# Full wwPDB EM Validation Report (i)

May 5, 2024 – 08:41 PM EDT

| | | |
|---|---|---|
| PDB ID | : | 4V6P |
| EMDB ID | : | EMD-5364 |
| Title | : | Structural characterization of mRNA-tRNA translocation intermediates (class 4b of the six classes) |
| Authors | : | Agirrezabala, X.; Liao, H.; Schreiner, E.; Fu, J.; Ortiz-Meoz, R.F.; Schulten, K.; Green, R.; Frank, J. |
| Deposited on | : | 2011-12-08 |
| Resolution | : | 13.50 Å(reported) |
| Based on initial model | : | 2I2U |

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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The following versions of software and data (see references (i)) were used in the production of this report:

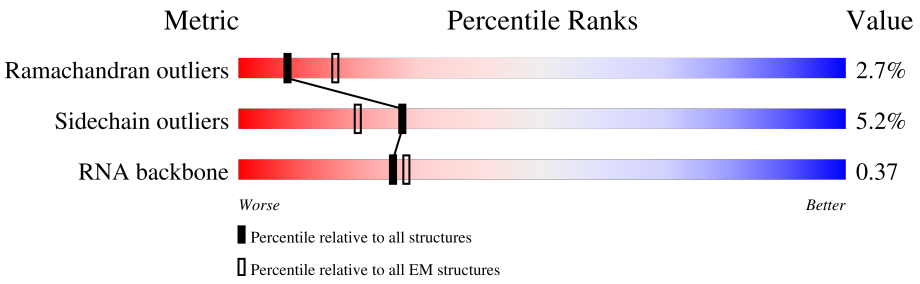
| | | |
|---|---|---|
| EMDB validation analysis | : | 0.0.1.dev92 |
| Mogul | : | 1.8.5 (274361), CSD as541be (2020) |
| MolProbity | : | 4.02b-467 |
| Percentile statistics | : | 20191225.v01 (using entries in the PDB archive December 25th 2019) |
| MapQ | : | 1.9.13 |
| Ideal geometry (proteins) | : | Engh & Huber (2001) |
| Ideal geometry (DNA, RNA) | : | Parkinson et al. (1996) |
| Validation Pipeline (wwPDB-VP) | : | 2.36.2 |

# 1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
*ELECTRON MICROSCOPY*

The reported resolution of this entry is 13.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.




| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|---|---|---|
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |
| RNA backbone | 4643 | 859 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 1 | AA | 1542 | 34% 53% 13% |
| 2 | AB | 76 | • 33% 51% 16% |
| 3 | AC | 47 | • 26% 49% 26% |
| 4 | AD | 77 | • 38% 49% 13% |
| 5 | AE | 240 | 84% 15% • |
| 6 | AF | 232 | 75% 19% 6% |
| 7 | AG | 205 | 76% 21% • |
| 8 | AH | 166 | 81% 16% • • |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 9 | AI | 135 | 71% 27% |
| 10 | AJ | 178 | 80% 18% |
| 11 | AK | 129 | 80% 20% |
| 12 | AL | 129 | 81% 17% |
| 13 | AM | 103 | 72% 23% 5% |
| 14 | AN | 128 | 84% 15% |
| 15 | AO | 123 | 73% 24% |
| 16 | AP | 117 | 80% 18% |
| 17 | AQ | 100 | 73% 24% |
| 18 | AR | 88 | 81% 18% |
| 19 | AS | 82 | 80% 17% |
| 20 | AT | 83 | 75% 20% 5% |
| 21 | AU | 74 | 64% 27% 8% |
| 22 | AV | 91 | 76% 21% |
| 23 | AW | 86 | 83% 15% |
| 24 | AX | 70 | 57% 41% |
| 25 | BA | 120 | 31% 59% 10% |
| 26 | BB | 2904 | 32% 54% 13% |
| 27 | BC | 234 | 9% 83% 16% |
| 28 | BD | 272 | 77% 20% |
| 29 | BE | 209 | 78% 19% |
| 30 | BF | 201 | 77% 18% |
| 31 | BG | 178 | 69% 26% 5% |
| 32 | BH | 176 | 74% 22% |
| 33 | BI | 149 | 5% 83% 16% |

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| Mol | Chain | Length | Quality of chain |
|---|---|---|---|
| 34 | BJ | 164 | 5% 82% 15% |
| 35 | BK | 141 | 85% 13% |
| 36 | BL | 142 | 79% 17% |
| 37 | BM | 123 | 74% 23% |
| 38 | BN | 144 | 78% 21% |
| 39 | BO | 136 | 79% 16% |
| 40 | BP | 127 | 75% 20% 5% |
| 41 | BQ | 117 | 77% 20% |
| 42 | BR | 114 | 69% 28% |
| 43 | BS | 117 | 73% 22% 5% |
| 44 | BT | 103 | 80% 17% |
| 45 | BU | 110 | 79% 18% |
| 46 | BV | 100 | 70% 25% 5% |
| 47 | BW | 103 | 81% 17% |
| 48 | BX | 94 | 74% 21% |
| 49 | BY | 84 | 69% 25% 6% |
| 50 | BZ | 77 | 70% 29% |
| 51 | B0 | 63 | 83% 16% |
| 52 | B1 | 58 | 83% 17% |
| 53 | B2 | 70 | 74% 19% 6% |
| 54 | B3 | 56 | 73% 23% |
| 55 | B4 | 54 | 78% 19% |
| 56 | B5 | 46 | 74% 24% |
| 57 | B6 | 64 | 80% 19% |
| 58 | B7 | 38 | 79% 18% |

# 2 Entry composition (i)

There are 60 unique types of molecules in this entry. The entry contains 152351 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | P | | |
| 1 | AA | 1542 | 33089 | 14767 | 6064 | 10717 | 1541 | 0 | 0 |

- Molecule 2 is a RNA chain called A site tRNA.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | P | S | | |
| 2 | AB | 76 | 1627 | 731 | 287 | 532 | 75 | 2 | 0 | 0 |

- Molecule 3 is a RNA chain called mRNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | P | | |
| 3 | AC | 47 | 993 | 445 | 167 | 335 | 46 | 0 | 0 |

- Molecule 4 is a RNA chain called P site tRNA.

| Mol | Chain | Residues | Atoms | | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | P | S | | |
| 4 | AD | 77 | 1641 | 734 | 297 | 533 | 76 | 1 | 0 | 0 |

- Molecule 5 is a protein called 30S ribosomal protein S2.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 5 | AE | 240 | 1872 | 1180 | 332 | 352 | 8 | 0 | 0 |

- Molecule 6 is a protein called 30S ribosomal protein S3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 6 | AF | 232 | 1822 | 1149 | 346 | 323 | 4 | 0 | 0 |

- Molecule 7 is a protein called 30S ribosomal protein S4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 7 | AG | 205 | 1643 | 1026 | 315 | 298 | 4 | 0 | 0 |

- Molecule 8 is a protein called 30S ribosomal protein S5.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 8 | AH | 166 | 1225 | 761 | 232 | 226 | 6 | 0 | 0 |

- Molecule 9 is a protein called 30S ribosomal protein S6.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 9 | AI | 135 | 1101 | 677 | 198 | 219 | 7 | 0 | 0 |

- Molecule 10 is a protein called 30S ribosomal protein S7.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 10 | AJ | 178 | 1400 | 874 | 269 | 253 | 4 | 0 | 0 |

- Molecule 11 is a protein called 30S ribosomal protein S8.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 11 | AK | 129 | 979 | 616 | 173 | 184 | 6 | 0 | 0 |

- Molecule 12 is a protein called 30S ribosomal protein S9.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 12 | AL | 129 | 1036 | 642 | 208 | 183 | 3 | 0 | 0 |

- Molecule 13 is a protein called 30S ribosomal protein S10.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 13 | AM | 103 | 825 | 514 | 158 | 151 | 2 | 0 | 0 |

- Molecule 14 is a protein called 30S ribosomal protein S11.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 14 | AN | 128 | 965 | 595 | 196 | 171 | 3 | 0 | 0 |

- Molecule 15 is a protein called 30S ribosomal protein S12.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 15 | AO | 123 | 955 | 590 | 196 | 165 | 4 | 0 | 0 |

- Molecule 16 is a protein called 30S ribosomal protein S13.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 16 | AP | 117 | 910 | 564 | 183 | 160 | 3 | 0 | 0 |

- Molecule 17 is a protein called 30S ribosomal protein S14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 17 | AQ | 100 | 805 | 499 | 164 | 139 | 3 | 0 | 0 |

- Molecule 18 is a protein called 30S ribosomal protein S15.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 18 | AR | 88 | 716 | 440 | 146 | 129 | 1 | 0 | 0 |

- Molecule 19 is a protein called 30S ribosomal protein S16.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 19 | AS | 82 | 649 | 406 | 128 | 114 | 1 | 0 | 0 |

- Molecule 20 is a protein called 30S ribosomal protein S17.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 20 | AT | 83 | 672 | 425 | 124 | 120 | 3 | 0 | 0 |

- Molecule 21 is a protein called 30S ribosomal protein S18.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 21 | AU | 74 | 626 | 395 | 123 | 107 | 1 | 0 | 0 |

- Molecule 22 is a protein called 30S ribosomal protein S19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 22 | AV | 91 | 727 | 464 | 139 | 122 | 2 | 0 | 0 |

- Molecule 23 is a protein called 30S ribosomal protein S20.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 23 | AW | 86 | 670 | 414 | 138 | 115 | 3 | 0 | 0 |

- Molecule 24 is a protein called 30S ribosomal protein S21.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 24 | AX | 70 | 590 | 366 | 125 | 98 | 1 | 0 | 0 |

- Molecule 25 is a RNA chain called 5S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | P | | |
| 25 | BA | 120 | 2566 | 1144 | 468 | 835 | 119 | 0 | 0 |

- Molecule 26 is a RNA chain called 23S ribosomal RNA.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | P | | |
| 26 | BB | 2904 | 62351 | 27824 | 11469 | 20155 | 2903 | 0 | 0 |

- Molecule 27 is a protein called 50S ribosomal protein L1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 27 | BC | 234 | 1733 | 1081 | 315 | 330 | 7 | 0 | 0 |

- Molecule 28 is a protein called 50S ribosomal protein L2.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 28 | BD | 272 | 2092 | 1294 | 425 | 366 | 7 | 0 | 0 |

- Molecule 29 is a protein called 50S ribosomal protein L3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 29 | BE | 209 | 1565 | 979 | 288 | 294 | 4 | 0 | 0 |

- Molecule 30 is a protein called 50S ribosomal protein L4.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 30 | BF | 201 | 1552 | 974 | 283 | 290 | 5 | 0 | 0 |

- Molecule 31 is a protein called 50S ribosomal protein L5.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 31 | BG | 178 | 1420 | 905 | 251 | 258 | 6 | 0 | 0 |

- Molecule 32 is a protein called 50S ribosomal protein L6.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 32 | BH | 176 | 1323 | 832 | 243 | 246 | 2 | 0 | 0 |

- Molecule 33 is a protein called 50S ribosomal protein L9.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 33 | BI | 149 | 1111 | 699 | 197 | 214 | 1 | 0 | 0 |

- Molecule 34 is a protein called 50S ribosomal protein L10.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 34 | BJ | 164 | 1233 | 776 | 220 | 231 | 6 | 0 | 0 |

- Molecule 35 is a protein called 50S ribosomal protein L11.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 35 | BK | 141 | 1032 | 651 | 179 | 196 | 6 | 0 | 0 |

- Molecule 36 is a protein called 50S ribosomal protein L13.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 36 | BL | 142 | 1129 | 714 | 212 | 199 | 4 | 0 | 0 |

- Molecule 37 is a protein called 50S ribosomal protein L14.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 37 | BM | 123 | 947 | 593 | 181 | 167 | 6 | 0 | 0 |

- Molecule 38 is a protein called 50S ribosomal protein L15.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 38 | BN | 144 | 1053 | 654 | 207 | 190 | 2 | 0 | 0 |

- Molecule 39 is a protein called 50S ribosomal protein L16.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 39 | BO | 136 | 1074 | 686 | 205 | 177 | 6 | 0 | 0 |

- Molecule 40 is a protein called 50S ribosomal protein L17.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 40 | BP | 127 | 1008 | 621 | 204 | 178 | 5 | 0 | 0 |

- Molecule 41 is a protein called 50S ribosomal protein L18.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 41 | BQ | 117 | 900 | 557 | 179 | 163 | 1 | 0 | 0 |

- Molecule 42 is a protein called 50S ribosomal protein L19.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 42 | BR | 114 | 917 | 574 | 179 | 163 | 1 | 0 | 0 |

- Molecule 43 is a protein called 50S ribosomal protein L20.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | | |
| 43 | BS | 117 | 947 | 604 | 192 | 151 | 0 | 0 |

- Molecule 44 is a protein called 50S ribosomal protein L21.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 44 | BT | 103 | 816 | 516 | 153 | 145 | 2 | 0 | 0 |

- Molecule 45 is a protein called 50S ribosomal protein L22.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 45 | BU | 110 | 857 | 532 | 166 | 156 | 3 | 0 | 0 |

- Molecule 46 is a protein called 50S ribosomal protein L23.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 46 | BV | 100 | 787 | 496 | 146 | 143 | 2 | 0 | 0 |

- Molecule 47 is a protein called 50S ribosomal protein L24.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | | |
| 47 | BW | 103 | 789 | 498 | 148 | 143 | 0 | 0 |

- Molecule 48 is a protein called 50S ribosomal protein L25.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 48 | BX | 94 | 753 | 479 | 137 | 134 | 3 | 0 | 0 |

- Molecule 49 is a protein called 50S ribosomal protein L27.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 49 | BY | 84 | 634 | 391 | 129 | 113 | 1 | 0 | 0 |

- Molecule 50 is a protein called 50S ribosomal protein L28.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 50 | BZ | 77 | 625 | 388 | 129 | 106 | 2 | 0 | 0 |

- Molecule 51 is a protein called 50S ribosomal protein L29.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 51 | B0 | 63 | 509 | 313 | 99 | 95 | 2 | 0 | 0 |

- Molecule 52 is a protein called 50S ribosomal protein L30.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 52 | B1 | 58 | 449 | 281 | 87 | 79 | 2 | 0 | 0 |

- Molecule 53 is a protein called 50S ribosomal protein L31.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 53 | B2 | 70 | 549 | 339 | 104 | 100 | 6 | 0 | 0 |

- Molecule 54 is a protein called 50S ribosomal protein L32.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 54 | B3 | 56 | 444 | 269 | 94 | 80 | 1 | 0 | 0 |

- Molecule 55 is a protein called 50S ribosomal protein L33.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | | |
| 55 | B4 | 54 | 441 | 284 | 81 | 76 | 0 | 0 |

- Molecule 56 is a protein called 50S ribosomal protein L34.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 56 | B5 | 46 | 377 | 228 | 90 | 57 | 2 | 0 | 0 |

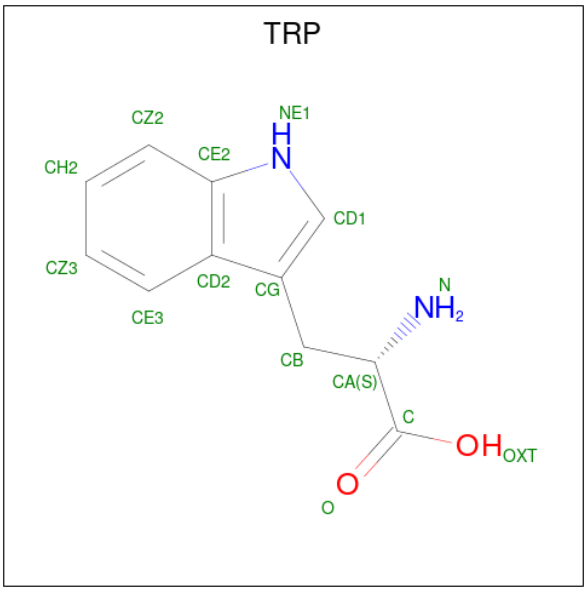
- Molecule 57 is a protein called 50S ribosomal protein L35.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 57 | B6 | 64 | 504 | 323 | 105 | 74 | 2 | 0 | 0 |

- Molecule 58 is a protein called 50S ribosomal protein L36.

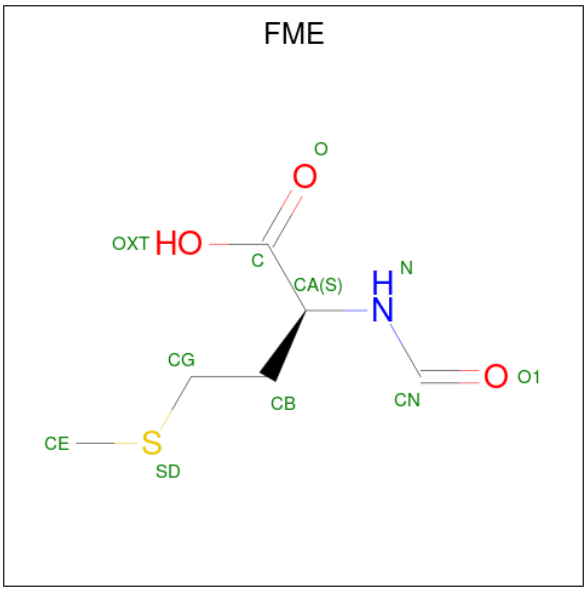
| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|---|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | | |
| 58 | B7 | 38 | 302 | 185 | 65 | 48 | 4 | 0 | 0 |

- Molecule 59 is TRYPTOPHAN (three-letter code: TRP) (formula: $C_{11}H_{12}N_2O_2$).




| Mol | Chain | Residues | Atoms | | | | AltConf |
|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | |
| 59 | AB | 1 | 14 | 11 | 2 | 1 | 0 |

- Molecule 60 is N-FORMYLMETHIONINE (three-letter code: FME) (formula: $C_6H_{11}NO_3S$).



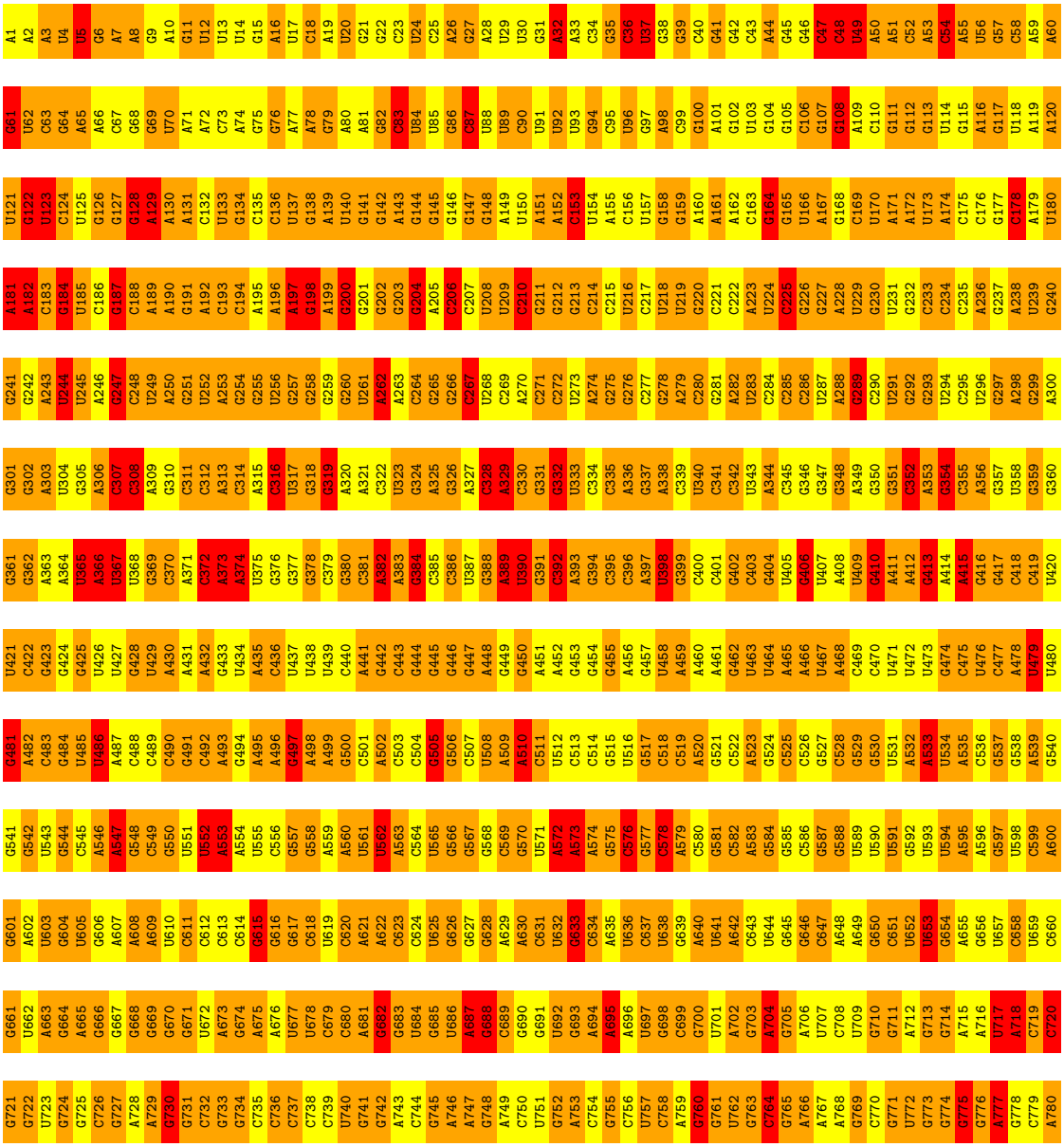

| Mol | Chain | Residues | Atoms | | | | | AltConf |
|---|---|---|---|---|---|---|---|---|
| | | | Total | C | N | O | S | |
| 60 | BB | 1 | 10 | 6 | 1 | 2 | 1 | 0 |

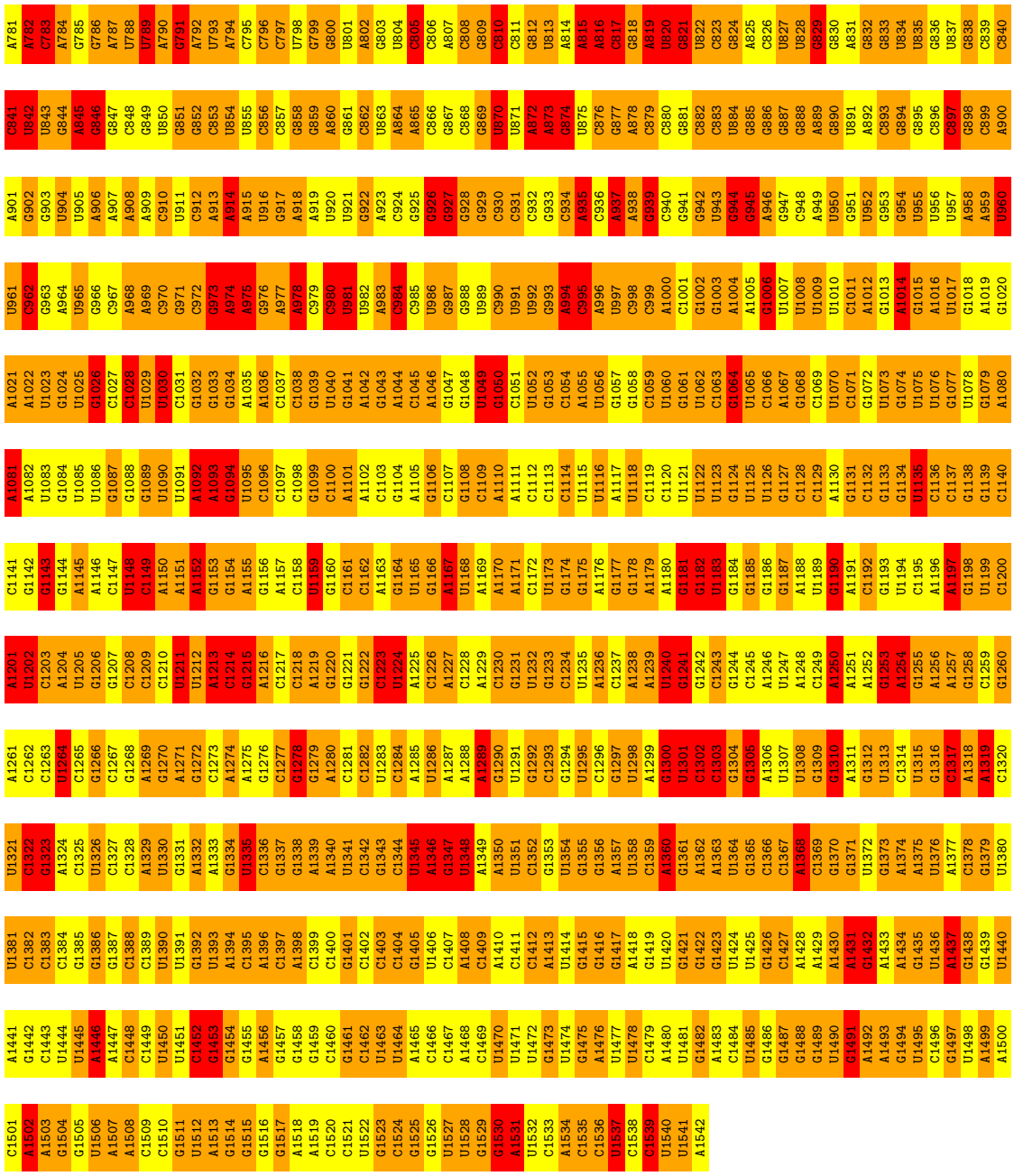
# 3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 16S ribosomal RNA

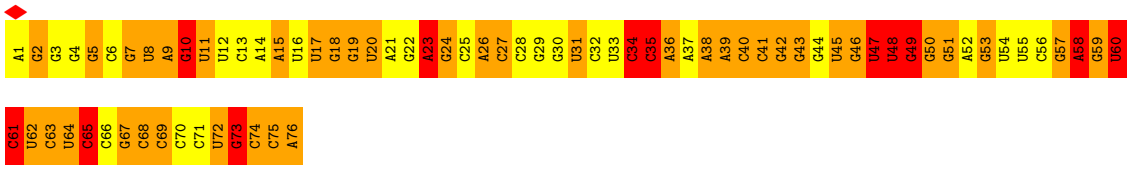
Chain AA: 34% 53% 13%





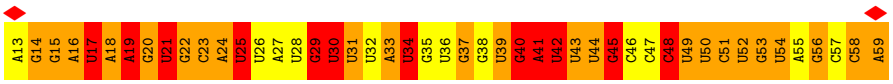
- Molecule 2: A site tRNA

Chain AB:



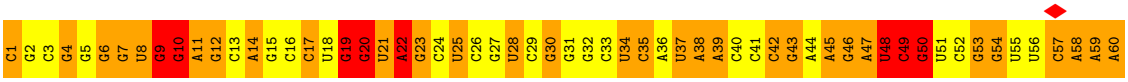

- Molecule 3: mRNA

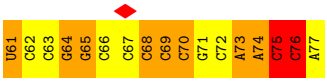
Chain AC:




• Molecule 4: P site tRNA

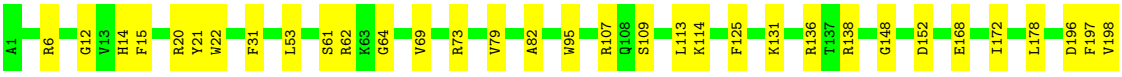
Chain AD: 38% 49% 13%



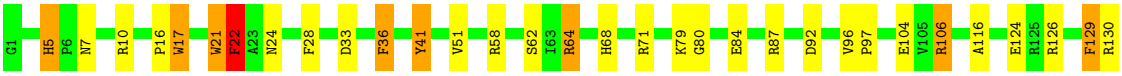

• Molecule 5: 30S ribosomal protein S2

Chain AE: 84% 15%



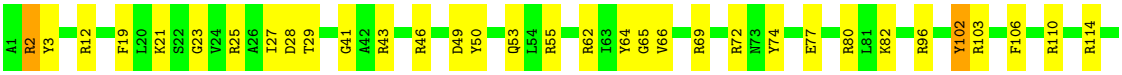
• Molecule 6: 30S ribosomal protein S3

Chain AF: 75% 19% 6%



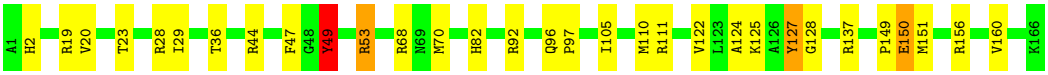
• Molecule 7: 30S ribosomal protein S4

Chain AG: 76% 21%



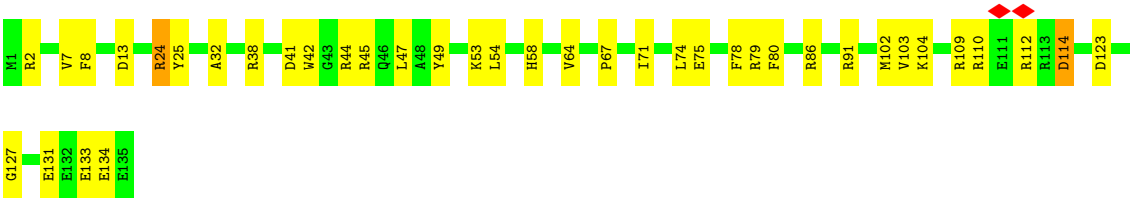
• Molecule 8: 30S ribosomal protein S5

Chain AH: 81% 16%




• Molecule 9: 30S ribosomal protein S6

Chain AI:

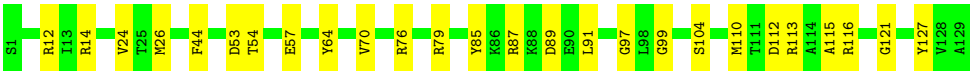



• Molecule 10: 30S ribosomal protein S7

Chain AJ:

• Molecule 11: 30S ribosomal protein S8

Chain AK:

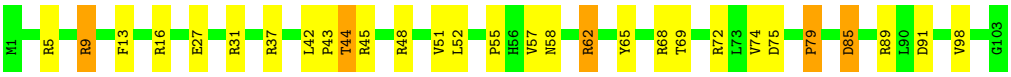



• Molecule 12: 30S ribosomal protein S9

Chain AL:

• Molecule 13: 30S ribosomal protein S10

Chain AM:




• Molecule 14: 30S ribosomal protein S11

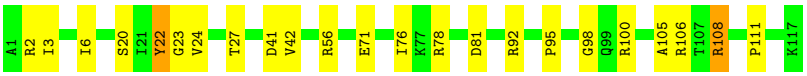
Chain AN:

• Molecule 15: 30S ribosomal protein S12

Chain AO:

• Molecule 16: 30S ribosomal protein S13

Chain AP:

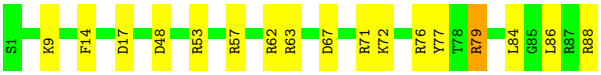



• Molecule 17: 30S ribosomal protein S14

Chain AQ:

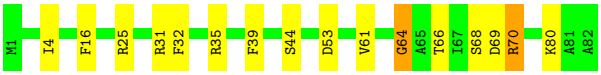
• Molecule 18: 30S ribosomal protein S15

Chain AR:



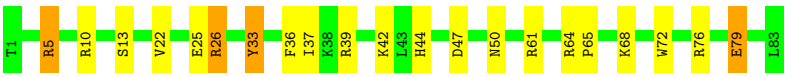

• Molecule 19: 30S ribosomal protein S16

Chain AS:




• Molecule 20: 30S ribosomal protein S17

Chain AT:

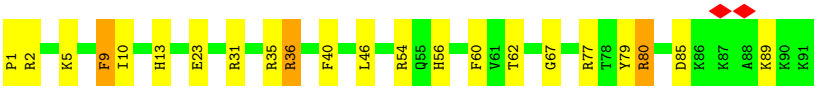



• Molecule 21: 30S ribosomal protein S18

Chain AU:

• Molecule 22: 30S ribosomal protein S19

Chain AV:

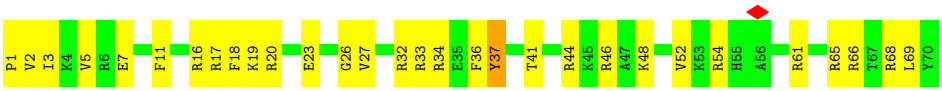



• Molecule 23: 30S ribosomal protein S20

Chain AW:

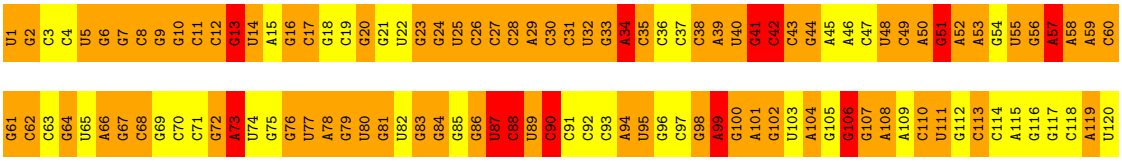
• Molecule 24: 30S ribosomal protein S21

Chain AX:



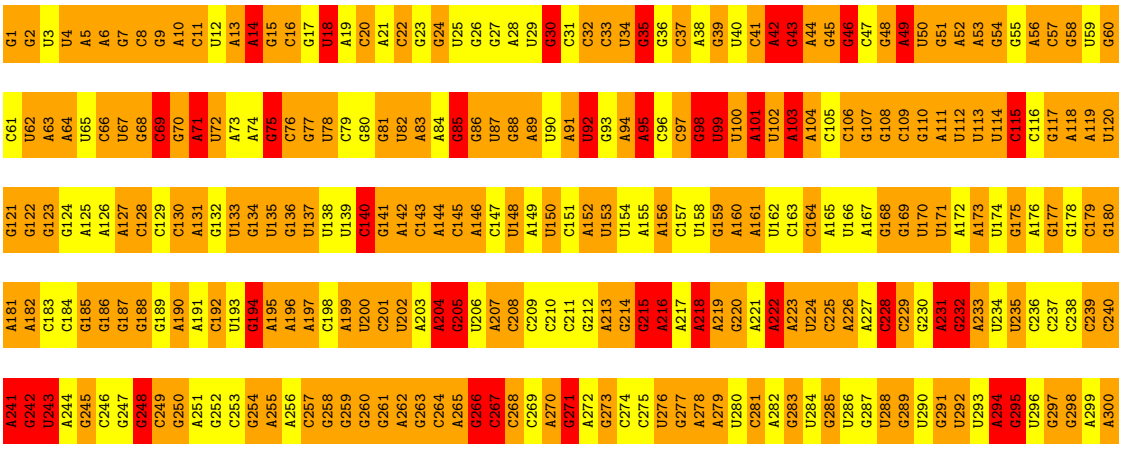

• Molecule 25: 5S ribosomal RNA

Chain BA:




• Molecule 26: 23S ribosomal RNA

Chain BB:



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C961 G962 U963 C964 C965 G966 U967 C968 G969 U970 G971 A972 A973 G974 A975 G976 G977 G978 A979 A980 A981 C982 A983 A984 C985 C986 C987 A988 G989 A990 C991 C992 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 G1003 U1004 C1005 C1006 C1007 A1008 A1009 A1010 G1011 U1012 C1013 G1014 U1015 G1016 G1017 U1018 U1019 A1020
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C601 A602 A603 G604 G605 U606 U607 A608 A609 C610 C611 G612 A613 A614 U615 A616 G617 G618 G619 G620 A621 G562 U563 C564 C565 U566 U567 U568 U569 G570 U571 A572 U573 A574 A575 U576 G577 G578 G579 U580 C581 A582 G583 C584 G585 A586 C587 U588 U589 A590 U591 U592 U593 U594 C595 U596 G597 U598 A599 G600
A541 C542 G543 C544 U545 U546 A547 G548 G549 C550 G551 U552 G553 U554 G555 A556 C557 U558 G559 C560 G561 U502 A503 A504 A505 G506 A507 A508 C509 C510 U511 G512 A513 A514 A515 C516 C517 G518 U519 G520 A460 C461 C462 G463 U464 G465 A466 G467 C527 A528 A529 G530 C531 A532 G533 U534 G535 G536 G537 A538 G539 C540
G481 A482 A483 C484 C485 C486 C487 G488 G489 C490 G491 A492 G493 U494 G495 G496 A497 G498 U499 G500 A501 A442 C443 C444 A445 G446 A447 U448 A449 C450 U451 A452 A453 A454 C455 C456 A457 G458 U459 A400 A401 A402 U403 A404 U405 G406 G407 G408 G409 A470 A471 A472 C473 G474 C475 G476 A477 A478 A479 A480
C421 A422 A423 G424 G425 C426 U427 A428 A429 A430 U431 A432 C433 U434 C435 C436 U437 G438 A439 C440 U441 G442 A443 C444 C445 G446 A447 U448 A449 C450 U451 A452 A453 A454 C455 C456 A457 G458 U459 A460 C461 C462 G463 U464 G465 A466 G467 C527 A528 A529 G530 C531 A532 G533 U534 G535 G536 G537 A538 G539 C540
G361 A362 G363 C364 U365 C366 G367 A368 U369 G370 A371 G372 U373 A374 G375 G376 G377 C378 G379 G380 G381 A382 C383 A384 C385 G386 U387 G388 G389 U390 A391 U392 C393 C394 U395 G396 U397 C398 U399 G400 A401 A402 U403 A404 U405 G406 G407 G408 G409 G410 G411 A412 C413 C414 A415 U416 C417 C418 U419 C420
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| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| G2341 | A2281 | G2221 | C2161 | A2101 | U2041 | A1981 | G1921 | G1861 | A1801 | C1741 | G1681 | U1621 | C1561 | G1501 | G1441 | G1381 |
| C2342 | G2282 | C2222 | G2162 | G2102 | A2042 | U1982 | G1922 | G1862 | A1802 | U1742 | G1682 | G1622 | U1562 | A1502 | U1442 | G1382 |
| U2343 | C2283 | G2223 | A2163 | C2103 | C2043 | G1983 | U1923 | G1863 | A1803 | G1743 | U1683 | G1623 | U1563 | A1503 | U1443 | A1383 |
| U2344 | A2284 | G2224 | C2164 | C2104 | C2044 | G1984 | C1924 | U1864 | C1804 | A1744 | G1684 | U1624 | C1564 | A1504 | G1444 | A1384 |
| G2345 | C2285 | A2225 | C2165 | U2105 | C2045 | C1985 | C1925 | U1865 | A1805 | A1745 | C1685 | C1625 | C1565 | A1505 | G1445 | A1385 |
| A2346 | G2286 | C2226 | U2166 | U2106 | G2046 | C1986 | U1926 | A1866 | C1806 | A1746 | C1686 | A1626 | A1566 | U1506 | C1446 | C1386 |
| C2347 | A2287 | A2227 | U2167 | G2107 | C2047 | A1987 | A1927 | G1867 | G1807 | U1747 | G1687 | G1627 | G1567 | C1507 | C1447 | A1387 |
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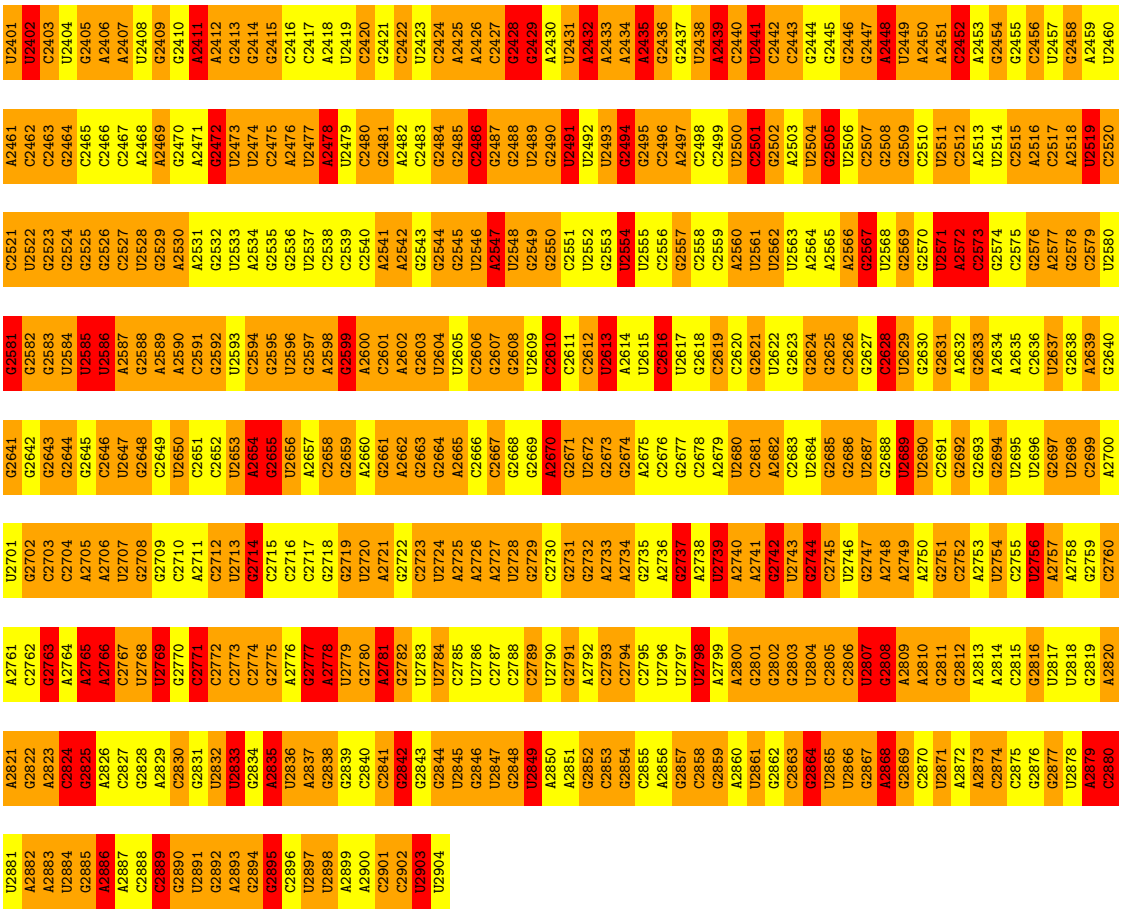
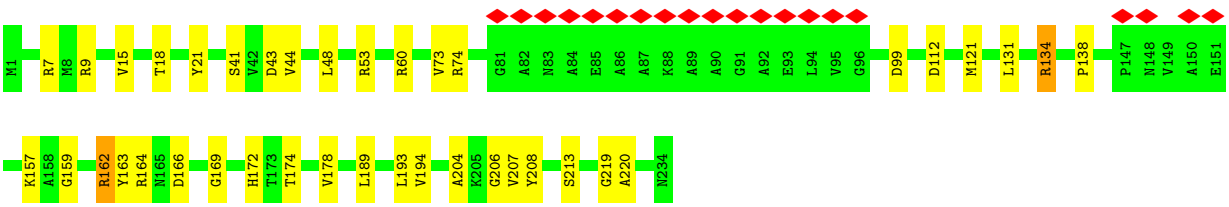
| G2351 | U2291 | U2231 | A2171 | U2111 | A2051 | U1991 | U1931 | A1871 | G1811 | U1751 | C1691 | G1631 | A1571 | G1511 | C1451 | U1391 |
| A2352 | U2292 | C2232 | U2172 | G2112 | A2052 | G1992 | A1932 | A1872 | U1812 | C1752 | U1692 | A1632 | A1572 | C1512 | G1452 | A1392 |
| G2353 | G2293 | U2233 | A2173 | U2113 | G2053 | U1993 | G1933 | G1873 | G1813 | G1753 | U1693 | G1633 | G1573 | U1513 | A1453 | A1393 |
| C2354 | G2294 | G2234 | C2174 | A2114 | A2054 | C1994 | C1934 | C1874 | G1814 | A1754 | C1694 | A1634 | C1574 | G1514 | C1454 | U1394 |
| G2355 | C2295 | G2235 | C2175 | G2115 | C2055 | U1995 | G1935 | G1875 | A1815 | A1755 | G1695 | A1635 | C1575 | A1515 | G1455 | A1395 |
| U2356 | U2296 | U2236 | A2176 | G2116 | G2056 | C1996 | A1936 | A1876 | C1816 | G1756 | G1696 | U1636 | U1576 | G1516 | G1456 | U1396 |
| G2357 | A2297 | G2237 | C2177 | A2117 | G2057 | C1997 | A1937 | A1877 | G1817 | A1757 | G1697 | A1637 | C1577 | G1517 | U1457 | U1397 |
| A2358 | A2298 | G2238 | C2178 | U2118 | A2058 | A1998 | A1938 | G1878 | U1818 | U1758 | A1698 | C1638 | U1578 | C1518 | U1458 | C1398 |
| C2359 | U2299 | G2239 | C2179 | A2119 | A2059 | C1999 | U1939 | C1879 | A1819 | A1759 | G1699 | C1639 | A1579 | G1519 | G1459 | C1399 |
| G2360 | C2300 | U2240 | U2180 | G2120 | A2060 | C2000 | U1940 | U1880 | U1820 | C1760 | A1700 | A1640 | A1580 | U1520 | U1460 | U1400 |
| G2361 | C2301 | A2241 | U2181 | G2121 | G2061 | C2001 | C1941 | C1881 | A1821 | C1761 | A1701 | A1641 | G1581 | G1521 | C1461 | G1401 |
| C2362 | U2302 | G2242 | U2182 | U2122 | A2062 | G2002 | C1942 | U1882 | C1822 | A1762 | G1702 | G1642 | C1582 | A1522 | C1462 | U1402 |
| G2363 | G2303 | U2243 | A2183 | G2123 | C2063 | A2003 | U1943 | U1883 | G1823 | G1763 | G1703 | G1643 | A1583 | U1523 | C1463 | A1403 |
| C2364 | G2304 | U2244 | A2184 | G2124 | C2064 | G2004 | U1944 | G1884 | G1824 | C1764 | C1704 | G1644 | U1584 | G1524 | G1464 | C1404 |
| G2365 | U2305 | U2245 | U2185 | G2125 | C2065 | A2005 | G1945 | A1885 | U1825 | U1765 | A1705 | G1645 | C1585 | A1525 | G1465 | U1405 |
| A2366 | C2306 | G2246 | G2186 | A2126 | C2066 | C2006 | U1946 | U1886 | G1826 | G1766 | C1706 | C1646 | A1586 | C1526 | U1466 | U1406 |
| G2367 | G2307 | A2247 | U2187 | G2127 | G2067 | U2007 | C1947 | C1887 | U1827 | G1767 | G1707 | U1647 | G1587 | G1527 | U1467 | G1407 |
| C2368 | G2308 | C2248 | U2188 | G2128 | U2068 | C2008 | G1948 | G1888 | G1828 | C1768 | C1708 | U1648 | G1588 | A1528 | U1468 | G1408 |
| A2369 | A2309 | U2249 | U2189 | C2129 | G2069 | A2009 | G1949 | A1889 | A1829 | U1769 | U1709 | G1649 | U1589 | G1529 | A1469 | U1409 |
| G2370 | C2310 | G2250 | G2190 | U2130 | A2070 | G2010 | G1950 | A1890 | C1830 | G1770 | G1710 | A1650 | A1590 | G1530 | A1470 | G1410 |
| G2371 | A2311 | G2251 | A2191 | U2131 | A2071 | U2011 | U1951 | G1891 | G1831 | C1771 | A1711 | G1651 | A1591 | C1531 | G1471 | U1411 |
| U2372 | U2312 | G2252 | U2192 | U2132 | C2072 | G2012 | A1952 | C1892 | C1832 | A1772 | U1712 | A1652 | C1592 | A1532 | C1472 | U1412 |
| G2373 | C2313 | G2253 | G2193 | G2133 | C2073 | A2013 | A1953 | C1893 | C1833 | A1773 | A1713 | G1653 | A1593 | C1533 | G1473 | A1413 |
| C2374 | A2314 | C2254 | U2194 | A2134 | U2074 | A2014 | G1954 | C1894 | U1834 | C1774 | U1714 | A1654 | U1594 | U1534 | U1474 | C1414 |
| G2375 | G2315 | G2255 | U2195 | A2135 | U2075 | A2015 | U1955 | C1895 | G1835 | U1775 | G1715 | A1655 | C1595 | A1535 | G1475 | U1415 |
| A2376 | G2316 | G2256 | C2196 | G2136 | U2076 | U2016 | U1956 | G1896 | C1836 | G1776 | U1716 | C1656 | A1596 | C1536 | U1476 | G1416 |
| A2377 | A2317 | U2257 | U2197 | U2137 | A2077 | U2017 | C1957 | G1897 | C1837 | U1777 | A1717 | U1657 | A1597 | G1537 | A1477 | C1417 |
| A2378 | G2318 | C2258 | A2198 | G2138 | C2078 | G2018 | C1958 | U1898 | C1838 | U1778 | G1718 | C1658 | A1598 | G1538 | G1478 | G1418 |
| G2379 | G2319 | U2259 | A2199 | U2139 | U2079 | A2019 | G1959 | A1899 | G1839 | U1779 | G1719 | G1659 | U1599 | U1539 | G1479 | A1419 |
| C2380 | U2320 | C2260 | C2200 | G2140 | A2080 | A2020 | A1960 | A1900 | G1840 | A1780 | U1720 | G1660 | C1600 | G1540 | C1480 | A1420 |
| A2381 | U2321 | C2261 | G2201 | G2141 | U2081 | C2021 | C1961 | A1901 | U1841 | U1781 | G1721 | G1661 | G1601 | C1541 | U1481 | G1421 |
| G2382 | A2322 | U2262 | U2202 | A2142 | A2082 | U2022 | C1962 | C1902 | G1842 | U1782 | A1722 | U1662 | U1602 | U1542 | G1482 | G1422 |
| G2383 | G2323 | C2263 | U2203 | C2143 | G2083 | C2023 | U1963 | G1903 | C1843 | A1783 | G1723 | G1663 | A1603 | G1543 | G1483 | G1423 |
| U2384 | U2324 | C2264 | G2204 | G2144 | C2084 | G2024 | G1964 | G1904 | C1844 | A1784 | G1724 | A1664 | C1604 | A1544 | U1484 | G1424 |
| C2385 | G2325 | U2265 | A2205 | C2145 | U2085 | C2025 | C1965 | C1905 | G1845 | A1785 | U1725 | A1665 | C1605 | A1545 | U1485 | G1425 |
| A2386 | C2326 | A2266 | C2206 | C2146 | U2086 | U2026 | A1966 | G1906 | G1846 | A1786 | C1726 | G1666 | C1606 | G1546 | U1486 | G1426 |
| U2387 | A2327 | A2267 | C2207 | A2147 | G2087 | G2027 | C1967 | G1907 | A1847 | A1787 | C1727 | G1667 | C1607 | C1547 | U1487 | A1427 |
| A2388 | A2328 | A2268 | C2208 | G2148 | A2088 | U2028 | G1968 | C1908 | A1848 | C1788 | C1728 | A1668 | A1608 | A1548 | C1488 | C1428 |
| G2389 | U2329 | G2269 | G2209 | U2149 | C2089 | G2029 | A1969 | C1909 | G1849 | A1789 | U1729 | A1669 | A1609 | A1549 | C1489 | G1429 |
| U2390 | G2330 | A2270 | U2210 | C2150 | A2090 | A2030 | A1970 | G1910 | G1850 | C1790 | C1730 | C1670 | A1610 | C1550 | A1490 | G1430 |
| G2391 | G2331 | G2271 | A2211 | U2151 | C2091 | A2031 | U1971 | U1911 | U1851 | A1791 | G1731 | U1671 | C1611 | A1551 | G1491 | A1431 |
| A2392 | C2332 | U2272 | A2212 | G2152 | U2092 | G2032 | G1972 | A1912 | U1852 | G1792 | C1732 | A1672 | C1612 | A1552 | G1492 | G1432 |
| U2393 | A2333 | A2273 | U2213 | C2153 | G2093 | A2033 | G1973 | A1913 | A1853 | C1793 | G1733 | G1673 | G1613 | A1553 | C1493 | A1433 |
| C2394 | U2334 | A2274 | C2214 | A2154 | A2094 | U2034 | C1974 | C1914 | A1854 | A1794 | G1734 | G1674 | A1614 | U1554 | A1494 | A1434 |
| C2395 | A2335 | C2275 | C2215 | U2155 | A2095 | G2035 | G1975 | 3TD1915 | U1855 | C1795 | A1735 | C1675 | C1615 | G1555 | A1495 | G1435 |
| G2396 | A2336 | G2276 | G2216 | G2156 | C2096 | C2036 | U1976 | A1916 | U1856 | U1796 | U1736 | A1676 | A1616 | C1556 | A1496 | G1436 |
| G2397 | G2337 | G2277 | G2217 | G2157 | A2097 | A2037 | A1977 | U1917 | G1857 | G1797 | G1737 | A1677 | C1617 | C1557 | U1497 | C1437 |
| U2398 | C2338 | A2278 | G2218 | A2158 | U2098 | G2038 | A1978 | A1918 | A1858 | U1798 | G1738 | A1678 | A1618 | C1558 | C1498 | U1438 |
| G2399 | C2339 | G2279 | U2219 | G2159 | U2099 | U2039 | U1979 | A1919 | U1859 | G1799 | A1739 | A1679 | G1619 | U1559 | C1499 | A1439 |
| G2400 | A2340 | G2280 | U2220 | C2160 | G2100 | G2040 | G1980 | C1920 | G1860 | C1800 | G1740 | U1680 | G1620 | G1560 | G1500 | U1440 |



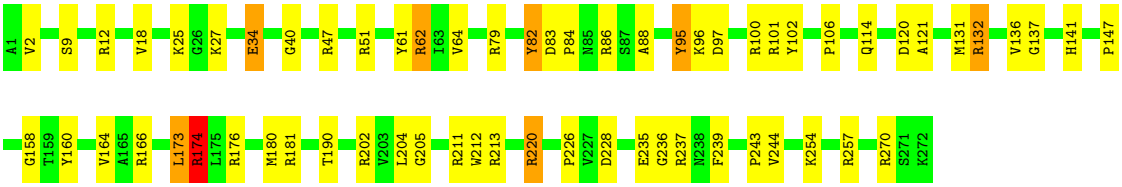

- Molecule 27: 50S ribosomal protein L1

Chain BC:



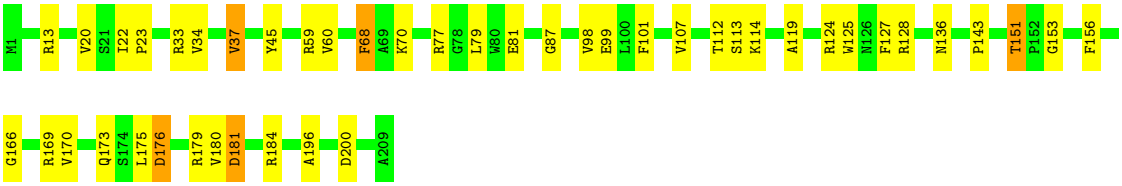

- Molecule 28: 50S ribosomal protein L2

Chain BD:



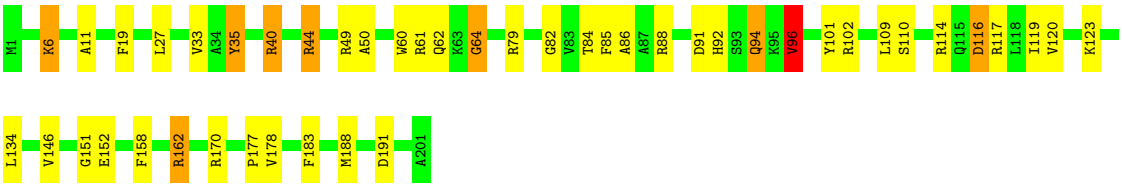

- Molecule 29: 50S ribosomal protein L3

Chain BE:



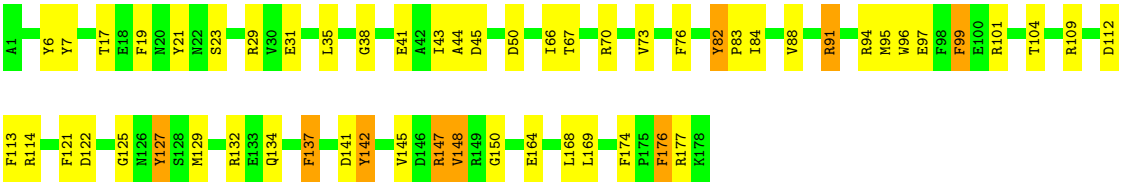

• Molecule 30: 50S ribosomal protein L4

Chain BF:



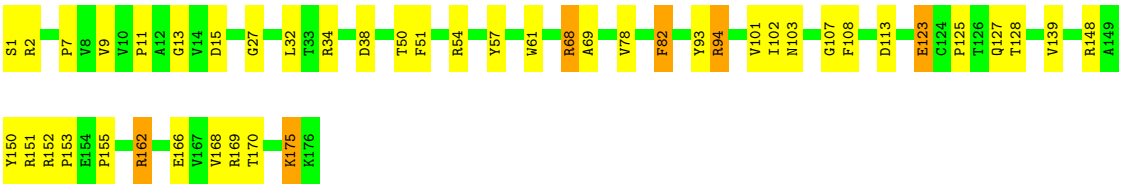

• Molecule 31: 50S ribosomal protein L5

Chain BG:



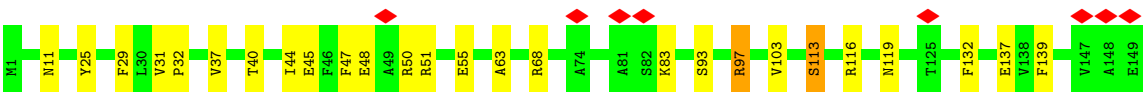

• Molecule 32: 50S ribosomal protein L6

Chain BH:



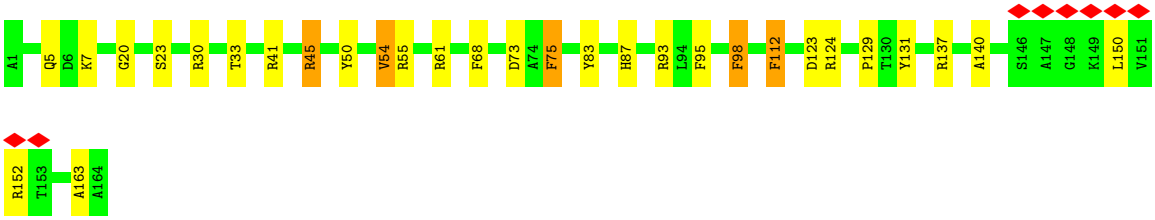

• Molecule 33: 50S ribosomal protein L9

Chain BI:



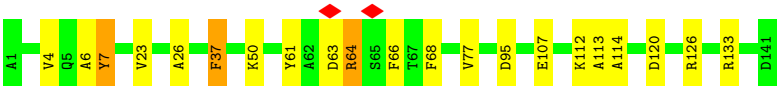

• Molecule 34: 50S ribosomal protein L10

Chain BJ:



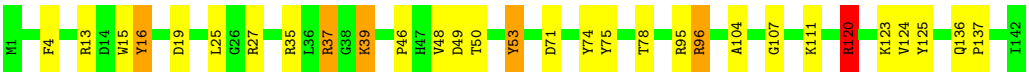

• Molecule 35: 50S ribosomal protein L11

Chain BK:



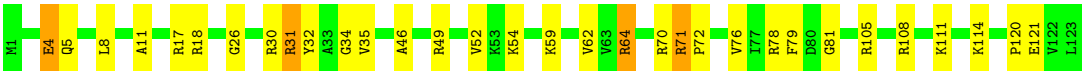

• Molecule 36: 50S ribosomal protein L13

Chain BL:



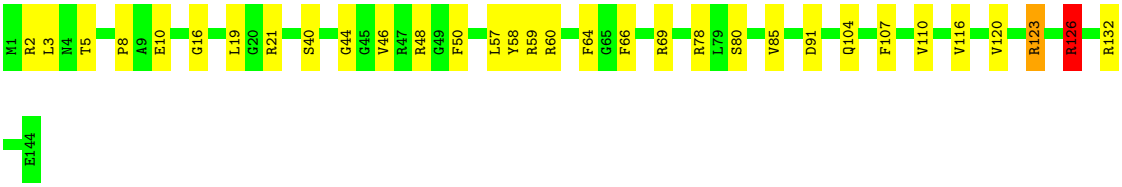

• Molecule 37: 50S ribosomal protein L14

Chain BM:




• Molecule 38: 50S ribosomal protein L15

Chain BN:




• Molecule 39: 50S ribosomal protein L16

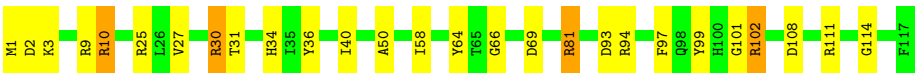
Chain BO:

• Molecule 40: 50S ribosomal protein L17

Chain BP:

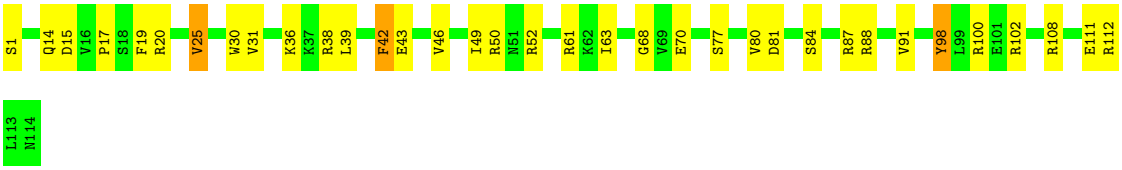
• Molecule 41: 50S ribosomal protein L18

Chain BQ:



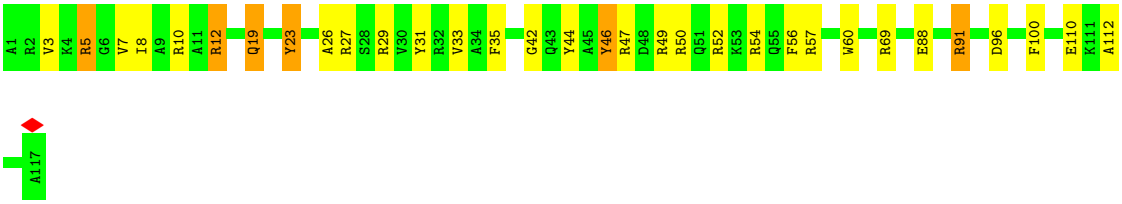

• Molecule 42: 50S ribosomal protein L19

Chain BR:




• Molecule 43: 50S ribosomal protein L20

Chain BS:

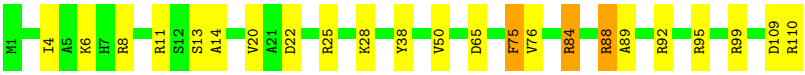



• Molecule 44: 50S ribosomal protein L21

Chain BT:

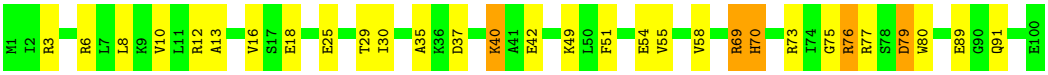
• Molecule 45: 50S ribosomal protein L22

Chain BU:




• Molecule 46: 50S ribosomal protein L23

Chain BV:

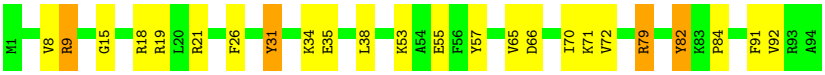



• Molecule 47: 50S ribosomal protein L24

Chain BW:

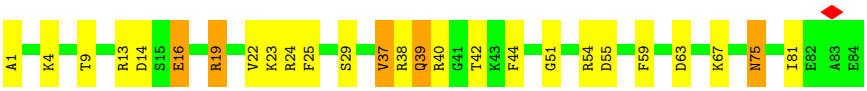
• Molecule 48: 50S ribosomal protein L25

Chain BX:




• Molecule 49: 50S ribosomal protein L27

Chain BY:

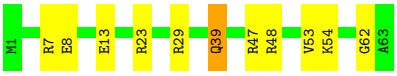



• Molecule 50: 50S ribosomal protein L28

Chain BZ:

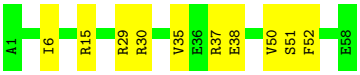
• Molecule 51: 50S ribosomal protein L29

Chain B0:



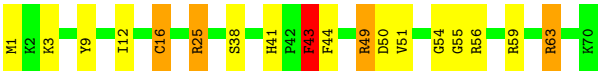

• Molecule 52: 50S ribosomal protein L30

Chain B1:



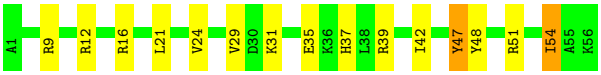

• Molecule 53: 50S ribosomal protein L31

Chain B2:



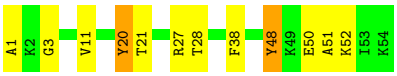

• Molecule 54: 50S ribosomal protein L32

Chain B3:

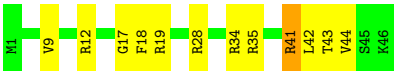

• Molecule 55: 50S ribosomal protein L33

Chain B4:

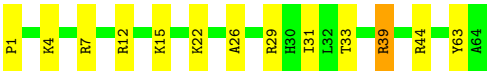

• Molecule 56: 50S ribosomal protein L34

Chain B5:

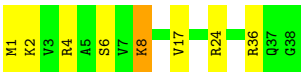

• Molecule 57: 50S ribosomal protein L35

Chain B6:


• Molecule 58: 50S ribosomal protein L36

Chain B7:

# 4 Experimental information (i)

| Property | Value | Source |
|---|---|---|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, C1 | Depositor |
| Number of particles used | 21000 | Depositor |
| Resolution determination method | FSC 0.5 CUT-OFF | Depositor |
| CTF correction method | Volumes were CTF-corrected in defocus groups | Depositor |
| Microscope | FEI TECNAI F30 | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/Å^2$) | 25 | Depositor |
| Minimum defocus (nm) | 1200 | Depositor |
| Maximum defocus (nm) | 4000 | Depositor |
| Magnification | 58269 | Depositor |
| Image detector | TVIPS TEMCAM-F415 (4k x 4k) | Depositor |
| Maximum map value | 1.536 | Depositor |
| Minimum map value | -0.480 | Depositor |
| Average map value | 0.031 | Depositor |
| Map value standard deviation | 0.200 | Depositor |
| Recommended contour level | 0.1 | Depositor |
| Map size (Å) | 375.0, 375.0, 375.0 | wwPDB |
| Map dimensions | 250, 250, 250 | wwPDB |
| Map angles (°) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (Å) | 1.5, 1.5, 1.5 | Depositor |

# 5 Model quality (i)

## 5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: 4OC, 4SU, MIA, UR3, OMG, 3TD, PSU, 6MZ, 7MG, FME, 5MU, CH, OMC, H2U, 1MG, OMU, 5MC, 2MG, MA6, 2MA

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | $\#\|Z\| >5$ | RMSZ | $\#\|Z\| >5$ |
| 1 | AA | 3.07 | 3842/36769 (10.4%) | 3.54 | 8339/57354 (14.5%) |
| 2 | AB | 3.16 | 182/1600 (11.4%) | 3.61 | 372/2492 (14.9%) |
| 3 | AC | 3.10 | 124/1108 (11.2%) | 3.72 | 275/1724 (16.0%) |
| 4 | AD | 3.15 | 181/1721 (10.5%) | 3.52 | 392/2683 (14.6%) |
| 5 | AE | 1.46 | 6/1904 (0.3%) | 1.85 | 30/2565 (1.2%) |
| 6 | AF | 1.47 | 6/1852 (0.3%) | 2.14 | 61/2490 (2.4%) |
| 7 | AG | 1.54 | 7/1665 (0.4%) | 1.95 | 47/2227 (2.1%) |
| 8 | AH | 1.48 | 3/1239 (0.2%) | 1.96 | 33/1664 (2.0%) |
| 9 | AI | 1.50 | 5/1121 (0.4%) | 1.99 | 30/1509 (2.0%) |
| 10 | AJ | 1.51 | 5/1422 (0.4%) | 1.96 | 30/1908 (1.6%) |
| 11 | AK | 1.47 | 6/989 (0.6%) | 1.83 | 20/1326 (1.5%) |
| 12 | AL | 1.57 | 2/1048 (0.2%) | 1.98 | 28/1394 (2.0%) |
| 13 | AM | 1.46 | 3/835 (0.4%) | 2.17 | 31/1127 (2.8%) |
| 14 | AN | 1.51 | 2/982 (0.2%) | 1.85 | 20/1323 (1.5%) |
| 15 | AO | 1.51 | 3/969 (0.3%) | 2.08 | 29/1300 (2.2%) |
| 16 | AP | 1.55 | 1/919 (0.1%) | 1.88 | 20/1226 (1.6%) |
| 17 | AQ | 1.45 | 4/817 (0.5%) | 2.05 | 21/1088 (1.9%) |
| 18 | AR | 1.50 | 2/724 (0.3%) | 2.03 | 16/966 (1.7%) |
| 19 | AS | 1.50 | 4/659 (0.6%) | 2.09 | 14/884 (1.6%) |
| 20 | AT | 1.46 | 2/681 (0.3%) | 2.02 | 24/913 (2.6%) |
| 21 | AU | 1.68 | 6/637 (0.9%) | 2.13 | 28/851 (3.3%) |
| 22 | AV | 1.44 | 3/744 (0.4%) | 1.80 | 16/995 (1.6%) |
| 23 | AW | 1.44 | 0/676 | 1.87 | 16/895 (1.8%) |
| 24 | AX | 1.54 | 3/598 (0.5%) | 2.37 | 30/792 (3.8%) |
| 25 | BA | 2.99 | 281/2869 (9.8%) | 3.51 | 651/4474 (14.6%) |
| 26 | BB | 3.08 | 7353/69257 (10.6%) | 3.54 | 15900/108040 (14.7%) |
| 27 | BC | 1.44 | 5/1748 (0.3%) | 1.89 | 32/2355 (1.4%) |
| 28 | BD | 1.55 | 11/2131 (0.5%) | 1.90 | 52/2863 (1.8%) |
| 29 | BE | 1.44 | 3/1586 (0.2%) | 1.91 | 40/2134 (1.9%) |
| 30 | BF | 1.46 | 7/1571 (0.4%) | 1.94 | 37/2113 (1.8%) |
| 31 | BG | 1.58 | 11/1444 (0.8%) | 2.03 | 47/1937 (2.4%) |

| Mol | Chain | Bond lengths | | Bond angles | |
|---|---|---|---|---|---|
| | | RMSZ | #\|Z\| >5 | RMSZ | #\|Z\| >5 |
| 32 | BH | 1.57 | 11/1343 (0.8%) | 1.89 | 39/1816 (2.1%) |
| 33 | BI | 1.56 | 7/1122 (0.6%) | 1.83 | 20/1515 (1.3%) |
| 34 | BJ | 1.49 | 3/1247 (0.2%) | 1.95 | 37/1679 (2.2%) |
| 35 | BK | 1.46 | 3/1046 (0.3%) | 1.85 | 17/1410 (1.2%) |
| 36 | BL | 1.48 | 6/1152 (0.5%) | 1.94 | 27/1551 (1.7%) |
| 37 | BM | 1.49 | 3/956 (0.3%) | 2.06 | 24/1279 (1.9%) |
| 38 | BN | 1.52 | 5/1062 (0.5%) | 1.88 | 26/1413 (1.8%) |
| 39 | BO | 1.49 | 4/1093 (0.4%) | 1.95 | 25/1460 (1.7%) |
| 40 | BP | 1.52 | 4/1021 (0.4%) | 2.12 | 32/1364 (2.3%) |
| 41 | BQ | 1.54 | 4/910 (0.4%) | 1.99 | 23/1219 (1.9%) |
| 42 | BR | 1.55 | 5/929 (0.5%) | 1.93 | 26/1242 (2.1%) |
| 43 | BS | 1.57 | 10/960 (1.0%) | 2.05 | 33/1278 (2.6%) |
| 44 | BT | 1.50 | 3/829 (0.4%) | 1.84 | 16/1107 (1.4%) |
| 45 | BU | 1.49 | 1/864 (0.1%) | 1.95 | 26/1156 (2.2%) |
| 46 | BV | 1.54 | 3/794 (0.4%) | 1.91 | 18/1060 (1.7%) |
| 47 | BW | 1.53 | 1/797 (0.1%) | 1.83 | 15/1062 (1.4%) |
| 48 | BX | 1.46 | 3/766 (0.4%) | 1.89 | 22/1025 (2.1%) |
| 49 | BY | 1.57 | 4/642 (0.6%) | 2.03 | 20/848 (2.4%) |
| 50 | BZ | 1.58 | 2/635 (0.3%) | 1.97 | 14/848 (1.7%) |
| 51 | B0 | 1.43 | 1/510 (0.2%) | 2.10 | 9/677 (1.3%) |
| 52 | B1 | 1.40 | 0/453 | 2.08 | 9/605 (1.5%) |
| 53 | B2 | 1.45 | 1/559 (0.2%) | 2.02 | 17/745 (2.3%) |
| 54 | B3 | 1.52 | 4/450 (0.9%) | 1.89 | 10/599 (1.7%) |
| 55 | B4 | 1.48 | 0/448 | 1.91 | 6/594 (1.0%) |
| 56 | B5 | 1.65 | 1/380 (0.3%) | 2.10 | 13/498 (2.6%) |
| 57 | B6 | 1.47 | 0/513 | 1.90 | 7/676 (1.0%) |
| 58 | B7 | 1.51 | 2/303 (0.7%) | 2.07 | 8/397 (2.0%) |
| All | All | 2.69 | 12164/164069 (7.4%) | 3.18 | 27220/244735 (11.1%) |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|---|---|---|---|
| 1 | AA | 0 | 881 |
| 2 | AB | 0 | 40 |
| 3 | AC | 0 | 28 |
| 4 | AD | 0 | 42 |
| 5 | AE | 0 | 3 |
| 6 | AF | 0 | 11 |
| 7 | AG | 0 | 6 |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|---|---|---|---|
| 8 | AH | 0 | 2 |
| 9 | AI | 0 | 4 |
| 10 | AJ | 0 | 4 |
| 11 | AK | 0 | 2 |
| 12 | AL | 0 | 2 |
| 14 | AN | 0 | 3 |
| 15 | AO | 0 | 4 |
| 16 | AP | 0 | 1 |
| 17 | AQ | 0 | 4 |
| 18 | AR | 0 | 1 |
| 19 | AS | 0 | 2 |
| 20 | AT | 0 | 1 |
| 21 | AU | 0 | 3 |
| 22 | AV | 0 | 2 |
| 23 | AW | 0 | 1 |
| 24 | AX | 0 | 2 |
| 25 | BA | 0 | 75 |
| 26 | BB | 0 | 1720 |
| 27 | BC | 0 | 2 |
| 28 | BD | 0 | 9 |
| 29 | BE | 0 | 4 |
| 30 | BF | 0 | 3 |
| 31 | BG | 0 | 6 |
| 32 | BH | 0 | 3 |
| 33 | BI | 0 | 1 |
| 34 | BJ | 0 | 5 |
| 35 | BK | 0 | 3 |
| 36 | BL | 0 | 2 |
| 37 | BM | 0 | 5 |
| 38 | BN | 0 | 2 |
| 39 | BO | 0 | 3 |
| 40 | BP | 0 | 4 |
| 41 | BQ | 0 | 6 |
| 42 | BR | 0 | 4 |
| 43 | BS | 0 | 6 |
| 44 | BT | 0 | 4 |
| 45 | BU | 0 | 5 |
| 46 | BV | 0 | 2 |
| 48 | BX | 0 | 4 |
| 49 | BY | 0 | 5 |
| 50 | BZ | 0 | 2 |
| 51 | B0 | 0 | 1 |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|---|---|---|---|
| 52 | B1 | 0 | 1 |
| 53 | B2 | 0 | 4 |
| 54 | B3 | 0 | 1 |
| 55 | B4 | 0 | 4 |
| 56 | B5 | 0 | 2 |
| 57 | B6 | 0 | 2 |
| All | All | 0 | 2949 |

All (12164) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 659 | G | N7-C5 | 18.05 | 1.50 | 1.39 |
| 26 | BB | 2104 | C | P-O5' | 17.37 | 1.77 | 1.59 |
| 26 | BB | 2168 | G | N7-C5 | 16.73 | 1.49 | 1.39 |
| 26 | BB | 268 | C | N1-C6 | 16.25 | 1.47 | 1.37 |
| 1 | AA | 1072 | G | P-O5' | 16.08 | 1.75 | 1.59 |
| 26 | BB | 1279 | G | N7-C5 | 15.66 | 1.48 | 1.39 |
| 1 | AA | 743 | A | N3-C4 | 15.12 | 1.44 | 1.34 |
| 1 | AA | 879 | C | N3-C4 | 15.05 | 1.44 | 1.33 |
| 1 | AA | 223 | A | N3-C4 | 14.81 | 1.43 | 1.34 |
| 26 | BB | 2633 | G | N7-C5 | 14.80 | 1.48 | 1.39 |
| 26 | BB | 1922 | G | P-O5' | 14.61 | 1.74 | 1.59 |
| 26 | BB | 1174 | U | C2-N3 | 14.52 | 1.48 | 1.37 |
| 26 | BB | 613 | A | N9-C4 | 14.43 | 1.46 | 1.37 |
| 25 | BA | 98 | G | N3-C4 | 14.23 | 1.45 | 1.35 |
| 4 | AD | 70 | C | N1-C6 | 14.16 | 1.45 | 1.37 |
| 26 | BB | 577 | G | N7-C5 | 14.16 | 1.47 | 1.39 |
| 26 | BB | 2887 | A | N3-C4 | 14.13 | 1.43 | 1.34 |
| 1 | AA | 123 | U | C2-N3 | 14.12 | 1.47 | 1.37 |
| 1 | AA | 1036 | A | N3-C4 | 13.72 | 1.43 | 1.34 |
| 26 | BB | 896 | A | N9-C8 | -13.71 | 1.26 | 1.37 |
| 26 | BB | 744 | U | P-O5' | 13.69 | 1.73 | 1.59 |
| 26 | BB | 1365 | A | N3-C4 | 13.66 | 1.43 | 1.34 |
| 26 | BB | 793 | A | N3-C4 | 13.61 | 1.43 | 1.34 |
| 1 | AA | 1535 | C | N1-C6 | 13.60 | 1.45 | 1.37 |
| 26 | BB | 2850 | A | N3-C4 | 13.60 | 1.43 | 1.34 |
| 26 | BB | 1733 | G | N9-C8 | -13.56 | 1.28 | 1.37 |
| 26 | BB | 2782 | G | N9-C8 | 13.49 | 1.47 | 1.37 |
| 26 | BB | 2861 | U | C2-N3 | 13.41 | 1.47 | 1.37 |
| 1 | AA | 1188 | A | P-O5' | 13.41 | 1.73 | 1.59 |
| 26 | BB | 801 | G | N7-C5 | 13.38 | 1.47 | 1.39 |
| 1 | AA | 1508 | A | N3-C4 | 13.28 | 1.42 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2675 | A | N3-C4 | 13.24 | 1.42 | 1.34 |
| 1 | AA | 510 | A | N3-C4 | 13.20 | 1.42 | 1.34 |
| 1 | AA | 901 | A | C6-N1 | -13.16 | 1.26 | 1.35 |
| 26 | BB | 1629 | U | C2-N3 | 13.14 | 1.47 | 1.37 |
| 1 | AA | 1133 | G | C6-N1 | 13.12 | 1.48 | 1.39 |
| 26 | BB | 2290 | G | N9-C8 | -13.09 | 1.28 | 1.37 |
| 26 | BB | 1702 | G | P-O5' | 13.01 | 1.72 | 1.59 |
| 1 | AA | 467 | U | P-O5' | 12.94 | 1.72 | 1.59 |
| 26 | BB | 472 | A | N3-C4 | 12.91 | 1.42 | 1.34 |
| 1 | AA | 1351 | U | C2-N3 | -12.90 | 1.28 | 1.37 |
| 26 | BB | 2256 | G | N3-C4 | 12.86 | 1.44 | 1.35 |
| 1 | AA | 1473 | G | N7-C5 | -12.85 | 1.31 | 1.39 |
| 1 | AA | 122 | G | N3-C4 | 12.83 | 1.44 | 1.35 |
| 1 | AA | 217 | C | N1-C6 | 12.83 | 1.44 | 1.37 |
| 26 | BB | 2020 | A | P-O5' | 12.82 | 1.72 | 1.59 |
| 1 | AA | 419 | C | P-O5' | 12.80 | 1.72 | 1.59 |
| 26 | BB | 2260 | C | P-O5' | 12.78 | 1.72 | 1.59 |
| 26 | BB | 361 | G | N1-C2 | -12.76 | 1.27 | 1.37 |
| 26 | BB | 1459 | G | N7-C5 | 12.75 | 1.46 | 1.39 |
| 1 | AA | 554 | A | N3-C4 | 12.74 | 1.42 | 1.34 |
| 26 | BB | 2491 | U | C2-N3 | 12.74 | 1.46 | 1.37 |
| 26 | BB | 2699 | C | P-O5' | 12.70 | 1.72 | 1.59 |
| 26 | BB | 1417 | C | N1-C6 | 12.68 | 1.44 | 1.37 |
| 1 | AA | 681 | A | C6-N1 | 12.66 | 1.44 | 1.35 |
| 26 | BB | 2750 | A | P-O5' | 12.65 | 1.72 | 1.59 |
| 26 | BB | 911 | A | N3-C4 | 12.61 | 1.42 | 1.34 |
| 26 | BB | 1403 | A | N3-C4 | 12.59 | 1.42 | 1.34 |
| 26 | BB | 2677 | G | O3'-P | 12.57 | 1.76 | 1.61 |
| 26 | BB | 1080 | A | N3-C4 | 12.54 | 1.42 | 1.34 |
| 1 | AA | 1499 | A | N9-C4 | 12.53 | 1.45 | 1.37 |
| 1 | AA | 805 | C | N1-C6 | 12.52 | 1.44 | 1.37 |
| 1 | AA | 1183 | U | C2-N3 | 12.51 | 1.46 | 1.37 |
| 26 | BB | 994 | C | N1-C6 | -12.49 | 1.29 | 1.37 |
| 26 | BB | 342 | A | N3-C4 | 12.44 | 1.42 | 1.34 |
| 26 | BB | 519 | U | P-O5' | 12.39 | 1.72 | 1.59 |
| 1 | AA | 237 | G | N3-C4 | 12.39 | 1.44 | 1.35 |
| 1 | AA | 1522 | U | P-O5' | 12.34 | 1.72 | 1.59 |
| 26 | BB | 1609 | A | N3-C4 | 12.34 | 1.42 | 1.34 |
| 1 | AA | 861 | G | C5-C4 | -12.34 | 1.29 | 1.38 |
| 26 | BB | 404 | A | P-O5' | 12.32 | 1.72 | 1.59 |
| 26 | BB | 2648 | G | P-O5' | 12.31 | 1.72 | 1.59 |
| 1 | AA | 1045 | C | P-O5' | 12.29 | 1.72 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2862 | G | C6-N1 | 12.27 | 1.48 | 1.39 |
| 26 | BB | 783 | A | N3-C4 | 12.23 | 1.42 | 1.34 |
| 26 | BB | 2252 | G | C8-N7 | -12.16 | 1.23 | 1.30 |
| 26 | BB | 2318 | G | N3-C4 | 12.16 | 1.44 | 1.35 |
| 26 | BB | 1814 | G | P-O5' | 12.14 | 1.71 | 1.59 |
| 26 | BB | 1646 | C | N3-C4 | 12.14 | 1.42 | 1.33 |
| 26 | BB | 508 | A | N3-C4 | 12.14 | 1.42 | 1.34 |
| 1 | AA | 778 | G | C6-N1 | 12.12 | 1.48 | 1.39 |
| 26 | BB | 1949 | G | C6-N1 | 12.11 | 1.48 | 1.39 |
| 25 | BA | 36 | C | N1-C6 | 12.01 | 1.44 | 1.37 |
| 25 | BA | 48 | U | C2-N3 | 11.99 | 1.46 | 1.37 |
| 1 | AA | 1332 | A | N7-C5 | -11.98 | 1.32 | 1.39 |
| 26 | BB | 2031 | A | N3-C4 | 11.97 | 1.42 | 1.34 |
| 26 | BB | 172 | A | N3-C4 | 11.96 | 1.42 | 1.34 |
| 1 | AA | 607 | A | N9-C4 | 11.95 | 1.45 | 1.37 |
| 1 | AA | 1204 | A | N3-C4 | 11.96 | 1.42 | 1.34 |
| 26 | BB | 2587 | A | N3-C4 | 11.94 | 1.42 | 1.34 |
| 1 | AA | 1487 | G | N7-C5 | 11.90 | 1.46 | 1.39 |
| 26 | BB | 2389 | G | C8-N7 | -11.89 | 1.23 | 1.30 |
| 26 | BB | 2077 | A | N3-C4 | 11.89 | 1.42 | 1.34 |
| 26 | BB | 2806 | C | N1-C6 | 11.89 | 1.44 | 1.37 |
| 1 | AA | 475 | C | P-O5' | 11.86 | 1.71 | 1.59 |
| 1 | AA | 340 | U | C2-N3 | 11.85 | 1.46 | 1.37 |
| 26 | BB | 504 | A | N9-C4 | 11.83 | 1.45 | 1.37 |
| 4 | AD | 69 | C | N3-C4 | 11.83 | 1.42 | 1.33 |
| 26 | BB | 2441 | U | N1-C2 | 11.81 | 1.49 | 1.38 |
| 1 | AA | 72 | A | N7-C5 | 11.80 | 1.46 | 1.39 |
| 4 | AD | 16 | C | N3-C4 | 11.78 | 1.42 | 1.33 |
| 26 | BB | 582 | A | C6-N1 | -11.78 | 1.27 | 1.35 |
| 26 | BB | 1131 | G | P-O5' | -11.76 | 1.48 | 1.59 |
| 26 | BB | 76 | C | N1-C6 | 11.71 | 1.44 | 1.37 |
| 26 | BB | 1315 | C | P-O5' | 11.71 | 1.71 | 1.59 |
| 26 | BB | 57 | C | N1-C6 | 11.71 | 1.44 | 1.37 |
| 1 | AA | 1347 | G | C8-N7 | -11.70 | 1.24 | 1.30 |
| 26 | BB | 2359 | C | P-O5' | 11.69 | 1.71 | 1.59 |
| 26 | BB | 2452 | C | N1-C6 | 11.68 | 1.44 | 1.37 |
| 1 | AA | 113 | G | C2-N3 | 11.68 | 1.42 | 1.32 |
| 26 | BB | 720 | U | C2-O2 | -11.67 | 1.11 | 1.22 |
| 1 | AA | 1479 | C | P-O5' | 11.66 | 1.71 | 1.59 |
| 1 | AA | 335 | C | N1-C6 | -11.66 | 1.30 | 1.37 |
| 26 | BB | 1746 | A | N3-C4 | 11.66 | 1.41 | 1.34 |
| 1 | AA | 568 | G | N7-C5 | -11.65 | 1.32 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 703 | G | N3-C4 | 11.65 | 1.43 | 1.35 |
| 1 | AA | 1433 | A | N3-C4 | 11.64 | 1.41 | 1.34 |
| 26 | BB | 1633 | G | C8-N7 | -11.64 | 1.24 | 1.30 |
| 1 | AA | 1201 | A | N9-C4 | -11.64 | 1.30 | 1.37 |
| 26 | BB | 406 | G | N7-C5 | -11.64 | 1.32 | 1.39 |
| 26 | BB | 1837 | C | N1-C6 | 11.63 | 1.44 | 1.37 |
| 26 | BB | 2490 | G | N3-C4 | 11.63 | 1.43 | 1.35 |
| 26 | BB | 2846 | G | N3-C4 | 11.63 | 1.43 | 1.35 |
| 26 | BB | 2112 | G | C8-N7 | 11.62 | 1.38 | 1.30 |
| 26 | BB | 2399 | G | C5-C4 | 11.61 | 1.46 | 1.38 |
| 26 | BB | 892 | A | N9-C8 | 11.61 | 1.47 | 1.37 |
| 26 | BB | 562 | U | C2-N3 | 11.61 | 1.45 | 1.37 |
| 26 | BB | 1817 | G | P-O5' | 11.60 | 1.71 | 1.59 |
| 26 | BB | 1585 | C | N1-C6 | 11.59 | 1.44 | 1.37 |
| 1 | AA | 845 | A | P-O5' | 11.59 | 1.71 | 1.59 |
| 26 | BB | 1796 | U | N1-C2 | 11.58 | 1.49 | 1.38 |
| 26 | BB | 1465 | G | C6-N1 | 11.57 | 1.47 | 1.39 |
| 26 | BB | 2115 | G | N9-C8 | 11.56 | 1.46 | 1.37 |
| 26 | BB | 2358 | A | P-O5' | 11.55 | 1.71 | 1.59 |
| 1 | AA | 60 | A | N3-C4 | 11.55 | 1.41 | 1.34 |
| 26 | BB | 516 | C | C5-C6 | 11.54 | 1.43 | 1.34 |
| 26 | BB | 808 | G | N9-C8 | 11.53 | 1.46 | 1.37 |
| 26 | BB | 1602 | U | C2-N3 | 11.52 | 1.45 | 1.37 |
| 1 | AA | 861 | G | P-O5' | 11.52 | 1.71 | 1.59 |
| 1 | AA | 715 | A | N9-C4 | 11.49 | 1.44 | 1.37 |
| 1 | AA | 548 | G | N9-C8 | 11.48 | 1.45 | 1.37 |
| 1 | AA | 48 | C | N3-C4 | 11.48 | 1.42 | 1.33 |
| 26 | BB | 919 | U | C2-N3 | 11.47 | 1.45 | 1.37 |
| 26 | BB | 1563 | U | P-O5' | 11.47 | 1.71 | 1.59 |
| 1 | AA | 1280 | A | N7-C5 | -11.46 | 1.32 | 1.39 |
| 1 | AA | 1153 | G | C6-N1 | 11.45 | 1.47 | 1.39 |
| 26 | BB | 2464 | G | N3-C4 | 11.45 | 1.43 | 1.35 |
| 1 | AA | 909 | A | N7-C5 | 11.43 | 1.46 | 1.39 |
| 1 | AA | 1350 | A | N9-C4 | 11.43 | 1.44 | 1.37 |
| 26 | BB | 778 | G | C8-N7 | -11.42 | 1.24 | 1.30 |
| 1 | AA | 646 | G | N7-C5 | 11.41 | 1.46 | 1.39 |
| 26 | BB | 364 | C | C2-N3 | 11.41 | 1.44 | 1.35 |
| 26 | BB | 519 | U | C2-N3 | 11.41 | 1.45 | 1.37 |
| 26 | BB | 1439 | A | N9-C4 | 11.41 | 1.44 | 1.37 |
| 1 | AA | 1164 | G | N7-C5 | -11.40 | 1.32 | 1.39 |
| 26 | BB | 1913 | A | N9-C8 | -11.40 | 1.28 | 1.37 |
| 26 | BB | 1526 | C | N1-C6 | 11.37 | 1.44 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 969 | A | P-O5' | 11.36 | 1.71 | 1.59 |
| 26 | BB | 114 | U | C2-N3 | 11.36 | 1.45 | 1.37 |
| 1 | AA | 263 | A | C6-N1 | -11.35 | 1.27 | 1.35 |
| 1 | AA | 146 | G | P-O5' | 11.35 | 1.71 | 1.59 |
| 1 | AA | 411 | A | N9-C4 | -11.34 | 1.31 | 1.37 |
| 26 | BB | 1700 | A | N9-C4 | 11.34 | 1.44 | 1.37 |
| 1 | AA | 598 | U | C2-N3 | 11.31 | 1.45 | 1.37 |
| 26 | BB | 1858 | A | N7-C5 | -11.29 | 1.32 | 1.39 |
| 26 | BB | 2318 | G | C8-N7 | 11.28 | 1.37 | 1.30 |
| 1 | AA | 1023 | U | C2-N3 | -11.27 | 1.29 | 1.37 |
| 26 | BB | 1560 | G | N9-C8 | 11.27 | 1.45 | 1.37 |
| 3 | AC | 32 | U | P-O5' | 11.27 | 1.71 | 1.59 |
| 26 | BB | 1228 | G | N3-C4 | 11.25 | 1.43 | 1.35 |
| 26 | BB | 2436 | G | C6-N1 | 11.25 | 1.47 | 1.39 |
| 1 | AA | 705 | G | P-O5' | 11.24 | 1.71 | 1.59 |
| 26 | BB | 1581 | G | N3-C4 | 11.22 | 1.43 | 1.35 |
| 1 | AA | 900 | A | N3-C4 | 11.21 | 1.41 | 1.34 |
| 26 | BB | 1965 | C | N1-C6 | 11.21 | 1.43 | 1.37 |
| 26 | BB | 2416 | C | P-O5' | 11.21 | 1.71 | 1.59 |
| 26 | BB | 297 | G | P-O5' | 11.20 | 1.71 | 1.59 |
| 26 | BB | 2761 | A | C6-N1 | 11.20 | 1.43 | 1.35 |
| 26 | BB | 1118 | C | P-O5' | 11.19 | 1.71 | 1.59 |
| 26 | BB | 2307 | G | C2-N3 | 11.19 | 1.41 | 1.32 |
| 26 | BB | 1930 | G | P-O5' | 11.19 | 1.71 | 1.59 |
| 1 | AA | 447 | G | N3-C4 | 11.19 | 1.43 | 1.35 |
| 26 | BB | 820 | A | P-O5' | 11.18 | 1.71 | 1.59 |
| 26 | BB | 1305 | C | N1-C6 | 11.17 | 1.43 | 1.37 |
| 25 | BA | 29 | A | O3'-P | 11.16 | 1.74 | 1.61 |
| 1 | AA | 1530 | G | C8-N7 | -11.16 | 1.24 | 1.30 |
| 26 | BB | 2289 | G | N3-C4 | 11.15 | 1.43 | 1.35 |
| 1 | AA | 655 | A | N7-C5 | -11.14 | 1.32 | 1.39 |
| 1 | AA | 116 | A | N3-C4 | 11.14 | 1.41 | 1.34 |
| 26 | BB | 2079 | U | C2-N3 | 11.14 | 1.45 | 1.37 |
| 1 | AA | 569 | C | P-O5' | 11.13 | 1.70 | 1.59 |
| 2 | AB | 49 | G | C2-N3 | 11.12 | 1.41 | 1.32 |
| 26 | BB | 2760 | C | C2-N3 | 11.11 | 1.44 | 1.35 |
| 1 | AA | 706 | A | N9-C4 | -11.11 | 1.31 | 1.37 |
| 1 | AA | 782 | A | N3-C4 | 11.10 | 1.41 | 1.34 |
| 1 | AA | 1352 | C | C4-C5 | 11.08 | 1.51 | 1.43 |
| 26 | BB | 844 | A | N9-C4 | -11.08 | 1.31 | 1.37 |
| 2 | AB | 38 | A | N9-C4 | 11.08 | 1.44 | 1.37 |
| 26 | BB | 2670 | A | N3-C4 | 11.07 | 1.41 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 64 | U | C2-N3 | 11.06 | 1.45 | 1.37 |
| 26 | BB | 1593 | A | P-O5' | 11.06 | 1.70 | 1.59 |
| 1 | AA | 36 | C | N1-C6 | -11.05 | 1.30 | 1.37 |
| 26 | BB | 1786 | A | N3-C4 | 11.04 | 1.41 | 1.34 |
| 1 | AA | 275 | G | C8-N7 | 11.04 | 1.37 | 1.30 |
| 26 | BB | 2799 | A | N7-C5 | -11.03 | 1.32 | 1.39 |
| 1 | AA | 1153 | G | C2-N3 | 11.02 | 1.41 | 1.32 |
| 4 | AD | 31 | G | N7-C5 | 11.02 | 1.45 | 1.39 |
| 26 | BB | 2135 | A | N9-C4 | -11.01 | 1.31 | 1.37 |
| 26 | BB | 730 | A | N3-C4 | 10.98 | 1.41 | 1.34 |
| 26 | BB | 2731 | G | N7-C5 | -10.98 | 1.32 | 1.39 |
| 1 | AA | 1168 | U | C4-C5 | 10.97 | 1.53 | 1.43 |
| 1 | AA | 1533 | C | N1-C6 | 10.96 | 1.43 | 1.37 |
| 26 | BB | 1432 | G | N1-C2 | 10.96 | 1.46 | 1.37 |
| 1 | AA | 329 | A | N9-C4 | 10.95 | 1.44 | 1.37 |
| 1 | AA | 189 | A | N3-C4 | 10.94 | 1.41 | 1.34 |
| 26 | BB | 768 | G | N7-C5 | 10.94 | 1.45 | 1.39 |
| 26 | BB | 1387 | A | C8-N7 | -10.93 | 1.23 | 1.31 |
| 1 | AA | 403 | C | N1-C6 | 10.92 | 1.43 | 1.37 |
| 26 | BB | 155 | A | N7-C5 | -10.92 | 1.32 | 1.39 |
| 1 | AA | 453 | G | N7-C5 | 10.92 | 1.45 | 1.39 |
| 26 | BB | 574 | A | N3-C4 | 10.91 | 1.41 | 1.34 |
| 26 | BB | 160 | A | P-O5' | 10.90 | 1.70 | 1.59 |
| 1 | AA | 964 | A | N7-C5 | 10.90 | 1.45 | 1.39 |
| 26 | BB | 968 | C | C4-C5 | 10.90 | 1.51 | 1.43 |
| 26 | BB | 710 | U | C2-N3 | 10.89 | 1.45 | 1.37 |
| 1 | AA | 745 | G | N3-C4 | 10.88 | 1.43 | 1.35 |
| 2 | AB | 5 | G | N7-C5 | 10.88 | 1.45 | 1.39 |
| 26 | BB | 37 | C | P-O5' | 10.87 | 1.70 | 1.59 |
| 1 | AA | 558 | G | C8-N7 | -10.86 | 1.24 | 1.30 |
| 26 | BB | 862 | G | C5'-C4' | 10.86 | 1.64 | 1.51 |
| 26 | BB | 2146 | C | N1-C6 | 10.85 | 1.43 | 1.37 |
| 1 | AA | 768 | A | N9-C4 | -10.85 | 1.31 | 1.37 |
| 26 | BB | 2164 | C | N3-C4 | -10.85 | 1.26 | 1.33 |
| 26 | BB | 1114 | C | C4'-O4' | -10.84 | 1.31 | 1.45 |
| 26 | BB | 2 | G | N7-C5 | -10.84 | 1.32 | 1.39 |
| 26 | BB | 26 | G | N7-C5 | 10.83 | 1.45 | 1.39 |
| 26 | BB | 782 | A | N7-C5 | 10.81 | 1.45 | 1.39 |
| 26 | BB | 1749 | A | N3-C4 | 10.81 | 1.41 | 1.34 |
| 1 | AA | 811 | C | N3-C4 | 10.81 | 1.41 | 1.33 |
| 26 | BB | 2623 | G | P-O5' | 10.81 | 1.70 | 1.59 |
| 26 | BB | 266 | G | O3'-P | 10.80 | 1.74 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2892 | G | C8-N7 | 10.80 | 1.37 | 1.30 |
| 25 | BA | 96 | G | C6-N1 | -10.79 | 1.31 | 1.39 |
| 26 | BB | 712 | G | C2-N3 | 10.78 | 1.41 | 1.32 |
| 1 | AA | 383 | A | C8-N7 | -10.78 | 1.24 | 1.31 |
| 26 | BB | 858 | G | C8-N7 | -10.77 | 1.24 | 1.30 |
| 26 | BB | 2640 | G | C5-C4 | -10.77 | 1.30 | 1.38 |
| 26 | BB | 1301 | A | P-O5' | 10.77 | 1.70 | 1.59 |
| 26 | BB | 1695 | G | C2'-O2' | -10.76 | 1.27 | 1.41 |
| 26 | BB | 54 | G | C6-N1 | 10.76 | 1.47 | 1.39 |
| 26 | BB | 2533 | U | C2-N3 | 10.74 | 1.45 | 1.37 |
| 1 | AA | 918 | A | N9-C8 | -10.73 | 1.29 | 1.37 |
| 26 | BB | 647 | G | C2-N3 | 10.72 | 1.41 | 1.32 |
| 1 | AA | 462 | G | C8-N7 | -10.71 | 1.24 | 1.30 |
| 26 | BB | 602 | A | N3-C4 | 10.72 | 1.41 | 1.34 |
| 26 | BB | 598 | U | P-O5' | 10.71 | 1.70 | 1.59 |
| 26 | BB | 761 | A | P-O5' | 10.71 | 1.70 | 1.59 |
| 26 | BB | 799 | G | C8-N7 | -10.71 | 1.24 | 1.30 |
| 26 | BB | 2111 | U | C2-N3 | 10.71 | 1.45 | 1.37 |
| 1 | AA | 1083 | U | N3-C4 | 10.70 | 1.48 | 1.38 |
| 26 | BB | 2803 | G | N9-C8 | -10.69 | 1.30 | 1.37 |
| 1 | AA | 1521 | C | O3'-P | 10.69 | 1.74 | 1.61 |
| 26 | BB | 375 | G | P-O5' | 10.69 | 1.70 | 1.59 |
| 26 | BB | 2430 | A | N3-C4 | 10.68 | 1.41 | 1.34 |
| 1 | AA | 629 | A | O3'-P | 10.68 | 1.74 | 1.61 |
| 1 | AA | 215 | C | N1-C6 | 10.67 | 1.43 | 1.37 |
| 26 | BB | 1983 | G | C2-N3 | 10.67 | 1.41 | 1.32 |
| 26 | BB | 1416 | G | C2-N3 | 10.65 | 1.41 | 1.32 |
| 1 | AA | 1399 | C | N3-C4 | 10.63 | 1.41 | 1.33 |
| 26 | BB | 2510 | C | O3'-P | 10.63 | 1.74 | 1.61 |
| 26 | BB | 925 | A | N7-C5 | 10.63 | 1.45 | 1.39 |
| 26 | BB | 1142 | A | N3-C4 | 10.63 | 1.41 | 1.34 |
| 26 | BB | 2376 | A | N3-C4 | 10.63 | 1.41 | 1.34 |
| 26 | BB | 2808 | G | N1-C2 | 10.63 | 1.46 | 1.37 |
| 26 | BB | 667 | U | P-O5' | 10.63 | 1.70 | 1.59 |
| 1 | AA | 530 | G | C8-N7 | -10.62 | 1.24 | 1.30 |
| 25 | BA | 61 | G | O3'-P | 10.62 | 1.73 | 1.61 |
| 26 | BB | 599 | A | N9-C4 | 10.62 | 1.44 | 1.37 |
| 1 | AA | 240 | G | C6-N1 | 10.61 | 1.47 | 1.39 |
| 26 | BB | 1460 | U | C2-N3 | -10.61 | 1.30 | 1.37 |
| 1 | AA | 1078 | U | C4-O4 | -10.60 | 1.15 | 1.23 |
| 26 | BB | 1051 | G | C6-O6 | -10.60 | 1.14 | 1.24 |
| 26 | BB | 2013 | A | N7-C5 | 10.60 | 1.45 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2219 | U | P-O5' | -10.60 | 1.49 | 1.59 |
| 1 | AA | 289 | G | N3-C4 | 10.59 | 1.42 | 1.35 |
| 26 | BB | 305 | C | P-O5' | 10.58 | 1.70 | 1.59 |
| 1 | AA | 120 | A | N7-C5 | 10.57 | 1.45 | 1.39 |
| 1 | AA | 971 | G | N3-C4 | 10.57 | 1.42 | 1.35 |
| 26 | BB | 10 | A | N3-C4 | 10.57 | 1.41 | 1.34 |
| 26 | BB | 2592 | G | C2-N3 | 10.57 | 1.41 | 1.32 |
| 25 | BA | 95 | U | C2-N3 | 10.57 | 1.45 | 1.37 |
| 26 | BB | 943 | A | N3-C4 | 10.56 | 1.41 | 1.34 |
| 2 | AB | 48 | U | P-O5' | 10.56 | 1.70 | 1.59 |
| 26 | BB | 481 | G | P-O5' | 10.55 | 1.70 | 1.59 |
| 26 | BB | 1966 | A | N3-C4 | 10.55 | 1.41 | 1.34 |
| 1 | AA | 1369 | C | N1-C6 | 10.55 | 1.43 | 1.37 |
| 26 | BB | 60 | G | N3-C4 | 10.54 | 1.42 | 1.35 |
| 26 | BB | 906 | U | P-O5' | 10.54 | 1.70 | 1.59 |
| 1 | AA | 315 | A | N3-C4 | 10.54 | 1.41 | 1.34 |
| 1 | AA | 243 | A | N3-C4 | 10.52 | 1.41 | 1.34 |
| 4 | AD | 13 | C | N1-C6 | 10.51 | 1.43 | 1.37 |
| 26 | BB | 656 | G | N3-C4 | 10.51 | 1.42 | 1.35 |
| 1 | AA | 373 | A | N7-C5 | -10.50 | 1.32 | 1.39 |
| 26 | BB | 1603 | A | P-O5' | 10.50 | 1.70 | 1.59 |
| 26 | BB | 2008 | C | C4'-O4' | -10.48 | 1.31 | 1.45 |
| 2 | AB | 34 | C | P-O5' | 10.48 | 1.70 | 1.59 |
| 4 | AD | 5 | G | C8-N7 | 10.48 | 1.37 | 1.30 |
| 1 | AA | 1387 | G | C8-N7 | -10.48 | 1.24 | 1.30 |
| 26 | BB | 2191 | A | N7-C5 | -10.48 | 1.32 | 1.39 |
| 1 | AA | 433 | G | N7-C5 | -10.47 | 1.32 | 1.39 |
| 1 | AA | 413 | G | N9-C8 | -10.47 | 1.30 | 1.37 |
| 26 | BB | 951 | C | N1-C6 | 10.46 | 1.43 | 1.37 |
| 1 | AA | 955 | U | C2-N3 | 10.46 | 1.45 | 1.37 |
| 26 | BB | 892 | A | N3-C4 | 10.45 | 1.41 | 1.34 |
| 26 | BB | 2472 | G | N7-C5 | 10.45 | 1.45 | 1.39 |
| 1 | AA | 208 | U | C2-N3 | 10.45 | 1.45 | 1.37 |
| 26 | BB | 1477 | A | C5-C4 | -10.45 | 1.31 | 1.38 |
| 1 | AA | 701 | U | P-O5' | 10.44 | 1.70 | 1.59 |
| 1 | AA | 1145 | A | N7-C5 | 10.44 | 1.45 | 1.39 |
| 26 | BB | 2720 | U | C2-N3 | 10.45 | 1.45 | 1.37 |
| 26 | BB | 2810 | A | N3-C4 | 10.45 | 1.41 | 1.34 |
| 2 | AB | 24 | G | N1-C2 | 10.44 | 1.46 | 1.37 |
| 26 | BB | 425 | G | N3-C4 | 10.44 | 1.42 | 1.35 |
| 26 | BB | 1660 | G | N7-C5 | 10.44 | 1.45 | 1.39 |
| 26 | BB | 1702 | G | C6-N1 | 10.44 | 1.46 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2696 | U | P-O5' | 10.43 | 1.70 | 1.59 |
| 26 | BB | 2724 | U | C4-C5 | 10.43 | 1.52 | 1.43 |
| 1 | AA | 649 | A | N9-C4 | 10.43 | 1.44 | 1.37 |
| 26 | BB | 426 | C | N1-C6 | 10.42 | 1.43 | 1.37 |
| 1 | AA | 1482 | G | C6-N1 | 10.41 | 1.46 | 1.39 |
| 25 | BA | 71 | C | N1-C6 | 10.39 | 1.43 | 1.37 |
| 26 | BB | 1098 | A | N3-C4 | 10.39 | 1.41 | 1.34 |
| 26 | BB | 449 | A | N9-C4 | -10.39 | 1.31 | 1.37 |
| 26 | BB | 2331 | G | N7-C5 | 10.38 | 1.45 | 1.39 |
| 26 | BB | 704 | G | C2-N3 | 10.38 | 1.41 | 1.32 |
| 26 | BB | 422 | A | C8-N7 | -10.37 | 1.24 | 1.31 |
| 1 | AA | 585 | G | C8-N7 | -10.37 | 1.24 | 1.30 |
| 26 | BB | 2662 | A | C6-N6 | 10.37 | 1.42 | 1.33 |
| 26 | BB | 2523 | G | N1-C2 | 10.37 | 1.46 | 1.37 |
| 26 | BB | 2843 | G | N1-C2 | 10.37 | 1.46 | 1.37 |
| 1 | AA | 338 | A | P-O5' | 10.36 | 1.70 | 1.59 |
| 26 | BB | 394 | C | N1-C6 | 10.36 | 1.43 | 1.37 |
| 1 | AA | 126 | G | N3-C4 | 10.35 | 1.42 | 1.35 |
| 26 | BB | 2373 | G | N9-C8 | 10.35 | 1.45 | 1.37 |
| 26 | BB | 652 | U | C5-C6 | 10.35 | 1.43 | 1.34 |
| 26 | BB | 2380 | C | N1-C6 | 10.34 | 1.43 | 1.37 |
| 26 | BB | 1424 | G | C6-N1 | 10.34 | 1.46 | 1.39 |
| 26 | BB | 1668 | A | P-O5' | 10.34 | 1.70 | 1.59 |
| 26 | BB | 2768 | U | O3'-P | 10.34 | 1.73 | 1.61 |
| 26 | BB | 88 | G | P-O5' | 10.33 | 1.70 | 1.59 |
| 1 | AA | 1197 | A | P-O5' | 10.33 | 1.70 | 1.59 |
| 1 | AA | 1465 | A | P-O5' | 10.33 | 1.70 | 1.59 |
| 2 | AB | 1 | A | N3-C4 | 10.33 | 1.41 | 1.34 |
| 26 | BB | 2381 | A | P-O5' | 10.33 | 1.70 | 1.59 |
| 26 | BB | 2136 | G | N7-C5 | 10.32 | 1.45 | 1.39 |
| 26 | BB | 1778 | U | N3-C4 | 10.31 | 1.47 | 1.38 |
| 26 | BB | 2125 | G | N3-C4 | 10.31 | 1.42 | 1.35 |
| 26 | BB | 259 | G | P-O5' | 10.31 | 1.70 | 1.59 |
| 1 | AA | 1041 | G | N3-C4 | 10.30 | 1.42 | 1.35 |
| 26 | BB | 1376 | C | N1-C6 | 10.29 | 1.43 | 1.37 |
| 26 | BB | 1373 | A | C5-C6 | 10.29 | 1.50 | 1.41 |
| 26 | BB | 466 | A | O3'-P | 10.28 | 1.73 | 1.61 |
| 26 | BB | 2550 | G | N9-C8 | 10.28 | 1.45 | 1.37 |
| 26 | BB | 2715 | C | N1-C6 | 10.28 | 1.43 | 1.37 |
| 26 | BB | 2549 | G | C8-N7 | -10.28 | 1.24 | 1.30 |
| 1 | AA | 6 | G | C2-N3 | 10.27 | 1.41 | 1.32 |
| 1 | AA | 771 | G | N1-C2 | 10.25 | 1.46 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 845 | A | N3-C4 | 10.25 | 1.41 | 1.34 |
| 1 | AA | 562 | U | C2-N3 | 10.24 | 1.45 | 1.37 |
| 26 | BB | 276 | U | C2-N3 | 10.24 | 1.45 | 1.37 |
| 26 | BB | 927 | A | N7-C5 | 10.24 | 1.45 | 1.39 |
| 4 | AD | 68 | C | C4'-C3' | 10.24 | 1.64 | 1.53 |
| 26 | BB | 2416 | C | C4-C5 | 10.23 | 1.51 | 1.43 |
| 26 | BB | 2860 | A | N7-C5 | -10.23 | 1.33 | 1.39 |
| 26 | BB | 2585 | U | C4-O4 | -10.23 | 1.15 | 1.23 |
| 26 | BB | 793 | A | N9-C4 | 10.22 | 1.44 | 1.37 |
| 26 | BB | 2113 | U | C2-N3 | 10.22 | 1.45 | 1.37 |
| 26 | BB | 2116 | G | C2-N3 | 10.22 | 1.41 | 1.32 |
| 1 | AA | 1273 | C | P-O5' | 10.22 | 1.70 | 1.59 |
| 26 | BB | 1567 | G | C4'-O4' | -10.21 | 1.32 | 1.45 |
| 1 | AA | 1069 | C | O3'-P | 10.21 | 1.73 | 1.61 |
| 26 | BB | 2344 | U | C4'-C3' | -10.20 | 1.42 | 1.53 |
| 26 | BB | 218 | A | P-O5' | 10.20 | 1.70 | 1.59 |
| 1 | AA | 979 | C | N3-C4 | 10.20 | 1.41 | 1.33 |
| 25 | BA | 6 | G | C6-N1 | 10.20 | 1.46 | 1.39 |
| 1 | AA | 1382 | C | C4-C5 | 10.19 | 1.51 | 1.43 |
| 1 | AA | 1229 | A | N7-C5 | -10.19 | 1.33 | 1.39 |
| 26 | BB | 1451 | C | C4-C5 | 10.19 | 1.51 | 1.43 |
| 1 | AA | 227 | G | C8-N7 | -10.18 | 1.24 | 1.30 |
| 1 | AA | 1353 | G | C6-N1 | 10.18 | 1.46 | 1.39 |
| 26 | BB | 742 | A | P-O5' | -10.18 | 1.49 | 1.59 |
| 26 | BB | 930 | G | C8-N7 | 10.18 | 1.37 | 1.30 |
| 26 | BB | 517 | C | N3-C4 | 10.17 | 1.41 | 1.33 |
| 4 | AD | 45 | A | P-O5' | 10.17 | 1.70 | 1.59 |
| 1 | AA | 1304 | G | N7-C5 | 10.16 | 1.45 | 1.39 |
| 26 | BB | 1083 | U | C2-N3 | 10.16 | 1.44 | 1.37 |
| 1 | AA | 109 | A | N3-C4 | 10.16 | 1.41 | 1.34 |
| 26 | BB | 2142 | A | N7-C5 | -10.15 | 1.33 | 1.39 |
| 26 | BB | 2851 | A | N3-C4 | 10.15 | 1.41 | 1.34 |
| 26 | BB | 2750 | A | N3-C4 | 10.15 | 1.41 | 1.34 |
| 4 | AD | 59 | A | N3-C4 | 10.14 | 1.41 | 1.34 |
| 1 | AA | 336 | A | N3-C4 | 10.13 | 1.41 | 1.34 |
| 1 | AA | 631 | C | C4-C5 | 10.13 | 1.51 | 1.43 |
| 26 | BB | 1723 | G | C4'-C3' | 10.13 | 1.64 | 1.53 |
| 1 | AA | 975 | A | C8-N7 | -10.13 | 1.24 | 1.31 |
| 26 | BB | 573 | U | P-O5' | 10.13 | 1.69 | 1.59 |
| 26 | BB | 1293 | C | N1-C6 | 10.13 | 1.43 | 1.37 |
| 26 | BB | 1768 | C | C4-C5 | 10.12 | 1.51 | 1.43 |
| 1 | AA | 1472 | U | C2-N3 | 10.12 | 1.44 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2176 | A | N3-C4 | 10.12 | 1.41 | 1.34 |
| 26 | BB | 2634 | A | N3-C4 | 10.12 | 1.41 | 1.34 |
| 26 | BB | 810 | U | C4-C5 | 10.11 | 1.52 | 1.43 |
| 1 | AA | 35 | G | C2-N3 | 10.11 | 1.40 | 1.32 |
| 26 | BB | 1738 | G | P-O5' | 10.11 | 1.69 | 1.59 |
| 26 | BB | 482 | A | N9-C4 | -10.11 | 1.31 | 1.37 |
| 26 | BB | 1906 | G | P-O5' | 10.10 | 1.69 | 1.59 |
| 26 | BB | 2131 | U | P-O5' | 10.10 | 1.69 | 1.59 |
| 26 | BB | 1772 | A | P-O5' | 10.09 | 1.69 | 1.59 |
| 26 | BB | 1654 | A | N9-C4 | -10.09 | 1.31 | 1.37 |
| 26 | BB | 1754 | A | N7-C5 | 10.09 | 1.45 | 1.39 |
| 26 | BB | 843 | G | C2-N3 | 10.09 | 1.40 | 1.32 |
| 26 | BB | 1107 | G | P-O5' | -10.09 | 1.49 | 1.59 |
| 4 | AD | 30 | G | N9-C8 | 10.08 | 1.45 | 1.37 |
| 26 | BB | 198 | C | P-O5' | 10.08 | 1.69 | 1.59 |
| 26 | BB | 1549 | A | C8-N7 | -10.08 | 1.24 | 1.31 |
| 26 | BB | 2856 | A | P-O5' | 10.08 | 1.69 | 1.59 |
| 26 | BB | 501 | A | C6-N6 | 10.08 | 1.42 | 1.33 |
| 1 | AA | 414 | A | P-O5' | 10.07 | 1.69 | 1.59 |
| 26 | BB | 1085 | A | C8-N7 | -10.07 | 1.24 | 1.31 |
| 25 | BA | 4 | C | C5-C6 | 10.07 | 1.42 | 1.34 |
| 3 | AC | 30 | U | P-O5' | 10.07 | 1.69 | 1.59 |
| 26 | BB | 435 | C | C5-C6 | 10.07 | 1.42 | 1.34 |
| 26 | BB | 460 | A | C8-N7 | -10.07 | 1.24 | 1.31 |
| 26 | BB | 859 | G | N7-C5 | -10.06 | 1.33 | 1.39 |
| 26 | BB | 489 | G | N3-C4 | 10.06 | 1.42 | 1.35 |
| 26 | BB | 611 | C | C4-C5 | 10.06 | 1.50 | 1.43 |
| 25 | BA | 21 | G | N7-C5 | 10.05 | 1.45 | 1.39 |
| 1 | AA | 943 | U | P-O5' | 10.05 | 1.69 | 1.59 |
| 26 | BB | 2581 | G | C4'-C3' | 10.04 | 1.64 | 1.53 |
| 26 | BB | 1934 | C | N3-C4 | 10.04 | 1.41 | 1.33 |
| 26 | BB | 749 | A | N7-C5 | -10.04 | 1.33 | 1.39 |
| 26 | BB | 945 | A | N3-C4 | 10.03 | 1.40 | 1.34 |
| 26 | BB | 2102 | G | N7-C5 | 10.03 | 1.45 | 1.39 |
| 1 | AA | 1206 | G | N3-C4 | 10.02 | 1.42 | 1.35 |
| 26 | BB | 664 | G | N3-C4 | 10.02 | 1.42 | 1.35 |
| 1 | AA | 941 | G | N9-C8 | -10.02 | 1.30 | 1.37 |
| 26 | BB | 1187 | G | N7-C5 | 10.02 | 1.45 | 1.39 |
| 26 | BB | 740 | C | C4-N4 | 10.01 | 1.43 | 1.33 |
| 1 | AA | 116 | A | N9-C4 | -10.01 | 1.31 | 1.37 |
| 26 | BB | 711 | G | C8-N7 | 10.01 | 1.36 | 1.30 |
| 1 | AA | 593 | U | C2-N3 | 10.01 | 1.44 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1590 | A | P-O5' | 10.00 | 1.69 | 1.59 |
| 1 | AA | 1475 | G | P-O5' | 9.99 | 1.69 | 1.59 |
| 26 | BB | 2320 | U | C2-N3 | 9.99 | 1.44 | 1.37 |
| 1 | AA | 355 | C | N3-C4 | 9.99 | 1.41 | 1.33 |
| 25 | BA | 37 | C | N1-C6 | 9.99 | 1.43 | 1.37 |
| 26 | BB | 2443 | C | N3-C4 | 9.99 | 1.41 | 1.33 |
| 26 | BB | 2550 | G | N1-C2 | 9.99 | 1.45 | 1.37 |
| 26 | BB | 1102 | C | N1-C6 | 9.98 | 1.43 | 1.37 |
| 26 | BB | 390 | U | N1-C2 | 9.98 | 1.47 | 1.38 |
| 26 | BB | 900 | A | N3-C4 | 9.98 | 1.40 | 1.34 |
| 26 | BB | 252 | G | N3-C4 | 9.97 | 1.42 | 1.35 |
| 26 | BB | 1100 | C | N1-C6 | 9.97 | 1.43 | 1.37 |
| 26 | BB | 1166 | G | N9-C8 | -9.96 | 1.30 | 1.37 |
| 2 | AB | 73 | G | P-O5' | 9.96 | 1.69 | 1.59 |
| 26 | BB | 243 | U | C2-N3 | 9.95 | 1.44 | 1.37 |
| 1 | AA | 358 | U | C2-N3 | 9.95 | 1.44 | 1.37 |
| 26 | BB | 53 | A | N3-C4 | 9.95 | 1.40 | 1.34 |
| 26 | BB | 1858 | A | C8-N7 | -9.95 | 1.24 | 1.31 |
| 1 | AA | 445 | G | N9-C8 | -9.95 | 1.30 | 1.37 |
| 26 | BB | 1848 | A | N7-C5 | -9.95 | 1.33 | 1.39 |
| 26 | BB | 2218 | G | C2-N3 | 9.95 | 1.40 | 1.32 |
| 26 | BB | 56 | A | N3-C4 | 9.94 | 1.40 | 1.34 |
| 26 | BB | 1261 | C | P-O5' | 9.94 | 1.69 | 1.59 |
| 25 | BA | 81 | G | C8-N7 | -9.93 | 1.25 | 1.30 |
| 1 | AA | 1473 | G | C2-N3 | 9.93 | 1.40 | 1.32 |
| 26 | BB | 1535 | A | C8-N7 | -9.93 | 1.24 | 1.31 |
| 1 | AA | 804 | U | C5'-C4' | 9.92 | 1.63 | 1.51 |
| 4 | AD | 40 | C | C2-N3 | 9.92 | 1.43 | 1.35 |
| 26 | BB | 1954 | G | N7-C5 | 9.91 | 1.45 | 1.39 |
| 26 | BB | 2526 | G | N9-C8 | 9.91 | 1.44 | 1.37 |
| 26 | BB | 2588 | G | N7-C5 | -9.91 | 1.33 | 1.39 |
| 1 | AA | 1396 | A | N3-C4 | 9.91 | 1.40 | 1.34 |
| 26 | BB | 21 | A | P-O5' | 9.90 | 1.69 | 1.59 |
| 26 | BB | 88 | G | N3-C4 | 9.90 | 1.42 | 1.35 |
| 26 | BB | 1057 | A | N7-C5 | 9.89 | 1.45 | 1.39 |
| 3 | AC | 40 | G | N1-C2 | 9.89 | 1.45 | 1.37 |
| 26 | BB | 411 | G | C4'-C3' | 9.89 | 1.64 | 1.53 |
| 26 | BB | 2308 | G | C6-N1 | 9.89 | 1.46 | 1.39 |
| 26 | BB | 359 | G | N9-C8 | 9.88 | 1.44 | 1.37 |
| 1 | AA | 415 | A | N3-C4 | 9.88 | 1.40 | 1.34 |
| 26 | BB | 2074 | U | P-O5' | 9.87 | 1.69 | 1.59 |
| 1 | AA | 408 | A | N9-C4 | 9.87 | 1.43 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 648 | A | N7-C5 | -9.87 | 1.33 | 1.39 |
| 26 | BB | 468 | G | N9-C4 | 9.87 | 1.45 | 1.38 |
| 1 | AA | 79 | G | N9-C8 | 9.87 | 1.44 | 1.37 |
| 26 | BB | 1614 | A | N3-C4 | 9.87 | 1.40 | 1.34 |
| 1 | AA | 903 | G | P-O5' | -9.86 | 1.49 | 1.59 |
| 1 | AA | 1490 | U | C2-N3 | 9.86 | 1.44 | 1.37 |
| 1 | AA | 766 | A | N3-C4 | 9.85 | 1.40 | 1.34 |
| 1 | AA | 879 | C | N1-C6 | 9.85 | 1.43 | 1.37 |
| 3 | AC | 22 | G | N3-C4 | 9.85 | 1.42 | 1.35 |
| 26 | BB | 1123 | C | N1-C6 | 9.85 | 1.43 | 1.37 |
| 1 | AA | 631 | C | N3-C4 | 9.85 | 1.40 | 1.33 |
| 26 | BB | 1751 | U | N1-C2 | 9.85 | 1.47 | 1.38 |
| 1 | AA | 834 | U | C4-C5 | 9.84 | 1.52 | 1.43 |
| 2 | AB | 70 | C | C5-C6 | 9.84 | 1.42 | 1.34 |
| 26 | BB | 2212 | A | C4'-O4' | -9.84 | 1.32 | 1.45 |
| 1 | AA | 672 | U | O3'-P | 9.83 | 1.73 | 1.61 |
| 1 | AA | 1387 | G | C6-N1 | 9.83 | 1.46 | 1.39 |
| 26 | BB | 1284 | A | P-O5' | 9.83 | 1.69 | 1.59 |
| 26 | BB | 821 | A | N3-C4 | 9.83 | 1.40 | 1.34 |
| 26 | BB | 631 | A | N3-C4 | 9.82 | 1.40 | 1.34 |
| 1 | AA | 1376 | U | C4-C5 | 9.82 | 1.52 | 1.43 |
| 26 | BB | 1626 | A | C8-N7 | -9.82 | 1.24 | 1.31 |
| 26 | BB | 279 | A | C5'-C4' | 9.82 | 1.63 | 1.51 |
| 26 | BB | 1456 | G | C2-N3 | 9.82 | 1.40 | 1.32 |
| 26 | BB | 1965 | C | C4-C5 | 9.82 | 1.50 | 1.43 |
| 26 | BB | 816 | C | N3-C4 | 9.81 | 1.40 | 1.33 |
| 26 | BB | 1816 | C | C5'-C4' | 9.81 | 1.63 | 1.51 |
| 26 | BB | 2700 | A | P-O5' | 9.81 | 1.69 | 1.59 |
| 26 | BB | 2056 | G | P-O5' | 9.80 | 1.69 | 1.59 |
| 26 | BB | 2567 | G | C8-N7 | 9.80 | 1.36 | 1.30 |
| 26 | BB | 604 | G | N9-C8 | -9.80 | 1.30 | 1.37 |
| 1 | AA | 195 | A | N3-C4 | 9.80 | 1.40 | 1.34 |
| 1 | AA | 601 | G | C5-C4 | 9.79 | 1.45 | 1.38 |
| 26 | BB | 271 | G | P-O5' | 9.79 | 1.69 | 1.59 |
| 26 | BB | 2635 | A | N7-C5 | -9.79 | 1.33 | 1.39 |
| 26 | BB | 197 | A | N3-C4 | 9.79 | 1.40 | 1.34 |
| 1 | AA | 1525 | G | N3-C4 | 9.79 | 1.42 | 1.35 |
| 1 | AA | 728 | A | N3-C4 | 9.78 | 1.40 | 1.34 |
| 26 | BB | 2803 | G | C6-N1 | 9.78 | 1.46 | 1.39 |
| 1 | AA | 1216 | A | N3-C4 | 9.78 | 1.40 | 1.34 |
| 26 | BB | 722 | A | O3'-P | 9.78 | 1.72 | 1.61 |
| 1 | AA | 1461 | G | C8-N7 | 9.78 | 1.36 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 591 | U | P-O5' | 9.78 | 1.69 | 1.59 |
| 26 | BB | 2469 | A | N3-C4 | 9.77 | 1.40 | 1.34 |
| 26 | BB | 1937 | A | N7-C5 | -9.76 | 1.33 | 1.39 |
| 26 | BB | 2214 | C | N1-C6 | 9.76 | 1.43 | 1.37 |
| 26 | BB | 1404 | C | P-O5' | 9.76 | 1.69 | 1.59 |
| 1 | AA | 464 | U | C2'-C1' | 9.75 | 1.64 | 1.53 |
| 1 | AA | 1016 | A | P-O5' | 9.75 | 1.69 | 1.59 |
| 26 | BB | 619 | G | P-O5' | 9.75 | 1.69 | 1.59 |
| 26 | BB | 798 | G | C8-N7 | -9.75 | 1.25 | 1.30 |
| 26 | BB | 1315 | C | N1-C6 | 9.75 | 1.43 | 1.37 |
| 26 | BB | 1434 | A | N3-C4 | 9.75 | 1.40 | 1.34 |
| 26 | BB | 2009 | A | C5-C4 | -9.75 | 1.31 | 1.38 |
| 1 | AA | 1176 | A | N9-C4 | -9.75 | 1.32 | 1.37 |
| 1 | AA | 74 | A | N9-C8 | -9.74 | 1.29 | 1.37 |
| 26 | BB | 659 | G | C5-C4 | -9.74 | 1.31 | 1.38 |
| 26 | BB | 1656 | C | C5-C6 | 9.74 | 1.42 | 1.34 |
| 26 | BB | 31 | C | P-O5' | 9.74 | 1.69 | 1.59 |
| 26 | BB | 239 | C | P-O5' | 9.74 | 1.69 | 1.59 |
| 26 | BB | 1110 | G | C8-N7 | -9.74 | 1.25 | 1.30 |
| 26 | BB | 976 | G | P-O5' | 9.73 | 1.69 | 1.59 |
| 26 | BB | 2019 | A | N9-C4 | 9.73 | 1.43 | 1.37 |
| 26 | BB | 2768 | U | P-O5' | 9.73 | 1.69 | 1.59 |
| 26 | BB | 2859 | G | P-O5' | 9.73 | 1.69 | 1.59 |
| 26 | BB | 1908 | C | N1-C6 | 9.73 | 1.43 | 1.37 |
| 1 | AA | 816 | A | N1-C2 | -9.72 | 1.25 | 1.34 |
| 26 | BB | 667 | U | O3'-P | 9.72 | 1.72 | 1.61 |
| 1 | AA | 1153 | G | N7-C5 | 9.72 | 1.45 | 1.39 |
| 1 | AA | 1127 | G | P-O5' | 9.72 | 1.69 | 1.59 |
| 1 | AA | 281 | G | C8-N7 | -9.72 | 1.25 | 1.30 |
| 1 | AA | 855 | U | P-O5' | 9.71 | 1.69 | 1.59 |
| 1 | AA | 1434 | A | P-O5' | 9.71 | 1.69 | 1.59 |
| 1 | AA | 1459 | G | C2-N3 | 9.71 | 1.40 | 1.32 |
| 26 | BB | 456 | C | N1-C6 | 9.71 | 1.43 | 1.37 |
| 26 | BB | 529 | A | C4'-C3' | 9.70 | 1.63 | 1.53 |
| 26 | BB | 1678 | A | N7-C5 | -9.70 | 1.33 | 1.39 |
| 26 | BB | 849 | A | P-O5' | 9.70 | 1.69 | 1.59 |
| 26 | BB | 895 | U | C2-N3 | 9.70 | 1.44 | 1.37 |
| 26 | BB | 1418 | G | C2-N3 | 9.70 | 1.40 | 1.32 |
| 1 | AA | 435 | A | N3-C4 | 9.70 | 1.40 | 1.34 |
| 26 | BB | 2635 | A | P-O5' | 9.70 | 1.69 | 1.59 |
| 1 | AA | 1362 | A | N3-C4 | -9.68 | 1.29 | 1.34 |
| 26 | BB | 1308 | A | N3-C4 | 9.68 | 1.40 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2416 | C | N3-C4 | 9.68 | 1.40 | 1.33 |
| 26 | BB | 553 | G | N3-C4 | 9.68 | 1.42 | 1.35 |
| 26 | BB | 1690 | A | N7-C5 | -9.67 | 1.33 | 1.39 |
| 1 | AA | 1542 | A | N7-C5 | 9.67 | 1.45 | 1.39 |
| 2 | AB | 49 | G | N9-C8 | -9.67 | 1.31 | 1.37 |
| 26 | BB | 1564 | C | C2-N3 | 9.67 | 1.43 | 1.35 |
| 1 | AA | 653 | U | P-O5' | 9.66 | 1.69 | 1.59 |
| 1 | AA | 781 | A | N9-C4 | -9.66 | 1.32 | 1.37 |
| 26 | BB | 2512 | C | P-O5' | 9.66 | 1.69 | 1.59 |
| 1 | AA | 887 | G | N3-C4 | 9.66 | 1.42 | 1.35 |
| 26 | BB | 2077 | A | C8-N7 | -9.66 | 1.24 | 1.31 |
| 26 | BB | 1460 | U | C4-O4 | 9.65 | 1.31 | 1.23 |
| 26 | BB | 1864 | U | N1-C2 | 9.65 | 1.47 | 1.38 |
| 26 | BB | 819 | A | C6-N1 | -9.65 | 1.28 | 1.35 |
| 26 | BB | 2272 | U | P-O5' | 9.65 | 1.69 | 1.59 |
| 1 | AA | 139 | A | N3-C4 | 9.65 | 1.40 | 1.34 |
| 26 | BB | 2586 | U | C2-N3 | 9.64 | 1.44 | 1.37 |
| 26 | BB | 1700 | A | N3-C4 | 9.64 | 1.40 | 1.34 |
| 26 | BB | 2531 | A | N9-C4 | 9.64 | 1.43 | 1.37 |
| 1 | AA | 769 | G | C8-N7 | -9.63 | 1.25 | 1.30 |
| 1 | AA | 1076 | U | C2-N3 | 9.63 | 1.44 | 1.37 |
| 1 | AA | 1237 | C | C2-N3 | 9.63 | 1.43 | 1.35 |
| 26 | BB | 220 | G | C8-N7 | 9.63 | 1.36 | 1.30 |
| 1 | AA | 1401 | G | N7-C5 | -9.63 | 1.33 | 1.39 |
| 26 | BB | 823 | C | N3-C4 | 9.62 | 1.40 | 1.33 |
| 1 | AA | 1469 | C | C4-C5 | 9.62 | 1.50 | 1.43 |
| 1 | AA | 710 | G | P-O5' | 9.62 | 1.69 | 1.59 |
| 26 | BB | 1840 | G | C6-N1 | 9.62 | 1.46 | 1.39 |
| 26 | BB | 536 | G | C8-N7 | 9.61 | 1.36 | 1.30 |
| 26 | BB | 2453 | A | C5-C4 | 9.62 | 1.45 | 1.38 |
| 26 | BB | 322 | A | N3-C4 | 9.61 | 1.40 | 1.34 |
| 3 | AC | 22 | G | O3'-P | 9.61 | 1.72 | 1.61 |
| 1 | AA | 1363 | A | C6-N6 | -9.61 | 1.26 | 1.33 |
| 26 | BB | 1128 | G | O3'-P | 9.61 | 1.72 | 1.61 |
| 26 | BB | 1303 | G | P-O5' | 9.61 | 1.69 | 1.59 |
| 26 | BB | 1706 | C | N3-C4 | 9.61 | 1.40 | 1.33 |
| 26 | BB | 2016 | U | N1-C2 | 9.61 | 1.47 | 1.38 |
| 26 | BB | 889 | C | P-O5' | 9.60 | 1.69 | 1.59 |
| 26 | BB | 1127 | A | C6-N1 | 9.60 | 1.42 | 1.35 |
| 26 | BB | 905 | A | C6-N1 | 9.59 | 1.42 | 1.35 |
| 26 | BB | 761 | A | N7-C5 | 9.58 | 1.45 | 1.39 |
| 1 | AA | 1309 | G | N7-C5 | 9.58 | 1.45 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 22 | A | C4'-O4' | -9.58 | 1.33 | 1.45 |
| 26 | BB | 306 | U | P-O5' | 9.58 | 1.69 | 1.59 |
| 26 | BB | 748 | G | C6-N1 | -9.58 | 1.32 | 1.39 |
| 26 | BB | 2264 | C | C4'-O4' | -9.58 | 1.33 | 1.45 |
| 26 | BB | 659 | G | C2-N3 | 9.58 | 1.40 | 1.32 |
| 26 | BB | 1955 | U | N1-C2 | 9.58 | 1.47 | 1.38 |
| 26 | BB | 2052 | A | P-O5' | 9.58 | 1.69 | 1.59 |
| 26 | BB | 497 | A | N3-C4 | 9.57 | 1.40 | 1.34 |
| 26 | BB | 504 | A | N3-C4 | 9.57 | 1.40 | 1.34 |
| 26 | BB | 1374 | G | C2-N3 | 9.57 | 1.40 | 1.32 |
| 25 | BA | 105 | G | C2-N3 | 9.56 | 1.40 | 1.32 |
| 26 | BB | 1391 | U | C3'-O3' | 9.56 | 1.55 | 1.42 |
| 26 | BB | 1997 | C | N1-C6 | 9.56 | 1.42 | 1.37 |
| 1 | AA | 383 | A | N3-C4 | 9.56 | 1.40 | 1.34 |
| 1 | AA | 424 | G | C2-N3 | 9.55 | 1.40 | 1.32 |
| 26 | BB | 2107 | G | C2-N3 | 9.55 | 1.40 | 1.32 |
| 26 | BB | 2128 | G | N7-C5 | 9.55 | 1.45 | 1.39 |
| 1 | AA | 1099 | G | N3-C4 | 9.55 | 1.42 | 1.35 |
| 1 | AA | 1241 | G | C8-N7 | -9.54 | 1.25 | 1.30 |
| 1 | AA | 830 | G | C6-N1 | -9.54 | 1.32 | 1.39 |
| 26 | BB | 1014 | A | N3-C4 | 9.54 | 1.40 | 1.34 |
| 1 | AA | 1279 | G | N3-C4 | 9.54 | 1.42 | 1.35 |
| 26 | BB | 1849 | G | O3'-P | 9.54 | 1.72 | 1.61 |
| 26 | BB | 1853 | A | C6-N1 | 9.53 | 1.42 | 1.35 |
| 26 | BB | 503 | A | N9-C4 | 9.53 | 1.43 | 1.37 |
| 1 | AA | 410 | G | N3-C4 | 9.53 | 1.42 | 1.35 |
| 26 | BB | 605 | G | N7-C5 | 9.53 | 1.45 | 1.39 |
| 26 | BB | 2231 | U | C2-N3 | 9.53 | 1.44 | 1.37 |
| 26 | BB | 128 | C | C2-N3 | 9.53 | 1.43 | 1.35 |
| 26 | BB | 515 | A | N7-C5 | -9.52 | 1.33 | 1.39 |
| 26 | BB | 1830 | C | P-O5' | 9.52 | 1.69 | 1.59 |
| 26 | BB | 1270 | C | C2-N3 | 9.52 | 1.43 | 1.35 |
| 26 | BB | 2662 | A | N7-C5 | 9.52 | 1.45 | 1.39 |
| 26 | BB | 1649 | G | P-O5' | 9.51 | 1.69 | 1.59 |
| 1 | AA | 525 | C | N3-C4 | 9.51 | 1.40 | 1.33 |
| 1 | AA | 15 | G | P-O5' | 9.51 | 1.69 | 1.59 |
| 1 | AA | 1244 | G | P-O5' | 9.51 | 1.69 | 1.59 |
| 26 | BB | 1799 | G | N7-C5 | -9.51 | 1.33 | 1.39 |
| 26 | BB | 1995 | U | C4'-O4' | -9.50 | 1.33 | 1.45 |
| 26 | BB | 684 | G | C4'-O4' | -9.50 | 1.33 | 1.45 |
| 26 | BB | 1641 | A | N3-C4 | 9.50 | 1.40 | 1.34 |
| 4 | AD | 5 | G | N3-C4 | 9.49 | 1.42 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2472 | G | C8-N7 | -9.49 | 1.25 | 1.30 |
| 1 | AA | 1209 | C | N3-C4 | 9.49 | 1.40 | 1.33 |
| 26 | BB | 1654 | A | N3-C4 | 9.49 | 1.40 | 1.34 |
| 26 | BB | 237 | C | N3-C4 | 9.48 | 1.40 | 1.33 |
| 26 | BB | 2665 | A | N9-C4 | -9.48 | 1.32 | 1.37 |
| 3 | AC | 14 | G | N3-C4 | 9.48 | 1.42 | 1.35 |
| 26 | BB | 2772 | C | C2-O2 | -9.48 | 1.16 | 1.24 |
| 26 | BB | 1034 | G | N9-C8 | -9.47 | 1.31 | 1.37 |
| 1 | AA | 195 | A | P-O5' | 9.47 | 1.69 | 1.59 |
| 26 | BB | 1269 | A | N3-C4 | 9.47 | 1.40 | 1.34 |
| 26 | BB | 1289 | C | C4-C5 | 9.47 | 1.50 | 1.43 |
| 26 | BB | 1770 | G | P-O5' | 9.47 | 1.69 | 1.59 |
| 26 | BB | 538 | A | N9-C4 | -9.47 | 1.32 | 1.37 |
| 26 | BB | 2083 | G | N7-C5 | -9.46 | 1.33 | 1.39 |
| 26 | BB | 2567 | G | C2-N3 | 9.46 | 1.40 | 1.32 |
| 26 | BB | 2777 | G | N7-C5 | -9.47 | 1.33 | 1.39 |
| 1 | AA | 61 | G | N9-C8 | 9.46 | 1.44 | 1.37 |
| 1 | AA | 681 | A | N7-C5 | 9.46 | 1.45 | 1.39 |
| 26 | BB | 1330 | C | C3'-C2' | 9.46 | 1.63 | 1.52 |
| 26 | BB | 2710 | C | N3-C4 | 9.46 | 1.40 | 1.33 |
| 26 | BB | 356 | G | N3-C4 | 9.45 | 1.42 | 1.35 |
| 26 | BB | 2016 | U | C4-C5 | 9.45 | 1.52 | 1.43 |
| 26 | BB | 344 | A | N3-C4 | 9.45 | 1.40 | 1.34 |
| 26 | BB | 1296 | G | C2-N3 | 9.45 | 1.40 | 1.32 |
| 1 | AA | 630 | A | C6-N6 | 9.44 | 1.41 | 1.33 |
| 1 | AA | 958 | A | C5'-C4' | 9.44 | 1.62 | 1.51 |
| 26 | BB | 2081 | U | C2-N3 | 9.44 | 1.44 | 1.37 |
| 26 | BB | 2625 | G | C8-N7 | -9.44 | 1.25 | 1.30 |
| 26 | BB | 245 | G | C8-N7 | -9.43 | 1.25 | 1.30 |
| 1 | AA | 15 | G | C5-C4 | -9.43 | 1.31 | 1.38 |
| 1 | AA | 769 | G | C6-N1 | 9.42 | 1.46 | 1.39 |
| 1 | AA | 854 | U | P-O5' | 9.42 | 1.69 | 1.59 |
| 26 | BB | 1889 | A | P-O5' | 9.42 | 1.69 | 1.59 |
| 1 | AA | 254 | G | N3-C4 | 9.42 | 1.42 | 1.35 |
| 26 | BB | 26 | G | N1-C2 | 9.42 | 1.45 | 1.37 |
| 26 | BB | 930 | G | N1-C2 | 9.42 | 1.45 | 1.37 |
| 1 | AA | 498 | A | N7-C5 | -9.41 | 1.33 | 1.39 |
| 26 | BB | 1944 | U | C2-N3 | 9.41 | 1.44 | 1.37 |
| 26 | BB | 2094 | A | P-O5' | 9.41 | 1.69 | 1.59 |
| 4 | AD | 68 | C | P-O5' | 9.41 | 1.69 | 1.59 |
| 26 | BB | 1009 | A | N9-C4 | -9.41 | 1.32 | 1.37 |
| 26 | BB | 1646 | C | N1-C6 | 9.40 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2600 | A | C4'-O4' | -9.40 | 1.33 | 1.45 |
| 1 | AA | 486 | U | C2-O2 | 9.40 | 1.30 | 1.22 |
| 1 | AA | 306 | A | C8-N7 | 9.40 | 1.38 | 1.31 |
| 26 | BB | 668 | A | N3-C4 | 9.40 | 1.40 | 1.34 |
| 26 | BB | 1028 | A | N3-C4 | 9.40 | 1.40 | 1.34 |
| 26 | BB | 2697 | G | C4'-C3' | -9.39 | 1.42 | 1.53 |
| 26 | BB | 2305 | U | C4-C5 | 9.39 | 1.51 | 1.43 |
| 1 | AA | 677 | U | P-O5' | 9.38 | 1.69 | 1.59 |
| 1 | AA | 1398 | A | C5-C4 | -9.38 | 1.32 | 1.38 |
| 26 | BB | 977 | G | N3-C4 | 9.38 | 1.42 | 1.35 |
| 1 | AA | 860 | A | N3-C4 | 9.38 | 1.40 | 1.34 |
| 1 | AA | 410 | G | C2-N3 | 9.38 | 1.40 | 1.32 |
| 26 | BB | 1567 | G | C4'-C3' | 9.37 | 1.63 | 1.53 |
| 4 | AD | 12 | G | P-O5' | 9.37 | 1.69 | 1.59 |
| 26 | BB | 2144 | G | C6-N1 | 9.37 | 1.46 | 1.39 |
| 1 | AA | 1109 | C | N1-C6 | 9.37 | 1.42 | 1.37 |
| 26 | BB | 1510 | G | P-O5' | 9.37 | 1.69 | 1.59 |
| 1 | AA | 1143 | G | C6-N1 | 9.36 | 1.46 | 1.39 |
| 26 | BB | 654 | A | C6-N1 | 9.37 | 1.42 | 1.35 |
| 26 | BB | 690 | G | N1-C2 | 9.36 | 1.45 | 1.37 |
| 26 | BB | 2661 | G | C5'-C4' | 9.36 | 1.62 | 1.51 |
| 1 | AA | 297 | G | P-O5' | 9.36 | 1.69 | 1.59 |
| 2 | AB | 71 | C | P-O5' | 9.36 | 1.69 | 1.59 |
| 26 | BB | 2890 | G | N9-C8 | 9.36 | 1.44 | 1.37 |
| 1 | AA | 972 | C | N3-C4 | 9.36 | 1.40 | 1.33 |
| 26 | BB | 2650 | U | C5'-C4' | 9.36 | 1.62 | 1.51 |
| 26 | BB | 2359 | C | N1-C6 | 9.35 | 1.42 | 1.37 |
| 26 | BB | 1038 | G | N9-C4 | 9.35 | 1.45 | 1.38 |
| 26 | BB | 1364 | G | C5-C4 | -9.34 | 1.31 | 1.38 |
| 26 | BB | 2075 | U | C2-N3 | 9.34 | 1.44 | 1.37 |
| 1 | AA | 338 | A | N7-C5 | 9.34 | 1.44 | 1.39 |
| 26 | BB | 1696 | G | C6-O6 | -9.33 | 1.15 | 1.24 |
| 26 | BB | 2450 | A | N9-C4 | 9.33 | 1.43 | 1.37 |
| 26 | BB | 1639 | C | C4-C5 | 9.32 | 1.50 | 1.43 |
| 26 | BB | 2154 | A | N3-C4 | 9.32 | 1.40 | 1.34 |
| 26 | BB | 1262 | A | N7-C5 | -9.32 | 1.33 | 1.39 |
| 26 | BB | 1843 | C | C5-C6 | 9.32 | 1.41 | 1.34 |
| 1 | AA | 2 | A | N7-C5 | 9.31 | 1.44 | 1.39 |
| 1 | AA | 556 | C | P-O5' | 9.31 | 1.69 | 1.59 |
| 1 | AA | 819 | A | N7-C5 | 9.31 | 1.44 | 1.39 |
| 26 | BB | 1127 | A | C4'-O4' | -9.31 | 1.33 | 1.45 |
| 26 | BB | 1809 | A | P-O5' | 9.31 | 1.69 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1263 | U | C4-C5 | 9.31 | 1.51 | 1.43 |
| 26 | BB | 272 | A | N7-C5 | -9.31 | 1.33 | 1.39 |
| 1 | AA | 790 | A | N3-C4 | 9.31 | 1.40 | 1.34 |
| 26 | BB | 1134 | A | N9-C4 | -9.30 | 1.32 | 1.37 |
| 26 | BB | 2643 | G | C5-C6 | 9.30 | 1.51 | 1.42 |
| 1 | AA | 682 | G | N9-C8 | 9.29 | 1.44 | 1.37 |
| 26 | BB | 2861 | U | C2'-O2' | -9.29 | 1.29 | 1.41 |
| 1 | AA | 874 | G | N1-C2 | 9.29 | 1.45 | 1.37 |
| 2 | AB | 24 | G | C8-N7 | -9.29 | 1.25 | 1.30 |
| 26 | BB | 765 | C | C2-N3 | 9.29 | 1.43 | 1.35 |
| 26 | BB | 2411 | A | N9-C4 | 9.29 | 1.43 | 1.37 |
| 1 | AA | 643 | C | N3-C4 | 9.29 | 1.40 | 1.33 |
| 26 | BB | 1843 | C | N3-C4 | 9.29 | 1.40 | 1.33 |
| 1 | AA | 578 | C | C4-C5 | 9.28 | 1.50 | 1.43 |
| 1 | AA | 170 | U | C4-O4 | -9.28 | 1.16 | 1.23 |
| 26 | BB | 87 | U | C2-N3 | 9.28 | 1.44 | 1.37 |
| 1 | AA | 415 | A | C5-C4 | -9.27 | 1.32 | 1.38 |
| 1 | AA | 1346 | A | C6-N1 | -9.27 | 1.29 | 1.35 |
| 26 | BB | 2443 | C | C4-C5 | 9.27 | 1.50 | 1.43 |
| 26 | BB | 2643 | G | C5'-C4' | 9.27 | 1.62 | 1.51 |
| 26 | BB | 2448 | A | N3-C4 | 9.27 | 1.40 | 1.34 |
| 1 | AA | 1249 | C | P-O5' | 9.27 | 1.69 | 1.59 |
| 26 | BB | 2530 | A | P-O5' | 9.26 | 1.69 | 1.59 |
| 26 | BB | 407 | G | N9-C4 | -9.26 | 1.30 | 1.38 |
| 1 | AA | 1260 | G | C2-N3 | 9.26 | 1.40 | 1.32 |
| 26 | BB | 2255 | G | C3'-C2' | 9.26 | 1.63 | 1.52 |
| 1 | AA | 1445 | U | P-O5' | 9.26 | 1.69 | 1.59 |
| 4 | AD | 29 | C | O3'-P | 9.26 | 1.72 | 1.61 |
| 1 | AA | 293 | G | N9-C4 | -9.25 | 1.30 | 1.38 |
| 1 | AA | 1361 | G | C6-N1 | 9.25 | 1.46 | 1.39 |
| 26 | BB | 2783 | U | C2-N3 | -9.25 | 1.31 | 1.37 |
| 1 | AA | 130 | A | C8-N7 | -9.25 | 1.25 | 1.31 |
| 26 | BB | 1380 | G | C8-N7 | -9.25 | 1.25 | 1.30 |
| 1 | AA | 847 | G | N7-C5 | 9.25 | 1.44 | 1.39 |
| 26 | BB | 283 | G | C5'-C4' | 9.25 | 1.62 | 1.51 |
| 26 | BB | 2314 | A | C8-N7 | -9.25 | 1.25 | 1.31 |
| 2 | AB | 73 | G | N7-C5 | 9.24 | 1.44 | 1.39 |
| 26 | BB | 124 | G | N3-C4 | 9.24 | 1.42 | 1.35 |
| 1 | AA | 350 | G | N1-C2 | 9.23 | 1.45 | 1.37 |
| 1 | AA | 423 | G | P-O5' | 9.23 | 1.69 | 1.59 |
| 26 | BB | 1025 | G | P-O5' | 9.23 | 1.69 | 1.59 |
| 26 | BB | 361 | G | P-O5' | 9.23 | 1.69 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2232 | C | N1-C6 | 9.23 | 1.42 | 1.37 |
| 26 | BB | 2619 | C | C5-C6 | 9.23 | 1.41 | 1.34 |
| 1 | AA | 1409 | C | N3-C4 | 9.23 | 1.40 | 1.33 |
| 26 | BB | 1171 | G | N1-C2 | 9.23 | 1.45 | 1.37 |
| 1 | AA | 977 | A | N3-C4 | 9.23 | 1.40 | 1.34 |
| 1 | AA | 1055 | A | N3-C4 | 9.23 | 1.40 | 1.34 |
| 26 | BB | 194 | G | N7-C5 | 9.23 | 1.44 | 1.39 |
| 26 | BB | 1881 | C | C5-C6 | 9.22 | 1.41 | 1.34 |
| 26 | BB | 2131 | U | O3'-P | 9.22 | 1.72 | 1.61 |
| 1 | AA | 382 | A | C8-N7 | -9.22 | 1.25 | 1.31 |
| 1 | AA | 1169 | A | P-O5' | 9.22 | 1.69 | 1.59 |
| 26 | BB | 477 | A | C8-N7 | -9.22 | 1.25 | 1.31 |
| 26 | BB | 2741 | A | C5-C4 | -9.22 | 1.32 | 1.38 |
| 26 | BB | 157 | C | C4-C5 | 9.22 | 1.50 | 1.43 |
| 3 | AC | 20 | G | C5-C4 | 9.22 | 1.44 | 1.38 |
| 1 | AA | 560 | A | C8-N7 | -9.22 | 1.25 | 1.31 |
| 26 | BB | 627 | A | C2'-C1' | 9.22 | 1.63 | 1.53 |
| 26 | BB | 2012 | G | C8-N7 | 9.21 | 1.36 | 1.30 |
| 26 | BB | 1022 | G | N3-C4 | 9.21 | 1.41 | 1.35 |
| 4 | AD | 2 | G | N7-C5 | 9.21 | 1.44 | 1.39 |
| 26 | BB | 940 | G | N1-C2 | 9.21 | 1.45 | 1.37 |
| 26 | BB | 2700 | A | N9-C4 | 9.21 | 1.43 | 1.37 |
| 1 | AA | 631 | C | C2-N3 | 9.20 | 1.43 | 1.35 |
| 26 | BB | 481 | G | C5'-C4' | 9.20 | 1.62 | 1.51 |
| 1 | AA | 1309 | G | N1-C2 | 9.20 | 1.45 | 1.37 |
| 26 | BB | 1689 | A | N3-C4 | 9.20 | 1.40 | 1.34 |
| 26 | BB | 1125 | G | C6-N1 | 9.19 | 1.46 | 1.39 |
| 1 | AA | 37 | U | P-O5' | 9.19 | 1.69 | 1.59 |
| 1 | AA | 661 | G | N3-C4 | 9.18 | 1.41 | 1.35 |
| 1 | AA | 1182 | G | C6-N1 | 9.18 | 1.46 | 1.39 |
| 26 | BB | 1079 | C | C2-O2 | -9.18 | 1.16 | 1.24 |
| 1 | AA | 21 | G | C2-N3 | 9.18 | 1.40 | 1.32 |
| 26 | BB | 751 | A | N3-C4 | 9.18 | 1.40 | 1.34 |
| 26 | BB | 2778 | A | N9-C4 | 9.18 | 1.43 | 1.37 |
| 26 | BB | 9 | G | P-O5' | 9.17 | 1.69 | 1.59 |
| 26 | BB | 2804 | U | C3'-C2' | 9.17 | 1.63 | 1.52 |
| 1 | AA | 1226 | C | P-O5' | 9.17 | 1.69 | 1.59 |
| 25 | BA | 24 | G | C5-C4 | 9.17 | 1.44 | 1.38 |
| 3 | AC | 47 | C | C4-N4 | 9.17 | 1.42 | 1.33 |
| 1 | AA | 101 | A | N3-C4 | 9.17 | 1.40 | 1.34 |
| 1 | AA | 191 | G | N7-C5 | 9.17 | 1.44 | 1.39 |
| 1 | AA | 681 | A | N9-C4 | -9.17 | 1.32 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 541 | A | C5-C4 | 9.16 | 1.45 | 1.38 |
| 1 | AA | 389 | A | C8-N7 | -9.16 | 1.25 | 1.31 |
| 26 | BB | 194 | G | P-O5' | 9.16 | 1.69 | 1.59 |
| 26 | BB | 1734 | G | C8-N7 | -9.16 | 1.25 | 1.30 |
| 26 | BB | 2118 | U | P-O5' | 9.15 | 1.68 | 1.59 |
| 26 | BB | 2563 | U | O3'-P | 9.15 | 1.72 | 1.61 |
| 26 | BB | 1839 | G | C2-N3 | 9.14 | 1.40 | 1.32 |
| 1 | AA | 908 | A | N9-C4 | 9.14 | 1.43 | 1.37 |
| 1 | AA | 1347 | G | C5-C4 | -9.14 | 1.31 | 1.38 |
| 2 | AB | 67 | G | N7-C5 | 9.14 | 1.44 | 1.39 |
| 26 | BB | 114 | U | P-O5' | 9.14 | 1.68 | 1.59 |
| 26 | BB | 207 | A | C5-C6 | 9.14 | 1.49 | 1.41 |
| 1 | AA | 157 | U | C2-N3 | 9.13 | 1.44 | 1.37 |
| 1 | AA | 651 | C | N1-C6 | 9.13 | 1.42 | 1.37 |
| 1 | AA | 946 | A | P-O5' | 9.13 | 1.68 | 1.59 |
| 26 | BB | 939 | G | N9-C4 | -9.13 | 1.30 | 1.38 |
| 26 | BB | 1600 | C | C5'-C4' | 9.13 | 1.62 | 1.51 |
| 1 | AA | 128 | G | N9-C4 | 9.13 | 1.45 | 1.38 |
| 1 | AA | 286 | C | P-O5' | 9.13 | 1.68 | 1.59 |
| 1 | AA | 565 | U | P-O5' | 9.13 | 1.68 | 1.59 |
| 26 | BB | 696 | G | O3'-P | 9.13 | 1.72 | 1.61 |
| 26 | BB | 1929 | G | C8-N7 | 9.13 | 1.36 | 1.30 |
| 1 | AA | 319 | G | C6-N1 | 9.12 | 1.46 | 1.39 |
| 1 | AA | 506 | G | N7-C5 | 9.12 | 1.44 | 1.39 |
| 26 | BB | 2257 | U | N1-C2 | 9.12 | 1.46 | 1.38 |
| 1 | AA | 414 | A | N9-C4 | 9.12 | 1.43 | 1.37 |
| 1 | AA | 614 | C | N3-C4 | 9.12 | 1.40 | 1.33 |
| 1 | AA | 1350 | A | N7-C5 | 9.11 | 1.44 | 1.39 |
| 26 | BB | 1488 | C | N3-C4 | 9.11 | 1.40 | 1.33 |
| 26 | BB | 1935 | G | C5'-C4' | 9.11 | 1.62 | 1.51 |
| 26 | BB | 69 | C | P-O5' | 9.11 | 1.68 | 1.59 |
| 26 | BB | 2756 | U | C4'-O4' | -9.10 | 1.33 | 1.45 |
| 26 | BB | 97 | C | C2-N3 | 9.10 | 1.43 | 1.35 |
| 1 | AA | 453 | G | C2-N3 | 9.10 | 1.40 | 1.32 |
| 1 | AA | 713 | G | P-O5' | 9.10 | 1.68 | 1.59 |
| 1 | AA | 1063 | C | N3-C4 | 9.10 | 1.40 | 1.33 |
| 26 | BB | 2024 | G | C2-N3 | 9.10 | 1.40 | 1.32 |
| 1 | AA | 233 | C | N1-C6 | 9.09 | 1.42 | 1.37 |
| 1 | AA | 1203 | C | C2'-O2' | 9.09 | 1.53 | 1.41 |
| 25 | BA | 23 | G | O3'-P | 9.09 | 1.72 | 1.61 |
| 26 | BB | 57 | C | C3'-C2' | 9.09 | 1.62 | 1.52 |
| 26 | BB | 1373 | A | C6-N6 | 9.09 | 1.41 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 171 | A | N9-C4 | -9.09 | 1.32 | 1.37 |
| 1 | AA | 587 | G | N3-C4 | 9.08 | 1.41 | 1.35 |
| 26 | BB | 1477 | A | N7-C5 | -9.08 | 1.33 | 1.39 |
| 1 | AA | 151 | A | C6-N1 | -9.08 | 1.29 | 1.35 |
| 1 | AA | 1311 | A | C5-C4 | -9.08 | 1.32 | 1.38 |
| 26 | BB | 804 | A | N3-C4 | 9.08 | 1.40 | 1.34 |
| 26 | BB | 30 | G | P-O5' | 9.07 | 1.68 | 1.59 |
| 26 | BB | 223 | A | C8-N7 | 9.07 | 1.38 | 1.31 |
| 26 | BB | 2195 | U | C2-N3 | 9.07 | 1.44 | 1.37 |
| 26 | BB | 2489 | U | C2-N3 | 9.07 | 1.44 | 1.37 |
| 1 | AA | 1445 | U | C4'-O4' | -9.07 | 1.33 | 1.45 |
| 26 | BB | 1842 | G | N3-C4 | -9.07 | 1.29 | 1.35 |
| 1 | AA | 1294 | G | C8-N7 | 9.06 | 1.36 | 1.30 |
| 26 | BB | 2631 | G | N3-C4 | 9.06 | 1.41 | 1.35 |
| 26 | BB | 2869 | G | P-O5' | 9.06 | 1.68 | 1.59 |
| 26 | BB | 2292 | U | C4'-C3' | -9.06 | 1.43 | 1.53 |
| 26 | BB | 2496 | C | N1-C6 | 9.06 | 1.42 | 1.37 |
| 26 | BB | 2076 | U | O3'-P | -9.06 | 1.50 | 1.61 |
| 26 | BB | 449 | A | N3-C4 | 9.05 | 1.40 | 1.34 |
| 26 | BB | 1226 | A | N7-C5 | 9.05 | 1.44 | 1.39 |
| 26 | BB | 328 | U | C4-C5 | 9.05 | 1.51 | 1.43 |
| 1 | AA | 1397 | C | P-O5' | 9.04 | 1.68 | 1.59 |
| 1 | AA | 1415 | G | P-O5' | 9.05 | 1.68 | 1.59 |
| 26 | BB | 2618 | G | C6-N1 | 9.05 | 1.45 | 1.39 |
| 26 | BB | 113 | U | P-O5' | 9.04 | 1.68 | 1.59 |
| 26 | BB | 2553 | G | N1-C2 | -9.04 | 1.30 | 1.37 |
| 1 | AA | 942 | G | N9-C8 | 9.04 | 1.44 | 1.37 |
| 1 | AA | 1141 | C | P-O5' | 9.03 | 1.68 | 1.59 |
| 26 | BB | 685 | A | P-O5' | 9.04 | 1.68 | 1.59 |
| 26 | BB | 2785 | C | C2-N3 | 9.03 | 1.43 | 1.35 |
| 26 | BB | 33 | C | C5-C6 | 9.03 | 1.41 | 1.34 |
| 1 | AA | 1141 | C | C4-C5 | 9.03 | 1.50 | 1.43 |
| 1 | AA | 131 | A | N7-C5 | 9.03 | 1.44 | 1.39 |
| 1 | AA | 615 | G | N7-C5 | -9.02 | 1.33 | 1.39 |
| 26 | BB | 2401 | U | C2-N3 | 9.02 | 1.44 | 1.37 |
| 26 | BB | 2129 | C | O3'-P | 9.02 | 1.72 | 1.61 |
| 26 | BB | 633 | A | P-O5' | 9.02 | 1.68 | 1.59 |
| 1 | AA | 1525 | G | C2-N3 | 9.02 | 1.40 | 1.32 |
| 26 | BB | 679 | C | N3-C4 | 9.02 | 1.40 | 1.33 |
| 1 | AA | 923 | A | N9-C8 | -9.01 | 1.30 | 1.37 |
| 1 | AA | 1359 | C | N1-C6 | 9.01 | 1.42 | 1.37 |
| 26 | BB | 2585 | U | N1-C2 | 9.01 | 1.46 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 926 | G | C6-N1 | 9.01 | 1.45 | 1.39 |
| 1 | AA | 1515 | G | N7-C5 | 9.01 | 1.44 | 1.39 |
| 26 | BB | 1970 | A | N3-C4 | 9.01 | 1.40 | 1.34 |
| 26 | BB | 2764 | A | N7-C5 | 9.01 | 1.44 | 1.39 |
| 26 | BB | 2321 | U | C2-N3 | 9.00 | 1.44 | 1.37 |
| 2 | AB | 36 | A | P-O5' | 9.00 | 1.68 | 1.59 |
| 26 | BB | 429 | A | P-O5' | 9.00 | 1.68 | 1.59 |
| 26 | BB | 2132 | U | P-O5' | 9.00 | 1.68 | 1.59 |
| 1 | AA | 1534 | A | P-O5' | 8.99 | 1.68 | 1.59 |
| 26 | BB | 1224 | U | O3'-P | -8.99 | 1.50 | 1.61 |
| 26 | BB | 763 | G | N1-C2 | 8.99 | 1.45 | 1.37 |
| 26 | BB | 1652 | A | N7-C5 | 8.99 | 1.44 | 1.39 |
| 26 | BB | 1847 | A | O3'-P | -8.99 | 1.50 | 1.61 |
| 26 | BB | 1966 | A | N9-C4 | 8.99 | 1.43 | 1.37 |
| 1 | AA | 224 | U | N1-C2 | 8.98 | 1.46 | 1.38 |
| 4 | AD | 37 | U | P-O5' | 8.98 | 1.68 | 1.59 |
| 26 | BB | 47 | C | P-O5' | 8.98 | 1.68 | 1.59 |
| 26 | BB | 2790 | U | C4-C5 | 8.98 | 1.51 | 1.43 |
| 3 | AC | 37 | G | O3'-P | 8.98 | 1.72 | 1.61 |
| 26 | BB | 1249 | U | C4-C5 | 8.98 | 1.51 | 1.43 |
| 26 | BB | 1496 | A | N9-C8 | 8.98 | 1.45 | 1.37 |
| 26 | BB | 1662 | U | C4-C5 | 8.98 | 1.51 | 1.43 |
| 26 | BB | 2280 | G | N3-C4 | 8.98 | 1.41 | 1.35 |
| 1 | AA | 56 | U | N1-C2 | 8.97 | 1.46 | 1.38 |
| 26 | BB | 502 | A | N3-C4 | 8.97 | 1.40 | 1.34 |
| 26 | BB | 2568 | U | C4'-O4' | -8.97 | 1.33 | 1.45 |
| 26 | BB | 712 | G | N1-C2 | 8.97 | 1.45 | 1.37 |
| 26 | BB | 1527 | G | C2-N3 | 8.97 | 1.40 | 1.32 |
| 2 | AB | 47 | U | P-O5' | 8.97 | 1.68 | 1.59 |
| 1 | AA | 83 | C | C2-N3 | 8.97 | 1.43 | 1.35 |
| 1 | AA | 1359 | C | C2-N3 | 8.97 | 1.43 | 1.35 |
| 26 | BB | 1908 | C | N3-C4 | 8.97 | 1.40 | 1.33 |
| 1 | AA | 1435 | G | C2'-C1' | -8.97 | 1.43 | 1.53 |
| 1 | AA | 314 | C | C4-C5 | 8.96 | 1.50 | 1.43 |
| 26 | BB | 2110 | G | P-O5' | 8.96 | 1.68 | 1.59 |
| 1 | AA | 81 | A | C5-C4 | 8.96 | 1.45 | 1.38 |
| 1 | AA | 1144 | G | N7-C5 | 8.96 | 1.44 | 1.39 |
| 25 | BA | 79 | G | N7-C5 | 8.95 | 1.44 | 1.39 |
| 26 | BB | 888 | C | C4-C5 | 8.95 | 1.50 | 1.43 |
| 26 | BB | 967 | U | C4-C5 | 8.95 | 1.51 | 1.43 |
| 26 | BB | 1612 | C | P-O5' | 8.95 | 1.68 | 1.59 |
| 26 | BB | 2052 | A | N3-C4 | 8.94 | 1.40 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2478 | A | C6-N1 | 8.94 | 1.41 | 1.35 |
| 26 | BB | 2829 | A | N3-C4 | 8.94 | 1.40 | 1.34 |
| 26 | BB | 2499 | C | N1-C6 | 8.93 | 1.42 | 1.37 |
| 1 | AA | 8 | A | N3-C4 | 8.93 | 1.40 | 1.34 |
| 26 | BB | 2145 | C | P-O5' | 8.93 | 1.68 | 1.59 |
| 1 | AA | 456 | A | O3'-P | 8.93 | 1.71 | 1.61 |
| 1 | AA | 482 | A | N7-C5 | 8.93 | 1.44 | 1.39 |
| 26 | BB | 2490 | G | N1-C2 | 8.93 | 1.44 | 1.37 |
| 1 | AA | 1451 | U | C4'-O4' | -8.93 | 1.33 | 1.45 |
| 26 | BB | 1142 | A | P-O5' | 8.93 | 1.68 | 1.59 |
| 26 | BB | 354 | A | O3'-P | 8.93 | 1.71 | 1.61 |
| 26 | BB | 631 | A | O5'-C5' | -8.93 | 1.28 | 1.42 |
| 26 | BB | 1831 | G | N9-C4 | 8.93 | 1.45 | 1.38 |
| 1 | AA | 893 | C | P-O5' | 8.92 | 1.68 | 1.59 |
| 2 | AB | 74 | C | O3'-P | 8.92 | 1.71 | 1.61 |
| 26 | BB | 2725 | A | N3-C4 | 8.92 | 1.40 | 1.34 |
| 2 | AB | 74 | C | P-O5' | 8.92 | 1.68 | 1.59 |
| 1 | AA | 80 | A | N9-C4 | 8.92 | 1.43 | 1.37 |
| 1 | AA | 768 | A | C5-C4 | 8.92 | 1.45 | 1.38 |
| 1 | AA | 1361 | G | N7-C5 | 8.92 | 1.44 | 1.39 |
| 1 | AA | 716 | A | C2'-O2' | -8.92 | 1.30 | 1.41 |
| 1 | AA | 1053 | G | C8-N7 | 8.91 | 1.36 | 1.30 |
| 26 | BB | 182 | A | N9-C4 | 8.91 | 1.43 | 1.37 |
| 1 | AA | 892 | A | N9-C4 | 8.91 | 1.43 | 1.37 |
| 1 | AA | 939 | G | N3-C4 | 8.91 | 1.41 | 1.35 |
| 26 | BB | 2764 | A | N3-C4 | 8.91 | 1.40 | 1.34 |
| 26 | BB | 1537 | G | C8-N7 | -8.91 | 1.25 | 1.30 |
| 2 | AB | 1 | A | N9-C8 | 8.90 | 1.44 | 1.37 |
| 1 | AA | 95 | C | O3'-P | 8.90 | 1.71 | 1.61 |
| 26 | BB | 2447 | G | N1-C2 | 8.90 | 1.44 | 1.37 |
| 1 | AA | 938 | A | P-O5' | 8.90 | 1.68 | 1.59 |
| 1 | AA | 679 | C | P-O5' | 8.90 | 1.68 | 1.59 |
| 26 | BB | 443 | A | N9-C4 | 8.90 | 1.43 | 1.37 |
| 1 | AA | 377 | G | C6-N1 | 8.89 | 1.45 | 1.39 |
| 26 | BB | 2728 | U | P-O5' | 8.89 | 1.68 | 1.59 |
| 1 | AA | 259 | G | N3-C4 | 8.89 | 1.41 | 1.35 |
| 1 | AA | 374 | A | N3-C4 | 8.89 | 1.40 | 1.34 |
| 1 | AA | 1292 | G | N3-C4 | 8.89 | 1.41 | 1.35 |
| 1 | AA | 1339 | A | C6-N1 | -8.89 | 1.29 | 1.35 |
| 4 | AD | 15 | G | C2-N3 | 8.89 | 1.39 | 1.32 |
| 26 | BB | 846 | U | C5-C6 | 8.89 | 1.42 | 1.34 |
| 26 | BB | 2525 | G | C4'-O4' | -8.89 | 1.33 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 957 | U | P-O5' | 8.89 | 1.68 | 1.59 |
| 1 | AA | 1198 | G | N9-C4 | 8.88 | 1.45 | 1.38 |
| 25 | BA | 107 | G | C5-C4 | -8.88 | 1.32 | 1.38 |
| 26 | BB | 1007 | C | C5-C6 | 8.88 | 1.41 | 1.34 |
| 1 | AA | 1386 | G | C6-N1 | -8.88 | 1.33 | 1.39 |
| 26 | BB | 2633 | G | O3'-P | 8.88 | 1.71 | 1.61 |
| 1 | AA | 203 | G | C8-N7 | 8.88 | 1.36 | 1.30 |
| 1 | AA | 593 | U | P-O5' | 8.88 | 1.68 | 1.59 |
| 1 | AA | 960 | U | N1-C2 | 8.87 | 1.46 | 1.38 |
| 26 | BB | 1877 | A | P-O5' | 8.88 | 1.68 | 1.59 |
| 26 | BB | 2410 | G | N9-C8 | 8.87 | 1.44 | 1.37 |
| 26 | BB | 2831 | G | N3-C4 | 8.88 | 1.41 | 1.35 |
| 26 | BB | 122 | G | P-O5' | 8.87 | 1.68 | 1.59 |
| 26 | BB | 1866 | A | C5-C6 | 8.87 | 1.49 | 1.41 |
| 26 | BB | 2283 | C | C5'-C4' | 8.87 | 1.61 | 1.51 |
| 26 | BB | 2564 | A | N9-C4 | 8.87 | 1.43 | 1.37 |
| 1 | AA | 1051 | C | C2-N3 | 8.87 | 1.42 | 1.35 |
| 26 | BB | 228 | C | P-O5' | 8.87 | 1.68 | 1.59 |
| 26 | BB | 1110 | G | N7-C5 | 8.87 | 1.44 | 1.39 |
| 26 | BB | 1353 | A | P-O5' | 8.87 | 1.68 | 1.59 |
| 1 | AA | 1090 | U | C4'-O4' | -8.86 | 1.34 | 1.45 |
| 1 | AA | 535 | A | C5-C4 | -8.86 | 1.32 | 1.38 |
| 1 | AA | 1469 | C | C2-N3 | 8.86 | 1.42 | 1.35 |
| 1 | AA | 97 | G | N3-C4 | 8.85 | 1.41 | 1.35 |
| 2 | AB | 28 | C | N1-C6 | 8.85 | 1.42 | 1.37 |
| 26 | BB | 1422 | G | P-O5' | 8.85 | 1.68 | 1.59 |
| 26 | BB | 2842 | G | P-O5' | 8.85 | 1.68 | 1.59 |
| 1 | AA | 1086 | U | C2-N3 | 8.85 | 1.44 | 1.37 |
| 26 | BB | 1874 | C | C5-C6 | 8.85 | 1.41 | 1.34 |
| 26 | BB | 977 | G | C5-C4 | -8.85 | 1.32 | 1.38 |
| 26 | BB | 1952 | A | P-O5' | 8.85 | 1.68 | 1.59 |
| 1 | AA | 245 | U | N1-C2 | 8.84 | 1.46 | 1.38 |
| 3 | AC | 22 | G | N9-C8 | -8.84 | 1.31 | 1.37 |
| 26 | BB | 1681 | G | C5-C4 | 8.84 | 1.44 | 1.38 |
| 26 | BB | 1767 | G | N1-C2 | 8.84 | 1.44 | 1.37 |
| 26 | BB | 2335 | A | C3'-C2' | 8.84 | 1.62 | 1.52 |
| 1 | AA | 669 | G | C2-N3 | 8.84 | 1.39 | 1.32 |
| 1 | AA | 767 | A | C6-N1 | -8.84 | 1.29 | 1.35 |
| 26 | BB | 1960 | A | N7-C5 | -8.84 | 1.33 | 1.39 |
| 26 | BB | 726 | G | N3-C4 | 8.84 | 1.41 | 1.35 |
| 26 | BB | 2005 | A | P-O5' | 8.84 | 1.68 | 1.59 |
| 26 | BB | 591 | U | C5-C6 | 8.84 | 1.42 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 881 | G | C8-N7 | -8.84 | 1.25 | 1.30 |
| 26 | BB | 2124 | G | P-O5' | 8.84 | 1.68 | 1.59 |
| 26 | BB | 2618 | G | C2-N3 | 8.84 | 1.39 | 1.32 |
| 1 | AA | 1403 | C | C3'-C2' | 8.83 | 1.62 | 1.52 |
| 1 | AA | 218 | U | C2-N3 | 8.83 | 1.44 | 1.37 |
| 3 | AC | 59 | A | C6-N6 | 8.83 | 1.41 | 1.33 |
| 26 | BB | 794 | A | N9-C4 | 8.83 | 1.43 | 1.37 |
| 1 | AA | 687 | A | N1-C2 | -8.83 | 1.26 | 1.34 |
| 26 | BB | 1524 | G | N9-C8 | -8.83 | 1.31 | 1.37 |
| 26 | BB | 2840 | C | N1-C6 | 8.83 | 1.42 | 1.37 |
| 26 | BB | 1667 | G | N7-C5 | -8.83 | 1.33 | 1.39 |
| 26 | BB | 828 | U | C4-C5 | 8.82 | 1.51 | 1.43 |
| 26 | BB | 1469 | A | P-O5' | 8.82 | 1.68 | 1.59 |
| 26 | BB | 791 | C | C5-C6 | 8.82 | 1.41 | 1.34 |
| 26 | BB | 2247 | A | N7-C5 | -8.82 | 1.33 | 1.39 |
| 1 | AA | 654 | G | P-O5' | 8.82 | 1.68 | 1.59 |
| 26 | BB | 2410 | G | N7-C5 | 8.82 | 1.44 | 1.39 |
| 26 | BB | 785 | G | C6-N1 | -8.81 | 1.33 | 1.39 |
| 26 | BB | 1655 | A | N7-C5 | -8.81 | 1.33 | 1.39 |
| 25 | BA | 81 | G | N1-C2 | 8.81 | 1.44 | 1.37 |
| 26 | BB | 1751 | U | P-O5' | 8.81 | 1.68 | 1.59 |
| 26 | BB | 133 | U | O3'-P | 8.81 | 1.71 | 1.61 |
| 1 | AA | 143 | A | N3-C4 | 8.80 | 1.40 | 1.34 |
| 1 | AA | 640 | A | N7-C5 | 8.80 | 1.44 | 1.39 |
| 1 | AA | 1534 | A | C6-N6 | 8.80 | 1.41 | 1.33 |
| 26 | BB | 1537 | G | N3-C4 | 8.80 | 1.41 | 1.35 |
| 1 | AA | 490 | C | C2-N3 | 8.80 | 1.42 | 1.35 |
| 26 | BB | 2286 | G | P-O5' | 8.80 | 1.68 | 1.59 |
| 1 | AA | 792 | A | C6-N1 | -8.80 | 1.29 | 1.35 |
| 26 | BB | 2327 | A | N3-C4 | 8.80 | 1.40 | 1.34 |
| 26 | BB | 2402 | U | C2-N3 | 8.80 | 1.44 | 1.37 |
| 26 | BB | 734 | A | C6-N1 | 8.80 | 1.41 | 1.35 |
| 26 | BB | 2762 | C | N3-C4 | 8.80 | 1.40 | 1.33 |
| 1 | AA | 1501 | C | C5'-C4' | 8.79 | 1.61 | 1.51 |
| 26 | BB | 1190 | G | C2-N3 | 8.80 | 1.39 | 1.32 |
| 2 | AB | 67 | G | N9-C4 | 8.79 | 1.45 | 1.38 |
| 26 | BB | 283 | G | C4'-O4' | -8.79 | 1.34 | 1.45 |
| 26 | BB | 954 | G | C8-N7 | -8.79 | 1.25 | 1.30 |
| 26 | BB | 2553 | G | P-O5' | 8.79 | 1.68 | 1.59 |
| 1 | AA | 727 | G | C8-N7 | -8.79 | 1.25 | 1.30 |
| 26 | BB | 1157 | G | C6-N1 | 8.79 | 1.45 | 1.39 |
| 1 | AA | 568 | G | N1-C2 | 8.79 | 1.44 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1457 | G | P-O5' | 8.79 | 1.68 | 1.59 |
| 26 | BB | 1290 | C | C5'-C4' | 8.78 | 1.61 | 1.51 |
| 1 | AA | 1357 | A | N9-C4 | 8.78 | 1.43 | 1.37 |
| 1 | AA | 378 | G | C2-N3 | 8.78 | 1.39 | 1.32 |
| 26 | BB | 349 | U | C4'-C3' | -8.78 | 1.43 | 1.53 |
| 1 | AA | 86 | G | C8-N7 | -8.78 | 1.25 | 1.30 |
| 1 | AA | 925 | G | P-O5' | 8.78 | 1.68 | 1.59 |
| 1 | AA | 1198 | G | C2-N3 | 8.78 | 1.39 | 1.32 |
| 1 | AA | 754 | C | P-O5' | 8.77 | 1.68 | 1.59 |
| 26 | BB | 1129 | A | C8-N7 | 8.77 | 1.37 | 1.31 |
| 26 | BB | 2893 | A | N3-C4 | 8.77 | 1.40 | 1.34 |
| 26 | BB | 433 | C | P-O5' | 8.77 | 1.68 | 1.59 |
| 1 | AA | 282 | A | C6-N1 | -8.77 | 1.29 | 1.35 |
| 1 | AA | 803 | G | N9-C8 | 8.77 | 1.44 | 1.37 |
| 26 | BB | 301 | G | C6-N1 | -8.77 | 1.33 | 1.39 |
| 1 | AA | 867 | G | C8-N7 | 8.77 | 1.36 | 1.30 |
| 4 | AD | 19 | G | N9-C8 | -8.77 | 1.31 | 1.37 |
| 4 | AD | 47 | A | P-O5' | 8.77 | 1.68 | 1.59 |
| 26 | BB | 354 | A | N9-C4 | -8.77 | 1.32 | 1.37 |
| 26 | BB | 1076 | C | C4-C5 | 8.77 | 1.50 | 1.43 |
| 26 | BB | 1309 | G | O3'-P | 8.77 | 1.71 | 1.61 |
| 26 | BB | 1254 | A | N9-C8 | 8.76 | 1.44 | 1.37 |
| 1 | AA | 1232 | U | P-O5' | 8.76 | 1.68 | 1.59 |
| 26 | BB | 237 | C | C4-C5 | 8.76 | 1.50 | 1.43 |
| 26 | BB | 1025 | G | N9-C4 | -8.76 | 1.30 | 1.38 |
| 26 | BB | 1091 | G | N9-C8 | 8.76 | 1.44 | 1.37 |
| 26 | BB | 2863 | C | N1-C6 | 8.76 | 1.42 | 1.37 |
| 26 | BB | 1690 | A | C6-N1 | 8.76 | 1.41 | 1.35 |
| 26 | BB | 1352 | U | C2-N3 | 8.75 | 1.43 | 1.37 |
| 26 | BB | 2889 | C | C2'-C1' | 8.75 | 1.62 | 1.53 |
| 1 | AA | 471 | U | C2-N3 | 8.75 | 1.43 | 1.37 |
| 3 | AC | 55 | A | N3-C4 | 8.75 | 1.40 | 1.34 |
| 2 | AB | 6 | C | C5'-C4' | 8.75 | 1.61 | 1.51 |
| 1 | AA | 1296 | C | C2-N3 | 8.75 | 1.42 | 1.35 |
| 26 | BB | 2254 | C | C4-N4 | -8.75 | 1.26 | 1.33 |
| 26 | BB | 599 | A | C8-N7 | -8.74 | 1.25 | 1.31 |
| 26 | BB | 2839 | G | C2-N3 | 8.74 | 1.39 | 1.32 |
| 1 | AA | 541 | G | N7-C5 | 8.74 | 1.44 | 1.39 |
| 1 | AA | 880 | C | N1-C6 | 8.74 | 1.42 | 1.37 |
| 26 | BB | 396 | G | C6-N1 | 8.74 | 1.45 | 1.39 |
| 26 | BB | 2631 | G | N1-C2 | 8.74 | 1.44 | 1.37 |
| 1 | AA | 1027 | C | N1-C6 | 8.73 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 996 | A | N9-C4 | 8.73 | 1.43 | 1.37 |
| 26 | BB | 741 | U | N1-C2 | 8.73 | 1.46 | 1.38 |
| 1 | AA | 311 | C | P-O5' | 8.73 | 1.68 | 1.59 |
| 26 | BB | 707 | G | N7-C5 | 8.73 | 1.44 | 1.39 |
| 26 | BB | 1415 | U | C2-N3 | 8.73 | 1.43 | 1.37 |
| 26 | BB | 1456 | G | N7-C5 | 8.73 | 1.44 | 1.39 |
| 1 | AA | 974 | A | C4'-O4' | -8.73 | 1.34 | 1.45 |
| 26 | BB | 2198 | A | C5'-C4' | 8.72 | 1.61 | 1.51 |
| 1 | AA | 1447 | A | N3-C4 | 8.72 | 1.40 | 1.34 |
| 26 | BB | 990 | A | N9-C4 | 8.72 | 1.43 | 1.37 |
| 1 | AA | 1098 | C | C4-C5 | 8.72 | 1.50 | 1.43 |
| 3 | AC | 33 | A | N9-C4 | 8.72 | 1.43 | 1.37 |
| 26 | BB | 1346 | G | C8-N7 | 8.72 | 1.36 | 1.30 |
| 1 | AA | 787 | A | C6-N1 | -8.71 | 1.29 | 1.35 |
| 26 | BB | 1642 | G | C8-N7 | 8.71 | 1.36 | 1.30 |
| 26 | BB | 2198 | A | N3-C4 | 8.71 | 1.40 | 1.34 |
| 1 | AA | 140 | U | C4'-C3' | -8.70 | 1.43 | 1.53 |
| 1 | AA | 481 | G | N1-C2 | 8.70 | 1.44 | 1.37 |
| 26 | BB | 2266 | A | C8-N7 | -8.70 | 1.25 | 1.31 |
| 1 | AA | 971 | G | C4'-C3' | 8.70 | 1.62 | 1.53 |
| 4 | AD | 53 | G | N7-C5 | -8.70 | 1.34 | 1.39 |
| 26 | BB | 626 | A | C8-N7 | -8.70 | 1.25 | 1.31 |
| 26 | BB | 1046 | A | N9-C4 | 8.69 | 1.43 | 1.37 |
| 1 | AA | 300 | A | P-O5' | 8.69 | 1.68 | 1.59 |
| 25 | BA | 97 | C | C4'-O4' | -8.69 | 1.34 | 1.45 |
| 26 | BB | 649 | G | N7-C5 | 8.69 | 1.44 | 1.39 |
| 26 | BB | 2893 | A | C2'-C1' | -8.69 | 1.43 | 1.53 |
| 1 | AA | 506 | G | P-O5' | 8.69 | 1.68 | 1.59 |
| 26 | BB | 1833 | C | C2'-O2' | -8.69 | 1.30 | 1.41 |
| 26 | BB | 2126 | A | C6-N1 | -8.69 | 1.29 | 1.35 |
| 4 | AD | 2 | G | N3-C4 | 8.69 | 1.41 | 1.35 |
| 26 | BB | 1078 | U | C4'-C3' | 8.69 | 1.62 | 1.53 |
| 1 | AA | 1449 | C | C4'-O4' | -8.68 | 1.34 | 1.45 |
| 26 | BB | 363 | G | P-O5' | 8.68 | 1.68 | 1.59 |
| 1 | AA | 1464 | U | C2-N3 | 8.68 | 1.43 | 1.37 |
| 26 | BB | 248 | G | C4'-O4' | -8.67 | 1.34 | 1.45 |
| 1 | AA | 741 | G | P-O5' | 8.67 | 1.68 | 1.59 |
| 26 | BB | 1709 | U | C5'-C4' | 8.67 | 1.61 | 1.51 |
| 26 | BB | 1824 | G | C8-N7 | 8.67 | 1.36 | 1.30 |
| 26 | BB | 1893 | C | C5-C6 | 8.67 | 1.41 | 1.34 |
| 1 | AA | 1251 | A | N7-C5 | -8.67 | 1.34 | 1.39 |
| 2 | AB | 10 | G | C2-N3 | 8.66 | 1.39 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 591 | U | C5'-C4' | 8.66 | 1.61 | 1.51 |
| 26 | BB | 2108 | A | N3-C4 | 8.66 | 1.40 | 1.34 |
| 26 | BB | 2342 | C | C2-O2 | -8.66 | 1.16 | 1.24 |
| 26 | BB | 1968 | G | C8-N7 | -8.66 | 1.25 | 1.30 |
| 1 | AA | 237 | G | P-O5' | 8.66 | 1.68 | 1.59 |
| 4 | AD | 44 | A | C8-N7 | -8.66 | 1.25 | 1.31 |
| 26 | BB | 88 | G | N9-C8 | -8.66 | 1.31 | 1.37 |
| 26 | BB | 246 | C | C2-N3 | 8.66 | 1.42 | 1.35 |
| 1 | AA | 1162 | C | P-O5' | 8.65 | 1.68 | 1.59 |
| 4 | AD | 4 | G | N3-C4 | 8.65 | 1.41 | 1.35 |
| 26 | BB | 2195 | U | P-O5' | 8.65 | 1.68 | 1.59 |
| 1 | AA | 1085 | U | C5'-C4' | 8.65 | 1.61 | 1.51 |
| 26 | BB | 1047 | G | C2-N3 | 8.65 | 1.39 | 1.32 |
| 26 | BB | 1173 | U | P-O5' | 8.65 | 1.68 | 1.59 |
| 1 | AA | 178 | C | C5-C6 | 8.64 | 1.41 | 1.34 |
| 1 | AA | 292 | G | C2-N3 | 8.64 | 1.39 | 1.32 |
| 4 | AD | 65 | G | N3-C4 | 8.64 | 1.41 | 1.35 |
| 26 | BB | 1424 | G | C2-N3 | 8.64 | 1.39 | 1.32 |
| 26 | BB | 1455 | G | C5'-C4' | 8.64 | 1.61 | 1.51 |
| 26 | BB | 2520 | C | C2-N3 | 8.64 | 1.42 | 1.35 |
| 26 | BB | 2872 | A | N3-C4 | 8.64 | 1.40 | 1.34 |
| 1 | AA | 863 | U | P-O5' | 8.64 | 1.68 | 1.59 |
| 26 | BB | 132 | G | C5'-C4' | 8.64 | 1.61 | 1.51 |
| 26 | BB | 2057 | G | N9-C8 | 8.64 | 1.43 | 1.37 |
| 26 | BB | 976 | G | C2-N3 | 8.64 | 1.39 | 1.32 |
| 26 | BB | 1660 | G | C6-N1 | 8.63 | 1.45 | 1.39 |
| 1 | AA | 365 | U | C2-N3 | 8.63 | 1.43 | 1.37 |
| 26 | BB | 1773 | A | N3-C4 | 8.63 | 1.40 | 1.34 |
| 26 | BB | 2381 | A | N3-C4 | 8.63 | 1.40 | 1.34 |
| 26 | BB | 519 | U | C4-C5 | 8.63 | 1.51 | 1.43 |
| 26 | BB | 1040 | A | N3-C4 | 8.63 | 1.40 | 1.34 |
| 26 | BB | 2345 | G | P-O5' | 8.62 | 1.68 | 1.59 |
| 26 | BB | 2840 | C | C4-C5 | -8.62 | 1.36 | 1.43 |
| 1 | AA | 805 | C | N3-C4 | 8.62 | 1.40 | 1.33 |
| 1 | AA | 1107 | C | C2-N3 | 8.62 | 1.42 | 1.35 |
| 4 | AD | 26 | C | N1-C6 | 8.62 | 1.42 | 1.37 |
| 26 | BB | 397 | U | P-O5' | 8.62 | 1.68 | 1.59 |
| 26 | BB | 1383 | A | N7-C5 | 8.62 | 1.44 | 1.39 |
| 26 | BB | 1122 | G | N7-C5 | 8.62 | 1.44 | 1.39 |
| 26 | BB | 960 | A | N3-C4 | 8.62 | 1.40 | 1.34 |
| 1 | AA | 453 | G | N3-C4 | 8.62 | 1.41 | 1.35 |
| 26 | BB | 2385 | C | N3-C4 | 8.62 | 1.40 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 61 | C | N3-C4 | 8.61 | 1.40 | 1.33 |
| 26 | BB | 1533 | C | C5'-C4' | 8.61 | 1.61 | 1.51 |
| 1 | AA | 796 | C | C4-C5 | 8.61 | 1.49 | 1.43 |
| 1 | AA | 230 | G | N3-C4 | 8.61 | 1.41 | 1.35 |
| 26 | BB | 1565 | C | C4-C5 | 8.61 | 1.49 | 1.43 |
| 1 | AA | 572 | A | N7-C5 | 8.60 | 1.44 | 1.39 |
| 1 | AA | 633 | G | C5-C4 | 8.60 | 1.44 | 1.38 |
| 26 | BB | 5 | A | P-O5' | 8.60 | 1.68 | 1.59 |
| 1 | AA | 249 | U | C2-N3 | 8.60 | 1.43 | 1.37 |
| 4 | AD | 58 | A | N3-C4 | 8.60 | 1.40 | 1.34 |
| 26 | BB | 1077 | A | N3-C4 | 8.60 | 1.40 | 1.34 |
| 26 | BB | 1382 | G | C6-N1 | 8.60 | 1.45 | 1.39 |
| 26 | BB | 576 | U | P-O5' | 8.60 | 1.68 | 1.59 |
| 26 | BB | 778 | G | C2-N3 | 8.60 | 1.39 | 1.32 |
| 26 | BB | 1575 | C | P-O5' | 8.60 | 1.68 | 1.59 |
| 1 | AA | 686 | U | C4-C5 | 8.59 | 1.51 | 1.43 |
| 3 | AC | 21 | U | N1-C2 | 8.59 | 1.46 | 1.38 |
| 26 | BB | 581 | C | O3'-P | 8.59 | 1.71 | 1.61 |
| 26 | BB | 1494 | A | C8-N7 | -8.59 | 1.25 | 1.31 |
| 26 | BB | 1584 | U | C2-N3 | 8.59 | 1.43 | 1.37 |
| 26 | BB | 1685 | C | O3'-P | 8.59 | 1.71 | 1.61 |
| 26 | BB | 2175 | C | C5-C6 | 8.59 | 1.41 | 1.34 |
| 26 | BB | 2466 | C | N3-C4 | 8.59 | 1.40 | 1.33 |
| 26 | BB | 2518 | A | N9-C4 | 8.59 | 1.43 | 1.37 |
| 1 | AA | 388 | G | C6-N1 | -8.59 | 1.33 | 1.39 |
| 1 | AA | 272 | C | N3-C4 | 8.58 | 1.40 | 1.33 |
| 1 | AA | 1038 | C | N3-C4 | 8.58 | 1.40 | 1.33 |
| 26 | BB | 2549 | G | C2-N3 | 8.58 | 1.39 | 1.32 |
| 26 | BB | 1270 | C | C2'-C1' | -8.58 | 1.44 | 1.53 |
| 26 | BB | 118 | A | N3-C4 | 8.58 | 1.40 | 1.34 |
| 26 | BB | 2382 | G | N7-C5 | -8.58 | 1.34 | 1.39 |
| 26 | BB | 822 | G | C5-C6 | -8.58 | 1.33 | 1.42 |
| 1 | AA | 1219 | A | N3-C4 | 8.58 | 1.40 | 1.34 |
| 26 | BB | 562 | U | C3'-C2' | 8.58 | 1.62 | 1.52 |
| 26 | BB | 2295 | C | N1-C6 | 8.58 | 1.42 | 1.37 |
| 1 | AA | 388 | G | N1-C2 | 8.57 | 1.44 | 1.37 |
| 26 | BB | 2551 | C | P-O5' | 8.57 | 1.68 | 1.59 |
| 26 | BB | 1993 | U | P-O5' | 8.57 | 1.68 | 1.59 |
| 26 | BB | 2848 | G | P-O5' | 8.57 | 1.68 | 1.59 |
| 26 | BB | 1929 | G | C5-C4 | 8.57 | 1.44 | 1.38 |
| 1 | AA | 1421 | G | C6-N1 | 8.56 | 1.45 | 1.39 |
| 26 | BB | 2328 | A | N9-C8 | -8.56 | 1.30 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1191 | A | C2'-C1' | 8.56 | 1.62 | 1.53 |
| 26 | BB | 583 | G | C5-C4 | -8.56 | 1.32 | 1.38 |
| 3 | AC | 14 | G | C2-N3 | 8.56 | 1.39 | 1.32 |
| 26 | BB | 2111 | U | C5'-C4' | 8.56 | 1.61 | 1.51 |
| 26 | BB | 2277 | G | C8-N7 | 8.56 | 1.36 | 1.30 |
| 26 | BB | 2718 | G | N3-C4 | 8.56 | 1.41 | 1.35 |
| 1 | AA | 204 | G | N9-C8 | -8.55 | 1.31 | 1.37 |
| 26 | BB | 1106 | G | N3-C4 | 8.55 | 1.41 | 1.35 |
| 26 | BB | 1327 | A | P-O5' | 8.55 | 1.68 | 1.59 |
| 26 | BB | 1515 | A | N7-C5 | -8.55 | 1.34 | 1.39 |
| 4 | AD | 63 | C | N1-C6 | 8.55 | 1.42 | 1.37 |
| 26 | BB | 812 | C | C2-O2 | -8.55 | 1.16 | 1.24 |
| 26 | BB | 1169 | A | N7-C5 | 8.54 | 1.44 | 1.39 |
| 1 | AA | 1126 | U | N3-C4 | 8.54 | 1.46 | 1.38 |
| 25 | BA | 83 | G | O3'-P | 8.54 | 1.71 | 1.61 |
| 26 | BB | 645 | C | N1-C2 | 8.54 | 1.48 | 1.40 |
| 26 | BB | 925 | A | P-O5' | 8.54 | 1.68 | 1.59 |
| 26 | BB | 83 | A | N9-C4 | -8.54 | 1.32 | 1.37 |
| 26 | BB | 408 | G | C2-N3 | 8.54 | 1.39 | 1.32 |
| 26 | BB | 1182 | G | O3'-P | 8.54 | 1.71 | 1.61 |
| 26 | BB | 1680 | U | C2'-C1' | -8.54 | 1.44 | 1.53 |
| 26 | BB | 527 | C | C2-N3 | 8.53 | 1.42 | 1.35 |
| 26 | BB | 1486 | U | C5'-C4' | 8.54 | 1.61 | 1.51 |
| 1 | AA | 319 | G | C2-N3 | 8.53 | 1.39 | 1.32 |
| 1 | AA | 624 | C | N3-C4 | 8.53 | 1.40 | 1.33 |
| 4 | AD | 71 | G | C6-N1 | 8.53 | 1.45 | 1.39 |
| 26 | BB | 1602 | U | C4-O4 | 8.53 | 1.30 | 1.23 |
| 1 | AA | 812 | G | N3-C4 | 8.53 | 1.41 | 1.35 |
| 25 | BA | 9 | G | N7-C5 | 8.53 | 1.44 | 1.39 |
| 26 | BB | 946 | C | N1-C6 | 8.53 | 1.42 | 1.37 |
| 26 | BB | 1032 | A | N7-C5 | 8.53 | 1.44 | 1.39 |
| 26 | BB | 1649 | G | C6-O6 | -8.53 | 1.16 | 1.24 |
| 26 | BB | 1708 | C | C4'-O4' | -8.53 | 1.34 | 1.45 |
| 26 | BB | 2894 | G | N7-C5 | -8.53 | 1.34 | 1.39 |
| 26 | BB | 877 | A | N7-C5 | 8.52 | 1.44 | 1.39 |
| 1 | AA | 476 | U | C5'-C4' | 8.52 | 1.61 | 1.51 |
| 26 | BB | 62 | U | C2-N3 | 8.52 | 1.43 | 1.37 |
| 26 | BB | 2197 | U | N1-C2 | 8.52 | 1.46 | 1.38 |
| 26 | BB | 2464 | G | P-O5' | 8.52 | 1.68 | 1.59 |
| 1 | AA | 1037 | C | N1-C6 | 8.52 | 1.42 | 1.37 |
| 1 | AA | 1541 | U | N1-C6 | 8.52 | 1.45 | 1.38 |
| 26 | BB | 928 | A | N7-C5 | -8.51 | 1.34 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 692 | U | P-O5' | 8.51 | 1.68 | 1.59 |
| 1 | AA | 1473 | G | C2'-C1' | 8.51 | 1.62 | 1.53 |
| 26 | BB | 121 | G | C6-N1 | 8.51 | 1.45 | 1.39 |
| 26 | BB | 2690 | U | C2-N3 | 8.51 | 1.43 | 1.37 |
| 1 | AA | 181 | A | C5'-C4' | 8.51 | 1.61 | 1.51 |
| 1 | AA | 1190 | G | C2'-C1' | 8.51 | 1.62 | 1.53 |
| 1 | AA | 872 | A | P-O5' | 8.50 | 1.68 | 1.59 |
| 1 | AA | 1285 | A | C8-N7 | -8.50 | 1.25 | 1.31 |
| 26 | BB | 1078 | U | C2-N3 | 8.50 | 1.43 | 1.37 |
| 26 | BB | 2245 | U | C2-N3 | 8.50 | 1.43 | 1.37 |
| 26 | BB | 794 | A | C5-C4 | -8.50 | 1.32 | 1.38 |
| 1 | AA | 252 | U | C2-N3 | 8.50 | 1.43 | 1.37 |
| 1 | AA | 999 | C | P-O5' | 8.50 | 1.68 | 1.59 |
| 1 | AA | 1222 | G | C5-C4 | -8.50 | 1.32 | 1.38 |
| 26 | BB | 856 | G | N1-C2 | 8.50 | 1.44 | 1.37 |
| 26 | BB | 1941 | C | N1-C6 | 8.50 | 1.42 | 1.37 |
| 1 | AA | 21 | G | N3-C4 | 8.50 | 1.41 | 1.35 |
| 1 | AA | 277 | C | C5-C6 | 8.49 | 1.41 | 1.34 |
| 1 | AA | 459 | A | N7-C5 | -8.49 | 1.34 | 1.39 |
| 4 | AD | 60 | A | C6-N1 | -8.49 | 1.29 | 1.35 |
| 26 | BB | 34 | U | C2-N3 | 8.49 | 1.43 | 1.37 |
| 26 | BB | 910 | A | N3-C4 | 8.49 | 1.40 | 1.34 |
| 26 | BB | 1106 | G | P-O5' | 8.49 | 1.68 | 1.59 |
| 3 | AC | 22 | G | P-O5' | 8.49 | 1.68 | 1.59 |
| 26 | BB | 2685 | G | C2-N3 | 8.49 | 1.39 | 1.32 |
| 1 | AA | 325 | A | P-O5' | 8.48 | 1.68 | 1.59 |
| 1 | AA | 773 | G | C2-N3 | 8.48 | 1.39 | 1.32 |
| 1 | AA | 843 | U | C5-C6 | 8.48 | 1.41 | 1.34 |
| 26 | BB | 1854 | A | N9-C8 | 8.48 | 1.44 | 1.37 |
| 1 | AA | 446 | G | N9-C4 | -8.48 | 1.31 | 1.38 |
| 26 | BB | 732 | C | C3'-C2' | 8.48 | 1.62 | 1.52 |
| 26 | BB | 1842 | G | N9-C8 | -8.48 | 1.31 | 1.37 |
| 26 | BB | 2129 | C | C5-C6 | 8.48 | 1.41 | 1.34 |
| 1 | AA | 607 | A | N3-C4 | 8.48 | 1.40 | 1.34 |
| 1 | AA | 1079 | G | N3-C4 | 8.48 | 1.41 | 1.35 |
| 26 | BB | 2585 | U | C2-N3 | -8.48 | 1.31 | 1.37 |
| 25 | BA | 56 | G | C6-N1 | 8.48 | 1.45 | 1.39 |
| 26 | BB | 2556 | C | C5'-C4' | 8.48 | 1.61 | 1.51 |
| 1 | AA | 1531 | A | N3-C4 | 8.48 | 1.40 | 1.34 |
| 1 | AA | 412 | A | N3-C4 | 8.48 | 1.40 | 1.34 |
| 1 | AA | 1497 | G | C6-N1 | 8.48 | 1.45 | 1.39 |
| 26 | BB | 1082 | U | C5-C6 | 8.48 | 1.41 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1137 | G | O3'-P | 8.48 | 1.71 | 1.61 |
| 26 | BB | 2803 | G | P-O5' | 8.48 | 1.68 | 1.59 |
| 1 | AA | 1364 | U | C2-N3 | 8.47 | 1.43 | 1.37 |
| 26 | BB | 19 | A | C6-N1 | 8.47 | 1.41 | 1.35 |
| 26 | BB | 244 | A | P-O5' | 8.47 | 1.68 | 1.59 |
| 1 | AA | 299 | G | C6-N1 | 8.47 | 1.45 | 1.39 |
| 1 | AA | 778 | G | P-O5' | 8.47 | 1.68 | 1.59 |
| 26 | BB | 241 | A | N1-C2 | -8.47 | 1.26 | 1.34 |
| 26 | BB | 1871 | A | P-O5' | 8.47 | 1.68 | 1.59 |
| 26 | BB | 2463 | C | C4'-O4' | -8.47 | 1.34 | 1.45 |
| 26 | BB | 2482 | A | N3-C4 | 8.47 | 1.40 | 1.34 |
| 26 | BB | 2396 | G | C6-N1 | 8.46 | 1.45 | 1.39 |
| 26 | BB | 2458 | G | N9-C8 | 8.47 | 1.43 | 1.37 |
| 26 | BB | 2800 | A | P-O5' | 8.47 | 1.68 | 1.59 |
| 1 | AA | 1301 | U | N1-C2 | 8.46 | 1.46 | 1.38 |
| 26 | BB | 793 | A | O3'-P | 8.46 | 1.71 | 1.61 |
| 1 | AA | 1316 | G | N7-C5 | -8.46 | 1.34 | 1.39 |
| 26 | BB | 759 | G | C5-C6 | 8.46 | 1.50 | 1.42 |
| 1 | AA | 142 | G | N1-C2 | 8.46 | 1.44 | 1.37 |
| 26 | BB | 1289 | C | N3-C4 | 8.46 | 1.39 | 1.33 |
| 26 | BB | 333 | G | C6-N1 | -8.46 | 1.33 | 1.39 |
| 26 | BB | 572 | A | C2-N3 | 8.46 | 1.41 | 1.33 |
| 26 | BB | 1425 | G | N9-C8 | -8.46 | 1.31 | 1.37 |
| 26 | BB | 2679 | A | P-O5' | 8.46 | 1.68 | 1.59 |
| 26 | BB | 589 | U | N3-C4 | 8.46 | 1.46 | 1.38 |
| 26 | BB | 1147 | A | C5-C4 | -8.46 | 1.32 | 1.38 |
| 26 | BB | 1307 | A | P-O5' | 8.46 | 1.68 | 1.59 |
| 1 | AA | 4 | U | P-O5' | 8.45 | 1.68 | 1.59 |
| 26 | BB | 506 | G | P-O5' | 8.45 | 1.68 | 1.59 |
| 26 | BB | 859 | G | C5-C6 | 8.45 | 1.50 | 1.42 |
| 26 | BB | 1715 | G | N7-C5 | 8.45 | 1.44 | 1.39 |
| 26 | BB | 1635 | A | N3-C4 | 8.45 | 1.40 | 1.34 |
| 26 | BB | 256 | A | N9-C4 | 8.45 | 1.43 | 1.37 |
| 26 | BB | 791 | C | N1-C6 | 8.45 | 1.42 | 1.37 |
| 26 | BB | 19 | A | N7-C5 | -8.45 | 1.34 | 1.39 |
| 1 | AA | 279 | A | N3-C4 | 8.45 | 1.40 | 1.34 |
| 1 | AA | 760 | G | C2-N3 | 8.45 | 1.39 | 1.32 |
| 26 | BB | 2778 | A | C5-C6 | 8.45 | 1.48 | 1.41 |
| 1 | AA | 958 | A | C5-C6 | 8.44 | 1.48 | 1.41 |
| 26 | BB | 311 | A | N3-C4 | 8.44 | 1.40 | 1.34 |
| 1 | AA | 445 | G | N7-C5 | 8.44 | 1.44 | 1.39 |
| 26 | BB | 231 | A | N9-C4 | 8.44 | 1.43 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2765 | A | C5-C6 | 8.44 | 1.48 | 1.41 |
| 1 | AA | 193 | C | N1-C6 | 8.44 | 1.42 | 1.37 |
| 4 | AD | 49 | C | N1-C2 | 8.44 | 1.48 | 1.40 |
| 26 | BB | 1713 | A | N3-C4 | 8.44 | 1.40 | 1.34 |
| 1 | AA | 761 | G | C5-C4 | -8.43 | 1.32 | 1.38 |
| 1 | AA | 885 | G | C2-N3 | 8.43 | 1.39 | 1.32 |
| 2 | AB | 23 | A | N3-C4 | 8.43 | 1.40 | 1.34 |
| 26 | BB | 2855 | C | N1-C6 | 8.43 | 1.42 | 1.37 |
| 1 | AA | 273 | U | C2-N3 | 8.43 | 1.43 | 1.37 |
| 26 | BB | 1143 | A | C5-C6 | 8.43 | 1.48 | 1.41 |
| 1 | AA | 1225 | A | P-O5' | 8.43 | 1.68 | 1.59 |
| 1 | AA | 339 | C | N1-C6 | 8.42 | 1.42 | 1.37 |
| 1 | AA | 476 | U | P-O5' | 8.42 | 1.68 | 1.59 |
| 1 | AA | 1330 | U | O3'-P | 8.42 | 1.71 | 1.61 |
| 26 | BB | 1572 | A | C6-N1 | 8.42 | 1.41 | 1.35 |
| 26 | BB | 2454 | G | C2-N3 | 8.42 | 1.39 | 1.32 |
| 26 | BB | 1388 | G | N9-C8 | 8.42 | 1.43 | 1.37 |
| 1 | AA | 241 | G | C5-C4 | 8.42 | 1.44 | 1.38 |
| 1 | AA | 309 | A | C6-N1 | 8.42 | 1.41 | 1.35 |
| 1 | AA | 1251 | A | N9-C8 | -8.42 | 1.31 | 1.37 |
| 26 | BB | 386 | G | C5'-C4' | 8.42 | 1.61 | 1.51 |
| 1 | AA | 412 | A | C5-C4 | -8.41 | 1.32 | 1.38 |
| 1 | AA | 1483 | A | N7-C5 | -8.41 | 1.34 | 1.39 |
| 1 | AA | 992 | U | C4'-O4' | -8.41 | 1.34 | 1.45 |
| 26 | BB | 887 | U | C4-O4 | -8.41 | 1.17 | 1.23 |
| 26 | BB | 1408 | G | C6-N1 | 8.41 | 1.45 | 1.39 |
| 1 | AA | 1328 | C | P-O5' | 8.41 | 1.68 | 1.59 |
| 26 | BB | 297 | G | N3-C4 | 8.41 | 1.41 | 1.35 |
| 26 | BB | 1905 | C | N3-C4 | -8.41 | 1.28 | 1.33 |
| 1 | AA | 21 | G | C8-N7 | -8.40 | 1.25 | 1.30 |
| 1 | AA | 199 | A | N3-C4 | 8.40 | 1.39 | 1.34 |
| 1 | AA | 345 | C | C5'-C4' | 8.40 | 1.61 | 1.51 |
| 26 | BB | 1380 | G | N9-C4 | -8.40 | 1.31 | 1.38 |
| 26 | BB | 1492 | G | C6-N1 | 8.40 | 1.45 | 1.39 |
| 1 | AA | 137 | U | C2-N3 | 8.40 | 1.43 | 1.37 |
| 26 | BB | 1297 | C | N1-C6 | -8.40 | 1.32 | 1.37 |
| 26 | BB | 2085 | U | C2-N3 | 8.40 | 1.43 | 1.37 |
| 26 | BB | 2277 | G | C2-N3 | 8.40 | 1.39 | 1.32 |
| 1 | AA | 46 | G | N1-C2 | 8.40 | 1.44 | 1.37 |
| 26 | BB | 1903 | G | C8-N7 | 8.40 | 1.35 | 1.30 |
| 1 | AA | 243 | A | C5'-C4' | 8.39 | 1.61 | 1.51 |
| 25 | BA | 95 | U | C4-O4 | 8.39 | 1.30 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2872 | A | N7-C5 | -8.39 | 1.34 | 1.39 |
| 26 | BB | 626 | A | P-O5' | 8.39 | 1.68 | 1.59 |
| 26 | BB | 1111 | A | N3-C4 | 8.39 | 1.39 | 1.34 |
| 25 | BA | 101 | A | C8-N7 | -8.39 | 1.25 | 1.31 |
| 26 | BB | 986 | C | N3-C4 | 8.39 | 1.39 | 1.33 |
| 26 | BB | 1459 | G | N9-C4 | 8.39 | 1.44 | 1.38 |
| 1 | AA | 14 | U | O3'-P | 8.38 | 1.71 | 1.61 |
| 1 | AA | 790 | A | P-O5' | 8.38 | 1.68 | 1.59 |
| 1 | AA | 1470 | U | C4-C5 | 8.38 | 1.51 | 1.43 |
| 26 | BB | 814 | C | P-O5' | 8.38 | 1.68 | 1.59 |
| 26 | BB | 1412 | U | C4-C5 | 8.38 | 1.51 | 1.43 |
| 26 | BB | 2074 | U | C4'-C3' | -8.38 | 1.44 | 1.53 |
| 2 | AB | 75 | C | P-O5' | 8.38 | 1.68 | 1.59 |
| 26 | BB | 648 | G | P-O5' | 8.38 | 1.68 | 1.59 |
| 26 | BB | 1541 | C | N1-C6 | 8.38 | 1.42 | 1.37 |
| 1 | AA | 475 | C | N1-C6 | -8.38 | 1.32 | 1.37 |
| 26 | BB | 2686 | G | C4'-O4' | -8.38 | 1.34 | 1.45 |
| 26 | BB | 379 | G | P-O5' | 8.37 | 1.68 | 1.59 |
| 1 | AA | 708 | C | C4-C5 | 8.37 | 1.49 | 1.43 |
| 1 | AA | 1032 | G | N1-C2 | 8.37 | 1.44 | 1.37 |
| 2 | AB | 10 | G | O4'-C1' | 8.37 | 1.52 | 1.41 |
| 26 | BB | 2424 | C | N1-C6 | 8.37 | 1.42 | 1.37 |
| 1 | AA | 1539 | C | C4-C5 | 8.37 | 1.49 | 1.43 |
| 25 | BA | 109 | A | C8-N7 | -8.37 | 1.25 | 1.31 |
| 26 | BB | 8 | C | P-O5' | 8.37 | 1.68 | 1.59 |
| 26 | BB | 2664 | G | N3-C4 | 8.37 | 1.41 | 1.35 |
| 1 | AA | 573 | A | N7-C5 | 8.36 | 1.44 | 1.39 |
| 1 | AA | 1059 | C | C2-N3 | 8.36 | 1.42 | 1.35 |
| 26 | BB | 1021 | A | N7-C5 | -8.36 | 1.34 | 1.39 |
| 26 | BB | 1040 | A | O3'-P | 8.36 | 1.71 | 1.61 |
| 26 | BB | 2038 | G | P-O5' | 8.36 | 1.68 | 1.59 |
| 26 | BB | 1204 | A | N3-C4 | 8.36 | 1.39 | 1.34 |
| 1 | AA | 1150 | A | C4'-O4' | -8.35 | 1.34 | 1.45 |
| 2 | AB | 76 | A | N7-C5 | 8.35 | 1.44 | 1.39 |
| 26 | BB | 973 | A | N3-C4 | 8.35 | 1.39 | 1.34 |
| 26 | BB | 347 | A | O3'-P | 8.35 | 1.71 | 1.61 |
| 26 | BB | 1266 | G | C2-N3 | 8.35 | 1.39 | 1.32 |
| 1 | AA | 974 | A | C4'-C3' | 8.35 | 1.62 | 1.53 |
| 1 | AA | 1084 | G | C8-N7 | -8.35 | 1.25 | 1.30 |
| 1 | AA | 1138 | G | N3-C4 | -8.35 | 1.29 | 1.35 |
| 1 | AA | 877 | G | N9-C8 | -8.35 | 1.32 | 1.37 |
| 26 | BB | 1233 | C | N1-C6 | 8.35 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 399 | U | C2-N3 | 8.34 | 1.43 | 1.37 |
| 26 | BB | 1761 | C | N1-C6 | 8.34 | 1.42 | 1.37 |
| 26 | BB | 1770 | G | C5'-C4' | 8.34 | 1.61 | 1.51 |
| 1 | AA | 256 | U | C2-N3 | 8.34 | 1.43 | 1.37 |
| 1 | AA | 541 | G | P-O5' | 8.34 | 1.68 | 1.59 |
| 26 | BB | 1283 | G | C5-C6 | 8.34 | 1.50 | 1.42 |
| 26 | BB | 2897 | U | C4-C5 | 8.34 | 1.51 | 1.43 |
| 26 | BB | 542 | C | P-O5' | 8.34 | 1.68 | 1.59 |
| 26 | BB | 200 | U | P-O5' | 8.34 | 1.68 | 1.59 |
| 1 | AA | 1206 | G | C6-N1 | 8.33 | 1.45 | 1.39 |
| 4 | AD | 35 | C | N1-C6 | 8.33 | 1.42 | 1.37 |
| 26 | BB | 33 | C | N1-C6 | -8.33 | 1.32 | 1.37 |
| 26 | BB | 2097 | A | N9-C4 | -8.33 | 1.32 | 1.37 |
| 26 | BB | 2426 | A | C6-N6 | -8.33 | 1.27 | 1.33 |
| 26 | BB | 2828 | G | P-O5' | 8.33 | 1.68 | 1.59 |
| 26 | BB | 1074 | G | P-O5' | 8.33 | 1.68 | 1.59 |
| 26 | BB | 2739 | U | C2-N3 | -8.33 | 1.31 | 1.37 |
| 1 | AA | 814 | A | N1-C2 | -8.32 | 1.26 | 1.34 |
| 1 | AA | 838 | G | C6-O6 | 8.32 | 1.31 | 1.24 |
| 1 | AA | 1278 | G | C4'-O4' | -8.32 | 1.34 | 1.45 |
| 26 | BB | 800 | A | C6-N1 | -8.32 | 1.29 | 1.35 |
| 26 | BB | 1211 | C | C2'-C1' | 8.32 | 1.62 | 1.53 |
| 1 | AA | 1474 | U | C4-C5 | 8.32 | 1.51 | 1.43 |
| 25 | BA | 118 | C | N1-C6 | 8.32 | 1.42 | 1.37 |
| 1 | AA | 459 | A | C8-N7 | -8.32 | 1.25 | 1.31 |
| 1 | AA | 1250 | A | N9-C4 | 8.32 | 1.42 | 1.37 |
| 1 | AA | 1272 | G | N1-C2 | 8.32 | 1.44 | 1.37 |
| 26 | BB | 44 | A | P-O5' | 8.32 | 1.68 | 1.59 |
| 26 | BB | 1388 | G | N7-C5 | 8.32 | 1.44 | 1.39 |
| 26 | BB | 618 | G | N1-C2 | 8.32 | 1.44 | 1.37 |
| 26 | BB | 1262 | A | P-O5' | 8.32 | 1.68 | 1.59 |
| 1 | AA | 251 | G | N7-C5 | 8.32 | 1.44 | 1.39 |
| 1 | AA | 1472 | U | P-O5' | 8.32 | 1.68 | 1.59 |
| 26 | BB | 2574 | G | C6-N1 | -8.32 | 1.33 | 1.39 |
| 26 | BB | 354 | A | N3-C4 | 8.32 | 1.39 | 1.34 |
| 26 | BB | 1072 | C | O4'-C1' | 8.32 | 1.52 | 1.41 |
| 26 | BB | 1721 | G | N7-C5 | 8.32 | 1.44 | 1.39 |
| 4 | AD | 46 | G | N7-C5 | -8.31 | 1.34 | 1.39 |
| 26 | BB | 219 | A | N3-C4 | 8.31 | 1.39 | 1.34 |
| 26 | BB | 2701 | U | C2-N3 | 8.31 | 1.43 | 1.37 |
| 26 | BB | 250 | G | N7-C5 | 8.31 | 1.44 | 1.39 |
| 1 | AA | 737 | C | C5'-C4' | 8.31 | 1.61 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 753 | A | N1-C2 | -8.31 | 1.26 | 1.34 |
| 1 | AA | 996 | A | N7-C5 | 8.31 | 1.44 | 1.39 |
| 26 | BB | 159 | G | N9-C8 | 8.31 | 1.43 | 1.37 |
| 4 | AD | 4 | G | C2-N3 | 8.30 | 1.39 | 1.32 |
| 26 | BB | 497 | A | C5'-C4' | 8.30 | 1.61 | 1.51 |
| 26 | BB | 2741 | A | C8-N7 | -8.30 | 1.25 | 1.31 |
| 26 | BB | 2314 | A | N3-C4 | 8.30 | 1.39 | 1.34 |
| 1 | AA | 1016 | A | C6-N1 | 8.30 | 1.41 | 1.35 |
| 25 | BA | 10 | G | C8-N7 | -8.30 | 1.25 | 1.30 |
| 26 | BB | 681 | G | N7-C5 | -8.30 | 1.34 | 1.39 |
| 26 | BB | 1684 | G | N9-C4 | 8.30 | 1.44 | 1.38 |
| 26 | BB | 1748 | C | C2-N3 | 8.30 | 1.42 | 1.35 |
| 26 | BB | 2375 | G | C8-N7 | 8.30 | 1.35 | 1.30 |
| 1 | AA | 816 | A | O3'-P | 8.29 | 1.71 | 1.61 |
| 1 | AA | 888 | G | C2-N3 | 8.30 | 1.39 | 1.32 |
| 26 | BB | 2394 | C | C2-O2 | -8.30 | 1.17 | 1.24 |
| 25 | BA | 52 | A | O3'-P | 8.29 | 1.71 | 1.61 |
| 26 | BB | 260 | G | N7-C5 | 8.29 | 1.44 | 1.39 |
| 26 | BB | 471 | A | P-O5' | 8.29 | 1.68 | 1.59 |
| 26 | BB | 616 | A | C6-N1 | 8.29 | 1.41 | 1.35 |
| 26 | BB | 1859 | U | C5'-C4' | 8.29 | 1.61 | 1.51 |
| 1 | AA | 27 | G | N7-C5 | -8.29 | 1.34 | 1.39 |
| 25 | BA | 6 | G | O3'-P | 8.29 | 1.71 | 1.61 |
| 26 | BB | 35 | G | C8-N7 | 8.29 | 1.35 | 1.30 |
| 26 | BB | 622 | G | C5'-C4' | 8.29 | 1.61 | 1.51 |
| 26 | BB | 1183 | U | C4-O4 | 8.29 | 1.30 | 1.23 |
| 26 | BB | 2675 | A | C5-C4 | -8.29 | 1.32 | 1.38 |
| 26 | BB | 910 | A | C4'-O4' | -8.28 | 1.34 | 1.45 |
| 1 | AA | 1243 | C | C4-C5 | 8.28 | 1.49 | 1.43 |
| 26 | BB | 150 | U | O3'-P | 8.28 | 1.71 | 1.61 |
| 26 | BB | 2064 | C | C2-O2 | -8.28 | 1.17 | 1.24 |
| 26 | BB | 2618 | G | C5'-C4' | 8.28 | 1.61 | 1.51 |
| 26 | BB | 2679 | A | N7-C5 | -8.28 | 1.34 | 1.39 |
| 4 | AD | 51 | U | C2-N3 | 8.28 | 1.43 | 1.37 |
| 26 | BB | 522 | A | C5'-C4' | 8.28 | 1.61 | 1.51 |
| 26 | BB | 1679 | A | N3-C4 | 8.28 | 1.39 | 1.34 |
| 26 | BB | 1735 | A | C5-C4 | -8.28 | 1.32 | 1.38 |
| 26 | BB | 1085 | A | C6-N6 | 8.27 | 1.40 | 1.33 |
| 26 | BB | 1302 | A | N9-C4 | -8.27 | 1.32 | 1.37 |
| 26 | BB | 1801 | A | N3-C4 | 8.27 | 1.39 | 1.34 |
| 2 | AB | 52 | A | N3-C4 | 8.27 | 1.39 | 1.34 |
| 26 | BB | 247 | G | N7-C5 | -8.27 | 1.34 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1212 | G | C6-N1 | 8.27 | 1.45 | 1.39 |
| 26 | BB | 1274 | A | P-O5' | 8.27 | 1.68 | 1.59 |
| 26 | BB | 27 | G | C8-N7 | -8.27 | 1.25 | 1.30 |
| 26 | BB | 1133 | A | N3-C4 | 8.27 | 1.39 | 1.34 |
| 26 | BB | 2132 | U | C4-C5 | 8.27 | 1.50 | 1.43 |
| 1 | AA | 399 | G | C2-N3 | 8.26 | 1.39 | 1.32 |
| 1 | AA | 1457 | G | C6-N1 | 8.26 | 1.45 | 1.39 |
| 26 | BB | 1189 | A | N9-C4 | 8.26 | 1.42 | 1.37 |
| 26 | BB | 1732 | C | C5-C6 | 8.26 | 1.41 | 1.34 |
| 1 | AA | 1187 | G | C2-N3 | 8.26 | 1.39 | 1.32 |
| 26 | BB | 1454 | C | C5'-C4' | 8.26 | 1.61 | 1.51 |
| 26 | BB | 2121 | G | C2-N3 | 8.26 | 1.39 | 1.32 |
| 26 | BB | 2422 | C | C2'-C1' | 8.26 | 1.62 | 1.53 |
| 1 | AA | 905 | U | N1-C2 | 8.26 | 1.46 | 1.38 |
| 26 | BB | 2169 | A | C5-C6 | 8.26 | 1.48 | 1.41 |
| 1 | AA | 438 | U | C2'-C1' | -8.26 | 1.44 | 1.53 |
| 26 | BB | 1165 | A | N9-C4 | 8.26 | 1.42 | 1.37 |
| 26 | BB | 2334 | U | C2-N3 | 8.26 | 1.43 | 1.37 |
| 26 | BB | 2453 | A | P-O5' | 8.26 | 1.68 | 1.59 |
| 26 | BB | 2532 | G | C6-N1 | 8.26 | 1.45 | 1.39 |
| 26 | BB | 1610 | A | N7-C5 | 8.26 | 1.44 | 1.39 |
| 1 | AA | 928 | G | C5-C4 | -8.25 | 1.32 | 1.38 |
| 2 | AB | 73 | G | C4'-O4' | -8.25 | 1.34 | 1.45 |
| 26 | BB | 181 | A | C6-N6 | 8.25 | 1.40 | 1.33 |
| 26 | BB | 2686 | G | C2-N3 | 8.25 | 1.39 | 1.32 |
| 25 | BA | 30 | C | O3'-P | 8.25 | 1.71 | 1.61 |
| 26 | BB | 2486 | C | O3'-P | 8.25 | 1.71 | 1.61 |
| 1 | AA | 766 | A | C5-C6 | 8.25 | 1.48 | 1.41 |
| 1 | AA | 1373 | G | P-O5' | 8.25 | 1.68 | 1.59 |
| 26 | BB | 597 | G | P-O5' | 8.25 | 1.68 | 1.59 |
| 26 | BB | 1893 | C | C3'-C2' | -8.25 | 1.43 | 1.52 |
| 1 | AA | 148 | G | N7-C5 | -8.24 | 1.34 | 1.39 |
| 1 | AA | 852 | G | C2-N3 | 8.24 | 1.39 | 1.32 |
| 25 | BA | 17 | C | C2-N3 | 8.24 | 1.42 | 1.35 |
| 26 | BB | 52 | A | N9-C8 | -8.24 | 1.31 | 1.37 |
| 26 | BB | 885 | C | P-O5' | 8.24 | 1.68 | 1.59 |
| 26 | BB | 1772 | A | C4'-C3' | 8.24 | 1.62 | 1.53 |
| 26 | BB | 1136 | G | N7-C5 | -8.24 | 1.34 | 1.39 |
| 26 | BB | 2858 | C | N3-C4 | 8.24 | 1.39 | 1.33 |
| 1 | AA | 928 | G | N1-C2 | 8.24 | 1.44 | 1.37 |
| 1 | AA | 722 | G | C5-C6 | 8.24 | 1.50 | 1.42 |
| 26 | BB | 244 | A | N3-C4 | 8.24 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1475 | G | C5'-C4' | 8.24 | 1.61 | 1.51 |
| 26 | BB | 1942 | C | N3-C4 | 8.24 | 1.39 | 1.33 |
| 26 | BB | 2168 | G | C2-N3 | 8.24 | 1.39 | 1.32 |
| 26 | BB | 844 | A | C4'-O4' | -8.23 | 1.34 | 1.45 |
| 1 | AA | 546 | A | N3-C4 | 8.23 | 1.39 | 1.34 |
| 1 | AA | 28 | A | C8-N7 | -8.23 | 1.25 | 1.31 |
| 26 | BB | 2297 | A | N3-C4 | 8.23 | 1.39 | 1.34 |
| 26 | BB | 1271 | G | P-O5' | 8.23 | 1.68 | 1.59 |
| 1 | AA | 743 | A | N7-C5 | 8.23 | 1.44 | 1.39 |
| 1 | AA | 1444 | U | C4-O4 | 8.23 | 1.30 | 1.23 |
| 26 | BB | 2550 | G | C5-C6 | -8.23 | 1.34 | 1.42 |
| 26 | BB | 624 | C | N3-C4 | 8.22 | 1.39 | 1.33 |
| 1 | AA | 759 | A | C4'-O4' | -8.22 | 1.34 | 1.45 |
| 3 | AC | 57 | C | N1-C6 | 8.22 | 1.42 | 1.37 |
| 26 | BB | 1660 | G | N3-C4 | 8.22 | 1.41 | 1.35 |
| 26 | BB | 2032 | G | N9-C8 | 8.22 | 1.43 | 1.37 |
| 1 | AA | 528 | C | C2'-O2' | 8.22 | 1.52 | 1.41 |
| 26 | BB | 2287 | A | C6-N1 | 8.22 | 1.41 | 1.35 |
| 26 | BB | 2314 | A | P-O5' | 8.22 | 1.68 | 1.59 |
| 26 | BB | 2455 | G | P-O5' | 8.22 | 1.68 | 1.59 |
| 26 | BB | 2227 | A | N3-C4 | 8.21 | 1.39 | 1.34 |
| 1 | AA | 81 | A | N3-C4 | 8.21 | 1.39 | 1.34 |
| 1 | AA | 732 | C | C4-N4 | -8.21 | 1.26 | 1.33 |
| 1 | AA | 1517 | G | C8-N7 | 8.21 | 1.35 | 1.30 |
| 26 | BB | 2079 | U | C2-O2 | 8.21 | 1.29 | 1.22 |
| 1 | AA | 266 | G | C6-N1 | 8.21 | 1.45 | 1.39 |
| 1 | AA | 639 | G | P-O5' | 8.21 | 1.68 | 1.59 |
| 1 | AA | 1334 | G | N3-C4 | 8.21 | 1.41 | 1.35 |
| 1 | AA | 1 | A | C8-N7 | -8.20 | 1.25 | 1.31 |
| 1 | AA | 1019 | A | N9-C4 | -8.20 | 1.32 | 1.37 |
| 1 | AA | 75 | G | N3-C4 | 8.20 | 1.41 | 1.35 |
| 1 | AA | 905 | U | N3-C4 | 8.20 | 1.45 | 1.38 |
| 26 | BB | 400 | G | P-O5' | 8.20 | 1.68 | 1.59 |
| 1 | AA | 60 | A | C6-N1 | -8.20 | 1.29 | 1.35 |
| 1 | AA | 253 | A | N7-C5 | -8.20 | 1.34 | 1.39 |
| 1 | AA | 723 | U | C4'-O4' | -8.20 | 1.34 | 1.45 |
| 1 | AA | 1194 | U | C5'-C4' | 8.20 | 1.61 | 1.51 |
| 1 | AA | 1067 | A | C6-N1 | 8.19 | 1.41 | 1.35 |
| 26 | BB | 388 | G | P-O5' | 8.19 | 1.68 | 1.59 |
| 26 | BB | 654 | A | N9-C4 | 8.19 | 1.42 | 1.37 |
| 26 | BB | 1387 | A | N3-C4 | 8.19 | 1.39 | 1.34 |
| 26 | BB | 248 | G | C2-N3 | 8.19 | 1.39 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1126 | U | N1-C2 | 8.19 | 1.46 | 1.38 |
| 4 | AD | 77 | A | N3-C4 | 8.19 | 1.39 | 1.34 |
| 26 | BB | 708 | G | C8-N7 | 8.19 | 1.35 | 1.30 |
| 2 | AB | 56 | C | P-O5' | 8.18 | 1.68 | 1.59 |
| 26 | BB | 61 | C | C3'-C2' | 8.18 | 1.61 | 1.52 |
| 1 | AA | 487 | A | C5-C4 | -8.18 | 1.33 | 1.38 |
| 25 | BA | 2 | G | C2-N3 | 8.18 | 1.39 | 1.32 |
| 26 | BB | 2792 | A | N9-C4 | 8.18 | 1.42 | 1.37 |
| 1 | AA | 1238 | A | N3-C4 | 8.18 | 1.39 | 1.34 |
| 26 | BB | 966 | G | P-O5' | 8.18 | 1.68 | 1.59 |
| 1 | AA | 163 | C | N1-C6 | 8.18 | 1.42 | 1.37 |
| 1 | AA | 1423 | G | N7-C5 | -8.18 | 1.34 | 1.39 |
| 26 | BB | 452 | G | N7-C5 | -8.18 | 1.34 | 1.39 |
| 26 | BB | 2370 | G | P-O5' | 8.18 | 1.68 | 1.59 |
| 1 | AA | 821 | G | C2-N3 | 8.17 | 1.39 | 1.32 |
| 1 | AA | 1367 | C | C4-C5 | 8.17 | 1.49 | 1.43 |
| 26 | BB | 1527 | G | N1-C2 | 8.17 | 1.44 | 1.37 |
| 26 | BB | 1889 | A | N7-C5 | 8.17 | 1.44 | 1.39 |
| 26 | BB | 2264 | C | C4-C5 | 8.17 | 1.49 | 1.43 |
| 26 | BB | 2526 | G | N7-C5 | 8.17 | 1.44 | 1.39 |
| 1 | AA | 626 | G | C5-C4 | -8.17 | 1.32 | 1.38 |
| 1 | AA | 628 | G | C6-N1 | 8.17 | 1.45 | 1.39 |
| 1 | AA | 706 | A | C8-N7 | -8.17 | 1.25 | 1.31 |
| 26 | BB | 2481 | G | C8-N7 | -8.17 | 1.26 | 1.30 |
| 26 | BB | 1711 | A | N3-C4 | 8.17 | 1.39 | 1.34 |
| 26 | BB | 2532 | G | C2-N3 | 8.17 | 1.39 | 1.32 |
| 26 | BB | 2736 | A | P-O5' | 8.17 | 1.68 | 1.59 |
| 1 | AA | 644 | U | P-O5' | 8.16 | 1.68 | 1.59 |
| 26 | BB | 1011 | G | C8-N7 | -8.16 | 1.26 | 1.30 |
| 26 | BB | 1589 | U | C2-N3 | 8.16 | 1.43 | 1.37 |
| 1 | AA | 1111 | A | N7-C5 | 8.16 | 1.44 | 1.39 |
| 26 | BB | 2322 | A | C2-N3 | 8.16 | 1.40 | 1.33 |
| 26 | BB | 2340 | A | N9-C4 | 8.16 | 1.42 | 1.37 |
| 26 | BB | 2071 | A | N7-C5 | -8.16 | 1.34 | 1.39 |
| 26 | BB | 2317 | A | C5'-C4' | 8.16 | 1.61 | 1.51 |
| 26 | BB | 725 | G | P-O5' | 8.16 | 1.68 | 1.59 |
| 1 | AA | 1497 | G | N3-C4 | 8.15 | 1.41 | 1.35 |
| 26 | BB | 1045 | C | N1-C6 | 8.15 | 1.42 | 1.37 |
| 26 | BB | 1740 | G | P-O5' | 8.15 | 1.68 | 1.59 |
| 26 | BB | 2466 | C | C4-C5 | 8.15 | 1.49 | 1.43 |
| 1 | AA | 441 | A | P-O5' | 8.15 | 1.67 | 1.59 |
| 26 | BB | 514 | A | N3-C4 | 8.15 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1009 | A | C4'-O4' | -8.15 | 1.34 | 1.45 |
| 26 | BB | 1957 | C | N1-C6 | 8.15 | 1.42 | 1.37 |
| 26 | BB | 1719 | G | N1-C2 | 8.14 | 1.44 | 1.37 |
| 26 | BB | 1956 | U | N1-C6 | 8.14 | 1.45 | 1.38 |
| 26 | BB | 2776 | A | N3-C4 | 8.14 | 1.39 | 1.34 |
| 1 | AA | 1431 | A | P-O5' | 8.14 | 1.67 | 1.59 |
| 1 | AA | 37 | U | C4'-O4' | -8.14 | 1.34 | 1.45 |
| 25 | BA | 93 | C | C5-C6 | 8.14 | 1.40 | 1.34 |
| 26 | BB | 845 | A | N7-C5 | 8.14 | 1.44 | 1.39 |
| 26 | BB | 1249 | U | C2'-C1' | 8.14 | 1.62 | 1.53 |
| 26 | BB | 2184 | A | C6-N1 | -8.14 | 1.29 | 1.35 |
| 26 | BB | 2532 | G | N7-C5 | -8.14 | 1.34 | 1.39 |
| 26 | BB | 674 | G | N3-C4 | 8.14 | 1.41 | 1.35 |
| 26 | BB | 1420 | A | N3-C4 | 8.13 | 1.39 | 1.34 |
| 26 | BB | 1829 | A | C5-C4 | -8.14 | 1.33 | 1.38 |
| 1 | AA | 779 | C | C5-C6 | 8.13 | 1.40 | 1.34 |
| 1 | AA | 979 | C | C4'-O4' | -8.13 | 1.34 | 1.45 |
| 26 | BB | 381 | G | C6-N1 | 8.12 | 1.45 | 1.39 |
| 26 | BB | 2427 | C | C2-O2 | -8.12 | 1.17 | 1.24 |
| 1 | AA | 858 | G | C2-N3 | 8.12 | 1.39 | 1.32 |
| 26 | BB | 343 | C | C2'-C1' | -8.12 | 1.44 | 1.53 |
| 26 | BB | 642 | U | C2-N3 | 8.12 | 1.43 | 1.37 |
| 26 | BB | 1411 | U | N1-C2 | 8.12 | 1.45 | 1.38 |
| 26 | BB | 1414 | C | C2-N3 | 8.12 | 1.42 | 1.35 |
| 1 | AA | 1322 | C | O3'-P | 8.12 | 1.70 | 1.61 |
| 26 | BB | 1698 | A | C5'-C4' | 8.12 | 1.61 | 1.51 |
| 26 | BB | 2354 | C | C2-N3 | 8.12 | 1.42 | 1.35 |
| 1 | AA | 1458 | G | C6-N1 | -8.12 | 1.33 | 1.39 |
| 1 | AA | 48 | C | P-O5' | 8.11 | 1.67 | 1.59 |
| 26 | BB | 429 | A | C4'-O4' | -8.11 | 1.35 | 1.45 |
| 26 | BB | 1337 | G | N7-C5 | 8.11 | 1.44 | 1.39 |
| 26 | BB | 1921 | G | O4'-C1' | 8.12 | 1.52 | 1.41 |
| 26 | BB | 2326 | C | C4'-C3' | 8.12 | 1.62 | 1.53 |
| 26 | BB | 2623 | G | C3'-C2' | 8.12 | 1.61 | 1.52 |
| 26 | BB | 231 | A | C8-N7 | -8.11 | 1.25 | 1.31 |
| 1 | AA | 995 | C | C5-C6 | 8.11 | 1.40 | 1.34 |
| 25 | BA | 108 | A | N7-C5 | 8.11 | 1.44 | 1.39 |
| 26 | BB | 1767 | G | N7-C5 | -8.11 | 1.34 | 1.39 |
| 1 | AA | 227 | G | P-O5' | 8.11 | 1.67 | 1.59 |
| 1 | AA | 767 | A | N9-C8 | -8.11 | 1.31 | 1.37 |
| 1 | AA | 1529 | G | N7-C5 | 8.11 | 1.44 | 1.39 |
| 2 | AB | 10 | G | N1-C2 | 8.11 | 1.44 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1162 | G | N7-C5 | -8.11 | 1.34 | 1.39 |
| 26 | BB | 783 | A | C3'-C2' | -8.11 | 1.43 | 1.52 |
| 26 | BB | 190 | A | N9-C8 | -8.10 | 1.31 | 1.37 |
| 26 | BB | 1557 | C | C5'-C4' | 8.10 | 1.61 | 1.51 |
| 1 | AA | 415 | A | P-O5' | 8.10 | 1.67 | 1.59 |
| 1 | AA | 664 | G | C2-N3 | 8.10 | 1.39 | 1.32 |
| 1 | AA | 688 | G | C2-N3 | 8.10 | 1.39 | 1.32 |
| 1 | AA | 692 | U | N1-C6 | 8.10 | 1.45 | 1.38 |
| 26 | BB | 1170 | C | P-O5' | 8.10 | 1.67 | 1.59 |
| 26 | BB | 2313 | C | N1-C6 | 8.10 | 1.42 | 1.37 |
| 1 | AA | 4 | U | O3'-P | 8.10 | 1.70 | 1.61 |
| 2 | AB | 23 | A | N9-C4 | 8.10 | 1.42 | 1.37 |
| 1 | AA | 860 | A | P-O5' | 8.10 | 1.67 | 1.59 |
| 1 | AA | 1142 | G | N7-C5 | 8.10 | 1.44 | 1.39 |
| 26 | BB | 1523 | U | C4'-O4' | -8.10 | 1.35 | 1.45 |
| 26 | BB | 1753 | G | C6-N1 | 8.09 | 1.45 | 1.39 |
| 26 | BB | 2025 | C | N3-C4 | 8.09 | 1.39 | 1.33 |
| 26 | BB | 2657 | A | N9-C4 | 8.09 | 1.42 | 1.37 |
| 26 | BB | 2695 | U | C4-C5 | 8.09 | 1.50 | 1.43 |
| 26 | BB | 212 | G | C2-N3 | 8.09 | 1.39 | 1.32 |
| 26 | BB | 520 | G | C6-N1 | 8.09 | 1.45 | 1.39 |
| 26 | BB | 668 | A | C8-N7 | -8.09 | 1.25 | 1.31 |
| 26 | BB | 1484 | U | C2-N3 | 8.09 | 1.43 | 1.37 |
| 1 | AA | 142 | G | C6-N1 | 8.09 | 1.45 | 1.39 |
| 1 | AA | 869 | G | C8-N7 | 8.09 | 1.35 | 1.30 |
| 1 | AA | 263 | A | C8-N7 | -8.09 | 1.25 | 1.31 |
| 26 | BB | 405 | U | C4-O4 | -8.09 | 1.17 | 1.23 |
| 26 | BB | 1357 | C | P-O5' | 8.09 | 1.67 | 1.59 |
| 26 | BB | 2485 | G | N1-C2 | 8.09 | 1.44 | 1.37 |
| 26 | BB | 2816 | G | N3-C4 | 8.09 | 1.41 | 1.35 |
| 1 | AA | 56 | U | N3-C4 | 8.08 | 1.45 | 1.38 |
| 1 | AA | 147 | G | O3'-P | 8.08 | 1.70 | 1.61 |
| 26 | BB | 1246 | A | N3-C4 | 8.08 | 1.39 | 1.34 |
| 26 | BB | 2870 | C | C4'-O4' | -8.08 | 1.35 | 1.45 |
| 1 | AA | 1181 | G | C8-N7 | -8.08 | 1.26 | 1.30 |
| 1 | AA | 1372 | U | P-O5' | 8.08 | 1.67 | 1.59 |
| 26 | BB | 2330 | G | N7-C5 | 8.08 | 1.44 | 1.39 |
| 26 | BB | 158 | U | C5'-C4' | 8.08 | 1.61 | 1.51 |
| 1 | AA | 265 | G | C2-N3 | 8.08 | 1.39 | 1.32 |
| 4 | AD | 46 | G | P-O5' | 8.08 | 1.67 | 1.59 |
| 26 | BB | 1797 | G | N3-C4 | 8.08 | 1.41 | 1.35 |
| 1 | AA | 1230 | C | N1-C6 | -8.08 | 1.32 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2346 | A | N1-C2 | 8.08 | 1.41 | 1.34 |
| 26 | BB | 448 | U | C4'-O4' | -8.07 | 1.35 | 1.45 |
| 26 | BB | 882 | G | C6-N1 | 8.07 | 1.45 | 1.39 |
| 1 | AA | 416 | G | N3-C4 | 8.07 | 1.41 | 1.35 |
| 1 | AA | 666 | G | N9-C4 | -8.07 | 1.31 | 1.38 |
| 26 | BB | 822 | G | C5'-C4' | 8.07 | 1.61 | 1.51 |
| 26 | BB | 2696 | U | C2-N3 | 8.07 | 1.43 | 1.37 |
| 1 | AA | 649 | A | N7-C5 | -8.07 | 1.34 | 1.39 |
| 26 | BB | 231 | A | C6-N6 | 8.07 | 1.40 | 1.33 |
| 26 | BB | 1061 | U | C4'-O4' | -8.07 | 1.35 | 1.45 |
| 1 | AA | 293 | G | O3'-P | 8.07 | 1.70 | 1.61 |
| 1 | AA | 1094 | G | P-O5' | 8.07 | 1.67 | 1.59 |
| 26 | BB | 328 | U | C4'-O4' | -8.07 | 1.35 | 1.45 |
| 26 | BB | 1960 | A | C8-N7 | 8.07 | 1.37 | 1.31 |
| 1 | AA | 90 | C | N1-C6 | -8.06 | 1.32 | 1.37 |
| 26 | BB | 1466 | U | P-O5' | 8.06 | 1.67 | 1.59 |
| 26 | BB | 2412 | A | N3-C4 | -8.06 | 1.30 | 1.34 |
| 1 | AA | 564 | C | C2'-C1' | 8.06 | 1.62 | 1.53 |
| 26 | BB | 777 | G | P-O5' | 8.06 | 1.67 | 1.59 |
| 26 | BB | 1425 | G | N7-C5 | -8.06 | 1.34 | 1.39 |
| 26 | BB | 2492 | U | N1-C2 | 8.06 | 1.45 | 1.38 |
| 1 | AA | 67 | C | N1-C6 | 8.06 | 1.42 | 1.37 |
| 1 | AA | 114 | U | C5-C6 | 8.06 | 1.41 | 1.34 |
| 26 | BB | 792 | A | N9-C4 | 8.06 | 1.42 | 1.37 |
| 1 | AA | 72 | A | P-O5' | 8.05 | 1.67 | 1.59 |
| 1 | AA | 173 | U | C5'-C4' | 8.05 | 1.61 | 1.51 |
| 26 | BB | 1285 | A | C8-N7 | -8.05 | 1.25 | 1.31 |
| 4 | AD | 28 | U | P-O5' | 8.05 | 1.67 | 1.59 |
| 1 | AA | 334 | C | P-O5' | 8.05 | 1.67 | 1.59 |
| 1 | AA | 1075 | U | P-O5' | 8.05 | 1.67 | 1.59 |
| 26 | BB | 251 | A | N9-C4 | -8.05 | 1.33 | 1.37 |
| 1 | AA | 1386 | G | N7-C5 | 8.05 | 1.44 | 1.39 |
| 26 | BB | 2054 | A | N9-C8 | 8.05 | 1.44 | 1.37 |
| 1 | AA | 184 | G | N9-C8 | 8.05 | 1.43 | 1.37 |
| 4 | AD | 20 | G | P-O5' | 8.04 | 1.67 | 1.59 |
| 26 | BB | 2134 | A | N3-C4 | 8.04 | 1.39 | 1.34 |
| 1 | AA | 894 | G | C6-N1 | 8.04 | 1.45 | 1.39 |
| 1 | AA | 561 | U | C2-N3 | 8.04 | 1.43 | 1.37 |
| 1 | AA | 563 | A | C8-N7 | -8.04 | 1.25 | 1.31 |
| 1 | AA | 952 | U | C3'-C2' | 8.04 | 1.61 | 1.52 |
| 26 | BB | 2709 | G | N3-C4 | 8.04 | 1.41 | 1.35 |
| 1 | AA | 1329 | A | C6-N1 | 8.04 | 1.41 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 802 | A | N9-C4 | -8.04 | 1.33 | 1.37 |
| 1 | AA | 200 | G | P-O5' | 8.04 | 1.67 | 1.59 |
| 26 | BB | 1275 | A | N3-C4 | 8.04 | 1.39 | 1.34 |
| 26 | BB | 1742 | U | N3-C4 | -8.04 | 1.31 | 1.38 |
| 4 | AD | 43 | G | P-O5' | 8.04 | 1.67 | 1.59 |
| 1 | AA | 491 | G | O3'-P | 8.03 | 1.70 | 1.61 |
| 1 | AA | 714 | G | N3-C4 | 8.03 | 1.41 | 1.35 |
| 1 | AA | 1145 | A | P-O5' | 8.03 | 1.67 | 1.59 |
| 26 | BB | 1528 | A | P-O5' | 8.03 | 1.67 | 1.59 |
| 26 | BB | 2821 | A | N7-C5 | -8.03 | 1.34 | 1.39 |
| 3 | AC | 37 | G | P-O5' | 8.03 | 1.67 | 1.59 |
| 1 | AA | 1401 | G | N9-C4 | 8.03 | 1.44 | 1.38 |
| 26 | BB | 290 | U | N1-C2 | 8.03 | 1.45 | 1.38 |
| 1 | AA | 970 | C | N3-C4 | 8.03 | 1.39 | 1.33 |
| 26 | BB | 1137 | G | P-O5' | 8.03 | 1.67 | 1.59 |
| 1 | AA | 1087 | G | C8-N7 | 8.02 | 1.35 | 1.30 |
| 26 | BB | 816 | C | N1-C6 | 8.02 | 1.42 | 1.37 |
| 26 | BB | 1674 | G | C8-N7 | -8.02 | 1.26 | 1.30 |
| 26 | BB | 2560 | A | N7-C5 | -8.02 | 1.34 | 1.39 |
| 1 | AA | 207 | C | C2-N3 | 8.02 | 1.42 | 1.35 |
| 1 | AA | 430 | A | C8-N7 | 8.02 | 1.37 | 1.31 |
| 26 | BB | 2484 | G | C2-N3 | 8.02 | 1.39 | 1.32 |
| 1 | AA | 457 | G | N7-C5 | -8.02 | 1.34 | 1.39 |
| 1 | AA | 487 | A | N3-C4 | 8.02 | 1.39 | 1.34 |
| 26 | BB | 292 | U | P-O5' | 8.02 | 1.67 | 1.59 |
| 26 | BB | 463 | G | C8-N7 | -8.02 | 1.26 | 1.30 |
| 26 | BB | 952 | G | C5'-C4' | 8.02 | 1.60 | 1.51 |
| 26 | BB | 647 | G | C5-C4 | 8.02 | 1.44 | 1.38 |
| 26 | BB | 2155 | U | C4'-C3' | 8.02 | 1.61 | 1.53 |
| 26 | BB | 2737 | G | C2-N3 | 8.02 | 1.39 | 1.32 |
| 1 | AA | 682 | G | C6-N1 | 8.02 | 1.45 | 1.39 |
| 1 | AA | 862 | C | C4-C5 | 8.02 | 1.49 | 1.43 |
| 26 | BB | 564 | C | N1-C6 | 8.02 | 1.42 | 1.37 |
| 26 | BB | 1475 | G | N7-C5 | 8.02 | 1.44 | 1.39 |
| 1 | AA | 889 | A | P-O5' | 8.01 | 1.67 | 1.59 |
| 1 | AA | 1392 | G | O3'-P | 8.01 | 1.70 | 1.61 |
| 26 | BB | 1559 | U | P-O5' | 8.01 | 1.67 | 1.59 |
| 26 | BB | 2484 | G | N7-C5 | 8.01 | 1.44 | 1.39 |
| 26 | BB | 2126 | A | N7-C5 | 8.01 | 1.44 | 1.39 |
| 26 | BB | 2127 | G | C2-N3 | 8.01 | 1.39 | 1.32 |
| 1 | AA | 1291 | U | C5-C6 | 8.01 | 1.41 | 1.34 |
| 26 | BB | 2000 | C | O3'-P | 8.01 | 1.70 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2731 | G | N9-C8 | 8.01 | 1.43 | 1.37 |
| 26 | BB | 2161 | C | N1-C6 | 8.00 | 1.42 | 1.37 |
| 26 | BB | 2750 | A | N7-C5 | 8.00 | 1.44 | 1.39 |
| 26 | BB | 1712 | U | C4-C5 | 8.00 | 1.50 | 1.43 |
| 26 | BB | 67 | U | C2-N3 | 8.00 | 1.43 | 1.37 |
| 26 | BB | 2040 | G | C2-N3 | 8.00 | 1.39 | 1.32 |
| 26 | BB | 2716 | C | P-O5' | 8.00 | 1.67 | 1.59 |
| 1 | AA | 268 | U | C2'-C1' | -8.00 | 1.44 | 1.53 |
| 26 | BB | 973 | A | N7-C5 | 8.00 | 1.44 | 1.39 |
| 26 | BB | 2085 | U | N3-C4 | 8.00 | 1.45 | 1.38 |
| 26 | BB | 2488 | G | N7-C5 | 8.00 | 1.44 | 1.39 |
| 1 | AA | 758 | C | P-O5' | 7.99 | 1.67 | 1.59 |
| 3 | AC | 29 | G | C2-N3 | 7.99 | 1.39 | 1.32 |
| 26 | BB | 1111 | A | C4'-O4' | -7.99 | 1.35 | 1.45 |
| 26 | BB | 2429 | G | N3-C4 | 7.99 | 1.41 | 1.35 |
| 1 | AA | 203 | G | C6-O6 | -7.99 | 1.17 | 1.24 |
| 1 | AA | 1335 | U | C2-N3 | 7.99 | 1.43 | 1.37 |
| 1 | AA | 389 | A | N7-C5 | -7.99 | 1.34 | 1.39 |
| 1 | AA | 907 | A | C5'-C4' | 7.99 | 1.60 | 1.51 |
| 2 | AB | 49 | G | O3'-P | 7.99 | 1.70 | 1.61 |
| 3 | AC | 19 | A | P-O5' | 7.99 | 1.67 | 1.59 |
| 26 | BB | 1256 | G | C2-N3 | 7.99 | 1.39 | 1.32 |
| 1 | AA | 1091 | U | P-O5' | 7.99 | 1.67 | 1.59 |
| 26 | BB | 1075 | C | P-O5' | 7.99 | 1.67 | 1.59 |
| 26 | BB | 1125 | G | N9-C8 | 7.99 | 1.43 | 1.37 |
| 1 | AA | 895 | G | N3-C4 | 7.99 | 1.41 | 1.35 |
| 26 | BB | 2 | G | C5'-C4' | 7.99 | 1.60 | 1.51 |
| 26 | BB | 593 | U | C3'-C2' | -7.99 | 1.44 | 1.52 |
| 26 | BB | 2516 | A | N9-C4 | -7.99 | 1.33 | 1.37 |
| 26 | BB | 2694 | G | C6-O6 | -7.99 | 1.17 | 1.24 |
| 26 | BB | 1247 | A | N9-C4 | -7.98 | 1.33 | 1.37 |
| 26 | BB | 152 | A | N3-C4 | 7.98 | 1.39 | 1.34 |
| 26 | BB | 249 | C | C5-C6 | 7.98 | 1.40 | 1.34 |
| 26 | BB | 1866 | A | N3-C4 | 7.98 | 1.39 | 1.34 |
| 26 | BB | 1993 | U | C4'-O4' | -7.98 | 1.35 | 1.45 |
| 1 | AA | 1469 | C | N1-C6 | 7.98 | 1.42 | 1.37 |
| 26 | BB | 330 | A | O3'-P | 7.98 | 1.70 | 1.61 |
| 26 | BB | 631 | A | N9-C4 | 7.98 | 1.42 | 1.37 |
| 26 | BB | 768 | G | P-O5' | 7.98 | 1.67 | 1.59 |
| 26 | BB | 2371 | G | N7-C5 | 7.98 | 1.44 | 1.39 |
| 1 | AA | 29 | U | P-O5' | 7.97 | 1.67 | 1.59 |
| 1 | AA | 524 | G | N9-C8 | 7.97 | 1.43 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 115 | A | N9-C8 | -7.97 | 1.31 | 1.37 |
| 1 | AA | 258 | G | O3'-P | 7.97 | 1.70 | 1.61 |
| 26 | BB | 320 | A | C6-N1 | 7.97 | 1.41 | 1.35 |
| 26 | BB | 1993 | U | C2-O2 | 7.97 | 1.29 | 1.22 |
| 1 | AA | 688 | G | N9-C8 | -7.97 | 1.32 | 1.37 |
| 26 | BB | 1800 | C | C4-C5 | 7.97 | 1.49 | 1.43 |
| 1 | AA | 1180 | A | N3-C4 | 7.97 | 1.39 | 1.34 |
| 26 | BB | 384 | A | C5-C4 | -7.97 | 1.33 | 1.38 |
| 26 | BB | 808 | G | P-O5' | 7.97 | 1.67 | 1.59 |
| 26 | BB | 1511 | G | N7-C5 | 7.97 | 1.44 | 1.39 |
| 26 | BB | 2295 | C | C4'-O4' | -7.97 | 1.35 | 1.45 |
| 1 | AA | 392 | C | C2'-C1' | 7.96 | 1.62 | 1.53 |
| 26 | BB | 931 | U | C2-N3 | 7.96 | 1.43 | 1.37 |
| 26 | BB | 1980 | G | N7-C5 | 7.96 | 1.44 | 1.39 |
| 26 | BB | 913 | U | N1-C2 | 7.96 | 1.45 | 1.38 |
| 1 | AA | 767 | A | N3-C4 | 7.96 | 1.39 | 1.34 |
| 1 | AA | 840 | C | C2'-C1' | 7.96 | 1.62 | 1.53 |
| 1 | AA | 1454 | G | N3-C4 | 7.96 | 1.41 | 1.35 |
| 25 | BA | 116 | G | N7-C5 | 7.96 | 1.44 | 1.39 |
| 26 | BB | 2611 | C | P-O5' | -7.96 | 1.51 | 1.59 |
| 1 | AA | 16 | A | N3-C4 | 7.96 | 1.39 | 1.34 |
| 1 | AA | 781 | A | N3-C4 | 7.96 | 1.39 | 1.34 |
| 3 | AC | 18 | A | N3-C4 | 7.96 | 1.39 | 1.34 |
| 1 | AA | 304 | U | C4'-O4' | -7.95 | 1.35 | 1.45 |
| 1 | AA | 1536 | C | C4'-C3' | 7.95 | 1.61 | 1.53 |
| 1 | AA | 465 | A | N9-C8 | 7.95 | 1.44 | 1.37 |
| 26 | BB | 2394 | C | N1-C6 | 7.95 | 1.42 | 1.37 |
| 26 | BB | 125 | A | C8-N7 | -7.95 | 1.25 | 1.31 |
| 26 | BB | 264 | C | N3-C4 | 7.95 | 1.39 | 1.33 |
| 26 | BB | 570 | G | C4'-C3' | -7.95 | 1.44 | 1.53 |
| 26 | BB | 653 | U | C2-O2 | 7.95 | 1.29 | 1.22 |
| 26 | BB | 683 | U | N1-C2 | 7.95 | 1.45 | 1.38 |
| 26 | BB | 703 | U | C5-C6 | 7.95 | 1.41 | 1.34 |
| 26 | BB | 2324 | U | C4-C5 | 7.95 | 1.50 | 1.43 |
| 26 | BB | 2458 | G | N3-C4 | 7.95 | 1.41 | 1.35 |
| 26 | BB | 2568 | U | N1-C2 | 7.95 | 1.45 | 1.38 |
| 26 | BB | 613 | A | N3-C4 | 7.95 | 1.39 | 1.34 |
| 26 | BB | 64 | A | N7-C5 | -7.95 | 1.34 | 1.39 |
| 26 | BB | 107 | G | C3'-C2' | 7.95 | 1.61 | 1.52 |
| 26 | BB | 684 | G | C8-N7 | 7.95 | 1.35 | 1.30 |
| 26 | BB | 2736 | A | N7-C5 | -7.95 | 1.34 | 1.39 |
| 26 | BB | 949 | G | P-O5' | 7.94 | 1.67 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1072 | C | P-O5' | 7.94 | 1.67 | 1.59 |
| 26 | BB | 1424 | G | P-O5' | 7.94 | 1.67 | 1.59 |
| 26 | BB | 2426 | A | P-O5' | 7.94 | 1.67 | 1.59 |
| 1 | AA | 1117 | A | N9-C4 | 7.94 | 1.42 | 1.37 |
| 26 | BB | 910 | A | N7-C5 | 7.94 | 1.44 | 1.39 |
| 26 | BB | 2031 | A | N9-C4 | 7.94 | 1.42 | 1.37 |
| 26 | BB | 490 | C | C4-C5 | 7.94 | 1.49 | 1.43 |
| 1 | AA | 1193 | G | P-O5' | 7.94 | 1.67 | 1.59 |
| 26 | BB | 635 | C | C4'-O4' | -7.94 | 1.35 | 1.45 |
| 26 | BB | 2314 | A | N9-C4 | 7.94 | 1.42 | 1.37 |
| 26 | BB | 2450 | A | C6-N1 | 7.94 | 1.41 | 1.35 |
| 26 | BB | 139 | U | N1-C6 | 7.93 | 1.45 | 1.38 |
| 26 | BB | 2235 | G | N3-C4 | 7.93 | 1.41 | 1.35 |
| 1 | AA | 1057 | G | C5-C6 | 7.93 | 1.50 | 1.42 |
| 26 | BB | 2648 | G | N7-C5 | -7.93 | 1.34 | 1.39 |
| 26 | BB | 2885 | G | P-O5' | 7.93 | 1.67 | 1.59 |
| 26 | BB | 220 | G | N1-C2 | 7.93 | 1.44 | 1.37 |
| 26 | BB | 2692 | G | C8-N7 | -7.93 | 1.26 | 1.30 |
| 1 | AA | 399 | G | N3-C4 | 7.93 | 1.41 | 1.35 |
| 1 | AA | 682 | G | C5-C4 | 7.93 | 1.43 | 1.38 |
| 25 | BA | 71 | C | C3'-C2' | 7.93 | 1.61 | 1.52 |
| 26 | BB | 2141 | G | O3'-P | 7.93 | 1.70 | 1.61 |
| 26 | BB | 2365 | G | C6-N1 | -7.93 | 1.34 | 1.39 |
| 1 | AA | 208 | U | C5'-C4' | 7.92 | 1.60 | 1.51 |
| 26 | BB | 1878 | G | N7-C5 | -7.92 | 1.34 | 1.39 |
| 26 | BB | 2446 | G | C2-N3 | 7.92 | 1.39 | 1.32 |
| 26 | BB | 2697 | G | N9-C4 | -7.92 | 1.31 | 1.38 |
| 26 | BB | 2015 | A | N3-C4 | 7.92 | 1.39 | 1.34 |
| 25 | BA | 113 | C | N3-C4 | -7.92 | 1.28 | 1.33 |
| 26 | BB | 1938 | A | P-O5' | 7.92 | 1.67 | 1.59 |
| 2 | AB | 36 | A | N7-C5 | -7.92 | 1.34 | 1.39 |
| 26 | BB | 1417 | C | C5-C6 | 7.92 | 1.40 | 1.34 |
| 26 | BB | 1562 | U | N1-C2 | 7.92 | 1.45 | 1.38 |
| 1 | AA | 389 | A | N9-C4 | 7.92 | 1.42 | 1.37 |
| 1 | AA | 597 | G | C8-N7 | 7.92 | 1.35 | 1.30 |
| 26 | BB | 2899 | A | N9-C8 | -7.92 | 1.31 | 1.37 |
| 26 | BB | 1902 | C | N3-C4 | -7.92 | 1.28 | 1.33 |
| 26 | BB | 2004 | G | N7-C5 | -7.91 | 1.34 | 1.39 |
| 26 | BB | 2845 | U | C4-C5 | 7.91 | 1.50 | 1.43 |
| 1 | AA | 677 | U | C2-O2 | 7.91 | 1.29 | 1.22 |
| 1 | AA | 1362 | A | P-O5' | 7.91 | 1.67 | 1.59 |
| 1 | AA | 1432 | G | N7-C5 | -7.91 | 1.34 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1475 | G | N9-C4 | 7.91 | 1.44 | 1.38 |
| 26 | BB | 2661 | G | C2-N3 | 7.91 | 1.39 | 1.32 |
| 26 | BB | 1136 | G | N3-C4 | 7.91 | 1.41 | 1.35 |
| 1 | AA | 1088 | G | C2-N3 | 7.91 | 1.39 | 1.32 |
| 26 | BB | 2614 | A | C4'-O4' | -7.91 | 1.35 | 1.45 |
| 1 | AA | 1428 | A | P-O5' | 7.90 | 1.67 | 1.59 |
| 26 | BB | 1410 | G | N7-C5 | 7.90 | 1.44 | 1.39 |
| 1 | AA | 1285 | A | N3-C4 | 7.90 | 1.39 | 1.34 |
| 1 | AA | 1340 | A | C8-N7 | -7.90 | 1.26 | 1.31 |
| 26 | BB | 811 | U | C2-N3 | 7.90 | 1.43 | 1.37 |
| 26 | BB | 2075 | U | C4'-O4' | -7.90 | 1.35 | 1.45 |
| 1 | AA | 463 | U | C2-O2 | 7.90 | 1.29 | 1.22 |
| 1 | AA | 728 | A | C5'-C4' | 7.90 | 1.60 | 1.51 |
| 2 | AB | 75 | C | N1-C6 | 7.90 | 1.41 | 1.37 |
| 26 | BB | 232 | G | N3-C4 | 7.90 | 1.41 | 1.35 |
| 26 | BB | 1039 | A | C8-N7 | -7.90 | 1.26 | 1.31 |
| 26 | BB | 2072 | C | C4-C5 | 7.90 | 1.49 | 1.43 |
| 26 | BB | 643 | A | C4'-O4' | -7.90 | 1.35 | 1.45 |
| 26 | BB | 2168 | G | O3'-P | 7.90 | 1.70 | 1.61 |
| 1 | AA | 787 | A | C4'-O4' | -7.89 | 1.35 | 1.45 |
| 26 | BB | 326 | G | C6-N1 | 7.89 | 1.45 | 1.39 |
| 26 | BB | 1175 | A | N3-C4 | 7.89 | 1.39 | 1.34 |
| 1 | AA | 940 | C | O3'-P | 7.89 | 1.70 | 1.61 |
| 26 | BB | 1995 | U | C5-C6 | 7.89 | 1.41 | 1.34 |
| 26 | BB | 2607 | G | N9-C8 | 7.89 | 1.43 | 1.37 |
| 26 | BB | 2658 | C | P-O5' | 7.89 | 1.67 | 1.59 |
| 26 | BB | 2824 | C | P-O5' | 7.89 | 1.67 | 1.59 |
| 1 | AA | 1176 | A | P-O5' | 7.89 | 1.67 | 1.59 |
| 26 | BB | 1681 | G | P-O5' | 7.89 | 1.67 | 1.59 |
| 26 | BB | 2300 | C | P-O5' | 7.89 | 1.67 | 1.59 |
| 1 | AA | 601 | G | N7-C5 | 7.89 | 1.44 | 1.39 |
| 1 | AA | 1188 | A | C3'-O3' | 7.89 | 1.53 | 1.42 |
| 1 | AA | 153 | C | C4-C5 | 7.89 | 1.49 | 1.43 |
| 1 | AA | 1349 | A | N3-C4 | 7.89 | 1.39 | 1.34 |
| 1 | AA | 520 | A | N3-C4 | 7.88 | 1.39 | 1.34 |
| 1 | AA | 671 | G | C4'-C3' | 7.88 | 1.61 | 1.53 |
| 1 | AA | 1126 | U | C2-N3 | 7.88 | 1.43 | 1.37 |
| 2 | AB | 57 | G | N7-C5 | 7.88 | 1.44 | 1.39 |
| 26 | BB | 2016 | U | C2-N3 | -7.88 | 1.32 | 1.37 |
| 1 | AA | 560 | A | P-O5' | -7.88 | 1.51 | 1.59 |
| 26 | BB | 1568 | G | C2-N3 | 7.88 | 1.39 | 1.32 |
| 26 | BB | 889 | C | C5-C6 | 7.88 | 1.40 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 168 | G | N3-C4 | -7.88 | 1.29 | 1.35 |
| 1 | AA | 792 | A | N3-C4 | 7.88 | 1.39 | 1.34 |
| 26 | BB | 1004 | U | C5'-C4' | 7.88 | 1.60 | 1.51 |
| 26 | BB | 769 | U | O4'-C1' | 7.87 | 1.51 | 1.41 |
| 26 | BB | 2641 | G | O3'-P | 7.87 | 1.70 | 1.61 |
| 1 | AA | 315 | A | P-O5' | 7.87 | 1.67 | 1.59 |
| 26 | BB | 1628 | G | C6-N1 | 7.87 | 1.45 | 1.39 |
| 26 | BB | 2373 | G | N3-C4 | 7.87 | 1.41 | 1.35 |
| 2 | AB | 68 | C | C3'-C2' | 7.87 | 1.61 | 1.52 |
| 1 | AA | 303 | A | C5'-C4' | 7.87 | 1.60 | 1.51 |
| 3 | AC | 39 | U | C2-O2 | 7.87 | 1.29 | 1.22 |
| 1 | AA | 1142 | G | N1-C2 | -7.87 | 1.31 | 1.37 |
| 3 | AC | 44 | U | C2-N3 | 7.87 | 1.43 | 1.37 |
| 26 | BB | 1807 | G | C2-N3 | 7.87 | 1.39 | 1.32 |
| 1 | AA | 898 | G | O3'-P | -7.86 | 1.51 | 1.61 |
| 26 | BB | 565 | C | O4'-C1' | 7.86 | 1.51 | 1.41 |
| 26 | BB | 2587 | A | C5'-C4' | 7.86 | 1.60 | 1.51 |
| 1 | AA | 661 | G | N9-C8 | 7.86 | 1.43 | 1.37 |
| 26 | BB | 93 | G | C6-N1 | 7.86 | 1.45 | 1.39 |
| 26 | BB | 303 | G | C5'-C4' | 7.86 | 1.60 | 1.51 |
| 1 | AA | 562 | U | C5'-C4' | 7.86 | 1.60 | 1.51 |
| 1 | AA | 761 | G | C6-N1 | 7.86 | 1.45 | 1.39 |
| 26 | BB | 1675 | C | C5-C6 | 7.86 | 1.40 | 1.34 |
| 26 | BB | 1205 | A | C5-C4 | 7.86 | 1.44 | 1.38 |
| 26 | BB | 1964 | G | P-O5' | 7.86 | 1.67 | 1.59 |
| 26 | BB | 1866 | A | C5'-C4' | 7.86 | 1.60 | 1.51 |
| 26 | BB | 2086 | U | N1-C2 | 7.85 | 1.45 | 1.38 |
| 26 | BB | 1994 | C | N1-C6 | -7.85 | 1.32 | 1.37 |
| 1 | AA | 519 | C | C5-C6 | 7.85 | 1.40 | 1.34 |
| 26 | BB | 431 | U | N3-C4 | 7.85 | 1.45 | 1.38 |
| 26 | BB | 892 | A | N9-C4 | -7.85 | 1.33 | 1.37 |
| 26 | BB | 1309 | G | C2-N3 | 7.85 | 1.39 | 1.32 |
| 1 | AA | 666 | G | N7-C5 | -7.84 | 1.34 | 1.39 |
| 1 | AA | 1146 | A | N3-C4 | 7.84 | 1.39 | 1.34 |
| 1 | AA | 1379 | G | C3'-C2' | 7.84 | 1.61 | 1.52 |
| 26 | BB | 849 | A | N3-C4 | 7.84 | 1.39 | 1.34 |
| 26 | BB | 1603 | A | C3'-C2' | 7.84 | 1.61 | 1.52 |
| 1 | AA | 405 | U | C5'-C4' | 7.84 | 1.60 | 1.51 |
| 1 | AA | 493 | A | C8-N7 | 7.84 | 1.37 | 1.31 |
| 3 | AC | 49 | U | P-O5' | 7.84 | 1.67 | 1.59 |
| 26 | BB | 149 | A | N7-C5 | -7.84 | 1.34 | 1.39 |
| 3 | AC | 43 | U | C3'-C2' | 7.84 | 1.61 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1105 | A | O3'-P | 7.84 | 1.70 | 1.61 |
| 26 | BB | 1007 | C | P-O5' | 7.84 | 1.67 | 1.59 |
| 1 | AA | 202 | G | N9-C8 | -7.84 | 1.32 | 1.37 |
| 1 | AA | 329 | A | P-O5' | 7.84 | 1.67 | 1.59 |
| 1 | AA | 568 | G | C5-C4 | 7.83 | 1.43 | 1.38 |
| 1 | AA | 1111 | A | N3-C4 | -7.83 | 1.30 | 1.34 |
| 26 | BB | 1164 | C | N1-C6 | 7.83 | 1.41 | 1.37 |
| 26 | BB | 1185 | G | C2'-C1' | 7.83 | 1.61 | 1.53 |
| 26 | BB | 1583 | A | N9-C8 | -7.83 | 1.31 | 1.37 |
| 26 | BB | 1660 | G | C5'-C4' | 7.83 | 1.60 | 1.51 |
| 26 | BB | 2650 | U | N1-C2 | 7.83 | 1.45 | 1.38 |
| 26 | BB | 1008 | A | N3-C4 | 7.83 | 1.39 | 1.34 |
| 1 | AA | 1026 | G | C2-N3 | 7.83 | 1.39 | 1.32 |
| 26 | BB | 1413 | A | N3-C4 | 7.83 | 1.39 | 1.34 |
| 1 | AA | 72 | A | N3-C4 | 7.83 | 1.39 | 1.34 |
| 1 | AA | 1019 | A | N3-C4 | 7.83 | 1.39 | 1.34 |
| 2 | AB | 7 | G | C4'-O4' | -7.83 | 1.35 | 1.45 |
| 26 | BB | 267 | C | C4'-C3' | -7.83 | 1.44 | 1.53 |
| 26 | BB | 942 | G | C2-N3 | 7.83 | 1.39 | 1.32 |
| 1 | AA | 254 | G | C8-N7 | 7.83 | 1.35 | 1.30 |
| 1 | AA | 149 | A | N9-C8 | -7.83 | 1.31 | 1.37 |
| 2 | AB | 49 | G | C8-N7 | -7.83 | 1.26 | 1.30 |
| 1 | AA | 1405 | G | N9-C8 | 7.82 | 1.43 | 1.37 |
| 2 | AB | 40 | C | N1-C6 | 7.82 | 1.41 | 1.37 |
| 26 | BB | 1236 | G | C2-N3 | 7.82 | 1.39 | 1.32 |
| 26 | BB | 1911 | PSU | O3'-P | 7.82 | 1.70 | 1.61 |
| 26 | BB | 288 | U | C5'-C4' | 7.82 | 1.60 | 1.51 |
| 1 | AA | 245 | U | C4-C5 | 7.82 | 1.50 | 1.43 |
| 4 | AD | 6 | G | C5-C6 | 7.82 | 1.50 | 1.42 |
| 26 | BB | 964 | C | O3'-P | 7.82 | 1.70 | 1.61 |
| 26 | BB | 1132 | U | C5'-C4' | 7.82 | 1.60 | 1.51 |
| 26 | BB | 1152 | C | P-O5' | 7.82 | 1.67 | 1.59 |
| 26 | BB | 829 | A | N3-C4 | 7.82 | 1.39 | 1.34 |
| 26 | BB | 2867 | G | N3-C4 | 7.82 | 1.41 | 1.35 |
| 1 | AA | 1155 | A | N9-C4 | 7.81 | 1.42 | 1.37 |
| 1 | AA | 14 | U | C4-C5 | 7.81 | 1.50 | 1.43 |
| 1 | AA | 1231 | G | C4'-C3' | -7.81 | 1.44 | 1.53 |
| 26 | BB | 2356 | U | O3'-P | 7.81 | 1.70 | 1.61 |
| 3 | AC | 45 | G | N9-C4 | -7.81 | 1.31 | 1.38 |
| 26 | BB | 57 | C | C5-C6 | 7.81 | 1.40 | 1.34 |
| 26 | BB | 1139 | G | C6-N1 | 7.81 | 1.45 | 1.39 |
| 1 | AA | 1261 | A | N3-C4 | 7.80 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 51 | G | C2-N3 | 7.80 | 1.39 | 1.32 |
| 26 | BB | 1143 | A | C6-N1 | -7.80 | 1.30 | 1.35 |
| 26 | BB | 1690 | A | N3-C4 | 7.80 | 1.39 | 1.34 |
| 26 | BB | 2384 | U | C2-N3 | 7.80 | 1.43 | 1.37 |
| 1 | AA | 662 | U | C5-C6 | 7.80 | 1.41 | 1.34 |
| 1 | AA | 210 | C | N3-C4 | 7.80 | 1.39 | 1.33 |
| 26 | BB | 1167 | C | N3-C4 | 7.80 | 1.39 | 1.33 |
| 1 | AA | 1385 | G | N7-C5 | 7.80 | 1.44 | 1.39 |
| 26 | BB | 507 | A | P-O5' | 7.80 | 1.67 | 1.59 |
| 26 | BB | 1787 | A | C8-N7 | -7.80 | 1.26 | 1.31 |
| 26 | BB | 2714 | G | C8-N7 | 7.80 | 1.35 | 1.30 |
| 26 | BB | 657 | U | P-O5' | 7.80 | 1.67 | 1.59 |
| 26 | BB | 287 | G | C5-C4 | 7.80 | 1.43 | 1.38 |
| 26 | BB | 993 | G | P-O5' | 7.80 | 1.67 | 1.59 |
| 26 | BB | 1595 | C | C2-N3 | 7.80 | 1.42 | 1.35 |
| 26 | BB | 1867 | G | N1-C2 | -7.80 | 1.31 | 1.37 |
| 26 | BB | 2784 | U | C5-C6 | 7.80 | 1.41 | 1.34 |
| 26 | BB | 361 | G | N7-C5 | 7.79 | 1.44 | 1.39 |
| 26 | BB | 394 | C | N3-C4 | 7.79 | 1.39 | 1.33 |
| 26 | BB | 2281 | A | N3-C4 | 7.79 | 1.39 | 1.34 |
| 1 | AA | 70 | U | C5'-C4' | 7.79 | 1.60 | 1.51 |
| 1 | AA | 438 | U | C4'-O4' | -7.79 | 1.35 | 1.45 |
| 1 | AA | 866 | C | O4'-C1' | 7.79 | 1.51 | 1.41 |
| 26 | BB | 1552 | A | N3-C4 | 7.79 | 1.39 | 1.34 |
| 26 | BB | 2202 | U | O3'-P | -7.79 | 1.51 | 1.61 |
| 26 | BB | 1566 | A | P-O5' | 7.79 | 1.67 | 1.59 |
| 26 | BB | 1668 | A | C6-N1 | -7.79 | 1.30 | 1.35 |
| 1 | AA | 212 | G | C5-C4 | 7.79 | 1.43 | 1.38 |
| 1 | AA | 31 | G | N7-C5 | -7.79 | 1.34 | 1.39 |
| 26 | BB | 801 | G | N1-C2 | 7.79 | 1.44 | 1.37 |
| 26 | BB | 858 | G | C5-C4 | -7.79 | 1.32 | 1.38 |
| 26 | BB | 978 | G | C5-C4 | -7.79 | 1.32 | 1.38 |
| 26 | BB | 2188 | U | C2-N3 | 7.79 | 1.43 | 1.37 |
| 3 | AC | 52 | U | C2-O2 | 7.79 | 1.29 | 1.22 |
| 26 | BB | 2427 | C | C5-C6 | 7.79 | 1.40 | 1.34 |
| 1 | AA | 622 | A | C5-C6 | 7.79 | 1.48 | 1.41 |
| 1 | AA | 858 | G | P-O5' | 7.79 | 1.67 | 1.59 |
| 1 | AA | 1487 | G | C2-N3 | 7.79 | 1.39 | 1.32 |
| 26 | BB | 670 | A | O3'-P | 7.79 | 1.70 | 1.61 |
| 1 | AA | 1000 | A | N7-C5 | -7.78 | 1.34 | 1.39 |
| 26 | BB | 171 | U | N3-C4 | 7.78 | 1.45 | 1.38 |
| 26 | BB | 922 | C | C4-C5 | 7.78 | 1.49 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1053 | C | P-O5' | 7.78 | 1.67 | 1.59 |
| 26 | BB | 2375 | G | N7-C5 | -7.78 | 1.34 | 1.39 |
| 1 | AA | 979 | C | P-O5' | 7.78 | 1.67 | 1.59 |
| 26 | BB | 2717 | C | C5-C6 | 7.78 | 1.40 | 1.34 |
| 1 | AA | 218 | U | N3-C4 | -7.78 | 1.31 | 1.38 |
| 1 | AA | 778 | G | C2-N3 | 7.78 | 1.39 | 1.32 |
| 26 | BB | 90 | U | C4'-C3' | 7.78 | 1.61 | 1.53 |
| 26 | BB | 677 | A | N9-C4 | 7.78 | 1.42 | 1.37 |
| 26 | BB | 761 | A | C5'-C4' | 7.78 | 1.60 | 1.51 |
| 26 | BB | 2274 | A | C6-N1 | -7.78 | 1.30 | 1.35 |
| 1 | AA | 1019 | A | O3'-P | 7.78 | 1.70 | 1.61 |
| 26 | BB | 431 | U | P-O5' | 7.78 | 1.67 | 1.59 |
| 26 | BB | 340 | A | C5-C4 | 7.78 | 1.44 | 1.38 |
| 26 | BB | 1383 | A | C5-C6 | 7.78 | 1.48 | 1.41 |
| 26 | BB | 1910 | G | N1-C2 | 7.78 | 1.44 | 1.37 |
| 26 | BB | 897 | C | N1-C6 | 7.77 | 1.41 | 1.37 |
| 26 | BB | 1586 | A | P-O5' | 7.77 | 1.67 | 1.59 |
| 1 | AA | 78 | A | C4'-C3' | -7.77 | 1.44 | 1.53 |
| 26 | BB | 2141 | G | N7-C5 | 7.77 | 1.44 | 1.39 |
| 26 | BB | 833 | A | P-O5' | 7.77 | 1.67 | 1.59 |
| 26 | BB | 1448 | G | C8-N7 | -7.77 | 1.26 | 1.30 |
| 26 | BB | 953 | G | C2-N3 | 7.77 | 1.39 | 1.32 |
| 26 | BB | 1814 | G | N9-C4 | -7.77 | 1.31 | 1.38 |
| 26 | BB | 1846 | G | C2'-C1' | 7.77 | 1.61 | 1.53 |
| 26 | BB | 2137 | U | C2'-C1' | -7.77 | 1.44 | 1.53 |
| 26 | BB | 2716 | C | C4-N4 | 7.77 | 1.41 | 1.33 |
| 1 | AA | 1288 | A | O3'-P | 7.77 | 1.70 | 1.61 |
| 26 | BB | 378 | C | N1-C2 | 7.77 | 1.48 | 1.40 |
| 26 | BB | 774 | G | N7-C5 | 7.77 | 1.44 | 1.39 |
| 1 | AA | 41 | G | C2'-C1' | 7.76 | 1.61 | 1.53 |
| 1 | AA | 133 | U | N3-C4 | 7.76 | 1.45 | 1.38 |
| 1 | AA | 165 | G | C6-N1 | 7.76 | 1.45 | 1.39 |
| 1 | AA | 1532 | U | P-O5' | 7.76 | 1.67 | 1.59 |
| 1 | AA | 394 | G | C2-N3 | 7.76 | 1.39 | 1.32 |
| 26 | BB | 491 | G | N9-C8 | 7.76 | 1.43 | 1.37 |
| 26 | BB | 1252 | G | N3-C4 | -7.76 | 1.30 | 1.35 |
| 1 | AA | 84 | U | C2-N3 | 7.76 | 1.43 | 1.37 |
| 1 | AA | 620 | C | P-O5' | 7.76 | 1.67 | 1.59 |
| 26 | BB | 1133 | A | P-O5' | 7.76 | 1.67 | 1.59 |
| 26 | BB | 1396 | U | C2-N3 | 7.76 | 1.43 | 1.37 |
| 26 | BB | 1782 | U | C2-N3 | 7.76 | 1.43 | 1.37 |
| 1 | AA | 47 | C | C2-O2 | -7.76 | 1.17 | 1.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 585 | G | N1-C2 | 7.76 | 1.44 | 1.37 |
| 1 | AA | 1311 | A | N9-C4 | 7.76 | 1.42 | 1.37 |
| 3 | AC | 20 | G | N9-C8 | -7.76 | 1.32 | 1.37 |
| 26 | BB | 1369 | G | P-O5' | 7.76 | 1.67 | 1.59 |
| 26 | BB | 622 | G | N9-C8 | -7.76 | 1.32 | 1.37 |
| 26 | BB | 1165 | A | C6-N1 | -7.76 | 1.30 | 1.35 |
| 26 | BB | 2079 | U | C4'-O4' | -7.76 | 1.35 | 1.45 |
| 26 | BB | 2772 | C | C2-N3 | 7.76 | 1.42 | 1.35 |
| 1 | AA | 833 | G | N7-C5 | 7.75 | 1.44 | 1.39 |
| 26 | BB | 2311 | A | C5-C6 | 7.75 | 1.48 | 1.41 |
| 1 | AA | 78 | A | C5-C6 | -7.75 | 1.34 | 1.41 |
| 25 | BA | 17 | C | C4'-O4' | -7.75 | 1.35 | 1.45 |
| 25 | BA | 6 | G | N7-C5 | -7.75 | 1.34 | 1.39 |
| 26 | BB | 698 | C | C5-C6 | 7.75 | 1.40 | 1.34 |
| 26 | BB | 1807 | G | N1-C2 | 7.75 | 1.44 | 1.37 |
| 1 | AA | 773 | G | N9-C8 | 7.75 | 1.43 | 1.37 |
| 1 | AA | 809 | G | C2-N3 | 7.75 | 1.39 | 1.32 |
| 1 | AA | 1365 | G | P-O5' | -7.75 | 1.52 | 1.59 |
| 1 | AA | 1496 | C | C2'-C1' | 7.75 | 1.61 | 1.53 |
| 26 | BB | 1728 | C | C4-C5 | 7.75 | 1.49 | 1.43 |
| 26 | BB | 1890 | A | C6-N1 | 7.75 | 1.41 | 1.35 |
| 26 | BB | 2808 | G | N7-C5 | 7.75 | 1.43 | 1.39 |
| 1 | AA | 1535 | C | C5'-C4' | 7.75 | 1.60 | 1.51 |
| 26 | BB | 1245 | G | N1-C2 | 7.75 | 1.44 | 1.37 |
| 26 | BB | 2500 | U | C5-C6 | 7.74 | 1.41 | 1.34 |
| 26 | BB | 626 | A | C6-N1 | 7.74 | 1.41 | 1.35 |
| 26 | BB | 652 | U | C4-C5 | -7.74 | 1.36 | 1.43 |
| 26 | BB | 841 | G | N1-C2 | 7.74 | 1.44 | 1.37 |
| 26 | BB | 1808 | A | N9-C8 | 7.74 | 1.44 | 1.37 |
| 26 | BB | 1252 | G | O4'-C1' | 7.74 | 1.51 | 1.41 |
| 26 | BB | 2313 | C | N3-C4 | 7.74 | 1.39 | 1.33 |
| 26 | BB | 547 | A | N3-C4 | 7.74 | 1.39 | 1.34 |
| 26 | BB | 669 | G | C6-N1 | -7.74 | 1.34 | 1.39 |
| 26 | BB | 1101 | U | C2-N3 | 7.74 | 1.43 | 1.37 |
| 26 | BB | 2398 | U | C2-N3 | 7.74 | 1.43 | 1.37 |
| 26 | BB | 2511 | U | N3-C4 | 7.74 | 1.45 | 1.38 |
| 26 | BB | 2654 | A | C6-N6 | -7.74 | 1.27 | 1.33 |
| 26 | BB | 1492 | G | N9-C8 | 7.74 | 1.43 | 1.37 |
| 1 | AA | 1368 | A | C8-N7 | -7.74 | 1.26 | 1.31 |
| 1 | AA | 1427 | C | N1-C6 | 7.74 | 1.41 | 1.37 |
| 26 | BB | 403 | U | C4'-O4' | -7.74 | 1.35 | 1.45 |
| 26 | BB | 1192 | G | C5-C4 | 7.74 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1537 | G | C2-N3 | 7.74 | 1.39 | 1.32 |
| 26 | BB | 1729 | U | N1-C2 | 7.73 | 1.45 | 1.38 |
| 1 | AA | 274 | A | C8-N7 | -7.73 | 1.26 | 1.31 |
| 26 | BB | 229 | C | P-O5' | 7.73 | 1.67 | 1.59 |
| 26 | BB | 682 | G | N1-C2 | -7.73 | 1.31 | 1.37 |
| 26 | BB | 1462 | C | N1-C6 | 7.73 | 1.41 | 1.37 |
| 26 | BB | 2449 | H2U | O3'-P | 7.73 | 1.70 | 1.61 |
| 26 | BB | 2839 | G | P-O5' | 7.73 | 1.67 | 1.59 |
| 26 | BB | 2878 | U | C2-N3 | 7.73 | 1.43 | 1.37 |
| 26 | BB | 1757 | A | P-O5' | 7.73 | 1.67 | 1.59 |
| 1 | AA | 6 | G | C8-N7 | -7.73 | 1.26 | 1.30 |
| 26 | BB | 1766 | G | O3'-P | 7.73 | 1.70 | 1.61 |
| 26 | BB | 2156 | G | N9-C4 | -7.73 | 1.31 | 1.38 |
| 25 | BA | 91 | C | P-O5' | 7.72 | 1.67 | 1.59 |
| 26 | BB | 2550 | G | C4'-O4' | -7.72 | 1.35 | 1.45 |
| 1 | AA | 1234 | C | P-O5' | 7.72 | 1.67 | 1.59 |
| 26 | BB | 1384 | A | N9-C8 | 7.72 | 1.44 | 1.37 |
| 26 | BB | 371 | A | C6-N1 | -7.72 | 1.30 | 1.35 |
| 26 | BB | 1309 | G | N9-C8 | -7.72 | 1.32 | 1.37 |
| 26 | BB | 652 | U | O4'-C1' | 7.72 | 1.51 | 1.41 |
| 26 | BB | 1359 | A | N7-C5 | -7.72 | 1.34 | 1.39 |
| 26 | BB | 2356 | U | P-O5' | 7.72 | 1.67 | 1.59 |
| 1 | AA | 775 | G | N7-C5 | 7.72 | 1.43 | 1.39 |
| 2 | AB | 10 | G | C5'-C4' | 7.72 | 1.60 | 1.51 |
| 26 | BB | 1723 | G | N9-C4 | 7.72 | 1.44 | 1.38 |
| 1 | AA | 226 | G | C6-N1 | 7.72 | 1.45 | 1.39 |
| 1 | AA | 422 | C | N1-C6 | 7.72 | 1.41 | 1.37 |
| 1 | AA | 415 | A | N7-C5 | 7.71 | 1.43 | 1.39 |
| 1 | AA | 706 | A | N3-C4 | 7.71 | 1.39 | 1.34 |
| 26 | BB | 105 | C | C4-C5 | 7.71 | 1.49 | 1.43 |
| 26 | BB | 231 | A | C5-C4 | -7.71 | 1.33 | 1.38 |
| 26 | BB | 234 | U | P-O5' | 7.71 | 1.67 | 1.59 |
| 26 | BB | 1145 | C | C5-C6 | -7.71 | 1.28 | 1.34 |
| 26 | BB | 2147 | A | N3-C4 | 7.71 | 1.39 | 1.34 |
| 1 | AA | 754 | C | C4-C5 | 7.71 | 1.49 | 1.43 |
| 26 | BB | 2046 | G | C2-N2 | -7.71 | 1.26 | 1.34 |
| 25 | BA | 47 | C | C5-C6 | 7.71 | 1.40 | 1.34 |
| 26 | BB | 974 | G | C2-N3 | 7.71 | 1.39 | 1.32 |
| 26 | BB | 985 | C | C4-C5 | 7.71 | 1.49 | 1.43 |
| 1 | AA | 16 | A | P-O5' | 7.71 | 1.67 | 1.59 |
| 26 | BB | 2387 | U | C2-N3 | 7.71 | 1.43 | 1.37 |
| 26 | BB | 1051 | G | C5-C4 | 7.71 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 128 | C | N1-C6 | 7.70 | 1.41 | 1.37 |
| 26 | BB | 482 | A | C8-N7 | -7.70 | 1.26 | 1.31 |
| 1 | AA | 250 | A | N3-C4 | 7.70 | 1.39 | 1.34 |
| 26 | BB | 383 | C | N1-C2 | 7.70 | 1.47 | 1.40 |
| 1 | AA | 640 | A | C2'-O2' | -7.70 | 1.31 | 1.41 |
| 1 | AA | 857 | C | C5'-C4' | 7.70 | 1.60 | 1.51 |
| 26 | BB | 215 | G | P-O5' | 7.70 | 1.67 | 1.59 |
| 26 | BB | 1055 | G | C8-N7 | -7.70 | 1.26 | 1.30 |
| 2 | AB | 63 | C | N3-C4 | 7.70 | 1.39 | 1.33 |
| 1 | AA | 121 | U | N3-C4 | 7.70 | 1.45 | 1.38 |
| 1 | AA | 629 | A | C3'-C2' | -7.70 | 1.44 | 1.52 |
| 4 | AD | 68 | C | N1-C6 | 7.70 | 1.41 | 1.37 |
| 26 | BB | 968 | C | C2-N3 | 7.70 | 1.42 | 1.35 |
| 26 | BB | 1561 | C | C2-N3 | 7.70 | 1.42 | 1.35 |
| 26 | BB | 2090 | A | N9-C4 | 7.69 | 1.42 | 1.37 |
| 26 | BB | 2531 | A | N3-C4 | 7.69 | 1.39 | 1.34 |
| 1 | AA | 365 | U | C3'-C2' | 7.69 | 1.61 | 1.52 |
| 1 | AA | 655 | A | P-O5' | 7.69 | 1.67 | 1.59 |
| 3 | AC | 43 | U | C5'-C4' | 7.69 | 1.60 | 1.51 |
| 26 | BB | 1159 | U | C5'-C4' | 7.69 | 1.60 | 1.51 |
| 26 | BB | 1705 | A | N3-C4 | 7.69 | 1.39 | 1.34 |
| 1 | AA | 1288 | A | C8-N7 | -7.69 | 1.26 | 1.31 |
| 26 | BB | 2808 | G | N9-C8 | 7.69 | 1.43 | 1.37 |
| 26 | BB | 1380 | G | P-O5' | 7.69 | 1.67 | 1.59 |
| 26 | BB | 1556 | C | O3'-P | 7.69 | 1.70 | 1.61 |
| 26 | BB | 1296 | G | C4'-O4' | -7.68 | 1.35 | 1.45 |
| 2 | AB | 50 | G | C2'-O2' | -7.68 | 1.31 | 1.41 |
| 26 | BB | 686 | U | P-O5' | 7.68 | 1.67 | 1.59 |
| 1 | AA | 15 | G | C8-N7 | 7.68 | 1.35 | 1.30 |
| 1 | AA | 1287 | A | N9-C4 | 7.68 | 1.42 | 1.37 |
| 1 | AA | 1310 | G | C8-N7 | -7.68 | 1.26 | 1.30 |
| 26 | BB | 1480 | C | N1-C6 | 7.68 | 1.41 | 1.37 |
| 26 | BB | 2209 | G | C6-O6 | -7.68 | 1.17 | 1.24 |
| 1 | AA | 13 | U | O3'-P | 7.68 | 1.70 | 1.61 |
| 1 | AA | 69 | G | N3-C4 | 7.68 | 1.40 | 1.35 |
| 26 | BB | 1664 | A | N9-C8 | 7.68 | 1.43 | 1.37 |
| 26 | BB | 1083 | U | C5'-C4' | 7.68 | 1.60 | 1.51 |
| 26 | BB | 1613 | G | C2-N3 | 7.68 | 1.38 | 1.32 |
| 1 | AA | 82 | G | C3'-C2' | -7.67 | 1.44 | 1.52 |
| 1 | AA | 1127 | G | N9-C8 | -7.67 | 1.32 | 1.37 |
| 26 | BB | 1009 | A | N3-C4 | 7.67 | 1.39 | 1.34 |
| 26 | BB | 1773 | A | P-O5' | 7.67 | 1.67 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2246 | G | N9-C8 | -7.67 | 1.32 | 1.37 |
| 26 | BB | 2270 | A | C8-N7 | -7.67 | 1.26 | 1.31 |
| 26 | BB | 2795 | C | N3-C4 | -7.67 | 1.28 | 1.33 |
| 26 | BB | 2117 | A | C5-C4 | -7.67 | 1.33 | 1.38 |
| 26 | BB | 176 | A | C6-N6 | 7.67 | 1.40 | 1.33 |
| 26 | BB | 2510 | C | N1-C6 | 7.67 | 1.41 | 1.37 |
| 1 | AA | 1127 | G | C6-N1 | 7.67 | 1.45 | 1.39 |
| 26 | BB | 259 | G | C2-N3 | 7.67 | 1.38 | 1.32 |
| 26 | BB | 2050 | C | C2'-C1' | 7.67 | 1.61 | 1.53 |
| 26 | BB | 2699 | C | C5-C6 | 7.67 | 1.40 | 1.34 |
| 26 | BB | 2735 | G | N7-C5 | 7.67 | 1.43 | 1.39 |
| 1 | AA | 1219 | A | C8-N7 | -7.67 | 1.26 | 1.31 |
| 1 | AA | 653 | U | C2'-C1' | -7.66 | 1.45 | 1.53 |
| 25 | BA | 83 | G | N1-C2 | 7.66 | 1.43 | 1.37 |
| 26 | BB | 396 | G | N9-C4 | 7.66 | 1.44 | 1.38 |
| 1 | AA | 922 | G | N7-C5 | -7.66 | 1.34 | 1.39 |
| 26 | BB | 1968 | G | N9-C4 | 7.66 | 1.44 | 1.38 |
| 1 | AA | 847 | G | N9-C8 | 7.66 | 1.43 | 1.37 |
| 26 | BB | 2372 | U | C2-N3 | 7.66 | 1.43 | 1.37 |
| 1 | AA | 1436 | U | C2-N3 | 7.66 | 1.43 | 1.37 |
| 26 | BB | 71 | A | C5-C6 | 7.66 | 1.48 | 1.41 |
| 26 | BB | 1056 | G | C2-N3 | 7.66 | 1.38 | 1.32 |
| 26 | BB | 1070 | A | N3-C4 | 7.66 | 1.39 | 1.34 |
| 26 | BB | 2317 | A | C5-C4 | -7.66 | 1.33 | 1.38 |
| 1 | AA | 814 | A | C6-N6 | 7.66 | 1.40 | 1.33 |
| 25 | BA | 16 | G | N7-C5 | -7.66 | 1.34 | 1.39 |
| 25 | BA | 64 | G | N3-C4 | 7.66 | 1.40 | 1.35 |
| 1 | AA | 845 | A | N7-C5 | -7.65 | 1.34 | 1.39 |
| 1 | AA | 1535 | C | C4-C5 | 7.65 | 1.49 | 1.43 |
| 26 | BB | 79 | C | C4-C5 | 7.65 | 1.49 | 1.43 |
| 26 | BB | 1928 | A | C5'-C4' | 7.65 | 1.60 | 1.51 |
| 26 | BB | 2707 | U | N3-C4 | 7.65 | 1.45 | 1.38 |
| 1 | AA | 879 | C | O4'-C1' | 7.65 | 1.51 | 1.41 |
| 1 | AA | 1222 | G | P-O5' | 7.65 | 1.67 | 1.59 |
| 26 | BB | 39 | G | C5-C6 | 7.65 | 1.50 | 1.42 |
| 26 | BB | 180 | G | C5-C4 | 7.65 | 1.43 | 1.38 |
| 26 | BB | 1464 | G | C5'-C4' | 7.65 | 1.60 | 1.51 |
| 26 | BB | 2094 | A | N9-C4 | 7.65 | 1.42 | 1.37 |
| 26 | BB | 1345 | C | C4'-O4' | -7.65 | 1.35 | 1.45 |
| 26 | BB | 1887 | C | C4-C5 | 7.65 | 1.49 | 1.43 |
| 26 | BB | 2114 | A | N3-C4 | 7.65 | 1.39 | 1.34 |
| 26 | BB | 2225 | A | N9-C4 | 7.65 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 851 | G | C2'-C1' | -7.65 | 1.45 | 1.53 |
| 1 | AA | 1107 | C | C2'-C1' | -7.65 | 1.45 | 1.53 |
| 26 | BB | 1567 | G | C2-N3 | 7.65 | 1.38 | 1.32 |
| 1 | AA | 1305 | G | N9-C8 | 7.64 | 1.43 | 1.37 |
| 26 | BB | 368 | A | C8-N7 | -7.64 | 1.26 | 1.31 |
| 26 | BB | 416 | U | C4-O4 | -7.64 | 1.17 | 1.23 |
| 26 | BB | 2553 | G | O3'-P | -7.64 | 1.51 | 1.61 |
| 1 | AA | 1368 | A | C4'-C3' | 7.64 | 1.61 | 1.53 |
| 3 | AC | 20 | G | N7-C5 | -7.64 | 1.34 | 1.39 |
| 25 | BA | 57 | A | P-O5' | 7.64 | 1.67 | 1.59 |
| 26 | BB | 1381 | G | C5'-C4' | 7.64 | 1.60 | 1.51 |
| 26 | BB | 1918 | A | N3-C4 | 7.64 | 1.39 | 1.34 |
| 26 | BB | 2573 | C | C4-C5 | 7.64 | 1.49 | 1.43 |
| 1 | AA | 19 | A | P-O5' | 7.64 | 1.67 | 1.59 |
| 26 | BB | 1567 | G | N9-C4 | 7.64 | 1.44 | 1.38 |
| 26 | BB | 1709 | U | C4-C5 | 7.64 | 1.50 | 1.43 |
| 1 | AA | 936 | C | C4-C5 | 7.64 | 1.49 | 1.43 |
| 4 | AD | 52 | C | P-O5' | 7.64 | 1.67 | 1.59 |
| 26 | BB | 706 | A | N3-C4 | 7.64 | 1.39 | 1.34 |
| 26 | BB | 1940 | U | C4'-O4' | -7.64 | 1.35 | 1.45 |
| 26 | BB | 1951 | U | P-O5' | 7.64 | 1.67 | 1.59 |
| 26 | BB | 2163 | A | N3-C4 | 7.64 | 1.39 | 1.34 |
| 1 | AA | 1450 | U | N3-C4 | 7.64 | 1.45 | 1.38 |
| 26 | BB | 1661 | G | C6-N1 | 7.64 | 1.44 | 1.39 |
| 1 | AA | 387 | U | C2-N3 | -7.64 | 1.32 | 1.37 |
| 1 | AA | 538 | G | C5'-C4' | 7.64 | 1.60 | 1.51 |
| 1 | AA | 553 | A | N3-C4 | 7.64 | 1.39 | 1.34 |
| 1 | AA | 596 | A | N3-C4 | 7.64 | 1.39 | 1.34 |
| 1 | AA | 1539 | C | P-O5' | 7.64 | 1.67 | 1.59 |
| 25 | BA | 44 | G | C5-C4 | -7.64 | 1.33 | 1.38 |
| 1 | AA | 1530 | G | C2-N3 | 7.63 | 1.38 | 1.32 |
| 26 | BB | 523 | C | P-O5' | 7.63 | 1.67 | 1.59 |
| 26 | BB | 1981 | A | N9-C4 | 7.63 | 1.42 | 1.37 |
| 26 | BB | 195 | A | O3'-P | 7.63 | 1.70 | 1.61 |
| 26 | BB | 264 | C | C2'-O2' | 7.63 | 1.51 | 1.41 |
| 2 | AB | 15 | A | N3-C4 | 7.63 | 1.39 | 1.34 |
| 26 | BB | 1341 | G | O3'-P | 7.63 | 1.70 | 1.61 |
| 26 | BB | 1605 | C | C2-O2 | -7.63 | 1.17 | 1.24 |
| 26 | BB | 1831 | G | N3-C4 | 7.63 | 1.40 | 1.35 |
| 1 | AA | 1287 | A | P-O5' | 7.63 | 1.67 | 1.59 |
| 26 | BB | 658 | U | O3'-P | 7.63 | 1.70 | 1.61 |
| 26 | BB | 972 | A | P-O5' | 7.63 | 1.67 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1991 | U | C5'-C4' | 7.62 | 1.60 | 1.51 |
| 1 | AA | 130 | A | C5-C4 | -7.62 | 1.33 | 1.38 |
| 4 | AD | 29 | C | C5-C6 | 7.62 | 1.40 | 1.34 |
| 26 | BB | 94 | A | N3-C4 | 7.62 | 1.39 | 1.34 |
| 26 | BB | 1753 | G | P-O5' | 7.62 | 1.67 | 1.59 |
| 26 | BB | 1889 | A | N3-C4 | -7.62 | 1.30 | 1.34 |
| 1 | AA | 211 | G | N9-C4 | 7.62 | 1.44 | 1.38 |
| 1 | AA | 434 | U | N1-C2 | 7.62 | 1.45 | 1.38 |
| 26 | BB | 2414 | G | P-O5' | 7.62 | 1.67 | 1.59 |
| 2 | AB | 22 | G | P-O5' | 7.62 | 1.67 | 1.59 |
| 26 | BB | 217 | A | C3'-C2' | 7.62 | 1.61 | 1.52 |
| 26 | BB | 1718 | G | C2-N3 | 7.62 | 1.38 | 1.32 |
| 1 | AA | 271 | C | N1-C2 | 7.62 | 1.47 | 1.40 |
| 26 | BB | 663 | G | C8-N7 | 7.62 | 1.35 | 1.30 |
| 1 | AA | 1124 | G | P-O5' | 7.62 | 1.67 | 1.59 |
| 26 | BB | 261 | G | C2-N3 | 7.61 | 1.38 | 1.32 |
| 26 | BB | 873 | C | P-O5' | 7.61 | 1.67 | 1.59 |
| 26 | BB | 1631 | G | C2-N3 | 7.61 | 1.38 | 1.32 |
| 1 | AA | 775 | G | N3-C4 | 7.61 | 1.40 | 1.35 |
| 26 | BB | 1157 | G | N3-C4 | 7.61 | 1.40 | 1.35 |
| 1 | AA | 51 | A | C5-C6 | 7.61 | 1.47 | 1.41 |
| 1 | AA | 166 | U | N1-C2 | 7.61 | 1.45 | 1.38 |
| 25 | BA | 32 | U | N3-C4 | 7.61 | 1.45 | 1.38 |
| 26 | BB | 2855 | C | P-O5' | 7.61 | 1.67 | 1.59 |
| 25 | BA | 94 | A | C6-N6 | 7.60 | 1.40 | 1.33 |
| 26 | BB | 18 | U | N3-C4 | 7.60 | 1.45 | 1.38 |
| 26 | BB | 844 | A | N3-C4 | 7.60 | 1.39 | 1.34 |
| 26 | BB | 1785 | A | C8-N7 | -7.60 | 1.26 | 1.31 |
| 26 | BB | 2648 | G | C2-N3 | 7.60 | 1.38 | 1.32 |
| 26 | BB | 1621 | U | C4-C5 | 7.60 | 1.50 | 1.43 |
| 26 | BB | 1776 | G | N3-C4 | 7.60 | 1.40 | 1.35 |
| 26 | BB | 868 | U | P-O5' | 7.60 | 1.67 | 1.59 |
| 26 | BB | 994 | C | P-O5' | 7.60 | 1.67 | 1.59 |
| 26 | BB | 62 | U | P-O5' | 7.60 | 1.67 | 1.59 |
| 1 | AA | 41 | G | O3'-P | 7.59 | 1.70 | 1.61 |
| 1 | AA | 1282 | C | P-O5' | 7.59 | 1.67 | 1.59 |
| 2 | AB | 44 | G | C5-C4 | 7.59 | 1.43 | 1.38 |
| 26 | BB | 1230 | A | N9-C4 | 7.59 | 1.42 | 1.37 |
| 1 | AA | 419 | C | C2-O2 | 7.59 | 1.31 | 1.24 |
| 1 | AA | 296 | U | N1-C2 | 7.59 | 1.45 | 1.38 |
| 1 | AA | 1505 | G | C2-N3 | 7.59 | 1.38 | 1.32 |
| 26 | BB | 1153 | C | N3-C4 | 7.59 | 1.39 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 954 | G | C2-N3 | 7.59 | 1.38 | 1.32 |
| 25 | BA | 83 | G | C2-N3 | 7.59 | 1.38 | 1.32 |
| 26 | BB | 386 | G | N7-C5 | 7.59 | 1.43 | 1.39 |
| 26 | BB | 1429 | G | N1-C2 | 7.59 | 1.43 | 1.37 |
| 26 | BB | 2443 | C | N1-C6 | 7.59 | 1.41 | 1.37 |
| 26 | BB | 552 | U | C2'-C1' | 7.58 | 1.61 | 1.53 |
| 26 | BB | 2814 | A | N9-C4 | 7.58 | 1.42 | 1.37 |
| 1 | AA | 804 | U | C2-N3 | 7.58 | 1.43 | 1.37 |
| 26 | BB | 219 | A | O3'-P | -7.58 | 1.52 | 1.61 |
| 26 | BB | 2662 | A | N9-C4 | -7.58 | 1.33 | 1.37 |
| 2 | AB | 42 | G | O3'-P | 7.58 | 1.70 | 1.61 |
| 25 | BA | 4 | C | N3-C4 | 7.58 | 1.39 | 1.33 |
| 1 | AA | 1114 | C | C5-C6 | 7.58 | 1.40 | 1.34 |
| 26 | BB | 1663 | G | C2'-C1' | 7.58 | 1.61 | 1.53 |
| 1 | AA | 115 | G | N7-C5 | -7.58 | 1.34 | 1.39 |
| 26 | BB | 964 | C | N1-C6 | 7.58 | 1.41 | 1.37 |
| 1 | AA | 379 | C | C2-N3 | 7.57 | 1.41 | 1.35 |
| 26 | BB | 1397 | U | N1-C2 | 7.57 | 1.45 | 1.38 |
| 26 | BB | 2139 | U | P-O5' | 7.57 | 1.67 | 1.59 |
| 1 | AA | 1428 | A | O3'-P | 7.57 | 1.70 | 1.61 |
| 26 | BB | 1284 | A | C3'-C2' | 7.57 | 1.61 | 1.52 |
| 26 | BB | 2512 | C | C2-N3 | 7.57 | 1.41 | 1.35 |
| 1 | AA | 383 | A | C6-N1 | 7.57 | 1.40 | 1.35 |
| 1 | AA | 491 | G | N9-C8 | 7.57 | 1.43 | 1.37 |
| 1 | AA | 794 | A | P-O5' | 7.57 | 1.67 | 1.59 |
| 26 | BB | 1767 | G | C6-N1 | 7.57 | 1.44 | 1.39 |
| 26 | BB | 1901 | A | C6-N6 | 7.56 | 1.40 | 1.33 |
| 26 | BB | 208 | C | C2-N3 | 7.56 | 1.41 | 1.35 |
| 1 | AA | 248 | C | C4-N4 | 7.56 | 1.40 | 1.33 |
| 26 | BB | 1935 | G | C2-N3 | 7.56 | 1.38 | 1.32 |
| 26 | BB | 2020 | A | C6-N6 | 7.56 | 1.40 | 1.33 |
| 26 | BB | 2202 | U | C4'-O4' | -7.56 | 1.35 | 1.45 |
| 1 | AA | 603 | U | C2-N3 | 7.56 | 1.43 | 1.37 |
| 2 | AB | 48 | U | N3-C4 | 7.56 | 1.45 | 1.38 |
| 26 | BB | 1705 | A | C2'-C1' | -7.56 | 1.45 | 1.53 |
| 26 | BB | 2138 | G | N9-C8 | 7.56 | 1.43 | 1.37 |
| 1 | AA | 489 | C | C4'-O4' | -7.56 | 1.35 | 1.45 |
| 1 | AA | 720 | C | N1-C6 | 7.56 | 1.41 | 1.37 |
| 26 | BB | 116 | C | P-O5' | 7.56 | 1.67 | 1.59 |
| 26 | BB | 1483 | G | P-O5' | 7.56 | 1.67 | 1.59 |
| 26 | BB | 1776 | G | C5'-C4' | 7.55 | 1.60 | 1.51 |
| 26 | BB | 1928 | A | P-O5' | 7.55 | 1.67 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1402 | U | C2-N3 | -7.55 | 1.32 | 1.37 |
| 26 | BB | 395 | U | N1-C6 | 7.55 | 1.44 | 1.38 |
| 26 | BB | 423 | A | P-O5' | 7.55 | 1.67 | 1.59 |
| 26 | BB | 2500 | U | C2-N3 | 7.55 | 1.43 | 1.37 |
| 25 | BA | 105 | G | C8-N7 | -7.55 | 1.26 | 1.30 |
| 26 | BB | 2056 | G | C2-N3 | 7.55 | 1.38 | 1.32 |
| 26 | BB | 2740 | A | O3'-P | -7.55 | 1.52 | 1.61 |
| 1 | AA | 308 | C | C4-N4 | 7.55 | 1.40 | 1.33 |
| 1 | AA | 930 | C | N1-C6 | 7.55 | 1.41 | 1.37 |
| 1 | AA | 1130 | A | C5'-C4' | 7.55 | 1.60 | 1.51 |
| 26 | BB | 181 | A | P-O5' | 7.55 | 1.67 | 1.59 |
| 1 | AA | 16 | A | N9-C4 | 7.54 | 1.42 | 1.37 |
| 2 | AB | 24 | G | P-O5' | 7.54 | 1.67 | 1.59 |
| 26 | BB | 933 | A | C6-N1 | -7.54 | 1.30 | 1.35 |
| 26 | BB | 1588 | G | C2-N3 | 7.54 | 1.38 | 1.32 |
| 26 | BB | 2013 | A | C4'-C3' | 7.54 | 1.61 | 1.53 |
| 1 | AA | 528 | C | N3-C4 | -7.54 | 1.28 | 1.33 |
| 26 | BB | 1482 | G | P-O5' | 7.54 | 1.67 | 1.59 |
| 26 | BB | 2123 | G | C4'-O4' | -7.54 | 1.35 | 1.45 |
| 1 | AA | 854 | U | C3'-O3' | 7.54 | 1.52 | 1.42 |
| 26 | BB | 387 | U | C4'-C3' | 7.54 | 1.61 | 1.53 |
| 26 | BB | 464 | U | N1-C2 | 7.54 | 1.45 | 1.38 |
| 26 | BB | 1282 | U | C2-N3 | 7.54 | 1.43 | 1.37 |
| 26 | BB | 1305 | C | N3-C4 | 7.54 | 1.39 | 1.33 |
| 26 | BB | 2020 | A | N7-C5 | 7.54 | 1.43 | 1.39 |
| 26 | BB | 1192 | G | C8-N7 | 7.54 | 1.35 | 1.30 |
| 26 | BB | 164 | C | N3-C4 | 7.54 | 1.39 | 1.33 |
| 26 | BB | 534 | U | C4'-O4' | -7.54 | 1.35 | 1.45 |
| 26 | BB | 189 | G | C2-N3 | 7.53 | 1.38 | 1.32 |
| 26 | BB | 309 | A | C8-N7 | -7.53 | 1.26 | 1.31 |
| 26 | BB | 1593 | A | N3-C4 | 7.53 | 1.39 | 1.34 |
| 26 | BB | 1669 | A | N7-C5 | -7.53 | 1.34 | 1.39 |
| 26 | BB | 906 | U | C2-N3 | -7.53 | 1.32 | 1.37 |
| 26 | BB | 1387 | A | C5-C6 | 7.53 | 1.47 | 1.41 |
| 25 | BA | 15 | A | C6-N6 | 7.53 | 1.40 | 1.33 |
| 26 | BB | 191 | A | N3-C4 | 7.53 | 1.39 | 1.34 |
| 1 | AA | 113 | G | N1-C2 | 7.53 | 1.43 | 1.37 |
| 25 | BA | 28 | C | C2-N3 | 7.53 | 1.41 | 1.35 |
| 26 | BB | 651 | G | N7-C5 | 7.53 | 1.43 | 1.39 |
| 26 | BB | 753 | A | C6-N1 | -7.53 | 1.30 | 1.35 |
| 26 | BB | 1076 | C | P-O5' | 7.53 | 1.67 | 1.59 |
| 26 | BB | 99 | U | O3'-P | 7.53 | 1.70 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 260 | G | P-O5' | 7.53 | 1.67 | 1.59 |
| 1 | AA | 104 | G | P-O5' | 7.52 | 1.67 | 1.59 |
| 26 | BB | 997 | G | C3'-C2' | -7.52 | 1.44 | 1.52 |
| 26 | BB | 422 | A | N9-C4 | 7.52 | 1.42 | 1.37 |
| 26 | BB | 2835 | A | N7-C5 | -7.52 | 1.34 | 1.39 |
| 26 | BB | 1885 | A | N9-C4 | -7.52 | 1.33 | 1.37 |
| 26 | BB | 2849 | U | C4-C5 | 7.52 | 1.50 | 1.43 |
| 25 | BA | 106 | G | N7-C5 | 7.52 | 1.43 | 1.39 |
| 25 | BA | 118 | C | P-O5' | 7.52 | 1.67 | 1.59 |
| 26 | BB | 784 | G | N3-C4 | 7.52 | 1.40 | 1.35 |
| 26 | BB | 1080 | A | C6-N1 | 7.52 | 1.40 | 1.35 |
| 26 | BB | 1095 | A | C6-N1 | 7.52 | 1.40 | 1.35 |
| 25 | BA | 85 | G | P-O5' | 7.52 | 1.67 | 1.59 |
| 26 | BB | 2343 | U | C4'-O4' | -7.52 | 1.35 | 1.45 |
| 9 | AI | 25 | TYR | CE2-CZ | 7.51 | 1.48 | 1.38 |
| 26 | BB | 40 | U | C2-N3 | 7.51 | 1.43 | 1.37 |
| 26 | BB | 486 | C | O3'-P | 7.51 | 1.70 | 1.61 |
| 26 | BB | 2252 | G | N7-C5 | 7.51 | 1.43 | 1.39 |
| 26 | BB | 2389 | G | N9-C8 | 7.51 | 1.43 | 1.37 |
| 26 | BB | 1482 | G | C2'-C1' | -7.51 | 1.45 | 1.53 |
| 1 | AA | 889 | A | C3'-O3' | 7.51 | 1.52 | 1.42 |
| 1 | AA | 1168 | U | P-O5' | 7.51 | 1.67 | 1.59 |
| 26 | BB | 850 | U | C5'-C4' | 7.51 | 1.60 | 1.51 |
| 26 | BB | 1166 | G | C5'-C4' | 7.51 | 1.60 | 1.51 |
| 26 | BB | 1872 | A | N7-C5 | -7.51 | 1.34 | 1.39 |
| 26 | BB | 2688 | G | C6-N1 | 7.51 | 1.44 | 1.39 |
| 26 | BB | 2831 | G | N7-C5 | -7.51 | 1.34 | 1.39 |
| 26 | BB | 950 | G | P-O5' | 7.51 | 1.67 | 1.59 |
| 26 | BB | 1776 | G | C2-N3 | 7.51 | 1.38 | 1.32 |
| 26 | BB | 445 | C | P-O5' | 7.51 | 1.67 | 1.59 |
| 26 | BB | 2359 | C | C4-C5 | 7.51 | 1.49 | 1.43 |
| 1 | AA | 53 | A | N9-C4 | 7.50 | 1.42 | 1.37 |
| 1 | AA | 1201 | A | N3-C4 | 7.50 | 1.39 | 1.34 |
| 25 | BA | 77 | U | P-O5' | 7.50 | 1.67 | 1.59 |
| 26 | BB | 946 | C | C4'-O4' | -7.50 | 1.35 | 1.45 |
| 1 | AA | 413 | G | C5'-C4' | 7.50 | 1.60 | 1.51 |
| 1 | AA | 783 | C | N3-C4 | 7.50 | 1.39 | 1.33 |
| 1 | AA | 1264 | U | N1-C2 | 7.50 | 1.45 | 1.38 |
| 26 | BB | 2646 | C | P-O5' | 7.50 | 1.67 | 1.59 |
| 1 | AA | 782 | A | N9-C4 | 7.50 | 1.42 | 1.37 |
| 26 | BB | 70 | G | C4'-O4' | -7.50 | 1.35 | 1.45 |
| 26 | BB | 150 | U | N3-C4 | 7.50 | 1.45 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1022 | A | N3-C4 | 7.50 | 1.39 | 1.34 |
| 1 | AA | 1302 | C | N1-C6 | 7.50 | 1.41 | 1.37 |
| 26 | BB | 387 | U | C2-N3 | 7.50 | 1.43 | 1.37 |
| 26 | BB | 482 | A | C5'-C4' | 7.50 | 1.60 | 1.51 |
| 26 | BB | 2853 | C | C4-C5 | 7.50 | 1.49 | 1.43 |
| 1 | AA | 648 | A | P-O5' | 7.50 | 1.67 | 1.59 |
| 1 | AA | 1123 | U | N1-C2 | 7.50 | 1.45 | 1.38 |
| 26 | BB | 2598 | A | C5-C4 | 7.50 | 1.44 | 1.38 |
| 26 | BB | 642 | U | N1-C2 | 7.50 | 1.45 | 1.38 |
| 26 | BB | 1528 | A | N3-C4 | 7.50 | 1.39 | 1.34 |
| 1 | AA | 1403 | C | N1-C6 | 7.49 | 1.41 | 1.37 |
| 2 | AB | 72 | U | N1-C2 | 7.49 | 1.45 | 1.38 |
| 4 | AD | 26 | C | C2-N3 | 7.49 | 1.41 | 1.35 |
| 26 | BB | 1260 | A | C8-N7 | -7.49 | 1.26 | 1.31 |
| 26 | BB | 1883 | U | C4-O4 | -7.49 | 1.17 | 1.23 |
| 1 | AA | 882 | C | P-O5' | 7.49 | 1.67 | 1.59 |
| 26 | BB | 282 | A | N3-C4 | 7.49 | 1.39 | 1.34 |
| 26 | BB | 2269 | G | N1-C2 | 7.49 | 1.43 | 1.37 |
| 1 | AA | 64 | G | C2'-C1' | -7.49 | 1.45 | 1.53 |
| 1 | AA | 1177 | G | N1-C2 | 7.49 | 1.43 | 1.37 |
| 26 | BB | 1416 | G | N9-C8 | -7.49 | 1.32 | 1.37 |
| 26 | BB | 2131 | U | C4'-O4' | -7.49 | 1.35 | 1.45 |
| 1 | AA | 1374 | A | N3-C4 | 7.49 | 1.39 | 1.34 |
| 26 | BB | 1263 | U | C2-N3 | 7.49 | 1.43 | 1.37 |
| 26 | BB | 2050 | C | C5'-C4' | 7.49 | 1.60 | 1.51 |
| 26 | BB | 2900 | A | N9-C4 | 7.49 | 1.42 | 1.37 |
| 1 | AA | 699 | C | C2-N3 | 7.49 | 1.41 | 1.35 |
| 26 | BB | 370 | G | C5-C4 | 7.49 | 1.43 | 1.38 |
| 26 | BB | 1359 | A | P-O5' | 7.49 | 1.67 | 1.59 |
| 1 | AA | 857 | C | N3-C4 | 7.49 | 1.39 | 1.33 |
| 1 | AA | 858 | G | N1-C2 | -7.49 | 1.31 | 1.37 |
| 26 | BB | 1860 | G | C4'-C3' | 7.49 | 1.61 | 1.53 |
| 26 | BB | 763 | G | O3'-P | 7.48 | 1.70 | 1.61 |
| 26 | BB | 1933 | G | C2-N3 | 7.48 | 1.38 | 1.32 |
| 26 | BB | 2722 | G | N1-C2 | 7.48 | 1.43 | 1.37 |
| 1 | AA | 159 | G | N3-C4 | 7.48 | 1.40 | 1.35 |
| 1 | AA | 789 | U | C2-N3 | 7.48 | 1.43 | 1.37 |
| 1 | AA | 895 | G | N9-C8 | 7.48 | 1.43 | 1.37 |
| 26 | BB | 751 | A | N9-C4 | -7.48 | 1.33 | 1.37 |
| 1 | AA | 399 | G | C3'-C2' | 7.48 | 1.61 | 1.52 |
| 1 | AA | 493 | A | O3'-P | 7.48 | 1.70 | 1.61 |
| 1 | AA | 703 | G | C5-C6 | 7.48 | 1.49 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1734 | G | C5'-C4' | 7.48 | 1.60 | 1.51 |
| 26 | BB | 1884 | G | C6-N1 | 7.48 | 1.44 | 1.39 |
| 26 | BB | 2871 | U | C2-N3 | 7.48 | 1.43 | 1.37 |
| 3 | AC | 46 | C | P-O5' | 7.48 | 1.67 | 1.59 |
| 26 | BB | 2639 | A | C5'-C4' | 7.48 | 1.60 | 1.51 |
| 1 | AA | 156 | C | C4-C5 | 7.48 | 1.49 | 1.43 |
| 26 | BB | 155 | A | C5-C6 | 7.48 | 1.47 | 1.41 |
| 26 | BB | 382 | A | P-O5' | 7.48 | 1.67 | 1.59 |
| 26 | BB | 19 | A | N3-C4 | 7.48 | 1.39 | 1.34 |
| 26 | BB | 1332 | G | C6-N1 | 7.48 | 1.44 | 1.39 |
| 26 | BB | 2679 | A | C2'-C1' | -7.48 | 1.45 | 1.53 |
| 1 | AA | 603 | U | O4'-C1' | -7.47 | 1.31 | 1.41 |
| 1 | AA | 928 | G | C2-N3 | 7.47 | 1.38 | 1.32 |
| 26 | BB | 943 | A | C8-N7 | -7.47 | 1.26 | 1.31 |
| 1 | AA | 675 | A | N9-C8 | 7.47 | 1.43 | 1.37 |
| 1 | AA | 1389 | C | P-O5' | 7.47 | 1.67 | 1.59 |
| 26 | BB | 705 | A | P-O5' | 7.47 | 1.67 | 1.59 |
| 26 | BB | 2480 | C | C2-N3 | 7.47 | 1.41 | 1.35 |
| 26 | BB | 2714 | G | N3-C4 | 7.47 | 1.40 | 1.35 |
| 1 | AA | 373 | A | P-O5' | 7.47 | 1.67 | 1.59 |
| 3 | AC | 57 | C | C4'-C3' | 7.47 | 1.61 | 1.53 |
| 1 | AA | 1345 | U | C4'-C3' | -7.47 | 1.45 | 1.53 |
| 4 | AD | 24 | C | P-O5' | 7.47 | 1.67 | 1.59 |
| 26 | BB | 2266 | A | C6-N1 | -7.47 | 1.30 | 1.35 |
| 26 | BB | 2647 | U | N1-C2 | 7.47 | 1.45 | 1.38 |
| 1 | AA | 803 | G | C2-N3 | 7.47 | 1.38 | 1.32 |
| 26 | BB | 2548 | U | N1-C2 | 7.47 | 1.45 | 1.38 |
| 1 | AA | 1201 | A | C6-N1 | 7.47 | 1.40 | 1.35 |
| 4 | AD | 71 | G | C6-O6 | -7.47 | 1.17 | 1.24 |
| 26 | BB | 1343 | G | C4'-O4' | -7.47 | 1.35 | 1.45 |
| 26 | BB | 2226 | C | O3'-P | 7.47 | 1.70 | 1.61 |
| 1 | AA | 866 | C | N1-C6 | 7.46 | 1.41 | 1.37 |
| 26 | BB | 562 | U | C4-C5 | 7.46 | 1.50 | 1.43 |
| 26 | BB | 1845 | G | C8-N7 | 7.46 | 1.35 | 1.30 |
| 1 | AA | 1422 | G | C2-N3 | 7.46 | 1.38 | 1.32 |
| 26 | BB | 245 | G | P-O5' | 7.46 | 1.67 | 1.59 |
| 26 | BB | 1747 | U | C2-N3 | 7.46 | 1.43 | 1.37 |
| 1 | AA | 521 | G | N9-C4 | -7.46 | 1.31 | 1.38 |
| 1 | AA | 1011 | C | P-O5' | 7.46 | 1.67 | 1.59 |
| 2 | AB | 62 | U | P-O5' | 7.46 | 1.67 | 1.59 |
| 26 | BB | 2023 | C | C2-N3 | 7.46 | 1.41 | 1.35 |
| 26 | BB | 2508 | G | N9-C4 | 7.46 | 1.44 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2767 | C | C5-C6 | 7.46 | 1.40 | 1.34 |
| 26 | BB | 1586 | A | N3-C4 | 7.46 | 1.39 | 1.34 |
| 1 | AA | 611 | C | C4-C5 | 7.46 | 1.49 | 1.43 |
| 1 | AA | 676 | A | N3-C4 | 7.46 | 1.39 | 1.34 |
| 26 | BB | 465 | G | C8-N7 | -7.46 | 1.26 | 1.30 |
| 1 | AA | 153 | C | N1-C6 | 7.46 | 1.41 | 1.37 |
| 1 | AA | 1156 | G | N7-C5 | 7.46 | 1.43 | 1.39 |
| 26 | BB | 280 | U | O3'-P | 7.46 | 1.70 | 1.61 |
| 26 | BB | 1120 | G | N3-C4 | 7.46 | 1.40 | 1.35 |
| 1 | AA | 790 | A | N9-C4 | 7.46 | 1.42 | 1.37 |
| 26 | BB | 587 | C | C2-N3 | -7.46 | 1.29 | 1.35 |
| 26 | BB | 2707 | U | P-O5' | 7.46 | 1.67 | 1.59 |
| 1 | AA | 86 | G | N3-C4 | 7.45 | 1.40 | 1.35 |
| 26 | BB | 935 | C | C4-C5 | 7.45 | 1.49 | 1.43 |
| 26 | BB | 1670 | C | N1-C6 | 7.45 | 1.41 | 1.37 |
| 26 | BB | 2751 | G | N7-C5 | 7.45 | 1.43 | 1.39 |
| 1 | AA | 473 | U | C4-C5 | 7.45 | 1.50 | 1.43 |
| 1 | AA | 1249 | C | C2-O2 | -7.45 | 1.17 | 1.24 |
| 26 | BB | 52 | A | P-O5' | -7.45 | 1.52 | 1.59 |
| 26 | BB | 2883 | A | N9-C4 | 7.45 | 1.42 | 1.37 |
| 1 | AA | 518 | C | C2'-C1' | 7.45 | 1.61 | 1.53 |
| 4 | AD | 59 | A | N9-C8 | -7.45 | 1.31 | 1.37 |
| 1 | AA | 236 | A | P-O5' | 7.45 | 1.67 | 1.59 |
| 1 | AA | 718 | A | C2-N3 | -7.45 | 1.26 | 1.33 |
| 1 | AA | 1132 | C | N1-C6 | 7.45 | 1.41 | 1.37 |
| 26 | BB | 1848 | A | N3-C4 | 7.45 | 1.39 | 1.34 |
| 26 | BB | 1906 | G | N3-C4 | 7.45 | 1.40 | 1.35 |
| 26 | BB | 2399 | G | C2-N2 | -7.45 | 1.27 | 1.34 |
| 26 | BB | 2640 | G | C2-N3 | 7.45 | 1.38 | 1.32 |
| 26 | BB | 443 | A | C5'-C4' | 7.45 | 1.60 | 1.51 |
| 26 | BB | 1891 | G | N3-C4 | 7.45 | 1.40 | 1.35 |
| 1 | AA | 538 | G | C2-N3 | 7.45 | 1.38 | 1.32 |
| 1 | AA | 1016 | A | N9-C4 | 7.45 | 1.42 | 1.37 |
| 26 | BB | 986 | C | C5'-C4' | 7.45 | 1.60 | 1.51 |
| 26 | BB | 2317 | A | C8-N7 | -7.44 | 1.26 | 1.31 |
| 1 | AA | 878 | A | N3-C4 | 7.44 | 1.39 | 1.34 |
| 2 | AB | 12 | U | C2-N3 | 7.44 | 1.43 | 1.37 |
| 26 | BB | 449 | A | C8-N7 | -7.44 | 1.26 | 1.31 |
| 26 | BB | 570 | G | N9-C8 | 7.44 | 1.43 | 1.37 |
| 26 | BB | 672 | C | C2-N3 | -7.44 | 1.29 | 1.35 |
| 1 | AA | 668 | G | N7-C5 | -7.44 | 1.34 | 1.39 |
| 25 | BA | 12 | C | C5-C6 | 7.44 | 1.40 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 299 | A | N7-C5 | -7.44 | 1.34 | 1.39 |
| 26 | BB | 650 | C | N3-C4 | 7.44 | 1.39 | 1.33 |
| 26 | BB | 1092 | C | N1-C6 | 7.44 | 1.41 | 1.37 |
| 1 | AA | 212 | G | C2-N3 | 7.44 | 1.38 | 1.32 |
| 26 | BB | 1362 | C | C4-N4 | 7.44 | 1.40 | 1.33 |
| 26 | BB | 2276 | G | C6-N1 | 7.44 | 1.44 | 1.39 |
| 26 | BB | 431 | U | C2-N3 | 7.44 | 1.43 | 1.37 |
| 26 | BB | 1670 | C | O3'-P | 7.43 | 1.70 | 1.61 |
| 26 | BB | 1953 | A | C8-N7 | -7.43 | 1.26 | 1.31 |
| 26 | BB | 2383 | G | O3'-P | 7.43 | 1.70 | 1.61 |
| 26 | BB | 2771 | C | N1-C6 | 7.43 | 1.41 | 1.37 |
| 26 | BB | 2801 | G | C3'-C2' | 7.43 | 1.61 | 1.52 |
| 1 | AA | 142 | G | C5'-C4' | 7.43 | 1.60 | 1.51 |
| 4 | AD | 11 | A | N1-C2 | 7.43 | 1.41 | 1.34 |
| 26 | BB | 1430 | G | C3'-C2' | 7.43 | 1.61 | 1.52 |
| 25 | BA | 112 | G | C6-N1 | 7.43 | 1.44 | 1.39 |
| 1 | AA | 759 | A | C6-N6 | 7.43 | 1.39 | 1.33 |
| 1 | AA | 1187 | G | N7-C5 | 7.43 | 1.43 | 1.39 |
| 4 | AD | 34 | U | C2-N3 | 7.43 | 1.43 | 1.37 |
| 1 | AA | 897 | C | C4-C5 | 7.43 | 1.48 | 1.43 |
| 2 | AB | 29 | G | C5-C6 | 7.43 | 1.49 | 1.42 |
| 26 | BB | 569 | U | N3-C4 | 7.43 | 1.45 | 1.38 |
| 26 | BB | 1827 | U | C5'-C4' | 7.43 | 1.60 | 1.51 |
| 26 | BB | 2637 | U | C2-N3 | 7.43 | 1.43 | 1.37 |
| 1 | AA | 250 | A | C4'-O4' | -7.42 | 1.35 | 1.45 |
| 2 | AB | 21 | A | N7-C5 | 7.42 | 1.43 | 1.39 |
| 26 | BB | 1447 | C | P-O5' | 7.42 | 1.67 | 1.59 |
| 26 | BB | 1836 | C | C2-N3 | -7.42 | 1.29 | 1.35 |
| 1 | AA | 1136 | C | C4-C5 | 7.42 | 1.48 | 1.43 |
| 26 | BB | 347 | A | N9-C4 | 7.42 | 1.42 | 1.37 |
| 26 | BB | 1846 | G | C5'-C4' | 7.42 | 1.60 | 1.51 |
| 1 | AA | 933 | G | N3-C4 | 7.42 | 1.40 | 1.35 |
| 1 | AA | 1330 | U | N1-C6 | 7.42 | 1.44 | 1.38 |
| 26 | BB | 1016 | G | N7-C5 | -7.42 | 1.34 | 1.39 |
| 26 | BB | 1625 | C | O3'-P | 7.42 | 1.70 | 1.61 |
| 26 | BB | 2080 | A | C2-N3 | 7.42 | 1.40 | 1.33 |
| 1 | AA | 137 | U | C5'-C4' | 7.42 | 1.60 | 1.51 |
| 1 | AA | 1041 | G | N9-C8 | -7.42 | 1.32 | 1.37 |
| 26 | BB | 2287 | A | P-O5' | 7.42 | 1.67 | 1.59 |
| 26 | BB | 2545 | G | N1-C2 | 7.42 | 1.43 | 1.37 |
| 26 | BB | 544 | C | N3-C4 | 7.42 | 1.39 | 1.33 |
| 1 | AA | 165 | G | C5-C6 | 7.41 | 1.49 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 671 | C | N1-C6 | 7.41 | 1.41 | 1.37 |
| 26 | BB | 757 | G | C6-O6 | -7.41 | 1.17 | 1.24 |
| 1 | AA | 645 | G | N7-C5 | 7.41 | 1.43 | 1.39 |
| 1 | AA | 988 | G | C8-N7 | -7.41 | 1.26 | 1.30 |
| 1 | AA | 1134 | G | C8-N7 | -7.41 | 1.26 | 1.30 |
| 26 | BB | 709 | U | C5-C6 | 7.41 | 1.40 | 1.34 |
| 1 | AA | 1244 | G | C8-N7 | 7.41 | 1.35 | 1.30 |
| 1 | AA | 1494 | G | C8-N7 | -7.41 | 1.26 | 1.30 |
| 26 | BB | 142 | A | N3-C4 | 7.41 | 1.39 | 1.34 |
| 26 | BB | 635 | C | C5'-C4' | 7.41 | 1.60 | 1.51 |
| 1 | AA | 762 | U | P-O5' | 7.41 | 1.67 | 1.59 |
| 25 | BA | 72 | G | N9-C8 | 7.41 | 1.43 | 1.37 |
| 1 | AA | 224 | U | C2-N3 | 7.41 | 1.43 | 1.37 |
| 1 | AA | 1287 | A | C5'-C4' | 7.41 | 1.60 | 1.51 |
| 26 | BB | 1218 | G | C2-N3 | 7.41 | 1.38 | 1.32 |
| 26 | BB | 1792 | G | P-O5' | 7.41 | 1.67 | 1.59 |
| 1 | AA | 848 | C | P-O5' | 7.41 | 1.67 | 1.59 |
| 26 | BB | 2584 | U | C4-C5 | 7.41 | 1.50 | 1.43 |
| 1 | AA | 656 | G | C5'-C4' | 7.40 | 1.60 | 1.51 |
| 26 | BB | 1821 | A | C6-N1 | -7.40 | 1.30 | 1.35 |
| 26 | BB | 2236 | U | C5-C6 | 7.40 | 1.40 | 1.34 |
| 26 | BB | 348 | A | N7-C5 | 7.40 | 1.43 | 1.39 |
| 26 | BB | 597 | G | C6-N1 | 7.40 | 1.44 | 1.39 |
| 26 | BB | 841 | G | O3'-P | 7.40 | 1.70 | 1.61 |
| 26 | BB | 1801 | A | C6-N1 | -7.40 | 1.30 | 1.35 |
| 26 | BB | 1124 | G | C8-N7 | -7.40 | 1.26 | 1.30 |
| 26 | BB | 1410 | G | C6-O6 | -7.40 | 1.17 | 1.24 |
| 26 | BB | 2045 | C | C5-C6 | 7.40 | 1.40 | 1.34 |
| 26 | BB | 2560 | A | P-O5' | 7.40 | 1.67 | 1.59 |
| 1 | AA | 293 | G | C5-C4 | -7.40 | 1.33 | 1.38 |
| 26 | BB | 2182 | U | P-O5' | 7.40 | 1.67 | 1.59 |
| 1 | AA | 364 | A | C5-C6 | 7.40 | 1.47 | 1.41 |
| 3 | AC | 56 | G | N7-C5 | 7.40 | 1.43 | 1.39 |
| 1 | AA | 369 | G | N1-C2 | 7.39 | 1.43 | 1.37 |
| 1 | AA | 1247 | U | C2'-C1' | 7.39 | 1.61 | 1.53 |
| 1 | AA | 1429 | A | C6-N6 | 7.39 | 1.39 | 1.33 |
| 26 | BB | 2484 | G | N9-C8 | 7.39 | 1.43 | 1.37 |
| 1 | AA | 434 | U | C2-O2 | -7.39 | 1.15 | 1.22 |
| 1 | AA | 1002 | G | C6-N1 | 7.39 | 1.44 | 1.39 |
| 1 | AA | 1435 | G | C5-C6 | 7.39 | 1.49 | 1.42 |
| 26 | BB | 236 | C | C4-N4 | -7.39 | 1.27 | 1.33 |
| 26 | BB | 647 | G | C6-O6 | -7.39 | 1.17 | 1.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1137 | G | C2-N3 | 7.39 | 1.38 | 1.32 |
| 26 | BB | 2657 | A | N3-C4 | 7.39 | 1.39 | 1.34 |
| 26 | BB | 136 | G | C6-N1 | 7.39 | 1.44 | 1.39 |
| 26 | BB | 567 | U | N1-C2 | 7.39 | 1.45 | 1.38 |
| 1 | AA | 530 | G | N3-C4 | 7.39 | 1.40 | 1.35 |
| 1 | AA | 1254 | A | O3'-P | 7.39 | 1.70 | 1.61 |
| 26 | BB | 1893 | C | C2-N3 | 7.39 | 1.41 | 1.35 |
| 1 | AA | 1347 | G | N1-C2 | 7.38 | 1.43 | 1.37 |
| 26 | BB | 922 | C | O3'-P | -7.38 | 1.52 | 1.61 |
| 26 | BB | 971 | G | C2-N3 | 7.38 | 1.38 | 1.32 |
| 26 | BB | 1124 | G | C5-C6 | 7.38 | 1.49 | 1.42 |
| 26 | BB | 1585 | C | C4-C5 | 7.38 | 1.48 | 1.43 |
| 26 | BB | 1654 | A | P-O5' | 7.38 | 1.67 | 1.59 |
| 1 | AA | 874 | G | N7-C5 | -7.38 | 1.34 | 1.39 |
| 1 | AA | 1086 | U | N1-C2 | 7.38 | 1.45 | 1.38 |
| 26 | BB | 149 | A | P-O5' | 7.38 | 1.67 | 1.59 |
| 26 | BB | 704 | G | P-O5' | 7.38 | 1.67 | 1.59 |
| 1 | AA | 46 | G | N7-C5 | 7.38 | 1.43 | 1.39 |
| 1 | AA | 800 | G | C2-N3 | 7.38 | 1.38 | 1.32 |
| 26 | BB | 1262 | A | C8-N7 | 7.38 | 1.36 | 1.31 |
| 26 | BB | 2508 | G | N1-C2 | -7.38 | 1.31 | 1.37 |
| 1 | AA | 1284 | C | P-O5' | 7.38 | 1.67 | 1.59 |
| 26 | BB | 1115 | G | C5'-C4' | 7.38 | 1.60 | 1.51 |
| 26 | BB | 1215 | G | N3-C4 | 7.38 | 1.40 | 1.35 |
| 26 | BB | 1365 | A | C8-N7 | -7.38 | 1.26 | 1.31 |
| 26 | BB | 2651 | C | C2-N3 | -7.38 | 1.29 | 1.35 |
| 1 | AA | 48 | C | C4-C5 | 7.38 | 1.48 | 1.43 |
| 26 | BB | 1920 | C | N1-C6 | 7.38 | 1.41 | 1.37 |
| 26 | BB | 2266 | A | C3'-C2' | 7.38 | 1.61 | 1.52 |
| 1 | AA | 591 | U | N1-C2 | 7.37 | 1.45 | 1.38 |
| 1 | AA | 727 | G | C6-N1 | 7.37 | 1.44 | 1.39 |
| 26 | BB | 278 | A | C6-N1 | -7.37 | 1.30 | 1.35 |
| 3 | AC | 53 | G | N3-C4 | 7.37 | 1.40 | 1.35 |
| 26 | BB | 22 | C | P-O5' | 7.37 | 1.67 | 1.59 |
| 26 | BB | 1252 | G | N9-C8 | -7.37 | 1.32 | 1.37 |
| 26 | BB | 2455 | G | C2-N3 | 7.37 | 1.38 | 1.32 |
| 1 | AA | 1193 | G | C8-N7 | 7.37 | 1.35 | 1.30 |
| 26 | BB | 171 | U | C4-O4 | 7.37 | 1.29 | 1.23 |
| 26 | BB | 960 | A | C5'-C4' | 7.37 | 1.60 | 1.51 |
| 25 | BA | 60 | C | C4-C5 | 7.37 | 1.48 | 1.43 |
| 1 | AA | 600 | A | N3-C4 | -7.37 | 1.30 | 1.34 |
| 4 | AD | 12 | G | N3-C4 | 7.37 | 1.40 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 182 | A | N9-C4 | 7.37 | 1.42 | 1.37 |
| 1 | AA | 1284 | C | C4'-O4' | -7.37 | 1.35 | 1.45 |
| 1 | AA | 1312 | G | O3'-P | 7.37 | 1.70 | 1.61 |
| 26 | BB | 4 | U | C5'-C4' | 7.37 | 1.60 | 1.51 |
| 26 | BB | 464 | U | C4-C5 | 7.37 | 1.50 | 1.43 |
| 26 | BB | 1850 | G | C3'-C2' | 7.37 | 1.61 | 1.52 |
| 26 | BB | 2664 | G | N7-C5 | 7.37 | 1.43 | 1.39 |
| 1 | AA | 26 | A | N7-C5 | 7.36 | 1.43 | 1.39 |
| 1 | AA | 85 | U | P-O5' | 7.36 | 1.67 | 1.59 |
| 1 | AA | 428 | G | C8-N7 | -7.36 | 1.26 | 1.30 |
| 1 | AA | 483 | C | N3-C4 | 7.36 | 1.39 | 1.33 |
| 26 | BB | 2250 | G | C2-N3 | 7.36 | 1.38 | 1.32 |
| 26 | BB | 2697 | G | C6-N1 | 7.36 | 1.44 | 1.39 |
| 26 | BB | 1735 | A | N3-C4 | 7.36 | 1.39 | 1.34 |
| 26 | BB | 2071 | A | C6-N6 | 7.36 | 1.39 | 1.33 |
| 1 | AA | 1488 | G | C8-N7 | -7.36 | 1.26 | 1.30 |
| 26 | BB | 1124 | G | N3-C4 | 7.36 | 1.40 | 1.35 |
| 26 | BB | 2139 | U | C2-N3 | 7.36 | 1.43 | 1.37 |
| 26 | BB | 2108 | A | P-O5' | 7.36 | 1.67 | 1.59 |
| 26 | BB | 1923 | U | C5'-C4' | 7.36 | 1.60 | 1.51 |
| 26 | BB | 2177 | C | P-O5' | 7.36 | 1.67 | 1.59 |
| 26 | BB | 2821 | A | N3-C4 | -7.36 | 1.30 | 1.34 |
| 1 | AA | 639 | G | N9-C8 | 7.36 | 1.43 | 1.37 |
| 1 | AA | 1195 | C | P-O5' | 7.36 | 1.67 | 1.59 |
| 1 | AA | 1345 | U | N1-C2 | 7.36 | 1.45 | 1.38 |
| 1 | AA | 1467 | C | P-O5' | 7.36 | 1.67 | 1.59 |
| 26 | BB | 367 | G | C6-N1 | 7.36 | 1.44 | 1.39 |
| 26 | BB | 1102 | C | N3-C4 | 7.36 | 1.39 | 1.33 |
| 26 | BB | 1785 | A | C4'-O4' | -7.36 | 1.35 | 1.45 |
| 26 | BB | 2344 | U | C3'-C2' | 7.36 | 1.61 | 1.52 |
| 1 | AA | 443 | C | N3-C4 | 7.35 | 1.39 | 1.33 |
| 1 | AA | 1284 | C | N1-C6 | 7.35 | 1.41 | 1.37 |
| 26 | BB | 1354 | A | N3-C4 | 7.35 | 1.39 | 1.34 |
| 26 | BB | 978 | G | C6-O6 | -7.35 | 1.17 | 1.24 |
| 26 | BB | 1700 | A | C6-N1 | 7.35 | 1.40 | 1.35 |
| 26 | BB | 2383 | G | N7-C5 | 7.35 | 1.43 | 1.39 |
| 1 | AA | 53 | A | C4'-O4' | -7.35 | 1.35 | 1.45 |
| 1 | AA | 456 | A | C6-N1 | 7.35 | 1.40 | 1.35 |
| 26 | BB | 1066 | U | P-O5' | 7.35 | 1.67 | 1.59 |
| 26 | BB | 1705 | A | N7-C5 | 7.35 | 1.43 | 1.39 |
| 26 | BB | 1473 | G | C5'-C4' | 7.35 | 1.60 | 1.51 |
| 26 | BB | 1556 | C | C4'-O4' | -7.35 | 1.35 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1882 | U | C2-O2 | 7.35 | 1.28 | 1.22 |
| 26 | BB | 2670 | A | O3'-P | 7.35 | 1.70 | 1.61 |
| 26 | BB | 2679 | A | N3-C4 | 7.35 | 1.39 | 1.34 |
| 1 | AA | 214 | C | C4-N4 | 7.35 | 1.40 | 1.33 |
| 1 | AA | 559 | A | C4'-C3' | 7.35 | 1.61 | 1.53 |
| 26 | BB | 2888 | C | C5-C6 | 7.35 | 1.40 | 1.34 |
| 1 | AA | 153 | C | C5'-C4' | 7.34 | 1.60 | 1.51 |
| 1 | AA | 888 | G | C5'-C4' | 7.34 | 1.60 | 1.51 |
| 26 | BB | 62 | U | C5'-C4' | 7.34 | 1.60 | 1.51 |
| 26 | BB | 41 | C | C3'-C2' | 7.34 | 1.61 | 1.52 |
| 26 | BB | 224 | U | N1-C2 | 7.34 | 1.45 | 1.38 |
| 1 | AA | 62 | U | N1-C2 | 7.34 | 1.45 | 1.38 |
| 26 | BB | 1017 | G | P-O5' | 7.34 | 1.67 | 1.59 |
| 3 | AC | 47 | C | N1-C2 | 7.34 | 1.47 | 1.40 |
| 26 | BB | 810 | U | P-O5' | 7.34 | 1.67 | 1.59 |
| 26 | BB | 2706 | A | N3-C4 | 7.34 | 1.39 | 1.34 |
| 1 | AA | 267 | C | C2'-O2' | 7.34 | 1.51 | 1.41 |
| 7 | AG | 23 | GLY | N-CA | 7.34 | 1.57 | 1.46 |
| 26 | BB | 1208 | C | P-O5' | 7.34 | 1.67 | 1.59 |
| 26 | BB | 2893 | A | O3'-P | 7.34 | 1.70 | 1.61 |
| 26 | BB | 1843 | C | C4'-O4' | -7.33 | 1.36 | 1.45 |
| 26 | BB | 1908 | C | P-O5' | 7.33 | 1.67 | 1.59 |
| 1 | AA | 205 | A | N9-C4 | 7.33 | 1.42 | 1.37 |
| 26 | BB | 570 | G | C8-N7 | 7.33 | 1.35 | 1.30 |
| 1 | AA | 330 | C | P-O5' | 7.33 | 1.67 | 1.59 |
| 26 | BB | 2369 | A | C2-N3 | -7.33 | 1.26 | 1.33 |
| 1 | AA | 608 | A | C6-N1 | -7.33 | 1.30 | 1.35 |
| 25 | BA | 96 | G | C5-C6 | 7.33 | 1.49 | 1.42 |
| 26 | BB | 156 | A | N9-C4 | -7.33 | 1.33 | 1.37 |
| 26 | BB | 318 | C | C2'-C1' | -7.33 | 1.45 | 1.53 |
| 26 | BB | 1679 | A | O3'-P | 7.33 | 1.70 | 1.61 |
| 26 | BB | 1903 | G | N3-C4 | 7.33 | 1.40 | 1.35 |
| 26 | BB | 2315 | G | O3'-P | 7.33 | 1.70 | 1.61 |
| 1 | AA | 470 | C | C2-N3 | 7.33 | 1.41 | 1.35 |
| 1 | AA | 427 | U | C2-O2 | 7.33 | 1.28 | 1.22 |
| 1 | AA | 630 | A | N3-C4 | 7.33 | 1.39 | 1.34 |
| 26 | BB | 1053 | C | N3-C4 | -7.33 | 1.28 | 1.33 |
| 26 | BB | 1073 | A | C5-C4 | -7.33 | 1.33 | 1.38 |
| 26 | BB | 1785 | A | N9-C4 | 7.33 | 1.42 | 1.37 |
| 1 | AA | 610 | U | O3'-P | 7.32 | 1.70 | 1.61 |
| 26 | BB | 228 | C | C5-C6 | 7.32 | 1.40 | 1.34 |
| 26 | BB | 781 | A | N3-C4 | 7.32 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1387 | A | N9-C8 | 7.32 | 1.43 | 1.37 |
| 1 | AA | 1266 | G | C2-N3 | 7.32 | 1.38 | 1.32 |
| 26 | BB | 69 | C | N3-C4 | 7.32 | 1.39 | 1.33 |
| 26 | BB | 2895 | G | C8-N7 | -7.32 | 1.26 | 1.30 |
| 1 | AA | 318 | G | O3'-P | 7.32 | 1.70 | 1.61 |
| 26 | BB | 1019 | U | C5'-C4' | 7.32 | 1.60 | 1.51 |
| 26 | BB | 1763 | G | N7-C5 | -7.32 | 1.34 | 1.39 |
| 26 | BB | 2819 | G | C2-N3 | 7.32 | 1.38 | 1.32 |
| 26 | BB | 37 | C | C2-N3 | 7.32 | 1.41 | 1.35 |
| 1 | AA | 671 | G | C8-N7 | 7.32 | 1.35 | 1.30 |
| 1 | AA | 957 | U | C2-O2 | 7.32 | 1.28 | 1.22 |
| 26 | BB | 1654 | A | N9-C8 | 7.32 | 1.43 | 1.37 |
| 26 | BB | 1723 | G | O3'-P | 7.32 | 1.70 | 1.61 |
| 1 | AA | 877 | G | N7-C5 | -7.32 | 1.34 | 1.39 |
| 1 | AA | 1344 | C | C2-N3 | 7.32 | 1.41 | 1.35 |
| 26 | BB | 2062 | A | C4'-C3' | 7.32 | 1.61 | 1.53 |
| 26 | BB | 2477 | U | C2-N3 | 7.32 | 1.42 | 1.37 |
| 1 | AA | 1048 | G | N1-C2 | 7.31 | 1.43 | 1.37 |
| 1 | AA | 1497 | G | P-O5' | 7.31 | 1.67 | 1.59 |
| 1 | AA | 1509 | C | O3'-P | 7.31 | 1.70 | 1.61 |
| 26 | BB | 944 | C | C4-C5 | 7.31 | 1.48 | 1.43 |
| 26 | BB | 1969 | A | N3-C4 | 7.31 | 1.39 | 1.34 |
| 1 | AA | 707 | U | C2-N3 | 7.31 | 1.42 | 1.37 |
| 26 | BB | 22 | C | C5-C6 | 7.31 | 1.40 | 1.34 |
| 1 | AA | 788 | U | C4'-C3' | 7.31 | 1.61 | 1.53 |
| 3 | AC | 30 | U | C4'-O4' | -7.31 | 1.36 | 1.45 |
| 26 | BB | 606 | U | C4-C5 | 7.31 | 1.50 | 1.43 |
| 1 | AA | 1074 | G | C2-N3 | 7.31 | 1.38 | 1.32 |
| 26 | BB | 1749 | A | C6-N1 | 7.31 | 1.40 | 1.35 |
| 26 | BB | 1810 | A | N7-C5 | -7.31 | 1.34 | 1.39 |
| 26 | BB | 344 | A | N7-C5 | -7.31 | 1.34 | 1.39 |
| 26 | BB | 459 | U | N3-C4 | -7.31 | 1.31 | 1.38 |
| 26 | BB | 588 | U | C2-N3 | 7.31 | 1.42 | 1.37 |
| 26 | BB | 2584 | U | C5'-C4' | 7.31 | 1.60 | 1.51 |
| 1 | AA | 394 | G | P-O5' | 7.30 | 1.67 | 1.59 |
| 26 | BB | 5 | A | C5-C6 | 7.30 | 1.47 | 1.41 |
| 26 | BB | 2176 | A | N7-C5 | 7.30 | 1.43 | 1.39 |
| 25 | BA | 106 | G | P-O5' | 7.30 | 1.67 | 1.59 |
| 1 | AA | 231 | U | C2-O2 | 7.30 | 1.28 | 1.22 |
| 1 | AA | 556 | C | N1-C6 | -7.30 | 1.32 | 1.37 |
| 1 | AA | 1165 | U | C5-C6 | 7.30 | 1.40 | 1.34 |
| 26 | BB | 1770 | G | N9-C4 | 7.30 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2096 | C | N3-C4 | 7.30 | 1.39 | 1.33 |
| 1 | AA | 25 | C | N1-C6 | 7.30 | 1.41 | 1.37 |
| 1 | AA | 229 | U | N3-C4 | 7.30 | 1.45 | 1.38 |
| 1 | AA | 327 | A | N7-C5 | -7.30 | 1.34 | 1.39 |
| 3 | AC | 44 | U | C5-C6 | 7.30 | 1.40 | 1.34 |
| 26 | BB | 735 | A | C2'-C1' | 7.30 | 1.61 | 1.53 |
| 2 | AB | 72 | U | C4'-O4' | -7.30 | 1.36 | 1.45 |
| 26 | BB | 421 | C | C2-O2 | 7.30 | 1.31 | 1.24 |
| 1 | AA | 211 | G | P-O5' | 7.30 | 1.67 | 1.59 |
| 1 | AA | 1496 | C | N1-C6 | 7.30 | 1.41 | 1.37 |
| 26 | BB | 248 | G | N7-C5 | 7.30 | 1.43 | 1.39 |
| 26 | BB | 628 | G | O4'-C1' | 7.30 | 1.51 | 1.41 |
| 26 | BB | 1167 | C | C2'-C1' | 7.30 | 1.61 | 1.53 |
| 1 | AA | 987 | G | C8-N7 | -7.29 | 1.26 | 1.30 |
| 26 | BB | 405 | U | N3-C4 | 7.29 | 1.45 | 1.38 |
| 26 | BB | 2409 | G | P-O5' | 7.29 | 1.67 | 1.59 |
| 26 | BB | 2826 | A | C5'-C4' | 7.29 | 1.60 | 1.51 |
| 25 | BA | 7 | G | C6-N1 | 7.29 | 1.44 | 1.39 |
| 26 | BB | 868 | U | C2-N3 | 7.29 | 1.42 | 1.37 |
| 26 | BB | 2267 | A | C5-C4 | -7.29 | 1.33 | 1.38 |
| 1 | AA | 299 | G | C2-N3 | 7.29 | 1.38 | 1.32 |
| 25 | BA | 88 | C | C5-C6 | 7.29 | 1.40 | 1.34 |
| 26 | BB | 2238 | G | C5-C4 | 7.29 | 1.43 | 1.38 |
| 26 | BB | 2824 | C | C2-O2 | -7.29 | 1.17 | 1.24 |
| 1 | AA | 684 | U | C5-C6 | 7.29 | 1.40 | 1.34 |
| 26 | BB | 136 | G | P-O5' | 7.29 | 1.67 | 1.59 |
| 26 | BB | 1283 | G | C8-N7 | -7.29 | 1.26 | 1.30 |
| 26 | BB | 2441 | U | P-O5' | 7.29 | 1.67 | 1.59 |
| 26 | BB | 2752 | C | C5-C6 | 7.29 | 1.40 | 1.34 |
| 1 | AA | 1522 | U | C2-N3 | 7.29 | 1.42 | 1.37 |
| 26 | BB | 252 | G | P-O5' | 7.29 | 1.67 | 1.59 |
| 26 | BB | 664 | G | O3'-P | 7.29 | 1.69 | 1.61 |
| 26 | BB | 2732 | G | C2'-C1' | -7.29 | 1.45 | 1.53 |
| 1 | AA | 875 | U | N1-C6 | -7.28 | 1.31 | 1.38 |
| 26 | BB | 1865 | U | C2-O2 | 7.28 | 1.28 | 1.22 |
| 26 | BB | 2418 | A | N3-C4 | 7.28 | 1.39 | 1.34 |
| 1 | AA | 181 | A | C4'-O4' | -7.28 | 1.36 | 1.45 |
| 1 | AA | 1059 | C | C4'-O4' | -7.28 | 1.36 | 1.45 |
| 26 | BB | 235 | U | C4'-O4' | -7.28 | 1.36 | 1.45 |
| 1 | AA | 1222 | G | N3-C4 | 7.28 | 1.40 | 1.35 |
| 4 | AD | 9 | G | P-O5' | 7.28 | 1.67 | 1.59 |
| 26 | BB | 35 | G | P-O5' | 7.28 | 1.67 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 143 | A | C5-C4 | -7.28 | 1.33 | 1.38 |
| 1 | AA | 1241 | G | N1-C2 | 7.28 | 1.43 | 1.37 |
| 26 | BB | 2560 | A | C6-N6 | 7.28 | 1.39 | 1.33 |
| 26 | BB | 379 | G | C4'-O4' | -7.28 | 1.36 | 1.45 |
| 26 | BB | 1186 | G | O3'-P | 7.28 | 1.69 | 1.61 |
| 26 | BB | 147 | C | C4-N4 | 7.27 | 1.40 | 1.33 |
| 26 | BB | 1658 | C | P-O5' | 7.27 | 1.67 | 1.59 |
| 26 | BB | 1903 | G | N9-C4 | 7.27 | 1.43 | 1.38 |
| 1 | AA | 520 | A | N7-C5 | 7.27 | 1.43 | 1.39 |
| 26 | BB | 1716 | U | C2-N3 | 7.27 | 1.42 | 1.37 |
| 1 | AA | 1067 | A | C5-C4 | 7.27 | 1.43 | 1.38 |
| 25 | BA | 75 | G | N9-C4 | 7.27 | 1.43 | 1.38 |
| 1 | AA | 259 | G | C5-C6 | 7.27 | 1.49 | 1.42 |
| 1 | AA | 561 | U | C3'-C2' | 7.27 | 1.60 | 1.52 |
| 26 | BB | 1514 | G | C2'-C1' | -7.27 | 1.45 | 1.53 |
| 26 | BB | 407 | G | C3'-C2' | 7.27 | 1.60 | 1.52 |
| 1 | AA | 64 | G | C3'-O3' | -7.26 | 1.31 | 1.42 |
| 2 | AB | 76 | A | P-O5' | 7.26 | 1.67 | 1.59 |
| 26 | BB | 2130 | U | C2-N3 | 7.26 | 1.42 | 1.37 |
| 26 | BB | 2161 | C | C4-C5 | -7.26 | 1.37 | 1.43 |
| 26 | BB | 2391 | G | C6-O6 | -7.26 | 1.17 | 1.24 |
| 1 | AA | 182 | A | N3-C4 | 7.26 | 1.39 | 1.34 |
| 1 | AA | 757 | U | C2-O2 | 7.26 | 1.28 | 1.22 |
| 26 | BB | 250 | G | N3-C4 | 7.26 | 1.40 | 1.35 |
| 26 | BB | 2298 | A | C5-C4 | -7.26 | 1.33 | 1.38 |
| 1 | AA | 117 | G | P-O5' | 7.26 | 1.67 | 1.59 |
| 1 | AA | 135 | C | O5'-C5' | -7.26 | 1.31 | 1.42 |
| 1 | AA | 715 | A | C6-N1 | -7.26 | 1.30 | 1.35 |
| 26 | BB | 2320 | U | C2'-O2' | 7.26 | 1.51 | 1.41 |
| 26 | BB | 120 | U | C5'-C4' | 7.26 | 1.60 | 1.51 |
| 26 | BB | 160 | A | O4'-C1' | 7.26 | 1.51 | 1.41 |
| 26 | BB | 177 | G | N9-C8 | -7.26 | 1.32 | 1.37 |
| 26 | BB | 253 | C | C2-N3 | 7.26 | 1.41 | 1.35 |
| 26 | BB | 701 | G | P-O5' | 7.26 | 1.67 | 1.59 |
| 26 | BB | 1713 | A | P-O5' | 7.26 | 1.67 | 1.59 |
| 1 | AA | 740 | U | C4-C5 | 7.26 | 1.50 | 1.43 |
| 26 | BB | 61 | C | P-O5' | 7.26 | 1.67 | 1.59 |
| 26 | BB | 1098 | A | N7-C5 | -7.26 | 1.34 | 1.39 |
| 26 | BB | 2771 | C | C4'-O4' | -7.26 | 1.36 | 1.45 |
| 26 | BB | 439 | A | P-O5' | 7.26 | 1.67 | 1.59 |
| 26 | BB | 819 | A | C3'-C2' | -7.26 | 1.44 | 1.52 |
| 26 | BB | 1948 | G | N7-C5 | -7.26 | 1.34 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2454 | G | N7-C5 | -7.26 | 1.34 | 1.39 |
| 26 | BB | 2640 | G | N3-C4 | 7.26 | 1.40 | 1.35 |
| 1 | AA | 1370 | G | N7-C5 | -7.25 | 1.34 | 1.39 |
| 25 | BA | 9 | G | C2-N3 | 7.25 | 1.38 | 1.32 |
| 26 | BB | 564 | C | C5-C6 | 7.25 | 1.40 | 1.34 |
| 1 | AA | 38 | G | N1-C2 | 7.25 | 1.43 | 1.37 |
| 26 | BB | 133 | U | C2-N3 | 7.25 | 1.42 | 1.37 |
| 26 | BB | 1054 | A | N7-C5 | 7.25 | 1.43 | 1.39 |
| 26 | BB | 1277 | G | P-O5' | -7.25 | 1.52 | 1.59 |
| 1 | AA | 478 | A | C2'-C1' | -7.25 | 1.45 | 1.53 |
| 1 | AA | 1530 | G | N3-C4 | 7.25 | 1.40 | 1.35 |
| 26 | BB | 1832 | C | C4-C5 | 7.25 | 1.48 | 1.43 |
| 26 | BB | 2847 | U | C3'-C2' | -7.25 | 1.44 | 1.52 |
| 1 | AA | 377 | G | N3-C4 | 7.25 | 1.40 | 1.35 |
| 1 | AA | 573 | A | N3-C4 | 7.25 | 1.39 | 1.34 |
| 1 | AA | 1037 | C | N3-C4 | -7.25 | 1.28 | 1.33 |
| 26 | BB | 2584 | U | P-O5' | 7.25 | 1.67 | 1.59 |
| 1 | AA | 406 | G | C4'-O4' | -7.25 | 1.36 | 1.45 |
| 26 | BB | 403 | U | O3'-P | 7.25 | 1.69 | 1.61 |
| 26 | BB | 2641 | G | C8-N7 | -7.25 | 1.26 | 1.30 |
| 1 | AA | 1134 | G | N7-C5 | -7.25 | 1.34 | 1.39 |
| 26 | BB | 2483 | C | N1-C6 | 7.25 | 1.41 | 1.37 |
| 2 | AB | 35 | C | N1-C6 | -7.25 | 1.32 | 1.37 |
| 26 | BB | 1201 | U | O4'-C1' | 7.25 | 1.51 | 1.41 |
| 26 | BB | 2732 | G | C6-N1 | 7.25 | 1.44 | 1.39 |
| 25 | BA | 101 | A | C5-C6 | 7.24 | 1.47 | 1.41 |
| 26 | BB | 859 | G | N3-C4 | 7.24 | 1.40 | 1.35 |
| 26 | BB | 2308 | G | C4'-O4' | -7.24 | 1.36 | 1.45 |
| 26 | BB | 2352 | A | P-O5' | 7.24 | 1.67 | 1.59 |
| 26 | BB | 2719 | G | P-O5' | 7.24 | 1.67 | 1.59 |
| 1 | AA | 526 | C | C2-N3 | 7.24 | 1.41 | 1.35 |
| 1 | AA | 552 | U | C2-N3 | 7.24 | 1.42 | 1.37 |
| 1 | AA | 851 | G | N3-C4 | 7.24 | 1.40 | 1.35 |
| 26 | BB | 96 | C | C2'-C1' | 7.24 | 1.61 | 1.53 |
| 26 | BB | 2561 | U | C5-C6 | 7.24 | 1.40 | 1.34 |
| 26 | BB | 2778 | A | P-O5' | 7.24 | 1.67 | 1.59 |
| 26 | BB | 2801 | G | C8-N7 | -7.24 | 1.26 | 1.30 |
| 1 | AA | 253 | A | N3-C4 | 7.24 | 1.39 | 1.34 |
| 1 | AA | 427 | U | C2-N3 | 7.24 | 1.42 | 1.37 |
| 1 | AA | 1542 | A | N3-C4 | 7.24 | 1.39 | 1.34 |
| 1 | AA | 1175 | G | C5-C4 | -7.24 | 1.33 | 1.38 |
| 25 | BA | 14 | U | C2-N3 | 7.24 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1034 | G | C2-N3 | 7.24 | 1.38 | 1.32 |
| 25 | BA | 112 | G | N7-C5 | -7.24 | 1.34 | 1.39 |
| 26 | BB | 1596 | A | P-O5' | 7.24 | 1.67 | 1.59 |
| 26 | BB | 2245 | U | O3'-P | 7.24 | 1.69 | 1.61 |
| 26 | BB | 2361 | G | C8-N7 | 7.24 | 1.35 | 1.30 |
| 26 | BB | 1360 | G | N9-C8 | 7.23 | 1.43 | 1.37 |
| 1 | AA | 1504 | G | C6-O6 | -7.23 | 1.17 | 1.24 |
| 1 | AA | 1468 | A | C6-N1 | 7.23 | 1.40 | 1.35 |
| 26 | BB | 346 | A | N7-C5 | -7.23 | 1.34 | 1.39 |
| 26 | BB | 839 | U | C4-O4 | -7.23 | 1.17 | 1.23 |
| 26 | BB | 1240 | U | C2-N3 | 7.23 | 1.42 | 1.37 |
| 26 | BB | 1537 | G | P-O5' | 7.23 | 1.67 | 1.59 |
| 26 | BB | 1811 | G | N7-C5 | 7.23 | 1.43 | 1.39 |
| 4 | AD | 65 | G | C8-N7 | -7.23 | 1.26 | 1.30 |
| 26 | BB | 577 | G | C8-N7 | -7.23 | 1.26 | 1.30 |
| 26 | BB | 2162 | G | P-O5' | 7.23 | 1.67 | 1.59 |
| 1 | AA | 1339 | A | C6-N6 | 7.23 | 1.39 | 1.33 |
| 4 | AD | 5 | G | N9-C4 | 7.23 | 1.43 | 1.38 |
| 26 | BB | 1682 | G | C8-N7 | -7.23 | 1.26 | 1.30 |
| 26 | BB | 1755 | A | C5-C4 | -7.23 | 1.33 | 1.38 |
| 26 | BB | 2360 | G | O3'-P | 7.23 | 1.69 | 1.61 |
| 26 | BB | 78 | U | C2-N3 | 7.22 | 1.42 | 1.37 |
| 26 | BB | 121 | G | N3-C4 | 7.22 | 1.40 | 1.35 |
| 26 | BB | 342 | A | N9-C8 | 7.22 | 1.43 | 1.37 |
| 26 | BB | 837 | C | C5'-C4' | 7.22 | 1.60 | 1.51 |
| 26 | BB | 1477 | A | O3'-P | 7.22 | 1.69 | 1.61 |
| 26 | BB | 1895 | C | C2-N3 | 7.22 | 1.41 | 1.35 |
| 1 | AA | 22 | G | N7-C5 | -7.22 | 1.34 | 1.39 |
| 1 | AA | 1499 | A | C5-C6 | -7.22 | 1.34 | 1.41 |
| 26 | BB | 842 | U | P-O5' | 7.22 | 1.67 | 1.59 |
| 26 | BB | 1785 | A | N3-C4 | 7.22 | 1.39 | 1.34 |
| 26 | BB | 2260 | C | C2-O2 | -7.22 | 1.18 | 1.24 |
| 1 | AA | 721 | G | C8-N7 | 7.22 | 1.35 | 1.30 |
| 1 | AA | 1401 | G | N9-C8 | 7.22 | 1.43 | 1.37 |
| 26 | BB | 1052 | C | N1-C6 | 7.22 | 1.41 | 1.37 |
| 26 | BB | 2040 | G | N9-C8 | -7.22 | 1.32 | 1.37 |
| 26 | BB | 2335 | A | C6-N6 | 7.22 | 1.39 | 1.33 |
| 25 | BA | 39 | A | N3-C4 | 7.22 | 1.39 | 1.34 |
| 26 | BB | 297 | G | O3'-P | 7.22 | 1.69 | 1.61 |
| 26 | BB | 2104 | C | C4'-O4' | -7.22 | 1.36 | 1.45 |
| 2 | AB | 19 | G | N9-C8 | 7.22 | 1.43 | 1.37 |
| 26 | BB | 204 | A | C2-N3 | -7.22 | 1.27 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 688 | U | N3-C4 | 7.22 | 1.45 | 1.38 |
| 26 | BB | 2007 | U | C4'-O4' | -7.22 | 1.36 | 1.45 |
| 1 | AA | 348 | G | N3-C4 | -7.22 | 1.30 | 1.35 |
| 1 | AA | 1299 | A | P-O5' | 7.22 | 1.67 | 1.59 |
| 26 | BB | 230 | G | N9-C8 | 7.22 | 1.43 | 1.37 |
| 26 | BB | 2517 | C | N1-C6 | -7.22 | 1.32 | 1.37 |
| 26 | BB | 2688 | G | P-O5' | 7.22 | 1.67 | 1.59 |
| 26 | BB | 2761 | A | C8-N7 | 7.22 | 1.36 | 1.31 |
| 26 | BB | 911 | A | C8-N7 | -7.21 | 1.26 | 1.31 |
| 26 | BB | 2093 | G | N9-C4 | 7.21 | 1.43 | 1.38 |
| 26 | BB | 2301 | C | C2'-O2' | 7.21 | 1.51 | 1.41 |
| 2 | AB | 3 | G | N9-C4 | 7.21 | 1.43 | 1.38 |
| 26 | BB | 1793 | C | P-O5' | 7.21 | 1.67 | 1.59 |
| 26 | BB | 2142 | A | C5-C6 | 7.21 | 1.47 | 1.41 |
| 26 | BB | 1685 | C | C4'-O4' | -7.21 | 1.36 | 1.45 |
| 26 | BB | 1761 | C | C4-N4 | 7.21 | 1.40 | 1.33 |
| 26 | BB | 1963 | U | C4'-O4' | -7.21 | 1.36 | 1.45 |
| 26 | BB | 2626 | C | C4-C5 | 7.21 | 1.48 | 1.43 |
| 1 | AA | 290 | C | N1-C2 | -7.21 | 1.32 | 1.40 |
| 1 | AA | 1220 | G | C3'-C2' | 7.21 | 1.60 | 1.52 |
| 25 | BA | 66 | A | N3-C4 | 7.21 | 1.39 | 1.34 |
| 26 | BB | 1957 | C | C2-N3 | 7.21 | 1.41 | 1.35 |
| 1 | AA | 1478 | U | C5'-C4' | 7.21 | 1.59 | 1.51 |
| 26 | BB | 1230 | A | N7-C5 | 7.21 | 1.43 | 1.39 |
| 26 | BB | 1231 | U | O3'-P | 7.21 | 1.69 | 1.61 |
| 26 | BB | 2854 | G | P-O5' | 7.21 | 1.67 | 1.59 |
| 1 | AA | 240 | G | C3'-C2' | 7.20 | 1.60 | 1.52 |
| 25 | BA | 88 | C | C4-C5 | 7.20 | 1.48 | 1.43 |
| 26 | BB | 790 | U | C5'-C4' | 7.20 | 1.59 | 1.51 |
| 26 | BB | 1948 | G | C8-N7 | 7.20 | 1.35 | 1.30 |
| 26 | BB | 2785 | C | P-O5' | 7.20 | 1.67 | 1.59 |
| 1 | AA | 410 | G | N1-C2 | 7.20 | 1.43 | 1.37 |
| 1 | AA | 703 | G | C2-N3 | 7.20 | 1.38 | 1.32 |
| 26 | BB | 26 | G | C2-N3 | 7.20 | 1.38 | 1.32 |
| 26 | BB | 2816 | G | P-O5' | 7.20 | 1.67 | 1.59 |
| 1 | AA | 939 | G | P-O5' | 7.20 | 1.67 | 1.59 |
| 26 | BB | 262 | A | N7-C5 | 7.20 | 1.43 | 1.39 |
| 26 | BB | 809 | G | N7-C5 | 7.20 | 1.43 | 1.39 |
| 26 | BB | 1772 | A | N9-C4 | 7.20 | 1.42 | 1.37 |
| 26 | BB | 636 | G | C8-N7 | -7.20 | 1.26 | 1.30 |
| 26 | BB | 1093 | G | C2'-O2' | 7.20 | 1.51 | 1.41 |
| 1 | AA | 430 | A | C2'-O2' | 7.20 | 1.51 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 460 | A | C4'-C3' | 7.20 | 1.61 | 1.53 |
| 1 | AA | 524 | G | C6-O6 | -7.20 | 1.17 | 1.24 |
| 1 | AA | 926 | G | C6-N1 | 7.20 | 1.44 | 1.39 |
| 1 | AA | 954 | G | C5-C4 | 7.20 | 1.43 | 1.38 |
| 1 | AA | 1362 | A | C5'-C4' | 7.20 | 1.59 | 1.51 |
| 25 | BA | 76 | G | N9-C4 | 7.20 | 1.43 | 1.38 |
| 26 | BB | 566 | U | C4'-C3' | -7.20 | 1.45 | 1.53 |
| 26 | BB | 1383 | A | N9-C4 | 7.20 | 1.42 | 1.37 |
| 26 | BB | 72 | U | N1-C2 | 7.19 | 1.45 | 1.38 |
| 26 | BB | 336 | C | N3-C4 | -7.19 | 1.28 | 1.33 |
| 26 | BB | 2347 | C | C4-C5 | 7.19 | 1.48 | 1.43 |
| 1 | AA | 1190 | G | O3'-P | 7.19 | 1.69 | 1.61 |
| 26 | BB | 73 | A | N3-C4 | 7.19 | 1.39 | 1.34 |
| 26 | BB | 2798 | U | O4'-C1' | 7.19 | 1.50 | 1.41 |
| 26 | BB | 189 | G | N7-C5 | 7.19 | 1.43 | 1.39 |
| 26 | BB | 621 | A | N7-C5 | -7.19 | 1.34 | 1.39 |
| 26 | BB | 1701 | A | C6-N6 | 7.19 | 1.39 | 1.33 |
| 26 | BB | 2296 | U | N3-C4 | 7.19 | 1.45 | 1.38 |
| 26 | BB | 2634 | A | N7-C5 | 7.19 | 1.43 | 1.39 |
| 1 | AA | 465 | A | C8-N7 | -7.19 | 1.26 | 1.31 |
| 26 | BB | 309 | A | C6-N1 | -7.19 | 1.30 | 1.35 |
| 26 | BB | 754 | U | P-O5' | 7.19 | 1.67 | 1.59 |
| 26 | BB | 1983 | G | N9-C8 | -7.19 | 1.32 | 1.37 |
| 1 | AA | 1203 | C | C2-N3 | 7.19 | 1.41 | 1.35 |
| 1 | AA | 335 | C | O4'-C1' | 7.18 | 1.50 | 1.41 |
| 1 | AA | 768 | A | N3-C4 | 7.18 | 1.39 | 1.34 |
| 1 | AA | 1015 | G | C2-N3 | 7.18 | 1.38 | 1.32 |
| 26 | BB | 317 | G | C2-N3 | 7.18 | 1.38 | 1.32 |
| 26 | BB | 681 | G | C4'-O4' | -7.18 | 1.36 | 1.45 |
| 1 | AA | 1130 | A | N7-C5 | 7.18 | 1.43 | 1.39 |
| 26 | BB | 5 | A | N3-C4 | 7.18 | 1.39 | 1.34 |
| 26 | BB | 1405 | U | C4'-C3' | -7.18 | 1.45 | 1.53 |
| 4 | AD | 30 | G | O3'-P | 7.18 | 1.69 | 1.61 |
| 26 | BB | 169 | G | C6-N1 | 7.18 | 1.44 | 1.39 |
| 26 | BB | 874 | G | P-O5' | 7.18 | 1.67 | 1.59 |
| 26 | BB | 2162 | G | N7-C5 | 7.18 | 1.43 | 1.39 |
| 1 | AA | 179 | A | N9-C4 | -7.18 | 1.33 | 1.37 |
| 26 | BB | 183 | C | C2-N3 | 7.18 | 1.41 | 1.35 |
| 26 | BB | 556 | A | N7-C5 | -7.18 | 1.34 | 1.39 |
| 1 | AA | 780 | A | C4'-C3' | -7.18 | 1.45 | 1.53 |
| 26 | BB | 601 | C | N3-C4 | 7.18 | 1.39 | 1.33 |
| 26 | BB | 696 | G | C5-C4 | 7.18 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 415 | A | O4'-C1' | 7.18 | 1.50 | 1.41 |
| 1 | AA | 1092 | A | C3'-C2' | 7.18 | 1.60 | 1.52 |
| 2 | AB | 60 | U | C5'-C4' | 7.18 | 1.59 | 1.51 |
| 26 | BB | 1754 | A | N3-C4 | 7.18 | 1.39 | 1.34 |
| 3 | AC | 45 | G | C8-N7 | 7.17 | 1.35 | 1.30 |
| 26 | BB | 1772 | A | N7-C5 | 7.17 | 1.43 | 1.39 |
| 26 | BB | 2255 | G | C5'-C4' | 7.17 | 1.59 | 1.51 |
| 1 | AA | 95 | C | C4-C5 | 7.17 | 1.48 | 1.43 |
| 26 | BB | 809 | G | C2'-C1' | 7.17 | 1.61 | 1.53 |
| 26 | BB | 1858 | A | N9-C4 | -7.17 | 1.33 | 1.37 |
| 26 | BB | 513 | A | C4'-O4' | -7.17 | 1.36 | 1.45 |
| 1 | AA | 798 | U | C2-N3 | 7.17 | 1.42 | 1.37 |
| 1 | AA | 933 | G | C2-N3 | 7.17 | 1.38 | 1.32 |
| 1 | AA | 1330 | U | P-O5' | 7.17 | 1.67 | 1.59 |
| 4 | AD | 63 | C | N1-C2 | 7.17 | 1.47 | 1.40 |
| 10 | AJ | 1 | PRO | N-CD | -7.17 | 1.37 | 1.47 |
| 26 | BB | 675 | A | N7-C5 | -7.17 | 1.34 | 1.39 |
| 26 | BB | 2065 | C | C2-N3 | 7.17 | 1.41 | 1.35 |
| 1 | AA | 1151 | A | N7-C5 | -7.17 | 1.34 | 1.39 |
| 26 | BB | 501 | A | P-O5' | 7.17 | 1.67 | 1.59 |
| 26 | BB | 2781 | A | C5'-C4' | 7.17 | 1.59 | 1.51 |
| 26 | BB | 2821 | A | C5-C6 | 7.17 | 1.47 | 1.41 |
| 1 | AA | 1493 | A | C5-C6 | 7.17 | 1.47 | 1.41 |
| 26 | BB | 377 | G | N1-C2 | 7.17 | 1.43 | 1.37 |
| 1 | AA | 240 | G | O3'-P | 7.16 | 1.69 | 1.61 |
| 1 | AA | 1065 | U | N1-C2 | 7.16 | 1.45 | 1.38 |
| 26 | BB | 1427 | A | N9-C4 | 7.16 | 1.42 | 1.37 |
| 4 | AD | 36 | A | N3-C4 | 7.16 | 1.39 | 1.34 |
| 26 | BB | 339 | U | P-O5' | 7.16 | 1.67 | 1.59 |
| 26 | BB | 396 | G | C8-N7 | -7.16 | 1.26 | 1.30 |
| 26 | BB | 1978 | A | N9-C8 | -7.16 | 1.32 | 1.37 |
| 4 | AD | 14 | A | N3-C4 | 7.16 | 1.39 | 1.34 |
| 26 | BB | 822 | G | N3-C4 | 7.16 | 1.40 | 1.35 |
| 1 | AA | 396 | C | N3-C4 | 7.16 | 1.39 | 1.33 |
| 26 | BB | 2213 | U | N1-C2 | 7.16 | 1.45 | 1.38 |
| 1 | AA | 1046 | A | C4'-C3' | 7.15 | 1.61 | 1.53 |
| 26 | BB | 117 | G | O3'-P | 7.15 | 1.69 | 1.61 |
| 1 | AA | 89 | U | C2-N3 | 7.15 | 1.42 | 1.37 |
| 26 | BB | 709 | U | C2'-C1' | 7.15 | 1.61 | 1.53 |
| 26 | BB | 735 | A | N3-C4 | -7.15 | 1.30 | 1.34 |
| 26 | BB | 1276 | A | N3-C4 | 7.15 | 1.39 | 1.34 |
| 1 | AA | 109 | A | C4'-C3' | 7.15 | 1.61 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 862 | G | C8-N7 | 7.15 | 1.35 | 1.30 |
| 26 | BB | 942 | G | N7-C5 | 7.15 | 1.43 | 1.39 |
| 1 | AA | 495 | A | C6-N1 | -7.15 | 1.30 | 1.35 |
| 26 | BB | 505 | A | C2-N3 | 7.15 | 1.40 | 1.33 |
| 26 | BB | 1279 | G | C6-N1 | -7.15 | 1.34 | 1.39 |
| 26 | BB | 1866 | A | N9-C8 | 7.15 | 1.43 | 1.37 |
| 26 | BB | 2128 | G | O3'-P | -7.15 | 1.52 | 1.61 |
| 1 | AA | 295 | C | C5-C6 | 7.15 | 1.40 | 1.34 |
| 1 | AA | 1387 | G | C2-N3 | 7.15 | 1.38 | 1.32 |
| 26 | BB | 144 | A | N9-C4 | 7.15 | 1.42 | 1.37 |
| 1 | AA | 613 | C | C4'-C3' | 7.14 | 1.61 | 1.53 |
| 26 | BB | 132 | G | N7-C5 | -7.14 | 1.34 | 1.39 |
| 26 | BB | 211 | C | C4'-O4' | -7.14 | 1.36 | 1.45 |
| 26 | BB | 474 | G | N3-C4 | -7.14 | 1.30 | 1.35 |
| 26 | BB | 1980 | G | C4'-O4' | -7.14 | 1.36 | 1.45 |
| 26 | BB | 96 | C | C4-C5 | 7.14 | 1.48 | 1.43 |
| 26 | BB | 855 | G | P-O5' | 7.14 | 1.66 | 1.59 |
| 26 | BB | 2598 | A | P-O5' | 7.14 | 1.66 | 1.59 |
| 1 | AA | 43 | C | N3-C4 | 7.14 | 1.39 | 1.33 |
| 26 | BB | 1041 | G | N3-C4 | 7.14 | 1.40 | 1.35 |
| 1 | AA | 1102 | A | C4'-O4' | -7.14 | 1.36 | 1.45 |
| 1 | AA | 1283 | U | N3-C4 | 7.14 | 1.44 | 1.38 |
| 26 | BB | 1933 | G | C4'-O4' | -7.14 | 1.36 | 1.45 |
| 1 | AA | 909 | A | N3-C4 | 7.14 | 1.39 | 1.34 |
| 26 | BB | 780 | G | P-O5' | 7.14 | 1.66 | 1.59 |
| 26 | BB | 2402 | U | C4-C5 | 7.14 | 1.50 | 1.43 |
| 1 | AA | 930 | C | P-O5' | 7.13 | 1.66 | 1.59 |
| 1 | AA | 984 | C | N1-C6 | 7.13 | 1.41 | 1.37 |
| 26 | BB | 1091 | G | O3'-P | 7.13 | 1.69 | 1.61 |
| 26 | BB | 1633 | G | C2-N3 | 7.13 | 1.38 | 1.32 |
| 4 | AD | 31 | G | N9-C8 | 7.13 | 1.42 | 1.37 |
| 26 | BB | 1646 | C | C4'-O4' | -7.13 | 1.36 | 1.45 |
| 1 | AA | 387 | U | N1-C2 | 7.13 | 1.45 | 1.38 |
| 26 | BB | 996 | A | N9-C8 | 7.13 | 1.43 | 1.37 |
| 1 | AA | 518 | C | C5'-C4' | 7.13 | 1.59 | 1.51 |
| 1 | AA | 1157 | A | C6-N6 | 7.13 | 1.39 | 1.33 |
| 26 | BB | 2283 | C | C2-N3 | 7.13 | 1.41 | 1.35 |
| 26 | BB | 42 | A | O3'-P | -7.13 | 1.52 | 1.61 |
| 26 | BB | 409 | G | P-O5' | 7.13 | 1.66 | 1.59 |
| 26 | BB | 1577 | C | C2-O2 | -7.13 | 1.18 | 1.24 |
| 1 | AA | 153 | C | C2-N3 | -7.13 | 1.30 | 1.35 |
| 1 | AA | 952 | U | C4-C5 | 7.13 | 1.50 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1201 | A | C4'-O4' | -7.13 | 1.36 | 1.45 |
| 1 | AA | 1324 | A | C2'-C1' | 7.13 | 1.61 | 1.53 |
| 2 | AB | 73 | G | O3'-P | 7.13 | 1.69 | 1.61 |
| 26 | BB | 481 | G | C2-N3 | 7.13 | 1.38 | 1.32 |
| 26 | BB | 2400 | G | N3-C4 | 7.13 | 1.40 | 1.35 |
| 1 | AA | 597 | G | C6-N1 | 7.12 | 1.44 | 1.39 |
| 1 | AA | 1466 | C | P-O5' | 7.12 | 1.66 | 1.59 |
| 1 | AA | 1486 | G | N7-C5 | -7.12 | 1.34 | 1.39 |
| 26 | BB | 1223 | G | N7-C5 | 7.12 | 1.43 | 1.39 |
| 26 | BB | 2417 | C | C5-C6 | 7.12 | 1.40 | 1.34 |
| 26 | BB | 2753 | A | N7-C5 | -7.12 | 1.34 | 1.39 |
| 1 | AA | 870 | U | C4-C5 | 7.12 | 1.50 | 1.43 |
| 1 | AA | 1063 | C | P-O5' | 7.12 | 1.66 | 1.59 |
| 1 | AA | 1422 | G | C8-N7 | -7.12 | 1.26 | 1.30 |
| 26 | BB | 355 | U | P-O5' | 7.12 | 1.66 | 1.59 |
| 26 | BB | 1453 | A | C6-N6 | 7.12 | 1.39 | 1.33 |
| 26 | BB | 1698 | A | C4'-C3' | 7.12 | 1.60 | 1.53 |
| 26 | BB | 1756 | G | N7-C5 | 7.12 | 1.43 | 1.39 |
| 26 | BB | 855 | G | C5-C4 | -7.12 | 1.33 | 1.38 |
| 26 | BB | 1616 | A | C3'-O3' | 7.12 | 1.52 | 1.42 |
| 26 | BB | 312 | G | P-O5' | 7.12 | 1.66 | 1.59 |
| 26 | BB | 998 | C | C3'-C2' | 7.12 | 1.60 | 1.52 |
| 4 | AD | 61 | U | P-O5' | 7.12 | 1.66 | 1.59 |
| 26 | BB | 664 | G | P-O5' | 7.12 | 1.66 | 1.59 |
| 1 | AA | 142 | G | N3-C4 | 7.12 | 1.40 | 1.35 |
| 25 | BA | 1 | U | C4-C5 | 7.12 | 1.50 | 1.43 |
| 26 | BB | 984 | A | N7-C5 | -7.12 | 1.34 | 1.39 |
| 26 | BB | 1247 | A | P-O5' | 7.12 | 1.66 | 1.59 |
| 26 | BB | 2642 | G | C2-N3 | 7.12 | 1.38 | 1.32 |
| 1 | AA | 1352 | C | C2'-O2' | 7.11 | 1.50 | 1.41 |
| 26 | BB | 804 | A | C8-N7 | -7.11 | 1.26 | 1.31 |
| 26 | BB | 2242 | G | N3-C4 | 7.11 | 1.40 | 1.35 |
| 26 | BB | 2476 | A | N1-C2 | 7.11 | 1.40 | 1.34 |
| 26 | BB | 2854 | G | C5'-C4' | -7.11 | 1.42 | 1.51 |
| 1 | AA | 165 | G | N9-C4 | -7.11 | 1.32 | 1.38 |
| 26 | BB | 788 | A | P-O5' | 7.11 | 1.66 | 1.59 |
| 26 | BB | 1068 | G | C4'-O4' | -7.11 | 1.36 | 1.45 |
| 26 | BB | 1429 | G | N3-C4 | 7.11 | 1.40 | 1.35 |
| 26 | BB | 1870 | C | C4-C5 | 7.11 | 1.48 | 1.43 |
| 26 | BB | 1900 | A | C2'-O2' | -7.11 | 1.32 | 1.41 |
| 26 | BB | 2533 | U | C5-C6 | 7.11 | 1.40 | 1.34 |
| 26 | BB | 2842 | G | C5-C6 | 7.11 | 1.49 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2866 | U | C4-O4 | -7.11 | 1.18 | 1.23 |
| 1 | AA | 699 | C | P-O5' | 7.11 | 1.66 | 1.59 |
| 1 | AA | 1081 | A | C5-C4 | -7.11 | 1.33 | 1.38 |
| 26 | BB | 1171 | G | N9-C4 | 7.11 | 1.43 | 1.38 |
| 25 | BA | 30 | C | N1-C6 | 7.11 | 1.41 | 1.37 |
| 26 | BB | 898 | C | C3'-C2' | 7.11 | 1.60 | 1.52 |
| 26 | BB | 1390 | U | C2-N3 | 7.11 | 1.42 | 1.37 |
| 26 | BB | 2267 | A | N3-C4 | 7.11 | 1.39 | 1.34 |
| 26 | BB | 2607 | G | P-O5' | 7.11 | 1.66 | 1.59 |
| 4 | AD | 61 | U | C4-O4 | -7.11 | 1.18 | 1.23 |
| 26 | BB | 1241 | A | C5-C4 | 7.11 | 1.43 | 1.38 |
| 26 | BB | 1826 | G | C6-N1 | 7.11 | 1.44 | 1.39 |
| 26 | BB | 2067 | G | P-O5' | -7.11 | 1.52 | 1.59 |
| 1 | AA | 168 | G | C6-O6 | -7.10 | 1.17 | 1.24 |
| 1 | AA | 990 | C | P-O5' | 7.10 | 1.66 | 1.59 |
| 2 | AB | 3 | G | N7-C5 | 7.10 | 1.43 | 1.39 |
| 25 | BA | 106 | G | C2-N3 | 7.10 | 1.38 | 1.32 |
| 26 | BB | 70 | G | P-O5' | 7.10 | 1.66 | 1.59 |
| 26 | BB | 1388 | G | N3-C4 | 7.10 | 1.40 | 1.35 |
| 26 | BB | 1426 | G | C8-N7 | -7.10 | 1.26 | 1.30 |
| 26 | BB | 1702 | G | C5-C4 | 7.10 | 1.43 | 1.38 |
| 26 | BB | 2800 | A | C2'-O2' | 7.10 | 1.50 | 1.41 |
| 28 | BD | 61 | TYR | CE2-CZ | 7.10 | 1.47 | 1.38 |
| 1 | AA | 1239 | A | N7-C5 | -7.10 | 1.34 | 1.39 |
| 26 | BB | 6 | A | N9-C4 | 7.10 | 1.42 | 1.37 |
| 26 | BB | 782 | A | N9-C4 | 7.10 | 1.42 | 1.37 |
| 26 | BB | 858 | G | C2-N2 | -7.10 | 1.27 | 1.34 |
| 26 | BB | 1837 | C | O3'-P | 7.10 | 1.69 | 1.61 |
| 26 | BB | 2563 | U | C4'-C3' | 7.10 | 1.60 | 1.53 |
| 1 | AA | 294 | U | C2-N3 | 7.10 | 1.42 | 1.37 |
| 25 | BA | 20 | G | C6-N1 | 7.10 | 1.44 | 1.39 |
| 26 | BB | 1173 | U | N1-C2 | 7.10 | 1.45 | 1.38 |
| 26 | BB | 1202 | G | N1-C2 | 7.10 | 1.43 | 1.37 |
| 26 | BB | 1525 | A | C8-N7 | -7.10 | 1.26 | 1.31 |
| 1 | AA | 801 | U | N3-C4 | 7.10 | 1.44 | 1.38 |
| 1 | AA | 1093 | A | P-O5' | 7.10 | 1.66 | 1.59 |
| 1 | AA | 912 | C | C4-C5 | 7.10 | 1.48 | 1.43 |
| 1 | AA | 235 | C | N3-C4 | 7.09 | 1.39 | 1.33 |
| 1 | AA | 270 | A | N9-C8 | -7.09 | 1.32 | 1.37 |
| 26 | BB | 87 | U | C4-C5 | 7.09 | 1.50 | 1.43 |
| 26 | BB | 1781 | U | C4-C5 | 7.09 | 1.50 | 1.43 |
| 26 | BB | 1906 | G | C4'-O4' | -7.09 | 1.36 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 577 | G | C4'-O4' | -7.09 | 1.36 | 1.45 |
| 1 | AA | 942 | G | C4'-O4' | -7.09 | 1.36 | 1.45 |
| 26 | BB | 2479 | U | P-O5' | 7.09 | 1.66 | 1.59 |
| 26 | BB | 1656 | C | C3'-C2' | 7.09 | 1.60 | 1.52 |
| 26 | BB | 2026 | U | C2-N3 | 7.09 | 1.42 | 1.37 |
| 1 | AA | 220 | G | C6-N1 | 7.09 | 1.44 | 1.39 |
| 26 | BB | 2098 | U | P-O5' | 7.09 | 1.66 | 1.59 |
| 26 | BB | 247 | G | N3-C4 | 7.09 | 1.40 | 1.35 |
| 26 | BB | 2293 | G | C5'-C4' | 7.09 | 1.59 | 1.51 |
| 26 | BB | 565 | C | C5'-C4' | 7.09 | 1.59 | 1.51 |
| 26 | BB | 1047 | G | C6-N1 | 7.09 | 1.44 | 1.39 |
| 26 | BB | 247 | G | C2-N3 | 7.08 | 1.38 | 1.32 |
| 26 | BB | 498 | G | C2-N2 | -7.08 | 1.27 | 1.34 |
| 26 | BB | 690 | G | P-O5' | 7.08 | 1.66 | 1.59 |
| 26 | BB | 1720 | U | O3'-P | 7.08 | 1.69 | 1.61 |
| 3 | AC | 13 | A | N7-C5 | 7.08 | 1.43 | 1.39 |
| 26 | BB | 91 | A | C5'-C4' | 7.08 | 1.59 | 1.51 |
| 26 | BB | 787 | C | C4'-C3' | -7.08 | 1.45 | 1.53 |
| 26 | BB | 1871 | A | C5'-C4' | 7.08 | 1.59 | 1.51 |
| 26 | BB | 2781 | A | N9-C8 | -7.08 | 1.32 | 1.37 |
| 1 | AA | 695 | A | C4'-C3' | 7.08 | 1.60 | 1.53 |
| 1 | AA | 933 | G | P-O5' | 7.08 | 1.66 | 1.59 |
| 26 | BB | 877 | A | C6-N6 | -7.08 | 1.28 | 1.33 |
| 26 | BB | 1172 | C | N1-C6 | 7.08 | 1.41 | 1.37 |
| 26 | BB | 2067 | G | C5'-C4' | 7.08 | 1.59 | 1.51 |
| 26 | BB | 345 | A | N9-C4 | 7.08 | 1.42 | 1.37 |
| 1 | AA | 1137 | C | C5-C6 | 7.08 | 1.40 | 1.34 |
| 26 | BB | 1450 | G | C5'-C4' | 7.08 | 1.59 | 1.51 |
| 1 | AA | 142 | G | N9-C8 | -7.08 | 1.32 | 1.37 |
| 26 | BB | 2812 | G | C2-N3 | 7.08 | 1.38 | 1.32 |
| 1 | AA | 330 | C | N3-C4 | 7.08 | 1.39 | 1.33 |
| 1 | AA | 1433 | A | C5-C4 | -7.08 | 1.33 | 1.38 |
| 26 | BB | 1337 | G | C2-N3 | 7.08 | 1.38 | 1.32 |
| 26 | BB | 1584 | U | O3'-P | 7.08 | 1.69 | 1.61 |
| 26 | BB | 2612 | C | N1-C6 | 7.08 | 1.41 | 1.37 |
| 1 | AA | 321 | A | N7-C5 | -7.07 | 1.35 | 1.39 |
| 1 | AA | 972 | C | N1-C6 | 7.07 | 1.41 | 1.37 |
| 26 | BB | 1071 | G | C4'-O4' | -7.07 | 1.36 | 1.45 |
| 26 | BB | 1190 | G | N1-C2 | -7.07 | 1.32 | 1.37 |
| 26 | BB | 1396 | U | C4'-O4' | -7.07 | 1.36 | 1.45 |
| 1 | AA | 271 | C | C5-C6 | 7.07 | 1.40 | 1.34 |
| 26 | BB | 2436 | G | P-O5' | 7.07 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 128 | G | N1-C2 | 7.07 | 1.43 | 1.37 |
| 1 | AA | 582 | C | P-O5' | 7.07 | 1.66 | 1.59 |
| 1 | AA | 731 | G | C5'-C4' | 7.07 | 1.59 | 1.51 |
| 26 | BB | 760 | G | C4'-O4' | -7.07 | 1.36 | 1.45 |
| 26 | BB | 2901 | C | N1-C6 | -7.07 | 1.32 | 1.37 |
| 1 | AA | 1381 | U | C2-N3 | 7.07 | 1.42 | 1.37 |
| 26 | BB | 802 | A | N9-C8 | -7.07 | 1.32 | 1.37 |
| 26 | BB | 2434 | A | C5-C4 | -7.07 | 1.33 | 1.38 |
| 1 | AA | 537 | G | C2-N3 | 7.07 | 1.38 | 1.32 |
| 1 | AA | 657 | U | N1-C6 | 7.07 | 1.44 | 1.38 |
| 26 | BB | 128 | C | P-O5' | 7.07 | 1.66 | 1.59 |
| 26 | BB | 256 | A | C8-N7 | -7.07 | 1.26 | 1.31 |
| 26 | BB | 543 | G | C4'-O4' | -7.07 | 1.36 | 1.45 |
| 26 | BB | 662 | G | N9-C4 | -7.07 | 1.32 | 1.38 |
| 26 | BB | 1300 | G | N9-C8 | -7.07 | 1.32 | 1.37 |
| 26 | BB | 2135 | A | N3-C4 | 7.07 | 1.39 | 1.34 |
| 25 | BA | 100 | G | C2'-O2' | 7.07 | 1.50 | 1.41 |
| 26 | BB | 451 | U | P-O5' | -7.07 | 1.52 | 1.59 |
| 2 | AB | 5 | G | C2-N3 | 7.06 | 1.38 | 1.32 |
| 26 | BB | 223 | A | N9-C4 | -7.06 | 1.33 | 1.37 |
| 26 | BB | 1070 | A | C4'-C3' | -7.06 | 1.45 | 1.53 |
| 38 | BN | 78 | ARG | NE-CZ | 7.06 | 1.42 | 1.33 |
| 26 | BB | 1030 | C | C4'-O4' | -7.06 | 1.36 | 1.45 |
| 26 | BB | 1754 | A | O3'-P | 7.06 | 1.69 | 1.61 |
| 26 | BB | 2325 | G | C6-N1 | -7.06 | 1.34 | 1.39 |
| 1 | AA | 108 | G | C6-N1 | 7.06 | 1.44 | 1.39 |
| 1 | AA | 624 | C | N1-C6 | 7.06 | 1.41 | 1.37 |
| 1 | AA | 670 | G | N9-C4 | 7.06 | 1.43 | 1.38 |
| 25 | BA | 24 | G | C6-N1 | 7.06 | 1.44 | 1.39 |
| 26 | BB | 1906 | G | O3'-P | 7.06 | 1.69 | 1.61 |
| 1 | AA | 602 | A | C6-N1 | -7.06 | 1.30 | 1.35 |
| 1 | AA | 975 | A | P-O5' | 7.06 | 1.66 | 1.59 |
| 1 | AA | 1206 | G | C2-N3 | 7.06 | 1.38 | 1.32 |
| 26 | BB | 1520 | U | C4'-O4' | -7.06 | 1.36 | 1.45 |
| 1 | AA | 935 | A | N9-C4 | -7.06 | 1.33 | 1.37 |
| 26 | BB | 2181 | U | P-O5' | 7.06 | 1.66 | 1.59 |
| 26 | BB | 2456 | C | N3-C4 | 7.06 | 1.38 | 1.33 |
| 1 | AA | 592 | G | N9-C4 | 7.05 | 1.43 | 1.38 |
| 26 | BB | 1657 | U | C5-C6 | 7.05 | 1.40 | 1.34 |
| 1 | AA | 1214 | C | C5'-C4' | 7.05 | 1.59 | 1.51 |
| 3 | AC | 18 | A | N7-C5 | 7.05 | 1.43 | 1.39 |
| 26 | BB | 510 | C | C5'-C4' | 7.05 | 1.59 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 661 | A | C2'-C1' | 7.05 | 1.61 | 1.53 |
| 26 | BB | 1479 | G | C6-N1 | 7.05 | 1.44 | 1.39 |
| 26 | BB | 2063 | C | C4-C5 | 7.05 | 1.48 | 1.43 |
| 26 | BB | 1256 | G | C2'-O2' | 7.05 | 1.50 | 1.41 |
| 26 | BB | 2701 | U | P-O5' | 7.05 | 1.66 | 1.59 |
| 1 | AA | 78 | A | C2-N3 | 7.05 | 1.39 | 1.33 |
| 1 | AA | 1093 | A | O3'-P | 7.05 | 1.69 | 1.61 |
| 26 | BB | 276 | U | C4-O4 | -7.05 | 1.18 | 1.23 |
| 26 | BB | 662 | G | C2'-O2' | -7.05 | 1.32 | 1.41 |
| 26 | BB | 760 | G | N7-C5 | 7.05 | 1.43 | 1.39 |
| 26 | BB | 775 | G | N1-C2 | 7.05 | 1.43 | 1.37 |
| 26 | BB | 902 | C | N1-C6 | 7.05 | 1.41 | 1.37 |
| 26 | BB | 1023 | U | N1-C2 | 7.05 | 1.44 | 1.38 |
| 26 | BB | 1120 | G | C4'-C3' | -7.05 | 1.45 | 1.53 |
| 26 | BB | 1454 | C | O3'-P | 7.05 | 1.69 | 1.61 |
| 26 | BB | 1791 | A | C8-N7 | -7.05 | 1.26 | 1.31 |
| 1 | AA | 252 | U | N3-C4 | 7.05 | 1.44 | 1.38 |
| 1 | AA | 1060 | U | N1-C2 | 7.05 | 1.44 | 1.38 |
| 25 | BA | 75 | G | C5-C4 | -7.05 | 1.33 | 1.38 |
| 26 | BB | 1916 | A | P-O5' | 7.05 | 1.66 | 1.59 |
| 26 | BB | 1982 | U | P-O5' | 7.05 | 1.66 | 1.59 |
| 26 | BB | 2462 | C | N3-C4 | 7.05 | 1.38 | 1.33 |
| 1 | AA | 443 | C | N1-C6 | 7.04 | 1.41 | 1.37 |
| 2 | AB | 67 | G | N9-C8 | 7.04 | 1.42 | 1.37 |
| 26 | BB | 1711 | A | C6-N1 | -7.04 | 1.30 | 1.35 |
| 26 | BB | 1803 | A | C2'-C1' | -7.04 | 1.45 | 1.53 |
| 26 | BB | 2419 | U | C5-C6 | 7.04 | 1.40 | 1.34 |
| 1 | AA | 1070 | U | C3'-C2' | -7.04 | 1.45 | 1.52 |
| 26 | BB | 75 | G | C5'-C4' | 7.04 | 1.59 | 1.51 |
| 1 | AA | 76 | G | N9-C8 | 7.04 | 1.42 | 1.37 |
| 26 | BB | 65 | U | C2-N3 | 7.04 | 1.42 | 1.37 |
| 26 | BB | 209 | C | C4-C5 | 7.04 | 1.48 | 1.43 |
| 26 | BB | 1577 | C | O4'-C1' | 7.04 | 1.50 | 1.41 |
| 1 | AA | 142 | G | N7-C5 | 7.04 | 1.43 | 1.39 |
| 26 | BB | 304 | U | C3'-C2' | 7.04 | 1.60 | 1.52 |
| 26 | BB | 318 | C | P-O5' | 7.04 | 1.66 | 1.59 |
| 26 | BB | 1253 | A | N3-C4 | 7.04 | 1.39 | 1.34 |
| 26 | BB | 2635 | A | C6-N6 | 7.04 | 1.39 | 1.33 |
| 1 | AA | 675 | A | C5-C6 | 7.04 | 1.47 | 1.41 |
| 25 | BA | 68 | C | N1-C6 | -7.04 | 1.32 | 1.37 |
| 26 | BB | 16 | C | C2-N3 | -7.04 | 1.30 | 1.35 |
| 26 | BB | 509 | C | O3'-P | 7.04 | 1.69 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 824 | U | N3-C4 | 7.04 | 1.44 | 1.38 |
| 26 | BB | 1249 | U | N1-C2 | 7.04 | 1.44 | 1.38 |
| 1 | AA | 20 | U | N1-C2 | 7.04 | 1.44 | 1.38 |
| 1 | AA | 1024 | G | C8-N7 | -7.04 | 1.26 | 1.30 |
| 3 | AC | 21 | U | C4-C5 | 7.04 | 1.49 | 1.43 |
| 26 | BB | 768 | G | N3-C4 | 7.04 | 1.40 | 1.35 |
| 26 | BB | 1398 | C | C5'-C4' | 7.04 | 1.59 | 1.51 |
| 1 | AA | 753 | A | O4'-C1' | -7.03 | 1.32 | 1.41 |
| 1 | AA | 793 | U | C4-C5 | 7.03 | 1.49 | 1.43 |
| 26 | BB | 1422 | G | C2-N3 | 7.03 | 1.38 | 1.32 |
| 26 | BB | 1515 | A | N9-C8 | 7.03 | 1.43 | 1.37 |
| 26 | BB | 1951 | U | C2-N3 | 7.03 | 1.42 | 1.37 |
| 1 | AA | 1002 | G | C5'-C4' | 7.03 | 1.59 | 1.51 |
| 1 | AA | 1120 | C | N3-C4 | 7.03 | 1.38 | 1.33 |
| 26 | BB | 880 | G | C2'-C1' | 7.03 | 1.61 | 1.53 |
| 1 | AA | 311 | C | C5'-C4' | 7.03 | 1.59 | 1.51 |
| 26 | BB | 1923 | U | C2-N3 | 7.03 | 1.42 | 1.37 |
| 26 | BB | 1979 | U | C2-O2 | 7.03 | 1.28 | 1.22 |
| 1 | AA | 384 | G | N3-C4 | 7.03 | 1.40 | 1.35 |
| 1 | AA | 437 | U | N1-C6 | 7.03 | 1.44 | 1.38 |
| 26 | BB | 19 | A | C8-N7 | -7.03 | 1.26 | 1.31 |
| 26 | BB | 575 | A | N7-C5 | -7.03 | 1.35 | 1.39 |
| 26 | BB | 924 | G | C5-C4 | 7.03 | 1.43 | 1.38 |
| 26 | BB | 1130 | U | P-O5' | 7.03 | 1.66 | 1.59 |
| 26 | BB | 1647 | U | N1-C2 | 7.03 | 1.44 | 1.38 |
| 26 | BB | 1964 | G | N9-C8 | -7.03 | 1.32 | 1.37 |
| 26 | BB | 2249 | U | N3-C4 | 7.03 | 1.44 | 1.38 |
| 1 | AA | 42 | G | P-O5' | 7.03 | 1.66 | 1.59 |
| 1 | AA | 427 | U | P-O5' | 7.03 | 1.66 | 1.59 |
| 26 | BB | 585 | G | C2-N2 | 7.03 | 1.41 | 1.34 |
| 26 | BB | 1995 | U | P-O5' | 7.03 | 1.66 | 1.59 |
| 26 | BB | 2253 | G | C3'-C2' | 7.02 | 1.60 | 1.52 |
| 1 | AA | 112 | G | C4'-O4' | -7.02 | 1.36 | 1.45 |
| 1 | AA | 710 | G | C2-N2 | 7.02 | 1.41 | 1.34 |
| 1 | AA | 806 | C | C5-C6 | 7.02 | 1.40 | 1.34 |
| 1 | AA | 1063 | C | C5-C6 | 7.02 | 1.40 | 1.34 |
| 25 | BA | 76 | G | P-O5' | 7.02 | 1.66 | 1.59 |
| 26 | BB | 1175 | A | C8-N7 | 7.02 | 1.36 | 1.31 |
| 26 | BB | 1884 | G | C2'-C1' | 7.02 | 1.61 | 1.53 |
| 26 | BB | 2108 | A | O3'-P | 7.02 | 1.69 | 1.61 |
| 26 | BB | 468 | G | C2'-O2' | -7.02 | 1.32 | 1.41 |
| 26 | BB | 1666 | G | C2-N2 | -7.02 | 1.27 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2863 | C | C2'-C1' | -7.02 | 1.45 | 1.53 |
| 26 | BB | 884 | U | P-O5' | 7.02 | 1.66 | 1.59 |
| 26 | BB | 1008 | A | P-O5' | -7.02 | 1.52 | 1.59 |
| 26 | BB | 2037 | A | C8-N7 | 7.02 | 1.36 | 1.31 |
| 26 | BB | 2331 | G | C5-C6 | -7.02 | 1.35 | 1.42 |
| 26 | BB | 2535 | G | C2'-C1' | 7.02 | 1.61 | 1.53 |
| 1 | AA | 890 | G | C8-N7 | 7.02 | 1.35 | 1.30 |
| 1 | AA | 1441 | A | C6-N1 | 7.02 | 1.40 | 1.35 |
| 26 | BB | 209 | C | C5'-C4' | 7.02 | 1.59 | 1.51 |
| 26 | BB | 808 | G | O3'-P | 7.02 | 1.69 | 1.61 |
| 26 | BB | 977 | G | C5'-C4' | 7.02 | 1.59 | 1.51 |
| 26 | BB | 1399 | C | N1-C6 | 7.02 | 1.41 | 1.37 |
| 26 | BB | 61 | C | C4-C5 | 7.02 | 1.48 | 1.43 |
| 26 | BB | 328 | U | C5-C6 | 7.02 | 1.40 | 1.34 |
| 26 | BB | 720 | U | C2-N3 | 7.02 | 1.42 | 1.37 |
| 1 | AA | 567 | G | C2-N3 | 7.01 | 1.38 | 1.32 |
| 26 | BB | 714 | U | N1-C2 | 7.01 | 1.44 | 1.38 |
| 26 | BB | 1099 | G | N7-C5 | -7.01 | 1.35 | 1.39 |
| 26 | BB | 1306 | C | N1-C6 | 7.01 | 1.41 | 1.37 |
| 26 | BB | 1685 | C | C5-C6 | 7.01 | 1.40 | 1.34 |
| 26 | BB | 1859 | U | C5-C6 | 7.01 | 1.40 | 1.34 |
| 26 | BB | 2413 | G | N7-C5 | -7.01 | 1.35 | 1.39 |
| 26 | BB | 2447 | G | C5'-C4' | 7.01 | 1.59 | 1.51 |
| 26 | BB | 2624 | G | C5'-C4' | 7.01 | 1.59 | 1.51 |
| 36 | BL | 75 | TYR | CE2-CZ | 7.01 | 1.47 | 1.38 |
| 26 | BB | 2295 | C | O3'-P | 7.01 | 1.69 | 1.61 |
| 1 | AA | 294 | U | C4-O4 | -7.01 | 1.18 | 1.23 |
| 1 | AA | 748 | G | N9-C4 | 7.01 | 1.43 | 1.38 |
| 1 | AA | 1050 | G | N3-C4 | 7.01 | 1.40 | 1.35 |
| 26 | BB | 632 | A | C5'-C4' | 7.01 | 1.59 | 1.51 |
| 26 | BB | 759 | G | C2-N3 | 7.01 | 1.38 | 1.32 |
| 26 | BB | 1940 | U | P-O5' | 7.01 | 1.66 | 1.59 |
| 1 | AA | 146 | G | C3'-O3' | 7.01 | 1.51 | 1.42 |
| 1 | AA | 766 | A | N9-C4 | -7.01 | 1.33 | 1.37 |
| 26 | BB | 722 | A | C4'-O4' | -7.01 | 1.36 | 1.45 |
| 26 | BB | 1200 | C | N3-C4 | 7.01 | 1.38 | 1.33 |
| 26 | BB | 1586 | A | N7-C5 | -7.01 | 1.35 | 1.39 |
| 1 | AA | 432 | A | C8-N7 | -7.01 | 1.26 | 1.31 |
| 1 | AA | 590 | U | C5-C6 | 7.01 | 1.40 | 1.34 |
| 1 | AA | 973 | G | C3'-O3' | 7.01 | 1.51 | 1.42 |
| 26 | BB | 88 | G | C6-N1 | 7.01 | 1.44 | 1.39 |
| 26 | BB | 856 | G | N9-C8 | -7.01 | 1.32 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2296 | U | N1-C2 | -7.01 | 1.32 | 1.38 |
| 26 | BB | 2412 | A | C5-C4 | -7.01 | 1.33 | 1.38 |
| 26 | BB | 2421 | G | N9-C8 | -7.01 | 1.32 | 1.37 |
| 26 | BB | 716 | A | N3-C4 | 7.01 | 1.39 | 1.34 |
| 26 | BB | 732 | C | O4'-C1' | 7.01 | 1.50 | 1.41 |
| 26 | BB | 2138 | G | C5'-C4' | 7.00 | 1.59 | 1.51 |
| 1 | AA | 227 | G | C4'-O4' | -7.00 | 1.36 | 1.45 |
| 1 | AA | 865 | A | C5-C4 | 7.00 | 1.43 | 1.38 |
| 1 | AA | 1440 | U | C2-N3 | 7.00 | 1.42 | 1.37 |
| 4 | AD | 43 | G | N7-C5 | 7.00 | 1.43 | 1.39 |
| 1 | AA | 793 | U | N3-C4 | 7.00 | 1.44 | 1.38 |
| 1 | AA | 1007 | U | N1-C2 | 7.00 | 1.44 | 1.38 |
| 26 | BB | 1388 | G | N1-C2 | 7.00 | 1.43 | 1.37 |
| 26 | BB | 1721 | G | C5-C6 | 7.00 | 1.49 | 1.42 |
| 26 | BB | 2448 | A | C5'-C4' | 7.00 | 1.59 | 1.51 |
| 1 | AA | 1342 | C | P-O5' | 7.00 | 1.66 | 1.59 |
| 3 | AC | 33 | A | N7-C5 | 7.00 | 1.43 | 1.39 |
| 26 | BB | 2225 | A | N1-C2 | -7.00 | 1.28 | 1.34 |
| 1 | AA | 174 | A | N9-C4 | 7.00 | 1.42 | 1.37 |
| 1 | AA | 1239 | A | C5-C6 | 7.00 | 1.47 | 1.41 |
| 1 | AA | 1256 | A | C2-N3 | 7.00 | 1.39 | 1.33 |
| 1 | AA | 1306 | A | C8-N7 | -7.00 | 1.26 | 1.31 |
| 1 | AA | 1438 | G | C3'-C2' | 7.00 | 1.60 | 1.52 |
| 26 | BB | 2307 | G | P-O5' | 7.00 | 1.66 | 1.59 |
| 1 | AA | 140 | U | O3'-P | 7.00 | 1.69 | 1.61 |
| 26 | BB | 744 | U | C2'-O2' | 6.99 | 1.50 | 1.41 |
| 26 | BB | 1838 | C | P-O5' | 6.99 | 1.66 | 1.59 |
| 26 | BB | 2444 | G | C5-C4 | 6.99 | 1.43 | 1.38 |
| 1 | AA | 1084 | G | C5-C6 | 6.99 | 1.49 | 1.42 |
| 26 | BB | 1891 | G | C6-N1 | 6.99 | 1.44 | 1.39 |
| 1 | AA | 1114 | C | C2-N3 | 6.99 | 1.41 | 1.35 |
| 25 | BA | 43 | C | C2-N3 | 6.99 | 1.41 | 1.35 |
| 25 | BA | 102 | G | N3-C4 | 6.99 | 1.40 | 1.35 |
| 26 | BB | 1373 | A | P-O5' | 6.99 | 1.66 | 1.59 |
| 26 | BB | 2226 | C | N1-C6 | 6.99 | 1.41 | 1.37 |
| 26 | BB | 2471 | A | C2-N3 | -6.99 | 1.27 | 1.33 |
| 1 | AA | 571 | U | C2-N3 | 6.99 | 1.42 | 1.37 |
| 26 | BB | 1292 | G | N7-C5 | -6.99 | 1.35 | 1.39 |
| 1 | AA | 144 | G | C2-N2 | 6.99 | 1.41 | 1.34 |
| 1 | AA | 1384 | C | N1-C6 | 6.99 | 1.41 | 1.37 |
| 4 | AD | 76 | C | N1-C6 | -6.99 | 1.32 | 1.37 |
| 26 | BB | 542 | C | O3'-P | 6.99 | 1.69 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1186 | G | N9-C4 | -6.99 | 1.32 | 1.38 |
| 26 | BB | 1777 | U | C2-N3 | -6.99 | 1.32 | 1.37 |
| 26 | BB | 2123 | G | O3'-P | 6.99 | 1.69 | 1.61 |
| 26 | BB | 2224 | G | N3-C4 | 6.99 | 1.40 | 1.35 |
| 26 | BB | 2315 | G | C5-C6 | 6.99 | 1.49 | 1.42 |
| 1 | AA | 325 | A | C5-C4 | -6.98 | 1.33 | 1.38 |
| 1 | AA | 737 | C | O4'-C1' | 6.98 | 1.50 | 1.41 |
| 26 | BB | 167 | A | N3-C4 | 6.98 | 1.39 | 1.34 |
| 26 | BB | 2248 | C | C2-N3 | 6.98 | 1.41 | 1.35 |
| 1 | AA | 891 | U | C5-C6 | 6.98 | 1.40 | 1.34 |
| 1 | AA | 922 | G | N3-C4 | 6.98 | 1.40 | 1.35 |
| 1 | AA | 1006 | G | O5'-C5' | -6.98 | 1.31 | 1.42 |
| 1 | AA | 1225 | A | N7-C5 | 6.98 | 1.43 | 1.39 |
| 26 | BB | 736 | C | N3-C4 | 6.98 | 1.38 | 1.33 |
| 26 | BB | 1592 | C | N1-C6 | 6.98 | 1.41 | 1.37 |
| 26 | BB | 2407 | A | C6-N6 | -6.98 | 1.28 | 1.33 |
| 26 | BB | 2799 | A | C2-N3 | -6.98 | 1.27 | 1.33 |
| 1 | AA | 1321 | U | O3'-P | 6.98 | 1.69 | 1.61 |
| 1 | AA | 1331 | G | C6-N1 | -6.98 | 1.34 | 1.39 |
| 25 | BA | 114 | C | C5'-C4' | 6.98 | 1.59 | 1.51 |
| 26 | BB | 105 | C | C5'-C4' | 6.98 | 1.59 | 1.51 |
| 26 | BB | 2066 | C | C5-C6 | 6.98 | 1.40 | 1.34 |
| 26 | BB | 2249 | U | P-O5' | 6.98 | 1.66 | 1.59 |
| 1 | AA | 1237 | C | P-O5' | 6.98 | 1.66 | 1.59 |
| 1 | AA | 577 | G | C8-N7 | -6.98 | 1.26 | 1.30 |
| 1 | AA | 724 | G | C5-C6 | 6.98 | 1.49 | 1.42 |
| 26 | BB | 2568 | U | C5'-C4' | 6.98 | 1.59 | 1.51 |
| 33 | BI | 32 | PRO | N-CD | -6.98 | 1.38 | 1.47 |
| 56 | B5 | 35 | ARG | CZ-NH2 | 6.98 | 1.42 | 1.33 |
| 1 | AA | 1178 | G | N3-C4 | 6.97 | 1.40 | 1.35 |
| 26 | BB | 158 | U | C4'-O4' | -6.97 | 1.36 | 1.45 |
| 26 | BB | 495 | G | C2-N3 | 6.97 | 1.38 | 1.32 |
| 26 | BB | 518 | G | N3-C4 | 6.97 | 1.40 | 1.35 |
| 1 | AA | 348 | G | N1-C2 | 6.97 | 1.43 | 1.37 |
| 1 | AA | 1146 | A | N9-C4 | -6.97 | 1.33 | 1.37 |
| 1 | AA | 1147 | C | C4-C5 | 6.97 | 1.48 | 1.43 |
| 26 | BB | 1118 | C | C2-N3 | 6.97 | 1.41 | 1.35 |
| 26 | BB | 1586 | A | C5'-C4' | 6.97 | 1.59 | 1.51 |
| 26 | BB | 2871 | U | C5-C6 | 6.97 | 1.40 | 1.34 |
| 1 | AA | 1424 | U | N1-C2 | 6.97 | 1.44 | 1.38 |
| 25 | BA | 53 | A | C4'-C3' | 6.97 | 1.60 | 1.53 |
| 26 | BB | 822 | G | N1-C2 | 6.97 | 1.43 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1349 | C | C5-C6 | 6.97 | 1.40 | 1.34 |
| 26 | BB | 1840 | G | N1-C2 | 6.97 | 1.43 | 1.37 |
| 26 | BB | 2067 | G | N7-C5 | -6.97 | 1.35 | 1.39 |
| 26 | BB | 2883 | A | P-O5' | 6.97 | 1.66 | 1.59 |
| 1 | AA | 473 | U | N1-C2 | 6.97 | 1.44 | 1.38 |
| 26 | BB | 719 | C | P-O5' | 6.97 | 1.66 | 1.59 |
| 26 | BB | 1192 | G | C4'-O4' | -6.97 | 1.36 | 1.45 |
| 1 | AA | 1021 | A | O3'-P | -6.96 | 1.52 | 1.61 |
| 26 | BB | 862 | G | C6-N1 | 6.96 | 1.44 | 1.39 |
| 26 | BB | 2017 | U | C4'-O4' | -6.96 | 1.36 | 1.45 |
| 26 | BB | 2097 | A | C5-C6 | 6.96 | 1.47 | 1.41 |
| 2 | AB | 12 | U | P-O5' | 6.96 | 1.66 | 1.59 |
| 26 | BB | 2807 | U | C4'-C3' | -6.96 | 1.45 | 1.53 |
| 1 | AA | 468 | A | N9-C8 | 6.96 | 1.43 | 1.37 |
| 1 | AA | 828 | U | C4-C5 | 6.96 | 1.49 | 1.43 |
| 26 | BB | 1121 | C | C3'-C2' | 6.96 | 1.60 | 1.52 |
| 26 | BB | 1837 | C | C4'-C3' | 6.96 | 1.60 | 1.53 |
| 26 | BB | 2108 | A | C5-C4 | -6.96 | 1.33 | 1.38 |
| 4 | AD | 19 | G | C2'-C1' | -6.96 | 1.45 | 1.53 |
| 26 | BB | 446 | G | P-O5' | 6.96 | 1.66 | 1.59 |
| 26 | BB | 1367 | A | C6-N1 | 6.96 | 1.40 | 1.35 |
| 26 | BB | 1610 | A | N1-C2 | -6.96 | 1.28 | 1.34 |
| 1 | AA | 1186 | G | C2-N3 | 6.96 | 1.38 | 1.32 |
| 26 | BB | 781 | A | C4'-O4' | -6.96 | 1.36 | 1.45 |
| 26 | BB | 1141 | U | C2-N3 | 6.96 | 1.42 | 1.37 |
| 26 | BB | 1851 | U | C2-N3 | 6.96 | 1.42 | 1.37 |
| 26 | BB | 2070 | A | O3'-P | 6.96 | 1.69 | 1.61 |
| 1 | AA | 426 | U | N1-C2 | 6.96 | 1.44 | 1.38 |
| 1 | AA | 1351 | U | O3'-P | 6.96 | 1.69 | 1.61 |
| 4 | AD | 63 | C | N3-C4 | -6.96 | 1.29 | 1.33 |
| 26 | BB | 121 | G | P-O5' | 6.96 | 1.66 | 1.59 |
| 26 | BB | 1168 | G | C8-N7 | -6.96 | 1.26 | 1.30 |
| 26 | BB | 2054 | A | N9-C4 | 6.96 | 1.42 | 1.37 |
| 26 | BB | 2119 | A | N1-C2 | -6.96 | 1.28 | 1.34 |
| 26 | BB | 2307 | G | C3'-C2' | -6.96 | 1.45 | 1.52 |
| 26 | BB | 2713 | U | C4-C5 | 6.96 | 1.49 | 1.43 |
| 1 | AA | 601 | G | P-O5' | 6.96 | 1.66 | 1.59 |
| 26 | BB | 213 | A | C2-N3 | 6.96 | 1.39 | 1.33 |
| 26 | BB | 1552 | A | N9-C8 | 6.96 | 1.43 | 1.37 |
| 26 | BB | 1566 | A | N3-C4 | -6.96 | 1.30 | 1.34 |
| 26 | BB | 2793 | C | P-O5' | 6.96 | 1.66 | 1.59 |
| 1 | AA | 285 | C | P-O5' | 6.95 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 465 | A | N9-C4 | 6.95 | 1.42 | 1.37 |
| 26 | BB | 532 | A | C5-C4 | 6.95 | 1.43 | 1.38 |
| 26 | BB | 2167 | U | N1-C2 | 6.95 | 1.44 | 1.38 |
| 26 | BB | 870 | U | C4'-O4' | -6.95 | 1.36 | 1.45 |
| 26 | BB | 1207 | C | P-O5' | 6.95 | 1.66 | 1.59 |
| 26 | BB | 2820 | A | N7-C5 | 6.95 | 1.43 | 1.39 |
| 2 | AB | 41 | C | C4'-O4' | -6.95 | 1.36 | 1.45 |
| 4 | AD | 29 | C | C4'-C3' | 6.95 | 1.60 | 1.53 |
| 1 | AA | 31 | G | P-O5' | 6.95 | 1.66 | 1.59 |
| 1 | AA | 807 | A | N9-C4 | -6.95 | 1.33 | 1.37 |
| 1 | AA | 1080 | A | N7-C5 | 6.95 | 1.43 | 1.39 |
| 1 | AA | 1308 | U | C5-C6 | 6.95 | 1.40 | 1.34 |
| 1 | AA | 1419 | G | C5-C4 | -6.95 | 1.33 | 1.38 |
| 26 | BB | 327 | G | C8-N7 | 6.95 | 1.35 | 1.30 |
| 26 | BB | 2305 | U | N1-C2 | 6.95 | 1.44 | 1.38 |
| 26 | BB | 1583 | A | O3'-P | 6.95 | 1.69 | 1.61 |
| 26 | BB | 2434 | A | C6-N1 | -6.95 | 1.30 | 1.35 |
| 26 | BB | 2811 | G | C6-N1 | 6.95 | 1.44 | 1.39 |
| 1 | AA | 755 | G | C6-O6 | 6.95 | 1.30 | 1.24 |
| 1 | AA | 817 | C | P-O5' | 6.95 | 1.66 | 1.59 |
| 1 | AA | 1084 | G | C2-N3 | 6.95 | 1.38 | 1.32 |
| 26 | BB | 51 | G | C2'-O2' | 6.95 | 1.50 | 1.41 |
| 26 | BB | 55 | G | C6-O6 | 6.95 | 1.30 | 1.24 |
| 26 | BB | 463 | G | C5-C6 | -6.95 | 1.35 | 1.42 |
| 26 | BB | 1682 | G | C4'-C3' | -6.95 | 1.45 | 1.53 |
| 26 | BB | 1804 | C | N1-C6 | 6.94 | 1.41 | 1.37 |
| 1 | AA | 150 | U | N1-C2 | 6.94 | 1.44 | 1.38 |
| 26 | BB | 127 | A | C8-N7 | -6.94 | 1.26 | 1.31 |
| 26 | BB | 1129 | A | N3-C4 | 6.94 | 1.39 | 1.34 |
| 26 | BB | 1502 | A | N3-C4 | 6.94 | 1.39 | 1.34 |
| 26 | BB | 1586 | A | C8-N7 | -6.94 | 1.26 | 1.31 |
| 26 | BB | 1626 | A | N3-C4 | 6.94 | 1.39 | 1.34 |
| 26 | BB | 1966 | A | N7-C5 | 6.94 | 1.43 | 1.39 |
| 26 | BB | 2487 | G | N3-C4 | 6.94 | 1.40 | 1.35 |
| 1 | AA | 1337 | G | C2-N3 | 6.94 | 1.38 | 1.32 |
| 26 | BB | 407 | G | C6-O6 | -6.94 | 1.18 | 1.24 |
| 26 | BB | 645 | C | N3-C4 | 6.94 | 1.38 | 1.33 |
| 26 | BB | 718 | A | C6-N1 | 6.94 | 1.40 | 1.35 |
| 26 | BB | 2324 | U | C5'-C4' | 6.94 | 1.59 | 1.51 |
| 26 | BB | 2374 | C | N1-C6 | 6.94 | 1.41 | 1.37 |
| 1 | AA | 1162 | C | C4-C5 | 6.94 | 1.48 | 1.43 |
| 26 | BB | 1401 | G | C8-N7 | 6.94 | 1.35 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2201 | G | O3'-P | 6.94 | 1.69 | 1.61 |
| 26 | BB | 2688 | G | N7-C5 | -6.94 | 1.35 | 1.39 |
| 1 | AA | 551 | U | N3-C4 | 6.94 | 1.44 | 1.38 |
| 1 | AA | 1227 | A | C8-N7 | -6.94 | 1.26 | 1.31 |
| 26 | BB | 1068 | G | P-O5' | 6.94 | 1.66 | 1.59 |
| 26 | BB | 1123 | C | N1-C2 | 6.94 | 1.47 | 1.40 |
| 26 | BB | 1171 | G | C2'-C1' | 6.94 | 1.60 | 1.53 |
| 26 | BB | 2100 | G | C2-N3 | 6.94 | 1.38 | 1.32 |
| 1 | AA | 776 | G | C2-N3 | 6.93 | 1.38 | 1.32 |
| 2 | AB | 18 | G | N9-C8 | -6.93 | 1.32 | 1.37 |
| 25 | BA | 55 | U | C2'-C1' | 6.93 | 1.60 | 1.53 |
| 26 | BB | 162 | U | P-O5' | 6.93 | 1.66 | 1.59 |
| 26 | BB | 839 | U | C3'-C2' | 6.93 | 1.60 | 1.52 |
| 1 | AA | 178 | C | P-O5' | 6.93 | 1.66 | 1.59 |
| 1 | AA | 424 | G | N7-C5 | -6.93 | 1.35 | 1.39 |
| 1 | AA | 572 | A | N3-C4 | 6.93 | 1.39 | 1.34 |
| 26 | BB | 806 | C | C4'-O4' | -6.93 | 1.36 | 1.45 |
| 26 | BB | 1655 | A | C3'-C2' | 6.93 | 1.60 | 1.52 |
| 26 | BB | 1896 | G | N9-C4 | -6.93 | 1.32 | 1.38 |
| 26 | BB | 2564 | A | P-O5' | -6.93 | 1.52 | 1.59 |
| 1 | AA | 502 | A | C4'-O4' | -6.93 | 1.36 | 1.45 |
| 1 | AA | 750 | C | C5-C6 | 6.93 | 1.39 | 1.34 |
| 1 | AA | 903 | G | C5'-C4' | 6.93 | 1.59 | 1.51 |
| 1 | AA | 921 | U | C3'-C2' | 6.93 | 1.60 | 1.52 |
| 1 | AA | 1375 | A | N9-C4 | 6.93 | 1.42 | 1.37 |
| 2 | AB | 47 | U | C5-C6 | 6.93 | 1.40 | 1.34 |
| 26 | BB | 1616 | A | O3'-P | 6.93 | 1.69 | 1.61 |
| 26 | BB | 17 | G | N7-C5 | -6.93 | 1.35 | 1.39 |
| 26 | BB | 2770 | G | C8-N7 | -6.93 | 1.26 | 1.30 |
| 1 | AA | 203 | G | C6-N1 | 6.92 | 1.44 | 1.39 |
| 1 | AA | 696 | A | C2'-C1' | -6.92 | 1.45 | 1.53 |
| 1 | AA | 808 | C | C2-N3 | 6.92 | 1.41 | 1.35 |
| 1 | AA | 1089 | G | C6-N1 | -6.92 | 1.34 | 1.39 |
| 25 | BA | 96 | G | C2-N3 | 6.92 | 1.38 | 1.32 |
| 26 | BB | 1489 | C | C4-C5 | 6.92 | 1.48 | 1.43 |
| 26 | BB | 2392 | A | P-O5' | 6.92 | 1.66 | 1.59 |
| 1 | AA | 288 | A | C3'-O3' | -6.92 | 1.32 | 1.42 |
| 1 | AA | 353 | A | N3-C4 | 6.92 | 1.39 | 1.34 |
| 26 | BB | 382 | A | C2-N3 | 6.92 | 1.39 | 1.33 |
| 1 | AA | 898 | G | O4'-C1' | 6.92 | 1.50 | 1.41 |
| 1 | AA | 1332 | A | C4'-O4' | -6.92 | 1.36 | 1.45 |
| 26 | BB | 299 | A | C3'-O3' | 6.92 | 1.51 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 479 | A | C6-N1 | -6.92 | 1.30 | 1.35 |
| 26 | BB | 1517 | G | P-O5' | 6.92 | 1.66 | 1.59 |
| 26 | BB | 1707 | G | N1-C2 | 6.92 | 1.43 | 1.37 |
| 26 | BB | 2559 | C | C4-N4 | -6.92 | 1.27 | 1.33 |
| 26 | BB | 2722 | G | N3-C4 | 6.92 | 1.40 | 1.35 |
| 26 | BB | 1676 | A | C5'-C4' | 6.92 | 1.59 | 1.51 |
| 26 | BB | 1983 | G | N3-C4 | 6.92 | 1.40 | 1.35 |
| 25 | BA | 110 | C | C5'-C4' | 6.92 | 1.59 | 1.51 |
| 26 | BB | 2760 | C | P-O5' | 6.92 | 1.66 | 1.59 |
| 2 | AB | 43 | G | P-O5' | 6.92 | 1.66 | 1.59 |
| 26 | BB | 1534 | U | C5'-C4' | 6.92 | 1.59 | 1.51 |
| 26 | BB | 2447 | G | N9-C8 | 6.92 | 1.42 | 1.37 |
| 26 | BB | 2181 | U | C2-N3 | 6.91 | 1.42 | 1.37 |
| 1 | AA | 1022 | A | C3'-C2' | 6.91 | 1.60 | 1.52 |
| 4 | AD | 10 | G | O4'-C1' | 6.91 | 1.50 | 1.41 |
| 25 | BA | 70 | C | C2-O2 | -6.91 | 1.18 | 1.24 |
| 26 | BB | 1621 | U | O3'-P | 6.91 | 1.69 | 1.61 |
| 26 | BB | 2099 | U | C5-C6 | 6.91 | 1.40 | 1.34 |
| 26 | BB | 621 | A | C5-C4 | 6.91 | 1.43 | 1.38 |
| 26 | BB | 1072 | C | N3-C4 | 6.91 | 1.38 | 1.33 |
| 26 | BB | 2080 | A | P-O5' | 6.91 | 1.66 | 1.59 |
| 1 | AA | 727 | G | P-O5' | 6.91 | 1.66 | 1.59 |
| 26 | BB | 1738 | G | C6-N1 | 6.91 | 1.44 | 1.39 |
| 1 | AA | 481 | G | C2'-C1' | 6.91 | 1.60 | 1.53 |
| 25 | BA | 14 | U | C3'-C2' | 6.91 | 1.60 | 1.52 |
| 25 | BA | 77 | U | N1-C2 | 6.91 | 1.44 | 1.38 |
| 26 | BB | 169 | G | C8-N7 | -6.91 | 1.26 | 1.30 |
| 26 | BB | 874 | G | C5'-C4' | 6.91 | 1.59 | 1.51 |
| 1 | AA | 290 | C | C4-C5 | 6.90 | 1.48 | 1.43 |
| 26 | BB | 1332 | G | N9-C8 | 6.90 | 1.42 | 1.37 |
| 26 | BB | 2597 | G | O3'-P | 6.90 | 1.69 | 1.61 |
| 1 | AA | 389 | A | N9-C8 | 6.90 | 1.43 | 1.37 |
| 1 | AA | 1240 | U | C4'-O4' | -6.90 | 1.36 | 1.45 |
| 26 | BB | 806 | C | C5-C6 | 6.90 | 1.39 | 1.34 |
| 1 | AA | 149 | A | O3'-P | 6.90 | 1.69 | 1.61 |
| 1 | AA | 726 | C | C5'-C4' | 6.90 | 1.59 | 1.51 |
| 26 | BB | 102 | U | C4-O4 | 6.90 | 1.29 | 1.23 |
| 26 | BB | 220 | G | C5'-C4' | 6.90 | 1.59 | 1.51 |
| 26 | BB | 401 | A | N3-C4 | 6.90 | 1.39 | 1.34 |
| 26 | BB | 428 | A | C8-N7 | -6.90 | 1.26 | 1.31 |
| 26 | BB | 1042 | G | C8-N7 | -6.90 | 1.26 | 1.30 |
| 26 | BB | 1672 | A | P-O5' | 6.90 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1913 | A | P-O5' | 6.90 | 1.66 | 1.59 |
| 26 | BB | 1936 | A | N7-C5 | -6.90 | 1.35 | 1.39 |
| 26 | BB | 2243 | U | C2'-C1' | 6.90 | 1.60 | 1.53 |
| 1 | AA | 1349 | A | C8-N7 | -6.90 | 1.26 | 1.31 |
| 1 | AA | 1365 | G | N1-C2 | 6.90 | 1.43 | 1.37 |
| 26 | BB | 1054 | A | C4'-C3' | -6.90 | 1.45 | 1.53 |
| 26 | BB | 563 | A | P-O5' | 6.90 | 1.66 | 1.59 |
| 1 | AA | 206 | C | N3-C4 | 6.89 | 1.38 | 1.33 |
| 1 | AA | 300 | A | N7-C5 | 6.89 | 1.43 | 1.39 |
| 1 | AA | 481 | G | C5-C4 | -6.89 | 1.33 | 1.38 |
| 26 | BB | 472 | A | C6-N1 | -6.89 | 1.30 | 1.35 |
| 26 | BB | 2139 | U | C2-O2 | 6.89 | 1.28 | 1.22 |
| 1 | AA | 985 | C | P-O5' | 6.89 | 1.66 | 1.59 |
| 1 | AA | 1099 | G | N1-C2 | 6.89 | 1.43 | 1.37 |
| 26 | BB | 213 | A | P-O5' | 6.89 | 1.66 | 1.59 |
| 26 | BB | 1933 | G | O3'-P | 6.89 | 1.69 | 1.61 |
| 26 | BB | 2003 | A | C5'-C4' | 6.89 | 1.59 | 1.51 |
| 26 | BB | 1878 | G | N3-C4 | 6.89 | 1.40 | 1.35 |
| 26 | BB | 2745 | C | P-O5' | 6.89 | 1.66 | 1.59 |
| 26 | BB | 212 | G | C6-O6 | -6.89 | 1.18 | 1.24 |
| 54 | B3 | 47 | TYR | CD2-CE2 | 6.89 | 1.49 | 1.39 |
| 1 | AA | 1367 | C | N3-C4 | 6.89 | 1.38 | 1.33 |
| 1 | AA | 1455 | G | N1-C2 | 6.89 | 1.43 | 1.37 |
| 3 | AC | 46 | C | N1-C2 | 6.89 | 1.47 | 1.40 |
| 26 | BB | 997 | G | C5-C4 | -6.89 | 1.33 | 1.38 |
| 26 | BB | 1687 | G | N1-C2 | -6.89 | 1.32 | 1.37 |
| 1 | AA | 46 | G | C2-N2 | -6.88 | 1.27 | 1.34 |
| 26 | BB | 1412 | U | N1-C2 | 6.88 | 1.44 | 1.38 |
| 26 | BB | 1877 | A | N7-C5 | -6.88 | 1.35 | 1.39 |
| 26 | BB | 2778 | A | C4'-O4' | -6.88 | 1.36 | 1.45 |
| 26 | BB | 2881 | U | N3-C4 | 6.88 | 1.44 | 1.38 |
| 1 | AA | 976 | G | C3'-C2' | 6.88 | 1.60 | 1.52 |
| 26 | BB | 1695 | G | N9-C8 | -6.88 | 1.33 | 1.37 |
| 26 | BB | 58 | G | C8-N7 | 6.88 | 1.35 | 1.30 |
| 26 | BB | 1044 | C | N3-C4 | 6.88 | 1.38 | 1.33 |
| 1 | AA | 481 | G | N9-C4 | 6.88 | 1.43 | 1.38 |
| 26 | BB | 1201 | U | O3'-P | 6.88 | 1.69 | 1.61 |
| 1 | AA | 529 | G | C2'-C1' | 6.88 | 1.60 | 1.53 |
| 26 | BB | 41 | C | P-O5' | 6.88 | 1.66 | 1.59 |
| 26 | BB | 312 | G | O4'-C1' | -6.88 | 1.32 | 1.41 |
| 26 | BB | 1773 | A | O4'-C1' | 6.88 | 1.50 | 1.41 |
| 26 | BB | 2024 | G | C6-N1 | 6.88 | 1.44 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2747 | G | P-O5' | 6.88 | 1.66 | 1.59 |
| 26 | BB | 2811 | G | O5'-C5' | -6.88 | 1.31 | 1.42 |
| 25 | BA | 24 | G | N7-C5 | 6.88 | 1.43 | 1.39 |
| 26 | BB | 726 | G | C6-N1 | 6.88 | 1.44 | 1.39 |
| 26 | BB | 2113 | U | C2-O2 | -6.88 | 1.16 | 1.22 |
| 26 | BB | 2554 | U | N1-C2 | 6.88 | 1.44 | 1.38 |
| 1 | AA | 580 | C | C2'-C1' | 6.88 | 1.60 | 1.53 |
| 26 | BB | 297 | G | C2-N3 | 6.88 | 1.38 | 1.32 |
| 26 | BB | 684 | G | C5'-C4' | 6.88 | 1.59 | 1.51 |
| 26 | BB | 1244 | A | N9-C4 | 6.88 | 1.42 | 1.37 |
| 26 | BB | 1587 | G | N7-C5 | -6.88 | 1.35 | 1.39 |
| 26 | BB | 2576 | G | O3'-P | 6.88 | 1.69 | 1.61 |
| 1 | AA | 777 | A | C6-N6 | -6.87 | 1.28 | 1.33 |
| 26 | BB | 1380 | G | C5'-C4' | 6.87 | 1.59 | 1.51 |
| 26 | BB | 1606 | C | C4-N4 | 6.87 | 1.40 | 1.33 |
| 1 | AA | 324 | G | N3-C4 | 6.87 | 1.40 | 1.35 |
| 26 | BB | 118 | A | C5-C4 | -6.87 | 1.33 | 1.38 |
| 26 | BB | 141 | G | N9-C4 | -6.87 | 1.32 | 1.38 |
| 1 | AA | 1349 | A | C5-C4 | -6.87 | 1.33 | 1.38 |
| 26 | BB | 1683 | U | C5-C6 | 6.87 | 1.40 | 1.34 |
| 26 | BB | 276 | U | P-O5' | 6.87 | 1.66 | 1.59 |
| 26 | BB | 846 | U | C2-O2 | 6.87 | 1.28 | 1.22 |
| 26 | BB | 1689 | A | N9-C4 | -6.87 | 1.33 | 1.37 |
| 26 | BB | 2629 | U | C4-C5 | 6.87 | 1.49 | 1.43 |
| 25 | BA | 26 | C | C4'-C3' | -6.87 | 1.45 | 1.53 |
| 26 | BB | 390 | U | C5'-C4' | 6.87 | 1.59 | 1.51 |
| 26 | BB | 468 | G | N3-C4 | 6.87 | 1.40 | 1.35 |
| 1 | AA | 1097 | C | N3-C4 | 6.86 | 1.38 | 1.33 |
| 1 | AA | 1162 | C | C2-O2 | -6.86 | 1.18 | 1.24 |
| 26 | BB | 553 | G | C4'-O4' | -6.86 | 1.36 | 1.45 |
| 26 | BB | 815 | C | C2-O2 | -6.86 | 1.18 | 1.24 |
| 26 | BB | 1589 | U | N1-C2 | 6.86 | 1.44 | 1.38 |
| 1 | AA | 946 | A | C4'-O4' | -6.86 | 1.36 | 1.45 |
| 1 | AA | 1422 | G | N9-C8 | -6.86 | 1.33 | 1.37 |
| 26 | BB | 181 | A | O3'-P | 6.86 | 1.69 | 1.61 |
| 26 | BB | 1792 | G | C2'-O2' | 6.86 | 1.50 | 1.41 |
| 26 | BB | 2230 | G | O3'-P | -6.86 | 1.52 | 1.61 |
| 26 | BB | 2617 | U | C4'-O4' | -6.86 | 1.36 | 1.45 |
| 26 | BB | 2775 | G | N3-C4 | 6.86 | 1.40 | 1.35 |
| 26 | BB | 232 | G | C2'-C1' | -6.86 | 1.45 | 1.53 |
| 1 | AA | 729 | A | C5'-C4' | 6.86 | 1.59 | 1.51 |
| 26 | BB | 1061 | U | N1-C2 | 6.86 | 1.44 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 283 | G | C5-C4 | 6.86 | 1.43 | 1.38 |
| 26 | BB | 467 | G | N9-C8 | 6.86 | 1.42 | 1.37 |
| 26 | BB | 720 | U | N3-C4 | 6.86 | 1.44 | 1.38 |
| 26 | BB | 733 | G | C8-N7 | 6.86 | 1.35 | 1.30 |
| 26 | BB | 1729 | U | C3'-O3' | -6.86 | 1.32 | 1.42 |
| 26 | BB | 1884 | G | N3-C4 | 6.86 | 1.40 | 1.35 |
| 26 | BB | 1927 | A | P-O5' | 6.86 | 1.66 | 1.59 |
| 26 | BB | 2883 | A | C5-C6 | 6.86 | 1.47 | 1.41 |
| 26 | BB | 1288 | G | C5'-C4' | 6.86 | 1.59 | 1.51 |
| 26 | BB | 2001 | C | C4'-O4' | -6.86 | 1.36 | 1.45 |
| 26 | BB | 2174 | C | C5-C6 | 6.86 | 1.39 | 1.34 |
| 1 | AA | 719 | C | C3'-C2' | 6.85 | 1.60 | 1.52 |
| 26 | BB | 382 | A | N1-C2 | -6.85 | 1.28 | 1.34 |
| 26 | BB | 988 | A | C2'-C1' | 6.85 | 1.60 | 1.53 |
| 26 | BB | 2886 | A | C2-N3 | 6.85 | 1.39 | 1.33 |
| 1 | AA | 1481 | U | C2-N3 | 6.85 | 1.42 | 1.37 |
| 4 | AD | 48 | U | N3-C4 | 6.85 | 1.44 | 1.38 |
| 26 | BB | 514 | A | O3'-P | 6.85 | 1.69 | 1.61 |
| 26 | BB | 710 | U | C2-O2 | 6.85 | 1.28 | 1.22 |
| 26 | BB | 2028 | U | C4-C5 | 6.85 | 1.49 | 1.43 |
| 26 | BB | 2432 | A | C1'-N9 | 6.85 | 1.59 | 1.48 |
| 26 | BB | 2711 | A | P-O5' | 6.85 | 1.66 | 1.59 |
| 26 | BB | 2729 | G | P-O5' | 6.85 | 1.66 | 1.59 |
| 1 | AA | 39 | G | C3'-C2' | 6.85 | 1.60 | 1.52 |
| 1 | AA | 440 | C | C2-N3 | 6.85 | 1.41 | 1.35 |
| 26 | BB | 1116 | G | P-O5' | 6.85 | 1.66 | 1.59 |
| 26 | BB | 1234 | U | C2-N3 | 6.85 | 1.42 | 1.37 |
| 26 | BB | 1580 | A | C2-N3 | 6.85 | 1.39 | 1.33 |
| 26 | BB | 1723 | G | C6-N1 | 6.85 | 1.44 | 1.39 |
| 1 | AA | 148 | G | C6-O6 | -6.85 | 1.18 | 1.24 |
| 1 | AA | 1016 | A | C4'-O4' | -6.85 | 1.36 | 1.45 |
| 1 | AA | 1039 | G | O3'-P | 6.85 | 1.69 | 1.61 |
| 1 | AA | 1439 | G | C3'-C2' | 6.85 | 1.60 | 1.52 |
| 26 | BB | 2413 | G | C2'-C1' | 6.85 | 1.60 | 1.53 |
| 1 | AA | 22 | G | C5-C4 | -6.85 | 1.33 | 1.38 |
| 1 | AA | 127 | G | P-O5' | -6.85 | 1.52 | 1.59 |
| 1 | AA | 957 | U | N3-C4 | 6.85 | 1.44 | 1.38 |
| 1 | AA | 995 | C | N1-C6 | 6.85 | 1.41 | 1.37 |
| 1 | AA | 1124 | G | C3'-C2' | -6.85 | 1.45 | 1.52 |
| 25 | BA | 112 | G | O4'-C1' | 6.85 | 1.50 | 1.41 |
| 26 | BB | 2721 | A | C2'-C1' | 6.85 | 1.60 | 1.53 |
| 41 | BQ | 25 | ARG | CZ-NH1 | 6.85 | 1.42 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 585 | G | C2-N3 | 6.85 | 1.38 | 1.32 |
| 2 | AB | 49 | G | N9-C4 | -6.85 | 1.32 | 1.38 |
| 26 | BB | 1095 | A | N3-C4 | 6.85 | 1.39 | 1.34 |
| 26 | BB | 1573 | G | C8-N7 | -6.85 | 1.26 | 1.30 |
| 26 | BB | 1819 | A | N7-C5 | 6.85 | 1.43 | 1.39 |
| 26 | BB | 1855 | U | C5-C6 | 6.85 | 1.40 | 1.34 |
| 1 | AA | 1280 | A | C5-C6 | 6.84 | 1.47 | 1.41 |
| 1 | AA | 1439 | G | C5'-C4' | 6.84 | 1.59 | 1.51 |
| 26 | BB | 216 | A | O3'-P | 6.84 | 1.69 | 1.61 |
| 26 | BB | 2143 | C | P-O5' | 6.84 | 1.66 | 1.59 |
| 26 | BB | 496 | G | C2-N3 | 6.84 | 1.38 | 1.32 |
| 26 | BB | 2358 | A | N7-C5 | 6.84 | 1.43 | 1.39 |
| 1 | AA | 1091 | U | C2-N3 | 6.84 | 1.42 | 1.37 |
| 4 | AD | 53 | G | C8-N7 | 6.84 | 1.35 | 1.30 |
| 26 | BB | 266 | G | C3'-C2' | -6.84 | 1.45 | 1.52 |
| 26 | BB | 404 | A | C5-C6 | -6.84 | 1.34 | 1.41 |
| 26 | BB | 551 | G | N1-C2 | 6.84 | 1.43 | 1.37 |
| 26 | BB | 1526 | C | O3'-P | 6.84 | 1.69 | 1.61 |
| 26 | BB | 2765 | A | N7-C5 | 6.84 | 1.43 | 1.39 |
| 26 | BB | 2841 | C | C5'-C4' | 6.84 | 1.59 | 1.51 |
| 1 | AA | 269 | C | O3'-P | 6.84 | 1.69 | 1.61 |
| 1 | AA | 589 | U | C4-C5 | 6.84 | 1.49 | 1.43 |
| 26 | BB | 430 | A | N7-C5 | 6.84 | 1.43 | 1.39 |
| 26 | BB | 890 | C | N1-C6 | 6.84 | 1.41 | 1.37 |
| 1 | AA | 105 | G | C6-N1 | 6.84 | 1.44 | 1.39 |
| 1 | AA | 236 | A | O3'-P | 6.84 | 1.69 | 1.61 |
| 26 | BB | 2234 | G | N9-C4 | 6.84 | 1.43 | 1.38 |
| 1 | AA | 486 | U | C5-C6 | 6.84 | 1.40 | 1.34 |
| 1 | AA | 1382 | C | P-O5' | 6.84 | 1.66 | 1.59 |
| 1 | AA | 1445 | U | C4-C5 | 6.84 | 1.49 | 1.43 |
| 26 | BB | 326 | G | N3-C4 | -6.84 | 1.30 | 1.35 |
| 26 | BB | 778 | G | N1-C2 | 6.84 | 1.43 | 1.37 |
| 26 | BB | 1857 | G | C6-O6 | -6.84 | 1.18 | 1.24 |
| 26 | BB | 416 | U | P-O5' | 6.83 | 1.66 | 1.59 |
| 26 | BB | 1859 | U | N1-C2 | 6.83 | 1.44 | 1.38 |
| 26 | BB | 2882 | A | O5'-C5' | -6.83 | 1.31 | 1.42 |
| 1 | AA | 75 | G | C5'-C4' | 6.83 | 1.59 | 1.51 |
| 26 | BB | 2473 | U | N3-C4 | 6.83 | 1.44 | 1.38 |
| 1 | AA | 431 | A | N9-C4 | 6.83 | 1.42 | 1.37 |
| 1 | AA | 563 | A | O4'-C1' | 6.83 | 1.50 | 1.41 |
| 1 | AA | 819 | A | N3-C4 | 6.83 | 1.39 | 1.34 |
| 1 | AA | 1283 | U | C2'-C1' | -6.83 | 1.45 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1408 | G | C5-C6 | 6.83 | 1.49 | 1.42 |
| 1 | AA | 381 | C | C2-N3 | 6.83 | 1.41 | 1.35 |
| 1 | AA | 829 | G | C6-N1 | 6.83 | 1.44 | 1.39 |
| 1 | AA | 927 | G | N7-C5 | 6.83 | 1.43 | 1.39 |
| 1 | AA | 1393 | U | N1-C6 | 6.83 | 1.44 | 1.38 |
| 2 | AB | 47 | U | O3'-P | 6.83 | 1.69 | 1.61 |
| 26 | BB | 1291 | C | C5-C6 | -6.83 | 1.28 | 1.34 |
| 26 | BB | 1519 | G | C5-C4 | 6.83 | 1.43 | 1.38 |
| 26 | BB | 230 | G | N7-C5 | 6.83 | 1.43 | 1.39 |
| 26 | BB | 1577 | C | C4'-C3' | 6.83 | 1.60 | 1.53 |
| 25 | BA | 46 | A | C5'-C4' | 6.83 | 1.59 | 1.51 |
| 26 | BB | 544 | C | O3'-P | 6.83 | 1.69 | 1.61 |
| 26 | BB | 568 | U | O3'-P | 6.83 | 1.69 | 1.61 |
| 26 | BB | 1161 | C | C4'-C3' | -6.83 | 1.45 | 1.53 |
| 26 | BB | 1525 | A | C6-N1 | -6.83 | 1.30 | 1.35 |
| 26 | BB | 2278 | A | C3'-C2' | 6.83 | 1.60 | 1.52 |
| 1 | AA | 83 | C | C4'-O4' | -6.82 | 1.36 | 1.45 |
| 1 | AA | 128 | G | C6-N1 | 6.82 | 1.44 | 1.39 |
| 1 | AA | 1128 | C | C5-C6 | 6.82 | 1.39 | 1.34 |
| 26 | BB | 1410 | G | C2-N3 | 6.82 | 1.38 | 1.32 |
| 26 | BB | 1447 | C | C4-N4 | 6.82 | 1.40 | 1.33 |
| 26 | BB | 1705 | A | C5-C4 | -6.82 | 1.33 | 1.38 |
| 26 | BB | 2143 | C | C2-N3 | 6.82 | 1.41 | 1.35 |
| 1 | AA | 663 | A | N7-C5 | -6.82 | 1.35 | 1.39 |
| 26 | BB | 1953 | A | N3-C4 | 6.82 | 1.39 | 1.34 |
| 26 | BB | 2340 | A | N1-C2 | -6.82 | 1.28 | 1.34 |
| 1 | AA | 1046 | A | P-O5' | 6.82 | 1.66 | 1.59 |
| 1 | AA | 1050 | G | N1-C2 | 6.82 | 1.43 | 1.37 |
| 26 | BB | 321 | U | C2-N3 | 6.82 | 1.42 | 1.37 |
| 26 | BB | 2540 | C | O3'-P | 6.82 | 1.69 | 1.61 |
| 26 | BB | 2681 | C | N1-C6 | 6.82 | 1.41 | 1.37 |
| 26 | BB | 142 | A | O3'-P | 6.82 | 1.69 | 1.61 |
| 26 | BB | 1295 | C | C5'-C4' | 6.82 | 1.59 | 1.51 |
| 26 | BB | 1813 | G | C2-N3 | 6.82 | 1.38 | 1.32 |
| 26 | BB | 2383 | G | C2-N3 | 6.82 | 1.38 | 1.32 |
| 1 | AA | 507 | C | P-O5' | -6.82 | 1.52 | 1.59 |
| 3 | AC | 40 | G | N9-C4 | -6.82 | 1.32 | 1.38 |
| 26 | BB | 307 | G | C8-N7 | -6.82 | 1.26 | 1.30 |
| 26 | BB | 684 | G | N9-C8 | 6.82 | 1.42 | 1.37 |
| 26 | BB | 1374 | G | N3-C4 | 6.82 | 1.40 | 1.35 |
| 26 | BB | 2093 | G | N9-C8 | -6.82 | 1.33 | 1.37 |
| 26 | BB | 2720 | U | P-O5' | 6.82 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 762 | U | C5-C6 | 6.82 | 1.40 | 1.34 |
| 1 | AA | 1159 | U | N1-C6 | -6.82 | 1.31 | 1.38 |
| 4 | AD | 20 | G | C8-N7 | 6.82 | 1.35 | 1.30 |
| 26 | BB | 1140 | C | C4'-O4' | -6.82 | 1.36 | 1.45 |
| 26 | BB | 1542 | U | C4-O4 | -6.82 | 1.18 | 1.23 |
| 26 | BB | 1713 | A | C6-N1 | 6.82 | 1.40 | 1.35 |
| 26 | BB | 1894 | C | C4'-O4' | -6.82 | 1.36 | 1.45 |
| 1 | AA | 111 | G | C2-N3 | 6.81 | 1.38 | 1.32 |
| 1 | AA | 464 | U | C2-N3 | 6.81 | 1.42 | 1.37 |
| 1 | AA | 1468 | A | N9-C8 | 6.81 | 1.43 | 1.37 |
| 26 | BB | 1105 | U | C2-N3 | 6.81 | 1.42 | 1.37 |
| 1 | AA | 396 | C | C2'-O2' | 6.81 | 1.50 | 1.41 |
| 1 | AA | 1368 | A | N1-C2 | 6.81 | 1.40 | 1.34 |
| 26 | BB | 668 | A | P-O5' | -6.81 | 1.52 | 1.59 |
| 26 | BB | 684 | G | N3-C4 | 6.81 | 1.40 | 1.35 |
| 26 | BB | 1492 | G | P-O5' | -6.81 | 1.52 | 1.59 |
| 26 | BB | 1903 | G | C5-C4 | 6.81 | 1.43 | 1.38 |
| 26 | BB | 2106 | U | C5-C6 | 6.81 | 1.40 | 1.34 |
| 1 | AA | 1337 | G | C5-C4 | -6.81 | 1.33 | 1.38 |
| 1 | AA | 1337 | G | N9-C8 | 6.81 | 1.42 | 1.37 |
| 26 | BB | 251 | A | C8-N7 | -6.81 | 1.26 | 1.31 |
| 1 | AA | 923 | A | N3-C4 | 6.81 | 1.39 | 1.34 |
| 26 | BB | 379 | G | N7-C5 | -6.81 | 1.35 | 1.39 |
| 26 | BB | 888 | C | C2-N3 | 6.81 | 1.41 | 1.35 |
| 26 | BB | 1181 | U | C4-O4 | -6.81 | 1.18 | 1.23 |
| 26 | BB | 1189 | A | C6-N1 | 6.81 | 1.40 | 1.35 |
| 26 | BB | 1541 | C | O3'-P | 6.81 | 1.69 | 1.61 |
| 26 | BB | 2856 | A | C5-C4 | 6.81 | 1.43 | 1.38 |
| 1 | AA | 123 | U | P-O5' | 6.81 | 1.66 | 1.59 |
| 1 | AA | 1365 | G | C5-C4 | -6.81 | 1.33 | 1.38 |
| 26 | BB | 283 | G | N9-C8 | -6.81 | 1.33 | 1.37 |
| 26 | BB | 1220 | G | N7-C5 | -6.81 | 1.35 | 1.39 |
| 26 | BB | 2165 | C | P-O5' | 6.81 | 1.66 | 1.59 |
| 1 | AA | 772 | U | C5'-C4' | 6.81 | 1.59 | 1.51 |
| 26 | BB | 793 | A | N7-C5 | -6.81 | 1.35 | 1.39 |
| 26 | BB | 1057 | A | C2-N3 | -6.81 | 1.27 | 1.33 |
| 26 | BB | 1971 | U | C4-C5 | 6.81 | 1.49 | 1.43 |
| 1 | AA | 109 | A | C5-C4 | -6.80 | 1.33 | 1.38 |
| 1 | AA | 975 | A | C2-N3 | 6.80 | 1.39 | 1.33 |
| 25 | BA | 20 | G | C8-N7 | -6.80 | 1.26 | 1.30 |
| 25 | BA | 92 | C | N1-C6 | 6.80 | 1.41 | 1.37 |
| 26 | BB | 132 | G | C8-N7 | -6.80 | 1.26 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1116 | G | C5'-C4' | 6.80 | 1.59 | 1.51 |
| 1 | AA | 23 | C | C4'-O4' | -6.80 | 1.36 | 1.45 |
| 26 | BB | 489 | G | C8-N7 | 6.80 | 1.35 | 1.30 |
| 25 | BA | 21 | G | C5-C4 | -6.80 | 1.33 | 1.38 |
| 25 | BA | 60 | C | C4'-C3' | -6.80 | 1.45 | 1.53 |
| 26 | BB | 94 | A | C5'-C4' | 6.80 | 1.59 | 1.51 |
| 26 | BB | 581 | C | N1-C6 | 6.80 | 1.41 | 1.37 |
| 26 | BB | 697 | G | P-O5' | 6.80 | 1.66 | 1.59 |
| 26 | BB | 867 | C | P-O5' | 6.80 | 1.66 | 1.59 |
| 26 | BB | 988 | A | C5'-C4' | 6.80 | 1.59 | 1.51 |
| 26 | BB | 1350 | C | O3'-P | 6.80 | 1.69 | 1.61 |
| 26 | BB | 2146 | C | C4'-O4' | -6.80 | 1.36 | 1.45 |
| 1 | AA | 961 | U | C5'-C4' | 6.80 | 1.59 | 1.51 |
| 26 | BB | 2170 | A | N7-C5 | -6.80 | 1.35 | 1.39 |
| 1 | AA | 1410 | A | C3'-C2' | -6.80 | 1.45 | 1.52 |
| 26 | BB | 170 | U | C2-N3 | 6.80 | 1.42 | 1.37 |
| 26 | BB | 1709 | U | C3'-C2' | 6.80 | 1.60 | 1.52 |
| 26 | BB | 36 | G | C6-N1 | 6.80 | 1.44 | 1.39 |
| 26 | BB | 380 | G | N7-C5 | -6.80 | 1.35 | 1.39 |
| 26 | BB | 1551 | A | N3-C4 | 6.80 | 1.39 | 1.34 |
| 26 | BB | 2667 | C | C4-C5 | 6.80 | 1.48 | 1.43 |
| 26 | BB | 818 | G | N7-C5 | 6.79 | 1.43 | 1.39 |
| 1 | AA | 116 | A | P-O5' | 6.79 | 1.66 | 1.59 |
| 26 | BB | 1422 | G | N9-C4 | -6.79 | 1.32 | 1.38 |
| 26 | BB | 1767 | G | N3-C4 | 6.79 | 1.40 | 1.35 |
| 26 | BB | 2039 | U | C2'-C1' | 6.79 | 1.60 | 1.53 |
| 26 | BB | 2472 | G | N9-C8 | 6.79 | 1.42 | 1.37 |
| 2 | AB | 21 | A | C4'-O4' | -6.79 | 1.36 | 1.45 |
| 26 | BB | 35 | G | C3'-C2' | 6.79 | 1.60 | 1.52 |
| 26 | BB | 505 | A | O3'-P | 6.79 | 1.69 | 1.61 |
| 26 | BB | 1853 | A | N3-C4 | 6.79 | 1.39 | 1.34 |
| 26 | BB | 2059 | A | C6-N6 | 6.79 | 1.39 | 1.33 |
| 26 | BB | 2774 | C | C2-N3 | 6.79 | 1.41 | 1.35 |
| 26 | BB | 2801 | G | C2-N3 | 6.79 | 1.38 | 1.32 |
| 1 | AA | 344 | A | C2'-O2' | -6.79 | 1.32 | 1.41 |
| 26 | BB | 621 | A | C5-C6 | 6.79 | 1.47 | 1.41 |
| 26 | BB | 948 | C | P-O5' | 6.79 | 1.66 | 1.59 |
| 26 | BB | 1833 | C | C5'-C4' | 6.79 | 1.59 | 1.51 |
| 26 | BB | 2413 | G | N3-C4 | 6.79 | 1.40 | 1.35 |
| 26 | BB | 2649 | C | N3-C4 | 6.79 | 1.38 | 1.33 |
| 26 | BB | 2857 | G | N9-C8 | 6.79 | 1.42 | 1.37 |
| 26 | BB | 2864 | G | P-O5' | 6.79 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 867 | G | P-O5' | 6.79 | 1.66 | 1.59 |
| 1 | AA | 1530 | G | C5-C4 | -6.79 | 1.33 | 1.38 |
| 26 | BB | 2421 | G | N3-C4 | 6.79 | 1.40 | 1.35 |
| 1 | AA | 412 | A | C5'-C4' | 6.78 | 1.59 | 1.51 |
| 1 | AA | 187 | G | N1-C2 | 6.78 | 1.43 | 1.37 |
| 1 | AA | 837 | U | O3'-P | 6.78 | 1.69 | 1.61 |
| 1 | AA | 53 | A | C5'-C4' | 6.78 | 1.59 | 1.51 |
| 1 | AA | 1148 | U | P-O5' | 6.78 | 1.66 | 1.59 |
| 26 | BB | 680 | C | N1-C6 | 6.78 | 1.41 | 1.37 |
| 26 | BB | 1281 | G | C5-C6 | 6.78 | 1.49 | 1.42 |
| 1 | AA | 1087 | G | C2-N3 | 6.78 | 1.38 | 1.32 |
| 2 | AB | 39 | A | N9-C4 | 6.78 | 1.42 | 1.37 |
| 26 | BB | 129 | C | N1-C2 | 6.78 | 1.47 | 1.40 |
| 1 | AA | 180 | U | C2-N3 | 6.78 | 1.42 | 1.37 |
| 1 | AA | 1312 | G | O4'-C1' | 6.78 | 1.50 | 1.41 |
| 1 | AA | 1360 | A | C5-C6 | 6.78 | 1.47 | 1.41 |
| 26 | BB | 1419 | A | P-O5' | 6.78 | 1.66 | 1.59 |
| 26 | BB | 2480 | C | N1-C6 | 6.78 | 1.41 | 1.37 |
| 1 | AA | 107 | G | N3-C4 | 6.77 | 1.40 | 1.35 |
| 1 | AA | 1416 | G | C4'-O4' | -6.77 | 1.36 | 1.45 |
| 26 | BB | 268 | C | C4-C5 | 6.77 | 1.48 | 1.43 |
| 26 | BB | 1375 | U | N1-C2 | 6.77 | 1.44 | 1.38 |
| 26 | BB | 1970 | A | P-O5' | 6.77 | 1.66 | 1.59 |
| 26 | BB | 2298 | A | C4'-O4' | -6.77 | 1.36 | 1.45 |
| 26 | BB | 2309 | A | N7-C5 | 6.77 | 1.43 | 1.39 |
| 1 | AA | 43 | C | P-O5' | 6.77 | 1.66 | 1.59 |
| 26 | BB | 2267 | A | C5'-C4' | 6.77 | 1.59 | 1.51 |
| 26 | BB | 2609 | U | P-O5' | 6.77 | 1.66 | 1.59 |
| 1 | AA | 120 | A | C6-N6 | 6.77 | 1.39 | 1.33 |
| 1 | AA | 237 | G | C8-N7 | -6.77 | 1.26 | 1.30 |
| 1 | AA | 243 | A | N1-C2 | -6.77 | 1.28 | 1.34 |
| 1 | AA | 998 | C | C4'-O4' | -6.77 | 1.36 | 1.45 |
| 1 | AA | 1128 | C | N3-C4 | 6.77 | 1.38 | 1.33 |
| 1 | AA | 1180 | A | C5'-C4' | 6.77 | 1.59 | 1.51 |
| 26 | BB | 508 | A | P-O5' | 6.77 | 1.66 | 1.59 |
| 26 | BB | 1313 | U | C5-C6 | 6.77 | 1.40 | 1.34 |
| 26 | BB | 1876 | A | C4'-C3' | -6.77 | 1.45 | 1.53 |
| 26 | BB | 2209 | G | C2-N3 | 6.77 | 1.38 | 1.32 |
| 26 | BB | 381 | G | N9-C8 | 6.77 | 1.42 | 1.37 |
| 26 | BB | 999 | U | C2-N3 | 6.77 | 1.42 | 1.37 |
| 26 | BB | 1378 | A | N3-C4 | 6.77 | 1.39 | 1.34 |
| 26 | BB | 1766 | G | N7-C5 | 6.77 | 1.43 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 913 | U | P-O5' | 6.77 | 1.66 | 1.59 |
| 26 | BB | 1031 | G | N7-C5 | -6.77 | 1.35 | 1.39 |
| 26 | BB | 2592 | G | N9-C8 | 6.77 | 1.42 | 1.37 |
| 1 | AA | 394 | G | N9-C4 | -6.76 | 1.32 | 1.38 |
| 1 | AA | 614 | C | C3'-C2' | 6.76 | 1.60 | 1.52 |
| 1 | AA | 713 | G | O3'-P | 6.76 | 1.69 | 1.61 |
| 1 | AA | 868 | C | N1-C6 | -6.76 | 1.33 | 1.37 |
| 1 | AA | 1213 | A | N3-C4 | 6.76 | 1.39 | 1.34 |
| 1 | AA | 349 | A | C6-N6 | 6.76 | 1.39 | 1.33 |
| 1 | AA | 1327 | C | C2-N3 | 6.76 | 1.41 | 1.35 |
| 26 | BB | 1551 | A | C6-N6 | 6.76 | 1.39 | 1.33 |
| 26 | BB | 1933 | G | C5-C4 | -6.76 | 1.33 | 1.38 |
| 1 | AA | 1365 | G | C2-N3 | 6.76 | 1.38 | 1.32 |
| 26 | BB | 713 | G | C2-N3 | 6.76 | 1.38 | 1.32 |
| 26 | BB | 781 | A | C8-N7 | 6.76 | 1.36 | 1.31 |
| 26 | BB | 812 | C | C5-C6 | -6.76 | 1.28 | 1.34 |
| 26 | BB | 933 | A | N7-C5 | 6.76 | 1.43 | 1.39 |
| 26 | BB | 2327 | A | N1-C2 | -6.76 | 1.28 | 1.34 |
| 1 | AA | 202 | G | C5-C4 | -6.76 | 1.33 | 1.38 |
| 26 | BB | 30 | G | N3-C4 | 6.76 | 1.40 | 1.35 |
| 26 | BB | 240 | C | C2-N3 | -6.76 | 1.30 | 1.35 |
| 26 | BB | 1305 | C | P-O5' | 6.76 | 1.66 | 1.59 |
| 1 | AA | 311 | C | N1-C6 | 6.76 | 1.41 | 1.37 |
| 1 | AA | 831 | A | N1-C2 | -6.76 | 1.28 | 1.34 |
| 1 | AA | 1279 | G | N1-C2 | 6.76 | 1.43 | 1.37 |
| 26 | BB | 1502 | A | N7-C5 | -6.76 | 1.35 | 1.39 |
| 1 | AA | 1409 | C | C3'-C2' | 6.76 | 1.60 | 1.52 |
| 6 | AF | 28 | PHE | CG-CD1 | 6.76 | 1.48 | 1.38 |
| 26 | BB | 794 | A | C2'-C1' | -6.76 | 1.46 | 1.53 |
| 26 | BB | 1195 | G | N1-C2 | 6.76 | 1.43 | 1.37 |
| 26 | BB | 1848 | A | N9-C4 | 6.76 | 1.42 | 1.37 |
| 26 | BB | 2267 | A | N7-C5 | 6.75 | 1.43 | 1.39 |
| 1 | AA | 52 | C | C2-O2 | -6.75 | 1.18 | 1.24 |
| 1 | AA | 238 | A | C5-C4 | 6.75 | 1.43 | 1.38 |
| 1 | AA | 515 | G | P-O5' | 6.75 | 1.66 | 1.59 |
| 1 | AA | 818 | G | N1-C2 | 6.75 | 1.43 | 1.37 |
| 1 | AA | 1165 | U | C3'-C2' | 6.75 | 1.60 | 1.52 |
| 26 | BB | 168 | G | N9-C8 | -6.75 | 1.33 | 1.37 |
| 26 | BB | 761 | A | C3'-O3' | -6.75 | 1.32 | 1.42 |
| 26 | BB | 1075 | C | C2-O2 | -6.75 | 1.18 | 1.24 |
| 26 | BB | 1580 | A | N3-C4 | 6.75 | 1.39 | 1.34 |
| 26 | BB | 2055 | C | C5'-C4' | 6.75 | 1.59 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2496 | C | P-O5' | -6.75 | 1.52 | 1.59 |
| 26 | BB | 2737 | G | P-O5' | 6.75 | 1.66 | 1.59 |
| 26 | BB | 2861 | U | C4-C5 | 6.75 | 1.49 | 1.43 |
| 26 | BB | 191 | A | N7-C5 | -6.75 | 1.35 | 1.39 |
| 26 | BB | 834 | G | N7-C5 | -6.75 | 1.35 | 1.39 |
| 26 | BB | 1391 | U | N1-C2 | 6.75 | 1.44 | 1.38 |
| 1 | AA | 1378 | C | C4'-O4' | -6.75 | 1.36 | 1.45 |
| 26 | BB | 956 | G | N9-C8 | -6.75 | 1.33 | 1.37 |
| 26 | BB | 2836 | U | O3'-P | 6.75 | 1.69 | 1.61 |
| 26 | BB | 2880 | C | N1-C6 | 6.75 | 1.41 | 1.37 |
| 1 | AA | 376 | G | C8-N7 | 6.75 | 1.34 | 1.30 |
| 1 | AA | 858 | G | N3-C4 | 6.75 | 1.40 | 1.35 |
| 1 | AA | 1326 | U | N1-C2 | 6.75 | 1.44 | 1.38 |
| 26 | BB | 799 | G | N9-C8 | -6.75 | 1.33 | 1.37 |
| 26 | BB | 1258 | U | C5-C6 | 6.75 | 1.40 | 1.34 |
| 26 | BB | 2081 | U | C4'-O4' | -6.75 | 1.36 | 1.45 |
| 1 | AA | 915 | A | C8-N7 | -6.75 | 1.26 | 1.31 |
| 2 | AB | 67 | G | C3'-C2' | 6.75 | 1.60 | 1.52 |
| 26 | BB | 1033 | U | C5-C6 | 6.75 | 1.40 | 1.34 |
| 26 | BB | 1271 | G | C4'-O4' | -6.75 | 1.36 | 1.45 |
| 1 | AA | 1528 | U | C2-N3 | 6.75 | 1.42 | 1.37 |
| 26 | BB | 771 | G | C2-N2 | 6.75 | 1.41 | 1.34 |
| 1 | AA | 1233 | G | N7-C5 | 6.74 | 1.43 | 1.39 |
| 1 | AA | 1502 | A | N9-C8 | -6.74 | 1.32 | 1.37 |
| 26 | BB | 676 | A | C2-N3 | 6.74 | 1.39 | 1.33 |
| 26 | BB | 2419 | U | C4-C5 | 6.74 | 1.49 | 1.43 |
| 26 | BB | 731 | C | N1-C6 | 6.74 | 1.41 | 1.37 |
| 26 | BB | 2616 | C | C4-N4 | 6.74 | 1.40 | 1.33 |
| 26 | BB | 2819 | G | O3'-P | 6.74 | 1.69 | 1.61 |
| 1 | AA | 130 | A | C5'-C4' | 6.74 | 1.59 | 1.51 |
| 1 | AA | 679 | C | C4-C5 | 6.74 | 1.48 | 1.43 |
| 1 | AA | 930 | C | C2-N3 | 6.74 | 1.41 | 1.35 |
| 1 | AA | 1379 | G | O3'-P | 6.74 | 1.69 | 1.61 |
| 1 | AA | 1449 | C | C4'-C3' | -6.74 | 1.45 | 1.53 |
| 4 | AD | 1 | C | O3'-P | 6.74 | 1.69 | 1.61 |
| 26 | BB | 802 | A | C8-N7 | 6.74 | 1.36 | 1.31 |
| 26 | BB | 1098 | A | N9-C4 | 6.74 | 1.41 | 1.37 |
| 26 | BB | 1238 | G | C2-N3 | 6.74 | 1.38 | 1.32 |
| 26 | BB | 165 | A | C5-C4 | -6.74 | 1.34 | 1.38 |
| 26 | BB | 179 | C | P-O5' | 6.74 | 1.66 | 1.59 |
| 26 | BB | 1516 | G | N9-C8 | 6.74 | 1.42 | 1.37 |
| 1 | AA | 758 | C | O3'-P | 6.74 | 1.69 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 951 | G | N1-C2 | 6.74 | 1.43 | 1.37 |
| 26 | BB | 1122 | G | N3-C4 | 6.74 | 1.40 | 1.35 |
| 26 | BB | 1600 | C | O3'-P | 6.74 | 1.69 | 1.61 |
| 26 | BB | 1604 | C | N1-C6 | 6.74 | 1.41 | 1.37 |
| 26 | BB | 1790 | C | P-O5' | 6.74 | 1.66 | 1.59 |
| 1 | AA | 1098 | C | N1-C6 | -6.73 | 1.33 | 1.37 |
| 1 | AA | 1171 | A | C6-N1 | -6.73 | 1.30 | 1.35 |
| 26 | BB | 886 | A | O4'-C1' | -6.73 | 1.32 | 1.41 |
| 1 | AA | 54 | C | N3-C4 | 6.73 | 1.38 | 1.33 |
| 1 | AA | 1371 | G | C8-N7 | -6.73 | 1.26 | 1.30 |
| 1 | AA | 1441 | A | O3'-P | 6.73 | 1.69 | 1.61 |
| 1 | AA | 1510 | C | N1-C6 | -6.73 | 1.33 | 1.37 |
| 2 | AB | 6 | C | P-O5' | 6.73 | 1.66 | 1.59 |
| 26 | BB | 561 | G | C8-N7 | -6.73 | 1.26 | 1.30 |
| 26 | BB | 2027 | G | N7-C5 | -6.73 | 1.35 | 1.39 |
| 26 | BB | 2059 | A | N1-C2 | -6.73 | 1.28 | 1.34 |
| 26 | BB | 2218 | G | N7-C5 | -6.73 | 1.35 | 1.39 |
| 1 | AA | 358 | U | C5-C6 | 6.73 | 1.40 | 1.34 |
| 2 | AB | 12 | U | N1-C6 | 6.73 | 1.44 | 1.38 |
| 26 | BB | 371 | A | P-O5' | 6.73 | 1.66 | 1.59 |
| 26 | BB | 899 | A | C4'-O4' | -6.73 | 1.36 | 1.45 |
| 26 | BB | 1573 | G | N9-C8 | 6.73 | 1.42 | 1.37 |
| 26 | BB | 2197 | U | C5'-C4' | 6.73 | 1.59 | 1.51 |
| 26 | BB | 2286 | G | N7-C5 | 6.73 | 1.43 | 1.39 |
| 26 | BB | 2460 | U | C5'-C4' | 6.73 | 1.59 | 1.51 |
| 1 | AA | 1346 | A | P-O5' | 6.73 | 1.66 | 1.59 |
| 26 | BB | 1003 | G | P-O5' | 6.73 | 1.66 | 1.59 |
| 26 | BB | 1901 | A | P-O5' | 6.73 | 1.66 | 1.59 |
| 26 | BB | 1973 | G | C8-N7 | 6.73 | 1.34 | 1.30 |
| 26 | BB | 96 | C | P-O5' | 6.73 | 1.66 | 1.59 |
| 26 | BB | 720 | U | C5-C6 | 6.73 | 1.40 | 1.34 |
| 26 | BB | 736 | C | C5'-C4' | 6.73 | 1.59 | 1.51 |
| 26 | BB | 1324 | G | C2-N3 | 6.73 | 1.38 | 1.32 |
| 26 | BB | 1659 | G | C8-N7 | -6.73 | 1.26 | 1.30 |
| 26 | BB | 825 | A | C6-N1 | -6.73 | 1.30 | 1.35 |
| 1 | AA | 639 | G | C6-N1 | 6.72 | 1.44 | 1.39 |
| 1 | AA | 1204 | A | C6-N6 | 6.72 | 1.39 | 1.33 |
| 25 | BA | 65 | U | C5'-C4' | 6.72 | 1.59 | 1.51 |
| 26 | BB | 617 | G | C6-O6 | -6.72 | 1.18 | 1.24 |
| 26 | BB | 784 | G | C8-N7 | -6.72 | 1.26 | 1.30 |
| 26 | BB | 2241 | A | C5'-C4' | 6.72 | 1.59 | 1.51 |
| 26 | BB | 2506 | U | C2-N3 | 6.72 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 299 | G | N3-C4 | -6.72 | 1.30 | 1.35 |
| 1 | AA | 380 | G | N3-C4 | 6.72 | 1.40 | 1.35 |
| 26 | BB | 122 | G | N1-C2 | 6.72 | 1.43 | 1.37 |
| 26 | BB | 797 | G | N1-C2 | 6.72 | 1.43 | 1.37 |
| 26 | BB | 1348 | C | O4'-C1' | 6.72 | 1.50 | 1.41 |
| 26 | BB | 2136 | G | N1-C2 | 6.72 | 1.43 | 1.37 |
| 26 | BB | 1977 | A | O3'-P | 6.72 | 1.69 | 1.61 |
| 1 | AA | 91 | U | C5'-C4' | 6.72 | 1.59 | 1.51 |
| 1 | AA | 133 | U | C5-C6 | 6.72 | 1.40 | 1.34 |
| 4 | AD | 73 | A | O3'-P | 6.72 | 1.69 | 1.61 |
| 26 | BB | 752 | A | C6-N6 | 6.72 | 1.39 | 1.33 |
| 26 | BB | 2473 | U | N1-C2 | 6.72 | 1.44 | 1.38 |
| 1 | AA | 305 | G | N7-C5 | 6.72 | 1.43 | 1.39 |
| 26 | BB | 2173 | A | N3-C4 | 6.72 | 1.38 | 1.34 |
| 26 | BB | 2371 | G | C2'-O2' | -6.72 | 1.32 | 1.41 |
| 1 | AA | 251 | G | N3-C4 | 6.72 | 1.40 | 1.35 |
| 26 | BB | 245 | G | N9-C8 | -6.72 | 1.33 | 1.37 |
| 26 | BB | 276 | U | O3'-P | 6.72 | 1.69 | 1.61 |
| 26 | BB | 735 | A | P-O5' | 6.72 | 1.66 | 1.59 |
| 1 | AA | 1066 | C | O3'-P | 6.71 | 1.69 | 1.61 |
| 3 | AC | 55 | A | N1-C2 | 6.71 | 1.40 | 1.34 |
| 26 | BB | 821 | A | C2'-O2' | 6.71 | 1.50 | 1.41 |
| 26 | BB | 1581 | G | P-O5' | 6.71 | 1.66 | 1.59 |
| 26 | BB | 1716 | U | C4'-O4' | -6.71 | 1.36 | 1.45 |
| 26 | BB | 1888 | G | C2'-C1' | 6.71 | 1.60 | 1.53 |
| 26 | BB | 711 | G | N7-C5 | -6.71 | 1.35 | 1.39 |
| 26 | BB | 1281 | G | N3-C4 | 6.71 | 1.40 | 1.35 |
| 26 | BB | 1641 | A | N9-C4 | -6.71 | 1.33 | 1.37 |
| 1 | AA | 175 | C | N3-C4 | 6.71 | 1.38 | 1.33 |
| 1 | AA | 949 | A | N9-C4 | 6.71 | 1.41 | 1.37 |
| 26 | BB | 851 | C | C2'-C1' | -6.71 | 1.46 | 1.53 |
| 26 | BB | 1741 | C | C5'-C4' | 6.71 | 1.59 | 1.51 |
| 26 | BB | 2036 | C | N1-C6 | 6.71 | 1.41 | 1.37 |
| 26 | BB | 462 | C | N1-C2 | 6.71 | 1.46 | 1.40 |
| 26 | BB | 638 | G | C2'-O2' | 6.71 | 1.50 | 1.41 |
| 26 | BB | 744 | U | N1-C2 | 6.71 | 1.44 | 1.38 |
| 26 | BB | 1204 | A | P-O5' | 6.71 | 1.66 | 1.59 |
| 1 | AA | 192 | A | C4'-C3' | 6.71 | 1.60 | 1.53 |
| 1 | AA | 540 | G | C8-N7 | 6.71 | 1.34 | 1.30 |
| 1 | AA | 676 | A | P-O5' | 6.71 | 1.66 | 1.59 |
| 25 | BA | 53 | A | C5-C4 | -6.71 | 1.34 | 1.38 |
| 26 | BB | 1001 | A | C5-C4 | -6.71 | 1.34 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1826 | G | O3'-P | 6.71 | 1.69 | 1.61 |
| 26 | BB | 2332 | C | C4'-O4' | -6.71 | 1.36 | 1.45 |
| 26 | BB | 2345 | G | N1-C2 | 6.71 | 1.43 | 1.37 |
| 26 | BB | 2709 | G | N7-C5 | -6.71 | 1.35 | 1.39 |
| 1 | AA | 361 | G | N9-C8 | -6.71 | 1.33 | 1.37 |
| 1 | AA | 801 | U | N1-C2 | 6.71 | 1.44 | 1.38 |
| 1 | AA | 877 | G | C8-N7 | -6.71 | 1.26 | 1.30 |
| 1 | AA | 943 | U | C5-C6 | 6.71 | 1.40 | 1.34 |
| 3 | AC | 41 | A | C6-N1 | -6.71 | 1.30 | 1.35 |
| 26 | BB | 11 | C | C4-N4 | 6.71 | 1.40 | 1.33 |
| 26 | BB | 1218 | G | N9-C8 | -6.71 | 1.33 | 1.37 |
| 26 | BB | 1557 | C | C4'-O4' | -6.71 | 1.36 | 1.45 |
| 1 | AA | 168 | G | C5'-C4' | 6.70 | 1.59 | 1.51 |
| 1 | AA | 255 | G | P-O5' | 6.70 | 1.66 | 1.59 |
| 1 | AA | 505 | G | P-O5' | 6.70 | 1.66 | 1.59 |
| 3 | AC | 38 | G | C6-O6 | -6.70 | 1.18 | 1.24 |
| 26 | BB | 187 | G | O3'-P | -6.70 | 1.53 | 1.61 |
| 26 | BB | 2643 | G | N3-C4 | 6.70 | 1.40 | 1.35 |
| 1 | AA | 561 | U | O3'-P | 6.70 | 1.69 | 1.61 |
| 26 | BB | 124 | G | N9-C4 | 6.70 | 1.43 | 1.38 |
| 1 | AA | 728 | A | C6-N1 | 6.70 | 1.40 | 1.35 |
| 25 | BA | 46 | A | C5-C4 | 6.70 | 1.43 | 1.38 |
| 26 | BB | 370 | G | N1-C2 | 6.70 | 1.43 | 1.37 |
| 26 | BB | 555 | G | C4'-C3' | -6.70 | 1.45 | 1.53 |
| 26 | BB | 1355 | G | N7-C5 | 6.70 | 1.43 | 1.39 |
| 26 | BB | 2097 | A | N3-C4 | 6.70 | 1.38 | 1.34 |
| 1 | AA | 1024 | G | P-O5' | 6.70 | 1.66 | 1.59 |
| 1 | AA | 1234 | C | C2-O2 | -6.70 | 1.18 | 1.24 |
| 26 | BB | 323 | C | N3-C4 | 6.70 | 1.38 | 1.33 |
| 26 | BB | 387 | U | N1-C2 | 6.70 | 1.44 | 1.38 |
| 26 | BB | 874 | G | N3-C4 | 6.70 | 1.40 | 1.35 |
| 26 | BB | 1943 | U | P-O5' | -6.70 | 1.53 | 1.59 |
| 26 | BB | 2158 | A | C4'-C3' | 6.70 | 1.60 | 1.53 |
| 26 | BB | 2597 | G | P-O5' | 6.70 | 1.66 | 1.59 |
| 2 | AB | 3 | G | C5-C6 | 6.70 | 1.49 | 1.42 |
| 26 | BB | 122 | G | N3-C4 | 6.70 | 1.40 | 1.35 |
| 26 | BB | 136 | G | C4'-O4' | -6.70 | 1.36 | 1.45 |
| 26 | BB | 1261 | C | N1-C6 | -6.70 | 1.33 | 1.37 |
| 1 | AA | 99 | C | C4-N4 | 6.70 | 1.40 | 1.33 |
| 1 | AA | 162 | A | C8-N7 | -6.70 | 1.26 | 1.31 |
| 1 | AA | 872 | A | N9-C8 | -6.70 | 1.32 | 1.37 |
| 1 | AA | 1289 | A | N7-C5 | -6.70 | 1.35 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 166 | U | C2-N3 | 6.70 | 1.42 | 1.37 |
| 26 | BB | 177 | G | C6-N1 | -6.70 | 1.34 | 1.39 |
| 26 | BB | 1890 | A | N9-C4 | 6.70 | 1.41 | 1.37 |
| 26 | BB | 2773 | C | C2-N3 | 6.70 | 1.41 | 1.35 |
| 1 | AA | 623 | C | N1-C2 | -6.69 | 1.33 | 1.40 |
| 26 | BB | 1474 | U | N3-C4 | 6.69 | 1.44 | 1.38 |
| 26 | BB | 1854 | A | N7-C5 | -6.69 | 1.35 | 1.39 |
| 26 | BB | 2835 | A | N3-C4 | 6.69 | 1.38 | 1.34 |
| 1 | AA | 1419 | G | N1-C2 | 6.69 | 1.43 | 1.37 |
| 4 | AD | 69 | C | O3'-P | -6.69 | 1.53 | 1.61 |
| 26 | BB | 1125 | G | C5-C4 | 6.69 | 1.43 | 1.38 |
| 26 | BB | 1643 | G | N9-C4 | 6.69 | 1.43 | 1.38 |
| 26 | BB | 2092 | U | C2-O2 | 6.69 | 1.28 | 1.22 |
| 1 | AA | 1214 | C | C2-N3 | 6.69 | 1.41 | 1.35 |
| 26 | BB | 544 | C | N1-C6 | 6.69 | 1.41 | 1.37 |
| 26 | BB | 1849 | G | C2-N2 | -6.69 | 1.27 | 1.34 |
| 26 | BB | 2265 | U | C4-O4 | 6.69 | 1.29 | 1.23 |
| 1 | AA | 1356 | G | N1-C2 | 6.69 | 1.43 | 1.37 |
| 3 | AC | 18 | A | C8-N7 | -6.69 | 1.26 | 1.31 |
| 26 | BB | 764 | A | N3-C4 | 6.69 | 1.38 | 1.34 |
| 26 | BB | 874 | G | N9-C8 | -6.69 | 1.33 | 1.37 |
| 26 | BB | 1760 | C | P-O5' | 6.69 | 1.66 | 1.59 |
| 26 | BB | 2136 | G | C3'-C2' | 6.69 | 1.60 | 1.52 |
| 26 | BB | 2142 | A | C5'-C4' | 6.69 | 1.59 | 1.51 |
| 1 | AA | 33 | A | C2'-O2' | -6.69 | 1.32 | 1.41 |
| 26 | BB | 1229 | C | C2-N3 | 6.69 | 1.41 | 1.35 |
| 26 | BB | 696 | G | C5-C6 | 6.68 | 1.49 | 1.42 |
| 26 | BB | 1046 | A | C4'-O4' | -6.68 | 1.36 | 1.45 |
| 26 | BB | 1296 | G | C8-N7 | -6.68 | 1.26 | 1.30 |
| 26 | BB | 2177 | C | O3'-P | 6.68 | 1.69 | 1.61 |
| 1 | AA | 447 | G | C2-N3 | 6.68 | 1.38 | 1.32 |
| 1 | AA | 617 | G | P-O5' | 6.68 | 1.66 | 1.59 |
| 1 | AA | 1236 | A | C8-N7 | 6.68 | 1.36 | 1.31 |
| 26 | BB | 2239 | G | C5-C6 | -6.68 | 1.35 | 1.42 |
| 26 | BB | 2886 | A | N9-C8 | -6.68 | 1.32 | 1.37 |
| 1 | AA | 1310 | G | N1-C2 | 6.68 | 1.43 | 1.37 |
| 1 | AA | 1406 | U | C4-C5 | 6.68 | 1.49 | 1.43 |
| 26 | BB | 163 | C | C4-C5 | 6.68 | 1.48 | 1.43 |
| 1 | AA | 254 | G | C2'-C1' | -6.68 | 1.46 | 1.53 |
| 1 | AA | 730 | G | C4'-O4' | -6.68 | 1.36 | 1.45 |
| 26 | BB | 1543 | G | C2-N3 | 6.68 | 1.38 | 1.32 |
| 26 | BB | 2059 | A | C8-N7 | -6.68 | 1.26 | 1.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2072 | C | C2-N3 | 6.68 | 1.41 | 1.35 |
| 26 | BB | 2829 | A | C6-N1 | 6.68 | 1.40 | 1.35 |
| 4 | AD | 14 | A | P-O5' | 6.68 | 1.66 | 1.59 |
| 26 | BB | 1750 | G | C5'-C4' | 6.68 | 1.59 | 1.51 |
| 1 | AA | 980 | C | C4'-O4' | -6.68 | 1.36 | 1.45 |
| 1 | AA | 1205 | U | P-O5' | 6.68 | 1.66 | 1.59 |
| 26 | BB | 532 | A | N9-C4 | 6.68 | 1.41 | 1.37 |
| 26 | BB | 2713 | U | O4'-C1' | 6.68 | 1.50 | 1.41 |
| 1 | AA | 1506 | U | C4-C5 | -6.67 | 1.37 | 1.43 |
| 26 | BB | 1183 | U | C2-N3 | 6.67 | 1.42 | 1.37 |
| 26 | BB | 1488 | C | N1-C6 | -6.67 | 1.33 | 1.37 |
| 26 | BB | 2392 | A | N3-C4 | 6.67 | 1.38 | 1.34 |
| 1 | AA | 865 | A | C2-N3 | 6.67 | 1.39 | 1.33 |
| 26 | BB | 815 | C | N3-C4 | 6.67 | 1.38 | 1.33 |
| 26 | BB | 2477 | U | C4'-O4' | -6.67 | 1.36 | 1.45 |
| 1 | AA | 226 | G | C5'-C4' | 6.67 | 1.59 | 1.51 |
| 1 | AA | 1469 | C | C4-N4 | 6.67 | 1.40 | 1.33 |
| 25 | BA | 97 | C | C5'-C4' | 6.67 | 1.59 | 1.51 |
| 26 | BB | 55 | G | N7-C5 | -6.67 | 1.35 | 1.39 |
| 26 | BB | 1029 | A | N3-C4 | 6.67 | 1.38 | 1.34 |
| 26 | BB | 2698 | U | C4'-O4' | -6.67 | 1.36 | 1.45 |
| 26 | BB | 455 | C | C5-C6 | 6.67 | 1.39 | 1.34 |
| 26 | BB | 1156 | A | P-O5' | 6.67 | 1.66 | 1.59 |
| 26 | BB | 1570 | A | C6-N1 | 6.67 | 1.40 | 1.35 |
| 26 | BB | 1677 | A | C4'-C3' | -6.67 | 1.45 | 1.53 |
| 26 | BB | 2006 | C | P-O5' | 6.67 | 1.66 | 1.59 |
| 26 | BB | 2256 | G | C2-N3 | 6.67 | 1.38 | 1.32 |
| 1 | AA | 1221 | G | P-O5' | 6.67 | 1.66 | 1.59 |
| 26 | BB | 727 | A | N9-C8 | -6.67 | 1.32 | 1.37 |
| 26 | BB | 1468 | U | C2-N3 | 6.67 | 1.42 | 1.37 |
| 26 | BB | 1566 | A | N9-C4 | 6.67 | 1.41 | 1.37 |
| 1 | AA | 273 | U | C2-O2 | 6.66 | 1.28 | 1.22 |
| 1 | AA | 1097 | C | N1-C6 | 6.66 | 1.41 | 1.37 |
| 26 | BB | 311 | A | N7-C5 | 6.66 | 1.43 | 1.39 |
| 26 | BB | 1500 | G | C6-N1 | 6.66 | 1.44 | 1.39 |
| 26 | BB | 2364 | C | C5'-C4' | 6.66 | 1.59 | 1.51 |
| 26 | BB | 2422 | C | N3-C4 | 6.66 | 1.38 | 1.33 |
| 26 | BB | 2439 | A | O3'-P | 6.66 | 1.69 | 1.61 |
| 26 | BB | 2573 | C | O3'-P | 6.66 | 1.69 | 1.61 |
| 26 | BB | 2393 | U | C4-O4 | -6.66 | 1.18 | 1.23 |
| 1 | AA | 143 | A | N9-C4 | 6.66 | 1.41 | 1.37 |
| 1 | AA | 812 | G | N9-C8 | -6.66 | 1.33 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 404 | A | N7-C5 | -6.66 | 1.35 | 1.39 |
| 26 | BB | 567 | U | C4-O4 | -6.66 | 1.18 | 1.23 |
| 26 | BB | 1768 | C | N1-C6 | 6.66 | 1.41 | 1.37 |
| 1 | AA | 68 | G | N1-C2 | 6.66 | 1.43 | 1.37 |
| 1 | AA | 681 | A | O3'-P | 6.66 | 1.69 | 1.61 |
| 1 | AA | 1384 | C | O3'-P | 6.66 | 1.69 | 1.61 |
| 4 | AD | 4 | G | C4'-O4' | -6.66 | 1.36 | 1.45 |
| 26 | BB | 2203 | U | C4-O4 | 6.66 | 1.28 | 1.23 |
| 1 | AA | 1060 | U | N3-C4 | 6.66 | 1.44 | 1.38 |
| 26 | BB | 1181 | U | N3-C4 | 6.66 | 1.44 | 1.38 |
| 26 | BB | 1669 | A | P-O5' | 6.66 | 1.66 | 1.59 |
| 26 | BB | 1830 | C | C2-N3 | 6.66 | 1.41 | 1.35 |
| 1 | AA | 26 | A | C8-N7 | -6.66 | 1.26 | 1.31 |
| 1 | AA | 515 | G | C3'-C2' | 6.66 | 1.60 | 1.52 |
| 1 | AA | 787 | A | N3-C4 | 6.66 | 1.38 | 1.34 |
| 25 | BA | 99 | A | C8-N7 | 6.66 | 1.36 | 1.31 |
| 26 | BB | 1645 | G | C8-N7 | -6.66 | 1.26 | 1.30 |
| 26 | BB | 2294 | G | N7-C5 | 6.66 | 1.43 | 1.39 |
| 30 | BF | 64 | GLY | N-CA | 6.66 | 1.56 | 1.46 |
| 26 | BB | 415 | A | N9-C4 | -6.65 | 1.33 | 1.37 |
| 26 | BB | 1755 | A | N9-C8 | -6.65 | 1.32 | 1.37 |
| 26 | BB | 1906 | G | C5-C4 | 6.65 | 1.43 | 1.38 |
| 26 | BB | 2861 | U | C5-C6 | 6.65 | 1.40 | 1.34 |
| 1 | AA | 1238 | A | N9-C8 | 6.65 | 1.43 | 1.37 |
| 26 | BB | 187 | G | C2-N3 | 6.65 | 1.38 | 1.32 |
| 26 | BB | 806 | C | N1-C6 | 6.65 | 1.41 | 1.37 |
| 26 | BB | 1648 | U | C4'-O4' | -6.65 | 1.36 | 1.45 |
| 26 | BB | 2255 | G | C6-O6 | -6.65 | 1.18 | 1.24 |
| 26 | BB | 2665 | A | P-O5' | 6.65 | 1.66 | 1.59 |
| 1 | AA | 13 | U | N3-C4 | 6.65 | 1.44 | 1.38 |
| 1 | AA | 671 | G | N3-C4 | 6.65 | 1.40 | 1.35 |
| 1 | AA | 1397 | C | C4'-O4' | -6.65 | 1.36 | 1.45 |
| 25 | BA | 93 | C | N3-C4 | -6.65 | 1.29 | 1.33 |
| 26 | BB | 307 | G | N1-C2 | 6.65 | 1.43 | 1.37 |
| 26 | BB | 1430 | G | N7-C5 | 6.65 | 1.43 | 1.39 |
| 26 | BB | 1723 | G | N7-C5 | -6.65 | 1.35 | 1.39 |
| 26 | BB | 2807 | U | N3-C4 | 6.65 | 1.44 | 1.38 |
| 1 | AA | 1062 | U | C3'-O3' | 6.65 | 1.51 | 1.42 |
| 4 | AD | 12 | G | C5'-C4' | 6.65 | 1.59 | 1.51 |
| 26 | BB | 2120 | G | P-O5' | 6.65 | 1.66 | 1.59 |
| 26 | BB | 2518 | A | N7-C5 | 6.65 | 1.43 | 1.39 |
| 26 | BB | 2551 | C | N3-C4 | 6.65 | 1.38 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1127 | G | N3-C4 | 6.65 | 1.40 | 1.35 |
| 1 | AA | 1405 | G | C4'-C3' | -6.65 | 1.45 | 1.53 |
| 26 | BB | 840 | C | P-O5' | 6.65 | 1.66 | 1.59 |
| 26 | BB | 1031 | G | C5'-C4' | 6.65 | 1.59 | 1.51 |
| 26 | BB | 2086 | U | C2-O2 | 6.65 | 1.28 | 1.22 |
| 1 | AA | 67 | C | C2-O2 | 6.65 | 1.30 | 1.24 |
| 1 | AA | 344 | A | N3-C4 | 6.65 | 1.38 | 1.34 |
| 1 | AA | 1281 | C | N3-C4 | 6.65 | 1.38 | 1.33 |
| 26 | BB | 728 | G | C3'-C2' | 6.65 | 1.60 | 1.52 |
| 26 | BB | 1509 | A | P-O5' | 6.65 | 1.66 | 1.59 |
| 1 | AA | 110 | C | P-O5' | 6.64 | 1.66 | 1.59 |
| 1 | AA | 1259 | C | N1-C6 | -6.64 | 1.33 | 1.37 |
| 1 | AA | 1332 | A | C8-N7 | -6.64 | 1.26 | 1.31 |
| 26 | BB | 579 | G | C2-N3 | 6.64 | 1.38 | 1.32 |
| 26 | BB | 1336 | A | C5'-C4' | 6.64 | 1.59 | 1.51 |
| 4 | AD | 58 | A | P-O5' | 6.64 | 1.66 | 1.59 |
| 26 | BB | 141 | G | C8-N7 | -6.64 | 1.26 | 1.30 |
| 26 | BB | 477 | A | N3-C4 | -6.64 | 1.30 | 1.34 |
| 26 | BB | 2188 | U | P-O5' | 6.64 | 1.66 | 1.59 |
| 26 | BB | 1057 | A | C5'-C4' | 6.64 | 1.59 | 1.51 |
| 26 | BB | 2239 | G | C4'-O4' | -6.64 | 1.36 | 1.45 |
| 1 | AA | 216 | U | C2'-O2' | -6.64 | 1.33 | 1.41 |
| 26 | BB | 292 | U | N1-C2 | 6.64 | 1.44 | 1.38 |
| 26 | BB | 399 | U | P-O5' | 6.64 | 1.66 | 1.59 |
| 26 | BB | 1134 | A | C8-N7 | -6.64 | 1.26 | 1.31 |
| 26 | BB | 1401 | G | C6-N1 | -6.64 | 1.34 | 1.39 |
| 26 | BB | 1786 | A | O3'-P | 6.64 | 1.69 | 1.61 |
| 1 | AA | 597 | G | C3'-C2' | 6.64 | 1.60 | 1.52 |
| 26 | BB | 604 | G | C3'-C2' | -6.64 | 1.45 | 1.52 |
| 26 | BB | 1127 | A | N3-C4 | 6.64 | 1.38 | 1.34 |
| 1 | AA | 337 | G | C2-N3 | 6.64 | 1.38 | 1.32 |
| 1 | AA | 733 | G | O3'-P | -6.64 | 1.53 | 1.61 |
| 26 | BB | 426 | C | O3'-P | 6.64 | 1.69 | 1.61 |
| 1 | AA | 811 | C | C3'-O3' | 6.63 | 1.51 | 1.42 |
| 26 | BB | 93 | G | P-O5' | 6.63 | 1.66 | 1.59 |
| 26 | BB | 101 | A | N3-C4 | -6.63 | 1.30 | 1.34 |
| 26 | BB | 299 | A | N9-C8 | -6.63 | 1.32 | 1.37 |
| 26 | BB | 878 | A | C6-N1 | -6.63 | 1.30 | 1.35 |
| 26 | BB | 1336 | A | C5-C6 | 6.63 | 1.47 | 1.41 |
| 26 | BB | 1345 | C | C1'-N1 | 6.63 | 1.58 | 1.48 |
| 26 | BB | 1614 | A | C5'-C4' | 6.63 | 1.59 | 1.51 |
| 1 | AA | 50 | A | C4'-C3' | 6.63 | 1.60 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1261 | A | C4'-C3' | 6.63 | 1.60 | 1.53 |
| 26 | BB | 818 | G | O3'-P | 6.63 | 1.69 | 1.61 |
| 1 | AA | 1113 | C | C4'-O4' | -6.63 | 1.36 | 1.45 |
| 26 | BB | 801 | G | C5'-C4' | 6.63 | 1.59 | 1.51 |
| 26 | BB | 1087 | G | N7-C5 | 6.63 | 1.43 | 1.39 |
| 26 | BB | 1819 | A | N3-C4 | 6.63 | 1.38 | 1.34 |
| 26 | BB | 1963 | U | N1-C2 | 6.63 | 1.44 | 1.38 |
| 1 | AA | 495 | A | C4'-O4' | -6.63 | 1.36 | 1.45 |
| 1 | AA | 705 | G | C6-N1 | -6.63 | 1.34 | 1.39 |
| 1 | AA | 1065 | U | C4-C5 | 6.63 | 1.49 | 1.43 |
| 1 | AA | 1426 | G | N3-C4 | 6.63 | 1.40 | 1.35 |
| 26 | BB | 892 | A | C2'-C1' | 6.63 | 1.60 | 1.53 |
| 26 | BB | 673 | C | N3-C4 | -6.63 | 1.29 | 1.33 |
| 26 | BB | 678 | C | C4'-O4' | -6.63 | 1.36 | 1.45 |
| 26 | BB | 735 | A | C8-N7 | -6.63 | 1.26 | 1.31 |
| 26 | BB | 743 | A | C8-N7 | -6.63 | 1.26 | 1.31 |
| 26 | BB | 1179 | G | N9-C4 | 6.63 | 1.43 | 1.38 |
| 26 | BB | 1262 | A | C5-C6 | 6.63 | 1.47 | 1.41 |
| 26 | BB | 1328 | A | N3-C4 | 6.63 | 1.38 | 1.34 |
| 26 | BB | 1965 | C | N3-C4 | 6.63 | 1.38 | 1.33 |
| 26 | BB | 2563 | U | C5-C6 | 6.63 | 1.40 | 1.34 |
| 26 | BB | 2808 | G | P-O5' | 6.63 | 1.66 | 1.59 |
| 1 | AA | 513 | C | C2-N3 | 6.63 | 1.41 | 1.35 |
| 1 | AA | 656 | G | O3'-P | 6.63 | 1.69 | 1.61 |
| 1 | AA | 920 | U | P-O5' | 6.63 | 1.66 | 1.59 |
| 1 | AA | 1232 | U | C2'-C1' | 6.63 | 1.60 | 1.53 |
| 26 | BB | 894 | U | N3-C4 | 6.63 | 1.44 | 1.38 |
| 26 | BB | 1042 | G | N9-C8 | -6.63 | 1.33 | 1.37 |
| 26 | BB | 1831 | G | C5-C6 | 6.63 | 1.49 | 1.42 |
| 26 | BB | 2499 | C | C4-N4 | -6.63 | 1.27 | 1.33 |
| 1 | AA | 610 | U | C3'-O3' | -6.62 | 1.32 | 1.42 |
| 1 | AA | 521 | G | N9-C8 | -6.62 | 1.33 | 1.37 |
| 1 | AA | 1467 | C | N1-C6 | -6.62 | 1.33 | 1.37 |
| 3 | AC | 53 | G | C5'-C4' | 6.62 | 1.59 | 1.51 |
| 26 | BB | 800 | A | C5-C6 | 6.62 | 1.47 | 1.41 |
| 1 | AA | 1227 | A | N7-C5 | 6.62 | 1.43 | 1.39 |
| 26 | BB | 271 | G | N9-C8 | 6.62 | 1.42 | 1.37 |
| 26 | BB | 583 | G | N1-C2 | 6.62 | 1.43 | 1.37 |
| 26 | BB | 1828 | G | N3-C4 | 6.62 | 1.40 | 1.35 |
| 26 | BB | 381 | G | N3-C4 | -6.62 | 1.30 | 1.35 |
| 26 | BB | 2112 | G | C2-N3 | 6.62 | 1.38 | 1.32 |
| 26 | BB | 2737 | G | C8-N7 | 6.62 | 1.34 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 639 | U | N1-C2 | 6.62 | 1.44 | 1.38 |
| 26 | BB | 1100 | C | C2'-O2' | 6.62 | 1.50 | 1.41 |
| 26 | BB | 1410 | G | N1-C2 | 6.62 | 1.43 | 1.37 |
| 26 | BB | 2842 | G | N9-C8 | 6.62 | 1.42 | 1.37 |
| 1 | AA | 514 | C | O3'-P | 6.62 | 1.69 | 1.61 |
| 1 | AA | 1457 | G | C5-C6 | 6.62 | 1.49 | 1.42 |
| 26 | BB | 2425 | A | O3'-P | 6.62 | 1.69 | 1.61 |
| 1 | AA | 1210 | C | C2-N3 | 6.62 | 1.41 | 1.35 |
| 26 | BB | 408 | G | C8-N7 | -6.62 | 1.26 | 1.30 |
| 26 | BB | 1093 | G | C8-N7 | -6.62 | 1.26 | 1.30 |
| 26 | BB | 1317 | G | C2-N3 | 6.62 | 1.38 | 1.32 |
| 26 | BB | 1560 | G | N7-C5 | 6.62 | 1.43 | 1.39 |
| 26 | BB | 1849 | G | N1-C2 | 6.62 | 1.43 | 1.37 |
| 1 | AA | 582 | C | C5-C6 | 6.61 | 1.39 | 1.34 |
| 1 | AA | 622 | A | C5-C4 | -6.61 | 1.34 | 1.38 |
| 1 | AA | 658 | C | C2-O2 | 6.61 | 1.30 | 1.24 |
| 1 | AA | 1259 | C | N3-C4 | 6.61 | 1.38 | 1.33 |
| 4 | AD | 74 | A | N9-C4 | -6.61 | 1.33 | 1.37 |
| 26 | BB | 665 | U | C5'-C4' | 6.61 | 1.59 | 1.51 |
| 26 | BB | 861 | A | C3'-O3' | 6.61 | 1.51 | 1.42 |
| 26 | BB | 1272 | A | C4'-O4' | -6.61 | 1.36 | 1.45 |
| 26 | BB | 1723 | G | N3-C4 | 6.61 | 1.40 | 1.35 |
| 26 | BB | 2807 | U | P-O5' | 6.61 | 1.66 | 1.59 |
| 26 | BB | 1377 | G | C1'-N9 | 6.61 | 1.58 | 1.48 |
| 1 | AA | 454 | G | C8-N7 | -6.61 | 1.26 | 1.30 |
| 1 | AA | 520 | A | C2'-C1' | -6.61 | 1.46 | 1.53 |
| 1 | AA | 775 | G | N9-C4 | 6.61 | 1.43 | 1.38 |
| 1 | AA | 921 | U | C5-C6 | 6.61 | 1.40 | 1.34 |
| 1 | AA | 1514 | G | C2'-C1' | 6.61 | 1.60 | 1.53 |
| 2 | AB | 60 | U | C2-N3 | 6.61 | 1.42 | 1.37 |
| 26 | BB | 197 | A | C6-N1 | -6.61 | 1.30 | 1.35 |
| 26 | BB | 370 | G | P-O5' | 6.61 | 1.66 | 1.59 |
| 26 | BB | 1275 | A | P-O5' | 6.61 | 1.66 | 1.59 |
| 26 | BB | 1400 | U | N1-C6 | 6.61 | 1.43 | 1.38 |
| 26 | BB | 1499 | C | C5-C6 | 6.61 | 1.39 | 1.34 |
| 1 | AA | 621 | A | C8-N7 | -6.61 | 1.26 | 1.31 |
| 1 | AA | 958 | A | C8-N7 | -6.61 | 1.26 | 1.31 |
| 2 | AB | 44 | G | O3'-P | 6.61 | 1.69 | 1.61 |
| 25 | BA | 72 | G | P-O5' | 6.61 | 1.66 | 1.59 |
| 26 | BB | 11 | C | N1-C6 | 6.61 | 1.41 | 1.37 |
| 26 | BB | 184 | C | N1-C6 | 6.61 | 1.41 | 1.37 |
| 26 | BB | 448 | U | C2-O2 | 6.61 | 1.28 | 1.22 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1701 | A | N9-C4 | 6.61 | 1.41 | 1.37 |
| 26 | BB | 1994 | C | C2-N3 | 6.61 | 1.41 | 1.35 |
| 26 | BB | 2118 | U | C3'-C2' | -6.61 | 1.45 | 1.52 |
| 26 | BB | 2395 | C | N3-C4 | 6.61 | 1.38 | 1.33 |
| 26 | BB | 2485 | G | C5'-C4' | 6.61 | 1.59 | 1.51 |
| 26 | BB | 2578 | G | C2-N3 | 6.61 | 1.38 | 1.32 |
| 1 | AA | 32 | A | N7-C5 | -6.61 | 1.35 | 1.39 |
| 1 | AA | 733 | G | N3-C4 | 6.61 | 1.40 | 1.35 |
| 1 | AA | 832 | G | C8-N7 | 6.61 | 1.34 | 1.30 |
| 1 | AA | 1455 | G | P-O5' | 6.61 | 1.66 | 1.59 |
| 1 | AA | 1478 | U | C5-C6 | 6.61 | 1.40 | 1.34 |
| 26 | BB | 2002 | G | P-O5' | 6.61 | 1.66 | 1.59 |
| 26 | BB | 2188 | U | N1-C2 | 6.60 | 1.44 | 1.38 |
| 26 | BB | 2440 | C | C2'-C1' | 6.60 | 1.60 | 1.53 |
| 1 | AA | 1087 | G | C5'-C4' | 6.60 | 1.59 | 1.51 |
| 1 | AA | 1143 | G | N9-C8 | 6.60 | 1.42 | 1.37 |
| 4 | AD | 15 | G | C5'-C4' | 6.60 | 1.59 | 1.51 |
| 26 | BB | 2289 | G | C4'-C3' | -6.60 | 1.45 | 1.53 |
| 26 | BB | 2665 | A | N7-C5 | -6.60 | 1.35 | 1.39 |
| 26 | BB | 226 | A | N7-C5 | -6.60 | 1.35 | 1.39 |
| 26 | BB | 928 | A | N3-C4 | 6.60 | 1.38 | 1.34 |
| 26 | BB | 2766 | A | N7-C5 | 6.60 | 1.43 | 1.39 |
| 1 | AA | 396 | C | P-O5' | 6.60 | 1.66 | 1.59 |
| 26 | BB | 254 | G | C3'-C2' | -6.60 | 1.45 | 1.52 |
| 26 | BB | 1371 | G | C5'-C4' | 6.60 | 1.59 | 1.51 |
| 1 | AA | 583 | A | N7-C5 | 6.60 | 1.43 | 1.39 |
| 1 | AA | 1036 | A | O3'-P | 6.60 | 1.69 | 1.61 |
| 1 | AA | 1537 | U | N1-C2 | 6.60 | 1.44 | 1.38 |
| 26 | BB | 1754 | A | C5-C6 | 6.60 | 1.47 | 1.41 |
| 26 | BB | 1947 | C | C5'-C4' | 6.60 | 1.59 | 1.51 |
| 26 | BB | 2033 | A | P-O5' | 6.60 | 1.66 | 1.59 |
| 26 | BB | 2141 | G | N9-C4 | 6.60 | 1.43 | 1.38 |
| 37 | BM | 71 | ARG | CZ-NH1 | 6.60 | 1.41 | 1.33 |
| 2 | AB | 47 | U | C4'-O4' | -6.60 | 1.36 | 1.45 |
| 22 | AV | 79 | TYR | CG-CD1 | 6.60 | 1.47 | 1.39 |
| 26 | BB | 2014 | A | C6-N1 | -6.60 | 1.30 | 1.35 |
| 26 | BB | 2132 | U | N1-C2 | 6.60 | 1.44 | 1.38 |
| 26 | BB | 2184 | A | C8-N7 | -6.60 | 1.26 | 1.31 |
| 1 | AA | 446 | G | N9-C8 | 6.59 | 1.42 | 1.37 |
| 1 | AA | 604 | G | C2-N2 | 6.59 | 1.41 | 1.34 |
| 1 | AA | 777 | A | N9-C8 | -6.59 | 1.32 | 1.37 |
| 1 | AA | 800 | G | C4'-O4' | -6.59 | 1.36 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 64 | G | C2-N3 | 6.59 | 1.38 | 1.32 |
| 26 | BB | 594 | U | N1-C6 | 6.59 | 1.43 | 1.38 |
| 26 | BB | 778 | G | P-O5' | 6.59 | 1.66 | 1.59 |
| 26 | BB | 1161 | C | C4-C5 | -6.59 | 1.37 | 1.43 |
| 26 | BB | 1876 | A | C6-N6 | 6.59 | 1.39 | 1.33 |
| 26 | BB | 2181 | U | C4-C5 | -6.59 | 1.37 | 1.43 |
| 1 | AA | 713 | G | C5-C4 | 6.59 | 1.43 | 1.38 |
| 1 | AA | 1007 | U | C5'-C4' | 6.59 | 1.59 | 1.51 |
| 1 | AA | 794 | A | C6-N6 | -6.59 | 1.28 | 1.33 |
| 1 | AA | 1334 | G | C2-N2 | -6.59 | 1.27 | 1.34 |
| 26 | BB | 468 | G | C5'-C4' | 6.59 | 1.59 | 1.51 |
| 26 | BB | 1027 | A | O3'-P | 6.59 | 1.69 | 1.61 |
| 26 | BB | 1030 | C | N1-C6 | 6.59 | 1.41 | 1.37 |
| 26 | BB | 1437 | C | C4'-O4' | -6.59 | 1.36 | 1.45 |
| 26 | BB | 1648 | U | P-O5' | 6.59 | 1.66 | 1.59 |
| 1 | AA | 1333 | A | C5'-C4' | 6.59 | 1.59 | 1.51 |
| 26 | BB | 155 | A | C8-N7 | -6.59 | 1.26 | 1.31 |
| 1 | AA | 5 | U | C4'-O4' | -6.59 | 1.36 | 1.45 |
| 1 | AA | 793 | U | C4'-C3' | 6.59 | 1.60 | 1.53 |
| 1 | AA | 1040 | U | C5'-C4' | 6.59 | 1.59 | 1.51 |
| 26 | BB | 91 | A | C5-C6 | 6.59 | 1.47 | 1.41 |
| 26 | BB | 507 | A | C6-N6 | 6.59 | 1.39 | 1.33 |
| 26 | BB | 546 | U | C5'-C4' | 6.59 | 1.59 | 1.51 |
| 26 | BB | 712 | G | N3-C4 | 6.59 | 1.40 | 1.35 |
| 26 | BB | 2252 | G | O3'-P | 6.59 | 1.69 | 1.61 |
| 26 | BB | 2779 | U | C4'-O4' | -6.59 | 1.36 | 1.45 |
| 26 | BB | 2803 | G | C1'-N9 | 6.59 | 1.58 | 1.48 |
| 1 | AA | 183 | C | N3-C4 | 6.58 | 1.38 | 1.33 |
| 1 | AA | 755 | G | O4'-C1' | 6.58 | 1.50 | 1.41 |
| 1 | AA | 1009 | U | C4'-O4' | -6.58 | 1.36 | 1.45 |
| 7 | AG | 77 | GLU | CG-CD | 6.58 | 1.61 | 1.51 |
| 26 | BB | 2161 | C | P-O5' | 6.58 | 1.66 | 1.59 |
| 3 | AC | 17 | U | C4'-O4' | -6.58 | 1.36 | 1.45 |
| 26 | BB | 600 | G | N1-C2 | 6.58 | 1.43 | 1.37 |
| 26 | BB | 2010 | G | P-O5' | 6.58 | 1.66 | 1.59 |
| 26 | BB | 2650 | U | C4'-O4' | -6.58 | 1.36 | 1.45 |
| 26 | BB | 903 | C | N1-C6 | 6.58 | 1.41 | 1.37 |
| 26 | BB | 1971 | U | N1-C2 | 6.58 | 1.44 | 1.38 |
| 1 | AA | 115 | G | C6-N1 | 6.58 | 1.44 | 1.39 |
| 1 | AA | 1477 | U | C2'-C1' | 6.58 | 1.60 | 1.53 |
| 25 | BA | 105 | G | C2'-C1' | -6.58 | 1.46 | 1.53 |
| 26 | BB | 1553 | A | C8-N7 | 6.58 | 1.36 | 1.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2021 | C | C5-C6 | 6.58 | 1.39 | 1.34 |
| 26 | BB | 2423 | U | C4'-C3' | -6.58 | 1.46 | 1.53 |
| 26 | BB | 2535 | G | C5-C6 | 6.58 | 1.49 | 1.42 |
| 26 | BB | 770 | G | C4'-O4' | -6.58 | 1.37 | 1.45 |
| 1 | AA | 948 | C | C5-C6 | 6.58 | 1.39 | 1.34 |
| 1 | AA | 1080 | A | C2-N3 | 6.58 | 1.39 | 1.33 |
| 26 | BB | 69 | C | C5'-C4' | 6.58 | 1.59 | 1.51 |
| 26 | BB | 1879 | C | C2-O2 | -6.58 | 1.18 | 1.24 |
| 26 | BB | 2373 | G | C6-N1 | 6.58 | 1.44 | 1.39 |
| 1 | AA | 831 | A | C6-N1 | -6.57 | 1.30 | 1.35 |
| 25 | BA | 56 | G | C5-C6 | 6.57 | 1.49 | 1.42 |
| 26 | BB | 2230 | G | P-O5' | 6.57 | 1.66 | 1.59 |
| 1 | AA | 338 | A | C4'-C3' | -6.57 | 1.46 | 1.53 |
| 1 | AA | 1405 | G | O3'-P | 6.57 | 1.69 | 1.61 |
| 26 | BB | 473 | G | O3'-P | 6.57 | 1.69 | 1.61 |
| 1 | AA | 539 | A | C8-N7 | -6.57 | 1.26 | 1.31 |
| 26 | BB | 787 | C | N1-C6 | 6.57 | 1.41 | 1.37 |
| 26 | BB | 1679 | A | C5-C4 | 6.57 | 1.43 | 1.38 |
| 1 | AA | 753 | A | C4'-O4' | -6.57 | 1.37 | 1.45 |
| 26 | BB | 885 | C | N1-C6 | 6.57 | 1.41 | 1.37 |
| 26 | BB | 1032 | A | C8-N7 | -6.57 | 1.26 | 1.31 |
| 26 | BB | 1666 | G | C2-N3 | 6.57 | 1.38 | 1.32 |
| 1 | AA | 730 | G | N9-C8 | -6.57 | 1.33 | 1.37 |
| 1 | AA | 1314 | C | P-O5' | 6.57 | 1.66 | 1.59 |
| 26 | BB | 878 | A | N1-C2 | -6.57 | 1.28 | 1.34 |
| 26 | BB | 2042 | A | N9-C4 | 6.57 | 1.41 | 1.37 |
| 26 | BB | 740 | C | C2-N3 | 6.57 | 1.41 | 1.35 |
| 26 | BB | 1152 | C | C4'-O4' | -6.57 | 1.37 | 1.45 |
| 26 | BB | 2431 | U | N1-C2 | 6.57 | 1.44 | 1.38 |
| 1 | AA | 1258 | G | C2-N2 | -6.56 | 1.27 | 1.34 |
| 26 | BB | 441 | U | C2-N3 | 6.56 | 1.42 | 1.37 |
| 26 | BB | 518 | G | N9-C4 | -6.56 | 1.32 | 1.38 |
| 26 | BB | 1503 | A | C6-N6 | 6.56 | 1.39 | 1.33 |
| 26 | BB | 2051 | A | N9-C8 | 6.56 | 1.43 | 1.37 |
| 26 | BB | 2217 | G | N7-C5 | 6.56 | 1.43 | 1.39 |
| 26 | BB | 2757 | A | P-O5' | 6.56 | 1.66 | 1.59 |
| 1 | AA | 572 | A | C5-C6 | -6.56 | 1.35 | 1.41 |
| 26 | BB | 1396 | U | C5'-C4' | 6.56 | 1.59 | 1.51 |
| 26 | BB | 1493 | C | C2-N3 | 6.56 | 1.41 | 1.35 |
| 26 | BB | 1642 | G | N9-C4 | 6.56 | 1.43 | 1.38 |
| 1 | AA | 587 | G | N7-C5 | 6.56 | 1.43 | 1.39 |
| 1 | AA | 1257 | A | C2-N3 | -6.56 | 1.27 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 277 | G | C5-C4 | 6.56 | 1.43 | 1.38 |
| 26 | BB | 1309 | G | O4'-C1' | 6.56 | 1.50 | 1.41 |
| 26 | BB | 1967 | C | N1-C2 | -6.56 | 1.33 | 1.40 |
| 26 | BB | 2027 | G | C4'-C3' | 6.56 | 1.60 | 1.53 |
| 1 | AA | 82 | G | C6-O6 | -6.56 | 1.18 | 1.24 |
| 1 | AA | 103 | U | P-O5' | 6.56 | 1.66 | 1.59 |
| 3 | AC | 40 | G | P-O5' | 6.56 | 1.66 | 1.59 |
| 26 | BB | 2370 | G | C2-N3 | 6.56 | 1.38 | 1.32 |
| 26 | BB | 2469 | A | C2'-C1' | 6.56 | 1.60 | 1.53 |
| 26 | BB | 479 | A | P-O5' | 6.56 | 1.66 | 1.59 |
| 26 | BB | 1616 | A | P-O5' | 6.56 | 1.66 | 1.59 |
| 28 | BD | 47 | ARG | CZ-NH1 | 6.56 | 1.41 | 1.33 |
| 1 | AA | 503 | C | C2-N3 | -6.55 | 1.30 | 1.35 |
| 1 | AA | 1094 | G | N7-C5 | -6.55 | 1.35 | 1.39 |
| 1 | AA | 1157 | A | N9-C4 | 6.55 | 1.41 | 1.37 |
| 26 | BB | 289 | G | N1-C2 | 6.55 | 1.43 | 1.37 |
| 26 | BB | 350 | G | N9-C8 | 6.55 | 1.42 | 1.37 |
| 26 | BB | 447 | A | C8-N7 | -6.55 | 1.26 | 1.31 |
| 26 | BB | 1343 | G | C5'-C4' | 6.55 | 1.59 | 1.51 |
| 26 | BB | 245 | G | C5'-C4' | 6.55 | 1.59 | 1.51 |
| 1 | AA | 11 | G | N3-C4 | 6.55 | 1.40 | 1.35 |
| 26 | BB | 365 | U | C4-C5 | 6.55 | 1.49 | 1.43 |
| 26 | BB | 789 | A | C5'-C4' | 6.55 | 1.59 | 1.51 |
| 26 | BB | 822 | G | N9-C8 | -6.55 | 1.33 | 1.37 |
| 26 | BB | 1376 | C | C4'-C3' | 6.55 | 1.60 | 1.53 |
| 26 | BB | 2659 | G | C5'-C4' | 6.55 | 1.59 | 1.51 |
| 26 | BB | 2792 | A | N9-C8 | -6.55 | 1.32 | 1.37 |
| 1 | AA | 390 | U | C2-N3 | 6.55 | 1.42 | 1.37 |
| 1 | AA | 664 | G | C4'-O4' | -6.55 | 1.37 | 1.45 |
| 1 | AA | 824 | G | N7-C5 | 6.55 | 1.43 | 1.39 |
| 26 | BB | 1260 | A | N3-C4 | 6.55 | 1.38 | 1.34 |
| 26 | BB | 2097 | A | C6-N1 | 6.55 | 1.40 | 1.35 |
| 26 | BB | 2275 | C | C2-N3 | 6.55 | 1.41 | 1.35 |
| 26 | BB | 2359 | C | C2-O2 | -6.55 | 1.18 | 1.24 |
| 26 | BB | 2742 | G | C6-O6 | 6.55 | 1.30 | 1.24 |
| 1 | AA | 765 | G | O3'-P | 6.55 | 1.69 | 1.61 |
| 1 | AA | 903 | G | C2'-C1' | 6.55 | 1.60 | 1.53 |
| 26 | BB | 681 | G | P-O5' | 6.55 | 1.66 | 1.59 |
| 26 | BB | 1383 | A | C4'-O4' | -6.55 | 1.37 | 1.45 |
| 26 | BB | 2133 | G | C6-N1 | -6.55 | 1.34 | 1.39 |
| 1 | AA | 906 | A | C5-C6 | 6.55 | 1.47 | 1.41 |
| 1 | AA | 1185 | G | C2-N3 | 6.55 | 1.38 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 14 | U | N1-C2 | 6.55 | 1.44 | 1.38 |
| 26 | BB | 2515 | C | C4-N4 | 6.55 | 1.39 | 1.33 |
| 26 | BB | 2632 | A | N9-C4 | 6.55 | 1.41 | 1.37 |
| 26 | BB | 2859 | G | C5'-C4' | 6.55 | 1.59 | 1.51 |
| 26 | BB | 2640 | G | C6-O6 | -6.54 | 1.18 | 1.24 |
| 1 | AA | 1156 | G | O3'-P | 6.54 | 1.69 | 1.61 |
| 25 | BA | 86 | G | N3-C4 | 6.54 | 1.40 | 1.35 |
| 26 | BB | 462 | C | C2'-C1' | -6.54 | 1.46 | 1.53 |
| 26 | BB | 502 | A | C5-C4 | -6.54 | 1.34 | 1.38 |
| 26 | BB | 1194 | A | O3'-P | -6.54 | 1.53 | 1.61 |
| 26 | BB | 1242 | U | C4-C5 | 6.54 | 1.49 | 1.43 |
| 26 | BB | 1800 | C | O4'-C1' | 6.54 | 1.50 | 1.41 |
| 26 | BB | 2311 | A | C2'-C1' | 6.54 | 1.60 | 1.53 |
| 1 | AA | 327 | A | C4'-C3' | 6.54 | 1.60 | 1.53 |
| 1 | AA | 549 | C | C4-N4 | -6.54 | 1.28 | 1.33 |
| 1 | AA | 821 | G | C5-C4 | 6.54 | 1.43 | 1.38 |
| 4 | AD | 50 | G | O3'-P | 6.54 | 1.69 | 1.61 |
| 25 | BA | 57 | A | C4'-O4' | -6.54 | 1.37 | 1.45 |
| 26 | BB | 930 | G | C4'-O4' | -6.54 | 1.37 | 1.45 |
| 26 | BB | 2568 | U | C2-N3 | 6.54 | 1.42 | 1.37 |
| 26 | BB | 415 | A | N3-C4 | 6.54 | 1.38 | 1.34 |
| 26 | BB | 2010 | G | N9-C4 | 6.54 | 1.43 | 1.38 |
| 26 | BB | 2472 | G | N9-C4 | -6.54 | 1.32 | 1.38 |
| 1 | AA | 184 | G | C6-N1 | 6.54 | 1.44 | 1.39 |
| 1 | AA | 439 | U | C2'-C1' | 6.54 | 1.60 | 1.53 |
| 26 | BB | 644 | A | O3'-P | 6.54 | 1.69 | 1.61 |
| 26 | BB | 884 | U | C4-C5 | 6.54 | 1.49 | 1.43 |
| 26 | BB | 1733 | G | C6-N1 | 6.54 | 1.44 | 1.39 |
| 1 | AA | 167 | A | C5-C4 | -6.54 | 1.34 | 1.38 |
| 26 | BB | 1041 | G | C8-N7 | 6.54 | 1.34 | 1.30 |
| 1 | AA | 11 | G | C2-N3 | 6.54 | 1.38 | 1.32 |
| 1 | AA | 54 | C | C5'-C4' | 6.54 | 1.59 | 1.51 |
| 1 | AA | 1500 | A | C5'-C4' | 6.54 | 1.59 | 1.51 |
| 26 | BB | 470 | A | C4'-C3' | 6.54 | 1.60 | 1.53 |
| 26 | BB | 1865 | U | C4-C5 | 6.54 | 1.49 | 1.43 |
| 26 | BB | 2711 | A | O3'-P | 6.54 | 1.69 | 1.61 |
| 1 | AA | 284 | C | C4'-O4' | -6.53 | 1.37 | 1.45 |
| 26 | BB | 468 | G | N9-C8 | 6.53 | 1.42 | 1.37 |
| 26 | BB | 552 | U | N1-C6 | 6.53 | 1.43 | 1.38 |
| 26 | BB | 881 | G | C2'-O2' | -6.53 | 1.33 | 1.41 |
| 26 | BB | 1353 | A | N1-C2 | -6.53 | 1.28 | 1.34 |
| 26 | BB | 1995 | U | C2-N3 | 6.53 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2068 | U | C4-C5 | 6.53 | 1.49 | 1.43 |
| 1 | AA | 117 | G | N1-C2 | 6.53 | 1.43 | 1.37 |
| 50 | BZ | 18 | SER | CA-CB | 6.53 | 1.62 | 1.52 |
| 26 | BB | 572 | A | N9-C4 | 6.53 | 1.41 | 1.37 |
| 26 | BB | 1207 | C | N3-C4 | 6.53 | 1.38 | 1.33 |
| 26 | BB | 2747 | G | C5-C4 | 6.53 | 1.43 | 1.38 |
| 1 | AA | 911 | U | N1-C6 | 6.53 | 1.43 | 1.38 |
| 26 | BB | 417 | C | N3-C4 | -6.53 | 1.29 | 1.33 |
| 31 | BG | 23 | SER | CB-OG | -6.53 | 1.33 | 1.42 |
| 1 | AA | 1212 | U | P-O5' | -6.53 | 1.53 | 1.59 |
| 1 | AA | 1323 | G | P-O5' | 6.53 | 1.66 | 1.59 |
| 25 | BA | 102 | G | C5-C4 | 6.53 | 1.43 | 1.38 |
| 26 | BB | 196 | A | C4'-O4' | -6.53 | 1.37 | 1.45 |
| 26 | BB | 585 | G | N9-C4 | -6.53 | 1.32 | 1.38 |
| 26 | BB | 1149 | G | P-O5' | 6.53 | 1.66 | 1.59 |
| 26 | BB | 1735 | A | C5'-C4' | 6.53 | 1.59 | 1.51 |
| 26 | BB | 2255 | G | C8-N7 | 6.53 | 1.34 | 1.30 |
| 4 | AD | 28 | U | N1-C2 | 6.53 | 1.44 | 1.38 |
| 26 | BB | 438 | G | O4'-C1' | 6.53 | 1.50 | 1.41 |
| 26 | BB | 667 | U | C2-N3 | 6.53 | 1.42 | 1.37 |
| 26 | BB | 1128 | G | N9-C8 | 6.53 | 1.42 | 1.37 |
| 26 | BB | 1664 | A | C2'-C1' | 6.53 | 1.60 | 1.53 |
| 26 | BB | 1698 | A | P-O5' | -6.53 | 1.53 | 1.59 |
| 15 | AO | 30 | ARG | NE-CZ | 6.52 | 1.41 | 1.33 |
| 1 | AA | 533 | A | N3-C4 | 6.52 | 1.38 | 1.34 |
| 26 | BB | 1051 | G | N9-C8 | -6.52 | 1.33 | 1.37 |
| 26 | BB | 1832 | C | C2'-C1' | 6.52 | 1.60 | 1.53 |
| 26 | BB | 2608 | G | N7-C5 | -6.52 | 1.35 | 1.39 |
| 1 | AA | 81 | A | O3'-P | 6.52 | 1.69 | 1.61 |
| 26 | BB | 2642 | G | O3'-P | 6.52 | 1.69 | 1.61 |
| 1 | AA | 505 | G | C5'-C4' | 6.52 | 1.59 | 1.51 |
| 1 | AA | 601 | G | C4'-O4' | -6.52 | 1.37 | 1.45 |
| 26 | BB | 1694 | C | N3-C4 | 6.52 | 1.38 | 1.33 |
| 3 | AC | 39 | U | C2'-O2' | -6.52 | 1.33 | 1.41 |
| 26 | BB | 192 | C | C4'-C3' | 6.52 | 1.60 | 1.53 |
| 26 | BB | 776 | G | C8-N7 | 6.52 | 1.34 | 1.30 |
| 26 | BB | 2547 | A | N7-C5 | -6.52 | 1.35 | 1.39 |
| 26 | BB | 2761 | A | C2-N3 | -6.52 | 1.27 | 1.33 |
| 26 | BB | 2889 | C | N1-C6 | -6.52 | 1.33 | 1.37 |
| 26 | BB | 255 | A | O3'-P | 6.52 | 1.69 | 1.61 |
| 26 | BB | 791 | C | N3-C4 | 6.52 | 1.38 | 1.33 |
| 26 | BB | 822 | G | P-O5' | -6.52 | 1.53 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 503 | A | C4'-O4' | -6.51 | 1.37 | 1.45 |
| 26 | BB | 1315 | C | O3'-P | 6.51 | 1.69 | 1.61 |
| 26 | BB | 1946 | U | C4'-O4' | -6.51 | 1.37 | 1.45 |
| 26 | BB | 2528 | U | C2-O2 | 6.51 | 1.28 | 1.22 |
| 1 | AA | 583 | A | N3-C4 | 6.51 | 1.38 | 1.34 |
| 26 | BB | 1899 | A | N7-C5 | -6.51 | 1.35 | 1.39 |
| 26 | BB | 2901 | C | C5-C6 | 6.51 | 1.39 | 1.34 |
| 1 | AA | 608 | A | N3-C4 | 6.51 | 1.38 | 1.34 |
| 1 | AA | 824 | G | N9-C4 | 6.51 | 1.43 | 1.38 |
| 26 | BB | 163 | C | C2-N3 | 6.51 | 1.41 | 1.35 |
| 26 | BB | 509 | C | C5'-C4' | 6.51 | 1.59 | 1.51 |
| 26 | BB | 2562 | U | P-O5' | 6.51 | 1.66 | 1.59 |
| 1 | AA | 124 | C | N1-C6 | 6.51 | 1.41 | 1.37 |
| 26 | BB | 168 | G | P-O5' | 6.51 | 1.66 | 1.59 |
| 1 | AA | 251 | G | N9-C8 | -6.51 | 1.33 | 1.37 |
| 1 | AA | 862 | C | N1-C6 | 6.51 | 1.41 | 1.37 |
| 26 | BB | 956 | G | C6-N1 | 6.51 | 1.44 | 1.39 |
| 1 | AA | 586 | C | N1-C6 | 6.51 | 1.41 | 1.37 |
| 1 | AA | 991 | U | C5-C6 | 6.51 | 1.40 | 1.34 |
| 1 | AA | 1099 | G | C5'-C4' | 6.51 | 1.59 | 1.51 |
| 1 | AA | 1373 | G | C2'-C1' | 6.51 | 1.60 | 1.53 |
| 1 | AA | 1448 | C | P-O5' | 6.51 | 1.66 | 1.59 |
| 2 | AB | 19 | G | C5-C4 | 6.51 | 1.43 | 1.38 |
| 26 | BB | 22 | C | C4-N4 | 6.51 | 1.39 | 1.33 |
| 26 | BB | 429 | A | N3-C4 | 6.51 | 1.38 | 1.34 |
| 26 | BB | 1766 | G | C2-N3 | 6.51 | 1.38 | 1.32 |
| 26 | BB | 288 | U | P-O5' | 6.50 | 1.66 | 1.59 |
| 26 | BB | 2654 | A | C4'-O4' | -6.50 | 1.37 | 1.45 |
| 1 | AA | 973 | G | N1-C2 | 6.50 | 1.43 | 1.37 |
| 1 | AA | 1332 | A | O3'-P | 6.50 | 1.69 | 1.61 |
| 26 | BB | 59 | U | N1-C2 | 6.50 | 1.44 | 1.38 |
| 26 | BB | 1666 | G | P-O5' | -6.50 | 1.53 | 1.59 |
| 26 | BB | 2014 | A | C3'-C2' | 6.50 | 1.60 | 1.52 |
| 26 | BB | 2474 | U | C2-N3 | 6.50 | 1.42 | 1.37 |
| 1 | AA | 791 | G | N7-C5 | 6.50 | 1.43 | 1.39 |
| 26 | BB | 1745 | A | C2'-O2' | -6.50 | 1.33 | 1.41 |
| 26 | BB | 2437 | G | N3-C4 | 6.50 | 1.40 | 1.35 |
| 26 | BB | 2868 | A | C6-N6 | -6.50 | 1.28 | 1.33 |
| 1 | AA | 335 | C | N3-C4 | 6.50 | 1.38 | 1.33 |
| 2 | AB | 29 | G | N9-C4 | -6.50 | 1.32 | 1.38 |
| 25 | BA | 90 | C | N1-C2 | 6.50 | 1.46 | 1.40 |
| 26 | BB | 104 | A | C3'-C2' | 6.50 | 1.60 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 868 | U | C5-C6 | 6.50 | 1.40 | 1.34 |
| 26 | BB | 1913 | A | N9-C4 | -6.50 | 1.33 | 1.37 |
| 26 | BB | 2254 | C | N1-C6 | 6.50 | 1.41 | 1.37 |
| 26 | BB | 2361 | G | C4'-O4' | -6.50 | 1.37 | 1.45 |
| 26 | BB | 2462 | C | O3'-P | 6.50 | 1.69 | 1.61 |
| 26 | BB | 2742 | G | C2'-C1' | -6.50 | 1.46 | 1.53 |
| 26 | BB | 174 | U | C5'-C4' | 6.50 | 1.59 | 1.51 |
| 26 | BB | 1643 | G | C8-N7 | 6.50 | 1.34 | 1.30 |
| 26 | BB | 2047 | C | C4-N4 | 6.50 | 1.39 | 1.33 |
| 26 | BB | 2409 | G | N3-C4 | 6.50 | 1.40 | 1.35 |
| 1 | AA | 652 | U | C2-N3 | 6.49 | 1.42 | 1.37 |
| 1 | AA | 1440 | U | C4-O4 | -6.49 | 1.18 | 1.23 |
| 26 | BB | 252 | G | N9-C8 | 6.49 | 1.42 | 1.37 |
| 26 | BB | 561 | G | N9-C8 | 6.49 | 1.42 | 1.37 |
| 26 | BB | 1246 | A | C5'-C4' | 6.49 | 1.59 | 1.51 |
| 26 | BB | 1366 | A | C3'-C2' | 6.49 | 1.60 | 1.52 |
| 26 | BB | 2032 | G | P-O5' | 6.49 | 1.66 | 1.59 |
| 26 | BB | 2256 | G | N9-C8 | 6.49 | 1.42 | 1.37 |
| 26 | BB | 2631 | G | N9-C8 | 6.49 | 1.42 | 1.37 |
| 1 | AA | 572 | A | P-O5' | 6.49 | 1.66 | 1.59 |
| 26 | BB | 2434 | A | C2'-C1' | 6.49 | 1.60 | 1.53 |
| 1 | AA | 281 | G | C4'-C3' | 6.49 | 1.60 | 1.53 |
| 1 | AA | 1020 | G | N9-C4 | -6.49 | 1.32 | 1.38 |
| 1 | AA | 1063 | C | C4'-O4' | -6.49 | 1.37 | 1.45 |
| 26 | BB | 644 | A | N3-C4 | 6.49 | 1.38 | 1.34 |
| 26 | BB | 680 | C | C2-N3 | 6.49 | 1.41 | 1.35 |
| 26 | BB | 1347 | A | O3'-P | 6.49 | 1.69 | 1.61 |
| 26 | BB | 1432 | G | C6-O6 | -6.49 | 1.18 | 1.24 |
| 26 | BB | 1630 | A | P-O5' | 6.49 | 1.66 | 1.59 |
| 26 | BB | 1730 | C | P-O5' | 6.49 | 1.66 | 1.59 |
| 26 | BB | 1834 | U | C4'-O4' | -6.49 | 1.37 | 1.45 |
| 1 | AA | 78 | A | P-O5' | 6.49 | 1.66 | 1.59 |
| 1 | AA | 901 | A | P-O5' | -6.49 | 1.53 | 1.59 |
| 26 | BB | 1162 | G | C2-N3 | 6.49 | 1.38 | 1.32 |
| 26 | BB | 1668 | A | N7-C5 | 6.49 | 1.43 | 1.39 |
| 26 | BB | 2452 | C | P-O5' | 6.49 | 1.66 | 1.59 |
| 1 | AA | 2 | A | N3-C4 | 6.49 | 1.38 | 1.34 |
| 1 | AA | 115 | G | N3-C4 | 6.49 | 1.40 | 1.35 |
| 1 | AA | 470 | C | C4'-O4' | -6.49 | 1.37 | 1.45 |
| 1 | AA | 685 | G | N7-C5 | -6.49 | 1.35 | 1.39 |
| 1 | AA | 1522 | U | O3'-P | 6.49 | 1.69 | 1.61 |
| 2 | AB | 11 | U | C5'-C4' | 6.49 | 1.59 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 334 | C | N1-C6 | 6.49 | 1.41 | 1.37 |
| 26 | BB | 1098 | A | N1-C2 | -6.49 | 1.28 | 1.34 |
| 26 | BB | 1969 | A | N7-C5 | -6.49 | 1.35 | 1.39 |
| 1 | AA | 475 | C | O3'-P | 6.49 | 1.69 | 1.61 |
| 1 | AA | 598 | U | C5-C6 | 6.49 | 1.40 | 1.34 |
| 1 | AA | 1205 | U | C4'-O4' | -6.49 | 1.37 | 1.45 |
| 1 | AA | 1502 | A | C8-N7 | -6.49 | 1.27 | 1.31 |
| 1 | AA | 1540 | U | P-O5' | 6.49 | 1.66 | 1.59 |
| 26 | BB | 2297 | A | P-O5' | 6.49 | 1.66 | 1.59 |
| 26 | BB | 2733 | A | P-O5' | 6.49 | 1.66 | 1.59 |
| 1 | AA | 435 | A | N9-C8 | 6.48 | 1.43 | 1.37 |
| 1 | AA | 1242 | G | C6-N1 | -6.48 | 1.35 | 1.39 |
| 4 | AD | 77 | A | N9-C4 | 6.48 | 1.41 | 1.37 |
| 26 | BB | 2411 | A | N3-C4 | 6.48 | 1.38 | 1.34 |
| 1 | AA | 1238 | A | N9-C4 | 6.48 | 1.41 | 1.37 |
| 26 | BB | 1259 | G | C5-C6 | 6.48 | 1.48 | 1.42 |
| 26 | BB | 1338 | G | N7-C5 | -6.48 | 1.35 | 1.39 |
| 26 | BB | 2280 | G | C4'-O4' | -6.48 | 1.37 | 1.45 |
| 1 | AA | 699 | C | N3-C4 | 6.48 | 1.38 | 1.33 |
| 1 | AA | 838 | G | C5'-C4' | 6.48 | 1.59 | 1.51 |
| 26 | BB | 221 | A | P-O5' | 6.48 | 1.66 | 1.59 |
| 26 | BB | 2687 | U | C4-C5 | 6.48 | 1.49 | 1.43 |
| 1 | AA | 687 | A | N9-C4 | 6.48 | 1.41 | 1.37 |
| 26 | BB | 1223 | G | C5-C4 | -6.48 | 1.33 | 1.38 |
| 1 | AA | 945 | G | C3'-C2' | 6.48 | 1.60 | 1.52 |
| 26 | BB | 956 | G | C4'-C3' | -6.48 | 1.46 | 1.53 |
| 26 | BB | 1222 | U | C2'-C1' | -6.48 | 1.46 | 1.53 |
| 26 | BB | 2175 | C | N3-C4 | 6.48 | 1.38 | 1.33 |
| 26 | BB | 508 | A | C2'-C1' | 6.48 | 1.60 | 1.53 |
| 26 | BB | 2176 | A | N9-C4 | 6.48 | 1.41 | 1.37 |
| 1 | AA | 826 | C | C4'-O4' | -6.47 | 1.37 | 1.45 |
| 1 | AA | 1154 | G | N9-C8 | -6.47 | 1.33 | 1.37 |
| 1 | AA | 1214 | C | N3-C4 | 6.47 | 1.38 | 1.33 |
| 1 | AA | 1438 | G | C8-N7 | -6.47 | 1.27 | 1.30 |
| 26 | BB | 1062 | G | C2-N3 | 6.47 | 1.38 | 1.32 |
| 26 | BB | 2320 | U | C2'-C1' | 6.47 | 1.60 | 1.53 |
| 1 | AA | 556 | C | C2-N3 | 6.47 | 1.41 | 1.35 |
| 1 | AA | 1353 | G | P-O5' | 6.47 | 1.66 | 1.59 |
| 1 | AA | 1477 | U | C5-C6 | 6.47 | 1.40 | 1.34 |
| 1 | AA | 1493 | A | N9-C4 | 6.47 | 1.41 | 1.37 |
| 26 | BB | 10 | A | C4'-O4' | -6.47 | 1.37 | 1.45 |
| 26 | BB | 487 | C | N3-C4 | 6.47 | 1.38 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1154 | G | C2'-C1' | -6.47 | 1.46 | 1.53 |
| 26 | BB | 1854 | A | N3-C4 | 6.47 | 1.38 | 1.34 |
| 1 | AA | 308 | C | C4-C5 | 6.47 | 1.48 | 1.43 |
| 26 | BB | 267 | C | O3'-P | 6.47 | 1.69 | 1.61 |
| 26 | BB | 287 | G | N3-C4 | -6.47 | 1.30 | 1.35 |
| 26 | BB | 1887 | C | C5-C6 | 6.47 | 1.39 | 1.34 |
| 26 | BB | 2268 | A | N3-C4 | 6.47 | 1.38 | 1.34 |
| 1 | AA | 1455 | G | C6-N1 | 6.47 | 1.44 | 1.39 |
| 4 | AD | 10 | G | N9-C8 | -6.47 | 1.33 | 1.37 |
| 26 | BB | 505 | A | N1-C2 | -6.47 | 1.28 | 1.34 |
| 26 | BB | 624 | C | C5'-C4' | 6.47 | 1.59 | 1.51 |
| 26 | BB | 740 | C | O4'-C1' | 6.47 | 1.50 | 1.41 |
| 26 | BB | 900 | A | O5'-C5' | -6.47 | 1.32 | 1.42 |
| 26 | BB | 1431 | A | N3-C4 | -6.47 | 1.30 | 1.34 |
| 26 | BB | 1528 | A | C5-C6 | -6.47 | 1.35 | 1.41 |
| 26 | BB | 1561 | C | P-O5' | -6.47 | 1.53 | 1.59 |
| 26 | BB | 1707 | G | O3'-P | 6.47 | 1.69 | 1.61 |
| 26 | BB | 2107 | G | C8-N7 | 6.47 | 1.34 | 1.30 |
| 26 | BB | 2749 | A | N7-C5 | -6.47 | 1.35 | 1.39 |
| 26 | BB | 2871 | U | C2'-C1' | 6.47 | 1.60 | 1.53 |
| 26 | BB | 2667 | C | O3'-P | 6.47 | 1.69 | 1.61 |
| 26 | BB | 2852 | G | C5-C4 | 6.47 | 1.42 | 1.38 |
| 26 | BB | 2895 | G | C5-C6 | -6.47 | 1.35 | 1.42 |
| 26 | BB | 2899 | A | N9-C4 | -6.47 | 1.33 | 1.37 |
| 1 | AA | 620 | C | C2-N3 | 6.47 | 1.41 | 1.35 |
| 1 | AA | 898 | G | C3'-O3' | -6.47 | 1.33 | 1.42 |
| 1 | AA | 1315 | U | C1'-N1 | 6.47 | 1.58 | 1.48 |
| 1 | AA | 1364 | U | N1-C2 | 6.47 | 1.44 | 1.38 |
| 1 | AA | 1418 | A | C5-C4 | -6.47 | 1.34 | 1.38 |
| 26 | BB | 1555 | G | C8-N7 | -6.47 | 1.27 | 1.30 |
| 26 | BB | 2269 | G | C2-N2 | 6.47 | 1.41 | 1.34 |
| 26 | BB | 2269 | G | C2-N3 | 6.47 | 1.38 | 1.32 |
| 1 | AA | 547 | A | C4'-C3' | 6.46 | 1.60 | 1.53 |
| 1 | AA | 922 | G | N9-C4 | -6.46 | 1.32 | 1.38 |
| 4 | AD | 71 | G | N3-C4 | 6.46 | 1.40 | 1.35 |
| 26 | BB | 181 | A | C2'-O2' | 6.46 | 1.50 | 1.41 |
| 26 | BB | 1286 | A | C5-C4 | -6.46 | 1.34 | 1.38 |
| 26 | BB | 1532 | A | N7-C5 | 6.46 | 1.43 | 1.39 |
| 26 | BB | 2505 | G | N9-C8 | -6.46 | 1.33 | 1.37 |
| 1 | AA | 512 | U | C2-N3 | 6.46 | 1.42 | 1.37 |
| 26 | BB | 1385 | A | C5-C4 | -6.46 | 1.34 | 1.38 |
| 26 | BB | 2018 | G | P-O5' | 6.46 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2051 | A | N9-C4 | 6.46 | 1.41 | 1.37 |
| 26 | BB | 2141 | G | P-O5' | 6.46 | 1.66 | 1.59 |
| 26 | BB | 966 | G | C3'-C2' | -6.46 | 1.45 | 1.52 |
| 26 | BB | 1341 | G | C5'-C4' | 6.46 | 1.59 | 1.51 |
| 26 | BB | 2054 | A | C8-N7 | -6.46 | 1.27 | 1.31 |
| 26 | BB | 2591 | C | C2-N3 | 6.46 | 1.41 | 1.35 |
| 26 | BB | 2884 | U | C5-C6 | 6.46 | 1.40 | 1.34 |
| 1 | AA | 289 | G | N7-C5 | 6.46 | 1.43 | 1.39 |
| 1 | AA | 1283 | U | O3'-P | 6.46 | 1.69 | 1.61 |
| 26 | BB | 554 | U | C5-C6 | 6.46 | 1.40 | 1.34 |
| 26 | BB | 1226 | A | N9-C4 | 6.46 | 1.41 | 1.37 |
| 1 | AA | 453 | G | P-O5' | 6.46 | 1.66 | 1.59 |
| 26 | BB | 34 | U | O3'-P | 6.46 | 1.68 | 1.61 |
| 26 | BB | 2663 | G | C8-N7 | 6.46 | 1.34 | 1.30 |
| 1 | AA | 1128 | C | C2-O2 | -6.46 | 1.18 | 1.24 |
| 1 | AA | 1374 | A | N1-C2 | -6.46 | 1.28 | 1.34 |
| 26 | BB | 86 | G | P-O5' | 6.46 | 1.66 | 1.59 |
| 26 | BB | 491 | G | O3'-P | 6.46 | 1.68 | 1.61 |
| 26 | BB | 1314 | C | O3'-P | 6.46 | 1.68 | 1.61 |
| 26 | BB | 1682 | G | C2-N3 | 6.46 | 1.38 | 1.32 |
| 26 | BB | 1713 | A | N9-C8 | -6.46 | 1.32 | 1.37 |
| 26 | BB | 2008 | C | C2'-C1' | 6.46 | 1.60 | 1.53 |
| 26 | BB | 2671 | G | N7-C5 | -6.46 | 1.35 | 1.39 |
| 26 | BB | 2757 | A | C8-N7 | -6.46 | 1.27 | 1.31 |
| 26 | BB | 1070 | A | C6-N6 | -6.46 | 1.28 | 1.33 |
| 26 | BB | 1876 | A | N1-C2 | -6.46 | 1.28 | 1.34 |
| 26 | BB | 1956 | U | N1-C2 | 6.46 | 1.44 | 1.38 |
| 26 | BB | 1966 | A | C6-N1 | 6.46 | 1.40 | 1.35 |
| 26 | BB | 249 | C | P-O5' | 6.45 | 1.66 | 1.59 |
| 26 | BB | 2129 | C | C3'-O3' | 6.45 | 1.51 | 1.42 |
| 26 | BB | 2770 | G | N7-C5 | 6.45 | 1.43 | 1.39 |
| 1 | AA | 296 | U | C2-N3 | 6.45 | 1.42 | 1.37 |
| 1 | AA | 1076 | U | N1-C2 | 6.45 | 1.44 | 1.38 |
| 25 | BA | 5 | U | P-O5' | 6.45 | 1.66 | 1.59 |
| 26 | BB | 1693 | U | N3-C4 | 6.45 | 1.44 | 1.38 |
| 1 | AA | 130 | A | N9-C8 | -6.45 | 1.32 | 1.37 |
| 2 | AB | 39 | A | N1-C2 | -6.45 | 1.28 | 1.34 |
| 26 | BB | 173 | A | C6-N1 | -6.45 | 1.31 | 1.35 |
| 26 | BB | 1064 | C | O3'-P | 6.45 | 1.68 | 1.61 |
| 26 | BB | 1090 | A | C6-N6 | 6.45 | 1.39 | 1.33 |
| 1 | AA | 255 | G | N1-C2 | 6.45 | 1.43 | 1.37 |
| 1 | AA | 330 | C | C2'-C1' | 6.45 | 1.60 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 95 | U | C4'-C3' | 6.45 | 1.60 | 1.53 |
| 26 | BB | 1728 | C | P-O5' | 6.45 | 1.66 | 1.59 |
| 26 | BB | 2183 | A | C8-N7 | -6.45 | 1.27 | 1.31 |
| 26 | BB | 2870 | C | C2-O2 | -6.45 | 1.18 | 1.24 |
| 26 | BB | 2807 | U | C2'-C1' | -6.45 | 1.46 | 1.53 |
| 1 | AA | 1235 | U | C2-N3 | 6.45 | 1.42 | 1.37 |
| 26 | BB | 484 | C | C2-N3 | 6.45 | 1.41 | 1.35 |
| 26 | BB | 1487 | U | C2-N3 | 6.45 | 1.42 | 1.37 |
| 26 | BB | 1538 | G | C6-N1 | -6.45 | 1.35 | 1.39 |
| 26 | BB | 1814 | G | C2-N3 | 6.45 | 1.38 | 1.32 |
| 26 | BB | 2055 | C | P-O5' | 6.45 | 1.66 | 1.59 |
| 1 | AA | 299 | G | C3'-C2' | 6.44 | 1.60 | 1.52 |
| 25 | BA | 109 | A | C2'-C1' | 6.44 | 1.60 | 1.53 |
| 1 | AA | 1126 | U | P-O5' | 6.44 | 1.66 | 1.59 |
| 1 | AA | 1420 | U | P-O5' | 6.44 | 1.66 | 1.59 |
| 26 | BB | 487 | C | N1-C2 | 6.44 | 1.46 | 1.40 |
| 26 | BB | 675 | A | O3'-P | 6.44 | 1.68 | 1.61 |
| 1 | AA | 398 | U | C2-N3 | 6.44 | 1.42 | 1.37 |
| 26 | BB | 187 | G | C6-N1 | 6.44 | 1.44 | 1.39 |
| 26 | BB | 1157 | G | N7-C5 | -6.44 | 1.35 | 1.39 |
| 26 | BB | 1455 | G | N3-C4 | 6.44 | 1.40 | 1.35 |
| 26 | BB | 1500 | G | N3-C4 | 6.44 | 1.40 | 1.35 |
| 26 | BB | 2332 | C | C2-N3 | 6.44 | 1.41 | 1.35 |
| 1 | AA | 307 | C | C4-C5 | 6.44 | 1.48 | 1.43 |
| 26 | BB | 2252 | G | N1-C2 | 6.44 | 1.43 | 1.37 |
| 1 | AA | 351 | G | C5-C4 | 6.44 | 1.42 | 1.38 |
| 1 | AA | 634 | C | C4-N4 | 6.44 | 1.39 | 1.33 |
| 26 | BB | 596 | U | P-O5' | 6.44 | 1.66 | 1.59 |
| 26 | BB | 990 | A | N3-C4 | 6.44 | 1.38 | 1.34 |
| 26 | BB | 1450 | G | C4'-O4' | -6.44 | 1.37 | 1.45 |
| 1 | AA | 660 | C | P-O5' | 6.44 | 1.66 | 1.59 |
| 1 | AA | 1540 | U | C4-C5 | 6.44 | 1.49 | 1.43 |
| 26 | BB | 188 | G | N9-C8 | 6.44 | 1.42 | 1.37 |
| 26 | BB | 484 | C | C3'-O3' | -6.44 | 1.33 | 1.42 |
| 25 | BA | 36 | C | C2-N3 | -6.43 | 1.30 | 1.35 |
| 26 | BB | 525 | U | C4'-C3' | -6.43 | 1.46 | 1.53 |
| 26 | BB | 862 | G | C5-C6 | 6.43 | 1.48 | 1.42 |
| 26 | BB | 893 | C | C5'-C4' | 6.43 | 1.59 | 1.51 |
| 26 | BB | 1575 | C | C2'-C1' | 6.43 | 1.60 | 1.53 |
| 26 | BB | 2355 | G | N7-C5 | 6.43 | 1.43 | 1.39 |
| 26 | BB | 2382 | G | N3-C4 | 6.43 | 1.40 | 1.35 |
| 1 | AA | 1057 | G | C5-C4 | -6.43 | 1.33 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 748 | G | C5-C6 | 6.43 | 1.48 | 1.42 |
| 26 | BB | 886 | A | N7-C5 | 6.43 | 1.43 | 1.39 |
| 26 | BB | 1473 | G | N9-C4 | 6.43 | 1.43 | 1.38 |
| 26 | BB | 1815 | A | C5-C6 | 6.43 | 1.46 | 1.41 |
| 26 | BB | 2896 | C | C4'-O4' | -6.43 | 1.37 | 1.45 |
| 1 | AA | 198 | G | N3-C4 | 6.43 | 1.40 | 1.35 |
| 26 | BB | 2873 | A | N3-C4 | -6.43 | 1.30 | 1.34 |
| 1 | AA | 432 | A | N9-C4 | 6.43 | 1.41 | 1.37 |
| 25 | BA | 23 | G | C8-N7 | 6.43 | 1.34 | 1.30 |
| 25 | BA | 97 | C | C2'-C1' | -6.43 | 1.46 | 1.53 |
| 26 | BB | 292 | U | N1-C6 | 6.43 | 1.43 | 1.38 |
| 26 | BB | 480 | A | O4'-C1' | 6.43 | 1.50 | 1.41 |
| 26 | BB | 791 | C | C3'-C2' | 6.43 | 1.60 | 1.52 |
| 26 | BB | 832 | U | C2-N3 | 6.43 | 1.42 | 1.37 |
| 26 | BB | 1564 | C | C5'-C4' | 6.43 | 1.59 | 1.51 |
| 1 | AA | 251 | G | O3'-P | 6.43 | 1.68 | 1.61 |
| 1 | AA | 1034 | G | N3-C4 | 6.43 | 1.40 | 1.35 |
| 1 | AA | 1073 | U | O3'-P | 6.43 | 1.68 | 1.61 |
| 1 | AA | 314 | C | N1-C2 | 6.43 | 1.46 | 1.40 |
| 1 | AA | 370 | C | C4-C5 | 6.43 | 1.48 | 1.43 |
| 26 | BB | 596 | U | C2'-C1' | 6.43 | 1.60 | 1.53 |
| 26 | BB | 1162 | G | N9-C8 | 6.43 | 1.42 | 1.37 |
| 26 | BB | 1218 | G | C6-N1 | -6.43 | 1.35 | 1.39 |
| 26 | BB | 1655 | A | C6-N1 | 6.43 | 1.40 | 1.35 |
| 26 | BB | 1693 | U | N1-C2 | 6.43 | 1.44 | 1.38 |
| 26 | BB | 1823 | G | C5-C4 | 6.43 | 1.42 | 1.38 |
| 26 | BB | 2140 | G | N3-C4 | 6.43 | 1.40 | 1.35 |
| 26 | BB | 2242 | G | N9-C8 | 6.43 | 1.42 | 1.37 |
| 1 | AA | 447 | G | N1-C2 | 6.42 | 1.42 | 1.37 |
| 26 | BB | 1368 | G | C8-N7 | -6.42 | 1.27 | 1.30 |
| 26 | BB | 2515 | C | N1-C6 | 6.42 | 1.41 | 1.37 |
| 1 | AA | 1212 | U | N3-C4 | 6.42 | 1.44 | 1.38 |
| 26 | BB | 2516 | A | C8-N7 | 6.42 | 1.36 | 1.31 |
| 1 | AA | 208 | U | C4-C5 | 6.42 | 1.49 | 1.43 |
| 1 | AA | 804 | U | P-O5' | 6.42 | 1.66 | 1.59 |
| 14 | AN | 75 | GLU | CD-OE1 | -6.42 | 1.18 | 1.25 |
| 26 | BB | 523 | C | C5-C6 | 6.42 | 1.39 | 1.34 |
| 26 | BB | 921 | C | P-O5' | 6.42 | 1.66 | 1.59 |
| 26 | BB | 923 | G | C4'-C3' | -6.42 | 1.46 | 1.53 |
| 26 | BB | 1676 | A | N7-C5 | -6.42 | 1.35 | 1.39 |
| 26 | BB | 2293 | G | C2-N3 | 6.42 | 1.37 | 1.32 |
| 26 | BB | 2321 | U | O3'-P | 6.42 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2619 | C | C4'-O4' | -6.42 | 1.37 | 1.45 |
| 1 | AA | 1432 | G | N9-C4 | -6.42 | 1.32 | 1.38 |
| 1 | AA | 1539 | C | C5-C6 | -6.42 | 1.29 | 1.34 |
| 26 | BB | 1026 | G | N3-C4 | 6.42 | 1.40 | 1.35 |
| 26 | BB | 2237 | G | C8-N7 | 6.42 | 1.34 | 1.30 |
| 26 | BB | 2249 | U | C4-C5 | 6.42 | 1.49 | 1.43 |
| 26 | BB | 2635 | A | C5-C6 | 6.42 | 1.46 | 1.41 |
| 1 | AA | 765 | G | C5'-C4' | 6.42 | 1.59 | 1.51 |
| 26 | BB | 456 | C | N3-C4 | 6.42 | 1.38 | 1.33 |
| 26 | BB | 987 | C | C4-C5 | 6.42 | 1.48 | 1.43 |
| 26 | BB | 2193 | G | C6-N1 | -6.42 | 1.35 | 1.39 |
| 26 | BB | 2588 | G | C2-N3 | 6.42 | 1.37 | 1.32 |
| 26 | BB | 503 | A | C8-N7 | -6.42 | 1.27 | 1.31 |
| 26 | BB | 996 | A | P-O5' | 6.42 | 1.66 | 1.59 |
| 26 | BB | 1265 | A | C2'-C1' | -6.42 | 1.46 | 1.53 |
| 26 | BB | 1594 | U | C5'-C4' | 6.42 | 1.59 | 1.51 |
| 27 | BC | 138 | PRO | N-CD | -6.42 | 1.38 | 1.47 |
| 1 | AA | 41 | G | N1-C2 | 6.42 | 1.42 | 1.37 |
| 1 | AA | 1520 | C | P-O5' | 6.42 | 1.66 | 1.59 |
| 26 | BB | 2384 | U | N3-C4 | 6.42 | 1.44 | 1.38 |
| 1 | AA | 201 | G | N3-C4 | 6.41 | 1.40 | 1.35 |
| 1 | AA | 942 | G | N7-C5 | -6.41 | 1.35 | 1.39 |
| 1 | AA | 1000 | A | C2-N3 | -6.41 | 1.27 | 1.33 |
| 3 | AC | 52 | U | P-O5' | 6.41 | 1.66 | 1.59 |
| 26 | BB | 1035 | U | O3'-P | 6.41 | 1.68 | 1.61 |
| 26 | BB | 2229 | U | C5-C6 | 6.41 | 1.40 | 1.34 |
| 1 | AA | 946 | A | C4'-C3' | 6.41 | 1.60 | 1.53 |
| 1 | AA | 974 | A | P-O5' | 6.41 | 1.66 | 1.59 |
| 1 | AA | 78 | A | N9-C8 | 6.41 | 1.42 | 1.37 |
| 1 | AA | 302 | G | O3'-P | 6.41 | 1.68 | 1.61 |
| 1 | AA | 464 | U | P-O5' | 6.41 | 1.66 | 1.59 |
| 1 | AA | 1369 | C | C4-C5 | 6.41 | 1.48 | 1.43 |
| 2 | AB | 29 | G | C8-N7 | -6.41 | 1.27 | 1.30 |
| 26 | BB | 969 | G | C5-C4 | 6.41 | 1.42 | 1.38 |
| 26 | BB | 1090 | A | C5-C4 | 6.41 | 1.43 | 1.38 |
| 26 | BB | 1460 | U | C5'-C4' | 6.41 | 1.59 | 1.51 |
| 1 | AA | 252 | U | C5-C6 | 6.41 | 1.40 | 1.34 |
| 1 | AA | 949 | A | O3'-P | 6.41 | 1.68 | 1.61 |
| 1 | AA | 1103 | C | C5-C6 | 6.41 | 1.39 | 1.34 |
| 25 | BA | 44 | G | N1-C2 | 6.41 | 1.42 | 1.37 |
| 26 | BB | 890 | C | C2-N3 | 6.41 | 1.40 | 1.35 |
| 26 | BB | 1968 | G | P-O5' | -6.41 | 1.53 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2520 | C | N3-C4 | -6.41 | 1.29 | 1.33 |
| 26 | BB | 2838 | G | C3'-C2' | 6.41 | 1.59 | 1.52 |
| 1 | AA | 600 | A | P-O5' | 6.41 | 1.66 | 1.59 |
| 25 | BA | 91 | C | N3-C4 | -6.41 | 1.29 | 1.33 |
| 34 | BJ | 131 | TYR | CE1-CZ | 6.41 | 1.46 | 1.38 |
| 1 | AA | 989 | U | O5'-C5' | -6.41 | 1.32 | 1.42 |
| 1 | AA | 1431 | A | O4'-C1' | 6.41 | 1.50 | 1.41 |
| 2 | AB | 24 | G | C5'-C4' | 6.41 | 1.59 | 1.51 |
| 26 | BB | 290 | U | P-O5' | 6.41 | 1.66 | 1.59 |
| 26 | BB | 1201 | U | N1-C2 | -6.41 | 1.32 | 1.38 |
| 26 | BB | 2336 | A | N7-C5 | -6.41 | 1.35 | 1.39 |
| 26 | BB | 2748 | A | C3'-C2' | 6.41 | 1.59 | 1.52 |
| 1 | AA | 77 | A | C3'-C2' | 6.40 | 1.59 | 1.52 |
| 1 | AA | 243 | A | C6-N1 | 6.40 | 1.40 | 1.35 |
| 26 | BB | 794 | A | O3'-P | 6.40 | 1.68 | 1.61 |
| 26 | BB | 1040 | A | C4'-O4' | -6.40 | 1.37 | 1.45 |
| 26 | BB | 2508 | G | N7-C5 | 6.40 | 1.43 | 1.39 |
| 26 | BB | 2717 | C | N3-C4 | 6.40 | 1.38 | 1.33 |
| 1 | AA | 526 | C | C4-C5 | 6.40 | 1.48 | 1.43 |
| 26 | BB | 695 | G | C6-N1 | 6.40 | 1.44 | 1.39 |
| 26 | BB | 1224 | U | N3-C4 | 6.40 | 1.44 | 1.38 |
| 26 | BB | 2461 | A | N9-C4 | 6.40 | 1.41 | 1.37 |
| 26 | BB | 2694 | G | C8-N7 | 6.40 | 1.34 | 1.30 |
| 1 | AA | 336 | A | N9-C8 | 6.40 | 1.42 | 1.37 |
| 1 | AA | 990 | C | C4'-O4' | -6.40 | 1.37 | 1.45 |
| 26 | BB | 2784 | U | C4-C5 | 6.40 | 1.49 | 1.43 |
| 1 | AA | 555 | U | N3-C4 | 6.40 | 1.44 | 1.38 |
| 3 | AC | 29 | G | C5-C6 | 6.40 | 1.48 | 1.42 |
| 26 | BB | 2071 | A | N3-C4 | 6.40 | 1.38 | 1.34 |
| 26 | BB | 2379 | G | C2-N3 | 6.40 | 1.37 | 1.32 |
| 1 | AA | 102 | G | P-O5' | 6.40 | 1.66 | 1.59 |
| 26 | BB | 655 | A | N9-C4 | 6.40 | 1.41 | 1.37 |
| 26 | BB | 1605 | C | C2-N3 | 6.40 | 1.40 | 1.35 |
| 26 | BB | 2714 | G | C6-N1 | 6.40 | 1.44 | 1.39 |
| 1 | AA | 1200 | C | O3'-P | 6.40 | 1.68 | 1.61 |
| 21 | AU | 36 | GLY | CA-C | 6.39 | 1.62 | 1.51 |
| 26 | BB | 898 | C | P-O5' | 6.39 | 1.66 | 1.59 |
| 26 | BB | 1827 | U | C4'-O4' | -6.39 | 1.37 | 1.45 |
| 26 | BB | 2352 | A | O3'-P | 6.39 | 1.68 | 1.61 |
| 26 | BB | 2738 | A | N7-C5 | -6.39 | 1.35 | 1.39 |
| 1 | AA | 1470 | U | C2-N3 | 6.39 | 1.42 | 1.37 |
| 3 | AC | 34 | U | C2-O2 | 6.39 | 1.28 | 1.22 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 35 | G | O3'-P | 6.39 | 1.68 | 1.61 |
| 26 | BB | 324 | A | O3'-P | 6.39 | 1.68 | 1.61 |
| 26 | BB | 672 | C | N1-C6 | -6.39 | 1.33 | 1.37 |
| 26 | BB | 2185 | U | P-O5' | 6.39 | 1.66 | 1.59 |
| 26 | BB | 2659 | G | C5-C4 | 6.39 | 1.42 | 1.38 |
| 26 | BB | 2667 | C | N3-C4 | 6.39 | 1.38 | 1.33 |
| 1 | AA | 341 | C | C5-C6 | 6.39 | 1.39 | 1.34 |
| 1 | AA | 1046 | A | N3-C4 | 6.39 | 1.38 | 1.34 |
| 2 | AB | 67 | G | C2-N3 | 6.39 | 1.37 | 1.32 |
| 26 | BB | 923 | G | N7-C5 | -6.39 | 1.35 | 1.39 |
| 26 | BB | 1702 | G | N7-C5 | -6.39 | 1.35 | 1.39 |
| 26 | BB | 2269 | G | N3-C4 | 6.39 | 1.40 | 1.35 |
| 1 | AA | 891 | U | C3'-C2' | -6.39 | 1.45 | 1.52 |
| 1 | AA | 1501 | C | N1-C6 | 6.39 | 1.41 | 1.37 |
| 25 | BA | 27 | C | C4-C5 | 6.39 | 1.48 | 1.43 |
| 26 | BB | 248 | G | P-O5' | 6.39 | 1.66 | 1.59 |
| 26 | BB | 471 | A | C4'-O4' | -6.39 | 1.37 | 1.45 |
| 26 | BB | 872 | U | C4'-O4' | -6.39 | 1.37 | 1.45 |
| 26 | BB | 1615 | C | C4-N4 | -6.39 | 1.28 | 1.33 |
| 26 | BB | 2213 | U | C4-C5 | 6.39 | 1.49 | 1.43 |
| 26 | BB | 2597 | G | C5-C4 | 6.39 | 1.42 | 1.38 |
| 1 | AA | 34 | C | N3-C4 | 6.39 | 1.38 | 1.33 |
| 1 | AA | 746 | A | C5'-C4' | 6.39 | 1.59 | 1.51 |
| 25 | BA | 64 | G | C5-C6 | 6.39 | 1.48 | 1.42 |
| 26 | BB | 789 | A | C6-N1 | 6.39 | 1.40 | 1.35 |
| 26 | BB | 1027 | A | P-O5' | 6.39 | 1.66 | 1.59 |
| 26 | BB | 2038 | G | C8-N7 | -6.39 | 1.27 | 1.30 |
| 1 | AA | 253 | A | C5-C4 | 6.39 | 1.43 | 1.38 |
| 1 | AA | 809 | G | C5'-C4' | 6.39 | 1.59 | 1.51 |
| 1 | AA | 1468 | A | O3'-P | 6.39 | 1.68 | 1.61 |
| 3 | AC | 57 | C | O3'-P | -6.39 | 1.53 | 1.61 |
| 26 | BB | 531 | C | C4'-C3' | 6.39 | 1.60 | 1.53 |
| 26 | BB | 784 | G | N7-C5 | -6.39 | 1.35 | 1.39 |
| 26 | BB | 846 | U | C2'-C1' | -6.39 | 1.46 | 1.53 |
| 26 | BB | 1177 | G | C5'-C4' | 6.39 | 1.59 | 1.51 |
| 26 | BB | 1788 | C | N1-C6 | 6.39 | 1.41 | 1.37 |
| 1 | AA | 588 | G | O3'-P | -6.38 | 1.53 | 1.61 |
| 1 | AA | 627 | G | C5-C4 | 6.38 | 1.42 | 1.38 |
| 32 | BH | 162 | ARG | CZ-NH2 | 6.38 | 1.41 | 1.33 |
| 1 | AA | 648 | A | C4'-O4' | -6.38 | 1.37 | 1.45 |
| 26 | BB | 130 | C | N1-C6 | 6.38 | 1.41 | 1.37 |
| 26 | BB | 2357 | G | C5'-C4' | 6.38 | 1.59 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 685 | G | N3-C4 | 6.38 | 1.40 | 1.35 |
| 1 | AA | 1076 | U | C5'-C4' | 6.38 | 1.59 | 1.51 |
| 1 | AA | 1287 | A | O3'-P | 6.38 | 1.68 | 1.61 |
| 26 | BB | 451 | U | C4-O4 | 6.38 | 1.28 | 1.23 |
| 26 | BB | 657 | U | C2-N3 | 6.38 | 1.42 | 1.37 |
| 26 | BB | 928 | A | C5'-C4' | 6.38 | 1.59 | 1.51 |
| 26 | BB | 1195 | G | C2-N3 | 6.38 | 1.37 | 1.32 |
| 26 | BB | 1353 | A | N3-C4 | -6.38 | 1.31 | 1.34 |
| 26 | BB | 2230 | G | C6-O6 | -6.38 | 1.18 | 1.24 |
| 26 | BB | 2676 | C | C1'-N1 | 6.38 | 1.58 | 1.48 |
| 1 | AA | 1185 | G | C6-N1 | 6.38 | 1.44 | 1.39 |
| 26 | BB | 320 | A | N7-C5 | 6.38 | 1.43 | 1.39 |
| 26 | BB | 700 | G | C4'-O4' | -6.38 | 1.37 | 1.45 |
| 1 | AA | 386 | C | C4'-O4' | -6.38 | 1.37 | 1.45 |
| 1 | AA | 423 | G | C6-N1 | -6.38 | 1.35 | 1.39 |
| 1 | AA | 687 | A | C4'-O4' | -6.38 | 1.37 | 1.45 |
| 26 | BB | 2569 | G | C2-N3 | 6.38 | 1.37 | 1.32 |
| 1 | AA | 1041 | G | N7-C5 | 6.38 | 1.43 | 1.39 |
| 1 | AA | 1208 | C | N1-C6 | 6.38 | 1.41 | 1.37 |
| 26 | BB | 1476 | U | C2'-C1' | 6.38 | 1.60 | 1.53 |
| 26 | BB | 1726 | C | C2-N3 | 6.38 | 1.40 | 1.35 |
| 26 | BB | 2860 | A | P-O5' | 6.38 | 1.66 | 1.59 |
| 1 | AA | 1013 | G | O4'-C1' | 6.38 | 1.50 | 1.41 |
| 26 | BB | 470 | A | N7-C5 | 6.38 | 1.43 | 1.39 |
| 26 | BB | 776 | G | N9-C8 | -6.38 | 1.33 | 1.37 |
| 26 | BB | 1116 | G | N9-C4 | -6.38 | 1.32 | 1.38 |
| 26 | BB | 1954 | G | C8-N7 | 6.38 | 1.34 | 1.30 |
| 1 | AA | 897 | C | C4-N4 | 6.37 | 1.39 | 1.33 |
| 1 | AA | 1170 | A | N1-C2 | -6.37 | 1.28 | 1.34 |
| 26 | BB | 1446 | C | N3-C4 | 6.37 | 1.38 | 1.33 |
| 26 | BB | 1623 | G | C2-N3 | 6.37 | 1.37 | 1.32 |
| 26 | BB | 2308 | G | C5'-C4' | 6.37 | 1.58 | 1.51 |
| 26 | BB | 2453 | A | C2-N3 | 6.37 | 1.39 | 1.33 |
| 26 | BB | 2730 | C | C4-N4 | 6.37 | 1.39 | 1.33 |
| 1 | AA | 94 | G | C2-N3 | 6.37 | 1.37 | 1.32 |
| 1 | AA | 119 | A | O3'-P | 6.37 | 1.68 | 1.61 |
| 1 | AA | 331 | G | C4'-O4' | -6.37 | 1.37 | 1.45 |
| 1 | AA | 785 | G | N7-C5 | -6.37 | 1.35 | 1.39 |
| 1 | AA | 912 | C | C2'-C1' | 6.37 | 1.60 | 1.53 |
| 1 | AA | 1035 | A | C5'-C4' | 6.37 | 1.58 | 1.51 |
| 1 | AA | 1088 | G | C8-N7 | -6.37 | 1.27 | 1.30 |
| 1 | AA | 1513 | A | N7-C5 | 6.37 | 1.43 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1287 | A | C8-N7 | -6.37 | 1.27 | 1.31 |
| 26 | BB | 2560 | A | O3'-P | 6.37 | 1.68 | 1.61 |
| 1 | AA | 223 | A | N9-C4 | -6.37 | 1.34 | 1.37 |
| 1 | AA | 1018 | G | N7-C5 | 6.37 | 1.43 | 1.39 |
| 26 | BB | 832 | U | N1-C2 | 6.37 | 1.44 | 1.38 |
| 1 | AA | 318 | G | P-O5' | 6.37 | 1.66 | 1.59 |
| 1 | AA | 564 | C | P-O5' | 6.37 | 1.66 | 1.59 |
| 1 | AA | 1040 | U | C2-N3 | 6.37 | 1.42 | 1.37 |
| 1 | AA | 1432 | G | N3-C4 | 6.37 | 1.40 | 1.35 |
| 3 | AC | 27 | A | C6-N1 | 6.37 | 1.40 | 1.35 |
| 26 | BB | 2564 | A | C5-C6 | 6.37 | 1.46 | 1.41 |
| 26 | BB | 2725 | A | N1-C2 | 6.37 | 1.40 | 1.34 |
| 26 | BB | 2687 | U | N1-C2 | 6.37 | 1.44 | 1.38 |
| 1 | AA | 185 | U | C4'-C3' | 6.37 | 1.60 | 1.53 |
| 1 | AA | 351 | G | C2-N3 | 6.37 | 1.37 | 1.32 |
| 1 | AA | 375 | U | O3'-P | 6.37 | 1.68 | 1.61 |
| 1 | AA | 414 | A | C2-N3 | 6.37 | 1.39 | 1.33 |
| 1 | AA | 546 | A | C4'-O4' | -6.37 | 1.37 | 1.45 |
| 1 | AA | 595 | A | N9-C4 | 6.37 | 1.41 | 1.37 |
| 1 | AA | 1168 | U | C2-O2 | 6.37 | 1.28 | 1.22 |
| 26 | BB | 167 | A | C4'-C3' | 6.37 | 1.60 | 1.53 |
| 26 | BB | 824 | U | C2-O2 | 6.37 | 1.28 | 1.22 |
| 26 | BB | 881 | G | C2-N3 | 6.37 | 1.37 | 1.32 |
| 26 | BB | 1757 | A | C5'-C4' | 6.37 | 1.58 | 1.51 |
| 26 | BB | 1896 | G | C8-N7 | -6.37 | 1.27 | 1.30 |
| 1 | AA | 940 | C | C5'-C4' | 6.36 | 1.58 | 1.51 |
| 1 | AA | 1444 | U | P-O5' | 6.36 | 1.66 | 1.59 |
| 1 | AA | 1513 | A | N3-C4 | 6.36 | 1.38 | 1.34 |
| 26 | BB | 132 | G | C5-C6 | 6.36 | 1.48 | 1.42 |
| 26 | BB | 661 | A | C6-N1 | 6.36 | 1.40 | 1.35 |
| 26 | BB | 774 | G | P-O5' | 6.36 | 1.66 | 1.59 |
| 26 | BB | 2094 | A | O3'-P | 6.36 | 1.68 | 1.61 |
| 1 | AA | 890 | G | C4'-O4' | -6.36 | 1.37 | 1.45 |
| 26 | BB | 1419 | A | C3'-C2' | 6.36 | 1.59 | 1.52 |
| 26 | BB | 2271 | G | C6-N1 | -6.36 | 1.35 | 1.39 |
| 1 | AA | 461 | A | C5'-C4' | 6.36 | 1.58 | 1.51 |
| 4 | AD | 20 | G | N9-C4 | 6.36 | 1.43 | 1.38 |
| 4 | AD | 65 | G | P-O5' | 6.36 | 1.66 | 1.59 |
| 26 | BB | 704 | G | C4'-C3' | 6.36 | 1.60 | 1.53 |
| 26 | BB | 2256 | G | N9-C4 | -6.36 | 1.32 | 1.38 |
| 26 | BB | 1539 | U | C2-O2 | 6.36 | 1.28 | 1.22 |
| 1 | AA | 953 | G | P-O5' | 6.36 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1037 | C | C4'-O4' | -6.36 | 1.37 | 1.45 |
| 26 | BB | 1568 | G | C6-N1 | 6.36 | 1.44 | 1.39 |
| 26 | BB | 2655 | G | O3'-P | 6.36 | 1.68 | 1.61 |
| 1 | AA | 352 | C | P-O5' | -6.36 | 1.53 | 1.59 |
| 1 | AA | 1380 | U | C2-N3 | 6.36 | 1.42 | 1.37 |
| 25 | BA | 57 | A | N3-C4 | -6.36 | 1.31 | 1.34 |
| 26 | BB | 284 | U | N1-C2 | 6.36 | 1.44 | 1.38 |
| 26 | BB | 939 | G | N3-C4 | -6.36 | 1.31 | 1.35 |
| 26 | BB | 1033 | U | N3-C4 | -6.36 | 1.32 | 1.38 |
| 26 | BB | 1744 | A | C3'-C2' | -6.36 | 1.45 | 1.52 |
| 26 | BB | 1847 | A | C4'-C3' | -6.36 | 1.46 | 1.53 |
| 26 | BB | 2785 | C | N3-C4 | 6.36 | 1.38 | 1.33 |
| 1 | AA | 350 | G | C4'-C3' | 6.35 | 1.60 | 1.53 |
| 1 | AA | 617 | G | C5'-C4' | 6.35 | 1.58 | 1.51 |
| 1 | AA | 626 | G | P-O5' | 6.35 | 1.66 | 1.59 |
| 1 | AA | 944 | G | N7-C5 | -6.35 | 1.35 | 1.39 |
| 26 | BB | 444 | C | N3-C4 | 6.35 | 1.38 | 1.33 |
| 26 | BB | 1015 | U | O4'-C1' | 6.35 | 1.50 | 1.41 |
| 1 | AA | 71 | A | N1-C2 | -6.35 | 1.28 | 1.34 |
| 1 | AA | 450 | G | N1-C2 | 6.35 | 1.42 | 1.37 |
| 1 | AA | 738 | C | C4-C5 | 6.35 | 1.48 | 1.43 |
| 1 | AA | 770 | C | C4'-O4' | -6.35 | 1.37 | 1.45 |
| 26 | BB | 190 | A | N3-C4 | 6.35 | 1.38 | 1.34 |
| 26 | BB | 1153 | C | C4-C5 | 6.35 | 1.48 | 1.43 |
| 26 | BB | 1722 | A | C4'-O4' | -6.35 | 1.37 | 1.45 |
| 26 | BB | 2751 | G | P-O5' | -6.35 | 1.53 | 1.59 |
| 31 | BG | 142 | TYR | CE2-CZ | 6.35 | 1.46 | 1.38 |
| 1 | AA | 38 | G | N3-C4 | 6.35 | 1.39 | 1.35 |
| 1 | AA | 280 | C | C4'-C3' | 6.35 | 1.60 | 1.53 |
| 1 | AA | 786 | G | C5-C6 | 6.35 | 1.48 | 1.42 |
| 1 | AA | 1269 | A | N9-C4 | 6.35 | 1.41 | 1.37 |
| 1 | AA | 1404 | C | C4'-O4' | -6.35 | 1.37 | 1.45 |
| 26 | BB | 156 | A | C8-N7 | -6.35 | 1.27 | 1.31 |
| 26 | BB | 186 | G | N9-C4 | 6.35 | 1.43 | 1.38 |
| 26 | BB | 1968 | G | C3'-C2' | 6.35 | 1.59 | 1.52 |
| 26 | BB | 2003 | A | N7-C5 | -6.35 | 1.35 | 1.39 |
| 26 | BB | 2391 | G | C5'-C4' | 6.35 | 1.58 | 1.51 |
| 1 | AA | 401 | C | O3'-P | -6.35 | 1.53 | 1.61 |
| 1 | AA | 987 | G | N3-C4 | 6.35 | 1.39 | 1.35 |
| 26 | BB | 175 | G | C5-C4 | -6.35 | 1.33 | 1.38 |
| 26 | BB | 177 | G | O3'-P | 6.35 | 1.68 | 1.61 |
| 26 | BB | 352 | A | C2'-C1' | -6.35 | 1.46 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1116 | G | C4'-C3' | 6.35 | 1.60 | 1.53 |
| 26 | BB | 2001 | C | N3-C4 | 6.35 | 1.38 | 1.33 |
| 26 | BB | 2424 | C | P-O5' | 6.35 | 1.66 | 1.59 |
| 26 | BB | 2810 | A | C5-C4 | -6.35 | 1.34 | 1.38 |
| 1 | AA | 205 | A | N7-C5 | 6.34 | 1.43 | 1.39 |
| 1 | AA | 693 | G | O3'-P | 6.34 | 1.68 | 1.61 |
| 1 | AA | 1458 | G | P-O5' | 6.34 | 1.66 | 1.59 |
| 26 | BB | 344 | A | C8-N7 | 6.34 | 1.35 | 1.31 |
| 26 | BB | 661 | A | C2-N3 | 6.34 | 1.39 | 1.33 |
| 26 | BB | 1369 | G | C5-C4 | 6.34 | 1.42 | 1.38 |
| 26 | BB | 1387 | A | P-O5' | 6.34 | 1.66 | 1.59 |
| 26 | BB | 2518 | A | N3-C4 | -6.34 | 1.31 | 1.34 |
| 26 | BB | 2838 | G | C2'-C1' | 6.34 | 1.60 | 1.53 |
| 1 | AA | 683 | G | C2-N3 | 6.34 | 1.37 | 1.32 |
| 26 | BB | 6 | A | O4'-C1' | 6.34 | 1.49 | 1.41 |
| 26 | BB | 1451 | C | C2-O2 | -6.34 | 1.18 | 1.24 |
| 1 | AA | 428 | G | N9-C8 | 6.34 | 1.42 | 1.37 |
| 1 | AA | 1150 | A | P-O5' | 6.34 | 1.66 | 1.59 |
| 2 | AB | 60 | U | C4-C5 | 6.34 | 1.49 | 1.43 |
| 26 | BB | 649 | G | C4'-C3' | 6.34 | 1.60 | 1.53 |
| 26 | BB | 879 | G | N1-C2 | 6.34 | 1.42 | 1.37 |
| 26 | BB | 493 | G | C2-N2 | -6.34 | 1.28 | 1.34 |
| 26 | BB | 1353 | A | N7-C5 | 6.34 | 1.43 | 1.39 |
| 26 | BB | 1773 | A | N7-C5 | -6.34 | 1.35 | 1.39 |
| 1 | AA | 248 | C | C5-C6 | 6.34 | 1.39 | 1.34 |
| 26 | BB | 335 | C | O3'-P | 6.34 | 1.68 | 1.61 |
| 1 | AA | 1231 | G | N9-C8 | -6.34 | 1.33 | 1.37 |
| 26 | BB | 257 | C | C2-N3 | 6.34 | 1.40 | 1.35 |
| 26 | BB | 341 | C | P-O5' | 6.34 | 1.66 | 1.59 |
| 26 | BB | 2228 | G | N9-C4 | 6.34 | 1.43 | 1.38 |
| 26 | BB | 2252 | G | P-O5' | 6.34 | 1.66 | 1.59 |
| 26 | BB | 2312 | U | C4'-C3' | 6.34 | 1.60 | 1.53 |
| 26 | BB | 2833 | U | N1-C2 | 6.34 | 1.44 | 1.38 |
| 26 | BB | 572 | A | C6-N6 | -6.33 | 1.28 | 1.33 |
| 26 | BB | 601 | C | C4-C5 | 6.33 | 1.48 | 1.43 |
| 26 | BB | 1531 | C | N1-C6 | 6.33 | 1.41 | 1.37 |
| 26 | BB | 2391 | G | C8-N7 | -6.33 | 1.27 | 1.30 |
| 1 | AA | 179 | A | N7-C5 | -6.33 | 1.35 | 1.39 |
| 1 | AA | 376 | G | N7-C5 | -6.33 | 1.35 | 1.39 |
| 1 | AA | 599 | C | N1-C6 | 6.33 | 1.41 | 1.37 |
| 26 | BB | 333 | G | C2'-O2' | 6.33 | 1.49 | 1.41 |
| 26 | BB | 607 | U | O3'-P | 6.33 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 898 | C | C4-N4 | 6.33 | 1.39 | 1.33 |
| 1 | AA | 459 | A | C4'-O4' | -6.33 | 1.37 | 1.45 |
| 1 | AA | 542 | G | P-O5' | 6.33 | 1.66 | 1.59 |
| 1 | AA | 1304 | G | N9-C8 | -6.33 | 1.33 | 1.37 |
| 2 | AB | 47 | U | C3'-O3' | 6.33 | 1.51 | 1.42 |
| 3 | AC | 34 | U | P-O5' | 6.33 | 1.66 | 1.59 |
| 4 | AD | 2 | G | C2-N3 | 6.33 | 1.37 | 1.32 |
| 26 | BB | 1772 | A | C5-C4 | -6.33 | 1.34 | 1.38 |
| 26 | BB | 1862 | G | P-O5' | 6.33 | 1.66 | 1.59 |
| 26 | BB | 2758 | A | C5-C4 | -6.33 | 1.34 | 1.38 |
| 1 | AA | 585 | G | P-O5' | -6.33 | 1.53 | 1.59 |
| 1 | AA | 1056 | U | P-O5' | 6.33 | 1.66 | 1.59 |
| 1 | AA | 1532 | U | C2'-C1' | 6.33 | 1.60 | 1.53 |
| 2 | AB | 42 | G | C2'-C1' | 6.33 | 1.60 | 1.53 |
| 26 | BB | 34 | U | C3'-C2' | 6.33 | 1.59 | 1.52 |
| 1 | AA | 401 | C | C2'-O2' | -6.33 | 1.33 | 1.41 |
| 26 | BB | 2390 | U | N1-C6 | 6.33 | 1.43 | 1.38 |
| 26 | BB | 2453 | A | N9-C8 | -6.33 | 1.32 | 1.37 |
| 1 | AA | 193 | C | C4-N4 | 6.33 | 1.39 | 1.33 |
| 1 | AA | 260 | G | N1-C2 | 6.33 | 1.42 | 1.37 |
| 1 | AA | 515 | G | N1-C2 | 6.33 | 1.42 | 1.37 |
| 1 | AA | 518 | C | P-O5' | 6.33 | 1.66 | 1.59 |
| 1 | AA | 1387 | G | P-O5' | 6.33 | 1.66 | 1.59 |
| 3 | AC | 56 | G | P-O5' | 6.33 | 1.66 | 1.59 |
| 26 | BB | 413 | C | C4'-O4' | -6.33 | 1.37 | 1.45 |
| 26 | BB | 556 | A | N3-C4 | 6.33 | 1.38 | 1.34 |
| 26 | BB | 945 | A | N9-C4 | -6.33 | 1.34 | 1.37 |
| 26 | BB | 2004 | G | N3-C4 | 6.33 | 1.39 | 1.35 |
| 26 | BB | 2349 | G | C6-N1 | 6.33 | 1.44 | 1.39 |
| 26 | BB | 2494 | G | O3'-P | 6.33 | 1.68 | 1.61 |
| 26 | BB | 2589 | A | C6-N1 | -6.33 | 1.31 | 1.35 |
| 32 | BH | 93 | TYR | CB-CG | -6.33 | 1.42 | 1.51 |
| 1 | AA | 151 | A | P-O5' | 6.32 | 1.66 | 1.59 |
| 1 | AA | 1081 | A | N9-C4 | 6.32 | 1.41 | 1.37 |
| 1 | AA | 1166 | G | O3'-P | 6.32 | 1.68 | 1.61 |
| 26 | BB | 1142 | A | C5-C4 | 6.32 | 1.43 | 1.38 |
| 26 | BB | 1520 | U | C3'-C2' | 6.32 | 1.59 | 1.52 |
| 26 | BB | 1557 | C | N3-C4 | 6.32 | 1.38 | 1.33 |
| 26 | BB | 1149 | G | N7-C5 | 6.32 | 1.43 | 1.39 |
| 26 | BB | 2521 | C | C5'-C4' | 6.32 | 1.58 | 1.51 |
| 26 | BB | 2777 | G | C3'-C2' | 6.32 | 1.59 | 1.52 |
| 1 | AA | 1036 | A | C3'-C2' | -6.32 | 1.45 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1400 | C | C5-C6 | 6.32 | 1.39 | 1.34 |
| 4 | AD | 31 | G | C5'-C4' | 6.32 | 1.58 | 1.51 |
| 26 | BB | 97 | C | C2-O2 | -6.32 | 1.18 | 1.24 |
| 26 | BB | 2333 | A | C2-N3 | -6.32 | 1.27 | 1.33 |
| 26 | BB | 2343 | U | P-O5' | 6.32 | 1.66 | 1.59 |
| 26 | BB | 2549 | G | N3-C4 | 6.32 | 1.39 | 1.35 |
| 1 | AA | 1111 | A | P-O5' | 6.32 | 1.66 | 1.59 |
| 25 | BA | 63 | C | C4'-O4' | -6.32 | 1.37 | 1.45 |
| 26 | BB | 2047 | C | C5'-C4' | 6.32 | 1.58 | 1.51 |
| 26 | BB | 2275 | C | N1-C2 | 6.32 | 1.46 | 1.40 |
| 1 | AA | 33 | A | C4'-C3' | -6.32 | 1.46 | 1.53 |
| 1 | AA | 359 | G | C8-N7 | -6.32 | 1.27 | 1.30 |
| 1 | AA | 609 | A | C4'-O4' | -6.32 | 1.37 | 1.45 |
| 1 | AA | 1100 | C | C2'-C1' | -6.32 | 1.46 | 1.53 |
| 26 | BB | 132 | G | P-O5' | 6.32 | 1.66 | 1.59 |
| 26 | BB | 894 | U | C5-C6 | 6.32 | 1.39 | 1.34 |
| 26 | BB | 2395 | C | N1-C6 | 6.32 | 1.41 | 1.37 |
| 1 | AA | 408 | A | N7-C5 | 6.32 | 1.43 | 1.39 |
| 1 | AA | 462 | G | P-O5' | 6.32 | 1.66 | 1.59 |
| 25 | BA | 99 | A | C4'-O4' | -6.32 | 1.37 | 1.45 |
| 26 | BB | 634 | C | O3'-P | 6.32 | 1.68 | 1.61 |
| 26 | BB | 880 | G | N1-C2 | 6.32 | 1.42 | 1.37 |
| 26 | BB | 2184 | A | N9-C4 | -6.32 | 1.34 | 1.37 |
| 32 | BH | 155 | PRO | N-CD | -6.32 | 1.39 | 1.47 |
| 1 | AA | 1012 | A | P-O5' | 6.31 | 1.66 | 1.59 |
| 1 | AA | 52 | C | C4'-O4' | -6.31 | 1.37 | 1.45 |
| 26 | BB | 661 | A | C8-N7 | -6.31 | 1.27 | 1.31 |
| 26 | BB | 2062 | A | C4'-O4' | -6.31 | 1.37 | 1.45 |
| 26 | BB | 2255 | G | N7-C5 | 6.31 | 1.43 | 1.39 |
| 1 | AA | 1473 | G | N1-C2 | 6.31 | 1.42 | 1.37 |
| 26 | BB | 307 | G | C5'-C4' | 6.31 | 1.58 | 1.51 |
| 26 | BB | 1717 | A | N3-C4 | 6.31 | 1.38 | 1.34 |
| 26 | BB | 1735 | A | N9-C8 | 6.31 | 1.42 | 1.37 |
| 1 | AA | 1164 | G | P-O5' | 6.31 | 1.66 | 1.59 |
| 26 | BB | 440 | C | N1-C2 | 6.31 | 1.46 | 1.40 |
| 26 | BB | 1171 | G | C2'-O2' | -6.31 | 1.33 | 1.41 |
| 26 | BB | 1771 | C | O4'-C1' | 6.31 | 1.49 | 1.41 |
| 38 | BN | 58 | TYR | CG-CD2 | 6.31 | 1.47 | 1.39 |
| 1 | AA | 640 | A | N3-C4 | 6.31 | 1.38 | 1.34 |
| 26 | BB | 423 | A | N3-C4 | 6.31 | 1.38 | 1.34 |
| 26 | BB | 491 | G | C5-C4 | -6.31 | 1.33 | 1.38 |
| 26 | BB | 1996 | C | C4-C5 | 6.31 | 1.48 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2673 | G | N1-C2 | 6.31 | 1.42 | 1.37 |
| 1 | AA | 1304 | G | C6-N1 | 6.31 | 1.44 | 1.39 |
| 3 | AC | 33 | A | C4'-C3' | 6.31 | 1.60 | 1.53 |
| 25 | BA | 79 | G | C4'-C3' | -6.31 | 1.46 | 1.53 |
| 26 | BB | 531 | C | C4'-O4' | -6.31 | 1.37 | 1.45 |
| 26 | BB | 717 | C | P-O5' | 6.31 | 1.66 | 1.59 |
| 26 | BB | 1274 | A | C5-C6 | -6.31 | 1.35 | 1.41 |
| 1 | AA | 858 | G | O3'-P | 6.30 | 1.68 | 1.61 |
| 1 | AA | 1074 | G | O3'-P | 6.30 | 1.68 | 1.61 |
| 26 | BB | 60 | G | N1-C2 | 6.30 | 1.42 | 1.37 |
| 26 | BB | 338 | G | C4'-O4' | -6.30 | 1.37 | 1.45 |
| 26 | BB | 520 | G | C8-N7 | 6.30 | 1.34 | 1.30 |
| 26 | BB | 809 | G | N9-C4 | 6.30 | 1.43 | 1.38 |
| 26 | BB | 1003 | G | C5-C6 | 6.30 | 1.48 | 1.42 |
| 26 | BB | 1152 | C | C1'-N1 | 6.30 | 1.58 | 1.48 |
| 26 | BB | 2873 | A | C2'-C1' | 6.30 | 1.60 | 1.53 |
| 1 | AA | 238 | A | N3-C4 | 6.30 | 1.38 | 1.34 |
| 1 | AA | 1147 | C | C4-N4 | -6.30 | 1.28 | 1.33 |
| 1 | AA | 264 | C | P-O5' | 6.30 | 1.66 | 1.59 |
| 25 | BA | 72 | G | C2-N3 | 6.30 | 1.37 | 1.32 |
| 26 | BB | 325 | G | O5'-C5' | -6.30 | 1.32 | 1.42 |
| 26 | BB | 429 | A | C2'-C1' | -6.30 | 1.46 | 1.53 |
| 26 | BB | 1187 | G | C2-N3 | 6.30 | 1.37 | 1.32 |
| 26 | BB | 1332 | G | N9-C4 | 6.30 | 1.43 | 1.38 |
| 26 | BB | 1913 | A | C6-N1 | -6.30 | 1.31 | 1.35 |
| 26 | BB | 2029 | G | P-O5' | 6.30 | 1.66 | 1.59 |
| 26 | BB | 2131 | U | N1-C2 | 6.30 | 1.44 | 1.38 |
| 26 | BB | 2684 | U | C2-N3 | 6.30 | 1.42 | 1.37 |
| 26 | BB | 2763 | G | O3'-P | 6.30 | 1.68 | 1.61 |
| 26 | BB | 350 | G | C6-N1 | 6.30 | 1.44 | 1.39 |
| 26 | BB | 1802 | A | C5'-C4' | 6.30 | 1.58 | 1.51 |
| 26 | BB | 2061 | G | P-O5' | 6.30 | 1.66 | 1.59 |
| 26 | BB | 2837 | A | N3-C4 | 6.30 | 1.38 | 1.34 |
| 1 | AA | 766 | A | P-O5' | 6.30 | 1.66 | 1.59 |
| 26 | BB | 1273 | U | C4-O4 | 6.30 | 1.28 | 1.23 |
| 26 | BB | 1484 | U | N1-C2 | 6.30 | 1.44 | 1.38 |
| 26 | BB | 2844 | G | C6-O6 | -6.30 | 1.18 | 1.24 |
| 1 | AA | 537 | G | P-O5' | 6.30 | 1.66 | 1.59 |
| 26 | BB | 909 | A | C5-C6 | -6.30 | 1.35 | 1.41 |
| 26 | BB | 1069 | A | O3'-P | 6.30 | 1.68 | 1.61 |
| 26 | BB | 2348 | U | C2-N3 | 6.30 | 1.42 | 1.37 |
| 26 | BB | 2351 | G | N9-C4 | -6.30 | 1.32 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2587 | A | N9-C4 | -6.30 | 1.34 | 1.37 |
| 26 | BB | 2663 | G | N3-C4 | 6.30 | 1.39 | 1.35 |
| 26 | BB | 2722 | G | N7-C5 | 6.30 | 1.43 | 1.39 |
| 4 | AD | 29 | C | C3'-C2' | 6.29 | 1.59 | 1.52 |
| 26 | BB | 180 | G | N9-C8 | 6.29 | 1.42 | 1.37 |
| 1 | AA | 136 | C | C2-N3 | 6.29 | 1.40 | 1.35 |
| 1 | AA | 288 | A | C5'-C4' | 6.29 | 1.58 | 1.51 |
| 1 | AA | 536 | C | C2-N3 | 6.29 | 1.40 | 1.35 |
| 1 | AA | 790 | A | C5-C6 | 6.29 | 1.46 | 1.41 |
| 26 | BB | 232 | G | P-O5' | 6.29 | 1.66 | 1.59 |
| 26 | BB | 410 | G | C2-N3 | 6.29 | 1.37 | 1.32 |
| 26 | BB | 775 | G | C4'-O4' | -6.29 | 1.37 | 1.45 |
| 26 | BB | 896 | A | N3-C4 | 6.29 | 1.38 | 1.34 |
| 26 | BB | 1030 | C | O3'-P | 6.29 | 1.68 | 1.61 |
| 1 | AA | 571 | U | C3'-C2' | 6.29 | 1.59 | 1.52 |
| 1 | AA | 644 | U | N3-C4 | -6.29 | 1.32 | 1.38 |
| 1 | AA | 1454 | G | C5-C6 | 6.29 | 1.48 | 1.42 |
| 4 | AD | 60 | A | C8-N7 | -6.29 | 1.27 | 1.31 |
| 26 | BB | 898 | C | C5-C6 | 6.29 | 1.39 | 1.34 |
| 26 | BB | 1944 | U | P-O5' | 6.29 | 1.66 | 1.59 |
| 26 | BB | 2083 | G | N1-C2 | 6.29 | 1.42 | 1.37 |
| 28 | BD | 84 | PRO | N-CD | -6.29 | 1.39 | 1.47 |
| 1 | AA | 1510 | C | C4'-C3' | -6.29 | 1.46 | 1.53 |
| 26 | BB | 593 | U | C2-O2 | 6.29 | 1.28 | 1.22 |
| 26 | BB | 1743 | G | N3-C4 | 6.29 | 1.39 | 1.35 |
| 1 | AA | 243 | A | C5-C4 | -6.29 | 1.34 | 1.38 |
| 1 | AA | 770 | C | C5'-C4' | 6.29 | 1.58 | 1.51 |
| 1 | AA | 801 | U | C5-C6 | 6.29 | 1.39 | 1.34 |
| 1 | AA | 811 | C | C4'-C3' | -6.29 | 1.46 | 1.53 |
| 26 | BB | 315 | G | C2-N3 | 6.29 | 1.37 | 1.32 |
| 26 | BB | 646 | U | O3'-P | 6.29 | 1.68 | 1.61 |
| 26 | BB | 962 | G | N3-C4 | 6.29 | 1.39 | 1.35 |
| 26 | BB | 1587 | G | N9-C4 | -6.29 | 1.32 | 1.38 |
| 1 | AA | 145 | G | O5'-C5' | -6.29 | 1.32 | 1.42 |
| 26 | BB | 259 | G | C8-N7 | -6.29 | 1.27 | 1.30 |
| 26 | BB | 1590 | A | N3-C4 | 6.29 | 1.38 | 1.34 |
| 1 | AA | 1 | A | C5-C6 | 6.29 | 1.46 | 1.41 |
| 1 | AA | 58 | C | N1-C2 | 6.29 | 1.46 | 1.40 |
| 1 | AA | 152 | A | C2'-O2' | 6.29 | 1.49 | 1.41 |
| 1 | AA | 1156 | G | C4'-C3' | 6.29 | 1.60 | 1.53 |
| 26 | BB | 608 | A | C3'-C2' | 6.29 | 1.59 | 1.52 |
| 26 | BB | 699 | A | N9-C4 | 6.29 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 929 | U | N1-C2 | 6.29 | 1.44 | 1.38 |
| 26 | BB | 1829 | A | N9-C4 | -6.29 | 1.34 | 1.37 |
| 26 | BB | 2491 | U | P-O5' | 6.29 | 1.66 | 1.59 |
| 1 | AA | 1134 | G | N1-C2 | 6.28 | 1.42 | 1.37 |
| 1 | AA | 1170 | A | C4'-O4' | -6.28 | 1.37 | 1.45 |
| 25 | BA | 72 | G | C5-C6 | 6.28 | 1.48 | 1.42 |
| 26 | BB | 333 | G | C5'-C4' | 6.28 | 1.58 | 1.51 |
| 26 | BB | 2324 | U | P-O5' | 6.28 | 1.66 | 1.59 |
| 26 | BB | 2588 | G | O4'-C1' | 6.28 | 1.49 | 1.41 |
| 26 | BB | 987 | C | O3'-P | 6.28 | 1.68 | 1.61 |
| 26 | BB | 2012 | G | C5-C6 | 6.28 | 1.48 | 1.42 |
| 1 | AA | 307 | C | C2-N3 | 6.28 | 1.40 | 1.35 |
| 1 | AA | 598 | U | N3-C4 | 6.28 | 1.44 | 1.38 |
| 1 | AA | 1193 | G | C2-N3 | 6.28 | 1.37 | 1.32 |
| 1 | AA | 1276 | G | C6-O6 | -6.28 | 1.18 | 1.24 |
| 1 | AA | 1299 | A | C4'-O4' | -6.28 | 1.37 | 1.45 |
| 1 | AA | 1515 | G | C1'-N9 | 6.28 | 1.58 | 1.48 |
| 4 | AD | 75 | C | C3'-C2' | 6.28 | 1.59 | 1.52 |
| 26 | BB | 81 | G | N3-C4 | 6.28 | 1.39 | 1.35 |
| 26 | BB | 1176 | U | C2-N3 | 6.28 | 1.42 | 1.37 |
| 26 | BB | 1482 | G | O3'-P | -6.28 | 1.53 | 1.61 |
| 26 | BB | 1876 | A | N7-C5 | 6.28 | 1.43 | 1.39 |
| 26 | BB | 2022 | U | P-O5' | -6.28 | 1.53 | 1.59 |
| 26 | BB | 2497 | A | C6-N6 | 6.28 | 1.39 | 1.33 |
| 26 | BB | 2603 | G | C5'-C4' | 6.28 | 1.58 | 1.51 |
| 2 | AB | 76 | A | C5'-C4' | 6.28 | 1.58 | 1.51 |
| 26 | BB | 904 | G | C6-O6 | -6.28 | 1.18 | 1.24 |
| 1 | AA | 348 | G | C2-N3 | 6.28 | 1.37 | 1.32 |
| 1 | AA | 360 | G | C6-O6 | -6.28 | 1.18 | 1.24 |
| 1 | AA | 380 | G | N7-C5 | 6.28 | 1.43 | 1.39 |
| 1 | AA | 896 | C | C2-O2 | -6.28 | 1.18 | 1.24 |
| 1 | AA | 1261 | A | C1'-N9 | 6.28 | 1.58 | 1.48 |
| 1 | AA | 1346 | A | N7-C5 | 6.28 | 1.43 | 1.39 |
| 26 | BB | 259 | G | N9-C4 | 6.28 | 1.43 | 1.38 |
| 26 | BB | 1862 | G | C5'-C4' | 6.28 | 1.58 | 1.51 |
| 26 | BB | 2450 | A | N3-C4 | 6.28 | 1.38 | 1.34 |
| 1 | AA | 194 | C | C4-N4 | 6.28 | 1.39 | 1.33 |
| 1 | AA | 500 | G | C2-N3 | 6.28 | 1.37 | 1.32 |
| 3 | AC | 17 | U | C4'-C3' | 6.28 | 1.60 | 1.53 |
| 26 | BB | 126 | A | O4'-C1' | -6.28 | 1.33 | 1.41 |
| 26 | BB | 2044 | C | C5'-C4' | 6.28 | 1.58 | 1.51 |
| 1 | AA | 802 | A | P-O5' | 6.27 | 1.66 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 41 | C | N1-C6 | 6.27 | 1.41 | 1.37 |
| 26 | BB | 1346 | G | P-O5' | 6.27 | 1.66 | 1.59 |
| 26 | BB | 2393 | U | P-O5' | 6.27 | 1.66 | 1.59 |
| 25 | BA | 45 | A | N7-C5 | 6.27 | 1.43 | 1.39 |
| 25 | BA | 66 | A | N7-C5 | 6.27 | 1.43 | 1.39 |
| 26 | BB | 2609 | U | C4'-C3' | 6.27 | 1.60 | 1.53 |
| 1 | AA | 1179 | A | O3'-P | 6.27 | 1.68 | 1.61 |
| 1 | AA | 1441 | A | C5-C4 | -6.27 | 1.34 | 1.38 |
| 26 | BB | 465 | G | N9-C8 | 6.27 | 1.42 | 1.37 |
| 26 | BB | 1688 | U | C4-C5 | 6.27 | 1.49 | 1.43 |
| 26 | BB | 1699 | G | C6-N1 | 6.27 | 1.44 | 1.39 |
| 1 | AA | 691 | G | C6-O6 | -6.27 | 1.18 | 1.24 |
| 26 | BB | 1491 | G | N1-C2 | 6.27 | 1.42 | 1.37 |
| 26 | BB | 1739 | A | N9-C8 | 6.27 | 1.42 | 1.37 |
| 26 | BB | 2089 | C | N1-C6 | 6.27 | 1.41 | 1.37 |
| 1 | AA | 579 | A | O3'-P | 6.27 | 1.68 | 1.61 |
| 13 | AM | 31 | ARG | CZ-NH2 | 6.27 | 1.41 | 1.33 |
| 26 | BB | 459 | U | P-O5' | 6.27 | 1.66 | 1.59 |
| 26 | BB | 765 | C | C3'-O3' | -6.27 | 1.33 | 1.42 |
| 26 | BB | 1979 | U | C2-N3 | 6.27 | 1.42 | 1.37 |
| 26 | BB | 2096 | C | C4'-O4' | -6.27 | 1.37 | 1.45 |
| 26 | BB | 2499 | C | O3'-P | -6.27 | 1.53 | 1.61 |
| 26 | BB | 2510 | C | C2-N3 | -6.27 | 1.30 | 1.35 |
| 26 | BB | 2548 | U | P-O5' | 6.27 | 1.66 | 1.59 |
| 31 | BG | 82 | TYR | CG-CD1 | 6.27 | 1.47 | 1.39 |
| 43 | BS | 42 | GLY | CA-C | 6.27 | 1.61 | 1.51 |
| 1 | AA | 819 | A | O4'-C1' | 6.27 | 1.49 | 1.41 |
| 1 | AA | 1386 | G | C5'-C4' | 6.27 | 1.58 | 1.51 |
| 1 | AA | 1425 | U | C4-C5 | 6.27 | 1.49 | 1.43 |
| 26 | BB | 992 | C | P-O5' | 6.27 | 1.66 | 1.59 |
| 26 | BB | 1481 | U | C4'-O4' | -6.27 | 1.37 | 1.45 |
| 26 | BB | 2295 | C | C3'-O3' | 6.27 | 1.50 | 1.42 |
| 26 | BB | 2698 | U | C2'-C1' | -6.27 | 1.46 | 1.53 |
| 1 | AA | 688 | G | N3-C4 | 6.26 | 1.39 | 1.35 |
| 26 | BB | 169 | G | N3-C4 | 6.26 | 1.39 | 1.35 |
| 26 | BB | 572 | A | C6-N1 | 6.26 | 1.40 | 1.35 |
| 26 | BB | 1106 | G | C8-N7 | 6.26 | 1.34 | 1.30 |
| 26 | BB | 1149 | G | N3-C4 | 6.26 | 1.39 | 1.35 |
| 26 | BB | 1252 | G | N1-C2 | 6.26 | 1.42 | 1.37 |
| 26 | BB | 1992 | G | C5-C6 | 6.26 | 1.48 | 1.42 |
| 26 | BB | 1459 | G | C4'-C3' | -6.26 | 1.46 | 1.53 |
| 1 | AA | 180 | U | O3'-P | -6.26 | 1.53 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 216 | A | C2'-C1' | 6.26 | 1.60 | 1.53 |
| 26 | BB | 628 | G | C8-N7 | -6.26 | 1.27 | 1.30 |
| 26 | BB | 753 | A | N3-C4 | 6.26 | 1.38 | 1.34 |
| 26 | BB | 2148 | G | C2-N3 | 6.26 | 1.37 | 1.32 |
| 26 | BB | 2839 | G | C2-N2 | 6.26 | 1.40 | 1.34 |
| 1 | AA | 44 | A | N3-C4 | 6.26 | 1.38 | 1.34 |
| 26 | BB | 286 | U | N1-C2 | 6.26 | 1.44 | 1.38 |
| 26 | BB | 1062 | G | C6-N1 | 6.26 | 1.44 | 1.39 |
| 26 | BB | 1327 | A | O3'-P | 6.26 | 1.68 | 1.61 |
| 1 | AA | 411 | A | C4'-O4' | -6.26 | 1.37 | 1.45 |
| 26 | BB | 1438 | U | C5-C6 | 6.26 | 1.39 | 1.34 |
| 26 | BB | 2651 | C | C4'-O4' | -6.26 | 1.37 | 1.45 |
| 1 | AA | 1386 | G | N9-C4 | -6.26 | 1.32 | 1.38 |
| 4 | AD | 4 | G | P-O5' | 6.26 | 1.66 | 1.59 |
| 26 | BB | 110 | G | N1-C2 | 6.26 | 1.42 | 1.37 |
| 26 | BB | 363 | G | C5'-C4' | 6.26 | 1.58 | 1.51 |
| 26 | BB | 465 | G | N9-C4 | 6.26 | 1.43 | 1.38 |
| 26 | BB | 1767 | G | C6-O6 | -6.26 | 1.18 | 1.24 |
| 26 | BB | 2218 | G | C8-N7 | -6.26 | 1.27 | 1.30 |
| 26 | BB | 2726 | A | N9-C8 | -6.26 | 1.32 | 1.37 |
| 26 | BB | 406 | G | C6-N1 | 6.25 | 1.44 | 1.39 |
| 26 | BB | 1509 | A | C2'-C1' | -6.25 | 1.46 | 1.53 |
| 26 | BB | 2562 | U | C5'-C4' | 6.25 | 1.58 | 1.51 |
| 26 | BB | 2680 | U | C2-N3 | 6.25 | 1.42 | 1.37 |
| 1 | AA | 140 | U | C2-N3 | 6.25 | 1.42 | 1.37 |
| 1 | AA | 453 | G | C4'-O4' | -6.25 | 1.37 | 1.45 |
| 2 | AB | 58 | A | C4'-O4' | -6.25 | 1.37 | 1.45 |
| 3 | AC | 49 | U | C2'-O2' | -6.25 | 1.33 | 1.41 |
| 26 | BB | 938 | G | P-O5' | -6.25 | 1.53 | 1.59 |
| 26 | BB | 1976 | U | C5-C6 | 6.25 | 1.39 | 1.34 |
| 26 | BB | 2063 | C | C4'-C3' | -6.25 | 1.46 | 1.53 |
| 26 | BB | 2220 | U | C2-N3 | -6.25 | 1.33 | 1.37 |
| 26 | BB | 2429 | G | N9-C8 | -6.25 | 1.33 | 1.37 |
| 1 | AA | 102 | G | N1-C2 | 6.25 | 1.42 | 1.37 |
| 1 | AA | 774 | G | C2-N3 | 6.25 | 1.37 | 1.32 |
| 3 | AC | 55 | A | C6-N1 | 6.25 | 1.40 | 1.35 |
| 26 | BB | 438 | G | C2'-C1' | 6.25 | 1.60 | 1.53 |
| 26 | BB | 1135 | C | C2-N3 | 6.25 | 1.40 | 1.35 |
| 26 | BB | 2683 | C | C5-C6 | 6.25 | 1.39 | 1.34 |
| 1 | AA | 688 | G | N7-C5 | 6.25 | 1.43 | 1.39 |
| 1 | AA | 971 | G | P-O5' | 6.25 | 1.66 | 1.59 |
| 1 | AA | 1153 | G | N1-C2 | 6.25 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 17 | U | C2-N3 | 6.25 | 1.42 | 1.37 |
| 26 | BB | 42 | A | N3-C4 | 6.25 | 1.38 | 1.34 |
| 26 | BB | 2160 | C | N1-C2 | 6.25 | 1.46 | 1.40 |
| 26 | BB | 2314 | A | C5-C4 | -6.25 | 1.34 | 1.38 |
| 26 | BB | 2468 | A | C4'-O4' | -6.25 | 1.37 | 1.45 |
| 26 | BB | 2867 | G | N9-C8 | -6.25 | 1.33 | 1.37 |
| 1 | AA | 1043 | G | C2-N2 | 6.25 | 1.40 | 1.34 |
| 1 | AA | 1388 | C | N1-C6 | 6.25 | 1.40 | 1.37 |
| 26 | BB | 119 | A | O4'-C1' | 6.25 | 1.49 | 1.41 |
| 26 | BB | 718 | A | N3-C4 | 6.25 | 1.38 | 1.34 |
| 26 | BB | 958 | U | P-O5' | 6.25 | 1.66 | 1.59 |
| 26 | BB | 1000 | A | N9-C4 | -6.25 | 1.34 | 1.37 |
| 26 | BB | 1094 | U | P-O5' | 6.25 | 1.66 | 1.59 |
| 26 | BB | 1452 | G | C5'-C4' | 6.25 | 1.58 | 1.51 |
| 26 | BB | 1950 | G | P-O5' | 6.25 | 1.66 | 1.59 |
| 26 | BB | 2551 | C | C4-N4 | 6.25 | 1.39 | 1.33 |
| 1 | AA | 89 | U | O3'-P | 6.25 | 1.68 | 1.61 |
| 1 | AA | 1232 | U | C4'-O4' | -6.25 | 1.37 | 1.45 |
| 26 | BB | 1656 | C | C5'-C4' | 6.25 | 1.58 | 1.51 |
| 26 | BB | 2078 | C | C3'-O3' | 6.25 | 1.50 | 1.42 |
| 26 | BB | 2894 | G | N9-C8 | 6.25 | 1.42 | 1.37 |
| 1 | AA | 924 | C | P-O5' | 6.24 | 1.66 | 1.59 |
| 1 | AA | 1152 | A | C4'-C3' | -6.24 | 1.46 | 1.53 |
| 1 | AA | 1456 | A | C6-N1 | 6.24 | 1.40 | 1.35 |
| 25 | BA | 28 | C | C4'-O4' | -6.24 | 1.37 | 1.45 |
| 26 | BB | 237 | C | P-O5' | 6.24 | 1.66 | 1.59 |
| 26 | BB | 1206 | G | C8-N7 | 6.24 | 1.34 | 1.30 |
| 26 | BB | 1514 | G | N9-C8 | 6.24 | 1.42 | 1.37 |
| 26 | BB | 2386 | A | C6-N6 | 6.24 | 1.39 | 1.33 |
| 1 | AA | 845 | A | N3-C4 | 6.24 | 1.38 | 1.34 |
| 1 | AA | 1275 | A | C8-N7 | -6.24 | 1.27 | 1.31 |
| 1 | AA | 1536 | C | C4'-O4' | -6.24 | 1.37 | 1.45 |
| 26 | BB | 1495 | A | C5-C6 | 6.24 | 1.46 | 1.41 |
| 26 | BB | 1563 | U | C2-N3 | 6.24 | 1.42 | 1.37 |
| 26 | BB | 2258 | C | C5-C6 | 6.24 | 1.39 | 1.34 |
| 1 | AA | 946 | A | N9-C4 | 6.24 | 1.41 | 1.37 |
| 26 | BB | 220 | G | P-O5' | 6.24 | 1.66 | 1.59 |
| 26 | BB | 278 | A | C4'-O4' | -6.24 | 1.37 | 1.45 |
| 26 | BB | 1648 | U | O3'-P | 6.24 | 1.68 | 1.61 |
| 1 | AA | 323 | U | P-O5' | 6.24 | 1.66 | 1.59 |
| 1 | AA | 1241 | G | C3'-C2' | -6.24 | 1.45 | 1.52 |
| 3 | AC | 38 | G | C5-C4 | -6.24 | 1.33 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 818 | G | C2-N3 | 6.24 | 1.37 | 1.32 |
| 26 | BB | 899 | A | N3-C4 | 6.24 | 1.38 | 1.34 |
| 26 | BB | 1607 | C | N1-C6 | 6.24 | 1.40 | 1.37 |
| 26 | BB | 1651 | G | C4'-O4' | -6.24 | 1.37 | 1.45 |
| 26 | BB | 2219 | U | C5'-C4' | 6.24 | 1.58 | 1.51 |
| 26 | BB | 2291 | U | C4'-O4' | -6.24 | 1.37 | 1.45 |
| 26 | BB | 2841 | C | N1-C6 | 6.24 | 1.40 | 1.37 |
| 26 | BB | 108 | G | C4'-O4' | -6.24 | 1.37 | 1.45 |
| 26 | BB | 1815 | A | O3'-P | 6.24 | 1.68 | 1.61 |
| 1 | AA | 861 | G | N7-C5 | 6.24 | 1.43 | 1.39 |
| 1 | AA | 1454 | G | N7-C5 | 6.24 | 1.43 | 1.39 |
| 3 | AC | 14 | G | C5-C4 | -6.24 | 1.33 | 1.38 |
| 26 | BB | 153 | U | C4-C5 | 6.24 | 1.49 | 1.43 |
| 26 | BB | 1420 | A | C6-N6 | 6.24 | 1.39 | 1.33 |
| 26 | BB | 2065 | C | N1-C6 | 6.24 | 1.40 | 1.37 |
| 26 | BB | 1861 | G | N3-C4 | 6.23 | 1.39 | 1.35 |
| 26 | BB | 2660 | A | C4'-O4' | -6.23 | 1.37 | 1.45 |
| 26 | BB | 2739 | U | C5'-C4' | 6.23 | 1.58 | 1.51 |
| 26 | BB | 2817 | U | C2-N3 | 6.23 | 1.42 | 1.37 |
| 1 | AA | 314 | C | C5'-C4' | 6.23 | 1.58 | 1.51 |
| 1 | AA | 1048 | G | C4'-O4' | -6.23 | 1.37 | 1.45 |
| 1 | AA | 1058 | G | C8-N7 | -6.23 | 1.27 | 1.30 |
| 1 | AA | 1164 | G | C5'-C4' | 6.23 | 1.58 | 1.51 |
| 1 | AA | 1229 | A | N9-C8 | -6.23 | 1.32 | 1.37 |
| 1 | AA | 72 | A | C5-C4 | -6.23 | 1.34 | 1.38 |
| 1 | AA | 72 | A | N9-C8 | -6.23 | 1.32 | 1.37 |
| 1 | AA | 713 | G | C4'-O4' | -6.23 | 1.37 | 1.45 |
| 1 | AA | 772 | U | N1-C2 | 6.23 | 1.44 | 1.38 |
| 25 | BA | 95 | U | C3'-C2' | 6.23 | 1.59 | 1.52 |
| 26 | BB | 473 | G | C8-N7 | 6.23 | 1.34 | 1.30 |
| 26 | BB | 923 | G | C6-N1 | 6.23 | 1.44 | 1.39 |
| 26 | BB | 1920 | C | C5-C6 | 6.23 | 1.39 | 1.34 |
| 26 | BB | 2544 | G | C6-N1 | -6.23 | 1.35 | 1.39 |
| 26 | BB | 1122 | G | P-O5' | 6.23 | 1.66 | 1.59 |
| 26 | BB | 2776 | A | N1-C2 | -6.23 | 1.28 | 1.34 |
| 1 | AA | 696 | A | C5-C4 | -6.23 | 1.34 | 1.38 |
| 1 | AA | 1392 | G | C2-N3 | 6.23 | 1.37 | 1.32 |
| 3 | AC | 59 | A | C2'-C1' | -6.23 | 1.46 | 1.53 |
| 26 | BB | 738 | G | C5-C6 | 6.23 | 1.48 | 1.42 |
| 26 | BB | 1141 | U | N1-C6 | 6.23 | 1.43 | 1.38 |
| 26 | BB | 1164 | C | C4-C5 | 6.23 | 1.48 | 1.43 |
| 26 | BB | 1211 | C | C4-N4 | -6.23 | 1.28 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1705 | A | N9-C4 | -6.23 | 1.34 | 1.37 |
| 26 | BB | 1933 | G | C4'-C3' | 6.23 | 1.59 | 1.53 |
| 26 | BB | 2044 | C | C4'-C3' | 6.23 | 1.59 | 1.53 |
| 1 | AA | 680 | C | C2-N3 | 6.23 | 1.40 | 1.35 |
| 26 | BB | 1976 | U | C4-C5 | 6.23 | 1.49 | 1.43 |
| 26 | BB | 2466 | C | C5-C6 | -6.23 | 1.29 | 1.34 |
| 1 | AA | 265 | G | P-O5' | 6.22 | 1.66 | 1.59 |
| 1 | AA | 408 | A | P-O5' | 6.22 | 1.66 | 1.59 |
| 1 | AA | 855 | U | C2'-C1' | 6.22 | 1.60 | 1.53 |
| 1 | AA | 1249 | C | O3'-P | 6.22 | 1.68 | 1.61 |
| 2 | AB | 7 | G | C6-N1 | 6.22 | 1.44 | 1.39 |
| 2 | AB | 38 | A | C3'-C2' | -6.22 | 1.46 | 1.52 |
| 26 | BB | 162 | U | C2-O2 | 6.22 | 1.27 | 1.22 |
| 26 | BB | 2234 | G | O3'-P | 6.22 | 1.68 | 1.61 |
| 26 | BB | 204 | A | C4'-C3' | 6.22 | 1.59 | 1.53 |
| 26 | BB | 993 | G | N1-C2 | 6.22 | 1.42 | 1.37 |
| 26 | BB | 1400 | U | N1-C2 | 6.22 | 1.44 | 1.38 |
| 26 | BB | 2299 | U | C4'-O4' | -6.22 | 1.37 | 1.45 |
| 26 | BB | 2400 | G | C2-N3 | 6.22 | 1.37 | 1.32 |
| 26 | BB | 2551 | C | C4-C5 | 6.22 | 1.48 | 1.43 |
| 26 | BB | 2646 | C | N3-C4 | 6.22 | 1.38 | 1.33 |
| 26 | BB | 2679 | A | C3'-O3' | -6.22 | 1.33 | 1.42 |
| 1 | AA | 214 | C | C2-N3 | 6.22 | 1.40 | 1.35 |
| 1 | AA | 833 | G | C3'-O3' | 6.22 | 1.50 | 1.42 |
| 1 | AA | 1504 | G | P-O5' | 6.22 | 1.66 | 1.59 |
| 26 | BB | 474 | G | O3'-P | 6.22 | 1.68 | 1.61 |
| 26 | BB | 2115 | G | C5'-C4' | 6.22 | 1.58 | 1.51 |
| 1 | AA | 1037 | C | O3'-P | 6.22 | 1.68 | 1.61 |
| 26 | BB | 103 | A | C6-N6 | 6.22 | 1.39 | 1.33 |
| 26 | BB | 252 | G | N1-C2 | 6.22 | 1.42 | 1.37 |
| 26 | BB | 529 | A | N9-C4 | 6.22 | 1.41 | 1.37 |
| 26 | BB | 2120 | G | N1-C2 | 6.22 | 1.42 | 1.37 |
| 26 | BB | 2363 | G | N1-C2 | 6.22 | 1.42 | 1.37 |
| 1 | AA | 254 | G | C5'-C4' | 6.22 | 1.58 | 1.51 |
| 26 | BB | 1416 | G | C6-O6 | -6.22 | 1.18 | 1.24 |
| 26 | BB | 1478 | G | C2-N3 | 6.22 | 1.37 | 1.32 |
| 26 | BB | 2650 | U | C3'-C2' | 6.22 | 1.59 | 1.52 |
| 26 | BB | 2735 | G | N3-C4 | 6.22 | 1.39 | 1.35 |
| 1 | AA | 167 | A | C6-N1 | -6.22 | 1.31 | 1.35 |
| 1 | AA | 806 | C | C5'-C4' | 6.22 | 1.58 | 1.51 |
| 26 | BB | 483 | A | O4'-C1' | 6.22 | 1.49 | 1.41 |
| 26 | BB | 826 | U | C2-N3 | 6.22 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1636 | U | N3-C4 | 6.22 | 1.44 | 1.38 |
| 26 | BB | 1728 | C | N3-C4 | 6.22 | 1.38 | 1.33 |
| 26 | BB | 2186 | G | N9-C8 | -6.22 | 1.33 | 1.37 |
| 1 | AA | 1038 | C | N1-C2 | 6.21 | 1.46 | 1.40 |
| 1 | AA | 1156 | G | N9-C8 | 6.21 | 1.42 | 1.37 |
| 26 | BB | 105 | C | C2-N3 | 6.21 | 1.40 | 1.35 |
| 26 | BB | 588 | U | C5'-C4' | 6.21 | 1.58 | 1.51 |
| 26 | BB | 915 | C | C5'-C4' | 6.21 | 1.58 | 1.51 |
| 1 | AA | 875 | U | C4-O4 | 6.21 | 1.28 | 1.23 |
| 26 | BB | 2113 | U | P-O5' | 6.21 | 1.66 | 1.59 |
| 1 | AA | 93 | U | C2'-O2' | -6.21 | 1.33 | 1.41 |
| 1 | AA | 949 | A | P-O5' | 6.21 | 1.66 | 1.59 |
| 1 | AA | 1142 | G | C2-N3 | 6.21 | 1.37 | 1.32 |
| 26 | BB | 388 | G | O3'-P | 6.21 | 1.68 | 1.61 |
| 26 | BB | 409 | G | C6-O6 | -6.21 | 1.18 | 1.24 |
| 26 | BB | 468 | G | C2-N3 | 6.21 | 1.37 | 1.32 |
| 26 | BB | 1010 | A | C6-N1 | 6.21 | 1.39 | 1.35 |
| 26 | BB | 1243 | C | C4-N4 | 6.21 | 1.39 | 1.33 |
| 26 | BB | 1424 | G | O4'-C1' | 6.21 | 1.49 | 1.41 |
| 26 | BB | 1811 | G | C6-O6 | -6.21 | 1.18 | 1.24 |
| 26 | BB | 2199 | A | N9-C8 | 6.21 | 1.42 | 1.37 |
| 26 | BB | 2335 | A | N3-C4 | -6.21 | 1.31 | 1.34 |
| 26 | BB | 2377 | A | N9-C4 | -6.21 | 1.34 | 1.37 |
| 26 | BB | 2608 | G | P-O5' | 6.21 | 1.66 | 1.59 |
| 1 | AA | 749 | A | N9-C4 | 6.21 | 1.41 | 1.37 |
| 1 | AA | 760 | G | P-O5' | 6.21 | 1.66 | 1.59 |
| 4 | AD | 16 | C | C4'-O4' | -6.21 | 1.37 | 1.45 |
| 25 | BA | 22 | U | C5-C6 | 6.21 | 1.39 | 1.34 |
| 26 | BB | 627 | A | N9-C4 | 6.21 | 1.41 | 1.37 |
| 26 | BB | 940 | G | C4'-O4' | -6.21 | 1.37 | 1.45 |
| 1 | AA | 29 | U | C4'-O4' | -6.21 | 1.37 | 1.45 |
| 1 | AA | 630 | A | N7-C5 | 6.21 | 1.43 | 1.39 |
| 1 | AA | 807 | A | C5-C6 | 6.21 | 1.46 | 1.41 |
| 26 | BB | 814 | C | C2'-C1' | -6.21 | 1.46 | 1.53 |
| 26 | BB | 1195 | G | N3-C4 | 6.21 | 1.39 | 1.35 |
| 26 | BB | 1956 | U | C5-C6 | 6.21 | 1.39 | 1.34 |
| 1 | AA | 384 | G | C5-C4 | -6.21 | 1.34 | 1.38 |
| 4 | AD | 10 | G | C4'-O4' | -6.21 | 1.37 | 1.45 |
| 25 | BA | 51 | G | N9-C8 | 6.21 | 1.42 | 1.37 |
| 26 | BB | 308 | G | N7-C5 | -6.21 | 1.35 | 1.39 |
| 26 | BB | 954 | G | C5-C4 | -6.21 | 1.34 | 1.38 |
| 26 | BB | 1632 | A | N9-C4 | 6.21 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2161 | C | C2-N3 | 6.21 | 1.40 | 1.35 |
| 1 | AA | 333 | U | C4'-O4' | -6.21 | 1.37 | 1.45 |
| 1 | AA | 138 | G | C2-N2 | 6.20 | 1.40 | 1.34 |
| 1 | AA | 1451 | U | C2-N3 | 6.20 | 1.42 | 1.37 |
| 26 | BB | 67 | U | P-O5' | 6.20 | 1.66 | 1.59 |
| 26 | BB | 621 | A | N9-C4 | -6.20 | 1.34 | 1.37 |
| 26 | BB | 701 | G | C4'-O4' | -6.20 | 1.37 | 1.45 |
| 26 | BB | 2166 | U | O3'-P | 6.20 | 1.68 | 1.61 |
| 26 | BB | 2210 | U | P-O5' | 6.20 | 1.66 | 1.59 |
| 26 | BB | 2738 | A | C6-N6 | -6.20 | 1.28 | 1.33 |
| 1 | AA | 634 | C | C4-C5 | 6.20 | 1.48 | 1.43 |
| 2 | AB | 9 | A | C2'-C1' | 6.20 | 1.60 | 1.53 |
| 26 | BB | 1937 | A | C4'-O4' | -6.20 | 1.37 | 1.45 |
| 26 | BB | 2319 | G | C5'-C4' | 6.20 | 1.58 | 1.51 |
| 26 | BB | 2667 | C | P-O5' | 6.20 | 1.66 | 1.59 |
| 1 | AA | 551 | U | N1-C6 | 6.20 | 1.43 | 1.38 |
| 1 | AA | 619 | U | C4'-C3' | 6.20 | 1.59 | 1.53 |
| 1 | AA | 644 | U | C2-O2 | 6.20 | 1.27 | 1.22 |
| 1 | AA | 664 | G | C3'-C2' | -6.20 | 1.46 | 1.52 |
| 1 | AA | 743 | A | C8-N7 | -6.20 | 1.27 | 1.31 |
| 1 | AA | 1190 | G | P-O5' | 6.20 | 1.66 | 1.59 |
| 2 | AB | 36 | A | N9-C4 | -6.20 | 1.34 | 1.37 |
| 3 | AC | 24 | A | N3-C4 | 6.20 | 1.38 | 1.34 |
| 4 | AD | 64 | G | C5-C4 | 6.20 | 1.42 | 1.38 |
| 4 | AD | 66 | C | C2-N3 | 6.20 | 1.40 | 1.35 |
| 26 | BB | 1168 | G | P-O5' | 6.20 | 1.66 | 1.59 |
| 26 | BB | 1259 | G | C5'-C4' | 6.20 | 1.58 | 1.51 |
| 26 | BB | 1455 | G | C2-N2 | -6.20 | 1.28 | 1.34 |
| 26 | BB | 1640 | A | C6-N6 | 6.20 | 1.39 | 1.33 |
| 26 | BB | 2027 | G | P-O5' | 6.20 | 1.66 | 1.59 |
| 26 | BB | 72 | U | C4'-O4' | -6.20 | 1.37 | 1.45 |
| 26 | BB | 1279 | G | C2-N3 | 6.20 | 1.37 | 1.32 |
| 26 | BB | 1925 | C | N3-C4 | 6.20 | 1.38 | 1.33 |
| 26 | BB | 2316 | G | C6-N1 | 6.20 | 1.43 | 1.39 |
| 1 | AA | 1113 | C | N1-C6 | 6.20 | 1.40 | 1.37 |
| 1 | AA | 495 | A | C8-N7 | -6.20 | 1.27 | 1.31 |
| 1 | AA | 684 | U | C5'-C4' | 6.20 | 1.58 | 1.51 |
| 1 | AA | 1116 | U | C4'-C3' | -6.20 | 1.46 | 1.53 |
| 26 | BB | 621 | A | C6-N6 | -6.20 | 1.28 | 1.33 |
| 26 | BB | 940 | G | O4'-C1' | 6.20 | 1.49 | 1.41 |
| 26 | BB | 1559 | U | C4-O4 | -6.20 | 1.18 | 1.23 |
| 26 | BB | 1931 | U | C5-C6 | 6.20 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2117 | A | P-O5' | 6.20 | 1.66 | 1.59 |
| 43 | BS | 10 | ARG | NE-CZ | 6.20 | 1.41 | 1.33 |
| 26 | BB | 609 | A | C5-C4 | -6.19 | 1.34 | 1.38 |
| 26 | BB | 1338 | G | P-O5' | 6.19 | 1.66 | 1.59 |
| 26 | BB | 1748 | C | C4'-O4' | -6.19 | 1.37 | 1.45 |
| 26 | BB | 2278 | A | N9-C4 | -6.19 | 1.34 | 1.37 |
| 1 | AA | 592 | G | N7-C5 | 6.19 | 1.43 | 1.39 |
| 1 | AA | 1242 | G | C8-N7 | -6.19 | 1.27 | 1.30 |
| 26 | BB | 517 | C | C2'-C1' | 6.19 | 1.60 | 1.53 |
| 26 | BB | 524 | G | N3-C4 | -6.19 | 1.31 | 1.35 |
| 26 | BB | 2022 | U | C3'-C2' | -6.19 | 1.46 | 1.52 |
| 1 | AA | 128 | G | N3-C4 | -6.19 | 1.31 | 1.35 |
| 1 | AA | 708 | C | C2'-C1' | 6.19 | 1.60 | 1.53 |
| 1 | AA | 1323 | G | C2'-C1' | 6.19 | 1.60 | 1.53 |
| 26 | BB | 96 | C | C2-N3 | 6.19 | 1.40 | 1.35 |
| 26 | BB | 230 | G | C2'-C1' | 6.19 | 1.60 | 1.53 |
| 26 | BB | 251 | A | O3'-P | 6.19 | 1.68 | 1.61 |
| 26 | BB | 2000 | C | C4-C5 | 6.19 | 1.48 | 1.43 |
| 26 | BB | 2379 | G | N1-C2 | 6.19 | 1.42 | 1.37 |
| 1 | AA | 1275 | A | C2-N3 | -6.19 | 1.27 | 1.33 |
| 26 | BB | 296 | U | C4-C5 | 6.19 | 1.49 | 1.43 |
| 26 | BB | 1428 | C | C5-C6 | 6.19 | 1.39 | 1.34 |
| 26 | BB | 1719 | G | N3-C4 | 6.19 | 1.39 | 1.35 |
| 26 | BB | 2289 | G | C6-N1 | 6.19 | 1.43 | 1.39 |
| 26 | BB | 2800 | A | N9-C4 | -6.19 | 1.34 | 1.37 |
| 1 | AA | 493 | A | N3-C4 | 6.19 | 1.38 | 1.34 |
| 1 | AA | 562 | U | C4-C5 | 6.19 | 1.49 | 1.43 |
| 1 | AA | 646 | G | C4'-O4' | -6.19 | 1.37 | 1.45 |
| 1 | AA | 1250 | A | N7-C5 | 6.19 | 1.43 | 1.39 |
| 26 | BB | 1166 | G | C3'-O3' | 6.19 | 1.50 | 1.42 |
| 26 | BB | 1220 | G | O4'-C1' | 6.19 | 1.49 | 1.41 |
| 26 | BB | 1825 | U | C2-N3 | 6.19 | 1.42 | 1.37 |
| 26 | BB | 2078 | C | P-O5' | 6.19 | 1.66 | 1.59 |
| 26 | BB | 2485 | G | C2-N3 | 6.19 | 1.37 | 1.32 |
| 26 | BB | 2558 | C | C5'-C4' | 6.19 | 1.58 | 1.51 |
| 26 | BB | 2714 | G | C2-N3 | 6.19 | 1.37 | 1.32 |
| 1 | AA | 273 | U | C4-C5 | 6.19 | 1.49 | 1.43 |
| 26 | BB | 354 | A | C2'-C1' | -6.19 | 1.46 | 1.53 |
| 26 | BB | 721 | A | C5-C4 | 6.19 | 1.43 | 1.38 |
| 26 | BB | 1216 | G | C5-C4 | 6.19 | 1.42 | 1.38 |
| 26 | BB | 1345 | C | N1-C6 | 6.19 | 1.40 | 1.37 |
| 26 | BB | 1910 | G | C8-N7 | -6.19 | 1.27 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2012 | G | N7-C5 | -6.19 | 1.35 | 1.39 |
| 26 | BB | 2903 | U | C5-C6 | 6.19 | 1.39 | 1.34 |
| 1 | AA | 934 | C | P-O5' | 6.18 | 1.66 | 1.59 |
| 1 | AA | 1068 | G | C8-N7 | -6.18 | 1.27 | 1.30 |
| 1 | AA | 1147 | C | O3'-P | -6.18 | 1.53 | 1.61 |
| 1 | AA | 1435 | G | N1-C2 | 6.18 | 1.42 | 1.37 |
| 1 | AA | 1530 | G | C3'-C2' | -6.18 | 1.46 | 1.52 |
| 25 | BA | 67 | G | N9-C8 | 6.18 | 1.42 | 1.37 |
| 26 | BB | 715 | A | C5'-C4' | 6.18 | 1.58 | 1.51 |
| 26 | BB | 1062 | G | C5-C4 | 6.18 | 1.42 | 1.38 |
| 26 | BB | 1116 | G | C2-N3 | 6.18 | 1.37 | 1.32 |
| 25 | BA | 113 | C | O4'-C1' | 6.18 | 1.49 | 1.41 |
| 26 | BB | 1186 | G | N7-C5 | -6.18 | 1.35 | 1.39 |
| 26 | BB | 1467 | U | C4'-O4' | -6.18 | 1.37 | 1.45 |
| 26 | BB | 1992 | G | C2'-C1' | 6.18 | 1.60 | 1.53 |
| 26 | BB | 2798 | U | N1-C2 | 6.18 | 1.44 | 1.38 |
| 1 | AA | 442 | G | C5-C4 | -6.18 | 1.34 | 1.38 |
| 26 | BB | 783 | A | P-O5' | -6.18 | 1.53 | 1.59 |
| 26 | BB | 1343 | G | C5-C6 | 6.18 | 1.48 | 1.42 |
| 26 | BB | 2241 | A | C8-N7 | -6.18 | 1.27 | 1.31 |
| 26 | BB | 2474 | U | P-O5' | 6.18 | 1.66 | 1.59 |
| 1 | AA | 549 | C | P-O5' | 6.18 | 1.66 | 1.59 |
| 1 | AA | 803 | G | C8-N7 | -6.18 | 1.27 | 1.30 |
| 4 | AD | 2 | G | C3'-C2' | 6.18 | 1.59 | 1.52 |
| 25 | BA | 2 | G | C8-N7 | 6.18 | 1.34 | 1.30 |
| 26 | BB | 683 | U | C5-C6 | 6.18 | 1.39 | 1.34 |
| 26 | BB | 852 | U | O4'-C1' | 6.18 | 1.49 | 1.41 |
| 26 | BB | 904 | G | N9-C4 | -6.18 | 1.33 | 1.38 |
| 26 | BB | 1624 | U | C5'-C4' | 6.18 | 1.58 | 1.51 |
| 26 | BB | 2666 | C | N1-C6 | 6.18 | 1.40 | 1.37 |
| 26 | BB | 2795 | C | P-O5' | 6.18 | 1.66 | 1.59 |
| 1 | AA | 213 | G | N7-C5 | 6.18 | 1.43 | 1.39 |
| 1 | AA | 798 | U | O3'-P | 6.18 | 1.68 | 1.61 |
| 4 | AD | 42 | C | O3'-P | 6.18 | 1.68 | 1.61 |
| 26 | BB | 1170 | C | O3'-P | 6.18 | 1.68 | 1.61 |
| 26 | BB | 1635 | A | C2-N3 | 6.18 | 1.39 | 1.33 |
| 26 | BB | 1763 | G | N3-C4 | 6.18 | 1.39 | 1.35 |
| 26 | BB | 1791 | A | C5'-C4' | 6.18 | 1.58 | 1.51 |
| 1 | AA | 390 | U | C2'-C1' | -6.18 | 1.46 | 1.53 |
| 1 | AA | 568 | G | C2-N2 | -6.18 | 1.28 | 1.34 |
| 1 | AA | 714 | G | C4'-O4' | -6.18 | 1.37 | 1.45 |
| 1 | AA | 1460 | C | C4-N4 | 6.18 | 1.39 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 219 | A | C2'-O2' | 6.18 | 1.49 | 1.41 |
| 26 | BB | 343 | C | C4-C5 | 6.18 | 1.47 | 1.43 |
| 26 | BB | 553 | G | C5-C4 | -6.18 | 1.34 | 1.38 |
| 26 | BB | 1050 | A | N3-C4 | 6.18 | 1.38 | 1.34 |
| 26 | BB | 1321 | A | N1-C2 | 6.18 | 1.40 | 1.34 |
| 26 | BB | 1756 | G | C6-N1 | 6.18 | 1.43 | 1.39 |
| 26 | BB | 2606 | C | N3-C4 | 6.18 | 1.38 | 1.33 |
| 1 | AA | 1249 | C | C2-N3 | 6.17 | 1.40 | 1.35 |
| 26 | BB | 308 | G | N9-C4 | 6.17 | 1.42 | 1.38 |
| 26 | BB | 377 | G | C4'-O4' | -6.17 | 1.37 | 1.45 |
| 26 | BB | 514 | A | N7-C5 | 6.17 | 1.43 | 1.39 |
| 26 | BB | 597 | G | N1-C2 | 6.17 | 1.42 | 1.37 |
| 26 | BB | 1347 | A | P-O5' | 6.17 | 1.66 | 1.59 |
| 26 | BB | 1355 | G | O3'-P | 6.17 | 1.68 | 1.61 |
| 26 | BB | 2546 | U | P-O5' | 6.17 | 1.66 | 1.59 |
| 26 | BB | 2628 | C | C4-C5 | -6.17 | 1.38 | 1.43 |
| 26 | BB | 439 | A | C2'-O2' | 6.17 | 1.49 | 1.41 |
| 1 | AA | 1197 | A | N3-C4 | 6.17 | 1.38 | 1.34 |
| 26 | BB | 176 | A | N7-C5 | -6.17 | 1.35 | 1.39 |
| 26 | BB | 397 | U | C5'-C4' | 6.17 | 1.58 | 1.51 |
| 26 | BB | 667 | U | N1-C2 | 6.17 | 1.44 | 1.38 |
| 26 | BB | 1092 | C | C4'-O4' | -6.17 | 1.37 | 1.45 |
| 26 | BB | 1188 | U | C5'-C4' | 6.17 | 1.58 | 1.51 |
| 26 | BB | 2700 | A | C2-N3 | -6.17 | 1.27 | 1.33 |
| 1 | AA | 310 | G | C3'-C2' | 6.17 | 1.59 | 1.52 |
| 1 | AA | 529 | G | C4'-C3' | 6.17 | 1.59 | 1.53 |
| 26 | BB | 858 | G | C6-N1 | 6.17 | 1.43 | 1.39 |
| 26 | BB | 1466 | U | N1-C2 | 6.17 | 1.44 | 1.38 |
| 1 | AA | 327 | A | O3'-P | -6.17 | 1.53 | 1.61 |
| 1 | AA | 1074 | G | C4'-O4' | -6.17 | 1.37 | 1.45 |
| 1 | AA | 1417 | G | C8-N7 | -6.17 | 1.27 | 1.30 |
| 26 | BB | 1117 | C | C2'-C1' | 6.17 | 1.60 | 1.53 |
| 26 | BB | 1247 | A | C4'-O4' | -6.17 | 1.37 | 1.45 |
| 26 | BB | 1488 | C | P-O5' | 6.17 | 1.66 | 1.59 |
| 26 | BB | 1535 | A | C3'-O3' | 6.17 | 1.50 | 1.42 |
| 26 | BB | 2425 | A | N3-C4 | 6.17 | 1.38 | 1.34 |
| 1 | AA | 1102 | A | C2'-O2' | 6.17 | 1.49 | 1.41 |
| 1 | AA | 1457 | G | C8-N7 | 6.17 | 1.34 | 1.30 |
| 25 | BA | 58 | A | C2-N3 | 6.17 | 1.39 | 1.33 |
| 26 | BB | 43 | G | C6-N1 | 6.17 | 1.43 | 1.39 |
| 26 | BB | 200 | U | N3-C4 | 6.17 | 1.44 | 1.38 |
| 26 | BB | 655 | A | C8-N7 | -6.17 | 1.27 | 1.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 804 | A | N1-C2 | 6.17 | 1.39 | 1.34 |
| 26 | BB | 1040 | A | C2-N3 | 6.17 | 1.39 | 1.33 |
| 26 | BB | 1312 | U | N1-C6 | 6.17 | 1.43 | 1.38 |
| 26 | BB | 1460 | U | N1-C2 | 6.17 | 1.44 | 1.38 |
| 26 | BB | 1523 | U | C2-N3 | 6.17 | 1.42 | 1.37 |
| 26 | BB | 1619 | G | C2-N3 | 6.17 | 1.37 | 1.32 |
| 26 | BB | 2157 | G | N9-C8 | -6.17 | 1.33 | 1.37 |
| 26 | BB | 2322 | A | N7-C5 | 6.17 | 1.43 | 1.39 |
| 1 | AA | 348 | G | C5-C6 | 6.17 | 1.48 | 1.42 |
| 26 | BB | 1028 | A | N9-C4 | 6.17 | 1.41 | 1.37 |
| 26 | BB | 2319 | G | N1-C2 | 6.17 | 1.42 | 1.37 |
| 1 | AA | 223 | A | C5'-C4' | 6.16 | 1.58 | 1.51 |
| 1 | AA | 1249 | C | C3'-C2' | 6.16 | 1.59 | 1.52 |
| 26 | BB | 758 | C | N1-C6 | 6.16 | 1.40 | 1.37 |
| 26 | BB | 869 | G | N7-C5 | 6.16 | 1.43 | 1.39 |
| 26 | BB | 1096 | A | N9-C8 | -6.16 | 1.32 | 1.37 |
| 26 | BB | 1149 | G | C4'-O4' | -6.16 | 1.37 | 1.45 |
| 26 | BB | 1251 | C | N3-C4 | 6.16 | 1.38 | 1.33 |
| 26 | BB | 2160 | C | C5-C6 | 6.16 | 1.39 | 1.34 |
| 1 | AA | 853 | C | P-O5' | 6.16 | 1.66 | 1.59 |
| 1 | AA | 1073 | U | C2-N3 | 6.16 | 1.42 | 1.37 |
| 1 | AA | 1408 | A | P-O5' | 6.16 | 1.66 | 1.59 |
| 26 | BB | 599 | A | C5-C4 | -6.16 | 1.34 | 1.38 |
| 26 | BB | 1692 | U | O3'-P | 6.16 | 1.68 | 1.61 |
| 1 | AA | 1179 | A | C4'-C3' | -6.16 | 1.46 | 1.53 |
| 1 | AA | 1282 | C | O3'-P | 6.16 | 1.68 | 1.61 |
| 3 | AC | 56 | G | N1-C2 | 6.16 | 1.42 | 1.37 |
| 26 | BB | 2065 | C | C4-C5 | 6.16 | 1.47 | 1.43 |
| 26 | BB | 2835 | A | N9-C4 | 6.16 | 1.41 | 1.37 |
| 1 | AA | 1432 | G | C5'-C4' | 6.16 | 1.58 | 1.51 |
| 2 | AB | 22 | G | N7-C5 | -6.16 | 1.35 | 1.39 |
| 25 | BA | 28 | C | O3'-P | 6.16 | 1.68 | 1.61 |
| 26 | BB | 942 | G | C2'-C1' | -6.16 | 1.46 | 1.53 |
| 1 | AA | 1118 | U | N1-C6 | 6.16 | 1.43 | 1.38 |
| 26 | BB | 23 | G | C2-N3 | 6.16 | 1.37 | 1.32 |
| 26 | BB | 124 | G | C5'-C4' | 6.16 | 1.58 | 1.51 |
| 26 | BB | 2044 | C | C2-N3 | 6.16 | 1.40 | 1.35 |
| 1 | AA | 31 | G | C2-N2 | -6.16 | 1.28 | 1.34 |
| 1 | AA | 43 | C | C2-N3 | 6.16 | 1.40 | 1.35 |
| 1 | AA | 1184 | G | N3-C4 | 6.16 | 1.39 | 1.35 |
| 2 | AB | 34 | C | C5-C6 | 6.16 | 1.39 | 1.34 |
| 26 | BB | 173 | A | C4'-O4' | -6.16 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 292 | U | C5-C6 | 6.16 | 1.39 | 1.34 |
| 26 | BB | 968 | C | O3'-P | 6.16 | 1.68 | 1.61 |
| 26 | BB | 1137 | G | C5-C4 | -6.16 | 1.34 | 1.38 |
| 26 | BB | 1407 | G | N3-C4 | 6.16 | 1.39 | 1.35 |
| 26 | BB | 2195 | U | C5-C6 | 6.16 | 1.39 | 1.34 |
| 1 | AA | 117 | G | C6-N1 | 6.15 | 1.43 | 1.39 |
| 1 | AA | 1140 | C | C5-C6 | 6.15 | 1.39 | 1.34 |
| 4 | AD | 42 | C | C2-O2 | -6.15 | 1.19 | 1.24 |
| 26 | BB | 6 | A | C4'-C3' | 6.15 | 1.59 | 1.53 |
| 26 | BB | 2820 | A | N3-C4 | 6.15 | 1.38 | 1.34 |
| 1 | AA | 53 | A | N3-C4 | 6.15 | 1.38 | 1.34 |
| 1 | AA | 338 | A | O3'-P | 6.15 | 1.68 | 1.61 |
| 4 | AD | 69 | C | C5-C6 | 6.15 | 1.39 | 1.34 |
| 26 | BB | 1609 | A | C2'-C1' | 6.15 | 1.60 | 1.53 |
| 26 | BB | 2765 | A | N9-C4 | 6.15 | 1.41 | 1.37 |
| 1 | AA | 927 | G | P-O5' | 6.15 | 1.66 | 1.59 |
| 1 | AA | 1492 | A | C2'-C1' | -6.15 | 1.46 | 1.53 |
| 2 | AB | 43 | G | C5-C4 | -6.15 | 1.34 | 1.38 |
| 1 | AA | 631 | C | P-O5' | 6.15 | 1.65 | 1.59 |
| 1 | AA | 1114 | C | O5'-C5' | -6.15 | 1.33 | 1.42 |
| 26 | BB | 2276 | G | C6-O6 | -6.15 | 1.18 | 1.24 |
| 1 | AA | 171 | A | N7-C5 | -6.15 | 1.35 | 1.39 |
| 1 | AA | 955 | U | C4'-O4' | -6.15 | 1.37 | 1.45 |
| 1 | AA | 1101 | A | C5-C4 | -6.15 | 1.34 | 1.38 |
| 1 | AA | 1448 | C | N1-C6 | 6.15 | 1.40 | 1.37 |
| 26 | BB | 91 | A | C4'-O4' | -6.15 | 1.37 | 1.45 |
| 26 | BB | 107 | G | C5'-C4' | 6.15 | 1.58 | 1.51 |
| 26 | BB | 1087 | G | C5'-C4' | 6.15 | 1.58 | 1.51 |
| 26 | BB | 1271 | G | N9-C8 | 6.15 | 1.42 | 1.37 |
| 26 | BB | 1653 | G | N1-C2 | 6.15 | 1.42 | 1.37 |
| 26 | BB | 1846 | G | N9-C4 | -6.15 | 1.33 | 1.38 |
| 1 | AA | 124 | C | O3'-P | 6.15 | 1.68 | 1.61 |
| 1 | AA | 894 | G | C2-N2 | -6.15 | 1.28 | 1.34 |
| 25 | BA | 51 | G | C5'-C4' | 6.15 | 1.58 | 1.51 |
| 26 | BB | 1070 | A | C8-N7 | -6.15 | 1.27 | 1.31 |
| 26 | BB | 1686 | C | O3'-P | 6.15 | 1.68 | 1.61 |
| 1 | AA | 496 | A | C8-N7 | -6.14 | 1.27 | 1.31 |
| 1 | AA | 736 | C | C5-C6 | -6.14 | 1.29 | 1.34 |
| 26 | BB | 390 | U | C5-C6 | 6.14 | 1.39 | 1.34 |
| 26 | BB | 1574 | C | O4'-C1' | 6.14 | 1.49 | 1.41 |
| 26 | BB | 2010 | G | N7-C5 | -6.14 | 1.35 | 1.39 |
| 26 | BB | 2283 | C | N3-C4 | 6.14 | 1.38 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2602 | A | C5-C4 | -6.14 | 1.34 | 1.38 |
| 1 | AA | 141 | G | N1-C2 | 6.14 | 1.42 | 1.37 |
| 26 | BB | 25 | U | C2-O2 | 6.14 | 1.27 | 1.22 |
| 26 | BB | 604 | G | C2-N3 | 6.14 | 1.37 | 1.32 |
| 26 | BB | 1572 | A | N7-C5 | -6.14 | 1.35 | 1.39 |
| 26 | BB | 2407 | A | N3-C4 | 6.14 | 1.38 | 1.34 |
| 26 | BB | 2662 | A | P-O5' | 6.14 | 1.65 | 1.59 |
| 26 | BB | 2064 | C | C2-N3 | 6.14 | 1.40 | 1.35 |
| 1 | AA | 1389 | C | C3'-C2' | -6.14 | 1.46 | 1.52 |
| 3 | AC | 29 | G | N3-C4 | 6.14 | 1.39 | 1.35 |
| 26 | BB | 1398 | C | N1-C2 | 6.14 | 1.46 | 1.40 |
| 26 | BB | 2213 | U | C3'-C2' | 6.14 | 1.59 | 1.52 |
| 26 | BB | 2302 | U | C2-N3 | 6.14 | 1.42 | 1.37 |
| 26 | BB | 2330 | G | O3'-P | -6.14 | 1.53 | 1.61 |
| 1 | AA | 540 | G | C6-N1 | -6.14 | 1.35 | 1.39 |
| 1 | AA | 1000 | A | N9-C4 | -6.14 | 1.34 | 1.37 |
| 13 | AM | 45 | ARG | CZ-NH1 | 6.14 | 1.41 | 1.33 |
| 26 | BB | 2417 | C | C4-C5 | 6.14 | 1.47 | 1.43 |
| 26 | BB | 2476 | A | N7-C5 | 6.14 | 1.43 | 1.39 |
| 1 | AA | 329 | A | C8-N7 | -6.14 | 1.27 | 1.31 |
| 1 | AA | 532 | A | N3-C4 | 6.14 | 1.38 | 1.34 |
| 1 | AA | 860 | A | C4'-C3' | 6.14 | 1.59 | 1.53 |
| 1 | AA | 894 | G | N7-C5 | 6.14 | 1.43 | 1.39 |
| 26 | BB | 511 | U | C3'-O3' | 6.14 | 1.50 | 1.42 |
| 26 | BB | 513 | A | C8-N7 | -6.14 | 1.27 | 1.31 |
| 26 | BB | 798 | G | O5'-C5' | -6.14 | 1.33 | 1.42 |
| 26 | BB | 806 | C | C2-N3 | 6.14 | 1.40 | 1.35 |
| 26 | BB | 901 | C | C4-N4 | 6.14 | 1.39 | 1.33 |
| 26 | BB | 1419 | A | C4'-O4' | -6.14 | 1.37 | 1.45 |
| 26 | BB | 1814 | G | N1-C2 | 6.14 | 1.42 | 1.37 |
| 26 | BB | 2129 | C | C3'-C2' | 6.14 | 1.59 | 1.52 |
| 1 | AA | 645 | G | N9-C8 | -6.13 | 1.33 | 1.37 |
| 1 | AA | 954 | G | C2'-C1' | 6.13 | 1.60 | 1.53 |
| 1 | AA | 960 | U | C2-O2 | 6.13 | 1.27 | 1.22 |
| 1 | AA | 1232 | U | C2-N3 | 6.13 | 1.42 | 1.37 |
| 1 | AA | 1257 | A | C6-N1 | -6.13 | 1.31 | 1.35 |
| 1 | AA | 1311 | A | C6-N6 | 6.13 | 1.38 | 1.33 |
| 1 | AA | 1510 | C | C4-N4 | 6.13 | 1.39 | 1.33 |
| 2 | AB | 53 | G | C5-C4 | 6.13 | 1.42 | 1.38 |
| 3 | AC | 58 | C | C5'-C4' | 6.13 | 1.58 | 1.51 |
| 26 | BB | 660 | C | C2'-O2' | 6.13 | 1.49 | 1.41 |
| 26 | BB | 674 | G | N7-C5 | -6.13 | 1.35 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1445 | G | O3'-P | 6.13 | 1.68 | 1.61 |
| 26 | BB | 1753 | G | C5'-C4' | 6.13 | 1.58 | 1.51 |
| 26 | BB | 2317 | A | N9-C4 | 6.13 | 1.41 | 1.37 |
| 26 | BB | 2792 | A | C2'-C1' | 6.13 | 1.60 | 1.53 |
| 1 | AA | 375 | U | C2-N3 | 6.13 | 1.42 | 1.37 |
| 26 | BB | 755 | U | C4'-O4' | -6.13 | 1.37 | 1.45 |
| 26 | BB | 2817 | U | N1-C6 | 6.13 | 1.43 | 1.38 |
| 1 | AA | 485 | U | C4'-C3' | 6.13 | 1.59 | 1.53 |
| 26 | BB | 429 | A | N7-C5 | -6.13 | 1.35 | 1.39 |
| 26 | BB | 533 | G | O3'-P | 6.13 | 1.68 | 1.61 |
| 26 | BB | 868 | U | N1-C2 | 6.13 | 1.44 | 1.38 |
| 26 | BB | 2550 | G | O4'-C1' | 6.13 | 1.49 | 1.41 |
| 1 | AA | 8 | A | O4'-C1' | 6.13 | 1.49 | 1.41 |
| 1 | AA | 926 | G | C5'-C4' | 6.13 | 1.58 | 1.51 |
| 1 | AA | 948 | C | C2-N3 | 6.13 | 1.40 | 1.35 |
| 1 | AA | 949 | A | O5'-C5' | -6.13 | 1.33 | 1.42 |
| 1 | AA | 999 | C | C2-N3 | 6.13 | 1.40 | 1.35 |
| 4 | AD | 54 | G | C8-N7 | 6.13 | 1.34 | 1.30 |
| 26 | BB | 20 | C | C5-C6 | 6.13 | 1.39 | 1.34 |
| 26 | BB | 191 | A | P-O5' | 6.13 | 1.65 | 1.59 |
| 26 | BB | 540 | C | C4'-C3' | -6.13 | 1.46 | 1.53 |
| 26 | BB | 1292 | G | N1-C2 | 6.13 | 1.42 | 1.37 |
| 26 | BB | 1479 | G | C4'-O4' | -6.13 | 1.37 | 1.45 |
| 26 | BB | 1721 | G | C5'-C4' | 6.13 | 1.58 | 1.51 |
| 26 | BB | 1726 | C | P-O5' | 6.13 | 1.65 | 1.59 |
| 1 | AA | 198 | G | C4'-C3' | -6.13 | 1.46 | 1.53 |
| 1 | AA | 962 | C | P-O5' | 6.13 | 1.65 | 1.59 |
| 1 | AA | 1096 | C | C4-C5 | 6.13 | 1.47 | 1.43 |
| 26 | BB | 25 | U | P-O5' | 6.13 | 1.65 | 1.59 |
| 26 | BB | 832 | U | C4-O4 | -6.13 | 1.18 | 1.23 |
| 26 | BB | 965 | C | N3-C4 | -6.13 | 1.29 | 1.33 |
| 26 | BB | 1323 | C | N3-C4 | 6.13 | 1.38 | 1.33 |
| 26 | BB | 1794 | A | C3'-O3' | -6.13 | 1.33 | 1.42 |
| 26 | BB | 2439 | A | C4'-O4' | -6.13 | 1.37 | 1.45 |
| 1 | AA | 22 | G | N3-C4 | 6.12 | 1.39 | 1.35 |
| 1 | AA | 1307 | U | P-O5' | 6.12 | 1.65 | 1.59 |
| 1 | AA | 1523 | G | C6-O6 | -6.12 | 1.18 | 1.24 |
| 3 | AC | 49 | U | C5'-C4' | 6.12 | 1.58 | 1.51 |
| 26 | BB | 1292 | G | O3'-P | 6.12 | 1.68 | 1.61 |
| 1 | AA | 641 | U | N1-C6 | 6.12 | 1.43 | 1.38 |
| 26 | BB | 159 | G | N1-C2 | 6.12 | 1.42 | 1.37 |
| 26 | BB | 167 | A | C4'-O4' | -6.12 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 470 | A | P-O5' | 6.12 | 1.65 | 1.59 |
| 26 | BB | 1069 | A | C6-N1 | 6.12 | 1.39 | 1.35 |
| 26 | BB | 1179 | G | N7-C5 | -6.12 | 1.35 | 1.39 |
| 26 | BB | 1627 | G | N3-C4 | 6.12 | 1.39 | 1.35 |
| 26 | BB | 1800 | C | C4'-O4' | -6.12 | 1.37 | 1.45 |
| 26 | BB | 2368 | C | O4'-C1' | 6.12 | 1.49 | 1.41 |
| 1 | AA | 902 | G | C2'-C1' | -6.12 | 1.46 | 1.53 |
| 26 | BB | 94 | A | C8-N7 | -6.12 | 1.27 | 1.31 |
| 26 | BB | 117 | G | P-O5' | 6.12 | 1.65 | 1.59 |
| 26 | BB | 533 | G | N9-C8 | 6.12 | 1.42 | 1.37 |
| 26 | BB | 604 | G | N3-C4 | -6.12 | 1.31 | 1.35 |
| 26 | BB | 1927 | A | C6-N1 | -6.12 | 1.31 | 1.35 |
| 1 | AA | 822 | U | O5'-C5' | -6.12 | 1.33 | 1.42 |
| 26 | BB | 237 | C | C4'-O4' | -6.12 | 1.37 | 1.45 |
| 1 | AA | 1227 | A | O5'-C5' | -6.12 | 1.33 | 1.42 |
| 4 | AD | 54 | G | P-O5' | 6.12 | 1.65 | 1.59 |
| 26 | BB | 203 | A | C5-C4 | 6.12 | 1.43 | 1.38 |
| 26 | BB | 878 | A | N9-C4 | 6.12 | 1.41 | 1.37 |
| 26 | BB | 964 | C | C4'-C3' | -6.12 | 1.46 | 1.53 |
| 26 | BB | 1235 | G | C6-O6 | -6.12 | 1.18 | 1.24 |
| 26 | BB | 1368 | G | C5-C6 | 6.12 | 1.48 | 1.42 |
| 26 | BB | 1746 | A | N1-C2 | -6.12 | 1.28 | 1.34 |
| 26 | BB | 1896 | G | N1-C2 | 6.12 | 1.42 | 1.37 |
| 26 | BB | 2459 | A | C6-N6 | -6.12 | 1.29 | 1.33 |
| 1 | AA | 1154 | G | N9-C4 | -6.12 | 1.33 | 1.38 |
| 26 | BB | 2205 | A | N3-C4 | 6.12 | 1.38 | 1.34 |
| 26 | BB | 2813 | A | C6-N6 | 6.12 | 1.38 | 1.33 |
| 58 | B7 | 4 | ARG | CD-NE | 6.12 | 1.56 | 1.46 |
| 1 | AA | 41 | G | N3-C4 | 6.12 | 1.39 | 1.35 |
| 1 | AA | 1063 | C | O3'-P | 6.12 | 1.68 | 1.61 |
| 1 | AA | 1139 | G | N7-C5 | 6.12 | 1.43 | 1.39 |
| 26 | BB | 432 | A | O4'-C1' | 6.12 | 1.49 | 1.41 |
| 26 | BB | 832 | U | C4-C5 | 6.12 | 1.49 | 1.43 |
| 26 | BB | 1196 | C | N3-C4 | -6.12 | 1.29 | 1.33 |
| 1 | AA | 1131 | G | C8-N7 | -6.11 | 1.27 | 1.30 |
| 4 | AD | 13 | C | N3-C4 | 6.11 | 1.38 | 1.33 |
| 26 | BB | 138 | U | N1-C2 | 6.11 | 1.44 | 1.38 |
| 26 | BB | 289 | G | P-O5' | -6.11 | 1.53 | 1.59 |
| 26 | BB | 473 | G | N7-C5 | 6.11 | 1.43 | 1.39 |
| 26 | BB | 677 | A | N9-C8 | 6.11 | 1.42 | 1.37 |
| 26 | BB | 846 | U | C3'-O3' | -6.11 | 1.33 | 1.42 |
| 26 | BB | 1079 | C | C2-N3 | 6.11 | 1.40 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2184 | A | C5'-C4' | 6.11 | 1.58 | 1.51 |
| 1 | AA | 482 | A | N3-C4 | 6.11 | 1.38 | 1.34 |
| 27 | BC | 9 | ARG | NE-CZ | 6.11 | 1.41 | 1.33 |
| 1 | AA | 426 | U | C3'-C2' | 6.11 | 1.59 | 1.52 |
| 1 | AA | 1308 | U | C4-O4 | -6.11 | 1.18 | 1.23 |
| 26 | BB | 752 | A | C5-C4 | -6.11 | 1.34 | 1.38 |
| 26 | BB | 1051 | G | C5'-C4' | 6.11 | 1.58 | 1.51 |
| 26 | BB | 2260 | C | O4'-C1' | 6.11 | 1.49 | 1.41 |
| 26 | BB | 2673 | G | O3'-P | 6.11 | 1.68 | 1.61 |
| 25 | BA | 18 | G | C5-C4 | -6.11 | 1.34 | 1.38 |
| 26 | BB | 153 | U | N1-C6 | 6.11 | 1.43 | 1.38 |
| 26 | BB | 1817 | G | C5'-C4' | 6.11 | 1.58 | 1.51 |
| 1 | AA | 1034 | G | C5'-C4' | 6.11 | 1.58 | 1.51 |
| 1 | AA | 1118 | U | C2-N3 | 6.11 | 1.42 | 1.37 |
| 2 | AB | 15 | A | C4'-O4' | -6.11 | 1.37 | 1.45 |
| 26 | BB | 568 | U | C2-N3 | 6.11 | 1.42 | 1.37 |
| 26 | BB | 1378 | A | P-O5' | 6.11 | 1.65 | 1.59 |
| 26 | BB | 2116 | G | N7-C5 | -6.11 | 1.35 | 1.39 |
| 1 | AA | 12 | U | P-O5' | 6.11 | 1.65 | 1.59 |
| 1 | AA | 447 | G | N7-C5 | 6.11 | 1.43 | 1.39 |
| 1 | AA | 795 | C | C5-C6 | 6.11 | 1.39 | 1.34 |
| 1 | AA | 797 | C | C3'-C2' | 6.11 | 1.59 | 1.52 |
| 1 | AA | 1285 | A | N7-C5 | 6.11 | 1.43 | 1.39 |
| 3 | AC | 13 | A | N3-C4 | 6.11 | 1.38 | 1.34 |
| 26 | BB | 161 | A | C2-N3 | -6.11 | 1.28 | 1.33 |
| 26 | BB | 938 | G | N7-C5 | 6.11 | 1.43 | 1.39 |
| 26 | BB | 1008 | A | C4'-O4' | -6.11 | 1.37 | 1.45 |
| 26 | BB | 1175 | A | C6-N6 | 6.11 | 1.38 | 1.33 |
| 26 | BB | 1927 | A | C4'-O4' | -6.11 | 1.37 | 1.45 |
| 26 | BB | 2840 | C | O4'-C1' | -6.11 | 1.33 | 1.41 |
| 1 | AA | 735 | C | C5-C6 | 6.10 | 1.39 | 1.34 |
| 1 | AA | 1005 | A | C3'-C2' | 6.10 | 1.59 | 1.52 |
| 26 | BB | 609 | A | P-O5' | 6.10 | 1.65 | 1.59 |
| 26 | BB | 2008 | C | N1-C6 | 6.10 | 1.40 | 1.37 |
| 26 | BB | 2525 | G | N3-C4 | 6.10 | 1.39 | 1.35 |
| 1 | AA | 58 | C | C2-N3 | -6.10 | 1.30 | 1.35 |
| 1 | AA | 856 | C | C5'-C4' | 6.10 | 1.58 | 1.51 |
| 1 | AA | 870 | U | C2'-C1' | 6.10 | 1.60 | 1.53 |
| 1 | AA | 1245 | C | C2-O2 | -6.10 | 1.19 | 1.24 |
| 26 | BB | 28 | A | O3'-P | 6.10 | 1.68 | 1.61 |
| 26 | BB | 282 | A | O3'-P | 6.10 | 1.68 | 1.61 |
| 26 | BB | 377 | G | C5'-C4' | 6.10 | 1.58 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1011 | G | N1-C2 | 6.10 | 1.42 | 1.37 |
| 26 | BB | 1039 | A | N3-C4 | 6.10 | 1.38 | 1.34 |
| 26 | BB | 2011 | U | C4-C5 | 6.10 | 1.49 | 1.43 |
| 26 | BB | 2099 | U | C2-N3 | 6.10 | 1.42 | 1.37 |
| 26 | BB | 2369 | A | N9-C4 | 6.10 | 1.41 | 1.37 |
| 36 | BL | 15 | TRP | CD2-CE2 | 6.10 | 1.48 | 1.41 |
| 26 | BB | 655 | A | N7-C5 | -6.10 | 1.35 | 1.39 |
| 26 | BB | 1317 | G | C6-N1 | 6.10 | 1.43 | 1.39 |
| 26 | BB | 1475 | G | N9-C8 | -6.10 | 1.33 | 1.37 |
| 1 | AA | 388 | G | P-O5' | 6.10 | 1.65 | 1.59 |
| 1 | AA | 407 | U | N3-C4 | 6.10 | 1.44 | 1.38 |
| 1 | AA | 552 | U | C5'-C4' | 6.10 | 1.58 | 1.51 |
| 1 | AA | 719 | C | O4'-C1' | -6.10 | 1.33 | 1.41 |
| 1 | AA | 974 | A | C6-N1 | -6.10 | 1.31 | 1.35 |
| 1 | AA | 1431 | A | N9-C8 | 6.10 | 1.42 | 1.37 |
| 25 | BA | 106 | G | N3-C4 | 6.10 | 1.39 | 1.35 |
| 26 | BB | 913 | U | C2-O2 | 6.10 | 1.27 | 1.22 |
| 26 | BB | 1098 | A | C2'-O2' | 6.10 | 1.49 | 1.41 |
| 26 | BB | 1338 | G | C8-N7 | -6.10 | 1.27 | 1.30 |
| 26 | BB | 2088 | A | P-O5' | 6.10 | 1.65 | 1.59 |
| 26 | BB | 2306 | C | N1-C6 | 6.10 | 1.40 | 1.37 |
| 26 | BB | 458 | G | C8-N7 | 6.10 | 1.34 | 1.30 |
| 26 | BB | 950 | G | C8-N7 | 6.10 | 1.34 | 1.30 |
| 26 | BB | 2764 | A | C3'-C2' | 6.10 | 1.59 | 1.52 |
| 26 | BB | 2828 | G | C2-N3 | 6.10 | 1.37 | 1.32 |
| 2 | AB | 44 | G | C6-O6 | -6.10 | 1.18 | 1.24 |
| 26 | BB | 579 | G | C3'-O3' | 6.10 | 1.50 | 1.42 |
| 26 | BB | 1497 | U | C4'-O4' | -6.10 | 1.37 | 1.45 |
| 26 | BB | 1815 | A | C6-N6 | -6.10 | 1.29 | 1.33 |
| 1 | AA | 884 | U | P-O5' | 6.09 | 1.65 | 1.59 |
| 2 | AB | 4 | G | O3'-P | 6.09 | 1.68 | 1.61 |
| 4 | AD | 72 | C | N3-C4 | 6.09 | 1.38 | 1.33 |
| 26 | BB | 1658 | C | C2-N3 | 6.09 | 1.40 | 1.35 |
| 26 | BB | 2096 | C | C4'-C3' | -6.09 | 1.46 | 1.53 |
| 26 | BB | 2269 | G | C5'-C4' | 6.09 | 1.58 | 1.51 |
| 26 | BB | 2471 | A | P-O5' | 6.09 | 1.65 | 1.59 |
| 26 | BB | 2587 | A | C6-N1 | 6.09 | 1.39 | 1.35 |
| 26 | BB | 500 | G | N9-C4 | -6.09 | 1.33 | 1.38 |
| 26 | BB | 502 | A | N7-C5 | 6.09 | 1.43 | 1.39 |
| 26 | BB | 2468 | A | N3-C4 | 6.09 | 1.38 | 1.34 |
| 1 | AA | 86 | G | C3'-C2' | -6.09 | 1.46 | 1.52 |
| 1 | AA | 263 | A | C4'-O4' | -6.09 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 376 | G | P-O5' | 6.09 | 1.65 | 1.59 |
| 1 | AA | 397 | A | P-O5' | 6.09 | 1.65 | 1.59 |
| 26 | BB | 316 | C | N3-C4 | 6.09 | 1.38 | 1.33 |
| 26 | BB | 442 | G | P-O5' | 6.09 | 1.65 | 1.59 |
| 26 | BB | 1298 | C | C2-N3 | 6.09 | 1.40 | 1.35 |
| 26 | BB | 1751 | U | C5'-C4' | 6.09 | 1.58 | 1.51 |
| 26 | BB | 1828 | G | C4'-C3' | 6.09 | 1.59 | 1.53 |
| 26 | BB | 2598 | A | C5'-C4' | 6.09 | 1.58 | 1.51 |
| 1 | AA | 95 | C | C2-N3 | -6.09 | 1.30 | 1.35 |
| 1 | AA | 1443 | C | P-O5' | 6.09 | 1.65 | 1.59 |
| 26 | BB | 662 | G | C3'-C2' | 6.09 | 1.59 | 1.52 |
| 26 | BB | 2425 | A | N7-C5 | 6.09 | 1.43 | 1.39 |
| 26 | BB | 2682 | A | P-O5' | 6.09 | 1.65 | 1.59 |
| 1 | AA | 80 | A | N1-C2 | 6.09 | 1.39 | 1.34 |
| 1 | AA | 879 | C | C2'-C1' | 6.09 | 1.60 | 1.53 |
| 26 | BB | 2172 | U | C2-O2 | 6.09 | 1.27 | 1.22 |
| 1 | AA | 1114 | C | C2'-C1' | 6.09 | 1.60 | 1.53 |
| 4 | AD | 47 | A | C8-N7 | 6.09 | 1.35 | 1.31 |
| 26 | BB | 45 | G | N1-C2 | 6.09 | 1.42 | 1.37 |
| 26 | BB | 1555 | G | O3'-P | -6.09 | 1.53 | 1.61 |
| 26 | BB | 1567 | G | P-O5' | 6.09 | 1.65 | 1.59 |
| 26 | BB | 1673 | G | O3'-P | -6.09 | 1.53 | 1.61 |
| 1 | AA | 750 | C | C2'-O2' | 6.08 | 1.49 | 1.41 |
| 26 | BB | 188 | G | C5-C4 | 6.08 | 1.42 | 1.38 |
| 26 | BB | 336 | C | N1-C6 | 6.08 | 1.40 | 1.37 |
| 26 | BB | 2021 | C | N1-C6 | -6.08 | 1.33 | 1.37 |
| 26 | BB | 2079 | U | C4'-C3' | 6.08 | 1.59 | 1.53 |
| 1 | AA | 212 | G | C6-N1 | 6.08 | 1.43 | 1.39 |
| 1 | AA | 1515 | G | P-O5' | 6.08 | 1.65 | 1.59 |
| 25 | BA | 52 | A | C5-C4 | -6.08 | 1.34 | 1.38 |
| 26 | BB | 56 | A | O3'-P | 6.08 | 1.68 | 1.61 |
| 26 | BB | 151 | C | C4'-C3' | -6.08 | 1.46 | 1.53 |
| 26 | BB | 387 | U | N1-C6 | 6.08 | 1.43 | 1.38 |
| 26 | BB | 1267 | U | N1-C2 | 6.08 | 1.44 | 1.38 |
| 26 | BB | 1453 | A | C5-C6 | 6.08 | 1.46 | 1.41 |
| 26 | BB | 1682 | G | C5-C4 | -6.08 | 1.34 | 1.38 |
| 26 | BB | 2478 | A | C5-C6 | -6.08 | 1.35 | 1.41 |
| 1 | AA | 74 | A | O3'-P | -6.08 | 1.53 | 1.61 |
| 1 | AA | 1057 | G | C2-N3 | 6.08 | 1.37 | 1.32 |
| 26 | BB | 29 | U | P-O5' | 6.08 | 1.65 | 1.59 |
| 26 | BB | 521 | U | N3-C4 | 6.08 | 1.44 | 1.38 |
| 26 | BB | 1638 | C | P-O5' | 6.08 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 607 | A | C6-N6 | 6.08 | 1.38 | 1.33 |
| 1 | AA | 227 | G | C6-N1 | -6.08 | 1.35 | 1.39 |
| 1 | AA | 274 | A | O3'-P | 6.08 | 1.68 | 1.61 |
| 1 | AA | 459 | A | N3-C4 | 6.08 | 1.38 | 1.34 |
| 1 | AA | 674 | G | C5-C6 | 6.08 | 1.48 | 1.42 |
| 1 | AA | 848 | C | C2-N3 | 6.08 | 1.40 | 1.35 |
| 25 | BA | 65 | U | C3'-C2' | 6.08 | 1.59 | 1.52 |
| 26 | BB | 157 | C | N3-C4 | 6.08 | 1.38 | 1.33 |
| 26 | BB | 749 | A | C5'-C4' | 6.08 | 1.58 | 1.51 |
| 26 | BB | 1492 | G | N3-C4 | 6.08 | 1.39 | 1.35 |
| 26 | BB | 1694 | C | C5-C6 | 6.08 | 1.39 | 1.34 |
| 26 | BB | 2481 | G | C4'-O4' | -6.08 | 1.37 | 1.45 |
| 26 | BB | 2837 | A | C2'-C1' | -6.08 | 1.46 | 1.53 |
| 25 | BA | 112 | G | C4'-O4' | -6.08 | 1.37 | 1.45 |
| 1 | AA | 1517 | G | C2'-C1' | -6.08 | 1.46 | 1.53 |
| 26 | BB | 164 | C | C5'-C4' | 6.08 | 1.58 | 1.51 |
| 26 | BB | 913 | U | C2-N3 | -6.08 | 1.33 | 1.37 |
| 26 | BB | 1293 | C | O4'-C1' | 6.08 | 1.49 | 1.41 |
| 26 | BB | 2106 | U | C3'-C2' | 6.08 | 1.59 | 1.52 |
| 4 | AD | 47 | A | C2'-O2' | 6.07 | 1.49 | 1.41 |
| 26 | BB | 784 | G | C5-C4 | 6.07 | 1.42 | 1.38 |
| 26 | BB | 2011 | U | C5'-C4' | 6.07 | 1.58 | 1.51 |
| 26 | BB | 78 | U | C5'-C4' | 6.07 | 1.58 | 1.51 |
| 26 | BB | 785 | G | P-O5' | 6.07 | 1.65 | 1.59 |
| 26 | BB | 904 | G | O3'-P | 6.07 | 1.68 | 1.61 |
| 26 | BB | 2259 | U | O3'-P | -6.07 | 1.53 | 1.61 |
| 1 | AA | 234 | C | C2-N3 | 6.07 | 1.40 | 1.35 |
| 1 | AA | 1258 | G | N1-C2 | 6.07 | 1.42 | 1.37 |
| 26 | BB | 97 | C | C2'-O2' | 6.07 | 1.49 | 1.41 |
| 26 | BB | 1522 | A | C6-N6 | 6.07 | 1.38 | 1.33 |
| 26 | BB | 1603 | A | O3'-P | 6.07 | 1.68 | 1.61 |
| 26 | BB | 1621 | U | C4'-O4' | -6.07 | 1.37 | 1.45 |
| 26 | BB | 39 | G | C6-N1 | 6.07 | 1.43 | 1.39 |
| 26 | BB | 153 | U | O4'-C1' | -6.07 | 1.33 | 1.41 |
| 26 | BB | 1734 | G | C4'-O4' | -6.07 | 1.37 | 1.45 |
| 26 | BB | 2600 | A | P-O5' | 6.07 | 1.65 | 1.59 |
| 1 | AA | 465 | A | N3-C4 | 6.07 | 1.38 | 1.34 |
| 1 | AA | 693 | G | C4'-O4' | -6.07 | 1.37 | 1.45 |
| 1 | AA | 767 | A | C5-C6 | 6.07 | 1.46 | 1.41 |
| 1 | AA | 1045 | C | C4-C5 | 6.07 | 1.47 | 1.43 |
| 26 | BB | 311 | A | C8-N7 | -6.07 | 1.27 | 1.31 |
| 26 | BB | 464 | U | C4'-O4' | -6.07 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 777 | G | C6-N1 | 6.07 | 1.43 | 1.39 |
| 26 | BB | 2354 | C | P-O5' | 6.07 | 1.65 | 1.59 |
| 26 | BB | 2452 | C | C4-C5 | 6.07 | 1.47 | 1.43 |
| 26 | BB | 2469 | A | N9-C4 | -6.07 | 1.34 | 1.37 |
| 26 | BB | 2886 | A | N7-C5 | -6.07 | 1.35 | 1.39 |
| 1 | AA | 105 | G | C4'-O4' | -6.07 | 1.37 | 1.45 |
| 1 | AA | 316 | C | C5-C6 | 6.07 | 1.39 | 1.34 |
| 1 | AA | 571 | U | C2-O2 | 6.07 | 1.27 | 1.22 |
| 1 | AA | 601 | G | C2-N3 | 6.07 | 1.37 | 1.32 |
| 26 | BB | 193 | U | C2'-O2' | 6.07 | 1.49 | 1.41 |
| 26 | BB | 324 | A | C5-C6 | 6.07 | 1.46 | 1.41 |
| 26 | BB | 1116 | G | C3'-C2' | 6.07 | 1.59 | 1.52 |
| 26 | BB | 1628 | G | C3'-O3' | 6.07 | 1.50 | 1.42 |
| 26 | BB | 1721 | G | C8-N7 | -6.07 | 1.27 | 1.30 |
| 26 | BB | 1935 | G | O3'-P | 6.07 | 1.68 | 1.61 |
| 26 | BB | 2464 | G | N9-C8 | -6.07 | 1.33 | 1.37 |
| 26 | BB | 2521 | C | C2-N3 | 6.07 | 1.40 | 1.35 |
| 26 | BB | 2685 | G | N9-C4 | -6.07 | 1.33 | 1.38 |
| 1 | AA | 508 | U | N1-C2 | 6.06 | 1.44 | 1.38 |
| 1 | AA | 687 | A | O3'-P | 6.06 | 1.68 | 1.61 |
| 4 | AD | 68 | C | O5'-C5' | -6.06 | 1.33 | 1.42 |
| 26 | BB | 2171 | A | N9-C4 | -6.06 | 1.34 | 1.37 |
| 26 | BB | 2638 | G | C4'-C3' | 6.06 | 1.59 | 1.53 |
| 1 | AA | 1030 | U | C5'-C4' | 6.06 | 1.58 | 1.51 |
| 26 | BB | 181 | A | C5-C4 | -6.06 | 1.34 | 1.38 |
| 26 | BB | 1972 | G | O3'-P | 6.06 | 1.68 | 1.61 |
| 26 | BB | 2154 | A | C4'-C3' | -6.06 | 1.46 | 1.53 |
| 26 | BB | 2361 | G | C6-N1 | -6.06 | 1.35 | 1.39 |
| 26 | BB | 2697 | G | C5-C4 | -6.06 | 1.34 | 1.38 |
| 3 | AC | 45 | G | C5-C6 | 6.06 | 1.48 | 1.42 |
| 26 | BB | 1381 | G | C3'-C2' | -6.06 | 1.46 | 1.52 |
| 26 | BB | 1566 | A | O3'-P | 6.06 | 1.68 | 1.61 |
| 26 | BB | 1662 | U | O3'-P | 6.06 | 1.68 | 1.61 |
| 26 | BB | 2638 | G | C2-N3 | 6.06 | 1.37 | 1.32 |
| 1 | AA | 303 | A | N9-C4 | 6.06 | 1.41 | 1.37 |
| 1 | AA | 432 | A | N7-C5 | -6.06 | 1.35 | 1.39 |
| 1 | AA | 1239 | A | C6-N6 | -6.06 | 1.29 | 1.33 |
| 25 | BA | 42 | C | O4'-C1' | 6.06 | 1.49 | 1.41 |
| 26 | BB | 468 | G | N7-C5 | -6.06 | 1.35 | 1.39 |
| 26 | BB | 2016 | U | C4-O4 | -6.06 | 1.18 | 1.23 |
| 26 | BB | 2215 | C | P-O5' | 6.06 | 1.65 | 1.59 |
| 26 | BB | 2739 | U | P-O5' | 6.06 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 96 | U | P-O5' | 6.06 | 1.65 | 1.59 |
| 1 | AA | 134 | G | C8-N7 | 6.06 | 1.34 | 1.30 |
| 1 | AA | 158 | G | C2'-C1' | 6.06 | 1.60 | 1.53 |
| 1 | AA | 410 | G | C5-C4 | 6.06 | 1.42 | 1.38 |
| 1 | AA | 831 | A | C8-N7 | 6.06 | 1.35 | 1.31 |
| 26 | BB | 400 | G | O3'-P | -6.06 | 1.53 | 1.61 |
| 26 | BB | 1293 | C | P-O5' | 6.06 | 1.65 | 1.59 |
| 26 | BB | 1601 | G | N9-C4 | 6.06 | 1.42 | 1.38 |
| 26 | BB | 1803 | A | O3'-P | -6.06 | 1.53 | 1.61 |
| 26 | BB | 2730 | C | N3-C4 | 6.06 | 1.38 | 1.33 |
| 26 | BB | 2848 | G | C4'-O4' | -6.06 | 1.37 | 1.45 |
| 1 | AA | 166 | U | C2-O2 | 6.06 | 1.27 | 1.22 |
| 1 | AA | 305 | G | C6-N1 | 6.06 | 1.43 | 1.39 |
| 1 | AA | 1281 | C | N1-C6 | 6.06 | 1.40 | 1.37 |
| 21 | AU | 60 | ARG | NE-CZ | 6.06 | 1.41 | 1.33 |
| 26 | BB | 87 | U | C5'-C4' | 6.06 | 1.58 | 1.51 |
| 26 | BB | 1413 | A | P-O5' | 6.06 | 1.65 | 1.59 |
| 26 | BB | 2261 | C | C2'-O2' | 6.06 | 1.49 | 1.41 |
| 1 | AA | 19 | A | N9-C8 | -6.05 | 1.32 | 1.37 |
| 1 | AA | 665 | A | C8-N7 | -6.05 | 1.27 | 1.31 |
| 1 | AA | 928 | G | N7-C5 | 6.05 | 1.42 | 1.39 |
| 1 | AA | 1236 | A | P-O5' | 6.05 | 1.65 | 1.59 |
| 1 | AA | 1421 | G | C2-N3 | 6.05 | 1.37 | 1.32 |
| 26 | BB | 277 | G | C2-N3 | 6.05 | 1.37 | 1.32 |
| 26 | BB | 945 | A | O3'-P | 6.05 | 1.68 | 1.61 |
| 26 | BB | 1358 | G | C6-N1 | 6.05 | 1.43 | 1.39 |
| 26 | BB | 1526 | C | C4'-C3' | -6.05 | 1.46 | 1.53 |
| 26 | BB | 1989 | G | P-O5' | 6.05 | 1.65 | 1.59 |
| 26 | BB | 1934 | C | P-O5' | 6.05 | 1.65 | 1.59 |
| 26 | BB | 2134 | A | C6-N1 | 6.05 | 1.39 | 1.35 |
| 1 | AA | 428 | G | N3-C4 | 6.05 | 1.39 | 1.35 |
| 1 | AA | 620 | C | C4'-O4' | -6.05 | 1.37 | 1.45 |
| 1 | AA | 733 | G | N7-C5 | -6.05 | 1.35 | 1.39 |
| 1 | AA | 937 | A | N7-C5 | -6.05 | 1.35 | 1.39 |
| 26 | BB | 392 | U | O4'-C1' | 6.05 | 1.49 | 1.41 |
| 26 | BB | 422 | A | N1-C2 | 6.05 | 1.39 | 1.34 |
| 26 | BB | 554 | U | C2'-C1' | -6.05 | 1.46 | 1.53 |
| 26 | BB | 1769 | U | C5-C6 | 6.05 | 1.39 | 1.34 |
| 26 | BB | 2622 | U | N1-C2 | -6.05 | 1.33 | 1.38 |
| 26 | BB | 420 | C | C4'-C3' | 6.05 | 1.59 | 1.53 |
| 26 | BB | 1243 | C | N1-C6 | 6.05 | 1.40 | 1.37 |
| 26 | BB | 2257 | U | C4-C5 | 6.05 | 1.49 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1601 | G | O3'-P | 6.05 | 1.68 | 1.61 |
| 26 | BB | 2831 | G | C2'-C1' | 6.05 | 1.60 | 1.53 |
| 1 | AA | 819 | A | N9-C4 | 6.05 | 1.41 | 1.37 |
| 1 | AA | 833 | G | O3'-P | -6.05 | 1.53 | 1.61 |
| 1 | AA | 1120 | C | C4-N4 | -6.05 | 1.28 | 1.33 |
| 5 | AE | 148 | GLY | CA-C | 6.05 | 1.61 | 1.51 |
| 26 | BB | 454 | A | N7-C5 | -6.05 | 1.35 | 1.39 |
| 26 | BB | 568 | U | C5'-C4' | 6.05 | 1.58 | 1.51 |
| 26 | BB | 635 | C | C2-O2 | -6.05 | 1.19 | 1.24 |
| 26 | BB | 886 | A | O3'-P | 6.05 | 1.68 | 1.61 |
| 26 | BB | 1455 | G | C5-C4 | -6.05 | 1.34 | 1.38 |
| 26 | BB | 1816 | C | C2-O2 | -6.05 | 1.19 | 1.24 |
| 26 | BB | 1891 | G | C5'-C4' | 6.05 | 1.58 | 1.51 |
| 26 | BB | 2059 | A | C5-C4 | -6.05 | 1.34 | 1.38 |
| 26 | BB | 2718 | G | C2-N3 | 6.05 | 1.37 | 1.32 |
| 1 | AA | 684 | U | C4-O4 | -6.04 | 1.18 | 1.23 |
| 1 | AA | 780 | A | N3-C4 | 6.04 | 1.38 | 1.34 |
| 26 | BB | 2589 | A | C6-N6 | 6.04 | 1.38 | 1.33 |
| 26 | BB | 2811 | G | N1-C2 | 6.04 | 1.42 | 1.37 |
| 1 | AA | 842 | U | C5-C6 | 6.04 | 1.39 | 1.34 |
| 1 | AA | 1064 | G | N7-C5 | 6.04 | 1.42 | 1.39 |
| 1 | AA | 1466 | C | O3'-P | 6.04 | 1.68 | 1.61 |
| 3 | AC | 38 | G | N7-C5 | 6.04 | 1.42 | 1.39 |
| 26 | BB | 537 | G | C2-N3 | 6.04 | 1.37 | 1.32 |
| 26 | BB | 537 | G | N9-C4 | 6.04 | 1.42 | 1.38 |
| 26 | BB | 1234 | U | C5'-C4' | 6.04 | 1.58 | 1.51 |
| 26 | BB | 1413 | A | O3'-P | 6.04 | 1.68 | 1.61 |
| 1 | AA | 276 | G | C8-N7 | 6.04 | 1.34 | 1.30 |
| 1 | AA | 621 | A | C6-N6 | 6.04 | 1.38 | 1.33 |
| 1 | AA | 945 | G | N1-C2 | 6.04 | 1.42 | 1.37 |
| 1 | AA | 1289 | A | N9-C4 | 6.04 | 1.41 | 1.37 |
| 25 | BA | 52 | A | N9-C4 | 6.04 | 1.41 | 1.37 |
| 26 | BB | 620 | G | C4'-O4' | -6.04 | 1.37 | 1.45 |
| 26 | BB | 2618 | G | C5-C6 | 6.04 | 1.48 | 1.42 |
| 26 | BB | 2722 | G | N9-C8 | 6.04 | 1.42 | 1.37 |
| 1 | AA | 938 | A | C6-N1 | -6.04 | 1.31 | 1.35 |
| 1 | AA | 1493 | A | N3-C4 | 6.04 | 1.38 | 1.34 |
| 26 | BB | 538 | A | N3-C4 | 6.04 | 1.38 | 1.34 |
| 1 | AA | 806 | C | P-O5' | 6.04 | 1.65 | 1.59 |
| 1 | AA | 1281 | C | P-O5' | 6.04 | 1.65 | 1.59 |
| 2 | AB | 71 | C | C4-C5 | 6.04 | 1.47 | 1.43 |
| 26 | BB | 222 | A | C5-C4 | -6.04 | 1.34 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 762 | U | C2-N3 | 6.04 | 1.42 | 1.37 |
| 26 | BB | 1815 | A | N3-C4 | 6.04 | 1.38 | 1.34 |
| 26 | BB | 1831 | G | C6-N1 | 6.04 | 1.43 | 1.39 |
| 26 | BB | 2052 | A | C2'-C1' | -6.04 | 1.46 | 1.53 |
| 26 | BB | 2144 | G | C2-N3 | 6.04 | 1.37 | 1.32 |
| 26 | BB | 2276 | G | C2-N3 | 6.04 | 1.37 | 1.32 |
| 26 | BB | 2880 | C | C4-N4 | 6.04 | 1.39 | 1.33 |
| 1 | AA | 250 | A | C2'-O2' | 6.04 | 1.49 | 1.41 |
| 1 | AA | 613 | C | N3-C4 | -6.04 | 1.29 | 1.33 |
| 26 | BB | 373 | U | P-O5' | 6.04 | 1.65 | 1.59 |
| 26 | BB | 579 | G | N9-C8 | -6.04 | 1.33 | 1.37 |
| 4 | AD | 11 | A | C4'-C3' | 6.04 | 1.59 | 1.53 |
| 5 | AE | 95 | TRP | CD2-CE2 | 6.04 | 1.48 | 1.41 |
| 26 | BB | 235 | U | O4'-C1' | 6.04 | 1.49 | 1.41 |
| 26 | BB | 2407 | A | N9-C4 | -6.04 | 1.34 | 1.37 |
| 1 | AA | 767 | A | C8-N7 | 6.03 | 1.35 | 1.31 |
| 1 | AA | 898 | G | C8-N7 | -6.03 | 1.27 | 1.30 |
| 1 | AA | 1375 | A | N9-C8 | 6.03 | 1.42 | 1.37 |
| 1 | AA | 1377 | A | P-O5' | 6.03 | 1.65 | 1.59 |
| 26 | BB | 1363 | C | C2-N3 | 6.03 | 1.40 | 1.35 |
| 26 | BB | 1397 | U | C2-N3 | 6.03 | 1.42 | 1.37 |
| 26 | BB | 1721 | G | C3'-O3' | -6.03 | 1.33 | 1.42 |
| 26 | BB | 1932 | A | N7-C5 | -6.03 | 1.35 | 1.39 |
| 26 | BB | 2199 | A | C4'-O4' | -6.03 | 1.37 | 1.45 |
| 26 | BB | 2336 | A | N9-C8 | 6.03 | 1.42 | 1.37 |
| 26 | BB | 2468 | A | C5-C4 | -6.03 | 1.34 | 1.38 |
| 1 | AA | 488 | C | C3'-C2' | 6.03 | 1.59 | 1.52 |
| 1 | AA | 882 | C | C3'-C2' | 6.03 | 1.59 | 1.52 |
| 1 | AA | 1387 | G | C3'-O3' | -6.03 | 1.33 | 1.42 |
| 26 | BB | 424 | G | C2-N3 | 6.03 | 1.37 | 1.32 |
| 26 | BB | 2561 | U | N1-C2 | 6.03 | 1.44 | 1.38 |
| 1 | AA | 604 | G | C4'-C3' | 6.03 | 1.59 | 1.53 |
| 1 | AA | 968 | A | N3-C4 | 6.03 | 1.38 | 1.34 |
| 17 | AQ | 54 | SER | CA-CB | 6.03 | 1.61 | 1.52 |
| 26 | BB | 733 | G | C2'-C1' | -6.03 | 1.46 | 1.53 |
| 26 | BB | 1637 | A | C8-N7 | -6.03 | 1.27 | 1.31 |
| 26 | BB | 2287 | A | C8-N7 | -6.03 | 1.27 | 1.31 |
| 26 | BB | 2552 | OMU | O3'-P | 6.03 | 1.68 | 1.61 |
| 26 | BB | 2623 | G | N9-C8 | -6.03 | 1.33 | 1.37 |
| 1 | AA | 958 | A | C6-N6 | 6.03 | 1.38 | 1.33 |
| 1 | AA | 1125 | U | C2-N3 | 6.03 | 1.42 | 1.37 |
| 26 | BB | 587 | C | C4'-O4' | -6.03 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 869 | G | N9-C8 | -6.03 | 1.33 | 1.37 |
| 26 | BB | 1528 | A | C4'-C3' | 6.03 | 1.59 | 1.53 |
| 26 | BB | 1803 | A | N9-C8 | -6.03 | 1.32 | 1.37 |
| 1 | AA | 423 | G | N9-C8 | -6.03 | 1.33 | 1.37 |
| 1 | AA | 554 | A | N9-C4 | -6.03 | 1.34 | 1.37 |
| 1 | AA | 648 | A | N1-C2 | 6.03 | 1.39 | 1.34 |
| 1 | AA | 724 | G | C3'-C2' | 6.03 | 1.59 | 1.52 |
| 4 | AD | 71 | G | C8-N7 | -6.03 | 1.27 | 1.30 |
| 26 | BB | 134 | G | C6-N1 | 6.03 | 1.43 | 1.39 |
| 26 | BB | 685 | A | C8-N7 | 6.03 | 1.35 | 1.31 |
| 26 | BB | 1077 | A | P-O5' | 6.03 | 1.65 | 1.59 |
| 26 | BB | 1984 | G | C5-C4 | 6.03 | 1.42 | 1.38 |
| 26 | BB | 2467 | C | C4'-O4' | -6.03 | 1.37 | 1.45 |
| 26 | BB | 2707 | U | N1-C2 | 6.03 | 1.44 | 1.38 |
| 1 | AA | 411 | A | N7-C5 | 6.03 | 1.42 | 1.39 |
| 3 | AC | 40 | G | C6-N1 | 6.03 | 1.43 | 1.39 |
| 26 | BB | 763 | G | C4'-O4' | -6.03 | 1.37 | 1.45 |
| 26 | BB | 2135 | A | C6-N1 | 6.03 | 1.39 | 1.35 |
| 1 | AA | 27 | G | C2-N3 | 6.02 | 1.37 | 1.32 |
| 1 | AA | 47 | C | N1-C6 | -6.02 | 1.33 | 1.37 |
| 1 | AA | 1116 | U | P-O5' | 6.02 | 1.65 | 1.59 |
| 26 | BB | 433 | C | N1-C6 | -6.02 | 1.33 | 1.37 |
| 26 | BB | 792 | A | C8-N7 | -6.02 | 1.27 | 1.31 |
| 26 | BB | 1002 | G | C8-N7 | -6.02 | 1.27 | 1.30 |
| 26 | BB | 1425 | G | C4'-C3' | 6.02 | 1.59 | 1.53 |
| 1 | AA | 112 | G | P-O5' | 6.02 | 1.65 | 1.59 |
| 1 | AA | 941 | G | N7-C5 | 6.02 | 1.42 | 1.39 |
| 4 | AD | 14 | A | N9-C4 | 6.02 | 1.41 | 1.37 |
| 26 | BB | 762 | U | O4'-C1' | 6.02 | 1.49 | 1.41 |
| 26 | BB | 1845 | G | C2-N2 | -6.02 | 1.28 | 1.34 |
| 1 | AA | 1282 | C | N3-C4 | 6.02 | 1.38 | 1.33 |
| 26 | BB | 2536 | G | C6-N1 | -6.02 | 1.35 | 1.39 |
| 42 | BR | 84 | SER | CB-OG | -6.02 | 1.34 | 1.42 |
| 1 | AA | 87 | C | C5'-C4' | 6.02 | 1.58 | 1.51 |
| 1 | AA | 231 | U | C4-O4 | -6.02 | 1.18 | 1.23 |
| 1 | AA | 615 | G | O4'-C1' | 6.02 | 1.49 | 1.41 |
| 1 | AA | 824 | G | C4'-O4' | -6.02 | 1.37 | 1.45 |
| 1 | AA | 943 | U | C2-N3 | 6.02 | 1.42 | 1.37 |
| 1 | AA | 1316 | G | N3-C4 | 6.02 | 1.39 | 1.35 |
| 26 | BB | 792 | A | O3'-P | 6.02 | 1.68 | 1.61 |
| 26 | BB | 852 | U | N1-C6 | 6.02 | 1.43 | 1.38 |
| 26 | BB | 925 | A | C5'-C4' | 6.02 | 1.58 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1643 | G | P-O5' | 6.02 | 1.65 | 1.59 |
| 26 | BB | 2338 | C | C4-C5 | -6.02 | 1.38 | 1.43 |
| 1 | AA | 678 | U | P-O5' | 6.02 | 1.65 | 1.59 |
| 26 | BB | 481 | G | N7-C5 | 6.02 | 1.42 | 1.39 |
| 26 | BB | 997 | G | P-O5' | 6.02 | 1.65 | 1.59 |
| 26 | BB | 1042 | G | C5-C6 | 6.02 | 1.48 | 1.42 |
| 26 | BB | 1378 | A | C3'-O3' | 6.02 | 1.50 | 1.42 |
| 26 | BB | 2465 | C | N3-C4 | 6.02 | 1.38 | 1.33 |
| 26 | BB | 2701 | U | C5'-C4' | 6.02 | 1.58 | 1.51 |
| 1 | AA | 821 | G | C2'-O2' | 6.02 | 1.49 | 1.41 |
| 4 | AD | 35 | C | N3-C4 | 6.02 | 1.38 | 1.33 |
| 1 | AA | 282 | A | N3-C4 | -6.01 | 1.31 | 1.34 |
| 1 | AA | 411 | A | C5'-C4' | 6.01 | 1.58 | 1.51 |
| 1 | AA | 1316 | G | C2-N3 | 6.01 | 1.37 | 1.32 |
| 26 | BB | 1677 | A | N3-C4 | 6.01 | 1.38 | 1.34 |
| 26 | BB | 1892 | C | N1-C6 | 6.01 | 1.40 | 1.37 |
| 26 | BB | 2043 | C | C5'-C4' | 6.01 | 1.58 | 1.51 |
| 26 | BB | 2378 | A | N9-C4 | 6.01 | 1.41 | 1.37 |
| 1 | AA | 874 | G | N9-C8 | -6.01 | 1.33 | 1.37 |
| 1 | AA | 974 | A | C8-N7 | -6.01 | 1.27 | 1.31 |
| 1 | AA | 1430 | A | C5-C4 | 6.01 | 1.43 | 1.38 |
| 26 | BB | 1242 | U | C2'-O2' | -6.01 | 1.33 | 1.41 |
| 26 | BB | 1434 | A | C6-N1 | -6.01 | 1.31 | 1.35 |
| 26 | BB | 1786 | A | C5-C4 | -6.01 | 1.34 | 1.38 |
| 26 | BB | 2511 | U | N1-C6 | 6.01 | 1.43 | 1.38 |
| 1 | AA | 1292 | G | C8-N7 | -6.01 | 1.27 | 1.30 |
| 26 | BB | 67 | U | C2'-C1' | -6.01 | 1.46 | 1.53 |
| 26 | BB | 94 | A | P-O5' | 6.01 | 1.65 | 1.59 |
| 26 | BB | 543 | G | C6-N1 | 6.01 | 1.43 | 1.39 |
| 1 | AA | 285 | C | C2-N3 | 6.01 | 1.40 | 1.35 |
| 1 | AA | 681 | A | C5-C4 | -6.01 | 1.34 | 1.38 |
| 1 | AA | 813 | U | C4'-C3' | 6.01 | 1.59 | 1.53 |
| 4 | AD | 9 | G | C4'-O4' | -6.01 | 1.37 | 1.45 |
| 26 | BB | 113 | U | C2-N3 | 6.01 | 1.42 | 1.37 |
| 26 | BB | 2768 | U | C2'-O2' | 6.01 | 1.49 | 1.41 |
| 25 | BA | 45 | A | N3-C4 | 6.01 | 1.38 | 1.34 |
| 26 | BB | 265 | A | C2-N3 | 6.01 | 1.39 | 1.33 |
| 26 | BB | 442 | G | C5'-C4' | 6.01 | 1.58 | 1.51 |
| 26 | BB | 547 | A | N7-C5 | 6.01 | 1.42 | 1.39 |
| 26 | BB | 1544 | A | N1-C2 | -6.01 | 1.28 | 1.34 |
| 26 | BB | 2852 | G | C5'-C4' | 6.01 | 1.58 | 1.51 |
| 1 | AA | 610 | U | N3-C4 | 6.01 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 35 | C | P-O5' | 6.01 | 1.65 | 1.59 |
| 26 | BB | 1065 | U | C2-O2 | 6.01 | 1.27 | 1.22 |
| 26 | BB | 1648 | U | C4-O4 | 6.01 | 1.28 | 1.23 |
| 26 | BB | 1907 | G | N9-C4 | 6.01 | 1.42 | 1.38 |
| 26 | BB | 2330 | G | P-O5' | 6.01 | 1.65 | 1.59 |
| 26 | BB | 2371 | G | N9-C8 | 6.01 | 1.42 | 1.37 |
| 26 | BB | 282 | A | P-O5' | 6.00 | 1.65 | 1.59 |
| 26 | BB | 2446 | G | C4'-C3' | -6.00 | 1.46 | 1.52 |
| 1 | AA | 258 | G | O4'-C1' | 6.00 | 1.49 | 1.41 |
| 1 | AA | 802 | A | C5'-C4' | 6.00 | 1.58 | 1.51 |
| 26 | BB | 1143 | A | N7-C5 | -6.00 | 1.35 | 1.39 |
| 26 | BB | 1324 | G | N9-C4 | -6.00 | 1.33 | 1.38 |
| 26 | BB | 1435 | G | O5'-C5' | -6.00 | 1.33 | 1.42 |
| 26 | BB | 1579 | A | P-O5' | 6.00 | 1.65 | 1.59 |
| 26 | BB | 2292 | U | O3'-P | 6.00 | 1.68 | 1.61 |
| 26 | BB | 2466 | C | C5'-C4' | 6.00 | 1.58 | 1.51 |
| 26 | BB | 2572 | A | C2-N3 | 6.00 | 1.39 | 1.33 |
| 26 | BB | 2835 | A | N9-C8 | 6.00 | 1.42 | 1.37 |
| 26 | BB | 2885 | G | N3-C4 | 6.00 | 1.39 | 1.35 |
| 1 | AA | 263 | A | N7-C5 | 6.00 | 1.42 | 1.39 |
| 1 | AA | 667 | G | C6-N1 | -6.00 | 1.35 | 1.39 |
| 26 | BB | 70 | G | C5'-C4' | 6.00 | 1.58 | 1.51 |
| 26 | BB | 144 | A | C3'-C2' | 6.00 | 1.59 | 1.52 |
| 26 | BB | 1243 | C | C4'-O4' | -6.00 | 1.37 | 1.45 |
| 26 | BB | 1847 | A | C8-N7 | -6.00 | 1.27 | 1.31 |
| 26 | BB | 2159 | G | C4'-O4' | -6.00 | 1.37 | 1.45 |
| 26 | BB | 2456 | C | C5'-C4' | 6.00 | 1.58 | 1.51 |
| 26 | BB | 2607 | G | C3'-C2' | -6.00 | 1.46 | 1.52 |
| 1 | AA | 144 | G | C5-C6 | 6.00 | 1.48 | 1.42 |
| 1 | AA | 482 | A | C6-N1 | 6.00 | 1.39 | 1.35 |
| 26 | BB | 432 | A | O3'-P | 6.00 | 1.68 | 1.61 |
| 26 | BB | 921 | C | C5-C6 | 6.00 | 1.39 | 1.34 |
| 26 | BB | 922 | C | C3'-C2' | 6.00 | 1.59 | 1.52 |
| 26 | BB | 1320 | C | P-O5' | 6.00 | 1.65 | 1.59 |
| 26 | BB | 1858 | A | C5-C6 | 6.00 | 1.46 | 1.41 |
| 26 | BB | 2353 | G | C2-N3 | 6.00 | 1.37 | 1.32 |
| 26 | BB | 2448 | A | P-O5' | 6.00 | 1.65 | 1.59 |
| 1 | AA | 268 | U | C5-C6 | 6.00 | 1.39 | 1.34 |
| 1 | AA | 350 | G | P-O5' | 6.00 | 1.65 | 1.59 |
| 26 | BB | 524 | G | N1-C2 | 6.00 | 1.42 | 1.37 |
| 26 | BB | 668 | A | C5-C4 | -6.00 | 1.34 | 1.38 |
| 26 | BB | 1174 | U | C4-O4 | -6.00 | 1.18 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1181 | U | C3'-C2' | -6.00 | 1.46 | 1.52 |
| 26 | BB | 1192 | G | N1-C2 | 6.00 | 1.42 | 1.37 |
| 26 | BB | 1631 | G | C4'-C3' | -6.00 | 1.46 | 1.52 |
| 26 | BB | 1946 | U | N3-C4 | 6.00 | 1.43 | 1.38 |
| 26 | BB | 1969 | A | N9-C4 | 6.00 | 1.41 | 1.37 |
| 26 | BB | 2331 | G | C5-C4 | 6.00 | 1.42 | 1.38 |
| 26 | BB | 2431 | U | C2-N3 | 6.00 | 1.42 | 1.37 |
| 26 | BB | 2486 | C | N3-C4 | 6.00 | 1.38 | 1.33 |
| 26 | BB | 2789 | C | C5'-C4' | 6.00 | 1.58 | 1.51 |
| 1 | AA | 111 | G | N1-C2 | -6.00 | 1.32 | 1.37 |
| 1 | AA | 959 | A | N3-C4 | 6.00 | 1.38 | 1.34 |
| 1 | AA | 1133 | G | N9-C8 | 6.00 | 1.42 | 1.37 |
| 1 | AA | 1338 | G | N1-C2 | 6.00 | 1.42 | 1.37 |
| 2 | AB | 74 | C | C5-C6 | 6.00 | 1.39 | 1.34 |
| 4 | AD | 27 | G | C6-O6 | -6.00 | 1.18 | 1.24 |
| 26 | BB | 543 | G | N1-C2 | 6.00 | 1.42 | 1.37 |
| 26 | BB | 701 | G | O3'-P | 6.00 | 1.68 | 1.61 |
| 26 | BB | 1286 | A | C4'-O4' | -6.00 | 1.37 | 1.45 |
| 26 | BB | 2727 | A | C5-C6 | 6.00 | 1.46 | 1.41 |
| 26 | BB | 2737 | G | N3-C4 | 6.00 | 1.39 | 1.35 |
| 26 | BB | 128 | C | C4'-O4' | -6.00 | 1.37 | 1.45 |
| 26 | BB | 1627 | G | O3'-P | 6.00 | 1.68 | 1.61 |
| 26 | BB | 2278 | A | C3'-O3' | -6.00 | 1.33 | 1.42 |
| 1 | AA | 310 | G | N9-C8 | -5.99 | 1.33 | 1.37 |
| 1 | AA | 462 | G | C5'-C4' | 5.99 | 1.58 | 1.51 |
| 1 | AA | 725 | G | N9-C8 | 5.99 | 1.42 | 1.37 |
| 1 | AA | 879 | C | O3'-P | -5.99 | 1.53 | 1.61 |
| 3 | AC | 34 | U | C4-O4 | -5.99 | 1.18 | 1.23 |
| 26 | BB | 219 | A | N1-C2 | -5.99 | 1.28 | 1.34 |
| 26 | BB | 474 | G | C8-N7 | 5.99 | 1.34 | 1.30 |
| 26 | BB | 663 | G | C5'-C4' | 5.99 | 1.58 | 1.51 |
| 26 | BB | 1041 | G | C2-N2 | -5.99 | 1.28 | 1.34 |
| 26 | BB | 1051 | G | N3-C4 | 5.99 | 1.39 | 1.35 |
| 26 | BB | 2153 | C | C5-C6 | 5.99 | 1.39 | 1.34 |
| 26 | BB | 2601 | C | N1-C2 | 5.99 | 1.46 | 1.40 |
| 1 | AA | 1462 | C | C2-O2 | -5.99 | 1.19 | 1.24 |
| 26 | BB | 1634 | A | N9-C4 | 5.99 | 1.41 | 1.37 |
| 1 | AA | 543 | U | C5'-C4' | 5.99 | 1.58 | 1.51 |
| 1 | AA | 793 | U | P-O5' | 5.99 | 1.65 | 1.59 |
| 26 | BB | 21 | A | C6-N1 | 5.99 | 1.39 | 1.35 |
| 26 | BB | 489 | G | N9-C4 | 5.99 | 1.42 | 1.38 |
| 26 | BB | 1394 | U | P-O5' | 5.99 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 980 | C | C2-N3 | 5.99 | 1.40 | 1.35 |
| 4 | AD | 38 | A | C6-N6 | -5.99 | 1.29 | 1.33 |
| 25 | BA | 78 | A | C6-N6 | -5.99 | 1.29 | 1.33 |
| 26 | BB | 1074 | G | C5-C4 | -5.99 | 1.34 | 1.38 |
| 26 | BB | 1426 | G | N9-C4 | -5.99 | 1.33 | 1.38 |
| 26 | BB | 2570 | G | N7-C5 | -5.99 | 1.35 | 1.39 |
| 1 | AA | 374 | A | P-O5' | 5.99 | 1.65 | 1.59 |
| 1 | AA | 558 | G | N7-C5 | -5.99 | 1.35 | 1.39 |
| 1 | AA | 842 | U | C3'-O3' | 5.99 | 1.50 | 1.42 |
| 26 | BB | 801 | G | C2-N3 | 5.99 | 1.37 | 1.32 |
| 1 | AA | 1112 | C | N3-C4 | 5.99 | 1.38 | 1.33 |
| 25 | BA | 15 | A | N9-C4 | -5.99 | 1.34 | 1.37 |
| 26 | BB | 277 | G | C8-N7 | 5.99 | 1.34 | 1.30 |
| 26 | BB | 861 | A | P-O5' | 5.99 | 1.65 | 1.59 |
| 26 | BB | 874 | G | N7-C5 | 5.99 | 1.42 | 1.39 |
| 26 | BB | 909 | A | N9-C8 | 5.99 | 1.42 | 1.37 |
| 26 | BB | 997 | G | N7-C5 | 5.99 | 1.42 | 1.39 |
| 26 | BB | 2099 | U | P-O5' | 5.99 | 1.65 | 1.59 |
| 26 | BB | 2216 | G | C4'-O4' | -5.99 | 1.37 | 1.45 |
| 26 | BB | 64 | A | P-O5' | -5.98 | 1.53 | 1.59 |
| 26 | BB | 631 | A | C6-N1 | 5.98 | 1.39 | 1.35 |
| 26 | BB | 694 | U | C4-C5 | -5.98 | 1.38 | 1.43 |
| 26 | BB | 1099 | G | N9-C4 | 5.98 | 1.42 | 1.38 |
| 1 | AA | 173 | U | C2-N3 | 5.98 | 1.42 | 1.37 |
| 1 | AA | 421 | U | N3-C4 | 5.98 | 1.43 | 1.38 |
| 1 | AA | 457 | G | C2-N3 | 5.98 | 1.37 | 1.32 |
| 1 | AA | 1229 | A | P-O5' | 5.98 | 1.65 | 1.59 |
| 26 | BB | 138 | U | C4-C5 | 5.98 | 1.49 | 1.43 |
| 26 | BB | 691 | C | C4-C5 | 5.98 | 1.47 | 1.43 |
| 26 | BB | 806 | C | C2'-C1' | 5.98 | 1.59 | 1.53 |
| 26 | BB | 1843 | C | C4-C5 | 5.98 | 1.47 | 1.43 |
| 26 | BB | 2152 | G | N1-C2 | 5.98 | 1.42 | 1.37 |
| 26 | BB | 2286 | G | N3-C4 | 5.98 | 1.39 | 1.35 |
| 1 | AA | 917 | G | N7-C5 | -5.98 | 1.35 | 1.39 |
| 1 | AA | 1343 | G | O4'-C1' | -5.98 | 1.33 | 1.41 |
| 25 | BA | 101 | A | N3-C4 | 5.98 | 1.38 | 1.34 |
| 26 | BB | 1064 | C | P-O5' | 5.98 | 1.65 | 1.59 |
| 26 | BB | 1139 | G | C4'-C3' | -5.98 | 1.46 | 1.52 |
| 26 | BB | 1799 | G | C8-N7 | -5.98 | 1.27 | 1.30 |
| 26 | BB | 2066 | C | C4-C5 | 5.98 | 1.47 | 1.43 |
| 26 | BB | 2272 | U | C2-N3 | 5.98 | 1.42 | 1.37 |
| 1 | AA | 1286 | U | C2-N3 | -5.98 | 1.33 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1192 | G | C6-O6 | -5.98 | 1.18 | 1.24 |
| 26 | BB | 1952 | A | N7-C5 | 5.98 | 1.42 | 1.39 |
| 26 | BB | 2288 | A | N7-C5 | -5.98 | 1.35 | 1.39 |
| 1 | AA | 1369 | C | C3'-C2' | -5.98 | 1.46 | 1.52 |
| 1 | AA | 1389 | C | N3-C4 | -5.98 | 1.29 | 1.33 |
| 26 | BB | 517 | C | N1-C6 | 5.98 | 1.40 | 1.37 |
| 26 | BB | 643 | A | C5'-C4' | 5.98 | 1.58 | 1.51 |
| 26 | BB | 1712 | U | C4'-O4' | -5.98 | 1.37 | 1.45 |
| 26 | BB | 2220 | U | C4-C5 | 5.98 | 1.49 | 1.43 |
| 26 | BB | 2891 | U | C5-C6 | 5.98 | 1.39 | 1.34 |
| 30 | BF | 110 | SER | CB-OG | -5.98 | 1.34 | 1.42 |
| 1 | AA | 807 | A | N7-C5 | -5.98 | 1.35 | 1.39 |
| 1 | AA | 1327 | C | P-O5' | 5.98 | 1.65 | 1.59 |
| 26 | BB | 224 | U | C2'-O2' | 5.98 | 1.49 | 1.41 |
| 26 | BB | 1103 | A | N9-C4 | -5.98 | 1.34 | 1.37 |
| 26 | BB | 1182 | G | N9-C8 | 5.98 | 1.42 | 1.37 |
| 1 | AA | 523 | A | C2'-O2' | 5.97 | 1.49 | 1.41 |
| 1 | AA | 607 | A | C8-N7 | 5.97 | 1.35 | 1.31 |
| 1 | AA | 722 | G | C5'-C4' | 5.97 | 1.58 | 1.51 |
| 1 | AA | 1157 | A | N3-C4 | 5.97 | 1.38 | 1.34 |
| 6 | AF | 84 | GLU | CG-CD | 5.97 | 1.60 | 1.51 |
| 26 | BB | 278 | A | C5'-C4' | 5.97 | 1.58 | 1.51 |
| 26 | BB | 954 | G | C6-N1 | 5.97 | 1.43 | 1.39 |
| 1 | AA | 283 | U | C4-C5 | 5.97 | 1.49 | 1.43 |
| 1 | AA | 332 | G | N9-C8 | 5.97 | 1.42 | 1.37 |
| 1 | AA | 416 | G | N9-C8 | -5.97 | 1.33 | 1.37 |
| 1 | AA | 896 | C | N1-C6 | 5.97 | 1.40 | 1.37 |
| 2 | AB | 59 | G | C2-N3 | 5.97 | 1.37 | 1.32 |
| 17 | AQ | 20 | PHE | CG-CD2 | 5.97 | 1.47 | 1.38 |
| 26 | BB | 193 | U | P-O5' | 5.97 | 1.65 | 1.59 |
| 26 | BB | 1289 | C | C5-C6 | 5.97 | 1.39 | 1.34 |
| 26 | BB | 1360 | G | C2-N3 | 5.97 | 1.37 | 1.32 |
| 26 | BB | 2110 | G | O4'-C1' | 5.97 | 1.49 | 1.41 |
| 26 | BB | 2802 | G | C5-C6 | 5.97 | 1.48 | 1.42 |
| 26 | BB | 2869 | G | C6-O6 | -5.97 | 1.18 | 1.24 |
| 1 | AA | 1005 | A | C5-C6 | 5.97 | 1.46 | 1.41 |
| 3 | AC | 37 | G | C2-N3 | 5.97 | 1.37 | 1.32 |
| 26 | BB | 283 | G | P-O5' | 5.97 | 1.65 | 1.59 |
| 26 | BB | 1765 | U | C2-N3 | 5.97 | 1.42 | 1.37 |
| 26 | BB | 1953 | A | N7-C5 | 5.97 | 1.42 | 1.39 |
| 26 | BB | 2027 | G | N3-C4 | 5.97 | 1.39 | 1.35 |
| 26 | BB | 2684 | U | C4'-O4' | -5.97 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 456 | A | C5'-C4' | 5.97 | 1.58 | 1.51 |
| 1 | AA | 1007 | U | N1-C6 | 5.97 | 1.43 | 1.38 |
| 1 | AA | 1213 | A | N7-C5 | -5.97 | 1.35 | 1.39 |
| 4 | AD | 41 | C | C4-C5 | 5.97 | 1.47 | 1.43 |
| 6 | AF | 216 | PRO | N-CA | -5.97 | 1.37 | 1.47 |
| 26 | BB | 118 | A | N9-C4 | -5.97 | 1.34 | 1.37 |
| 26 | BB | 666 | A | O3'-P | 5.97 | 1.68 | 1.61 |
| 26 | BB | 774 | G | C4'-C3' | 5.97 | 1.59 | 1.53 |
| 26 | BB | 1230 | A | N9-C8 | 5.97 | 1.42 | 1.37 |
| 26 | BB | 1532 | A | N9-C4 | 5.97 | 1.41 | 1.37 |
| 26 | BB | 1580 | A | N9-C4 | -5.97 | 1.34 | 1.37 |
| 26 | BB | 1830 | C | N3-C4 | 5.97 | 1.38 | 1.33 |
| 26 | BB | 2023 | C | C3'-C2' | 5.97 | 1.59 | 1.52 |
| 26 | BB | 2025 | C | C2-N3 | 5.97 | 1.40 | 1.35 |
| 26 | BB | 2257 | U | C2-N3 | 5.97 | 1.42 | 1.37 |
| 1 | AA | 626 | G | C2'-C1' | -5.97 | 1.46 | 1.53 |
| 1 | AA | 1521 | C | C4-C5 | 5.97 | 1.47 | 1.43 |
| 26 | BB | 549 | G | N1-C2 | 5.97 | 1.42 | 1.37 |
| 1 | AA | 627 | G | O3'-P | 5.97 | 1.68 | 1.61 |
| 1 | AA | 1501 | C | C3'-C2' | 5.97 | 1.59 | 1.52 |
| 4 | AD | 40 | C | C4'-C3' | -5.97 | 1.46 | 1.52 |
| 4 | AD | 43 | G | C8-N7 | 5.97 | 1.34 | 1.30 |
| 26 | BB | 313 | G | N3-C4 | 5.97 | 1.39 | 1.35 |
| 26 | BB | 629 | G | C6-N1 | 5.97 | 1.43 | 1.39 |
| 26 | BB | 648 | G | N9-C4 | 5.97 | 1.42 | 1.38 |
| 26 | BB | 872 | U | N1-C2 | 5.97 | 1.44 | 1.38 |
| 26 | BB | 1791 | A | N3-C4 | 5.97 | 1.38 | 1.34 |
| 26 | BB | 2018 | G | N9-C8 | -5.97 | 1.33 | 1.37 |
| 26 | BB | 2182 | U | O3'-P | 5.97 | 1.68 | 1.61 |
| 26 | BB | 2363 | G | P-O5' | 5.97 | 1.65 | 1.59 |
| 26 | BB | 2536 | G | N7-C5 | -5.97 | 1.35 | 1.39 |
| 1 | AA | 752 | G | C2'-C1' | 5.96 | 1.59 | 1.53 |
| 25 | BA | 53 | A | N7-C5 | -5.96 | 1.35 | 1.39 |
| 26 | BB | 1028 | A | C5-C4 | -5.96 | 1.34 | 1.38 |
| 1 | AA | 51 | A | P-O5' | 5.96 | 1.65 | 1.59 |
| 4 | AD | 15 | G | C4'-O4' | -5.96 | 1.37 | 1.45 |
| 26 | BB | 446 | G | N7-C5 | -5.96 | 1.35 | 1.39 |
| 26 | BB | 1375 | U | N3-C4 | 5.96 | 1.43 | 1.38 |
| 26 | BB | 1519 | G | C6-N1 | 5.96 | 1.43 | 1.39 |
| 26 | BB | 1897 | G | O3'-P | 5.96 | 1.68 | 1.61 |
| 26 | BB | 1900 | A | N7-C5 | 5.96 | 1.42 | 1.39 |
| 26 | BB | 2143 | C | N1-C6 | 5.96 | 1.40 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 132 | C | N1-C6 | 5.96 | 1.40 | 1.37 |
| 1 | AA | 587 | G | C6-N1 | -5.96 | 1.35 | 1.39 |
| 1 | AA | 1285 | A | C3'-C2' | -5.96 | 1.46 | 1.52 |
| 3 | AC | 53 | G | C6-O6 | -5.96 | 1.18 | 1.24 |
| 25 | BA | 81 | G | P-O5' | 5.96 | 1.65 | 1.59 |
| 26 | BB | 493 | G | N3-C4 | -5.96 | 1.31 | 1.35 |
| 26 | BB | 614 | A | N7-C5 | -5.96 | 1.35 | 1.39 |
| 26 | BB | 642 | U | P-O5' | 5.96 | 1.65 | 1.59 |
| 26 | BB | 1203 | U | C2-N3 | 5.96 | 1.42 | 1.37 |
| 26 | BB | 1533 | C | N1-C6 | 5.96 | 1.40 | 1.37 |
| 26 | BB | 1738 | G | C8-N7 | 5.96 | 1.34 | 1.30 |
| 1 | AA | 279 | A | C3'-C2' | 5.96 | 1.59 | 1.52 |
| 1 | AA | 666 | G | N9-C8 | -5.96 | 1.33 | 1.37 |
| 1 | AA | 954 | G | C4'-C3' | 5.96 | 1.59 | 1.53 |
| 1 | AA | 1342 | C | C5-C6 | 5.96 | 1.39 | 1.34 |
| 26 | BB | 1579 | A | C5'-C4' | 5.96 | 1.58 | 1.51 |
| 1 | AA | 417 | G | C4'-O4' | -5.96 | 1.37 | 1.45 |
| 1 | AA | 430 | A | O3'-P | 5.96 | 1.68 | 1.61 |
| 1 | AA | 507 | C | N1-C6 | 5.96 | 1.40 | 1.37 |
| 1 | AA | 870 | U | N1-C2 | 5.96 | 1.44 | 1.38 |
| 1 | AA | 891 | U | C5'-C4' | 5.96 | 1.58 | 1.51 |
| 3 | AC | 56 | G | C6-N1 | 5.96 | 1.43 | 1.39 |
| 26 | BB | 598 | U | C4-O4 | 5.96 | 1.28 | 1.23 |
| 26 | BB | 1443 | U | C4-C5 | 5.96 | 1.49 | 1.43 |
| 26 | BB | 1728 | C | C5-C6 | 5.96 | 1.39 | 1.34 |
| 26 | BB | 1925 | C | O3'-P | 5.96 | 1.68 | 1.61 |
| 26 | BB | 2738 | A | C5'-C4' | 5.96 | 1.58 | 1.51 |
| 1 | AA | 71 | A | C2'-O2' | 5.96 | 1.49 | 1.41 |
| 1 | AA | 1147 | C | C3'-O3' | 5.96 | 1.50 | 1.42 |
| 26 | BB | 102 | U | C4'-C3' | 5.96 | 1.59 | 1.53 |
| 26 | BB | 363 | G | O3'-P | 5.96 | 1.68 | 1.61 |
| 26 | BB | 517 | C | O3'-P | 5.96 | 1.68 | 1.61 |
| 26 | BB | 896 | A | N7-C5 | -5.96 | 1.35 | 1.39 |
| 26 | BB | 1543 | G | C8-N7 | 5.96 | 1.34 | 1.30 |
| 26 | BB | 1598 | A | N1-C2 | 5.96 | 1.39 | 1.34 |
| 26 | BB | 2810 | A | O3'-P | 5.96 | 1.68 | 1.61 |
| 26 | BB | 547 | A | C3'-C2' | 5.96 | 1.59 | 1.52 |
| 26 | BB | 875 | G | N9-C8 | -5.96 | 1.33 | 1.37 |
| 26 | BB | 1359 | A | C6-N6 | -5.96 | 1.29 | 1.33 |
| 26 | BB | 2624 | G | C4'-O4' | -5.96 | 1.37 | 1.45 |
| 26 | BB | 2818 | U | O5'-C5' | -5.96 | 1.33 | 1.42 |
| 1 | AA | 288 | A | C5-C6 | 5.95 | 1.46 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 310 | G | N3-C4 | 5.95 | 1.39 | 1.35 |
| 1 | AA | 868 | C | P-O5' | 5.95 | 1.65 | 1.59 |
| 1 | AA | 1246 | A | C6-N1 | 5.95 | 1.39 | 1.35 |
| 4 | AD | 24 | C | C4'-O4' | -5.95 | 1.37 | 1.45 |
| 26 | BB | 369 | U | C5'-C4' | 5.95 | 1.58 | 1.51 |
| 26 | BB | 1445 | G | P-O5' | 5.95 | 1.65 | 1.59 |
| 26 | BB | 1789 | A | C8-N7 | 5.95 | 1.35 | 1.31 |
| 26 | BB | 2066 | C | P-O5' | -5.95 | 1.53 | 1.59 |
| 26 | BB | 2711 | A | C5'-C4' | 5.95 | 1.58 | 1.51 |
| 1 | AA | 520 | A | C5-C6 | 5.95 | 1.46 | 1.41 |
| 26 | BB | 554 | U | P-O5' | 5.95 | 1.65 | 1.59 |
| 26 | BB | 910 | A | C6-N1 | -5.95 | 1.31 | 1.35 |
| 1 | AA | 42 | G | C5-C4 | 5.95 | 1.42 | 1.38 |
| 1 | AA | 997 | U | C4-C5 | 5.95 | 1.49 | 1.43 |
| 26 | BB | 148 | U | C4'-O4' | -5.95 | 1.37 | 1.45 |
| 26 | BB | 1101 | U | C4-O4 | -5.95 | 1.18 | 1.23 |
| 26 | BB | 2147 | A | N9-C4 | -5.95 | 1.34 | 1.37 |
| 1 | AA | 20 | U | C2-O2 | -5.95 | 1.17 | 1.22 |
| 1 | AA | 274 | A | N1-C2 | -5.95 | 1.28 | 1.34 |
| 26 | BB | 388 | G | N3-C4 | -5.95 | 1.31 | 1.35 |
| 26 | BB | 1189 | A | N3-C4 | 5.95 | 1.38 | 1.34 |
| 26 | BB | 1333 | G | C2-N3 | 5.95 | 1.37 | 1.32 |
| 26 | BB | 1833 | C | C5-C6 | 5.95 | 1.39 | 1.34 |
| 26 | BB | 2244 | U | N1-C2 | -5.95 | 1.33 | 1.38 |
| 26 | BB | 2542 | A | C5'-C4' | 5.95 | 1.58 | 1.51 |
| 29 | BE | 101 | PHE | CE1-CZ | 5.95 | 1.48 | 1.37 |
| 1 | AA | 699 | C | C4'-O4' | -5.95 | 1.37 | 1.45 |
| 1 | AA | 1285 | A | C6-N1 | -5.95 | 1.31 | 1.35 |
| 26 | BB | 2107 | G | N3-C4 | -5.95 | 1.31 | 1.35 |
| 26 | BB | 2117 | A | N9-C8 | -5.95 | 1.32 | 1.37 |
| 26 | BB | 375 | G | N9-C4 | -5.95 | 1.33 | 1.38 |
| 26 | BB | 1211 | C | N3-C4 | 5.95 | 1.38 | 1.33 |
| 26 | BB | 2142 | A | N9-C4 | -5.95 | 1.34 | 1.37 |
| 1 | AA | 726 | C | C2-N3 | 5.94 | 1.40 | 1.35 |
| 1 | AA | 1455 | G | C4'-O4' | -5.94 | 1.37 | 1.45 |
| 26 | BB | 146 | A | C6-N6 | 5.94 | 1.38 | 1.33 |
| 26 | BB | 1078 | U | C2-O2 | 5.94 | 1.27 | 1.22 |
| 26 | BB | 1095 | A | C5-C6 | 5.94 | 1.46 | 1.41 |
| 26 | BB | 1799 | G | C4'-O4' | -5.94 | 1.37 | 1.45 |
| 1 | AA | 39 | G | N9-C8 | 5.94 | 1.42 | 1.37 |
| 1 | AA | 138 | G | N1-C2 | 5.94 | 1.42 | 1.37 |
| 26 | BB | 99 | U | C4'-O4' | -5.94 | 1.37 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 139 | U | C4-C5 | 5.94 | 1.48 | 1.43 |
| 26 | BB | 612 | G | C2-N3 | 5.94 | 1.37 | 1.32 |
| 26 | BB | 2717 | C | C4'-C3' | 5.94 | 1.59 | 1.53 |
| 1 | AA | 180 | U | C3'-O3' | 5.94 | 1.50 | 1.42 |
| 26 | BB | 709 | U | C3'-C2' | 5.94 | 1.59 | 1.52 |
| 26 | BB | 1740 | G | C2'-C1' | 5.94 | 1.59 | 1.53 |
| 26 | BB | 1931 | U | C2-N3 | 5.94 | 1.42 | 1.37 |
| 26 | BB | 1983 | G | P-O5' | 5.94 | 1.65 | 1.59 |
| 26 | BB | 2062 | A | C6-N6 | -5.94 | 1.29 | 1.33 |
| 26 | BB | 2429 | G | C2-N3 | 5.94 | 1.37 | 1.32 |
| 26 | BB | 2642 | G | C5-C4 | 5.94 | 1.42 | 1.38 |
| 34 | BJ | 68 | PHE | CB-CG | -5.94 | 1.41 | 1.51 |
| 1 | AA | 921 | U | C4'-C3' | -5.94 | 1.46 | 1.52 |
| 26 | BB | 455 | C | O3'-P | 5.94 | 1.68 | 1.61 |
| 26 | BB | 621 | A | N3-C4 | 5.94 | 1.38 | 1.34 |
| 26 | BB | 1211 | C | O3'-P | 5.94 | 1.68 | 1.61 |
| 26 | BB | 1414 | C | N1-C6 | -5.94 | 1.33 | 1.37 |
| 1 | AA | 370 | C | N3-C4 | 5.94 | 1.38 | 1.33 |
| 1 | AA | 788 | U | C4'-O4' | -5.94 | 1.37 | 1.45 |
| 1 | AA | 871 | U | P-O5' | 5.94 | 1.65 | 1.59 |
| 1 | AA | 1059 | C | N1-C6 | 5.94 | 1.40 | 1.37 |
| 2 | AB | 9 | A | N7-C5 | 5.94 | 1.42 | 1.39 |
| 26 | BB | 1266 | G | C2'-O2' | 5.94 | 1.49 | 1.41 |
| 26 | BB | 1736 | U | C4'-O4' | -5.94 | 1.37 | 1.45 |
| 1 | AA | 877 | G | C5'-C4' | 5.94 | 1.58 | 1.51 |
| 1 | AA | 1106 | G | C6-O6 | -5.94 | 1.18 | 1.24 |
| 1 | AA | 1124 | G | C5-C4 | -5.94 | 1.34 | 1.38 |
| 1 | AA | 1392 | G | N9-C8 | -5.94 | 1.33 | 1.37 |
| 26 | BB | 613 | A | C6-N6 | -5.94 | 1.29 | 1.33 |
| 26 | BB | 887 | U | C4-C5 | 5.94 | 1.48 | 1.43 |
| 26 | BB | 2461 | A | O3'-P | 5.94 | 1.68 | 1.61 |
| 1 | AA | 442 | G | O3'-P | 5.93 | 1.68 | 1.61 |
| 26 | BB | 159 | G | C2-N2 | -5.93 | 1.28 | 1.34 |
| 26 | BB | 582 | A | N7-C5 | 5.93 | 1.42 | 1.39 |
| 26 | BB | 814 | C | N3-C4 | 5.93 | 1.38 | 1.33 |
| 26 | BB | 1888 | G | N9-C4 | 5.93 | 1.42 | 1.38 |
| 26 | BB | 777 | G | C2-N3 | 5.93 | 1.37 | 1.32 |
| 26 | BB | 2315 | G | C5-C4 | -5.93 | 1.34 | 1.38 |
| 26 | BB | 2821 | A | P-O5' | 5.93 | 1.65 | 1.59 |
| 1 | AA | 131 | A | O3'-P | 5.93 | 1.68 | 1.61 |
| 1 | AA | 1269 | A | C5'-C4' | 5.93 | 1.58 | 1.51 |
| 1 | AA | 1320 | C | O3'-P | 5.93 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1162 | G | N3-C4 | -5.93 | 1.31 | 1.35 |
| 26 | BB | 1344 | U | C2-N3 | 5.93 | 1.42 | 1.37 |
| 26 | BB | 2759 | G | C6-O6 | -5.93 | 1.18 | 1.24 |
| 26 | BB | 2861 | U | P-O5' | 5.93 | 1.65 | 1.59 |
| 1 | AA | 332 | G | C2-N3 | 5.93 | 1.37 | 1.32 |
| 1 | AA | 1275 | A | N3-C4 | 5.93 | 1.38 | 1.34 |
| 26 | BB | 235 | U | C3'-C2' | 5.93 | 1.59 | 1.52 |
| 26 | BB | 991 | C | C5'-C4' | -5.93 | 1.44 | 1.51 |
| 26 | BB | 1875 | G | P-O5' | 5.93 | 1.65 | 1.59 |
| 26 | BB | 2578 | G | N7-C5 | -5.93 | 1.35 | 1.39 |
| 26 | BB | 2780 | G | P-O5' | 5.93 | 1.65 | 1.59 |
| 26 | BB | 2787 | C | C5-C6 | 5.93 | 1.39 | 1.34 |
| 26 | BB | 1152 | C | N3-C4 | 5.93 | 1.38 | 1.33 |
| 26 | BB | 1599 | U | C4'-C3' | 5.93 | 1.59 | 1.53 |
| 1 | AA | 404 | G | P-O5' | 5.93 | 1.65 | 1.59 |
| 1 | AA | 504 | C | C5'-C4' | 5.93 | 1.58 | 1.51 |
| 1 | AA | 545 | C | P-O5' | -5.93 | 1.53 | 1.59 |
| 1 | AA | 688 | G | P-O5' | 5.93 | 1.65 | 1.59 |
| 1 | AA | 712 | A | N9-C8 | -5.93 | 1.33 | 1.37 |
| 1 | AA | 974 | A | N3-C4 | -5.93 | 1.31 | 1.34 |
| 1 | AA | 856 | C | C2-N3 | 5.92 | 1.40 | 1.35 |
| 1 | AA | 1010 | U | N1-C2 | 5.92 | 1.43 | 1.38 |
| 1 | AA | 1032 | G | N9-C8 | -5.92 | 1.33 | 1.37 |
| 26 | BB | 1875 | G | C2-N2 | -5.92 | 1.28 | 1.34 |
| 26 | BB | 2496 | C | N3-C4 | 5.92 | 1.38 | 1.33 |
| 1 | AA | 747 | A | C4'-C3' | 5.92 | 1.59 | 1.53 |
| 26 | BB | 80 | G | O3'-P | 5.92 | 1.68 | 1.61 |
| 26 | BB | 914 | G | C2-N3 | 5.92 | 1.37 | 1.32 |
| 1 | AA | 1481 | U | N3-C4 | 5.92 | 1.43 | 1.38 |
| 26 | BB | 54 | G | C5'-C4' | 5.92 | 1.58 | 1.51 |
| 26 | BB | 143 | C | C4'-O4' | -5.92 | 1.37 | 1.45 |
| 26 | BB | 1465 | G | C6-O6 | -5.92 | 1.18 | 1.24 |
| 26 | BB | 2705 | A | N9-C4 | -5.92 | 1.34 | 1.37 |
| 26 | BB | 2873 | A | C5-C4 | 5.92 | 1.42 | 1.38 |
| 1 | AA | 682 | G | C8-N7 | -5.92 | 1.27 | 1.30 |
| 1 | AA | 807 | A | O3'-P | 5.92 | 1.68 | 1.61 |
| 1 | AA | 1334 | G | C6-N1 | 5.92 | 1.43 | 1.39 |
| 26 | BB | 3 | U | N1-C2 | 5.92 | 1.43 | 1.38 |
| 1 | AA | 60 | A | C1'-N9 | 5.92 | 1.57 | 1.48 |
| 1 | AA | 959 | A | P-O5' | 5.92 | 1.65 | 1.59 |
| 26 | BB | 32 | C | C4-C5 | 5.92 | 1.47 | 1.43 |
| 26 | BB | 465 | G | N7-C5 | 5.92 | 1.42 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1497 | U | C2-N3 | 5.92 | 1.41 | 1.37 |
| 26 | BB | 1578 | U | C2-O2 | 5.92 | 1.27 | 1.22 |
| 1 | AA | 784 | A | N9-C4 | 5.92 | 1.41 | 1.37 |
| 1 | AA | 1483 | A | C6-N1 | -5.92 | 1.31 | 1.35 |
| 26 | BB | 1266 | G | N7-C5 | 5.92 | 1.42 | 1.39 |
| 26 | BB | 1487 | U | C4-C5 | 5.92 | 1.48 | 1.43 |
| 26 | BB | 1726 | C | O3'-P | 5.92 | 1.68 | 1.61 |
| 26 | BB | 2876 | G | C8-N7 | -5.92 | 1.27 | 1.30 |
| 26 | BB | 2876 | G | N9-C8 | -5.92 | 1.33 | 1.37 |
| 26 | BB | 2893 | A | C4'-O4' | -5.92 | 1.37 | 1.45 |
| 1 | AA | 914 | A | N9-C8 | 5.92 | 1.42 | 1.37 |
| 1 | AA | 1271 | A | N9-C8 | -5.92 | 1.33 | 1.37 |
| 2 | AB | 4 | G | N7-C5 | 5.92 | 1.42 | 1.39 |
| 26 | BB | 1137 | G | C2'-O2' | -5.92 | 1.33 | 1.41 |
| 26 | BB | 1444 | G | N3-C4 | 5.92 | 1.39 | 1.35 |
| 26 | BB | 1610 | A | C4'-C3' | 5.92 | 1.59 | 1.53 |
| 26 | BB | 2488 | G | N9-C8 | 5.92 | 1.42 | 1.37 |
| 26 | BB | 2840 | C | C4'-O4' | -5.92 | 1.37 | 1.45 |
| 1 | AA | 236 | A | N9-C4 | 5.91 | 1.41 | 1.37 |
| 1 | AA | 1304 | G | N3-C4 | 5.91 | 1.39 | 1.35 |
| 1 | AA | 1408 | A | N9-C4 | -5.91 | 1.34 | 1.37 |
| 9 | AI | 134 | GLU | CG-CD | 5.91 | 1.60 | 1.51 |
| 26 | BB | 410 | G | O3'-P | 5.91 | 1.68 | 1.61 |
| 26 | BB | 1265 | A | N3-C4 | 5.91 | 1.38 | 1.34 |
| 25 | BA | 94 | A | N9-C4 | -5.91 | 1.34 | 1.37 |
| 26 | BB | 1174 | U | C4'-C3' | 5.91 | 1.59 | 1.53 |
| 26 | BB | 2491 | U | N1-C2 | 5.91 | 1.43 | 1.38 |
| 1 | AA | 923 | A | C6-N1 | 5.91 | 1.39 | 1.35 |
| 22 | AV | 40 | PHE | CG-CD2 | 5.91 | 1.47 | 1.38 |
| 25 | BA | 11 | C | C4'-C3' | -5.91 | 1.46 | 1.52 |
| 26 | BB | 1172 | C | N3-C4 | 5.91 | 1.38 | 1.33 |
| 26 | BB | 1228 | G | C2-N3 | -5.91 | 1.28 | 1.32 |
| 26 | BB | 1317 | G | C5'-C4' | 5.91 | 1.58 | 1.51 |
| 26 | BB | 2551 | C | C3'-C2' | 5.91 | 1.59 | 1.52 |
| 26 | BB | 2803 | G | C8-N7 | 5.91 | 1.34 | 1.30 |
| 1 | AA | 858 | G | C6-N1 | 5.91 | 1.43 | 1.39 |
| 26 | BB | 1112 | G | N7-C5 | -5.91 | 1.35 | 1.39 |
| 26 | BB | 2135 | A | C5-C6 | 5.91 | 1.46 | 1.41 |
| 1 | AA | 1199 | U | C5-C6 | 5.91 | 1.39 | 1.34 |
| 26 | BB | 47 | C | C1'-N1 | 5.91 | 1.57 | 1.48 |
| 26 | BB | 489 | G | C2-N3 | 5.91 | 1.37 | 1.32 |
| 1 | AA | 548 | G | C2-N3 | 5.91 | 1.37 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1169 | A | O3'-P | 5.91 | 1.68 | 1.61 |
| 1 | AA | 1316 | G | C4'-C3' | 5.91 | 1.59 | 1.53 |
| 25 | BA | 82 | U | P-O5' | 5.91 | 1.65 | 1.59 |
| 26 | BB | 10 | A | C5-C4 | 5.91 | 1.42 | 1.38 |
| 26 | BB | 232 | G | C4'-C3' | 5.91 | 1.59 | 1.53 |
| 26 | BB | 553 | G | C2-N3 | 5.91 | 1.37 | 1.32 |
| 26 | BB | 1965 | C | C2-N3 | 5.91 | 1.40 | 1.35 |
| 26 | BB | 2668 | G | N1-C2 | 5.91 | 1.42 | 1.37 |
| 1 | AA | 111 | G | P-O5' | -5.90 | 1.53 | 1.59 |
| 1 | AA | 375 | U | C4-O4 | -5.90 | 1.19 | 1.23 |
| 1 | AA | 1276 | G | N9-C4 | 5.90 | 1.42 | 1.38 |
| 25 | BA | 37 | C | C5-C6 | 5.90 | 1.39 | 1.34 |
| 26 | BB | 714 | U | C2-N3 | 5.90 | 1.41 | 1.37 |
| 26 | BB | 2502 | G | P-O5' | 5.90 | 1.65 | 1.59 |
| 1 | AA | 228 | A | C2'-C1' | 5.90 | 1.59 | 1.53 |
| 1 | AA | 291 | U | P-O5' | 5.90 | 1.65 | 1.59 |
| 1 | AA | 359 | G | C5'-C4' | 5.90 | 1.58 | 1.51 |
| 1 | AA | 562 | U | C4-O4 | 5.90 | 1.28 | 1.23 |
| 1 | AA | 1341 | U | O3'-P | -5.90 | 1.54 | 1.61 |
| 7 | AG | 187 | ARG | NE-CZ | 5.90 | 1.40 | 1.33 |
| 26 | BB | 190 | A | C4'-O4' | -5.90 | 1.37 | 1.45 |
| 26 | BB | 298 | G | C2-N3 | 5.90 | 1.37 | 1.32 |
| 26 | BB | 1968 | G | N3-C4 | 5.90 | 1.39 | 1.35 |
| 26 | BB | 2177 | C | C2-O2 | 5.90 | 1.29 | 1.24 |
| 26 | BB | 2583 | G | C2'-C1' | 5.90 | 1.59 | 1.53 |
| 26 | BB | 2626 | C | O3'-P | -5.90 | 1.54 | 1.61 |
| 1 | AA | 200 | G | C4'-C3' | 5.90 | 1.59 | 1.53 |
| 25 | BA | 83 | G | N9-C8 | -5.90 | 1.33 | 1.37 |
| 25 | BA | 119 | A | N3-C4 | 5.90 | 1.38 | 1.34 |
| 26 | BB | 236 | C | C4'-O4' | -5.90 | 1.37 | 1.45 |
| 26 | BB | 541 | A | C5'-C4' | 5.90 | 1.58 | 1.51 |
| 26 | BB | 601 | C | C5-C6 | 5.90 | 1.39 | 1.34 |
| 26 | BB | 794 | A | C6-N6 | 5.90 | 1.38 | 1.33 |
| 26 | BB | 1106 | G | N1-C2 | 5.90 | 1.42 | 1.37 |
| 26 | BB | 2018 | G | C2-N2 | 5.90 | 1.40 | 1.34 |
| 1 | AA | 446 | G | C6-O6 | -5.90 | 1.18 | 1.24 |
| 26 | BB | 1041 | G | C5-C6 | 5.90 | 1.48 | 1.42 |
| 26 | BB | 1121 | C | O4'-C1' | 5.90 | 1.49 | 1.41 |
| 1 | AA | 882 | C | C4'-O4' | -5.90 | 1.37 | 1.45 |
| 4 | AD | 58 | A | O3'-P | 5.90 | 1.68 | 1.61 |
| 5 | AE | 73 | ARG | NE-CZ | 5.90 | 1.40 | 1.33 |
| 26 | BB | 209 | C | C5-C6 | -5.90 | 1.29 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 911 | A | N9-C8 | 5.90 | 1.42 | 1.37 |
| 26 | BB | 988 | A | P-O5' | 5.90 | 1.65 | 1.59 |
| 26 | BB | 1033 | U | C4'-O4' | -5.90 | 1.37 | 1.45 |
| 26 | BB | 1422 | G | N3-C4 | 5.90 | 1.39 | 1.35 |
| 26 | BB | 1792 | G | C8-N7 | 5.90 | 1.34 | 1.30 |
| 26 | BB | 2115 | G | C8-N7 | -5.90 | 1.27 | 1.30 |
| 26 | BB | 2360 | G | C2-N3 | 5.90 | 1.37 | 1.32 |
| 1 | AA | 1020 | G | C6-N1 | -5.90 | 1.35 | 1.39 |
| 1 | AA | 1263 | C | O3'-P | -5.90 | 1.54 | 1.61 |
| 1 | AA | 1263 | C | N3-C4 | 5.90 | 1.38 | 1.33 |
| 1 | AA | 1509 | C | C4-C5 | 5.90 | 1.47 | 1.43 |
| 4 | AD | 72 | C | P-O5' | 5.90 | 1.65 | 1.59 |
| 26 | BB | 92 | U | C2'-O2' | -5.90 | 1.33 | 1.41 |
| 26 | BB | 1101 | U | N1-C6 | -5.90 | 1.32 | 1.38 |
| 26 | BB | 535 | G | P-O5' | 5.89 | 1.65 | 1.59 |
| 26 | BB | 585 | G | C3'-C2' | 5.89 | 1.59 | 1.52 |
| 26 | BB | 1255 | U | C4-C5 | 5.89 | 1.48 | 1.43 |
| 26 | BB | 1535 | A | P-O5' | 5.89 | 1.65 | 1.59 |
| 26 | BB | 1639 | C | O4'-C1' | -5.89 | 1.33 | 1.41 |
| 26 | BB | 2876 | G | N7-C5 | -5.89 | 1.35 | 1.39 |
| 1 | AA | 35 | G | N9-C8 | 5.89 | 1.42 | 1.37 |
| 25 | BA | 24 | G | N3-C4 | 5.89 | 1.39 | 1.35 |
| 26 | BB | 402 | A | N9-C4 | -5.89 | 1.34 | 1.37 |
| 26 | BB | 522 | A | N9-C8 | 5.89 | 1.42 | 1.37 |
| 1 | AA | 233 | C | O3'-P | 5.89 | 1.68 | 1.61 |
| 26 | BB | 325 | G | N9-C4 | 5.89 | 1.42 | 1.38 |
| 26 | BB | 585 | G | N7-C5 | -5.89 | 1.35 | 1.39 |
| 26 | BB | 1080 | A | N9-C4 | 5.89 | 1.41 | 1.37 |
| 26 | BB | 1576 | U | C4-O4 | 5.89 | 1.28 | 1.23 |
| 26 | BB | 2362 | C | O3'-P | 5.89 | 1.68 | 1.61 |
| 26 | BB | 2657 | A | C5'-C4' | 5.89 | 1.58 | 1.51 |
| 1 | AA | 108 | G | C6-O6 | -5.89 | 1.18 | 1.24 |
| 1 | AA | 405 | U | N3-C4 | 5.89 | 1.43 | 1.38 |
| 1 | AA | 534 | U | C2-O2 | 5.89 | 1.27 | 1.22 |
| 1 | AA | 1041 | G | N9-C4 | -5.89 | 1.33 | 1.38 |
| 25 | BA | 99 | A | C5-C4 | -5.89 | 1.34 | 1.38 |
| 26 | BB | 105 | C | P-O5' | 5.89 | 1.65 | 1.59 |
| 26 | BB | 1283 | G | C6-O6 | -5.89 | 1.18 | 1.24 |
| 26 | BB | 1331 | G | N9-C4 | 5.89 | 1.42 | 1.38 |
| 26 | BB | 2120 | G | C4'-O4' | -5.89 | 1.37 | 1.45 |
| 26 | BB | 2292 | U | C4-C5 | -5.89 | 1.38 | 1.43 |
| 26 | BB | 2294 | G | P-O5' | -5.89 | 1.53 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 33 | A | P-O5' | 5.89 | 1.65 | 1.59 |
| 26 | BB | 595 | C | C5-C6 | 5.89 | 1.39 | 1.34 |
| 26 | BB | 1970 | A | N1-C2 | -5.89 | 1.29 | 1.34 |
| 26 | BB | 2050 | C | N3-C4 | 5.89 | 1.38 | 1.33 |
| 1 | AA | 437 | U | N3-C4 | 5.89 | 1.43 | 1.38 |
| 26 | BB | 119 | A | N9-C8 | 5.89 | 1.42 | 1.37 |
| 26 | BB | 945 | A | C6-N1 | 5.89 | 1.39 | 1.35 |
| 26 | BB | 1511 | G | C2-N3 | 5.89 | 1.37 | 1.32 |
| 26 | BB | 2168 | G | C5-C6 | 5.89 | 1.48 | 1.42 |
| 26 | BB | 2584 | U | N1-C6 | 5.89 | 1.43 | 1.38 |
| 26 | BB | 381 | G | C4'-C3' | 5.88 | 1.59 | 1.53 |
| 26 | BB | 408 | G | N1-C2 | 5.88 | 1.42 | 1.37 |
| 26 | BB | 759 | G | N1-C2 | 5.88 | 1.42 | 1.37 |
| 26 | BB | 1085 | A | N9-C8 | 5.88 | 1.42 | 1.37 |
| 26 | BB | 1572 | A | N9-C8 | 5.88 | 1.42 | 1.37 |
| 26 | BB | 2117 | A | C5'-C4' | 5.88 | 1.58 | 1.51 |
| 26 | BB | 2788 | C | N3-C4 | 5.88 | 1.38 | 1.33 |
| 1 | AA | 12 | U | C2-N3 | 5.88 | 1.41 | 1.37 |
| 1 | AA | 832 | G | N1-C2 | 5.88 | 1.42 | 1.37 |
| 26 | BB | 281 | C | C4-C5 | 5.88 | 1.47 | 1.43 |
| 26 | BB | 1319 | C | N3-C4 | 5.88 | 1.38 | 1.33 |
| 1 | AA | 589 | U | C5'-C4' | 5.88 | 1.58 | 1.51 |
| 1 | AA | 733 | G | C2-N2 | -5.88 | 1.28 | 1.34 |
| 1 | AA | 975 | A | C5'-C4' | -5.88 | 1.44 | 1.51 |
| 1 | AA | 984 | C | N3-C4 | 5.88 | 1.38 | 1.33 |
| 1 | AA | 1217 | C | C4-N4 | 5.88 | 1.39 | 1.33 |
| 4 | AD | 42 | C | C3'-C2' | -5.88 | 1.46 | 1.52 |
| 4 | AD | 52 | C | N1-C6 | 5.88 | 1.40 | 1.37 |
| 26 | BB | 701 | G | N3-C4 | 5.88 | 1.39 | 1.35 |
| 26 | BB | 1095 | A | O3'-P | 5.88 | 1.68 | 1.61 |
| 1 | AA | 1077 | G | O3'-P | 5.88 | 1.68 | 1.61 |
| 1 | AA | 1129 | C | C4-C5 | -5.88 | 1.38 | 1.43 |
| 26 | BB | 342 | A | N9-C4 | 5.88 | 1.41 | 1.37 |
| 26 | BB | 622 | G | C2-N3 | 5.88 | 1.37 | 1.32 |
| 26 | BB | 910 | A | C5-C4 | -5.88 | 1.34 | 1.38 |
| 26 | BB | 1504 | A | C5-C4 | -5.88 | 1.34 | 1.38 |
| 26 | BB | 1949 | G | N3-C4 | -5.88 | 1.31 | 1.35 |
| 26 | BB | 1951 | U | C4-C5 | 5.88 | 1.48 | 1.43 |
| 26 | BB | 2664 | G | N9-C4 | 5.88 | 1.42 | 1.38 |
| 1 | AA | 265 | G | N7-C5 | -5.88 | 1.35 | 1.39 |
| 1 | AA | 710 | G | C6-O6 | -5.88 | 1.18 | 1.24 |
| 2 | AB | 70 | C | C2'-C1' | -5.88 | 1.46 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 72 | U | C2-O2 | 5.88 | 1.27 | 1.22 |
| 25 | BA | 14 | U | O5'-C5' | -5.88 | 1.33 | 1.42 |
| 26 | BB | 358 | U | C5'-C4' | 5.88 | 1.58 | 1.51 |
| 26 | BB | 621 | A | C3'-C2' | 5.88 | 1.59 | 1.52 |
| 26 | BB | 800 | A | O4'-C1' | 5.88 | 1.49 | 1.41 |
| 26 | BB | 1173 | U | C2-N3 | 5.88 | 1.41 | 1.37 |
| 26 | BB | 2333 | A | C5-C4 | -5.88 | 1.34 | 1.38 |
| 26 | BB | 2626 | C | C2'-C1' | 5.88 | 1.59 | 1.53 |
| 26 | BB | 2765 | A | C2-N3 | 5.88 | 1.38 | 1.33 |
| 26 | BB | 2822 | G | C2'-C1' | -5.88 | 1.46 | 1.53 |
| 1 | AA | 175 | C | C2-O2 | -5.88 | 1.19 | 1.24 |
| 1 | AA | 1084 | G | C6-O6 | -5.88 | 1.18 | 1.24 |
| 1 | AA | 1153 | G | C2-N2 | -5.88 | 1.28 | 1.34 |
| 2 | AB | 58 | A | N3-C4 | 5.88 | 1.38 | 1.34 |
| 4 | AD | 69 | C | P-O5' | 5.88 | 1.65 | 1.59 |
| 26 | BB | 42 | A | P-O5' | 5.88 | 1.65 | 1.59 |
| 26 | BB | 537 | G | C4'-O4' | -5.88 | 1.38 | 1.45 |
| 26 | BB | 1213 | A | C3'-C2' | -5.88 | 1.46 | 1.52 |
| 26 | BB | 1539 | U | C4-C5 | 5.88 | 1.48 | 1.43 |
| 26 | BB | 1577 | C | C4-C5 | -5.88 | 1.38 | 1.43 |
| 26 | BB | 2562 | U | C2-N3 | 5.88 | 1.41 | 1.37 |
| 1 | AA | 230 | G | C4'-C3' | -5.88 | 1.46 | 1.52 |
| 1 | AA | 1355 | G | N9-C8 | 5.88 | 1.42 | 1.37 |
| 26 | BB | 1005 | C | C3'-C2' | 5.88 | 1.59 | 1.52 |
| 26 | BB | 1102 | C | C5'-C4' | 5.88 | 1.58 | 1.51 |
| 26 | BB | 1344 | U | N1-C2 | 5.88 | 1.43 | 1.38 |
| 26 | BB | 1410 | G | C1'-N9 | 5.88 | 1.57 | 1.48 |
| 26 | BB | 2854 | G | N1-C2 | 5.88 | 1.42 | 1.37 |
| 1 | AA | 368 | U | P-O5' | 5.87 | 1.65 | 1.59 |
| 1 | AA | 550 | G | P-O5' | -5.87 | 1.53 | 1.59 |
| 1 | AA | 1451 | U | C4-O4 | -5.87 | 1.19 | 1.23 |
| 1 | AA | 1509 | C | C5'-C4' | 5.87 | 1.58 | 1.51 |
| 1 | AA | 1524 | C | N3-C4 | 5.87 | 1.38 | 1.33 |
| 25 | BA | 85 | G | N1-C2 | 5.87 | 1.42 | 1.37 |
| 26 | BB | 462 | C | C4'-O4' | -5.87 | 1.38 | 1.45 |
| 26 | BB | 549 | G | C8-N7 | -5.87 | 1.27 | 1.30 |
| 26 | BB | 1448 | G | O3'-P | 5.87 | 1.68 | 1.61 |
| 26 | BB | 2045 | C | N1-C6 | 5.87 | 1.40 | 1.37 |
| 26 | BB | 2053 | G | C2-N3 | 5.87 | 1.37 | 1.32 |
| 26 | BB | 2470 | G | P-O5' | 5.87 | 1.65 | 1.59 |
| 26 | BB | 2835 | A | C4'-O4' | -5.87 | 1.38 | 1.45 |
| 1 | AA | 263 | A | N3-C4 | 5.87 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 892 | A | C3'-C2' | -5.87 | 1.46 | 1.52 |
| 1 | AA | 1345 | U | C5-C6 | 5.87 | 1.39 | 1.34 |
| 2 | AB | 25 | C | C2-O2 | 5.87 | 1.29 | 1.24 |
| 25 | BA | 78 | A | N9-C8 | -5.87 | 1.33 | 1.37 |
| 26 | BB | 156 | A | C6-N6 | 5.87 | 1.38 | 1.33 |
| 26 | BB | 629 | G | N7-C5 | -5.87 | 1.35 | 1.39 |
| 26 | BB | 1113 | U | N1-C6 | 5.87 | 1.43 | 1.38 |
| 26 | BB | 2495 | G | N9-C4 | 5.87 | 1.42 | 1.38 |
| 1 | AA | 1100 | C | C2-N3 | 5.87 | 1.40 | 1.35 |
| 3 | AC | 40 | G | C2'-C1' | -5.87 | 1.46 | 1.53 |
| 26 | BB | 80 | G | C5-C4 | -5.87 | 1.34 | 1.38 |
| 26 | BB | 277 | G | C4'-C3' | 5.87 | 1.59 | 1.53 |
| 26 | BB | 2539 | C | C5-C6 | 5.87 | 1.39 | 1.34 |
| 26 | BB | 2811 | G | N9-C8 | -5.87 | 1.33 | 1.37 |
| 26 | BB | 2900 | A | C8-N7 | 5.87 | 1.35 | 1.31 |
| 1 | AA | 269 | C | C4-C5 | 5.87 | 1.47 | 1.43 |
| 1 | AA | 271 | C | N1-C6 | 5.87 | 1.40 | 1.37 |
| 26 | BB | 26 | G | P-O5' | 5.87 | 1.65 | 1.59 |
| 26 | BB | 526 | A | C8-N7 | -5.87 | 1.27 | 1.31 |
| 26 | BB | 528 | A | N3-C4 | 5.87 | 1.38 | 1.34 |
| 26 | BB | 710 | U | N1-C2 | 5.87 | 1.43 | 1.38 |
| 26 | BB | 1419 | A | N7-C5 | -5.87 | 1.35 | 1.39 |
| 26 | BB | 1471 | G | P-O5' | 5.87 | 1.65 | 1.59 |
| 26 | BB | 1614 | A | N1-C2 | -5.87 | 1.29 | 1.34 |
| 26 | BB | 2561 | U | C3'-C2' | 5.87 | 1.59 | 1.52 |
| 26 | BB | 2675 | A | N7-C5 | -5.87 | 1.35 | 1.39 |
| 26 | BB | 2873 | A | C6-N6 | 5.87 | 1.38 | 1.33 |
| 1 | AA | 687 | A | P-O5' | 5.87 | 1.65 | 1.59 |
| 1 | AA | 919 | A | C4'-O4' | -5.87 | 1.38 | 1.45 |
| 1 | AA | 925 | G | N3-C4 | 5.87 | 1.39 | 1.35 |
| 1 | AA | 1227 | A | N3-C4 | 5.87 | 1.38 | 1.34 |
| 1 | AA | 1378 | C | O4'-C1' | 5.87 | 1.49 | 1.41 |
| 1 | AA | 1412 | C | C2-O2 | -5.87 | 1.19 | 1.24 |
| 4 | AD | 40 | C | O3'-P | -5.87 | 1.54 | 1.61 |
| 26 | BB | 1328 | A | N9-C8 | -5.87 | 1.33 | 1.37 |
| 26 | BB | 1657 | U | C2-N3 | 5.87 | 1.41 | 1.37 |
| 1 | AA | 854 | U | O3'-P | 5.87 | 1.68 | 1.61 |
| 26 | BB | 1129 | A | C4'-O4' | -5.87 | 1.38 | 1.45 |
| 26 | BB | 1391 | U | N1-C6 | 5.87 | 1.43 | 1.38 |
| 26 | BB | 1458 | U | C5'-C4' | 5.87 | 1.58 | 1.51 |
| 26 | BB | 1530 | G | N9-C4 | 5.87 | 1.42 | 1.38 |
| 26 | BB | 1664 | A | N9-C4 | 5.87 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2165 | C | C4'-O4' | -5.87 | 1.38 | 1.45 |
| 26 | BB | 2208 | C | P-O5' | 5.87 | 1.65 | 1.59 |
| 26 | BB | 2377 | A | N7-C5 | 5.87 | 1.42 | 1.39 |
| 26 | BB | 2798 | U | O3'-P | 5.87 | 1.68 | 1.61 |
| 1 | AA | 146 | G | C4'-O4' | -5.86 | 1.38 | 1.45 |
| 1 | AA | 540 | G | N7-C5 | -5.86 | 1.35 | 1.39 |
| 1 | AA | 1293 | C | C4'-O4' | -5.86 | 1.38 | 1.45 |
| 1 | AA | 1491 | G | O3'-P | -5.86 | 1.54 | 1.61 |
| 4 | AD | 47 | A | N3-C4 | 5.86 | 1.38 | 1.34 |
| 26 | BB | 2249 | U | O3'-P | -5.86 | 1.54 | 1.61 |
| 27 | BC | 41 | SER | CB-OG | -5.86 | 1.34 | 1.42 |
| 1 | AA | 902 | G | C2-N3 | 5.86 | 1.37 | 1.32 |
| 26 | BB | 81 | G | C2-N3 | 5.86 | 1.37 | 1.32 |
| 1 | AA | 1060 | U | C2-O2 | 5.86 | 1.27 | 1.22 |
| 1 | AA | 1125 | U | C4-C5 | 5.86 | 1.48 | 1.43 |
| 1 | AA | 1294 | G | C5'-C4' | 5.86 | 1.58 | 1.51 |
| 2 | AB | 43 | G | N1-C2 | 5.86 | 1.42 | 1.37 |
| 25 | BA | 60 | C | C2-N3 | 5.86 | 1.40 | 1.35 |
| 26 | BB | 1044 | C | N1-C6 | 5.86 | 1.40 | 1.37 |
| 26 | BB | 1295 | C | C2-N3 | 5.86 | 1.40 | 1.35 |
| 26 | BB | 1851 | U | C4-C5 | 5.86 | 1.48 | 1.43 |
| 26 | BB | 2229 | U | C2'-C1' | 5.86 | 1.59 | 1.53 |
| 1 | AA | 637 | C | C5'-C4' | 5.86 | 1.58 | 1.51 |
| 26 | BB | 321 | U | P-O5' | 5.86 | 1.65 | 1.59 |
| 26 | BB | 560 | C | N3-C4 | -5.86 | 1.29 | 1.33 |
| 26 | BB | 2063 | C | O3'-P | 5.86 | 1.68 | 1.61 |
| 26 | BB | 2373 | G | C2-N3 | 5.86 | 1.37 | 1.32 |
| 26 | BB | 2472 | G | N1-C2 | 5.86 | 1.42 | 1.37 |
| 26 | BB | 2583 | G | C3'-C2' | 5.86 | 1.59 | 1.52 |
| 26 | BB | 2744 | G | N1-C2 | 5.86 | 1.42 | 1.37 |
| 1 | AA | 211 | G | C5-C6 | 5.86 | 1.48 | 1.42 |
| 1 | AA | 270 | A | C2'-C1' | -5.86 | 1.47 | 1.53 |
| 1 | AA | 602 | A | C5-C4 | -5.86 | 1.34 | 1.38 |
| 1 | AA | 1434 | A | C4'-O4' | -5.86 | 1.38 | 1.45 |
| 2 | AB | 19 | G | C2-N3 | 5.86 | 1.37 | 1.32 |
| 26 | BB | 347 | A | N7-C5 | -5.86 | 1.35 | 1.39 |
| 26 | BB | 419 | U | N1-C6 | 5.86 | 1.43 | 1.38 |
| 26 | BB | 420 | C | O3'-P | 5.86 | 1.68 | 1.61 |
| 1 | AA | 611 | C | C5'-C4' | 5.86 | 1.58 | 1.51 |
| 26 | BB | 764 | A | C2-N3 | 5.86 | 1.38 | 1.33 |
| 26 | BB | 1553 | A | N9-C8 | 5.86 | 1.42 | 1.37 |
| 26 | BB | 1804 | C | C3'-C2' | -5.86 | 1.46 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2390 | U | C4-C5 | 5.86 | 1.48 | 1.43 |
| 26 | BB | 115 | C | C4-C5 | 5.85 | 1.47 | 1.43 |
| 26 | BB | 250 | G | C2'-C1' | -5.85 | 1.47 | 1.53 |
| 26 | BB | 1397 | U | C4-C5 | -5.85 | 1.38 | 1.43 |
| 26 | BB | 2034 | U | N1-C2 | 5.85 | 1.43 | 1.38 |
| 26 | BB | 2550 | G | C5'-C4' | 5.85 | 1.58 | 1.51 |
| 1 | AA | 492 | C | C4-N4 | -5.85 | 1.28 | 1.33 |
| 3 | AC | 48 | C | O3'-P | 5.85 | 1.68 | 1.61 |
| 4 | AD | 7 | G | C2-N2 | 5.85 | 1.40 | 1.34 |
| 25 | BA | 19 | C | C4-C5 | 5.85 | 1.47 | 1.43 |
| 26 | BB | 1415 | U | N1-C2 | 5.85 | 1.43 | 1.38 |
| 26 | BB | 1831 | G | C2-N3 | 5.85 | 1.37 | 1.32 |
| 26 | BB | 2372 | U | O3'-P | 5.85 | 1.68 | 1.61 |
| 26 | BB | 2374 | C | P-O5' | 5.85 | 1.65 | 1.59 |
| 28 | BD | 137 | GLY | CA-C | 5.85 | 1.61 | 1.51 |
| 25 | BA | 89 | U | C4'-C3' | 5.85 | 1.59 | 1.53 |
| 1 | AA | 460 | A | C5-C4 | -5.85 | 1.34 | 1.38 |
| 1 | AA | 466 | A | N9-C8 | 5.85 | 1.42 | 1.37 |
| 1 | AA | 677 | U | C5-C6 | 5.85 | 1.39 | 1.34 |
| 1 | AA | 1434 | A | C2-N3 | 5.85 | 1.38 | 1.33 |
| 1 | AA | 1508 | A | N9-C8 | 5.85 | 1.42 | 1.37 |
| 25 | BA | 8 | C | C2-O2 | -5.85 | 1.19 | 1.24 |
| 26 | BB | 355 | U | C5-C6 | 5.85 | 1.39 | 1.34 |
| 26 | BB | 577 | G | C6-N1 | -5.85 | 1.35 | 1.39 |
| 26 | BB | 608 | A | C6-N6 | -5.85 | 1.29 | 1.33 |
| 26 | BB | 874 | G | C3'-C2' | 5.85 | 1.59 | 1.52 |
| 26 | BB | 1708 | C | C1'-N1 | 5.85 | 1.57 | 1.48 |
| 26 | BB | 2087 | G | P-O5' | -5.85 | 1.53 | 1.59 |
| 26 | BB | 2235 | G | N9-C4 | 5.85 | 1.42 | 1.38 |
| 26 | BB | 2361 | G | C2-N3 | 5.85 | 1.37 | 1.32 |
| 26 | BB | 2418 | A | P-O5' | 5.85 | 1.65 | 1.59 |
| 26 | BB | 2587 | A | C4'-O4' | -5.85 | 1.38 | 1.45 |
| 26 | BB | 2852 | G | C2-N3 | 5.85 | 1.37 | 1.32 |
| 1 | AA | 183 | C | C3'-C2' | 5.85 | 1.59 | 1.52 |
| 1 | AA | 423 | G | C5-C4 | -5.85 | 1.34 | 1.38 |
| 1 | AA | 592 | G | C2'-O2' | -5.85 | 1.34 | 1.41 |
| 1 | AA | 980 | C | N3-C4 | 5.85 | 1.38 | 1.33 |
| 4 | AD | 7 | G | N9-C4 | 5.85 | 1.42 | 1.38 |
| 26 | BB | 379 | G | C3'-C2' | 5.85 | 1.59 | 1.52 |
| 26 | BB | 437 | U | N3-C4 | 5.85 | 1.43 | 1.38 |
| 26 | BB | 1976 | U | C2-O2 | -5.85 | 1.17 | 1.22 |
| 26 | BB | 2488 | G | C8-N7 | -5.85 | 1.27 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2732 | G | C2-N3 | 5.85 | 1.37 | 1.32 |
| 26 | BB | 2759 | G | C2-N3 | 5.85 | 1.37 | 1.32 |
| 30 | BF | 101 | TYR | CD2-CE2 | 5.85 | 1.48 | 1.39 |
| 26 | BB | 220 | G | N7-C5 | -5.85 | 1.35 | 1.39 |
| 26 | BB | 1462 | C | P-O5' | 5.85 | 1.65 | 1.59 |
| 26 | BB | 1949 | G | C5'-C4' | -5.85 | 1.44 | 1.51 |
| 36 | BL | 75 | TYR | CG-CD2 | 5.85 | 1.46 | 1.39 |
| 1 | AA | 650 | G | N3-C4 | 5.84 | 1.39 | 1.35 |
| 1 | AA | 773 | G | C5-C4 | -5.84 | 1.34 | 1.38 |
| 1 | AA | 923 | A | O3'-P | 5.84 | 1.68 | 1.61 |
| 1 | AA | 1235 | U | C3'-O3' | -5.84 | 1.33 | 1.42 |
| 1 | AA | 1385 | G | N1-C2 | 5.84 | 1.42 | 1.37 |
| 26 | BB | 905 | A | P-O5' | 5.84 | 1.65 | 1.59 |
| 26 | BB | 2036 | C | C5'-C4' | 5.84 | 1.58 | 1.51 |
| 26 | BB | 2192 | U | C5-C6 | 5.84 | 1.39 | 1.34 |
| 26 | BB | 2712 | C | C5'-C4' | 5.84 | 1.58 | 1.51 |
| 1 | AA | 420 | U | C2'-C1' | -5.84 | 1.47 | 1.53 |
| 1 | AA | 649 | A | N9-C8 | 5.84 | 1.42 | 1.37 |
| 26 | BB | 44 | A | C6-N1 | 5.84 | 1.39 | 1.35 |
| 26 | BB | 1147 | A | C6-N6 | 5.84 | 1.38 | 1.33 |
| 26 | BB | 1670 | C | C4'-O4' | -5.84 | 1.38 | 1.45 |
| 26 | BB | 1842 | G | O3'-P | 5.84 | 1.68 | 1.61 |
| 1 | AA | 1196 | A | N3-C4 | 5.84 | 1.38 | 1.34 |
| 4 | AD | 2 | G | N9-C4 | 5.84 | 1.42 | 1.38 |
| 26 | BB | 689 | A | C5-C6 | 5.84 | 1.46 | 1.41 |
| 26 | BB | 804 | A | P-O5' | 5.84 | 1.65 | 1.59 |
| 26 | BB | 1760 | C | C2-O2 | -5.84 | 1.19 | 1.24 |
| 26 | BB | 1840 | G | O3'-P | 5.84 | 1.68 | 1.61 |
| 26 | BB | 1850 | G | C2-N3 | 5.84 | 1.37 | 1.32 |
| 26 | BB | 2436 | G | C8-N7 | -5.84 | 1.27 | 1.30 |
| 1 | AA | 591 | U | N1-C6 | 5.84 | 1.43 | 1.38 |
| 2 | AB | 11 | U | C4'-C3' | -5.84 | 1.46 | 1.52 |
| 26 | BB | 1973 | G | C4'-O4' | -5.84 | 1.38 | 1.45 |
| 26 | BB | 2038 | G | N1-C2 | -5.84 | 1.33 | 1.37 |
| 26 | BB | 2051 | A | C3'-C2' | 5.84 | 1.59 | 1.52 |
| 1 | AA | 179 | A | C2'-C1' | -5.84 | 1.47 | 1.53 |
| 1 | AA | 1079 | G | C2'-O2' | 5.84 | 1.49 | 1.41 |
| 1 | AA | 1169 | A | N7-C5 | -5.84 | 1.35 | 1.39 |
| 26 | BB | 189 | G | C6-N1 | 5.84 | 1.43 | 1.39 |
| 1 | AA | 705 | G | C8-N7 | -5.84 | 1.27 | 1.30 |
| 26 | BB | 1592 | C | C4'-O4' | -5.84 | 1.38 | 1.45 |
| 26 | BB | 1638 | C | C4-C5 | 5.84 | 1.47 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2793 | C | C3'-C2' | -5.84 | 1.46 | 1.52 |
| 26 | BB | 1815 | A | N7-C5 | -5.83 | 1.35 | 1.39 |
| 32 | BH | 34 | ARG | CZ-NH1 | 5.83 | 1.40 | 1.33 |
| 1 | AA | 158 | G | N7-C5 | -5.83 | 1.35 | 1.39 |
| 1 | AA | 663 | A | C5-C4 | -5.83 | 1.34 | 1.38 |
| 1 | AA | 926 | G | C2-N3 | 5.83 | 1.37 | 1.32 |
| 1 | AA | 1029 | U | C2-N3 | 5.83 | 1.41 | 1.37 |
| 26 | BB | 142 | A | N9-C4 | 5.83 | 1.41 | 1.37 |
| 26 | BB | 757 | G | C2'-C1' | -5.83 | 1.47 | 1.53 |
| 26 | BB | 1043 | C | C5'-C4' | 5.83 | 1.58 | 1.51 |
| 26 | BB | 1237 | A | O3'-P | -5.83 | 1.54 | 1.61 |
| 26 | BB | 1879 | C | N1-C6 | -5.83 | 1.33 | 1.37 |
| 26 | BB | 2056 | G | C6-N1 | 5.83 | 1.43 | 1.39 |
| 26 | BB | 2167 | U | N1-C6 | -5.83 | 1.32 | 1.38 |
| 26 | BB | 2331 | G | P-O5' | 5.83 | 1.65 | 1.59 |
| 26 | BB | 2541 | A | P-O5' | 5.83 | 1.65 | 1.59 |
| 1 | AA | 324 | G | N9-C8 | -5.83 | 1.33 | 1.37 |
| 26 | BB | 548 | G | C8-N7 | -5.83 | 1.27 | 1.30 |
| 26 | BB | 1258 | U | P-O5' | 5.83 | 1.65 | 1.59 |
| 26 | BB | 2130 | U | C5-C6 | 5.83 | 1.39 | 1.34 |
| 26 | BB | 2722 | G | C6-N1 | 5.83 | 1.43 | 1.39 |
| 26 | BB | 2892 | G | N3-C4 | 5.83 | 1.39 | 1.35 |
| 26 | BB | 981 | A | N9-C4 | 5.83 | 1.41 | 1.37 |
| 26 | BB | 1873 | G | C2'-C1' | -5.83 | 1.47 | 1.53 |
| 1 | AA | 149 | A | N9-C4 | 5.83 | 1.41 | 1.37 |
| 1 | AA | 294 | U | C4'-O4' | -5.83 | 1.38 | 1.45 |
| 1 | AA | 1334 | G | N1-C2 | 5.83 | 1.42 | 1.37 |
| 1 | AA | 1525 | G | C2'-C1' | 5.83 | 1.59 | 1.53 |
| 25 | BA | 30 | C | O4'-C1' | 5.83 | 1.49 | 1.41 |
| 26 | BB | 329 | G | C5'-C4' | 5.83 | 1.58 | 1.51 |
| 26 | BB | 507 | A | C4'-O4' | -5.83 | 1.38 | 1.45 |
| 26 | BB | 959 | A | O3'-P | 5.83 | 1.68 | 1.61 |
| 26 | BB | 1709 | U | P-O5' | 5.83 | 1.65 | 1.59 |
| 26 | BB | 2036 | C | P-O5' | 5.83 | 1.65 | 1.59 |
| 30 | BF | 151 | GLY | CA-C | 5.83 | 1.61 | 1.51 |
| 1 | AA | 171 | A | C5'-C4' | 5.83 | 1.58 | 1.51 |
| 1 | AA | 807 | A | C5'-C4' | 5.83 | 1.58 | 1.51 |
| 26 | BB | 1269 | A | N9-C8 | 5.83 | 1.42 | 1.37 |
| 1 | AA | 449 | G | N3-C4 | 5.83 | 1.39 | 1.35 |
| 1 | AA | 563 | A | C4'-O4' | -5.83 | 1.38 | 1.45 |
| 1 | AA | 767 | A | O4'-C1' | -5.83 | 1.34 | 1.41 |
| 1 | AA | 1285 | A | C2'-C1' | 5.83 | 1.59 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 534 | U | C2-N3 | 5.83 | 1.41 | 1.37 |
| 26 | BB | 1235 | G | C2-N3 | 5.83 | 1.37 | 1.32 |
| 26 | BB | 1386 | C | C3'-C2' | -5.83 | 1.46 | 1.52 |
| 26 | BB | 1955 | U | C4'-O4' | -5.83 | 1.38 | 1.45 |
| 26 | BB | 1989 | G | N3-C4 | 5.83 | 1.39 | 1.35 |
| 26 | BB | 1998 | A | C3'-C2' | 5.83 | 1.59 | 1.52 |
| 26 | BB | 2902 | C | C2-N3 | 5.83 | 1.40 | 1.35 |
| 1 | AA | 755 | G | N1-C2 | 5.82 | 1.42 | 1.37 |
| 1 | AA | 810 | C | C4-N4 | 5.82 | 1.39 | 1.33 |
| 1 | AA | 1054 | C | P-O5' | 5.82 | 1.65 | 1.59 |
| 1 | AA | 1303 | C | N1-C6 | 5.82 | 1.40 | 1.37 |
| 1 | AA | 1315 | U | C5'-C4' | 5.82 | 1.58 | 1.51 |
| 1 | AA | 1412 | C | N1-C6 | -5.82 | 1.33 | 1.37 |
| 26 | BB | 2114 | A | C6-N1 | 5.82 | 1.39 | 1.35 |
| 26 | BB | 2450 | A | N7-C5 | -5.82 | 1.35 | 1.39 |
| 1 | AA | 203 | G | N9-C4 | 5.82 | 1.42 | 1.38 |
| 2 | AB | 10 | G | N7-C5 | -5.82 | 1.35 | 1.39 |
| 26 | BB | 705 | A | C6-N6 | 5.82 | 1.38 | 1.33 |
| 1 | AA | 154 | U | N1-C2 | 5.82 | 1.43 | 1.38 |
| 1 | AA | 394 | G | C6-N1 | 5.82 | 1.43 | 1.39 |
| 1 | AA | 643 | C | C4-C5 | 5.82 | 1.47 | 1.43 |
| 1 | AA | 993 | G | C6-N1 | 5.82 | 1.43 | 1.39 |
| 1 | AA | 1266 | G | C4'-C3' | 5.82 | 1.59 | 1.53 |
| 1 | AA | 1327 | C | O3'-P | 5.82 | 1.68 | 1.61 |
| 26 | BB | 119 | A | N7-C5 | -5.82 | 1.35 | 1.39 |
| 26 | BB | 175 | G | C5'-C4' | 5.82 | 1.58 | 1.51 |
| 26 | BB | 838 | C | C2-O2 | -5.82 | 1.19 | 1.24 |
| 26 | BB | 898 | C | C4'-O4' | -5.82 | 1.38 | 1.45 |
| 26 | BB | 1711 | A | C3'-O3' | -5.82 | 1.34 | 1.42 |
| 26 | BB | 2045 | C | C4-C5 | 5.82 | 1.47 | 1.43 |
| 26 | BB | 2324 | U | C3'-O3' | 5.82 | 1.50 | 1.42 |
| 1 | AA | 1150 | A | N7-C5 | -5.82 | 1.35 | 1.39 |
| 26 | BB | 310 | A | C4'-O4' | -5.82 | 1.38 | 1.45 |
| 26 | BB | 1328 | A | C5-C6 | 5.82 | 1.46 | 1.41 |
| 26 | BB | 1943 | U | N1-C2 | 5.82 | 1.43 | 1.38 |
| 1 | AA | 1015 | G | C4'-O4' | -5.82 | 1.38 | 1.45 |
| 1 | AA | 1229 | A | C2-N3 | 5.82 | 1.38 | 1.33 |
| 25 | BA | 55 | U | C5-C6 | 5.82 | 1.39 | 1.34 |
| 26 | BB | 163 | C | C2-O2 | -5.82 | 1.19 | 1.24 |
| 26 | BB | 1121 | C | C5-C6 | 5.82 | 1.39 | 1.34 |
| 26 | BB | 1404 | C | C4-C5 | 5.82 | 1.47 | 1.43 |
| 26 | BB | 1427 | A | C5'-C4' | 5.82 | 1.58 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1698 | A | C3'-O3' | 5.82 | 1.50 | 1.42 |
| 26 | BB | 1843 | C | N1-C6 | -5.82 | 1.33 | 1.37 |
| 26 | BB | 1965 | C | C4'-C3' | -5.82 | 1.46 | 1.52 |
| 26 | BB | 2415 | G | C2-N3 | 5.82 | 1.37 | 1.32 |
| 26 | BB | 2864 | G | C5'-C4' | 5.82 | 1.58 | 1.51 |
| 41 | BQ | 66 | GLY | N-CA | 5.82 | 1.54 | 1.46 |
| 1 | AA | 56 | U | O3'-P | 5.82 | 1.68 | 1.61 |
| 1 | AA | 780 | A | P-O5' | 5.82 | 1.65 | 1.59 |
| 1 | AA | 1288 | A | N9-C4 | -5.82 | 1.34 | 1.37 |
| 26 | BB | 34 | U | P-O5' | 5.82 | 1.65 | 1.59 |
| 26 | BB | 207 | A | N3-C4 | 5.82 | 1.38 | 1.34 |
| 26 | BB | 239 | C | C4-N4 | -5.82 | 1.28 | 1.33 |
| 26 | BB | 503 | A | C5-C6 | 5.82 | 1.46 | 1.41 |
| 26 | BB | 717 | C | N1-C6 | 5.82 | 1.40 | 1.37 |
| 26 | BB | 1029 | A | C4'-C3' | 5.82 | 1.59 | 1.53 |
| 26 | BB | 1163 | G | C2-N3 | 5.82 | 1.37 | 1.32 |
| 26 | BB | 2140 | G | P-O5' | 5.82 | 1.65 | 1.59 |
| 26 | BB | 2706 | A | N9-C4 | -5.82 | 1.34 | 1.37 |
| 1 | AA | 938 | A | C5-C4 | -5.81 | 1.34 | 1.38 |
| 26 | BB | 805 | G | P-O5' | 5.81 | 1.65 | 1.59 |
| 26 | BB | 1737 | G | O4'-C1' | 5.81 | 1.49 | 1.41 |
| 26 | BB | 1781 | U | C5'-C4' | 5.81 | 1.58 | 1.51 |
| 26 | BB | 2053 | G | C8-N7 | 5.81 | 1.34 | 1.30 |
| 26 | BB | 2850 | A | N9-C8 | 5.81 | 1.42 | 1.37 |
| 1 | AA | 40 | C | N1-C2 | 5.81 | 1.46 | 1.40 |
| 1 | AA | 393 | A | N7-C5 | 5.81 | 1.42 | 1.39 |
| 1 | AA | 529 | G | C4'-O4' | -5.81 | 1.38 | 1.45 |
| 26 | BB | 23 | G | C6-O6 | -5.81 | 1.19 | 1.24 |
| 26 | BB | 798 | G | C4'-C3' | -5.81 | 1.46 | 1.52 |
| 26 | BB | 1098 | A | C4'-C3' | -5.81 | 1.46 | 1.52 |
| 26 | BB | 1571 | A | N3-C4 | 5.81 | 1.38 | 1.34 |
| 26 | BB | 1774 | C | O3'-P | -5.81 | 1.54 | 1.61 |
| 26 | BB | 1860 | G | N9-C8 | -5.81 | 1.33 | 1.37 |
| 26 | BB | 2042 | A | N7-C5 | 5.81 | 1.42 | 1.39 |
| 26 | BB | 2138 | G | P-O5' | -5.81 | 1.53 | 1.59 |
| 25 | BA | 119 | A | C5'-C4' | 5.81 | 1.58 | 1.51 |
| 26 | BB | 1325 | U | P-O5' | 5.81 | 1.65 | 1.59 |
| 1 | AA | 767 | A | C5'-C4' | 5.81 | 1.58 | 1.51 |
| 1 | AA | 1035 | A | C5-C4 | 5.81 | 1.42 | 1.38 |
| 1 | AA | 1526 | G | N9-C8 | 5.81 | 1.42 | 1.37 |
| 26 | BB | 153 | U | C2-O2 | 5.81 | 1.27 | 1.22 |
| 26 | BB | 467 | G | C3'-C2' | 5.81 | 1.59 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2217 | G | N1-C2 | 5.81 | 1.42 | 1.37 |
| 26 | BB | 2333 | A | N9-C4 | -5.81 | 1.34 | 1.37 |
| 1 | AA | 793 | U | N1-C6 | 5.81 | 1.43 | 1.38 |
| 1 | AA | 868 | C | C5-C6 | 5.81 | 1.39 | 1.34 |
| 1 | AA | 1512 | U | O3'-P | 5.81 | 1.68 | 1.61 |
| 26 | BB | 836 | G | N7-C5 | 5.81 | 1.42 | 1.39 |
| 26 | BB | 1155 | A | N9-C4 | -5.81 | 1.34 | 1.37 |
| 26 | BB | 1342 | A | C3'-C2' | 5.81 | 1.59 | 1.52 |
| 26 | BB | 2220 | U | P-O5' | 5.81 | 1.65 | 1.59 |
| 26 | BB | 2268 | A | P-O5' | -5.81 | 1.53 | 1.59 |
| 26 | BB | 2322 | A | P-O5' | 5.81 | 1.65 | 1.59 |
| 26 | BB | 2468 | A | N9-C4 | 5.81 | 1.41 | 1.37 |
| 1 | AA | 763 | G | N7-C5 | 5.81 | 1.42 | 1.39 |
| 26 | BB | 799 | G | P-O5' | -5.81 | 1.53 | 1.59 |
| 26 | BB | 884 | U | C4'-O4' | -5.81 | 1.38 | 1.45 |
| 26 | BB | 1758 | U | P-O5' | 5.81 | 1.65 | 1.59 |
| 1 | AA | 1042 | A | C6-N6 | 5.80 | 1.38 | 1.33 |
| 1 | AA | 1149 | C | P-O5' | 5.80 | 1.65 | 1.59 |
| 1 | AA | 1218 | C | C4-N4 | -5.80 | 1.28 | 1.33 |
| 26 | BB | 321 | U | N1-C2 | 5.80 | 1.43 | 1.38 |
| 26 | BB | 661 | A | C6-N6 | -5.80 | 1.29 | 1.33 |
| 26 | BB | 709 | U | C4-C5 | 5.80 | 1.48 | 1.43 |
| 26 | BB | 2402 | U | C4'-O4' | -5.80 | 1.38 | 1.45 |
| 1 | AA | 114 | U | C4-C5 | -5.80 | 1.38 | 1.43 |
| 26 | BB | 37 | C | C5-C6 | 5.80 | 1.39 | 1.34 |
| 26 | BB | 257 | C | C4'-C3' | -5.80 | 1.46 | 1.52 |
| 26 | BB | 514 | A | C6-N1 | -5.80 | 1.31 | 1.35 |
| 26 | BB | 1649 | G | C2-N3 | 5.80 | 1.37 | 1.32 |
| 26 | BB | 2200 | C | P-O5' | 5.80 | 1.65 | 1.59 |
| 26 | BB | 2226 | C | C4-C5 | 5.80 | 1.47 | 1.43 |
| 26 | BB | 2236 | U | C4'-O4' | -5.80 | 1.38 | 1.45 |
| 26 | BB | 2250 | G | N3-C4 | 5.80 | 1.39 | 1.35 |
| 26 | BB | 2763 | G | N9-C4 | -5.80 | 1.33 | 1.38 |
| 1 | AA | 75 | G | C6-N1 | -5.80 | 1.35 | 1.39 |
| 1 | AA | 838 | G | C8-N7 | 5.80 | 1.34 | 1.30 |
| 1 | AA | 1481 | U | C2'-C1' | 5.80 | 1.59 | 1.53 |
| 26 | BB | 1440 | U | C2'-O2' | 5.80 | 1.49 | 1.41 |
| 26 | BB | 2479 | U | C2-O2 | 5.80 | 1.27 | 1.22 |
| 26 | BB | 2574 | G | C5'-C4' | 5.80 | 1.58 | 1.51 |
| 2 | AB | 25 | C | C4-C5 | 5.80 | 1.47 | 1.43 |
| 26 | BB | 1234 | U | N3-C4 | 5.80 | 1.43 | 1.38 |
| 26 | BB | 1407 | G | O3'-P | 5.80 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1700 | A | O4'-C1' | 5.80 | 1.49 | 1.41 |
| 1 | AA | 461 | A | O3'-P | 5.80 | 1.68 | 1.61 |
| 1 | AA | 532 | A | N7-C5 | 5.80 | 1.42 | 1.39 |
| 1 | AA | 581 | G | C2-N3 | 5.80 | 1.37 | 1.32 |
| 1 | AA | 1227 | A | N1-C2 | -5.80 | 1.29 | 1.34 |
| 1 | AA | 1281 | C | C2'-O2' | 5.80 | 1.49 | 1.41 |
| 25 | BA | 91 | C | C5'-C4' | 5.80 | 1.58 | 1.51 |
| 26 | BB | 188 | G | N1-C2 | 5.80 | 1.42 | 1.37 |
| 26 | BB | 1125 | G | N1-C2 | 5.80 | 1.42 | 1.37 |
| 26 | BB | 1778 | U | C2-N3 | 5.80 | 1.41 | 1.37 |
| 26 | BB | 2886 | A | C2'-O2' | -5.80 | 1.34 | 1.41 |
| 1 | AA | 1024 | G | C5'-C4' | 5.79 | 1.58 | 1.51 |
| 26 | BB | 354 | A | C2-N3 | 5.79 | 1.38 | 1.33 |
| 26 | BB | 1123 | C | C2-O2 | -5.79 | 1.19 | 1.24 |
| 1 | AA | 1139 | G | P-O5' | 5.79 | 1.65 | 1.59 |
| 1 | AA | 1278 | G | C8-N7 | 5.79 | 1.34 | 1.30 |
| 1 | AA | 1329 | A | C8-N7 | -5.79 | 1.27 | 1.31 |
| 10 | AJ | 159 | ARG | NE-CZ | 5.79 | 1.40 | 1.33 |
| 26 | BB | 23 | G | C2-N2 | -5.79 | 1.28 | 1.34 |
| 26 | BB | 2197 | U | C4-C5 | 5.79 | 1.48 | 1.43 |
| 26 | BB | 2216 | G | C3'-C2' | 5.79 | 1.59 | 1.52 |
| 1 | AA | 98 | A | C4'-C3' | 5.79 | 1.59 | 1.53 |
| 1 | AA | 253 | A | C2-N3 | 5.79 | 1.38 | 1.33 |
| 1 | AA | 289 | G | P-O5' | 5.79 | 1.65 | 1.59 |
| 1 | AA | 665 | A | C5-C6 | 5.79 | 1.46 | 1.41 |
| 1 | AA | 745 | G | C2'-C1' | 5.79 | 1.59 | 1.53 |
| 1 | AA | 895 | G | C6-N1 | 5.79 | 1.43 | 1.39 |
| 1 | AA | 945 | G | C5-C6 | 5.79 | 1.48 | 1.42 |
| 25 | BA | 53 | A | P-O5' | 5.79 | 1.65 | 1.59 |
| 26 | BB | 245 | G | C5-C6 | 5.79 | 1.48 | 1.42 |
| 26 | BB | 796 | C | C4-C5 | 5.79 | 1.47 | 1.43 |
| 26 | BB | 1379 | U | C2'-C1' | -5.79 | 1.47 | 1.53 |
| 26 | BB | 1573 | G | C4'-C3' | -5.79 | 1.46 | 1.52 |
| 26 | BB | 2315 | G | N9-C4 | -5.79 | 1.33 | 1.38 |
| 39 | BO | 55 | ARG | NE-CZ | 5.79 | 1.40 | 1.33 |
| 1 | AA | 358 | U | C4'-O4' | -5.79 | 1.38 | 1.45 |
| 1 | AA | 367 | U | N1-C2 | 5.79 | 1.43 | 1.38 |
| 26 | BB | 1122 | G | C2-N3 | 5.79 | 1.37 | 1.32 |
| 26 | BB | 1152 | C | C5'-C4' | 5.79 | 1.58 | 1.51 |
| 26 | BB | 2144 | G | C4'-O4' | -5.79 | 1.38 | 1.45 |
| 1 | AA | 367 | U | C4'-C3' | 5.79 | 1.59 | 1.53 |
| 1 | AA | 911 | U | C5'-C4' | 5.79 | 1.58 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 8 | AH | 47 | PHE | CG-CD2 | 5.79 | 1.47 | 1.38 |
| 25 | BA | 18 | G | N9-C8 | 5.79 | 1.42 | 1.37 |
| 26 | BB | 1370 | C | C2-N3 | 5.79 | 1.40 | 1.35 |
| 26 | BB | 2127 | G | C5'-C4' | 5.79 | 1.58 | 1.51 |
| 1 | AA | 752 | G | C6-N1 | -5.79 | 1.35 | 1.39 |
| 1 | AA | 848 | C | C5-C6 | 5.79 | 1.39 | 1.34 |
| 1 | AA | 1478 | U | C4-C5 | 5.79 | 1.48 | 1.43 |
| 26 | BB | 1602 | U | C4-C5 | 5.79 | 1.48 | 1.43 |
| 26 | BB | 1810 | A | C5-C4 | -5.79 | 1.34 | 1.38 |
| 26 | BB | 2848 | G | O3'-P | 5.79 | 1.68 | 1.61 |
| 1 | AA | 74 | A | P-O5' | 5.79 | 1.65 | 1.59 |
| 1 | AA | 256 | U | C4-C5 | 5.79 | 1.48 | 1.43 |
| 1 | AA | 1533 | C | C5-C6 | 5.79 | 1.39 | 1.34 |
| 26 | BB | 1277 | G | C6-N1 | 5.79 | 1.43 | 1.39 |
| 26 | BB | 2282 | G | N7-C5 | 5.79 | 1.42 | 1.39 |
| 1 | AA | 259 | G | P-O5' | 5.78 | 1.65 | 1.59 |
| 26 | BB | 189 | G | P-O5' | 5.78 | 1.65 | 1.59 |
| 26 | BB | 221 | A | N3-C4 | 5.78 | 1.38 | 1.34 |
| 26 | BB | 649 | G | C6-N1 | -5.78 | 1.35 | 1.39 |
| 26 | BB | 768 | G | C4'-O4' | -5.78 | 1.38 | 1.45 |
| 26 | BB | 1612 | C | C2-N3 | 5.78 | 1.40 | 1.35 |
| 26 | BB | 2887 | A | N9-C8 | 5.78 | 1.42 | 1.37 |
| 1 | AA | 1001 | C | C5'-C4' | 5.78 | 1.58 | 1.51 |
| 26 | BB | 2525 | G | C5'-C4' | 5.78 | 1.58 | 1.51 |
| 1 | AA | 205 | A | C8-N7 | -5.78 | 1.27 | 1.31 |
| 4 | AD | 6 | G | C4'-O4' | -5.78 | 1.38 | 1.45 |
| 26 | BB | 840 | C | O3'-P | 5.78 | 1.68 | 1.61 |
| 26 | BB | 1937 | A | C2'-C1' | 5.78 | 1.59 | 1.53 |
| 26 | BB | 2626 | C | N1-C6 | 5.78 | 1.40 | 1.37 |
| 26 | BB | 2876 | G | C5-C4 | 5.78 | 1.42 | 1.38 |
| 1 | AA | 1193 | G | C5-C4 | 5.78 | 1.42 | 1.38 |
| 1 | AA | 1452 | C | C2-O2 | -5.78 | 1.19 | 1.24 |
| 26 | BB | 528 | A | C2-N3 | 5.78 | 1.38 | 1.33 |
| 26 | BB | 1048 | A | N9-C4 | -5.78 | 1.34 | 1.37 |
| 26 | BB | 1117 | C | N1-C2 | -5.78 | 1.34 | 1.40 |
| 26 | BB | 1502 | A | C6-N1 | 5.78 | 1.39 | 1.35 |
| 26 | BB | 1626 | A | C5-C4 | -5.78 | 1.34 | 1.38 |
| 26 | BB | 2136 | G | C2-N2 | -5.78 | 1.28 | 1.34 |
| 1 | AA | 1321 | U | C2'-C1' | 5.78 | 1.59 | 1.53 |
| 26 | BB | 362 | A | N9-C8 | 5.78 | 1.42 | 1.37 |
| 26 | BB | 444 | C | C2'-C1' | 5.78 | 1.59 | 1.53 |
| 26 | BB | 1805 | A | C1'-N9 | 5.78 | 1.57 | 1.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2553 | G | C1'-N9 | 5.78 | 1.57 | 1.48 |
| 1 | AA | 655 | A | C6-N1 | -5.78 | 1.31 | 1.35 |
| 1 | AA | 824 | G | C6-O6 | -5.78 | 1.19 | 1.24 |
| 1 | AA | 972 | C | C1'-N1 | 5.78 | 1.57 | 1.48 |
| 1 | AA | 978 | A | N3-C4 | 5.78 | 1.38 | 1.34 |
| 1 | AA | 1068 | G | P-O5' | 5.78 | 1.65 | 1.59 |
| 3 | AC | 14 | G | N7-C5 | -5.78 | 1.35 | 1.39 |
| 26 | BB | 469 | G | N3-C4 | 5.78 | 1.39 | 1.35 |
| 26 | BB | 1359 | A | N9-C4 | 5.78 | 1.41 | 1.37 |
| 26 | BB | 1717 | A | C3'-C2' | 5.78 | 1.59 | 1.52 |
| 26 | BB | 1753 | G | O4'-C1' | 5.78 | 1.49 | 1.41 |
| 26 | BB | 2234 | G | C4'-O4' | -5.78 | 1.38 | 1.45 |
| 26 | BB | 2849 | U | N1-C6 | 5.78 | 1.43 | 1.38 |
| 1 | AA | 734 | G | N7-C5 | -5.77 | 1.35 | 1.39 |
| 1 | AA | 938 | A | N3-C4 | 5.77 | 1.38 | 1.34 |
| 26 | BB | 1790 | C | C2'-O2' | 5.77 | 1.49 | 1.41 |
| 1 | AA | 326 | G | C5'-C4' | 5.77 | 1.58 | 1.51 |
| 1 | AA | 627 | G | C3'-C2' | 5.77 | 1.59 | 1.52 |
| 1 | AA | 785 | G | N9-C8 | 5.77 | 1.41 | 1.37 |
| 26 | BB | 123 | G | O3'-P | 5.77 | 1.68 | 1.61 |
| 26 | BB | 208 | C | N3-C4 | 5.77 | 1.38 | 1.33 |
| 26 | BB | 507 | A | N7-C5 | -5.77 | 1.35 | 1.39 |
| 26 | BB | 1112 | G | N1-C2 | 5.77 | 1.42 | 1.37 |
| 26 | BB | 1383 | A | C8-N7 | -5.77 | 1.27 | 1.31 |
| 1 | AA | 630 | A | N9-C4 | -5.77 | 1.34 | 1.37 |
| 26 | BB | 617 | G | C6-N1 | 5.77 | 1.43 | 1.39 |
| 26 | BB | 1382 | G | N3-C4 | 5.77 | 1.39 | 1.35 |
| 26 | BB | 2544 | G | N1-C2 | 5.77 | 1.42 | 1.37 |
| 43 | BS | 60 | TRP | CD2-CE2 | 5.77 | 1.48 | 1.41 |
| 1 | AA | 297 | G | C8-N7 | 5.77 | 1.34 | 1.30 |
| 1 | AA | 877 | G | N3-C4 | 5.77 | 1.39 | 1.35 |
| 1 | AA | 1333 | A | N7-C5 | -5.77 | 1.35 | 1.39 |
| 26 | BB | 186 | G | C3'-O3' | -5.77 | 1.34 | 1.42 |
| 26 | BB | 402 | A | P-O5' | 5.77 | 1.65 | 1.59 |
| 26 | BB | 1447 | C | C4'-O4' | -5.77 | 1.38 | 1.45 |
| 26 | BB | 1547 | C | N1-C6 | 5.77 | 1.40 | 1.37 |
| 26 | BB | 1672 | A | C5-C6 | 5.77 | 1.46 | 1.41 |
| 26 | BB | 1677 | A | C5'-C4' | 5.77 | 1.58 | 1.51 |
| 26 | BB | 1710 | G | N3-C4 | 5.77 | 1.39 | 1.35 |
| 26 | BB | 2039 | U | C2-O2 | 5.77 | 1.27 | 1.22 |
| 26 | BB | 2724 | U | C4'-O4' | -5.77 | 1.38 | 1.45 |
| 1 | AA | 119 | A | P-O5' | 5.77 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 251 | G | C5-C6 | 5.77 | 1.48 | 1.42 |
| 1 | AA | 1348 | U | O4'-C1' | 5.77 | 1.49 | 1.41 |
| 26 | BB | 183 | C | C4-C5 | 5.77 | 1.47 | 1.43 |
| 26 | BB | 442 | G | C2'-C1' | -5.77 | 1.47 | 1.53 |
| 26 | BB | 2017 | U | N3-C4 | 5.77 | 1.43 | 1.38 |
| 26 | BB | 2438 | U | C4'-O4' | -5.77 | 1.38 | 1.45 |
| 26 | BB | 2650 | U | N3-C4 | 5.77 | 1.43 | 1.38 |
| 25 | BA | 98 | G | C2-N3 | 5.77 | 1.37 | 1.32 |
| 26 | BB | 17 | G | P-O5' | 5.77 | 1.65 | 1.59 |
| 26 | BB | 990 | A | N7-C5 | -5.77 | 1.35 | 1.39 |
| 26 | BB | 1312 | U | C3'-C2' | 5.77 | 1.59 | 1.52 |
| 26 | BB | 2113 | U | C4-C5 | 5.77 | 1.48 | 1.43 |
| 26 | BB | 2581 | G | P-O5' | 5.77 | 1.65 | 1.59 |
| 26 | BB | 2802 | G | N3-C4 | 5.77 | 1.39 | 1.35 |
| 1 | AA | 1371 | G | N7-C5 | -5.76 | 1.35 | 1.39 |
| 1 | AA | 1529 | G | O3'-P | 5.76 | 1.68 | 1.61 |
| 26 | BB | 2163 | A | N9-C4 | -5.76 | 1.34 | 1.37 |
| 26 | BB | 2521 | C | C4-C5 | 5.76 | 1.47 | 1.43 |
| 26 | BB | 2741 | A | N3-C4 | 5.76 | 1.38 | 1.34 |
| 26 | BB | 2809 | A | C2-N3 | 5.76 | 1.38 | 1.33 |
| 1 | AA | 754 | C | N1-C6 | 5.76 | 1.40 | 1.37 |
| 1 | AA | 1326 | U | C2-O2 | -5.76 | 1.17 | 1.22 |
| 26 | BB | 833 | A | C4'-O4' | -5.76 | 1.38 | 1.45 |
| 26 | BB | 2639 | A | C3'-C2' | 5.76 | 1.59 | 1.52 |
| 1 | AA | 472 | U | C4'-C3' | -5.76 | 1.46 | 1.52 |
| 1 | AA | 864 | A | N3-C4 | 5.76 | 1.38 | 1.34 |
| 1 | AA | 884 | U | O4'-C1' | 5.76 | 1.49 | 1.41 |
| 1 | AA | 975 | A | N3-C4 | 5.76 | 1.38 | 1.34 |
| 1 | AA | 1490 | U | C3'-C2' | 5.76 | 1.59 | 1.52 |
| 26 | BB | 944 | C | C2'-C1' | 5.76 | 1.59 | 1.53 |
| 26 | BB | 1454 | C | C4'-O4' | -5.76 | 1.38 | 1.45 |
| 1 | AA | 376 | G | N1-C2 | 5.76 | 1.42 | 1.37 |
| 2 | AB | 38 | A | N7-C5 | 5.76 | 1.42 | 1.39 |
| 26 | BB | 231 | A | N3-C4 | 5.76 | 1.38 | 1.34 |
| 26 | BB | 720 | U | N1-C6 | 5.76 | 1.43 | 1.38 |
| 26 | BB | 942 | G | P-O5' | 5.76 | 1.65 | 1.59 |
| 26 | BB | 1505 | A | N9-C4 | 5.76 | 1.41 | 1.37 |
| 26 | BB | 1838 | C | O3'-P | 5.76 | 1.68 | 1.61 |
| 26 | BB | 2458 | G | O3'-P | 5.76 | 1.68 | 1.61 |
| 26 | BB | 2900 | A | C5-C6 | 5.76 | 1.46 | 1.41 |
| 1 | AA | 298 | A | C5'-C4' | 5.76 | 1.58 | 1.51 |
| 1 | AA | 1079 | G | N7-C5 | 5.76 | 1.42 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1121 | U | C2-O2 | 5.76 | 1.27 | 1.22 |
| 26 | BB | 320 | A | O3'-P | -5.76 | 1.54 | 1.61 |
| 26 | BB | 857 | G | C2-N3 | 5.76 | 1.37 | 1.32 |
| 26 | BB | 1327 | A | N3-C4 | 5.76 | 1.38 | 1.34 |
| 26 | BB | 1686 | C | C4'-O4' | -5.76 | 1.38 | 1.45 |
| 26 | BB | 2715 | C | C4-N4 | 5.76 | 1.39 | 1.33 |
| 1 | AA | 698 | G | N1-C2 | 5.76 | 1.42 | 1.37 |
| 1 | AA | 863 | U | C4-C5 | 5.76 | 1.48 | 1.43 |
| 1 | AA | 1505 | G | C5-C6 | 5.76 | 1.48 | 1.42 |
| 26 | BB | 718 | A | N1-C2 | -5.76 | 1.29 | 1.34 |
| 26 | BB | 1613 | G | C5'-C4' | 5.76 | 1.58 | 1.51 |
| 1 | AA | 777 | A | N3-C4 | 5.75 | 1.38 | 1.34 |
| 1 | AA | 1291 | U | C2'-C1' | 5.75 | 1.59 | 1.53 |
| 26 | BB | 337 | C | N1-C6 | 5.75 | 1.40 | 1.37 |
| 26 | BB | 1663 | G | C8-N7 | -5.75 | 1.27 | 1.30 |
| 26 | BB | 1809 | A | N3-C4 | 5.75 | 1.38 | 1.34 |
| 26 | BB | 2657 | A | C5-C6 | 5.75 | 1.46 | 1.41 |
| 26 | BB | 51 | G | N9-C8 | 5.75 | 1.41 | 1.37 |
| 26 | BB | 507 | A | C5-C6 | -5.75 | 1.35 | 1.41 |
| 26 | BB | 1796 | U | C4-C5 | 5.75 | 1.48 | 1.43 |
| 26 | BB | 2335 | A | C5'-C4' | 5.75 | 1.58 | 1.51 |
| 26 | BB | 2452 | C | C2-O2 | -5.75 | 1.19 | 1.24 |
| 26 | BB | 2884 | U | O3'-P | 5.75 | 1.68 | 1.61 |
| 1 | AA | 1439 | G | N1-C2 | 5.75 | 1.42 | 1.37 |
| 10 | AJ | 61 | PHE | CG-CD2 | 5.75 | 1.47 | 1.38 |
| 26 | BB | 125 | A | N9-C4 | -5.75 | 1.34 | 1.37 |
| 26 | BB | 221 | A | N7-C5 | -5.75 | 1.35 | 1.39 |
| 26 | BB | 276 | U | C2-O2 | 5.75 | 1.27 | 1.22 |
| 26 | BB | 513 | A | O3'-P | 5.75 | 1.68 | 1.61 |
| 26 | BB | 589 | U | C4-O4 | -5.75 | 1.19 | 1.23 |
| 26 | BB | 618 | G | N7-C5 | 5.75 | 1.42 | 1.39 |
| 26 | BB | 1113 | U | C4'-C3' | -5.75 | 1.46 | 1.52 |
| 26 | BB | 1157 | G | C8-N7 | -5.75 | 1.27 | 1.30 |
| 26 | BB | 1220 | G | P-O5' | 5.75 | 1.65 | 1.59 |
| 26 | BB | 1501 | G | C3'-C2' | 5.75 | 1.59 | 1.52 |
| 26 | BB | 1597 | A | C6-N6 | -5.75 | 1.29 | 1.33 |
| 26 | BB | 2507 | C | C3'-C2' | 5.75 | 1.59 | 1.52 |
| 26 | BB | 2751 | G | C6-N1 | 5.75 | 1.43 | 1.39 |
| 26 | BB | 2903 | U | O3'-P | -5.75 | 1.54 | 1.61 |
| 25 | BA | 60 | C | N1-C6 | 5.75 | 1.40 | 1.37 |
| 26 | BB | 54 | G | N1-C2 | 5.75 | 1.42 | 1.37 |
| 26 | BB | 1158 | C | C2'-O2' | 5.75 | 1.49 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1935 | G | C8-N7 | 5.75 | 1.34 | 1.30 |
| 26 | BB | 2204 | G | C8-N7 | -5.75 | 1.27 | 1.30 |
| 26 | BB | 2464 | G | N1-C2 | 5.75 | 1.42 | 1.37 |
| 1 | AA | 566 | G | C6-O6 | -5.75 | 1.19 | 1.24 |
| 1 | AA | 829 | G | N7-C5 | 5.75 | 1.42 | 1.39 |
| 1 | AA | 1345 | U | N3-C4 | 5.75 | 1.43 | 1.38 |
| 2 | AB | 72 | U | C5-C6 | 5.75 | 1.39 | 1.34 |
| 26 | BB | 810 | U | N3-C4 | 5.75 | 1.43 | 1.38 |
| 26 | BB | 2055 | C | C4'-O4' | -5.75 | 1.38 | 1.45 |
| 1 | AA | 1271 | A | N9-C4 | -5.75 | 1.34 | 1.37 |
| 26 | BB | 717 | C | C4-N4 | 5.75 | 1.39 | 1.33 |
| 26 | BB | 2623 | G | C5'-C4' | 5.75 | 1.58 | 1.51 |
| 1 | AA | 1437 | A | C2'-O2' | -5.75 | 1.34 | 1.41 |
| 26 | BB | 219 | A | N7-C5 | 5.75 | 1.42 | 1.39 |
| 26 | BB | 502 | A | C8-N7 | -5.74 | 1.27 | 1.31 |
| 26 | BB | 1367 | A | C4'-O4' | -5.74 | 1.38 | 1.45 |
| 26 | BB | 1937 | A | C6-N1 | 5.74 | 1.39 | 1.35 |
| 26 | BB | 2016 | U | C5-C6 | 5.74 | 1.39 | 1.34 |
| 26 | BB | 2169 | A | N9-C8 | -5.74 | 1.33 | 1.37 |
| 1 | AA | 94 | G | C6-N1 | 5.74 | 1.43 | 1.39 |
| 3 | AC | 51 | C | C4'-C3' | 5.74 | 1.59 | 1.53 |
| 1 | AA | 236 | A | C8-N7 | -5.74 | 1.27 | 1.31 |
| 1 | AA | 520 | A | C5-C4 | -5.74 | 1.34 | 1.38 |
| 1 | AA | 1320 | C | P-O5' | 5.74 | 1.65 | 1.59 |
| 26 | BB | 646 | U | C5-C6 | 5.74 | 1.39 | 1.34 |
| 26 | BB | 742 | A | C1'-N9 | 5.74 | 1.57 | 1.48 |
| 26 | BB | 802 | A | C2'-O2' | 5.74 | 1.49 | 1.41 |
| 26 | BB | 1395 | A | O3'-P | 5.74 | 1.68 | 1.61 |
| 26 | BB | 1657 | U | N1-C2 | 5.74 | 1.43 | 1.38 |
| 26 | BB | 1693 | U | C4'-O4' | -5.74 | 1.38 | 1.45 |
| 26 | BB | 1958 | C | C4-C5 | 5.74 | 1.47 | 1.43 |
| 26 | BB | 2584 | U | C2-O2 | 5.74 | 1.27 | 1.22 |
| 26 | BB | 2693 | G | C5-C6 | 5.74 | 1.48 | 1.42 |
| 26 | BB | 2748 | A | P-O5' | 5.74 | 1.65 | 1.59 |
| 26 | BB | 2890 | G | N1-C2 | 5.74 | 1.42 | 1.37 |
| 26 | BB | 2904 | U | C2'-C1' | -5.74 | 1.47 | 1.53 |
| 38 | BN | 21 | ARG | CZ-NH1 | 5.74 | 1.40 | 1.33 |
| 1 | AA | 66 | A | C6-N6 | 5.74 | 1.38 | 1.33 |
| 1 | AA | 332 | G | C8-N7 | -5.74 | 1.27 | 1.30 |
| 1 | AA | 509 | A | P-O5' | 5.74 | 1.65 | 1.59 |
| 25 | BA | 29 | A | C6-N1 | 5.74 | 1.39 | 1.35 |
| 26 | BB | 557 | C | N1-C6 | 5.74 | 1.40 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 764 | A | C5'-C4' | 5.74 | 1.58 | 1.51 |
| 26 | BB | 978 | G | N9-C4 | -5.74 | 1.33 | 1.38 |
| 26 | BB | 1205 | A | C6-N1 | -5.74 | 1.31 | 1.35 |
| 32 | BH | 13 | GLY | CA-C | 5.74 | 1.61 | 1.51 |
| 1 | AA | 635 | A | P-O5' | 5.74 | 1.65 | 1.59 |
| 1 | AA | 1074 | G | N1-C2 | 5.74 | 1.42 | 1.37 |
| 1 | AA | 1274 | A | C4'-O4' | -5.74 | 1.38 | 1.45 |
| 26 | BB | 856 | G | N7-C5 | 5.74 | 1.42 | 1.39 |
| 26 | BB | 919 | U | C4-O4 | 5.74 | 1.28 | 1.23 |
| 26 | BB | 1028 | A | C4'-O4' | -5.74 | 1.38 | 1.45 |
| 26 | BB | 1504 | A | C2'-C1' | -5.74 | 1.47 | 1.53 |
| 26 | BB | 2083 | G | C8-N7 | 5.74 | 1.34 | 1.30 |
| 1 | AA | 349 | A | C5-C4 | -5.74 | 1.34 | 1.38 |
| 1 | AA | 1176 | A | C8-N7 | 5.74 | 1.35 | 1.31 |
| 1 | AA | 1459 | G | O3'-P | 5.74 | 1.68 | 1.61 |
| 26 | BB | 569 | U | C2-O2 | 5.74 | 1.27 | 1.22 |
| 26 | BB | 1160 | G | N3-C4 | 5.74 | 1.39 | 1.35 |
| 26 | BB | 2077 | A | C5-C6 | 5.74 | 1.46 | 1.41 |
| 26 | BB | 2361 | G | C5-C4 | -5.74 | 1.34 | 1.38 |
| 26 | BB | 2815 | C | C5'-C4' | 5.74 | 1.58 | 1.51 |
| 26 | BB | 2855 | C | N3-C4 | -5.74 | 1.29 | 1.33 |
| 26 | BB | 2880 | C | C5-C6 | 5.74 | 1.39 | 1.34 |
| 1 | AA | 310 | G | N9-C4 | 5.73 | 1.42 | 1.38 |
| 1 | AA | 609 | A | N9-C4 | -5.73 | 1.34 | 1.37 |
| 1 | AA | 891 | U | N1-C2 | 5.73 | 1.43 | 1.38 |
| 1 | AA | 1306 | A | N7-C5 | -5.73 | 1.35 | 1.39 |
| 1 | AA | 1412 | C | C4'-C3' | 5.73 | 1.59 | 1.53 |
| 26 | BB | 127 | A | P-O5' | 5.73 | 1.65 | 1.59 |
| 26 | BB | 1212 | G | N9-C4 | 5.73 | 1.42 | 1.38 |
| 26 | BB | 2141 | G | C3'-O3' | 5.73 | 1.50 | 1.42 |
| 26 | BB | 2230 | G | N9-C4 | 5.73 | 1.42 | 1.38 |
| 1 | AA | 1482 | G | C3'-O3' | 5.73 | 1.50 | 1.42 |
| 26 | BB | 64 | A | C5'-C4' | 5.73 | 1.58 | 1.51 |
| 26 | BB | 150 | U | C2'-C1' | -5.73 | 1.47 | 1.53 |
| 26 | BB | 273 | G | C2'-O2' | 5.73 | 1.49 | 1.41 |
| 26 | BB | 344 | A | N9-C4 | -5.73 | 1.34 | 1.37 |
| 26 | BB | 516 | C | C2-N3 | 5.73 | 1.40 | 1.35 |
| 26 | BB | 830 | G | C5-C4 | -5.73 | 1.34 | 1.38 |
| 26 | BB | 2534 | A | C2-N3 | 5.73 | 1.38 | 1.33 |
| 26 | BB | 2558 | C | C4'-C3' | -5.73 | 1.46 | 1.52 |
| 40 | BP | 12 | ARG | NE-CZ | 5.73 | 1.40 | 1.33 |
| 3 | AC | 22 | G | C4'-C3' | 5.73 | 1.59 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 239 | C | C1'-N1 | 5.73 | 1.57 | 1.48 |
| 26 | BB | 641 | U | P-O5' | -5.73 | 1.54 | 1.59 |
| 26 | BB | 766 | U | P-O5' | 5.73 | 1.65 | 1.59 |
| 26 | BB | 1070 | A | P-O5' | 5.73 | 1.65 | 1.59 |
| 26 | BB | 1919 | A | N3-C4 | 5.73 | 1.38 | 1.34 |
| 1 | AA | 848 | C | C5'-C4' | -5.73 | 1.44 | 1.51 |
| 26 | BB | 1980 | G | N3-C4 | 5.73 | 1.39 | 1.35 |
| 26 | BB | 2889 | C | C4-C5 | 5.73 | 1.47 | 1.43 |
| 1 | AA | 956 | U | C4'-O4' | -5.73 | 1.38 | 1.45 |
| 26 | BB | 126 | A | P-O5' | 5.73 | 1.65 | 1.59 |
| 26 | BB | 902 | C | C3'-C2' | 5.73 | 1.59 | 1.52 |
| 26 | BB | 1376 | C | C4-C5 | 5.73 | 1.47 | 1.43 |
| 26 | BB | 1878 | G | C2-N3 | 5.73 | 1.37 | 1.32 |
| 26 | BB | 2218 | G | P-O5' | 5.73 | 1.65 | 1.59 |
| 26 | BB | 2904 | U | C5'-C4' | 5.73 | 1.58 | 1.51 |
| 1 | AA | 113 | G | C5'-C4' | 5.73 | 1.58 | 1.51 |
| 1 | AA | 952 | U | C2'-C1' | -5.73 | 1.47 | 1.53 |
| 26 | BB | 149 | A | C3'-C2' | 5.73 | 1.59 | 1.52 |
| 26 | BB | 191 | A | C3'-C2' | 5.73 | 1.59 | 1.52 |
| 26 | BB | 345 | A | N3-C4 | 5.73 | 1.38 | 1.34 |
| 26 | BB | 1436 | G | C6-N1 | 5.73 | 1.43 | 1.39 |
| 26 | BB | 1516 | G | N3-C4 | -5.73 | 1.31 | 1.35 |
| 26 | BB | 2733 | A | C3'-C2' | 5.73 | 1.59 | 1.52 |
| 1 | AA | 424 | G | N3-C4 | 5.72 | 1.39 | 1.35 |
| 1 | AA | 1163 | A | P-O5' | 5.72 | 1.65 | 1.59 |
| 26 | BB | 845 | A | P-O5' | 5.72 | 1.65 | 1.59 |
| 26 | BB | 1232 | G | N1-C2 | 5.72 | 1.42 | 1.37 |
| 26 | BB | 1300 | G | O3'-P | 5.72 | 1.68 | 1.61 |
| 26 | BB | 2091 | C | P-O5' | 5.72 | 1.65 | 1.59 |
| 1 | AA | 143 | A | C5-C6 | 5.72 | 1.46 | 1.41 |
| 3 | AC | 28 | U | C4-O4 | 5.72 | 1.28 | 1.23 |
| 25 | BA | 100 | G | C3'-C2' | -5.72 | 1.46 | 1.52 |
| 26 | BB | 236 | C | C5-C6 | 5.72 | 1.39 | 1.34 |
| 26 | BB | 593 | U | C4-O4 | -5.72 | 1.19 | 1.23 |
| 26 | BB | 1331 | G | C2'-O2' | -5.72 | 1.34 | 1.41 |
| 26 | BB | 2330 | G | N9-C4 | 5.72 | 1.42 | 1.38 |
| 1 | AA | 1391 | U | N1-C2 | 5.72 | 1.43 | 1.38 |
| 26 | BB | 752 | A | C2'-C1' | -5.72 | 1.47 | 1.53 |
| 26 | BB | 2712 | C | P-O5' | 5.72 | 1.65 | 1.59 |
| 1 | AA | 107 | G | N1-C2 | 5.72 | 1.42 | 1.37 |
| 1 | AA | 191 | G | C5'-C4' | 5.72 | 1.58 | 1.51 |
| 1 | AA | 363 | A | N9-C4 | 5.72 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 111 | A | C5'-C4' | 5.72 | 1.58 | 1.51 |
| 26 | BB | 206 | U | O3'-P | 5.72 | 1.68 | 1.61 |
| 26 | BB | 969 | G | P-O5' | 5.72 | 1.65 | 1.59 |
| 1 | AA | 1515 | G | C6-N1 | 5.72 | 1.43 | 1.39 |
| 25 | BA | 41 | G | N9-C4 | 5.72 | 1.42 | 1.38 |
| 26 | BB | 581 | C | C2-O2 | -5.72 | 1.19 | 1.24 |
| 26 | BB | 2147 | A | N9-C8 | -5.72 | 1.33 | 1.37 |
| 1 | AA | 1540 | U | N1-C2 | 5.72 | 1.43 | 1.38 |
| 4 | AD | 49 | C | C4'-O4' | -5.72 | 1.38 | 1.45 |
| 26 | BB | 113 | U | O3'-P | 5.72 | 1.68 | 1.61 |
| 26 | BB | 416 | U | C2'-C1' | 5.72 | 1.59 | 1.53 |
| 26 | BB | 655 | A | C5-C4 | -5.72 | 1.34 | 1.38 |
| 26 | BB | 1567 | G | C2'-C1' | 5.72 | 1.59 | 1.53 |
| 26 | BB | 2043 | C | C4'-O4' | -5.72 | 1.38 | 1.45 |
| 26 | BB | 2149 | U | C2-O2 | -5.72 | 1.17 | 1.22 |
| 1 | AA | 110 | C | N1-C6 | 5.71 | 1.40 | 1.37 |
| 1 | AA | 1178 | G | N9-C4 | 5.71 | 1.42 | 1.38 |
| 1 | AA | 1192 | C | N1-C6 | 5.71 | 1.40 | 1.37 |
| 21 | AU | 3 | TYR | CD1-CE1 | 5.71 | 1.48 | 1.39 |
| 26 | BB | 187 | G | C2'-C1' | -5.71 | 1.47 | 1.53 |
| 26 | BB | 1022 | G | C5-C4 | -5.71 | 1.34 | 1.38 |
| 26 | BB | 1033 | U | C4-C5 | 5.71 | 1.48 | 1.43 |
| 26 | BB | 1845 | G | O3'-P | 5.71 | 1.68 | 1.61 |
| 26 | BB | 2425 | A | C5'-C4' | 5.71 | 1.58 | 1.51 |
| 26 | BB | 2593 | U | C2-O2 | 5.71 | 1.27 | 1.22 |
| 26 | BB | 2835 | A | C5-C6 | 5.71 | 1.46 | 1.41 |
| 26 | BB | 2890 | G | C3'-C2' | 5.71 | 1.59 | 1.52 |
| 1 | AA | 83 | C | N3-C4 | 5.71 | 1.38 | 1.33 |
| 1 | AA | 283 | U | C2-O2 | 5.71 | 1.27 | 1.22 |
| 1 | AA | 359 | G | C6-O6 | -5.71 | 1.19 | 1.24 |
| 1 | AA | 931 | C | C4'-O4' | -5.71 | 1.38 | 1.45 |
| 1 | AA | 1132 | C | N1-C2 | 5.71 | 1.45 | 1.40 |
| 1 | AA | 1412 | C | C4-C5 | 5.71 | 1.47 | 1.43 |
| 4 | AD | 2 | G | P-O5' | 5.71 | 1.65 | 1.59 |
| 26 | BB | 662 | G | C4'-C3' | 5.71 | 1.59 | 1.53 |
| 26 | BB | 1274 | A | C6-N1 | -5.71 | 1.31 | 1.35 |
| 26 | BB | 2317 | A | P-O5' | 5.71 | 1.65 | 1.59 |
| 1 | AA | 946 | A | C3'-C2' | 5.71 | 1.59 | 1.52 |
| 1 | AA | 1527 | U | N1-C2 | 5.71 | 1.43 | 1.38 |
| 4 | AD | 12 | G | C4'-C3' | -5.71 | 1.46 | 1.52 |
| 25 | BA | 71 | C | C4'-O4' | -5.71 | 1.38 | 1.45 |
| 26 | BB | 120 | U | N1-C2 | 5.71 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 39 | G | C5'-C4' | 5.71 | 1.58 | 1.51 |
| 1 | AA | 901 | A | C4'-C3' | 5.71 | 1.59 | 1.53 |
| 1 | AA | 921 | U | N1-C6 | -5.71 | 1.32 | 1.38 |
| 1 | AA | 950 | U | N1-C2 | 5.71 | 1.43 | 1.38 |
| 1 | AA | 1082 | A | C4'-C3' | 5.71 | 1.59 | 1.53 |
| 1 | AA | 1314 | C | C4'-O4' | -5.71 | 1.38 | 1.45 |
| 2 | AB | 9 | A | N9-C8 | 5.71 | 1.42 | 1.37 |
| 26 | BB | 163 | C | C3'-C2' | 5.71 | 1.59 | 1.52 |
| 26 | BB | 1387 | A | C2-N3 | 5.71 | 1.38 | 1.33 |
| 26 | BB | 1420 | A | C8-N7 | -5.71 | 1.27 | 1.31 |
| 26 | BB | 2308 | G | C2-N2 | -5.71 | 1.28 | 1.34 |
| 26 | BB | 2831 | G | C6-N1 | -5.71 | 1.35 | 1.39 |
| 26 | BB | 2902 | C | N3-C4 | 5.71 | 1.38 | 1.33 |
| 1 | AA | 445 | G | N1-C2 | 5.71 | 1.42 | 1.37 |
| 1 | AA | 592 | G | C3'-C2' | 5.71 | 1.59 | 1.52 |
| 1 | AA | 1183 | U | C1'-N1 | 5.71 | 1.57 | 1.48 |
| 26 | BB | 1203 | U | P-O5' | 5.71 | 1.65 | 1.59 |
| 26 | BB | 1973 | G | N1-C2 | -5.71 | 1.33 | 1.37 |
| 26 | BB | 2573 | C | C2-O2 | -5.71 | 1.19 | 1.24 |
| 26 | BB | 2802 | G | C4'-O4' | -5.71 | 1.38 | 1.45 |
| 2 | AB | 70 | C | C5'-C4' | 5.71 | 1.58 | 1.51 |
| 26 | BB | 608 | A | C2-N3 | 5.71 | 1.38 | 1.33 |
| 26 | BB | 2274 | A | N3-C4 | 5.71 | 1.38 | 1.34 |
| 26 | BB | 2578 | G | N1-C2 | 5.71 | 1.42 | 1.37 |
| 1 | AA | 342 | C | N1-C6 | 5.70 | 1.40 | 1.37 |
| 26 | BB | 208 | C | C4'-O4' | -5.70 | 1.38 | 1.45 |
| 26 | BB | 1523 | U | N1-C6 | 5.70 | 1.43 | 1.38 |
| 26 | BB | 1668 | A | C5'-C4' | 5.70 | 1.58 | 1.51 |
| 26 | BB | 1701 | A | C5'-C4' | 5.70 | 1.58 | 1.51 |
| 26 | BB | 1803 | A | C4'-O4' | -5.70 | 1.38 | 1.45 |
| 26 | BB | 1860 | G | C2-N3 | 5.70 | 1.37 | 1.32 |
| 26 | BB | 2113 | U | C5'-C4' | 5.70 | 1.58 | 1.51 |
| 26 | BB | 1885 | A | N3-C4 | -5.70 | 1.31 | 1.34 |
| 26 | BB | 2366 | A | C5-C4 | -5.70 | 1.34 | 1.38 |
| 1 | AA | 167 | A | N1-C2 | -5.70 | 1.29 | 1.34 |
| 1 | AA | 650 | G | C8-N7 | 5.70 | 1.34 | 1.30 |
| 1 | AA | 666 | G | C5-C4 | -5.70 | 1.34 | 1.38 |
| 26 | BB | 230 | G | C8-N7 | 5.70 | 1.34 | 1.30 |
| 26 | BB | 256 | A | N7-C5 | 5.70 | 1.42 | 1.39 |
| 26 | BB | 1161 | C | N1-C6 | 5.70 | 1.40 | 1.37 |
| 26 | BB | 1646 | C | P-O5' | -5.70 | 1.54 | 1.59 |
| 26 | BB | 1996 | C | C5-C6 | 5.70 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2747 | G | C2-N3 | 5.70 | 1.37 | 1.32 |
| 1 | AA | 1143 | G | N7-C5 | 5.70 | 1.42 | 1.39 |
| 26 | BB | 98 | G | C3'-C2' | 5.70 | 1.59 | 1.52 |
| 26 | BB | 602 | A | C2'-C1' | 5.70 | 1.59 | 1.53 |
| 26 | BB | 2112 | G | N9-C4 | -5.70 | 1.33 | 1.38 |
| 26 | BB | 2448 | A | N7-C5 | -5.70 | 1.35 | 1.39 |
| 1 | AA | 164 | G | C4'-O4' | -5.70 | 1.38 | 1.45 |
| 1 | AA | 366 | A | C5'-C4' | 5.70 | 1.58 | 1.51 |
| 26 | BB | 1113 | U | P-O5' | 5.70 | 1.65 | 1.59 |
| 26 | BB | 2365 | G | C2-N2 | -5.70 | 1.28 | 1.34 |
| 26 | BB | 2752 | C | N3-C4 | 5.70 | 1.38 | 1.33 |
| 29 | BE | 127 | PHE | CE2-CZ | 5.70 | 1.48 | 1.37 |
| 1 | AA | 244 | U | N1-C2 | 5.70 | 1.43 | 1.38 |
| 1 | AA | 579 | A | C5-C6 | -5.70 | 1.35 | 1.41 |
| 1 | AA | 975 | A | O3'-P | 5.70 | 1.68 | 1.61 |
| 2 | AB | 34 | C | N1-C6 | 5.70 | 1.40 | 1.37 |
| 26 | BB | 120 | U | C4-C5 | 5.70 | 1.48 | 1.43 |
| 26 | BB | 141 | G | C4'-C3' | -5.70 | 1.46 | 1.52 |
| 26 | BB | 653 | U | P-O5' | 5.70 | 1.65 | 1.59 |
| 26 | BB | 1020 | A | N9-C4 | -5.70 | 1.34 | 1.37 |
| 26 | BB | 1139 | G | O3'-P | 5.70 | 1.68 | 1.61 |
| 26 | BB | 1617 | C | C5-C6 | 5.70 | 1.39 | 1.34 |
| 26 | BB | 1657 | U | N1-C6 | -5.70 | 1.32 | 1.38 |
| 26 | BB | 1999 | C | C5-C6 | 5.70 | 1.39 | 1.34 |
| 1 | AA | 373 | A | C2'-C1' | -5.69 | 1.47 | 1.53 |
| 25 | BA | 105 | G | C6-N1 | 5.69 | 1.43 | 1.39 |
| 26 | BB | 182 | A | C5-C4 | 5.69 | 1.42 | 1.38 |
| 26 | BB | 1012 | U | C3'-C2' | 5.69 | 1.59 | 1.52 |
| 26 | BB | 1217 | U | P-O5' | 5.69 | 1.65 | 1.59 |
| 26 | BB | 2007 | U | N1-C6 | 5.69 | 1.43 | 1.38 |
| 1 | AA | 241 | G | C4'-O4' | -5.69 | 1.38 | 1.45 |
| 1 | AA | 511 | C | C2-O2 | -5.69 | 1.19 | 1.24 |
| 1 | AA | 1326 | U | C4-C5 | 5.69 | 1.48 | 1.43 |
| 2 | AB | 42 | G | C5-C6 | 5.69 | 1.48 | 1.42 |
| 26 | BB | 6 | A | C8-N7 | -5.69 | 1.27 | 1.31 |
| 26 | BB | 120 | U | C3'-C2' | 5.69 | 1.59 | 1.52 |
| 26 | BB | 327 | G | N1-C2 | 5.69 | 1.42 | 1.37 |
| 26 | BB | 347 | A | P-O5' | 5.69 | 1.65 | 1.59 |
| 26 | BB | 503 | A | C2-N3 | 5.69 | 1.38 | 1.33 |
| 26 | BB | 1193 | G | N9-C4 | -5.69 | 1.33 | 1.38 |
| 26 | BB | 1436 | G | N9-C8 | 5.69 | 1.41 | 1.37 |
| 26 | BB | 1515 | A | C8-N7 | -5.69 | 1.27 | 1.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1993 | U | C4-O4 | -5.69 | 1.19 | 1.23 |
| 26 | BB | 2241 | A | C5-C6 | 5.69 | 1.46 | 1.41 |
| 26 | BB | 2676 | C | C4-N4 | 5.69 | 1.39 | 1.33 |
| 31 | BG | 7 | TYR | CE1-CZ | 5.69 | 1.46 | 1.38 |
| 1 | AA | 308 | C | C1'-N1 | 5.69 | 1.57 | 1.48 |
| 1 | AA | 611 | C | O3'-P | 5.69 | 1.68 | 1.61 |
| 1 | AA | 892 | A | C6-N6 | -5.69 | 1.29 | 1.33 |
| 1 | AA | 1261 | A | N9-C4 | 5.69 | 1.41 | 1.37 |
| 1 | AA | 1278 | G | N9-C4 | 5.69 | 1.42 | 1.38 |
| 1 | AA | 1513 | A | C6-N1 | -5.69 | 1.31 | 1.35 |
| 26 | BB | 421 | C | N3-C4 | 5.69 | 1.38 | 1.33 |
| 26 | BB | 652 | U | C2-O2 | 5.69 | 1.27 | 1.22 |
| 26 | BB | 693 | A | C5-C4 | -5.69 | 1.34 | 1.38 |
| 26 | BB | 2388 | A | N3-C4 | 5.69 | 1.38 | 1.34 |
| 1 | AA | 1002 | G | N1-C2 | 5.69 | 1.42 | 1.37 |
| 1 | AA | 1456 | A | P-O5' | 5.69 | 1.65 | 1.59 |
| 26 | BB | 1248 | G | C2-N2 | 5.69 | 1.40 | 1.34 |
| 26 | BB | 2726 | A | P-O5' | 5.69 | 1.65 | 1.59 |
| 4 | AD | 64 | G | C6-N1 | 5.69 | 1.43 | 1.39 |
| 26 | BB | 395 | U | C4-O4 | -5.69 | 1.19 | 1.23 |
| 26 | BB | 450 | G | C2-N3 | 5.69 | 1.37 | 1.32 |
| 26 | BB | 472 | A | P-O5' | 5.69 | 1.65 | 1.59 |
| 26 | BB | 830 | G | P-O5' | 5.69 | 1.65 | 1.59 |
| 26 | BB | 967 | U | O3'-P | 5.69 | 1.68 | 1.61 |
| 26 | BB | 1215 | G | C5'-C4' | 5.69 | 1.58 | 1.51 |
| 26 | BB | 1216 | G | O3'-P | -5.69 | 1.54 | 1.61 |
| 26 | BB | 2124 | G | N1-C2 | 5.69 | 1.42 | 1.37 |
| 26 | BB | 2138 | G | C8-N7 | -5.69 | 1.27 | 1.30 |
| 26 | BB | 2825 | G | N3-C4 | -5.69 | 1.31 | 1.35 |
| 26 | BB | 2883 | A | O3'-P | 5.69 | 1.68 | 1.61 |
| 48 | BX | 15 | GLY | CA-C | 5.69 | 1.60 | 1.51 |
| 1 | AA | 894 | G | C3'-C2' | -5.69 | 1.46 | 1.52 |
| 1 | AA | 1123 | U | C4-C5 | 5.69 | 1.48 | 1.43 |
| 25 | BA | 33 | G | N9-C4 | 5.68 | 1.42 | 1.38 |
| 26 | BB | 1592 | C | N3-C4 | 5.68 | 1.38 | 1.33 |
| 39 | BO | 75 | GLU | CB-CG | 5.68 | 1.62 | 1.52 |
| 1 | AA | 367 | U | O3'-P | -5.68 | 1.54 | 1.61 |
| 1 | AA | 415 | A | C8-N7 | -5.68 | 1.27 | 1.31 |
| 1 | AA | 647 | C | C4'-O4' | -5.68 | 1.38 | 1.45 |
| 1 | AA | 710 | G | C6-N1 | 5.68 | 1.43 | 1.39 |
| 1 | AA | 970 | C | C2-O2 | -5.68 | 1.19 | 1.24 |
| 1 | AA | 1213 | A | C3'-C2' | 5.68 | 1.59 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1367 | C | N1-C2 | 5.68 | 1.45 | 1.40 |
| 1 | AA | 1425 | U | C5-C6 | 5.68 | 1.39 | 1.34 |
| 4 | AD | 36 | A | O4'-C1' | -5.68 | 1.34 | 1.41 |
| 26 | BB | 1558 | C | C4-C5 | 5.68 | 1.47 | 1.43 |
| 1 | AA | 183 | C | C4-C5 | 5.68 | 1.47 | 1.43 |
| 1 | AA | 203 | G | C2-N3 | 5.68 | 1.37 | 1.32 |
| 4 | AD | 1 | C | C2-N3 | -5.68 | 1.31 | 1.35 |
| 26 | BB | 797 | G | N3-C4 | 5.68 | 1.39 | 1.35 |
| 26 | BB | 819 | A | P-O5' | 5.68 | 1.65 | 1.59 |
| 1 | AA | 935 | A | C2'-C1' | 5.68 | 1.59 | 1.53 |
| 1 | AA | 997 | U | N3-C4 | 5.68 | 1.43 | 1.38 |
| 10 | AJ | 176 | TYR | CE1-CZ | 5.68 | 1.46 | 1.38 |
| 26 | BB | 578 | G | C8-N7 | -5.68 | 1.27 | 1.30 |
| 26 | BB | 1045 | C | C5-C6 | 5.68 | 1.38 | 1.34 |
| 26 | BB | 1560 | G | N9-C4 | 5.68 | 1.42 | 1.38 |
| 26 | BB | 2283 | C | C4'-C3' | -5.68 | 1.46 | 1.52 |
| 1 | AA | 628 | G | N3-C4 | 5.68 | 1.39 | 1.35 |
| 1 | AA | 1345 | U | C4-C5 | 5.68 | 1.48 | 1.43 |
| 25 | BA | 66 | A | C6-N1 | 5.68 | 1.39 | 1.35 |
| 25 | BA | 120 | U | C2-O2 | 5.68 | 1.27 | 1.22 |
| 26 | BB | 575 | A | N3-C4 | 5.68 | 1.38 | 1.34 |
| 26 | BB | 1324 | G | N7-C5 | -5.68 | 1.35 | 1.39 |
| 26 | BB | 1733 | G | C2-N3 | 5.68 | 1.37 | 1.32 |
| 1 | AA | 1178 | G | C5'-C4' | 5.68 | 1.58 | 1.51 |
| 1 | AA | 1300 | G | P-O5' | 5.68 | 1.65 | 1.59 |
| 1 | AA | 1397 | C | N1-C6 | 5.68 | 1.40 | 1.37 |
| 26 | BB | 1214 | A | C6-N6 | -5.68 | 1.29 | 1.33 |
| 26 | BB | 1716 | U | N3-C4 | 5.68 | 1.43 | 1.38 |
| 26 | BB | 1859 | U | C4'-C3' | -5.68 | 1.46 | 1.52 |
| 26 | BB | 2203 | U | C4-C5 | 5.68 | 1.48 | 1.43 |
| 1 | AA | 729 | A | C4'-O4' | -5.67 | 1.38 | 1.45 |
| 25 | BA | 102 | G | C2-N3 | 5.67 | 1.37 | 1.32 |
| 26 | BB | 797 | G | C4'-C3' | 5.67 | 1.59 | 1.53 |
| 26 | BB | 973 | A | C8-N7 | -5.67 | 1.27 | 1.31 |
| 26 | BB | 2188 | U | C2-O2 | 5.67 | 1.27 | 1.22 |
| 26 | BB | 2453 | A | C4'-O4' | -5.67 | 1.38 | 1.45 |
| 26 | BB | 2488 | G | N9-C4 | 5.67 | 1.42 | 1.38 |
| 13 | AM | 48 | ARG | NE-CZ | 5.67 | 1.40 | 1.33 |
| 26 | BB | 240 | C | C2-O2 | -5.67 | 1.19 | 1.24 |
| 26 | BB | 757 | G | O3'-P | 5.67 | 1.68 | 1.61 |
| 26 | BB | 2015 | A | C5-C6 | 5.67 | 1.46 | 1.41 |
| 26 | BB | 2641 | G | C4'-O4' | -5.67 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2733 | A | C2-N3 | -5.67 | 1.28 | 1.33 |
| 1 | AA | 59 | A | N9-C8 | -5.67 | 1.33 | 1.37 |
| 1 | AA | 608 | A | C4'-C3' | 5.67 | 1.59 | 1.53 |
| 1 | AA | 1013 | G | C4'-O4' | -5.67 | 1.38 | 1.45 |
| 1 | AA | 1423 | G | N3-C4 | 5.67 | 1.39 | 1.35 |
| 26 | BB | 487 | C | C5-C6 | 5.67 | 1.38 | 1.34 |
| 26 | BB | 917 | A | C4'-O4' | -5.67 | 1.38 | 1.45 |
| 26 | BB | 1587 | G | C8-N7 | -5.67 | 1.27 | 1.30 |
| 26 | BB | 2706 | A | C5'-C4' | 5.67 | 1.58 | 1.51 |
| 26 | BB | 2778 | A | N7-C5 | 5.67 | 1.42 | 1.39 |
| 26 | BB | 2845 | U | N1-C2 | 5.67 | 1.43 | 1.38 |
| 1 | AA | 1033 | G | C8-N7 | 5.67 | 1.34 | 1.30 |
| 1 | AA | 1216 | A | P-O5' | 5.67 | 1.65 | 1.59 |
| 26 | BB | 354 | A | C6-N6 | -5.67 | 1.29 | 1.33 |
| 26 | BB | 1195 | G | N7-C5 | 5.67 | 1.42 | 1.39 |
| 26 | BB | 1978 | A | N9-C4 | 5.67 | 1.41 | 1.37 |
| 26 | BB | 2757 | A | C6-N6 | -5.67 | 1.29 | 1.33 |
| 1 | AA | 9 | G | C4'-C3' | 5.67 | 1.59 | 1.53 |
| 1 | AA | 1004 | A | N9-C4 | 5.67 | 1.41 | 1.37 |
| 1 | AA | 1492 | A | N9-C8 | 5.67 | 1.42 | 1.37 |
| 25 | BA | 9 | G | O4'-C1' | 5.67 | 1.49 | 1.41 |
| 26 | BB | 1430 | G | C2-N3 | 5.67 | 1.37 | 1.32 |
| 26 | BB | 1496 | A | C5-C4 | -5.67 | 1.34 | 1.38 |
| 26 | BB | 2467 | C | O4'-C1' | 5.67 | 1.49 | 1.41 |
| 1 | AA | 392 | C | C2-N3 | 5.67 | 1.40 | 1.35 |
| 1 | AA | 1168 | U | C5-C6 | 5.67 | 1.39 | 1.34 |
| 1 | AA | 1220 | G | N3-C4 | 5.67 | 1.39 | 1.35 |
| 1 | AA | 1264 | U | N3-C4 | 5.67 | 1.43 | 1.38 |
| 1 | AA | 1317 | C | O3'-P | 5.67 | 1.68 | 1.61 |
| 26 | BB | 271 | G | C6-N1 | 5.67 | 1.43 | 1.39 |
| 26 | BB | 1035 | U | P-O5' | 5.67 | 1.65 | 1.59 |
| 26 | BB | 1174 | U | C5-C6 | 5.67 | 1.39 | 1.34 |
| 26 | BB | 2123 | G | C5-C6 | 5.67 | 1.48 | 1.42 |
| 26 | BB | 2265 | U | C4'-C3' | 5.67 | 1.59 | 1.53 |
| 26 | BB | 2557 | G | N9-C4 | 5.67 | 1.42 | 1.38 |
| 1 | AA | 166 | U | O5'-C5' | -5.67 | 1.33 | 1.42 |
| 2 | AB | 76 | A | C5-C4 | -5.67 | 1.34 | 1.38 |
| 25 | BA | 73 | A | C5-C4 | -5.67 | 1.34 | 1.38 |
| 25 | BA | 99 | A | P-O5' | 5.67 | 1.65 | 1.59 |
| 26 | BB | 351 | C | P-O5' | 5.67 | 1.65 | 1.59 |
| 26 | BB | 1483 | G | N1-C2 | -5.67 | 1.33 | 1.37 |
| 26 | BB | 2776 | A | C5'-C4' | 5.67 | 1.58 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 43 | BS | 110 | GLU | CG-CD | 5.67 | 1.60 | 1.51 |
| 1 | AA | 170 | U | O3'-P | 5.66 | 1.68 | 1.61 |
| 1 | AA | 440 | C | N1-C6 | 5.66 | 1.40 | 1.37 |
| 1 | AA | 1033 | G | C4'-O4' | -5.66 | 1.38 | 1.45 |
| 26 | BB | 28 | A | C6-N1 | -5.66 | 1.31 | 1.35 |
| 26 | BB | 2488 | G | C2-N3 | 5.66 | 1.37 | 1.32 |
| 1 | AA | 157 | U | O3'-P | 5.66 | 1.68 | 1.61 |
| 1 | AA | 910 | C | C5-C6 | 5.66 | 1.38 | 1.34 |
| 26 | BB | 650 | C | N1-C6 | -5.66 | 1.33 | 1.37 |
| 1 | AA | 466 | A | N3-C4 | 5.66 | 1.38 | 1.34 |
| 1 | AA | 588 | G | N7-C5 | -5.66 | 1.35 | 1.39 |
| 1 | AA | 1206 | G | N1-C2 | 5.66 | 1.42 | 1.37 |
| 3 | AC | 21 | U | C4'-O4' | -5.66 | 1.38 | 1.45 |
| 26 | BB | 231 | A | C3'-O3' | 5.66 | 1.50 | 1.42 |
| 26 | BB | 350 | G | C8-N7 | -5.66 | 1.27 | 1.30 |
| 26 | BB | 416 | U | C5'-C4' | 5.66 | 1.58 | 1.51 |
| 26 | BB | 542 | C | N3-C4 | 5.66 | 1.38 | 1.33 |
| 26 | BB | 562 | U | P-O5' | 5.66 | 1.65 | 1.59 |
| 26 | BB | 1010 | A | N9-C4 | -5.66 | 1.34 | 1.37 |
| 26 | BB | 1132 | U | N3-C4 | 5.66 | 1.43 | 1.38 |
| 26 | BB | 1139 | G | P-O5' | 5.66 | 1.65 | 1.59 |
| 26 | BB | 1735 | A | C8-N7 | -5.66 | 1.27 | 1.31 |
| 26 | BB | 1772 | A | N3-C4 | 5.66 | 1.38 | 1.34 |
| 26 | BB | 2459 | A | P-O5' | 5.66 | 1.65 | 1.59 |
| 26 | BB | 2895 | G | C3'-C2' | -5.66 | 1.46 | 1.52 |
| 1 | AA | 1137 | C | N3-C4 | -5.66 | 1.29 | 1.33 |
| 26 | BB | 172 | A | C5-C6 | -5.66 | 1.35 | 1.41 |
| 26 | BB | 236 | C | P-O5' | 5.66 | 1.65 | 1.59 |
| 26 | BB | 1270 | C | C4-C5 | 5.66 | 1.47 | 1.43 |
| 26 | BB | 1305 | C | C2-O2 | -5.66 | 1.19 | 1.24 |
| 26 | BB | 1610 | A | C6-N6 | 5.66 | 1.38 | 1.33 |
| 26 | BB | 1750 | G | O3'-P | 5.66 | 1.68 | 1.61 |
| 1 | AA | 450 | G | C2'-C1' | 5.66 | 1.59 | 1.53 |
| 25 | BA | 53 | A | C8-N7 | 5.66 | 1.35 | 1.31 |
| 26 | BB | 2344 | U | C4'-O4' | -5.66 | 1.38 | 1.45 |
| 26 | BB | 2492 | U | C5'-C4' | 5.66 | 1.58 | 1.51 |
| 1 | AA | 101 | A | C3'-O3' | 5.66 | 1.50 | 1.42 |
| 1 | AA | 668 | G | C4'-O4' | -5.66 | 1.38 | 1.45 |
| 1 | AA | 691 | G | C2-N3 | 5.66 | 1.37 | 1.32 |
| 1 | AA | 1390 | U | N3-C4 | 5.66 | 1.43 | 1.38 |
| 26 | BB | 164 | C | N1-C2 | 5.66 | 1.45 | 1.40 |
| 26 | BB | 211 | C | C4'-C3' | -5.66 | 1.46 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 670 | A | N3-C4 | 5.66 | 1.38 | 1.34 |
| 26 | BB | 1363 | C | C4'-O4' | -5.66 | 1.38 | 1.45 |
| 26 | BB | 2160 | C | P-O5' | -5.66 | 1.54 | 1.59 |
| 26 | BB | 2309 | A | N1-C2 | -5.66 | 1.29 | 1.34 |
| 1 | AA | 337 | G | N7-C5 | -5.65 | 1.35 | 1.39 |
| 1 | AA | 793 | U | C2-N3 | 5.65 | 1.41 | 1.37 |
| 2 | AB | 12 | U | N1-C2 | 5.65 | 1.43 | 1.38 |
| 26 | BB | 1444 | G | P-O5' | 5.65 | 1.65 | 1.59 |
| 26 | BB | 2153 | C | C2'-O2' | 5.65 | 1.49 | 1.41 |
| 26 | BB | 2650 | U | C4-C5 | 5.65 | 1.48 | 1.43 |
| 1 | AA | 879 | C | P-O5' | 5.65 | 1.65 | 1.59 |
| 1 | AA | 1181 | G | N1-C2 | 5.65 | 1.42 | 1.37 |
| 26 | BB | 33 | C | O3'-P | 5.65 | 1.68 | 1.61 |
| 26 | BB | 258 | G | C4'-O4' | -5.65 | 1.38 | 1.45 |
| 26 | BB | 336 | C | O3'-P | 5.65 | 1.68 | 1.61 |
| 26 | BB | 752 | A | N3-C4 | 5.65 | 1.38 | 1.34 |
| 26 | BB | 1611 | C | P-O5' | 5.65 | 1.65 | 1.59 |
| 26 | BB | 2387 | U | N1-C6 | 5.65 | 1.43 | 1.38 |
| 26 | BB | 2470 | G | C4'-O4' | -5.65 | 1.38 | 1.45 |
| 29 | BE | 166 | GLY | CA-C | -5.65 | 1.42 | 1.51 |
| 26 | BB | 254 | G | N1-C2 | 5.65 | 1.42 | 1.37 |
| 26 | BB | 1024 | G | C4'-C3' | -5.65 | 1.46 | 1.52 |
| 26 | BB | 1037 | G | P-O5' | 5.65 | 1.65 | 1.59 |
| 26 | BB | 1325 | U | C2'-C1' | 5.65 | 1.59 | 1.53 |
| 26 | BB | 2012 | G | N1-C2 | 5.65 | 1.42 | 1.37 |
| 1 | AA | 469 | C | C5'-C4' | 5.65 | 1.58 | 1.51 |
| 26 | BB | 2276 | G | N9-C8 | -5.65 | 1.33 | 1.37 |
| 1 | AA | 14 | U | C4'-C3' | 5.65 | 1.59 | 1.53 |
| 1 | AA | 175 | C | C2-N3 | 5.65 | 1.40 | 1.35 |
| 1 | AA | 185 | U | N3-C4 | 5.65 | 1.43 | 1.38 |
| 1 | AA | 229 | U | C3'-O3' | 5.65 | 1.50 | 1.42 |
| 1 | AA | 467 | U | C2-N3 | 5.65 | 1.41 | 1.37 |
| 1 | AA | 593 | U | C4-C5 | 5.65 | 1.48 | 1.43 |
| 1 | AA | 812 | G | C5'-C4' | 5.65 | 1.58 | 1.51 |
| 6 | AF | 68 | HIS | CB-CG | 5.65 | 1.60 | 1.50 |
| 26 | BB | 139 | U | C2'-C1' | -5.65 | 1.47 | 1.53 |
| 26 | BB | 1155 | A | C3'-C2' | 5.65 | 1.59 | 1.52 |
| 1 | AA | 821 | G | N1-C2 | -5.65 | 1.33 | 1.37 |
| 26 | BB | 733 | G | C5-C4 | -5.65 | 1.34 | 1.38 |
| 26 | BB | 2032 | G | C2'-C1' | 5.65 | 1.59 | 1.53 |
| 26 | BB | 2035 | G | C6-N1 | 5.65 | 1.43 | 1.39 |
| 1 | AA | 282 | A | P-O5' | 5.64 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 932 | C | C5-C6 | 5.64 | 1.38 | 1.34 |
| 26 | BB | 1128 | G | C4'-O4' | -5.64 | 1.38 | 1.45 |
| 26 | BB | 1342 | A | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 26 | BB | 1441 | G | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 26 | BB | 1733 | G | N7-C5 | 5.64 | 1.42 | 1.39 |
| 26 | BB | 1903 | G | C2-N3 | 5.64 | 1.37 | 1.32 |
| 26 | BB | 1949 | G | C8-N7 | 5.64 | 1.34 | 1.30 |
| 26 | BB | 2272 | U | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 26 | BB | 2497 | A | C2-N3 | -5.64 | 1.28 | 1.33 |
| 26 | BB | 2676 | C | N1-C6 | -5.64 | 1.33 | 1.37 |
| 1 | AA | 203 | G | C2-N2 | -5.64 | 1.28 | 1.34 |
| 1 | AA | 641 | U | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 1 | AA | 845 | A | C2-N3 | -5.64 | 1.28 | 1.33 |
| 1 | AA | 1266 | G | C5-C4 | 5.64 | 1.42 | 1.38 |
| 1 | AA | 1283 | U | C5-C6 | 5.64 | 1.39 | 1.34 |
| 1 | AA | 1320 | C | C2-O2 | -5.64 | 1.19 | 1.24 |
| 1 | AA | 1352 | C | C2-N3 | 5.64 | 1.40 | 1.35 |
| 26 | BB | 288 | U | C3'-C2' | -5.64 | 1.46 | 1.52 |
| 26 | BB | 973 | A | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 26 | BB | 2082 | A | C4'-O4' | -5.64 | 1.38 | 1.45 |
| 26 | BB | 2321 | U | C4'-O4' | -5.64 | 1.38 | 1.45 |
| 26 | BB | 2395 | C | C4-C5 | 5.64 | 1.47 | 1.43 |
| 26 | BB | 2851 | A | C4'-C3' | 5.64 | 1.59 | 1.53 |
| 26 | BB | 2892 | G | C2-N3 | 5.64 | 1.37 | 1.32 |
| 2 | AB | 5 | G | C2'-C1' | -5.64 | 1.47 | 1.53 |
| 26 | BB | 1024 | G | C6-N1 | 5.64 | 1.43 | 1.39 |
| 26 | BB | 2375 | G | P-O5' | 5.64 | 1.65 | 1.59 |
| 1 | AA | 25 | C | O4'-C1' | -5.64 | 1.34 | 1.41 |
| 1 | AA | 232 | G | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 2 | AB | 25 | C | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 26 | BB | 797 | G | C4'-O4' | -5.64 | 1.38 | 1.45 |
| 26 | BB | 1729 | U | C4-C5 | 5.64 | 1.48 | 1.43 |
| 26 | BB | 1900 | A | N9-C8 | 5.64 | 1.42 | 1.37 |
| 26 | BB | 2541 | A | C6-N6 | -5.64 | 1.29 | 1.33 |
| 26 | BB | 2843 | G | C3'-O3' | 5.64 | 1.50 | 1.42 |
| 26 | BB | 2878 | U | C3'-C2' | -5.64 | 1.46 | 1.52 |
| 1 | AA | 1000 | A | O3'-P | 5.64 | 1.68 | 1.61 |
| 1 | AA | 1535 | C | C4'-O4' | -5.64 | 1.38 | 1.45 |
| 26 | BB | 676 | A | N7-C5 | -5.64 | 1.35 | 1.39 |
| 26 | BB | 737 | C | N3-C4 | 5.64 | 1.37 | 1.33 |
| 49 | BY | 67 | LYS | CD-CE | 5.64 | 1.65 | 1.51 |
| 1 | AA | 567 | G | P-O5' | -5.64 | 1.54 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 19 | AS | 25 | ARG | NE-CZ | 5.64 | 1.40 | 1.33 |
| 26 | BB | 367 | G | C8-N7 | -5.64 | 1.27 | 1.30 |
| 26 | BB | 489 | G | C5-C4 | 5.64 | 1.42 | 1.38 |
| 26 | BB | 767 | U | O3'-P | 5.64 | 1.68 | 1.61 |
| 26 | BB | 1538 | G | C5'-C4' | 5.64 | 1.58 | 1.51 |
| 26 | BB | 1969 | A | C2'-C1' | -5.64 | 1.47 | 1.53 |
| 26 | BB | 2032 | G | C2-N3 | 5.64 | 1.37 | 1.32 |
| 26 | BB | 2200 | C | C2-N3 | 5.64 | 1.40 | 1.35 |
| 26 | BB | 2270 | A | C6-N6 | -5.64 | 1.29 | 1.33 |
| 26 | BB | 2473 | U | C4'-O4' | -5.64 | 1.38 | 1.45 |
| 26 | BB | 2728 | U | N1-C2 | 5.64 | 1.43 | 1.38 |
| 26 | BB | 2753 | A | C2'-C1' | -5.64 | 1.47 | 1.53 |
| 1 | AA | 365 | U | C5-C6 | 5.63 | 1.39 | 1.34 |
| 1 | AA | 471 | U | C3'-C2' | 5.63 | 1.59 | 1.52 |
| 1 | AA | 1255 | G | C2-N3 | 5.63 | 1.37 | 1.32 |
| 1 | AA | 1528 | U | C5-C6 | 5.63 | 1.39 | 1.34 |
| 26 | BB | 161 | A | P-O5' | 5.63 | 1.65 | 1.59 |
| 26 | BB | 785 | G | C5-C4 | 5.63 | 1.42 | 1.38 |
| 26 | BB | 799 | G | C6-O6 | -5.63 | 1.19 | 1.24 |
| 26 | BB | 1219 | U | O3'-P | 5.63 | 1.68 | 1.61 |
| 26 | BB | 1377 | G | N9-C8 | -5.63 | 1.33 | 1.37 |
| 26 | BB | 1625 | C | C2'-C1' | 5.63 | 1.59 | 1.53 |
| 26 | BB | 1627 | G | C4'-O4' | -5.63 | 1.38 | 1.45 |
| 26 | BB | 2016 | U | C5'-C4' | 5.63 | 1.58 | 1.51 |
| 26 | BB | 2074 | U | C3'-O3' | -5.63 | 1.34 | 1.42 |
| 1 | AA | 853 | C | O4'-C1' | 5.63 | 1.49 | 1.41 |
| 1 | AA | 1050 | G | N7-C5 | 5.63 | 1.42 | 1.39 |
| 26 | BB | 49 | A | C2'-C1' | -5.63 | 1.47 | 1.53 |
| 26 | BB | 285 | G | N7-C5 | 5.63 | 1.42 | 1.39 |
| 26 | BB | 1532 | A | P-O5' | 5.63 | 1.65 | 1.59 |
| 26 | BB | 1557 | C | C4'-C3' | 5.63 | 1.59 | 1.53 |
| 26 | BB | 2828 | G | N9-C4 | 5.63 | 1.42 | 1.38 |
| 26 | BB | 2829 | A | C4'-C3' | 5.63 | 1.59 | 1.53 |
| 1 | AA | 419 | C | O3'-P | 5.63 | 1.68 | 1.61 |
| 3 | AC | 53 | G | C2-N3 | 5.63 | 1.37 | 1.32 |
| 26 | BB | 374 | A | P-O5' | 5.63 | 1.65 | 1.59 |
| 26 | BB | 725 | G | C5-C4 | -5.63 | 1.34 | 1.38 |
| 26 | BB | 1251 | C | C4-N4 | -5.63 | 1.28 | 1.33 |
| 32 | BH | 61 | TRP | CG-CD1 | -5.63 | 1.28 | 1.36 |
| 1 | AA | 568 | G | C6-O6 | -5.63 | 1.19 | 1.24 |
| 26 | BB | 754 | U | C4-C5 | 5.63 | 1.48 | 1.43 |
| 26 | BB | 774 | G | O3'-P | 5.63 | 1.68 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2668 | G | N3-C4 | 5.63 | 1.39 | 1.35 |
| 1 | AA | 520 | A | P-O5' | 5.63 | 1.65 | 1.59 |
| 4 | AD | 19 | G | C2-N3 | 5.63 | 1.37 | 1.32 |
| 25 | BA | 28 | C | O4'-C1' | 5.63 | 1.49 | 1.41 |
| 26 | BB | 284 | U | N3-C4 | 5.63 | 1.43 | 1.38 |
| 26 | BB | 1320 | C | N1-C6 | 5.63 | 1.40 | 1.37 |
| 26 | BB | 1418 | G | C3'-C2' | 5.63 | 1.59 | 1.52 |
| 26 | BB | 1901 | A | C5-C4 | -5.63 | 1.34 | 1.38 |
| 26 | BB | 2145 | C | N1-C6 | 5.63 | 1.40 | 1.37 |
| 26 | BB | 2439 | A | P-O5' | 5.63 | 1.65 | 1.59 |
| 26 | BB | 2807 | U | C4'-O4' | -5.63 | 1.38 | 1.45 |
| 1 | AA | 1158 | C | O4'-C1' | 5.63 | 1.49 | 1.41 |
| 1 | AA | 1222 | G | N9-C8 | -5.63 | 1.33 | 1.37 |
| 1 | AA | 1228 | C | N3-C4 | 5.63 | 1.37 | 1.33 |
| 26 | BB | 36 | G | C4'-C3' | 5.63 | 1.59 | 1.53 |
| 26 | BB | 163 | C | C4-N4 | -5.63 | 1.28 | 1.33 |
| 26 | BB | 492 | A | N3-C4 | 5.63 | 1.38 | 1.34 |
| 26 | BB | 566 | U | O4'-C1' | 5.63 | 1.49 | 1.41 |
| 26 | BB | 843 | G | O3'-P | -5.63 | 1.54 | 1.61 |
| 26 | BB | 875 | G | C6-N1 | -5.63 | 1.35 | 1.39 |
| 26 | BB | 1159 | U | C3'-C2' | -5.63 | 1.46 | 1.52 |
| 26 | BB | 1295 | C | O3'-P | 5.63 | 1.68 | 1.61 |
| 26 | BB | 1363 | C | C5'-C4' | 5.63 | 1.58 | 1.51 |
| 26 | BB | 1396 | U | C2-O2 | 5.63 | 1.27 | 1.22 |
| 26 | BB | 2428 | G | C8-N7 | 5.63 | 1.34 | 1.30 |
| 26 | BB | 2544 | G | C5-C6 | 5.63 | 1.48 | 1.42 |
| 26 | BB | 67 | U | N1-C6 | 5.62 | 1.43 | 1.38 |
| 26 | BB | 303 | G | N9-C8 | 5.62 | 1.41 | 1.37 |
| 26 | BB | 1010 | A | C2-N3 | -5.62 | 1.28 | 1.33 |
| 26 | BB | 1748 | C | P-O5' | 5.62 | 1.65 | 1.59 |
| 26 | BB | 1804 | C | C4-C5 | 5.62 | 1.47 | 1.43 |
| 26 | BB | 1956 | U | C2-N3 | -5.62 | 1.33 | 1.37 |
| 26 | BB | 2140 | G | C4'-O4' | -5.62 | 1.38 | 1.45 |
| 26 | BB | 2557 | G | C5'-C4' | 5.62 | 1.58 | 1.51 |
| 26 | BB | 2750 | A | N1-C2 | -5.62 | 1.29 | 1.34 |
| 26 | BB | 2845 | U | C4-O4 | 5.62 | 1.28 | 1.23 |
| 1 | AA | 549 | C | N3-C4 | 5.62 | 1.37 | 1.33 |
| 1 | AA | 605 | U | C4-O4 | -5.62 | 1.19 | 1.23 |
| 1 | AA | 646 | G | C5-C6 | 5.62 | 1.48 | 1.42 |
| 1 | AA | 1430 | A | C1'-N9 | 5.62 | 1.57 | 1.48 |
| 26 | BB | 280 | U | C2-N3 | 5.62 | 1.41 | 1.37 |
| 26 | BB | 427 | U | C2'-O2' | 5.62 | 1.49 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 850 | U | O3'-P | 5.62 | 1.67 | 1.61 |
| 26 | BB | 1817 | G | C2-N2 | -5.62 | 1.28 | 1.34 |
| 26 | BB | 2216 | G | C4'-C3' | 5.62 | 1.59 | 1.53 |
| 1 | AA | 65 | A | P-O5' | 5.62 | 1.65 | 1.59 |
| 1 | AA | 141 | G | C8-N7 | 5.62 | 1.34 | 1.30 |
| 1 | AA | 429 | U | C4-C5 | 5.62 | 1.48 | 1.43 |
| 1 | AA | 475 | C | C5'-C4' | 5.62 | 1.58 | 1.51 |
| 1 | AA | 555 | U | C5-C6 | 5.62 | 1.39 | 1.34 |
| 1 | AA | 881 | G | N9-C4 | 5.62 | 1.42 | 1.38 |
| 1 | AA | 1001 | C | C2-O2 | -5.62 | 1.19 | 1.24 |
| 1 | AA | 1391 | U | C4-C5 | 5.62 | 1.48 | 1.43 |
| 3 | AC | 14 | G | N9-C4 | 5.62 | 1.42 | 1.38 |
| 26 | BB | 264 | C | P-O5' | 5.62 | 1.65 | 1.59 |
| 26 | BB | 2545 | G | C3'-C2' | 5.62 | 1.59 | 1.52 |
| 26 | BB | 2833 | U | C2-N3 | 5.62 | 1.41 | 1.37 |
| 1 | AA | 702 | A | C2-N3 | 5.62 | 1.38 | 1.33 |
| 1 | AA | 1197 | A | C2-N3 | 5.62 | 1.38 | 1.33 |
| 26 | BB | 149 | A | C5-C4 | -5.62 | 1.34 | 1.38 |
| 26 | BB | 353 | C | C4'-O4' | -5.62 | 1.38 | 1.45 |
| 26 | BB | 383 | C | C2-N3 | 5.62 | 1.40 | 1.35 |
| 26 | BB | 1121 | C | P-O5' | 5.62 | 1.65 | 1.59 |
| 26 | BB | 1250 | G | C5'-C4' | 5.62 | 1.58 | 1.51 |
| 1 | AA | 258 | G | C2-N3 | -5.62 | 1.28 | 1.32 |
| 1 | AA | 259 | G | C6-N1 | 5.62 | 1.43 | 1.39 |
| 1 | AA | 1455 | G | N7-C5 | 5.62 | 1.42 | 1.39 |
| 26 | BB | 32 | C | O3'-P | 5.62 | 1.67 | 1.61 |
| 26 | BB | 377 | G | N3-C4 | 5.62 | 1.39 | 1.35 |
| 26 | BB | 427 | U | C2'-C1' | 5.62 | 1.59 | 1.53 |
| 26 | BB | 582 | A | C6-N6 | 5.62 | 1.38 | 1.33 |
| 26 | BB | 829 | A | P-O5' | 5.62 | 1.65 | 1.59 |
| 26 | BB | 1026 | G | C6-O6 | -5.62 | 1.19 | 1.24 |
| 26 | BB | 1367 | A | C3'-O3' | 5.62 | 1.50 | 1.42 |
| 26 | BB | 1512 | C | C5-C6 | 5.62 | 1.38 | 1.34 |
| 26 | BB | 2259 | U | C4-C5 | 5.62 | 1.48 | 1.43 |
| 26 | BB | 2884 | U | O4'-C1' | 5.62 | 1.49 | 1.41 |
| 1 | AA | 470 | C | C3'-C2' | 5.62 | 1.59 | 1.52 |
| 26 | BB | 2193 | G | C4'-O4' | -5.62 | 1.38 | 1.45 |
| 26 | BB | 2772 | C | C5-C6 | 5.62 | 1.38 | 1.34 |
| 1 | AA | 235 | C | O3'-P | 5.62 | 1.67 | 1.61 |
| 1 | AA | 1050 | G | C2'-C1' | -5.62 | 1.47 | 1.53 |
| 1 | AA | 1215 | G | C2-N3 | 5.62 | 1.37 | 1.32 |
| 25 | BA | 99 | A | C4'-C3' | 5.62 | 1.59 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 283 | G | O4'-C1' | 5.62 | 1.49 | 1.41 |
| 26 | BB | 303 | G | N3-C4 | 5.62 | 1.39 | 1.35 |
| 26 | BB | 484 | C | N3-C4 | 5.62 | 1.37 | 1.33 |
| 26 | BB | 2649 | C | N1-C6 | 5.62 | 1.40 | 1.37 |
| 27 | BC | 21 | TYR | CD2-CE2 | 5.62 | 1.47 | 1.39 |
| 42 | BR | 111 | GLU | CB-CG | 5.62 | 1.62 | 1.52 |
| 1 | AA | 1133 | G | C4'-C3' | 5.61 | 1.59 | 1.53 |
| 1 | AA | 1332 | A | C6-N1 | 5.61 | 1.39 | 1.35 |
| 3 | AC | 44 | U | O4'-C1' | 5.61 | 1.49 | 1.41 |
| 26 | BB | 13 | A | N3-C4 | 5.61 | 1.38 | 1.34 |
| 26 | BB | 23 | G | O3'-P | 5.61 | 1.67 | 1.61 |
| 26 | BB | 734 | A | N7-C5 | -5.61 | 1.35 | 1.39 |
| 26 | BB | 768 | G | C4'-C3' | 5.61 | 1.59 | 1.53 |
| 26 | BB | 996 | A | N9-C4 | -5.61 | 1.34 | 1.37 |
| 26 | BB | 1037 | G | C2-N3 | 5.61 | 1.37 | 1.32 |
| 26 | BB | 1139 | G | C2-N2 | 5.61 | 1.40 | 1.34 |
| 26 | BB | 2186 | G | C2-N3 | 5.61 | 1.37 | 1.32 |
| 1 | AA | 28 | A | N1-C2 | -5.61 | 1.29 | 1.34 |
| 1 | AA | 1094 | G | N1-C2 | 5.61 | 1.42 | 1.37 |
| 1 | AA | 1121 | U | C3'-O3' | -5.61 | 1.34 | 1.42 |
| 19 | AS | 68 | SER | CA-CB | -5.61 | 1.44 | 1.52 |
| 26 | BB | 221 | A | C6-N1 | 5.61 | 1.39 | 1.35 |
| 26 | BB | 721 | A | N7-C5 | 5.61 | 1.42 | 1.39 |
| 26 | BB | 890 | C | N3-C4 | 5.61 | 1.37 | 1.33 |
| 1 | AA | 484 | G | C2-N3 | 5.61 | 1.37 | 1.32 |
| 1 | AA | 1502 | A | C6-N1 | -5.61 | 1.31 | 1.35 |
| 2 | AB | 58 | A | N9-C8 | 5.61 | 1.42 | 1.37 |
| 25 | BA | 99 | A | C6-N6 | 5.61 | 1.38 | 1.33 |
| 26 | BB | 243 | U | C2-O2 | 5.61 | 1.27 | 1.22 |
| 26 | BB | 394 | C | C2-N3 | 5.61 | 1.40 | 1.35 |
| 26 | BB | 523 | C | C4'-C3' | 5.61 | 1.59 | 1.53 |
| 26 | BB | 1038 | G | C8-N7 | -5.61 | 1.27 | 1.30 |
| 26 | BB | 1142 | A | C2'-O2' | -5.61 | 1.34 | 1.41 |
| 26 | BB | 1758 | U | C3'-O3' | 5.61 | 1.50 | 1.42 |
| 26 | BB | 2151 | U | C3'-O3' | -5.61 | 1.34 | 1.42 |
| 26 | BB | 2478 | A | O3'-P | 5.61 | 1.67 | 1.61 |
| 1 | AA | 192 | A | C5-C4 | -5.61 | 1.34 | 1.38 |
| 1 | AA | 747 | A | C4'-O4' | -5.61 | 1.38 | 1.45 |
| 26 | BB | 56 | A | C2'-C1' | -5.61 | 1.47 | 1.53 |
| 26 | BB | 868 | U | C4-C5 | 5.61 | 1.48 | 1.43 |
| 1 | AA | 277 | C | C4'-O4' | -5.61 | 1.38 | 1.45 |
| 1 | AA | 1160 | G | P-O5' | 5.61 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1474 | U | C5'-C4' | 5.61 | 1.58 | 1.51 |
| 1 | AA | 1540 | U | C4'-C3' | 5.61 | 1.59 | 1.53 |
| 26 | BB | 248 | G | C8-N7 | -5.61 | 1.27 | 1.30 |
| 26 | BB | 422 | A | C5'-C4' | 5.61 | 1.58 | 1.51 |
| 26 | BB | 623 | C | C2'-O2' | -5.61 | 1.34 | 1.41 |
| 26 | BB | 1018 | U | C4'-O4' | -5.61 | 1.38 | 1.45 |
| 26 | BB | 1696 | G | C2-N2 | 5.61 | 1.40 | 1.34 |
| 26 | BB | 2541 | A | C3'-C2' | 5.61 | 1.59 | 1.52 |
| 26 | BB | 2558 | C | N1-C6 | 5.61 | 1.40 | 1.37 |
| 32 | BH | 1 | SER | CB-OG | 5.61 | 1.49 | 1.42 |
| 1 | AA | 608 | A | N7-C5 | -5.61 | 1.35 | 1.39 |
| 1 | AA | 1230 | C | C4-C5 | -5.61 | 1.38 | 1.43 |
| 26 | BB | 1216 | G | C6-O6 | -5.61 | 1.19 | 1.24 |
| 26 | BB | 2624 | G | C6-O6 | 5.61 | 1.29 | 1.24 |
| 26 | BB | 2848 | G | C3'-C2' | 5.61 | 1.59 | 1.52 |
| 26 | BB | 2863 | C | C4'-C3' | 5.61 | 1.59 | 1.53 |
| 1 | AA | 1257 | A | O3'-P | 5.60 | 1.67 | 1.61 |
| 1 | AA | 1355 | G | N1-C2 | 5.60 | 1.42 | 1.37 |
| 26 | BB | 425 | G | C2-N3 | 5.60 | 1.37 | 1.32 |
| 26 | BB | 1845 | G | C6-N1 | 5.60 | 1.43 | 1.39 |
| 26 | BB | 2535 | G | O4'-C1' | 5.60 | 1.49 | 1.41 |
| 26 | BB | 2817 | U | P-O5' | 5.60 | 1.65 | 1.59 |
| 1 | AA | 566 | G | N1-C2 | 5.60 | 1.42 | 1.37 |
| 2 | AB | 15 | A | C5-C4 | -5.60 | 1.34 | 1.38 |
| 2 | AB | 57 | G | C2-N3 | -5.60 | 1.28 | 1.32 |
| 25 | BA | 4 | C | N1-C6 | 5.60 | 1.40 | 1.37 |
| 26 | BB | 230 | G | C3'-C2' | 5.60 | 1.59 | 1.52 |
| 26 | BB | 1009 | A | C5'-C4' | 5.60 | 1.58 | 1.51 |
| 26 | BB | 1124 | G | P-O5' | 5.60 | 1.65 | 1.59 |
| 26 | BB | 1534 | U | C4'-O4' | -5.60 | 1.38 | 1.45 |
| 26 | BB | 1689 | A | C4'-O4' | -5.60 | 1.38 | 1.45 |
| 26 | BB | 1745 | A | N3-C4 | 5.60 | 1.38 | 1.34 |
| 26 | BB | 2833 | U | C4-C5 | 5.60 | 1.48 | 1.43 |
| 1 | AA | 259 | G | N1-C2 | 5.60 | 1.42 | 1.37 |
| 1 | AA | 327 | A | C1'-N9 | 5.60 | 1.57 | 1.48 |
| 3 | AC | 20 | G | O3'-P | 5.60 | 1.67 | 1.61 |
| 26 | BB | 535 | G | N7-C5 | 5.60 | 1.42 | 1.39 |
| 26 | BB | 665 | U | P-O5' | 5.60 | 1.65 | 1.59 |
| 26 | BB | 1344 | U | C4-C5 | 5.60 | 1.48 | 1.43 |
| 26 | BB | 1535 | A | C2'-C1' | -5.60 | 1.47 | 1.53 |
| 26 | BB | 1896 | G | C5-C4 | -5.60 | 1.34 | 1.38 |
| 26 | BB | 2643 | G | P-O5' | 5.60 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 400 | C | C3'-C2' | -5.60 | 1.46 | 1.52 |
| 1 | AA | 484 | G | C3'-O3' | 5.60 | 1.50 | 1.42 |
| 1 | AA | 901 | A | C5-C4 | -5.60 | 1.34 | 1.38 |
| 1 | AA | 1106 | G | C8-N7 | -5.60 | 1.27 | 1.30 |
| 18 | AR | 71 | ARG | CZ-NH2 | 5.60 | 1.40 | 1.33 |
| 26 | BB | 405 | U | C5-C6 | 5.60 | 1.39 | 1.34 |
| 26 | BB | 893 | C | N3-C4 | 5.60 | 1.37 | 1.33 |
| 26 | BB | 1101 | U | N3-C4 | 5.60 | 1.43 | 1.38 |
| 26 | BB | 1179 | G | C2'-O2' | 5.60 | 1.49 | 1.41 |
| 26 | BB | 1591 | A | C2'-O2' | -5.60 | 1.34 | 1.41 |
| 26 | BB | 1818 | U | C4'-O4' | -5.60 | 1.38 | 1.45 |
| 26 | BB | 2037 | A | C4'-C3' | -5.60 | 1.47 | 1.52 |
| 26 | BB | 2802 | G | C4'-C3' | -5.60 | 1.47 | 1.52 |
| 1 | AA | 234 | C | C4'-O4' | -5.60 | 1.38 | 1.45 |
| 1 | AA | 268 | U | N1-C6 | 5.60 | 1.43 | 1.38 |
| 16 | AP | 23 | GLY | N-CA | 5.60 | 1.54 | 1.46 |
| 25 | BA | 10 | G | C4'-O4' | -5.60 | 1.38 | 1.45 |
| 25 | BA | 16 | G | C5-C6 | 5.60 | 1.48 | 1.42 |
| 26 | BB | 343 | C | C2-O2 | 5.60 | 1.29 | 1.24 |
| 26 | BB | 1735 | A | C4'-C3' | 5.60 | 1.59 | 1.53 |
| 26 | BB | 1752 | C | C2'-C1' | 5.60 | 1.59 | 1.53 |
| 26 | BB | 1961 | C | C3'-O3' | 5.60 | 1.50 | 1.42 |
| 26 | BB | 2117 | A | C2'-C1' | -5.60 | 1.47 | 1.53 |
| 26 | BB | 2556 | C | N1-C6 | 5.60 | 1.40 | 1.37 |
| 26 | BB | 2799 | A | P-O5' | 5.60 | 1.65 | 1.59 |
| 26 | BB | 2878 | U | C4-O4 | 5.60 | 1.28 | 1.23 |
| 1 | AA | 1126 | U | N1-C6 | 5.60 | 1.43 | 1.38 |
| 26 | BB | 194 | G | C8-N7 | -5.60 | 1.27 | 1.30 |
| 26 | BB | 277 | G | N1-C2 | 5.60 | 1.42 | 1.37 |
| 26 | BB | 412 | A | N3-C4 | -5.60 | 1.31 | 1.34 |
| 26 | BB | 2685 | G | N9-C8 | 5.60 | 1.41 | 1.37 |
| 26 | BB | 2731 | G | C6-N1 | 5.60 | 1.43 | 1.39 |
| 1 | AA | 225 | C | C2-N3 | 5.59 | 1.40 | 1.35 |
| 1 | AA | 877 | G | O4'-C1' | 5.59 | 1.49 | 1.41 |
| 1 | AA | 1467 | C | C4-C5 | 5.59 | 1.47 | 1.43 |
| 25 | BA | 47 | C | C3'-C2' | -5.59 | 1.46 | 1.52 |
| 25 | BA | 112 | G | N1-C2 | 5.59 | 1.42 | 1.37 |
| 26 | BB | 1893 | C | N3-C4 | -5.59 | 1.30 | 1.33 |
| 1 | AA | 435 | A | C2'-O2' | -5.59 | 1.34 | 1.41 |
| 25 | BA | 56 | G | P-O5' | 5.59 | 1.65 | 1.59 |
| 1 | AA | 1211 | U | N3-C4 | 5.59 | 1.43 | 1.38 |
| 25 | BA | 114 | C | C5-C6 | 5.59 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 854 | C | N1-C6 | 5.59 | 1.40 | 1.37 |
| 26 | BB | 1258 | U | C2-N3 | 5.59 | 1.41 | 1.37 |
| 26 | BB | 1826 | G | C8-N7 | -5.59 | 1.27 | 1.30 |
| 26 | BB | 2581 | G | C8-N7 | 5.59 | 1.34 | 1.30 |
| 40 | BP | 63 | ARG | NE-CZ | 5.59 | 1.40 | 1.33 |
| 1 | AA | 6 | G | C4'-C3' | -5.59 | 1.47 | 1.52 |
| 1 | AA | 94 | G | N1-C2 | -5.59 | 1.33 | 1.37 |
| 1 | AA | 97 | G | N1-C2 | 5.59 | 1.42 | 1.37 |
| 1 | AA | 634 | C | C2'-C1' | 5.59 | 1.59 | 1.53 |
| 1 | AA | 947 | G | N3-C4 | 5.59 | 1.39 | 1.35 |
| 1 | AA | 1064 | G | C5-C4 | 5.59 | 1.42 | 1.38 |
| 1 | AA | 1404 | C | C2-O2 | 5.59 | 1.29 | 1.24 |
| 25 | BA | 95 | U | C2-O2 | 5.59 | 1.27 | 1.22 |
| 26 | BB | 652 | U | C2'-C1' | 5.59 | 1.59 | 1.53 |
| 26 | BB | 1175 | A | N9-C8 | 5.59 | 1.42 | 1.37 |
| 1 | AA | 369 | G | O4'-C1' | 5.59 | 1.49 | 1.41 |
| 1 | AA | 1191 | A | C6-N6 | 5.59 | 1.38 | 1.33 |
| 26 | BB | 806 | C | N1-C2 | -5.59 | 1.34 | 1.40 |
| 26 | BB | 1169 | A | C3'-C2' | 5.59 | 1.59 | 1.52 |
| 26 | BB | 2470 | G | N7-C5 | 5.59 | 1.42 | 1.39 |
| 1 | AA | 287 | U | P-O5' | 5.59 | 1.65 | 1.59 |
| 1 | AA | 346 | G | C5'-C4' | 5.59 | 1.58 | 1.51 |
| 1 | AA | 970 | C | C4-N4 | 5.59 | 1.39 | 1.33 |
| 1 | AA | 1088 | G | C5-C4 | 5.59 | 1.42 | 1.38 |
| 26 | BB | 89 | A | O3'-P | -5.59 | 1.54 | 1.61 |
| 26 | BB | 711 | G | N3-C4 | 5.59 | 1.39 | 1.35 |
| 26 | BB | 890 | C | C4'-C3' | -5.59 | 1.47 | 1.52 |
| 26 | BB | 1543 | G | C4'-O4' | -5.59 | 1.38 | 1.45 |
| 26 | BB | 1591 | A | N9-C8 | -5.59 | 1.33 | 1.37 |
| 26 | BB | 2124 | G | N9-C8 | 5.59 | 1.41 | 1.37 |
| 26 | BB | 2288 | A | C8-N7 | -5.59 | 1.27 | 1.31 |
| 26 | BB | 2642 | G | C5'-C4' | 5.59 | 1.58 | 1.51 |
| 43 | BS | 19 | GLN | CA-CB | 5.59 | 1.66 | 1.53 |
| 1 | AA | 45 | G | C6-N1 | 5.58 | 1.43 | 1.39 |
| 1 | AA | 472 | U | C4-C5 | 5.58 | 1.48 | 1.43 |
| 1 | AA | 576 | C | C5'-C4' | 5.58 | 1.58 | 1.51 |
| 1 | AA | 656 | G | P-O5' | 5.58 | 1.65 | 1.59 |
| 1 | AA | 1003 | G | N7-C5 | 5.58 | 1.42 | 1.39 |
| 3 | AC | 36 | U | N1-C2 | 5.58 | 1.43 | 1.38 |
| 26 | BB | 1434 | A | C1'-N9 | 5.58 | 1.57 | 1.48 |
| 26 | BB | 2634 | A | O3'-P | 5.58 | 1.67 | 1.61 |
| 1 | AA | 33 | A | C4'-O4' | -5.58 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 144 | G | P-O5' | 5.58 | 1.65 | 1.59 |
| 1 | AA | 1006 | G | C2-N3 | 5.58 | 1.37 | 1.32 |
| 1 | AA | 1043 | G | O4'-C1' | 5.58 | 1.49 | 1.41 |
| 1 | AA | 1058 | G | N3-C4 | -5.58 | 1.31 | 1.35 |
| 1 | AA | 1127 | G | C8-N7 | 5.58 | 1.34 | 1.30 |
| 26 | BB | 733 | G | N7-C5 | 5.58 | 1.42 | 1.39 |
| 26 | BB | 803 | U | C4-C5 | 5.58 | 1.48 | 1.43 |
| 26 | BB | 1388 | G | C2-N3 | 5.58 | 1.37 | 1.32 |
| 26 | BB | 1460 | U | C2'-C1' | -5.58 | 1.47 | 1.53 |
| 36 | BL | 27 | ARG | CD-NE | 5.58 | 1.55 | 1.46 |
| 1 | AA | 608 | A | C8-N7 | -5.58 | 1.27 | 1.31 |
| 1 | AA | 838 | G | N1-C2 | 5.58 | 1.42 | 1.37 |
| 1 | AA | 870 | U | C4'-O4' | -5.58 | 1.38 | 1.45 |
| 1 | AA | 952 | U | O3'-P | 5.58 | 1.67 | 1.61 |
| 1 | AA | 1057 | G | N9-C8 | 5.58 | 1.41 | 1.37 |
| 25 | BA | 47 | C | C4-C5 | 5.58 | 1.47 | 1.43 |
| 26 | BB | 39 | G | C2-N2 | -5.58 | 1.28 | 1.34 |
| 26 | BB | 1079 | C | N1-C6 | 5.58 | 1.40 | 1.37 |
| 26 | BB | 2709 | G | C6-N1 | -5.58 | 1.35 | 1.39 |
| 1 | AA | 565 | U | C2-O2 | 5.58 | 1.27 | 1.22 |
| 1 | AA | 1423 | G | C4'-O4' | -5.58 | 1.38 | 1.45 |
| 4 | AD | 31 | G | C8-N7 | 5.58 | 1.34 | 1.30 |
| 26 | BB | 2483 | C | C2-O2 | -5.58 | 1.19 | 1.24 |
| 1 | AA | 211 | G | N7-C5 | 5.58 | 1.42 | 1.39 |
| 1 | AA | 385 | C | C2-N3 | 5.58 | 1.40 | 1.35 |
| 1 | AA | 513 | C | C5'-C4' | 5.58 | 1.58 | 1.51 |
| 1 | AA | 579 | A | C6-N6 | -5.58 | 1.29 | 1.33 |
| 1 | AA | 1339 | A | C4'-O4' | -5.58 | 1.38 | 1.45 |
| 1 | AA | 1492 | A | C8-N7 | 5.58 | 1.35 | 1.31 |
| 26 | BB | 4 | U | C2'-C1' | 5.58 | 1.59 | 1.53 |
| 26 | BB | 1406 | U | C2-N3 | 5.58 | 1.41 | 1.37 |
| 26 | BB | 1455 | G | C8-N7 | -5.58 | 1.27 | 1.30 |
| 26 | BB | 1904 | G | C4'-C3' | 5.58 | 1.59 | 1.53 |
| 26 | BB | 2893 | A | C6-N1 | 5.58 | 1.39 | 1.35 |
| 31 | BG | 99 | PHE | CG-CD1 | 5.58 | 1.47 | 1.38 |
| 1 | AA | 846 | G | N9-C4 | 5.58 | 1.42 | 1.38 |
| 1 | AA | 1000 | A | N3-C4 | 5.58 | 1.38 | 1.34 |
| 1 | AA | 1030 | U | C2-O2 | 5.58 | 1.27 | 1.22 |
| 1 | AA | 1060 | U | C3'-C2' | 5.58 | 1.59 | 1.52 |
| 1 | AA | 1236 | A | O3'-P | 5.58 | 1.67 | 1.61 |
| 1 | AA | 1514 | G | C5-C4 | 5.58 | 1.42 | 1.38 |
| 26 | BB | 17 | G | C5-C6 | 5.58 | 1.48 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 177 | G | C2-N3 | 5.58 | 1.37 | 1.32 |
| 26 | BB | 224 | U | N3-C4 | 5.58 | 1.43 | 1.38 |
| 26 | BB | 465 | G | O3'-P | 5.58 | 1.67 | 1.61 |
| 26 | BB | 1239 | G | C8-N7 | -5.58 | 1.27 | 1.30 |
| 26 | BB | 1515 | A | C6-N1 | -5.58 | 1.31 | 1.35 |
| 26 | BB | 1717 | A | C2'-C1' | 5.58 | 1.59 | 1.53 |
| 26 | BB | 1737 | G | C2-N2 | -5.58 | 1.28 | 1.34 |
| 26 | BB | 1981 | A | C5'-C4' | 5.58 | 1.58 | 1.51 |
| 26 | BB | 2566 | A | P-O5' | 5.58 | 1.65 | 1.59 |
| 26 | BB | 559 | G | N3-C4 | 5.57 | 1.39 | 1.35 |
| 26 | BB | 1878 | G | C2'-C1' | 5.57 | 1.59 | 1.53 |
| 26 | BB | 2317 | A | N3-C4 | 5.57 | 1.38 | 1.34 |
| 26 | BB | 2576 | G | N7-C5 | -5.57 | 1.35 | 1.39 |
| 1 | AA | 258 | G | C5-C6 | 5.57 | 1.48 | 1.42 |
| 1 | AA | 473 | U | N3-C4 | 5.57 | 1.43 | 1.38 |
| 1 | AA | 1210 | C | C5'-C4' | 5.57 | 1.58 | 1.51 |
| 4 | AD | 39 | A | P-O5' | 5.57 | 1.65 | 1.59 |
| 26 | BB | 30 | G | C4'-C3' | 5.57 | 1.59 | 1.53 |
| 26 | BB | 342 | A | O4'-C1' | 5.57 | 1.48 | 1.41 |
| 26 | BB | 1283 | G | O3'-P | 5.57 | 1.67 | 1.61 |
| 26 | BB | 1318 | U | N1-C2 | 5.57 | 1.43 | 1.38 |
| 26 | BB | 1790 | C | C4'-O4' | -5.57 | 1.38 | 1.45 |
| 1 | AA | 89 | U | C5-C6 | 5.57 | 1.39 | 1.34 |
| 1 | AA | 237 | G | N9-C8 | 5.57 | 1.41 | 1.37 |
| 1 | AA | 730 | G | N1-C2 | 5.57 | 1.42 | 1.37 |
| 26 | BB | 539 | G | C2-N3 | 5.57 | 1.37 | 1.32 |
| 26 | BB | 1300 | G | N7-C5 | 5.57 | 1.42 | 1.39 |
| 26 | BB | 1383 | A | N3-C4 | 5.57 | 1.38 | 1.34 |
| 26 | BB | 1797 | G | C3'-C2' | 5.57 | 1.59 | 1.52 |
| 26 | BB | 2381 | A | C8-N7 | 5.57 | 1.35 | 1.31 |
| 1 | AA | 1391 | U | O3'-P | 5.57 | 1.67 | 1.61 |
| 2 | AB | 29 | G | P-O5' | 5.57 | 1.65 | 1.59 |
| 26 | BB | 2763 | G | C5-C4 | 5.57 | 1.42 | 1.38 |
| 1 | AA | 268 | U | P-O5' | 5.57 | 1.65 | 1.59 |
| 1 | AA | 327 | A | C5-C6 | -5.57 | 1.36 | 1.41 |
| 1 | AA | 384 | G | C6-N1 | 5.57 | 1.43 | 1.39 |
| 1 | AA | 448 | A | N3-C4 | 5.57 | 1.38 | 1.34 |
| 1 | AA | 658 | C | C4-C5 | 5.57 | 1.47 | 1.43 |
| 1 | AA | 1067 | A | P-O5' | -5.57 | 1.54 | 1.59 |
| 26 | BB | 1534 | U | C2-N3 | 5.57 | 1.41 | 1.37 |
| 26 | BB | 1540 | G | C6-N1 | 5.57 | 1.43 | 1.39 |
| 26 | BB | 1610 | A | O3'-P | 5.57 | 1.67 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1632 | A | N1-C2 | -5.57 | 1.29 | 1.34 |
| 26 | BB | 2450 | A | C5-C4 | -5.57 | 1.34 | 1.38 |
| 26 | BB | 2561 | U | C2'-C1' | 5.57 | 1.59 | 1.53 |
| 26 | BB | 2642 | G | P-O5' | 5.57 | 1.65 | 1.59 |
| 1 | AA | 197 | A | N9-C4 | -5.57 | 1.34 | 1.37 |
| 1 | AA | 211 | G | N3-C4 | -5.57 | 1.31 | 1.35 |
| 1 | AA | 1010 | U | C3'-C2' | -5.57 | 1.46 | 1.52 |
| 1 | AA | 1152 | A | P-O5' | 5.57 | 1.65 | 1.59 |
| 1 | AA | 1195 | C | C2'-C1' | -5.57 | 1.47 | 1.53 |
| 1 | AA | 1213 | A | C5'-C4' | 5.57 | 1.58 | 1.51 |
| 1 | AA | 1482 | G | N9-C4 | 5.57 | 1.42 | 1.38 |
| 26 | BB | 95 | A | C6-N1 | -5.57 | 1.31 | 1.35 |
| 26 | BB | 120 | U | N3-C4 | 5.57 | 1.43 | 1.38 |
| 26 | BB | 312 | G | N9-C4 | -5.57 | 1.33 | 1.38 |
| 26 | BB | 467 | G | C5'-C4' | 5.57 | 1.58 | 1.51 |
| 26 | BB | 1429 | G | C6-N1 | -5.57 | 1.35 | 1.39 |
| 26 | BB | 2113 | U | N1-C2 | 5.57 | 1.43 | 1.38 |
| 26 | BB | 2240 | U | C2-N3 | 5.57 | 1.41 | 1.37 |
| 28 | BD | 147 | PRO | N-CD | 5.57 | 1.55 | 1.47 |
| 1 | AA | 346 | G | C8-N7 | 5.56 | 1.34 | 1.30 |
| 1 | AA | 533 | A | N9-C4 | 5.56 | 1.41 | 1.37 |
| 1 | AA | 722 | G | N3-C4 | 5.56 | 1.39 | 1.35 |
| 1 | AA | 820 | U | C1'-N1 | 5.56 | 1.57 | 1.48 |
| 1 | AA | 961 | U | C4'-C3' | -5.56 | 1.47 | 1.52 |
| 4 | AD | 32 | G | N9-C4 | -5.56 | 1.33 | 1.38 |
| 9 | AI | 131 | GLU | CG-CD | 5.56 | 1.60 | 1.51 |
| 26 | BB | 1807 | G | N3-C4 | 5.56 | 1.39 | 1.35 |
| 26 | BB | 2803 | G | C2-N3 | 5.56 | 1.37 | 1.32 |
| 1 | AA | 338 | A | C8-N7 | -5.56 | 1.27 | 1.31 |
| 1 | AA | 567 | G | N7-C5 | -5.56 | 1.35 | 1.39 |
| 1 | AA | 1415 | G | C6-N1 | 5.56 | 1.43 | 1.39 |
| 25 | BA | 83 | G | C6-N1 | 5.56 | 1.43 | 1.39 |
| 26 | BB | 777 | G | C5'-C4' | 5.56 | 1.58 | 1.51 |
| 26 | BB | 934 | U | C2'-C1' | -5.56 | 1.47 | 1.53 |
| 26 | BB | 938 | G | C6-O6 | -5.56 | 1.19 | 1.24 |
| 26 | BB | 1378 | A | C5-C4 | -5.56 | 1.34 | 1.38 |
| 26 | BB | 1645 | G | N7-C5 | -5.56 | 1.35 | 1.39 |
| 26 | BB | 2281 | A | N9-C8 | 5.56 | 1.42 | 1.37 |
| 1 | AA | 202 | G | C5-C6 | 5.56 | 1.48 | 1.42 |
| 26 | BB | 273 | G | C6-N1 | 5.56 | 1.43 | 1.39 |
| 26 | BB | 486 | C | C4'-O4' | -5.56 | 1.38 | 1.45 |
| 26 | BB | 1581 | G | C2-N3 | 5.56 | 1.37 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1873 | G | C6-N1 | 5.56 | 1.43 | 1.39 |
| 1 | AA | 225 | C | O3'-P | 5.56 | 1.67 | 1.61 |
| 1 | AA | 604 | G | C2-N3 | 5.56 | 1.37 | 1.32 |
| 1 | AA | 1143 | G | N3-C4 | -5.56 | 1.31 | 1.35 |
| 1 | AA | 1458 | G | N9-C4 | 5.56 | 1.42 | 1.38 |
| 26 | BB | 1145 | C | C2-N3 | 5.56 | 1.40 | 1.35 |
| 1 | AA | 836 | G | N1-C2 | 5.56 | 1.42 | 1.37 |
| 1 | AA | 1171 | A | O3'-P | 5.56 | 1.67 | 1.61 |
| 1 | AA | 1525 | G | C6-N1 | 5.56 | 1.43 | 1.39 |
| 1 | AA | 1528 | U | N1-C6 | -5.56 | 1.32 | 1.38 |
| 26 | BB | 495 | G | N3-C4 | 5.56 | 1.39 | 1.35 |
| 26 | BB | 516 | C | C4-C5 | 5.56 | 1.47 | 1.43 |
| 26 | BB | 833 | A | N3-C4 | 5.56 | 1.38 | 1.34 |
| 26 | BB | 881 | G | N9-C8 | -5.56 | 1.33 | 1.37 |
| 26 | BB | 1117 | C | O3'-P | 5.56 | 1.67 | 1.61 |
| 26 | BB | 1471 | G | C5'-C4' | 5.56 | 1.58 | 1.51 |
| 26 | BB | 2026 | U | C5'-C4' | 5.56 | 1.58 | 1.51 |
| 26 | BB | 2128 | G | P-O5' | 5.56 | 1.65 | 1.59 |
| 26 | BB | 2159 | G | O5'-C5' | -5.56 | 1.33 | 1.42 |
| 26 | BB | 2191 | A | N3-C4 | 5.56 | 1.38 | 1.34 |
| 1 | AA | 388 | G | C5-C6 | 5.56 | 1.48 | 1.42 |
| 1 | AA | 1264 | U | C2-N3 | 5.56 | 1.41 | 1.37 |
| 1 | AA | 1420 | U | N1-C2 | 5.56 | 1.43 | 1.38 |
| 26 | BB | 614 | A | N3-C4 | 5.56 | 1.38 | 1.34 |
| 26 | BB | 1701 | A | N9-C8 | -5.56 | 1.33 | 1.37 |
| 1 | AA | 16 | A | O3'-P | -5.55 | 1.54 | 1.61 |
| 25 | BA | 17 | C | C5-C6 | 5.55 | 1.38 | 1.34 |
| 26 | BB | 871 | U | C3'-C2' | -5.55 | 1.46 | 1.52 |
| 26 | BB | 1063 | G | O3'-P | 5.55 | 1.67 | 1.61 |
| 26 | BB | 1176 | U | C5'-C4' | 5.55 | 1.58 | 1.51 |
| 26 | BB | 1949 | G | N9-C4 | -5.55 | 1.33 | 1.38 |
| 26 | BB | 2603 | G | N1-C2 | 5.55 | 1.42 | 1.37 |
| 26 | BB | 1005 | C | C3'-O3' | -5.55 | 1.34 | 1.42 |
| 1 | AA | 177 | G | C6-O6 | 5.55 | 1.29 | 1.24 |
| 1 | AA | 788 | U | C4-C5 | 5.55 | 1.48 | 1.43 |
| 1 | AA | 866 | C | C2'-C1' | -5.55 | 1.47 | 1.53 |
| 26 | BB | 141 | G | N1-C2 | 5.55 | 1.42 | 1.37 |
| 26 | BB | 858 | G | C2-N3 | 5.55 | 1.37 | 1.32 |
| 1 | AA | 1191 | A | N7-C5 | 5.55 | 1.42 | 1.39 |
| 25 | BA | 52 | A | N3-C4 | 5.55 | 1.38 | 1.34 |
| 25 | BA | 105 | G | N9-C4 | -5.55 | 1.33 | 1.38 |
| 26 | BB | 742 | A | N3-C4 | 5.55 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1140 | C | O4'-C1' | 5.55 | 1.48 | 1.41 |
| 26 | BB | 1449 | G | C6-O6 | 5.55 | 1.29 | 1.24 |
| 26 | BB | 2350 | C | C3'-C2' | 5.55 | 1.59 | 1.52 |
| 26 | BB | 2518 | A | P-O5' | 5.55 | 1.65 | 1.59 |
| 26 | BB | 2874 | C | C5-C6 | 5.55 | 1.38 | 1.34 |
| 42 | BR | 100 | ARG | NE-CZ | 5.55 | 1.40 | 1.33 |
| 1 | AA | 909 | A | P-O5' | 5.55 | 1.65 | 1.59 |
| 1 | AA | 1009 | U | C3'-C2' | 5.55 | 1.59 | 1.52 |
| 26 | BB | 1134 | A | P-O5' | 5.55 | 1.65 | 1.59 |
| 26 | BB | 1812 | U | C2-N3 | 5.55 | 1.41 | 1.37 |
| 26 | BB | 2000 | C | C2-O2 | -5.55 | 1.19 | 1.24 |
| 26 | BB | 2029 | G | C6-N1 | -5.55 | 1.35 | 1.39 |
| 1 | AA | 278 | G | C2-N3 | 5.55 | 1.37 | 1.32 |
| 2 | AB | 58 | A | C2-N3 | -5.55 | 1.28 | 1.33 |
| 26 | BB | 1055 | G | C5-C6 | 5.55 | 1.47 | 1.42 |
| 26 | BB | 2110 | G | N1-C2 | 5.55 | 1.42 | 1.37 |
| 26 | BB | 2809 | A | C4'-O4' | -5.55 | 1.38 | 1.45 |
| 1 | AA | 1333 | A | C8-N7 | -5.54 | 1.27 | 1.31 |
| 26 | BB | 752 | A | N9-C4 | 5.54 | 1.41 | 1.37 |
| 26 | BB | 1928 | A | O3'-P | 5.54 | 1.67 | 1.61 |
| 26 | BB | 2317 | A | N7-C5 | 5.54 | 1.42 | 1.39 |
| 1 | AA | 679 | C | C4'-C3' | -5.54 | 1.47 | 1.52 |
| 1 | AA | 1455 | G | C5'-C4' | 5.54 | 1.58 | 1.51 |
| 26 | BB | 473 | G | N3-C4 | -5.54 | 1.31 | 1.35 |
| 26 | BB | 872 | U | C4-C5 | 5.54 | 1.48 | 1.43 |
| 26 | BB | 962 | G | C5-C4 | -5.54 | 1.34 | 1.38 |
| 26 | BB | 1014 | A | C6-N6 | 5.54 | 1.38 | 1.33 |
| 26 | BB | 1017 | G | N9-C8 | 5.54 | 1.41 | 1.37 |
| 26 | BB | 1047 | G | C4'-O4' | -5.54 | 1.38 | 1.45 |
| 26 | BB | 1067 | A | C5'-C4' | 5.54 | 1.58 | 1.51 |
| 26 | BB | 1089 | A | P-O5' | 5.54 | 1.65 | 1.59 |
| 26 | BB | 1998 | A | C2-N3 | 5.54 | 1.38 | 1.33 |
| 26 | BB | 2078 | C | C5-C6 | 5.54 | 1.38 | 1.34 |
| 26 | BB | 2629 | U | P-O5' | 5.54 | 1.65 | 1.59 |
| 1 | AA | 230 | G | N9-C4 | 5.54 | 1.42 | 1.38 |
| 1 | AA | 311 | C | N1-C2 | 5.54 | 1.45 | 1.40 |
| 1 | AA | 337 | G | C8-N7 | -5.54 | 1.27 | 1.30 |
| 1 | AA | 752 | G | C2'-O2' | 5.54 | 1.48 | 1.41 |
| 1 | AA | 963 | G | N7-C5 | 5.54 | 1.42 | 1.39 |
| 26 | BB | 55 | G | N9-C4 | -5.54 | 1.33 | 1.38 |
| 26 | BB | 1133 | A | C2-N3 | -5.54 | 1.28 | 1.33 |
| 26 | BB | 1876 | A | C8-N7 | -5.54 | 1.27 | 1.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2361 | G | C5-C6 | -5.54 | 1.36 | 1.42 |
| 26 | BB | 2538 | C | C4-N4 | -5.54 | 1.28 | 1.33 |
| 26 | BB | 2676 | C | C2-N3 | 5.54 | 1.40 | 1.35 |
| 26 | BB | 1069 | A | C4'-O4' | -5.54 | 1.38 | 1.45 |
| 26 | BB | 1094 | U | C4-C5 | 5.54 | 1.48 | 1.43 |
| 26 | BB | 2830 | C | C3'-C2' | 5.54 | 1.59 | 1.52 |
| 26 | BB | 2837 | A | C4'-O4' | -5.54 | 1.38 | 1.45 |
| 1 | AA | 1394 | A | O3'-P | 5.54 | 1.67 | 1.61 |
| 3 | AC | 33 | A | C3'-C2' | 5.54 | 1.59 | 1.52 |
| 5 | AE | 109 | SER | CA-CB | 5.54 | 1.61 | 1.52 |
| 26 | BB | 16 | C | N1-C2 | 5.54 | 1.45 | 1.40 |
| 26 | BB | 19 | A | O3'-P | 5.54 | 1.67 | 1.61 |
| 26 | BB | 533 | G | N7-C5 | 5.54 | 1.42 | 1.39 |
| 26 | BB | 1373 | A | N9-C8 | -5.54 | 1.33 | 1.37 |
| 26 | BB | 2119 | A | O3'-P | 5.54 | 1.67 | 1.61 |
| 26 | BB | 2841 | C | C2-N3 | 5.54 | 1.40 | 1.35 |
| 1 | AA | 86 | G | N7-C5 | -5.54 | 1.35 | 1.39 |
| 26 | BB | 1097 | U | N1-C6 | 5.54 | 1.43 | 1.38 |
| 26 | BB | 2359 | C | C5'-C4' | 5.54 | 1.57 | 1.51 |
| 26 | BB | 2731 | G | C5'-C4' | 5.54 | 1.57 | 1.51 |
| 1 | AA | 110 | C | C4'-O4' | -5.54 | 1.38 | 1.45 |
| 1 | AA | 1159 | U | C4'-C3' | -5.54 | 1.47 | 1.52 |
| 26 | BB | 9 | G | C4'-O4' | -5.54 | 1.38 | 1.45 |
| 26 | BB | 1238 | G | C4'-C3' | 5.54 | 1.59 | 1.53 |
| 26 | BB | 1555 | G | N9-C8 | -5.54 | 1.33 | 1.37 |
| 26 | BB | 1640 | A | N9-C8 | -5.54 | 1.33 | 1.37 |
| 26 | BB | 1844 | C | N1-C6 | 5.54 | 1.40 | 1.37 |
| 26 | BB | 1898 | U | C5'-C4' | 5.54 | 1.57 | 1.51 |
| 26 | BB | 1958 | C | P-O5' | -5.54 | 1.54 | 1.59 |
| 26 | BB | 2216 | G | C5'-C4' | 5.54 | 1.57 | 1.51 |
| 1 | AA | 42 | G | C2'-C1' | 5.53 | 1.59 | 1.53 |
| 1 | AA | 713 | G | C8-N7 | 5.53 | 1.34 | 1.30 |
| 26 | BB | 22 | C | C1'-N1 | 5.53 | 1.57 | 1.48 |
| 26 | BB | 670 | A | N9-C4 | 5.53 | 1.41 | 1.37 |
| 26 | BB | 1886 | U | N1-C6 | -5.53 | 1.32 | 1.38 |
| 26 | BB | 2145 | C | C5'-C4' | 5.53 | 1.57 | 1.51 |
| 26 | BB | 2341 | G | C2-N2 | 5.53 | 1.40 | 1.34 |
| 26 | BB | 2538 | C | C2'-C1' | 5.53 | 1.59 | 1.53 |
| 26 | BB | 520 | G | C2-N3 | 5.53 | 1.37 | 1.32 |
| 26 | BB | 848 | C | C3'-O3' | 5.53 | 1.49 | 1.42 |
| 26 | BB | 2010 | G | N9-C8 | 5.53 | 1.41 | 1.37 |
| 1 | AA | 388 | G | O3'-P | -5.53 | 1.54 | 1.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 952 | U | N1-C6 | 5.53 | 1.43 | 1.38 |
| 1 | AA | 985 | C | C4'-O4' | -5.53 | 1.38 | 1.45 |
| 1 | AA | 988 | G | N1-C2 | 5.53 | 1.42 | 1.37 |
| 1 | AA | 1247 | U | C4-O4 | -5.53 | 1.19 | 1.23 |
| 25 | BA | 102 | G | P-O5' | 5.53 | 1.65 | 1.59 |
| 26 | BB | 173 | A | C6-N6 | -5.53 | 1.29 | 1.33 |
| 26 | BB | 603 | A | C6-N6 | 5.53 | 1.38 | 1.33 |
| 26 | BB | 2055 | C | C5-C6 | 5.53 | 1.38 | 1.34 |
| 26 | BB | 2082 | A | C4'-C3' | 5.53 | 1.59 | 1.53 |
| 26 | BB | 2438 | U | C4'-C3' | -5.53 | 1.47 | 1.52 |
| 26 | BB | 2446 | G | P-O5' | 5.53 | 1.65 | 1.59 |
| 26 | BB | 2880 | C | N3-C4 | 5.53 | 1.37 | 1.33 |
| 26 | BB | 2883 | A | N7-C5 | 5.53 | 1.42 | 1.39 |
| 1 | AA | 272 | C | C3'-C2' | 5.53 | 1.59 | 1.52 |
| 1 | AA | 1312 | G | C6-O6 | -5.53 | 1.19 | 1.24 |
| 1 | AA | 1319 | A | C5'-C4' | 5.53 | 1.57 | 1.51 |
| 26 | BB | 1005 | C | C5-C6 | 5.53 | 1.38 | 1.34 |
| 1 | AA | 14 | U | C2'-O2' | 5.53 | 1.48 | 1.41 |
| 1 | AA | 471 | U | C4-O4 | -5.53 | 1.19 | 1.23 |
| 1 | AA | 1045 | C | C2-N3 | 5.53 | 1.40 | 1.35 |
| 1 | AA | 1415 | G | N9-C8 | 5.53 | 1.41 | 1.37 |
| 1 | AA | 1492 | A | C2'-O2' | -5.53 | 1.34 | 1.41 |
| 26 | BB | 1002 | G | P-O5' | 5.53 | 1.65 | 1.59 |
| 26 | BB | 2586 | U | N1-C2 | 5.53 | 1.43 | 1.38 |
| 26 | BB | 2678 | C | C2-N3 | 5.53 | 1.40 | 1.35 |
| 26 | BB | 2725 | A | C8-N7 | -5.53 | 1.27 | 1.31 |
| 1 | AA | 140 | U | C5'-C4' | 5.53 | 1.57 | 1.51 |
| 25 | BA | 43 | C | C4-N4 | -5.53 | 1.28 | 1.33 |
| 26 | BB | 254 | G | N9-C4 | 5.53 | 1.42 | 1.38 |
| 26 | BB | 525 | U | C2-N3 | 5.53 | 1.41 | 1.37 |
| 26 | BB | 572 | A | C4'-C3' | 5.53 | 1.59 | 1.53 |
| 26 | BB | 628 | G | N1-C2 | 5.53 | 1.42 | 1.37 |
| 26 | BB | 822 | G | C6-N1 | 5.53 | 1.43 | 1.39 |
| 26 | BB | 1203 | U | C4'-C3' | -5.53 | 1.47 | 1.52 |
| 26 | BB | 1260 | A | C2'-O2' | -5.53 | 1.34 | 1.41 |
| 26 | BB | 1930 | G | C8-N7 | 5.53 | 1.34 | 1.30 |
| 26 | BB | 2510 | C | C5'-C4' | 5.53 | 1.57 | 1.51 |
| 26 | BB | 801 | G | C4'-O4' | -5.52 | 1.38 | 1.45 |
| 26 | BB | 1492 | G | C1'-N9 | 5.52 | 1.57 | 1.48 |
| 26 | BB | 2401 | U | N1-C6 | 5.52 | 1.43 | 1.38 |
| 26 | BB | 2546 | U | C2-N3 | -5.52 | 1.33 | 1.37 |
| 26 | BB | 2567 | G | C6-N1 | 5.52 | 1.43 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 185 | U | C5-C6 | 5.52 | 1.39 | 1.34 |
| 2 | AB | 53 | G | C4'-O4' | -5.52 | 1.38 | 1.45 |
| 26 | BB | 26 | G | C4'-O4' | -5.52 | 1.38 | 1.45 |
| 26 | BB | 600 | G | N9-C8 | -5.52 | 1.33 | 1.37 |
| 26 | BB | 757 | G | C6-N1 | -5.52 | 1.35 | 1.39 |
| 26 | BB | 1009 | A | O3'-P | -5.52 | 1.54 | 1.61 |
| 26 | BB | 1198 | U | C4-O4 | -5.52 | 1.19 | 1.23 |
| 26 | BB | 1443 | U | C4'-O4' | -5.52 | 1.38 | 1.45 |
| 26 | BB | 1609 | A | O3'-P | 5.52 | 1.67 | 1.61 |
| 26 | BB | 822 | G | C2-N3 | 5.52 | 1.37 | 1.32 |
| 26 | BB | 1440 | U | C4'-O4' | -5.52 | 1.38 | 1.45 |
| 26 | BB | 1512 | C | N1-C6 | -5.52 | 1.33 | 1.37 |
| 1 | AA | 922 | G | C8-N7 | -5.52 | 1.27 | 1.30 |
| 1 | AA | 1035 | A | C2'-C1' | -5.52 | 1.47 | 1.53 |
| 2 | AB | 9 | A | O3'-P | 5.52 | 1.67 | 1.61 |
| 26 | BB | 40 | U | O3'-P | 5.52 | 1.67 | 1.61 |
| 26 | BB | 247 | G | C4'-C3' | -5.52 | 1.47 | 1.52 |
| 26 | BB | 834 | G | C2-N3 | 5.52 | 1.37 | 1.32 |
| 26 | BB | 1316 | U | O3'-P | 5.52 | 1.67 | 1.61 |
| 26 | BB | 1759 | A | C8-N7 | 5.52 | 1.35 | 1.31 |
| 26 | BB | 1829 | A | N3-C4 | 5.52 | 1.38 | 1.34 |
| 26 | BB | 1988 | G | O4'-C1' | -5.52 | 1.34 | 1.41 |
| 26 | BB | 2024 | G | O4'-C1' | 5.52 | 1.48 | 1.41 |
| 26 | BB | 2185 | U | C2-O2 | 5.52 | 1.27 | 1.22 |
| 26 | BB | 2478 | A | C8-N7 | -5.52 | 1.27 | 1.31 |
| 26 | BB | 2521 | C | P-O5' | 5.52 | 1.65 | 1.59 |
| 26 | BB | 2593 | U | C3'-O3' | 5.52 | 1.49 | 1.42 |
| 43 | BS | 88 | GLU | CD-OE2 | -5.52 | 1.19 | 1.25 |
| 1 | AA | 1215 | G | C8-N7 | -5.52 | 1.27 | 1.30 |
| 2 | AB | 53 | G | C8-N7 | -5.52 | 1.27 | 1.30 |
| 25 | BA | 35 | C | C4'-C3' | 5.52 | 1.59 | 1.53 |
| 26 | BB | 10 | A | N9-C4 | 5.52 | 1.41 | 1.37 |
| 26 | BB | 285 | G | C6-N1 | 5.52 | 1.43 | 1.39 |
| 26 | BB | 1432 | G | P-O5' | -5.52 | 1.54 | 1.59 |
| 26 | BB | 2052 | A | C5'-C4' | 5.52 | 1.57 | 1.51 |
| 26 | BB | 2440 | C | C4-C5 | 5.52 | 1.47 | 1.43 |
| 26 | BB | 2780 | G | C2'-O2' | -5.52 | 1.34 | 1.41 |
| 46 | BV | 73 | ARG | CZ-NH2 | 5.52 | 1.40 | 1.33 |
| 1 | AA | 321 | A | N3-C4 | 5.52 | 1.38 | 1.34 |
| 1 | AA | 1024 | G | O3'-P | 5.52 | 1.67 | 1.61 |
| 26 | BB | 1278 | C | C2-N3 | 5.52 | 1.40 | 1.35 |
| 26 | BB | 2565 | A | C4'-O4' | -5.52 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 166 | U | O3'-P | 5.51 | 1.67 | 1.61 |
| 1 | AA | 1229 | A | C5'-C4' | 5.51 | 1.57 | 1.51 |
| 1 | AA | 1352 | C | C2-O2 | 5.51 | 1.29 | 1.24 |
| 2 | AB | 33 | U | C4-C5 | 5.51 | 1.48 | 1.43 |
| 19 | AS | 44 | SER | CA-CB | 5.51 | 1.61 | 1.52 |
| 26 | BB | 75 | G | N1-C2 | 5.51 | 1.42 | 1.37 |
| 26 | BB | 496 | G | C5-C4 | -5.51 | 1.34 | 1.38 |
| 26 | BB | 1594 | U | C2-N3 | 5.51 | 1.41 | 1.37 |
| 26 | BB | 2572 | A | C2'-C1' | -5.51 | 1.47 | 1.53 |
| 1 | AA | 479 | U | C2-N3 | 5.51 | 1.41 | 1.37 |
| 1 | AA | 748 | G | O3'-P | -5.51 | 1.54 | 1.61 |
| 1 | AA | 1167 | A | C5'-C4' | 5.51 | 1.57 | 1.51 |
| 2 | AB | 2 | G | P-O5' | 5.51 | 1.65 | 1.59 |
| 25 | BA | 44 | G | C8-N7 | 5.51 | 1.34 | 1.30 |
| 26 | BB | 166 | U | C4'-O4' | -5.51 | 1.38 | 1.45 |
| 26 | BB | 274 | C | N3-C4 | 5.51 | 1.37 | 1.33 |
| 1 | AA | 50 | A | C5-C6 | 5.51 | 1.46 | 1.41 |
| 1 | AA | 132 | C | C2'-C1' | 5.51 | 1.59 | 1.53 |
| 1 | AA | 860 | A | C6-N1 | -5.51 | 1.31 | 1.35 |
| 1 | AA | 1282 | C | C2'-C1' | 5.51 | 1.59 | 1.53 |
| 1 | AA | 1344 | C | O3'-P | 5.51 | 1.67 | 1.61 |
| 1 | AA | 1445 | U | N3-C4 | 5.51 | 1.43 | 1.38 |
| 3 | AC | 59 | A | P-O5' | 5.51 | 1.65 | 1.59 |
| 25 | BA | 63 | C | P-O5' | 5.51 | 1.65 | 1.59 |
| 26 | BB | 270 | A | C6-N1 | -5.51 | 1.31 | 1.35 |
| 26 | BB | 577 | G | O3'-P | 5.51 | 1.67 | 1.61 |
| 26 | BB | 1833 | C | C2'-C1' | 5.51 | 1.59 | 1.53 |
| 26 | BB | 2119 | A | C5-C6 | -5.51 | 1.36 | 1.41 |
| 1 | AA | 410 | G | N9-C4 | -5.51 | 1.33 | 1.38 |
| 1 | AA | 553 | A | C4'-O4' | -5.51 | 1.38 | 1.45 |
| 1 | AA | 1363 | A | C6-N1 | 5.51 | 1.39 | 1.35 |
| 26 | BB | 185 | G | C6-N1 | 5.51 | 1.43 | 1.39 |
| 26 | BB | 1114 | C | P-O5' | 5.51 | 1.65 | 1.59 |
| 26 | BB | 1180 | U | C4-C5 | 5.51 | 1.48 | 1.43 |
| 26 | BB | 1359 | A | C5-C4 | 5.51 | 1.42 | 1.38 |
| 26 | BB | 2509 | G | C4'-O4' | -5.51 | 1.38 | 1.45 |
| 31 | BG | 97 | GLU | CG-CD | 5.51 | 1.60 | 1.51 |
| 1 | AA | 155 | A | C6-N1 | -5.51 | 1.31 | 1.35 |
| 4 | AD | 53 | G | C6-O6 | -5.51 | 1.19 | 1.24 |
| 26 | BB | 399 | U | C4'-O4' | -5.51 | 1.38 | 1.45 |
| 26 | BB | 1449 | G | C2-N3 | 5.51 | 1.37 | 1.32 |
| 26 | BB | 1622 | G | C4'-C3' | 5.51 | 1.59 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2267 | A | C2-N3 | 5.51 | 1.38 | 1.33 |
| 26 | BB | 2671 | G | C4'-O4' | -5.51 | 1.38 | 1.45 |
| 1 | AA | 136 | C | C5-C6 | 5.51 | 1.38 | 1.34 |
| 1 | AA | 406 | G | N1-C2 | 5.51 | 1.42 | 1.37 |
| 1 | AA | 939 | G | C8-N7 | 5.51 | 1.34 | 1.30 |
| 1 | AA | 1075 | U | C5'-C4' | 5.51 | 1.57 | 1.51 |
| 1 | AA | 1218 | C | C5-C6 | 5.51 | 1.38 | 1.34 |
| 1 | AA | 1395 | C | C2-N3 | 5.51 | 1.40 | 1.35 |
| 26 | BB | 988 | A | C8-N7 | -5.51 | 1.27 | 1.31 |
| 26 | BB | 1225 | G | C2'-O2' | -5.51 | 1.34 | 1.41 |
| 26 | BB | 1266 | G | C4'-O4' | -5.51 | 1.38 | 1.45 |
| 26 | BB | 1316 | U | C2-N3 | 5.51 | 1.41 | 1.37 |
| 26 | BB | 1726 | C | N1-C2 | 5.51 | 1.45 | 1.40 |
| 26 | BB | 1795 | C | C2-N3 | 5.51 | 1.40 | 1.35 |
| 26 | BB | 2541 | A | C6-N1 | 5.51 | 1.39 | 1.35 |
| 26 | BB | 2868 | A | C5'-C4' | 5.51 | 1.57 | 1.51 |
| 1 | AA | 709 | U | C2-N3 | 5.50 | 1.41 | 1.37 |
| 1 | AA | 731 | G | N3-C4 | -5.50 | 1.31 | 1.35 |
| 1 | AA | 1167 | A | C2-N3 | -5.50 | 1.28 | 1.33 |
| 25 | BA | 78 | A | O4'-C1' | 5.50 | 1.48 | 1.41 |
| 26 | BB | 1691 | C | C4-N4 | 5.50 | 1.39 | 1.33 |
| 26 | BB | 2244 | U | C5-C6 | 5.50 | 1.39 | 1.34 |
| 1 | AA | 333 | U | C2'-C1' | -5.50 | 1.47 | 1.53 |
| 1 | AA | 334 | C | N1-C6 | 5.50 | 1.40 | 1.37 |
| 1 | AA | 1048 | G | C4'-C3' | 5.50 | 1.59 | 1.53 |
| 1 | AA | 1089 | G | N1-C2 | 5.50 | 1.42 | 1.37 |
| 1 | AA | 1287 | A | C5-C6 | 5.50 | 1.46 | 1.41 |
| 1 | AA | 1416 | G | C2'-C1' | 5.50 | 1.59 | 1.53 |
| 26 | BB | 514 | A | O4'-C1' | 5.50 | 1.48 | 1.41 |
| 26 | BB | 1200 | C | C5-C6 | 5.50 | 1.38 | 1.34 |
| 26 | BB | 1216 | G | N1-C2 | 5.50 | 1.42 | 1.37 |
| 26 | BB | 1519 | G | C5'-C4' | 5.50 | 1.57 | 1.51 |
| 26 | BB | 1648 | U | C4-C5 | 5.50 | 1.48 | 1.43 |
| 26 | BB | 2494 | G | N9-C8 | 5.50 | 1.41 | 1.37 |
| 26 | BB | 2596 | U | N1-C2 | 5.50 | 1.43 | 1.38 |
| 26 | BB | 2812 | G | N7-C5 | -5.50 | 1.35 | 1.39 |
| 1 | AA | 958 | A | C4'-O4' | -5.50 | 1.38 | 1.45 |
| 1 | AA | 1471 | U | N3-C4 | 5.50 | 1.43 | 1.38 |
| 26 | BB | 372 | G | P-O5' | 5.50 | 1.65 | 1.59 |
| 26 | BB | 381 | G | C2-N2 | -5.50 | 1.29 | 1.34 |
| 26 | BB | 458 | G | N1-C2 | -5.50 | 1.33 | 1.37 |
| 26 | BB | 922 | C | C2-O2 | -5.50 | 1.19 | 1.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1375 | U | C4-O4 | -5.50 | 1.19 | 1.23 |
| 26 | BB | 1753 | G | C8-N7 | -5.50 | 1.27 | 1.30 |
| 26 | BB | 2260 | C | O3'-P | 5.50 | 1.67 | 1.61 |
| 26 | BB | 2706 | A | C6-N1 | -5.50 | 1.31 | 1.35 |
| 42 | BR | 68 | GLY | CA-C | 5.50 | 1.60 | 1.51 |
| 1 | AA | 991 | U | C5'-C4' | 5.50 | 1.57 | 1.51 |
| 26 | BB | 268 | C | C4-N4 | 5.50 | 1.39 | 1.33 |
| 26 | BB | 852 | U | N3-C4 | 5.50 | 1.43 | 1.38 |
| 26 | BB | 1732 | C | N1-C2 | 5.50 | 1.45 | 1.40 |
| 1 | AA | 384 | G | C6-O6 | -5.50 | 1.19 | 1.24 |
| 26 | BB | 474 | G | N9-C8 | -5.50 | 1.34 | 1.37 |
| 26 | BB | 525 | U | C5-C6 | 5.50 | 1.39 | 1.34 |
| 26 | BB | 669 | G | C5-C4 | -5.50 | 1.34 | 1.38 |
| 26 | BB | 1132 | U | C5-C6 | 5.50 | 1.39 | 1.34 |
| 26 | BB | 1345 | C | N1-C2 | 5.50 | 1.45 | 1.40 |
| 26 | BB | 1611 | C | C4'-O4' | -5.50 | 1.38 | 1.45 |
| 26 | BB | 1854 | A | C6-N1 | 5.50 | 1.39 | 1.35 |
| 26 | BB | 2138 | G | N7-C5 | -5.50 | 1.35 | 1.39 |
| 1 | AA | 944 | G | C2'-C1' | 5.50 | 1.59 | 1.53 |
| 1 | AA | 1070 | U | C4'-C3' | -5.50 | 1.47 | 1.52 |
| 1 | AA | 1362 | A | C4'-C3' | 5.50 | 1.59 | 1.53 |
| 25 | BA | 46 | A | N9-C4 | 5.50 | 1.41 | 1.37 |
| 26 | BB | 148 | U | C3'-C2' | -5.50 | 1.46 | 1.52 |
| 26 | BB | 972 | A | C4'-O4' | -5.50 | 1.38 | 1.45 |
| 26 | BB | 1579 | A | C4'-O4' | -5.50 | 1.38 | 1.45 |
| 1 | AA | 1291 | U | C3'-C2' | -5.50 | 1.46 | 1.52 |
| 26 | BB | 599 | A | N3-C4 | 5.50 | 1.38 | 1.34 |
| 26 | BB | 882 | G | C5'-C4' | 5.50 | 1.57 | 1.51 |
| 26 | BB | 2768 | U | C5-C6 | 5.50 | 1.39 | 1.34 |
| 1 | AA | 76 | G | C6-N1 | -5.49 | 1.35 | 1.39 |
| 1 | AA | 170 | U | C5'-C4' | 5.49 | 1.57 | 1.51 |
| 5 | AE | 61 | SER | CB-OG | 5.49 | 1.49 | 1.42 |
| 26 | BB | 409 | G | C8-N7 | 5.49 | 1.34 | 1.30 |
| 26 | BB | 567 | U | P-O5' | 5.49 | 1.65 | 1.59 |
| 26 | BB | 606 | U | C5'-C4' | 5.49 | 1.57 | 1.51 |
| 26 | BB | 1028 | A | C6-N1 | 5.49 | 1.39 | 1.35 |
| 26 | BB | 1219 | U | C4'-O4' | -5.49 | 1.38 | 1.45 |
| 26 | BB | 1783 | A | C2'-C1' | -5.49 | 1.47 | 1.53 |
| 26 | BB | 1916 | A | N1-C2 | -5.49 | 1.29 | 1.34 |
| 26 | BB | 2002 | G | N9-C4 | -5.49 | 1.33 | 1.38 |
| 26 | BB | 2470 | G | C8-N7 | -5.49 | 1.27 | 1.30 |
| 26 | BB | 2797 | U | C2-N3 | 5.49 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 692 | U | C2-N3 | 5.49 | 1.41 | 1.37 |
| 1 | AA | 1014 | A | N7-C5 | 5.49 | 1.42 | 1.39 |
| 26 | BB | 579 | G | N3-C4 | 5.49 | 1.39 | 1.35 |
| 26 | BB | 2435 | A | C5'-C4' | 5.49 | 1.57 | 1.51 |
| 1 | AA | 20 | U | C2'-C1' | -5.49 | 1.47 | 1.53 |
| 1 | AA | 34 | C | P-O5' | 5.49 | 1.65 | 1.59 |
| 1 | AA | 476 | U | N1-C2 | 5.49 | 1.43 | 1.38 |
| 1 | AA | 717 | U | O3'-P | -5.49 | 1.54 | 1.61 |
| 4 | AD | 7 | G | C8-N7 | -5.49 | 1.27 | 1.30 |
| 25 | BA | 46 | A | C6-N6 | -5.49 | 1.29 | 1.33 |
| 26 | BB | 43 | G | N7-C5 | 5.49 | 1.42 | 1.39 |
| 26 | BB | 333 | G | C3'-C2' | -5.49 | 1.46 | 1.52 |
| 26 | BB | 1055 | G | N7-C5 | 5.49 | 1.42 | 1.39 |
| 26 | BB | 1514 | G | C2'-O2' | -5.49 | 1.34 | 1.41 |
| 26 | BB | 1959 | G | N7-C5 | 5.49 | 1.42 | 1.39 |
| 26 | BB | 2762 | C | N1-C6 | 5.49 | 1.40 | 1.37 |
| 26 | BB | 2852 | G | C6-N1 | 5.49 | 1.43 | 1.39 |
| 40 | BP | 39 | PRO | N-CA | 5.49 | 1.56 | 1.47 |
| 1 | AA | 567 | G | C5-C6 | 5.49 | 1.47 | 1.42 |
| 1 | AA | 883 | C | C4'-C3' | 5.49 | 1.59 | 1.53 |
| 1 | AA | 909 | A | C6-N1 | -5.49 | 1.31 | 1.35 |
| 26 | BB | 52 | A | N9-C4 | 5.49 | 1.41 | 1.37 |
| 26 | BB | 260 | G | N9-C4 | 5.49 | 1.42 | 1.38 |
| 26 | BB | 1452 | G | N9-C4 | 5.49 | 1.42 | 1.38 |
| 26 | BB | 2667 | C | C4'-O4' | -5.49 | 1.38 | 1.45 |
| 26 | BB | 2813 | A | N3-C4 | 5.49 | 1.38 | 1.34 |
| 1 | AA | 622 | A | C6-N1 | -5.49 | 1.31 | 1.35 |
| 26 | BB | 640 | C | C5-C6 | 5.49 | 1.38 | 1.34 |
| 26 | BB | 1191 | G | C8-N7 | 5.49 | 1.34 | 1.30 |
| 26 | BB | 1770 | G | N7-C5 | -5.49 | 1.35 | 1.39 |
| 26 | BB | 1988 | G | C2'-C1' | 5.49 | 1.59 | 1.53 |
| 26 | BB | 2558 | C | C4-N4 | 5.49 | 1.38 | 1.33 |
| 1 | AA | 235 | C | O4'-C1' | 5.49 | 1.48 | 1.41 |
| 1 | AA | 584 | G | N9-C4 | -5.49 | 1.33 | 1.38 |
| 1 | AA | 845 | A | C6-N1 | 5.49 | 1.39 | 1.35 |
| 1 | AA | 1331 | G | N3-C4 | 5.49 | 1.39 | 1.35 |
| 26 | BB | 302 | C | C5-C6 | 5.49 | 1.38 | 1.34 |
| 26 | BB | 339 | U | C5'-C4' | 5.49 | 1.57 | 1.51 |
| 26 | BB | 1063 | G | C2-N3 | 5.49 | 1.37 | 1.32 |
| 26 | BB | 1781 | U | C2-N3 | 5.49 | 1.41 | 1.37 |
| 26 | BB | 2860 | A | C4'-O4' | -5.49 | 1.38 | 1.45 |
| 1 | AA | 155 | A | P-O5' | -5.48 | 1.54 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1068 | G | C2'-O2' | -5.48 | 1.34 | 1.41 |
| 1 | AA | 1135 | U | P-O5' | -5.48 | 1.54 | 1.59 |
| 26 | BB | 415 | A | C5'-C4' | 5.48 | 1.57 | 1.51 |
| 26 | BB | 646 | U | O4'-C1' | 5.48 | 1.48 | 1.41 |
| 26 | BB | 2337 | G | C2-N3 | 5.48 | 1.37 | 1.32 |
| 1 | AA | 220 | G | P-O5' | 5.48 | 1.65 | 1.59 |
| 1 | AA | 255 | G | C5-C4 | 5.48 | 1.42 | 1.38 |
| 1 | AA | 639 | G | C5-C6 | 5.48 | 1.47 | 1.42 |
| 26 | BB | 951 | C | O4'-C1' | 5.48 | 1.48 | 1.41 |
| 26 | BB | 2261 | C | N3-C4 | 5.48 | 1.37 | 1.33 |
| 26 | BB | 2442 | C | N1-C2 | -5.48 | 1.34 | 1.40 |
| 1 | AA | 796 | C | C5-C6 | 5.48 | 1.38 | 1.34 |
| 1 | AA | 1045 | C | C4'-O4' | -5.48 | 1.38 | 1.45 |
| 1 | AA | 1046 | A | N9-C4 | -5.48 | 1.34 | 1.37 |
| 1 | AA | 1201 | A | O3'-P | 5.48 | 1.67 | 1.61 |
| 1 | AA | 1442 | G | O3'-P | 5.48 | 1.67 | 1.61 |
| 15 | AO | 99 | GLY | CA-C | 5.48 | 1.60 | 1.51 |
| 26 | BB | 44 | A | N3-C4 | 5.48 | 1.38 | 1.34 |
| 26 | BB | 626 | A | C2-N3 | -5.48 | 1.28 | 1.33 |
| 26 | BB | 856 | G | O3'-P | 5.48 | 1.67 | 1.61 |
| 26 | BB | 1852 | U | C2-N3 | 5.48 | 1.41 | 1.37 |
| 26 | BB | 2168 | G | C4'-C3' | 5.48 | 1.59 | 1.53 |
| 39 | BO | 103 | TYR | CE2-CZ | 5.48 | 1.45 | 1.38 |
| 6 | AF | 135 | ARG | NE-CZ | 5.48 | 1.40 | 1.33 |
| 26 | BB | 412 | A | N9-C4 | -5.48 | 1.34 | 1.37 |
| 26 | BB | 1002 | G | N1-C2 | 5.48 | 1.42 | 1.37 |
| 26 | BB | 2495 | G | C2-N3 | 5.48 | 1.37 | 1.32 |
| 1 | AA | 907 | A | C6-N6 | -5.48 | 1.29 | 1.33 |
| 1 | AA | 1106 | G | P-O5' | 5.48 | 1.65 | 1.59 |
| 1 | AA | 1367 | C | O3'-P | -5.48 | 1.54 | 1.61 |
| 19 | AS | 64 | GLY | CA-C | 5.48 | 1.60 | 1.51 |
| 26 | BB | 285 | G | C5-C6 | 5.48 | 1.47 | 1.42 |
| 26 | BB | 628 | G | C2-N3 | 5.48 | 1.37 | 1.32 |
| 26 | BB | 794 | A | C6-N1 | 5.48 | 1.39 | 1.35 |
| 26 | BB | 925 | A | C2-N3 | 5.48 | 1.38 | 1.33 |
| 26 | BB | 1597 | A | C3'-C2' | 5.48 | 1.58 | 1.52 |
| 26 | BB | 1719 | G | N9-C8 | -5.48 | 1.34 | 1.37 |
| 1 | AA | 691 | G | C6-N1 | 5.48 | 1.43 | 1.39 |
| 25 | BA | 43 | C | C5-C6 | 5.48 | 1.38 | 1.34 |
| 26 | BB | 223 | A | O5'-C5' | -5.48 | 1.34 | 1.42 |
| 26 | BB | 857 | G | C5'-C4' | 5.48 | 1.57 | 1.51 |
| 26 | BB | 1877 | A | C5-C4 | -5.48 | 1.34 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1980 | G | N1-C2 | 5.48 | 1.42 | 1.37 |
| 26 | BB | 2362 | C | C4-C5 | -5.48 | 1.38 | 1.43 |
| 1 | AA | 1173 | U | C2-N3 | 5.47 | 1.41 | 1.37 |
| 25 | BA | 26 | C | C1'-N1 | 5.47 | 1.56 | 1.48 |
| 26 | BB | 124 | G | C4'-O4' | -5.47 | 1.38 | 1.45 |
| 26 | BB | 620 | G | N9-C8 | -5.47 | 1.34 | 1.37 |
| 26 | BB | 787 | C | C2-O2 | -5.47 | 1.19 | 1.24 |
| 26 | BB | 858 | G | N7-C5 | -5.47 | 1.35 | 1.39 |
| 26 | BB | 1074 | G | N9-C4 | 5.47 | 1.42 | 1.38 |
| 26 | BB | 1471 | G | O3'-P | -5.47 | 1.54 | 1.61 |
| 1 | AA | 376 | G | C6-N1 | 5.47 | 1.43 | 1.39 |
| 1 | AA | 460 | A | P-O5' | 5.47 | 1.65 | 1.59 |
| 1 | AA | 477 | C | O3'-P | 5.47 | 1.67 | 1.61 |
| 1 | AA | 648 | A | N9-C8 | -5.47 | 1.33 | 1.37 |
| 1 | AA | 694 | A | N3-C4 | 5.47 | 1.38 | 1.34 |
| 1 | AA | 1005 | A | P-O5' | 5.47 | 1.65 | 1.59 |
| 1 | AA | 1206 | G | C5'-C4' | 5.47 | 1.57 | 1.51 |
| 1 | AA | 1357 | A | N7-C5 | -5.47 | 1.35 | 1.39 |
| 2 | AB | 4 | G | N1-C2 | 5.47 | 1.42 | 1.37 |
| 26 | BB | 699 | A | N1-C2 | -5.47 | 1.29 | 1.34 |
| 26 | BB | 1964 | G | N1-C2 | 5.47 | 1.42 | 1.37 |
| 26 | BB | 2488 | G | N1-C2 | -5.47 | 1.33 | 1.37 |
| 26 | BB | 2663 | G | O3'-P | 5.47 | 1.67 | 1.61 |
| 1 | AA | 305 | G | C8-N7 | -5.47 | 1.27 | 1.30 |
| 1 | AA | 581 | G | C2'-C1' | -5.47 | 1.47 | 1.53 |
| 1 | AA | 1215 | G | C6-N1 | -5.47 | 1.35 | 1.39 |
| 1 | AA | 1437 | A | C2'-C1' | -5.47 | 1.47 | 1.53 |
| 25 | BA | 75 | G | C5-C6 | 5.47 | 1.47 | 1.42 |
| 26 | BB | 1202 | G | C2-N3 | 5.47 | 1.37 | 1.32 |
| 26 | BB | 1449 | G | C5-C6 | 5.47 | 1.47 | 1.42 |
| 26 | BB | 1570 | A | N9-C4 | -5.47 | 1.34 | 1.37 |
| 26 | BB | 1650 | A | O3'-P | 5.47 | 1.67 | 1.61 |
| 26 | BB | 1808 | A | N3-C4 | 5.47 | 1.38 | 1.34 |
| 26 | BB | 2005 | A | C2-N3 | 5.47 | 1.38 | 1.33 |
| 1 | AA | 140 | U | C4-C5 | 5.47 | 1.48 | 1.43 |
| 1 | AA | 675 | A | C4'-C3' | 5.47 | 1.59 | 1.53 |
| 1 | AA | 1047 | G | N1-C2 | 5.47 | 1.42 | 1.37 |
| 25 | BA | 26 | C | C2'-C1' | -5.47 | 1.47 | 1.53 |
| 26 | BB | 68 | G | N1-C2 | 5.47 | 1.42 | 1.37 |
| 26 | BB | 550 | C | C5'-C4' | 5.47 | 1.57 | 1.51 |
| 26 | BB | 762 | U | C4'-O4' | -5.47 | 1.38 | 1.45 |
| 26 | BB | 1628 | G | C6-O6 | -5.47 | 1.19 | 1.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1887 | C | P-O5' | 5.47 | 1.65 | 1.59 |
| 26 | BB | 2403 | C | N3-C4 | 5.47 | 1.37 | 1.33 |
| 1 | AA | 407 | U | C4-C5 | 5.47 | 1.48 | 1.43 |
| 3 | AC | 36 | U | C2-N3 | 5.47 | 1.41 | 1.37 |
| 26 | BB | 2834 | G | C2-N3 | 5.47 | 1.37 | 1.32 |
| 1 | AA | 306 | A | N3-C4 | 5.47 | 1.38 | 1.34 |
| 1 | AA | 730 | G | C8-N7 | 5.47 | 1.34 | 1.30 |
| 1 | AA | 1160 | G | N9-C8 | 5.47 | 1.41 | 1.37 |
| 1 | AA | 1273 | C | C4'-O4' | -5.47 | 1.38 | 1.45 |
| 3 | AC | 49 | U | C2-N3 | 5.47 | 1.41 | 1.37 |
| 26 | BB | 328 | U | N3-C4 | 5.47 | 1.43 | 1.38 |
| 26 | BB | 915 | C | N1-C6 | 5.47 | 1.40 | 1.37 |
| 26 | BB | 1250 | G | C6-N1 | -5.47 | 1.35 | 1.39 |
| 26 | BB | 1971 | U | N1-C6 | 5.47 | 1.42 | 1.38 |
| 26 | BB | 2322 | A | N9-C8 | -5.47 | 1.33 | 1.37 |
| 1 | AA | 688 | G | C3'-O3' | 5.46 | 1.49 | 1.42 |
| 1 | AA | 698 | G | C6-O6 | -5.46 | 1.19 | 1.24 |
| 1 | AA | 1073 | U | P-O5' | 5.46 | 1.65 | 1.59 |
| 1 | AA | 1339 | A | N7-C5 | -5.46 | 1.35 | 1.39 |
| 26 | BB | 721 | A | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 26 | BB | 760 | G | N9-C4 | 5.46 | 1.42 | 1.38 |
| 26 | BB | 1125 | G | C2-N3 | 5.46 | 1.37 | 1.32 |
| 26 | BB | 1191 | G | N3-C4 | 5.46 | 1.39 | 1.35 |
| 26 | BB | 1298 | C | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 26 | BB | 2033 | A | N3-C4 | 5.46 | 1.38 | 1.34 |
| 26 | BB | 2711 | A | N3-C4 | 5.46 | 1.38 | 1.34 |
| 31 | BG | 31 | GLU | CD-OE2 | -5.46 | 1.19 | 1.25 |
| 46 | BV | 76 | ARG | CZ-NH1 | 5.46 | 1.40 | 1.33 |
| 1 | AA | 9 | G | N1-C2 | 5.46 | 1.42 | 1.37 |
| 1 | AA | 333 | U | C4-O4 | -5.46 | 1.19 | 1.23 |
| 1 | AA | 723 | U | C5'-C4' | 5.46 | 1.57 | 1.51 |
| 1 | AA | 1064 | G | N9-C8 | -5.46 | 1.34 | 1.37 |
| 1 | AA | 1177 | G | N7-C5 | 5.46 | 1.42 | 1.39 |
| 2 | AB | 22 | G | C6-N1 | 5.46 | 1.43 | 1.39 |
| 26 | BB | 249 | C | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 26 | BB | 1528 | A | C5-C4 | -5.46 | 1.34 | 1.38 |
| 1 | AA | 28 | A | N7-C5 | 5.46 | 1.42 | 1.39 |
| 1 | AA | 103 | U | O4'-C1' | 5.46 | 1.48 | 1.41 |
| 1 | AA | 228 | A | C6-N6 | 5.46 | 1.38 | 1.33 |
| 1 | AA | 230 | G | C5'-C4' | 5.46 | 1.57 | 1.51 |
| 1 | AA | 625 | U | P-O5' | 5.46 | 1.65 | 1.59 |
| 1 | AA | 728 | A | P-O5' | 5.46 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 840 | C | O4'-C1' | 5.46 | 1.48 | 1.41 |
| 1 | AA | 896 | C | C2'-C1' | 5.46 | 1.59 | 1.53 |
| 26 | BB | 185 | G | N9-C8 | -5.46 | 1.34 | 1.37 |
| 26 | BB | 526 | A | N9-C4 | 5.46 | 1.41 | 1.37 |
| 26 | BB | 1283 | G | N7-C5 | -5.46 | 1.35 | 1.39 |
| 26 | BB | 2579 | C | C5-C6 | 5.46 | 1.38 | 1.34 |
| 26 | BB | 2707 | U | C2-N3 | 5.46 | 1.41 | 1.37 |
| 25 | BA | 85 | G | C5-C6 | 5.46 | 1.47 | 1.42 |
| 26 | BB | 265 | A | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 26 | BB | 739 | A | O3'-P | 5.46 | 1.67 | 1.61 |
| 26 | BB | 2541 | A | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 26 | BB | 2848 | G | C6-N1 | 5.46 | 1.43 | 1.39 |
| 1 | AA | 705 | G | C5-C4 | -5.46 | 1.34 | 1.38 |
| 1 | AA | 1323 | G | N3-C4 | 5.46 | 1.39 | 1.35 |
| 7 | AG | 134 | TYR | CE2-CZ | 5.46 | 1.45 | 1.38 |
| 25 | BA | 11 | C | N1-C6 | -5.46 | 1.33 | 1.37 |
| 26 | BB | 700 | G | C5-C4 | -5.46 | 1.34 | 1.38 |
| 26 | BB | 1142 | A | C6-N1 | -5.46 | 1.31 | 1.35 |
| 26 | BB | 2319 | G | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 26 | BB | 2572 | A | N9-C4 | 5.46 | 1.41 | 1.37 |
| 26 | BB | 2576 | G | C2-N3 | 5.46 | 1.37 | 1.32 |
| 1 | AA | 1031 | C | C1'-N1 | 5.46 | 1.56 | 1.48 |
| 1 | AA | 1483 | A | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 25 | BA | 57 | A | N1-C2 | -5.46 | 1.29 | 1.34 |
| 26 | BB | 529 | A | C2'-C1' | -5.46 | 1.47 | 1.53 |
| 26 | BB | 1053 | C | C4'-O4' | -5.46 | 1.38 | 1.45 |
| 1 | AA | 1412 | C | O4'-C1' | 5.46 | 1.48 | 1.41 |
| 26 | BB | 13 | A | C5'-C4' | 5.46 | 1.57 | 1.51 |
| 26 | BB | 1254 | A | N7-C5 | -5.46 | 1.35 | 1.39 |
| 26 | BB | 2024 | G | N9-C4 | 5.46 | 1.42 | 1.38 |
| 26 | BB | 2528 | U | N1-C2 | 5.46 | 1.43 | 1.38 |
| 26 | BB | 2891 | U | C4'-C3' | -5.46 | 1.47 | 1.52 |
| 1 | AA | 162 | A | N9-C4 | 5.45 | 1.41 | 1.37 |
| 1 | AA | 1204 | A | N9-C4 | -5.45 | 1.34 | 1.37 |
| 26 | BB | 116 | C | N1-C6 | 5.45 | 1.40 | 1.37 |
| 26 | BB | 728 | G | N1-C2 | 5.45 | 1.42 | 1.37 |
| 1 | AA | 381 | C | P-O5' | 5.45 | 1.65 | 1.59 |
| 1 | AA | 1486 | G | N3-C4 | 5.45 | 1.39 | 1.35 |
| 26 | BB | 1405 | U | C3'-C2' | 5.45 | 1.58 | 1.52 |
| 1 | AA | 219 | U | C2-N3 | 5.45 | 1.41 | 1.37 |
| 1 | AA | 433 | G | N9-C8 | 5.45 | 1.41 | 1.37 |
| 26 | BB | 53 | A | N7-C5 | -5.45 | 1.35 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 500 | G | C2-N3 | 5.45 | 1.37 | 1.32 |
| 26 | BB | 540 | C | N1-C6 | 5.45 | 1.40 | 1.37 |
| 26 | BB | 730 | A | O4'-C1' | 5.45 | 1.48 | 1.41 |
| 26 | BB | 1098 | A | C4'-O4' | -5.45 | 1.38 | 1.45 |
| 26 | BB | 1294 | U | C4'-O4' | -5.45 | 1.38 | 1.45 |
| 26 | BB | 1568 | G | C5-C4 | 5.45 | 1.42 | 1.38 |
| 26 | BB | 1644 | C | C2-N3 | 5.45 | 1.40 | 1.35 |
| 26 | BB | 1880 | U | C2-O2 | 5.45 | 1.27 | 1.22 |
| 1 | AA | 1097 | C | C2-O2 | -5.45 | 1.19 | 1.24 |
| 1 | AA | 1163 | A | C5-C4 | -5.45 | 1.34 | 1.38 |
| 1 | AA | 1226 | C | N3-C4 | -5.45 | 1.30 | 1.33 |
| 1 | AA | 1375 | A | N7-C5 | 5.45 | 1.42 | 1.39 |
| 1 | AA | 1538 | C | N1-C6 | 5.45 | 1.40 | 1.37 |
| 2 | AB | 14 | A | N3-C4 | 5.45 | 1.38 | 1.34 |
| 4 | AD | 11 | A | N3-C4 | -5.45 | 1.31 | 1.34 |
| 26 | BB | 46 | G | N9-C8 | -5.45 | 1.34 | 1.37 |
| 26 | BB | 516 | C | C5'-C4' | 5.45 | 1.57 | 1.51 |
| 26 | BB | 1525 | A | N9-C8 | 5.45 | 1.42 | 1.37 |
| 26 | BB | 2206 | C | O3'-P | 5.45 | 1.67 | 1.61 |
| 26 | BB | 2594 | C | N3-C4 | 5.45 | 1.37 | 1.33 |
| 26 | BB | 2681 | C | C3'-C2' | 5.45 | 1.58 | 1.52 |
| 1 | AA | 197 | A | C5'-C4' | 5.45 | 1.57 | 1.51 |
| 1 | AA | 950 | U | P-O5' | 5.45 | 1.65 | 1.59 |
| 1 | AA | 570 | G | N9-C4 | -5.45 | 1.33 | 1.38 |
| 1 | AA | 605 | U | C4'-C3' | -5.45 | 1.47 | 1.52 |
| 1 | AA | 670 | G | C2-N3 | 5.45 | 1.37 | 1.32 |
| 1 | AA | 776 | G | C5-C6 | 5.45 | 1.47 | 1.42 |
| 1 | AA | 779 | C | C4'-O4' | -5.45 | 1.38 | 1.45 |
| 26 | BB | 1550 | C | P-O5' | 5.45 | 1.65 | 1.59 |
| 26 | BB | 2210 | U | N3-C4 | 5.45 | 1.43 | 1.38 |
| 41 | BQ | 10 | ARG | CD-NE | 5.45 | 1.55 | 1.46 |
| 1 | AA | 931 | C | N1-C2 | 5.44 | 1.45 | 1.40 |
| 2 | AB | 14 | A | C5-C6 | 5.44 | 1.46 | 1.41 |
| 4 | AD | 44 | A | N9-C4 | -5.44 | 1.34 | 1.37 |
| 26 | BB | 98 | G | N9-C8 | 5.44 | 1.41 | 1.37 |
| 1 | AA | 489 | C | C4-C5 | 5.44 | 1.47 | 1.43 |
| 1 | AA | 948 | C | C4-N4 | 5.44 | 1.38 | 1.33 |
| 1 | AA | 1202 | U | N1-C6 | -5.44 | 1.33 | 1.38 |
| 1 | AA | 1514 | G | P-O5' | -5.44 | 1.54 | 1.59 |
| 26 | BB | 192 | C | O3'-P | 5.44 | 1.67 | 1.61 |
| 26 | BB | 754 | U | O3'-P | 5.44 | 1.67 | 1.61 |
| 26 | BB | 1653 | G | C2-N3 | 5.44 | 1.37 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1747 | U | O3'-P | 5.44 | 1.67 | 1.61 |
| 26 | BB | 1840 | G | C5-C4 | -5.44 | 1.34 | 1.38 |
| 26 | BB | 2074 | U | O3'-P | -5.44 | 1.54 | 1.61 |
| 26 | BB | 2294 | G | C2-N2 | 5.44 | 1.40 | 1.34 |
| 26 | BB | 2307 | G | C4'-O4' | -5.44 | 1.38 | 1.45 |
| 26 | BB | 2421 | G | C2-N2 | -5.44 | 1.29 | 1.34 |
| 26 | BB | 2790 | U | C5-C6 | 5.44 | 1.39 | 1.34 |
| 26 | BB | 2883 | A | C2'-C1' | -5.44 | 1.47 | 1.53 |
| 1 | AA | 236 | A | C4'-C3' | 5.44 | 1.59 | 1.53 |
| 1 | AA | 751 | U | C4-O4 | -5.44 | 1.19 | 1.23 |
| 1 | AA | 1053 | G | C2'-C1' | 5.44 | 1.59 | 1.53 |
| 1 | AA | 1172 | C | P-O5' | 5.44 | 1.65 | 1.59 |
| 4 | AD | 1 | C | C4-C5 | 5.44 | 1.47 | 1.43 |
| 20 | AT | 33 | TYR | CE1-CZ | 5.44 | 1.45 | 1.38 |
| 26 | BB | 658 | U | P-O5' | 5.44 | 1.65 | 1.59 |
| 26 | BB | 672 | C | N1-C2 | 5.44 | 1.45 | 1.40 |
| 26 | BB | 1124 | G | C6-O6 | -5.44 | 1.19 | 1.24 |
| 26 | BB | 1425 | G | C4'-O4' | -5.44 | 1.38 | 1.45 |
| 26 | BB | 2150 | C | C5-C6 | 5.44 | 1.38 | 1.34 |
| 26 | BB | 2589 | A | C2'-C1' | -5.44 | 1.47 | 1.53 |
| 26 | BB | 2634 | A | N9-C4 | 5.44 | 1.41 | 1.37 |
| 26 | BB | 2693 | G | N7-C5 | -5.44 | 1.35 | 1.39 |
| 1 | AA | 12 | U | C5-C6 | 5.44 | 1.39 | 1.34 |
| 1 | AA | 268 | U | C2'-O2' | 5.44 | 1.48 | 1.41 |
| 1 | AA | 669 | G | N3-C4 | 5.44 | 1.39 | 1.35 |
| 26 | BB | 1640 | A | N7-C5 | 5.44 | 1.42 | 1.39 |
| 1 | AA | 323 | U | C2'-C1' | 5.44 | 1.59 | 1.53 |
| 1 | AA | 1366 | C | C4'-O4' | -5.44 | 1.38 | 1.45 |
| 1 | AA | 1373 | G | N7-C5 | -5.44 | 1.35 | 1.39 |
| 26 | BB | 156 | A | N3-C4 | 5.44 | 1.38 | 1.34 |
| 26 | BB | 348 | A | C5-C4 | -5.44 | 1.34 | 1.38 |
| 26 | BB | 391 | A | N9-C4 | 5.44 | 1.41 | 1.37 |
| 26 | BB | 1582 | C | C2-N3 | 5.44 | 1.40 | 1.35 |
| 26 | BB | 1979 | U | C4'-C3' | 5.44 | 1.59 | 1.53 |
| 26 | BB | 2222 | C | C2'-C1' | -5.44 | 1.47 | 1.53 |
| 1 | AA | 633 | G | C2-N3 | 5.44 | 1.37 | 1.32 |
| 1 | AA | 1398 | A | C2-N3 | -5.44 | 1.28 | 1.33 |
| 26 | BB | 511 | U | C5-C6 | 5.44 | 1.39 | 1.34 |
| 26 | BB | 1485 | U | N3-C4 | 5.44 | 1.43 | 1.38 |
| 26 | BB | 2497 | A | C5-C4 | -5.44 | 1.34 | 1.38 |
| 1 | AA | 384 | G | C1'-N9 | 5.43 | 1.56 | 1.48 |
| 1 | AA | 404 | G | C6-O6 | -5.43 | 1.19 | 1.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 498 | A | N3-C4 | 5.43 | 1.38 | 1.34 |
| 1 | AA | 893 | C | C4'-O4' | -5.43 | 1.38 | 1.45 |
| 1 | AA | 1171 | A | N7-C5 | -5.43 | 1.35 | 1.39 |
| 1 | AA | 1219 | A | C4'-O4' | -5.43 | 1.38 | 1.45 |
| 1 | AA | 1258 | G | C8-N7 | 5.43 | 1.34 | 1.30 |
| 26 | BB | 345 | A | C5'-C4' | -5.43 | 1.44 | 1.51 |
| 26 | BB | 373 | U | C4-C5 | 5.43 | 1.48 | 1.43 |
| 26 | BB | 1022 | G | N9-C8 | 5.43 | 1.41 | 1.37 |
| 26 | BB | 1157 | G | C2'-C1' | -5.43 | 1.47 | 1.53 |
| 26 | BB | 1367 | A | P-O5' | 5.43 | 1.65 | 1.59 |
| 26 | BB | 1420 | A | C4'-O4' | -5.43 | 1.38 | 1.45 |
| 26 | BB | 1628 | G | N7-C5 | -5.43 | 1.35 | 1.39 |
| 26 | BB | 1889 | A | O5'-C5' | -5.43 | 1.34 | 1.42 |
| 26 | BB | 1983 | G | C8-N7 | -5.43 | 1.27 | 1.30 |
| 1 | AA | 61 | G | C6-N1 | -5.43 | 1.35 | 1.39 |
| 1 | AA | 275 | G | C2-N3 | 5.43 | 1.37 | 1.32 |
| 1 | AA | 724 | G | N3-C4 | 5.43 | 1.39 | 1.35 |
| 1 | AA | 732 | C | O3'-P | -5.43 | 1.54 | 1.61 |
| 1 | AA | 771 | G | C2-N3 | 5.43 | 1.37 | 1.32 |
| 1 | AA | 961 | U | N3-C4 | 5.43 | 1.43 | 1.38 |
| 26 | BB | 771 | G | P-O5' | 5.43 | 1.65 | 1.59 |
| 26 | BB | 1042 | G | C6-O6 | 5.43 | 1.29 | 1.24 |
| 26 | BB | 1480 | C | C5-C6 | 5.43 | 1.38 | 1.34 |
| 26 | BB | 1635 | A | P-O5' | 5.43 | 1.65 | 1.59 |
| 26 | BB | 2204 | G | C6-N1 | -5.43 | 1.35 | 1.39 |
| 26 | BB | 2301 | C | O3'-P | 5.43 | 1.67 | 1.61 |
| 1 | AA | 380 | G | C8-N7 | 5.43 | 1.34 | 1.30 |
| 1 | AA | 728 | A | C3'-O3' | 5.43 | 1.49 | 1.42 |
| 1 | AA | 1228 | C | N1-C6 | 5.43 | 1.40 | 1.37 |
| 26 | BB | 1252 | G | C6-N1 | -5.43 | 1.35 | 1.39 |
| 26 | BB | 2029 | G | N3-C4 | 5.43 | 1.39 | 1.35 |
| 26 | BB | 2540 | C | C2-N3 | 5.43 | 1.40 | 1.35 |
| 1 | AA | 21 | G | C2'-O2' | -5.43 | 1.34 | 1.41 |
| 1 | AA | 167 | A | N9-C4 | 5.43 | 1.41 | 1.37 |
| 1 | AA | 420 | U | C2-O2 | 5.43 | 1.27 | 1.22 |
| 1 | AA | 443 | C | C4-N4 | -5.43 | 1.29 | 1.33 |
| 1 | AA | 939 | G | N9-C4 | -5.43 | 1.33 | 1.38 |
| 4 | AD | 54 | G | N3-C4 | 5.43 | 1.39 | 1.35 |
| 26 | BB | 351 | C | C3'-O3' | -5.43 | 1.34 | 1.42 |
| 26 | BB | 677 | A | C4'-O4' | -5.43 | 1.38 | 1.45 |
| 26 | BB | 718 | A | P-O5' | 5.43 | 1.65 | 1.59 |
| 26 | BB | 809 | G | C5-C6 | 5.43 | 1.47 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1002 | G | N9-C8 | -5.43 | 1.34 | 1.37 |
| 26 | BB | 1393 | A | N7-C5 | -5.43 | 1.35 | 1.39 |
| 26 | BB | 1798 | U | C2-N3 | 5.43 | 1.41 | 1.37 |
| 26 | BB | 2037 | A | C6-N1 | -5.43 | 1.31 | 1.35 |
| 26 | BB | 2161 | C | O3'-P | -5.43 | 1.54 | 1.61 |
| 26 | BB | 2298 | A | N3-C4 | 5.43 | 1.38 | 1.34 |
| 26 | BB | 2409 | G | C4'-O4' | -5.43 | 1.38 | 1.45 |
| 32 | BH | 125 | PRO | N-CD | -5.43 | 1.40 | 1.47 |
| 1 | AA | 1505 | G | C8-N7 | -5.43 | 1.27 | 1.30 |
| 26 | BB | 189 | G | N3-C4 | 5.43 | 1.39 | 1.35 |
| 26 | BB | 476 | G | N7-C5 | -5.43 | 1.35 | 1.39 |
| 26 | BB | 974 | G | C5-C4 | -5.43 | 1.34 | 1.38 |
| 26 | BB | 1169 | A | N9-C8 | 5.43 | 1.42 | 1.37 |
| 26 | BB | 1796 | U | P-O5' | 5.43 | 1.65 | 1.59 |
| 1 | AA | 302 | G | N1-C2 | 5.43 | 1.42 | 1.37 |
| 1 | AA | 358 | U | N3-C4 | 5.43 | 1.43 | 1.38 |
| 3 | AC | 35 | G | N9-C8 | -5.43 | 1.34 | 1.37 |
| 26 | BB | 171 | U | C2-N3 | -5.43 | 1.33 | 1.37 |
| 26 | BB | 899 | A | C2'-O2' | 5.43 | 1.48 | 1.41 |
| 26 | BB | 1265 | A | C2'-O2' | 5.43 | 1.48 | 1.41 |
| 26 | BB | 1885 | A | C2-N3 | -5.43 | 1.28 | 1.33 |
| 26 | BB | 1969 | A | C8-N7 | -5.43 | 1.27 | 1.31 |
| 26 | BB | 2169 | A | C2'-C1' | -5.43 | 1.47 | 1.53 |
| 1 | AA | 970 | C | C5-C6 | 5.42 | 1.38 | 1.34 |
| 3 | AC | 48 | C | C4-C5 | 5.42 | 1.47 | 1.43 |
| 26 | BB | 789 | A | C4'-O4' | -5.42 | 1.38 | 1.45 |
| 26 | BB | 1420 | A | C2'-O2' | 5.42 | 1.48 | 1.41 |
| 26 | BB | 2610 | C | C3'-C2' | 5.42 | 1.58 | 1.52 |
| 27 | BC | 208 | TYR | CE2-CZ | 5.42 | 1.45 | 1.38 |
| 48 | BX | 57 | TYR | CE1-CZ | 5.42 | 1.45 | 1.38 |
| 1 | AA | 295 | C | P-O5' | -5.42 | 1.54 | 1.59 |
| 1 | AA | 593 | U | C2'-C1' | 5.42 | 1.59 | 1.53 |
| 25 | BA | 84 | G | N9-C8 | 5.42 | 1.41 | 1.37 |
| 1 | AA | 139 | A | C5-C4 | -5.42 | 1.34 | 1.38 |
| 1 | AA | 294 | U | N1-C2 | 5.42 | 1.43 | 1.38 |
| 1 | AA | 566 | G | C8-N7 | -5.42 | 1.27 | 1.30 |
| 20 | AT | 79 | GLU | CD-OE1 | -5.42 | 1.19 | 1.25 |
| 26 | BB | 517 | C | C4'-O4' | -5.42 | 1.38 | 1.45 |
| 26 | BB | 1676 | A | C4'-O4' | -5.42 | 1.38 | 1.45 |
| 26 | BB | 2463 | C | N3-C4 | 5.42 | 1.37 | 1.33 |
| 1 | AA | 1084 | G | N7-C5 | -5.42 | 1.35 | 1.39 |
| 4 | AD | 59 | A | C5-C4 | -5.42 | 1.34 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 110 | G | C6-N1 | 5.42 | 1.43 | 1.39 |
| 26 | BB | 1088 | A | C3'-C2' | 5.42 | 1.58 | 1.52 |
| 26 | BB | 1116 | G | C4'-O4' | -5.42 | 1.38 | 1.45 |
| 26 | BB | 2388 | A | C3'-O3' | -5.42 | 1.34 | 1.42 |
| 26 | BB | 2790 | U | N1-C2 | 5.42 | 1.43 | 1.38 |
| 1 | AA | 91 | U | N3-C4 | 5.42 | 1.43 | 1.38 |
| 1 | AA | 467 | U | C4-O4 | 5.42 | 1.27 | 1.23 |
| 1 | AA | 755 | G | C2'-C1' | -5.42 | 1.47 | 1.53 |
| 1 | AA | 829 | G | N9-C4 | 5.42 | 1.42 | 1.38 |
| 1 | AA | 986 | U | N1-C2 | 5.42 | 1.43 | 1.38 |
| 2 | AB | 65 | C | N1-C6 | -5.42 | 1.33 | 1.37 |
| 26 | BB | 304 | U | O3'-P | 5.42 | 1.67 | 1.61 |
| 26 | BB | 2727 | A | C5-C4 | -5.42 | 1.34 | 1.38 |
| 26 | BB | 2806 | C | C5-C6 | 5.42 | 1.38 | 1.34 |
| 50 | BZ | 45 | PHE | CE2-CZ | 5.42 | 1.47 | 1.37 |
| 1 | AA | 526 | C | C5'-C4' | 5.42 | 1.57 | 1.51 |
| 1 | AA | 563 | A | P-O5' | 5.42 | 1.65 | 1.59 |
| 1 | AA | 592 | G | O3'-P | 5.42 | 1.67 | 1.61 |
| 4 | AD | 60 | A | C5'-C4' | 5.42 | 1.57 | 1.51 |
| 26 | BB | 1275 | A | N7-C5 | 5.42 | 1.42 | 1.39 |
| 26 | BB | 1645 | G | C4'-C3' | 5.42 | 1.59 | 1.53 |
| 26 | BB | 2135 | A | N7-C5 | 5.42 | 1.42 | 1.39 |
| 2 | AB | 18 | G | C6-O6 | -5.42 | 1.19 | 1.24 |
| 2 | AB | 35 | C | C4'-O4' | -5.42 | 1.38 | 1.45 |
| 17 | AQ | 80 | ARG | CZ-NH1 | 5.42 | 1.40 | 1.33 |
| 25 | BA | 106 | G | N9-C4 | 5.42 | 1.42 | 1.38 |
| 26 | BB | 507 | A | C2'-C1' | 5.42 | 1.59 | 1.53 |
| 26 | BB | 1113 | U | N3-C4 | 5.42 | 1.43 | 1.38 |
| 26 | BB | 1447 | C | N1-C2 | 5.42 | 1.45 | 1.40 |
| 26 | BB | 2172 | U | C5-C6 | 5.42 | 1.39 | 1.34 |
| 1 | AA | 2 | A | C5-C4 | -5.41 | 1.34 | 1.38 |
| 1 | AA | 49 | U | P-O5' | 5.41 | 1.65 | 1.59 |
| 1 | AA | 360 | G | N1-C2 | 5.41 | 1.42 | 1.37 |
| 1 | AA | 836 | G | C2'-C1' | -5.41 | 1.47 | 1.53 |
| 26 | BB | 580 | U | C2-N3 | 5.41 | 1.41 | 1.37 |
| 26 | BB | 643 | A | N3-C4 | 5.41 | 1.38 | 1.34 |
| 26 | BB | 953 | G | N3-C4 | 5.41 | 1.39 | 1.35 |
| 26 | BB | 1162 | G | C4'-C3' | 5.41 | 1.59 | 1.53 |
| 26 | BB | 2487 | G | C5-C6 | 5.41 | 1.47 | 1.42 |
| 26 | BB | 2571 | U | P-O5' | -5.41 | 1.54 | 1.59 |
| 1 | AA | 918 | A | C3'-C2' | 5.41 | 1.58 | 1.52 |
| 1 | AA | 1104 | G | C3'-C2' | 5.41 | 1.58 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 38 | G | C2-N3 | 5.41 | 1.37 | 1.32 |
| 26 | BB | 710 | U | C3'-C2' | -5.41 | 1.46 | 1.52 |
| 26 | BB | 1393 | A | C2'-C1' | 5.41 | 1.59 | 1.53 |
| 26 | BB | 1494 | A | C5-C4 | -5.41 | 1.34 | 1.38 |
| 26 | BB | 1640 | A | C4'-O4' | -5.41 | 1.38 | 1.45 |
| 1 | AA | 332 | G | N7-C5 | 5.41 | 1.42 | 1.39 |
| 1 | AA | 446 | G | N3-C4 | 5.41 | 1.39 | 1.35 |
| 1 | AA | 1388 | C | C3'-C2' | 5.41 | 1.58 | 1.52 |
| 1 | AA | 1417 | G | N1-C2 | 5.41 | 1.42 | 1.37 |
| 11 | AK | 64 | TYR | CE2-CZ | 5.41 | 1.45 | 1.38 |
| 26 | BB | 314 | C | N3-C4 | -5.41 | 1.30 | 1.33 |
| 26 | BB | 710 | U | N3-C4 | 5.41 | 1.43 | 1.38 |
| 26 | BB | 1307 | A | N9-C4 | -5.41 | 1.34 | 1.37 |
| 26 | BB | 2625 | G | C2-N3 | 5.41 | 1.37 | 1.32 |
| 26 | BB | 2846 | G | C8-N7 | 5.41 | 1.34 | 1.30 |
| 41 | BQ | 36 | TYR | CG-CD2 | 5.41 | 1.46 | 1.39 |
| 1 | AA | 105 | G | N3-C4 | 5.41 | 1.39 | 1.35 |
| 1 | AA | 397 | A | C2'-C1' | 5.41 | 1.59 | 1.53 |
| 1 | AA | 681 | A | C2-N3 | 5.41 | 1.38 | 1.33 |
| 1 | AA | 1360 | A | N9-C8 | -5.41 | 1.33 | 1.37 |
| 2 | AB | 27 | C | P-O5' | -5.41 | 1.54 | 1.59 |
| 3 | AC | 15 | G | C1'-N9 | 5.41 | 1.56 | 1.48 |
| 26 | BB | 254 | G | C5'-C4' | 5.41 | 1.57 | 1.51 |
| 26 | BB | 430 | A | P-O5' | 5.41 | 1.65 | 1.59 |
| 26 | BB | 1255 | U | C5'-C4' | 5.41 | 1.57 | 1.51 |
| 26 | BB | 2098 | U | N3-C4 | 5.41 | 1.43 | 1.38 |
| 1 | AA | 6 | G | C1'-N9 | 5.41 | 1.56 | 1.48 |
| 1 | AA | 704 | A | N7-C5 | -5.41 | 1.36 | 1.39 |
| 1 | AA | 1182 | G | N9-C8 | 5.41 | 1.41 | 1.37 |
| 26 | BB | 682 | G | N7-C5 | 5.41 | 1.42 | 1.39 |
| 26 | BB | 1409 | U | N1-C6 | -5.41 | 1.33 | 1.38 |
| 26 | BB | 2376 | A | C4'-O4' | -5.41 | 1.38 | 1.45 |
| 26 | BB | 2635 | A | C5-C4 | 5.41 | 1.42 | 1.38 |
| 26 | BB | 2893 | A | C2'-O2' | -5.41 | 1.34 | 1.41 |
| 1 | AA | 654 | G | N7-C5 | -5.41 | 1.36 | 1.39 |
| 1 | AA | 1040 | U | N1-C6 | 5.41 | 1.42 | 1.38 |
| 1 | AA | 1088 | G | N7-C5 | 5.41 | 1.42 | 1.39 |
| 1 | AA | 1489 | G | C5'-C4' | 5.41 | 1.57 | 1.51 |
| 26 | BB | 1830 | C | C5-C6 | 5.41 | 1.38 | 1.34 |
| 26 | BB | 1883 | U | N1-C2 | 5.41 | 1.43 | 1.38 |
| 26 | BB | 2267 | A | C8-N7 | -5.41 | 1.27 | 1.31 |
| 26 | BB | 2459 | A | C2'-C1' | -5.41 | 1.47 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2533 | U | N1-C6 | -5.41 | 1.33 | 1.38 |
| 26 | BB | 2644 | G | C1'-N9 | 5.41 | 1.56 | 1.48 |
| 1 | AA | 970 | C | O3'-P | 5.40 | 1.67 | 1.61 |
| 1 | AA | 1054 | C | O5'-C5' | -5.40 | 1.34 | 1.42 |
| 3 | AC | 25 | U | C3'-C2' | -5.40 | 1.46 | 1.52 |
| 26 | BB | 686 | U | N1-C2 | 5.40 | 1.43 | 1.38 |
| 26 | BB | 2238 | G | C5'-C4' | -5.40 | 1.44 | 1.51 |
| 1 | AA | 225 | C | C5'-C4' | 5.40 | 1.57 | 1.51 |
| 1 | AA | 337 | G | C2-N2 | -5.40 | 1.29 | 1.34 |
| 1 | AA | 554 | A | C2'-C1' | 5.40 | 1.59 | 1.53 |
| 1 | AA | 628 | G | C3'-C2' | 5.40 | 1.58 | 1.52 |
| 1 | AA | 780 | A | N9-C4 | -5.40 | 1.34 | 1.37 |
| 1 | AA | 1160 | G | C2-N3 | 5.40 | 1.37 | 1.32 |
| 1 | AA | 1167 | A | C5-C6 | -5.40 | 1.36 | 1.41 |
| 26 | BB | 353 | C | N3-C4 | 5.40 | 1.37 | 1.33 |
| 26 | BB | 442 | G | N9-C8 | -5.40 | 1.34 | 1.37 |
| 26 | BB | 1434 | A | C6-N6 | -5.40 | 1.29 | 1.33 |
| 26 | BB | 2107 | G | N9-C8 | 5.40 | 1.41 | 1.37 |
| 26 | BB | 2734 | A | N3-C4 | 5.40 | 1.38 | 1.34 |
| 26 | BB | 2766 | A | O3'-P | -5.40 | 1.54 | 1.61 |
| 26 | BB | 2794 | C | C2'-C1' | -5.40 | 1.47 | 1.53 |
| 26 | BB | 2872 | A | C8-N7 | -5.40 | 1.27 | 1.31 |
| 1 | AA | 112 | G | N9-C4 | 5.40 | 1.42 | 1.38 |
| 1 | AA | 187 | G | C8-N7 | 5.40 | 1.34 | 1.30 |
| 1 | AA | 417 | G | N9-C4 | 5.40 | 1.42 | 1.38 |
| 1 | AA | 700 | G | C2-N3 | 5.40 | 1.37 | 1.32 |
| 1 | AA | 778 | G | C2'-O2' | -5.40 | 1.34 | 1.41 |
| 1 | AA | 788 | U | P-O5' | 5.40 | 1.65 | 1.59 |
| 1 | AA | 1209 | C | C4'-O4' | -5.40 | 1.38 | 1.45 |
| 2 | AB | 48 | U | C5'-C4' | 5.40 | 1.57 | 1.51 |
| 26 | BB | 100 | U | C1'-N1 | 5.40 | 1.56 | 1.48 |
| 26 | BB | 719 | C | C5'-C4' | 5.40 | 1.57 | 1.51 |
| 26 | BB | 910 | A | N1-C2 | 5.40 | 1.39 | 1.34 |
| 26 | BB | 1189 | A | C8-N7 | -5.40 | 1.27 | 1.31 |
| 26 | BB | 1406 | U | C2'-O2' | 5.40 | 1.48 | 1.41 |
| 26 | BB | 1473 | G | O5'-C5' | -5.40 | 1.34 | 1.42 |
| 26 | BB | 2321 | U | P-O5' | 5.40 | 1.65 | 1.59 |
| 1 | AA | 729 | A | C8-N7 | -5.40 | 1.27 | 1.31 |
| 26 | BB | 175 | G | C2-N2 | -5.40 | 1.29 | 1.34 |
| 26 | BB | 1011 | G | C4'-O4' | -5.40 | 1.38 | 1.45 |
| 26 | BB | 1609 | A | N9-C4 | 5.40 | 1.41 | 1.37 |
| 26 | BB | 2214 | C | P-O5' | 5.40 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2815 | C | C2'-C1' | -5.40 | 1.47 | 1.53 |
| 37 | BM | 120 | PRO | N-CD | -5.40 | 1.40 | 1.47 |
| 1 | AA | 61 | G | P-O5' | 5.40 | 1.65 | 1.59 |
| 1 | AA | 164 | G | C8-N7 | 5.40 | 1.34 | 1.30 |
| 1 | AA | 696 | A | C6-N6 | -5.40 | 1.29 | 1.33 |
| 1 | AA | 1006 | G | C5-C6 | 5.40 | 1.47 | 1.42 |
| 26 | BB | 1 | G | N1-C2 | 5.40 | 1.42 | 1.37 |
| 26 | BB | 1295 | C | C1'-N1 | 5.40 | 1.56 | 1.48 |
| 26 | BB | 1501 | G | C2-N3 | 5.40 | 1.37 | 1.32 |
| 26 | BB | 2124 | G | C2-N3 | 5.40 | 1.37 | 1.32 |
| 26 | BB | 2483 | C | N3-C4 | 5.40 | 1.37 | 1.33 |
| 1 | AA | 867 | G | O3'-P | -5.40 | 1.54 | 1.61 |
| 26 | BB | 2674 | G | C6-N1 | 5.40 | 1.43 | 1.39 |
| 1 | AA | 525 | C | C4-C5 | -5.39 | 1.38 | 1.43 |
| 26 | BB | 197 | A | O4'-C1' | 5.39 | 1.48 | 1.41 |
| 26 | BB | 491 | G | C2-N2 | -5.39 | 1.29 | 1.34 |
| 26 | BB | 1021 | A | C8-N7 | -5.39 | 1.27 | 1.31 |
| 26 | BB | 1100 | C | C4'-O4' | -5.39 | 1.38 | 1.45 |
| 26 | BB | 1287 | A | C6-N6 | 5.39 | 1.38 | 1.33 |
| 26 | BB | 1436 | G | O3'-P | 5.39 | 1.67 | 1.61 |
| 26 | BB | 1904 | G | C2-N3 | 5.39 | 1.37 | 1.32 |
| 26 | BB | 2026 | U | P-O5' | 5.39 | 1.65 | 1.59 |
| 26 | BB | 2179 | C | N3-C4 | 5.39 | 1.37 | 1.33 |
| 26 | BB | 2842 | G | N1-C2 | 5.39 | 1.42 | 1.37 |
| 1 | AA | 1379 | G | C2'-O2' | 5.39 | 1.48 | 1.41 |
| 1 | AA | 1524 | C | C4-C5 | 5.39 | 1.47 | 1.43 |
| 26 | BB | 263 | G | C2-N3 | 5.39 | 1.37 | 1.32 |
| 26 | BB | 457 | A | C6-N6 | -5.39 | 1.29 | 1.33 |
| 26 | BB | 978 | G | C2-N3 | -5.39 | 1.28 | 1.32 |
| 26 | BB | 1265 | A | C6-N6 | -5.39 | 1.29 | 1.33 |
| 26 | BB | 1389 | G | O3'-P | 5.39 | 1.67 | 1.61 |
| 26 | BB | 1665 | A | N9-C4 | -5.39 | 1.34 | 1.37 |
| 26 | BB | 1784 | A | C2-N3 | 5.39 | 1.38 | 1.33 |
| 26 | BB | 2201 | G | O4'-C1' | 5.39 | 1.48 | 1.41 |
| 26 | BB | 2888 | C | C2-N3 | 5.39 | 1.40 | 1.35 |
| 34 | BJ | 20 | GLY | CA-C | 5.39 | 1.60 | 1.51 |
| 1 | AA | 800 | G | O3'-P | -5.39 | 1.54 | 1.61 |
| 1 | AA | 1181 | G | C4'-C3' | 5.39 | 1.59 | 1.53 |
| 1 | AA | 1523 | G | N7-C5 | 5.39 | 1.42 | 1.39 |
| 2 | AB | 76 | A | N9-C4 | 5.39 | 1.41 | 1.37 |
| 26 | BB | 542 | C | C5'-C4' | 5.39 | 1.57 | 1.51 |
| 26 | BB | 2494 | G | N3-C4 | 5.39 | 1.39 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 145 | G | C8-N7 | -5.39 | 1.27 | 1.30 |
| 1 | AA | 846 | G | N7-C5 | 5.39 | 1.42 | 1.39 |
| 26 | BB | 58 | G | N9-C4 | -5.39 | 1.33 | 1.38 |
| 26 | BB | 146 | A | P-O5' | -5.39 | 1.54 | 1.59 |
| 26 | BB | 953 | G | N9-C8 | -5.39 | 1.34 | 1.37 |
| 26 | BB | 1214 | A | C5-C4 | 5.39 | 1.42 | 1.38 |
| 26 | BB | 1225 | G | C8-N7 | -5.39 | 1.27 | 1.30 |
| 26 | BB | 1513 | U | C3'-C2' | 5.39 | 1.58 | 1.52 |
| 26 | BB | 1514 | G | C2-N3 | 5.39 | 1.37 | 1.32 |
| 26 | BB | 1534 | U | C2-O2 | 5.39 | 1.27 | 1.22 |
| 26 | BB | 2551 | C | N1-C2 | 5.39 | 1.45 | 1.40 |
| 26 | BB | 2697 | G | N3-C4 | 5.39 | 1.39 | 1.35 |
| 26 | BB | 2849 | U | O3'-P | -5.39 | 1.54 | 1.61 |
| 1 | AA | 733 | G | C4'-C3' | 5.39 | 1.59 | 1.53 |
| 1 | AA | 944 | G | O4'-C1' | 5.39 | 1.48 | 1.41 |
| 1 | AA | 977 | A | C4'-C3' | 5.39 | 1.59 | 1.53 |
| 1 | AA | 1092 | A | C6-N1 | -5.39 | 1.31 | 1.35 |
| 26 | BB | 2005 | A | C6-N1 | -5.39 | 1.31 | 1.35 |
| 26 | BB | 2819 | G | N9-C4 | 5.39 | 1.42 | 1.38 |
| 1 | AA | 439 | U | C2-N3 | 5.39 | 1.41 | 1.37 |
| 1 | AA | 846 | G | C6-N1 | 5.39 | 1.43 | 1.39 |
| 1 | AA | 892 | A | N3-C4 | 5.39 | 1.38 | 1.34 |
| 1 | AA | 901 | A | C4'-O4' | -5.39 | 1.38 | 1.45 |
| 26 | BB | 442 | G | N9-C4 | 5.39 | 1.42 | 1.38 |
| 26 | BB | 548 | G | C2-N3 | 5.39 | 1.37 | 1.32 |
| 26 | BB | 997 | G | C2-N3 | 5.39 | 1.37 | 1.32 |
| 26 | BB | 1387 | A | C4'-O4' | -5.39 | 1.38 | 1.45 |
| 26 | BB | 1455 | G | O3'-P | 5.39 | 1.67 | 1.61 |
| 26 | BB | 1797 | G | C4'-O4' | -5.39 | 1.38 | 1.45 |
| 26 | BB | 2109 | U | N1-C2 | 5.39 | 1.43 | 1.38 |
| 26 | BB | 2597 | G | C2-N3 | 5.39 | 1.37 | 1.32 |
| 26 | BB | 2617 | U | N1-C2 | 5.39 | 1.43 | 1.38 |
| 1 | AA | 153 | C | N1-C2 | 5.38 | 1.45 | 1.40 |
| 1 | AA | 617 | G | O3'-P | 5.38 | 1.67 | 1.61 |
| 26 | BB | 480 | A | C4'-O4' | -5.38 | 1.38 | 1.45 |
| 26 | BB | 804 | A | C5-C6 | -5.38 | 1.36 | 1.41 |
| 26 | BB | 1137 | G | N9-C8 | -5.38 | 1.34 | 1.37 |
| 26 | BB | 1179 | G | C2-N3 | 5.38 | 1.37 | 1.32 |
| 26 | BB | 1461 | C | P-O5' | 5.38 | 1.65 | 1.59 |
| 26 | BB | 1858 | A | C2'-C1' | -5.38 | 1.47 | 1.53 |
| 26 | BB | 2184 | A | C5-C4 | -5.38 | 1.34 | 1.38 |
| 26 | BB | 2477 | U | C4-O4 | -5.38 | 1.19 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2572 | A | N3-C4 | 5.38 | 1.38 | 1.34 |
| 51 | B0 | 13 | GLU | CD-OE2 | 5.38 | 1.31 | 1.25 |
| 1 | AA | 1233 | G | O3'-P | 5.38 | 1.67 | 1.61 |
| 2 | AB | 28 | C | C5-C6 | 5.38 | 1.38 | 1.34 |
| 26 | BB | 734 | A | C1'-N9 | 5.38 | 1.56 | 1.48 |
| 26 | BB | 1276 | A | C5-C6 | -5.38 | 1.36 | 1.41 |
| 26 | BB | 1663 | G | C6-O6 | -5.38 | 1.19 | 1.24 |
| 26 | BB | 2618 | G | C4'-O4' | -5.38 | 1.38 | 1.45 |
| 1 | AA | 128 | G | P-O5' | 5.38 | 1.65 | 1.59 |
| 1 | AA | 1092 | A | C4'-O4' | -5.38 | 1.38 | 1.45 |
| 1 | AA | 1258 | G | N7-C5 | 5.38 | 1.42 | 1.39 |
| 26 | BB | 453 | A | N9-C8 | -5.38 | 1.33 | 1.37 |
| 26 | BB | 643 | A | N9-C4 | 5.38 | 1.41 | 1.37 |
| 26 | BB | 999 | U | C4-C5 | 5.38 | 1.48 | 1.43 |
| 26 | BB | 1054 | A | P-O5' | -5.38 | 1.54 | 1.59 |
| 26 | BB | 1815 | A | O4'-C1' | -5.38 | 1.34 | 1.41 |
| 26 | BB | 2247 | A | C2'-O2' | 5.38 | 1.48 | 1.41 |
| 26 | BB | 2638 | G | N7-C5 | 5.38 | 1.42 | 1.39 |
| 26 | BB | 2751 | G | O3'-P | -5.38 | 1.54 | 1.61 |
| 26 | BB | 2781 | A | N7-C5 | 5.38 | 1.42 | 1.39 |
| 26 | BB | 2900 | A | C4'-O4' | -5.38 | 1.38 | 1.45 |
| 26 | BB | 263 | G | C8-N7 | -5.38 | 1.27 | 1.30 |
| 26 | BB | 962 | G | N7-C5 | -5.38 | 1.36 | 1.39 |
| 26 | BB | 1469 | A | N3-C4 | 5.38 | 1.38 | 1.34 |
| 26 | BB | 1507 | C | N1-C6 | 5.38 | 1.40 | 1.37 |
| 26 | BB | 2305 | U | C3'-C2' | -5.38 | 1.46 | 1.52 |
| 1 | AA | 109 | A | N9-C4 | 5.38 | 1.41 | 1.37 |
| 1 | AA | 537 | G | N7-C5 | 5.38 | 1.42 | 1.39 |
| 26 | BB | 360 | U | C5'-C4' | 5.38 | 1.57 | 1.51 |
| 26 | BB | 490 | C | C4'-O4' | -5.38 | 1.38 | 1.45 |
| 26 | BB | 715 | A | N7-C5 | 5.38 | 1.42 | 1.39 |
| 26 | BB | 950 | G | C5-C6 | 5.38 | 1.47 | 1.42 |
| 26 | BB | 1599 | U | C5-C6 | 5.38 | 1.39 | 1.34 |
| 26 | BB | 2387 | U | C5'-C4' | 5.38 | 1.57 | 1.51 |
| 26 | BB | 2681 | C | P-O5' | 5.38 | 1.65 | 1.59 |
| 1 | AA | 119 | A | N3-C4 | 5.38 | 1.38 | 1.34 |
| 1 | AA | 865 | A | N3-C4 | -5.38 | 1.31 | 1.34 |
| 1 | AA | 1508 | A | C5-C4 | -5.38 | 1.34 | 1.38 |
| 4 | AD | 14 | A | C2-N3 | 5.38 | 1.38 | 1.33 |
| 25 | BA | 37 | C | C3'-C2' | 5.38 | 1.58 | 1.52 |
| 26 | BB | 947 | A | C6-N6 | 5.38 | 1.38 | 1.33 |
| 26 | BB | 1976 | U | P-O5' | 5.38 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2563 | U | C2-N3 | 5.38 | 1.41 | 1.37 |
| 1 | AA | 420 | U | C5-C6 | 5.38 | 1.39 | 1.34 |
| 1 | AA | 671 | G | C3'-C2' | 5.38 | 1.58 | 1.52 |
| 1 | AA | 987 | G | O3'-P | 5.38 | 1.67 | 1.61 |
| 1 | AA | 1055 | A | C5'-C4' | -5.38 | 1.44 | 1.51 |
| 26 | BB | 2126 | A | C4'-O4' | -5.38 | 1.38 | 1.45 |
| 26 | BB | 2662 | A | C5-C6 | 5.38 | 1.45 | 1.41 |
| 26 | BB | 2735 | G | C3'-C2' | 5.38 | 1.58 | 1.52 |
| 47 | BW | 93 | ARG | NE-CZ | 5.38 | 1.40 | 1.33 |
| 1 | AA | 1079 | G | C5-C6 | 5.37 | 1.47 | 1.42 |
| 26 | BB | 266 | G | C6-N1 | -5.37 | 1.35 | 1.39 |
| 26 | BB | 991 | C | N1-C6 | 5.37 | 1.40 | 1.37 |
| 26 | BB | 1684 | G | C8-N7 | 5.37 | 1.34 | 1.30 |
| 26 | BB | 1978 | A | C3'-C2' | 5.37 | 1.58 | 1.52 |
| 26 | BB | 2141 | G | C6-N1 | -5.37 | 1.35 | 1.39 |
| 26 | BB | 2222 | C | N1-C2 | 5.37 | 1.45 | 1.40 |
| 26 | BB | 2797 | U | P-O5' | 5.37 | 1.65 | 1.59 |
| 1 | AA | 952 | U | C2-N3 | 5.37 | 1.41 | 1.37 |
| 26 | BB | 25 | U | O5'-C5' | -5.37 | 1.34 | 1.42 |
| 26 | BB | 275 | C | P-O5' | 5.37 | 1.65 | 1.59 |
| 26 | BB | 351 | C | C2-N3 | 5.37 | 1.40 | 1.35 |
| 26 | BB | 895 | U | N1-C2 | 5.37 | 1.43 | 1.38 |
| 1 | AA | 1062 | U | O3'-P | 5.37 | 1.67 | 1.61 |
| 26 | BB | 1706 | C | C3'-C2' | 5.37 | 1.58 | 1.52 |
| 1 | AA | 194 | C | C5-C6 | 5.37 | 1.38 | 1.34 |
| 1 | AA | 233 | C | P-O5' | 5.37 | 1.65 | 1.59 |
| 1 | AA | 492 | C | C4'-O4' | -5.37 | 1.38 | 1.45 |
| 1 | AA | 989 | U | C2'-C1' | -5.37 | 1.47 | 1.53 |
| 1 | AA | 1230 | C | C5-C6 | 5.37 | 1.38 | 1.34 |
| 1 | AA | 1332 | A | N9-C8 | -5.37 | 1.33 | 1.37 |
| 26 | BB | 255 | A | C4'-O4' | -5.37 | 1.38 | 1.45 |
| 26 | BB | 891 | G | C5-C6 | 5.37 | 1.47 | 1.42 |
| 26 | BB | 1449 | G | C2'-C1' | -5.37 | 1.47 | 1.53 |
| 26 | BB | 1918 | A | C2'-O2' | 5.37 | 1.48 | 1.41 |
| 26 | BB | 2052 | A | C8-N7 | -5.37 | 1.27 | 1.31 |
| 26 | BB | 2530 | A | C3'-C2' | -5.37 | 1.46 | 1.52 |
| 26 | BB | 2616 | C | N1-C6 | 5.37 | 1.40 | 1.37 |
| 43 | BS | 54 | ARG | CZ-NH2 | 5.37 | 1.40 | 1.33 |
| 1 | AA | 861 | G | C2-N3 | 5.37 | 1.37 | 1.32 |
| 1 | AA | 1425 | U | C2-N3 | 5.37 | 1.41 | 1.37 |
| 26 | BB | 493 | G | C3'-C2' | -5.37 | 1.46 | 1.52 |
| 26 | BB | 587 | C | C4-C5 | 5.37 | 1.47 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 676 | A | N9-C4 | 5.37 | 1.41 | 1.37 |
| 26 | BB | 79 | C | N1-C6 | 5.37 | 1.40 | 1.37 |
| 26 | BB | 91 | A | N3-C4 | 5.37 | 1.38 | 1.34 |
| 26 | BB | 308 | G | O4'-C1' | -5.37 | 1.34 | 1.41 |
| 26 | BB | 686 | U | C4-O4 | -5.37 | 1.19 | 1.23 |
| 26 | BB | 827 | U | N1-C2 | 5.37 | 1.43 | 1.38 |
| 26 | BB | 2136 | G | C8-N7 | 5.37 | 1.34 | 1.30 |
| 26 | BB | 2259 | U | C2-N3 | 5.37 | 1.41 | 1.37 |
| 1 | AA | 36 | C | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 1 | AA | 306 | A | C5-C6 | 5.36 | 1.45 | 1.41 |
| 1 | AA | 549 | C | O3'-P | -5.36 | 1.54 | 1.61 |
| 26 | BB | 1490 | A | C8-N7 | -5.36 | 1.27 | 1.31 |
| 26 | BB | 1872 | A | C6-N1 | -5.36 | 1.31 | 1.35 |
| 26 | BB | 2417 | C | N1-C6 | 5.36 | 1.40 | 1.37 |
| 26 | BB | 2781 | A | O3'-P | 5.36 | 1.67 | 1.61 |
| 32 | BH | 169 | ARG | NE-CZ | 5.36 | 1.40 | 1.33 |
| 1 | AA | 1227 | A | N9-C8 | 5.36 | 1.42 | 1.37 |
| 26 | BB | 1431 | A | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 26 | BB | 1562 | U | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 26 | BB | 1789 | A | C5-C6 | 5.36 | 1.45 | 1.41 |
| 26 | BB | 2035 | G | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 26 | BB | 2040 | G | O3'-P | 5.36 | 1.67 | 1.61 |
| 26 | BB | 2332 | C | C2'-O2' | 5.36 | 1.48 | 1.41 |
| 26 | BB | 2832 | U | C2'-C1' | 5.36 | 1.59 | 1.53 |
| 1 | AA | 265 | G | C5-C4 | 5.36 | 1.42 | 1.38 |
| 1 | AA | 336 | A | C4'-O4' | -5.36 | 1.38 | 1.45 |
| 1 | AA | 739 | C | C4-C5 | 5.36 | 1.47 | 1.43 |
| 26 | BB | 95 | A | C4'-O4' | -5.36 | 1.38 | 1.45 |
| 26 | BB | 352 | A | C6-N1 | 5.36 | 1.39 | 1.35 |
| 26 | BB | 1600 | C | O4'-C1' | 5.36 | 1.48 | 1.41 |
| 26 | BB | 1969 | A | C6-N6 | 5.36 | 1.38 | 1.33 |
| 26 | BB | 2132 | U | C2'-O2' | 5.36 | 1.48 | 1.41 |
| 26 | BB | 2588 | G | C2'-C1' | 5.36 | 1.59 | 1.53 |
| 26 | BB | 2695 | U | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 26 | BB | 2751 | G | N9-C8 | 5.36 | 1.41 | 1.37 |
| 26 | BB | 2755 | C | C2'-C1' | -5.36 | 1.47 | 1.53 |
| 33 | BI | 113 | SER | CA-CB | 5.36 | 1.60 | 1.52 |
| 1 | AA | 600 | A | C5-C6 | 5.36 | 1.45 | 1.41 |
| 26 | BB | 411 | G | C4'-O4' | -5.36 | 1.38 | 1.45 |
| 26 | BB | 412 | A | O3'-P | 5.36 | 1.67 | 1.61 |
| 26 | BB | 770 | G | N3-C4 | 5.36 | 1.39 | 1.35 |
| 26 | BB | 1359 | A | N3-C4 | 5.36 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 3 | A | N1-C2 | -5.36 | 1.29 | 1.34 |
| 1 | AA | 108 | G | N3-C4 | 5.36 | 1.39 | 1.35 |
| 1 | AA | 189 | A | N7-C5 | -5.36 | 1.36 | 1.39 |
| 1 | AA | 372 | C | C4-C5 | 5.36 | 1.47 | 1.43 |
| 1 | AA | 452 | A | N3-C4 | 5.36 | 1.38 | 1.34 |
| 1 | AA | 738 | C | N1-C6 | 5.36 | 1.40 | 1.37 |
| 1 | AA | 1058 | G | N7-C5 | 5.36 | 1.42 | 1.39 |
| 1 | AA | 1187 | G | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 3 | AC | 42 | U | N3-C4 | 5.36 | 1.43 | 1.38 |
| 26 | BB | 917 | A | N9-C4 | 5.36 | 1.41 | 1.37 |
| 26 | BB | 1062 | G | C6-O6 | -5.36 | 1.19 | 1.24 |
| 26 | BB | 1242 | U | C3'-C2' | 5.36 | 1.58 | 1.52 |
| 26 | BB | 1354 | A | N7-C5 | 5.36 | 1.42 | 1.39 |
| 26 | BB | 1499 | C | C1'-N1 | 5.36 | 1.56 | 1.48 |
| 26 | BB | 1813 | G | P-O5' | 5.36 | 1.65 | 1.59 |
| 26 | BB | 2202 | U | N3-C4 | 5.36 | 1.43 | 1.38 |
| 26 | BB | 2387 | U | C4'-O4' | -5.36 | 1.38 | 1.45 |
| 26 | BB | 2452 | C | C5'-C4' | 5.36 | 1.57 | 1.51 |
| 26 | BB | 2669 | G | C6-O6 | -5.36 | 1.19 | 1.24 |
| 26 | BB | 2697 | G | C2-N3 | 5.36 | 1.37 | 1.32 |
| 1 | AA | 13 | U | C4-O4 | -5.36 | 1.19 | 1.23 |
| 1 | AA | 745 | G | N1-C2 | 5.36 | 1.42 | 1.37 |
| 1 | AA | 1022 | A | C4'-O4' | -5.36 | 1.38 | 1.45 |
| 1 | AA | 1233 | G | C5-C4 | -5.36 | 1.34 | 1.38 |
| 1 | AA | 1267 | C | N3-C4 | 5.36 | 1.37 | 1.33 |
| 4 | AD | 32 | G | C6-N1 | -5.36 | 1.35 | 1.39 |
| 26 | BB | 677 | A | C6-N1 | 5.36 | 1.39 | 1.35 |
| 26 | BB | 684 | G | C6-N1 | -5.36 | 1.35 | 1.39 |
| 26 | BB | 919 | U | C2-O2 | 5.36 | 1.27 | 1.22 |
| 26 | BB | 1031 | G | N1-C2 | -5.36 | 1.33 | 1.37 |
| 26 | BB | 1312 | U | C4'-C3' | 5.36 | 1.59 | 1.53 |
| 26 | BB | 1340 | U | C4'-O4' | -5.36 | 1.38 | 1.45 |
| 26 | BB | 2098 | U | C2-N3 | 5.36 | 1.41 | 1.37 |
| 26 | BB | 2223 | G | C4'-C3' | 5.36 | 1.59 | 1.53 |
| 26 | BB | 2247 | A | N9-C4 | 5.36 | 1.41 | 1.37 |
| 26 | BB | 540 | C | C5'-C4' | 5.35 | 1.57 | 1.51 |
| 26 | BB | 706 | A | N9-C8 | 5.35 | 1.42 | 1.37 |
| 26 | BB | 2314 | A | O3'-P | 5.35 | 1.67 | 1.61 |
| 26 | BB | 2341 | G | N9-C8 | 5.35 | 1.41 | 1.37 |
| 26 | BB | 2374 | C | C5'-C4' | 5.35 | 1.57 | 1.51 |
| 33 | BI | 25 | TYR | CG-CD1 | 5.35 | 1.46 | 1.39 |
| 1 | AA | 257 | G | C4'-O4' | -5.35 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 854 | U | C5'-C4' | 5.35 | 1.57 | 1.51 |
| 1 | AA | 925 | G | C6-O6 | -5.35 | 1.19 | 1.24 |
| 1 | AA | 1035 | A | C4'-O4' | -5.35 | 1.38 | 1.45 |
| 1 | AA | 1430 | A | C5'-C4' | -5.35 | 1.45 | 1.51 |
| 1 | AA | 1476 | A | N3-C4 | 5.35 | 1.38 | 1.34 |
| 2 | AB | 40 | C | C1'-N1 | 5.35 | 1.56 | 1.48 |
| 26 | BB | 578 | G | N1-C2 | -5.35 | 1.33 | 1.37 |
| 26 | BB | 711 | G | O3'-P | 5.35 | 1.67 | 1.61 |
| 26 | BB | 961 | C | N3-C4 | -5.35 | 1.30 | 1.33 |
| 26 | BB | 997 | G | N3-C4 | 5.35 | 1.39 | 1.35 |
| 26 | BB | 2338 | C | O3'-P | 5.35 | 1.67 | 1.61 |
| 1 | AA | 36 | C | P-O5' | 5.35 | 1.65 | 1.59 |
| 1 | AA | 1276 | G | N9-C8 | 5.35 | 1.41 | 1.37 |
| 2 | AB | 8 | 4SU | O3'-P | 5.35 | 1.67 | 1.61 |
| 26 | BB | 22 | C | C3'-C2' | 5.35 | 1.58 | 1.52 |
| 26 | BB | 152 | A | C3'-C2' | -5.35 | 1.46 | 1.52 |
| 26 | BB | 495 | G | P-O5' | 5.35 | 1.65 | 1.59 |
| 26 | BB | 1777 | U | C5-C6 | 5.35 | 1.39 | 1.34 |
| 26 | BB | 2540 | C | C2-O2 | -5.35 | 1.19 | 1.24 |
| 1 | AA | 502 | A | N3-C4 | -5.35 | 1.31 | 1.34 |
| 1 | AA | 1106 | G | C2-N3 | 5.35 | 1.37 | 1.32 |
| 1 | AA | 1252 | A | C8-N7 | -5.35 | 1.27 | 1.31 |
| 3 | AC | 57 | C | C2'-C1' | 5.35 | 1.59 | 1.53 |
| 25 | BA | 20 | G | C5'-C4' | 5.35 | 1.57 | 1.51 |
| 26 | BB | 530 | G | C4'-C3' | 5.35 | 1.59 | 1.53 |
| 26 | BB | 689 | A | C2-N3 | 5.35 | 1.38 | 1.33 |
| 26 | BB | 2365 | G | O3'-P | 5.35 | 1.67 | 1.61 |
| 1 | AA | 768 | A | N9-C8 | 5.35 | 1.42 | 1.37 |
| 1 | AA | 1394 | A | C6-N1 | -5.35 | 1.31 | 1.35 |
| 25 | BA | 35 | C | C4-C5 | 5.35 | 1.47 | 1.43 |
| 26 | BB | 700 | G | O4'-C1' | -5.35 | 1.34 | 1.41 |
| 26 | BB | 1372 | U | O3'-P | 5.35 | 1.67 | 1.61 |
| 26 | BB | 1699 | G | O5'-C5' | -5.35 | 1.34 | 1.42 |
| 26 | BB | 2034 | U | P-O5' | 5.35 | 1.65 | 1.59 |
| 26 | BB | 2458 | G | C5'-C4' | 5.35 | 1.57 | 1.51 |
| 1 | AA | 107 | G | C2-N3 | -5.35 | 1.28 | 1.32 |
| 1 | AA | 1246 | A | C3'-C2' | -5.35 | 1.46 | 1.52 |
| 1 | AA | 1345 | U | P-O5' | 5.35 | 1.65 | 1.59 |
| 1 | AA | 1346 | A | C2'-C1' | 5.35 | 1.59 | 1.53 |
| 26 | BB | 2489 | U | C5-C6 | 5.35 | 1.39 | 1.34 |
| 26 | BB | 2895 | G | C1'-N9 | 5.35 | 1.56 | 1.48 |
| 1 | AA | 175 | C | C3'-C2' | 5.34 | 1.58 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 242 | G | P-O5' | 5.34 | 1.65 | 1.59 |
| 1 | AA | 618 | C | C4-C5 | 5.34 | 1.47 | 1.43 |
| 1 | AA | 1291 | U | C4-C5 | 5.34 | 1.48 | 1.43 |
| 2 | AB | 14 | A | O3'-P | 5.34 | 1.67 | 1.61 |
| 26 | BB | 226 | A | C2-N3 | 5.34 | 1.38 | 1.33 |
| 26 | BB | 580 | U | N3-C4 | 5.34 | 1.43 | 1.38 |
| 26 | BB | 836 | G | C2-N3 | 5.34 | 1.37 | 1.32 |
| 26 | BB | 969 | G | C2-N2 | -5.34 | 1.29 | 1.34 |
| 26 | BB | 1481 | U | P-O5' | 5.34 | 1.65 | 1.59 |
| 26 | BB | 1787 | A | N1-C2 | -5.34 | 1.29 | 1.34 |
| 26 | BB | 2132 | U | C4-O4 | -5.34 | 1.19 | 1.23 |
| 26 | BB | 2626 | C | C5-C6 | 5.34 | 1.38 | 1.34 |
| 1 | AA | 289 | G | O3'-P | -5.34 | 1.54 | 1.61 |
| 1 | AA | 492 | C | N1-C2 | 5.34 | 1.45 | 1.40 |
| 26 | BB | 676 | A | C6-N1 | -5.34 | 1.31 | 1.35 |
| 26 | BB | 1511 | G | N3-C4 | 5.34 | 1.39 | 1.35 |
| 26 | BB | 1549 | A | C6-N1 | 5.34 | 1.39 | 1.35 |
| 26 | BB | 2096 | C | C5-C6 | 5.34 | 1.38 | 1.34 |
| 1 | AA | 144 | G | C2-N3 | 5.34 | 1.37 | 1.32 |
| 1 | AA | 264 | C | C4-N4 | 5.34 | 1.38 | 1.33 |
| 1 | AA | 716 | A | C8-N7 | 5.34 | 1.35 | 1.31 |
| 1 | AA | 752 | G | N9-C8 | 5.34 | 1.41 | 1.37 |
| 1 | AA | 958 | A | N3-C4 | 5.34 | 1.38 | 1.34 |
| 1 | AA | 1368 | A | O3'-P | 5.34 | 1.67 | 1.61 |
| 6 | AF | 104 | GLU | CG-CD | 5.34 | 1.59 | 1.51 |
| 26 | BB | 115 | C | N1-C6 | -5.34 | 1.33 | 1.37 |
| 26 | BB | 257 | C | N3-C4 | 5.34 | 1.37 | 1.33 |
| 26 | BB | 516 | C | N1-C6 | 5.34 | 1.40 | 1.37 |
| 26 | BB | 590 | A | C2-N3 | 5.34 | 1.38 | 1.33 |
| 26 | BB | 605 | G | O3'-P | 5.34 | 1.67 | 1.61 |
| 26 | BB | 1300 | G | C5-C4 | 5.34 | 1.42 | 1.38 |
| 26 | BB | 1482 | G | N9-C8 | -5.34 | 1.34 | 1.37 |
| 26 | BB | 1651 | G | C5'-C4' | 5.34 | 1.57 | 1.51 |
| 26 | BB | 1895 | C | O4'-C1' | 5.34 | 1.48 | 1.41 |
| 26 | BB | 2014 | A | C1'-N9 | 5.34 | 1.56 | 1.48 |
| 26 | BB | 2360 | G | N3-C4 | 5.34 | 1.39 | 1.35 |
| 26 | BB | 2485 | G | N3-C4 | 5.34 | 1.39 | 1.35 |
| 1 | AA | 298 | A | C5-C6 | 5.34 | 1.45 | 1.41 |
| 1 | AA | 679 | C | C2-N3 | 5.34 | 1.40 | 1.35 |
| 1 | AA | 763 | G | C2'-C1' | 5.34 | 1.59 | 1.53 |
| 1 | AA | 983 | A | C3'-C2' | 5.34 | 1.58 | 1.52 |
| 26 | BB | 460 | A | C3'-O3' | 5.34 | 1.49 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 688 | U | C2-O2 | 5.34 | 1.27 | 1.22 |
| 26 | BB | 1067 | A | C3'-C2' | 5.34 | 1.58 | 1.52 |
| 26 | BB | 1537 | G | C6-N1 | -5.34 | 1.35 | 1.39 |
| 26 | BB | 1538 | G | N1-C2 | 5.34 | 1.42 | 1.37 |
| 26 | BB | 1685 | C | C2'-O2' | 5.34 | 1.48 | 1.41 |
| 26 | BB | 1935 | G | C3'-C2' | 5.34 | 1.58 | 1.52 |
| 26 | BB | 2376 | A | C6-N6 | -5.34 | 1.29 | 1.33 |
| 26 | BB | 2405 | G | C6-O6 | -5.34 | 1.19 | 1.24 |
| 26 | BB | 2629 | U | O5'-C5' | -5.34 | 1.34 | 1.42 |
| 26 | BB | 2644 | G | N3-C4 | 5.34 | 1.39 | 1.35 |
| 1 | AA | 352 | C | C4-N4 | 5.34 | 1.38 | 1.33 |
| 1 | AA | 813 | U | C2'-C1' | -5.34 | 1.47 | 1.53 |
| 1 | AA | 1224 | U | C2-N3 | 5.34 | 1.41 | 1.37 |
| 26 | BB | 85 | G | O4'-C1' | 5.34 | 1.48 | 1.41 |
| 26 | BB | 2232 | C | O4'-C1' | 5.34 | 1.48 | 1.41 |
| 1 | AA | 117 | G | N7-C5 | 5.34 | 1.42 | 1.39 |
| 1 | AA | 750 | C | C4-C5 | 5.34 | 1.47 | 1.43 |
| 1 | AA | 915 | A | N9-C8 | -5.34 | 1.33 | 1.37 |
| 26 | BB | 117 | G | C2-N3 | 5.34 | 1.37 | 1.32 |
| 26 | BB | 267 | C | N1-C6 | 5.34 | 1.40 | 1.37 |
| 26 | BB | 417 | C | C3'-C2' | -5.34 | 1.46 | 1.52 |
| 26 | BB | 1109 | C | P-O5' | 5.34 | 1.65 | 1.59 |
| 1 | AA | 960 | U | C5'-C4' | -5.33 | 1.45 | 1.51 |
| 1 | AA | 1360 | A | N9-C4 | 5.33 | 1.41 | 1.37 |
| 4 | AD | 23 | G | C4'-O4' | -5.33 | 1.38 | 1.45 |
| 1 | AA | 446 | G | N7-C5 | 5.33 | 1.42 | 1.39 |
| 1 | AA | 456 | A | N9-C4 | -5.33 | 1.34 | 1.37 |
| 1 | AA | 662 | U | C4-C5 | 5.33 | 1.48 | 1.43 |
| 1 | AA | 1406 | U | C4'-C3' | -5.33 | 1.47 | 1.52 |
| 1 | AA | 1417 | G | C4'-O4' | -5.33 | 1.38 | 1.45 |
| 11 | AK | 14 | ARG | CD-NE | 5.33 | 1.55 | 1.46 |
| 26 | BB | 123 | G | N7-C5 | 5.33 | 1.42 | 1.39 |
| 26 | BB | 240 | C | N3-C4 | 5.33 | 1.37 | 1.33 |
| 26 | BB | 292 | U | O3'-P | 5.33 | 1.67 | 1.61 |
| 26 | BB | 369 | U | C4-O4 | 5.33 | 1.27 | 1.23 |
| 26 | BB | 591 | U | N1-C2 | 5.33 | 1.43 | 1.38 |
| 26 | BB | 1071 | G | C6-O6 | -5.33 | 1.19 | 1.24 |
| 26 | BB | 1279 | G | C6-O6 | -5.33 | 1.19 | 1.24 |
| 26 | BB | 1394 | U | C2-O2 | 5.33 | 1.27 | 1.22 |
| 26 | BB | 1413 | A | C6-N1 | -5.33 | 1.31 | 1.35 |
| 26 | BB | 2576 | G | N3-C4 | 5.33 | 1.39 | 1.35 |
| 26 | BB | 2783 | U | P-O5' | 5.33 | 1.65 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 32 | A | C3'-C2' | 5.33 | 1.58 | 1.52 |
| 1 | AA | 491 | G | N3-C4 | -5.33 | 1.31 | 1.35 |
| 1 | AA | 581 | G | N3-C4 | 5.33 | 1.39 | 1.35 |
| 1 | AA | 985 | C | N3-C4 | 5.33 | 1.37 | 1.33 |
| 26 | BB | 898 | C | C5'-C4' | 5.33 | 1.57 | 1.51 |
| 26 | BB | 1217 | U | O4'-C1' | 5.33 | 1.48 | 1.41 |
| 26 | BB | 1896 | G | N7-C5 | -5.33 | 1.36 | 1.39 |
| 26 | BB | 2272 | U | O4'-C1' | 5.33 | 1.48 | 1.41 |
| 31 | BG | 38 | GLY | N-CA | 5.33 | 1.54 | 1.46 |
| 1 | AA | 1049 | U | C5-C6 | -5.33 | 1.29 | 1.34 |
| 26 | BB | 179 | C | C3'-C2' | 5.33 | 1.58 | 1.52 |
| 26 | BB | 2610 | C | C5-C6 | 5.33 | 1.38 | 1.34 |
| 26 | BB | 333 | G | P-O5' | 5.33 | 1.65 | 1.59 |
| 26 | BB | 1015 | U | N1-C6 | -5.33 | 1.33 | 1.38 |
| 26 | BB | 1693 | U | C2-N3 | 5.33 | 1.41 | 1.37 |
| 26 | BB | 2273 | A | C5'-C4' | 5.33 | 1.57 | 1.51 |
| 26 | BB | 2502 | G | C2-N2 | -5.33 | 1.29 | 1.34 |
| 26 | BB | 2546 | U | C4'-O4' | -5.33 | 1.38 | 1.45 |
| 26 | BB | 2638 | G | N1-C2 | 5.33 | 1.42 | 1.37 |
| 1 | AA | 494 | G | C4'-C3' | 5.33 | 1.59 | 1.53 |
| 1 | AA | 807 | A | N1-C2 | -5.33 | 1.29 | 1.34 |
| 1 | AA | 1291 | U | C2-N3 | 5.33 | 1.41 | 1.37 |
| 26 | BB | 333 | G | C2-N3 | 5.33 | 1.37 | 1.32 |
| 26 | BB | 818 | G | C6-N1 | 5.33 | 1.43 | 1.39 |
| 26 | BB | 2899 | A | C8-N7 | -5.33 | 1.27 | 1.31 |
| 1 | AA | 568 | G | N9-C4 | 5.33 | 1.42 | 1.38 |
| 1 | AA | 730 | G | C2'-C1' | -5.33 | 1.47 | 1.53 |
| 1 | AA | 1021 | A | O4'-C1' | -5.33 | 1.34 | 1.41 |
| 26 | BB | 428 | A | C4'-O4' | -5.33 | 1.38 | 1.45 |
| 26 | BB | 1206 | G | N3-C4 | 5.33 | 1.39 | 1.35 |
| 26 | BB | 1695 | G | P-O5' | 5.33 | 1.65 | 1.59 |
| 26 | BB | 1735 | A | C4'-O4' | -5.33 | 1.38 | 1.45 |
| 26 | BB | 1780 | A | N9-C8 | 5.33 | 1.42 | 1.37 |
| 26 | BB | 1963 | U | O3'-P | 5.33 | 1.67 | 1.61 |
| 26 | BB | 2033 | A | C8-N7 | -5.33 | 1.27 | 1.31 |
| 32 | BH | 150 | TYR | CG-CD2 | 5.33 | 1.46 | 1.39 |
| 1 | AA | 722 | G | C4'-O4' | -5.32 | 1.38 | 1.45 |
| 1 | AA | 1178 | G | C2'-C1' | -5.32 | 1.47 | 1.53 |
| 26 | BB | 961 | C | C5-C6 | 5.32 | 1.38 | 1.34 |
| 26 | BB | 1192 | G | C5-C6 | 5.32 | 1.47 | 1.42 |
| 26 | BB | 1900 | A | C2'-C1' | 5.32 | 1.59 | 1.53 |
| 26 | BB | 2298 | A | N1-C2 | 5.32 | 1.39 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2303 | G | C5-C4 | -5.32 | 1.34 | 1.38 |
| 26 | BB | 2628 | C | O3'-P | 5.32 | 1.67 | 1.61 |
| 26 | BB | 174 | U | C2-O2 | 5.32 | 1.27 | 1.22 |
| 26 | BB | 539 | G | P-O5' | -5.32 | 1.54 | 1.59 |
| 26 | BB | 1253 | A | P-O5' | 5.32 | 1.65 | 1.59 |
| 26 | BB | 1497 | U | C5-C6 | 5.32 | 1.39 | 1.34 |
| 26 | BB | 1680 | U | N1-C2 | 5.32 | 1.43 | 1.38 |
| 1 | AA | 661 | G | P-O5' | 5.32 | 1.65 | 1.59 |
| 1 | AA | 712 | A | N7-C5 | 5.32 | 1.42 | 1.39 |
| 1 | AA | 1174 | G | C8-N7 | -5.32 | 1.27 | 1.30 |
| 25 | BA | 6 | G | C8-N7 | -5.32 | 1.27 | 1.30 |
| 26 | BB | 70 | G | N3-C4 | 5.32 | 1.39 | 1.35 |
| 26 | BB | 290 | U | C4-O4 | -5.32 | 1.19 | 1.23 |
| 26 | BB | 438 | G | C2-N3 | 5.32 | 1.37 | 1.32 |
| 26 | BB | 660 | C | C5-C6 | -5.32 | 1.30 | 1.34 |
| 26 | BB | 857 | G | C5-C4 | -5.32 | 1.34 | 1.38 |
| 26 | BB | 865 | C | C5'-C4' | 5.32 | 1.57 | 1.51 |
| 26 | BB | 927 | A | C3'-C2' | 5.32 | 1.58 | 1.52 |
| 26 | BB | 1358 | G | C2-N3 | 5.32 | 1.37 | 1.32 |
| 26 | BB | 1504 | A | C5-C6 | 5.32 | 1.45 | 1.41 |
| 26 | BB | 2113 | U | C2'-C1' | 5.32 | 1.59 | 1.53 |
| 26 | BB | 2382 | G | N9-C8 | 5.32 | 1.41 | 1.37 |
| 26 | BB | 2519 | U | C5'-C4' | 5.32 | 1.57 | 1.51 |
| 1 | AA | 237 | G | N1-C2 | 5.32 | 1.42 | 1.37 |
| 1 | AA | 359 | G | C2-N2 | 5.32 | 1.39 | 1.34 |
| 1 | AA | 670 | G | C5-C4 | -5.32 | 1.34 | 1.38 |
| 1 | AA | 958 | A | C6-N1 | -5.32 | 1.31 | 1.35 |
| 26 | BB | 218 | A | C4'-O4' | -5.32 | 1.38 | 1.45 |
| 26 | BB | 938 | G | C3'-C2' | -5.32 | 1.46 | 1.52 |
| 26 | BB | 1349 | C | C4'-C3' | 5.32 | 1.59 | 1.53 |
| 26 | BB | 2041 | U | C5-C6 | 5.32 | 1.39 | 1.34 |
| 26 | BB | 2590 | A | N9-C4 | -5.32 | 1.34 | 1.37 |
| 26 | BB | 2674 | G | P-O5' | 5.32 | 1.65 | 1.59 |
| 1 | AA | 300 | A | C3'-C2' | 5.32 | 1.58 | 1.52 |
| 1 | AA | 307 | C | C3'-O3' | -5.32 | 1.34 | 1.42 |
| 1 | AA | 1024 | G | C3'-O3' | 5.32 | 1.49 | 1.42 |
| 1 | AA | 1067 | A | N3-C4 | 5.32 | 1.38 | 1.34 |
| 2 | AB | 48 | U | C4-C5 | 5.32 | 1.48 | 1.43 |
| 4 | AD | 74 | A | C3'-O3' | 5.32 | 1.49 | 1.42 |
| 25 | BA | 26 | C | N1-C6 | -5.32 | 1.33 | 1.37 |
| 26 | BB | 315 | G | N7-C5 | -5.32 | 1.36 | 1.39 |
| 26 | BB | 1039 | A | C5-C4 | -5.32 | 1.35 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1243 | C | C2-N3 | 5.32 | 1.40 | 1.35 |
| 26 | BB | 1353 | A | O3'-P | 5.32 | 1.67 | 1.61 |
| 26 | BB | 1425 | G | N9-C4 | -5.32 | 1.33 | 1.38 |
| 26 | BB | 1611 | C | C2-O2 | -5.32 | 1.19 | 1.24 |
| 26 | BB | 1703 | G | C4'-O4' | -5.32 | 1.38 | 1.45 |
| 26 | BB | 2035 | G | N3-C4 | 5.32 | 1.39 | 1.35 |
| 26 | BB | 2207 | C | C5'-C4' | 5.32 | 1.57 | 1.51 |
| 26 | BB | 2211 | A | N7-C5 | 5.32 | 1.42 | 1.39 |
| 26 | BB | 2276 | G | O3'-P | 5.32 | 1.67 | 1.61 |
| 26 | BB | 2334 | U | C4'-O4' | -5.32 | 1.38 | 1.45 |
| 26 | BB | 2752 | C | O3'-P | 5.32 | 1.67 | 1.61 |
| 1 | AA | 248 | C | O3'-P | -5.32 | 1.54 | 1.61 |
| 1 | AA | 285 | C | C4-C5 | 5.32 | 1.47 | 1.43 |
| 1 | AA | 431 | A | N3-C4 | 5.32 | 1.38 | 1.34 |
| 7 | AG | 19 | PHE | CG-CD1 | 5.32 | 1.46 | 1.38 |
| 26 | BB | 1638 | C | C2'-C1' | -5.32 | 1.47 | 1.53 |
| 26 | BB | 1856 | U | N1-C6 | 5.32 | 1.42 | 1.38 |
| 26 | BB | 2225 | A | P-O5' | 5.32 | 1.65 | 1.59 |
| 26 | BB | 2396 | G | C2-N2 | 5.32 | 1.39 | 1.34 |
| 1 | AA | 112 | G | C5-C6 | -5.31 | 1.37 | 1.42 |
| 1 | AA | 1453 | G | C2'-O2' | 5.31 | 1.48 | 1.41 |
| 26 | BB | 1675 | C | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 1 | AA | 135 | C | C4-C5 | 5.31 | 1.47 | 1.43 |
| 4 | AD | 38 | A | N3-C4 | -5.31 | 1.31 | 1.34 |
| 26 | BB | 71 | A | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 26 | BB | 224 | U | C2-O2 | -5.31 | 1.17 | 1.22 |
| 26 | BB | 240 | C | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 26 | BB | 800 | A | C2'-C1' | -5.31 | 1.47 | 1.53 |
| 26 | BB | 869 | G | N1-C2 | 5.31 | 1.42 | 1.37 |
| 26 | BB | 1841 | U | N1-C2 | 5.31 | 1.43 | 1.38 |
| 26 | BB | 1897 | G | C8-N7 | 5.31 | 1.34 | 1.30 |
| 26 | BB | 1961 | C | C2-N3 | -5.31 | 1.31 | 1.35 |
| 26 | BB | 2511 | U | C2'-C1' | -5.31 | 1.47 | 1.53 |
| 26 | BB | 2511 | U | C4'-C3' | 5.31 | 1.58 | 1.53 |
| 26 | BB | 2736 | A | N9-C4 | 5.31 | 1.41 | 1.37 |
| 45 | BU | 99 | ARG | CZ-NH2 | 5.31 | 1.40 | 1.33 |
| 1 | AA | 48 | C | C4-N4 | 5.31 | 1.38 | 1.33 |
| 1 | AA | 912 | C | O3'-P | 5.31 | 1.67 | 1.61 |
| 1 | AA | 1137 | C | C4-N4 | 5.31 | 1.38 | 1.33 |
| 1 | AA | 1499 | A | C4'-O4' | -5.31 | 1.38 | 1.45 |
| 24 | AX | 65 | ARG | NE-CZ | 5.31 | 1.40 | 1.33 |
| 26 | BB | 778 | G | N9-C8 | 5.31 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1090 | A | C2'-C1' | 5.31 | 1.59 | 1.53 |
| 1 | AA | 133 | U | C2-N3 | 5.31 | 1.41 | 1.37 |
| 1 | AA | 285 | C | C3'-C2' | 5.31 | 1.58 | 1.52 |
| 1 | AA | 322 | C | N3-C4 | 5.31 | 1.37 | 1.33 |
| 1 | AA | 411 | A | P-O5' | 5.31 | 1.65 | 1.59 |
| 1 | AA | 1166 | G | N1-C2 | 5.31 | 1.42 | 1.37 |
| 1 | AA | 1225 | A | N9-C4 | 5.31 | 1.41 | 1.37 |
| 1 | AA | 1428 | A | N9-C4 | -5.31 | 1.34 | 1.37 |
| 1 | AA | 1515 | G | C8-N7 | 5.31 | 1.34 | 1.30 |
| 2 | AB | 73 | G | C2-N3 | 5.31 | 1.36 | 1.32 |
| 26 | BB | 429 | A | C5-C4 | 5.31 | 1.42 | 1.38 |
| 26 | BB | 502 | A | C6-N1 | 5.31 | 1.39 | 1.35 |
| 26 | BB | 1732 | C | C2-O2 | -5.31 | 1.19 | 1.24 |
| 26 | BB | 1814 | G | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 26 | BB | 2101 | A | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 26 | BB | 2415 | G | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 26 | BB | 2464 | G | N7-C5 | 5.31 | 1.42 | 1.39 |
| 1 | AA | 808 | C | C4'-O4' | -5.31 | 1.38 | 1.45 |
| 1 | AA | 968 | A | N7-C5 | 5.31 | 1.42 | 1.39 |
| 26 | BB | 140 | C | N1-C6 | 5.31 | 1.40 | 1.37 |
| 26 | BB | 1234 | U | N1-C6 | -5.31 | 1.33 | 1.38 |
| 26 | BB | 2282 | G | N3-C4 | -5.31 | 1.31 | 1.35 |
| 26 | BB | 2354 | C | C5-C6 | 5.31 | 1.38 | 1.34 |
| 26 | BB | 2768 | U | C3'-C2' | -5.31 | 1.47 | 1.52 |
| 26 | BB | 2791 | G | N3-C4 | -5.31 | 1.31 | 1.35 |
| 26 | BB | 2885 | G | C5'-C4' | 5.31 | 1.57 | 1.51 |
| 1 | AA | 549 | C | N1-C6 | 5.31 | 1.40 | 1.37 |
| 26 | BB | 48 | G | N9-C8 | -5.31 | 1.34 | 1.37 |
| 26 | BB | 1207 | C | C4'-C3' | -5.31 | 1.47 | 1.52 |
| 26 | BB | 1490 | A | O3'-P | 5.31 | 1.67 | 1.61 |
| 26 | BB | 1806 | C | C4-N4 | 5.31 | 1.38 | 1.33 |
| 1 | AA | 250 | A | N7-C5 | -5.30 | 1.36 | 1.39 |
| 1 | AA | 259 | G | C3'-C2' | 5.30 | 1.58 | 1.52 |
| 1 | AA | 843 | U | O3'-P | 5.30 | 1.67 | 1.61 |
| 1 | AA | 1255 | G | C8-N7 | 5.30 | 1.34 | 1.30 |
| 1 | AA | 1456 | A | C3'-C2' | -5.30 | 1.47 | 1.52 |
| 3 | AC | 15 | G | P-O5' | 5.30 | 1.65 | 1.59 |
| 26 | BB | 352 | A | N9-C8 | 5.30 | 1.42 | 1.37 |
| 26 | BB | 472 | A | C3'-C2' | 5.30 | 1.58 | 1.52 |
| 26 | BB | 559 | G | N7-C5 | -5.30 | 1.36 | 1.39 |
| 26 | BB | 612 | G | C4'-C3' | 5.30 | 1.58 | 1.53 |
| 26 | BB | 1029 | A | N9-C8 | 5.30 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1497 | U | C4-C5 | 5.30 | 1.48 | 1.43 |
| 1 | AA | 275 | G | N9-C4 | 5.30 | 1.42 | 1.38 |
| 1 | AA | 1531 | A | C6-N6 | 5.30 | 1.38 | 1.33 |
| 26 | BB | 275 | C | C2-N3 | 5.30 | 1.40 | 1.35 |
| 26 | BB | 376 | G | C2'-C1' | -5.30 | 1.47 | 1.53 |
| 26 | BB | 376 | G | N7-C5 | -5.30 | 1.36 | 1.39 |
| 26 | BB | 396 | G | N9-C8 | -5.30 | 1.34 | 1.37 |
| 26 | BB | 866 | A | C5-C6 | 5.30 | 1.45 | 1.41 |
| 26 | BB | 2210 | U | C4-O4 | -5.30 | 1.19 | 1.23 |
| 26 | BB | 2666 | C | C2'-C1' | -5.30 | 1.47 | 1.53 |
| 58 | B7 | 36 | ARG | NE-CZ | 5.30 | 1.40 | 1.33 |
| 1 | AA | 75 | G | C4'-C3' | 5.30 | 1.58 | 1.53 |
| 1 | AA | 321 | A | C2-N3 | -5.30 | 1.28 | 1.33 |
| 1 | AA | 486 | U | N3-C4 | 5.30 | 1.43 | 1.38 |
| 1 | AA | 1099 | G | C4'-O4' | -5.30 | 1.38 | 1.45 |
| 1 | AA | 1374 | A | P-O5' | 5.30 | 1.65 | 1.59 |
| 1 | AA | 1458 | G | C4'-O4' | -5.30 | 1.38 | 1.45 |
| 1 | AA | 1506 | U | C5-C6 | 5.30 | 1.39 | 1.34 |
| 25 | BA | 32 | U | P-O5' | 5.30 | 1.65 | 1.59 |
| 26 | BB | 602 | A | C5-C4 | -5.30 | 1.35 | 1.38 |
| 26 | BB | 1102 | C | C2'-O2' | 5.30 | 1.48 | 1.41 |
| 26 | BB | 1869 | G | C4'-O4' | -5.30 | 1.38 | 1.45 |
| 26 | BB | 2456 | C | O4'-C1' | -5.30 | 1.34 | 1.41 |
| 26 | BB | 2602 | A | O3'-P | 5.30 | 1.67 | 1.61 |
| 26 | BB | 2822 | G | P-O5' | 5.30 | 1.65 | 1.59 |
| 26 | BB | 2893 | A | C5-C6 | 5.30 | 1.45 | 1.41 |
| 1 | AA | 762 | U | N3-C4 | 5.30 | 1.43 | 1.38 |
| 2 | AB | 65 | C | C4-C5 | 5.30 | 1.47 | 1.43 |
| 25 | BA | 95 | U | C3'-O3' | 5.30 | 1.49 | 1.42 |
| 26 | BB | 58 | G | C5'-C4' | 5.30 | 1.57 | 1.51 |
| 26 | BB | 448 | U | N1-C2 | 5.30 | 1.43 | 1.38 |
| 26 | BB | 795 | C | C2-N3 | 5.30 | 1.40 | 1.35 |
| 26 | BB | 959 | A | N9-C4 | 5.30 | 1.41 | 1.37 |
| 26 | BB | 1097 | U | C3'-C2' | -5.30 | 1.47 | 1.52 |
| 26 | BB | 1429 | G | C4'-O4' | -5.30 | 1.38 | 1.45 |
| 26 | BB | 1979 | U | C4-O4 | -5.30 | 1.19 | 1.23 |
| 26 | BB | 2337 | G | C4'-O4' | -5.30 | 1.38 | 1.45 |
| 26 | BB | 2461 | A | C2-N3 | 5.30 | 1.38 | 1.33 |
| 26 | BB | 2528 | U | C4'-O4' | -5.30 | 1.38 | 1.45 |
| 26 | BB | 2769 | U | C5'-C4' | 5.30 | 1.57 | 1.51 |
| 26 | BB | 1970 | A | N7-C5 | -5.30 | 1.36 | 1.39 |
| 26 | BB | 2245 | U | C4-O4 | -5.30 | 1.19 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 46 | BV | 54 | GLU | CB-CG | 5.30 | 1.62 | 1.52 |
| 1 | AA | 397 | A | N9-C4 | 5.30 | 1.41 | 1.37 |
| 1 | AA | 949 | A | C3'-O3' | 5.30 | 1.49 | 1.42 |
| 4 | AD | 20 | G | C6-N1 | 5.30 | 1.43 | 1.39 |
| 26 | BB | 829 | A | C4'-C3' | 5.30 | 1.58 | 1.53 |
| 26 | BB | 1555 | G | C3'-O3' | 5.30 | 1.49 | 1.42 |
| 26 | BB | 1664 | A | O3'-P | 5.30 | 1.67 | 1.61 |
| 26 | BB | 2007 | U | C4-O4 | -5.30 | 1.19 | 1.23 |
| 26 | BB | 2064 | C | C4'-C3' | 5.30 | 1.58 | 1.53 |
| 1 | AA | 390 | U | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 1 | AA | 1073 | U | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 1 | AA | 1139 | G | O3'-P | 5.29 | 1.67 | 1.61 |
| 26 | BB | 385 | C | C4'-O4' | -5.29 | 1.38 | 1.45 |
| 26 | BB | 1098 | A | C8-N7 | 5.29 | 1.35 | 1.31 |
| 26 | BB | 1676 | A | N9-C4 | 5.29 | 1.41 | 1.37 |
| 26 | BB | 1749 | A | N9-C4 | -5.29 | 1.34 | 1.37 |
| 1 | AA | 589 | U | C2-N3 | 5.29 | 1.41 | 1.37 |
| 1 | AA | 847 | G | N1-C2 | 5.29 | 1.42 | 1.37 |
| 1 | AA | 1288 | A | C5-C6 | 5.29 | 1.45 | 1.41 |
| 1 | AA | 1458 | G | C3'-C2' | 5.29 | 1.58 | 1.52 |
| 1 | AA | 1531 | A | N9-C8 | 5.29 | 1.42 | 1.37 |
| 25 | BA | 28 | C | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 25 | BA | 56 | G | N9-C8 | -5.29 | 1.34 | 1.37 |
| 26 | BB | 802 | A | C4'-C3' | 5.29 | 1.58 | 1.53 |
| 26 | BB | 1250 | G | O3'-P | 5.29 | 1.67 | 1.61 |
| 26 | BB | 1679 | A | P-O5' | 5.29 | 1.65 | 1.59 |
| 26 | BB | 1695 | G | C6-N1 | 5.29 | 1.43 | 1.39 |
| 26 | BB | 1738 | G | C2'-C1' | 5.29 | 1.59 | 1.53 |
| 26 | BB | 1967 | C | C2-O2 | -5.29 | 1.19 | 1.24 |
| 26 | BB | 2318 | G | N9-C4 | 5.29 | 1.42 | 1.38 |
| 1 | AA | 137 | U | C2'-O2' | 5.29 | 1.48 | 1.41 |
| 1 | AA | 272 | C | C4'-C3' | -5.29 | 1.47 | 1.52 |
| 1 | AA | 528 | C | N1-C6 | 5.29 | 1.40 | 1.37 |
| 1 | AA | 1050 | G | C6-N1 | 5.29 | 1.43 | 1.39 |
| 4 | AD | 26 | C | C3'-C2' | -5.29 | 1.47 | 1.52 |
| 25 | BA | 82 | U | C2'-C1' | 5.29 | 1.59 | 1.53 |
| 26 | BB | 66 | C | C4-C5 | -5.29 | 1.38 | 1.43 |
| 26 | BB | 453 | A | C5-C4 | -5.29 | 1.35 | 1.38 |
| 26 | BB | 576 | U | C4-O4 | -5.29 | 1.19 | 1.23 |
| 26 | BB | 656 | G | C2'-C1' | 5.29 | 1.59 | 1.53 |
| 26 | BB | 1407 | G | C4'-C3' | 5.29 | 1.58 | 1.53 |
| 26 | BB | 1998 | A | C2'-O2' | 5.29 | 1.48 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2751 | G | C8-N7 | -5.29 | 1.27 | 1.30 |
| 1 | AA | 1160 | G | N3-C4 | 5.29 | 1.39 | 1.35 |
| 26 | BB | 329 | G | C4'-C3' | 5.29 | 1.58 | 1.53 |
| 26 | BB | 667 | U | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 26 | BB | 1042 | G | N1-C2 | -5.29 | 1.33 | 1.37 |
| 26 | BB | 2467 | C | C2'-C1' | -5.29 | 1.47 | 1.53 |
| 1 | AA | 636 | U | N1-C2 | 5.29 | 1.43 | 1.38 |
| 1 | AA | 660 | C | O3'-P | 5.29 | 1.67 | 1.61 |
| 1 | AA | 771 | G | N7-C5 | 5.29 | 1.42 | 1.39 |
| 1 | AA | 1259 | C | C4'-O4' | -5.29 | 1.38 | 1.45 |
| 21 | AU | 2 | ARG | CZ-NH2 | 5.29 | 1.40 | 1.33 |
| 26 | BB | 43 | G | C3'-O3' | -5.29 | 1.34 | 1.42 |
| 26 | BB | 713 | G | C4'-O4' | -5.29 | 1.38 | 1.45 |
| 26 | BB | 1302 | A | N7-C5 | 5.29 | 1.42 | 1.39 |
| 26 | BB | 1762 | A | C5-C4 | 5.29 | 1.42 | 1.38 |
| 26 | BB | 1938 | A | N7-C5 | -5.29 | 1.36 | 1.39 |
| 26 | BB | 2704 | C | C4-N4 | 5.29 | 1.38 | 1.33 |
| 1 | AA | 828 | U | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 1 | AA | 1232 | U | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 1 | AA | 1374 | A | C5-C6 | 5.29 | 1.45 | 1.41 |
| 1 | AA | 1446 | A | N3-C4 | 5.29 | 1.38 | 1.34 |
| 26 | BB | 841 | G | C8-N7 | -5.29 | 1.27 | 1.30 |
| 26 | BB | 1627 | G | N9-C4 | 5.29 | 1.42 | 1.38 |
| 26 | BB | 1663 | G | C6-N1 | 5.29 | 1.43 | 1.39 |
| 1 | AA | 81 | A | C8-N7 | 5.29 | 1.35 | 1.31 |
| 26 | BB | 48 | G | C3'-C2' | -5.29 | 1.47 | 1.52 |
| 26 | BB | 111 | A | N9-C8 | -5.29 | 1.33 | 1.37 |
| 26 | BB | 164 | C | C2-N3 | 5.29 | 1.40 | 1.35 |
| 26 | BB | 226 | A | C6-N1 | -5.29 | 1.31 | 1.35 |
| 26 | BB | 1059 | G | N1-C2 | 5.29 | 1.42 | 1.37 |
| 26 | BB | 1192 | G | C5'-C4' | 5.29 | 1.57 | 1.51 |
| 26 | BB | 1219 | U | N1-C2 | 5.29 | 1.43 | 1.38 |
| 26 | BB | 1708 | C | C4'-C3' | -5.29 | 1.47 | 1.52 |
| 26 | BB | 1770 | G | N3-C4 | -5.29 | 1.31 | 1.35 |
| 26 | BB | 1882 | U | C1'-N1 | 5.29 | 1.56 | 1.48 |
| 26 | BB | 2040 | G | C6-N1 | 5.29 | 1.43 | 1.39 |
| 26 | BB | 2492 | U | P-O5' | 5.29 | 1.65 | 1.59 |
| 33 | BI | 25 | TYR | CE1-CZ | 5.29 | 1.45 | 1.38 |
| 1 | AA | 524 | G | N7-C5 | -5.28 | 1.36 | 1.39 |
| 25 | BA | 71 | C | N1-C2 | 5.28 | 1.45 | 1.40 |
| 26 | BB | 580 | U | C4-O4 | -5.28 | 1.19 | 1.23 |
| 26 | BB | 1224 | U | C3'-C2' | -5.28 | 1.47 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1322 | A | P-O5' | -5.28 | 1.54 | 1.59 |
| 26 | BB | 1470 | A | C5-C4 | 5.28 | 1.42 | 1.38 |
| 26 | BB | 1676 | A | C6-N1 | 5.28 | 1.39 | 1.35 |
| 26 | BB | 2611 | C | C2'-C1' | 5.28 | 1.59 | 1.53 |
| 26 | BB | 2700 | A | N3-C4 | 5.28 | 1.38 | 1.34 |
| 26 | BB | 2717 | C | P-O5' | 5.28 | 1.65 | 1.59 |
| 26 | BB | 2823 | A | O3'-P | 5.28 | 1.67 | 1.61 |
| 1 | AA | 228 | A | N1-C2 | 5.28 | 1.39 | 1.34 |
| 26 | BB | 2086 | U | P-O5' | 5.28 | 1.65 | 1.59 |
| 1 | AA | 3 | A | C6-N6 | 5.28 | 1.38 | 1.33 |
| 1 | AA | 101 | A | C5-C4 | 5.28 | 1.42 | 1.38 |
| 1 | AA | 1170 | A | C5-C4 | -5.28 | 1.35 | 1.38 |
| 1 | AA | 1189 | U | C3'-C2' | 5.28 | 1.58 | 1.52 |
| 1 | AA | 1420 | U | C4-O4 | -5.28 | 1.19 | 1.23 |
| 4 | AD | 32 | G | C5-C4 | -5.28 | 1.34 | 1.38 |
| 14 | AN | 48 | GLY | CA-C | 5.28 | 1.60 | 1.51 |
| 26 | BB | 277 | G | C6-N1 | -5.28 | 1.35 | 1.39 |
| 26 | BB | 417 | C | C4-C5 | 5.28 | 1.47 | 1.43 |
| 26 | BB | 446 | G | C2-N3 | 5.28 | 1.36 | 1.32 |
| 26 | BB | 758 | C | P-O5' | -5.28 | 1.54 | 1.59 |
| 26 | BB | 1220 | G | N1-C2 | 5.28 | 1.42 | 1.37 |
| 26 | BB | 1461 | C | O3'-P | -5.28 | 1.54 | 1.61 |
| 26 | BB | 2129 | C | P-O5' | 5.28 | 1.65 | 1.59 |
| 26 | BB | 2672 | U | N1-C2 | 5.28 | 1.43 | 1.38 |
| 26 | BB | 262 | A | C3'-C2' | -5.28 | 1.47 | 1.52 |
| 26 | BB | 1078 | U | C2'-C1' | -5.28 | 1.47 | 1.53 |
| 26 | BB | 2481 | G | C5-C4 | -5.28 | 1.34 | 1.38 |
| 26 | BB | 2650 | U | C2-N3 | 5.28 | 1.41 | 1.37 |
| 26 | BB | 2827 | C | O3'-P | 5.28 | 1.67 | 1.61 |
| 1 | AA | 387 | U | C2'-C1' | 5.28 | 1.59 | 1.53 |
| 1 | AA | 833 | G | C6-N1 | -5.28 | 1.35 | 1.39 |
| 1 | AA | 1397 | C | O3'-P | 5.28 | 1.67 | 1.61 |
| 2 | AB | 76 | A | N3-C4 | 5.28 | 1.38 | 1.34 |
| 26 | BB | 212 | G | N3-C4 | 5.28 | 1.39 | 1.35 |
| 26 | BB | 941 | A | C8-N7 | -5.28 | 1.27 | 1.31 |
| 26 | BB | 1115 | G | N1-C2 | 5.28 | 1.42 | 1.37 |
| 26 | BB | 2137 | U | C2-N3 | 5.28 | 1.41 | 1.37 |
| 26 | BB | 2491 | U | O4'-C1' | 5.28 | 1.48 | 1.41 |
| 26 | BB | 2618 | G | C8-N7 | 5.28 | 1.34 | 1.30 |
| 1 | AA | 389 | A | O4'-C1' | 5.28 | 1.48 | 1.41 |
| 26 | BB | 230 | G | C5-C4 | 5.28 | 1.42 | 1.38 |
| 26 | BB | 514 | A | C4'-C3' | 5.28 | 1.58 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 794 | A | P-O5' | 5.28 | 1.65 | 1.59 |
| 26 | BB | 1115 | G | N7-C5 | -5.28 | 1.36 | 1.39 |
| 26 | BB | 2264 | C | N1-C6 | -5.28 | 1.33 | 1.37 |
| 43 | BS | 96 | ASP | CB-CG | 5.28 | 1.62 | 1.51 |
| 1 | AA | 887 | G | O3'-P | 5.27 | 1.67 | 1.61 |
| 1 | AA | 1025 | U | O5'-C5' | 5.27 | 1.52 | 1.44 |
| 26 | BB | 478 | A | C6-N1 | 5.27 | 1.39 | 1.35 |
| 26 | BB | 565 | C | C4-C5 | 5.27 | 1.47 | 1.43 |
| 26 | BB | 637 | A | N9-C8 | 5.27 | 1.42 | 1.37 |
| 26 | BB | 1387 | A | C5-C4 | -5.27 | 1.35 | 1.38 |
| 26 | BB | 2692 | G | N7-C5 | -5.27 | 1.36 | 1.39 |
| 1 | AA | 651 | C | N3-C4 | 5.27 | 1.37 | 1.33 |
| 1 | AA | 792 | A | C2-N3 | 5.27 | 1.38 | 1.33 |
| 1 | AA | 803 | G | C2'-C1' | -5.27 | 1.47 | 1.53 |
| 1 | AA | 825 | A | N9-C8 | 5.27 | 1.42 | 1.37 |
| 1 | AA | 875 | U | N1-C2 | 5.27 | 1.43 | 1.38 |
| 1 | AA | 959 | A | N9-C4 | -5.27 | 1.34 | 1.37 |
| 1 | AA | 1185 | G | O3'-P | 5.27 | 1.67 | 1.61 |
| 1 | AA | 1374 | A | N7-C5 | 5.27 | 1.42 | 1.39 |
| 8 | AH | 128 | GLY | N-CA | 5.27 | 1.53 | 1.46 |
| 26 | BB | 86 | G | N3-C4 | -5.27 | 1.31 | 1.35 |
| 26 | BB | 665 | U | C5-C6 | 5.27 | 1.38 | 1.34 |
| 26 | BB | 984 | A | C6-N1 | 5.27 | 1.39 | 1.35 |
| 26 | BB | 1204 | A | C4'-C3' | 5.27 | 1.58 | 1.53 |
| 26 | BB | 1530 | G | C8-N7 | -5.27 | 1.27 | 1.30 |
| 26 | BB | 1565 | C | P-O5' | 5.27 | 1.65 | 1.59 |
| 26 | BB | 2435 | A | O4'-C1' | 5.27 | 1.48 | 1.41 |
| 1 | AA | 1361 | G | C4'-C3' | -5.27 | 1.47 | 1.52 |
| 2 | AB | 59 | G | N9-C4 | 5.27 | 1.42 | 1.38 |
| 25 | BA | 29 | A | N3-C4 | 5.27 | 1.38 | 1.34 |
| 26 | BB | 668 | A | C2'-O2' | -5.27 | 1.34 | 1.41 |
| 26 | BB | 887 | U | C2-O2 | 5.27 | 1.27 | 1.22 |
| 26 | BB | 1214 | A | C4'-O4' | -5.27 | 1.38 | 1.45 |
| 26 | BB | 2163 | A | C5-C4 | -5.27 | 1.35 | 1.38 |
| 54 | B3 | 39 | ARG | CZ-NH1 | 5.27 | 1.40 | 1.33 |
| 1 | AA | 58 | C | O3'-P | 5.27 | 1.67 | 1.61 |
| 1 | AA | 1379 | G | C2-N3 | 5.27 | 1.36 | 1.32 |
| 4 | AD | 3 | C | O4'-C1' | -5.27 | 1.34 | 1.41 |
| 4 | AD | 77 | A | N9-C8 | 5.27 | 1.42 | 1.37 |
| 26 | BB | 323 | C | N1-C6 | 5.27 | 1.40 | 1.37 |
| 26 | BB | 1029 | A | O4'-C1' | 5.27 | 1.48 | 1.41 |
| 26 | BB | 1481 | U | N1-C2 | 5.27 | 1.43 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2079 | U | C1'-N1 | 5.27 | 1.56 | 1.48 |
| 26 | BB | 2371 | G | C4'-C3' | -5.27 | 1.47 | 1.52 |
| 26 | BB | 2683 | C | C4'-O4' | -5.27 | 1.38 | 1.45 |
| 30 | BF | 101 | TYR | CB-CG | 5.27 | 1.59 | 1.51 |
| 1 | AA | 437 | U | C5-C6 | 5.27 | 1.38 | 1.34 |
| 1 | AA | 484 | G | O3'-P | 5.27 | 1.67 | 1.61 |
| 1 | AA | 540 | G | C4'-C3' | 5.27 | 1.58 | 1.53 |
| 1 | AA | 1216 | A | C4'-O4' | -5.27 | 1.38 | 1.45 |
| 1 | AA | 1268 | G | C5-C4 | 5.27 | 1.42 | 1.38 |
| 1 | AA | 1364 | U | C1'-N1 | 5.27 | 1.56 | 1.48 |
| 3 | AC | 41 | A | P-O5' | 5.27 | 1.65 | 1.59 |
| 26 | BB | 584 | C | P-O5' | 5.27 | 1.65 | 1.59 |
| 26 | BB | 680 | C | C4-C5 | -5.27 | 1.38 | 1.43 |
| 26 | BB | 1240 | U | C5'-C4' | 5.27 | 1.57 | 1.51 |
| 26 | BB | 1545 | A | C6-N1 | 5.27 | 1.39 | 1.35 |
| 26 | BB | 2018 | G | C5'-C4' | 5.27 | 1.57 | 1.51 |
| 26 | BB | 2559 | C | C4'-C3' | -5.27 | 1.47 | 1.52 |
| 1 | AA | 15 | G | C2-N3 | 5.27 | 1.36 | 1.32 |
| 1 | AA | 167 | A | N7-C5 | 5.27 | 1.42 | 1.39 |
| 1 | AA | 413 | G | N9-C4 | -5.27 | 1.33 | 1.38 |
| 3 | AC | 24 | A | C5-C6 | 5.27 | 1.45 | 1.41 |
| 26 | BB | 886 | A | C5'-C4' | 5.27 | 1.57 | 1.51 |
| 26 | BB | 1975 | G | C4'-O4' | -5.27 | 1.38 | 1.45 |
| 1 | AA | 561 | U | C2-O2 | 5.26 | 1.27 | 1.22 |
| 1 | AA | 653 | U | C4-C5 | 5.26 | 1.48 | 1.43 |
| 1 | AA | 732 | C | O4'-C1' | 5.26 | 1.48 | 1.41 |
| 1 | AA | 915 | A | C6-N1 | -5.26 | 1.31 | 1.35 |
| 1 | AA | 1261 | A | C5-C4 | -5.26 | 1.35 | 1.38 |
| 2 | AB | 31 | U | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 26 | BB | 412 | A | C2'-C1' | -5.26 | 1.47 | 1.53 |
| 26 | BB | 1122 | G | O4'-C1' | 5.26 | 1.48 | 1.41 |
| 26 | BB | 1400 | U | C2-N3 | 5.26 | 1.41 | 1.37 |
| 26 | BB | 1424 | G | C2'-O2' | -5.26 | 1.34 | 1.41 |
| 26 | BB | 2676 | C | O3'-P | 5.26 | 1.67 | 1.61 |
| 1 | AA | 35 | G | C6-O6 | -5.26 | 1.19 | 1.24 |
| 1 | AA | 1336 | C | N1-C6 | 5.26 | 1.40 | 1.37 |
| 3 | AC | 53 | G | O4'-C1' | 5.26 | 1.48 | 1.41 |
| 26 | BB | 2156 | G | P-O5' | 5.26 | 1.65 | 1.59 |
| 1 | AA | 82 | G | N3-C4 | 5.26 | 1.39 | 1.35 |
| 1 | AA | 234 | C | C5-C6 | 5.26 | 1.38 | 1.34 |
| 1 | AA | 997 | U | C2-N3 | 5.26 | 1.41 | 1.37 |
| 1 | AA | 1238 | A | N1-C2 | -5.26 | 1.29 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1286 | U | C2'-C1' | -5.26 | 1.47 | 1.53 |
| 1 | AA | 1480 | A | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 26 | BB | 363 | G | N9-C8 | 5.26 | 1.41 | 1.37 |
| 26 | BB | 999 | U | C4-O4 | 5.26 | 1.27 | 1.23 |
| 26 | BB | 1393 | A | N9-C8 | -5.26 | 1.33 | 1.37 |
| 26 | BB | 2127 | G | P-O5' | 5.26 | 1.65 | 1.59 |
| 26 | BB | 2385 | C | N1-C6 | 5.26 | 1.40 | 1.37 |
| 26 | BB | 2727 | A | P-O5' | 5.26 | 1.65 | 1.59 |
| 1 | AA | 320 | A | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 1 | AA | 596 | A | P-O5' | 5.26 | 1.65 | 1.59 |
| 1 | AA | 707 | U | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 1 | AA | 1283 | U | C2-N3 | 5.26 | 1.41 | 1.37 |
| 1 | AA | 1528 | U | C4'-O4' | -5.26 | 1.38 | 1.45 |
| 25 | BA | 101 | A | C2-N3 | 5.26 | 1.38 | 1.33 |
| 26 | BB | 146 | A | N3-C4 | 5.26 | 1.38 | 1.34 |
| 26 | BB | 619 | G | O4'-C1' | 5.26 | 1.48 | 1.41 |
| 26 | BB | 756 | A | C6-N6 | -5.26 | 1.29 | 1.33 |
| 26 | BB | 1137 | G | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 26 | BB | 1250 | G | N7-C5 | -5.26 | 1.36 | 1.39 |
| 26 | BB | 1575 | C | O3'-P | 5.26 | 1.67 | 1.61 |
| 26 | BB | 1675 | C | N1-C6 | 5.26 | 1.40 | 1.37 |
| 26 | BB | 1744 | A | C2'-O2' | 5.26 | 1.48 | 1.41 |
| 26 | BB | 2831 | G | C2-N3 | 5.26 | 1.36 | 1.32 |
| 1 | AA | 539 | A | P-O5' | 5.26 | 1.65 | 1.59 |
| 1 | AA | 853 | C | C3'-C2' | 5.26 | 1.58 | 1.52 |
| 1 | AA | 988 | G | C2-N3 | -5.26 | 1.28 | 1.32 |
| 1 | AA | 1080 | A | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 26 | BB | 56 | A | C8-N7 | -5.26 | 1.27 | 1.31 |
| 26 | BB | 628 | G | C5-C6 | 5.26 | 1.47 | 1.42 |
| 1 | AA | 158 | G | P-O5' | 5.26 | 1.65 | 1.59 |
| 1 | AA | 293 | G | N7-C5 | -5.26 | 1.36 | 1.39 |
| 1 | AA | 730 | G | N7-C5 | 5.26 | 1.42 | 1.39 |
| 1 | AA | 925 | G | C2-N3 | 5.26 | 1.36 | 1.32 |
| 2 | AB | 51 | G | C5'-C4' | 5.26 | 1.57 | 1.51 |
| 26 | BB | 207 | A | C4'-C3' | 5.26 | 1.58 | 1.53 |
| 26 | BB | 400 | G | C2'-C1' | 5.26 | 1.59 | 1.53 |
| 26 | BB | 641 | U | C4'-C3' | -5.26 | 1.47 | 1.52 |
| 26 | BB | 886 | A | C6-N6 | 5.26 | 1.38 | 1.33 |
| 26 | BB | 1224 | U | N1-C6 | 5.26 | 1.42 | 1.38 |
| 26 | BB | 2269 | G | C6-O6 | -5.26 | 1.19 | 1.24 |
| 26 | BB | 2444 | G | C8-N7 | 5.26 | 1.34 | 1.30 |
| 1 | AA | 559 | A | N3-C4 | 5.25 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 661 | G | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 26 | BB | 401 | A | N9-C4 | 5.25 | 1.41 | 1.37 |
| 26 | BB | 632 | A | C2'-C1' | 5.25 | 1.59 | 1.53 |
| 26 | BB | 1188 | U | N1-C6 | -5.25 | 1.33 | 1.38 |
| 26 | BB | 1532 | A | C2'-C1' | -5.25 | 1.47 | 1.53 |
| 26 | BB | 2782 | G | C8-N7 | -5.25 | 1.27 | 1.30 |
| 1 | AA | 65 | A | C5'-C4' | -5.25 | 1.45 | 1.51 |
| 1 | AA | 179 | A | N1-C2 | -5.25 | 1.29 | 1.34 |
| 1 | AA | 485 | U | C4'-O4' | -5.25 | 1.38 | 1.45 |
| 1 | AA | 496 | A | C3'-C2' | -5.25 | 1.47 | 1.52 |
| 1 | AA | 800 | G | N9-C8 | -5.25 | 1.34 | 1.37 |
| 1 | AA | 970 | C | P-O5' | 5.25 | 1.65 | 1.59 |
| 1 | AA | 1048 | G | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 1 | AA | 1093 | A | C3'-C2' | 5.25 | 1.58 | 1.52 |
| 1 | AA | 1320 | C | C5-C6 | 5.25 | 1.38 | 1.34 |
| 25 | BA | 93 | C | C4-C5 | 5.25 | 1.47 | 1.43 |
| 26 | BB | 260 | G | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 26 | BB | 331 | C | C2'-C1' | 5.25 | 1.59 | 1.53 |
| 26 | BB | 639 | U | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 26 | BB | 821 | A | C6-N6 | -5.25 | 1.29 | 1.33 |
| 26 | BB | 1090 | A | N3-C4 | -5.25 | 1.31 | 1.34 |
| 26 | BB | 1945 | G | C2-N3 | 5.25 | 1.36 | 1.32 |
| 26 | BB | 1951 | U | C5-C6 | 5.25 | 1.38 | 1.34 |
| 26 | BB | 2239 | G | P-O5' | 5.25 | 1.65 | 1.59 |
| 26 | BB | 2369 | A | C2'-C1' | 5.25 | 1.59 | 1.53 |
| 1 | AA | 1093 | A | C4'-O4' | -5.25 | 1.38 | 1.45 |
| 1 | AA | 1102 | A | C5'-C4' | 5.25 | 1.57 | 1.51 |
| 26 | BB | 135 | U | P-O5' | 5.25 | 1.65 | 1.59 |
| 26 | BB | 445 | C | N3-C4 | 5.25 | 1.37 | 1.33 |
| 26 | BB | 553 | G | C3'-C2' | 5.25 | 1.58 | 1.52 |
| 26 | BB | 2115 | G | C6-N1 | 5.25 | 1.43 | 1.39 |
| 26 | BB | 2426 | A | C5-C4 | -5.25 | 1.35 | 1.38 |
| 26 | BB | 2642 | G | C2'-C1' | 5.25 | 1.59 | 1.53 |
| 26 | BB | 2728 | U | C2-N3 | 5.25 | 1.41 | 1.37 |
| 1 | AA | 636 | U | P-O5' | 5.25 | 1.65 | 1.59 |
| 1 | AA | 1193 | G | C2'-C1' | 5.25 | 1.59 | 1.53 |
| 26 | BB | 472 | A | O3'-P | 5.25 | 1.67 | 1.61 |
| 26 | BB | 1101 | U | C4'-C3' | 5.25 | 1.58 | 1.53 |
| 26 | BB | 2659 | G | N7-C5 | 5.25 | 1.42 | 1.39 |
| 1 | AA | 319 | G | N3-C4 | 5.25 | 1.39 | 1.35 |
| 1 | AA | 421 | U | C4'-O4' | -5.25 | 1.38 | 1.45 |
| 1 | AA | 734 | G | C4'-O4' | -5.25 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 873 | A | C4'-C3' | 5.25 | 1.58 | 1.53 |
| 1 | AA | 1040 | U | C3'-C2' | 5.25 | 1.58 | 1.52 |
| 1 | AA | 1142 | G | N9-C4 | 5.25 | 1.42 | 1.38 |
| 1 | AA | 1185 | G | C5'-C4' | 5.25 | 1.57 | 1.51 |
| 26 | BB | 22 | C | C2-N3 | 5.25 | 1.40 | 1.35 |
| 26 | BB | 25 | U | N1-C6 | 5.25 | 1.42 | 1.38 |
| 26 | BB | 1058 | U | C2-N3 | 5.25 | 1.41 | 1.37 |
| 26 | BB | 1130 | U | C4-O4 | 5.25 | 1.27 | 1.23 |
| 26 | BB | 1540 | G | N3-C4 | 5.25 | 1.39 | 1.35 |
| 26 | BB | 1737 | G | C5-C6 | 5.25 | 1.47 | 1.42 |
| 26 | BB | 1758 | U | N1-C2 | 5.25 | 1.43 | 1.38 |
| 26 | BB | 2386 | A | N7-C5 | -5.25 | 1.36 | 1.39 |
| 26 | BB | 2694 | G | C5-C4 | 5.25 | 1.42 | 1.38 |
| 26 | BB | 2760 | C | C3'-C2' | 5.25 | 1.58 | 1.52 |
| 26 | BB | 2771 | C | C3'-C2' | -5.25 | 1.47 | 1.52 |
| 26 | BB | 2871 | U | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 26 | BB | 2876 | G | C2-N3 | 5.25 | 1.36 | 1.32 |
| 1 | AA | 120 | A | C3'-O3' | 5.25 | 1.49 | 1.42 |
| 1 | AA | 251 | G | N9-C4 | 5.25 | 1.42 | 1.38 |
| 1 | AA | 1122 | U | C5-C6 | 5.25 | 1.38 | 1.34 |
| 1 | AA | 1171 | A | C3'-O3' | 5.25 | 1.49 | 1.42 |
| 1 | AA | 1418 | A | N3-C4 | 5.25 | 1.38 | 1.34 |
| 26 | BB | 428 | A | N9-C4 | -5.25 | 1.34 | 1.37 |
| 26 | BB | 547 | A | O3'-P | 5.25 | 1.67 | 1.61 |
| 26 | BB | 1089 | A | N7-C5 | 5.25 | 1.42 | 1.39 |
| 26 | BB | 1532 | A | C4'-O4' | -5.25 | 1.38 | 1.45 |
| 26 | BB | 1870 | C | N3-C4 | -5.25 | 1.30 | 1.33 |
| 26 | BB | 1987 | A | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 26 | BB | 2214 | C | C4-C5 | 5.25 | 1.47 | 1.43 |
| 26 | BB | 2313 | C | O3'-P | 5.25 | 1.67 | 1.61 |
| 1 | AA | 169 | C | C5'-C4' | 5.25 | 1.57 | 1.51 |
| 1 | AA | 211 | G | N9-C8 | -5.25 | 1.34 | 1.37 |
| 1 | AA | 428 | G | N1-C2 | 5.25 | 1.42 | 1.37 |
| 1 | AA | 1058 | G | O4'-C1' | 5.25 | 1.48 | 1.41 |
| 26 | BB | 108 | G | N7-C5 | 5.25 | 1.42 | 1.39 |
| 26 | BB | 2837 | A | C3'-O3' | -5.25 | 1.34 | 1.42 |
| 1 | AA | 323 | U | C5-C6 | 5.24 | 1.38 | 1.34 |
| 1 | AA | 1005 | A | C5'-C4' | 5.24 | 1.57 | 1.51 |
| 1 | AA | 1101 | A | C5-C6 | -5.24 | 1.36 | 1.41 |
| 1 | AA | 1418 | A | C4'-C3' | 5.24 | 1.58 | 1.53 |
| 2 | AB | 43 | G | N3-C4 | 5.24 | 1.39 | 1.35 |
| 26 | BB | 200 | U | C4'-O4' | -5.24 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 461 | C | C2-O2 | -5.24 | 1.19 | 1.24 |
| 26 | BB | 624 | C | C2-N3 | 5.24 | 1.40 | 1.35 |
| 26 | BB | 1142 | A | N7-C5 | 5.24 | 1.42 | 1.39 |
| 26 | BB | 1903 | G | C4'-O4' | -5.24 | 1.38 | 1.45 |
| 26 | BB | 2362 | C | C3'-C2' | 5.24 | 1.58 | 1.52 |
| 26 | BB | 2576 | G | C4'-O4' | -5.24 | 1.38 | 1.45 |
| 26 | BB | 2885 | G | O3'-P | 5.24 | 1.67 | 1.61 |
| 1 | AA | 375 | U | C5-C6 | 5.24 | 1.38 | 1.34 |
| 26 | BB | 127 | A | C5'-C4' | 5.24 | 1.57 | 1.51 |
| 26 | BB | 488 | G | C2'-O2' | -5.24 | 1.34 | 1.41 |
| 26 | BB | 2061 | G | C5-C6 | -5.24 | 1.37 | 1.42 |
| 1 | AA | 222 | C | P-O5' | 5.24 | 1.65 | 1.59 |
| 1 | AA | 552 | U | C5-C6 | 5.24 | 1.38 | 1.34 |
| 1 | AA | 607 | A | N9-C8 | 5.24 | 1.42 | 1.37 |
| 1 | AA | 1370 | G | N3-C4 | 5.24 | 1.39 | 1.35 |
| 7 | AG | 50 | TYR | CE2-CZ | 5.24 | 1.45 | 1.38 |
| 25 | BA | 43 | C | C4-C5 | 5.24 | 1.47 | 1.43 |
| 26 | BB | 226 | A | N3-C4 | -5.24 | 1.31 | 1.34 |
| 26 | BB | 429 | A | O3'-P | 5.24 | 1.67 | 1.61 |
| 26 | BB | 455 | C | C4'-O4' | -5.24 | 1.38 | 1.45 |
| 26 | BB | 1084 | A | C5'-C4' | 5.24 | 1.57 | 1.51 |
| 26 | BB | 1371 | G | N3-C4 | 5.24 | 1.39 | 1.35 |
| 26 | BB | 1725 | U | C2'-O2' | 5.24 | 1.48 | 1.41 |
| 26 | BB | 2084 | C | C4'-O4' | -5.24 | 1.38 | 1.45 |
| 26 | BB | 2198 | A | P-O5' | 5.24 | 1.65 | 1.59 |
| 26 | BB | 2221 | G | C2-N2 | -5.24 | 1.29 | 1.34 |
| 26 | BB | 2268 | A | O3'-P | -5.24 | 1.54 | 1.61 |
| 26 | BB | 2513 | A | C2-N3 | 5.24 | 1.38 | 1.33 |
| 26 | BB | 2799 | A | O3'-P | 5.24 | 1.67 | 1.61 |
| 1 | AA | 164 | G | C2-N2 | -5.24 | 1.29 | 1.34 |
| 1 | AA | 492 | C | C3'-C2' | 5.24 | 1.58 | 1.52 |
| 1 | AA | 649 | A | C6-N6 | -5.24 | 1.29 | 1.33 |
| 1 | AA | 725 | G | C6-N1 | 5.24 | 1.43 | 1.39 |
| 1 | AA | 1123 | U | C2-N3 | -5.24 | 1.34 | 1.37 |
| 1 | AA | 1445 | U | N1-C2 | 5.24 | 1.43 | 1.38 |
| 2 | AB | 14 | A | C5-C4 | 5.24 | 1.42 | 1.38 |
| 26 | BB | 427 | U | P-O5' | -5.24 | 1.54 | 1.59 |
| 26 | BB | 1050 | A | P-O5' | 5.24 | 1.65 | 1.59 |
| 26 | BB | 2898 | U | O4'-C1' | 5.24 | 1.48 | 1.41 |
| 26 | BB | 1235 | G | C2'-O2' | 5.24 | 1.48 | 1.41 |
| 26 | BB | 1377 | G | C5-C6 | 5.24 | 1.47 | 1.42 |
| 26 | BB | 2521 | C | C4-N4 | -5.24 | 1.29 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 30 | BF | 19 | PHE | CB-CG | 5.24 | 1.60 | 1.51 |
| 1 | AA | 380 | G | P-OP1 | 5.24 | 1.57 | 1.49 |
| 1 | AA | 454 | G | C3'-C2' | 5.24 | 1.58 | 1.52 |
| 1 | AA | 560 | A | N3-C4 | 5.24 | 1.38 | 1.34 |
| 1 | AA | 678 | U | C2-N3 | 5.24 | 1.41 | 1.37 |
| 1 | AA | 826 | C | O4'-C1' | 5.24 | 1.48 | 1.41 |
| 1 | AA | 1255 | G | N1-C2 | 5.24 | 1.42 | 1.37 |
| 1 | AA | 1466 | C | N3-C4 | 5.24 | 1.37 | 1.33 |
| 2 | AB | 31 | U | N1-C6 | 5.24 | 1.42 | 1.38 |
| 25 | BA | 79 | G | C3'-C2' | -5.24 | 1.47 | 1.52 |
| 26 | BB | 496 | G | C2'-C1' | 5.24 | 1.59 | 1.53 |
| 26 | BB | 720 | U | N1-C2 | 5.24 | 1.43 | 1.38 |
| 26 | BB | 856 | G | C6-N1 | -5.24 | 1.35 | 1.39 |
| 26 | BB | 864 | G | C8-N7 | 5.24 | 1.34 | 1.30 |
| 26 | BB | 898 | C | N1-C6 | 5.24 | 1.40 | 1.37 |
| 26 | BB | 1673 | G | C2'-O2' | 5.24 | 1.48 | 1.41 |
| 26 | BB | 1805 | A | N9-C8 | -5.24 | 1.33 | 1.37 |
| 26 | BB | 2529 | G | C4'-O4' | -5.24 | 1.38 | 1.45 |
| 1 | AA | 404 | G | C5-C4 | 5.23 | 1.42 | 1.38 |
| 1 | AA | 1231 | G | C3'-O3' | -5.23 | 1.34 | 1.42 |
| 26 | BB | 50 | U | N1-C2 | 5.23 | 1.43 | 1.38 |
| 26 | BB | 2038 | G | N7-C5 | 5.23 | 1.42 | 1.39 |
| 26 | BB | 2347 | C | N1-C6 | 5.23 | 1.40 | 1.37 |
| 1 | AA | 112 | G | O4'-C1' | 5.23 | 1.48 | 1.41 |
| 1 | AA | 857 | C | N1-C6 | 5.23 | 1.40 | 1.37 |
| 1 | AA | 921 | U | C4-C5 | 5.23 | 1.48 | 1.43 |
| 1 | AA | 957 | U | C2-N3 | 5.23 | 1.41 | 1.37 |
| 1 | AA | 1205 | U | C5-C6 | 5.23 | 1.38 | 1.34 |
| 1 | AA | 1258 | G | C5-C4 | 5.23 | 1.42 | 1.38 |
| 1 | AA | 1539 | C | C1'-N1 | 5.23 | 1.56 | 1.48 |
| 2 | AB | 14 | A | N9-C4 | -5.23 | 1.34 | 1.37 |
| 4 | AD | 40 | C | O4'-C1' | 5.23 | 1.48 | 1.41 |
| 26 | BB | 219 | A | P-O5' | -5.23 | 1.54 | 1.59 |
| 26 | BB | 316 | C | C2-N3 | 5.23 | 1.40 | 1.35 |
| 26 | BB | 332 | A | C8-N7 | -5.23 | 1.27 | 1.31 |
| 26 | BB | 722 | A | N9-C8 | 5.23 | 1.42 | 1.37 |
| 26 | BB | 815 | C | C2-N3 | 5.23 | 1.40 | 1.35 |
| 26 | BB | 948 | C | C4-C5 | -5.23 | 1.38 | 1.43 |
| 26 | BB | 1209 | U | C2'-C1' | 5.23 | 1.59 | 1.53 |
| 26 | BB | 1659 | G | P-O5' | 5.23 | 1.65 | 1.59 |
| 26 | BB | 2147 | A | C4'-O4' | -5.23 | 1.38 | 1.45 |
| 26 | BB | 2269 | G | C8-N7 | 5.23 | 1.34 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2319 | G | N7-C5 | -5.23 | 1.36 | 1.39 |
| 26 | BB | 2785 | C | C4-N4 | 5.23 | 1.38 | 1.33 |
| 26 | BB | 2886 | A | C3'-O3' | 5.23 | 1.49 | 1.42 |
| 1 | AA | 171 | A | N3-C4 | 5.23 | 1.38 | 1.34 |
| 1 | AA | 352 | C | C3'-C2' | 5.23 | 1.58 | 1.52 |
| 1 | AA | 442 | G | N3-C4 | 5.23 | 1.39 | 1.35 |
| 1 | AA | 932 | C | C4'-O4' | -5.23 | 1.38 | 1.45 |
| 1 | AA | 949 | A | C5-C4 | -5.23 | 1.35 | 1.38 |
| 4 | AD | 71 | G | N9-C8 | 5.23 | 1.41 | 1.37 |
| 25 | BA | 89 | U | C3'-C2' | 5.23 | 1.58 | 1.52 |
| 26 | BB | 13 | A | N7-C5 | -5.23 | 1.36 | 1.39 |
| 26 | BB | 217 | A | N9-C4 | 5.23 | 1.41 | 1.37 |
| 26 | BB | 230 | G | C5'-C4' | 5.23 | 1.57 | 1.51 |
| 26 | BB | 706 | A | C6-N6 | -5.23 | 1.29 | 1.33 |
| 26 | BB | 2006 | C | N1-C6 | 5.23 | 1.40 | 1.37 |
| 1 | AA | 677 | U | N3-C4 | 5.23 | 1.43 | 1.38 |
| 1 | AA | 1005 | A | N9-C4 | 5.23 | 1.41 | 1.37 |
| 26 | BB | 759 | G | N9-C4 | 5.23 | 1.42 | 1.38 |
| 26 | BB | 2546 | U | C3'-C2' | -5.23 | 1.47 | 1.52 |
| 26 | BB | 2609 | U | C4'-O4' | -5.23 | 1.38 | 1.45 |
| 1 | AA | 6 | G | N7-C5 | 5.23 | 1.42 | 1.39 |
| 1 | AA | 892 | A | N7-C5 | 5.23 | 1.42 | 1.39 |
| 1 | AA | 1462 | C | P-O5' | -5.23 | 1.54 | 1.59 |
| 26 | BB | 125 | A | C5'-C4' | 5.23 | 1.57 | 1.51 |
| 26 | BB | 206 | U | C2'-C1' | 5.23 | 1.59 | 1.53 |
| 26 | BB | 440 | C | C4-C5 | 5.23 | 1.47 | 1.43 |
| 26 | BB | 904 | G | N9-C8 | 5.23 | 1.41 | 1.37 |
| 26 | BB | 1385 | A | C4'-C3' | 5.23 | 1.58 | 1.53 |
| 26 | BB | 1491 | G | P-O5' | -5.23 | 1.54 | 1.59 |
| 26 | BB | 2100 | G | N3-C4 | 5.23 | 1.39 | 1.35 |
| 26 | BB | 2816 | G | C3'-C2' | 5.23 | 1.58 | 1.52 |
| 1 | AA | 1167 | A | C5-C4 | -5.23 | 1.35 | 1.38 |
| 1 | AA | 1315 | U | N1-C2 | -5.23 | 1.33 | 1.38 |
| 26 | BB | 563 | A | N9-C8 | -5.23 | 1.33 | 1.37 |
| 26 | BB | 628 | G | N7-C5 | -5.23 | 1.36 | 1.39 |
| 26 | BB | 1977 | A | C2'-C1' | -5.23 | 1.47 | 1.53 |
| 26 | BB | 2487 | G | C8-N7 | 5.23 | 1.34 | 1.30 |
| 1 | AA | 499 | A | C8-N7 | -5.22 | 1.27 | 1.31 |
| 2 | AB | 30 | G | N9-C4 | 5.22 | 1.42 | 1.38 |
| 25 | BA | 83 | G | C2-N2 | -5.22 | 1.29 | 1.34 |
| 26 | BB | 365 | U | N1-C2 | 5.22 | 1.43 | 1.38 |
| 26 | BB | 374 | A | C3'-C2' | 5.22 | 1.58 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 579 | G | C5-C4 | -5.22 | 1.34 | 1.38 |
| 26 | BB | 1292 | G | C2-N3 | 5.22 | 1.36 | 1.32 |
| 26 | BB | 1552 | A | C6-N1 | -5.22 | 1.31 | 1.35 |
| 26 | BB | 1615 | C | N3-C4 | -5.22 | 1.30 | 1.33 |
| 26 | BB | 1959 | G | C5-C4 | 5.22 | 1.42 | 1.38 |
| 26 | BB | 2024 | G | C4'-C3' | 5.22 | 1.58 | 1.53 |
| 26 | BB | 2723 | C | C4-N4 | 5.22 | 1.38 | 1.33 |
| 1 | AA | 19 | A | C6-N1 | 5.22 | 1.39 | 1.35 |
| 1 | AA | 180 | U | N1-C6 | 5.22 | 1.42 | 1.38 |
| 1 | AA | 1364 | U | O3'-P | 5.22 | 1.67 | 1.61 |
| 1 | AA | 1495 | U | C4-O4 | 5.22 | 1.27 | 1.23 |
| 2 | AB | 42 | G | C6-O6 | -5.22 | 1.19 | 1.24 |
| 25 | BA | 63 | C | N3-C4 | 5.22 | 1.37 | 1.33 |
| 26 | BB | 133 | U | C3'-C2' | 5.22 | 1.58 | 1.52 |
| 26 | BB | 196 | A | N3-C4 | 5.22 | 1.38 | 1.34 |
| 26 | BB | 234 | U | C3'-C2' | 5.22 | 1.58 | 1.52 |
| 26 | BB | 291 | G | O3'-P | -5.22 | 1.54 | 1.61 |
| 26 | BB | 689 | A | C3'-C2' | -5.22 | 1.47 | 1.52 |
| 26 | BB | 777 | G | C6-O6 | -5.22 | 1.19 | 1.24 |
| 26 | BB | 1495 | A | C6-N6 | 5.22 | 1.38 | 1.33 |
| 26 | BB | 1842 | G | C2-N2 | 5.22 | 1.39 | 1.34 |
| 26 | BB | 2258 | C | N3-C4 | 5.22 | 1.37 | 1.33 |
| 26 | BB | 2730 | C | P-O5' | -5.22 | 1.54 | 1.59 |
| 1 | AA | 590 | U | C2-N3 | 5.22 | 1.41 | 1.37 |
| 1 | AA | 596 | A | N7-C5 | 5.22 | 1.42 | 1.39 |
| 1 | AA | 951 | G | P-O5' | 5.22 | 1.65 | 1.59 |
| 3 | AC | 39 | U | C2-N3 | 5.22 | 1.41 | 1.37 |
| 26 | BB | 1328 | A | C4'-C3' | -5.22 | 1.47 | 1.52 |
| 26 | BB | 1489 | C | O4'-C1' | -5.22 | 1.34 | 1.41 |
| 26 | BB | 2597 | G | C6-N1 | 5.22 | 1.43 | 1.39 |
| 31 | BG | 125 | GLY | N-CA | 5.22 | 1.53 | 1.46 |
| 1 | AA | 158 | G | N9-C8 | 5.22 | 1.41 | 1.37 |
| 1 | AA | 172 | A | C2'-C1' | -5.22 | 1.47 | 1.53 |
| 1 | AA | 246 | A | C2-N3 | 5.22 | 1.38 | 1.33 |
| 1 | AA | 467 | U | O3'-P | 5.22 | 1.67 | 1.61 |
| 1 | AA | 1015 | G | C5'-C4' | 5.22 | 1.57 | 1.51 |
| 3 | AC | 56 | G | N9-C8 | -5.22 | 1.34 | 1.37 |
| 4 | AD | 19 | G | C3'-O3' | -5.22 | 1.34 | 1.42 |
| 25 | BA | 93 | C | P-O5' | -5.22 | 1.54 | 1.59 |
| 26 | BB | 382 | A | C6-N1 | 5.22 | 1.39 | 1.35 |
| 26 | BB | 390 | U | C4-C5 | 5.22 | 1.48 | 1.43 |
| 26 | BB | 530 | G | N3-C4 | 5.22 | 1.39 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1093 | G | P-OP1 | 5.22 | 1.57 | 1.49 |
| 26 | BB | 1149 | G | C3'-O3' | 5.22 | 1.49 | 1.42 |
| 26 | BB | 1299 | G | C4'-C3' | 5.22 | 1.58 | 1.53 |
| 1 | AA | 530 | G | C5'-C4' | 5.22 | 1.57 | 1.51 |
| 26 | BB | 2559 | C | C3'-O3' | 5.22 | 1.49 | 1.42 |
| 1 | AA | 538 | G | N7-C5 | -5.22 | 1.36 | 1.39 |
| 1 | AA | 1028 | C | O3'-P | 5.22 | 1.67 | 1.61 |
| 1 | AA | 1105 | A | N3-C4 | 5.22 | 1.38 | 1.34 |
| 26 | BB | 28 | A | C6-N6 | 5.22 | 1.38 | 1.33 |
| 26 | BB | 89 | A | P-O5' | 5.22 | 1.65 | 1.59 |
| 26 | BB | 733 | G | C2-N3 | 5.22 | 1.36 | 1.32 |
| 26 | BB | 1865 | U | C2'-C1' | -5.22 | 1.47 | 1.53 |
| 26 | BB | 1945 | G | O5'-C5' | -5.22 | 1.34 | 1.42 |
| 26 | BB | 2783 | U | C5'-C4' | 5.22 | 1.57 | 1.51 |
| 26 | BB | 2799 | A | N9-C8 | 5.22 | 1.42 | 1.37 |
| 28 | BD | 51 | ARG | NE-CZ | 5.22 | 1.39 | 1.33 |
| 1 | AA | 931 | C | C5'-C4' | 5.21 | 1.57 | 1.51 |
| 2 | AB | 65 | C | P-O5' | 5.21 | 1.65 | 1.59 |
| 26 | BB | 704 | G | C5-C4 | -5.21 | 1.34 | 1.38 |
| 26 | BB | 766 | U | C4'-C3' | 5.21 | 1.58 | 1.53 |
| 26 | BB | 1508 | A | O4'-C1' | 5.21 | 1.48 | 1.41 |
| 26 | BB | 1535 | A | O3'-P | 5.21 | 1.67 | 1.61 |
| 26 | BB | 1630 | A | C3'-C2' | -5.21 | 1.47 | 1.52 |
| 26 | BB | 1775 | U | C5'-C4' | 5.21 | 1.57 | 1.51 |
| 26 | BB | 1796 | U | C5'-C4' | 5.21 | 1.57 | 1.51 |
| 26 | BB | 1913 | A | C2'-C1' | -5.21 | 1.47 | 1.53 |
| 26 | BB | 2414 | G | O3'-P | -5.21 | 1.54 | 1.61 |
| 43 | BS | 23 | TYR | CG-CD1 | 5.21 | 1.46 | 1.39 |
| 44 | BT | 53 | PHE | CG-CD2 | 5.21 | 1.46 | 1.38 |
| 26 | BB | 1443 | U | C2-O2 | 5.21 | 1.27 | 1.22 |
| 26 | BB | 1839 | G | C3'-C2' | 5.21 | 1.58 | 1.52 |
| 1 | AA | 750 | C | C4'-C3' | -5.21 | 1.47 | 1.52 |
| 1 | AA | 937 | A | O3'-P | -5.21 | 1.54 | 1.61 |
| 1 | AA | 1035 | A | N9-C8 | 5.21 | 1.42 | 1.37 |
| 26 | BB | 2 | G | C8-N7 | -5.21 | 1.27 | 1.30 |
| 26 | BB | 262 | A | C5-C4 | -5.21 | 1.35 | 1.38 |
| 26 | BB | 930 | G | N7-C5 | 5.21 | 1.42 | 1.39 |
| 26 | BB | 1017 | G | C5-C6 | -5.21 | 1.37 | 1.42 |
| 26 | BB | 1599 | U | C2-N3 | 5.21 | 1.41 | 1.37 |
| 26 | BB | 1861 | G | N7-C5 | -5.21 | 1.36 | 1.39 |
| 26 | BB | 1909 | C | C4'-O4' | -5.21 | 1.38 | 1.45 |
| 26 | BB | 2162 | G | C4'-C3' | -5.21 | 1.47 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2487 | G | C2-N3 | 5.21 | 1.36 | 1.32 |
| 26 | BB | 2530 | A | N9-C8 | -5.21 | 1.33 | 1.37 |
| 28 | BD | 18 | VAL | CA-CB | 5.21 | 1.65 | 1.54 |
| 31 | BG | 113 | PHE | CG-CD2 | 5.21 | 1.46 | 1.38 |
| 38 | BN | 40 | SER | CB-OG | -5.21 | 1.35 | 1.42 |
| 1 | AA | 435 | A | C5-C4 | -5.21 | 1.35 | 1.38 |
| 1 | AA | 993 | G | N9-C8 | -5.21 | 1.34 | 1.37 |
| 1 | AA | 1512 | U | C5-C6 | 5.21 | 1.38 | 1.34 |
| 25 | BA | 15 | A | P-O5' | 5.21 | 1.65 | 1.59 |
| 26 | BB | 280 | U | N3-C4 | -5.21 | 1.33 | 1.38 |
| 26 | BB | 2329 | U | C4-C5 | 5.21 | 1.48 | 1.43 |
| 26 | BB | 2367 | G | P-O5' | 5.21 | 1.65 | 1.59 |
| 1 | AA | 449 | G | N9-C8 | -5.21 | 1.34 | 1.37 |
| 1 | AA | 559 | A | O3'-P | -5.21 | 1.54 | 1.61 |
| 1 | AA | 752 | G | O3'-P | 5.21 | 1.67 | 1.61 |
| 1 | AA | 971 | G | C8-N7 | -5.21 | 1.27 | 1.30 |
| 1 | AA | 1075 | U | N1-C2 | 5.21 | 1.43 | 1.38 |
| 25 | BA | 66 | A | N1-C2 | -5.21 | 1.29 | 1.34 |
| 26 | BB | 767 | U | N1-C2 | 5.21 | 1.43 | 1.38 |
| 26 | BB | 801 | G | N3-C4 | 5.21 | 1.39 | 1.35 |
| 26 | BB | 1757 | A | N3-C4 | 5.21 | 1.38 | 1.34 |
| 28 | BD | 40 | GLY | N-CA | 5.21 | 1.53 | 1.46 |
| 1 | AA | 128 | G | O3'-P | 5.21 | 1.67 | 1.61 |
| 1 | AA | 143 | A | C6-N6 | -5.21 | 1.29 | 1.33 |
| 1 | AA | 174 | A | C4'-O4' | -5.21 | 1.38 | 1.45 |
| 1 | AA | 203 | G | C5'-C4' | 5.21 | 1.57 | 1.51 |
| 1 | AA | 944 | G | P-O5' | 5.21 | 1.65 | 1.59 |
| 1 | AA | 1062 | U | N1-C2 | 5.21 | 1.43 | 1.38 |
| 1 | AA | 1112 | C | P-O5' | 5.21 | 1.65 | 1.59 |
| 1 | AA | 1118 | U | O3'-P | -5.21 | 1.54 | 1.61 |
| 1 | AA | 1195 | C | C2-N3 | 5.21 | 1.40 | 1.35 |
| 1 | AA | 1255 | G | N9-C8 | -5.21 | 1.34 | 1.37 |
| 17 | AQ | 64 | ARG | CZ-NH1 | 5.21 | 1.39 | 1.33 |
| 26 | BB | 228 | C | N1-C6 | 5.21 | 1.40 | 1.37 |
| 26 | BB | 236 | C | C4-C5 | 5.21 | 1.47 | 1.43 |
| 26 | BB | 280 | U | C2-O2 | 5.21 | 1.27 | 1.22 |
| 26 | BB | 1769 | U | N3-C4 | 5.21 | 1.43 | 1.38 |
| 26 | BB | 2242 | G | C3'-O3' | -5.21 | 1.34 | 1.42 |
| 26 | BB | 2771 | C | C5'-C4' | 5.21 | 1.57 | 1.51 |
| 31 | BG | 41 | GLU | CD-OE2 | 5.21 | 1.31 | 1.25 |
| 1 | AA | 80 | A | C3'-C2' | 5.21 | 1.58 | 1.52 |
| 1 | AA | 1346 | A | C6-N6 | -5.21 | 1.29 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2255 | G | C2-N3 | 5.21 | 1.36 | 1.32 |
| 1 | AA | 56 | U | P-O5' | 5.20 | 1.65 | 1.59 |
| 1 | AA | 166 | U | C2-N3 | 5.20 | 1.41 | 1.37 |
| 1 | AA | 406 | G | C6-N1 | -5.20 | 1.35 | 1.39 |
| 1 | AA | 461 | A | N3-C4 | 5.20 | 1.38 | 1.34 |
| 1 | AA | 752 | G | N3-C4 | 5.20 | 1.39 | 1.35 |
| 1 | AA | 835 | U | C2-N3 | 5.20 | 1.41 | 1.37 |
| 26 | BB | 618 | G | C4'-O4' | -5.20 | 1.38 | 1.45 |
| 26 | BB | 1517 | G | N9-C8 | -5.20 | 1.34 | 1.37 |
| 26 | BB | 1682 | G | C5'-C4' | 5.20 | 1.57 | 1.51 |
| 26 | BB | 1754 | A | N9-C4 | 5.20 | 1.41 | 1.37 |
| 26 | BB | 2034 | U | C5'-C4' | 5.20 | 1.57 | 1.51 |
| 26 | BB | 2094 | A | C4'-O4' | -5.20 | 1.38 | 1.45 |
| 48 | BX | 15 | GLY | N-CA | 5.20 | 1.53 | 1.46 |
| 25 | BA | 13 | G | C5-C4 | -5.20 | 1.34 | 1.38 |
| 25 | BA | 100 | G | N7-C5 | -5.20 | 1.36 | 1.39 |
| 26 | BB | 416 | U | N1-C6 | 5.20 | 1.42 | 1.38 |
| 26 | BB | 674 | G | O3'-P | 5.20 | 1.67 | 1.61 |
| 26 | BB | 782 | A | C5-C4 | -5.20 | 1.35 | 1.38 |
| 26 | BB | 2205 | A | N9-C4 | -5.20 | 1.34 | 1.37 |
| 26 | BB | 2849 | U | C2'-C1' | -5.20 | 1.47 | 1.53 |
| 1 | AA | 910 | C | P-O5' | 5.20 | 1.65 | 1.59 |
| 26 | BB | 322 | A | N9-C8 | 5.20 | 1.42 | 1.37 |
| 26 | BB | 603 | A | C5-C4 | -5.20 | 1.35 | 1.38 |
| 26 | BB | 934 | U | C4'-O4' | -5.20 | 1.38 | 1.45 |
| 26 | BB | 2612 | C | C4-C5 | 5.20 | 1.47 | 1.43 |
| 26 | BB | 2810 | A | N7-C5 | -5.20 | 1.36 | 1.39 |
| 1 | AA | 139 | A | C4'-C3' | 5.20 | 1.58 | 1.53 |
| 1 | AA | 1082 | A | O4'-C1' | -5.20 | 1.34 | 1.41 |
| 1 | AA | 1141 | C | C5'-C4' | 5.20 | 1.57 | 1.51 |
| 1 | AA | 1165 | U | C2-N3 | 5.20 | 1.41 | 1.37 |
| 26 | BB | 201 | C | C4-C5 | -5.20 | 1.38 | 1.43 |
| 26 | BB | 210 | C | N3-C4 | 5.20 | 1.37 | 1.33 |
| 26 | BB | 970 | U | C2-N3 | 5.20 | 1.41 | 1.37 |
| 26 | BB | 1760 | C | C2-N3 | 5.20 | 1.40 | 1.35 |
| 26 | BB | 1921 | G | C2-N3 | 5.20 | 1.36 | 1.32 |
| 26 | BB | 2534 | A | N3-C4 | 5.20 | 1.38 | 1.34 |
| 1 | AA | 403 | C | C5'-C4' | 5.20 | 1.57 | 1.51 |
| 9 | AI | 75 | GLU | CD-OE2 | -5.20 | 1.20 | 1.25 |
| 26 | BB | 19 | A | P-O5' | 5.20 | 1.65 | 1.59 |
| 26 | BB | 178 | G | C2-N2 | -5.20 | 1.29 | 1.34 |
| 26 | BB | 854 | C | C5'-C4' | 5.20 | 1.57 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2202 | U | P-O5' | 5.20 | 1.65 | 1.59 |
| 26 | BB | 2545 | G | C4'-O4' | -5.20 | 1.38 | 1.45 |
| 26 | BB | 2833 | U | C3'-O3' | 5.20 | 1.49 | 1.42 |
| 1 | AA | 49 | U | N1-C2 | 5.20 | 1.43 | 1.38 |
| 1 | AA | 954 | G | C2'-O2' | 5.20 | 1.48 | 1.41 |
| 1 | AA | 964 | A | C5-C6 | -5.20 | 1.36 | 1.41 |
| 4 | AD | 43 | G | C5-C4 | 5.20 | 1.42 | 1.38 |
| 4 | AD | 47 | A | N9-C8 | 5.20 | 1.42 | 1.37 |
| 22 | AV | 2 | ARG | CD-NE | 5.20 | 1.55 | 1.46 |
| 26 | BB | 401 | A | C8-N7 | -5.20 | 1.27 | 1.31 |
| 26 | BB | 550 | C | C5-C6 | -5.20 | 1.30 | 1.34 |
| 26 | BB | 828 | U | C1'-N1 | 5.20 | 1.56 | 1.48 |
| 26 | BB | 1216 | G | N7-C5 | 5.20 | 1.42 | 1.39 |
| 26 | BB | 1241 | A | N9-C4 | 5.20 | 1.41 | 1.37 |
| 26 | BB | 1430 | G | N1-C2 | 5.20 | 1.42 | 1.37 |
| 26 | BB | 1712 | U | N1-C2 | 5.20 | 1.43 | 1.38 |
| 1 | AA | 138 | G | C4'-C3' | -5.19 | 1.47 | 1.52 |
| 1 | AA | 152 | A | C8-N7 | -5.19 | 1.27 | 1.31 |
| 1 | AA | 270 | A | C3'-C2' | 5.19 | 1.58 | 1.52 |
| 1 | AA | 1170 | A | C2-N3 | -5.19 | 1.28 | 1.33 |
| 26 | BB | 2748 | A | C5'-C4' | 5.19 | 1.57 | 1.51 |
| 1 | AA | 319 | G | P-O5' | -5.19 | 1.54 | 1.59 |
| 1 | AA | 323 | U | C4'-O4' | -5.19 | 1.38 | 1.45 |
| 1 | AA | 511 | C | C4'-C3' | 5.19 | 1.58 | 1.53 |
| 1 | AA | 821 | G | C8-N7 | -5.19 | 1.27 | 1.30 |
| 1 | AA | 860 | A | C1'-N9 | 5.19 | 1.56 | 1.48 |
| 1 | AA | 868 | C | C4'-O4' | -5.19 | 1.38 | 1.45 |
| 1 | AA | 1284 | C | O4'-C1' | 5.19 | 1.48 | 1.41 |
| 25 | BA | 9 | G | C6-N1 | 5.19 | 1.43 | 1.39 |
| 25 | BA | 27 | C | P-O5' | 5.19 | 1.65 | 1.59 |
| 26 | BB | 27 | G | N3-C4 | 5.19 | 1.39 | 1.35 |
| 26 | BB | 1469 | A | N9-C4 | 5.19 | 1.41 | 1.37 |
| 26 | BB | 1651 | G | N7-C5 | -5.19 | 1.36 | 1.39 |
| 26 | BB | 2061 | G | C4'-O4' | -5.19 | 1.38 | 1.45 |
| 26 | BB | 2363 | G | C5'-C4' | 5.19 | 1.57 | 1.51 |
| 26 | BB | 2518 | A | C5-C6 | -5.19 | 1.36 | 1.41 |
| 26 | BB | 2644 | G | P-O5' | 5.19 | 1.65 | 1.59 |
| 1 | AA | 99 | C | O3'-P | 5.19 | 1.67 | 1.61 |
| 1 | AA | 130 | A | N9-C4 | -5.19 | 1.34 | 1.37 |
| 1 | AA | 414 | A | N3-C4 | 5.19 | 1.38 | 1.34 |
| 1 | AA | 417 | G | C5-C6 | -5.19 | 1.37 | 1.42 |
| 1 | AA | 517 | G | C6-N1 | 5.19 | 1.43 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1064 | G | C2'-O2' | -5.19 | 1.34 | 1.41 |
| 1 | AA | 1361 | G | C6-O6 | 5.19 | 1.28 | 1.24 |
| 1 | AA | 1426 | G | C8-N7 | 5.19 | 1.34 | 1.30 |
| 26 | BB | 300 | A | C6-N6 | -5.19 | 1.29 | 1.33 |
| 26 | BB | 529 | A | N9-C8 | -5.19 | 1.33 | 1.37 |
| 26 | BB | 570 | G | C3'-O3' | 5.19 | 1.49 | 1.42 |
| 26 | BB | 589 | U | C2-N3 | 5.19 | 1.41 | 1.37 |
| 26 | BB | 956 | G | C4'-O4' | -5.19 | 1.38 | 1.45 |
| 26 | BB | 1650 | A | N7-C5 | 5.19 | 1.42 | 1.39 |
| 26 | BB | 1922 | G | N3-C4 | -5.19 | 1.31 | 1.35 |
| 26 | BB | 1947 | C | C2-O2 | -5.19 | 1.19 | 1.24 |
| 26 | BB | 2409 | G | O3'-P | 5.19 | 1.67 | 1.61 |
| 26 | BB | 2538 | C | P-O5' | 5.19 | 1.65 | 1.59 |
| 26 | BB | 2679 | A | C3'-C2' | -5.19 | 1.47 | 1.52 |
| 26 | BB | 2805 | C | C4-C5 | 5.19 | 1.47 | 1.43 |
| 28 | BD | 213 | ARG | CZ-NH2 | 5.19 | 1.39 | 1.33 |
| 25 | BA | 39 | A | C4'-C3' | 5.19 | 1.58 | 1.53 |
| 1 | AA | 68 | G | C2-N2 | -5.19 | 1.29 | 1.34 |
| 1 | AA | 355 | C | C5-C6 | 5.19 | 1.38 | 1.34 |
| 1 | AA | 1050 | G | C6-O6 | -5.19 | 1.19 | 1.24 |
| 25 | BA | 84 | G | O3'-P | 5.19 | 1.67 | 1.61 |
| 26 | BB | 269 | C | O3'-P | 5.19 | 1.67 | 1.61 |
| 26 | BB | 450 | G | N7-C5 | 5.19 | 1.42 | 1.39 |
| 26 | BB | 647 | G | P-O5' | 5.19 | 1.65 | 1.59 |
| 26 | BB | 1517 | G | C5'-C4' | 5.19 | 1.57 | 1.51 |
| 26 | BB | 1991 | U | N3-C4 | 5.19 | 1.43 | 1.38 |
| 26 | BB | 2639 | A | P-O5' | 5.19 | 1.65 | 1.59 |
| 26 | BB | 2656 | U | C5'-C4' | 5.19 | 1.57 | 1.51 |
| 26 | BB | 2896 | C | O4'-C1' | 5.19 | 1.48 | 1.41 |
| 1 | AA | 69 | G | C8-N7 | 5.19 | 1.34 | 1.30 |
| 1 | AA | 1254 | A | C4'-O4' | -5.19 | 1.38 | 1.45 |
| 26 | BB | 2903 | U | C4'-O4' | -5.19 | 1.38 | 1.45 |
| 1 | AA | 354 | G | N9-C8 | 5.18 | 1.41 | 1.37 |
| 1 | AA | 631 | C | C5'-C4' | 5.18 | 1.57 | 1.51 |
| 2 | AB | 21 | A | C6-N6 | -5.18 | 1.29 | 1.33 |
| 3 | AC | 56 | G | C8-N7 | -5.18 | 1.27 | 1.30 |
| 26 | BB | 30 | G | O5'-C5' | -5.18 | 1.34 | 1.42 |
| 26 | BB | 300 | A | P-O5' | -5.18 | 1.54 | 1.59 |
| 26 | BB | 882 | G | O4'-C1' | 5.18 | 1.48 | 1.41 |
| 26 | BB | 920 | A | C4'-C3' | 5.18 | 1.58 | 1.53 |
| 26 | BB | 941 | A | C4'-O4' | -5.18 | 1.38 | 1.45 |
| 26 | BB | 1270 | C | N1-C6 | 5.18 | 1.40 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1654 | A | C5'-C4' | 5.18 | 1.57 | 1.51 |
| 26 | BB | 1691 | C | N1-C6 | 5.18 | 1.40 | 1.37 |
| 26 | BB | 1926 | U | C5'-C4' | 5.18 | 1.57 | 1.51 |
| 26 | BB | 1975 | G | N3-C4 | 5.18 | 1.39 | 1.35 |
| 26 | BB | 1998 | A | C3'-O3' | -5.18 | 1.34 | 1.42 |
| 26 | BB | 2597 | G | N1-C2 | 5.18 | 1.41 | 1.37 |
| 26 | BB | 2841 | C | C5-C6 | 5.18 | 1.38 | 1.34 |
| 1 | AA | 204 | G | C6-O6 | -5.18 | 1.19 | 1.24 |
| 1 | AA | 550 | G | C8-N7 | -5.18 | 1.27 | 1.30 |
| 1 | AA | 921 | U | N1-C2 | 5.18 | 1.43 | 1.38 |
| 4 | AD | 40 | C | C2'-C1' | 5.18 | 1.59 | 1.53 |
| 26 | BB | 519 | U | C2'-C1' | 5.18 | 1.59 | 1.53 |
| 26 | BB | 866 | A | C8-N7 | 5.18 | 1.35 | 1.31 |
| 26 | BB | 870 | U | O3'-P | 5.18 | 1.67 | 1.61 |
| 26 | BB | 881 | G | O4'-C1' | 5.18 | 1.48 | 1.41 |
| 26 | BB | 973 | A | P-O5' | 5.18 | 1.65 | 1.59 |
| 26 | BB | 983 | A | C5'-C4' | 5.18 | 1.57 | 1.51 |
| 26 | BB | 1688 | U | C2-N3 | 5.18 | 1.41 | 1.37 |
| 26 | BB | 1863 | G | O3'-P | 5.18 | 1.67 | 1.61 |
| 26 | BB | 2275 | C | N3-C4 | 5.18 | 1.37 | 1.33 |
| 26 | BB | 2533 | U | C5'-C4' | 5.18 | 1.57 | 1.51 |
| 1 | AA | 328 | C | P-O5' | 5.18 | 1.65 | 1.59 |
| 1 | AA | 376 | G | C4'-O4' | -5.18 | 1.38 | 1.45 |
| 3 | AC | 55 | A | N9-C4 | -5.18 | 1.34 | 1.37 |
| 5 | AE | 138 | ARG | NE-CZ | 5.18 | 1.39 | 1.33 |
| 26 | BB | 1409 | U | P-O5' | 5.18 | 1.65 | 1.59 |
| 1 | AA | 599 | C | N3-C4 | -5.18 | 1.30 | 1.33 |
| 1 | AA | 863 | U | C2'-C1' | 5.18 | 1.59 | 1.53 |
| 1 | AA | 882 | C | C2-O2 | -5.18 | 1.19 | 1.24 |
| 3 | AC | 51 | C | C2-N3 | 5.18 | 1.39 | 1.35 |
| 26 | BB | 66 | C | P-O5' | 5.18 | 1.65 | 1.59 |
| 26 | BB | 106 | C | N3-C4 | 5.18 | 1.37 | 1.33 |
| 26 | BB | 641 | U | N1-C2 | 5.18 | 1.43 | 1.38 |
| 26 | BB | 814 | C | C2'-O2' | 5.18 | 1.48 | 1.41 |
| 26 | BB | 1299 | G | C8-N7 | -5.18 | 1.27 | 1.30 |
| 26 | BB | 1676 | A | P-O5' | -5.18 | 1.54 | 1.59 |
| 26 | BB | 2281 | A | N7-C5 | 5.18 | 1.42 | 1.39 |
| 26 | BB | 2577 | A | N9-C8 | -5.18 | 1.33 | 1.37 |
| 1 | AA | 761 | G | C2-N3 | 5.18 | 1.36 | 1.32 |
| 26 | BB | 698 | C | O5'-C5' | -5.18 | 1.34 | 1.42 |
| 26 | BB | 1184 | U | C5'-C4' | -5.18 | 1.45 | 1.51 |
| 26 | BB | 1914 | C | C4'-O4' | -5.18 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2883 | A | O4'-C1' | 5.18 | 1.48 | 1.41 |
| 1 | AA | 150 | U | C2-N3 | 5.18 | 1.41 | 1.37 |
| 1 | AA | 258 | G | N9-C8 | -5.18 | 1.34 | 1.37 |
| 1 | AA | 374 | A | C4'-O4' | -5.18 | 1.38 | 1.45 |
| 1 | AA | 657 | U | C4'-O4' | -5.18 | 1.38 | 1.45 |
| 1 | AA | 725 | G | N7-C5 | 5.18 | 1.42 | 1.39 |
| 1 | AA | 1054 | C | O3'-P | 5.18 | 1.67 | 1.61 |
| 1 | AA | 1163 | A | N9-C4 | -5.18 | 1.34 | 1.37 |
| 2 | AB | 5 | G | N1-C2 | 5.18 | 1.41 | 1.37 |
| 26 | BB | 141 | G | C5-C6 | 5.18 | 1.47 | 1.42 |
| 26 | BB | 274 | C | C2'-C1' | 5.18 | 1.59 | 1.53 |
| 26 | BB | 356 | G | C2'-O2' | 5.18 | 1.48 | 1.41 |
| 26 | BB | 675 | A | P-O5' | 5.18 | 1.65 | 1.59 |
| 26 | BB | 744 | U | O4'-C1' | 5.18 | 1.48 | 1.41 |
| 26 | BB | 904 | G | C5-C4 | -5.18 | 1.34 | 1.38 |
| 26 | BB | 1115 | G | N9-C4 | 5.18 | 1.42 | 1.38 |
| 26 | BB | 1173 | U | C5'-C4' | 5.18 | 1.57 | 1.51 |
| 26 | BB | 1696 | G | C5-C4 | -5.18 | 1.34 | 1.38 |
| 26 | BB | 2459 | A | O5'-C5' | -5.18 | 1.34 | 1.42 |
| 26 | BB | 2860 | A | O3'-P | 5.18 | 1.67 | 1.61 |
| 1 | AA | 466 | A | C6-N1 | 5.17 | 1.39 | 1.35 |
| 1 | AA | 510 | A | C5'-C4' | 5.17 | 1.57 | 1.51 |
| 1 | AA | 621 | A | N7-C5 | -5.17 | 1.36 | 1.39 |
| 1 | AA | 1226 | C | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 1 | AA | 1401 | G | N1-C2 | -5.17 | 1.33 | 1.37 |
| 1 | AA | 1490 | U | P-O5' | 5.17 | 1.65 | 1.59 |
| 26 | BB | 634 | C | C2-N3 | 5.17 | 1.39 | 1.35 |
| 26 | BB | 670 | A | C5-C4 | -5.17 | 1.35 | 1.38 |
| 26 | BB | 956 | G | P-O5' | 5.17 | 1.65 | 1.59 |
| 26 | BB | 1485 | U | C3'-O3' | 5.17 | 1.49 | 1.42 |
| 26 | BB | 2844 | G | C2-N2 | -5.17 | 1.29 | 1.34 |
| 26 | BB | 1219 | U | C2-N3 | -5.17 | 1.34 | 1.37 |
| 26 | BB | 1600 | C | C2'-C1' | -5.17 | 1.47 | 1.53 |
| 26 | BB | 2853 | C | C5'-C4' | 5.17 | 1.57 | 1.51 |
| 36 | BL | 107 | GLY | N-CA | -5.17 | 1.38 | 1.46 |
| 1 | AA | 40 | C | C4-C5 | 5.17 | 1.47 | 1.43 |
| 1 | AA | 867 | G | C3'-O3' | -5.17 | 1.34 | 1.42 |
| 1 | AA | 931 | C | C4-C5 | 5.17 | 1.47 | 1.43 |
| 1 | AA | 1487 | G | N9-C4 | 5.17 | 1.42 | 1.38 |
| 1 | AA | 1500 | A | P-O5' | 5.17 | 1.65 | 1.59 |
| 4 | AD | 1 | C | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 18 | U | C4'-O4' | -5.17 | 1.38 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 910 | A | C1'-N9 | 5.17 | 1.56 | 1.48 |
| 26 | BB | 989 | G | C8-N7 | -5.17 | 1.27 | 1.30 |
| 26 | BB | 1341 | G | C2-N3 | 5.17 | 1.36 | 1.32 |
| 26 | BB | 1441 | G | C4'-C3' | 5.17 | 1.58 | 1.53 |
| 26 | BB | 1912 | A | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 2513 | A | C5'-C4' | 5.17 | 1.57 | 1.51 |
| 26 | BB | 2620 | C | C4-C5 | 5.17 | 1.47 | 1.43 |
| 1 | AA | 234 | C | N3-C4 | 5.17 | 1.37 | 1.33 |
| 1 | AA | 406 | G | P-O5' | 5.17 | 1.65 | 1.59 |
| 1 | AA | 1107 | C | O3'-P | 5.17 | 1.67 | 1.61 |
| 3 | AC | 54 | U | C2'-O2' | -5.17 | 1.34 | 1.41 |
| 26 | BB | 397 | U | N1-C2 | 5.17 | 1.43 | 1.38 |
| 26 | BB | 647 | G | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 2198 | A | N9-C8 | 5.17 | 1.41 | 1.37 |
| 26 | BB | 2513 | A | N3-C4 | 5.17 | 1.38 | 1.34 |
| 1 | AA | 226 | G | C8-N7 | -5.17 | 1.27 | 1.30 |
| 1 | AA | 1106 | G | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 277 | G | N3-C4 | 5.17 | 1.39 | 1.35 |
| 26 | BB | 436 | C | C2-O2 | -5.17 | 1.19 | 1.24 |
| 26 | BB | 933 | A | C5'-C4' | 5.17 | 1.57 | 1.51 |
| 26 | BB | 1043 | C | O3'-P | 5.17 | 1.67 | 1.61 |
| 26 | BB | 1083 | U | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 1231 | U | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 2018 | G | C4'-C3' | 5.17 | 1.58 | 1.53 |
| 26 | BB | 2156 | G | N9-C8 | 5.17 | 1.41 | 1.37 |
| 26 | BB | 2194 | U | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 35 | BK | 61 | TYR | CE1-CZ | 5.17 | 1.45 | 1.38 |
| 37 | BM | 34 | GLY | CA-C | 5.17 | 1.60 | 1.51 |
| 1 | AA | 585 | G | O3'-P | 5.17 | 1.67 | 1.61 |
| 1 | AA | 1239 | A | O3'-P | -5.17 | 1.54 | 1.61 |
| 1 | AA | 1278 | G | C2-N3 | 5.17 | 1.36 | 1.32 |
| 1 | AA | 1388 | C | C5-C6 | 5.17 | 1.38 | 1.34 |
| 1 | AA | 1484 | C | C2-O2 | -5.17 | 1.19 | 1.24 |
| 26 | BB | 242 | G | N1-C2 | -5.17 | 1.33 | 1.37 |
| 26 | BB | 284 | U | O3'-P | -5.17 | 1.54 | 1.61 |
| 26 | BB | 338 | G | C6-N1 | 5.17 | 1.43 | 1.39 |
| 26 | BB | 475 | C | O4'-C1' | 5.17 | 1.48 | 1.41 |
| 26 | BB | 701 | G | C2-N3 | 5.17 | 1.36 | 1.32 |
| 26 | BB | 940 | G | C8-N7 | -5.17 | 1.27 | 1.30 |
| 26 | BB | 1097 | U | C2-N3 | 5.17 | 1.41 | 1.37 |
| 26 | BB | 1281 | G | C6-N1 | 5.17 | 1.43 | 1.39 |
| 26 | BB | 1774 | C | C5'-C4' | 5.17 | 1.57 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2000 | C | C5-C6 | 5.17 | 1.38 | 1.34 |
| 26 | BB | 2101 | A | C6-N1 | 5.17 | 1.39 | 1.35 |
| 26 | BB | 2158 | A | C6-N6 | 5.17 | 1.38 | 1.33 |
| 26 | BB | 2436 | G | N3-C4 | 5.17 | 1.39 | 1.35 |
| 26 | BB | 2506 | U | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 26 | BB | 2595 | G | N7-C5 | -5.17 | 1.36 | 1.39 |
| 26 | BB | 2686 | G | C8-N7 | 5.17 | 1.34 | 1.30 |
| 26 | BB | 2723 | C | C3'-C2' | -5.17 | 1.47 | 1.52 |
| 1 | AA | 715 | A | C6-N6 | 5.17 | 1.38 | 1.33 |
| 1 | AA | 1032 | G | N7-C5 | -5.17 | 1.36 | 1.39 |
| 21 | AU | 69 | TYR | CE2-CZ | 5.17 | 1.45 | 1.38 |
| 26 | BB | 107 | G | C6-N1 | 5.17 | 1.43 | 1.39 |
| 26 | BB | 147 | C | C4-C5 | 5.17 | 1.47 | 1.43 |
| 26 | BB | 188 | G | N3-C4 | 5.17 | 1.39 | 1.35 |
| 26 | BB | 623 | C | C4-C5 | -5.17 | 1.38 | 1.43 |
| 26 | BB | 2035 | G | C4'-O4' | -5.17 | 1.38 | 1.45 |
| 1 | AA | 552 | U | C4-O4 | -5.16 | 1.19 | 1.23 |
| 1 | AA | 685 | G | O3'-P | 5.16 | 1.67 | 1.61 |
| 1 | AA | 850 | U | C5-C6 | 5.16 | 1.38 | 1.34 |
| 1 | AA | 1061 | G | N3-C4 | 5.16 | 1.39 | 1.35 |
| 1 | AA | 1117 | A | C4'-C3' | 5.16 | 1.58 | 1.53 |
| 1 | AA | 1191 | A | N3-C4 | 5.16 | 1.38 | 1.34 |
| 26 | BB | 81 | G | C5-C4 | -5.16 | 1.34 | 1.38 |
| 26 | BB | 579 | G | N1-C2 | 5.16 | 1.41 | 1.37 |
| 26 | BB | 1572 | A | P-O5' | 5.16 | 1.65 | 1.59 |
| 26 | BB | 2196 | C | O4'-C1' | -5.16 | 1.34 | 1.41 |
| 26 | BB | 2420 | C | C4-N4 | 5.16 | 1.38 | 1.33 |
| 2 | AB | 26 | A | C8-N7 | -5.16 | 1.27 | 1.31 |
| 3 | AC | 35 | G | N3-C4 | 5.16 | 1.39 | 1.35 |
| 26 | BB | 314 | C | C4'-C3' | 5.16 | 1.58 | 1.53 |
| 26 | BB | 562 | U | C4-O4 | 5.16 | 1.27 | 1.23 |
| 26 | BB | 1165 | A | N7-C5 | 5.16 | 1.42 | 1.39 |
| 26 | BB | 1308 | A | C4'-O4' | -5.16 | 1.38 | 1.45 |
| 26 | BB | 2432 | A | N9-C4 | 5.16 | 1.41 | 1.37 |
| 26 | BB | 2736 | A | C4'-C3' | 5.16 | 1.58 | 1.53 |
| 1 | AA | 499 | A | N1-C2 | -5.16 | 1.29 | 1.34 |
| 1 | AA | 985 | C | C4-C5 | 5.16 | 1.47 | 1.43 |
| 4 | AD | 34 | U | C1'-N1 | 5.16 | 1.56 | 1.48 |
| 26 | BB | 229 | C | C2'-C1' | -5.16 | 1.47 | 1.53 |
| 26 | BB | 231 | A | N7-C5 | 5.16 | 1.42 | 1.39 |
| 26 | BB | 513 | A | N1-C2 | -5.16 | 1.29 | 1.34 |
| 26 | BB | 928 | A | C6-N1 | -5.16 | 1.31 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 952 | G | O5'-C5' | -5.16 | 1.34 | 1.42 |
| 26 | BB | 1006 | C | N1-C6 | 5.16 | 1.40 | 1.37 |
| 26 | BB | 1121 | C | C4-C5 | 5.16 | 1.47 | 1.43 |
| 26 | BB | 1298 | C | N3-C4 | 5.16 | 1.37 | 1.33 |
| 26 | BB | 1340 | U | C2'-O2' | 5.16 | 1.48 | 1.41 |
| 26 | BB | 1425 | G | C2-N3 | 5.16 | 1.36 | 1.32 |
| 26 | BB | 2215 | C | C5'-C4' | 5.16 | 1.57 | 1.51 |
| 26 | BB | 2325 | G | O3'-P | 5.16 | 1.67 | 1.61 |
| 26 | BB | 2598 | A | C5-C6 | 5.16 | 1.45 | 1.41 |
| 26 | BB | 2607 | G | C4'-O4' | -5.16 | 1.38 | 1.45 |
| 1 | AA | 1244 | G | N1-C2 | 5.16 | 1.41 | 1.37 |
| 1 | AA | 1253 | G | N9-C4 | -5.16 | 1.33 | 1.38 |
| 3 | AC | 49 | U | N1-C2 | 5.16 | 1.43 | 1.38 |
| 25 | BA | 21 | G | C8-N7 | 5.16 | 1.34 | 1.30 |
| 26 | BB | 233 | A | C5-C4 | -5.16 | 1.35 | 1.38 |
| 26 | BB | 379 | G | O3'-P | 5.16 | 1.67 | 1.61 |
| 26 | BB | 541 | A | C4'-C3' | 5.16 | 1.58 | 1.53 |
| 26 | BB | 934 | U | N3-C4 | 5.16 | 1.43 | 1.38 |
| 26 | BB | 1407 | G | P-O5' | 5.16 | 1.65 | 1.59 |
| 26 | BB | 2036 | C | C4-C5 | -5.16 | 1.38 | 1.43 |
| 1 | AA | 893 | C | C5-C6 | 5.16 | 1.38 | 1.34 |
| 1 | AA | 1090 | U | O3'-P | 5.16 | 1.67 | 1.61 |
| 1 | AA | 1133 | G | C8-N7 | 5.16 | 1.34 | 1.30 |
| 1 | AA | 1144 | G | C4'-C3' | 5.16 | 1.58 | 1.53 |
| 1 | AA | 1153 | G | C8-N7 | 5.16 | 1.34 | 1.30 |
| 26 | BB | 657 | U | C4'-O4' | -5.16 | 1.38 | 1.45 |
| 26 | BB | 895 | U | C4-C5 | 5.16 | 1.48 | 1.43 |
| 26 | BB | 1190 | G | C2-N2 | -5.16 | 1.29 | 1.34 |
| 26 | BB | 2818 | U | C4'-C3' | -5.16 | 1.47 | 1.52 |
| 1 | AA | 2 | A | C8-N7 | -5.16 | 1.27 | 1.31 |
| 1 | AA | 64 | G | C3'-C2' | 5.16 | 1.58 | 1.52 |
| 1 | AA | 144 | G | N1-C2 | 5.16 | 1.41 | 1.37 |
| 1 | AA | 198 | G | C8-N7 | 5.16 | 1.34 | 1.30 |
| 1 | AA | 433 | G | C5-C6 | 5.16 | 1.47 | 1.42 |
| 1 | AA | 902 | G | N9-C8 | -5.16 | 1.34 | 1.37 |
| 1 | AA | 974 | A | N1-C2 | 5.16 | 1.39 | 1.34 |
| 25 | BA | 19 | C | N1-C2 | 5.16 | 1.45 | 1.40 |
| 25 | BA | 85 | G | C8-N7 | -5.16 | 1.27 | 1.30 |
| 26 | BB | 33 | C | N1-C2 | 5.16 | 1.45 | 1.40 |
| 26 | BB | 67 | U | C4-C5 | 5.16 | 1.48 | 1.43 |
| 26 | BB | 846 | U | N1-C6 | -5.16 | 1.33 | 1.38 |
| 26 | BB | 1822 | C | N1-C6 | 5.16 | 1.40 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2311 | A | N3-C4 | 5.16 | 1.38 | 1.34 |
| 26 | BB | 2632 | A | O3'-P | 5.16 | 1.67 | 1.61 |
| 1 | AA | 249 | U | C5-C6 | 5.15 | 1.38 | 1.34 |
| 1 | AA | 900 | A | C2-N3 | -5.15 | 1.28 | 1.33 |
| 1 | AA | 961 | U | C5-C6 | 5.15 | 1.38 | 1.34 |
| 1 | AA | 1273 | C | C3'-C2' | 5.15 | 1.58 | 1.52 |
| 26 | BB | 35 | G | C2-N2 | -5.15 | 1.29 | 1.34 |
| 26 | BB | 728 | G | C4'-C3' | 5.15 | 1.58 | 1.53 |
| 26 | BB | 753 | A | C5-C6 | 5.15 | 1.45 | 1.41 |
| 26 | BB | 1268 | A | C5'-C4' | 5.15 | 1.57 | 1.51 |
| 26 | BB | 1853 | A | P-O5' | 5.15 | 1.65 | 1.59 |
| 26 | BB | 2239 | G | C4'-C3' | 5.15 | 1.58 | 1.53 |
| 26 | BB | 2725 | A | O5'-C5' | -5.15 | 1.34 | 1.42 |
| 1 | AA | 219 | U | C5-C6 | 5.15 | 1.38 | 1.34 |
| 1 | AA | 526 | C | C5-C6 | 5.15 | 1.38 | 1.34 |
| 1 | AA | 654 | G | C3'-C2' | -5.15 | 1.47 | 1.52 |
| 1 | AA | 750 | C | N3-C4 | -5.15 | 1.30 | 1.33 |
| 1 | AA | 876 | C | C3'-O3' | -5.15 | 1.34 | 1.42 |
| 1 | AA | 888 | G | C4'-O4' | -5.15 | 1.38 | 1.45 |
| 1 | AA | 991 | U | C3'-C2' | -5.15 | 1.47 | 1.52 |
| 1 | AA | 1076 | U | C2'-C1' | 5.15 | 1.59 | 1.53 |
| 1 | AA | 1345 | U | C2-O2 | 5.15 | 1.26 | 1.22 |
| 25 | BA | 18 | G | C3'-C2' | 5.15 | 1.58 | 1.52 |
| 26 | BB | 129 | C | N3-C4 | 5.15 | 1.37 | 1.33 |
| 26 | BB | 279 | A | N3-C4 | 5.15 | 1.38 | 1.34 |
| 26 | BB | 764 | A | N1-C2 | -5.15 | 1.29 | 1.34 |
| 26 | BB | 963 | U | C2-N3 | 5.15 | 1.41 | 1.37 |
| 26 | BB | 2073 | C | O3'-P | -5.15 | 1.54 | 1.61 |
| 54 | B3 | 16 | ARG | CZ-NH1 | 5.15 | 1.39 | 1.33 |
| 1 | AA | 291 | U | C2'-C1' | 5.15 | 1.59 | 1.53 |
| 1 | AA | 468 | A | N7-C5 | -5.15 | 1.36 | 1.39 |
| 1 | AA | 921 | U | C2-N3 | 5.15 | 1.41 | 1.37 |
| 1 | AA | 1166 | G | C6-O6 | -5.15 | 1.19 | 1.24 |
| 9 | AI | 67 | PRO | N-CD | -5.15 | 1.40 | 1.47 |
| 26 | BB | 277 | G | C5-C6 | 5.15 | 1.47 | 1.42 |
| 26 | BB | 671 | C | P-O5' | 5.15 | 1.65 | 1.59 |
| 26 | BB | 831 | G | C8-N7 | -5.15 | 1.27 | 1.30 |
| 26 | BB | 1393 | A | C6-N1 | 5.15 | 1.39 | 1.35 |
| 26 | BB | 1552 | A | N1-C2 | 5.15 | 1.39 | 1.34 |
| 26 | BB | 2034 | U | C3'-O3' | -5.15 | 1.34 | 1.42 |
| 26 | BB | 2511 | U | C2-O2 | 5.15 | 1.26 | 1.22 |
| 26 | BB | 623 | C | P-O5' | 5.15 | 1.64 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 631 | A | C2'-C1' | 5.15 | 1.59 | 1.53 |
| 26 | BB | 1078 | U | C4'-O4' | -5.15 | 1.38 | 1.45 |
| 26 | BB | 1340 | U | C5-C6 | 5.15 | 1.38 | 1.34 |
| 26 | BB | 2888 | C | C2'-O2' | 5.15 | 1.48 | 1.41 |
| 1 | AA | 86 | G | C5-C4 | 5.15 | 1.42 | 1.38 |
| 1 | AA | 91 | U | C5-C6 | 5.15 | 1.38 | 1.34 |
| 1 | AA | 407 | U | N1-C2 | 5.15 | 1.43 | 1.38 |
| 1 | AA | 1325 | C | N1-C6 | 5.15 | 1.40 | 1.37 |
| 2 | AB | 44 | G | C2-N3 | 5.15 | 1.36 | 1.32 |
| 26 | BB | 209 | C | O4'-C1' | 5.15 | 1.48 | 1.41 |
| 26 | BB | 1110 | G | C2-N3 | 5.15 | 1.36 | 1.32 |
| 26 | BB | 1308 | A | C8-N7 | -5.15 | 1.27 | 1.31 |
| 26 | BB | 1537 | G | C5'-C4' | 5.15 | 1.57 | 1.51 |
| 26 | BB | 1800 | C | P-O5' | -5.15 | 1.54 | 1.59 |
| 26 | BB | 2193 | G | N3-C4 | 5.15 | 1.39 | 1.35 |
| 26 | BB | 2420 | C | C4-C5 | 5.15 | 1.47 | 1.43 |
| 26 | BB | 2444 | G | N7-C5 | 5.15 | 1.42 | 1.39 |
| 26 | BB | 2826 | A | C5-C6 | 5.15 | 1.45 | 1.41 |
| 1 | AA | 153 | C | N3-C4 | 5.15 | 1.37 | 1.33 |
| 26 | BB | 1229 | C | C5-C6 | 5.15 | 1.38 | 1.34 |
| 26 | BB | 2320 | U | C4'-O4' | -5.15 | 1.38 | 1.45 |
| 26 | BB | 2818 | U | C2'-C1' | 5.15 | 1.59 | 1.53 |
| 26 | BB | 2837 | A | C6-N1 | -5.15 | 1.31 | 1.35 |
| 1 | AA | 92 | U | C4-C5 | 5.14 | 1.48 | 1.43 |
| 1 | AA | 684 | U | N1-C6 | -5.14 | 1.33 | 1.38 |
| 1 | AA | 1112 | C | C3'-C2' | 5.14 | 1.58 | 1.52 |
| 1 | AA | 1328 | C | N1-C6 | 5.14 | 1.40 | 1.37 |
| 1 | AA | 1500 | A | N7-C5 | 5.14 | 1.42 | 1.39 |
| 26 | BB | 168 | G | C2-N3 | 5.14 | 1.36 | 1.32 |
| 26 | BB | 215 | G | N9-C4 | 5.14 | 1.42 | 1.38 |
| 26 | BB | 699 | A | P-O5' | -5.14 | 1.54 | 1.59 |
| 26 | BB | 1350 | C | C2-N3 | 5.14 | 1.39 | 1.35 |
| 26 | BB | 1392 | A | C4'-O4' | -5.14 | 1.38 | 1.45 |
| 26 | BB | 1536 | C | N3-C4 | 5.14 | 1.37 | 1.33 |
| 26 | BB | 1553 | A | C2-N3 | 5.14 | 1.38 | 1.33 |
| 26 | BB | 1877 | A | C3'-C2' | 5.14 | 1.58 | 1.52 |
| 26 | BB | 2141 | G | C8-N7 | 5.14 | 1.34 | 1.30 |
| 26 | BB | 2190 | G | C2-N3 | 5.14 | 1.36 | 1.32 |
| 26 | BB | 2274 | A | N7-C5 | 5.14 | 1.42 | 1.39 |
| 26 | BB | 2854 | G | C3'-C2' | 5.14 | 1.58 | 1.52 |
| 1 | AA | 97 | G | C1'-N9 | 5.14 | 1.56 | 1.48 |
| 1 | AA | 225 | C | O4'-C1' | 5.14 | 1.48 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 46 | G | N9-C4 | 5.14 | 1.42 | 1.38 |
| 26 | BB | 180 | G | C4'-C3' | 5.14 | 1.58 | 1.53 |
| 26 | BB | 584 | C | C3'-O3' | -5.14 | 1.34 | 1.42 |
| 26 | BB | 2480 | C | O3'-P | 5.14 | 1.67 | 1.61 |
| 26 | BB | 2602 | A | P-O5' | 5.14 | 1.64 | 1.59 |
| 26 | BB | 2668 | G | C8-N7 | 5.14 | 1.34 | 1.30 |
| 26 | BB | 2700 | A | C5'-C4' | 5.14 | 1.57 | 1.51 |
| 26 | BB | 2760 | C | C4'-C3' | 5.14 | 1.58 | 1.53 |
| 8 | AH | 49 | TYR | CE2-CZ | 5.14 | 1.45 | 1.38 |
| 26 | BB | 43 | G | C4'-O4' | -5.14 | 1.38 | 1.45 |
| 26 | BB | 704 | G | C2'-O2' | 5.14 | 1.48 | 1.41 |
| 26 | BB | 2502 | G | C4'-C3' | 5.14 | 1.58 | 1.53 |
| 26 | BB | 2578 | G | C2'-O2' | 5.14 | 1.48 | 1.41 |
| 1 | AA | 555 | U | O3'-P | 5.14 | 1.67 | 1.61 |
| 1 | AA | 841 | C | C2'-C1' | 5.14 | 1.59 | 1.53 |
| 26 | BB | 82 | U | N1-C6 | 5.14 | 1.42 | 1.38 |
| 26 | BB | 405 | U | N1-C2 | 5.14 | 1.43 | 1.38 |
| 26 | BB | 609 | A | C6-N1 | 5.14 | 1.39 | 1.35 |
| 26 | BB | 830 | G | O4'-C1' | 5.14 | 1.48 | 1.41 |
| 26 | BB | 1335 | C | C4'-O4' | -5.14 | 1.38 | 1.45 |
| 26 | BB | 2066 | C | C4'-C3' | 5.14 | 1.58 | 1.53 |
| 26 | BB | 2494 | G | C6-O6 | 5.14 | 1.28 | 1.24 |
| 26 | BB | 2678 | C | C4-N4 | 5.14 | 1.38 | 1.33 |
| 26 | BB | 2841 | C | P-O5' | -5.14 | 1.54 | 1.59 |
| 53 | B2 | 56 | ARG | N-CA | 5.14 | 1.56 | 1.46 |
| 1 | AA | 238 | A | C5'-C4' | 5.14 | 1.57 | 1.51 |
| 25 | BA | 93 | C | O3'-P | 5.14 | 1.67 | 1.61 |
| 26 | BB | 231 | A | C5-C6 | 5.14 | 1.45 | 1.41 |
| 26 | BB | 1604 | C | N1-C2 | -5.14 | 1.35 | 1.40 |
| 26 | BB | 2308 | G | N3-C4 | 5.14 | 1.39 | 1.35 |
| 26 | BB | 2455 | G | C5-C6 | -5.14 | 1.37 | 1.42 |
| 1 | AA | 4 | U | C5-C6 | 5.14 | 1.38 | 1.34 |
| 4 | AD | 24 | C | C1'-N1 | 5.14 | 1.56 | 1.48 |
| 12 | AL | 126 | PHE | CE1-CZ | 5.14 | 1.47 | 1.37 |
| 26 | BB | 601 | C | C2'-O2' | -5.14 | 1.34 | 1.41 |
| 26 | BB | 1317 | G | O3'-P | 5.14 | 1.67 | 1.61 |
| 26 | BB | 1388 | G | C3'-C2' | -5.14 | 1.47 | 1.52 |
| 26 | BB | 1760 | C | C3'-C2' | -5.14 | 1.47 | 1.52 |
| 26 | BB | 2137 | U | C4-O4 | -5.14 | 1.19 | 1.23 |
| 26 | BB | 2425 | A | N9-C4 | 5.14 | 1.41 | 1.37 |
| 1 | AA | 63 | C | P-O5' | 5.13 | 1.64 | 1.59 |
| 1 | AA | 853 | C | C5'-C4' | 5.13 | 1.57 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1066 | C | C5-C6 | 5.13 | 1.38 | 1.34 |
| 25 | BA | 50 | A | O3'-P | 5.13 | 1.67 | 1.61 |
| 25 | BA | 84 | G | C2-N3 | 5.13 | 1.36 | 1.32 |
| 26 | BB | 1162 | G | N9-C4 | -5.13 | 1.33 | 1.38 |
| 26 | BB | 1201 | U | C4-O4 | -5.13 | 1.19 | 1.23 |
| 26 | BB | 1321 | A | C4'-O4' | -5.13 | 1.38 | 1.45 |
| 26 | BB | 1390 | U | N3-C4 | 5.13 | 1.43 | 1.38 |
| 26 | BB | 1613 | G | C4'-O4' | -5.13 | 1.38 | 1.45 |
| 26 | BB | 1937 | A | N3-C4 | 5.13 | 1.38 | 1.34 |
| 26 | BB | 2344 | U | O4'-C1' | 5.13 | 1.48 | 1.41 |
| 26 | BB | 2716 | C | O5'-C5' | -5.13 | 1.34 | 1.42 |
| 1 | AA | 902 | G | O4'-C1' | 5.13 | 1.48 | 1.41 |
| 1 | AA | 1331 | G | C2'-C1' | 5.13 | 1.58 | 1.53 |
| 26 | BB | 1086 | A | N9-C8 | 5.13 | 1.41 | 1.37 |
| 26 | BB | 1151 | A | C5-C4 | -5.13 | 1.35 | 1.38 |
| 26 | BB | 2198 | A | C8-N7 | -5.13 | 1.27 | 1.31 |
| 1 | AA | 27 | G | N9-C8 | -5.13 | 1.34 | 1.37 |
| 1 | AA | 1033 | G | N9-C8 | 5.13 | 1.41 | 1.37 |
| 1 | AA | 1171 | A | C4'-C3' | -5.13 | 1.47 | 1.52 |
| 1 | AA | 1172 | C | N3-C4 | -5.13 | 1.30 | 1.33 |
| 3 | AC | 47 | C | C2-O2 | 5.13 | 1.29 | 1.24 |
| 26 | BB | 121 | G | O4'-C1' | 5.13 | 1.48 | 1.41 |
| 26 | BB | 1128 | G | N3-C4 | 5.13 | 1.39 | 1.35 |
| 26 | BB | 1139 | G | N7-C5 | -5.13 | 1.36 | 1.39 |
| 26 | BB | 1176 | U | N1-C2 | 5.13 | 1.43 | 1.38 |
| 26 | BB | 1823 | G | N9-C8 | -5.13 | 1.34 | 1.37 |
| 26 | BB | 2026 | U | C5-C6 | 5.13 | 1.38 | 1.34 |
| 26 | BB | 2256 | G | N1-C2 | 5.13 | 1.41 | 1.37 |
| 26 | BB | 2275 | C | C2-O2 | -5.13 | 1.19 | 1.24 |
| 26 | BB | 2280 | G | C6-N1 | 5.13 | 1.43 | 1.39 |
| 1 | AA | 448 | A | C2'-O2' | -5.13 | 1.34 | 1.41 |
| 26 | BB | 954 | G | P-O5' | 5.13 | 1.64 | 1.59 |
| 1 | AA | 1 | A | C3'-C2' | 5.13 | 1.58 | 1.52 |
| 1 | AA | 486 | U | C4'-O4' | -5.13 | 1.38 | 1.45 |
| 1 | AA | 647 | C | C2'-C1' | 5.13 | 1.58 | 1.53 |
| 1 | AA | 986 | U | C3'-C2' | -5.13 | 1.47 | 1.52 |
| 1 | AA | 1042 | A | C5-C4 | -5.13 | 1.35 | 1.38 |
| 25 | BA | 107 | G | P-O5' | 5.13 | 1.64 | 1.59 |
| 26 | BB | 124 | G | P-O5' | 5.13 | 1.64 | 1.59 |
| 26 | BB | 1307 | A | C6-N6 | 5.13 | 1.38 | 1.33 |
| 26 | BB | 1554 | U | N1-C2 | 5.13 | 1.43 | 1.38 |
| 26 | BB | 1641 | A | P-O5' | -5.13 | 1.54 | 1.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1896 | G | C5'-C4' | 5.13 | 1.57 | 1.51 |
| 26 | BB | 2186 | G | C5'-C4' | 5.13 | 1.57 | 1.51 |
| 26 | BB | 2316 | G | P-O5' | 5.13 | 1.64 | 1.59 |
| 1 | AA | 73 | C | N1-C2 | 5.13 | 1.45 | 1.40 |
| 1 | AA | 412 | A | N9-C4 | 5.13 | 1.41 | 1.37 |
| 1 | AA | 1037 | C | C2-O2 | -5.13 | 1.19 | 1.24 |
| 1 | AA | 1060 | U | O4'-C1' | -5.13 | 1.34 | 1.41 |
| 1 | AA | 1273 | C | C5'-C4' | 5.13 | 1.57 | 1.51 |
| 1 | AA | 1386 | G | C8-N7 | 5.13 | 1.34 | 1.30 |
| 3 | AC | 33 | A | C2'-O2' | 5.13 | 1.48 | 1.41 |
| 26 | BB | 293 | U | N1-C2 | 5.13 | 1.43 | 1.38 |
| 26 | BB | 301 | G | C2-N3 | 5.13 | 1.36 | 1.32 |
| 26 | BB | 905 | A | C4'-O4' | -5.13 | 1.38 | 1.45 |
| 26 | BB | 1401 | G | P-O5' | 5.13 | 1.64 | 1.59 |
| 26 | BB | 1655 | A | C8-N7 | -5.13 | 1.27 | 1.31 |
| 26 | BB | 1870 | C | O3'-P | 5.13 | 1.67 | 1.61 |
| 26 | BB | 2365 | G | C3'-C2' | -5.13 | 1.47 | 1.52 |
| 1 | AA | 293 | G | C2-N3 | 5.12 | 1.36 | 1.32 |
| 1 | AA | 1488 | G | C5'-C4' | 5.12 | 1.57 | 1.51 |
| 25 | BA | 56 | G | C8-N7 | 5.12 | 1.34 | 1.30 |
| 26 | BB | 117 | G | C8-N7 | -5.12 | 1.27 | 1.30 |
| 26 | BB | 268 | C | C2-O2 | -5.12 | 1.19 | 1.24 |
| 26 | BB | 1030 | C | C2-N3 | 5.12 | 1.39 | 1.35 |
| 26 | BB | 2201 | G | N7-C5 | 5.12 | 1.42 | 1.39 |
| 1 | AA | 705 | G | C6-O6 | -5.12 | 1.19 | 1.24 |
| 1 | AA | 1367 | C | N1-C6 | 5.12 | 1.40 | 1.37 |
| 4 | AD | 15 | G | P-O5' | 5.12 | 1.64 | 1.59 |
| 11 | AK | 85 | TYR | CD2-CE2 | 5.12 | 1.47 | 1.39 |
| 26 | BB | 594 | U | C4'-O4' | -5.12 | 1.38 | 1.45 |
| 26 | BB | 1240 | U | C3'-O3' | -5.12 | 1.34 | 1.42 |
| 26 | BB | 1466 | U | C4'-O4' | -5.12 | 1.38 | 1.45 |
| 26 | BB | 1533 | C | C1'-N1 | 5.12 | 1.56 | 1.48 |
| 26 | BB | 1735 | A | N1-C2 | 5.12 | 1.39 | 1.34 |
| 26 | BB | 2162 | G | C4'-O4' | -5.12 | 1.38 | 1.45 |
| 26 | BB | 2282 | G | P-O5' | 5.12 | 1.64 | 1.59 |
| 26 | BB | 2300 | C | N1-C6 | 5.12 | 1.40 | 1.37 |
| 32 | BH | 123 | GLU | CG-CD | 5.12 | 1.59 | 1.51 |
| 1 | AA | 72 | A | C5-C6 | 5.12 | 1.45 | 1.41 |
| 1 | AA | 787 | A | N9-C4 | 5.12 | 1.41 | 1.37 |
| 1 | AA | 999 | C | C4'-C3' | -5.12 | 1.47 | 1.52 |
| 1 | AA | 1220 | G | N1-C2 | -5.12 | 1.33 | 1.37 |
| 11 | AK | 64 | TYR | CE1-CZ | 5.12 | 1.45 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 24 | G | C4'-O4' | -5.12 | 1.38 | 1.45 |
| 26 | BB | 1 | G | N9-C4 | 5.12 | 1.42 | 1.38 |
| 26 | BB | 822 | G | O3'-P | 5.12 | 1.67 | 1.61 |
| 26 | BB | 2074 | U | O4'-C1' | -5.12 | 1.34 | 1.41 |
| 26 | BB | 2351 | G | C3'-C2' | 5.12 | 1.58 | 1.52 |
| 1 | AA | 809 | G | C1'-N9 | 5.12 | 1.56 | 1.48 |
| 1 | AA | 1324 | A | N7-C5 | -5.12 | 1.36 | 1.39 |
| 4 | AD | 68 | C | N3-C4 | 5.12 | 1.37 | 1.33 |
| 26 | BB | 972 | A | N7-C5 | 5.12 | 1.42 | 1.39 |
| 26 | BB | 1731 | G | N1-C2 | 5.12 | 1.41 | 1.37 |
| 26 | BB | 1815 | A | C3'-O3' | 5.12 | 1.49 | 1.42 |
| 26 | BB | 2298 | A | N9-C8 | 5.12 | 1.41 | 1.37 |
| 1 | AA | 36 | C | C4-C5 | 5.12 | 1.47 | 1.43 |
| 1 | AA | 497 | G | P-O5' | -5.12 | 1.54 | 1.59 |
| 1 | AA | 1082 | A | N9-C4 | 5.12 | 1.41 | 1.37 |
| 1 | AA | 1117 | A | P-O5' | -5.12 | 1.54 | 1.59 |
| 1 | AA | 1290 | G | N1-C2 | 5.12 | 1.41 | 1.37 |
| 1 | AA | 1452 | C | C4-N4 | 5.12 | 1.38 | 1.33 |
| 26 | BB | 658 | U | N1-C6 | 5.12 | 1.42 | 1.38 |
| 26 | BB | 1126 | A | C6-N1 | -5.12 | 1.31 | 1.35 |
| 26 | BB | 1934 | C | N1-C2 | 5.12 | 1.45 | 1.40 |
| 26 | BB | 2370 | G | C8-N7 | -5.12 | 1.27 | 1.30 |
| 1 | AA | 151 | A | C2'-C1' | -5.12 | 1.47 | 1.53 |
| 1 | AA | 310 | G | C5-C4 | -5.12 | 1.34 | 1.38 |
| 1 | AA | 990 | C | C4'-C3' | 5.12 | 1.58 | 1.53 |
| 1 | AA | 1325 | C | P-O5' | 5.12 | 1.64 | 1.59 |
| 26 | BB | 35 | G | N7-C5 | -5.12 | 1.36 | 1.39 |
| 26 | BB | 284 | U | C2-O2 | 5.12 | 1.26 | 1.22 |
| 26 | BB | 641 | U | C2-O2 | 5.12 | 1.26 | 1.22 |
| 26 | BB | 1402 | U | N1-C2 | 5.12 | 1.43 | 1.38 |
| 26 | BB | 2695 | U | P-OP1 | -5.12 | 1.40 | 1.49 |
| 1 | AA | 183 | C | P-O5' | 5.12 | 1.64 | 1.59 |
| 26 | BB | 28 | A | N9-C8 | 5.12 | 1.41 | 1.37 |
| 26 | BB | 155 | A | P-O5' | -5.12 | 1.54 | 1.59 |
| 26 | BB | 227 | A | N3-C4 | -5.12 | 1.31 | 1.34 |
| 26 | BB | 353 | C | C4-C5 | 5.12 | 1.47 | 1.43 |
| 26 | BB | 744 | U | C5'-C4' | 5.12 | 1.57 | 1.51 |
| 26 | BB | 925 | A | C4'-O4' | -5.12 | 1.38 | 1.45 |
| 26 | BB | 1227 | G | O3'-P | 5.12 | 1.67 | 1.61 |
| 26 | BB | 1335 | C | C2'-C1' | 5.12 | 1.58 | 1.53 |
| 26 | BB | 1669 | A | N3-C4 | 5.12 | 1.38 | 1.34 |
| 26 | BB | 1749 | A | N7-C5 | -5.12 | 1.36 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1890 | A | P-O5' | 5.12 | 1.64 | 1.59 |
| 26 | BB | 2190 | G | N9-C8 | -5.12 | 1.34 | 1.37 |
| 26 | BB | 2444 | G | N3-C4 | 5.12 | 1.39 | 1.35 |
| 26 | BB | 2562 | U | C3'-C2' | 5.12 | 1.58 | 1.52 |
| 26 | BB | 2817 | U | C5'-C4' | 5.12 | 1.57 | 1.51 |
| 26 | BB | 2887 | A | C2'-C1' | 5.12 | 1.58 | 1.53 |
| 1 | AA | 1304 | G | C3'-O3' | 5.11 | 1.49 | 1.42 |
| 26 | BB | 482 | A | O3'-P | 5.11 | 1.67 | 1.61 |
| 26 | BB | 513 | A | N9-C4 | -5.11 | 1.34 | 1.37 |
| 26 | BB | 1441 | G | N9-C4 | 5.11 | 1.42 | 1.38 |
| 26 | BB | 2368 | C | C2'-C1' | -5.11 | 1.47 | 1.53 |
| 28 | BD | 34 | GLU | CB-CG | 5.11 | 1.61 | 1.52 |
| 1 | AA | 98 | A | C3'-C2' | 5.11 | 1.58 | 1.52 |
| 1 | AA | 1211 | U | C4-C5 | 5.11 | 1.48 | 1.43 |
| 1 | AA | 1319 | A | C2'-O2' | 5.11 | 1.48 | 1.41 |
| 26 | BB | 258 | G | C2'-O2' | 5.11 | 1.48 | 1.41 |
| 26 | BB | 1555 | G | N1-C2 | 5.11 | 1.41 | 1.37 |
| 40 | BP | 94 | TYR | CB-CG | 5.11 | 1.59 | 1.51 |
| 1 | AA | 705 | G | C5-C6 | 5.11 | 1.47 | 1.42 |
| 1 | AA | 998 | C | C5'-C4' | 5.11 | 1.57 | 1.51 |
| 1 | AA | 1092 | A | N3-C4 | 5.11 | 1.38 | 1.34 |
| 1 | AA | 1497 | G | C3'-C2' | 5.11 | 1.58 | 1.52 |
| 3 | AC | 24 | A | N9-C8 | 5.11 | 1.41 | 1.37 |
| 26 | BB | 425 | G | P-O5' | 5.11 | 1.64 | 1.59 |
| 26 | BB | 601 | C | C2-N3 | 5.11 | 1.39 | 1.35 |
| 26 | BB | 825 | A | C5-C6 | -5.11 | 1.36 | 1.41 |
| 26 | BB | 919 | U | O4'-C1' | 5.11 | 1.48 | 1.41 |
| 26 | BB | 1096 | A | C5-C6 | 5.11 | 1.45 | 1.41 |
| 26 | BB | 1114 | C | N1-C6 | 5.11 | 1.40 | 1.37 |
| 26 | BB | 1205 | A | N1-C2 | 5.11 | 1.39 | 1.34 |
| 26 | BB | 2633 | G | P-O5' | 5.11 | 1.64 | 1.59 |
| 26 | BB | 856 | G | P-O5' | 5.11 | 1.64 | 1.59 |
| 26 | BB | 903 | C | C5'-C4' | 5.11 | 1.57 | 1.51 |
| 26 | BB | 1671 | U | O3'-P | 5.11 | 1.67 | 1.61 |
| 1 | AA | 70 | U | P-O5' | 5.11 | 1.64 | 1.59 |
| 1 | AA | 255 | G | N9-C4 | 5.11 | 1.42 | 1.38 |
| 1 | AA | 456 | A | C5-C4 | 5.11 | 1.42 | 1.38 |
| 1 | AA | 1530 | G | N9-C8 | -5.11 | 1.34 | 1.37 |
| 25 | BA | 48 | U | N1-C2 | 5.11 | 1.43 | 1.38 |
| 26 | BB | 265 | A | C4'-C3' | 5.11 | 1.58 | 1.53 |
| 26 | BB | 305 | C | C5'-C4' | 5.11 | 1.57 | 1.51 |
| 26 | BB | 512 | G | C5-C6 | 5.11 | 1.47 | 1.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1478 | G | C6-N1 | -5.11 | 1.35 | 1.39 |
| 26 | BB | 1546 | G | C2-N3 | -5.11 | 1.28 | 1.32 |
| 26 | BB | 1880 | U | N1-C2 | 5.11 | 1.43 | 1.38 |
| 26 | BB | 2196 | C | N1-C6 | 5.11 | 1.40 | 1.37 |
| 26 | BB | 2290 | G | N1-C2 | -5.11 | 1.33 | 1.37 |
| 28 | BD | 220 | ARG | CZ-NH1 | 5.11 | 1.39 | 1.33 |
| 1 | AA | 1016 | A | C5-C4 | 5.11 | 1.42 | 1.38 |
| 1 | AA | 1364 | U | C4'-C3' | 5.11 | 1.58 | 1.53 |
| 11 | AK | 99 | GLY | CA-C | 5.11 | 1.60 | 1.51 |
| 26 | BB | 324 | A | C6-N1 | -5.11 | 1.31 | 1.35 |
| 26 | BB | 619 | G | C3'-C2' | 5.11 | 1.58 | 1.52 |
| 26 | BB | 1606 | C | O3'-P | 5.11 | 1.67 | 1.61 |
| 26 | BB | 2019 | A | P-O5' | 5.11 | 1.64 | 1.59 |
| 1 | AA | 910 | C | C2-O2 | -5.10 | 1.19 | 1.24 |
| 26 | BB | 199 | A | N7-C5 | 5.10 | 1.42 | 1.39 |
| 26 | BB | 279 | A | C2'-O2' | 5.10 | 1.48 | 1.41 |
| 26 | BB | 494 | G | N9-C8 | 5.10 | 1.41 | 1.37 |
| 26 | BB | 1809 | A | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 26 | BB | 1817 | G | C5-C4 | 5.10 | 1.42 | 1.38 |
| 26 | BB | 2579 | C | C2'-C1' | 5.10 | 1.58 | 1.53 |
| 1 | AA | 42 | G | N7-C5 | -5.10 | 1.36 | 1.39 |
| 1 | AA | 102 | G | N7-C5 | -5.10 | 1.36 | 1.39 |
| 1 | AA | 247 | G | N3-C4 | 5.10 | 1.39 | 1.35 |
| 1 | AA | 544 | G | C6-O6 | -5.10 | 1.19 | 1.24 |
| 1 | AA | 850 | U | C4-O4 | -5.10 | 1.19 | 1.23 |
| 1 | AA | 904 | U | C2-O2 | -5.10 | 1.17 | 1.22 |
| 1 | AA | 1227 | A | P-O5' | 5.10 | 1.64 | 1.59 |
| 1 | AA | 1391 | U | C4'-C3' | 5.10 | 1.58 | 1.53 |
| 1 | AA | 1497 | G | C6-O6 | -5.10 | 1.19 | 1.24 |
| 2 | AB | 60 | U | C4'-C3' | 5.10 | 1.58 | 1.53 |
| 26 | BB | 73 | A | C5'-C4' | 5.10 | 1.57 | 1.51 |
| 26 | BB | 178 | G | C3'-O3' | 5.10 | 1.49 | 1.42 |
| 26 | BB | 402 | A | N1-C2 | -5.10 | 1.29 | 1.34 |
| 26 | BB | 406 | G | C4'-C3' | -5.10 | 1.47 | 1.52 |
| 26 | BB | 876 | C | C5-C6 | 5.10 | 1.38 | 1.34 |
| 26 | BB | 1302 | A | C4'-C3' | 5.10 | 1.58 | 1.53 |
| 26 | BB | 1348 | C | N3-C4 | 5.10 | 1.37 | 1.33 |
| 33 | BI | 48 | GLU | CD-OE1 | 5.10 | 1.31 | 1.25 |
| 1 | AA | 224 | U | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 1 | AA | 1220 | G | C2-N3 | 5.10 | 1.36 | 1.32 |
| 26 | BB | 354 | A | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 26 | BB | 585 | G | C4'-C3' | 5.10 | 1.58 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1093 | G | N7-C5 | 5.10 | 1.42 | 1.39 |
| 26 | BB | 1193 | G | C2-N3 | 5.10 | 1.36 | 1.32 |
| 26 | BB | 1229 | C | N1-C6 | 5.10 | 1.40 | 1.37 |
| 26 | BB | 1436 | G | C2-N3 | 5.10 | 1.36 | 1.32 |
| 26 | BB | 2423 | U | N1-C2 | 5.10 | 1.43 | 1.38 |
| 1 | AA | 548 | G | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 1 | AA | 934 | C | C4-C5 | 5.10 | 1.47 | 1.43 |
| 4 | AD | 51 | U | O3'-P | 5.10 | 1.67 | 1.61 |
| 26 | BB | 264 | C | C3'-O3' | 5.10 | 1.49 | 1.42 |
| 26 | BB | 294 | A | O3'-P | 5.10 | 1.67 | 1.61 |
| 26 | BB | 763 | G | P-O5' | 5.10 | 1.64 | 1.59 |
| 26 | BB | 769 | U | O3'-P | -5.10 | 1.55 | 1.61 |
| 26 | BB | 793 | A | C5-C6 | 5.10 | 1.45 | 1.41 |
| 26 | BB | 1134 | A | N3-C4 | 5.10 | 1.38 | 1.34 |
| 26 | BB | 1135 | C | P-O5' | 5.10 | 1.64 | 1.59 |
| 26 | BB | 1217 | U | C4-O4 | -5.10 | 1.19 | 1.23 |
| 26 | BB | 1227 | G | N3-C4 | -5.10 | 1.31 | 1.35 |
| 26 | BB | 1473 | G | C2'-C1' | -5.10 | 1.47 | 1.53 |
| 26 | BB | 1822 | C | P-O5' | 5.10 | 1.64 | 1.59 |
| 26 | BB | 2054 | A | C6-N1 | 5.10 | 1.39 | 1.35 |
| 33 | BI | 132 | PHE | CG-CD2 | 5.10 | 1.46 | 1.38 |
| 42 | BR | 1 | SER | CA-CB | 5.10 | 1.60 | 1.52 |
| 1 | AA | 709 | U | C2-O2 | 5.10 | 1.26 | 1.22 |
| 1 | AA | 887 | G | C5-C6 | 5.10 | 1.47 | 1.42 |
| 25 | BA | 76 | G | C2-N3 | 5.10 | 1.36 | 1.32 |
| 26 | BB | 48 | G | N3-C4 | 5.10 | 1.39 | 1.35 |
| 26 | BB | 340 | A | C8-N7 | -5.10 | 1.27 | 1.31 |
| 26 | BB | 361 | G | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 26 | BB | 509 | C | N3-C4 | 5.10 | 1.37 | 1.33 |
| 26 | BB | 1059 | G | N9-C4 | 5.10 | 1.42 | 1.38 |
| 26 | BB | 1092 | C | P-O5' | 5.10 | 1.64 | 1.59 |
| 26 | BB | 1651 | G | C6-N1 | 5.10 | 1.43 | 1.39 |
| 26 | BB | 1711 | A | N9-C4 | 5.10 | 1.41 | 1.37 |
| 26 | BB | 1791 | A | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 26 | BB | 1910 | G | C6-N1 | 5.10 | 1.43 | 1.39 |
| 26 | BB | 1996 | C | C2-N3 | 5.10 | 1.39 | 1.35 |
| 26 | BB | 2042 | A | P-O5' | 5.10 | 1.64 | 1.59 |
| 1 | AA | 694 | A | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 26 | BB | 231 | A | C6-N1 | -5.10 | 1.31 | 1.35 |
| 26 | BB | 1635 | A | C4'-O4' | -5.10 | 1.39 | 1.45 |
| 26 | BB | 1837 | C | C2-N3 | 5.10 | 1.39 | 1.35 |
| 26 | BB | 2242 | G | C2-N3 | 5.10 | 1.36 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2289 | G | N9-C8 | 5.10 | 1.41 | 1.37 |
| 1 | AA | 27 | G | P-O5' | 5.09 | 1.64 | 1.59 |
| 1 | AA | 1024 | G | C2'-O2' | 5.09 | 1.48 | 1.41 |
| 1 | AA | 1538 | C | C2-O2 | -5.09 | 1.19 | 1.24 |
| 4 | AD | 27 | G | N9-C8 | -5.09 | 1.34 | 1.37 |
| 25 | BA | 59 | A | P-O5' | 5.09 | 1.64 | 1.59 |
| 26 | BB | 114 | U | N3-C4 | 5.09 | 1.43 | 1.38 |
| 26 | BB | 322 | A | C4'-O4' | -5.09 | 1.39 | 1.45 |
| 26 | BB | 952 | G | C2-N2 | 5.09 | 1.39 | 1.34 |
| 26 | BB | 1285 | A | N9-C8 | -5.09 | 1.33 | 1.37 |
| 1 | AA | 274 | A | C3'-C2' | 5.09 | 1.58 | 1.52 |
| 1 | AA | 760 | G | C6-N1 | 5.09 | 1.43 | 1.39 |
| 26 | BB | 379 | G | C8-N7 | -5.09 | 1.27 | 1.30 |
| 26 | BB | 1998 | A | C5-C4 | -5.09 | 1.35 | 1.38 |
| 26 | BB | 2128 | G | C5-C6 | 5.09 | 1.47 | 1.42 |
| 1 | AA | 68 | G | C5'-C4' | 5.09 | 1.57 | 1.51 |
| 1 | AA | 206 | C | C5'-C4' | 5.09 | 1.57 | 1.51 |
| 1 | AA | 986 | U | C4-C5 | 5.09 | 1.48 | 1.43 |
| 1 | AA | 1296 | C | C2'-C1' | 5.09 | 1.58 | 1.53 |
| 26 | BB | 571 | U | N3-C4 | 5.09 | 1.43 | 1.38 |
| 26 | BB | 943 | A | N7-C5 | 5.09 | 1.42 | 1.39 |
| 26 | BB | 1366 | A | P-O5' | 5.09 | 1.64 | 1.59 |
| 26 | BB | 1378 | A | N9-C4 | 5.09 | 1.41 | 1.37 |
| 26 | BB | 2478 | A | C4'-O4' | -5.09 | 1.39 | 1.45 |
| 1 | AA | 307 | C | N1-C6 | 5.09 | 1.40 | 1.37 |
| 1 | AA | 752 | G | C8-N7 | -5.09 | 1.27 | 1.30 |
| 1 | AA | 1137 | C | C4'-O4' | -5.09 | 1.39 | 1.45 |
| 1 | AA | 1432 | G | C4'-C3' | 5.09 | 1.58 | 1.53 |
| 26 | BB | 602 | A | C6-N1 | 5.09 | 1.39 | 1.35 |
| 26 | BB | 667 | U | C4'-C3' | -5.09 | 1.47 | 1.52 |
| 26 | BB | 946 | C | N3-C4 | 5.09 | 1.37 | 1.33 |
| 26 | BB | 954 | G | N3-C4 | 5.09 | 1.39 | 1.35 |
| 26 | BB | 1539 | U | C2'-C1' | -5.09 | 1.47 | 1.53 |
| 26 | BB | 1811 | G | N3-C4 | 5.09 | 1.39 | 1.35 |
| 26 | BB | 1862 | G | C3'-C2' | -5.09 | 1.47 | 1.52 |
| 26 | BB | 1908 | C | O4'-C1' | -5.09 | 1.35 | 1.41 |
| 26 | BB | 2126 | A | C3'-C2' | 5.09 | 1.58 | 1.52 |
| 26 | BB | 2666 | C | C1'-N1 | 5.09 | 1.56 | 1.48 |
| 26 | BB | 2690 | U | C1'-N1 | 5.09 | 1.56 | 1.48 |
| 1 | AA | 275 | G | C6-N1 | 5.09 | 1.43 | 1.39 |
| 1 | AA | 473 | U | O4'-C1' | -5.09 | 1.35 | 1.41 |
| 1 | AA | 832 | G | C6-N1 | 5.09 | 1.43 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1008 | A | C2-N3 | -5.09 | 1.28 | 1.33 |
| 26 | BB | 1177 | G | C5-C6 | 5.09 | 1.47 | 1.42 |
| 26 | BB | 2142 | A | C5-C4 | -5.09 | 1.35 | 1.38 |
| 1 | AA | 612 | C | C2-N3 | 5.09 | 1.39 | 1.35 |
| 26 | BB | 34 | U | N3-C4 | 5.09 | 1.43 | 1.38 |
| 26 | BB | 324 | A | C4'-C3' | -5.09 | 1.47 | 1.52 |
| 26 | BB | 711 | G | C3'-C2' | 5.09 | 1.58 | 1.52 |
| 26 | BB | 1473 | G | C2-N3 | 5.09 | 1.36 | 1.32 |
| 26 | BB | 1634 | A | O3'-P | 5.09 | 1.67 | 1.61 |
| 26 | BB | 2109 | U | O3'-P | 5.09 | 1.67 | 1.61 |
| 26 | BB | 2447 | G | C8-N7 | -5.09 | 1.27 | 1.30 |
| 1 | AA | 369 | G | C5-C4 | -5.08 | 1.34 | 1.38 |
| 1 | AA | 755 | G | C6-N1 | 5.08 | 1.43 | 1.39 |
| 1 | AA | 969 | A | C6-N6 | 5.08 | 1.38 | 1.33 |
| 1 | AA | 1042 | A | N7-C5 | 5.08 | 1.42 | 1.39 |
| 1 | AA | 1125 | U | O3'-P | 5.08 | 1.67 | 1.61 |
| 26 | BB | 116 | C | C4-N4 | 5.08 | 1.38 | 1.33 |
| 26 | BB | 348 | A | N9-C8 | -5.08 | 1.33 | 1.37 |
| 26 | BB | 738 | G | C2-N3 | 5.08 | 1.36 | 1.32 |
| 26 | BB | 1948 | G | C2-N3 | 5.08 | 1.36 | 1.32 |
| 26 | BB | 2513 | A | O4'-C1' | 5.08 | 1.48 | 1.41 |
| 26 | BB | 2851 | A | C5-C4 | -5.08 | 1.35 | 1.38 |
| 1 | AA | 496 | A | N3-C4 | 5.08 | 1.38 | 1.34 |
| 1 | AA | 861 | G | N1-C2 | -5.08 | 1.33 | 1.37 |
| 1 | AA | 1321 | U | C5-C6 | 5.08 | 1.38 | 1.34 |
| 1 | AA | 1334 | G | N7-C5 | -5.08 | 1.36 | 1.39 |
| 1 | AA | 1379 | G | C8-N7 | -5.08 | 1.27 | 1.30 |
| 4 | AD | 34 | U | N1-C2 | 5.08 | 1.43 | 1.38 |
| 25 | BA | 52 | A | C6-N6 | -5.08 | 1.29 | 1.33 |
| 25 | BA | 117 | G | N1-C2 | 5.08 | 1.41 | 1.37 |
| 26 | BB | 246 | C | N3-C4 | 5.08 | 1.37 | 1.33 |
| 26 | BB | 737 | C | C4'-O4' | -5.08 | 1.39 | 1.45 |
| 26 | BB | 1284 | A | N1-C2 | -5.08 | 1.29 | 1.34 |
| 26 | BB | 1793 | C | C3'-C2' | -5.08 | 1.47 | 1.52 |
| 26 | BB | 2765 | A | C4'-O4' | -5.08 | 1.39 | 1.45 |
| 1 | AA | 127 | G | N9-C4 | -5.08 | 1.33 | 1.38 |
| 1 | AA | 701 | U | C2-N3 | 5.08 | 1.41 | 1.37 |
| 1 | AA | 704 | A | O3'-P | -5.08 | 1.55 | 1.61 |
| 26 | BB | 126 | A | C3'-O3' | 5.08 | 1.49 | 1.42 |
| 26 | BB | 351 | C | C4-N4 | 5.08 | 1.38 | 1.33 |
| 26 | BB | 728 | G | C6-O6 | 5.08 | 1.28 | 1.24 |
| 26 | BB | 1502 | A | C2'-O2' | 5.08 | 1.48 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2875 | C | C5'-C4' | 5.08 | 1.57 | 1.51 |
| 1 | AA | 790 | A | O3'-P | 5.08 | 1.67 | 1.61 |
| 1 | AA | 1003 | G | N1-C2 | 5.08 | 1.41 | 1.37 |
| 1 | AA | 1017 | U | O4'-C1' | -5.08 | 1.35 | 1.41 |
| 1 | AA | 1339 | A | N9-C4 | -5.08 | 1.34 | 1.37 |
| 18 | AR | 14 | PHE | CG-CD2 | 5.08 | 1.46 | 1.38 |
| 26 | BB | 262 | A | C5-C6 | -5.08 | 1.36 | 1.41 |
| 26 | BB | 471 | A | C3'-C2' | 5.08 | 1.58 | 1.52 |
| 26 | BB | 870 | U | N1-C2 | 5.08 | 1.43 | 1.38 |
| 1 | AA | 328 | C | C4-C5 | 5.08 | 1.47 | 1.43 |
| 1 | AA | 705 | G | C5'-C4' | 5.08 | 1.57 | 1.51 |
| 1 | AA | 768 | A | C4'-O4' | -5.08 | 1.39 | 1.45 |
| 1 | AA | 847 | G | C2'-O2' | -5.08 | 1.35 | 1.41 |
| 1 | AA | 1366 | C | C2'-C1' | 5.08 | 1.58 | 1.53 |
| 1 | AA | 1376 | U | C2-O2 | 5.08 | 1.26 | 1.22 |
| 15 | AO | 67 | GLY | N-CA | -5.08 | 1.38 | 1.46 |
| 25 | BA | 33 | G | N3-C4 | 5.08 | 1.39 | 1.35 |
| 26 | BB | 1005 | C | O3'-P | 5.08 | 1.67 | 1.61 |
| 26 | BB | 1900 | A | C3'-C2' | 5.08 | 1.58 | 1.52 |
| 26 | BB | 1920 | C | C5'-C4' | 5.08 | 1.57 | 1.51 |
| 26 | BB | 2476 | A | O4'-C1' | 5.08 | 1.48 | 1.41 |
| 26 | BB | 2755 | C | C2'-O2' | 5.08 | 1.48 | 1.41 |
| 26 | BB | 2809 | A | N9-C4 | -5.08 | 1.34 | 1.37 |
| 1 | AA | 354 | G | C5-C4 | 5.08 | 1.42 | 1.38 |
| 1 | AA | 432 | A | C2'-O2' | 5.08 | 1.48 | 1.41 |
| 2 | AB | 5 | G | C3'-O3' | 5.08 | 1.49 | 1.42 |
| 25 | BA | 98 | G | C2'-C1' | -5.08 | 1.47 | 1.53 |
| 26 | BB | 590 | A | C4'-O4' | -5.08 | 1.39 | 1.45 |
| 26 | BB | 681 | G | C5-C6 | -5.08 | 1.37 | 1.42 |
| 26 | BB | 1227 | G | C3'-C2' | 5.08 | 1.58 | 1.52 |
| 26 | BB | 1441 | G | C5-C6 | 5.08 | 1.47 | 1.42 |
| 26 | BB | 2118 | U | C2-O2 | 5.08 | 1.26 | 1.22 |
| 26 | BB | 2152 | G | C2'-C1' | 5.08 | 1.58 | 1.53 |
| 26 | BB | 2505 | G | C2'-C1' | -5.08 | 1.47 | 1.53 |
| 26 | BB | 2630 | G | O4'-C1' | 5.08 | 1.48 | 1.41 |
| 44 | BT | 35 | PHE | CG-CD2 | 5.08 | 1.46 | 1.38 |
| 1 | AA | 565 | U | C5'-C4' | 5.08 | 1.57 | 1.51 |
| 1 | AA | 816 | A | N7-C5 | 5.08 | 1.42 | 1.39 |
| 1 | AA | 1541 | U | C4'-C3' | -5.08 | 1.47 | 1.52 |
| 26 | BB | 27 | G | C5-C6 | 5.08 | 1.47 | 1.42 |
| 26 | BB | 312 | G | C4'-O4' | -5.08 | 1.39 | 1.45 |
| 26 | BB | 656 | G | C5'-C4' | 5.08 | 1.57 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1695 | G | O3'-P | 5.08 | 1.67 | 1.61 |
| 26 | BB | 2660 | A | N9-C8 | -5.08 | 1.33 | 1.37 |
| 26 | BB | 2752 | C | C4-C5 | 5.08 | 1.47 | 1.43 |
| 1 | AA | 328 | C | N3-C4 | 5.07 | 1.37 | 1.33 |
| 1 | AA | 499 | A | C4'-C3' | 5.07 | 1.58 | 1.53 |
| 1 | AA | 500 | G | C2'-C1' | -5.07 | 1.47 | 1.53 |
| 1 | AA | 558 | G | N9-C8 | -5.07 | 1.34 | 1.37 |
| 1 | AA | 735 | C | O3'-P | -5.07 | 1.55 | 1.61 |
| 1 | AA | 934 | C | O3'-P | 5.07 | 1.67 | 1.61 |
| 1 | AA | 1048 | G | N9-C4 | -5.07 | 1.33 | 1.38 |
| 25 | BA | 18 | G | N1-C2 | 5.07 | 1.41 | 1.37 |
| 26 | BB | 11 | C | C3'-C2' | -5.07 | 1.47 | 1.52 |
| 26 | BB | 505 | A | P-O5' | 5.07 | 1.64 | 1.59 |
| 26 | BB | 749 | A | N9-C4 | 5.07 | 1.40 | 1.37 |
| 26 | BB | 887 | U | P-O5' | 5.07 | 1.64 | 1.59 |
| 26 | BB | 2066 | C | C3'-C2' | -5.07 | 1.47 | 1.52 |
| 26 | BB | 2157 | G | P-O5' | 5.07 | 1.64 | 1.59 |
| 26 | BB | 2534 | A | P-O5' | 5.07 | 1.64 | 1.59 |
| 26 | BB | 2709 | G | C8-N7 | 5.07 | 1.33 | 1.30 |
| 26 | BB | 2878 | U | C2'-O2' | 5.07 | 1.48 | 1.41 |
| 1 | AA | 582 | C | C2'-O2' | 5.07 | 1.48 | 1.41 |
| 1 | AA | 637 | C | N1-C6 | 5.07 | 1.40 | 1.37 |
| 1 | AA | 1340 | A | N7-C5 | 5.07 | 1.42 | 1.39 |
| 1 | AA | 1517 | G | N3-C4 | 5.07 | 1.39 | 1.35 |
| 2 | AB | 71 | C | C5-C6 | 5.07 | 1.38 | 1.34 |
| 26 | BB | 553 | G | C6-N1 | 5.07 | 1.43 | 1.39 |
| 26 | BB | 1288 | G | N7-C5 | -5.07 | 1.36 | 1.39 |
| 26 | BB | 1466 | U | C4-O4 | -5.07 | 1.19 | 1.23 |
| 26 | BB | 1834 | U | C4-C5 | 5.07 | 1.48 | 1.43 |
| 26 | BB | 2133 | G | N7-C5 | 5.07 | 1.42 | 1.39 |
| 26 | BB | 2311 | A | C6-N1 | -5.07 | 1.31 | 1.35 |
| 26 | BB | 2560 | A | C2-N3 | 5.07 | 1.38 | 1.33 |
| 39 | BO | 81 | ARG | CZ-NH1 | 5.07 | 1.39 | 1.33 |
| 1 | AA | 391 | G | N1-C2 | 5.07 | 1.41 | 1.37 |
| 1 | AA | 594 | U | C4-C5 | 5.07 | 1.48 | 1.43 |
| 1 | AA | 812 | G | C4'-O4' | -5.07 | 1.39 | 1.45 |
| 26 | BB | 151 | C | C4'-O4' | -5.07 | 1.39 | 1.45 |
| 26 | BB | 170 | U | C4-C5 | 5.07 | 1.48 | 1.43 |
| 26 | BB | 906 | U | O3'-P | -5.07 | 1.55 | 1.61 |
| 26 | BB | 1502 | A | N9-C8 | -5.07 | 1.33 | 1.37 |
| 26 | BB | 2022 | U | O3'-P | 5.07 | 1.67 | 1.61 |
| 26 | BB | 2060 | A | C4'-C3' | 5.07 | 1.58 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2151 | U | C2-N3 | 5.07 | 1.41 | 1.37 |
| 26 | BB | 2747 | G | O3'-P | -5.07 | 1.55 | 1.61 |
| 1 | AA | 1412 | C | O5'-C5' | -5.07 | 1.34 | 1.42 |
| 21 | AU | 68 | PRO | N-CD | -5.07 | 1.40 | 1.47 |
| 26 | BB | 985 | C | C5-C6 | 5.07 | 1.38 | 1.34 |
| 26 | BB | 1378 | A | O4'-C1' | 5.07 | 1.48 | 1.41 |
| 26 | BB | 1831 | G | C3'-C2' | 5.07 | 1.58 | 1.52 |
| 26 | BB | 2673 | G | C8-N7 | -5.07 | 1.27 | 1.30 |
| 1 | AA | 322 | C | N1-C6 | 5.07 | 1.40 | 1.37 |
| 1 | AA | 434 | U | C5'-C4' | 5.07 | 1.57 | 1.51 |
| 1 | AA | 1230 | C | P-O5' | 5.07 | 1.64 | 1.59 |
| 1 | AA | 1295 | U | C5-C6 | 5.07 | 1.38 | 1.34 |
| 2 | AB | 6 | C | C5-C6 | 5.07 | 1.38 | 1.34 |
| 26 | BB | 214 | G | N3-C4 | 5.07 | 1.39 | 1.35 |
| 26 | BB | 554 | U | N1-C6 | -5.07 | 1.33 | 1.38 |
| 26 | BB | 1884 | G | C2-N3 | 5.07 | 1.36 | 1.32 |
| 1 | AA | 143 | A | C4'-C3' | 5.07 | 1.58 | 1.53 |
| 1 | AA | 598 | U | O3'-P | -5.07 | 1.55 | 1.61 |
| 2 | AB | 12 | U | C5'-C4' | 5.07 | 1.57 | 1.51 |
| 25 | BA | 22 | U | C3'-C2' | 5.07 | 1.58 | 1.52 |
| 26 | BB | 1015 | U | N1-C2 | 5.07 | 1.43 | 1.38 |
| 26 | BB | 1321 | A | C2'-C1' | -5.07 | 1.47 | 1.53 |
| 26 | BB | 1884 | G | P-O5' | 5.07 | 1.64 | 1.59 |
| 26 | BB | 2165 | C | C3'-C2' | 5.07 | 1.58 | 1.52 |
| 26 | BB | 2683 | C | C4-C5 | 5.07 | 1.47 | 1.43 |
| 26 | BB | 2721 | A | N1-C2 | -5.07 | 1.29 | 1.34 |
| 26 | BB | 2770 | G | N1-C2 | 5.07 | 1.41 | 1.37 |
| 1 | AA | 238 | A | O3'-P | 5.06 | 1.67 | 1.61 |
| 1 | AA | 878 | A | N9-C8 | 5.06 | 1.41 | 1.37 |
| 1 | AA | 1197 | A | C4'-O4' | -5.06 | 1.39 | 1.45 |
| 26 | BB | 376 | G | N3-C4 | 5.06 | 1.39 | 1.35 |
| 26 | BB | 1028 | A | O3'-P | -5.06 | 1.55 | 1.61 |
| 26 | BB | 1683 | U | C5'-C4' | 5.06 | 1.57 | 1.51 |
| 26 | BB | 2234 | G | C2-N2 | 5.06 | 1.39 | 1.34 |
| 1 | AA | 546 | A | C2'-C1' | -5.06 | 1.47 | 1.53 |
| 1 | AA | 648 | A | C6-N1 | -5.06 | 1.32 | 1.35 |
| 1 | AA | 654 | G | C6-N1 | 5.06 | 1.43 | 1.39 |
| 1 | AA | 675 | A | C2-N3 | -5.06 | 1.28 | 1.33 |
| 1 | AA | 749 | A | C5-C4 | 5.06 | 1.42 | 1.38 |
| 1 | AA | 1181 | G | N9-C8 | 5.06 | 1.41 | 1.37 |
| 3 | AC | 25 | U | N1-C2 | 5.06 | 1.43 | 1.38 |
| 12 | AL | 84 | ARG | CZ-NH1 | 5.06 | 1.39 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 682 | G | C4'-O4' | -5.06 | 1.39 | 1.45 |
| 26 | BB | 897 | C | C2-O2 | -5.06 | 1.19 | 1.24 |
| 26 | BB | 1192 | G | P-O5' | 5.06 | 1.64 | 1.59 |
| 26 | BB | 1509 | A | C6-N6 | 5.06 | 1.38 | 1.33 |
| 26 | BB | 1930 | G | C2-N3 | 5.06 | 1.36 | 1.32 |
| 26 | BB | 2222 | C | C4-C5 | 5.06 | 1.47 | 1.43 |
| 26 | BB | 2225 | A | N3-C4 | 5.06 | 1.37 | 1.34 |
| 26 | BB | 2302 | U | P-O5' | -5.06 | 1.54 | 1.59 |
| 26 | BB | 2459 | A | N9-C4 | 5.06 | 1.40 | 1.37 |
| 1 | AA | 40 | C | C2-N3 | 5.06 | 1.39 | 1.35 |
| 1 | AA | 644 | U | N1-C2 | 5.06 | 1.43 | 1.38 |
| 1 | AA | 995 | C | N3-C4 | 5.06 | 1.37 | 1.33 |
| 1 | AA | 1388 | C | P-O5' | 5.06 | 1.64 | 1.59 |
| 26 | BB | 2766 | A | C5-C6 | -5.06 | 1.36 | 1.41 |
| 1 | AA | 611 | C | N1-C6 | 5.06 | 1.40 | 1.37 |
| 1 | AA | 658 | C | C2'-C1' | 5.06 | 1.58 | 1.53 |
| 1 | AA | 703 | G | C8-N7 | 5.06 | 1.33 | 1.30 |
| 1 | AA | 738 | C | C3'-O3' | 5.06 | 1.49 | 1.42 |
| 1 | AA | 1411 | C | O3'-P | 5.06 | 1.67 | 1.61 |
| 1 | AA | 1502 | A | N9-C4 | 5.06 | 1.40 | 1.37 |
| 7 | AG | 103 | ARG | CZ-NH2 | 5.06 | 1.39 | 1.33 |
| 26 | BB | 582 | A | N3-C4 | 5.06 | 1.37 | 1.34 |
| 26 | BB | 709 | U | N1-C2 | 5.06 | 1.43 | 1.38 |
| 26 | BB | 996 | A | N3-C4 | 5.06 | 1.37 | 1.34 |
| 26 | BB | 1054 | A | C8-N7 | -5.06 | 1.28 | 1.31 |
| 26 | BB | 1518 | C | O5'-C5' | -5.06 | 1.34 | 1.42 |
| 26 | BB | 1537 | G | C2'-C1' | -5.06 | 1.47 | 1.53 |
| 26 | BB | 1716 | U | C2-O2 | 5.06 | 1.26 | 1.22 |
| 26 | BB | 1839 | G | N7-C5 | -5.06 | 1.36 | 1.39 |
| 26 | BB | 2157 | G | O3'-P | 5.06 | 1.67 | 1.61 |
| 26 | BB | 2335 | A | C6-N1 | -5.06 | 1.32 | 1.35 |
| 26 | BB | 2562 | U | C1'-N1 | 5.06 | 1.56 | 1.48 |
| 26 | BB | 2877 | G | C4'-C3' | -5.06 | 1.47 | 1.52 |
| 26 | BB | 2904 | U | N3-C4 | 5.06 | 1.43 | 1.38 |
| 1 | AA | 29 | U | C4-C5 | 5.06 | 1.48 | 1.43 |
| 1 | AA | 225 | C | N1-C2 | 5.06 | 1.45 | 1.40 |
| 1 | AA | 871 | U | N1-C2 | 5.06 | 1.43 | 1.38 |
| 1 | AA | 1381 | U | C4-O4 | 5.06 | 1.27 | 1.23 |
| 1 | AA | 1400 | C | C5'-C4' | 5.06 | 1.57 | 1.51 |
| 26 | BB | 487 | C | N1-C6 | 5.06 | 1.40 | 1.37 |
| 26 | BB | 532 | A | C8-N7 | 5.06 | 1.35 | 1.31 |
| 26 | BB | 630 | G | C8-N7 | -5.06 | 1.27 | 1.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 633 | A | C8-N7 | -5.06 | 1.28 | 1.31 |
| 26 | BB | 688 | U | P-O5' | 5.06 | 1.64 | 1.59 |
| 26 | BB | 862 | G | C5-C4 | -5.06 | 1.34 | 1.38 |
| 26 | BB | 1186 | G | C6-O6 | -5.06 | 1.19 | 1.24 |
| 26 | BB | 1264 | A | N7-C5 | -5.06 | 1.36 | 1.39 |
| 26 | BB | 1273 | U | C4'-C3' | 5.06 | 1.58 | 1.53 |
| 26 | BB | 1623 | G | N9-C4 | 5.06 | 1.42 | 1.38 |
| 26 | BB | 1812 | U | C4'-O4' | -5.06 | 1.39 | 1.45 |
| 26 | BB | 2308 | G | N1-C2 | 5.06 | 1.41 | 1.37 |
| 26 | BB | 2410 | G | C2-N3 | -5.06 | 1.28 | 1.32 |
| 1 | AA | 169 | C | C4-C5 | 5.06 | 1.47 | 1.43 |
| 1 | AA | 670 | G | N7-C5 | -5.06 | 1.36 | 1.39 |
| 1 | AA | 894 | G | C5-C4 | 5.06 | 1.41 | 1.38 |
| 1 | AA | 1149 | C | C2-N3 | -5.06 | 1.31 | 1.35 |
| 4 | AD | 6 | G | C2'-C1' | 5.06 | 1.58 | 1.53 |
| 11 | AK | 57 | GLU | CG-CD | 5.06 | 1.59 | 1.51 |
| 26 | BB | 213 | A | C2'-C1' | 5.06 | 1.58 | 1.53 |
| 26 | BB | 1984 | G | O3'-P | 5.06 | 1.67 | 1.61 |
| 26 | BB | 2160 | C | N3-C4 | 5.06 | 1.37 | 1.33 |
| 26 | BB | 2802 | G | N9-C8 | 5.06 | 1.41 | 1.37 |
| 1 | AA | 177 | G | C4'-O4' | -5.05 | 1.39 | 1.45 |
| 1 | AA | 783 | C | C2-N3 | 5.05 | 1.39 | 1.35 |
| 1 | AA | 1379 | G | N9-C8 | -5.05 | 1.34 | 1.37 |
| 1 | AA | 1411 | C | C5'-C4' | 5.05 | 1.57 | 1.51 |
| 2 | AB | 18 | G | N7-C5 | -5.05 | 1.36 | 1.39 |
| 26 | BB | 12 | U | N3-C4 | -5.05 | 1.33 | 1.38 |
| 26 | BB | 83 | A | P-O5' | 5.05 | 1.64 | 1.59 |
| 26 | BB | 246 | C | P-O5' | 5.05 | 1.64 | 1.59 |
| 26 | BB | 1627 | G | P-O5' | 5.05 | 1.64 | 1.59 |
| 26 | BB | 1638 | C | C5-C6 | 5.05 | 1.38 | 1.34 |
| 26 | BB | 2647 | U | C3'-C2' | -5.05 | 1.47 | 1.52 |
| 26 | BB | 2675 | A | O4'-C1' | 5.05 | 1.48 | 1.41 |
| 26 | BB | 2679 | A | O3'-P | -5.05 | 1.55 | 1.61 |
| 1 | AA | 425 | G | C5-C6 | 5.05 | 1.47 | 1.42 |
| 1 | AA | 599 | C | P-O5' | -5.05 | 1.54 | 1.59 |
| 1 | AA | 803 | G | P-O5' | 5.05 | 1.64 | 1.59 |
| 1 | AA | 909 | A | N9-C4 | -5.05 | 1.34 | 1.37 |
| 1 | AA | 963 | G | N9-C4 | -5.05 | 1.33 | 1.38 |
| 2 | AB | 64 | U | C1'-N1 | 5.05 | 1.56 | 1.48 |
| 26 | BB | 310 | A | N3-C4 | 5.05 | 1.37 | 1.34 |
| 26 | BB | 324 | A | O5'-C5' | -5.05 | 1.34 | 1.42 |
| 26 | BB | 686 | U | C5-C6 | 5.05 | 1.38 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 689 | A | C4'-C3' | 5.05 | 1.58 | 1.53 |
| 26 | BB | 851 | C | C4'-O4' | -5.05 | 1.39 | 1.45 |
| 26 | BB | 1073 | A | N9-C4 | 5.05 | 1.40 | 1.37 |
| 26 | BB | 1232 | G | C2'-C1' | 5.05 | 1.58 | 1.53 |
| 26 | BB | 2263 | C | P-O5' | -5.05 | 1.54 | 1.59 |
| 26 | BB | 2531 | A | C4'-C3' | 5.05 | 1.58 | 1.53 |
| 26 | BB | 2592 | G | C4'-C3' | -5.05 | 1.47 | 1.52 |
| 26 | BB | 2698 | U | C5'-C4' | 5.05 | 1.57 | 1.51 |
| 36 | BL | 96 | ARG | NE-CZ | 5.05 | 1.39 | 1.33 |
| 1 | AA | 260 | G | N9-C8 | -5.05 | 1.34 | 1.37 |
| 1 | AA | 1108 | G | N9-C4 | 5.05 | 1.42 | 1.38 |
| 26 | BB | 268 | C | N3-C4 | 5.05 | 1.37 | 1.33 |
| 26 | BB | 332 | A | C4'-O4' | -5.05 | 1.39 | 1.45 |
| 26 | BB | 1115 | G | C8-N7 | -5.05 | 1.27 | 1.30 |
| 26 | BB | 1307 | A | C4'-O4' | -5.05 | 1.39 | 1.45 |
| 26 | BB | 1794 | A | N7-C5 | 5.05 | 1.42 | 1.39 |
| 26 | BB | 2318 | G | C3'-C2' | 5.05 | 1.58 | 1.52 |
| 1 | AA | 376 | G | N9-C8 | -5.05 | 1.34 | 1.37 |
| 1 | AA | 381 | C | C3'-O3' | 5.05 | 1.49 | 1.42 |
| 1 | AA | 642 | A | N1-C2 | -5.05 | 1.29 | 1.34 |
| 1 | AA | 1120 | C | C2-O2 | -5.05 | 1.20 | 1.24 |
| 1 | AA | 1371 | G | C2-N3 | 5.05 | 1.36 | 1.32 |
| 26 | BB | 632 | A | C3'-C2' | 5.05 | 1.58 | 1.52 |
| 26 | BB | 1544 | A | C3'-O3' | -5.05 | 1.35 | 1.42 |
| 26 | BB | 2357 | G | C3'-C2' | 5.05 | 1.58 | 1.52 |
| 1 | AA | 811 | C | N1-C2 | 5.05 | 1.45 | 1.40 |
| 1 | AA | 839 | C | N3-C4 | 5.05 | 1.37 | 1.33 |
| 1 | AA | 848 | C | O3'-P | 5.05 | 1.67 | 1.61 |
| 1 | AA | 1248 | A | P-O5' | 5.05 | 1.64 | 1.59 |
| 1 | AA | 565 | U | O5'-C5' | -5.05 | 1.34 | 1.42 |
| 1 | AA | 898 | G | N7-C5 | 5.05 | 1.42 | 1.39 |
| 1 | AA | 1011 | C | C4'-O4' | -5.05 | 1.39 | 1.45 |
| 1 | AA | 1294 | G | N1-C2 | -5.05 | 1.33 | 1.37 |
| 2 | AB | 34 | C | C2-N3 | 5.05 | 1.39 | 1.35 |
| 25 | BA | 43 | C | C4'-O4' | -5.05 | 1.39 | 1.45 |
| 26 | BB | 144 | A | C8-N7 | 5.05 | 1.35 | 1.31 |
| 26 | BB | 256 | A | N1-C2 | 5.05 | 1.38 | 1.34 |
| 26 | BB | 469 | G | O3'-P | 5.05 | 1.67 | 1.61 |
| 26 | BB | 803 | U | O3'-P | -5.05 | 1.55 | 1.61 |
| 26 | BB | 958 | U | C2-O2 | 5.05 | 1.26 | 1.22 |
| 26 | BB | 1141 | U | C4-O4 | 5.05 | 1.27 | 1.23 |
| 26 | BB | 2096 | C | C2-O2 | -5.05 | 1.20 | 1.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2611 | C | O4'-C1' | 5.05 | 1.48 | 1.41 |
| 1 | AA | 28 | A | N9-C4 | 5.04 | 1.40 | 1.37 |
| 1 | AA | 299 | G | O3'-P | 5.04 | 1.67 | 1.61 |
| 1 | AA | 930 | C | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 26 | BB | 38 | A | C8-N7 | -5.04 | 1.28 | 1.31 |
| 26 | BB | 105 | C | C4'-C3' | -5.04 | 1.47 | 1.52 |
| 26 | BB | 117 | G | C3'-C2' | 5.04 | 1.58 | 1.52 |
| 26 | BB | 1455 | G | N7-C5 | -5.04 | 1.36 | 1.39 |
| 26 | BB | 2182 | U | C4-C5 | 5.04 | 1.48 | 1.43 |
| 26 | BB | 2188 | U | C2'-C1' | -5.04 | 1.47 | 1.53 |
| 1 | AA | 70 | U | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 1 | AA | 388 | G | C4'-C3' | -5.04 | 1.47 | 1.52 |
| 1 | AA | 559 | A | P-O5' | 5.04 | 1.64 | 1.59 |
| 1 | AA | 701 | U | C5-C6 | 5.04 | 1.38 | 1.34 |
| 1 | AA | 1373 | G | O4'-C1' | 5.04 | 1.48 | 1.41 |
| 1 | AA | 1385 | G | N3-C4 | 5.04 | 1.39 | 1.35 |
| 2 | AB | 68 | C | C5-C6 | -5.04 | 1.30 | 1.34 |
| 26 | BB | 855 | G | C5'-C4' | 5.04 | 1.57 | 1.51 |
| 26 | BB | 896 | A | C8-N7 | 5.04 | 1.35 | 1.31 |
| 26 | BB | 939 | G | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 26 | BB | 1212 | G | C2-N2 | -5.04 | 1.29 | 1.34 |
| 26 | BB | 1228 | G | P-O5' | -5.04 | 1.54 | 1.59 |
| 26 | BB | 1301 | A | N3-C4 | 5.04 | 1.37 | 1.34 |
| 26 | BB | 1344 | U | C4-O4 | 5.04 | 1.27 | 1.23 |
| 26 | BB | 1418 | G | O3'-P | -5.04 | 1.55 | 1.61 |
| 26 | BB | 1445 | G | C5-C4 | 5.04 | 1.41 | 1.38 |
| 26 | BB | 1498 | C | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 26 | BB | 2082 | A | C8-N7 | -5.04 | 1.28 | 1.31 |
| 26 | BB | 2163 | A | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 26 | BB | 2408 | U | O4'-C1' | 5.04 | 1.48 | 1.41 |
| 26 | BB | 2422 | C | C3'-O3' | 5.04 | 1.49 | 1.42 |
| 26 | BB | 2530 | A | N7-C5 | 5.04 | 1.42 | 1.39 |
| 1 | AA | 391 | G | N3-C4 | 5.04 | 1.39 | 1.35 |
| 1 | AA | 1386 | G | P-O5' | 5.04 | 1.64 | 1.59 |
| 26 | BB | 157 | C | N1-C6 | 5.04 | 1.40 | 1.37 |
| 26 | BB | 677 | A | C3'-C2' | -5.04 | 1.47 | 1.52 |
| 26 | BB | 986 | C | C3'-O3' | 5.04 | 1.49 | 1.42 |
| 26 | BB | 1308 | A | O3'-P | 5.04 | 1.67 | 1.61 |
| 26 | BB | 1375 | U | P-O5' | 5.04 | 1.64 | 1.59 |
| 26 | BB | 1501 | G | C6-N1 | 5.04 | 1.43 | 1.39 |
| 26 | BB | 2641 | G | C6-N1 | 5.04 | 1.43 | 1.39 |
| 44 | BT | 10 | LYS | N-CA | -5.04 | 1.36 | 1.46 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 612 | C | P-O5' | 5.04 | 1.64 | 1.59 |
| 1 | AA | 1143 | G | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 1 | AA | 1437 | A | N9-C8 | -5.04 | 1.33 | 1.37 |
| 26 | BB | 594 | U | C2-N3 | 5.04 | 1.41 | 1.37 |
| 26 | BB | 1445 | G | C2-N3 | 5.04 | 1.36 | 1.32 |
| 26 | BB | 1712 | U | C2'-C1' | 5.04 | 1.58 | 1.53 |
| 26 | BB | 2820 | A | C5-C4 | -5.04 | 1.35 | 1.38 |
| 1 | AA | 48 | C | C2-N3 | 5.04 | 1.39 | 1.35 |
| 1 | AA | 116 | A | C6-N6 | 5.04 | 1.38 | 1.33 |
| 1 | AA | 371 | A | C5-C4 | 5.04 | 1.42 | 1.38 |
| 1 | AA | 543 | U | N1-C6 | 5.04 | 1.42 | 1.38 |
| 1 | AA | 1026 | G | N7-C5 | -5.04 | 1.36 | 1.39 |
| 1 | AA | 1202 | U | C2-N3 | -5.04 | 1.34 | 1.37 |
| 1 | AA | 1381 | U | C2'-C1' | 5.04 | 1.58 | 1.53 |
| 1 | AA | 1388 | C | C2'-C1' | -5.04 | 1.47 | 1.53 |
| 24 | AX | 61 | ARG | CZ-NH2 | 5.04 | 1.39 | 1.33 |
| 26 | BB | 182 | A | N3-C4 | 5.04 | 1.37 | 1.34 |
| 26 | BB | 245 | G | N7-C5 | -5.04 | 1.36 | 1.39 |
| 26 | BB | 510 | C | C3'-C2' | 5.04 | 1.58 | 1.52 |
| 26 | BB | 1083 | U | C5-C6 | 5.04 | 1.38 | 1.34 |
| 26 | BB | 1689 | A | C8-N7 | -5.04 | 1.28 | 1.31 |
| 26 | BB | 1949 | G | O4'-C1' | 5.04 | 1.48 | 1.41 |
| 26 | BB | 2429 | G | C8-N7 | -5.04 | 1.27 | 1.30 |
| 26 | BB | 2775 | G | C5-C6 | 5.04 | 1.47 | 1.42 |
| 1 | AA | 199 | A | C8-N7 | -5.04 | 1.28 | 1.31 |
| 1 | AA | 1372 | U | C3'-C2' | 5.04 | 1.58 | 1.52 |
| 26 | BB | 1001 | A | C3'-C2' | 5.04 | 1.58 | 1.52 |
| 26 | BB | 1653 | G | O4'-C1' | 5.04 | 1.48 | 1.41 |
| 26 | BB | 2303 | G | N3-C4 | 5.04 | 1.39 | 1.35 |
| 26 | BB | 2653 | U | C5'-C4' | 5.04 | 1.57 | 1.51 |
| 26 | BB | 2661 | G | C4'-C3' | 5.04 | 1.58 | 1.53 |
| 26 | BB | 2814 | A | C2'-C1' | 5.04 | 1.58 | 1.53 |
| 1 | AA | 749 | A | P-O5' | 5.04 | 1.64 | 1.59 |
| 1 | AA | 800 | G | N7-C5 | 5.04 | 1.42 | 1.39 |
| 1 | AA | 831 | A | N9-C4 | 5.04 | 1.40 | 1.37 |
| 1 | AA | 1182 | G | C8-N7 | -5.04 | 1.27 | 1.30 |
| 1 | AA | 1198 | G | C8-N7 | -5.04 | 1.27 | 1.30 |
| 1 | AA | 1439 | G | N3-C4 | -5.04 | 1.31 | 1.35 |
| 26 | BB | 147 | C | N3-C4 | 5.04 | 1.37 | 1.33 |
| 26 | BB | 453 | A | C3'-C2' | 5.04 | 1.58 | 1.52 |
| 26 | BB | 903 | C | P-O5' | 5.04 | 1.64 | 1.59 |
| 26 | BB | 1180 | U | C2'-C1' | 5.04 | 1.58 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1450 | G | C2'-O2' | 5.04 | 1.48 | 1.41 |
| 26 | BB | 1541 | C | N3-C4 | 5.04 | 1.37 | 1.33 |
| 26 | BB | 1764 | C | C4'-O4' | -5.04 | 1.39 | 1.45 |
| 26 | BB | 1857 | G | C8-N7 | -5.04 | 1.27 | 1.30 |
| 26 | BB | 2221 | G | O3'-P | 5.04 | 1.67 | 1.61 |
| 26 | BB | 2380 | C | O3'-P | 5.04 | 1.67 | 1.61 |
| 1 | AA | 78 | A | N3-C4 | 5.03 | 1.37 | 1.34 |
| 1 | AA | 286 | C | C4'-O4' | -5.03 | 1.39 | 1.45 |
| 1 | AA | 640 | A | N9-C8 | 5.03 | 1.41 | 1.37 |
| 3 | AC | 25 | U | N3-C4 | -5.03 | 1.33 | 1.38 |
| 26 | BB | 235 | U | C2-N3 | 5.03 | 1.41 | 1.37 |
| 26 | BB | 1441 | G | C4'-O4' | -5.03 | 1.39 | 1.45 |
| 26 | BB | 2442 | C | P-O5' | -5.03 | 1.54 | 1.59 |
| 26 | BB | 2674 | G | C2-N3 | 5.03 | 1.36 | 1.32 |
| 26 | BB | 2886 | A | C5'-C4' | 5.03 | 1.57 | 1.51 |
| 26 | BB | 238 | C | C4-N4 | -5.03 | 1.29 | 1.33 |
| 26 | BB | 700 | G | C2-N2 | -5.03 | 1.29 | 1.34 |
| 26 | BB | 766 | U | C5'-C4' | 5.03 | 1.57 | 1.51 |
| 26 | BB | 1086 | A | C4'-C3' | -5.03 | 1.47 | 1.52 |
| 26 | BB | 1615 | C | C5-C6 | 5.03 | 1.38 | 1.34 |
| 26 | BB | 2363 | G | N9-C8 | 5.03 | 1.41 | 1.37 |
| 26 | BB | 2469 | A | C3'-C2' | 5.03 | 1.58 | 1.52 |
| 43 | BS | 5 | ARG | CZ-NH1 | 5.03 | 1.39 | 1.33 |
| 1 | AA | 370 | C | C4'-C3' | 5.03 | 1.58 | 1.53 |
| 1 | AA | 419 | C | C4'-O4' | -5.03 | 1.39 | 1.45 |
| 1 | AA | 669 | G | N9-C4 | -5.03 | 1.33 | 1.38 |
| 1 | AA | 1542 | A | C6-N6 | 5.03 | 1.38 | 1.33 |
| 25 | BA | 102 | G | N9-C8 | 5.03 | 1.41 | 1.37 |
| 26 | BB | 232 | G | C2'-O2' | 5.03 | 1.48 | 1.41 |
| 26 | BB | 444 | C | P-O5' | 5.03 | 1.64 | 1.59 |
| 26 | BB | 603 | A | N1-C2 | -5.03 | 1.29 | 1.34 |
| 26 | BB | 1783 | A | C2'-O2' | -5.03 | 1.35 | 1.41 |
| 26 | BB | 2225 | A | C5-C4 | -5.03 | 1.35 | 1.38 |
| 1 | AA | 50 | A | N9-C4 | 5.03 | 1.40 | 1.37 |
| 1 | AA | 583 | A | N1-C2 | 5.03 | 1.38 | 1.34 |
| 1 | AA | 1474 | U | P-O5' | -5.03 | 1.54 | 1.59 |
| 1 | AA | 1529 | G | C2-N2 | 5.03 | 1.39 | 1.34 |
| 26 | BB | 729 | G | P-O5' | -5.03 | 1.54 | 1.59 |
| 26 | BB | 1191 | G | C5'-C4' | 5.03 | 1.57 | 1.51 |
| 26 | BB | 1551 | A | P-O5' | 5.03 | 1.64 | 1.59 |
| 26 | BB | 1832 | C | C1'-N1 | 5.03 | 1.56 | 1.48 |
| 26 | BB | 2827 | C | C1'-N1 | 5.03 | 1.56 | 1.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 449 | G | C6-O6 | -5.03 | 1.19 | 1.24 |
| 1 | AA | 782 | A | C5-C4 | -5.03 | 1.35 | 1.38 |
| 1 | AA | 899 | C | N3-C4 | 5.03 | 1.37 | 1.33 |
| 4 | AD | 74 | A | C5'-C4' | 5.03 | 1.57 | 1.51 |
| 25 | BA | 107 | G | C2'-C1' | 5.03 | 1.58 | 1.53 |
| 26 | BB | 377 | G | C4'-C3' | -5.03 | 1.47 | 1.52 |
| 26 | BB | 845 | A | C2-N3 | -5.03 | 1.29 | 1.33 |
| 26 | BB | 930 | G | C3'-C2' | -5.03 | 1.47 | 1.52 |
| 26 | BB | 1004 | U | C2'-O2' | -5.03 | 1.35 | 1.41 |
| 26 | BB | 1370 | C | O3'-P | 5.03 | 1.67 | 1.61 |
| 26 | BB | 1582 | C | N1-C2 | -5.03 | 1.35 | 1.40 |
| 26 | BB | 1600 | C | N1-C6 | -5.03 | 1.34 | 1.37 |
| 26 | BB | 1809 | A | O3'-P | 5.03 | 1.67 | 1.61 |
| 26 | BB | 1829 | A | N1-C2 | -5.03 | 1.29 | 1.34 |
| 26 | BB | 1952 | A | C2'-C1' | -5.03 | 1.47 | 1.53 |
| 26 | BB | 2169 | A | C4'-C3' | 5.03 | 1.58 | 1.53 |
| 26 | BB | 2397 | G | C2-N3 | 5.03 | 1.36 | 1.32 |
| 26 | BB | 2661 | G | N9-C4 | -5.03 | 1.33 | 1.38 |
| 26 | BB | 2702 | G | C4'-C3' | 5.03 | 1.58 | 1.53 |
| 1 | AA | 313 | A | N9-C8 | -5.03 | 1.33 | 1.37 |
| 1 | AA | 438 | U | C4'-C3' | 5.03 | 1.58 | 1.53 |
| 1 | AA | 1150 | A | C5-C6 | 5.03 | 1.45 | 1.41 |
| 1 | AA | 1238 | A | C5-C4 | -5.03 | 1.35 | 1.38 |
| 3 | AC | 20 | G | C4'-O4' | -5.03 | 1.39 | 1.45 |
| 26 | BB | 443 | A | C8-N7 | -5.03 | 1.28 | 1.31 |
| 26 | BB | 1068 | G | C3'-C2' | 5.03 | 1.58 | 1.52 |
| 26 | BB | 1594 | U | N3-C4 | 5.03 | 1.43 | 1.38 |
| 1 | AA | 647 | C | N3-C4 | 5.02 | 1.37 | 1.33 |
| 1 | AA | 1155 | A | N1-C2 | -5.02 | 1.29 | 1.34 |
| 26 | BB | 851 | C | C3'-O3' | -5.02 | 1.35 | 1.42 |
| 26 | BB | 1453 | A | C2-N3 | 5.02 | 1.38 | 1.33 |
| 26 | BB | 1608 | A | C5'-C4' | 5.02 | 1.57 | 1.51 |
| 26 | BB | 2886 | A | C1'-N9 | 5.02 | 1.56 | 1.48 |
| 38 | BN | 21 | ARG | CD-NE | 5.02 | 1.54 | 1.46 |
| 49 | BY | 29 | SER | CB-OG | 5.02 | 1.48 | 1.42 |
| 1 | AA | 13 | U | C4'-C3' | 5.02 | 1.58 | 1.53 |
| 1 | AA | 568 | G | C6-N1 | -5.02 | 1.36 | 1.39 |
| 1 | AA | 801 | U | C2'-C1' | 5.02 | 1.58 | 1.53 |
| 1 | AA | 1079 | G | C8-N7 | -5.02 | 1.27 | 1.30 |
| 1 | AA | 1240 | U | P-O5' | 5.02 | 1.64 | 1.59 |
| 1 | AA | 1268 | G | C4'-O4' | -5.02 | 1.39 | 1.45 |
| 1 | AA | 1279 | G | N9-C4 | 5.02 | 1.42 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 15 | G | N9-C4 | 5.02 | 1.42 | 1.38 |
| 4 | AD | 66 | C | C4'-O4' | -5.02 | 1.39 | 1.45 |
| 26 | BB | 48 | G | P-O5' | 5.02 | 1.64 | 1.59 |
| 26 | BB | 1038 | G | C2'-C1' | -5.02 | 1.47 | 1.53 |
| 26 | BB | 1182 | G | C2-N3 | 5.02 | 1.36 | 1.32 |
| 26 | BB | 1279 | G | N1-C2 | 5.02 | 1.41 | 1.37 |
| 26 | BB | 1541 | C | C5'-C4' | 5.02 | 1.57 | 1.51 |
| 26 | BB | 1753 | G | O3'-P | 5.02 | 1.67 | 1.61 |
| 26 | BB | 2086 | U | C2'-O2' | 5.02 | 1.48 | 1.41 |
| 26 | BB | 2346 | A | O3'-P | 5.02 | 1.67 | 1.61 |
| 26 | BB | 2417 | C | O3'-P | 5.02 | 1.67 | 1.61 |
| 26 | BB | 2659 | G | C6-N1 | -5.02 | 1.36 | 1.39 |
| 26 | BB | 194 | G | N9-C4 | -5.02 | 1.33 | 1.38 |
| 26 | BB | 289 | G | C6-O6 | -5.02 | 1.19 | 1.24 |
| 26 | BB | 811 | U | P-O5' | 5.02 | 1.64 | 1.59 |
| 26 | BB | 845 | A | C2'-O2' | 5.02 | 1.48 | 1.41 |
| 26 | BB | 1104 | C | C2-O2 | -5.02 | 1.20 | 1.24 |
| 1 | AA | 387 | U | C5-C6 | 5.02 | 1.38 | 1.34 |
| 1 | AA | 801 | U | N1-C6 | 5.02 | 1.42 | 1.38 |
| 1 | AA | 1321 | U | C1'-N1 | 5.02 | 1.56 | 1.48 |
| 2 | AB | 47 | U | C5'-C4' | -5.02 | 1.45 | 1.51 |
| 25 | BA | 67 | G | P-O5' | 5.02 | 1.64 | 1.59 |
| 26 | BB | 1668 | A | C5-C4 | -5.02 | 1.35 | 1.38 |
| 26 | BB | 2472 | G | O3'-P | 5.02 | 1.67 | 1.61 |
| 26 | BB | 2484 | G | C3'-C2' | -5.02 | 1.47 | 1.52 |
| 26 | BB | 2528 | U | P-O5' | 5.02 | 1.64 | 1.59 |
| 1 | AA | 164 | G | N1-C2 | 5.02 | 1.41 | 1.37 |
| 1 | AA | 622 | A | O3'-P | 5.02 | 1.67 | 1.61 |
| 1 | AA | 1006 | G | N9-C8 | 5.02 | 1.41 | 1.37 |
| 1 | AA | 1172 | C | C4-C5 | 5.02 | 1.47 | 1.43 |
| 1 | AA | 1215 | G | C3'-C2' | 5.02 | 1.58 | 1.52 |
| 26 | BB | 306 | U | C4-C5 | 5.02 | 1.48 | 1.43 |
| 26 | BB | 348 | A | N3-C4 | 5.02 | 1.37 | 1.34 |
| 26 | BB | 691 | C | N1-C6 | 5.02 | 1.40 | 1.37 |
| 26 | BB | 800 | A | P-O5' | 5.02 | 1.64 | 1.59 |
| 26 | BB | 928 | A | C3'-C2' | 5.02 | 1.58 | 1.52 |
| 26 | BB | 1308 | A | N9-C8 | -5.02 | 1.33 | 1.37 |
| 26 | BB | 2691 | C | C4-N4 | 5.02 | 1.38 | 1.33 |
| 49 | BY | 24 | ARG | CZ-NH2 | 5.02 | 1.39 | 1.33 |
| 1 | AA | 898 | G | C4'-C3' | 5.02 | 1.58 | 1.53 |
| 1 | AA | 1271 | A | P-O5' | 5.02 | 1.64 | 1.59 |
| 1 | AA | 1442 | G | N9-C4 | -5.02 | 1.33 | 1.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 27 | G | C2'-O2' | 5.02 | 1.48 | 1.41 |
| 25 | BA | 56 | G | C2'-C1' | 5.02 | 1.58 | 1.53 |
| 26 | BB | 465 | G | N3-C4 | -5.02 | 1.31 | 1.35 |
| 26 | BB | 697 | G | N9-C8 | 5.02 | 1.41 | 1.37 |
| 26 | BB | 1424 | G | C4'-O4' | -5.02 | 1.39 | 1.45 |
| 26 | BB | 1522 | A | C8-N7 | -5.02 | 1.28 | 1.31 |
| 26 | BB | 1616 | A | C6-N1 | -5.02 | 1.32 | 1.35 |
| 26 | BB | 2296 | U | C2'-C1' | -5.02 | 1.47 | 1.53 |
| 54 | B3 | 48 | TYR | CE1-CZ | 5.02 | 1.45 | 1.38 |
| 1 | AA | 433 | G | C5'-C4' | 5.01 | 1.57 | 1.51 |
| 1 | AA | 500 | G | C3'-C2' | -5.01 | 1.47 | 1.52 |
| 26 | BB | 334 | C | C4'-O4' | -5.01 | 1.39 | 1.45 |
| 26 | BB | 435 | C | C3'-C2' | 5.01 | 1.58 | 1.52 |
| 26 | BB | 521 | U | C2'-C1' | 5.01 | 1.58 | 1.53 |
| 26 | BB | 882 | G | O5'-C5' | -5.01 | 1.34 | 1.42 |
| 26 | BB | 1573 | G | O4'-C1' | 5.01 | 1.48 | 1.41 |
| 26 | BB | 1779 | U | C4-O4 | -5.01 | 1.19 | 1.23 |
| 26 | BB | 1973 | G | C2-N3 | 5.01 | 1.36 | 1.32 |
| 26 | BB | 1988 | G | C8-N7 | -5.01 | 1.27 | 1.30 |
| 26 | BB | 2220 | U | C5-C6 | 5.01 | 1.38 | 1.34 |
| 26 | BB | 2638 | G | C6-N1 | 5.01 | 1.43 | 1.39 |
| 26 | BB | 2721 | A | N9-C8 | -5.01 | 1.33 | 1.37 |
| 26 | BB | 327 | G | C6-N1 | 5.01 | 1.43 | 1.39 |
| 26 | BB | 1177 | G | C6-N1 | 5.01 | 1.43 | 1.39 |
| 26 | BB | 1959 | G | N1-C2 | 5.01 | 1.41 | 1.37 |
| 26 | BB | 2704 | C | O3'-P | 5.01 | 1.67 | 1.61 |
| 49 | BY | 16 | GLU | CG-CD | 5.01 | 1.59 | 1.51 |
| 1 | AA | 26 | A | C3'-C2' | 5.01 | 1.58 | 1.52 |
| 1 | AA | 77 | A | C5-C4 | -5.01 | 1.35 | 1.38 |
| 1 | AA | 113 | G | O3'-P | 5.01 | 1.67 | 1.61 |
| 1 | AA | 149 | A | C5'-C4' | 5.01 | 1.57 | 1.51 |
| 1 | AA | 316 | C | O3'-P | 5.01 | 1.67 | 1.61 |
| 1 | AA | 804 | U | O3'-P | 5.01 | 1.67 | 1.61 |
| 1 | AA | 873 | A | N7-C5 | 5.01 | 1.42 | 1.39 |
| 26 | BB | 520 | G | N1-C2 | 5.01 | 1.41 | 1.37 |
| 26 | BB | 663 | G | N3-C4 | 5.01 | 1.39 | 1.35 |
| 26 | BB | 687 | C | C2'-C1' | 5.01 | 1.58 | 1.53 |
| 26 | BB | 1159 | U | C4-C5 | 5.01 | 1.48 | 1.43 |
| 26 | BB | 1306 | C | N3-C4 | 5.01 | 1.37 | 1.33 |
| 26 | BB | 1311 | G | N9-C4 | -5.01 | 1.33 | 1.38 |
| 26 | BB | 2123 | G | C3'-C2' | -5.01 | 1.47 | 1.52 |
| 26 | BB | 2162 | G | C5'-C4' | 5.01 | 1.57 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2257 | U | C4'-O4' | -5.01 | 1.39 | 1.45 |
| 26 | BB | 2428 | G | C4'-C3' | 5.01 | 1.58 | 1.53 |
| 1 | AA | 713 | G | C5'-C4' | 5.01 | 1.57 | 1.51 |
| 1 | AA | 734 | G | C8-N7 | -5.01 | 1.27 | 1.30 |
| 1 | AA | 833 | G | C5'-C4' | 5.01 | 1.57 | 1.51 |
| 1 | AA | 1448 | C | C5-C6 | 5.01 | 1.38 | 1.34 |
| 26 | BB | 270 | A | N1-C2 | 5.01 | 1.38 | 1.34 |
| 26 | BB | 330 | A | C5-C6 | -5.01 | 1.36 | 1.41 |
| 26 | BB | 1185 | G | C4'-C3' | 5.01 | 1.58 | 1.53 |
| 26 | BB | 1737 | G | C4'-O4' | -5.01 | 1.39 | 1.45 |
| 26 | BB | 2382 | G | C1'-N9 | 5.01 | 1.56 | 1.48 |
| 26 | BB | 2592 | G | N3-C4 | 5.01 | 1.39 | 1.35 |
| 1 | AA | 576 | C | P-O5' | 5.01 | 1.64 | 1.59 |
| 1 | AA | 621 | A | C4'-O4' | -5.01 | 1.39 | 1.45 |
| 1 | AA | 1257 | A | C8-N7 | 5.01 | 1.35 | 1.31 |
| 25 | BA | 93 | C | C2-O2 | -5.01 | 1.20 | 1.24 |
| 26 | BB | 404 | A | N1-C2 | -5.01 | 1.29 | 1.34 |
| 26 | BB | 1753 | G | C4'-O4' | -5.01 | 1.39 | 1.45 |
| 26 | BB | 2020 | A | C2'-O2' | -5.01 | 1.35 | 1.41 |
| 35 | BK | 4 | VAL | CA-CB | 5.01 | 1.65 | 1.54 |
| 1 | AA | 51 | A | C8-N7 | 5.01 | 1.35 | 1.31 |
| 1 | AA | 603 | U | C4'-C3' | 5.01 | 1.58 | 1.53 |
| 1 | AA | 1034 | G | C8-N7 | -5.01 | 1.27 | 1.30 |
| 1 | AA | 1531 | A | C2'-C1' | 5.01 | 1.58 | 1.53 |
| 26 | BB | 1637 | A | C5-C4 | -5.01 | 1.35 | 1.38 |
| 26 | BB | 1747 | U | C5'-C4' | 5.01 | 1.57 | 1.51 |
| 26 | BB | 1881 | C | O4'-C1' | 5.01 | 1.48 | 1.41 |
| 26 | BB | 1970 | A | C3'-O3' | 5.01 | 1.49 | 1.42 |
| 26 | BB | 1970 | A | C6-N6 | 5.01 | 1.38 | 1.33 |
| 26 | BB | 2168 | G | C5'-C4' | 5.01 | 1.57 | 1.51 |
| 26 | BB | 2784 | U | N1-C6 | 5.01 | 1.42 | 1.38 |
| 33 | BI | 47 | PHE | CG-CD2 | 5.01 | 1.46 | 1.38 |
| 1 | AA | 336 | A | C2'-C1' | 5.00 | 1.58 | 1.53 |
| 1 | AA | 1369 | C | C2-N3 | 5.00 | 1.39 | 1.35 |
| 3 | AC | 13 | A | N9-C8 | 5.00 | 1.41 | 1.37 |
| 26 | BB | 487 | C | C5'-C4' | 5.00 | 1.57 | 1.51 |
| 26 | BB | 985 | C | P-O5' | 5.00 | 1.64 | 1.59 |
| 26 | BB | 1050 | A | C6-N1 | -5.00 | 1.32 | 1.35 |
| 26 | BB | 1150 | C | C5-C6 | 5.00 | 1.38 | 1.34 |
| 26 | BB | 1789 | A | O5'-C5' | -5.00 | 1.34 | 1.42 |
| 26 | BB | 2823 | A | P-O5' | 5.00 | 1.64 | 1.59 |
| 1 | AA | 1 | A | N3-C4 | 5.00 | 1.37 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 473 | U | C5'-C4' | 5.00 | 1.57 | 1.51 |
| 1 | AA | 559 | A | N1-C2 | 5.00 | 1.38 | 1.34 |
| 1 | AA | 882 | C | C4'-C3' | 5.00 | 1.58 | 1.53 |
| 1 | AA | 1500 | A | C2'-C1' | 5.00 | 1.58 | 1.53 |
| 4 | AD | 32 | G | N9-C8 | -5.00 | 1.34 | 1.37 |
| 26 | BB | 224 | U | N1-C6 | 5.00 | 1.42 | 1.38 |
| 26 | BB | 226 | A | C5'-C4' | 5.00 | 1.57 | 1.51 |
| 26 | BB | 337 | C | C5-C6 | 5.00 | 1.38 | 1.34 |
| 26 | BB | 879 | G | C2-N3 | 5.00 | 1.36 | 1.32 |
| 26 | BB | 895 | U | N3-C4 | 5.00 | 1.43 | 1.38 |
| 26 | BB | 1008 | A | N1-C2 | 5.00 | 1.38 | 1.34 |
| 26 | BB | 1431 | A | P-O5' | 5.00 | 1.64 | 1.59 |
| 26 | BB | 1515 | A | C4'-O4' | -5.00 | 1.39 | 1.45 |
| 26 | BB | 1549 | A | C3'-C2' | 5.00 | 1.58 | 1.52 |
| 26 | BB | 1929 | G | C3'-O3' | 5.00 | 1.49 | 1.42 |
| 26 | BB | 2542 | A | C2-N3 | -5.00 | 1.29 | 1.33 |
| 26 | BB | 2609 | U | N1-C2 | 5.00 | 1.43 | 1.38 |
| 26 | BB | 2716 | C | C3'-O3' | -5.00 | 1.35 | 1.42 |
| 30 | BF | 162 | ARG | CZ-NH1 | 5.00 | 1.39 | 1.33 |
| 35 | BK | 7 | TYR | CE2-CZ | 5.00 | 1.45 | 1.38 |
| 1 | AA | 420 | U | C2'-O2' | 5.00 | 1.48 | 1.41 |
| 1 | AA | 429 | U | C2'-C1' | 5.00 | 1.58 | 1.53 |
| 1 | AA | 1089 | G | C8-N7 | -5.00 | 1.27 | 1.30 |
| 1 | AA | 1287 | A | C4'-O4' | -5.00 | 1.39 | 1.45 |
| 4 | AD | 2 | G | C5-C4 | -5.00 | 1.34 | 1.38 |
| 10 | AJ | 114 | SER | CA-CB | -5.00 | 1.45 | 1.52 |
| 24 | AX | 41 | THR | CB-OG1 | -5.00 | 1.33 | 1.43 |
| 26 | BB | 128 | C | C2-O2 | -5.00 | 1.20 | 1.24 |
| 26 | BB | 550 | C | N3-C4 | 5.00 | 1.37 | 1.33 |
| 26 | BB | 664 | G | C6-O6 | -5.00 | 1.19 | 1.24 |
| 26 | BB | 1013 | C | C2'-O2' | -5.00 | 1.35 | 1.41 |
| 26 | BB | 1161 | C | C2'-C1' | 5.00 | 1.58 | 1.53 |
| 26 | BB | 1177 | G | C6-O6 | -5.00 | 1.19 | 1.24 |
| 26 | BB | 1355 | G | N1-C2 | 5.00 | 1.41 | 1.37 |
| 26 | BB | 2057 | G | C5'-C4' | 5.00 | 1.57 | 1.51 |
| 26 | BB | 2159 | G | C6-N1 | 5.00 | 1.43 | 1.39 |
| 26 | BB | 2655 | G | C2-N3 | 5.00 | 1.36 | 1.32 |

All (27220) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 51 | B0 | 48 | ARG | NE-CZ-NH1 | 24.22 | 132.41 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2494 | G | N3-C4-C5 | -22.56 | 117.32 | 128.60 |
| 51 | B0 | 48 | ARG | NE-CZ-NH2 | -21.50 | 109.55 | 120.30 |
| 26 | BB | 93 | G | C2-N3-C4 | 20.63 | 122.22 | 111.90 |
| 26 | BB | 1478 | G | N1-C6-O6 | -20.46 | 107.62 | 119.90 |
| 26 | BB | 2402 | U | O4'-C1'-N1 | 20.19 | 124.35 | 108.20 |
| 26 | BB | 1843 | C | N3-C4-C5 | -20.15 | 113.84 | 121.90 |
| 1 | AA | 622 | A | C8-N9-C4 | -20.01 | 97.80 | 105.80 |
| 1 | AA | 1220 | G | C8-N9-C4 | -19.84 | 98.46 | 106.40 |
| 26 | BB | 2428 | G | C8-N9-C4 | -19.76 | 98.50 | 106.40 |
| 1 | AA | 1334 | G | C8-N9-C4 | -19.57 | 98.57 | 106.40 |
| 17 | AQ | 89 | ARG | NE-CZ-NH1 | 19.49 | 130.04 | 120.30 |
| 1 | AA | 1427 | C | C6-N1-C2 | -19.37 | 112.55 | 120.30 |
| 26 | BB | 2494 | G | N9-C4-C5 | 19.29 | 113.11 | 105.40 |
| 26 | BB | 1037 | G | C8-N9-C4 | -19.07 | 98.77 | 106.40 |
| 26 | BB | 958 | U | N3-C2-O2 | -19.06 | 108.86 | 122.20 |
| 26 | BB | 2806 | C | O4'-C1'-N1 | 19.02 | 123.42 | 108.20 |
| 1 | AA | 293 | G | N9-C4-C5 | 18.98 | 112.99 | 105.40 |
| 28 | BD | 132 | ARG | NE-CZ-NH2 | -18.94 | 110.83 | 120.30 |
| 26 | BB | 157 | C | O4'-C1'-N1 | 18.89 | 123.31 | 108.20 |
| 1 | AA | 1400 | C | O4'-C1'-N1 | 18.88 | 123.30 | 108.20 |
| 9 | AI | 79 | ARG | NE-CZ-NH2 | -18.63 | 110.99 | 120.30 |
| 26 | BB | 2640 | G | N9-C4-C5 | 18.61 | 112.84 | 105.40 |
| 3 | AC | 14 | G | C8-N9-C4 | -18.60 | 98.96 | 106.40 |
| 26 | BB | 468 | G | C8-N9-C4 | -18.58 | 98.97 | 106.40 |
| 1 | AA | 596 | A | C2-N3-C4 | 18.52 | 119.86 | 110.60 |
| 1 | AA | 1504 | G | N9-C4-C5 | 18.48 | 112.79 | 105.40 |
| 26 | BB | 1763 | G | C8-N9-C4 | -18.46 | 99.02 | 106.40 |
| 37 | BM | 108 | ARG | NE-CZ-NH2 | -18.38 | 111.11 | 120.30 |
| 1 | AA | 596 | A | N1-C2-N3 | -18.34 | 120.13 | 129.30 |
| 1 | AA | 604 | G | C8-N9-C4 | -18.33 | 99.07 | 106.40 |
| 26 | BB | 2341 | G | C8-N9-C4 | -18.31 | 99.08 | 106.40 |
| 26 | BB | 257 | C | N3-C4-C5 | -18.28 | 114.59 | 121.90 |
| 26 | BB | 2690 | U | C5-C6-N1 | -18.26 | 113.57 | 122.70 |
| 19 | AS | 31 | ARG | NE-CZ-NH2 | -18.25 | 111.17 | 120.30 |
| 26 | BB | 1948 | G | N9-C4-C5 | 18.20 | 112.68 | 105.40 |
| 52 | B1 | 15 | ARG | NE-CZ-NH1 | 18.14 | 129.37 | 120.30 |
| 26 | BB | 1571 | A | C8-N9-C4 | -18.10 | 98.56 | 105.80 |
| 26 | BB | 2846 | G | N9-C4-C5 | 18.05 | 112.62 | 105.40 |
| 1 | AA | 1504 | G | C4-C5-N7 | -18.05 | 103.58 | 110.80 |
| 1 | AA | 622 | A | N9-C4-C5 | 18.03 | 113.01 | 105.80 |
| 26 | BB | 2178 | C | O4'-C1'-N1 | 17.93 | 122.54 | 108.20 |
| 26 | BB | 2374 | C | O4'-C1'-N1 | 17.91 | 122.53 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2151 | U | O4'-C1'-N1 | 17.90 | 122.52 | 108.20 |
| 26 | BB | 550 | C | N3-C4-C5 | -17.86 | 114.75 | 121.90 |
| 26 | BB | 200 | U | O4'-C1'-N1 | 17.82 | 122.46 | 108.20 |
| 26 | BB | 443 | A | C8-N9-C4 | -17.80 | 98.68 | 105.80 |
| 1 | AA | 952 | U | C5-C4-O4 | -17.70 | 115.28 | 125.90 |
| 26 | BB | 2807 | U | O4'-C1'-N1 | 17.68 | 122.34 | 108.20 |
| 26 | BB | 2324 | U | O4'-C1'-N1 | 17.63 | 122.30 | 108.20 |
| 3 | AC | 28 | U | O4'-C1'-N1 | 17.59 | 122.27 | 108.20 |
| 26 | BB | 201 | C | C6-N1-C2 | -17.55 | 113.28 | 120.30 |
| 26 | BB | 1297 | C | N3-C4-C5 | -17.54 | 114.88 | 121.90 |
| 26 | BB | 2377 | A | O4'-C1'-N9 | 17.54 | 122.23 | 108.20 |
| 52 | B1 | 15 | ARG | NE-CZ-NH2 | -17.52 | 111.54 | 120.30 |
| 26 | BB | 1700 | A | C8-N9-C4 | -17.51 | 98.80 | 105.80 |
| 1 | AA | 290 | C | N3-C4-C5 | -17.49 | 114.90 | 121.90 |
| 26 | BB | 1839 | G | C8-N9-C4 | -17.48 | 99.41 | 106.40 |
| 1 | AA | 1142 | G | C5-C6-O6 | -17.48 | 118.11 | 128.60 |
| 26 | BB | 1074 | G | C8-N9-C4 | -17.47 | 99.41 | 106.40 |
| 26 | BB | 1694 | C | N3-C4-C5 | -17.43 | 114.93 | 121.90 |
| 26 | BB | 1250 | G | O4'-C1'-N9 | 17.30 | 122.04 | 108.20 |
| 1 | AA | 1431 | A | C8-N9-C4 | -17.30 | 98.88 | 105.80 |
| 26 | BB | 2285 | C | C2-N3-C4 | 17.28 | 128.54 | 119.90 |
| 26 | BB | 1137 | G | C8-N9-C4 | -17.23 | 99.51 | 106.40 |
| 1 | AA | 2 | A | C4-C5-C6 | 17.22 | 125.61 | 117.00 |
| 26 | BB | 861 | A | C4-C5-C6 | -17.20 | 108.40 | 117.00 |
| 18 | AR | 53 | ARG | NE-CZ-NH1 | 17.19 | 128.90 | 120.30 |
| 26 | BB | 2845 | U | O4'-C1'-N1 | 17.14 | 121.91 | 108.20 |
| 2 | AB | 18 | G | N7-C8-N9 | 17.08 | 121.64 | 113.10 |
| 1 | AA | 903 | G | C8-N9-C4 | -17.07 | 99.57 | 106.40 |
| 26 | BB | 806 | C | O4'-C1'-N1 | 17.03 | 121.82 | 108.20 |
| 9 | AI | 79 | ARG | NE-CZ-NH1 | 16.99 | 128.79 | 120.30 |
| 26 | BB | 1575 | C | N3-C4-N4 | 16.98 | 129.88 | 118.00 |
| 58 | B7 | 4 | ARG | NE-CZ-NH2 | -16.97 | 111.81 | 120.30 |
| 26 | BB | 406 | G | C8-N9-C4 | -16.97 | 99.61 | 106.40 |
| 26 | BB | 1686 | C | N3-C4-C5 | -16.96 | 115.11 | 121.90 |
| 1 | AA | 267 | C | O4'-C1'-N1 | 16.93 | 121.75 | 108.20 |
| 1 | AA | 693 | G | C8-N9-C4 | -16.92 | 99.63 | 106.40 |
| 26 | BB | 1884 | G | C8-N9-C4 | -16.81 | 99.68 | 106.40 |
| 26 | BB | 2235 | G | C8-N9-C4 | -16.80 | 99.68 | 106.40 |
| 26 | BB | 1222 | U | C5-C6-N1 | -16.80 | 114.30 | 122.70 |
| 1 | AA | 89 | U | O4'-C1'-N1 | 16.74 | 121.59 | 108.20 |
| 25 | BA | 118 | C | O4'-C1'-N1 | 16.74 | 121.59 | 108.20 |
| 26 | BB | 1194 | A | N9-C4-C5 | 16.70 | 112.48 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 71 | G | N3-C4-C5 | -16.64 | 120.28 | 128.60 |
| 26 | BB | 899 | A | N9-C4-C5 | 16.61 | 112.44 | 105.80 |
| 26 | BB | 719 | C | O4'-C1'-N1 | 16.60 | 121.48 | 108.20 |
| 26 | BB | 555 | G | N3-C4-N9 | 16.57 | 135.94 | 126.00 |
| 26 | BB | 2761 | A | C2-N3-C4 | 16.54 | 118.87 | 110.60 |
| 26 | BB | 1604 | C | N1-C2-O2 | 16.52 | 128.81 | 118.90 |
| 2 | AB | 18 | G | C8-N9-C4 | -16.50 | 99.80 | 106.40 |
| 26 | BB | 790 | U | O4'-C1'-N1 | 16.49 | 121.39 | 108.20 |
| 26 | BB | 189 | G | N3-C4-C5 | -16.49 | 120.36 | 128.60 |
| 41 | BQ | 9 | ARG | NE-CZ-NH1 | 16.49 | 128.54 | 120.30 |
| 3 | AC | 15 | G | O4'-C1'-N9 | 16.48 | 121.39 | 108.20 |
| 1 | AA | 336 | A | N1-C2-N3 | -16.45 | 121.08 | 129.30 |
| 26 | BB | 1678 | A | C8-N9-C4 | -16.44 | 99.23 | 105.80 |
| 10 | AJ | 9 | ARG | NE-CZ-NH2 | -16.36 | 112.12 | 120.30 |
| 26 | BB | 2494 | G | C8-N9-C4 | -16.34 | 99.86 | 106.40 |
| 26 | BB | 1087 | G | N3-C4-C5 | -16.32 | 120.44 | 128.60 |
| 26 | BB | 2285 | C | N3-C4-C5 | -16.30 | 115.38 | 121.90 |
| 26 | BB | 731 | C | O4'-C1'-N1 | 16.24 | 121.19 | 108.20 |
| 26 | BB | 2380 | C | N3-C4-C5 | 16.23 | 128.39 | 121.90 |
| 26 | BB | 1992 | G | C8-N9-C4 | -16.23 | 99.91 | 106.40 |
| 26 | BB | 2357 | G | C2-N3-C4 | 16.20 | 120.00 | 111.90 |
| 40 | BP | 30 | ARG | NE-CZ-NH1 | 16.20 | 128.40 | 120.30 |
| 1 | AA | 32 | A | O4'-C1'-N9 | 16.20 | 121.16 | 108.20 |
| 1 | AA | 1147 | C | N3-C4-C5 | -16.18 | 115.43 | 121.90 |
| 26 | BB | 492 | A | O4'-C1'-N9 | 16.18 | 121.15 | 108.20 |
| 1 | AA | 956 | U | O4'-C1'-N1 | 16.18 | 121.14 | 108.20 |
| 4 | AD | 71 | G | C8-N9-C4 | -16.17 | 99.93 | 106.40 |
| 26 | BB | 268 | C | C6-N1-C2 | -16.16 | 113.83 | 120.30 |
| 1 | AA | 765 | G | O4'-C1'-N9 | 16.14 | 121.11 | 108.20 |
| 26 | BB | 2716 | C | C6-N1-C2 | -16.12 | 113.85 | 120.30 |
| 26 | BB | 2773 | C | O4'-C1'-N1 | 16.12 | 121.10 | 108.20 |
| 26 | BB | 741 | U | C4-C5-C6 | 16.12 | 129.37 | 119.70 |
| 26 | BB | 2835 | A | C8-N9-C4 | -16.12 | 99.35 | 105.80 |
| 1 | AA | 154 | U | O4'-C1'-N1 | 16.09 | 121.08 | 108.20 |
| 1 | AA | 835 | U | O4'-C1'-N1 | 16.07 | 121.06 | 108.20 |
| 26 | BB | 997 | G | O4'-C1'-N9 | 16.07 | 121.06 | 108.20 |
| 1 | AA | 948 | C | O4'-C1'-N1 | 16.06 | 121.05 | 108.20 |
| 26 | BB | 2723 | C | C6-N1-C2 | -16.05 | 113.88 | 120.30 |
| 1 | AA | 993 | G | N9-C4-C5 | -16.04 | 98.98 | 105.40 |
| 1 | AA | 530 | G | C4-C5-N7 | -16.04 | 104.39 | 110.80 |
| 2 | AB | 75 | C | N3-C4-C5 | -16.02 | 115.49 | 121.90 |
| 26 | BB | 1386 | C | O4'-C1'-N1 | 16.02 | 121.01 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1422 | G | N3-C4-C5 | -16.02 | 120.59 | 128.60 |
| 26 | BB | 1157 | G | N7-C8-N9 | 16.01 | 121.10 | 113.10 |
| 1 | AA | 1389 | C | N3-C4-C5 | -16.00 | 115.50 | 121.90 |
| 26 | BB | 2116 | G | C8-N9-C4 | -15.99 | 100.00 | 106.40 |
| 1 | AA | 31 | G | C8-N9-C4 | -15.99 | 100.00 | 106.40 |
| 26 | BB | 1248 | G | N9-C4-C5 | 15.98 | 111.79 | 105.40 |
| 26 | BB | 237 | C | N3-C4-C5 | -15.97 | 115.51 | 121.90 |
| 26 | BB | 2481 | G | C8-N9-C4 | -15.97 | 100.01 | 106.40 |
| 1 | AA | 389 | A | C8-N9-C4 | -15.95 | 99.42 | 105.80 |
| 26 | BB | 648 | G | N7-C8-N9 | 15.94 | 121.07 | 113.10 |
| 26 | BB | 2360 | G | C4-C5-N7 | -15.92 | 104.43 | 110.80 |
| 19 | AS | 35 | ARG | NE-CZ-NH1 | 15.91 | 128.26 | 120.30 |
| 1 | AA | 1086 | U | O4'-C1'-N1 | 15.90 | 120.92 | 108.20 |
| 26 | BB | 2018 | G | C8-N9-C4 | -15.90 | 100.04 | 106.40 |
| 4 | AD | 12 | G | C8-N9-C4 | -15.88 | 100.05 | 106.40 |
| 26 | BB | 810 | U | O4'-C1'-N1 | 15.87 | 120.90 | 108.20 |
| 1 | AA | 780 | A | N9-C4-C5 | 15.87 | 112.15 | 105.80 |
| 26 | BB | 1268 | A | N1-C6-N6 | -15.80 | 109.12 | 118.60 |
| 26 | BB | 2232 | C | O4'-C1'-N1 | 15.80 | 120.84 | 108.20 |
| 40 | BP | 30 | ARG | NE-CZ-NH2 | -15.77 | 112.41 | 120.30 |
| 1 | AA | 476 | U | O4'-C1'-N1 | 15.77 | 120.82 | 108.20 |
| 19 | AS | 35 | ARG | NE-CZ-NH2 | -15.76 | 112.42 | 120.30 |
| 1 | AA | 773 | G | C8-N9-C4 | -15.76 | 100.10 | 106.40 |
| 26 | BB | 1531 | C | O4'-C1'-N1 | 15.75 | 120.80 | 108.20 |
| 26 | BB | 2608 | G | N9-C4-C5 | 15.75 | 111.70 | 105.40 |
| 1 | AA | 489 | C | C5-C6-N1 | 15.72 | 128.86 | 121.00 |
| 6 | AF | 10 | ARG | NE-CZ-NH2 | -15.71 | 112.44 | 120.30 |
| 1 | AA | 1367 | C | O4'-C1'-N1 | 15.70 | 120.76 | 108.20 |
| 26 | BB | 2494 | G | C4-C5-C6 | 15.69 | 128.21 | 118.80 |
| 26 | BB | 507 | A | C8-N9-C4 | -15.68 | 99.53 | 105.80 |
| 3 | AC | 22 | G | N7-C8-N9 | 15.67 | 120.93 | 113.10 |
| 26 | BB | 2012 | G | C8-N9-C4 | -15.66 | 100.14 | 106.40 |
| 26 | BB | 2379 | G | C4-C5-N7 | -15.66 | 104.54 | 110.80 |
| 1 | AA | 1417 | G | C8-N9-C4 | -15.65 | 100.14 | 106.40 |
| 25 | BA | 10 | G | O4'-C1'-N9 | 15.65 | 120.72 | 108.20 |
| 26 | BB | 2718 | G | O4'-C1'-N9 | 15.63 | 120.70 | 108.20 |
| 26 | BB | 2884 | U | C5-C6-N1 | -15.63 | 114.89 | 122.70 |
| 1 | AA | 470 | C | N3-C4-C5 | -15.62 | 115.65 | 121.90 |
| 26 | BB | 373 | U | O4'-C1'-N1 | 15.62 | 120.69 | 108.20 |
| 3 | AC | 45 | G | O4'-C1'-N9 | 15.60 | 120.68 | 108.20 |
| 26 | BB | 2330 | G | C5-C6-O6 | -15.60 | 119.24 | 128.60 |
| 26 | BB | 1459 | G | N7-C8-N9 | 15.59 | 120.89 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 83 | C | O4'-C1'-N1 | 15.58 | 120.67 | 108.20 |
| 26 | BB | 783 | A | N1-C6-N6 | -15.57 | 109.26 | 118.60 |
| 26 | BB | 72 | U | O4'-C1'-N1 | 15.57 | 120.65 | 108.20 |
| 26 | BB | 1202 | G | N7-C8-N9 | 15.57 | 120.88 | 113.10 |
| 26 | BB | 1248 | G | C8-N9-C4 | -15.57 | 100.17 | 106.40 |
| 26 | BB | 1635 | A | C8-N9-C4 | -15.54 | 99.58 | 105.80 |
| 1 | AA | 436 | C | O4'-C1'-N1 | 15.52 | 120.62 | 108.20 |
| 26 | BB | 2029 | G | N3-C4-C5 | -15.52 | 120.84 | 128.60 |
| 26 | BB | 1217 | U | O4'-C1'-N1 | 15.52 | 120.61 | 108.20 |
| 3 | AC | 22 | G | C8-N9-C4 | -15.51 | 100.20 | 106.40 |
| 26 | BB | 387 | U | C5-C6-N1 | -15.51 | 114.94 | 122.70 |
| 26 | BB | 648 | G | C8-N9-C4 | -15.51 | 100.20 | 106.40 |
| 1 | AA | 944 | G | C4-C5-N7 | 15.50 | 117.00 | 110.80 |
| 1 | AA | 1193 | G | C2-N3-C4 | 15.47 | 119.64 | 111.90 |
| 26 | BB | 376 | G | N3-C4-C5 | -15.47 | 120.86 | 128.60 |
| 1 | AA | 190 | A | C8-N9-C4 | -15.45 | 99.62 | 105.80 |
| 2 | AB | 22 | G | C2-N3-C4 | 15.44 | 119.62 | 111.90 |
| 26 | BB | 1815 | A | C4-C5-C6 | -15.44 | 109.28 | 117.00 |
| 1 | AA | 36 | C | O4'-C1'-N1 | 15.42 | 120.53 | 108.20 |
| 1 | AA | 1051 | C | C3'-C2'-C1' | 15.41 | 113.83 | 101.50 |
| 26 | BB | 2201 | G | C8-N9-C4 | -15.41 | 100.24 | 106.40 |
| 26 | BB | 1715 | G | N3-C2-N2 | 15.40 | 130.68 | 119.90 |
| 26 | BB | 814 | C | O4'-C1'-N1 | 15.39 | 120.51 | 108.20 |
| 26 | BB | 717 | C | O4'-C1'-N1 | 15.38 | 120.51 | 108.20 |
| 26 | BB | 763 | G | N3-C4-C5 | -15.37 | 120.92 | 128.60 |
| 1 | AA | 1471 | U | O4'-C1'-N1 | 15.35 | 120.48 | 108.20 |
| 1 | AA | 465 | A | C8-N9-C4 | -15.35 | 99.66 | 105.80 |
| 1 | AA | 1535 | C | O4'-C1'-N1 | 15.33 | 120.47 | 108.20 |
| 26 | BB | 342 | A | C8-N9-C4 | -15.33 | 99.67 | 105.80 |
| 26 | BB | 1393 | A | C8-N9-C4 | -15.32 | 99.67 | 105.80 |
| 3 | AC | 48 | C | O4'-C1'-N1 | 15.31 | 120.45 | 108.20 |
| 25 | BA | 75 | G | C2-N3-C4 | 15.30 | 119.55 | 111.90 |
| 26 | BB | 1456 | G | N3-C4-C5 | -15.30 | 120.95 | 128.60 |
| 26 | BB | 555 | G | N3-C4-C5 | -15.29 | 120.96 | 128.60 |
| 26 | BB | 722 | A | C8-N9-C4 | -15.27 | 99.69 | 105.80 |
| 1 | AA | 671 | G | C8-N9-C4 | -15.25 | 100.30 | 106.40 |
| 1 | AA | 1503 | A | O4'-C1'-N9 | 15.23 | 120.39 | 108.20 |
| 26 | BB | 634 | C | C6-N1-C2 | -15.23 | 114.21 | 120.30 |
| 26 | BB | 2009 | A | O4'-C1'-N9 | 15.22 | 120.38 | 108.20 |
| 1 | AA | 188 | C | N1-C2-O2 | 15.20 | 128.02 | 118.90 |
| 26 | BB | 662 | G | O4'-C1'-N9 | 15.19 | 120.35 | 108.20 |
| 26 | BB | 151 | C | N3-C4-C5 | -15.18 | 115.83 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 113 | G | N1-C2-N3 | -15.17 | 114.80 | 123.90 |
| 1 | AA | 293 | G | C2-N3-C4 | 15.16 | 119.48 | 111.90 |
| 26 | BB | 862 | G | C2-N3-C4 | 15.16 | 119.48 | 111.90 |
| 1 | AA | 424 | G | N3-C4-C5 | -15.16 | 121.02 | 128.60 |
| 26 | BB | 2106 | U | C5-C6-N1 | -15.16 | 115.12 | 122.70 |
| 1 | AA | 1217 | C | C5-C6-N1 | 15.14 | 128.57 | 121.00 |
| 26 | BB | 486 | C | O4'-C1'-N1 | 15.12 | 120.30 | 108.20 |
| 26 | BB | 2756 | U | C5-C4-O4 | -15.12 | 116.83 | 125.90 |
| 1 | AA | 990 | C | O4'-C1'-N1 | 15.10 | 120.28 | 108.20 |
| 26 | BB | 1315 | C | O4'-C1'-N1 | 15.10 | 120.28 | 108.20 |
| 26 | BB | 481 | G | C2-N3-C4 | 15.08 | 119.44 | 111.90 |
| 26 | BB | 1707 | G | O4'-C1'-N9 | 15.08 | 120.27 | 108.20 |
| 26 | BB | 424 | G | C4-C5-N7 | -15.08 | 104.77 | 110.80 |
| 26 | BB | 125 | A | C8-N9-C4 | -15.08 | 99.77 | 105.80 |
| 26 | BB | 2612 | C | C5-C4-N4 | -15.07 | 109.65 | 120.20 |
| 1 | AA | 958 | A | C8-N9-C4 | -15.07 | 99.77 | 105.80 |
| 26 | BB | 34 | U | O4'-C1'-N1 | 15.05 | 120.24 | 108.20 |
| 2 | AB | 53 | G | C4-C5-N7 | -15.04 | 104.78 | 110.80 |
| 26 | BB | 805 | G | C1'-O4'-C4' | -15.04 | 97.87 | 109.90 |
| 26 | BB | 1927 | A | C8-N9-C4 | -15.03 | 99.79 | 105.80 |
| 26 | BB | 1202 | G | C8-N9-C4 | -15.03 | 100.39 | 106.40 |
| 1 | AA | 671 | G | N9-C4-C5 | 15.02 | 111.41 | 105.40 |
| 3 | AC | 48 | C | N1-C2-O2 | 15.01 | 127.91 | 118.90 |
| 26 | BB | 597 | G | C4-C5-N7 | -15.00 | 104.80 | 110.80 |
| 1 | AA | 924 | C | O4'-C1'-N1 | 15.00 | 120.20 | 108.20 |
| 1 | AA | 1517 | G | C5-C6-O6 | -14.98 | 119.61 | 128.60 |
| 1 | AA | 1074 | G | C5-C6-O6 | -14.96 | 119.63 | 128.60 |
| 26 | BB | 154 | U | O4'-C1'-N1 | 14.96 | 120.16 | 108.20 |
| 1 | AA | 293 | G | N3-C4-C5 | -14.94 | 121.13 | 128.60 |
| 26 | BB | 1374 | G | C5-C6-O6 | -14.93 | 119.64 | 128.60 |
| 2 | AB | 19 | G | N3-C4-C5 | -14.93 | 121.14 | 128.60 |
| 1 | AA | 206 | C | N3-C4-N4 | 14.91 | 128.44 | 118.00 |
| 26 | BB | 1591 | A | N1-C2-N3 | -14.90 | 121.85 | 129.30 |
| 26 | BB | 432 | A | N9-C4-C5 | 14.89 | 111.76 | 105.80 |
| 26 | BB | 2443 | C | N3-C4-C5 | -14.89 | 115.94 | 121.90 |
| 1 | AA | 903 | G | N7-C8-N9 | 14.89 | 120.54 | 113.10 |
| 26 | BB | 944 | C | N3-C4-C5 | -14.89 | 115.94 | 121.90 |
| 1 | AA | 1325 | C | N3-C4-C5 | 14.87 | 127.85 | 121.90 |
| 26 | BB | 893 | C | N1-C2-O2 | 14.87 | 127.82 | 118.90 |
| 6 | AF | 228 | ARG | NE-CZ-NH2 | -14.87 | 112.87 | 120.30 |
| 26 | BB | 1731 | G | C2-N3-C4 | 14.86 | 119.33 | 111.90 |
| 26 | BB | 515 | A | N7-C8-N9 | -14.85 | 106.37 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 43 | G | C6-N1-C2 | -14.85 | 116.19 | 125.10 |
| 1 | AA | 241 | G | N3-C4-C5 | -14.83 | 121.18 | 128.60 |
| 1 | AA | 1260 | G | N7-C8-N9 | 14.83 | 120.51 | 113.10 |
| 26 | BB | 2860 | A | C8-N9-C4 | -14.83 | 99.87 | 105.80 |
| 26 | BB | 1560 | G | C4-C5-N7 | 14.80 | 116.72 | 110.80 |
| 1 | AA | 711 | G | N3-C4-C5 | -14.79 | 121.20 | 128.60 |
| 26 | BB | 1730 | C | O4'-C1'-N1 | 14.80 | 120.04 | 108.20 |
| 37 | BM | 70 | ARG | NE-CZ-NH2 | -14.79 | 112.90 | 120.30 |
| 26 | BB | 553 | G | C4-C5-N7 | -14.79 | 104.88 | 110.80 |
| 26 | BB | 2718 | G | N3-C4-C5 | -14.79 | 121.20 | 128.60 |
| 12 | AL | 118 | ARG | NE-CZ-NH1 | 14.79 | 127.69 | 120.30 |
| 1 | AA | 1164 | G | N3-C4-C5 | -14.78 | 121.21 | 128.60 |
| 26 | BB | 564 | C | N1-C2-O2 | 14.77 | 127.76 | 118.90 |
| 26 | BB | 583 | G | C6-N1-C2 | -14.77 | 116.23 | 125.10 |
| 1 | AA | 1128 | C | N3-C4-C5 | -14.77 | 115.99 | 121.90 |
| 26 | BB | 785 | G | N3-C4-C5 | -14.77 | 121.22 | 128.60 |
| 1 | AA | 770 | C | O4'-C1'-N1 | 14.76 | 120.01 | 108.20 |
| 26 | BB | 2379 | G | N9-C4-C5 | 14.76 | 111.30 | 105.40 |
| 26 | BB | 295 | G | C8-N9-C4 | -14.75 | 100.50 | 106.40 |
| 26 | BB | 1465 | G | C8-N9-C4 | -14.75 | 100.50 | 106.40 |
| 26 | BB | 2113 | U | O4'-C1'-N1 | 14.74 | 119.99 | 108.20 |
| 26 | BB | 1479 | G | C2-N3-C4 | 14.73 | 119.27 | 111.90 |
| 26 | BB | 1272 | A | O4'-C1'-N9 | 14.71 | 119.97 | 108.20 |
| 26 | BB | 2428 | G | N7-C8-N9 | 14.71 | 120.46 | 113.10 |
| 26 | BB | 1098 | A | C4-C5-C6 | -14.70 | 109.65 | 117.00 |
| 1 | AA | 675 | A | O4'-C1'-N9 | 14.70 | 119.96 | 108.20 |
| 26 | BB | 979 | A | C8-N9-C4 | -14.69 | 99.92 | 105.80 |
| 26 | BB | 1371 | G | C8-N9-C4 | -14.69 | 100.52 | 106.40 |
| 26 | BB | 481 | G | N3-C4-C5 | -14.68 | 121.26 | 128.60 |
| 1 | AA | 693 | G | N3-C4-C5 | -14.66 | 121.27 | 128.60 |
| 26 | BB | 553 | G | N9-C4-C5 | 14.66 | 111.26 | 105.40 |
| 26 | BB | 1575 | C | N3-C4-C5 | -14.66 | 116.04 | 121.90 |
| 4 | AD | 53 | G | N3-C4-C5 | -14.65 | 121.27 | 128.60 |
| 26 | BB | 1166 | G | O4'-C1'-N9 | 14.65 | 119.92 | 108.20 |
| 26 | BB | 2145 | C | O4'-C1'-N1 | 14.65 | 119.92 | 108.20 |
| 1 | AA | 1463 | U | O4'-C1'-N1 | 14.64 | 119.91 | 108.20 |
| 1 | AA | 1399 | C | O4'-C1'-N1 | 14.64 | 119.91 | 108.20 |
| 15 | AO | 53 | ARG | NE-CZ-NH2 | -14.64 | 112.98 | 120.30 |
| 1 | AA | 758 | C | O4'-C1'-N1 | 14.63 | 119.90 | 108.20 |
| 26 | BB | 66 | C | O4'-C1'-N1 | 14.63 | 119.90 | 108.20 |
| 26 | BB | 262 | A | N9-C4-C5 | 14.63 | 111.65 | 105.80 |
| 2 | AB | 60 | U | O4'-C1'-N1 | 14.62 | 119.90 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1510 | C | O4'-C1'-N1 | 14.61 | 119.89 | 108.20 |
| 1 | AA | 1220 | G | N9-C4-C5 | 14.59 | 111.24 | 105.40 |
| 26 | BB | 1185 | G | C2-N3-C4 | 14.59 | 119.19 | 111.90 |
| 26 | BB | 1039 | A | C8-N9-C4 | -14.58 | 99.97 | 105.80 |
| 26 | BB | 520 | G | O4'-C1'-N9 | 14.57 | 119.86 | 108.20 |
| 26 | BB | 445 | C | C6-N1-C2 | 14.56 | 126.12 | 120.30 |
| 26 | BB | 257 | C | C4-C5-C6 | 14.55 | 124.68 | 117.40 |
| 26 | BB | 2708 | G | C2-N3-C4 | 14.55 | 119.17 | 111.90 |
| 1 | AA | 1370 | G | C4-C5-N7 | 14.55 | 116.62 | 110.80 |
| 26 | BB | 2633 | G | C4-C5-N7 | -14.55 | 104.98 | 110.80 |
| 1 | AA | 232 | G | C4-C5-N7 | -14.55 | 104.98 | 110.80 |
| 1 | AA | 469 | C | C5-C6-N1 | 14.55 | 128.27 | 121.00 |
| 1 | AA | 278 | G | C5-N7-C8 | 14.54 | 111.57 | 104.30 |
| 1 | AA | 1450 | U | O4'-C1'-N1 | 14.54 | 119.83 | 108.20 |
| 1 | AA | 735 | C | C6-N1-C2 | -14.53 | 114.49 | 120.30 |
| 26 | BB | 1292 | G | C8-N9-C4 | -14.53 | 100.59 | 106.40 |
| 1 | AA | 899 | C | N1-C2-O2 | 14.52 | 127.61 | 118.90 |
| 41 | BQ | 25 | ARG | NE-CZ-NH2 | -14.51 | 113.04 | 120.30 |
| 1 | AA | 746 | A | C8-N9-C4 | -14.51 | 100.00 | 105.80 |
| 26 | BB | 1224 | U | O4'-C1'-N1 | 14.51 | 119.80 | 108.20 |
| 26 | BB | 1321 | A | N1-C2-N3 | -14.49 | 122.06 | 129.30 |
| 26 | BB | 1172 | C | C5-C6-N1 | -14.48 | 113.76 | 121.00 |
| 26 | BB | 1914 | C | C6-N1-C2 | -14.48 | 114.51 | 120.30 |
| 26 | BB | 2461 | A | C8-N9-C4 | -14.48 | 100.01 | 105.80 |
| 26 | BB | 2718 | G | N9-C4-C5 | 14.47 | 111.19 | 105.40 |
| 4 | AD | 62 | C | N3-C4-C5 | -14.47 | 116.11 | 121.90 |
| 13 | AM | 62 | ARG | NE-CZ-NH1 | 14.46 | 127.53 | 120.30 |
| 26 | BB | 346 | A | O4'-C1'-N9 | 14.46 | 119.77 | 108.20 |
| 26 | BB | 778 | G | C5-C6-N1 | 14.45 | 118.73 | 111.50 |
| 1 | AA | 748 | G | C5-C6-O6 | -14.45 | 119.93 | 128.60 |
| 26 | BB | 2061 | G | N9-C4-C5 | 14.45 | 111.18 | 105.40 |
| 26 | BB | 2031 | A | N1-C6-N6 | 14.45 | 127.27 | 118.60 |
| 1 | AA | 779 | C | O4'-C1'-N1 | 14.44 | 119.75 | 108.20 |
| 26 | BB | 380 | G | C8-N9-C4 | -14.42 | 100.63 | 106.40 |
| 26 | BB | 1349 | C | N3-C4-C5 | -14.41 | 116.14 | 121.90 |
| 26 | BB | 1256 | G | N3-C4-C5 | -14.40 | 121.40 | 128.60 |
| 1 | AA | 351 | G | C5-C6-N1 | 14.39 | 118.69 | 111.50 |
| 25 | BA | 11 | C | O4'-C1'-N1 | 14.38 | 119.71 | 108.20 |
| 1 | AA | 255 | G | C8-N9-C4 | -14.38 | 100.65 | 106.40 |
| 26 | BB | 87 | U | O4'-C1'-N1 | 14.36 | 119.69 | 108.20 |
| 1 | AA | 1061 | G | N3-C4-C5 | -14.36 | 121.42 | 128.60 |
| 1 | AA | 1292 | G | N3-C4-C5 | -14.36 | 121.42 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1319 | A | N7-C8-N9 | 14.35 | 120.98 | 113.80 |
| 26 | BB | 1459 | G | C8-N9-C4 | -14.33 | 100.67 | 106.40 |
| 1 | AA | 191 | G | C4-C5-N7 | 14.33 | 116.53 | 110.80 |
| 26 | BB | 331 | C | C6-N1-C2 | -14.33 | 114.57 | 120.30 |
| 1 | AA | 1064 | G | C4-C5-N7 | -14.32 | 105.07 | 110.80 |
| 26 | BB | 652 | U | O4'-C1'-N1 | 14.32 | 119.66 | 108.20 |
| 37 | BM | 105 | ARG | NE-CZ-NH1 | 14.30 | 127.45 | 120.30 |
| 26 | BB | 492 | A | N1-C2-N3 | -14.30 | 122.15 | 129.30 |
| 26 | BB | 2341 | G | N9-C4-C5 | 14.28 | 111.11 | 105.40 |
| 26 | BB | 2846 | G | C4-C5-N7 | -14.28 | 105.09 | 110.80 |
| 26 | BB | 1667 | G | C6-C5-N7 | -14.27 | 121.84 | 130.40 |
| 26 | BB | 217 | A | C8-N9-C4 | -14.26 | 100.10 | 105.80 |
| 26 | BB | 768 | G | N9-C4-C5 | 14.26 | 111.10 | 105.40 |
| 1 | AA | 847 | G | N3-C4-C5 | -14.23 | 121.49 | 128.60 |
| 4 | AD | 53 | G | N9-C4-C5 | 14.22 | 111.09 | 105.40 |
| 26 | BB | 1216 | G | N7-C8-N9 | 14.21 | 120.21 | 113.10 |
| 26 | BB | 350 | G | O4'-C1'-N9 | 14.21 | 119.57 | 108.20 |
| 26 | BB | 1843 | C | N3-C4-N4 | 14.21 | 127.94 | 118.00 |
| 1 | AA | 122 | G | C8-N9-C4 | -14.20 | 100.72 | 106.40 |
| 1 | AA | 801 | U | O4'-C1'-N1 | 14.20 | 119.56 | 108.20 |
| 26 | BB | 732 | C | O4'-C1'-N1 | 14.20 | 119.56 | 108.20 |
| 26 | BB | 1364 | G | N1-C2-N3 | -14.19 | 115.39 | 123.90 |
| 26 | BB | 801 | G | C4-C5-N7 | -14.18 | 105.13 | 110.80 |
| 26 | BB | 1627 | G | C8-N9-C4 | -14.16 | 100.74 | 106.40 |
| 26 | BB | 116 | C | O4'-C1'-N1 | 14.15 | 119.52 | 108.20 |
| 6 | AF | 135 | ARG | NE-CZ-NH2 | -14.14 | 113.23 | 120.30 |
| 26 | BB | 2848 | G | C5-C6-N1 | -14.13 | 104.43 | 111.50 |
| 26 | BB | 2852 | G | C5-C6-O6 | -14.13 | 120.12 | 128.60 |
| 3 | AC | 45 | G | C5-N7-C8 | -14.13 | 97.23 | 104.30 |
| 26 | BB | 2821 | A | C8-N9-C4 | -14.13 | 100.15 | 105.80 |
| 1 | AA | 1053 | G | C8-N9-C4 | -14.12 | 100.75 | 106.40 |
| 1 | AA | 1488 | G | N3-C2-N2 | -14.09 | 110.04 | 119.90 |
| 29 | BE | 128 | ARG | NE-CZ-NH1 | -14.08 | 113.26 | 120.30 |
| 26 | BB | 2212 | A | O4'-C1'-N9 | 14.08 | 119.46 | 108.20 |
| 26 | BB | 1825 | U | C2-N3-C4 | -14.07 | 118.56 | 127.00 |
| 26 | BB | 2311 | A | C8-N9-C4 | 14.07 | 111.43 | 105.80 |
| 1 | AA | 1085 | U | C5-C4-O4 | -14.07 | 117.46 | 125.90 |
| 28 | BD | 62 | ARG | NE-CZ-NH2 | -14.06 | 113.27 | 120.30 |
| 1 | AA | 568 | G | N9-C4-C5 | -14.04 | 99.78 | 105.40 |
| 26 | BB | 2890 | G | C8-N9-C4 | -14.04 | 100.78 | 106.40 |
| 26 | BB | 1172 | C | C4-C5-C6 | 14.02 | 124.41 | 117.40 |
| 26 | BB | 2221 | G | C4-C5-N7 | -14.02 | 105.19 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 849 | G | C4-C5-N7 | -14.02 | 105.19 | 110.80 |
| 1 | AA | 1437 | A | N1-C6-N6 | 14.00 | 127.00 | 118.60 |
| 26 | BB | 551 | G | C2-N3-C4 | 14.00 | 118.90 | 111.90 |
| 3 | AC | 24 | A | N1-C6-N6 | -13.99 | 110.20 | 118.60 |
| 26 | BB | 375 | G | N1-C2-N3 | -13.99 | 115.51 | 123.90 |
| 1 | AA | 795 | C | N3-C2-O2 | -13.98 | 112.11 | 121.90 |
| 1 | AA | 45 | G | N3-C4-C5 | -13.98 | 121.61 | 128.60 |
| 26 | BB | 1776 | G | C4-C5-N7 | 13.98 | 116.39 | 110.80 |
| 26 | BB | 225 | C | N3-C4-N4 | 13.97 | 127.78 | 118.00 |
| 26 | BB | 1839 | G | N9-C4-C5 | 13.97 | 110.99 | 105.40 |
| 1 | AA | 86 | G | O4'-C1'-N9 | 13.97 | 119.37 | 108.20 |
| 26 | BB | 1384 | A | C8-N9-C4 | -13.96 | 100.22 | 105.80 |
| 1 | AA | 9 | G | O4'-C1'-N9 | 13.96 | 119.36 | 108.20 |
| 26 | BB | 692 | C | C2-N3-C4 | 13.95 | 126.88 | 119.90 |
| 1 | AA | 980 | C | O4'-C1'-N1 | 13.95 | 119.36 | 108.20 |
| 1 | AA | 1495 | U | N3-C2-O2 | -13.94 | 112.44 | 122.20 |
| 29 | BE | 184 | ARG | NE-CZ-NH2 | 13.94 | 127.27 | 120.30 |
| 1 | AA | 1124 | G | N1-C6-O6 | -13.94 | 111.54 | 119.90 |
| 1 | AA | 1305 | G | C8-N9-C4 | -13.92 | 100.83 | 106.40 |
| 1 | AA | 442 | G | C8-N9-C4 | -13.91 | 100.83 | 106.40 |
| 1 | AA | 1215 | G | C8-N9-C4 | -13.91 | 100.84 | 106.40 |
| 1 | AA | 521 | G | N3-C2-N2 | -13.91 | 110.17 | 119.90 |
| 25 | BA | 120 | U | O4'-C1'-N1 | 13.90 | 119.32 | 108.20 |
| 26 | BB | 2133 | G | N3-C4-C5 | -13.90 | 121.65 | 128.60 |
| 1 | AA | 1312 | G | C2-N3-C4 | 13.89 | 118.85 | 111.90 |
| 18 | AR | 53 | ARG | NE-CZ-NH2 | -13.89 | 113.36 | 120.30 |
| 26 | BB | 2813 | A | C4-C5-C6 | -13.88 | 110.06 | 117.00 |
| 26 | BB | 411 | G | N3-C4-C5 | -13.88 | 121.66 | 128.60 |
| 26 | BB | 1662 | U | N3-C4-C5 | -13.87 | 106.28 | 114.60 |
| 26 | BB | 2126 | A | C4-C5-N7 | -13.86 | 103.77 | 110.70 |
| 36 | BL | 120 | ARG | NE-CZ-NH2 | 13.86 | 127.23 | 120.30 |
| 6 | AF | 126 | ARG | NE-CZ-NH2 | 13.86 | 127.23 | 120.30 |
| 1 | AA | 413 | G | N7-C8-N9 | 13.85 | 120.03 | 113.10 |
| 26 | BB | 1216 | G | N3-C4-C5 | -13.85 | 121.67 | 128.60 |
| 1 | AA | 352 | C | C6-N1-C2 | 13.85 | 125.84 | 120.30 |
| 1 | AA | 310 | G | N9-C4-C5 | 13.84 | 110.94 | 105.40 |
| 25 | BA | 108 | A | N1-C6-N6 | -13.84 | 110.29 | 118.60 |
| 3 | AC | 56 | G | C4-C5-N7 | -13.84 | 105.27 | 110.80 |
| 26 | BB | 1020 | A | O4'-C1'-N9 | 13.83 | 119.26 | 108.20 |
| 1 | AA | 401 | C | C2-N3-C4 | 13.83 | 126.81 | 119.90 |
| 1 | AA | 1131 | G | C8-N9-C4 | -13.83 | 100.87 | 106.40 |
| 26 | BB | 2837 | A | C5-C6-N1 | 13.83 | 124.61 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2794 | C | O4'-C1'-N1 | 13.82 | 119.25 | 108.20 |
| 26 | BB | 297 | G | C8-N9-C4 | -13.81 | 100.88 | 106.40 |
| 1 | AA | 364 | A | C5-N7-C8 | -13.81 | 97.00 | 103.90 |
| 1 | AA | 306 | A | C5-C6-N1 | 13.81 | 124.60 | 117.70 |
| 1 | AA | 396 | C | N1-C2-O2 | 13.80 | 127.18 | 118.90 |
| 1 | AA | 1391 | U | O4'-C1'-N1 | 13.80 | 119.24 | 108.20 |
| 26 | BB | 1866 | A | O4'-C1'-N9 | 13.79 | 119.23 | 108.20 |
| 1 | AA | 310 | G | C4-C5-N7 | -13.79 | 105.28 | 110.80 |
| 1 | AA | 991 | U | O4'-C1'-N1 | 13.79 | 119.23 | 108.20 |
| 26 | BB | 1037 | G | N7-C8-N9 | 13.78 | 119.99 | 113.10 |
| 26 | BB | 1228 | G | C8-N9-C4 | -13.79 | 100.89 | 106.40 |
| 26 | BB | 1992 | G | N9-C4-C5 | 13.78 | 110.91 | 105.40 |
| 26 | BB | 495 | G | C8-N9-C4 | -13.77 | 100.89 | 106.40 |
| 1 | AA | 106 | C | N1-C2-O2 | 13.77 | 127.16 | 118.90 |
| 4 | AD | 49 | C | O4'-C1'-N1 | 13.77 | 119.22 | 108.20 |
| 1 | AA | 1094 | G | C2-N3-C4 | 13.77 | 118.78 | 111.90 |
| 1 | AA | 830 | G | C8-N9-C4 | -13.76 | 100.90 | 106.40 |
| 26 | BB | 1822 | C | C5-C6-N1 | -13.76 | 114.12 | 121.00 |
| 26 | BB | 1948 | G | C8-N9-C4 | -13.75 | 100.90 | 106.40 |
| 26 | BB | 2087 | G | N3-C4-C5 | -13.74 | 121.73 | 128.60 |
| 26 | BB | 212 | G | O4'-C1'-N9 | 13.73 | 119.19 | 108.20 |
| 26 | BB | 1090 | A | N7-C8-N9 | 13.73 | 120.66 | 113.80 |
| 1 | AA | 690 | G | N3-C4-C5 | -13.73 | 121.74 | 128.60 |
| 26 | BB | 443 | A | N7-C8-N9 | 13.72 | 120.66 | 113.80 |
| 26 | BB | 2247 | A | O4'-C1'-N9 | 13.69 | 119.15 | 108.20 |
| 26 | BB | 958 | U | N1-C2-O2 | 13.68 | 132.38 | 122.80 |
| 1 | AA | 1375 | A | C8-N9-C4 | -13.68 | 100.33 | 105.80 |
| 26 | BB | 473 | G | N3-C4-C5 | -13.67 | 121.76 | 128.60 |
| 1 | AA | 694 | A | C4'-C3'-C2' | -13.67 | 88.93 | 102.60 |
| 1 | AA | 969 | A | C4-C5-N7 | -13.67 | 103.87 | 110.70 |
| 1 | AA | 1118 | U | O4'-C1'-N1 | 13.66 | 119.13 | 108.20 |
| 26 | BB | 387 | U | C4-C5-C6 | 13.66 | 127.90 | 119.70 |
| 57 | B6 | 39 | ARG | NE-CZ-NH2 | 13.66 | 127.13 | 120.30 |
| 26 | BB | 276 | U | O4'-C1'-N1 | 13.66 | 119.13 | 108.20 |
| 4 | AD | 53 | G | C4-C5-N7 | -13.66 | 105.34 | 110.80 |
| 24 | AX | 68 | ARG | NE-CZ-NH2 | -13.65 | 113.47 | 120.30 |
| 1 | AA | 336 | A | C8-N9-C4 | -13.65 | 100.34 | 105.80 |
| 1 | AA | 713 | G | N3-C4-C5 | -13.65 | 121.77 | 128.60 |
| 2 | AB | 27 | C | N1-C2-O2 | 13.64 | 127.09 | 118.90 |
| 26 | BB | 1524 | G | N9-C4-C5 | -13.64 | 99.94 | 105.40 |
| 1 | AA | 344 | A | C4-C5-C6 | 13.63 | 123.82 | 117.00 |
| 1 | AA | 1431 | A | N9-C4-C5 | 13.63 | 111.25 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1927 | A | N9-C4-C5 | 13.63 | 111.25 | 105.80 |
| 1 | AA | 705 | G | C8-N9-C4 | -13.63 | 100.95 | 106.40 |
| 26 | BB | 698 | C | N3-C4-C5 | 13.63 | 127.35 | 121.90 |
| 1 | AA | 435 | A | C5-C6-N1 | 13.62 | 124.51 | 117.70 |
| 24 | AX | 65 | ARG | NE-CZ-NH2 | -13.63 | 113.49 | 120.30 |
| 26 | BB | 1092 | C | O4'-C1'-N1 | 13.62 | 119.10 | 108.20 |
| 1 | AA | 728 | A | C8-N9-C4 | -13.62 | 100.35 | 105.80 |
| 1 | AA | 202 | G | C8-N9-C4 | -13.62 | 100.95 | 106.40 |
| 26 | BB | 2782 | G | C2-N3-C4 | 13.60 | 118.70 | 111.90 |
| 26 | BB | 2516 | A | N1-C2-N3 | -13.60 | 122.50 | 129.30 |
| 1 | AA | 342 | C | O4'-C1'-N1 | 13.59 | 119.07 | 108.20 |
| 1 | AA | 1088 | G | C5-C6-N1 | 13.59 | 118.29 | 111.50 |
| 2 | AB | 71 | C | O4'-C1'-N1 | 13.59 | 119.07 | 108.20 |
| 26 | BB | 1278 | C | C6-N1-C2 | 13.58 | 125.73 | 120.30 |
| 40 | BP | 8 | ARG | NE-CZ-NH1 | 13.57 | 127.09 | 120.30 |
| 15 | AO | 49 | ARG | NE-CZ-NH2 | -13.57 | 113.52 | 120.30 |
| 26 | BB | 2903 | U | O4'-C1'-N1 | 13.57 | 119.05 | 108.20 |
| 26 | BB | 2852 | G | N1-C6-O6 | 13.57 | 128.04 | 119.90 |
| 26 | BB | 79 | C | C5-C6-N1 | 13.56 | 127.78 | 121.00 |
| 1 | AA | 627 | G | C8-N9-C4 | -13.55 | 100.98 | 106.40 |
| 1 | AA | 262 | A | C5-C6-N1 | 13.55 | 124.47 | 117.70 |
| 50 | BZ | 2 | ARG | NE-CZ-NH2 | 13.55 | 127.08 | 120.30 |
| 1 | AA | 1325 | C | C2-N3-C4 | -13.55 | 113.13 | 119.90 |
| 24 | AX | 65 | ARG | NE-CZ-NH1 | 13.55 | 127.07 | 120.30 |
| 26 | BB | 2061 | G | C4-C5-N7 | -13.55 | 105.38 | 110.80 |
| 26 | BB | 42 | A | N7-C8-N9 | 13.54 | 120.57 | 113.80 |
| 26 | BB | 845 | A | C2-N3-C4 | 13.53 | 117.37 | 110.60 |
| 26 | BB | 2020 | A | C8-N9-C4 | 13.53 | 111.21 | 105.80 |
| 1 | AA | 728 | A | N9-C4-C5 | 13.53 | 111.21 | 105.80 |
| 26 | BB | 331 | C | C5-C6-N1 | 13.53 | 127.76 | 121.00 |
| 26 | BB | 2592 | G | C8-N9-C4 | -13.52 | 100.99 | 106.40 |
| 26 | BB | 2660 | A | O4'-C1'-N9 | 13.52 | 119.02 | 108.20 |
| 26 | BB | 2718 | G | C8-N9-C4 | -13.52 | 100.99 | 106.40 |
| 26 | BB | 1932 | A | O4'-C1'-N9 | 13.51 | 119.01 | 108.20 |
| 1 | AA | 1369 | C | O4'-C1'-N1 | 13.50 | 119.00 | 108.20 |
| 26 | BB | 2306 | C | N1-C2-O2 | 13.50 | 127.00 | 118.90 |
| 25 | BA | 30 | C | O4'-C1'-N1 | 13.49 | 119.00 | 108.20 |
| 26 | BB | 2405 | G | C8-N9-C4 | -13.48 | 101.01 | 106.40 |
| 1 | AA | 106 | C | N3-C4-C5 | 13.48 | 127.29 | 121.90 |
| 1 | AA | 1334 | G | N9-C4-C5 | 13.47 | 110.79 | 105.40 |
| 1 | AA | 242 | G | C8-N9-C4 | -13.46 | 101.02 | 106.40 |
| 1 | AA | 1039 | G | N3-C4-C5 | -13.46 | 121.87 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1039 | G | C2-N3-C4 | 13.45 | 118.63 | 111.90 |
| 26 | BB | 1016 | G | C8-N9-C4 | -13.45 | 101.02 | 106.40 |
| 26 | BB | 45 | G | C6-N1-C2 | -13.45 | 117.03 | 125.10 |
| 2 | AB | 1 | A | C8-N9-C4 | -13.45 | 100.42 | 105.80 |
| 26 | BB | 2652 | C | C6-N1-C2 | -13.45 | 114.92 | 120.30 |
| 1 | AA | 422 | C | C2-N3-C4 | 13.44 | 126.62 | 119.90 |
| 1 | AA | 1013 | G | N9-C4-C5 | 13.43 | 110.77 | 105.40 |
| 1 | AA | 623 | C | N3-C4-C5 | -13.43 | 116.53 | 121.90 |
| 1 | AA | 1398 | A | N9-C4-C5 | 13.43 | 111.17 | 105.80 |
| 24 | AX | 34 | ARG | NE-CZ-NH1 | 13.42 | 127.01 | 120.30 |
| 1 | AA | 364 | A | N7-C8-N9 | 13.41 | 120.51 | 113.80 |
| 26 | BB | 1054 | A | N9-C4-C5 | 13.41 | 111.17 | 105.80 |
| 26 | BB | 1864 | U | C1'-O4'-C4' | 13.41 | 120.63 | 109.90 |
| 1 | AA | 1419 | G | O4'-C1'-N9 | 13.41 | 118.93 | 108.20 |
| 26 | BB | 376 | G | C8-N9-C4 | -13.41 | 101.04 | 106.40 |
| 45 | BU | 8 | ARG | NE-CZ-NH1 | 13.40 | 127.00 | 120.30 |
| 26 | BB | 2 | G | C2-N3-C4 | 13.40 | 118.60 | 111.90 |
| 1 | AA | 1451 | U | O4'-C1'-N1 | 13.39 | 118.92 | 108.20 |
| 1 | AA | 1094 | G | C8-N9-C4 | -13.39 | 101.04 | 106.40 |
| 26 | BB | 995 | C | O4'-C1'-N1 | 13.39 | 118.91 | 108.20 |
| 26 | BB | 1099 | G | C4-C5-N7 | 13.39 | 116.16 | 110.80 |
| 1 | AA | 893 | C | N1-C2-O2 | 13.39 | 126.93 | 118.90 |
| 26 | BB | 1644 | C | O4'-C1'-N1 | 13.39 | 118.91 | 108.20 |
| 26 | BB | 1567 | G | C8-N9-C4 | -13.38 | 101.05 | 106.40 |
| 26 | BB | 1710 | G | C2-N3-C4 | 13.38 | 118.59 | 111.90 |
| 26 | BB | 57 | C | N1-C2-O2 | 13.37 | 126.92 | 118.90 |
| 1 | AA | 554 | A | N9-C4-C5 | 13.36 | 111.14 | 105.80 |
| 1 | AA | 1109 | C | C2-N3-C4 | 13.36 | 126.58 | 119.90 |
| 26 | BB | 2086 | U | C5-C4-O4 | -13.36 | 117.88 | 125.90 |
| 26 | BB | 54 | G | C2-N3-C4 | 13.36 | 118.58 | 111.90 |
| 26 | BB | 2612 | C | N3-C4-N4 | 13.36 | 127.35 | 118.00 |
| 26 | BB | 406 | G | N9-C4-C5 | 13.35 | 110.74 | 105.40 |
| 26 | BB | 2638 | G | C6-N1-C2 | -13.35 | 117.09 | 125.10 |
| 1 | AA | 58 | C | O4'-C1'-N1 | 13.35 | 118.88 | 108.20 |
| 1 | AA | 588 | G | C8-N9-C4 | -13.34 | 101.06 | 106.40 |
| 1 | AA | 705 | G | N9-C4-C5 | 13.34 | 110.73 | 105.40 |
| 26 | BB | 2427 | C | O4'-C1'-N1 | 13.34 | 118.87 | 108.20 |
| 1 | AA | 469 | C | C6-N1-C2 | -13.33 | 114.97 | 120.30 |
| 1 | AA | 550 | G | C8-N9-C4 | -13.33 | 101.07 | 106.40 |
| 26 | BB | 1511 | G | N9-C4-C5 | 13.33 | 110.73 | 105.40 |
| 26 | BB | 2260 | C | N1-C2-O2 | 13.33 | 126.90 | 118.90 |
| 26 | BB | 985 | C | O4'-C1'-N1 | 13.33 | 118.86 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1833 | C | O4'-C1'-N1 | 13.32 | 118.86 | 108.20 |
| 1 | AA | 475 | C | O4'-C1'-N1 | 13.32 | 118.85 | 108.20 |
| 21 | AU | 3 | TYR | CB-CG-CD2 | -13.32 | 113.01 | 121.00 |
| 26 | BB | 775 | G | C2-N3-C4 | 13.32 | 118.56 | 111.90 |
| 26 | BB | 1380 | G | C5-C6-O6 | 13.31 | 136.59 | 128.60 |
| 26 | BB | 2821 | A | N9-C4-C5 | 13.31 | 111.12 | 105.80 |
| 26 | BB | 2649 | C | N3-C4-C5 | 13.30 | 127.22 | 121.90 |
| 1 | AA | 438 | U | C5-C6-N1 | -13.30 | 116.05 | 122.70 |
| 8 | AH | 111 | ARG | NE-CZ-NH1 | 13.30 | 126.95 | 120.30 |
| 26 | BB | 240 | C | N3-C4-C5 | -13.29 | 116.58 | 121.90 |
| 6 | AF | 10 | ARG | NE-CZ-NH1 | 13.28 | 126.94 | 120.30 |
| 26 | BB | 1586 | A | N1-C6-N6 | 13.28 | 126.57 | 118.60 |
| 26 | BB | 1343 | G | N3-C4-C5 | -13.28 | 121.96 | 128.60 |
| 1 | AA | 654 | G | C2-N3-C4 | 13.27 | 118.54 | 111.90 |
| 26 | BB | 204 | A | O4'-C1'-N9 | 13.27 | 118.82 | 108.20 |
| 26 | BB | 2635 | A | C2-N3-C4 | 13.27 | 117.24 | 110.60 |
| 6 | AF | 41 | TYR | CB-CG-CD2 | -13.27 | 113.04 | 121.00 |
| 26 | BB | 321 | U | N3-C2-O2 | -13.26 | 112.92 | 122.20 |
| 26 | BB | 809 | G | O4'-C1'-N9 | 13.24 | 118.80 | 108.20 |
| 26 | BB | 800 | A | C6-N1-C2 | 13.24 | 126.54 | 118.60 |
| 1 | AA | 1034 | G | C8-N9-C4 | -13.23 | 101.11 | 106.40 |
| 26 | BB | 1888 | G | C3'-C2'-C1' | -13.23 | 90.92 | 101.50 |
| 26 | BB | 6 | A | N7-C8-N9 | 13.21 | 120.41 | 113.80 |
| 1 | AA | 753 | A | N9-C4-C5 | 13.21 | 111.08 | 105.80 |
| 25 | BA | 53 | A | C3'-C2'-C1' | 13.21 | 112.06 | 101.50 |
| 1 | AA | 493 | A | C5-C6-N1 | 13.21 | 124.30 | 117.70 |
| 26 | BB | 1098 | A | C5-C6-N6 | -13.21 | 113.14 | 123.70 |
| 1 | AA | 1403 | C | N3-C2-O2 | -13.20 | 112.66 | 121.90 |
| 1 | AA | 1370 | G | N9-C4-C5 | -13.20 | 100.12 | 105.40 |
| 26 | BB | 1243 | C | C2-N3-C4 | 13.20 | 126.50 | 119.90 |
| 26 | BB | 2192 | U | N3-C4-O4 | 13.19 | 128.63 | 119.40 |
| 1 | AA | 1190 | G | N3-C4-C5 | -13.19 | 122.00 | 128.60 |
| 26 | BB | 2723 | C | O4'-C1'-N1 | 13.19 | 118.75 | 108.20 |
| 26 | BB | 2686 | G | C4-C5-N7 | -13.18 | 105.53 | 110.80 |
| 1 | AA | 232 | G | N9-C4-C5 | 13.18 | 110.67 | 105.40 |
| 1 | AA | 399 | G | C2-N3-C4 | -13.18 | 105.31 | 111.90 |
| 1 | AA | 1258 | G | N3-C4-C5 | -13.18 | 122.01 | 128.60 |
| 26 | BB | 1280 | G | C5-C6-N1 | 13.18 | 118.09 | 111.50 |
| 26 | BB | 1881 | C | C6-N1-C2 | -13.18 | 115.03 | 120.30 |
| 26 | BB | 2075 | U | C4'-C3'-C2' | -13.17 | 89.43 | 102.60 |
| 26 | BB | 1942 | C | C6-N1-C2 | 13.17 | 125.57 | 120.30 |
| 26 | BB | 555 | G | C2-N3-C4 | 13.17 | 118.48 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 149 | A | C5-N7-C8 | -13.16 | 97.32 | 103.90 |
| 3 | AC | 55 | A | C3'-C2'-C1' | 13.16 | 112.03 | 101.50 |
| 26 | BB | 376 | G | N9-C4-C5 | 13.16 | 110.67 | 105.40 |
| 26 | BB | 553 | G | N3-C4-C5 | -13.16 | 122.02 | 128.60 |
| 1 | AA | 330 | C | N1-C2-O2 | 13.16 | 126.79 | 118.90 |
| 1 | AA | 736 | C | C6-N1-C2 | -13.15 | 115.04 | 120.30 |
| 26 | BB | 2330 | G | C5-C6-N1 | 13.15 | 118.08 | 111.50 |
| 26 | BB | 2716 | C | C5-C6-N1 | 13.15 | 127.58 | 121.00 |
| 26 | BB | 1303 | G | C5-C6-N1 | 13.15 | 118.08 | 111.50 |
| 25 | BA | 88 | C | N1-C2-O2 | 13.14 | 126.78 | 118.90 |
| 26 | BB | 758 | C | C6-N1-C2 | 13.14 | 125.56 | 120.30 |
| 26 | BB | 93 | G | N3-C4-C5 | -13.13 | 122.03 | 128.60 |
| 26 | BB | 828 | U | C5-C6-N1 | -13.13 | 116.13 | 122.70 |
| 1 | AA | 259 | G | O4'-C1'-N9 | 13.13 | 118.70 | 108.20 |
| 26 | BB | 2894 | G | C4-C5-N7 | 13.13 | 116.05 | 110.80 |
| 1 | AA | 749 | A | C4-C5-C6 | -13.12 | 110.44 | 117.00 |
| 26 | BB | 1529 | G | C5-C6-O6 | -13.12 | 120.73 | 128.60 |
| 26 | BB | 2174 | C | C6-N1-C2 | -13.11 | 115.06 | 120.30 |
| 1 | AA | 336 | A | C2-N3-C4 | 13.11 | 117.16 | 110.60 |
| 1 | AA | 416 | G | N7-C8-N9 | 13.11 | 119.66 | 113.10 |
| 15 | AO | 93 | ARG | NE-CZ-NH2 | -13.11 | 113.75 | 120.30 |
| 26 | BB | 1837 | C | C5-C4-N4 | -13.11 | 111.03 | 120.20 |
| 26 | BB | 1511 | G | C2-N3-C4 | 13.10 | 118.45 | 111.90 |
| 26 | BB | 1653 | G | N9-C4-C5 | 13.10 | 110.64 | 105.40 |
| 26 | BB | 1388 | G | N7-C8-N9 | -13.09 | 106.55 | 113.10 |
| 1 | AA | 1401 | G | C8-N9-C4 | -13.08 | 101.17 | 106.40 |
| 26 | BB | 359 | G | C8-N9-C4 | -13.08 | 101.17 | 106.40 |
| 1 | AA | 2 | A | N3-C4-C5 | -13.08 | 117.65 | 126.80 |
| 1 | AA | 332 | G | N3-C2-N2 | -13.07 | 110.75 | 119.90 |
| 1 | AA | 1190 | G | N9-C4-C5 | 13.07 | 110.63 | 105.40 |
| 25 | BA | 24 | G | C4-C5-N7 | -13.07 | 105.57 | 110.80 |
| 13 | AM | 5 | ARG | NE-CZ-NH2 | -13.06 | 113.77 | 120.30 |
| 26 | BB | 2157 | G | O4'-C1'-N9 | 13.06 | 118.65 | 108.20 |
| 1 | AA | 1515 | G | N9-C4-C5 | 13.06 | 110.62 | 105.40 |
| 26 | BB | 1607 | C | C5'-C4'-O4' | 13.06 | 124.77 | 109.10 |
| 26 | BB | 1037 | G | N9-C4-C5 | 13.05 | 110.62 | 105.40 |
| 26 | BB | 2201 | G | N9-C4-C5 | 13.05 | 110.62 | 105.40 |
| 26 | BB | 198 | C | O4'-C1'-N1 | 13.05 | 118.64 | 108.20 |
| 26 | BB | 1808 | A | C8-N9-C4 | -13.04 | 100.58 | 105.80 |
| 26 | BB | 1340 | U | C5-C4-O4 | -13.04 | 118.08 | 125.90 |
| 26 | BB | 225 | C | C5-C4-N4 | -13.04 | 111.08 | 120.20 |
| 1 | AA | 1479 | C | C5-C6-N1 | 13.03 | 127.52 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 41 | C | C6-N1-C2 | -13.03 | 115.09 | 120.30 |
| 25 | BA | 102 | G | C5-C6-N1 | 13.03 | 118.01 | 111.50 |
| 26 | BB | 228 | C | O4'-C1'-N1 | 13.03 | 118.62 | 108.20 |
| 26 | BB | 930 | G | C4-C5-N7 | -13.03 | 105.59 | 110.80 |
| 26 | BB | 1592 | C | N1-C2-O2 | 13.02 | 126.71 | 118.90 |
| 26 | BB | 1170 | C | O4'-C1'-N1 | 13.02 | 118.61 | 108.20 |
| 26 | BB | 1545 | A | O4'-C1'-N9 | 13.02 | 118.61 | 108.20 |
| 26 | BB | 2391 | G | N1-C6-O6 | -13.02 | 112.09 | 119.90 |
| 26 | BB | 1043 | C | O4'-C1'-N1 | 13.02 | 118.61 | 108.20 |
| 26 | BB | 2426 | A | O4'-C1'-N9 | 13.01 | 118.61 | 108.20 |
| 41 | BQ | 9 | ARG | NE-CZ-NH2 | -13.01 | 113.79 | 120.30 |
| 26 | BB | 192 | C | N1-C2-O2 | 13.01 | 126.70 | 118.90 |
| 1 | AA | 762 | U | O4'-C1'-N1 | 13.01 | 118.61 | 108.20 |
| 1 | AA | 1322 | C | N1-C2-O2 | 13.01 | 126.70 | 118.90 |
| 26 | BB | 1580 | A | N1-C2-N3 | -13.01 | 122.80 | 129.30 |
| 26 | BB | 2838 | G | N3-C4-C5 | -13.00 | 122.10 | 128.60 |
| 26 | BB | 423 | A | C8-N9-C4 | -13.00 | 100.60 | 105.80 |
| 1 | AA | 109 | A | O4'-C1'-N9 | 13.00 | 118.60 | 108.20 |
| 1 | AA | 191 | G | N9-C4-C5 | -12.99 | 100.20 | 105.40 |
| 1 | AA | 559 | A | O4'-C1'-N9 | 12.99 | 118.59 | 108.20 |
| 26 | BB | 2156 | G | C5-N7-C8 | -12.99 | 97.81 | 104.30 |
| 26 | BB | 189 | G | C6-C5-N7 | -12.98 | 122.61 | 130.40 |
| 1 | AA | 987 | G | O4'-C1'-N9 | 12.98 | 118.58 | 108.20 |
| 4 | AD | 63 | C | C2-N3-C4 | 12.98 | 126.39 | 119.90 |
| 1 | AA | 40 | C | N3-C2-O2 | -12.97 | 112.82 | 121.90 |
| 26 | BB | 1506 | U | N3-C4-O4 | 12.97 | 128.48 | 119.40 |
| 1 | AA | 1520 | C | C3'-C2'-C1' | 12.96 | 111.87 | 101.50 |
| 26 | BB | 2814 | A | O4'-C1'-N9 | 12.96 | 118.56 | 108.20 |
| 1 | AA | 1217 | C | C4-C5-C6 | -12.96 | 110.92 | 117.40 |
| 15 | AO | 120 | ARG | NE-CZ-NH2 | -12.95 | 113.83 | 120.30 |
| 26 | BB | 2408 | U | N3-C2-O2 | -12.95 | 113.13 | 122.20 |
| 26 | BB | 413 | C | N1-C2-O2 | 12.95 | 126.67 | 118.90 |
| 26 | BB | 1637 | A | C4-C5-C6 | 12.95 | 123.47 | 117.00 |
| 26 | BB | 1460 | U | C3'-C2'-C1' | 12.94 | 111.85 | 101.50 |
| 26 | BB | 1289 | C | N1-C2-O2 | 12.93 | 126.66 | 118.90 |
| 26 | BB | 784 | G | O4'-C1'-N9 | 12.93 | 118.55 | 108.20 |
| 1 | AA | 1031 | C | O4'-C1'-N1 | 12.93 | 118.54 | 108.20 |
| 26 | BB | 1014 | A | C8-N9-C4 | -12.92 | 100.63 | 105.80 |
| 1 | AA | 757 | U | O4'-C1'-N1 | 12.92 | 118.53 | 108.20 |
| 4 | AD | 24 | C | C6-N1-C2 | 12.92 | 125.47 | 120.30 |
| 26 | BB | 611 | C | O4'-C1'-N1 | 12.92 | 118.53 | 108.20 |
| 26 | BB | 1087 | G | C2-N3-C4 | 12.92 | 118.36 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1029 | A | C8-N9-C4 | -12.91 | 100.63 | 105.80 |
| 1 | AA | 149 | A | N7-C8-N9 | 12.91 | 120.26 | 113.80 |
| 25 | BA | 71 | C | C2-N3-C4 | 12.91 | 126.36 | 119.90 |
| 26 | BB | 1179 | G | C8-N9-C4 | -12.91 | 101.23 | 106.40 |
| 40 | BP | 64 | ARG | NE-CZ-NH1 | 12.91 | 126.75 | 120.30 |
| 1 | AA | 255 | G | N7-C8-N9 | 12.91 | 119.55 | 113.10 |
| 1 | AA | 1152 | A | O4'-C1'-N9 | 12.91 | 118.53 | 108.20 |
| 26 | BB | 1158 | C | N1-C2-O2 | 12.91 | 126.64 | 118.90 |
| 26 | BB | 530 | G | C8-N9-C4 | -12.91 | 101.24 | 106.40 |
| 26 | BB | 2289 | G | C8-N9-C4 | -12.90 | 101.24 | 106.40 |
| 26 | BB | 2426 | A | C8-N9-C4 | -12.90 | 100.64 | 105.80 |
| 26 | BB | 788 | A | C5-N7-C8 | -12.90 | 97.45 | 103.90 |
| 1 | AA | 1039 | G | O4'-C1'-N9 | 12.89 | 118.52 | 108.20 |
| 26 | BB | 439 | A | C8-N9-C4 | -12.89 | 100.64 | 105.80 |
| 1 | AA | 183 | C | C1'-O4'-C4' | -12.89 | 99.59 | 109.90 |
| 26 | BB | 323 | C | O4'-C1'-N1 | 12.89 | 118.51 | 108.20 |
| 26 | BB | 2736 | A | C2-N3-C4 | 12.89 | 117.05 | 110.60 |
| 26 | BB | 783 | A | C5-C6-N1 | 12.89 | 124.14 | 117.70 |
| 1 | AA | 1011 | C | N3-C4-C5 | 12.88 | 127.05 | 121.90 |
| 26 | BB | 1935 | G | C8-N9-C4 | 12.88 | 111.55 | 106.40 |
| 1 | AA | 1387 | G | N7-C8-N9 | 12.88 | 119.54 | 113.10 |
| 1 | AA | 204 | G | N3-C4-C5 | -12.88 | 122.16 | 128.60 |
| 26 | BB | 2592 | G | N9-C4-C5 | 12.88 | 110.55 | 105.40 |
| 26 | BB | 1509 | A | C8-N9-C4 | -12.86 | 100.66 | 105.80 |
| 26 | BB | 1567 | G | C4-C5-N7 | -12.85 | 105.66 | 110.80 |
| 26 | BB | 2688 | G | N3-C4-C5 | -12.85 | 122.18 | 128.60 |
| 26 | BB | 944 | C | N1-C2-O2 | 12.84 | 126.61 | 118.90 |
| 1 | AA | 580 | C | N1-C2-O2 | 12.84 | 126.60 | 118.90 |
| 26 | BB | 1157 | G | C5-N7-C8 | -12.84 | 97.88 | 104.30 |
| 26 | BB | 2153 | C | O4'-C1'-N1 | 12.84 | 118.47 | 108.20 |
| 26 | BB | 2659 | G | N3-C4-C5 | -12.84 | 122.18 | 128.60 |
| 26 | BB | 1712 | U | O4'-C1'-N1 | 12.83 | 118.47 | 108.20 |
| 26 | BB | 2608 | G | C8-N9-C4 | -12.83 | 101.27 | 106.40 |
| 1 | AA | 1328 | C | C4-C5-C6 | -12.82 | 110.99 | 117.40 |
| 1 | AA | 158 | G | C8-N9-C4 | -12.82 | 101.27 | 106.40 |
| 1 | AA | 476 | U | C5-C4-O4 | -12.82 | 118.21 | 125.90 |
| 3 | AC | 58 | C | N3-C4-C5 | -12.81 | 116.77 | 121.90 |
| 26 | BB | 1577 | C | N1-C2-O2 | 12.81 | 126.59 | 118.90 |
| 1 | AA | 764 | C | O4'-C1'-N1 | 12.81 | 118.45 | 108.20 |
| 26 | BB | 846 | U | O4'-C1'-N1 | 12.81 | 118.45 | 108.20 |
| 26 | BB | 1408 | G | C2-N3-C4 | 12.81 | 118.31 | 111.90 |
| 26 | BB | 1726 | C | O4'-C1'-N1 | 12.81 | 118.45 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 329 | A | C5-N7-C8 | 12.80 | 110.30 | 103.90 |
| 26 | BB | 2282 | G | C2-N3-C4 | 12.80 | 118.30 | 111.90 |
| 1 | AA | 1061 | G | C2-N3-C4 | 12.80 | 118.30 | 111.90 |
| 1 | AA | 357 | G | C4-C5-N7 | -12.79 | 105.68 | 110.80 |
| 1 | AA | 512 | U | O4'-C1'-N1 | 12.79 | 118.43 | 108.20 |
| 26 | BB | 1471 | G | N3-C4-C5 | -12.79 | 122.21 | 128.60 |
| 26 | BB | 2124 | G | N1-C6-O6 | -12.79 | 112.23 | 119.90 |
| 55 | B4 | 48 | TYR | CB-CG-CD2 | -12.78 | 113.33 | 121.00 |
| 1 | AA | 1403 | C | N1-C2-O2 | 12.78 | 126.57 | 118.90 |
| 39 | BO | 16 | ARG | NE-CZ-NH2 | -12.78 | 113.91 | 120.30 |
| 26 | BB | 393 | C | N1-C2-O2 | 12.78 | 126.57 | 118.90 |
| 26 | BB | 597 | G | N9-C4-C5 | 12.78 | 110.51 | 105.40 |
| 26 | BB | 2392 | A | C8-N9-C4 | -12.78 | 100.69 | 105.80 |
| 26 | BB | 1267 | U | O4'-C1'-N1 | 12.77 | 118.42 | 108.20 |
| 25 | BA | 108 | A | C5-C6-N1 | 12.77 | 124.08 | 117.70 |
| 25 | BA | 102 | G | C5-C6-O6 | -12.77 | 120.94 | 128.60 |
| 26 | BB | 835 | C | O4'-C1'-N1 | 12.77 | 118.41 | 108.20 |
| 26 | BB | 1518 | C | O4'-C1'-N1 | 12.77 | 118.41 | 108.20 |
| 26 | BB | 2509 | G | N3-C4-C5 | -12.76 | 122.22 | 128.60 |
| 26 | BB | 1854 | A | C4-C5-C6 | -12.76 | 110.62 | 117.00 |
| 26 | BB | 786 | C | C5-C4-N4 | -12.75 | 111.28 | 120.20 |
| 26 | BB | 2608 | G | C4-C5-N7 | -12.75 | 105.70 | 110.80 |
| 1 | AA | 191 | G | C5-N7-C8 | -12.74 | 97.93 | 104.30 |
| 1 | AA | 899 | C | C5-C4-N4 | 12.74 | 129.12 | 120.20 |
| 1 | AA | 912 | C | O4'-C1'-N1 | 12.74 | 118.39 | 108.20 |
| 1 | AA | 477 | C | N1-C2-O2 | 12.74 | 126.54 | 118.90 |
| 15 | AO | 35 | ARG | NE-CZ-NH1 | 12.73 | 126.67 | 120.30 |
| 1 | AA | 1133 | G | N7-C8-N9 | -12.73 | 106.74 | 113.10 |
| 26 | BB | 1982 | U | O4'-C1'-N1 | 12.73 | 118.38 | 108.20 |
| 26 | BB | 208 | C | N1-C2-O2 | 12.72 | 126.53 | 118.90 |
| 1 | AA | 36 | C | N3-C4-C5 | -12.72 | 116.81 | 121.90 |
| 25 | BA | 112 | G | C8-N9-C4 | -12.72 | 101.31 | 106.40 |
| 26 | BB | 1950 | G | N3-C4-C5 | -12.72 | 122.24 | 128.60 |
| 4 | AD | 71 | G | C2-N3-C4 | 12.72 | 118.26 | 111.90 |
| 26 | BB | 263 | G | N9-C4-C5 | 12.71 | 110.48 | 105.40 |
| 26 | BB | 2804 | U | O4'-C1'-N1 | 12.71 | 118.37 | 108.20 |
| 26 | BB | 1818 | U | O4'-C1'-N1 | 12.71 | 118.36 | 108.20 |
| 4 | AD | 71 | G | N9-C4-C5 | 12.70 | 110.48 | 105.40 |
| 26 | BB | 899 | A | C8-N9-C4 | -12.70 | 100.72 | 105.80 |
| 1 | AA | 693 | G | N9-C4-C5 | 12.70 | 110.48 | 105.40 |
| 55 | B4 | 27 | ARG | NE-CZ-NH2 | 12.70 | 126.65 | 120.30 |
| 1 | AA | 21 | G | C4-C5-N7 | -12.70 | 105.72 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1334 | G | C8-N9-C4 | -12.70 | 101.32 | 106.40 |
| 26 | BB | 2895 | G | N7-C8-N9 | 12.69 | 119.45 | 113.10 |
| 1 | AA | 1388 | C | O4'-C1'-N1 | 12.69 | 118.35 | 108.20 |
| 26 | BB | 2215 | C | N3-C4-C5 | -12.69 | 116.82 | 121.90 |
| 26 | BB | 2867 | G | N9-C4-C5 | 12.69 | 110.48 | 105.40 |
| 1 | AA | 761 | G | N9-C4-C5 | 12.69 | 110.48 | 105.40 |
| 26 | BB | 1365 | A | N7-C8-N9 | 12.69 | 120.14 | 113.80 |
| 26 | BB | 2640 | G | N3-C4-C5 | -12.69 | 122.26 | 128.60 |
| 1 | AA | 11 | G | N3-C4-C5 | -12.69 | 122.26 | 128.60 |
| 1 | AA | 722 | G | N3-C4-C5 | -12.69 | 122.26 | 128.60 |
| 48 | BX | 18 | ARG | NE-CZ-NH2 | 12.69 | 126.64 | 120.30 |
| 17 | AQ | 52 | ARG | NE-CZ-NH2 | -12.68 | 113.96 | 120.30 |
| 26 | BB | 1807 | G | C8-N9-C4 | -12.68 | 101.33 | 106.40 |
| 26 | BB | 1847 | A | N1-C6-N6 | -12.68 | 110.99 | 118.60 |
| 26 | BB | 800 | A | C5-C6-N1 | -12.68 | 111.36 | 117.70 |
| 12 | AL | 37 | TYR | CB-CG-CD1 | -12.67 | 113.40 | 121.00 |
| 26 | BB | 986 | C | C6-N1-C2 | 12.67 | 125.37 | 120.30 |
| 1 | AA | 405 | U | O4'-C1'-N1 | 12.67 | 118.33 | 108.20 |
| 26 | BB | 1899 | A | C8-N9-C4 | -12.67 | 100.73 | 105.80 |
| 53 | B2 | 43 | PHE | CB-CG-CD1 | -12.65 | 111.94 | 120.80 |
| 1 | AA | 930 | C | O4'-C1'-N1 | 12.65 | 118.32 | 108.20 |
| 26 | BB | 1108 | U | O4'-C1'-N1 | 12.65 | 118.32 | 108.20 |
| 26 | BB | 1491 | G | C8-N9-C4 | -12.65 | 101.34 | 106.40 |
| 1 | AA | 1439 | G | C2-N3-C4 | 12.65 | 118.22 | 111.90 |
| 1 | AA | 248 | C | N1-C2-O2 | 12.64 | 126.48 | 118.90 |
| 26 | BB | 81 | G | O4'-C1'-N9 | 12.64 | 118.31 | 108.20 |
| 26 | BB | 118 | A | O4'-C1'-N9 | 12.64 | 118.31 | 108.20 |
| 26 | BB | 860 | U | N3-C2-O2 | -12.64 | 113.35 | 122.20 |
| 10 | AJ | 154 | ARG | NE-CZ-NH2 | -12.63 | 113.98 | 120.30 |
| 25 | BA | 64 | G | C8-N9-C4 | -12.63 | 101.35 | 106.40 |
| 26 | BB | 28 | A | N1-C6-N6 | 12.63 | 126.18 | 118.60 |
| 26 | BB | 1228 | G | N9-C4-C5 | 12.64 | 110.45 | 105.40 |
| 26 | BB | 1511 | G | C8-N9-C4 | -12.63 | 101.35 | 106.40 |
| 26 | BB | 2102 | G | N7-C8-N9 | 12.63 | 119.42 | 113.10 |
| 26 | BB | 1804 | C | C6-N1-C2 | -12.63 | 115.25 | 120.30 |
| 26 | BB | 399 | U | O4'-C1'-N1 | 12.62 | 118.30 | 108.20 |
| 26 | BB | 1025 | G | O4'-C1'-N9 | 12.62 | 118.30 | 108.20 |
| 26 | BB | 1386 | C | C2-N3-C4 | 12.62 | 126.21 | 119.90 |
| 1 | AA | 222 | C | C6-N1-C2 | -12.62 | 115.25 | 120.30 |
| 26 | BB | 498 | G | O4'-C1'-N9 | 12.62 | 118.29 | 108.20 |
| 26 | BB | 2447 | G | C8-N9-C4 | -12.62 | 101.35 | 106.40 |
| 26 | BB | 916 | G | N3-C4-C5 | -12.61 | 122.30 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1137 | G | N9-C4-C5 | 12.61 | 110.44 | 105.40 |
| 26 | BB | 2874 | C | C6-N1-C2 | 12.61 | 125.34 | 120.30 |
| 1 | AA | 1530 | G | C4-C5-C6 | 12.60 | 126.36 | 118.80 |
| 26 | BB | 1251 | C | N3-C4-C5 | -12.60 | 116.86 | 121.90 |
| 26 | BB | 2777 | G | C8-N9-C4 | -12.60 | 101.36 | 106.40 |
| 1 | AA | 991 | U | N3-C2-O2 | -12.60 | 113.38 | 122.20 |
| 26 | BB | 248 | G | C4-C5-N7 | -12.60 | 105.76 | 110.80 |
| 26 | BB | 837 | C | N1-C2-O2 | 12.60 | 126.46 | 118.90 |
| 26 | BB | 2688 | G | C6-C5-N7 | -12.60 | 122.84 | 130.40 |
| 8 | AH | 53 | ARG | NE-CZ-NH2 | -12.60 | 114.00 | 120.30 |
| 26 | BB | 2214 | C | O4'-C1'-N1 | 12.60 | 118.28 | 108.20 |
| 1 | AA | 1143 | G | C8-N9-C4 | -12.59 | 101.36 | 106.40 |
| 1 | AA | 1426 | G | N9-C4-C5 | -12.59 | 100.36 | 105.40 |
| 4 | AD | 35 | C | C4-C5-C6 | -12.59 | 111.10 | 117.40 |
| 26 | BB | 181 | A | N7-C8-N9 | -12.59 | 107.50 | 113.80 |
| 26 | BB | 2671 | G | O4'-C1'-N9 | 12.59 | 118.27 | 108.20 |
| 26 | BB | 2271 | G | N3-C4-C5 | -12.59 | 122.31 | 128.60 |
| 1 | AA | 134 | G | C4-C5-N7 | -12.58 | 105.77 | 110.80 |
| 1 | AA | 1143 | G | N9-C4-C5 | 12.58 | 110.43 | 105.40 |
| 26 | BB | 1271 | G | C8-N9-C4 | -12.58 | 101.37 | 106.40 |
| 26 | BB | 2 | G | N3-C4-C5 | -12.58 | 122.31 | 128.60 |
| 26 | BB | 2234 | G | N7-C8-N9 | 12.58 | 119.39 | 113.10 |
| 26 | BB | 295 | G | O4'-C1'-N9 | 12.57 | 118.26 | 108.20 |
| 1 | AA | 1368 | A | C4-C5-C6 | -12.57 | 110.72 | 117.00 |
| 26 | BB | 2495 | G | C8-N9-C4 | -12.57 | 101.37 | 106.40 |
| 26 | BB | 1858 | A | N9-C4-C5 | -12.57 | 100.77 | 105.80 |
| 1 | AA | 1515 | G | N3-C4-C5 | -12.56 | 122.32 | 128.60 |
| 26 | BB | 2288 | A | C5-N7-C8 | 12.56 | 110.18 | 103.90 |
| 26 | BB | 237 | C | C4-C5-C6 | 12.56 | 123.68 | 117.40 |
| 26 | BB | 1141 | U | O4'-C1'-N1 | 12.56 | 118.25 | 108.20 |
| 26 | BB | 1814 | G | N9-C4-C5 | 12.56 | 110.42 | 105.40 |
| 26 | BB | 1973 | G | N3-C4-C5 | -12.56 | 122.32 | 128.60 |
| 26 | BB | 2192 | U | O4'-C1'-N1 | 12.56 | 118.25 | 108.20 |
| 1 | AA | 277 | C | O4'-C1'-N1 | 12.56 | 118.25 | 108.20 |
| 1 | AA | 293 | G | C4-C5-N7 | -12.55 | 105.78 | 110.80 |
| 26 | BB | 2751 | G | C8-N9-C4 | -12.55 | 101.38 | 106.40 |
| 1 | AA | 919 | A | O4'-C1'-N9 | 12.54 | 118.23 | 108.20 |
| 26 | BB | 2258 | C | O4'-C1'-N1 | 12.54 | 118.23 | 108.20 |
| 26 | BB | 2876 | G | C4-C5-N7 | -12.54 | 105.78 | 110.80 |
| 1 | AA | 567 | G | N9-C4-C5 | 12.54 | 110.41 | 105.40 |
| 26 | BB | 332 | A | O4'-C1'-C2' | -12.53 | 93.27 | 105.80 |
| 1 | AA | 540 | G | N3-C2-N2 | -12.53 | 111.13 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2751 | G | O4'-C1'-N9 | 12.53 | 118.22 | 108.20 |
| 1 | AA | 501 | C | N3-C4-C5 | -12.53 | 116.89 | 121.90 |
| 26 | BB | 2435 | A | O4'-C1'-N9 | 12.53 | 118.22 | 108.20 |
| 26 | BB | 2021 | C | O4'-C1'-N1 | 12.52 | 118.22 | 108.20 |
| 26 | BB | 2886 | A | N7-C8-N9 | 12.52 | 120.06 | 113.80 |
| 19 | AS | 31 | ARG | NE-CZ-NH1 | 12.52 | 126.56 | 120.30 |
| 25 | BA | 106 | G | N3-C4-C5 | -12.52 | 122.34 | 128.60 |
| 26 | BB | 1980 | G | N3-C4-C5 | -12.52 | 122.34 | 128.60 |
| 26 | BB | 275 | C | N3-C4-C5 | -12.52 | 116.89 | 121.90 |
| 25 | BA | 74 | U | N3-C2-O2 | -12.51 | 113.44 | 122.20 |
| 26 | BB | 692 | C | C5-C6-N1 | 12.51 | 127.25 | 121.00 |
| 26 | BB | 2184 | A | N1-C2-N3 | -12.50 | 123.05 | 129.30 |
| 26 | BB | 2601 | C | N1-C2-O2 | 12.50 | 126.40 | 118.90 |
| 26 | BB | 2375 | G | O4'-C1'-N9 | 12.50 | 118.20 | 108.20 |
| 26 | BB | 2425 | A | N1-C6-N6 | -12.50 | 111.10 | 118.60 |
| 29 | BE | 184 | ARG | NE-CZ-NH1 | -12.50 | 114.05 | 120.30 |
| 26 | BB | 1700 | A | N7-C8-N9 | 12.50 | 120.05 | 113.80 |
| 25 | BA | 90 | C | N3-C2-O2 | -12.50 | 113.15 | 121.90 |
| 26 | BB | 140 | C | O4'-C1'-N1 | 12.50 | 118.20 | 108.20 |
| 1 | AA | 807 | A | C2-N3-C4 | 12.49 | 116.84 | 110.60 |
| 1 | AA | 726 | C | O4'-C1'-N1 | 12.49 | 118.19 | 108.20 |
| 1 | AA | 762 | U | N3-C2-O2 | -12.49 | 113.46 | 122.20 |
| 26 | BB | 1278 | C | N1-C2-O2 | 12.49 | 126.39 | 118.90 |
| 26 | BB | 1846 | G | N3-C4-C5 | -12.49 | 122.36 | 128.60 |
| 26 | BB | 2049 | G | O4'-C1'-N9 | 12.48 | 118.19 | 108.20 |
| 1 | AA | 958 | A | N7-C8-N9 | 12.48 | 120.04 | 113.80 |
| 26 | BB | 539 | G | O4'-C1'-N9 | 12.48 | 118.19 | 108.20 |
| 26 | BB | 2095 | A | C2-N3-C4 | 12.48 | 116.84 | 110.60 |
| 1 | AA | 353 | A | O4'-C1'-N9 | 12.47 | 118.18 | 108.20 |
| 26 | BB | 1238 | G | O4'-C1'-N9 | 12.47 | 118.18 | 108.20 |
| 1 | AA | 1370 | G | O4'-C1'-N9 | 12.47 | 118.18 | 108.20 |
| 26 | BB | 1321 | A | C2-N3-C4 | 12.47 | 116.83 | 110.60 |
| 26 | BB | 1702 | G | O4'-C1'-N9 | 12.46 | 118.17 | 108.20 |
| 26 | BB | 2428 | G | N9-C4-C5 | 12.46 | 110.39 | 105.40 |
| 26 | BB | 1673 | G | N3-C4-C5 | -12.46 | 122.37 | 128.60 |
| 1 | AA | 746 | A | N9-C4-C5 | 12.45 | 110.78 | 105.80 |
| 1 | AA | 1213 | A | C8-N9-C4 | -12.45 | 100.82 | 105.80 |
| 1 | AA | 1137 | C | C2-N3-C4 | 12.45 | 126.12 | 119.90 |
| 26 | BB | 831 | G | C5-C6-N1 | 12.45 | 117.72 | 111.50 |
| 26 | BB | 2561 | U | O4'-C1'-N1 | 12.45 | 118.16 | 108.20 |
| 26 | BB | 2768 | U | C5-C4-O4 | 12.44 | 133.37 | 125.90 |
| 26 | BB | 1303 | G | C6-N1-C2 | -12.44 | 117.64 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2235 | G | N7-C8-N9 | 12.44 | 119.32 | 113.10 |
| 13 | AM | 68 | ARG | NE-CZ-NH2 | 12.43 | 126.52 | 120.30 |
| 18 | AR | 57 | ARG | NE-CZ-NH1 | 12.43 | 126.52 | 120.30 |
| 26 | BB | 316 | C | N1-C2-O2 | 12.43 | 126.36 | 118.90 |
| 25 | BA | 30 | C | N1-C2-O2 | 12.43 | 126.36 | 118.90 |
| 26 | BB | 595 | C | C4'-C3'-C2' | -12.43 | 90.17 | 102.60 |
| 26 | BB | 1134 | A | O4'-C4'-C3' | 12.43 | 116.43 | 104.00 |
| 26 | BB | 1867 | G | N3-C4-C5 | -12.43 | 122.39 | 128.60 |
| 26 | BB | 1465 | G | O4'-C1'-N9 | 12.43 | 118.14 | 108.20 |
| 26 | BB | 2837 | A | C4-C5-C6 | -12.43 | 110.79 | 117.00 |
| 1 | AA | 1233 | G | N9-C4-C5 | 12.43 | 110.37 | 105.40 |
| 26 | BB | 1420 | A | C8-N9-C4 | -12.43 | 100.83 | 105.80 |
| 26 | BB | 1250 | G | C8-N9-C4 | -12.43 | 101.43 | 106.40 |
| 1 | AA | 435 | A | N1-C2-N3 | -12.42 | 123.09 | 129.30 |
| 26 | BB | 2723 | C | C5-C6-N1 | 12.42 | 127.21 | 121.00 |
| 26 | BB | 1713 | A | C4-C5-C6 | -12.42 | 110.79 | 117.00 |
| 26 | BB | 2368 | C | C6-N1-C2 | 12.41 | 125.27 | 120.30 |
| 1 | AA | 137 | U | O4'-C1'-N1 | 12.41 | 118.13 | 108.20 |
| 1 | AA | 878 | A | N1-C6-N6 | 12.41 | 126.05 | 118.60 |
| 26 | BB | 1044 | C | O4'-C1'-N1 | 12.41 | 118.13 | 108.20 |
| 1 | AA | 393 | A | N1-C2-N3 | -12.41 | 123.09 | 129.30 |
| 26 | BB | 803 | U | C5-C6-N1 | -12.41 | 116.50 | 122.70 |
| 27 | BC | 162 | ARG | NE-CZ-NH2 | 12.40 | 126.50 | 120.30 |
| 1 | AA | 1362 | A | O4'-C1'-N9 | 12.40 | 118.12 | 108.20 |
| 27 | BC | 60 | ARG | NE-CZ-NH2 | -12.39 | 114.10 | 120.30 |
| 26 | BB | 2087 | G | C6-C5-N7 | -12.39 | 122.97 | 130.40 |
| 1 | AA | 134 | G | N3-C4-C5 | -12.39 | 122.41 | 128.60 |
| 13 | AM | 37 | ARG | NE-CZ-NH2 | 12.38 | 126.49 | 120.30 |
| 26 | BB | 2443 | C | O4'-C1'-N1 | 12.38 | 118.11 | 108.20 |
| 26 | BB | 711 | G | C8-N9-C4 | -12.38 | 101.45 | 106.40 |
| 26 | BB | 2012 | G | N9-C4-C5 | 12.38 | 110.35 | 105.40 |
| 4 | AD | 66 | C | O4'-C1'-N1 | 12.38 | 118.10 | 108.20 |
| 26 | BB | 2636 | C | O4'-C1'-N1 | 12.38 | 118.10 | 108.20 |
| 1 | AA | 862 | C | N3-C4-C5 | 12.37 | 126.85 | 121.90 |
| 26 | BB | 1036 | G | C2-N3-C4 | 12.36 | 118.08 | 111.90 |
| 26 | BB | 1581 | G | C8-N9-C4 | -12.36 | 101.46 | 106.40 |
| 1 | AA | 115 | G | C8-N9-C4 | -12.35 | 101.46 | 106.40 |
| 26 | BB | 559 | G | O4'-C1'-N9 | 12.35 | 118.08 | 108.20 |
| 26 | BB | 772 | C | C2-N3-C4 | -12.35 | 113.73 | 119.90 |
| 26 | BB | 1468 | U | N3-C4-O4 | 12.35 | 128.04 | 119.40 |
| 26 | BB | 2219 | U | O4'-C1'-N1 | 12.35 | 118.08 | 108.20 |
| 1 | AA | 671 | G | N3-C4-N9 | -12.34 | 118.59 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 27 | BC | 164 | ARG | NE-CZ-NH2 | -12.34 | 114.13 | 120.30 |
| 26 | BB | 32 | C | N3-C4-N4 | 12.34 | 126.63 | 118.00 |
| 1 | AA | 142 | G | O4'-C1'-N9 | 12.33 | 118.07 | 108.20 |
| 1 | AA | 1244 | G | C5-C6-O6 | -12.33 | 121.20 | 128.60 |
| 26 | BB | 2152 | G | C4-C5-N7 | 12.33 | 115.73 | 110.80 |
| 26 | BB | 1483 | G | N3-C4-C5 | -12.33 | 122.44 | 128.60 |
| 26 | BB | 1823 | G | N7-C8-N9 | 12.33 | 119.26 | 113.10 |
| 41 | BQ | 25 | ARG | NE-CZ-NH1 | 12.33 | 126.46 | 120.30 |
| 3 | AC | 58 | C | C3'-C2'-C1' | 12.31 | 111.35 | 101.50 |
| 26 | BB | 822 | G | N1-C2-N3 | -12.31 | 116.51 | 123.90 |
| 26 | BB | 1503 | A | O4'-C1'-N9 | 12.31 | 118.05 | 108.20 |
| 26 | BB | 1087 | G | N3-C4-N9 | 12.31 | 133.39 | 126.00 |
| 2 | AB | 19 | G | C2-N3-C4 | 12.31 | 118.06 | 111.90 |
| 1 | AA | 117 | G | C4-C5-N7 | -12.31 | 105.88 | 110.80 |
| 26 | BB | 2326 | C | C2-N3-C4 | 12.30 | 126.05 | 119.90 |
| 1 | AA | 267 | C | N1-C2-O2 | 12.29 | 126.28 | 118.90 |
| 26 | BB | 2755 | C | C6-N1-C2 | -12.29 | 115.38 | 120.30 |
| 26 | BB | 2453 | A | C5-C6-N1 | 12.29 | 123.85 | 117.70 |
| 1 | AA | 651 | C | C2-N3-C4 | 12.29 | 126.04 | 119.90 |
| 6 | AF | 167 | TYR | CB-CG-CD2 | -12.29 | 113.63 | 121.00 |
| 26 | BB | 2376 | A | C2-N3-C4 | 12.28 | 116.74 | 110.60 |
| 1 | AA | 1503 | A | C5-N7-C8 | -12.28 | 97.76 | 103.90 |
| 26 | BB | 877 | A | C2-N3-C4 | 12.28 | 116.74 | 110.60 |
| 1 | AA | 462 | G | C4-C5-N7 | -12.28 | 105.89 | 110.80 |
| 26 | BB | 786 | C | O4'-C1'-N1 | 12.28 | 118.02 | 108.20 |
| 26 | BB | 1890 | A | C2-N3-C4 | 12.27 | 116.74 | 110.60 |
| 26 | BB | 2520 | C | O4'-C1'-N1 | 12.27 | 118.02 | 108.20 |
| 26 | BB | 2870 | C | C6-N1-C2 | -12.27 | 115.39 | 120.30 |
| 26 | BB | 1046 | A | O4'-C1'-N9 | 12.27 | 118.01 | 108.20 |
| 26 | BB | 2405 | G | C2-N3-C4 | 12.27 | 118.03 | 111.90 |
| 1 | AA | 630 | A | O4'-C1'-N9 | 12.26 | 118.01 | 108.20 |
| 25 | BA | 91 | C | O4'-C1'-N1 | 12.26 | 118.01 | 108.20 |
| 26 | BB | 686 | U | O4'-C1'-N1 | 12.26 | 118.00 | 108.20 |
| 26 | BB | 1710 | G | O4'-C1'-N9 | 12.26 | 118.00 | 108.20 |
| 26 | BB | 647 | G | C8-N9-C4 | -12.25 | 101.50 | 106.40 |
| 26 | BB | 1186 | G | C5-C6-N1 | 12.25 | 117.62 | 111.50 |
| 1 | AA | 706 | A | N9-C4-C5 | 12.24 | 110.70 | 105.80 |
| 26 | BB | 683 | U | C5-C6-N1 | -12.24 | 116.58 | 122.70 |
| 26 | BB | 1135 | C | C2-N3-C4 | -12.24 | 113.78 | 119.90 |
| 1 | AA | 570 | G | N7-C8-N9 | 12.24 | 119.22 | 113.10 |
| 1 | AA | 856 | C | C5-C6-N1 | 12.24 | 127.12 | 121.00 |
| 26 | BB | 2392 | A | N1-C2-N3 | -12.24 | 123.18 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 911 | U | O4'-C1'-N1 | 12.24 | 117.99 | 108.20 |
| 1 | AA | 1190 | G | C4-C5-N7 | -12.24 | 105.90 | 110.80 |
| 26 | BB | 2413 | G | C6-C5-N7 | -12.24 | 123.06 | 130.40 |
| 26 | BB | 2883 | A | C5-C6-N1 | -12.24 | 111.58 | 117.70 |
| 26 | BB | 679 | C | N3-C4-C5 | -12.24 | 117.01 | 121.90 |
| 40 | BP | 63 | ARG | NE-CZ-NH1 | 12.23 | 126.42 | 120.30 |
| 26 | BB | 2485 | G | O4'-C1'-N9 | 12.23 | 117.99 | 108.20 |
| 26 | BB | 693 | A | C8-N9-C4 | -12.23 | 100.91 | 105.80 |
| 1 | AA | 1316 | G | N1-C6-O6 | 12.22 | 127.23 | 119.90 |
| 1 | AA | 199 | A | N1-C6-N6 | 12.21 | 125.93 | 118.60 |
| 26 | BB | 1313 | U | N3-C2-O2 | -12.22 | 113.65 | 122.20 |
| 26 | BB | 2502 | G | C3'-C2'-C1' | 12.21 | 111.27 | 101.50 |
| 26 | BB | 1216 | G | C8-N9-C4 | -12.21 | 101.52 | 106.40 |
| 26 | BB | 1604 | C | C3'-C2'-C1' | 12.21 | 111.27 | 101.50 |
| 4 | AD | 7 | G | C8-N9-C4 | -12.20 | 101.52 | 106.40 |
| 26 | BB | 309 | A | C4-C5-N7 | -12.20 | 104.60 | 110.70 |
| 1 | AA | 28 | A | O4'-C1'-N9 | 12.20 | 117.96 | 108.20 |
| 1 | AA | 394 | G | C4-C5-N7 | -12.20 | 105.92 | 110.80 |
| 26 | BB | 1496 | A | C8-N9-C4 | -12.20 | 100.92 | 105.80 |
| 26 | BB | 1191 | G | C5-C6-N1 | 12.19 | 117.60 | 111.50 |
| 45 | BU | 84 | ARG | NE-CZ-NH1 | -12.19 | 114.20 | 120.30 |
| 1 | AA | 416 | G | C5-N7-C8 | -12.19 | 98.21 | 104.30 |
| 26 | BB | 625 | G | C4-C5-N7 | -12.19 | 105.93 | 110.80 |
| 26 | BB | 2433 | A | C8-N9-C4 | -12.18 | 100.93 | 105.80 |
| 26 | BB | 2493 | U | C5-C4-O4 | -12.17 | 118.59 | 125.90 |
| 26 | BB | 1074 | G | N9-C4-C5 | 12.17 | 110.27 | 105.40 |
| 26 | BB | 1439 | A | C8-N9-C4 | -12.17 | 100.93 | 105.80 |
| 26 | BB | 406 | G | C4-C5-N7 | -12.17 | 105.93 | 110.80 |
| 26 | BB | 1078 | U | O4'-C1'-N1 | 12.16 | 117.93 | 108.20 |
| 26 | BB | 1149 | G | O4'-C1'-N9 | 12.16 | 117.93 | 108.20 |
| 26 | BB | 2138 | G | C6-C5-N7 | -12.16 | 123.10 | 130.40 |
| 26 | BB | 741 | U | N3-C4-O4 | 12.16 | 127.91 | 119.40 |
| 26 | BB | 1631 | G | N3-C4-C5 | -12.16 | 122.52 | 128.60 |
| 26 | BB | 142 | A | N1-C2-N3 | -12.16 | 123.22 | 129.30 |
| 1 | AA | 222 | C | N3-C2-O2 | -12.15 | 113.39 | 121.90 |
| 1 | AA | 485 | U | O4'-C1'-N1 | 12.15 | 117.92 | 108.20 |
| 26 | BB | 340 | A | C5-N7-C8 | 12.15 | 109.98 | 103.90 |
| 1 | AA | 1534 | A | N9-C4-C5 | 12.15 | 110.66 | 105.80 |
| 26 | BB | 100 | U | O4'-C1'-N1 | 12.15 | 117.92 | 108.20 |
| 1 | AA | 1252 | A | N1-C2-N3 | -12.15 | 123.23 | 129.30 |
| 18 | AR | 79 | ARG | NE-CZ-NH1 | 12.15 | 126.37 | 120.30 |
| 26 | BB | 913 | U | O4'-C1'-N1 | 12.15 | 117.92 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 682 | G | C8-N9-C4 | -12.14 | 101.54 | 106.40 |
| 1 | AA | 232 | G | C8-N9-C4 | -12.14 | 101.54 | 106.40 |
| 1 | AA | 1154 | G | C5-C6-N1 | 12.14 | 117.57 | 111.50 |
| 26 | BB | 2587 | A | C5-N7-C8 | -12.14 | 97.83 | 103.90 |
| 4 | AD | 28 | U | N3-C2-O2 | -12.14 | 113.70 | 122.20 |
| 26 | BB | 2065 | C | C5-C4-N4 | -12.14 | 111.70 | 120.20 |
| 26 | BB | 2200 | C | C4-C5-C6 | -12.14 | 111.33 | 117.40 |
| 26 | BB | 2097 | A | C5-N7-C8 | -12.13 | 97.83 | 103.90 |
| 1 | AA | 580 | C | C6-N1-C2 | 12.13 | 125.15 | 120.30 |
| 26 | BB | 899 | A | O4'-C1'-N9 | 12.13 | 117.91 | 108.20 |
| 26 | BB | 137 | U | O4'-C1'-N1 | 12.13 | 117.90 | 108.20 |
| 26 | BB | 2117 | A | C5-C6-N1 | 12.12 | 123.76 | 117.70 |
| 26 | BB | 58 | G | C5-N7-C8 | -12.12 | 98.24 | 104.30 |
| 26 | BB | 2274 | A | N9-C4-C5 | 12.12 | 110.65 | 105.80 |
| 1 | AA | 1298 | U | C2-N3-C4 | -12.12 | 119.73 | 127.00 |
| 1 | AA | 471 | U | O4'-C1'-N1 | 12.12 | 117.89 | 108.20 |
| 25 | BA | 3 | C | O4'-C1'-N1 | 12.11 | 117.89 | 108.20 |
| 26 | BB | 711 | G | N9-C4-C5 | 12.11 | 110.25 | 105.40 |
| 1 | AA | 1142 | G | N7-C8-N9 | 12.11 | 119.15 | 113.10 |
| 2 | AB | 75 | C | C2-N3-C4 | 12.11 | 125.95 | 119.90 |
| 26 | BB | 2859 | G | N3-C2-N2 | 12.11 | 128.38 | 119.90 |
| 1 | AA | 1036 | A | N1-C2-N3 | -12.11 | 123.25 | 129.30 |
| 26 | BB | 454 | A | C5-C6-N1 | 12.10 | 123.75 | 117.70 |
| 26 | BB | 2790 | U | C5-C6-N1 | -12.10 | 116.65 | 122.70 |
| 26 | BB | 2735 | G | N3-C2-N2 | -12.10 | 111.43 | 119.90 |
| 1 | AA | 423 | G | O4'-C1'-N9 | 12.10 | 117.88 | 108.20 |
| 1 | AA | 818 | G | C4-C5-N7 | -12.10 | 105.96 | 110.80 |
| 26 | BB | 2858 | C | N3-C4-C5 | -12.10 | 117.06 | 121.90 |
| 1 | AA | 550 | G | C2-N3-C4 | 12.09 | 117.95 | 111.90 |
| 3 | AC | 33 | A | C2-N3-C4 | 12.09 | 116.65 | 110.60 |
| 1 | AA | 951 | G | C8-N9-C4 | -12.09 | 101.56 | 106.40 |
| 1 | AA | 809 | G | C2-N3-C4 | 12.09 | 117.94 | 111.90 |
| 26 | BB | 54 | G | C8-N9-C4 | -12.09 | 101.57 | 106.40 |
| 26 | BB | 57 | C | N3-C2-O2 | -12.09 | 113.44 | 121.90 |
| 26 | BB | 1059 | G | O4'-C1'-N9 | 12.09 | 117.87 | 108.20 |
| 26 | BB | 1449 | G | O4'-C1'-N9 | 12.09 | 117.87 | 108.20 |
| 1 | AA | 278 | G | C4-C5-N7 | -12.08 | 105.97 | 110.80 |
| 1 | AA | 630 | A | N9-C4-C5 | 12.08 | 110.63 | 105.80 |
| 1 | AA | 1266 | G | N1-C6-O6 | -12.08 | 112.65 | 119.90 |
| 2 | AB | 65 | C | O4'-C1'-N1 | 12.08 | 117.86 | 108.20 |
| 26 | BB | 2274 | A | C8-N9-C4 | -12.08 | 100.97 | 105.80 |
| 1 | AA | 1164 | G | C2-N3-C4 | 12.07 | 117.94 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 40 | BP | 64 | ARG | NE-CZ-NH2 | -12.07 | 114.27 | 120.30 |
| 26 | BB | 216 | A | O4'-C1'-N9 | 12.06 | 117.85 | 108.20 |
| 26 | BB | 2867 | G | C8-N9-C4 | -12.06 | 101.57 | 106.40 |
| 1 | AA | 1495 | U | N1-C2-O2 | 12.06 | 131.24 | 122.80 |
| 26 | BB | 788 | A | C4-C5-N7 | 12.06 | 116.73 | 110.70 |
| 26 | BB | 2536 | G | C8-N9-C4 | -12.06 | 101.58 | 106.40 |
| 26 | BB | 986 | C | N1-C2-O2 | 12.06 | 126.13 | 118.90 |
| 26 | BB | 644 | A | C5-C6-N1 | 12.05 | 123.73 | 117.70 |
| 26 | BB | 712 | G | C5-C6-O6 | -12.05 | 121.37 | 128.60 |
| 26 | BB | 873 | C | N1-C2-O2 | 12.05 | 126.13 | 118.90 |
| 26 | BB | 2472 | G | C2-N3-C4 | 12.05 | 117.93 | 111.90 |
| 1 | AA | 381 | C | C3'-C2'-C1' | 12.05 | 111.14 | 101.50 |
| 26 | BB | 1732 | C | O4'-C1'-N1 | 12.04 | 117.83 | 108.20 |
| 1 | AA | 627 | G | C4-C5-N7 | -12.04 | 105.98 | 110.80 |
| 26 | BB | 364 | C | C5-C4-N4 | -12.04 | 111.77 | 120.20 |
| 26 | BB | 817 | C | C2-N3-C4 | 12.04 | 125.92 | 119.90 |
| 26 | BB | 1028 | A | N7-C8-N9 | -12.04 | 107.78 | 113.80 |
| 26 | BB | 205 | G | N1-C6-O6 | -12.04 | 112.68 | 119.90 |
| 26 | BB | 1318 | U | C4-C5-C6 | 12.03 | 126.92 | 119.70 |
| 26 | BB | 2221 | G | C6-C5-N7 | 12.04 | 137.62 | 130.40 |
| 4 | AD | 62 | C | O4'-C1'-N1 | 12.03 | 117.83 | 108.20 |
| 32 | BH | 68 | ARG | NE-CZ-NH2 | -12.03 | 114.28 | 120.30 |
| 26 | BB | 2020 | A | O4'-C1'-N9 | 12.03 | 117.82 | 108.20 |
| 1 | AA | 7 | A | N9-C4-C5 | 12.03 | 110.61 | 105.80 |
| 1 | AA | 267 | C | N3-C4-C5 | -12.03 | 117.09 | 121.90 |
| 1 | AA | 641 | U | O4'-C1'-N1 | 12.03 | 117.82 | 108.20 |
| 26 | BB | 2185 | U | N1-C2-O2 | 12.03 | 131.22 | 122.80 |
| 26 | BB | 2902 | C | O4'-C1'-N1 | 12.03 | 117.82 | 108.20 |
| 1 | AA | 278 | G | N7-C8-N9 | -12.03 | 107.09 | 113.10 |
| 1 | AA | 1195 | C | C5-C4-N4 | -12.03 | 111.78 | 120.20 |
| 26 | BB | 192 | C | N3-C2-O2 | -12.02 | 113.48 | 121.90 |
| 26 | BB | 1680 | U | O4'-C1'-N1 | 12.02 | 117.82 | 108.20 |
| 26 | BB | 930 | G | N9-C4-C5 | 12.02 | 110.21 | 105.40 |
| 1 | AA | 950 | U | O4'-C1'-N1 | 12.02 | 117.81 | 108.20 |
| 1 | AA | 1031 | C | N1-C2-O2 | 12.01 | 126.11 | 118.90 |
| 26 | BB | 411 | G | N9-C4-C5 | 12.01 | 110.20 | 105.40 |
| 1 | AA | 795 | C | C6-N1-C2 | -12.01 | 115.50 | 120.30 |
| 26 | BB | 1234 | U | C2-N3-C4 | -12.01 | 119.80 | 127.00 |
| 26 | BB | 2431 | U | N1-C2-N3 | -12.01 | 107.70 | 114.90 |
| 1 | AA | 106 | C | N3-C2-O2 | -12.00 | 113.50 | 121.90 |
| 1 | AA | 1491 | G | C6-N1-C2 | -12.00 | 117.90 | 125.10 |
| 26 | BB | 1845 | G | C2-N3-C4 | 12.00 | 117.90 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 393 | A | C2-N3-C4 | 11.99 | 116.60 | 110.60 |
| 1 | AA | 284 | C | N3-C4-C5 | -11.99 | 117.10 | 121.90 |
| 4 | AD | 30 | G | C8-N9-C4 | -11.99 | 101.60 | 106.40 |
| 26 | BB | 2200 | C | N3-C4-C5 | 11.99 | 126.70 | 121.90 |
| 1 | AA | 1185 | G | C4-C5-N7 | 11.99 | 115.59 | 110.80 |
| 26 | BB | 536 | G | N9-C4-C5 | 11.99 | 110.19 | 105.40 |
| 26 | BB | 2264 | C | N3-C2-O2 | -11.99 | 113.51 | 121.90 |
| 26 | BB | 1964 | G | C5-C6-N1 | 11.99 | 117.49 | 111.50 |
| 26 | BB | 1098 | A | C5-C6-N1 | 11.98 | 123.69 | 117.70 |
| 26 | BB | 488 | G | N9-C4-C5 | 11.98 | 110.19 | 105.40 |
| 1 | AA | 1262 | C | O4'-C1'-N1 | 11.98 | 117.78 | 108.20 |
| 26 | BB | 1608 | A | N9-C4-C5 | -11.98 | 101.01 | 105.80 |
| 26 | BB | 2674 | G | O4'-C1'-N9 | 11.98 | 117.78 | 108.20 |
| 1 | AA | 160 | A | C8-N9-C4 | -11.97 | 101.01 | 105.80 |
| 1 | AA | 482 | A | N9-C4-C5 | 11.97 | 110.59 | 105.80 |
| 1 | AA | 1197 | A | O4'-C1'-N9 | 11.97 | 117.78 | 108.20 |
| 1 | AA | 1389 | C | O4'-C1'-N1 | 11.97 | 117.77 | 108.20 |
| 1 | AA | 1506 | U | C5-C6-N1 | -11.96 | 116.72 | 122.70 |
| 26 | BB | 424 | G | O4'-C1'-N9 | 11.96 | 117.77 | 108.20 |
| 26 | BB | 2326 | C | N3-C4-C5 | -11.96 | 117.11 | 121.90 |
| 26 | BB | 763 | G | C6-N1-C2 | -11.96 | 117.92 | 125.10 |
| 26 | BB | 2129 | C | O4'-C1'-N1 | 11.96 | 117.77 | 108.20 |
| 26 | BB | 2276 | G | C6-N1-C2 | -11.95 | 117.93 | 125.10 |
| 1 | AA | 915 | A | C2-N3-C4 | 11.95 | 116.58 | 110.60 |
| 1 | AA | 954 | G | N3-C4-C5 | -11.95 | 122.62 | 128.60 |
| 26 | BB | 422 | A | C8-N9-C4 | -11.95 | 101.02 | 105.80 |
| 26 | BB | 1604 | C | N3-C2-O2 | -11.95 | 113.54 | 121.90 |
| 26 | BB | 1664 | A | C8-N9-C4 | -11.95 | 101.02 | 105.80 |
| 1 | AA | 1383 | C | C5-C6-N1 | 11.95 | 126.97 | 121.00 |
| 26 | BB | 1718 | G | N3-C4-C5 | -11.95 | 122.63 | 128.60 |
| 26 | BB | 2403 | C | C5-C6-N1 | 11.95 | 126.97 | 121.00 |
| 1 | AA | 1080 | A | C8-N9-C4 | -11.94 | 101.02 | 105.80 |
| 26 | BB | 666 | A | C8-N9-C4 | 11.94 | 110.58 | 105.80 |
| 1 | AA | 800 | G | C4-C5-N7 | -11.94 | 106.03 | 110.80 |
| 1 | AA | 1219 | A | C8-N9-C4 | -11.94 | 101.03 | 105.80 |
| 26 | BB | 906 | U | C5-C6-N1 | -11.94 | 116.73 | 122.70 |
| 26 | BB | 976 | G | N3-C2-N2 | -11.94 | 111.54 | 119.90 |
| 26 | BB | 1369 | G | C5-C6-N1 | -11.93 | 105.53 | 111.50 |
| 26 | BB | 1818 | U | N3-C2-O2 | -11.93 | 113.85 | 122.20 |
| 1 | AA | 346 | G | O4'-C1'-N9 | 11.93 | 117.74 | 108.20 |
| 45 | BU | 88 | ARG | NE-CZ-NH2 | 11.93 | 126.27 | 120.30 |
| 1 | AA | 722 | G | C8-N9-C4 | -11.93 | 101.63 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 550 | C | N3-C4-N4 | 11.93 | 126.35 | 118.00 |
| 40 | BP | 12 | ARG | NE-CZ-NH1 | 11.93 | 126.26 | 120.30 |
| 26 | BB | 259 | G | C8-N9-C4 | -11.92 | 101.63 | 106.40 |
| 26 | BB | 326 | G | N1-C6-O6 | 11.92 | 127.05 | 119.90 |
| 26 | BB | 1442 | U | O4'-C1'-N1 | 11.92 | 117.74 | 108.20 |
| 26 | BB | 2632 | A | C3'-C2'-C1' | -11.92 | 91.96 | 101.50 |
| 26 | BB | 125 | A | N7-C8-N9 | 11.92 | 119.76 | 113.80 |
| 2 | AB | 29 | G | N3-C4-C5 | -11.91 | 122.64 | 128.60 |
| 26 | BB | 1888 | G | C8-N9-C4 | -11.91 | 101.63 | 106.40 |
| 26 | BB | 2132 | U | C5-C4-O4 | -11.91 | 118.75 | 125.90 |
| 26 | BB | 2846 | G | N3-C4-C5 | -11.90 | 122.65 | 128.60 |
| 26 | BB | 2138 | G | C8-N9-C4 | -11.90 | 101.64 | 106.40 |
| 1 | AA | 1224 | U | O4'-C1'-N1 | 11.90 | 117.72 | 108.20 |
| 25 | BA | 13 | G | C5-C6-O6 | 11.90 | 135.74 | 128.60 |
| 26 | BB | 931 | U | O4'-C1'-N1 | 11.89 | 117.72 | 108.20 |
| 26 | BB | 677 | A | C4-C5-C6 | -11.89 | 111.05 | 117.00 |
| 26 | BB | 1185 | G | N3-C4-C5 | -11.89 | 122.66 | 128.60 |
| 26 | BB | 2234 | G | C4-C5-N7 | 11.89 | 115.56 | 110.80 |
| 26 | BB | 569 | U | N1-C2-N3 | 11.89 | 122.03 | 114.90 |
| 26 | BB | 2193 | G | N3-C4-C5 | -11.89 | 122.66 | 128.60 |
| 25 | BA | 2 | G | N3-C4-C5 | -11.88 | 122.66 | 128.60 |
| 26 | BB | 2264 | C | N1-C2-O2 | 11.88 | 126.03 | 118.90 |
| 25 | BA | 73 | A | N1-C6-N6 | 11.88 | 125.73 | 118.60 |
| 26 | BB | 250 | G | C5-C6-O6 | -11.88 | 121.47 | 128.60 |
| 1 | AA | 406 | G | N1-C6-O6 | 11.88 | 127.03 | 119.90 |
| 1 | AA | 628 | G | O4'-C1'-N9 | 11.88 | 117.70 | 108.20 |
| 26 | BB | 1650 | A | O4'-C1'-N9 | 11.88 | 117.70 | 108.20 |
| 1 | AA | 1449 | C | N1-C2-O2 | 11.87 | 126.02 | 118.90 |
| 26 | BB | 1318 | U | C5-C6-N1 | -11.87 | 116.77 | 122.70 |
| 26 | BB | 1665 | A | N1-C6-N6 | -11.87 | 111.48 | 118.60 |
| 1 | AA | 974 | A | C8-N9-C4 | -11.87 | 101.05 | 105.80 |
| 26 | BB | 150 | U | O4'-C1'-N1 | 11.86 | 117.69 | 108.20 |
| 1 | AA | 220 | G | C2-N3-C4 | 11.86 | 117.83 | 111.90 |
| 26 | BB | 2510 | C | N1-C2-O2 | 11.86 | 126.02 | 118.90 |
| 2 | AB | 11 | U | O4'-C1'-N1 | 11.85 | 117.68 | 108.20 |
| 26 | BB | 2494 | G | C4-C5-N7 | -11.85 | 106.06 | 110.80 |
| 25 | BA | 29 | A | N1-C2-N3 | -11.85 | 123.38 | 129.30 |
| 26 | BB | 1840 | G | C4-C5-C6 | 11.85 | 125.91 | 118.80 |
| 26 | BB | 402 | A | O4'-C1'-N9 | 11.84 | 117.67 | 108.20 |
| 26 | BB | 1959 | G | C4-C5-N7 | -11.84 | 106.06 | 110.80 |
| 26 | BB | 2065 | C | N3-C4-N4 | 11.84 | 126.29 | 118.00 |
| 1 | AA | 1141 | C | O4'-C1'-N1 | 11.84 | 117.67 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1355 | G | C8-N9-C4 | -11.84 | 101.66 | 106.40 |
| 26 | BB | 69 | C | O4'-C1'-N1 | 11.84 | 117.67 | 108.20 |
| 26 | BB | 1762 | A | O4'-C1'-N9 | 11.83 | 117.67 | 108.20 |
| 26 | BB | 2178 | C | C2-N3-C4 | 11.83 | 125.82 | 119.90 |
| 6 | AF | 130 | ARG | NE-CZ-NH1 | 11.83 | 126.21 | 120.30 |
| 26 | BB | 2516 | A | C2-N3-C4 | 11.83 | 116.51 | 110.60 |
| 1 | AA | 176 | C | C2-N3-C4 | -11.82 | 113.99 | 119.90 |
| 1 | AA | 750 | C | O4'-C1'-N1 | 11.82 | 117.66 | 108.20 |
| 26 | BB | 2181 | U | C4-C5-C6 | 11.82 | 126.80 | 119.70 |
| 4 | AD | 62 | C | C6-N1-C2 | -11.82 | 115.57 | 120.30 |
| 26 | BB | 1384 | A | N9-C4-C5 | 11.82 | 110.53 | 105.80 |
| 1 | AA | 41 | G | N3-C2-N2 | -11.82 | 111.63 | 119.90 |
| 1 | AA | 224 | U | O4'-C1'-N1 | 11.82 | 117.65 | 108.20 |
| 1 | AA | 287 | U | O4'-C1'-N1 | 11.82 | 117.65 | 108.20 |
| 52 | B1 | 29 | ARG | NE-CZ-NH2 | -11.82 | 114.39 | 120.30 |
| 25 | BA | 70 | C | N3-C2-O2 | -11.82 | 113.63 | 121.90 |
| 26 | BB | 1516 | G | C2-N3-C4 | 11.82 | 117.81 | 111.90 |
| 30 | BF | 35 | TYR | CB-CG-CD2 | -11.82 | 113.91 | 121.00 |
| 49 | BY | 54 | ARG | NE-CZ-NH2 | 11.82 | 126.21 | 120.30 |
| 3 | AC | 55 | A | N1-C2-N3 | -11.81 | 123.39 | 129.30 |
| 26 | BB | 2386 | A | C8-N9-C4 | -11.81 | 101.07 | 105.80 |
| 1 | AA | 455 | G | N1-C2-N2 | 11.81 | 126.83 | 116.20 |
| 1 | AA | 1194 | U | O4'-C1'-N1 | 11.81 | 117.65 | 108.20 |
| 26 | BB | 2480 | C | O4'-C1'-N1 | 11.81 | 117.65 | 108.20 |
| 26 | BB | 2409 | G | N3-C4-C5 | -11.81 | 122.70 | 128.60 |
| 26 | BB | 1478 | G | C4-C5-N7 | 11.80 | 115.52 | 110.80 |
| 1 | AA | 1235 | U | O4'-C1'-N1 | 11.80 | 117.64 | 108.20 |
| 6 | AF | 131 | ARG | NE-CZ-NH2 | -11.79 | 114.40 | 120.30 |
| 25 | BA | 77 | U | O4'-C1'-N1 | 11.79 | 117.63 | 108.20 |
| 26 | BB | 513 | A | N7-C8-N9 | 11.79 | 119.70 | 113.80 |
| 26 | BB | 1246 | A | C5-C6-N1 | 11.79 | 123.60 | 117.70 |
| 26 | BB | 2712 | C | N3-C4-N4 | 11.79 | 126.25 | 118.00 |
| 1 | AA | 1294 | G | N9-C4-C5 | 11.79 | 110.12 | 105.40 |
| 26 | BB | 2456 | C | C2-N3-C4 | 11.79 | 125.79 | 119.90 |
| 1 | AA | 796 | C | N3-C4-C5 | -11.78 | 117.19 | 121.90 |
| 1 | AA | 1277 | C | N1-C2-O2 | 11.78 | 125.97 | 118.90 |
| 26 | BB | 1816 | C | O4'-C1'-N1 | 11.78 | 117.62 | 108.20 |
| 26 | BB | 263 | G | C4-C5-N7 | -11.78 | 106.09 | 110.80 |
| 26 | BB | 1053 | C | N3-C4-N4 | 11.78 | 126.25 | 118.00 |
| 26 | BB | 18 | U | O4'-C1'-N1 | 11.78 | 117.62 | 108.20 |
| 26 | BB | 794 | A | C2-N3-C4 | 11.77 | 116.49 | 110.60 |
| 26 | BB | 2675 | A | C5-C6-N1 | 11.77 | 123.59 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1258 | G | C8-N9-C4 | -11.77 | 101.69 | 106.40 |
| 1 | AA | 145 | G | C5-C6-N1 | 11.77 | 117.38 | 111.50 |
| 1 | AA | 1156 | G | N3-C2-N2 | 11.77 | 128.14 | 119.90 |
| 26 | BB | 1865 | U | C2-N3-C4 | -11.77 | 119.94 | 127.00 |
| 26 | BB | 1076 | C | C6-N1-C2 | -11.76 | 115.59 | 120.30 |
| 26 | BB | 2126 | A | N9-C4-C5 | 11.76 | 110.51 | 105.80 |
| 10 | AJ | 95 | ARG | NE-CZ-NH1 | 11.76 | 126.18 | 120.30 |
| 26 | BB | 1528 | A | N9-C4-C5 | 11.76 | 110.50 | 105.80 |
| 25 | BA | 63 | C | O4'-C1'-N1 | 11.76 | 117.61 | 108.20 |
| 1 | AA | 1540 | U | C5-C4-O4 | 11.76 | 132.95 | 125.90 |
| 26 | BB | 2308 | G | C8-N9-C4 | -11.76 | 101.70 | 106.40 |
| 1 | AA | 182 | A | O4'-C1'-N9 | 11.75 | 117.60 | 108.20 |
| 7 | AG | 103 | ARG | NE-CZ-NH2 | -11.75 | 114.42 | 120.30 |
| 26 | BB | 283 | G | N7-C8-N9 | 11.75 | 118.98 | 113.10 |
| 26 | BB | 674 | G | C8-N9-C4 | -11.75 | 101.70 | 106.40 |
| 1 | AA | 76 | G | C4-C5-N7 | 11.75 | 115.50 | 110.80 |
| 1 | AA | 736 | C | C5-C6-N1 | 11.75 | 126.88 | 121.00 |
| 1 | AA | 222 | C | C2-N3-C4 | -11.75 | 114.03 | 119.90 |
| 1 | AA | 518 | C | C6-N1-C2 | 11.75 | 125.00 | 120.30 |
| 26 | BB | 1879 | C | C6-N1-C2 | -11.75 | 115.60 | 120.30 |
| 1 | AA | 1319 | A | C5-N7-C8 | -11.74 | 98.03 | 103.90 |
| 26 | BB | 568 | U | N3-C2-O2 | -11.74 | 113.98 | 122.20 |
| 26 | BB | 391 | A | C2-N3-C4 | 11.74 | 116.47 | 110.60 |
| 1 | AA | 1200 | C | N3-C4-N4 | 11.73 | 126.21 | 118.00 |
| 1 | AA | 1393 | U | O4'-C1'-N1 | 11.73 | 117.59 | 108.20 |
| 26 | BB | 2179 | C | C6-N1-C2 | -11.73 | 115.61 | 120.30 |
| 26 | BB | 2481 | G | N9-C4-C5 | 11.73 | 110.09 | 105.40 |
| 1 | AA | 220 | G | N3-C4-N9 | 11.73 | 133.04 | 126.00 |
| 1 | AA | 1137 | C | C6-N1-C2 | -11.73 | 115.61 | 120.30 |
| 26 | BB | 2459 | A | C6-N1-C2 | 11.73 | 125.64 | 118.60 |
| 2 | AB | 45 | U | O4'-C1'-N1 | 11.73 | 117.58 | 108.20 |
| 26 | BB | 109 | C | C1'-O4'-C4' | -11.73 | 100.52 | 109.90 |
| 1 | AA | 861 | G | C6-C5-N7 | -11.73 | 123.36 | 130.40 |
| 1 | AA | 1050 | G | C3'-C2'-C1' | 11.73 | 110.88 | 101.50 |
| 26 | BB | 2754 | U | O4'-C1'-N1 | 11.72 | 117.58 | 108.20 |
| 1 | AA | 311 | C | N1-C2-O2 | 11.72 | 125.93 | 118.90 |
| 1 | AA | 1323 | G | C4-C5-N7 | -11.72 | 106.11 | 110.80 |
| 26 | BB | 1364 | G | C2-N3-C4 | 11.72 | 117.76 | 111.90 |
| 26 | BB | 1695 | G | O4'-C1'-N9 | 11.72 | 117.57 | 108.20 |
| 26 | BB | 2064 | C | N3-C4-C5 | -11.72 | 117.21 | 121.90 |
| 26 | BB | 1690 | A | C4-C5-N7 | 11.71 | 116.56 | 110.70 |
| 26 | BB | 2249 | U | N3-C2-O2 | -11.71 | 114.00 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 38 | G | C2-N3-C4 | 11.71 | 117.75 | 111.90 |
| 26 | BB | 1703 | G | C4-C5-N7 | -11.71 | 106.11 | 110.80 |
| 26 | BB | 1987 | A | C5-N7-C8 | -11.71 | 98.04 | 103.90 |
| 26 | BB | 2507 | C | N3-C4-C5 | -11.71 | 117.22 | 121.90 |
| 26 | BB | 2589 | A | N7-C8-N9 | 11.71 | 119.66 | 113.80 |
| 25 | BA | 78 | A | N1-C6-N6 | 11.71 | 125.62 | 118.60 |
| 19 | AS | 70 | ARG | NE-CZ-NH1 | 11.70 | 126.15 | 120.30 |
| 26 | BB | 558 | U | N3-C4-O4 | 11.70 | 127.59 | 119.40 |
| 1 | AA | 534 | U | O4'-C1'-N1 | 11.70 | 117.56 | 108.20 |
| 26 | BB | 1333 | G | N3-C2-N2 | -11.70 | 111.71 | 119.90 |
| 26 | BB | 2200 | C | C5-C6-N1 | 11.70 | 126.85 | 121.00 |
| 1 | AA | 1041 | G | N3-C4-C5 | -11.70 | 122.75 | 128.60 |
| 1 | AA | 1215 | G | O4'-C1'-N9 | 11.70 | 117.56 | 108.20 |
| 2 | AB | 1 | A | N9-C4-C5 | 11.69 | 110.48 | 105.80 |
| 26 | BB | 1011 | G | C4-C5-N7 | -11.69 | 106.12 | 110.80 |
| 26 | BB | 825 | A | N1-C2-N3 | -11.69 | 123.46 | 129.30 |
| 26 | BB | 355 | U | O4'-C1'-N1 | 11.69 | 117.55 | 108.20 |
| 26 | BB | 2152 | G | C5-C6-O6 | -11.68 | 121.59 | 128.60 |
| 26 | BB | 349 | U | N3-C2-O2 | -11.68 | 114.02 | 122.20 |
| 26 | BB | 2545 | G | N3-C2-N2 | 11.68 | 128.08 | 119.90 |
| 1 | AA | 174 | A | O4'-C1'-N9 | 11.68 | 117.54 | 108.20 |
| 1 | AA | 325 | A | C5-N7-C8 | -11.68 | 98.06 | 103.90 |
| 1 | AA | 489 | C | C6-N1-C2 | -11.68 | 115.63 | 120.30 |
| 26 | BB | 288 | U | O4'-C1'-N1 | 11.68 | 117.54 | 108.20 |
| 36 | BL | 27 | ARG | NE-CZ-NH2 | -11.68 | 114.46 | 120.30 |
| 26 | BB | 1830 | C | C5-C4-N4 | -11.68 | 112.03 | 120.20 |
| 26 | BB | 240 | C | O4'-C1'-N1 | 11.68 | 117.54 | 108.20 |
| 26 | BB | 1883 | U | O4'-C1'-N1 | 11.67 | 117.54 | 108.20 |
| 25 | BA | 1 | U | N1-C2-N3 | 11.67 | 121.90 | 114.90 |
| 1 | AA | 351 | G | C8-N9-C4 | -11.67 | 101.73 | 106.40 |
| 1 | AA | 307 | C | N3-C4-C5 | -11.66 | 117.23 | 121.90 |
| 1 | AA | 596 | A | O4'-C4'-C3' | 11.66 | 115.66 | 104.00 |
| 26 | BB | 979 | A | N7-C8-N9 | 11.66 | 119.63 | 113.80 |
| 26 | BB | 1428 | C | N3-C4-C5 | -11.66 | 117.24 | 121.90 |
| 26 | BB | 1846 | G | N9-C4-C5 | 11.66 | 110.06 | 105.40 |
| 26 | BB | 1928 | A | C4-C5-C6 | -11.66 | 111.17 | 117.00 |
| 26 | BB | 2092 | U | O4'-C1'-N1 | 11.65 | 117.52 | 108.20 |
| 26 | BB | 1608 | A | O4'-C1'-N9 | 11.65 | 117.52 | 108.20 |
| 26 | BB | 1770 | G | C2-N3-C4 | 11.65 | 117.73 | 111.90 |
| 1 | AA | 985 | C | O4'-C1'-N1 | 11.65 | 117.52 | 108.20 |
| 1 | AA | 1220 | G | N7-C8-N9 | 11.65 | 118.92 | 113.10 |
| 24 | AX | 66 | ARG | NE-CZ-NH2 | 11.64 | 126.12 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 723 | C | N1-C2-O2 | 11.64 | 125.89 | 118.90 |
| 1 | AA | 825 | A | C8-N9-C4 | -11.64 | 101.14 | 105.80 |
| 26 | BB | 2152 | G | N3-C4-N9 | 11.64 | 132.98 | 126.00 |
| 1 | AA | 1004 | A | N1-C2-N3 | -11.64 | 123.48 | 129.30 |
| 1 | AA | 1275 | A | O4'-C1'-N9 | 11.64 | 117.51 | 108.20 |
| 26 | BB | 1305 | C | C4-C5-C6 | -11.64 | 111.58 | 117.40 |
| 26 | BB | 2099 | U | N3-C4-O4 | -11.64 | 111.25 | 119.40 |
| 1 | AA | 100 | G | C2-N3-C4 | 11.63 | 117.72 | 111.90 |
| 1 | AA | 1294 | G | C8-N9-C4 | -11.63 | 101.75 | 106.40 |
| 1 | AA | 362 | G | N7-C8-N9 | 11.63 | 118.91 | 113.10 |
| 1 | AA | 665 | A | C8-N9-C4 | -11.62 | 101.15 | 105.80 |
| 1 | AA | 1361 | G | N7-C8-N9 | 11.62 | 118.91 | 113.10 |
| 2 | AB | 24 | G | C4-C5-N7 | -11.62 | 106.15 | 110.80 |
| 26 | BB | 2434 | A | N1-C6-N6 | -11.62 | 111.63 | 118.60 |
| 26 | BB | 1323 | C | C1'-O4'-C4' | -11.62 | 100.60 | 109.90 |
| 1 | AA | 443 | C | N3-C4-N4 | 11.62 | 126.13 | 118.00 |
| 26 | BB | 663 | G | C2-N3-C4 | 11.62 | 117.71 | 111.90 |
| 26 | BB | 2688 | G | N3-C4-N9 | 11.62 | 132.97 | 126.00 |
| 26 | BB | 1393 | A | N7-C8-N9 | 11.62 | 119.61 | 113.80 |
| 1 | AA | 580 | C | O4'-C1'-N1 | 11.61 | 117.49 | 108.20 |
| 26 | BB | 394 | C | C6-N1-C2 | -11.61 | 115.65 | 120.30 |
| 26 | BB | 609 | A | N7-C8-N9 | -11.61 | 107.99 | 113.80 |
| 26 | BB | 642 | U | C5-C4-O4 | 11.62 | 132.87 | 125.90 |
| 1 | AA | 1332 | A | C8-N9-C4 | -11.61 | 101.16 | 105.80 |
| 26 | BB | 1960 | A | C8-N9-C4 | -11.61 | 101.16 | 105.80 |
| 26 | BB | 1196 | C | C6-N1-C2 | -11.61 | 115.66 | 120.30 |
| 26 | BB | 2731 | G | C5-N7-C8 | 11.61 | 110.11 | 104.30 |
| 1 | AA | 428 | G | C5-N7-C8 | 11.61 | 110.10 | 104.30 |
| 1 | AA | 1418 | A | N7-C8-N9 | -11.61 | 108.00 | 113.80 |
| 25 | BA | 75 | G | N3-C4-C5 | -11.60 | 122.80 | 128.60 |
| 26 | BB | 171 | U | C3'-C2'-C1' | 11.60 | 110.78 | 101.50 |
| 23 | AW | 24 | ARG | NE-CZ-NH1 | 11.60 | 126.10 | 120.30 |
| 26 | BB | 856 | G | O4'-C1'-N9 | 11.60 | 117.48 | 108.20 |
| 1 | AA | 683 | G | C4-C5-N7 | -11.60 | 106.16 | 110.80 |
| 1 | AA | 211 | G | N1-C6-O6 | 11.60 | 126.86 | 119.90 |
| 26 | BB | 1238 | G | C2-N3-C4 | 11.59 | 117.70 | 111.90 |
| 1 | AA | 56 | U | N3-C2-O2 | -11.59 | 114.09 | 122.20 |
| 1 | AA | 565 | U | O4'-C1'-N1 | 11.59 | 117.47 | 108.20 |
| 25 | BA | 88 | C | O4'-C1'-N1 | 11.59 | 117.47 | 108.20 |
| 26 | BB | 1738 | G | N9-C4-C5 | 11.59 | 110.03 | 105.40 |
| 26 | BB | 2290 | G | C4-C5-N7 | -11.59 | 106.17 | 110.80 |
| 26 | BB | 2486 | C | O4'-C1'-N1 | 11.59 | 117.47 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1026 | G | C8-N9-C4 | -11.58 | 101.77 | 106.40 |
| 1 | AA | 482 | A | C2-N3-C4 | 11.58 | 116.39 | 110.60 |
| 1 | AA | 799 | G | N3-C4-C5 | -11.58 | 122.81 | 128.60 |
| 26 | BB | 2539 | C | O4'-C1'-N1 | 11.58 | 117.46 | 108.20 |
| 1 | AA | 138 | G | N3-C4-C5 | -11.58 | 122.81 | 128.60 |
| 26 | BB | 1258 | U | C5-C6-N1 | -11.57 | 116.91 | 122.70 |
| 26 | BB | 2129 | C | N1-C2-O2 | 11.57 | 125.84 | 118.90 |
| 26 | BB | 1918 | A | C6-N1-C2 | 11.57 | 125.54 | 118.60 |
| 1 | AA | 1171 | A | O4'-C1'-N9 | 11.57 | 117.46 | 108.20 |
| 26 | BB | 6 | A | C2-N3-C4 | 11.57 | 116.38 | 110.60 |
| 26 | BB | 2799 | A | C8-N9-C4 | -11.57 | 101.17 | 105.80 |
| 26 | BB | 2824 | C | C5-C6-N1 | 11.56 | 126.78 | 121.00 |
| 26 | BB | 1371 | G | N7-C8-N9 | 11.56 | 118.88 | 113.10 |
| 26 | BB | 2527 | C | N3-C4-C5 | 11.55 | 126.52 | 121.90 |
| 26 | BB | 1382 | G | C4'-C3'-C2' | -11.55 | 91.05 | 102.60 |
| 1 | AA | 1316 | G | C5-C6-N1 | -11.55 | 105.73 | 111.50 |
| 1 | AA | 1210 | C | O4'-C1'-N1 | 11.54 | 117.44 | 108.20 |
| 26 | BB | 79 | C | C6-N1-C2 | -11.54 | 115.68 | 120.30 |
| 26 | BB | 663 | G | O4'-C1'-N9 | 11.55 | 117.44 | 108.20 |
| 1 | AA | 445 | G | C2-N3-C4 | 11.54 | 117.67 | 111.90 |
| 13 | AM | 89 | ARG | NE-CZ-NH2 | -11.54 | 114.53 | 120.30 |
| 26 | BB | 45 | G | C5-C6-N1 | 11.54 | 117.27 | 111.50 |
| 26 | BB | 113 | U | C5-C4-O4 | 11.54 | 132.82 | 125.90 |
| 26 | BB | 1422 | G | N9-C4-C5 | 11.54 | 110.01 | 105.40 |
| 1 | AA | 753 | A | C4-C5-N7 | -11.53 | 104.93 | 110.70 |
| 26 | BB | 1694 | C | C2-N3-C4 | 11.54 | 125.67 | 119.90 |
| 26 | BB | 1852 | U | C3'-C2'-C1' | 11.53 | 110.73 | 101.50 |
| 26 | BB | 1903 | G | C5-C6-O6 | -11.53 | 121.68 | 128.60 |
| 1 | AA | 162 | A | O4'-C1'-N9 | 11.53 | 117.42 | 108.20 |
| 1 | AA | 1452 | C | O4'-C1'-N1 | 11.53 | 117.43 | 108.20 |
| 26 | BB | 100 | U | N3-C2-O2 | -11.53 | 114.13 | 122.20 |
| 1 | AA | 542 | G | C5-N7-C8 | -11.53 | 98.53 | 104.30 |
| 26 | BB | 189 | G | N3-C4-N9 | 11.53 | 132.92 | 126.00 |
| 26 | BB | 595 | C | C3'-C2'-C1' | 11.53 | 110.72 | 101.50 |
| 26 | BB | 1638 | C | C6-N1-C2 | -11.53 | 115.69 | 120.30 |
| 26 | BB | 2330 | G | C2-N3-C4 | 11.53 | 117.66 | 111.90 |
| 26 | BB | 882 | G | C8-N9-C4 | -11.53 | 101.79 | 106.40 |
| 26 | BB | 1495 | A | C2-N3-C4 | 11.53 | 116.36 | 110.60 |
| 1 | AA | 853 | C | N1-C2-O2 | 11.52 | 125.81 | 118.90 |
| 3 | AC | 22 | G | N9-C4-C5 | 11.52 | 110.01 | 105.40 |
| 26 | BB | 553 | G | C5-N7-C8 | 11.52 | 110.06 | 104.30 |
| 26 | BB | 984 | A | N1-C6-N6 | 11.52 | 125.51 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1289 | C | N3-C4-N4 | 11.52 | 126.06 | 118.00 |
| 26 | BB | 757 | G | O4'-C1'-N9 | 11.52 | 117.41 | 108.20 |
| 26 | BB | 1153 | C | N3-C4-C5 | -11.52 | 117.29 | 121.90 |
| 26 | BB | 2080 | A | C8-N9-C4 | -11.52 | 101.19 | 105.80 |
| 1 | AA | 132 | C | N1-C2-O2 | 11.52 | 125.81 | 118.90 |
| 1 | AA | 972 | C | O4'-C1'-N1 | 11.52 | 117.41 | 108.20 |
| 26 | BB | 1879 | C | N3-C4-C5 | -11.52 | 117.29 | 121.90 |
| 26 | BB | 108 | G | N3-C4-C5 | -11.51 | 122.84 | 128.60 |
| 26 | BB | 784 | G | N7-C8-N9 | 11.51 | 118.86 | 113.10 |
| 1 | AA | 1254 | A | N7-C8-N9 | 11.51 | 119.56 | 113.80 |
| 26 | BB | 2309 | A | C8-N9-C4 | -11.51 | 101.19 | 105.80 |
| 26 | BB | 2458 | G | C8-N9-C4 | -11.51 | 101.80 | 106.40 |
| 1 | AA | 812 | G | N3-C4-N9 | 11.51 | 132.91 | 126.00 |
| 1 | AA | 1215 | G | N7-C8-N9 | 11.51 | 118.86 | 113.10 |
| 15 | AO | 113 | ARG | NE-CZ-NH1 | 11.51 | 126.06 | 120.30 |
| 26 | BB | 1766 | G | C4-C5-N7 | -11.51 | 106.20 | 110.80 |
| 26 | BB | 1878 | G | N3-C4-C5 | -11.51 | 122.85 | 128.60 |
| 26 | BB | 1981 | A | C8-N9-C4 | -11.51 | 101.20 | 105.80 |
| 1 | AA | 865 | A | N1-C2-N3 | -11.51 | 123.55 | 129.30 |
| 39 | BO | 55 | ARG | NE-CZ-NH1 | 11.51 | 126.05 | 120.30 |
| 1 | AA | 53 | A | C5'-C4'-O4' | 11.51 | 122.91 | 109.10 |
| 26 | BB | 127 | A | C8-N9-C4 | -11.51 | 101.20 | 105.80 |
| 26 | BB | 2625 | G | C8-N9-C4 | -11.51 | 101.80 | 106.40 |
| 1 | AA | 401 | C | O4'-C1'-N1 | 11.50 | 117.40 | 108.20 |
| 26 | BB | 1456 | G | C4-C5-N7 | -11.50 | 106.20 | 110.80 |
| 26 | BB | 1887 | C | O4'-C1'-N1 | 11.50 | 117.40 | 108.20 |
| 1 | AA | 724 | G | C5'-C4'-O4' | 11.50 | 122.90 | 109.10 |
| 1 | AA | 1265 | C | C5-C6-N1 | -11.50 | 115.25 | 121.00 |
| 26 | BB | 2095 | A | C8-N9-C4 | -11.50 | 101.20 | 105.80 |
| 26 | BB | 2518 | A | C5-N7-C8 | 11.50 | 109.65 | 103.90 |
| 26 | BB | 2807 | U | N3-C4-O4 | 11.50 | 127.45 | 119.40 |
| 1 | AA | 501 | C | C2-N3-C4 | 11.50 | 125.65 | 119.90 |
| 9 | AI | 2 | ARG | NE-CZ-NH1 | 11.50 | 126.05 | 120.30 |
| 26 | BB | 634 | C | C5-C6-N1 | 11.50 | 126.75 | 121.00 |
| 26 | BB | 1564 | C | N1-C2-O2 | 11.50 | 125.80 | 118.90 |
| 26 | BB | 2148 | G | C5-C6-O6 | -11.50 | 121.70 | 128.60 |
| 1 | AA | 436 | C | C2-N3-C4 | -11.50 | 114.15 | 119.90 |
| 26 | BB | 2863 | C | N1-C2-O2 | 11.50 | 125.80 | 118.90 |
| 1 | AA | 144 | G | C8-N9-C4 | -11.49 | 101.80 | 106.40 |
| 26 | BB | 2787 | C | C4-C5-C6 | -11.49 | 111.65 | 117.40 |
| 26 | BB | 2121 | G | N3-C4-C5 | -11.49 | 122.86 | 128.60 |
| 26 | BB | 93 | G | N1-C2-N3 | -11.48 | 117.01 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 242 | G | N9-C4-C5 | 11.48 | 109.99 | 105.40 |
| 1 | AA | 1193 | G | N1-C2-N3 | -11.48 | 117.01 | 123.90 |
| 1 | AA | 892 | A | C2-N3-C4 | 11.48 | 116.34 | 110.60 |
| 26 | BB | 2165 | C | N1-C2-O2 | 11.48 | 125.79 | 118.90 |
| 50 | BZ | 56 | ARG | NE-CZ-NH2 | -11.48 | 114.56 | 120.30 |
| 26 | BB | 2765 | A | C2-N3-C4 | 11.48 | 116.34 | 110.60 |
| 26 | BB | 858 | G | C6-N1-C2 | -11.47 | 118.22 | 125.10 |
| 26 | BB | 1877 | A | C8-N9-C4 | -11.47 | 101.21 | 105.80 |
| 26 | BB | 2315 | G | N3-C2-N2 | -11.47 | 111.87 | 119.90 |
| 1 | AA | 1412 | C | N3-C4-N4 | 11.47 | 126.03 | 118.00 |
| 26 | BB | 760 | G | C2-N3-C4 | 11.47 | 117.64 | 111.90 |
| 25 | BA | 55 | U | N3-C4-C5 | -11.47 | 107.72 | 114.60 |
| 26 | BB | 2822 | G | N1-C6-O6 | -11.47 | 113.02 | 119.90 |
| 1 | AA | 1154 | G | N3-C4-C5 | -11.46 | 122.87 | 128.60 |
| 26 | BB | 624 | C | N3-C4-C5 | -11.46 | 117.31 | 121.90 |
| 26 | BB | 716 | A | O4'-C1'-N9 | 11.46 | 117.37 | 108.20 |
| 25 | BA | 105 | G | O4'-C1'-N9 | 11.46 | 117.37 | 108.20 |
| 26 | BB | 423 | A | O4'-C1'-N9 | 11.46 | 117.37 | 108.20 |
| 26 | BB | 2587 | A | N7-C8-N9 | 11.46 | 119.53 | 113.80 |
| 32 | BH | 68 | ARG | NE-CZ-NH1 | 11.46 | 126.03 | 120.30 |
| 1 | AA | 295 | C | O4'-C1'-N1 | 11.46 | 117.37 | 108.20 |
| 26 | BB | 695 | G | C6-C5-N7 | -11.46 | 123.52 | 130.40 |
| 1 | AA | 994 | A | N1-C2-N3 | -11.46 | 123.57 | 129.30 |
| 1 | AA | 1268 | G | O4'-C1'-N9 | 11.46 | 117.36 | 108.20 |
| 26 | BB | 204 | A | C6-N1-C2 | -11.46 | 111.73 | 118.60 |
| 1 | AA | 404 | G | C2-N3-C4 | 11.46 | 117.63 | 111.90 |
| 3 | AC | 52 | U | O4'-C1'-N1 | 11.46 | 117.36 | 108.20 |
| 1 | AA | 2 | A | N9-C4-C5 | 11.45 | 110.38 | 105.80 |
| 1 | AA | 1170 | A | C2-N3-C4 | 11.45 | 116.33 | 110.60 |
| 26 | BB | 297 | G | N9-C4-C5 | 11.45 | 109.98 | 105.40 |
| 1 | AA | 1491 | G | N3-C2-N2 | -11.45 | 111.88 | 119.90 |
| 26 | BB | 376 | G | C4-C5-C6 | 11.45 | 125.67 | 118.80 |
| 26 | BB | 1767 | G | C2-N3-C4 | 11.45 | 117.63 | 111.90 |
| 26 | BB | 1775 | U | O4'-C1'-N1 | 11.45 | 117.36 | 108.20 |
| 3 | AC | 57 | C | N3-C4-C5 | -11.45 | 117.32 | 121.90 |
| 26 | BB | 213 | A | N7-C8-N9 | 11.45 | 119.53 | 113.80 |
| 26 | BB | 1591 | A | C2-N3-C4 | 11.45 | 116.33 | 110.60 |
| 26 | BB | 2315 | G | N3-C4-C5 | -11.45 | 122.88 | 128.60 |
| 56 | B5 | 28 | ARG | NE-CZ-NH2 | -11.45 | 114.58 | 120.30 |
| 1 | AA | 197 | A | C5-N7-C8 | -11.45 | 98.18 | 103.90 |
| 26 | BB | 1090 | A | C8-N9-C4 | -11.45 | 101.22 | 105.80 |
| 26 | BB | 2342 | C | O4'-C1'-N1 | 11.44 | 117.36 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 429 | U | C3'-C2'-C1' | -11.44 | 92.35 | 101.50 |
| 1 | AA | 1238 | A | N9-C4-C5 | 11.44 | 110.38 | 105.80 |
| 1 | AA | 1352 | C | N3-C4-C5 | -11.44 | 117.32 | 121.90 |
| 17 | AQ | 89 | ARG | NE-CZ-NH2 | -11.44 | 114.58 | 120.30 |
| 26 | BB | 381 | G | O4'-C1'-N9 | 11.44 | 117.35 | 108.20 |
| 26 | BB | 108 | G | O4'-C1'-N9 | 11.44 | 117.35 | 108.20 |
| 26 | BB | 777 | G | C8-N9-C4 | -11.44 | 101.83 | 106.40 |
| 26 | BB | 2003 | A | N7-C8-N9 | 11.44 | 119.52 | 113.80 |
| 1 | AA | 789 | U | O4'-C1'-N1 | 11.43 | 117.34 | 108.20 |
| 26 | BB | 298 | G | C8-N9-C4 | -11.43 | 101.83 | 106.40 |
| 26 | BB | 814 | C | C5-C4-N4 | -11.43 | 112.20 | 120.20 |
| 26 | BB | 789 | A | C2-N3-C4 | 11.43 | 116.31 | 110.60 |
| 26 | BB | 1192 | G | N7-C8-N9 | 11.43 | 118.81 | 113.10 |
| 26 | BB | 1627 | G | N7-C8-N9 | 11.43 | 118.81 | 113.10 |
| 26 | BB | 2797 | U | C1'-O4'-C4' | -11.43 | 100.76 | 109.90 |
| 26 | BB | 2904 | U | O4'-C1'-N1 | 11.43 | 117.34 | 108.20 |
| 1 | AA | 711 | G | C2-N3-C4 | 11.43 | 117.61 | 111.90 |
| 1 | AA | 97 | G | N3-C4-C5 | -11.43 | 122.89 | 128.60 |
| 1 | AA | 1057 | G | C8-N9-C4 | -11.43 | 101.83 | 106.40 |
| 26 | BB | 1759 | A | N9-C4-C5 | 11.43 | 110.37 | 105.80 |
| 26 | BB | 2252 | G | N3-C2-N2 | 11.43 | 127.90 | 119.90 |
| 1 | AA | 688 | G | C4-C5-N7 | -11.42 | 106.23 | 110.80 |
| 26 | BB | 1024 | G | C2-N3-C4 | 11.42 | 117.61 | 111.90 |
| 26 | BB | 2296 | U | N3-C2-O2 | -11.42 | 114.20 | 122.20 |
| 26 | BB | 2365 | G | N9-C4-C5 | 11.42 | 109.97 | 105.40 |
| 26 | BB | 2692 | G | C8-N9-C4 | -11.42 | 101.83 | 106.40 |
| 26 | BB | 716 | A | N7-C8-N9 | 11.42 | 119.51 | 113.80 |
| 26 | BB | 733 | G | N1-C6-O6 | -11.42 | 113.05 | 119.90 |
| 26 | BB | 1448 | G | C4-C5-N7 | -11.42 | 106.23 | 110.80 |
| 26 | BB | 2067 | G | C8-N9-C4 | -11.42 | 101.83 | 106.40 |
| 12 | AL | 48 | ARG | NE-CZ-NH2 | -11.41 | 114.59 | 120.30 |
| 1 | AA | 735 | C | C5-C6-N1 | 11.41 | 126.71 | 121.00 |
| 26 | BB | 2053 | G | C8-N9-C4 | -11.41 | 101.84 | 106.40 |
| 26 | BB | 142 | A | C5-C6-N1 | 11.41 | 123.41 | 117.70 |
| 26 | BB | 2584 | U | O4'-C1'-N1 | 11.41 | 117.33 | 108.20 |
| 7 | AG | 55 | ARG | NE-CZ-NH1 | 11.41 | 126.00 | 120.30 |
| 26 | BB | 2724 | U | P-O3'-C3' | 11.41 | 133.39 | 119.70 |
| 26 | BB | 1400 | U | O4'-C1'-N1 | 11.41 | 117.33 | 108.20 |
| 26 | BB | 2903 | U | O4'-C1'-C2' | -11.41 | 94.39 | 105.80 |
| 57 | B6 | 29 | ARG | NE-CZ-NH1 | -11.41 | 114.60 | 120.30 |
| 26 | BB | 1197 | G | C5-C6-O6 | -11.40 | 121.76 | 128.60 |
| 1 | AA | 878 | A | C6-N1-C2 | 11.40 | 125.44 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1180 | A | N7-C8-N9 | -11.40 | 108.10 | 113.80 |
| 26 | BB | 647 | G | N7-C8-N9 | 11.40 | 118.80 | 113.10 |
| 53 | B2 | 63 | ARG | NE-CZ-NH2 | 11.40 | 126.00 | 120.30 |
| 1 | AA | 1484 | C | O4'-C1'-N1 | 11.40 | 117.32 | 108.20 |
| 26 | BB | 2079 | U | C2-N3-C4 | -11.40 | 120.16 | 127.00 |
| 26 | BB | 2223 | G | C8-N9-C4 | -11.40 | 101.84 | 106.40 |
| 26 | BB | 1 | G | N1-C6-O6 | -11.39 | 113.06 | 119.90 |
| 26 | BB | 33 | C | C5-C4-N4 | -11.39 | 112.23 | 120.20 |
| 26 | BB | 205 | G | C5-C6-O6 | 11.39 | 135.43 | 128.60 |
| 26 | BB | 1024 | G | C5-C6-O6 | -11.39 | 121.77 | 128.60 |
| 26 | BB | 2465 | C | O4'-C1'-N1 | 11.39 | 117.31 | 108.20 |
| 1 | AA | 355 | C | O4'-C1'-N1 | 11.39 | 117.31 | 108.20 |
| 1 | AA | 332 | G | C4-C5-N7 | -11.38 | 106.25 | 110.80 |
| 2 | AB | 75 | C | O4'-C1'-N1 | 11.38 | 117.31 | 108.20 |
| 1 | AA | 1288 | A | C5-N7-C8 | -11.38 | 98.21 | 103.90 |
| 25 | BA | 61 | G | C5-C6-O6 | -11.38 | 121.77 | 128.60 |
| 26 | BB | 1365 | A | C8-N9-C4 | -11.38 | 101.25 | 105.80 |
| 26 | BB | 1269 | A | N1-C2-N3 | -11.37 | 123.61 | 129.30 |
| 1 | AA | 1272 | G | C2-N3-C4 | 11.37 | 117.59 | 111.90 |
| 26 | BB | 167 | A | C8-N9-C4 | -11.37 | 101.25 | 105.80 |
| 26 | BB | 307 | G | C5-C6-O6 | 11.37 | 135.42 | 128.60 |
| 26 | BB | 551 | G | N3-C4-C5 | -11.37 | 122.91 | 128.60 |
| 26 | BB | 1735 | A | C6-N1-C2 | -11.37 | 111.78 | 118.60 |
| 1 | AA | 836 | G | C4-C5-N7 | -11.37 | 106.25 | 110.80 |
| 26 | BB | 1210 | G | C4-C5-N7 | -11.37 | 106.25 | 110.80 |
| 26 | BB | 2640 | G | C8-N9-C4 | -11.37 | 101.85 | 106.40 |
| 2 | AB | 35 | C | C5-C4-N4 | -11.37 | 112.24 | 120.20 |
| 25 | BA | 50 | A | N1-C2-N3 | 11.37 | 134.98 | 129.30 |
| 26 | BB | 1355 | G | C6-N1-C2 | -11.36 | 118.28 | 125.10 |
| 26 | BB | 1446 | C | O4'-C1'-N1 | 11.37 | 117.29 | 108.20 |
| 26 | BB | 591 | U | N3-C2-O2 | -11.36 | 114.25 | 122.20 |
| 26 | BB | 1906 | G | C8-N9-C4 | 11.36 | 110.94 | 106.40 |
| 1 | AA | 1054 | C | C1'-O4'-C4' | -11.36 | 100.81 | 109.90 |
| 26 | BB | 92 | U | O4'-C1'-N1 | 11.36 | 117.29 | 108.20 |
| 1 | AA | 580 | C | C5-C6-N1 | -11.36 | 115.32 | 121.00 |
| 1 | AA | 660 | C | C5-C6-N1 | 11.36 | 126.68 | 121.00 |
| 26 | BB | 307 | G | C4-C5-N7 | -11.35 | 106.26 | 110.80 |
| 26 | BB | 2184 | A | N9-C4-C5 | -11.35 | 101.26 | 105.80 |
| 1 | AA | 622 | A | N1-C6-N6 | -11.35 | 111.79 | 118.60 |
| 26 | BB | 1246 | A | C4-C5-C6 | -11.35 | 111.33 | 117.00 |
| 26 | BB | 2846 | G | C8-N9-C4 | -11.35 | 101.86 | 106.40 |
| 1 | AA | 87 | C | N3-C4-C5 | -11.35 | 117.36 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 381 | C | O4'-C1'-N1 | 11.35 | 117.28 | 108.20 |
| 1 | AA | 249 | U | O4'-C1'-N1 | 11.35 | 117.28 | 108.20 |
| 1 | AA | 1085 | U | C3'-C2'-C1' | -11.35 | 92.42 | 101.50 |
| 16 | AP | 22 | TYR | CB-CG-CD2 | -11.35 | 114.19 | 121.00 |
| 26 | BB | 358 | U | C5-C4-O4 | -11.35 | 119.09 | 125.90 |
| 26 | BB | 1380 | G | O4'-C1'-N9 | 11.35 | 117.28 | 108.20 |
| 1 | AA | 495 | A | C3'-C2'-C1' | -11.34 | 92.42 | 101.50 |
| 26 | BB | 899 | A | C4-C5-N7 | -11.34 | 105.03 | 110.70 |
| 26 | BB | 1776 | G | C5-N7-C8 | -11.34 | 98.63 | 104.30 |
| 1 | AA | 517 | G | C2-N3-C4 | 11.34 | 117.57 | 111.90 |
| 26 | BB | 678 | C | N1-C2-O2 | 11.34 | 125.70 | 118.90 |
| 26 | BB | 1920 | C | C4-C5-C6 | -11.34 | 111.73 | 117.40 |
| 1 | AA | 1258 | G | N7-C8-N9 | 11.34 | 118.77 | 113.10 |
| 1 | AA | 1504 | G | N3-C4-C5 | -11.33 | 122.93 | 128.60 |
| 26 | BB | 1149 | G | N3-C4-C5 | -11.33 | 122.93 | 128.60 |
| 26 | BB | 1304 | A | N9-C4-C5 | -11.33 | 101.27 | 105.80 |
| 26 | BB | 1337 | G | N3-C4-C5 | -11.33 | 122.93 | 128.60 |
| 26 | BB | 2260 | C | O4'-C1'-N1 | 11.33 | 117.27 | 108.20 |
| 1 | AA | 206 | C | C5-C4-N4 | -11.33 | 112.27 | 120.20 |
| 25 | BA | 60 | C | O4'-C1'-N1 | 11.33 | 117.26 | 108.20 |
| 26 | BB | 1295 | C | O4'-C1'-N1 | 11.33 | 117.26 | 108.20 |
| 2 | AB | 74 | C | C1'-O4'-C4' | -11.32 | 100.84 | 109.90 |
| 26 | BB | 1614 | A | N7-C8-N9 | 11.32 | 119.46 | 113.80 |
| 1 | AA | 780 | A | C8-N9-C4 | -11.32 | 101.27 | 105.80 |
| 1 | AA | 1238 | A | C8-N9-C4 | -11.32 | 101.27 | 105.80 |
| 26 | BB | 924 | G | C5-C6-O6 | -11.32 | 121.81 | 128.60 |
| 1 | AA | 311 | C | N3-C2-O2 | -11.32 | 113.98 | 121.90 |
| 26 | BB | 1329 | U | N3-C4-O4 | 11.32 | 127.32 | 119.40 |
| 1 | AA | 789 | U | C5-C4-O4 | -11.32 | 119.11 | 125.90 |
| 26 | BB | 768 | G | C4-C5-N7 | -11.32 | 106.27 | 110.80 |
| 26 | BB | 1406 | U | C2-N3-C4 | -11.32 | 120.21 | 127.00 |
| 26 | BB | 1157 | G | C8-N9-C4 | -11.31 | 101.87 | 106.40 |
| 26 | BB | 2156 | G | N7-C8-N9 | 11.31 | 118.76 | 113.10 |
| 26 | BB | 1068 | G | C5-C6-O6 | -11.31 | 121.81 | 128.60 |
| 1 | AA | 199 | A | O4'-C1'-N9 | 11.31 | 117.25 | 108.20 |
| 1 | AA | 1439 | G | N3-C4-C5 | -11.31 | 122.94 | 128.60 |
| 10 | AJ | 142 | ARG | NE-CZ-NH2 | 11.31 | 125.96 | 120.30 |
| 26 | BB | 1041 | G | N3-C4-C5 | -11.31 | 122.95 | 128.60 |
| 26 | BB | 2019 | A | C8-N9-C4 | -11.31 | 101.28 | 105.80 |
| 26 | BB | 2425 | A | C5-C6-N1 | 11.31 | 123.35 | 117.70 |
| 26 | BB | 2129 | C | C2-N3-C4 | 11.31 | 125.55 | 119.90 |
| 27 | BC | 9 | ARG | NE-CZ-NH2 | -11.30 | 114.65 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2309 | A | C5-C6-N6 | -11.30 | 114.66 | 123.70 |
| 1 | AA | 205 | A | N7-C8-N9 | 11.30 | 119.45 | 113.80 |
| 1 | AA | 876 | C | N3-C4-C5 | -11.30 | 117.38 | 121.90 |
| 26 | BB | 765 | C | C5-C6-N1 | 11.30 | 126.65 | 121.00 |
| 1 | AA | 205 | A | C8-N9-C4 | -11.30 | 101.28 | 105.80 |
| 26 | BB | 1345 | C | C5-C4-N4 | -11.30 | 112.29 | 120.20 |
| 26 | BB | 1879 | C | C5-C6-N1 | 11.30 | 126.65 | 121.00 |
| 26 | BB | 1014 | A | N7-C8-N9 | 11.30 | 119.45 | 113.80 |
| 25 | BA | 23 | G | C5-C6-N1 | 11.29 | 117.15 | 111.50 |
| 26 | BB | 1613 | G | O4'-C1'-N9 | 11.30 | 117.24 | 108.20 |
| 32 | BH | 54 | ARG | NE-CZ-NH2 | 11.29 | 125.95 | 120.30 |
| 1 | AA | 337 | G | O4'-C1'-N9 | 11.29 | 117.23 | 108.20 |
| 1 | AA | 404 | G | N3-C4-C5 | -11.29 | 122.96 | 128.60 |
| 26 | BB | 1696 | G | O4'-C1'-N9 | 11.29 | 117.23 | 108.20 |
| 26 | BB | 1 | G | N9-C4-C5 | -11.28 | 100.89 | 105.40 |
| 26 | BB | 233 | A | C8-N9-C4 | -11.28 | 101.29 | 105.80 |
| 26 | BB | 343 | C | O4'-C1'-N1 | 11.28 | 117.23 | 108.20 |
| 26 | BB | 662 | G | N9-C1'-C2' | -11.28 | 99.33 | 114.00 |
| 26 | BB | 550 | C | C2-N3-C4 | 11.28 | 125.54 | 119.90 |
| 26 | BB | 10 | A | C6-N1-C2 | 11.28 | 125.37 | 118.60 |
| 26 | BB | 484 | C | N3-C2-O2 | -11.28 | 114.00 | 121.90 |
| 26 | BB | 2541 | A | N1-C2-N3 | -11.28 | 123.66 | 129.30 |
| 1 | AA | 212 | G | N3-C4-C5 | -11.28 | 122.96 | 128.60 |
| 1 | AA | 691 | G | C4-C5-N7 | -11.28 | 106.29 | 110.80 |
| 26 | BB | 998 | C | C5-C4-N4 | -11.28 | 112.31 | 120.20 |
| 26 | BB | 523 | C | C5-C4-N4 | -11.27 | 112.31 | 120.20 |
| 1 | AA | 331 | G | N9-C4-C5 | 11.27 | 109.91 | 105.40 |
| 25 | BA | 74 | U | C5-C6-N1 | -11.27 | 117.06 | 122.70 |
| 26 | BB | 568 | U | N1-C2-O2 | 11.27 | 130.69 | 122.80 |
| 35 | BK | 64 | ARG | NE-CZ-NH1 | 11.27 | 125.94 | 120.30 |
| 26 | BB | 651 | G | C5-C6-N1 | 11.27 | 117.14 | 111.50 |
| 26 | BB | 1261 | C | N1-C2-O2 | 11.27 | 125.66 | 118.90 |
| 26 | BB | 473 | G | C4-C5-C6 | 11.27 | 125.56 | 118.80 |
| 26 | BB | 1183 | U | C1'-O4'-C4' | -11.27 | 100.89 | 109.90 |
| 26 | BB | 1875 | G | C8-N9-C4 | -11.27 | 101.89 | 106.40 |
| 26 | BB | 2361 | G | N1-C2-N3 | -11.27 | 117.14 | 123.90 |
| 26 | BB | 739 | A | C5-C6-N1 | 11.26 | 123.33 | 117.70 |
| 26 | BB | 897 | C | O4'-C1'-N1 | 11.26 | 117.21 | 108.20 |
| 26 | BB | 2210 | U | O4'-C1'-N1 | 11.26 | 117.21 | 108.20 |
| 26 | BB | 2424 | C | C2-N3-C4 | 11.26 | 125.53 | 119.90 |
| 1 | AA | 1491 | G | N1-C2-N3 | 11.26 | 130.66 | 123.90 |
| 26 | BB | 1376 | C | N3-C4-C5 | -11.26 | 117.40 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1542 | U | O4'-C1'-N1 | 11.26 | 117.21 | 108.20 |
| 26 | BB | 1038 | G | C8-N9-C4 | -11.26 | 101.90 | 106.40 |
| 26 | BB | 1471 | G | C2-N3-C4 | 11.26 | 117.53 | 111.90 |
| 26 | BB | 2589 | A | C8-N9-C4 | -11.26 | 101.30 | 105.80 |
| 1 | AA | 295 | C | C2-N3-C4 | 11.25 | 125.53 | 119.90 |
| 1 | AA | 625 | U | C5-C4-O4 | 11.25 | 132.65 | 125.90 |
| 26 | BB | 1450 | G | N1-C6-O6 | 11.25 | 126.65 | 119.90 |
| 26 | BB | 122 | G | C5-C6-O6 | -11.25 | 121.85 | 128.60 |
| 26 | BB | 1274 | A | O4'-C1'-N9 | 11.25 | 117.20 | 108.20 |
| 26 | BB | 2870 | C | C5-C6-N1 | 11.25 | 126.62 | 121.00 |
| 26 | BB | 1110 | G | C4-C5-N7 | -11.24 | 106.30 | 110.80 |
| 1 | AA | 559 | A | N1-C6-N6 | -11.24 | 111.85 | 118.60 |
| 3 | AC | 38 | G | N1-C2-N3 | -11.24 | 117.16 | 123.90 |
| 26 | BB | 345 | A | N1-C2-N3 | -11.24 | 123.68 | 129.30 |
| 26 | BB | 1146 | C | C6-N1-C2 | -11.24 | 115.80 | 120.30 |
| 26 | BB | 2020 | A | N7-C8-N9 | -11.24 | 108.18 | 113.80 |
| 26 | BB | 349 | U | O4'-C1'-N1 | 11.24 | 117.19 | 108.20 |
| 26 | BB | 2425 | A | N7-C8-N9 | 11.24 | 119.42 | 113.80 |
| 26 | BB | 468 | G | C5-C6-N1 | 11.24 | 117.12 | 111.50 |
| 1 | AA | 1408 | A | C2-N3-C4 | 11.23 | 116.22 | 110.60 |
| 26 | BB | 1933 | G | C4-C5-N7 | 11.23 | 115.29 | 110.80 |
| 26 | BB | 1743 | G | N7-C8-N9 | 11.23 | 118.72 | 113.10 |
| 26 | BB | 1867 | G | N1-C6-O6 | 11.23 | 126.64 | 119.90 |
| 26 | BB | 765 | C | C6-N1-C2 | -11.23 | 115.81 | 120.30 |
| 26 | BB | 2312 | U | C5-C4-O4 | 11.23 | 132.64 | 125.90 |
| 26 | BB | 1822 | C | C6-N1-C2 | 11.22 | 124.79 | 120.30 |
| 26 | BB | 28 | A | C5-C6-N6 | -11.22 | 114.72 | 123.70 |
| 26 | BB | 1571 | A | N9-C4-C5 | 11.22 | 110.29 | 105.80 |
| 26 | BB | 2080 | A | N9-C4-C5 | 11.22 | 110.29 | 105.80 |
| 26 | BB | 552 | U | C5-C4-O4 | 11.22 | 132.63 | 125.90 |
| 1 | AA | 722 | G | N9-C4-C5 | 11.22 | 109.89 | 105.40 |
| 1 | AA | 1253 | G | O4'-C1'-N9 | 11.21 | 117.17 | 108.20 |
| 26 | BB | 43 | G | N3-C4-C5 | -11.22 | 122.99 | 128.60 |
| 1 | AA | 1484 | C | C6-N1-C2 | -11.21 | 115.81 | 120.30 |
| 1 | AA | 260 | G | C4-C5-N7 | -11.21 | 106.31 | 110.80 |
| 26 | BB | 2156 | G | C6-C5-N7 | -11.21 | 123.67 | 130.40 |
| 26 | BB | 920 | A | C8-N9-C4 | -11.21 | 101.32 | 105.80 |
| 26 | BB | 1482 | G | C1'-O4'-C4' | -11.21 | 100.93 | 109.90 |
| 1 | AA | 1147 | C | N1-C2-O2 | 11.21 | 125.62 | 118.90 |
| 10 | AJ | 9 | ARG | NE-CZ-NH1 | 11.21 | 125.90 | 120.30 |
| 26 | BB | 1836 | C | C6-N1-C2 | -11.20 | 115.82 | 120.30 |
| 4 | AD | 22 | A | N9-C4-C5 | 11.20 | 110.28 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 451 | U | O4'-C1'-N1 | 11.20 | 117.16 | 108.20 |
| 26 | BB | 877 | A | N1-C6-N6 | -11.20 | 111.88 | 118.60 |
| 26 | BB | 2268 | A | N1-C2-N3 | -11.20 | 123.70 | 129.30 |
| 26 | BB | 1177 | G | C8-N9-C4 | -11.20 | 101.92 | 106.40 |
| 26 | BB | 793 | A | C8-N9-C4 | -11.19 | 101.32 | 105.80 |
| 52 | B1 | 29 | ARG | NE-CZ-NH1 | 11.19 | 125.90 | 120.30 |
| 26 | BB | 537 | G | C6-C5-N7 | -11.19 | 123.68 | 130.40 |
| 1 | AA | 1325 | C | N3-C2-O2 | -11.19 | 114.07 | 121.90 |
| 26 | BB | 1358 | G | C8-N9-C4 | -11.19 | 101.92 | 106.40 |
| 26 | BB | 1650 | A | C5-N7-C8 | -11.19 | 98.30 | 103.90 |
| 26 | BB | 2620 | C | O4'-C1'-N1 | 11.19 | 117.16 | 108.20 |
| 2 | AB | 56 | C | N1-C2-O2 | 11.19 | 125.61 | 118.90 |
| 20 | AT | 26 | ARG | NE-CZ-NH1 | 11.19 | 125.89 | 120.30 |
| 26 | BB | 76 | C | N1-C2-O2 | 11.19 | 125.61 | 118.90 |
| 26 | BB | 775 | G | N3-C4-C5 | -11.19 | 123.01 | 128.60 |
| 26 | BB | 841 | G | O4'-C1'-N9 | 11.19 | 117.15 | 108.20 |
| 26 | BB | 1216 | G | C2-N3-C4 | 11.19 | 117.49 | 111.90 |
| 1 | AA | 1053 | G | C5-N7-C8 | -11.18 | 98.71 | 104.30 |
| 26 | BB | 757 | G | N3-C2-N2 | -11.18 | 112.07 | 119.90 |
| 26 | BB | 2887 | A | N9-C4-C5 | 11.18 | 110.27 | 105.80 |
| 1 | AA | 497 | G | C8-N9-C4 | -11.18 | 101.93 | 106.40 |
| 1 | AA | 1057 | G | C6-C5-N7 | -11.18 | 123.69 | 130.40 |
| 1 | AA | 455 | G | N3-C2-N2 | -11.17 | 112.08 | 119.90 |
| 1 | AA | 1088 | G | C6-N1-C2 | -11.17 | 118.40 | 125.10 |
| 24 | AX | 68 | ARG | NE-CZ-NH1 | 11.17 | 125.89 | 120.30 |
| 26 | BB | 356 | G | N1-C2-N3 | -11.17 | 117.20 | 123.90 |
| 26 | BB | 524 | G | C2-N3-C4 | 11.17 | 117.49 | 111.90 |
| 26 | BB | 1635 | A | N7-C8-N9 | 11.17 | 119.39 | 113.80 |
| 1 | AA | 9 | G | C5-C6-N1 | 11.17 | 117.08 | 111.50 |
| 1 | AA | 542 | G | N7-C8-N9 | 11.17 | 118.68 | 113.10 |
| 1 | AA | 567 | G | C8-N9-C4 | -11.17 | 101.93 | 106.40 |
| 26 | BB | 537 | G | N3-C4-C5 | -11.17 | 123.02 | 128.60 |
| 26 | BB | 1364 | G | C4-C5-N7 | 11.16 | 115.27 | 110.80 |
| 1 | AA | 561 | U | C5-C4-O4 | 11.16 | 132.60 | 125.90 |
| 26 | BB | 236 | C | O4'-C1'-N1 | 11.16 | 117.13 | 108.20 |
| 26 | BB | 2029 | G | C2-N3-C4 | 11.16 | 117.48 | 111.90 |
| 1 | AA | 1487 | G | N1-C6-O6 | -11.16 | 113.21 | 119.90 |
| 1 | AA | 52 | C | C2-N3-C4 | -11.15 | 114.32 | 119.90 |
| 1 | AA | 456 | A | C2-N3-C4 | 11.15 | 116.18 | 110.60 |
| 2 | AB | 49 | G | C8-N9-C4 | 11.15 | 110.86 | 106.40 |
| 26 | BB | 3 | U | O4'-C1'-N1 | 11.15 | 117.12 | 108.20 |
| 26 | BB | 2451 | A | O4'-C1'-N9 | 11.15 | 117.12 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 239 | U | N3-C2-O2 | -11.15 | 114.40 | 122.20 |
| 26 | BB | 929 | U | N1-C2-O2 | 11.15 | 130.60 | 122.80 |
| 1 | AA | 496 | A | C3'-C2'-C1' | 11.15 | 110.42 | 101.50 |
| 1 | AA | 906 | A | N1-C2-N3 | -11.15 | 123.73 | 129.30 |
| 1 | AA | 414 | A | N1-C2-N3 | -11.14 | 123.73 | 129.30 |
| 1 | AA | 1334 | G | C5-C6-N1 | 11.14 | 117.07 | 111.50 |
| 26 | BB | 877 | A | N1-C2-N3 | -11.14 | 123.73 | 129.30 |
| 26 | BB | 1050 | A | N1-C6-N6 | -11.14 | 111.91 | 118.60 |
| 26 | BB | 2102 | G | C5-N7-C8 | -11.14 | 98.73 | 104.30 |
| 26 | BB | 2382 | G | C5-C6-O6 | -11.14 | 121.91 | 128.60 |
| 1 | AA | 132 | C | N3-C2-O2 | -11.14 | 114.10 | 121.90 |
| 26 | BB | 1248 | G | C4-C5-N7 | -11.14 | 106.34 | 110.80 |
| 1 | AA | 1260 | G | C5-N7-C8 | -11.14 | 98.73 | 104.30 |
| 26 | BB | 1039 | A | N7-C8-N9 | 11.14 | 119.37 | 113.80 |
| 26 | BB | 1827 | U | O4'-C1'-N1 | 11.14 | 117.11 | 108.20 |
| 26 | BB | 2379 | G | N3-C4-C5 | -11.14 | 123.03 | 128.60 |
| 26 | BB | 923 | G | O4'-C1'-N9 | 11.14 | 117.11 | 108.20 |
| 26 | BB | 201 | C | N3-C4-C5 | -11.13 | 117.45 | 121.90 |
| 26 | BB | 741 | U | C5-C6-N1 | -11.13 | 117.13 | 122.70 |
| 26 | BB | 1702 | G | C6-N1-C2 | -11.13 | 118.42 | 125.10 |
| 26 | BB | 2439 | A | C8-N9-C4 | -11.13 | 101.35 | 105.80 |
| 26 | BB | 39 | G | N1-C6-O6 | 11.13 | 126.58 | 119.90 |
| 26 | BB | 1232 | G | N1-C2-N3 | 11.13 | 130.58 | 123.90 |
| 26 | BB | 2286 | G | C4-C5-N7 | -11.13 | 106.35 | 110.80 |
| 26 | BB | 2663 | G | O4'-C1'-N9 | 11.13 | 117.10 | 108.20 |
| 40 | BP | 90 | ARG | NE-CZ-NH1 | 11.13 | 125.86 | 120.30 |
| 1 | AA | 731 | G | C8-N9-C4 | -11.13 | 101.95 | 106.40 |
| 26 | BB | 865 | C | C2-N3-C4 | 11.13 | 125.47 | 119.90 |
| 26 | BB | 2653 | U | N3-C4-O4 | 11.13 | 127.19 | 119.40 |
| 26 | BB | 669 | G | N9-C4-C5 | 11.13 | 109.85 | 105.40 |
| 1 | AA | 1081 | A | C6-N1-C2 | -11.12 | 111.93 | 118.60 |
| 13 | AM | 31 | ARG | NE-CZ-NH2 | -11.12 | 114.74 | 120.30 |
| 26 | BB | 348 | A | N9-C4-C5 | 11.12 | 110.25 | 105.80 |
| 26 | BB | 628 | G | C4-C5-N7 | -11.12 | 106.35 | 110.80 |
| 26 | BB | 1902 | C | N3-C2-O2 | -11.12 | 114.11 | 121.90 |
| 1 | AA | 530 | G | N9-C4-C5 | 11.12 | 109.85 | 105.40 |
| 3 | AC | 47 | C | C6-N1-C2 | -11.12 | 115.85 | 120.30 |
| 26 | BB | 1482 | G | N3-C4-C5 | -11.12 | 123.04 | 128.60 |
| 1 | AA | 1053 | G | N7-C8-N9 | 11.12 | 118.66 | 113.10 |
| 1 | AA | 1370 | G | N9-C1'-C2' | -11.12 | 99.55 | 114.00 |
| 26 | BB | 481 | G | O4'-C1'-N9 | 11.12 | 117.09 | 108.20 |
| 26 | BB | 2286 | G | N3-C4-C5 | -11.12 | 123.04 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2108 | A | C5-C6-N1 | 11.12 | 123.26 | 117.70 |
| 26 | BB | 1178 | C | O4'-C1'-N1 | 11.11 | 117.09 | 108.20 |
| 26 | BB | 2036 | C | C6-N1-C2 | -11.11 | 115.86 | 120.30 |
| 1 | AA | 27 | G | N3-C2-N2 | 11.11 | 127.68 | 119.90 |
| 1 | AA | 309 | A | N1-C6-N6 | 11.11 | 125.27 | 118.60 |
| 1 | AA | 363 | A | C8-N9-C4 | -11.11 | 101.36 | 105.80 |
| 26 | BB | 628 | G | N3-C4-C5 | -11.11 | 123.05 | 128.60 |
| 1 | AA | 1202 | U | C1'-O4'-C4' | -11.11 | 101.01 | 109.90 |
| 26 | BB | 2860 | A | N9-C4-C5 | 11.11 | 110.24 | 105.80 |
| 1 | AA | 436 | C | C6-N1-C2 | -11.11 | 115.86 | 120.30 |
| 26 | BB | 833 | A | N1-C6-N6 | -11.11 | 111.94 | 118.60 |
| 26 | BB | 1115 | G | N9-C4-C5 | -11.11 | 100.96 | 105.40 |
| 26 | BB | 424 | G | N9-C4-C5 | 11.11 | 109.84 | 105.40 |
| 26 | BB | 925 | A | N1-C2-N3 | 11.11 | 134.85 | 129.30 |
| 26 | BB | 2838 | G | C8-N9-C4 | -11.11 | 101.96 | 106.40 |
| 1 | AA | 442 | G | C5-N7-C8 | -11.10 | 98.75 | 104.30 |
| 26 | BB | 563 | A | C4-C5-N7 | -11.10 | 105.15 | 110.70 |
| 1 | AA | 122 | G | N9-C4-C5 | 11.10 | 109.84 | 105.40 |
| 1 | AA | 1417 | G | N1-C6-O6 | 11.10 | 126.56 | 119.90 |
| 26 | BB | 400 | G | C8-N9-C4 | -11.10 | 101.96 | 106.40 |
| 26 | BB | 1928 | A | C5-C6-N1 | 11.10 | 123.25 | 117.70 |
| 26 | BB | 446 | G | C8-N9-C4 | -11.10 | 101.96 | 106.40 |
| 26 | BB | 1104 | C | N3-C4-C5 | -11.10 | 117.46 | 121.90 |
| 1 | AA | 50 | A | C3'-C2'-C1' | 11.10 | 110.38 | 101.50 |
| 1 | AA | 765 | G | O4'-C1'-C2' | -11.10 | 94.70 | 105.80 |
| 1 | AA | 869 | G | N9-C4-C5 | 11.10 | 109.84 | 105.40 |
| 15 | AO | 49 | ARG | NE-CZ-NH1 | 11.10 | 125.85 | 120.30 |
| 26 | BB | 80 | G | C6-N1-C2 | -11.10 | 118.44 | 125.10 |
| 26 | BB | 1981 | A | N9-C4-C5 | 11.09 | 110.24 | 105.80 |
| 26 | BB | 2448 | A | O4'-C1'-N9 | 11.09 | 117.07 | 108.20 |
| 1 | AA | 848 | C | C1'-O4'-C4' | -11.09 | 101.03 | 109.90 |
| 1 | AA | 1034 | G | N9-C4-C5 | 11.09 | 109.84 | 105.40 |
| 26 | BB | 881 | G | N7-C8-N9 | 11.09 | 118.64 | 113.10 |
| 26 | BB | 1334 | G | N9-C4-C5 | 11.09 | 109.84 | 105.40 |
| 26 | BB | 1847 | A | O4'-C1'-N9 | 11.09 | 117.07 | 108.20 |
| 1 | AA | 1333 | A | C4-C5-C6 | -11.09 | 111.46 | 117.00 |
| 26 | BB | 2108 | A | N1-C2-N3 | -11.09 | 123.76 | 129.30 |
| 26 | BB | 607 | U | C5-C6-N1 | -11.08 | 117.16 | 122.70 |
| 26 | BB | 2694 | G | N3-C2-N2 | -11.08 | 112.14 | 119.90 |
| 1 | AA | 1435 | G | C3'-C2'-C1' | 11.08 | 110.36 | 101.50 |
| 26 | BB | 1744 | A | O4'-C1'-N9 | 11.08 | 117.06 | 108.20 |
| 1 | AA | 1064 | G | C6-C5-N7 | 11.08 | 137.05 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1496 | C | N3-C4-C5 | -11.08 | 117.47 | 121.90 |
| 2 | AB | 34 | C | N3-C4-N4 | 11.08 | 125.75 | 118.00 |
| 1 | AA | 540 | G | N1-C2-N2 | 11.08 | 126.17 | 116.20 |
| 1 | AA | 882 | C | C6-N1-C2 | -11.08 | 115.87 | 120.30 |
| 26 | BB | 2144 | G | C5-C6-O6 | -11.08 | 121.95 | 128.60 |
| 1 | AA | 1128 | C | C2-N3-C4 | 11.07 | 125.44 | 119.90 |
| 1 | AA | 745 | G | N3-C4-C5 | -11.07 | 123.06 | 128.60 |
| 26 | BB | 367 | G | C2-N3-C4 | 11.07 | 117.44 | 111.90 |
| 1 | AA | 1020 | G | N9-C4-C5 | 11.07 | 109.83 | 105.40 |
| 6 | AF | 163 | ARG | NE-CZ-NH1 | 11.07 | 125.83 | 120.30 |
| 1 | AA | 1171 | A | C2-N3-C4 | 11.06 | 116.13 | 110.60 |
| 26 | BB | 1770 | G | C8-N9-C4 | -11.06 | 101.97 | 106.40 |
| 26 | BB | 1800 | C | N3-C2-O2 | -11.06 | 114.16 | 121.90 |
| 26 | BB | 263 | G | C8-N9-C4 | -11.06 | 101.98 | 106.40 |
| 1 | AA | 1272 | G | N3-C4-C5 | -11.05 | 123.07 | 128.60 |
| 26 | BB | 638 | G | C8-N9-C4 | -11.06 | 101.98 | 106.40 |
| 1 | AA | 570 | G | C8-N9-C4 | -11.05 | 101.98 | 106.40 |
| 1 | AA | 1440 | U | N3-C2-O2 | -11.05 | 114.46 | 122.20 |
| 17 | AQ | 40 | ARG | NE-CZ-NH2 | -11.05 | 114.77 | 120.30 |
| 26 | BB | 1176 | U | C5-C4-O4 | -11.05 | 119.27 | 125.90 |
| 26 | BB | 1664 | A | C4-C5-N7 | 11.05 | 116.22 | 110.70 |
| 1 | AA | 424 | G | C2-N3-C4 | 11.05 | 117.42 | 111.90 |
| 26 | BB | 2405 | G | N9-C4-C5 | 11.05 | 109.82 | 105.40 |
| 26 | BB | 2117 | A | N1-C6-N6 | -11.04 | 111.97 | 118.60 |
| 26 | BB | 1914 | C | N3-C2-O2 | -11.04 | 114.17 | 121.90 |
| 26 | BB | 2018 | G | N3-C4-C5 | -11.04 | 123.08 | 128.60 |
| 26 | BB | 2521 | C | C2-N3-C4 | 11.04 | 125.42 | 119.90 |
| 1 | AA | 577 | G | C4-C5-N7 | 11.04 | 115.21 | 110.80 |
| 1 | AA | 1366 | C | N3-C4-C5 | -11.04 | 117.49 | 121.90 |
| 26 | BB | 151 | C | C6-N1-C2 | -11.03 | 115.89 | 120.30 |
| 26 | BB | 391 | A | C3'-C2'-C1' | -11.04 | 92.67 | 101.50 |
| 1 | AA | 1154 | G | C2-N3-C4 | 11.03 | 117.42 | 111.90 |
| 1 | AA | 1499 | A | C5-N7-C8 | 11.03 | 109.42 | 103.90 |
| 26 | BB | 10 | A | O4'-C1'-N9 | 11.03 | 117.03 | 108.20 |
| 1 | AA | 1419 | G | N3-C2-N2 | 11.03 | 127.62 | 119.90 |
| 1 | AA | 440 | C | O4'-C1'-N1 | 11.03 | 117.02 | 108.20 |
| 1 | AA | 969 | A | N9-C4-C5 | 11.03 | 110.21 | 105.80 |
| 26 | BB | 603 | A | O4'-C1'-N9 | 11.03 | 117.02 | 108.20 |
| 26 | BB | 1450 | G | C5-C6-O6 | -11.03 | 121.98 | 128.60 |
| 26 | BB | 1238 | G | N9-C4-C5 | 11.03 | 109.81 | 105.40 |
| 1 | AA | 444 | G | O4'-C1'-N9 | 11.03 | 117.02 | 108.20 |
| 26 | BB | 142 | A | C2-N3-C4 | 11.03 | 116.11 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 916 | G | N7-C8-N9 | 11.03 | 118.61 | 113.10 |
| 26 | BB | 2015 | A | N9-C4-C5 | 11.02 | 110.21 | 105.80 |
| 27 | BC | 134 | ARG | NE-CZ-NH1 | 11.02 | 125.81 | 120.30 |
| 1 | AA | 1186 | G | N3-C4-C5 | -11.02 | 123.09 | 128.60 |
| 26 | BB | 245 | G | N3-C4-C5 | 11.02 | 134.11 | 128.60 |
| 26 | BB | 1761 | C | N1-C2-O2 | 11.02 | 125.51 | 118.90 |
| 26 | BB | 2035 | G | N9-C4-C5 | 11.02 | 109.81 | 105.40 |
| 26 | BB | 1288 | G | O4'-C1'-N9 | 11.02 | 117.01 | 108.20 |
| 26 | BB | 2122 | U | C2-N3-C4 | -11.02 | 120.39 | 127.00 |
| 1 | AA | 311 | C | C6-N1-C2 | -11.01 | 115.90 | 120.30 |
| 4 | AD | 12 | G | C5-C6-N1 | 11.01 | 117.00 | 111.50 |
| 26 | BB | 1740 | G | O4'-C1'-N9 | 11.01 | 117.01 | 108.20 |
| 26 | BB | 2411 | A | N1-C2-N3 | 11.01 | 134.81 | 129.30 |
| 26 | BB | 28 | A | N9-C1'-C2' | -11.01 | 99.69 | 114.00 |
| 26 | BB | 2053 | G | N3-C4-C5 | -11.01 | 123.10 | 128.60 |
| 1 | AA | 37 | U | C5-C4-O4 | -11.00 | 119.30 | 125.90 |
| 1 | AA | 719 | C | C6-N1-C2 | -11.00 | 115.90 | 120.30 |
| 25 | BA | 5 | U | C5'-C4'-O4' | 11.00 | 122.30 | 109.10 |
| 26 | BB | 677 | A | C5-C6-N1 | 11.00 | 123.20 | 117.70 |
| 26 | BB | 940 | G | O4'-C1'-N9 | 11.00 | 117.00 | 108.20 |
| 24 | AX | 20 | ARG | NE-CZ-NH2 | -11.00 | 114.80 | 120.30 |
| 26 | BB | 2009 | A | C2-N3-C4 | 11.00 | 116.10 | 110.60 |
| 26 | BB | 1163 | G | N1-C6-O6 | 11.00 | 126.50 | 119.90 |
| 26 | BB | 2607 | G | C8-N9-C4 | -11.00 | 102.00 | 106.40 |
| 26 | BB | 311 | A | O4'-C1'-N9 | 10.99 | 117.00 | 108.20 |
| 1 | AA | 716 | A | C8-N9-C4 | -10.99 | 101.40 | 105.80 |
| 2 | AB | 35 | C | C4-C5-C6 | -10.99 | 111.90 | 117.40 |
| 26 | BB | 1654 | A | C5-C6-N1 | 10.99 | 123.20 | 117.70 |
| 1 | AA | 442 | G | C4-C5-N7 | 10.99 | 115.20 | 110.80 |
| 26 | BB | 2360 | G | N3-C4-C5 | -10.99 | 123.10 | 128.60 |
| 1 | AA | 173 | U | O4'-C1'-N1 | 10.99 | 116.99 | 108.20 |
| 26 | BB | 1355 | G | C6-C5-N7 | -10.99 | 123.81 | 130.40 |
| 26 | BB | 32 | C | C2-N3-C4 | 10.98 | 125.39 | 119.90 |
| 1 | AA | 773 | G | N9-C4-C5 | 10.98 | 109.79 | 105.40 |
| 26 | BB | 360 | U | C5-C4-O4 | -10.98 | 119.31 | 125.90 |
| 26 | BB | 2201 | G | N7-C8-N9 | 10.98 | 118.59 | 113.10 |
| 26 | BB | 1471 | G | C8-N9-C4 | -10.98 | 102.01 | 106.40 |
| 26 | BB | 2106 | U | C4-C5-C6 | 10.98 | 126.29 | 119.70 |
| 26 | BB | 2839 | G | C2-N3-C4 | 10.98 | 117.39 | 111.90 |
| 1 | AA | 202 | G | N9-C4-C5 | 10.98 | 109.79 | 105.40 |
| 26 | BB | 834 | G | C5-C6-N1 | 10.98 | 116.99 | 111.50 |
| 26 | BB | 2536 | G | N3-C4-C5 | -10.98 | 123.11 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 138 | G | N1-C6-O6 | 10.97 | 126.48 | 119.90 |
| 1 | AA | 756 | C | O4'-C1'-N1 | 10.97 | 116.98 | 108.20 |
| 1 | AA | 1015 | G | O4'-C1'-N9 | 10.97 | 116.98 | 108.20 |
| 3 | AC | 22 | G | N3-C4-C5 | -10.97 | 123.11 | 128.60 |
| 26 | BB | 1271 | G | C2-N3-C4 | 10.97 | 117.39 | 111.90 |
| 26 | BB | 2014 | A | N9-C4-C5 | 10.97 | 110.19 | 105.80 |
| 26 | BB | 2505 | G | C2-N3-C4 | 10.97 | 117.39 | 111.90 |
| 1 | AA | 637 | C | N3-C2-O2 | -10.97 | 114.22 | 121.90 |
| 1 | AA | 475 | C | C3'-C2'-C1' | 10.97 | 110.27 | 101.50 |
| 1 | AA | 503 | C | C5-C4-N4 | -10.97 | 112.52 | 120.20 |
| 26 | BB | 2865 | U | C1'-O4'-C4' | -10.97 | 101.12 | 109.90 |
| 1 | AA | 1268 | G | C8-N9-C4 | -10.96 | 102.02 | 106.40 |
| 1 | AA | 462 | G | C5-C6-O6 | -10.96 | 122.02 | 128.60 |
| 26 | BB | 315 | G | C6-N1-C2 | -10.96 | 118.53 | 125.10 |
| 26 | BB | 1175 | A | C5-N7-C8 | -10.96 | 98.42 | 103.90 |
| 26 | BB | 1451 | C | C4-C5-C6 | -10.96 | 111.92 | 117.40 |
| 1 | AA | 94 | G | C4-C5-N7 | -10.95 | 106.42 | 110.80 |
| 1 | AA | 1045 | C | N3-C4-C5 | -10.96 | 117.52 | 121.90 |
| 26 | BB | 1684 | G | C8-N9-C4 | -10.95 | 102.02 | 106.40 |
| 26 | BB | 1846 | G | C4-C5-N7 | -10.95 | 106.42 | 110.80 |
| 26 | BB | 2690 | U | C4-C5-C6 | 10.96 | 126.27 | 119.70 |
| 26 | BB | 428 | A | C2-N3-C4 | 10.95 | 116.08 | 110.60 |
| 26 | BB | 797 | G | C6-C5-N7 | -10.95 | 123.83 | 130.40 |
| 26 | BB | 945 | A | N1-C2-N3 | -10.95 | 123.83 | 129.30 |
| 26 | BB | 1349 | C | C2-N3-C4 | 10.95 | 125.38 | 119.90 |
| 26 | BB | 2433 | A | N9-C4-C5 | 10.95 | 110.18 | 105.80 |
| 1 | AA | 809 | G | C3'-C2'-C1' | 10.95 | 110.26 | 101.50 |
| 26 | BB | 1479 | G | O4'-C1'-N9 | 10.95 | 116.96 | 108.20 |
| 26 | BB | 2118 | U | C1'-O4'-C4' | -10.95 | 101.14 | 109.90 |
| 26 | BB | 2585 | U | O4'-C1'-N1 | 10.95 | 116.96 | 108.20 |
| 1 | AA | 343 | U | N1-C2-O2 | 10.95 | 130.46 | 122.80 |
| 26 | BB | 2152 | G | C5-C6-N1 | 10.95 | 116.97 | 111.50 |
| 1 | AA | 785 | G | C8-N9-C4 | -10.95 | 102.02 | 106.40 |
| 1 | AA | 1126 | U | C5-C4-O4 | -10.95 | 119.33 | 125.90 |
| 26 | BB | 2138 | G | C4-C5-N7 | 10.94 | 115.18 | 110.80 |
| 1 | AA | 627 | G | N9-C4-C5 | 10.94 | 109.78 | 105.40 |
| 1 | AA | 894 | G | C4-C5-N7 | -10.94 | 106.42 | 110.80 |
| 26 | BB | 583 | G | C5-C6-N1 | 10.94 | 116.97 | 111.50 |
| 1 | AA | 1259 | C | N3-C4-N4 | 10.94 | 125.66 | 118.00 |
| 1 | AA | 686 | U | N1-C2-N3 | 10.94 | 121.46 | 114.90 |
| 2 | AB | 13 | C | C2-N3-C4 | 10.94 | 125.37 | 119.90 |
| 1 | AA | 1289 | A | O4'-C1'-N9 | 10.93 | 116.95 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 34 | U | N3-C2-O2 | -10.93 | 114.55 | 122.20 |
| 1 | AA | 241 | G | N3-C4-N9 | 10.93 | 132.56 | 126.00 |
| 26 | BB | 1350 | C | N1-C2-O2 | 10.93 | 125.46 | 118.90 |
| 1 | AA | 1045 | C | N3-C4-N4 | 10.93 | 125.65 | 118.00 |
| 53 | B2 | 59 | ARG | NE-CZ-NH2 | -10.93 | 114.83 | 120.30 |
| 26 | BB | 2134 | A | N9-C4-C5 | -10.93 | 101.43 | 105.80 |
| 4 | AD | 77 | A | C8-N9-C4 | -10.93 | 101.43 | 105.80 |
| 1 | AA | 344 | A | N9-C4-C5 | 10.92 | 110.17 | 105.80 |
| 26 | BB | 171 | U | N1-C2-N3 | 10.92 | 121.45 | 114.90 |
| 1 | AA | 522 | C | C5-C6-N1 | 10.92 | 126.46 | 121.00 |
| 1 | AA | 532 | A | C2-N3-C4 | 10.92 | 116.06 | 110.60 |
| 26 | BB | 350 | G | C8-N9-C4 | -10.92 | 102.03 | 106.40 |
| 26 | BB | 364 | C | O4'-C1'-N1 | 10.92 | 116.93 | 108.20 |
| 26 | BB | 920 | A | N7-C8-N9 | 10.92 | 119.26 | 113.80 |
| 26 | BB | 2315 | G | C2-N3-C4 | 10.92 | 117.36 | 111.90 |
| 26 | BB | 11 | C | N3-C4-N4 | 10.91 | 125.64 | 118.00 |
| 26 | BB | 898 | C | C5-C4-N4 | -10.91 | 112.56 | 120.20 |
| 1 | AA | 959 | A | C2-N3-C4 | 10.91 | 116.06 | 110.60 |
| 1 | AA | 134 | G | N9-C4-C5 | 10.91 | 109.76 | 105.40 |
| 1 | AA | 1185 | G | N9-C4-C5 | -10.91 | 101.04 | 105.40 |
| 1 | AA | 523 | A | C2-N3-C4 | 10.91 | 116.06 | 110.60 |
| 1 | AA | 881 | G | N1-C6-O6 | 10.91 | 126.45 | 119.90 |
| 26 | BB | 838 | C | N3-C4-C5 | -10.91 | 117.54 | 121.90 |
| 26 | BB | 1192 | G | C2-N3-C4 | 10.91 | 117.36 | 111.90 |
| 26 | BB | 1766 | G | C4-C5-C6 | 10.91 | 125.35 | 118.80 |
| 1 | AA | 424 | G | N3-C4-N9 | 10.91 | 132.54 | 126.00 |
| 1 | AA | 1245 | C | N3-C4-C5 | -10.91 | 117.54 | 121.90 |
| 26 | BB | 922 | C | C5-C6-N1 | 10.91 | 126.45 | 121.00 |
| 1 | AA | 1117 | A | N7-C8-N9 | 10.90 | 119.25 | 113.80 |
| 26 | BB | 2889 | C | C5-C6-N1 | 10.90 | 126.45 | 121.00 |
| 26 | BB | 55 | G | C8-N9-C4 | -10.90 | 102.04 | 106.40 |
| 1 | AA | 994 | A | C2-N3-C4 | 10.90 | 116.05 | 110.60 |
| 26 | BB | 1333 | G | C6-N1-C2 | -10.90 | 118.56 | 125.10 |
| 24 | AX | 54 | ARG | NE-CZ-NH2 | 10.90 | 125.75 | 120.30 |
| 26 | BB | 2870 | C | O4'-C1'-N1 | 10.90 | 116.92 | 108.20 |
| 26 | BB | 1498 | C | C5-C6-N1 | 10.90 | 126.45 | 121.00 |
| 26 | BB | 1826 | G | C1'-O4'-C4' | -10.90 | 101.18 | 109.90 |
| 26 | BB | 2087 | G | C5-N7-C8 | -10.90 | 98.85 | 104.30 |
| 26 | BB | 72 | U | C5-C6-N1 | -10.89 | 117.25 | 122.70 |
| 1 | AA | 1039 | G | N9-C4-C5 | 10.89 | 109.76 | 105.40 |
| 26 | BB | 763 | G | C4-C5-N7 | -10.89 | 106.44 | 110.80 |
| 26 | BB | 2810 | A | C2-N3-C4 | 10.89 | 116.05 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 253 | A | C4-C5-N7 | -10.89 | 105.26 | 110.70 |
| 1 | AA | 1169 | A | C2-N3-C4 | 10.89 | 116.04 | 110.60 |
| 26 | BB | 1650 | A | N7-C8-N9 | 10.89 | 119.24 | 113.80 |
| 1 | AA | 1272 | G | N3-C4-N9 | 10.89 | 132.53 | 126.00 |
| 26 | BB | 113 | U | C3'-C2'-C1' | -10.89 | 92.79 | 101.50 |
| 26 | BB | 134 | G | N7-C8-N9 | 10.89 | 118.54 | 113.10 |
| 26 | BB | 669 | G | C8-N9-C4 | -10.89 | 102.05 | 106.40 |
| 26 | BB | 1011 | G | N3-C4-C5 | -10.89 | 123.16 | 128.60 |
| 26 | BB | 279 | A | C8-N9-C4 | -10.89 | 101.45 | 105.80 |
| 26 | BB | 885 | C | N3-C2-O2 | -10.88 | 114.28 | 121.90 |
| 26 | BB | 2687 | U | O4'-C1'-N1 | 10.89 | 116.91 | 108.20 |
| 4 | AD | 19 | G | C4-C5-N7 | -10.88 | 106.45 | 110.80 |
| 26 | BB | 2885 | G | C8-N9-C4 | -10.88 | 102.05 | 106.40 |
| 1 | AA | 1018 | G | N3-C4-C5 | -10.88 | 123.16 | 128.60 |
| 1 | AA | 1150 | A | O4'-C4'-C3' | 10.88 | 114.88 | 104.00 |
| 26 | BB | 507 | A | N7-C8-N9 | 10.88 | 119.24 | 113.80 |
| 26 | BB | 730 | A | C8-N9-C4 | -10.88 | 101.45 | 105.80 |
| 1 | AA | 1084 | G | C2-N3-C4 | 10.88 | 117.34 | 111.90 |
| 1 | AA | 1173 | U | C5-C4-O4 | 10.87 | 132.42 | 125.90 |
| 26 | BB | 2146 | C | O4'-C1'-N1 | 10.88 | 116.90 | 108.20 |
| 26 | BB | 2844 | G | C8-N9-C1' | 10.87 | 141.14 | 127.00 |
| 1 | AA | 52 | C | N3-C4-C5 | 10.87 | 126.25 | 121.90 |
| 1 | AA | 456 | A | C8-N9-C4 | -10.87 | 101.45 | 105.80 |
| 26 | BB | 1478 | G | C5-C6-N1 | 10.87 | 116.94 | 111.50 |
| 1 | AA | 1476 | A | C5-C6-N1 | 10.87 | 123.14 | 117.70 |
| 3 | AC | 57 | C | C2-N3-C4 | 10.87 | 125.33 | 119.90 |
| 26 | BB | 989 | G | O4'-C1'-N9 | 10.87 | 116.89 | 108.20 |
| 1 | AA | 1383 | C | C2-N3-C4 | 10.87 | 125.33 | 119.90 |
| 26 | BB | 297 | G | N3-C4-C5 | -10.86 | 123.17 | 128.60 |
| 1 | AA | 1466 | C | O4'-C1'-N1 | 10.86 | 116.89 | 108.20 |
| 26 | BB | 583 | G | N9-C4-C5 | 10.86 | 109.74 | 105.40 |
| 26 | BB | 1271 | G | N3-C4-C5 | -10.86 | 123.17 | 128.60 |
| 26 | BB | 189 | G | C2-N3-C4 | 10.85 | 117.33 | 111.90 |
| 26 | BB | 869 | G | C1'-O4'-C4' | -10.85 | 101.22 | 109.90 |
| 26 | BB | 962 | G | C4-C5-N7 | -10.85 | 106.46 | 110.80 |
| 26 | BB | 1901 | A | C4-C5-C6 | 10.85 | 122.43 | 117.00 |
| 26 | BB | 2366 | A | O4'-C1'-N9 | 10.85 | 116.88 | 108.20 |
| 26 | BB | 1181 | U | C5-C6-N1 | 10.85 | 128.12 | 122.70 |
| 26 | BB | 1790 | C | N3-C2-O2 | -10.85 | 114.31 | 121.90 |
| 26 | BB | 2606 | C | N3-C4-C5 | -10.85 | 117.56 | 121.90 |
| 35 | BK | 126 | ARG | NE-CZ-NH1 | 10.85 | 125.72 | 120.30 |
| 1 | AA | 1225 | A | C8-N9-C4 | -10.85 | 101.46 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1014 | A | C5-C6-N1 | 10.85 | 123.12 | 117.70 |
| 26 | BB | 2405 | G | N3-C4-C5 | -10.85 | 123.18 | 128.60 |
| 26 | BB | 1378 | A | C8-N9-C4 | -10.85 | 101.46 | 105.80 |
| 26 | BB | 1271 | G | N9-C4-C5 | 10.84 | 109.74 | 105.40 |
| 26 | BB | 1406 | U | N3-C2-O2 | -10.84 | 114.61 | 122.20 |
| 26 | BB | 1778 | U | C5-C6-N1 | -10.84 | 117.28 | 122.70 |
| 1 | AA | 1190 | G | C2-N3-C4 | 10.84 | 117.32 | 111.90 |
| 1 | AA | 212 | G | N3-C4-N9 | 10.84 | 132.50 | 126.00 |
| 1 | AA | 807 | A | N1-C2-N3 | -10.84 | 123.88 | 129.30 |
| 25 | BA | 70 | C | N1-C2-O2 | 10.84 | 125.40 | 118.90 |
| 26 | BB | 297 | G | C4-C5-N7 | -10.84 | 106.47 | 110.80 |
| 26 | BB | 693 | A | N9-C4-C5 | 10.84 | 110.14 | 105.80 |
| 26 | BB | 2365 | G | C8-N9-C4 | -10.84 | 102.06 | 106.40 |
| 26 | BB | 2287 | A | N7-C8-N9 | 10.84 | 119.22 | 113.80 |
| 26 | BB | 2654 | A | C3'-C2'-C1' | -10.84 | 92.83 | 101.50 |
| 26 | BB | 708 | G | O4'-C1'-N9 | 10.83 | 116.86 | 108.20 |
| 26 | BB | 1158 | C | C5-C6-N1 | 10.83 | 126.42 | 121.00 |
| 26 | BB | 1174 | U | C1'-O4'-C4' | -10.83 | 101.23 | 109.90 |
| 26 | BB | 2397 | G | N3-C4-C5 | -10.83 | 123.18 | 128.60 |
| 26 | BB | 2751 | G | N9-C4-C5 | 10.83 | 109.73 | 105.40 |
| 1 | AA | 1279 | G | N7-C8-N9 | 10.83 | 118.52 | 113.10 |
| 26 | BB | 1238 | G | C8-N9-C4 | -10.83 | 102.07 | 106.40 |
| 1 | AA | 889 | A | N1-C6-N6 | -10.83 | 112.10 | 118.60 |
| 26 | BB | 789 | A | N1-C2-N3 | -10.83 | 123.89 | 129.30 |
| 26 | BB | 1735 | A | N7-C8-N9 | -10.82 | 108.39 | 113.80 |
| 1 | AA | 823 | C | O4'-C1'-N1 | 10.82 | 116.86 | 108.20 |
| 26 | BB | 2807 | U | N1-C2-O2 | -10.82 | 115.22 | 122.80 |
| 26 | BB | 646 | U | N1-C2-N3 | 10.82 | 121.39 | 114.90 |
| 26 | BB | 1288 | G | N1-C6-O6 | -10.82 | 113.41 | 119.90 |
| 26 | BB | 867 | C | C6-N1-C2 | 10.82 | 124.63 | 120.30 |
| 26 | BB | 2798 | U | C4-C5-C6 | 10.82 | 126.19 | 119.70 |
| 3 | AC | 51 | C | O4'-C1'-N1 | 10.81 | 116.85 | 108.20 |
| 26 | BB | 411 | G | C5-C6-O6 | 10.81 | 135.09 | 128.60 |
| 26 | BB | 1292 | G | N3-C4-C5 | -10.81 | 123.19 | 128.60 |
| 26 | BB | 1315 | C | N1-C2-O2 | 10.81 | 125.39 | 118.90 |
| 26 | BB | 2379 | G | C8-N9-C4 | -10.81 | 102.07 | 106.40 |
| 25 | BA | 34 | A | O4'-C1'-N9 | 10.81 | 116.85 | 108.20 |
| 26 | BB | 1659 | G | N3-C4-C5 | -10.81 | 123.20 | 128.60 |
| 26 | BB | 1901 | A | C2-N3-C4 | 10.81 | 116.00 | 110.60 |
| 26 | BB | 1901 | A | O4'-C1'-N9 | 10.81 | 116.85 | 108.20 |
| 26 | BB | 2521 | C | N3-C4-C5 | -10.81 | 117.58 | 121.90 |
| 26 | BB | 2107 | G | C6-N1-C2 | -10.81 | 118.62 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 317 | U | C5-C4-O4 | 10.80 | 132.38 | 125.90 |
| 3 | AC | 56 | G | N9-C4-C5 | 10.80 | 109.72 | 105.40 |
| 26 | BB | 191 | A | C8-N9-C4 | -10.80 | 101.48 | 105.80 |
| 26 | BB | 616 | A | C4-C5-N7 | -10.80 | 105.30 | 110.70 |
| 1 | AA | 1137 | C | N3-C4-C5 | -10.80 | 117.58 | 121.90 |
| 26 | BB | 1000 | A | O4'-C1'-N9 | 10.80 | 116.84 | 108.20 |
| 26 | BB | 1888 | G | O4'-C1'-N9 | 10.80 | 116.84 | 108.20 |
| 26 | BB | 2325 | G | N3-C4-C5 | -10.80 | 123.20 | 128.60 |
| 1 | AA | 1032 | G | C2-N3-C4 | -10.79 | 106.50 | 111.90 |
| 26 | BB | 1593 | A | O4'-C1'-N9 | 10.80 | 116.84 | 108.20 |
| 26 | BB | 1970 | A | C6-C5-N7 | 10.79 | 139.85 | 132.30 |
| 1 | AA | 473 | U | O4'-C1'-N1 | 10.79 | 116.83 | 108.20 |
| 26 | BB | 1343 | G | N3-C2-N2 | -10.79 | 112.35 | 119.90 |
| 26 | BB | 2600 | A | O4'-C1'-N9 | 10.79 | 116.83 | 108.20 |
| 26 | BB | 2830 | C | N3-C4-C5 | -10.79 | 117.58 | 121.90 |
| 26 | BB | 2173 | A | N1-C2-N3 | -10.79 | 123.91 | 129.30 |
| 1 | AA | 184 | G | C8-N9-C4 | -10.78 | 102.09 | 106.40 |
| 1 | AA | 1410 | A | C8-N9-C4 | -10.78 | 101.49 | 105.80 |
| 2 | AB | 75 | C | C6-N1-C2 | -10.78 | 115.99 | 120.30 |
| 26 | BB | 256 | A | C4-C5-N7 | -10.78 | 105.31 | 110.70 |
| 26 | BB | 870 | U | O4'-C1'-N1 | 10.78 | 116.82 | 108.20 |
| 26 | BB | 1374 | G | N1-C6-O6 | 10.78 | 126.37 | 119.90 |
| 1 | AA | 191 | G | C6-C5-N7 | -10.78 | 123.93 | 130.40 |
| 26 | BB | 432 | A | C4-C5-N7 | -10.78 | 105.31 | 110.70 |
| 26 | BB | 492 | A | C6-N1-C2 | 10.78 | 125.07 | 118.60 |
| 26 | BB | 956 | G | N3-C4-N9 | 10.78 | 132.47 | 126.00 |
| 26 | BB | 1814 | G | C8-N9-C4 | -10.78 | 102.09 | 106.40 |
| 26 | BB | 1152 | C | C6-N1-C2 | -10.78 | 115.99 | 120.30 |
| 26 | BB | 2655 | G | N9-C4-C5 | 10.78 | 109.71 | 105.40 |
| 26 | BB | 2637 | U | N3-C4-C5 | -10.78 | 108.14 | 114.60 |
| 1 | AA | 122 | G | N7-C8-N9 | 10.77 | 118.49 | 113.10 |
| 26 | BB | 117 | G | N1-C2-N3 | -10.77 | 117.44 | 123.90 |
| 26 | BB | 348 | A | C4-C5-N7 | -10.77 | 105.31 | 110.70 |
| 26 | BB | 513 | A | C8-N9-C4 | -10.77 | 101.49 | 105.80 |
| 26 | BB | 1560 | G | C5-N7-C8 | -10.77 | 98.91 | 104.30 |
| 26 | BB | 2121 | G | N1-C6-O6 | -10.77 | 113.44 | 119.90 |
| 26 | BB | 2193 | G | N3-C4-N9 | 10.77 | 132.46 | 126.00 |
| 26 | BB | 2901 | C | C6-N1-C2 | -10.77 | 115.99 | 120.30 |
| 1 | AA | 497 | G | P-O3'-C3' | 10.77 | 132.62 | 119.70 |
| 25 | BA | 18 | G | C2-N3-C4 | 10.77 | 117.28 | 111.90 |
| 1 | AA | 946 | A | C8-N9-C4 | -10.77 | 101.49 | 105.80 |
| 1 | AA | 49 | U | O4'-C4'-C3' | 10.77 | 114.77 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 639 | G | C5-C6-O6 | -10.77 | 122.14 | 128.60 |
| 1 | AA | 1091 | U | O4'-C1'-N1 | 10.77 | 116.81 | 108.20 |
| 26 | BB | 497 | A | N1-C6-N6 | -10.77 | 112.14 | 118.60 |
| 26 | BB | 2392 | A | C2-N3-C4 | 10.77 | 115.98 | 110.60 |
| 26 | BB | 2808 | G | N9-C4-C5 | 10.77 | 109.71 | 105.40 |
| 26 | BB | 2824 | C | N3-C4-N4 | 10.77 | 125.54 | 118.00 |
| 30 | BF | 85 | PHE | CB-CG-CD2 | -10.76 | 113.27 | 120.80 |
| 26 | BB | 2087 | G | C8-N9-C4 | -10.76 | 102.09 | 106.40 |
| 26 | BB | 1255 | U | C3'-C2'-C1' | 10.76 | 110.11 | 101.50 |
| 26 | BB | 1749 | A | O4'-C1'-N9 | 10.76 | 116.81 | 108.20 |
| 26 | BB | 2408 | U | O4'-C1'-N1 | 10.76 | 116.81 | 108.20 |
| 1 | AA | 755 | G | C2-N3-C4 | 10.76 | 117.28 | 111.90 |
| 1 | AA | 239 | U | C2-N3-C4 | -10.76 | 120.55 | 127.00 |
| 25 | BA | 44 | G | C6-N1-C2 | -10.76 | 118.65 | 125.10 |
| 26 | BB | 821 | A | C5-C6-N6 | -10.76 | 115.09 | 123.70 |
| 26 | BB | 1555 | G | C4-C5-N7 | -10.75 | 106.50 | 110.80 |
| 26 | BB | 1094 | U | C5-C6-N1 | -10.75 | 117.32 | 122.70 |
| 26 | BB | 2322 | A | C4'-C3'-C2' | -10.75 | 91.85 | 102.60 |
| 26 | BB | 2088 | A | C8-N9-C4 | -10.75 | 101.50 | 105.80 |
| 26 | BB | 1867 | G | C5-C6-O6 | -10.75 | 122.15 | 128.60 |
| 1 | AA | 13 | U | N3-C4-C5 | -10.74 | 108.15 | 114.60 |
| 1 | AA | 388 | G | C2-N3-C4 | 10.74 | 117.27 | 111.90 |
| 26 | BB | 1840 | G | N3-C4-C5 | -10.74 | 123.23 | 128.60 |
| 26 | BB | 2751 | G | C4-C5-N7 | -10.74 | 106.50 | 110.80 |
| 26 | BB | 2752 | C | O4'-C1'-N1 | 10.74 | 116.79 | 108.20 |
| 26 | BB | 2759 | G | C8-N9-C4 | -10.74 | 102.10 | 106.40 |
| 1 | AA | 711 | G | C4-C5-C6 | 10.74 | 125.24 | 118.80 |
| 26 | BB | 2309 | A | N1-C6-N6 | 10.74 | 125.04 | 118.60 |
| 1 | AA | 255 | G | O4'-C1'-N9 | 10.73 | 116.79 | 108.20 |
| 1 | AA | 1440 | U | N1-C2-N3 | 10.73 | 121.34 | 114.90 |
| 26 | BB | 2026 | U | N1-C2-N3 | 10.73 | 121.34 | 114.90 |
| 26 | BB | 90 | U | C5-C6-N1 | -10.73 | 117.33 | 122.70 |
| 26 | BB | 1289 | C | N3-C2-O2 | -10.73 | 114.39 | 121.90 |
| 26 | BB | 1375 | U | C5-C6-N1 | 10.73 | 128.07 | 122.70 |
| 1 | AA | 1126 | U | N3-C4-O4 | 10.73 | 126.91 | 119.40 |
| 26 | BB | 1773 | A | C8-N9-C4 | -10.73 | 101.51 | 105.80 |
| 26 | BB | 1128 | G | N3-C4-C5 | -10.73 | 123.24 | 128.60 |
| 1 | AA | 578 | C | C2-N3-C4 | 10.72 | 125.26 | 119.90 |
| 26 | BB | 1238 | G | N1-C2-N3 | -10.72 | 117.47 | 123.90 |
| 26 | BB | 2042 | A | C2-N3-C4 | 10.72 | 115.96 | 110.60 |
| 1 | AA | 1059 | C | C4-C5-C6 | 10.72 | 122.76 | 117.40 |
| 25 | BA | 119 | A | O4'-C1'-N9 | 10.72 | 116.78 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 249 | C | O4'-C1'-N1 | 10.72 | 116.78 | 108.20 |
| 26 | BB | 402 | A | C8-N9-C4 | -10.72 | 101.51 | 105.80 |
| 26 | BB | 1352 | U | C5-C4-O4 | 10.72 | 132.34 | 125.90 |
| 26 | BB | 1292 | G | N9-C4-C5 | 10.72 | 109.69 | 105.40 |
| 1 | AA | 397 | A | C5-N7-C8 | 10.72 | 109.26 | 103.90 |
| 1 | AA | 1397 | C | N1-C2-O2 | 10.72 | 125.33 | 118.90 |
| 26 | BB | 885 | C | C6-N1-C2 | -10.72 | 116.01 | 120.30 |
| 26 | BB | 1383 | A | O4'-C1'-N9 | 10.72 | 116.77 | 108.20 |
| 26 | BB | 2748 | A | C8-N9-C4 | 10.72 | 110.09 | 105.80 |
| 1 | AA | 157 | U | O4'-C1'-N1 | 10.71 | 116.77 | 108.20 |
| 1 | AA | 429 | U | N3-C2-O2 | -10.71 | 114.70 | 122.20 |
| 1 | AA | 1438 | G | N1-C6-O6 | 10.72 | 126.33 | 119.90 |
| 26 | BB | 2052 | A | C8-N9-C4 | -10.72 | 101.51 | 105.80 |
| 1 | AA | 711 | G | C4-C5-N7 | -10.71 | 106.52 | 110.80 |
| 1 | AA | 809 | G | N3-C2-N2 | 10.71 | 127.40 | 119.90 |
| 1 | AA | 1020 | G | N3-C4-C5 | -10.71 | 123.25 | 128.60 |
| 3 | AC | 39 | U | O4'-C1'-N1 | 10.71 | 116.77 | 108.20 |
| 26 | BB | 92 | U | C5-C4-O4 | -10.71 | 119.47 | 125.90 |
| 26 | BB | 515 | A | C5-N7-C8 | 10.71 | 109.25 | 103.90 |
| 26 | BB | 1398 | C | N1-C2-O2 | 10.71 | 125.32 | 118.90 |
| 1 | AA | 272 | C | O4'-C1'-N1 | 10.71 | 116.77 | 108.20 |
| 1 | AA | 903 | G | N3-C4-C5 | -10.70 | 123.25 | 128.60 |
| 1 | AA | 1164 | G | C8-N9-C4 | -10.70 | 102.12 | 106.40 |
| 1 | AA | 1424 | U | O4'-C1'-N1 | 10.70 | 116.76 | 108.20 |
| 1 | AA | 1492 | A | C5'-C4'-O4' | 10.70 | 121.94 | 109.10 |
| 6 | AF | 192 | TYR | CB-CG-CD1 | -10.70 | 114.58 | 121.00 |
| 26 | BB | 326 | G | C6-C5-N7 | -10.70 | 123.98 | 130.40 |
| 26 | BB | 1309 | G | C5-C6-N1 | 10.70 | 116.85 | 111.50 |
| 25 | BA | 75 | G | N1-C2-N3 | -10.70 | 117.48 | 123.90 |
| 26 | BB | 1245 | G | C2-N3-C4 | 10.70 | 117.25 | 111.90 |
| 26 | BB | 738 | G | C8-N9-C4 | -10.70 | 102.12 | 106.40 |
| 26 | BB | 1745 | A | C3'-C2'-C1' | 10.70 | 110.06 | 101.50 |
| 26 | BB | 1884 | G | C4-C5-C6 | 10.70 | 125.22 | 118.80 |
| 26 | BB | 2038 | G | N3-C2-N2 | -10.70 | 112.41 | 119.90 |
| 26 | BB | 1822 | C | N3-C4-N4 | 10.69 | 125.49 | 118.00 |
| 26 | BB | 1854 | A | C4-C5-N7 | 10.69 | 116.05 | 110.70 |
| 1 | AA | 526 | C | C2-N3-C4 | -10.69 | 114.55 | 119.90 |
| 26 | BB | 954 | G | N1-C2-N3 | -10.69 | 117.48 | 123.90 |
| 26 | BB | 756 | A | C8-N9-C4 | -10.69 | 101.52 | 105.80 |
| 26 | BB | 1552 | A | N1-C2-N3 | -10.69 | 123.96 | 129.30 |
| 26 | BB | 2481 | G | N7-C8-N9 | 10.69 | 118.44 | 113.10 |
| 26 | BB | 369 | U | C1'-O4'-C4' | -10.69 | 101.35 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 77 | A | O4'-C1'-N9 | 10.68 | 116.75 | 108.20 |
| 26 | BB | 1164 | C | C6-N1-C2 | 10.68 | 124.57 | 120.30 |
| 26 | BB | 2018 | G | N9-C4-C5 | 10.68 | 109.67 | 105.40 |
| 5 | AE | 20 | ARG | NE-CZ-NH2 | -10.68 | 114.96 | 120.30 |
| 25 | BA | 107 | G | N3-C2-N2 | 10.68 | 127.38 | 119.90 |
| 26 | BB | 2405 | G | C4-C5-N7 | -10.68 | 106.53 | 110.80 |
| 26 | BB | 2649 | C | C5-C4-N4 | -10.68 | 112.72 | 120.20 |
| 1 | AA | 393 | A | O4'-C1'-N9 | 10.68 | 116.74 | 108.20 |
| 26 | BB | 72 | U | C4-C5-C6 | 10.68 | 126.11 | 119.70 |
| 1 | AA | 1080 | A | N9-C4-C5 | 10.68 | 110.07 | 105.80 |
| 26 | BB | 1537 | G | N7-C8-N9 | 10.67 | 118.44 | 113.10 |
| 26 | BB | 1799 | G | O4'-C1'-N9 | 10.67 | 116.74 | 108.20 |
| 26 | BB | 1874 | C | O4'-C1'-N1 | 10.67 | 116.74 | 108.20 |
| 26 | BB | 2708 | G | O4'-C1'-N9 | 10.67 | 116.74 | 108.20 |
| 58 | B7 | 4 | ARG | NE-CZ-NH1 | 10.67 | 125.64 | 120.30 |
| 26 | BB | 820 | A | N9-C4-C5 | 10.67 | 110.07 | 105.80 |
| 26 | BB | 2739 | U | O4'-C1'-N1 | 10.67 | 116.74 | 108.20 |
| 26 | BB | 1299 | G | N1-C6-O6 | -10.67 | 113.50 | 119.90 |
| 26 | BB | 1587 | G | N3-C4-N9 | -10.67 | 119.60 | 126.00 |
| 26 | BB | 1896 | G | C5-C6-N1 | 10.67 | 116.83 | 111.50 |
| 26 | BB | 2633 | G | O4'-C1'-N9 | 10.67 | 116.73 | 108.20 |
| 1 | AA | 183 | C | O4'-C1'-N1 | 10.66 | 116.73 | 108.20 |
| 26 | BB | 334 | C | O4'-C1'-N1 | 10.66 | 116.73 | 108.20 |
| 26 | BB | 424 | G | N3-C4-C5 | -10.66 | 123.27 | 128.60 |
| 1 | AA | 1468 | A | C3'-C2'-C1' | -10.66 | 92.97 | 101.50 |
| 25 | BA | 55 | U | C4-C5-C6 | 10.66 | 126.10 | 119.70 |
| 26 | BB | 1134 | A | C1'-O4'-C4' | -10.66 | 101.37 | 109.90 |
| 26 | BB | 1275 | A | O4'-C1'-N9 | 10.66 | 116.73 | 108.20 |
| 26 | BB | 2282 | G | N3-C4-C5 | -10.66 | 123.27 | 128.60 |
| 26 | BB | 2895 | G | C8-N9-C4 | -10.66 | 102.14 | 106.40 |
| 1 | AA | 1151 | A | C5-C6-N1 | 10.66 | 123.03 | 117.70 |
| 26 | BB | 2541 | A | C1'-O4'-C4' | 10.66 | 118.43 | 109.90 |
| 45 | BU | 25 | ARG | NE-CZ-NH2 | -10.66 | 114.97 | 120.30 |
| 25 | BA | 96 | G | C8-N9-C4 | -10.65 | 102.14 | 106.40 |
| 26 | BB | 2112 | G | N3-C4-C5 | -10.65 | 123.27 | 128.60 |
| 26 | BB | 2800 | A | C2-N3-C4 | 10.65 | 115.93 | 110.60 |
| 1 | AA | 1112 | C | N3-C4-C5 | -10.65 | 117.64 | 121.90 |
| 5 | AE | 73 | ARG | NE-CZ-NH2 | -10.65 | 114.97 | 120.30 |
| 26 | BB | 1704 | C | N1-C2-O2 | 10.65 | 125.29 | 118.90 |
| 26 | BB | 1758 | U | N3-C2-O2 | -10.65 | 114.74 | 122.20 |
| 26 | BB | 2004 | G | C5-C6-N1 | 10.65 | 116.82 | 111.50 |
| 26 | BB | 224 | U | O4'-C1'-N1 | 10.65 | 116.72 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1043 | G | C2-N3-C4 | 10.64 | 117.22 | 111.90 |
| 26 | BB | 181 | A | C8-N9-C4 | 10.64 | 110.06 | 105.80 |
| 26 | BB | 1200 | C | N1-C2-O2 | 10.64 | 125.29 | 118.90 |
| 26 | BB | 2107 | G | O4'-C1'-N9 | 10.64 | 116.72 | 108.20 |
| 1 | AA | 1253 | G | N3-C4-C5 | -10.64 | 123.28 | 128.60 |
| 2 | AB | 71 | C | C2-N3-C4 | 10.64 | 125.22 | 119.90 |
| 26 | BB | 458 | G | C8-N9-C4 | -10.64 | 102.14 | 106.40 |
| 1 | AA | 713 | G | C2-N3-C4 | 10.64 | 117.22 | 111.90 |
| 1 | AA | 952 | U | N3-C4-O4 | 10.64 | 126.85 | 119.40 |
| 26 | BB | 2079 | U | C5-C4-O4 | -10.64 | 119.52 | 125.90 |
| 26 | BB | 1040 | A | N1-C6-N6 | -10.63 | 112.22 | 118.60 |
| 26 | BB | 1338 | G | C5-C6-O6 | -10.63 | 122.22 | 128.60 |
| 26 | BB | 2234 | G | C8-N9-C4 | -10.63 | 102.15 | 106.40 |
| 26 | BB | 2870 | C | C2-N3-C4 | 10.63 | 125.22 | 119.90 |
| 1 | AA | 1533 | C | O4'-C1'-N1 | 10.63 | 116.71 | 108.20 |
| 26 | BB | 1237 | A | N9-C4-C5 | 10.63 | 110.05 | 105.80 |
| 18 | AR | 88 | ARG | NE-CZ-NH2 | -10.63 | 114.98 | 120.30 |
| 1 | AA | 477 | C | N3-C2-O2 | -10.63 | 114.46 | 121.90 |
| 26 | BB | 1053 | C | C5-C4-N4 | -10.62 | 112.76 | 120.20 |
| 26 | BB | 1472 | C | C4'-C3'-C2' | -10.62 | 91.98 | 102.60 |
| 26 | BB | 1918 | A | N1-C2-N3 | -10.62 | 123.99 | 129.30 |
| 1 | AA | 534 | U | C4-C5-C6 | 10.62 | 126.07 | 119.70 |
| 1 | AA | 600 | A | N7-C8-N9 | 10.62 | 119.11 | 113.80 |
| 26 | BB | 2655 | G | C4-C5-N7 | -10.62 | 106.55 | 110.80 |
| 26 | BB | 1058 | U | N3-C2-O2 | -10.62 | 114.77 | 122.20 |
| 26 | BB | 1295 | C | C2-N3-C4 | -10.62 | 114.59 | 119.90 |
| 26 | BB | 2756 | U | N3-C4-O4 | 10.62 | 126.83 | 119.40 |
| 36 | BL | 95 | ARG | NE-CZ-NH1 | 10.62 | 125.61 | 120.30 |
| 1 | AA | 163 | C | N3-C4-N4 | 10.62 | 125.43 | 118.00 |
| 2 | AB | 67 | G | C4-C5-N7 | -10.61 | 106.56 | 110.80 |
| 3 | AC | 30 | U | O4'-C1'-N1 | 10.62 | 116.69 | 108.20 |
| 26 | BB | 380 | G | C4-C5-N7 | -10.61 | 106.55 | 110.80 |
| 26 | BB | 1099 | G | C6-C5-N7 | -10.61 | 124.03 | 130.40 |
| 26 | BB | 2277 | G | C4-C5-N7 | -10.62 | 106.55 | 110.80 |
| 1 | AA | 942 | G | O4'-C1'-N9 | 10.61 | 116.69 | 108.20 |
| 26 | BB | 1888 | G | C5-C6-O6 | -10.61 | 122.23 | 128.60 |
| 26 | BB | 2715 | C | C6-N1-C2 | -10.61 | 116.06 | 120.30 |
| 1 | AA | 899 | C | N3-C2-O2 | -10.61 | 114.47 | 121.90 |
| 25 | BA | 17 | C | N3-C4-C5 | -10.61 | 117.66 | 121.90 |
| 26 | BB | 123 | G | C4-C5-N7 | -10.61 | 106.56 | 110.80 |
| 34 | BJ | 124 | ARG | NE-CZ-NH1 | 10.61 | 125.60 | 120.30 |
| 25 | BA | 1 | U | C2-N3-C4 | -10.61 | 120.64 | 127.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2633 | G | N9-C4-C5 | 10.61 | 109.64 | 105.40 |
| 26 | BB | 820 | A | C8-N9-C4 | -10.61 | 101.56 | 105.80 |
| 1 | AA | 364 | A | O4'-C1'-N9 | 10.60 | 116.68 | 108.20 |
| 4 | AD | 22 | A | O4'-C1'-N9 | 10.60 | 116.68 | 108.20 |
| 26 | BB | 2711 | A | C5-C6-N6 | -10.60 | 115.22 | 123.70 |
| 26 | BB | 385 | C | N3-C4-N4 | 10.60 | 125.42 | 118.00 |
| 1 | AA | 420 | U | C5-C6-N1 | -10.59 | 117.40 | 122.70 |
| 26 | BB | 533 | G | N3-C4-C5 | -10.59 | 123.31 | 128.60 |
| 26 | BB | 1136 | G | C8-N9-C4 | -10.59 | 102.17 | 106.40 |
| 26 | BB | 1694 | C | N1-C2-O2 | 10.59 | 125.25 | 118.90 |
| 26 | BB | 1041 | G | N9-C4-C5 | 10.59 | 109.63 | 105.40 |
| 26 | BB | 2214 | C | C2-N3-C4 | 10.59 | 125.19 | 119.90 |
| 26 | BB | 622 | G | P-O3'-C3' | 10.58 | 132.40 | 119.70 |
| 1 | AA | 743 | A | O4'-C1'-N9 | 10.58 | 116.66 | 108.20 |
| 1 | AA | 846 | G | C4-C5-N7 | -10.58 | 106.57 | 110.80 |
| 1 | AA | 1165 | U | C5-C6-N1 | -10.58 | 117.41 | 122.70 |
| 25 | BA | 11 | C | C3'-C2'-C1' | 10.58 | 109.96 | 101.50 |
| 26 | BB | 1674 | G | N9-C4-C5 | -10.58 | 101.17 | 105.40 |
| 26 | BB | 1884 | G | N9-C4-C5 | 10.58 | 109.63 | 105.40 |
| 26 | BB | 2311 | A | N9-C4-C5 | -10.58 | 101.57 | 105.80 |
| 26 | BB | 2635 | A | N1-C2-N3 | -10.58 | 124.01 | 129.30 |
| 26 | BB | 2763 | G | C5-N7-C8 | -10.58 | 99.01 | 104.30 |
| 26 | BB | 276 | U | C5-C4-O4 | 10.58 | 132.25 | 125.90 |
| 1 | AA | 682 | G | N7-C8-N9 | 10.57 | 118.39 | 113.10 |
| 26 | BB | 1194 | A | C8-N9-C4 | -10.57 | 101.57 | 105.80 |
| 26 | BB | 1582 | C | O4'-C1'-N1 | 10.57 | 116.66 | 108.20 |
| 26 | BB | 1739 | A | O4'-C1'-N9 | 10.57 | 116.66 | 108.20 |
| 1 | AA | 1328 | C | C5-C6-N1 | 10.57 | 126.29 | 121.00 |
| 26 | BB | 1790 | C | N1-C2-O2 | 10.57 | 125.24 | 118.90 |
| 1 | AA | 281 | G | C3'-C2'-C1' | 10.57 | 109.96 | 101.50 |
| 26 | BB | 484 | C | N1-C2-O2 | 10.57 | 125.24 | 118.90 |
| 26 | BB | 508 | A | C8-N9-C4 | -10.57 | 101.57 | 105.80 |
| 39 | BO | 16 | ARG | NE-CZ-NH1 | 10.57 | 125.58 | 120.30 |
| 26 | BB | 91 | A | O4'-C1'-N9 | 10.57 | 116.66 | 108.20 |
| 26 | BB | 2785 | C | C5-C4-N4 | -10.57 | 112.80 | 120.20 |
| 26 | BB | 2340 | A | N1-C6-N6 | -10.57 | 112.26 | 118.60 |
| 1 | AA | 626 | G | C4-C5-N7 | 10.56 | 115.03 | 110.80 |
| 26 | BB | 1029 | A | C5'-C4'-O4' | 10.56 | 121.78 | 109.10 |
| 26 | BB | 1933 | G | C4'-C3'-C2' | -10.56 | 92.04 | 102.60 |
| 25 | BA | 19 | C | O4'-C1'-N1 | 10.56 | 116.65 | 108.20 |
| 26 | BB | 309 | A | C5-N7-C8 | 10.56 | 109.18 | 103.90 |
| 26 | BB | 1525 | A | C8-N9-C4 | -10.56 | 101.58 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 7 | G | C2-N3-C4 | 10.56 | 117.18 | 111.90 |
| 1 | AA | 1111 | A | C4-C5-C6 | -10.56 | 111.72 | 117.00 |
| 1 | AA | 1186 | G | C2-N3-C4 | 10.56 | 117.18 | 111.90 |
| 1 | AA | 161 | A | O4'-C1'-N9 | 10.56 | 116.64 | 108.20 |
| 26 | BB | 2370 | G | O4'-C1'-N9 | 10.55 | 116.64 | 108.20 |
| 42 | BR | 87 | ARG | NE-CZ-NH2 | -10.55 | 115.02 | 120.30 |
| 1 | AA | 630 | A | C8-N9-C4 | -10.55 | 101.58 | 105.80 |
| 26 | BB | 340 | A | C2-N3-C4 | 10.55 | 115.88 | 110.60 |
| 26 | BB | 2215 | C | N3-C4-N4 | 10.55 | 125.39 | 118.00 |
| 1 | AA | 716 | A | N9-C4-C5 | 10.55 | 110.02 | 105.80 |
| 26 | BB | 1262 | A | C5'-C4'-O4' | 10.55 | 121.76 | 109.10 |
| 26 | BB | 687 | C | N3-C4-C5 | -10.54 | 117.68 | 121.90 |
| 35 | BK | 95 | ASP | CB-CG-OD1 | -10.55 | 108.81 | 118.30 |
| 26 | BB | 2460 | U | O4'-C1'-N1 | 10.54 | 116.63 | 108.20 |
| 1 | AA | 384 | G | O4'-C1'-N9 | 10.54 | 116.63 | 108.20 |
| 26 | BB | 115 | C | C5-C6-N1 | 10.54 | 126.27 | 121.00 |
| 26 | BB | 262 | A | O4'-C1'-N9 | 10.54 | 116.64 | 108.20 |
| 26 | BB | 1040 | A | C8-N9-C4 | -10.54 | 101.58 | 105.80 |
| 56 | B5 | 41 | ARG | NE-CZ-NH2 | 10.54 | 125.57 | 120.30 |
| 1 | AA | 660 | C | C6-N1-C2 | -10.54 | 116.08 | 120.30 |
| 26 | BB | 533 | G | O4'-C1'-N9 | 10.54 | 116.63 | 108.20 |
| 26 | BB | 1948 | G | C5-C6-O6 | 10.54 | 134.92 | 128.60 |
| 6 | AF | 163 | ARG | NE-CZ-NH2 | -10.54 | 115.03 | 120.30 |
| 26 | BB | 1 | G | N3-C4-N9 | 10.53 | 132.32 | 126.00 |
| 26 | BB | 1030 | C | O4'-C1'-N1 | 10.54 | 116.63 | 108.20 |
| 26 | BB | 1208 | C | O4'-C1'-N1 | 10.53 | 116.63 | 108.20 |
| 26 | BB | 2661 | G | C5-C6-O6 | -10.54 | 122.28 | 128.60 |
| 1 | AA | 271 | C | C2-N3-C4 | 10.53 | 125.17 | 119.90 |
| 8 | AH | 111 | ARG | NE-CZ-NH2 | -10.53 | 115.03 | 120.30 |
| 26 | BB | 1571 | A | N7-C8-N9 | 10.53 | 119.07 | 113.80 |
| 26 | BB | 1885 | A | C2-N3-C4 | 10.53 | 115.87 | 110.60 |
| 26 | BB | 663 | G | N3-C4-C5 | -10.53 | 123.33 | 128.60 |
| 26 | BB | 1201 | U | N3-C4-O4 | 10.53 | 126.77 | 119.40 |
| 26 | BB | 1303 | G | N3-C4-C5 | -10.53 | 123.33 | 128.60 |
| 26 | BB | 2142 | A | N7-C8-N9 | -10.53 | 108.53 | 113.80 |
| 26 | BB | 2844 | G | C8-N9-C4 | -10.53 | 102.19 | 106.40 |
| 26 | BB | 479 | A | O4'-C1'-C2' | -10.53 | 95.27 | 105.80 |
| 26 | BB | 355 | U | N3-C2-O2 | -10.53 | 114.83 | 122.20 |
| 1 | AA | 604 | G | N7-C8-N9 | 10.52 | 118.36 | 113.10 |
| 1 | AA | 1024 | G | C4-C5-N7 | -10.52 | 106.59 | 110.80 |
| 49 | BY | 40 | ARG | NE-CZ-NH2 | 10.52 | 125.56 | 120.30 |
| 26 | BB | 1846 | G | C4-C5-C6 | 10.52 | 125.11 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1652 | A | N9-C4-C5 | 10.52 | 110.01 | 105.80 |
| 26 | BB | 1806 | C | C6-N1-C2 | -10.52 | 116.09 | 120.30 |
| 1 | AA | 831 | A | C5-C6-N1 | 10.52 | 122.96 | 117.70 |
| 1 | AA | 883 | C | N3-C2-O2 | -10.52 | 114.54 | 121.90 |
| 25 | BA | 55 | U | C5-C6-N1 | -10.51 | 117.44 | 122.70 |
| 26 | BB | 1146 | C | O4'-C1'-N1 | 10.51 | 116.61 | 108.20 |
| 26 | BB | 2041 | U | N1-C2-O2 | 10.51 | 130.16 | 122.80 |
| 1 | AA | 1541 | U | N1-C2-N3 | 10.51 | 121.21 | 114.90 |
| 26 | BB | 998 | C | N3-C4-N4 | 10.51 | 125.36 | 118.00 |
| 26 | BB | 1166 | G | C6-C5-N7 | 10.51 | 136.71 | 130.40 |
| 26 | BB | 1277 | G | C4-C5-N7 | 10.51 | 115.00 | 110.80 |
| 26 | BB | 1871 | A | C8-N9-C4 | -10.51 | 101.60 | 105.80 |
| 1 | AA | 411 | A | O4'-C1'-N9 | 10.51 | 116.61 | 108.20 |
| 1 | AA | 797 | C | C2-N3-C4 | 10.51 | 125.15 | 119.90 |
| 1 | AA | 975 | A | C8-N9-C4 | -10.51 | 101.60 | 105.80 |
| 26 | BB | 748 | G | O4'-C1'-N9 | 10.51 | 116.61 | 108.20 |
| 26 | BB | 874 | G | N9-C4-C5 | 10.51 | 109.60 | 105.40 |
| 26 | BB | 420 | C | C6-N1-C2 | -10.50 | 116.10 | 120.30 |
| 26 | BB | 1935 | G | N9-C4-C5 | -10.50 | 101.20 | 105.40 |
| 26 | BB | 605 | G | C4-C5-N7 | -10.50 | 106.60 | 110.80 |
| 26 | BB | 1025 | G | N9-C4-C5 | 10.50 | 109.60 | 105.40 |
| 26 | BB | 1710 | G | N1-C2-N3 | -10.50 | 117.60 | 123.90 |
| 1 | AA | 1172 | C | N3-C4-N4 | 10.50 | 125.35 | 118.00 |
| 1 | AA | 1331 | G | C6-N1-C2 | 10.50 | 131.40 | 125.10 |
| 26 | BB | 174 | U | O4'-C1'-N1 | 10.50 | 116.60 | 108.20 |
| 25 | BA | 50 | A | C8-N9-C4 | -10.50 | 101.60 | 105.80 |
| 26 | BB | 550 | C | C6-N1-C2 | -10.50 | 116.10 | 120.30 |
| 1 | AA | 1035 | A | O4'-C4'-C3' | 10.50 | 114.50 | 104.00 |
| 1 | AA | 1140 | C | O4'-C1'-N1 | 10.50 | 116.60 | 108.20 |
| 23 | AW | 59 | ARG | NE-CZ-NH1 | 10.49 | 125.55 | 120.30 |
| 1 | AA | 560 | A | O4'-C1'-N9 | 10.49 | 116.59 | 108.20 |
| 25 | BA | 77 | U | C6-N1-C2 | -10.49 | 114.70 | 121.00 |
| 1 | AA | 883 | C | C6-N1-C2 | -10.49 | 116.10 | 120.30 |
| 26 | BB | 575 | A | C1'-O4'-C4' | -10.49 | 101.51 | 109.90 |
| 1 | AA | 260 | G | N1-C6-O6 | -10.49 | 113.61 | 119.90 |
| 1 | AA | 1521 | C | N1-C2-O2 | 10.49 | 125.19 | 118.90 |
| 26 | BB | 554 | U | O4'-C1'-N1 | 10.49 | 116.59 | 108.20 |
| 26 | BB | 2187 | U | O4'-C1'-N1 | 10.48 | 116.58 | 108.20 |
| 26 | BB | 2550 | G | N9-C4-C5 | 10.48 | 109.59 | 105.40 |
| 26 | BB | 1512 | C | O4'-C1'-N1 | 10.48 | 116.58 | 108.20 |
| 1 | AA | 113 | G | C2-N3-C4 | 10.48 | 117.14 | 111.90 |
| 1 | AA | 1089 | G | N7-C8-N9 | 10.48 | 118.34 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 273 | G | C8-N9-C4 | -10.48 | 102.21 | 106.40 |
| 1 | AA | 1256 | A | C2-N3-C4 | 10.47 | 115.84 | 110.60 |
| 26 | BB | 2621 | G | N7-C8-N9 | 10.47 | 118.34 | 113.10 |
| 49 | BY | 54 | ARG | NE-CZ-NH1 | -10.47 | 115.06 | 120.30 |
| 26 | BB | 2677 | G | O4'-C1'-N9 | 10.47 | 116.58 | 108.20 |
| 1 | AA | 381 | C | C6-N1-C2 | -10.47 | 116.11 | 120.30 |
| 4 | AD | 4 | G | N3-C4-C5 | -10.47 | 123.36 | 128.60 |
| 26 | BB | 426 | C | N1-C2-O2 | 10.47 | 125.18 | 118.90 |
| 26 | BB | 1163 | G | C5-C6-N1 | -10.47 | 106.27 | 111.50 |
| 1 | AA | 749 | A | C5-C6-N1 | 10.47 | 122.94 | 117.70 |
| 1 | AA | 1486 | G | C5-C6-N1 | 10.47 | 116.73 | 111.50 |
| 26 | BB | 575 | A | C8-N9-C4 | -10.47 | 101.61 | 105.80 |
| 1 | AA | 121 | U | O4'-C1'-N1 | 10.47 | 116.57 | 108.20 |
| 1 | AA | 1232 | U | O4'-C1'-N1 | 10.47 | 116.57 | 108.20 |
| 25 | BA | 30 | C | N3-C2-O2 | -10.46 | 114.58 | 121.90 |
| 26 | BB | 1731 | G | N1-C2-N2 | 10.46 | 125.62 | 116.20 |
| 26 | BB | 2360 | G | N9-C4-C5 | 10.46 | 109.58 | 105.40 |
| 1 | AA | 1418 | A | C5-N7-C8 | 10.46 | 109.13 | 103.90 |
| 26 | BB | 1387 | A | C8-N9-C4 | -10.46 | 101.62 | 105.80 |
| 26 | BB | 2505 | G | N3-C4-C5 | -10.46 | 123.37 | 128.60 |
| 1 | AA | 7 | A | C4-C5-N7 | -10.46 | 105.47 | 110.70 |
| 26 | BB | 1109 | C | O4'-C1'-N1 | 10.46 | 116.57 | 108.20 |
| 26 | BB | 1201 | U | O4'-C1'-N1 | 10.46 | 116.57 | 108.20 |
| 1 | AA | 691 | G | N3-C4-C5 | -10.46 | 123.37 | 128.60 |
| 1 | AA | 828 | U | N1-C2-O2 | 10.46 | 130.12 | 122.80 |
| 26 | BB | 512 | G | C8-N9-C4 | -10.45 | 102.22 | 106.40 |
| 26 | BB | 923 | G | C2-N3-C4 | 10.46 | 117.13 | 111.90 |
| 26 | BB | 2546 | U | C6-N1-C2 | -10.45 | 114.73 | 121.00 |
| 26 | BB | 652 | U | C6-N1-C2 | -10.45 | 114.73 | 121.00 |
| 26 | BB | 737 | C | O4'-C1'-N1 | 10.45 | 116.56 | 108.20 |
| 26 | BB | 1878 | G | C6-C5-N7 | -10.45 | 124.13 | 130.40 |
| 26 | BB | 2134 | A | C5-C6-N1 | 10.45 | 122.93 | 117.70 |
| 26 | BB | 2511 | U | O4'-C1'-N1 | 10.45 | 116.56 | 108.20 |
| 1 | AA | 138 | G | C4-C5-C6 | 10.45 | 125.07 | 118.80 |
| 26 | BB | 129 | C | C5'-C4'-O4' | 10.45 | 121.64 | 109.10 |
| 1 | AA | 258 | G | O4'-C1'-N9 | 10.45 | 116.56 | 108.20 |
| 1 | AA | 821 | G | N1-C6-O6 | 10.45 | 126.17 | 119.90 |
| 26 | BB | 1036 | G | C5-C6-N1 | 10.45 | 116.72 | 111.50 |
| 26 | BB | 1694 | C | C6-N1-C2 | -10.45 | 116.12 | 120.30 |
| 26 | BB | 1903 | G | N3-C4-C5 | -10.45 | 123.38 | 128.60 |
| 1 | AA | 225 | C | N1-C2-O2 | 10.45 | 125.17 | 118.90 |
| 1 | AA | 1142 | G | C5-C6-N1 | 10.45 | 116.72 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1404 | C | O4'-C1'-N1 | 10.45 | 116.56 | 108.20 |
| 2 | AB | 25 | C | C5-C4-N4 | 10.45 | 127.51 | 120.20 |
| 26 | BB | 1023 | U | C5-C4-O4 | -10.45 | 119.63 | 125.90 |
| 26 | BB | 2108 | A | C5-C6-N6 | -10.45 | 115.34 | 123.70 |
| 26 | BB | 2196 | C | C4-C5-C6 | -10.44 | 112.18 | 117.40 |
| 26 | BB | 2402 | U | O4'-C1'-C2' | -10.45 | 95.36 | 105.80 |
| 1 | AA | 364 | A | C8-N9-C4 | -10.44 | 101.62 | 105.80 |
| 26 | BB | 1239 | G | C5'-C4'-O4' | 10.44 | 121.63 | 109.10 |
| 26 | BB | 1450 | G | N3-C4-C5 | -10.44 | 123.38 | 128.60 |
| 26 | BB | 561 | G | C8-N9-C4 | -10.44 | 102.22 | 106.40 |
| 1 | AA | 783 | C | N3-C4-C5 | -10.44 | 117.72 | 121.90 |
| 26 | BB | 565 | C | C4-C5-C6 | -10.44 | 112.18 | 117.40 |
| 26 | BB | 1201 | U | N1-C2-O2 | 10.44 | 130.11 | 122.80 |
| 1 | AA | 392 | C | C5'-C4'-O4' | 10.44 | 121.62 | 109.10 |
| 1 | AA | 784 | A | N7-C8-N9 | 10.44 | 119.02 | 113.80 |
| 26 | BB | 2807 | U | C5-C4-O4 | -10.44 | 119.64 | 125.90 |
| 1 | AA | 1265 | C | C6-N1-C2 | 10.44 | 124.47 | 120.30 |
| 1 | AA | 1366 | C | C2-N3-C4 | 10.44 | 125.12 | 119.90 |
| 26 | BB | 730 | A | N7-C8-N9 | 10.44 | 119.02 | 113.80 |
| 26 | BB | 2813 | A | C5-C6-N1 | 10.44 | 122.92 | 117.70 |
| 1 | AA | 100 | G | N3-C4-C5 | -10.43 | 123.38 | 128.60 |
| 14 | AN | 121 | ARG | NE-CZ-NH1 | 10.43 | 125.52 | 120.30 |
| 26 | BB | 1115 | G | C2-N3-C4 | 10.43 | 117.12 | 111.90 |
| 26 | BB | 1627 | G | N1-C6-O6 | 10.43 | 126.16 | 119.90 |
| 26 | BB | 2736 | A | C5-C6-N1 | 10.43 | 122.92 | 117.70 |
| 1 | AA | 1254 | A | C8-N9-C4 | -10.43 | 101.63 | 105.80 |
| 26 | BB | 2281 | A | O4'-C1'-N9 | 10.43 | 116.54 | 108.20 |
| 1 | AA | 844 | G | N3-C4-C5 | -10.43 | 123.39 | 128.60 |
| 1 | AA | 857 | C | C5-C4-N4 | -10.43 | 112.90 | 120.20 |
| 1 | AA | 1108 | G | C4-C5-N7 | -10.43 | 106.63 | 110.80 |
| 26 | BB | 938 | G | N9-C1'-C2' | -10.43 | 100.45 | 114.00 |
| 1 | AA | 332 | G | C5-N7-C8 | 10.42 | 109.51 | 104.30 |
| 26 | BB | 1262 | A | O4'-C1'-N9 | 10.42 | 116.54 | 108.20 |
| 26 | BB | 2512 | C | O4'-C1'-N1 | 10.42 | 116.54 | 108.20 |
| 26 | BB | 2848 | G | C6-C5-N7 | -10.42 | 124.15 | 130.40 |
| 26 | BB | 412 | A | O4'-C1'-N9 | 10.42 | 116.54 | 108.20 |
| 26 | BB | 703 | U | O4'-C1'-N1 | 10.42 | 116.54 | 108.20 |
| 26 | BB | 2834 | G | C6-C5-N7 | -10.42 | 124.15 | 130.40 |
| 25 | BA | 17 | C | C2-N3-C4 | 10.42 | 125.11 | 119.90 |
| 26 | BB | 1341 | G | O4'-C1'-N9 | 10.42 | 116.53 | 108.20 |
| 26 | BB | 2250 | G | C5-C6-N1 | 10.42 | 116.71 | 111.50 |
| 25 | BA | 99 | A | N9-C4-C5 | 10.42 | 109.97 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1482 | G | C2-N3-C4 | 10.42 | 117.11 | 111.90 |
| 25 | BA | 51 | G | C2-N3-C4 | 10.42 | 117.11 | 111.90 |
| 26 | BB | 1549 | A | O4'-C1'-N9 | 10.42 | 116.53 | 108.20 |
| 26 | BB | 2012 | G | N7-C8-N9 | 10.42 | 118.31 | 113.10 |
| 1 | AA | 1396 | A | N1-C2-N3 | -10.41 | 124.09 | 129.30 |
| 26 | BB | 2847 | U | N3-C4-C5 | -10.41 | 108.35 | 114.60 |
| 1 | AA | 562 | U | C5-C4-O4 | -10.41 | 119.65 | 125.90 |
| 1 | AA | 882 | C | C4'-C3'-C2' | -10.41 | 92.19 | 102.60 |
| 26 | BB | 889 | C | C2-N3-C4 | 10.41 | 125.11 | 119.90 |
| 1 | AA | 103 | U | C5-C4-O4 | 10.41 | 132.15 | 125.90 |
| 1 | AA | 1426 | G | C4-C5-N7 | 10.41 | 114.96 | 110.80 |
| 26 | BB | 702 | U | C5-C6-N1 | -10.41 | 117.50 | 122.70 |
| 2 | AB | 59 | G | C4-C5-C6 | 10.41 | 125.05 | 118.80 |
| 26 | BB | 2521 | C | N1-C2-O2 | 10.41 | 125.14 | 118.90 |
| 26 | BB | 2157 | G | C5'-C4'-O4' | 10.40 | 121.59 | 109.10 |
| 1 | AA | 750 | C | C2-N3-C4 | 10.40 | 125.10 | 119.90 |
| 2 | AB | 76 | A | C8-N9-C4 | -10.40 | 101.64 | 105.80 |
| 26 | BB | 952 | G | C5-N7-C8 | 10.40 | 109.50 | 104.30 |
| 26 | BB | 1026 | G | C8-N9-C4 | -10.40 | 102.24 | 106.40 |
| 26 | BB | 1662 | U | C4-C5-C6 | 10.40 | 125.94 | 119.70 |
| 26 | BB | 2035 | G | C4-C5-N7 | -10.40 | 106.64 | 110.80 |
| 26 | BB | 2583 | G | C2-N3-C4 | 10.40 | 117.10 | 111.90 |
| 26 | BB | 2032 | G | C6-C5-N7 | -10.40 | 124.16 | 130.40 |
| 26 | BB | 2109 | U | C6-N1-C2 | -10.40 | 114.76 | 121.00 |
| 26 | BB | 2770 | G | C4-C5-N7 | -10.40 | 106.64 | 110.80 |
| 1 | AA | 351 | G | N1-C6-O6 | -10.40 | 113.66 | 119.90 |
| 2 | AB | 56 | C | C5-C4-N4 | -10.40 | 112.92 | 120.20 |
| 26 | BB | 1503 | A | C8-N9-C4 | -10.40 | 101.64 | 105.80 |
| 26 | BB | 2041 | U | N3-C2-O2 | -10.40 | 114.92 | 122.20 |
| 26 | BB | 1459 | G | O4'-C1'-N9 | 10.40 | 116.52 | 108.20 |
| 26 | BB | 1626 | A | O4'-C1'-N9 | 10.40 | 116.52 | 108.20 |
| 26 | BB | 2184 | A | C4-C5-N7 | 10.40 | 115.90 | 110.70 |
| 1 | AA | 412 | A | C4-C5-N7 | 10.39 | 115.90 | 110.70 |
| 4 | AD | 75 | C | O4'-C1'-N1 | 10.39 | 116.52 | 108.20 |
| 26 | BB | 2099 | U | O4'-C1'-N1 | 10.39 | 116.52 | 108.20 |
| 26 | BB | 2304 | G | C6-N1-C2 | -10.39 | 118.86 | 125.10 |
| 26 | BB | 787 | C | C4-C5-C6 | 10.39 | 122.59 | 117.40 |
| 26 | BB | 1685 | C | N3-C4-N4 | 10.39 | 125.27 | 118.00 |
| 1 | AA | 993 | G | C8-N9-C4 | 10.39 | 110.56 | 106.40 |
| 26 | BB | 724 | U | O4'-C1'-N1 | 10.39 | 116.51 | 108.20 |
| 26 | BB | 993 | G | N7-C8-N9 | 10.39 | 118.30 | 113.10 |
| 26 | BB | 2723 | C | N3-C4-N4 | 10.39 | 125.27 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 282 | A | N7-C8-N9 | 10.38 | 118.99 | 113.80 |
| 26 | BB | 268 | C | N3-C4-C5 | -10.39 | 117.75 | 121.90 |
| 26 | BB | 1322 | A | C5-C6-N1 | 10.38 | 122.89 | 117.70 |
| 26 | BB | 1370 | C | C6-N1-C2 | -10.38 | 116.15 | 120.30 |
| 1 | AA | 170 | U | C5-C4-O4 | -10.38 | 119.67 | 125.90 |
| 1 | AA | 202 | G | N7-C8-N9 | 10.38 | 118.29 | 113.10 |
| 1 | AA | 876 | C | N1-C2-O2 | 10.38 | 125.13 | 118.90 |
| 1 | AA | 1139 | G | O4'-C1'-N9 | 10.38 | 116.51 | 108.20 |
| 26 | BB | 2536 | G | N9-C4-C5 | 10.38 | 109.55 | 105.40 |
| 1 | AA | 725 | G | N9-C4-C5 | 10.38 | 109.55 | 105.40 |
| 26 | BB | 205 | G | N3-C4-C5 | -10.38 | 123.41 | 128.60 |
| 26 | BB | 272 | A | C8-N9-C4 | -10.38 | 101.65 | 105.80 |
| 26 | BB | 1776 | G | N9-C4-C5 | -10.38 | 101.25 | 105.40 |
| 26 | BB | 453 | A | C4-C5-N7 | -10.38 | 105.51 | 110.70 |
| 26 | BB | 2242 | G | N3-C4-C5 | -10.38 | 123.41 | 128.60 |
| 1 | AA | 1361 | G | C8-N9-C4 | -10.38 | 102.25 | 106.40 |
| 26 | BB | 2669 | G | C4-C5-N7 | -10.38 | 106.65 | 110.80 |
| 1 | AA | 1467 | C | C6-N1-C2 | -10.37 | 116.15 | 120.30 |
| 26 | BB | 1570 | A | C2-N3-C4 | 10.38 | 115.79 | 110.60 |
| 26 | BB | 2753 | A | C8-N9-C4 | -10.38 | 101.65 | 105.80 |
| 1 | AA | 404 | G | N3-C4-N9 | 10.37 | 132.22 | 126.00 |
| 26 | BB | 869 | G | C5-C6-O6 | -10.37 | 122.38 | 128.60 |
| 5 | AE | 138 | ARG | NE-CZ-NH1 | 10.37 | 125.49 | 120.30 |
| 1 | AA | 737 | C | N3-C4-C5 | -10.37 | 117.75 | 121.90 |
| 2 | AB | 13 | C | O4'-C1'-N1 | 10.37 | 116.50 | 108.20 |
| 25 | BA | 89 | U | O4'-C1'-N1 | 10.37 | 116.50 | 108.20 |
| 38 | BN | 59 | ARG | NE-CZ-NH2 | 10.37 | 125.48 | 120.30 |
| 1 | AA | 832 | G | C4-C5-N7 | -10.37 | 106.65 | 110.80 |
| 1 | AA | 309 | A | C1'-O4'-C4' | -10.37 | 101.61 | 109.90 |
| 26 | BB | 393 | C | N3-C4-C5 | -10.36 | 117.75 | 121.90 |
| 26 | BB | 2885 | G | N9-C4-C5 | 10.37 | 109.55 | 105.40 |
| 26 | BB | 491 | G | N3-C4-C5 | -10.36 | 123.42 | 128.60 |
| 26 | BB | 1002 | G | C4-C5-N7 | -10.36 | 106.66 | 110.80 |
| 26 | BB | 1614 | A | C5-N7-C8 | -10.36 | 98.72 | 103.90 |
| 1 | AA | 1304 | G | C5-N7-C8 | -10.36 | 99.12 | 104.30 |
| 26 | BB | 128 | C | C5-C4-N4 | -10.36 | 112.95 | 120.20 |
| 26 | BB | 1093 | G | C5-C6-N1 | 10.36 | 116.68 | 111.50 |
| 26 | BB | 2837 | A | C5-C6-N6 | -10.36 | 115.41 | 123.70 |
| 1 | AA | 72 | A | N9-C4-C5 | 10.36 | 109.94 | 105.80 |
| 1 | AA | 812 | G | N3-C4-C5 | -10.36 | 123.42 | 128.60 |
| 26 | BB | 2141 | G | C4-C5-N7 | -10.36 | 106.66 | 110.80 |
| 26 | BB | 2777 | G | N3-C4-C5 | -10.36 | 123.42 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2793 | C | C5-C4-N4 | -10.36 | 112.95 | 120.20 |
| 26 | BB | 347 | A | C2-N3-C4 | 10.36 | 115.78 | 110.60 |
| 1 | AA | 1412 | C | C5-C4-N4 | -10.35 | 112.95 | 120.20 |
| 26 | BB | 1687 | G | N3-C4-C5 | -10.35 | 123.42 | 128.60 |
| 1 | AA | 125 | U | N3-C4-C5 | -10.35 | 108.39 | 114.60 |
| 1 | AA | 1523 | G | C2-N3-C4 | 10.35 | 117.08 | 111.90 |
| 2 | AB | 7 | G | N3-C2-N2 | 10.35 | 127.15 | 119.90 |
| 1 | AA | 1054 | C | O4'-C1'-N1 | 10.35 | 116.48 | 108.20 |
| 26 | BB | 277 | G | O4'-C1'-N9 | 10.35 | 116.48 | 108.20 |
| 26 | BB | 1625 | C | O4'-C1'-N1 | 10.35 | 116.48 | 108.20 |
| 26 | BB | 1852 | U | C4-C5-C6 | 10.35 | 125.91 | 119.70 |
| 1 | AA | 1059 | C | O4'-C1'-N1 | 10.35 | 116.48 | 108.20 |
| 26 | BB | 1865 | U | N1-C2-N3 | 10.34 | 121.11 | 114.90 |
| 26 | BB | 309 | A | C4-C5-C6 | 10.34 | 122.17 | 117.00 |
| 26 | BB | 2234 | G | C5-N7-C8 | -10.34 | 99.13 | 104.30 |
| 26 | BB | 2822 | G | C5-C6-N1 | 10.34 | 116.67 | 111.50 |
| 1 | AA | 222 | C | N3-C4-C5 | 10.34 | 126.03 | 121.90 |
| 1 | AA | 596 | A | N3-C4-C5 | -10.34 | 119.56 | 126.80 |
| 26 | BB | 547 | A | O4'-C1'-N9 | 10.34 | 116.47 | 108.20 |
| 26 | BB | 1053 | C | C6-N1-C2 | -10.34 | 116.17 | 120.30 |
| 26 | BB | 1131 | G | N9-C4-C5 | 10.34 | 109.53 | 105.40 |
| 1 | AA | 184 | G | C1'-O4'-C4' | -10.34 | 101.63 | 109.90 |
| 1 | AA | 1230 | C | N1-C2-O2 | 10.34 | 125.10 | 118.90 |
| 26 | BB | 1768 | C | C3'-C2'-C1' | 10.33 | 109.77 | 101.50 |
| 26 | BB | 2689 | U | C5-C6-N1 | -10.33 | 117.53 | 122.70 |
| 13 | AM | 62 | ARG | NE-CZ-NH2 | -10.33 | 115.13 | 120.30 |
| 26 | BB | 227 | A | C4-C5-C6 | 10.33 | 122.17 | 117.00 |
| 1 | AA | 299 | G | O4'-C1'-N9 | 10.33 | 116.47 | 108.20 |
| 1 | AA | 669 | G | O4'-C1'-N9 | 10.33 | 116.46 | 108.20 |
| 1 | AA | 795 | C | N1-C2-O2 | 10.33 | 125.10 | 118.90 |
| 26 | BB | 1166 | G | C4-C5-N7 | -10.33 | 106.67 | 110.80 |
| 26 | BB | 1528 | A | C2-N3-C4 | 10.33 | 115.77 | 110.60 |
| 1 | AA | 503 | C | N3-C2-O2 | -10.33 | 114.67 | 121.90 |
| 1 | AA | 587 | G | C5-C6-N1 | 10.33 | 116.66 | 111.50 |
| 1 | AA | 1190 | G | C5-C6-N1 | 10.33 | 116.66 | 111.50 |
| 26 | BB | 281 | C | C5-C6-N1 | 10.33 | 126.16 | 121.00 |
| 26 | BB | 555 | G | C6-C5-N7 | -10.33 | 124.20 | 130.40 |
| 1 | AA | 240 | G | N1-C2-N3 | 10.32 | 130.09 | 123.90 |
| 26 | BB | 1832 | C | N3-C4-N4 | 10.32 | 125.23 | 118.00 |
| 1 | AA | 169 | C | N3-C4-C5 | -10.32 | 117.77 | 121.90 |
| 26 | BB | 421 | C | N3-C4-C5 | -10.32 | 117.77 | 121.90 |
| 26 | BB | 1524 | G | C4-C5-N7 | 10.32 | 114.93 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 30 | BF | 40 | ARG | NE-CZ-NH1 | 10.32 | 125.46 | 120.30 |
| 26 | BB | 1603 | A | N9-C4-C5 | -10.32 | 101.67 | 105.80 |
| 1 | AA | 993 | G | C4-C5-N7 | 10.32 | 114.93 | 110.80 |
| 26 | BB | 1521 | G | C8-N9-C4 | -10.32 | 102.27 | 106.40 |
| 26 | BB | 2502 | G | C4-C5-N7 | 10.32 | 114.93 | 110.80 |
| 26 | BB | 1362 | C | C2-N3-C4 | 10.32 | 125.06 | 119.90 |
| 26 | BB | 2476 | A | N7-C8-N9 | 10.32 | 118.96 | 113.80 |
| 26 | BB | 2630 | G | C6-N1-C2 | -10.32 | 118.91 | 125.10 |
| 25 | BA | 17 | C | C6-N1-C2 | -10.32 | 116.17 | 120.30 |
| 26 | BB | 697 | G | C8-N9-C4 | -10.32 | 102.27 | 106.40 |
| 26 | BB | 1521 | G | N7-C8-N9 | 10.32 | 118.26 | 113.10 |
| 26 | BB | 2453 | A | C6-C5-N7 | 10.32 | 139.52 | 132.30 |
| 26 | BB | 2535 | G | O4'-C1'-N9 | 10.32 | 116.45 | 108.20 |
| 1 | AA | 470 | C | O4'-C4'-C3' | 10.31 | 114.35 | 106.10 |
| 1 | AA | 651 | C | N3-C4-C5 | -10.31 | 117.78 | 121.90 |
| 1 | AA | 896 | C | C5-C6-N1 | -10.31 | 115.84 | 121.00 |
| 1 | AA | 1259 | C | N3-C4-C5 | -10.31 | 117.78 | 121.90 |
| 26 | BB | 744 | U | O4'-C1'-N1 | 10.31 | 116.45 | 108.20 |
| 26 | BB | 2765 | A | N7-C8-N9 | 10.31 | 118.96 | 113.80 |
| 1 | AA | 245 | U | N1-C2-N3 | 10.31 | 121.09 | 114.90 |
| 1 | AA | 524 | G | C8-N9-C4 | -10.31 | 102.28 | 106.40 |
| 1 | AA | 1492 | A | C8-N9-C4 | -10.31 | 101.67 | 105.80 |
| 1 | AA | 396 | C | N3-C2-O2 | -10.31 | 114.68 | 121.90 |
| 4 | AD | 74 | A | C5-N7-C8 | -10.31 | 98.75 | 103.90 |
| 26 | BB | 235 | U | N3-C2-O2 | -10.31 | 114.98 | 122.20 |
| 2 | AB | 47 | U | N3-C2-O2 | -10.31 | 114.98 | 122.20 |
| 26 | BB | 2440 | C | P-O3'-C3' | 10.31 | 132.07 | 119.70 |
| 26 | BB | 286 | U | O4'-C1'-N1 | 10.30 | 116.44 | 108.20 |
| 26 | BB | 1363 | C | N3-C4-N4 | 10.30 | 125.21 | 118.00 |
| 26 | BB | 2131 | U | C2-N3-C4 | -10.30 | 120.82 | 127.00 |
| 26 | BB | 2162 | G | C5-N7-C8 | -10.30 | 99.15 | 104.30 |
| 1 | AA | 420 | U | C4'-C3'-C2' | -10.30 | 92.30 | 102.60 |
| 26 | BB | 1817 | G | N3-C4-N9 | 10.30 | 132.18 | 126.00 |
| 2 | AB | 35 | C | C6-N1-C2 | 10.29 | 124.42 | 120.30 |
| 25 | BA | 61 | G | N1-C6-O6 | 10.29 | 126.08 | 119.90 |
| 26 | BB | 856 | G | C2-N3-C4 | 10.29 | 117.05 | 111.90 |
| 26 | BB | 1336 | A | C2-N3-C4 | 10.29 | 115.75 | 110.60 |
| 26 | BB | 1649 | G | N3-C4-N9 | -10.29 | 119.82 | 126.00 |
| 26 | BB | 2041 | U | O4'-C1'-N1 | 10.29 | 116.44 | 108.20 |
| 26 | BB | 1281 | G | N3-C4-C5 | -10.29 | 123.45 | 128.60 |
| 26 | BB | 1376 | C | C5-C6-N1 | -10.29 | 115.86 | 121.00 |
| 26 | BB | 1673 | G | N9-C4-C5 | 10.29 | 109.52 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 773 | G | O4'-C1'-N9 | 10.29 | 116.43 | 108.20 |
| 26 | BB | 2302 | U | C4-C5-C6 | 10.29 | 125.87 | 119.70 |
| 38 | BN | 69 | ARG | NE-CZ-NH2 | -10.29 | 115.16 | 120.30 |
| 26 | BB | 218 | A | O4'-C1'-N9 | 10.29 | 116.43 | 108.20 |
| 26 | BB | 2670 | A | N1-C6-N6 | -10.29 | 112.43 | 118.60 |
| 26 | BB | 2429 | G | C4-C5-N7 | -10.29 | 106.69 | 110.80 |
| 1 | AA | 16 | A | O4'-C1'-N9 | 10.28 | 116.43 | 108.20 |
| 1 | AA | 1387 | G | C6-N1-C2 | -10.29 | 118.93 | 125.10 |
| 26 | BB | 838 | C | N1-C2-O2 | 10.28 | 125.07 | 118.90 |
| 1 | AA | 31 | G | N9-C4-C5 | 10.28 | 109.51 | 105.40 |
| 1 | AA | 839 | C | C5-C4-N4 | 10.28 | 127.40 | 120.20 |
| 26 | BB | 117 | G | C5-C6-N1 | -10.28 | 106.36 | 111.50 |
| 26 | BB | 785 | G | O4'-C1'-N9 | 10.28 | 116.42 | 108.20 |
| 1 | AA | 176 | C | O4'-C1'-N1 | 10.28 | 116.42 | 108.20 |
| 26 | BB | 200 | U | C2-N3-C4 | -10.28 | 120.83 | 127.00 |
| 26 | BB | 308 | G | C8-N9-C4 | -10.28 | 102.29 | 106.40 |
| 26 | BB | 891 | G | C4-C5-N7 | -10.28 | 106.69 | 110.80 |
| 26 | BB | 931 | U | N3-C2-O2 | -10.28 | 115.00 | 122.20 |
| 26 | BB | 1664 | A | C6-C5-N7 | -10.28 | 125.10 | 132.30 |
| 1 | AA | 215 | C | C6-N1-C2 | -10.28 | 116.19 | 120.30 |
| 10 | AJ | 4 | ARG | NE-CZ-NH1 | 10.28 | 125.44 | 120.30 |
| 26 | BB | 1529 | G | N1-C6-O6 | 10.28 | 126.07 | 119.90 |
| 26 | BB | 1666 | G | C8-N9-C4 | -10.28 | 102.29 | 106.40 |
| 1 | AA | 1430 | A | C8-N9-C4 | -10.28 | 101.69 | 105.80 |
| 1 | AA | 352 | C | N1-C2-O2 | 10.28 | 125.06 | 118.90 |
| 1 | AA | 1027 | C | C5-C4-N4 | -10.28 | 113.01 | 120.20 |
| 26 | BB | 1395 | A | N1-C2-N3 | -10.28 | 124.16 | 129.30 |
| 26 | BB | 2357 | G | N3-C4-C5 | -10.28 | 123.46 | 128.60 |
| 1 | AA | 550 | G | O4'-C1'-N9 | 10.27 | 116.42 | 108.20 |
| 1 | AA | 1379 | G | C8-N9-C4 | -10.27 | 102.29 | 106.40 |
| 2 | AB | 63 | C | O4'-C1'-N1 | 10.27 | 116.42 | 108.20 |
| 25 | BA | 71 | C | N3-C4-C5 | -10.27 | 117.79 | 121.90 |
| 26 | BB | 1973 | G | C2-N3-C4 | 10.27 | 117.04 | 111.90 |
| 37 | BM | 64 | ARG | NE-CZ-NH2 | 10.27 | 125.44 | 120.30 |
| 26 | BB | 2579 | C | C1'-O4'-C4' | -10.27 | 101.68 | 109.90 |
| 4 | AD | 72 | C | C4-C5-C6 | -10.27 | 112.27 | 117.40 |
| 26 | BB | 211 | C | C6-N1-C2 | -10.27 | 116.19 | 120.30 |
| 26 | BB | 2541 | A | C5'-C4'-O4' | 10.27 | 121.42 | 109.10 |
| 26 | BB | 2862 | G | C6-C5-N7 | -10.27 | 124.24 | 130.40 |
| 1 | AA | 772 | U | O4'-C1'-N1 | 10.27 | 116.41 | 108.20 |
| 26 | BB | 156 | A | O4'-C1'-N9 | 10.27 | 116.41 | 108.20 |
| 26 | BB | 2057 | G | C6-C5-N7 | -10.27 | 124.24 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1655 | A | O4'-C1'-N9 | 10.27 | 116.41 | 108.20 |
| 1 | AA | 774 | G | C5-C6-O6 | -10.26 | 122.44 | 128.60 |
| 1 | AA | 1242 | G | N9-C4-C5 | -10.26 | 101.29 | 105.40 |
| 26 | BB | 2061 | G | N3-C4-N9 | -10.26 | 119.84 | 126.00 |
| 37 | BM | 49 | ARG | NE-CZ-NH2 | 10.26 | 125.43 | 120.30 |
| 1 | AA | 210 | C | C5-C4-N4 | -10.26 | 113.02 | 120.20 |
| 1 | AA | 336 | A | N9-C4-C5 | 10.26 | 109.90 | 105.80 |
| 2 | AB | 53 | G | C5-N7-C8 | 10.26 | 109.43 | 104.30 |
| 1 | AA | 649 | A | C4-C5-C6 | -10.26 | 111.87 | 117.00 |
| 1 | AA | 803 | G | C4-C5-N7 | -10.26 | 106.70 | 110.80 |
| 26 | BB | 2481 | G | O4'-C1'-N9 | 10.26 | 116.41 | 108.20 |
| 26 | BB | 2492 | U | O4'-C1'-N1 | 10.26 | 116.41 | 108.20 |
| 26 | BB | 205 | G | O4'-C1'-N9 | 10.26 | 116.41 | 108.20 |
| 26 | BB | 1411 | U | O4'-C1'-N1 | 10.26 | 116.41 | 108.20 |
| 26 | BB | 2275 | C | N1-C2-O2 | 10.26 | 125.05 | 118.90 |
| 26 | BB | 2668 | G | C5-N7-C8 | -10.26 | 99.17 | 104.30 |
| 26 | BB | 2192 | U | C4-C5-C6 | 10.25 | 125.85 | 119.70 |
| 1 | AA | 622 | A | N3-C4-N9 | -10.25 | 119.20 | 127.40 |
| 1 | AA | 1298 | U | C5-C6-N1 | -10.25 | 117.57 | 122.70 |
| 25 | BA | 32 | U | O4'-C1'-N1 | 10.25 | 116.40 | 108.20 |
| 26 | BB | 2448 | A | N7-C8-N9 | 10.25 | 118.93 | 113.80 |
| 1 | AA | 604 | G | N9-C4-C5 | 10.25 | 109.50 | 105.40 |
| 1 | AA | 933 | G | N3-C4-N9 | 10.25 | 132.15 | 126.00 |
| 25 | BA | 27 | C | N3-C4-C5 | -10.25 | 117.80 | 121.90 |
| 1 | AA | 699 | C | N1-C2-O2 | 10.25 | 125.05 | 118.90 |
| 1 | AA | 828 | U | O4'-C1'-N1 | 10.25 | 116.40 | 108.20 |
| 1 | AA | 1173 | U | N3-C4-C5 | -10.24 | 108.45 | 114.60 |
| 2 | AB | 22 | G | N3-C4-C5 | -10.24 | 123.48 | 128.60 |
| 4 | AD | 53 | G | C8-N9-C4 | -10.24 | 102.30 | 106.40 |
| 26 | BB | 2536 | G | C4-C5-C6 | 10.24 | 124.95 | 118.80 |
| 1 | AA | 204 | G | C4-C5-N7 | -10.24 | 106.70 | 110.80 |
| 1 | AA | 960 | U | O4'-C1'-N1 | 10.24 | 116.39 | 108.20 |
| 1 | AA | 557 | G | O4'-C1'-N9 | 10.24 | 116.39 | 108.20 |
| 26 | BB | 68 | G | O4'-C1'-N9 | 10.24 | 116.39 | 108.20 |
| 26 | BB | 2277 | G | N9-C4-C5 | 10.24 | 109.50 | 105.40 |
| 26 | BB | 375 | G | C2-N3-C4 | 10.24 | 117.02 | 111.90 |
| 26 | BB | 1678 | A | N7-C8-N9 | 10.24 | 118.92 | 113.80 |
| 26 | BB | 1995 | U | N3-C2-O2 | -10.24 | 115.03 | 122.20 |
| 26 | BB | 2858 | C | O4'-C1'-N1 | 10.24 | 116.39 | 108.20 |
| 26 | BB | 712 | G | C5-C6-N1 | 10.23 | 116.62 | 111.50 |
| 26 | BB | 1116 | G | N3-C4-C5 | -10.23 | 123.48 | 128.60 |
| 26 | BB | 2232 | C | N3-C4-C5 | 10.23 | 125.99 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 106 | C | O4'-C1'-N1 | 10.23 | 116.38 | 108.20 |
| 26 | BB | 2554 | U | C4'-C3'-C2' | -10.23 | 92.37 | 102.60 |
| 1 | AA | 1537 | U | C5-C4-O4 | -10.23 | 119.76 | 125.90 |
| 2 | AB | 65 | C | C5-C6-N1 | 10.23 | 126.11 | 121.00 |
| 26 | BB | 411 | G | C8-N9-C4 | -10.23 | 102.31 | 106.40 |
| 26 | BB | 1790 | C | N3-C4-N4 | 10.23 | 125.16 | 118.00 |
| 26 | BB | 1888 | G | C5-C6-N1 | 10.23 | 116.61 | 111.50 |
| 26 | BB | 391 | A | O4'-C1'-N9 | 10.23 | 116.38 | 108.20 |
| 26 | BB | 2018 | G | N7-C8-N9 | 10.23 | 118.21 | 113.10 |
| 26 | BB | 2139 | U | C5'-C4'-C3' | -10.23 | 99.64 | 116.00 |
| 26 | BB | 2163 | A | C1'-O4'-C4' | -10.23 | 101.72 | 109.90 |
| 1 | AA | 1200 | C | N3-C4-C5 | -10.22 | 117.81 | 121.90 |
| 26 | BB | 156 | A | N9-C4-C5 | 10.22 | 109.89 | 105.80 |
| 26 | BB | 279 | A | N1-C2-N3 | -10.22 | 124.19 | 129.30 |
| 26 | BB | 451 | U | C5-C6-N1 | -10.22 | 117.59 | 122.70 |
| 26 | BB | 1986 | C | N3-C4-C5 | -10.22 | 117.81 | 121.90 |
| 26 | BB | 2563 | U | N3-C2-O2 | -10.22 | 115.04 | 122.20 |
| 26 | BB | 683 | U | O4'-C1'-N1 | 10.22 | 116.38 | 108.20 |
| 1 | AA | 475 | C | N1-C2-O2 | 10.22 | 125.03 | 118.90 |
| 1 | AA | 1483 | A | C3'-C2'-C1' | -10.22 | 93.33 | 101.50 |
| 26 | BB | 36 | G | C2-N3-C4 | 10.22 | 117.01 | 111.90 |
| 26 | BB | 1186 | G | N1-C6-O6 | -10.21 | 113.77 | 119.90 |
| 1 | AA | 41 | G | C5-N7-C8 | 10.21 | 109.41 | 104.30 |
| 1 | AA | 1398 | A | C8-N9-C4 | -10.21 | 101.72 | 105.80 |
| 26 | BB | 2474 | U | C5-C6-N1 | -10.21 | 117.59 | 122.70 |
| 4 | AD | 70 | C | O4'-C1'-N1 | 10.21 | 116.37 | 108.20 |
| 26 | BB | 205 | G | C2-N3-C4 | 10.21 | 117.01 | 111.90 |
| 26 | BB | 495 | G | N9-C4-C5 | 10.21 | 109.48 | 105.40 |
| 26 | BB | 722 | A | C1'-O4'-C4' | 10.21 | 118.07 | 109.90 |
| 26 | BB | 2112 | G | C2-N3-C4 | 10.21 | 117.00 | 111.90 |
| 26 | BB | 2824 | C | C5-C4-N4 | -10.21 | 113.05 | 120.20 |
| 1 | AA | 1501 | C | C2-N3-C4 | 10.21 | 125.00 | 119.90 |
| 24 | AX | 20 | ARG | NE-CZ-NH1 | 10.21 | 125.40 | 120.30 |
| 25 | BA | 97 | C | N3-C2-O2 | -10.21 | 114.75 | 121.90 |
| 26 | BB | 167 | A | N7-C8-N9 | 10.21 | 118.91 | 113.80 |
| 26 | BB | 1557 | C | C5-C4-N4 | -10.21 | 113.05 | 120.20 |
| 26 | BB | 89 | A | N1-C2-N3 | -10.21 | 124.20 | 129.30 |
| 26 | BB | 1787 | A | C4-C5-N7 | -10.21 | 105.60 | 110.70 |
| 1 | AA | 395 | C | C6-N1-C2 | -10.20 | 116.22 | 120.30 |
| 1 | AA | 1396 | A | O4'-C1'-N9 | 10.20 | 116.36 | 108.20 |
| 26 | BB | 159 | G | C8-N9-C4 | -10.21 | 102.32 | 106.40 |
| 26 | BB | 2076 | U | C5-C6-N1 | -10.21 | 117.60 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 766 | A | C5-N7-C8 | -10.20 | 98.80 | 103.90 |
| 26 | BB | 1440 | U | N3-C2-O2 | -10.20 | 115.06 | 122.20 |
| 1 | AA | 521 | G | C5-C6-N1 | 10.20 | 116.60 | 111.50 |
| 26 | BB | 715 | A | N1-C6-N6 | -10.20 | 112.48 | 118.60 |
| 42 | BR | 108 | ARG | NE-CZ-NH1 | -10.20 | 115.20 | 120.30 |
| 1 | AA | 1356 | G | O4'-C1'-N9 | 10.20 | 116.36 | 108.20 |
| 26 | BB | 2008 | C | N3-C4-C5 | -10.20 | 117.82 | 121.90 |
| 26 | BB | 500 | G | C5-N7-C8 | -10.20 | 99.20 | 104.30 |
| 26 | BB | 2867 | G | N3-C4-C5 | -10.20 | 123.50 | 128.60 |
| 1 | AA | 818 | G | C2-N3-C4 | 10.20 | 117.00 | 111.90 |
| 26 | BB | 2694 | G | O4'-C1'-N9 | 10.20 | 116.36 | 108.20 |
| 26 | BB | 2850 | A | C5-N7-C8 | 10.19 | 109.00 | 103.90 |
| 26 | BB | 1259 | G | C1'-O4'-C4' | -10.19 | 101.75 | 109.90 |
| 26 | BB | 1614 | A | C5-C6-N1 | 10.19 | 122.80 | 117.70 |
| 26 | BB | 2688 | G | C4-C5-C6 | 10.19 | 124.91 | 118.80 |
| 1 | AA | 696 | A | C2-N3-C4 | 10.19 | 115.69 | 110.60 |
| 1 | AA | 838 | G | N3-C4-N9 | -10.19 | 119.89 | 126.00 |
| 1 | AA | 1240 | U | C4-C5-C6 | -10.19 | 113.59 | 119.70 |
| 4 | AD | 48 | U | N3-C4-C5 | -10.19 | 108.49 | 114.60 |
| 1 | AA | 220 | G | N3-C4-C5 | -10.19 | 123.51 | 128.60 |
| 26 | BB | 1796 | U | C4'-C3'-C2' | -10.19 | 92.41 | 102.60 |
| 1 | AA | 1365 | G | N3-C4-N9 | -10.18 | 119.89 | 126.00 |
| 26 | BB | 193 | U | O4'-C1'-N1 | 10.18 | 116.34 | 108.20 |
| 26 | BB | 444 | C | N1-C1'-C2' | -10.18 | 100.76 | 114.00 |
| 26 | BB | 717 | C | N3-C4-C5 | 10.18 | 125.97 | 121.90 |
| 26 | BB | 1116 | G | O4'-C1'-N9 | 10.18 | 116.34 | 108.20 |
| 26 | BB | 120 | U | N1-C2-N3 | 10.18 | 121.01 | 114.90 |
| 26 | BB | 1368 | G | N3-C4-C5 | -10.18 | 123.51 | 128.60 |
| 26 | BB | 1815 | A | O4'-C1'-N9 | 10.18 | 116.34 | 108.20 |
| 1 | AA | 352 | C | N3-C4-C5 | 10.18 | 125.97 | 121.90 |
| 1 | AA | 482 | A | O4'-C1'-N9 | 10.18 | 116.34 | 108.20 |
| 26 | BB | 558 | U | C5-C4-O4 | -10.18 | 119.80 | 125.90 |
| 1 | AA | 107 | G | N3-C4-C5 | -10.17 | 123.51 | 128.60 |
| 26 | BB | 1081 | U | O4'-C1'-N1 | 10.17 | 116.34 | 108.20 |
| 26 | BB | 1888 | G | C6-N1-C2 | -10.17 | 119.00 | 125.10 |
| 26 | BB | 2051 | A | C2-N3-C4 | 10.17 | 115.69 | 110.60 |
| 1 | AA | 29 | U | C5-C6-N1 | -10.17 | 117.61 | 122.70 |
| 1 | AA | 733 | G | C8-N9-C4 | -10.17 | 102.33 | 106.40 |
| 1 | AA | 1000 | A | O4'-C1'-N9 | 10.17 | 116.34 | 108.20 |
| 26 | BB | 1234 | U | O4'-C1'-N1 | 10.17 | 116.34 | 108.20 |
| 1 | AA | 1193 | G | N1-C2-N2 | 10.17 | 125.35 | 116.20 |
| 1 | AA | 639 | G | N9-C4-C5 | 10.17 | 109.47 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1148 | U | O4'-C1'-N1 | 10.17 | 116.33 | 108.20 |
| 4 | AD | 42 | C | C2-N3-C4 | 10.17 | 124.98 | 119.90 |
| 26 | BB | 1869 | G | N7-C8-N9 | 10.17 | 118.18 | 113.10 |
| 1 | AA | 793 | U | C5-C4-O4 | -10.16 | 119.80 | 125.90 |
| 26 | BB | 2099 | U | C5-C4-O4 | 10.16 | 132.00 | 125.90 |
| 26 | BB | 2293 | G | C4-C5-N7 | -10.16 | 106.73 | 110.80 |
| 1 | AA | 351 | G | N7-C8-N9 | 10.16 | 118.18 | 113.10 |
| 1 | AA | 1477 | U | C5-C6-N1 | -10.16 | 117.62 | 122.70 |
| 2 | AB | 35 | C | N3-C4-C5 | 10.16 | 125.96 | 121.90 |
| 26 | BB | 1268 | A | N9-C4-C5 | -10.16 | 101.73 | 105.80 |
| 26 | BB | 1869 | G | C8-N9-C4 | -10.16 | 102.34 | 106.40 |
| 26 | BB | 2342 | C | N3-C2-O2 | -10.16 | 114.79 | 121.90 |
| 26 | BB | 2725 | A | C3'-C2'-C1' | 10.16 | 109.62 | 101.50 |
| 26 | BB | 1873 | G | C5-C6-O6 | -10.15 | 122.51 | 128.60 |
| 1 | AA | 73 | C | O4'-C1'-N1 | 10.15 | 116.32 | 108.20 |
| 18 | AR | 63 | ARG | NE-CZ-NH2 | 10.15 | 125.38 | 120.30 |
| 26 | BB | 1171 | G | C8-N9-C4 | -10.15 | 102.34 | 106.40 |
| 1 | AA | 198 | G | N3-C4-C5 | -10.15 | 123.53 | 128.60 |
| 1 | AA | 422 | C | O4'-C1'-N1 | 10.15 | 116.32 | 108.20 |
| 1 | AA | 669 | G | C5-C6-N1 | 10.15 | 116.57 | 111.50 |
| 26 | BB | 1470 | A | N9-C4-C5 | -10.15 | 101.74 | 105.80 |
| 26 | BB | 1299 | G | C5-C6-O6 | 10.15 | 134.69 | 128.60 |
| 26 | BB | 1537 | G | O4'-C1'-N9 | 10.15 | 116.32 | 108.20 |
| 26 | BB | 2523 | G | C6-C5-N7 | -10.15 | 124.31 | 130.40 |
| 1 | AA | 392 | C | O4'-C1'-N1 | 10.14 | 116.32 | 108.20 |
| 1 | AA | 267 | C | C3'-C2'-C1' | 10.14 | 109.61 | 101.50 |
| 1 | AA | 919 | A | C2-N3-C4 | -10.14 | 105.53 | 110.60 |
| 25 | BA | 78 | A | C5-C6-N6 | -10.14 | 115.59 | 123.70 |
| 26 | BB | 727 | A | C4-C5-N7 | -10.14 | 105.63 | 110.70 |
| 26 | BB | 1142 | A | N1-C6-N6 | 10.14 | 124.68 | 118.60 |
| 26 | BB | 1252 | G | C8-N9-C4 | -10.14 | 102.34 | 106.40 |
| 26 | BB | 1623 | G | N9-C4-C5 | 10.14 | 109.46 | 105.40 |
| 26 | BB | 1850 | G | N3-C4-N9 | 10.14 | 132.09 | 126.00 |
| 26 | BB | 2417 | C | O4'-C1'-N1 | 10.14 | 116.31 | 108.20 |
| 30 | BF | 102 | ARG | NE-CZ-NH2 | -10.14 | 115.23 | 120.30 |
| 1 | AA | 135 | C | C1'-O4'-C4' | -10.13 | 101.79 | 109.90 |
| 1 | AA | 855 | U | O4'-C1'-N1 | 10.14 | 116.31 | 108.20 |
| 1 | AA | 1298 | U | C4-C5-C6 | 10.14 | 125.78 | 119.70 |
| 1 | AA | 1410 | A | N9-C4-C5 | 10.13 | 109.85 | 105.80 |
| 26 | BB | 2603 | G | C5'-C4'-O4' | 10.13 | 121.26 | 109.10 |
| 26 | BB | 473 | G | N7-C8-N9 | 10.13 | 118.17 | 113.10 |
| 26 | BB | 2774 | C | O4'-C1'-N1 | 10.13 | 116.31 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 34 | BJ | 137 | ARG | NE-CZ-NH1 | 10.13 | 125.37 | 120.30 |
| 1 | AA | 127 | G | O4'-C1'-N9 | 10.13 | 116.30 | 108.20 |
| 1 | AA | 1160 | G | C2-N3-C4 | 10.13 | 116.97 | 111.90 |
| 26 | BB | 2656 | U | N3-C4-O4 | 10.13 | 126.49 | 119.40 |
| 3 | AC | 49 | U | C5-C6-N1 | -10.13 | 117.64 | 122.70 |
| 26 | BB | 2326 | C | C5-C6-N1 | 10.13 | 126.06 | 121.00 |
| 1 | AA | 1160 | G | C5-C6-N1 | 10.13 | 116.56 | 111.50 |
| 26 | BB | 90 | U | O4'-C1'-N1 | 10.13 | 116.30 | 108.20 |
| 26 | BB | 524 | G | N3-C4-C5 | -10.13 | 123.54 | 128.60 |
| 26 | BB | 1110 | G | N9-C4-C5 | 10.13 | 109.45 | 105.40 |
| 26 | BB | 1569 | A | N7-C8-N9 | -10.13 | 108.74 | 113.80 |
| 1 | AA | 803 | G | N3-C4-C5 | -10.12 | 123.54 | 128.60 |
| 1 | AA | 1236 | A | N9-C4-C5 | -10.13 | 101.75 | 105.80 |
| 26 | BB | 1216 | G | C5-N7-C8 | -10.12 | 99.24 | 104.30 |
| 26 | BB | 1591 | A | C6-N1-C2 | 10.12 | 124.67 | 118.60 |
| 26 | BB | 490 | C | O4'-C1'-N1 | 10.12 | 116.30 | 108.20 |
| 26 | BB | 820 | A | O4'-C1'-N9 | 10.12 | 116.30 | 108.20 |
| 26 | BB | 1731 | G | N3-C4-C5 | -10.12 | 123.54 | 128.60 |
| 26 | BB | 2313 | C | N3-C2-O2 | -10.12 | 114.81 | 121.90 |
| 26 | BB | 3 | U | C4'-C3'-C2' | -10.12 | 92.48 | 102.60 |
| 4 | AD | 48 | U | N3-C2-O2 | -10.12 | 115.12 | 122.20 |
| 4 | AD | 70 | C | C2-N3-C4 | 10.12 | 124.96 | 119.90 |
| 26 | BB | 350 | G | C6-C5-N7 | -10.12 | 124.33 | 130.40 |
| 26 | BB | 648 | G | C5-N7-C8 | -10.12 | 99.24 | 104.30 |
| 26 | BB | 111 | A | O4'-C1'-N9 | 10.12 | 116.29 | 108.20 |
| 26 | BB | 922 | C | N3-C4-C5 | -10.12 | 117.85 | 121.90 |
| 26 | BB | 1018 | U | C5-C4-O4 | 10.12 | 131.97 | 125.90 |
| 26 | BB | 1872 | A | N9-C4-C5 | 10.12 | 109.85 | 105.80 |
| 26 | BB | 2307 | G | N7-C8-N9 | 10.12 | 118.16 | 113.10 |
| 26 | BB | 2669 | G | C5-N7-C8 | 10.12 | 109.36 | 104.30 |
| 26 | BB | 1398 | C | N3-C4-C5 | -10.11 | 117.85 | 121.90 |
| 1 | AA | 319 | G | N3-C4-C5 | -10.11 | 123.54 | 128.60 |
| 26 | BB | 1874 | C | N3-C4-N4 | 10.11 | 125.08 | 118.00 |
| 1 | AA | 344 | A | C3'-C2'-C1' | 10.11 | 109.59 | 101.50 |
| 26 | BB | 813 | U | O4'-C1'-N1 | 10.11 | 116.29 | 108.20 |
| 1 | AA | 382 | A | C6-C5-N7 | 10.11 | 139.37 | 132.30 |
| 1 | AA | 609 | A | N7-C8-N9 | 10.11 | 118.85 | 113.80 |
| 1 | AA | 1342 | C | N3-C2-O2 | -10.11 | 114.83 | 121.90 |
| 26 | BB | 2386 | A | N7-C8-N9 | 10.11 | 118.85 | 113.80 |
| 26 | BB | 16 | C | N3-C4-C5 | -10.10 | 117.86 | 121.90 |
| 26 | BB | 1158 | C | N3-C2-O2 | -10.10 | 114.83 | 121.90 |
| 26 | BB | 2413 | G | C8-N9-C4 | -10.10 | 102.36 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1666 | G | N9-C4-C5 | 10.10 | 109.44 | 105.40 |
| 1 | AA | 1330 | U | O4'-C1'-N1 | 10.10 | 116.28 | 108.20 |
| 26 | BB | 507 | A | C5-N7-C8 | -10.10 | 98.85 | 103.90 |
| 26 | BB | 614 | A | N1-C2-N3 | -10.10 | 124.25 | 129.30 |
| 26 | BB | 1375 | U | O4'-C1'-N1 | 10.10 | 116.28 | 108.20 |
| 26 | BB | 1511 | G | N1-C2-N3 | -10.10 | 117.84 | 123.90 |
| 1 | AA | 45 | G | C2-N3-C4 | 10.10 | 116.95 | 111.90 |
| 26 | BB | 82 | U | N3-C4-O4 | 10.10 | 126.47 | 119.40 |
| 26 | BB | 204 | A | N1-C2-N3 | 10.10 | 134.35 | 129.30 |
| 26 | BB | 1383 | A | C8-N9-C4 | -10.10 | 101.76 | 105.80 |
| 26 | BB | 2624 | G | C4-C5-N7 | 10.10 | 114.84 | 110.80 |
| 23 | AW | 24 | ARG | NE-CZ-NH2 | -10.09 | 115.25 | 120.30 |
| 26 | BB | 214 | G | N3-C4-C5 | -10.09 | 123.55 | 128.60 |
| 26 | BB | 1051 | G | O4'-C1'-N9 | 10.09 | 116.27 | 108.20 |
| 26 | BB | 2242 | G | N3-C4-N9 | 10.09 | 132.06 | 126.00 |
| 26 | BB | 2817 | U | C5-C6-N1 | -10.09 | 117.65 | 122.70 |
| 26 | BB | 2890 | G | O4'-C4'-C3' | 10.09 | 114.17 | 106.10 |
| 1 | AA | 1050 | G | C5-N7-C8 | -10.09 | 99.26 | 104.30 |
| 20 | AT | 5 | ARG | NE-CZ-NH1 | 10.09 | 125.34 | 120.30 |
| 1 | AA | 977 | A | N9-C4-C5 | 10.09 | 109.83 | 105.80 |
| 2 | AB | 72 | U | N3-C4-O4 | -10.09 | 112.34 | 119.40 |
| 26 | BB | 2034 | U | N1-C2-N3 | 10.09 | 120.95 | 114.90 |
| 3 | AC | 46 | C | O4'-C1'-N1 | 10.08 | 116.27 | 108.20 |
| 1 | AA | 374 | A | C4-C5-C6 | 10.08 | 122.04 | 117.00 |
| 1 | AA | 1323 | G | O4'-C1'-N9 | 10.08 | 116.26 | 108.20 |
| 26 | BB | 412 | A | C8-N9-C4 | -10.08 | 101.77 | 105.80 |
| 26 | BB | 2488 | G | C8-N9-C4 | -10.08 | 102.37 | 106.40 |
| 26 | BB | 2543 | G | N3-C4-C5 | -10.08 | 123.56 | 128.60 |
| 26 | BB | 723 | C | N3-C2-O2 | -10.08 | 114.84 | 121.90 |
| 26 | BB | 1980 | G | C8-N9-C4 | -10.08 | 102.37 | 106.40 |
| 1 | AA | 307 | C | C2-N3-C4 | 10.08 | 124.94 | 119.90 |
| 1 | AA | 893 | C | C2-N3-C4 | 10.08 | 124.94 | 119.90 |
| 1 | AA | 1000 | A | C5-C6-N1 | 10.08 | 122.74 | 117.70 |
| 2 | AB | 66 | C | N3-C4-C5 | -10.08 | 117.87 | 121.90 |
| 26 | BB | 189 | G | C4-C5-C6 | 10.08 | 124.85 | 118.80 |
| 26 | BB | 842 | U | N3-C2-O2 | -10.08 | 115.15 | 122.20 |
| 26 | BB | 1280 | G | C6-N1-C2 | -10.08 | 119.05 | 125.10 |
| 41 | BQ | 10 | ARG | NE-CZ-NH1 | -10.07 | 115.26 | 120.30 |
| 1 | AA | 1078 | U | C1'-O4'-C4' | -10.07 | 101.84 | 109.90 |
| 26 | BB | 117 | G | C6-N1-C2 | 10.07 | 131.14 | 125.10 |
| 26 | BB | 1719 | G | C8-N9-C4 | 10.07 | 110.43 | 106.40 |
| 25 | BA | 66 | A | N1-C6-N6 | -10.07 | 112.56 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 421 | C | C2-N3-C4 | 10.07 | 124.94 | 119.90 |
| 26 | BB | 570 | G | N9-C4-C5 | 10.07 | 109.43 | 105.40 |
| 33 | BI | 25 | TYR | CB-CG-CD1 | -10.07 | 114.96 | 121.00 |
| 1 | AA | 456 | A | N9-C4-C5 | 10.07 | 109.83 | 105.80 |
| 1 | AA | 760 | G | O4'-C1'-N9 | 10.07 | 116.26 | 108.20 |
| 1 | AA | 1069 | C | N3-C4-C5 | -10.07 | 117.87 | 121.90 |
| 26 | BB | 2003 | A | C5-N7-C8 | -10.07 | 98.86 | 103.90 |
| 1 | AA | 944 | G | N9-C4-C5 | -10.07 | 101.37 | 105.40 |
| 26 | BB | 1211 | C | O4'-C1'-N1 | 10.07 | 116.25 | 108.20 |
| 25 | BA | 90 | C | N1-C2-O2 | 10.07 | 124.94 | 118.90 |
| 25 | BA | 98 | G | N3-C4-C5 | -10.07 | 123.57 | 128.60 |
| 26 | BB | 985 | C | C4-C5-C6 | -10.07 | 112.37 | 117.40 |
| 1 | AA | 881 | G | N3-C4-C5 | -10.06 | 123.57 | 128.60 |
| 26 | BB | 1854 | A | N9-C4-C5 | -10.06 | 101.77 | 105.80 |
| 26 | BB | 1995 | U | N1-C2-O2 | 10.06 | 129.84 | 122.80 |
| 1 | AA | 789 | U | N1-C2-O2 | -10.06 | 115.76 | 122.80 |
| 26 | BB | 21 | A | C4-C5-C6 | -10.06 | 111.97 | 117.00 |
| 26 | BB | 143 | C | N3-C2-O2 | -10.06 | 114.86 | 121.90 |
| 26 | BB | 1308 | A | N1-C2-N3 | 10.06 | 134.33 | 129.30 |
| 26 | BB | 677 | A | C6-C5-N7 | 10.06 | 139.34 | 132.30 |
| 26 | BB | 1773 | A | N9-C4-C5 | 10.06 | 109.83 | 105.80 |
| 26 | BB | 274 | C | O4'-C1'-N1 | 10.06 | 116.25 | 108.20 |
| 26 | BB | 616 | A | C5-N7-C8 | 10.06 | 108.93 | 103.90 |
| 1 | AA | 893 | C | O4'-C1'-N1 | 10.06 | 116.25 | 108.20 |
| 1 | AA | 1022 | A | C1'-O4'-C4' | -10.06 | 101.86 | 109.90 |
| 1 | AA | 1232 | U | C6-N1-C2 | -10.06 | 114.97 | 121.00 |
| 26 | BB | 2561 | U | C5-C6-N1 | -10.06 | 117.67 | 122.70 |
| 22 | AV | 54 | ARG | NE-CZ-NH2 | -10.06 | 115.27 | 120.30 |
| 26 | BB | 214 | G | O4'-C1'-N9 | 10.05 | 116.24 | 108.20 |
| 26 | BB | 1176 | U | N3-C4-O4 | 10.06 | 126.44 | 119.40 |
| 26 | BB | 427 | U | N1-C2-N3 | 10.05 | 120.93 | 114.90 |
| 26 | BB | 1282 | U | N3-C2-O2 | -10.05 | 115.16 | 122.20 |
| 26 | BB | 1779 | U | C3'-C2'-C1' | 10.05 | 109.54 | 101.50 |
| 1 | AA | 140 | U | N3-C2-O2 | -10.05 | 115.17 | 122.20 |
| 1 | AA | 1059 | C | C2-N3-C4 | -10.05 | 114.88 | 119.90 |
| 26 | BB | 527 | C | O4'-C1'-N1 | 10.05 | 116.24 | 108.20 |
| 26 | BB | 829 | A | C8-N9-C4 | -10.05 | 101.78 | 105.80 |
| 26 | BB | 1127 | A | O4'-C1'-N9 | -10.05 | 100.16 | 108.20 |
| 26 | BB | 1322 | A | N1-C2-N3 | -10.05 | 124.28 | 129.30 |
| 1 | AA | 243 | A | P-O3'-C3' | 10.05 | 131.76 | 119.70 |
| 26 | BB | 2621 | G | C6-C5-N7 | -10.05 | 124.37 | 130.40 |
| 26 | BB | 796 | C | C4-C5-C6 | -10.04 | 112.38 | 117.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2144 | G | C4-C5-N7 | -10.04 | 106.78 | 110.80 |
| 26 | BB | 2407 | A | N1-C6-N6 | -10.04 | 112.57 | 118.60 |
| 1 | AA | 792 | A | C6-N1-C2 | 10.04 | 124.62 | 118.60 |
| 1 | AA | 1461 | G | C5-N7-C8 | -10.04 | 99.28 | 104.30 |
| 26 | BB | 324 | A | N1-C6-N6 | -10.04 | 112.58 | 118.60 |
| 26 | BB | 891 | G | N3-C2-N2 | -10.04 | 112.87 | 119.90 |
| 26 | BB | 2119 | A | C8-N9-C4 | -10.04 | 101.78 | 105.80 |
| 26 | BB | 1716 | U | N3-C4-O4 | 10.04 | 126.43 | 119.40 |
| 1 | AA | 803 | G | C8-N9-C4 | -10.04 | 102.39 | 106.40 |
| 1 | AA | 1131 | G | C2-N3-C4 | 10.04 | 116.92 | 111.90 |
| 26 | BB | 620 | G | C5'-C4'-O4' | 10.04 | 121.14 | 109.10 |
| 26 | BB | 1821 | A | C8-N9-C4 | -10.04 | 101.79 | 105.80 |
| 26 | BB | 2228 | G | N3-C4-N9 | 10.04 | 132.02 | 126.00 |
| 26 | BB | 2432 | A | P-O3'-C3' | 10.04 | 131.74 | 119.70 |
| 1 | AA | 495 | A | N1-C2-N3 | 10.03 | 134.32 | 129.30 |
| 26 | BB | 406 | G | C6-N1-C2 | -10.03 | 119.08 | 125.10 |
| 1 | AA | 1005 | A | C4'-C3'-C2' | -10.03 | 92.57 | 102.60 |
| 26 | BB | 2046 | G | N9-C4-C5 | 10.03 | 109.41 | 105.40 |
| 1 | AA | 1486 | G | C6-N1-C2 | -10.03 | 119.08 | 125.10 |
| 26 | BB | 2630 | G | C5-C6-N1 | 10.03 | 116.51 | 111.50 |
| 26 | BB | 263 | G | O4'-C1'-N9 | 10.03 | 116.22 | 108.20 |
| 26 | BB | 360 | U | C2-N3-C4 | -10.03 | 120.98 | 127.00 |
| 42 | BR | 112 | ARG | NE-CZ-NH1 | -10.03 | 115.29 | 120.30 |
| 1 | AA | 1164 | G | N9-C4-C5 | 10.02 | 109.41 | 105.40 |
| 1 | AA | 1530 | G | N3-C4-C5 | -10.02 | 123.59 | 128.60 |
| 3 | AC | 37 | G | C8-N9-C4 | -10.02 | 102.39 | 106.40 |
| 26 | BB | 785 | G | C8-N9-C4 | -10.02 | 102.39 | 106.40 |
| 26 | BB | 1832 | C | O4'-C1'-N1 | 10.02 | 116.22 | 108.20 |
| 1 | AA | 530 | G | C8-N9-C4 | -10.02 | 102.39 | 106.40 |
| 1 | AA | 1216 | A | O4'-C1'-N9 | 10.02 | 116.22 | 108.20 |
| 1 | AA | 1288 | A | C4-C5-N7 | 10.02 | 115.71 | 110.70 |
| 26 | BB | 594 | U | N1-C2-N3 | 10.02 | 120.91 | 114.90 |
| 26 | BB | 2793 | C | N3-C4-N4 | 10.02 | 125.02 | 118.00 |
| 1 | AA | 150 | U | C6-N1-C2 | -10.02 | 114.99 | 121.00 |
| 26 | BB | 80 | G | C5-C6-O6 | -10.02 | 122.59 | 128.60 |
| 26 | BB | 888 | C | C3'-C2'-C1' | 10.02 | 109.52 | 101.50 |
| 26 | BB | 1242 | U | C5-C4-O4 | -10.02 | 119.89 | 125.90 |
| 26 | BB | 1993 | U | O4'-C1'-N1 | 10.02 | 116.22 | 108.20 |
| 26 | BB | 2061 | G | C8-N9-C4 | -10.02 | 102.39 | 106.40 |
| 1 | AA | 416 | G | C8-N9-C4 | -10.02 | 102.39 | 106.40 |
| 2 | AB | 68 | C | C2-N3-C4 | -10.02 | 114.89 | 119.90 |
| 26 | BB | 1292 | G | C2-N3-C4 | 10.02 | 116.91 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1557 | C | N3-C4-N4 | 10.02 | 125.01 | 118.00 |
| 26 | BB | 1641 | A | N1-C6-N6 | -10.02 | 112.59 | 118.60 |
| 26 | BB | 2368 | C | N1-C2-O2 | 10.02 | 124.91 | 118.90 |
| 26 | BB | 2748 | A | N7-C8-N9 | -10.02 | 108.79 | 113.80 |
| 26 | BB | 2845 | U | C4'-C3'-C2' | -10.02 | 92.58 | 102.60 |
| 26 | BB | 2894 | G | N3-C2-N2 | -10.02 | 112.89 | 119.90 |
| 26 | BB | 1646 | C | N1-C2-O2 | 10.01 | 124.91 | 118.90 |
| 4 | AD | 19 | G | O4'-C1'-N9 | 10.01 | 116.21 | 108.20 |
| 26 | BB | 974 | G | O4'-C1'-N9 | 10.01 | 116.21 | 108.20 |
| 26 | BB | 581 | C | C2-N3-C4 | 10.01 | 124.91 | 119.90 |
| 26 | BB | 2008 | C | C2-N3-C4 | 10.01 | 124.91 | 119.90 |
| 26 | BB | 1397 | U | C4-C5-C6 | 10.01 | 125.70 | 119.70 |
| 26 | BB | 1069 | A | C1'-O4'-C4' | -10.01 | 101.90 | 109.90 |
| 26 | BB | 1265 | A | N9-C4-C5 | -10.01 | 101.80 | 105.80 |
| 26 | BB | 1706 | C | O4'-C1'-N1 | 10.01 | 116.20 | 108.20 |
| 1 | AA | 1506 | U | N3-C2-O2 | -10.00 | 115.20 | 122.20 |
| 26 | BB | 2140 | G | O4'-C1'-N9 | 10.00 | 116.20 | 108.20 |
| 26 | BB | 2531 | A | C8-N9-C4 | -10.00 | 101.80 | 105.80 |
| 1 | AA | 149 | A | N9-C4-C5 | -10.00 | 101.80 | 105.80 |
| 1 | AA | 623 | C | C6-N1-C2 | -10.00 | 116.30 | 120.30 |
| 26 | BB | 1007 | C | N1-C2-O2 | 10.00 | 124.90 | 118.90 |
| 26 | BB | 1181 | U | O4'-C1'-N1 | 10.00 | 116.20 | 108.20 |
| 26 | BB | 1304 | A | C4-C5-N7 | 10.00 | 115.70 | 110.70 |
| 26 | BB | 2354 | C | N3-C4-N4 | 10.00 | 125.00 | 118.00 |
| 1 | AA | 915 | A | C4-C5-N7 | -10.00 | 105.70 | 110.70 |
| 1 | AA | 310 | G | N3-C4-C5 | -10.00 | 123.60 | 128.60 |
| 26 | BB | 1503 | A | N1-C6-N6 | -10.00 | 112.60 | 118.60 |
| 26 | BB | 392 | U | C5'-C4'-O4' | 9.99 | 121.09 | 109.10 |
| 26 | BB | 2144 | G | N9-C4-C5 | 9.99 | 109.40 | 105.40 |
| 26 | BB | 2838 | G | C6-N1-C2 | -9.99 | 119.10 | 125.10 |
| 1 | AA | 649 | A | C5-C6-N6 | -9.99 | 115.71 | 123.70 |
| 1 | AA | 832 | G | N9-C4-C5 | 9.99 | 109.40 | 105.40 |
| 1 | AA | 899 | C | O4'-C1'-N1 | 9.99 | 116.19 | 108.20 |
| 2 | AB | 72 | U | C5-C4-O4 | 9.99 | 131.89 | 125.90 |
| 26 | BB | 1056 | G | N3-C2-N2 | -9.99 | 112.91 | 119.90 |
| 26 | BB | 1616 | A | N9-C4-C5 | -9.99 | 101.80 | 105.80 |
| 26 | BB | 2871 | U | N3-C4-C5 | 9.99 | 120.59 | 114.60 |
| 4 | AD | 69 | C | O4'-C1'-N1 | 9.99 | 116.19 | 108.20 |
| 26 | BB | 467 | G | N3-C4-C5 | -9.99 | 123.61 | 128.60 |
| 26 | BB | 2349 | G | O4'-C1'-N9 | 9.99 | 116.19 | 108.20 |
| 1 | AA | 466 | A | C8-N9-C4 | -9.99 | 101.81 | 105.80 |
| 1 | AA | 1187 | G | O4'-C1'-N9 | 9.99 | 116.19 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1766 | G | N3-C4-C5 | -9.99 | 123.61 | 128.60 |
| 1 | AA | 227 | G | O4'-C1'-N9 | 9.98 | 116.19 | 108.20 |
| 1 | AA | 1240 | U | O4'-C1'-N1 | 9.98 | 116.19 | 108.20 |
| 26 | BB | 1793 | C | C6-N1-C2 | -9.98 | 116.31 | 120.30 |
| 26 | BB | 2216 | G | N7-C8-N9 | 9.98 | 118.09 | 113.10 |
| 4 | AD | 3 | C | C5-C6-N1 | 9.98 | 125.99 | 121.00 |
| 26 | BB | 2324 | U | N3-C2-O2 | -9.98 | 115.21 | 122.20 |
| 26 | BB | 2748 | A | C5-N7-C8 | 9.98 | 108.89 | 103.90 |
| 4 | AD | 6 | G | N7-C8-N9 | 9.98 | 118.09 | 113.10 |
| 26 | BB | 599 | A | C3'-C2'-C1' | 9.98 | 109.48 | 101.50 |
| 26 | BB | 1363 | C | N3-C4-C5 | -9.98 | 117.91 | 121.90 |
| 26 | BB | 1429 | G | C8-N9-C4 | -9.98 | 102.41 | 106.40 |
| 26 | BB | 1623 | G | C5-C6-N1 | 9.98 | 116.49 | 111.50 |
| 26 | BB | 2549 | G | N7-C8-N9 | 9.98 | 118.09 | 113.10 |
| 26 | BB | 778 | G | C6-N1-C2 | -9.98 | 119.11 | 125.10 |
| 26 | BB | 924 | G | N1-C6-O6 | 9.97 | 125.88 | 119.90 |
| 26 | BB | 1830 | C | N3-C4-N4 | 9.97 | 124.98 | 118.00 |
| 1 | AA | 1538 | C | O4'-C1'-N1 | -9.97 | 100.22 | 108.20 |
| 2 | AB | 53 | G | O4'-C1'-N9 | 9.97 | 116.18 | 108.20 |
| 26 | BB | 163 | C | N3-C4-N4 | 9.97 | 124.98 | 118.00 |
| 26 | BB | 622 | G | C4-C5-N7 | -9.97 | 106.81 | 110.80 |
| 26 | BB | 1124 | G | N1-C6-O6 | 9.97 | 125.88 | 119.90 |
| 26 | BB | 2277 | G | N3-C4-C5 | -9.97 | 123.61 | 128.60 |
| 1 | AA | 244 | U | C5-C6-N1 | -9.97 | 117.72 | 122.70 |
| 3 | AC | 39 | U | C2-N3-C4 | -9.97 | 121.02 | 127.00 |
| 26 | BB | 1016 | G | N9-C4-C5 | 9.97 | 109.39 | 105.40 |
| 1 | AA | 1103 | C | N3-C4-C5 | -9.96 | 117.91 | 121.90 |
| 1 | AA | 1313 | U | O4'-C1'-N1 | 9.96 | 116.17 | 108.20 |
| 1 | AA | 263 | A | N1-C2-N3 | -9.96 | 124.32 | 129.30 |
| 1 | AA | 1383 | C | N3-C4-C5 | -9.96 | 117.92 | 121.90 |
| 26 | BB | 933 | A | O4'-C1'-N9 | 9.96 | 116.17 | 108.20 |
| 1 | AA | 977 | A | O4'-C1'-N9 | 9.96 | 116.17 | 108.20 |
| 1 | AA | 306 | A | C6-N1-C2 | -9.96 | 112.63 | 118.60 |
| 1 | AA | 774 | G | N3-C4-C5 | -9.96 | 123.62 | 128.60 |
| 1 | AA | 1438 | G | C5-C6-O6 | -9.96 | 122.62 | 128.60 |
| 26 | BB | 272 | A | C5'-C4'-O4' | 9.96 | 121.05 | 109.10 |
| 26 | BB | 657 | U | O4'-C1'-N1 | 9.96 | 116.17 | 108.20 |
| 26 | BB | 564 | C | N3-C2-O2 | -9.96 | 114.93 | 121.90 |
| 26 | BB | 2097 | A | N7-C8-N9 | 9.96 | 118.78 | 113.80 |
| 26 | BB | 2507 | C | C2-N3-C4 | 9.96 | 124.88 | 119.90 |
| 1 | AA | 562 | U | C2-N3-C4 | -9.95 | 121.03 | 127.00 |
| 26 | BB | 1074 | G | N7-C8-N9 | 9.95 | 118.08 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2021 | C | C4-C5-C6 | -9.95 | 112.42 | 117.40 |
| 26 | BB | 162 | U | O4'-C1'-N1 | 9.95 | 116.16 | 108.20 |
| 26 | BB | 2274 | A | N7-C8-N9 | 9.95 | 118.78 | 113.80 |
| 24 | AX | 33 | ARG | NE-CZ-NH1 | 9.95 | 125.27 | 120.30 |
| 26 | BB | 728 | G | C5-C6-N1 | 9.95 | 116.47 | 111.50 |
| 26 | BB | 1433 | A | N1-C2-N3 | -9.95 | 124.33 | 129.30 |
| 26 | BB | 2066 | C | O4'-C1'-N1 | 9.95 | 116.16 | 108.20 |
| 26 | BB | 2207 | C | N1-C2-O2 | 9.95 | 124.87 | 118.90 |
| 1 | AA | 1299 | A | C5-N7-C8 | 9.95 | 108.87 | 103.90 |
| 25 | BA | 15 | A | O4'-C1'-N9 | 9.95 | 116.16 | 108.20 |
| 26 | BB | 155 | A | N1-C2-N3 | 9.95 | 134.27 | 129.30 |
| 26 | BB | 1862 | G | N3-C4-C5 | -9.94 | 123.63 | 128.60 |
| 26 | BB | 2825 | G | C2-N3-C4 | 9.94 | 116.87 | 111.90 |
| 1 | AA | 293 | G | C8-N9-C4 | -9.94 | 102.42 | 106.40 |
| 26 | BB | 98 | G | N3-C4-C5 | -9.94 | 123.63 | 128.60 |
| 1 | AA | 761 | G | N3-C4-N9 | -9.94 | 120.03 | 126.00 |
| 26 | BB | 2597 | G | C3'-C2'-C1' | 9.94 | 109.45 | 101.50 |
| 26 | BB | 2784 | U | O4'-C1'-N1 | 9.94 | 116.15 | 108.20 |
| 27 | BC | 21 | TYR | CB-CG-CD2 | -9.94 | 115.03 | 121.00 |
| 1 | AA | 530 | G | C6-C5-N7 | 9.94 | 136.36 | 130.40 |
| 26 | BB | 681 | G | C4-C5-N7 | -9.94 | 106.83 | 110.80 |
| 26 | BB | 1738 | G | C8-N9-C4 | -9.94 | 102.42 | 106.40 |
| 1 | AA | 1124 | G | C5-C6-N1 | 9.94 | 116.47 | 111.50 |
| 1 | AA | 1486 | G | C4-C5-N7 | 9.94 | 114.78 | 110.80 |
| 26 | BB | 336 | C | C6-N1-C2 | -9.94 | 116.33 | 120.30 |
| 26 | BB | 786 | C | N3-C4-C5 | 9.94 | 125.87 | 121.90 |
| 26 | BB | 1586 | A | C6-N1-C2 | 9.94 | 124.56 | 118.60 |
| 1 | AA | 1469 | C | N1-C2-O2 | 9.93 | 124.86 | 118.90 |
| 26 | BB | 1223 | G | C2-N3-C4 | 9.93 | 116.87 | 111.90 |
| 26 | BB | 1461 | C | C6-N1-C2 | -9.93 | 116.33 | 120.30 |
| 26 | BB | 1942 | C | N3-C4-N4 | -9.93 | 111.05 | 118.00 |
| 1 | AA | 391 | G | C5-C6-N1 | 9.93 | 116.47 | 111.50 |
| 1 | AA | 500 | G | C8-N9-C4 | -9.93 | 102.43 | 106.40 |
| 4 | AD | 4 | G | N7-C8-N9 | 9.93 | 118.06 | 113.10 |
| 26 | BB | 2440 | C | C5-C6-N1 | 9.93 | 125.97 | 121.00 |
| 26 | BB | 626 | A | C4-C5-C6 | -9.93 | 112.04 | 117.00 |
| 26 | BB | 2713 | U | C3'-C2'-C1' | 9.93 | 109.44 | 101.50 |
| 3 | AC | 20 | G | N7-C8-N9 | 9.93 | 118.06 | 113.10 |
| 26 | BB | 1355 | G | N3-C4-C5 | -9.93 | 123.64 | 128.60 |
| 26 | BB | 1416 | G | O4'-C1'-N9 | 9.93 | 116.14 | 108.20 |
| 26 | BB | 1482 | G | N7-C8-N9 | 9.93 | 118.06 | 113.10 |
| 26 | BB | 1980 | G | C6-N1-C2 | -9.93 | 119.14 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 643 | C | C6-N1-C2 | 9.92 | 124.27 | 120.30 |
| 1 | AA | 819 | A | C1'-O4'-C4' | -9.92 | 101.96 | 109.90 |
| 1 | AA | 1444 | U | O4'-C1'-N1 | 9.92 | 116.14 | 108.20 |
| 26 | BB | 140 | C | C6-N1-C2 | -9.92 | 116.33 | 120.30 |
| 26 | BB | 641 | U | C5-C6-N1 | -9.92 | 117.74 | 122.70 |
| 26 | BB | 1256 | G | C6-N1-C2 | -9.92 | 119.14 | 125.10 |
| 26 | BB | 2437 | G | N3-C4-C5 | -9.92 | 123.64 | 128.60 |
| 26 | BB | 1933 | G | C8-N9-C4 | -9.92 | 102.43 | 106.40 |
| 1 | AA | 308 | C | O4'-C1'-N1 | 9.92 | 116.14 | 108.20 |
| 1 | AA | 662 | U | C5-C6-N1 | -9.92 | 117.74 | 122.70 |
| 1 | AA | 1168 | U | N1-C2-N3 | 9.92 | 120.85 | 114.90 |
| 1 | AA | 615 | G | C1'-O4'-C4' | -9.92 | 101.97 | 109.90 |
| 26 | BB | 21 | A | N9-C4-C5 | -9.92 | 101.83 | 105.80 |
| 26 | BB | 1374 | G | O4'-C1'-N9 | 9.92 | 116.14 | 108.20 |
| 26 | BB | 1476 | U | N3-C2-O2 | -9.92 | 115.25 | 122.20 |
| 26 | BB | 2228 | G | C6-C5-N7 | -9.92 | 124.45 | 130.40 |
| 1 | AA | 393 | A | C3'-C2'-C1' | 9.92 | 109.43 | 101.50 |
| 4 | AD | 65 | G | C2-N3-C4 | -9.92 | 106.94 | 111.90 |
| 26 | BB | 396 | G | C5-C6-N1 | -9.92 | 106.54 | 111.50 |
| 26 | BB | 646 | U | C6-N1-C2 | -9.92 | 115.05 | 121.00 |
| 1 | AA | 961 | U | O4'-C1'-N1 | 9.91 | 116.13 | 108.20 |
| 1 | AA | 1141 | C | N1-C2-O2 | 9.91 | 124.85 | 118.90 |
| 2 | AB | 29 | G | N3-C4-N9 | 9.91 | 131.95 | 126.00 |
| 4 | AD | 6 | G | C4-C5-N7 | 9.91 | 114.77 | 110.80 |
| 26 | BB | 1799 | G | C5-N7-C8 | 9.91 | 109.26 | 104.30 |
| 26 | BB | 2893 | A | N9-C4-C5 | 9.91 | 109.77 | 105.80 |
| 1 | AA | 522 | C | C6-N1-C2 | -9.91 | 116.34 | 120.30 |
| 1 | AA | 1195 | C | N3-C4-N4 | 9.91 | 124.94 | 118.00 |
| 26 | BB | 269 | C | C5-C4-N4 | -9.91 | 113.26 | 120.20 |
| 26 | BB | 1413 | A | O4'-C1'-N9 | 9.91 | 116.13 | 108.20 |
| 1 | AA | 279 | A | C5-N7-C8 | -9.91 | 98.95 | 103.90 |
| 1 | AA | 923 | A | N9-C4-C5 | -9.91 | 101.84 | 105.80 |
| 1 | AA | 1182 | G | O4'-C1'-N9 | 9.91 | 116.12 | 108.20 |
| 26 | BB | 1686 | C | C6-N1-C2 | -9.91 | 116.34 | 120.30 |
| 26 | BB | 1476 | U | C2-N3-C4 | -9.91 | 121.06 | 127.00 |
| 26 | BB | 2180 | U | O4'-C1'-N1 | 9.91 | 116.12 | 108.20 |
| 26 | BB | 2759 | G | N9-C4-C5 | 9.91 | 109.36 | 105.40 |
| 26 | BB | 1333 | G | N3-C4-C5 | -9.90 | 123.65 | 128.60 |
| 26 | BB | 1439 | A | N9-C4-C5 | 9.90 | 109.76 | 105.80 |
| 26 | BB | 178 | G | O4'-C1'-N9 | 9.90 | 116.12 | 108.20 |
| 1 | AA | 878 | A | N1-C2-N3 | -9.90 | 124.35 | 129.30 |
| 25 | BA | 42 | C | C6-N1-C2 | 9.90 | 124.26 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 902 | C | C4-C5-C6 | -9.90 | 112.45 | 117.40 |
| 26 | BB | 1063 | G | N1-C6-O6 | -9.90 | 113.96 | 119.90 |
| 26 | BB | 1161 | C | C6-N1-C2 | -9.90 | 116.34 | 120.30 |
| 26 | BB | 1235 | G | C3'-C2'-C1' | 9.90 | 109.42 | 101.50 |
| 26 | BB | 196 | A | O4'-C1'-N9 | 9.90 | 116.12 | 108.20 |
| 26 | BB | 1355 | G | O4'-C1'-N9 | 9.90 | 116.12 | 108.20 |
| 1 | AA | 1526 | G | N3-C4-C5 | -9.90 | 123.65 | 128.60 |
| 8 | AH | 156 | ARG | NE-CZ-NH2 | -9.90 | 115.35 | 120.30 |
| 26 | BB | 565 | C | N1-C2-O2 | 9.90 | 124.84 | 118.90 |
| 26 | BB | 1422 | G | C4-C5-N7 | -9.90 | 106.84 | 110.80 |
| 1 | AA | 482 | A | C4-C5-N7 | -9.89 | 105.75 | 110.70 |
| 26 | BB | 974 | G | C8-N9-C4 | -9.89 | 102.44 | 106.40 |
| 26 | BB | 2444 | G | N1-C6-O6 | 9.89 | 125.84 | 119.90 |
| 39 | BO | 50 | ARG | NE-CZ-NH1 | -9.89 | 115.35 | 120.30 |
| 26 | BB | 413 | C | O4'-C1'-N1 | 9.89 | 116.11 | 108.20 |
| 26 | BB | 1152 | C | O4'-C1'-N1 | 9.89 | 116.11 | 108.20 |
| 26 | BB | 947 | A | C3'-C2'-C1' | 9.89 | 109.41 | 101.50 |
| 26 | BB | 1490 | A | C8-N9-C4 | -9.89 | 101.84 | 105.80 |
| 26 | BB | 1672 | A | N1-C2-N3 | 9.89 | 134.25 | 129.30 |
| 26 | BB | 1733 | G | N1-C6-O6 | -9.89 | 113.97 | 119.90 |
| 26 | BB | 2628 | C | C3'-C2'-C1' | 9.89 | 109.41 | 101.50 |
| 26 | BB | 512 | G | N9-C4-C5 | 9.89 | 109.36 | 105.40 |
| 26 | BB | 1593 | A | C5-N7-C8 | 9.89 | 108.84 | 103.90 |
| 1 | AA | 482 | A | N1-C2-N3 | -9.88 | 124.36 | 129.30 |
| 26 | BB | 1174 | U | N3-C2-O2 | -9.88 | 115.28 | 122.20 |
| 26 | BB | 2104 | C | O4'-C1'-N1 | 9.88 | 116.11 | 108.20 |
| 1 | AA | 303 | A | C8-N9-C4 | -9.88 | 101.85 | 105.80 |
| 26 | BB | 658 | U | C5-C6-N1 | -9.88 | 117.76 | 122.70 |
| 26 | BB | 1653 | G | C4-C5-N7 | -9.88 | 106.85 | 110.80 |
| 26 | BB | 2052 | A | N9-C4-C5 | 9.88 | 109.75 | 105.80 |
| 26 | BB | 2176 | A | C8-N9-C4 | -9.88 | 101.85 | 105.80 |
| 1 | AA | 422 | C | C5-C6-N1 | 9.88 | 125.94 | 121.00 |
| 1 | AA | 724 | G | C1'-O4'-C4' | 9.88 | 117.81 | 109.90 |
| 1 | AA | 986 | U | C3'-C2'-C1' | 9.88 | 109.40 | 101.50 |
| 26 | BB | 1192 | G | C8-N9-C4 | -9.88 | 102.45 | 106.40 |
| 26 | BB | 2023 | C | C4'-C3'-C2' | -9.88 | 92.72 | 102.60 |
| 26 | BB | 961 | C | C2-N3-C4 | 9.88 | 124.84 | 119.90 |
| 26 | BB | 1303 | G | N1-C6-O6 | -9.88 | 113.97 | 119.90 |
| 1 | AA | 501 | C | N3-C4-N4 | 9.88 | 124.91 | 118.00 |
| 26 | BB | 578 | G | N3-C4-C5 | -9.88 | 123.66 | 128.60 |
| 26 | BB | 2228 | G | C6-N1-C2 | -9.88 | 119.17 | 125.10 |
| 26 | BB | 1452 | G | N3-C4-N9 | 9.87 | 131.93 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2614 | A | O4'-C1'-N9 | 9.88 | 116.10 | 108.20 |
| 26 | BB | 2893 | A | C4-C5-N7 | -9.88 | 105.76 | 110.70 |
| 1 | AA | 883 | C | O4'-C1'-N1 | 9.87 | 116.10 | 108.20 |
| 1 | AA | 921 | U | O4'-C1'-N1 | 9.87 | 116.10 | 108.20 |
| 1 | AA | 1446 | A | O4'-C1'-N9 | 9.87 | 116.10 | 108.20 |
| 26 | BB | 80 | G | C2-N3-C4 | 9.87 | 116.84 | 111.90 |
| 26 | BB | 1759 | A | N1-C2-N3 | -9.87 | 124.36 | 129.30 |
| 26 | BB | 992 | C | O4'-C1'-N1 | 9.87 | 116.10 | 108.20 |
| 26 | BB | 2462 | C | C5-C6-N1 | 9.87 | 125.94 | 121.00 |
| 26 | BB | 2826 | A | C2-N3-C4 | 9.87 | 115.54 | 110.60 |
| 1 | AA | 573 | A | N1-C2-N3 | -9.87 | 124.36 | 129.30 |
| 26 | BB | 2014 | A | N1-C2-N3 | -9.87 | 124.36 | 129.30 |
| 1 | AA | 903 | G | C5-N7-C8 | -9.87 | 99.37 | 104.30 |
| 1 | AA | 977 | A | C8-N9-C4 | -9.87 | 101.85 | 105.80 |
| 26 | BB | 822 | G | O4'-C1'-N9 | 9.87 | 116.09 | 108.20 |
| 26 | BB | 1776 | G | N1-C2-N3 | 9.87 | 129.82 | 123.90 |
| 26 | BB | 2761 | A | C3'-C2'-C1' | -9.87 | 93.61 | 101.50 |
| 26 | BB | 882 | G | N7-C8-N9 | 9.87 | 118.03 | 113.10 |
| 26 | BB | 962 | G | C5-N7-C8 | 9.87 | 109.23 | 104.30 |
| 26 | BB | 2373 | G | C8-N9-C4 | -9.87 | 102.45 | 106.40 |
| 26 | BB | 508 | A | C5'-C4'-O4' | 9.87 | 120.94 | 109.10 |
| 26 | BB | 1393 | A | O4'-C1'-N9 | 9.87 | 116.09 | 108.20 |
| 26 | BB | 599 | A | C4'-C3'-C2' | -9.86 | 92.74 | 102.60 |
| 26 | BB | 2883 | A | C4-C5-C6 | 9.87 | 121.93 | 117.00 |
| 1 | AA | 285 | C | N1-C2-O2 | 9.86 | 124.82 | 118.90 |
| 1 | AA | 647 | C | C5-C6-N1 | 9.86 | 125.93 | 121.00 |
| 7 | AG | 69 | ARG | NE-CZ-NH2 | -9.86 | 115.37 | 120.30 |
| 26 | BB | 2690 | U | C2-N3-C4 | -9.86 | 121.08 | 127.00 |
| 1 | AA | 474 | G | C5-C6-O6 | -9.86 | 122.68 | 128.60 |
| 26 | BB | 244 | A | C5-C6-N1 | 9.86 | 122.63 | 117.70 |
| 1 | AA | 225 | C | N3-C2-O2 | -9.86 | 115.00 | 121.90 |
| 1 | AA | 435 | A | O4'-C1'-N9 | 9.86 | 116.09 | 108.20 |
| 26 | BB | 435 | C | O4'-C1'-N1 | 9.86 | 116.09 | 108.20 |
| 26 | BB | 1247 | A | N1-C6-N6 | -9.86 | 112.69 | 118.60 |
| 26 | BB | 2809 | A | N9-C4-C5 | 9.86 | 109.74 | 105.80 |
| 26 | BB | 1450 | G | O4'-C1'-N9 | 9.86 | 116.09 | 108.20 |
| 26 | BB | 787 | C | N3-C4-C5 | -9.86 | 117.96 | 121.90 |
| 26 | BB | 2331 | G | N9-C4-C5 | -9.86 | 101.46 | 105.40 |
| 26 | BB | 2341 | G | C4-C5-N7 | -9.86 | 106.86 | 110.80 |
| 26 | BB | 2468 | A | C3'-C2'-C1' | 9.86 | 109.38 | 101.50 |
| 1 | AA | 414 | A | N1-C6-N6 | -9.85 | 112.69 | 118.60 |
| 26 | BB | 1237 | A | N1-C6-N6 | -9.85 | 112.69 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1192 | C | C2-N3-C4 | 9.85 | 124.83 | 119.90 |
| 26 | BB | 241 | A | C6-C5-N7 | 9.85 | 139.20 | 132.30 |
| 26 | BB | 453 | A | C6-C5-N7 | 9.85 | 139.20 | 132.30 |
| 26 | BB | 663 | G | C4-C5-N7 | -9.85 | 106.86 | 110.80 |
| 26 | BB | 2792 | A | O4'-C1'-N9 | 9.85 | 116.08 | 108.20 |
| 1 | AA | 184 | G | C2-N3-C4 | 9.85 | 116.83 | 111.90 |
| 26 | BB | 2473 | U | O4'-C1'-N1 | 9.85 | 116.08 | 108.20 |
| 26 | BB | 2837 | A | C2-N3-C4 | -9.85 | 105.67 | 110.60 |
| 1 | AA | 774 | G | N1-C6-O6 | 9.85 | 125.81 | 119.90 |
| 26 | BB | 304 | U | O4'-C1'-N1 | 9.85 | 116.08 | 108.20 |
| 26 | BB | 989 | G | N3-C4-C5 | -9.85 | 123.68 | 128.60 |
| 1 | AA | 1180 | A | C5-C6-N6 | -9.84 | 115.83 | 123.70 |
| 4 | AD | 63 | C | N1-C2-N3 | -9.84 | 112.31 | 119.20 |
| 26 | BB | 1232 | G | C6-N1-C2 | -9.84 | 119.19 | 125.10 |
| 26 | BB | 1362 | C | C4'-C3'-C2' | -9.84 | 92.76 | 102.60 |
| 26 | BB | 2662 | A | C5-N7-C8 | -9.84 | 98.98 | 103.90 |
| 1 | AA | 743 | A | C4-C5-C6 | 9.84 | 121.92 | 117.00 |
| 26 | BB | 665 | U | O4'-C1'-N1 | 9.84 | 116.08 | 108.20 |
| 26 | BB | 456 | C | N1-C2-O2 | 9.84 | 124.80 | 118.90 |
| 26 | BB | 1515 | A | C8-N9-C4 | -9.84 | 101.86 | 105.80 |
| 26 | BB | 1052 | C | O4'-C1'-N1 | 9.84 | 116.07 | 108.20 |
| 26 | BB | 381 | G | N3-C2-N2 | 9.84 | 126.79 | 119.90 |
| 26 | BB | 1803 | A | N1-C6-N6 | -9.84 | 112.70 | 118.60 |
| 26 | BB | 1822 | C | C4-C5-C6 | 9.84 | 122.32 | 117.40 |
| 1 | AA | 870 | U | O4'-C1'-N1 | 9.84 | 116.07 | 108.20 |
| 26 | BB | 24 | G | C6-C5-N7 | -9.84 | 124.50 | 130.40 |
| 1 | AA | 1379 | G | N7-C8-N9 | 9.84 | 118.02 | 113.10 |
| 1 | AA | 1387 | G | C8-N9-C4 | -9.84 | 102.47 | 106.40 |
| 26 | BB | 789 | A | C3'-C2'-C1' | 9.84 | 109.37 | 101.50 |
| 26 | BB | 2286 | G | C2-N3-C4 | 9.84 | 116.82 | 111.90 |
| 1 | AA | 747 | A | N1-C6-N6 | -9.83 | 112.70 | 118.60 |
| 1 | AA | 1399 | C | O4'-C1'-C2' | -9.83 | 95.97 | 105.80 |
| 26 | BB | 1215 | G | C5'-C4'-O4' | 9.83 | 120.90 | 109.10 |
| 26 | BB | 1624 | U | C5-C4-O4 | -9.83 | 120.00 | 125.90 |
| 26 | BB | 2296 | U | C5'-C4'-O4' | 9.83 | 120.89 | 109.10 |
| 26 | BB | 2379 | G | C2-N3-C4 | 9.83 | 116.81 | 111.90 |
| 1 | AA | 392 | C | C5-C4-N4 | -9.83 | 113.32 | 120.20 |
| 1 | AA | 590 | U | C5-C6-N1 | -9.83 | 117.79 | 122.70 |
| 26 | BB | 1345 | C | N3-C4-N4 | 9.83 | 124.88 | 118.00 |
| 1 | AA | 991 | U | P-O3'-C3' | 9.82 | 131.49 | 119.70 |
| 26 | BB | 96 | C | O4'-C1'-N1 | 9.82 | 116.06 | 108.20 |
| 26 | BB | 2555 | U | C4-C5-C6 | 9.82 | 125.59 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 445 | C | N3-C4-C5 | 9.82 | 125.83 | 121.90 |
| 26 | BB | 874 | G | C4-C5-N7 | -9.82 | 106.87 | 110.80 |
| 26 | BB | 2116 | G | N9-C4-C5 | 9.82 | 109.33 | 105.40 |
| 26 | BB | 2302 | U | C1'-O4'-C4' | 9.82 | 117.76 | 109.90 |
| 26 | BB | 2509 | G | C8-N9-C4 | -9.82 | 102.47 | 106.40 |
| 1 | AA | 1366 | C | C5-C6-N1 | 9.82 | 125.91 | 121.00 |
| 1 | AA | 401 | C | N3-C4-C5 | -9.82 | 117.97 | 121.90 |
| 3 | AC | 15 | G | C6-N1-C2 | -9.82 | 119.21 | 125.10 |
| 26 | BB | 223 | A | C5-N7-C8 | -9.82 | 98.99 | 103.90 |
| 26 | BB | 1524 | G | C5-N7-C8 | -9.82 | 99.39 | 104.30 |
| 26 | BB | 2077 | A | N1-C6-N6 | -9.82 | 112.71 | 118.60 |
| 1 | AA | 831 | A | N9-C4-C5 | 9.81 | 109.73 | 105.80 |
| 1 | AA | 1515 | G | C4-C5-N7 | -9.81 | 106.87 | 110.80 |
| 26 | BB | 141 | G | O4'-C1'-N9 | 9.81 | 116.05 | 108.20 |
| 26 | BB | 223 | A | O4'-C1'-N9 | 9.81 | 116.05 | 108.20 |
| 26 | BB | 463 | G | C5-C6-O6 | -9.81 | 122.71 | 128.60 |
| 26 | BB | 771 | G | C8-N9-C4 | -9.81 | 102.47 | 106.40 |
| 26 | BB | 1666 | G | C4-C5-C6 | 9.81 | 124.69 | 118.80 |
| 1 | AA | 588 | G | N7-C8-N9 | 9.81 | 118.01 | 113.10 |
| 26 | BB | 2618 | G | C2-N3-C4 | 9.81 | 116.81 | 111.90 |
| 1 | AA | 84 | U | C5-C6-N1 | -9.81 | 117.80 | 122.70 |
| 1 | AA | 1011 | C | C4-C5-C6 | -9.81 | 112.50 | 117.40 |
| 26 | BB | 1222 | U | C4-C5-C6 | 9.81 | 125.59 | 119.70 |
| 26 | BB | 1683 | U | O4'-C1'-N1 | 9.81 | 116.05 | 108.20 |
| 2 | AB | 76 | A | N9-C4-C5 | 9.81 | 109.72 | 105.80 |
| 1 | AA | 840 | C | C5'-C4'-O4' | 9.81 | 120.87 | 109.10 |
| 1 | AA | 1479 | C | C4-C5-C6 | -9.81 | 112.50 | 117.40 |
| 26 | BB | 2518 | A | C4-C5-N7 | -9.81 | 105.80 | 110.70 |
| 1 | AA | 301 | G | N3-C4-C5 | -9.81 | 123.70 | 128.60 |
| 1 | AA | 382 | A | C5-C6-N1 | 9.80 | 122.60 | 117.70 |
| 26 | BB | 1201 | U | C5-C6-N1 | -9.81 | 117.80 | 122.70 |
| 26 | BB | 1824 | G | C4'-C3'-C2' | -9.81 | 92.79 | 102.60 |
| 26 | BB | 2136 | G | C2-N3-C4 | 9.81 | 116.80 | 111.90 |
| 1 | AA | 384 | G | C8-N9-C4 | -9.80 | 102.48 | 106.40 |
| 26 | BB | 2712 | C | C2-N3-C4 | 9.80 | 124.80 | 119.90 |
| 1 | AA | 1496 | C | C2-N3-C4 | 9.80 | 124.80 | 119.90 |
| 26 | BB | 1293 | C | N3-C4-C5 | 9.80 | 125.82 | 121.90 |
| 26 | BB | 1297 | C | C2-N3-C4 | 9.80 | 124.80 | 119.90 |
| 1 | AA | 378 | G | C4-C5-N7 | -9.80 | 106.88 | 110.80 |
| 26 | BB | 1631 | G | C4-C5-N7 | -9.80 | 106.88 | 110.80 |
| 1 | AA | 645 | G | C6-N1-C2 | -9.80 | 119.22 | 125.10 |
| 1 | AA | 845 | A | N1-C6-N6 | -9.80 | 112.72 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1339 | G | O4'-C1'-N9 | 9.80 | 116.04 | 108.20 |
| 1 | AA | 210 | C | O4'-C1'-N1 | 9.80 | 116.04 | 108.20 |
| 1 | AA | 572 | A | C5-C6-N1 | 9.80 | 122.60 | 117.70 |
| 11 | AK | 116 | ARG | NE-CZ-NH1 | 9.79 | 125.20 | 120.30 |
| 26 | BB | 1435 | G | C4-C5-N7 | -9.79 | 106.88 | 110.80 |
| 46 | BV | 12 | ARG | NE-CZ-NH1 | 9.79 | 125.20 | 120.30 |
| 1 | AA | 89 | U | N3-C2-O2 | -9.79 | 115.34 | 122.20 |
| 1 | AA | 129 | A | O4'-C4'-C3' | 9.79 | 113.93 | 106.10 |
| 26 | BB | 1908 | C | N3-C2-O2 | -9.79 | 115.05 | 121.90 |
| 2 | AB | 31 | U | C5-C6-N1 | -9.79 | 117.80 | 122.70 |
| 26 | BB | 1872 | A | C8-N9-C4 | -9.79 | 101.88 | 105.80 |
| 26 | BB | 1887 | C | N3-C2-O2 | -9.79 | 115.05 | 121.90 |
| 26 | BB | 2107 | G | C5-C6-N1 | 9.79 | 116.39 | 111.50 |
| 26 | BB | 2112 | G | C5-C6-N1 | 9.79 | 116.40 | 111.50 |
| 1 | AA | 1368 | A | N9-C4-C5 | -9.79 | 101.88 | 105.80 |
| 26 | BB | 367 | G | N3-C4-C5 | -9.79 | 123.70 | 128.60 |
| 26 | BB | 624 | C | N1-C2-O2 | 9.79 | 124.77 | 118.90 |
| 1 | AA | 101 | A | P-O3'-C3' | 9.79 | 131.44 | 119.70 |
| 26 | BB | 1509 | A | N9-C4-C5 | 9.78 | 109.71 | 105.80 |
| 1 | AA | 553 | A | O4'-C1'-N9 | 9.78 | 116.02 | 108.20 |
| 26 | BB | 625 | G | N9-C4-C5 | 9.78 | 109.31 | 105.40 |
| 26 | BB | 1210 | G | O4'-C1'-N9 | 9.78 | 116.03 | 108.20 |
| 26 | BB | 1518 | C | N3-C2-O2 | -9.78 | 115.05 | 121.90 |
| 1 | AA | 337 | G | C8-N9-C4 | -9.78 | 102.49 | 106.40 |
| 1 | AA | 792 | A | N9-C4-C5 | -9.78 | 101.89 | 105.80 |
| 4 | AD | 28 | U | N1-C2-O2 | 9.78 | 129.65 | 122.80 |
| 26 | BB | 2806 | C | C5-C6-N1 | -9.78 | 116.11 | 121.00 |
| 1 | AA | 163 | C | O4'-C1'-N1 | 9.78 | 116.02 | 108.20 |
| 26 | BB | 417 | C | C3'-C2'-C1' | 9.78 | 109.32 | 101.50 |
| 26 | BB | 1424 | G | O4'-C1'-N9 | 9.78 | 116.02 | 108.20 |
| 26 | BB | 1502 | A | O4'-C1'-N9 | 9.78 | 116.02 | 108.20 |
| 26 | BB | 1970 | A | C4-C5-C6 | -9.78 | 112.11 | 117.00 |
| 31 | BG | 113 | PHE | CB-CG-CD2 | -9.78 | 113.96 | 120.80 |
| 1 | AA | 332 | G | C6-C5-N7 | 9.78 | 136.27 | 130.40 |
| 26 | BB | 43 | G | N1-C2-N3 | 9.78 | 129.77 | 123.90 |
| 26 | BB | 1463 | C | C6-N1-C2 | -9.78 | 116.39 | 120.30 |
| 1 | AA | 640 | A | N9-C4-C5 | 9.78 | 109.71 | 105.80 |
| 1 | AA | 1034 | G | N3-C4-C5 | -9.78 | 123.71 | 128.60 |
| 1 | AA | 1365 | G | C8-N9-C4 | -9.78 | 102.49 | 106.40 |
| 26 | BB | 2877 | G | N9-C4-C5 | 9.78 | 109.31 | 105.40 |
| 26 | BB | 638 | G | C5'-C4'-O4' | 9.78 | 120.83 | 109.10 |
| 26 | BB | 1100 | C | C6-N1-C2 | -9.78 | 116.39 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1646 | C | O4'-C1'-N1 | 9.78 | 116.02 | 108.20 |
| 14 | AN | 92 | ARG | NE-CZ-NH2 | -9.77 | 115.41 | 120.30 |
| 26 | BB | 2085 | U | C2-N3-C4 | -9.77 | 121.14 | 127.00 |
| 26 | BB | 1684 | G | N3-C4-C5 | -9.77 | 123.71 | 128.60 |
| 44 | BT | 80 | ARG | NE-CZ-NH2 | -9.77 | 115.41 | 120.30 |
| 1 | AA | 316 | C | O4'-C1'-N1 | 9.77 | 116.02 | 108.20 |
| 1 | AA | 1094 | G | N1-C2-N3 | -9.77 | 118.04 | 123.90 |
| 3 | AC | 51 | C | C6-N1-C2 | -9.77 | 116.39 | 120.30 |
| 26 | BB | 655 | A | C3'-C2'-C1' | 9.77 | 109.32 | 101.50 |
| 26 | BB | 1050 | A | C8-N9-C4 | -9.77 | 101.89 | 105.80 |
| 26 | BB | 997 | G | C5-N7-C8 | -9.77 | 99.42 | 104.30 |
| 26 | BB | 2168 | G | C5-N7-C8 | -9.77 | 99.42 | 104.30 |
| 1 | AA | 876 | C | C2-N3-C4 | 9.77 | 124.78 | 119.90 |
| 1 | AA | 545 | C | N3-C4-N4 | 9.77 | 124.84 | 118.00 |
| 26 | BB | 511 | U | O4'-C1'-N1 | 9.77 | 116.01 | 108.20 |
| 26 | BB | 1309 | G | C8-N9-C4 | -9.77 | 102.49 | 106.40 |
| 26 | BB | 1955 | U | C3'-C2'-C1' | -9.77 | 93.69 | 101.50 |
| 26 | BB | 2456 | C | N3-C4-C5 | -9.77 | 117.99 | 121.90 |
| 26 | BB | 2708 | G | C5-C6-N1 | 9.77 | 116.38 | 111.50 |
| 1 | AA | 920 | U | C1'-O4'-C4' | 9.76 | 117.71 | 109.90 |
| 1 | AA | 1154 | G | C6-N1-C2 | -9.76 | 119.24 | 125.10 |
| 1 | AA | 1190 | G | C5-C6-O6 | -9.76 | 122.74 | 128.60 |
| 26 | BB | 1584 | U | N3-C4-C5 | -9.76 | 108.74 | 114.60 |
| 7 | AG | 106 | PHE | CB-CG-CD2 | -9.76 | 113.97 | 120.80 |
| 26 | BB | 1487 | U | N3-C4-O4 | 9.76 | 126.23 | 119.40 |
| 26 | BB | 1742 | U | C5-C6-N1 | -9.76 | 117.82 | 122.70 |
| 26 | BB | 2152 | G | N9-C4-C5 | -9.76 | 101.50 | 105.40 |
| 26 | BB | 2265 | U | N3-C2-O2 | -9.76 | 115.37 | 122.20 |
| 1 | AA | 420 | U | C3'-C2'-C1' | 9.76 | 109.31 | 101.50 |
| 25 | BA | 106 | G | O4'-C1'-N9 | 9.76 | 116.01 | 108.20 |
| 26 | BB | 1256 | G | N9-C4-C5 | 9.76 | 109.30 | 105.40 |
| 26 | BB | 2126 | A | C6-C5-N7 | 9.76 | 139.13 | 132.30 |
| 26 | BB | 2454 | G | C5-C6-O6 | -9.76 | 122.75 | 128.60 |
| 1 | AA | 582 | C | N3-C4-C5 | -9.76 | 118.00 | 121.90 |
| 26 | BB | 1054 | A | C4-C5-N7 | -9.76 | 105.82 | 110.70 |
| 26 | BB | 2256 | G | C5-C6-O6 | -9.76 | 122.75 | 128.60 |
| 1 | AA | 1069 | C | N3-C4-N4 | 9.75 | 124.83 | 118.00 |
| 4 | AD | 59 | A | N1-C2-N3 | -9.75 | 124.42 | 129.30 |
| 26 | BB | 1694 | C | O4'-C1'-N1 | 9.75 | 116.00 | 108.20 |
| 26 | BB | 2399 | G | N3-C4-C5 | -9.75 | 123.72 | 128.60 |
| 26 | BB | 2455 | G | N3-C4-C5 | -9.75 | 123.72 | 128.60 |
| 1 | AA | 185 | U | C6-N1-C2 | -9.75 | 115.15 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 206 | C | C6-N1-C2 | -9.75 | 116.40 | 120.30 |
| 1 | AA | 706 | A | C8-N9-C4 | -9.75 | 101.90 | 105.80 |
| 1 | AA | 1176 | A | C2-N3-C4 | 9.75 | 115.47 | 110.60 |
| 1 | AA | 1225 | A | N9-C4-C5 | 9.75 | 109.70 | 105.80 |
| 25 | BA | 84 | G | C8-N9-C4 | -9.75 | 102.50 | 106.40 |
| 26 | BB | 1397 | U | C3'-C2'-C1' | 9.75 | 109.30 | 101.50 |
| 1 | AA | 428 | G | C4-C5-N7 | -9.75 | 106.90 | 110.80 |
| 26 | BB | 389 | G | N3-C4-C5 | -9.75 | 123.73 | 128.60 |
| 26 | BB | 456 | C | N3-C2-O2 | -9.75 | 115.08 | 121.90 |
| 1 | AA | 257 | G | O4'-C1'-N9 | 9.74 | 115.99 | 108.20 |
| 2 | AB | 31 | U | O4'-C1'-N1 | 9.74 | 116.00 | 108.20 |
| 26 | BB | 1493 | C | N3-C4-C5 | -9.74 | 118.00 | 121.90 |
| 26 | BB | 2192 | U | N3-C4-C5 | -9.74 | 108.75 | 114.60 |
| 26 | BB | 2547 | A | C1'-O4'-C4' | -9.74 | 102.11 | 109.90 |
| 1 | AA | 253 | A | C5-N7-C8 | 9.74 | 108.77 | 103.90 |
| 1 | AA | 715 | A | N9-C4-C5 | -9.74 | 101.90 | 105.80 |
| 1 | AA | 809 | G | C4'-C3'-C2' | -9.74 | 92.86 | 102.60 |
| 4 | AD | 4 | G | C6-C5-N7 | -9.74 | 124.56 | 130.40 |
| 25 | BA | 20 | G | C5-C6-N1 | 9.74 | 116.37 | 111.50 |
| 26 | BB | 2547 | A | C8-N9-C4 | -9.74 | 101.90 | 105.80 |
| 25 | BA | 108 | A | O4'-C1'-C2' | 9.74 | 116.36 | 107.60 |
| 26 | BB | 1478 | G | C5-C6-O6 | 9.74 | 134.44 | 128.60 |
| 1 | AA | 387 | U | C6-N1-C2 | -9.74 | 115.16 | 121.00 |
| 1 | AA | 1077 | G | N1-C6-O6 | -9.74 | 114.06 | 119.90 |
| 1 | AA | 1389 | C | C2-N3-C4 | 9.74 | 124.77 | 119.90 |
| 3 | AC | 22 | G | C2-N3-C4 | 9.74 | 116.77 | 111.90 |
| 26 | BB | 792 | A | C5-N7-C8 | 9.74 | 108.77 | 103.90 |
| 26 | BB | 1650 | A | C2-N3-C4 | 9.74 | 115.47 | 110.60 |
| 1 | AA | 15 | G | N9-C4-C5 | 9.73 | 109.29 | 105.40 |
| 1 | AA | 413 | G | C8-N9-C4 | -9.73 | 102.51 | 106.40 |
| 1 | AA | 962 | C | N3-C2-O2 | -9.73 | 115.09 | 121.90 |
| 25 | BA | 66 | A | N1-C2-N3 | -9.73 | 124.43 | 129.30 |
| 26 | BB | 488 | G | C8-N9-C4 | -9.73 | 102.51 | 106.40 |
| 26 | BB | 1157 | G | C6-N1-C2 | -9.73 | 119.26 | 125.10 |
| 1 | AA | 220 | G | C4-C5-N7 | 9.73 | 114.69 | 110.80 |
| 1 | AA | 291 | U | O4'-C4'-C3' | 9.73 | 113.89 | 106.10 |
| 2 | AB | 34 | C | C2-N3-C4 | 9.73 | 124.77 | 119.90 |
| 26 | BB | 217 | A | N7-C8-N9 | 9.73 | 118.67 | 113.80 |
| 26 | BB | 969 | G | N7-C8-N9 | 9.73 | 117.97 | 113.10 |
| 26 | BB | 1140 | C | N3-C4-N4 | 9.73 | 124.81 | 118.00 |
| 26 | BB | 1480 | C | C2-N3-C4 | 9.73 | 124.77 | 119.90 |
| 1 | AA | 295 | C | N3-C4-C5 | -9.73 | 118.01 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 473 | G | C8-N9-C4 | -9.73 | 102.51 | 106.40 |
| 26 | BB | 2355 | G | N7-C8-N9 | 9.73 | 117.96 | 113.10 |
| 1 | AA | 331 | G | C4-C5-N7 | -9.72 | 106.91 | 110.80 |
| 26 | BB | 1631 | G | N1-C6-O6 | -9.72 | 114.06 | 119.90 |
| 1 | AA | 113 | G | O4'-C1'-N9 | 9.72 | 115.98 | 108.20 |
| 26 | BB | 922 | C | N3-C4-N4 | 9.72 | 124.81 | 118.00 |
| 49 | BY | 59 | PHE | CB-CG-CD2 | -9.72 | 113.99 | 120.80 |
| 26 | BB | 234 | U | O4'-C1'-N1 | 9.72 | 115.98 | 108.20 |
| 26 | BB | 583 | G | C5-C6-O6 | -9.72 | 122.77 | 128.60 |
| 26 | BB | 1954 | G | C3'-C2'-C1' | 9.72 | 109.28 | 101.50 |
| 26 | BB | 2133 | G | P-O3'-C3' | 9.72 | 131.37 | 119.70 |
| 26 | BB | 2260 | C | N3-C2-O2 | -9.72 | 115.09 | 121.90 |
| 1 | AA | 256 | U | C2-N3-C4 | -9.72 | 121.17 | 127.00 |
| 26 | BB | 717 | C | N3-C4-N4 | -9.72 | 111.20 | 118.00 |
| 26 | BB | 166 | U | C1'-O4'-C4' | -9.72 | 102.13 | 109.90 |
| 26 | BB | 2763 | G | N7-C8-N9 | 9.72 | 117.96 | 113.10 |
| 1 | AA | 1379 | G | O4'-C1'-N9 | 9.71 | 115.97 | 108.20 |
| 41 | BQ | 108 | ASP | CB-CG-OD1 | -9.71 | 109.56 | 118.30 |
| 1 | AA | 142 | G | C4-C5-N7 | -9.71 | 106.92 | 110.80 |
| 1 | AA | 1470 | U | O4'-C1'-N1 | 9.71 | 115.97 | 108.20 |
| 26 | BB | 587 | C | N3-C4-N4 | 9.71 | 124.80 | 118.00 |
| 26 | BB | 1309 | G | C2-N3-C4 | 9.71 | 116.76 | 111.90 |
| 26 | BB | 1975 | G | C3'-C2'-C1' | -9.71 | 93.73 | 101.50 |
| 26 | BB | 2838 | G | N9-C4-C5 | 9.71 | 109.28 | 105.40 |
| 1 | AA | 568 | G | N3-C4-N9 | 9.71 | 131.83 | 126.00 |
| 26 | BB | 124 | G | C8-N9-C4 | -9.71 | 102.52 | 106.40 |
| 26 | BB | 126 | A | C5-C6-N1 | -9.71 | 112.84 | 117.70 |
| 26 | BB | 946 | C | N3-C2-O2 | -9.71 | 115.10 | 121.90 |
| 1 | AA | 795 | C | C1'-O4'-C4' | 9.71 | 117.67 | 109.90 |
| 1 | AA | 891 | U | C5-C4-O4 | 9.71 | 131.73 | 125.90 |
| 5 | AE | 20 | ARG | NE-CZ-NH1 | 9.71 | 125.16 | 120.30 |
| 26 | BB | 488 | G | C2-N3-C4 | 9.71 | 116.75 | 111.90 |
| 26 | BB | 629 | G | N3-C4-C5 | -9.71 | 123.75 | 128.60 |
| 26 | BB | 862 | G | N3-C4-C5 | -9.71 | 123.75 | 128.60 |
| 26 | BB | 1062 | G | O4'-C1'-N9 | 9.71 | 115.97 | 108.20 |
| 26 | BB | 2718 | G | C4-C5-N7 | -9.71 | 106.92 | 110.80 |
| 26 | BB | 1690 | A | C5-N7-C8 | -9.70 | 99.05 | 103.90 |
| 26 | BB | 2481 | G | C2-N3-C4 | 9.70 | 116.75 | 111.90 |
| 26 | BB | 1200 | C | N3-C4-N4 | 9.70 | 124.79 | 118.00 |
| 26 | BB | 2398 | U | C5'-C4'-O4' | 9.70 | 120.74 | 109.10 |
| 1 | AA | 639 | G | N1-C6-O6 | 9.70 | 125.72 | 119.90 |
| 26 | BB | 2621 | G | N3-C4-C5 | -9.70 | 123.75 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 597 | G | N9-C4-C5 | 9.70 | 109.28 | 105.40 |
| 25 | BA | 69 | G | C5-C6-O6 | -9.70 | 122.78 | 128.60 |
| 26 | BB | 398 | C | N1-C2-O2 | 9.70 | 124.72 | 118.90 |
| 26 | BB | 2015 | A | C8-N9-C4 | -9.69 | 101.92 | 105.80 |
| 26 | BB | 2792 | A | C2-N3-C4 | 9.69 | 115.45 | 110.60 |
| 1 | AA | 310 | G | C8-N9-C4 | -9.69 | 102.52 | 106.40 |
| 13 | AM | 5 | ARG | NE-CZ-NH1 | 9.69 | 125.14 | 120.30 |
| 26 | BB | 561 | G | N9-C4-C5 | 9.69 | 109.28 | 105.40 |
| 26 | BB | 1202 | G | C5-N7-C8 | -9.69 | 99.45 | 104.30 |
| 26 | BB | 2315 | G | N1-C2-N2 | 9.69 | 124.92 | 116.20 |
| 26 | BB | 2689 | U | C4-C5-C6 | 9.69 | 125.52 | 119.70 |
| 1 | AA | 1240 | U | C5-C6-N1 | 9.69 | 127.55 | 122.70 |
| 26 | BB | 1571 | A | C1'-O4'-C4' | 9.69 | 117.65 | 109.90 |
| 26 | BB | 1942 | C | N1-C2-O2 | 9.69 | 124.71 | 118.90 |
| 1 | AA | 654 | G | C8-N9-C4 | -9.69 | 102.53 | 106.40 |
| 26 | BB | 2437 | G | N3-C4-N9 | 9.69 | 131.81 | 126.00 |
| 1 | AA | 1281 | C | N3-C2-O2 | -9.69 | 115.12 | 121.90 |
| 3 | AC | 41 | A | C5-C6-N6 | -9.68 | 115.95 | 123.70 |
| 26 | BB | 164 | C | C5-C6-N1 | 9.68 | 125.84 | 121.00 |
| 26 | BB | 1443 | U | C6-N1-C2 | -9.68 | 115.19 | 121.00 |
| 26 | BB | 1619 | G | C2-N3-C4 | 9.68 | 116.74 | 111.90 |
| 26 | BB | 2592 | G | N3-C4-C5 | -9.68 | 123.76 | 128.60 |
| 1 | AA | 649 | A | C8-N9-C4 | -9.68 | 101.93 | 105.80 |
| 1 | AA | 1346 | A | C6-N1-C2 | 9.68 | 124.41 | 118.60 |
| 26 | BB | 443 | A | N1-C2-N3 | -9.68 | 124.46 | 129.30 |
| 1 | AA | 1409 | C | N3-C4-C5 | -9.68 | 118.03 | 121.90 |
| 26 | BB | 295 | G | N3-C2-N2 | 9.68 | 126.67 | 119.90 |
| 1 | AA | 284 | C | N1-C2-O2 | 9.68 | 124.70 | 118.90 |
| 1 | AA | 1111 | A | C5-C6-N1 | 9.68 | 122.54 | 117.70 |
| 1 | AA | 1258 | G | N9-C4-C5 | 9.68 | 109.27 | 105.40 |
| 26 | BB | 127 | A | N7-C8-N9 | 9.68 | 118.64 | 113.80 |
| 1 | AA | 881 | G | C5-C6-O6 | -9.67 | 122.80 | 128.60 |
| 1 | AA | 960 | U | P-O3'-C3' | 9.67 | 131.31 | 119.70 |
| 26 | BB | 1121 | C | C5-C6-N1 | 9.67 | 125.84 | 121.00 |
| 26 | BB | 1163 | G | C4-C5-C6 | 9.67 | 124.60 | 118.80 |
| 26 | BB | 1792 | G | O4'-C1'-N9 | -9.67 | 100.46 | 108.20 |
| 26 | BB | 1873 | G | N3-C4-C5 | -9.67 | 123.76 | 128.60 |
| 1 | AA | 828 | U | N3-C2-O2 | -9.67 | 115.43 | 122.20 |
| 36 | BL | 37 | ARG | NE-CZ-NH1 | -9.67 | 115.46 | 120.30 |
| 1 | AA | 242 | G | N3-C2-N2 | -9.67 | 113.13 | 119.90 |
| 26 | BB | 2770 | G | N1-C6-O6 | 9.67 | 125.70 | 119.90 |
| 26 | BB | 146 | A | C1'-O4'-C4' | -9.67 | 102.17 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 227 | A | N3-C4-C5 | -9.67 | 120.03 | 126.80 |
| 26 | BB | 957 | C | N3-C2-O2 | -9.67 | 115.13 | 121.90 |
| 26 | BB | 1728 | C | C1'-O4'-C4' | 9.67 | 117.63 | 109.90 |
| 1 | AA | 38 | G | C5-C6-O6 | 9.66 | 134.40 | 128.60 |
| 1 | AA | 1134 | G | C2-N3-C4 | 9.66 | 116.73 | 111.90 |
| 1 | AA | 1233 | G | C4-C5-N7 | -9.66 | 106.93 | 110.80 |
| 26 | BB | 2509 | G | N9-C4-C5 | 9.66 | 109.27 | 105.40 |
| 17 | AQ | 58 | ARG | NE-CZ-NH2 | -9.66 | 115.47 | 120.30 |
| 26 | BB | 122 | G | N1-C6-O6 | 9.66 | 125.70 | 119.90 |
| 26 | BB | 1776 | G | C6-N1-C2 | -9.66 | 119.30 | 125.10 |
| 1 | AA | 788 | U | O4'-C1'-N1 | 9.66 | 115.93 | 108.20 |
| 26 | BB | 1971 | U | N3-C2-O2 | -9.66 | 115.44 | 122.20 |
| 26 | BB | 2880 | C | N3-C4-N4 | 9.66 | 124.76 | 118.00 |
| 1 | AA | 208 | U | O4'-C1'-N1 | 9.66 | 115.92 | 108.20 |
| 10 | AJ | 159 | ARG | NE-CZ-NH2 | 9.66 | 125.13 | 120.30 |
| 26 | BB | 1002 | G | C6-C5-N7 | 9.66 | 136.19 | 130.40 |
| 1 | AA | 431 | A | C8-N9-C4 | -9.65 | 101.94 | 105.80 |
| 26 | BB | 1651 | G | C2-N3-C4 | 9.65 | 116.73 | 111.90 |
| 1 | AA | 770 | C | N3-C4-N4 | 9.65 | 124.76 | 118.00 |
| 1 | AA | 1354 | U | C5-C6-N1 | -9.65 | 117.88 | 122.70 |
| 26 | BB | 2026 | U | C2-N3-C4 | -9.65 | 121.21 | 127.00 |
| 1 | AA | 1139 | G | C2-N3-C4 | 9.65 | 116.72 | 111.90 |
| 1 | AA | 1156 | G | C8-N9-C4 | -9.65 | 102.54 | 106.40 |
| 26 | BB | 115 | C | C6-N1-C2 | -9.65 | 116.44 | 120.30 |
| 1 | AA | 521 | G | C6-N1-C2 | -9.65 | 119.31 | 125.10 |
| 26 | BB | 14 | A | N1-C2-N3 | -9.65 | 124.48 | 129.30 |
| 26 | BB | 315 | G | C8-N9-C4 | -9.65 | 102.54 | 106.40 |
| 26 | BB | 1441 | G | C5'-C4'-O4' | 9.65 | 120.67 | 109.10 |
| 26 | BB | 2078 | C | C5'-C4'-O4' | 9.65 | 120.68 | 109.10 |
| 26 | BB | 2084 | C | N3-C4-N4 | 9.65 | 124.75 | 118.00 |
| 26 | BB | 2590 | A | C2-N3-C4 | 9.65 | 115.42 | 110.60 |
| 1 | AA | 285 | C | C6-N1-C2 | -9.64 | 116.44 | 120.30 |
| 1 | AA | 654 | G | N9-C4-C5 | 9.64 | 109.26 | 105.40 |
| 26 | BB | 708 | G | C6-C5-N7 | -9.64 | 124.61 | 130.40 |
| 1 | AA | 262 | A | C6-N1-C2 | -9.64 | 112.81 | 118.60 |
| 1 | AA | 1431 | A | N1-C2-N3 | -9.64 | 124.48 | 129.30 |
| 2 | AB | 22 | G | N3-C4-N9 | 9.64 | 131.79 | 126.00 |
| 26 | BB | 2621 | G | O4'-C1'-C2' | 9.64 | 116.28 | 107.60 |
| 1 | AA | 1101 | A | N9-C4-C5 | 9.64 | 109.66 | 105.80 |
| 1 | AA | 1118 | U | C3'-C2'-C1' | 9.64 | 109.21 | 101.50 |
| 1 | AA | 1280 | A | O4'-C1'-N9 | 9.64 | 115.91 | 108.20 |
| 1 | AA | 1319 | A | C5'-C4'-O4' | 9.64 | 120.67 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 251 | A | O4'-C1'-N9 | 9.64 | 115.91 | 108.20 |
| 26 | BB | 762 | U | O4'-C1'-N1 | 9.64 | 115.91 | 108.20 |
| 26 | BB | 1955 | U | C5-C4-O4 | -9.64 | 120.12 | 125.90 |
| 2 | AB | 33 | U | N1-C2-O2 | 9.64 | 129.55 | 122.80 |
| 1 | AA | 185 | U | N3-C4-C5 | -9.64 | 108.82 | 114.60 |
| 1 | AA | 1048 | G | O4'-C1'-N9 | 9.64 | 115.91 | 108.20 |
| 26 | BB | 1227 | G | C6-N1-C2 | -9.64 | 119.32 | 125.10 |
| 1 | AA | 932 | C | O4'-C1'-N1 | 9.64 | 115.91 | 108.20 |
| 1 | AA | 1300 | G | C5-C6-N1 | 9.63 | 116.32 | 111.50 |
| 2 | AB | 62 | U | O4'-C1'-N1 | 9.63 | 115.91 | 108.20 |
| 4 | AD | 29 | C | N3-C2-O2 | -9.64 | 115.16 | 121.90 |
| 26 | BB | 837 | C | C6-N1-C2 | 9.64 | 124.16 | 120.30 |
| 26 | BB | 1091 | G | C3'-C2'-C1' | -9.64 | 93.79 | 101.50 |
| 26 | BB | 1465 | G | C2-N3-C4 | 9.63 | 116.72 | 111.90 |
| 26 | BB | 2693 | G | C6-N1-C2 | -9.64 | 119.32 | 125.10 |
| 1 | AA | 25 | C | C5'-C4'-O4' | 9.63 | 120.66 | 109.10 |
| 1 | AA | 1113 | C | O4'-C1'-N1 | 9.63 | 115.91 | 108.20 |
| 1 | AA | 1501 | C | N3-C4-C5 | -9.63 | 118.05 | 121.90 |
| 4 | AD | 35 | C | N1-C2-O2 | 9.63 | 124.68 | 118.90 |
| 26 | BB | 408 | G | C2-N3-C4 | -9.63 | 107.08 | 111.90 |
| 26 | BB | 569 | U | C2-N3-C4 | -9.63 | 121.22 | 127.00 |
| 26 | BB | 864 | G | C4-C5-C6 | 9.63 | 124.58 | 118.80 |
| 26 | BB | 1100 | C | N3-C4-C5 | -9.63 | 118.05 | 121.90 |
| 26 | BB | 2610 | C | C4-C5-C6 | -9.63 | 112.58 | 117.40 |
| 26 | BB | 2711 | A | O4'-C4'-C3' | 9.63 | 113.81 | 106.10 |
| 1 | AA | 253 | A | C6-C5-N7 | 9.63 | 139.04 | 132.30 |
| 30 | BF | 114 | ARG | NE-CZ-NH1 | 9.63 | 125.11 | 120.30 |
| 1 | AA | 389 | A | C5'-C4'-O4' | 9.63 | 120.65 | 109.10 |
| 26 | BB | 1587 | G | N9-C4-C5 | 9.63 | 109.25 | 105.40 |
| 26 | BB | 380 | G | N9-C4-C5 | 9.63 | 109.25 | 105.40 |
| 26 | BB | 1465 | G | N7-C8-N9 | 9.63 | 117.91 | 113.10 |
| 26 | BB | 2349 | G | N3-C2-N2 | 9.63 | 126.64 | 119.90 |
| 1 | AA | 190 | A | C3'-C2'-C1' | -9.62 | 93.80 | 101.50 |
| 1 | AA | 348 | G | O4'-C1'-N9 | 9.63 | 115.90 | 108.20 |
| 1 | AA | 1164 | G | C5-N7-C8 | 9.63 | 109.11 | 104.30 |
| 26 | BB | 1647 | U | C6-N1-C2 | -9.62 | 115.22 | 121.00 |
| 26 | BB | 2191 | A | C5-C6-N1 | 9.62 | 122.51 | 117.70 |
| 1 | AA | 533 | A | C8-N9-C4 | -9.62 | 101.95 | 105.80 |
| 1 | AA | 1260 | G | C8-N9-C4 | -9.62 | 102.55 | 106.40 |
| 1 | AA | 1357 | A | C8-N9-C4 | -9.62 | 101.95 | 105.80 |
| 26 | BB | 1511 | G | C4-C5-N7 | -9.62 | 106.95 | 110.80 |
| 26 | BB | 1731 | G | C5-C6-O6 | -9.62 | 122.83 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 672 | U | N3-C4-C5 | -9.62 | 108.83 | 114.60 |
| 1 | AA | 757 | U | O4'-C4'-C3' | 9.62 | 113.80 | 106.10 |
| 1 | AA | 1222 | G | C5-C6-O6 | -9.62 | 122.83 | 128.60 |
| 25 | BA | 73 | A | C4-C5-C6 | 9.62 | 121.81 | 117.00 |
| 26 | BB | 522 | A | C5'-C4'-O4' | 9.62 | 120.64 | 109.10 |
| 26 | BB | 440 | C | O4'-C1'-N1 | 9.62 | 115.89 | 108.20 |
| 26 | BB | 1934 | C | N3-C4-C5 | -9.62 | 118.05 | 121.90 |
| 26 | BB | 572 | A | C2-N3-C4 | -9.62 | 105.79 | 110.60 |
| 26 | BB | 2245 | U | C6-N1-C2 | -9.62 | 115.23 | 121.00 |
| 1 | AA | 190 | A | N9-C4-C5 | 9.62 | 109.65 | 105.80 |
| 1 | AA | 675 | A | C2-N3-C4 | 9.62 | 115.41 | 110.60 |
| 26 | BB | 212 | G | N3-C2-N2 | 9.62 | 126.63 | 119.90 |
| 26 | BB | 2340 | A | O4'-C1'-N9 | 9.62 | 115.89 | 108.20 |
| 1 | AA | 1333 | A | C5-C6-N1 | 9.61 | 122.51 | 117.70 |
| 26 | BB | 307 | G | O4'-C1'-N9 | 9.62 | 115.89 | 108.20 |
| 26 | BB | 916 | G | C8-N9-C4 | -9.62 | 102.55 | 106.40 |
| 26 | BB | 1815 | A | C4-C5-N7 | 9.61 | 115.51 | 110.70 |
| 1 | AA | 115 | G | C5-C6-N1 | 9.61 | 116.31 | 111.50 |
| 26 | BB | 321 | U | C4-C5-C6 | 9.61 | 125.47 | 119.70 |
| 26 | BB | 1662 | U | O4'-C1'-N1 | 9.61 | 115.89 | 108.20 |
| 26 | BB | 1927 | A | N7-C8-N9 | 9.61 | 118.61 | 113.80 |
| 26 | BB | 1758 | U | N1-C2-O2 | 9.61 | 129.53 | 122.80 |
| 26 | BB | 1766 | G | N9-C4-C5 | 9.61 | 109.24 | 105.40 |
| 1 | AA | 1063 | C | N1-C2-O2 | 9.61 | 124.67 | 118.90 |
| 1 | AA | 1131 | G | N9-C4-C5 | 9.61 | 109.24 | 105.40 |
| 2 | AB | 38 | A | C5'-C4'-O4' | 9.61 | 120.63 | 109.10 |
| 26 | BB | 1687 | G | O4'-C1'-N9 | 9.61 | 115.89 | 108.20 |
| 1 | AA | 1137 | C | O4'-C1'-N1 | 9.61 | 115.89 | 108.20 |
| 26 | BB | 2131 | U | N3-C2-O2 | -9.61 | 115.47 | 122.20 |
| 26 | BB | 2777 | G | N9-C4-C5 | 9.61 | 109.24 | 105.40 |
| 26 | BB | 489 | G | C4-C5-N7 | -9.61 | 106.96 | 110.80 |
| 26 | BB | 1172 | C | O4'-C1'-N1 | 9.61 | 115.89 | 108.20 |
| 26 | BB | 1577 | C | C2-N3-C4 | 9.61 | 124.70 | 119.90 |
| 21 | AU | 9 | PHE | CB-CG-CD2 | -9.60 | 114.08 | 120.80 |
| 1 | AA | 748 | G | N1-C6-O6 | 9.60 | 125.66 | 119.90 |
| 1 | AA | 1288 | A | N9-C4-C5 | -9.60 | 101.96 | 105.80 |
| 15 | AO | 85 | ARG | NE-CZ-NH1 | 9.60 | 125.10 | 120.30 |
| 26 | BB | 788 | A | N1-C6-N6 | -9.60 | 112.84 | 118.60 |
| 26 | BB | 2220 | U | O4'-C1'-N1 | 9.60 | 115.88 | 108.20 |
| 26 | BB | 801 | G | N9-C4-C5 | 9.60 | 109.24 | 105.40 |
| 26 | BB | 1652 | A | C8-N9-C4 | -9.60 | 101.96 | 105.80 |
| 26 | BB | 2461 | A | N7-C8-N9 | 9.60 | 118.60 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2852 | G | N3-C4-N9 | 9.60 | 131.76 | 126.00 |
| 1 | AA | 17 | U | C4'-C3'-C2' | -9.60 | 93.00 | 102.60 |
| 26 | BB | 592 | A | C2-N3-C4 | -9.60 | 105.80 | 110.60 |
| 1 | AA | 379 | C | C5-C4-N4 | -9.60 | 113.48 | 120.20 |
| 1 | AA | 1109 | C | N3-C4-C5 | -9.60 | 118.06 | 121.90 |
| 26 | BB | 413 | C | N3-C2-O2 | -9.60 | 115.18 | 121.90 |
| 26 | BB | 505 | A | N1-C6-N6 | 9.60 | 124.36 | 118.60 |
| 1 | AA | 419 | C | C6-N1-C2 | -9.60 | 116.46 | 120.30 |
| 26 | BB | 262 | A | C4-C5-N7 | -9.60 | 105.90 | 110.70 |
| 26 | BB | 2670 | A | N9-C1'-C2' | -9.60 | 101.45 | 112.00 |
| 1 | AA | 198 | G | N3-C2-N2 | -9.59 | 113.19 | 119.90 |
| 1 | AA | 510 | A | C8-N9-C4 | -9.59 | 101.96 | 105.80 |
| 1 | AA | 867 | G | C2-N3-C4 | 9.59 | 116.70 | 111.90 |
| 26 | BB | 1051 | G | N3-C4-C5 | -9.59 | 123.80 | 128.60 |
| 26 | BB | 2234 | G | C5'-C4'-O4' | 9.59 | 120.61 | 109.10 |
| 26 | BB | 14 | A | C2-N3-C4 | 9.59 | 115.39 | 110.60 |
| 26 | BB | 81 | G | N9-C4-C5 | 9.59 | 109.24 | 105.40 |
| 26 | BB | 203 | A | N7-C8-N9 | 9.59 | 118.59 | 113.80 |
| 26 | BB | 1004 | U | N3-C4-C5 | -9.59 | 108.85 | 114.60 |
| 26 | BB | 1040 | A | C5-C6-N1 | 9.59 | 122.50 | 117.70 |
| 1 | AA | 510 | A | N9-C4-C5 | 9.59 | 109.64 | 105.80 |
| 26 | BB | 2046 | G | C4-C5-N7 | -9.59 | 106.97 | 110.80 |
| 1 | AA | 1026 | G | N7-C8-N9 | 9.59 | 117.89 | 113.10 |
| 26 | BB | 494 | G | O4'-C1'-N9 | 9.59 | 115.87 | 108.20 |
| 26 | BB | 1477 | A | C5-C6-N1 | 9.59 | 122.49 | 117.70 |
| 26 | BB | 2624 | G | C8-N9-C4 | 9.59 | 110.23 | 106.40 |
| 26 | BB | 1528 | A | C8-N9-C4 | -9.58 | 101.97 | 105.80 |
| 26 | BB | 1418 | G | C8-N9-C4 | -9.58 | 102.57 | 106.40 |
| 26 | BB | 2185 | U | N3-C2-O2 | -9.58 | 115.49 | 122.20 |
| 26 | BB | 2732 | G | C2-N3-C4 | 9.58 | 116.69 | 111.90 |
| 1 | AA | 441 | A | C5'-C4'-O4' | 9.58 | 120.60 | 109.10 |
| 26 | BB | 445 | C | N1-C2-N3 | -9.58 | 112.50 | 119.20 |
| 1 | AA | 1134 | G | C8-N9-C4 | -9.58 | 102.57 | 106.40 |
| 26 | BB | 940 | G | N7-C8-N9 | 9.58 | 117.89 | 113.10 |
| 1 | AA | 1479 | C | C6-N1-C2 | -9.58 | 116.47 | 120.30 |
| 2 | AB | 3 | G | O4'-C1'-N9 | 9.58 | 115.86 | 108.20 |
| 4 | AD | 48 | U | C4-C5-C6 | 9.58 | 125.45 | 119.70 |
| 1 | AA | 783 | C | O4'-C1'-N1 | 9.57 | 115.86 | 108.20 |
| 1 | AA | 387 | U | N1-C2-N3 | 9.57 | 120.64 | 114.90 |
| 26 | BB | 1299 | G | N9-C1'-C2' | -9.57 | 101.47 | 112.00 |
| 4 | AD | 62 | C | C2-N3-C4 | 9.57 | 124.69 | 119.90 |
| 25 | BA | 76 | G | C8-N9-C4 | -9.57 | 102.57 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 114 | C | C3'-C2'-C1' | -9.57 | 93.84 | 101.50 |
| 1 | AA | 1230 | C | O4'-C1'-N1 | 9.57 | 115.86 | 108.20 |
| 26 | BB | 935 | C | O4'-C1'-N1 | 9.57 | 115.86 | 108.20 |
| 26 | BB | 1137 | G | N1-C2-N3 | -9.57 | 118.16 | 123.90 |
| 26 | BB | 2519 | U | C4-C5-C6 | 9.57 | 125.44 | 119.70 |
| 1 | AA | 1442 | G | C5-N7-C8 | -9.57 | 99.52 | 104.30 |
| 4 | AD | 76 | C | O4'-C1'-N1 | 9.57 | 115.85 | 108.20 |
| 26 | BB | 1735 | A | N1-C2-N3 | 9.57 | 134.08 | 129.30 |
| 26 | BB | 2391 | G | C5-C6-O6 | 9.57 | 134.34 | 128.60 |
| 1 | AA | 786 | G | O4'-C1'-N9 | 9.56 | 115.85 | 108.20 |
| 1 | AA | 898 | G | N1-C6-O6 | -9.56 | 114.16 | 119.90 |
| 1 | AA | 987 | G | N9-C1'-C2' | -9.56 | 101.48 | 112.00 |
| 3 | AC | 19 | A | O4'-C1'-N9 | 9.56 | 115.85 | 108.20 |
| 26 | BB | 678 | C | N3-C2-O2 | -9.56 | 115.20 | 121.90 |
| 26 | BB | 80 | G | C5-C6-N1 | 9.56 | 116.28 | 111.50 |
| 26 | BB | 449 | A | N1-C2-N3 | 9.56 | 134.08 | 129.30 |
| 26 | BB | 1873 | G | C2-N3-C4 | 9.56 | 116.68 | 111.90 |
| 26 | BB | 2316 | G | O4'-C1'-N9 | 9.56 | 115.85 | 108.20 |
| 1 | AA | 1511 | G | C4-C5-N7 | 9.56 | 114.62 | 110.80 |
| 2 | AB | 57 | G | N3-C4-C5 | -9.56 | 123.82 | 128.60 |
| 26 | BB | 108 | G | C4-C5-C6 | 9.56 | 124.54 | 118.80 |
| 26 | BB | 645 | C | O4'-C1'-N1 | 9.56 | 115.85 | 108.20 |
| 1 | AA | 449 | G | C4-C5-N7 | -9.56 | 106.98 | 110.80 |
| 26 | BB | 2606 | C | O4'-C1'-N1 | 9.56 | 115.85 | 108.20 |
| 1 | AA | 1070 | U | C1'-O4'-C4' | -9.56 | 102.25 | 109.90 |
| 26 | BB | 1130 | U | N3-C4-O4 | 9.56 | 126.09 | 119.40 |
| 26 | BB | 1270 | C | C3'-C2'-C1' | 9.56 | 109.15 | 101.50 |
| 26 | BB | 2570 | G | N9-C4-C5 | -9.56 | 101.58 | 105.40 |
| 1 | AA | 523 | A | O4'-C1'-N9 | 9.55 | 115.84 | 108.20 |
| 26 | BB | 523 | C | N3-C4-N4 | 9.55 | 124.69 | 118.00 |
| 26 | BB | 2674 | G | N9-C1'-C2' | -9.55 | 101.49 | 112.00 |
| 25 | BA | 24 | G | N9-C4-C5 | 9.55 | 109.22 | 105.40 |
| 26 | BB | 605 | G | O4'-C1'-N9 | 9.55 | 115.84 | 108.20 |
| 26 | BB | 898 | C | N3-C4-C5 | 9.55 | 125.72 | 121.90 |
| 26 | BB | 988 | A | C3'-C2'-C1' | -9.55 | 93.86 | 101.50 |
| 26 | BB | 1538 | G | C5-N7-C8 | -9.55 | 99.52 | 104.30 |
| 26 | BB | 2253 | G | O4'-C1'-N9 | 9.55 | 115.84 | 108.20 |
| 26 | BB | 2228 | G | C5-C6-O6 | -9.55 | 122.87 | 128.60 |
| 26 | BB | 2351 | G | O4'-C1'-N9 | 9.55 | 115.84 | 108.20 |
| 26 | BB | 1999 | C | O4'-C1'-N1 | 9.55 | 115.84 | 108.20 |
| 1 | AA | 1055 | A | C4'-C3'-C2' | -9.55 | 93.05 | 102.60 |
| 26 | BB | 1289 | C | N3-C4-C5 | -9.55 | 118.08 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1476 | U | C5-C6-N1 | -9.55 | 117.93 | 122.70 |
| 26 | BB | 2688 | G | C2-N3-C4 | 9.55 | 116.67 | 111.90 |
| 26 | BB | 2848 | G | C5-C6-O6 | 9.55 | 134.33 | 128.60 |
| 1 | AA | 64 | G | C6-C5-N7 | 9.54 | 136.13 | 130.40 |
| 26 | BB | 1560 | G | N7-C8-N9 | 9.55 | 117.87 | 113.10 |
| 26 | BB | 2307 | G | C5-N7-C8 | -9.55 | 99.53 | 104.30 |
| 1 | AA | 563 | A | C1'-O4'-C4' | -9.54 | 102.27 | 109.90 |
| 26 | BB | 66 | C | N1-C2-O2 | 9.54 | 124.63 | 118.90 |
| 1 | AA | 1069 | C | C6-N1-C2 | -9.54 | 116.48 | 120.30 |
| 1 | AA | 1161 | C | C4-C5-C6 | 9.54 | 122.17 | 117.40 |
| 26 | BB | 636 | G | C2-N3-C4 | 9.54 | 116.67 | 111.90 |
| 26 | BB | 1942 | C | C5-C4-N4 | 9.54 | 126.88 | 120.20 |
| 43 | BS | 91 | ARG | NE-CZ-NH1 | 9.54 | 125.07 | 120.30 |
| 3 | AC | 56 | G | C6-N1-C2 | -9.54 | 119.38 | 125.10 |
| 25 | BA | 53 | A | N7-C8-N9 | -9.54 | 109.03 | 113.80 |
| 1 | AA | 397 | A | C4-C5-N7 | -9.54 | 105.93 | 110.70 |
| 1 | AA | 1539 | C | N3-C4-C5 | -9.54 | 118.08 | 121.90 |
| 26 | BB | 208 | C | C6-N1-C2 | 9.54 | 124.12 | 120.30 |
| 26 | BB | 794 | A | N1-C6-N6 | -9.54 | 112.88 | 118.60 |
| 26 | BB | 1509 | A | C5'-C4'-O4' | 9.54 | 120.55 | 109.10 |
| 1 | AA | 661 | G | C3'-C2'-C1' | 9.54 | 109.13 | 101.50 |
| 1 | AA | 830 | G | N7-C8-N9 | 9.54 | 117.87 | 113.10 |
| 1 | AA | 1486 | G | N1-C2-N3 | 9.54 | 129.62 | 123.90 |
| 26 | BB | 495 | G | C5-C6-N1 | 9.54 | 116.27 | 111.50 |
| 26 | BB | 2144 | G | N1-C6-O6 | 9.54 | 125.62 | 119.90 |
| 26 | BB | 696 | G | N1-C6-O6 | 9.53 | 125.62 | 119.90 |
| 26 | BB | 873 | C | N3-C2-O2 | -9.53 | 115.23 | 121.90 |
| 26 | BB | 1855 | U | O4'-C1'-N1 | 9.54 | 115.83 | 108.20 |
| 1 | AA | 847 | G | C6-N1-C2 | -9.53 | 119.38 | 125.10 |
| 1 | AA | 1013 | G | C8-N9-C4 | -9.53 | 102.59 | 106.40 |
| 1 | AA | 1150 | A | C4'-C3'-C2' | -9.53 | 93.07 | 102.60 |
| 1 | AA | 1149 | C | N1-C1'-C2' | -9.53 | 101.52 | 112.00 |
| 3 | AC | 17 | U | O4'-C1'-N1 | 9.53 | 115.83 | 108.20 |
| 26 | BB | 2721 | A | C1'-O4'-C4' | -9.53 | 102.28 | 109.90 |
| 25 | BA | 79 | G | C6-C5-N7 | 9.53 | 136.12 | 130.40 |
| 43 | BS | 49 | ARG | NE-CZ-NH2 | 9.53 | 125.06 | 120.30 |
| 1 | AA | 260 | G | C8-N9-C4 | -9.53 | 102.59 | 106.40 |
| 1 | AA | 812 | G | C4'-C3'-C2' | -9.53 | 93.07 | 102.60 |
| 4 | AD | 25 | U | N3-C2-O2 | -9.53 | 115.53 | 122.20 |
| 25 | BA | 24 | G | O4'-C1'-N9 | -9.53 | 100.58 | 108.20 |
| 26 | BB | 1973 | G | N9-C4-C5 | 9.53 | 109.21 | 105.40 |
| 1 | AA | 522 | C | O4'-C1'-N1 | 9.53 | 115.82 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 743 | A | N3-C4-C5 | -9.53 | 120.13 | 126.80 |
| 1 | AA | 1051 | C | C4'-C3'-C2' | -9.53 | 93.07 | 102.60 |
| 1 | AA | 1133 | G | C8-N9-C4 | 9.53 | 110.21 | 106.40 |
| 4 | AD | 35 | C | C5'-C4'-O4' | 9.53 | 120.53 | 109.10 |
| 26 | BB | 751 | A | C6-N1-C2 | 9.53 | 124.32 | 118.60 |
| 26 | BB | 1431 | A | C4-C5-C6 | -9.52 | 112.24 | 117.00 |
| 26 | BB | 1843 | C | O4'-C1'-N1 | 9.52 | 115.82 | 108.20 |
| 26 | BB | 2621 | G | C8-N9-C4 | -9.52 | 102.59 | 106.40 |
| 26 | BB | 1042 | G | O4'-C1'-N9 | 9.52 | 115.82 | 108.20 |
| 26 | BB | 1130 | U | C5-C4-O4 | -9.52 | 120.19 | 125.90 |
| 1 | AA | 292 | G | N3-C4-C5 | -9.52 | 123.84 | 128.60 |
| 1 | AA | 891 | U | C4-C5-C6 | 9.52 | 125.41 | 119.70 |
| 25 | BA | 50 | A | C2-N3-C4 | -9.52 | 105.84 | 110.60 |
| 26 | BB | 189 | G | N7-C8-N9 | 9.52 | 117.86 | 113.10 |
| 26 | BB | 1252 | G | N7-C8-N9 | 9.52 | 117.86 | 113.10 |
| 26 | BB | 217 | A | N9-C4-C5 | 9.52 | 109.61 | 105.80 |
| 26 | BB | 314 | C | N3-C4-C5 | 9.52 | 125.71 | 121.90 |
| 26 | BB | 156 | A | C4-C5-C6 | 9.52 | 121.76 | 117.00 |
| 26 | BB | 530 | G | C4'-C3'-C2' | -9.52 | 93.08 | 102.60 |
| 1 | AA | 8 | A | C8-N9-C4 | 9.51 | 109.61 | 105.80 |
| 26 | BB | 438 | G | O4'-C1'-N9 | 9.51 | 115.81 | 108.20 |
| 26 | BB | 1518 | C | N3-C4-C5 | 9.51 | 125.71 | 121.90 |
| 16 | AP | 78 | ARG | NE-CZ-NH1 | 9.51 | 125.06 | 120.30 |
| 26 | BB | 464 | U | N1-C2-O2 | 9.51 | 129.46 | 122.80 |
| 26 | BB | 1762 | A | C8-N9-C4 | -9.51 | 102.00 | 105.80 |
| 1 | AA | 1324 | A | C5-C6-N1 | -9.51 | 112.95 | 117.70 |
| 26 | BB | 42 | A | C5-N7-C8 | -9.51 | 99.15 | 103.90 |
| 26 | BB | 438 | G | N3-C4-C5 | -9.51 | 123.85 | 128.60 |
| 26 | BB | 1608 | A | C4-C5-N7 | 9.51 | 115.45 | 110.70 |
| 30 | BF | 49 | ARG | NE-CZ-NH2 | 9.51 | 125.05 | 120.30 |
| 25 | BA | 98 | G | C8-N9-C4 | -9.51 | 102.60 | 106.40 |
| 26 | BB | 864 | G | N3-C4-C5 | -9.51 | 123.85 | 128.60 |
| 26 | BB | 1850 | G | C5-C6-O6 | -9.51 | 122.90 | 128.60 |
| 26 | BB | 2624 | G | N9-C4-C5 | -9.51 | 101.60 | 105.40 |
| 26 | BB | 1978 | A | O4'-C1'-N9 | 9.50 | 115.80 | 108.20 |
| 26 | BB | 2103 | C | C6-N1-C2 | -9.50 | 116.50 | 120.30 |
| 26 | BB | 2481 | G | N3-C4-C5 | -9.50 | 123.85 | 128.60 |
| 1 | AA | 226 | G | O4'-C1'-N9 | 9.50 | 115.80 | 108.20 |
| 1 | AA | 175 | C | O4'-C1'-N1 | 9.50 | 115.80 | 108.20 |
| 1 | AA | 1044 | A | O4'-C1'-N9 | 9.50 | 115.80 | 108.20 |
| 4 | AD | 76 | C | C2-N3-C4 | -9.50 | 115.15 | 119.90 |
| 26 | BB | 741 | U | N3-C4-C5 | -9.50 | 108.90 | 114.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1228 | G | C4-C5-N7 | -9.50 | 107.00 | 110.80 |
| 26 | BB | 2644 | G | C2-N3-C4 | 9.50 | 116.65 | 111.90 |
| 26 | BB | 2730 | C | O4'-C1'-N1 | 9.50 | 115.80 | 108.20 |
| 26 | BB | 2886 | A | C4'-C3'-C2' | -9.50 | 93.10 | 102.60 |
| 1 | AA | 21 | G | N3-C4-C5 | -9.50 | 123.85 | 128.60 |
| 1 | AA | 569 | C | C6-N1-C2 | -9.50 | 116.50 | 120.30 |
| 1 | AA | 1521 | C | C5-C4-N4 | -9.50 | 113.55 | 120.20 |
| 4 | AD | 40 | C | C6-N1-C2 | -9.50 | 116.50 | 120.30 |
| 26 | BB | 1045 | C | C2-N3-C4 | 9.50 | 124.65 | 119.90 |
| 26 | BB | 1307 | A | N1-C2-N3 | -9.50 | 124.55 | 129.30 |
| 26 | BB | 2546 | U | O4'-C1'-N1 | 9.50 | 115.80 | 108.20 |
| 1 | AA | 1437 | A | C5-C6-N6 | -9.49 | 116.10 | 123.70 |
| 1 | AA | 705 | G | N7-C8-N9 | 9.49 | 117.85 | 113.10 |
| 26 | BB | 1265 | A | C8-N9-C4 | 9.49 | 109.60 | 105.80 |
| 1 | AA | 1322 | C | C5-C4-N4 | -9.49 | 113.56 | 120.20 |
| 25 | BA | 96 | G | N9-C4-C5 | 9.49 | 109.20 | 105.40 |
| 26 | BB | 2050 | C | N3-C2-O2 | -9.49 | 115.25 | 121.90 |
| 26 | BB | 2603 | G | C6-N1-C2 | -9.49 | 119.40 | 125.10 |
| 26 | BB | 2612 | C | N3-C2-O2 | -9.49 | 115.25 | 121.90 |
| 26 | BB | 2635 | A | O4'-C1'-N9 | 9.49 | 115.79 | 108.20 |
| 1 | AA | 856 | C | C4-C5-C6 | -9.49 | 112.66 | 117.40 |
| 1 | AA | 934 | C | N1-C2-O2 | 9.49 | 124.59 | 118.90 |
| 1 | AA | 1423 | G | C8-N9-C4 | -9.49 | 102.60 | 106.40 |
| 26 | BB | 275 | C | C2-N3-C4 | 9.49 | 124.64 | 119.90 |
| 26 | BB | 485 | C | O4'-C1'-N1 | 9.49 | 115.79 | 108.20 |
| 26 | BB | 1584 | U | O4'-C1'-N1 | 9.49 | 115.79 | 108.20 |
| 1 | AA | 639 | G | C2-N3-C4 | 9.49 | 116.64 | 111.90 |
| 1 | AA | 663 | A | N7-C8-N9 | -9.49 | 109.06 | 113.80 |
| 1 | AA | 967 | 5MC | P-O3'-C3' | 9.49 | 131.09 | 119.70 |
| 1 | AA | 599 | C | O4'-C1'-N1 | 9.49 | 115.79 | 108.20 |
| 25 | BA | 59 | A | O4'-C1'-N9 | 9.49 | 115.79 | 108.20 |
| 26 | BB | 651 | G | C6-C5-N7 | 9.49 | 136.09 | 130.40 |
| 26 | BB | 2103 | C | N1-C1'-C2' | -9.49 | 101.56 | 112.00 |
| 26 | BB | 2293 | G | C4'-C3'-C2' | -9.49 | 93.11 | 102.60 |
| 25 | BA | 100 | G | C6-C5-N7 | -9.48 | 124.71 | 130.40 |
| 1 | AA | 61 | G | C2-N3-C4 | 9.48 | 116.64 | 111.90 |
| 1 | AA | 413 | G | C5-C6-O6 | 9.48 | 134.29 | 128.60 |
| 1 | AA | 1517 | G | C8-N9-C4 | -9.48 | 102.61 | 106.40 |
| 2 | AB | 74 | C | O4'-C1'-N1 | 9.48 | 115.79 | 108.20 |
| 26 | BB | 681 | G | N9-C4-C5 | 9.48 | 109.19 | 105.40 |
| 26 | BB | 1186 | G | N3-C4-N9 | 9.48 | 131.69 | 126.00 |
| 26 | BB | 1237 | A | N1-C2-N3 | -9.48 | 124.56 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2281 | A | C8-N9-C4 | -9.48 | 102.01 | 105.80 |
| 1 | AA | 761 | G | C8-N9-C4 | -9.48 | 102.61 | 106.40 |
| 1 | AA | 791 | G | C1'-O4'-C4' | -9.48 | 102.31 | 109.90 |
| 26 | BB | 1309 | G | N7-C8-N9 | 9.48 | 117.84 | 113.10 |
| 26 | BB | 1800 | C | N1-C2-O2 | 9.48 | 124.59 | 118.90 |
| 1 | AA | 926 | G | C4-C5-N7 | 9.48 | 114.59 | 110.80 |
| 1 | AA | 1300 | G | C6-N1-C2 | -9.48 | 119.41 | 125.10 |
| 1 | AA | 74 | A | C1'-O4'-C4' | -9.48 | 102.32 | 109.90 |
| 1 | AA | 166 | U | N1-C1'-C2' | -9.48 | 101.58 | 112.00 |
| 1 | AA | 659 | U | O4'-C1'-N1 | 9.48 | 115.78 | 108.20 |
| 1 | AA | 959 | A | N9-C4-C5 | 9.48 | 109.59 | 105.80 |
| 26 | BB | 473 | G | C6-C5-N7 | -9.48 | 124.71 | 130.40 |
| 26 | BB | 2212 | A | C8-N9-C4 | 9.48 | 109.59 | 105.80 |
| 26 | BB | 530 | G | N1-C2-N2 | -9.48 | 107.67 | 116.20 |
| 26 | BB | 2188 | U | C4-C5-C6 | 9.48 | 125.39 | 119.70 |
| 26 | BB | 606 | U | C5-C6-N1 | -9.47 | 117.96 | 122.70 |
| 26 | BB | 2874 | C | N1-C2-O2 | 9.47 | 124.58 | 118.90 |
| 26 | BB | 1205 | A | O4'-C1'-N9 | 9.47 | 115.78 | 108.20 |
| 1 | AA | 803 | G | N9-C4-C5 | 9.47 | 109.19 | 105.40 |
| 26 | BB | 57 | C | C5'-C4'-O4' | 9.47 | 120.47 | 109.10 |
| 1 | AA | 188 | C | N3-C2-O2 | -9.47 | 115.27 | 121.90 |
| 1 | AA | 1234 | C | C3'-C2'-C1' | 9.47 | 109.08 | 101.50 |
| 1 | AA | 1332 | A | N7-C8-N9 | 9.47 | 118.53 | 113.80 |
| 26 | BB | 2295 | C | O4'-C1'-N1 | 9.47 | 115.78 | 108.20 |
| 1 | AA | 866 | C | C6-N1-C2 | -9.47 | 116.51 | 120.30 |
| 26 | BB | 1004 | U | O4'-C1'-N1 | 9.47 | 115.78 | 108.20 |
| 1 | AA | 496 | A | C5-C6-N1 | 9.47 | 122.43 | 117.70 |
| 26 | BB | 1137 | G | N7-C8-N9 | 9.47 | 117.83 | 113.10 |
| 26 | BB | 1506 | U | C5-C4-O4 | -9.47 | 120.22 | 125.90 |
| 26 | BB | 1547 | C | O4'-C1'-N1 | 9.47 | 115.77 | 108.20 |
| 26 | BB | 2839 | G | N3-C4-N9 | 9.47 | 131.68 | 126.00 |
| 1 | AA | 1523 | G | N3-C4-C5 | -9.46 | 123.87 | 128.60 |
| 26 | BB | 834 | G | C6-N1-C2 | -9.47 | 119.42 | 125.10 |
| 26 | BB | 1114 | C | N1-C2-O2 | 9.47 | 124.58 | 118.90 |
| 26 | BB | 1326 | U | O4'-C1'-N1 | 9.47 | 115.77 | 108.20 |
| 26 | BB | 1715 | G | N1-C2-N2 | -9.47 | 107.68 | 116.20 |
| 1 | AA | 1542 | A | N9-C4-C5 | 9.46 | 109.59 | 105.80 |
| 1 | AA | 1237 | C | N3-C2-O2 | -9.46 | 115.28 | 121.90 |
| 1 | AA | 663 | A | C5-N7-C8 | 9.46 | 108.63 | 103.90 |
| 16 | AP | 92 | ARG | NE-CZ-NH1 | 9.46 | 125.03 | 120.30 |
| 26 | BB | 493 | G | C2-N3-C4 | 9.46 | 116.63 | 111.90 |
| 26 | BB | 1614 | A | C4-C5-C6 | -9.46 | 112.27 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2548 | U | C5-C6-N1 | -9.46 | 117.97 | 122.70 |
| 26 | BB | 1518 | C | N1-C2-O2 | 9.46 | 124.58 | 118.90 |
| 26 | BB | 1677 | A | N7-C8-N9 | -9.46 | 109.07 | 113.80 |
| 26 | BB | 2398 | U | C6-N1-C2 | -9.46 | 115.32 | 121.00 |
| 26 | BB | 2785 | C | O4'-C1'-N1 | 9.46 | 115.77 | 108.20 |
| 1 | AA | 735 | C | O4'-C1'-N1 | 9.46 | 115.77 | 108.20 |
| 1 | AA | 448 | A | C4-C5-N7 | -9.46 | 105.97 | 110.70 |
| 1 | AA | 974 | A | N3-C4-N9 | -9.46 | 119.83 | 127.40 |
| 4 | AD | 63 | C | O4'-C1'-N1 | 9.46 | 115.77 | 108.20 |
| 26 | BB | 569 | U | O4'-C1'-N1 | 9.46 | 115.77 | 108.20 |
| 1 | AA | 1293 | C | O4'-C1'-N1 | 9.46 | 115.77 | 108.20 |
| 26 | BB | 251 | A | C5-N7-C8 | -9.46 | 99.17 | 103.90 |
| 26 | BB | 2493 | U | C2-N3-C4 | -9.46 | 121.33 | 127.00 |
| 1 | AA | 1493 | A | C2-N3-C4 | 9.45 | 115.33 | 110.60 |
| 26 | BB | 2095 | A | N1-C2-N3 | -9.45 | 124.57 | 129.30 |
| 26 | BB | 2876 | G | O4'-C1'-N9 | 9.45 | 115.76 | 108.20 |
| 1 | AA | 149 | A | C4-C5-N7 | 9.45 | 115.43 | 110.70 |
| 1 | AA | 749 | A | C5'-C4'-O4' | 9.45 | 120.44 | 109.10 |
| 1 | AA | 1299 | A | N7-C8-N9 | -9.45 | 109.07 | 113.80 |
| 26 | BB | 439 | A | N7-C8-N9 | 9.45 | 118.53 | 113.80 |
| 26 | BB | 791 | C | C3'-C2'-C1' | -9.45 | 93.94 | 101.50 |
| 26 | BB | 2352 | A | C4-C5-N7 | -9.45 | 105.97 | 110.70 |
| 26 | BB | 733 | G | C6-N1-C2 | -9.45 | 119.43 | 125.10 |
| 26 | BB | 1386 | C | C5-C6-N1 | 9.45 | 125.72 | 121.00 |
| 26 | BB | 2412 | A | C6-N1-C2 | -9.45 | 112.93 | 118.60 |
| 26 | BB | 213 | A | C8-N9-C4 | -9.45 | 102.02 | 105.80 |
| 26 | BB | 406 | G | N3-C4-C5 | -9.45 | 123.88 | 128.60 |
| 26 | BB | 780 | G | N9-C4-C5 | -9.45 | 101.62 | 105.40 |
| 26 | BB | 2201 | G | O4'-C1'-N9 | 9.44 | 115.75 | 108.20 |
| 1 | AA | 145 | G | C6-N1-C2 | -9.44 | 119.44 | 125.10 |
| 1 | AA | 805 | C | C1'-O4'-C4' | -9.44 | 102.35 | 109.90 |
| 26 | BB | 12 | U | N3-C2-O2 | -9.44 | 115.59 | 122.20 |
| 26 | BB | 266 | G | C4-C5-N7 | 9.44 | 114.58 | 110.80 |
| 26 | BB | 712 | G | O4'-C1'-N9 | 9.44 | 115.75 | 108.20 |
| 1 | AA | 79 | G | C8-N9-C4 | -9.44 | 102.62 | 106.40 |
| 25 | BA | 75 | G | N3-C4-N9 | 9.44 | 131.66 | 126.00 |
| 26 | BB | 942 | G | C6-N1-C2 | -9.44 | 119.44 | 125.10 |
| 26 | BB | 1082 | U | O4'-C1'-N1 | 9.44 | 115.75 | 108.20 |
| 26 | BB | 2655 | G | C3'-C2'-C1' | -9.44 | 93.95 | 101.50 |
| 26 | BB | 2083 | G | C3'-C2'-C1' | 9.44 | 109.05 | 101.50 |
| 26 | BB | 593 | U | O4'-C1'-N1 | 9.44 | 115.75 | 108.20 |
| 26 | BB | 2671 | G | C4-C5-N7 | 9.44 | 114.58 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2684 | U | O4'-C1'-N1 | 9.44 | 115.75 | 108.20 |
| 26 | BB | 2047 | C | C5-C6-N1 | -9.44 | 116.28 | 121.00 |
| 26 | BB | 2679 | A | N9-C4-C5 | 9.44 | 109.57 | 105.80 |
| 26 | BB | 240 | C | N3-C4-N4 | 9.43 | 124.60 | 118.00 |
| 26 | BB | 917 | A | O4'-C1'-N9 | 9.43 | 115.75 | 108.20 |
| 26 | BB | 1378 | A | N1-C6-N6 | -9.43 | 112.94 | 118.60 |
| 26 | BB | 1588 | G | N3-C4-C5 | -9.43 | 123.88 | 128.60 |
| 26 | BB | 2655 | G | C8-N9-C4 | -9.43 | 102.63 | 106.40 |
| 26 | BB | 784 | G | C4'-C3'-C2' | -9.43 | 93.17 | 102.60 |
| 26 | BB | 1057 | A | C2-N3-C4 | 9.43 | 115.31 | 110.60 |
| 1 | AA | 172 | A | O4'-C1'-N9 | 9.43 | 115.74 | 108.20 |
| 1 | AA | 212 | G | O4'-C1'-N9 | 9.43 | 115.74 | 108.20 |
| 1 | AA | 960 | U | N3-C4-O4 | -9.43 | 112.80 | 119.40 |
| 1 | AA | 1165 | U | N3-C2-O2 | -9.43 | 115.60 | 122.20 |
| 1 | AA | 1305 | G | N1-C6-O6 | 9.43 | 125.56 | 119.90 |
| 3 | AC | 13 | A | C2-N3-C4 | 9.43 | 115.31 | 110.60 |
| 4 | AD | 10 | G | N1-C2-N3 | 9.43 | 129.56 | 123.90 |
| 26 | BB | 390 | U | C4-C5-C6 | 9.43 | 125.36 | 119.70 |
| 26 | BB | 938 | G | C4-C5-N7 | -9.43 | 107.03 | 110.80 |
| 26 | BB | 1223 | G | C6-N1-C2 | -9.43 | 119.44 | 125.10 |
| 26 | BB | 1490 | A | N9-C4-C5 | 9.43 | 109.57 | 105.80 |
| 26 | BB | 1563 | U | N1-C2-O2 | 9.43 | 129.40 | 122.80 |
| 26 | BB | 2546 | U | N3-C2-O2 | -9.43 | 115.60 | 122.20 |
| 1 | AA | 1524 | C | C2-N3-C4 | 9.42 | 124.61 | 119.90 |
| 26 | BB | 2054 | A | N1-C6-N6 | -9.42 | 112.95 | 118.60 |
| 26 | BB | 2228 | G | N9-C4-C5 | -9.42 | 101.63 | 105.40 |
| 1 | AA | 78 | A | C8-N9-C4 | -9.42 | 102.03 | 105.80 |
| 3 | AC | 40 | G | O4'-C1'-N9 | 9.42 | 115.74 | 108.20 |
| 12 | AL | 118 | ARG | NE-CZ-NH2 | -9.42 | 115.59 | 120.30 |
| 26 | BB | 1703 | G | N9-C4-C5 | 9.42 | 109.17 | 105.40 |
| 26 | BB | 1752 | C | O4'-C1'-N1 | 9.42 | 115.74 | 108.20 |
| 26 | BB | 1980 | G | N9-C4-C5 | 9.42 | 109.17 | 105.40 |
| 26 | BB | 2666 | C | N3-C4-C5 | 9.42 | 125.67 | 121.90 |
| 1 | AA | 591 | U | C5-C4-O4 | -9.42 | 120.25 | 125.90 |
| 26 | BB | 100 | U | C2-N3-C4 | -9.42 | 121.35 | 127.00 |
| 26 | BB | 920 | A | N9-C4-C5 | 9.42 | 109.57 | 105.80 |
| 26 | BB | 1893 | C | N3-C4-C5 | -9.42 | 118.13 | 121.90 |
| 26 | BB | 1969 | A | C8-N9-C4 | -9.42 | 102.03 | 105.80 |
| 1 | AA | 84 | U | C4-C5-C6 | 9.41 | 125.35 | 119.70 |
| 1 | AA | 242 | G | N7-C8-N9 | 9.41 | 117.81 | 113.10 |
| 26 | BB | 1094 | U | O4'-C1'-N1 | 9.41 | 115.73 | 108.20 |
| 26 | BB | 1685 | C | O4'-C1'-N1 | 9.41 | 115.73 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2002 | G | C8-N9-C4 | 9.41 | 110.17 | 106.40 |
| 26 | BB | 2822 | G | C6-N1-C2 | -9.41 | 119.45 | 125.10 |
| 1 | AA | 627 | G | O4'-C1'-N9 | 9.41 | 115.73 | 108.20 |
| 1 | AA | 1473 | G | C5-C6-O6 | -9.41 | 122.95 | 128.60 |
| 1 | AA | 1490 | U | O4'-C1'-N1 | 9.41 | 115.73 | 108.20 |
| 7 | AG | 2 | ARG | NE-CZ-NH1 | 9.41 | 125.01 | 120.30 |
| 26 | BB | 1965 | C | C5-C4-N4 | -9.41 | 113.61 | 120.20 |
| 26 | BB | 2667 | C | O4'-C1'-N1 | 9.41 | 115.73 | 108.20 |
| 1 | AA | 4 | U | C5-C6-N1 | 9.41 | 127.41 | 122.70 |
| 1 | AA | 327 | A | N1-C2-N3 | -9.41 | 124.59 | 129.30 |
| 1 | AA | 749 | A | N9-C4-C5 | -9.41 | 102.04 | 105.80 |
| 1 | AA | 916 | U | O4'-C1'-N1 | 9.41 | 115.73 | 108.20 |
| 26 | BB | 1134 | A | C5-N7-C8 | 9.41 | 108.61 | 103.90 |
| 26 | BB | 2297 | A | O4'-C1'-N9 | 9.41 | 115.73 | 108.20 |
| 26 | BB | 2765 | A | C8-N9-C4 | -9.41 | 102.03 | 105.80 |
| 25 | BA | 84 | G | N9-C4-C5 | 9.41 | 109.16 | 105.40 |
| 26 | BB | 190 | A | N1-C6-N6 | -9.41 | 112.95 | 118.60 |
| 26 | BB | 1002 | G | C5-C6-N1 | 9.41 | 116.20 | 111.50 |
| 26 | BB | 1492 | G | C2-N3-C4 | 9.41 | 116.60 | 111.90 |
| 26 | BB | 722 | A | N7-C8-N9 | 9.41 | 118.50 | 113.80 |
| 26 | BB | 1845 | G | O4'-C1'-N9 | 9.41 | 115.73 | 108.20 |
| 1 | AA | 32 | A | C4-C5-N7 | 9.41 | 115.40 | 110.70 |
| 1 | AA | 1149 | C | C6-N1-C2 | -9.41 | 116.54 | 120.30 |
| 1 | AA | 1217 | C | C6-N1-C2 | -9.41 | 116.54 | 120.30 |
| 2 | AB | 36 | A | O4'-C4'-C3' | 9.41 | 113.63 | 106.10 |
| 26 | BB | 956 | G | N1-C6-O6 | -9.41 | 114.26 | 119.90 |
| 26 | BB | 1218 | G | N3-C4-C5 | -9.41 | 123.90 | 128.60 |
| 26 | BB | 2536 | G | C4-C5-N7 | -9.41 | 107.04 | 110.80 |
| 26 | BB | 2711 | A | C8-N9-C4 | -9.41 | 102.04 | 105.80 |
| 1 | AA | 508 | U | C6-N1-C2 | -9.40 | 115.36 | 121.00 |
| 26 | BB | 623 | C | O4'-C1'-N1 | 9.40 | 115.72 | 108.20 |
| 1 | AA | 902 | G | O4'-C1'-N9 | 9.40 | 115.72 | 108.20 |
| 1 | AA | 1174 | G | C5-N7-C8 | 9.40 | 109.00 | 104.30 |
| 26 | BB | 234 | U | N1-C2-O2 | -9.40 | 116.22 | 122.80 |
| 26 | BB | 2056 | G | C2-N3-C4 | 9.40 | 116.60 | 111.90 |
| 26 | BB | 2284 | A | N1-C2-N3 | -9.40 | 124.60 | 129.30 |
| 26 | BB | 6 | A | N1-C2-N3 | -9.40 | 124.60 | 129.30 |
| 26 | BB | 1042 | G | N3-C4-C5 | -9.40 | 123.90 | 128.60 |
| 26 | BB | 1115 | G | N3-C4-N9 | 9.40 | 131.64 | 126.00 |
| 26 | BB | 2327 | A | C5-C6-N1 | 9.40 | 122.40 | 117.70 |
| 3 | AC | 32 | U | O4'-C1'-N1 | 9.40 | 115.72 | 108.20 |
| 26 | BB | 1575 | C | C2-N3-C4 | 9.40 | 124.60 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1217 | C | N1-C2-O2 | 9.40 | 124.54 | 118.90 |
| 1 | AA | 1504 | G | C3'-C2'-C1' | -9.40 | 93.98 | 101.50 |
| 3 | AC | 36 | U | O4'-C1'-N1 | 9.40 | 115.72 | 108.20 |
| 26 | BB | 426 | C | C2-N3-C4 | 9.40 | 124.60 | 119.90 |
| 26 | BB | 705 | A | C8-N9-C4 | -9.40 | 102.04 | 105.80 |
| 26 | BB | 1763 | G | N9-C4-C5 | 9.40 | 109.16 | 105.40 |
| 26 | BB | 2794 | C | N3-C4-C5 | 9.40 | 125.66 | 121.90 |
| 4 | AD | 34 | U | C4-C5-C6 | 9.39 | 125.34 | 119.70 |
| 1 | AA | 104 | G | C4-C5-N7 | -9.39 | 107.04 | 110.80 |
| 1 | AA | 307 | C | N1-C2-O2 | 9.39 | 124.53 | 118.90 |
| 1 | AA | 1488 | G | C5-N7-C8 | 9.39 | 109.00 | 104.30 |
| 2 | AB | 26 | A | C5'-C4'-O4' | 9.39 | 120.37 | 109.10 |
| 26 | BB | 110 | G | C8-N9-C4 | -9.39 | 102.64 | 106.40 |
| 26 | BB | 890 | C | O4'-C1'-N1 | 9.39 | 115.71 | 108.20 |
| 26 | BB | 1567 | G | O4'-C1'-C2' | -9.39 | 96.41 | 105.80 |
| 26 | BB | 406 | G | C5-N7-C8 | 9.39 | 109.00 | 104.30 |
| 26 | BB | 126 | A | C6-N1-C2 | 9.39 | 124.23 | 118.60 |
| 26 | BB | 836 | G | O4'-C1'-N9 | 9.39 | 115.71 | 108.20 |
| 24 | AX | 33 | ARG | NE-CZ-NH2 | -9.39 | 115.61 | 120.30 |
| 26 | BB | 312 | G | N1-C6-O6 | 9.39 | 125.53 | 119.90 |
| 9 | AI | 78 | PHE | CB-CG-CD2 | -9.38 | 114.23 | 120.80 |
| 1 | AA | 186 | C | O4'-C1'-N1 | 9.38 | 115.71 | 108.20 |
| 26 | BB | 2798 | U | C5-C6-N1 | -9.38 | 118.01 | 122.70 |
| 1 | AA | 730 | G | N7-C8-N9 | 9.38 | 117.79 | 113.10 |
| 26 | BB | 1756 | G | C8-N9-C4 | -9.38 | 102.65 | 106.40 |
| 26 | BB | 1812 | U | N3-C4-O4 | 9.38 | 125.97 | 119.40 |
| 26 | BB | 2367 | G | N3-C4-C5 | -9.38 | 123.91 | 128.60 |
| 26 | BB | 2628 | C | N1-C2-O2 | 9.38 | 124.53 | 118.90 |
| 26 | BB | 2852 | G | N9-C4-C5 | -9.38 | 101.65 | 105.40 |
| 1 | AA | 812 | G | O4'-C4'-C3' | 9.38 | 113.60 | 106.10 |
| 1 | AA | 1223 | C | C6-N1-C2 | -9.38 | 116.55 | 120.30 |
| 2 | AB | 57 | G | C2-N3-C4 | 9.38 | 116.59 | 111.90 |
| 2 | AB | 71 | C | C4-C5-C6 | -9.38 | 112.71 | 117.40 |
| 26 | BB | 2816 | G | C2-N3-C4 | 9.38 | 116.59 | 111.90 |
| 26 | BB | 321 | U | C5-C6-N1 | -9.38 | 118.01 | 122.70 |
| 1 | AA | 1024 | G | C1'-O4'-C4' | -9.38 | 102.40 | 109.90 |
| 1 | AA | 1304 | G | N7-C8-N9 | 9.37 | 117.79 | 113.10 |
| 1 | AA | 1449 | C | N3-C2-O2 | -9.38 | 115.34 | 121.90 |
| 25 | BA | 1 | U | N1-C2-O2 | -9.38 | 116.24 | 122.80 |
| 1 | AA | 1364 | U | O4'-C1'-N1 | 9.37 | 115.70 | 108.20 |
| 1 | AA | 533 | A | C5-C6-N1 | 9.37 | 122.39 | 117.70 |
| 1 | AA | 772 | U | C5-C4-O4 | -9.37 | 120.28 | 125.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 952 | U | O4'-C1'-N1 | 9.37 | 115.69 | 108.20 |
| 26 | BB | 483 | A | C2-N3-C4 | 9.37 | 115.28 | 110.60 |
| 26 | BB | 2152 | G | C5-N7-C8 | -9.37 | 99.61 | 104.30 |
| 26 | BB | 2749 | A | C6-N1-C2 | -9.37 | 112.98 | 118.60 |
| 1 | AA | 695 | A | N1-C2-N3 | -9.37 | 124.62 | 129.30 |
| 1 | AA | 1157 | A | C8-N9-C4 | -9.37 | 102.05 | 105.80 |
| 1 | AA | 1375 | A | N3-C4-C5 | -9.37 | 120.24 | 126.80 |
| 4 | AD | 34 | U | N3-C2-O2 | -9.37 | 115.64 | 122.20 |
| 26 | BB | 55 | G | N9-C4-C5 | 9.37 | 109.15 | 105.40 |
| 26 | BB | 1348 | C | C6-N1-C2 | -9.37 | 116.55 | 120.30 |
| 1 | AA | 481 | G | C8-N9-C4 | -9.36 | 102.66 | 106.40 |
| 1 | AA | 524 | G | N3-C4-C5 | -9.36 | 123.92 | 128.60 |
| 1 | AA | 836 | G | C3'-C2'-C1' | 9.36 | 108.99 | 101.50 |
| 1 | AA | 846 | G | N9-C4-C5 | 9.36 | 109.14 | 105.40 |
| 1 | AA | 892 | A | N1-C2-N3 | -9.36 | 124.62 | 129.30 |
| 1 | AA | 1401 | G | C5-C6-N1 | 9.36 | 116.18 | 111.50 |
| 1 | AA | 1403 | C | N3-C4-C5 | -9.36 | 118.16 | 121.90 |
| 26 | BB | 682 | G | N7-C8-N9 | -9.36 | 108.42 | 113.10 |
| 26 | BB | 1007 | C | O4'-C1'-N1 | 9.36 | 115.69 | 108.20 |
| 26 | BB | 1243 | C | N3-C4-C5 | -9.36 | 118.16 | 121.90 |
| 26 | BB | 1982 | U | C2-N3-C4 | -9.36 | 121.38 | 127.00 |
| 34 | BJ | 45 | ARG | NE-CZ-NH1 | 9.36 | 124.98 | 120.30 |
| 1 | AA | 1369 | C | N3-C4-C5 | -9.36 | 118.16 | 121.90 |
| 26 | BB | 108 | G | C5-C6-O6 | 9.36 | 134.22 | 128.60 |
| 26 | BB | 952 | G | N7-C8-N9 | -9.36 | 108.42 | 113.10 |
| 26 | BB | 2287 | A | C5-N7-C8 | -9.36 | 99.22 | 103.90 |
| 26 | BB | 1191 | G | N1-C6-O6 | -9.36 | 114.28 | 119.90 |
| 1 | AA | 402 | G | C5'-C4'-O4' | 9.36 | 120.33 | 109.10 |
| 1 | AA | 525 | C | C5-C4-N4 | -9.36 | 113.65 | 120.20 |
| 1 | AA | 1290 | G | C1'-O4'-C4' | 9.36 | 117.39 | 109.90 |
| 1 | AA | 1356 | G | N1-C6-O6 | 9.36 | 125.51 | 119.90 |
| 26 | BB | 1796 | U | C5-C6-N1 | -9.36 | 118.02 | 122.70 |
| 26 | BB | 2901 | C | C5-C6-N1 | 9.36 | 125.68 | 121.00 |
| 25 | BA | 21 | G | O4'-C1'-N9 | 9.35 | 115.68 | 108.20 |
| 26 | BB | 1795 | C | O4'-C1'-N1 | 9.35 | 115.68 | 108.20 |
| 37 | BM | 30 | ARG | NE-CZ-NH1 | -9.35 | 115.62 | 120.30 |
| 40 | BP | 96 | ARG | NE-CZ-NH1 | -9.35 | 115.62 | 120.30 |
| 1 | AA | 39 | G | C4'-C3'-C2' | -9.35 | 93.25 | 102.60 |
| 1 | AA | 111 | G | C4-C5-N7 | -9.35 | 107.06 | 110.80 |
| 1 | AA | 450 | G | C6-C5-N7 | -9.35 | 124.79 | 130.40 |
| 25 | BA | 73 | A | C4-C5-N7 | -9.35 | 106.03 | 110.70 |
| 26 | BB | 479 | A | N9-C4-C5 | 9.35 | 109.54 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 829 | A | N7-C8-N9 | 9.35 | 118.48 | 113.80 |
| 26 | BB | 2130 | U | P-O3'-C3' | 9.35 | 130.92 | 119.70 |
| 26 | BB | 2472 | G | N3-C4-C5 | -9.35 | 123.92 | 128.60 |
| 3 | AC | 23 | C | C2-N3-C4 | 9.35 | 124.58 | 119.90 |
| 25 | BA | 97 | C | C1'-O4'-C4' | 9.35 | 117.38 | 109.90 |
| 26 | BB | 53 | A | C4-C5-C6 | -9.35 | 112.33 | 117.00 |
| 26 | BB | 1309 | G | C5-N7-C8 | -9.35 | 99.63 | 104.30 |
| 26 | BB | 2160 | C | N1-C2-O2 | 9.35 | 124.51 | 118.90 |
| 26 | BB | 2179 | C | C4'-C3'-C2' | -9.35 | 93.25 | 102.60 |
| 1 | AA | 784 | A | C8-N9-C4 | -9.35 | 102.06 | 105.80 |
| 1 | AA | 1335 | U | C1'-O4'-C4' | -9.35 | 102.42 | 109.90 |
| 3 | AC | 50 | U | O4'-C1'-N1 | 9.35 | 115.68 | 108.20 |
| 26 | BB | 1210 | G | C8-N9-C4 | -9.35 | 102.66 | 106.40 |
| 1 | AA | 970 | C | N1-C2-O2 | 9.35 | 124.51 | 118.90 |
| 1 | AA | 1008 | U | C5-C6-N1 | -9.35 | 118.03 | 122.70 |
| 26 | BB | 427 | U | C2-N3-C4 | -9.35 | 121.39 | 127.00 |
| 26 | BB | 555 | G | C4-C5-N7 | 9.35 | 114.54 | 110.80 |
| 26 | BB | 1589 | U | N3-C4-O4 | 9.35 | 125.94 | 119.40 |
| 26 | BB | 1668 | A | C8-N9-C4 | -9.35 | 102.06 | 105.80 |
| 26 | BB | 2549 | G | C8-N9-C4 | -9.35 | 102.66 | 106.40 |
| 26 | BB | 2560 | A | C5-N7-C8 | 9.35 | 108.57 | 103.90 |
| 1 | AA | 1319 | A | C8-N9-C4 | -9.34 | 102.06 | 105.80 |
| 25 | BA | 97 | C | N1-C2-O2 | 9.34 | 124.50 | 118.90 |
| 26 | BB | 2867 | G | C4-C5-N7 | -9.34 | 107.06 | 110.80 |
| 1 | AA | 842 | U | C2-N3-C4 | -9.34 | 121.40 | 127.00 |
| 26 | BB | 1654 | A | N1-C6-N6 | -9.34 | 113.00 | 118.60 |
| 40 | BP | 22 | ARG | NE-CZ-NH1 | 9.34 | 124.97 | 120.30 |
| 26 | BB | 1552 | A | N1-C6-N6 | -9.34 | 113.00 | 118.60 |
| 1 | AA | 711 | G | N9-C4-C5 | 9.34 | 109.14 | 105.40 |
| 1 | AA | 1182 | G | C8-N9-C4 | -9.34 | 102.67 | 106.40 |
| 1 | AA | 1337 | G | C3'-C2'-C1' | -9.34 | 94.03 | 101.50 |
| 2 | AB | 67 | G | C5-N7-C8 | 9.34 | 108.97 | 104.30 |
| 25 | BA | 106 | G | N3-C4-N9 | 9.34 | 131.60 | 126.00 |
| 33 | BI | 68 | ARG | NE-CZ-NH2 | -9.34 | 115.63 | 120.30 |
| 26 | BB | 1175 | A | C6-C5-N7 | -9.34 | 125.77 | 132.30 |
| 26 | BB | 1708 | C | O4'-C1'-N1 | 9.34 | 115.67 | 108.20 |
| 4 | AD | 49 | C | C6-N1-C2 | -9.33 | 116.57 | 120.30 |
| 26 | BB | 161 | A | N1-C6-N6 | -9.33 | 113.00 | 118.60 |
| 26 | BB | 852 | U | C4-C5-C6 | 9.33 | 125.30 | 119.70 |
| 26 | BB | 2167 | U | C4-C5-C6 | 9.33 | 125.30 | 119.70 |
| 26 | BB | 2269 | G | O4'-C1'-N9 | 9.33 | 115.67 | 108.20 |
| 26 | BB | 2330 | G | C6-N1-C2 | -9.33 | 119.50 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 240 | G | C6-N1-C2 | -9.33 | 119.50 | 125.10 |
| 1 | AA | 317 | U | C4-C5-C6 | 9.33 | 125.30 | 119.70 |
| 1 | AA | 1011 | C | O4'-C1'-N1 | 9.33 | 115.66 | 108.20 |
| 1 | AA | 1247 | U | O4'-C1'-N1 | 9.33 | 115.67 | 108.20 |
| 26 | BB | 1443 | U | N3-C4-C5 | -9.33 | 109.00 | 114.60 |
| 26 | BB | 2469 | A | N7-C8-N9 | -9.33 | 109.13 | 113.80 |
| 26 | BB | 252 | G | C5-C6-O6 | -9.33 | 123.00 | 128.60 |
| 26 | BB | 744 | U | C5-C4-O4 | -9.33 | 120.30 | 125.90 |
| 26 | BB | 1547 | C | C4'-C3'-C2' | -9.33 | 93.27 | 102.60 |
| 26 | BB | 1068 | G | N1-C6-O6 | 9.33 | 125.50 | 119.90 |
| 26 | BB | 1459 | G | C5-N7-C8 | -9.33 | 99.64 | 104.30 |
| 26 | BB | 1776 | G | C2-N3-C4 | -9.33 | 107.24 | 111.90 |
| 26 | BB | 2698 | U | N3-C2-O2 | -9.33 | 115.67 | 122.20 |
| 28 | BD | 270 | ARG | NE-CZ-NH2 | -9.33 | 115.64 | 120.30 |
| 1 | AA | 880 | C | C6-N1-C2 | -9.32 | 116.57 | 120.30 |
| 26 | BB | 887 | U | O4'-C1'-N1 | 9.32 | 115.66 | 108.20 |
| 1 | AA | 1487 | G | C6-N1-C2 | -9.32 | 119.51 | 125.10 |
| 26 | BB | 1429 | G | N1-C2-N3 | -9.32 | 118.31 | 123.90 |
| 26 | BB | 2114 | A | C2-N3-C4 | 9.32 | 115.26 | 110.60 |
| 26 | BB | 2720 | U | C5'-C4'-O4' | 9.32 | 120.29 | 109.10 |
| 1 | AA | 1341 | U | C5-C6-N1 | -9.32 | 118.04 | 122.70 |
| 1 | AA | 318 | G | O4'-C1'-N9 | 9.32 | 115.66 | 108.20 |
| 1 | AA | 535 | A | N1-C6-N6 | -9.32 | 113.01 | 118.60 |
| 26 | BB | 628 | G | N3-C2-N2 | 9.32 | 126.42 | 119.90 |
| 26 | BB | 768 | G | O4'-C1'-N9 | 9.32 | 115.66 | 108.20 |
| 26 | BB | 464 | U | N3-C2-O2 | -9.32 | 115.68 | 122.20 |
| 26 | BB | 1599 | U | N3-C4-O4 | 9.32 | 125.92 | 119.40 |
| 26 | BB | 1631 | G | C2-N3-C4 | 9.32 | 116.56 | 111.90 |
| 26 | BB | 2632 | A | C5-C6-N1 | 9.32 | 122.36 | 117.70 |
| 1 | AA | 1237 | C | C6-N1-C2 | -9.32 | 116.57 | 120.30 |
| 1 | AA | 186 | C | N3-C4-C5 | -9.31 | 118.17 | 121.90 |
| 1 | AA | 696 | A | C8-N9-C4 | -9.31 | 102.07 | 105.80 |
| 26 | BB | 256 | A | C5-N7-C8 | 9.31 | 108.56 | 103.90 |
| 26 | BB | 452 | G | C2-N3-C4 | 9.31 | 116.56 | 111.90 |
| 26 | BB | 1323 | C | N3-C4-C5 | -9.31 | 118.17 | 121.90 |
| 26 | BB | 1392 | A | C2-N3-C4 | 9.31 | 115.26 | 110.60 |
| 26 | BB | 1948 | G | N3-C4-C5 | -9.31 | 123.94 | 128.60 |
| 26 | BB | 2806 | C | C4'-C3'-C2' | -9.31 | 93.29 | 102.60 |
| 1 | AA | 1217 | C | O4'-C1'-N1 | 9.31 | 115.65 | 108.20 |
| 3 | AC | 23 | C | N3-C4-C5 | -9.31 | 118.18 | 121.90 |
| 26 | BB | 615 | U | P-O3'-C3' | 9.31 | 130.88 | 119.70 |
| 26 | BB | 2816 | G | O4'-C1'-C2' | 9.31 | 115.98 | 107.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 412 | A | C5-N7-C8 | -9.31 | 99.25 | 103.90 |
| 1 | AA | 691 | G | N9-C4-C5 | 9.31 | 109.12 | 105.40 |
| 1 | AA | 743 | A | C4-C5-N7 | -9.31 | 106.05 | 110.70 |
| 1 | AA | 843 | U | C5-C6-N1 | -9.31 | 118.05 | 122.70 |
| 26 | BB | 1106 | G | C5-C6-O6 | -9.31 | 123.02 | 128.60 |
| 26 | BB | 1393 | A | N9-C4-C5 | 9.31 | 109.52 | 105.80 |
| 26 | BB | 2088 | A | N9-C4-C5 | 9.31 | 109.52 | 105.80 |
| 1 | AA | 671 | G | N3-C2-N2 | -9.31 | 113.39 | 119.90 |
| 7 | AG | 96 | ARG | NE-CZ-NH1 | -9.31 | 115.65 | 120.30 |
| 26 | BB | 156 | A | C8-N9-C4 | -9.30 | 102.08 | 105.80 |
| 26 | BB | 548 | G | C4-C5-N7 | -9.30 | 107.08 | 110.80 |
| 26 | BB | 1423 | G | C1'-O4'-C4' | -9.30 | 102.46 | 109.90 |
| 26 | BB | 763 | G | C8-N9-C4 | -9.30 | 102.68 | 106.40 |
| 26 | BB | 1750 | G | P-O3'-C3' | 9.30 | 130.86 | 119.70 |
| 26 | BB | 1857 | G | O4'-C1'-N9 | 9.30 | 115.64 | 108.20 |
| 1 | AA | 888 | G | N1-C2-N3 | 9.30 | 129.48 | 123.90 |
| 4 | AD | 71 | G | C4-C5-C6 | 9.30 | 124.38 | 118.80 |
| 26 | BB | 592 | A | N1-C2-N3 | 9.30 | 133.95 | 129.30 |
| 26 | BB | 834 | G | N3-C4-C5 | -9.30 | 123.95 | 128.60 |
| 26 | BB | 1803 | A | C4-C5-N7 | -9.30 | 106.05 | 110.70 |
| 26 | BB | 1033 | U | N1-C2-N3 | 9.30 | 120.48 | 114.90 |
| 26 | BB | 1733 | G | C4-C5-N7 | -9.30 | 107.08 | 110.80 |
| 26 | BB | 2123 | G | N7-C8-N9 | 9.30 | 117.75 | 113.10 |
| 1 | AA | 346 | G | C8-N9-C4 | -9.30 | 102.68 | 106.40 |
| 1 | AA | 442 | G | N7-C8-N9 | 9.29 | 117.75 | 113.10 |
| 26 | BB | 402 | A | N7-C8-N9 | 9.30 | 118.45 | 113.80 |
| 1 | AA | 1506 | U | O4'-C1'-N1 | 9.29 | 115.64 | 108.20 |
| 26 | BB | 1168 | G | N7-C8-N9 | 9.29 | 117.75 | 113.10 |
| 26 | BB | 1245 | G | N3-C4-C5 | -9.29 | 123.95 | 128.60 |
| 26 | BB | 1305 | C | C5-C6-N1 | 9.29 | 125.65 | 121.00 |
| 1 | AA | 690 | G | N3-C2-N2 | 9.29 | 126.40 | 119.90 |
| 1 | AA | 1057 | G | C4-C5-C6 | 9.29 | 124.38 | 118.80 |
| 1 | AA | 1508 | A | C8-N9-C4 | -9.29 | 102.08 | 105.80 |
| 4 | AD | 10 | G | C6-N1-C2 | -9.29 | 119.53 | 125.10 |
| 26 | BB | 411 | G | C4-C5-N7 | -9.29 | 107.08 | 110.80 |
| 26 | BB | 1949 | G | C2-N3-C4 | 9.29 | 116.55 | 111.90 |
| 26 | BB | 1335 | C | C2-N3-C4 | -9.29 | 115.25 | 119.90 |
| 26 | BB | 1528 | A | N3-C4-C5 | -9.29 | 120.30 | 126.80 |
| 1 | AA | 544 | G | C1'-O4'-C4' | -9.29 | 102.47 | 109.90 |
| 1 | AA | 1169 | A | N3-C4-N9 | 9.29 | 134.83 | 127.40 |
| 26 | BB | 861 | A | N1-C2-N3 | -9.29 | 124.66 | 129.30 |
| 26 | BB | 1045 | C | O4'-C1'-N1 | 9.29 | 115.63 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1525 | G | N3-C4-C5 | -9.29 | 123.96 | 128.60 |
| 26 | BB | 763 | G | N9-C4-C5 | 9.29 | 109.11 | 105.40 |
| 26 | BB | 1771 | C | C2-N3-C4 | -9.29 | 115.26 | 119.90 |
| 26 | BB | 2869 | G | N7-C8-N9 | 9.29 | 117.74 | 113.10 |
| 1 | AA | 1334 | G | C6-N1-C2 | -9.28 | 119.53 | 125.10 |
| 26 | BB | 420 | C | N3-C2-O2 | -9.29 | 115.40 | 121.90 |
| 26 | BB | 2022 | U | O4'-C1'-C2' | -9.29 | 96.52 | 105.80 |
| 26 | BB | 2376 | A | N1-C2-N3 | -9.29 | 124.66 | 129.30 |
| 1 | AA | 953 | G | N3-C2-N2 | -9.28 | 113.40 | 119.90 |
| 26 | BB | 565 | C | C5-C6-N1 | 9.28 | 125.64 | 121.00 |
| 26 | BB | 852 | U | C5-C6-N1 | -9.28 | 118.06 | 122.70 |
| 26 | BB | 1410 | G | C5-C6-O6 | -9.28 | 123.03 | 128.60 |
| 26 | BB | 1581 | G | N9-C4-C5 | 9.28 | 109.11 | 105.40 |
| 1 | AA | 1 | A | C5-C6-N1 | -9.28 | 113.06 | 117.70 |
| 1 | AA | 690 | G | N1-C2-N2 | -9.28 | 107.85 | 116.20 |
| 26 | BB | 2663 | G | N3-C4-C5 | -9.28 | 123.96 | 128.60 |
| 1 | AA | 1469 | C | O4'-C1'-N1 | 9.28 | 115.62 | 108.20 |
| 1 | AA | 575 | G | O4'-C1'-N9 | 9.28 | 115.62 | 108.20 |
| 26 | BB | 785 | G | C2-N3-C4 | 9.28 | 116.54 | 111.90 |
| 26 | BB | 1495 | A | C3'-C2'-C1' | -9.28 | 94.08 | 101.50 |
| 26 | BB | 835 | C | C5-C6-N1 | -9.28 | 116.36 | 121.00 |
| 26 | BB | 1743 | G | C8-N9-C4 | -9.28 | 102.69 | 106.40 |
| 26 | BB | 2550 | G | C4-C5-N7 | -9.27 | 107.09 | 110.80 |
| 1 | AA | 872 | A | O4'-C1'-N9 | 9.27 | 115.62 | 108.20 |
| 1 | AA | 1142 | G | C4-C5-C6 | -9.27 | 113.24 | 118.80 |
| 2 | AB | 2 | G | O4'-C1'-N9 | 9.27 | 115.62 | 108.20 |
| 26 | BB | 1361 | G | C2-N3-C4 | 9.27 | 116.53 | 111.90 |
| 26 | BB | 2880 | C | C5-C4-N4 | -9.27 | 113.71 | 120.20 |
| 1 | AA | 655 | A | C8-N9-C4 | -9.27 | 102.09 | 105.80 |
| 1 | AA | 1044 | A | C5-C6-N1 | 9.27 | 122.33 | 117.70 |
| 1 | AA | 1181 | G | O4'-C1'-N9 | 9.27 | 115.61 | 108.20 |
| 26 | BB | 487 | C | O4'-C1'-N1 | 9.27 | 115.61 | 108.20 |
| 26 | BB | 1816 | C | N3-C2-O2 | -9.27 | 115.41 | 121.90 |
| 1 | AA | 222 | C | N1-C2-N3 | 9.27 | 125.69 | 119.20 |
| 1 | AA | 306 | A | C4-C5-C6 | -9.27 | 112.37 | 117.00 |
| 1 | AA | 1329 | A | C8-N9-C4 | -9.27 | 102.09 | 105.80 |
| 26 | BB | 185 | G | C5-C6-O6 | -9.27 | 123.04 | 128.60 |
| 26 | BB | 1002 | G | C2-N3-C4 | 9.27 | 116.53 | 111.90 |
| 26 | BB | 1203 | U | O4'-C1'-N1 | 9.27 | 115.61 | 108.20 |
| 26 | BB | 1778 | U | C6-N1-C2 | 9.27 | 126.56 | 121.00 |
| 1 | AA | 445 | G | C5-C6-O6 | -9.26 | 123.04 | 128.60 |
| 1 | AA | 1154 | G | C5-C6-O6 | -9.26 | 123.04 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1156 | G | O4'-C1'-N9 | 9.26 | 115.61 | 108.20 |
| 26 | BB | 976 | G | C2-N3-C4 | -9.26 | 107.27 | 111.90 |
| 1 | AA | 1399 | C | C4-C5-C6 | 9.26 | 122.03 | 117.40 |
| 8 | AH | 127 | TYR | CB-CG-CD1 | -9.26 | 115.44 | 121.00 |
| 26 | BB | 453 | A | N9-C4-C5 | 9.26 | 109.50 | 105.80 |
| 26 | BB | 1519 | G | N1-C2-N3 | 9.26 | 129.46 | 123.90 |
| 26 | BB | 1623 | G | C8-N9-C4 | -9.26 | 102.69 | 106.40 |
| 1 | AA | 739 | C | O4'-C1'-N1 | 9.26 | 115.61 | 108.20 |
| 25 | BA | 2 | G | N9-C4-C5 | 9.26 | 109.10 | 105.40 |
| 26 | BB | 685 | A | N9-C4-C5 | 9.26 | 109.50 | 105.80 |
| 26 | BB | 1527 | G | C8-N9-C4 | -9.26 | 102.70 | 106.40 |
| 26 | BB | 1025 | G | C4-C5-N7 | -9.26 | 107.10 | 110.80 |
| 26 | BB | 2121 | G | C5-C6-O6 | 9.26 | 134.16 | 128.60 |
| 26 | BB | 2454 | G | C5'-C4'-O4' | 9.26 | 120.21 | 109.10 |
| 1 | AA | 737 | C | N1-C2-O2 | 9.26 | 124.45 | 118.90 |
| 1 | AA | 910 | C | N3-C4-C5 | -9.26 | 118.20 | 121.90 |
| 25 | BA | 37 | C | C5-C4-N4 | 9.26 | 126.68 | 120.20 |
| 26 | BB | 777 | G | O4'-C1'-N9 | 9.26 | 115.61 | 108.20 |
| 26 | BB | 2693 | G | C5-C6-N1 | 9.26 | 116.13 | 111.50 |
| 26 | BB | 987 | C | C4-C5-C6 | -9.26 | 112.77 | 117.40 |
| 1 | AA | 602 | A | C5-C6-N1 | 9.25 | 122.33 | 117.70 |
| 26 | BB | 840 | C | C6-N1-C2 | -9.25 | 116.60 | 120.30 |
| 26 | BB | 2132 | U | N3-C4-O4 | 9.25 | 125.88 | 119.40 |
| 1 | AA | 1184 | G | O4'-C1'-N9 | 9.25 | 115.60 | 108.20 |
| 25 | BA | 42 | C | N1-C2-N3 | -9.25 | 112.72 | 119.20 |
| 26 | BB | 80 | G | O4'-C1'-N9 | 9.25 | 115.60 | 108.20 |
| 1 | AA | 530 | G | N3-C4-C5 | -9.25 | 123.97 | 128.60 |
| 1 | AA | 1013 | G | C4-C5-N7 | -9.25 | 107.10 | 110.80 |
| 1 | AA | 1248 | A | C2-N3-C4 | 9.25 | 115.22 | 110.60 |
| 1 | AA | 1371 | G | C8-N9-C4 | -9.25 | 102.70 | 106.40 |
| 26 | BB | 404 | A | C6-C5-N7 | -9.25 | 125.83 | 132.30 |
| 26 | BB | 445 | C | N1-C1'-C2' | -9.25 | 101.83 | 112.00 |
| 26 | BB | 775 | G | C5-C6-N1 | 9.25 | 116.13 | 111.50 |
| 26 | BB | 1074 | G | N3-C4-N9 | -9.25 | 120.45 | 126.00 |
| 26 | BB | 1093 | G | N1-C6-O6 | -9.25 | 114.35 | 119.90 |
| 1 | AA | 797 | C | N3-C4-C5 | -9.25 | 118.20 | 121.90 |
| 26 | BB | 1459 | G | C2-N3-C4 | 9.25 | 116.52 | 111.90 |
| 26 | BB | 862 | G | C8-N9-C4 | -9.25 | 102.70 | 106.40 |
| 26 | BB | 1251 | C | C4-C5-C6 | 9.25 | 122.02 | 117.40 |
| 1 | AA | 627 | G | C6-C5-N7 | 9.24 | 135.95 | 130.40 |
| 26 | BB | 1269 | A | C2-N3-C4 | 9.24 | 115.22 | 110.60 |
| 1 | AA | 860 | A | N9-C4-C5 | 9.24 | 109.50 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1232 | U | N1-C1'-C2' | -9.24 | 101.83 | 112.00 |
| 25 | BA | 79 | G | C5-C6-N1 | 9.24 | 116.12 | 111.50 |
| 26 | BB | 2276 | G | C4-C5-N7 | -9.24 | 107.10 | 110.80 |
| 26 | BB | 158 | U | O4'-C1'-N1 | 9.24 | 115.59 | 108.20 |
| 26 | BB | 1308 | A | C5-C6-N1 | 9.24 | 122.32 | 117.70 |
| 26 | BB | 2000 | C | O4'-C1'-N1 | 9.24 | 115.59 | 108.20 |
| 26 | BB | 2134 | A | C8-N9-C4 | 9.24 | 109.50 | 105.80 |
| 31 | BG | 147 | ARG | NE-CZ-NH1 | 9.24 | 124.92 | 120.30 |
| 34 | BJ | 124 | ARG | NE-CZ-NH2 | -9.24 | 115.68 | 120.30 |
| 1 | AA | 13 | U | C4-C5-C6 | 9.24 | 125.24 | 119.70 |
| 1 | AA | 401 | C | N1-C2-N3 | -9.24 | 112.73 | 119.20 |
| 26 | BB | 1389 | G | C5-C6-O6 | 9.24 | 134.14 | 128.60 |
| 26 | BB | 1519 | G | C6-N1-C2 | -9.24 | 119.56 | 125.10 |
| 26 | BB | 1710 | G | N3-C4-C5 | -9.24 | 123.98 | 128.60 |
| 1 | AA | 1 | A | C4'-C3'-C2' | -9.24 | 93.36 | 102.60 |
| 1 | AA | 1042 | A | N1-C2-N3 | -9.24 | 124.68 | 129.30 |
| 13 | AM | 89 | ARG | NE-CZ-NH1 | 9.24 | 124.92 | 120.30 |
| 26 | BB | 260 | G | C1'-O4'-C4' | -9.24 | 102.51 | 109.90 |
| 26 | BB | 1468 | U | N3-C4-C5 | -9.24 | 109.06 | 114.60 |
| 26 | BB | 2409 | G | C2-N3-C4 | 9.24 | 116.52 | 111.90 |
| 26 | BB | 1028 | A | C5-N7-C8 | 9.24 | 108.52 | 103.90 |
| 26 | BB | 76 | C | N3-C2-O2 | -9.23 | 115.44 | 121.90 |
| 26 | BB | 2440 | C | C4-C5-C6 | -9.23 | 112.78 | 117.40 |
| 1 | AA | 503 | C | C6-N1-C2 | -9.23 | 116.61 | 120.30 |
| 26 | BB | 1358 | G | N9-C4-C5 | 9.23 | 109.09 | 105.40 |
| 26 | BB | 2143 | C | P-O3'-C3' | 9.23 | 130.78 | 119.70 |
| 26 | BB | 2500 | U | O4'-C1'-N1 | 9.23 | 115.59 | 108.20 |
| 26 | BB | 33 | C | N3-C4-C5 | 9.23 | 125.59 | 121.90 |
| 1 | AA | 915 | A | O4'-C1'-N9 | 9.23 | 115.58 | 108.20 |
| 3 | AC | 50 | U | C3'-C2'-C1' | 9.23 | 108.88 | 101.50 |
| 26 | BB | 481 | G | N9-C4-C5 | 9.23 | 109.09 | 105.40 |
| 26 | BB | 1521 | G | N3-C4-C5 | -9.23 | 123.98 | 128.60 |
| 43 | BS | 46 | TYR | CB-CG-CD2 | 9.23 | 126.54 | 121.00 |
| 17 | AQ | 8 | ARG | NE-CZ-NH1 | -9.23 | 115.69 | 120.30 |
| 26 | BB | 778 | G | C8-N9-C4 | -9.23 | 102.71 | 106.40 |
| 26 | BB | 1230 | A | C8-N9-C4 | -9.23 | 102.11 | 105.80 |
| 26 | BB | 2227 | A | N7-C8-N9 | -9.23 | 109.19 | 113.80 |
| 26 | BB | 1386 | C | N3-C4-C5 | -9.23 | 118.21 | 121.90 |
| 26 | BB | 1850 | G | N3-C4-C5 | -9.22 | 123.99 | 128.60 |
| 25 | BA | 19 | C | C5-C4-N4 | -9.22 | 113.74 | 120.20 |
| 26 | BB | 1806 | C | O4'-C1'-N1 | 9.22 | 115.58 | 108.20 |
| 26 | BB | 1885 | A | C4-C5-C6 | -9.22 | 112.39 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 486 | U | O4'-C1'-N1 | 9.22 | 115.58 | 108.20 |
| 1 | AA | 714 | G | C4'-C3'-C2' | -9.22 | 93.38 | 102.60 |
| 1 | AA | 1305 | G | N3-C2-N2 | 9.22 | 126.36 | 119.90 |
| 1 | AA | 1369 | C | C6-N1-C2 | -9.22 | 116.61 | 120.30 |
| 1 | AA | 1530 | G | C5-C6-O6 | 9.22 | 134.13 | 128.60 |
| 6 | AF | 22 | PHE | CB-CG-CD1 | 9.22 | 127.25 | 120.80 |
| 26 | BB | 614 | A | C4'-C3'-C2' | -9.22 | 93.38 | 102.60 |
| 26 | BB | 1388 | G | C8-N9-C4 | 9.22 | 110.09 | 106.40 |
| 26 | BB | 907 | G | C4-C5-C6 | 9.22 | 124.33 | 118.80 |
| 26 | BB | 920 | A | N1-C6-N6 | -9.22 | 113.07 | 118.60 |
| 26 | BB | 1385 | A | O4'-C1'-N9 | 9.22 | 115.58 | 108.20 |
| 1 | AA | 1205 | U | C2-N3-C4 | -9.22 | 121.47 | 127.00 |
| 26 | BB | 1507 | C | C6-N1-C2 | -9.22 | 116.61 | 120.30 |
| 26 | BB | 2079 | U | C5'-C4'-O4' | 9.22 | 120.16 | 109.10 |
| 1 | AA | 133 | U | O4'-C1'-N1 | 9.22 | 115.57 | 108.20 |
| 1 | AA | 790 | A | N7-C8-N9 | 9.21 | 118.41 | 113.80 |
| 26 | BB | 763 | G | C2-N3-C4 | 9.21 | 116.51 | 111.90 |
| 26 | BB | 825 | A | C2-N3-C4 | 9.21 | 115.21 | 110.60 |
| 26 | BB | 2126 | A | C5-N7-C8 | 9.21 | 108.51 | 103.90 |
| 1 | AA | 952 | U | N1-C1'-C2' | -9.21 | 101.87 | 112.00 |
| 4 | AD | 4 | G | C8-N9-C4 | -9.21 | 102.72 | 106.40 |
| 1 | AA | 1198 | G | C5-C6-N1 | 9.21 | 116.11 | 111.50 |
| 1 | AA | 1238 | A | O4'-C4'-C3' | 9.21 | 113.47 | 106.10 |
| 26 | BB | 1928 | A | N1-C6-N6 | -9.21 | 113.07 | 118.60 |
| 26 | BB | 1933 | G | C5-N7-C8 | -9.21 | 99.69 | 104.30 |
| 1 | AA | 1412 | C | C5-C6-N1 | -9.21 | 116.39 | 121.00 |
| 26 | BB | 327 | G | N9-C1'-C2' | -9.21 | 101.87 | 112.00 |
| 26 | BB | 1283 | G | C8-N9-C4 | -9.21 | 102.72 | 106.40 |
| 26 | BB | 2598 | A | C2-N3-C4 | 9.21 | 115.21 | 110.60 |
| 26 | BB | 2109 | U | N1-C2-N3 | 9.21 | 120.42 | 114.90 |
| 26 | BB | 2286 | G | N3-C2-N2 | -9.21 | 113.45 | 119.90 |
| 26 | BB | 2578 | G | N9-C1'-C2' | -9.21 | 101.87 | 112.00 |
| 1 | AA | 325 | A | C4-C5-N7 | 9.21 | 115.30 | 110.70 |
| 1 | AA | 951 | G | N3-C4-C5 | -9.21 | 124.00 | 128.60 |
| 1 | AA | 1201 | A | N1-C2-N3 | 9.21 | 133.90 | 129.30 |
| 26 | BB | 123 | G | C6-C5-N7 | 9.21 | 135.92 | 130.40 |
| 26 | BB | 321 | U | N1-C2-N3 | 9.21 | 120.42 | 114.90 |
| 26 | BB | 1384 | A | C4-C5-C6 | 9.21 | 121.60 | 117.00 |
| 26 | BB | 1617 | C | C2-N3-C4 | 9.21 | 124.50 | 119.90 |
| 1 | AA | 520 | A | O4'-C1'-N9 | 9.20 | 115.56 | 108.20 |
| 1 | AA | 1370 | G | C5-N7-C8 | -9.20 | 99.70 | 104.30 |
| 26 | BB | 2824 | C | C4-C5-C6 | -9.20 | 112.80 | 117.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1192 | G | C5-N7-C8 | -9.20 | 99.70 | 104.30 |
| 26 | BB | 1649 | G | N3-C4-C5 | 9.20 | 133.20 | 128.60 |
| 26 | BB | 2357 | G | N1-C2-N3 | -9.20 | 118.38 | 123.90 |
| 1 | AA | 1000 | A | C8-N9-C4 | -9.20 | 102.12 | 105.80 |
| 26 | BB | 694 | U | N3-C2-O2 | -9.20 | 115.76 | 122.20 |
| 26 | BB | 756 | A | C6-N1-C2 | -9.20 | 113.08 | 118.60 |
| 26 | BB | 1466 | U | C4-C5-C6 | 9.20 | 125.22 | 119.70 |
| 26 | BB | 2701 | U | N3-C2-O2 | -9.20 | 115.76 | 122.20 |
| 1 | AA | 607 | A | C4-C5-N7 | 9.20 | 115.30 | 110.70 |
| 3 | AC | 34 | U | N1-C2-O2 | 9.20 | 129.24 | 122.80 |
| 1 | AA | 570 | G | C5-N7-C8 | -9.20 | 99.70 | 104.30 |
| 26 | BB | 371 | A | O4'-C1'-N9 | -9.20 | 100.84 | 108.20 |
| 26 | BB | 1332 | G | C8-N9-C4 | -9.20 | 102.72 | 106.40 |
| 26 | BB | 1722 | A | N1-C6-N6 | 9.20 | 124.12 | 118.60 |
| 26 | BB | 2220 | U | C5-C6-N1 | -9.20 | 118.10 | 122.70 |
| 26 | BB | 1527 | G | C6-C5-N7 | -9.19 | 124.88 | 130.40 |
| 26 | BB | 1728 | C | N3-C2-O2 | -9.19 | 115.46 | 121.90 |
| 1 | AA | 145 | G | O4'-C1'-N9 | 9.19 | 115.55 | 108.20 |
| 1 | AA | 282 | A | C8-N9-C4 | -9.19 | 102.12 | 105.80 |
| 26 | BB | 1428 | C | N1-C2-O2 | 9.19 | 124.42 | 118.90 |
| 26 | BB | 2755 | C | O4'-C1'-N1 | 9.19 | 115.55 | 108.20 |
| 1 | AA | 184 | G | C5-C6-N1 | 9.19 | 116.09 | 111.50 |
| 1 | AA | 188 | C | N3-C4-N4 | 9.19 | 124.43 | 118.00 |
| 1 | AA | 1147 | C | O4'-C1'-N1 | 9.19 | 115.55 | 108.20 |
| 1 | AA | 1296 | C | N3-C4-C5 | -9.19 | 118.22 | 121.90 |
| 26 | BB | 986 | C | N1-C2-N3 | -9.19 | 112.77 | 119.20 |
| 1 | AA | 528 | C | C5'-C4'-O4' | 9.19 | 120.12 | 109.10 |
| 1 | AA | 947 | G | O4'-C1'-N9 | 9.19 | 115.55 | 108.20 |
| 1 | AA | 994 | A | C8-N9-C4 | 9.19 | 109.47 | 105.80 |
| 26 | BB | 1359 | A | C1'-O4'-C4' | -9.19 | 102.55 | 109.90 |
| 25 | BA | 88 | C | C4-C5-C6 | -9.19 | 112.81 | 117.40 |
| 26 | BB | 131 | A | N1-C6-N6 | 9.19 | 124.11 | 118.60 |
| 26 | BB | 2317 | A | C4-C5-N7 | -9.19 | 106.11 | 110.70 |
| 26 | BB | 2425 | A | O4'-C1'-N9 | 9.19 | 115.55 | 108.20 |
| 26 | BB | 2841 | C | N3-C4-C5 | -9.19 | 118.23 | 121.90 |
| 26 | BB | 797 | G | N3-C4-N9 | 9.18 | 131.51 | 126.00 |
| 26 | BB | 961 | C | N3-C4-N4 | 9.18 | 124.43 | 118.00 |
| 26 | BB | 2112 | G | C5-C6-O6 | -9.18 | 123.09 | 128.60 |
| 26 | BB | 2087 | G | C4-C5-C6 | 9.18 | 124.31 | 118.80 |
| 1 | AA | 20 | U | N1-C2-N3 | 9.18 | 120.41 | 114.90 |
| 1 | AA | 451 | A | C4-C5-C6 | -9.18 | 112.41 | 117.00 |
| 2 | AB | 29 | G | C6-C5-N7 | -9.18 | 124.89 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 45 | G | C8-N9-C4 | -9.18 | 102.73 | 106.40 |
| 1 | AA | 1062 | U | C4-C5-C6 | 9.18 | 125.21 | 119.70 |
| 3 | AC | 15 | G | C8-N9-C4 | -9.18 | 102.73 | 106.40 |
| 26 | BB | 22 | C | C5-C4-N4 | -9.18 | 113.77 | 120.20 |
| 1 | AA | 415 | A | N7-C8-N9 | -9.18 | 109.21 | 113.80 |
| 26 | BB | 16 | C | C5-C4-N4 | 9.18 | 126.62 | 120.20 |
| 26 | BB | 116 | C | N3-C4-N4 | -9.18 | 111.58 | 118.00 |
| 26 | BB | 2284 | A | N1-C6-N6 | 9.18 | 124.11 | 118.60 |
| 26 | BB | 438 | G | C2-N3-C4 | 9.18 | 116.49 | 111.90 |
| 26 | BB | 597 | G | O4'-C1'-N9 | 9.18 | 115.54 | 108.20 |
| 1 | AA | 538 | G | O4'-C1'-N9 | 9.18 | 115.54 | 108.20 |
| 1 | AA | 1302 | C | N3-C4-N4 | 9.18 | 124.42 | 118.00 |
| 26 | BB | 606 | U | C2-N3-C4 | -9.18 | 121.50 | 127.00 |
| 26 | BB | 1643 | G | C5-C6-O6 | -9.18 | 123.09 | 128.60 |
| 26 | BB | 1765 | U | O4'-C1'-N1 | 9.18 | 115.54 | 108.20 |
| 26 | BB | 2422 | C | C3'-C2'-C1' | 9.18 | 108.84 | 101.50 |
| 1 | AA | 545 | C | O4'-C1'-N1 | 9.17 | 115.54 | 108.20 |
| 26 | BB | 124 | G | N1-C2-N3 | 9.17 | 129.41 | 123.90 |
| 1 | AA | 433 | G | C5-C6-O6 | -9.17 | 123.10 | 128.60 |
| 26 | BB | 327 | G | O4'-C1'-N9 | 9.17 | 115.54 | 108.20 |
| 26 | BB | 533 | G | N7-C8-N9 | -9.17 | 108.51 | 113.10 |
| 26 | BB | 2320 | U | C4-C5-C6 | 9.17 | 125.20 | 119.70 |
| 26 | BB | 2668 | G | C4-C5-N7 | 9.17 | 114.47 | 110.80 |
| 1 | AA | 317 | U | O4'-C1'-N1 | 9.17 | 115.54 | 108.20 |
| 1 | AA | 288 | A | C5'-C4'-O4' | 9.17 | 120.10 | 109.10 |
| 3 | AC | 55 | A | O4'-C1'-N9 | 9.17 | 115.53 | 108.20 |
| 5 | AE | 107 | ARG | NE-CZ-NH1 | 9.17 | 124.88 | 120.30 |
| 26 | BB | 1001 | A | C5-N7-C8 | -9.17 | 99.32 | 103.90 |
| 26 | BB | 1005 | C | N1-C2-O2 | 9.17 | 124.40 | 118.90 |
| 26 | BB | 2526 | G | C6-C5-N7 | -9.17 | 124.90 | 130.40 |
| 1 | AA | 50 | A | C2-N3-C4 | 9.17 | 115.18 | 110.60 |
| 26 | BB | 1239 | G | C8-N9-C4 | -9.17 | 102.73 | 106.40 |
| 26 | BB | 2368 | C | O4'-C1'-N1 | 9.17 | 115.53 | 108.20 |
| 26 | BB | 1595 | C | C6-N1-C2 | -9.17 | 116.63 | 120.30 |
| 26 | BB | 1923 | U | N1-C2-O2 | 9.17 | 129.22 | 122.80 |
| 26 | BB | 2328 | A | N1-C2-N3 | 9.17 | 133.88 | 129.30 |
| 26 | BB | 2685 | G | C5-N7-C8 | -9.17 | 99.72 | 104.30 |
| 1 | AA | 793 | U | N3-C4-O4 | 9.16 | 125.81 | 119.40 |
| 26 | BB | 2711 | A | N1-C6-N6 | 9.16 | 124.10 | 118.60 |
| 26 | BB | 515 | A | N1-C6-N6 | 9.16 | 124.10 | 118.60 |
| 26 | BB | 670 | A | O4'-C4'-C3' | 9.16 | 113.43 | 106.10 |
| 26 | BB | 1359 | A | O4'-C1'-N9 | 9.16 | 115.53 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 889 | C | C6-N1-C2 | -9.16 | 116.64 | 120.30 |
| 26 | BB | 1080 | A | C4-C5-C6 | -9.16 | 112.42 | 117.00 |
| 26 | BB | 2267 | A | N1-C2-N3 | -9.16 | 124.72 | 129.30 |
| 26 | BB | 2804 | U | C4'-C3'-C2' | -9.16 | 93.44 | 102.60 |
| 1 | AA | 607 | A | C5-N7-C8 | -9.16 | 99.32 | 103.90 |
| 1 | AA | 1258 | G | C2-N3-C4 | 9.16 | 116.48 | 111.90 |
| 26 | BB | 454 | A | C5-N7-C8 | 9.16 | 108.48 | 103.90 |
| 26 | BB | 1324 | G | O4'-C1'-N9 | 9.16 | 115.53 | 108.20 |
| 1 | AA | 601 | G | C8-N9-C4 | 9.16 | 110.06 | 106.40 |
| 26 | BB | 172 | A | C5-N7-C8 | -9.16 | 99.32 | 103.90 |
| 26 | BB | 2401 | U | C5'-C4'-O4' | 9.16 | 120.09 | 109.10 |
| 26 | BB | 2657 | A | N9-C4-C5 | -9.16 | 102.14 | 105.80 |
| 1 | AA | 164 | G | C5-C6-O6 | -9.16 | 123.11 | 128.60 |
| 1 | AA | 457 | G | N3-C4-N9 | 9.16 | 131.49 | 126.00 |
| 26 | BB | 1799 | G | N1-C6-O6 | -9.16 | 114.41 | 119.90 |
| 26 | BB | 1891 | G | C3'-C2'-C1' | -9.16 | 94.17 | 101.50 |
| 26 | BB | 244 | A | C4-C5-C6 | -9.16 | 112.42 | 117.00 |
| 26 | BB | 466 | A | N9-C4-C5 | 9.16 | 109.46 | 105.80 |
| 26 | BB | 1837 | C | N3-C4-C5 | 9.16 | 125.56 | 121.90 |
| 26 | BB | 2047 | C | C4-C5-C6 | 9.16 | 121.98 | 117.40 |
| 26 | BB | 2144 | G | N3-C4-C5 | -9.16 | 124.02 | 128.60 |
| 26 | BB | 2311 | A | N7-C8-N9 | -9.16 | 109.22 | 113.80 |
| 26 | BB | 182 | A | C2-N3-C4 | 9.15 | 115.18 | 110.60 |
| 26 | BB | 701 | G | C8-N9-C4 | -9.15 | 102.74 | 106.40 |
| 26 | BB | 1898 | U | O4'-C1'-N1 | 9.15 | 115.52 | 108.20 |
| 1 | AA | 1032 | G | N1-C2-N2 | -9.15 | 107.96 | 116.20 |
| 26 | BB | 232 | G | N1-C6-O6 | -9.15 | 114.41 | 119.90 |
| 26 | BB | 1194 | A | C4-C5-N7 | -9.15 | 106.12 | 110.70 |
| 26 | BB | 1268 | A | N1-C2-N3 | -9.15 | 124.72 | 129.30 |
| 30 | BF | 85 | PHE | CB-CG-CD1 | 9.15 | 127.21 | 120.80 |
| 26 | BB | 2523 | G | N9-C1'-C2' | -9.15 | 101.93 | 112.00 |
| 1 | AA | 579 | A | O4'-C1'-N9 | 9.15 | 115.52 | 108.20 |
| 26 | BB | 493 | G | N3-C4-C5 | -9.15 | 124.02 | 128.60 |
| 26 | BB | 877 | A | C5-C6-N1 | 9.15 | 122.28 | 117.70 |
| 26 | BB | 1166 | G | N3-C2-N2 | 9.15 | 126.31 | 119.90 |
| 26 | BB | 2006 | C | C4-C5-C6 | -9.15 | 112.82 | 117.40 |
| 26 | BB | 2756 | U | P-O3'-C3' | 9.15 | 130.68 | 119.70 |
| 1 | AA | 472 | U | O4'-C1'-N1 | 9.15 | 115.52 | 108.20 |
| 26 | BB | 944 | C | N3-C2-O2 | -9.15 | 115.50 | 121.90 |
| 1 | AA | 745 | G | N3-C4-N9 | 9.15 | 131.49 | 126.00 |
| 1 | AA | 1142 | G | C5-N7-C8 | -9.15 | 99.73 | 104.30 |
| 1 | AA | 1339 | A | P-O3'-C3' | 9.15 | 130.68 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1424 | U | N1-C2-O2 | -9.15 | 116.40 | 122.80 |
| 26 | BB | 137 | U | C5-C4-O4 | -9.15 | 120.41 | 125.90 |
| 26 | BB | 680 | C | N1-C2-O2 | 9.15 | 124.39 | 118.90 |
| 1 | AA | 410 | G | N1-C6-O6 | -9.14 | 114.41 | 119.90 |
| 26 | BB | 1228 | G | N3-C4-C5 | -9.14 | 124.03 | 128.60 |
| 1 | AA | 318 | G | N3-C4-C5 | -9.14 | 124.03 | 128.60 |
| 26 | BB | 1269 | A | C8-N9-C4 | -9.14 | 102.14 | 105.80 |
| 1 | AA | 421 | U | C6-N1-C2 | -9.14 | 115.52 | 121.00 |
| 1 | AA | 1372 | U | C2-N3-C4 | -9.14 | 121.52 | 127.00 |
| 4 | AD | 19 | G | C3'-C2'-C1' | 9.14 | 108.81 | 101.50 |
| 4 | AD | 53 | G | C2-N3-C4 | 9.14 | 116.47 | 111.90 |
| 25 | BA | 12 | C | N3-C4-N4 | -9.14 | 111.60 | 118.00 |
| 26 | BB | 2751 | G | N3-C4-N9 | -9.14 | 120.52 | 126.00 |
| 31 | BG | 147 | ARG | NE-CZ-NH2 | -9.14 | 115.73 | 120.30 |
| 1 | AA | 980 | C | C5-C6-N1 | 9.14 | 125.57 | 121.00 |
| 1 | AA | 1274 | A | C8-N9-C4 | -9.14 | 102.14 | 105.80 |
| 26 | BB | 1589 | U | C5-C4-O4 | -9.14 | 120.42 | 125.90 |
| 26 | BB | 1761 | C | C5-C4-N4 | -9.14 | 113.80 | 120.20 |
| 26 | BB | 2235 | G | N9-C4-C5 | 9.14 | 109.06 | 105.40 |
| 26 | BB | 2527 | C | C2-N3-C4 | -9.14 | 115.33 | 119.90 |
| 1 | AA | 860 | A | C2-N3-C4 | -9.13 | 106.03 | 110.60 |
| 26 | BB | 1145 | C | N1-C2-O2 | 9.13 | 124.38 | 118.90 |
| 26 | BB | 1980 | G | C4-C5-N7 | -9.14 | 107.15 | 110.80 |
| 45 | BU | 84 | ARG | NE-CZ-NH2 | 9.13 | 124.87 | 120.30 |
| 26 | BB | 842 | U | N3-C4-O4 | 9.13 | 125.79 | 119.40 |
| 26 | BB | 1328 | A | O4'-C1'-N9 | 9.13 | 115.51 | 108.20 |
| 1 | AA | 1405 | G | C5-C6-N1 | 9.13 | 116.06 | 111.50 |
| 26 | BB | 1283 | G | N1-C6-O6 | 9.13 | 125.38 | 119.90 |
| 26 | BB | 2029 | G | N3-C4-N9 | 9.13 | 131.48 | 126.00 |
| 26 | BB | 358 | U | O4'-C1'-N1 | 9.13 | 115.50 | 108.20 |
| 26 | BB | 1158 | C | C4-C5-C6 | -9.13 | 112.83 | 117.40 |
| 26 | BB | 1188 | U | N3-C4-C5 | -9.13 | 109.12 | 114.60 |
| 1 | AA | 212 | G | N1-C6-O6 | -9.13 | 114.42 | 119.90 |
| 26 | BB | 887 | U | C1'-O4'-C4' | 9.13 | 117.20 | 109.90 |
| 26 | BB | 1213 | A | N1-C6-N6 | -9.13 | 113.12 | 118.60 |
| 26 | BB | 2053 | G | N9-C4-C5 | 9.13 | 109.05 | 105.40 |
| 26 | BB | 2621 | G | C5-N7-C8 | -9.13 | 99.74 | 104.30 |
| 26 | BB | 344 | A | C6-C5-N7 | -9.13 | 125.91 | 132.30 |
| 1 | AA | 167 | A | N1-C2-N3 | -9.12 | 124.74 | 129.30 |
| 1 | AA | 807 | A | C6-N1-C2 | 9.12 | 124.08 | 118.60 |
| 1 | AA | 1130 | A | O4'-C1'-N9 | 9.12 | 115.50 | 108.20 |
| 26 | BB | 849 | A | O4'-C1'-N9 | 9.12 | 115.50 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1509 | A | C2-N3-C4 | 9.12 | 115.16 | 110.60 |
| 26 | BB | 8 | C | C6-N1-C2 | -9.12 | 116.65 | 120.30 |
| 26 | BB | 2427 | C | C6-N1-C2 | -9.12 | 116.65 | 120.30 |
| 26 | BB | 585 | G | C5-C6-O6 | 9.12 | 134.07 | 128.60 |
| 26 | BB | 1815 | A | C5-C6-N1 | 9.12 | 122.26 | 117.70 |
| 1 | AA | 5 | U | C5-C6-N1 | -9.12 | 118.14 | 122.70 |
| 1 | AA | 1232 | U | N1-C2-N3 | 9.12 | 120.37 | 114.90 |
| 1 | AA | 1527 | U | N3-C4-O4 | -9.12 | 113.02 | 119.40 |
| 26 | BB | 569 | U | C4-C5-C6 | 9.12 | 125.17 | 119.70 |
| 26 | BB | 610 | C | N1-C2-O2 | 9.12 | 124.37 | 118.90 |
| 26 | BB | 997 | G | C6-C5-N7 | -9.12 | 124.93 | 130.40 |
| 1 | AA | 825 | A | N9-C4-C5 | 9.12 | 109.45 | 105.80 |
| 1 | AA | 1020 | G | C4'-C3'-C2' | -9.12 | 93.48 | 102.60 |
| 26 | BB | 1530 | G | C2-N3-C4 | 9.12 | 116.46 | 111.90 |
| 1 | AA | 1138 | G | C8-N9-C4 | -9.11 | 102.75 | 106.40 |
| 1 | AA | 1483 | A | C5-C6-N1 | 9.11 | 122.26 | 117.70 |
| 26 | BB | 1853 | A | C5-N7-C8 | 9.11 | 108.46 | 103.90 |
| 1 | AA | 809 | G | C5-C6-N1 | 9.11 | 116.06 | 111.50 |
| 26 | BB | 535 | G | C8-N9-C4 | -9.11 | 102.75 | 106.40 |
| 26 | BB | 1472 | C | C3'-C2'-C1' | 9.11 | 108.79 | 101.50 |
| 26 | BB | 2527 | C | O4'-C1'-N1 | 9.11 | 115.49 | 108.20 |
| 26 | BB | 2546 | U | N1-C2-N3 | 9.11 | 120.37 | 114.90 |
| 26 | BB | 1186 | G | C2-N3-C4 | 9.11 | 116.45 | 111.90 |
| 26 | BB | 2844 | G | N7-C8-N9 | 9.11 | 117.66 | 113.10 |
| 1 | AA | 202 | G | C6-N1-C2 | -9.11 | 119.63 | 125.10 |
| 1 | AA | 1047 | G | C5-N7-C8 | -9.11 | 99.75 | 104.30 |
| 1 | AA | 816 | A | C4'-C3'-C2' | -9.11 | 93.49 | 102.60 |
| 1 | AA | 1088 | G | N3-C2-N2 | -9.11 | 113.52 | 119.90 |
| 1 | AA | 1340 | A | O4'-C1'-N9 | 9.11 | 115.49 | 108.20 |
| 26 | BB | 469 | G | P-O3'-C3' | 9.11 | 130.63 | 119.70 |
| 26 | BB | 785 | G | N3-C4-N9 | 9.11 | 131.47 | 126.00 |
| 26 | BB | 1864 | U | C3'-C2'-C1' | 9.11 | 108.79 | 101.50 |
| 26 | BB | 2669 | G | N9-C4-C5 | 9.11 | 109.04 | 105.40 |
| 26 | BB | 524 | G | C6-N1-C2 | -9.11 | 119.64 | 125.10 |
| 1 | AA | 1057 | G | N3-C4-C5 | -9.11 | 124.05 | 128.60 |
| 25 | BA | 9 | G | C2-N3-C4 | 9.11 | 116.45 | 111.90 |
| 1 | AA | 645 | G | O4'-C1'-N9 | 9.11 | 115.48 | 108.20 |
| 26 | BB | 2668 | G | C6-C5-N7 | -9.11 | 124.94 | 130.40 |
| 1 | AA | 910 | C | C6-N1-C2 | -9.10 | 116.66 | 120.30 |
| 1 | AA | 1351 | U | N1-C2-O2 | -9.10 | 116.43 | 122.80 |
| 4 | AD | 35 | C | C5-C6-N1 | 9.10 | 125.55 | 121.00 |
| 26 | BB | 1608 | A | C3'-C2'-C1' | 9.10 | 108.78 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1943 | U | O4'-C1'-N1 | 9.10 | 115.48 | 108.20 |
| 1 | AA | 49 | U | N3-C2-O2 | -9.10 | 115.83 | 122.20 |
| 1 | AA | 435 | A | C4-C5-C6 | -9.10 | 112.45 | 117.00 |
| 1 | AA | 558 | G | C5-N7-C8 | 9.10 | 108.85 | 104.30 |
| 26 | BB | 2364 | C | C6-N1-C2 | -9.10 | 116.66 | 120.30 |
| 26 | BB | 411 | G | C4-C5-C6 | 9.10 | 124.26 | 118.80 |
| 25 | BA | 74 | U | C4-C5-C6 | 9.10 | 125.16 | 119.70 |
| 1 | AA | 859 | G | C2-N3-C4 | 9.10 | 116.45 | 111.90 |
| 25 | BA | 110 | C | O4'-C1'-N1 | 9.10 | 115.48 | 108.20 |
| 26 | BB | 979 | A | C5-N7-C8 | -9.10 | 99.35 | 103.90 |
| 26 | BB | 1454 | C | C2-N3-C4 | 9.10 | 124.45 | 119.90 |
| 26 | BB | 1743 | G | N3-C2-N2 | 9.10 | 126.27 | 119.90 |
| 1 | AA | 344 | A | C4-C5-N7 | -9.10 | 106.15 | 110.70 |
| 1 | AA | 737 | C | C2-N3-C4 | 9.10 | 124.45 | 119.90 |
| 2 | AB | 73 | G | N3-C4-C5 | -9.10 | 124.05 | 128.60 |
| 25 | BA | 44 | G | N7-C8-N9 | -9.10 | 108.55 | 113.10 |
| 26 | BB | 681 | G | C8-N9-C4 | -9.10 | 102.76 | 106.40 |
| 26 | BB | 1220 | G | N3-C2-N2 | 9.10 | 126.27 | 119.90 |
| 26 | BB | 1575 | C | C5-C4-N4 | -9.10 | 113.83 | 120.20 |
| 26 | BB | 2083 | G | C8-N9-C4 | -9.10 | 102.76 | 106.40 |
| 26 | BB | 2158 | A | C4'-C3'-C2' | 9.10 | 111.70 | 102.60 |
| 26 | BB | 2791 | G | C5'-C4'-O4' | 9.10 | 120.02 | 109.10 |
| 2 | AB | 2 | G | C6-N1-C2 | -9.09 | 119.64 | 125.10 |
| 26 | BB | 269 | C | N3-C4-N4 | 9.09 | 124.36 | 118.00 |
| 26 | BB | 406 | G | C2-N3-C4 | 9.09 | 116.45 | 111.90 |
| 26 | BB | 829 | A | C5'-C4'-O4' | 9.09 | 120.01 | 109.10 |
| 38 | BN | 126 | ARG | NE-CZ-NH2 | -9.09 | 115.75 | 120.30 |
| 26 | BB | 1464 | G | N3-C2-N2 | -9.09 | 113.53 | 119.90 |
| 1 | AA | 1089 | G | C5-N7-C8 | -9.09 | 99.75 | 104.30 |
| 26 | BB | 1382 | G | O4'-C1'-N9 | 9.09 | 115.47 | 108.20 |
| 26 | BB | 2010 | G | C4-C5-N7 | 9.09 | 114.44 | 110.80 |
| 26 | BB | 2718 | G | C2-N3-C4 | 9.09 | 116.45 | 111.90 |
| 31 | BG | 109 | ARG | NE-CZ-NH1 | 9.09 | 124.85 | 120.30 |
| 1 | AA | 799 | G | C4-C5-N7 | -9.09 | 107.17 | 110.80 |
| 26 | BB | 709 | U | N3-C2-O2 | -9.09 | 115.84 | 122.20 |
| 26 | BB | 1001 | A | C4'-C3'-C2' | -9.09 | 93.51 | 102.60 |
| 26 | BB | 2614 | A | C8-N9-C4 | 9.09 | 109.44 | 105.80 |
| 26 | BB | 2823 | A | C4-C5-C6 | 9.09 | 121.54 | 117.00 |
| 1 | AA | 1448 | C | O4'-C4'-C3' | 9.09 | 113.37 | 106.10 |
| 26 | BB | 1918 | A | C5-C6-N1 | -9.09 | 113.16 | 117.70 |
| 26 | BB | 1474 | U | O4'-C1'-N1 | 9.08 | 115.47 | 108.20 |
| 1 | AA | 257 | G | C5'-C4'-O4' | 9.08 | 120.00 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 330 | A | N1-C6-N6 | -9.08 | 113.15 | 118.60 |
| 26 | BB | 911 | A | C5-C6-N1 | 9.08 | 122.24 | 117.70 |
| 26 | BB | 929 | U | N3-C2-O2 | -9.08 | 115.84 | 122.20 |
| 1 | AA | 60 | A | P-O3'-C3' | 9.08 | 130.60 | 119.70 |
| 1 | AA | 952 | U | C5'-C4'-O4' | 9.08 | 120.00 | 109.10 |
| 1 | AA | 1082 | A | N7-C8-N9 | 9.08 | 118.34 | 113.80 |
| 1 | AA | 1278 | G | O4'-C1'-N9 | 9.08 | 115.47 | 108.20 |
| 26 | BB | 1466 | U | C5-C6-N1 | -9.08 | 118.16 | 122.70 |
| 26 | BB | 2227 | A | N1-C2-N3 | -9.08 | 124.76 | 129.30 |
| 5 | AE | 136 | ARG | NE-CZ-NH1 | 9.08 | 124.84 | 120.30 |
| 26 | BB | 4 | U | N3-C2-O2 | -9.08 | 115.84 | 122.20 |
| 26 | BB | 386 | G | O4'-C1'-N9 | 9.08 | 115.46 | 108.20 |
| 1 | AA | 211 | G | C4-C5-N7 | -9.08 | 107.17 | 110.80 |
| 26 | BB | 2051 | A | N1-C2-N3 | -9.08 | 124.76 | 129.30 |
| 1 | AA | 993 | G | O4'-C1'-N9 | 9.08 | 115.46 | 108.20 |
| 1 | AA | 1038 | C | C2-N3-C4 | 9.08 | 124.44 | 119.90 |
| 1 | AA | 1439 | G | C8-N9-C4 | -9.08 | 102.77 | 106.40 |
| 1 | AA | 1450 | U | N3-C2-O2 | -9.08 | 115.85 | 122.20 |
| 26 | BB | 899 | A | C4-C5-C6 | 9.08 | 121.54 | 117.00 |
| 26 | BB | 944 | C | C2-N3-C4 | 9.08 | 124.44 | 119.90 |
| 26 | BB | 1913 | A | C4-C5-N7 | -9.08 | 106.16 | 110.70 |
| 26 | BB | 2321 | U | O4'-C1'-N1 | 9.08 | 115.46 | 108.20 |
| 1 | AA | 626 | G | C8-N9-C4 | -9.07 | 102.77 | 106.40 |
| 1 | AA | 942 | G | C8-N9-C4 | -9.07 | 102.77 | 106.40 |
| 26 | BB | 1408 | G | O4'-C1'-N9 | 9.07 | 115.46 | 108.20 |
| 1 | AA | 1487 | G | C5-C6-N1 | 9.07 | 116.04 | 111.50 |
| 25 | BA | 36 | C | O4'-C1'-N1 | 9.07 | 115.46 | 108.20 |
| 26 | BB | 433 | C | C2-N3-C4 | -9.07 | 115.36 | 119.90 |
| 26 | BB | 675 | A | C8-N9-C4 | -9.07 | 102.17 | 105.80 |
| 26 | BB | 1443 | U | N1-C2-N3 | 9.07 | 120.34 | 114.90 |
| 26 | BB | 2448 | A | C8-N9-C4 | -9.07 | 102.17 | 105.80 |
| 26 | BB | 283 | G | C4-C5-N7 | -9.07 | 107.17 | 110.80 |
| 26 | BB | 1117 | C | N3-C2-O2 | -9.07 | 115.55 | 121.90 |
| 1 | AA | 270 | A | N9-C4-C5 | 9.07 | 109.43 | 105.80 |
| 1 | AA | 781 | A | C5'-C4'-O4' | 9.07 | 119.98 | 109.10 |
| 1 | AA | 1237 | C | O4'-C1'-N1 | 9.07 | 115.45 | 108.20 |
| 26 | BB | 418 | C | N1-C2-O2 | 9.07 | 124.34 | 118.90 |
| 26 | BB | 1089 | A | C6-N1-C2 | -9.07 | 113.16 | 118.60 |
| 26 | BB | 2186 | G | C4-C5-N7 | -9.07 | 107.17 | 110.80 |
| 1 | AA | 531 | U | N3-C2-O2 | -9.07 | 115.85 | 122.20 |
| 1 | AA | 1356 | G | C4-C5-C6 | 9.07 | 124.24 | 118.80 |
| 1 | AA | 717 | U | C4-C5-C6 | 9.06 | 125.14 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 95 | U | C4-C5-C6 | 9.06 | 125.14 | 119.70 |
| 1 | AA | 1316 | G | C4-C5-C6 | 9.06 | 124.24 | 118.80 |
| 2 | AB | 56 | C | C6-N1-C2 | 9.06 | 123.92 | 120.30 |
| 25 | BA | 94 | A | C5-N7-C8 | -9.06 | 99.37 | 103.90 |
| 26 | BB | 1148 | U | O4'-C1'-N1 | 9.06 | 115.45 | 108.20 |
| 26 | BB | 1829 | A | N1-C6-N6 | -9.06 | 113.16 | 118.60 |
| 26 | BB | 2602 | A | C1'-O4'-C4' | -9.06 | 102.65 | 109.90 |
| 2 | AB | 25 | C | N3-C4-N4 | -9.06 | 111.66 | 118.00 |
| 26 | BB | 71 | A | C5'-C4'-O4' | -9.06 | 98.23 | 109.10 |
| 26 | BB | 2010 | G | N9-C4-C5 | -9.06 | 101.78 | 105.40 |
| 26 | BB | 2010 | G | O4'-C1'-N9 | 9.06 | 115.45 | 108.20 |
| 26 | BB | 228 | C | N3-C4-C5 | 9.06 | 125.52 | 121.90 |
| 1 | AA | 415 | A | N1-C2-N3 | -9.06 | 124.77 | 129.30 |
| 1 | AA | 1205 | U | C5-C6-N1 | -9.06 | 118.17 | 122.70 |
| 4 | AD | 49 | C | C1'-O4'-C4' | 9.06 | 117.15 | 109.90 |
| 1 | AA | 1331 | G | C5-C6-N1 | -9.05 | 106.97 | 111.50 |
| 2 | AB | 24 | G | N9-C4-C5 | 9.05 | 109.02 | 105.40 |
| 26 | BB | 692 | C | C6-N1-C2 | -9.06 | 116.68 | 120.30 |
| 1 | AA | 362 | G | C5-N7-C8 | -9.05 | 99.77 | 104.30 |
| 1 | AA | 436 | C | N1-C2-N3 | 9.05 | 125.54 | 119.20 |
| 1 | AA | 1182 | G | C2-N3-C4 | 9.05 | 116.43 | 111.90 |
| 26 | BB | 510 | C | C5'-C4'-O4' | 9.05 | 119.96 | 109.10 |
| 26 | BB | 2100 | G | C5-C6-N1 | 9.05 | 116.03 | 111.50 |
| 26 | BB | 2286 | G | N1-C2-N2 | 9.06 | 124.35 | 116.20 |
| 26 | BB | 2854 | G | C8-N9-C4 | -9.05 | 102.78 | 106.40 |
| 31 | BG | 96 | TRP | CD1-CG-CD2 | -9.05 | 99.06 | 106.30 |
| 1 | AA | 606 | G | C6-C5-N7 | -9.05 | 124.97 | 130.40 |
| 1 | AA | 1005 | A | C8-N9-C4 | -9.05 | 102.18 | 105.80 |
| 26 | BB | 1873 | G | N1-C6-O6 | 9.05 | 125.33 | 119.90 |
| 1 | AA | 1476 | A | O4'-C1'-N9 | 9.05 | 115.44 | 108.20 |
| 4 | AD | 17 | C | C6-N1-C2 | -9.05 | 116.68 | 120.30 |
| 4 | AD | 30 | G | O4'-C1'-N9 | 9.05 | 115.44 | 108.20 |
| 26 | BB | 1153 | C | O4'-C1'-N1 | 9.05 | 115.44 | 108.20 |
| 26 | BB | 869 | G | C5'-C4'-O4' | -9.05 | 98.24 | 109.10 |
| 1 | AA | 1538 | C | N3-C2-O2 | -9.05 | 115.57 | 121.90 |
| 1 | AA | 456 | A | N7-C8-N9 | 9.05 | 118.32 | 113.80 |
| 1 | AA | 809 | G | N1-C6-O6 | -9.05 | 114.47 | 119.90 |
| 1 | AA | 1141 | C | N3-C4-N4 | -9.05 | 111.67 | 118.00 |
| 26 | BB | 943 | A | C6-N1-C2 | 9.05 | 124.03 | 118.60 |
| 26 | BB | 2050 | C | C1'-O4'-C4' | 9.05 | 117.14 | 109.90 |
| 26 | BB | 1341 | G | N9-C1'-C2' | -9.05 | 102.05 | 112.00 |
| 26 | BB | 575 | A | C2-N3-C4 | 9.05 | 115.12 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 812 | C | O4'-C1'-N1 | 9.05 | 115.44 | 108.20 |
| 26 | BB | 1378 | A | C2-N3-C4 | 9.05 | 115.12 | 110.60 |
| 1 | AA | 546 | A | C4-C5-N7 | -9.04 | 106.18 | 110.70 |
| 26 | BB | 1288 | G | N3-C4-C5 | -9.04 | 124.08 | 128.60 |
| 26 | BB | 1546 | G | O4'-C1'-N9 | 9.04 | 115.44 | 108.20 |
| 26 | BB | 1597 | A | C2-N3-C4 | 9.05 | 115.12 | 110.60 |
| 26 | BB | 2268 | A | C4-C5-N7 | -9.05 | 106.18 | 110.70 |
| 1 | AA | 302 | G | C5'-C4'-O4' | 9.04 | 119.95 | 109.10 |
| 1 | AA | 1266 | G | C5-C6-O6 | 9.04 | 134.03 | 128.60 |
| 26 | BB | 843 | G | C8-N9-C4 | -9.04 | 102.78 | 106.40 |
| 26 | BB | 2828 | G | C2-N3-C4 | 9.04 | 116.42 | 111.90 |
| 26 | BB | 1410 | G | C2-N3-C4 | 9.04 | 116.42 | 111.90 |
| 1 | AA | 1530 | G | C4-C5-N7 | -9.04 | 107.18 | 110.80 |
| 25 | BA | 107 | G | C8-N9-C4 | -9.04 | 102.78 | 106.40 |
| 26 | BB | 1134 | A | C4-C5-N7 | -9.04 | 106.18 | 110.70 |
| 26 | BB | 2487 | G | C6-N1-C2 | 9.04 | 130.52 | 125.10 |
| 26 | BB | 2660 | A | N9-C4-C5 | -9.04 | 102.18 | 105.80 |
| 26 | BB | 2881 | U | C4-C5-C6 | 9.04 | 125.12 | 119.70 |
| 1 | AA | 699 | C | O4'-C1'-N1 | 9.04 | 115.43 | 108.20 |
| 26 | BB | 255 | A | N1-C6-N6 | 9.04 | 124.02 | 118.60 |
| 26 | BB | 2454 | G | N9-C4-C5 | -9.04 | 101.78 | 105.40 |
| 53 | B2 | 25 | ARG | NE-CZ-NH1 | 9.04 | 124.82 | 120.30 |
| 1 | AA | 214 | C | C4-C5-C6 | -9.04 | 112.88 | 117.40 |
| 1 | AA | 1401 | G | C5'-C4'-C3' | -9.04 | 101.54 | 116.00 |
| 1 | AA | 994 | A | O4'-C1'-N9 | 9.03 | 115.43 | 108.20 |
| 1 | AA | 1430 | A | N7-C8-N9 | 9.04 | 118.32 | 113.80 |
| 26 | BB | 212 | G | C4'-C3'-C2' | -9.04 | 93.56 | 102.60 |
| 26 | BB | 418 | C | C3'-C2'-C1' | -9.04 | 94.27 | 101.50 |
| 26 | BB | 677 | A | N1-C6-N6 | -9.04 | 113.18 | 118.60 |
| 26 | BB | 1248 | G | C5-C6-O6 | -9.03 | 123.18 | 128.60 |
| 26 | BB | 704 | G | C4-C5-N7 | 9.03 | 114.41 | 110.80 |
| 26 | BB | 1171 | G | N7-C8-N9 | 9.03 | 117.62 | 113.10 |
| 26 | BB | 2474 | U | O4'-C1'-N1 | 9.03 | 115.43 | 108.20 |
| 1 | AA | 833 | G | N3-C4-N9 | 9.03 | 131.42 | 126.00 |
| 26 | BB | 2758 | A | O4'-C1'-N9 | 9.03 | 115.42 | 108.20 |
| 1 | AA | 149 | A | C6-C5-N7 | -9.03 | 125.98 | 132.30 |
| 1 | AA | 1476 | A | N9-C4-C5 | -9.03 | 102.19 | 105.80 |
| 26 | BB | 229 | C | N3-C4-C5 | -9.03 | 118.29 | 121.90 |
| 26 | BB | 1158 | C | C6-N1-C2 | -9.03 | 116.69 | 120.30 |
| 26 | BB | 2384 | U | C4-C5-C6 | 9.03 | 125.12 | 119.70 |
| 1 | AA | 591 | U | N3-C2-O2 | -9.03 | 115.88 | 122.20 |
| 1 | AA | 1175 | G | C6-C5-N7 | -9.03 | 124.98 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 16 | AP | 56 | ARG | NE-CZ-NH2 | -9.03 | 115.79 | 120.30 |
| 26 | BB | 1661 | G | C5'-C4'-O4' | 9.03 | 119.93 | 109.10 |
| 26 | BB | 1667 | G | C8-N9-C4 | -9.03 | 102.79 | 106.40 |
| 26 | BB | 267 | C | C2-N3-C4 | 9.03 | 124.41 | 119.90 |
| 1 | AA | 1087 | G | N1-C6-O6 | -9.02 | 114.49 | 119.90 |
| 26 | BB | 389 | G | C4-C5-N7 | -9.02 | 107.19 | 110.80 |
| 26 | BB | 2265 | U | O4'-C1'-N1 | 9.02 | 115.42 | 108.20 |
| 26 | BB | 1277 | G | C5-N7-C8 | -9.02 | 99.79 | 104.30 |
| 26 | BB | 1399 | C | N3-C2-O2 | -9.02 | 115.58 | 121.90 |
| 26 | BB | 2146 | C | C2-N3-C4 | 9.02 | 124.41 | 119.90 |
| 26 | BB | 2371 | G | C2-N3-C4 | 9.02 | 116.41 | 111.90 |
| 26 | BB | 2622 | U | N3-C2-O2 | -9.02 | 115.89 | 122.20 |
| 1 | AA | 116 | A | C4-C5-N7 | -9.02 | 106.19 | 110.70 |
| 1 | AA | 397 | A | C6-C5-N7 | 9.02 | 138.61 | 132.30 |
| 1 | AA | 1463 | U | N1-C1'-C2' | -9.02 | 102.08 | 112.00 |
| 26 | BB | 110 | G | O4'-C1'-N9 | 9.02 | 115.42 | 108.20 |
| 26 | BB | 273 | G | C6-N1-C2 | -9.02 | 119.69 | 125.10 |
| 26 | BB | 530 | G | N9-C4-C5 | 9.02 | 109.01 | 105.40 |
| 26 | BB | 1140 | C | N3-C4-C5 | -9.02 | 118.29 | 121.90 |
| 26 | BB | 1847 | A | C3'-C2'-C1' | 9.02 | 108.72 | 101.50 |
| 26 | BB | 2275 | C | O4'-C1'-N1 | 9.02 | 115.42 | 108.20 |
| 26 | BB | 2771 | C | N1-C2-O2 | 9.02 | 124.31 | 118.90 |
| 37 | BM | 30 | ARG | NE-CZ-NH2 | 9.02 | 124.81 | 120.30 |
| 1 | AA | 623 | C | N3-C4-N4 | 9.02 | 124.31 | 118.00 |
| 1 | AA | 1030 | U | N3-C2-O2 | -9.02 | 115.89 | 122.20 |
| 25 | BA | 42 | C | N1-C2-O2 | 9.02 | 124.31 | 118.90 |
| 26 | BB | 1653 | G | C4-C5-C6 | 9.02 | 124.21 | 118.80 |
| 1 | AA | 138 | G | C5-C6-O6 | -9.02 | 123.19 | 128.60 |
| 26 | BB | 616 | A | N7-C8-N9 | -9.02 | 109.29 | 113.80 |
| 26 | BB | 791 | C | C6-N1-C2 | 9.02 | 123.91 | 120.30 |
| 26 | BB | 1301 | A | O4'-C1'-N9 | 9.02 | 115.41 | 108.20 |
| 26 | BB | 1916 | A | C2-N3-C4 | 9.02 | 115.11 | 110.60 |
| 26 | BB | 1986 | C | O4'-C1'-N1 | 9.02 | 115.41 | 108.20 |
| 1 | AA | 466 | A | N9-C4-C5 | 9.01 | 109.41 | 105.80 |
| 1 | AA | 1039 | G | C8-N9-C4 | -9.01 | 102.80 | 106.40 |
| 26 | BB | 464 | U | C3'-C2'-C1' | 9.01 | 108.71 | 101.50 |
| 26 | BB | 837 | C | N3-C2-O2 | -9.01 | 115.59 | 121.90 |
| 26 | BB | 308 | G | N1-C6-O6 | -9.01 | 114.49 | 119.90 |
| 26 | BB | 2038 | G | C8-N9-C4 | -9.01 | 102.80 | 106.40 |
| 26 | BB | 2121 | G | C2-N3-C4 | 9.01 | 116.40 | 111.90 |
| 1 | AA | 388 | G | N3-C4-C5 | -9.01 | 124.10 | 128.60 |
| 1 | AA | 712 | A | C4-C5-N7 | -9.01 | 106.20 | 110.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 899 | C | N3-C4-N4 | -9.01 | 111.69 | 118.00 |
| 2 | AB | 31 | U | C5'-C4'-O4' | 9.01 | 119.91 | 109.10 |
| 4 | AD | 17 | C | N1-C2-O2 | 9.01 | 124.31 | 118.90 |
| 26 | BB | 45 | G | O4'-C1'-N9 | 9.01 | 115.41 | 108.20 |
| 26 | BB | 1482 | G | C4'-C3'-C2' | -9.01 | 93.59 | 102.60 |
| 26 | BB | 437 | U | N3-C4-O4 | 9.01 | 125.70 | 119.40 |
| 26 | BB | 897 | C | N3-C4-C5 | -9.01 | 118.30 | 121.90 |
| 26 | BB | 1380 | G | N3-C4-C5 | -9.01 | 124.10 | 128.60 |
| 34 | BJ | 112 | PHE | CB-CG-CD2 | -9.01 | 114.50 | 120.80 |
| 1 | AA | 478 | A | C2-N3-C4 | 9.00 | 115.10 | 110.60 |
| 1 | AA | 524 | G | C6-C5-N7 | -9.00 | 125.00 | 130.40 |
| 1 | AA | 673 | A | N9-C4-C5 | 9.00 | 109.40 | 105.80 |
| 1 | AA | 969 | A | C5-N7-C8 | 9.00 | 108.40 | 103.90 |
| 1 | AA | 1140 | C | C3'-C2'-C1' | 9.00 | 108.70 | 101.50 |
| 1 | AA | 1286 | U | O4'-C1'-N1 | 9.00 | 115.40 | 108.20 |
| 26 | BB | 98 | G | C2-N3-C4 | 9.00 | 116.40 | 111.90 |
| 26 | BB | 767 | U | C5-C4-O4 | -9.00 | 120.50 | 125.90 |
| 26 | BB | 964 | C | C6-N1-C2 | 9.00 | 123.90 | 120.30 |
| 26 | BB | 1329 | U | C5-C4-O4 | -9.00 | 120.50 | 125.90 |
| 26 | BB | 1377 | G | N1-C2-N3 | 9.00 | 129.30 | 123.90 |
| 26 | BB | 1932 | A | N1-C2-N3 | 9.00 | 133.80 | 129.30 |
| 26 | BB | 672 | C | O4'-C1'-N1 | 9.00 | 115.40 | 108.20 |
| 26 | BB | 2696 | U | C5-C4-O4 | -9.00 | 120.50 | 125.90 |
| 1 | AA | 261 | U | O4'-C1'-N1 | 9.00 | 115.40 | 108.20 |
| 26 | BB | 255 | A | N1-C2-N3 | -9.00 | 124.80 | 129.30 |
| 26 | BB | 1694 | C | N3-C2-O2 | -9.00 | 115.60 | 121.90 |
| 26 | BB | 1994 | C | N3-C4-C5 | -9.00 | 118.30 | 121.90 |
| 26 | BB | 2096 | C | O4'-C1'-N1 | 9.00 | 115.40 | 108.20 |
| 1 | AA | 602 | A | C6-N1-C2 | -9.00 | 113.20 | 118.60 |
| 25 | BA | 47 | C | O4'-C1'-N1 | 9.00 | 115.40 | 108.20 |
| 26 | BB | 394 | C | N3-C4-N4 | 9.00 | 124.30 | 118.00 |
| 26 | BB | 558 | U | P-O3'-C3' | 9.00 | 130.50 | 119.70 |
| 26 | BB | 1060 | U | C6-N1-C2 | -9.00 | 115.60 | 121.00 |
| 1 | AA | 147 | G | O4'-C1'-N9 | 8.99 | 115.40 | 108.20 |
| 1 | AA | 495 | A | C1'-O4'-C4' | -8.99 | 102.70 | 109.90 |
| 26 | BB | 1333 | G | C4'-C3'-C2' | -8.99 | 93.61 | 102.60 |
| 26 | BB | 1368 | G | N3-C4-N9 | 8.99 | 131.40 | 126.00 |
| 26 | BB | 105 | C | C2-N3-C4 | 8.99 | 124.40 | 119.90 |
| 26 | BB | 1652 | A | C2-N3-C4 | 8.99 | 115.10 | 110.60 |
| 26 | BB | 1989 | G | N3-C4-C5 | -8.99 | 124.10 | 128.60 |
| 26 | BB | 1099 | G | C5-N7-C8 | -8.99 | 99.80 | 104.30 |
| 26 | BB | 1368 | G | N3-C2-N2 | -8.99 | 113.61 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2303 | G | C5-C6-O6 | -8.99 | 123.20 | 128.60 |
| 26 | BB | 414 | C | N1-C2-O2 | 8.99 | 124.30 | 118.90 |
| 1 | AA | 1144 | G | C5-C6-O6 | -8.99 | 123.21 | 128.60 |
| 26 | BB | 1873 | G | N7-C8-N9 | 8.99 | 117.59 | 113.10 |
| 26 | BB | 2787 | C | N1-C2-O2 | 8.99 | 124.30 | 118.90 |
| 26 | BB | 2020 | A | C5-N7-C8 | 8.99 | 108.39 | 103.90 |
| 1 | AA | 135 | C | O4'-C1'-N1 | 8.99 | 115.39 | 108.20 |
| 1 | AA | 174 | A | C8-N9-C4 | -8.99 | 102.21 | 105.80 |
| 1 | AA | 571 | U | O4'-C1'-N1 | 8.99 | 115.39 | 108.20 |
| 1 | AA | 936 | C | N3-C4-C5 | -8.99 | 118.31 | 121.90 |
| 7 | AG | 153 | ARG | NE-CZ-NH2 | 8.99 | 124.79 | 120.30 |
| 26 | BB | 302 | C | N1-C2-O2 | 8.99 | 124.29 | 118.90 |
| 26 | BB | 442 | G | N3-C4-C5 | -8.99 | 124.11 | 128.60 |
| 26 | BB | 1271 | G | C6-N1-C2 | -8.99 | 119.71 | 125.10 |
| 26 | BB | 2861 | U | C2-N3-C4 | -8.99 | 121.61 | 127.00 |
| 1 | AA | 591 | U | O4'-C1'-N1 | 8.98 | 115.39 | 108.20 |
| 1 | AA | 728 | A | C4-C5-N7 | -8.98 | 106.21 | 110.70 |
| 1 | AA | 1540 | U | N3-C4-O4 | -8.98 | 113.11 | 119.40 |
| 26 | BB | 304 | U | N1-C2-N3 | 8.98 | 120.29 | 114.90 |
| 26 | BB | 553 | G | C4-C5-C6 | 8.98 | 124.19 | 118.80 |
| 26 | BB | 1852 | U | C5-C4-O4 | 8.98 | 131.29 | 125.90 |
| 1 | AA | 656 | G | C8-N9-C4 | -8.98 | 102.81 | 106.40 |
| 1 | AA | 1189 | U | C2-N3-C4 | -8.98 | 121.61 | 127.00 |
| 1 | AA | 1385 | G | N3-C2-N2 | -8.98 | 113.61 | 119.90 |
| 1 | AA | 1455 | G | C4-C5-N7 | -8.98 | 107.21 | 110.80 |
| 26 | BB | 2035 | G | C8-N9-C4 | -8.98 | 102.81 | 106.40 |
| 26 | BB | 2380 | C | P-O3'-C3' | 8.98 | 130.47 | 119.70 |
| 26 | BB | 27 | G | O4'-C1'-N9 | 8.98 | 115.38 | 108.20 |
| 26 | BB | 549 | G | C6-N1-C2 | -8.98 | 119.71 | 125.10 |
| 1 | AA | 20 | U | C6-N1-C2 | -8.98 | 115.61 | 121.00 |
| 1 | AA | 693 | G | N7-C8-N9 | 8.98 | 117.59 | 113.10 |
| 1 | AA | 772 | U | C2-N3-C4 | -8.98 | 121.61 | 127.00 |
| 1 | AA | 1008 | U | N3-C2-O2 | -8.98 | 115.92 | 122.20 |
| 1 | AA | 1513 | A | O4'-C1'-N9 | 8.98 | 115.38 | 108.20 |
| 1 | AA | 1172 | C | C5-C4-N4 | -8.98 | 113.92 | 120.20 |
| 3 | AC | 47 | C | N3-C4-C5 | 8.97 | 125.49 | 121.90 |
| 26 | BB | 1992 | G | N3-C2-N2 | -8.97 | 113.62 | 119.90 |
| 1 | AA | 88 | U | C5-C6-N1 | -8.97 | 118.21 | 122.70 |
| 2 | AB | 25 | C | C4'-C3'-C2' | -8.97 | 93.63 | 102.60 |
| 26 | BB | 713 | G | C5-C6-O6 | -8.97 | 123.22 | 128.60 |
| 26 | BB | 805 | G | N9-C4-C5 | 8.97 | 108.99 | 105.40 |
| 26 | BB | 1942 | C | N1-C2-N3 | -8.97 | 112.92 | 119.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2004 | G | C3'-C2'-C1' | 8.97 | 108.68 | 101.50 |
| 26 | BB | 2022 | U | O4'-C1'-N1 | 8.97 | 115.38 | 108.20 |
| 26 | BB | 2267 | A | C5-C6-N1 | 8.97 | 122.19 | 117.70 |
| 1 | AA | 684 | U | C2-N3-C4 | -8.97 | 121.62 | 127.00 |
| 1 | AA | 202 | G | C5-N7-C8 | -8.97 | 99.81 | 104.30 |
| 1 | AA | 372 | C | C5-C6-N1 | 8.97 | 125.48 | 121.00 |
| 1 | AA | 627 | G | N7-C8-N9 | 8.97 | 117.58 | 113.10 |
| 1 | AA | 1012 | A | C5-C6-N6 | -8.97 | 116.52 | 123.70 |
| 2 | AB | 66 | C | C2-N3-C4 | 8.97 | 124.39 | 119.90 |
| 4 | AD | 3 | C | C6-N1-C2 | -8.97 | 116.71 | 120.30 |
| 26 | BB | 312 | G | C8-N9-C4 | 8.97 | 109.99 | 106.40 |
| 26 | BB | 1650 | A | C8-N9-C4 | -8.97 | 102.21 | 105.80 |
| 1 | AA | 669 | G | C5-C6-O6 | -8.97 | 123.22 | 128.60 |
| 1 | AA | 1302 | C | C2-N3-C4 | 8.97 | 124.39 | 119.90 |
| 1 | AA | 1331 | G | N3-C4-C5 | -8.97 | 124.11 | 128.60 |
| 1 | AA | 965 | U | O4'-C1'-N1 | 8.97 | 115.38 | 108.20 |
| 24 | AX | 61 | ARG | NE-CZ-NH2 | 8.97 | 124.78 | 120.30 |
| 26 | BB | 1959 | G | C1'-O4'-C4' | -8.97 | 102.73 | 109.90 |
| 26 | BB | 2461 | A | N9-C4-C5 | 8.97 | 109.39 | 105.80 |
| 1 | AA | 685 | G | N3-C4-C5 | -8.97 | 124.12 | 128.60 |
| 1 | AA | 811 | C | C5-C6-N1 | 8.96 | 125.48 | 121.00 |
| 25 | BA | 37 | C | C2-N3-C4 | 8.96 | 124.38 | 119.90 |
| 26 | BB | 1450 | G | C4-C5-N7 | -8.96 | 107.21 | 110.80 |
| 26 | BB | 2238 | G | C8-N9-C4 | -8.96 | 102.81 | 106.40 |
| 26 | BB | 2325 | G | C8-N9-C4 | -8.96 | 102.81 | 106.40 |
| 26 | BB | 1828 | G | O4'-C1'-N9 | 8.96 | 115.37 | 108.20 |
| 1 | AA | 974 | A | C4-C5-N7 | -8.96 | 106.22 | 110.70 |
| 1 | AA | 1051 | C | O4'-C1'-N1 | 8.96 | 115.37 | 108.20 |
| 2 | AB | 30 | G | N1-C2-N3 | 8.96 | 129.28 | 123.90 |
| 2 | AB | 45 | U | C2-N3-C4 | -8.96 | 121.62 | 127.00 |
| 26 | BB | 1182 | G | N3-C4-C5 | -8.96 | 124.12 | 128.60 |
| 31 | BG | 121 | PHE | CB-CG-CD2 | -8.96 | 114.53 | 120.80 |
| 1 | AA | 1176 | A | C8-N9-C4 | 8.96 | 109.38 | 105.80 |
| 26 | BB | 1948 | G | C4-C5-N7 | -8.96 | 107.22 | 110.80 |
| 1 | AA | 27 | G | C5-C6-O6 | -8.96 | 123.22 | 128.60 |
| 1 | AA | 649 | A | C5-C6-N1 | 8.96 | 122.18 | 117.70 |
| 1 | AA | 925 | G | O5'-P-OP2 | -8.96 | 97.64 | 105.70 |
| 26 | BB | 1023 | U | C2-N3-C4 | -8.96 | 121.63 | 127.00 |
| 26 | BB | 1922 | G | C8-N9-C4 | -8.96 | 102.82 | 106.40 |
| 1 | AA | 316 | C | N3-C4-N4 | 8.96 | 124.27 | 118.00 |
| 26 | BB | 270 | A | O4'-C1'-N9 | 8.96 | 115.36 | 108.20 |
| 1 | AA | 40 | C | N1-C2-O2 | 8.95 | 124.27 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 401 | A | N1-C6-N6 | 8.96 | 123.97 | 118.60 |
| 26 | BB | 1807 | G | P-O3'-C3' | 8.95 | 130.44 | 119.70 |
| 26 | BB | 1829 | A | N9-C4-C5 | 8.96 | 109.38 | 105.80 |
| 1 | AA | 38 | G | N1-C6-O6 | -8.95 | 114.53 | 119.90 |
| 1 | AA | 70 | U | N3-C2-O2 | -8.95 | 115.93 | 122.20 |
| 1 | AA | 639 | G | C4-C5-N7 | -8.95 | 107.22 | 110.80 |
| 25 | BA | 4 | C | C1'-O4'-C4' | -8.95 | 102.74 | 109.90 |
| 1 | AA | 533 | A | O4'-C1'-N9 | -8.95 | 101.04 | 108.20 |
| 1 | AA | 778 | G | N7-C8-N9 | 8.95 | 117.58 | 113.10 |
| 1 | AA | 1360 | A | N7-C8-N9 | 8.95 | 118.28 | 113.80 |
| 3 | AC | 14 | G | N7-C8-N9 | 8.95 | 117.57 | 113.10 |
| 26 | BB | 802 | A | C5-N7-C8 | -8.95 | 99.42 | 103.90 |
| 26 | BB | 2340 | A | C5-C6-N6 | 8.95 | 130.86 | 123.70 |
| 1 | AA | 319 | G | N3-C4-N9 | 8.95 | 131.37 | 126.00 |
| 6 | AF | 33 | ASP | CB-CG-OD1 | -8.95 | 110.25 | 118.30 |
| 12 | AL | 126 | PHE | CB-CG-CD1 | -8.95 | 114.54 | 120.80 |
| 26 | BB | 1274 | A | C2-N3-C4 | -8.95 | 106.13 | 110.60 |
| 26 | BB | 1817 | G | O4'-C1'-N9 | 8.95 | 115.36 | 108.20 |
| 26 | BB | 1992 | G | N3-C4-C5 | -8.95 | 124.13 | 128.60 |
| 1 | AA | 33 | A | C5-C6-N6 | -8.94 | 116.54 | 123.70 |
| 1 | AA | 1501 | C | C5'-C4'-O4' | 8.94 | 119.83 | 109.10 |
| 25 | BA | 56 | G | N3-C4-C5 | -8.94 | 124.13 | 128.60 |
| 26 | BB | 1322 | A | C2-N3-C4 | 8.95 | 115.07 | 110.60 |
| 26 | BB | 2308 | G | N9-C4-C5 | 8.95 | 108.98 | 105.40 |
| 26 | BB | 2576 | G | N3-C4-C5 | -8.95 | 124.13 | 128.60 |
| 1 | AA | 161 | A | N1-C6-N6 | -8.94 | 113.23 | 118.60 |
| 1 | AA | 775 | G | C8-N9-C4 | -8.94 | 102.82 | 106.40 |
| 26 | BB | 926 | G | C4-C5-N7 | 8.94 | 114.38 | 110.80 |
| 1 | AA | 362 | G | C8-N9-C4 | -8.94 | 102.82 | 106.40 |
| 1 | AA | 817 | C | C5-C6-N1 | 8.94 | 125.47 | 121.00 |
| 26 | BB | 1401 | G | O4'-C1'-N9 | 8.94 | 115.35 | 108.20 |
| 26 | BB | 1409 | U | C2-N3-C4 | -8.94 | 121.63 | 127.00 |
| 1 | AA | 1515 | G | C2-N3-C4 | 8.94 | 116.37 | 111.90 |
| 1 | AA | 970 | C | N3-C2-O2 | -8.94 | 115.64 | 121.90 |
| 26 | BB | 322 | A | C3'-C2'-C1' | 8.94 | 108.65 | 101.50 |
| 26 | BB | 1478 | G | C5-N7-C8 | -8.94 | 99.83 | 104.30 |
| 28 | BD | 83 | ASP | CB-CG-OD1 | -8.94 | 110.26 | 118.30 |
| 1 | AA | 1371 | G | N1-C6-O6 | 8.94 | 125.26 | 119.90 |
| 25 | BA | 19 | C | C2-N3-C4 | -8.94 | 115.43 | 119.90 |
| 26 | BB | 116 | C | N3-C4-C5 | 8.94 | 125.47 | 121.90 |
| 26 | BB | 460 | A | N1-C2-N3 | -8.94 | 124.83 | 129.30 |
| 26 | BB | 553 | G | C4'-C3'-C2' | -8.94 | 93.66 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1656 | C | N3-C4-C5 | 8.94 | 125.47 | 121.90 |
| 26 | BB | 2342 | C | N1-C2-O2 | 8.94 | 124.26 | 118.90 |
| 1 | AA | 82 | G | C8-N9-C4 | -8.93 | 102.83 | 106.40 |
| 26 | BB | 101 | A | C4'-C3'-C2' | -8.93 | 93.67 | 102.60 |
| 26 | BB | 925 | A | C6-N1-C2 | -8.93 | 113.24 | 118.60 |
| 26 | BB | 1986 | C | N3-C4-N4 | 8.93 | 124.25 | 118.00 |
| 26 | BB | 2659 | G | C4-C5-N7 | -8.93 | 107.23 | 110.80 |
| 1 | AA | 1193 | G | N3-C4-C5 | -8.93 | 124.13 | 128.60 |
| 1 | AA | 1315 | U | N3-C2-O2 | -8.93 | 115.95 | 122.20 |
| 15 | AO | 94 | TYR | CB-CG-CD1 | -8.93 | 115.64 | 121.00 |
| 26 | BB | 805 | G | C8-N9-C4 | -8.93 | 102.83 | 106.40 |
| 26 | BB | 1339 | G | C4-C5-N7 | -8.93 | 107.23 | 110.80 |
| 26 | BB | 1511 | G | C5-C6-N1 | 8.93 | 115.97 | 111.50 |
| 26 | BB | 2148 | G | C8-N9-C4 | -8.93 | 102.83 | 106.40 |
| 26 | BB | 2887 | A | C8-N9-C4 | -8.93 | 102.23 | 105.80 |
| 1 | AA | 325 | A | C8-N9-C4 | -8.93 | 102.23 | 105.80 |
| 26 | BB | 612 | G | C4-C5-C6 | 8.93 | 124.16 | 118.80 |
| 26 | BB | 750 | A | C5-N7-C8 | -8.93 | 99.43 | 103.90 |
| 26 | BB | 2019 | A | N9-C1'-C2' | -8.93 | 102.18 | 112.00 |
| 1 | AA | 158 | G | N9-C4-C5 | 8.93 | 108.97 | 105.40 |
| 1 | AA | 301 | G | O4'-C1'-N9 | 8.93 | 115.34 | 108.20 |
| 1 | AA | 476 | U | C2-N3-C4 | -8.93 | 121.64 | 127.00 |
| 1 | AA | 673 | A | C2-N3-C4 | 8.93 | 115.06 | 110.60 |
| 1 | AA | 776 | G | C8-N9-C4 | -8.93 | 102.83 | 106.40 |
| 26 | BB | 1314 | C | N3-C4-C5 | -8.93 | 118.33 | 121.90 |
| 26 | BB | 2413 | G | N3-C4-C5 | -8.93 | 124.14 | 128.60 |
| 26 | BB | 1007 | C | C5-C4-N4 | 8.93 | 126.45 | 120.20 |
| 26 | BB | 2821 | A | O4'-C1'-N9 | 8.93 | 115.34 | 108.20 |
| 1 | AA | 834 | U | O4'-C1'-N1 | 8.93 | 115.34 | 108.20 |
| 26 | BB | 1154 | G | O4'-C1'-N9 | 8.93 | 115.34 | 108.20 |
| 26 | BB | 1862 | G | N3-C2-N2 | 8.93 | 126.15 | 119.90 |
| 26 | BB | 2558 | C | O4'-C1'-N1 | 8.93 | 115.34 | 108.20 |
| 26 | BB | 633 | A | C4-C5-N7 | -8.92 | 106.24 | 110.70 |
| 2 | AB | 27 | C | C2-N3-C4 | 8.92 | 124.36 | 119.90 |
| 3 | AC | 53 | G | N3-C4-N9 | -8.92 | 120.65 | 126.00 |
| 4 | AD | 61 | U | O4'-C1'-C2' | 8.92 | 115.63 | 107.60 |
| 26 | BB | 1511 | G | N3-C4-C5 | -8.92 | 124.14 | 128.60 |
| 25 | BA | 90 | C | C4'-C3'-C2' | -8.92 | 93.68 | 102.60 |
| 26 | BB | 1053 | C | C5'-C4'-O4' | 8.92 | 119.81 | 109.10 |
| 26 | BB | 1728 | C | N3-C4-C5 | -8.92 | 118.33 | 121.90 |
| 1 | AA | 1375 | A | N7-C8-N9 | 8.92 | 118.26 | 113.80 |
| 25 | BA | 52 | A | C5-C6-N1 | 8.92 | 122.16 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 110 | C | N1-C2-O2 | 8.92 | 124.25 | 118.90 |
| 26 | BB | 273 | G | N3-C4-C5 | -8.92 | 124.14 | 128.60 |
| 26 | BB | 1232 | G | C2-N3-C4 | -8.92 | 107.44 | 111.90 |
| 1 | AA | 413 | G | N9-C4-C5 | 8.92 | 108.97 | 105.40 |
| 1 | AA | 699 | C | C6-N1-C2 | 8.92 | 123.87 | 120.30 |
| 4 | AD | 14 | A | N9-C4-C5 | -8.92 | 102.23 | 105.80 |
| 26 | BB | 438 | G | C5-C6-O6 | 8.92 | 133.95 | 128.60 |
| 26 | BB | 1020 | A | N1-C6-N6 | -8.92 | 113.25 | 118.60 |
| 26 | BB | 966 | G | C2-N3-C4 | 8.92 | 116.36 | 111.90 |
| 26 | BB | 1491 | G | C6-N1-C2 | -8.92 | 119.75 | 125.10 |
| 26 | BB | 2444 | G | N7-C8-N9 | 8.92 | 117.56 | 113.10 |
| 1 | AA | 21 | G | C8-N9-C4 | -8.91 | 102.83 | 106.40 |
| 1 | AA | 360 | G | O4'-C1'-N9 | 8.91 | 115.33 | 108.20 |
| 26 | BB | 609 | A | C1'-O4'-C4' | 8.91 | 117.03 | 109.90 |
| 26 | BB | 1722 | A | C5-C6-N1 | -8.91 | 113.24 | 117.70 |
| 1 | AA | 378 | G | N9-C4-C5 | 8.91 | 108.97 | 105.40 |
| 1 | AA | 969 | A | C4-C5-C6 | 8.91 | 121.46 | 117.00 |
| 2 | AB | 2 | G | C5-C6-O6 | -8.91 | 123.25 | 128.60 |
| 26 | BB | 320 | A | C5-N7-C8 | -8.91 | 99.44 | 103.90 |
| 26 | BB | 474 | G | C6-N1-C2 | -8.91 | 119.75 | 125.10 |
| 26 | BB | 2155 | U | O4'-C1'-N1 | 8.91 | 115.33 | 108.20 |
| 26 | BB | 2634 | A | O4'-C1'-N9 | 8.91 | 115.33 | 108.20 |
| 26 | BB | 2679 | A | C8-N9-C4 | -8.91 | 102.23 | 105.80 |
| 44 | BT | 95 | ASP | CB-CG-OD1 | -8.91 | 110.28 | 118.30 |
| 1 | AA | 254 | G | C5-C6-O6 | -8.91 | 123.25 | 128.60 |
| 1 | AA | 1171 | A | N1-C2-N3 | -8.91 | 124.84 | 129.30 |
| 1 | AA | 1346 | A | C1'-O4'-C4' | -8.91 | 102.77 | 109.90 |
| 1 | AA | 413 | G | C5-N7-C8 | -8.91 | 99.84 | 104.30 |
| 26 | BB | 1213 | A | C2-N3-C4 | 8.91 | 115.06 | 110.60 |
| 26 | BB | 2365 | G | C4-C5-N7 | -8.91 | 107.23 | 110.80 |
| 26 | BB | 2459 | A | N1-C2-N3 | -8.91 | 124.84 | 129.30 |
| 26 | BB | 1789 | A | N1-C2-N3 | 8.91 | 133.75 | 129.30 |
| 26 | BB | 2476 | A | N9-C4-C5 | 8.91 | 109.36 | 105.80 |
| 1 | AA | 34 | C | C5-C6-N1 | 8.91 | 125.45 | 121.00 |
| 1 | AA | 442 | G | C5-C6-O6 | -8.91 | 123.26 | 128.60 |
| 1 | AA | 479 | U | C6-N1-C2 | 8.91 | 126.34 | 121.00 |
| 1 | AA | 665 | A | C2-N3-C4 | 8.91 | 115.05 | 110.60 |
| 1 | AA | 778 | G | C2-N3-C4 | 8.91 | 116.35 | 111.90 |
| 1 | AA | 1063 | C | N3-C2-O2 | -8.91 | 115.67 | 121.90 |
| 26 | BB | 584 | C | N3-C2-O2 | -8.91 | 115.67 | 121.90 |
| 26 | BB | 977 | G | N7-C8-N9 | -8.91 | 108.65 | 113.10 |
| 26 | BB | 1408 | G | N3-C4-C5 | -8.91 | 124.15 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2238 | G | C1'-O4'-C4' | -8.91 | 102.78 | 109.90 |
| 26 | BB | 2397 | G | C2-N3-C4 | 8.90 | 116.35 | 111.90 |
| 1 | AA | 1038 | C | N3-C4-C5 | -8.90 | 118.34 | 121.90 |
| 1 | AA | 1184 | G | C4-C5-N7 | 8.90 | 114.36 | 110.80 |
| 5 | AE | 138 | ARG | NE-CZ-NH2 | -8.90 | 115.85 | 120.30 |
| 26 | BB | 20 | C | O4'-C1'-N1 | 8.90 | 115.32 | 108.20 |
| 26 | BB | 491 | G | C2-N3-C4 | 8.90 | 116.35 | 111.90 |
| 26 | BB | 964 | C | C5-C6-N1 | -8.90 | 116.55 | 121.00 |
| 26 | BB | 1631 | G | C5-C6-N1 | 8.90 | 115.95 | 111.50 |
| 1 | AA | 1062 | U | N3-C4-C5 | -8.90 | 109.26 | 114.60 |
| 26 | BB | 455 | C | C2-N3-C4 | 8.90 | 124.35 | 119.90 |
| 2 | AB | 59 | G | C1'-O4'-C4' | -8.90 | 102.78 | 109.90 |
| 26 | BB | 328 | U | O4'-C1'-N1 | 8.90 | 115.32 | 108.20 |
| 26 | BB | 2184 | A | C5-N7-C8 | -8.90 | 99.45 | 103.90 |
| 26 | BB | 1930 | G | C5-C6-N1 | 8.90 | 115.95 | 111.50 |
| 26 | BB | 2175 | C | O4'-C1'-N1 | 8.90 | 115.32 | 108.20 |
| 26 | BB | 2415 | G | C2-N3-C4 | 8.90 | 116.35 | 111.90 |
| 1 | AA | 86 | G | N7-C8-N9 | 8.90 | 117.55 | 113.10 |
| 26 | BB | 2866 | U | C1'-O4'-C4' | -8.90 | 102.78 | 109.90 |
| 1 | AA | 1009 | U | O4'-C1'-N1 | 8.90 | 115.32 | 108.20 |
| 1 | AA | 1192 | C | N3-C4-C5 | -8.90 | 118.34 | 121.90 |
| 1 | AA | 1234 | C | C4'-C3'-C2' | -8.90 | 93.70 | 102.60 |
| 26 | BB | 261 | G | C8-N9-C4 | -8.90 | 102.84 | 106.40 |
| 26 | BB | 321 | U | O4'-C1'-N1 | 8.90 | 115.32 | 108.20 |
| 26 | BB | 1237 | A | C8-N9-C4 | -8.90 | 102.24 | 105.80 |
| 26 | BB | 1799 | G | N3-C2-N2 | -8.90 | 113.67 | 119.90 |
| 1 | AA | 8 | A | N1-C6-N6 | -8.89 | 113.26 | 118.60 |
| 1 | AA | 629 | A | N1-C6-N6 | 8.89 | 123.94 | 118.60 |
| 26 | BB | 611 | C | C6-N1-C2 | 8.89 | 123.86 | 120.30 |
| 26 | BB | 1041 | G | C4-C5-N7 | -8.89 | 107.24 | 110.80 |
| 26 | BB | 1431 | A | C4-C5-N7 | 8.89 | 115.15 | 110.70 |
| 3 | AC | 35 | G | N7-C8-N9 | 8.89 | 117.55 | 113.10 |
| 26 | BB | 1430 | G | N7-C8-N9 | -8.89 | 108.65 | 113.10 |
| 26 | BB | 1865 | U | P-O3'-C3' | 8.89 | 130.37 | 119.70 |
| 26 | BB | 2061 | G | O4'-C1'-N9 | 8.89 | 115.31 | 108.20 |
| 26 | BB | 2196 | C | N3-C4-C5 | 8.89 | 125.46 | 121.90 |
| 26 | BB | 2816 | G | C1'-O4'-C4' | -8.89 | 102.78 | 109.90 |
| 1 | AA | 279 | A | C4-C5-C6 | -8.89 | 112.55 | 117.00 |
| 26 | BB | 433 | C | O4'-C1'-N1 | 8.89 | 115.31 | 108.20 |
| 26 | BB | 1633 | G | C6-C5-N7 | 8.89 | 135.74 | 130.40 |
| 26 | BB | 1667 | G | C5-C6-N1 | -8.89 | 107.05 | 111.50 |
| 26 | BB | 2382 | G | O4'-C4'-C3' | 8.89 | 113.21 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2803 | G | C5-N7-C8 | -8.89 | 99.85 | 104.30 |
| 4 | AD | 7 | G | C3'-C2'-C1' | 8.89 | 108.61 | 101.50 |
| 26 | BB | 212 | G | N1-C2-N3 | -8.89 | 118.57 | 123.90 |
| 26 | BB | 1640 | A | N7-C8-N9 | 8.89 | 118.24 | 113.80 |
| 1 | AA | 450 | G | N1-C6-O6 | 8.89 | 125.23 | 119.90 |
| 26 | BB | 2843 | G | C6-N1-C2 | -8.89 | 119.77 | 125.10 |
| 1 | AA | 388 | G | N3-C4-N9 | 8.88 | 131.33 | 126.00 |
| 3 | AC | 56 | G | N3-C4-C5 | -8.88 | 124.16 | 128.60 |
| 26 | BB | 1099 | G | N7-C8-N9 | 8.89 | 117.54 | 113.10 |
| 26 | BB | 1347 | A | C5-N7-C8 | -8.88 | 99.46 | 103.90 |
| 26 | BB | 1862 | G | C4-C5-C6 | 8.89 | 124.13 | 118.80 |
| 26 | BB | 2217 | G | N9-C4-C5 | 8.88 | 108.95 | 105.40 |
| 26 | BB | 2538 | C | N3-C4-C5 | -8.88 | 118.35 | 121.90 |
| 1 | AA | 56 | U | N1-C2-O2 | 8.88 | 129.02 | 122.80 |
| 1 | AA | 165 | G | O4'-C1'-N9 | 8.88 | 115.31 | 108.20 |
| 1 | AA | 392 | C | N3-C4-N4 | 8.88 | 124.22 | 118.00 |
| 1 | AA | 522 | C | C2-N3-C4 | 8.88 | 124.34 | 119.90 |
| 4 | AD | 20 | G | C6-C5-N7 | -8.88 | 125.07 | 130.40 |
| 26 | BB | 15 | G | N3-C4-C5 | -8.88 | 124.16 | 128.60 |
| 26 | BB | 82 | U | O4'-C1'-N1 | 8.88 | 115.30 | 108.20 |
| 1 | AA | 158 | G | C5-C6-N1 | 8.88 | 115.94 | 111.50 |
| 1 | AA | 971 | G | N3-C4-C5 | -8.88 | 124.16 | 128.60 |
| 26 | BB | 97 | C | N3-C4-C5 | 8.88 | 125.45 | 121.90 |
| 26 | BB | 1096 | A | N7-C8-N9 | 8.88 | 118.24 | 113.80 |
| 26 | BB | 1266 | G | N3-C4-C5 | -8.88 | 124.16 | 128.60 |
| 26 | BB | 2360 | G | O4'-C1'-N9 | 8.88 | 115.30 | 108.20 |
| 26 | BB | 818 | G | N3-C4-C5 | -8.88 | 124.16 | 128.60 |
| 26 | BB | 1473 | G | C8-N9-C4 | -8.88 | 102.85 | 106.40 |
| 26 | BB | 2447 | G | N9-C4-C5 | 8.88 | 108.95 | 105.40 |
| 26 | BB | 2791 | G | O4'-C1'-N9 | 8.88 | 115.30 | 108.20 |
| 26 | BB | 2859 | G | N1-C2-N2 | -8.88 | 108.21 | 116.20 |
| 1 | AA | 1296 | C | C5-C6-N1 | 8.88 | 125.44 | 121.00 |
| 26 | BB | 1370 | C | N3-C4-N4 | 8.88 | 124.21 | 118.00 |
| 43 | BS | 52 | ARG | NE-CZ-NH1 | 8.88 | 124.74 | 120.30 |
| 26 | BB | 287 | G | C4-C5-N7 | -8.87 | 107.25 | 110.80 |
| 26 | BB | 2720 | U | C5'-C4'-C3' | -8.87 | 101.80 | 116.00 |
| 26 | BB | 2732 | G | N3-C4-C5 | -8.88 | 124.16 | 128.60 |
| 1 | AA | 76 | G | C6-C5-N7 | -8.87 | 125.08 | 130.40 |
| 1 | AA | 831 | A | C5-C6-N6 | -8.87 | 116.60 | 123.70 |
| 1 | AA | 978 | A | P-O3'-C3' | 8.87 | 130.35 | 119.70 |
| 26 | BB | 103 | A | C4-C5-N7 | -8.87 | 106.26 | 110.70 |
| 26 | BB | 772 | C | N3-C2-O2 | -8.87 | 115.69 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1175 | A | C4-C5-N7 | 8.87 | 115.14 | 110.70 |
| 26 | BB | 1588 | G | C8-N9-C4 | -8.87 | 102.85 | 106.40 |
| 26 | BB | 1983 | G | P-O3'-C3' | 8.87 | 130.35 | 119.70 |
| 26 | BB | 2068 | U | N1-C2-N3 | 8.87 | 120.22 | 114.90 |
| 26 | BB | 2802 | G | N3-C4-C5 | -8.87 | 124.16 | 128.60 |
| 1 | AA | 202 | G | O4'-C1'-N9 | 8.87 | 115.30 | 108.20 |
| 1 | AA | 364 | A | C4-C5-N7 | 8.87 | 115.14 | 110.70 |
| 26 | BB | 28 | A | N9-C4-C5 | 8.87 | 109.35 | 105.80 |
| 26 | BB | 2241 | A | O4'-C1'-N9 | 8.87 | 115.30 | 108.20 |
| 26 | BB | 2282 | G | P-O3'-C3' | 8.87 | 130.34 | 119.70 |
| 1 | AA | 750 | C | N1-C2-O2 | 8.87 | 124.22 | 118.90 |
| 1 | AA | 436 | C | N3-C2-O2 | -8.87 | 115.69 | 121.90 |
| 1 | AA | 697 | U | N1-C2-N3 | 8.86 | 120.22 | 114.90 |
| 26 | BB | 105 | C | C3'-C2'-C1' | 8.86 | 108.59 | 101.50 |
| 26 | BB | 538 | A | C4'-C3'-C2' | -8.87 | 93.73 | 102.60 |
| 1 | AA | 1374 | A | N9-C1'-C2' | -8.86 | 102.25 | 112.00 |
| 1 | AA | 1436 | U | C2-N3-C4 | -8.86 | 121.68 | 127.00 |
| 26 | BB | 1203 | U | C6-N1-C2 | -8.86 | 115.68 | 121.00 |
| 26 | BB | 2058 | A | O4'-C1'-N9 | 8.86 | 115.29 | 108.20 |
| 26 | BB | 2135 | A | C3'-C2'-C1' | 8.86 | 108.59 | 101.50 |
| 26 | BB | 2384 | U | N3-C4-C5 | -8.86 | 109.28 | 114.60 |
| 3 | AC | 58 | C | C2-N3-C4 | 8.86 | 124.33 | 119.90 |
| 26 | BB | 258 | G | C4-C5-N7 | 8.86 | 114.34 | 110.80 |
| 26 | BB | 1764 | C | O4'-C1'-N1 | 8.86 | 115.29 | 108.20 |
| 1 | AA | 469 | C | O4'-C1'-N1 | 8.86 | 115.28 | 108.20 |
| 1 | AA | 867 | G | N3-C4-C5 | -8.86 | 124.17 | 128.60 |
| 2 | AB | 58 | A | C5'-C4'-O4' | 8.86 | 119.73 | 109.10 |
| 26 | BB | 39 | G | C5-C6-O6 | -8.86 | 123.29 | 128.60 |
| 26 | BB | 143 | C | C6-N1-C2 | -8.86 | 116.76 | 120.30 |
| 1 | AA | 1010 | U | O4'-C1'-N1 | 8.86 | 115.28 | 108.20 |
| 1 | AA | 1179 | A | C3'-C2'-C1' | -8.86 | 94.42 | 101.50 |
| 26 | BB | 326 | G | N3-C2-N2 | -8.86 | 113.70 | 119.90 |
| 26 | BB | 2131 | U | C5-C4-O4 | -8.86 | 120.59 | 125.90 |
| 26 | BB | 2333 | A | C2-N3-C4 | 8.86 | 115.03 | 110.60 |
| 26 | BB | 2645 | G | N3-C4-C5 | -8.86 | 124.17 | 128.60 |
| 26 | BB | 2684 | U | C2-N3-C4 | -8.86 | 121.69 | 127.00 |
| 26 | BB | 466 | A | C2-N3-C4 | 8.85 | 115.03 | 110.60 |
| 26 | BB | 646 | U | O4'-C1'-N1 | 8.85 | 115.28 | 108.20 |
| 26 | BB | 1182 | G | C2-N3-C4 | 8.85 | 116.33 | 111.90 |
| 1 | AA | 691 | G | C2-N3-C4 | 8.85 | 116.33 | 111.90 |
| 1 | AA | 1214 | C | N3-C4-C5 | 8.85 | 125.44 | 121.90 |
| 26 | BB | 151 | C | C4-C5-C6 | 8.85 | 121.83 | 117.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 321 | U | C2-N3-C4 | -8.85 | 121.69 | 127.00 |
| 26 | BB | 517 | C | O4'-C1'-N1 | 8.85 | 115.28 | 108.20 |
| 26 | BB | 2124 | G | C8-N9-C4 | -8.85 | 102.86 | 106.40 |
| 1 | AA | 1312 | G | O4'-C1'-N9 | 8.85 | 115.28 | 108.20 |
| 1 | AA | 775 | G | O4'-C1'-N9 | 8.85 | 115.28 | 108.20 |
| 1 | AA | 806 | C | N3-C4-N4 | -8.85 | 111.81 | 118.00 |
| 1 | AA | 1005 | A | C3'-C2'-C1' | 8.85 | 108.58 | 101.50 |
| 26 | BB | 1339 | G | N3-C4-C5 | -8.85 | 124.18 | 128.60 |
| 26 | BB | 2261 | C | C5'-C4'-O4' | 8.85 | 119.72 | 109.10 |
| 1 | AA | 446 | G | C5-C6-N1 | 8.85 | 115.92 | 111.50 |
| 1 | AA | 1078 | U | C5-C4-O4 | 8.85 | 131.21 | 125.90 |
| 1 | AA | 1370 | G | C5-C6-N1 | 8.85 | 115.92 | 111.50 |
| 26 | BB | 328 | U | N3-C4-O4 | 8.85 | 125.59 | 119.40 |
| 26 | BB | 2765 | A | N1-C2-N3 | -8.85 | 124.88 | 129.30 |
| 26 | BB | 2848 | G | C4-C5-C6 | 8.85 | 124.11 | 118.80 |
| 26 | BB | 1596 | A | O4'-C1'-N9 | 8.85 | 115.28 | 108.20 |
| 1 | AA | 566 | G | N7-C8-N9 | 8.84 | 117.52 | 113.10 |
| 26 | BB | 1887 | C | N1-C2-N3 | 8.84 | 125.39 | 119.20 |
| 26 | BB | 2327 | A | C5-N7-C8 | -8.84 | 99.48 | 103.90 |
| 1 | AA | 97 | G | C2-N3-C4 | 8.84 | 116.32 | 111.90 |
| 26 | BB | 2800 | A | C5-N7-C8 | -8.84 | 99.48 | 103.90 |
| 26 | BB | 1470 | A | C4-C5-N7 | 8.84 | 115.12 | 110.70 |
| 26 | BB | 1834 | U | O4'-C1'-N1 | 8.84 | 115.27 | 108.20 |
| 26 | BB | 2287 | A | O4'-C1'-N9 | 8.84 | 115.27 | 108.20 |
| 1 | AA | 149 | A | N1-C6-N6 | 8.84 | 123.90 | 118.60 |
| 1 | AA | 474 | G | C8-N9-C4 | -8.84 | 102.86 | 106.40 |
| 26 | BB | 17 | G | C5-C6-N1 | -8.84 | 107.08 | 111.50 |
| 26 | BB | 2588 | G | C8-N9-C4 | -8.84 | 102.86 | 106.40 |
| 1 | AA | 164 | G | C5-C6-N1 | 8.84 | 115.92 | 111.50 |
| 1 | AA | 759 | A | N1-C6-N6 | 8.84 | 123.90 | 118.60 |
| 1 | AA | 1251 | A | N7-C8-N9 | 8.84 | 118.22 | 113.80 |
| 1 | AA | 1441 | A | N1-C6-N6 | 8.84 | 123.90 | 118.60 |
| 26 | BB | 1512 | C | N3-C4-C5 | -8.84 | 118.37 | 121.90 |
| 26 | BB | 2428 | G | O4'-C1'-N9 | 8.83 | 115.27 | 108.20 |
| 1 | AA | 1144 | G | N3-C4-C5 | -8.83 | 124.18 | 128.60 |
| 26 | BB | 220 | G | C4'-C3'-C2' | -8.83 | 93.77 | 102.60 |
| 26 | BB | 756 | A | O4'-C1'-N9 | 8.83 | 115.27 | 108.20 |
| 26 | BB | 830 | G | O4'-C1'-N9 | 8.83 | 115.27 | 108.20 |
| 26 | BB | 1550 | C | N3-C4-C5 | -8.83 | 118.37 | 121.90 |
| 26 | BB | 2797 | U | C2-N3-C4 | -8.83 | 121.70 | 127.00 |
| 1 | AA | 391 | G | C6-N1-C2 | -8.83 | 119.80 | 125.10 |
| 5 | AE | 221 | ARG | NE-CZ-NH2 | -8.83 | 115.89 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 126 | A | N1-C6-N6 | 8.83 | 123.90 | 118.60 |
| 26 | BB | 1157 | G | C4-C5-N7 | 8.83 | 114.33 | 110.80 |
| 26 | BB | 1846 | G | O4'-C1'-N9 | 8.83 | 115.26 | 108.20 |
| 26 | BB | 1967 | C | O4'-C1'-N1 | 8.83 | 115.26 | 108.20 |
| 26 | BB | 2182 | U | O4'-C1'-N1 | 8.83 | 115.26 | 108.20 |
| 26 | BB | 2346 | A | C5'-C4'-O4' | 8.83 | 119.70 | 109.10 |
| 26 | BB | 2894 | G | C5-C6-N1 | 8.83 | 115.92 | 111.50 |
| 1 | AA | 69 | G | C5-N7-C8 | -8.83 | 99.89 | 104.30 |
| 1 | AA | 504 | C | O4'-C1'-N1 | 8.83 | 115.26 | 108.20 |
| 26 | BB | 666 | A | N7-C8-N9 | -8.83 | 109.39 | 113.80 |
| 1 | AA | 1133 | G | C4-C5-N7 | 8.83 | 114.33 | 110.80 |
| 25 | BA | 7 | G | N3-C4-C5 | -8.83 | 124.19 | 128.60 |
| 26 | BB | 2415 | G | N3-C4-C5 | -8.83 | 124.19 | 128.60 |
| 43 | BS | 57 | ARG | NE-CZ-NH1 | 8.83 | 124.71 | 120.30 |
| 26 | BB | 1982 | U | N3-C4-C5 | 8.83 | 119.90 | 114.60 |
| 1 | AA | 705 | G | C4-C5-N7 | -8.82 | 107.27 | 110.80 |
| 1 | AA | 1094 | G | N9-C4-C5 | 8.82 | 108.93 | 105.40 |
| 1 | AA | 1025 | U | N3-C2-O2 | -8.82 | 116.02 | 122.20 |
| 1 | AA | 1364 | U | N1-C2-O2 | -8.82 | 116.62 | 122.80 |
| 26 | BB | 961 | C | N1-C2-O2 | 8.82 | 124.19 | 118.90 |
| 26 | BB | 775 | G | C6-N1-C2 | -8.82 | 119.81 | 125.10 |
| 26 | BB | 808 | G | N3-C2-N2 | 8.82 | 126.08 | 119.90 |
| 26 | BB | 954 | G | C4-C5-N7 | 8.82 | 114.33 | 110.80 |
| 26 | BB | 1944 | U | C3'-C2'-C1' | 8.82 | 108.56 | 101.50 |
| 26 | BB | 2891 | U | C6-N1-C2 | -8.82 | 115.71 | 121.00 |
| 1 | AA | 50 | A | O4'-C1'-N9 | 8.82 | 115.25 | 108.20 |
| 1 | AA | 584 | G | C2-N3-C4 | 8.82 | 116.31 | 111.90 |
| 25 | BA | 8 | C | C4'-C3'-C2' | -8.82 | 93.78 | 102.60 |
| 26 | BB | 1466 | U | C2-N3-C4 | -8.82 | 121.71 | 127.00 |
| 1 | AA | 170 | U | O4'-C1'-N1 | 8.82 | 115.25 | 108.20 |
| 26 | BB | 246 | C | C5-C6-N1 | 8.82 | 125.41 | 121.00 |
| 26 | BB | 625 | G | N3-C4-C5 | -8.82 | 124.19 | 128.60 |
| 26 | BB | 1277 | G | C4'-C3'-C2' | -8.82 | 93.78 | 102.60 |
| 26 | BB | 1940 | U | C1'-O4'-C4' | -8.82 | 102.85 | 109.90 |
| 26 | BB | 2687 | U | C5'-C4'-O4' | 8.82 | 119.68 | 109.10 |
| 1 | AA | 662 | U | N1-C2-N3 | 8.82 | 120.19 | 114.90 |
| 9 | AI | 110 | ARG | NE-CZ-NH1 | 8.82 | 124.71 | 120.30 |
| 26 | BB | 891 | G | C6-C5-N7 | 8.82 | 135.69 | 130.40 |
| 26 | BB | 1656 | C | N3-C2-O2 | -8.82 | 115.73 | 121.90 |
| 26 | BB | 2327 | A | C5-C6-N6 | -8.82 | 116.65 | 123.70 |
| 26 | BB | 2224 | G | N9-C4-C5 | 8.81 | 108.93 | 105.40 |
| 1 | AA | 274 | A | C5-C6-N1 | -8.81 | 113.29 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 573 | A | C2-N3-C4 | 8.81 | 115.01 | 110.60 |
| 1 | AA | 1042 | A | C2-N3-C4 | 8.81 | 115.01 | 110.60 |
| 25 | BA | 55 | U | C5'-C4'-O4' | 8.81 | 119.68 | 109.10 |
| 26 | BB | 68 | G | C4-C5-N7 | -8.81 | 107.27 | 110.80 |
| 26 | BB | 356 | G | C5-C6-N1 | 8.81 | 115.91 | 111.50 |
| 26 | BB | 1728 | C | O4'-C1'-N1 | 8.81 | 115.25 | 108.20 |
| 26 | BB | 2594 | C | O4'-C1'-N1 | 8.81 | 115.25 | 108.20 |
| 26 | BB | 1132 | U | O4'-C1'-N1 | 8.81 | 115.25 | 108.20 |
| 26 | BB | 1343 | G | C2-N3-C4 | 8.81 | 116.31 | 111.90 |
| 1 | AA | 1414 | U | C4-C5-C6 | -8.81 | 114.41 | 119.70 |
| 26 | BB | 1535 | A | O4'-C1'-N9 | 8.81 | 115.25 | 108.20 |
| 26 | BB | 1667 | G | C4-C5-C6 | 8.81 | 124.09 | 118.80 |
| 26 | BB | 2744 | G | C2-N3-C4 | 8.81 | 116.31 | 111.90 |
| 26 | BB | 1771 | C | C6-N1-C2 | -8.81 | 116.78 | 120.30 |
| 26 | BB | 1776 | G | C5-C6-N1 | 8.81 | 115.91 | 111.50 |
| 26 | BB | 2669 | G | O4'-C1'-N9 | -8.81 | 101.15 | 108.20 |
| 3 | AC | 45 | G | C2-N3-C4 | 8.81 | 116.31 | 111.90 |
| 26 | BB | 36 | G | O4'-C1'-N9 | 8.81 | 115.25 | 108.20 |
| 26 | BB | 1055 | G | C3'-C2'-C1' | -8.81 | 94.45 | 101.50 |
| 26 | BB | 1553 | A | N9-C4-C5 | 8.81 | 109.32 | 105.80 |
| 26 | BB | 2037 | A | O4'-C1'-N9 | -8.81 | 101.15 | 108.20 |
| 26 | BB | 2032 | G | N3-C2-N2 | -8.81 | 113.73 | 119.90 |
| 26 | BB | 2134 | A | C2-N3-C4 | 8.81 | 115.00 | 110.60 |
| 1 | AA | 782 | A | C5-C6-N1 | 8.81 | 122.10 | 117.70 |
| 25 | BA | 101 | A | N1-C6-N6 | -8.81 | 113.32 | 118.60 |
| 26 | BB | 715 | A | C5-C6-N1 | 8.81 | 122.10 | 117.70 |
| 26 | BB | 2863 | C | C2-N3-C4 | 8.80 | 124.30 | 119.90 |
| 1 | AA | 471 | U | N3-C2-O2 | -8.80 | 116.04 | 122.20 |
| 1 | AA | 797 | C | N1-C2-N3 | -8.80 | 113.04 | 119.20 |
| 4 | AD | 4 | G | N3-C4-N9 | 8.80 | 131.28 | 126.00 |
| 26 | BB | 1355 | G | N3-C4-N9 | 8.80 | 131.28 | 126.00 |
| 26 | BB | 2249 | U | O4'-C1'-N1 | 8.80 | 115.24 | 108.20 |
| 26 | BB | 2604 | U | C5'-C4'-O4' | 8.80 | 119.67 | 109.10 |
| 1 | AA | 1366 | C | C6-N1-C2 | -8.80 | 116.78 | 120.30 |
| 26 | BB | 2046 | G | C8-N9-C4 | -8.80 | 102.88 | 106.40 |
| 1 | AA | 743 | A | N9-C4-C5 | 8.80 | 109.32 | 105.80 |
| 26 | BB | 2660 | A | C3'-C2'-C1' | 8.80 | 108.54 | 101.50 |
| 1 | AA | 690 | G | C2-N3-C4 | 8.80 | 116.30 | 111.90 |
| 1 | AA | 847 | G | C5-C6-O6 | -8.80 | 123.32 | 128.60 |
| 1 | AA | 1071 | C | N3-C2-O2 | -8.80 | 115.74 | 121.90 |
| 26 | BB | 35 | G | C3'-C2'-C1' | -8.80 | 94.46 | 101.50 |
| 26 | BB | 93 | G | N9-C4-C5 | 8.80 | 108.92 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2810 | A | N3-C4-C5 | -8.80 | 120.64 | 126.80 |
| 1 | AA | 1230 | C | N1-C1'-C2' | -8.80 | 102.32 | 112.00 |
| 26 | BB | 1096 | A | C3'-C2'-C1' | 8.80 | 108.54 | 101.50 |
| 26 | BB | 1998 | A | C5'-C4'-O4' | 8.80 | 119.66 | 109.10 |
| 26 | BB | 2354 | C | C5-C4-N4 | -8.80 | 114.04 | 120.20 |
| 1 | AA | 1503 | A | C4-C5-N7 | 8.80 | 115.10 | 110.70 |
| 26 | BB | 361 | G | N3-C4-C5 | -8.80 | 124.20 | 128.60 |
| 26 | BB | 401 | A | C8-N9-C4 | -8.80 | 102.28 | 105.80 |
| 26 | BB | 1340 | U | N3-C4-O4 | 8.80 | 125.56 | 119.40 |
| 26 | BB | 2644 | G | N9-C4-C5 | 8.80 | 108.92 | 105.40 |
| 26 | BB | 2876 | G | N3-C4-C5 | -8.80 | 124.20 | 128.60 |
| 1 | AA | 792 | A | C2-N3-C4 | -8.79 | 106.20 | 110.60 |
| 4 | AD | 6 | G | C5-N7-C8 | -8.79 | 99.90 | 104.30 |
| 26 | BB | 1944 | U | N3-C2-O2 | -8.79 | 116.04 | 122.20 |
| 26 | BB | 2138 | G | N7-C8-N9 | 8.79 | 117.50 | 113.10 |
| 26 | BB | 2876 | G | C5-N7-C8 | 8.79 | 108.70 | 104.30 |
| 1 | AA | 1117 | A | C8-N9-C4 | -8.79 | 102.28 | 105.80 |
| 26 | BB | 537 | G | N7-C8-N9 | 8.79 | 117.50 | 113.10 |
| 26 | BB | 2532 | G | O4'-C1'-N9 | 8.79 | 115.23 | 108.20 |
| 26 | BB | 2789 | C | C5-C4-N4 | -8.79 | 114.05 | 120.20 |
| 1 | AA | 191 | G | C8-N9-C4 | 8.79 | 109.92 | 106.40 |
| 26 | BB | 2832 | U | O4'-C1'-N1 | 8.79 | 115.23 | 108.20 |
| 1 | AA | 1405 | G | C5-C6-O6 | -8.79 | 123.33 | 128.60 |
| 25 | BA | 17 | C | C5-C6-N1 | 8.79 | 125.39 | 121.00 |
| 26 | BB | 1815 | A | N1-C6-N6 | -8.79 | 113.33 | 118.60 |
| 26 | BB | 190 | A | O4'-C1'-N9 | 8.79 | 115.23 | 108.20 |
| 26 | BB | 1559 | U | C5-C4-O4 | -8.79 | 120.63 | 125.90 |
| 1 | AA | 260 | G | N9-C4-C5 | 8.79 | 108.91 | 105.40 |
| 1 | AA | 270 | A | C4-C5-N7 | -8.79 | 106.31 | 110.70 |
| 1 | AA | 1022 | A | C4'-C3'-C2' | -8.79 | 93.81 | 102.60 |
| 26 | BB | 163 | C | O4'-C1'-N1 | 8.79 | 115.23 | 108.20 |
| 26 | BB | 1735 | A | N1-C6-N6 | -8.79 | 113.33 | 118.60 |
| 26 | BB | 549 | G | N1-C6-O6 | -8.78 | 114.63 | 119.90 |
| 26 | BB | 2861 | U | N1-C2-N3 | 8.79 | 120.17 | 114.90 |
| 27 | BC | 21 | TYR | CB-CG-CD1 | 8.78 | 126.27 | 121.00 |
| 39 | BO | 6 | ARG | NE-CZ-NH1 | 8.78 | 124.69 | 120.30 |
| 26 | BB | 635 | C | C2-N3-C4 | 8.78 | 124.29 | 119.90 |
| 26 | BB | 2002 | G | N3-C2-N2 | -8.78 | 113.75 | 119.90 |
| 26 | BB | 2303 | G | C1'-O4'-C4' | 8.78 | 116.93 | 109.90 |
| 1 | AA | 1365 | G | N9-C4-C5 | 8.78 | 108.91 | 105.40 |
| 25 | BA | 45 | A | N1-C2-N3 | -8.78 | 124.91 | 129.30 |
| 26 | BB | 425 | G | C5-C6-N1 | 8.78 | 115.89 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 721 | A | N7-C8-N9 | 8.78 | 118.19 | 113.80 |
| 26 | BB | 1115 | G | C4'-C3'-C2' | -8.78 | 93.82 | 102.60 |
| 1 | AA | 465 | A | N9-C4-C5 | 8.78 | 109.31 | 105.80 |
| 1 | AA | 1160 | G | N1-C2-N3 | -8.78 | 118.64 | 123.90 |
| 3 | AC | 51 | C | N3-C4-C5 | -8.78 | 118.39 | 121.90 |
| 26 | BB | 783 | A | C5-N7-C8 | 8.78 | 108.29 | 103.90 |
| 26 | BB | 831 | G | C6-N1-C2 | -8.78 | 119.83 | 125.10 |
| 26 | BB | 993 | G | C5-N7-C8 | -8.78 | 99.91 | 104.30 |
| 1 | AA | 1283 | U | N3-C2-O2 | -8.77 | 116.06 | 122.20 |
| 1 | AA | 744 | C | N1-C1'-C2' | -8.77 | 102.35 | 112.00 |
| 1 | AA | 759 | A | C8-N9-C4 | -8.77 | 102.29 | 105.80 |
| 25 | BA | 69 | G | N1-C6-O6 | 8.77 | 125.16 | 119.90 |
| 1 | AA | 1156 | G | N7-C8-N9 | 8.77 | 117.49 | 113.10 |
| 1 | AA | 1506 | U | N1-C2-O2 | 8.77 | 128.94 | 122.80 |
| 26 | BB | 391 | A | N1-C2-N3 | -8.77 | 124.91 | 129.30 |
| 26 | BB | 982 | C | O4'-C1'-N1 | 8.77 | 115.22 | 108.20 |
| 26 | BB | 1646 | C | C3'-C2'-C1' | 8.77 | 108.52 | 101.50 |
| 26 | BB | 2827 | C | N3-C4-C5 | -8.77 | 118.39 | 121.90 |
| 26 | BB | 1478 | G | N7-C8-N9 | 8.77 | 117.48 | 113.10 |
| 1 | AA | 51 | A | P-O3'-C3' | 8.77 | 130.22 | 119.70 |
| 1 | AA | 584 | G | N3-C4-C5 | -8.77 | 124.22 | 128.60 |
| 1 | AA | 836 | G | C5-N7-C8 | 8.77 | 108.69 | 104.30 |
| 26 | BB | 432 | A | C6-C5-N7 | 8.77 | 138.44 | 132.30 |
| 26 | BB | 1521 | G | C2-N3-C4 | 8.77 | 116.28 | 111.90 |
| 26 | BB | 2557 | G | C5-C6-O6 | -8.77 | 123.34 | 128.60 |
| 1 | AA | 896 | C | C6-N1-C2 | 8.77 | 123.81 | 120.30 |
| 1 | AA | 1129 | C | C5-C4-N4 | 8.77 | 126.34 | 120.20 |
| 4 | AD | 53 | G | C5-C6-O6 | -8.77 | 123.34 | 128.60 |
| 26 | BB | 834 | G | C8-N9-C4 | -8.77 | 102.89 | 106.40 |
| 26 | BB | 2310 | C | C2-N3-C4 | 8.77 | 124.28 | 119.90 |
| 1 | AA | 1095 | U | C5-C6-N1 | -8.77 | 118.32 | 122.70 |
| 1 | AA | 1515 | G | C5-C6-O6 | -8.77 | 123.34 | 128.60 |
| 3 | AC | 33 | A | N1-C6-N6 | 8.77 | 123.86 | 118.60 |
| 7 | AG | 102 | TYR | CB-CG-CD1 | -8.77 | 115.74 | 121.00 |
| 26 | BB | 78 | U | N3-C4-O4 | 8.77 | 125.54 | 119.40 |
| 26 | BB | 1831 | G | C8-N9-C4 | -8.77 | 102.89 | 106.40 |
| 26 | BB | 2396 | G | O4'-C1'-N9 | 8.77 | 115.21 | 108.20 |
| 29 | BE | 77 | ARG | NE-CZ-NH1 | -8.77 | 115.92 | 120.30 |
| 1 | AA | 562 | U | O4'-C1'-N1 | 8.76 | 115.21 | 108.20 |
| 1 | AA | 1356 | G | C8-N9-C4 | -8.76 | 102.89 | 106.40 |
| 25 | BA | 119 | A | N9-C4-C5 | -8.76 | 102.30 | 105.80 |
| 26 | BB | 2338 | C | N1-C2-O2 | 8.76 | 124.16 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1046 | A | C2-N3-C4 | 8.76 | 114.98 | 110.60 |
| 26 | BB | 698 | C | C4-C5-C6 | -8.76 | 113.02 | 117.40 |
| 26 | BB | 2509 | G | C4-C5-C6 | 8.76 | 124.06 | 118.80 |
| 1 | AA | 483 | C | C5-C4-N4 | -8.76 | 114.07 | 120.20 |
| 1 | AA | 1150 | A | O4'-C1'-N9 | 8.76 | 115.21 | 108.20 |
| 26 | BB | 1950 | G | C4-C5-N7 | -8.76 | 107.30 | 110.80 |
| 1 | AA | 991 | U | N1-C2-O2 | 8.76 | 128.93 | 122.80 |
| 26 | BB | 233 | A | N9-C4-C5 | 8.76 | 109.30 | 105.80 |
| 26 | BB | 517 | C | N3-C4-C5 | -8.76 | 118.40 | 121.90 |
| 26 | BB | 587 | C | C5-C4-N4 | -8.76 | 114.07 | 120.20 |
| 26 | BB | 654 | A | C2-N3-C4 | 8.76 | 114.98 | 110.60 |
| 26 | BB | 2035 | G | O4'-C1'-N9 | 8.76 | 115.20 | 108.20 |
| 26 | BB | 2178 | C | N1-C1'-C2' | -8.76 | 102.37 | 112.00 |
| 26 | BB | 2494 | G | C2-N3-C4 | 8.76 | 116.28 | 111.90 |
| 1 | AA | 861 | G | C5-N7-C8 | -8.75 | 99.92 | 104.30 |
| 1 | AA | 995 | C | N1-C2-N3 | 8.75 | 125.33 | 119.20 |
| 1 | AA | 1286 | U | C5-C4-O4 | -8.75 | 120.65 | 125.90 |
| 1 | AA | 997 | U | C1'-O4'-C4' | -8.75 | 102.90 | 109.90 |
| 1 | AA | 1073 | U | C4-C5-C6 | 8.75 | 124.95 | 119.70 |
| 26 | BB | 1518 | C | C4-C5-C6 | -8.75 | 113.02 | 117.40 |
| 26 | BB | 2015 | A | C5-C6-N6 | 8.75 | 130.70 | 123.70 |
| 26 | BB | 2353 | G | C4-C5-N7 | -8.75 | 107.30 | 110.80 |
| 1 | AA | 1417 | G | C5-C6-O6 | -8.75 | 123.35 | 128.60 |
| 3 | AC | 57 | C | N3-C4-N4 | 8.75 | 124.13 | 118.00 |
| 1 | AA | 1401 | G | C5'-C4'-O4' | 8.75 | 119.60 | 109.10 |
| 2 | AB | 70 | C | C4-C5-C6 | -8.75 | 113.03 | 117.40 |
| 26 | BB | 534 | U | N3-C4-C5 | -8.75 | 109.35 | 114.60 |
| 26 | BB | 620 | G | N3-C2-N2 | -8.75 | 113.78 | 119.90 |
| 26 | BB | 1030 | C | N3-C4-C5 | -8.75 | 118.40 | 121.90 |
| 26 | BB | 2824 | C | C2-N3-C4 | 8.75 | 124.28 | 119.90 |
| 1 | AA | 814 | A | O4'-C1'-N9 | 8.75 | 115.20 | 108.20 |
| 1 | AA | 1036 | A | C6-N1-C2 | 8.75 | 123.85 | 118.60 |
| 1 | AA | 1080 | A | N1-C6-N6 | -8.75 | 113.35 | 118.60 |
| 26 | BB | 397 | U | C5-C6-N1 | -8.75 | 118.33 | 122.70 |
| 26 | BB | 402 | A | N1-C2-N3 | -8.75 | 124.93 | 129.30 |
| 26 | BB | 791 | C | O4'-C1'-N1 | 8.75 | 115.20 | 108.20 |
| 26 | BB | 925 | A | O4'-C1'-N9 | 8.75 | 115.20 | 108.20 |
| 26 | BB | 1884 | G | C4-C5-N7 | -8.75 | 107.30 | 110.80 |
| 26 | BB | 2529 | G | N3-C2-N2 | -8.75 | 113.78 | 119.90 |
| 56 | B5 | 34 | ARG | NE-CZ-NH2 | -8.75 | 115.93 | 120.30 |
| 1 | AA | 310 | G | C4-C5-C6 | 8.74 | 124.05 | 118.80 |
| 26 | BB | 1498 | C | C4-C5-C6 | -8.74 | 113.03 | 117.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1614 | A | N1-C6-N6 | -8.74 | 113.35 | 118.60 |
| 1 | AA | 1047 | G | N7-C8-N9 | 8.74 | 117.47 | 113.10 |
| 1 | AA | 1525 | G | O4'-C1'-N9 | 8.74 | 115.19 | 108.20 |
| 3 | AC | 28 | U | C5-C4-O4 | -8.74 | 120.65 | 125.90 |
| 26 | BB | 315 | G | O4'-C1'-N9 | 8.74 | 115.19 | 108.20 |
| 26 | BB | 552 | U | C6-N1-C2 | -8.74 | 115.75 | 121.00 |
| 26 | BB | 1667 | G | N3-C4-C5 | -8.74 | 124.23 | 128.60 |
| 26 | BB | 2505 | G | N3-C2-N2 | 8.74 | 126.02 | 119.90 |
| 1 | AA | 189 | A | C5-C6-N1 | 8.74 | 122.07 | 117.70 |
| 1 | AA | 1133 | G | N9-C4-C5 | -8.74 | 101.90 | 105.40 |
| 1 | AA | 1355 | G | O4'-C1'-N9 | 8.74 | 115.19 | 108.20 |
| 1 | AA | 1406 | U | C5-C4-O4 | -8.74 | 120.66 | 125.90 |
| 26 | BB | 771 | G | N7-C8-N9 | 8.74 | 117.47 | 113.10 |
| 26 | BB | 1114 | C | N3-C4-C5 | -8.74 | 118.40 | 121.90 |
| 26 | BB | 1177 | G | N3-C4-C5 | -8.74 | 124.23 | 128.60 |
| 26 | BB | 1538 | G | N7-C8-N9 | 8.74 | 117.47 | 113.10 |
| 26 | BB | 2157 | G | N1-C6-O6 | -8.74 | 114.66 | 119.90 |
| 26 | BB | 2192 | U | N1-C2-N3 | 8.74 | 120.14 | 114.90 |
| 26 | BB | 2807 | U | N3-C2-O2 | 8.74 | 128.32 | 122.20 |
| 1 | AA | 86 | G | N1-C2-N3 | 8.74 | 129.14 | 123.90 |
| 1 | AA | 262 | A | C4-C5-C6 | -8.74 | 112.63 | 117.00 |
| 26 | BB | 805 | G | C4-C5-N7 | -8.74 | 107.31 | 110.80 |
| 26 | BB | 1369 | G | N3-C2-N2 | -8.74 | 113.78 | 119.90 |
| 1 | AA | 1074 | G | N1-C6-O6 | 8.74 | 125.14 | 119.90 |
| 26 | BB | 1833 | C | N1-C2-O2 | 8.74 | 124.14 | 118.90 |
| 1 | AA | 438 | U | C4-C5-C6 | 8.73 | 124.94 | 119.70 |
| 6 | AF | 106 | ARG | NE-CZ-NH1 | 8.73 | 124.67 | 120.30 |
| 26 | BB | 434 | U | C5-C4-O4 | -8.73 | 120.66 | 125.90 |
| 26 | BB | 1452 | G | N9-C4-C5 | -8.73 | 101.91 | 105.40 |
| 26 | BB | 2234 | G | N9-C4-C5 | -8.73 | 101.91 | 105.40 |
| 1 | AA | 692 | U | C5'-C4'-O4' | 8.73 | 119.58 | 109.10 |
| 26 | BB | 469 | G | N3-C2-N2 | 8.73 | 126.01 | 119.90 |
| 26 | BB | 516 | C | N3-C2-O2 | -8.73 | 115.79 | 121.90 |
| 26 | BB | 741 | U | N1-C2-O2 | -8.73 | 116.69 | 122.80 |
| 26 | BB | 805 | G | N3-C4-C5 | -8.73 | 124.23 | 128.60 |
| 26 | BB | 1037 | G | N3-C4-N9 | -8.73 | 120.76 | 126.00 |
| 26 | BB | 1082 | U | C3'-C2'-C1' | 8.73 | 108.48 | 101.50 |
| 34 | BJ | 50 | TYR | CB-CG-CD1 | -8.73 | 115.76 | 121.00 |
| 1 | AA | 733 | G | P-O3'-C3' | 8.73 | 130.17 | 119.70 |
| 26 | BB | 1703 | G | C2-N3-C4 | 8.73 | 116.26 | 111.90 |
| 26 | BB | 2043 | C | N3-C2-O2 | -8.73 | 115.79 | 121.90 |
| 1 | AA | 428 | G | N7-C8-N9 | -8.72 | 108.74 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1361 | G | O4'-C4'-C3' | 8.72 | 113.08 | 106.10 |
| 25 | BA | 92 | C | C1'-O4'-C4' | 8.72 | 116.88 | 109.90 |
| 26 | BB | 748 | G | C4-C5-N7 | -8.72 | 107.31 | 110.80 |
| 1 | AA | 665 | A | N9-C4-C5 | 8.72 | 109.29 | 105.80 |
| 1 | AA | 908 | A | C6-C5-N7 | 8.72 | 138.41 | 132.30 |
| 25 | BA | 55 | U | C5'-C4'-C3' | -8.72 | 102.04 | 116.00 |
| 26 | BB | 648 | G | C6-C5-N7 | -8.72 | 125.17 | 130.40 |
| 26 | BB | 1232 | G | N9-C4-C5 | -8.72 | 101.91 | 105.40 |
| 26 | BB | 1312 | U | N3-C4-O4 | -8.72 | 113.30 | 119.40 |
| 26 | BB | 1453 | A | C8-N9-C4 | -8.72 | 102.31 | 105.80 |
| 1 | AA | 1321 | U | C4-C5-C6 | 8.72 | 124.93 | 119.70 |
| 27 | BC | 208 | TYR | CB-CG-CD2 | -8.72 | 115.77 | 121.00 |
| 1 | AA | 422 | C | O4'-C1'-C2' | -8.72 | 97.08 | 105.80 |
| 2 | AB | 59 | G | N3-C4-C5 | -8.72 | 124.24 | 128.60 |
| 26 | BB | 856 | G | N3-C4-C5 | -8.72 | 124.24 | 128.60 |
| 26 | BB | 1085 | A | C8-N9-C4 | -8.72 | 102.31 | 105.80 |
| 26 | BB | 2839 | G | N1-C2-N3 | -8.72 | 118.67 | 123.90 |
| 26 | BB | 180 | G | O4'-C1'-N9 | 8.72 | 115.17 | 108.20 |
| 26 | BB | 845 | A | N3-C4-N9 | 8.72 | 134.37 | 127.40 |
| 26 | BB | 947 | A | C8-N9-C4 | -8.72 | 102.31 | 105.80 |
| 26 | BB | 1166 | G | N9-C4-C5 | 8.72 | 108.89 | 105.40 |
| 26 | BB | 1221 | C | N3-C4-C5 | -8.72 | 118.41 | 121.90 |
| 26 | BB | 2847 | U | C3'-C2'-C1' | 8.72 | 108.47 | 101.50 |
| 28 | BD | 166 | ARG | NE-CZ-NH1 | 8.72 | 124.66 | 120.30 |
| 1 | AA | 642 | A | N1-C6-N6 | -8.72 | 113.37 | 118.60 |
| 1 | AA | 765 | G | N3-C2-N2 | -8.71 | 113.80 | 119.90 |
| 1 | AA | 893 | C | C5'-C4'-O4' | 8.72 | 119.56 | 109.10 |
| 1 | AA | 1315 | U | N1-C2-O2 | 8.72 | 128.90 | 122.80 |
| 1 | AA | 1387 | G | C5-N7-C8 | -8.71 | 99.94 | 104.30 |
| 26 | BB | 451 | U | C2-N3-C4 | -8.71 | 121.77 | 127.00 |
| 26 | BB | 869 | G | N1-C6-O6 | 8.72 | 125.13 | 119.90 |
| 26 | BB | 2133 | G | N3-C4-N9 | 8.72 | 131.23 | 126.00 |
| 26 | BB | 2154 | A | C6-N1-C2 | 8.71 | 123.83 | 118.60 |
| 1 | AA | 1428 | A | C2-N3-C4 | 8.71 | 114.96 | 110.60 |
| 2 | AB | 47 | U | O4'-C1'-C2' | -8.71 | 97.09 | 105.80 |
| 26 | BB | 1083 | U | O4'-C1'-N1 | 8.71 | 115.17 | 108.20 |
| 26 | BB | 272 | A | C5-C6-N1 | 8.71 | 122.06 | 117.70 |
| 26 | BB | 1593 | A | N1-C6-N6 | -8.71 | 113.37 | 118.60 |
| 26 | BB | 1825 | U | N1-C2-N3 | 8.71 | 120.13 | 114.90 |
| 26 | BB | 2454 | G | C3'-C2'-C1' | 8.71 | 108.47 | 101.50 |
| 1 | AA | 387 | U | C5-C4-O4 | -8.71 | 120.67 | 125.90 |
| 1 | AA | 622 | A | O4'-C1'-N9 | -8.71 | 101.23 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1019 | A | N1-C2-N3 | -8.71 | 124.95 | 129.30 |
| 3 | AC | 39 | U | P-O3'-C3' | 8.71 | 130.15 | 119.70 |
| 25 | BA | 6 | G | C2-N3-C4 | 8.71 | 116.25 | 111.90 |
| 26 | BB | 488 | G | C4-C5-N7 | -8.71 | 107.32 | 110.80 |
| 26 | BB | 1177 | G | N9-C4-C5 | 8.71 | 108.88 | 105.40 |
| 26 | BB | 2144 | G | C2-N3-C4 | 8.71 | 116.25 | 111.90 |
| 1 | AA | 457 | G | N9-C4-C5 | -8.71 | 101.92 | 105.40 |
| 1 | AA | 555 | U | O4'-C1'-N1 | 8.70 | 115.16 | 108.20 |
| 1 | AA | 587 | G | C6-N1-C2 | -8.71 | 119.88 | 125.10 |
| 26 | BB | 93 | G | C4-C5-N7 | -8.70 | 107.32 | 110.80 |
| 26 | BB | 919 | U | O4'-C1'-N1 | 8.71 | 115.16 | 108.20 |
| 26 | BB | 1946 | U | O4'-C1'-N1 | 8.70 | 115.16 | 108.20 |
| 26 | BB | 2341 | G | C8-N9-C1' | 8.71 | 138.32 | 127.00 |
| 1 | AA | 2 | A | C4-C5-N7 | -8.70 | 106.35 | 110.70 |
| 1 | AA | 394 | G | N9-C4-C5 | 8.70 | 108.88 | 105.40 |
| 1 | AA | 1297 | G | N3-C4-C5 | -8.70 | 124.25 | 128.60 |
| 1 | AA | 1410 | A | C4-C5-N7 | -8.70 | 106.35 | 110.70 |
| 3 | AC | 47 | C | C4-C5-C6 | -8.70 | 113.05 | 117.40 |
| 26 | BB | 893 | C | C6-N1-C2 | 8.70 | 123.78 | 120.30 |
| 25 | BA | 18 | G | N3-C4-C5 | -8.70 | 124.25 | 128.60 |
| 1 | AA | 59 | A | N1-C6-N6 | -8.70 | 113.38 | 118.60 |
| 1 | AA | 367 | U | O4'-C1'-N1 | 8.70 | 115.16 | 108.20 |
| 1 | AA | 1114 | C | C4-C5-C6 | 8.70 | 121.75 | 117.40 |
| 1 | AA | 1337 | G | N9-C4-C5 | 8.70 | 108.88 | 105.40 |
| 26 | BB | 350 | G | C4-C5-C6 | 8.70 | 124.02 | 118.80 |
| 26 | BB | 352 | A | C2-N3-C4 | 8.70 | 114.95 | 110.60 |
| 26 | BB | 472 | A | C5'-C4'-O4' | 8.70 | 119.54 | 109.10 |
| 26 | BB | 2594 | C | N3-C4-C5 | -8.70 | 118.42 | 121.90 |
| 1 | AA | 575 | G | C2-N3-C4 | 8.70 | 116.25 | 111.90 |
| 1 | AA | 988 | G | C3'-C2'-C1' | -8.70 | 94.54 | 101.50 |
| 1 | AA | 1284 | C | C3'-C2'-C1' | 8.70 | 108.46 | 101.50 |
| 26 | BB | 1187 | G | N9-C4-C5 | 8.70 | 108.88 | 105.40 |
| 1 | AA | 1426 | G | N3-C4-N9 | 8.70 | 131.22 | 126.00 |
| 26 | BB | 245 | G | O4'-C1'-N9 | 8.70 | 115.16 | 108.20 |
| 26 | BB | 1465 | G | N1-C6-O6 | -8.70 | 114.68 | 119.90 |
| 26 | BB | 1840 | G | C2-N3-C4 | 8.70 | 116.25 | 111.90 |
| 26 | BB | 2396 | G | N9-C1'-C2' | -8.70 | 102.44 | 112.00 |
| 26 | BB | 2567 | G | C5'-C4'-O4' | 8.70 | 119.54 | 109.10 |
| 15 | AO | 85 | ARG | NE-CZ-NH2 | -8.69 | 115.95 | 120.30 |
| 1 | AA | 997 | U | C2-N3-C4 | -8.69 | 121.78 | 127.00 |
| 1 | AA | 240 | G | C2-N3-C4 | -8.69 | 107.56 | 111.90 |
| 1 | AA | 610 | U | C5-C4-O4 | -8.69 | 120.69 | 125.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 31 | BG | 121 | PHE | CB-CG-CD1 | 8.69 | 126.88 | 120.80 |
| 1 | AA | 946 | A | C4-C5-C6 | 8.69 | 121.34 | 117.00 |
| 26 | BB | 80 | G | N3-C4-C5 | -8.69 | 124.25 | 128.60 |
| 26 | BB | 1929 | G | N7-C8-N9 | 8.69 | 117.44 | 113.10 |
| 26 | BB | 2358 | A | C1'-O4'-C4' | -8.69 | 102.95 | 109.90 |
| 26 | BB | 382 | A | C1'-O4'-C4' | 8.69 | 116.85 | 109.90 |
| 26 | BB | 2011 | U | O5'-P-OP2 | -8.69 | 97.88 | 105.70 |
| 26 | BB | 2399 | G | C2-N3-C4 | 8.69 | 116.25 | 111.90 |
| 1 | AA | 862 | C | C2-N3-C4 | -8.69 | 115.56 | 119.90 |
| 1 | AA | 1279 | G | C8-N9-C4 | -8.69 | 102.92 | 106.40 |
| 25 | BA | 12 | C | C5-C4-N4 | 8.69 | 126.28 | 120.20 |
| 26 | BB | 806 | C | O4'-C4'-C3' | 8.69 | 113.05 | 106.10 |
| 26 | BB | 727 | A | C2-N3-C4 | 8.69 | 114.94 | 110.60 |
| 26 | BB | 973 | A | O4'-C4'-C3' | 8.69 | 113.05 | 106.10 |
| 26 | BB | 1878 | G | C5'-C4'-O4' | 8.69 | 119.52 | 109.10 |
| 1 | AA | 1064 | G | N3-C2-N2 | -8.68 | 113.82 | 119.90 |
| 26 | BB | 1766 | G | O4'-C1'-N9 | 8.68 | 115.15 | 108.20 |
| 26 | BB | 2414 | G | C5-C6-O6 | -8.68 | 123.39 | 128.60 |
| 26 | BB | 2303 | G | C8-N9-C4 | -8.68 | 102.93 | 106.40 |
| 1 | AA | 56 | U | C5-C4-O4 | -8.68 | 120.69 | 125.90 |
| 1 | AA | 806 | C | C6-N1-C2 | 8.68 | 123.77 | 120.30 |
| 1 | AA | 1503 | A | C6-C5-N7 | -8.68 | 126.22 | 132.30 |
| 4 | AD | 72 | C | C6-N1-C2 | 8.68 | 123.77 | 120.30 |
| 26 | BB | 1353 | A | C5'-C4'-O4' | 8.68 | 119.52 | 109.10 |
| 26 | BB | 1796 | U | C4-C5-C6 | 8.68 | 124.91 | 119.70 |
| 26 | BB | 245 | G | C2-N3-C4 | -8.68 | 107.56 | 111.90 |
| 26 | BB | 1830 | C | O4'-C1'-N1 | 8.68 | 115.14 | 108.20 |
| 26 | BB | 2288 | A | C4-C5-N7 | -8.68 | 106.36 | 110.70 |
| 26 | BB | 2582 | G | N3-C4-C5 | -8.68 | 124.26 | 128.60 |
| 1 | AA | 1239 | A | P-O3'-C3' | 8.68 | 130.11 | 119.70 |
| 2 | AB | 53 | G | N3-C4-C5 | -8.68 | 124.26 | 128.60 |
| 26 | BB | 859 | G | N1-C2-N2 | -8.68 | 108.39 | 116.20 |
| 26 | BB | 1011 | G | C2-N3-C4 | 8.68 | 116.24 | 111.90 |
| 26 | BB | 2559 | C | C5-C4-N4 | -8.68 | 114.13 | 120.20 |
| 26 | BB | 1925 | C | C3'-C2'-C1' | 8.68 | 108.44 | 101.50 |
| 26 | BB | 2097 | A | C5-C6-N1 | -8.68 | 113.36 | 117.70 |
| 26 | BB | 2178 | C | N3-C4-C5 | -8.68 | 118.43 | 121.90 |
| 26 | BB | 2349 | G | C2-N3-C4 | 8.68 | 116.24 | 111.90 |
| 26 | BB | 1236 | G | N9-C4-C5 | 8.67 | 108.87 | 105.40 |
| 26 | BB | 1423 | G | C4-C5-N7 | 8.67 | 114.27 | 110.80 |
| 26 | BB | 1805 | A | C2-N3-C4 | -8.67 | 106.26 | 110.60 |
| 26 | BB | 1910 | G | C6-N1-C2 | -8.67 | 119.90 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2811 | G | C4-C5-N7 | -8.67 | 107.33 | 110.80 |
| 1 | AA | 547 | A | C2-N3-C4 | 8.67 | 114.94 | 110.60 |
| 26 | BB | 1052 | C | C4-C5-C6 | 8.67 | 121.73 | 117.40 |
| 26 | BB | 1467 | U | N3-C4-O4 | 8.67 | 125.47 | 119.40 |
| 26 | BB | 2417 | C | N3-C4-C5 | -8.67 | 118.43 | 121.90 |
| 26 | BB | 1659 | G | C6-N1-C2 | -8.67 | 119.90 | 125.10 |
| 26 | BB | 1853 | A | N7-C8-N9 | -8.67 | 109.47 | 113.80 |
| 1 | AA | 949 | A | N1-C6-N6 | 8.67 | 123.80 | 118.60 |
| 26 | BB | 394 | C | N3-C2-O2 | -8.67 | 115.83 | 121.90 |
| 26 | BB | 213 | A | C2-N3-C4 | -8.67 | 106.27 | 110.60 |
| 26 | BB | 783 | A | N7-C8-N9 | -8.67 | 109.47 | 113.80 |
| 26 | BB | 111 | A | C3'-C2'-C1' | 8.66 | 108.43 | 101.50 |
| 26 | BB | 338 | G | C4-C5-N7 | -8.66 | 107.33 | 110.80 |
| 26 | BB | 1446 | C | P-O3'-C3' | 8.66 | 130.10 | 119.70 |
| 26 | BB | 1593 | A | C4-C5-N7 | -8.66 | 106.37 | 110.70 |
| 26 | BB | 1597 | A | C8-N9-C4 | -8.66 | 102.33 | 105.80 |
| 26 | BB | 1871 | A | N7-C8-N9 | 8.66 | 118.13 | 113.80 |
| 26 | BB | 2205 | A | C2-N3-C4 | 8.66 | 114.93 | 110.60 |
| 26 | BB | 2799 | A | N1-C6-N6 | -8.66 | 113.40 | 118.60 |
| 26 | BB | 2325 | G | C5-N7-C8 | -8.66 | 99.97 | 104.30 |
| 1 | AA | 838 | G | C3'-C2'-C1' | -8.66 | 94.57 | 101.50 |
| 1 | AA | 1277 | C | N3-C2-O2 | -8.66 | 115.84 | 121.90 |
| 1 | AA | 1298 | U | N1-C2-N3 | 8.66 | 120.10 | 114.90 |
| 2 | AB | 56 | C | C3'-C2'-C1' | 8.66 | 108.43 | 101.50 |
| 26 | BB | 1572 | A | N9-C1'-C2' | -8.66 | 102.47 | 112.00 |
| 1 | AA | 748 | G | C8-N9-C4 | -8.66 | 102.94 | 106.40 |
| 1 | AA | 800 | G | N9-C4-C5 | 8.66 | 108.86 | 105.40 |
| 1 | AA | 1252 | A | N1-C6-N6 | 8.66 | 123.79 | 118.60 |
| 26 | BB | 1593 | A | C2-N3-C4 | -8.66 | 106.27 | 110.60 |
| 1 | AA | 51 | A | N1-C2-N3 | -8.65 | 124.97 | 129.30 |
| 1 | AA | 351 | G | C2-N3-C4 | 8.65 | 116.23 | 111.90 |
| 26 | BB | 782 | A | N1-C6-N6 | 8.65 | 123.79 | 118.60 |
| 26 | BB | 791 | C | C5-C6-N1 | -8.65 | 116.67 | 121.00 |
| 26 | BB | 1786 | A | N1-C2-N3 | -8.65 | 124.97 | 129.30 |
| 26 | BB | 2454 | G | C4-C5-N7 | 8.65 | 114.26 | 110.80 |
| 1 | AA | 384 | G | C6-N1-C2 | -8.65 | 119.91 | 125.10 |
| 1 | AA | 959 | A | C5-C6-N1 | 8.65 | 122.03 | 117.70 |
| 1 | AA | 1141 | C | C6-N1-C2 | 8.65 | 123.76 | 120.30 |
| 26 | BB | 123 | G | N9-C4-C5 | 8.65 | 108.86 | 105.40 |
| 26 | BB | 424 | G | C2-N3-C4 | 8.65 | 116.23 | 111.90 |
| 26 | BB | 893 | C | N3-C4-C5 | 8.65 | 125.36 | 121.90 |
| 26 | BB | 2357 | G | C4-C5-N7 | -8.65 | 107.34 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2640 | G | C5-C6-O6 | -8.65 | 123.41 | 128.60 |
| 1 | AA | 1161 | C | C5-C6-N1 | -8.65 | 116.67 | 121.00 |
| 6 | AF | 36 | PHE | CB-CG-CD2 | -8.65 | 114.75 | 120.80 |
| 26 | BB | 1416 | G | C4'-C3'-C2' | -8.65 | 93.95 | 102.60 |
| 26 | BB | 1440 | U | C2-N3-C4 | -8.65 | 121.81 | 127.00 |
| 26 | BB | 2045 | C | O4'-C1'-N1 | 8.65 | 115.12 | 108.20 |
| 26 | BB | 2612 | C | C2-N3-C4 | -8.65 | 115.58 | 119.90 |
| 34 | BJ | 93 | ARG | NE-CZ-NH2 | 8.65 | 124.62 | 120.30 |
| 26 | BB | 703 | U | C1'-O4'-C4' | 8.65 | 116.82 | 109.90 |
| 26 | BB | 2237 | G | N9-C4-C5 | 8.65 | 108.86 | 105.40 |
| 1 | AA | 127 | G | N1-C6-O6 | 8.65 | 125.09 | 119.90 |
| 26 | BB | 1426 | G | C4-C5-N7 | -8.65 | 107.34 | 110.80 |
| 26 | BB | 2750 | A | C1'-O4'-C4' | -8.65 | 102.98 | 109.90 |
| 28 | BD | 79 | ARG | NE-CZ-NH2 | 8.65 | 124.62 | 120.30 |
| 26 | BB | 2330 | G | N7-C8-N9 | 8.65 | 117.42 | 113.10 |
| 1 | AA | 202 | G | C4'-C3'-C2' | -8.64 | 93.96 | 102.60 |
| 1 | AA | 712 | A | C5'-C4'-O4' | 8.64 | 119.47 | 109.10 |
| 26 | BB | 881 | G | N1-C6-O6 | -8.64 | 114.71 | 119.90 |
| 2 | AB | 23 | A | C3'-C2'-C1' | 8.64 | 108.42 | 101.50 |
| 26 | BB | 1505 | A | C4-C5-C6 | -8.64 | 112.68 | 117.00 |
| 28 | BD | 102 | TYR | CB-CG-CD2 | 8.64 | 126.19 | 121.00 |
| 1 | AA | 38 | G | C8-N9-C4 | -8.64 | 102.94 | 106.40 |
| 1 | AA | 241 | G | N7-C8-N9 | 8.64 | 117.42 | 113.10 |
| 1 | AA | 293 | G | C4-C5-C6 | 8.64 | 123.98 | 118.80 |
| 12 | AL | 40 | ARG | NE-CZ-NH2 | -8.64 | 115.98 | 120.30 |
| 26 | BB | 1592 | C | N3-C2-O2 | -8.64 | 115.85 | 121.90 |
| 26 | BB | 2702 | G | C5'-C4'-O4' | 8.64 | 119.47 | 109.10 |
| 32 | BH | 82 | PHE | CB-CG-CD2 | -8.64 | 114.75 | 120.80 |
| 1 | AA | 276 | G | C5-N7-C8 | -8.64 | 99.98 | 104.30 |
| 1 | AA | 531 | U | N1-C2-N3 | 8.64 | 120.08 | 114.90 |
| 1 | AA | 119 | A | C5'-C4'-O4' | -8.64 | 98.74 | 109.10 |
| 1 | AA | 1104 | G | C2-N3-C4 | 8.64 | 116.22 | 111.90 |
| 3 | AC | 56 | G | C4-C5-C6 | 8.64 | 123.98 | 118.80 |
| 26 | BB | 121 | G | N1-C2-N3 | -8.64 | 118.72 | 123.90 |
| 1 | AA | 1272 | G | N7-C8-N9 | 8.64 | 117.42 | 113.10 |
| 26 | BB | 1859 | U | N3-C2-O2 | -8.64 | 116.15 | 122.20 |
| 1 | AA | 1482 | G | C5-C6-O6 | -8.64 | 123.42 | 128.60 |
| 1 | AA | 1486 | G | C2-N3-C4 | -8.63 | 107.58 | 111.90 |
| 4 | AD | 19 | G | N9-C4-C5 | 8.63 | 108.85 | 105.40 |
| 18 | AR | 76 | ARG | NE-CZ-NH1 | 8.63 | 124.62 | 120.30 |
| 26 | BB | 16 | C | C2-N3-C4 | 8.64 | 124.22 | 119.90 |
| 26 | BB | 986 | C | P-O5'-C5' | 8.64 | 134.72 | 120.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 503 | A | C5-N7-C8 | 8.63 | 108.22 | 103.90 |
| 26 | BB | 696 | G | C5-C6-O6 | -8.63 | 123.42 | 128.60 |
| 26 | BB | 2179 | C | C5-C6-N1 | 8.64 | 125.32 | 121.00 |
| 1 | AA | 1147 | C | N3-C4-N4 | 8.63 | 124.04 | 118.00 |
| 2 | AB | 13 | C | N3-C2-O2 | 8.63 | 127.94 | 121.90 |
| 4 | AD | 40 | C | O4'-C1'-N1 | 8.63 | 115.11 | 108.20 |
| 26 | BB | 487 | C | N1-C2-O2 | 8.63 | 124.08 | 118.90 |
| 26 | BB | 2450 | A | C6-C5-N7 | -8.63 | 126.26 | 132.30 |
| 1 | AA | 717 | U | O4'-C1'-N1 | 8.63 | 115.10 | 108.20 |
| 26 | BB | 242 | G | C5-C6-N1 | 8.63 | 115.82 | 111.50 |
| 26 | BB | 527 | C | N3-C4-C5 | -8.63 | 118.45 | 121.90 |
| 26 | BB | 950 | G | C8-N9-C4 | -8.63 | 102.95 | 106.40 |
| 26 | BB | 1002 | G | C5-C6-O6 | -8.63 | 123.42 | 128.60 |
| 26 | BB | 1983 | G | N7-C8-N9 | 8.63 | 117.42 | 113.10 |
| 26 | BB | 2184 | A | C5-C6-N1 | 8.63 | 122.02 | 117.70 |
| 26 | BB | 2491 | U | C2-N1-C1' | 8.63 | 128.06 | 117.70 |
| 26 | BB | 2774 | C | N3-C2-O2 | -8.63 | 115.86 | 121.90 |
| 1 | AA | 197 | A | N7-C8-N9 | 8.63 | 118.11 | 113.80 |
| 26 | BB | 203 | A | C5-N7-C8 | -8.63 | 99.59 | 103.90 |
| 26 | BB | 1192 | G | N1-C2-N3 | -8.63 | 118.72 | 123.90 |
| 26 | BB | 1347 | A | N1-C2-N3 | 8.63 | 133.61 | 129.30 |
| 1 | AA | 648 | A | N1-C2-N3 | 8.62 | 133.61 | 129.30 |
| 26 | BB | 1508 | A | C5-C6-N1 | 8.62 | 122.01 | 117.70 |
| 26 | BB | 2185 | U | C4'-C3'-C2' | -8.62 | 93.97 | 102.60 |
| 1 | AA | 219 | U | C5-C6-N1 | -8.62 | 118.39 | 122.70 |
| 1 | AA | 681 | A | N9-C4-C5 | 8.62 | 109.25 | 105.80 |
| 1 | AA | 1242 | G | O4'-C1'-N9 | 8.62 | 115.10 | 108.20 |
| 25 | BA | 71 | C | O4'-C1'-N1 | 8.62 | 115.10 | 108.20 |
| 1 | AA | 1218 | C | N3-C4-C5 | 8.62 | 125.35 | 121.90 |
| 26 | BB | 323 | C | C4-C5-C6 | -8.62 | 113.09 | 117.40 |
| 26 | BB | 524 | G | N3-C4-N9 | 8.62 | 131.17 | 126.00 |
| 1 | AA | 1245 | C | O4'-C1'-N1 | 8.62 | 115.10 | 108.20 |
| 26 | BB | 2731 | G | N7-C8-N9 | -8.62 | 108.79 | 113.10 |
| 1 | AA | 366 | A | C3'-C2'-C1' | -8.62 | 94.61 | 101.50 |
| 26 | BB | 248 | G | N9-C4-C5 | 8.62 | 108.85 | 105.40 |
| 26 | BB | 574 | A | C3'-C2'-C1' | 8.62 | 108.39 | 101.50 |
| 26 | BB | 991 | C | C1'-O4'-C4' | 8.62 | 116.80 | 109.90 |
| 26 | BB | 1051 | G | N3-C4-N9 | 8.62 | 131.17 | 126.00 |
| 26 | BB | 1893 | C | C6-N1-C2 | -8.62 | 116.85 | 120.30 |
| 26 | BB | 2304 | G | C5-C6-O6 | -8.62 | 123.43 | 128.60 |
| 26 | BB | 2441 | U | C6-N1-C2 | -8.62 | 115.83 | 121.00 |
| 1 | AA | 260 | G | C6-C5-N7 | 8.61 | 135.57 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 538 | G | N9-C4-C5 | 8.62 | 108.85 | 105.40 |
| 1 | AA | 940 | C | O4'-C1'-N1 | 8.62 | 115.09 | 108.20 |
| 26 | BB | 1768 | C | C4'-C3'-C2' | -8.62 | 93.98 | 102.60 |
| 26 | BB | 2425 | A | C8-N9-C4 | -8.62 | 102.35 | 105.80 |
| 26 | BB | 2470 | G | C5'-C4'-O4' | 8.62 | 119.44 | 109.10 |
| 1 | AA | 202 | G | C5-C6-O6 | -8.61 | 123.43 | 128.60 |
| 1 | AA | 239 | U | N1-C2-N3 | 8.61 | 120.07 | 114.90 |
| 1 | AA | 318 | G | C2-N3-C4 | 8.61 | 116.21 | 111.90 |
| 4 | AD | 22 | A | P-O3'-C3' | 8.61 | 130.03 | 119.70 |
| 26 | BB | 2828 | G | O4'-C1'-N9 | 8.61 | 115.09 | 108.20 |
| 1 | AA | 908 | A | C5-C6-N1 | 8.61 | 122.00 | 117.70 |
| 1 | AA | 1310 | G | O4'-C1'-N9 | 8.61 | 115.09 | 108.20 |
| 26 | BB | 42 | A | C8-N9-C4 | -8.61 | 102.36 | 105.80 |
| 26 | BB | 295 | G | N3-C4-C5 | -8.61 | 124.29 | 128.60 |
| 26 | BB | 530 | G | N3-C2-N2 | 8.61 | 125.93 | 119.90 |
| 26 | BB | 834 | G | C5'-C4'-O4' | 8.61 | 119.43 | 109.10 |
| 26 | BB | 843 | G | C6-N1-C2 | -8.61 | 119.93 | 125.10 |
| 26 | BB | 1202 | G | N9-C4-C5 | 8.61 | 108.84 | 105.40 |
| 26 | BB | 1420 | A | C4-C5-C6 | 8.61 | 121.31 | 117.00 |
| 1 | AA | 104 | G | N1-C6-O6 | 8.61 | 125.06 | 119.90 |
| 1 | AA | 485 | U | C2-N3-C4 | -8.61 | 121.83 | 127.00 |
| 12 | AL | 48 | ARG | NE-CZ-NH1 | 8.61 | 124.61 | 120.30 |
| 26 | BB | 2742 | G | N1-C2-N3 | 8.61 | 129.07 | 123.90 |
| 2 | AB | 68 | C | N3-C2-O2 | -8.61 | 115.87 | 121.90 |
| 26 | BB | 1047 | G | C5-C6-O6 | -8.61 | 123.43 | 128.60 |
| 26 | BB | 2156 | G | C4-C5-N7 | 8.61 | 114.24 | 110.80 |
| 26 | BB | 2376 | A | C5-C6-N6 | -8.61 | 116.81 | 123.70 |
| 1 | AA | 746 | A | N7-C8-N9 | 8.61 | 118.10 | 113.80 |
| 1 | AA | 1343 | G | O4'-C1'-N9 | 8.61 | 115.08 | 108.20 |
| 26 | BB | 427 | U | N3-C2-O2 | -8.61 | 116.17 | 122.20 |
| 26 | BB | 781 | A | O4'-C1'-N9 | 8.61 | 115.08 | 108.20 |
| 26 | BB | 880 | G | C8-N9-C4 | -8.61 | 102.96 | 106.40 |
| 26 | BB | 2141 | G | N3-C4-C5 | -8.61 | 124.30 | 128.60 |
| 26 | BB | 1174 | U | N1-C2-N3 | 8.60 | 120.06 | 114.90 |
| 26 | BB | 2403 | C | C4-C5-C6 | -8.60 | 113.10 | 117.40 |
| 43 | BS | 23 | TYR | CB-CG-CD1 | -8.60 | 115.84 | 121.00 |
| 26 | BB | 2712 | C | N1-C2-N3 | -8.60 | 113.18 | 119.20 |
| 1 | AA | 981 | U | O5'-P-OP2 | -8.60 | 97.96 | 105.70 |
| 26 | BB | 349 | U | C5-C4-O4 | 8.60 | 131.06 | 125.90 |
| 26 | BB | 2347 | C | O4'-C1'-N1 | 8.60 | 115.08 | 108.20 |
| 1 | AA | 993 | G | C5-C6-O6 | -8.60 | 123.44 | 128.60 |
| 1 | AA | 1184 | G | C5-C6-O6 | -8.60 | 123.44 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 45 | BU | 38 | TYR | CB-CG-CD1 | -8.60 | 115.84 | 121.00 |
| 1 | AA | 4 | U | C4-C5-C6 | -8.60 | 114.54 | 119.70 |
| 26 | BB | 32 | C | C5-C4-N4 | -8.60 | 114.18 | 120.20 |
| 26 | BB | 446 | G | N7-C8-N9 | 8.60 | 117.40 | 113.10 |
| 26 | BB | 1278 | C | O4'-C1'-N1 | 8.60 | 115.08 | 108.20 |
| 26 | BB | 1402 | U | C5'-C4'-O4' | 8.60 | 119.42 | 109.10 |
| 3 | AC | 57 | C | C3'-C2'-C1' | 8.60 | 108.38 | 101.50 |
| 26 | BB | 1323 | C | O4'-C1'-N1 | 8.60 | 115.08 | 108.20 |
| 26 | BB | 1782 | U | C4-C5-C6 | 8.60 | 124.86 | 119.70 |
| 26 | BB | 2742 | G | C2-N3-C4 | -8.60 | 107.60 | 111.90 |
| 1 | AA | 673 | A | C8-N9-C4 | -8.59 | 102.36 | 105.80 |
| 1 | AA | 1204 | A | C4-C5-C6 | -8.59 | 112.70 | 117.00 |
| 1 | AA | 1397 | C | C3'-C2'-C1' | -8.59 | 94.62 | 101.50 |
| 26 | BB | 1579 | A | O4'-C4'-C3' | 8.59 | 112.97 | 106.10 |
| 26 | BB | 2087 | G | C2-N3-C4 | 8.59 | 116.20 | 111.90 |
| 26 | BB | 2016 | U | O4'-C1'-N1 | 8.59 | 115.07 | 108.20 |
| 1 | AA | 262 | A | C6-C5-N7 | 8.59 | 138.31 | 132.30 |
| 1 | AA | 575 | G | C8-N9-C4 | -8.59 | 102.96 | 106.40 |
| 1 | AA | 577 | G | N9-C4-C5 | -8.59 | 101.96 | 105.40 |
| 26 | BB | 146 | A | C8-N9-C4 | -8.59 | 102.36 | 105.80 |
| 26 | BB | 463 | G | C3'-C2'-C1' | -8.59 | 94.63 | 101.50 |
| 26 | BB | 598 | U | C6-N1-C2 | -8.59 | 115.84 | 121.00 |
| 26 | BB | 1236 | G | C4-C5-N7 | -8.59 | 107.36 | 110.80 |
| 26 | BB | 2014 | A | C8-N9-C4 | -8.59 | 102.36 | 105.80 |
| 1 | AA | 986 | U | O4'-C1'-N1 | 8.59 | 115.07 | 108.20 |
| 1 | AA | 1363 | A | C3'-C2'-C1' | -8.59 | 94.63 | 101.50 |
| 26 | BB | 1472 | C | O4'-C1'-N1 | 8.59 | 115.07 | 108.20 |
| 26 | BB | 2877 | G | C4-C5-N7 | -8.59 | 107.36 | 110.80 |
| 26 | BB | 1477 | A | C2-N3-C4 | 8.59 | 114.89 | 110.60 |
| 1 | AA | 3 | A | C4-C5-C6 | -8.59 | 112.71 | 117.00 |
| 26 | BB | 73 | A | C8-N9-C4 | -8.59 | 102.36 | 105.80 |
| 26 | BB | 580 | U | C5-C6-N1 | -8.59 | 118.41 | 122.70 |
| 26 | BB | 1813 | G | C4-C5-N7 | 8.59 | 114.23 | 110.80 |
| 26 | BB | 430 | A | P-O3'-C3' | 8.59 | 130.00 | 119.70 |
| 26 | BB | 916 | G | C5-N7-C8 | -8.59 | 100.01 | 104.30 |
| 26 | BB | 1823 | G | N3-C4-C5 | -8.59 | 124.31 | 128.60 |
| 26 | BB | 1017 | G | C5-C6-N1 | 8.59 | 115.79 | 111.50 |
| 26 | BB | 1216 | G | N3-C4-N9 | 8.59 | 131.15 | 126.00 |
| 26 | BB | 1414 | C | N1-C2-O2 | 8.59 | 124.05 | 118.90 |
| 26 | BB | 1991 | U | C5-C6-N1 | -8.59 | 118.41 | 122.70 |
| 26 | BB | 2618 | G | N3-C4-C5 | -8.59 | 124.31 | 128.60 |
| 1 | AA | 790 | A | C8-N9-C4 | -8.58 | 102.37 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1517 | G | N3-C4-C5 | -8.58 | 124.31 | 128.60 |
| 26 | BB | 1711 | A | C5-C6-N6 | -8.58 | 116.83 | 123.70 |
| 1 | AA | 217 | C | N3-C2-O2 | -8.58 | 115.89 | 121.90 |
| 26 | BB | 2567 | G | C4-C5-N7 | 8.58 | 114.23 | 110.80 |
| 1 | AA | 1046 | A | N9-C4-C5 | 8.58 | 109.23 | 105.80 |
| 1 | AA | 1323 | G | N3-C4-C5 | -8.58 | 124.31 | 128.60 |
| 26 | BB | 177 | G | C4-C5-N7 | -8.58 | 107.37 | 110.80 |
| 1 | AA | 254 | G | C5-C6-N1 | 8.58 | 115.79 | 111.50 |
| 1 | AA | 642 | A | C3'-C2'-C1' | -8.58 | 94.64 | 101.50 |
| 1 | AA | 759 | A | N7-C8-N9 | 8.58 | 118.09 | 113.80 |
| 26 | BB | 725 | G | N9-C4-C5 | 8.58 | 108.83 | 105.40 |
| 26 | BB | 312 | G | C6-C5-N7 | -8.58 | 125.25 | 130.40 |
| 26 | BB | 739 | A | C2-N3-C4 | 8.58 | 114.89 | 110.60 |
| 26 | BB | 992 | C | N3-C4-C5 | -8.58 | 118.47 | 121.90 |
| 26 | BB | 1352 | U | N3-C4-O4 | -8.58 | 113.40 | 119.40 |
| 26 | BB | 1530 | G | C5-N7-C8 | 8.58 | 108.59 | 104.30 |
| 26 | BB | 2560 | A | N7-C8-N9 | -8.58 | 109.51 | 113.80 |
| 1 | AA | 986 | U | C5-C4-O4 | 8.57 | 131.04 | 125.90 |
| 1 | AA | 1071 | C | O4'-C1'-N1 | 8.57 | 115.06 | 108.20 |
| 26 | BB | 2619 | C | O4'-C1'-N1 | 8.57 | 115.06 | 108.20 |
| 26 | BB | 308 | G | C5-C6-O6 | 8.57 | 133.74 | 128.60 |
| 26 | BB | 375 | G | C6-N1-C2 | 8.57 | 130.24 | 125.10 |
| 26 | BB | 412 | A | N9-C4-C5 | 8.57 | 109.23 | 105.80 |
| 26 | BB | 530 | G | C6-N1-C2 | -8.57 | 119.96 | 125.10 |
| 26 | BB | 684 | G | C3'-C2'-C1' | -8.57 | 94.64 | 101.50 |
| 1 | AA | 475 | C | N3-C2-O2 | -8.57 | 115.90 | 121.90 |
| 1 | AA | 1538 | C | P-O3'-C3' | 8.57 | 129.99 | 119.70 |
| 1 | AA | 500 | G | N9-C4-C5 | 8.57 | 108.83 | 105.40 |
| 1 | AA | 1106 | G | C6-N1-C2 | -8.57 | 119.96 | 125.10 |
| 4 | AD | 75 | C | C1'-O4'-C4' | -8.57 | 103.04 | 109.90 |
| 26 | BB | 528 | A | C5-C6-N1 | 8.57 | 121.98 | 117.70 |
| 26 | BB | 906 | U | N1-C2-N3 | 8.57 | 120.04 | 114.90 |
| 26 | BB | 1197 | G | C2-N3-C4 | 8.57 | 116.18 | 111.90 |
| 26 | BB | 1807 | G | N9-C4-C5 | 8.57 | 108.83 | 105.40 |
| 26 | BB | 2131 | U | N1-C2-N3 | 8.57 | 120.04 | 114.90 |
| 26 | BB | 2785 | C | N1-C2-N3 | -8.57 | 113.20 | 119.20 |
| 3 | AC | 57 | C | O4'-C1'-N1 | 8.57 | 115.05 | 108.20 |
| 26 | BB | 153 | U | N1-C2-N3 | 8.57 | 120.04 | 114.90 |
| 26 | BB | 342 | A | C4-C5-C6 | -8.57 | 112.72 | 117.00 |
| 26 | BB | 2440 | C | C3'-C2'-C1' | -8.57 | 94.65 | 101.50 |
| 1 | AA | 1368 | A | N1-C6-N6 | -8.56 | 113.46 | 118.60 |
| 26 | BB | 342 | A | C5'-C4'-O4' | 8.56 | 119.38 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1211 | C | O5'-P-OP1 | -8.56 | 97.99 | 105.70 |
| 26 | BB | 2424 | C | N1-C2-N3 | -8.56 | 113.20 | 119.20 |
| 25 | BA | 24 | G | N3-C4-C5 | -8.56 | 124.32 | 128.60 |
| 26 | BB | 1011 | G | N9-C4-C5 | 8.56 | 108.83 | 105.40 |
| 26 | BB | 1755 | A | C5-C6-N1 | 8.56 | 121.98 | 117.70 |
| 26 | BB | 2672 | U | N3-C2-O2 | -8.56 | 116.20 | 122.20 |
| 3 | AC | 33 | A | N1-C2-N3 | -8.56 | 125.02 | 129.30 |
| 1 | AA | 1202 | U | O4'-C4'-C3' | 8.56 | 112.95 | 106.10 |
| 4 | AD | 10 | G | C4-C5-N7 | -8.56 | 107.38 | 110.80 |
| 21 | AU | 50 | TYR | CB-CG-CD1 | -8.56 | 115.86 | 121.00 |
| 26 | BB | 889 | C | N3-C4-C5 | -8.56 | 118.48 | 121.90 |
| 26 | BB | 1140 | C | N1-C2-O2 | 8.56 | 124.04 | 118.90 |
| 26 | BB | 2100 | G | N3-C4-C5 | -8.56 | 124.32 | 128.60 |
| 1 | AA | 1411 | C | C5-C6-N1 | 8.56 | 125.28 | 121.00 |
| 26 | BB | 162 | U | O4'-C1'-C2' | -8.56 | 97.24 | 105.80 |
| 26 | BB | 492 | A | C8-N9-C4 | -8.56 | 102.38 | 105.80 |
| 26 | BB | 656 | G | N1-C2-N3 | -8.56 | 118.77 | 123.90 |
| 26 | BB | 993 | G | C6-C5-N7 | -8.56 | 125.27 | 130.40 |
| 56 | B5 | 12 | ARG | NE-CZ-NH1 | 8.56 | 124.58 | 120.30 |
| 1 | AA | 357 | G | N9-C4-C5 | 8.56 | 108.82 | 105.40 |
| 1 | AA | 784 | A | C5-N7-C8 | -8.56 | 99.62 | 103.90 |
| 1 | AA | 1404 | C | C2-N3-C4 | 8.55 | 124.18 | 119.90 |
| 26 | BB | 752 | A | O4'-C1'-N9 | 8.56 | 115.05 | 108.20 |
| 26 | BB | 1144 | A | O4'-C4'-C3' | 8.56 | 112.94 | 106.10 |
| 2 | AB | 52 | A | N9-C4-C5 | -8.55 | 102.38 | 105.80 |
| 26 | BB | 827 | U | N1-C2-O2 | -8.55 | 116.81 | 122.80 |
| 26 | BB | 922 | C | C2-N3-C4 | 8.55 | 124.18 | 119.90 |
| 26 | BB | 1148 | U | C2-N3-C4 | -8.55 | 121.87 | 127.00 |
| 26 | BB | 1486 | U | C4-C5-C6 | 8.55 | 124.83 | 119.70 |
| 26 | BB | 2004 | G | N3-C4-C5 | -8.55 | 124.32 | 128.60 |
| 26 | BB | 2081 | U | O4'-C1'-N1 | 8.56 | 115.05 | 108.20 |
| 1 | AA | 1297 | G | C5'-C4'-O4' | 8.55 | 119.36 | 109.10 |
| 1 | AA | 1331 | G | N9-C4-C5 | 8.55 | 108.82 | 105.40 |
| 6 | AF | 130 | ARG | NE-CZ-NH2 | -8.55 | 116.03 | 120.30 |
| 11 | AK | 127 | TYR | CB-CG-CD2 | -8.55 | 115.87 | 121.00 |
| 26 | BB | 248 | G | N3-C4-C5 | -8.55 | 124.32 | 128.60 |
| 26 | BB | 372 | G | C3'-C2'-C1' | -8.55 | 94.66 | 101.50 |
| 26 | BB | 1934 | C | O4'-C1'-N1 | 8.55 | 115.04 | 108.20 |
| 26 | BB | 2703 | C | N3-C4-C5 | -8.55 | 118.48 | 121.90 |
| 1 | AA | 31 | G | N7-C8-N9 | 8.55 | 117.37 | 113.10 |
| 1 | AA | 1322 | C | P-O3'-C3' | 8.55 | 129.96 | 119.70 |
| 26 | BB | 2243 | U | O4'-C1'-N1 | 8.55 | 115.04 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1365 | G | N3-C2-N2 | 8.55 | 125.88 | 119.90 |
| 1 | AA | 1491 | G | N3-C4-N9 | 8.55 | 131.13 | 126.00 |
| 26 | BB | 1085 | A | O4'-C1'-N9 | 8.55 | 115.04 | 108.20 |
| 37 | BM | 17 | ARG | NE-CZ-NH2 | -8.55 | 116.03 | 120.30 |
| 1 | AA | 14 | U | C4-C5-C6 | -8.55 | 114.57 | 119.70 |
| 1 | AA | 785 | G | C6-C5-N7 | -8.55 | 125.27 | 130.40 |
| 1 | AA | 930 | C | C2-N3-C4 | 8.55 | 124.17 | 119.90 |
| 1 | AA | 1309 | G | C2-N3-C4 | 8.54 | 116.17 | 111.90 |
| 1 | AA | 1465 | A | C3'-C2'-C1' | -8.54 | 94.66 | 101.50 |
| 2 | AB | 48 | U | C6-N1-C2 | 8.55 | 126.13 | 121.00 |
| 3 | AC | 16 | A | O4'-C1'-N9 | 8.55 | 115.04 | 108.20 |
| 26 | BB | 629 | G | N1-C6-O6 | -8.55 | 114.77 | 119.90 |
| 26 | BB | 1114 | C | C5'-C4'-C3' | -8.55 | 102.33 | 116.00 |
| 26 | BB | 1673 | G | C4-C5-N7 | -8.55 | 107.38 | 110.80 |
| 30 | BF | 88 | ARG | NE-CZ-NH1 | -8.54 | 116.03 | 120.30 |
| 1 | AA | 493 | A | C6-N1-C2 | -8.54 | 113.48 | 118.60 |
| 26 | BB | 511 | U | C5-C6-N1 | -8.54 | 118.43 | 122.70 |
| 26 | BB | 526 | A | O4'-C1'-N9 | -8.54 | 101.37 | 108.20 |
| 26 | BB | 891 | G | N1-C2-N2 | 8.54 | 123.89 | 116.20 |
| 26 | BB | 2320 | U | C2-N3-C4 | -8.54 | 121.88 | 127.00 |
| 26 | BB | 2491 | U | C4-C5-C6 | 8.54 | 124.83 | 119.70 |
| 1 | AA | 452 | A | O4'-C1'-N9 | 8.54 | 115.03 | 108.20 |
| 1 | AA | 941 | G | C4-C5-N7 | -8.54 | 107.38 | 110.80 |
| 26 | BB | 124 | G | C6-N1-C2 | -8.54 | 119.98 | 125.10 |
| 26 | BB | 2385 | C | C5'-C4'-O4' | 8.54 | 119.35 | 109.10 |
| 26 | BB | 2570 | G | C5-C6-O6 | -8.54 | 123.48 | 128.60 |
| 26 | BB | 1977 | A | O4'-C1'-N9 | 8.54 | 115.03 | 108.20 |
| 26 | BB | 2224 | G | C4-C5-N7 | -8.54 | 107.39 | 110.80 |
| 1 | AA | 12 | U | C5-C6-N1 | -8.54 | 118.43 | 122.70 |
| 1 | AA | 241 | G | C2-N3-C4 | 8.54 | 116.17 | 111.90 |
| 1 | AA | 272 | C | P-O3'-C3' | 8.54 | 129.94 | 119.70 |
| 1 | AA | 688 | G | C4'-C3'-C2' | -8.54 | 94.06 | 102.60 |
| 1 | AA | 1075 | U | C5-C4-O4 | -8.54 | 120.78 | 125.90 |
| 1 | AA | 1306 | A | C8-N9-C4 | -8.54 | 102.39 | 105.80 |
| 26 | BB | 1026 | G | N9-C4-C5 | 8.54 | 108.81 | 105.40 |
| 26 | BB | 2250 | G | N1-C6-O6 | -8.54 | 114.78 | 119.90 |
| 1 | AA | 530 | G | C5-C6-N1 | 8.53 | 115.77 | 111.50 |
| 1 | AA | 1309 | G | N3-C4-C5 | -8.53 | 124.33 | 128.60 |
| 26 | BB | 170 | U | N1-C2-N3 | 8.54 | 120.02 | 114.90 |
| 26 | BB | 650 | C | N3-C2-O2 | -8.53 | 115.93 | 121.90 |
| 26 | BB | 926 | G | C3'-C2'-C1' | -8.53 | 94.67 | 101.50 |
| 1 | AA | 540 | G | C4-C5-N7 | 8.53 | 114.21 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 894 | G | C5-C6-O6 | 8.53 | 133.72 | 128.60 |
| 4 | AD | 53 | G | C4-C5-C6 | 8.53 | 123.92 | 118.80 |
| 26 | BB | 698 | C | O5'-P-OP2 | -8.53 | 98.02 | 105.70 |
| 26 | BB | 1400 | U | N1-C2-O2 | 8.53 | 128.77 | 122.80 |
| 26 | BB | 278 | A | C8-N9-C4 | -8.53 | 102.39 | 105.80 |
| 26 | BB | 899 | A | C5-C6-N1 | -8.53 | 113.44 | 117.70 |
| 1 | AA | 112 | G | N3-C2-N2 | -8.53 | 113.93 | 119.90 |
| 1 | AA | 418 | C | C6-N1-C2 | -8.53 | 116.89 | 120.30 |
| 25 | BA | 64 | G | N7-C8-N9 | 8.53 | 117.36 | 113.10 |
| 26 | BB | 549 | G | C5-C6-N1 | 8.53 | 115.77 | 111.50 |
| 26 | BB | 878 | A | C4-C5-N7 | 8.53 | 114.97 | 110.70 |
| 26 | BB | 1309 | G | N3-C4-C5 | -8.53 | 124.33 | 128.60 |
| 1 | AA | 1455 | G | N9-C4-C5 | 8.53 | 108.81 | 105.40 |
| 2 | AB | 61 | C | N1-C2-O2 | -8.53 | 113.78 | 118.90 |
| 26 | BB | 423 | A | N7-C8-N9 | 8.53 | 118.06 | 113.80 |
| 26 | BB | 1096 | A | N1-C6-N6 | 8.53 | 123.72 | 118.60 |
| 26 | BB | 1823 | G | C5-C6-O6 | -8.53 | 123.48 | 128.60 |
| 26 | BB | 2524 | G | C5-C6-O6 | 8.53 | 133.72 | 128.60 |
| 26 | BB | 2645 | G | C4-C5-N7 | -8.53 | 107.39 | 110.80 |
| 26 | BB | 776 | G | N3-C4-C5 | -8.53 | 124.34 | 128.60 |
| 26 | BB | 1867 | G | C8-N9-C4 | -8.53 | 102.99 | 106.40 |
| 1 | AA | 1050 | G | C4-C5-N7 | 8.53 | 114.21 | 110.80 |
| 1 | AA | 1171 | A | C5-C6-N1 | 8.53 | 121.96 | 117.70 |
| 26 | BB | 323 | C | C5-C6-N1 | 8.53 | 125.26 | 121.00 |
| 26 | BB | 1721 | G | C1'-O4'-C4' | -8.53 | 103.08 | 109.90 |
| 26 | BB | 1826 | G | N1-C6-O6 | -8.53 | 114.78 | 119.90 |
| 26 | BB | 1913 | A | N1-C6-N6 | 8.53 | 123.72 | 118.60 |
| 26 | BB | 1979 | U | O4'-C1'-N1 | 8.53 | 115.02 | 108.20 |
| 26 | BB | 2067 | G | O4'-C1'-N9 | 8.53 | 115.02 | 108.20 |
| 26 | BB | 2117 | A | C6-N1-C2 | -8.53 | 113.48 | 118.60 |
| 26 | BB | 2140 | G | C1'-O4'-C4' | -8.53 | 103.08 | 109.90 |
| 26 | BB | 2798 | U | N3-C4-O4 | 8.53 | 125.37 | 119.40 |
| 1 | AA | 191 | G | N3-C4-N9 | 8.52 | 131.11 | 126.00 |
| 1 | AA | 317 | U | C5-C6-N1 | -8.52 | 118.44 | 122.70 |
| 1 | AA | 622 | A | N1-C2-N3 | -8.52 | 125.04 | 129.30 |
| 1 | AA | 1202 | U | N1-C2-N3 | 8.52 | 120.01 | 114.90 |
| 1 | AA | 1467 | C | N3-C2-O2 | -8.52 | 115.93 | 121.90 |
| 3 | AC | 59 | A | C2-N3-C4 | 8.52 | 114.86 | 110.60 |
| 20 | AT | 61 | ARG | NE-CZ-NH1 | 8.52 | 124.56 | 120.30 |
| 26 | BB | 944 | C | O4'-C1'-N1 | 8.52 | 115.02 | 108.20 |
| 26 | BB | 1195 | G | N3-C2-N2 | 8.52 | 125.87 | 119.90 |
| 26 | BB | 190 | A | C5-C6-N1 | 8.52 | 121.96 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2331 | G | C5-N7-C8 | -8.52 | 100.04 | 104.30 |
| 26 | BB | 1402 | U | O4'-C1'-N1 | 8.52 | 115.02 | 108.20 |
| 26 | BB | 1621 | U | N3-C2-O2 | -8.52 | 116.23 | 122.20 |
| 26 | BB | 1933 | G | C3'-C2'-C1' | 8.52 | 108.32 | 101.50 |
| 26 | BB | 2595 | G | O4'-C1'-N9 | 8.52 | 115.02 | 108.20 |
| 1 | AA | 1299 | A | C4-C5-N7 | -8.52 | 106.44 | 110.70 |
| 1 | AA | 1441 | A | O4'-C1'-N9 | 8.52 | 115.02 | 108.20 |
| 1 | AA | 1499 | A | N9-C1'-C2' | -8.52 | 102.63 | 112.00 |
| 1 | AA | 1514 | G | C6-C5-N7 | -8.52 | 125.29 | 130.40 |
| 2 | AB | 48 | U | C5-C4-O4 | 8.52 | 131.01 | 125.90 |
| 26 | BB | 247 | G | C3'-C2'-C1' | 8.52 | 108.31 | 101.50 |
| 26 | BB | 1364 | G | C5-N7-C8 | -8.52 | 100.04 | 104.30 |
| 26 | BB | 1569 | A | C5-N7-C8 | 8.52 | 108.16 | 103.90 |
| 26 | BB | 2122 | U | C5-C4-O4 | -8.52 | 120.79 | 125.90 |
| 47 | BW | 94 | PHE | CB-CG-CD1 | -8.52 | 114.84 | 120.80 |
| 1 | AA | 248 | C | N3-C2-O2 | -8.52 | 115.94 | 121.90 |
| 1 | AA | 715 | A | C6-N1-C2 | 8.52 | 123.71 | 118.60 |
| 26 | BB | 54 | G | N7-C8-N9 | 8.52 | 117.36 | 113.10 |
| 26 | BB | 252 | G | N1-C6-O6 | 8.52 | 125.01 | 119.90 |
| 31 | BG | 132 | ARG | NE-CZ-NH1 | -8.52 | 116.04 | 120.30 |
| 1 | AA | 1521 | C | N3-C4-N4 | 8.51 | 123.96 | 118.00 |
| 26 | BB | 33 | C | C6-N1-C2 | 8.51 | 123.71 | 120.30 |
| 26 | BB | 237 | C | N3-C2-O2 | -8.51 | 115.94 | 121.90 |
| 26 | BB | 340 | A | N3-C4-N9 | 8.51 | 134.21 | 127.40 |
| 26 | BB | 1197 | G | N3-C4-C5 | -8.51 | 124.34 | 128.60 |
| 1 | AA | 180 | U | N3-C4-O4 | -8.51 | 113.44 | 119.40 |
| 26 | BB | 1523 | U | C4-C5-C6 | 8.51 | 124.81 | 119.70 |
| 26 | BB | 1563 | U | N3-C2-O2 | -8.51 | 116.24 | 122.20 |
| 26 | BB | 1786 | A | C2-N3-C4 | 8.51 | 114.86 | 110.60 |
| 26 | BB | 2049 | G | C5-C6-N1 | 8.51 | 115.76 | 111.50 |
| 26 | BB | 2064 | C | N3-C4-N4 | 8.51 | 123.96 | 118.00 |
| 41 | BQ | 30 | ARG | NE-CZ-NH1 | 8.51 | 124.56 | 120.30 |
| 26 | BB | 797 | G | N3-C4-C5 | -8.51 | 124.34 | 128.60 |
| 26 | BB | 1777 | U | C5-C6-N1 | -8.51 | 118.44 | 122.70 |
| 1 | AA | 1422 | G | C3'-C2'-C1' | -8.51 | 94.69 | 101.50 |
| 4 | AD | 16 | C | O4'-C1'-N1 | 8.51 | 115.01 | 108.20 |
| 4 | AD | 57 | C | O4'-C1'-N1 | 8.51 | 115.01 | 108.20 |
| 26 | BB | 1012 | U | C2-N3-C4 | -8.51 | 121.89 | 127.00 |
| 43 | BS | 10 | ARG | NE-CZ-NH1 | 8.51 | 124.56 | 120.30 |
| 1 | AA | 630 | A | N7-C8-N9 | 8.51 | 118.05 | 113.80 |
| 3 | AC | 40 | G | C5-C6-O6 | -8.51 | 123.50 | 128.60 |
| 1 | AA | 7 | A | C6-C5-N7 | 8.51 | 138.25 | 132.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 873 | A | N1-C6-N6 | 8.51 | 123.70 | 118.60 |
| 25 | BA | 10 | G | N1-C6-O6 | -8.51 | 114.80 | 119.90 |
| 1 | AA | 1439 | G | N9-C4-C5 | 8.51 | 108.80 | 105.40 |
| 2 | AB | 65 | C | C3'-C2'-C1' | 8.51 | 108.30 | 101.50 |
| 26 | BB | 329 | G | C5'-C4'-O4' | 8.51 | 119.31 | 109.10 |
| 26 | BB | 420 | C | O4'-C1'-N1 | 8.51 | 115.01 | 108.20 |
| 26 | BB | 1420 | A | N9-C1'-C2' | -8.51 | 102.64 | 112.00 |
| 26 | BB | 1455 | G | N3-C4-C5 | -8.51 | 124.35 | 128.60 |
| 26 | BB | 1865 | U | N3-C2-O2 | -8.51 | 116.25 | 122.20 |
| 26 | BB | 2433 | A | C2-N3-C4 | 8.51 | 114.85 | 110.60 |
| 26 | BB | 2713 | U | O4'-C1'-N1 | 8.51 | 115.00 | 108.20 |
| 3 | AC | 18 | A | O4'-C4'-C3' | 8.50 | 112.90 | 106.10 |
| 26 | BB | 733 | G | O4'-C1'-N9 | 8.50 | 115.00 | 108.20 |
| 1 | AA | 1409 | C | N3-C4-N4 | 8.50 | 123.95 | 118.00 |
| 26 | BB | 83 | A | C5-N7-C8 | -8.50 | 99.65 | 103.90 |
| 26 | BB | 1565 | C | O3'-P-O5' | -8.50 | 87.84 | 104.00 |
| 26 | BB | 105 | C | N1-C2-N3 | -8.50 | 113.25 | 119.20 |
| 26 | BB | 893 | C | O4'-C1'-N1 | 8.50 | 115.00 | 108.20 |
| 26 | BB | 1273 | U | C5-C4-O4 | -8.50 | 120.80 | 125.90 |
| 26 | BB | 2525 | G | O4'-C1'-N9 | 8.50 | 115.00 | 108.20 |
| 26 | BB | 2537 | U | N3-C4-O4 | 8.50 | 125.35 | 119.40 |
| 25 | BA | 43 | C | O4'-C1'-N1 | 8.50 | 115.00 | 108.20 |
| 26 | BB | 6 | A | O4'-C1'-N9 | -8.50 | 101.40 | 108.20 |
| 26 | BB | 112 | U | N1-C1'-C2' | -8.50 | 102.65 | 112.00 |
| 26 | BB | 511 | U | C3'-C2'-C1' | 8.50 | 108.30 | 101.50 |
| 26 | BB | 647 | G | C6-N1-C2 | 8.50 | 130.20 | 125.10 |
| 26 | BB | 1482 | G | O4'-C4'-C3' | 8.50 | 112.90 | 106.10 |
| 26 | BB | 2239 | G | C3'-C2'-C1' | -8.50 | 94.70 | 101.50 |
| 26 | BB | 1197 | G | C5-C6-N1 | 8.50 | 115.75 | 111.50 |
| 26 | BB | 2036 | C | O4'-C1'-N1 | 8.50 | 115.00 | 108.20 |
| 26 | BB | 2406 | A | O4'-C1'-N9 | 8.50 | 115.00 | 108.20 |
| 1 | AA | 521 | G | N1-C2-N2 | 8.50 | 123.85 | 116.20 |
| 1 | AA | 805 | C | C5-C6-N1 | 8.50 | 125.25 | 121.00 |
| 26 | BB | 190 | A | N9-C4-C5 | -8.50 | 102.40 | 105.80 |
| 1 | AA | 849 | G | C4-C5-C6 | 8.50 | 123.90 | 118.80 |
| 1 | AA | 850 | U | C2-N3-C4 | -8.50 | 121.90 | 127.00 |
| 1 | AA | 994 | A | C3'-C2'-C1' | 8.50 | 108.30 | 101.50 |
| 1 | AA | 1321 | U | P-O3'-C3' | 8.50 | 129.90 | 119.70 |
| 26 | BB | 217 | A | O4'-C1'-N9 | 8.50 | 115.00 | 108.20 |
| 26 | BB | 448 | U | N1-C2-N3 | 8.50 | 120.00 | 114.90 |
| 13 | AM | 48 | ARG | NE-CZ-NH2 | 8.49 | 124.55 | 120.30 |
| 26 | BB | 71 | A | C1'-O4'-C4' | -8.49 | 103.11 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 531 | C | N1-C2-O2 | 8.49 | 124.00 | 118.90 |
| 26 | BB | 1476 | U | O4'-C1'-N1 | 8.49 | 115.00 | 108.20 |
| 26 | BB | 1881 | C | N3-C2-O2 | -8.49 | 115.95 | 121.90 |
| 26 | BB | 1901 | A | N1-C2-N3 | -8.49 | 125.05 | 129.30 |
| 1 | AA | 1118 | U | C4-C5-C6 | 8.49 | 124.80 | 119.70 |
| 26 | BB | 326 | G | C8-N9-C4 | -8.49 | 103.00 | 106.40 |
| 26 | BB | 1521 | G | N1-C2-N2 | -8.49 | 108.56 | 116.20 |
| 26 | BB | 1808 | A | C2-N3-C4 | 8.49 | 114.85 | 110.60 |
| 26 | BB | 2322 | A | C3'-C2'-C1' | 8.49 | 108.29 | 101.50 |
| 26 | BB | 2480 | C | N1-C2-N3 | -8.49 | 113.25 | 119.20 |
| 26 | BB | 2556 | C | C4-C5-C6 | -8.49 | 113.15 | 117.40 |
| 26 | BB | 2867 | G | P-O3'-C3' | 8.49 | 129.89 | 119.70 |
| 25 | BA | 63 | C | N3-C2-O2 | -8.49 | 115.96 | 121.90 |
| 25 | BA | 106 | G | C4-C5-N7 | -8.49 | 107.40 | 110.80 |
| 26 | BB | 295 | G | N9-C4-C5 | 8.49 | 108.80 | 105.40 |
| 26 | BB | 855 | G | N9-C4-C5 | 8.49 | 108.80 | 105.40 |
| 26 | BB | 1831 | G | C5-C6-N1 | 8.49 | 115.75 | 111.50 |
| 26 | BB | 829 | A | C5-N7-C8 | -8.49 | 99.66 | 103.90 |
| 26 | BB | 2316 | G | N7-C8-N9 | 8.49 | 117.34 | 113.10 |
| 1 | AA | 148 | G | C8-N9-C4 | -8.49 | 103.00 | 106.40 |
| 1 | AA | 677 | U | N3-C2-O2 | -8.49 | 116.26 | 122.20 |
| 26 | BB | 70 | G | C5-C6-O6 | -8.49 | 123.51 | 128.60 |
| 26 | BB | 287 | G | N3-C4-C5 | -8.49 | 124.36 | 128.60 |
| 26 | BB | 1964 | G | N9-C4-C5 | -8.49 | 102.01 | 105.40 |
| 26 | BB | 2148 | G | N1-C6-O6 | 8.49 | 124.99 | 119.90 |
| 26 | BB | 2154 | A | N1-C2-N3 | -8.49 | 125.06 | 129.30 |
| 26 | BB | 2437 | G | O4'-C1'-N9 | 8.49 | 114.99 | 108.20 |
| 1 | AA | 132 | C | O4'-C1'-N1 | 8.48 | 114.99 | 108.20 |
| 1 | AA | 1517 | G | N1-C6-O6 | 8.48 | 124.99 | 119.90 |
| 1 | AA | 1541 | U | C2-N3-C4 | -8.48 | 121.91 | 127.00 |
| 25 | BA | 20 | G | C8-N9-C4 | -8.48 | 103.01 | 106.40 |
| 26 | BB | 53 | A | N1-C6-N6 | -8.48 | 113.51 | 118.60 |
| 1 | AA | 564 | C | C6-N1-C2 | -8.48 | 116.91 | 120.30 |
| 4 | AD | 16 | C | C5-C6-N1 | 8.48 | 125.24 | 121.00 |
| 25 | BA | 102 | G | N3-C4-C5 | -8.48 | 124.36 | 128.60 |
| 26 | BB | 252 | G | O4'-C1'-N9 | 8.48 | 114.99 | 108.20 |
| 26 | BB | 316 | C | N3-C2-O2 | -8.48 | 115.96 | 121.90 |
| 26 | BB | 1122 | G | C2-N3-C4 | -8.48 | 107.66 | 111.90 |
| 26 | BB | 1895 | C | P-O3'-C3' | 8.48 | 129.88 | 119.70 |
| 26 | BB | 2886 | A | C3'-C2'-C1' | 8.48 | 108.29 | 101.50 |
| 1 | AA | 439 | U | C4-C5-C6 | 8.48 | 124.79 | 119.70 |
| 26 | BB | 132 | G | C4-C5-N7 | -8.48 | 107.41 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1571 | A | C5-C6-N6 | -8.48 | 116.92 | 123.70 |
| 26 | BB | 2129 | C | C4-C5-C6 | -8.48 | 113.16 | 117.40 |
| 26 | BB | 2201 | G | C6-N1-C2 | -8.48 | 120.01 | 125.10 |
| 1 | AA | 1426 | G | C8-N9-C4 | 8.48 | 109.79 | 106.40 |
| 6 | AF | 155 | ARG | NE-CZ-NH2 | -8.48 | 116.06 | 120.30 |
| 26 | BB | 334 | C | P-O3'-C3' | 8.48 | 129.87 | 119.70 |
| 26 | BB | 2725 | A | N1-C6-N6 | -8.48 | 113.51 | 118.60 |
| 50 | BZ | 2 | ARG | NH1-CZ-NH2 | -8.48 | 110.07 | 119.40 |
| 26 | BB | 866 | A | O4'-C4'-C3' | 8.47 | 112.88 | 106.10 |
| 26 | BB | 2235 | G | N3-C4-C5 | -8.47 | 124.36 | 128.60 |
| 1 | AA | 744 | C | C5'-C4'-O4' | 8.47 | 119.27 | 109.10 |
| 4 | AD | 9 | G | N1-C6-O6 | -8.47 | 114.82 | 119.90 |
| 25 | BA | 112 | G | N7-C8-N9 | 8.47 | 117.34 | 113.10 |
| 26 | BB | 434 | U | C5-C6-N1 | 8.47 | 126.94 | 122.70 |
| 26 | BB | 941 | A | C3'-C2'-C1' | 8.47 | 108.28 | 101.50 |
| 26 | BB | 1164 | C | C1'-O4'-C4' | -8.47 | 103.12 | 109.90 |
| 26 | BB | 2060 | A | C6-N1-C2 | 8.47 | 123.68 | 118.60 |
| 26 | BB | 2369 | A | C8-N9-C4 | -8.47 | 102.41 | 105.80 |
| 1 | AA | 382 | A | N1-C6-N6 | -8.47 | 113.52 | 118.60 |
| 14 | AN | 6 | ARG | NE-CZ-NH2 | -8.47 | 116.06 | 120.30 |
| 26 | BB | 1260 | A | C2-N3-C4 | 8.47 | 114.84 | 110.60 |
| 26 | BB | 1440 | U | C5-C4-O4 | -8.47 | 120.82 | 125.90 |
| 26 | BB | 1901 | A | N3-C4-C5 | -8.47 | 120.87 | 126.80 |
| 26 | BB | 1935 | G | N1-C6-O6 | -8.47 | 114.82 | 119.90 |
| 26 | BB | 2567 | G | C5-N7-C8 | -8.47 | 100.06 | 104.30 |
| 26 | BB | 2831 | G | C8-N9-C4 | -8.47 | 103.01 | 106.40 |
| 1 | AA | 613 | C | C6-N1-C2 | -8.47 | 116.91 | 120.30 |
| 26 | BB | 1406 | U | N1-C2-N3 | 8.47 | 119.98 | 114.90 |
| 1 | AA | 708 | C | C5-C4-N4 | -8.47 | 114.27 | 120.20 |
| 1 | AA | 823 | C | P-O3'-C3' | 8.47 | 129.86 | 119.70 |
| 1 | AA | 1079 | G | O4'-C1'-N9 | 8.47 | 114.97 | 108.20 |
| 1 | AA | 1202 | U | N3-C4-O4 | 8.47 | 125.33 | 119.40 |
| 1 | AA | 1333 | A | C8-N9-C4 | -8.47 | 102.41 | 105.80 |
| 26 | BB | 1466 | U | N1-C2-N3 | 8.47 | 119.98 | 114.90 |
| 26 | BB | 1998 | A | C6-N1-C2 | -8.47 | 113.52 | 118.60 |
| 3 | AC | 49 | U | C4-C5-C6 | 8.46 | 124.78 | 119.70 |
| 26 | BB | 146 | A | N9-C4-C5 | 8.47 | 109.19 | 105.80 |
| 26 | BB | 368 | A | C6-N1-C2 | -8.46 | 113.52 | 118.60 |
| 26 | BB | 1172 | C | N3-C4-N4 | 8.47 | 123.93 | 118.00 |
| 26 | BB | 2723 | C | C5-C4-N4 | -8.47 | 114.27 | 120.20 |
| 1 | AA | 1165 | U | C3'-C2'-C1' | 8.46 | 108.27 | 101.50 |
| 26 | BB | 1210 | G | N1-C6-O6 | 8.46 | 124.98 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1445 | G | C4-C5-N7 | 8.46 | 114.19 | 110.80 |
| 1 | AA | 554 | A | C4-C5-N7 | -8.46 | 106.47 | 110.70 |
| 26 | BB | 1313 | U | N1-C2-O2 | 8.46 | 128.72 | 122.80 |
| 26 | BB | 2646 | C | N1-C2-O2 | 8.46 | 123.98 | 118.90 |
| 1 | AA | 150 | U | O4'-C1'-N1 | 8.46 | 114.97 | 108.20 |
| 1 | AA | 604 | G | N3-C4-C5 | -8.46 | 124.37 | 128.60 |
| 26 | BB | 222 | A | O4'-C1'-N9 | 8.46 | 114.97 | 108.20 |
| 26 | BB | 269 | C | O4'-C1'-N1 | 8.46 | 114.97 | 108.20 |
| 1 | AA | 256 | U | C5-C6-N1 | -8.46 | 118.47 | 122.70 |
| 1 | AA | 1181 | G | N1-C6-O6 | -8.46 | 114.83 | 119.90 |
| 1 | AA | 1268 | G | N3-C4-C5 | -8.46 | 124.37 | 128.60 |
| 1 | AA | 1513 | A | C5-C6-N1 | 8.46 | 121.93 | 117.70 |
| 26 | BB | 916 | G | C2-N3-C4 | 8.46 | 116.13 | 111.90 |
| 26 | BB | 1129 | A | C2-N3-C4 | 8.46 | 114.83 | 110.60 |
| 26 | BB | 1483 | G | C4-C5-C6 | 8.46 | 123.88 | 118.80 |
| 26 | BB | 1612 | C | C5'-C4'-O4' | 8.46 | 119.25 | 109.10 |
| 26 | BB | 1785 | A | N3-C4-C5 | -8.46 | 120.88 | 126.80 |
| 26 | BB | 1996 | C | O4'-C1'-N1 | 8.46 | 114.97 | 108.20 |
| 26 | BB | 2157 | G | C4-C5-N7 | -8.46 | 107.42 | 110.80 |
| 1 | AA | 782 | A | C4-C5-C6 | -8.46 | 112.77 | 117.00 |
| 26 | BB | 981 | A | C6-C5-N7 | -8.46 | 126.38 | 132.30 |
| 26 | BB | 2711 | A | C2-N3-C4 | 8.46 | 114.83 | 110.60 |
| 1 | AA | 408 | A | N7-C8-N9 | 8.45 | 118.03 | 113.80 |
| 1 | AA | 495 | A | C2-N3-C4 | -8.45 | 106.37 | 110.60 |
| 1 | AA | 1072 | G | N3-C2-N2 | 8.46 | 125.82 | 119.90 |
| 26 | BB | 2634 | A | C3'-C2'-C1' | 8.46 | 108.27 | 101.50 |
| 26 | BB | 63 | A | N1-C6-N6 | -8.45 | 113.53 | 118.60 |
| 26 | BB | 476 | G | N3-C4-C5 | -8.45 | 124.37 | 128.60 |
| 1 | AA | 1538 | C | N3-C4-C5 | -8.45 | 118.52 | 121.90 |
| 26 | BB | 37 | C | C2-N3-C4 | 8.45 | 124.12 | 119.90 |
| 26 | BB | 1066 | U | N3-C4-O4 | 8.45 | 125.32 | 119.40 |
| 26 | BB | 2690 | U | C4'-C3'-C2' | -8.45 | 94.15 | 102.60 |
| 1 | AA | 1178 | G | P-O3'-C3' | 8.45 | 129.84 | 119.70 |
| 26 | BB | 363 | G | C8-N9-C4 | -8.45 | 103.02 | 106.40 |
| 26 | BB | 1787 | A | C5-N7-C8 | 8.45 | 108.12 | 103.90 |
| 26 | BB | 1802 | A | C8-N9-C4 | -8.45 | 102.42 | 105.80 |
| 26 | BB | 1905 | C | C3'-C2'-C1' | 8.45 | 108.26 | 101.50 |
| 26 | BB | 1662 | U | N3-C2-O2 | -8.45 | 116.29 | 122.20 |
| 26 | BB | 2703 | C | O4'-C1'-N1 | 8.45 | 114.96 | 108.20 |
| 26 | BB | 2872 | A | C8-N9-C4 | -8.45 | 102.42 | 105.80 |
| 1 | AA | 418 | C | N3-C2-O2 | -8.45 | 115.99 | 121.90 |
| 1 | AA | 1096 | C | C4'-C3'-C2' | -8.45 | 94.15 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1196 | C | C4-C5-C6 | -8.45 | 113.18 | 117.40 |
| 26 | BB | 1852 | U | N3-C4-C5 | -8.45 | 109.53 | 114.60 |
| 1 | AA | 489 | C | N3-C4-C5 | -8.45 | 118.52 | 121.90 |
| 1 | AA | 539 | A | O4'-C1'-N9 | 8.45 | 114.96 | 108.20 |
| 26 | BB | 331 | C | C4-C5-C6 | -8.44 | 113.18 | 117.40 |
| 26 | BB | 998 | C | C6-N1-C2 | -8.45 | 116.92 | 120.30 |
| 26 | BB | 1561 | C | C5-C4-N4 | 8.45 | 126.11 | 120.20 |
| 26 | BB | 2645 | G | C2-N3-C4 | 8.45 | 116.12 | 111.90 |
| 43 | BS | 52 | ARG | NE-CZ-NH2 | -8.45 | 116.08 | 120.30 |
| 1 | AA | 109 | A | C6-C5-N7 | -8.44 | 126.39 | 132.30 |
| 1 | AA | 1424 | U | N1-C2-N3 | 8.44 | 119.97 | 114.90 |
| 26 | BB | 470 | A | N9-C4-C5 | 8.44 | 109.18 | 105.80 |
| 26 | BB | 1160 | G | C8-N9-C4 | -8.44 | 103.02 | 106.40 |
| 26 | BB | 2280 | G | C5-C6-N1 | 8.44 | 115.72 | 111.50 |
| 1 | AA | 289 | G | N3-C2-N2 | -8.44 | 113.99 | 119.90 |
| 26 | BB | 1245 | G | N7-C8-N9 | 8.44 | 117.32 | 113.10 |
| 26 | BB | 1423 | G | O4'-C4'-C3' | 8.44 | 112.85 | 106.10 |
| 26 | BB | 2214 | C | N3-C4-C5 | -8.44 | 118.52 | 121.90 |
| 1 | AA | 1309 | G | C4-C5-C6 | 8.44 | 123.86 | 118.80 |
| 1 | AA | 366 | A | C4'-C3'-C2' | 8.44 | 111.04 | 102.60 |
| 1 | AA | 772 | U | C5'-C4'-O4' | 8.44 | 119.23 | 109.10 |
| 1 | AA | 1331 | G | C8-N9-C4 | -8.44 | 103.02 | 106.40 |
| 26 | BB | 784 | G | C8-N9-C4 | -8.44 | 103.02 | 106.40 |
| 26 | BB | 1875 | G | N3-C2-N2 | -8.44 | 113.99 | 119.90 |
| 26 | BB | 2229 | U | N3-C4-C5 | -8.44 | 109.54 | 114.60 |
| 26 | BB | 2583 | G | N3-C4-C5 | -8.44 | 124.38 | 128.60 |
| 26 | BB | 2672 | U | C1'-O4'-C4' | 8.44 | 116.65 | 109.90 |
| 1 | AA | 487 | A | C4-C5-C6 | 8.44 | 121.22 | 117.00 |
| 1 | AA | 595 | A | C5-N7-C8 | 8.44 | 108.12 | 103.90 |
| 1 | AA | 1085 | U | N3-C4-O4 | 8.44 | 125.31 | 119.40 |
| 1 | AA | 1137 | C | C5-C4-N4 | 8.44 | 126.11 | 120.20 |
| 26 | BB | 43 | G | N9-C4-C5 | 8.44 | 108.77 | 105.40 |
| 26 | BB | 983 | A | O4'-C4'-C3' | 8.44 | 112.85 | 106.10 |
| 26 | BB | 1380 | G | C4-C5-C6 | 8.44 | 123.86 | 118.80 |
| 26 | BB | 1931 | U | O4'-C1'-N1 | 8.44 | 114.95 | 108.20 |
| 26 | BB | 1894 | C | N3-C2-O2 | -8.44 | 116.00 | 121.90 |
| 26 | BB | 2321 | U | C5-C6-N1 | -8.44 | 118.48 | 122.70 |
| 26 | BB | 2780 | G | C2-N3-C4 | 8.44 | 116.12 | 111.90 |
| 40 | BP | 8 | ARG | NE-CZ-NH2 | -8.44 | 116.08 | 120.30 |
| 1 | AA | 92 | U | N3-C2-O2 | -8.43 | 116.30 | 122.20 |
| 1 | AA | 126 | G | C5-C6-O6 | -8.43 | 123.54 | 128.60 |
| 1 | AA | 149 | A | O4'-C1'-N9 | 8.43 | 114.95 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 267 | C | N3-C2-O2 | -8.43 | 116.00 | 121.90 |
| 1 | AA | 1355 | G | C5-N7-C8 | -8.43 | 100.08 | 104.30 |
| 1 | AA | 1532 | U | N3-C2-O2 | 8.43 | 128.10 | 122.20 |
| 6 | AF | 41 | TYR | CG-CD1-CE1 | -8.43 | 114.55 | 121.30 |
| 26 | BB | 119 | A | C5-N7-C8 | 8.43 | 108.12 | 103.90 |
| 26 | BB | 616 | A | N9-C4-C5 | 8.43 | 109.17 | 105.80 |
| 26 | BB | 828 | U | C6-N1-C2 | 8.43 | 126.06 | 121.00 |
| 26 | BB | 1555 | G | C5-N7-C8 | 8.43 | 108.52 | 104.30 |
| 26 | BB | 1723 | G | C3'-C2'-C1' | -8.43 | 94.75 | 101.50 |
| 26 | BB | 2410 | G | N9-C4-C5 | 8.43 | 108.77 | 105.40 |
| 26 | BB | 2459 | A | C5-C6-N1 | -8.43 | 113.48 | 117.70 |
| 26 | BB | 2798 | U | N1-C2-N3 | 8.43 | 119.96 | 114.90 |
| 1 | AA | 163 | C | C5-C4-N4 | -8.43 | 114.30 | 120.20 |
| 1 | AA | 307 | C | O4'-C1'-N1 | 8.43 | 114.94 | 108.20 |
| 1 | AA | 532 | A | N1-C6-N6 | -8.43 | 113.54 | 118.60 |
| 1 | AA | 804 | U | O4'-C1'-N1 | 8.43 | 114.94 | 108.20 |
| 1 | AA | 995 | C | N3-C2-O2 | -8.43 | 116.00 | 121.90 |
| 1 | AA | 1440 | U | C6-N1-C2 | -8.43 | 115.94 | 121.00 |
| 26 | BB | 997 | G | N9-C4-C5 | 8.43 | 108.77 | 105.40 |
| 4 | AD | 38 | A | C5'-C4'-O4' | 8.43 | 119.21 | 109.10 |
| 26 | BB | 928 | A | C8-N9-C4 | -8.43 | 102.43 | 105.80 |
| 26 | BB | 1160 | G | C4-C5-N7 | -8.43 | 107.43 | 110.80 |
| 26 | BB | 2694 | G | N3-C4-C5 | -8.43 | 124.39 | 128.60 |
| 26 | BB | 2727 | A | C8-N9-C4 | -8.43 | 102.43 | 105.80 |
| 1 | AA | 224 | U | C1'-O4'-C4' | 8.43 | 116.64 | 109.90 |
| 1 | AA | 334 | C | C4'-C3'-C2' | -8.43 | 94.17 | 102.60 |
| 1 | AA | 340 | U | C5-C6-N1 | -8.43 | 118.49 | 122.70 |
| 1 | AA | 1417 | G | N7-C8-N9 | 8.43 | 117.31 | 113.10 |
| 26 | BB | 841 | G | C2-N3-C4 | 8.43 | 116.11 | 111.90 |
| 26 | BB | 1131 | G | N3-C4-C5 | -8.43 | 124.39 | 128.60 |
| 26 | BB | 2627 | G | C4-C5-N7 | -8.43 | 107.43 | 110.80 |
| 1 | AA | 319 | G | C1'-O4'-C4' | 8.42 | 116.64 | 109.90 |
| 1 | AA | 514 | C | N3-C4-C5 | -8.42 | 118.53 | 121.90 |
| 1 | AA | 1302 | C | N1-C2-O2 | 8.42 | 123.95 | 118.90 |
| 26 | BB | 1258 | U | O4'-C1'-N1 | 8.42 | 114.94 | 108.20 |
| 1 | AA | 713 | G | N3-C4-N9 | 8.42 | 131.05 | 126.00 |
| 26 | BB | 22 | C | N3-C4-N4 | 8.42 | 123.90 | 118.00 |
| 26 | BB | 814 | C | N3-C4-C5 | 8.42 | 125.27 | 121.90 |
| 26 | BB | 1778 | U | C2-N3-C4 | -8.42 | 121.95 | 127.00 |
| 26 | BB | 2351 | G | C3'-C2'-C1' | 8.42 | 108.24 | 101.50 |
| 1 | AA | 1228 | C | C6-N1-C2 | -8.42 | 116.93 | 120.30 |
| 2 | AB | 40 | C | O4'-C1'-N1 | 8.42 | 114.94 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 71 | C | N1-C1'-C2' | -8.42 | 102.74 | 112.00 |
| 26 | BB | 235 | U | N1-C2-O2 | 8.42 | 128.69 | 122.80 |
| 26 | BB | 655 | A | N9-C4-C5 | -8.42 | 102.43 | 105.80 |
| 26 | BB | 2521 | C | C5-C6-N1 | 8.42 | 125.21 | 121.00 |
| 26 | BB | 2635 | A | C8-N9-C4 | -8.42 | 102.43 | 105.80 |
| 26 | BB | 842 | U | O4'-C1'-N1 | 8.42 | 114.94 | 108.20 |
| 26 | BB | 991 | C | N3-C4-C5 | -8.42 | 118.53 | 121.90 |
| 26 | BB | 1347 | A | O4'-C1'-N9 | 8.42 | 114.94 | 108.20 |
| 1 | AA | 256 | U | N3-C2-O2 | -8.42 | 116.31 | 122.20 |
| 1 | AA | 544 | G | C4'-C3'-C2' | -8.42 | 94.18 | 102.60 |
| 1 | AA | 1352 | C | N3-C2-O2 | -8.42 | 116.01 | 121.90 |
| 1 | AA | 1491 | G | N3-C4-C5 | -8.42 | 124.39 | 128.60 |
| 26 | BB | 1025 | G | N3-C4-C5 | -8.42 | 124.39 | 128.60 |
| 26 | BB | 2245 | U | N1-C2-N3 | 8.42 | 119.95 | 114.90 |
| 26 | BB | 1076 | C | C5-C6-N1 | 8.42 | 125.21 | 121.00 |
| 26 | BB | 2866 | U | O4'-C1'-C2' | 8.42 | 115.17 | 107.60 |
| 26 | BB | 1295 | C | C4-C5-C6 | 8.41 | 121.61 | 117.40 |
| 26 | BB | 1957 | C | N3-C2-O2 | -8.41 | 116.01 | 121.90 |
| 1 | AA | 474 | G | C4'-C3'-C2' | -8.41 | 94.19 | 102.60 |
| 26 | BB | 1281 | G | C2-N3-C4 | 8.41 | 116.11 | 111.90 |
| 26 | BB | 941 | A | N1-C6-N6 | 8.41 | 123.65 | 118.60 |
| 26 | BB | 1521 | G | N3-C2-N2 | 8.41 | 125.79 | 119.90 |
| 26 | BB | 1743 | G | C5-N7-C8 | -8.41 | 100.09 | 104.30 |
| 26 | BB | 2659 | G | C5-C6-N1 | 8.41 | 115.71 | 111.50 |
| 1 | AA | 63 | C | N3-C2-O2 | -8.41 | 116.01 | 121.90 |
| 1 | AA | 128 | G | O4'-C1'-N9 | 8.41 | 114.93 | 108.20 |
| 2 | AB | 44 | G | N3-C4-N9 | 8.41 | 131.04 | 126.00 |
| 26 | BB | 14 | A | N1-C6-N6 | -8.41 | 113.56 | 118.60 |
| 26 | BB | 723 | C | N3-C4-C5 | 8.41 | 125.26 | 121.90 |
| 1 | AA | 291 | U | O4'-C1'-N1 | 8.41 | 114.93 | 108.20 |
| 1 | AA | 1480 | A | N1-C2-N3 | -8.41 | 125.10 | 129.30 |
| 26 | BB | 1989 | G | C2-N3-C4 | 8.41 | 116.10 | 111.90 |
| 26 | BB | 2790 | U | C6-N1-C2 | 8.41 | 126.05 | 121.00 |
| 1 | AA | 506 | G | C4-C5-N7 | -8.41 | 107.44 | 110.80 |
| 26 | BB | 2147 | A | C2-N3-C4 | 8.41 | 114.80 | 110.60 |
| 26 | BB | 2198 | A | O4'-C1'-N9 | 8.41 | 114.92 | 108.20 |
| 26 | BB | 2373 | G | O4'-C1'-N9 | 8.41 | 114.93 | 108.20 |
| 26 | BB | 2640 | G | C5'-C4'-O4' | 8.41 | 119.19 | 109.10 |
| 1 | AA | 740 | U | C4'-C3'-C2' | -8.40 | 94.20 | 102.60 |
| 26 | BB | 423 | A | C3'-C2'-C1' | -8.40 | 94.78 | 101.50 |
| 26 | BB | 522 | A | N7-C8-N9 | -8.40 | 109.60 | 113.80 |
| 26 | BB | 2463 | C | C5-C6-N1 | 8.40 | 125.20 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2621 | G | C3'-C2'-C1' | -8.40 | 94.78 | 101.50 |
| 1 | AA | 470 | C | C2-N3-C4 | 8.40 | 124.10 | 119.90 |
| 26 | BB | 403 | U | N3-C4-O4 | -8.40 | 113.52 | 119.40 |
| 1 | AA | 559 | A | C5-C6-N6 | 8.40 | 130.42 | 123.70 |
| 26 | BB | 749 | A | C8-N9-C4 | -8.40 | 102.44 | 105.80 |
| 26 | BB | 920 | A | C5-N7-C8 | -8.40 | 99.70 | 103.90 |
| 26 | BB | 1420 | A | N9-C4-C5 | 8.40 | 109.16 | 105.80 |
| 26 | BB | 2181 | U | O4'-C1'-N1 | 8.40 | 114.92 | 108.20 |
| 1 | AA | 502 | A | N1-C2-N3 | -8.40 | 125.10 | 129.30 |
| 3 | AC | 23 | C | C1'-O4'-C4' | 8.40 | 116.62 | 109.90 |
| 4 | AD | 20 | G | O4'-C1'-N9 | 8.40 | 114.92 | 108.20 |
| 4 | AD | 30 | G | C5-C6-N1 | 8.40 | 115.70 | 111.50 |
| 26 | BB | 578 | G | O4'-C1'-N9 | 8.40 | 114.92 | 108.20 |
| 26 | BB | 1096 | A | C5-C6-N6 | -8.40 | 116.98 | 123.70 |
| 26 | BB | 1424 | G | C5-C6-N1 | 8.40 | 115.70 | 111.50 |
| 26 | BB | 1959 | G | C6-C5-N7 | 8.40 | 135.44 | 130.40 |
| 26 | BB | 2325 | G | N7-C8-N9 | 8.40 | 117.30 | 113.10 |
| 26 | BB | 211 | C | O4'-C1'-N1 | 8.40 | 114.92 | 108.20 |
| 26 | BB | 2043 | C | N1-C2-O2 | 8.40 | 123.94 | 118.90 |
| 26 | BB | 2545 | G | C2-N3-C4 | 8.40 | 116.10 | 111.90 |
| 26 | BB | 2670 | A | N7-C8-N9 | 8.40 | 118.00 | 113.80 |
| 1 | AA | 524 | G | C3'-C2'-C1' | 8.39 | 108.22 | 101.50 |
| 1 | AA | 631 | C | C1'-O4'-C4' | -8.39 | 103.18 | 109.90 |
| 1 | AA | 1459 | G | O4'-C1'-N9 | 8.39 | 114.92 | 108.20 |
| 26 | BB | 146 | A | C4'-C3'-C2' | -8.39 | 94.20 | 102.60 |
| 1 | AA | 478 | A | O4'-C1'-N9 | 8.39 | 114.92 | 108.20 |
| 1 | AA | 542 | G | C2-N3-C4 | 8.39 | 116.10 | 111.90 |
| 1 | AA | 1499 | A | C4-C5-N7 | -8.39 | 106.50 | 110.70 |
| 26 | BB | 1821 | A | O4'-C1'-N9 | 8.39 | 114.92 | 108.20 |
| 26 | BB | 2820 | A | C2-N3-C4 | 8.39 | 114.80 | 110.60 |
| 26 | BB | 2899 | A | N3-C4-C5 | -8.39 | 120.92 | 126.80 |
| 26 | BB | 51 | G | C5-C6-N1 | 8.39 | 115.70 | 111.50 |
| 1 | AA | 295 | C | C1'-O4'-C4' | 8.39 | 116.61 | 109.90 |
| 1 | AA | 633 | G | C8-N9-C4 | -8.39 | 103.04 | 106.40 |
| 1 | AA | 1515 | G | N1-C6-O6 | 8.39 | 124.94 | 119.90 |
| 26 | BB | 487 | C | C2-N3-C4 | 8.39 | 124.09 | 119.90 |
| 26 | BB | 1178 | C | C4'-C3'-C2' | -8.39 | 94.21 | 102.60 |
| 43 | BS | 23 | TYR | CB-CG-CD2 | 8.39 | 126.03 | 121.00 |
| 1 | AA | 9 | G | N9-C4-C5 | -8.39 | 102.04 | 105.40 |
| 1 | AA | 179 | A | O4'-C1'-N9 | 8.39 | 114.91 | 108.20 |
| 1 | AA | 517 | G | C8-N9-C4 | -8.39 | 103.04 | 106.40 |
| 1 | AA | 569 | C | O4'-C1'-N1 | 8.39 | 114.91 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1013 | G | C3'-C2'-C1' | 8.39 | 108.21 | 101.50 |
| 26 | BB | 2028 | U | O4'-C1'-N1 | 8.39 | 114.91 | 108.20 |
| 4 | AD | 39 | A | N1-C2-N3 | -8.39 | 125.11 | 129.30 |
| 26 | BB | 107 | G | C4-C5-N7 | -8.39 | 107.44 | 110.80 |
| 26 | BB | 916 | G | N3-C4-N9 | 8.39 | 131.03 | 126.00 |
| 26 | BB | 1321 | A | O4'-C1'-N9 | 8.39 | 114.91 | 108.20 |
| 26 | BB | 2096 | C | N3-C4-N4 | 8.39 | 123.87 | 118.00 |
| 2 | AB | 34 | C | N1-C1'-C2' | 8.38 | 124.90 | 114.00 |
| 26 | BB | 2700 | A | C4'-C3'-C2' | -8.39 | 94.21 | 102.60 |
| 26 | BB | 2810 | A | C5'-C4'-O4' | 8.39 | 119.16 | 109.10 |
| 25 | BA | 113 | C | O4'-C1'-N1 | 8.38 | 114.91 | 108.20 |
| 26 | BB | 404 | A | C3'-C2'-C1' | 8.38 | 108.21 | 101.50 |
| 26 | BB | 1112 | G | O5'-P-OP2 | -8.38 | 98.15 | 105.70 |
| 26 | BB | 1211 | C | N3-C4-C5 | -8.38 | 118.55 | 121.90 |
| 26 | BB | 1573 | G | O4'-C1'-N9 | 8.38 | 114.91 | 108.20 |
| 26 | BB | 2169 | A | C4-C5-C6 | -8.38 | 112.81 | 117.00 |
| 1 | AA | 686 | U | N3-C2-O2 | -8.38 | 116.33 | 122.20 |
| 1 | AA | 770 | C | C5-C4-N4 | -8.38 | 114.33 | 120.20 |
| 1 | AA | 1035 | A | C5-C6-N6 | -8.38 | 116.99 | 123.70 |
| 1 | AA | 101 | A | C2-N3-C4 | 8.38 | 114.79 | 110.60 |
| 1 | AA | 230 | G | O4'-C1'-N9 | 8.38 | 114.90 | 108.20 |
| 1 | AA | 1079 | G | N7-C8-N9 | 8.38 | 117.29 | 113.10 |
| 26 | BB | 1585 | C | C5'-C4'-O4' | 8.38 | 119.16 | 109.10 |
| 26 | BB | 1681 | G | C3'-C2'-C1' | -8.38 | 94.80 | 101.50 |
| 26 | BB | 1861 | G | C2-N3-C4 | 8.38 | 116.09 | 111.90 |
| 26 | BB | 2541 | A | C8-N9-C4 | -8.38 | 102.45 | 105.80 |
| 1 | AA | 32 | A | O4'-C1'-C2' | -8.38 | 97.42 | 105.80 |
| 1 | AA | 1082 | A | C8-N9-C4 | -8.38 | 102.45 | 105.80 |
| 25 | BA | 92 | C | C3'-C2'-C1' | 8.38 | 108.20 | 101.50 |
| 26 | BB | 855 | G | C4-C5-N7 | -8.38 | 107.45 | 110.80 |
| 26 | BB | 1259 | G | C4-C5-N7 | -8.38 | 107.45 | 110.80 |
| 26 | BB | 1447 | C | C2-N3-C4 | 8.38 | 124.09 | 119.90 |
| 26 | BB | 1865 | U | O4'-C4'-C3' | 8.38 | 112.80 | 106.10 |
| 26 | BB | 2574 | G | N3-C4-C5 | -8.38 | 124.41 | 128.60 |
| 1 | AA | 377 | G | N3-C4-C5 | -8.38 | 124.41 | 128.60 |
| 26 | BB | 1516 | G | N1-C2-N3 | -8.38 | 118.88 | 123.90 |
| 26 | BB | 2054 | A | C5-C6-N1 | 8.38 | 121.89 | 117.70 |
| 26 | BB | 2086 | U | C2-N3-C4 | -8.38 | 121.97 | 127.00 |
| 26 | BB | 2638 | G | C5-C6-N1 | 8.38 | 115.69 | 111.50 |
| 1 | AA | 479 | U | N1-C2-N3 | -8.37 | 109.88 | 114.90 |
| 26 | BB | 1477 | A | C5'-C4'-O4' | 8.37 | 119.15 | 109.10 |
| 26 | BB | 2276 | G | C5-C6-N1 | 8.37 | 115.69 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2380 | C | C5'-C4'-O4' | 8.37 | 119.15 | 109.10 |
| 1 | AA | 441 | A | C8-N9-C4 | -8.37 | 102.45 | 105.80 |
| 1 | AA | 1078 | U | N3-C4-O4 | -8.37 | 113.54 | 119.40 |
| 1 | AA | 1467 | C | N3-C4-C5 | -8.37 | 118.55 | 121.90 |
| 26 | BB | 94 | A | P-O3'-C3' | 8.37 | 129.74 | 119.70 |
| 26 | BB | 1512 | C | C5-C4-N4 | 8.37 | 126.06 | 120.20 |
| 26 | BB | 2316 | G | C8-N9-C4 | -8.37 | 103.05 | 106.40 |
| 26 | BB | 2355 | G | C8-N9-C4 | -8.37 | 103.05 | 106.40 |
| 29 | BE | 124 | ARG | NE-CZ-NH2 | 8.37 | 124.48 | 120.30 |
| 1 | AA | 408 | A | C8-N9-C4 | -8.37 | 102.45 | 105.80 |
| 1 | AA | 1100 | C | C3'-C2'-C1' | 8.37 | 108.19 | 101.50 |
| 4 | AD | 27 | G | C5-C6-O6 | 8.37 | 133.62 | 128.60 |
| 26 | BB | 2379 | G | C5-N7-C8 | 8.37 | 108.48 | 104.30 |
| 1 | AA | 1446 | A | C2-N3-C4 | -8.36 | 106.42 | 110.60 |
| 26 | BB | 1627 | G | C4-C5-C6 | 8.36 | 123.82 | 118.80 |
| 26 | BB | 2215 | C | C2-N3-C4 | 8.37 | 124.08 | 119.90 |
| 26 | BB | 2667 | C | C3'-C2'-C1' | 8.36 | 108.19 | 101.50 |
| 26 | BB | 2892 | G | O4'-C1'-C2' | 8.36 | 115.13 | 107.60 |
| 1 | AA | 279 | A | C4-C5-N7 | 8.36 | 114.88 | 110.70 |
| 1 | AA | 567 | G | N1-C6-O6 | -8.36 | 114.88 | 119.90 |
| 4 | AD | 41 | C | C5-C6-N1 | 8.36 | 125.18 | 121.00 |
| 26 | BB | 951 | C | C6-N1-C2 | 8.36 | 123.64 | 120.30 |
| 26 | BB | 256 | A | C5-C6-N6 | -8.36 | 117.01 | 123.70 |
| 26 | BB | 767 | U | N3-C2-O2 | -8.36 | 116.35 | 122.20 |
| 26 | BB | 1085 | A | N1-C2-N3 | -8.36 | 125.12 | 129.30 |
| 26 | BB | 1219 | U | O4'-C1'-N1 | 8.36 | 114.89 | 108.20 |
| 26 | BB | 2106 | U | O4'-C1'-N1 | 8.36 | 114.89 | 108.20 |
| 26 | BB | 2884 | U | C4-C5-C6 | 8.36 | 124.72 | 119.70 |
| 26 | BB | 279 | A | N7-C8-N9 | 8.36 | 117.98 | 113.80 |
| 26 | BB | 522 | A | C6-N1-C2 | -8.36 | 113.58 | 118.60 |
| 26 | BB | 1923 | U | O4'-C1'-N1 | 8.36 | 114.89 | 108.20 |
| 26 | BB | 2070 | A | C4-C5-C6 | -8.36 | 112.82 | 117.00 |
| 26 | BB | 2317 | A | C8-N9-C4 | -8.36 | 102.46 | 105.80 |
| 26 | BB | 2710 | C | N3-C4-C5 | -8.36 | 118.56 | 121.90 |
| 1 | AA | 808 | C | N3-C2-O2 | -8.36 | 116.05 | 121.90 |
| 26 | BB | 1122 | G | N7-C8-N9 | 8.36 | 117.28 | 113.10 |
| 26 | BB | 1544 | A | C1'-O4'-C4' | -8.36 | 103.22 | 109.90 |
| 1 | AA | 59 | A | C2-N3-C4 | 8.36 | 114.78 | 110.60 |
| 1 | AA | 1047 | G | C5-C6-O6 | -8.36 | 123.59 | 128.60 |
| 1 | AA | 1467 | C | C5-C6-N1 | 8.36 | 125.18 | 121.00 |
| 26 | BB | 1599 | U | O4'-C1'-N1 | 8.36 | 114.88 | 108.20 |
| 26 | BB | 1953 | A | O4'-C1'-N9 | 8.36 | 114.89 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2603 | G | C5-C6-N1 | 8.36 | 115.68 | 111.50 |
| 26 | BB | 2818 | U | C6-N1-C2 | -8.36 | 115.99 | 121.00 |
| 1 | AA | 1034 | G | C4-C5-N7 | -8.35 | 107.46 | 110.80 |
| 4 | AD | 43 | G | C4-C5-N7 | -8.35 | 107.46 | 110.80 |
| 26 | BB | 43 | G | C4-C5-C6 | 8.35 | 123.81 | 118.80 |
| 26 | BB | 1125 | G | C3'-C2'-C1' | -8.35 | 94.82 | 101.50 |
| 26 | BB | 1172 | C | C5-C4-N4 | -8.35 | 114.36 | 120.20 |
| 26 | BB | 1588 | G | C4-C5-C6 | 8.35 | 123.81 | 118.80 |
| 26 | BB | 2708 | G | N3-C4-C5 | -8.35 | 124.42 | 128.60 |
| 1 | AA | 34 | C | O4'-C4'-C3' | 8.35 | 112.78 | 106.10 |
| 1 | AA | 474 | G | N3-C4-C5 | -8.35 | 124.42 | 128.60 |
| 1 | AA | 488 | C | O4'-C1'-N1 | 8.35 | 114.88 | 108.20 |
| 26 | BB | 255 | A | N9-C4-C5 | -8.35 | 102.46 | 105.80 |
| 26 | BB | 533 | G | C4-C5-C6 | 8.35 | 123.81 | 118.80 |
| 1 | AA | 1480 | A | C6-N1-C2 | 8.35 | 123.61 | 118.60 |
| 50 | BZ | 49 | ARG | NE-CZ-NH2 | 8.35 | 124.47 | 120.30 |
| 26 | BB | 1296 | G | N3-C4-N9 | 8.35 | 131.01 | 126.00 |
| 1 | AA | 1109 | C | N3-C2-O2 | 8.35 | 127.74 | 121.90 |
| 1 | AA | 1221 | G | C6-C5-N7 | 8.35 | 135.41 | 130.40 |
| 26 | BB | 1967 | C | P-O3'-C3' | 8.35 | 129.72 | 119.70 |
| 26 | BB | 2021 | C | N3-C4-C5 | 8.35 | 125.24 | 121.90 |
| 26 | BB | 2554 | U | C6-N1-C2 | -8.35 | 115.99 | 121.00 |
| 26 | BB | 2582 | G | C1'-O4'-C4' | -8.35 | 103.22 | 109.90 |
| 26 | BB | 2841 | C | O4'-C1'-N1 | 8.35 | 114.88 | 108.20 |
| 1 | AA | 51 | A | O4'-C4'-C3' | 8.34 | 112.78 | 106.10 |
| 26 | BB | 166 | U | N3-C4-C5 | -8.34 | 109.59 | 114.60 |
| 1 | AA | 442 | G | O4'-C1'-N9 | 8.34 | 114.87 | 108.20 |
| 26 | BB | 468 | G | C5-C6-O6 | -8.34 | 123.59 | 128.60 |
| 26 | BB | 957 | C | N3-C4-N4 | 8.34 | 123.84 | 118.00 |
| 26 | BB | 1029 | A | N9-C4-C5 | 8.34 | 109.14 | 105.80 |
| 26 | BB | 1462 | C | N3-C4-N4 | 8.34 | 123.84 | 118.00 |
| 26 | BB | 2676 | C | C1'-O4'-C4' | -8.34 | 103.23 | 109.90 |
| 26 | BB | 2890 | G | C4-C5-N7 | 8.34 | 114.14 | 110.80 |
| 1 | AA | 1413 | A | C5-C6-N1 | 8.34 | 121.87 | 117.70 |
| 26 | BB | 326 | G | C4-C5-C6 | 8.34 | 123.80 | 118.80 |
| 26 | BB | 797 | G | C4'-C3'-C2' | -8.34 | 94.26 | 102.60 |
| 26 | BB | 823 | C | C1'-O4'-C4' | -8.34 | 103.23 | 109.90 |
| 26 | BB | 903 | C | C5-C6-N1 | -8.34 | 116.83 | 121.00 |
| 26 | BB | 1453 | A | N9-C4-C5 | 8.34 | 109.14 | 105.80 |
| 1 | AA | 392 | C | O5'-P-OP1 | -8.34 | 98.20 | 105.70 |
| 19 | AS | 69 | ASP | CB-CG-OD1 | 8.34 | 125.80 | 118.30 |
| 25 | BA | 38 | C | N1-C1'-C2' | -8.34 | 102.83 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1028 | A | C8-N9-C4 | 8.34 | 109.14 | 105.80 |
| 1 | AA | 1201 | A | C2'-C3'-O3' | 8.34 | 127.84 | 109.50 |
| 26 | BB | 1646 | C | N3-C2-O2 | -8.34 | 116.06 | 121.90 |
| 26 | BB | 2135 | A | C8-N9-C4 | 8.34 | 109.14 | 105.80 |
| 26 | BB | 24 | G | C5-N7-C8 | -8.34 | 100.13 | 104.30 |
| 26 | BB | 956 | G | N9-C4-C5 | -8.34 | 102.07 | 105.40 |
| 26 | BB | 1795 | C | N3-C4-C5 | -8.34 | 118.57 | 121.90 |
| 26 | BB | 1824 | G | P-O3'-C3' | 8.34 | 129.70 | 119.70 |
| 26 | BB | 2595 | G | C8-N9-C4 | -8.34 | 103.07 | 106.40 |
| 26 | BB | 2868 | A | C5-C6-N6 | 8.34 | 130.37 | 123.70 |
| 1 | AA | 714 | G | C6-C5-N7 | -8.33 | 125.40 | 130.40 |
| 1 | AA | 798 | U | O4'-C1'-N1 | 8.33 | 114.87 | 108.20 |
| 1 | AA | 1098 | C | N1-C1'-C2' | -8.33 | 102.83 | 112.00 |
| 1 | AA | 1035 | A | O4'-C1'-N9 | 8.33 | 114.87 | 108.20 |
| 1 | AA | 1256 | A | C4-C5-N7 | -8.33 | 106.53 | 110.70 |
| 1 | AA | 1537 | U | C2-N3-C4 | -8.33 | 122.00 | 127.00 |
| 3 | AC | 38 | G | N3-C4-C5 | -8.33 | 124.43 | 128.60 |
| 9 | AI | 109 | ARG | NE-CZ-NH2 | 8.33 | 124.47 | 120.30 |
| 26 | BB | 11 | C | N3-C4-C5 | -8.33 | 118.57 | 121.90 |
| 26 | BB | 301 | G | C5'-C4'-C3' | -8.33 | 102.67 | 116.00 |
| 26 | BB | 380 | G | O4'-C1'-N9 | 8.33 | 114.87 | 108.20 |
| 26 | BB | 404 | A | N9-C4-C5 | -8.33 | 102.47 | 105.80 |
| 26 | BB | 536 | G | O4'-C1'-N9 | 8.33 | 114.87 | 108.20 |
| 26 | BB | 1022 | G | N9-C4-C5 | 8.33 | 108.73 | 105.40 |
| 26 | BB | 1370 | C | O4'-C1'-N1 | 8.33 | 114.87 | 108.20 |
| 26 | BB | 1797 | G | N7-C8-N9 | 8.33 | 117.27 | 113.10 |
| 26 | BB | 1950 | G | N9-C4-C5 | 8.33 | 108.73 | 105.40 |
| 26 | BB | 2692 | G | N7-C8-N9 | 8.33 | 117.27 | 113.10 |
| 26 | BB | 770 | G | O4'-C1'-N9 | 8.33 | 114.86 | 108.20 |
| 1 | AA | 457 | G | C4-C5-N7 | 8.33 | 114.13 | 110.80 |
| 26 | BB | 829 | A | C3'-C2'-C1' | 8.33 | 108.16 | 101.50 |
| 26 | BB | 1900 | A | O3'-P-O5' | -8.33 | 88.17 | 104.00 |
| 1 | AA | 603 | U | C4'-C3'-C2' | -8.33 | 94.27 | 102.60 |
| 1 | AA | 649 | A | C5-N7-C8 | 8.33 | 108.06 | 103.90 |
| 2 | AB | 59 | G | C6-C5-N7 | -8.33 | 125.40 | 130.40 |
| 1 | AA | 1041 | G | O4'-C1'-N9 | 8.33 | 114.86 | 108.20 |
| 10 | AJ | 137 | ARG | NE-CZ-NH1 | 8.33 | 124.46 | 120.30 |
| 26 | BB | 785 | G | N7-C8-N9 | 8.33 | 117.26 | 113.10 |
| 26 | BB | 1795 | C | C2-N3-C4 | 8.33 | 124.06 | 119.90 |
| 26 | BB | 2349 | G | C4-N9-C1' | -8.33 | 115.68 | 126.50 |
| 34 | BJ | 23 | SER | N-CA-CB | 8.33 | 122.99 | 110.50 |
| 1 | AA | 953 | G | O4'-C1'-N9 | 8.32 | 114.86 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1048 | G | C4-C5-N7 | 8.32 | 114.13 | 110.80 |
| 1 | AA | 1138 | G | N9-C4-C5 | 8.32 | 108.73 | 105.40 |
| 1 | AA | 1474 | U | N1-C2-N3 | 8.32 | 119.89 | 114.90 |
| 1 | AA | 1505 | G | N3-C2-N2 | -8.32 | 114.07 | 119.90 |
| 26 | BB | 1768 | C | C1'-O4'-C4' | -8.32 | 103.24 | 109.90 |
| 26 | BB | 1389 | G | N3-C4-C5 | -8.32 | 124.44 | 128.60 |
| 1 | AA | 221 | C | O4'-C1'-N1 | 8.32 | 114.86 | 108.20 |
| 1 | AA | 927 | G | N7-C8-N9 | 8.32 | 117.26 | 113.10 |
| 26 | BB | 744 | U | C2-N3-C4 | -8.32 | 122.01 | 127.00 |
| 26 | BB | 768 | G | C6-N1-C2 | -8.32 | 120.11 | 125.10 |
| 26 | BB | 989 | G | O4'-C4'-C3' | 8.32 | 112.76 | 106.10 |
| 26 | BB | 1354 | A | C3'-C2'-C1' | -8.32 | 94.84 | 101.50 |
| 26 | BB | 1715 | G | O4'-C1'-N9 | 8.32 | 114.86 | 108.20 |
| 1 | AA | 1094 | G | N3-C4-C5 | -8.32 | 124.44 | 128.60 |
| 1 | AA | 1238 | A | C1'-O4'-C4' | -8.32 | 103.25 | 109.90 |
| 26 | BB | 121 | G | C2-N3-C4 | 8.32 | 116.06 | 111.90 |
| 26 | BB | 1068 | G | N7-C8-N9 | 8.32 | 117.26 | 113.10 |
| 26 | BB | 1203 | U | N1-C2-N3 | 8.32 | 119.89 | 114.90 |
| 26 | BB | 2115 | G | C8-N9-C4 | -8.32 | 103.07 | 106.40 |
| 27 | BC | 53 | ARG | NE-CZ-NH2 | -8.32 | 116.14 | 120.30 |
| 26 | BB | 257 | C | C6-N1-C2 | -8.32 | 116.97 | 120.30 |
| 26 | BB | 780 | G | C5-C6-N1 | 8.32 | 115.66 | 111.50 |
| 26 | BB | 1545 | A | C2-N3-C4 | 8.32 | 114.76 | 110.60 |
| 1 | AA | 391 | G | C8-N9-C4 | 8.32 | 109.73 | 106.40 |
| 26 | BB | 1568 | G | C5'-C4'-O4' | 8.32 | 119.08 | 109.10 |
| 26 | BB | 1606 | C | N3-C4-N4 | -8.32 | 112.18 | 118.00 |
| 26 | BB | 2121 | G | C4-C5-C6 | 8.32 | 123.79 | 118.80 |
| 26 | BB | 2873 | A | N1-C2-N3 | 8.32 | 133.46 | 129.30 |
| 1 | AA | 563 | A | C8-N9-C4 | -8.31 | 102.47 | 105.80 |
| 26 | BB | 488 | G | N3-C4-C5 | -8.31 | 124.44 | 128.60 |
| 1 | AA | 1488 | G | C4-C5-N7 | -8.31 | 107.47 | 110.80 |
| 3 | AC | 28 | U | N3-C4-O4 | 8.31 | 125.22 | 119.40 |
| 25 | BA | 66 | A | C5-C6-N6 | 8.31 | 130.35 | 123.70 |
| 26 | BB | 283 | G | O4'-C1'-N9 | 8.31 | 114.85 | 108.20 |
| 26 | BB | 453 | A | O4'-C1'-C2' | 8.31 | 115.08 | 107.60 |
| 26 | BB | 840 | C | C5-C6-N1 | 8.31 | 125.16 | 121.00 |
| 26 | BB | 1602 | U | O4'-C1'-N1 | 8.31 | 114.85 | 108.20 |
| 26 | BB | 1878 | G | C8-N9-C4 | -8.31 | 103.07 | 106.40 |
| 26 | BB | 2142 | A | P-O3'-C3' | 8.31 | 129.68 | 119.70 |
| 1 | AA | 10 | A | O4'-C1'-N9 | 8.31 | 114.85 | 108.20 |
| 1 | AA | 98 | A | C8-N9-C4 | 8.31 | 109.12 | 105.80 |
| 1 | AA | 395 | C | N3-C2-O2 | -8.31 | 116.08 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1412 | C | C6-N1-C2 | 8.31 | 123.62 | 120.30 |
| 4 | AD | 52 | C | O4'-C1'-N1 | 8.31 | 114.85 | 108.20 |
| 2 | AB | 21 | A | C1'-O4'-C4' | 8.31 | 116.55 | 109.90 |
| 25 | BA | 14 | U | O4'-C4'-C3' | 8.31 | 112.75 | 106.10 |
| 26 | BB | 674 | G | N9-C1'-C2' | -8.31 | 102.86 | 112.00 |
| 26 | BB | 60 | G | C2-N3-C4 | 8.31 | 116.06 | 111.90 |
| 26 | BB | 814 | C | C5'-C4'-O4' | 8.31 | 119.07 | 109.10 |
| 26 | BB | 1477 | A | C6-N1-C2 | -8.31 | 113.61 | 118.60 |
| 26 | BB | 1755 | A | C4-C5-C6 | -8.31 | 112.84 | 117.00 |
| 26 | BB | 1817 | G | C5-N7-C8 | -8.31 | 100.14 | 104.30 |
| 26 | BB | 1896 | G | C6-N1-C2 | -8.31 | 120.11 | 125.10 |
| 26 | BB | 2176 | A | C5-N7-C8 | -8.31 | 99.75 | 103.90 |
| 1 | AA | 420 | U | N3-C2-O2 | -8.31 | 116.38 | 122.20 |
| 1 | AA | 501 | C | C4'-C3'-C2' | -8.31 | 94.29 | 102.60 |
| 1 | AA | 654 | G | N3-C4-C5 | -8.31 | 124.44 | 128.60 |
| 26 | BB | 841 | G | C5-C6-N1 | 8.31 | 115.65 | 111.50 |
| 26 | BB | 2505 | G | O4'-C1'-N9 | 8.31 | 114.85 | 108.20 |
| 56 | B5 | 12 | ARG | NE-CZ-NH2 | -8.31 | 116.15 | 120.30 |
| 1 | AA | 595 | A | N1-C2-N3 | -8.31 | 125.15 | 129.30 |
| 26 | BB | 185 | G | N3-C4-N9 | 8.31 | 130.98 | 126.00 |
| 26 | BB | 216 | A | C2-N3-C4 | 8.31 | 114.75 | 110.60 |
| 26 | BB | 531 | C | C4'-C3'-C2' | -8.31 | 94.29 | 102.60 |
| 26 | BB | 764 | A | C5-C6-N1 | 8.31 | 121.85 | 117.70 |
| 26 | BB | 764 | A | N1-C6-N6 | -8.31 | 113.61 | 118.60 |
| 26 | BB | 1588 | G | C6-N1-C2 | -8.31 | 120.12 | 125.10 |
| 26 | BB | 2395 | C | N1-C2-O2 | 8.31 | 123.89 | 118.90 |
| 26 | BB | 46 | G | C1'-O4'-C4' | -8.31 | 103.25 | 109.90 |
| 26 | BB | 1364 | G | C1'-O4'-C4' | 8.30 | 116.54 | 109.90 |
| 26 | BB | 2216 | G | C5-N7-C8 | -8.30 | 100.15 | 104.30 |
| 26 | BB | 2512 | C | C5-C6-N1 | 8.31 | 125.15 | 121.00 |
| 26 | BB | 791 | C | N1-C2-O2 | 8.30 | 123.88 | 118.90 |
| 26 | BB | 1220 | G | C2-N3-C4 | 8.30 | 116.05 | 111.90 |
| 26 | BB | 1472 | C | C6-N1-C2 | -8.30 | 116.98 | 120.30 |
| 26 | BB | 1776 | G | C6-C5-N7 | -8.30 | 125.42 | 130.40 |
| 26 | BB | 2223 | G | N7-C8-N9 | 8.30 | 117.25 | 113.10 |
| 1 | AA | 35 | G | N1-C6-O6 | -8.30 | 114.92 | 119.90 |
| 1 | AA | 369 | G | C3'-C2'-C1' | 8.30 | 108.14 | 101.50 |
| 26 | BB | 103 | A | C6-C5-N7 | 8.30 | 138.11 | 132.30 |
| 26 | BB | 1018 | U | N3-C4-C5 | -8.30 | 109.62 | 114.60 |
| 26 | BB | 1627 | G | N9-C4-C5 | 8.30 | 108.72 | 105.40 |
| 26 | BB | 1463 | C | N3-C2-O2 | -8.30 | 116.09 | 121.90 |
| 26 | BB | 2476 | A | C8-N9-C4 | -8.30 | 102.48 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1048 | G | C5-N7-C8 | -8.30 | 100.15 | 104.30 |
| 1 | AA | 1453 | G | O4'-C1'-N9 | 8.30 | 114.84 | 108.20 |
| 26 | BB | 743 | A | C5-N7-C8 | 8.30 | 108.05 | 103.90 |
| 26 | BB | 1478 | G | C8-N9-C4 | -8.30 | 103.08 | 106.40 |
| 26 | BB | 2317 | A | N9-C4-C5 | 8.30 | 109.12 | 105.80 |
| 1 | AA | 129 | A | N1-C2-N3 | -8.29 | 125.15 | 129.30 |
| 26 | BB | 337 | C | C6-N1-C2 | -8.30 | 116.98 | 120.30 |
| 26 | BB | 675 | A | N7-C8-N9 | 8.30 | 117.95 | 113.80 |
| 1 | AA | 1480 | A | O4'-C1'-N9 | 8.29 | 114.83 | 108.20 |
| 26 | BB | 638 | G | N7-C8-N9 | 8.29 | 117.25 | 113.10 |
| 26 | BB | 1001 | A | C6-C5-N7 | -8.29 | 126.49 | 132.30 |
| 26 | BB | 1891 | G | C8-N9-C4 | -8.29 | 103.08 | 106.40 |
| 1 | AA | 502 | A | N1-C6-N6 | 8.29 | 123.58 | 118.60 |
| 1 | AA | 745 | G | O4'-C1'-N9 | 8.29 | 114.83 | 108.20 |
| 1 | AA | 989 | U | C5-C4-O4 | 8.29 | 130.88 | 125.90 |
| 1 | AA | 1220 | G | N3-C4-C5 | -8.29 | 124.45 | 128.60 |
| 26 | BB | 2470 | G | N1-C2-N2 | 8.29 | 123.66 | 116.20 |
| 1 | AA | 1328 | C | C2-N3-C4 | 8.29 | 124.05 | 119.90 |
| 25 | BA | 46 | A | N1-C2-N3 | 8.29 | 133.45 | 129.30 |
| 26 | BB | 161 | A | C2-N3-C4 | 8.29 | 114.75 | 110.60 |
| 26 | BB | 430 | A | N7-C8-N9 | 8.29 | 117.95 | 113.80 |
| 26 | BB | 796 | C | C5-C6-N1 | 8.29 | 125.15 | 121.00 |
| 26 | BB | 957 | C | C5-C4-N4 | -8.29 | 114.40 | 120.20 |
| 1 | AA | 46 | G | C6-N1-C2 | -8.29 | 120.13 | 125.10 |
| 1 | AA | 597 | G | C5-C6-O6 | -8.29 | 123.63 | 128.60 |
| 26 | BB | 1068 | G | C5-N7-C8 | -8.29 | 100.16 | 104.30 |
| 26 | BB | 1229 | C | C3'-C2'-C1' | -8.29 | 94.87 | 101.50 |
| 26 | BB | 2450 | A | C8-N9-C4 | -8.29 | 102.48 | 105.80 |
| 1 | AA | 814 | A | N9-C1'-C2' | -8.29 | 102.89 | 112.00 |
| 1 | AA | 1321 | U | C5-C6-N1 | -8.29 | 118.56 | 122.70 |
| 26 | BB | 368 | A | C3'-C2'-C1' | -8.29 | 94.87 | 101.50 |
| 26 | BB | 369 | U | C5-C6-N1 | -8.28 | 118.56 | 122.70 |
| 26 | BB | 633 | A | N9-C4-C5 | 8.29 | 109.11 | 105.80 |
| 26 | BB | 1662 | U | N1-C2-N3 | 8.29 | 119.87 | 114.90 |
| 26 | BB | 2685 | G | N7-C8-N9 | 8.29 | 117.24 | 113.10 |
| 26 | BB | 1711 | A | C5'-C4'-O4' | 8.28 | 119.04 | 109.10 |
| 26 | BB | 2514 | U | O4'-C1'-N1 | 8.28 | 114.83 | 108.20 |
| 1 | AA | 416 | G | N3-C4-C5 | -8.28 | 124.46 | 128.60 |
| 1 | AA | 1221 | G | C4-C5-C6 | -8.28 | 113.83 | 118.80 |
| 26 | BB | 141 | G | N1-C6-O6 | -8.28 | 114.93 | 119.90 |
| 26 | BB | 481 | G | C4-C5-N7 | -8.28 | 107.49 | 110.80 |
| 26 | BB | 606 | U | C5'-C4'-O4' | 8.28 | 119.04 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1486 | U | N3-C2-O2 | -8.28 | 116.40 | 122.20 |
| 26 | BB | 1901 | A | N9-C4-C5 | 8.28 | 109.11 | 105.80 |
| 1 | AA | 292 | G | C4-C5-C6 | 8.28 | 123.77 | 118.80 |
| 1 | AA | 313 | A | C5-N7-C8 | -8.28 | 99.76 | 103.90 |
| 1 | AA | 1111 | A | C5-N7-C8 | -8.28 | 99.76 | 103.90 |
| 1 | AA | 1312 | G | N1-C2-N3 | -8.28 | 118.93 | 123.90 |
| 26 | BB | 495 | G | N3-C4-N9 | -8.28 | 121.03 | 126.00 |
| 26 | BB | 893 | C | C4-C5-C6 | -8.28 | 113.26 | 117.40 |
| 26 | BB | 1431 | A | N9-C4-C5 | -8.28 | 102.49 | 105.80 |
| 26 | BB | 1604 | C | C6-N1-C2 | 8.28 | 123.61 | 120.30 |
| 26 | BB | 1661 | G | C3'-C2'-C1' | 8.28 | 108.12 | 101.50 |
| 26 | BB | 2589 | A | C5-N7-C8 | -8.28 | 99.76 | 103.90 |
| 1 | AA | 359 | G | O4'-C1'-N9 | 8.28 | 114.82 | 108.20 |
| 25 | BA | 24 | G | C8-N9-C4 | -8.28 | 103.09 | 106.40 |
| 26 | BB | 45 | G | N3-C4-N9 | 8.28 | 130.97 | 126.00 |
| 26 | BB | 697 | G | C5-C6-O6 | -8.28 | 123.64 | 128.60 |
| 26 | BB | 855 | G | N3-C4-C5 | -8.28 | 124.46 | 128.60 |
| 26 | BB | 2191 | A | N1-C6-N6 | -8.28 | 113.63 | 118.60 |
| 1 | AA | 46 | G | C5-C6-O6 | -8.27 | 123.64 | 128.60 |
| 1 | AA | 289 | G | N3-C4-C5 | -8.27 | 124.46 | 128.60 |
| 1 | AA | 571 | U | N3-C2-O2 | -8.27 | 116.41 | 122.20 |
| 1 | AA | 1129 | C | N3-C4-C5 | -8.27 | 118.59 | 121.90 |
| 1 | AA | 1342 | C | N1-C2-O2 | 8.27 | 123.86 | 118.90 |
| 26 | BB | 345 | A | C6-N1-C2 | 8.27 | 123.56 | 118.60 |
| 26 | BB | 921 | C | C4'-C3'-C2' | -8.27 | 94.33 | 102.60 |
| 1 | AA | 777 | A | O4'-C1'-N9 | 8.27 | 114.82 | 108.20 |
| 1 | AA | 887 | G | N1-C6-O6 | -8.27 | 114.94 | 119.90 |
| 1 | AA | 944 | G | C6-C5-N7 | -8.27 | 125.44 | 130.40 |
| 26 | BB | 142 | A | C8-N9-C4 | -8.27 | 102.49 | 105.80 |
| 26 | BB | 1755 | A | N1-C2-N3 | -8.27 | 125.16 | 129.30 |
| 26 | BB | 628 | G | C2-N3-C4 | 8.27 | 116.03 | 111.90 |
| 26 | BB | 836 | G | N9-C4-C5 | 8.27 | 108.71 | 105.40 |
| 26 | BB | 992 | C | C5'-C4'-O4' | 8.27 | 119.03 | 109.10 |
| 1 | AA | 735 | C | C3'-C2'-C1' | 8.27 | 108.12 | 101.50 |
| 26 | BB | 499 | U | C5'-C4'-C3' | -8.27 | 102.77 | 116.00 |
| 1 | AA | 551 | U | N1-C1'-C2' | -8.27 | 102.91 | 112.00 |
| 1 | AA | 743 | A | C3'-C2'-C1' | 8.27 | 108.11 | 101.50 |
| 1 | AA | 1262 | C | N1-C2-O2 | 8.27 | 123.86 | 118.90 |
| 1 | AA | 1403 | C | C6-N1-C2 | -8.27 | 116.99 | 120.30 |
| 26 | BB | 142 | A | N7-C8-N9 | 8.27 | 117.93 | 113.80 |
| 26 | BB | 1154 | G | C8-N9-C4 | -8.27 | 103.09 | 106.40 |
| 26 | BB | 1436 | G | C8-N9-C4 | -8.27 | 103.09 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1651 | G | N3-C4-C5 | -8.27 | 124.47 | 128.60 |
| 26 | BB | 1791 | A | N1-C2-N3 | -8.27 | 125.17 | 129.30 |
| 1 | AA | 1275 | A | C8-N9-C4 | -8.27 | 102.49 | 105.80 |
| 3 | AC | 53 | G | N9-C4-C5 | 8.27 | 108.71 | 105.40 |
| 26 | BB | 69 | C | N1-C2-O2 | 8.27 | 123.86 | 118.90 |
| 26 | BB | 151 | C | C1'-O4'-C4' | 8.27 | 116.51 | 109.90 |
| 26 | BB | 1896 | G | O4'-C1'-N9 | 8.27 | 114.81 | 108.20 |
| 1 | AA | 618 | C | P-O3'-C3' | 8.26 | 129.62 | 119.70 |
| 1 | AA | 876 | C | C5-C4-N4 | 8.26 | 125.98 | 120.20 |
| 1 | AA | 1383 | C | C5'-C4'-C3' | -8.26 | 102.78 | 116.00 |
| 6 | AF | 64 | ARG | NE-CZ-NH1 | -8.26 | 116.17 | 120.30 |
| 26 | BB | 473 | G | N9-C4-C5 | 8.26 | 108.70 | 105.40 |
| 26 | BB | 764 | A | O4'-C1'-C2' | -8.26 | 97.54 | 105.80 |
| 26 | BB | 853 | C | N1-C2-O2 | 8.26 | 123.86 | 118.90 |
| 26 | BB | 1399 | C | C6-N1-C2 | -8.26 | 117.00 | 120.30 |
| 26 | BB | 1774 | C | C4-C5-C6 | -8.26 | 113.27 | 117.40 |
| 26 | BB | 2508 | G | N7-C8-N9 | 8.26 | 117.23 | 113.10 |
| 26 | BB | 2695 | U | O4'-C1'-N1 | 8.26 | 114.81 | 108.20 |
| 26 | BB | 2797 | U | N3-C2-O2 | -8.26 | 116.42 | 122.20 |
| 1 | AA | 761 | G | N1-C6-O6 | 8.26 | 124.86 | 119.90 |
| 1 | AA | 797 | C | C6-N1-C2 | 8.26 | 123.61 | 120.30 |
| 1 | AA | 1211 | U | O4'-C1'-N1 | 8.26 | 114.81 | 108.20 |
| 1 | AA | 1279 | G | C5-C6-O6 | -8.26 | 123.64 | 128.60 |
| 2 | AB | 19 | G | N3-C4-N9 | 8.26 | 130.96 | 126.00 |
| 26 | BB | 98 | G | C8-N9-C4 | -8.26 | 103.10 | 106.40 |
| 26 | BB | 703 | U | C5-C4-O4 | 8.26 | 130.86 | 125.90 |
| 40 | BP | 96 | ARG | NE-CZ-NH2 | 8.26 | 124.43 | 120.30 |
| 26 | BB | 2537 | U | C4'-C3'-C2' | -8.26 | 94.34 | 102.60 |
| 26 | BB | 2759 | G | C6-N1-C2 | -8.26 | 120.14 | 125.10 |
| 44 | BT | 90 | ARG | NE-CZ-NH1 | 8.26 | 124.43 | 120.30 |
| 1 | AA | 537 | G | C5-C6-O6 | -8.26 | 123.64 | 128.60 |
| 1 | AA | 709 | U | O4'-C1'-N1 | 8.26 | 114.81 | 108.20 |
| 1 | AA | 744 | C | N3-C4-N4 | 8.26 | 123.78 | 118.00 |
| 1 | AA | 101 | A | C5-C6-N1 | 8.26 | 121.83 | 117.70 |
| 1 | AA | 296 | U | C4-C5-C6 | 8.26 | 124.65 | 119.70 |
| 1 | AA | 1397 | C | O4'-C1'-N1 | 8.26 | 114.81 | 108.20 |
| 4 | AD | 17 | C | C5-C6-N1 | 8.26 | 125.13 | 121.00 |
| 25 | BA | 95 | U | C5-C4-O4 | 8.26 | 130.85 | 125.90 |
| 26 | BB | 349 | U | C5-C6-N1 | -8.26 | 118.57 | 122.70 |
| 26 | BB | 938 | G | N9-C4-C5 | 8.26 | 108.70 | 105.40 |
| 26 | BB | 2725 | A | O4'-C4'-C3' | 8.26 | 112.70 | 106.10 |
| 26 | BB | 2253 | G | C4-C5-N7 | -8.26 | 107.50 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2413 | G | C4-C5-C6 | 8.26 | 123.75 | 118.80 |
| 1 | AA | 1358 | U | P-O3'-C3' | 8.25 | 129.60 | 119.70 |
| 1 | AA | 778 | G | N3-C4-C5 | -8.25 | 124.47 | 128.60 |
| 1 | AA | 782 | A | N9-C1'-C2' | -8.25 | 102.92 | 112.00 |
| 25 | BA | 30 | C | N3-C4-C5 | -8.25 | 118.60 | 121.90 |
| 26 | BB | 174 | U | C5-C4-O4 | -8.25 | 120.95 | 125.90 |
| 26 | BB | 1092 | C | N3-C4-C5 | 8.25 | 125.20 | 121.90 |
| 26 | BB | 2130 | U | O4'-C1'-N1 | 8.25 | 114.80 | 108.20 |
| 26 | BB | 1125 | G | C8-N9-C4 | -8.25 | 103.10 | 106.40 |
| 26 | BB | 1996 | C | N3-C4-N4 | 8.25 | 123.78 | 118.00 |
| 26 | BB | 2268 | A | N9-C4-C5 | 8.25 | 109.10 | 105.80 |
| 26 | BB | 2871 | U | C2-N3-C4 | -8.25 | 122.05 | 127.00 |
| 1 | AA | 876 | C | N3-C2-O2 | -8.25 | 116.12 | 121.90 |
| 3 | AC | 45 | G | N7-C8-N9 | 8.25 | 117.23 | 113.10 |
| 26 | BB | 972 | A | O4'-C1'-N9 | 8.25 | 114.80 | 108.20 |
| 26 | BB | 1623 | G | C6-C5-N7 | 8.25 | 135.35 | 130.40 |
| 26 | BB | 1875 | G | N7-C8-N9 | 8.25 | 117.23 | 113.10 |
| 26 | BB | 2288 | A | N1-C6-N6 | 8.25 | 123.55 | 118.60 |
| 26 | BB | 2631 | G | O4'-C1'-N9 | 8.25 | 114.80 | 108.20 |
| 31 | BG | 174 | PHE | CB-CG-CD2 | -8.25 | 115.03 | 120.80 |
| 1 | AA | 1323 | G | N9-C4-C5 | 8.25 | 108.70 | 105.40 |
| 2 | AB | 6 | C | N1-C2-O2 | 8.25 | 123.85 | 118.90 |
| 26 | BB | 1398 | C | C4-C5-C6 | 8.25 | 121.52 | 117.40 |
| 26 | BB | 1553 | A | O4'-C1'-N9 | 8.25 | 114.80 | 108.20 |
| 26 | BB | 1606 | C | C5-C4-N4 | 8.25 | 125.97 | 120.20 |
| 26 | BB | 1740 | G | C2-N3-C4 | -8.25 | 107.78 | 111.90 |
| 1 | AA | 692 | U | N3-C2-O2 | -8.24 | 116.43 | 122.20 |
| 1 | AA | 1414 | U | C5-C4-O4 | -8.24 | 120.95 | 125.90 |
| 26 | BB | 120 | U | N1-C2-O2 | -8.24 | 117.03 | 122.80 |
| 26 | BB | 569 | U | N1-C2-O2 | -8.24 | 117.03 | 122.80 |
| 26 | BB | 1245 | G | C5-C6-O6 | -8.24 | 123.65 | 128.60 |
| 26 | BB | 1315 | C | N3-C2-O2 | -8.24 | 116.13 | 121.90 |
| 26 | BB | 2011 | U | C5-C6-N1 | -8.24 | 118.58 | 122.70 |
| 26 | BB | 2632 | A | C5'-C4'-O4' | 8.24 | 118.99 | 109.10 |
| 1 | AA | 85 | U | P-O3'-C3' | 8.24 | 129.59 | 119.70 |
| 26 | BB | 103 | A | O4'-C1'-N9 | 8.24 | 114.79 | 108.20 |
| 26 | BB | 155 | A | O4'-C1'-N9 | 8.24 | 114.79 | 108.20 |
| 28 | BD | 51 | ARG | NE-CZ-NH2 | -8.24 | 116.18 | 120.30 |
| 1 | AA | 639 | G | C5'-C4'-O4' | 8.24 | 118.99 | 109.10 |
| 4 | AD | 54 | G | O4'-C1'-N9 | 8.24 | 114.79 | 108.20 |
| 26 | BB | 2638 | G | O4'-C1'-N9 | 8.24 | 114.79 | 108.20 |
| 1 | AA | 225 | C | O4'-C4'-C3' | -8.24 | 95.76 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 541 | G | C3'-C2'-C1' | 8.24 | 108.09 | 101.50 |
| 1 | AA | 1126 | U | C4-C5-C6 | 8.24 | 124.64 | 119.70 |
| 1 | AA | 1231 | G | C4-C5-N7 | -8.24 | 107.50 | 110.80 |
| 2 | AB | 53 | G | O4'-C4'-C3' | 8.24 | 112.69 | 106.10 |
| 26 | BB | 1638 | C | N3-C2-O2 | -8.24 | 116.13 | 121.90 |
| 26 | BB | 2156 | G | O5'-P-OP2 | -8.24 | 98.28 | 105.70 |
| 41 | BQ | 50 | ALA | N-CA-CB | -8.24 | 98.56 | 110.10 |
| 1 | AA | 465 | A | C6-N1-C2 | -8.24 | 113.66 | 118.60 |
| 26 | BB | 561 | G | C4-C5-C6 | 8.24 | 123.74 | 118.80 |
| 1 | AA | 606 | G | C1'-O4'-C4' | 8.24 | 116.49 | 109.90 |
| 26 | BB | 1768 | C | N1-C2-O2 | 8.24 | 123.84 | 118.90 |
| 1 | AA | 383 | A | C2-N3-C4 | 8.23 | 114.72 | 110.60 |
| 1 | AA | 144 | G | N7-C8-N9 | 8.23 | 117.22 | 113.10 |
| 1 | AA | 730 | G | C5-N7-C8 | -8.23 | 100.18 | 104.30 |
| 26 | BB | 302 | C | O4'-C1'-N1 | 8.23 | 114.79 | 108.20 |
| 26 | BB | 755 | U | N3-C4-O4 | 8.23 | 125.16 | 119.40 |
| 26 | BB | 1350 | C | O4'-C1'-N1 | 8.23 | 114.79 | 108.20 |
| 26 | BB | 1966 | A | C1'-O4'-C4' | -8.23 | 103.31 | 109.90 |
| 43 | BS | 12 | ARG | NE-CZ-NH1 | -8.23 | 116.18 | 120.30 |
| 1 | AA | 106 | C | O4'-C1'-N1 | 8.23 | 114.78 | 108.20 |
| 1 | AA | 944 | G | N1-C6-O6 | -8.23 | 114.96 | 119.90 |
| 26 | BB | 423 | A | C4'-C3'-C2' | 8.23 | 110.83 | 102.60 |
| 26 | BB | 189 | G | C8-N9-C4 | -8.23 | 103.11 | 106.40 |
| 26 | BB | 575 | A | O4'-C1'-N9 | 8.23 | 114.78 | 108.20 |
| 26 | BB | 973 | A | C8-N9-C4 | -8.23 | 102.51 | 105.80 |
| 26 | BB | 1186 | G | N3-C4-C5 | -8.23 | 124.48 | 128.60 |
| 26 | BB | 1642 | G | N3-C4-C5 | -8.23 | 124.48 | 128.60 |
| 26 | BB | 2038 | G | N9-C4-C5 | 8.23 | 108.69 | 105.40 |
| 26 | BB | 2060 | A | O4'-C4'-C3' | 8.23 | 112.69 | 106.10 |
| 26 | BB | 2234 | G | C6-C5-N7 | -8.23 | 125.46 | 130.40 |
| 26 | BB | 2374 | C | C2-N3-C4 | 8.23 | 124.02 | 119.90 |
| 26 | BB | 2890 | G | C5-C6-O6 | -8.23 | 123.66 | 128.60 |
| 1 | AA | 646 | G | C5-C6-O6 | 8.23 | 133.54 | 128.60 |
| 1 | AA | 764 | C | C1'-O4'-C4' | -8.23 | 103.32 | 109.90 |
| 1 | AA | 862 | C | N3-C4-N4 | -8.23 | 112.24 | 118.00 |
| 1 | AA | 1128 | C | O4'-C1'-N1 | 8.23 | 114.78 | 108.20 |
| 1 | AA | 1476 | A | C4-C5-N7 | 8.23 | 114.81 | 110.70 |
| 1 | AA | 1527 | U | C2-N3-C4 | -8.23 | 122.06 | 127.00 |
| 3 | AC | 52 | U | C5-C6-N1 | -8.23 | 118.59 | 122.70 |
| 26 | BB | 1852 | U | N1-C2-N3 | 8.23 | 119.84 | 114.90 |
| 26 | BB | 1871 | A | N9-C4-C5 | 8.23 | 109.09 | 105.80 |
| 26 | BB | 1919 | A | N1-C2-N3 | -8.23 | 125.19 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 271 | G | C8-N9-C4 | -8.23 | 103.11 | 106.40 |
| 26 | BB | 557 | C | N1-C2-O2 | 8.23 | 123.84 | 118.90 |
| 26 | BB | 1143 | A | C5-N7-C8 | -8.23 | 99.79 | 103.90 |
| 26 | BB | 1336 | A | N1-C2-N3 | -8.23 | 125.19 | 129.30 |
| 26 | BB | 1824 | G | C3'-C2'-C1' | 8.23 | 108.08 | 101.50 |
| 1 | AA | 613 | C | N1-C2-O2 | 8.22 | 123.83 | 118.90 |
| 26 | BB | 2185 | U | O4'-C1'-N1 | 8.22 | 114.78 | 108.20 |
| 26 | BB | 119 | A | C1'-O4'-C4' | -8.22 | 103.32 | 109.90 |
| 26 | BB | 225 | C | O4'-C1'-N1 | 8.22 | 114.78 | 108.20 |
| 26 | BB | 844 | A | O4'-C1'-N9 | 8.22 | 114.78 | 108.20 |
| 1 | AA | 821 | G | C5-C6-O6 | -8.22 | 123.67 | 128.60 |
| 26 | BB | 1003 | G | C6-C5-N7 | -8.22 | 125.47 | 130.40 |
| 26 | BB | 974 | G | C1'-O4'-C4' | -8.22 | 103.32 | 109.90 |
| 26 | BB | 1185 | G | N9-C4-C5 | 8.22 | 108.69 | 105.40 |
| 26 | BB | 1598 | A | C5'-C4'-O4' | 8.22 | 118.96 | 109.10 |
| 26 | BB | 1862 | G | N9-C4-C5 | 8.22 | 108.69 | 105.40 |
| 26 | BB | 2330 | G | N3-C4-N9 | 8.22 | 130.93 | 126.00 |
| 26 | BB | 2506 | U | N3-C2-O2 | 8.22 | 127.95 | 122.20 |
| 1 | AA | 324 | G | C3'-C2'-C1' | 8.22 | 108.07 | 101.50 |
| 1 | AA | 435 | A | C2-N3-C4 | 8.22 | 114.71 | 110.60 |
| 1 | AA | 493 | A | N9-C4-C5 | 8.22 | 109.09 | 105.80 |
| 1 | AA | 550 | G | N7-C8-N9 | 8.22 | 117.21 | 113.10 |
| 1 | AA | 775 | G | N3-C2-N2 | -8.22 | 114.15 | 119.90 |
| 1 | AA | 1103 | C | N3-C2-O2 | -8.22 | 116.15 | 121.90 |
| 26 | BB | 455 | C | C5-C4-N4 | 8.22 | 125.95 | 120.20 |
| 26 | BB | 20 | C | N1-C1'-C2' | -8.22 | 102.96 | 112.00 |
| 26 | BB | 735 | A | P-O3'-C3' | 8.22 | 129.56 | 119.70 |
| 26 | BB | 2173 | A | N7-C8-N9 | 8.22 | 117.91 | 113.80 |
| 1 | AA | 144 | G | C6-N1-C2 | -8.21 | 120.17 | 125.10 |
| 1 | AA | 275 | G | O4'-C1'-N9 | 8.21 | 114.77 | 108.20 |
| 1 | AA | 284 | C | C2-N3-C4 | 8.21 | 124.01 | 119.90 |
| 1 | AA | 653 | U | N3-C2-O2 | 8.21 | 127.95 | 122.20 |
| 1 | AA | 1324 | A | C4-C5-C6 | 8.21 | 121.11 | 117.00 |
| 3 | AC | 20 | G | N3-C4-C5 | -8.21 | 124.49 | 128.60 |
| 26 | BB | 167 | A | C4'-C3'-C2' | -8.21 | 94.39 | 102.60 |
| 26 | BB | 395 | U | N1-C2-O2 | 8.21 | 128.55 | 122.80 |
| 26 | BB | 836 | G | C4-C5-N7 | -8.21 | 107.51 | 110.80 |
| 26 | BB | 1848 | A | C2-N3-C4 | 8.22 | 114.71 | 110.60 |
| 26 | BB | 2034 | U | C2-N3-C4 | -8.21 | 122.07 | 127.00 |
| 26 | BB | 2858 | C | C5-C4-N4 | 8.22 | 125.95 | 120.20 |
| 1 | AA | 1317 | C | O4'-C1'-N1 | 8.21 | 114.77 | 108.20 |
| 35 | BK | 66 | PHE | CB-CG-CD2 | -8.21 | 115.05 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 954 | G | C4-C5-N7 | -8.21 | 107.52 | 110.80 |
| 26 | BB | 142 | A | C4-C5-C6 | -8.21 | 112.89 | 117.00 |
| 26 | BB | 783 | A | N3-C4-C5 | -8.21 | 121.05 | 126.80 |
| 26 | BB | 2006 | C | C6-N1-C2 | -8.21 | 117.02 | 120.30 |
| 39 | BO | 114 | ARG | NE-CZ-NH2 | 8.21 | 124.41 | 120.30 |
| 26 | BB | 2080 | A | C4-C5-N7 | -8.21 | 106.59 | 110.70 |
| 26 | BB | 2111 | U | P-O3'-C3' | 8.21 | 129.55 | 119.70 |
| 1 | AA | 1030 | U | C3'-C2'-C1' | -8.21 | 94.93 | 101.50 |
| 26 | BB | 783 | A | C6-N1-C2 | -8.21 | 113.67 | 118.60 |
| 1 | AA | 332 | G | C5'-C4'-O4' | 8.21 | 118.95 | 109.10 |
| 1 | AA | 851 | G | C2-N3-C4 | 8.21 | 116.00 | 111.90 |
| 1 | AA | 1074 | G | C4-C5-N7 | 8.21 | 114.08 | 110.80 |
| 1 | AA | 1121 | U | N3-C2-O2 | -8.21 | 116.45 | 122.20 |
| 1 | AA | 1280 | A | N1-C2-N3 | 8.21 | 133.41 | 129.30 |
| 26 | BB | 327 | G | C8-N9-C4 | 8.21 | 109.68 | 106.40 |
| 26 | BB | 1992 | G | C2-N3-C4 | 8.21 | 116.00 | 111.90 |
| 26 | BB | 2742 | G | N3-C2-N2 | -8.21 | 114.15 | 119.90 |
| 26 | BB | 3 | U | O4'-C4'-C3' | 8.21 | 112.67 | 106.10 |
| 26 | BB | 534 | U | C5-C4-O4 | 8.21 | 130.82 | 125.90 |
| 1 | AA | 971 | G | C5-C6-O6 | -8.20 | 123.68 | 128.60 |
| 26 | BB | 403 | U | N3-C4-C5 | 8.21 | 119.52 | 114.60 |
| 26 | BB | 631 | A | N1-C2-N3 | -8.21 | 125.20 | 129.30 |
| 26 | BB | 1740 | G | C4-C5-N7 | 8.21 | 114.08 | 110.80 |
| 26 | BB | 856 | G | N9-C1'-C2' | -8.20 | 102.98 | 112.00 |
| 26 | BB | 2054 | A | C2-N3-C4 | 8.21 | 114.70 | 110.60 |
| 1 | AA | 948 | C | C3'-C2'-C1' | 8.20 | 108.06 | 101.50 |
| 1 | AA | 1349 | A | N1-C6-N6 | -8.20 | 113.68 | 118.60 |
| 26 | BB | 460 | A | C2-N3-C4 | 8.20 | 114.70 | 110.60 |
| 26 | BB | 781 | A | C4-C5-C6 | -8.20 | 112.90 | 117.00 |
| 26 | BB | 937 | C | O4'-C1'-N1 | 8.20 | 114.76 | 108.20 |
| 26 | BB | 1218 | G | N3-C4-N9 | 8.20 | 130.92 | 126.00 |
| 26 | BB | 1930 | G | C2-N3-C4 | 8.20 | 116.00 | 111.90 |
| 26 | BB | 2152 | G | C2-N3-C4 | 8.20 | 116.00 | 111.90 |
| 1 | AA | 71 | A | C2-N3-C4 | 8.20 | 114.70 | 110.60 |
| 1 | AA | 550 | G | N1-C2-N3 | -8.20 | 118.98 | 123.90 |
| 1 | AA | 1211 | U | C2-N3-C4 | -8.20 | 122.08 | 127.00 |
| 20 | AT | 64 | ARG | NE-CZ-NH1 | 8.20 | 124.40 | 120.30 |
| 26 | BB | 238 | C | C5-C6-N1 | 8.20 | 125.10 | 121.00 |
| 26 | BB | 311 | A | N1-C6-N6 | -8.20 | 113.68 | 118.60 |
| 26 | BB | 2434 | A | C2-N3-C4 | 8.20 | 114.70 | 110.60 |
| 26 | BB | 1944 | U | C6-N1-C2 | -8.20 | 116.08 | 121.00 |
| 26 | BB | 2817 | U | C4-C5-C6 | 8.20 | 124.62 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 46 | A | C4-C5-C6 | -8.20 | 112.90 | 117.00 |
| 26 | BB | 206 | U | O4'-C1'-N1 | 8.20 | 114.76 | 108.20 |
| 26 | BB | 454 | A | N7-C8-N9 | -8.20 | 109.70 | 113.80 |
| 26 | BB | 1574 | C | O5'-P-OP2 | -8.20 | 98.32 | 105.70 |
| 26 | BB | 1599 | U | C4-C5-C6 | 8.20 | 124.62 | 119.70 |
| 26 | BB | 1672 | A | N9-C4-C5 | 8.20 | 109.08 | 105.80 |
| 26 | BB | 2118 | U | N3-C2-O2 | -8.20 | 116.46 | 122.20 |
| 26 | BB | 2178 | C | N3-C2-O2 | 8.20 | 127.64 | 121.90 |
| 26 | BB | 2193 | G | N3-C2-N2 | -8.20 | 114.16 | 119.90 |
| 1 | AA | 1016 | A | C4-C5-C6 | -8.19 | 112.90 | 117.00 |
| 8 | AH | 49 | TYR | CB-CG-CD1 | 8.19 | 125.92 | 121.00 |
| 26 | BB | 229 | C | C2-N3-C4 | 8.19 | 124.00 | 119.90 |
| 26 | BB | 1250 | G | C3'-C2'-C1' | 8.19 | 108.06 | 101.50 |
| 26 | BB | 1661 | G | C5'-C4'-C3' | -8.19 | 102.89 | 116.00 |
| 26 | BB | 2280 | G | N3-C4-C5 | -8.19 | 124.50 | 128.60 |
| 26 | BB | 2468 | A | O4'-C4'-C3' | 8.19 | 112.66 | 106.10 |
| 1 | AA | 717 | U | C5-C6-N1 | -8.19 | 118.60 | 122.70 |
| 1 | AA | 429 | U | N3-C4-C5 | -8.19 | 109.69 | 114.60 |
| 1 | AA | 1100 | C | N3-C4-C5 | -8.19 | 118.62 | 121.90 |
| 25 | BA | 28 | C | C5-C6-N1 | -8.19 | 116.90 | 121.00 |
| 26 | BB | 335 | C | C2-N3-C4 | 8.19 | 124.00 | 119.90 |
| 26 | BB | 861 | A | C5-C6-N1 | 8.19 | 121.80 | 117.70 |
| 26 | BB | 1139 | G | N3-C2-N2 | 8.19 | 125.63 | 119.90 |
| 26 | BB | 1751 | U | C5-C4-O4 | -8.19 | 120.98 | 125.90 |
| 26 | BB | 2414 | G | N1-C2-N3 | -8.19 | 118.98 | 123.90 |
| 26 | BB | 2745 | C | C5-C4-N4 | 8.19 | 125.93 | 120.20 |
| 1 | AA | 32 | A | C4'-C3'-C2' | -8.19 | 94.41 | 102.60 |
| 1 | AA | 95 | C | C5'-C4'-O4' | 8.19 | 118.93 | 109.10 |
| 26 | BB | 1815 | A | N9-C4-C5 | -8.19 | 102.52 | 105.80 |
| 26 | BB | 2408 | U | C3'-C2'-C1' | 8.19 | 108.05 | 101.50 |
| 1 | AA | 412 | A | O4'-C1'-N9 | 8.19 | 114.75 | 108.20 |
| 1 | AA | 588 | G | O5'-C5'-C4' | -8.19 | 96.14 | 111.70 |
| 1 | AA | 897 | C | N3-C4-C5 | -8.19 | 118.62 | 121.90 |
| 1 | AA | 996 | A | C4-C5-C6 | 8.19 | 121.09 | 117.00 |
| 1 | AA | 1413 | A | C6-N1-C2 | -8.19 | 113.69 | 118.60 |
| 1 | AA | 1416 | G | N3-C4-C5 | -8.19 | 124.50 | 128.60 |
| 25 | BA | 108 | A | C4-C5-C6 | -8.19 | 112.91 | 117.00 |
| 26 | BB | 204 | A | C5-C6-N1 | 8.19 | 121.79 | 117.70 |
| 26 | BB | 385 | C | O4'-C1'-N1 | 8.19 | 114.75 | 108.20 |
| 26 | BB | 443 | A | C2-N3-C4 | 8.19 | 114.69 | 110.60 |
| 26 | BB | 1520 | U | C5-C4-O4 | 8.19 | 130.81 | 125.90 |
| 26 | BB | 1594 | U | O4'-C1'-N1 | 8.19 | 114.75 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1605 | C | O4'-C1'-N1 | 8.19 | 114.75 | 108.20 |
| 1 | AA | 41 | G | N1-C2-N2 | 8.19 | 123.57 | 116.20 |
| 26 | BB | 493 | G | C1'-O4'-C4' | -8.19 | 103.35 | 109.90 |
| 26 | BB | 1787 | A | N9-C4-C5 | 8.19 | 109.07 | 105.80 |
| 26 | BB | 2350 | C | N3-C4-N4 | -8.19 | 112.27 | 118.00 |
| 26 | BB | 325 | G | N9-C4-C5 | -8.18 | 102.13 | 105.40 |
| 26 | BB | 1094 | U | C3'-C2'-C1' | 8.18 | 108.05 | 101.50 |
| 26 | BB | 1280 | G | N1-C6-O6 | -8.18 | 114.99 | 119.90 |
| 26 | BB | 2087 | G | O4'-C1'-N9 | 8.18 | 114.75 | 108.20 |
| 1 | AA | 168 | G | N9-C4-C5 | 8.18 | 108.67 | 105.40 |
| 1 | AA | 1081 | A | N1-C2-N3 | 8.18 | 133.39 | 129.30 |
| 26 | BB | 70 | G | N3-C4-C5 | -8.18 | 124.51 | 128.60 |
| 26 | BB | 81 | G | N3-C4-C5 | -8.18 | 124.51 | 128.60 |
| 26 | BB | 1272 | A | N1-C2-N3 | -8.18 | 125.21 | 129.30 |
| 26 | BB | 1483 | G | N1-C2-N3 | 8.18 | 128.81 | 123.90 |
| 26 | BB | 2389 | G | C8-N9-C4 | -8.18 | 103.13 | 106.40 |
| 26 | BB | 1376 | C | C5'-C4'-C3' | 8.18 | 129.09 | 116.00 |
| 26 | BB | 1862 | G | C4-C5-N7 | -8.18 | 107.53 | 110.80 |
| 26 | BB | 2304 | G | C5-C6-N1 | 8.18 | 115.59 | 111.50 |
| 26 | BB | 2309 | A | C2-N3-C4 | 8.18 | 114.69 | 110.60 |
| 31 | BG | 70 | ARG | NE-CZ-NH2 | 8.18 | 124.39 | 120.30 |
| 44 | BT | 21 | ARG | NE-CZ-NH1 | -8.18 | 116.21 | 120.30 |
| 1 | AA | 111 | G | C4'-C3'-C2' | -8.18 | 94.42 | 102.60 |
| 1 | AA | 332 | G | C6-N1-C2 | -8.18 | 120.19 | 125.10 |
| 1 | AA | 1415 | G | C2-N3-C4 | 8.18 | 115.99 | 111.90 |
| 25 | BA | 45 | A | C2-N3-C4 | 8.18 | 114.69 | 110.60 |
| 26 | BB | 141 | G | C5-C6-N1 | 8.18 | 115.59 | 111.50 |
| 26 | BB | 764 | A | O4'-C1'-N9 | 8.18 | 114.75 | 108.20 |
| 26 | BB | 1401 | G | C2-N3-C4 | -8.18 | 107.81 | 111.90 |
| 26 | BB | 1808 | A | N3-C4-C5 | -8.18 | 121.07 | 126.80 |
| 26 | BB | 2625 | G | C8-N9-C1' | 8.18 | 137.64 | 127.00 |
| 1 | AA | 204 | G | C4-C5-C6 | 8.18 | 123.71 | 118.80 |
| 1 | AA | 1515 | G | C4-C5-C6 | 8.18 | 123.71 | 118.80 |
| 26 | BB | 951 | C | C5-C6-N1 | -8.18 | 116.91 | 121.00 |
| 26 | BB | 2560 | A | C5-C6-N1 | 8.18 | 121.79 | 117.70 |
| 26 | BB | 2666 | C | O4'-C1'-N1 | 8.18 | 114.74 | 108.20 |
| 1 | AA | 638 | U | N3-C4-C5 | -8.18 | 109.69 | 114.60 |
| 26 | BB | 1465 | G | C6-N1-C2 | -8.18 | 120.19 | 125.10 |
| 26 | BB | 1752 | C | O4'-C4'-C3' | 8.18 | 112.64 | 106.10 |
| 26 | BB | 2791 | G | C2-N3-C4 | 8.18 | 115.99 | 111.90 |
| 1 | AA | 1418 | A | O4'-C1'-N9 | 8.18 | 114.74 | 108.20 |
| 26 | BB | 886 | A | C5-N7-C8 | -8.18 | 99.81 | 103.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1604 | C | C4'-C3'-C2' | -8.18 | 94.42 | 102.60 |
| 25 | BA | 78 | A | N7-C8-N9 | 8.17 | 117.89 | 113.80 |
| 26 | BB | 1180 | U | O4'-C1'-N1 | 8.17 | 114.74 | 108.20 |
| 26 | BB | 2242 | G | C5-C6-O6 | -8.17 | 123.70 | 128.60 |
| 26 | BB | 2593 | U | C5'-C4'-O4' | 8.17 | 118.91 | 109.10 |
| 1 | AA | 722 | G | C4-C5-C6 | 8.17 | 123.70 | 118.80 |
| 26 | BB | 2866 | U | C5-C4-O4 | 8.17 | 130.80 | 125.90 |
| 1 | AA | 235 | C | O4'-C1'-N1 | 8.17 | 114.73 | 108.20 |
| 1 | AA | 354 | G | C4-C5-N7 | 8.17 | 114.07 | 110.80 |
| 1 | AA | 477 | C | N3-C4-C5 | -8.17 | 118.63 | 121.90 |
| 1 | AA | 1202 | U | C6-N1-C2 | -8.17 | 116.10 | 121.00 |
| 26 | BB | 448 | U | C6-N1-C2 | -8.17 | 116.10 | 121.00 |
| 26 | BB | 1397 | U | N3-C4-O4 | 8.17 | 125.12 | 119.40 |
| 1 | AA | 582 | C | C6-N1-C2 | -8.17 | 117.03 | 120.30 |
| 1 | AA | 800 | G | C4'-C3'-C2' | -8.17 | 94.43 | 102.60 |
| 1 | AA | 898 | G | P-O3'-C3' | 8.17 | 129.50 | 119.70 |
| 1 | AA | 1054 | C | N3-C4-C5 | -8.17 | 118.63 | 121.90 |
| 1 | AA | 1522 | U | C3'-C2'-C1' | 8.17 | 108.03 | 101.50 |
| 26 | BB | 253 | C | C5'-C4'-O4' | 8.17 | 118.90 | 109.10 |
| 26 | BB | 1162 | G | C5-C6-N1 | 8.17 | 115.58 | 111.50 |
| 26 | BB | 1878 | G | N3-C4-N9 | 8.17 | 130.90 | 126.00 |
| 26 | BB | 1938 | A | N1-C6-N6 | -8.17 | 113.70 | 118.60 |
| 26 | BB | 2834 | G | N3-C4-C5 | -8.17 | 124.52 | 128.60 |
| 1 | AA | 409 | U | C5-C4-O4 | -8.16 | 121.00 | 125.90 |
| 1 | AA | 890 | G | C5-N7-C8 | -8.16 | 100.22 | 104.30 |
| 26 | BB | 267 | C | N3-C4-C5 | -8.16 | 118.63 | 121.90 |
| 26 | BB | 695 | G | N9-C1'-C2' | -8.16 | 103.02 | 112.00 |
| 26 | BB | 806 | C | N1-C2-O2 | 8.16 | 123.80 | 118.90 |
| 26 | BB | 1413 | A | C4'-C3'-C2' | -8.16 | 94.44 | 102.60 |
| 26 | BB | 2187 | U | C5-C6-N1 | -8.16 | 118.62 | 122.70 |
| 1 | AA | 400 | C | O4'-C1'-N1 | 8.16 | 114.73 | 108.20 |
| 1 | AA | 836 | G | N9-C4-C5 | 8.16 | 108.67 | 105.40 |
| 1 | AA | 1533 | C | C3'-C2'-C1' | 8.16 | 108.03 | 101.50 |
| 26 | BB | 472 | A | C3'-C2'-C1' | -8.16 | 94.97 | 101.50 |
| 26 | BB | 1719 | G | C6-N1-C2 | -8.16 | 120.20 | 125.10 |
| 26 | BB | 2250 | G | N3-C4-C5 | -8.16 | 124.52 | 128.60 |
| 28 | BD | 257 | ARG | NE-CZ-NH1 | 8.16 | 124.38 | 120.30 |
| 1 | AA | 647 | C | C6-N1-C2 | -8.16 | 117.04 | 120.30 |
| 26 | BB | 358 | U | C4'-C3'-C2' | -8.16 | 94.44 | 102.60 |
| 26 | BB | 921 | C | N3-C4-C5 | 8.16 | 125.17 | 121.90 |
| 1 | AA | 690 | G | N9-C4-C5 | 8.16 | 108.66 | 105.40 |
| 1 | AA | 1321 | U | O4'-C1'-N1 | 8.16 | 114.73 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 942 | G | N3-C4-C5 | -8.16 | 124.52 | 128.60 |
| 26 | BB | 1135 | C | O4'-C1'-N1 | 8.16 | 114.73 | 108.20 |
| 26 | BB | 1567 | G | N9-C4-C5 | 8.16 | 108.66 | 105.40 |
| 26 | BB | 1254 | A | C5-N7-C8 | 8.16 | 107.98 | 103.90 |
| 26 | BB | 1409 | U | N1-C2-N3 | 8.16 | 119.80 | 114.90 |
| 26 | BB | 2783 | U | N1-C2-O2 | -8.16 | 117.09 | 122.80 |
| 1 | AA | 1537 | U | N3-C2-O2 | -8.16 | 116.49 | 122.20 |
| 1 | AA | 352 | C | C5-C4-N4 | -8.16 | 114.49 | 120.20 |
| 1 | AA | 503 | C | C4-C5-C6 | -8.16 | 113.32 | 117.40 |
| 1 | AA | 744 | C | N3-C4-C5 | -8.16 | 118.64 | 121.90 |
| 4 | AD | 7 | G | C4-C5-N7 | -8.16 | 107.54 | 110.80 |
| 26 | BB | 836 | G | N1-C6-O6 | -8.16 | 115.00 | 119.90 |
| 26 | BB | 1160 | G | N9-C4-C5 | 8.16 | 108.66 | 105.40 |
| 26 | BB | 1268 | A | C4-C5-N7 | 8.16 | 114.78 | 110.70 |
| 1 | AA | 704 | A | C5-C6-N1 | 8.16 | 121.78 | 117.70 |
| 1 | AA | 1213 | A | P-O3'-C3' | 8.16 | 129.49 | 119.70 |
| 2 | AB | 35 | C | C5'-C4'-O4' | 8.16 | 118.89 | 109.10 |
| 26 | BB | 254 | G | N3-C4-C5 | -8.16 | 124.52 | 128.60 |
| 26 | BB | 442 | G | N3-C2-N2 | -8.16 | 114.19 | 119.90 |
| 26 | BB | 1820 | U | C6-N1-C2 | -8.16 | 116.11 | 121.00 |
| 26 | BB | 502 | A | C1'-O4'-C4' | 8.16 | 116.42 | 109.90 |
| 26 | BB | 2225 | A | C4-C5-C6 | 8.16 | 121.08 | 117.00 |
| 26 | BB | 519 | U | C5-C4-O4 | -8.15 | 121.01 | 125.90 |
| 26 | BB | 592 | A | C4-C5-C6 | -8.15 | 112.92 | 117.00 |
| 26 | BB | 603 | A | P-O3'-C3' | 8.15 | 129.49 | 119.70 |
| 31 | BG | 137 | PHE | CB-CG-CD1 | -8.15 | 115.09 | 120.80 |
| 26 | BB | 610 | C | C5'-C4'-O4' | 8.15 | 118.88 | 109.10 |
| 26 | BB | 833 | A | N7-C8-N9 | 8.15 | 117.88 | 113.80 |
| 26 | BB | 609 | A | C8-N9-C4 | 8.15 | 109.06 | 105.80 |
| 26 | BB | 795 | C | C4-C5-C6 | -8.15 | 113.32 | 117.40 |
| 26 | BB | 2229 | U | N3-C4-O4 | 8.15 | 125.11 | 119.40 |
| 26 | BB | 2847 | U | C4-C5-C6 | 8.15 | 124.59 | 119.70 |
| 26 | BB | 2847 | U | N3-C4-O4 | 8.15 | 125.11 | 119.40 |
| 1 | AA | 1184 | G | N3-C4-N9 | 8.15 | 130.89 | 126.00 |
| 25 | BA | 76 | G | C4-C5-N7 | 8.15 | 114.06 | 110.80 |
| 26 | BB | 367 | G | N1-C2-N3 | -8.15 | 119.01 | 123.90 |
| 26 | BB | 643 | A | C4'-C3'-C2' | -8.15 | 94.45 | 102.60 |
| 26 | BB | 1903 | G | O4'-C4'-C3' | 8.15 | 112.62 | 106.10 |
| 26 | BB | 2782 | G | N1-C2-N3 | -8.15 | 119.01 | 123.90 |
| 26 | BB | 2859 | G | N1-C6-O6 | 8.15 | 124.79 | 119.90 |
| 38 | BN | 107 | PHE | CB-CG-CD2 | -8.15 | 115.10 | 120.80 |
| 26 | BB | 1614 | A | C8-N9-C4 | -8.15 | 102.54 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1688 | U | N3-C4-C5 | -8.15 | 109.71 | 114.60 |
| 26 | BB | 2360 | G | C4-C5-C6 | 8.15 | 123.69 | 118.80 |
| 26 | BB | 2550 | G | C5-N7-C8 | 8.15 | 108.37 | 104.30 |
| 1 | AA | 204 | G | C8-N9-C4 | -8.14 | 103.14 | 106.40 |
| 1 | AA | 352 | C | C5'-C4'-C3' | -8.14 | 102.97 | 116.00 |
| 1 | AA | 379 | C | C2-N3-C4 | -8.14 | 115.83 | 119.90 |
| 1 | AA | 1013 | G | C4'-C3'-C2' | -8.14 | 94.45 | 102.60 |
| 26 | BB | 616 | A | N1-C6-N6 | 8.14 | 123.49 | 118.60 |
| 26 | BB | 748 | G | N3-C4-C5 | -8.14 | 124.53 | 128.60 |
| 1 | AA | 971 | G | O4'-C4'-C3' | 8.14 | 112.61 | 106.10 |
| 26 | BB | 73 | A | O4'-C1'-N9 | 8.14 | 114.72 | 108.20 |
| 26 | BB | 2153 | C | C3'-C2'-C1' | 8.14 | 108.01 | 101.50 |
| 26 | BB | 2428 | G | C3'-C2'-C1' | 8.14 | 108.01 | 101.50 |
| 1 | AA | 206 | C | N3-C4-C5 | -8.14 | 118.64 | 121.90 |
| 1 | AA | 1147 | C | C4-C5-C6 | 8.14 | 121.47 | 117.40 |
| 1 | AA | 1165 | U | C4'-C3'-C2' | -8.14 | 94.46 | 102.60 |
| 26 | BB | 421 | C | P-O3'-C3' | 8.14 | 129.47 | 119.70 |
| 26 | BB | 901 | C | N3-C4-N4 | 8.14 | 123.70 | 118.00 |
| 26 | BB | 956 | G | C8-N9-C4 | 8.14 | 109.66 | 106.40 |
| 26 | BB | 1593 | A | C6-C5-N7 | 8.14 | 138.00 | 132.30 |
| 26 | BB | 1424 | G | C6-N1-C2 | -8.14 | 120.22 | 125.10 |
| 1 | AA | 1506 | U | C4-C5-C6 | 8.14 | 124.58 | 119.70 |
| 15 | AO | 108 | ASP | CB-CG-OD1 | -8.14 | 110.97 | 118.30 |
| 26 | BB | 596 | U | N1-C2-N3 | 8.14 | 119.78 | 114.90 |
| 26 | BB | 824 | U | O4'-C1'-N1 | 8.14 | 114.71 | 108.20 |
| 26 | BB | 1214 | A | C4'-C3'-C2' | -8.14 | 94.46 | 102.60 |
| 26 | BB | 1988 | G | N3-C4-C5 | -8.14 | 124.53 | 128.60 |
| 26 | BB | 2721 | A | C4'-C3'-C2' | -8.14 | 94.46 | 102.60 |
| 26 | BB | 2892 | G | O4'-C4'-C3' | 8.14 | 112.61 | 106.10 |
| 24 | AX | 17 | ARG | NE-CZ-NH1 | 8.14 | 124.37 | 120.30 |
| 26 | BB | 1595 | C | N3-C4-C5 | -8.14 | 118.64 | 121.90 |
| 26 | BB | 1933 | G | O4'-C1'-N9 | 8.14 | 114.71 | 108.20 |
| 26 | BB | 2006 | C | C5-C6-N1 | 8.14 | 125.07 | 121.00 |
| 1 | AA | 323 | U | N3-C2-O2 | -8.14 | 116.50 | 122.20 |
| 1 | AA | 361 | G | C6-C5-N7 | -8.13 | 125.52 | 130.40 |
| 1 | AA | 729 | A | C4'-C3'-C2' | -8.13 | 94.47 | 102.60 |
| 1 | AA | 843 | U | N3-C2-O2 | -8.13 | 116.50 | 122.20 |
| 25 | BA | 72 | G | C8-N9-C4 | -8.14 | 103.14 | 106.40 |
| 26 | BB | 121 | G | N1-C2-N2 | 8.13 | 123.52 | 116.20 |
| 26 | BB | 155 | A | C5-C6-N1 | 8.13 | 121.77 | 117.70 |
| 26 | BB | 873 | C | C5-C6-N1 | -8.14 | 116.93 | 121.00 |
| 26 | BB | 1130 | U | O4'-C1'-N1 | 8.14 | 114.71 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1853 | A | C6-N1-C2 | -8.14 | 113.72 | 118.60 |
| 26 | BB | 868 | U | N1-C2-O2 | 8.13 | 128.49 | 122.80 |
| 26 | BB | 2301 | C | C2-N3-C4 | 8.13 | 123.97 | 119.90 |
| 1 | AA | 184 | G | N1-C6-O6 | -8.13 | 115.02 | 119.90 |
| 26 | BB | 958 | U | C4-C5-C6 | 8.13 | 124.58 | 119.70 |
| 1 | AA | 341 | C | C4-C5-C6 | -8.13 | 113.33 | 117.40 |
| 1 | AA | 622 | A | C6-C5-N7 | 8.13 | 137.99 | 132.30 |
| 1 | AA | 963 | G | C5-C6-O6 | -8.13 | 123.72 | 128.60 |
| 1 | AA | 1127 | G | C8-N9-C4 | -8.13 | 103.15 | 106.40 |
| 26 | BB | 1115 | G | N1-C2-N3 | -8.13 | 119.02 | 123.90 |
| 26 | BB | 60 | G | N3-C2-N2 | 8.13 | 125.59 | 119.90 |
| 26 | BB | 1697 | G | C5-C6-O6 | -8.13 | 123.72 | 128.60 |
| 1 | AA | 302 | G | C5-N7-C8 | -8.13 | 100.23 | 104.30 |
| 1 | AA | 809 | G | N3-C4-N9 | 8.13 | 130.88 | 126.00 |
| 1 | AA | 1121 | U | P-O3'-C3' | 8.13 | 129.46 | 119.70 |
| 26 | BB | 841 | G | N3-C4-C5 | -8.13 | 124.53 | 128.60 |
| 1 | AA | 915 | A | C8-N9-C4 | -8.13 | 102.55 | 105.80 |
| 1 | AA | 1364 | U | N1-C2-N3 | 8.13 | 119.78 | 114.90 |
| 1 | AA | 1452 | C | C1'-O4'-C4' | 8.13 | 116.40 | 109.90 |
| 1 | AA | 1514 | G | N3-C4-C5 | -8.13 | 124.54 | 128.60 |
| 26 | BB | 459 | U | C4'-C3'-C2' | -8.13 | 94.47 | 102.60 |
| 26 | BB | 903 | C | O4'-C1'-N1 | 8.13 | 114.70 | 108.20 |
| 26 | BB | 1528 | A | C5-C6-N1 | 8.13 | 121.76 | 117.70 |
| 26 | BB | 1569 | A | C4-C5-N7 | -8.13 | 106.64 | 110.70 |
| 26 | BB | 2453 | A | C4-C5-N7 | -8.13 | 106.64 | 110.70 |
| 1 | AA | 700 | G | C5'-C4'-O4' | 8.13 | 118.85 | 109.10 |
| 1 | AA | 1022 | A | N9-C4-C5 | 8.13 | 109.05 | 105.80 |
| 26 | BB | 662 | G | N3-C4-C5 | -8.13 | 124.54 | 128.60 |
| 26 | BB | 2286 | G | O4'-C4'-C3' | 8.13 | 112.60 | 106.10 |
| 1 | AA | 415 | A | N1-C6-N6 | 8.12 | 123.47 | 118.60 |
| 26 | BB | 494 | G | N1-C2-N3 | 8.12 | 128.78 | 123.90 |
| 26 | BB | 1084 | A | N1-C2-N3 | -8.12 | 125.24 | 129.30 |
| 26 | BB | 1246 | A | C6-C5-N7 | 8.12 | 137.99 | 132.30 |
| 26 | BB | 2252 | G | C8-N9-C4 | -8.12 | 103.15 | 106.40 |
| 26 | BB | 2405 | G | N7-C8-N9 | 8.12 | 117.16 | 113.10 |
| 26 | BB | 2541 | A | N7-C8-N9 | 8.12 | 117.86 | 113.80 |
| 26 | BB | 2697 | G | C5'-C4'-C3' | -8.12 | 103.00 | 116.00 |
| 29 | BE | 81 | GLU | OE1-CD-OE2 | 8.12 | 133.05 | 123.30 |
| 1 | AA | 318 | G | N9-C4-C5 | 8.12 | 108.65 | 105.40 |
| 26 | BB | 168 | G | N1-C2-N3 | -8.12 | 119.03 | 123.90 |
| 26 | BB | 302 | C | C4-C5-C6 | -8.12 | 113.34 | 117.40 |
| 26 | BB | 835 | C | C5'-C4'-O4' | 8.12 | 118.85 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2584 | U | N1-C2-O2 | 8.12 | 128.49 | 122.80 |
| 1 | AA | 822 | U | C5-C6-N1 | -8.12 | 118.64 | 122.70 |
| 1 | AA | 961 | U | C1'-O4'-C4' | 8.12 | 116.40 | 109.90 |
| 26 | BB | 2390 | U | C5-C6-N1 | -8.12 | 118.64 | 122.70 |
| 1 | AA | 152 | A | C3'-C2'-C1' | -8.12 | 95.00 | 101.50 |
| 1 | AA | 375 | U | O4'-C1'-N1 | 8.12 | 114.70 | 108.20 |
| 1 | AA | 924 | C | C5-C6-N1 | 8.12 | 125.06 | 121.00 |
| 26 | BB | 47 | C | N1-C2-O2 | 8.12 | 123.77 | 118.90 |
| 26 | BB | 371 | A | C6-N1-C2 | 8.12 | 123.47 | 118.60 |
| 1 | AA | 1356 | G | N7-C8-N9 | 8.12 | 117.16 | 113.10 |
| 1 | AA | 1525 | G | C4-C5-C6 | 8.12 | 123.67 | 118.80 |
| 2 | AB | 35 | C | C1'-O4'-C4' | 8.12 | 116.39 | 109.90 |
| 6 | AF | 167 | TYR | CG-CD1-CE1 | -8.12 | 114.81 | 121.30 |
| 25 | BA | 65 | U | O4'-C1'-N1 | 8.12 | 114.69 | 108.20 |
| 26 | BB | 1 | G | C5-C6-N1 | 8.12 | 115.56 | 111.50 |
| 26 | BB | 30 | G | O4'-C1'-N9 | 8.12 | 114.69 | 108.20 |
| 26 | BB | 195 | A | C2-N3-C4 | -8.12 | 106.54 | 110.60 |
| 26 | BB | 282 | A | O4'-C1'-N9 | 8.12 | 114.69 | 108.20 |
| 26 | BB | 301 | G | N3-C4-N9 | 8.12 | 130.87 | 126.00 |
| 26 | BB | 479 | A | C8-N9-C4 | -8.12 | 102.55 | 105.80 |
| 26 | BB | 1220 | G | C5-C6-N1 | 8.12 | 115.56 | 111.50 |
| 26 | BB | 2446 | G | N7-C8-N9 | 8.12 | 117.16 | 113.10 |
| 26 | BB | 569 | U | C1'-O4'-C4' | -8.12 | 103.41 | 109.90 |
| 26 | BB | 1580 | A | C2-N3-C4 | 8.12 | 114.66 | 110.60 |
| 26 | BB | 2207 | C | O4'-C1'-N1 | 8.12 | 114.69 | 108.20 |
| 26 | BB | 2242 | G | C6-C5-N7 | -8.12 | 125.53 | 130.40 |
| 1 | AA | 500 | G | N3-C4-N9 | -8.12 | 121.13 | 126.00 |
| 26 | BB | 2202 | U | N3-C4-C5 | -8.12 | 109.73 | 114.60 |
| 1 | AA | 571 | U | N1-C2-O2 | 8.11 | 128.48 | 122.80 |
| 1 | AA | 1314 | C | N1-C2-O2 | 8.11 | 123.77 | 118.90 |
| 1 | AA | 1427 | C | C5-C6-N1 | 8.11 | 125.06 | 121.00 |
| 26 | BB | 924 | G | N3-C4-C5 | -8.11 | 124.54 | 128.60 |
| 26 | BB | 2078 | C | N1-C2-O2 | 8.11 | 123.77 | 118.90 |
| 26 | BB | 2323 | G | C5'-C4'-O4' | 8.11 | 118.84 | 109.10 |
| 26 | BB | 2455 | G | N3-C4-N9 | 8.12 | 130.87 | 126.00 |
| 26 | BB | 2837 | A | C4'-C3'-C2' | -8.11 | 94.49 | 102.60 |
| 1 | AA | 429 | U | C4-C5-C6 | 8.11 | 124.57 | 119.70 |
| 1 | AA | 628 | G | C8-N9-C4 | -8.11 | 103.16 | 106.40 |
| 1 | AA | 789 | U | C2-N3-C4 | -8.11 | 122.13 | 127.00 |
| 1 | AA | 822 | U | C4'-C3'-C2' | -8.11 | 94.49 | 102.60 |
| 1 | AA | 1397 | C | N3-C2-O2 | -8.11 | 116.22 | 121.90 |
| 26 | BB | 415 | A | N1-C2-N3 | -8.11 | 125.24 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1034 | G | C2-N3-C4 | 8.11 | 115.95 | 111.90 |
| 1 | AA | 1338 | G | C8-N9-C4 | -8.11 | 103.16 | 106.40 |
| 26 | BB | 26 | G | C5'-C4'-O4' | 8.11 | 118.83 | 109.10 |
| 26 | BB | 1414 | C | C4-C5-C6 | 8.11 | 121.46 | 117.40 |
| 26 | BB | 131 | A | O4'-C1'-N9 | 8.11 | 114.69 | 108.20 |
| 26 | BB | 2081 | U | N3-C4-O4 | -8.11 | 113.72 | 119.40 |
| 1 | AA | 331 | G | C8-N9-C4 | -8.11 | 103.16 | 106.40 |
| 1 | AA | 800 | G | N3-C4-C5 | -8.11 | 124.55 | 128.60 |
| 1 | AA | 1056 | U | N3-C2-O2 | -8.11 | 116.52 | 122.20 |
| 1 | AA | 1201 | A | N1-C6-N6 | -8.11 | 113.73 | 118.60 |
| 1 | AA | 1373 | G | O4'-C1'-N9 | 8.11 | 114.69 | 108.20 |
| 26 | BB | 11 | C | N1-C2-O2 | 8.11 | 123.77 | 118.90 |
| 26 | BB | 1437 | C | C4-C5-C6 | 8.11 | 121.45 | 117.40 |
| 26 | BB | 2054 | A | C5-N7-C8 | 8.11 | 107.95 | 103.90 |
| 26 | BB | 2060 | A | C4-C5-C6 | -8.11 | 112.94 | 117.00 |
| 26 | BB | 1727 | C | C1'-O4'-C4' | -8.11 | 103.41 | 109.90 |
| 26 | BB | 2673 | G | C4-C5-N7 | 8.11 | 114.04 | 110.80 |
| 26 | BB | 2793 | C | C3'-C2'-C1' | 8.11 | 107.99 | 101.50 |
| 1 | AA | 136 | C | C5-C6-N1 | 8.11 | 125.05 | 121.00 |
| 1 | AA | 1061 | G | C8-N9-C4 | -8.11 | 103.16 | 106.40 |
| 1 | AA | 1107 | C | O4'-C1'-N1 | 8.11 | 114.68 | 108.20 |
| 1 | AA | 1251 | A | N1-C2-N3 | -8.11 | 125.25 | 129.30 |
| 1 | AA | 1534 | A | C4-C5-C6 | 8.11 | 121.05 | 117.00 |
| 4 | AD | 29 | C | N1-C2-O2 | 8.11 | 123.76 | 118.90 |
| 26 | BB | 300 | A | C3'-C2'-C1' | -8.11 | 95.02 | 101.50 |
| 26 | BB | 2886 | A | C1'-O4'-C4' | -8.11 | 103.42 | 109.90 |
| 31 | BG | 101 | ARG | NE-CZ-NH1 | -8.11 | 116.25 | 120.30 |
| 1 | AA | 562 | U | N1-C2-N3 | 8.10 | 119.76 | 114.90 |
| 1 | AA | 1103 | C | O4'-C1'-N1 | 8.10 | 114.68 | 108.20 |
| 25 | BA | 92 | C | N3-C4-N4 | 8.10 | 123.67 | 118.00 |
| 26 | BB | 772 | C | C5-C4-N4 | -8.10 | 114.53 | 120.20 |
| 26 | BB | 1068 | G | C8-N9-C4 | -8.10 | 103.16 | 106.40 |
| 26 | BB | 1865 | U | O4'-C1'-N1 | 8.10 | 114.68 | 108.20 |
| 1 | AA | 227 | G | C8-N9-C4 | -8.10 | 103.16 | 106.40 |
| 2 | AB | 69 | C | N1-C2-O2 | 8.10 | 123.76 | 118.90 |
| 26 | BB | 2795 | C | O4'-C1'-N1 | 8.10 | 114.68 | 108.20 |
| 1 | AA | 148 | G | O4'-C1'-N9 | 8.10 | 114.68 | 108.20 |
| 1 | AA | 1539 | C | C5-C6-N1 | 8.10 | 125.05 | 121.00 |
| 32 | BH | 57 | TYR | CB-CG-CD2 | -8.10 | 116.14 | 121.00 |
| 1 | AA | 297 | G | N3-C4-C5 | -8.10 | 124.55 | 128.60 |
| 1 | AA | 671 | G | C4'-C3'-C2' | -8.10 | 94.50 | 102.60 |
| 26 | BB | 2146 | C | N3-C4-C5 | -8.10 | 118.66 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 773 | G | C4-C5-C6 | 8.10 | 123.66 | 118.80 |
| 26 | BB | 802 | A | C2-N3-C4 | 8.10 | 114.65 | 110.60 |
| 26 | BB | 2444 | G | O4'-C1'-N9 | 8.10 | 114.68 | 108.20 |
| 1 | AA | 474 | G | C5-N7-C8 | -8.10 | 100.25 | 104.30 |
| 1 | AA | 915 | A | N9-C4-C5 | 8.10 | 109.04 | 105.80 |
| 1 | AA | 1268 | G | N9-C4-C5 | 8.10 | 108.64 | 105.40 |
| 26 | BB | 153 | U | N3-C2-O2 | -8.10 | 116.53 | 122.20 |
| 26 | BB | 1659 | G | N3-C4-N9 | 8.10 | 130.86 | 126.00 |
| 26 | BB | 1817 | G | N9-C4-C5 | -8.10 | 102.16 | 105.40 |
| 26 | BB | 2007 | U | C5-C4-O4 | 8.10 | 130.76 | 125.90 |
| 26 | BB | 2203 | U | C5-C4-O4 | -8.10 | 121.04 | 125.90 |
| 26 | BB | 790 | U | N3-C4-O4 | 8.10 | 125.07 | 119.40 |
| 26 | BB | 2896 | C | C6-N1-C2 | -8.10 | 117.06 | 120.30 |
| 1 | AA | 321 | A | C8-N9-C4 | -8.09 | 102.56 | 105.80 |
| 2 | AB | 19 | G | N1-C2-N3 | -8.09 | 119.04 | 123.90 |
| 3 | AC | 54 | U | C3'-C2'-C1' | -8.09 | 95.03 | 101.50 |
| 26 | BB | 620 | G | N7-C8-N9 | 8.09 | 117.15 | 113.10 |
| 26 | BB | 2227 | A | C4-C5-C6 | -8.09 | 112.95 | 117.00 |
| 26 | BB | 2474 | U | C2-N3-C4 | -8.09 | 122.14 | 127.00 |
| 4 | AD | 17 | C | N3-C4-C5 | -8.09 | 118.66 | 121.90 |
| 26 | BB | 1409 | U | C5-C6-N1 | 8.09 | 126.75 | 122.70 |
| 26 | BB | 1979 | U | C4'-C3'-C2' | -8.09 | 94.51 | 102.60 |
| 26 | BB | 2095 | A | N9-C4-C5 | 8.09 | 109.04 | 105.80 |
| 26 | BB | 2126 | A | C6-N1-C2 | 8.09 | 123.46 | 118.60 |
| 26 | BB | 2359 | C | N3-C4-C5 | -8.09 | 118.66 | 121.90 |
| 1 | AA | 505 | G | C5'-C4'-O4' | 8.09 | 118.81 | 109.10 |
| 1 | AA | 814 | A | C5-N7-C8 | -8.09 | 99.86 | 103.90 |
| 4 | AD | 60 | A | C2-N3-C4 | -8.09 | 106.56 | 110.60 |
| 26 | BB | 404 | A | C4-C5-N7 | 8.09 | 114.75 | 110.70 |
| 26 | BB | 288 | U | N3-C2-O2 | -8.09 | 116.54 | 122.20 |
| 26 | BB | 906 | U | C4-C5-C6 | 8.09 | 124.55 | 119.70 |
| 26 | BB | 1519 | G | C4-C5-N7 | -8.09 | 107.56 | 110.80 |
| 26 | BB | 1759 | A | C2-N3-C4 | 8.09 | 114.64 | 110.60 |
| 26 | BB | 1821 | A | C4'-C3'-C2' | -8.09 | 94.51 | 102.60 |
| 26 | BB | 2371 | G | O4'-C1'-N9 | 8.09 | 114.67 | 108.20 |
| 1 | AA | 2 | A | C5-C6-N1 | -8.09 | 113.66 | 117.70 |
| 1 | AA | 117 | G | N3-C4-C5 | -8.09 | 124.56 | 128.60 |
| 1 | AA | 363 | A | N7-C8-N9 | 8.09 | 117.84 | 113.80 |
| 1 | AA | 1134 | G | N3-C4-C5 | -8.09 | 124.56 | 128.60 |
| 26 | BB | 223 | A | N7-C8-N9 | 8.09 | 117.84 | 113.80 |
| 26 | BB | 1908 | C | N1-C2-O2 | 8.09 | 123.75 | 118.90 |
| 1 | AA | 1041 | G | N3-C4-N9 | 8.09 | 130.85 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 344 | A | C4-C5-N7 | 8.09 | 114.74 | 110.70 |
| 26 | BB | 1572 | A | N7-C8-N9 | -8.09 | 109.76 | 113.80 |
| 26 | BB | 1583 | A | P-O3'-C3' | 8.09 | 129.41 | 119.70 |
| 26 | BB | 877 | A | C4-C5-C6 | -8.09 | 112.96 | 117.00 |
| 26 | BB | 1699 | G | O4'-C1'-N9 | 8.09 | 114.67 | 108.20 |
| 26 | BB | 1745 | A | O4'-C1'-N9 | 8.09 | 114.67 | 108.20 |
| 26 | BB | 1755 | A | C5'-C4'-O4' | 8.09 | 118.80 | 109.10 |
| 26 | BB | 240 | C | N3-C2-O2 | -8.08 | 116.24 | 121.90 |
| 25 | BA | 54 | G | C2'-C3'-O3' | 8.08 | 127.28 | 109.50 |
| 25 | BA | 74 | U | C2-N3-C4 | -8.08 | 122.15 | 127.00 |
| 26 | BB | 157 | C | C5-C4-N4 | 8.08 | 125.86 | 120.20 |
| 26 | BB | 843 | G | N1-C2-N3 | 8.08 | 128.75 | 123.90 |
| 26 | BB | 1623 | G | C6-N1-C2 | -8.08 | 120.25 | 125.10 |
| 26 | BB | 1646 | C | O4'-C4'-C3' | 8.08 | 112.57 | 106.10 |
| 26 | BB | 1704 | C | N3-C4-C5 | -8.08 | 118.67 | 121.90 |
| 4 | AD | 2 | G | N9-C1'-C2' | -8.08 | 103.11 | 112.00 |
| 1 | AA | 1032 | G | N3-C2-N2 | 8.08 | 125.56 | 119.90 |
| 1 | AA | 1442 | G | C5-C6-N1 | 8.08 | 115.54 | 111.50 |
| 1 | AA | 1479 | C | O4'-C1'-N1 | 8.08 | 114.66 | 108.20 |
| 26 | BB | 2593 | U | C5-C6-N1 | -8.08 | 118.66 | 122.70 |
| 1 | AA | 1035 | A | N7-C8-N9 | 8.08 | 117.84 | 113.80 |
| 1 | AA | 1333 | A | C4-C5-N7 | 8.08 | 114.74 | 110.70 |
| 25 | BA | 3 | C | N3-C4-C5 | -8.08 | 118.67 | 121.90 |
| 25 | BA | 13 | G | C5-C6-N1 | -8.08 | 107.46 | 111.50 |
| 26 | BB | 758 | C | N1-C2-O2 | 8.08 | 123.75 | 118.90 |
| 26 | BB | 861 | A | N9-C4-C5 | -8.08 | 102.57 | 105.80 |
| 26 | BB | 1781 | U | O4'-C1'-N1 | 8.08 | 114.66 | 108.20 |
| 26 | BB | 1830 | C | C6-N1-C2 | 8.08 | 123.53 | 120.30 |
| 26 | BB | 1948 | G | C4-C5-C6 | 8.08 | 123.65 | 118.80 |
| 26 | BB | 2597 | G | P-O3'-C3' | 8.08 | 129.39 | 119.70 |
| 1 | AA | 1092 | A | N9-C4-C5 | 8.07 | 109.03 | 105.80 |
| 1 | AA | 253 | A | N9-C4-C5 | 8.07 | 109.03 | 105.80 |
| 1 | AA | 473 | U | C5-C4-O4 | -8.07 | 121.06 | 125.90 |
| 25 | BA | 99 | A | N1-C6-N6 | -8.07 | 113.75 | 118.60 |
| 26 | BB | 863 | A | N1-C6-N6 | 8.07 | 123.44 | 118.60 |
| 26 | BB | 1833 | C | N3-C2-O2 | -8.07 | 116.25 | 121.90 |
| 1 | AA | 366 | A | O4'-C1'-N9 | 8.07 | 114.66 | 108.20 |
| 1 | AA | 730 | G | C4'-C3'-C2' | -8.07 | 94.53 | 102.60 |
| 1 | AA | 1465 | A | C1'-O4'-C4' | -8.07 | 103.44 | 109.90 |
| 26 | BB | 279 | A | N9-C4-C5 | 8.07 | 109.03 | 105.80 |
| 26 | BB | 717 | C | C3'-C2'-C1' | 8.07 | 107.96 | 101.50 |
| 26 | BB | 1180 | U | C5-C4-O4 | 8.07 | 130.74 | 125.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1965 | C | N3-C4-N4 | 8.07 | 123.65 | 118.00 |
| 26 | BB | 2021 | C | P-O3'-C3' | 8.07 | 129.39 | 119.70 |
| 26 | BB | 2638 | G | N3-C4-C5 | -8.07 | 124.56 | 128.60 |
| 26 | BB | 2641 | G | O4'-C1'-N9 | 8.07 | 114.66 | 108.20 |
| 1 | AA | 459 | A | C2-N3-C4 | 8.07 | 114.63 | 110.60 |
| 1 | AA | 903 | G | N9-C4-C5 | 8.07 | 108.63 | 105.40 |
| 1 | AA | 962 | C | C1'-O4'-C4' | -8.07 | 103.44 | 109.90 |
| 2 | AB | 24 | G | C8-N9-C4 | -8.07 | 103.17 | 106.40 |
| 26 | BB | 1666 | G | C5-C6-O6 | 8.07 | 133.44 | 128.60 |
| 1 | AA | 1211 | U | N1-C2-N3 | 8.07 | 119.74 | 114.90 |
| 26 | BB | 1116 | G | C2-N3-C4 | 8.07 | 115.93 | 111.90 |
| 1 | AA | 34 | C | C4-C5-C6 | -8.07 | 113.37 | 117.40 |
| 26 | BB | 1753 | G | C1'-O4'-C4' | -8.07 | 103.45 | 109.90 |
| 26 | BB | 1820 | U | N1-C2-N3 | 8.07 | 119.74 | 114.90 |
| 26 | BB | 2180 | U | N1-C2-N3 | 8.07 | 119.74 | 114.90 |
| 1 | AA | 577 | G | C5-N7-C8 | -8.06 | 100.27 | 104.30 |
| 4 | AD | 49 | C | C5-C6-N1 | 8.06 | 125.03 | 121.00 |
| 26 | BB | 178 | G | C5-C6-O6 | -8.06 | 123.76 | 128.60 |
| 26 | BB | 1537 | G | C5-C6-N1 | 8.06 | 115.53 | 111.50 |
| 1 | AA | 160 | A | N7-C8-N9 | 8.06 | 117.83 | 113.80 |
| 4 | AD | 75 | C | C3'-C2'-C1' | -8.06 | 95.05 | 101.50 |
| 26 | BB | 1136 | G | N1-C2-N2 | 8.06 | 123.46 | 116.20 |
| 1 | AA | 86 | G | N3-C4-C5 | -8.06 | 124.57 | 128.60 |
| 1 | AA | 1089 | G | C8-N9-C4 | -8.06 | 103.17 | 106.40 |
| 26 | BB | 1029 | A | N9-C1'-C2' | -8.06 | 103.13 | 112.00 |
| 26 | BB | 1428 | C | C2-N3-C4 | 8.06 | 123.93 | 119.90 |
| 26 | BB | 1667 | G | N3-C4-N9 | 8.06 | 130.84 | 126.00 |
| 26 | BB | 1871 | A | N1-C2-N3 | 8.06 | 133.33 | 129.30 |
| 26 | BB | 2466 | C | C2-N3-C4 | -8.06 | 115.87 | 119.90 |
| 26 | BB | 2473 | U | N3-C4-O4 | 8.06 | 125.04 | 119.40 |
| 26 | BB | 2644 | G | N3-C4-C5 | -8.06 | 124.57 | 128.60 |
| 1 | AA | 46 | G | C4-C5-N7 | -8.06 | 107.58 | 110.80 |
| 1 | AA | 51 | A | C3'-C2'-C1' | 8.06 | 107.95 | 101.50 |
| 1 | AA | 101 | A | N1-C6-N6 | -8.06 | 113.76 | 118.60 |
| 1 | AA | 937 | A | C5-C6-N1 | -8.06 | 113.67 | 117.70 |
| 1 | AA | 1193 | G | C3'-C2'-C1' | -8.06 | 95.05 | 101.50 |
| 26 | BB | 841 | G | C6-N1-C2 | -8.06 | 120.26 | 125.10 |
| 1 | AA | 250 | A | C8-N9-C4 | -8.06 | 102.58 | 105.80 |
| 7 | AG | 25 | ARG | NE-CZ-NH1 | 8.06 | 124.33 | 120.30 |
| 26 | BB | 340 | A | N3-C4-C5 | -8.06 | 121.16 | 126.80 |
| 26 | BB | 997 | G | C4-C5-C6 | 8.06 | 123.63 | 118.80 |
| 26 | BB | 1304 | A | C4-C5-C6 | -8.06 | 112.97 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1761 | C | N3-C4-C5 | 8.06 | 125.12 | 121.90 |
| 45 | BU | 110 | ARG | NE-CZ-NH2 | 8.06 | 124.33 | 120.30 |
| 53 | B2 | 25 | ARG | NE-CZ-NH2 | -8.06 | 116.27 | 120.30 |
| 1 | AA | 915 | A | C5-N7-C8 | 8.06 | 107.93 | 103.90 |
| 1 | AA | 1265 | C | O4'-C1'-N1 | 8.06 | 114.64 | 108.20 |
| 1 | AA | 1461 | G | N7-C8-N9 | 8.06 | 117.13 | 113.10 |
| 3 | AC | 14 | G | N9-C4-C5 | 8.05 | 108.62 | 105.40 |
| 26 | BB | 1726 | C | C4-C5-C6 | 8.06 | 121.43 | 117.40 |
| 26 | BB | 2292 | U | N1-C2-N3 | 8.06 | 119.73 | 114.90 |
| 26 | BB | 2709 | G | N3-C4-C5 | -8.06 | 124.57 | 128.60 |
| 1 | AA | 295 | C | C6-N1-C2 | -8.05 | 117.08 | 120.30 |
| 26 | BB | 1109 | C | N3-C4-C5 | 8.05 | 125.12 | 121.90 |
| 57 | B6 | 39 | ARG | NE-CZ-NH1 | -8.05 | 116.27 | 120.30 |
| 26 | BB | 2210 | U | P-O5'-C5' | 8.05 | 133.78 | 120.90 |
| 1 | AA | 11 | G | C8-N9-C4 | -8.05 | 103.18 | 106.40 |
| 1 | AA | 498 | A | C8-N9-C4 | -8.05 | 102.58 | 105.80 |
| 1 | AA | 809 | G | N1-C2-N3 | -8.05 | 119.07 | 123.90 |
| 26 | BB | 412 | A | C2-N3-C4 | 8.05 | 114.63 | 110.60 |
| 26 | BB | 781 | A | N9-C4-C5 | -8.05 | 102.58 | 105.80 |
| 26 | BB | 773 | U | N1-C2-O2 | -8.05 | 117.17 | 122.80 |
| 26 | BB | 803 | U | O4'-C1'-N1 | 8.05 | 114.64 | 108.20 |
| 26 | BB | 1961 | C | O4'-C1'-N1 | 8.05 | 114.64 | 108.20 |
| 26 | BB | 2602 | A | C4-C5-C6 | 8.05 | 121.03 | 117.00 |
| 1 | AA | 523 | A | C8-N9-C4 | -8.05 | 102.58 | 105.80 |
| 1 | AA | 889 | A | C5-C6-N1 | 8.05 | 121.72 | 117.70 |
| 26 | BB | 2886 | A | C5-N7-C8 | -8.05 | 99.88 | 103.90 |
| 1 | AA | 906 | A | C6-N1-C2 | 8.05 | 123.43 | 118.60 |
| 1 | AA | 921 | U | O4'-C4'-C3' | 8.05 | 112.54 | 106.10 |
| 1 | AA | 1168 | U | O4'-C1'-N1 | 8.05 | 114.64 | 108.20 |
| 3 | AC | 27 | A | C1'-O4'-C4' | 8.05 | 116.34 | 109.90 |
| 26 | BB | 376 | G | C2-N3-C4 | 8.05 | 115.92 | 111.90 |
| 26 | BB | 507 | A | O3'-P-O5' | -8.05 | 88.71 | 104.00 |
| 26 | BB | 565 | C | N3-C2-O2 | -8.05 | 116.27 | 121.90 |
| 26 | BB | 2773 | C | N1-C2-O2 | 8.05 | 123.73 | 118.90 |
| 26 | BB | 684 | G | N3-C4-C5 | -8.05 | 124.58 | 128.60 |
| 26 | BB | 1117 | C | O4'-C1'-N1 | 8.05 | 114.64 | 108.20 |
| 26 | BB | 1631 | G | N9-C4-C5 | 8.05 | 108.62 | 105.40 |
| 26 | BB | 2109 | U | C4-C5-C6 | 8.05 | 124.53 | 119.70 |
| 26 | BB | 2295 | C | N3-C4-N4 | 8.05 | 123.63 | 118.00 |
| 26 | BB | 2773 | C | N1-C1'-C2' | -8.05 | 103.15 | 112.00 |
| 1 | AA | 167 | A | C4-C5-C6 | -8.04 | 112.98 | 117.00 |
| 1 | AA | 405 | U | O4'-C4'-C3' | 8.05 | 112.54 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 901 | A | N7-C8-N9 | -8.04 | 109.78 | 113.80 |
| 1 | AA | 942 | G | N1-C2-N3 | -8.05 | 119.07 | 123.90 |
| 2 | AB | 57 | G | N3-C4-N9 | 8.04 | 130.83 | 126.00 |
| 25 | BA | 57 | A | P-O3'-C3' | 8.05 | 129.35 | 119.70 |
| 26 | BB | 1069 | A | C4-C5-C6 | 8.05 | 121.02 | 117.00 |
| 26 | BB | 1790 | C | N3-C4-C5 | -8.05 | 118.68 | 121.90 |
| 26 | BB | 2667 | C | C5'-C4'-C3' | -8.05 | 103.13 | 116.00 |
| 25 | BA | 2 | G | C6-N1-C2 | -8.04 | 120.27 | 125.10 |
| 26 | BB | 702 | U | C4-C5-C6 | 8.04 | 124.53 | 119.70 |
| 26 | BB | 908 | C | N1-C2-O2 | 8.04 | 123.73 | 118.90 |
| 26 | BB | 1895 | C | O4'-C1'-N1 | 8.04 | 114.64 | 108.20 |
| 26 | BB | 1937 | A | N9-C4-C5 | -8.04 | 102.58 | 105.80 |
| 26 | BB | 2350 | C | C5'-C4'-C3' | -8.04 | 103.13 | 116.00 |
| 1 | AA | 451 | A | N1-C2-N3 | -8.04 | 125.28 | 129.30 |
| 1 | AA | 1526 | G | N9-C4-C5 | 8.04 | 108.62 | 105.40 |
| 26 | BB | 583 | G | N3-C4-C5 | -8.04 | 124.58 | 128.60 |
| 26 | BB | 2538 | C | C6-N1-C2 | -8.04 | 117.08 | 120.30 |
| 1 | AA | 469 | C | C2-N3-C4 | 8.04 | 123.92 | 119.90 |
| 1 | AA | 849 | G | O4'-C1'-N9 | 8.04 | 114.63 | 108.20 |
| 26 | BB | 24 | G | C4-C5-N7 | 8.04 | 114.02 | 110.80 |
| 26 | BB | 262 | A | C2-N3-C4 | 8.04 | 114.62 | 110.60 |
| 26 | BB | 732 | C | N1-C2-O2 | 8.04 | 123.72 | 118.90 |
| 26 | BB | 1338 | G | O4'-C1'-N9 | 8.04 | 114.63 | 108.20 |
| 26 | BB | 1713 | A | N9-C4-C5 | -8.04 | 102.58 | 105.80 |
| 26 | BB | 2123 | G | C5-C6-O6 | -8.04 | 123.78 | 128.60 |
| 26 | BB | 2446 | G | C3'-C2'-C1' | -8.04 | 95.07 | 101.50 |
| 26 | BB | 2788 | C | C5'-C4'-O4' | 8.04 | 118.75 | 109.10 |
| 1 | AA | 578 | C | N3-C4-N4 | 8.04 | 123.63 | 118.00 |
| 1 | AA | 758 | C | O4'-C1'-C2' | -8.04 | 97.76 | 105.80 |
| 4 | AD | 12 | G | N9-C4-C5 | 8.04 | 108.62 | 105.40 |
| 26 | BB | 2176 | A | N7-C8-N9 | 8.04 | 117.82 | 113.80 |
| 46 | BV | 70 | HIS | CA-CB-CG | 8.04 | 127.27 | 113.60 |
| 1 | AA | 1059 | C | C5-C6-N1 | -8.04 | 116.98 | 121.00 |
| 25 | BA | 120 | U | C2-N3-C4 | -8.04 | 122.18 | 127.00 |
| 26 | BB | 2608 | G | C2-N3-C4 | 8.04 | 115.92 | 111.90 |
| 26 | BB | 733 | G | C1'-O4'-C4' | -8.04 | 103.47 | 109.90 |
| 26 | BB | 892 | A | C5-C6-N1 | 8.04 | 121.72 | 117.70 |
| 26 | BB | 1989 | G | C5-C6-O6 | -8.04 | 123.78 | 128.60 |
| 26 | BB | 2763 | G | C6-C5-N7 | -8.04 | 125.58 | 130.40 |
| 26 | BB | 2879 | A | C8-N9-C4 | -8.04 | 102.58 | 105.80 |
| 1 | AA | 895 | G | C6-C5-N7 | -8.04 | 125.58 | 130.40 |
| 1 | AA | 1073 | U | O4'-C1'-N1 | 8.04 | 114.63 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1457 | G | C5'-C4'-O4' | 8.04 | 118.74 | 109.10 |
| 2 | AB | 44 | G | N3-C4-C5 | -8.03 | 124.58 | 128.60 |
| 25 | BA | 117 | G | C8-N9-C4 | -8.03 | 103.19 | 106.40 |
| 26 | BB | 375 | G | C5-N7-C8 | -8.04 | 100.28 | 104.30 |
| 26 | BB | 458 | G | N9-C4-C5 | 8.04 | 108.61 | 105.40 |
| 26 | BB | 780 | G | C4-C5-N7 | 8.04 | 114.01 | 110.80 |
| 26 | BB | 2134 | A | N1-C6-N6 | -8.04 | 113.78 | 118.60 |
| 26 | BB | 2207 | C | C2-N3-C4 | 8.04 | 123.92 | 119.90 |
| 26 | BB | 2429 | G | N3-C2-N2 | -8.04 | 114.28 | 119.90 |
| 26 | BB | 2451 | A | C2-N3-C4 | -8.04 | 106.58 | 110.60 |
| 1 | AA | 109 | A | C4-C5-N7 | 8.03 | 114.72 | 110.70 |
| 1 | AA | 188 | C | C2-N3-C4 | 8.03 | 123.92 | 119.90 |
| 1 | AA | 996 | A | N3-C4-C5 | -8.03 | 121.18 | 126.80 |
| 26 | BB | 1005 | C | C2-N3-C4 | 8.03 | 123.92 | 119.90 |
| 1 | AA | 530 | G | O4'-C1'-C2' | 8.03 | 114.83 | 107.60 |
| 4 | AD | 7 | G | C4'-C3'-O3' | 8.03 | 129.06 | 113.00 |
| 25 | BA | 61 | G | N7-C8-N9 | 8.03 | 117.12 | 113.10 |
| 26 | BB | 989 | G | N3-C4-N9 | 8.03 | 130.82 | 126.00 |
| 26 | BB | 1988 | G | C4-C5-N7 | -8.03 | 107.59 | 110.80 |
| 26 | BB | 2686 | G | N3-C4-C5 | -8.03 | 124.58 | 128.60 |
| 1 | AA | 462 | G | C5-N7-C8 | 8.03 | 108.31 | 104.30 |
| 1 | AA | 861 | G | O4'-C1'-N9 | 8.03 | 114.62 | 108.20 |
| 1 | AA | 410 | G | C2-N3-C4 | -8.03 | 107.89 | 111.90 |
| 1 | AA | 1180 | A | C8-N9-C4 | 8.03 | 109.01 | 105.80 |
| 1 | AA | 1359 | C | C5-C6-N1 | -8.03 | 116.98 | 121.00 |
| 26 | BB | 89 | A | C1'-O4'-C4' | -8.03 | 103.48 | 109.90 |
| 26 | BB | 1087 | G | C4-C5-N7 | -8.03 | 107.59 | 110.80 |
| 26 | BB | 1106 | G | C5-C6-N1 | 8.03 | 115.52 | 111.50 |
| 26 | BB | 1182 | G | N1-C6-O6 | -8.03 | 115.08 | 119.90 |
| 1 | AA | 808 | C | N1-C2-O2 | 8.03 | 123.72 | 118.90 |
| 1 | AA | 1512 | U | C4'-C3'-C2' | -8.03 | 94.57 | 102.60 |
| 15 | AO | 98 | ARG | NE-CZ-NH2 | 8.03 | 124.31 | 120.30 |
| 1 | AA | 399 | G | O4'-C1'-N9 | 8.03 | 114.62 | 108.20 |
| 1 | AA | 680 | C | N1-C2-O2 | 8.03 | 123.72 | 118.90 |
| 25 | BA | 43 | C | C4-C5-C6 | -8.03 | 113.39 | 117.40 |
| 26 | BB | 1202 | G | N3-C2-N2 | -8.03 | 114.28 | 119.90 |
| 26 | BB | 1387 | A | N9-C4-C5 | 8.03 | 109.01 | 105.80 |
| 26 | BB | 1983 | G | C8-N9-C4 | -8.03 | 103.19 | 106.40 |
| 26 | BB | 2325 | G | C6-C5-N7 | -8.03 | 125.58 | 130.40 |
| 4 | AD | 32 | G | O4'-C1'-N9 | 8.02 | 114.62 | 108.20 |
| 26 | BB | 256 | A | N1-C6-N6 | 8.02 | 123.42 | 118.60 |
| 26 | BB | 468 | G | C8-N9-C1' | 8.02 | 137.43 | 127.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1957 | C | C6-N1-C2 | -8.02 | 117.09 | 120.30 |
| 26 | BB | 2610 | C | N1-C2-O2 | 8.02 | 123.71 | 118.90 |
| 1 | AA | 9 | G | C2-N3-C4 | 8.02 | 115.91 | 111.90 |
| 1 | AA | 1508 | A | C6-N1-C2 | -8.02 | 113.79 | 118.60 |
| 25 | BA | 120 | U | N3-C2-O2 | -8.02 | 116.58 | 122.20 |
| 26 | BB | 444 | C | O4'-C1'-N1 | 8.02 | 114.62 | 108.20 |
| 26 | BB | 506 | G | C8-N9-C4 | -8.02 | 103.19 | 106.40 |
| 26 | BB | 912 | C | O4'-C1'-N1 | 8.02 | 114.62 | 108.20 |
| 26 | BB | 2013 | A | C6-C5-N7 | 8.02 | 137.92 | 132.30 |
| 26 | BB | 1654 | A | C4-C5-C6 | -8.02 | 112.99 | 117.00 |
| 26 | BB | 2294 | G | C2-N3-C4 | 8.02 | 115.91 | 111.90 |
| 1 | AA | 502 | A | N9-C1'-C2' | -8.02 | 103.18 | 112.00 |
| 1 | AA | 611 | C | N3-C4-C5 | -8.02 | 118.69 | 121.90 |
| 26 | BB | 1771 | C | N1-C2-N3 | 8.02 | 124.81 | 119.20 |
| 26 | BB | 2759 | G | C5-C6-N1 | 8.02 | 115.51 | 111.50 |
| 1 | AA | 842 | U | O4'-C1'-N1 | 8.02 | 114.61 | 108.20 |
| 1 | AA | 1147 | C | C6-N1-C2 | 8.02 | 123.51 | 120.30 |
| 1 | AA | 1256 | A | N3-C4-C5 | -8.02 | 121.19 | 126.80 |
| 25 | BA | 33 | G | O4'-C1'-N9 | 8.02 | 114.61 | 108.20 |
| 26 | BB | 537 | G | C8-N9-C4 | -8.02 | 103.19 | 106.40 |
| 26 | BB | 2004 | G | N3-C2-N2 | -8.02 | 114.29 | 119.90 |
| 26 | BB | 2387 | U | N3-C2-O2 | -8.02 | 116.59 | 122.20 |
| 26 | BB | 81 | G | C8-N9-C4 | -8.02 | 103.19 | 106.40 |
| 26 | BB | 338 | G | O4'-C4'-C3' | 8.02 | 112.51 | 106.10 |
| 1 | AA | 46 | G | C5-C6-N1 | 8.02 | 115.51 | 111.50 |
| 1 | AA | 47 | C | C5-C6-N1 | 8.02 | 125.01 | 121.00 |
| 1 | AA | 293 | G | N1-C2-N3 | -8.02 | 119.09 | 123.90 |
| 1 | AA | 1506 | U | C5-C4-O4 | -8.02 | 121.09 | 125.90 |
| 1 | AA | 1541 | U | O4'-C1'-N1 | 8.02 | 114.61 | 108.20 |
| 14 | AN | 51 | PHE | CB-CG-CD2 | -8.02 | 115.19 | 120.80 |
| 26 | BB | 238 | C | C2-N3-C4 | 8.02 | 123.91 | 119.90 |
| 26 | BB | 1405 | U | O4'-C1'-N1 | 8.02 | 114.61 | 108.20 |
| 48 | BX | 9 | ARG | NE-CZ-NH2 | 8.02 | 124.31 | 120.30 |
| 26 | BB | 1111 | A | N1-C6-N6 | -8.02 | 113.79 | 118.60 |
| 26 | BB | 1308 | A | P-O3'-C3' | 8.02 | 129.32 | 119.70 |
| 26 | BB | 2456 | C | C5-C6-N1 | 8.02 | 125.01 | 121.00 |
| 26 | BB | 2472 | G | N1-C2-N3 | -8.02 | 119.09 | 123.90 |
| 26 | BB | 2738 | A | O4'-C1'-N9 | 8.02 | 114.61 | 108.20 |
| 1 | AA | 21 | G | N9-C4-C5 | 8.01 | 108.61 | 105.40 |
| 1 | AA | 706 | A | C4-C5-N7 | -8.01 | 106.69 | 110.70 |
| 1 | AA | 917 | G | C4-C5-C6 | -8.01 | 113.99 | 118.80 |
| 26 | BB | 1633 | G | C4-C5-N7 | -8.01 | 107.59 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 499 | A | C5'-C4'-O4' | 8.01 | 118.72 | 109.10 |
| 26 | BB | 48 | G | N3-C4-N9 | 8.01 | 130.81 | 126.00 |
| 26 | BB | 92 | U | N3-C4-C5 | 8.01 | 119.41 | 114.60 |
| 1 | AA | 828 | U | C3'-C2'-C1' | 8.01 | 107.91 | 101.50 |
| 10 | AJ | 4 | ARG | NE-CZ-NH2 | -8.01 | 116.29 | 120.30 |
| 26 | BB | 32 | C | N1-C2-N3 | -8.01 | 113.59 | 119.20 |
| 26 | BB | 21 | A | C3'-C2'-C1' | -8.01 | 95.09 | 101.50 |
| 26 | BB | 1152 | C | N3-C2-O2 | -8.01 | 116.29 | 121.90 |
| 26 | BB | 1260 | A | C5-C6-N6 | -8.01 | 117.29 | 123.70 |
| 26 | BB | 1342 | A | N9-C4-C5 | -8.01 | 102.59 | 105.80 |
| 26 | BB | 2218 | G | C5'-C4'-O4' | 8.01 | 118.71 | 109.10 |
| 26 | BB | 2286 | G | N9-C4-C5 | 8.01 | 108.60 | 105.40 |
| 26 | BB | 2468 | A | P-O3'-C3' | 8.01 | 129.31 | 119.70 |
| 1 | AA | 764 | C | P-O3'-C3' | 8.01 | 129.31 | 119.70 |
| 1 | AA | 847 | G | N9-C4-C5 | 8.01 | 108.60 | 105.40 |
| 1 | AA | 1185 | G | N1-C2-N3 | -8.01 | 119.09 | 123.90 |
| 1 | AA | 847 | G | C2-N3-C4 | 8.01 | 115.90 | 111.90 |
| 26 | BB | 611 | C | C4'-C3'-C2' | -8.01 | 94.59 | 102.60 |
| 26 | BB | 2238 | G | N7-C8-N9 | 8.01 | 117.10 | 113.10 |
| 26 | BB | 2628 | C | N3-C4-C5 | 8.01 | 125.10 | 121.90 |
| 26 | BB | 1543 | G | C6-C5-N7 | -8.01 | 125.60 | 130.40 |
| 26 | BB | 2414 | G | C2-N3-C4 | 8.01 | 115.90 | 111.90 |
| 26 | BB | 2428 | G | N3-C4-C5 | -8.01 | 124.60 | 128.60 |
| 26 | BB | 2668 | G | N7-C8-N9 | 8.01 | 117.10 | 113.10 |
| 26 | BB | 2896 | C | N3-C4-N4 | 8.01 | 123.60 | 118.00 |
| 1 | AA | 60 | A | O4'-C1'-N9 | 8.00 | 114.60 | 108.20 |
| 1 | AA | 494 | G | N3-C4-N9 | 8.00 | 130.80 | 126.00 |
| 1 | AA | 1354 | U | C4-C5-C6 | 8.00 | 124.50 | 119.70 |
| 26 | BB | 1163 | G | N9-C4-C5 | 8.00 | 108.60 | 105.40 |
| 26 | BB | 1220 | G | C6-N1-C2 | -8.00 | 120.30 | 125.10 |
| 26 | BB | 1445 | G | C5-C6-N1 | 8.00 | 115.50 | 111.50 |
| 26 | BB | 1964 | G | N1-C6-O6 | -8.00 | 115.10 | 119.90 |
| 26 | BB | 2023 | C | O4'-C4'-C3' | 8.00 | 112.50 | 106.10 |
| 26 | BB | 2899 | A | C4-C5-C6 | 8.00 | 121.00 | 117.00 |
| 26 | BB | 1169 | A | N1-C6-N6 | 8.00 | 123.40 | 118.60 |
| 1 | AA | 749 | A | N1-C2-N3 | -8.00 | 125.30 | 129.30 |
| 26 | BB | 332 | A | C8-N9-C4 | -8.00 | 102.60 | 105.80 |
| 26 | BB | 394 | C | O4'-C1'-N1 | 8.00 | 114.60 | 108.20 |
| 26 | BB | 790 | U | C5-C4-O4 | -8.00 | 121.10 | 125.90 |
| 26 | BB | 806 | C | C4'-C3'-C2' | -8.00 | 94.60 | 102.60 |
| 26 | BB | 2727 | A | N1-C2-N3 | -8.00 | 125.30 | 129.30 |
| 26 | BB | 120 | U | C6-N1-C2 | -8.00 | 116.20 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 258 | G | N1-C6-O6 | -8.00 | 115.10 | 119.90 |
| 26 | BB | 846 | U | N3-C2-O2 | -8.00 | 116.60 | 122.20 |
| 1 | AA | 342 | C | C5-C6-N1 | 8.00 | 125.00 | 121.00 |
| 1 | AA | 1116 | U | C3'-C2'-C1' | 8.00 | 107.90 | 101.50 |
| 1 | AA | 1384 | C | C1'-O4'-C4' | -8.00 | 103.50 | 109.90 |
| 25 | BA | 43 | C | P-O3'-C3' | 8.00 | 129.30 | 119.70 |
| 26 | BB | 1767 | G | N3-C4-N9 | 8.00 | 130.80 | 126.00 |
| 26 | BB | 2015 | A | N7-C8-N9 | 8.00 | 117.80 | 113.80 |
| 26 | BB | 2303 | G | C5-C6-N1 | 8.00 | 115.50 | 111.50 |
| 1 | AA | 105 | G | N7-C8-N9 | 8.00 | 117.10 | 113.10 |
| 1 | AA | 740 | U | C5'-C4'-O4' | 8.00 | 118.69 | 109.10 |
| 4 | AD | 23 | G | C8-N9-C4 | -8.00 | 103.20 | 106.40 |
| 26 | BB | 814 | C | C2-N3-C4 | -8.00 | 115.90 | 119.90 |
| 26 | BB | 1929 | G | C8-N9-C4 | -8.00 | 103.20 | 106.40 |
| 1 | AA | 22 | G | C5-C6-O6 | 7.99 | 133.40 | 128.60 |
| 1 | AA | 33 | A | O4'-C1'-N9 | 7.99 | 114.59 | 108.20 |
| 1 | AA | 85 | U | N1-C1'-C2' | -7.99 | 103.21 | 112.00 |
| 1 | AA | 472 | U | O4'-C4'-C3' | 7.99 | 112.50 | 106.10 |
| 1 | AA | 491 | G | N3-C4-N9 | -7.99 | 121.20 | 126.00 |
| 1 | AA | 1484 | C | C5-C6-N1 | 7.99 | 125.00 | 121.00 |
| 26 | BB | 414 | C | N3-C2-O2 | -7.99 | 116.31 | 121.90 |
| 26 | BB | 1084 | A | N1-C6-N6 | -7.99 | 113.80 | 118.60 |
| 26 | BB | 1110 | G | N3-C4-C5 | -7.99 | 124.60 | 128.60 |
| 26 | BB | 1517 | G | C4-C5-C6 | 7.99 | 123.60 | 118.80 |
| 26 | BB | 2300 | C | O4'-C1'-N1 | 7.99 | 114.59 | 108.20 |
| 26 | BB | 2434 | A | C5-C6-N1 | 7.99 | 121.70 | 117.70 |
| 1 | AA | 820 | U | N3-C4-C5 | -7.99 | 109.81 | 114.60 |
| 4 | AD | 7 | G | N9-C4-C5 | 7.99 | 108.60 | 105.40 |
| 26 | BB | 1677 | A | C5-N7-C8 | 7.99 | 107.90 | 103.90 |
| 1 | AA | 329 | A | N7-C8-N9 | -7.99 | 109.80 | 113.80 |
| 1 | AA | 944 | G | C5-N7-C8 | -7.99 | 100.31 | 104.30 |
| 26 | BB | 303 | G | N1-C6-O6 | 7.99 | 124.69 | 119.90 |
| 1 | AA | 1396 | A | C6-N1-C2 | 7.99 | 123.39 | 118.60 |
| 1 | AA | 1485 | U | C5-C6-N1 | 7.99 | 126.69 | 122.70 |
| 26 | BB | 429 | A | O4'-C1'-N9 | 7.99 | 114.59 | 108.20 |
| 26 | BB | 645 | C | O4'-C1'-C2' | -7.99 | 97.81 | 105.80 |
| 26 | BB | 1580 | A | N9-C4-C5 | 7.99 | 109.00 | 105.80 |
| 1 | AA | 222 | C | O4'-C1'-N1 | 7.99 | 114.59 | 108.20 |
| 26 | BB | 182 | A | N3-C4-C5 | -7.99 | 121.21 | 126.80 |
| 26 | BB | 2408 | U | N1-C2-N3 | 7.99 | 119.69 | 114.90 |
| 1 | AA | 1074 | G | C2-N3-C4 | -7.99 | 107.91 | 111.90 |
| 1 | AA | 1121 | U | C4'-C3'-C2' | -7.99 | 94.61 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1147 | C | C2-N3-C4 | 7.99 | 123.89 | 119.90 |
| 26 | BB | 349 | U | C4-C5-C6 | 7.99 | 124.49 | 119.70 |
| 26 | BB | 861 | A | C6-C5-N7 | 7.99 | 137.89 | 132.30 |
| 26 | BB | 879 | G | C5-C6-O6 | -7.99 | 123.81 | 128.60 |
| 26 | BB | 1988 | G | C2-N3-C4 | 7.99 | 115.89 | 111.90 |
| 26 | BB | 2699 | C | N1-C2-O2 | 7.99 | 123.69 | 118.90 |
| 25 | BA | 86 | G | C6-C5-N7 | -7.98 | 125.61 | 130.40 |
| 26 | BB | 949 | G | C2-N3-C4 | 7.98 | 115.89 | 111.90 |
| 30 | BF | 35 | TYR | CG-CD2-CE2 | -7.98 | 114.91 | 121.30 |
| 1 | AA | 83 | C | N1-C1'-C2' | -7.98 | 103.22 | 112.00 |
| 1 | AA | 445 | G | N7-C8-N9 | 7.98 | 117.09 | 113.10 |
| 2 | AB | 51 | G | C8-N9-C4 | -7.98 | 103.21 | 106.40 |
| 26 | BB | 701 | G | C5-C6-N1 | 7.98 | 115.49 | 111.50 |
| 26 | BB | 2410 | G | C5'-C4'-O4' | 7.98 | 118.68 | 109.10 |
| 26 | BB | 2684 | U | C5'-C4'-O4' | 7.98 | 118.68 | 109.10 |
| 1 | AA | 692 | U | C5-C6-N1 | -7.98 | 118.71 | 122.70 |
| 1 | AA | 1250 | A | C8-N9-C4 | -7.98 | 102.61 | 105.80 |
| 26 | BB | 569 | U | C5-C6-N1 | -7.98 | 118.71 | 122.70 |
| 26 | BB | 942 | G | C5-C6-N1 | 7.98 | 115.49 | 111.50 |
| 26 | BB | 1337 | G | N9-C4-C5 | 7.98 | 108.59 | 105.40 |
| 26 | BB | 2622 | U | C5'-C4'-O4' | 7.98 | 118.68 | 109.10 |
| 1 | AA | 1410 | A | N1-C2-N3 | 7.98 | 133.29 | 129.30 |
| 25 | BA | 35 | C | O4'-C1'-N1 | 7.98 | 114.58 | 108.20 |
| 26 | BB | 264 | C | O4'-C1'-N1 | 7.98 | 114.58 | 108.20 |
| 26 | BB | 382 | A | C3'-C2'-C1' | 7.98 | 107.88 | 101.50 |
| 26 | BB | 473 | G | C2-N3-C4 | 7.98 | 115.89 | 111.90 |
| 26 | BB | 1427 | A | N9-C4-C5 | -7.98 | 102.61 | 105.80 |
| 26 | BB | 2019 | A | C4-C5-C6 | 7.98 | 120.99 | 117.00 |
| 26 | BB | 2100 | G | C6-N1-C2 | -7.98 | 120.31 | 125.10 |
| 26 | BB | 2629 | U | C5-C4-O4 | -7.98 | 121.11 | 125.90 |
| 1 | AA | 369 | G | C6-N1-C2 | -7.98 | 120.31 | 125.10 |
| 26 | BB | 136 | G | C6-N1-C2 | -7.98 | 120.31 | 125.10 |
| 26 | BB | 701 | G | N9-C4-C5 | 7.98 | 108.59 | 105.40 |
| 26 | BB | 1101 | U | N3-C2-O2 | -7.98 | 116.62 | 122.20 |
| 1 | AA | 329 | A | N1-C6-N6 | -7.97 | 113.82 | 118.60 |
| 3 | AC | 13 | A | N9-C4-C5 | 7.97 | 108.99 | 105.80 |
| 3 | AC | 22 | G | P-O3'-C3' | 7.97 | 129.27 | 119.70 |
| 4 | AD | 17 | C | C2-N3-C4 | 7.97 | 123.89 | 119.90 |
| 26 | BB | 890 | C | C6-N1-C2 | 7.97 | 123.49 | 120.30 |
| 26 | BB | 1858 | A | C4-C5-N7 | 7.97 | 114.69 | 110.70 |
| 26 | BB | 2031 | A | C5-C6-N1 | -7.97 | 113.71 | 117.70 |
| 26 | BB | 2355 | G | C5-N7-C8 | -7.97 | 100.31 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2695 | U | N3-C2-O2 | -7.97 | 116.62 | 122.20 |
| 1 | AA | 251 | G | N7-C8-N9 | 7.97 | 117.09 | 113.10 |
| 1 | AA | 747 | A | O4'-C1'-N9 | 7.97 | 114.58 | 108.20 |
| 1 | AA | 1399 | C | C5-C6-N1 | -7.97 | 117.01 | 121.00 |
| 26 | BB | 491 | G | C5-C6-O6 | -7.97 | 123.82 | 128.60 |
| 26 | BB | 645 | C | C2-N3-C4 | 7.97 | 123.89 | 119.90 |
| 26 | BB | 1597 | A | O4'-C4'-C3' | 7.97 | 112.48 | 106.10 |
| 1 | AA | 9 | G | C4-C5-N7 | 7.97 | 113.99 | 110.80 |
| 26 | BB | 653 | U | C5-C6-N1 | -7.97 | 118.72 | 122.70 |
| 1 | AA | 488 | C | C4'-C3'-C2' | -7.97 | 94.63 | 102.60 |
| 1 | AA | 874 | G | O4'-C1'-N9 | 7.97 | 114.58 | 108.20 |
| 1 | AA | 1024 | G | N9-C4-C5 | 7.97 | 108.59 | 105.40 |
| 1 | AA | 1542 | A | C6-C5-N7 | 7.97 | 137.88 | 132.30 |
| 13 | AM | 68 | ARG | NE-CZ-NH1 | -7.97 | 116.31 | 120.30 |
| 26 | BB | 1524 | G | N3-C4-N9 | 7.97 | 130.78 | 126.00 |
| 26 | BB | 1527 | G | C4-C5-C6 | 7.97 | 123.58 | 118.80 |
| 26 | BB | 2158 | A | C3'-C2'-C1' | -7.97 | 95.12 | 101.50 |
| 26 | BB | 2164 | C | C6-N1-C2 | -7.97 | 117.11 | 120.30 |
| 1 | AA | 713 | G | C4-C5-N7 | -7.97 | 107.61 | 110.80 |
| 26 | BB | 80 | G | N9-C4-C5 | 7.97 | 108.59 | 105.40 |
| 26 | BB | 399 | U | C5-C4-O4 | -7.97 | 121.12 | 125.90 |
| 26 | BB | 805 | G | N7-C8-N9 | 7.97 | 117.08 | 113.10 |
| 26 | BB | 1725 | U | C3'-C2'-C1' | 7.97 | 107.87 | 101.50 |
| 26 | BB | 2579 | C | C4-C5-C6 | -7.97 | 113.42 | 117.40 |
| 26 | BB | 2715 | C | N3-C4-C5 | -7.97 | 118.71 | 121.90 |
| 26 | BB | 2894 | G | C8-N9-C4 | -7.97 | 103.21 | 106.40 |
| 1 | AA | 566 | G | C5'-C4'-C3' | -7.96 | 103.26 | 116.00 |
| 1 | AA | 582 | C | N3-C2-O2 | -7.96 | 116.33 | 121.90 |
| 1 | AA | 913 | A | N9-C4-C5 | -7.96 | 102.61 | 105.80 |
| 4 | AD | 66 | C | N1-C2-O2 | 7.96 | 123.68 | 118.90 |
| 26 | BB | 923 | G | N3-C4-N9 | 7.96 | 130.78 | 126.00 |
| 26 | BB | 1034 | G | C4-C5-N7 | -7.96 | 107.61 | 110.80 |
| 26 | BB | 1069 | A | O4'-C1'-N9 | 7.96 | 114.57 | 108.20 |
| 26 | BB | 2186 | G | C6-C5-N7 | 7.96 | 135.18 | 130.40 |
| 26 | BB | 2691 | C | C4'-C3'-C2' | -7.96 | 94.64 | 102.60 |
| 1 | AA | 8 | A | O4'-C1'-N9 | 7.96 | 114.57 | 108.20 |
| 1 | AA | 109 | A | C5-N7-C8 | -7.96 | 99.92 | 103.90 |
| 26 | BB | 1166 | G | C8-N9-C4 | -7.96 | 103.22 | 106.40 |
| 26 | BB | 1352 | U | O4'-C1'-N1 | 7.96 | 114.57 | 108.20 |
| 26 | BB | 2751 | G | N7-C8-N9 | 7.96 | 117.08 | 113.10 |
| 1 | AA | 1244 | G | C5'-C4'-C3' | -7.96 | 103.26 | 116.00 |
| 1 | AA | 1494 | G | N7-C8-N9 | 7.96 | 117.08 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 71 | G | N7-C8-N9 | 7.96 | 117.08 | 113.10 |
| 26 | BB | 695 | G | C5-C6-N1 | -7.96 | 107.52 | 111.50 |
| 26 | BB | 784 | G | N3-C2-N2 | -7.96 | 114.33 | 119.90 |
| 26 | BB | 1419 | A | C2-N3-C4 | 7.96 | 114.58 | 110.60 |
| 1 | AA | 347 | G | N3-C2-N2 | -7.96 | 114.33 | 119.90 |
| 26 | BB | 13 | A | O4'-C1'-C2' | -7.96 | 97.84 | 105.80 |
| 26 | BB | 322 | A | O4'-C1'-N9 | 7.96 | 114.57 | 108.20 |
| 26 | BB | 618 | G | C6-N1-C2 | -7.96 | 120.32 | 125.10 |
| 26 | BB | 2060 | A | C3'-C2'-C1' | 7.96 | 107.87 | 101.50 |
| 1 | AA | 245 | U | C6-N1-C2 | -7.96 | 116.22 | 121.00 |
| 1 | AA | 1318 | A | N9-C1'-C2' | -7.96 | 103.25 | 112.00 |
| 19 | AS | 53 | ASP | CB-CG-OD2 | -7.96 | 111.14 | 118.30 |
| 26 | BB | 1774 | C | C5-C4-N4 | -7.96 | 114.63 | 120.20 |
| 1 | AA | 6 | G | C4-C5-C6 | 7.96 | 123.57 | 118.80 |
| 1 | AA | 520 | A | C2-N3-C4 | 7.96 | 114.58 | 110.60 |
| 1 | AA | 1243 | C | N3-C4-C5 | -7.96 | 118.72 | 121.90 |
| 26 | BB | 2533 | U | C5-C6-N1 | -7.96 | 118.72 | 122.70 |
| 26 | BB | 2786 | U | O4'-C1'-N1 | 7.96 | 114.56 | 108.20 |
| 1 | AA | 116 | A | N9-C4-C5 | 7.96 | 108.98 | 105.80 |
| 1 | AA | 1281 | C | N1-C2-O2 | 7.96 | 123.67 | 118.90 |
| 26 | BB | 1338 | G | N1-C6-O6 | 7.96 | 124.67 | 119.90 |
| 1 | AA | 304 | U | O4'-C4'-C3' | 7.95 | 112.46 | 106.10 |
| 1 | AA | 1372 | U | N3-C4-C5 | 7.95 | 119.37 | 114.60 |
| 25 | BA | 105 | G | C6-N1-C2 | -7.95 | 120.33 | 125.10 |
| 26 | BB | 729 | G | N3-C2-N2 | -7.95 | 114.33 | 119.90 |
| 26 | BB | 928 | A | N9-C1'-C2' | -7.95 | 103.25 | 112.00 |
| 26 | BB | 1072 | C | C4-C5-C6 | -7.95 | 113.42 | 117.40 |
| 26 | BB | 1964 | G | C6-N1-C2 | -7.95 | 120.33 | 125.10 |
| 1 | AA | 542 | G | C4-C5-N7 | 7.95 | 113.98 | 110.80 |
| 1 | AA | 1389 | C | C4-C5-C6 | 7.95 | 121.38 | 117.40 |
| 1 | AA | 403 | C | C2-N3-C4 | 7.95 | 123.88 | 119.90 |
| 1 | AA | 577 | G | N7-C8-N9 | 7.95 | 117.08 | 113.10 |
| 2 | AB | 28 | C | N1-C2-O2 | 7.95 | 123.67 | 118.90 |
| 3 | AC | 37 | G | N9-C4-C5 | 7.95 | 108.58 | 105.40 |
| 26 | BB | 923 | G | N3-C4-C5 | -7.95 | 124.62 | 128.60 |
| 26 | BB | 1976 | U | C3'-C2'-C1' | 7.95 | 107.86 | 101.50 |
| 31 | BG | 76 | PHE | CB-CG-CD1 | -7.95 | 115.23 | 120.80 |
| 34 | BJ | 152 | ARG | CD-NE-CZ | 7.95 | 134.73 | 123.60 |
| 1 | AA | 841 | C | N3-C4-C5 | -7.95 | 118.72 | 121.90 |
| 1 | AA | 1130 | A | C4-C5-N7 | -7.95 | 106.73 | 110.70 |
| 2 | AB | 49 | G | C4-C5-N7 | -7.95 | 107.62 | 110.80 |
| 26 | BB | 2 | G | N3-C4-N9 | 7.95 | 130.77 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 392 | U | C4-C5-C6 | 7.95 | 124.47 | 119.70 |
| 26 | BB | 495 | G | C5-C6-O6 | -7.95 | 123.83 | 128.60 |
| 26 | BB | 788 | A | C6-N1-C2 | -7.95 | 113.83 | 118.60 |
| 1 | AA | 326 | G | O4'-C1'-N9 | 7.95 | 114.56 | 108.20 |
| 26 | BB | 2095 | A | N3-C4-C5 | -7.95 | 121.24 | 126.80 |
| 1 | AA | 183 | C | C4'-C3'-C2' | -7.95 | 94.65 | 102.60 |
| 1 | AA | 823 | C | C4'-C3'-C2' | -7.95 | 94.66 | 102.60 |
| 26 | BB | 152 | A | C4-C5-N7 | 7.95 | 114.67 | 110.70 |
| 26 | BB | 1003 | G | N1-C6-O6 | 7.95 | 124.67 | 119.90 |
| 26 | BB | 1920 | C | C2-N3-C4 | 7.95 | 123.87 | 119.90 |
| 26 | BB | 2047 | C | N3-C2-O2 | -7.95 | 116.34 | 121.90 |
| 26 | BB | 2202 | U | C4-C5-C6 | 7.95 | 124.47 | 119.70 |
| 26 | BB | 2293 | G | C3'-C2'-C1' | 7.95 | 107.86 | 101.50 |
| 26 | BB | 340 | A | N7-C8-N9 | -7.94 | 109.83 | 113.80 |
| 26 | BB | 1005 | C | O4'-C1'-N1 | 7.94 | 114.56 | 108.20 |
| 26 | BB | 1802 | A | N9-C4-C5 | 7.94 | 108.98 | 105.80 |
| 26 | BB | 2294 | G | O4'-C1'-N9 | 7.94 | 114.56 | 108.20 |
| 1 | AA | 958 | A | C5-N7-C8 | -7.94 | 99.93 | 103.90 |
| 26 | BB | 281 | C | C6-N1-C2 | -7.94 | 117.12 | 120.30 |
| 26 | BB | 1355 | G | N3-C2-N2 | -7.94 | 114.34 | 119.90 |
| 26 | BB | 1505 | A | C4-C5-N7 | 7.94 | 114.67 | 110.70 |
| 26 | BB | 1935 | G | C4-C5-N7 | 7.94 | 113.98 | 110.80 |
| 26 | BB | 2124 | G | C5-C6-N1 | 7.94 | 115.47 | 111.50 |
| 1 | AA | 399 | G | O5'-C5'-C4' | -7.94 | 96.61 | 111.70 |
| 1 | AA | 1035 | A | C4'-C3'-C2' | -7.94 | 94.66 | 102.60 |
| 1 | AA | 1354 | U | N3-C2-O2 | -7.94 | 116.64 | 122.20 |
| 26 | BB | 189 | G | C5-N7-C8 | -7.94 | 100.33 | 104.30 |
| 26 | BB | 338 | G | N3-C4-C5 | -7.94 | 124.63 | 128.60 |
| 26 | BB | 439 | A | N9-C4-C5 | 7.94 | 108.98 | 105.80 |
| 26 | BB | 579 | G | C4-C5-N7 | 7.94 | 113.98 | 110.80 |
| 26 | BB | 1187 | G | N3-C4-C5 | -7.94 | 124.63 | 128.60 |
| 26 | BB | 1711 | A | C8-N9-C4 | 7.94 | 108.98 | 105.80 |
| 26 | BB | 2282 | G | N9-C4-C5 | 7.94 | 108.58 | 105.40 |
| 26 | BB | 2769 | U | N3-C4-C5 | -7.94 | 109.84 | 114.60 |
| 1 | AA | 82 | G | N9-C1'-C2' | -7.94 | 103.27 | 112.00 |
| 26 | BB | 1862 | G | O4'-C1'-N9 | 7.94 | 114.55 | 108.20 |
| 1 | AA | 82 | G | N9-C4-C5 | 7.94 | 108.58 | 105.40 |
| 1 | AA | 925 | G | N1-C2-N3 | 7.94 | 128.66 | 123.90 |
| 1 | AA | 948 | C | C4'-C3'-C2' | -7.94 | 94.66 | 102.60 |
| 1 | AA | 1267 | C | C1'-O4'-C4' | -7.94 | 103.55 | 109.90 |
| 25 | BA | 28 | C | O4'-C1'-N1 | 7.94 | 114.55 | 108.20 |
| 26 | BB | 973 | A | O4'-C1'-N9 | 7.94 | 114.55 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1183 | U | C4'-C3'-C2' | -7.94 | 94.66 | 102.60 |
| 26 | BB | 1212 | G | O4'-C1'-N9 | 7.94 | 114.55 | 108.20 |
| 1 | AA | 158 | G | C6-N1-C2 | -7.94 | 120.34 | 125.10 |
| 1 | AA | 343 | U | N3-C2-O2 | -7.94 | 116.64 | 122.20 |
| 1 | AA | 849 | G | C5-N7-C8 | 7.94 | 108.27 | 104.30 |
| 3 | AC | 15 | G | C5-C6-N1 | 7.94 | 115.47 | 111.50 |
| 26 | BB | 863 | A | O4'-C1'-N9 | 7.94 | 114.55 | 108.20 |
| 26 | BB | 2203 | U | O4'-C1'-N1 | 7.94 | 114.55 | 108.20 |
| 26 | BB | 2312 | U | C1'-O4'-C4' | 7.94 | 116.25 | 109.90 |
| 1 | AA | 242 | G | C5-C6-O6 | -7.93 | 123.84 | 128.60 |
| 26 | BB | 585 | G | C5'-C4'-O4' | 7.93 | 118.62 | 109.10 |
| 26 | BB | 1245 | G | C8-N9-C4 | -7.93 | 103.23 | 106.40 |
| 26 | BB | 1380 | G | C4-C5-N7 | -7.93 | 107.63 | 110.80 |
| 26 | BB | 2798 | U | C5-C4-O4 | -7.93 | 121.14 | 125.90 |
| 1 | AA | 443 | C | C5-C4-N4 | -7.93 | 114.65 | 120.20 |
| 26 | BB | 52 | A | N1-C2-N3 | -7.93 | 125.33 | 129.30 |
| 26 | BB | 391 | A | N3-C4-C5 | -7.93 | 121.25 | 126.80 |
| 26 | BB | 764 | A | N7-C8-N9 | 7.93 | 117.77 | 113.80 |
| 26 | BB | 1138 | G | C8-N9-C4 | -7.93 | 103.23 | 106.40 |
| 26 | BB | 1769 | U | O4'-C1'-N1 | 7.93 | 114.55 | 108.20 |
| 26 | BB | 716 | A | C8-N9-C4 | -7.93 | 102.63 | 105.80 |
| 26 | BB | 1227 | G | C5'-C4'-O4' | 7.93 | 118.62 | 109.10 |
| 26 | BB | 1595 | C | N3-C4-N4 | 7.93 | 123.55 | 118.00 |
| 26 | BB | 297 | G | C5-C6-O6 | -7.93 | 123.84 | 128.60 |
| 26 | BB | 539 | G | C4-C5-N7 | -7.93 | 107.63 | 110.80 |
| 26 | BB | 1799 | G | C5-C6-O6 | 7.93 | 133.36 | 128.60 |
| 26 | BB | 2505 | G | N7-C8-N9 | 7.93 | 117.06 | 113.10 |
| 1 | AA | 1004 | A | C6-N1-C2 | 7.93 | 123.36 | 118.60 |
| 1 | AA | 1455 | G | N3-C4-C5 | -7.93 | 124.64 | 128.60 |
| 26 | BB | 393 | C | C2-N3-C4 | 7.93 | 123.86 | 119.90 |
| 26 | BB | 1139 | G | C8-N9-C4 | -7.93 | 103.23 | 106.40 |
| 26 | BB | 1703 | G | N3-C4-C5 | -7.93 | 124.64 | 128.60 |
| 26 | BB | 1899 | A | C6-N1-C2 | -7.93 | 113.84 | 118.60 |
| 27 | BC | 163 | TYR | CB-CG-CD1 | -7.93 | 116.25 | 121.00 |
| 1 | AA | 132 | C | N3-C4-C5 | 7.92 | 125.07 | 121.90 |
| 1 | AA | 276 | G | C6-C5-N7 | -7.92 | 125.65 | 130.40 |
| 1 | AA | 470 | C | C5-C4-N4 | 7.92 | 125.75 | 120.20 |
| 1 | AA | 507 | C | C5-C4-N4 | -7.92 | 114.65 | 120.20 |
| 1 | AA | 570 | G | N3-C4-C5 | -7.92 | 124.64 | 128.60 |
| 1 | AA | 1067 | A | C2-N3-C4 | 7.92 | 114.56 | 110.60 |
| 1 | AA | 1159 | U | O5'-P-OP1 | -7.92 | 98.57 | 105.70 |
| 25 | BA | 67 | G | C5-C6-O6 | -7.92 | 123.84 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 396 | G | O4'-C1'-N9 | 7.92 | 114.54 | 108.20 |
| 26 | BB | 890 | C | N1-C2-O2 | 7.92 | 123.66 | 118.90 |
| 26 | BB | 2407 | A | C5-C6-N6 | 7.92 | 130.04 | 123.70 |
| 4 | AD | 20 | G | C8-N9-C4 | -7.92 | 103.23 | 106.40 |
| 20 | AT | 26 | ARG | NE-CZ-NH2 | -7.92 | 116.34 | 120.30 |
| 26 | BB | 977 | G | C3'-C2'-C1' | 7.92 | 107.84 | 101.50 |
| 26 | BB | 1122 | G | N9-C1'-C2' | -7.92 | 103.28 | 112.00 |
| 1 | AA | 171 | A | C5'-C4'-O4' | 7.92 | 118.61 | 109.10 |
| 1 | AA | 1131 | G | N7-C8-N9 | 7.92 | 117.06 | 113.10 |
| 26 | BB | 107 | G | C8-N9-C4 | -7.92 | 103.23 | 106.40 |
| 26 | BB | 470 | A | C8-N9-C4 | -7.92 | 102.63 | 105.80 |
| 26 | BB | 792 | A | C4-C5-N7 | -7.92 | 106.74 | 110.70 |
| 26 | BB | 2431 | U | C2-N3-C4 | 7.92 | 131.75 | 127.00 |
| 26 | BB | 2873 | A | C5-C6-N1 | -7.92 | 113.74 | 117.70 |
| 1 | AA | 927 | G | C8-N9-C4 | -7.92 | 103.23 | 106.40 |
| 1 | AA | 941 | G | O4'-C1'-N9 | 7.92 | 114.54 | 108.20 |
| 1 | AA | 1537 | U | O4'-C1'-N1 | 7.92 | 114.54 | 108.20 |
| 26 | BB | 31 | C | O4'-C1'-N1 | 7.92 | 114.54 | 108.20 |
| 26 | BB | 664 | G | O4'-C1'-C2' | 7.92 | 114.73 | 107.60 |
| 26 | BB | 878 | A | C6-N1-C2 | 7.92 | 123.35 | 118.60 |
| 26 | BB | 1173 | U | C4'-C3'-C2' | -7.92 | 94.68 | 102.60 |
| 26 | BB | 1411 | U | C5-C4-O4 | 7.92 | 130.65 | 125.90 |
| 1 | AA | 921 | U | C4'-C3'-C2' | -7.92 | 94.68 | 102.60 |
| 1 | AA | 1212 | U | N3-C4-C5 | -7.92 | 109.85 | 114.60 |
| 1 | AA | 1220 | G | C4-C5-N7 | -7.92 | 107.63 | 110.80 |
| 1 | AA | 1277 | C | C2-N1-C1' | -7.92 | 110.09 | 118.80 |
| 1 | AA | 1322 | C | N3-C4-N4 | 7.92 | 123.54 | 118.00 |
| 26 | BB | 271 | G | N9-C4-C5 | 7.92 | 108.57 | 105.40 |
| 26 | BB | 825 | A | N9-C4-C5 | 7.92 | 108.97 | 105.80 |
| 26 | BB | 1574 | C | N3-C2-O2 | -7.92 | 116.36 | 121.90 |
| 26 | BB | 2597 | G | O4'-C4'-C3' | 7.92 | 112.43 | 106.10 |
| 26 | BB | 2764 | A | C8-N9-C4 | -7.92 | 102.63 | 105.80 |
| 28 | BD | 102 | TYR | CB-CG-CD1 | -7.92 | 116.25 | 121.00 |
| 1 | AA | 549 | C | C5'-C4'-O4' | 7.92 | 118.60 | 109.10 |
| 1 | AA | 1459 | G | N1-C2-N3 | 7.92 | 128.65 | 123.90 |
| 26 | BB | 732 | C | C5-C4-N4 | -7.92 | 114.66 | 120.20 |
| 26 | BB | 2202 | U | O4'-C1'-N1 | 7.92 | 114.53 | 108.20 |
| 26 | BB | 2249 | U | C3'-C2'-C1' | 7.92 | 107.83 | 101.50 |
| 1 | AA | 595 | A | C4-C5-N7 | -7.92 | 106.74 | 110.70 |
| 1 | AA | 818 | G | N3-C4-C5 | -7.92 | 124.64 | 128.60 |
| 1 | AA | 979 | C | N3-C4-C5 | -7.92 | 118.73 | 121.90 |
| 25 | BA | 66 | A | C2-N3-C4 | 7.92 | 114.56 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2782 | G | O4'-C1'-N9 | 7.92 | 114.53 | 108.20 |
| 1 | AA | 26 | A | C4-C5-N7 | -7.91 | 106.74 | 110.70 |
| 1 | AA | 220 | G | C5-N7-C8 | -7.91 | 100.34 | 104.30 |
| 1 | AA | 560 | A | C5-N7-C8 | 7.91 | 107.86 | 103.90 |
| 1 | AA | 884 | U | N1-C2-O2 | 7.91 | 128.34 | 122.80 |
| 26 | BB | 555 | G | C5-N7-C8 | -7.91 | 100.34 | 104.30 |
| 26 | BB | 2116 | G | N7-C8-N9 | 7.91 | 117.06 | 113.10 |
| 26 | BB | 2216 | G | C8-N9-C4 | -7.91 | 103.23 | 106.40 |
| 26 | BB | 2295 | C | N3-C4-C5 | -7.91 | 118.73 | 121.90 |
| 1 | AA | 538 | G | N3-C4-C5 | -7.91 | 124.64 | 128.60 |
| 2 | AB | 67 | G | O4'-C1'-N9 | 7.91 | 114.53 | 108.20 |
| 26 | BB | 1131 | G | C5-C6-N1 | -7.91 | 107.54 | 111.50 |
| 26 | BB | 1133 | A | C4-C5-N7 | -7.91 | 106.74 | 110.70 |
| 26 | BB | 2527 | C | N3-C2-O2 | -7.91 | 116.36 | 121.90 |
| 1 | AA | 395 | C | C5'-C4'-O4' | 7.91 | 118.59 | 109.10 |
| 1 | AA | 981 | U | O4'-C1'-N1 | 7.91 | 114.53 | 108.20 |
| 1 | AA | 1374 | A | N1-C6-N6 | -7.91 | 113.85 | 118.60 |
| 25 | BA | 85 | G | C4-C5-N7 | -7.91 | 107.64 | 110.80 |
| 26 | BB | 590 | A | O4'-C1'-N9 | 7.91 | 114.53 | 108.20 |
| 26 | BB | 666 | A | C5'-C4'-O4' | 7.91 | 118.59 | 109.10 |
| 26 | BB | 1029 | A | O4'-C1'-N9 | 7.91 | 114.53 | 108.20 |
| 26 | BB | 1805 | A | O4'-C4'-C3' | 7.91 | 112.43 | 106.10 |
| 1 | AA | 87 | C | C4-C5-C6 | 7.91 | 121.36 | 117.40 |
| 1 | AA | 493 | A | C4-C5-C6 | -7.91 | 113.05 | 117.00 |
| 1 | AA | 821 | G | C4-C5-N7 | -7.91 | 107.64 | 110.80 |
| 17 | AQ | 23 | ARG | NE-CZ-NH1 | 7.91 | 124.25 | 120.30 |
| 26 | BB | 1267 | U | C5'-C4'-O4' | 7.91 | 118.59 | 109.10 |
| 26 | BB | 1530 | G | C5-C6-O6 | -7.91 | 123.86 | 128.60 |
| 26 | BB | 2495 | G | N9-C4-C5 | 7.91 | 108.56 | 105.40 |
| 26 | BB | 2519 | U | C4'-C3'-C2' | -7.91 | 94.69 | 102.60 |
| 26 | BB | 2835 | A | N7-C8-N9 | 7.91 | 117.75 | 113.80 |
| 1 | AA | 1176 | A | N7-C8-N9 | -7.91 | 109.85 | 113.80 |
| 26 | BB | 665 | U | C3'-C2'-C1' | 7.91 | 107.83 | 101.50 |
| 26 | BB | 826 | U | O4'-C1'-N1 | 7.91 | 114.53 | 108.20 |
| 26 | BB | 1162 | G | C8-N9-C4 | -7.91 | 103.24 | 106.40 |
| 26 | BB | 1426 | G | O4'-C1'-N9 | 7.91 | 114.53 | 108.20 |
| 1 | AA | 675 | A | C4'-C3'-C2' | -7.91 | 94.69 | 102.60 |
| 2 | AB | 65 | C | C4-C5-C6 | -7.91 | 113.45 | 117.40 |
| 25 | BA | 57 | A | N1-C6-N6 | 7.91 | 123.34 | 118.60 |
| 26 | BB | 693 | A | C5-N7-C8 | -7.91 | 99.95 | 103.90 |
| 26 | BB | 1195 | G | N1-C2-N3 | -7.91 | 119.16 | 123.90 |
| 26 | BB | 2004 | G | N1-C2-N2 | 7.91 | 123.31 | 116.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2463 | C | N1-C1'-C2' | -7.91 | 103.30 | 112.00 |
| 26 | BB | 2570 | G | C8-N9-C4 | 7.91 | 109.56 | 106.40 |
| 1 | AA | 852 | G | N3-C2-N2 | 7.90 | 125.43 | 119.90 |
| 23 | AW | 59 | ARG | NE-CZ-NH2 | -7.90 | 116.35 | 120.30 |
| 26 | BB | 1413 | A | N1-C6-N6 | -7.90 | 113.86 | 118.60 |
| 26 | BB | 1742 | U | N3-C4-O4 | 7.90 | 124.93 | 119.40 |
| 26 | BB | 2413 | G | C5-C6-N1 | -7.90 | 107.55 | 111.50 |
| 26 | BB | 2571 | U | N1-C2-N3 | 7.90 | 119.64 | 114.90 |
| 26 | BB | 2759 | G | N3-C4-N9 | -7.90 | 121.26 | 126.00 |
| 26 | BB | 2800 | A | N7-C8-N9 | 7.90 | 117.75 | 113.80 |
| 1 | AA | 77 | A | C2-N3-C4 | 7.90 | 114.55 | 110.60 |
| 1 | AA | 209 | U | C4-C5-C6 | 7.90 | 124.44 | 119.70 |
| 1 | AA | 843 | U | O4'-C1'-N1 | 7.90 | 114.52 | 108.20 |
| 3 | AC | 13 | A | N1-C2-N3 | -7.90 | 125.35 | 129.30 |
| 25 | BA | 67 | G | N1-C6-O6 | 7.90 | 124.64 | 119.90 |
| 26 | BB | 177 | G | C5-C6-N1 | -7.90 | 107.55 | 111.50 |
| 26 | BB | 381 | G | C2-N3-C4 | 7.90 | 115.85 | 111.90 |
| 26 | BB | 1209 | U | O4'-C1'-N1 | 7.90 | 114.52 | 108.20 |
| 26 | BB | 1222 | U | C6-N1-C2 | 7.90 | 125.74 | 121.00 |
| 26 | BB | 1456 | G | C2-N3-C4 | 7.90 | 115.85 | 111.90 |
| 26 | BB | 2507 | C | C1'-O4'-C4' | 7.90 | 116.22 | 109.90 |
| 1 | AA | 86 | G | C6-N1-C2 | -7.90 | 120.36 | 125.10 |
| 1 | AA | 744 | C | O4'-C1'-N1 | 7.90 | 114.52 | 108.20 |
| 3 | AC | 53 | G | C8-N9-C4 | -7.90 | 103.24 | 106.40 |
| 26 | BB | 47 | C | N3-C2-O2 | -7.90 | 116.37 | 121.90 |
| 26 | BB | 109 | C | O4'-C4'-C3' | 7.90 | 112.42 | 106.10 |
| 26 | BB | 224 | U | C5'-C4'-C3' | -7.90 | 103.36 | 116.00 |
| 26 | BB | 657 | U | N3-C4-C5 | -7.90 | 109.86 | 114.60 |
| 26 | BB | 798 | G | C8-N9-C4 | -7.90 | 103.24 | 106.40 |
| 26 | BB | 952 | G | O4'-C1'-N9 | 7.90 | 114.52 | 108.20 |
| 26 | BB | 1639 | C | O4'-C1'-N1 | 7.90 | 114.52 | 108.20 |
| 26 | BB | 2221 | G | N9-C4-C5 | 7.90 | 108.56 | 105.40 |
| 26 | BB | 1293 | C | O4'-C1'-N1 | 7.90 | 114.52 | 108.20 |
| 1 | AA | 1026 | G | C5-N7-C8 | -7.90 | 100.35 | 104.30 |
| 4 | AD | 50 | G | N7-C8-N9 | 7.90 | 117.05 | 113.10 |
| 26 | BB | 133 | U | N3-C2-O2 | -7.90 | 116.67 | 122.20 |
| 26 | BB | 396 | G | C4-C5-N7 | -7.90 | 107.64 | 110.80 |
| 26 | BB | 755 | U | C4-C5-C6 | 7.90 | 124.44 | 119.70 |
| 26 | BB | 831 | G | N1-C6-O6 | -7.90 | 115.16 | 119.90 |
| 26 | BB | 875 | G | N3-C4-C5 | -7.90 | 124.65 | 128.60 |
| 26 | BB | 1380 | G | N1-C6-O6 | -7.90 | 115.16 | 119.90 |
| 26 | BB | 1549 | A | N9-C4-C5 | -7.90 | 102.64 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1368 | A | C5-C6-N1 | 7.90 | 121.65 | 117.70 |
| 29 | BE | 68 | PHE | CB-CG-CD1 | -7.90 | 115.27 | 120.80 |
| 1 | AA | 413 | G | N3-C2-N2 | -7.89 | 114.37 | 119.90 |
| 1 | AA | 705 | G | N3-C4-C5 | -7.89 | 124.65 | 128.60 |
| 26 | BB | 531 | C | N3-C2-O2 | -7.89 | 116.37 | 121.90 |
| 26 | BB | 2538 | C | C5-C4-N4 | 7.89 | 125.73 | 120.20 |
| 1 | AA | 430 | A | C5'-C4'-C3' | -7.89 | 103.37 | 116.00 |
| 26 | BB | 1047 | G | N1-C6-O6 | 7.89 | 124.64 | 119.90 |
| 26 | BB | 1102 | C | C5-C4-N4 | -7.89 | 114.67 | 120.20 |
| 26 | BB | 1119 | U | O4'-C1'-N1 | 7.89 | 114.51 | 108.20 |
| 26 | BB | 2787 | C | C5-C6-N1 | 7.89 | 124.95 | 121.00 |
| 26 | BB | 262 | A | N1-C2-N3 | -7.89 | 125.36 | 129.30 |
| 26 | BB | 1272 | A | P-O3'-C3' | 7.89 | 129.17 | 119.70 |
| 1 | AA | 1082 | A | O4'-C1'-N9 | 7.89 | 114.51 | 108.20 |
| 3 | AC | 40 | G | P-O3'-C3' | 7.89 | 129.17 | 119.70 |
| 26 | BB | 762 | U | C5-C6-N1 | 7.89 | 126.64 | 122.70 |
| 26 | BB | 798 | G | C3'-C2'-C1' | -7.89 | 95.19 | 101.50 |
| 26 | BB | 1024 | G | C5-C6-N1 | 7.89 | 115.44 | 111.50 |
| 26 | BB | 1628 | G | C6-N1-C2 | -7.89 | 120.37 | 125.10 |
| 26 | BB | 2117 | A | C1'-O4'-C4' | -7.89 | 103.59 | 109.90 |
| 26 | BB | 2121 | G | N1-C2-N3 | -7.89 | 119.17 | 123.90 |
| 26 | BB | 2147 | A | C3'-C2'-C1' | -7.89 | 95.19 | 101.50 |
| 26 | BB | 2712 | C | N3-C4-C5 | -7.89 | 118.74 | 121.90 |
| 25 | BA | 63 | C | N3-C4-N4 | 7.89 | 123.52 | 118.00 |
| 26 | BB | 897 | C | C2-N3-C4 | 7.89 | 123.84 | 119.90 |
| 26 | BB | 1965 | C | O4'-C1'-N1 | 7.89 | 114.51 | 108.20 |
| 1 | AA | 346 | G | N7-C8-N9 | 7.89 | 117.04 | 113.10 |
| 1 | AA | 448 | A | N9-C4-C5 | 7.89 | 108.95 | 105.80 |
| 1 | AA | 827 | U | N1-C2-O2 | 7.89 | 128.32 | 122.80 |
| 26 | BB | 629 | G | N3-C4-N9 | 7.89 | 130.73 | 126.00 |
| 26 | BB | 1884 | G | N7-C8-N9 | 7.89 | 117.04 | 113.10 |
| 26 | BB | 2283 | C | N1-C2-O2 | 7.89 | 123.63 | 118.90 |
| 26 | BB | 2633 | G | N3-C4-C5 | -7.89 | 124.66 | 128.60 |
| 1 | AA | 46 | G | O4'-C1'-N9 | 7.88 | 114.51 | 108.20 |
| 1 | AA | 212 | G | C2-N3-C4 | 7.88 | 115.84 | 111.90 |
| 1 | AA | 214 | C | N3-C4-C5 | 7.88 | 125.05 | 121.90 |
| 1 | AA | 797 | C | N3-C2-O2 | 7.88 | 127.42 | 121.90 |
| 1 | AA | 893 | C | N3-C4-C5 | -7.88 | 118.75 | 121.90 |
| 1 | AA | 1157 | A | O4'-C4'-C3' | 7.88 | 112.41 | 106.10 |
| 1 | AA | 1362 | A | C3'-C2'-C1' | 7.88 | 107.81 | 101.50 |
| 1 | AA | 1541 | U | C5-C6-N1 | -7.88 | 118.76 | 122.70 |
| 4 | AD | 74 | A | N7-C8-N9 | 7.88 | 117.74 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 22 | AV | 36 | ARG | NE-CZ-NH2 | -7.88 | 116.36 | 120.30 |
| 26 | BB | 1503 | A | N9-C4-C5 | 7.88 | 108.95 | 105.80 |
| 26 | BB | 1676 | A | O4'-C1'-N9 | 7.88 | 114.51 | 108.20 |
| 1 | AA | 5 | U | C6-N1-C2 | 7.88 | 125.73 | 121.00 |
| 1 | AA | 614 | C | O4'-C1'-N1 | 7.88 | 114.51 | 108.20 |
| 1 | AA | 1086 | U | C5-C4-O4 | -7.88 | 121.17 | 125.90 |
| 25 | BA | 3 | C | N3-C4-N4 | 7.88 | 123.52 | 118.00 |
| 25 | BA | 83 | G | O4'-C1'-N9 | 7.88 | 114.51 | 108.20 |
| 26 | BB | 383 | C | N3-C4-C5 | 7.88 | 125.05 | 121.90 |
| 26 | BB | 1249 | U | O4'-C1'-N1 | 7.88 | 114.51 | 108.20 |
| 26 | BB | 1379 | U | C5-C4-O4 | -7.88 | 121.17 | 125.90 |
| 26 | BB | 2255 | G | C6-C5-N7 | -7.88 | 125.67 | 130.40 |
| 1 | AA | 156 | C | N1-C2-O2 | 7.88 | 123.63 | 118.90 |
| 1 | AA | 161 | A | C8-N9-C4 | -7.88 | 102.65 | 105.80 |
| 1 | AA | 316 | C | N3-C4-C5 | -7.88 | 118.75 | 121.90 |
| 1 | AA | 773 | G | N3-C4-C5 | -7.88 | 124.66 | 128.60 |
| 1 | AA | 1421 | G | N7-C8-N9 | 7.88 | 117.04 | 113.10 |
| 2 | AB | 39 | A | C5-N7-C8 | 7.88 | 107.84 | 103.90 |
| 26 | BB | 1012 | U | N1-C2-N3 | 7.88 | 119.63 | 114.90 |
| 37 | BM | 18 | ARG | NE-CZ-NH1 | 7.88 | 124.24 | 120.30 |
| 1 | AA | 138 | G | C6-C5-N7 | -7.88 | 125.67 | 130.40 |
| 1 | AA | 891 | U | N3-C4-C5 | -7.88 | 109.87 | 114.60 |
| 2 | AB | 10 | G | O4'-C1'-N9 | 7.88 | 114.50 | 108.20 |
| 26 | BB | 15 | G | C2-N3-C4 | 7.88 | 115.84 | 111.90 |
| 26 | BB | 1453 | A | C4-C5-N7 | -7.88 | 106.76 | 110.70 |
| 26 | BB | 2446 | G | C5-N7-C8 | -7.88 | 100.36 | 104.30 |
| 1 | AA | 749 | A | C4-C5-N7 | 7.88 | 114.64 | 110.70 |
| 1 | AA | 965 | U | C6-N1-C2 | -7.88 | 116.27 | 121.00 |
| 4 | AD | 41 | C | C6-N1-C2 | -7.88 | 117.15 | 120.30 |
| 26 | BB | 537 | G | C4-C5-C6 | 7.88 | 123.53 | 118.80 |
| 26 | BB | 1058 | U | C6-N1-C2 | -7.88 | 116.27 | 121.00 |
| 1 | AA | 1486 | G | C5-C6-O6 | -7.88 | 123.87 | 128.60 |
| 26 | BB | 855 | G | C2-N3-C4 | 7.88 | 115.84 | 111.90 |
| 26 | BB | 899 | A | N1-C2-N3 | 7.88 | 133.24 | 129.30 |
| 26 | BB | 2193 | G | C4-C5-C6 | 7.88 | 123.53 | 118.80 |
| 1 | AA | 453 | G | C5-N7-C8 | -7.88 | 100.36 | 104.30 |
| 1 | AA | 1500 | A | O4'-C1'-N9 | 7.88 | 114.50 | 108.20 |
| 26 | BB | 1629 | U | O4'-C1'-N1 | 7.88 | 114.50 | 108.20 |
| 26 | BB | 1880 | U | O4'-C1'-N1 | 7.88 | 114.50 | 108.20 |
| 40 | BP | 71 | ARG | NE-CZ-NH2 | -7.88 | 116.36 | 120.30 |
| 1 | AA | 300 | A | C4-C5-N7 | -7.87 | 106.76 | 110.70 |
| 1 | AA | 1252 | A | C5-C6-N6 | -7.87 | 117.40 | 123.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1459 | G | C2-N3-C4 | -7.87 | 107.96 | 111.90 |
| 26 | BB | 1001 | A | C4-C5-N7 | 7.87 | 114.64 | 110.70 |
| 26 | BB | 1361 | G | N3-C2-N2 | 7.87 | 125.41 | 119.90 |
| 26 | BB | 1864 | U | C6-N1-C2 | -7.87 | 116.28 | 121.00 |
| 1 | AA | 473 | U | N3-C4-O4 | 7.87 | 124.91 | 119.40 |
| 1 | AA | 479 | U | O4'-C1'-N1 | 7.87 | 114.50 | 108.20 |
| 1 | AA | 1196 | A | N1-C6-N6 | 7.87 | 123.32 | 118.60 |
| 1 | AA | 1214 | C | C3'-C2'-C1' | 7.87 | 107.80 | 101.50 |
| 26 | BB | 621 | A | C4-C5-C6 | -7.87 | 113.06 | 117.00 |
| 26 | BB | 788 | A | N9-C4-C5 | -7.87 | 102.65 | 105.80 |
| 26 | BB | 841 | G | N7-C8-N9 | 7.87 | 117.04 | 113.10 |
| 26 | BB | 1587 | G | C8-N9-C4 | -7.87 | 103.25 | 106.40 |
| 26 | BB | 2321 | U | C3'-C2'-C1' | 7.87 | 107.80 | 101.50 |
| 26 | BB | 2363 | G | C6-C5-N7 | -7.87 | 125.68 | 130.40 |
| 26 | BB | 2499 | C | O4'-C1'-N1 | 7.87 | 114.50 | 108.20 |
| 32 | BH | 113 | ASP | CB-CG-OD1 | -7.87 | 111.22 | 118.30 |
| 26 | BB | 886 | A | C6-N1-C2 | -7.87 | 113.88 | 118.60 |
| 26 | BB | 1775 | U | C3'-C2'-C1' | -7.87 | 95.20 | 101.50 |
| 26 | BB | 2702 | G | N9-C4-C5 | -7.87 | 102.25 | 105.40 |
| 1 | AA | 1041 | G | C4-C5-N7 | -7.87 | 107.65 | 110.80 |
| 1 | AA | 1453 | G | C5'-C4'-O4' | 7.87 | 118.54 | 109.10 |
| 26 | BB | 622 | G | O4'-C1'-N9 | 7.87 | 114.50 | 108.20 |
| 1 | AA | 993 | G | N1-C6-O6 | 7.87 | 124.62 | 119.90 |
| 1 | AA | 1356 | G | C6-C5-N7 | -7.87 | 125.68 | 130.40 |
| 26 | BB | 587 | C | O4'-C1'-N1 | 7.87 | 114.49 | 108.20 |
| 26 | BB | 1912 | A | O4'-C4'-C3' | 7.87 | 112.39 | 106.10 |
| 26 | BB | 2268 | A | C5-N7-C8 | 7.87 | 107.83 | 103.90 |
| 1 | AA | 80 | A | N1-C2-N3 | 7.87 | 133.23 | 129.30 |
| 1 | AA | 588 | G | C2-N3-C4 | 7.87 | 115.83 | 111.90 |
| 1 | AA | 688 | G | C5-C6-O6 | -7.87 | 123.88 | 128.60 |
| 1 | AA | 930 | C | P-O3'-C3' | 7.87 | 129.14 | 119.70 |
| 3 | AC | 43 | U | O4'-C1'-N1 | 7.87 | 114.49 | 108.20 |
| 4 | AD | 31 | G | C5-N7-C8 | -7.87 | 100.37 | 104.30 |
| 26 | BB | 2789 | C | N3-C4-C5 | 7.87 | 125.05 | 121.90 |
| 1 | AA | 35 | G | C8-N9-C4 | -7.86 | 103.25 | 106.40 |
| 1 | AA | 909 | A | N9-C4-C5 | 7.86 | 108.95 | 105.80 |
| 3 | AC | 48 | C | N3-C2-O2 | -7.86 | 116.39 | 121.90 |
| 26 | BB | 797 | G | O4'-C4'-C3' | 7.86 | 112.39 | 106.10 |
| 26 | BB | 993 | G | C4-C5-N7 | 7.86 | 113.95 | 110.80 |
| 26 | BB | 1138 | G | C6-N1-C2 | -7.86 | 120.38 | 125.10 |
| 26 | BB | 1607 | C | C2-N3-C4 | 7.86 | 123.83 | 119.90 |
| 26 | BB | 1973 | G | C5-C6-O6 | -7.86 | 123.88 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2072 | C | C2-N3-C4 | -7.86 | 115.97 | 119.90 |
| 26 | BB | 2217 | G | C8-N9-C4 | -7.86 | 103.25 | 106.40 |
| 1 | AA | 319 | G | O4'-C4'-C3' | -7.86 | 96.14 | 104.00 |
| 4 | AD | 3 | C | O4'-C1'-N1 | -7.86 | 101.91 | 108.20 |
| 1 | AA | 468 | A | N1-C6-N6 | 7.86 | 123.32 | 118.60 |
| 1 | AA | 688 | G | C1'-O4'-C4' | -7.86 | 103.61 | 109.90 |
| 1 | AA | 1017 | U | C4'-C3'-C2' | -7.86 | 94.74 | 102.60 |
| 1 | AA | 1265 | C | C2-N3-C4 | -7.86 | 115.97 | 119.90 |
| 3 | AC | 58 | C | C4'-C3'-C2' | -7.86 | 94.74 | 102.60 |
| 26 | BB | 258 | G | C5-N7-C8 | -7.86 | 100.37 | 104.30 |
| 26 | BB | 1223 | G | N9-C4-C5 | 7.86 | 108.54 | 105.40 |
| 26 | BB | 1429 | G | C2-N3-C4 | 7.86 | 115.83 | 111.90 |
| 10 | AJ | 118 | ARG | NE-CZ-NH1 | 7.86 | 124.23 | 120.30 |
| 1 | AA | 314 | C | N3-C4-N4 | 7.86 | 123.50 | 118.00 |
| 1 | AA | 607 | A | N7-C8-N9 | 7.86 | 117.73 | 113.80 |
| 1 | AA | 664 | G | C3'-C2'-C1' | -7.86 | 95.21 | 101.50 |
| 1 | AA | 1459 | G | C4-C5-C6 | 7.86 | 123.52 | 118.80 |
| 26 | BB | 1093 | G | C6-N1-C2 | -7.86 | 120.39 | 125.10 |
| 26 | BB | 1332 | G | C5'-C4'-O4' | 7.86 | 118.53 | 109.10 |
| 26 | BB | 2431 | U | N3-C2-O2 | 7.86 | 127.70 | 122.20 |
| 26 | BB | 2765 | A | C6-C5-N7 | 7.86 | 137.80 | 132.30 |
| 33 | BI | 25 | TYR | CG-CD1-CE1 | -7.86 | 115.01 | 121.30 |
| 1 | AA | 9 | G | N9-C1'-C2' | -7.86 | 103.36 | 112.00 |
| 26 | BB | 673 | C | N3-C4-N4 | 7.86 | 123.50 | 118.00 |
| 1 | AA | 130 | A | C8-N9-C4 | -7.85 | 102.66 | 105.80 |
| 21 | AU | 22 | TYR | CB-CG-CD1 | -7.85 | 116.29 | 121.00 |
| 26 | BB | 1311 | G | N7-C8-N9 | 7.85 | 117.03 | 113.10 |
| 26 | BB | 2146 | C | P-O3'-C3' | 7.85 | 129.12 | 119.70 |
| 1 | AA | 1542 | A | C2-N3-C4 | 7.85 | 114.53 | 110.60 |
| 26 | BB | 22 | C | C5'-C4'-O4' | 7.85 | 118.52 | 109.10 |
| 26 | BB | 402 | A | N1-C6-N6 | 7.85 | 123.31 | 118.60 |
| 26 | BB | 513 | A | C5'-C4'-O4' | 7.85 | 118.52 | 109.10 |
| 26 | BB | 2391 | G | N3-C2-N2 | -7.85 | 114.40 | 119.90 |
| 26 | BB | 2893 | A | C8-N9-C4 | -7.85 | 102.66 | 105.80 |
| 26 | BB | 460 | A | N7-C8-N9 | 7.85 | 117.72 | 113.80 |
| 1 | AA | 125 | U | N3-C4-O4 | 7.85 | 124.89 | 119.40 |
| 1 | AA | 1098 | C | C6-N1-C2 | 7.85 | 123.44 | 120.30 |
| 4 | AD | 59 | A | C6-N1-C2 | 7.85 | 123.31 | 118.60 |
| 26 | BB | 1 | G | C4-C5-N7 | 7.85 | 113.94 | 110.80 |
| 26 | BB | 561 | G | P-O3'-C3' | 7.85 | 129.12 | 119.70 |
| 26 | BB | 1816 | C | C5'-C4'-O4' | 7.85 | 118.52 | 109.10 |
| 26 | BB | 2278 | A | N9-C1'-C2' | -7.85 | 103.36 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 145 | G | C5-C6-O6 | -7.85 | 123.89 | 128.60 |
| 1 | AA | 147 | G | N3-C4-N9 | 7.85 | 130.71 | 126.00 |
| 1 | AA | 397 | A | N7-C8-N9 | -7.85 | 109.88 | 113.80 |
| 1 | AA | 578 | C | C5'-C4'-O4' | 7.85 | 118.52 | 109.10 |
| 26 | BB | 233 | A | N3-C4-N9 | -7.85 | 121.12 | 127.40 |
| 26 | BB | 1296 | G | N3-C4-C5 | -7.85 | 124.68 | 128.60 |
| 1 | AA | 316 | C | O5'-P-OP2 | -7.85 | 98.64 | 105.70 |
| 1 | AA | 446 | G | O4'-C1'-N9 | 7.85 | 114.48 | 108.20 |
| 1 | AA | 548 | G | O4'-C1'-N9 | 7.85 | 114.48 | 108.20 |
| 26 | BB | 2873 | A | C5-N7-C8 | 7.85 | 107.82 | 103.90 |
| 29 | BE | 59 | ARG | NE-CZ-NH1 | -7.85 | 116.38 | 120.30 |
| 1 | AA | 22 | G | N1-C6-O6 | -7.84 | 115.19 | 119.90 |
| 1 | AA | 589 | U | C4'-C3'-C2' | -7.84 | 94.76 | 102.60 |
| 1 | AA | 796 | C | N1-C2-O2 | 7.84 | 123.61 | 118.90 |
| 1 | AA | 907 | A | C1'-O4'-C4' | -7.84 | 103.62 | 109.90 |
| 1 | AA | 1309 | G | N9-C4-C5 | 7.84 | 108.54 | 105.40 |
| 26 | BB | 764 | A | C4-C5-C6 | -7.84 | 113.08 | 117.00 |
| 26 | BB | 981 | A | C8-N9-C4 | -7.84 | 102.66 | 105.80 |
| 26 | BB | 1027 | A | P-O3'-C3' | 7.84 | 129.11 | 119.70 |
| 26 | BB | 1284 | A | O4'-C1'-N9 | 7.84 | 114.47 | 108.20 |
| 26 | BB | 2848 | G | C6-N1-C2 | 7.84 | 129.81 | 125.10 |
| 1 | AA | 235 | C | N3-C2-O2 | -7.84 | 116.41 | 121.90 |
| 26 | BB | 1910 | G | C4'-C3'-C2' | -7.84 | 94.76 | 102.60 |
| 26 | BB | 2201 | G | C5-C6-O6 | -7.84 | 123.89 | 128.60 |
| 3 | AC | 13 | A | C4-C5-N7 | -7.84 | 106.78 | 110.70 |
| 26 | BB | 338 | G | C2-N3-C4 | 7.84 | 115.82 | 111.90 |
| 26 | BB | 527 | C | N1-C2-O2 | 7.84 | 123.61 | 118.90 |
| 26 | BB | 1348 | C | P-O3'-C3' | 7.84 | 129.11 | 119.70 |
| 26 | BB | 1899 | A | N1-C2-N3 | 7.84 | 133.22 | 129.30 |
| 26 | BB | 2437 | G | N1-C6-O6 | -7.84 | 115.19 | 119.90 |
| 26 | BB | 2506 | U | N1-C2-O2 | -7.84 | 117.31 | 122.80 |
| 48 | BX | 26 | PHE | CB-CG-CD2 | -7.84 | 115.31 | 120.80 |
| 1 | AA | 1368 | A | C5'-C4'-O4' | 7.84 | 118.51 | 109.10 |
| 1 | AA | 1473 | G | C8-N9-C4 | -7.84 | 103.26 | 106.40 |
| 25 | BA | 98 | G | O4'-C1'-N9 | 7.84 | 114.47 | 108.20 |
| 26 | BB | 262 | A | C8-N9-C4 | -7.84 | 102.66 | 105.80 |
| 26 | BB | 684 | G | C4-C5-N7 | 7.84 | 113.94 | 110.80 |
| 26 | BB | 2018 | G | C2-N3-C4 | 7.84 | 115.82 | 111.90 |
| 25 | BA | 92 | C | O4'-C1'-N1 | 7.84 | 114.47 | 108.20 |
| 26 | BB | 1079 | C | C6-N1-C2 | -7.84 | 117.17 | 120.30 |
| 1 | AA | 63 | C | C1'-O4'-C4' | 7.84 | 116.17 | 109.90 |
| 1 | AA | 195 | A | C4-C5-C6 | -7.84 | 113.08 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 15 | AO | 61 | GLU | OE1-CD-OE2 | 7.84 | 132.70 | 123.30 |
| 25 | BA | 36 | C | C1'-O4'-C4' | 7.84 | 116.17 | 109.90 |
| 26 | BB | 307 | G | N1-C6-O6 | -7.84 | 115.20 | 119.90 |
| 26 | BB | 1054 | A | O4'-C1'-N9 | 7.84 | 114.47 | 108.20 |
| 26 | BB | 2106 | U | C2'-C3'-O3' | 7.84 | 126.74 | 109.50 |
| 26 | BB | 2861 | U | N1-C2-O2 | -7.84 | 117.31 | 122.80 |
| 26 | BB | 507 | A | N3-C4-N9 | -7.83 | 121.13 | 127.40 |
| 26 | BB | 1028 | A | C1'-O4'-C4' | -7.83 | 103.63 | 109.90 |
| 1 | AA | 317 | U | N3-C4-O4 | -7.83 | 113.92 | 119.40 |
| 1 | AA | 382 | A | C4-C5-N7 | -7.83 | 106.78 | 110.70 |
| 1 | AA | 1124 | G | C1'-O4'-C4' | -7.83 | 103.63 | 109.90 |
| 4 | AD | 63 | C | N1-C2-O2 | 7.83 | 123.60 | 118.90 |
| 25 | BA | 2 | G | C4-C5-C6 | 7.83 | 123.50 | 118.80 |
| 26 | BB | 241 | A | C4-C5-N7 | -7.83 | 106.78 | 110.70 |
| 26 | BB | 1067 | A | C5-C6-N1 | -7.83 | 113.78 | 117.70 |
| 26 | BB | 2236 | U | P-O3'-C3' | 7.83 | 129.10 | 119.70 |
| 1 | AA | 441 | A | N1-C2-N3 | -7.83 | 125.39 | 129.30 |
| 4 | AD | 19 | G | C6-C5-N7 | 7.83 | 135.10 | 130.40 |
| 26 | BB | 91 | A | P-O3'-C3' | 7.83 | 129.10 | 119.70 |
| 26 | BB | 101 | A | C5'-C4'-O4' | 7.83 | 118.50 | 109.10 |
| 26 | BB | 172 | A | C5-C6-N6 | -7.83 | 117.44 | 123.70 |
| 26 | BB | 2429 | G | N1-C2-N3 | 7.83 | 128.60 | 123.90 |
| 28 | BD | 132 | ARG | NE-CZ-NH1 | 7.83 | 124.22 | 120.30 |
| 1 | AA | 474 | G | N1-C6-O6 | 7.83 | 124.60 | 119.90 |
| 25 | BA | 51 | G | N3-C4-C5 | -7.83 | 124.69 | 128.60 |
| 26 | BB | 2424 | C | N1-C2-O2 | 7.83 | 123.60 | 118.90 |
| 44 | BT | 90 | ARG | NE-CZ-NH2 | -7.83 | 116.39 | 120.30 |
| 1 | AA | 888 | G | C2-N3-C4 | -7.83 | 107.99 | 111.90 |
| 26 | BB | 195 | A | N3-C4-C5 | 7.83 | 132.28 | 126.80 |
| 26 | BB | 1664 | A | C5-N7-C8 | -7.83 | 99.99 | 103.90 |
| 1 | AA | 1538 | C | N3-C4-N4 | 7.83 | 123.48 | 118.00 |
| 26 | BB | 2875 | C | O4'-C1'-N1 | 7.83 | 114.46 | 108.20 |
| 1 | AA | 1115 | U | C2-N3-C4 | -7.83 | 122.31 | 127.00 |
| 26 | BB | 567 | U | O4'-C1'-N1 | 7.83 | 114.46 | 108.20 |
| 26 | BB | 1355 | G | C5-N7-C8 | -7.83 | 100.39 | 104.30 |
| 26 | BB | 1724 | G | C4-C5-N7 | -7.83 | 107.67 | 110.80 |
| 1 | AA | 662 | U | N3-C2-O2 | -7.82 | 116.72 | 122.20 |
| 1 | AA | 887 | G | C5-C6-O6 | 7.82 | 133.29 | 128.60 |
| 1 | AA | 1118 | U | C1'-O4'-C4' | 7.82 | 116.16 | 109.90 |
| 2 | AB | 50 | G | C2-N3-C4 | 7.82 | 115.81 | 111.90 |
| 24 | AX | 11 | PHE | CB-CG-CD2 | -7.82 | 115.32 | 120.80 |
| 25 | BA | 31 | C | N3-C4-N4 | -7.82 | 112.52 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 598 | U | N1-C2-N3 | 7.82 | 119.59 | 114.90 |
| 26 | BB | 921 | C | O4'-C4'-C3' | 7.82 | 112.36 | 106.10 |
| 26 | BB | 2732 | G | N9-C4-C5 | 7.82 | 108.53 | 105.40 |
| 26 | BB | 2763 | G | C4'-C3'-C2' | -7.82 | 94.78 | 102.60 |
| 1 | AA | 992 | U | O4'-C4'-C3' | 7.82 | 112.36 | 106.10 |
| 26 | BB | 2009 | A | N1-C2-N3 | -7.82 | 125.39 | 129.30 |
| 1 | AA | 199 | A | C4-C5-N7 | -7.82 | 106.79 | 110.70 |
| 1 | AA | 215 | C | C4'-C3'-C2' | -7.82 | 94.78 | 102.60 |
| 2 | AB | 73 | G | C1'-O4'-C4' | -7.82 | 103.64 | 109.90 |
| 25 | BA | 25 | U | N3-C2-O2 | -7.82 | 116.73 | 122.20 |
| 26 | BB | 1434 | A | O4'-C1'-N9 | 7.82 | 114.46 | 108.20 |
| 26 | BB | 2121 | G | C5-N7-C8 | 7.82 | 108.21 | 104.30 |
| 26 | BB | 2895 | G | O4'-C1'-N9 | 7.82 | 114.46 | 108.20 |
| 1 | AA | 317 | U | N1-C2-O2 | -7.82 | 117.33 | 122.80 |
| 1 | AA | 890 | G | C4-C5-N7 | 7.82 | 113.93 | 110.80 |
| 2 | AB | 7 | G | C2'-C3'-O3' | 7.82 | 126.70 | 109.50 |
| 5 | AE | 6 | ARG | NE-CZ-NH1 | 7.82 | 124.21 | 120.30 |
| 26 | BB | 1845 | G | C5-C6-N1 | 7.82 | 115.41 | 111.50 |
| 26 | BB | 2037 | A | N9-C4-C5 | 7.82 | 108.93 | 105.80 |
| 26 | BB | 2494 | G | C6-C5-N7 | -7.82 | 125.71 | 130.40 |
| 1 | AA | 847 | G | C5-C6-N1 | 7.82 | 115.41 | 111.50 |
| 2 | AB | 28 | C | C2-N3-C4 | 7.82 | 123.81 | 119.90 |
| 26 | BB | 411 | G | N1-C6-O6 | -7.82 | 115.21 | 119.90 |
| 26 | BB | 641 | U | C4-C5-C6 | 7.82 | 124.39 | 119.70 |
| 26 | BB | 991 | C | N1-C2-O2 | 7.82 | 123.59 | 118.90 |
| 26 | BB | 1378 | A | O4'-C4'-C3' | 7.82 | 112.36 | 106.10 |
| 26 | BB | 1481 | U | N3-C4-O4 | 7.82 | 124.87 | 119.40 |
| 26 | BB | 1985 | C | N1-C2-O2 | 7.82 | 123.59 | 118.90 |
| 26 | BB | 2270 | A | C6-N1-C2 | -7.82 | 113.91 | 118.60 |
| 26 | BB | 2675 | A | C4-C5-C6 | -7.82 | 113.09 | 117.00 |
| 1 | AA | 37 | U | N3-C2-O2 | -7.82 | 116.73 | 122.20 |
| 1 | AA | 1215 | G | N3-C4-C5 | -7.82 | 124.69 | 128.60 |
| 4 | AD | 27 | G | C4-C5-N7 | -7.82 | 107.67 | 110.80 |
| 26 | BB | 139 | U | N3-C2-O2 | -7.82 | 116.73 | 122.20 |
| 26 | BB | 359 | G | O4'-C1'-N9 | 7.82 | 114.45 | 108.20 |
| 26 | BB | 533 | G | N3-C4-N9 | 7.82 | 130.69 | 126.00 |
| 26 | BB | 1494 | A | C5'-C4'-O4' | 7.82 | 118.48 | 109.10 |
| 26 | BB | 1838 | C | C3'-C2'-C1' | -7.82 | 95.25 | 101.50 |
| 26 | BB | 2124 | G | C1'-O4'-C4' | 7.82 | 116.15 | 109.90 |
| 25 | BA | 84 | G | C5'-C4'-O4' | 7.81 | 118.48 | 109.10 |
| 26 | BB | 99 | U | O4'-C1'-N1 | 7.81 | 114.45 | 108.20 |
| 26 | BB | 719 | C | C6-N1-C2 | -7.81 | 117.17 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2718 | G | C5-C6-N1 | 7.81 | 115.41 | 111.50 |
| 49 | BY | 63 | ASP | CB-CG-OD2 | -7.81 | 111.27 | 118.30 |
| 1 | AA | 1338 | G | O4'-C1'-C2' | 7.81 | 114.63 | 107.60 |
| 1 | AA | 1488 | G | O4'-C1'-N9 | 7.81 | 114.45 | 108.20 |
| 4 | AD | 19 | G | N7-C8-N9 | 7.81 | 117.01 | 113.10 |
| 26 | BB | 92 | U | C4-C5-C6 | -7.81 | 115.01 | 119.70 |
| 26 | BB | 161 | A | N9-C4-C5 | 7.81 | 108.92 | 105.80 |
| 26 | BB | 1937 | A | O4'-C1'-N9 | -7.81 | 101.95 | 108.20 |
| 1 | AA | 1515 | G | O4'-C1'-N9 | -7.81 | 101.95 | 108.20 |
| 1 | AA | 1358 | U | C2-N3-C4 | -7.81 | 122.31 | 127.00 |
| 3 | AC | 44 | U | O4'-C4'-C3' | 7.81 | 112.35 | 106.10 |
| 4 | AD | 58 | A | N1-C2-N3 | -7.81 | 125.39 | 129.30 |
| 26 | BB | 1330 | C | N3-C4-N4 | 7.81 | 123.47 | 118.00 |
| 26 | BB | 2290 | G | N3-C4-C5 | -7.81 | 124.69 | 128.60 |
| 1 | AA | 41 | G | C4-C5-N7 | -7.81 | 107.68 | 110.80 |
| 2 | AB | 57 | G | C5-N7-C8 | -7.81 | 100.40 | 104.30 |
| 26 | BB | 100 | U | N1-C1'-C2' | -7.81 | 103.41 | 112.00 |
| 26 | BB | 513 | A | C5-C6-N1 | 7.81 | 121.60 | 117.70 |
| 26 | BB | 880 | G | N9-C4-C5 | 7.81 | 108.52 | 105.40 |
| 26 | BB | 1119 | U | C5-C4-O4 | -7.81 | 121.22 | 125.90 |
| 1 | AA | 815 | A | O4'-C4'-C3' | 7.81 | 112.34 | 106.10 |
| 26 | BB | 805 | G | C2-N3-C4 | 7.81 | 115.80 | 111.90 |
| 26 | BB | 986 | C | C4-C5-C6 | -7.81 | 113.50 | 117.40 |
| 26 | BB | 2381 | A | O4'-C4'-C3' | 7.81 | 112.34 | 106.10 |
| 26 | BB | 2467 | C | O4'-C1'-N1 | 7.81 | 114.44 | 108.20 |
| 1 | AA | 111 | G | C3'-C2'-C1' | 7.80 | 107.74 | 101.50 |
| 1 | AA | 1082 | A | N1-C6-N6 | 7.80 | 123.28 | 118.60 |
| 1 | AA | 1313 | U | O5'-C5'-C4' | 7.80 | 126.53 | 111.70 |
| 1 | AA | 1375 | A | C4'-C3'-C2' | -7.80 | 94.80 | 102.60 |
| 25 | BA | 38 | C | C2-N3-C4 | 7.80 | 123.80 | 119.90 |
| 31 | BG | 19 | PHE | CB-CG-CD2 | -7.80 | 115.34 | 120.80 |
| 1 | AA | 304 | U | C3'-C2'-C1' | 7.80 | 107.74 | 101.50 |
| 1 | AA | 1128 | C | N1-C2-O2 | 7.80 | 123.58 | 118.90 |
| 1 | AA | 1447 | A | N9-C4-C5 | 7.80 | 108.92 | 105.80 |
| 26 | BB | 199 | A | O4'-C1'-N9 | 7.80 | 114.44 | 108.20 |
| 26 | BB | 1637 | A | N1-C6-N6 | 7.80 | 123.28 | 118.60 |
| 26 | BB | 1787 | A | C2-N3-C4 | 7.80 | 114.50 | 110.60 |
| 1 | AA | 187 | G | C4'-C3'-C2' | -7.80 | 94.80 | 102.60 |
| 1 | AA | 696 | A | N1-C2-N3 | -7.80 | 125.40 | 129.30 |
| 26 | BB | 900 | A | C5-C6-N1 | 7.80 | 121.60 | 117.70 |
| 26 | BB | 975 | A | N1-C6-N6 | -7.80 | 113.92 | 118.60 |
| 26 | BB | 1066 | U | P-O3'-C3' | 7.80 | 129.06 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2429 | G | C2-N3-C4 | -7.80 | 108.00 | 111.90 |
| 26 | BB | 2879 | A | O4'-C1'-N9 | 7.80 | 114.44 | 108.20 |
| 1 | AA | 101 | A | N3-C4-C5 | -7.80 | 121.34 | 126.80 |
| 1 | AA | 549 | C | N1-C2-O2 | 7.80 | 123.58 | 118.90 |
| 1 | AA | 571 | U | C4-C5-C6 | 7.80 | 124.38 | 119.70 |
| 1 | AA | 1461 | G | N3-C2-N2 | -7.80 | 114.44 | 119.90 |
| 26 | BB | 195 | A | N1-C6-N6 | 7.80 | 123.28 | 118.60 |
| 26 | BB | 243 | U | P-O3'-C3' | 7.80 | 129.06 | 119.70 |
| 26 | BB | 614 | A | N1-C6-N6 | -7.80 | 113.92 | 118.60 |
| 26 | BB | 834 | G | O4'-C1'-N9 | 7.80 | 114.44 | 108.20 |
| 26 | BB | 1251 | C | N3-C4-N4 | 7.80 | 123.46 | 118.00 |
| 26 | BB | 1337 | G | C3'-C2'-C1' | -7.80 | 95.26 | 101.50 |
| 26 | BB | 1484 | U | O4'-C1'-N1 | 7.80 | 114.44 | 108.20 |
| 26 | BB | 1516 | G | O4'-C1'-N9 | 7.80 | 114.44 | 108.20 |
| 26 | BB | 1517 | G | N3-C2-N2 | -7.80 | 114.44 | 119.90 |
| 26 | BB | 2114 | A | C5-C6-N6 | -7.80 | 117.46 | 123.70 |
| 26 | BB | 2331 | G | N7-C8-N9 | 7.80 | 117.00 | 113.10 |
| 1 | AA | 724 | G | N1-C6-O6 | -7.80 | 115.22 | 119.90 |
| 26 | BB | 1566 | A | C2-N3-C4 | 7.80 | 114.50 | 110.60 |
| 26 | BB | 2470 | G | N7-C8-N9 | 7.80 | 117.00 | 113.10 |
| 26 | BB | 2578 | G | C6-C5-N7 | -7.80 | 125.72 | 130.40 |
| 1 | AA | 49 | U | N1-C2-O2 | 7.80 | 128.26 | 122.80 |
| 1 | AA | 219 | U | N1-C2-N3 | 7.80 | 119.58 | 114.90 |
| 1 | AA | 371 | A | O4'-C1'-N9 | 7.80 | 114.44 | 108.20 |
| 1 | AA | 430 | A | C8-N9-C4 | -7.80 | 102.68 | 105.80 |
| 1 | AA | 975 | A | N7-C8-N9 | 7.80 | 117.70 | 113.80 |
| 1 | AA | 1045 | C | C2-N3-C4 | 7.80 | 123.80 | 119.90 |
| 26 | BB | 1499 | C | O4'-C1'-N1 | 7.80 | 114.44 | 108.20 |
| 26 | BB | 2505 | G | C8-N9-C4 | -7.80 | 103.28 | 106.40 |
| 26 | BB | 2820 | A | O4'-C4'-C3' | 7.80 | 112.34 | 106.10 |
| 1 | AA | 972 | C | C5'-C4'-O4' | 7.79 | 118.45 | 109.10 |
| 26 | BB | 279 | A | C6-N1-C2 | 7.79 | 123.28 | 118.60 |
| 26 | BB | 314 | C | C5-C4-N4 | -7.79 | 114.74 | 120.20 |
| 26 | BB | 364 | C | N3-C4-N4 | 7.79 | 123.46 | 118.00 |
| 26 | BB | 1318 | U | N3-C4-O4 | 7.79 | 124.86 | 119.40 |
| 26 | BB | 417 | C | C4'-C3'-C2' | -7.79 | 94.81 | 102.60 |
| 26 | BB | 768 | G | N3-C4-C5 | -7.79 | 124.70 | 128.60 |
| 26 | BB | 863 | A | C3'-C2'-C1' | 7.79 | 107.73 | 101.50 |
| 26 | BB | 864 | G | C6-C5-N7 | -7.79 | 125.72 | 130.40 |
| 26 | BB | 978 | G | C6-C5-N7 | -7.79 | 125.72 | 130.40 |
| 26 | BB | 1385 | A | C4-C5-C6 | -7.79 | 113.10 | 117.00 |
| 26 | BB | 1832 | C | C5-C4-N4 | -7.79 | 114.74 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1974 | C | O4'-C1'-N1 | 7.79 | 114.43 | 108.20 |
| 1 | AA | 412 | A | C6-C5-N7 | -7.79 | 126.85 | 132.30 |
| 1 | AA | 1152 | A | N9-C4-C5 | 7.79 | 108.92 | 105.80 |
| 1 | AA | 1532 | U | N1-C2-O2 | -7.79 | 117.34 | 122.80 |
| 26 | BB | 202 | U | O4'-C1'-N1 | 7.79 | 114.43 | 108.20 |
| 26 | BB | 584 | C | N1-C2-O2 | 7.79 | 123.58 | 118.90 |
| 26 | BB | 772 | C | O4'-C1'-N1 | 7.79 | 114.43 | 108.20 |
| 26 | BB | 1453 | A | C2-N3-C4 | 7.79 | 114.50 | 110.60 |
| 26 | BB | 2659 | G | C6-N1-C2 | -7.79 | 120.42 | 125.10 |
| 1 | AA | 508 | U | O4'-C4'-C3' | 7.79 | 112.33 | 106.10 |
| 1 | AA | 696 | A | N9-C4-C5 | 7.79 | 108.92 | 105.80 |
| 1 | AA | 1141 | C | C3'-C2'-C1' | 7.79 | 107.73 | 101.50 |
| 26 | BB | 1971 | U | C6-N1-C2 | -7.79 | 116.33 | 121.00 |
| 1 | AA | 614 | C | N3-C2-O2 | -7.79 | 116.45 | 121.90 |
| 1 | AA | 829 | G | C1'-O4'-C4' | -7.79 | 103.67 | 109.90 |
| 26 | BB | 393 | C | O4'-C1'-N1 | 7.79 | 114.43 | 108.20 |
| 26 | BB | 704 | G | N9-C4-C5 | -7.79 | 102.28 | 105.40 |
| 26 | BB | 2018 | G | O4'-C1'-N9 | 7.79 | 114.43 | 108.20 |
| 26 | BB | 2529 | G | N7-C8-N9 | 7.79 | 116.99 | 113.10 |
| 1 | AA | 598 | U | C1'-O4'-C4' | -7.79 | 103.67 | 109.90 |
| 1 | AA | 619 | U | N1-C2-N3 | 7.79 | 119.57 | 114.90 |
| 1 | AA | 942 | G | N3-C2-N2 | 7.79 | 125.35 | 119.90 |
| 1 | AA | 970 | C | O4'-C1'-N1 | 7.79 | 114.43 | 108.20 |
| 1 | AA | 1142 | G | C8-N9-C4 | -7.79 | 103.28 | 106.40 |
| 2 | AB | 24 | G | C6-N1-C2 | -7.79 | 120.43 | 125.10 |
| 11 | AK | 112 | ASP | CB-CG-OD2 | -7.79 | 111.29 | 118.30 |
| 26 | BB | 846 | U | C3'-C2'-C1' | 7.79 | 107.73 | 101.50 |
| 26 | BB | 1429 | G | N7-C8-N9 | 7.79 | 116.99 | 113.10 |
| 26 | BB | 1736 | U | P-O3'-C3' | 7.79 | 129.04 | 119.70 |
| 26 | BB | 2433 | A | C4'-C3'-C2' | 7.79 | 110.39 | 102.60 |
| 26 | BB | 2794 | C | N1-C1'-C2' | -7.79 | 103.44 | 112.00 |
| 26 | BB | 2885 | G | C5'-C4'-O4' | 7.79 | 118.44 | 109.10 |
| 1 | AA | 301 | G | C4-C5-C6 | 7.78 | 123.47 | 118.80 |
| 1 | AA | 1460 | C | C6-N1-C2 | -7.78 | 117.19 | 120.30 |
| 26 | BB | 529 | A | C4-C5-N7 | -7.78 | 106.81 | 110.70 |
| 26 | BB | 1089 | A | N1-C6-N6 | -7.78 | 113.93 | 118.60 |
| 26 | BB | 1213 | A | N3-C4-C5 | -7.78 | 121.35 | 126.80 |
| 26 | BB | 2380 | C | C4-C5-C6 | -7.78 | 113.51 | 117.40 |
| 26 | BB | 2657 | A | N1-C2-N3 | -7.78 | 125.41 | 129.30 |
| 26 | BB | 2872 | A | C5-N7-C8 | 7.78 | 107.79 | 103.90 |
| 1 | AA | 586 | C | O4'-C1'-N1 | 7.78 | 114.43 | 108.20 |
| 26 | BB | 93 | G | N1-C2-N2 | 7.78 | 123.20 | 116.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 156 | A | N7-C8-N9 | 7.78 | 117.69 | 113.80 |
| 26 | BB | 845 | A | N3-C4-C5 | -7.78 | 121.35 | 126.80 |
| 53 | B2 | 56 | ARG | NE-CZ-NH2 | -7.78 | 116.41 | 120.30 |
| 1 | AA | 301 | G | N1-C6-O6 | 7.78 | 124.57 | 119.90 |
| 1 | AA | 453 | G | N1-C2-N3 | -7.78 | 119.23 | 123.90 |
| 1 | AA | 1228 | C | N3-C4-C5 | -7.78 | 118.79 | 121.90 |
| 26 | BB | 544 | C | O4'-C1'-N1 | 7.78 | 114.42 | 108.20 |
| 26 | BB | 940 | G | C8-N9-C4 | -7.78 | 103.29 | 106.40 |
| 26 | BB | 2049 | G | C5'-C4'-O4' | 7.78 | 118.44 | 109.10 |
| 26 | BB | 2683 | C | C5-C4-N4 | 7.78 | 125.65 | 120.20 |
| 1 | AA | 707 | U | C5-C4-O4 | 7.78 | 130.57 | 125.90 |
| 1 | AA | 876 | C | N1-C1'-C2' | -7.78 | 103.44 | 112.00 |
| 1 | AA | 1080 | A | N7-C8-N9 | 7.78 | 117.69 | 113.80 |
| 26 | BB | 53 | A | C4'-C3'-C2' | -7.78 | 94.82 | 102.60 |
| 26 | BB | 281 | C | P-O3'-C3' | 7.78 | 129.03 | 119.70 |
| 26 | BB | 382 | A | C5-C6-N1 | 7.78 | 121.59 | 117.70 |
| 26 | BB | 2476 | A | C5-N7-C8 | -7.78 | 100.01 | 103.90 |
| 53 | B2 | 44 | PHE | CB-CG-CD1 | 7.78 | 126.25 | 120.80 |
| 1 | AA | 548 | G | N3-C4-C5 | -7.78 | 124.71 | 128.60 |
| 26 | BB | 2158 | A | C6-C5-N7 | 7.78 | 137.74 | 132.30 |
| 1 | AA | 917 | G | C5'-C4'-O4' | 7.77 | 118.43 | 109.10 |
| 26 | BB | 230 | G | C5-C6-N1 | 7.77 | 115.39 | 111.50 |
| 1 | AA | 951 | G | C6-C5-N7 | -7.77 | 125.74 | 130.40 |
| 1 | AA | 1437 | A | P-O3'-C3' | 7.77 | 129.03 | 119.70 |
| 1 | AA | 1454 | G | C5-C6-N1 | -7.77 | 107.61 | 111.50 |
| 26 | BB | 6 | A | C5-N7-C8 | -7.77 | 100.01 | 103.90 |
| 26 | BB | 621 | A | N7-C8-N9 | 7.77 | 117.69 | 113.80 |
| 26 | BB | 973 | A | N7-C8-N9 | 7.77 | 117.69 | 113.80 |
| 26 | BB | 1370 | C | C5-C4-N4 | -7.77 | 114.76 | 120.20 |
| 26 | BB | 1412 | U | O4'-C1'-N1 | 7.77 | 114.42 | 108.20 |
| 26 | BB | 1424 | G | C5-C6-O6 | -7.77 | 123.94 | 128.60 |
| 26 | BB | 1731 | G | N3-C2-N2 | -7.77 | 114.46 | 119.90 |
| 26 | BB | 2810 | A | C3'-C2'-C1' | -7.77 | 95.28 | 101.50 |
| 54 | B3 | 39 | ARG | NE-CZ-NH1 | 7.77 | 124.19 | 120.30 |
| 1 | AA | 1262 | C | C4-C5-C6 | 7.77 | 121.28 | 117.40 |
| 2 | AB | 66 | C | C5-C6-N1 | 7.77 | 124.89 | 121.00 |
| 26 | BB | 188 | G | C5-C6-O6 | -7.77 | 123.94 | 128.60 |
| 26 | BB | 381 | G | N1-C2-N2 | -7.77 | 109.21 | 116.20 |
| 26 | BB | 1031 | G | O4'-C1'-N9 | 7.77 | 114.42 | 108.20 |
| 26 | BB | 1828 | G | N1-C6-O6 | -7.77 | 115.24 | 119.90 |
| 26 | BB | 2019 | A | N9-C4-C5 | 7.77 | 108.91 | 105.80 |
| 1 | AA | 526 | C | N3-C2-O2 | -7.77 | 116.46 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 390 | U | N3-C4-C5 | -7.77 | 109.94 | 114.60 |
| 26 | BB | 1529 | G | N9-C4-C5 | 7.77 | 108.51 | 105.40 |
| 26 | BB | 2177 | C | O4'-C1'-N1 | 7.77 | 114.42 | 108.20 |
| 26 | BB | 2736 | A | N3-C4-C5 | -7.77 | 121.36 | 126.80 |
| 26 | BB | 2742 | G | C1'-O4'-C4' | -7.77 | 103.69 | 109.90 |
| 1 | AA | 413 | G | C2-N3-C4 | -7.77 | 108.02 | 111.90 |
| 4 | AD | 13 | C | C5-C6-N1 | 7.77 | 124.88 | 121.00 |
| 10 | AJ | 77 | ARG | NE-CZ-NH2 | 7.77 | 124.18 | 120.30 |
| 26 | BB | 307 | G | C4-C5-C6 | 7.77 | 123.46 | 118.80 |
| 26 | BB | 703 | U | C5-C6-N1 | -7.77 | 118.82 | 122.70 |
| 26 | BB | 1218 | G | C4-C5-C6 | 7.77 | 123.46 | 118.80 |
| 26 | BB | 1753 | G | C2-N3-C4 | 7.77 | 115.78 | 111.90 |
| 26 | BB | 2823 | A | N9-C4-C5 | 7.77 | 108.91 | 105.80 |
| 26 | BB | 2847 | U | C4'-C3'-C2' | -7.77 | 94.83 | 102.60 |
| 3 | AC | 41 | A | N1-C6-N6 | 7.77 | 123.26 | 118.60 |
| 26 | BB | 10 | A | C2-N3-C4 | -7.77 | 106.72 | 110.60 |
| 26 | BB | 512 | G | C2-N3-C4 | 7.77 | 115.78 | 111.90 |
| 26 | BB | 942 | G | C4-C5-N7 | -7.77 | 107.69 | 110.80 |
| 26 | BB | 1850 | G | C6-N1-C2 | -7.77 | 120.44 | 125.10 |
| 1 | AA | 903 | G | C6-N1-C2 | -7.76 | 120.44 | 125.10 |
| 1 | AA | 1131 | G | N1-C2-N3 | -7.76 | 119.24 | 123.90 |
| 26 | BB | 618 | G | C5-C6-N1 | 7.76 | 115.38 | 111.50 |
| 26 | BB | 1414 | C | N3-C4-C5 | -7.76 | 118.79 | 121.90 |
| 26 | BB | 1808 | A | N7-C8-N9 | 7.76 | 117.68 | 113.80 |
| 26 | BB | 2186 | G | C5-C6-N1 | 7.76 | 115.38 | 111.50 |
| 1 | AA | 377 | G | N9-C4-C5 | 7.76 | 108.50 | 105.40 |
| 1 | AA | 1143 | G | C2-N3-C4 | 7.76 | 115.78 | 111.90 |
| 26 | BB | 966 | G | C4-C5-N7 | -7.76 | 107.69 | 110.80 |
| 1 | AA | 402 | G | O3'-P-O5' | 7.76 | 118.75 | 104.00 |
| 1 | AA | 608 | A | N1-C6-N6 | -7.76 | 113.94 | 118.60 |
| 1 | AA | 1019 | A | C5'-C4'-O4' | 7.76 | 118.41 | 109.10 |
| 26 | BB | 436 | C | N1-C2-O2 | 7.76 | 123.56 | 118.90 |
| 26 | BB | 1437 | C | C5-C6-N1 | -7.76 | 117.12 | 121.00 |
| 26 | BB | 1455 | G | C6-C5-N7 | -7.76 | 125.74 | 130.40 |
| 26 | BB | 2209 | G | C6-N1-C2 | -7.76 | 120.44 | 125.10 |
| 1 | AA | 1253 | G | C4-C5-C6 | 7.76 | 123.46 | 118.80 |
| 26 | BB | 27 | G | C4-C5-N7 | 7.76 | 113.90 | 110.80 |
| 26 | BB | 126 | A | N1-C2-N3 | -7.76 | 125.42 | 129.30 |
| 26 | BB | 529 | A | C8-N9-C4 | -7.76 | 102.70 | 105.80 |
| 26 | BB | 1472 | C | C4-C5-C6 | 7.76 | 121.28 | 117.40 |
| 26 | BB | 1822 | C | C2-N3-C4 | 7.76 | 123.78 | 119.90 |
| 26 | BB | 1922 | G | C5-C6-O6 | -7.76 | 123.94 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2053 | G | N1-C6-O6 | -7.76 | 115.24 | 119.90 |
| 26 | BB | 2554 | U | C4-C5-C6 | 7.76 | 124.36 | 119.70 |
| 26 | BB | 2608 | G | C5'-C4'-O4' | 7.76 | 118.41 | 109.10 |
| 26 | BB | 2836 | U | C4-C5-C6 | 7.76 | 124.36 | 119.70 |
| 1 | AA | 88 | U | C4-C5-C6 | 7.76 | 124.36 | 119.70 |
| 1 | AA | 139 | A | C8-N9-C4 | -7.76 | 102.70 | 105.80 |
| 26 | BB | 371 | A | C2-N3-C4 | -7.76 | 106.72 | 110.60 |
| 26 | BB | 1878 | G | C6-N1-C2 | -7.76 | 120.44 | 125.10 |
| 26 | BB | 2433 | A | C3'-C2'-C1' | -7.76 | 95.29 | 101.50 |
| 1 | AA | 1334 | G | C2-N3-C4 | 7.76 | 115.78 | 111.90 |
| 2 | AB | 3 | G | N9-C1'-C2' | -7.76 | 103.47 | 112.00 |
| 8 | AH | 137 | ARG | NE-CZ-NH1 | 7.76 | 124.18 | 120.30 |
| 26 | BB | 274 | C | N3-C4-N4 | 7.76 | 123.43 | 118.00 |
| 26 | BB | 731 | C | N3-C2-O2 | -7.76 | 116.47 | 121.90 |
| 26 | BB | 928 | A | N3-C4-C5 | -7.76 | 121.37 | 126.80 |
| 26 | BB | 1064 | C | N1-C2-O2 | 7.76 | 123.55 | 118.90 |
| 26 | BB | 1647 | U | N3-C2-O2 | -7.76 | 116.77 | 122.20 |
| 26 | BB | 1783 | A | N1-C6-N6 | 7.76 | 123.25 | 118.60 |
| 26 | BB | 2107 | G | C8-N9-C4 | -7.76 | 103.30 | 106.40 |
| 26 | BB | 2624 | G | C3'-C2'-C1' | -7.76 | 95.30 | 101.50 |
| 1 | AA | 1292 | G | C4-C5-N7 | -7.75 | 107.70 | 110.80 |
| 25 | BA | 16 | G | N7-C8-N9 | -7.75 | 109.22 | 113.10 |
| 1 | AA | 539 | A | C4-C5-N7 | 7.75 | 114.58 | 110.70 |
| 26 | BB | 583 | G | C8-N9-C4 | -7.75 | 103.30 | 106.40 |
| 26 | BB | 948 | C | O4'-C1'-N1 | 7.75 | 114.40 | 108.20 |
| 26 | BB | 1306 | C | C1'-O4'-C4' | 7.75 | 116.10 | 109.90 |
| 26 | BB | 2500 | U | P-O3'-C3' | 7.75 | 129.00 | 119.70 |
| 26 | BB | 2735 | G | C3'-C2'-C1' | -7.75 | 95.30 | 101.50 |
| 26 | BB | 2838 | G | C4-C5-C6 | 7.75 | 123.45 | 118.80 |
| 1 | AA | 306 | A | N9-C4-C5 | 7.75 | 108.90 | 105.80 |
| 1 | AA | 1072 | G | O4'-C1'-N9 | 7.75 | 114.40 | 108.20 |
| 1 | AA | 1303 | C | C2-N3-C4 | 7.75 | 123.78 | 119.90 |
| 25 | BA | 89 | U | C2-N3-C4 | -7.75 | 122.35 | 127.00 |
| 26 | BB | 380 | G | N9-C1'-C2' | -7.75 | 103.47 | 112.00 |
| 26 | BB | 1013 | C | C6-N1-C2 | -7.75 | 117.20 | 120.30 |
| 26 | BB | 2649 | C | C2-N3-C4 | -7.75 | 116.03 | 119.90 |
| 1 | AA | 819 | A | C5-C6-N6 | -7.75 | 117.50 | 123.70 |
| 1 | AA | 1014 | A | C2-N3-C4 | 7.75 | 114.47 | 110.60 |
| 1 | AA | 1142 | G | N1-C6-O6 | 7.75 | 124.55 | 119.90 |
| 26 | BB | 816 | C | C5'-C4'-O4' | 7.75 | 118.40 | 109.10 |
| 1 | AA | 419 | C | N1-C2-N3 | 7.75 | 124.62 | 119.20 |
| 1 | AA | 1352 | C | N3-C4-N4 | 7.75 | 123.42 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1504 | G | C8-N9-C4 | -7.75 | 103.30 | 106.40 |
| 26 | BB | 351 | C | C6-N1-C2 | -7.75 | 117.20 | 120.30 |
| 26 | BB | 605 | G | N9-C4-C5 | 7.75 | 108.50 | 105.40 |
| 26 | BB | 785 | G | C5-C6-N1 | 7.75 | 115.37 | 111.50 |
| 26 | BB | 1275 | A | C5-N7-C8 | -7.75 | 100.03 | 103.90 |
| 26 | BB | 1399 | C | N1-C2-O2 | 7.75 | 123.55 | 118.90 |
| 26 | BB | 1662 | U | N3-C4-O4 | 7.75 | 124.82 | 119.40 |
| 26 | BB | 1947 | C | C6-N1-C2 | -7.75 | 117.20 | 120.30 |
| 1 | AA | 1154 | G | N9-C4-C5 | 7.75 | 108.50 | 105.40 |
| 25 | BA | 50 | A | C6-N1-C2 | -7.75 | 113.95 | 118.60 |
| 26 | BB | 645 | C | N3-C4-C5 | -7.75 | 118.80 | 121.90 |
| 26 | BB | 2075 | U | O4'-C1'-N1 | 7.75 | 114.40 | 108.20 |
| 1 | AA | 928 | G | C5-C6-O6 | -7.75 | 123.95 | 128.60 |
| 26 | BB | 105 | C | C6-N1-C2 | 7.75 | 123.40 | 120.30 |
| 26 | BB | 922 | C | C4-C5-C6 | -7.75 | 113.53 | 117.40 |
| 26 | BB | 1192 | G | N3-C4-C5 | -7.75 | 124.73 | 128.60 |
| 26 | BB | 1361 | G | N3-C4-C5 | -7.75 | 124.73 | 128.60 |
| 26 | BB | 1845 | G | C3'-C2'-C1' | 7.75 | 107.70 | 101.50 |
| 26 | BB | 2031 | A | C6-N1-C2 | 7.75 | 123.25 | 118.60 |
| 1 | AA | 892 | A | C5-N7-C8 | 7.74 | 107.77 | 103.90 |
| 1 | AA | 1536 | C | C5'-C4'-O4' | 7.74 | 118.39 | 109.10 |
| 3 | AC | 52 | U | C3'-C2'-C1' | 7.74 | 107.69 | 101.50 |
| 26 | BB | 1728 | C | O4'-C1'-C2' | -7.74 | 98.06 | 105.80 |
| 26 | BB | 2692 | G | C1'-O4'-C4' | -7.74 | 103.71 | 109.90 |
| 26 | BB | 2711 | A | C3'-C2'-C1' | 7.74 | 107.69 | 101.50 |
| 26 | BB | 259 | G | N7-C8-N9 | 7.74 | 116.97 | 113.10 |
| 26 | BB | 1098 | A | N9-C4-C5 | -7.74 | 102.70 | 105.80 |
| 26 | BB | 2407 | A | C5-N7-C8 | -7.74 | 100.03 | 103.90 |
| 26 | BB | 2512 | C | N1-C2-O2 | 7.74 | 123.55 | 118.90 |
| 1 | AA | 442 | G | C6-C5-N7 | -7.74 | 125.75 | 130.40 |
| 1 | AA | 574 | A | O4'-C1'-N9 | 7.74 | 114.39 | 108.20 |
| 1 | AA | 1160 | G | C5'-C4'-O4' | 7.74 | 118.39 | 109.10 |
| 26 | BB | 62 | U | C3'-C2'-C1' | 7.74 | 107.69 | 101.50 |
| 26 | BB | 461 | C | N3-C4-C5 | -7.74 | 118.80 | 121.90 |
| 26 | BB | 1847 | A | C5'-C4'-C3' | -7.74 | 103.61 | 116.00 |
| 26 | BB | 2302 | U | O4'-C1'-N1 | 7.74 | 114.39 | 108.20 |
| 1 | AA | 327 | A | C6-N1-C2 | 7.74 | 123.24 | 118.60 |
| 1 | AA | 350 | G | N1-C6-O6 | -7.74 | 115.26 | 119.90 |
| 1 | AA | 469 | C | N3-C4-C5 | -7.74 | 118.80 | 121.90 |
| 1 | AA | 1141 | C | C5-C4-N4 | 7.74 | 125.62 | 120.20 |
| 26 | BB | 189 | G | C5-C6-O6 | -7.74 | 123.96 | 128.60 |
| 26 | BB | 540 | C | N3-C4-N4 | -7.74 | 112.58 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1055 | G | N7-C8-N9 | 7.74 | 116.97 | 113.10 |
| 26 | BB | 2173 | A | C8-N9-C4 | -7.74 | 102.70 | 105.80 |
| 26 | BB | 2252 | G | C2-N3-C4 | 7.74 | 115.77 | 111.90 |
| 26 | BB | 2680 | U | N1-C2-N3 | 7.74 | 119.54 | 114.90 |
| 1 | AA | 882 | C | N3-C4-C5 | -7.74 | 118.81 | 121.90 |
| 2 | AB | 66 | C | C6-N1-C2 | -7.74 | 117.20 | 120.30 |
| 26 | BB | 400 | G | N7-C8-N9 | 7.74 | 116.97 | 113.10 |
| 26 | BB | 838 | C | N3-C2-O2 | -7.74 | 116.48 | 121.90 |
| 26 | BB | 2016 | U | C5-C4-O4 | -7.74 | 121.26 | 125.90 |
| 1 | AA | 945 | G | C6-N1-C2 | -7.74 | 120.46 | 125.10 |
| 1 | AA | 1234 | C | O4'-C4'-C3' | 7.74 | 112.29 | 106.10 |
| 1 | AA | 1468 | A | C5-N7-C8 | 7.74 | 107.77 | 103.90 |
| 1 | AA | 1523 | G | N7-C8-N9 | 7.74 | 116.97 | 113.10 |
| 26 | BB | 237 | C | C5-C4-N4 | 7.74 | 125.61 | 120.20 |
| 26 | BB | 240 | C | C5'-C4'-O4' | 7.74 | 118.38 | 109.10 |
| 26 | BB | 1238 | G | C5-C6-O6 | -7.74 | 123.96 | 128.60 |
| 26 | BB | 1883 | U | C5-C4-O4 | 7.74 | 130.54 | 125.90 |
| 4 | AD | 49 | C | C5'-C4'-C3' | -7.73 | 103.62 | 116.00 |
| 26 | BB | 313 | G | C5-C6-O6 | -7.73 | 123.96 | 128.60 |
| 26 | BB | 934 | U | N3-C4-O4 | 7.73 | 124.81 | 119.40 |
| 1 | AA | 79 | G | N3-C2-N2 | -7.73 | 114.49 | 119.90 |
| 1 | AA | 850 | U | N1-C2-O2 | -7.73 | 117.39 | 122.80 |
| 26 | BB | 537 | G | N3-C4-N9 | 7.73 | 130.64 | 126.00 |
| 26 | BB | 857 | G | O4'-C1'-N9 | 7.73 | 114.39 | 108.20 |
| 26 | BB | 1040 | A | C5'-C4'-O4' | 7.73 | 118.38 | 109.10 |
| 26 | BB | 1084 | A | C4-C5-N7 | -7.73 | 106.83 | 110.70 |
| 26 | BB | 2549 | G | N9-C1'-C2' | -7.73 | 103.50 | 112.00 |
| 1 | AA | 232 | G | C4-C5-C6 | 7.73 | 123.44 | 118.80 |
| 1 | AA | 1322 | C | N3-C2-O2 | -7.73 | 116.49 | 121.90 |
| 26 | BB | 293 | U | C4-C5-C6 | -7.73 | 115.06 | 119.70 |
| 26 | BB | 1763 | G | N7-C8-N9 | 7.73 | 116.97 | 113.10 |
| 26 | BB | 2032 | G | N3-C4-C5 | -7.73 | 124.73 | 128.60 |
| 26 | BB | 2283 | C | C6-N1-C2 | 7.73 | 123.39 | 120.30 |
| 1 | AA | 173 | U | N3-C4-C5 | -7.73 | 109.96 | 114.60 |
| 26 | BB | 880 | G | O4'-C1'-N9 | 7.73 | 114.38 | 108.20 |
| 26 | BB | 1455 | G | C5-C6-O6 | -7.73 | 123.96 | 128.60 |
| 26 | BB | 1543 | G | C4-C5-C6 | 7.73 | 123.44 | 118.80 |
| 26 | BB | 1821 | A | N7-C8-N9 | 7.73 | 117.67 | 113.80 |
| 1 | AA | 349 | A | C5-C6-N1 | 7.73 | 121.56 | 117.70 |
| 1 | AA | 775 | G | N9-C4-C5 | 7.73 | 108.49 | 105.40 |
| 1 | AA | 822 | U | C5-C4-O4 | 7.73 | 130.54 | 125.90 |
| 1 | AA | 1195 | C | C5'-C4'-O4' | 7.73 | 118.37 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 114 | C | O4'-C1'-N1 | 7.73 | 114.38 | 108.20 |
| 26 | BB | 261 | G | N9-C1'-C2' | -7.73 | 103.50 | 112.00 |
| 26 | BB | 1044 | C | N3-C4-C5 | -7.73 | 118.81 | 121.90 |
| 26 | BB | 1711 | A | N7-C8-N9 | -7.73 | 109.94 | 113.80 |
| 26 | BB | 2341 | G | N3-C4-C5 | -7.73 | 124.74 | 128.60 |
| 26 | BB | 2657 | A | C4-C5-C6 | -7.73 | 113.14 | 117.00 |
| 26 | BB | 2667 | C | C4'-C3'-C2' | -7.73 | 94.87 | 102.60 |
| 1 | AA | 54 | C | N3-C2-O2 | -7.73 | 116.49 | 121.90 |
| 1 | AA | 806 | C | C5'-C4'-O4' | 7.73 | 118.37 | 109.10 |
| 1 | AA | 188 | C | N3-C4-C5 | -7.72 | 118.81 | 121.90 |
| 1 | AA | 392 | C | N1-C2-O2 | 7.72 | 123.53 | 118.90 |
| 1 | AA | 1293 | C | N1-C2-O2 | 7.72 | 123.53 | 118.90 |
| 26 | BB | 771 | G | O4'-C1'-N9 | 7.72 | 114.38 | 108.20 |
| 26 | BB | 1497 | U | N1-C2-N3 | 7.72 | 119.53 | 114.90 |
| 26 | BB | 1552 | A | N7-C8-N9 | -7.72 | 109.94 | 113.80 |
| 1 | AA | 1014 | A | C4-C5-C6 | 7.72 | 120.86 | 117.00 |
| 1 | AA | 1066 | C | O4'-C1'-N1 | 7.72 | 114.38 | 108.20 |
| 1 | AA | 1502 | A | N7-C8-N9 | 7.72 | 117.66 | 113.80 |
| 1 | AA | 1525 | G | C1'-O4'-C4' | 7.72 | 116.08 | 109.90 |
| 26 | BB | 1401 | G | C4-C5-N7 | 7.72 | 113.89 | 110.80 |
| 26 | BB | 1643 | G | O4'-C1'-N9 | 7.72 | 114.38 | 108.20 |
| 1 | AA | 67 | C | O4'-C1'-N1 | 7.72 | 114.38 | 108.20 |
| 25 | BA | 34 | A | P-O3'-C3' | 7.72 | 128.97 | 119.70 |
| 25 | BA | 96 | G | C4-C5-N7 | -7.72 | 107.71 | 110.80 |
| 26 | BB | 670 | A | C1'-O4'-C4' | -7.72 | 103.72 | 109.90 |
| 26 | BB | 776 | G | C2-N3-C4 | 7.72 | 115.76 | 111.90 |
| 26 | BB | 1602 | U | N3-C4-O4 | 7.72 | 124.81 | 119.40 |
| 26 | BB | 2367 | G | C5'-C4'-O4' | 7.72 | 118.37 | 109.10 |
| 26 | BB | 2706 | A | C6-N1-C2 | 7.72 | 123.23 | 118.60 |
| 1 | AA | 344 | A | C5-C6-N1 | -7.72 | 113.84 | 117.70 |
| 1 | AA | 1180 | A | O4'-C1'-N9 | 7.72 | 114.38 | 108.20 |
| 1 | AA | 1253 | G | N9-C4-C5 | 7.72 | 108.49 | 105.40 |
| 26 | BB | 149 | A | C6-C5-N7 | -7.72 | 126.90 | 132.30 |
| 26 | BB | 1967 | C | C4-C5-C6 | -7.72 | 113.54 | 117.40 |
| 26 | BB | 2725 | A | C4'-C3'-C2' | -7.72 | 94.88 | 102.60 |
| 26 | BB | 2841 | C | C3'-C2'-C1' | 7.72 | 107.67 | 101.50 |
| 26 | BB | 1060 | U | N1-C2-N3 | 7.72 | 119.53 | 114.90 |
| 26 | BB | 1306 | C | O4'-C1'-C2' | -7.72 | 98.08 | 105.80 |
| 1 | AA | 395 | C | C4'-C3'-C2' | -7.72 | 94.88 | 102.60 |
| 26 | BB | 335 | C | O4'-C1'-N1 | 7.72 | 114.37 | 108.20 |
| 26 | BB | 620 | G | O5'-P-OP2 | -7.72 | 98.75 | 105.70 |
| 26 | BB | 1188 | U | C4-C5-C6 | 7.72 | 124.33 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1331 | G | C8-N9-C4 | -7.72 | 103.31 | 106.40 |
| 26 | BB | 1832 | C | N1-C2-O2 | 7.72 | 123.53 | 118.90 |
| 26 | BB | 2513 | A | C6-N1-C2 | -7.72 | 113.97 | 118.60 |
| 26 | BB | 2650 | U | C5'-C4'-C3' | -7.72 | 103.66 | 116.00 |
| 26 | BB | 2770 | G | C5-C6-O6 | -7.72 | 123.97 | 128.60 |
| 26 | BB | 2886 | A | C4-C5-C6 | -7.72 | 113.14 | 117.00 |
| 1 | AA | 239 | U | O3'-P-O5' | -7.71 | 89.34 | 104.00 |
| 26 | BB | 428 | A | N1-C2-N3 | -7.71 | 125.44 | 129.30 |
| 26 | BB | 1964 | G | O4'-C1'-N9 | 7.71 | 114.37 | 108.20 |
| 26 | BB | 2598 | A | C5-C6-N1 | 7.71 | 121.56 | 117.70 |
| 1 | AA | 1040 | U | N3-C2-O2 | -7.71 | 116.80 | 122.20 |
| 26 | BB | 993 | G | C8-N9-C4 | -7.71 | 103.31 | 106.40 |
| 26 | BB | 2627 | G | C1'-O4'-C4' | -7.71 | 103.73 | 109.90 |
| 1 | AA | 1153 | G | C8-N9-C4 | 7.71 | 109.48 | 106.40 |
| 4 | AD | 61 | U | N3-C4-O4 | -7.71 | 114.00 | 119.40 |
| 26 | BB | 257 | C | C5-C4-N4 | 7.71 | 125.60 | 120.20 |
| 26 | BB | 2188 | U | C5-C6-N1 | -7.71 | 118.84 | 122.70 |
| 26 | BB | 2340 | A | C1'-O4'-C4' | 7.71 | 116.07 | 109.90 |
| 26 | BB | 347 | A | N1-C2-N3 | -7.71 | 125.44 | 129.30 |
| 26 | BB | 608 | A | C5-N7-C8 | -7.71 | 100.05 | 103.90 |
| 26 | BB | 1374 | G | C3'-C2'-C1' | 7.71 | 107.67 | 101.50 |
| 26 | BB | 2051 | A | C8-N9-C4 | -7.71 | 102.72 | 105.80 |
| 1 | AA | 59 | A | P-O3'-C3' | 7.71 | 128.95 | 119.70 |
| 1 | AA | 211 | G | P-O3'-C3' | 7.71 | 128.95 | 119.70 |
| 1 | AA | 326 | G | N3-C2-N2 | 7.71 | 125.30 | 119.90 |
| 1 | AA | 332 | G | C3'-C2'-C1' | -7.71 | 95.33 | 101.50 |
| 1 | AA | 412 | A | N9-C4-C5 | -7.71 | 102.72 | 105.80 |
| 1 | AA | 1534 | A | C4-C5-N7 | -7.71 | 106.85 | 110.70 |
| 4 | AD | 9 | G | C4'-C3'-C2' | 7.71 | 110.31 | 102.60 |
| 21 | AU | 50 | TYR | CB-CG-CD2 | 7.71 | 125.63 | 121.00 |
| 26 | BB | 969 | G | C5-N7-C8 | -7.71 | 100.45 | 104.30 |
| 26 | BB | 2269 | G | N1-C2-N3 | -7.71 | 119.28 | 123.90 |
| 26 | BB | 2844 | G | C4-N9-C1' | -7.71 | 116.48 | 126.50 |
| 1 | AA | 896 | C | C4-C5-C6 | 7.71 | 121.25 | 117.40 |
| 6 | AF | 21 | TRP | NE1-CE2-CD2 | -7.71 | 99.59 | 107.30 |
| 26 | BB | 402 | A | C2-N3-C4 | 7.71 | 114.45 | 110.60 |
| 26 | BB | 743 | A | C5-C6-N1 | 7.71 | 121.55 | 117.70 |
| 26 | BB | 1246 | A | C5'-C4'-O4' | 7.71 | 118.35 | 109.10 |
| 26 | BB | 2272 | U | C5'-C4'-O4' | 7.71 | 118.35 | 109.10 |
| 26 | BB | 2306 | C | C4-C5-C6 | -7.71 | 113.55 | 117.40 |
| 26 | BB | 2390 | U | N3-C2-O2 | -7.71 | 116.81 | 122.20 |
| 26 | BB | 2808 | G | C8-N9-C4 | -7.71 | 103.32 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 289 | G | O5'-P-OP2 | -7.71 | 98.77 | 105.70 |
| 26 | BB | 1181 | U | C6-N1-C2 | -7.71 | 116.38 | 121.00 |
| 26 | BB | 1577 | C | N3-C4-C5 | -7.71 | 118.82 | 121.90 |
| 1 | AA | 54 | C | O4'-C1'-N1 | 7.70 | 114.36 | 108.20 |
| 1 | AA | 284 | C | O4'-C1'-N1 | 7.70 | 114.36 | 108.20 |
| 1 | AA | 639 | G | O4'-C1'-N9 | 7.70 | 114.36 | 108.20 |
| 1 | AA | 664 | G | N1-C2-N2 | 7.70 | 123.13 | 116.20 |
| 26 | BB | 405 | U | C4-C5-C6 | 7.70 | 124.32 | 119.70 |
| 26 | BB | 699 | A | C6-N1-C2 | 7.70 | 123.22 | 118.60 |
| 26 | BB | 1926 | U | C6-N1-C2 | -7.70 | 116.38 | 121.00 |
| 26 | BB | 2037 | A | N1-C2-N3 | -7.70 | 125.45 | 129.30 |
| 2 | AB | 69 | C | C3'-C2'-C1' | 7.70 | 107.66 | 101.50 |
| 4 | AD | 25 | U | N3-C4-O4 | 7.70 | 124.79 | 119.40 |
| 26 | BB | 1243 | C | N1-C2-N3 | -7.70 | 113.81 | 119.20 |
| 1 | AA | 408 | A | C5-C6-N6 | -7.70 | 117.54 | 123.70 |
| 1 | AA | 414 | A | C5'-C4'-O4' | 7.70 | 118.34 | 109.10 |
| 1 | AA | 1299 | A | N9-C4-C5 | 7.70 | 108.88 | 105.80 |
| 2 | AB | 47 | U | C2-N3-C4 | -7.70 | 122.38 | 127.00 |
| 26 | BB | 570 | G | C8-N9-C4 | -7.70 | 103.32 | 106.40 |
| 26 | BB | 966 | G | C5-C6-O6 | -7.70 | 123.98 | 128.60 |
| 26 | BB | 1134 | A | N7-C8-N9 | -7.70 | 109.95 | 113.80 |
| 26 | BB | 1465 | G | N9-C4-C5 | 7.70 | 108.48 | 105.40 |
| 26 | BB | 2100 | G | C4-C5-N7 | -7.70 | 107.72 | 110.80 |
| 26 | BB | 2309 | A | N9-C4-C5 | 7.70 | 108.88 | 105.80 |
| 26 | BB | 2566 | A | N1-C2-N3 | -7.70 | 125.45 | 129.30 |
| 31 | BG | 96 | TRP | CG-CD1-NE1 | 7.70 | 117.80 | 110.10 |
| 1 | AA | 571 | U | N3-C4-C5 | -7.70 | 109.98 | 114.60 |
| 1 | AA | 950 | U | C6-N1-C2 | 7.70 | 125.62 | 121.00 |
| 1 | AA | 1089 | G | N3-C4-C5 | -7.70 | 124.75 | 128.60 |
| 2 | AB | 10 | G | C6-C5-N7 | -7.70 | 125.78 | 130.40 |
| 26 | BB | 1670 | C | C2-N3-C4 | 7.70 | 123.75 | 119.90 |
| 26 | BB | 2280 | G | C2-N3-C4 | 7.70 | 115.75 | 111.90 |
| 26 | BB | 2323 | G | O4'-C4'-C3' | 7.70 | 112.26 | 106.10 |
| 26 | BB | 2338 | C | C6-N1-C2 | -7.70 | 117.22 | 120.30 |
| 26 | BB | 2362 | C | N3-C4-C5 | 7.70 | 124.98 | 121.90 |
| 26 | BB | 2818 | U | N1-C2-N3 | 7.70 | 119.52 | 114.90 |
| 26 | BB | 2868 | A | C5-C6-N1 | -7.70 | 113.85 | 117.70 |
| 1 | AA | 21 | G | N7-C8-N9 | 7.70 | 116.95 | 113.10 |
| 1 | AA | 636 | U | N1-C2-O2 | 7.70 | 128.19 | 122.80 |
| 1 | AA | 666 | G | O4'-C1'-N9 | 7.70 | 114.36 | 108.20 |
| 1 | AA | 943 | U | N1-C2-O2 | -7.70 | 117.41 | 122.80 |
| 4 | AD | 39 | A | C4-C5-C6 | -7.70 | 113.15 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1480 | C | N1-C2-O2 | 7.70 | 123.52 | 118.90 |
| 1 | AA | 264 | C | N3-C4-C5 | -7.70 | 118.82 | 121.90 |
| 1 | AA | 1141 | C | C4'-C3'-C2' | -7.70 | 94.91 | 102.60 |
| 26 | BB | 1636 | U | O4'-C1'-N1 | 7.70 | 114.36 | 108.20 |
| 26 | BB | 1637 | A | O4'-C1'-N9 | 7.70 | 114.36 | 108.20 |
| 26 | BB | 2050 | C | O4'-C1'-N1 | 7.70 | 114.36 | 108.20 |
| 1 | AA | 182 | A | C5-C6-N6 | -7.69 | 117.55 | 123.70 |
| 1 | AA | 456 | A | N3-C4-C5 | -7.69 | 121.41 | 126.80 |
| 26 | BB | 1489 | C | O4'-C1'-N1 | 7.69 | 114.36 | 108.20 |
| 1 | AA | 1468 | A | O4'-C1'-C2' | 7.69 | 114.52 | 107.60 |
| 1 | AA | 1507 | A | C3'-C2'-C1' | -7.69 | 95.35 | 101.50 |
| 1 | AA | 1542 | A | C4-C5-N7 | -7.69 | 106.85 | 110.70 |
| 25 | BA | 39 | A | C1'-O4'-C4' | -7.69 | 103.75 | 109.90 |
| 26 | BB | 585 | G | C4'-C3'-C2' | -7.69 | 94.91 | 102.60 |
| 26 | BB | 995 | C | C5'-C4'-C3' | -7.69 | 103.69 | 116.00 |
| 26 | BB | 1892 | C | C4'-C3'-C2' | -7.69 | 94.91 | 102.60 |
| 26 | BB | 2002 | G | N3-C4-N9 | 7.69 | 130.62 | 126.00 |
| 26 | BB | 2250 | G | C1'-O4'-C4' | -7.69 | 103.75 | 109.90 |
| 26 | BB | 1111 | A | C5'-C4'-O4' | 7.69 | 118.33 | 109.10 |
| 26 | BB | 1988 | G | N1-C6-O6 | 7.69 | 124.51 | 119.90 |
| 26 | BB | 2288 | A | C5-C6-N1 | -7.69 | 113.85 | 117.70 |
| 1 | AA | 86 | G | C8-N9-C1' | 7.69 | 137.00 | 127.00 |
| 1 | AA | 857 | C | C6-N1-C2 | 7.69 | 123.38 | 120.30 |
| 26 | BB | 608 | A | C8-N9-C4 | -7.69 | 102.72 | 105.80 |
| 26 | BB | 2364 | C | N3-C2-O2 | -7.69 | 116.52 | 121.90 |
| 1 | AA | 237 | G | C5-C6-N1 | 7.69 | 115.34 | 111.50 |
| 1 | AA | 1352 | C | C6-N1-C2 | -7.69 | 117.22 | 120.30 |
| 26 | BB | 1570 | A | O4'-C1'-N9 | 7.69 | 114.35 | 108.20 |
| 26 | BB | 1714 | U | N3-C2-O2 | -7.69 | 116.82 | 122.20 |
| 26 | BB | 1845 | G | C4'-C3'-C2' | -7.69 | 94.91 | 102.60 |
| 26 | BB | 2411 | A | C2-N3-C4 | -7.69 | 106.76 | 110.60 |
| 26 | BB | 2583 | G | C5-C6-N1 | 7.69 | 115.34 | 111.50 |
| 26 | BB | 2706 | A | N1-C6-N6 | 7.69 | 123.21 | 118.60 |
| 1 | AA | 509 | A | C4-C5-C6 | 7.68 | 120.84 | 117.00 |
| 1 | AA | 594 | U | C4'-C3'-C2' | -7.68 | 94.92 | 102.60 |
| 1 | AA | 1421 | G | O4'-C1'-N9 | 7.68 | 114.35 | 108.20 |
| 2 | AB | 47 | U | N1-C2-N3 | 7.68 | 119.51 | 114.90 |
| 26 | BB | 203 | A | C8-N9-C4 | -7.68 | 102.73 | 105.80 |
| 26 | BB | 257 | C | O4'-C1'-N1 | 7.68 | 114.35 | 108.20 |
| 26 | BB | 763 | G | C4-C5-C6 | 7.68 | 123.41 | 118.80 |
| 26 | BB | 1746 | A | C6-N1-C2 | 7.68 | 123.21 | 118.60 |
| 26 | BB | 2865 | U | C5'-C4'-O4' | 7.68 | 118.32 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 915 | A | N1-C2-N3 | -7.68 | 125.46 | 129.30 |
| 1 | AA | 1504 | G | C2-N3-C4 | 7.68 | 115.74 | 111.90 |
| 26 | BB | 146 | A | N9-C1'-C2' | -7.68 | 103.55 | 112.00 |
| 26 | BB | 175 | G | O4'-C1'-N9 | 7.68 | 114.34 | 108.20 |
| 26 | BB | 2005 | A | C2-N3-C4 | -7.68 | 106.76 | 110.60 |
| 26 | BB | 2050 | C | C6-N1-C2 | -7.68 | 117.23 | 120.30 |
| 26 | BB | 2218 | G | N1-C2-N3 | -7.68 | 119.29 | 123.90 |
| 26 | BB | 2450 | A | N1-C6-N6 | -7.68 | 113.99 | 118.60 |
| 26 | BB | 2900 | A | C5-N7-C8 | 7.68 | 107.74 | 103.90 |
| 29 | BE | 68 | PHE | CB-CG-CD2 | 7.68 | 126.18 | 120.80 |
| 1 | AA | 5 | U | O4'-C1'-N1 | 7.68 | 114.34 | 108.20 |
| 26 | BB | 182 | A | C4-C5-N7 | -7.68 | 106.86 | 110.70 |
| 26 | BB | 373 | U | N1-C2-N3 | 7.68 | 119.51 | 114.90 |
| 26 | BB | 2863 | C | O4'-C1'-N1 | 7.68 | 114.34 | 108.20 |
| 2 | AB | 23 | A | C4'-C3'-C2' | -7.68 | 94.92 | 102.60 |
| 26 | BB | 443 | A | C5-N7-C8 | -7.68 | 100.06 | 103.90 |
| 26 | BB | 1157 | G | C3'-C2'-C1' | 7.68 | 107.64 | 101.50 |
| 26 | BB | 1658 | C | C4-C5-C6 | 7.68 | 121.24 | 117.40 |
| 26 | BB | 2063 | C | C1'-O4'-C4' | -7.68 | 103.76 | 109.90 |
| 26 | BB | 2088 | A | N7-C8-N9 | 7.68 | 117.64 | 113.80 |
| 26 | BB | 2198 | A | N7-C8-N9 | -7.68 | 109.96 | 113.80 |
| 1 | AA | 512 | U | C2-N3-C4 | -7.68 | 122.39 | 127.00 |
| 1 | AA | 1344 | C | C4-C5-C6 | 7.68 | 121.24 | 117.40 |
| 26 | BB | 603 | A | N9-C4-C5 | 7.68 | 108.87 | 105.80 |
| 1 | AA | 97 | G | P-O3'-C3' | 7.68 | 128.91 | 119.70 |
| 1 | AA | 1034 | G | C5-C6-O6 | -7.68 | 123.99 | 128.60 |
| 25 | BA | 50 | A | N9-C4-C5 | 7.68 | 108.87 | 105.80 |
| 26 | BB | 11 | C | C2-N3-C4 | 7.68 | 123.74 | 119.90 |
| 26 | BB | 454 | A | C6-C5-N7 | 7.68 | 137.67 | 132.30 |
| 26 | BB | 1293 | C | C2-N3-C4 | -7.68 | 116.06 | 119.90 |
| 26 | BB | 2703 | C | N1-C1'-C2' | -7.68 | 103.56 | 112.00 |
| 26 | BB | 2870 | C | N3-C4-C5 | -7.68 | 118.83 | 121.90 |
| 37 | BM | 70 | ARG | NH1-CZ-NH2 | 7.68 | 127.84 | 119.40 |
| 1 | AA | 861 | G | N3-C4-C5 | -7.67 | 124.76 | 128.60 |
| 2 | AB | 10 | G | N1-C6-O6 | -7.67 | 115.30 | 119.90 |
| 26 | BB | 339 | U | C5-C4-O4 | -7.67 | 121.30 | 125.90 |
| 26 | BB | 990 | A | C5-N7-C8 | 7.67 | 107.74 | 103.90 |
| 1 | AA | 2 | A | C2-N3-C4 | 7.67 | 114.44 | 110.60 |
| 1 | AA | 751 | U | O4'-C1'-N1 | 7.67 | 114.34 | 108.20 |
| 1 | AA | 1314 | C | O4'-C1'-N1 | 7.67 | 114.34 | 108.20 |
| 26 | BB | 249 | C | C6-N1-C2 | 7.67 | 123.37 | 120.30 |
| 26 | BB | 1578 | U | C5-C4-O4 | -7.67 | 121.30 | 125.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 461 | A | C5-N7-C8 | 7.67 | 107.73 | 103.90 |
| 1 | AA | 532 | A | O4'-C1'-N9 | 7.67 | 114.34 | 108.20 |
| 1 | AA | 999 | C | C6-N1-C2 | 7.67 | 123.37 | 120.30 |
| 26 | BB | 168 | G | C2-N3-C4 | 7.67 | 115.74 | 111.90 |
| 26 | BB | 312 | G | C4-C5-C6 | 7.67 | 123.40 | 118.80 |
| 26 | BB | 2317 | A | C4-C5-C6 | 7.67 | 120.83 | 117.00 |
| 1 | AA | 530 | G | C2-N3-C4 | 7.67 | 115.73 | 111.90 |
| 1 | AA | 805 | C | C4-C5-C6 | -7.67 | 113.56 | 117.40 |
| 1 | AA | 1470 | U | N3-C2-O2 | -7.67 | 116.83 | 122.20 |
| 3 | AC | 15 | G | C5-C6-O6 | -7.67 | 124.00 | 128.60 |
| 4 | AD | 27 | G | N1-C6-O6 | -7.67 | 115.30 | 119.90 |
| 26 | BB | 2001 | C | C6-N1-C2 | -7.67 | 117.23 | 120.30 |
| 26 | BB | 2788 | C | N3-C2-O2 | -7.67 | 116.53 | 121.90 |
| 1 | AA | 818 | G | C5-N7-C8 | 7.67 | 108.13 | 104.30 |
| 1 | AA | 1455 | G | C2-N3-C4 | 7.67 | 115.73 | 111.90 |
| 4 | AD | 46 | G | C5-C6-O6 | -7.67 | 124.00 | 128.60 |
| 26 | BB | 45 | G | N1-C6-O6 | -7.67 | 115.30 | 119.90 |
| 26 | BB | 1189 | A | C8-N9-C4 | -7.67 | 102.73 | 105.80 |
| 26 | BB | 1238 | G | C4-C5-N7 | -7.67 | 107.73 | 110.80 |
| 26 | BB | 1254 | A | N7-C8-N9 | -7.67 | 109.97 | 113.80 |
| 26 | BB | 1460 | U | P-O3'-C3' | 7.67 | 128.90 | 119.70 |
| 26 | BB | 2673 | G | C5-N7-C8 | -7.67 | 100.47 | 104.30 |
| 1 | AA | 933 | G | C5-C6-N1 | 7.67 | 115.33 | 111.50 |
| 1 | AA | 1131 | G | C5'-C4'-O4' | 7.67 | 118.30 | 109.10 |
| 25 | BA | 116 | G | N3-C4-C5 | -7.67 | 124.77 | 128.60 |
| 26 | BB | 260 | G | C8-N9-C4 | -7.67 | 103.33 | 106.40 |
| 26 | BB | 1421 | G | C5-C6-O6 | -7.67 | 124.00 | 128.60 |
| 26 | BB | 1535 | A | C4-C5-N7 | -7.67 | 106.87 | 110.70 |
| 26 | BB | 1581 | G | C4'-C3'-C2' | -7.67 | 94.93 | 102.60 |
| 26 | BB | 2088 | A | C5-N7-C8 | -7.67 | 100.07 | 103.90 |
| 1 | AA | 710 | G | O4'-C1'-N9 | 7.67 | 114.33 | 108.20 |
| 1 | AA | 865 | A | C6-N1-C2 | 7.66 | 123.20 | 118.60 |
| 1 | AA | 1520 | C | O4'-C1'-N1 | 7.66 | 114.33 | 108.20 |
| 4 | AD | 32 | G | C5-N7-C8 | -7.66 | 100.47 | 104.30 |
| 25 | BA | 25 | U | O4'-C1'-N1 | 7.66 | 114.33 | 108.20 |
| 26 | BB | 73 | A | N7-C8-N9 | 7.66 | 117.63 | 113.80 |
| 26 | BB | 1201 | U | N3-C2-O2 | -7.66 | 116.84 | 122.20 |
| 26 | BB | 1524 | G | C6-C5-N7 | -7.66 | 125.80 | 130.40 |
| 26 | BB | 1840 | G | C6-C5-N7 | -7.66 | 125.80 | 130.40 |
| 26 | BB | 2662 | A | N1-C2-N3 | 7.66 | 133.13 | 129.30 |
| 1 | AA | 376 | G | C1'-O4'-C4' | -7.66 | 103.77 | 109.90 |
| 1 | AA | 849 | G | C5-C6-N1 | -7.66 | 107.67 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 980 | C | N3-C4-N4 | 7.66 | 123.36 | 118.00 |
| 1 | AA | 1482 | G | N9-C4-C5 | -7.66 | 102.33 | 105.40 |
| 4 | AD | 36 | A | O4'-C1'-N9 | 7.66 | 114.33 | 108.20 |
| 26 | BB | 842 | U | N1-C2-N3 | 7.66 | 119.50 | 114.90 |
| 26 | BB | 1166 | G | C5-C6-N1 | 7.66 | 115.33 | 111.50 |
| 26 | BB | 1200 | C | N3-C2-O2 | -7.66 | 116.54 | 121.90 |
| 1 | AA | 436 | C | N3-C4-C5 | 7.66 | 124.96 | 121.90 |
| 1 | AA | 694 | A | O4'-C4'-C3' | 7.66 | 112.23 | 106.10 |
| 1 | AA | 735 | C | P-O3'-C3' | 7.66 | 128.89 | 119.70 |
| 1 | AA | 1164 | G | O4'-C1'-N9 | 7.66 | 114.33 | 108.20 |
| 2 | AB | 18 | G | C5-N7-C8 | -7.66 | 100.47 | 104.30 |
| 3 | AC | 53 | G | C2-N3-C4 | -7.66 | 108.07 | 111.90 |
| 26 | BB | 382 | A | C4-C5-C6 | -7.66 | 113.17 | 117.00 |
| 26 | BB | 731 | C | C5-C4-N4 | -7.66 | 114.84 | 120.20 |
| 26 | BB | 2691 | C | N3-C4-N4 | -7.66 | 112.64 | 118.00 |
| 26 | BB | 2749 | A | C5-C6-N1 | 7.66 | 121.53 | 117.70 |
| 1 | AA | 694 | A | O4'-C1'-N9 | 7.66 | 114.33 | 108.20 |
| 26 | BB | 628 | G | C5-N7-C8 | 7.66 | 108.13 | 104.30 |
| 1 | AA | 247 | G | C3'-C2'-C1' | -7.66 | 95.38 | 101.50 |
| 1 | AA | 1106 | G | C4-C5-N7 | -7.66 | 107.74 | 110.80 |
| 1 | AA | 1316 | G | N9-C4-C5 | 7.66 | 108.46 | 105.40 |
| 26 | BB | 1174 | U | C4'-C3'-C2' | -7.66 | 94.94 | 102.60 |
| 26 | BB | 1768 | C | N3-C4-C5 | -7.66 | 118.84 | 121.90 |
| 26 | BB | 2583 | G | C6-N1-C2 | -7.66 | 120.51 | 125.10 |
| 1 | AA | 664 | G | N3-C2-N2 | -7.65 | 114.54 | 119.90 |
| 1 | AA | 355 | C | C6-N1-C2 | 7.65 | 123.36 | 120.30 |
| 1 | AA | 588 | G | N1-C2-N3 | -7.65 | 119.31 | 123.90 |
| 1 | AA | 665 | A | C6-C5-N7 | 7.65 | 137.66 | 132.30 |
| 1 | AA | 698 | G | C5-C6-N1 | -7.65 | 107.67 | 111.50 |
| 1 | AA | 830 | G | N9-C1'-C2' | -7.65 | 103.58 | 112.00 |
| 1 | AA | 1329 | A | P-O3'-C3' | 7.65 | 128.88 | 119.70 |
| 1 | AA | 1455 | G | C4-C5-C6 | 7.65 | 123.39 | 118.80 |
| 26 | BB | 822 | G | N1-C2-N2 | 7.65 | 123.09 | 116.20 |
| 26 | BB | 1389 | G | C8-N9-C4 | -7.65 | 103.34 | 106.40 |
| 26 | BB | 1532 | A | N9-C1'-C2' | -7.65 | 103.58 | 112.00 |
| 26 | BB | 1573 | G | N3-C2-N2 | 7.65 | 125.26 | 119.90 |
| 26 | BB | 2121 | G | O4'-C1'-N9 | 7.65 | 114.32 | 108.20 |
| 26 | BB | 2775 | G | C8-N9-C4 | -7.65 | 103.34 | 106.40 |
| 1 | AA | 95 | C | C6-N1-C2 | 7.65 | 123.36 | 120.30 |
| 1 | AA | 694 | A | N1-C2-N3 | -7.65 | 125.47 | 129.30 |
| 26 | BB | 84 | A | P-O3'-C3' | 7.65 | 128.88 | 119.70 |
| 26 | BB | 395 | U | N3-C2-O2 | -7.65 | 116.84 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 471 | A | C8-N9-C4 | -7.65 | 102.74 | 105.80 |
| 26 | BB | 565 | C | N3-C4-C5 | 7.65 | 124.96 | 121.90 |
| 26 | BB | 873 | C | C6-N1-C2 | 7.65 | 123.36 | 120.30 |
| 26 | BB | 973 | A | C4-C5-N7 | -7.65 | 106.88 | 110.70 |
| 26 | BB | 1676 | A | C8-N9-C4 | -7.65 | 102.74 | 105.80 |
| 26 | BB | 1776 | G | N7-C8-N9 | 7.65 | 116.93 | 113.10 |
| 26 | BB | 2803 | G | N7-C8-N9 | 7.65 | 116.93 | 113.10 |
| 26 | BB | 2881 | U | C5-C4-O4 | 7.65 | 130.49 | 125.90 |
| 1 | AA | 30 | U | C5-C4-O4 | -7.65 | 121.31 | 125.90 |
| 26 | BB | 59 | U | C4-C5-C6 | 7.65 | 124.29 | 119.70 |
| 1 | AA | 1057 | G | N9-C4-C5 | 7.65 | 108.46 | 105.40 |
| 1 | AA | 1189 | U | N1-C2-N3 | 7.65 | 119.49 | 114.90 |
| 1 | AA | 1260 | G | C6-C5-N7 | -7.65 | 125.81 | 130.40 |
| 1 | AA | 1494 | G | O4'-C4'-C3' | 7.65 | 112.22 | 106.10 |
| 26 | BB | 553 | G | C6-N1-C2 | -7.65 | 120.51 | 125.10 |
| 26 | BB | 1337 | G | C2-N3-C4 | 7.65 | 115.72 | 111.90 |
| 26 | BB | 2147 | A | N1-C6-N6 | -7.65 | 114.01 | 118.60 |
| 26 | BB | 437 | U | C5'-C4'-O4' | 7.65 | 118.28 | 109.10 |
| 26 | BB | 1151 | A | C8-N9-C4 | -7.65 | 102.74 | 105.80 |
| 26 | BB | 1268 | A | C5-C6-N6 | 7.65 | 129.82 | 123.70 |
| 26 | BB | 1932 | A | C6-N1-C2 | -7.65 | 114.01 | 118.60 |
| 1 | AA | 185 | U | O4'-C1'-N1 | 7.64 | 114.32 | 108.20 |
| 1 | AA | 450 | G | C2-N3-C4 | -7.64 | 108.08 | 111.90 |
| 1 | AA | 511 | C | C5-C6-N1 | -7.64 | 117.18 | 121.00 |
| 1 | AA | 809 | G | N9-C4-C5 | -7.64 | 102.34 | 105.40 |
| 1 | AA | 893 | C | C6-N1-C2 | 7.64 | 123.36 | 120.30 |
| 1 | AA | 1043 | G | N3-C4-N9 | 7.64 | 130.59 | 126.00 |
| 26 | BB | 402 | A | N9-C4-C5 | 7.64 | 108.86 | 105.80 |
| 26 | BB | 692 | C | C4-C5-C6 | -7.64 | 113.58 | 117.40 |
| 26 | BB | 765 | C | C3'-C2'-C1' | 7.64 | 107.61 | 101.50 |
| 26 | BB | 797 | G | C5-N7-C8 | -7.64 | 100.48 | 104.30 |
| 26 | BB | 1899 | A | N7-C8-N9 | 7.64 | 117.62 | 113.80 |
| 26 | BB | 2075 | U | C3'-C2'-C1' | 7.64 | 107.61 | 101.50 |
| 26 | BB | 2556 | C | N3-C4-C5 | 7.64 | 124.96 | 121.90 |
| 26 | BB | 2637 | U | C2-N3-C4 | 7.64 | 131.59 | 127.00 |
| 26 | BB | 2816 | G | N1-C2-N2 | 7.64 | 123.08 | 116.20 |
| 1 | AA | 419 | C | C3'-C2'-C1' | -7.64 | 95.39 | 101.50 |
| 1 | AA | 1483 | A | C4'-C3'-C2' | 7.64 | 110.24 | 102.60 |
| 16 | AP | 100 | ARG | NE-CZ-NH1 | 7.64 | 124.12 | 120.30 |
| 26 | BB | 315 | G | C5-C6-O6 | -7.64 | 124.01 | 128.60 |
| 26 | BB | 560 | C | N1-C1'-C2' | -7.64 | 103.59 | 112.00 |
| 26 | BB | 804 | A | N7-C8-N9 | 7.64 | 117.62 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 609 | A | C8-N9-C4 | -7.64 | 102.74 | 105.80 |
| 26 | BB | 379 | G | O4'-C1'-N9 | 7.64 | 114.31 | 108.20 |
| 26 | BB | 93 | G | C8-N9-C4 | -7.64 | 103.34 | 106.40 |
| 26 | BB | 645 | C | C4'-C3'-C2' | -7.64 | 94.96 | 102.60 |
| 26 | BB | 1874 | C | C6-N1-C2 | -7.64 | 117.24 | 120.30 |
| 1 | AA | 1419 | G | C2-N3-C4 | 7.64 | 115.72 | 111.90 |
| 26 | BB | 161 | A | O4'-C4'-C3' | 7.64 | 112.21 | 106.10 |
| 26 | BB | 1172 | C | C6-N1-C2 | 7.64 | 123.36 | 120.30 |
| 1 | AA | 1479 | C | C5-C4-N4 | -7.64 | 114.86 | 120.20 |
| 26 | BB | 100 | U | N1-C2-N3 | 7.64 | 119.48 | 114.90 |
| 26 | BB | 709 | U | N1-C2-N3 | 7.64 | 119.48 | 114.90 |
| 26 | BB | 1425 | G | C6-C5-N7 | -7.64 | 125.82 | 130.40 |
| 26 | BB | 1428 | C | O4'-C1'-N1 | 7.64 | 114.31 | 108.20 |
| 26 | BB | 2052 | A | C5-C6-N1 | 7.64 | 121.52 | 117.70 |
| 1 | AA | 626 | G | C2-N3-C4 | 7.63 | 115.72 | 111.90 |
| 1 | AA | 1087 | G | N9-C4-C5 | 7.63 | 108.45 | 105.40 |
| 3 | AC | 36 | U | N1-C1'-C2' | -7.63 | 103.60 | 112.00 |
| 26 | BB | 101 | A | O4'-C1'-N9 | 7.63 | 114.31 | 108.20 |
| 26 | BB | 326 | G | N3-C4-C5 | -7.63 | 124.78 | 128.60 |
| 26 | BB | 1142 | A | N7-C8-N9 | 7.63 | 117.62 | 113.80 |
| 26 | BB | 1723 | G | C5'-C4'-O4' | 7.63 | 118.26 | 109.10 |
| 26 | BB | 2171 | A | C2-N3-C4 | 7.63 | 114.42 | 110.60 |
| 26 | BB | 2257 | U | C4'-C3'-C2' | -7.63 | 94.97 | 102.60 |
| 26 | BB | 166 | U | C6-N1-C2 | -7.63 | 116.42 | 121.00 |
| 26 | BB | 536 | G | N3-C4-N9 | -7.63 | 121.42 | 126.00 |
| 1 | AA | 268 | U | N1-C2-N3 | 7.63 | 119.48 | 114.90 |
| 2 | AB | 15 | A | C4-C5-N7 | 7.63 | 114.52 | 110.70 |
| 18 | AR | 67 | ASP | CB-CG-OD1 | -7.63 | 111.43 | 118.30 |
| 26 | BB | 1243 | C | N1-C2-O2 | 7.63 | 123.48 | 118.90 |
| 26 | BB | 1365 | A | C5-N7-C8 | -7.63 | 100.08 | 103.90 |
| 26 | BB | 1724 | G | C5-N7-C8 | 7.63 | 108.12 | 104.30 |
| 26 | BB | 1823 | G | C5-N7-C8 | -7.63 | 100.48 | 104.30 |
| 26 | BB | 2308 | G | C4-C5-N7 | -7.63 | 107.75 | 110.80 |
| 1 | AA | 182 | A | C4-C5-N7 | 7.63 | 114.52 | 110.70 |
| 1 | AA | 503 | C | N3-C4-N4 | 7.63 | 123.34 | 118.00 |
| 1 | AA | 1464 | U | N1-C2-N3 | -7.63 | 110.32 | 114.90 |
| 26 | BB | 1250 | G | C5'-C4'-O4' | 7.63 | 118.26 | 109.10 |
| 26 | BB | 1418 | G | N9-C4-C5 | 7.63 | 108.45 | 105.40 |
| 26 | BB | 2054 | A | C6-N1-C2 | -7.63 | 114.02 | 118.60 |
| 1 | AA | 1300 | G | C3'-C2'-C1' | 7.63 | 107.60 | 101.50 |
| 1 | AA | 1467 | C | O4'-C1'-N1 | 7.63 | 114.30 | 108.20 |
| 12 | AL | 89 | TYR | CB-CG-CD2 | -7.63 | 116.42 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 18 | G | O4'-C1'-N9 | 7.63 | 114.30 | 108.20 |
| 25 | BA | 46 | A | C2-N3-C4 | -7.63 | 106.79 | 110.60 |
| 26 | BB | 509 | C | O4'-C1'-N1 | 7.63 | 114.30 | 108.20 |
| 26 | BB | 1829 | A | C5-C6-N1 | 7.63 | 121.51 | 117.70 |
| 26 | BB | 2262 | U | N3-C4-O4 | 7.63 | 124.74 | 119.40 |
| 26 | BB | 2762 | C | N3-C4-C5 | -7.63 | 118.85 | 121.90 |
| 1 | AA | 290 | C | N3-C4-N4 | 7.63 | 123.34 | 118.00 |
| 1 | AA | 1367 | C | N3-C4-C5 | -7.63 | 118.85 | 121.90 |
| 1 | AA | 1391 | U | N3-C2-O2 | -7.63 | 116.86 | 122.20 |
| 26 | BB | 1 | G | C2-N3-C4 | 7.63 | 115.71 | 111.90 |
| 26 | BB | 476 | G | C4-C5-C6 | 7.63 | 123.38 | 118.80 |
| 26 | BB | 2257 | U | C2-N3-C4 | -7.63 | 122.42 | 127.00 |
| 26 | BB | 5 | A | N1-C2-N3 | 7.62 | 133.11 | 129.30 |
| 26 | BB | 890 | C | N3-C4-N4 | 7.62 | 123.34 | 118.00 |
| 26 | BB | 1729 | U | C4'-C3'-C2' | -7.62 | 94.97 | 102.60 |
| 26 | BB | 2598 | A | N3-C4-N9 | 7.62 | 133.50 | 127.40 |
| 1 | AA | 1006 | G | C8-N9-C4 | -7.62 | 103.35 | 106.40 |
| 26 | BB | 832 | U | C4-C5-C6 | 7.62 | 124.27 | 119.70 |
| 1 | AA | 474 | G | O4'-C1'-N9 | 7.62 | 114.30 | 108.20 |
| 1 | AA | 625 | U | N1-C2-N3 | 7.62 | 119.47 | 114.90 |
| 1 | AA | 1251 | A | C8-N9-C4 | -7.62 | 102.75 | 105.80 |
| 1 | AA | 1522 | U | C5'-C4'-C3' | -7.62 | 103.81 | 116.00 |
| 25 | BA | 5 | U | C2-N3-C4 | -7.62 | 122.43 | 127.00 |
| 26 | BB | 437 | U | C5-C4-O4 | -7.62 | 121.33 | 125.90 |
| 26 | BB | 1207 | C | N1-C2-O2 | 7.62 | 123.47 | 118.90 |
| 26 | BB | 1575 | C | C4-C5-C6 | 7.62 | 121.21 | 117.40 |
| 1 | AA | 1326 | U | O4'-C1'-N1 | 7.62 | 114.30 | 108.20 |
| 26 | BB | 1722 | A | C1'-O4'-C4' | 7.62 | 116.00 | 109.90 |
| 26 | BB | 2865 | U | C2-N3-C4 | -7.62 | 122.43 | 127.00 |
| 1 | AA | 428 | G | N3-C2-N2 | 7.62 | 125.23 | 119.90 |
| 1 | AA | 637 | C | N1-C2-O2 | 7.62 | 123.47 | 118.90 |
| 1 | AA | 730 | G | N9-C1'-C2' | -7.62 | 103.62 | 112.00 |
| 26 | BB | 252 | G | N1-C2-N3 | -7.62 | 119.33 | 123.90 |
| 26 | BB | 1090 | A | O4'-C4'-C3' | 7.62 | 112.19 | 106.10 |
| 26 | BB | 1128 | G | C2-N3-C4 | 7.62 | 115.71 | 111.90 |
| 26 | BB | 1812 | U | O4'-C1'-N1 | 7.62 | 114.30 | 108.20 |
| 26 | BB | 2591 | C | C5'-C4'-O4' | 7.62 | 118.24 | 109.10 |
| 26 | BB | 2653 | U | C5-C4-O4 | -7.62 | 121.33 | 125.90 |
| 1 | AA | 130 | A | N1-C2-N3 | -7.62 | 125.49 | 129.30 |
| 1 | AA | 866 | C | O4'-C1'-N1 | 7.62 | 114.29 | 108.20 |
| 1 | AA | 1080 | A | C5-C6-N1 | 7.62 | 121.51 | 117.70 |
| 1 | AA | 104 | G | N1-C2-N3 | 7.62 | 128.47 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 271 | C | N1-C2-O2 | 7.62 | 123.47 | 118.90 |
| 1 | AA | 345 | C | N3-C4-C5 | 7.62 | 124.95 | 121.90 |
| 1 | AA | 457 | G | C2-N3-C4 | 7.62 | 115.71 | 111.90 |
| 1 | AA | 1099 | G | N3-C4-N9 | 7.62 | 130.57 | 126.00 |
| 25 | BA | 10 | G | C4-C5-N7 | -7.62 | 107.75 | 110.80 |
| 26 | BB | 103 | A | C5-C6-N6 | -7.62 | 117.61 | 123.70 |
| 26 | BB | 773 | U | C2-N3-C4 | -7.62 | 122.43 | 127.00 |
| 26 | BB | 1262 | A | N9-C4-C5 | 7.62 | 108.85 | 105.80 |
| 26 | BB | 1288 | G | C5-C6-O6 | 7.62 | 133.17 | 128.60 |
| 26 | BB | 1336 | A | C8-N9-C4 | -7.62 | 102.75 | 105.80 |
| 26 | BB | 1500 | G | C5'-C4'-O4' | 7.62 | 118.24 | 109.10 |
| 26 | BB | 1738 | G | O4'-C1'-N9 | 7.62 | 114.29 | 108.20 |
| 26 | BB | 2320 | U | P-O3'-C3' | 7.62 | 128.84 | 119.70 |
| 26 | BB | 2408 | U | C2-N3-C4 | -7.62 | 122.43 | 127.00 |
| 26 | BB | 2537 | U | C5'-C4'-O4' | 7.62 | 118.24 | 109.10 |
| 26 | BB | 2618 | G | C5-C6-O6 | -7.62 | 124.03 | 128.60 |
| 26 | BB | 2640 | G | C5-C6-N1 | 7.62 | 115.31 | 111.50 |
| 26 | BB | 2691 | C | C5-C4-N4 | 7.62 | 125.53 | 120.20 |
| 26 | BB | 2716 | C | C3'-C2'-C1' | 7.62 | 107.59 | 101.50 |
| 33 | BI | 50 | ARG | NE-CZ-NH2 | 7.62 | 124.11 | 120.30 |
| 1 | AA | 57 | G | C8-N9-C4 | -7.61 | 103.36 | 106.40 |
| 1 | AA | 562 | U | C3'-C2'-C1' | -7.61 | 95.41 | 101.50 |
| 1 | AA | 1127 | G | N7-C8-N9 | 7.61 | 116.91 | 113.10 |
| 1 | AA | 1153 | G | O4'-C1'-N9 | 7.61 | 114.29 | 108.20 |
| 1 | AA | 1213 | A | C5-N7-C8 | -7.61 | 100.09 | 103.90 |
| 1 | AA | 1263 | C | C4'-C3'-C2' | -7.61 | 94.99 | 102.60 |
| 2 | AB | 42 | G | N3-C4-C5 | -7.61 | 124.79 | 128.60 |
| 4 | AD | 17 | C | C5'-C4'-O4' | 7.61 | 118.24 | 109.10 |
| 25 | BA | 58 | A | O4'-C1'-N9 | 7.61 | 114.29 | 108.20 |
| 26 | BB | 386 | G | C3'-C2'-C1' | 7.61 | 107.59 | 101.50 |
| 26 | BB | 498 | G | N1-C6-O6 | -7.61 | 115.33 | 119.90 |
| 26 | BB | 718 | A | C1'-O4'-C4' | -7.61 | 103.81 | 109.90 |
| 26 | BB | 2590 | A | O4'-C1'-N9 | 7.61 | 114.29 | 108.20 |
| 1 | AA | 723 | U | N1-C2-O2 | 7.61 | 128.13 | 122.80 |
| 1 | AA | 746 | A | C5-C6-N6 | -7.61 | 117.61 | 123.70 |
| 1 | AA | 1057 | G | C4'-C3'-C2' | -7.61 | 94.99 | 102.60 |
| 26 | BB | 23 | G | C4-C5-N7 | -7.61 | 107.75 | 110.80 |
| 26 | BB | 179 | C | N3-C4-N4 | 7.61 | 123.33 | 118.00 |
| 26 | BB | 2146 | C | C5-C6-N1 | -7.61 | 117.19 | 121.00 |
| 1 | AA | 244 | U | O4'-C1'-N1 | 7.61 | 114.29 | 108.20 |
| 1 | AA | 337 | G | C6-N1-C2 | -7.61 | 120.53 | 125.10 |
| 1 | AA | 522 | C | N1-C2-O2 | 7.61 | 123.47 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 57 | A | C3'-C2'-C1' | -7.61 | 95.41 | 101.50 |
| 26 | BB | 177 | G | C5-N7-C8 | 7.61 | 108.11 | 104.30 |
| 26 | BB | 192 | C | N3-C4-C5 | 7.61 | 124.94 | 121.90 |
| 26 | BB | 561 | G | C4-C5-N7 | -7.61 | 107.76 | 110.80 |
| 26 | BB | 1186 | G | C1'-O4'-C4' | 7.61 | 115.99 | 109.90 |
| 26 | BB | 1391 | U | C6-N1-C2 | -7.61 | 116.43 | 121.00 |
| 26 | BB | 1537 | G | C5-N7-C8 | -7.61 | 100.50 | 104.30 |
| 26 | BB | 1559 | U | C2-N3-C4 | -7.61 | 122.43 | 127.00 |
| 26 | BB | 1654 | A | C5-N7-C8 | -7.61 | 100.09 | 103.90 |
| 26 | BB | 2422 | C | C4'-C3'-C2' | -7.61 | 94.99 | 102.60 |
| 26 | BB | 2526 | G | C5-N7-C8 | -7.61 | 100.50 | 104.30 |
| 26 | BB | 512 | G | C4-C5-N7 | -7.61 | 107.76 | 110.80 |
| 26 | BB | 675 | A | C5-N7-C8 | -7.61 | 100.10 | 103.90 |
| 26 | BB | 1097 | U | O4'-C4'-C3' | 7.61 | 112.19 | 106.10 |
| 26 | BB | 1168 | G | N1-C6-O6 | -7.61 | 115.33 | 119.90 |
| 26 | BB | 1963 | U | P-O3'-C3' | 7.61 | 128.83 | 119.70 |
| 26 | BB | 2273 | A | C4-C5-N7 | 7.61 | 114.50 | 110.70 |
| 26 | BB | 2571 | U | N3-C2-O2 | -7.61 | 116.87 | 122.20 |
| 1 | AA | 1527 | U | O4'-C1'-N1 | 7.61 | 114.29 | 108.20 |
| 26 | BB | 254 | G | C4-C5-N7 | -7.61 | 107.76 | 110.80 |
| 26 | BB | 740 | C | N3-C4-C5 | 7.61 | 124.94 | 121.90 |
| 26 | BB | 1678 | A | N9-C4-C5 | 7.61 | 108.84 | 105.80 |
| 1 | AA | 740 | U | O4'-C1'-N1 | 7.61 | 114.28 | 108.20 |
| 1 | AA | 379 | C | N3-C4-C5 | 7.60 | 124.94 | 121.90 |
| 1 | AA | 799 | G | N9-C4-C5 | 7.60 | 108.44 | 105.40 |
| 1 | AA | 1242 | G | C4-C5-N7 | 7.60 | 113.84 | 110.80 |
| 1 | AA | 1529 | G | C3'-C2'-C1' | 7.60 | 107.58 | 101.50 |
| 26 | BB | 556 | A | C5'-C4'-O4' | 7.60 | 118.22 | 109.10 |
| 26 | BB | 2237 | G | O4'-C1'-N9 | 7.60 | 114.28 | 108.20 |
| 26 | BB | 2517 | C | N3-C4-N4 | -7.60 | 112.68 | 118.00 |
| 1 | AA | 36 | C | C4-C5-C6 | 7.60 | 121.20 | 117.40 |
| 1 | AA | 198 | G | C6-C5-N7 | -7.60 | 125.84 | 130.40 |
| 1 | AA | 524 | G | C5-N7-C8 | -7.60 | 100.50 | 104.30 |
| 1 | AA | 1000 | A | C4-C5-C6 | -7.60 | 113.20 | 117.00 |
| 26 | BB | 911 | A | C4-C5-N7 | 7.60 | 114.50 | 110.70 |
| 26 | BB | 1572 | A | C5-N7-C8 | 7.60 | 107.70 | 103.90 |
| 26 | BB | 1723 | G | C5-C6-N1 | 7.60 | 115.30 | 111.50 |
| 26 | BB | 1837 | C | N3-C4-N4 | 7.60 | 123.32 | 118.00 |
| 26 | BB | 2225 | A | C8-N9-C4 | -7.60 | 102.76 | 105.80 |
| 26 | BB | 2479 | U | O4'-C1'-N1 | 7.60 | 114.28 | 108.20 |
| 27 | BC | 7 | ARG | NE-CZ-NH1 | 7.60 | 124.10 | 120.30 |
| 1 | AA | 845 | A | C4-C5-C6 | -7.60 | 113.20 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 540 | C | O4'-C4'-C3' | 7.60 | 112.18 | 106.10 |
| 26 | BB | 874 | G | N3-C4-C5 | -7.60 | 124.80 | 128.60 |
| 26 | BB | 1398 | C | N3-C4-N4 | 7.60 | 123.32 | 118.00 |
| 1 | AA | 710 | G | N3-C2-N2 | -7.60 | 114.58 | 119.90 |
| 26 | BB | 175 | G | N9-C1'-C2' | -7.60 | 103.64 | 112.00 |
| 26 | BB | 222 | A | O4'-C4'-C3' | 7.60 | 112.18 | 106.10 |
| 26 | BB | 1215 | G | N3-C4-C5 | -7.60 | 124.80 | 128.60 |
| 26 | BB | 2266 | A | N1-C6-N6 | -7.60 | 114.04 | 118.60 |
| 1 | AA | 63 | C | N1-C2-O2 | 7.60 | 123.46 | 118.90 |
| 1 | AA | 259 | G | N1-C6-O6 | 7.60 | 124.46 | 119.90 |
| 1 | AA | 546 | A | N1-C2-N3 | -7.60 | 125.50 | 129.30 |
| 1 | AA | 996 | A | N1-C6-N6 | 7.60 | 123.16 | 118.60 |
| 26 | BB | 142 | A | N1-C6-N6 | -7.60 | 114.04 | 118.60 |
| 26 | BB | 303 | G | N9-C4-C5 | 7.60 | 108.44 | 105.40 |
| 26 | BB | 417 | C | O4'-C1'-N1 | 7.60 | 114.28 | 108.20 |
| 26 | BB | 1097 | U | C6-N1-C2 | -7.60 | 116.44 | 121.00 |
| 26 | BB | 1189 | A | N7-C8-N9 | 7.60 | 117.60 | 113.80 |
| 26 | BB | 2133 | G | C2-N3-C4 | 7.60 | 115.70 | 111.90 |
| 26 | BB | 2291 | U | O4'-C1'-N1 | 7.60 | 114.28 | 108.20 |
| 26 | BB | 2752 | C | P-O3'-C3' | 7.60 | 128.82 | 119.70 |
| 1 | AA | 1244 | G | C4'-C3'-C2' | -7.60 | 95.00 | 102.60 |
| 1 | AA | 1292 | G | N3-C4-N9 | 7.60 | 130.56 | 126.00 |
| 26 | BB | 2628 | C | O4'-C4'-C3' | 7.60 | 112.18 | 106.10 |
| 27 | BC | 134 | ARG | NE-CZ-NH2 | -7.60 | 116.50 | 120.30 |
| 26 | BB | 204 | A | N7-C8-N9 | 7.59 | 117.60 | 113.80 |
| 26 | BB | 819 | A | C5-C6-N1 | 7.59 | 121.50 | 117.70 |
| 26 | BB | 926 | G | O4'-C1'-N9 | 7.59 | 114.28 | 108.20 |
| 26 | BB | 976 | G | N1-C2-N2 | 7.59 | 123.04 | 116.20 |
| 26 | BB | 1642 | G | C8-N9-C4 | -7.59 | 103.36 | 106.40 |
| 26 | BB | 2750 | A | C6-N1-C2 | 7.59 | 123.16 | 118.60 |
| 1 | AA | 430 | A | N9-C4-C5 | 7.59 | 108.84 | 105.80 |
| 1 | AA | 653 | U | C5-C4-O4 | 7.59 | 130.46 | 125.90 |
| 1 | AA | 1071 | C | N1-C2-O2 | 7.59 | 123.46 | 118.90 |
| 2 | AB | 26 | A | O5'-P-OP1 | -7.59 | 98.87 | 105.70 |
| 1 | AA | 113 | G | N1-C2-N2 | 7.59 | 123.03 | 116.20 |
| 1 | AA | 969 | A | C5-C6-N1 | -7.59 | 113.90 | 117.70 |
| 26 | BB | 6 | A | N3-C4-N9 | 7.59 | 133.47 | 127.40 |
| 26 | BB | 402 | A | C1'-O4'-C4' | 7.59 | 115.97 | 109.90 |
| 26 | BB | 1918 | A | N1-C6-N6 | 7.59 | 123.16 | 118.60 |
| 26 | BB | 2593 | U | C5-C4-O4 | -7.59 | 121.34 | 125.90 |
| 1 | AA | 592 | G | C5-C6-O6 | 7.59 | 133.15 | 128.60 |
| 26 | BB | 874 | G | C6-C5-N7 | 7.59 | 134.95 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 904 | G | C5-N7-C8 | -7.59 | 100.50 | 104.30 |
| 26 | BB | 1135 | C | N3-C4-C5 | 7.59 | 124.94 | 121.90 |
| 26 | BB | 1479 | G | N1-C6-O6 | -7.59 | 115.35 | 119.90 |
| 26 | BB | 2196 | C | O4'-C1'-N1 | 7.59 | 114.27 | 108.20 |
| 26 | BB | 2469 | A | C6-C5-N7 | 7.59 | 137.61 | 132.30 |
| 1 | AA | 130 | A | N9-C4-C5 | 7.59 | 108.83 | 105.80 |
| 1 | AA | 181 | A | C3'-C2'-C1' | -7.59 | 95.43 | 101.50 |
| 1 | AA | 774 | G | N3-C4-N9 | 7.59 | 130.55 | 126.00 |
| 1 | AA | 1045 | C | O4'-C1'-N1 | 7.59 | 114.27 | 108.20 |
| 3 | AC | 48 | C | N1-C1'-C2' | -7.59 | 103.65 | 112.00 |
| 26 | BB | 597 | G | N3-C4-C5 | -7.59 | 124.81 | 128.60 |
| 26 | BB | 636 | G | N1-C6-O6 | -7.59 | 115.35 | 119.90 |
| 26 | BB | 2183 | A | C6-N1-C2 | -7.59 | 114.05 | 118.60 |
| 1 | AA | 860 | A | C8-N9-C4 | -7.59 | 102.77 | 105.80 |
| 1 | AA | 1165 | U | N1-C2-O2 | 7.59 | 128.11 | 122.80 |
| 1 | AA | 1542 | A | N1-C2-N3 | -7.59 | 125.51 | 129.30 |
| 26 | BB | 494 | G | C6-N1-C2 | -7.59 | 120.55 | 125.10 |
| 26 | BB | 2006 | C | C3'-C2'-C1' | 7.59 | 107.57 | 101.50 |
| 26 | BB | 2097 | A | C6-N1-C2 | 7.59 | 123.15 | 118.60 |
| 26 | BB | 2216 | G | N3-C4-C5 | -7.59 | 124.81 | 128.60 |
| 40 | BP | 44 | LEU | CB-CG-CD1 | 7.59 | 123.90 | 111.00 |
| 26 | BB | 2882 | A | N9-C1'-C2' | -7.58 | 103.66 | 112.00 |
| 1 | AA | 387 | U | O4'-C1'-N1 | 7.58 | 114.27 | 108.20 |
| 1 | AA | 485 | U | N1-C2-N3 | 7.58 | 119.45 | 114.90 |
| 26 | BB | 376 | G | C6-C5-N7 | -7.58 | 125.85 | 130.40 |
| 26 | BB | 505 | A | N7-C8-N9 | 7.58 | 117.59 | 113.80 |
| 26 | BB | 751 | A | C5-C6-N1 | -7.58 | 113.91 | 117.70 |
| 26 | BB | 1115 | G | C5-C6-N1 | 7.58 | 115.29 | 111.50 |
| 26 | BB | 1330 | C | C5-C4-N4 | -7.58 | 114.89 | 120.20 |
| 26 | BB | 1705 | A | C5-N7-C8 | -7.58 | 100.11 | 103.90 |
| 26 | BB | 2466 | C | N3-C2-O2 | -7.58 | 116.59 | 121.90 |
| 26 | BB | 2636 | C | C6-N1-C2 | 7.58 | 123.33 | 120.30 |
| 26 | BB | 2745 | C | C3'-C2'-C1' | 7.58 | 107.57 | 101.50 |
| 26 | BB | 2820 | A | O4'-C1'-N9 | 7.58 | 114.27 | 108.20 |
| 1 | AA | 158 | G | N3-C4-C5 | -7.58 | 124.81 | 128.60 |
| 26 | BB | 287 | G | O4'-C1'-C2' | -7.58 | 98.22 | 105.80 |
| 26 | BB | 754 | U | O4'-C1'-N1 | 7.58 | 114.26 | 108.20 |
| 26 | BB | 2150 | C | C2-N3-C4 | 7.58 | 123.69 | 119.90 |
| 26 | BB | 2515 | C | C5'-C4'-C3' | 7.58 | 128.13 | 116.00 |
| 1 | AA | 44 | A | N1-C2-N3 | -7.58 | 125.51 | 129.30 |
| 1 | AA | 498 | A | C4-C5-C6 | -7.58 | 113.21 | 117.00 |
| 26 | BB | 809 | G | C8-N9-C4 | -7.58 | 103.37 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 905 | A | C2-N3-C4 | 7.58 | 114.39 | 110.60 |
| 26 | BB | 2351 | G | C1'-O4'-C4' | 7.58 | 115.96 | 109.90 |
| 25 | BA | 94 | A | C2-N3-C4 | 7.58 | 114.39 | 110.60 |
| 26 | BB | 1633 | G | N3-C2-N2 | 7.58 | 125.20 | 119.90 |
| 26 | BB | 2092 | U | N3-C2-O2 | -7.58 | 116.90 | 122.20 |
| 1 | AA | 1126 | U | O4'-C1'-N1 | 7.58 | 114.26 | 108.20 |
| 1 | AA | 1400 | C | C6-N1-C2 | -7.58 | 117.27 | 120.30 |
| 26 | BB | 797 | G | C6-N1-C2 | -7.58 | 120.56 | 125.10 |
| 26 | BB | 1004 | U | C4-C5-C6 | 7.58 | 124.25 | 119.70 |
| 26 | BB | 1182 | G | C8-N9-C4 | -7.58 | 103.37 | 106.40 |
| 26 | BB | 2366 | A | C6-N1-C2 | -7.58 | 114.05 | 118.60 |
| 1 | AA | 709 | U | N3-C2-O2 | -7.57 | 116.90 | 122.20 |
| 26 | BB | 628 | G | C8-N9-C4 | -7.57 | 103.37 | 106.40 |
| 26 | BB | 657 | U | N3-C4-O4 | 7.57 | 124.70 | 119.40 |
| 26 | BB | 1299 | G | O4'-C1'-N9 | 7.57 | 114.26 | 108.20 |
| 26 | BB | 2106 | U | C5'-C4'-O4' | 7.57 | 118.19 | 109.10 |
| 26 | BB | 2827 | C | C2-N3-C4 | 7.57 | 123.69 | 119.90 |
| 1 | AA | 203 | G | C6-N1-C2 | -7.57 | 120.56 | 125.10 |
| 1 | AA | 835 | U | C4'-C3'-C2' | -7.57 | 95.03 | 102.60 |
| 26 | BB | 666 | A | N9-C4-C5 | -7.57 | 102.77 | 105.80 |
| 26 | BB | 1000 | A | N9-C4-C5 | 7.57 | 108.83 | 105.80 |
| 26 | BB | 2627 | G | O4'-C1'-N9 | 7.57 | 114.26 | 108.20 |
| 1 | AA | 1479 | C | N3-C4-N4 | 7.57 | 123.30 | 118.00 |
| 26 | BB | 656 | G | C5-C6-O6 | -7.57 | 124.06 | 128.60 |
| 26 | BB | 1250 | G | O3'-P-O5' | -7.57 | 89.62 | 104.00 |
| 26 | BB | 1803 | A | N9-C4-C5 | 7.57 | 108.83 | 105.80 |
| 26 | BB | 2319 | G | O4'-C4'-C3' | 7.57 | 112.16 | 106.10 |
| 26 | BB | 2904 | U | C3'-C2'-C1' | 7.57 | 107.56 | 101.50 |
| 1 | AA | 649 | A | C6-C5-N7 | 7.57 | 137.60 | 132.30 |
| 1 | AA | 769 | G | N9-C4-C5 | -7.57 | 102.37 | 105.40 |
| 1 | AA | 776 | G | N3-C2-N2 | 7.57 | 125.20 | 119.90 |
| 17 | AQ | 40 | ARG | NE-CZ-NH1 | 7.57 | 124.08 | 120.30 |
| 26 | BB | 1270 | C | C5-C4-N4 | 7.57 | 125.50 | 120.20 |
| 26 | BB | 2736 | A | N3-C4-N9 | 7.57 | 133.46 | 127.40 |
| 1 | AA | 1429 | A | O5'-P-OP1 | -7.57 | 98.89 | 105.70 |
| 2 | AB | 71 | C | N1-C2-N3 | -7.57 | 113.90 | 119.20 |
| 26 | BB | 29 | U | C5-C6-N1 | -7.57 | 118.92 | 122.70 |
| 26 | BB | 1311 | G | C2-N3-C4 | 7.57 | 115.68 | 111.90 |
| 26 | BB | 1513 | U | C3'-C2'-C1' | 7.57 | 107.56 | 101.50 |
| 26 | BB | 1516 | G | C8-N9-C4 | -7.57 | 103.37 | 106.40 |
| 26 | BB | 1588 | G | C6-C5-N7 | -7.57 | 125.86 | 130.40 |
| 26 | BB | 1672 | A | C8-N9-C4 | -7.57 | 102.77 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1684 | G | C4-C5-C6 | 7.57 | 123.34 | 118.80 |
| 26 | BB | 1902 | C | C6-N1-C2 | -7.57 | 117.27 | 120.30 |
| 26 | BB | 2109 | U | N1-C1'-C2' | 7.57 | 123.84 | 114.00 |
| 26 | BB | 2476 | A | C5-C6-N1 | -7.57 | 113.92 | 117.70 |
| 26 | BB | 2665 | A | C2-N3-C4 | 7.57 | 114.38 | 110.60 |
| 1 | AA | 978 | A | O4'-C1'-C2' | 7.57 | 114.41 | 107.60 |
| 25 | BA | 46 | A | O4'-C1'-N9 | 7.57 | 114.25 | 108.20 |
| 26 | BB | 1521 | G | C5-N7-C8 | -7.57 | 100.52 | 104.30 |
| 26 | BB | 2315 | G | C6-C5-N7 | -7.57 | 125.86 | 130.40 |
| 1 | AA | 409 | U | O4'-C1'-N1 | 7.56 | 114.25 | 108.20 |
| 26 | BB | 1332 | G | N9-C4-C5 | 7.56 | 108.43 | 105.40 |
| 26 | BB | 2200 | C | N3-C4-N4 | -7.56 | 112.70 | 118.00 |
| 1 | AA | 309 | A | C5-C6-N6 | -7.56 | 117.65 | 123.70 |
| 1 | AA | 600 | A | C5-N7-C8 | -7.56 | 100.12 | 103.90 |
| 1 | AA | 612 | C | N3-C4-C5 | -7.56 | 118.88 | 121.90 |
| 1 | AA | 696 | A | C1'-O4'-C4' | -7.56 | 103.85 | 109.90 |
| 1 | AA | 763 | G | C2-N3-C4 | 7.56 | 115.68 | 111.90 |
| 1 | AA | 898 | G | C5-C6-N1 | 7.56 | 115.28 | 111.50 |
| 1 | AA | 1073 | U | C5'-C4'-O4' | 7.56 | 118.17 | 109.10 |
| 1 | AA | 1361 | G | N3-C4-C5 | -7.56 | 124.82 | 128.60 |
| 1 | AA | 1425 | U | N1-C1'-C2' | -7.56 | 103.68 | 112.00 |
| 1 | AA | 1517 | G | C5-C6-N1 | 7.56 | 115.28 | 111.50 |
| 26 | BB | 562 | U | C4-C5-C6 | 7.56 | 124.24 | 119.70 |
| 26 | BB | 804 | A | C5'-C4'-C3' | 7.56 | 128.10 | 116.00 |
| 26 | BB | 1633 | G | C5-C6-N1 | 7.56 | 115.28 | 111.50 |
| 26 | BB | 2712 | C | C5-C4-N4 | -7.56 | 114.91 | 120.20 |
| 32 | BH | 11 | PRO | N-CA-CB | 7.56 | 112.38 | 103.30 |
| 1 | AA | 1024 | G | C8-N9-C4 | -7.56 | 103.38 | 106.40 |
| 25 | BA | 111 | U | N1-C2-N3 | -7.56 | 110.36 | 114.90 |
| 26 | BB | 1651 | G | N1-C6-O6 | 7.56 | 124.44 | 119.90 |
| 26 | BB | 1831 | G | N1-C6-O6 | -7.56 | 115.36 | 119.90 |
| 26 | BB | 2290 | G | C6-C5-N7 | 7.56 | 134.94 | 130.40 |
| 1 | AA | 448 | A | C6-C5-N7 | 7.56 | 137.59 | 132.30 |
| 1 | AA | 1164 | G | C4-C5-N7 | -7.56 | 107.78 | 110.80 |
| 2 | AB | 42 | G | C8-N9-C4 | -7.56 | 103.38 | 106.40 |
| 26 | BB | 1025 | G | C6-N1-C2 | -7.56 | 120.56 | 125.10 |
| 26 | BB | 2027 | G | O4'-C1'-C2' | 7.56 | 114.40 | 107.60 |
| 26 | BB | 2385 | C | C6-N1-C2 | 7.56 | 123.32 | 120.30 |
| 26 | BB | 2755 | C | N3-C2-O2 | -7.56 | 116.61 | 121.90 |
| 1 | AA | 563 | A | C5-C6-N6 | -7.56 | 117.65 | 123.70 |
| 26 | BB | 477 | A | C4'-C3'-C2' | -7.56 | 95.04 | 102.60 |
| 26 | BB | 519 | U | O4'-C1'-N1 | 7.56 | 114.25 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 883 | G | O4'-C1'-N9 | 7.56 | 114.25 | 108.20 |
| 26 | BB | 2444 | G | C8-N9-C4 | -7.56 | 103.38 | 106.40 |
| 1 | AA | 1311 | A | N1-C2-N3 | -7.56 | 125.52 | 129.30 |
| 1 | AA | 1030 | U | C2-N3-C4 | -7.55 | 122.47 | 127.00 |
| 1 | AA | 1530 | G | C5-C6-N1 | -7.55 | 107.72 | 111.50 |
| 26 | BB | 113 | U | C4'-C3'-C2' | 7.55 | 110.15 | 102.60 |
| 26 | BB | 764 | A | C3'-C2'-C1' | 7.55 | 107.54 | 101.50 |
| 26 | BB | 2759 | G | C4-C5-N7 | -7.55 | 107.78 | 110.80 |
| 1 | AA | 195 | A | C6-C5-N7 | 7.55 | 137.59 | 132.30 |
| 1 | AA | 780 | A | N1-C2-N3 | -7.55 | 125.52 | 129.30 |
| 1 | AA | 1108 | G | C2-N3-C4 | 7.55 | 115.68 | 111.90 |
| 1 | AA | 1444 | U | C3'-C2'-C1' | 7.55 | 107.54 | 101.50 |
| 26 | BB | 167 | A | N1-C6-N6 | 7.55 | 123.13 | 118.60 |
| 26 | BB | 190 | A | C5-N7-C8 | -7.55 | 100.12 | 103.90 |
| 1 | AA | 443 | C | N3-C4-C5 | -7.55 | 118.88 | 121.90 |
| 1 | AA | 1169 | A | N3-C4-C5 | -7.55 | 121.52 | 126.80 |
| 26 | BB | 508 | A | N9-C4-C5 | 7.55 | 108.82 | 105.80 |
| 26 | BB | 1268 | A | O4'-C1'-N9 | 7.55 | 114.24 | 108.20 |
| 26 | BB | 2012 | G | N3-C4-N9 | -7.55 | 121.47 | 126.00 |
| 26 | BB | 2093 | G | C2-N3-C4 | 7.55 | 115.67 | 111.90 |
| 26 | BB | 2189 | U | O4'-C1'-N1 | 7.55 | 114.24 | 108.20 |
| 26 | BB | 2865 | U | O4'-C4'-C3' | 7.55 | 112.14 | 106.10 |
| 1 | AA | 934 | C | N3-C2-O2 | -7.55 | 116.62 | 121.90 |
| 25 | BA | 75 | G | C5'-C4'-O4' | 7.55 | 118.16 | 109.10 |
| 26 | BB | 2579 | C | O4'-C4'-C3' | 7.55 | 112.14 | 106.10 |
| 1 | AA | 41 | G | C6-N1-C2 | -7.55 | 120.57 | 125.10 |
| 1 | AA | 219 | U | C2-N3-C4 | -7.55 | 122.47 | 127.00 |
| 1 | AA | 238 | A | N9-C4-C5 | -7.55 | 102.78 | 105.80 |
| 1 | AA | 746 | A | C4'-C3'-C2' | -7.55 | 95.05 | 102.60 |
| 1 | AA | 1078 | U | O4'-C1'-C2' | 7.55 | 114.39 | 107.60 |
| 26 | BB | 691 | C | C5'-C4'-C3' | -7.55 | 103.93 | 116.00 |
| 26 | BB | 737 | C | N1-C1'-C2' | -7.55 | 103.70 | 112.00 |
| 26 | BB | 927 | A | C4-C5-N7 | -7.55 | 106.93 | 110.70 |
| 26 | BB | 1590 | A | O4'-C4'-C3' | 7.55 | 112.14 | 106.10 |
| 26 | BB | 1891 | G | N7-C8-N9 | 7.55 | 116.87 | 113.10 |
| 26 | BB | 2280 | G | C4'-C3'-C2' | -7.55 | 95.05 | 102.60 |
| 1 | AA | 680 | C | C5'-C4'-O4' | 7.54 | 118.15 | 109.10 |
| 26 | BB | 1177 | G | C8-N9-C1' | 7.54 | 136.81 | 127.00 |
| 25 | BA | 99 | A | C4-C5-C6 | 7.54 | 120.77 | 117.00 |
| 26 | BB | 7 | G | N3-C2-N2 | -7.54 | 114.62 | 119.90 |
| 26 | BB | 57 | C | N3-C4-C5 | 7.54 | 124.92 | 121.90 |
| 26 | BB | 499 | U | C5'-C4'-O4' | 7.54 | 118.15 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 603 | A | C5-C6-N1 | 7.54 | 121.47 | 117.70 |
| 26 | BB | 650 | C | C2-N3-C4 | -7.54 | 116.13 | 119.90 |
| 26 | BB | 823 | C | N3-C4-C5 | -7.54 | 118.88 | 121.90 |
| 26 | BB | 840 | C | C3'-C2'-C1' | 7.54 | 107.53 | 101.50 |
| 26 | BB | 1157 | G | C5-C6-N1 | 7.54 | 115.27 | 111.50 |
| 26 | BB | 1192 | G | O4'-C1'-N9 | 7.54 | 114.23 | 108.20 |
| 26 | BB | 1937 | A | C4'-C3'-C2' | -7.54 | 95.06 | 102.60 |
| 26 | BB | 2446 | G | C8-N9-C4 | -7.54 | 103.38 | 106.40 |
| 1 | AA | 139 | A | C4-C5-C6 | 7.54 | 120.77 | 117.00 |
| 1 | AA | 1133 | G | N3-C4-C5 | 7.54 | 132.37 | 128.60 |
| 26 | BB | 1237 | A | C6-C5-N7 | 7.54 | 137.58 | 132.30 |
| 26 | BB | 2688 | G | O4'-C1'-N9 | -7.54 | 102.17 | 108.20 |
| 1 | AA | 56 | U | N3-C4-O4 | 7.54 | 124.68 | 119.40 |
| 1 | AA | 59 | A | N7-C8-N9 | 7.54 | 117.57 | 113.80 |
| 1 | AA | 303 | A | N1-C2-N3 | -7.54 | 125.53 | 129.30 |
| 1 | AA | 719 | C | N3-C2-O2 | -7.54 | 116.62 | 121.90 |
| 25 | BA | 56 | G | C2-N3-C4 | 7.54 | 115.67 | 111.90 |
| 26 | BB | 104 | A | N1-C2-N3 | -7.54 | 125.53 | 129.30 |
| 26 | BB | 550 | C | O4'-C1'-N1 | 7.54 | 114.23 | 108.20 |
| 26 | BB | 1543 | G | N3-C4-C5 | -7.54 | 124.83 | 128.60 |
| 42 | BR | 61 | ARG | NE-CZ-NH1 | -7.54 | 116.53 | 120.30 |
| 1 | AA | 601 | G | C6-N1-C2 | 7.54 | 129.62 | 125.10 |
| 26 | BB | 317 | G | N3-C2-N2 | -7.54 | 114.62 | 119.90 |
| 26 | BB | 1250 | G | N9-C4-C5 | 7.54 | 108.42 | 105.40 |
| 26 | BB | 1653 | G | C8-N9-C4 | -7.54 | 103.39 | 106.40 |
| 26 | BB | 1822 | C | O4'-C1'-N1 | 7.54 | 114.23 | 108.20 |
| 26 | BB | 1855 | U | C5-C6-N1 | -7.54 | 118.93 | 122.70 |
| 26 | BB | 2076 | U | C4-C5-C6 | 7.54 | 124.22 | 119.70 |
| 26 | BB | 1866 | A | C8-N9-C4 | -7.54 | 102.78 | 105.80 |
| 26 | BB | 2828 | G | N1-C2-N2 | 7.54 | 122.98 | 116.20 |
| 1 | AA | 1378 | C | N3-C4-C5 | 7.54 | 124.91 | 121.90 |
| 6 | AF | 21 | TRP | CE2-CD2-CG | 7.54 | 113.33 | 107.30 |
| 25 | BA | 13 | G | C4-C5-C6 | 7.54 | 123.32 | 118.80 |
| 26 | BB | 1074 | G | C6-N1-C2 | -7.54 | 120.58 | 125.10 |
| 26 | BB | 1209 | U | P-O3'-C3' | 7.54 | 128.74 | 119.70 |
| 26 | BB | 1669 | A | C1'-O4'-C4' | -7.54 | 103.87 | 109.90 |
| 26 | BB | 1759 | A | O4'-C1'-N9 | 7.54 | 114.23 | 108.20 |
| 26 | BB | 2090 | A | N1-C2-N3 | 7.54 | 133.07 | 129.30 |
| 1 | AA | 827 | U | N3-C2-O2 | -7.53 | 116.93 | 122.20 |
| 1 | AA | 853 | C | C6-N1-C2 | 7.53 | 123.31 | 120.30 |
| 1 | AA | 1128 | C | C3'-C2'-C1' | -7.53 | 95.47 | 101.50 |
| 1 | AA | 1258 | G | C5-N7-C8 | -7.53 | 100.53 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1344 | C | N3-C2-O2 | -7.53 | 116.63 | 121.90 |
| 26 | BB | 300 | A | N1-C6-N6 | -7.53 | 114.08 | 118.60 |
| 26 | BB | 1151 | A | N1-C2-N3 | -7.53 | 125.53 | 129.30 |
| 26 | BB | 2403 | C | C5'-C4'-O4' | 7.53 | 118.14 | 109.10 |
| 26 | BB | 486 | C | C1'-O4'-C4' | 7.53 | 115.93 | 109.90 |
| 26 | BB | 963 | U | C4'-C3'-C2' | -7.53 | 95.07 | 102.60 |
| 26 | BB | 965 | C | C6-N1-C2 | -7.53 | 117.29 | 120.30 |
| 1 | AA | 512 | U | C5-C6-N1 | -7.53 | 118.93 | 122.70 |
| 1 | AA | 1110 | A | O4'-C1'-N9 | 7.53 | 114.22 | 108.20 |
| 1 | AA | 1233 | G | O4'-C1'-N9 | 7.53 | 114.22 | 108.20 |
| 26 | BB | 2877 | G | C8-N9-C4 | -7.53 | 103.39 | 106.40 |
| 1 | AA | 433 | G | C3'-C2'-C1' | -7.53 | 95.48 | 101.50 |
| 25 | BA | 92 | C | C5-C4-N4 | -7.53 | 114.93 | 120.20 |
| 26 | BB | 2347 | C | C3'-C2'-C1' | 7.53 | 107.52 | 101.50 |
| 1 | AA | 181 | A | C5-C6-N1 | 7.53 | 121.46 | 117.70 |
| 1 | AA | 1160 | G | C8-N9-C4 | -7.53 | 103.39 | 106.40 |
| 1 | AA | 1218 | C | N3-C2-O2 | -7.53 | 116.63 | 121.90 |
| 1 | AA | 1255 | G | N3-C4-C5 | -7.53 | 124.84 | 128.60 |
| 26 | BB | 582 | A | N9-C1'-C2' | -7.53 | 103.72 | 112.00 |
| 26 | BB | 931 | U | C2-N3-C4 | -7.53 | 122.48 | 127.00 |
| 26 | BB | 1876 | A | C8-N9-C4 | -7.53 | 102.79 | 105.80 |
| 26 | BB | 2277 | G | C2-N3-C4 | 7.53 | 115.66 | 111.90 |
| 26 | BB | 2385 | C | O4'-C1'-N1 | 7.53 | 114.22 | 108.20 |
| 26 | BB | 2670 | A | C1'-O4'-C4' | -7.53 | 103.88 | 109.90 |
| 26 | BB | 2782 | G | N3-C2-N2 | 7.53 | 125.17 | 119.90 |
| 1 | AA | 838 | G | N9-C4-C5 | 7.53 | 108.41 | 105.40 |
| 3 | AC | 19 | A | C1'-O4'-C4' | -7.53 | 103.88 | 109.90 |
| 26 | BB | 478 | A | N3-C4-N9 | -7.53 | 121.38 | 127.40 |
| 26 | BB | 2084 | C | N3-C4-C5 | -7.53 | 118.89 | 121.90 |
| 26 | BB | 2702 | G | N3-C2-N2 | -7.53 | 114.63 | 119.90 |
| 26 | BB | 392 | U | C5-C6-N1 | -7.52 | 118.94 | 122.70 |
| 20 | AT | 33 | TYR | CG-CD1-CE1 | -7.52 | 115.28 | 121.30 |
| 26 | BB | 293 | U | N3-C4-C5 | 7.52 | 119.11 | 114.60 |
| 26 | BB | 455 | C | N3-C4-C5 | -7.52 | 118.89 | 121.90 |
| 26 | BB | 874 | G | C5-C6-N1 | 7.52 | 115.26 | 111.50 |
| 26 | BB | 1263 | U | C3'-C2'-C1' | 7.52 | 107.52 | 101.50 |
| 26 | BB | 1514 | G | N3-C4-C5 | -7.52 | 124.84 | 128.60 |
| 26 | BB | 1833 | C | N1-C1'-C2' | -7.52 | 103.72 | 112.00 |
| 1 | AA | 1265 | C | C4-C5-C6 | 7.52 | 121.16 | 117.40 |
| 26 | BB | 927 | A | N1-C2-N3 | -7.52 | 125.54 | 129.30 |
| 26 | BB | 1482 | G | C8-N9-C4 | -7.52 | 103.39 | 106.40 |
| 26 | BB | 1623 | G | C4-C5-N7 | -7.52 | 107.79 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1933 | G | C1'-O4'-C4' | 7.52 | 115.92 | 109.90 |
| 26 | BB | 2039 | U | C5-C4-O4 | 7.52 | 130.41 | 125.90 |
| 26 | BB | 2268 | A | C2-N3-C4 | 7.52 | 114.36 | 110.60 |
| 26 | BB | 2808 | G | C3'-C2'-C1' | 7.52 | 107.52 | 101.50 |
| 1 | AA | 46 | G | N9-C4-C5 | 7.52 | 108.41 | 105.40 |
| 1 | AA | 505 | G | C5'-C4'-C3' | -7.52 | 103.97 | 116.00 |
| 1 | AA | 869 | G | C4-C5-N7 | -7.52 | 107.79 | 110.80 |
| 1 | AA | 1359 | C | C4-C5-C6 | 7.52 | 121.16 | 117.40 |
| 2 | AB | 43 | G | N3-C4-C5 | -7.52 | 124.84 | 128.60 |
| 26 | BB | 130 | C | O4'-C1'-N1 | 7.52 | 114.22 | 108.20 |
| 26 | BB | 535 | G | N9-C4-C5 | 7.52 | 108.41 | 105.40 |
| 26 | BB | 1090 | A | C5-N7-C8 | -7.52 | 100.14 | 103.90 |
| 26 | BB | 1210 | G | N3-C4-C5 | -7.52 | 124.84 | 128.60 |
| 26 | BB | 1334 | G | N7-C8-N9 | 7.52 | 116.86 | 113.10 |
| 26 | BB | 1549 | A | C4-C5-C6 | -7.52 | 113.24 | 117.00 |
| 26 | BB | 1950 | G | C5-C6-O6 | 7.52 | 133.11 | 128.60 |
| 1 | AA | 1011 | C | P-O3'-C3' | 7.52 | 128.72 | 119.70 |
| 1 | AA | 1316 | G | C4-C5-N7 | -7.52 | 107.79 | 110.80 |
| 4 | AD | 75 | C | C2-N3-C4 | 7.52 | 123.66 | 119.90 |
| 25 | BA | 83 | G | C5-C6-O6 | -7.52 | 124.09 | 128.60 |
| 26 | BB | 59 | U | N3-C4-C5 | -7.52 | 110.09 | 114.60 |
| 26 | BB | 679 | C | C1'-O4'-C4' | -7.52 | 103.89 | 109.90 |
| 26 | BB | 2610 | C | C5-C6-N1 | 7.52 | 124.76 | 121.00 |
| 1 | AA | 234 | C | O4'-C1'-N1 | 7.52 | 114.21 | 108.20 |
| 1 | AA | 330 | C | O4'-C1'-N1 | 7.52 | 114.21 | 108.20 |
| 1 | AA | 455 | G | C1'-O4'-C4' | -7.52 | 103.89 | 109.90 |
| 26 | BB | 266 | G | C6-C5-N7 | -7.52 | 125.89 | 130.40 |
| 26 | BB | 1481 | U | C3'-C2'-C1' | -7.52 | 95.49 | 101.50 |
| 1 | AA | 368 | U | C4'-C3'-C2' | -7.51 | 95.08 | 102.60 |
| 1 | AA | 702 | A | N7-C8-N9 | -7.51 | 110.04 | 113.80 |
| 26 | BB | 775 | G | N1-C6-O6 | -7.51 | 115.39 | 119.90 |
| 26 | BB | 1033 | U | O4'-C1'-N1 | 7.51 | 114.21 | 108.20 |
| 26 | BB | 1779 | U | O4'-C1'-N1 | 7.51 | 114.21 | 108.20 |
| 26 | BB | 1870 | C | N3-C2-O2 | -7.51 | 116.64 | 121.90 |
| 26 | BB | 2076 | U | O4'-C1'-N1 | 7.51 | 114.21 | 108.20 |
| 26 | BB | 2310 | C | C5'-C4'-O4' | 7.51 | 118.12 | 109.10 |
| 26 | BB | 2527 | C | C5'-C4'-O4' | 7.51 | 118.12 | 109.10 |
| 26 | BB | 2569 | G | C8-N9-C4 | -7.51 | 103.39 | 106.40 |
| 26 | BB | 2618 | G | C5-C6-N1 | 7.51 | 115.26 | 111.50 |
| 26 | BB | 134 | G | C5-N7-C8 | -7.51 | 100.54 | 104.30 |
| 26 | BB | 1196 | C | N3-C4-C5 | 7.51 | 124.91 | 121.90 |
| 26 | BB | 2574 | G | C5'-C4'-O4' | -7.51 | 100.08 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 716 | A | N1-C2-N3 | -7.51 | 125.54 | 129.30 |
| 26 | BB | 307 | G | N3-C4-C5 | -7.51 | 124.84 | 128.60 |
| 26 | BB | 513 | A | C5-N7-C8 | -7.51 | 100.14 | 103.90 |
| 26 | BB | 1463 | C | N3-C4-N4 | 7.51 | 123.26 | 118.00 |
| 26 | BB | 1541 | C | N3-C4-N4 | -7.51 | 112.74 | 118.00 |
| 26 | BB | 1550 | C | N3-C2-O2 | -7.51 | 116.64 | 121.90 |
| 26 | BB | 2594 | C | N3-C4-N4 | 7.51 | 123.26 | 118.00 |
| 1 | AA | 1108 | G | N1-C6-O6 | 7.51 | 124.41 | 119.90 |
| 1 | AA | 1143 | G | N1-C2-N2 | 7.51 | 122.96 | 116.20 |
| 1 | AA | 1366 | C | N1-C2-O2 | 7.51 | 123.41 | 118.90 |
| 1 | AA | 1393 | U | C5'-C4'-O4' | 7.51 | 118.11 | 109.10 |
| 4 | AD | 76 | C | C1'-O4'-C4' | -7.51 | 103.89 | 109.90 |
| 7 | AG | 43 | ARG | NE-CZ-NH1 | 7.51 | 124.06 | 120.30 |
| 25 | BA | 23 | G | N7-C8-N9 | -7.51 | 109.34 | 113.10 |
| 26 | BB | 161 | A | C1'-O4'-C4' | -7.51 | 103.89 | 109.90 |
| 26 | BB | 860 | U | N1-C2-N3 | 7.51 | 119.41 | 114.90 |
| 26 | BB | 1114 | C | C2-N3-C4 | 7.51 | 123.66 | 119.90 |
| 26 | BB | 1147 | A | N9-C4-C5 | 7.51 | 108.80 | 105.80 |
| 1 | AA | 406 | G | C3'-C2'-C1' | -7.51 | 95.49 | 101.50 |
| 1 | AA | 520 | A | N1-C2-N3 | -7.51 | 125.55 | 129.30 |
| 1 | AA | 739 | C | N3-C4-C5 | -7.51 | 118.90 | 121.90 |
| 1 | AA | 263 | A | C6-N1-C2 | 7.51 | 123.10 | 118.60 |
| 1 | AA | 520 | A | C3'-C2'-C1' | 7.51 | 107.50 | 101.50 |
| 1 | AA | 745 | G | C4-C5-C6 | 7.51 | 123.30 | 118.80 |
| 1 | AA | 1323 | G | C5'-C4'-O4' | 7.51 | 118.11 | 109.10 |
| 1 | AA | 1341 | U | C4-C5-C6 | 7.51 | 124.20 | 119.70 |
| 26 | BB | 254 | G | C3'-C2'-C1' | 7.51 | 107.51 | 101.50 |
| 26 | BB | 527 | C | C6-N1-C2 | 7.51 | 123.30 | 120.30 |
| 26 | BB | 1812 | U | C5-C4-O4 | -7.51 | 121.40 | 125.90 |
| 26 | BB | 2240 | U | N3-C2-O2 | -7.51 | 116.95 | 122.20 |
| 26 | BB | 2380 | C | C2-N1-C1' | -7.51 | 110.54 | 118.80 |
| 1 | AA | 532 | A | N9-C4-C5 | 7.50 | 108.80 | 105.80 |
| 2 | AB | 67 | G | P-O3'-C3' | 7.50 | 128.71 | 119.70 |
| 25 | BA | 99 | A | C8-N9-C4 | -7.50 | 102.80 | 105.80 |
| 26 | BB | 696 | G | C3'-C2'-C1' | 7.50 | 107.50 | 101.50 |
| 1 | AA | 873 | A | C5-C6-N1 | -7.50 | 113.95 | 117.70 |
| 1 | AA | 989 | U | O4'-C1'-N1 | 7.50 | 114.20 | 108.20 |
| 1 | AA | 1143 | G | C4-C5-N7 | -7.50 | 107.80 | 110.80 |
| 26 | BB | 15 | G | C5'-C4'-O4' | -7.50 | 100.10 | 109.10 |
| 26 | BB | 57 | C | C1'-O4'-C4' | 7.50 | 115.90 | 109.90 |
| 26 | BB | 180 | G | C5-C6-O6 | -7.50 | 124.10 | 128.60 |
| 26 | BB | 1722 | A | C4-C5-C6 | 7.50 | 120.75 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1932 | A | N1-C6-N6 | -7.50 | 114.10 | 118.60 |
| 1 | AA | 686 | U | P-O3'-C3' | 7.50 | 128.70 | 119.70 |
| 1 | AA | 1126 | U | N1-C2-O2 | 7.50 | 128.05 | 122.80 |
| 26 | BB | 354 | A | N7-C8-N9 | 7.50 | 117.55 | 113.80 |
| 26 | BB | 397 | U | C4-C5-C6 | 7.50 | 124.20 | 119.70 |
| 26 | BB | 1233 | C | C5-C4-N4 | -7.50 | 114.95 | 120.20 |
| 26 | BB | 1645 | G | C1'-O4'-C4' | 7.50 | 115.90 | 109.90 |
| 26 | BB | 2686 | G | C2-N3-C4 | 7.50 | 115.65 | 111.90 |
| 26 | BB | 2857 | G | N3-C2-N2 | -7.50 | 114.65 | 119.90 |
| 1 | AA | 554 | A | C8-N9-C4 | -7.50 | 102.80 | 105.80 |
| 1 | AA | 1091 | U | C2-N3-C4 | -7.50 | 122.50 | 127.00 |
| 4 | AD | 68 | C | O4'-C1'-N1 | 7.50 | 114.20 | 108.20 |
| 26 | BB | 703 | U | C3'-C2'-C1' | 7.50 | 107.50 | 101.50 |
| 26 | BB | 1424 | G | C8-N9-C4 | -7.50 | 103.40 | 106.40 |
| 26 | BB | 2210 | U | C5-C6-N1 | -7.50 | 118.95 | 122.70 |
| 26 | BB | 2579 | C | O4'-C1'-N1 | 7.50 | 114.20 | 108.20 |
| 27 | BC | 112 | ASP | CB-CG-OD1 | -7.50 | 111.55 | 118.30 |
| 1 | AA | 1053 | G | N3-C4-N9 | -7.50 | 121.50 | 126.00 |
| 1 | AA | 1368 | A | N3-C4-C5 | 7.50 | 132.05 | 126.80 |
| 25 | BA | 93 | C | C6-N1-C2 | -7.50 | 117.30 | 120.30 |
| 26 | BB | 479 | A | P-O3'-C3' | 7.50 | 128.70 | 119.70 |
| 26 | BB | 841 | G | C8-N9-C4 | -7.50 | 103.40 | 106.40 |
| 26 | BB | 924 | G | C5-N7-C8 | 7.50 | 108.05 | 104.30 |
| 26 | BB | 1131 | G | C4-C5-C6 | 7.50 | 123.30 | 118.80 |
| 26 | BB | 1659 | G | C2-N3-C4 | 7.50 | 115.65 | 111.90 |
| 26 | BB | 1843 | C | C2-N3-C4 | 7.50 | 123.65 | 119.90 |
| 26 | BB | 1855 | U | N3-C2-O2 | -7.50 | 116.95 | 122.20 |
| 26 | BB | 2896 | C | C5-C4-N4 | -7.50 | 114.95 | 120.20 |
| 1 | AA | 1454 | G | C6-N1-C2 | 7.50 | 129.60 | 125.10 |
| 7 | AG | 66 | VAL | CA-CB-CG1 | 7.50 | 122.14 | 110.90 |
| 26 | BB | 2044 | C | C6-N1-C2 | -7.50 | 117.30 | 120.30 |
| 1 | AA | 465 | A | O4'-C4'-C3' | 7.49 | 112.09 | 106.10 |
| 1 | AA | 1230 | C | N3-C4-N4 | 7.49 | 123.25 | 118.00 |
| 26 | BB | 927 | A | C2-N3-C4 | 7.49 | 114.35 | 110.60 |
| 26 | BB | 1673 | G | C8-N9-C4 | -7.49 | 103.40 | 106.40 |
| 26 | BB | 2582 | G | C5-C6-O6 | -7.49 | 124.10 | 128.60 |
| 1 | AA | 267 | C | N3-C4-N4 | 7.49 | 123.25 | 118.00 |
| 1 | AA | 860 | A | N1-C6-N6 | 7.49 | 123.09 | 118.60 |
| 1 | AA | 921 | U | N3-C4-O4 | 7.49 | 124.64 | 119.40 |
| 26 | BB | 1260 | A | C5-C6-N1 | 7.49 | 121.45 | 117.70 |
| 1 | AA | 1050 | G | C4'-C3'-C2' | -7.49 | 95.11 | 102.60 |
| 5 | AE | 178 | LEU | CB-CG-CD1 | 7.49 | 123.73 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1543 | G | N9-C4-C5 | 7.49 | 108.40 | 105.40 |
| 26 | BB | 2134 | A | N3-C4-N9 | 7.49 | 133.39 | 127.40 |
| 26 | BB | 2348 | U | O4'-C1'-N1 | 7.49 | 114.19 | 108.20 |
| 26 | BB | 2878 | U | N3-C2-O2 | -7.49 | 116.96 | 122.20 |
| 1 | AA | 98 | A | O4'-C4'-C3' | -7.49 | 96.51 | 104.00 |
| 1 | AA | 946 | A | C1'-O4'-C4' | 7.49 | 115.89 | 109.90 |
| 1 | AA | 1303 | C | N3-C4-C5 | -7.49 | 118.91 | 121.90 |
| 26 | BB | 664 | G | C5-C6-O6 | -7.49 | 124.11 | 128.60 |
| 26 | BB | 2301 | C | N3-C4-N4 | 7.49 | 123.24 | 118.00 |
| 26 | BB | 2745 | C | N3-C4-N4 | -7.49 | 112.76 | 118.00 |
| 1 | AA | 318 | G | C8-N9-C4 | -7.49 | 103.41 | 106.40 |
| 1 | AA | 1251 | A | O4'-C1'-N9 | 7.49 | 114.19 | 108.20 |
| 4 | AD | 4 | G | C4-C5-C6 | 7.49 | 123.29 | 118.80 |
| 26 | BB | 573 | U | C5'-C4'-C3' | -7.49 | 104.02 | 116.00 |
| 1 | AA | 750 | C | N3-C4-C5 | -7.49 | 118.91 | 121.90 |
| 1 | AA | 892 | A | C6-C5-N7 | 7.49 | 137.54 | 132.30 |
| 1 | AA | 1268 | G | C4-C5-N7 | -7.49 | 107.81 | 110.80 |
| 26 | BB | 232 | G | C8-N9-C4 | -7.49 | 103.41 | 106.40 |
| 26 | BB | 957 | C | O4'-C1'-N1 | 7.49 | 114.19 | 108.20 |
| 26 | BB | 1040 | A | N7-C8-N9 | 7.49 | 117.54 | 113.80 |
| 26 | BB | 1396 | U | P-O3'-C3' | 7.49 | 128.68 | 119.70 |
| 1 | AA | 1154 | G | C4-C5-N7 | -7.48 | 107.81 | 110.80 |
| 25 | BA | 20 | G | N7-C8-N9 | 7.48 | 116.84 | 113.10 |
| 25 | BA | 113 | C | N3-C4-N4 | 7.48 | 123.24 | 118.00 |
| 26 | BB | 1641 | A | C4'-C3'-C2' | -7.48 | 95.12 | 102.60 |
| 1 | AA | 1161 | C | C2-N3-C4 | -7.48 | 116.16 | 119.90 |
| 26 | BB | 131 | A | C5-C6-N6 | -7.48 | 117.71 | 123.70 |
| 26 | BB | 173 | A | C8-N9-C4 | -7.48 | 102.81 | 105.80 |
| 26 | BB | 396 | G | C4-C5-C6 | 7.48 | 123.29 | 118.80 |
| 26 | BB | 1131 | G | C2-N3-C4 | 7.48 | 115.64 | 111.90 |
| 26 | BB | 1456 | G | N9-C4-C5 | 7.48 | 108.39 | 105.40 |
| 26 | BB | 1538 | G | C3'-C2'-C1' | -7.48 | 95.52 | 101.50 |
| 26 | BB | 1544 | A | O4'-C4'-C3' | 7.48 | 112.09 | 106.10 |
| 26 | BB | 1822 | C | N3-C4-C5 | -7.48 | 118.91 | 121.90 |
| 26 | BB | 1847 | A | C5-C6-N1 | 7.48 | 121.44 | 117.70 |
| 30 | BF | 49 | ARG | NE-CZ-NH1 | -7.48 | 116.56 | 120.30 |
| 1 | AA | 308 | C | N1-C2-O2 | 7.48 | 123.39 | 118.90 |
| 1 | AA | 1043 | G | N3-C4-C5 | -7.48 | 124.86 | 128.60 |
| 1 | AA | 1302 | C | C5-C4-N4 | -7.48 | 114.96 | 120.20 |
| 1 | AA | 1309 | G | C4-C5-N7 | -7.48 | 107.81 | 110.80 |
| 25 | BA | 45 | A | C5-C6-N1 | 7.48 | 121.44 | 117.70 |
| 26 | BB | 422 | A | C2-N3-C4 | 7.48 | 114.34 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 732 | C | N3-C4-N4 | 7.48 | 123.24 | 118.00 |
| 26 | BB | 2398 | U | N1-C2-N3 | 7.48 | 119.39 | 114.90 |
| 26 | BB | 2780 | G | N1-C2-N3 | -7.48 | 119.41 | 123.90 |
| 48 | BX | 82 | TYR | CB-CG-CD2 | -7.48 | 116.51 | 121.00 |
| 1 | AA | 752 | G | O4'-C1'-C2' | -7.48 | 98.32 | 105.80 |
| 1 | AA | 1244 | G | C5-C6-N1 | 7.48 | 115.24 | 111.50 |
| 4 | AD | 35 | C | N3-C4-N4 | 7.48 | 123.24 | 118.00 |
| 26 | BB | 82 | U | N1-C1'-C2' | -7.48 | 103.77 | 112.00 |
| 26 | BB | 2670 | A | C8-N9-C4 | -7.48 | 102.81 | 105.80 |
| 1 | AA | 38 | G | N9-C4-C5 | 7.48 | 108.39 | 105.40 |
| 1 | AA | 302 | G | C2-N3-C4 | 7.48 | 115.64 | 111.90 |
| 1 | AA | 561 | U | N3-C4-O4 | -7.48 | 114.17 | 119.40 |
| 1 | AA | 676 | A | N1-C2-N3 | -7.48 | 125.56 | 129.30 |
| 1 | AA | 764 | C | N3-C4-C5 | -7.48 | 118.91 | 121.90 |
| 1 | AA | 913 | A | N1-C6-N6 | -7.48 | 114.11 | 118.60 |
| 1 | AA | 992 | U | N1-C2-O2 | 7.48 | 128.03 | 122.80 |
| 1 | AA | 1500 | A | N1-C2-N3 | -7.48 | 125.56 | 129.30 |
| 1 | AA | 1508 | A | C5-C6-N1 | 7.48 | 121.44 | 117.70 |
| 1 | AA | 1530 | G | N9-C4-C5 | 7.48 | 108.39 | 105.40 |
| 26 | BB | 125 | A | N9-C4-C5 | 7.48 | 108.79 | 105.80 |
| 26 | BB | 522 | A | C5-C6-N1 | 7.48 | 121.44 | 117.70 |
| 49 | BY | 38 | ARG | NE-CZ-NH1 | 7.48 | 124.04 | 120.30 |
| 1 | AA | 227 | G | N7-C8-N9 | 7.48 | 116.84 | 113.10 |
| 26 | BB | 563 | A | N9-C4-C5 | 7.48 | 108.79 | 105.80 |
| 1 | AA | 200 | G | O4'-C1'-N9 | 7.47 | 114.18 | 108.20 |
| 1 | AA | 1028 | C | N1-C2-O2 | 7.47 | 123.39 | 118.90 |
| 1 | AA | 1258 | G | C5-C6-N1 | 7.47 | 115.24 | 111.50 |
| 1 | AA | 1288 | A | N7-C8-N9 | 7.47 | 117.54 | 113.80 |
| 1 | AA | 1523 | G | C8-N9-C4 | -7.47 | 103.41 | 106.40 |
| 26 | BB | 656 | G | C2-N3-C4 | 7.47 | 115.64 | 111.90 |
| 26 | BB | 1305 | C | C5-C4-N4 | -7.47 | 114.97 | 120.20 |
| 26 | BB | 1430 | G | C4-C5-N7 | -7.47 | 107.81 | 110.80 |
| 26 | BB | 1492 | G | C8-N9-C4 | -7.47 | 103.41 | 106.40 |
| 26 | BB | 2004 | G | C2-N3-C4 | 7.47 | 115.64 | 111.90 |
| 1 | AA | 114 | U | C1'-O4'-C4' | 7.47 | 115.88 | 109.90 |
| 1 | AA | 1386 | G | N3-C4-C5 | -7.47 | 124.86 | 128.60 |
| 26 | BB | 384 | A | N1-C2-N3 | -7.47 | 125.56 | 129.30 |
| 26 | BB | 1731 | G | C4-C5-N7 | -7.47 | 107.81 | 110.80 |
| 35 | BK | 133 | ARG | NE-CZ-NH1 | 7.47 | 124.04 | 120.30 |
| 1 | AA | 168 | G | C8-N9-C4 | -7.47 | 103.41 | 106.40 |
| 1 | AA | 861 | G | C1'-O4'-C4' | 7.47 | 115.88 | 109.90 |
| 1 | AA | 150 | U | N3-C2-O2 | -7.47 | 116.97 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 247 | G | N7-C8-N9 | 7.47 | 116.83 | 113.10 |
| 1 | AA | 711 | G | C8-N9-C4 | -7.47 | 103.41 | 106.40 |
| 1 | AA | 860 | A | C4-C5-N7 | -7.47 | 106.97 | 110.70 |
| 1 | AA | 926 | G | C6-C5-N7 | -7.47 | 125.92 | 130.40 |
| 1 | AA | 1174 | G | N7-C8-N9 | -7.47 | 109.36 | 113.10 |
| 1 | AA | 1398 | A | C5'-C4'-O4' | 7.47 | 118.06 | 109.10 |
| 2 | AB | 57 | G | C5'-C4'-O4' | 7.47 | 118.06 | 109.10 |
| 25 | BA | 13 | G | C8-N9-C4 | -7.47 | 103.41 | 106.40 |
| 25 | BA | 75 | G | C6-C5-N7 | -7.47 | 125.92 | 130.40 |
| 25 | BA | 111 | U | O4'-C1'-N1 | 7.47 | 114.17 | 108.20 |
| 26 | BB | 284 | U | O4'-C1'-N1 | 7.47 | 114.18 | 108.20 |
| 26 | BB | 431 | U | C4-C5-C6 | 7.47 | 124.18 | 119.70 |
| 26 | BB | 1846 | G | C8-N9-C4 | -7.47 | 103.41 | 106.40 |
| 26 | BB | 1603 | A | C8-N9-C4 | 7.47 | 108.79 | 105.80 |
| 26 | BB | 2118 | U | O4'-C4'-C3' | 7.47 | 112.08 | 106.10 |
| 26 | BB | 304 | U | C5-C4-O4 | -7.47 | 121.42 | 125.90 |
| 26 | BB | 1446 | C | O4'-C1'-C2' | -7.47 | 98.33 | 105.80 |
| 26 | BB | 1643 | G | C5-C6-N1 | 7.47 | 115.23 | 111.50 |
| 26 | BB | 2047 | C | C6-N1-C2 | 7.47 | 123.29 | 120.30 |
| 26 | BB | 2401 | U | O4'-C1'-N1 | 7.47 | 114.17 | 108.20 |
| 1 | AA | 998 | C | N3-C4-C5 | 7.46 | 124.89 | 121.90 |
| 1 | AA | 1434 | A | C5'-C4'-O4' | 7.46 | 118.06 | 109.10 |
| 1 | AA | 1457 | G | C5-C6-O6 | 7.46 | 133.08 | 128.60 |
| 2 | AB | 51 | G | C4'-C3'-C2' | -7.46 | 95.14 | 102.60 |
| 3 | AC | 14 | G | C6-C5-N7 | -7.46 | 125.92 | 130.40 |
| 25 | BA | 24 | G | O4'-C4'-C3' | 7.46 | 112.07 | 106.10 |
| 26 | BB | 1177 | G | N7-C8-N9 | 7.46 | 116.83 | 113.10 |
| 26 | BB | 2767 | C | N3-C4-C5 | -7.46 | 118.91 | 121.90 |
| 26 | BB | 186 | G | C8-N9-C4 | -7.46 | 103.42 | 106.40 |
| 26 | BB | 203 | A | C3'-C2'-C1' | 7.46 | 107.47 | 101.50 |
| 26 | BB | 2612 | C | C5'-C4'-O4' | 7.46 | 118.06 | 109.10 |
| 1 | AA | 148 | G | N3-C2-N2 | -7.46 | 114.68 | 119.90 |
| 1 | AA | 206 | C | C2'-C3'-O3' | 7.46 | 125.91 | 109.50 |
| 1 | AA | 806 | C | N1-C2-O2 | 7.46 | 123.38 | 118.90 |
| 1 | AA | 853 | C | O4'-C4'-C3' | 7.46 | 112.07 | 106.10 |
| 1 | AA | 1292 | G | C8-N9-C4 | -7.46 | 103.42 | 106.40 |
| 1 | AA | 1349 | A | O4'-C1'-N9 | 7.46 | 114.17 | 108.20 |
| 2 | AB | 12 | U | C5-C6-N1 | -7.46 | 118.97 | 122.70 |
| 26 | BB | 450 | G | C8-N9-C4 | -7.46 | 103.42 | 106.40 |
| 26 | BB | 478 | A | C6-C5-N7 | 7.46 | 137.52 | 132.30 |
| 26 | BB | 1408 | G | N1-C6-O6 | 7.46 | 124.38 | 119.90 |
| 26 | BB | 2249 | U | O4'-C4'-C3' | 7.46 | 112.07 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2300 | C | N3-C4-C5 | -7.46 | 118.92 | 121.90 |
| 1 | AA | 497 | G | N7-C8-N9 | 7.46 | 116.83 | 113.10 |
| 1 | AA | 1253 | G | C2'-C3'-O3' | 7.46 | 125.91 | 109.50 |
| 26 | BB | 99 | U | N3-C2-O2 | -7.46 | 116.98 | 122.20 |
| 26 | BB | 107 | G | N9-C4-C5 | 7.46 | 108.38 | 105.40 |
| 26 | BB | 1296 | G | C2-N3-C4 | 7.46 | 115.63 | 111.90 |
| 26 | BB | 1742 | U | C3'-C2'-C1' | 7.46 | 107.47 | 101.50 |
| 26 | BB | 2629 | U | N1-C2-N3 | 7.46 | 119.38 | 114.90 |
| 1 | AA | 1032 | G | C5'-C4'-O4' | 7.46 | 118.05 | 109.10 |
| 26 | BB | 1861 | G | N3-C4-C5 | -7.46 | 124.87 | 128.60 |
| 1 | AA | 1229 | A | N9-C4-C5 | -7.46 | 102.82 | 105.80 |
| 3 | AC | 56 | G | C3'-C2'-C1' | -7.46 | 95.53 | 101.50 |
| 25 | BA | 44 | G | C8-N9-C4 | 7.46 | 109.38 | 106.40 |
| 26 | BB | 1467 | U | C5-C4-O4 | -7.46 | 121.43 | 125.90 |
| 26 | BB | 1963 | U | O3'-P-O5' | -7.46 | 89.83 | 104.00 |
| 26 | BB | 2061 | G | C5-C6-N1 | 7.46 | 115.23 | 111.50 |
| 26 | BB | 2517 | C | O4'-C1'-N1 | 7.46 | 114.17 | 108.20 |
| 1 | AA | 435 | A | C5'-C4'-O4' | 7.46 | 118.05 | 109.10 |
| 1 | AA | 1223 | C | P-O3'-C3' | 7.46 | 128.65 | 119.70 |
| 26 | BB | 71 | A | O4'-C1'-N9 | 7.46 | 114.16 | 108.20 |
| 26 | BB | 664 | G | N1-C6-O6 | 7.46 | 124.37 | 119.90 |
| 26 | BB | 841 | G | C5-C6-O6 | -7.46 | 124.13 | 128.60 |
| 26 | BB | 1632 | A | C5-N7-C8 | 7.46 | 107.63 | 103.90 |
| 26 | BB | 2006 | C | N3-C4-N4 | -7.46 | 112.78 | 118.00 |
| 26 | BB | 2348 | U | C1'-O4'-C4' | -7.46 | 103.94 | 109.90 |
| 1 | AA | 302 | G | C5-C6-O6 | -7.45 | 124.13 | 128.60 |
| 1 | AA | 929 | G | C4'-C3'-C2' | -7.45 | 95.15 | 102.60 |
| 1 | AA | 1524 | C | N3-C2-O2 | 7.45 | 127.12 | 121.90 |
| 26 | BB | 552 | U | O4'-C1'-N1 | 7.45 | 114.16 | 108.20 |
| 26 | BB | 912 | C | C1'-O4'-C4' | -7.45 | 103.94 | 109.90 |
| 26 | BB | 1562 | U | N3-C4-O4 | -7.45 | 114.18 | 119.40 |
| 26 | BB | 1593 | A | N1-C2-N3 | 7.45 | 133.03 | 129.30 |
| 26 | BB | 1807 | G | N7-C8-N9 | 7.45 | 116.83 | 113.10 |
| 26 | BB | 2388 | A | C1'-O4'-C4' | -7.45 | 103.94 | 109.90 |
| 1 | AA | 470 | C | O4'-C1'-N1 | 7.45 | 114.16 | 108.20 |
| 1 | AA | 1130 | A | C6-C5-N7 | 7.45 | 137.52 | 132.30 |
| 1 | AA | 1503 | A | O4'-C1'-C2' | -7.45 | 98.35 | 105.80 |
| 6 | AF | 129 | PHE | CB-CG-CD2 | -7.45 | 115.58 | 120.80 |
| 26 | BB | 1301 | A | N7-C8-N9 | -7.45 | 110.07 | 113.80 |
| 26 | BB | 1733 | G | O5'-P-OP2 | -7.45 | 98.99 | 105.70 |
| 26 | BB | 1960 | A | N3-C4-N9 | -7.45 | 121.44 | 127.40 |
| 26 | BB | 2715 | C | C5'-C4'-C3' | -7.45 | 104.08 | 116.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 978 | A | C5-C6-N1 | 7.45 | 121.42 | 117.70 |
| 1 | AA | 1083 | U | C1'-O4'-C4' | -7.45 | 103.94 | 109.90 |
| 1 | AA | 1283 | U | C2-N3-C4 | -7.45 | 122.53 | 127.00 |
| 26 | BB | 449 | A | C4-C5-N7 | -7.45 | 106.97 | 110.70 |
| 26 | BB | 835 | C | C4-C5-C6 | 7.45 | 121.12 | 117.40 |
| 26 | BB | 1079 | C | O4'-C1'-N1 | 7.45 | 114.16 | 108.20 |
| 26 | BB | 2839 | G | N9-C4-C5 | -7.45 | 102.42 | 105.40 |
| 1 | AA | 596 | A | N3-C4-N9 | 7.45 | 133.36 | 127.40 |
| 1 | AA | 792 | A | N1-C2-N3 | -7.45 | 125.58 | 129.30 |
| 1 | AA | 1409 | C | P-O5'-C5' | 7.45 | 132.82 | 120.90 |
| 1 | AA | 1475 | G | C4'-C3'-C2' | -7.45 | 95.15 | 102.60 |
| 26 | BB | 301 | G | N3-C4-C5 | -7.45 | 124.88 | 128.60 |
| 26 | BB | 693 | A | N7-C8-N9 | 7.45 | 117.53 | 113.80 |
| 26 | BB | 1377 | G | N3-C2-N2 | -7.45 | 114.69 | 119.90 |
| 26 | BB | 1382 | G | N3-C4-C5 | -7.45 | 124.88 | 128.60 |
| 26 | BB | 2310 | C | N1-C2-N3 | -7.45 | 113.99 | 119.20 |
| 4 | AD | 46 | G | O4'-C1'-N9 | 7.45 | 114.16 | 108.20 |
| 26 | BB | 1033 | U | N1-C2-O2 | -7.45 | 117.59 | 122.80 |
| 26 | BB | 2601 | C | C2-N3-C4 | 7.45 | 123.62 | 119.90 |
| 1 | AA | 88 | U | O4'-C1'-N1 | 7.45 | 114.16 | 108.20 |
| 25 | BA | 31 | C | N3-C2-O2 | -7.45 | 116.69 | 121.90 |
| 26 | BB | 489 | G | C5-N7-C8 | 7.45 | 108.02 | 104.30 |
| 26 | BB | 704 | G | P-O3'-C3' | 7.45 | 128.63 | 119.70 |
| 26 | BB | 862 | G | N1-C6-O6 | -7.45 | 115.43 | 119.90 |
| 26 | BB | 1291 | C | C6-N1-C2 | -7.45 | 117.32 | 120.30 |
| 26 | BB | 2673 | G | N7-C8-N9 | 7.45 | 116.82 | 113.10 |
| 37 | BM | 17 | ARG | NE-CZ-NH1 | 7.45 | 124.02 | 120.30 |
| 1 | AA | 532 | A | N1-C2-N3 | -7.44 | 125.58 | 129.30 |
| 26 | BB | 997 | G | N7-C8-N9 | 7.44 | 116.82 | 113.10 |
| 1 | AA | 601 | G | N1-C6-O6 | 7.44 | 124.36 | 119.90 |
| 1 | AA | 974 | A | N7-C8-N9 | 7.44 | 117.52 | 113.80 |
| 26 | BB | 1913 | A | N7-C8-N9 | 7.44 | 117.52 | 113.80 |
| 26 | BB | 2082 | A | C5-C6-N1 | 7.44 | 121.42 | 117.70 |
| 26 | BB | 2162 | G | C3'-C2'-C1' | 7.44 | 107.45 | 101.50 |
| 26 | BB | 2576 | G | C8-N9-C4 | -7.44 | 103.42 | 106.40 |
| 1 | AA | 104 | G | N3-C2-N2 | -7.44 | 114.69 | 119.90 |
| 1 | AA | 142 | G | N7-C8-N9 | 7.44 | 116.82 | 113.10 |
| 1 | AA | 978 | A | C4-C5-C6 | -7.44 | 113.28 | 117.00 |
| 25 | BA | 6 | G | N1-C2-N2 | 7.44 | 122.90 | 116.20 |
| 26 | BB | 251 | A | N7-C8-N9 | 7.44 | 117.52 | 113.80 |
| 26 | BB | 626 | A | C5'-C4'-C3' | -7.44 | 104.09 | 116.00 |
| 26 | BB | 910 | A | O4'-C4'-C3' | 7.44 | 112.05 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 931 | U | C4-C5-C6 | 7.44 | 124.16 | 119.70 |
| 26 | BB | 1126 | A | C4-C5-N7 | 7.44 | 114.42 | 110.70 |
| 26 | BB | 1173 | U | C3'-C2'-C1' | 7.44 | 107.45 | 101.50 |
| 26 | BB | 1771 | C | O4'-C1'-N1 | 7.44 | 114.15 | 108.20 |
| 26 | BB | 2040 | G | C4-C5-C6 | 7.44 | 123.26 | 118.80 |
| 26 | BB | 2470 | G | N1-C2-N3 | -7.44 | 119.44 | 123.90 |
| 26 | BB | 2666 | C | C4-C5-C6 | -7.44 | 113.68 | 117.40 |
| 3 | AC | 16 | A | N1-C6-N6 | 7.44 | 123.06 | 118.60 |
| 26 | BB | 608 | A | N7-C8-N9 | 7.44 | 117.52 | 113.80 |
| 26 | BB | 1552 | A | O4'-C1'-N9 | 7.44 | 114.15 | 108.20 |
| 26 | BB | 2843 | G | C4-C5-N7 | -7.44 | 107.82 | 110.80 |
| 1 | AA | 410 | G | O4'-C1'-N9 | 7.44 | 114.15 | 108.20 |
| 1 | AA | 1256 | A | C4'-C3'-C2' | 7.44 | 110.04 | 102.60 |
| 1 | AA | 1311 | A | C2-N3-C4 | 7.44 | 114.32 | 110.60 |
| 10 | AJ | 101 | ARG | NE-CZ-NH1 | 7.44 | 124.02 | 120.30 |
| 26 | BB | 178 | G | C6-N1-C2 | -7.44 | 120.64 | 125.10 |
| 26 | BB | 1659 | G | C5-C6-N1 | 7.44 | 115.22 | 111.50 |
| 26 | BB | 1874 | C | C5-C4-N4 | -7.44 | 114.99 | 120.20 |
| 26 | BB | 2014 | A | C4-C5-N7 | -7.44 | 106.98 | 110.70 |
| 26 | BB | 2618 | G | C5'-C4'-O4' | 7.44 | 118.03 | 109.10 |
| 1 | AA | 871 | U | P-O3'-C3' | 7.44 | 128.62 | 119.70 |
| 26 | BB | 1259 | G | C5'-C4'-O4' | 7.44 | 118.02 | 109.10 |
| 26 | BB | 1487 | U | C5-C4-O4 | -7.44 | 121.44 | 125.90 |
| 3 | AC | 59 | A | C4-C5-N7 | -7.43 | 106.98 | 110.70 |
| 26 | BB | 619 | G | C8-N9-C4 | -7.43 | 103.43 | 106.40 |
| 26 | BB | 1133 | A | C5-N7-C8 | 7.43 | 107.62 | 103.90 |
| 26 | BB | 1479 | G | C5-C6-N1 | 7.43 | 115.22 | 111.50 |
| 26 | BB | 2290 | G | N7-C8-N9 | 7.43 | 116.82 | 113.10 |
| 26 | BB | 2630 | G | N3-C4-C5 | -7.43 | 124.88 | 128.60 |
| 1 | AA | 147 | G | C2-N3-C4 | 7.43 | 115.62 | 111.90 |
| 1 | AA | 1159 | U | C5-C6-N1 | 7.43 | 126.42 | 122.70 |
| 1 | AA | 1262 | C | N3-C4-N4 | 7.43 | 123.20 | 118.00 |
| 1 | AA | 1475 | G | C5-C6-N1 | 7.43 | 115.22 | 111.50 |
| 26 | BB | 230 | G | C4'-C3'-C2' | -7.43 | 95.17 | 102.60 |
| 1 | AA | 1399 | C | C2-N3-C4 | -7.43 | 116.18 | 119.90 |
| 1 | AA | 1425 | U | C5-C6-N1 | -7.43 | 118.98 | 122.70 |
| 26 | BB | 436 | C | C2-N3-C4 | 7.43 | 123.62 | 119.90 |
| 26 | BB | 732 | C | N3-C2-O2 | -7.43 | 116.70 | 121.90 |
| 1 | AA | 289 | G | O4'-C1'-N9 | 7.43 | 114.14 | 108.20 |
| 1 | AA | 922 | G | C8-N9-C4 | -7.43 | 103.43 | 106.40 |
| 1 | AA | 1200 | C | N1-C2-O2 | 7.43 | 123.36 | 118.90 |
| 26 | BB | 177 | G | C4-C5-C6 | 7.43 | 123.26 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 880 | G | N3-C4-N9 | -7.43 | 121.54 | 126.00 |
| 26 | BB | 2262 | U | N1-C2-O2 | -7.43 | 117.60 | 122.80 |
| 1 | AA | 298 | A | N9-C4-C5 | -7.43 | 102.83 | 105.80 |
| 1 | AA | 310 | G | C4'-C3'-C2' | -7.43 | 95.17 | 102.60 |
| 26 | BB | 1184 | U | C5'-C4'-O4' | 7.43 | 118.01 | 109.10 |
| 26 | BB | 1410 | G | N1-C2-N3 | -7.43 | 119.44 | 123.90 |
| 26 | BB | 2082 | A | N9-C4-C5 | 7.43 | 108.77 | 105.80 |
| 26 | BB | 2262 | U | O4'-C1'-N1 | 7.43 | 114.14 | 108.20 |
| 26 | BB | 2351 | G | O4'-C1'-C2' | -7.43 | 98.37 | 105.80 |
| 1 | AA | 21 | G | O4'-C1'-N9 | 7.43 | 114.14 | 108.20 |
| 4 | AD | 72 | C | P-O3'-C3' | 7.43 | 128.61 | 119.70 |
| 26 | BB | 1954 | G | O4'-C1'-N9 | 7.43 | 114.14 | 108.20 |
| 26 | BB | 2244 | U | N1-C1'-C2' | -7.43 | 103.83 | 112.00 |
| 26 | BB | 2532 | G | N3-C2-N2 | -7.43 | 114.70 | 119.90 |
| 26 | BB | 2572 | A | C5-C6-N1 | 7.43 | 121.41 | 117.70 |
| 1 | AA | 367 | U | C5'-C4'-O4' | 7.42 | 118.01 | 109.10 |
| 1 | AA | 680 | C | O4'-C1'-N1 | 7.42 | 114.14 | 108.20 |
| 1 | AA | 800 | G | C8-N9-C4 | -7.42 | 103.43 | 106.40 |
| 24 | AX | 44 | ARG | NE-CZ-NH1 | 7.42 | 124.01 | 120.30 |
| 26 | BB | 380 | G | N7-C8-N9 | 7.42 | 116.81 | 113.10 |
| 26 | BB | 2558 | C | C4-C5-C6 | -7.42 | 113.69 | 117.40 |
| 29 | BE | 128 | ARG | NH1-CZ-NH2 | 7.42 | 127.57 | 119.40 |
| 1 | AA | 168 | G | O4'-C1'-N9 | 7.42 | 114.14 | 108.20 |
| 1 | AA | 402 | G | N3-C4-C5 | -7.42 | 124.89 | 128.60 |
| 1 | AA | 854 | U | N1-C2-N3 | 7.42 | 119.35 | 114.90 |
| 26 | BB | 672 | C | C3'-C2'-C1' | 7.42 | 107.44 | 101.50 |
| 26 | BB | 1685 | C | C5-C4-N4 | -7.42 | 115.00 | 120.20 |
| 4 | AD | 32 | G | N1-C2-N3 | -7.42 | 119.45 | 123.90 |
| 26 | BB | 241 | A | C4-C5-C6 | -7.42 | 113.29 | 117.00 |
| 26 | BB | 929 | U | C5'-C4'-O4' | 7.42 | 118.00 | 109.10 |
| 26 | BB | 1641 | A | C5-C6-N1 | 7.42 | 121.41 | 117.70 |
| 26 | BB | 2767 | C | N1-C2-O2 | 7.42 | 123.35 | 118.90 |
| 25 | BA | 47 | C | N3-C4-C5 | -7.42 | 118.93 | 121.90 |
| 26 | BB | 1864 | U | O4'-C1'-C2' | -7.42 | 98.38 | 105.80 |
| 26 | BB | 2014 | A | C2-N3-C4 | 7.42 | 114.31 | 110.60 |
| 26 | BB | 2632 | A | C4-C5-C6 | -7.42 | 113.29 | 117.00 |
| 1 | AA | 541 | G | C2-N3-C4 | 7.42 | 115.61 | 111.90 |
| 1 | AA | 1089 | G | O4'-C1'-N9 | 7.42 | 114.14 | 108.20 |
| 3 | AC | 47 | C | C5-C6-N1 | 7.42 | 124.71 | 121.00 |
| 26 | BB | 79 | C | C4-C5-C6 | -7.42 | 113.69 | 117.40 |
| 26 | BB | 336 | C | C5'-C4'-O4' | 7.42 | 118.00 | 109.10 |
| 26 | BB | 2114 | A | N3-C4-C5 | -7.42 | 121.61 | 126.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2271 | G | N3-C4-N9 | 7.42 | 130.45 | 126.00 |
| 26 | BB | 2709 | G | C3'-C2'-C1' | 7.42 | 107.44 | 101.50 |
| 39 | BO | 10 | ARG | NE-CZ-NH2 | 7.42 | 124.01 | 120.30 |
| 1 | AA | 433 | G | C5-C6-N1 | 7.42 | 115.21 | 111.50 |
| 1 | AA | 1425 | U | C1'-O4'-C4' | -7.42 | 103.97 | 109.90 |
| 26 | BB | 2072 | C | O4'-C1'-N1 | 7.42 | 114.13 | 108.20 |
| 26 | BB | 2541 | A | C3'-C2'-C1' | -7.42 | 95.57 | 101.50 |
| 1 | AA | 349 | A | C8-N9-C4 | -7.42 | 102.83 | 105.80 |
| 1 | AA | 580 | C | N3-C2-O2 | -7.42 | 116.71 | 121.90 |
| 1 | AA | 648 | A | O4'-C1'-N9 | 7.42 | 114.13 | 108.20 |
| 3 | AC | 55 | A | C6-C5-N7 | 7.42 | 137.49 | 132.30 |
| 26 | BB | 863 | A | C1'-O4'-C4' | 7.42 | 115.83 | 109.90 |
| 1 | AA | 72 | A | C4-C5-N7 | -7.41 | 106.99 | 110.70 |
| 1 | AA | 868 | C | C6-N1-C2 | 7.41 | 123.27 | 120.30 |
| 1 | AA | 1067 | A | C4-C5-C6 | -7.41 | 113.29 | 117.00 |
| 1 | AA | 1476 | A | C4-C5-C6 | -7.41 | 113.29 | 117.00 |
| 26 | BB | 184 | C | O4'-C1'-N1 | 7.41 | 114.13 | 108.20 |
| 26 | BB | 528 | A | C5'-C4'-O4' | 7.41 | 118.00 | 109.10 |
| 26 | BB | 1256 | G | C4-C5-N7 | -7.41 | 107.83 | 110.80 |
| 26 | BB | 2179 | C | N3-C2-O2 | -7.41 | 116.71 | 121.90 |
| 26 | BB | 2661 | G | N3-C2-N2 | -7.41 | 114.71 | 119.90 |
| 1 | AA | 694 | A | N1-C6-N6 | -7.41 | 114.15 | 118.60 |
| 1 | AA | 702 | A | C8-N9-C4 | 7.41 | 108.77 | 105.80 |
| 1 | AA | 1174 | G | C4-C5-N7 | -7.41 | 107.83 | 110.80 |
| 26 | BB | 1627 | G | O4'-C1'-N9 | 7.41 | 114.13 | 108.20 |
| 40 | BP | 86 | ARG | NE-CZ-NH2 | -7.41 | 116.59 | 120.30 |
| 1 | AA | 45 | G | N3-C4-N9 | 7.41 | 130.45 | 126.00 |
| 1 | AA | 104 | G | C5-C6-O6 | -7.41 | 124.15 | 128.60 |
| 1 | AA | 519 | C | C1'-O4'-C4' | -7.41 | 103.97 | 109.90 |
| 1 | AA | 1419 | G | O4'-C4'-C3' | 7.41 | 112.03 | 106.10 |
| 1 | AA | 1534 | A | O4'-C1'-N9 | 7.41 | 114.13 | 108.20 |
| 26 | BB | 635 | C | O4'-C1'-N1 | 7.41 | 114.13 | 108.20 |
| 26 | BB | 1399 | C | C4-C5-C6 | -7.41 | 113.69 | 117.40 |
| 26 | BB | 1700 | A | N1-C6-N6 | 7.41 | 123.05 | 118.60 |
| 26 | BB | 2028 | U | O5'-P-OP2 | -7.41 | 99.03 | 105.70 |
| 1 | AA | 1499 | A | C6-C5-N7 | 7.41 | 137.49 | 132.30 |
| 4 | AD | 22 | A | C4-C5-N7 | -7.41 | 107.00 | 110.70 |
| 26 | BB | 374 | A | C8-N9-C4 | 7.41 | 108.76 | 105.80 |
| 26 | BB | 862 | G | C6-N1-C2 | -7.41 | 120.66 | 125.10 |
| 26 | BB | 1410 | G | N3-C4-C5 | -7.41 | 124.90 | 128.60 |
| 26 | BB | 1632 | A | C3'-C2'-C1' | 7.41 | 107.43 | 101.50 |
| 26 | BB | 2463 | C | N3-C4-N4 | 7.41 | 123.19 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2485 | G | P-O3'-C3' | 7.41 | 128.59 | 119.70 |
| 26 | BB | 2593 | U | N3-C4-O4 | 7.41 | 124.59 | 119.40 |
| 1 | AA | 262 | A | C5-C6-N6 | -7.41 | 117.77 | 123.70 |
| 1 | AA | 499 | A | N1-C6-N6 | 7.41 | 123.04 | 118.60 |
| 1 | AA | 571 | U | N3-C4-O4 | 7.41 | 124.58 | 119.40 |
| 26 | BB | 2462 | C | C6-N1-C1' | 7.41 | 129.69 | 120.80 |
| 26 | BB | 2795 | C | C6-N1-C2 | -7.41 | 117.34 | 120.30 |
| 1 | AA | 64 | G | N1-C2-N2 | 7.41 | 122.86 | 116.20 |
| 1 | AA | 332 | G | N7-C8-N9 | -7.41 | 109.40 | 113.10 |
| 1 | AA | 625 | U | C6-N1-C2 | -7.41 | 116.56 | 121.00 |
| 1 | AA | 1050 | G | N1-C6-O6 | 7.41 | 124.34 | 119.90 |
| 1 | AA | 1364 | U | C4-C5-C6 | 7.41 | 124.14 | 119.70 |
| 26 | BB | 26 | G | N7-C8-N9 | 7.41 | 116.80 | 113.10 |
| 26 | BB | 356 | G | C4-C5-C6 | -7.41 | 114.36 | 118.80 |
| 26 | BB | 2156 | G | C8-N9-C4 | -7.41 | 103.44 | 106.40 |
| 1 | AA | 421 | U | C1'-O4'-C4' | 7.40 | 115.82 | 109.90 |
| 4 | AD | 20 | G | C5'-C4'-O4' | 7.40 | 117.98 | 109.10 |
| 26 | BB | 174 | U | N3-C2-O2 | -7.40 | 117.02 | 122.20 |
| 26 | BB | 2230 | G | C8-N9-C4 | -7.40 | 103.44 | 106.40 |
| 26 | BB | 2816 | G | N3-C4-C5 | -7.40 | 124.90 | 128.60 |
| 1 | AA | 87 | C | C6-N1-C2 | -7.40 | 117.34 | 120.30 |
| 1 | AA | 177 | G | C3'-C2'-C1' | 7.40 | 107.42 | 101.50 |
| 1 | AA | 429 | U | N1-C2-O2 | 7.40 | 127.98 | 122.80 |
| 1 | AA | 611 | C | C2-N3-C4 | 7.40 | 123.60 | 119.90 |
| 1 | AA | 1205 | U | C5-C4-O4 | -7.40 | 121.46 | 125.90 |
| 26 | BB | 75 | G | C5-C6-N1 | 7.40 | 115.20 | 111.50 |
| 26 | BB | 664 | G | N7-C8-N9 | -7.40 | 109.40 | 113.10 |
| 26 | BB | 1108 | U | C5-C6-N1 | -7.40 | 119.00 | 122.70 |
| 26 | BB | 1440 | U | N3-C4-C5 | 7.40 | 119.04 | 114.60 |
| 26 | BB | 2160 | C | P-O3'-C3' | 7.40 | 128.58 | 119.70 |
| 26 | BB | 2423 | U | C3'-C2'-C1' | -7.40 | 95.58 | 101.50 |
| 37 | BM | 105 | ARG | NH1-CZ-NH2 | -7.40 | 111.26 | 119.40 |
| 1 | AA | 192 | A | N1-C6-N6 | 7.40 | 123.04 | 118.60 |
| 1 | AA | 285 | C | C3'-C2'-C1' | -7.40 | 95.58 | 101.50 |
| 1 | AA | 903 | G | N9-C1'-C2' | -7.40 | 103.86 | 112.00 |
| 3 | AC | 25 | U | C3'-C2'-C1' | 7.40 | 107.42 | 101.50 |
| 25 | BA | 81 | G | C4-C5-N7 | -7.40 | 107.84 | 110.80 |
| 26 | BB | 401 | A | C1'-O4'-C4' | -7.40 | 103.98 | 109.90 |
| 26 | BB | 525 | U | O4'-C1'-N1 | 7.40 | 114.12 | 108.20 |
| 26 | BB | 537 | G | C5-N7-C8 | -7.40 | 100.60 | 104.30 |
| 26 | BB | 1320 | C | O4'-C4'-C3' | 7.40 | 112.02 | 106.10 |
| 26 | BB | 1720 | U | C5'-C4'-O4' | 7.40 | 117.98 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2315 | G | N9-C4-C5 | 7.40 | 108.36 | 105.40 |
| 4 | AD | 48 | U | O4'-C1'-N1 | 7.40 | 114.12 | 108.20 |
| 26 | BB | 2842 | G | O4'-C1'-N9 | 7.40 | 114.12 | 108.20 |
| 1 | AA | 291 | U | C4'-C3'-C2' | -7.40 | 95.20 | 102.60 |
| 1 | AA | 591 | U | N3-C4-O4 | 7.40 | 124.58 | 119.40 |
| 1 | AA | 643 | C | O4'-C1'-N1 | 7.40 | 114.12 | 108.20 |
| 1 | AA | 1136 | C | C5'-C4'-O4' | 7.40 | 117.98 | 109.10 |
| 1 | AA | 1166 | G | N3-C2-N2 | -7.40 | 114.72 | 119.90 |
| 26 | BB | 1495 | A | O4'-C1'-N9 | 7.40 | 114.12 | 108.20 |
| 26 | BB | 2627 | G | C5-N7-C8 | 7.40 | 108.00 | 104.30 |
| 1 | AA | 1123 | U | N1-C2-O2 | -7.40 | 117.62 | 122.80 |
| 4 | AD | 51 | U | C5-C4-O4 | 7.40 | 130.34 | 125.90 |
| 26 | BB | 588 | U | N3-C2-O2 | -7.40 | 117.02 | 122.20 |
| 26 | BB | 823 | C | O4'-C1'-N1 | 7.40 | 114.12 | 108.20 |
| 26 | BB | 1582 | C | N1-C1'-C2' | -7.40 | 103.86 | 112.00 |
| 1 | AA | 975 | A | N1-C2-N3 | -7.39 | 125.60 | 129.30 |
| 1 | AA | 1414 | U | C5-C6-N1 | 7.39 | 126.40 | 122.70 |
| 26 | BB | 1191 | G | C6-N1-C2 | -7.39 | 120.66 | 125.10 |
| 26 | BB | 1237 | A | O4'-C1'-N9 | 7.39 | 114.12 | 108.20 |
| 26 | BB | 1331 | G | N3-C2-N2 | 7.39 | 125.08 | 119.90 |
| 26 | BB | 1582 | C | P-O3'-C3' | 7.39 | 128.57 | 119.70 |
| 26 | BB | 1729 | U | O4'-C1'-N1 | 7.39 | 114.12 | 108.20 |
| 26 | BB | 2469 | A | C5'-C4'-O4' | 7.39 | 117.97 | 109.10 |
| 26 | BB | 2516 | A | C6-N1-C2 | 7.39 | 123.04 | 118.60 |
| 1 | AA | 220 | G | O4'-C1'-N9 | 7.39 | 114.11 | 108.20 |
| 1 | AA | 265 | G | C5-C6-N1 | 7.39 | 115.20 | 111.50 |
| 1 | AA | 442 | G | C6-N1-C2 | -7.39 | 120.66 | 125.10 |
| 1 | AA | 878 | A | C4-C5-N7 | 7.39 | 114.40 | 110.70 |
| 1 | AA | 1362 | A | N9-C4-C5 | -7.39 | 102.84 | 105.80 |
| 2 | AB | 67 | G | C8-N9-C4 | -7.39 | 103.44 | 106.40 |
| 26 | BB | 1817 | G | C6-C5-N7 | -7.39 | 125.96 | 130.40 |
| 26 | BB | 1945 | G | N1-C6-O6 | -7.39 | 115.46 | 119.90 |
| 1 | AA | 860 | A | N9-C1'-C2' | -7.39 | 103.87 | 112.00 |
| 1 | AA | 930 | C | N1-C2-N3 | -7.39 | 114.03 | 119.20 |
| 26 | BB | 1513 | U | C4-C5-C6 | 7.39 | 124.13 | 119.70 |
| 26 | BB | 1907 | G | N3-C4-C5 | -7.39 | 124.90 | 128.60 |
| 26 | BB | 2462 | C | C4-C5-C6 | -7.39 | 113.70 | 117.40 |
| 1 | AA | 51 | A | C6-N1-C2 | 7.39 | 123.03 | 118.60 |
| 1 | AA | 457 | G | N1-C2-N3 | -7.39 | 119.47 | 123.90 |
| 1 | AA | 635 | A | C5'-C4'-C3' | 7.39 | 127.82 | 116.00 |
| 1 | AA | 665 | A | N7-C8-N9 | 7.39 | 117.50 | 113.80 |
| 26 | BB | 874 | G | N7-C8-N9 | 7.39 | 116.80 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 925 | A | N9-C4-C5 | 7.39 | 108.76 | 105.80 |
| 26 | BB | 1506 | U | O4'-C1'-N1 | 7.39 | 114.11 | 108.20 |
| 26 | BB | 970 | U | N1-C1'-C2' | -7.39 | 103.87 | 112.00 |
| 26 | BB | 1243 | C | O4'-C1'-N1 | 7.39 | 114.11 | 108.20 |
| 26 | BB | 2809 | A | C4-C5-N7 | -7.39 | 107.01 | 110.70 |
| 1 | AA | 526 | C | N3-C4-C5 | 7.39 | 124.85 | 121.90 |
| 26 | BB | 191 | A | N9-C4-C5 | 7.39 | 108.75 | 105.80 |
| 26 | BB | 356 | G | O4'-C1'-N9 | 7.39 | 114.11 | 108.20 |
| 26 | BB | 378 | C | C6-N1-C2 | -7.39 | 117.34 | 120.30 |
| 26 | BB | 728 | G | N9-C4-C5 | -7.39 | 102.45 | 105.40 |
| 26 | BB | 1686 | C | C2-N3-C4 | 7.39 | 123.59 | 119.90 |
| 26 | BB | 1882 | U | O4'-C1'-N1 | 7.39 | 114.11 | 108.20 |
| 26 | BB | 2809 | A | C6-N1-C2 | -7.39 | 114.17 | 118.60 |
| 1 | AA | 340 | U | C2-N3-C4 | -7.38 | 122.57 | 127.00 |
| 4 | AD | 9 | G | C1'-O4'-C4' | 7.38 | 115.81 | 109.90 |
| 4 | AD | 48 | U | C5-C6-N1 | -7.38 | 119.01 | 122.70 |
| 26 | BB | 607 | U | C4-C5-C6 | 7.38 | 124.13 | 119.70 |
| 26 | BB | 831 | G | C2-N3-C4 | 7.38 | 115.59 | 111.90 |
| 26 | BB | 1203 | U | O4'-C4'-C3' | 7.38 | 112.01 | 106.10 |
| 26 | BB | 1565 | C | N3-C4-C5 | -7.38 | 118.95 | 121.90 |
| 26 | BB | 2673 | G | N9-C4-C5 | -7.38 | 102.45 | 105.40 |
| 2 | AB | 14 | A | C5'-C4'-O4' | 7.38 | 117.96 | 109.10 |
| 26 | BB | 2087 | G | N7-C8-N9 | 7.38 | 116.79 | 113.10 |
| 1 | AA | 824 | G | N3-C4-C5 | -7.38 | 124.91 | 128.60 |
| 1 | AA | 873 | A | C3'-C2'-C1' | 7.38 | 107.41 | 101.50 |
| 1 | AA | 1186 | G | N1-C2-N3 | -7.38 | 119.47 | 123.90 |
| 1 | AA | 1339 | A | C8-N9-C4 | -7.38 | 102.85 | 105.80 |
| 2 | AB | 34 | C | C5-C4-N4 | -7.38 | 115.03 | 120.20 |
| 26 | BB | 49 | A | O4'-C1'-N9 | 7.38 | 114.11 | 108.20 |
| 26 | BB | 50 | U | C5'-C4'-O4' | 7.38 | 117.96 | 109.10 |
| 26 | BB | 88 | G | O4'-C1'-N9 | 7.38 | 114.11 | 108.20 |
| 26 | BB | 1031 | G | C8-N9-C4 | -7.38 | 103.45 | 106.40 |
| 26 | BB | 1521 | G | O4'-C1'-N9 | 7.38 | 114.11 | 108.20 |
| 26 | BB | 1873 | G | C5'-C4'-O4' | 7.38 | 117.96 | 109.10 |
| 26 | BB | 1955 | U | N1-C2-O2 | -7.38 | 117.63 | 122.80 |
| 26 | BB | 2020 | A | N9-C4-C5 | -7.38 | 102.85 | 105.80 |
| 26 | BB | 2634 | A | C4-C5-N7 | -7.38 | 107.01 | 110.70 |
| 11 | AK | 89 | ASP | CB-CG-OD1 | 7.38 | 124.94 | 118.30 |
| 26 | BB | 64 | A | O4'-C1'-N9 | 7.38 | 114.10 | 108.20 |
| 26 | BB | 1364 | G | C5'-C4'-C3' | 7.38 | 127.81 | 116.00 |
| 26 | BB | 1847 | A | O4'-C1'-C2' | -7.38 | 98.42 | 105.80 |
| 26 | BB | 2500 | U | C5-C6-N1 | -7.38 | 119.01 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 562 | U | C6-N1-C2 | -7.38 | 116.57 | 121.00 |
| 1 | AA | 803 | G | C2-N3-C4 | 7.38 | 115.59 | 111.90 |
| 1 | AA | 941 | G | N3-C4-C5 | -7.38 | 124.91 | 128.60 |
| 2 | AB | 48 | U | C5'-C4'-O4' | 7.38 | 117.95 | 109.10 |
| 26 | BB | 154 | U | N1-C1'-C2' | -7.38 | 103.88 | 112.00 |
| 26 | BB | 295 | G | C1'-O4'-C4' | -7.38 | 104.00 | 109.90 |
| 26 | BB | 375 | G | C4-C5-N7 | 7.38 | 113.75 | 110.80 |
| 26 | BB | 842 | U | C5-C4-O4 | -7.38 | 121.47 | 125.90 |
| 26 | BB | 1839 | G | C4-C5-N7 | -7.38 | 107.85 | 110.80 |
| 26 | BB | 1891 | G | O4'-C1'-C2' | 7.38 | 114.24 | 107.60 |
| 26 | BB | 2630 | G | N1-C6-O6 | -7.38 | 115.47 | 119.90 |
| 26 | BB | 2646 | C | C5-C6-N1 | 7.38 | 124.69 | 121.00 |
| 26 | BB | 2813 | A | C6-C5-N7 | 7.38 | 137.46 | 132.30 |
| 1 | AA | 523 | A | N3-C4-C5 | -7.38 | 121.64 | 126.80 |
| 1 | AA | 832 | G | N1-C2-N3 | -7.38 | 119.47 | 123.90 |
| 1 | AA | 1475 | G | C6-N1-C2 | -7.38 | 120.67 | 125.10 |
| 26 | BB | 200 | U | C5-C4-O4 | -7.38 | 121.47 | 125.90 |
| 26 | BB | 385 | C | C5-C4-N4 | -7.38 | 115.04 | 120.20 |
| 26 | BB | 2652 | C | O4'-C1'-N1 | 7.38 | 114.10 | 108.20 |
| 26 | BB | 2774 | C | C2-N3-C4 | -7.38 | 116.21 | 119.90 |
| 26 | BB | 1678 | A | C2-N3-C4 | 7.38 | 114.29 | 110.60 |
| 1 | AA | 562 | U | N1-C2-O2 | -7.37 | 117.64 | 122.80 |
| 1 | AA | 1270 | G | C5-C6-O6 | -7.37 | 124.18 | 128.60 |
| 1 | AA | 1374 | A | C6-C5-N7 | 7.37 | 137.46 | 132.30 |
| 17 | AQ | 56 | PRO | N-CD-CG | 7.37 | 114.26 | 103.20 |
| 26 | BB | 6 | A | C8-N9-C4 | -7.37 | 102.85 | 105.80 |
| 26 | BB | 70 | G | N1-C6-O6 | 7.37 | 124.32 | 119.90 |
| 26 | BB | 532 | A | O4'-C1'-N9 | 7.37 | 114.10 | 108.20 |
| 26 | BB | 682 | G | C5-C6-O6 | -7.37 | 124.17 | 128.60 |
| 26 | BB | 1831 | G | C6-N1-C2 | -7.37 | 120.68 | 125.10 |
| 26 | BB | 2114 | A | N1-C6-N6 | 7.37 | 123.02 | 118.60 |
| 1 | AA | 679 | C | C2-N3-C4 | -7.37 | 116.22 | 119.90 |
| 3 | AC | 52 | U | C1'-O4'-C4' | -7.37 | 104.00 | 109.90 |
| 26 | BB | 1000 | A | C5-C6-N6 | -7.37 | 117.80 | 123.70 |
| 26 | BB | 2070 | A | O4'-C1'-C2' | -7.37 | 98.43 | 105.80 |
| 26 | BB | 2809 | A | C8-N9-C4 | -7.37 | 102.85 | 105.80 |
| 1 | AA | 1 | A | C3'-C2'-C1' | 7.37 | 107.40 | 101.50 |
| 1 | AA | 208 | U | C4-C5-C6 | 7.37 | 124.12 | 119.70 |
| 1 | AA | 445 | G | N3-C4-C5 | -7.37 | 124.92 | 128.60 |
| 1 | AA | 1448 | C | C5-C6-N1 | -7.37 | 117.31 | 121.00 |
| 26 | BB | 971 | G | N3-C4-C5 | -7.37 | 124.92 | 128.60 |
| 26 | BB | 1647 | U | N1-C2-N3 | 7.37 | 119.32 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1861 | G | C5'-C4'-C3' | -7.37 | 104.21 | 116.00 |
| 26 | BB | 2038 | G | N3-C4-C5 | -7.37 | 124.92 | 128.60 |
| 1 | AA | 696 | A | O4'-C1'-C2' | 7.37 | 114.23 | 107.60 |
| 26 | BB | 652 | U | N1-C2-N3 | 7.37 | 119.32 | 114.90 |
| 26 | BB | 889 | C | C5-C6-N1 | 7.37 | 124.68 | 121.00 |
| 26 | BB | 1344 | U | N3-C2-O2 | -7.37 | 117.04 | 122.20 |
| 26 | BB | 1624 | U | C5-C6-N1 | -7.37 | 119.02 | 122.70 |
| 26 | BB | 1891 | G | C6-N1-C2 | -7.37 | 120.68 | 125.10 |
| 26 | BB | 2034 | U | N3-C2-O2 | -7.37 | 117.04 | 122.20 |
| 1 | AA | 58 | C | C4'-C3'-C2' | -7.37 | 95.23 | 102.60 |
| 1 | AA | 312 | C | N1-C2-O2 | 7.37 | 123.32 | 118.90 |
| 26 | BB | 945 | A | C6-N1-C2 | 7.37 | 123.02 | 118.60 |
| 26 | BB | 1627 | G | C5-C6-O6 | -7.37 | 124.18 | 128.60 |
| 26 | BB | 2631 | G | C5-C6-N1 | 7.37 | 115.18 | 111.50 |
| 1 | AA | 58 | C | C2-N3-C4 | 7.36 | 123.58 | 119.90 |
| 1 | AA | 211 | G | C5-C6-O6 | -7.36 | 124.18 | 128.60 |
| 1 | AA | 334 | C | C6-N1-C2 | 7.36 | 123.25 | 120.30 |
| 1 | AA | 950 | U | N1-C2-N3 | -7.36 | 110.48 | 114.90 |
| 1 | AA | 1047 | G | C5-C6-N1 | 7.36 | 115.18 | 111.50 |
| 1 | AA | 1256 | A | N9-C4-C5 | 7.36 | 108.75 | 105.80 |
| 26 | BB | 289 | G | N1-C2-N2 | 7.36 | 122.83 | 116.20 |
| 26 | BB | 455 | C | N1-C2-O2 | 7.36 | 123.32 | 118.90 |
| 26 | BB | 638 | G | C5'-C4'-C3' | -7.36 | 104.22 | 116.00 |
| 26 | BB | 1553 | A | C8-N9-C4 | -7.36 | 102.86 | 105.80 |
| 26 | BB | 2302 | U | N3-C2-O2 | -7.36 | 117.05 | 122.20 |
| 1 | AA | 145 | G | C4'-C3'-C2' | -7.36 | 95.24 | 102.60 |
| 1 | AA | 430 | A | N1-C6-N6 | -7.36 | 114.18 | 118.60 |
| 26 | BB | 909 | A | O4'-C1'-N9 | 7.36 | 114.09 | 108.20 |
| 26 | BB | 1641 | A | C6-N1-C2 | -7.36 | 114.18 | 118.60 |
| 26 | BB | 1737 | G | N3-C4-N9 | 7.36 | 130.42 | 126.00 |
| 26 | BB | 2194 | U | C5-C6-N1 | -7.36 | 119.02 | 122.70 |
| 26 | BB | 2271 | G | C2-N3-C4 | 7.36 | 115.58 | 111.90 |
| 1 | AA | 148 | G | N3-C4-C5 | -7.36 | 124.92 | 128.60 |
| 1 | AA | 292 | G | O4'-C1'-N9 | 7.36 | 114.09 | 108.20 |
| 1 | AA | 707 | U | C1'-O4'-C4' | 7.36 | 115.79 | 109.90 |
| 25 | BA | 116 | G | C2-N3-C4 | 7.36 | 115.58 | 111.90 |
| 26 | BB | 243 | U | C6-N1-C2 | 7.36 | 125.42 | 121.00 |
| 26 | BB | 561 | G | N3-C4-C5 | -7.36 | 124.92 | 128.60 |
| 26 | BB | 1889 | A | O4'-C4'-C3' | -7.36 | 96.64 | 104.00 |
| 26 | BB | 2298 | A | C5-C6-N1 | 7.36 | 121.38 | 117.70 |
| 26 | BB | 2357 | G | N1-C6-O6 | -7.36 | 115.48 | 119.90 |
| 26 | BB | 2765 | A | C4-C5-C6 | -7.36 | 113.32 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 846 | G | C8-N9-C4 | -7.36 | 103.46 | 106.40 |
| 25 | BA | 90 | C | N3-C4-N4 | -7.36 | 112.85 | 118.00 |
| 26 | BB | 1973 | G | C4-C5-N7 | -7.36 | 107.86 | 110.80 |
| 26 | BB | 2700 | A | N9-C1'-C2' | -7.36 | 103.91 | 112.00 |
| 26 | BB | 144 | A | O4'-C1'-N9 | 7.36 | 114.09 | 108.20 |
| 26 | BB | 886 | A | C5-C6-N1 | 7.36 | 121.38 | 117.70 |
| 26 | BB | 952 | G | C4-C5-N7 | -7.36 | 107.86 | 110.80 |
| 26 | BB | 1617 | C | C3'-C2'-C1' | -7.36 | 95.61 | 101.50 |
| 26 | BB | 2437 | G | C5-N7-C8 | -7.36 | 100.62 | 104.30 |
| 26 | BB | 2544 | G | C1'-O4'-C4' | 7.36 | 115.79 | 109.90 |
| 1 | AA | 566 | G | C3'-C2'-C1' | -7.36 | 95.62 | 101.50 |
| 26 | BB | 37 | C | O4'-C1'-N1 | 7.36 | 114.08 | 108.20 |
| 26 | BB | 50 | U | N1-C2-O2 | 7.36 | 127.95 | 122.80 |
| 26 | BB | 819 | A | C3'-C2'-C1' | 7.36 | 107.38 | 101.50 |
| 26 | BB | 861 | A | N3-C4-C5 | 7.36 | 131.95 | 126.80 |
| 26 | BB | 863 | A | C4-C5-C6 | 7.36 | 120.68 | 117.00 |
| 26 | BB | 1238 | G | C1'-O4'-C4' | 7.36 | 115.78 | 109.90 |
| 26 | BB | 1927 | A | C2'-C3'-O3' | 7.36 | 125.68 | 109.50 |
| 26 | BB | 2297 | A | C5'-C4'-O4' | 7.36 | 117.93 | 109.10 |
| 26 | BB | 2629 | U | N3-C4-O4 | 7.36 | 124.55 | 119.40 |
| 1 | AA | 640 | A | C5'-C4'-O4' | 7.35 | 117.92 | 109.10 |
| 26 | BB | 2051 | A | N1-C6-N6 | -7.35 | 114.19 | 118.60 |
| 1 | AA | 144 | G | O4'-C1'-N9 | 7.35 | 114.08 | 108.20 |
| 4 | AD | 70 | C | C4'-C3'-C2' | -7.35 | 95.25 | 102.60 |
| 26 | BB | 2002 | G | N3-C4-C5 | -7.35 | 124.92 | 128.60 |
| 26 | BB | 2303 | G | N3-C4-C5 | -7.35 | 124.92 | 128.60 |
| 26 | BB | 2323 | G | C4'-C3'-C2' | -7.35 | 95.25 | 102.60 |
| 26 | BB | 2703 | C | C4-C5-C6 | 7.35 | 121.08 | 117.40 |
| 26 | BB | 2797 | U | C5'-C4'-O4' | 7.35 | 117.92 | 109.10 |
| 34 | BJ | 98 | PHE | CB-CG-CD2 | -7.35 | 115.65 | 120.80 |
| 26 | BB | 2403 | C | C2-N3-C4 | 7.35 | 123.58 | 119.90 |
| 26 | BB | 2757 | A | O4'-C1'-N9 | 7.35 | 114.08 | 108.20 |
| 24 | AX | 44 | ARG | NE-CZ-NH2 | -7.35 | 116.62 | 120.30 |
| 26 | BB | 552 | U | N1-C2-O2 | -7.35 | 117.66 | 122.80 |
| 26 | BB | 1576 | U | P-O3'-C3' | 7.35 | 128.52 | 119.70 |
| 1 | AA | 963 | G | C5-N7-C8 | -7.35 | 100.63 | 104.30 |
| 1 | AA | 1099 | G | N3-C4-C5 | -7.35 | 124.93 | 128.60 |
| 4 | AD | 14 | A | N1-C2-N3 | -7.35 | 125.63 | 129.30 |
| 26 | BB | 1191 | G | C4-C5-C6 | -7.35 | 114.39 | 118.80 |
| 26 | BB | 1242 | U | N3-C2-O2 | -7.35 | 117.06 | 122.20 |
| 26 | BB | 1260 | A | C8-N9-C4 | -7.35 | 102.86 | 105.80 |
| 26 | BB | 1282 | U | O4'-C4'-C3' | -7.35 | 96.65 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1865 | U | C6-N1-C2 | -7.35 | 116.59 | 121.00 |
| 39 | BO | 114 | ARG | NE-CZ-NH1 | -7.35 | 116.63 | 120.30 |
| 26 | BB | 1530 | G | N1-C2-N3 | -7.35 | 119.49 | 123.90 |
| 26 | BB | 1985 | C | N3-C4-C5 | 7.35 | 124.84 | 121.90 |
| 26 | BB | 2509 | G | C4-C5-N7 | -7.35 | 107.86 | 110.80 |
| 26 | BB | 2699 | C | N3-C2-O2 | -7.35 | 116.76 | 121.90 |
| 26 | BB | 2 | G | O4'-C1'-N9 | 7.34 | 114.08 | 108.20 |
| 26 | BB | 457 | A | C3'-C2'-C1' | 7.34 | 107.38 | 101.50 |
| 26 | BB | 621 | A | N1-C6-N6 | -7.34 | 114.19 | 118.60 |
| 26 | BB | 762 | U | O4'-C4'-C3' | 7.34 | 111.97 | 106.10 |
| 53 | B2 | 44 | PHE | CB-CG-CD2 | -7.34 | 115.66 | 120.80 |
| 1 | AA | 144 | G | C5-N7-C8 | -7.34 | 100.63 | 104.30 |
| 1 | AA | 427 | U | C5-C4-O4 | -7.34 | 121.49 | 125.90 |
| 25 | BA | 87 | U | C2'-C3'-O3' | 7.34 | 125.65 | 109.50 |
| 37 | BM | 108 | ARG | NE-CZ-NH1 | 7.34 | 123.97 | 120.30 |
| 1 | AA | 778 | G | C6-N1-C2 | -7.34 | 120.69 | 125.10 |
| 26 | BB | 761 | A | N9-C4-C5 | 7.34 | 108.74 | 105.80 |
| 26 | BB | 1545 | A | N1-C2-N3 | -7.34 | 125.63 | 129.30 |
| 26 | BB | 1564 | C | N3-C4-C5 | -7.34 | 118.96 | 121.90 |
| 26 | BB | 1581 | G | N3-C4-C5 | -7.34 | 124.93 | 128.60 |
| 26 | BB | 2368 | C | C2-N3-C4 | 7.34 | 123.57 | 119.90 |
| 26 | BB | 2655 | G | C1'-O4'-C4' | -7.34 | 104.03 | 109.90 |
| 40 | BP | 45 | ARG | NE-CZ-NH1 | 7.34 | 123.97 | 120.30 |
| 1 | AA | 126 | G | O4'-C1'-N9 | 7.34 | 114.07 | 108.20 |
| 1 | AA | 911 | U | C3'-C2'-C1' | 7.34 | 107.37 | 101.50 |
| 1 | AA | 1345 | U | O4'-C1'-N1 | 7.34 | 114.07 | 108.20 |
| 1 | AA | 1356 | G | C5-C6-N1 | -7.34 | 107.83 | 111.50 |
| 26 | BB | 124 | G | N9-C4-C5 | 7.34 | 108.34 | 105.40 |
| 26 | BB | 1225 | G | O4'-C4'-C3' | 7.34 | 111.97 | 106.10 |
| 26 | BB | 2381 | A | N1-C6-N6 | -7.34 | 114.20 | 118.60 |
| 26 | BB | 2400 | G | C8-N9-C4 | -7.34 | 103.47 | 106.40 |
| 1 | AA | 280 | C | N1-C1'-C2' | -7.34 | 103.93 | 112.00 |
| 26 | BB | 403 | U | O4'-C1'-N1 | 7.34 | 114.07 | 108.20 |
| 26 | BB | 679 | C | C5-C4-N4 | 7.34 | 125.34 | 120.20 |
| 26 | BB | 2532 | G | N9-C4-C5 | -7.34 | 102.47 | 105.40 |
| 1 | AA | 642 | A | C4-C5-C6 | -7.34 | 113.33 | 117.00 |
| 1 | AA | 815 | A | O4'-C1'-N9 | 7.34 | 114.07 | 108.20 |
| 26 | BB | 262 | A | C6-C5-N7 | 7.34 | 137.44 | 132.30 |
| 26 | BB | 1459 | G | P-O3'-C3' | 7.34 | 128.50 | 119.70 |
| 26 | BB | 1571 | A | C2-N3-C4 | 7.34 | 114.27 | 110.60 |
| 26 | BB | 1640 | A | N9-C4-C5 | 7.34 | 108.73 | 105.80 |
| 45 | BU | 38 | TYR | CB-CG-CD2 | 7.34 | 125.40 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 581 | G | N1-C2-N3 | -7.33 | 119.50 | 123.90 |
| 1 | AA | 1046 | A | C4-C5-N7 | -7.33 | 107.03 | 110.70 |
| 1 | AA | 1186 | G | C4-C5-N7 | -7.33 | 107.87 | 110.80 |
| 26 | BB | 186 | G | N9-C1'-C2' | -7.33 | 103.93 | 112.00 |
| 1 | AA | 411 | A | C2-N3-C4 | 7.33 | 114.27 | 110.60 |
| 1 | AA | 1006 | G | O4'-C1'-N9 | 7.33 | 114.07 | 108.20 |
| 25 | BA | 33 | G | C8-N9-C4 | -7.33 | 103.47 | 106.40 |
| 26 | BB | 814 | C | N3-C2-O2 | -7.33 | 116.77 | 121.90 |
| 26 | BB | 1735 | A | C5-N7-C8 | 7.33 | 107.57 | 103.90 |
| 26 | BB | 1759 | A | N1-C6-N6 | -7.33 | 114.20 | 118.60 |
| 26 | BB | 2469 | A | C8-N9-C4 | 7.33 | 108.73 | 105.80 |
| 1 | AA | 235 | C | C5'-C4'-O4' | 7.33 | 117.90 | 109.10 |
| 1 | AA | 749 | A | C5-C6-N6 | -7.33 | 117.83 | 123.70 |
| 1 | AA | 785 | G | N9-C1'-C2' | -7.33 | 103.94 | 112.00 |
| 1 | AA | 1225 | A | O4'-C1'-N9 | 7.33 | 114.06 | 108.20 |
| 3 | AC | 54 | U | C5-C4-O4 | -7.33 | 121.50 | 125.90 |
| 25 | BA | 34 | A | N9-C4-C5 | 7.33 | 108.73 | 105.80 |
| 26 | BB | 358 | U | N1-C2-O2 | -7.33 | 117.67 | 122.80 |
| 26 | BB | 1943 | U | C1'-O4'-C4' | 7.33 | 115.77 | 109.90 |
| 26 | BB | 2102 | G | C8-N9-C4 | -7.33 | 103.47 | 106.40 |
| 26 | BB | 2526 | G | C8-N9-C4 | -7.33 | 103.47 | 106.40 |
| 47 | BW | 81 | ARG | NE-CZ-NH1 | 7.33 | 123.97 | 120.30 |
| 1 | AA | 224 | U | O4'-C1'-C2' | -7.33 | 98.47 | 105.80 |
| 1 | AA | 403 | C | N1-C1'-C2' | -7.33 | 103.94 | 112.00 |
| 26 | BB | 2787 | C | N3-C4-C5 | 7.33 | 124.83 | 121.90 |
| 1 | AA | 86 | G | N3-C4-N9 | 7.33 | 130.40 | 126.00 |
| 1 | AA | 122 | G | C5-N7-C8 | -7.33 | 100.64 | 104.30 |
| 26 | BB | 139 | U | C5-C6-N1 | -7.33 | 119.03 | 122.70 |
| 26 | BB | 788 | A | C5-C6-N1 | 7.33 | 121.36 | 117.70 |
| 26 | BB | 919 | U | C4-C5-C6 | 7.33 | 124.10 | 119.70 |
| 26 | BB | 1319 | C | O4'-C1'-N1 | 7.33 | 114.06 | 108.20 |
| 26 | BB | 1719 | G | N9-C4-C5 | -7.33 | 102.47 | 105.40 |
| 26 | BB | 2209 | G | N1-C2-N3 | 7.33 | 128.30 | 123.90 |
| 26 | BB | 757 | G | C6-N1-C2 | -7.33 | 120.70 | 125.10 |
| 26 | BB | 1098 | A | N1-C6-N6 | 7.33 | 123.00 | 118.60 |
| 26 | BB | 1640 | A | C8-N9-C4 | -7.33 | 102.87 | 105.80 |
| 1 | AA | 1296 | C | C5'-C4'-O4' | 7.33 | 117.89 | 109.10 |
| 7 | AG | 153 | ARG | NE-CZ-NH1 | -7.33 | 116.64 | 120.30 |
| 15 | AO | 93 | ARG | NE-CZ-NH1 | 7.33 | 123.96 | 120.30 |
| 25 | BA | 4 | C | C5-C6-N1 | -7.33 | 117.34 | 121.00 |
| 26 | BB | 115 | C | C5'-C4'-C3' | -7.33 | 104.28 | 116.00 |
| 26 | BB | 1071 | G | O4'-C1'-N9 | 7.33 | 114.06 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1098 | A | C6-C5-N7 | 7.33 | 137.43 | 132.30 |
| 26 | BB | 1705 | A | O4'-C1'-N9 | 7.33 | 114.06 | 108.20 |
| 26 | BB | 2187 | U | C5-C4-O4 | -7.33 | 121.50 | 125.90 |
| 26 | BB | 2533 | U | C5'-C4'-O4' | 7.33 | 117.89 | 109.10 |
| 26 | BB | 2898 | U | N3-C2-O2 | -7.33 | 117.07 | 122.20 |
| 1 | AA | 40 | C | C2-N3-C4 | -7.32 | 116.24 | 119.90 |
| 3 | AC | 31 | U | N3-C2-O2 | -7.32 | 117.07 | 122.20 |
| 26 | BB | 65 | U | C5-C6-N1 | 7.32 | 126.36 | 122.70 |
| 26 | BB | 220 | G | N9-C4-C5 | 7.32 | 108.33 | 105.40 |
| 26 | BB | 550 | C | C5-C6-N1 | 7.32 | 124.66 | 121.00 |
| 26 | BB | 1502 | A | C2-N3-C4 | 7.32 | 114.26 | 110.60 |
| 26 | BB | 1663 | G | C2-N3-C4 | 7.32 | 115.56 | 111.90 |
| 26 | BB | 1737 | G | N9-C1'-C2' | -7.32 | 103.94 | 112.00 |
| 26 | BB | 2218 | G | C6-C5-N7 | -7.32 | 126.01 | 130.40 |
| 1 | AA | 1359 | C | O4'-C1'-N1 | 7.32 | 114.06 | 108.20 |
| 2 | AB | 33 | U | P-O3'-C3' | 7.32 | 128.49 | 119.70 |
| 26 | BB | 379 | G | N1-C6-O6 | -7.32 | 115.51 | 119.90 |
| 26 | BB | 626 | A | N7-C8-N9 | 7.32 | 117.46 | 113.80 |
| 26 | BB | 1042 | G | N3-C4-N9 | 7.32 | 130.39 | 126.00 |
| 26 | BB | 2158 | A | C5'-C4'-O4' | -7.32 | 100.31 | 109.10 |
| 26 | BB | 2768 | U | N3-C4-C5 | -7.32 | 110.21 | 114.60 |
| 1 | AA | 761 | G | C4-C5-C6 | 7.32 | 123.19 | 118.80 |
| 1 | AA | 1453 | G | C5-N7-C8 | -7.32 | 100.64 | 104.30 |
| 26 | BB | 661 | A | C4-C5-N7 | -7.32 | 107.04 | 110.70 |
| 26 | BB | 740 | C | C5-C4-N4 | -7.32 | 115.08 | 120.20 |
| 26 | BB | 2175 | C | N3-C2-O2 | -7.32 | 116.78 | 121.90 |
| 40 | BP | 71 | ARG | CD-NE-CZ | 7.32 | 133.85 | 123.60 |
| 1 | AA | 49 | U | C5'-C4'-C3' | -7.32 | 104.29 | 116.00 |
| 1 | AA | 547 | A | C8-N9-C4 | -7.32 | 102.87 | 105.80 |
| 1 | AA | 609 | A | C1'-O4'-C4' | 7.32 | 115.76 | 109.90 |
| 26 | BB | 227 | A | N3-C4-N9 | 7.32 | 133.25 | 127.40 |
| 26 | BB | 245 | G | N3-C4-N9 | -7.32 | 121.61 | 126.00 |
| 26 | BB | 682 | G | N9-C4-C5 | 7.32 | 108.33 | 105.40 |
| 26 | BB | 918 | A | C5-C6-N1 | 7.32 | 121.36 | 117.70 |
| 26 | BB | 1273 | U | N3-C4-O4 | 7.32 | 124.52 | 119.40 |
| 26 | BB | 2386 | A | C5-N7-C8 | -7.32 | 100.24 | 103.90 |
| 26 | BB | 2582 | G | O4'-C4'-C3' | 7.32 | 111.95 | 106.10 |
| 1 | AA | 136 | C | N1-C2-O2 | 7.32 | 123.29 | 118.90 |
| 1 | AA | 951 | G | N7-C8-N9 | 7.32 | 116.76 | 113.10 |
| 2 | AB | 70 | C | C1'-O4'-C4' | -7.32 | 104.05 | 109.90 |
| 25 | BA | 21 | G | C6-C5-N7 | -7.32 | 126.01 | 130.40 |
| 26 | BB | 258 | G | C6-C5-N7 | -7.32 | 126.01 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 552 | U | N1-C2-N3 | 7.32 | 119.29 | 114.90 |
| 26 | BB | 612 | G | C4-C5-N7 | -7.32 | 107.87 | 110.80 |
| 26 | BB | 1061 | U | O4'-C1'-C2' | -7.32 | 98.48 | 105.80 |
| 26 | BB | 1203 | U | N3-C4-O4 | 7.32 | 124.52 | 119.40 |
| 26 | BB | 1623 | G | N3-C4-N9 | -7.32 | 121.61 | 126.00 |
| 26 | BB | 2004 | G | N1-C6-O6 | -7.32 | 115.51 | 119.90 |
| 26 | BB | 2278 | A | O4'-C1'-N9 | 7.32 | 114.06 | 108.20 |
| 26 | BB | 2737 | G | C3'-C2'-C1' | 7.32 | 107.35 | 101.50 |
| 1 | AA | 107 | G | C4-C5-N7 | -7.32 | 107.87 | 110.80 |
| 1 | AA | 450 | G | C8-N9-C4 | -7.32 | 103.47 | 106.40 |
| 1 | AA | 815 | A | C1'-O4'-C4' | -7.32 | 104.05 | 109.90 |
| 1 | AA | 1138 | G | C4-C5-N7 | -7.32 | 107.87 | 110.80 |
| 2 | AB | 59 | G | O5'-C5'-C4' | 7.32 | 125.60 | 111.70 |
| 4 | AD | 23 | G | N1-C2-N3 | -7.32 | 119.51 | 123.90 |
| 26 | BB | 1185 | G | C6-N1-C2 | -7.32 | 120.71 | 125.10 |
| 26 | BB | 2730 | C | C4'-C3'-C2' | -7.32 | 95.28 | 102.60 |
| 26 | BB | 2800 | A | C5-C6-N1 | 7.32 | 121.36 | 117.70 |
| 26 | BB | 2900 | A | C6-C5-N7 | 7.32 | 137.42 | 132.30 |
| 26 | BB | 1223 | G | N3-C2-N2 | -7.31 | 114.78 | 119.90 |
| 26 | BB | 1921 | G | C8-N9-C4 | -7.31 | 103.47 | 106.40 |
| 26 | BB | 2675 | A | N1-C6-N6 | -7.31 | 114.21 | 118.60 |
| 1 | AA | 851 | G | O4'-C1'-N9 | 7.31 | 114.05 | 108.20 |
| 1 | AA | 895 | G | C5'-C4'-O4' | 7.31 | 117.88 | 109.10 |
| 1 | AA | 1270 | G | O4'-C1'-N9 | 7.31 | 114.05 | 108.20 |
| 4 | AD | 53 | G | N1-C6-O6 | 7.31 | 124.29 | 119.90 |
| 26 | BB | 61 | C | C6-N1-C2 | 7.31 | 123.22 | 120.30 |
| 26 | BB | 192 | C | C4-C5-C6 | -7.31 | 113.74 | 117.40 |
| 26 | BB | 948 | C | N1-C2-O2 | 7.31 | 123.29 | 118.90 |
| 26 | BB | 1162 | G | C2-N3-C4 | 7.31 | 115.56 | 111.90 |
| 26 | BB | 2087 | G | N3-C2-N2 | -7.31 | 114.78 | 119.90 |
| 28 | BD | 101 | ARG | NE-CZ-NH2 | -7.31 | 116.64 | 120.30 |
| 1 | AA | 135 | C | O4'-C1'-C2' | 7.31 | 114.18 | 107.60 |
| 1 | AA | 597 | G | C6-N1-C2 | -7.31 | 120.71 | 125.10 |
| 1 | AA | 1014 | A | N3-C4-C5 | -7.31 | 121.68 | 126.80 |
| 1 | AA | 1230 | C | C5-C4-N4 | -7.31 | 115.08 | 120.20 |
| 26 | BB | 1538 | G | C5-C6-O6 | -7.31 | 124.21 | 128.60 |
| 26 | BB | 2857 | G | O4'-C1'-N9 | 7.31 | 114.05 | 108.20 |
| 1 | AA | 657 | U | C5-C6-N1 | -7.31 | 119.05 | 122.70 |
| 1 | AA | 834 | U | C2-N3-C4 | -7.31 | 122.61 | 127.00 |
| 26 | BB | 351 | C | O4'-C1'-N1 | 7.31 | 114.05 | 108.20 |
| 26 | BB | 554 | U | N3-C4-C5 | -7.31 | 110.21 | 114.60 |
| 26 | BB | 1448 | G | C5-N7-C8 | 7.31 | 107.95 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1622 | G | N3-C2-N2 | -7.31 | 114.78 | 119.90 |
| 26 | BB | 2495 | G | C4-C5-N7 | -7.31 | 107.88 | 110.80 |
| 26 | BB | 332 | A | O4'-C1'-N9 | 7.31 | 114.05 | 108.20 |
| 26 | BB | 685 | A | C8-N9-C4 | -7.31 | 102.88 | 105.80 |
| 26 | BB | 1009 | A | C2-N3-C4 | 7.31 | 114.25 | 110.60 |
| 26 | BB | 2707 | U | C3'-C2'-C1' | 7.31 | 107.35 | 101.50 |
| 1 | AA | 544 | G | N3-C4-C5 | -7.31 | 124.95 | 128.60 |
| 1 | AA | 1284 | C | C6-N1-C2 | 7.31 | 123.22 | 120.30 |
| 1 | AA | 566 | G | C1'-O4'-C4' | -7.30 | 104.06 | 109.90 |
| 1 | AA | 575 | G | N9-C4-C5 | 7.30 | 108.32 | 105.40 |
| 1 | AA | 614 | C | N1-C2-O2 | 7.30 | 123.28 | 118.90 |
| 1 | AA | 744 | C | C2-N3-C4 | 7.30 | 123.55 | 119.90 |
| 2 | AB | 65 | C | C5'-C4'-O4' | 7.30 | 117.87 | 109.10 |
| 4 | AD | 65 | G | N7-C8-N9 | 7.30 | 116.75 | 113.10 |
| 26 | BB | 98 | G | O4'-C1'-N9 | 7.30 | 114.04 | 108.20 |
| 26 | BB | 996 | A | C2-N3-C4 | 7.30 | 114.25 | 110.60 |
| 26 | BB | 1095 | A | C5-C6-N1 | -7.30 | 114.05 | 117.70 |
| 26 | BB | 2108 | A | C2-N3-C4 | 7.30 | 114.25 | 110.60 |
| 26 | BB | 2592 | G | C4-C5-C6 | 7.30 | 123.18 | 118.80 |
| 26 | BB | 2659 | G | N3-C4-N9 | 7.30 | 130.38 | 126.00 |
| 1 | AA | 490 | C | C2-N3-C4 | -7.30 | 116.25 | 119.90 |
| 1 | AA | 999 | C | N3-C4-C5 | 7.30 | 124.82 | 121.90 |
| 1 | AA | 1106 | G | C3'-C2'-C1' | -7.30 | 95.66 | 101.50 |
| 26 | BB | 1284 | A | C6-N1-C2 | 7.30 | 122.98 | 118.60 |
| 1 | AA | 275 | G | C3'-C2'-C1' | -7.30 | 95.66 | 101.50 |
| 1 | AA | 382 | A | O4'-C1'-N9 | 7.30 | 114.04 | 108.20 |
| 1 | AA | 856 | C | O5'-P-OP2 | -7.30 | 99.13 | 105.70 |
| 3 | AC | 37 | G | O4'-C1'-N9 | 7.30 | 114.04 | 108.20 |
| 26 | BB | 177 | G | N3-C4-C5 | -7.30 | 124.95 | 128.60 |
| 34 | BJ | 50 | TYR | CG-CD2-CE2 | -7.30 | 115.46 | 121.30 |
| 1 | AA | 870 | U | C5-C6-N1 | -7.30 | 119.05 | 122.70 |
| 1 | AA | 954 | G | C2-N3-C4 | 7.30 | 115.55 | 111.90 |
| 1 | AA | 969 | A | C8-N9-C4 | -7.30 | 102.88 | 105.80 |
| 1 | AA | 980 | C | O5'-P-OP2 | -7.30 | 99.13 | 105.70 |
| 1 | AA | 988 | G | C5'-C4'-O4' | 7.30 | 117.86 | 109.10 |
| 26 | BB | 81 | G | C4'-C3'-C2' | -7.30 | 95.30 | 102.60 |
| 26 | BB | 1057 | A | N1-C2-N3 | -7.30 | 125.65 | 129.30 |
| 26 | BB | 1343 | G | C6-N1-C2 | -7.30 | 120.72 | 125.10 |
| 26 | BB | 1481 | U | O4'-C1'-N1 | 7.30 | 114.04 | 108.20 |
| 26 | BB | 2368 | C | N1-C2-N3 | -7.30 | 114.09 | 119.20 |
| 26 | BB | 2749 | A | N7-C8-N9 | -7.30 | 110.15 | 113.80 |
| 26 | BB | 2812 | G | C8-N9-C4 | -7.30 | 103.48 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 610 | U | O4'-C1'-N1 | 7.30 | 114.04 | 108.20 |
| 1 | AA | 1114 | C | C5-C6-N1 | -7.30 | 117.35 | 121.00 |
| 26 | BB | 570 | G | C2-N3-C4 | 7.30 | 115.55 | 111.90 |
| 31 | BG | 73 | VAL | CA-CB-CG2 | 7.30 | 121.85 | 110.90 |
| 1 | AA | 290 | C | N3-C2-O2 | -7.30 | 116.79 | 121.90 |
| 1 | AA | 346 | G | C5-N7-C8 | -7.30 | 100.65 | 104.30 |
| 1 | AA | 809 | G | C4-C5-N7 | 7.30 | 113.72 | 110.80 |
| 1 | AA | 1166 | G | C2-N3-C4 | -7.30 | 108.25 | 111.90 |
| 1 | AA | 1399 | C | C6-N1-C2 | 7.30 | 123.22 | 120.30 |
| 1 | AA | 1476 | A | C8-N9-C4 | 7.30 | 108.72 | 105.80 |
| 4 | AD | 10 | G | N3-C2-N2 | -7.30 | 114.79 | 119.90 |
| 4 | AD | 32 | G | C6-N1-C2 | 7.30 | 129.48 | 125.10 |
| 25 | BA | 82 | U | N1-C2-N3 | 7.30 | 119.28 | 114.90 |
| 26 | BB | 241 | A | N9-C4-C5 | 7.30 | 108.72 | 105.80 |
| 26 | BB | 1069 | A | C5-C6-N6 | 7.30 | 129.54 | 123.70 |
| 26 | BB | 1114 | C | N3-C2-O2 | -7.30 | 116.79 | 121.90 |
| 26 | BB | 1135 | C | C1'-O4'-C4' | -7.30 | 104.06 | 109.90 |
| 26 | BB | 1200 | C | N3-C4-C5 | -7.30 | 118.98 | 121.90 |
| 26 | BB | 1600 | C | N3-C4-C5 | -7.30 | 118.98 | 121.90 |
| 26 | BB | 1611 | C | C2-N3-C4 | 7.30 | 123.55 | 119.90 |
| 26 | BB | 2865 | U | P-O3'-C3' | 7.30 | 128.46 | 119.70 |
| 26 | BB | 1264 | A | C1'-O4'-C4' | -7.29 | 104.06 | 109.90 |
| 26 | BB | 1360 | G | N3-C2-N2 | 7.29 | 125.01 | 119.90 |
| 26 | BB | 1888 | G | N7-C8-N9 | 7.29 | 116.75 | 113.10 |
| 23 | AW | 17 | ARG | NE-CZ-NH1 | -7.29 | 116.65 | 120.30 |
| 26 | BB | 28 | A | C4-C5-N7 | -7.29 | 107.05 | 110.70 |
| 26 | BB | 1358 | G | C3'-C2'-C1' | 7.29 | 107.33 | 101.50 |
| 26 | BB | 1742 | U | C4-C5-C6 | 7.29 | 124.08 | 119.70 |
| 26 | BB | 2736 | A | C5-C6-N6 | -7.29 | 117.87 | 123.70 |
| 26 | BB | 2805 | C | C3'-C2'-C1' | -7.29 | 95.67 | 101.50 |
| 1 | AA | 396 | C | C5-C4-N4 | -7.29 | 115.10 | 120.20 |
| 1 | AA | 538 | G | C8-N9-C4 | -7.29 | 103.48 | 106.40 |
| 1 | AA | 615 | G | N3-C4-C5 | -7.29 | 124.95 | 128.60 |
| 1 | AA | 1099 | G | N7-C8-N9 | 7.29 | 116.75 | 113.10 |
| 1 | AA | 1285 | A | C2-N3-C4 | -7.29 | 106.95 | 110.60 |
| 1 | AA | 1295 | U | O4'-C1'-N1 | 7.29 | 114.03 | 108.20 |
| 4 | AD | 46 | G | C5-N7-C8 | 7.29 | 107.95 | 104.30 |
| 26 | BB | 541 | A | C3'-C2'-C1' | 7.29 | 107.33 | 101.50 |
| 26 | BB | 996 | A | N1-C6-N6 | -7.29 | 114.23 | 118.60 |
| 26 | BB | 1139 | G | N1-C2-N2 | -7.29 | 109.64 | 116.20 |
| 26 | BB | 1264 | A | O4'-C1'-N9 | 7.29 | 114.03 | 108.20 |
| 26 | BB | 1415 | U | N3-C4-C5 | -7.29 | 110.23 | 114.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1443 | U | N1-C2-O2 | -7.29 | 117.70 | 122.80 |
| 26 | BB | 1552 | A | C4-C5-N7 | 7.29 | 114.35 | 110.70 |
| 26 | BB | 1702 | G | N3-C2-N2 | -7.29 | 114.80 | 119.90 |
| 1 | AA | 76 | G | O4'-C1'-N9 | 7.29 | 114.03 | 108.20 |
| 1 | AA | 702 | A | C3'-C2'-C1' | 7.29 | 107.33 | 101.50 |
| 26 | BB | 1350 | C | N3-C2-O2 | -7.29 | 116.80 | 121.90 |
| 26 | BB | 2147 | A | C5-C6-N1 | 7.29 | 121.34 | 117.70 |
| 1 | AA | 742 | G | N3-C4-C5 | -7.29 | 124.95 | 128.60 |
| 1 | AA | 920 | U | P-O3'-C3' | 7.29 | 128.45 | 119.70 |
| 26 | BB | 107 | G | C4'-C3'-C2' | -7.29 | 95.31 | 102.60 |
| 26 | BB | 1429 | G | N3-C2-N2 | 7.29 | 125.00 | 119.90 |
| 31 | BG | 127 | TYR | CB-CG-CD2 | -7.29 | 116.63 | 121.00 |
| 1 | AA | 1137 | C | N1-C2-O2 | 7.29 | 123.27 | 118.90 |
| 26 | BB | 274 | C | N3-C2-O2 | -7.29 | 116.80 | 121.90 |
| 26 | BB | 313 | G | C8-N9-C4 | -7.29 | 103.48 | 106.40 |
| 26 | BB | 2417 | C | N1-C1'-C2' | -7.29 | 103.98 | 112.00 |
| 1 | AA | 536 | C | C5-C4-N4 | 7.29 | 125.30 | 120.20 |
| 1 | AA | 1032 | G | N9-C4-C5 | -7.29 | 102.48 | 105.40 |
| 26 | BB | 763 | G | C3'-C2'-C1' | -7.29 | 95.67 | 101.50 |
| 26 | BB | 808 | G | N1-C2-N3 | -7.29 | 119.53 | 123.90 |
| 26 | BB | 1942 | C | C2-N3-C4 | 7.29 | 123.54 | 119.90 |
| 26 | BB | 2430 | A | N1-C2-N3 | 7.29 | 132.94 | 129.30 |
| 26 | BB | 2903 | U | C1'-O4'-C4' | 7.29 | 115.73 | 109.90 |
| 1 | AA | 279 | A | N7-C8-N9 | 7.28 | 117.44 | 113.80 |
| 1 | AA | 962 | C | C6-N1-C2 | -7.28 | 117.39 | 120.30 |
| 1 | AA | 1368 | A | C4'-C3'-C2' | -7.28 | 95.32 | 102.60 |
| 1 | AA | 1427 | C | N3-C2-O2 | -7.28 | 116.80 | 121.90 |
| 2 | AB | 23 | A | N1-C6-N6 | 7.28 | 122.97 | 118.60 |
| 26 | BB | 1297 | C | C6-N1-C2 | -7.28 | 117.39 | 120.30 |
| 26 | BB | 2269 | G | C8-N9-C4 | 7.28 | 109.31 | 106.40 |
| 29 | BE | 112 | THR | CA-CB-CG2 | -7.28 | 102.20 | 112.40 |
| 56 | B5 | 35 | ARG | NE-CZ-NH2 | -7.28 | 116.66 | 120.30 |
| 1 | AA | 866 | C | C5-C6-N1 | 7.28 | 124.64 | 121.00 |
| 26 | BB | 217 | A | P-O3'-C3' | 7.28 | 128.44 | 119.70 |
| 26 | BB | 2004 | G | N3-C4-N9 | 7.28 | 130.37 | 126.00 |
| 26 | BB | 2756 | U | O4'-C4'-C3' | 7.28 | 111.93 | 106.10 |
| 1 | AA | 1326 | U | C5-C4-O4 | 7.28 | 130.27 | 125.90 |
| 1 | AA | 1528 | U | P-O3'-C3' | 7.28 | 128.44 | 119.70 |
| 3 | AC | 35 | G | C5-N7-C8 | -7.28 | 100.66 | 104.30 |
| 4 | AD | 20 | G | N1-C6-O6 | 7.28 | 124.27 | 119.90 |
| 26 | BB | 470 | A | N1-C2-N3 | -7.28 | 125.66 | 129.30 |
| 26 | BB | 1094 | U | N3-C2-O2 | -7.28 | 117.10 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1107 | G | N3-C2-N2 | -7.28 | 114.80 | 119.90 |
| 26 | BB | 1721 | G | C2-N3-C4 | 7.28 | 115.54 | 111.90 |
| 26 | BB | 1903 | G | C5-C6-N1 | 7.28 | 115.14 | 111.50 |
| 1 | AA | 1035 | A | C5-C6-N1 | 7.28 | 121.34 | 117.70 |
| 26 | BB | 285 | G | C4-C5-N7 | 7.28 | 113.71 | 110.80 |
| 26 | BB | 728 | G | C5-C6-O6 | -7.28 | 124.23 | 128.60 |
| 26 | BB | 1067 | A | C5-C6-N6 | 7.28 | 129.52 | 123.70 |
| 26 | BB | 1417 | C | N3-C4-C5 | 7.28 | 124.81 | 121.90 |
| 40 | BP | 87 | PHE | CB-CA-C | 7.28 | 124.96 | 110.40 |
| 4 | AD | 57 | C | C6-N1-C2 | -7.28 | 117.39 | 120.30 |
| 26 | BB | 210 | C | C6-N1-C2 | 7.28 | 123.21 | 120.30 |
| 26 | BB | 213 | A | C5-N7-C8 | -7.28 | 100.26 | 103.90 |
| 26 | BB | 1214 | A | C5-C6-N1 | -7.28 | 114.06 | 117.70 |
| 26 | BB | 1415 | U | O4'-C1'-N1 | 7.28 | 114.02 | 108.20 |
| 26 | BB | 1476 | U | N1-C2-N3 | 7.28 | 119.27 | 114.90 |
| 26 | BB | 1894 | C | C2-N3-C4 | -7.28 | 116.26 | 119.90 |
| 1 | AA | 428 | G | N9-C4-C5 | 7.28 | 108.31 | 105.40 |
| 1 | AA | 1475 | G | N1-C2-N3 | 7.28 | 128.27 | 123.90 |
| 26 | BB | 108 | G | N3-C2-N2 | -7.28 | 114.81 | 119.90 |
| 26 | BB | 733 | G | C5-C6-N1 | 7.28 | 115.14 | 111.50 |
| 26 | BB | 1061 | U | O3'-P-O5' | -7.28 | 90.18 | 104.00 |
| 26 | BB | 1227 | G | C1'-O4'-C4' | 7.28 | 115.72 | 109.90 |
| 26 | BB | 1873 | G | C8-N9-C4 | -7.28 | 103.49 | 106.40 |
| 26 | BB | 2374 | C | N3-C4-N4 | 7.28 | 123.09 | 118.00 |
| 1 | AA | 1005 | A | N1-C6-N6 | 7.27 | 122.97 | 118.60 |
| 2 | AB | 57 | G | C6-C5-N7 | -7.27 | 126.04 | 130.40 |
| 25 | BA | 45 | A | O4'-C1'-N9 | 7.27 | 114.02 | 108.20 |
| 26 | BB | 558 | U | O4'-C1'-N1 | 7.27 | 114.02 | 108.20 |
| 26 | BB | 610 | C | N3-C2-O2 | -7.27 | 116.81 | 121.90 |
| 26 | BB | 950 | G | N3-C2-N2 | -7.27 | 114.81 | 119.90 |
| 26 | BB | 2821 | A | C4-C5-N7 | -7.27 | 107.06 | 110.70 |
| 1 | AA | 543 | U | O4'-C1'-N1 | 7.27 | 114.02 | 108.20 |
| 1 | AA | 612 | C | C5'-C4'-C3' | -7.27 | 104.36 | 116.00 |
| 1 | AA | 1013 | G | N3-C4-N9 | -7.27 | 121.64 | 126.00 |
| 26 | BB | 1568 | G | N3-C4-C5 | -7.27 | 124.96 | 128.60 |
| 26 | BB | 2335 | A | N7-C8-N9 | 7.27 | 117.44 | 113.80 |
| 1 | AA | 3 | A | C6-C5-N7 | 7.27 | 137.39 | 132.30 |
| 1 | AA | 1110 | A | N1-C6-N6 | 7.27 | 122.96 | 118.60 |
| 1 | AA | 1308 | U | N3-C4-O4 | 7.27 | 124.49 | 119.40 |
| 26 | BB | 619 | G | O4'-C1'-N9 | 7.27 | 114.02 | 108.20 |
| 1 | AA | 1292 | G | C4-C5-C6 | 7.27 | 123.16 | 118.80 |
| 1 | AA | 1494 | G | C8-N9-C4 | -7.27 | 103.49 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 106 | C | N3-C2-O2 | -7.27 | 116.81 | 121.90 |
| 26 | BB | 535 | G | N1-C2-N3 | -7.27 | 119.54 | 123.90 |
| 26 | BB | 1731 | G | O4'-C1'-N9 | 7.27 | 114.02 | 108.20 |
| 26 | BB | 1805 | A | C4'-C3'-C2' | -7.27 | 95.33 | 102.60 |
| 26 | BB | 2062 | A | C5'-C4'-C3' | -7.27 | 104.37 | 116.00 |
| 26 | BB | 2632 | A | O4'-C1'-C2' | 7.27 | 114.14 | 107.60 |
| 26 | BB | 2674 | G | C5-C6-O6 | -7.27 | 124.24 | 128.60 |
| 26 | BB | 2818 | U | C4'-C3'-C2' | -7.27 | 95.33 | 102.60 |
| 1 | AA | 606 | G | C4-C5-C6 | 7.27 | 123.16 | 118.80 |
| 25 | BA | 97 | C | C2-N3-C4 | -7.27 | 116.27 | 119.90 |
| 26 | BB | 708 | G | C5'-C4'-O4' | 7.27 | 117.82 | 109.10 |
| 26 | BB | 789 | A | C4'-C3'-C2' | -7.27 | 95.33 | 102.60 |
| 26 | BB | 1710 | G | C1'-O4'-C4' | -7.27 | 104.09 | 109.90 |
| 26 | BB | 2256 | G | P-O3'-C3' | 7.27 | 128.42 | 119.70 |
| 26 | BB | 2273 | A | N1-C2-N3 | -7.27 | 125.67 | 129.30 |
| 26 | BB | 2636 | C | N1-C2-O2 | 7.27 | 123.26 | 118.90 |
| 26 | BB | 2708 | G | N1-C2-N2 | 7.27 | 122.74 | 116.20 |
| 1 | AA | 202 | G | C5-C6-N1 | 7.27 | 115.13 | 111.50 |
| 1 | AA | 587 | G | N1-C6-O6 | -7.27 | 115.54 | 119.90 |
| 1 | AA | 1479 | C | N1-C2-O2 | 7.27 | 123.26 | 118.90 |
| 1 | AA | 176 | C | N1-C2-N3 | 7.26 | 124.28 | 119.20 |
| 1 | AA | 181 | A | C4-C5-C6 | -7.26 | 113.37 | 117.00 |
| 1 | AA | 259 | G | C5-C6-O6 | -7.26 | 124.24 | 128.60 |
| 1 | AA | 1336 | C | O4'-C4'-C3' | 7.26 | 111.91 | 106.10 |
| 26 | BB | 112 | U | O4'-C1'-N1 | 7.26 | 114.01 | 108.20 |
| 26 | BB | 268 | C | N1-C2-N3 | 7.26 | 124.28 | 119.20 |
| 26 | BB | 629 | G | C6-N1-C2 | -7.26 | 120.74 | 125.10 |
| 26 | BB | 1718 | G | C4-C5-C6 | 7.26 | 123.16 | 118.80 |
| 26 | BB | 1981 | A | N1-C6-N6 | -7.26 | 114.24 | 118.60 |
| 26 | BB | 2353 | G | C2-N3-C4 | -7.26 | 108.27 | 111.90 |
| 34 | BJ | 55 | ARG | NE-CZ-NH2 | -7.26 | 116.67 | 120.30 |
| 1 | AA | 874 | G | C5'-C4'-O4' | 7.26 | 117.82 | 109.10 |
| 26 | BB | 159 | G | C5-C6-O6 | -7.26 | 124.24 | 128.60 |
| 47 | BW | 85 | ARG | NE-CZ-NH2 | 7.26 | 123.93 | 120.30 |
| 1 | AA | 39 | G | C5'-C4'-O4' | 7.26 | 117.81 | 109.10 |
| 1 | AA | 369 | G | C5-C6-O6 | -7.26 | 124.24 | 128.60 |
| 26 | BB | 78 | U | C5-C4-O4 | -7.26 | 121.54 | 125.90 |
| 26 | BB | 1164 | C | N1-C2-O2 | 7.26 | 123.26 | 118.90 |
| 26 | BB | 1167 | C | O4'-C1'-N1 | 7.26 | 114.01 | 108.20 |
| 26 | BB | 2892 | G | C1'-O4'-C4' | -7.26 | 104.09 | 109.90 |
| 28 | BD | 2 | VAL | CG1-CB-CG2 | -7.26 | 99.28 | 110.90 |
| 31 | BG | 164 | GLU | OE1-CD-OE2 | 7.26 | 132.01 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 78 | A | C3'-C2'-C1' | -7.26 | 95.69 | 101.50 |
| 1 | AA | 937 | A | P-O3'-C3' | 7.26 | 128.41 | 119.70 |
| 1 | AA | 1352 | C | O4'-C1'-N1 | 7.26 | 114.01 | 108.20 |
| 4 | AD | 74 | A | N9-C1'-C2' | 7.26 | 123.44 | 114.00 |
| 26 | BB | 67 | U | N3-C2-O2 | -7.26 | 117.12 | 122.20 |
| 26 | BB | 307 | G | C5-N7-C8 | 7.26 | 107.93 | 104.30 |
| 26 | BB | 770 | G | C4-C5-C6 | -7.26 | 114.44 | 118.80 |
| 26 | BB | 1239 | G | C4-C5-N7 | -7.26 | 107.90 | 110.80 |
| 26 | BB | 1749 | A | C5'-C4'-O4' | 7.26 | 117.81 | 109.10 |
| 26 | BB | 1761 | C | N1-C2-N3 | -7.26 | 114.12 | 119.20 |
| 26 | BB | 1985 | C | C5-C6-N1 | -7.26 | 117.37 | 121.00 |
| 26 | BB | 2841 | C | C6-N1-C2 | -7.26 | 117.40 | 120.30 |
| 3 | AC | 56 | G | C8-N9-C4 | -7.26 | 103.50 | 106.40 |
| 26 | BB | 185 | G | N3-C4-C5 | -7.26 | 124.97 | 128.60 |
| 26 | BB | 233 | A | C2-N3-C4 | -7.26 | 106.97 | 110.60 |
| 26 | BB | 1552 | A | C5-C6-N1 | 7.26 | 121.33 | 117.70 |
| 26 | BB | 1941 | C | C2-N3-C4 | 7.26 | 123.53 | 119.90 |
| 1 | AA | 606 | G | O4'-C1'-N9 | 7.26 | 114.01 | 108.20 |
| 1 | AA | 828 | U | P-O3'-C3' | 7.26 | 128.41 | 119.70 |
| 26 | BB | 143 | C | N1-C2-O2 | 7.26 | 123.25 | 118.90 |
| 26 | BB | 701 | G | C6-N1-C2 | -7.26 | 120.75 | 125.10 |
| 26 | BB | 1000 | A | C4-C5-N7 | -7.26 | 107.07 | 110.70 |
| 26 | BB | 1456 | G | N9-C1'-C2' | -7.26 | 104.02 | 112.00 |
| 26 | BB | 1597 | A | C4'-C3'-C2' | -7.26 | 95.34 | 102.60 |
| 26 | BB | 2133 | G | N3-C2-N2 | -7.26 | 114.82 | 119.90 |
| 1 | AA | 463 | U | N1-C1'-C2' | -7.25 | 104.02 | 112.00 |
| 1 | AA | 1087 | G | C8-N9-C4 | -7.25 | 103.50 | 106.40 |
| 26 | BB | 464 | U | C5-C6-N1 | -7.25 | 119.07 | 122.70 |
| 26 | BB | 494 | G | C5-C6-N1 | 7.25 | 115.13 | 111.50 |
| 26 | BB | 2066 | C | N3-C2-O2 | -7.25 | 116.82 | 121.90 |
| 26 | BB | 2611 | C | O4'-C4'-C3' | 7.25 | 111.90 | 106.10 |
| 26 | BB | 2874 | C | O4'-C1'-N1 | 7.25 | 114.00 | 108.20 |
| 1 | AA | 690 | G | C4-C5-C6 | 7.25 | 123.15 | 118.80 |
| 1 | AA | 937 | A | C6-N1-C2 | 7.25 | 122.95 | 118.60 |
| 1 | AA | 1038 | C | C5-C4-N4 | 7.25 | 125.28 | 120.20 |
| 1 | AA | 1177 | G | O4'-C1'-N9 | 7.25 | 114.00 | 108.20 |
| 1 | AA | 1387 | G | C6-C5-N7 | -7.25 | 126.05 | 130.40 |
| 26 | BB | 208 | C | O4'-C1'-N1 | 7.25 | 114.00 | 108.20 |
| 26 | BB | 288 | U | N1-C2-O2 | 7.25 | 127.88 | 122.80 |
| 26 | BB | 1069 | A | C5-C6-N1 | -7.25 | 114.07 | 117.70 |
| 26 | BB | 1275 | A | C4-C5-C6 | -7.25 | 113.37 | 117.00 |
| 26 | BB | 2721 | A | C5'-C4'-C3' | -7.25 | 104.39 | 116.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 45 | BU | 38 | TYR | CG-CD2-CE2 | -7.25 | 115.50 | 121.30 |
| 1 | AA | 1525 | G | C6-C5-N7 | -7.25 | 126.05 | 130.40 |
| 4 | AD | 25 | U | O5'-P-OP2 | -7.25 | 99.17 | 105.70 |
| 26 | BB | 670 | A | C8-N9-C4 | 7.25 | 108.70 | 105.80 |
| 26 | BB | 2074 | U | O4'-C1'-N1 | 7.25 | 114.00 | 108.20 |
| 26 | BB | 2815 | C | N3-C4-N4 | 7.25 | 123.08 | 118.00 |
| 26 | BB | 2820 | A | N1-C2-N3 | -7.25 | 125.67 | 129.30 |
| 1 | AA | 618 | C | N1-C2-O2 | 7.25 | 123.25 | 118.90 |
| 1 | AA | 657 | U | C4'-C3'-C2' | -7.25 | 95.35 | 102.60 |
| 4 | AD | 15 | G | C6-N1-C2 | -7.25 | 120.75 | 125.10 |
| 1 | AA | 286 | C | O4'-C1'-N1 | 7.25 | 114.00 | 108.20 |
| 1 | AA | 768 | A | N7-C8-N9 | 7.25 | 117.42 | 113.80 |
| 1 | AA | 796 | C | C2-N3-C4 | 7.25 | 123.52 | 119.90 |
| 1 | AA | 1156 | G | C5-N7-C8 | -7.25 | 100.68 | 104.30 |
| 26 | BB | 405 | U | O4'-C1'-N1 | 7.25 | 114.00 | 108.20 |
| 1 | AA | 11 | G | N9-C4-C5 | 7.25 | 108.30 | 105.40 |
| 1 | AA | 273 | U | C5-C6-N1 | 7.25 | 126.32 | 122.70 |
| 1 | AA | 1337 | G | C5-C6-N1 | 7.25 | 115.12 | 111.50 |
| 25 | BA | 71 | C | C4-C5-C6 | 7.25 | 121.02 | 117.40 |
| 26 | BB | 338 | G | C5-C6-N1 | 7.25 | 115.12 | 111.50 |
| 26 | BB | 1144 | A | N3-C4-N9 | 7.25 | 133.20 | 127.40 |
| 26 | BB | 1599 | U | C4'-C3'-C2' | -7.25 | 95.35 | 102.60 |
| 26 | BB | 1713 | A | O4'-C4'-C3' | 7.25 | 111.90 | 106.10 |
| 3 | AC | 20 | G | N3-C4-N9 | 7.25 | 130.35 | 126.00 |
| 26 | BB | 111 | A | C2-N3-C4 | 7.25 | 114.22 | 110.60 |
| 26 | BB | 2651 | C | C4-C5-C6 | -7.25 | 113.78 | 117.40 |
| 1 | AA | 1035 | A | C8-N9-C4 | -7.24 | 102.90 | 105.80 |
| 1 | AA | 1053 | G | N9-C4-C5 | 7.24 | 108.30 | 105.40 |
| 1 | AA | 1261 | A | C2-N3-C4 | 7.24 | 114.22 | 110.60 |
| 3 | AC | 43 | U | P-O3'-C3' | 7.24 | 128.39 | 119.70 |
| 4 | AD | 62 | C | C5-C4-N4 | 7.24 | 125.27 | 120.20 |
| 26 | BB | 62 | U | C5-C4-O4 | -7.24 | 121.55 | 125.90 |
| 26 | BB | 312 | G | C5-C6-O6 | -7.24 | 124.25 | 128.60 |
| 26 | BB | 1592 | C | C3'-C2'-C1' | 7.24 | 107.29 | 101.50 |
| 26 | BB | 1604 | C | C2-N1-C1' | -7.24 | 110.83 | 118.80 |
| 26 | BB | 1692 | U | C5-C6-N1 | -7.24 | 119.08 | 122.70 |
| 26 | BB | 2433 | A | N3-C4-C5 | -7.24 | 121.73 | 126.80 |
| 31 | BG | 50 | ASP | CB-CG-OD2 | 7.24 | 124.82 | 118.30 |
| 56 | B5 | 41 | ARG | NE-CZ-NH1 | -7.24 | 116.68 | 120.30 |
| 1 | AA | 79 | G | N1-C2-N2 | 7.24 | 122.72 | 116.20 |
| 1 | AA | 321 | A | C2-N3-C4 | 7.24 | 114.22 | 110.60 |
| 1 | AA | 579 | A | C8-N9-C4 | 7.24 | 108.70 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1366 | C | N3-C4-N4 | 7.24 | 123.07 | 118.00 |
| 1 | AA | 1437 | A | O4'-C1'-N9 | 7.24 | 113.99 | 108.20 |
| 1 | AA | 1533 | C | C6-N1-C2 | -7.24 | 117.40 | 120.30 |
| 26 | BB | 37 | C | N1-C2-N3 | -7.24 | 114.13 | 119.20 |
| 26 | BB | 2740 | A | C2-N3-C4 | 7.24 | 114.22 | 110.60 |
| 1 | AA | 63 | C | O4'-C1'-N1 | 7.24 | 113.99 | 108.20 |
| 1 | AA | 535 | A | C1'-O4'-C4' | -7.24 | 104.11 | 109.90 |
| 1 | AA | 661 | G | C5-N7-C8 | 7.24 | 107.92 | 104.30 |
| 26 | BB | 1383 | A | O4'-C1'-C2' | -7.24 | 98.56 | 105.80 |
| 26 | BB | 1454 | C | N1-C2-O2 | 7.24 | 123.24 | 118.90 |
| 26 | BB | 1511 | G | O4'-C1'-N9 | 7.24 | 113.99 | 108.20 |
| 30 | BF | 183 | PHE | CB-CG-CD1 | -7.24 | 115.73 | 120.80 |
| 1 | AA | 69 | G | N7-C8-N9 | 7.24 | 116.72 | 113.10 |
| 1 | AA | 319 | G | C2-N3-C4 | 7.24 | 115.52 | 111.90 |
| 1 | AA | 384 | G | N1-C2-N3 | 7.24 | 128.24 | 123.90 |
| 1 | AA | 1031 | C | C2-N3-C4 | 7.24 | 123.52 | 119.90 |
| 26 | BB | 1270 | C | N3-C4-C5 | -7.24 | 119.00 | 121.90 |
| 26 | BB | 2406 | A | C2-N3-C4 | 7.24 | 114.22 | 110.60 |
| 1 | AA | 115 | G | C6-C5-N7 | 7.24 | 134.74 | 130.40 |
| 1 | AA | 681 | A | O4'-C1'-N9 | 7.24 | 113.99 | 108.20 |
| 1 | AA | 708 | C | N3-C4-N4 | 7.24 | 123.06 | 118.00 |
| 1 | AA | 1083 | U | O4'-C4'-C3' | 7.24 | 111.89 | 106.10 |
| 2 | AB | 18 | G | N3-C4-C5 | -7.24 | 124.98 | 128.60 |
| 8 | AH | 19 | ARG | CD-NE-CZ | 7.24 | 133.73 | 123.60 |
| 25 | BA | 93 | C | N1-C1'-C2' | -7.24 | 104.04 | 112.00 |
| 26 | BB | 588 | U | C5-C6-N1 | 7.24 | 126.32 | 122.70 |
| 26 | BB | 2441 | U | O4'-C1'-N1 | 7.24 | 113.99 | 108.20 |
| 1 | AA | 345 | C | C4-C5-C6 | -7.23 | 113.78 | 117.40 |
| 1 | AA | 581 | G | N3-C2-N2 | 7.23 | 124.96 | 119.90 |
| 1 | AA | 789 | U | N1-C2-N3 | 7.23 | 119.24 | 114.90 |
| 26 | BB | 395 | U | C4'-C3'-C2' | -7.23 | 95.37 | 102.60 |
| 26 | BB | 2851 | A | N1-C2-N3 | -7.23 | 125.68 | 129.30 |
| 1 | AA | 1078 | U | O4'-C1'-N1 | -7.23 | 102.42 | 108.20 |
| 1 | AA | 1378 | C | N1-C2-O2 | 7.23 | 123.24 | 118.90 |
| 1 | AA | 1533 | C | N3-C2-O2 | -7.23 | 116.84 | 121.90 |
| 26 | BB | 1694 | C | C5-C6-N1 | 7.23 | 124.62 | 121.00 |
| 26 | BB | 1719 | G | C6-C5-N7 | -7.23 | 126.06 | 130.40 |
| 26 | BB | 2093 | G | N3-C2-N2 | 7.23 | 124.96 | 119.90 |
| 26 | BB | 2182 | U | C5-C6-N1 | -7.23 | 119.08 | 122.70 |
| 1 | AA | 417 | G | O4'-C1'-N9 | 7.23 | 113.98 | 108.20 |
| 1 | AA | 482 | A | C1'-O4'-C4' | 7.23 | 115.68 | 109.90 |
| 4 | AD | 42 | C | N1-C2-O2 | 7.23 | 123.24 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 129 | C | O3'-P-O5' | 7.23 | 117.74 | 104.00 |
| 26 | BB | 350 | G | C5'-C4'-O4' | 7.23 | 117.78 | 109.10 |
| 26 | BB | 540 | C | C1'-O4'-C4' | -7.23 | 104.12 | 109.90 |
| 26 | BB | 699 | A | N7-C8-N9 | 7.23 | 117.42 | 113.80 |
| 26 | BB | 1635 | A | N1-C2-N3 | -7.23 | 125.69 | 129.30 |
| 1 | AA | 220 | G | C6-C5-N7 | -7.23 | 126.06 | 130.40 |
| 1 | AA | 368 | U | O4'-C1'-N1 | 7.23 | 113.98 | 108.20 |
| 4 | AD | 9 | G | C6-N1-C2 | -7.23 | 120.76 | 125.10 |
| 26 | BB | 2138 | G | C5-N7-C8 | -7.23 | 100.69 | 104.30 |
| 1 | AA | 32 | A | C5-N7-C8 | -7.23 | 100.29 | 103.90 |
| 1 | AA | 1293 | C | C6-N1-C2 | 7.23 | 123.19 | 120.30 |
| 26 | BB | 1200 | C | O4'-C1'-N1 | 7.23 | 113.98 | 108.20 |
| 26 | BB | 1413 | A | N7-C8-N9 | -7.23 | 110.19 | 113.80 |
| 26 | BB | 1739 | A | C2-N3-C4 | 7.23 | 114.21 | 110.60 |
| 26 | BB | 1759 | A | C8-N9-C4 | -7.23 | 102.91 | 105.80 |
| 26 | BB | 1762 | A | C3'-C2'-C1' | 7.23 | 107.28 | 101.50 |
| 26 | BB | 1783 | A | O4'-C1'-N9 | 7.23 | 113.98 | 108.20 |
| 1 | AA | 841 | C | C1'-O4'-C4' | -7.23 | 104.12 | 109.90 |
| 26 | BB | 144 | A | C4-C5-C6 | -7.23 | 113.39 | 117.00 |
| 26 | BB | 1812 | U | C4-C5-C6 | 7.23 | 124.04 | 119.70 |
| 26 | BB | 2744 | G | P-O3'-C3' | 7.23 | 128.37 | 119.70 |
| 1 | AA | 406 | G | C5-C6-O6 | -7.22 | 124.27 | 128.60 |
| 1 | AA | 493 | A | C8-N9-C4 | -7.22 | 102.91 | 105.80 |
| 1 | AA | 505 | G | N3-C2-N2 | -7.22 | 114.84 | 119.90 |
| 1 | AA | 833 | G | N3-C4-C5 | -7.22 | 124.99 | 128.60 |
| 4 | AD | 51 | U | C2-N3-C4 | -7.22 | 122.67 | 127.00 |
| 20 | AT | 36 | PHE | CB-CG-CD1 | 7.22 | 125.86 | 120.80 |
| 26 | BB | 443 | A | O4'-C1'-N9 | 7.22 | 113.98 | 108.20 |
| 26 | BB | 1343 | G | N3-C4-N9 | 7.22 | 130.34 | 126.00 |
| 26 | BB | 2232 | C | C4-C5-C6 | -7.22 | 113.79 | 117.40 |
| 26 | BB | 2274 | A | N3-C4-C5 | -7.22 | 121.74 | 126.80 |
| 26 | BB | 2297 | A | N1-C2-N3 | -7.22 | 125.69 | 129.30 |
| 1 | AA | 1358 | U | N1-C1'-C2' | -7.22 | 104.06 | 112.00 |
| 26 | BB | 1189 | A | N1-C2-N3 | -7.22 | 125.69 | 129.30 |
| 26 | BB | 1303 | G | O4'-C1'-N9 | 7.22 | 113.98 | 108.20 |
| 1 | AA | 1020 | G | C3'-C2'-C1' | 7.22 | 107.28 | 101.50 |
| 26 | BB | 499 | U | C4'-C3'-C2' | -7.22 | 95.38 | 102.60 |
| 26 | BB | 1357 | C | C6-N1-C2 | -7.22 | 117.41 | 120.30 |
| 1 | AA | 422 | C | N1-C2-N3 | -7.22 | 114.15 | 119.20 |
| 3 | AC | 50 | U | C5-C6-N1 | -7.22 | 119.09 | 122.70 |
| 4 | AD | 49 | C | C2-N3-C4 | 7.22 | 123.51 | 119.90 |
| 26 | BB | 105 | C | N1-C2-O2 | 7.22 | 123.23 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 467 | G | C2-N3-C4 | 7.22 | 115.51 | 111.90 |
| 26 | BB | 1275 | A | C5-C6-N6 | -7.22 | 117.92 | 123.70 |
| 26 | BB | 1721 | G | P-O3'-C3' | 7.22 | 128.36 | 119.70 |
| 26 | BB | 2439 | A | P-O3'-C3' | 7.22 | 128.36 | 119.70 |
| 1 | AA | 639 | G | N3-C4-C5 | -7.22 | 124.99 | 128.60 |
| 1 | AA | 1350 | A | C2-N3-C4 | 7.22 | 114.21 | 110.60 |
| 26 | BB | 1220 | G | O4'-C1'-N9 | 7.22 | 113.97 | 108.20 |
| 1 | AA | 98 | A | C5'-C4'-O4' | 7.22 | 117.76 | 109.10 |
| 1 | AA | 408 | A | C5-C6-N1 | 7.22 | 121.31 | 117.70 |
| 1 | AA | 608 | A | C2-N3-C4 | -7.22 | 106.99 | 110.60 |
| 1 | AA | 785 | G | C5'-C4'-O4' | 7.22 | 117.76 | 109.10 |
| 1 | AA | 925 | G | C2-N3-C4 | -7.22 | 108.29 | 111.90 |
| 1 | AA | 1307 | U | C5-C6-N1 | -7.22 | 119.09 | 122.70 |
| 26 | BB | 1491 | G | N9-C4-C5 | 7.22 | 108.29 | 105.40 |
| 26 | BB | 2133 | G | N1-C6-O6 | -7.22 | 115.57 | 119.90 |
| 26 | BB | 2656 | U | C4-C5-C6 | 7.22 | 124.03 | 119.70 |
| 26 | BB | 2665 | A | C5-C6-N1 | 7.22 | 121.31 | 117.70 |
| 1 | AA | 765 | G | C6-N1-C2 | -7.21 | 120.77 | 125.10 |
| 23 | AW | 17 | ARG | CD-NE-CZ | 7.21 | 133.70 | 123.60 |
| 26 | BB | 406 | G | N1-C6-O6 | -7.21 | 115.57 | 119.90 |
| 26 | BB | 482 | A | C2-N3-C4 | 7.21 | 114.21 | 110.60 |
| 26 | BB | 775 | G | N3-C4-N9 | 7.21 | 130.33 | 126.00 |
| 26 | BB | 1026 | G | O4'-C1'-N9 | 7.21 | 113.97 | 108.20 |
| 26 | BB | 1328 | A | C5-N7-C8 | -7.21 | 100.29 | 103.90 |
| 26 | BB | 1491 | G | N7-C8-N9 | 7.21 | 116.71 | 113.10 |
| 26 | BB | 2357 | G | N9-C4-C5 | 7.21 | 108.29 | 105.40 |
| 1 | AA | 535 | A | C6-N1-C2 | -7.21 | 114.27 | 118.60 |
| 26 | BB | 659 | G | C2-N3-C4 | 7.21 | 115.51 | 111.90 |
| 26 | BB | 2799 | A | C5'-C4'-O4' | 7.21 | 117.75 | 109.10 |
| 56 | B5 | 34 | ARG | NE-CZ-NH1 | 7.21 | 123.91 | 120.30 |
| 1 | AA | 328 | C | O4'-C1'-N1 | 7.21 | 113.97 | 108.20 |
| 1 | AA | 487 | A | O4'-C1'-N9 | 7.21 | 113.97 | 108.20 |
| 1 | AA | 576 | C | N3-C4-N4 | -7.21 | 112.95 | 118.00 |
| 1 | AA | 1001 | C | O4'-C1'-N1 | 7.21 | 113.97 | 108.20 |
| 25 | BA | 30 | C | C2-N3-C4 | 7.21 | 123.51 | 119.90 |
| 25 | BA | 50 | A | N7-C8-N9 | 7.21 | 117.41 | 113.80 |
| 26 | BB | 1572 | A | N1-C6-N6 | -7.21 | 114.27 | 118.60 |
| 26 | BB | 1716 | U | N3-C2-O2 | -7.21 | 117.15 | 122.20 |
| 38 | BN | 123 | ARG | C-N-CA | 7.21 | 137.44 | 122.30 |
| 1 | AA | 286 | C | N1-C2-O2 | 7.21 | 123.23 | 118.90 |
| 4 | AD | 17 | C | C3'-C2'-C1' | 7.21 | 107.27 | 101.50 |
| 26 | BB | 1410 | G | N1-C6-O6 | 7.21 | 124.23 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1682 | G | C5'-C4'-O4' | 7.21 | 117.75 | 109.10 |
| 26 | BB | 2091 | C | C4-C5-C6 | 7.21 | 121.00 | 117.40 |
| 1 | AA | 495 | A | C5'-C4'-C3' | -7.21 | 104.47 | 116.00 |
| 1 | AA | 533 | A | N7-C8-N9 | 7.21 | 117.40 | 113.80 |
| 4 | AD | 10 | G | N3-C4-C5 | -7.21 | 125.00 | 128.60 |
| 26 | BB | 30 | G | C4'-C3'-C2' | -7.21 | 95.39 | 102.60 |
| 26 | BB | 1571 | A | O4'-C1'-N9 | 7.21 | 113.97 | 108.20 |
| 26 | BB | 2520 | C | N1-C2-O2 | 7.21 | 123.22 | 118.90 |
| 26 | BB | 2693 | G | O4'-C1'-N9 | 7.21 | 113.97 | 108.20 |
| 1 | AA | 301 | G | N7-C8-N9 | 7.21 | 116.70 | 113.10 |
| 1 | AA | 466 | A | C3'-C2'-C1' | 7.21 | 107.27 | 101.50 |
| 1 | AA | 982 | U | C6-N1-C2 | -7.21 | 116.68 | 121.00 |
| 1 | AA | 1175 | G | C4'-C3'-C2' | -7.21 | 95.39 | 102.60 |
| 1 | AA | 1252 | A | C2-N3-C4 | 7.21 | 114.20 | 110.60 |
| 15 | AO | 82 | ARG | NE-CZ-NH1 | 7.21 | 123.90 | 120.30 |
| 26 | BB | 276 | U | C4'-C3'-C2' | -7.21 | 95.39 | 102.60 |
| 26 | BB | 288 | U | P-O3'-C3' | 7.21 | 128.35 | 119.70 |
| 26 | BB | 1599 | U | N1-C1'-C2' | -7.21 | 104.07 | 112.00 |
| 26 | BB | 2003 | A | C8-N9-C4 | -7.21 | 102.92 | 105.80 |
| 1 | AA | 1370 | G | C6-C5-N7 | -7.21 | 126.08 | 130.40 |
| 1 | AA | 1496 | C | N1-C2-O2 | 7.21 | 123.22 | 118.90 |
| 26 | BB | 322 | A | C4'-C3'-C2' | -7.21 | 95.39 | 102.60 |
| 26 | BB | 486 | C | C5'-C4'-O4' | 7.21 | 117.75 | 109.10 |
| 26 | BB | 947 | A | N7-C8-N9 | 7.21 | 117.40 | 113.80 |
| 26 | BB | 2414 | G | N1-C2-N2 | 7.21 | 122.68 | 116.20 |
| 1 | AA | 998 | C | C5-C4-N4 | -7.20 | 115.16 | 120.20 |
| 1 | AA | 1029 | U | C2-N3-C4 | -7.20 | 122.68 | 127.00 |
| 2 | AB | 6 | C | O4'-C1'-N1 | 7.20 | 113.96 | 108.20 |
| 26 | BB | 60 | G | N7-C8-N9 | 7.20 | 116.70 | 113.10 |
| 26 | BB | 468 | G | C2-N3-C4 | 7.20 | 115.50 | 111.90 |
| 26 | BB | 529 | A | N9-C4-C5 | 7.20 | 108.68 | 105.80 |
| 26 | BB | 990 | A | C8-N9-C4 | -7.20 | 102.92 | 105.80 |
| 26 | BB | 1479 | G | N1-C2-N3 | -7.20 | 119.58 | 123.90 |
| 26 | BB | 1585 | C | N3-C2-O2 | -7.20 | 116.86 | 121.90 |
| 26 | BB | 1989 | G | C5-C6-N1 | 7.20 | 115.10 | 111.50 |
| 26 | BB | 2376 | A | O4'-C1'-C2' | -7.20 | 98.60 | 105.80 |
| 26 | BB | 2748 | A | C5'-C4'-O4' | 7.20 | 117.75 | 109.10 |
| 1 | AA | 1509 | C | C5-C6-N1 | 7.20 | 124.60 | 121.00 |
| 26 | BB | 1523 | U | N3-C4-C5 | -7.20 | 110.28 | 114.60 |
| 26 | BB | 2305 | U | C5'-C4'-C3' | -7.20 | 104.48 | 116.00 |
| 26 | BB | 2737 | G | C5-C6-O6 | -7.20 | 124.28 | 128.60 |
| 1 | AA | 486 | U | N1-C2-N3 | 7.20 | 119.22 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 910 | C | C5-C6-N1 | 7.20 | 124.60 | 121.00 |
| 1 | AA | 992 | U | P-O3'-C3' | 7.20 | 128.34 | 119.70 |
| 1 | AA | 1050 | G | N7-C8-N9 | 7.20 | 116.70 | 113.10 |
| 1 | AA | 1176 | A | N1-C2-N3 | -7.20 | 125.70 | 129.30 |
| 26 | BB | 138 | U | O5'-P-OP2 | 7.20 | 119.34 | 110.70 |
| 26 | BB | 616 | A | C4-C5-C6 | 7.20 | 120.60 | 117.00 |
| 26 | BB | 1315 | C | C5'-C4'-O4' | 7.20 | 117.74 | 109.10 |
| 26 | BB | 1368 | G | N1-C2-N2 | 7.20 | 122.68 | 116.20 |
| 26 | BB | 2081 | U | N3-C2-O2 | -7.20 | 117.16 | 122.20 |
| 1 | AA | 156 | C | N3-C2-O2 | -7.20 | 116.86 | 121.90 |
| 1 | AA | 812 | G | C5-N7-C8 | -7.20 | 100.70 | 104.30 |
| 26 | BB | 75 | G | N9-C1'-C2' | -7.20 | 104.08 | 112.00 |
| 26 | BB | 1649 | G | C3'-C2'-C1' | -7.20 | 95.74 | 101.50 |
| 26 | BB | 1805 | A | N7-C8-N9 | -7.20 | 110.20 | 113.80 |
| 26 | BB | 2550 | G | C6-N1-C2 | -7.20 | 120.78 | 125.10 |
| 26 | BB | 2640 | G | N3-C2-N2 | -7.20 | 114.86 | 119.90 |
| 26 | BB | 2679 | A | C2'-C3'-O3' | 7.20 | 125.34 | 109.50 |
| 26 | BB | 2709 | G | C6-C5-N7 | -7.20 | 126.08 | 130.40 |
| 1 | AA | 954 | G | N3-C4-N9 | 7.20 | 130.32 | 126.00 |
| 25 | BA | 15 | A | C5-N7-C8 | -7.20 | 100.30 | 103.90 |
| 26 | BB | 885 | C | N1-C2-N3 | 7.20 | 124.24 | 119.20 |
| 26 | BB | 1420 | A | O4'-C1'-N9 | 7.20 | 113.96 | 108.20 |
| 1 | AA | 597 | G | N3-C4-C5 | -7.20 | 125.00 | 128.60 |
| 25 | BA | 24 | G | N7-C8-N9 | 7.20 | 116.70 | 113.10 |
| 26 | BB | 26 | G | N1-C2-N3 | -7.20 | 119.58 | 123.90 |
| 26 | BB | 962 | G | N9-C4-C5 | 7.20 | 108.28 | 105.40 |
| 26 | BB | 1039 | A | N9-C4-C5 | 7.20 | 108.68 | 105.80 |
| 26 | BB | 1131 | G | C8-N9-C4 | -7.20 | 103.52 | 106.40 |
| 26 | BB | 1591 | A | C5-C6-N1 | -7.20 | 114.10 | 117.70 |
| 26 | BB | 1718 | G | C2-N3-C4 | 7.20 | 115.50 | 111.90 |
| 26 | BB | 1949 | G | C5-C6-O6 | -7.20 | 124.28 | 128.60 |
| 26 | BB | 2847 | U | C2-N3-C4 | 7.20 | 131.32 | 127.00 |
| 27 | BC | 60 | ARG | NE-CZ-NH1 | 7.20 | 123.90 | 120.30 |
| 26 | BB | 156 | A | C4-C5-N7 | -7.19 | 107.10 | 110.70 |
| 26 | BB | 332 | A | C5'-C4'-O4' | 7.19 | 117.73 | 109.10 |
| 1 | AA | 115 | G | C5-C6-O6 | -7.19 | 124.28 | 128.60 |
| 1 | AA | 431 | A | O4'-C1'-N9 | 7.19 | 113.95 | 108.20 |
| 1 | AA | 628 | G | C2-N3-C4 | 7.19 | 115.50 | 111.90 |
| 1 | AA | 980 | C | C5-C4-N4 | -7.19 | 115.17 | 120.20 |
| 1 | AA | 1254 | A | C5-N7-C8 | -7.19 | 100.30 | 103.90 |
| 26 | BB | 86 | G | N1-C2-N2 | -7.19 | 109.73 | 116.20 |
| 26 | BB | 368 | A | C5-C6-N1 | 7.19 | 121.30 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 857 | G | C6-N1-C2 | -7.19 | 120.78 | 125.10 |
| 26 | BB | 1680 | U | C3'-C2'-C1' | 7.19 | 107.25 | 101.50 |
| 1 | AA | 560 | A | C5-C6-N6 | 7.19 | 129.45 | 123.70 |
| 1 | AA | 671 | G | C2-N3-C4 | -7.19 | 108.31 | 111.90 |
| 1 | AA | 1347 | G | P-O3'-C3' | 7.19 | 128.33 | 119.70 |
| 1 | AA | 1385 | G | C5-C6-O6 | -7.19 | 124.29 | 128.60 |
| 26 | BB | 1124 | G | C5-C6-O6 | -7.19 | 124.29 | 128.60 |
| 26 | BB | 1440 | U | N1-C2-N3 | 7.19 | 119.21 | 114.90 |
| 26 | BB | 1454 | C | O4'-C1'-N1 | 7.19 | 113.95 | 108.20 |
| 26 | BB | 1908 | C | C6-N1-C2 | -7.19 | 117.42 | 120.30 |
| 26 | BB | 2380 | C | N1-C2-O2 | 7.19 | 123.21 | 118.90 |
| 26 | BB | 2606 | C | C3'-C2'-C1' | 7.19 | 107.25 | 101.50 |
| 26 | BB | 2793 | C | C4'-C3'-C2' | -7.19 | 95.41 | 102.60 |
| 26 | BB | 2883 | A | C6-N1-C2 | 7.19 | 122.92 | 118.60 |
| 34 | BJ | 75 | PHE | CB-CG-CD2 | -7.19 | 115.77 | 120.80 |
| 40 | BP | 103 | ARG | NE-CZ-NH1 | 7.19 | 123.89 | 120.30 |
| 1 | AA | 795 | C | C5'-C4'-O4' | 7.19 | 117.73 | 109.10 |
| 5 | AE | 196 | ASP | CB-CG-OD2 | -7.19 | 111.83 | 118.30 |
| 26 | BB | 727 | A | N9-C4-C5 | 7.19 | 108.68 | 105.80 |
| 26 | BB | 978 | G | N3-C4-C5 | -7.19 | 125.00 | 128.60 |
| 26 | BB | 1233 | C | N1-C2-O2 | 7.19 | 123.21 | 118.90 |
| 26 | BB | 2285 | C | N1-C2-N3 | -7.19 | 114.17 | 119.20 |
| 1 | AA | 920 | U | C5-C6-N1 | -7.19 | 119.11 | 122.70 |
| 26 | BB | 88 | G | C5'-C4'-O4' | 7.19 | 117.73 | 109.10 |
| 26 | BB | 329 | G | C5'-C4'-C3' | -7.19 | 104.50 | 116.00 |
| 26 | BB | 382 | A | O4'-C1'-C2' | -7.19 | 98.61 | 105.80 |
| 26 | BB | 1194 | A | N1-C6-N6 | -7.19 | 114.29 | 118.60 |
| 26 | BB | 2428 | G | C5-N7-C8 | -7.19 | 100.71 | 104.30 |
| 42 | BR | 91 | VAL | CA-CB-CG1 | 7.19 | 121.68 | 110.90 |
| 1 | AA | 697 | U | C2-N3-C4 | -7.19 | 122.69 | 127.00 |
| 1 | AA | 764 | C | C2'-C3'-O3' | 7.19 | 125.31 | 109.50 |
| 26 | BB | 89 | A | C6-N1-C2 | 7.19 | 122.91 | 118.60 |
| 26 | BB | 551 | G | C5-C6-O6 | -7.19 | 124.29 | 128.60 |
| 1 | AA | 17 | U | N3-C4-C5 | -7.18 | 110.29 | 114.60 |
| 1 | AA | 155 | A | C4'-C3'-C2' | -7.18 | 95.42 | 102.60 |
| 26 | BB | 659 | G | N1-C2-N3 | -7.18 | 119.59 | 123.90 |
| 26 | BB | 1121 | C | O4'-C1'-N1 | 7.18 | 113.95 | 108.20 |
| 26 | BB | 1351 | C | C5-C4-N4 | 7.18 | 125.23 | 120.20 |
| 26 | BB | 2020 | A | C5'-C4'-C3' | -7.18 | 104.50 | 116.00 |
| 26 | BB | 2360 | G | N9-C1'-C2' | -7.18 | 104.10 | 112.00 |
| 26 | BB | 2773 | C | N3-C2-O2 | -7.18 | 116.87 | 121.90 |
| 26 | BB | 2783 | U | C6-N1-C2 | -7.18 | 116.69 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 288 | A | O5'-C5'-C4' | -7.18 | 98.05 | 111.70 |
| 1 | AA | 995 | C | C6-N1-C2 | -7.18 | 117.43 | 120.30 |
| 1 | AA | 1440 | U | O4'-C1'-N1 | 7.18 | 113.95 | 108.20 |
| 10 | AJ | 3 | ARG | NE-CZ-NH2 | -7.18 | 116.71 | 120.30 |
| 26 | BB | 871 | U | C5'-C4'-O4' | 7.18 | 117.72 | 109.10 |
| 26 | BB | 1232 | G | C8-N9-C4 | 7.18 | 109.27 | 106.40 |
| 26 | BB | 1268 | A | C8-N9-C4 | 7.18 | 108.67 | 105.80 |
| 26 | BB | 1392 | A | N3-C4-C5 | -7.18 | 121.77 | 126.80 |
| 26 | BB | 1679 | A | N7-C8-N9 | 7.18 | 117.39 | 113.80 |
| 26 | BB | 1899 | A | C5-C6-N1 | 7.18 | 121.29 | 117.70 |
| 26 | BB | 2047 | C | O4'-C1'-N1 | 7.18 | 113.95 | 108.20 |
| 1 | AA | 265 | G | N1-C6-O6 | -7.18 | 115.59 | 119.90 |
| 1 | AA | 1335 | U | O4'-C1'-N1 | 7.18 | 113.94 | 108.20 |
| 26 | BB | 646 | U | N1-C2-O2 | -7.18 | 117.77 | 122.80 |
| 1 | AA | 63 | C | O4'-C1'-C2' | -7.18 | 98.62 | 105.80 |
| 1 | AA | 619 | U | O4'-C1'-N1 | 7.18 | 113.94 | 108.20 |
| 26 | BB | 527 | C | N1-C2-N3 | -7.18 | 114.17 | 119.20 |
| 26 | BB | 1558 | C | N3-C4-N4 | 7.18 | 123.03 | 118.00 |
| 26 | BB | 2142 | A | C8-N9-C4 | 7.18 | 108.67 | 105.80 |
| 26 | BB | 2206 | C | C5'-C4'-O4' | 7.18 | 117.72 | 109.10 |
| 26 | BB | 2888 | C | C3'-C2'-C1' | 7.18 | 107.24 | 101.50 |
| 1 | AA | 850 | U | N3-C4-C5 | 7.18 | 118.91 | 114.60 |
| 1 | AA | 1521 | C | O4'-C1'-N1 | 7.18 | 113.94 | 108.20 |
| 26 | BB | 1611 | C | N3-C4-C5 | -7.18 | 119.03 | 121.90 |
| 1 | AA | 9 | G | C6-N1-C2 | -7.18 | 120.79 | 125.10 |
| 1 | AA | 1069 | C | C2-N3-C4 | 7.18 | 123.49 | 119.90 |
| 1 | AA | 1309 | G | N1-C6-O6 | 7.18 | 124.20 | 119.90 |
| 3 | AC | 54 | U | N3-C2-O2 | -7.18 | 117.18 | 122.20 |
| 4 | AD | 34 | U | C1'-O4'-C4' | 7.18 | 115.64 | 109.90 |
| 26 | BB | 2 | G | C5-N7-C8 | 7.18 | 107.89 | 104.30 |
| 26 | BB | 272 | A | P-O3'-C3' | 7.18 | 128.31 | 119.70 |
| 26 | BB | 436 | C | C6-N1-C2 | 7.18 | 123.17 | 120.30 |
| 26 | BB | 783 | A | N3-C4-N9 | 7.18 | 133.14 | 127.40 |
| 39 | BO | 50 | ARG | NE-CZ-NH2 | 7.18 | 123.89 | 120.30 |
| 1 | AA | 837 | U | O4'-C1'-N1 | 7.17 | 113.94 | 108.20 |
| 1 | AA | 1322 | C | C4'-C3'-C2' | 7.17 | 109.77 | 102.60 |
| 25 | BA | 9 | G | C4-C5-N7 | -7.17 | 107.93 | 110.80 |
| 26 | BB | 188 | G | C4'-C3'-C2' | -7.17 | 95.43 | 102.60 |
| 26 | BB | 945 | A | C2-N3-C4 | 7.17 | 114.19 | 110.60 |
| 26 | BB | 1501 | G | O4'-C1'-N9 | 7.17 | 113.94 | 108.20 |
| 26 | BB | 1713 | A | N3-C4-C5 | 7.17 | 131.82 | 126.80 |
| 1 | AA | 780 | A | C4-C5-N7 | -7.17 | 107.11 | 110.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 25 | U | C6-N1-C2 | -7.17 | 116.70 | 121.00 |
| 26 | BB | 375 | G | N3-C2-N2 | 7.17 | 124.92 | 119.90 |
| 26 | BB | 1727 | C | C5-C6-N1 | 7.17 | 124.59 | 121.00 |
| 26 | BB | 2722 | G | N9-C4-C5 | 7.17 | 108.27 | 105.40 |
| 26 | BB | 2757 | A | C3'-C2'-C1' | 7.17 | 107.24 | 101.50 |
| 42 | BR | 108 | ARG | NE-CZ-NH2 | 7.17 | 123.89 | 120.30 |
| 1 | AA | 127 | G | C6-C5-N7 | -7.17 | 126.10 | 130.40 |
| 1 | AA | 1250 | A | N7-C8-N9 | 7.17 | 117.39 | 113.80 |
| 26 | BB | 463 | G | C5'-C4'-O4' | 7.17 | 117.71 | 109.10 |
| 26 | BB | 513 | A | N9-C4-C5 | 7.17 | 108.67 | 105.80 |
| 26 | BB | 2213 | U | C5'-C4'-O4' | 7.17 | 117.71 | 109.10 |
| 1 | AA | 358 | U | N1-C2-N3 | 7.17 | 119.20 | 114.90 |
| 26 | BB | 2632 | A | C6-C5-N7 | 7.17 | 137.32 | 132.30 |
| 26 | BB | 2798 | U | C2-N3-C4 | -7.17 | 122.70 | 127.00 |
| 1 | AA | 545 | C | N3-C4-C5 | -7.17 | 119.03 | 121.90 |
| 1 | AA | 1142 | G | C4-C5-N7 | 7.17 | 113.67 | 110.80 |
| 9 | AI | 112 | ARG | NE-CZ-NH2 | 7.17 | 123.88 | 120.30 |
| 26 | BB | 155 | A | C8-N9-C4 | -7.17 | 102.93 | 105.80 |
| 26 | BB | 454 | A | C4-C5-C6 | -7.17 | 113.42 | 117.00 |
| 26 | BB | 1165 | A | C8-N9-C4 | -7.17 | 102.93 | 105.80 |
| 26 | BB | 2352 | A | C5-N7-C8 | 7.17 | 107.48 | 103.90 |
| 26 | BB | 2425 | A | C2-N3-C4 | 7.17 | 114.18 | 110.60 |
| 26 | BB | 2533 | U | N1-C1'-C2' | -7.17 | 104.11 | 112.00 |
| 1 | AA | 630 | A | N9-C1'-C2' | -7.17 | 104.12 | 112.00 |
| 1 | AA | 856 | C | O4'-C1'-N1 | 7.17 | 113.93 | 108.20 |
| 1 | AA | 1266 | G | N1-C2-N3 | 7.17 | 128.20 | 123.90 |
| 2 | AB | 56 | C | N1-C2-N3 | -7.17 | 114.18 | 119.20 |
| 26 | BB | 117 | G | N1-C2-N2 | 7.17 | 122.65 | 116.20 |
| 26 | BB | 575 | A | C5-N7-C8 | -7.17 | 100.32 | 103.90 |
| 26 | BB | 1579 | A | C1'-O4'-C4' | -7.17 | 104.17 | 109.90 |
| 26 | BB | 1664 | A | N7-C8-N9 | 7.17 | 117.38 | 113.80 |
| 26 | BB | 2002 | G | C2-N3-C4 | 7.17 | 115.48 | 111.90 |
| 26 | BB | 2150 | C | N3-C4-C5 | -7.17 | 119.03 | 121.90 |
| 1 | AA | 33 | A | C5-C6-N1 | 7.17 | 121.28 | 117.70 |
| 26 | BB | 250 | G | C8-N9-C4 | 7.17 | 109.27 | 106.40 |
| 26 | BB | 1722 | A | C6-C5-N7 | -7.17 | 127.28 | 132.30 |
| 26 | BB | 2100 | G | N1-C6-O6 | -7.17 | 115.60 | 119.90 |
| 26 | BB | 2822 | G | O4'-C1'-N9 | 7.17 | 113.93 | 108.20 |
| 1 | AA | 872 | A | O4'-C4'-C3' | 7.16 | 111.83 | 106.10 |
| 1 | AA | 1044 | A | C4'-C3'-C2' | -7.16 | 95.44 | 102.60 |
| 1 | AA | 1188 | A | O4'-C1'-N9 | 7.16 | 113.93 | 108.20 |
| 1 | AA | 1431 | A | O4'-C1'-N9 | 7.16 | 113.93 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1449 | C | N3-C4-C5 | -7.16 | 119.03 | 121.90 |
| 26 | BB | 276 | U | C4-C5-C6 | 7.16 | 124.00 | 119.70 |
| 26 | BB | 466 | A | C8-N9-C4 | -7.16 | 102.93 | 105.80 |
| 26 | BB | 670 | A | N9-C4-C5 | -7.16 | 102.94 | 105.80 |
| 26 | BB | 914 | G | C4'-C3'-C2' | -7.16 | 95.44 | 102.60 |
| 26 | BB | 1866 | A | N1-C2-N3 | -7.16 | 125.72 | 129.30 |
| 26 | BB | 2076 | U | N3-C2-O2 | -7.16 | 117.19 | 122.20 |
| 35 | BK | 23 | VAL | CA-CB-CG1 | 7.16 | 121.64 | 110.90 |
| 26 | BB | 1762 | A | N7-C8-N9 | 7.16 | 117.38 | 113.80 |
| 33 | BI | 97 | ARG | NE-CZ-NH1 | 7.16 | 123.88 | 120.30 |
| 1 | AA | 331 | G | N3-C4-C5 | -7.16 | 125.02 | 128.60 |
| 12 | AL | 32 | ARG | NE-CZ-NH2 | -7.16 | 116.72 | 120.30 |
| 26 | BB | 325 | G | C1'-O4'-C4' | -7.16 | 104.17 | 109.90 |
| 26 | BB | 1650 | A | N1-C2-N3 | -7.16 | 125.72 | 129.30 |
| 26 | BB | 2748 | A | N9-C4-C5 | -7.16 | 102.94 | 105.80 |
| 43 | BS | 29 | ARG | NE-CZ-NH1 | -7.16 | 116.72 | 120.30 |
| 1 | AA | 32 | A | C3'-C2'-C1' | 7.16 | 107.23 | 101.50 |
| 1 | AA | 290 | C | C4-C5-C6 | 7.16 | 120.98 | 117.40 |
| 1 | AA | 1272 | G | C6-C5-N7 | -7.16 | 126.11 | 130.40 |
| 26 | BB | 264 | C | C6-N1-C2 | -7.16 | 117.44 | 120.30 |
| 26 | BB | 1571 | A | N3-C4-C5 | -7.16 | 121.79 | 126.80 |
| 26 | BB | 1903 | G | C1'-O4'-C4' | -7.16 | 104.17 | 109.90 |
| 26 | BB | 2376 | A | N7-C8-N9 | 7.16 | 117.38 | 113.80 |
| 26 | BB | 2750 | A | C5-C6-N1 | -7.16 | 114.12 | 117.70 |
| 1 | AA | 441 | A | C5-N7-C8 | -7.16 | 100.32 | 103.90 |
| 22 | AV | 35 | ARG | NE-CZ-NH1 | 7.16 | 123.88 | 120.30 |
| 26 | BB | 36 | G | N3-C4-C5 | -7.16 | 125.02 | 128.60 |
| 26 | BB | 1723 | G | P-O3'-C3' | 7.16 | 128.29 | 119.70 |
| 28 | BD | 120 | ASP | CB-CG-OD2 | -7.16 | 111.86 | 118.30 |
| 1 | AA | 82 | G | N7-C8-N9 | 7.16 | 116.68 | 113.10 |
| 1 | AA | 192 | A | C5-C6-N1 | -7.16 | 114.12 | 117.70 |
| 1 | AA | 335 | C | O4'-C1'-N1 | 7.16 | 113.92 | 108.20 |
| 1 | AA | 1524 | C | N3-C4-C5 | -7.16 | 119.04 | 121.90 |
| 4 | AD | 19 | G | C4'-C3'-C2' | -7.16 | 95.44 | 102.60 |
| 26 | BB | 795 | C | C5-C6-N1 | 7.16 | 124.58 | 121.00 |
| 26 | BB | 864 | G | O4'-C1'-N9 | 7.16 | 113.92 | 108.20 |
| 26 | BB | 1229 | C | C1'-O4'-C4' | -7.16 | 104.18 | 109.90 |
| 26 | BB | 1768 | C | O4'-C4'-C3' | 7.16 | 111.82 | 106.10 |
| 26 | BB | 1937 | A | C1'-O4'-C4' | -7.16 | 104.17 | 109.90 |
| 26 | BB | 2061 | G | C6-C5-N7 | 7.16 | 134.69 | 130.40 |
| 26 | BB | 2315 | G | O4'-C1'-N9 | 7.16 | 113.92 | 108.20 |
| 1 | AA | 1440 | U | C4-C5-C6 | 7.15 | 123.99 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 6 | C | N3-C2-O2 | -7.15 | 116.89 | 121.90 |
| 26 | BB | 1435 | G | N1-C6-O6 | 7.15 | 124.19 | 119.90 |
| 26 | BB | 2156 | G | C1'-O4'-C4' | -7.15 | 104.18 | 109.90 |
| 26 | BB | 2534 | A | C3'-C2'-C1' | -7.15 | 95.78 | 101.50 |
| 1 | AA | 265 | G | C2-N3-C4 | 7.15 | 115.48 | 111.90 |
| 1 | AA | 1351 | U | N1-C2-N3 | 7.15 | 119.19 | 114.90 |
| 1 | AA | 1360 | A | C8-N9-C4 | -7.15 | 102.94 | 105.80 |
| 1 | AA | 1509 | C | C6-N1-C2 | -7.15 | 117.44 | 120.30 |
| 26 | BB | 597 | G | C5-N7-C8 | 7.15 | 107.88 | 104.30 |
| 26 | BB | 612 | G | N1-C6-O6 | 7.15 | 124.19 | 119.90 |
| 26 | BB | 651 | G | N1-C6-O6 | -7.15 | 115.61 | 119.90 |
| 26 | BB | 734 | A | N1-C6-N6 | 7.15 | 122.89 | 118.60 |
| 26 | BB | 1700 | A | C5-C6-N6 | -7.15 | 117.98 | 123.70 |
| 26 | BB | 2067 | G | N9-C4-C5 | 7.15 | 108.26 | 105.40 |
| 26 | BB | 2437 | G | C6-C5-N7 | -7.15 | 126.11 | 130.40 |
| 1 | AA | 359 | G | C4'-C3'-C2' | -7.15 | 95.45 | 102.60 |
| 1 | AA | 838 | G | C8-N9-C4 | -7.15 | 103.54 | 106.40 |
| 1 | AA | 1530 | G | C6-C5-N7 | -7.15 | 126.11 | 130.40 |
| 1 | AA | 1534 | A | C1'-O4'-C4' | 7.15 | 115.62 | 109.90 |
| 26 | BB | 28 | A | C5-N7-C8 | 7.15 | 107.47 | 103.90 |
| 26 | BB | 933 | A | N7-C8-N9 | 7.15 | 117.38 | 113.80 |
| 26 | BB | 1278 | C | C5-C6-N1 | -7.15 | 117.42 | 121.00 |
| 26 | BB | 1308 | A | C5'-C4'-O4' | 7.15 | 117.68 | 109.10 |
| 26 | BB | 2019 | A | P-O3'-C3' | 7.15 | 128.28 | 119.70 |
| 26 | BB | 2554 | U | C1'-O4'-C4' | -7.15 | 104.18 | 109.90 |
| 26 | BB | 2740 | A | C4'-C3'-C2' | -7.15 | 95.45 | 102.60 |
| 26 | BB | 2753 | A | N9-C4-C5 | 7.15 | 108.66 | 105.80 |
| 26 | BB | 2904 | U | N3-C4-C5 | -7.15 | 110.31 | 114.60 |
| 1 | AA | 830 | G | N3-C4-C5 | -7.15 | 125.03 | 128.60 |
| 26 | BB | 773 | U | C5-C6-N1 | -7.15 | 119.13 | 122.70 |
| 26 | BB | 979 | A | C5-C6-N1 | 7.15 | 121.28 | 117.70 |
| 26 | BB | 1203 | U | C3'-C2'-C1' | 7.15 | 107.22 | 101.50 |
| 26 | BB | 2697 | G | C4-C5-C6 | 7.15 | 123.09 | 118.80 |
| 26 | BB | 2833 | U | N1-C2-O2 | 7.15 | 127.80 | 122.80 |
| 1 | AA | 557 | G | N7-C8-N9 | 7.15 | 116.67 | 113.10 |
| 1 | AA | 894 | G | C5'-C4'-O4' | 7.15 | 117.68 | 109.10 |
| 1 | AA | 1237 | C | C5-C6-N1 | 7.15 | 124.57 | 121.00 |
| 26 | BB | 1129 | A | N9-C4-C5 | 7.15 | 108.66 | 105.80 |
| 26 | BB | 1989 | G | N3-C4-N9 | 7.15 | 130.29 | 126.00 |
| 26 | BB | 2727 | A | N9-C4-C5 | 7.15 | 108.66 | 105.80 |
| 26 | BB | 2741 | A | N1-C2-N3 | -7.15 | 125.73 | 129.30 |
| 37 | BM | 18 | ARG | NE-CZ-NH2 | -7.15 | 116.73 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 828 | U | N3-C4-O4 | 7.15 | 124.40 | 119.40 |
| 3 | AC | 39 | U | C2'-C3'-O3' | 7.15 | 125.22 | 109.50 |
| 26 | BB | 43 | G | C3'-C2'-C1' | -7.15 | 95.78 | 101.50 |
| 26 | BB | 849 | A | N1-C6-N6 | 7.15 | 122.89 | 118.60 |
| 26 | BB | 2522 | U | C4-C5-C6 | 7.15 | 123.99 | 119.70 |
| 1 | AA | 83 | C | N1-C2-O2 | 7.14 | 123.19 | 118.90 |
| 1 | AA | 126 | G | C8-N9-C4 | -7.14 | 103.54 | 106.40 |
| 1 | AA | 1327 | C | C5'-C4'-O4' | 7.14 | 117.67 | 109.10 |
| 2 | AB | 23 | A | C8-N9-C4 | -7.14 | 102.94 | 105.80 |
| 26 | BB | 180 | G | C2-N3-C4 | 7.14 | 115.47 | 111.90 |
| 26 | BB | 1233 | C | N3-C4-N4 | 7.14 | 123.00 | 118.00 |
| 26 | BB | 1526 | C | N1-C2-O2 | 7.14 | 123.19 | 118.90 |
| 26 | BB | 1692 | U | N3-C2-O2 | -7.14 | 117.20 | 122.20 |
| 26 | BB | 2309 | A | N1-C2-N3 | -7.14 | 125.73 | 129.30 |
| 26 | BB | 2571 | U | C4'-C3'-C2' | -7.14 | 95.46 | 102.60 |
| 1 | AA | 75 | G | C5-C6-O6 | -7.14 | 124.31 | 128.60 |
| 1 | AA | 627 | G | C6-N1-C2 | -7.14 | 120.81 | 125.10 |
| 1 | AA | 1074 | G | O4'-C1'-N9 | 7.14 | 113.91 | 108.20 |
| 1 | AA | 1414 | U | N3-C4-C5 | 7.14 | 118.89 | 114.60 |
| 1 | AA | 1480 | A | C4-C5-C6 | -7.14 | 113.43 | 117.00 |
| 26 | BB | 647 | G | C5-C6-N1 | -7.14 | 107.93 | 111.50 |
| 26 | BB | 1853 | A | C8-N9-C4 | 7.14 | 108.66 | 105.80 |
| 26 | BB | 1998 | A | C5-C6-N6 | -7.14 | 117.99 | 123.70 |
| 27 | BC | 163 | TYR | CB-CG-CD2 | 7.14 | 125.28 | 121.00 |
| 1 | AA | 754 | C | C6-N1-C2 | -7.14 | 117.44 | 120.30 |
| 1 | AA | 1055 | A | C5'-C4'-O4' | 7.14 | 117.67 | 109.10 |
| 1 | AA | 1216 | A | C6-C5-N7 | 7.14 | 137.30 | 132.30 |
| 26 | BB | 469 | G | C4'-C3'-C2' | -7.14 | 95.46 | 102.60 |
| 26 | BB | 905 | A | C8-N9-C4 | -7.14 | 102.94 | 105.80 |
| 26 | BB | 1501 | G | N7-C8-N9 | 7.14 | 116.67 | 113.10 |
| 26 | BB | 1914 | C | N1-C2-N3 | 7.14 | 124.20 | 119.20 |
| 26 | BB | 2385 | C | C4-C5-C6 | -7.14 | 113.83 | 117.40 |
| 26 | BB | 2607 | G | P-O3'-C3' | 7.14 | 128.27 | 119.70 |
| 36 | BL | 37 | ARG | NE-CZ-NH2 | 7.14 | 123.87 | 120.30 |
| 1 | AA | 220 | G | N7-C8-N9 | 7.14 | 116.67 | 113.10 |
| 1 | AA | 683 | G | N9-C4-C5 | 7.14 | 108.25 | 105.40 |
| 26 | BB | 994 | C | C4'-C3'-C2' | -7.14 | 95.46 | 102.60 |
| 26 | BB | 1484 | U | N1-C1'-C2' | -7.14 | 104.15 | 112.00 |
| 1 | AA | 562 | U | N3-C4-O4 | 7.14 | 124.40 | 119.40 |
| 1 | AA | 751 | U | C5-C6-N1 | -7.14 | 119.13 | 122.70 |
| 1 | AA | 869 | G | N1-C6-O6 | 7.14 | 124.18 | 119.90 |
| 1 | AA | 1165 | U | O4'-C1'-N1 | 7.14 | 113.91 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 13 | AM | 72 | ARG | NE-CZ-NH2 | 7.14 | 123.87 | 120.30 |
| 26 | BB | 1799 | G | N1-C2-N2 | 7.14 | 122.62 | 116.20 |
| 26 | BB | 2106 | U | P-O3'-C3' | 7.14 | 128.26 | 119.70 |
| 26 | BB | 2856 | A | C4-C5-C6 | -7.14 | 113.43 | 117.00 |
| 1 | AA | 230 | G | C5'-C4'-O4' | 7.13 | 117.66 | 109.10 |
| 1 | AA | 755 | G | N3-C4-C5 | -7.13 | 125.03 | 128.60 |
| 1 | AA | 763 | G | N3-C2-N2 | -7.13 | 114.91 | 119.90 |
| 1 | AA | 1154 | G | C8-N9-C4 | -7.13 | 103.55 | 106.40 |
| 1 | AA | 1266 | G | C6-N1-C2 | -7.13 | 120.82 | 125.10 |
| 26 | BB | 1214 | A | C4-C5-N7 | -7.13 | 107.13 | 110.70 |
| 26 | BB | 2262 | U | N1-C2-N3 | 7.13 | 119.18 | 114.90 |
| 26 | BB | 2834 | G | C4-C5-C6 | 7.13 | 123.08 | 118.80 |
| 27 | BC | 164 | ARG | NE-CZ-NH1 | 7.13 | 123.87 | 120.30 |
| 25 | BA | 73 | A | C5-N7-C8 | 7.13 | 107.47 | 103.90 |
| 26 | BB | 1086 | A | C8-N9-C4 | -7.13 | 102.95 | 105.80 |
| 26 | BB | 1307 | A | N9-C1'-C2' | 7.13 | 123.27 | 114.00 |
| 26 | BB | 2698 | U | N1-C2-O2 | 7.13 | 127.79 | 122.80 |
| 26 | BB | 2790 | U | C5-C4-O4 | -7.13 | 121.62 | 125.90 |
| 26 | BB | 2821 | A | N1-C6-N6 | -7.13 | 114.32 | 118.60 |
| 1 | AA | 15 | G | N1-C2-N3 | -7.13 | 119.62 | 123.90 |
| 1 | AA | 175 | C | N3-C4-C5 | 7.13 | 124.75 | 121.90 |
| 4 | AD | 14 | A | C6-N1-C2 | 7.13 | 122.88 | 118.60 |
| 26 | BB | 375 | G | O4'-C1'-N9 | 7.13 | 113.91 | 108.20 |
| 26 | BB | 1333 | G | N1-C2-N3 | 7.13 | 128.18 | 123.90 |
| 26 | BB | 1653 | G | P-O3'-C3' | 7.13 | 128.26 | 119.70 |
| 26 | BB | 1799 | G | O4'-C4'-C3' | 7.13 | 111.80 | 106.10 |
| 26 | BB | 2351 | G | N7-C8-N9 | 7.13 | 116.67 | 113.10 |
| 26 | BB | 2502 | G | N9-C4-C5 | -7.13 | 102.55 | 105.40 |
| 1 | AA | 409 | U | N3-C4-O4 | 7.13 | 124.39 | 119.40 |
| 1 | AA | 496 | A | C5-C6-N6 | -7.13 | 118.00 | 123.70 |
| 26 | BB | 1248 | G | N7-C8-N9 | 7.13 | 116.67 | 113.10 |
| 26 | BB | 1439 | A | C4-C5-N7 | -7.13 | 107.14 | 110.70 |
| 26 | BB | 1536 | C | O4'-C4'-C3' | 7.13 | 111.80 | 106.10 |
| 26 | BB | 2696 | U | N3-C4-O4 | 7.13 | 124.39 | 119.40 |
| 26 | BB | 2826 | A | O4'-C1'-N9 | 7.13 | 113.90 | 108.20 |
| 1 | AA | 135 | C | C5'-C4'-O4' | 7.13 | 117.65 | 109.10 |
| 1 | AA | 357 | G | N3-C4-C5 | -7.13 | 125.04 | 128.60 |
| 26 | BB | 627 | A | C6-C5-N7 | 7.13 | 137.29 | 132.30 |
| 26 | BB | 1560 | G | N9-C4-C5 | -7.13 | 102.55 | 105.40 |
| 26 | BB | 1649 | G | O4'-C4'-C3' | -7.13 | 96.87 | 104.00 |
| 26 | BB | 1805 | A | C8-N9-C4 | 7.13 | 108.65 | 105.80 |
| 26 | BB | 1966 | A | O4'-C4'-C3' | 7.13 | 111.80 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2107 | G | C5-N7-C8 | -7.13 | 100.74 | 104.30 |
| 26 | BB | 2640 | G | C4-C5-N7 | -7.13 | 107.95 | 110.80 |
| 3 | AC | 22 | G | C5-N7-C8 | -7.13 | 100.74 | 104.30 |
| 26 | BB | 86 | G | C6-N1-C2 | -7.13 | 120.82 | 125.10 |
| 26 | BB | 311 | A | N9-C1'-C2' | -7.13 | 104.16 | 112.00 |
| 26 | BB | 959 | A | O4'-C1'-N9 | 7.13 | 113.90 | 108.20 |
| 26 | BB | 2750 | A | O4'-C4'-C3' | 7.13 | 111.80 | 106.10 |
| 26 | BB | 2763 | G | N3-C4-N9 | 7.13 | 130.28 | 126.00 |
| 26 | BB | 2782 | G | N3-C4-C5 | -7.13 | 125.04 | 128.60 |
| 2 | AB | 22 | G | O4'-C1'-N9 | 7.12 | 113.90 | 108.20 |
| 26 | BB | 451 | U | N1-C2-N3 | 7.12 | 119.17 | 114.90 |
| 26 | BB | 1908 | C | C4'-C3'-C2' | -7.12 | 95.47 | 102.60 |
| 26 | BB | 1974 | C | N1-C2-O2 | 7.12 | 123.17 | 118.90 |
| 1 | AA | 201 | G | N9-C4-C5 | 7.12 | 108.25 | 105.40 |
| 1 | AA | 1032 | G | C3'-C2'-C1' | -7.12 | 95.80 | 101.50 |
| 1 | AA | 1184 | G | N9-C4-C5 | -7.12 | 102.55 | 105.40 |
| 25 | BA | 116 | G | N3-C4-N9 | 7.12 | 130.27 | 126.00 |
| 26 | BB | 1836 | C | P-O3'-C3' | 7.12 | 128.25 | 119.70 |
| 26 | BB | 1920 | C | O4'-C1'-N1 | 7.12 | 113.90 | 108.20 |
| 1 | AA | 203 | G | C5-C6-N1 | 7.12 | 115.06 | 111.50 |
| 25 | BA | 23 | G | C4-C5-C6 | -7.12 | 114.53 | 118.80 |
| 26 | BB | 940 | G | C2-N3-C4 | 7.12 | 115.46 | 111.90 |
| 26 | BB | 1489 | C | C6-N1-C2 | 7.12 | 123.15 | 120.30 |
| 26 | BB | 1527 | G | N7-C8-N9 | 7.12 | 116.66 | 113.10 |
| 26 | BB | 1640 | A | N1-C2-N3 | -7.12 | 125.74 | 129.30 |
| 26 | BB | 1871 | A | O4'-C1'-N9 | 7.12 | 113.90 | 108.20 |
| 26 | BB | 2085 | U | O4'-C1'-N1 | 7.12 | 113.90 | 108.20 |
| 1 | AA | 1013 | G | C2'-C3'-O3' | 7.12 | 125.16 | 109.50 |
| 5 | AE | 53 | LEU | CB-CG-CD2 | 7.12 | 123.10 | 111.00 |
| 26 | BB | 1096 | A | C5-N7-C8 | -7.12 | 100.34 | 103.90 |
| 1 | AA | 110 | C | N3-C4-N4 | -7.12 | 113.02 | 118.00 |
| 1 | AA | 150 | U | N1-C2-N3 | 7.12 | 119.17 | 114.90 |
| 1 | AA | 439 | U | C5-C6-N1 | -7.12 | 119.14 | 122.70 |
| 1 | AA | 509 | A | N9-C4-C5 | 7.12 | 108.65 | 105.80 |
| 1 | AA | 853 | C | N3-C2-O2 | -7.12 | 116.92 | 121.90 |
| 1 | AA | 1263 | C | O4'-C1'-N1 | 7.12 | 113.89 | 108.20 |
| 1 | AA | 1471 | U | C5'-C4'-O4' | 7.12 | 117.64 | 109.10 |
| 26 | BB | 96 | C | N3-C4-C5 | 7.12 | 124.75 | 121.90 |
| 26 | BB | 1000 | A | C6-C5-N7 | 7.12 | 137.28 | 132.30 |
| 26 | BB | 1356 | G | O4'-C4'-C3' | -7.12 | 96.88 | 104.00 |
| 26 | BB | 1369 | G | C6-N1-C2 | 7.12 | 129.37 | 125.10 |
| 26 | BB | 1468 | U | O4'-C1'-N1 | 7.12 | 113.89 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2100 | G | C8-N9-C4 | -7.12 | 103.55 | 106.40 |
| 26 | BB | 2426 | A | N9-C4-C5 | 7.12 | 108.65 | 105.80 |
| 1 | AA | 1049 | U | O4'-C1'-N1 | 7.12 | 113.89 | 108.20 |
| 26 | BB | 29 | U | C4-C5-C6 | 7.12 | 123.97 | 119.70 |
| 26 | BB | 817 | C | C4'-C3'-C2' | -7.12 | 95.48 | 102.60 |
| 26 | BB | 1081 | U | N3-C2-O2 | -7.12 | 117.22 | 122.20 |
| 26 | BB | 1194 | A | N3-C4-N9 | -7.12 | 121.71 | 127.40 |
| 26 | BB | 2741 | A | C2-N3-C4 | 7.12 | 114.16 | 110.60 |
| 1 | AA | 204 | G | N9-C4-C5 | 7.12 | 108.25 | 105.40 |
| 1 | AA | 285 | C | N3-C2-O2 | -7.12 | 116.92 | 121.90 |
| 1 | AA | 657 | U | O4'-C1'-N1 | 7.12 | 113.89 | 108.20 |
| 1 | AA | 1085 | U | C2-N3-C4 | -7.12 | 122.73 | 127.00 |
| 1 | AA | 1088 | G | N1-C2-N3 | 7.12 | 128.17 | 123.90 |
| 1 | AA | 1238 | A | C5-N7-C8 | 7.12 | 107.46 | 103.90 |
| 26 | BB | 344 | A | C2-N3-C4 | -7.12 | 107.04 | 110.60 |
| 26 | BB | 494 | G | N3-C2-N2 | -7.12 | 114.92 | 119.90 |
| 26 | BB | 1890 | A | N3-C4-N9 | 7.12 | 133.09 | 127.40 |
| 26 | BB | 1963 | U | O4'-C1'-N1 | 7.12 | 113.89 | 108.20 |
| 26 | BB | 2243 | U | N3-C2-O2 | -7.12 | 117.22 | 122.20 |
| 26 | BB | 2570 | G | N1-C6-O6 | 7.12 | 124.17 | 119.90 |
| 1 | AA | 55 | A | N9-C4-C5 | 7.11 | 108.64 | 105.80 |
| 1 | AA | 328 | C | C3'-C2'-C1' | 7.11 | 107.19 | 101.50 |
| 1 | AA | 1243 | C | N3-C4-N4 | 7.11 | 122.98 | 118.00 |
| 26 | BB | 841 | G | P-O3'-C3' | 7.11 | 128.24 | 119.70 |
| 26 | BB | 1368 | G | O4'-C1'-N9 | 7.11 | 113.89 | 108.20 |
| 26 | BB | 1697 | G | N1-C6-O6 | 7.11 | 124.17 | 119.90 |
| 26 | BB | 1840 | G | N9-C4-C5 | 7.11 | 108.25 | 105.40 |
| 26 | BB | 2323 | G | C4-C5-N7 | 7.11 | 113.64 | 110.80 |
| 47 | BW | 17 | ASP | CB-CG-OD1 | -7.11 | 111.90 | 118.30 |
| 1 | AA | 163 | C | C3'-C2'-C1' | 7.11 | 107.19 | 101.50 |
| 1 | AA | 195 | A | C5'-C4'-C3' | -7.11 | 104.62 | 116.00 |
| 1 | AA | 571 | U | C3'-C2'-C1' | 7.11 | 107.19 | 101.50 |
| 25 | BA | 68 | C | N3-C4-N4 | 7.11 | 122.98 | 118.00 |
| 26 | BB | 132 | G | C5-N7-C8 | 7.11 | 107.86 | 104.30 |
| 26 | BB | 2528 | U | P-O3'-C3' | 7.11 | 128.23 | 119.70 |
| 27 | BC | 207 | VAL | CA-CB-CG2 | -7.11 | 100.23 | 110.90 |
| 1 | AA | 45 | G | O4'-C1'-N9 | 7.11 | 113.89 | 108.20 |
| 1 | AA | 138 | G | N3-C4-N9 | 7.11 | 130.27 | 126.00 |
| 1 | AA | 160 | A | N9-C4-C5 | 7.11 | 108.64 | 105.80 |
| 1 | AA | 189 | A | C4-C5-C6 | -7.11 | 113.44 | 117.00 |
| 1 | AA | 479 | U | C5'-C4'-O4' | 7.11 | 117.63 | 109.10 |
| 2 | AB | 76 | A | C4-C5-C6 | 7.11 | 120.56 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 21 | U | O4'-C1'-N1 | 7.11 | 113.89 | 108.20 |
| 4 | AD | 40 | C | N1-C1'-C2' | -7.11 | 104.18 | 112.00 |
| 4 | AD | 40 | C | N3-C4-C5 | -7.11 | 119.06 | 121.90 |
| 4 | AD | 58 | A | C6-N1-C2 | 7.11 | 122.87 | 118.60 |
| 26 | BB | 738 | G | N9-C4-C5 | 7.11 | 108.24 | 105.40 |
| 26 | BB | 766 | U | C5-C4-O4 | 7.11 | 130.17 | 125.90 |
| 26 | BB | 859 | G | C4-C5-N7 | 7.11 | 113.64 | 110.80 |
| 26 | BB | 942 | G | N1-C6-O6 | -7.11 | 115.63 | 119.90 |
| 26 | BB | 1521 | G | N9-C4-C5 | 7.11 | 108.24 | 105.40 |
| 26 | BB | 1950 | G | C2-N3-C4 | 7.11 | 115.45 | 111.90 |
| 38 | BN | 132 | ARG | NE-CZ-NH1 | 7.11 | 123.86 | 120.30 |
| 1 | AA | 1374 | A | C4-C5-C6 | -7.11 | 113.44 | 117.00 |
| 26 | BB | 400 | G | N1-C2-N3 | -7.11 | 119.63 | 123.90 |
| 26 | BB | 764 | A | C4'-C3'-C2' | -7.11 | 95.49 | 102.60 |
| 26 | BB | 2152 | G | N3-C4-C5 | -7.11 | 125.05 | 128.60 |
| 1 | AA | 193 | C | N3-C4-N4 | -7.11 | 113.02 | 118.00 |
| 1 | AA | 386 | C | O4'-C1'-N1 | 7.11 | 113.89 | 108.20 |
| 1 | AA | 1136 | C | C1'-O4'-C4' | 7.11 | 115.59 | 109.90 |
| 26 | BB | 644 | A | C4-C5-C6 | -7.11 | 113.45 | 117.00 |
| 26 | BB | 682 | G | C4-C5-N7 | -7.11 | 107.96 | 110.80 |
| 26 | BB | 984 | A | C5-C6-N6 | -7.11 | 118.01 | 123.70 |
| 26 | BB | 1199 | U | O4'-C4'-C3' | 7.11 | 111.79 | 106.10 |
| 26 | BB | 1883 | U | C1'-O4'-C4' | 7.11 | 115.59 | 109.90 |
| 1 | AA | 990 | C | C4-C5-C6 | 7.11 | 120.95 | 117.40 |
| 1 | AA | 1217 | C | N3-C2-O2 | -7.11 | 116.93 | 121.90 |
| 1 | AA | 1358 | U | C5-C6-N1 | -7.11 | 119.15 | 122.70 |
| 26 | BB | 317 | G | O4'-C1'-N9 | 7.11 | 113.89 | 108.20 |
| 26 | BB | 1148 | U | N1-C2-O2 | 7.11 | 127.77 | 122.80 |
| 26 | BB | 1384 | A | C5'-C4'-O4' | 7.11 | 117.63 | 109.10 |
| 26 | BB | 2810 | A | N9-C4-C5 | 7.11 | 108.64 | 105.80 |
| 1 | AA | 1215 | G | C5-N7-C8 | -7.10 | 100.75 | 104.30 |
| 1 | AA | 1514 | G | N7-C8-N9 | 7.10 | 116.65 | 113.10 |
| 26 | BB | 23 | G | C5-N7-C8 | 7.10 | 107.85 | 104.30 |
| 26 | BB | 433 | C | O4'-C1'-C2' | 7.10 | 113.99 | 107.60 |
| 26 | BB | 623 | C | C5-C6-N1 | -7.10 | 117.45 | 121.00 |
| 26 | BB | 2175 | C | O3'-P-O5' | -7.10 | 90.50 | 104.00 |
| 26 | BB | 2446 | G | C1'-O4'-C4' | -7.10 | 104.22 | 109.90 |
| 1 | AA | 102 | G | C8-N9-C4 | -7.10 | 103.56 | 106.40 |
| 1 | AA | 795 | C | C5-C6-N1 | 7.10 | 124.55 | 121.00 |
| 1 | AA | 1262 | C | C5'-C4'-O4' | 7.10 | 117.62 | 109.10 |
| 25 | BA | 106 | G | C2'-C3'-O3' | 7.10 | 125.13 | 109.50 |
| 26 | BB | 67 | U | C4'-C3'-C2' | -7.10 | 95.50 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 445 | C | C5'-C4'-O4' | 7.10 | 117.62 | 109.10 |
| 26 | BB | 774 | G | C2-N3-C4 | 7.10 | 115.45 | 111.90 |
| 26 | BB | 1869 | G | C5-C6-O6 | 7.10 | 132.86 | 128.60 |
| 26 | BB | 2399 | G | N9-C1'-C2' | -7.10 | 104.19 | 112.00 |
| 26 | BB | 2693 | G | C5-C6-O6 | -7.10 | 124.34 | 128.60 |
| 1 | AA | 278 | G | N9-C4-C5 | 7.10 | 108.24 | 105.40 |
| 1 | AA | 461 | A | N7-C8-N9 | -7.10 | 110.25 | 113.80 |
| 26 | BB | 2316 | G | C5'-C4'-O4' | 7.10 | 117.62 | 109.10 |
| 26 | BB | 2553 | G | N1-C6-O6 | -7.10 | 115.64 | 119.90 |
| 1 | AA | 207 | C | C2-N3-C4 | -7.10 | 116.35 | 119.90 |
| 1 | AA | 489 | C | N3-C4-N4 | 7.10 | 122.97 | 118.00 |
| 1 | AA | 934 | C | O4'-C4'-C3' | 7.10 | 111.78 | 106.10 |
| 1 | AA | 1087 | G | N3-C4-C5 | -7.10 | 125.05 | 128.60 |
| 1 | AA | 1444 | U | N3-C4-O4 | 7.10 | 124.37 | 119.40 |
| 2 | AB | 13 | C | C6-N1-C2 | 7.10 | 123.14 | 120.30 |
| 7 | AG | 164 | ARG | NE-CZ-NH2 | 7.10 | 123.85 | 120.30 |
| 25 | BA | 80 | U | N3-C2-O2 | -7.10 | 117.23 | 122.20 |
| 26 | BB | 2379 | G | C3'-C2'-C1' | 7.10 | 107.18 | 101.50 |
| 1 | AA | 1524 | C | O4'-C1'-N1 | 7.10 | 113.88 | 108.20 |
| 26 | BB | 808 | G | C2-N3-C4 | 7.10 | 115.45 | 111.90 |
| 26 | BB | 859 | G | C6-N1-C2 | -7.10 | 120.84 | 125.10 |
| 26 | BB | 1173 | U | C6-N1-C2 | -7.10 | 116.74 | 121.00 |
| 26 | BB | 1701 | A | N1-C2-N3 | -7.10 | 125.75 | 129.30 |
| 26 | BB | 1906 | G | N3-C4-N9 | 7.10 | 130.26 | 126.00 |
| 26 | BB | 1929 | G | C5-N7-C8 | -7.10 | 100.75 | 104.30 |
| 26 | BB | 2193 | G | C6-C5-N7 | -7.10 | 126.14 | 130.40 |
| 26 | BB | 2214 | C | C6-N1-C2 | 7.10 | 123.14 | 120.30 |
| 26 | BB | 2228 | G | C4-C5-N7 | 7.10 | 113.64 | 110.80 |
| 43 | BS | 91 | ARG | NE-CZ-NH2 | -7.10 | 116.75 | 120.30 |
| 1 | AA | 1200 | C | C2-N3-C4 | 7.10 | 123.45 | 119.90 |
| 1 | AA | 1382 | C | C5'-C4'-O4' | 7.10 | 117.61 | 109.10 |
| 1 | AA | 590 | U | C1'-O4'-C4' | -7.09 | 104.22 | 109.90 |
| 1 | AA | 612 | C | C1'-O4'-C4' | -7.09 | 104.22 | 109.90 |
| 26 | BB | 280 | U | N3-C2-O2 | -7.09 | 117.23 | 122.20 |
| 26 | BB | 553 | G | O4'-C4'-C3' | 7.09 | 111.78 | 106.10 |
| 26 | BB | 828 | U | C3'-C2'-C1' | 7.09 | 107.18 | 101.50 |
| 26 | BB | 1343 | G | C1'-O4'-C4' | 7.09 | 115.58 | 109.90 |
| 26 | BB | 2223 | G | C5-N7-C8 | -7.09 | 100.75 | 104.30 |
| 1 | AA | 1508 | A | N3-C4-C5 | -7.09 | 121.83 | 126.80 |
| 3 | AC | 17 | U | N1-C2-N3 | -7.09 | 110.64 | 114.90 |
| 26 | BB | 1599 | U | C5'-C4'-C3' | -7.09 | 104.65 | 116.00 |
| 26 | BB | 2810 | A | N1-C2-N3 | -7.09 | 125.75 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 85 | U | O4'-C4'-C3' | 7.09 | 111.77 | 106.10 |
| 1 | AA | 164 | G | P-O3'-C3' | 7.09 | 128.21 | 119.70 |
| 1 | AA | 304 | U | C5-C6-N1 | -7.09 | 119.15 | 122.70 |
| 1 | AA | 630 | A | C5-N7-C8 | -7.09 | 100.35 | 103.90 |
| 1 | AA | 990 | C | C1'-O4'-C4' | 7.09 | 115.57 | 109.90 |
| 6 | AF | 97 | PRO | N-CA-CB | 7.09 | 111.81 | 103.30 |
| 26 | BB | 235 | U | C5-C6-N1 | -7.09 | 119.16 | 122.70 |
| 26 | BB | 342 | A | C4-C5-N7 | 7.09 | 114.25 | 110.70 |
| 26 | BB | 1406 | U | O4'-C1'-N1 | 7.09 | 113.87 | 108.20 |
| 26 | BB | 2502 | G | C5-C6-N1 | 7.09 | 115.05 | 111.50 |
| 26 | BB | 2526 | G | N3-C4-C5 | -7.09 | 125.05 | 128.60 |
| 1 | AA | 59 | A | C5-N7-C8 | -7.09 | 100.36 | 103.90 |
| 25 | BA | 74 | U | N1-C2-O2 | 7.09 | 127.76 | 122.80 |
| 26 | BB | 1200 | C | C5-C4-N4 | -7.09 | 115.24 | 120.20 |
| 26 | BB | 2161 | C | C4'-C3'-C2' | -7.09 | 95.51 | 102.60 |
| 26 | BB | 2518 | A | N7-C8-N9 | -7.09 | 110.25 | 113.80 |
| 1 | AA | 996 | A | C5'-C4'-C3' | -7.09 | 104.66 | 116.00 |
| 1 | AA | 1099 | G | C5-N7-C8 | -7.09 | 100.76 | 104.30 |
| 26 | BB | 297 | G | N7-C8-N9 | 7.09 | 116.64 | 113.10 |
| 26 | BB | 1205 | A | C1'-O4'-C4' | 7.09 | 115.57 | 109.90 |
| 26 | BB | 1409 | U | C4-C5-C6 | -7.09 | 115.45 | 119.70 |
| 26 | BB | 1780 | A | C2-N3-C4 | 7.09 | 114.14 | 110.60 |
| 1 | AA | 1453 | G | N7-C8-N9 | 7.09 | 116.64 | 113.10 |
| 26 | BB | 504 | A | C8-N9-C4 | -7.09 | 102.97 | 105.80 |
| 26 | BB | 606 | U | C5-C4-O4 | -7.09 | 121.65 | 125.90 |
| 26 | BB | 668 | A | N1-C2-N3 | -7.09 | 125.76 | 129.30 |
| 26 | BB | 798 | G | N7-C8-N9 | 7.09 | 116.64 | 113.10 |
| 26 | BB | 1094 | U | C4-C5-C6 | 7.09 | 123.95 | 119.70 |
| 26 | BB | 2409 | G | C4-C5-C6 | 7.09 | 123.05 | 118.80 |
| 26 | BB | 2454 | G | C4'-C3'-C2' | -7.09 | 95.51 | 102.60 |
| 44 | BT | 78 | ARG | NE-CZ-NH2 | 7.09 | 123.84 | 120.30 |
| 1 | AA | 383 | A | N3-C4-N9 | 7.08 | 133.07 | 127.40 |
| 26 | BB | 777 | G | N3-C4-C5 | -7.08 | 125.06 | 128.60 |
| 26 | BB | 1387 | A | N1-C6-N6 | 7.08 | 122.85 | 118.60 |
| 1 | AA | 1248 | A | O4'-C1'-N9 | 7.08 | 113.87 | 108.20 |
| 26 | BB | 250 | G | N1-C6-O6 | 7.08 | 124.15 | 119.90 |
| 26 | BB | 799 | G | N3-C2-N2 | 7.08 | 124.86 | 119.90 |
| 26 | BB | 1379 | U | O4'-C1'-N1 | 7.08 | 113.87 | 108.20 |
| 26 | BB | 1583 | A | C1'-O4'-C4' | -7.08 | 104.23 | 109.90 |
| 26 | BB | 1876 | A | N9-C4-C5 | 7.08 | 108.63 | 105.80 |
| 26 | BB | 2897 | U | C5-C4-O4 | -7.08 | 121.65 | 125.90 |
| 28 | BD | 213 | ARG | NE-CZ-NH1 | 7.08 | 123.84 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 245 | U | C2-N3-C4 | -7.08 | 122.75 | 127.00 |
| 1 | AA | 1264 | U | N3-C4-O4 | 7.08 | 124.36 | 119.40 |
| 1 | AA | 1291 | U | N1-C2-O2 | 7.08 | 127.76 | 122.80 |
| 2 | AB | 74 | C | C2-N3-C4 | 7.08 | 123.44 | 119.90 |
| 26 | BB | 77 | G | C5-C6-N1 | 7.08 | 115.04 | 111.50 |
| 26 | BB | 88 | G | N1-C2-N3 | -7.08 | 119.65 | 123.90 |
| 26 | BB | 128 | C | N3-C4-C5 | 7.08 | 124.73 | 121.90 |
| 26 | BB | 883 | G | C8-N9-C4 | -7.08 | 103.57 | 106.40 |
| 26 | BB | 1026 | G | C3'-C2'-C1' | -7.08 | 95.83 | 101.50 |
| 26 | BB | 1082 | U | C5-C4-O4 | -7.08 | 121.65 | 125.90 |
| 26 | BB | 2112 | G | N3-C4-N9 | 7.08 | 130.25 | 126.00 |
| 26 | BB | 2485 | G | C4-C5-N7 | -7.08 | 107.97 | 110.80 |
| 26 | BB | 2530 | A | O4'-C1'-N9 | 7.08 | 113.87 | 108.20 |
| 31 | BG | 142 | TYR | CB-CG-CD1 | -7.08 | 116.75 | 121.00 |
| 1 | AA | 607 | A | C8-N9-C4 | -7.08 | 102.97 | 105.80 |
| 26 | BB | 438 | G | C4-C5-C6 | 7.08 | 123.05 | 118.80 |
| 26 | BB | 2049 | G | C3'-C2'-C1' | 7.08 | 107.16 | 101.50 |
| 26 | BB | 2770 | G | N7-C8-N9 | 7.08 | 116.64 | 113.10 |
| 1 | AA | 1019 | A | O4'-C1'-N9 | 7.08 | 113.86 | 108.20 |
| 1 | AA | 1239 | A | O4'-C4'-C3' | 7.08 | 111.76 | 106.10 |
| 2 | AB | 71 | C | C5'-C4'-O4' | 7.08 | 117.59 | 109.10 |
| 3 | AC | 26 | U | C1'-O4'-C4' | 7.08 | 115.56 | 109.90 |
| 6 | AF | 228 | ARG | NE-CZ-NH1 | 7.08 | 123.84 | 120.30 |
| 26 | BB | 12 | U | N1-C2-O2 | 7.08 | 127.75 | 122.80 |
| 26 | BB | 1478 | G | C5'-C4'-O4' | 7.08 | 117.59 | 109.10 |
| 26 | BB | 2277 | G | O4'-C1'-N9 | 7.08 | 113.86 | 108.20 |
| 1 | AA | 185 | U | N1-C2-N3 | 7.08 | 119.15 | 114.90 |
| 26 | BB | 796 | C | C5-C4-N4 | -7.08 | 115.25 | 120.20 |
| 26 | BB | 1480 | C | N3-C4-C5 | -7.08 | 119.07 | 121.90 |
| 26 | BB | 2351 | G | C5-N7-C8 | -7.08 | 100.76 | 104.30 |
| 26 | BB | 2614 | A | C4'-C3'-C2' | -7.08 | 95.52 | 102.60 |
| 1 | AA | 78 | A | N1-C2-N3 | -7.08 | 125.76 | 129.30 |
| 26 | BB | 838 | C | C5-C4-N4 | 7.08 | 125.15 | 120.20 |
| 26 | BB | 867 | C | N1-C2-O2 | 7.08 | 123.14 | 118.90 |
| 26 | BB | 1176 | U | O4'-C1'-N1 | 7.08 | 113.86 | 108.20 |
| 26 | BB | 1787 | A | C8-N9-C4 | -7.08 | 102.97 | 105.80 |
| 26 | BB | 1910 | G | OP1-P-OP2 | 7.08 | 130.21 | 119.60 |
| 26 | BB | 2139 | U | N3-C4-C5 | -7.08 | 110.35 | 114.60 |
| 1 | AA | 320 | A | N1-C6-N6 | -7.07 | 114.36 | 118.60 |
| 26 | BB | 1788 | C | C5-C6-N1 | 7.07 | 124.54 | 121.00 |
| 26 | BB | 234 | U | N1-C2-N3 | 7.07 | 119.14 | 114.90 |
| 1 | AA | 703 | G | C8-N9-C4 | -7.07 | 103.57 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1266 | G | O4'-C1'-N9 | 7.07 | 113.86 | 108.20 |
| 1 | AA | 1471 | U | N3-C4-O4 | 7.07 | 124.35 | 119.40 |
| 4 | AD | 66 | C | C5-C6-N1 | 7.07 | 124.53 | 121.00 |
| 25 | BA | 107 | G | N7-C8-N9 | 7.07 | 116.64 | 113.10 |
| 26 | BB | 578 | G | C4-C5-N7 | -7.07 | 107.97 | 110.80 |
| 26 | BB | 1064 | C | C5'-C4'-O4' | 7.07 | 117.58 | 109.10 |
| 26 | BB | 1216 | G | O4'-C1'-C2' | 7.07 | 113.96 | 107.60 |
| 26 | BB | 1248 | G | N3-C4-N9 | -7.07 | 121.76 | 126.00 |
| 26 | BB | 1501 | G | C8-N9-C4 | -7.07 | 103.57 | 106.40 |
| 26 | BB | 2671 | G | C5-C6-N1 | 7.07 | 115.03 | 111.50 |
| 1 | AA | 1134 | G | N9-C4-C5 | 7.07 | 108.23 | 105.40 |
| 21 | AU | 52 | ARG | NE-CZ-NH2 | -7.07 | 116.77 | 120.30 |
| 26 | BB | 1507 | C | N3-C4-N4 | 7.07 | 122.95 | 118.00 |
| 1 | AA | 581 | G | C8-N9-C4 | -7.07 | 103.57 | 106.40 |
| 26 | BB | 785 | G | C4-C5-N7 | -7.07 | 107.97 | 110.80 |
| 26 | BB | 1246 | A | C5-C6-N6 | -7.07 | 118.05 | 123.70 |
| 26 | BB | 1452 | G | C3'-C2'-C1' | 7.07 | 107.15 | 101.50 |
| 26 | BB | 1486 | U | C5-C6-N1 | -7.07 | 119.17 | 122.70 |
| 26 | BB | 1569 | A | N9-C1'-C2' | -7.07 | 104.22 | 112.00 |
| 26 | BB | 2035 | G | C6-N1-C2 | -7.07 | 120.86 | 125.10 |
| 1 | AA | 1349 | A | C8-N9-C4 | -7.07 | 102.97 | 105.80 |
| 4 | AD | 44 | A | N7-C8-N9 | 7.07 | 117.33 | 113.80 |
| 25 | BA | 101 | A | C6-N1-C2 | -7.07 | 114.36 | 118.60 |
| 26 | BB | 684 | G | C6-C5-N7 | -7.07 | 126.16 | 130.40 |
| 26 | BB | 772 | C | N3-C4-C5 | 7.07 | 124.73 | 121.90 |
| 26 | BB | 875 | G | C4-C5-N7 | -7.07 | 107.97 | 110.80 |
| 26 | BB | 1414 | C | O4'-C1'-N1 | 7.07 | 113.85 | 108.20 |
| 26 | BB | 2123 | G | C5-C6-N1 | 7.07 | 115.03 | 111.50 |
| 26 | BB | 2808 | G | N1-C2-N3 | -7.07 | 119.66 | 123.90 |
| 1 | AA | 563 | A | C4-C5-N7 | -7.06 | 107.17 | 110.70 |
| 26 | BB | 2181 | U | C5-C4-O4 | 7.06 | 130.14 | 125.90 |
| 26 | BB | 2677 | G | C2-N3-C4 | 7.06 | 115.43 | 111.90 |
| 1 | AA | 1338 | G | C5-C6-O6 | -7.06 | 124.36 | 128.60 |
| 1 | AA | 1345 | U | C3'-C2'-C1' | -7.06 | 95.85 | 101.50 |
| 26 | BB | 1328 | A | N7-C8-N9 | 7.06 | 117.33 | 113.80 |
| 26 | BB | 2126 | A | C5'-C4'-C3' | -7.06 | 104.70 | 116.00 |
| 26 | BB | 2521 | C | N3-C4-N4 | 7.06 | 122.94 | 118.00 |
| 1 | AA | 1052 | U | C5-C6-N1 | -7.06 | 119.17 | 122.70 |
| 26 | BB | 1097 | U | P-O3'-C3' | 7.06 | 128.17 | 119.70 |
| 26 | BB | 1224 | U | N1-C1'-C2' | 7.06 | 123.18 | 114.00 |
| 1 | AA | 430 | A | C5'-C4'-O4' | 7.06 | 117.57 | 109.10 |
| 1 | AA | 949 | A | C5-N7-C8 | 7.06 | 107.43 | 103.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 6 | AF | 58 | ARG | NE-CZ-NH2 | 7.06 | 123.83 | 120.30 |
| 20 | AT | 22 | VAL | CA-CB-CG2 | 7.06 | 121.49 | 110.90 |
| 26 | BB | 261 | G | C8-N9-C1' | 7.06 | 136.18 | 127.00 |
| 26 | BB | 753 | A | C6-N1-C2 | 7.06 | 122.83 | 118.60 |
| 26 | BB | 829 | A | C5'-C4'-C3' | -7.06 | 104.70 | 116.00 |
| 26 | BB | 1059 | G | O4'-C1'-C2' | 7.06 | 113.95 | 107.60 |
| 26 | BB | 1233 | C | O4'-C1'-N1 | 7.06 | 113.85 | 108.20 |
| 26 | BB | 1679 | A | O4'-C1'-N9 | 7.06 | 113.85 | 108.20 |
| 26 | BB | 2297 | A | C8-N9-C4 | -7.06 | 102.98 | 105.80 |
| 26 | BB | 2490 | G | C8-N9-C4 | -7.06 | 103.58 | 106.40 |
| 26 | BB | 2888 | C | C4'-C3'-C2' | -7.06 | 95.54 | 102.60 |
| 1 | AA | 407 | U | C1'-O4'-C4' | -7.06 | 104.25 | 109.90 |
| 1 | AA | 1382 | C | N3-C4-C5 | -7.06 | 119.08 | 121.90 |
| 26 | BB | 140 | C | N3-C2-O2 | -7.06 | 116.96 | 121.90 |
| 26 | BB | 571 | U | O4'-C4'-C3' | 7.06 | 111.75 | 106.10 |
| 26 | BB | 636 | G | N3-C4-N9 | 7.06 | 130.24 | 126.00 |
| 26 | BB | 921 | C | C4-C5-C6 | -7.06 | 113.87 | 117.40 |
| 26 | BB | 1456 | G | O4'-C1'-N9 | 7.06 | 113.85 | 108.20 |
| 26 | BB | 1503 | A | C5-C6-N6 | 7.06 | 129.35 | 123.70 |
| 26 | BB | 1997 | C | C2-N3-C4 | 7.06 | 123.43 | 119.90 |
| 26 | BB | 2196 | C | C4'-C3'-C2' | -7.06 | 95.54 | 102.60 |
| 26 | BB | 2330 | G | N3-C4-C5 | -7.06 | 125.07 | 128.60 |
| 26 | BB | 2524 | G | N1-C6-O6 | -7.06 | 115.67 | 119.90 |
| 42 | BR | 20 | ARG | NE-CZ-NH2 | -7.06 | 116.77 | 120.30 |
| 1 | AA | 8 | A | C5-C6-N6 | 7.06 | 129.34 | 123.70 |
| 1 | AA | 944 | G | N1-C2-N3 | -7.06 | 119.67 | 123.90 |
| 26 | BB | 314 | C | C5'-C4'-C3' | 7.06 | 127.29 | 116.00 |
| 26 | BB | 1174 | U | C2-N3-C4 | -7.06 | 122.77 | 127.00 |
| 26 | BB | 1942 | C | C5'-C4'-O4' | 7.06 | 117.57 | 109.10 |
| 39 | BO | 18 | ARG | CD-NE-CZ | 7.06 | 133.48 | 123.60 |
| 1 | AA | 771 | G | N1-C6-O6 | -7.05 | 115.67 | 119.90 |
| 1 | AA | 778 | G | C4-C5-N7 | -7.05 | 107.98 | 110.80 |
| 1 | AA | 851 | G | C5-C6-O6 | -7.05 | 124.37 | 128.60 |
| 1 | AA | 1386 | G | C4-C5-N7 | -7.05 | 107.98 | 110.80 |
| 26 | BB | 108 | G | C3'-C2'-C1' | -7.05 | 95.86 | 101.50 |
| 26 | BB | 1818 | U | N1-C2-O2 | 7.05 | 127.74 | 122.80 |
| 26 | BB | 2178 | C | C6-N1-C2 | -7.05 | 117.48 | 120.30 |
| 26 | BB | 2451 | A | N1-C2-N3 | 7.05 | 132.83 | 129.30 |
| 26 | BB | 2466 | C | C3'-C2'-C1' | 7.05 | 107.14 | 101.50 |
| 1 | AA | 8 | A | N7-C8-N9 | -7.05 | 110.27 | 113.80 |
| 1 | AA | 878 | A | C5-C6-N1 | -7.05 | 114.17 | 117.70 |
| 26 | BB | 1552 | A | C1'-O4'-C4' | -7.05 | 104.26 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2098 | U | C5-C4-O4 | 7.05 | 130.13 | 125.90 |
| 26 | BB | 2386 | A | C5'-C4'-C3' | -7.05 | 104.72 | 116.00 |
| 26 | BB | 2644 | G | C4-C5-N7 | -7.05 | 107.98 | 110.80 |
| 26 | BB | 2859 | G | O4'-C1'-N9 | 7.05 | 113.84 | 108.20 |
| 1 | AA | 1191 | A | N1-C6-N6 | -7.05 | 114.37 | 118.60 |
| 3 | AC | 47 | C | C5-C4-N4 | -7.05 | 115.26 | 120.20 |
| 26 | BB | 1007 | C | C5-C6-N1 | -7.05 | 117.47 | 121.00 |
| 26 | BB | 1529 | G | C8-N9-C4 | -7.05 | 103.58 | 106.40 |
| 26 | BB | 1654 | A | P-O5'-C5' | 7.05 | 132.18 | 120.90 |
| 26 | BB | 2118 | U | C5-C4-O4 | 7.05 | 130.13 | 125.90 |
| 26 | BB | 2751 | G | P-O3'-C3' | 7.05 | 128.16 | 119.70 |
| 1 | AA | 376 | G | N1-C6-O6 | -7.05 | 115.67 | 119.90 |
| 1 | AA | 948 | C | O4'-C4'-C3' | 7.05 | 111.74 | 106.10 |
| 26 | BB | 273 | G | C5'-C4'-O4' | 7.05 | 117.56 | 109.10 |
| 26 | BB | 1272 | A | N1-C6-N6 | -7.05 | 114.37 | 118.60 |
| 26 | BB | 1303 | G | C2-N3-C4 | 7.05 | 115.42 | 111.90 |
| 26 | BB | 1471 | G | N9-C4-C5 | 7.05 | 108.22 | 105.40 |
| 26 | BB | 1483 | G | N3-C4-N9 | 7.05 | 130.23 | 126.00 |
| 26 | BB | 2107 | G | C4-C5-N7 | 7.05 | 113.62 | 110.80 |
| 26 | BB | 2296 | U | N1-C2-N3 | 7.05 | 119.13 | 114.90 |
| 26 | BB | 2306 | C | C5-C4-N4 | -7.05 | 115.27 | 120.20 |
| 26 | BB | 23 | G | C6-C5-N7 | 7.05 | 134.63 | 130.40 |
| 26 | BB | 713 | G | N3-C4-C5 | -7.05 | 125.08 | 128.60 |
| 26 | BB | 1000 | A | C5-C6-N1 | 7.05 | 121.22 | 117.70 |
| 26 | BB | 1105 | U | C5-C6-N1 | -7.05 | 119.18 | 122.70 |
| 26 | BB | 1429 | G | N9-C4-C5 | 7.05 | 108.22 | 105.40 |
| 26 | BB | 2011 | U | P-O3'-C3' | 7.05 | 128.16 | 119.70 |
| 26 | BB | 2093 | G | N1-C6-O6 | -7.05 | 115.67 | 119.90 |
| 26 | BB | 2516 | A | N9-C4-C5 | 7.05 | 108.62 | 105.80 |
| 1 | AA | 754 | C | N3-C2-O2 | -7.05 | 116.97 | 121.90 |
| 1 | AA | 861 | G | C4-C5-C6 | 7.05 | 123.03 | 118.80 |
| 1 | AA | 907 | A | N9-C4-C5 | -7.05 | 102.98 | 105.80 |
| 3 | AC | 55 | A | C2'-C3'-O3' | 7.05 | 125.00 | 109.50 |
| 3 | AC | 55 | A | C4'-C3'-C2' | -7.05 | 95.55 | 102.60 |
| 26 | BB | 770 | G | C5-C6-N1 | 7.05 | 115.02 | 111.50 |
| 26 | BB | 2230 | G | N7-C8-N9 | 7.05 | 116.62 | 113.10 |
| 1 | AA | 37 | U | N1-C2-N3 | 7.04 | 119.13 | 114.90 |
| 1 | AA | 778 | G | C5-C6-O6 | -7.04 | 124.37 | 128.60 |
| 26 | BB | 1895 | C | C6-N1-C2 | -7.04 | 117.48 | 120.30 |
| 26 | BB | 2745 | C | N1-C2-O2 | 7.04 | 123.13 | 118.90 |
| 1 | AA | 76 | G | C2-N3-C4 | -7.04 | 108.38 | 111.90 |
| 1 | AA | 248 | C | C5'-C4'-O4' | 7.04 | 117.55 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1157 | A | N9-C4-C5 | 7.04 | 108.62 | 105.80 |
| 26 | BB | 400 | G | C2-N3-C4 | 7.04 | 115.42 | 111.90 |
| 26 | BB | 647 | G | C4-C5-C6 | 7.04 | 123.03 | 118.80 |
| 26 | BB | 989 | G | C2-N3-C4 | 7.04 | 115.42 | 111.90 |
| 26 | BB | 1443 | U | C5-C4-O4 | 7.04 | 130.13 | 125.90 |
| 26 | BB | 1624 | U | O4'-C1'-N1 | 7.04 | 113.83 | 108.20 |
| 1 | AA | 303 | A | C5'-C4'-O4' | 7.04 | 117.55 | 109.10 |
| 1 | AA | 355 | C | C5'-C4'-O4' | 7.04 | 117.55 | 109.10 |
| 26 | BB | 1256 | G | C4-C5-C6 | 7.04 | 123.03 | 118.80 |
| 26 | BB | 1578 | U | N3-C4-O4 | 7.04 | 124.33 | 119.40 |
| 26 | BB | 2678 | C | C5-C6-N1 | 7.04 | 124.52 | 121.00 |
| 34 | BJ | 123 | ASP | CB-CG-OD2 | -7.04 | 111.96 | 118.30 |
| 49 | BY | 19 | ARG | NE-CZ-NH1 | 7.04 | 123.82 | 120.30 |
| 1 | AA | 240 | G | C5-N7-C8 | -7.04 | 100.78 | 104.30 |
| 1 | AA | 520 | A | C4-C5-C6 | -7.04 | 113.48 | 117.00 |
| 1 | AA | 771 | G | C5'-C4'-O4' | 7.04 | 117.55 | 109.10 |
| 1 | AA | 1533 | C | N1-C2-O2 | 7.04 | 123.12 | 118.90 |
| 26 | BB | 36 | G | C6-N1-C2 | -7.04 | 120.88 | 125.10 |
| 26 | BB | 143 | C | C4'-C3'-C2' | -7.04 | 95.56 | 102.60 |
| 26 | BB | 420 | C | C3'-C2'-C1' | 7.04 | 107.13 | 101.50 |
| 26 | BB | 522 | A | C4-C5-C6 | -7.04 | 113.48 | 117.00 |
| 26 | BB | 579 | G | N3-C2-N2 | 7.04 | 124.83 | 119.90 |
| 26 | BB | 609 | A | O4'-C1'-N9 | 7.04 | 113.83 | 108.20 |
| 26 | BB | 828 | U | C1'-O4'-C4' | -7.04 | 104.27 | 109.90 |
| 26 | BB | 927 | A | C6-C5-N7 | 7.04 | 137.23 | 132.30 |
| 26 | BB | 1292 | G | C4-C5-C6 | 7.04 | 123.02 | 118.80 |
| 26 | BB | 2094 | A | N1-C6-N6 | -7.04 | 114.38 | 118.60 |
| 26 | BB | 2193 | G | C6-N1-C2 | -7.04 | 120.88 | 125.10 |
| 26 | BB | 2310 | C | C6-N1-C2 | 7.04 | 123.11 | 120.30 |
| 30 | BF | 61 | ARG | NE-CZ-NH1 | -7.04 | 116.78 | 120.30 |
| 1 | AA | 1 | A | N7-C8-N9 | 7.04 | 117.32 | 113.80 |
| 1 | AA | 95 | C | C3'-C2'-C1' | 7.04 | 107.13 | 101.50 |
| 1 | AA | 174 | A | C2-N3-C4 | 7.04 | 114.12 | 110.60 |
| 1 | AA | 376 | G | C4-C5-N7 | -7.04 | 107.98 | 110.80 |
| 26 | BB | 155 | A | C5'-C4'-O4' | 7.04 | 117.54 | 109.10 |
| 26 | BB | 1313 | U | C5-C6-N1 | -7.04 | 119.18 | 122.70 |
| 26 | BB | 1471 | G | C6-C5-N7 | -7.04 | 126.18 | 130.40 |
| 26 | BB | 2493 | U | N3-C4-O4 | 7.04 | 124.33 | 119.40 |
| 26 | BB | 2733 | A | C5-C6-N1 | -7.04 | 114.18 | 117.70 |
| 32 | BH | 54 | ARG | NE-CZ-NH1 | -7.04 | 116.78 | 120.30 |
| 1 | AA | 478 | A | N7-C8-N9 | 7.04 | 117.32 | 113.80 |
| 1 | AA | 878 | A | C6-C5-N7 | -7.04 | 127.38 | 132.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1213 | A | N7-C8-N9 | 7.04 | 117.32 | 113.80 |
| 26 | BB | 104 | A | C2-N3-C4 | 7.04 | 114.12 | 110.60 |
| 26 | BB | 398 | C | C1'-O4'-C4' | -7.04 | 104.27 | 109.90 |
| 26 | BB | 1248 | G | N1-C6-O6 | 7.04 | 124.12 | 119.90 |
| 26 | BB | 2027 | G | C5-C6-N1 | 7.04 | 115.02 | 111.50 |
| 26 | BB | 2195 | U | O4'-C1'-N1 | 7.04 | 113.83 | 108.20 |
| 26 | BB | 2285 | C | O4'-C1'-N1 | 7.04 | 113.83 | 108.20 |
| 26 | BB | 2626 | C | C2-N3-C4 | 7.04 | 123.42 | 119.90 |
| 26 | BB | 2838 | G | C4-C5-N7 | -7.04 | 107.99 | 110.80 |
| 58 | B7 | 1 | MET | CA-CB-CG | 7.04 | 125.26 | 113.30 |
| 1 | AA | 446 | G | C5'-C4'-O4' | 7.03 | 117.54 | 109.10 |
| 1 | AA | 713 | G | O4'-C1'-N9 | 7.03 | 113.83 | 108.20 |
| 1 | AA | 783 | C | C6-N1-C2 | -7.03 | 117.49 | 120.30 |
| 1 | AA | 803 | G | C5-N7-C8 | 7.03 | 107.82 | 104.30 |
| 1 | AA | 1008 | U | O4'-C1'-N1 | 7.03 | 113.83 | 108.20 |
| 1 | AA | 1447 | A | C8-N9-C4 | -7.03 | 102.99 | 105.80 |
| 26 | BB | 56 | A | N9-C4-C5 | -7.03 | 102.99 | 105.80 |
| 26 | BB | 295 | G | C2-N3-C4 | 7.03 | 115.42 | 111.90 |
| 26 | BB | 597 | G | C3'-C2'-C1' | -7.03 | 95.87 | 101.50 |
| 26 | BB | 1042 | G | C2-N3-C4 | 7.03 | 115.42 | 111.90 |
| 26 | BB | 1122 | G | N3-C2-N2 | -7.03 | 114.98 | 119.90 |
| 26 | BB | 1494 | A | C4'-C3'-C2' | 7.03 | 109.63 | 102.60 |
| 26 | BB | 1669 | A | C8-N9-C4 | -7.03 | 102.99 | 105.80 |
| 26 | BB | 2577 | A | N3-C4-C5 | -7.03 | 121.88 | 126.80 |
| 26 | BB | 2579 | C | N1-C2-N3 | -7.03 | 114.28 | 119.20 |
| 1 | AA | 547 | A | N3-C4-C5 | -7.03 | 121.88 | 126.80 |
| 1 | AA | 657 | U | C3'-C2'-C1' | 7.03 | 107.13 | 101.50 |
| 1 | AA | 1198 | G | N9-C1'-C2' | -7.03 | 104.27 | 112.00 |
| 26 | BB | 980 | A | O4'-C1'-N9 | 7.03 | 113.83 | 108.20 |
| 26 | BB | 1420 | A | N7-C8-N9 | 7.03 | 117.32 | 113.80 |
| 1 | AA | 529 | G | O4'-C1'-N9 | -7.03 | 102.58 | 108.20 |
| 1 | AA | 725 | G | C4-C5-N7 | -7.03 | 107.99 | 110.80 |
| 1 | AA | 1479 | C | C2-N3-C4 | 7.03 | 123.42 | 119.90 |
| 26 | BB | 998 | C | C5-C6-N1 | 7.03 | 124.52 | 121.00 |
| 26 | BB | 1022 | G | C1'-O4'-C4' | -7.03 | 104.28 | 109.90 |
| 26 | BB | 1162 | G | C4-C5-N7 | 7.03 | 113.61 | 110.80 |
| 26 | BB | 1179 | G | O4'-C1'-N9 | 7.03 | 113.83 | 108.20 |
| 26 | BB | 2136 | G | N3-C4-C5 | -7.03 | 125.08 | 128.60 |
| 26 | BB | 2514 | U | C4'-C3'-C2' | -7.03 | 95.57 | 102.60 |
| 26 | BB | 2581 | G | N3-C4-C5 | -7.03 | 125.08 | 128.60 |
| 1 | AA | 730 | G | C8-N9-C4 | -7.03 | 103.59 | 106.40 |
| 1 | AA | 993 | G | O4'-C1'-C2' | -7.03 | 98.77 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1307 | U | N1-C2-O2 | 7.03 | 127.72 | 122.80 |
| 2 | AB | 25 | C | O4'-C4'-C3' | 7.03 | 111.72 | 106.10 |
| 26 | BB | 90 | U | N3-C2-O2 | -7.03 | 117.28 | 122.20 |
| 26 | BB | 336 | C | C1'-O4'-C4' | 7.03 | 115.52 | 109.90 |
| 26 | BB | 1267 | U | C4-C5-C6 | 7.03 | 123.92 | 119.70 |
| 26 | BB | 1959 | G | C8-N9-C4 | -7.03 | 103.59 | 106.40 |
| 26 | BB | 2336 | A | N7-C8-N9 | -7.03 | 110.29 | 113.80 |
| 26 | BB | 2398 | U | O4'-C1'-N1 | 7.03 | 113.82 | 108.20 |
| 40 | BP | 72 | ASP | CB-CG-OD1 | -7.03 | 111.97 | 118.30 |
| 1 | AA | 4 | U | O4'-C1'-N1 | 7.03 | 113.82 | 108.20 |
| 1 | AA | 301 | G | C8-N9-C4 | -7.03 | 103.59 | 106.40 |
| 1 | AA | 582 | C | N3-C4-N4 | 7.03 | 122.92 | 118.00 |
| 1 | AA | 1197 | A | C6-N1-C2 | -7.03 | 114.38 | 118.60 |
| 1 | AA | 1254 | A | P-O3'-C3' | -7.03 | 111.27 | 119.70 |
| 1 | AA | 1321 | U | N1-C2-O2 | 7.03 | 127.72 | 122.80 |
| 1 | AA | 1528 | U | N1-C2-N3 | 7.03 | 119.12 | 114.90 |
| 3 | AC | 24 | A | C5-C6-N6 | 7.03 | 129.32 | 123.70 |
| 4 | AD | 72 | C | N1-C2-O2 | 7.03 | 123.12 | 118.90 |
| 6 | AF | 142 | ARG | NE-CZ-NH2 | 7.03 | 123.81 | 120.30 |
| 25 | BA | 15 | A | C1'-O4'-C4' | 7.03 | 115.52 | 109.90 |
| 26 | BB | 577 | G | N9-C4-C5 | -7.03 | 102.59 | 105.40 |
| 26 | BB | 1185 | G | C4-C5-N7 | -7.03 | 107.99 | 110.80 |
| 26 | BB | 1464 | G | N1-C2-N2 | 7.03 | 122.53 | 116.20 |
| 26 | BB | 1875 | G | C5-C6-O6 | -7.03 | 124.38 | 128.60 |
| 26 | BB | 2768 | U | N1-C2-O2 | 7.03 | 127.72 | 122.80 |
| 43 | BS | 50 | ARG | NE-CZ-NH1 | 7.03 | 123.81 | 120.30 |
| 1 | AA | 79 | G | N3-C4-C5 | -7.03 | 125.09 | 128.60 |
| 1 | AA | 283 | U | C3'-C2'-C1' | -7.03 | 95.88 | 101.50 |
| 1 | AA | 1066 | C | N1-C2-O2 | 7.03 | 123.11 | 118.90 |
| 9 | AI | 2 | ARG | NH1-CZ-NH2 | -7.03 | 111.67 | 119.40 |
| 26 | BB | 431 | U | N1-C2-N3 | 7.03 | 119.12 | 114.90 |
| 26 | BB | 832 | U | N3-C4-C5 | -7.03 | 110.39 | 114.60 |
| 26 | BB | 1201 | U | C5-C4-O4 | -7.03 | 121.68 | 125.90 |
| 26 | BB | 1369 | G | N3-C4-C5 | -7.03 | 125.09 | 128.60 |
| 26 | BB | 2272 | U | N3-C2-O2 | -7.03 | 117.28 | 122.20 |
| 1 | AA | 7 | A | C5-N7-C8 | 7.02 | 107.41 | 103.90 |
| 1 | AA | 210 | C | C4-C5-C6 | -7.02 | 113.89 | 117.40 |
| 14 | AN | 121 | ARG | NE-CZ-NH2 | -7.02 | 116.79 | 120.30 |
| 26 | BB | 390 | U | C3'-C2'-C1' | 7.02 | 107.12 | 101.50 |
| 26 | BB | 1077 | A | N1-C6-N6 | 7.02 | 122.81 | 118.60 |
| 26 | BB | 1154 | G | C1'-O4'-C4' | -7.02 | 104.28 | 109.90 |
| 26 | BB | 1641 | A | N1-C2-N3 | 7.02 | 132.81 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 43 | BS | 54 | ARG | NE-CZ-NH1 | 7.02 | 123.81 | 120.30 |
| 1 | AA | 161 | A | C5-C6-N1 | 7.02 | 121.21 | 117.70 |
| 1 | AA | 225 | C | N3-C4-C5 | 7.02 | 124.71 | 121.90 |
| 1 | AA | 767 | A | N1-C2-N3 | -7.02 | 125.79 | 129.30 |
| 1 | AA | 1026 | G | C6-C5-N7 | -7.02 | 126.19 | 130.40 |
| 4 | AD | 64 | G | O4'-C1'-N9 | 7.02 | 113.82 | 108.20 |
| 5 | AE | 212 | TYR | CB-CG-CD1 | 7.02 | 125.21 | 121.00 |
| 26 | BB | 303 | G | C5-C6-N1 | -7.02 | 107.99 | 111.50 |
| 26 | BB | 390 | U | O4'-C1'-N1 | 7.02 | 113.82 | 108.20 |
| 26 | BB | 987 | C | C6-N1-C2 | -7.02 | 117.49 | 120.30 |
| 26 | BB | 1856 | U | N1-C1'-C2' | -7.02 | 104.28 | 112.00 |
| 26 | BB | 2196 | C | C3'-C2'-C1' | 7.02 | 107.12 | 101.50 |
| 26 | BB | 2226 | C | C6-N1-C2 | -7.02 | 117.49 | 120.30 |
| 1 | AA | 538 | G | C4-C5-N7 | -7.02 | 107.99 | 110.80 |
| 1 | AA | 982 | U | C5-C6-N1 | 7.02 | 126.21 | 122.70 |
| 1 | AA | 1268 | G | N7-C8-N9 | 7.02 | 116.61 | 113.10 |
| 4 | AD | 6 | G | N9-C4-C5 | -7.02 | 102.59 | 105.40 |
| 26 | BB | 829 | A | O4'-C4'-C3' | 7.02 | 111.72 | 106.10 |
| 26 | BB | 1656 | C | O4'-C1'-N1 | 7.02 | 113.82 | 108.20 |
| 1 | AA | 743 | A | N1-C2-N3 | -7.02 | 125.79 | 129.30 |
| 1 | AA | 1160 | G | C5-N7-C8 | -7.02 | 100.79 | 104.30 |
| 26 | BB | 1099 | G | N9-C4-C5 | -7.02 | 102.59 | 105.40 |
| 26 | BB | 1194 | A | C6-C5-N7 | 7.02 | 137.21 | 132.30 |
| 26 | BB | 1665 | A | C5-C6-N6 | 7.02 | 129.31 | 123.70 |
| 26 | BB | 1790 | C | P-O3'-C3' | 7.02 | 128.12 | 119.70 |
| 26 | BB | 1994 | C | C5-C4-N4 | 7.02 | 125.11 | 120.20 |
| 26 | BB | 2227 | A | N9-C4-C5 | -7.02 | 102.99 | 105.80 |
| 26 | BB | 2399 | G | N3-C4-N9 | 7.02 | 130.21 | 126.00 |
| 28 | BD | 95 | TYR | CZ-CE2-CD2 | -7.02 | 113.48 | 119.80 |
| 48 | BX | 31 | TYR | CB-CG-CD2 | -7.02 | 116.79 | 121.00 |
| 1 | AA | 41 | G | N1-C6-O6 | -7.02 | 115.69 | 119.90 |
| 1 | AA | 206 | C | N3-C2-O2 | -7.02 | 116.99 | 121.90 |
| 1 | AA | 402 | G | N1-C6-O6 | 7.02 | 124.11 | 119.90 |
| 1 | AA | 690 | G | C6-N1-C2 | -7.02 | 120.89 | 125.10 |
| 1 | AA | 907 | A | N9-C1'-C2' | -7.02 | 104.28 | 112.00 |
| 1 | AA | 1266 | G | C3'-C2'-C1' | 7.02 | 107.11 | 101.50 |
| 26 | BB | 461 | C | N1-C2-O2 | 7.02 | 123.11 | 118.90 |
| 26 | BB | 1369 | G | C4-C5-N7 | -7.02 | 107.99 | 110.80 |
| 26 | BB | 1902 | C | N1-C2-O2 | 7.02 | 123.11 | 118.90 |
| 26 | BB | 2448 | A | C6-N1-C2 | 7.02 | 122.81 | 118.60 |
| 1 | AA | 489 | C | O4'-C1'-N1 | 7.02 | 113.81 | 108.20 |
| 1 | AA | 695 | A | C6-N1-C2 | 7.02 | 122.81 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1024 | G | N3-C2-N2 | -7.02 | 114.99 | 119.90 |
| 26 | BB | 728 | G | C6-N1-C2 | -7.02 | 120.89 | 125.10 |
| 26 | BB | 1991 | U | C4-C5-C6 | 7.02 | 123.91 | 119.70 |
| 1 | AA | 926 | G | N9-C4-C5 | -7.01 | 102.59 | 105.40 |
| 1 | AA | 1370 | G | N3-C4-N9 | 7.01 | 130.21 | 126.00 |
| 1 | AA | 1405 | G | C6-N1-C2 | -7.01 | 120.89 | 125.10 |
| 1 | AA | 1443 | C | N3-C4-N4 | -7.01 | 113.09 | 118.00 |
| 4 | AD | 69 | C | C4-C5-C6 | -7.01 | 113.89 | 117.40 |
| 26 | BB | 1555 | G | O4'-C1'-N9 | 7.01 | 113.81 | 108.20 |
| 26 | BB | 1783 | A | N1-C2-N3 | 7.01 | 132.81 | 129.30 |
| 26 | BB | 2439 | A | N7-C8-N9 | 7.01 | 117.31 | 113.80 |
| 26 | BB | 2535 | G | O4'-C1'-C2' | -7.01 | 98.79 | 105.80 |
| 26 | BB | 88 | G | C5-N7-C8 | -7.01 | 100.79 | 104.30 |
| 26 | BB | 408 | G | N7-C8-N9 | 7.01 | 116.61 | 113.10 |
| 26 | BB | 524 | G | C6-C5-N7 | -7.01 | 126.19 | 130.40 |
| 26 | BB | 778 | G | C5-C6-O6 | -7.01 | 124.39 | 128.60 |
| 26 | BB | 2288 | A | O4'-C1'-N9 | 7.01 | 113.81 | 108.20 |
| 26 | BB | 2708 | G | C6-C5-N7 | 7.01 | 134.61 | 130.40 |
| 1 | AA | 179 | A | C6-N1-C2 | 7.01 | 122.81 | 118.60 |
| 10 | AJ | 101 | ARG | NE-CZ-NH2 | -7.01 | 116.79 | 120.30 |
| 13 | AM | 31 | ARG | NE-CZ-NH1 | 7.01 | 123.81 | 120.30 |
| 26 | BB | 17 | G | C6-C5-N7 | -7.01 | 126.19 | 130.40 |
| 26 | BB | 123 | G | C8-N9-C4 | -7.01 | 103.60 | 106.40 |
| 26 | BB | 662 | G | O4'-C1'-C2' | 7.01 | 113.91 | 107.60 |
| 26 | BB | 907 | G | N3-C4-C5 | -7.01 | 125.09 | 128.60 |
| 1 | AA | 260 | G | C5-C6-N1 | 7.01 | 115.00 | 111.50 |
| 1 | AA | 383 | A | N1-C2-N3 | -7.01 | 125.80 | 129.30 |
| 1 | AA | 1097 | C | N1-C2-O2 | 7.01 | 123.11 | 118.90 |
| 1 | AA | 1398 | A | O4'-C4'-C3' | 7.01 | 111.71 | 106.10 |
| 26 | BB | 67 | U | C5-C6-N1 | 7.01 | 126.20 | 122.70 |
| 26 | BB | 157 | C | N3-C4-C5 | -7.01 | 119.10 | 121.90 |
| 26 | BB | 300 | A | N1-C2-N3 | -7.01 | 125.80 | 129.30 |
| 26 | BB | 1690 | A | N1-C2-N3 | -7.01 | 125.80 | 129.30 |
| 1 | AA | 433 | G | C2-N3-C4 | 7.01 | 115.40 | 111.90 |
| 26 | BB | 309 | A | N3-C4-C5 | -7.01 | 121.89 | 126.80 |
| 26 | BB | 407 | G | C8-N9-C4 | 7.01 | 109.20 | 106.40 |
| 26 | BB | 881 | G | C5-N7-C8 | -7.01 | 100.80 | 104.30 |
| 26 | BB | 1613 | G | N3-C4-N9 | -7.01 | 121.80 | 126.00 |
| 1 | AA | 51 | A | C2-N3-C4 | 7.01 | 114.10 | 110.60 |
| 1 | AA | 486 | U | C2-N3-C4 | -7.01 | 122.80 | 127.00 |
| 1 | AA | 511 | C | C4-C5-C6 | 7.01 | 120.90 | 117.40 |
| 1 | AA | 769 | G | N3-C4-N9 | 7.01 | 130.20 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1050 | G | C5-C6-O6 | -7.01 | 124.40 | 128.60 |
| 1 | AA | 1511 | G | C5-N7-C8 | -7.01 | 100.80 | 104.30 |
| 25 | BA | 44 | G | P-O3'-C3' | 7.01 | 128.11 | 119.70 |
| 26 | BB | 381 | G | C5'-C4'-O4' | 7.01 | 117.51 | 109.10 |
| 26 | BB | 513 | A | N1-C6-N6 | -7.01 | 114.40 | 118.60 |
| 26 | BB | 1599 | U | N3-C2-O2 | -7.01 | 117.30 | 122.20 |
| 26 | BB | 1890 | A | N3-C4-C5 | -7.01 | 121.89 | 126.80 |
| 26 | BB | 2206 | C | C4-C5-C6 | -7.01 | 113.90 | 117.40 |
| 1 | AA | 144 | G | C5-C6-N1 | 7.00 | 115.00 | 111.50 |
| 1 | AA | 162 | A | C8-N9-C4 | -7.00 | 103.00 | 105.80 |
| 1 | AA | 539 | A | C8-N9-C4 | -7.00 | 103.00 | 105.80 |
| 26 | BB | 750 | A | C4-C5-N7 | 7.00 | 114.20 | 110.70 |
| 26 | BB | 1237 | A | C4-C5-N7 | -7.00 | 107.20 | 110.70 |
| 26 | BB | 2077 | A | O4'-C1'-C2' | -7.00 | 98.80 | 105.80 |
| 26 | BB | 2097 | A | C8-N9-C4 | -7.00 | 103.00 | 105.80 |
| 26 | BB | 2550 | G | N3-C4-N9 | -7.00 | 121.80 | 126.00 |
| 26 | BB | 2761 | A | N1-C6-N6 | -7.00 | 114.40 | 118.60 |
| 4 | AD | 45 | A | N9-C4-C5 | 7.00 | 108.60 | 105.80 |
| 25 | BA | 5 | U | N3-C2-O2 | -7.00 | 117.30 | 122.20 |
| 26 | BB | 56 | A | C5-N7-C8 | -7.00 | 100.40 | 103.90 |
| 26 | BB | 2127 | G | C5-C6-N1 | 7.00 | 115.00 | 111.50 |
| 1 | AA | 231 | U | N1-C2-N3 | 7.00 | 119.10 | 114.90 |
| 1 | AA | 462 | G | C5'-C4'-O4' | 7.00 | 117.50 | 109.10 |
| 1 | AA | 693 | G | C4-C5-C6 | 7.00 | 123.00 | 118.80 |
| 1 | AA | 1202 | U | C5-C4-O4 | -7.00 | 121.70 | 125.90 |
| 4 | AD | 61 | U | C5'-C4'-O4' | 7.00 | 117.50 | 109.10 |
| 25 | BA | 100 | G | C4-C5-C6 | 7.00 | 123.00 | 118.80 |
| 26 | BB | 253 | C | C4'-C3'-C2' | -7.00 | 95.60 | 102.60 |
| 26 | BB | 1196 | C | C5-C6-N1 | 7.00 | 124.50 | 121.00 |
| 26 | BB | 1711 | A | C5-N7-C8 | 7.00 | 107.40 | 103.90 |
| 26 | BB | 1936 | A | O4'-C1'-N9 | 7.00 | 113.80 | 108.20 |
| 26 | BB | 2184 | A | C5-C6-N6 | -7.00 | 118.10 | 123.70 |
| 26 | BB | 2305 | U | N1-C2-N3 | 7.00 | 119.10 | 114.90 |
| 26 | BB | 2461 | A | C2-N3-C4 | 7.00 | 114.10 | 110.60 |
| 26 | BB | 2530 | A | C8-N9-C4 | 7.00 | 108.60 | 105.80 |
| 26 | BB | 2683 | C | C2-N3-C4 | 7.00 | 123.40 | 119.90 |
| 1 | AA | 567 | G | C5-C6-O6 | 7.00 | 132.80 | 128.60 |
| 25 | BA | 16 | G | P-O3'-C3' | 7.00 | 128.10 | 119.70 |
| 1 | AA | 765 | G | N3-C4-C5 | -7.00 | 125.10 | 128.60 |
| 1 | AA | 819 | A | N9-C4-C5 | -7.00 | 103.00 | 105.80 |
| 1 | AA | 915 | A | N3-C4-C5 | -7.00 | 121.90 | 126.80 |
| 1 | AA | 1156 | G | N1-C6-O6 | -7.00 | 115.70 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 13 | G | C6-N1-C2 | 7.00 | 129.30 | 125.10 |
| 26 | BB | 386 | G | C4-C5-N7 | -7.00 | 108.00 | 110.80 |
| 26 | BB | 1826 | G | C6-N1-C2 | -7.00 | 120.90 | 125.10 |
| 26 | BB | 2148 | G | P-O3'-C3' | 7.00 | 128.10 | 119.70 |
| 26 | BB | 2183 | A | C5-N7-C8 | 7.00 | 107.40 | 103.90 |
| 26 | BB | 2513 | A | N1-C2-N3 | 7.00 | 132.80 | 129.30 |
| 1 | AA | 1298 | U | O4'-C1'-C2' | -7.00 | 98.80 | 105.80 |
| 2 | AB | 24 | G | C4-C5-C6 | 7.00 | 123.00 | 118.80 |
| 26 | BB | 29 | U | O4'-C1'-C2' | 7.00 | 113.90 | 107.60 |
| 26 | BB | 115 | C | N3-C4-C5 | -7.00 | 119.10 | 121.90 |
| 26 | BB | 756 | A | N1-C2-N3 | 7.00 | 132.80 | 129.30 |
| 26 | BB | 1036 | G | C5-N7-C8 | -7.00 | 100.80 | 104.30 |
| 26 | BB | 1311 | G | C5-N7-C8 | -7.00 | 100.80 | 104.30 |
| 26 | BB | 2164 | C | P-O3'-C3' | 7.00 | 128.09 | 119.70 |
| 26 | BB | 2612 | C | N1-C2-N3 | 7.00 | 124.10 | 119.20 |
| 26 | BB | 2668 | G | N3-C2-N2 | 7.00 | 124.80 | 119.90 |
| 1 | AA | 420 | U | N1-C2-O2 | 7.00 | 127.70 | 122.80 |
| 1 | AA | 595 | A | C2-N3-C4 | 7.00 | 114.10 | 110.60 |
| 1 | AA | 932 | C | C2-N3-C4 | 7.00 | 123.40 | 119.90 |
| 3 | AC | 22 | G | C4-C5-N7 | -7.00 | 108.00 | 110.80 |
| 26 | BB | 1771 | C | O4'-C1'-C2' | -7.00 | 98.81 | 105.80 |
| 26 | BB | 2249 | U | C5-C6-N1 | 7.00 | 126.20 | 122.70 |
| 26 | BB | 2865 | U | C5-C4-O4 | -7.00 | 121.70 | 125.90 |
| 1 | AA | 626 | G | C6-C5-N7 | -6.99 | 126.20 | 130.40 |
| 3 | AC | 59 | A | O4'-C1'-N9 | 6.99 | 113.80 | 108.20 |
| 25 | BA | 106 | G | C2-N3-C4 | 6.99 | 115.40 | 111.90 |
| 26 | BB | 39 | G | N3-C2-N2 | -6.99 | 115.00 | 119.90 |
| 26 | BB | 210 | C | N1-C2-O2 | 6.99 | 123.10 | 118.90 |
| 26 | BB | 1545 | A | N7-C8-N9 | -6.99 | 110.30 | 113.80 |
| 26 | BB | 1720 | U | O4'-C1'-N1 | 6.99 | 113.80 | 108.20 |
| 26 | BB | 2323 | G | N9-C4-C5 | -6.99 | 102.60 | 105.40 |
| 26 | BB | 2799 | A | P-O3'-C3' | 6.99 | 128.09 | 119.70 |
| 1 | AA | 152 | A | O4'-C1'-C2' | 6.99 | 113.89 | 107.60 |
| 1 | AA | 738 | C | N1-C2-O2 | 6.99 | 123.09 | 118.90 |
| 1 | AA | 759 | A | C5-C6-N6 | -6.99 | 118.11 | 123.70 |
| 1 | AA | 888 | G | C6-N1-C2 | -6.99 | 120.91 | 125.10 |
| 26 | BB | 1602 | U | N3-C4-C5 | -6.99 | 110.41 | 114.60 |
| 26 | BB | 2669 | G | N7-C8-N9 | -6.99 | 109.60 | 113.10 |
| 3 | AC | 14 | G | N3-C4-C5 | -6.99 | 125.10 | 128.60 |
| 26 | BB | 1076 | C | C4'-C3'-C2' | -6.99 | 95.61 | 102.60 |
| 26 | BB | 1215 | G | C4-C5-C6 | 6.99 | 122.99 | 118.80 |
| 26 | BB | 1269 | A | C6-N1-C2 | 6.99 | 122.79 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1294 | U | C2-N3-C4 | -6.99 | 122.81 | 127.00 |
| 26 | BB | 1770 | G | N3-C2-N2 | 6.99 | 124.79 | 119.90 |
| 26 | BB | 2064 | C | C2-N3-C4 | 6.99 | 123.39 | 119.90 |
| 26 | BB | 2219 | U | C5-C6-N1 | -6.99 | 119.20 | 122.70 |
| 26 | BB | 2835 | A | C4-C5-C6 | -6.99 | 113.50 | 117.00 |
| 43 | BS | 46 | TYR | CG-CD1-CE1 | 6.99 | 126.89 | 121.30 |
| 1 | AA | 210 | C | N3-C4-N4 | 6.99 | 122.89 | 118.00 |
| 1 | AA | 244 | U | C4-C5-C6 | 6.99 | 123.89 | 119.70 |
| 1 | AA | 788 | U | C5'-C4'-O4' | 6.99 | 117.49 | 109.10 |
| 1 | AA | 1414 | U | P-O3'-C3' | 6.99 | 128.09 | 119.70 |
| 1 | AA | 1439 | G | N1-C2-N3 | -6.99 | 119.71 | 123.90 |
| 26 | BB | 674 | G | N7-C8-N9 | 6.99 | 116.59 | 113.10 |
| 26 | BB | 917 | A | N1-C2-N3 | -6.99 | 125.81 | 129.30 |
| 48 | BX | 21 | ARG | NE-CZ-NH1 | 6.99 | 123.79 | 120.30 |
| 1 | AA | 481 | G | O4'-C1'-N9 | -6.99 | 102.61 | 108.20 |
| 25 | BA | 74 | U | C3'-C2'-C1' | 6.99 | 107.09 | 101.50 |
| 26 | BB | 1598 | A | O4'-C1'-N9 | 6.99 | 113.79 | 108.20 |
| 26 | BB | 2236 | U | N1-C2-N3 | 6.99 | 119.09 | 114.90 |
| 26 | BB | 2729 | G | C5-C6-O6 | 6.99 | 132.79 | 128.60 |
| 26 | BB | 2880 | C | C4-C5-C6 | 6.99 | 120.89 | 117.40 |
| 1 | AA | 1345 | U | C4-C5-C6 | 6.99 | 123.89 | 119.70 |
| 25 | BA | 16 | G | C4'-C3'-C2' | -6.99 | 95.61 | 102.60 |
| 26 | BB | 243 | U | N1-C2-N3 | -6.99 | 110.71 | 114.90 |
| 26 | BB | 440 | C | N1-C2-O2 | 6.99 | 123.09 | 118.90 |
| 26 | BB | 659 | G | N3-C2-N2 | 6.99 | 124.79 | 119.90 |
| 26 | BB | 1208 | C | C6-N1-C2 | -6.99 | 117.51 | 120.30 |
| 26 | BB | 1619 | G | N9-C4-C5 | 6.99 | 108.19 | 105.40 |
| 26 | BB | 1802 | A | P-O3'-C3' | 6.99 | 128.08 | 119.70 |
| 26 | BB | 1957 | C | O4'-C1'-N1 | 6.99 | 113.79 | 108.20 |
| 1 | AA | 1094 | G | C4-C5-N7 | -6.98 | 108.01 | 110.80 |
| 26 | BB | 979 | A | N9-C4-C5 | 6.98 | 108.59 | 105.80 |
| 26 | BB | 1658 | C | N3-C4-C5 | -6.98 | 119.11 | 121.90 |
| 26 | BB | 2361 | G | C6-N1-C2 | 6.98 | 129.29 | 125.10 |
| 1 | AA | 564 | C | N1-C1'-C2' | -6.98 | 104.32 | 112.00 |
| 1 | AA | 640 | A | C1'-O4'-C4' | -6.98 | 104.31 | 109.90 |
| 1 | AA | 694 | A | C3'-C2'-C1' | 6.98 | 107.09 | 101.50 |
| 1 | AA | 943 | U | C5'-C4'-C3' | -6.98 | 104.83 | 116.00 |
| 1 | AA | 1528 | U | C2-N3-C4 | -6.98 | 122.81 | 127.00 |
| 26 | BB | 863 | A | N3-C4-C5 | -6.98 | 121.91 | 126.80 |
| 26 | BB | 1246 | A | O4'-C1'-N9 | 6.98 | 113.78 | 108.20 |
| 26 | BB | 1803 | A | N3-C4-C5 | -6.98 | 121.91 | 126.80 |
| 1 | AA | 117 | G | N9-C4-C5 | 6.98 | 108.19 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 205 | A | N1-C6-N6 | 6.98 | 122.79 | 118.60 |
| 1 | AA | 277 | C | C4'-C3'-C2' | -6.98 | 95.62 | 102.60 |
| 1 | AA | 957 | U | C3'-C2'-C1' | 6.98 | 107.08 | 101.50 |
| 1 | AA | 1132 | C | C6-N1-C2 | -6.98 | 117.51 | 120.30 |
| 26 | BB | 597 | G | C4-C5-C6 | 6.98 | 122.99 | 118.80 |
| 26 | BB | 820 | A | N3-C4-N9 | -6.98 | 121.82 | 127.40 |
| 26 | BB | 932 | U | C2-N1-C1' | 6.98 | 126.08 | 117.70 |
| 26 | BB | 986 | C | C5-C4-N4 | -6.98 | 115.31 | 120.20 |
| 26 | BB | 1253 | A | O4'-C1'-N9 | 6.98 | 113.78 | 108.20 |
| 26 | BB | 1263 | U | C5'-C4'-O4' | 6.98 | 117.48 | 109.10 |
| 26 | BB | 1926 | U | N1-C2-O2 | -6.98 | 117.91 | 122.80 |
| 26 | BB | 2258 | C | C6-N1-C2 | 6.98 | 123.09 | 120.30 |
| 26 | BB | 2702 | G | C8-N9-C4 | 6.98 | 109.19 | 106.40 |
| 1 | AA | 523 | A | N9-C4-C5 | 6.98 | 108.59 | 105.80 |
| 1 | AA | 1386 | G | N9-C4-C5 | 6.98 | 108.19 | 105.40 |
| 26 | BB | 467 | G | C4-C5-C6 | 6.98 | 122.99 | 118.80 |
| 26 | BB | 2431 | U | N3-C4-C5 | -6.98 | 110.41 | 114.60 |
| 30 | BF | 96 | VAL | CG1-CB-CG2 | -6.98 | 99.73 | 110.90 |
| 22 | AV | 85 | ASP | CB-CG-OD1 | -6.98 | 112.02 | 118.30 |
| 26 | BB | 60 | G | N1-C2-N3 | -6.98 | 119.71 | 123.90 |
| 26 | BB | 777 | G | N1-C6-O6 | 6.98 | 124.09 | 119.90 |
| 26 | BB | 1166 | G | N3-C4-N9 | -6.98 | 121.81 | 126.00 |
| 26 | BB | 1378 | A | C5-C6-N6 | 6.98 | 129.28 | 123.70 |
| 26 | BB | 1476 | U | C4-C5-C6 | 6.98 | 123.89 | 119.70 |
| 26 | BB | 2015 | A | N1-C6-N6 | -6.98 | 114.41 | 118.60 |
| 26 | BB | 2252 | G | N1-C2-N3 | -6.98 | 119.71 | 123.90 |
| 26 | BB | 2615 | U | N3-C4-O4 | -6.98 | 114.52 | 119.40 |
| 45 | BU | 88 | ARG | NE-CZ-NH1 | -6.98 | 116.81 | 120.30 |
| 26 | BB | 1089 | A | C5-C6-N1 | 6.98 | 121.19 | 117.70 |
| 26 | BB | 1599 | U | N1-C2-N3 | 6.98 | 119.08 | 114.90 |
| 26 | BB | 2534 | A | O4'-C1'-N9 | 6.98 | 113.78 | 108.20 |
| 1 | AA | 49 | U | C3'-C2'-C1' | 6.97 | 107.08 | 101.50 |
| 1 | AA | 656 | G | N9-C4-C5 | 6.97 | 108.19 | 105.40 |
| 2 | AB | 73 | G | N3-C2-N2 | 6.97 | 124.78 | 119.90 |
| 26 | BB | 178 | G | N3-C4-N9 | 6.97 | 130.19 | 126.00 |
| 26 | BB | 180 | G | C5-C6-N1 | 6.97 | 114.99 | 111.50 |
| 26 | BB | 806 | C | N3-C2-O2 | -6.97 | 117.02 | 121.90 |
| 26 | BB | 1425 | G | C2-N3-C4 | -6.97 | 108.41 | 111.90 |
| 26 | BB | 1454 | C | C4'-C3'-C2' | -6.97 | 95.63 | 102.60 |
| 26 | BB | 1491 | G | N3-C4-C5 | -6.97 | 125.11 | 128.60 |
| 26 | BB | 1774 | C | N3-C4-N4 | 6.97 | 122.88 | 118.00 |
| 26 | BB | 1823 | G | N1-C6-O6 | 6.97 | 124.08 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 32 | BH | 148 | ARG | NE-CZ-NH1 | 6.97 | 123.79 | 120.30 |
| 1 | AA | 76 | G | C3'-C2'-C1' | 6.97 | 107.08 | 101.50 |
| 1 | AA | 854 | U | C2-N3-C4 | -6.97 | 122.82 | 127.00 |
| 1 | AA | 1413 | A | N1-C2-N3 | 6.97 | 132.79 | 129.30 |
| 2 | AB | 41 | C | O4'-C1'-N1 | 6.97 | 113.78 | 108.20 |
| 26 | BB | 340 | A | N1-C2-N3 | -6.97 | 125.81 | 129.30 |
| 26 | BB | 637 | A | P-O3'-C3' | 6.97 | 128.07 | 119.70 |
| 26 | BB | 1269 | A | N1-C6-N6 | 6.97 | 122.78 | 118.60 |
| 26 | BB | 1828 | G | C8-N9-C4 | 6.97 | 109.19 | 106.40 |
| 26 | BB | 1960 | A | N9-C4-C5 | 6.97 | 108.59 | 105.80 |
| 26 | BB | 2834 | G | C8-N9-C4 | -6.97 | 103.61 | 106.40 |
| 3 | AC | 44 | U | N1-C2-N3 | 6.97 | 119.08 | 114.90 |
| 26 | BB | 285 | G | C5-N7-C8 | -6.97 | 100.81 | 104.30 |
| 26 | BB | 651 | G | C4-C5-C6 | -6.97 | 114.62 | 118.80 |
| 26 | BB | 1131 | G | N1-C6-O6 | 6.97 | 124.08 | 119.90 |
| 49 | BY | 40 | ARG | NH1-CZ-NH2 | -6.97 | 111.73 | 119.40 |
| 1 | AA | 88 | U | N3-C2-O2 | -6.97 | 117.32 | 122.20 |
| 1 | AA | 345 | C | N1-C2-O2 | 6.97 | 123.08 | 118.90 |
| 1 | AA | 910 | C | N3-C2-O2 | -6.97 | 117.02 | 121.90 |
| 1 | AA | 1381 | U | O3'-P-O5' | -6.97 | 90.76 | 104.00 |
| 1 | AA | 1511 | G | C1'-O4'-C4' | 6.97 | 115.48 | 109.90 |
| 26 | BB | 13 | A | N9-C4-C5 | 6.97 | 108.59 | 105.80 |
| 26 | BB | 167 | A | C4-C5-C6 | 6.97 | 120.48 | 117.00 |
| 26 | BB | 887 | U | C3'-C2'-C1' | 6.97 | 107.08 | 101.50 |
| 26 | BB | 957 | C | C4-C5-C6 | 6.97 | 120.89 | 117.40 |
| 26 | BB | 1347 | A | C4-C5-N7 | 6.97 | 114.19 | 110.70 |
| 26 | BB | 1536 | C | N3-C4-C5 | -6.97 | 119.11 | 121.90 |
| 26 | BB | 1918 | A | N9-C4-C5 | 6.97 | 108.59 | 105.80 |
| 26 | BB | 2120 | G | C8-N9-C4 | -6.97 | 103.61 | 106.40 |
| 25 | BA | 76 | G | N7-C8-N9 | 6.97 | 116.58 | 113.10 |
| 26 | BB | 218 | A | C5'-C4'-O4' | 6.97 | 117.46 | 109.10 |
| 26 | BB | 407 | G | N1-C6-O6 | -6.97 | 115.72 | 119.90 |
| 26 | BB | 1753 | G | O4'-C4'-C3' | 6.97 | 111.67 | 106.10 |
| 26 | BB | 2321 | U | C4-C5-C6 | 6.97 | 123.88 | 119.70 |
| 1 | AA | 291 | U | C5-C6-N1 | -6.97 | 119.22 | 122.70 |
| 1 | AA | 643 | C | C5'-C4'-O4' | 6.97 | 117.46 | 109.10 |
| 1 | AA | 1273 | C | C6-N1-C2 | 6.97 | 123.09 | 120.30 |
| 25 | BA | 16 | G | C5-N7-C8 | 6.97 | 107.78 | 104.30 |
| 26 | BB | 18 | U | N3-C4-C5 | -6.97 | 110.42 | 114.60 |
| 26 | BB | 152 | A | N9-C4-C5 | -6.97 | 103.01 | 105.80 |
| 26 | BB | 467 | G | N7-C8-N9 | -6.97 | 109.62 | 113.10 |
| 26 | BB | 531 | C | C5-C4-N4 | -6.97 | 115.32 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 564 | C | N1-C1'-C2' | -6.97 | 104.34 | 112.00 |
| 26 | BB | 914 | G | O4'-C1'-N9 | 6.97 | 113.77 | 108.20 |
| 26 | BB | 2276 | G | C5-C6-O6 | -6.97 | 124.42 | 128.60 |
| 1 | AA | 517 | G | C8-N9-C1' | 6.96 | 136.05 | 127.00 |
| 1 | AA | 1168 | U | C5'-C4'-O4' | 6.96 | 117.46 | 109.10 |
| 26 | BB | 870 | U | N3-C4-C5 | 6.96 | 118.78 | 114.60 |
| 26 | BB | 1784 | A | C5-C6-N1 | 6.96 | 121.18 | 117.70 |
| 26 | BB | 2091 | C | C5-C6-N1 | -6.96 | 117.52 | 121.00 |
| 26 | BB | 2374 | C | N3-C4-C5 | -6.96 | 119.11 | 121.90 |
| 26 | BB | 2675 | A | C3'-C2'-C1' | -6.96 | 95.93 | 101.50 |
| 1 | AA | 189 | A | C3'-C2'-C1' | 6.96 | 107.07 | 101.50 |
| 1 | AA | 449 | G | C5-C6-O6 | -6.96 | 124.42 | 128.60 |
| 1 | AA | 1108 | G | N9-C4-C5 | 6.96 | 108.19 | 105.40 |
| 26 | BB | 347 | A | O4'-C4'-C3' | -6.96 | 97.04 | 104.00 |
| 26 | BB | 1998 | A | C8-N9-C4 | -6.96 | 103.02 | 105.80 |
| 1 | AA | 298 | A | O4'-C1'-N9 | 6.96 | 113.77 | 108.20 |
| 1 | AA | 1371 | G | C6-C5-N7 | -6.96 | 126.22 | 130.40 |
| 1 | AA | 1541 | U | C4'-C3'-C2' | 6.96 | 109.56 | 102.60 |
| 2 | AB | 27 | C | N3-C2-O2 | -6.96 | 117.03 | 121.90 |
| 26 | BB | 286 | U | C2-N3-C4 | -6.96 | 122.82 | 127.00 |
| 26 | BB | 324 | A | O4'-C1'-N9 | 6.96 | 113.77 | 108.20 |
| 26 | BB | 1796 | U | O4'-C4'-C3' | 6.96 | 111.67 | 106.10 |
| 26 | BB | 2212 | A | N7-C8-N9 | -6.96 | 110.32 | 113.80 |
| 26 | BB | 2606 | C | N1-C1'-C2' | -6.96 | 104.34 | 112.00 |
| 26 | BB | 2832 | U | C1'-O4'-C4' | 6.96 | 115.47 | 109.90 |
| 26 | BB | 183 | C | C5-C6-N1 | 6.96 | 124.48 | 121.00 |
| 26 | BB | 493 | G | C8-N9-C4 | -6.96 | 103.62 | 106.40 |
| 1 | AA | 165 | G | C2-N3-C4 | 6.96 | 115.38 | 111.90 |
| 1 | AA | 309 | A | C4'-C3'-C2' | -6.96 | 95.64 | 102.60 |
| 1 | AA | 538 | G | C5-N7-C8 | 6.96 | 107.78 | 104.30 |
| 1 | AA | 848 | C | C6-N1-C2 | -6.96 | 117.52 | 120.30 |
| 1 | AA | 944 | G | C2'-C3'-O3' | 6.96 | 124.83 | 113.70 |
| 1 | AA | 1132 | C | N3-C4-C5 | 6.96 | 124.68 | 121.90 |
| 1 | AA | 1504 | G | C5-N7-C8 | 6.96 | 107.78 | 104.30 |
| 2 | AB | 69 | C | O4'-C1'-N1 | 6.96 | 113.77 | 108.20 |
| 26 | BB | 45 | G | N1-C2-N2 | -6.96 | 109.94 | 116.20 |
| 26 | BB | 55 | G | C5'-C4'-O4' | 6.96 | 117.45 | 109.10 |
| 26 | BB | 991 | C | N3-C2-O2 | -6.96 | 117.03 | 121.90 |
| 26 | BB | 1226 | A | C8-N9-C4 | -6.96 | 103.02 | 105.80 |
| 26 | BB | 1899 | A | N1-C6-N6 | -6.96 | 114.42 | 118.60 |
| 1 | AA | 511 | C | N1-C1'-C2' | 6.96 | 123.04 | 114.00 |
| 1 | AA | 601 | G | P-O3'-C3' | 6.96 | 128.05 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 882 | C | O4'-C1'-N1 | 6.96 | 113.77 | 108.20 |
| 1 | AA | 971 | G | C4'-C3'-C2' | -6.96 | 95.64 | 102.60 |
| 1 | AA | 993 | G | N3-C4-N9 | 6.96 | 130.17 | 126.00 |
| 1 | AA | 1114 | C | N3-C4-N4 | 6.96 | 122.87 | 118.00 |
| 25 | BA | 120 | U | N1-C1'-C2' | -6.96 | 104.35 | 112.00 |
| 26 | BB | 367 | G | C5'-C4'-O4' | 6.96 | 117.45 | 109.10 |
| 26 | BB | 384 | A | C5-C6-N1 | 6.96 | 121.18 | 117.70 |
| 26 | BB | 1614 | A | C4'-C3'-C2' | 6.96 | 109.56 | 102.60 |
| 26 | BB | 1737 | G | N3-C4-C5 | -6.96 | 125.12 | 128.60 |
| 26 | BB | 1816 | C | P-O3'-C3' | 6.96 | 128.05 | 119.70 |
| 26 | BB | 1986 | C | C5'-C4'-O4' | 6.96 | 117.45 | 109.10 |
| 1 | AA | 613 | C | N1-C1'-C2' | -6.96 | 104.35 | 112.00 |
| 1 | AA | 622 | A | C4-C5-N7 | -6.96 | 107.22 | 110.70 |
| 25 | BA | 7 | G | C5-C6-O6 | -6.96 | 124.43 | 128.60 |
| 26 | BB | 161 | A | C4-C5-N7 | -6.96 | 107.22 | 110.70 |
| 26 | BB | 650 | C | C5-C4-N4 | -6.96 | 115.33 | 120.20 |
| 26 | BB | 1672 | A | C6-N1-C2 | -6.96 | 114.43 | 118.60 |
| 26 | BB | 1892 | C | N3-C4-C5 | -6.96 | 119.12 | 121.90 |
| 26 | BB | 2120 | G | O4'-C1'-N9 | -6.96 | 102.64 | 108.20 |
| 26 | BB | 2886 | A | C8-N9-C4 | -6.96 | 103.02 | 105.80 |
| 29 | BE | 13 | ARG | NE-CZ-NH1 | -6.96 | 116.82 | 120.30 |
| 1 | AA | 760 | G | C4-C5-N7 | -6.95 | 108.02 | 110.80 |
| 1 | AA | 768 | A | C3'-C2'-C1' | -6.95 | 95.94 | 101.50 |
| 1 | AA | 1006 | G | C5'-C4'-O4' | 6.95 | 117.44 | 109.10 |
| 1 | AA | 1067 | A | C6-C5-N7 | 6.95 | 137.17 | 132.30 |
| 1 | AA | 1288 | A | C3'-C2'-C1' | -6.95 | 95.94 | 101.50 |
| 25 | BA | 99 | A | N3-C4-C5 | -6.95 | 121.93 | 126.80 |
| 26 | BB | 667 | U | C2-N3-C4 | -6.95 | 122.83 | 127.00 |
| 26 | BB | 1366 | A | C2-N3-C4 | 6.95 | 114.08 | 110.60 |
| 26 | BB | 1675 | C | N3-C4-C5 | 6.95 | 124.68 | 121.90 |
| 26 | BB | 1837 | C | C4-C5-C6 | -6.95 | 113.92 | 117.40 |
| 26 | BB | 2508 | G | C6-C5-N7 | -6.95 | 126.23 | 130.40 |
| 33 | BI | 55 | GLU | OE1-CD-OE2 | 6.95 | 131.64 | 123.30 |
| 1 | AA | 531 | U | C5-C4-O4 | 6.95 | 130.07 | 125.90 |
| 13 | AM | 9 | ARG | CD-NE-CZ | 6.95 | 133.33 | 123.60 |
| 26 | BB | 1688 | U | N3-C4-O4 | 6.95 | 124.27 | 119.40 |
| 26 | BB | 2134 | A | C4-C5-N7 | 6.95 | 114.18 | 110.70 |
| 1 | AA | 1381 | U | C4'-C3'-C2' | -6.95 | 95.65 | 102.60 |
| 1 | AA | 1438 | G | N1-C2-N2 | 6.95 | 122.45 | 116.20 |
| 26 | BB | 371 | A | C5-C6-N6 | 6.95 | 129.26 | 123.70 |
| 26 | BB | 422 | A | N7-C8-N9 | 6.95 | 117.28 | 113.80 |
| 26 | BB | 463 | G | O4'-C1'-N9 | 6.95 | 113.76 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 794 | A | C5'-C4'-O4' | 6.95 | 117.44 | 109.10 |
| 26 | BB | 1151 | A | N9-C4-C5 | 6.95 | 108.58 | 105.80 |
| 26 | BB | 1403 | A | C5'-C4'-O4' | 6.95 | 117.44 | 109.10 |
| 26 | BB | 1950 | G | C5-N7-C8 | 6.95 | 107.78 | 104.30 |
| 26 | BB | 2731 | G | C3'-C2'-C1' | 6.95 | 107.06 | 101.50 |
| 26 | BB | 2839 | G | C5'-C4'-O4' | 6.95 | 117.44 | 109.10 |
| 1 | AA | 828 | U | C5-C6-N1 | 6.95 | 126.17 | 122.70 |
| 1 | AA | 830 | G | N9-C4-C5 | 6.95 | 108.18 | 105.40 |
| 1 | AA | 1231 | G | C4'-C3'-C2' | -6.95 | 95.65 | 102.60 |
| 13 | AM | 65 | TYR | CG-CD2-CE2 | -6.95 | 115.74 | 121.30 |
| 26 | BB | 735 | A | C4-C5-C6 | -6.95 | 113.53 | 117.00 |
| 26 | BB | 748 | G | C5-N7-C8 | 6.95 | 107.78 | 104.30 |
| 26 | BB | 1000 | A | C4'-C3'-C2' | -6.95 | 95.65 | 102.60 |
| 26 | BB | 1075 | C | C2-N1-C1' | -6.95 | 111.16 | 118.80 |
| 26 | BB | 1193 | G | C5-C6-O6 | -6.95 | 124.43 | 128.60 |
| 26 | BB | 1853 | A | C4-C5-N7 | -6.95 | 107.23 | 110.70 |
| 26 | BB | 2075 | U | C1'-O4'-C4' | -6.95 | 104.34 | 109.90 |
| 26 | BB | 2608 | G | C5-N7-C8 | 6.95 | 107.78 | 104.30 |
| 1 | AA | 804 | U | O4'-C1'-C2' | -6.95 | 98.85 | 105.80 |
| 3 | AC | 40 | G | C6-N1-C2 | -6.95 | 120.93 | 125.10 |
| 25 | BA | 62 | C | C3'-C2'-C1' | 6.95 | 107.06 | 101.50 |
| 26 | BB | 84 | A | C3'-C2'-C1' | -6.95 | 95.94 | 101.50 |
| 26 | BB | 780 | G | C4-C5-C6 | -6.95 | 114.63 | 118.80 |
| 26 | BB | 1167 | C | C5-C6-N1 | 6.95 | 124.47 | 121.00 |
| 26 | BB | 1191 | G | C5'-C4'-O4' | 6.95 | 117.44 | 109.10 |
| 26 | BB | 2830 | C | C5-C4-N4 | 6.95 | 125.06 | 120.20 |
| 1 | AA | 1084 | G | C5-C6-N1 | 6.95 | 114.97 | 111.50 |
| 1 | AA | 1196 | A | C5-C6-N6 | -6.95 | 118.14 | 123.70 |
| 1 | AA | 1424 | U | C2-N3-C4 | -6.95 | 122.83 | 127.00 |
| 26 | BB | 547 | A | C3'-C2'-C1' | -6.95 | 95.94 | 101.50 |
| 26 | BB | 1063 | G | C6-C5-N7 | -6.95 | 126.23 | 130.40 |
| 26 | BB | 1074 | G | N1-C2-N3 | 6.95 | 128.07 | 123.90 |
| 26 | BB | 2577 | A | C4-C5-C6 | 6.95 | 120.47 | 117.00 |
| 26 | BB | 2692 | G | N3-C4-C5 | -6.95 | 125.13 | 128.60 |
| 26 | BB | 2776 | A | C6-N1-C2 | 6.95 | 122.77 | 118.60 |
| 1 | AA | 1361 | G | C5-N7-C8 | -6.94 | 100.83 | 104.30 |
| 26 | BB | 23 | G | N1-C6-O6 | -6.94 | 115.73 | 119.90 |
| 1 | AA | 13 | U | N3-C4-O4 | 6.94 | 124.26 | 119.40 |
| 1 | AA | 980 | C | C4-C5-C6 | -6.94 | 113.93 | 117.40 |
| 26 | BB | 1749 | A | C5'-C4'-C3' | -6.94 | 104.89 | 116.00 |
| 26 | BB | 1975 | G | N3-C4-C5 | -6.94 | 125.13 | 128.60 |
| 26 | BB | 2226 | C | P-O3'-C3' | 6.94 | 128.03 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2261 | C | O4'-C1'-N1 | 6.94 | 113.75 | 108.20 |
| 1 | AA | 1130 | A | N9-C4-C5 | 6.94 | 108.58 | 105.80 |
| 1 | AA | 1238 | A | N3-C4-C5 | -6.94 | 121.94 | 126.80 |
| 26 | BB | 227 | A | C2-N3-C4 | 6.94 | 114.07 | 110.60 |
| 26 | BB | 273 | G | C4-C5-N7 | -6.94 | 108.02 | 110.80 |
| 26 | BB | 394 | C | N3-C4-C5 | -6.94 | 119.12 | 121.90 |
| 26 | BB | 1213 | A | C6-N1-C2 | -6.94 | 114.44 | 118.60 |
| 26 | BB | 1573 | G | C8-N9-C4 | 6.94 | 109.18 | 106.40 |
| 26 | BB | 1713 | A | C1'-O4'-C4' | -6.94 | 104.35 | 109.90 |
| 26 | BB | 1754 | A | C4'-C3'-C2' | 6.94 | 109.54 | 102.60 |
| 26 | BB | 2104 | C | N3-C2-O2 | -6.94 | 117.04 | 121.90 |
| 26 | BB | 2223 | G | P-O3'-C3' | 6.94 | 128.03 | 119.70 |
| 26 | BB | 2446 | G | P-O3'-C3' | 6.94 | 128.03 | 119.70 |
| 26 | BB | 2641 | G | N9-C1'-C2' | -6.94 | 104.36 | 112.00 |
| 26 | BB | 2660 | A | C8-N9-C4 | 6.94 | 108.58 | 105.80 |
| 26 | BB | 2736 | A | O4'-C1'-N9 | 6.94 | 113.75 | 108.20 |
| 1 | AA | 1268 | G | C1'-O4'-C4' | 6.94 | 115.45 | 109.90 |
| 3 | AC | 13 | A | C6-C5-N7 | 6.94 | 137.16 | 132.30 |
| 26 | BB | 2137 | U | O4'-C1'-N1 | 6.94 | 113.75 | 108.20 |
| 1 | AA | 199 | A | C5-N7-C8 | 6.94 | 107.37 | 103.90 |
| 1 | AA | 633 | G | C5-C6-N1 | -6.94 | 108.03 | 111.50 |
| 1 | AA | 783 | C | N3-C2-O2 | -6.94 | 117.04 | 121.90 |
| 1 | AA | 1069 | C | O4'-C1'-N1 | 6.94 | 113.75 | 108.20 |
| 1 | AA | 1263 | C | N1-C2-O2 | 6.94 | 123.06 | 118.90 |
| 1 | AA | 1431 | A | C4-C5-N7 | -6.94 | 107.23 | 110.70 |
| 26 | BB | 556 | A | N1-C2-N3 | -6.94 | 125.83 | 129.30 |
| 29 | BE | 143 | PRO | N-CA-CB | 6.94 | 111.62 | 103.30 |
| 1 | AA | 1442 | G | C4-C5-N7 | 6.94 | 113.58 | 110.80 |
| 28 | BD | 100 | ARG | NE-CZ-NH2 | -6.94 | 116.83 | 120.30 |
| 1 | AA | 824 | G | C2-N3-C4 | 6.93 | 115.37 | 111.90 |
| 1 | AA | 1239 | A | C6-C5-N7 | 6.93 | 137.15 | 132.30 |
| 26 | BB | 393 | C | N3-C2-O2 | -6.93 | 117.05 | 121.90 |
| 26 | BB | 758 | C | C5-C6-N1 | -6.93 | 117.53 | 121.00 |
| 26 | BB | 1809 | A | N1-C2-N3 | 6.93 | 132.77 | 129.30 |
| 26 | BB | 1935 | G | N3-C4-N9 | 6.93 | 130.16 | 126.00 |
| 26 | BB | 2379 | G | N1-C2-N3 | -6.93 | 119.74 | 123.90 |
| 58 | B7 | 36 | ARG | NE-CZ-NH1 | 6.93 | 123.77 | 120.30 |
| 1 | AA | 829 | G | C4'-C3'-C2' | -6.93 | 95.67 | 102.60 |
| 1 | AA | 1090 | U | C5-C4-O4 | -6.93 | 121.74 | 125.90 |
| 1 | AA | 1176 | A | C1'-O4'-C4' | 6.93 | 115.45 | 109.90 |
| 26 | BB | 327 | G | N7-C8-N9 | -6.93 | 109.63 | 113.10 |
| 26 | BB | 1180 | U | N3-C2-O2 | -6.93 | 117.35 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1299 | G | C1'-O4'-C4' | 6.93 | 115.45 | 109.90 |
| 26 | BB | 2098 | U | O4'-C1'-N1 | 6.93 | 113.75 | 108.20 |
| 26 | BB | 2209 | G | C2-N3-C4 | -6.93 | 108.43 | 111.90 |
| 1 | AA | 768 | A | C5-N7-C8 | -6.93 | 100.43 | 103.90 |
| 1 | AA | 1432 | G | O4'-C1'-N9 | 6.93 | 113.75 | 108.20 |
| 1 | AA | 1538 | C | C4-C5-C6 | 6.93 | 120.87 | 117.40 |
| 26 | BB | 1005 | C | N3-C4-C5 | -6.93 | 119.13 | 121.90 |
| 26 | BB | 1637 | A | N3-C4-C5 | -6.93 | 121.95 | 126.80 |
| 26 | BB | 2485 | G | C5-C6-N1 | 6.93 | 114.97 | 111.50 |
| 28 | BD | 82 | TYR | CG-CD1-CE1 | -6.93 | 115.75 | 121.30 |
| 1 | AA | 832 | G | C5-C6-N1 | -6.93 | 108.03 | 111.50 |
| 1 | AA | 1214 | C | C5-C4-N4 | -6.93 | 115.35 | 120.20 |
| 1 | AA | 1520 | C | O4'-C1'-C2' | -6.93 | 98.87 | 105.80 |
| 26 | BB | 17 | G | O4'-C1'-N9 | 6.93 | 113.74 | 108.20 |
| 26 | BB | 1935 | G | N3-C2-N2 | -6.93 | 115.05 | 119.90 |
| 26 | BB | 2146 | C | C4-C5-C6 | 6.93 | 120.86 | 117.40 |
| 39 | BO | 51 | ARG | NE-CZ-NH1 | -6.93 | 116.83 | 120.30 |
| 1 | AA | 1130 | A | C5-C6-N6 | -6.93 | 118.16 | 123.70 |
| 26 | BB | 119 | A | C5'-C4'-C3' | -6.93 | 104.92 | 116.00 |
| 26 | BB | 572 | A | C5-C6-N1 | -6.93 | 114.24 | 117.70 |
| 26 | BB | 1519 | G | C5-N7-C8 | 6.93 | 107.76 | 104.30 |
| 1 | AA | 721 | G | C5-C6-N1 | 6.93 | 114.96 | 111.50 |
| 1 | AA | 933 | G | N3-C4-C5 | -6.93 | 125.14 | 128.60 |
| 25 | BA | 97 | C | O4'-C1'-C2' | -6.93 | 98.87 | 105.80 |
| 26 | BB | 505 | A | C6-N1-C2 | 6.93 | 122.76 | 118.60 |
| 26 | BB | 986 | C | O4'-C1'-N1 | 6.93 | 113.74 | 108.20 |
| 26 | BB | 1953 | A | C5-C6-N6 | -6.93 | 118.16 | 123.70 |
| 26 | BB | 2089 | C | C3'-C2'-C1' | -6.93 | 95.96 | 101.50 |
| 26 | BB | 2471 | A | C4-C5-C6 | -6.93 | 113.54 | 117.00 |
| 26 | BB | 2713 | U | N3-C2-O2 | -6.93 | 117.35 | 122.20 |
| 28 | BD | 97 | ASP | CB-CG-OD2 | -6.93 | 112.07 | 118.30 |
| 1 | AA | 116 | A | N3-C4-C5 | -6.92 | 121.95 | 126.80 |
| 1 | AA | 267 | C | C6-N1-C2 | 6.92 | 123.07 | 120.30 |
| 1 | AA | 528 | C | C6-N1-C2 | -6.92 | 117.53 | 120.30 |
| 1 | AA | 999 | C | C2-N3-C4 | -6.92 | 116.44 | 119.90 |
| 1 | AA | 1194 | U | C5-C6-N1 | 6.92 | 126.16 | 122.70 |
| 1 | AA | 1413 | A | C5-C6-N6 | -6.92 | 118.16 | 123.70 |
| 1 | AA | 1468 | A | N9-C4-C5 | 6.92 | 108.57 | 105.80 |
| 2 | AB | 34 | C | N3-C4-C5 | -6.92 | 119.13 | 121.90 |
| 4 | AD | 43 | G | C5-C6-O6 | -6.92 | 124.44 | 128.60 |
| 26 | BB | 211 | C | N3-C4-N4 | 6.92 | 122.85 | 118.00 |
| 26 | BB | 260 | G | O4'-C1'-N9 | 6.92 | 113.74 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 829 | A | N1-C6-N6 | -6.92 | 114.44 | 118.60 |
| 26 | BB | 956 | G | C5-C6-O6 | 6.92 | 132.75 | 128.60 |
| 26 | BB | 2623 | G | N3-C2-N2 | -6.92 | 115.05 | 119.90 |
| 26 | BB | 2625 | G | C4-C5-N7 | -6.92 | 108.03 | 110.80 |
| 1 | AA | 459 | A | N1-C2-N3 | -6.92 | 125.84 | 129.30 |
| 25 | BA | 117 | G | N3-C4-C5 | -6.92 | 125.14 | 128.60 |
| 26 | BB | 417 | C | N3-C4-C5 | -6.92 | 119.13 | 121.90 |
| 26 | BB | 2788 | C | N1-C2-O2 | 6.92 | 123.05 | 118.90 |
| 1 | AA | 478 | A | C5-C6-N1 | 6.92 | 121.16 | 117.70 |
| 4 | AD | 65 | G | C8-N9-C4 | -6.92 | 103.63 | 106.40 |
| 26 | BB | 628 | G | N9-C4-C5 | 6.92 | 108.17 | 105.40 |
| 26 | BB | 1128 | G | O4'-C1'-N9 | 6.92 | 113.74 | 108.20 |
| 26 | BB | 1152 | C | N1-C2-N3 | 6.92 | 124.05 | 119.20 |
| 26 | BB | 2670 | A | O4'-C1'-N9 | 6.92 | 113.74 | 108.20 |
| 26 | BB | 533 | G | N1-C6-O6 | -6.92 | 115.75 | 119.90 |
| 26 | BB | 606 | U | N3-C2-O2 | -6.92 | 117.36 | 122.20 |
| 1 | AA | 237 | G | C6-N1-C2 | -6.92 | 120.95 | 125.10 |
| 1 | AA | 657 | U | O4'-C4'-C3' | 6.92 | 111.63 | 106.10 |
| 26 | BB | 327 | G | C5-C6-N1 | 6.92 | 114.96 | 111.50 |
| 26 | BB | 440 | C | N3-C4-C5 | 6.92 | 124.67 | 121.90 |
| 26 | BB | 1785 | A | N3-C4-N9 | 6.92 | 132.94 | 127.40 |
| 26 | BB | 1827 | U | N3-C2-O2 | -6.92 | 117.36 | 122.20 |
| 26 | BB | 2422 | C | N3-C4-N4 | 6.92 | 122.84 | 118.00 |
| 26 | BB | 2650 | U | O4'-C1'-N1 | 6.92 | 113.73 | 108.20 |
| 36 | BL | 49 | ASP | CB-CG-OD1 | -6.92 | 112.07 | 118.30 |
| 1 | AA | 110 | C | N3-C4-C5 | 6.92 | 124.67 | 121.90 |
| 1 | AA | 462 | G | C6-C5-N7 | 6.92 | 134.55 | 130.40 |
| 26 | BB | 388 | G | O4'-C1'-N9 | 6.92 | 113.73 | 108.20 |
| 26 | BB | 422 | A | N1-C6-N6 | -6.92 | 114.45 | 118.60 |
| 26 | BB | 646 | U | C5'-C4'-O4' | 6.92 | 117.40 | 109.10 |
| 26 | BB | 1154 | G | O4'-C4'-C3' | 6.92 | 111.63 | 106.10 |
| 26 | BB | 1788 | C | C4-C5-C6 | -6.92 | 113.94 | 117.40 |
| 26 | BB | 1988 | G | C5-C6-O6 | -6.92 | 124.45 | 128.60 |
| 26 | BB | 2057 | G | C4-C5-N7 | 6.92 | 113.57 | 110.80 |
| 26 | BB | 2138 | G | C6-N1-C2 | -6.92 | 120.95 | 125.10 |
| 26 | BB | 2887 | A | O4'-C1'-N9 | 6.92 | 113.73 | 108.20 |
| 31 | BG | 132 | ARG | NE-CZ-NH2 | 6.92 | 123.76 | 120.30 |
| 39 | BO | 68 | PHE | CB-CG-CD1 | 6.92 | 125.64 | 120.80 |
| 1 | AA | 753 | A | O4'-C4'-C3' | 6.92 | 111.63 | 106.10 |
| 1 | AA | 1156 | G | N1-C2-N2 | -6.92 | 109.98 | 116.20 |
| 3 | AC | 37 | G | C4-C5-N7 | -6.92 | 108.03 | 110.80 |
| 4 | AD | 68 | C | N3-C4-N4 | -6.92 | 113.16 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 888 | G | C4-C5-N7 | -6.91 | 108.03 | 110.80 |
| 1 | AA | 1002 | G | C4-C5-C6 | 6.91 | 122.95 | 118.80 |
| 26 | BB | 299 | A | N1-C6-N6 | -6.91 | 114.45 | 118.60 |
| 26 | BB | 1758 | U | C4-C5-C6 | 6.91 | 123.85 | 119.70 |
| 26 | BB | 1833 | C | C5'-C4'-C3' | -6.91 | 104.94 | 116.00 |
| 26 | BB | 2266 | A | O4'-C4'-C3' | 6.91 | 111.63 | 106.10 |
| 26 | BB | 2433 | A | C4-C5-C6 | 6.91 | 120.46 | 117.00 |
| 57 | B6 | 7 | ARG | NE-CZ-NH2 | -6.91 | 116.84 | 120.30 |
| 1 | AA | 117 | G | C2-N3-C4 | 6.91 | 115.36 | 111.90 |
| 1 | AA | 181 | A | O4'-C1'-N9 | 6.91 | 113.73 | 108.20 |
| 1 | AA | 1246 | A | N1-C6-N6 | 6.91 | 122.75 | 118.60 |
| 2 | AB | 2 | G | C5-C6-N1 | 6.91 | 114.96 | 111.50 |
| 26 | BB | 415 | A | O4'-C1'-N9 | 6.91 | 113.73 | 108.20 |
| 26 | BB | 417 | C | C2-N3-C4 | 6.91 | 123.36 | 119.90 |
| 26 | BB | 693 | A | N3-C4-N9 | -6.91 | 121.87 | 127.40 |
| 26 | BB | 1213 | A | C4-C5-N7 | -6.91 | 107.24 | 110.70 |
| 26 | BB | 1381 | G | C1'-O4'-C4' | -6.91 | 104.37 | 109.90 |
| 26 | BB | 1673 | G | C5-C6-N1 | 6.91 | 114.96 | 111.50 |
| 26 | BB | 1682 | G | O4'-C1'-N9 | 6.91 | 113.73 | 108.20 |
| 26 | BB | 2607 | G | C6-C5-N7 | -6.91 | 126.25 | 130.40 |
| 1 | AA | 177 | G | C4-C5-N7 | -6.91 | 108.03 | 110.80 |
| 1 | AA | 465 | A | N1-C6-N6 | -6.91 | 114.45 | 118.60 |
| 26 | BB | 320 | A | N7-C8-N9 | 6.91 | 117.25 | 113.80 |
| 26 | BB | 535 | G | N3-C2-N2 | 6.91 | 124.74 | 119.90 |
| 26 | BB | 1110 | G | C4-C5-C6 | 6.91 | 122.95 | 118.80 |
| 37 | BM | 71 | ARG | NE-CZ-NH2 | 6.91 | 123.75 | 120.30 |
| 1 | AA | 499 | A | O4'-C1'-N9 | 6.91 | 113.73 | 108.20 |
| 1 | AA | 762 | U | N1-C2-O2 | 6.91 | 127.64 | 122.80 |
| 26 | BB | 182 | A | C5-N7-C8 | 6.91 | 107.36 | 103.90 |
| 26 | BB | 916 | G | C6-C5-N7 | -6.91 | 126.25 | 130.40 |
| 30 | BF | 60 | TRP | CH2-CZ2-CE2 | 6.91 | 124.31 | 117.40 |
| 1 | AA | 1267 | C | O4'-C1'-N1 | 6.91 | 113.72 | 108.20 |
| 26 | BB | 2642 | G | C5-C6-N1 | -6.91 | 108.05 | 111.50 |
| 26 | BB | 2775 | G | C4'-C3'-C2' | -6.91 | 95.69 | 102.60 |
| 1 | AA | 559 | A | N1-C2-N3 | -6.91 | 125.85 | 129.30 |
| 1 | AA | 996 | A | C4-C5-N7 | -6.91 | 107.25 | 110.70 |
| 1 | AA | 1180 | A | C6-N1-C2 | -6.91 | 114.46 | 118.60 |
| 1 | AA | 1284 | C | N1-C2-O2 | 6.91 | 123.04 | 118.90 |
| 1 | AA | 1316 | G | C6-N1-C2 | 6.91 | 129.24 | 125.10 |
| 2 | AB | 15 | A | C5-N7-C8 | -6.91 | 100.45 | 103.90 |
| 13 | AM | 85 | ASP | CB-CG-OD1 | -6.91 | 112.08 | 118.30 |
| 26 | BB | 397 | U | C4'-C3'-C2' | -6.91 | 95.69 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 784 | G | N1-C2-N3 | 6.91 | 128.04 | 123.90 |
| 26 | BB | 935 | C | C5-C6-N1 | 6.91 | 124.45 | 121.00 |
| 26 | BB | 1155 | A | N7-C8-N9 | 6.91 | 117.25 | 113.80 |
| 26 | BB | 1258 | U | C4-C5-C6 | 6.91 | 123.84 | 119.70 |
| 26 | BB | 2439 | A | N9-C4-C5 | 6.91 | 108.56 | 105.80 |
| 26 | BB | 2788 | C | C5'-C4'-C3' | -6.91 | 104.95 | 116.00 |
| 1 | AA | 1169 | A | C8-N9-C4 | 6.90 | 108.56 | 105.80 |
| 26 | BB | 988 | A | O4'-C1'-N9 | 6.90 | 113.72 | 108.20 |
| 26 | BB | 2686 | G | C6-C5-N7 | 6.90 | 134.54 | 130.40 |
| 26 | BB | 2770 | G | N9-C4-C5 | 6.90 | 108.16 | 105.40 |
| 1 | AA | 2 | A | C5-C6-N6 | 6.90 | 129.22 | 123.70 |
| 1 | AA | 125 | U | C4-C5-C6 | 6.90 | 123.84 | 119.70 |
| 1 | AA | 565 | U | N3-C4-C5 | -6.90 | 110.46 | 114.60 |
| 1 | AA | 768 | A | C8-N9-C4 | -6.90 | 103.04 | 105.80 |
| 1 | AA | 839 | C | N3-C4-N4 | -6.90 | 113.17 | 118.00 |
| 1 | AA | 899 | C | N3-C4-C5 | -6.90 | 119.14 | 121.90 |
| 1 | AA | 1321 | U | N3-C4-C5 | -6.90 | 110.46 | 114.60 |
| 1 | AA | 1528 | U | O4'-C4'-C3' | 6.90 | 111.62 | 106.10 |
| 25 | BA | 29 | A | C1'-O4'-C4' | -6.90 | 104.38 | 109.90 |
| 26 | BB | 524 | G | N1-C6-O6 | -6.90 | 115.76 | 119.90 |
| 26 | BB | 624 | C | C2-N3-C4 | 6.90 | 123.35 | 119.90 |
| 26 | BB | 1450 | G | N9-C4-C5 | 6.90 | 108.16 | 105.40 |
| 26 | BB | 1717 | A | N9-C4-C5 | 6.90 | 108.56 | 105.80 |
| 26 | BB | 1896 | G | C5-C6-O6 | -6.90 | 124.46 | 128.60 |
| 26 | BB | 2324 | U | N3-C4-O4 | 6.90 | 124.23 | 119.40 |
| 1 | AA | 1240 | U | N3-C4-C5 | 6.90 | 118.74 | 114.60 |
| 1 | AA | 1361 | G | C2-N3-C4 | 6.90 | 115.35 | 111.90 |
| 26 | BB | 1016 | G | C2-N3-C4 | 6.90 | 115.35 | 111.90 |
| 26 | BB | 2015 | A | C4-C5-N7 | -6.90 | 107.25 | 110.70 |
| 26 | BB | 2178 | C | C2-N1-C1' | 6.90 | 126.39 | 118.80 |
| 26 | BB | 2343 | U | O4'-C1'-N1 | 6.90 | 113.72 | 108.20 |
| 1 | AA | 548 | G | C5-C6-O6 | 6.90 | 132.74 | 128.60 |
| 26 | BB | 1358 | G | C4-C5-N7 | -6.90 | 108.04 | 110.80 |
| 26 | BB | 2280 | G | N1-C6-O6 | -6.90 | 115.76 | 119.90 |
| 26 | BB | 2719 | G | C5'-C4'-O4' | 6.90 | 117.38 | 109.10 |
| 1 | AA | 408 | A | C3'-C2'-C1' | 6.90 | 107.02 | 101.50 |
| 1 | AA | 520 | A | C5-N7-C8 | -6.90 | 100.45 | 103.90 |
| 1 | AA | 975 | A | C5-C6-N1 | 6.90 | 121.15 | 117.70 |
| 1 | AA | 1321 | U | N3-C2-O2 | -6.90 | 117.37 | 122.20 |
| 26 | BB | 448 | U | O4'-C4'-C3' | 6.90 | 111.62 | 106.10 |
| 26 | BB | 452 | G | N1-C6-O6 | -6.90 | 115.76 | 119.90 |
| 26 | BB | 1494 | A | C3'-C2'-C1' | -6.90 | 95.98 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1528 | A | N1-C2-N3 | -6.90 | 125.85 | 129.30 |
| 26 | BB | 1677 | A | O4'-C1'-N9 | 6.90 | 113.72 | 108.20 |
| 26 | BB | 1838 | C | N3-C4-C5 | -6.90 | 119.14 | 121.90 |
| 26 | BB | 2869 | G | C8-N9-C4 | -6.90 | 103.64 | 106.40 |
| 30 | BF | 19 | PHE | C-N-CA | 6.90 | 136.78 | 122.30 |
| 1 | AA | 1144 | G | C4'-C3'-C2' | -6.90 | 95.70 | 102.60 |
| 1 | AA | 1398 | A | N1-C6-N6 | 6.90 | 122.74 | 118.60 |
| 26 | BB | 1390 | U | C5-C4-O4 | 6.90 | 130.04 | 125.90 |
| 26 | BB | 1462 | C | C5-C4-N4 | -6.90 | 115.37 | 120.20 |
| 1 | AA | 286 | C | C5'-C4'-O4' | 6.89 | 117.37 | 109.10 |
| 1 | AA | 321 | A | N1-C2-N3 | -6.89 | 125.85 | 129.30 |
| 1 | AA | 1088 | G | C6-C5-N7 | 6.89 | 134.54 | 130.40 |
| 26 | BB | 356 | G | N9-C1'-C2' | -6.89 | 104.42 | 112.00 |
| 26 | BB | 399 | U | C3'-C2'-C1' | -6.89 | 95.98 | 101.50 |
| 26 | BB | 2512 | C | C5'-C4'-O4' | -6.89 | 100.83 | 109.10 |
| 27 | BC | 166 | ASP | CB-CG-OD2 | -6.89 | 112.10 | 118.30 |
| 1 | AA | 106 | C | C2-N3-C4 | -6.89 | 116.45 | 119.90 |
| 1 | AA | 128 | G | C6-N1-C2 | -6.89 | 120.97 | 125.10 |
| 1 | AA | 651 | C | N1-C2-O2 | 6.89 | 123.03 | 118.90 |
| 1 | AA | 1375 | A | N9-C4-C5 | 6.89 | 108.56 | 105.80 |
| 26 | BB | 159 | G | C5-C6-N1 | 6.89 | 114.95 | 111.50 |
| 26 | BB | 772 | C | C5-C6-N1 | -6.89 | 117.55 | 121.00 |
| 26 | BB | 958 | U | O4'-C1'-N1 | 6.89 | 113.72 | 108.20 |
| 26 | BB | 1650 | A | C3'-C2'-C1' | 6.89 | 107.01 | 101.50 |
| 26 | BB | 1674 | G | N7-C8-N9 | 6.89 | 116.55 | 113.10 |
| 26 | BB | 2091 | C | C5'-C4'-O4' | 6.89 | 117.37 | 109.10 |
| 26 | BB | 2384 | U | C3'-C2'-C1' | 6.89 | 107.01 | 101.50 |
| 26 | BB | 2515 | C | O4'-C1'-N1 | 6.89 | 113.71 | 108.20 |
| 4 | AD | 10 | G | C5-C6-N1 | 6.89 | 114.95 | 111.50 |
| 26 | BB | 857 | G | N9-C4-C5 | 6.89 | 108.16 | 105.40 |
| 26 | BB | 2141 | G | C1'-O4'-C4' | -6.89 | 104.39 | 109.90 |
| 26 | BB | 2707 | U | C4'-C3'-C2' | -6.89 | 95.71 | 102.60 |
| 1 | AA | 1008 | U | N1-C2-O2 | 6.89 | 127.62 | 122.80 |
| 3 | AC | 41 | A | C2-N3-C4 | 6.89 | 114.05 | 110.60 |
| 26 | BB | 458 | G | C5'-C4'-C3' | -6.89 | 104.98 | 116.00 |
| 26 | BB | 2189 | U | N3-C2-O2 | -6.89 | 117.38 | 122.20 |
| 26 | BB | 2209 | G | C5-C6-O6 | -6.89 | 124.47 | 128.60 |
| 35 | BK | 66 | PHE | CB-CG-CD1 | 6.89 | 125.62 | 120.80 |
| 1 | AA | 224 | U | P-O3'-C3' | 6.89 | 127.97 | 119.70 |
| 1 | AA | 1302 | C | C5'-C4'-O4' | 6.89 | 117.37 | 109.10 |
| 26 | BB | 1175 | A | C2-N3-C4 | 6.89 | 114.04 | 110.60 |
| 26 | BB | 2581 | G | N3-C4-N9 | 6.89 | 130.13 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 36 | BL | 53 | TYR | CB-CG-CD2 | -6.89 | 116.87 | 121.00 |
| 58 | B7 | 24 | ARG | NE-CZ-NH2 | 6.89 | 123.74 | 120.30 |
| 4 | AD | 50 | G | C8-N9-C4 | -6.89 | 103.64 | 106.40 |
| 22 | AV | 54 | ARG | NE-CZ-NH1 | 6.89 | 123.74 | 120.30 |
| 26 | BB | 289 | G | N3-C2-N2 | -6.89 | 115.08 | 119.90 |
| 26 | BB | 360 | U | N3-C4-C5 | 6.89 | 118.73 | 114.60 |
| 26 | BB | 463 | G | N1-C6-O6 | 6.89 | 124.03 | 119.90 |
| 26 | BB | 1128 | G | N3-C4-N9 | 6.89 | 130.13 | 126.00 |
| 26 | BB | 1608 | A | C6-C5-N7 | -6.89 | 127.48 | 132.30 |
| 26 | BB | 1716 | U | C5-C4-O4 | -6.89 | 121.77 | 125.90 |
| 26 | BB | 2434 | A | N9-C4-C5 | 6.89 | 108.55 | 105.80 |
| 1 | AA | 34 | C | C5-C4-N4 | -6.88 | 115.38 | 120.20 |
| 1 | AA | 662 | U | C4-C5-C6 | 6.88 | 123.83 | 119.70 |
| 1 | AA | 1067 | A | C5-C6-N1 | 6.88 | 121.14 | 117.70 |
| 1 | AA | 1517 | G | C5-N7-C8 | -6.88 | 100.86 | 104.30 |
| 26 | BB | 47 | C | N3-C4-N4 | -6.88 | 113.18 | 118.00 |
| 26 | BB | 613 | A | O4'-C1'-N9 | 6.88 | 113.71 | 108.20 |
| 26 | BB | 622 | G | C8-N9-C4 | 6.88 | 109.15 | 106.40 |
| 26 | BB | 2055 | C | C1'-O4'-C4' | -6.88 | 104.39 | 109.90 |
| 26 | BB | 2649 | C | O4'-C1'-N1 | 6.88 | 113.71 | 108.20 |
| 26 | BB | 2778 | A | O4'-C1'-N9 | 6.88 | 113.71 | 108.20 |
| 26 | BB | 2786 | U | N1-C2-N3 | 6.88 | 119.03 | 114.90 |
| 26 | BB | 2808 | G | C1'-O4'-C4' | 6.88 | 115.41 | 109.90 |
| 1 | AA | 788 | U | C4-C5-C6 | -6.88 | 115.57 | 119.70 |
| 1 | AA | 1525 | G | N3-C2-N2 | -6.88 | 115.08 | 119.90 |
| 26 | BB | 317 | G | O4'-C4'-C3' | 6.88 | 111.61 | 106.10 |
| 26 | BB | 992 | C | C4-C5-C6 | 6.88 | 120.84 | 117.40 |
| 26 | BB | 1977 | A | C5-N7-C8 | -6.88 | 100.46 | 103.90 |
| 26 | BB | 2097 | A | N1-C2-N3 | -6.88 | 125.86 | 129.30 |
| 26 | BB | 2527 | C | N1-C2-O2 | 6.88 | 123.03 | 118.90 |
| 1 | AA | 986 | U | C6-N1-C2 | -6.88 | 116.87 | 121.00 |
| 1 | AA | 991 | U | C6-N1-C2 | -6.88 | 116.87 | 121.00 |
| 1 | AA | 1013 | G | N3-C2-N2 | -6.88 | 115.08 | 119.90 |
| 26 | BB | 604 | G | N3-C4-C5 | -6.88 | 125.16 | 128.60 |
| 26 | BB | 737 | C | N3-C2-O2 | -6.88 | 117.08 | 121.90 |
| 26 | BB | 882 | G | N9-C4-C5 | 6.88 | 108.15 | 105.40 |
| 26 | BB | 895 | U | C2-N3-C4 | -6.88 | 122.87 | 127.00 |
| 26 | BB | 1095 | A | N9-C4-C5 | -6.88 | 103.05 | 105.80 |
| 26 | BB | 1292 | G | N1-C2-N3 | -6.88 | 119.77 | 123.90 |
| 26 | BB | 1873 | G | C5-N7-C8 | -6.88 | 100.86 | 104.30 |
| 26 | BB | 1880 | U | C6-N1-C2 | -6.88 | 116.87 | 121.00 |
| 26 | BB | 2597 | G | C4'-C3'-C2' | -6.88 | 95.72 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 673 | A | C5-C6-N1 | 6.88 | 121.14 | 117.70 |
| 25 | BA | 112 | G | N3-C4-C5 | -6.88 | 125.16 | 128.60 |
| 26 | BB | 2719 | G | N7-C8-N9 | 6.88 | 116.54 | 113.10 |
| 1 | AA | 116 | A | N7-C8-N9 | -6.88 | 110.36 | 113.80 |
| 1 | AA | 1251 | A | C3'-C2'-C1' | 6.88 | 107.00 | 101.50 |
| 26 | BB | 395 | U | C1'-O4'-C4' | -6.88 | 104.40 | 109.90 |
| 26 | BB | 750 | A | N1-C6-N6 | -6.88 | 114.47 | 118.60 |
| 26 | BB | 2718 | G | C5'-C4'-O4' | 6.88 | 117.36 | 109.10 |
| 26 | BB | 2781 | A | N7-C8-N9 | 6.88 | 117.24 | 113.80 |
| 26 | BB | 2850 | A | N7-C8-N9 | -6.88 | 110.36 | 113.80 |
| 1 | AA | 922 | G | O4'-C1'-N9 | 6.88 | 113.70 | 108.20 |
| 1 | AA | 935 | A | C3'-C2'-C1' | 6.88 | 107.00 | 101.50 |
| 1 | AA | 1391 | U | N3-C4-O4 | 6.88 | 124.21 | 119.40 |
| 1 | AA | 1398 | A | N3-C4-N9 | -6.88 | 121.90 | 127.40 |
| 1 | AA | 1488 | G | N1-C2-N2 | 6.88 | 122.39 | 116.20 |
| 25 | BA | 13 | G | N3-C4-C5 | -6.88 | 125.16 | 128.60 |
| 26 | BB | 99 | U | P-O3'-C3' | 6.88 | 127.95 | 119.70 |
| 26 | BB | 260 | G | C6-N1-C2 | -6.88 | 120.97 | 125.10 |
| 26 | BB | 312 | G | N3-C2-N2 | -6.88 | 115.09 | 119.90 |
| 26 | BB | 313 | G | C4'-C3'-C2' | -6.88 | 95.72 | 102.60 |
| 26 | BB | 367 | G | N7-C8-N9 | 6.88 | 116.54 | 113.10 |
| 26 | BB | 539 | G | N1-C6-O6 | 6.88 | 124.03 | 119.90 |
| 26 | BB | 610 | C | C5-C6-N1 | 6.88 | 124.44 | 121.00 |
| 26 | BB | 695 | G | C4-C5-C6 | 6.88 | 122.93 | 118.80 |
| 26 | BB | 1561 | C | N1-C2-O2 | 6.88 | 123.03 | 118.90 |
| 26 | BB | 2200 | C | N1-C2-O2 | 6.88 | 123.03 | 118.90 |
| 26 | BB | 2562 | U | C5'-C4'-O4' | 6.88 | 117.35 | 109.10 |
| 26 | BB | 2885 | G | C4-C5-N7 | -6.88 | 108.05 | 110.80 |
| 6 | AF | 168 | ARG | NE-CZ-NH2 | -6.88 | 116.86 | 120.30 |
| 26 | BB | 1904 | G | O4'-C1'-N9 | 6.88 | 113.70 | 108.20 |
| 26 | BB | 2230 | G | C5'-C4'-O4' | 6.88 | 117.35 | 109.10 |
| 26 | BB | 2392 | A | N3-C4-C5 | -6.88 | 121.99 | 126.80 |
| 1 | AA | 126 | G | N7-C8-N9 | 6.87 | 116.54 | 113.10 |
| 1 | AA | 462 | G | N9-C4-C5 | 6.87 | 108.15 | 105.40 |
| 1 | AA | 1016 | A | C4-C5-N7 | 6.87 | 114.14 | 110.70 |
| 1 | AA | 1474 | U | C6-N1-C2 | -6.87 | 116.88 | 121.00 |
| 3 | AC | 42 | U | C1'-O4'-C4' | -6.87 | 104.40 | 109.90 |
| 26 | BB | 930 | G | N3-C4-C5 | -6.87 | 125.16 | 128.60 |
| 26 | BB | 2670 | A | C5-N7-C8 | -6.87 | 100.46 | 103.90 |
| 26 | BB | 2880 | C | C5'-C4'-C3' | -6.87 | 105.00 | 116.00 |
| 1 | AA | 434 | U | O4'-C1'-N1 | 6.87 | 113.70 | 108.20 |
| 1 | AA | 781 | A | O4'-C1'-N9 | 6.87 | 113.70 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 796 | C | P-O3'-C3' | 6.87 | 127.95 | 119.70 |
| 4 | AD | 30 | G | C5-N7-C8 | -6.87 | 100.86 | 104.30 |
| 26 | BB | 1308 | A | C4-C5-C6 | -6.87 | 113.56 | 117.00 |
| 26 | BB | 1376 | C | C6-N1-C2 | 6.87 | 123.05 | 120.30 |
| 26 | BB | 1642 | G | C2-N3-C4 | 6.87 | 115.33 | 111.90 |
| 26 | BB | 1651 | G | O5'-P-OP1 | -6.87 | 99.52 | 105.70 |
| 26 | BB | 1933 | G | N1-C2-N3 | -6.87 | 119.78 | 123.90 |
| 1 | AA | 404 | G | N9-C1'-C2' | -6.87 | 104.44 | 112.00 |
| 1 | AA | 1179 | A | N9-C1'-C2' | -6.87 | 104.44 | 112.00 |
| 1 | AA | 1485 | U | C2-N3-C4 | -6.87 | 122.88 | 127.00 |
| 1 | AA | 1529 | G | N3-C4-C5 | -6.87 | 125.17 | 128.60 |
| 26 | BB | 900 | A | C5-C6-N6 | -6.87 | 118.20 | 123.70 |
| 26 | BB | 2621 | G | C1'-O4'-C4' | -6.87 | 104.40 | 109.90 |
| 36 | BL | 74 | TYR | CG-CD1-CE1 | -6.87 | 115.80 | 121.30 |
| 1 | AA | 575 | G | C4'-C3'-C2' | -6.87 | 95.73 | 102.60 |
| 1 | AA | 1212 | U | C4-C5-C6 | 6.87 | 123.82 | 119.70 |
| 26 | BB | 15 | G | N1-C2-N3 | -6.87 | 119.78 | 123.90 |
| 26 | BB | 23 | G | N1-C2-N2 | 6.87 | 122.38 | 116.20 |
| 26 | BB | 403 | U | C2-N3-C4 | -6.87 | 122.88 | 127.00 |
| 26 | BB | 410 | G | C5-C6-O6 | -6.87 | 124.48 | 128.60 |
| 26 | BB | 1842 | G | O4'-C1'-N9 | 6.87 | 113.69 | 108.20 |
| 26 | BB | 1949 | G | N3-C2-N2 | -6.87 | 115.09 | 119.90 |
| 26 | BB | 2013 | A | C5-C6-N1 | 6.87 | 121.14 | 117.70 |
| 26 | BB | 2817 | U | C4'-C3'-C2' | -6.87 | 95.73 | 102.60 |
| 1 | AA | 805 | C | C4'-C3'-C2' | -6.87 | 95.73 | 102.60 |
| 26 | BB | 65 | U | C3'-C2'-C1' | 6.87 | 106.99 | 101.50 |
| 26 | BB | 95 | A | N1-C2-N3 | 6.87 | 132.73 | 129.30 |
| 26 | BB | 710 | U | C4-C5-C6 | 6.87 | 123.82 | 119.70 |
| 26 | BB | 1180 | U | N1-C2-O2 | 6.87 | 127.61 | 122.80 |
| 1 | AA | 608 | A | C5-C6-N1 | 6.87 | 121.13 | 117.70 |
| 1 | AA | 1345 | U | N1-C2-N3 | 6.87 | 119.02 | 114.90 |
| 1 | AA | 1423 | G | O4'-C1'-N9 | 6.87 | 113.69 | 108.20 |
| 2 | AB | 28 | C | C3'-C2'-C1' | -6.87 | 96.01 | 101.50 |
| 26 | BB | 54 | G | N1-C2-N3 | -6.87 | 119.78 | 123.90 |
| 26 | BB | 230 | G | C8-N9-C4 | 6.87 | 109.15 | 106.40 |
| 26 | BB | 498 | G | C5-C6-N1 | 6.87 | 114.93 | 111.50 |
| 26 | BB | 1042 | G | N7-C8-N9 | 6.87 | 116.53 | 113.10 |
| 26 | BB | 1635 | A | C6-N1-C2 | 6.87 | 122.72 | 118.60 |
| 26 | BB | 1704 | C | O4'-C1'-N1 | 6.87 | 113.69 | 108.20 |
| 26 | BB | 2697 | G | N9-C4-C5 | 6.87 | 108.15 | 105.40 |
| 26 | BB | 2718 | G | O4'-C1'-C2' | -6.87 | 98.94 | 105.80 |
| 1 | AA | 864 | A | P-O3'-C3' | 6.86 | 127.94 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 473 | G | C5-N7-C8 | -6.86 | 100.87 | 104.30 |
| 26 | BB | 1201 | U | C6-N1-C2 | 6.86 | 125.12 | 121.00 |
| 26 | BB | 2582 | G | C2-N3-C4 | 6.86 | 115.33 | 111.90 |
| 26 | BB | 2601 | C | O4'-C1'-N1 | 6.86 | 113.69 | 108.20 |
| 1 | AA | 3 | A | C3'-C2'-C1' | -6.86 | 96.01 | 101.50 |
| 1 | AA | 438 | U | N3-C2-O2 | -6.86 | 117.40 | 122.20 |
| 1 | AA | 772 | U | N1-C2-N3 | 6.86 | 119.02 | 114.90 |
| 26 | BB | 1358 | G | C4-C5-C6 | 6.86 | 122.92 | 118.80 |
| 26 | BB | 2148 | G | C5'-C4'-O4' | 6.86 | 117.33 | 109.10 |
| 26 | BB | 2869 | G | C5-C6-O6 | 6.86 | 132.72 | 128.60 |
| 26 | BB | 2899 | A | C3'-C2'-C1' | 6.86 | 106.99 | 101.50 |
| 1 | AA | 699 | C | C4'-C3'-C2' | -6.86 | 95.74 | 102.60 |
| 25 | BA | 9 | G | N1-C2-N3 | -6.86 | 119.78 | 123.90 |
| 26 | BB | 116 | C | C3'-C2'-C1' | 6.86 | 106.99 | 101.50 |
| 26 | BB | 1333 | G | C4-C5-N7 | -6.86 | 108.06 | 110.80 |
| 26 | BB | 2203 | U | C4-C5-C6 | -6.86 | 115.58 | 119.70 |
| 26 | BB | 2562 | U | C6-N1-C2 | -6.86 | 116.88 | 121.00 |
| 1 | AA | 311 | C | C1'-O4'-C4' | -6.86 | 104.41 | 109.90 |
| 1 | AA | 1112 | C | C4-C5-C6 | 6.86 | 120.83 | 117.40 |
| 1 | AA | 1286 | U | N3-C4-O4 | 6.86 | 124.20 | 119.40 |
| 26 | BB | 809 | G | N7-C8-N9 | 6.86 | 116.53 | 113.10 |
| 34 | BJ | 73 | ASP | CB-CG-OD1 | -6.86 | 112.13 | 118.30 |
| 1 | AA | 59 | A | N1-C2-N3 | -6.86 | 125.87 | 129.30 |
| 1 | AA | 438 | U | O4'-C1'-N1 | 6.86 | 113.69 | 108.20 |
| 1 | AA | 497 | G | N3-C4-C5 | -6.86 | 125.17 | 128.60 |
| 1 | AA | 1530 | G | C8-N9-C4 | -6.86 | 103.66 | 106.40 |
| 26 | BB | 283 | G | C8-N9-C4 | -6.86 | 103.66 | 106.40 |
| 26 | BB | 300 | A | N9-C4-C5 | 6.86 | 108.54 | 105.80 |
| 26 | BB | 570 | G | N3-C4-N9 | -6.86 | 121.89 | 126.00 |
| 26 | BB | 637 | A | N9-C4-C5 | 6.86 | 108.54 | 105.80 |
| 26 | BB | 786 | C | P-O3'-C3' | 6.86 | 127.93 | 119.70 |
| 26 | BB | 1388 | G | C5-N7-C8 | 6.86 | 107.73 | 104.30 |
| 26 | BB | 1892 | C | C2-N3-C4 | 6.86 | 123.33 | 119.90 |
| 26 | BB | 1988 | G | C5-N7-C8 | 6.86 | 107.73 | 104.30 |
| 26 | BB | 2292 | U | C6-N1-C2 | -6.86 | 116.89 | 121.00 |
| 26 | BB | 2779 | U | N3-C4-O4 | 6.86 | 124.20 | 119.40 |
| 1 | AA | 118 | U | N1-C2-N3 | 6.86 | 119.01 | 114.90 |
| 1 | AA | 630 | A | N3-C4-C5 | -6.86 | 122.00 | 126.80 |
| 1 | AA | 1166 | G | N1-C2-N3 | 6.86 | 128.01 | 123.90 |
| 1 | AA | 1353 | G | O4'-C1'-N9 | 6.86 | 113.68 | 108.20 |
| 2 | AB | 7 | G | N1-C2-N3 | -6.86 | 119.79 | 123.90 |
| 26 | BB | 940 | G | C5-N7-C8 | -6.86 | 100.87 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1087 | G | C4-C5-C6 | 6.86 | 122.91 | 118.80 |
| 26 | BB | 1770 | G | N7-C8-N9 | 6.86 | 116.53 | 113.10 |
| 26 | BB | 2357 | G | O4'-C1'-N9 | 6.86 | 113.68 | 108.20 |
| 26 | BB | 2887 | A | C5'-C4'-O4' | 6.86 | 117.33 | 109.10 |
| 27 | BC | 208 | TYR | CB-CG-CD1 | 6.86 | 125.11 | 121.00 |
| 32 | BH | 162 | ARG | NE-CZ-NH2 | 6.86 | 123.73 | 120.30 |
| 1 | AA | 111 | G | C5-N7-C8 | 6.85 | 107.73 | 104.30 |
| 1 | AA | 1150 | A | C3'-C2'-C1' | 6.85 | 106.98 | 101.50 |
| 25 | BA | 22 | U | N3-C2-O2 | -6.85 | 117.40 | 122.20 |
| 26 | BB | 110 | G | N7-C8-N9 | 6.85 | 116.53 | 113.10 |
| 26 | BB | 375 | G | N1-C6-O6 | -6.85 | 115.79 | 119.90 |
| 26 | BB | 757 | G | N1-C2-N3 | 6.85 | 128.01 | 123.90 |
| 26 | BB | 2298 | A | C5-C6-N6 | -6.85 | 118.22 | 123.70 |
| 1 | AA | 107 | G | C4-C5-C6 | 6.85 | 122.91 | 118.80 |
| 1 | AA | 775 | G | C1'-O4'-C4' | -6.85 | 104.42 | 109.90 |
| 1 | AA | 778 | G | O4'-C1'-N9 | 6.85 | 113.68 | 108.20 |
| 4 | AD | 59 | A | N1-C6-N6 | 6.85 | 122.71 | 118.60 |
| 25 | BA | 85 | G | C4'-C3'-C2' | -6.85 | 95.75 | 102.60 |
| 26 | BB | 204 | A | C8-N9-C4 | -6.85 | 103.06 | 105.80 |
| 26 | BB | 295 | G | O4'-C1'-C2' | 6.85 | 113.77 | 107.60 |
| 26 | BB | 1032 | A | C6-N1-C2 | 6.85 | 122.71 | 118.60 |
| 26 | BB | 1470 | A | C6-C5-N7 | -6.85 | 127.50 | 132.30 |
| 26 | BB | 1657 | U | C5-C6-N1 | -6.85 | 119.27 | 122.70 |
| 26 | BB | 1767 | G | N3-C4-C5 | -6.85 | 125.17 | 128.60 |
| 26 | BB | 2068 | U | C5'-C4'-O4' | 6.85 | 117.32 | 109.10 |
| 26 | BB | 2193 | G | N7-C8-N9 | -6.85 | 109.67 | 113.10 |
| 2 | AB | 67 | G | N9-C4-C5 | 6.85 | 108.14 | 105.40 |
| 4 | AD | 14 | A | C4-C5-N7 | 6.85 | 114.12 | 110.70 |
| 26 | BB | 736 | C | C3'-C2'-C1' | 6.85 | 106.98 | 101.50 |
| 26 | BB | 758 | C | C5-C4-N4 | -6.85 | 115.40 | 120.20 |
| 26 | BB | 1159 | U | C2-N3-C4 | -6.85 | 122.89 | 127.00 |
| 26 | BB | 2118 | U | O4'-C1'-N1 | 6.85 | 113.68 | 108.20 |
| 26 | BB | 2301 | C | N3-C4-C5 | -6.85 | 119.16 | 121.90 |
| 37 | BM | 62 | VAL | CG1-CB-CG2 | -6.85 | 99.94 | 110.90 |
| 1 | AA | 223 | A | N3-C4-C5 | -6.85 | 122.00 | 126.80 |
| 1 | AA | 573 | A | C6-N1-C2 | 6.85 | 122.71 | 118.60 |
| 1 | AA | 1085 | U | N1-C2-O2 | -6.85 | 118.01 | 122.80 |
| 1 | AA | 1111 | A | C5-C6-N6 | -6.85 | 118.22 | 123.70 |
| 1 | AA | 1521 | C | N3-C2-O2 | -6.85 | 117.11 | 121.90 |
| 26 | BB | 474 | G | N3-C4-C5 | -6.85 | 125.17 | 128.60 |
| 26 | BB | 603 | A | C6-C5-N7 | 6.85 | 137.09 | 132.30 |
| 26 | BB | 1146 | C | C5-C6-N1 | 6.85 | 124.42 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1308 | A | C2-N3-C4 | -6.85 | 107.17 | 110.60 |
| 26 | BB | 1323 | C | C6-N1-C2 | -6.85 | 117.56 | 120.30 |
| 26 | BB | 1483 | G | C6-N1-C2 | -6.85 | 120.99 | 125.10 |
| 26 | BB | 1822 | C | N1-C2-N3 | -6.85 | 114.41 | 119.20 |
| 26 | BB | 2537 | U | C5-C4-O4 | -6.85 | 121.79 | 125.90 |
| 26 | BB | 2596 | U | N3-C2-O2 | -6.85 | 117.41 | 122.20 |
| 1 | AA | 453 | G | N7-C8-N9 | 6.85 | 116.52 | 113.10 |
| 1 | AA | 485 | U | N3-C2-O2 | -6.85 | 117.41 | 122.20 |
| 1 | AA | 888 | G | C4-C5-C6 | 6.85 | 122.91 | 118.80 |
| 1 | AA | 962 | C | C2-N3-C4 | -6.85 | 116.48 | 119.90 |
| 1 | AA | 1087 | G | C5-C6-N1 | 6.85 | 114.92 | 111.50 |
| 1 | AA | 1356 | G | C2-N3-C4 | -6.85 | 108.48 | 111.90 |
| 26 | BB | 1451 | C | N3-C4-C5 | 6.85 | 124.64 | 121.90 |
| 26 | BB | 1542 | U | N3-C4-O4 | 6.85 | 124.19 | 119.40 |
| 26 | BB | 1788 | C | C1'-O4'-C4' | -6.85 | 104.42 | 109.90 |
| 26 | BB | 2016 | U | N3-C4-O4 | 6.85 | 124.19 | 119.40 |
| 26 | BB | 2167 | U | O5'-P-OP2 | -6.85 | 99.54 | 105.70 |
| 26 | BB | 2214 | C | C1'-O4'-C4' | 6.85 | 115.38 | 109.90 |
| 26 | BB | 2224 | G | N3-C4-C5 | -6.85 | 125.18 | 128.60 |
| 26 | BB | 2277 | G | N9-C1'-C2' | -6.85 | 104.47 | 112.00 |
| 26 | BB | 2629 | U | O4'-C1'-N1 | 6.85 | 113.68 | 108.20 |
| 1 | AA | 1261 | A | N3-C4-C5 | -6.85 | 122.01 | 126.80 |
| 3 | AC | 41 | A | C4'-C3'-C2' | -6.85 | 95.75 | 102.60 |
| 26 | BB | 2608 | G | N3-C4-C5 | -6.85 | 125.18 | 128.60 |
| 26 | BB | 2828 | G | N3-C4-C5 | -6.85 | 125.18 | 128.60 |
| 1 | AA | 278 | G | C6-C5-N7 | 6.84 | 134.51 | 130.40 |
| 1 | AA | 288 | A | C4-C5-C6 | -6.84 | 113.58 | 117.00 |
| 1 | AA | 675 | A | N1-C2-N3 | -6.84 | 125.88 | 129.30 |
| 26 | BB | 401 | A | N7-C8-N9 | 6.84 | 117.22 | 113.80 |
| 26 | BB | 1306 | C | C5'-C4'-O4' | 6.84 | 117.31 | 109.10 |
| 26 | BB | 1745 | A | N1-C2-N3 | 6.84 | 132.72 | 129.30 |
| 26 | BB | 2582 | G | C6-N1-C2 | -6.84 | 120.99 | 125.10 |
| 1 | AA | 518 | C | O4'-C1'-N1 | 6.84 | 113.67 | 108.20 |
| 26 | BB | 1637 | A | C3'-C2'-C1' | 6.84 | 106.97 | 101.50 |
| 26 | BB | 1879 | C | C2-N3-C4 | 6.84 | 123.32 | 119.90 |
| 1 | AA | 173 | U | C5'-C4'-C3' | -6.84 | 105.05 | 116.00 |
| 1 | AA | 357 | G | C4-C5-C6 | 6.84 | 122.91 | 118.80 |
| 1 | AA | 1084 | G | C5-C6-O6 | -6.84 | 124.50 | 128.60 |
| 4 | AD | 39 | A | O5'-P-OP2 | -6.84 | 99.54 | 105.70 |
| 12 | AL | 85 | ALA | O-C-N | 6.84 | 133.65 | 122.70 |
| 26 | BB | 677 | A | C8-N9-C4 | -6.84 | 103.06 | 105.80 |
| 26 | BB | 1620 | G | N3-C4-C5 | -6.84 | 125.18 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2057 | G | C2-N3-C4 | 6.84 | 115.32 | 111.90 |
| 26 | BB | 2534 | A | C2-N3-C4 | 6.84 | 114.02 | 110.60 |
| 1 | AA | 535 | A | O4'-C1'-C2' | 6.84 | 113.75 | 107.60 |
| 1 | AA | 877 | G | C1'-O4'-C4' | -6.84 | 104.43 | 109.90 |
| 1 | AA | 1372 | U | C4'-C3'-C2' | -6.84 | 95.76 | 102.60 |
| 1 | AA | 1423 | G | N9-C4-C5 | 6.84 | 108.14 | 105.40 |
| 2 | AB | 68 | C | C6-N1-C2 | -6.84 | 117.56 | 120.30 |
| 26 | BB | 557 | C | N3-C2-O2 | -6.84 | 117.11 | 121.90 |
| 26 | BB | 631 | A | O4'-C1'-N9 | 6.84 | 113.67 | 108.20 |
| 26 | BB | 1124 | G | C8-N9-C4 | -6.84 | 103.66 | 106.40 |
| 26 | BB | 1507 | C | N1-C2-O2 | 6.84 | 123.00 | 118.90 |
| 26 | BB | 1527 | G | C4'-C3'-C2' | -6.84 | 95.76 | 102.60 |
| 26 | BB | 1866 | A | N9-C4-C5 | 6.84 | 108.53 | 105.80 |
| 26 | BB | 1974 | C | N3-C2-O2 | -6.84 | 117.11 | 121.90 |
| 26 | BB | 2728 | U | C5-C6-N1 | -6.84 | 119.28 | 122.70 |
| 26 | BB | 1281 | G | N3-C4-N9 | 6.84 | 130.10 | 126.00 |
| 26 | BB | 1441 | G | C5-C6-O6 | -6.84 | 124.50 | 128.60 |
| 1 | AA | 334 | C | C2-N3-C4 | 6.84 | 123.32 | 119.90 |
| 1 | AA | 632 | U | C5-C4-O4 | -6.84 | 121.80 | 125.90 |
| 1 | AA | 797 | C | C4-C5-C6 | 6.84 | 120.82 | 117.40 |
| 1 | AA | 909 | A | C5-N7-C8 | -6.84 | 100.48 | 103.90 |
| 1 | AA | 912 | C | C6-N1-C2 | -6.84 | 117.56 | 120.30 |
| 26 | BB | 251 | A | C5'-C4'-O4' | 6.84 | 117.30 | 109.10 |
| 26 | BB | 1228 | G | N7-C8-N9 | 6.84 | 116.52 | 113.10 |
| 26 | BB | 1518 | C | C6-N1-C2 | -6.84 | 117.56 | 120.30 |
| 26 | BB | 1527 | G | C3'-C2'-C1' | 6.84 | 106.97 | 101.50 |
| 26 | BB | 317 | G | C4'-C3'-C2' | -6.83 | 95.77 | 102.60 |
| 26 | BB | 1422 | G | C5-C6-N1 | 6.83 | 114.92 | 111.50 |
| 26 | BB | 2110 | G | O4'-C4'-C3' | 6.83 | 111.57 | 106.10 |
| 26 | BB | 2628 | C | N3-C4-N4 | -6.83 | 113.22 | 118.00 |
| 26 | BB | 2650 | U | C1'-O4'-C4' | 6.83 | 115.37 | 109.90 |
| 1 | AA | 767 | A | C5-N7-C8 | -6.83 | 100.48 | 103.90 |
| 1 | AA | 810 | C | N3-C4-C5 | -6.83 | 119.17 | 121.90 |
| 1 | AA | 1085 | U | C5-C6-N1 | -6.83 | 119.28 | 122.70 |
| 1 | AA | 1111 | A | C4-C5-N7 | 6.83 | 114.12 | 110.70 |
| 1 | AA | 1510 | C | N3-C4-C5 | -6.83 | 119.17 | 121.90 |
| 13 | AM | 51 | VAL | CA-CB-CG2 | 6.83 | 121.15 | 110.90 |
| 26 | BB | 369 | U | N1-C2-N3 | 6.83 | 119.00 | 114.90 |
| 26 | BB | 1129 | A | C5-C6-N1 | 6.83 | 121.12 | 117.70 |
| 26 | BB | 1365 | A | C5'-C4'-O4' | 6.83 | 117.30 | 109.10 |
| 26 | BB | 2777 | G | C4-C5-C6 | 6.83 | 122.90 | 118.80 |
| 1 | AA | 46 | G | C8-N9-C4 | -6.83 | 103.67 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1531 | A | N7-C8-N9 | -6.83 | 110.39 | 113.80 |
| 25 | BA | 107 | G | C5-N7-C8 | -6.83 | 100.88 | 104.30 |
| 26 | BB | 337 | C | O4'-C4'-C3' | 6.83 | 111.57 | 106.10 |
| 26 | BB | 730 | A | N3-C4-C5 | -6.83 | 122.02 | 126.80 |
| 26 | BB | 1237 | A | C2-N3-C4 | 6.83 | 114.02 | 110.60 |
| 26 | BB | 1323 | C | O4'-C4'-C3' | 6.83 | 111.56 | 106.10 |
| 26 | BB | 1651 | G | C5-C6-O6 | -6.83 | 124.50 | 128.60 |
| 26 | BB | 2532 | G | N1-C2-N2 | 6.83 | 122.35 | 116.20 |
| 26 | BB | 2749 | A | O3'-P-O5' | -6.83 | 91.02 | 104.00 |
| 3 | AC | 26 | U | N3-C4-O4 | 6.83 | 124.18 | 119.40 |
| 26 | BB | 2075 | U | O4'-C4'-C3' | 6.83 | 111.56 | 106.10 |
| 26 | BB | 2311 | A | O4'-C4'-C3' | 6.83 | 111.56 | 106.10 |
| 1 | AA | 579 | A | N7-C8-N9 | -6.83 | 110.39 | 113.80 |
| 1 | AA | 782 | A | C5-N7-C8 | 6.83 | 107.31 | 103.90 |
| 4 | AD | 17 | C | N3-C2-O2 | -6.83 | 117.12 | 121.90 |
| 25 | BA | 117 | G | N7-C8-N9 | 6.83 | 116.51 | 113.10 |
| 26 | BB | 642 | U | C5-C6-N1 | 6.83 | 126.11 | 122.70 |
| 26 | BB | 1544 | A | C2-N3-C4 | 6.83 | 114.01 | 110.60 |
| 26 | BB | 2274 | A | C4-C5-N7 | -6.83 | 107.29 | 110.70 |
| 26 | BB | 2469 | A | C4-C5-N7 | -6.83 | 107.28 | 110.70 |
| 26 | BB | 2549 | G | N1-C2-N2 | 6.83 | 122.34 | 116.20 |
| 26 | BB | 2665 | A | C8-N9-C4 | -6.83 | 103.07 | 105.80 |
| 1 | AA | 1088 | G | O4'-C1'-N9 | 6.83 | 113.66 | 108.20 |
| 1 | AA | 1183 | U | N1-C1'-C2' | 6.83 | 122.88 | 114.00 |
| 1 | AA | 1215 | G | N9-C4-C5 | 6.83 | 108.13 | 105.40 |
| 26 | BB | 362 | A | O4'-C4'-C3' | 6.83 | 111.56 | 106.10 |
| 26 | BB | 1900 | A | P-O3'-C3' | 6.83 | 127.89 | 119.70 |
| 1 | AA | 279 | A | P-O3'-C3' | 6.83 | 127.89 | 119.70 |
| 1 | AA | 906 | A | C2-N3-C4 | 6.83 | 114.01 | 110.60 |
| 1 | AA | 1076 | U | C4-C5-C6 | 6.83 | 123.80 | 119.70 |
| 25 | BA | 18 | G | N1-C2-N2 | 6.83 | 122.34 | 116.20 |
| 26 | BB | 768 | G | C5-C6-O6 | -6.83 | 124.50 | 128.60 |
| 26 | BB | 1183 | U | C2-N3-C4 | -6.83 | 122.90 | 127.00 |
| 26 | BB | 1417 | C | N1-C2-O2 | 6.83 | 123.00 | 118.90 |
| 26 | BB | 1698 | A | C5-N7-C8 | 6.83 | 107.31 | 103.90 |
| 26 | BB | 1880 | U | N1-C2-O2 | -6.83 | 118.02 | 122.80 |
| 26 | BB | 2229 | U | C5-C6-N1 | -6.83 | 119.29 | 122.70 |
| 26 | BB | 2266 | A | N9-C4-C5 | -6.83 | 103.07 | 105.80 |
| 33 | BI | 25 | TYR | CD1-CG-CD2 | 6.83 | 125.41 | 117.90 |
| 1 | AA | 340 | U | C5'-C4'-O4' | 6.82 | 117.29 | 109.10 |
| 1 | AA | 668 | G | N3-C2-N2 | -6.82 | 115.12 | 119.90 |
| 1 | AA | 1100 | C | C6-N1-C2 | -6.82 | 117.57 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1219 | A | N7-C8-N9 | 6.82 | 117.21 | 113.80 |
| 1 | AA | 1377 | A | C4-C5-C6 | 6.82 | 120.41 | 117.00 |
| 1 | AA | 1438 | G | N3-C2-N2 | -6.82 | 115.12 | 119.90 |
| 8 | AH | 47 | PHE | CB-CG-CD2 | -6.82 | 116.02 | 120.80 |
| 26 | BB | 250 | G | C4-C5-N7 | -6.82 | 108.07 | 110.80 |
| 26 | BB | 263 | G | C5-C6-O6 | 6.82 | 132.69 | 128.60 |
| 26 | BB | 301 | G | N1-C2-N3 | -6.82 | 119.81 | 123.90 |
| 26 | BB | 395 | U | O4'-C4'-C3' | 6.82 | 111.56 | 106.10 |
| 26 | BB | 777 | G | C5-C6-O6 | -6.82 | 124.50 | 128.60 |
| 26 | BB | 795 | C | O4'-C1'-N1 | 6.82 | 113.66 | 108.20 |
| 26 | BB | 956 | G | O4'-C1'-N9 | 6.82 | 113.66 | 108.20 |
| 26 | BB | 1969 | A | C2-N3-C4 | -6.82 | 107.19 | 110.60 |
| 26 | BB | 2003 | A | C5-C6-N6 | 6.82 | 129.16 | 123.70 |
| 1 | AA | 616 | G | C8-N9-C4 | -6.82 | 103.67 | 106.40 |
| 1 | AA | 829 | G | C4-C5-N7 | -6.82 | 108.07 | 110.80 |
| 2 | AB | 34 | C | C6-N1-C2 | -6.82 | 117.57 | 120.30 |
| 26 | BB | 406 | G | C5-C6-N1 | 6.82 | 114.91 | 111.50 |
| 26 | BB | 1355 | G | C2-N3-C4 | 6.82 | 115.31 | 111.90 |
| 26 | BB | 2538 | C | C2-N3-C4 | 6.82 | 123.31 | 119.90 |
| 1 | AA | 304 | U | C5'-C4'-C3' | -6.82 | 105.09 | 116.00 |
| 1 | AA | 931 | C | C3'-C2'-C1' | -6.82 | 96.04 | 101.50 |
| 1 | AA | 1291 | U | N1-C1'-C2' | -6.82 | 104.50 | 112.00 |
| 4 | AD | 27 | G | C5'-C4'-O4' | 6.82 | 117.28 | 109.10 |
| 26 | BB | 701 | G | C5-C6-O6 | -6.82 | 124.51 | 128.60 |
| 26 | BB | 737 | C | C4'-C3'-C2' | -6.82 | 95.78 | 102.60 |
| 26 | BB | 753 | A | N3-C4-C5 | -6.82 | 122.03 | 126.80 |
| 26 | BB | 842 | U | C5-C6-N1 | -6.82 | 119.29 | 122.70 |
| 26 | BB | 946 | C | C4-C5-C6 | 6.82 | 120.81 | 117.40 |
| 26 | BB | 1987 | A | C4-C5-N7 | 6.82 | 114.11 | 110.70 |
| 26 | BB | 2477 | U | C3'-C2'-C1' | 6.82 | 106.96 | 101.50 |
| 1 | AA | 415 | A | C8-N9-C4 | 6.82 | 108.53 | 105.80 |
| 1 | AA | 1228 | C | N3-C4-N4 | 6.82 | 122.77 | 118.00 |
| 1 | AA | 1346 | A | C5'-C4'-O4' | -6.82 | 100.92 | 109.10 |
| 26 | BB | 635 | C | N3-C4-C5 | -6.82 | 119.17 | 121.90 |
| 26 | BB | 2011 | U | C4-C5-C6 | 6.82 | 123.79 | 119.70 |
| 1 | AA | 410 | G | C5-C6-O6 | 6.82 | 132.69 | 128.60 |
| 1 | AA | 420 | U | O4'-C1'-N1 | 6.82 | 113.66 | 108.20 |
| 26 | BB | 1256 | G | C8-N9-C4 | -6.82 | 103.67 | 106.40 |
| 26 | BB | 1269 | A | N7-C8-N9 | 6.82 | 117.21 | 113.80 |
| 26 | BB | 1652 | A | O4'-C1'-N9 | 6.82 | 113.65 | 108.20 |
| 26 | BB | 2013 | A | C5-C6-N6 | -6.82 | 118.25 | 123.70 |
| 26 | BB | 2160 | C | N3-C2-O2 | -6.82 | 117.13 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2534 | A | P-O5'-C5' | 6.82 | 131.81 | 120.90 |
| 1 | AA | 925 | G | C6-N1-C2 | -6.82 | 121.01 | 125.10 |
| 1 | AA | 968 | A | O4'-C4'-C3' | 6.82 | 111.55 | 106.10 |
| 1 | AA | 1502 | A | O4'-C1'-N9 | 6.82 | 113.65 | 108.20 |
| 2 | AB | 44 | G | C6-C5-N7 | -6.82 | 126.31 | 130.40 |
| 26 | BB | 350 | G | C1'-O4'-C4' | 6.82 | 115.35 | 109.90 |
| 26 | BB | 407 | G | O5'-P-OP2 | 6.82 | 118.88 | 110.70 |
| 26 | BB | 425 | G | O4'-C1'-N9 | 6.82 | 113.65 | 108.20 |
| 26 | BB | 510 | C | C4-C5-C6 | 6.82 | 120.81 | 117.40 |
| 26 | BB | 539 | G | C5-C6-O6 | -6.82 | 124.51 | 128.60 |
| 26 | BB | 1011 | G | C5-N7-C8 | 6.82 | 107.71 | 104.30 |
| 26 | BB | 1024 | G | N1-C2-N3 | -6.82 | 119.81 | 123.90 |
| 26 | BB | 1151 | A | C5-N7-C8 | -6.82 | 100.49 | 103.90 |
| 26 | BB | 1275 | A | C1'-O4'-C4' | -6.82 | 104.45 | 109.90 |
| 26 | BB | 1613 | G | N9-C4-C5 | 6.82 | 108.13 | 105.40 |
| 26 | BB | 1726 | C | C5-C6-N1 | -6.82 | 117.59 | 121.00 |
| 26 | BB | 1897 | G | O4'-C1'-N9 | 6.82 | 113.65 | 108.20 |
| 45 | BU | 95 | ARG | NE-CZ-NH1 | -6.82 | 116.89 | 120.30 |
| 26 | BB | 1203 | U | N3-C2-O2 | -6.81 | 117.43 | 122.20 |
| 26 | BB | 1800 | C | P-O3'-C3' | 6.81 | 127.88 | 119.70 |
| 26 | BB | 1834 | U | C5-C4-O4 | -6.81 | 121.81 | 125.90 |
| 1 | AA | 14 | U | C2-N3-C4 | 6.81 | 131.09 | 127.00 |
| 1 | AA | 844 | G | C4-C5-C6 | 6.81 | 122.89 | 118.80 |
| 1 | AA | 1122 | U | C3'-C2'-C1' | 6.81 | 106.95 | 101.50 |
| 1 | AA | 1325 | C | C5-C4-N4 | -6.81 | 115.43 | 120.20 |
| 4 | AD | 29 | C | C6-N1-C2 | -6.81 | 117.58 | 120.30 |
| 22 | AV | 77 | ARG | NE-CZ-NH2 | -6.81 | 116.89 | 120.30 |
| 25 | BA | 71 | C | N1-C2-N3 | -6.81 | 114.43 | 119.20 |
| 26 | BB | 208 | C | N3-C4-N4 | 6.81 | 122.77 | 118.00 |
| 26 | BB | 577 | G | O4'-C1'-N9 | 6.81 | 113.65 | 108.20 |
| 26 | BB | 889 | C | P-O3'-C3' | 6.81 | 127.87 | 119.70 |
| 26 | BB | 1185 | G | N1-C6-O6 | -6.81 | 115.81 | 119.90 |
| 26 | BB | 1567 | G | C6-N1-C2 | -6.81 | 121.01 | 125.10 |
| 26 | BB | 2129 | C | N1-C2-N3 | -6.81 | 114.43 | 119.20 |
| 26 | BB | 2682 | A | C8-N9-C4 | -6.81 | 103.08 | 105.80 |
| 1 | AA | 285 | C | N3-C4-C5 | -6.81 | 119.18 | 121.90 |
| 1 | AA | 1052 | U | O4'-C1'-N1 | 6.81 | 113.65 | 108.20 |
| 26 | BB | 32 | C | N3-C4-C5 | -6.81 | 119.18 | 121.90 |
| 26 | BB | 720 | U | C5-C6-N1 | -6.81 | 119.29 | 122.70 |
| 26 | BB | 1411 | U | C6-N1-C2 | -6.81 | 116.91 | 121.00 |
| 26 | BB | 1975 | G | O4'-C1'-C2' | 6.81 | 113.73 | 107.60 |
| 26 | BB | 2165 | C | C2-N3-C4 | 6.81 | 123.31 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 365 | U | C5'-C4'-O4' | 6.81 | 117.27 | 109.10 |
| 1 | AA | 461 | A | N9-C1'-C2' | 6.81 | 122.85 | 114.00 |
| 1 | AA | 692 | U | O4'-C1'-N1 | 6.81 | 113.65 | 108.20 |
| 1 | AA | 755 | G | C5-C6-O6 | -6.81 | 124.51 | 128.60 |
| 1 | AA | 895 | G | O4'-C1'-N9 | 6.81 | 113.65 | 108.20 |
| 1 | AA | 1515 | G | N3-C2-N2 | -6.81 | 115.13 | 119.90 |
| 21 | AU | 62 | ARG | NE-CZ-NH2 | -6.81 | 116.89 | 120.30 |
| 25 | BA | 6 | G | N1-C2-N3 | -6.81 | 119.81 | 123.90 |
| 26 | BB | 768 | G | C1'-O4'-C4' | 6.81 | 115.35 | 109.90 |
| 26 | BB | 878 | A | N9-C4-C5 | -6.81 | 103.08 | 105.80 |
| 26 | BB | 2084 | C | O4'-C1'-N1 | 6.81 | 113.65 | 108.20 |
| 26 | BB | 2602 | A | C5-C6-N1 | -6.81 | 114.30 | 117.70 |
| 26 | BB | 2660 | A | C4'-C3'-C2' | -6.81 | 95.79 | 102.60 |
| 26 | BB | 2765 | A | N9-C4-C5 | 6.81 | 108.52 | 105.80 |
| 1 | AA | 812 | G | N1-C2-N2 | -6.81 | 110.07 | 116.20 |
| 1 | AA | 1138 | G | N7-C8-N9 | 6.81 | 116.50 | 113.10 |
| 1 | AA | 1366 | C | O4'-C1'-N1 | 6.81 | 113.65 | 108.20 |
| 25 | BA | 66 | A | C4'-C3'-O3' | 6.81 | 126.61 | 113.00 |
| 26 | BB | 57 | C | C4'-C3'-C2' | -6.81 | 95.79 | 102.60 |
| 26 | BB | 507 | A | N9-C4-C5 | 6.81 | 108.52 | 105.80 |
| 26 | BB | 582 | A | N7-C8-N9 | 6.81 | 117.20 | 113.80 |
| 26 | BB | 607 | U | O4'-C1'-N1 | 6.81 | 113.65 | 108.20 |
| 26 | BB | 698 | C | N3-C4-N4 | -6.81 | 113.23 | 118.00 |
| 26 | BB | 1004 | U | C3'-C2'-C1' | 6.81 | 106.94 | 101.50 |
| 26 | BB | 1144 | A | C1'-O4'-C4' | -6.81 | 104.45 | 109.90 |
| 26 | BB | 1335 | C | N3-C2-O2 | -6.81 | 117.13 | 121.90 |
| 26 | BB | 1578 | U | O4'-C1'-N1 | 6.81 | 113.64 | 108.20 |
| 26 | BB | 1965 | C | C6-N1-C2 | 6.81 | 123.02 | 120.30 |
| 26 | BB | 1983 | G | N3-C4-C5 | -6.81 | 125.20 | 128.60 |
| 26 | BB | 2409 | G | N3-C4-N9 | 6.81 | 130.09 | 126.00 |
| 26 | BB | 2472 | G | N1-C2-N2 | 6.81 | 122.33 | 116.20 |
| 26 | BB | 2676 | C | C4'-C3'-C2' | -6.81 | 95.79 | 102.60 |
| 26 | BB | 2848 | G | C3'-C2'-C1' | -6.81 | 96.05 | 101.50 |
| 1 | AA | 603 | U | C3'-C2'-C1' | 6.81 | 106.94 | 101.50 |
| 26 | BB | 764 | A | C6-C5-N7 | 6.81 | 137.06 | 132.30 |
| 26 | BB | 862 | G | O4'-C1'-N9 | 6.81 | 113.64 | 108.20 |
| 26 | BB | 1505 | A | N1-C2-N3 | -6.81 | 125.90 | 129.30 |
| 26 | BB | 2571 | U | C4-C5-C6 | 6.81 | 123.78 | 119.70 |
| 1 | AA | 485 | U | O4'-C1'-C2' | -6.80 | 99.00 | 105.80 |
| 1 | AA | 831 | A | C6-C5-N7 | 6.80 | 137.06 | 132.30 |
| 1 | AA | 903 | G | C5-C6-N1 | 6.80 | 114.90 | 111.50 |
| 1 | AA | 920 | U | N1-C1'-C2' | -6.80 | 104.52 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 76 | C | C5'-C4'-C3' | -6.80 | 105.11 | 116.00 |
| 26 | BB | 1235 | G | C5-N7-C8 | 6.80 | 107.70 | 104.30 |
| 26 | BB | 1683 | U | C2-N3-C4 | -6.80 | 122.92 | 127.00 |
| 26 | BB | 2134 | A | C5'-C4'-O4' | 6.80 | 117.27 | 109.10 |
| 26 | BB | 2849 | U | N1-C1'-C2' | 6.80 | 122.85 | 114.00 |
| 1 | AA | 676 | A | C4'-C3'-C2' | -6.80 | 95.80 | 102.60 |
| 1 | AA | 1149 | C | C4'-C3'-C2' | -6.80 | 95.80 | 102.60 |
| 26 | BB | 185 | G | C2-N3-C4 | 6.80 | 115.30 | 111.90 |
| 26 | BB | 990 | A | O4'-C1'-N9 | 6.80 | 113.64 | 108.20 |
| 26 | BB | 1164 | C | O4'-C1'-N1 | 6.80 | 113.64 | 108.20 |
| 26 | BB | 2070 | A | N1-C6-N6 | -6.80 | 114.52 | 118.60 |
| 26 | BB | 2479 | U | C4'-C3'-C2' | -6.80 | 95.80 | 102.60 |
| 1 | AA | 165 | G | N3-C4-C5 | -6.80 | 125.20 | 128.60 |
| 1 | AA | 1280 | A | C5-N7-C8 | 6.80 | 107.30 | 103.90 |
| 26 | BB | 174 | U | N3-C4-O4 | 6.80 | 124.16 | 119.40 |
| 26 | BB | 447 | A | N7-C8-N9 | 6.80 | 117.20 | 113.80 |
| 26 | BB | 453 | A | P-O3'-C3' | 6.80 | 127.86 | 119.70 |
| 26 | BB | 536 | G | N1-C2-N3 | -6.80 | 119.82 | 123.90 |
| 26 | BB | 1005 | C | N1-C2-N3 | -6.80 | 114.44 | 119.20 |
| 26 | BB | 1197 | G | C3'-C2'-C1' | 6.80 | 106.94 | 101.50 |
| 26 | BB | 1289 | C | C3'-C2'-C1' | 6.80 | 106.94 | 101.50 |
| 26 | BB | 1555 | G | C4'-C3'-C2' | -6.80 | 95.80 | 102.60 |
| 26 | BB | 1560 | G | C8-N9-C4 | -6.80 | 103.68 | 106.40 |
| 26 | BB | 2844 | G | N3-C4-C5 | -6.80 | 125.20 | 128.60 |
| 1 | AA | 818 | G | N9-C4-C5 | 6.80 | 108.12 | 105.40 |
| 1 | AA | 1196 | A | C5-N7-C8 | -6.80 | 100.50 | 103.90 |
| 1 | AA | 1254 | A | C5-C6-N1 | 6.80 | 121.10 | 117.70 |
| 3 | AC | 36 | U | C5-C4-O4 | -6.80 | 121.82 | 125.90 |
| 26 | BB | 342 | A | N7-C8-N9 | 6.80 | 117.20 | 113.80 |
| 26 | BB | 850 | U | N1-C2-N3 | 6.80 | 118.98 | 114.90 |
| 26 | BB | 1380 | G | C5-C6-N1 | -6.80 | 108.10 | 111.50 |
| 26 | BB | 1860 | G | N3-C4-N9 | 6.80 | 130.08 | 126.00 |
| 26 | BB | 1983 | G | C4-C5-C6 | 6.80 | 122.88 | 118.80 |
| 26 | BB | 2665 | A | N1-C6-N6 | -6.80 | 114.52 | 118.60 |
| 26 | BB | 861 | A | O4'-C1'-N9 | 6.80 | 113.64 | 108.20 |
| 26 | BB | 2631 | G | C5-C6-O6 | -6.80 | 124.52 | 128.60 |
| 1 | AA | 219 | U | N1-C2-O2 | -6.80 | 118.04 | 122.80 |
| 1 | AA | 1119 | C | C6-N1-C2 | -6.80 | 117.58 | 120.30 |
| 1 | AA | 1360 | A | C5'-C4'-O4' | 6.80 | 117.26 | 109.10 |
| 2 | AB | 65 | C | C2-N3-C4 | 6.80 | 123.30 | 119.90 |
| 23 | AW | 26 | MET | CG-SD-CE | 6.80 | 111.07 | 100.20 |
| 26 | BB | 51 | G | C6-N1-C2 | -6.80 | 121.02 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 432 | A | C5-C6-N1 | 6.80 | 121.10 | 117.70 |
| 26 | BB | 1259 | G | O4'-C4'-C3' | 6.80 | 111.54 | 106.10 |
| 26 | BB | 1346 | G | C4-C5-N7 | -6.80 | 108.08 | 110.80 |
| 26 | BB | 1456 | G | C6-N1-C2 | -6.80 | 121.02 | 125.10 |
| 26 | BB | 1836 | C | C2-N3-C4 | 6.80 | 123.30 | 119.90 |
| 26 | BB | 1861 | G | C5-C6-N1 | 6.80 | 114.90 | 111.50 |
| 26 | BB | 2287 | A | N9-C4-C5 | -6.80 | 103.08 | 105.80 |
| 26 | BB | 2450 | A | C4-C5-N7 | 6.80 | 114.10 | 110.70 |
| 1 | AA | 1455 | G | C8-N9-C4 | -6.79 | 103.68 | 106.40 |
| 26 | BB | 1039 | A | C5-N7-C8 | -6.79 | 100.50 | 103.90 |
| 26 | BB | 2053 | G | C5'-C4'-O4' | 6.79 | 117.25 | 109.10 |
| 26 | BB | 2334 | U | C3'-C2'-C1' | 6.79 | 106.94 | 101.50 |
| 26 | BB | 2512 | C | C5-C4-N4 | -6.79 | 115.44 | 120.20 |
| 33 | BI | 31 | VAL | CG1-CB-CG2 | -6.79 | 100.03 | 110.90 |
| 1 | AA | 54 | C | N1-C2-O2 | 6.79 | 122.98 | 118.90 |
| 4 | AD | 30 | G | N7-C8-N9 | 6.79 | 116.50 | 113.10 |
| 26 | BB | 575 | A | N3-C4-C5 | -6.79 | 122.04 | 126.80 |
| 26 | BB | 1159 | U | C1'-O4'-C4' | -6.79 | 104.47 | 109.90 |
| 26 | BB | 1971 | U | C5-C4-O4 | 6.79 | 129.98 | 125.90 |
| 26 | BB | 1975 | G | N7-C8-N9 | 6.79 | 116.50 | 113.10 |
| 26 | BB | 2589 | A | O4'-C1'-N9 | 6.79 | 113.64 | 108.20 |
| 28 | BD | 239 | PHE | CB-CG-CD1 | -6.79 | 116.05 | 120.80 |
| 1 | AA | 1363 | A | C1'-O4'-C4' | -6.79 | 104.47 | 109.90 |
| 25 | BA | 6 | G | N1-C6-O6 | -6.79 | 115.83 | 119.90 |
| 26 | BB | 115 | C | C4'-C3'-C2' | -6.79 | 95.81 | 102.60 |
| 26 | BB | 326 | G | C5-C6-O6 | -6.79 | 124.53 | 128.60 |
| 26 | BB | 363 | G | C2-N3-C4 | 6.79 | 115.30 | 111.90 |
| 26 | BB | 1017 | G | C5-C6-O6 | -6.79 | 124.53 | 128.60 |
| 26 | BB | 1890 | A | O4'-C1'-N9 | 6.79 | 113.63 | 108.20 |
| 26 | BB | 2204 | G | C5-C6-O6 | -6.79 | 124.53 | 128.60 |
| 26 | BB | 2559 | C | N3-C4-C5 | 6.79 | 124.62 | 121.90 |
| 1 | AA | 1152 | A | C1'-O4'-C4' | -6.79 | 104.47 | 109.90 |
| 26 | BB | 1063 | G | C5-N7-C8 | -6.79 | 100.91 | 104.30 |
| 26 | BB | 2646 | C | C4-C5-C6 | -6.79 | 114.00 | 117.40 |
| 1 | AA | 109 | A | N1-C6-N6 | 6.79 | 122.67 | 118.60 |
| 1 | AA | 306 | A | C6-C5-N7 | 6.79 | 137.05 | 132.30 |
| 1 | AA | 1068 | G | C8-N9-C4 | -6.79 | 103.69 | 106.40 |
| 7 | AG | 203 | TYR | CB-CG-CD2 | -6.79 | 116.93 | 121.00 |
| 25 | BA | 64 | G | N1-C2-N3 | 6.79 | 127.97 | 123.90 |
| 26 | BB | 43 | G | C8-N9-C4 | -6.79 | 103.68 | 106.40 |
| 26 | BB | 54 | G | C5-C6-O6 | -6.79 | 124.53 | 128.60 |
| 26 | BB | 96 | C | C2-N3-C4 | -6.79 | 116.50 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2880 | C | C3'-C2'-C1' | -6.79 | 96.07 | 101.50 |
| 1 | AA | 143 | A | O4'-C1'-N9 | -6.79 | 102.77 | 108.20 |
| 1 | AA | 1061 | G | N9-C4-C5 | 6.79 | 108.11 | 105.40 |
| 1 | AA | 1220 | G | O5'-P-OP2 | -6.79 | 99.59 | 105.70 |
| 26 | BB | 319 | G | C8-N9-C4 | -6.79 | 103.69 | 106.40 |
| 26 | BB | 1408 | G | C5-C6-O6 | -6.79 | 124.53 | 128.60 |
| 26 | BB | 1978 | A | N1-C6-N6 | -6.79 | 114.53 | 118.60 |
| 26 | BB | 2329 | U | P-O3'-C3' | 6.79 | 127.84 | 119.70 |
| 1 | AA | 184 | G | O4'-C4'-C3' | 6.79 | 111.53 | 106.10 |
| 1 | AA | 361 | G | N3-C4-C5 | -6.79 | 125.21 | 128.60 |
| 1 | AA | 871 | U | O4'-C1'-N1 | 6.79 | 113.63 | 108.20 |
| 4 | AD | 19 | G | C8-N9-C4 | -6.79 | 103.69 | 106.40 |
| 4 | AD | 54 | G | C4-C5-N7 | -6.79 | 108.09 | 110.80 |
| 26 | BB | 13 | A | C8-N9-C4 | -6.79 | 103.09 | 105.80 |
| 26 | BB | 356 | G | N3-C2-N2 | 6.79 | 124.65 | 119.90 |
| 26 | BB | 1116 | G | N1-C2-N3 | -6.79 | 119.83 | 123.90 |
| 26 | BB | 1561 | C | N3-C4-N4 | -6.79 | 113.25 | 118.00 |
| 26 | BB | 2140 | G | N3-C2-N2 | 6.79 | 124.65 | 119.90 |
| 1 | AA | 1190 | G | C8-N9-C4 | -6.78 | 103.69 | 106.40 |
| 1 | AA | 1273 | C | C5'-C4'-O4' | 6.78 | 117.24 | 109.10 |
| 1 | AA | 1540 | U | C5-C6-N1 | -6.78 | 119.31 | 122.70 |
| 4 | AD | 13 | C | C4-C5-C6 | -6.78 | 114.01 | 117.40 |
| 8 | AH | 53 | ARG | NE-CZ-NH1 | 6.78 | 123.69 | 120.30 |
| 26 | BB | 780 | G | N3-C2-N2 | 6.78 | 124.65 | 119.90 |
| 26 | BB | 1266 | G | C4-C5-N7 | -6.78 | 108.09 | 110.80 |
| 26 | BB | 2248 | C | C3'-C2'-C1' | 6.78 | 106.93 | 101.50 |
| 26 | BB | 2271 | G | C8-N9-C4 | -6.78 | 103.69 | 106.40 |
| 26 | BB | 2378 | A | O4'-C1'-N9 | 6.78 | 113.63 | 108.20 |
| 26 | BB | 2423 | U | C2-N3-C4 | -6.78 | 122.93 | 127.00 |
| 26 | BB | 2455 | G | C5-C6-N1 | 6.78 | 114.89 | 111.50 |
| 1 | AA | 514 | C | C2-N3-C4 | 6.78 | 123.29 | 119.90 |
| 26 | BB | 498 | G | P-O3'-C3' | 6.78 | 127.84 | 119.70 |
| 26 | BB | 608 | A | C5-C6-N6 | -6.78 | 118.28 | 123.70 |
| 26 | BB | 2375 | G | C4-C5-C6 | 6.78 | 122.87 | 118.80 |
| 26 | BB | 2627 | G | O4'-C4'-C3' | 6.78 | 111.53 | 106.10 |
| 26 | BB | 2869 | G | N9-C1'-C2' | -6.78 | 104.54 | 112.00 |
| 1 | AA | 789 | U | O4'-C4'-C3' | 6.78 | 111.52 | 106.10 |
| 1 | AA | 1504 | G | C1'-O4'-C4' | -6.78 | 104.48 | 109.90 |
| 1 | AA | 1526 | G | C8-N9-C4 | -6.78 | 103.69 | 106.40 |
| 25 | BA | 9 | G | N9-C4-C5 | 6.78 | 108.11 | 105.40 |
| 25 | BA | 38 | C | C5-C4-N4 | 6.78 | 124.95 | 120.20 |
| 26 | BB | 6 | A | N3-C4-C5 | -6.78 | 122.05 | 126.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 113 | U | O4'-C1'-N1 | 6.78 | 113.62 | 108.20 |
| 26 | BB | 944 | C | C5'-C4'-O4' | 6.78 | 117.24 | 109.10 |
| 26 | BB | 2425 | A | C5-N7-C8 | -6.78 | 100.51 | 103.90 |
| 26 | BB | 2635 | A | N3-C4-C5 | -6.78 | 122.05 | 126.80 |
| 26 | BB | 2683 | C | C1'-O4'-C4' | -6.78 | 104.47 | 109.90 |
| 26 | BB | 2735 | G | C5'-C4'-O4' | 6.78 | 117.23 | 109.10 |
| 1 | AA | 824 | G | N3-C4-N9 | 6.78 | 130.07 | 126.00 |
| 1 | AA | 1493 | A | C8-N9-C4 | -6.78 | 103.09 | 105.80 |
| 25 | BA | 37 | C | N3-C4-N4 | -6.78 | 113.25 | 118.00 |
| 26 | BB | 2467 | C | N3-C4-C5 | -6.78 | 119.19 | 121.90 |
| 1 | AA | 487 | A | N3-C4-C5 | -6.78 | 122.06 | 126.80 |
| 1 | AA | 831 | A | C4-C5-C6 | -6.78 | 113.61 | 117.00 |
| 1 | AA | 945 | G | C5-C6-N1 | 6.78 | 114.89 | 111.50 |
| 2 | AB | 13 | C | N1-C2-N3 | -6.78 | 114.45 | 119.20 |
| 25 | BA | 67 | G | O4'-C1'-N9 | 6.78 | 113.62 | 108.20 |
| 26 | BB | 436 | C | C4'-C3'-C2' | -6.78 | 95.82 | 102.60 |
| 26 | BB | 1207 | C | N3-C2-O2 | -6.78 | 117.16 | 121.90 |
| 26 | BB | 1263 | U | C5-C6-N1 | -6.78 | 119.31 | 122.70 |
| 26 | BB | 1271 | G | P-O3'-C3' | 6.78 | 127.83 | 119.70 |
| 26 | BB | 1520 | U | N3-C4-C5 | -6.78 | 110.53 | 114.60 |
| 26 | BB | 2639 | A | C5'-C4'-C3' | -6.78 | 105.16 | 116.00 |
| 26 | BB | 2899 | A | N7-C8-N9 | 6.78 | 117.19 | 113.80 |
| 28 | BD | 100 | ARG | NE-CZ-NH1 | 6.78 | 123.69 | 120.30 |
| 1 | AA | 115 | G | N9-C4-C5 | 6.78 | 108.11 | 105.40 |
| 3 | AC | 27 | A | O4'-C1'-C2' | -6.78 | 99.02 | 105.80 |
| 25 | BA | 14 | U | C4'-C3'-C2' | -6.78 | 95.82 | 102.60 |
| 25 | BA | 78 | A | C5-N7-C8 | -6.78 | 100.51 | 103.90 |
| 26 | BB | 163 | C | N3-C4-C5 | -6.78 | 119.19 | 121.90 |
| 26 | BB | 730 | A | O5'-C5'-C4' | -6.78 | 98.83 | 111.70 |
| 26 | BB | 1690 | A | C8-N9-C4 | -6.78 | 103.09 | 105.80 |
| 26 | BB | 2101 | A | C5-N7-C8 | 6.78 | 107.29 | 103.90 |
| 26 | BB | 2616 | C | N3-C2-O2 | 6.78 | 126.64 | 121.90 |
| 26 | BB | 2644 | G | N1-C2-N3 | -6.78 | 119.83 | 123.90 |
| 26 | BB | 2843 | G | N3-C2-N2 | -6.78 | 115.16 | 119.90 |
| 1 | AA | 524 | G | C4-C5-N7 | 6.77 | 113.51 | 110.80 |
| 3 | AC | 15 | G | N7-C8-N9 | 6.77 | 116.49 | 113.10 |
| 26 | BB | 979 | A | C2-N3-C4 | 6.77 | 113.99 | 110.60 |
| 26 | BB | 1308 | A | N7-C8-N9 | 6.77 | 117.19 | 113.80 |
| 1 | AA | 193 | C | C1'-O4'-C4' | -6.77 | 104.48 | 109.90 |
| 1 | AA | 342 | C | C6-N1-C2 | -6.77 | 117.59 | 120.30 |
| 1 | AA | 1508 | A | N9-C4-C5 | 6.77 | 108.51 | 105.80 |
| 26 | BB | 7 | G | C5-C6-O6 | -6.77 | 124.54 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 102 | U | O4'-C1'-N1 | 6.77 | 113.62 | 108.20 |
| 26 | BB | 285 | G | N3-C2-N2 | -6.77 | 115.16 | 119.90 |
| 26 | BB | 669 | G | C1'-O4'-C4' | 6.77 | 115.32 | 109.90 |
| 26 | BB | 1369 | G | C4-C5-C6 | 6.77 | 122.86 | 118.80 |
| 26 | BB | 1444 | G | C4-C5-N7 | -6.77 | 108.09 | 110.80 |
| 26 | BB | 1686 | C | N1-C1'-C2' | -6.77 | 104.55 | 112.00 |
| 26 | BB | 1755 | A | N1-C6-N6 | -6.77 | 114.54 | 118.60 |
| 26 | BB | 2614 | A | N1-C6-N6 | 6.77 | 122.66 | 118.60 |
| 26 | BB | 2614 | A | N9-C4-C5 | -6.77 | 103.09 | 105.80 |
| 1 | AA | 139 | A | N9-C4-C5 | 6.77 | 108.51 | 105.80 |
| 4 | AD | 46 | G | N1-C6-O6 | 6.77 | 123.96 | 119.90 |
| 26 | BB | 269 | C | O5'-C5'-C4' | -6.77 | 98.83 | 111.70 |
| 26 | BB | 1467 | U | N3-C2-O2 | -6.77 | 117.46 | 122.20 |
| 26 | BB | 1521 | G | C4'-C3'-C2' | -6.77 | 95.83 | 102.60 |
| 26 | BB | 2060 | A | C4'-C3'-C2' | -6.77 | 95.83 | 102.60 |
| 1 | AA | 613 | C | C5-C6-N1 | 6.77 | 124.39 | 121.00 |
| 1 | AA | 657 | U | N1-C2-O2 | 6.77 | 127.54 | 122.80 |
| 1 | AA | 696 | A | C3'-C2'-C1' | -6.77 | 96.08 | 101.50 |
| 1 | AA | 879 | C | O4'-C1'-N1 | 6.77 | 113.61 | 108.20 |
| 1 | AA | 1222 | G | C3'-C2'-C1' | 6.77 | 106.92 | 101.50 |
| 1 | AA | 1262 | C | N3-C2-O2 | -6.77 | 117.16 | 121.90 |
| 25 | BA | 17 | C | C1'-O4'-C4' | 6.77 | 115.32 | 109.90 |
| 26 | BB | 322 | A | P-O3'-C3' | 6.77 | 127.83 | 119.70 |
| 26 | BB | 1221 | C | O4'-C1'-N1 | 6.77 | 113.61 | 108.20 |
| 26 | BB | 1935 | G | C6-C5-N7 | -6.77 | 126.34 | 130.40 |
| 26 | BB | 2106 | U | N3-C2-O2 | -6.77 | 117.46 | 122.20 |
| 26 | BB | 2377 | A | O4'-C4'-C3' | 6.77 | 111.52 | 106.10 |
| 26 | BB | 2422 | C | C5-C6-N1 | 6.77 | 124.39 | 121.00 |
| 26 | BB | 2468 | A | C4'-C3'-C2' | -6.77 | 95.83 | 102.60 |
| 26 | BB | 2476 | A | C3'-C2'-C1' | 6.77 | 106.92 | 101.50 |
| 26 | BB | 2895 | G | C5-N7-C8 | -6.77 | 100.92 | 104.30 |
| 1 | AA | 601 | G | N9-C4-C5 | -6.77 | 102.69 | 105.40 |
| 1 | AA | 890 | G | O4'-C1'-N9 | 6.77 | 113.61 | 108.20 |
| 1 | AA | 1068 | G | P-O5'-C5' | 6.77 | 131.73 | 120.90 |
| 26 | BB | 762 | U | C5-C4-O4 | -6.77 | 121.84 | 125.90 |
| 26 | BB | 827 | U | N1-C2-N3 | 6.77 | 118.96 | 114.90 |
| 26 | BB | 1121 | C | C6-N1-C2 | -6.77 | 117.59 | 120.30 |
| 26 | BB | 1545 | A | N9-C1'-C2' | -6.77 | 104.56 | 112.00 |
| 26 | BB | 1645 | G | N1-C6-O6 | 6.77 | 123.96 | 119.90 |
| 26 | BB | 2353 | G | C5-N7-C8 | 6.77 | 107.68 | 104.30 |
| 1 | AA | 1074 | G | C5-N7-C8 | -6.77 | 100.92 | 104.30 |
| 1 | AA | 1170 | A | N9-C4-C5 | 6.77 | 108.51 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 21 | A | C4-C5-N7 | 6.77 | 114.08 | 110.70 |
| 26 | BB | 750 | A | N7-C8-N9 | 6.77 | 117.18 | 113.80 |
| 26 | BB | 1020 | A | C3'-C2'-C1' | 6.77 | 106.91 | 101.50 |
| 26 | BB | 1284 | A | C5'-C4'-O4' | 6.77 | 117.22 | 109.10 |
| 26 | BB | 1613 | G | C8-N9-C4 | -6.77 | 103.69 | 106.40 |
| 26 | BB | 2076 | U | N3-C4-O4 | 6.77 | 124.14 | 119.40 |
| 1 | AA | 43 | C | O4'-C1'-N1 | 6.76 | 113.61 | 108.20 |
| 1 | AA | 324 | G | N7-C8-N9 | 6.76 | 116.48 | 113.10 |
| 1 | AA | 422 | C | C4-C5-C6 | -6.76 | 114.02 | 117.40 |
| 1 | AA | 707 | U | C4-C5-C6 | 6.76 | 123.76 | 119.70 |
| 1 | AA | 1028 | C | C6-N1-C2 | -6.76 | 117.59 | 120.30 |
| 1 | AA | 1125 | U | N3-C2-O2 | -6.76 | 117.46 | 122.20 |
| 2 | AB | 30 | G | C2-N3-C4 | -6.76 | 108.52 | 111.90 |
| 4 | AD | 35 | C | C5-C4-N4 | -6.76 | 115.47 | 120.20 |
| 7 | AG | 72 | ARG | NE-CZ-NH2 | -6.76 | 116.92 | 120.30 |
| 25 | BA | 3 | C | C4-C5-C6 | 6.76 | 120.78 | 117.40 |
| 26 | BB | 339 | U | N3-C2-O2 | -6.76 | 117.47 | 122.20 |
| 26 | BB | 531 | C | C6-N1-C2 | -6.76 | 117.59 | 120.30 |
| 26 | BB | 767 | U | N1-C2-O2 | 6.76 | 127.53 | 122.80 |
| 26 | BB | 868 | U | O4'-C1'-N1 | 6.76 | 113.61 | 108.20 |
| 26 | BB | 1466 | U | N3-C2-O2 | -6.76 | 117.47 | 122.20 |
| 26 | BB | 1619 | G | C5-C6-N1 | 6.76 | 114.88 | 111.50 |
| 26 | BB | 1667 | G | N7-C8-N9 | 6.76 | 116.48 | 113.10 |
| 26 | BB | 1814 | G | C4-C5-C6 | 6.76 | 122.86 | 118.80 |
| 26 | BB | 1933 | G | N3-C4-C5 | 6.76 | 131.98 | 128.60 |
| 26 | BB | 2179 | C | O4'-C1'-N1 | 6.76 | 113.61 | 108.20 |
| 26 | BB | 2597 | G | N3-C2-N2 | -6.76 | 115.16 | 119.90 |
| 26 | BB | 2718 | G | C4'-C3'-C2' | -6.76 | 95.84 | 102.60 |
| 1 | AA | 956 | U | C4-C5-C6 | -6.76 | 115.64 | 119.70 |
| 26 | BB | 447 | A | C3'-C2'-C1' | 6.76 | 106.91 | 101.50 |
| 26 | BB | 1684 | G | C6-C5-N7 | -6.76 | 126.34 | 130.40 |
| 26 | BB | 2900 | A | C4-C5-N7 | -6.76 | 107.32 | 110.70 |
| 1 | AA | 27 | G | N1-C6-O6 | 6.76 | 123.96 | 119.90 |
| 1 | AA | 1313 | U | N1-C1'-C2' | -6.76 | 104.56 | 112.00 |
| 26 | BB | 221 | A | C3'-C2'-C1' | 6.76 | 106.91 | 101.50 |
| 26 | BB | 364 | C | C5-C6-N1 | 6.76 | 124.38 | 121.00 |
| 26 | BB | 912 | C | C4-C5-C6 | 6.76 | 120.78 | 117.40 |
| 26 | BB | 2502 | G | C5-N7-C8 | -6.76 | 100.92 | 104.30 |
| 26 | BB | 2816 | G | C8-N9-C4 | -6.76 | 103.69 | 106.40 |
| 1 | AA | 360 | G | N3-C4-C5 | -6.76 | 125.22 | 128.60 |
| 7 | AG | 50 | TYR | CD1-CG-CD2 | 6.76 | 125.34 | 117.90 |
| 25 | BA | 53 | A | C6-N1-C2 | -6.76 | 114.54 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1034 | G | C5-C6-N1 | -6.76 | 108.12 | 111.50 |
| 26 | BB | 1215 | G | C6-C5-N7 | -6.76 | 126.34 | 130.40 |
| 26 | BB | 1328 | A | P-O3'-C3' | 6.76 | 127.81 | 119.70 |
| 1 | AA | 232 | G | N3-C4-C5 | -6.76 | 125.22 | 128.60 |
| 1 | AA | 775 | G | N7-C8-N9 | 6.76 | 116.48 | 113.10 |
| 1 | AA | 844 | G | O4'-C1'-N9 | 6.76 | 113.61 | 108.20 |
| 25 | BA | 63 | C | N1-C2-O2 | 6.76 | 122.95 | 118.90 |
| 26 | BB | 2820 | A | N3-C4-C5 | -6.76 | 122.07 | 126.80 |
| 27 | BC | 43 | ASP | CB-CG-OD1 | -6.76 | 112.22 | 118.30 |
| 1 | AA | 958 | A | N1-C2-N3 | 6.76 | 132.68 | 129.30 |
| 1 | AA | 1509 | C | N3-C4-C5 | -6.76 | 119.20 | 121.90 |
| 26 | BB | 2261 | C | N3-C4-C5 | -6.76 | 119.20 | 121.90 |
| 33 | BI | 97 | ARG | CD-NE-CZ | 6.76 | 133.06 | 123.60 |
| 1 | AA | 532 | A | N3-C4-C5 | -6.75 | 122.07 | 126.80 |
| 2 | AB | 58 | A | P-O3'-C3' | 6.75 | 127.81 | 119.70 |
| 26 | BB | 695 | G | N9-C4-C5 | -6.75 | 102.70 | 105.40 |
| 26 | BB | 1368 | G | C3'-C2'-C1' | -6.75 | 96.10 | 101.50 |
| 26 | BB | 2152 | G | C6-C5-N7 | -6.75 | 126.35 | 130.40 |
| 26 | BB | 2572 | A | C3'-C2'-C1' | 6.75 | 106.90 | 101.50 |
| 1 | AA | 39 | G | N3-C4-N9 | -6.75 | 121.95 | 126.00 |
| 1 | AA | 412 | A | N7-C8-N9 | 6.75 | 117.18 | 113.80 |
| 1 | AA | 423 | G | C5-C6-N1 | 6.75 | 114.88 | 111.50 |
| 1 | AA | 913 | A | C8-N9-C4 | 6.75 | 108.50 | 105.80 |
| 1 | AA | 1437 | A | C1'-O4'-C4' | -6.75 | 104.50 | 109.90 |
| 4 | AD | 14 | A | C6-C5-N7 | -6.75 | 127.57 | 132.30 |
| 5 | AE | 234 | GLU | OE1-CD-OE2 | 6.75 | 131.40 | 123.30 |
| 26 | BB | 231 | A | C2'-C3'-O3' | 6.75 | 124.50 | 113.70 |
| 26 | BB | 1869 | G | N1-C6-O6 | -6.75 | 115.85 | 119.90 |
| 26 | BB | 1948 | G | O4'-C1'-N9 | -6.75 | 102.80 | 108.20 |
| 1 | AA | 1150 | A | C1'-O4'-C4' | -6.75 | 104.50 | 109.90 |
| 1 | AA | 1294 | G | N1-C6-O6 | 6.75 | 123.95 | 119.90 |
| 2 | AB | 18 | G | N9-C4-C5 | 6.75 | 108.10 | 105.40 |
| 3 | AC | 44 | U | C2-N3-C4 | -6.75 | 122.95 | 127.00 |
| 26 | BB | 173 | A | O4'-C1'-N9 | 6.75 | 113.60 | 108.20 |
| 26 | BB | 285 | G | O4'-C1'-N9 | 6.75 | 113.60 | 108.20 |
| 26 | BB | 620 | G | N1-C2-N2 | 6.75 | 122.28 | 116.20 |
| 26 | BB | 1091 | G | O4'-C1'-C2' | 6.75 | 113.68 | 107.60 |
| 26 | BB | 1230 | A | N9-C4-C5 | 6.75 | 108.50 | 105.80 |
| 26 | BB | 1461 | C | C4-C5-C6 | -6.75 | 114.02 | 117.40 |
| 26 | BB | 1500 | G | C4-C5-N7 | 6.75 | 113.50 | 110.80 |
| 26 | BB | 1673 | G | C6-N1-C2 | -6.75 | 121.05 | 125.10 |
| 26 | BB | 2220 | U | N1-C2-N3 | 6.75 | 118.95 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2695 | U | O5'-P-OP1 | -6.75 | 99.62 | 105.70 |
| 1 | AA | 1072 | G | N1-C2-N2 | -6.75 | 110.12 | 116.20 |
| 1 | AA | 1096 | C | N3-C4-C5 | -6.75 | 119.20 | 121.90 |
| 1 | AA | 1512 | U | C3'-C2'-C1' | 6.75 | 106.90 | 101.50 |
| 26 | BB | 57 | C | C4-C5-C6 | -6.75 | 114.03 | 117.40 |
| 26 | BB | 1032 | A | C5-C6-N1 | -6.75 | 114.33 | 117.70 |
| 26 | BB | 1797 | G | C5-N7-C8 | -6.75 | 100.92 | 104.30 |
| 1 | AA | 216 | U | C6-N1-C2 | -6.75 | 116.95 | 121.00 |
| 1 | AA | 417 | G | N1-C6-O6 | -6.75 | 115.85 | 119.90 |
| 1 | AA | 509 | A | C4-C5-N7 | -6.75 | 107.33 | 110.70 |
| 1 | AA | 1033 | G | N3-C2-N2 | -6.75 | 115.18 | 119.90 |
| 26 | BB | 33 | C | O4'-C1'-N1 | 6.75 | 113.60 | 108.20 |
| 26 | BB | 55 | G | C4'-C3'-C2' | -6.75 | 95.85 | 102.60 |
| 26 | BB | 74 | A | N9-C4-C5 | -6.75 | 103.10 | 105.80 |
| 26 | BB | 453 | A | C5-N7-C8 | 6.75 | 107.27 | 103.90 |
| 26 | BB | 650 | C | N1-C2-O2 | 6.75 | 122.95 | 118.90 |
| 26 | BB | 971 | G | C2-N3-C4 | 6.75 | 115.28 | 111.90 |
| 26 | BB | 1084 | A | N9-C4-C5 | 6.75 | 108.50 | 105.80 |
| 26 | BB | 1296 | G | O4'-C1'-N9 | -6.75 | 102.80 | 108.20 |
| 26 | BB | 1945 | G | P-O3'-C3' | 6.75 | 127.80 | 119.70 |
| 26 | BB | 2020 | A | C5'-C4'-O4' | 6.75 | 117.20 | 109.10 |
| 26 | BB | 2806 | C | P-O3'-C3' | 6.75 | 127.80 | 119.70 |
| 1 | AA | 188 | C | P-O3'-C3' | 6.75 | 127.80 | 119.70 |
| 1 | AA | 568 | G | C3'-C2'-C1' | 6.75 | 106.90 | 101.50 |
| 1 | AA | 775 | G | C4-C5-N7 | -6.75 | 108.10 | 110.80 |
| 1 | AA | 804 | U | C1'-O4'-C4' | 6.75 | 115.30 | 109.90 |
| 2 | AB | 59 | G | C5-C6-N1 | -6.75 | 108.13 | 111.50 |
| 26 | BB | 326 | G | N7-C8-N9 | 6.75 | 116.47 | 113.10 |
| 26 | BB | 417 | C | C5-C4-N4 | 6.75 | 124.92 | 120.20 |
| 26 | BB | 540 | C | N3-C2-O2 | -6.75 | 117.18 | 121.90 |
| 26 | BB | 907 | G | N9-C4-C5 | 6.75 | 108.10 | 105.40 |
| 26 | BB | 1214 | A | C8-N9-C4 | -6.75 | 103.10 | 105.80 |
| 26 | BB | 1374 | G | N3-C4-C5 | -6.75 | 125.23 | 128.60 |
| 26 | BB | 1435 | G | N9-C4-C5 | 6.75 | 108.10 | 105.40 |
| 26 | BB | 1489 | C | C5'-C4'-O4' | 6.75 | 117.20 | 109.10 |
| 26 | BB | 1974 | C | C5-C4-N4 | -6.75 | 115.48 | 120.20 |
| 45 | BU | 50 | VAL | CA-CB-CG1 | 6.75 | 121.02 | 110.90 |
| 1 | AA | 25 | C | N3-C4-N4 | 6.75 | 122.72 | 118.00 |
| 1 | AA | 371 | A | C4-C5-C6 | -6.75 | 113.63 | 117.00 |
| 1 | AA | 617 | G | C4'-C3'-C2' | -6.75 | 95.86 | 102.60 |
| 26 | BB | 144 | A | C5'-C4'-O4' | 6.75 | 117.19 | 109.10 |
| 26 | BB | 342 | A | C5-N7-C8 | -6.75 | 100.53 | 103.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2795 | C | C5'-C4'-O4' | 6.75 | 117.19 | 109.10 |
| 1 | AA | 993 | G | C1'-O4'-C4' | 6.74 | 115.30 | 109.90 |
| 25 | BA | 41 | G | C5-N7-C8 | -6.74 | 100.93 | 104.30 |
| 26 | BB | 298 | G | N9-C4-C5 | 6.74 | 108.10 | 105.40 |
| 26 | BB | 689 | A | C4'-C3'-C2' | -6.74 | 95.86 | 102.60 |
| 26 | BB | 904 | G | C5-C6-O6 | 6.74 | 132.65 | 128.60 |
| 26 | BB | 1240 | U | N3-C4-O4 | 6.74 | 124.12 | 119.40 |
| 26 | BB | 1423 | G | C5-N7-C8 | -6.74 | 100.93 | 104.30 |
| 26 | BB | 1567 | G | N7-C8-N9 | 6.74 | 116.47 | 113.10 |
| 26 | BB | 1853 | A | N1-C2-N3 | 6.74 | 132.67 | 129.30 |
| 26 | BB | 2494 | G | N3-C2-N2 | -6.74 | 115.18 | 119.90 |
| 26 | BB | 2827 | C | C3'-C2'-C1' | -6.74 | 96.11 | 101.50 |
| 1 | AA | 1539 | C | C4'-C3'-C2' | 6.74 | 109.34 | 102.60 |
| 26 | BB | 704 | G | C5-C6-O6 | -6.74 | 124.56 | 128.60 |
| 26 | BB | 1264 | A | N1-C2-N3 | 6.74 | 132.67 | 129.30 |
| 26 | BB | 1372 | U | C5-C4-O4 | -6.74 | 121.86 | 125.90 |
| 26 | BB | 1495 | A | N3-C4-N9 | 6.74 | 132.79 | 127.40 |
| 26 | BB | 1963 | U | C1'-O4'-C4' | -6.74 | 104.51 | 109.90 |
| 26 | BB | 2505 | G | P-O3'-C3' | 6.74 | 127.79 | 119.70 |
| 26 | BB | 2581 | G | C5-N7-C8 | -6.74 | 100.93 | 104.30 |
| 1 | AA | 31 | G | O4'-C1'-N9 | 6.74 | 113.59 | 108.20 |
| 1 | AA | 212 | G | C5-C6-N1 | 6.74 | 114.87 | 111.50 |
| 1 | AA | 546 | A | N1-C6-N6 | -6.74 | 114.56 | 118.60 |
| 1 | AA | 584 | G | C4-C5-N7 | -6.74 | 108.10 | 110.80 |
| 1 | AA | 1088 | G | C4-C5-C6 | -6.74 | 114.76 | 118.80 |
| 26 | BB | 57 | C | C5-C4-N4 | -6.74 | 115.48 | 120.20 |
| 26 | BB | 642 | U | C6-N1-C2 | -6.74 | 116.95 | 121.00 |
| 26 | BB | 1339 | G | C2-N3-C4 | 6.74 | 115.27 | 111.90 |
| 26 | BB | 1399 | C | C5-C6-N1 | 6.74 | 124.37 | 121.00 |
| 26 | BB | 1673 | G | C3'-C2'-C1' | 6.74 | 106.89 | 101.50 |
| 26 | BB | 2565 | A | P-O3'-C3' | 6.74 | 127.79 | 119.70 |
| 1 | AA | 178 | C | N3-C4-C5 | -6.74 | 119.20 | 121.90 |
| 1 | AA | 704 | A | N1-C2-N3 | -6.74 | 125.93 | 129.30 |
| 1 | AA | 1145 | A | C5-C6-N1 | 6.74 | 121.07 | 117.70 |
| 4 | AD | 67 | C | C6-N1-C2 | -6.74 | 117.61 | 120.30 |
| 26 | BB | 21 | A | C8-N9-C4 | 6.74 | 108.50 | 105.80 |
| 26 | BB | 1004 | U | C5-C4-O4 | 6.74 | 129.94 | 125.90 |
| 26 | BB | 1140 | C | N3-C2-O2 | -6.74 | 117.18 | 121.90 |
| 26 | BB | 1534 | U | C3'-C2'-C1' | 6.74 | 106.89 | 101.50 |
| 26 | BB | 1715 | G | N1-C6-O6 | -6.74 | 115.86 | 119.90 |
| 26 | BB | 2509 | G | C6-C5-N7 | -6.74 | 126.36 | 130.40 |
| 1 | AA | 22 | G | C8-N9-C4 | -6.74 | 103.70 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 550 | G | N9-C4-C5 | 6.74 | 108.09 | 105.40 |
| 1 | AA | 872 | A | C6-N1-C2 | 6.74 | 122.64 | 118.60 |
| 1 | AA | 1111 | A | N9-C4-C5 | -6.74 | 103.11 | 105.80 |
| 26 | BB | 893 | C | N3-C2-O2 | -6.74 | 117.18 | 121.90 |
| 26 | BB | 957 | C | C5-C6-N1 | -6.74 | 117.63 | 121.00 |
| 26 | BB | 1370 | C | N3-C4-C5 | -6.74 | 119.20 | 121.90 |
| 26 | BB | 1390 | U | C4-C5-C6 | 6.74 | 123.74 | 119.70 |
| 26 | BB | 1608 | A | C5-N7-C8 | -6.74 | 100.53 | 103.90 |
| 26 | BB | 2200 | C | C2-N3-C4 | -6.74 | 116.53 | 119.90 |
| 26 | BB | 2634 | A | N1-C2-N3 | -6.74 | 125.93 | 129.30 |
| 1 | AA | 202 | G | O4'-C4'-C3' | 6.74 | 111.49 | 106.10 |
| 1 | AA | 930 | C | N1-C2-O2 | 6.74 | 122.94 | 118.90 |
| 25 | BA | 18 | G | C6-C5-N7 | -6.74 | 126.36 | 130.40 |
| 26 | BB | 460 | A | N1-C6-N6 | -6.74 | 114.56 | 118.60 |
| 26 | BB | 668 | A | O4'-C1'-N9 | -6.74 | 102.81 | 108.20 |
| 26 | BB | 712 | G | N3-C2-N2 | 6.74 | 124.61 | 119.90 |
| 26 | BB | 1638 | C | O4'-C1'-N1 | 6.74 | 113.59 | 108.20 |
| 26 | BB | 1807 | G | C5-C6-N1 | 6.74 | 114.87 | 111.50 |
| 26 | BB | 2193 | G | C5-N7-C8 | 6.74 | 107.67 | 104.30 |
| 26 | BB | 2488 | G | N3-C4-C5 | -6.74 | 125.23 | 128.60 |
| 44 | BT | 92 | TRP | CD1-CG-CD2 | -6.74 | 100.91 | 106.30 |
| 26 | BB | 180 | G | C8-N9-C4 | -6.73 | 103.71 | 106.40 |
| 26 | BB | 453 | A | C8-N9-C4 | -6.73 | 103.11 | 105.80 |
| 26 | BB | 1294 | U | N1-C2-N3 | 6.73 | 118.94 | 114.90 |
| 26 | BB | 1433 | A | C5'-C4'-O4' | 6.73 | 117.18 | 109.10 |
| 26 | BB | 1695 | G | C5-C6-N1 | -6.73 | 108.13 | 111.50 |
| 26 | BB | 2235 | G | C4'-C3'-C2' | -6.73 | 95.87 | 102.60 |
| 26 | BB | 2672 | U | C6-N1-C2 | -6.73 | 116.96 | 121.00 |
| 26 | BB | 2751 | G | C6-C5-N7 | 6.73 | 134.44 | 130.40 |
| 1 | AA | 561 | U | C4-C5-C6 | 6.73 | 123.74 | 119.70 |
| 1 | AA | 1351 | U | C6-N1-C2 | -6.73 | 116.96 | 121.00 |
| 1 | AA | 1448 | C | N1-C1'-C2' | 6.73 | 122.75 | 114.00 |
| 26 | BB | 269 | C | C4'-C3'-C2' | -6.73 | 95.87 | 102.60 |
| 26 | BB | 394 | C | N1-C2-O2 | 6.73 | 122.94 | 118.90 |
| 26 | BB | 1006 | C | N3-C4-N4 | 6.73 | 122.71 | 118.00 |
| 26 | BB | 1047 | G | C4-C5-N7 | -6.73 | 108.11 | 110.80 |
| 26 | BB | 1339 | G | N9-C4-C5 | 6.73 | 108.09 | 105.40 |
| 26 | BB | 2315 | G | C8-N9-C4 | -6.73 | 103.71 | 106.40 |
| 28 | BD | 211 | ARG | NE-CZ-NH2 | 6.73 | 123.67 | 120.30 |
| 1 | AA | 1152 | A | C4-C5-N7 | -6.73 | 107.33 | 110.70 |
| 3 | AC | 57 | C | C6-N1-C2 | -6.73 | 117.61 | 120.30 |
| 6 | AF | 180 | ASP | CB-CG-OD2 | -6.73 | 112.24 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 76 | G | C5'-C4'-O4' | 6.73 | 117.18 | 109.10 |
| 26 | BB | 1638 | C | N1-C2-N3 | 6.73 | 123.91 | 119.20 |
| 26 | BB | 2003 | A | O5'-P-OP2 | -6.73 | 99.64 | 105.70 |
| 26 | BB | 2312 | U | O4'-C1'-N1 | 6.73 | 113.58 | 108.20 |
| 1 | AA | 1014 | A | N9-C4-C5 | 6.73 | 108.49 | 105.80 |
| 26 | BB | 654 | A | O4'-C4'-C3' | -6.73 | 97.27 | 104.00 |
| 26 | BB | 657 | U | C5'-C4'-O4' | 6.73 | 117.17 | 109.10 |
| 26 | BB | 1857 | G | C6-N1-C2 | -6.73 | 121.06 | 125.10 |
| 26 | BB | 2101 | A | C4-C5-N7 | -6.73 | 107.33 | 110.70 |
| 26 | BB | 2258 | C | N1-C2-O2 | 6.73 | 122.94 | 118.90 |
| 26 | BB | 2462 | C | O4'-C4'-C3' | 6.73 | 111.48 | 106.10 |
| 26 | BB | 2671 | G | C6-N1-C2 | -6.73 | 121.06 | 125.10 |
| 26 | BB | 2735 | G | C2-N3-C4 | -6.73 | 108.54 | 111.90 |
| 26 | BB | 2868 | A | N9-C1'-C2' | -6.73 | 104.60 | 112.00 |
| 42 | BR | 81 | ASP | CB-CG-OD2 | -6.73 | 112.24 | 118.30 |
| 1 | AA | 373 | A | O4'-C1'-N9 | 6.73 | 113.58 | 108.20 |
| 1 | AA | 943 | U | N3-C2-O2 | 6.73 | 126.91 | 122.20 |
| 26 | BB | 75 | G | C6-N1-C2 | -6.73 | 121.06 | 125.10 |
| 26 | BB | 315 | G | N1-C2-N3 | 6.73 | 127.94 | 123.90 |
| 26 | BB | 707 | G | O4'-C4'-C3' | 6.73 | 111.48 | 106.10 |
| 26 | BB | 1600 | C | C4-C5-C6 | 6.73 | 120.76 | 117.40 |
| 26 | BB | 1625 | C | C5-C4-N4 | -6.73 | 115.49 | 120.20 |
| 26 | BB | 2001 | C | C5-C6-N1 | 6.73 | 124.36 | 121.00 |
| 1 | AA | 224 | U | C3'-C2'-C1' | 6.73 | 106.88 | 101.50 |
| 1 | AA | 823 | C | C3'-C2'-C1' | 6.73 | 106.88 | 101.50 |
| 1 | AA | 1465 | A | O4'-C1'-C2' | 6.73 | 113.65 | 107.60 |
| 1 | AA | 1485 | U | C6-N1-C2 | -6.73 | 116.96 | 121.00 |
| 4 | AD | 59 | A | C3'-C2'-C1' | 6.73 | 106.88 | 101.50 |
| 26 | BB | 68 | G | C8-N9-C1' | 6.73 | 135.74 | 127.00 |
| 26 | BB | 82 | U | C4-C5-C6 | 6.73 | 123.74 | 119.70 |
| 26 | BB | 542 | C | O4'-C1'-N1 | 6.73 | 113.58 | 108.20 |
| 26 | BB | 1936 | A | C3'-C2'-C1' | -6.73 | 96.12 | 101.50 |
| 26 | BB | 2042 | A | C5'-C4'-O4' | 6.73 | 117.17 | 109.10 |
| 26 | BB | 2598 | A | N9-C4-C5 | -6.73 | 103.11 | 105.80 |
| 1 | AA | 235 | C | C2-N3-C4 | -6.72 | 116.54 | 119.90 |
| 1 | AA | 1290 | G | O4'-C4'-C3' | -6.72 | 97.28 | 104.00 |
| 6 | AF | 96 | VAL | CA-CB-CG2 | 6.72 | 120.99 | 110.90 |
| 26 | BB | 549 | G | C8-N9-C4 | -6.72 | 103.71 | 106.40 |
| 26 | BB | 1098 | A | N7-C8-N9 | -6.72 | 110.44 | 113.80 |
| 26 | BB | 1401 | G | C6-C5-N7 | -6.72 | 126.36 | 130.40 |
| 26 | BB | 1677 | A | C2-N3-C4 | 6.72 | 113.96 | 110.60 |
| 26 | BB | 1944 | U | C2-N3-C4 | -6.72 | 122.97 | 127.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2421 | G | N9-C1'-C2' | -6.72 | 104.60 | 112.00 |
| 26 | BB | 2641 | G | C8-N9-C4 | -6.72 | 103.71 | 106.40 |
| 26 | BB | 2750 | A | C2-N3-C4 | -6.72 | 107.24 | 110.60 |
| 1 | AA | 468 | A | C5'-C4'-O4' | 6.72 | 117.17 | 109.10 |
| 26 | BB | 185 | G | N3-C2-N2 | -6.72 | 115.19 | 119.90 |
| 26 | BB | 601 | C | O4'-C1'-N1 | 6.72 | 113.58 | 108.20 |
| 26 | BB | 1061 | U | P-O3'-C3' | 6.72 | 127.77 | 119.70 |
| 26 | BB | 1529 | G | N3-C2-N2 | -6.72 | 115.19 | 119.90 |
| 26 | BB | 1719 | G | C3'-C2'-C1' | -6.72 | 96.12 | 101.50 |
| 26 | BB | 2519 | U | N3-C4-C5 | -6.72 | 110.57 | 114.60 |
| 33 | BI | 137 | GLU | OE1-CD-OE2 | 6.72 | 131.37 | 123.30 |
| 1 | AA | 745 | G | C2-N3-C4 | 6.72 | 115.26 | 111.90 |
| 1 | AA | 1060 | U | O4'-C1'-N1 | 6.72 | 113.58 | 108.20 |
| 1 | AA | 1215 | G | C6-C5-N7 | -6.72 | 126.37 | 130.40 |
| 26 | BB | 957 | C | N1-C2-O2 | 6.72 | 122.93 | 118.90 |
| 26 | BB | 1151 | A | N7-C8-N9 | 6.72 | 117.16 | 113.80 |
| 26 | BB | 1524 | G | N7-C8-N9 | 6.72 | 116.46 | 113.10 |
| 26 | BB | 1788 | C | O4'-C1'-N1 | 6.72 | 113.58 | 108.20 |
| 26 | BB | 2837 | A | N3-C4-C5 | 6.72 | 131.50 | 126.80 |
| 1 | AA | 89 | U | N1-C2-O2 | 6.72 | 127.50 | 122.80 |
| 1 | AA | 1246 | A | C6-C5-N7 | -6.72 | 127.60 | 132.30 |
| 26 | BB | 481 | G | C4-C5-C6 | 6.72 | 122.83 | 118.80 |
| 26 | BB | 900 | A | C2'-C3'-O3' | 6.72 | 124.45 | 113.70 |
| 26 | BB | 1147 | A | N7-C8-N9 | -6.72 | 110.44 | 113.80 |
| 26 | BB | 2082 | A | C8-N9-C4 | -6.72 | 103.11 | 105.80 |
| 26 | BB | 2286 | G | C4-C5-C6 | 6.72 | 122.83 | 118.80 |
| 26 | BB | 2377 | A | C4'-C3'-C2' | -6.72 | 95.88 | 102.60 |
| 26 | BB | 2722 | G | N3-C2-N2 | -6.72 | 115.20 | 119.90 |
| 1 | AA | 338 | A | C4-C5-N7 | -6.72 | 107.34 | 110.70 |
| 2 | AB | 72 | U | N1-C2-O2 | 6.72 | 127.50 | 122.80 |
| 26 | BB | 545 | U | C3'-C2'-C1' | -6.72 | 96.12 | 101.50 |
| 26 | BB | 722 | A | N9-C4-C5 | 6.72 | 108.49 | 105.80 |
| 26 | BB | 1864 | U | C5-C6-N1 | 6.72 | 126.06 | 122.70 |
| 26 | BB | 2101 | A | N7-C8-N9 | -6.72 | 110.44 | 113.80 |
| 1 | AA | 933 | G | N9-C4-C5 | -6.72 | 102.71 | 105.40 |
| 26 | BB | 259 | G | N3-C4-C5 | -6.72 | 125.24 | 128.60 |
| 26 | BB | 943 | A | C5-C6-N6 | 6.72 | 129.07 | 123.70 |
| 26 | BB | 1358 | G | N7-C8-N9 | 6.72 | 116.46 | 113.10 |
| 26 | BB | 1468 | U | C4-C5-C6 | 6.72 | 123.73 | 119.70 |
| 26 | BB | 1541 | C | O4'-C1'-N1 | 6.72 | 113.57 | 108.20 |
| 26 | BB | 1985 | C | N1-C1'-C2' | -6.72 | 104.61 | 112.00 |
| 26 | BB | 2621 | G | C4-C5-C6 | 6.72 | 122.83 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 30 | BF | 44 | ARG | NE-CZ-NH1 | -6.72 | 116.94 | 120.30 |
| 54 | B3 | 9 | ARG | NE-CZ-NH2 | 6.72 | 123.66 | 120.30 |
| 1 | AA | 313 | A | N7-C8-N9 | 6.71 | 117.16 | 113.80 |
| 1 | AA | 1097 | C | C4-C5-C6 | -6.71 | 114.04 | 117.40 |
| 1 | AA | 1239 | A | C4-C5-C6 | -6.71 | 113.64 | 117.00 |
| 18 | AR | 62 | ARG | NE-CZ-NH1 | -6.71 | 116.94 | 120.30 |
| 25 | BA | 75 | G | N1-C6-O6 | 6.71 | 123.93 | 119.90 |
| 26 | BB | 245 | G | C4-C5-C6 | -6.71 | 114.77 | 118.80 |
| 26 | BB | 434 | U | N3-C4-O4 | 6.71 | 124.10 | 119.40 |
| 26 | BB | 743 | A | C6-N1-C2 | -6.71 | 114.57 | 118.60 |
| 26 | BB | 874 | G | C4'-C3'-C2' | -6.71 | 95.89 | 102.60 |
| 26 | BB | 902 | C | C5-C6-N1 | 6.71 | 124.36 | 121.00 |
| 26 | BB | 1015 | U | O4'-C1'-N1 | 6.71 | 113.57 | 108.20 |
| 26 | BB | 2803 | G | C6-N1-C2 | -6.71 | 121.07 | 125.10 |
| 1 | AA | 9 | G | N3-C4-N9 | 6.71 | 130.03 | 126.00 |
| 1 | AA | 419 | C | N3-C2-O2 | -6.71 | 117.20 | 121.90 |
| 26 | BB | 20 | C | N1-C2-O2 | 6.71 | 122.93 | 118.90 |
| 26 | BB | 2214 | C | C5-C6-N1 | -6.71 | 117.64 | 121.00 |
| 26 | BB | 2284 | A | C2-N3-C4 | 6.71 | 113.96 | 110.60 |
| 1 | AA | 104 | G | C5-N7-C8 | 6.71 | 107.66 | 104.30 |
| 1 | AA | 243 | A | C5-C6-N1 | 6.71 | 121.06 | 117.70 |
| 1 | AA | 1149 | C | O4'-C1'-N1 | 6.71 | 113.57 | 108.20 |
| 1 | AA | 1263 | C | C2-N3-C4 | 6.71 | 123.26 | 119.90 |
| 3 | AC | 56 | G | C5-C6-O6 | -6.71 | 124.57 | 128.60 |
| 26 | BB | 58 | G | C4-C5-N7 | 6.71 | 113.48 | 110.80 |
| 26 | BB | 500 | G | N1-C6-O6 | -6.71 | 115.87 | 119.90 |
| 26 | BB | 587 | C | C1'-O4'-C4' | 6.71 | 115.27 | 109.90 |
| 26 | BB | 658 | U | O4'-C1'-N1 | 6.71 | 113.57 | 108.20 |
| 26 | BB | 1454 | C | N3-C4-N4 | 6.71 | 122.70 | 118.00 |
| 26 | BB | 2078 | C | N3-C2-O2 | -6.71 | 117.20 | 121.90 |
| 26 | BB | 2463 | C | C5-C4-N4 | -6.71 | 115.50 | 120.20 |
| 26 | BB | 2886 | A | N9-C4-C5 | -6.71 | 103.11 | 105.80 |
| 1 | AA | 127 | G | N3-C4-C5 | -6.71 | 125.25 | 128.60 |
| 25 | BA | 78 | A | N9-C4-C5 | 6.71 | 108.48 | 105.80 |
| 26 | BB | 431 | U | C1'-O4'-C4' | -6.71 | 104.53 | 109.90 |
| 26 | BB | 840 | C | C4'-C3'-C2' | -6.71 | 95.89 | 102.60 |
| 26 | BB | 1117 | C | N1-C2-O2 | 6.71 | 122.93 | 118.90 |
| 26 | BB | 1847 | A | C4'-C3'-C2' | -6.71 | 95.89 | 102.60 |
| 26 | BB | 2828 | G | N1-C2-N3 | -6.71 | 119.87 | 123.90 |
| 1 | AA | 818 | G | C5-C6-O6 | -6.71 | 124.57 | 128.60 |
| 1 | AA | 1252 | A | C8-N9-C4 | -6.71 | 103.12 | 105.80 |
| 26 | BB | 43 | G | N3-C2-N2 | -6.71 | 115.20 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 182 | A | C8-N9-C4 | -6.71 | 103.12 | 105.80 |
| 26 | BB | 1485 | U | C5-C6-N1 | 6.71 | 126.05 | 122.70 |
| 26 | BB | 1503 | A | C1'-O4'-C4' | 6.71 | 115.27 | 109.90 |
| 26 | BB | 1513 | U | C5-C6-N1 | -6.71 | 119.35 | 122.70 |
| 26 | BB | 1714 | U | N1-C2-O2 | 6.71 | 127.50 | 122.80 |
| 26 | BB | 2655 | G | N3-C4-N9 | -6.71 | 121.97 | 126.00 |
| 31 | BG | 83 | PRO | N-CA-CB | 6.71 | 111.35 | 103.30 |
| 1 | AA | 786 | G | C4-C5-N7 | 6.71 | 113.48 | 110.80 |
| 1 | AA | 941 | G | N9-C4-C5 | 6.71 | 108.08 | 105.40 |
| 4 | AD | 54 | G | N3-C2-N2 | -6.71 | 115.20 | 119.90 |
| 26 | BB | 326 | G | C2-N3-C4 | 6.71 | 115.25 | 111.90 |
| 26 | BB | 539 | G | N9-C4-C5 | 6.71 | 108.08 | 105.40 |
| 26 | BB | 1022 | G | C5-C6-O6 | -6.71 | 124.58 | 128.60 |
| 26 | BB | 1394 | U | N3-C4-O4 | 6.71 | 124.09 | 119.40 |
| 26 | BB | 1807 | G | N3-C2-N2 | -6.71 | 115.20 | 119.90 |
| 26 | BB | 1936 | A | C6-N1-C2 | -6.71 | 114.58 | 118.60 |
| 26 | BB | 2510 | C | C5-C6-N1 | -6.71 | 117.65 | 121.00 |
| 26 | BB | 2581 | G | C2-N3-C4 | 6.71 | 115.25 | 111.90 |
| 1 | AA | 1270 | G | C2-N3-C4 | 6.71 | 115.25 | 111.90 |
| 1 | AA | 1457 | G | C5-C6-N1 | -6.71 | 108.15 | 111.50 |
| 26 | BB | 449 | A | P-O3'-C3' | 6.71 | 127.75 | 119.70 |
| 26 | BB | 487 | C | N1-C2-N3 | -6.71 | 114.51 | 119.20 |
| 26 | BB | 1819 | A | O5'-C5'-C4' | 6.71 | 124.44 | 111.70 |
| 26 | BB | 2006 | C | C5-C4-N4 | 6.71 | 124.89 | 120.20 |
| 1 | AA | 946 | A | C4'-C3'-C2' | -6.70 | 95.90 | 102.60 |
| 1 | AA | 1139 | G | N9-C4-C5 | 6.70 | 108.08 | 105.40 |
| 9 | AI | 13 | ASP | CB-CG-OD2 | -6.70 | 112.27 | 118.30 |
| 26 | BB | 73 | A | N9-C4-C5 | 6.70 | 108.48 | 105.80 |
| 26 | BB | 536 | G | C2-N3-C4 | 6.70 | 115.25 | 111.90 |
| 26 | BB | 542 | C | C4'-C3'-C2' | -6.70 | 95.90 | 102.60 |
| 26 | BB | 670 | A | C2-N3-C4 | -6.70 | 107.25 | 110.60 |
| 26 | BB | 794 | A | O5'-P-OP2 | -6.70 | 99.67 | 105.70 |
| 26 | BB | 1012 | U | N3-C2-O2 | -6.70 | 117.51 | 122.20 |
| 26 | BB | 1054 | A | C8-N9-C4 | -6.70 | 103.12 | 105.80 |
| 26 | BB | 1338 | G | N3-C4-N9 | 6.70 | 130.02 | 126.00 |
| 26 | BB | 1580 | A | O4'-C1'-N9 | 6.70 | 113.56 | 108.20 |
| 26 | BB | 1652 | A | N7-C8-N9 | 6.70 | 117.15 | 113.80 |
| 45 | BU | 109 | ASP | CB-CG-OD1 | 6.70 | 124.33 | 118.30 |
| 1 | AA | 671 | G | O4'-C1'-N9 | 6.70 | 113.56 | 108.20 |
| 26 | BB | 1656 | C | C6-N1-C2 | -6.70 | 117.62 | 120.30 |
| 26 | BB | 1785 | A | C4-C5-C6 | 6.70 | 120.35 | 117.00 |
| 26 | BB | 1970 | A | C5-C6-N1 | 6.70 | 121.05 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2890 | G | N7-C8-N9 | 6.70 | 116.45 | 113.10 |
| 1 | AA | 761 | G | C5-C6-N1 | -6.70 | 108.15 | 111.50 |
| 1 | AA | 1413 | A | O4'-C1'-N9 | -6.70 | 102.84 | 108.20 |
| 25 | BA | 84 | G | N9-C1'-C2' | -6.70 | 104.63 | 112.00 |
| 26 | BB | 100 | U | N3-C4-O4 | -6.70 | 114.71 | 119.40 |
| 26 | BB | 994 | C | C1'-O4'-C4' | -6.70 | 104.54 | 109.90 |
| 26 | BB | 1735 | A | C5-C6-N1 | 6.70 | 121.05 | 117.70 |
| 26 | BB | 2054 | A | N7-C8-N9 | -6.70 | 110.45 | 113.80 |
| 26 | BB | 2464 | G | N7-C8-N9 | 6.70 | 116.45 | 113.10 |
| 26 | BB | 2726 | A | C5-N7-C8 | -6.70 | 100.55 | 103.90 |
| 1 | AA | 94 | G | N3-C4-C5 | -6.70 | 125.25 | 128.60 |
| 2 | AB | 38 | A | O4'-C1'-N9 | 6.70 | 113.56 | 108.20 |
| 4 | AD | 58 | A | N1-C6-N6 | -6.70 | 114.58 | 118.60 |
| 24 | AX | 2 | VAL | CA-CB-CG1 | 6.70 | 120.95 | 110.90 |
| 25 | BA | 63 | C | P-O3'-C3' | 6.70 | 127.74 | 119.70 |
| 25 | BA | 73 | A | C5-C6-N6 | -6.70 | 118.34 | 123.70 |
| 26 | BB | 24 | G | N3-C4-N9 | 6.70 | 130.02 | 126.00 |
| 26 | BB | 47 | C | N1-C1'-C2' | -6.70 | 104.63 | 112.00 |
| 26 | BB | 260 | G | C3'-C2'-C1' | -6.70 | 96.14 | 101.50 |
| 26 | BB | 479 | A | N1-C6-N6 | 6.70 | 122.62 | 118.60 |
| 26 | BB | 1014 | A | C5-N7-C8 | -6.70 | 100.55 | 103.90 |
| 26 | BB | 1309 | G | N1-C2-N3 | -6.70 | 119.88 | 123.90 |
| 26 | BB | 1660 | G | N3-C2-N2 | -6.70 | 115.21 | 119.90 |
| 26 | BB | 2322 | A | C4-C5-N7 | -6.70 | 107.35 | 110.70 |
| 26 | BB | 2821 | A | C2-N3-C4 | 6.70 | 113.95 | 110.60 |
| 1 | AA | 368 | U | C5'-C4'-C3' | -6.70 | 105.28 | 116.00 |
| 1 | AA | 780 | A | C6-N1-C2 | 6.70 | 122.62 | 118.60 |
| 26 | BB | 898 | C | C5-C6-N1 | -6.70 | 117.65 | 121.00 |
| 26 | BB | 2614 | A | C5-C6-N6 | -6.70 | 118.34 | 123.70 |
| 1 | AA | 406 | G | C4-C5-N7 | -6.70 | 108.12 | 110.80 |
| 1 | AA | 763 | G | C4-C5-N7 | -6.70 | 108.12 | 110.80 |
| 2 | AB | 69 | C | N3-C2-O2 | -6.70 | 117.21 | 121.90 |
| 25 | BA | 66 | A | C5'-C4'-O4' | 6.70 | 117.14 | 109.10 |
| 26 | BB | 247 | G | N3-C4-C5 | -6.70 | 125.25 | 128.60 |
| 26 | BB | 707 | G | O4'-C1'-N9 | 6.70 | 113.56 | 108.20 |
| 26 | BB | 803 | U | C2-N3-C4 | -6.70 | 122.98 | 127.00 |
| 26 | BB | 838 | C | O4'-C1'-N1 | 6.70 | 113.56 | 108.20 |
| 26 | BB | 1109 | C | C5'-C4'-O4' | 6.70 | 117.13 | 109.10 |
| 26 | BB | 1242 | U | C2-N3-C4 | -6.70 | 122.98 | 127.00 |
| 26 | BB | 1861 | G | N3-C4-N9 | 6.70 | 130.02 | 126.00 |
| 26 | BB | 2050 | C | N1-C2-O2 | 6.70 | 122.92 | 118.90 |
| 26 | BB | 2899 | A | O4'-C1'-N9 | 6.70 | 113.56 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1504 | G | C4-C5-C6 | 6.69 | 122.82 | 118.80 |
| 21 | AU | 56 | ARG | NE-CZ-NH1 | 6.69 | 123.65 | 120.30 |
| 25 | BA | 18 | G | N7-C8-N9 | -6.69 | 109.75 | 113.10 |
| 26 | BB | 133 | U | C2-N3-C4 | -6.69 | 122.98 | 127.00 |
| 26 | BB | 276 | U | N1-C2-N3 | 6.69 | 118.92 | 114.90 |
| 26 | BB | 1067 | A | C3'-C2'-C1' | 6.69 | 106.86 | 101.50 |
| 26 | BB | 1602 | U | C4-C5-C6 | 6.69 | 123.72 | 119.70 |
| 26 | BB | 1761 | C | C6-N1-C2 | 6.69 | 122.98 | 120.30 |
| 26 | BB | 2476 | A | C4-C5-C6 | 6.69 | 120.35 | 117.00 |
| 1 | AA | 627 | G | C5-C6-N1 | 6.69 | 114.85 | 111.50 |
| 1 | AA | 820 | U | N3-C2-O2 | -6.69 | 117.52 | 122.20 |
| 1 | AA | 1083 | U | C4'-C3'-C2' | -6.69 | 95.91 | 102.60 |
| 8 | AH | 127 | TYR | CB-CG-CD2 | 6.69 | 125.02 | 121.00 |
| 26 | BB | 173 | A | C4'-C3'-C2' | -6.69 | 95.91 | 102.60 |
| 26 | BB | 240 | C | N1-C2-O2 | 6.69 | 122.92 | 118.90 |
| 26 | BB | 647 | G | C6-C5-N7 | -6.69 | 126.38 | 130.40 |
| 26 | BB | 1333 | G | N3-C4-N9 | 6.69 | 130.02 | 126.00 |
| 26 | BB | 2011 | U | C5'-C4'-C3' | -6.69 | 105.29 | 116.00 |
| 26 | BB | 2203 | U | C6-N1-C2 | 6.69 | 125.02 | 121.00 |
| 26 | BB | 2438 | U | N1-C2-N3 | 6.69 | 118.92 | 114.90 |
| 26 | BB | 2540 | C | C5'-C4'-O4' | 6.69 | 117.13 | 109.10 |
| 26 | BB | 2670 | A | C4'-C3'-C2' | -6.69 | 95.91 | 102.60 |
| 26 | BB | 2731 | G | N3-C4-C5 | -6.69 | 125.25 | 128.60 |
| 29 | BE | 169 | ARG | NE-CZ-NH1 | 6.69 | 123.65 | 120.30 |
| 1 | AA | 410 | G | P-O3'-C3' | 6.69 | 127.73 | 119.70 |
| 1 | AA | 887 | G | N3-C4-C5 | -6.69 | 125.25 | 128.60 |
| 1 | AA | 996 | A | C5-N7-C8 | 6.69 | 107.25 | 103.90 |
| 1 | AA | 1094 | G | O4'-C1'-N9 | -6.69 | 102.85 | 108.20 |
| 1 | AA | 1467 | C | N3-C4-N4 | 6.69 | 122.68 | 118.00 |
| 26 | BB | 797 | G | C4-C5-C6 | 6.69 | 122.81 | 118.80 |
| 26 | BB | 844 | A | C2-N3-C4 | 6.69 | 113.95 | 110.60 |
| 26 | BB | 1066 | U | C6-N1-C2 | -6.69 | 116.99 | 121.00 |
| 26 | BB | 1289 | C | C5-C4-N4 | -6.69 | 115.52 | 120.20 |
| 26 | BB | 1342 | A | O4'-C1'-N9 | 6.69 | 113.55 | 108.20 |
| 26 | BB | 1776 | G | C5'-C4'-O4' | 6.69 | 117.13 | 109.10 |
| 26 | BB | 2242 | G | N3-C2-N2 | 6.69 | 124.58 | 119.90 |
| 26 | BB | 2785 | C | N3-C4-N4 | 6.69 | 122.68 | 118.00 |
| 1 | AA | 200 | G | N1-C6-O6 | -6.69 | 115.89 | 119.90 |
| 1 | AA | 204 | G | N7-C8-N9 | 6.69 | 116.44 | 113.10 |
| 1 | AA | 589 | U | C3'-C2'-C1' | 6.69 | 106.85 | 101.50 |
| 25 | BA | 23 | G | C5'-C4'-O4' | 6.69 | 117.13 | 109.10 |
| 26 | BB | 211 | C | C5-C4-N4 | -6.69 | 115.52 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2200 | C | C6-N1-C2 | -6.69 | 117.62 | 120.30 |
| 1 | AA | 134 | G | O4'-C1'-N9 | -6.69 | 102.85 | 108.20 |
| 1 | AA | 524 | G | C2-N3-C4 | 6.69 | 115.24 | 111.90 |
| 1 | AA | 802 | A | O4'-C1'-N9 | 6.69 | 113.55 | 108.20 |
| 1 | AA | 968 | A | C1'-O4'-C4' | -6.69 | 104.55 | 109.90 |
| 1 | AA | 1459 | G | C6-C5-N7 | -6.69 | 126.39 | 130.40 |
| 25 | BA | 38 | C | N1-C2-N3 | -6.69 | 114.52 | 119.20 |
| 26 | BB | 348 | A | C6-C5-N7 | 6.69 | 136.98 | 132.30 |
| 26 | BB | 414 | C | O4'-C1'-N1 | 6.69 | 113.55 | 108.20 |
| 26 | BB | 1006 | C | O4'-C1'-N1 | 6.69 | 113.55 | 108.20 |
| 26 | BB | 2170 | A | O4'-C1'-C2' | 6.69 | 113.62 | 107.60 |
| 26 | BB | 2761 | A | N1-C2-N3 | -6.69 | 125.96 | 129.30 |
| 42 | BR | 88 | ARG | NE-CZ-NH1 | -6.69 | 116.96 | 120.30 |
| 26 | BB | 843 | G | N3-C2-N2 | -6.69 | 115.22 | 119.90 |
| 26 | BB | 849 | A | C2-N3-C4 | -6.69 | 107.26 | 110.60 |
| 26 | BB | 1368 | G | C2-N3-C4 | 6.69 | 115.24 | 111.90 |
| 26 | BB | 1502 | A | N1-C2-N3 | -6.69 | 125.96 | 129.30 |
| 26 | BB | 1753 | G | C4-C5-N7 | -6.69 | 108.13 | 110.80 |
| 26 | BB | 2854 | G | C6-N1-C2 | -6.69 | 121.09 | 125.10 |
| 1 | AA | 11 | G | C4-C5-N7 | -6.68 | 108.13 | 110.80 |
| 1 | AA | 117 | G | C3'-C2'-C1' | 6.68 | 106.85 | 101.50 |
| 1 | AA | 519 | C | C5'-C4'-C3' | -6.68 | 105.31 | 116.00 |
| 25 | BA | 8 | C | C3'-C2'-C1' | 6.68 | 106.85 | 101.50 |
| 26 | BB | 478 | A | C4-C5-C6 | -6.68 | 113.66 | 117.00 |
| 26 | BB | 966 | G | N3-C2-N2 | 6.68 | 124.58 | 119.90 |
| 26 | BB | 1020 | A | O4'-C4'-C3' | 6.68 | 111.45 | 106.10 |
| 26 | BB | 1240 | U | C4-C5-C6 | 6.68 | 123.71 | 119.70 |
| 26 | BB | 1338 | G | C2-N3-C4 | 6.68 | 115.24 | 111.90 |
| 26 | BB | 1885 | A | C6-C5-N7 | 6.68 | 136.98 | 132.30 |
| 26 | BB | 1971 | U | O4'-C1'-N1 | 6.68 | 113.55 | 108.20 |
| 26 | BB | 2040 | G | C4-C5-N7 | -6.68 | 108.13 | 110.80 |
| 26 | BB | 2178 | C | C5'-C4'-O4' | 6.68 | 117.12 | 109.10 |
| 26 | BB | 2332 | C | C1'-O4'-C4' | 6.68 | 115.25 | 109.90 |
| 26 | BB | 2581 | G | C6-C5-N7 | -6.68 | 126.39 | 130.40 |
| 54 | B3 | 24 | VAL | CA-CB-CG1 | 6.68 | 120.93 | 110.90 |
| 1 | AA | 180 | U | O4'-C1'-N1 | 6.68 | 113.55 | 108.20 |
| 1 | AA | 779 | C | O4'-C4'-C3' | 6.68 | 111.45 | 106.10 |
| 1 | AA | 962 | C | N1-C2-N3 | 6.68 | 123.88 | 119.20 |
| 26 | BB | 120 | U | P-O3'-C3' | 6.68 | 127.72 | 119.70 |
| 26 | BB | 297 | G | N1-C6-O6 | 6.68 | 123.91 | 119.90 |
| 26 | BB | 966 | G | N3-C4-C5 | -6.68 | 125.26 | 128.60 |
| 26 | BB | 1094 | U | N1-C2-N3 | 6.68 | 118.91 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1654 | A | C5'-C4'-C3' | -6.68 | 105.31 | 116.00 |
| 26 | BB | 2153 | C | N3-C4-N4 | 6.68 | 122.68 | 118.00 |
| 26 | BB | 2595 | G | C6-C5-N7 | -6.68 | 126.39 | 130.40 |
| 26 | BB | 2598 | A | O4'-C1'-N9 | 6.68 | 113.55 | 108.20 |
| 1 | AA | 6 | G | N3-C4-C5 | -6.68 | 125.26 | 128.60 |
| 1 | AA | 491 | G | N9-C4-C5 | 6.68 | 108.07 | 105.40 |
| 1 | AA | 1164 | G | N9-C1'-C2' | -6.68 | 104.65 | 112.00 |
| 1 | AA | 1541 | U | C4-C5-C6 | 6.68 | 123.71 | 119.70 |
| 26 | BB | 768 | G | C4-C5-C6 | 6.68 | 122.81 | 118.80 |
| 26 | BB | 1194 | A | C5-C6-N1 | 6.68 | 121.04 | 117.70 |
| 26 | BB | 1256 | G | C5'-C4'-O4' | 6.68 | 117.12 | 109.10 |
| 26 | BB | 1292 | G | C6-C5-N7 | -6.68 | 126.39 | 130.40 |
| 26 | BB | 2842 | G | C5'-C4'-O4' | 6.68 | 117.12 | 109.10 |
| 1 | AA | 551 | U | C5-C4-O4 | -6.68 | 121.89 | 125.90 |
| 1 | AA | 715 | A | N1-C2-N3 | -6.68 | 125.96 | 129.30 |
| 1 | AA | 807 | A | C6-C5-N7 | 6.68 | 136.98 | 132.30 |
| 1 | AA | 1070 | U | C5'-C4'-C3' | -6.68 | 105.31 | 116.00 |
| 1 | AA | 1201 | A | P-O3'-C3' | 6.68 | 127.72 | 119.70 |
| 26 | BB | 1259 | G | C4'-C3'-C2' | -6.68 | 95.92 | 102.60 |
| 26 | BB | 1274 | A | N9-C1'-C2' | -6.68 | 104.65 | 112.00 |
| 26 | BB | 1877 | A | C5-C6-N6 | -6.68 | 118.36 | 123.70 |
| 26 | BB | 2011 | U | N3-C4-C5 | -6.68 | 110.59 | 114.60 |
| 26 | BB | 2283 | C | N3-C4-C5 | -6.68 | 119.23 | 121.90 |
| 26 | BB | 2527 | C | C1'-O4'-C4' | 6.68 | 115.24 | 109.90 |
| 26 | BB | 2548 | U | N1-C2-O2 | 6.68 | 127.48 | 122.80 |
| 26 | BB | 2634 | A | C6-C5-N7 | 6.68 | 136.98 | 132.30 |
| 26 | BB | 2656 | U | N3-C4-C5 | -6.68 | 110.59 | 114.60 |
| 1 | AA | 208 | U | N3-C2-O2 | -6.68 | 117.53 | 122.20 |
| 1 | AA | 1082 | A | C5-N7-C8 | -6.68 | 100.56 | 103.90 |
| 4 | AD | 33 | OMC | P-O3'-C3' | 6.68 | 127.71 | 119.70 |
| 26 | BB | 209 | C | C6-N1-C2 | 6.68 | 122.97 | 120.30 |
| 26 | BB | 461 | C | N3-C2-O2 | -6.68 | 117.23 | 121.90 |
| 26 | BB | 694 | U | N1-C2-O2 | 6.68 | 127.47 | 122.80 |
| 26 | BB | 727 | A | N3-C4-C5 | -6.68 | 122.13 | 126.80 |
| 26 | BB | 883 | G | N9-C1'-C2' | -6.68 | 104.65 | 112.00 |
| 26 | BB | 2118 | U | N3-C4-C5 | -6.68 | 110.59 | 114.60 |
| 26 | BB | 2719 | G | C8-N9-C4 | -6.68 | 103.73 | 106.40 |
| 26 | BB | 2880 | C | C5'-C4'-O4' | 6.68 | 117.11 | 109.10 |
| 1 | AA | 760 | G | N9-C4-C5 | 6.68 | 108.07 | 105.40 |
| 1 | AA | 1185 | G | C6-N1-C2 | 6.68 | 129.10 | 125.10 |
| 26 | BB | 113 | U | N3-C4-O4 | -6.68 | 114.73 | 119.40 |
| 26 | BB | 370 | G | C8-N9-C4 | -6.68 | 103.73 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1004 | U | C5-C6-N1 | -6.68 | 119.36 | 122.70 |
| 26 | BB | 1173 | U | C5-C6-N1 | 6.68 | 126.04 | 122.70 |
| 26 | BB | 1346 | G | N7-C8-N9 | -6.68 | 109.76 | 113.10 |
| 26 | BB | 1805 | A | C1'-O4'-C4' | -6.68 | 104.56 | 109.90 |
| 26 | BB | 2325 | G | C6-N1-C2 | -6.68 | 121.09 | 125.10 |
| 26 | BB | 2487 | G | N1-C2-N3 | -6.68 | 119.89 | 123.90 |
| 26 | BB | 2732 | G | C8-N9-C4 | -6.68 | 103.73 | 106.40 |
| 49 | BY | 19 | ARG | CD-NE-CZ | 6.68 | 132.95 | 123.60 |
| 1 | AA | 535 | A | P-O3'-C3' | 6.67 | 127.71 | 119.70 |
| 1 | AA | 1160 | G | C8-N9-C1' | 6.67 | 135.68 | 127.00 |
| 11 | AK | 53 | ASP | CB-CG-OD1 | -6.67 | 112.29 | 118.30 |
| 26 | BB | 980 | A | C5'-C4'-O4' | 6.67 | 117.11 | 109.10 |
| 26 | BB | 1254 | A | C5-C6-N1 | -6.67 | 114.36 | 117.70 |
| 26 | BB | 1675 | C | C4'-C3'-C2' | -6.67 | 95.93 | 102.60 |
| 26 | BB | 1933 | G | N3-C4-N9 | -6.67 | 122.00 | 126.00 |
| 26 | BB | 1944 | U | N1-C2-N3 | 6.67 | 118.90 | 114.90 |
| 26 | BB | 2366 | A | C5-C6-N1 | 6.67 | 121.04 | 117.70 |
| 26 | BB | 2672 | U | N1-C2-N3 | 6.67 | 118.91 | 114.90 |
| 26 | BB | 2713 | U | C5-C4-O4 | -6.67 | 121.89 | 125.90 |
| 57 | B6 | 33 | THR | CA-CB-CG2 | 6.67 | 121.74 | 112.40 |
| 1 | AA | 1221 | G | C8-N9-C4 | -6.67 | 103.73 | 106.40 |
| 26 | BB | 163 | C | N1-C2-O2 | 6.67 | 122.90 | 118.90 |
| 26 | BB | 1754 | A | N9-C4-C5 | -6.67 | 103.13 | 105.80 |
| 26 | BB | 1907 | G | O4'-C1'-N9 | 6.67 | 113.54 | 108.20 |
| 26 | BB | 1924 | C | C4-C5-C6 | -6.67 | 114.06 | 117.40 |
| 26 | BB | 2529 | G | C8-N9-C4 | -6.67 | 103.73 | 106.40 |
| 1 | AA | 1279 | G | C5-N7-C8 | -6.67 | 100.97 | 104.30 |
| 26 | BB | 62 | U | N3-C4-O4 | 6.67 | 124.07 | 119.40 |
| 26 | BB | 407 | G | N3-C4-N9 | 6.67 | 130.00 | 126.00 |
| 26 | BB | 1397 | U | N1-C2-N3 | -6.67 | 110.90 | 114.90 |
| 26 | BB | 1998 | A | O4'-C1'-N9 | 6.67 | 113.54 | 108.20 |
| 26 | BB | 2640 | G | C6-N1-C2 | -6.67 | 121.10 | 125.10 |
| 1 | AA | 551 | U | N3-C4-O4 | 6.67 | 124.07 | 119.40 |
| 1 | AA | 705 | G | C2-N3-C4 | 6.67 | 115.23 | 111.90 |
| 1 | AA | 795 | C | C6-N1-C1' | 6.67 | 128.80 | 120.80 |
| 26 | BB | 389 | G | C4-C5-C6 | 6.67 | 122.80 | 118.80 |
| 26 | BB | 2331 | G | C4-C5-N7 | 6.67 | 113.47 | 110.80 |
| 1 | AA | 361 | G | C5-N7-C8 | -6.67 | 100.97 | 104.30 |
| 1 | AA | 587 | G | C6-C5-N7 | 6.67 | 134.40 | 130.40 |
| 1 | AA | 753 | A | C4'-C3'-C2' | -6.67 | 95.93 | 102.60 |
| 26 | BB | 29 | U | N1-C2-N3 | 6.67 | 118.90 | 114.90 |
| 26 | BB | 516 | C | C5-C4-N4 | -6.67 | 115.53 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 566 | U | C4-C5-C6 | 6.67 | 123.70 | 119.70 |
| 26 | BB | 649 | G | C5'-C4'-O4' | 6.67 | 117.10 | 109.10 |
| 26 | BB | 722 | A | C5-C6-N1 | -6.67 | 114.36 | 117.70 |
| 26 | BB | 874 | G | C8-N9-C4 | -6.67 | 103.73 | 106.40 |
| 26 | BB | 908 | C | O4'-C1'-N1 | 6.67 | 113.53 | 108.20 |
| 26 | BB | 1235 | G | C5-C6-N1 | 6.67 | 114.83 | 111.50 |
| 26 | BB | 2128 | G | N3-C2-N2 | -6.67 | 115.23 | 119.90 |
| 26 | BB | 2206 | C | O4'-C1'-N1 | 6.67 | 113.53 | 108.20 |
| 1 | AA | 101 | A | C3'-C2'-C1' | -6.67 | 96.17 | 101.50 |
| 1 | AA | 454 | G | C4-C5-N7 | -6.67 | 108.13 | 110.80 |
| 1 | AA | 558 | G | C1'-O4'-C4' | -6.67 | 104.57 | 109.90 |
| 1 | AA | 935 | A | C8-N9-C4 | 6.67 | 108.47 | 105.80 |
| 1 | AA | 1032 | G | C6-C5-N7 | -6.67 | 126.40 | 130.40 |
| 26 | BB | 187 | G | N1-C6-O6 | -6.67 | 115.90 | 119.90 |
| 26 | BB | 342 | A | C5-C6-N1 | 6.67 | 121.03 | 117.70 |
| 26 | BB | 594 | U | C2-N3-C4 | -6.67 | 123.00 | 127.00 |
| 26 | BB | 2111 | U | C5-C4-O4 | 6.67 | 129.90 | 125.90 |
| 1 | AA | 1200 | C | N3-C2-O2 | -6.67 | 117.23 | 121.90 |
| 1 | AA | 1331 | G | N1-C2-N3 | -6.67 | 119.90 | 123.90 |
| 1 | AA | 1369 | C | N3-C4-N4 | 6.67 | 122.67 | 118.00 |
| 26 | BB | 1063 | G | C5-C6-O6 | 6.67 | 132.60 | 128.60 |
| 26 | BB | 1247 | A | C5-C6-N1 | 6.67 | 121.03 | 117.70 |
| 26 | BB | 1855 | U | C3'-C2'-C1' | 6.67 | 106.83 | 101.50 |
| 26 | BB | 2599 | G | N3-C2-N2 | -6.67 | 115.23 | 119.90 |
| 1 | AA | 143 | A | N9-C4-C5 | 6.66 | 108.47 | 105.80 |
| 1 | AA | 632 | U | C3'-C2'-C1' | 6.66 | 106.83 | 101.50 |
| 1 | AA | 757 | U | C3'-C2'-C1' | 6.66 | 106.83 | 101.50 |
| 1 | AA | 1083 | U | C2-N3-C4 | -6.66 | 123.00 | 127.00 |
| 1 | AA | 1308 | U | O5'-P-OP2 | -6.66 | 99.70 | 105.70 |
| 26 | BB | 492 | A | N3-C4-N9 | -6.66 | 122.07 | 127.40 |
| 26 | BB | 1026 | G | C5'-C4'-O4' | 6.66 | 117.10 | 109.10 |
| 26 | BB | 1333 | G | C4-C5-C6 | 6.66 | 122.80 | 118.80 |
| 26 | BB | 1569 | A | N9-C4-C5 | 6.66 | 108.47 | 105.80 |
| 26 | BB | 1632 | A | C4-C5-N7 | -6.66 | 107.37 | 110.70 |
| 26 | BB | 2031 | A | C5-C6-N6 | -6.66 | 118.37 | 123.70 |
| 26 | BB | 2200 | C | N3-C2-O2 | -6.66 | 117.23 | 121.90 |
| 26 | BB | 2255 | G | N3-C2-N2 | 6.66 | 124.56 | 119.90 |
| 26 | BB | 2375 | G | N1-C6-O6 | 6.66 | 123.90 | 119.90 |
| 26 | BB | 2775 | G | N1-C2-N2 | 6.66 | 122.20 | 116.20 |
| 1 | AA | 50 | A | N1-C2-N3 | -6.66 | 125.97 | 129.30 |
| 1 | AA | 454 | G | C3'-C2'-C1' | -6.66 | 96.17 | 101.50 |
| 1 | AA | 626 | G | N7-C8-N9 | 6.66 | 116.43 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1514 | G | N3-C4-N9 | 6.66 | 130.00 | 126.00 |
| 26 | BB | 1385 | A | C5-C6-N1 | 6.66 | 121.03 | 117.70 |
| 26 | BB | 1564 | C | O4'-C1'-N1 | 6.66 | 113.53 | 108.20 |
| 1 | AA | 199 | A | C5-C6-N1 | -6.66 | 114.37 | 117.70 |
| 1 | AA | 299 | G | C4'-C3'-C2' | -6.66 | 95.94 | 102.60 |
| 1 | AA | 509 | A | N9-C1'-C2' | -6.66 | 104.67 | 112.00 |
| 1 | AA | 1092 | A | N1-C6-N6 | -6.66 | 114.60 | 118.60 |
| 1 | AA | 1413 | A | P-O3'-C3' | 6.66 | 127.69 | 119.70 |
| 26 | BB | 245 | G | N9-C4-C5 | -6.66 | 102.74 | 105.40 |
| 26 | BB | 276 | U | N1-C2-O2 | -6.66 | 118.14 | 122.80 |
| 26 | BB | 528 | A | O4'-C4'-C3' | 6.66 | 111.43 | 106.10 |
| 26 | BB | 728 | G | N9-C1'-C2' | -6.66 | 104.67 | 112.00 |
| 26 | BB | 774 | G | C4-C5-N7 | -6.66 | 108.14 | 110.80 |
| 26 | BB | 1041 | G | C2-N3-C4 | 6.66 | 115.23 | 111.90 |
| 26 | BB | 2086 | U | N3-C4-C5 | 6.66 | 118.60 | 114.60 |
| 26 | BB | 2590 | A | N9-C4-C5 | 6.66 | 108.46 | 105.80 |
| 26 | BB | 2607 | G | N9-C1'-C2' | -6.66 | 104.67 | 112.00 |
| 26 | BB | 2862 | G | O4'-C1'-N9 | 6.66 | 113.53 | 108.20 |
| 1 | AA | 484 | G | O4'-C1'-N9 | 6.66 | 113.53 | 108.20 |
| 1 | AA | 558 | G | C4-C5-N7 | -6.66 | 108.14 | 110.80 |
| 1 | AA | 689 | C | C2-N3-C4 | -6.66 | 116.57 | 119.90 |
| 25 | BA | 37 | C | N3-C4-C5 | -6.66 | 119.24 | 121.90 |
| 25 | BA | 81 | G | C5-N7-C8 | 6.66 | 107.63 | 104.30 |
| 26 | BB | 294 | A | N9-C1'-C2' | -6.66 | 104.68 | 112.00 |
| 26 | BB | 458 | G | C3'-C2'-C1' | -6.66 | 96.17 | 101.50 |
| 26 | BB | 592 | A | N7-C8-N9 | 6.66 | 117.13 | 113.80 |
| 26 | BB | 1018 | U | C2-N3-C4 | 6.66 | 131.00 | 127.00 |
| 26 | BB | 1136 | G | C2-N3-C4 | 6.66 | 115.23 | 111.90 |
| 26 | BB | 1174 | U | C4-C5-C6 | 6.66 | 123.69 | 119.70 |
| 26 | BB | 1636 | U | C2-N3-C4 | -6.66 | 123.00 | 127.00 |
| 26 | BB | 1805 | A | N1-C2-N3 | 6.66 | 132.63 | 129.30 |
| 26 | BB | 1916 | A | C8-N9-C4 | -6.66 | 103.14 | 105.80 |
| 1 | AA | 1124 | G | C6-N1-C2 | -6.66 | 121.11 | 125.10 |
| 26 | BB | 46 | G | C4'-C3'-C2' | -6.66 | 95.94 | 102.60 |
| 26 | BB | 226 | A | N1-C2-N3 | -6.66 | 125.97 | 129.30 |
| 26 | BB | 594 | U | C5-C6-N1 | -6.66 | 119.37 | 122.70 |
| 26 | BB | 630 | G | C6-C5-N7 | 6.66 | 134.39 | 130.40 |
| 26 | BB | 694 | U | O4'-C1'-N1 | 6.66 | 113.53 | 108.20 |
| 26 | BB | 1558 | C | N1-C2-O2 | 6.66 | 122.89 | 118.90 |
| 26 | BB | 1791 | A | C4-C5-C6 | -6.66 | 113.67 | 117.00 |
| 26 | BB | 1803 | A | C6-N1-C2 | -6.66 | 114.61 | 118.60 |
| 26 | BB | 2537 | U | C1'-O4'-C4' | -6.66 | 104.57 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2694 | G | C2-N3-C4 | 6.66 | 115.23 | 111.90 |
| 1 | AA | 389 | A | N7-C8-N9 | 6.66 | 117.13 | 113.80 |
| 1 | AA | 447 | G | C5'-C4'-O4' | 6.66 | 117.09 | 109.10 |
| 1 | AA | 977 | A | C3'-C2'-C1' | 6.66 | 106.82 | 101.50 |
| 1 | AA | 1087 | G | C6-N1-C2 | -6.66 | 121.11 | 125.10 |
| 1 | AA | 1436 | U | C5-C4-O4 | -6.66 | 121.91 | 125.90 |
| 26 | BB | 145 | C | C1'-O4'-C4' | -6.66 | 104.58 | 109.90 |
| 26 | BB | 238 | C | C2'-C3'-O3' | 6.66 | 124.35 | 113.70 |
| 26 | BB | 400 | G | C5-C6-N1 | 6.66 | 114.83 | 111.50 |
| 26 | BB | 623 | C | P-O3'-C3' | 6.66 | 127.69 | 119.70 |
| 26 | BB | 1161 | C | N3-C4-N4 | 6.66 | 122.66 | 118.00 |
| 26 | BB | 1587 | G | C3'-C2'-C1' | 6.66 | 106.83 | 101.50 |
| 26 | BB | 1970 | A | C3'-C2'-C1' | 6.66 | 106.82 | 101.50 |
| 26 | BB | 2004 | G | C5'-C4'-O4' | 6.66 | 117.09 | 109.10 |
| 32 | BH | 93 | TYR | CG-CD2-CE2 | -6.66 | 115.97 | 121.30 |
| 1 | AA | 1014 | A | C2'-C3'-O3' | 6.65 | 124.35 | 113.70 |
| 1 | AA | 1200 | C | C5-C4-N4 | -6.65 | 115.54 | 120.20 |
| 26 | BB | 1002 | G | N9-C1'-C2' | -6.65 | 104.68 | 112.00 |
| 26 | BB | 2625 | G | N9-C4-C5 | 6.65 | 108.06 | 105.40 |
| 1 | AA | 743 | A | C2-N3-C4 | 6.65 | 113.93 | 110.60 |
| 1 | AA | 890 | G | C2-N3-C4 | 6.65 | 115.23 | 111.90 |
| 1 | AA | 1048 | G | C6-C5-N7 | -6.65 | 126.41 | 130.40 |
| 1 | AA | 1091 | U | N1-C2-N3 | 6.65 | 118.89 | 114.90 |
| 1 | AA | 1109 | C | N1-C2-N3 | -6.65 | 114.54 | 119.20 |
| 25 | BA | 29 | A | C5-N7-C8 | -6.65 | 100.57 | 103.90 |
| 26 | BB | 1235 | G | O4'-C1'-N9 | 6.65 | 113.52 | 108.20 |
| 1 | AA | 155 | A | N9-C4-C5 | 6.65 | 108.46 | 105.80 |
| 1 | AA | 279 | A | C2-N3-C4 | 6.65 | 113.92 | 110.60 |
| 1 | AA | 284 | C | C4-C5-C6 | 6.65 | 120.73 | 117.40 |
| 25 | BA | 112 | G | C2-N3-C4 | 6.65 | 115.22 | 111.90 |
| 26 | BB | 158 | U | C4-C5-C6 | 6.65 | 123.69 | 119.70 |
| 26 | BB | 615 | U | N3-C4-C5 | -6.65 | 110.61 | 114.60 |
| 26 | BB | 1332 | G | N1-C6-O6 | -6.65 | 115.91 | 119.90 |
| 26 | BB | 1692 | U | C4'-C3'-C2' | -6.65 | 95.95 | 102.60 |
| 26 | BB | 1858 | A | C4'-C3'-C2' | -6.65 | 95.95 | 102.60 |
| 26 | BB | 1899 | A | N3-C4-C5 | -6.65 | 122.14 | 126.80 |
| 46 | BV | 37 | ASP | CB-CG-OD2 | -6.65 | 112.31 | 118.30 |
| 21 | AU | 3 | TYR | CB-CG-CD1 | 6.65 | 124.99 | 121.00 |
| 26 | BB | 1124 | G | C1'-O4'-C4' | 6.65 | 115.22 | 109.90 |
| 26 | BB | 1430 | G | C4'-C3'-C2' | -6.65 | 95.95 | 102.60 |
| 26 | BB | 1443 | U | C4-C5-C6 | 6.65 | 123.69 | 119.70 |
| 26 | BB | 1460 | U | C4'-C3'-C2' | -6.65 | 95.95 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 25 | C | C5-C4-N4 | -6.65 | 115.55 | 120.20 |
| 1 | AA | 728 | A | N1-C2-N3 | 6.65 | 132.62 | 129.30 |
| 9 | AI | 7 | VAL | CA-CB-CG1 | 6.65 | 120.87 | 110.90 |
| 25 | BA | 19 | C | N3-C4-C5 | 6.65 | 124.56 | 121.90 |
| 25 | BA | 77 | U | N1-C2-N3 | 6.65 | 118.89 | 114.90 |
| 26 | BB | 219 | A | C4'-C3'-C2' | -6.65 | 95.95 | 102.60 |
| 26 | BB | 1099 | G | C8-N9-C4 | -6.65 | 103.74 | 106.40 |
| 26 | BB | 1317 | G | O4'-C1'-N9 | 6.65 | 113.52 | 108.20 |
| 26 | BB | 1451 | C | O4'-C1'-N1 | 6.65 | 113.52 | 108.20 |
| 26 | BB | 1590 | A | N1-C6-N6 | -6.65 | 114.61 | 118.60 |
| 26 | BB | 1748 | C | C5-C6-N1 | 6.65 | 124.32 | 121.00 |
| 26 | BB | 2003 | A | C4-C5-N7 | 6.65 | 114.02 | 110.70 |
| 26 | BB | 2171 | A | C5-N7-C8 | -6.65 | 100.58 | 103.90 |
| 26 | BB | 2428 | G | C4-C5-C6 | 6.65 | 122.79 | 118.80 |
| 1 | AA | 629 | A | C5-C6-N6 | -6.65 | 118.38 | 123.70 |
| 1 | AA | 734 | G | N3-C4-C5 | -6.65 | 125.28 | 128.60 |
| 1 | AA | 1074 | G | C5-C6-N1 | 6.65 | 114.82 | 111.50 |
| 1 | AA | 1438 | G | N9-C1'-C2' | -6.65 | 104.69 | 112.00 |
| 26 | BB | 315 | G | C6-C5-N7 | -6.65 | 126.41 | 130.40 |
| 26 | BB | 512 | G | N7-C8-N9 | 6.65 | 116.42 | 113.10 |
| 26 | BB | 1832 | C | N1-C1'-C2' | -6.65 | 104.69 | 112.00 |
| 26 | BB | 2228 | G | N1-C6-O6 | 6.65 | 123.89 | 119.90 |
| 1 | AA | 101 | A | N3-C4-N9 | 6.64 | 132.72 | 127.40 |
| 1 | AA | 388 | G | C6-N1-C2 | -6.64 | 121.11 | 125.10 |
| 1 | AA | 618 | C | O4'-C4'-C3' | -6.64 | 97.36 | 104.00 |
| 2 | AB | 70 | C | C2-N3-C4 | 6.64 | 123.22 | 119.90 |
| 5 | AE | 109 | SER | N-CA-CB | -6.64 | 100.53 | 110.50 |
| 26 | BB | 510 | C | C1'-O4'-C4' | 6.64 | 115.22 | 109.90 |
| 26 | BB | 818 | G | C4-C5-N7 | -6.64 | 108.14 | 110.80 |
| 26 | BB | 1388 | G | O4'-C1'-N9 | 6.64 | 113.52 | 108.20 |
| 26 | BB | 1756 | G | C5'-C4'-O4' | 6.64 | 117.07 | 109.10 |
| 26 | BB | 1803 | A | N1-C2-N3 | 6.64 | 132.62 | 129.30 |
| 26 | BB | 2341 | G | C5'-C4'-C3' | -6.64 | 105.37 | 116.00 |
| 26 | BB | 2699 | C | C5-C4-N4 | -6.64 | 115.55 | 120.20 |
| 26 | BB | 2760 | C | C4'-C3'-C2' | -6.64 | 95.95 | 102.60 |
| 26 | BB | 2884 | U | O4'-C1'-N1 | 6.64 | 113.52 | 108.20 |
| 1 | AA | 85 | U | N3-C2-O2 | -6.64 | 117.55 | 122.20 |
| 1 | AA | 138 | G | C2-N3-C4 | 6.64 | 115.22 | 111.90 |
| 1 | AA | 323 | U | C4-C5-C6 | 6.64 | 123.69 | 119.70 |
| 1 | AA | 347 | G | C5'-C4'-O4' | 6.64 | 117.07 | 109.10 |
| 1 | AA | 1324 | A | C6-C5-N7 | -6.64 | 127.65 | 132.30 |
| 3 | AC | 37 | G | C2-N3-C4 | 6.64 | 115.22 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 636 | G | P-O3'-C3' | 6.64 | 127.67 | 119.70 |
| 26 | BB | 681 | G | C4-C5-C6 | 6.64 | 122.78 | 118.80 |
| 26 | BB | 1500 | G | C8-N9-C4 | -6.64 | 103.74 | 106.40 |
| 26 | BB | 1950 | G | C4-C5-C6 | 6.64 | 122.78 | 118.80 |
| 26 | BB | 2086 | U | N3-C2-O2 | 6.64 | 126.85 | 122.20 |
| 26 | BB | 626 | A | O4'-C1'-N9 | -6.64 | 102.89 | 108.20 |
| 26 | BB | 1768 | C | N3-C2-O2 | -6.64 | 117.25 | 121.90 |
| 26 | BB | 1804 | C | N3-C4-C5 | -6.64 | 119.24 | 121.90 |
| 26 | BB | 2000 | C | C2-N3-C4 | 6.64 | 123.22 | 119.90 |
| 1 | AA | 37 | U | C6-N1-C2 | -6.64 | 117.02 | 121.00 |
| 1 | AA | 107 | G | C5'-C4'-O4' | 6.64 | 117.07 | 109.10 |
| 1 | AA | 467 | U | C4-C5-C6 | 6.64 | 123.68 | 119.70 |
| 25 | BA | 85 | G | C6-N1-C2 | -6.64 | 121.12 | 125.10 |
| 26 | BB | 94 | A | C8-N9-C4 | -6.64 | 103.14 | 105.80 |
| 26 | BB | 630 | G | C4-C5-N7 | -6.64 | 108.14 | 110.80 |
| 26 | BB | 1569 | A | C1'-O4'-C4' | -6.64 | 104.59 | 109.90 |
| 26 | BB | 1865 | U | C1'-O4'-C4' | -6.64 | 104.59 | 109.90 |
| 26 | BB | 1897 | G | C6-N1-C2 | -6.64 | 121.12 | 125.10 |
| 26 | BB | 2024 | G | N3-C2-N2 | -6.64 | 115.25 | 119.90 |
| 26 | BB | 2522 | U | O4'-C1'-N1 | 6.64 | 113.51 | 108.20 |
| 26 | BB | 2862 | G | C4-C5-C6 | 6.64 | 122.78 | 118.80 |
| 44 | BT | 77 | PHE | CB-CG-CD1 | -6.64 | 116.15 | 120.80 |
| 1 | AA | 223 | A | N9-C4-C5 | 6.64 | 108.45 | 105.80 |
| 1 | AA | 491 | G | O4'-C1'-C2' | 6.64 | 113.57 | 107.60 |
| 2 | AB | 73 | G | C5-C6-O6 | 6.64 | 132.58 | 128.60 |
| 26 | BB | 506 | G | N3-C4-C5 | -6.64 | 125.28 | 128.60 |
| 26 | BB | 603 | A | C5'-C4'-C3' | -6.64 | 105.38 | 116.00 |
| 26 | BB | 895 | U | N1-C1'-C2' | 6.64 | 122.63 | 114.00 |
| 26 | BB | 2796 | U | C5'-C4'-C3' | -6.64 | 105.38 | 116.00 |
| 1 | AA | 450 | G | C5-C6-O6 | -6.64 | 124.62 | 128.60 |
| 1 | AA | 1302 | C | P-O3'-C3' | 6.64 | 127.66 | 119.70 |
| 26 | BB | 297 | G | C8-N9-C1' | 6.64 | 135.63 | 127.00 |
| 26 | BB | 956 | G | C2-N3-C4 | 6.64 | 115.22 | 111.90 |
| 26 | BB | 1606 | C | N1-C2-O2 | 6.64 | 122.88 | 118.90 |
| 26 | BB | 2154 | A | C8-N9-C4 | -6.64 | 103.15 | 105.80 |
| 26 | BB | 2624 | G | C6-C5-N7 | -6.64 | 126.42 | 130.40 |
| 1 | AA | 1051 | C | N3-C4-N4 | 6.63 | 122.64 | 118.00 |
| 1 | AA | 1243 | C | N1-C2-O2 | 6.63 | 122.88 | 118.90 |
| 4 | AD | 16 | C | O4'-C1'-C2' | -6.63 | 99.17 | 105.80 |
| 25 | BA | 67 | G | C5'-C4'-O4' | 6.63 | 117.06 | 109.10 |
| 26 | BB | 44 | A | C5-C6-N1 | -6.63 | 114.38 | 117.70 |
| 26 | BB | 533 | G | C1'-O4'-C4' | 6.63 | 115.21 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1129 | A | C5-C6-N6 | -6.63 | 118.39 | 123.70 |
| 26 | BB | 1538 | G | N3-C2-N2 | -6.63 | 115.26 | 119.90 |
| 26 | BB | 1597 | A | N3-C4-C5 | -6.63 | 122.16 | 126.80 |
| 26 | BB | 2327 | A | C3'-C2'-C1' | 6.63 | 106.81 | 101.50 |
| 26 | BB | 2463 | C | O4'-C1'-N1 | 6.63 | 113.51 | 108.20 |
| 41 | BQ | 30 | ARG | NH1-CZ-NH2 | -6.63 | 112.10 | 119.40 |
| 1 | AA | 1087 | G | C5-N7-C8 | -6.63 | 100.98 | 104.30 |
| 1 | AA | 1258 | G | C6-N1-C2 | -6.63 | 121.12 | 125.10 |
| 1 | AA | 1447 | A | C4-C5-C6 | -6.63 | 113.68 | 117.00 |
| 4 | AD | 2 | G | N1-C2-N2 | 6.63 | 122.17 | 116.20 |
| 26 | BB | 866 | A | C5'-C4'-O4' | 6.63 | 117.06 | 109.10 |
| 1 | AA | 767 | A | C6-N1-C2 | 6.63 | 122.58 | 118.60 |
| 26 | BB | 234 | U | C2-N3-C4 | -6.63 | 123.02 | 127.00 |
| 26 | BB | 348 | A | C2-N3-C4 | 6.63 | 113.92 | 110.60 |
| 26 | BB | 1073 | A | C8-N9-C4 | -6.63 | 103.15 | 105.80 |
| 26 | BB | 1262 | A | C4-C5-N7 | -6.63 | 107.38 | 110.70 |
| 26 | BB | 1278 | C | C3'-C2'-C1' | 6.63 | 106.81 | 101.50 |
| 26 | BB | 1308 | A | C6-N1-C2 | -6.63 | 114.62 | 118.60 |
| 26 | BB | 1547 | C | N3-C4-C5 | -6.63 | 119.25 | 121.90 |
| 26 | BB | 1894 | C | N1-C2-O2 | 6.63 | 122.88 | 118.90 |
| 26 | BB | 2419 | U | O4'-C1'-N1 | 6.63 | 113.50 | 108.20 |
| 1 | AA | 218 | U | N3-C2-O2 | -6.63 | 117.56 | 122.20 |
| 1 | AA | 983 | A | O4'-C1'-C2' | 6.63 | 113.57 | 107.60 |
| 1 | AA | 1172 | C | C3'-C2'-C1' | 6.63 | 106.80 | 101.50 |
| 4 | AD | 42 | C | C5-C6-N1 | 6.63 | 124.31 | 121.00 |
| 26 | BB | 192 | C | C2-N3-C4 | -6.63 | 116.58 | 119.90 |
| 26 | BB | 1604 | C | C5-C6-N1 | -6.63 | 117.69 | 121.00 |
| 1 | AA | 70 | U | C3'-C2'-C1' | -6.63 | 96.20 | 101.50 |
| 1 | AA | 376 | G | C5-N7-C8 | 6.63 | 107.61 | 104.30 |
| 1 | AA | 854 | U | C5-C6-N1 | -6.63 | 119.39 | 122.70 |
| 1 | AA | 867 | G | N9-C4-C5 | 6.63 | 108.05 | 105.40 |
| 1 | AA | 1095 | U | N3-C2-O2 | -6.63 | 117.56 | 122.20 |
| 1 | AA | 1266 | G | N3-C2-N2 | -6.63 | 115.26 | 119.90 |
| 1 | AA | 1430 | A | C5-C6-N1 | 6.63 | 121.02 | 117.70 |
| 26 | BB | 17 | G | C4-C5-C6 | 6.63 | 122.78 | 118.80 |
| 26 | BB | 433 | C | C3'-C2'-C1' | -6.63 | 96.20 | 101.50 |
| 26 | BB | 1731 | G | N1-C2-N3 | -6.63 | 119.92 | 123.90 |
| 26 | BB | 1738 | G | C6-N1-C2 | -6.63 | 121.12 | 125.10 |
| 26 | BB | 1752 | C | C4'-C3'-C2' | -6.63 | 95.97 | 102.60 |
| 26 | BB | 2555 | U | N3-C4-C5 | -6.63 | 110.62 | 114.60 |
| 26 | BB | 2828 | G | N9-C1'-C2' | -6.63 | 104.71 | 112.00 |
| 1 | AA | 476 | U | N3-C4-C5 | 6.63 | 118.58 | 114.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 618 | C | O4'-C1'-N1 | 6.63 | 113.50 | 108.20 |
| 1 | AA | 817 | C | C2-N3-C4 | 6.63 | 123.21 | 119.90 |
| 1 | AA | 1139 | G | N3-C4-C5 | -6.63 | 125.29 | 128.60 |
| 26 | BB | 278 | A | N1-C6-N6 | -6.63 | 114.62 | 118.60 |
| 26 | BB | 516 | C | N3-C4-C5 | 6.63 | 124.55 | 121.90 |
| 26 | BB | 553 | G | C8-N9-C4 | -6.63 | 103.75 | 106.40 |
| 26 | BB | 553 | G | N1-C6-O6 | -6.63 | 115.92 | 119.90 |
| 26 | BB | 793 | A | N7-C8-N9 | 6.63 | 117.11 | 113.80 |
| 26 | BB | 909 | A | N3-C4-C5 | -6.63 | 122.16 | 126.80 |
| 26 | BB | 1273 | U | O4'-C1'-C2' | 6.63 | 113.56 | 107.60 |
| 26 | BB | 1418 | G | N3-C2-N2 | 6.63 | 124.54 | 119.90 |
| 26 | BB | 1616 | A | C3'-C2'-C1' | 6.63 | 106.80 | 101.50 |
| 26 | BB | 1702 | G | C1'-O4'-C4' | -6.63 | 104.60 | 109.90 |
| 26 | BB | 2765 | A | C5-C6-N1 | 6.63 | 121.01 | 117.70 |
| 1 | AA | 953 | G | C4-C5-N7 | -6.62 | 108.15 | 110.80 |
| 1 | AA | 1392 | G | O4'-C1'-N9 | 6.62 | 113.50 | 108.20 |
| 26 | BB | 59 | U | C5'-C4'-O4' | 6.62 | 117.05 | 109.10 |
| 26 | BB | 172 | A | N7-C8-N9 | 6.62 | 117.11 | 113.80 |
| 26 | BB | 207 | A | C2-N3-C4 | 6.62 | 113.91 | 110.60 |
| 26 | BB | 714 | U | O4'-C1'-N1 | 6.62 | 113.50 | 108.20 |
| 26 | BB | 1376 | C | C4-C5-C6 | 6.62 | 120.71 | 117.40 |
| 26 | BB | 1427 | A | N7-C8-N9 | 6.62 | 117.11 | 113.80 |
| 26 | BB | 1767 | G | N1-C2-N3 | -6.62 | 119.92 | 123.90 |
| 1 | AA | 413 | G | O4'-C4'-C3' | 6.62 | 111.40 | 106.10 |
| 1 | AA | 478 | A | N9-C1'-C2' | -6.62 | 104.71 | 112.00 |
| 1 | AA | 1029 | U | N1-C2-N3 | 6.62 | 118.87 | 114.90 |
| 1 | AA | 1136 | C | P-O3'-C3' | 6.62 | 127.65 | 119.70 |
| 1 | AA | 1334 | G | N3-C4-N9 | -6.62 | 122.03 | 126.00 |
| 1 | AA | 1468 | A | C4-C5-N7 | -6.62 | 107.39 | 110.70 |
| 3 | AC | 55 | A | N9-C4-C5 | 6.62 | 108.45 | 105.80 |
| 26 | BB | 1088 | A | C2-N3-C4 | 6.62 | 113.91 | 110.60 |
| 26 | BB | 2025 | C | C1'-O4'-C4' | -6.62 | 104.60 | 109.90 |
| 26 | BB | 2341 | G | N1-C6-O6 | 6.62 | 123.88 | 119.90 |
| 1 | AA | 187 | G | N3-C2-N2 | -6.62 | 115.26 | 119.90 |
| 1 | AA | 860 | A | N3-C4-N9 | -6.62 | 122.10 | 127.40 |
| 1 | AA | 911 | U | N1-C2-N3 | 6.62 | 118.87 | 114.90 |
| 26 | BB | 317 | G | C1'-O4'-C4' | -6.62 | 104.60 | 109.90 |
| 26 | BB | 1735 | A | C2-N3-C4 | -6.62 | 107.29 | 110.60 |
| 26 | BB | 2371 | G | N3-C2-N2 | 6.62 | 124.53 | 119.90 |
| 2 | AB | 5 | G | C5-N7-C8 | -6.62 | 100.99 | 104.30 |
| 26 | BB | 187 | G | C2-N3-C4 | 6.62 | 115.21 | 111.90 |
| 26 | BB | 438 | G | N1-C6-O6 | -6.62 | 115.93 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2312 | U | C3'-C2'-C1' | 6.62 | 106.80 | 101.50 |
| 1 | AA | 497 | G | C2-N3-C4 | 6.62 | 115.21 | 111.90 |
| 1 | AA | 917 | G | N9-C4-C5 | -6.62 | 102.75 | 105.40 |
| 1 | AA | 1066 | C | N3-C2-O2 | -6.62 | 117.27 | 121.90 |
| 1 | AA | 1511 | G | O4'-C4'-C3' | -6.62 | 97.38 | 104.00 |
| 1 | AA | 1527 | U | C5'-C4'-C3' | 6.62 | 126.59 | 116.00 |
| 2 | AB | 5 | G | O4'-C1'-N9 | 6.62 | 113.50 | 108.20 |
| 3 | AC | 41 | A | O4'-C1'-N9 | 6.62 | 113.49 | 108.20 |
| 25 | BA | 33 | G | N3-C4-C5 | -6.62 | 125.29 | 128.60 |
| 25 | BA | 103 | U | C2-N3-C4 | -6.62 | 123.03 | 127.00 |
| 26 | BB | 51 | G | C5-C6-O6 | -6.62 | 124.63 | 128.60 |
| 26 | BB | 121 | G | C5'-C4'-O4' | 6.62 | 117.04 | 109.10 |
| 26 | BB | 586 | A | N7-C8-N9 | -6.62 | 110.49 | 113.80 |
| 26 | BB | 624 | C | N3-C4-N4 | 6.62 | 122.63 | 118.00 |
| 26 | BB | 1545 | A | C5-N7-C8 | 6.62 | 107.21 | 103.90 |
| 26 | BB | 1730 | C | N3-C4-N4 | 6.62 | 122.63 | 118.00 |
| 26 | BB | 1837 | C | N3-C2-O2 | -6.62 | 117.27 | 121.90 |
| 26 | BB | 2042 | A | N9-C4-C5 | 6.62 | 108.45 | 105.80 |
| 26 | BB | 2872 | A | C6-C5-N7 | 6.62 | 136.93 | 132.30 |
| 1 | AA | 591 | U | N1-C2-N3 | 6.62 | 118.87 | 114.90 |
| 1 | AA | 714 | G | C5-N7-C8 | -6.62 | 100.99 | 104.30 |
| 1 | AA | 1338 | G | C5-C6-N1 | 6.62 | 114.81 | 111.50 |
| 1 | AA | 1493 | A | N1-C2-N3 | -6.62 | 125.99 | 129.30 |
| 25 | BA | 7 | G | C6-N1-C2 | -6.62 | 121.13 | 125.10 |
| 26 | BB | 181 | A | C5-N7-C8 | 6.62 | 107.21 | 103.90 |
| 26 | BB | 658 | U | N1-C1'-C2' | -6.62 | 104.72 | 112.00 |
| 26 | BB | 1306 | C | O4'-C1'-N1 | 6.62 | 113.49 | 108.20 |
| 26 | BB | 1737 | G | O4'-C4'-C3' | 6.62 | 111.39 | 106.10 |
| 26 | BB | 1823 | G | C8-N9-C4 | -6.62 | 103.75 | 106.40 |
| 26 | BB | 1907 | G | N3-C4-N9 | 6.62 | 129.97 | 126.00 |
| 26 | BB | 2299 | U | N3-C4-C5 | -6.62 | 110.63 | 114.60 |
| 26 | BB | 2697 | G | C6-N1-C2 | -6.62 | 121.13 | 125.10 |
| 1 | AA | 177 | G | O4'-C1'-N9 | 6.62 | 113.49 | 108.20 |
| 1 | AA | 380 | G | C5-C6-N1 | 6.62 | 114.81 | 111.50 |
| 1 | AA | 649 | A | P-O3'-C3' | 6.62 | 127.64 | 119.70 |
| 1 | AA | 668 | G | N1-C2-N2 | 6.62 | 122.15 | 116.20 |
| 19 | AS | 32 | PHE | CB-CG-CD2 | -6.62 | 116.17 | 120.80 |
| 26 | BB | 130 | C | C6-N1-C2 | -6.62 | 117.65 | 120.30 |
| 26 | BB | 627 | A | C3'-C2'-C1' | -6.62 | 96.21 | 101.50 |
| 26 | BB | 836 | G | C5'-C4'-C3' | -6.62 | 105.42 | 116.00 |
| 26 | BB | 2062 | A | P-O3'-C3' | 6.62 | 127.64 | 119.70 |
| 26 | BB | 2833 | U | N3-C4-O4 | -6.62 | 114.77 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 366 | A | N1-C6-N6 | -6.61 | 114.63 | 118.60 |
| 1 | AA | 1492 | A | N1-C6-N6 | -6.61 | 114.63 | 118.60 |
| 3 | AC | 42 | U | P-O3'-C3' | 6.61 | 127.64 | 119.70 |
| 16 | AP | 92 | ARG | NH1-CZ-NH2 | -6.61 | 112.12 | 119.40 |
| 26 | BB | 84 | A | C4'-C3'-C2' | 6.61 | 109.21 | 102.60 |
| 26 | BB | 133 | U | C3'-C2'-C1' | -6.61 | 96.21 | 101.50 |
| 26 | BB | 473 | G | N3-C2-N2 | -6.61 | 115.27 | 119.90 |
| 26 | BB | 514 | A | N1-C6-N6 | 6.61 | 122.57 | 118.60 |
| 26 | BB | 706 | A | C5'-C4'-O4' | 6.61 | 117.04 | 109.10 |
| 26 | BB | 1009 | A | N3-C4-C5 | -6.61 | 122.17 | 126.80 |
| 26 | BB | 1597 | A | N1-C2-N3 | -6.61 | 125.99 | 129.30 |
| 26 | BB | 2308 | G | C3'-C2'-C1' | -6.61 | 96.21 | 101.50 |
| 26 | BB | 2499 | C | C3'-C2'-C1' | 6.61 | 106.79 | 101.50 |
| 1 | AA | 396 | C | N3-C4-N4 | 6.61 | 122.63 | 118.00 |
| 12 | AL | 124 | PRO | N-CA-CB | 6.61 | 111.23 | 103.30 |
| 13 | AM | 43 | PRO | N-CA-CB | 6.61 | 111.23 | 103.30 |
| 1 | AA | 604 | G | C4-C5-N7 | -6.61 | 108.16 | 110.80 |
| 1 | AA | 648 | A | C6-N1-C2 | -6.61 | 114.63 | 118.60 |
| 1 | AA | 994 | A | C6-N1-C2 | 6.61 | 122.57 | 118.60 |
| 25 | BA | 12 | C | O4'-C1'-N1 | 6.61 | 113.49 | 108.20 |
| 25 | BA | 105 | G | N9-C4-C5 | 6.61 | 108.04 | 105.40 |
| 26 | BB | 422 | A | C1'-O4'-C4' | -6.61 | 104.61 | 109.90 |
| 26 | BB | 881 | G | C2-N3-C4 | 6.61 | 115.20 | 111.90 |
| 26 | BB | 1752 | C | C3'-C2'-C1' | 6.61 | 106.79 | 101.50 |
| 26 | BB | 2295 | C | C4-C5-C6 | 6.61 | 120.70 | 117.40 |
| 42 | BR | 31 | VAL | CA-CB-CG1 | 6.61 | 120.82 | 110.90 |
| 1 | AA | 821 | G | C3'-C2'-C1' | 6.61 | 106.79 | 101.50 |
| 25 | BA | 109 | A | C5'-C4'-C3' | 6.61 | 126.57 | 116.00 |
| 26 | BB | 1389 | G | N1-C6-O6 | -6.61 | 115.93 | 119.90 |
| 1 | AA | 53 | A | N1-C6-N6 | 6.61 | 122.56 | 118.60 |
| 1 | AA | 1447 | A | N3-C4-N9 | -6.61 | 122.11 | 127.40 |
| 4 | AD | 40 | C | C5-C4-N4 | 6.61 | 124.83 | 120.20 |
| 26 | BB | 36 | G | C5-C6-N1 | 6.61 | 114.80 | 111.50 |
| 26 | BB | 290 | U | C4-C5-C6 | 6.61 | 123.66 | 119.70 |
| 26 | BB | 1214 | A | N9-C4-C5 | 6.61 | 108.44 | 105.80 |
| 26 | BB | 1482 | G | P-O3'-C3' | 6.61 | 127.63 | 119.70 |
| 26 | BB | 1921 | G | N3-C4-C5 | -6.61 | 125.30 | 128.60 |
| 26 | BB | 1944 | U | C4-C5-C6 | 6.61 | 123.67 | 119.70 |
| 26 | BB | 2026 | U | N3-C2-O2 | -6.61 | 117.58 | 122.20 |
| 26 | BB | 2287 | A | C4-C5-N7 | 6.61 | 114.00 | 110.70 |
| 26 | BB | 2622 | U | N1-C2-O2 | 6.61 | 127.42 | 122.80 |
| 1 | AA | 567 | G | N3-C4-C5 | -6.61 | 125.30 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 825 | A | C2-N3-C4 | 6.61 | 113.90 | 110.60 |
| 1 | AA | 1020 | G | C2-N3-C4 | 6.61 | 115.20 | 111.90 |
| 1 | AA | 1340 | A | N1-C6-N6 | 6.61 | 122.56 | 118.60 |
| 2 | AB | 4 | G | C6-N1-C2 | -6.61 | 121.14 | 125.10 |
| 26 | BB | 324 | A | C5'-C4'-O4' | 6.61 | 117.03 | 109.10 |
| 26 | BB | 1210 | G | C4-C5-C6 | 6.61 | 122.76 | 118.80 |
| 26 | BB | 1421 | G | N9-C4-C5 | -6.61 | 102.76 | 105.40 |
| 26 | BB | 1738 | G | N3-C4-N9 | -6.61 | 122.04 | 126.00 |
| 26 | BB | 1773 | A | N1-C6-N6 | 6.61 | 122.56 | 118.60 |
| 26 | BB | 1895 | C | C5-C6-N1 | 6.61 | 124.30 | 121.00 |
| 26 | BB | 1960 | A | N7-C8-N9 | 6.61 | 117.10 | 113.80 |
| 26 | BB | 2086 | U | C1'-O4'-C4' | -6.61 | 104.61 | 109.90 |
| 26 | BB | 2732 | G | C6-N1-C2 | -6.61 | 121.14 | 125.10 |
| 26 | BB | 313 | G | N9-C4-C5 | 6.60 | 108.04 | 105.40 |
| 26 | BB | 579 | G | C5-N7-C8 | -6.60 | 101.00 | 104.30 |
| 26 | BB | 2081 | U | C6-N1-C2 | -6.60 | 117.04 | 121.00 |
| 26 | BB | 2256 | G | O4'-C1'-N9 | 6.60 | 113.48 | 108.20 |
| 1 | AA | 77 | A | C5-C6-N1 | 6.60 | 121.00 | 117.70 |
| 1 | AA | 605 | U | O4'-C1'-N1 | 6.60 | 113.48 | 108.20 |
| 1 | AA | 899 | C | C6-N1-C2 | 6.60 | 122.94 | 120.30 |
| 1 | AA | 1494 | G | C3'-C2'-C1' | 6.60 | 106.78 | 101.50 |
| 26 | BB | 207 | A | C5'-C4'-C3' | -6.60 | 105.44 | 116.00 |
| 26 | BB | 489 | G | C4'-C3'-C2' | -6.60 | 96.00 | 102.60 |
| 26 | BB | 1513 | U | N3-C4-C5 | -6.60 | 110.64 | 114.60 |
| 26 | BB | 1675 | C | C5-C4-N4 | -6.60 | 115.58 | 120.20 |
| 26 | BB | 1822 | C | C5-C4-N4 | -6.60 | 115.58 | 120.20 |
| 26 | BB | 2573 | C | P-O3'-C3' | 6.60 | 127.62 | 119.70 |
| 26 | BB | 2628 | C | O4'-C1'-N1 | 6.60 | 113.48 | 108.20 |
| 1 | AA | 61 | G | N3-C4-C5 | -6.60 | 125.30 | 128.60 |
| 1 | AA | 372 | C | N3-C4-N4 | -6.60 | 113.38 | 118.00 |
| 1 | AA | 473 | U | C6-N1-C2 | 6.60 | 124.96 | 121.00 |
| 1 | AA | 959 | A | N3-C4-C5 | -6.60 | 122.18 | 126.80 |
| 16 | AP | 78 | ARG | NE-CZ-NH2 | -6.60 | 117.00 | 120.30 |
| 26 | BB | 1342 | A | N1-C2-N3 | 6.60 | 132.60 | 129.30 |
| 1 | AA | 189 | A | N1-C6-N6 | -6.60 | 114.64 | 118.60 |
| 1 | AA | 797 | C | N3-C4-N4 | 6.60 | 122.62 | 118.00 |
| 1 | AA | 1414 | U | N3-C2-O2 | -6.60 | 117.58 | 122.20 |
| 26 | BB | 727 | A | C4-C5-C6 | 6.60 | 120.30 | 117.00 |
| 26 | BB | 774 | G | C5-C6-O6 | -6.60 | 124.64 | 128.60 |
| 26 | BB | 1298 | C | C1'-O4'-C4' | -6.60 | 104.62 | 109.90 |
| 26 | BB | 1323 | C | N3-C2-O2 | -6.60 | 117.28 | 121.90 |
| 26 | BB | 1409 | U | N3-C2-O2 | -6.60 | 117.58 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1579 | A | C2-N3-C4 | 6.60 | 113.90 | 110.60 |
| 26 | BB | 1662 | U | C5'-C4'-C3' | -6.60 | 105.44 | 116.00 |
| 26 | BB | 1669 | A | C4-C5-N7 | 6.60 | 114.00 | 110.70 |
| 26 | BB | 2414 | G | C5'-C4'-O4' | 6.60 | 117.02 | 109.10 |
| 26 | BB | 2720 | U | O4'-C1'-N1 | 6.60 | 113.48 | 108.20 |
| 1 | AA | 53 | A | C5'-C4'-C3' | -6.60 | 105.44 | 116.00 |
| 1 | AA | 340 | U | C4-C5-C6 | 6.60 | 123.66 | 119.70 |
| 1 | AA | 1082 | A | C4'-C3'-C2' | -6.60 | 96.00 | 102.60 |
| 1 | AA | 1233 | G | N1-C6-O6 | 6.60 | 123.86 | 119.90 |
| 26 | BB | 1002 | G | C8-N9-C4 | -6.60 | 103.76 | 106.40 |
| 26 | BB | 1173 | U | C2-N3-C4 | -6.60 | 123.04 | 127.00 |
| 26 | BB | 1491 | G | C5-N7-C8 | -6.60 | 101.00 | 104.30 |
| 26 | BB | 1930 | G | C5-C6-O6 | -6.60 | 124.64 | 128.60 |
| 41 | BQ | 93 | ASP | CB-CG-OD1 | -6.60 | 112.36 | 118.30 |
| 1 | AA | 252 | U | P-O3'-C3' | 6.60 | 127.61 | 119.70 |
| 1 | AA | 1032 | G | N3-C4-C5 | 6.60 | 131.90 | 128.60 |
| 1 | AA | 1050 | G | C6-C5-N7 | -6.60 | 126.44 | 130.40 |
| 1 | AA | 1106 | G | P-O3'-C3' | 6.60 | 127.61 | 119.70 |
| 26 | BB | 356 | G | C5'-C4'-O4' | -6.60 | 101.19 | 109.10 |
| 26 | BB | 925 | A | C5-C6-N6 | -6.60 | 118.42 | 123.70 |
| 26 | BB | 1077 | A | C4-C5-C6 | 6.60 | 120.30 | 117.00 |
| 26 | BB | 2144 | G | C3'-C2'-C1' | -6.60 | 96.22 | 101.50 |
| 26 | BB | 2165 | C | C6-N1-C2 | 6.60 | 122.94 | 120.30 |
| 26 | BB | 2349 | G | N3-C4-N9 | 6.60 | 129.96 | 126.00 |
| 26 | BB | 2427 | C | P-O5'-C5' | 6.60 | 131.45 | 120.90 |
| 26 | BB | 2696 | U | O4'-C1'-N1 | 6.60 | 113.48 | 108.20 |
| 26 | BB | 2739 | U | C5'-C4'-C3' | -6.60 | 105.45 | 116.00 |
| 1 | AA | 793 | U | O4'-C1'-N1 | 6.59 | 113.48 | 108.20 |
| 1 | AA | 1108 | G | C8-N9-C4 | -6.59 | 103.76 | 106.40 |
| 1 | AA | 1278 | G | N9-C4-C5 | -6.59 | 102.76 | 105.40 |
| 26 | BB | 647 | G | N1-C2-N3 | -6.59 | 119.94 | 123.90 |
| 26 | BB | 665 | U | C4-C5-C6 | 6.59 | 123.66 | 119.70 |
| 26 | BB | 739 | A | C8-N9-C4 | -6.59 | 103.16 | 105.80 |
| 26 | BB | 997 | G | C8-N9-C4 | -6.59 | 103.76 | 106.40 |
| 26 | BB | 1576 | U | O4'-C1'-N1 | 6.59 | 113.48 | 108.20 |
| 26 | BB | 1818 | U | N3-C4-O4 | 6.59 | 124.02 | 119.40 |
| 26 | BB | 1941 | C | N1-C1'-C2' | -6.59 | 104.75 | 112.00 |
| 26 | BB | 2062 | A | O4'-C4'-C3' | 6.59 | 111.38 | 106.10 |
| 31 | BG | 50 | ASP | CB-CG-OD1 | -6.59 | 112.36 | 118.30 |
| 26 | BB | 9 | G | N7-C8-N9 | -6.59 | 109.80 | 113.10 |
| 26 | BB | 1017 | G | C4'-C3'-C2' | -6.59 | 96.01 | 102.60 |
| 26 | BB | 1500 | G | C6-N1-C2 | -6.59 | 121.14 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2245 | U | N3-C2-O2 | -6.59 | 117.58 | 122.20 |
| 26 | BB | 2872 | A | C4-C5-N7 | -6.59 | 107.40 | 110.70 |
| 1 | AA | 761 | G | N1-C2-N3 | -6.59 | 119.94 | 123.90 |
| 1 | AA | 970 | C | C5'-C4'-O4' | 6.59 | 117.01 | 109.10 |
| 1 | AA | 1101 | A | C8-N9-C4 | -6.59 | 103.16 | 105.80 |
| 1 | AA | 1206 | G | N3-C2-N2 | 6.59 | 124.52 | 119.90 |
| 26 | BB | 1182 | G | C5-C6-O6 | 6.59 | 132.56 | 128.60 |
| 26 | BB | 1981 | A | O4'-C4'-C3' | 6.59 | 111.37 | 106.10 |
| 26 | BB | 2290 | G | C2-N3-C4 | 6.59 | 115.20 | 111.90 |
| 26 | BB | 2315 | G | N9-C1'-C2' | -6.59 | 104.75 | 112.00 |
| 26 | BB | 2346 | A | O4'-C4'-C3' | 6.59 | 111.37 | 106.10 |
| 26 | BB | 2490 | G | O4'-C4'-C3' | 6.59 | 111.37 | 106.10 |
| 1 | AA | 585 | G | N1-C6-O6 | -6.59 | 115.95 | 119.90 |
| 1 | AA | 895 | G | N1-C2-N2 | -6.59 | 110.27 | 116.20 |
| 1 | AA | 1305 | G | N7-C8-N9 | 6.59 | 116.39 | 113.10 |
| 2 | AB | 24 | G | N3-C4-C5 | -6.59 | 125.31 | 128.60 |
| 25 | BA | 94 | A | N9-C4-C5 | -6.59 | 103.16 | 105.80 |
| 26 | BB | 610 | C | C4-C5-C6 | -6.59 | 114.11 | 117.40 |
| 26 | BB | 1019 | U | N3-C2-O2 | -6.59 | 117.59 | 122.20 |
| 26 | BB | 1101 | U | O4'-C1'-C2' | 6.59 | 113.53 | 107.60 |
| 26 | BB | 1206 | G | C3'-C2'-C1' | 6.59 | 106.77 | 101.50 |
| 26 | BB | 1923 | U | N3-C2-O2 | -6.59 | 117.59 | 122.20 |
| 26 | BB | 2290 | G | C3'-C2'-C1' | 6.59 | 106.77 | 101.50 |
| 26 | BB | 2303 | G | C2-N3-C4 | 6.59 | 115.19 | 111.90 |
| 1 | AA | 817 | C | N3-C4-N4 | 6.59 | 122.61 | 118.00 |
| 1 | AA | 1246 | A | C3'-C2'-C1' | 6.59 | 106.77 | 101.50 |
| 1 | AA | 1260 | G | N1-C2-N2 | -6.59 | 110.27 | 116.20 |
| 25 | BA | 101 | A | N1-C2-N3 | 6.59 | 132.59 | 129.30 |
| 26 | BB | 82 | U | C3'-C2'-C1' | 6.59 | 106.77 | 101.50 |
| 26 | BB | 1655 | A | C5'-C4'-O4' | 6.59 | 117.01 | 109.10 |
| 26 | BB | 1956 | U | C1'-O4'-C4' | -6.59 | 104.63 | 109.90 |
| 51 | B0 | 29 | ARG | NE-CZ-NH1 | -6.59 | 117.01 | 120.30 |
| 1 | AA | 436 | C | C5-C4-N4 | -6.59 | 115.59 | 120.20 |
| 1 | AA | 465 | A | C3'-C2'-C1' | 6.59 | 106.77 | 101.50 |
| 1 | AA | 931 | C | C2-N3-C4 | -6.59 | 116.61 | 119.90 |
| 1 | AA | 1038 | C | C5'-C4'-O4' | 6.59 | 117.00 | 109.10 |
| 1 | AA | 1508 | A | C5-C6-N6 | -6.59 | 118.43 | 123.70 |
| 2 | AB | 63 | C | N3-C4-C5 | -6.59 | 119.27 | 121.90 |
| 25 | BA | 57 | A | C5-C6-N6 | -6.59 | 118.43 | 123.70 |
| 26 | BB | 114 | U | C5'-C4'-O4' | 6.59 | 117.00 | 109.10 |
| 26 | BB | 155 | A | C6-N1-C2 | -6.59 | 114.65 | 118.60 |
| 26 | BB | 1229 | C | C5-C6-N1 | -6.59 | 117.71 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1581 | G | N7-C8-N9 | 6.59 | 116.39 | 113.10 |
| 26 | BB | 1826 | G | N3-C4-N9 | 6.59 | 129.95 | 126.00 |
| 26 | BB | 2414 | G | O4'-C1'-N9 | 6.59 | 113.47 | 108.20 |
| 12 | AL | 63 | TYR | CG-CD2-CE2 | -6.58 | 116.03 | 121.30 |
| 26 | BB | 371 | A | N1-C6-N6 | -6.58 | 114.65 | 118.60 |
| 26 | BB | 885 | C | C2-N3-C4 | -6.58 | 116.61 | 119.90 |
| 26 | BB | 1829 | A | C6-N1-C2 | -6.58 | 114.65 | 118.60 |
| 26 | BB | 1834 | U | N3-C2-O2 | -6.58 | 117.59 | 122.20 |
| 26 | BB | 2363 | G | C3'-C2'-C1' | -6.58 | 96.23 | 101.50 |
| 26 | BB | 2722 | G | C6-C5-N7 | -6.58 | 126.45 | 130.40 |
| 1 | AA | 23 | C | C2-N3-C4 | -6.58 | 116.61 | 119.90 |
| 1 | AA | 49 | U | C4'-C3'-C2' | -6.58 | 96.02 | 102.60 |
| 1 | AA | 1497 | G | O4'-C1'-N9 | 6.58 | 113.47 | 108.20 |
| 1 | AA | 1511 | G | N1-C2-N3 | -6.58 | 119.95 | 123.90 |
| 2 | AB | 73 | G | C8-N9-C4 | -6.58 | 103.77 | 106.40 |
| 4 | AD | 30 | G | C6-N1-C2 | -6.58 | 121.15 | 125.10 |
| 25 | BA | 43 | C | C5-C6-N1 | 6.58 | 124.29 | 121.00 |
| 25 | BA | 97 | C | C5'-C4'-O4' | 6.58 | 117.00 | 109.10 |
| 26 | BB | 32 | C | C2-N1-C1' | -6.58 | 111.56 | 118.80 |
| 26 | BB | 86 | G | N1-C2-N3 | 6.58 | 127.85 | 123.90 |
| 26 | BB | 1177 | G | C6-N1-C2 | -6.58 | 121.15 | 125.10 |
| 26 | BB | 2164 | C | O4'-C1'-N1 | 6.58 | 113.47 | 108.20 |
| 26 | BB | 2559 | C | O4'-C1'-N1 | 6.58 | 113.47 | 108.20 |
| 57 | B6 | 7 | ARG | NE-CZ-NH1 | 6.58 | 123.59 | 120.30 |
| 1 | AA | 26 | A | N9-C4-C5 | 6.58 | 108.43 | 105.80 |
| 1 | AA | 530 | G | C3'-C2'-C1' | -6.58 | 96.24 | 101.50 |
| 1 | AA | 631 | C | N3-C4-C5 | -6.58 | 119.27 | 121.90 |
| 1 | AA | 640 | A | N1-C6-N6 | 6.58 | 122.55 | 118.60 |
| 1 | AA | 693 | G | C4-C5-N7 | -6.58 | 108.17 | 110.80 |
| 1 | AA | 1154 | G | N7-C8-N9 | 6.58 | 116.39 | 113.10 |
| 1 | AA | 1162 | C | C3'-C2'-C1' | 6.58 | 106.76 | 101.50 |
| 26 | BB | 130 | C | N3-C2-O2 | -6.58 | 117.29 | 121.90 |
| 26 | BB | 2152 | G | C6-N1-C2 | -6.58 | 121.15 | 125.10 |
| 26 | BB | 2210 | U | C6-N1-C2 | 6.58 | 124.95 | 121.00 |
| 26 | BB | 2628 | C | C4-C5-C6 | -6.58 | 114.11 | 117.40 |
| 26 | BB | 2809 | A | C5-C6-N1 | 6.58 | 120.99 | 117.70 |
| 26 | BB | 2855 | C | C5-C4-N4 | -6.58 | 115.59 | 120.20 |
| 1 | AA | 465 | A | N3-C4-C5 | -6.58 | 122.19 | 126.80 |
| 26 | BB | 2704 | C | O4'-C1'-N1 | 6.58 | 113.46 | 108.20 |
| 26 | BB | 2840 | C | C1'-O4'-C4' | 6.58 | 115.16 | 109.90 |
| 1 | AA | 131 | A | C5'-C4'-O4' | 6.58 | 116.99 | 109.10 |
| 1 | AA | 1090 | U | N3-C4-O4 | 6.58 | 124.00 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1164 | G | C4-C5-C6 | 6.58 | 122.75 | 118.80 |
| 1 | AA | 1248 | A | C4-C5-C6 | -6.58 | 113.71 | 117.00 |
| 1 | AA | 1411 | C | C6-N1-C2 | -6.58 | 117.67 | 120.30 |
| 25 | BA | 23 | G | C8-N9-C4 | 6.58 | 109.03 | 106.40 |
| 26 | BB | 160 | A | C6-N1-C2 | 6.58 | 122.55 | 118.60 |
| 26 | BB | 408 | G | C4'-C3'-C2' | -6.58 | 96.02 | 102.60 |
| 26 | BB | 426 | C | C4-C5-C6 | -6.58 | 114.11 | 117.40 |
| 26 | BB | 687 | C | N3-C2-O2 | -6.58 | 117.30 | 121.90 |
| 26 | BB | 853 | C | C2-N3-C4 | 6.58 | 123.19 | 119.90 |
| 26 | BB | 856 | G | C4-C5-N7 | -6.58 | 108.17 | 110.80 |
| 26 | BB | 1075 | C | N1-C2-O2 | 6.58 | 122.85 | 118.90 |
| 26 | BB | 1884 | G | N3-C4-C5 | -6.58 | 125.31 | 128.60 |
| 26 | BB | 1978 | A | N9-C1'-C2' | -6.58 | 104.76 | 112.00 |
| 26 | BB | 2705 | A | C5-N7-C8 | -6.58 | 100.61 | 103.90 |
| 26 | BB | 2742 | G | N3-C4-N9 | -6.58 | 122.05 | 126.00 |
| 1 | AA | 587 | G | C1'-O4'-C4' | -6.58 | 104.64 | 109.90 |
| 1 | AA | 601 | G | C5-C6-N1 | -6.58 | 108.21 | 111.50 |
| 1 | AA | 880 | C | O4'-C1'-N1 | 6.58 | 113.46 | 108.20 |
| 26 | BB | 354 | A | C5-N7-C8 | -6.58 | 100.61 | 103.90 |
| 26 | BB | 1059 | G | N9-C4-C5 | -6.58 | 102.77 | 105.40 |
| 26 | BB | 1075 | C | C5-C6-N1 | -6.58 | 117.71 | 121.00 |
| 26 | BB | 2078 | C | O4'-C1'-N1 | 6.58 | 113.46 | 108.20 |
| 1 | AA | 80 | A | C8-N9-C4 | -6.58 | 103.17 | 105.80 |
| 1 | AA | 435 | A | C5-C6-N6 | -6.58 | 118.44 | 123.70 |
| 1 | AA | 761 | G | C4'-C3'-C2' | -6.58 | 96.03 | 102.60 |
| 1 | AA | 1102 | A | C5'-C4'-O4' | 6.58 | 116.99 | 109.10 |
| 1 | AA | 1168 | U | N3-C2-O2 | -6.58 | 117.60 | 122.20 |
| 1 | AA | 1394 | A | P-O3'-C3' | 6.58 | 127.59 | 119.70 |
| 1 | AA | 1464 | U | N3-C2-O2 | 6.58 | 126.80 | 122.20 |
| 3 | AC | 20 | G | C1'-O4'-C4' | 6.58 | 115.16 | 109.90 |
| 26 | BB | 81 | G | C4-C5-C6 | 6.58 | 122.75 | 118.80 |
| 26 | BB | 134 | G | N1-C6-O6 | -6.58 | 115.95 | 119.90 |
| 26 | BB | 165 | A | N9-C4-C5 | 6.58 | 108.43 | 105.80 |
| 26 | BB | 447 | A | N1-C2-N3 | 6.58 | 132.59 | 129.30 |
| 26 | BB | 629 | G | C2-N3-C4 | 6.58 | 115.19 | 111.90 |
| 26 | BB | 1543 | G | N9-C1'-C2' | -6.58 | 104.77 | 112.00 |
| 26 | BB | 2003 | A | P-O3'-C3' | 6.58 | 127.59 | 119.70 |
| 26 | BB | 2716 | C | C4-C5-C6 | -6.58 | 114.11 | 117.40 |
| 26 | BB | 2717 | C | C5-C6-N1 | 6.58 | 124.29 | 121.00 |
| 1 | AA | 474 | G | N7-C8-N9 | 6.57 | 116.39 | 113.10 |
| 1 | AA | 808 | C | N3-C4-N4 | 6.57 | 122.60 | 118.00 |
| 1 | AA | 898 | G | C6-N1-C2 | -6.57 | 121.16 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 258 | G | C4'-C3'-C2' | -6.57 | 96.03 | 102.60 |
| 26 | BB | 1104 | C | C3'-C2'-C1' | 6.57 | 106.76 | 101.50 |
| 26 | BB | 1275 | A | N9-C4-C5 | -6.57 | 103.17 | 105.80 |
| 26 | BB | 1283 | G | C5'-C4'-O4' | 6.57 | 116.99 | 109.10 |
| 26 | BB | 2070 | A | C1'-O4'-C4' | 6.57 | 115.16 | 109.90 |
| 26 | BB | 2365 | G | N3-C4-C5 | -6.57 | 125.31 | 128.60 |
| 26 | BB | 2591 | C | O4'-C1'-N1 | 6.57 | 113.46 | 108.20 |
| 26 | BB | 2669 | G | C5-C6-O6 | -6.57 | 124.66 | 128.60 |
| 26 | BB | 2684 | U | N3-C4-C5 | 6.57 | 118.54 | 114.60 |
| 26 | BB | 2843 | G | N1-C2-N3 | 6.57 | 127.84 | 123.90 |
| 1 | AA | 779 | C | C3'-C2'-C1' | 6.57 | 106.76 | 101.50 |
| 1 | AA | 866 | C | C1'-O4'-C4' | -6.57 | 104.64 | 109.90 |
| 26 | BB | 1770 | G | N3-C4-C5 | -6.57 | 125.31 | 128.60 |
| 1 | AA | 288 | A | C6-N1-C2 | 6.57 | 122.54 | 118.60 |
| 4 | AD | 65 | G | O4'-C1'-N9 | -6.57 | 102.94 | 108.20 |
| 26 | BB | 40 | U | O4'-C1'-N1 | 6.57 | 113.46 | 108.20 |
| 26 | BB | 241 | A | C5'-C4'-O4' | 6.57 | 116.98 | 109.10 |
| 26 | BB | 385 | C | N3-C4-C5 | -6.57 | 119.27 | 121.90 |
| 26 | BB | 569 | U | O4'-C1'-C2' | -6.57 | 99.23 | 105.80 |
| 26 | BB | 1276 | A | C5-N7-C8 | 6.57 | 107.19 | 103.90 |
| 26 | BB | 2569 | G | N9-C1'-C2' | -6.57 | 104.77 | 112.00 |
| 1 | AA | 22 | G | N3-C2-N2 | 6.57 | 124.50 | 119.90 |
| 1 | AA | 772 | U | C3'-C2'-C1' | -6.57 | 96.25 | 101.50 |
| 1 | AA | 1294 | G | N3-C4-C5 | -6.57 | 125.31 | 128.60 |
| 26 | BB | 664 | G | O4'-C1'-N9 | 6.57 | 113.45 | 108.20 |
| 26 | BB | 1472 | C | N3-C2-O2 | -6.57 | 117.30 | 121.90 |
| 26 | BB | 2297 | A | N9-C4-C5 | 6.57 | 108.43 | 105.80 |
| 26 | BB | 2473 | U | C3'-C2'-C1' | -6.57 | 96.25 | 101.50 |
| 1 | AA | 769 | G | N3-C2-N2 | 6.57 | 124.50 | 119.90 |
| 1 | AA | 1441 | A | C5-C6-N6 | -6.57 | 118.45 | 123.70 |
| 2 | AB | 4 | G | C5-C6-N1 | 6.57 | 114.78 | 111.50 |
| 26 | BB | 862 | G | C5-N7-C8 | -6.57 | 101.02 | 104.30 |
| 26 | BB | 918 | A | O4'-C4'-C3' | 6.57 | 111.36 | 106.10 |
| 26 | BB | 1724 | G | N3-C2-N2 | -6.57 | 115.30 | 119.90 |
| 26 | BB | 1769 | U | C5-C6-N1 | -6.57 | 119.42 | 122.70 |
| 1 | AA | 787 | A | C5-N7-C8 | 6.57 | 107.18 | 103.90 |
| 1 | AA | 904 | U | C5-C4-O4 | -6.57 | 121.96 | 125.90 |
| 1 | AA | 1044 | A | C1'-O4'-C4' | -6.57 | 104.65 | 109.90 |
| 1 | AA | 1337 | G | C8-N9-C4 | -6.57 | 103.77 | 106.40 |
| 1 | AA | 1345 | U | C4'-C3'-C2' | 6.57 | 109.17 | 102.60 |
| 26 | BB | 769 | U | C2-N3-C4 | -6.57 | 123.06 | 127.00 |
| 26 | BB | 1464 | G | C4-C5-N7 | -6.57 | 108.17 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1789 | A | O4'-C1'-N9 | -6.57 | 102.95 | 108.20 |
| 26 | BB | 2204 | G | C5-C6-N1 | 6.57 | 114.78 | 111.50 |
| 26 | BB | 2346 | A | C1'-O4'-C4' | -6.57 | 104.65 | 109.90 |
| 26 | BB | 2540 | C | C5-C4-N4 | -6.57 | 115.60 | 120.20 |
| 1 | AA | 726 | C | O4'-C1'-C2' | -6.56 | 99.24 | 105.80 |
| 26 | BB | 1101 | U | C5-C4-O4 | 6.56 | 129.84 | 125.90 |
| 26 | BB | 2320 | U | N1-C1'-C2' | 6.56 | 122.53 | 114.00 |
| 1 | AA | 177 | G | N3-C4-C5 | -6.56 | 125.32 | 128.60 |
| 1 | AA | 320 | A | C4-C5-N7 | 6.56 | 113.98 | 110.70 |
| 1 | AA | 597 | G | N1-C6-O6 | 6.56 | 123.84 | 119.90 |
| 1 | AA | 606 | G | C8-N9-C4 | -6.56 | 103.78 | 106.40 |
| 1 | AA | 742 | G | C2-N3-C4 | 6.56 | 115.18 | 111.90 |
| 1 | AA | 892 | A | C4-C5-C6 | -6.56 | 113.72 | 117.00 |
| 12 | AL | 121 | ARG | NE-CZ-NH2 | -6.56 | 117.02 | 120.30 |
| 25 | BA | 64 | G | C8-N9-C1' | 6.56 | 135.53 | 127.00 |
| 26 | BB | 491 | G | C6-C5-N7 | -6.56 | 126.46 | 130.40 |
| 26 | BB | 881 | G | N3-C2-N2 | 6.56 | 124.49 | 119.90 |
| 26 | BB | 1934 | C | C5-C6-N1 | 6.56 | 124.28 | 121.00 |
| 26 | BB | 2227 | A | C8-N9-C4 | 6.56 | 108.42 | 105.80 |
| 40 | BP | 42 | LYS | O-C-N | 6.56 | 133.20 | 122.70 |
| 48 | BX | 19 | ARG | NE-CZ-NH1 | 6.56 | 123.58 | 120.30 |
| 1 | AA | 85 | U | C1'-O4'-C4' | -6.56 | 104.65 | 109.90 |
| 1 | AA | 392 | C | C5-C6-N1 | 6.56 | 124.28 | 121.00 |
| 1 | AA | 1151 | A | C4-C5-C6 | -6.56 | 113.72 | 117.00 |
| 26 | BB | 93 | G | C4'-C3'-C2' | -6.56 | 96.04 | 102.60 |
| 1 | AA | 122 | G | N3-C4-N9 | -6.56 | 122.06 | 126.00 |
| 1 | AA | 234 | C | N3-C4-N4 | -6.56 | 113.41 | 118.00 |
| 1 | AA | 665 | A | N1-C2-N3 | -6.56 | 126.02 | 129.30 |
| 1 | AA | 1180 | A | C5-N7-C8 | 6.56 | 107.18 | 103.90 |
| 10 | AJ | 3 | ARG | CD-NE-CZ | 6.56 | 132.78 | 123.60 |
| 26 | BB | 1067 | A | C6-N1-C2 | 6.56 | 122.54 | 118.60 |
| 26 | BB | 2701 | U | C6-N1-C2 | -6.56 | 117.06 | 121.00 |
| 1 | AA | 373 | A | C8-N9-C4 | -6.56 | 103.18 | 105.80 |
| 1 | AA | 471 | U | N1-C2-O2 | 6.56 | 127.39 | 122.80 |
| 1 | AA | 710 | G | C2-N3-C4 | 6.56 | 115.18 | 111.90 |
| 1 | AA | 1425 | U | C5-C4-O4 | 6.56 | 129.83 | 125.90 |
| 3 | AC | 19 | A | C4'-C3'-C2' | -6.56 | 96.04 | 102.60 |
| 26 | BB | 144 | A | N1-C2-N3 | -6.56 | 126.02 | 129.30 |
| 26 | BB | 273 | G | O4'-C1'-N9 | 6.56 | 113.44 | 108.20 |
| 26 | BB | 368 | A | N1-C6-N6 | -6.56 | 114.67 | 118.60 |
| 26 | BB | 1344 | U | N1-C2-O2 | 6.56 | 127.39 | 122.80 |
| 26 | BB | 1725 | U | C4'-C3'-C2' | -6.56 | 96.04 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2562 | U | C5'-C4'-C3' | -6.56 | 105.51 | 116.00 |
| 28 | BD | 160 | TYR | CB-CG-CD1 | -6.56 | 117.06 | 121.00 |
| 51 | B0 | 8 | GLU | CA-CB-CG | 6.56 | 127.83 | 113.40 |
| 1 | AA | 508 | U | N3-C4-C5 | -6.56 | 110.67 | 114.60 |
| 1 | AA | 681 | A | C5-N7-C8 | -6.56 | 100.62 | 103.90 |
| 25 | BA | 27 | C | C5'-C4'-O4' | 6.56 | 116.97 | 109.10 |
| 26 | BB | 844 | A | C5-N7-C8 | -6.56 | 100.62 | 103.90 |
| 26 | BB | 1036 | G | P-O3'-C3' | 6.56 | 127.57 | 119.70 |
| 26 | BB | 2472 | G | C3'-C2'-C1' | 6.56 | 106.74 | 101.50 |
| 1 | AA | 391 | G | N7-C8-N9 | -6.55 | 109.82 | 113.10 |
| 1 | AA | 745 | G | C6-C5-N7 | -6.55 | 126.47 | 130.40 |
| 1 | AA | 835 | U | C3'-C2'-C1' | 6.55 | 106.74 | 101.50 |
| 26 | BB | 495 | G | N7-C8-N9 | 6.55 | 116.38 | 113.10 |
| 26 | BB | 593 | U | N3-C4-O4 | 6.55 | 123.99 | 119.40 |
| 26 | BB | 970 | U | O5'-P-OP2 | -6.55 | 99.80 | 105.70 |
| 26 | BB | 1490 | A | C1'-O4'-C4' | -6.55 | 104.66 | 109.90 |
| 26 | BB | 2478 | A | C2-N3-C4 | 6.55 | 113.88 | 110.60 |
| 1 | AA | 380 | G | C6-N1-C2 | -6.55 | 121.17 | 125.10 |
| 1 | AA | 1178 | G | O4'-C1'-N9 | 6.55 | 113.44 | 108.20 |
| 26 | BB | 1149 | G | N9-C4-C5 | 6.55 | 108.02 | 105.40 |
| 26 | BB | 1342 | A | C5'-C4'-C3' | -6.55 | 105.52 | 116.00 |
| 26 | BB | 2214 | C | N3-C4-N4 | 6.55 | 122.59 | 118.00 |
| 1 | AA | 327 | A | O4'-C1'-N9 | 6.55 | 113.44 | 108.20 |
| 1 | AA | 1127 | G | C5-C6-N1 | 6.55 | 114.78 | 111.50 |
| 26 | BB | 5 | A | C4-C5-C6 | -6.55 | 113.72 | 117.00 |
| 26 | BB | 599 | A | C8-N9-C4 | -6.55 | 103.18 | 105.80 |
| 26 | BB | 963 | U | O4'-C4'-C3' | 6.55 | 111.34 | 106.10 |
| 26 | BB | 999 | U | O4'-C1'-N1 | 6.55 | 113.44 | 108.20 |
| 26 | BB | 1625 | C | C5'-C4'-O4' | 6.55 | 116.96 | 109.10 |
| 26 | BB | 1905 | C | N3-C2-O2 | -6.55 | 117.31 | 121.90 |
| 26 | BB | 1930 | G | N9-C4-C5 | 6.55 | 108.02 | 105.40 |
| 1 | AA | 758 | C | C1'-O4'-C4' | 6.55 | 115.14 | 109.90 |
| 1 | AA | 893 | C | N1-C2-N3 | -6.55 | 114.61 | 119.20 |
| 1 | AA | 982 | U | O4'-C4'-C3' | 6.55 | 111.34 | 106.10 |
| 1 | AA | 1304 | G | O4'-C1'-N9 | 6.55 | 113.44 | 108.20 |
| 7 | AG | 74 | TYR | CB-CG-CD2 | -6.55 | 117.07 | 121.00 |
| 25 | BA | 88 | C | C2-N3-C4 | 6.55 | 123.17 | 119.90 |
| 26 | BB | 491 | G | N1-C6-O6 | 6.55 | 123.83 | 119.90 |
| 26 | BB | 632 | A | C3'-C2'-C1' | -6.55 | 96.26 | 101.50 |
| 26 | BB | 685 | A | O4'-C1'-N9 | 6.55 | 113.44 | 108.20 |
| 26 | BB | 1276 | A | N7-C8-N9 | -6.55 | 110.53 | 113.80 |
| 26 | BB | 1519 | G | N3-C2-N2 | -6.55 | 115.32 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1919 | A | C2-N3-C4 | 6.55 | 113.87 | 110.60 |
| 26 | BB | 2022 | U | C5'-C4'-O4' | 6.55 | 116.96 | 109.10 |
| 1 | AA | 449 | G | O4'-C1'-N9 | 6.55 | 113.44 | 108.20 |
| 1 | AA | 1126 | U | N3-C2-O2 | -6.55 | 117.62 | 122.20 |
| 26 | BB | 591 | U | C2-N3-C4 | -6.55 | 123.07 | 127.00 |
| 26 | BB | 601 | C | N3-C4-C5 | -6.55 | 119.28 | 121.90 |
| 26 | BB | 708 | G | N3-C2-N2 | -6.55 | 115.32 | 119.90 |
| 26 | BB | 1583 | A | N7-C8-N9 | 6.55 | 117.07 | 113.80 |
| 26 | BB | 1785 | A | C8-N9-C4 | -6.55 | 103.18 | 105.80 |
| 1 | AA | 452 | A | N1-C6-N6 | -6.55 | 114.67 | 118.60 |
| 1 | AA | 546 | A | C5-N7-C8 | 6.55 | 107.17 | 103.90 |
| 1 | AA | 1417 | G | C4-C5-C6 | 6.55 | 122.73 | 118.80 |
| 26 | BB | 170 | U | C2-N3-C4 | -6.55 | 123.07 | 127.00 |
| 26 | BB | 1090 | A | C2-N3-C4 | 6.55 | 113.87 | 110.60 |
| 26 | BB | 1622 | G | C8-N9-C4 | -6.55 | 103.78 | 106.40 |
| 1 | AA | 100 | G | N3-C4-N9 | 6.54 | 129.93 | 126.00 |
| 1 | AA | 1132 | C | O4'-C1'-N1 | 6.54 | 113.44 | 108.20 |
| 26 | BB | 332 | A | P-O3'-C3' | 6.54 | 127.55 | 119.70 |
| 26 | BB | 431 | U | O4'-C1'-N1 | 6.54 | 113.44 | 108.20 |
| 26 | BB | 1036 | G | N1-C2-N3 | -6.54 | 119.97 | 123.90 |
| 26 | BB | 1084 | A | C5-C6-N6 | 6.54 | 128.94 | 123.70 |
| 26 | BB | 1859 | U | C6-N1-C2 | -6.54 | 117.07 | 121.00 |
| 26 | BB | 2276 | G | O4'-C1'-N9 | 6.54 | 113.44 | 108.20 |
| 26 | BB | 2543 | G | N3-C4-N9 | 6.54 | 129.93 | 126.00 |
| 1 | AA | 18 | C | N1-C2-O2 | 6.54 | 122.83 | 118.90 |
| 1 | AA | 461 | A | C5'-C4'-C3' | -6.54 | 105.53 | 116.00 |
| 26 | BB | 739 | A | C6-N1-C2 | -6.54 | 114.67 | 118.60 |
| 26 | BB | 827 | U | C2-N3-C4 | -6.54 | 123.07 | 127.00 |
| 26 | BB | 972 | A | C3'-C2'-C1' | 6.54 | 106.73 | 101.50 |
| 26 | BB | 1478 | G | N1-C2-N3 | -6.54 | 119.97 | 123.90 |
| 26 | BB | 1765 | U | C2-N3-C4 | -6.54 | 123.07 | 127.00 |
| 26 | BB | 1808 | A | N9-C4-C5 | 6.54 | 108.42 | 105.80 |
| 26 | BB | 2076 | U | N1-C2-N3 | 6.54 | 118.83 | 114.90 |
| 26 | BB | 2146 | C | N1-C2-O2 | 6.54 | 122.83 | 118.90 |
| 26 | BB | 2283 | C | C1'-O4'-C4' | 6.54 | 115.14 | 109.90 |
| 46 | BV | 6 | ARG | NE-CZ-NH2 | -6.54 | 117.03 | 120.30 |
| 1 | AA | 1341 | U | N3-C2-O2 | -6.54 | 117.62 | 122.20 |
| 2 | AB | 42 | G | C6-N1-C2 | -6.54 | 121.17 | 125.10 |
| 25 | BA | 21 | G | N9-C4-C5 | 6.54 | 108.02 | 105.40 |
| 26 | BB | 592 | A | C5-N7-C8 | -6.54 | 100.63 | 103.90 |
| 26 | BB | 644 | A | C4'-C3'-C2' | -6.54 | 96.06 | 102.60 |
| 26 | BB | 811 | U | N1-C2-N3 | 6.54 | 118.83 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1106 | G | C6-C5-N7 | -6.54 | 126.48 | 130.40 |
| 26 | BB | 1205 | A | C3'-C2'-C1' | 6.54 | 106.73 | 101.50 |
| 26 | BB | 1261 | C | N3-C2-O2 | -6.54 | 117.32 | 121.90 |
| 26 | BB | 1471 | G | N7-C8-N9 | 6.54 | 116.37 | 113.10 |
| 26 | BB | 2195 | U | N1-C1'-C2' | -6.54 | 104.80 | 112.00 |
| 26 | BB | 2222 | C | O4'-C1'-N1 | 6.54 | 113.43 | 108.20 |
| 26 | BB | 2361 | G | N3-C4-C5 | -6.54 | 125.33 | 128.60 |
| 26 | BB | 2374 | C | C2'-C3'-O3' | 6.54 | 124.17 | 113.70 |
| 2 | AB | 29 | G | N7-C8-N9 | 6.54 | 116.37 | 113.10 |
| 4 | AD | 6 | G | C2-N3-C4 | 6.54 | 115.17 | 111.90 |
| 26 | BB | 1881 | C | N3-C4-C5 | -6.54 | 119.28 | 121.90 |
| 26 | BB | 1980 | G | C5-C6-N1 | 6.54 | 114.77 | 111.50 |
| 34 | BJ | 95 | PHE | CG-CD2-CE2 | -6.54 | 113.61 | 120.80 |
| 1 | AA | 143 | A | N3-C4-C5 | -6.54 | 122.22 | 126.80 |
| 1 | AA | 536 | C | N3-C4-N4 | -6.54 | 113.42 | 118.00 |
| 2 | AB | 72 | U | O4'-C1'-N1 | 6.54 | 113.43 | 108.20 |
| 26 | BB | 1211 | C | C6-N1-C2 | 6.54 | 122.92 | 120.30 |
| 26 | BB | 1891 | G | C1'-O4'-C4' | -6.54 | 104.67 | 109.90 |
| 26 | BB | 2563 | U | N1-C2-N3 | 6.54 | 118.82 | 114.90 |
| 1 | AA | 115 | G | N7-C8-N9 | 6.54 | 116.37 | 113.10 |
| 1 | AA | 487 | A | N9-C4-C5 | 6.54 | 108.42 | 105.80 |
| 1 | AA | 595 | A | C6-N1-C2 | 6.54 | 122.52 | 118.60 |
| 1 | AA | 1236 | A | C6-C5-N7 | -6.54 | 127.72 | 132.30 |
| 26 | BB | 58 | G | N3-C4-N9 | -6.54 | 122.08 | 126.00 |
| 26 | BB | 996 | A | C4'-C3'-C2' | 6.54 | 109.14 | 102.60 |
| 26 | BB | 2806 | C | N1-C2-O2 | 6.54 | 122.82 | 118.90 |
| 26 | BB | 2860 | A | C2-N3-C4 | 6.54 | 113.87 | 110.60 |
| 1 | AA | 123 | U | C5-C6-N1 | -6.54 | 119.43 | 122.70 |
| 1 | AA | 310 | G | O4'-C1'-N9 | 6.54 | 113.43 | 108.20 |
| 1 | AA | 1469 | C | N3-C2-O2 | -6.54 | 117.33 | 121.90 |
| 21 | AU | 69 | TYR | CB-CG-CD1 | -6.54 | 117.08 | 121.00 |
| 25 | BA | 21 | G | N3-C2-N2 | -6.54 | 115.33 | 119.90 |
| 26 | BB | 148 | U | N1-C2-N3 | 6.54 | 118.82 | 114.90 |
| 26 | BB | 811 | U | C1'-O4'-C4' | -6.54 | 104.67 | 109.90 |
| 26 | BB | 997 | G | N3-C4-C5 | -6.54 | 125.33 | 128.60 |
| 26 | BB | 1122 | G | N1-C2-N3 | 6.54 | 127.82 | 123.90 |
| 26 | BB | 1659 | G | C4'-C3'-C2' | -6.54 | 96.06 | 102.60 |
| 26 | BB | 2029 | G | N3-C2-N2 | 6.54 | 124.47 | 119.90 |
| 26 | BB | 2221 | G | C5-C6-O6 | -6.54 | 124.68 | 128.60 |
| 29 | BE | 200 | ASP | CB-CG-OD1 | -6.54 | 112.42 | 118.30 |
| 38 | BN | 126 | ARG | CD-NE-CZ | 6.54 | 132.75 | 123.60 |
| 48 | BX | 91 | PHE | CB-CG-CD1 | 6.54 | 125.37 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 461 | A | C4'-C3'-C2' | -6.53 | 96.07 | 102.60 |
| 1 | AA | 1110 | A | C5-C6-N1 | -6.53 | 114.43 | 117.70 |
| 26 | BB | 825 | A | C5-C6-N1 | 6.53 | 120.97 | 117.70 |
| 26 | BB | 1088 | A | C3'-C2'-C1' | 6.53 | 106.73 | 101.50 |
| 26 | BB | 2097 | A | C3'-C2'-C1' | -6.53 | 96.27 | 101.50 |
| 1 | AA | 607 | A | C5-C6-N1 | 6.53 | 120.97 | 117.70 |
| 1 | AA | 895 | G | N3-C2-N2 | 6.53 | 124.47 | 119.90 |
| 1 | AA | 930 | C | C6-N1-C2 | 6.53 | 122.91 | 120.30 |
| 26 | BB | 574 | A | O4'-C1'-N9 | 6.53 | 113.42 | 108.20 |
| 26 | BB | 1348 | C | C5-C6-N1 | 6.53 | 124.27 | 121.00 |
| 26 | BB | 1711 | A | N1-C6-N6 | 6.53 | 122.52 | 118.60 |
| 26 | BB | 2462 | C | C6-N1-C2 | -6.53 | 117.69 | 120.30 |
| 26 | BB | 2521 | C | N1-C2-N3 | -6.53 | 114.63 | 119.20 |
| 1 | AA | 1276 | G | N3-C4-N9 | -6.53 | 122.08 | 126.00 |
| 1 | AA | 1330 | U | C4-C5-C6 | 6.53 | 123.62 | 119.70 |
| 1 | AA | 1330 | U | C5-C6-N1 | -6.53 | 119.44 | 122.70 |
| 2 | AB | 5 | G | N3-C4-C5 | -6.53 | 125.33 | 128.60 |
| 2 | AB | 30 | G | N9-C1'-C2' | -6.53 | 104.82 | 112.00 |
| 26 | BB | 292 | U | N3-C4-C5 | 6.53 | 118.52 | 114.60 |
| 26 | BB | 423 | A | N9-C4-C5 | 6.53 | 108.41 | 105.80 |
| 26 | BB | 829 | A | C4'-C3'-C2' | -6.53 | 96.07 | 102.60 |
| 26 | BB | 983 | A | C4'-C3'-C2' | -6.53 | 96.07 | 102.60 |
| 26 | BB | 1269 | A | C5-N7-C8 | -6.53 | 100.64 | 103.90 |
| 26 | BB | 1430 | G | C6-N1-C2 | -6.53 | 121.18 | 125.10 |
| 26 | BB | 1875 | G | C4'-C3'-C2' | -6.53 | 96.07 | 102.60 |
| 26 | BB | 2239 | G | N7-C8-N9 | 6.53 | 116.36 | 113.10 |
| 26 | BB | 2269 | G | C2-N3-C4 | 6.53 | 115.17 | 111.90 |
| 26 | BB | 2412 | A | C5'-C4'-O4' | 6.53 | 116.94 | 109.10 |
| 38 | BN | 5 | THR | CA-CB-CG2 | 6.53 | 121.54 | 112.40 |
| 22 | AV | 77 | ARG | NE-CZ-NH1 | 6.53 | 123.56 | 120.30 |
| 26 | BB | 1326 | U | O4'-C4'-C3' | -6.53 | 97.47 | 104.00 |
| 26 | BB | 1961 | C | N1-C2-N3 | 6.53 | 123.77 | 119.20 |
| 1 | AA | 928 | G | C5-N7-C8 | -6.53 | 101.04 | 104.30 |
| 1 | AA | 937 | A | C8-N9-C4 | -6.53 | 103.19 | 105.80 |
| 26 | BB | 120 | U | N3-C4-O4 | 6.53 | 123.97 | 119.40 |
| 26 | BB | 166 | U | O4'-C1'-C2' | 6.53 | 113.47 | 107.60 |
| 26 | BB | 211 | C | C4'-C3'-C2' | -6.53 | 96.07 | 102.60 |
| 26 | BB | 223 | A | N9-C4-C5 | 6.53 | 108.41 | 105.80 |
| 26 | BB | 244 | A | N1-C6-N6 | -6.53 | 114.68 | 118.60 |
| 26 | BB | 821 | A | C5-C6-N1 | 6.53 | 120.96 | 117.70 |
| 26 | BB | 862 | G | C5-C6-N1 | 6.53 | 114.76 | 111.50 |
| 26 | BB | 1018 | U | O4'-C1'-N1 | 6.53 | 113.42 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1167 | C | N3-C4-C5 | -6.53 | 119.29 | 121.90 |
| 26 | BB | 2756 | U | O4'-C1'-N1 | 6.53 | 113.42 | 108.20 |
| 26 | BB | 2859 | G | C5-C6-O6 | -6.53 | 124.68 | 128.60 |
| 1 | AA | 556 | C | N1-C2-O2 | 6.53 | 122.81 | 118.90 |
| 1 | AA | 691 | G | C5-C6-O6 | -6.53 | 124.68 | 128.60 |
| 1 | AA | 955 | U | C4'-C3'-C2' | -6.53 | 96.08 | 102.60 |
| 3 | AC | 15 | G | C5'-C4'-O4' | 6.53 | 116.93 | 109.10 |
| 26 | BB | 380 | G | C3'-C2'-C1' | -6.53 | 96.28 | 101.50 |
| 26 | BB | 659 | G | O4'-C1'-N9 | 6.53 | 113.42 | 108.20 |
| 26 | BB | 761 | A | C8-N9-C4 | -6.53 | 103.19 | 105.80 |
| 26 | BB | 847 | U | C1'-O4'-C4' | -6.53 | 104.68 | 109.90 |
| 26 | BB | 859 | G | N1-C2-N3 | 6.53 | 127.81 | 123.90 |
| 26 | BB | 1515 | A | C5'-C4'-C3' | -6.53 | 105.56 | 116.00 |
| 26 | BB | 1670 | C | O5'-P-OP2 | -6.53 | 99.83 | 105.70 |
| 26 | BB | 1948 | G | N1-C6-O6 | -6.53 | 115.98 | 119.90 |
| 26 | BB | 2249 | U | C5-C4-O4 | 6.53 | 129.82 | 125.90 |
| 26 | BB | 2459 | A | O4'-C1'-N9 | 6.53 | 113.42 | 108.20 |
| 26 | BB | 2469 | A | O4'-C1'-N9 | 6.53 | 113.42 | 108.20 |
| 26 | BB | 2706 | A | C5'-C4'-O4' | 6.53 | 116.93 | 109.10 |
| 26 | BB | 2794 | C | C5-C4-N4 | -6.53 | 115.63 | 120.20 |
| 1 | AA | 55 | A | N1-C6-N6 | 6.52 | 122.52 | 118.60 |
| 1 | AA | 1134 | G | C4-C5-N7 | -6.52 | 108.19 | 110.80 |
| 1 | AA | 1151 | A | C4-C5-N7 | 6.52 | 113.96 | 110.70 |
| 1 | AA | 1346 | A | C5-C6-N1 | -6.52 | 114.44 | 117.70 |
| 25 | BA | 41 | G | N7-C8-N9 | 6.52 | 116.36 | 113.10 |
| 26 | BB | 58 | G | N3-C4-C5 | 6.52 | 131.86 | 128.60 |
| 26 | BB | 1338 | G | C5'-C4'-O4' | 6.52 | 116.93 | 109.10 |
| 26 | BB | 2406 | A | N1-C2-N3 | -6.52 | 126.04 | 129.30 |
| 1 | AA | 115 | G | C6-N1-C2 | -6.52 | 121.19 | 125.10 |
| 1 | AA | 188 | C | C5-C4-N4 | -6.52 | 115.64 | 120.20 |
| 1 | AA | 927 | G | O5'-P-OP2 | -6.52 | 99.83 | 105.70 |
| 1 | AA | 987 | G | C5'-C4'-O4' | 6.52 | 116.93 | 109.10 |
| 1 | AA | 1441 | A | C4'-C3'-C2' | -6.52 | 96.08 | 102.60 |
| 4 | AD | 30 | G | N9-C4-C5 | 6.52 | 108.01 | 105.40 |
| 26 | BB | 253 | C | O4'-C1'-N1 | 6.52 | 113.42 | 108.20 |
| 26 | BB | 586 | A | N1-C2-N3 | 6.52 | 132.56 | 129.30 |
| 26 | BB | 1094 | U | N3-C4-C5 | -6.52 | 110.69 | 114.60 |
| 26 | BB | 1333 | G | C3'-C2'-C1' | 6.52 | 106.72 | 101.50 |
| 26 | BB | 1515 | A | C5'-C4'-O4' | 6.52 | 116.93 | 109.10 |
| 26 | BB | 1713 | A | C5-C6-N1 | 6.52 | 120.96 | 117.70 |
| 26 | BB | 2253 | G | C5-N7-C8 | 6.52 | 107.56 | 104.30 |
| 29 | BE | 23 | PRO | C-N-CA | 6.52 | 138.00 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 140 | U | N1-C2-O2 | 6.52 | 127.36 | 122.80 |
| 1 | AA | 928 | G | C6-N1-C2 | -6.52 | 121.19 | 125.10 |
| 1 | AA | 1352 | C | N1-C2-N3 | 6.52 | 123.77 | 119.20 |
| 26 | BB | 493 | G | N9-C4-C5 | 6.52 | 108.01 | 105.40 |
| 26 | BB | 579 | G | C5-C6-N1 | 6.52 | 114.76 | 111.50 |
| 26 | BB | 619 | G | N3-C4-C5 | -6.52 | 125.34 | 128.60 |
| 26 | BB | 716 | A | C5-N7-C8 | -6.52 | 100.64 | 103.90 |
| 26 | BB | 1843 | C | O4'-C4'-C3' | -6.52 | 97.48 | 104.00 |
| 1 | AA | 135 | C | N1-C1'-C2' | -6.52 | 104.83 | 112.00 |
| 1 | AA | 470 | C | N1-C1'-C2' | -6.52 | 104.83 | 112.00 |
| 1 | AA | 474 | G | C3'-C2'-C1' | 6.52 | 106.72 | 101.50 |
| 1 | AA | 574 | A | P-O3'-C3' | 6.52 | 127.52 | 119.70 |
| 1 | AA | 694 | A | C2-N3-C4 | 6.52 | 113.86 | 110.60 |
| 1 | AA | 891 | U | C5-C6-N1 | -6.52 | 119.44 | 122.70 |
| 1 | AA | 1171 | A | C4'-C3'-C2' | 6.52 | 109.12 | 102.60 |
| 1 | AA | 1201 | A | C1'-O4'-C4' | -6.52 | 104.68 | 109.90 |
| 1 | AA | 1242 | G | N3-C4-N9 | 6.52 | 129.91 | 126.00 |
| 1 | AA | 1416 | G | C4-C5-N7 | -6.52 | 108.19 | 110.80 |
| 26 | BB | 292 | U | C4-C5-C6 | -6.52 | 115.79 | 119.70 |
| 26 | BB | 933 | A | N9-C4-C5 | 6.52 | 108.41 | 105.80 |
| 26 | BB | 2292 | U | C2-N3-C4 | -6.52 | 123.09 | 127.00 |
| 26 | BB | 2641 | G | N7-C8-N9 | 6.52 | 116.36 | 113.10 |
| 26 | BB | 2694 | G | N1-C6-O6 | -6.52 | 115.99 | 119.90 |
| 1 | AA | 7 | A | N3-C4-N9 | -6.52 | 122.19 | 127.40 |
| 1 | AA | 993 | G | N9-C1'-C2' | 6.52 | 122.47 | 114.00 |
| 1 | AA | 1075 | U | O4'-C1'-N1 | 6.52 | 113.41 | 108.20 |
| 1 | AA | 1440 | U | N3-C4-C5 | -6.52 | 110.69 | 114.60 |
| 26 | BB | 415 | A | C2-N3-C4 | 6.52 | 113.86 | 110.60 |
| 26 | BB | 518 | G | C2-N3-C4 | 6.52 | 115.16 | 111.90 |
| 26 | BB | 1112 | G | P-O3'-C3' | 6.52 | 127.52 | 119.70 |
| 26 | BB | 1292 | G | N9-C1'-C2' | -6.52 | 104.83 | 112.00 |
| 26 | BB | 1500 | G | C5'-C4'-C3' | -6.52 | 105.57 | 116.00 |
| 26 | BB | 1615 | C | C5-C4-N4 | -6.52 | 115.64 | 120.20 |
| 26 | BB | 2033 | A | C4-C5-N7 | -6.52 | 107.44 | 110.70 |
| 26 | BB | 2283 | C | N3-C4-N4 | 6.52 | 122.56 | 118.00 |
| 26 | BB | 2491 | U | C2-N3-C4 | -6.52 | 123.09 | 127.00 |
| 1 | AA | 1522 | U | C5'-C4'-O4' | 6.52 | 116.92 | 109.10 |
| 26 | BB | 149 | A | C4'-C3'-C2' | -6.52 | 96.08 | 102.60 |
| 26 | BB | 1160 | G | O4'-C1'-N9 | 6.52 | 113.41 | 108.20 |
| 26 | BB | 1705 | A | C5'-C4'-C3' | 6.52 | 126.42 | 116.00 |
| 1 | AA | 185 | U | P-O3'-C3' | 6.51 | 127.52 | 119.70 |
| 1 | AA | 465 | A | N1-C2-N3 | 6.51 | 132.56 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 7 | AG | 49 | ASP | CB-CG-OD2 | -6.51 | 112.44 | 118.30 |
| 26 | BB | 115 | C | O4'-C1'-N1 | 6.51 | 113.41 | 108.20 |
| 26 | BB | 898 | C | C4'-C3'-C2' | -6.51 | 96.09 | 102.60 |
| 26 | BB | 1248 | G | C6-C5-N7 | 6.51 | 134.31 | 130.40 |
| 26 | BB | 1288 | G | C6-N1-C2 | -6.51 | 121.19 | 125.10 |
| 26 | BB | 1486 | U | C2-N3-C4 | -6.51 | 123.09 | 127.00 |
| 26 | BB | 2037 | A | C6-N1-C2 | 6.51 | 122.51 | 118.60 |
| 1 | AA | 762 | U | N1-C2-N3 | 6.51 | 118.81 | 114.90 |
| 1 | AA | 784 | A | C4-C5-N7 | 6.51 | 113.96 | 110.70 |
| 1 | AA | 1304 | G | P-O3'-C3' | 6.51 | 127.52 | 119.70 |
| 26 | BB | 420 | C | N3-C4-N4 | -6.51 | 113.44 | 118.00 |
| 26 | BB | 2327 | A | N7-C8-N9 | 6.51 | 117.06 | 113.80 |
| 1 | AA | 466 | A | C4'-C3'-C2' | -6.51 | 96.09 | 102.60 |
| 1 | AA | 891 | U | C1'-O4'-C4' | -6.51 | 104.69 | 109.90 |
| 1 | AA | 1072 | G | C2-N3-C4 | 6.51 | 115.16 | 111.90 |
| 25 | BA | 52 | A | C4-C5-C6 | -6.51 | 113.74 | 117.00 |
| 26 | BB | 731 | C | N1-C2-O2 | 6.51 | 122.81 | 118.90 |
| 26 | BB | 990 | A | N1-C6-N6 | -6.51 | 114.69 | 118.60 |
| 26 | BB | 1536 | C | O3'-P-O5' | 6.51 | 116.37 | 104.00 |
| 26 | BB | 1877 | A | C3'-C2'-C1' | 6.51 | 106.71 | 101.50 |
| 26 | BB | 1891 | G | N9-C4-C5 | 6.51 | 108.00 | 105.40 |
| 26 | BB | 2615 | U | C5-C4-O4 | 6.51 | 129.81 | 125.90 |
| 26 | BB | 2797 | U | O4'-C1'-N1 | 6.51 | 113.41 | 108.20 |
| 26 | BB | 2904 | U | C6-N1-C2 | -6.51 | 117.09 | 121.00 |
| 1 | AA | 634 | C | O4'-C1'-N1 | 6.51 | 113.41 | 108.20 |
| 1 | AA | 785 | G | C4-C5-C6 | 6.51 | 122.71 | 118.80 |
| 1 | AA | 846 | G | C5-N7-C8 | 6.51 | 107.55 | 104.30 |
| 1 | AA | 1324 | A | N1-C6-N6 | 6.51 | 122.51 | 118.60 |
| 25 | BA | 66 | A | P-O3'-C3' | 6.51 | 127.51 | 119.70 |
| 26 | BB | 490 | C | N3-C4-N4 | 6.51 | 122.56 | 118.00 |
| 26 | BB | 617 | G | P-O5'-C5' | 6.51 | 131.31 | 120.90 |
| 26 | BB | 1329 | U | C4-C5-C6 | 6.51 | 123.61 | 119.70 |
| 26 | BB | 1573 | G | N9-C4-C5 | -6.51 | 102.80 | 105.40 |
| 26 | BB | 1627 | G | C4-C5-N7 | -6.51 | 108.20 | 110.80 |
| 26 | BB | 2126 | A | C5-C6-N1 | -6.51 | 114.45 | 117.70 |
| 26 | BB | 2315 | G | C5-N7-C8 | -6.51 | 101.05 | 104.30 |
| 26 | BB | 2890 | G | C4'-C3'-C2' | -6.51 | 96.09 | 102.60 |
| 1 | AA | 1144 | G | C6-N1-C2 | -6.51 | 121.19 | 125.10 |
| 26 | BB | 879 | G | C4-C5-N7 | -6.51 | 108.20 | 110.80 |
| 26 | BB | 1942 | C | O4'-C1'-N1 | 6.51 | 113.41 | 108.20 |
| 26 | BB | 2016 | U | C6-N1-C2 | -6.51 | 117.09 | 121.00 |
| 1 | AA | 359 | G | N1-C6-O6 | -6.51 | 116.00 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 850 | U | C5-C4-O4 | -6.51 | 122.00 | 125.90 |
| 1 | AA | 922 | G | N3-C4-C5 | -6.51 | 125.35 | 128.60 |
| 1 | AA | 1154 | G | O4'-C4'-C3' | -6.51 | 97.49 | 104.00 |
| 1 | AA | 1374 | A | C4'-C3'-C2' | -6.51 | 96.09 | 102.60 |
| 2 | AB | 56 | C | N3-C4-N4 | 6.51 | 122.56 | 118.00 |
| 26 | BB | 124 | G | C2-N3-C4 | -6.51 | 108.65 | 111.90 |
| 26 | BB | 341 | C | C3'-C2'-C1' | 6.51 | 106.70 | 101.50 |
| 26 | BB | 700 | G | C4-N9-C1' | -6.51 | 118.04 | 126.50 |
| 26 | BB | 1715 | G | C2-N3-C4 | 6.51 | 115.15 | 111.90 |
| 26 | BB | 2333 | A | C4-C5-C6 | -6.51 | 113.75 | 117.00 |
| 26 | BB | 2690 | U | C6-N1-C2 | 6.51 | 124.90 | 121.00 |
| 26 | BB | 2877 | G | C6-N1-C2 | -6.51 | 121.20 | 125.10 |
| 1 | AA | 33 | A | C2-N3-C4 | 6.50 | 113.85 | 110.60 |
| 1 | AA | 503 | C | N1-C2-O2 | 6.50 | 122.80 | 118.90 |
| 1 | AA | 623 | C | C4-C5-C6 | 6.50 | 120.65 | 117.40 |
| 26 | BB | 54 | G | O4'-C1'-N9 | 6.50 | 113.40 | 108.20 |
| 26 | BB | 104 | A | C4'-C3'-C2' | -6.50 | 96.09 | 102.60 |
| 1 | AA | 212 | G | C6-N1-C2 | -6.50 | 121.20 | 125.10 |
| 1 | AA | 420 | U | C4-C5-C6 | 6.50 | 123.60 | 119.70 |
| 1 | AA | 914 | A | N1-C2-N3 | -6.50 | 126.05 | 129.30 |
| 1 | AA | 1186 | G | C5'-C4'-O4' | 6.50 | 116.91 | 109.10 |
| 26 | BB | 60 | G | C5'-C4'-C3' | -6.50 | 105.59 | 116.00 |
| 26 | BB | 744 | U | N1-C2-N3 | 6.50 | 118.80 | 114.90 |
| 26 | BB | 890 | C | C5-C6-N1 | -6.50 | 117.75 | 121.00 |
| 26 | BB | 996 | A | N1-C2-N3 | -6.50 | 126.05 | 129.30 |
| 26 | BB | 1335 | C | C1'-O4'-C4' | 6.50 | 115.10 | 109.90 |
| 26 | BB | 1845 | G | C4-C5-N7 | 6.50 | 113.40 | 110.80 |
| 26 | BB | 2064 | C | N1-C2-N3 | -6.50 | 114.65 | 119.20 |
| 26 | BB | 2353 | G | N1-C6-O6 | 6.50 | 123.80 | 119.90 |
| 26 | BB | 2543 | G | C2-N3-C4 | 6.50 | 115.15 | 111.90 |
| 26 | BB | 2811 | G | C1'-O4'-C4' | 6.50 | 115.10 | 109.90 |
| 1 | AA | 526 | C | N1-C2-N3 | 6.50 | 123.75 | 119.20 |
| 1 | AA | 1029 | U | O4'-C1'-N1 | 6.50 | 113.40 | 108.20 |
| 1 | AA | 1197 | A | C8-N9-C4 | -6.50 | 103.20 | 105.80 |
| 26 | BB | 1398 | C | C2-N3-C4 | 6.50 | 123.15 | 119.90 |
| 26 | BB | 1746 | A | O4'-C1'-N9 | 6.50 | 113.40 | 108.20 |
| 26 | BB | 1807 | G | O4'-C1'-N9 | 6.50 | 113.40 | 108.20 |
| 26 | BB | 2107 | G | N1-C6-O6 | -6.50 | 116.00 | 119.90 |
| 26 | BB | 2348 | U | N3-C2-O2 | -6.50 | 117.65 | 122.20 |
| 1 | AA | 1043 | G | N1-C2-N2 | 6.50 | 122.05 | 116.20 |
| 26 | BB | 261 | G | C5-C6-N1 | 6.50 | 114.75 | 111.50 |
| 26 | BB | 1795 | C | N3-C4-N4 | 6.50 | 122.55 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2103 | C | O4'-C1'-N1 | 6.50 | 113.40 | 108.20 |
| 1 | AA | 204 | G | C2-N3-C4 | 6.50 | 115.15 | 111.90 |
| 1 | AA | 509 | A | C8-N9-C4 | -6.50 | 103.20 | 105.80 |
| 1 | AA | 586 | C | N3-C4-C5 | -6.50 | 119.30 | 121.90 |
| 1 | AA | 944 | G | C2-N3-C4 | 6.50 | 115.15 | 111.90 |
| 1 | AA | 1206 | G | C8-N9-C4 | -6.50 | 103.80 | 106.40 |
| 26 | BB | 615 | U | C4-C5-C6 | 6.50 | 123.60 | 119.70 |
| 26 | BB | 931 | U | C5-C6-N1 | -6.50 | 119.45 | 122.70 |
| 26 | BB | 1011 | G | C4-C5-C6 | 6.50 | 122.70 | 118.80 |
| 26 | BB | 1437 | C | O4'-C1'-N1 | 6.50 | 113.40 | 108.20 |
| 26 | BB | 2325 | G | C3'-C2'-C1' | -6.50 | 96.30 | 101.50 |
| 1 | AA | 673 | A | N3-C4-C5 | -6.50 | 122.25 | 126.80 |
| 1 | AA | 1187 | G | C4-C5-C6 | 6.50 | 122.70 | 118.80 |
| 26 | BB | 85 | G | C4-C5-N7 | 6.50 | 113.40 | 110.80 |
| 26 | BB | 242 | G | C5'-C4'-C3' | -6.50 | 105.61 | 116.00 |
| 26 | BB | 374 | A | N7-C8-N9 | -6.50 | 110.55 | 113.80 |
| 26 | BB | 519 | U | N3-C4-O4 | 6.50 | 123.95 | 119.40 |
| 26 | BB | 1586 | A | C5-C6-N6 | -6.50 | 118.50 | 123.70 |
| 26 | BB | 1772 | A | C5'-C4'-C3' | -6.50 | 105.61 | 116.00 |
| 26 | BB | 2233 | U | C3'-C2'-C1' | 6.50 | 106.70 | 101.50 |
| 26 | BB | 2637 | U | O4'-C1'-N1 | 6.50 | 113.40 | 108.20 |
| 26 | BB | 2869 | G | C5-N7-C8 | -6.50 | 101.05 | 104.30 |
| 1 | AA | 104 | G | C2-N3-C4 | -6.50 | 108.65 | 111.90 |
| 1 | AA | 704 | A | C4-C5-C6 | -6.50 | 113.75 | 117.00 |
| 1 | AA | 905 | U | N1-C2-N3 | -6.50 | 111.00 | 114.90 |
| 26 | BB | 618 | G | N3-C2-N2 | -6.50 | 115.35 | 119.90 |
| 26 | BB | 665 | U | C5-C6-N1 | -6.50 | 119.45 | 122.70 |
| 1 | AA | 130 | A | N1-C6-N6 | -6.49 | 114.70 | 118.60 |
| 1 | AA | 243 | A | C2'-C3'-O3' | 6.49 | 124.09 | 113.70 |
| 1 | AA | 1023 | U | O4'-C4'-C3' | -6.49 | 97.51 | 104.00 |
| 1 | AA | 1074 | G | C4'-C3'-C2' | -6.49 | 96.11 | 102.60 |
| 26 | BB | 126 | A | C5'-C4'-O4' | 6.49 | 116.89 | 109.10 |
| 26 | BB | 900 | A | C2-N3-C4 | 6.49 | 113.85 | 110.60 |
| 26 | BB | 1646 | C | C4'-C3'-C2' | -6.49 | 96.11 | 102.60 |
| 26 | BB | 2052 | A | O4'-C1'-N9 | 6.49 | 113.39 | 108.20 |
| 26 | BB | 2113 | U | C2-N3-C4 | -6.49 | 123.10 | 127.00 |
| 26 | BB | 2687 | U | C2-N3-C4 | -6.49 | 123.10 | 127.00 |
| 26 | BB | 2711 | A | N9-C4-C5 | 6.49 | 108.40 | 105.80 |
| 25 | BA | 90 | C | C5'-C4'-C3' | -6.49 | 105.61 | 116.00 |
| 26 | BB | 827 | U | N3-C4-O4 | 6.49 | 123.94 | 119.40 |
| 1 | AA | 40 | C | C6-N1-C2 | -6.49 | 117.70 | 120.30 |
| 1 | AA | 64 | G | N3-C2-N2 | -6.49 | 115.36 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 396 | C | C5-C6-N1 | 6.49 | 124.25 | 121.00 |
| 1 | AA | 423 | G | N7-C8-N9 | 6.49 | 116.34 | 113.10 |
| 1 | AA | 508 | U | N1-C2-N3 | 6.49 | 118.79 | 114.90 |
| 1 | AA | 528 | C | C2-N3-C4 | -6.49 | 116.65 | 119.90 |
| 1 | AA | 762 | U | C2-N3-C4 | -6.49 | 123.11 | 127.00 |
| 26 | BB | 228 | C | O4'-C1'-C2' | -6.49 | 99.31 | 105.80 |
| 26 | BB | 743 | A | N7-C8-N9 | -6.49 | 110.56 | 113.80 |
| 26 | BB | 2672 | U | O4'-C1'-N1 | 6.49 | 113.39 | 108.20 |
| 26 | BB | 2737 | G | C6-C5-N7 | -6.49 | 126.50 | 130.40 |
| 1 | AA | 201 | G | C8-N9-C4 | -6.49 | 103.81 | 106.40 |
| 1 | AA | 253 | A | C5-C6-N1 | 6.49 | 120.94 | 117.70 |
| 1 | AA | 397 | A | N9-C1'-C2' | 6.49 | 122.44 | 114.00 |
| 1 | AA | 1012 | A | C5-C6-N1 | 6.49 | 120.94 | 117.70 |
| 1 | AA | 1044 | A | C2-N3-C4 | 6.49 | 113.84 | 110.60 |
| 1 | AA | 1193 | G | C8-N9-C4 | -6.49 | 103.80 | 106.40 |
| 1 | AA | 1355 | G | N7-C8-N9 | 6.49 | 116.34 | 113.10 |
| 25 | BA | 52 | A | C6-N1-C2 | -6.49 | 114.71 | 118.60 |
| 26 | BB | 431 | U | N3-C4-C5 | -6.49 | 110.71 | 114.60 |
| 26 | BB | 468 | G | N7-C8-N9 | 6.49 | 116.34 | 113.10 |
| 26 | BB | 996 | A | C5-N7-C8 | -6.49 | 100.66 | 103.90 |
| 26 | BB | 1075 | C | N3-C2-O2 | -6.49 | 117.36 | 121.90 |
| 26 | BB | 1170 | C | C3'-C2'-C1' | -6.49 | 96.31 | 101.50 |
| 26 | BB | 1519 | G | C4'-C3'-C2' | -6.49 | 96.11 | 102.60 |
| 26 | BB | 2068 | U | C2-N3-C4 | -6.49 | 123.11 | 127.00 |
| 26 | BB | 2185 | U | C1'-O4'-C4' | -6.49 | 104.71 | 109.90 |
| 45 | BU | 38 | TYR | CZ-CE2-CD2 | 6.49 | 125.64 | 119.80 |
| 1 | AA | 1019 | A | N9-C4-C5 | 6.49 | 108.39 | 105.80 |
| 1 | AA | 1452 | C | N1-C2-O2 | 6.49 | 122.79 | 118.90 |
| 26 | BB | 510 | C | N3-C2-O2 | -6.49 | 117.36 | 121.90 |
| 26 | BB | 1314 | C | O4'-C1'-N1 | 6.49 | 113.39 | 108.20 |
| 26 | BB | 1667 | G | C5-C6-O6 | 6.49 | 132.49 | 128.60 |
| 26 | BB | 1906 | G | O4'-C1'-N9 | 6.49 | 113.39 | 108.20 |
| 26 | BB | 2397 | G | N9-C4-C5 | 6.49 | 108.00 | 105.40 |
| 1 | AA | 209 | U | N3-C4-C5 | -6.49 | 110.71 | 114.60 |
| 1 | AA | 341 | C | C6-N1-C2 | 6.49 | 122.89 | 120.30 |
| 1 | AA | 488 | C | C6-N1-C2 | -6.49 | 117.71 | 120.30 |
| 1 | AA | 821 | G | N3-C4-C5 | -6.49 | 125.36 | 128.60 |
| 1 | AA | 1255 | G | N3-C4-N9 | 6.49 | 129.89 | 126.00 |
| 3 | AC | 33 | A | N3-C4-C5 | -6.49 | 122.26 | 126.80 |
| 9 | AI | 49 | TYR | CB-CG-CD2 | -6.49 | 117.11 | 121.00 |
| 26 | BB | 182 | A | N1-C2-N3 | -6.49 | 126.06 | 129.30 |
| 26 | BB | 439 | A | C3'-C2'-C1' | -6.49 | 96.31 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1265 | A | C4-C5-N7 | 6.49 | 113.94 | 110.70 |
| 26 | BB | 1470 | A | N3-C4-N9 | 6.49 | 132.59 | 127.40 |
| 26 | BB | 2229 | U | C4-C5-C6 | 6.49 | 123.59 | 119.70 |
| 26 | BB | 2272 | U | N1-C2-N3 | 6.49 | 118.79 | 114.90 |
| 26 | BB | 2609 | U | N1-C2-N3 | 6.49 | 118.79 | 114.90 |
| 26 | BB | 2742 | G | O5'-P-OP2 | -6.49 | 99.86 | 105.70 |
| 1 | AA | 302 | G | N1-C2-N2 | 6.48 | 122.04 | 116.20 |
| 26 | BB | 473 | G | C4'-C3'-C2' | -6.48 | 96.12 | 102.60 |
| 26 | BB | 2663 | G | C2-N3-C4 | 6.48 | 115.14 | 111.90 |
| 1 | AA | 578 | C | N3-C4-C5 | -6.48 | 119.31 | 121.90 |
| 1 | AA | 752 | G | C5-C6-O6 | -6.48 | 124.71 | 128.60 |
| 26 | BB | 945 | A | C5'-C4'-C3' | -6.48 | 105.63 | 116.00 |
| 26 | BB | 1609 | A | C8-N9-C4 | -6.48 | 103.21 | 105.80 |
| 26 | BB | 1836 | C | C5'-C4'-O4' | 6.48 | 116.88 | 109.10 |
| 26 | BB | 2548 | U | C1'-O4'-C4' | -6.48 | 104.71 | 109.90 |
| 32 | BH | 148 | ARG | NE-CZ-NH2 | -6.48 | 117.06 | 120.30 |
| 1 | AA | 55 | A | C8-N9-C4 | -6.48 | 103.21 | 105.80 |
| 1 | AA | 102 | G | C5-C6-N1 | 6.48 | 114.74 | 111.50 |
| 1 | AA | 213 | G | C4-C5-N7 | -6.48 | 108.21 | 110.80 |
| 1 | AA | 408 | A | C2-N3-C4 | 6.48 | 113.84 | 110.60 |
| 1 | AA | 439 | U | N1-C2-N3 | 6.48 | 118.79 | 114.90 |
| 1 | AA | 1363 | A | N7-C8-N9 | -6.48 | 110.56 | 113.80 |
| 26 | BB | 301 | G | C6-C5-N7 | -6.48 | 126.51 | 130.40 |
| 26 | BB | 315 | G | N3-C2-N2 | -6.48 | 115.36 | 119.90 |
| 26 | BB | 1856 | U | C5'-C4'-O4' | 6.48 | 116.88 | 109.10 |
| 26 | BB | 1966 | A | C6-N1-C2 | -6.48 | 114.71 | 118.60 |
| 26 | BB | 2603 | G | N3-C4-C5 | -6.48 | 125.36 | 128.60 |
| 1 | AA | 407 | U | O4'-C1'-C2' | 6.48 | 113.43 | 107.60 |
| 1 | AA | 727 | G | C2-N3-C4 | 6.48 | 115.14 | 111.90 |
| 1 | AA | 1155 | A | C3'-C2'-C1' | -6.48 | 96.32 | 101.50 |
| 26 | BB | 551 | G | N1-C2-N3 | -6.48 | 120.01 | 123.90 |
| 26 | BB | 1700 | A | O4'-C1'-N9 | 6.48 | 113.38 | 108.20 |
| 26 | BB | 2339 | C | N3-C4-N4 | 6.48 | 122.54 | 118.00 |
| 26 | BB | 2869 | G | C5-C6-N1 | -6.48 | 108.26 | 111.50 |
| 1 | AA | 322 | C | C5-C6-N1 | -6.48 | 117.76 | 121.00 |
| 1 | AA | 347 | G | N9-C4-C5 | 6.48 | 107.99 | 105.40 |
| 1 | AA | 431 | A | C5'-C4'-O4' | 6.48 | 116.87 | 109.10 |
| 1 | AA | 681 | A | N3-C4-N9 | -6.48 | 122.22 | 127.40 |
| 1 | AA | 1026 | G | C4-C5-N7 | 6.48 | 113.39 | 110.80 |
| 1 | AA | 1139 | G | C4-C5-N7 | -6.48 | 108.21 | 110.80 |
| 26 | BB | 1059 | G | C1'-O4'-C4' | -6.48 | 104.72 | 109.90 |
| 26 | BB | 1658 | C | C4'-C3'-C2' | -6.48 | 96.12 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1905 | C | C4'-C3'-C2' | -6.48 | 96.12 | 102.60 |
| 26 | BB | 2114 | A | C4'-C3'-C2' | -6.48 | 96.12 | 102.60 |
| 26 | BB | 2589 | A | C4'-C3'-C2' | -6.48 | 96.12 | 102.60 |
| 26 | BB | 2603 | G | N3-C4-N9 | 6.48 | 129.89 | 126.00 |
| 1 | AA | 814 | A | C4-C5-C6 | -6.48 | 113.76 | 117.00 |
| 26 | BB | 16 | C | C2-N1-C1' | -6.48 | 111.68 | 118.80 |
| 43 | BS | 100 | PHE | CB-CG-CD2 | -6.48 | 116.27 | 120.80 |
| 50 | BZ | 73 | ARG | NE-CZ-NH2 | 6.48 | 123.54 | 120.30 |
| 53 | B2 | 51 | VAL | CA-CB-CG2 | 6.48 | 120.61 | 110.90 |
| 1 | AA | 291 | U | C3'-C2'-C1' | 6.47 | 106.68 | 101.50 |
| 1 | AA | 329 | A | C4-C5-N7 | -6.47 | 107.46 | 110.70 |
| 1 | AA | 692 | U | N1-C2-O2 | 6.47 | 127.33 | 122.80 |
| 1 | AA | 806 | C | N1-C2-N3 | -6.47 | 114.67 | 119.20 |
| 1 | AA | 1184 | G | C5-N7-C8 | -6.47 | 101.06 | 104.30 |
| 26 | BB | 970 | U | P-O5'-C5' | 6.47 | 131.26 | 120.90 |
| 26 | BB | 1185 | G | O4'-C1'-N9 | 6.47 | 113.38 | 108.20 |
| 26 | BB | 1257 | C | C5'-C4'-O4' | 6.47 | 116.87 | 109.10 |
| 26 | BB | 1260 | A | C1'-O4'-C4' | -6.47 | 104.72 | 109.90 |
| 26 | BB | 1419 | A | O4'-C4'-C3' | 6.47 | 111.28 | 106.10 |
| 26 | BB | 1940 | U | O4'-C4'-C3' | 6.47 | 111.28 | 106.10 |
| 26 | BB | 2076 | U | O4'-C4'-C3' | 6.47 | 111.28 | 106.10 |
| 26 | BB | 2901 | C | N3-C4-C5 | -6.47 | 119.31 | 121.90 |
| 1 | AA | 149 | A | N1-C2-N3 | -6.47 | 126.06 | 129.30 |
| 1 | AA | 270 | A | N9-C1'-C2' | -6.47 | 104.88 | 112.00 |
| 1 | AA | 488 | C | N3-C4-N4 | 6.47 | 122.53 | 118.00 |
| 1 | AA | 691 | G | C8-N9-C4 | -6.47 | 103.81 | 106.40 |
| 1 | AA | 734 | G | N3-C2-N2 | -6.47 | 115.37 | 119.90 |
| 1 | AA | 1047 | G | N9-C1'-C2' | -6.47 | 104.88 | 112.00 |
| 1 | AA | 1102 | A | C5-C6-N1 | 6.47 | 120.94 | 117.70 |
| 1 | AA | 1476 | A | N1-C6-N6 | -6.47 | 114.72 | 118.60 |
| 1 | AA | 1496 | C | N3-C4-N4 | 6.47 | 122.53 | 118.00 |
| 2 | AB | 5 | G | N3-C4-N9 | 6.47 | 129.88 | 126.00 |
| 26 | BB | 75 | G | C5'-C4'-O4' | 6.47 | 116.87 | 109.10 |
| 26 | BB | 260 | G | N3-C4-N9 | -6.47 | 122.12 | 126.00 |
| 26 | BB | 314 | C | C4-C5-C6 | -6.47 | 114.16 | 117.40 |
| 26 | BB | 727 | A | N1-C2-N3 | -6.47 | 126.06 | 129.30 |
| 26 | BB | 925 | A | C4-C5-N7 | -6.47 | 107.46 | 110.70 |
| 26 | BB | 1129 | A | P-O3'-C3' | 6.47 | 127.47 | 119.70 |
| 26 | BB | 1573 | G | N3-C4-N9 | 6.47 | 129.88 | 126.00 |
| 26 | BB | 2007 | U | N3-C4-C5 | -6.47 | 110.72 | 114.60 |
| 26 | BB | 2158 | A | N9-C4-C5 | 6.47 | 108.39 | 105.80 |
| 26 | BB | 2209 | G | O4'-C4'-C3' | 6.47 | 111.28 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 416 | G | C2-N3-C4 | 6.47 | 115.14 | 111.90 |
| 6 | AF | 92 | ASP | CB-CG-OD1 | 6.47 | 124.12 | 118.30 |
| 26 | BB | 729 | G | C5-C6-N1 | 6.47 | 114.73 | 111.50 |
| 26 | BB | 737 | C | C3'-C2'-C1' | 6.47 | 106.68 | 101.50 |
| 26 | BB | 777 | G | C2-N3-C4 | 6.47 | 115.14 | 111.90 |
| 26 | BB | 1463 | C | C5-C6-N1 | 6.47 | 124.23 | 121.00 |
| 26 | BB | 1895 | C | N1-C1'-C2' | -6.47 | 104.88 | 112.00 |
| 1 | AA | 147 | G | N3-C4-C5 | -6.47 | 125.36 | 128.60 |
| 1 | AA | 959 | A | C8-N9-C4 | -6.47 | 103.21 | 105.80 |
| 1 | AA | 1005 | A | N9-C4-C5 | 6.47 | 108.39 | 105.80 |
| 1 | AA | 1169 | A | C6-N1-C2 | -6.47 | 114.72 | 118.60 |
| 1 | AA | 1427 | C | N3-C4-C5 | -6.47 | 119.31 | 121.90 |
| 26 | BB | 56 | A | C3'-C2'-C1' | -6.47 | 96.33 | 101.50 |
| 26 | BB | 140 | C | N3-C4-C5 | -6.47 | 119.31 | 121.90 |
| 26 | BB | 197 | A | C8-N9-C4 | -6.47 | 103.21 | 105.80 |
| 26 | BB | 294 | A | C2-N3-C4 | 6.47 | 113.83 | 110.60 |
| 26 | BB | 478 | A | N7-C8-N9 | -6.47 | 110.56 | 113.80 |
| 26 | BB | 980 | A | P-O3'-C3' | 6.47 | 127.46 | 119.70 |
| 26 | BB | 1120 | G | N9-C1'-C2' | -6.47 | 104.88 | 112.00 |
| 26 | BB | 1210 | G | N7-C8-N9 | 6.47 | 116.33 | 113.10 |
| 26 | BB | 1235 | G | C4-C5-N7 | -6.47 | 108.21 | 110.80 |
| 26 | BB | 1436 | G | C5-N7-C8 | -6.47 | 101.06 | 104.30 |
| 26 | BB | 1775 | U | C2-N3-C4 | -6.47 | 123.12 | 127.00 |
| 26 | BB | 1854 | A | C5-C6-N1 | 6.47 | 120.94 | 117.70 |
| 26 | BB | 2769 | U | C4'-C3'-C2' | -6.47 | 96.13 | 102.60 |
| 26 | BB | 2813 | A | N3-C4-C5 | 6.47 | 131.33 | 126.80 |
| 28 | BD | 235 | GLU | OE1-CD-OE2 | 6.47 | 131.06 | 123.30 |
| 1 | AA | 453 | G | N1-C2-N2 | 6.47 | 122.02 | 116.20 |
| 1 | AA | 528 | C | N3-C4-C5 | 6.47 | 124.49 | 121.90 |
| 4 | AD | 22 | A | C8-N9-C4 | -6.47 | 103.21 | 105.80 |
| 26 | BB | 328 | U | N3-C4-C5 | -6.47 | 110.72 | 114.60 |
| 26 | BB | 783 | A | C2-N3-C4 | 6.47 | 113.83 | 110.60 |
| 26 | BB | 1232 | G | C3'-C2'-C1' | -6.47 | 96.33 | 101.50 |
| 1 | AA | 370 | C | N3-C4-C5 | -6.47 | 119.31 | 121.90 |
| 1 | AA | 852 | G | C1'-O4'-C4' | 6.47 | 115.07 | 109.90 |
| 1 | AA | 1294 | G | C6-C5-N7 | -6.47 | 126.52 | 130.40 |
| 26 | BB | 363 | G | N3-C4-C5 | -6.47 | 125.37 | 128.60 |
| 26 | BB | 444 | C | C2-N3-C4 | 6.47 | 123.13 | 119.90 |
| 26 | BB | 809 | G | C2-N3-C4 | 6.47 | 115.13 | 111.90 |
| 26 | BB | 997 | G | C5'-C4'-O4' | 6.47 | 116.86 | 109.10 |
| 26 | BB | 1552 | A | N9-C4-C5 | -6.47 | 103.21 | 105.80 |
| 26 | BB | 1756 | G | C6-N1-C2 | -6.47 | 121.22 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2029 | G | C5'-C4'-O4' | 6.47 | 116.86 | 109.10 |
| 26 | BB | 2264 | C | C2-N3-C4 | -6.47 | 116.67 | 119.90 |
| 1 | AA | 297 | G | C6-N1-C2 | -6.46 | 121.22 | 125.10 |
| 1 | AA | 382 | A | C4-C5-C6 | -6.46 | 113.77 | 117.00 |
| 6 | AF | 7 | ASN | CA-C-N | 6.46 | 129.13 | 116.20 |
| 26 | BB | 108 | G | N3-C4-N9 | 6.46 | 129.88 | 126.00 |
| 26 | BB | 140 | C | C4-C5-C6 | 6.46 | 120.63 | 117.40 |
| 26 | BB | 209 | C | N3-C4-N4 | 6.46 | 122.53 | 118.00 |
| 26 | BB | 1041 | G | C4'-C3'-C2' | -6.46 | 96.14 | 102.60 |
| 26 | BB | 2351 | G | C5-C6-N1 | -6.46 | 108.27 | 111.50 |
| 26 | BB | 2753 | A | C5-C6-N6 | -6.46 | 118.53 | 123.70 |
| 1 | AA | 579 | A | C4-C5-C6 | 6.46 | 120.23 | 117.00 |
| 26 | BB | 993 | G | N1-C2-N3 | -6.46 | 120.02 | 123.90 |
| 26 | BB | 2454 | G | N1-C6-O6 | 6.46 | 123.78 | 119.90 |
| 52 | B1 | 37 | ARG | NE-CZ-NH2 | 6.46 | 123.53 | 120.30 |
| 1 | AA | 17 | U | N1-C2-N3 | 6.46 | 118.78 | 114.90 |
| 1 | AA | 1084 | G | N1-C2-N3 | -6.46 | 120.02 | 123.90 |
| 1 | AA | 1404 | C | N3-C4-N4 | 6.46 | 122.52 | 118.00 |
| 3 | AC | 54 | U | N3-C4-O4 | 6.46 | 123.92 | 119.40 |
| 6 | AF | 131 | ARG | NE-CZ-NH1 | 6.46 | 123.53 | 120.30 |
| 25 | BA | 17 | C | N1-C1'-C2' | -6.46 | 104.89 | 112.00 |
| 26 | BB | 774 | G | O4'-C1'-N9 | 6.46 | 113.37 | 108.20 |
| 26 | BB | 1158 | C | O4'-C1'-N1 | 6.46 | 113.37 | 108.20 |
| 26 | BB | 1263 | U | C4-C5-C6 | 6.46 | 123.58 | 119.70 |
| 26 | BB | 1551 | A | N7-C8-N9 | 6.46 | 117.03 | 113.80 |
| 26 | BB | 1641 | A | C4-C5-N7 | -6.46 | 107.47 | 110.70 |
| 26 | BB | 2109 | U | N3-C4-C5 | -6.46 | 110.72 | 114.60 |
| 26 | BB | 2242 | G | C4-C5-C6 | 6.46 | 122.68 | 118.80 |
| 26 | BB | 2278 | A | C8-N9-C4 | 6.46 | 108.38 | 105.80 |
| 26 | BB | 2358 | A | C5'-C4'-O4' | 6.46 | 116.85 | 109.10 |
| 26 | BB | 2683 | C | C6-N1-C2 | -6.46 | 117.72 | 120.30 |
| 26 | BB | 2837 | A | C6-C5-N7 | 6.46 | 136.82 | 132.30 |
| 1 | AA | 424 | G | C4-C5-C6 | 6.46 | 122.68 | 118.80 |
| 26 | BB | 1817 | G | N3-C4-C5 | -6.46 | 125.37 | 128.60 |
| 26 | BB | 2549 | G | O4'-C4'-C3' | 6.46 | 111.27 | 106.10 |
| 1 | AA | 106 | C | C3'-C2'-C1' | 6.46 | 106.67 | 101.50 |
| 1 | AA | 1146 | A | O4'-C1'-N9 | 6.46 | 113.37 | 108.20 |
| 1 | AA | 1225 | A | N7-C8-N9 | 6.46 | 117.03 | 113.80 |
| 3 | AC | 40 | G | C3'-C2'-C1' | -6.46 | 96.33 | 101.50 |
| 26 | BB | 96 | C | C3'-C2'-C1' | -6.46 | 96.33 | 101.50 |
| 26 | BB | 250 | G | N7-C8-N9 | -6.46 | 109.87 | 113.10 |
| 26 | BB | 397 | U | N3-C2-O2 | -6.46 | 117.68 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 561 | G | N1-C6-O6 | 6.46 | 123.78 | 119.90 |
| 26 | BB | 962 | G | O4'-C1'-N9 | 6.46 | 113.37 | 108.20 |
| 26 | BB | 1040 | A | N1-C2-N3 | -6.46 | 126.07 | 129.30 |
| 26 | BB | 1422 | G | C2-N3-C4 | 6.46 | 115.13 | 111.90 |
| 26 | BB | 1422 | G | C4-C5-C6 | 6.46 | 122.67 | 118.80 |
| 26 | BB | 2011 | U | N1-C2-O2 | 6.46 | 127.32 | 122.80 |
| 26 | BB | 2057 | G | C8-N9-C1' | 6.46 | 135.40 | 127.00 |
| 26 | BB | 2096 | C | N3-C4-C5 | -6.46 | 119.32 | 121.90 |
| 26 | BB | 2124 | G | N1-C2-N3 | -6.46 | 120.03 | 123.90 |
| 26 | BB | 2789 | C | C4-C5-C6 | -6.46 | 114.17 | 117.40 |
| 1 | AA | 1482 | G | C4-C5-N7 | 6.46 | 113.38 | 110.80 |
| 9 | AI | 45 | ARG | NE-CZ-NH2 | -6.46 | 117.07 | 120.30 |
| 26 | BB | 911 | A | N9-C4-C5 | -6.46 | 103.22 | 105.80 |
| 26 | BB | 1333 | G | C5-C6-O6 | -6.46 | 124.73 | 128.60 |
| 26 | BB | 2525 | G | C5-C6-O6 | -6.46 | 124.73 | 128.60 |
| 26 | BB | 2547 | A | P-O3'-C3' | 6.46 | 127.45 | 119.70 |
| 26 | BB | 2871 | U | O4'-C1'-N1 | 6.46 | 113.36 | 108.20 |
| 1 | AA | 335 | C | C6-N1-C2 | 6.46 | 122.88 | 120.30 |
| 1 | AA | 716 | A | N7-C8-N9 | 6.46 | 117.03 | 113.80 |
| 26 | BB | 498 | G | O4'-C4'-C3' | 6.46 | 111.26 | 106.10 |
| 26 | BB | 1874 | C | C4-C5-C6 | 6.46 | 120.63 | 117.40 |
| 26 | BB | 2299 | U | N3-C2-O2 | -6.46 | 117.68 | 122.20 |
| 26 | BB | 2418 | A | C1'-O4'-C4' | -6.46 | 104.74 | 109.90 |
| 26 | BB | 2655 | G | C4'-C3'-C2' | 6.46 | 109.06 | 102.60 |
| 1 | AA | 287 | U | N1-C1'-C2' | -6.45 | 104.90 | 112.00 |
| 1 | AA | 596 | A | O4'-C1'-N9 | 6.45 | 113.36 | 108.20 |
| 6 | AF | 16 | PRO | N-CA-CB | 6.45 | 111.05 | 103.30 |
| 26 | BB | 199 | A | C8-N9-C4 | 6.45 | 108.38 | 105.80 |
| 26 | BB | 1163 | G | C4-C5-N7 | -6.45 | 108.22 | 110.80 |
| 26 | BB | 1512 | C | O5'-C5'-C4' | 6.45 | 123.96 | 111.70 |
| 26 | BB | 1667 | G | N3-C2-N2 | 6.45 | 124.42 | 119.90 |
| 26 | BB | 1887 | C | C2-N3-C4 | -6.45 | 116.67 | 119.90 |
| 26 | BB | 1929 | G | N3-C2-N2 | -6.45 | 115.38 | 119.90 |
| 26 | BB | 1957 | C | C5'-C4'-O4' | 6.45 | 116.84 | 109.10 |
| 26 | BB | 2166 | U | O4'-C1'-N1 | 6.45 | 113.36 | 108.20 |
| 26 | BB | 2411 | A | N9-C4-C5 | -6.45 | 103.22 | 105.80 |
| 26 | BB | 2679 | A | N1-C6-N6 | 6.45 | 122.47 | 118.60 |
| 34 | BJ | 83 | TYR | CZ-CE2-CD2 | 6.45 | 125.61 | 119.80 |
| 40 | BP | 72 | ASP | CB-CG-OD2 | 6.45 | 124.11 | 118.30 |
| 1 | AA | 119 | A | C3'-C2'-C1' | 6.45 | 106.66 | 101.50 |
| 26 | BB | 1090 | A | C1'-O4'-C4' | -6.45 | 104.74 | 109.90 |
| 1 | AA | 763 | G | N3-C4-C5 | -6.45 | 125.37 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1236 | A | C5'-C4'-O4' | 6.45 | 116.84 | 109.10 |
| 26 | BB | 721 | A | N1-C6-N6 | -6.45 | 114.73 | 118.60 |
| 26 | BB | 1428 | C | C3'-C2'-C1' | 6.45 | 106.66 | 101.50 |
| 26 | BB | 1463 | C | N1-C2-O2 | 6.45 | 122.77 | 118.90 |
| 26 | BB | 1827 | U | C3'-C2'-C1' | 6.45 | 106.66 | 101.50 |
| 26 | BB | 1867 | G | N3-C4-N9 | 6.45 | 129.87 | 126.00 |
| 26 | BB | 2124 | G | N3-C2-N2 | 6.45 | 124.42 | 119.90 |
| 26 | BB | 2211 | A | C5-C6-N1 | 6.45 | 120.92 | 117.70 |
| 1 | AA | 182 | A | N1-C6-N6 | 6.45 | 122.47 | 118.60 |
| 1 | AA | 319 | G | C5-N7-C8 | 6.45 | 107.52 | 104.30 |
| 1 | AA | 350 | G | O4'-C1'-N9 | 6.45 | 113.36 | 108.20 |
| 1 | AA | 420 | U | C2'-C3'-O3' | 6.45 | 124.02 | 113.70 |
| 1 | AA | 926 | G | C1'-O4'-C4' | -6.45 | 104.74 | 109.90 |
| 1 | AA | 984 | C | C5'-C4'-O4' | 6.45 | 116.84 | 109.10 |
| 1 | AA | 1161 | C | N1-C2-N3 | 6.45 | 123.72 | 119.20 |
| 1 | AA | 1355 | G | N9-C4-C5 | 6.45 | 107.98 | 105.40 |
| 26 | BB | 155 | A | C4-C5-C6 | -6.45 | 113.78 | 117.00 |
| 26 | BB | 1170 | C | O5'-P-OP2 | -6.45 | 99.90 | 105.70 |
| 26 | BB | 1613 | G | C3'-C2'-C1' | -6.45 | 96.34 | 101.50 |
| 26 | BB | 2595 | G | C4-C5-N7 | 6.45 | 113.38 | 110.80 |
| 26 | BB | 2699 | C | O4'-C1'-N1 | 6.45 | 113.36 | 108.20 |
| 1 | AA | 505 | G | N3-C4-C5 | -6.45 | 125.38 | 128.60 |
| 1 | AA | 612 | C | C5-C4-N4 | 6.45 | 124.71 | 120.20 |
| 25 | BA | 13 | G | N1-C2-N3 | -6.45 | 120.03 | 123.90 |
| 26 | BB | 1115 | G | O4'-C4'-C3' | 6.45 | 111.26 | 106.10 |
| 26 | BB | 1934 | C | C6-N1-C2 | -6.45 | 117.72 | 120.30 |
| 26 | BB | 2028 | U | C5-C4-O4 | 6.45 | 129.77 | 125.90 |
| 1 | AA | 1137 | C | N3-C2-O2 | -6.45 | 117.39 | 121.90 |
| 6 | AF | 21 | TRP | CA-CB-CG | 6.45 | 125.95 | 113.70 |
| 26 | BB | 385 | C | O3'-P-O5' | -6.45 | 91.75 | 104.00 |
| 26 | BB | 940 | G | C5-C6-N1 | 6.45 | 114.72 | 111.50 |
| 26 | BB | 994 | C | C2-N3-C4 | -6.45 | 116.68 | 119.90 |
| 26 | BB | 1097 | U | C3'-C2'-C1' | 6.45 | 106.66 | 101.50 |
| 26 | BB | 1172 | C | C3'-C2'-C1' | -6.45 | 96.34 | 101.50 |
| 42 | BR | 87 | ARG | NE-CZ-NH1 | 6.45 | 123.52 | 120.30 |
| 26 | BB | 33 | C | C3'-C2'-C1' | 6.44 | 106.66 | 101.50 |
| 26 | BB | 2791 | G | C4-C5-N7 | -6.44 | 108.22 | 110.80 |
| 26 | BB | 2836 | U | O4'-C1'-N1 | 6.44 | 113.36 | 108.20 |
| 1 | AA | 570 | G | N9-C4-C5 | 6.44 | 107.98 | 105.40 |
| 1 | AA | 735 | C | C4-C5-C6 | -6.44 | 114.18 | 117.40 |
| 1 | AA | 785 | G | N3-C4-C5 | -6.44 | 125.38 | 128.60 |
| 1 | AA | 832 | G | C2-N3-C4 | 6.44 | 115.12 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 886 | G | N7-C8-N9 | 6.44 | 116.32 | 113.10 |
| 1 | AA | 1351 | U | O4'-C1'-N1 | 6.44 | 113.35 | 108.20 |
| 26 | BB | 69 | C | C5'-C4'-O4' | 6.44 | 116.83 | 109.10 |
| 26 | BB | 421 | C | O4'-C1'-N1 | 6.44 | 113.35 | 108.20 |
| 26 | BB | 540 | C | C4'-C3'-C2' | -6.44 | 96.16 | 102.60 |
| 26 | BB | 1086 | A | C6-N1-C2 | -6.44 | 114.73 | 118.60 |
| 26 | BB | 1100 | C | O4'-C1'-N1 | 6.44 | 113.35 | 108.20 |
| 26 | BB | 2468 | A | O4'-C1'-C2' | -6.44 | 99.36 | 105.80 |
| 26 | BB | 2657 | A | C6-N1-C2 | 6.44 | 122.47 | 118.60 |
| 26 | BB | 2658 | C | N3-C2-O2 | -6.44 | 117.39 | 121.90 |
| 1 | AA | 1264 | U | C1'-O4'-C4' | -6.44 | 104.75 | 109.90 |
| 1 | AA | 1292 | G | N9-C4-C5 | 6.44 | 107.98 | 105.40 |
| 1 | AA | 1294 | G | C4-C5-C6 | 6.44 | 122.67 | 118.80 |
| 26 | BB | 241 | A | C8-N9-C4 | -6.44 | 103.22 | 105.80 |
| 26 | BB | 627 | A | N1-C2-N3 | 6.44 | 132.52 | 129.30 |
| 26 | BB | 1003 | G | N3-C4-N9 | 6.44 | 129.86 | 126.00 |
| 26 | BB | 1808 | A | C5-N7-C8 | -6.44 | 100.68 | 103.90 |
| 26 | BB | 2046 | G | O4'-C4'-C3' | -6.44 | 97.56 | 104.00 |
| 26 | BB | 2276 | G | N9-C4-C5 | 6.44 | 107.98 | 105.40 |
| 26 | BB | 2408 | U | C5-C4-O4 | -6.44 | 122.04 | 125.90 |
| 26 | BB | 2732 | G | C3'-C2'-C1' | 6.44 | 106.65 | 101.50 |
| 26 | BB | 2823 | A | C4-C5-N7 | -6.44 | 107.48 | 110.70 |
| 1 | AA | 1214 | C | C6-N1-C1' | -6.44 | 113.07 | 120.80 |
| 1 | AA | 1223 | C | C2-N1-C1' | 6.44 | 125.88 | 118.80 |
| 26 | BB | 1336 | A | N9-C4-C5 | 6.44 | 108.38 | 105.80 |
| 26 | BB | 2262 | U | C5'-C4'-C3' | -6.44 | 105.70 | 116.00 |
| 26 | BB | 2292 | U | O4'-C1'-N1 | 6.44 | 113.35 | 108.20 |
| 26 | BB | 2627 | G | N9-C4-C5 | 6.44 | 107.98 | 105.40 |
| 1 | AA | 974 | A | N9-C4-C5 | 6.44 | 108.38 | 105.80 |
| 1 | AA | 1178 | G | C5-C6-O6 | -6.44 | 124.74 | 128.60 |
| 1 | AA | 1238 | A | C2-N3-C4 | 6.44 | 113.82 | 110.60 |
| 3 | AC | 43 | U | C6-N1-C2 | -6.44 | 117.14 | 121.00 |
| 25 | BA | 54 | G | O4'-C1'-N9 | 6.44 | 113.35 | 108.20 |
| 26 | BB | 58 | G | C1'-O4'-C4' | 6.44 | 115.05 | 109.90 |
| 26 | BB | 532 | A | C6-C5-N7 | 6.44 | 136.81 | 132.30 |
| 26 | BB | 570 | G | C3'-C2'-C1' | 6.44 | 106.65 | 101.50 |
| 26 | BB | 683 | U | C4-C5-C6 | 6.44 | 123.56 | 119.70 |
| 26 | BB | 1323 | C | N1-C2-O2 | 6.44 | 122.76 | 118.90 |
| 26 | BB | 1498 | C | O4'-C1'-N1 | 6.44 | 113.35 | 108.20 |
| 26 | BB | 2547 | A | N7-C8-N9 | 6.44 | 117.02 | 113.80 |
| 1 | AA | 191 | G | N9-C1'-C2' | -6.44 | 104.92 | 112.00 |
| 1 | AA | 459 | A | N3-C4-C5 | -6.44 | 122.30 | 126.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 525 | C | N3-C4-N4 | 6.44 | 122.50 | 118.00 |
| 1 | AA | 722 | G | N7-C8-N9 | 6.44 | 116.32 | 113.10 |
| 1 | AA | 1181 | G | C8-N9-C4 | -6.44 | 103.83 | 106.40 |
| 25 | BA | 108 | A | C1'-O4'-C4' | -6.44 | 104.75 | 109.90 |
| 26 | BB | 563 | A | C4-C5-C6 | 6.44 | 120.22 | 117.00 |
| 26 | BB | 1553 | A | N1-C2-N3 | -6.44 | 126.08 | 129.30 |
| 32 | BH | 151 | ARG | NE-CZ-NH1 | 6.44 | 123.52 | 120.30 |
| 1 | AA | 277 | C | N3-C4-C5 | -6.43 | 119.33 | 121.90 |
| 1 | AA | 536 | C | C6-N1-C2 | -6.43 | 117.73 | 120.30 |
| 1 | AA | 652 | U | N3-C2-O2 | -6.43 | 117.70 | 122.20 |
| 1 | AA | 775 | G | N3-C4-N9 | -6.43 | 122.14 | 126.00 |
| 1 | AA | 1158 | C | C2-N3-C4 | 6.43 | 123.12 | 119.90 |
| 1 | AA | 1409 | C | N1-C2-O2 | 6.43 | 122.76 | 118.90 |
| 26 | BB | 69 | C | N3-C4-N4 | 6.43 | 122.50 | 118.00 |
| 26 | BB | 335 | C | N1-C2-N3 | -6.43 | 114.69 | 119.20 |
| 26 | BB | 438 | G | N1-C2-N2 | 6.43 | 121.99 | 116.20 |
| 26 | BB | 654 | A | C5'-C4'-O4' | 6.43 | 116.82 | 109.10 |
| 26 | BB | 2216 | G | C4'-C3'-C2' | -6.43 | 96.17 | 102.60 |
| 29 | BE | 107 | VAL | CA-CB-CG2 | 6.43 | 120.55 | 110.90 |
| 1 | AA | 1 | A | C6-N1-C2 | 6.43 | 122.46 | 118.60 |
| 1 | AA | 336 | A | C6-N1-C2 | 6.43 | 122.46 | 118.60 |
| 1 | AA | 353 | A | N1-C6-N6 | 6.43 | 122.46 | 118.60 |
| 1 | AA | 418 | C | N1-C2-N3 | 6.43 | 123.70 | 119.20 |
| 1 | AA | 619 | U | C2-N1-C1' | 6.43 | 125.42 | 117.70 |
| 1 | AA | 1527 | U | N3-C2-O2 | -6.43 | 117.70 | 122.20 |
| 3 | AC | 50 | U | N3-C2-O2 | -6.43 | 117.70 | 122.20 |
| 3 | AC | 55 | A | C4-C5-C6 | -6.43 | 113.78 | 117.00 |
| 26 | BB | 242 | G | P-O3'-C3' | 6.43 | 127.42 | 119.70 |
| 26 | BB | 1187 | G | C8-N9-C4 | -6.43 | 103.83 | 106.40 |
| 26 | BB | 1436 | G | N7-C8-N9 | 6.43 | 116.32 | 113.10 |
| 26 | BB | 1697 | G | C4-C5-N7 | -6.43 | 108.23 | 110.80 |
| 26 | BB | 1955 | U | C5-C6-N1 | -6.43 | 119.48 | 122.70 |
| 26 | BB | 2187 | U | C2-N3-C4 | -6.43 | 123.14 | 127.00 |
| 26 | BB | 2376 | A | N9-C1'-C2' | 6.43 | 122.36 | 114.00 |
| 26 | BB | 2821 | A | C5-C6-N6 | 6.43 | 128.85 | 123.70 |
| 1 | AA | 742 | G | C8-N9-C1' | 6.43 | 135.36 | 127.00 |
| 26 | BB | 283 | G | C6-C5-N7 | 6.43 | 134.26 | 130.40 |
| 1 | AA | 655 | A | N1-C6-N6 | 6.43 | 122.46 | 118.60 |
| 1 | AA | 1472 | U | O4'-C1'-N1 | 6.43 | 113.34 | 108.20 |
| 3 | AC | 34 | U | C6-N1-C2 | -6.43 | 117.14 | 121.00 |
| 26 | BB | 27 | G | N9-C4-C5 | -6.43 | 102.83 | 105.40 |
| 26 | BB | 615 | U | C6-N1-C2 | -6.43 | 117.14 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1212 | G | O4'-C4'-C3' | 6.43 | 111.24 | 106.10 |
| 26 | BB | 1382 | G | C2-N3-C4 | 6.43 | 115.11 | 111.90 |
| 26 | BB | 2083 | G | C2-N3-C4 | 6.43 | 115.11 | 111.90 |
| 1 | AA | 916 | U | N3-C2-O2 | -6.43 | 117.70 | 122.20 |
| 1 | AA | 1153 | G | N1-C6-O6 | 6.43 | 123.76 | 119.90 |
| 1 | AA | 1527 | U | C5-C4-O4 | 6.43 | 129.76 | 125.90 |
| 26 | BB | 553 | G | N7-C8-N9 | -6.43 | 109.89 | 113.10 |
| 26 | BB | 1156 | A | O4'-C4'-C3' | 6.43 | 111.24 | 106.10 |
| 26 | BB | 1245 | G | N1-C6-O6 | 6.43 | 123.76 | 119.90 |
| 26 | BB | 1552 | A | C8-N9-C4 | 6.43 | 108.37 | 105.80 |
| 26 | BB | 2336 | A | O4'-C1'-N9 | 6.43 | 113.34 | 108.20 |
| 51 | B0 | 7 | ARG | NE-CZ-NH1 | 6.43 | 123.51 | 120.30 |
| 1 | AA | 1364 | U | C6-N1-C2 | -6.43 | 117.14 | 121.00 |
| 7 | AG | 12 | ARG | NE-CZ-NH2 | 6.43 | 123.51 | 120.30 |
| 26 | BB | 32 | C | N1-C2-O2 | 6.43 | 122.76 | 118.90 |
| 26 | BB | 593 | U | C5'-C4'-O4' | 6.43 | 116.81 | 109.10 |
| 26 | BB | 1816 | C | C3'-C2'-C1' | 6.43 | 106.64 | 101.50 |
| 34 | BJ | 95 | PHE | CB-CG-CD1 | -6.43 | 116.30 | 120.80 |
| 1 | AA | 34 | C | C4'-C3'-C2' | -6.42 | 96.18 | 102.60 |
| 1 | AA | 179 | A | N1-C6-N6 | 6.42 | 122.45 | 118.60 |
| 1 | AA | 492 | C | N3-C4-C5 | -6.42 | 119.33 | 121.90 |
| 1 | AA | 790 | A | C4-C5-N7 | 6.42 | 113.91 | 110.70 |
| 26 | BB | 101 | A | C3'-C2'-C1' | 6.42 | 106.64 | 101.50 |
| 26 | BB | 261 | G | N3-C4-C5 | -6.42 | 125.39 | 128.60 |
| 26 | BB | 682 | G | C5-N7-C8 | 6.42 | 107.51 | 104.30 |
| 26 | BB | 958 | U | N1-C2-N3 | 6.42 | 118.75 | 114.90 |
| 26 | BB | 1265 | A | N9-C1'-C2' | -6.42 | 104.93 | 112.00 |
| 54 | B3 | 16 | ARG | NE-CZ-NH2 | 6.42 | 123.51 | 120.30 |
| 1 | AA | 238 | A | N3-C4-N9 | 6.42 | 132.54 | 127.40 |
| 1 | AA | 502 | A | C2-N3-C4 | 6.42 | 113.81 | 110.60 |
| 1 | AA | 1159 | U | C5-C4-O4 | 6.42 | 129.75 | 125.90 |
| 1 | AA | 1239 | A | O4'-C1'-N9 | 6.42 | 113.34 | 108.20 |
| 26 | BB | 9 | G | C6-C5-N7 | 6.42 | 134.25 | 130.40 |
| 26 | BB | 1577 | C | N3-C2-O2 | -6.42 | 117.40 | 121.90 |
| 26 | BB | 2100 | G | N7-C8-N9 | 6.42 | 116.31 | 113.10 |
| 26 | BB | 2391 | G | O4'-C4'-C3' | 6.42 | 111.24 | 106.10 |
| 1 | AA | 872 | A | C1'-O4'-C4' | -6.42 | 104.76 | 109.90 |
| 1 | AA | 971 | G | C5-C6-N1 | 6.42 | 114.71 | 111.50 |
| 1 | AA | 1039 | G | C4-C5-N7 | -6.42 | 108.23 | 110.80 |
| 1 | AA | 1068 | G | N7-C8-N9 | 6.42 | 116.31 | 113.10 |
| 1 | AA | 1125 | U | O4'-C1'-N1 | 6.42 | 113.34 | 108.20 |
| 1 | AA | 1371 | G | N9-C1'-C2' | -6.42 | 104.94 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1541 | U | C1'-O4'-C4' | 6.42 | 115.04 | 109.90 |
| 2 | AB | 9 | A | C6-C5-N7 | -6.42 | 127.81 | 132.30 |
| 26 | BB | 266 | G | N9-C4-C5 | -6.42 | 102.83 | 105.40 |
| 26 | BB | 1175 | A | N3-C4-C5 | -6.42 | 122.31 | 126.80 |
| 26 | BB | 1196 | C | C5'-C4'-O4' | 6.42 | 116.81 | 109.10 |
| 26 | BB | 1378 | A | N1-C2-N3 | -6.42 | 126.09 | 129.30 |
| 26 | BB | 1624 | U | N3-C4-O4 | 6.42 | 123.89 | 119.40 |
| 26 | BB | 1666 | G | C4'-C3'-C2' | -6.42 | 96.18 | 102.60 |
| 26 | BB | 1673 | G | C2-N3-C4 | 6.42 | 115.11 | 111.90 |
| 26 | BB | 2029 | G | C5-C6-N1 | 6.42 | 114.71 | 111.50 |
| 26 | BB | 2403 | C | C5'-C4'-C3' | -6.42 | 105.72 | 116.00 |
| 1 | AA | 800 | G | C3'-C2'-C1' | 6.42 | 106.64 | 101.50 |
| 26 | BB | 1249 | U | C5-C4-O4 | -6.42 | 122.05 | 125.90 |
| 26 | BB | 2223 | G | C5'-C4'-O4' | 6.42 | 116.80 | 109.10 |
| 1 | AA | 56 | U | C5-C6-N1 | 6.42 | 125.91 | 122.70 |
| 1 | AA | 831 | A | O4'-C1'-N9 | 6.42 | 113.33 | 108.20 |
| 1 | AA | 887 | G | C1'-O4'-C4' | -6.42 | 104.77 | 109.90 |
| 1 | AA | 1027 | C | N3-C4-C5 | 6.42 | 124.47 | 121.90 |
| 26 | BB | 936 | A | C2-N3-C4 | 6.42 | 113.81 | 110.60 |
| 26 | BB | 1771 | C | N3-C4-C5 | 6.42 | 124.47 | 121.90 |
| 26 | BB | 1948 | G | C2-N3-C4 | 6.42 | 115.11 | 111.90 |
| 26 | BB | 2628 | C | P-O3'-C3' | 6.42 | 127.40 | 119.70 |
| 26 | BB | 2698 | U | O4'-C1'-N1 | 6.42 | 113.33 | 108.20 |
| 26 | BB | 2758 | A | C6-N1-C2 | -6.42 | 114.75 | 118.60 |
| 26 | BB | 2886 | A | C5-C6-N1 | 6.42 | 120.91 | 117.70 |
| 1 | AA | 800 | G | N7-C8-N9 | 6.42 | 116.31 | 113.10 |
| 1 | AA | 887 | G | C8-N9-C4 | -6.42 | 103.83 | 106.40 |
| 1 | AA | 1111 | A | N3-C4-C5 | 6.42 | 131.29 | 126.80 |
| 1 | AA | 1236 | A | C8-N9-C4 | 6.42 | 108.37 | 105.80 |
| 4 | AD | 48 | U | C5-C4-O4 | 6.42 | 129.75 | 125.90 |
| 4 | AD | 70 | C | C3'-C2'-C1' | 6.42 | 106.63 | 101.50 |
| 25 | BA | 82 | U | C2-N3-C4 | -6.42 | 123.15 | 127.00 |
| 26 | BB | 30 | G | N3-C4-C5 | -6.42 | 125.39 | 128.60 |
| 26 | BB | 114 | U | N1-C2-N3 | 6.42 | 118.75 | 114.90 |
| 26 | BB | 340 | A | C4-C5-N7 | -6.42 | 107.49 | 110.70 |
| 26 | BB | 694 | U | C4-C5-C6 | 6.42 | 123.55 | 119.70 |
| 26 | BB | 1176 | U | O4'-C4'-C3' | -6.42 | 97.58 | 104.00 |
| 26 | BB | 1393 | A | C4-C5-N7 | -6.42 | 107.49 | 110.70 |
| 26 | BB | 1539 | U | C5'-C4'-O4' | 6.42 | 116.80 | 109.10 |
| 26 | BB | 1631 | G | C6-N1-C2 | -6.42 | 121.25 | 125.10 |
| 1 | AA | 376 | G | N3-C4-C5 | -6.42 | 125.39 | 128.60 |
| 1 | AA | 917 | G | N1-C2-N3 | -6.42 | 120.05 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1315 | U | C5'-C4'-O4' | 6.42 | 116.80 | 109.10 |
| 2 | AB | 47 | U | N3-C4-C5 | 6.42 | 118.45 | 114.60 |
| 26 | BB | 522 | A | C5-C6-N6 | -6.42 | 118.57 | 123.70 |
| 26 | BB | 1221 | C | C5'-C4'-O4' | 6.42 | 116.80 | 109.10 |
| 28 | BD | 226 | PRO | N-CA-CB | 6.42 | 111.00 | 103.30 |
| 29 | BE | 20 | VAL | CG1-CB-CG2 | -6.42 | 100.64 | 110.90 |
| 1 | AA | 31 | G | N1-C2-N2 | -6.41 | 110.43 | 116.20 |
| 1 | AA | 430 | A | C3'-C2'-C1' | -6.41 | 96.37 | 101.50 |
| 1 | AA | 439 | U | C5'-C4'-O4' | 6.41 | 116.80 | 109.10 |
| 1 | AA | 1201 | A | C5'-C4'-O4' | 6.41 | 116.80 | 109.10 |
| 1 | AA | 1201 | A | O4'-C1'-N9 | 6.41 | 113.33 | 108.20 |
| 1 | AA | 1221 | G | N7-C8-N9 | 6.41 | 116.31 | 113.10 |
| 2 | AB | 1 | A | N1-C2-N3 | 6.41 | 132.51 | 129.30 |
| 3 | AC | 58 | C | N3-C2-O2 | -6.41 | 117.41 | 121.90 |
| 26 | BB | 106 | C | C4-C5-C6 | 6.41 | 120.61 | 117.40 |
| 26 | BB | 1518 | C | C5-C6-N1 | 6.41 | 124.21 | 121.00 |
| 26 | BB | 1878 | G | N1-C2-N3 | 6.41 | 127.75 | 123.90 |
| 1 | AA | 334 | C | O4'-C1'-N1 | 6.41 | 113.33 | 108.20 |
| 26 | BB | 215 | G | C5-C6-O6 | -6.41 | 124.75 | 128.60 |
| 26 | BB | 315 | G | N9-C4-C5 | 6.41 | 107.97 | 105.40 |
| 26 | BB | 418 | C | N3-C2-O2 | -6.41 | 117.41 | 121.90 |
| 26 | BB | 2053 | G | N7-C8-N9 | 6.41 | 116.31 | 113.10 |
| 1 | AA | 192 | A | C4-C5-C6 | 6.41 | 120.20 | 117.00 |
| 1 | AA | 674 | G | N3-C2-N2 | -6.41 | 115.41 | 119.90 |
| 1 | AA | 1103 | C | C6-N1-C2 | -6.41 | 117.74 | 120.30 |
| 1 | AA | 1335 | U | N3-C2-O2 | -6.41 | 117.71 | 122.20 |
| 1 | AA | 1446 | A | C3'-C2'-C1' | 6.41 | 106.63 | 101.50 |
| 25 | BA | 5 | U | N3-C4-C5 | 6.41 | 118.45 | 114.60 |
| 26 | BB | 68 | G | C4-N9-C1' | -6.41 | 118.17 | 126.50 |
| 26 | BB | 132 | G | C6-C5-N7 | 6.41 | 134.25 | 130.40 |
| 26 | BB | 207 | A | N3-C4-C5 | -6.41 | 122.31 | 126.80 |
| 1 | AA | 64 | G | C5-C6-O6 | -6.41 | 124.75 | 128.60 |
| 1 | AA | 382 | A | C6-N1-C2 | -6.41 | 114.75 | 118.60 |
| 1 | AA | 1213 | A | C2'-C3'-O3' | 6.41 | 123.95 | 113.70 |
| 1 | AA | 1371 | G | C4-C5-N7 | 6.41 | 113.36 | 110.80 |
| 2 | AB | 69 | C | C4'-C3'-C2' | -6.41 | 96.19 | 102.60 |
| 4 | AD | 42 | C | C4-C5-C6 | -6.41 | 114.20 | 117.40 |
| 4 | AD | 77 | A | O4'-C1'-N9 | 6.41 | 113.33 | 108.20 |
| 14 | AN | 35 | ASP | CB-CG-OD2 | 6.41 | 124.07 | 118.30 |
| 18 | AR | 77 | TYR | CD1-CE1-CZ | -6.41 | 114.03 | 119.80 |
| 25 | BA | 25 | U | C2-N3-C4 | -6.41 | 123.16 | 127.00 |
| 26 | BB | 217 | A | N1-C6-N6 | -6.41 | 114.75 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 260 | G | N9-C4-C5 | 6.41 | 107.96 | 105.40 |
| 26 | BB | 760 | G | N7-C8-N9 | 6.41 | 116.30 | 113.10 |
| 26 | BB | 1585 | C | O4'-C1'-N1 | 6.41 | 113.33 | 108.20 |
| 26 | BB | 2638 | G | N9-C4-C5 | 6.41 | 107.96 | 105.40 |
| 39 | BO | 103 | TYR | CB-CG-CD1 | -6.41 | 117.16 | 121.00 |
| 43 | BS | 12 | ARG | NE-CZ-NH2 | 6.41 | 123.50 | 120.30 |
| 1 | AA | 548 | G | C4-C5-C6 | 6.41 | 122.64 | 118.80 |
| 1 | AA | 817 | C | C6-N1-C2 | -6.41 | 117.74 | 120.30 |
| 1 | AA | 1014 | A | C8-N9-C4 | -6.41 | 103.24 | 105.80 |
| 1 | AA | 1173 | U | C2-N3-C4 | 6.41 | 130.84 | 127.00 |
| 22 | AV | 9 | PHE | CG-CD2-CE2 | -6.41 | 113.75 | 120.80 |
| 26 | BB | 1050 | A | O4'-C4'-C3' | -6.41 | 97.59 | 104.00 |
| 26 | BB | 1204 | A | C4-C5-C6 | 6.41 | 120.20 | 117.00 |
| 26 | BB | 1575 | C | O4'-C1'-N1 | 6.41 | 113.33 | 108.20 |
| 26 | BB | 1713 | A | C4-C5-N7 | 6.41 | 113.90 | 110.70 |
| 30 | BF | 170 | ARG | NE-CZ-NH1 | 6.41 | 123.50 | 120.30 |
| 1 | AA | 136 | C | C5'-C4'-O4' | 6.41 | 116.79 | 109.10 |
| 1 | AA | 231 | U | C4-C5-C6 | 6.41 | 123.54 | 119.70 |
| 1 | AA | 235 | C | N1-C1'-C2' | -6.41 | 104.95 | 112.00 |
| 1 | AA | 268 | U | C5-C6-N1 | -6.41 | 119.50 | 122.70 |
| 1 | AA | 539 | A | N7-C8-N9 | 6.41 | 117.00 | 113.80 |
| 1 | AA | 1037 | C | C5-C4-N4 | -6.41 | 115.72 | 120.20 |
| 26 | BB | 534 | U | C5-C6-N1 | 6.41 | 125.90 | 122.70 |
| 26 | BB | 695 | G | N1-C6-O6 | 6.41 | 123.74 | 119.90 |
| 26 | BB | 1297 | C | C5-C6-N1 | 6.41 | 124.20 | 121.00 |
| 26 | BB | 1384 | A | N3-C4-C5 | -6.41 | 122.32 | 126.80 |
| 26 | BB | 1425 | G | C5-N7-C8 | -6.41 | 101.10 | 104.30 |
| 26 | BB | 1881 | C | C5'-C4'-C3' | -6.41 | 105.75 | 116.00 |
| 26 | BB | 2469 | A | C5-N7-C8 | 6.41 | 107.10 | 103.90 |
| 26 | BB | 2480 | C | N1-C2-O2 | 6.41 | 122.74 | 118.90 |
| 26 | BB | 2793 | C | C1'-O4'-C4' | -6.41 | 104.78 | 109.90 |
| 1 | AA | 309 | A | C8-N9-C4 | -6.40 | 103.24 | 105.80 |
| 1 | AA | 540 | G | C8-N9-C4 | -6.40 | 103.84 | 106.40 |
| 26 | BB | 749 | A | O4'-C1'-N9 | 6.40 | 113.32 | 108.20 |
| 26 | BB | 818 | G | O4'-C1'-N9 | 6.40 | 113.32 | 108.20 |
| 26 | BB | 900 | A | N1-C2-N3 | -6.40 | 126.10 | 129.30 |
| 26 | BB | 2006 | C | N1-C2-O2 | 6.40 | 122.74 | 118.90 |
| 26 | BB | 2299 | U | C5'-C4'-O4' | 6.40 | 116.78 | 109.10 |
| 26 | BB | 2404 | U | N1-C2-N3 | 6.40 | 118.74 | 114.90 |
| 1 | AA | 332 | G | C5-C6-N1 | 6.40 | 114.70 | 111.50 |
| 1 | AA | 462 | G | N1-C6-O6 | 6.40 | 123.74 | 119.90 |
| 1 | AA | 857 | C | O4'-C1'-N1 | 6.40 | 113.32 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1021 | A | C3'-C2'-C1' | 6.40 | 106.62 | 101.50 |
| 2 | AB | 22 | G | N1-C2-N3 | -6.40 | 120.06 | 123.90 |
| 26 | BB | 84 | A | C4-C5-C6 | -6.40 | 113.80 | 117.00 |
| 26 | BB | 153 | U | C2-N3-C4 | -6.40 | 123.16 | 127.00 |
| 26 | BB | 498 | G | C5-N7-C8 | 6.40 | 107.50 | 104.30 |
| 26 | BB | 536 | G | C4-C5-N7 | -6.40 | 108.24 | 110.80 |
| 26 | BB | 989 | G | C6-C5-N7 | -6.40 | 126.56 | 130.40 |
| 26 | BB | 1910 | G | N3-C2-N2 | -6.40 | 115.42 | 119.90 |
| 26 | BB | 2157 | G | N3-C4-C5 | -6.40 | 125.40 | 128.60 |
| 26 | BB | 2229 | U | C3'-C2'-C1' | 6.40 | 106.62 | 101.50 |
| 26 | BB | 2325 | G | O4'-C1'-N9 | 6.40 | 113.32 | 108.20 |
| 26 | BB | 2804 | U | N3-C2-O2 | -6.40 | 117.72 | 122.20 |
| 26 | BB | 2825 | G | O4'-C4'-C3' | -6.40 | 97.60 | 104.00 |
| 26 | BB | 2846 | G | C5-N7-C8 | 6.40 | 107.50 | 104.30 |
| 1 | AA | 245 | U | P-O3'-C3' | 6.40 | 127.38 | 119.70 |
| 1 | AA | 331 | G | C5'-C4'-O4' | 6.40 | 116.78 | 109.10 |
| 1 | AA | 689 | C | O4'-C1'-N1 | 6.40 | 113.32 | 108.20 |
| 1 | AA | 1005 | A | C2-N3-C4 | 6.40 | 113.80 | 110.60 |
| 1 | AA | 1095 | U | O4'-C1'-N1 | 6.40 | 113.32 | 108.20 |
| 1 | AA | 1335 | U | N1-C2-O2 | 6.40 | 127.28 | 122.80 |
| 25 | BA | 75 | G | C5-C6-O6 | -6.40 | 124.76 | 128.60 |
| 26 | BB | 106 | C | N1-C2-O2 | 6.40 | 122.74 | 118.90 |
| 26 | BB | 289 | G | O4'-C4'-C3' | 6.40 | 111.22 | 106.10 |
| 26 | BB | 553 | G | C1'-O4'-C4' | -6.40 | 104.78 | 109.90 |
| 26 | BB | 605 | G | N7-C8-N9 | 6.40 | 116.30 | 113.10 |
| 26 | BB | 1168 | G | C8-N9-C4 | -6.40 | 103.84 | 106.40 |
| 26 | BB | 1500 | G | C6-C5-N7 | -6.40 | 126.56 | 130.40 |
| 26 | BB | 1748 | C | C6-N1-C2 | -6.40 | 117.74 | 120.30 |
| 1 | AA | 1012 | A | N1-C6-N6 | 6.40 | 122.44 | 118.60 |
| 1 | AA | 1071 | C | C5'-C4'-O4' | 6.40 | 116.78 | 109.10 |
| 25 | BA | 31 | C | C5-C4-N4 | 6.40 | 124.68 | 120.20 |
| 26 | BB | 205 | G | C4-C5-C6 | 6.40 | 122.64 | 118.80 |
| 26 | BB | 1456 | G | C4-C5-C6 | 6.40 | 122.64 | 118.80 |
| 26 | BB | 2491 | U | O4'-C1'-N1 | 6.40 | 113.32 | 108.20 |
| 26 | BB | 2829 | A | O4'-C1'-N9 | 6.40 | 113.32 | 108.20 |
| 1 | AA | 796 | C | N3-C2-O2 | -6.40 | 117.42 | 121.90 |
| 1 | AA | 1437 | A | N1-C2-N3 | -6.40 | 126.10 | 129.30 |
| 2 | AB | 44 | G | C4-N9-C1' | -6.40 | 118.18 | 126.50 |
| 4 | AD | 27 | G | C4'-C3'-C2' | -6.40 | 96.20 | 102.60 |
| 26 | BB | 205 | G | C8-N9-C4 | -6.40 | 103.84 | 106.40 |
| 26 | BB | 255 | A | C2-N3-C4 | 6.40 | 113.80 | 110.60 |
| 26 | BB | 509 | C | C6-N1-C2 | -6.40 | 117.74 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2269 | G | P-O3'-C3' | 6.40 | 127.38 | 119.70 |
| 26 | BB | 2306 | C | N1-C2-N3 | -6.40 | 114.72 | 119.20 |
| 26 | BB | 2845 | U | O3'-P-O5' | -6.40 | 91.84 | 104.00 |
| 26 | BB | 453 | A | N3-C4-N9 | -6.40 | 122.28 | 127.40 |
| 26 | BB | 714 | U | C5'-C4'-O4' | 6.40 | 116.78 | 109.10 |
| 1 | AA | 85 | U | N1-C2-N3 | 6.39 | 118.74 | 114.90 |
| 1 | AA | 616 | G | C4-C5-N7 | -6.39 | 108.24 | 110.80 |
| 1 | AA | 635 | A | C5-C6-N1 | -6.39 | 114.50 | 117.70 |
| 1 | AA | 1223 | C | C5-C4-N4 | -6.39 | 115.72 | 120.20 |
| 1 | AA | 1254 | A | N3-C4-C5 | -6.39 | 122.32 | 126.80 |
| 1 | AA | 1333 | A | C5-N7-C8 | -6.39 | 100.70 | 103.90 |
| 3 | AC | 26 | U | C6-N1-C2 | -6.39 | 117.16 | 121.00 |
| 26 | BB | 328 | U | C5-C6-N1 | -6.39 | 119.50 | 122.70 |
| 26 | BB | 508 | A | O5'-P-OP2 | 6.39 | 118.37 | 110.70 |
| 26 | BB | 596 | U | O4'-C1'-N1 | 6.39 | 113.31 | 108.20 |
| 26 | BB | 904 | G | N1-C6-O6 | -6.39 | 116.06 | 119.90 |
| 26 | BB | 1077 | A | N3-C4-C5 | -6.39 | 122.32 | 126.80 |
| 26 | BB | 1831 | G | O4'-C1'-N9 | 6.39 | 113.31 | 108.20 |
| 26 | BB | 1999 | C | C6-N1-C2 | -6.39 | 117.74 | 120.30 |
| 26 | BB | 2018 | G | C4-C5-C6 | 6.39 | 122.64 | 118.80 |
| 26 | BB | 2207 | C | N1-C2-N3 | -6.39 | 114.72 | 119.20 |
| 26 | BB | 2333 | A | N1-C6-N6 | -6.39 | 114.76 | 118.60 |
| 26 | BB | 2360 | G | C2-N3-C4 | 6.39 | 115.10 | 111.90 |
| 26 | BB | 2538 | C | O4'-C1'-N1 | 6.39 | 113.32 | 108.20 |
| 26 | BB | 2657 | A | C4-C5-N7 | 6.39 | 113.90 | 110.70 |
| 26 | BB | 2697 | G | C1'-O4'-C4' | -6.39 | 104.78 | 109.90 |
| 1 | AA | 15 | G | C5-N7-C8 | -6.39 | 101.10 | 104.30 |
| 1 | AA | 541 | G | C4'-C3'-C2' | -6.39 | 96.21 | 102.60 |
| 1 | AA | 943 | U | C3'-C2'-C1' | 6.39 | 106.61 | 101.50 |
| 1 | AA | 957 | U | C5-C6-N1 | 6.39 | 125.90 | 122.70 |
| 1 | AA | 1096 | C | O4'-C4'-C3' | 6.39 | 111.21 | 106.10 |
| 1 | AA | 1143 | G | N3-C2-N2 | -6.39 | 115.43 | 119.90 |
| 1 | AA | 1175 | G | C8-N9-C4 | -6.39 | 103.84 | 106.40 |
| 1 | AA | 1277 | C | C6-N1-C1' | 6.39 | 128.47 | 120.80 |
| 26 | BB | 269 | C | P-O5'-C5' | 6.39 | 131.13 | 120.90 |
| 26 | BB | 337 | C | C4'-C3'-C2' | -6.39 | 96.21 | 102.60 |
| 26 | BB | 349 | U | N1-C2-O2 | 6.39 | 127.28 | 122.80 |
| 26 | BB | 377 | G | C4'-C3'-C2' | -6.39 | 96.21 | 102.60 |
| 26 | BB | 620 | G | C4'-C3'-C2' | 6.39 | 108.99 | 102.60 |
| 26 | BB | 786 | C | C3'-C2'-C1' | 6.39 | 106.61 | 101.50 |
| 26 | BB | 857 | G | C5-C6-N1 | 6.39 | 114.70 | 111.50 |
| 26 | BB | 1987 | A | N7-C8-N9 | 6.39 | 117.00 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 644 | U | N1-C1'-C2' | -6.39 | 104.97 | 112.00 |
| 1 | AA | 652 | U | N3-C4-O4 | 6.39 | 123.87 | 119.40 |
| 1 | AA | 908 | A | C4-C5-C6 | -6.39 | 113.80 | 117.00 |
| 1 | AA | 1307 | U | C6-N1-C2 | 6.39 | 124.83 | 121.00 |
| 26 | BB | 248 | G | C8-N9-C4 | -6.39 | 103.84 | 106.40 |
| 26 | BB | 534 | U | C6-N1-C2 | -6.39 | 117.17 | 121.00 |
| 26 | BB | 786 | C | C5'-C4'-C3' | -6.39 | 105.78 | 116.00 |
| 26 | BB | 868 | U | N3-C2-O2 | -6.39 | 117.73 | 122.20 |
| 26 | BB | 2456 | C | N1-C2-N3 | -6.39 | 114.73 | 119.20 |
| 26 | BB | 2797 | U | N1-C2-N3 | 6.39 | 118.73 | 114.90 |
| 1 | AA | 398 | U | O4'-C1'-N1 | 6.39 | 113.31 | 108.20 |
| 1 | AA | 599 | C | C4'-C3'-C2' | -6.39 | 96.21 | 102.60 |
| 1 | AA | 742 | G | N9-C1'-C2' | -6.39 | 104.97 | 112.00 |
| 25 | BA | 68 | C | N3-C2-O2 | -6.39 | 117.43 | 121.90 |
| 26 | BB | 911 | A | N1-C2-N3 | 6.39 | 132.50 | 129.30 |
| 26 | BB | 1730 | C | N3-C2-O2 | -6.39 | 117.43 | 121.90 |
| 26 | BB | 2071 | A | C8-N9-C4 | -6.39 | 103.25 | 105.80 |
| 53 | B2 | 16 | CYS | CA-CB-SG | -6.39 | 102.50 | 114.00 |
| 1 | AA | 1134 | G | C5-N7-C8 | 6.39 | 107.49 | 104.30 |
| 1 | AA | 1453 | G | C5-C6-O6 | -6.39 | 124.77 | 128.60 |
| 26 | BB | 281 | C | C4-C5-C6 | -6.39 | 114.21 | 117.40 |
| 26 | BB | 472 | A | C8-N9-C4 | -6.39 | 103.25 | 105.80 |
| 26 | BB | 548 | G | O4'-C1'-N9 | 6.39 | 113.31 | 108.20 |
| 26 | BB | 624 | C | C5-C6-N1 | 6.39 | 124.19 | 121.00 |
| 26 | BB | 673 | C | N3-C2-O2 | -6.39 | 117.43 | 121.90 |
| 26 | BB | 893 | C | N1-C2-N3 | -6.39 | 114.73 | 119.20 |
| 26 | BB | 1571 | A | C3'-C2'-C1' | 6.39 | 106.61 | 101.50 |
| 26 | BB | 2518 | A | C1'-O4'-C4' | -6.39 | 104.79 | 109.90 |
| 1 | AA | 254 | G | C2-N3-C4 | 6.39 | 115.09 | 111.90 |
| 7 | AG | 128 | VAL | CA-CB-CG1 | 6.39 | 120.48 | 110.90 |
| 26 | BB | 79 | C | C5-C4-N4 | 6.39 | 124.67 | 120.20 |
| 26 | BB | 199 | A | N1-C2-N3 | -6.39 | 126.11 | 129.30 |
| 26 | BB | 697 | G | C4-C5-N7 | 6.39 | 113.36 | 110.80 |
| 26 | BB | 1437 | C | N3-C2-O2 | -6.39 | 117.43 | 121.90 |
| 26 | BB | 1493 | C | O4'-C1'-N1 | 6.39 | 113.31 | 108.20 |
| 26 | BB | 1918 | A | C4-C5-N7 | -6.39 | 107.51 | 110.70 |
| 26 | BB | 2620 | C | C6-N1-C2 | 6.39 | 122.86 | 120.30 |
| 26 | BB | 2877 | G | N3-C4-N9 | -6.39 | 122.17 | 126.00 |
| 47 | BW | 14 | THR | CA-CB-CG2 | 6.39 | 121.34 | 112.40 |
| 1 | AA | 268 | U | O4'-C1'-N1 | 6.38 | 113.31 | 108.20 |
| 1 | AA | 542 | G | N3-C4-N9 | 6.38 | 129.83 | 126.00 |
| 1 | AA | 658 | C | N3-C2-O2 | -6.38 | 117.43 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1173 | U | C3'-C2'-C1' | -6.38 | 96.39 | 101.50 |
| 26 | BB | 149 | A | C4-C5-N7 | 6.38 | 113.89 | 110.70 |
| 26 | BB | 476 | G | C4-C5-N7 | -6.38 | 108.25 | 110.80 |
| 26 | BB | 533 | G | N3-C2-N2 | -6.38 | 115.43 | 119.90 |
| 26 | BB | 968 | C | N3-C4-C5 | -6.38 | 119.35 | 121.90 |
| 26 | BB | 1186 | G | O5'-C5'-C4' | -6.38 | 99.57 | 111.70 |
| 26 | BB | 1451 | C | C5'-C4'-O4' | 6.38 | 116.76 | 109.10 |
| 26 | BB | 1535 | A | O4'-C4'-C3' | 6.38 | 111.21 | 106.10 |
| 26 | BB | 2180 | U | C2-N3-C4 | -6.38 | 123.17 | 127.00 |
| 26 | BB | 2193 | G | C5'-C4'-O4' | 6.38 | 116.76 | 109.10 |
| 26 | BB | 2424 | C | C1'-O4'-C4' | 6.38 | 115.01 | 109.90 |
| 26 | BB | 2902 | C | C6-N1-C2 | -6.38 | 117.75 | 120.30 |
| 26 | BB | 1445 | G | N7-C8-N9 | 6.38 | 116.29 | 113.10 |
| 26 | BB | 1560 | G | C5-C6-O6 | -6.38 | 124.77 | 128.60 |
| 26 | BB | 1686 | C | C4'-C3'-C2' | -6.38 | 96.22 | 102.60 |
| 26 | BB | 2752 | C | C3'-C2'-C1' | 6.38 | 106.61 | 101.50 |
| 26 | BB | 2796 | U | O4'-C1'-N1 | 6.38 | 113.31 | 108.20 |
| 1 | AA | 141 | G | C3'-C2'-C1' | -6.38 | 96.39 | 101.50 |
| 1 | AA | 724 | G | N3-C2-N2 | -6.38 | 115.43 | 119.90 |
| 1 | AA | 799 | G | C8-N9-C4 | -6.38 | 103.85 | 106.40 |
| 1 | AA | 1117 | A | N1-C2-N3 | 6.38 | 132.49 | 129.30 |
| 1 | AA | 1415 | G | C8-N9-C4 | -6.38 | 103.85 | 106.40 |
| 4 | AD | 71 | G | C4'-C3'-C2' | -6.38 | 96.22 | 102.60 |
| 5 | AE | 168 | GLU | OE1-CD-OE2 | 6.38 | 130.96 | 123.30 |
| 18 | AR | 57 | ARG | NE-CZ-NH2 | -6.38 | 117.11 | 120.30 |
| 25 | BA | 107 | G | N1-C2-N3 | -6.38 | 120.07 | 123.90 |
| 26 | BB | 4 | U | N1-C2-N3 | 6.38 | 118.73 | 114.90 |
| 26 | BB | 225 | C | N1-C2-O2 | 6.38 | 122.73 | 118.90 |
| 26 | BB | 360 | U | O4'-C1'-N1 | 6.38 | 113.31 | 108.20 |
| 26 | BB | 1907 | G | C2-N3-C4 | 6.38 | 115.09 | 111.90 |
| 26 | BB | 2315 | G | C4-C5-C6 | 6.38 | 122.63 | 118.80 |
| 26 | BB | 2692 | G | O4'-C1'-N9 | 6.38 | 113.31 | 108.20 |
| 26 | BB | 2733 | A | N1-C6-N6 | 6.38 | 122.43 | 118.60 |
| 1 | AA | 350 | G | C3'-C2'-C1' | 6.38 | 106.60 | 101.50 |
| 1 | AA | 840 | C | C4'-C3'-C2' | 6.38 | 108.98 | 102.60 |
| 26 | BB | 1134 | A | C6-N1-C2 | -6.38 | 114.77 | 118.60 |
| 26 | BB | 1223 | G | C5-C6-N1 | 6.38 | 114.69 | 111.50 |
| 26 | BB | 1980 | G | O4'-C1'-N9 | 6.38 | 113.30 | 108.20 |
| 26 | BB | 2437 | G | C6-N1-C2 | -6.38 | 121.27 | 125.10 |
| 1 | AA | 712 | A | C5-N7-C8 | 6.38 | 107.09 | 103.90 |
| 2 | AB | 45 | U | C5-C4-O4 | -6.38 | 122.07 | 125.90 |
| 25 | BA | 30 | C | C6-N1-C2 | -6.38 | 117.75 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 115 | A | N1-C6-N6 | 6.38 | 122.43 | 118.60 |
| 26 | BB | 22 | C | O4'-C1'-N1 | 6.38 | 113.30 | 108.20 |
| 26 | BB | 784 | G | C5-C6-O6 | -6.38 | 124.77 | 128.60 |
| 26 | BB | 940 | G | C4-C5-N7 | 6.38 | 113.35 | 110.80 |
| 26 | BB | 2184 | A | C8-N9-C4 | 6.38 | 108.35 | 105.80 |
| 1 | AA | 441 | A | N7-C8-N9 | 6.38 | 116.99 | 113.80 |
| 1 | AA | 707 | U | O4'-C1'-N1 | 6.38 | 113.30 | 108.20 |
| 1 | AA | 871 | U | C2-N3-C4 | -6.38 | 123.17 | 127.00 |
| 1 | AA | 886 | G | C5-N7-C8 | -6.38 | 101.11 | 104.30 |
| 1 | AA | 975 | A | C4-C5-C6 | -6.38 | 113.81 | 117.00 |
| 1 | AA | 1024 | G | N3-C4-C5 | -6.38 | 125.41 | 128.60 |
| 1 | AA | 1361 | G | C6-C5-N7 | -6.38 | 126.57 | 130.40 |
| 25 | BA | 73 | A | N7-C8-N9 | -6.38 | 110.61 | 113.80 |
| 26 | BB | 161 | A | C5-C6-N6 | 6.38 | 128.80 | 123.70 |
| 26 | BB | 592 | A | C8-N9-C4 | -6.38 | 103.25 | 105.80 |
| 26 | BB | 1268 | A | C4-C5-C6 | -6.38 | 113.81 | 117.00 |
| 26 | BB | 1482 | G | C6-N1-C2 | -6.38 | 121.27 | 125.10 |
| 26 | BB | 1819 | A | O4'-C1'-N9 | 6.38 | 113.30 | 108.20 |
| 26 | BB | 2140 | G | C4'-C3'-C2' | -6.38 | 96.22 | 102.60 |
| 26 | BB | 2404 | U | N1-C2-O2 | -6.38 | 118.34 | 122.80 |
| 26 | BB | 2470 | G | C6-N1-C2 | 6.38 | 128.93 | 125.10 |
| 26 | BB | 2471 | A | C3'-C2'-C1' | -6.38 | 96.40 | 101.50 |
| 26 | BB | 2727 | A | C2-N3-C4 | 6.38 | 113.79 | 110.60 |
| 26 | BB | 2881 | U | N3-C4-C5 | -6.38 | 110.77 | 114.60 |
| 1 | AA | 120 | A | C2-N3-C4 | 6.38 | 113.79 | 110.60 |
| 1 | AA | 597 | G | C4-C5-C6 | 6.38 | 122.62 | 118.80 |
| 26 | BB | 20 | C | C4-C5-C6 | -6.38 | 114.21 | 117.40 |
| 26 | BB | 251 | A | C2-N3-C4 | -6.38 | 107.41 | 110.60 |
| 26 | BB | 286 | U | N3-C4-O4 | -6.38 | 114.94 | 119.40 |
| 26 | BB | 475 | C | C3'-C2'-C1' | 6.38 | 106.60 | 101.50 |
| 26 | BB | 2380 | C | N3-C4-N4 | -6.38 | 113.54 | 118.00 |
| 34 | BJ | 163 | ALA | CB-CA-C | 6.38 | 119.66 | 110.10 |
| 1 | AA | 960 | U | C5-C4-O4 | 6.37 | 129.72 | 125.90 |
| 26 | BB | 386 | G | N3-C4-C5 | -6.37 | 125.41 | 128.60 |
| 26 | BB | 896 | A | C4-C5-N7 | -6.37 | 107.51 | 110.70 |
| 26 | BB | 953 | G | O4'-C1'-N9 | 6.37 | 113.30 | 108.20 |
| 26 | BB | 1362 | C | N3-C4-C5 | -6.37 | 119.35 | 121.90 |
| 26 | BB | 1471 | G | C5-N7-C8 | -6.37 | 101.11 | 104.30 |
| 26 | BB | 1550 | C | N1-C2-O2 | 6.37 | 122.72 | 118.90 |
| 26 | BB | 1654 | A | C4-C5-N7 | 6.37 | 113.89 | 110.70 |
| 26 | BB | 1695 | G | C5'-C4'-O4' | 6.37 | 116.75 | 109.10 |
| 26 | BB | 1770 | G | C5'-C4'-O4' | 6.37 | 116.75 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2265 | U | N1-C2-N3 | 6.37 | 118.72 | 114.90 |
| 26 | BB | 2591 | C | C4'-C3'-C2' | -6.37 | 96.23 | 102.60 |
| 26 | BB | 2618 | G | C3'-C2'-C1' | -6.37 | 96.40 | 101.50 |
| 26 | BB | 2888 | C | O4'-C1'-N1 | 6.37 | 113.30 | 108.20 |
| 1 | AA | 102 | G | N3-C4-C5 | -6.37 | 125.41 | 128.60 |
| 1 | AA | 569 | C | N1-C2-N3 | 6.37 | 123.66 | 119.20 |
| 1 | AA | 826 | C | O4'-C1'-N1 | 6.37 | 113.30 | 108.20 |
| 1 | AA | 1041 | G | C2-N3-C4 | 6.37 | 115.09 | 111.90 |
| 4 | AD | 61 | U | N3-C4-C5 | 6.37 | 118.42 | 114.60 |
| 25 | BA | 51 | G | C5'-C4'-O4' | 6.37 | 116.75 | 109.10 |
| 25 | BA | 94 | A | N9-C1'-C2' | -6.37 | 104.99 | 112.00 |
| 25 | BA | 95 | U | N3-C4-C5 | -6.37 | 110.78 | 114.60 |
| 26 | BB | 447 | A | O4'-C1'-N9 | -6.37 | 103.10 | 108.20 |
| 26 | BB | 658 | U | N3-C2-O2 | -6.37 | 117.74 | 122.20 |
| 26 | BB | 662 | G | N1-C6-O6 | -6.37 | 116.08 | 119.90 |
| 26 | BB | 701 | G | N3-C2-N2 | 6.37 | 124.36 | 119.90 |
| 26 | BB | 722 | A | C4-C5-C6 | 6.37 | 120.19 | 117.00 |
| 26 | BB | 781 | A | C5-C6-N1 | 6.37 | 120.89 | 117.70 |
| 26 | BB | 1264 | A | O4'-C1'-C2' | 6.37 | 113.33 | 107.60 |
| 26 | BB | 1751 | U | O4'-C4'-C3' | -6.37 | 97.63 | 104.00 |
| 26 | BB | 2234 | G | N3-C4-N9 | 6.37 | 129.82 | 126.00 |
| 26 | BB | 2286 | G | C5-N7-C8 | 6.37 | 107.49 | 104.30 |
| 26 | BB | 2318 | G | N3-C4-C5 | -6.37 | 125.41 | 128.60 |
| 26 | BB | 2814 | A | C3'-C2'-C1' | -6.37 | 96.40 | 101.50 |
| 26 | BB | 2889 | C | N1-C2-O2 | 6.37 | 122.72 | 118.90 |
| 26 | BB | 345 | A | N1-C6-N6 | -6.37 | 114.78 | 118.60 |
| 26 | BB | 710 | U | O4'-C1'-N1 | 6.37 | 113.30 | 108.20 |
| 26 | BB | 1181 | U | N1-C2-N3 | 6.37 | 118.72 | 114.90 |
| 26 | BB | 1202 | G | N3-C4-C5 | -6.37 | 125.42 | 128.60 |
| 26 | BB | 1238 | G | O4'-C4'-C3' | -6.37 | 97.63 | 104.00 |
| 26 | BB | 1723 | G | C8-N9-C4 | -6.37 | 103.85 | 106.40 |
| 26 | BB | 2314 | A | N9-C4-C5 | -6.37 | 103.25 | 105.80 |
| 26 | BB | 2318 | G | C5-C6-N1 | 6.37 | 114.69 | 111.50 |
| 26 | BB | 2454 | G | C6-C5-N7 | -6.37 | 126.58 | 130.40 |
| 26 | BB | 2621 | G | N3-C4-N9 | 6.37 | 129.82 | 126.00 |
| 1 | AA | 24 | U | C5-C4-O4 | 6.37 | 129.72 | 125.90 |
| 1 | AA | 448 | A | C5'-C4'-C3' | -6.37 | 105.81 | 116.00 |
| 1 | AA | 574 | A | N3-C4-N9 | -6.37 | 122.31 | 127.40 |
| 1 | AA | 1234 | C | C2-N3-C4 | 6.37 | 123.08 | 119.90 |
| 26 | BB | 7 | G | C6-N1-C2 | -6.37 | 121.28 | 125.10 |
| 26 | BB | 49 | A | C6-N1-C2 | -6.37 | 114.78 | 118.60 |
| 26 | BB | 612 | G | N3-C4-C5 | -6.37 | 125.42 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 858 | G | C5-C6-O6 | -6.37 | 124.78 | 128.60 |
| 26 | BB | 1377 | G | N3-C4-C5 | -6.37 | 125.42 | 128.60 |
| 26 | BB | 1426 | G | C2-N3-C4 | 6.37 | 115.08 | 111.90 |
| 26 | BB | 2873 | A | O4'-C1'-N9 | 6.37 | 113.30 | 108.20 |
| 26 | BB | 2898 | U | O4'-C1'-N1 | 6.37 | 113.30 | 108.20 |
| 46 | BV | 8 | LEU | CB-CG-CD1 | 6.37 | 121.83 | 111.00 |
| 1 | AA | 320 | A | C5-C6-N1 | 6.37 | 120.88 | 117.70 |
| 1 | AA | 947 | G | C5-C6-N1 | 6.37 | 114.68 | 111.50 |
| 1 | AA | 1171 | A | N3-C4-C5 | -6.37 | 122.34 | 126.80 |
| 1 | AA | 213 | G | P-O5'-C5' | 6.37 | 131.09 | 120.90 |
| 1 | AA | 272 | C | C5'-C4'-O4' | 6.37 | 116.74 | 109.10 |
| 1 | AA | 449 | G | N1-C2-N3 | -6.37 | 120.08 | 123.90 |
| 1 | AA | 782 | A | N7-C8-N9 | -6.37 | 110.62 | 113.80 |
| 1 | AA | 1155 | A | N1-C6-N6 | 6.37 | 122.42 | 118.60 |
| 25 | BA | 20 | G | C4-C5-C6 | -6.37 | 114.98 | 118.80 |
| 25 | BA | 45 | A | C4-C5-C6 | -6.37 | 113.82 | 117.00 |
| 26 | BB | 164 | C | C6-N1-C2 | -6.37 | 117.75 | 120.30 |
| 26 | BB | 481 | G | C6-N1-C2 | -6.37 | 121.28 | 125.10 |
| 26 | BB | 765 | C | C4'-C3'-C2' | -6.37 | 96.23 | 102.60 |
| 26 | BB | 1591 | A | C8-N9-C4 | 6.37 | 108.35 | 105.80 |
| 26 | BB | 2227 | A | O4'-C1'-N9 | 6.37 | 113.29 | 108.20 |
| 26 | BB | 2725 | A | C5-C6-N6 | 6.37 | 128.79 | 123.70 |
| 43 | BS | 27 | ARG | NE-CZ-NH1 | 6.37 | 123.48 | 120.30 |
| 1 | AA | 47 | C | N1-C2-O2 | 6.36 | 122.72 | 118.90 |
| 1 | AA | 197 | A | O5'-P-OP1 | -6.36 | 99.97 | 105.70 |
| 1 | AA | 912 | C | N1-C1'-C2' | -6.36 | 105.00 | 112.00 |
| 1 | AA | 1011 | C | C5-C4-N4 | -6.36 | 115.75 | 120.20 |
| 1 | AA | 1382 | C | C4'-C3'-C2' | -6.36 | 96.24 | 102.60 |
| 2 | AB | 38 | A | C8-N9-C4 | -6.36 | 103.25 | 105.80 |
| 8 | AH | 68 | ARG | CD-NE-CZ | 6.36 | 132.51 | 123.60 |
| 26 | BB | 1141 | U | N1-C2-N3 | 6.36 | 118.72 | 114.90 |
| 26 | BB | 1273 | U | C1'-O4'-C4' | -6.36 | 104.81 | 109.90 |
| 26 | BB | 1349 | C | C5'-C4'-O4' | 6.36 | 116.74 | 109.10 |
| 26 | BB | 1734 | G | C2-N3-C4 | 6.36 | 115.08 | 111.90 |
| 26 | BB | 2640 | G | C8-N9-C1' | 6.36 | 135.27 | 127.00 |
| 26 | BB | 2808 | G | O4'-C1'-C2' | -6.36 | 99.44 | 105.80 |
| 1 | AA | 45 | G | C6-N1-C2 | -6.36 | 121.28 | 125.10 |
| 1 | AA | 319 | G | C4-C5-C6 | 6.36 | 122.62 | 118.80 |
| 13 | AM | 65 | TYR | CZ-CE2-CD2 | 6.36 | 125.53 | 119.80 |
| 26 | BB | 943 | A | C3'-C2'-C1' | -6.36 | 96.41 | 101.50 |
| 1 | AA | 509 | A | C5-C6-N1 | -6.36 | 114.52 | 117.70 |
| 26 | BB | 502 | A | C3'-C2'-C1' | 6.36 | 106.59 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 786 | C | C2-N3-C4 | -6.36 | 116.72 | 119.90 |
| 26 | BB | 1003 | G | N9-C4-C5 | -6.36 | 102.86 | 105.40 |
| 26 | BB | 1028 | A | P-O5'-C5' | 6.36 | 131.08 | 120.90 |
| 26 | BB | 1632 | A | N1-C6-N6 | 6.36 | 122.42 | 118.60 |
| 26 | BB | 1740 | G | N9-C4-C5 | -6.36 | 102.86 | 105.40 |
| 26 | BB | 2080 | A | N1-C6-N6 | 6.36 | 122.42 | 118.60 |
| 26 | BB | 2154 | A | O4'-C1'-N9 | 6.36 | 113.29 | 108.20 |
| 26 | BB | 2426 | A | C5-C6-N1 | 6.36 | 120.88 | 117.70 |
| 1 | AA | 630 | A | C2-N3-C4 | 6.36 | 113.78 | 110.60 |
| 1 | AA | 1429 | A | C2-N3-C4 | 6.36 | 113.78 | 110.60 |
| 26 | BB | 953 | G | C4-C5-C6 | 6.36 | 122.61 | 118.80 |
| 1 | AA | 243 | A | C2-N3-C4 | 6.36 | 113.78 | 110.60 |
| 1 | AA | 437 | U | O4'-C1'-N1 | 6.36 | 113.29 | 108.20 |
| 1 | AA | 807 | A | N9-C4-C5 | 6.36 | 108.34 | 105.80 |
| 1 | AA | 833 | G | N1-C2-N2 | 6.36 | 121.92 | 116.20 |
| 1 | AA | 1329 | A | N1-C6-N6 | 6.36 | 122.41 | 118.60 |
| 26 | BB | 282 | A | C8-N9-C4 | -6.36 | 103.26 | 105.80 |
| 26 | BB | 956 | G | N3-C4-C5 | -6.36 | 125.42 | 128.60 |
| 26 | BB | 1698 | A | O4'-C1'-N9 | -6.36 | 103.11 | 108.20 |
| 26 | BB | 2711 | A | C5-N7-C8 | -6.36 | 100.72 | 103.90 |
| 26 | BB | 2731 | G | C6-N1-C2 | -6.36 | 121.28 | 125.10 |
| 36 | BL | 46 | PRO | N-CA-CB | 6.36 | 110.93 | 103.30 |
| 1 | AA | 220 | G | C8-N9-C1' | 6.36 | 135.26 | 127.00 |
| 1 | AA | 1291 | U | N3-C4-C5 | -6.36 | 110.79 | 114.60 |
| 1 | AA | 1525 | G | N9-C4-C5 | 6.36 | 107.94 | 105.40 |
| 26 | BB | 1131 | G | C5'-C4'-O4' | 6.36 | 116.73 | 109.10 |
| 26 | BB | 1555 | G | C4-C5-C6 | 6.36 | 122.61 | 118.80 |
| 26 | BB | 2302 | U | P-O3'-C3' | 6.36 | 127.33 | 119.70 |
| 26 | BB | 2509 | G | N1-C2-N3 | 6.36 | 127.71 | 123.90 |
| 1 | AA | 520 | A | C5-C6-N1 | 6.35 | 120.88 | 117.70 |
| 26 | BB | 11 | C | C5-C4-N4 | -6.35 | 115.75 | 120.20 |
| 26 | BB | 722 | A | O4'-C1'-C2' | -6.35 | 99.45 | 105.80 |
| 26 | BB | 735 | A | N1-C6-N6 | -6.35 | 114.79 | 118.60 |
| 26 | BB | 1760 | C | C6-N1-C2 | 6.35 | 122.84 | 120.30 |
| 26 | BB | 2534 | A | N7-C8-N9 | 6.35 | 116.98 | 113.80 |
| 1 | AA | 51 | A | C5'-C4'-C3' | -6.35 | 105.83 | 116.00 |
| 4 | AD | 31 | G | N1-C6-O6 | -6.35 | 116.09 | 119.90 |
| 25 | BA | 90 | C | C2-N3-C4 | -6.35 | 116.72 | 119.90 |
| 26 | BB | 327 | G | N1-C6-O6 | -6.35 | 116.09 | 119.90 |
| 26 | BB | 404 | A | O4'-C4'-C3' | 6.35 | 111.18 | 106.10 |
| 26 | BB | 741 | U | N1-C2-N3 | 6.35 | 118.71 | 114.90 |
| 26 | BB | 762 | U | C6-N1-C2 | -6.35 | 117.19 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1065 | U | N3-C2-O2 | 6.35 | 126.65 | 122.20 |
| 26 | BB | 1929 | G | O4'-C1'-N9 | 6.35 | 113.28 | 108.20 |
| 26 | BB | 2213 | U | C4'-C3'-C2' | -6.35 | 96.25 | 102.60 |
| 26 | BB | 2637 | U | C1'-O4'-C4' | 6.35 | 114.98 | 109.90 |
| 26 | BB | 2741 | A | C4'-C3'-C2' | -6.35 | 96.25 | 102.60 |
| 1 | AA | 22 | G | C4'-C3'-C2' | -6.35 | 96.25 | 102.60 |
| 1 | AA | 129 | A | O4'-C1'-N9 | 6.35 | 113.28 | 108.20 |
| 1 | AA | 394 | G | N1-C6-O6 | 6.35 | 123.71 | 119.90 |
| 1 | AA | 1172 | C | C2-N3-C4 | 6.35 | 123.08 | 119.90 |
| 3 | AC | 46 | C | C5'-C4'-O4' | 6.35 | 116.72 | 109.10 |
| 26 | BB | 1260 | A | N7-C8-N9 | 6.35 | 116.98 | 113.80 |
| 26 | BB | 1578 | U | C5-C6-N1 | -6.35 | 119.52 | 122.70 |
| 26 | BB | 2153 | C | C4'-C3'-C2' | -6.35 | 96.25 | 102.60 |
| 26 | BB | 2557 | G | N9-C1'-C2' | -6.35 | 105.01 | 112.00 |
| 26 | BB | 2889 | C | C4-C5-C6 | -6.35 | 114.22 | 117.40 |
| 1 | AA | 398 | U | C4-C5-C6 | 6.35 | 123.51 | 119.70 |
| 1 | AA | 626 | G | C5-N7-C8 | -6.35 | 101.12 | 104.30 |
| 1 | AA | 1046 | A | N1-C2-N3 | -6.35 | 126.12 | 129.30 |
| 2 | AB | 52 | A | C8-N9-C4 | 6.35 | 108.34 | 105.80 |
| 26 | BB | 276 | U | N3-C4-O4 | -6.35 | 114.95 | 119.40 |
| 26 | BB | 356 | G | C6-C5-N7 | 6.35 | 134.21 | 130.40 |
| 26 | BB | 1964 | G | C8-N9-C4 | 6.35 | 108.94 | 106.40 |
| 1 | AA | 187 | G | C6-N1-C2 | -6.35 | 121.29 | 125.10 |
| 1 | AA | 838 | G | C2-N3-C4 | -6.35 | 108.73 | 111.90 |
| 1 | AA | 1144 | G | N1-C6-O6 | 6.35 | 123.71 | 119.90 |
| 1 | AA | 1391 | U | C4-C5-C6 | 6.35 | 123.51 | 119.70 |
| 1 | AA | 1486 | G | C4'-C3'-C2' | -6.35 | 96.25 | 102.60 |
| 1 | AA | 1495 | U | C3'-C2'-C1' | 6.35 | 106.58 | 101.50 |
| 25 | BA | 36 | C | C2-N3-C4 | 6.35 | 123.07 | 119.90 |
| 25 | BA | 109 | A | P-O3'-C3' | 6.35 | 127.32 | 119.70 |
| 26 | BB | 1088 | A | N1-C6-N6 | -6.35 | 114.79 | 118.60 |
| 26 | BB | 1225 | G | O4'-C1'-N9 | -6.35 | 103.12 | 108.20 |
| 26 | BB | 1638 | C | N3-C4-C5 | -6.35 | 119.36 | 121.90 |
| 26 | BB | 1854 | A | O4'-C1'-N9 | 6.35 | 113.28 | 108.20 |
| 26 | BB | 2267 | A | C2-N3-C4 | 6.35 | 113.77 | 110.60 |
| 26 | BB | 2694 | G | C4-C5-N7 | -6.35 | 108.26 | 110.80 |
| 1 | AA | 1166 | G | C8-N9-C4 | -6.35 | 103.86 | 106.40 |
| 1 | AA | 1511 | G | C2-N3-C4 | 6.35 | 115.07 | 111.90 |
| 26 | BB | 77 | G | C8-N9-C4 | -6.35 | 103.86 | 106.40 |
| 26 | BB | 713 | G | C8-N9-C4 | -6.35 | 103.86 | 106.40 |
| 26 | BB | 799 | G | C4-C5-N7 | -6.35 | 108.26 | 110.80 |
| 26 | BB | 1020 | A | C4'-C3'-C2' | -6.35 | 96.25 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1030 | C | C6-N1-C2 | -6.35 | 117.76 | 120.30 |
| 26 | BB | 1162 | G | C4-C5-C6 | -6.35 | 114.99 | 118.80 |
| 26 | BB | 1259 | G | C5'-C4'-C3' | -6.35 | 105.85 | 116.00 |
| 26 | BB | 1802 | A | C2-N3-C4 | 6.35 | 113.77 | 110.60 |
| 26 | BB | 2534 | A | N1-C2-N3 | -6.35 | 126.13 | 129.30 |
| 1 | AA | 279 | A | C5'-C4'-O4' | 6.34 | 116.71 | 109.10 |
| 1 | AA | 878 | A | N9-C4-C5 | -6.34 | 103.26 | 105.80 |
| 1 | AA | 954 | G | C6-N1-C2 | -6.34 | 121.29 | 125.10 |
| 1 | AA | 1031 | C | C5'-C4'-O4' | 6.34 | 116.71 | 109.10 |
| 1 | AA | 1378 | C | N3-C2-O2 | -6.34 | 117.46 | 121.90 |
| 4 | AD | 19 | G | N1-C2-N2 | -6.34 | 110.49 | 116.20 |
| 25 | BA | 21 | G | C6-N1-C2 | -6.34 | 121.29 | 125.10 |
| 26 | BB | 4 | U | O4'-C1'-N1 | 6.34 | 113.28 | 108.20 |
| 26 | BB | 26 | G | C2-N3-C4 | 6.34 | 115.07 | 111.90 |
| 26 | BB | 199 | A | O4'-C1'-C2' | -6.34 | 99.46 | 105.80 |
| 26 | BB | 513 | A | C4-C5-C6 | -6.34 | 113.83 | 117.00 |
| 26 | BB | 1217 | U | C5-C4-O4 | 6.34 | 129.71 | 125.90 |
| 26 | BB | 1713 | A | C5-N7-C8 | -6.34 | 100.73 | 103.90 |
| 26 | BB | 2402 | U | N1-C2-N3 | 6.34 | 118.71 | 114.90 |
| 26 | BB | 2438 | U | C6-N1-C2 | -6.34 | 117.19 | 121.00 |
| 26 | BB | 2490 | G | N9-C4-C5 | 6.34 | 107.94 | 105.40 |
| 46 | BV | 76 | ARG | NE-CZ-NH2 | -6.34 | 117.13 | 120.30 |
| 1 | AA | 539 | A | C5-N7-C8 | -6.34 | 100.73 | 103.90 |
| 26 | BB | 1702 | G | N1-C2-N3 | 6.34 | 127.71 | 123.90 |
| 26 | BB | 1783 | A | C8-N9-C4 | -6.34 | 103.26 | 105.80 |
| 26 | BB | 1999 | C | N3-C2-O2 | -6.34 | 117.46 | 121.90 |
| 26 | BB | 2767 | C | N1-C1'-C2' | -6.34 | 105.02 | 112.00 |
| 1 | AA | 90 | C | N3-C4-C5 | -6.34 | 119.36 | 121.90 |
| 1 | AA | 422 | C | N3-C4-C5 | -6.34 | 119.36 | 121.90 |
| 1 | AA | 533 | A | N9-C4-C5 | 6.34 | 108.34 | 105.80 |
| 1 | AA | 670 | G | C8-N9-C4 | -6.34 | 103.86 | 106.40 |
| 1 | AA | 778 | G | C8-N9-C4 | -6.34 | 103.86 | 106.40 |
| 1 | AA | 851 | G | C5-C6-N1 | 6.34 | 114.67 | 111.50 |
| 1 | AA | 1129 | C | C2-N3-C4 | 6.34 | 123.07 | 119.90 |
| 1 | AA | 1338 | G | N7-C8-N9 | 6.34 | 116.27 | 113.10 |
| 1 | AA | 1372 | U | O4'-C4'-C3' | 6.34 | 111.17 | 106.10 |
| 1 | AA | 1523 | G | C5-N7-C8 | -6.34 | 101.13 | 104.30 |
| 25 | BA | 65 | U | P-O3'-C3' | 6.34 | 127.31 | 119.70 |
| 26 | BB | 626 | A | C8-N9-C4 | -6.34 | 103.26 | 105.80 |
| 26 | BB | 757 | G | C4'-C3'-C2' | -6.34 | 96.26 | 102.60 |
| 26 | BB | 1573 | G | P-O5'-C5' | 6.34 | 131.05 | 120.90 |
| 1 | AA | 459 | A | C8-N9-C4 | -6.34 | 103.26 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 467 | U | C5-C6-N1 | -6.34 | 119.53 | 122.70 |
| 3 | AC | 39 | U | N3-C2-O2 | -6.34 | 117.76 | 122.20 |
| 25 | BA | 92 | C | C5'-C4'-O4' | 6.34 | 116.71 | 109.10 |
| 26 | BB | 845 | A | N1-C2-N3 | -6.34 | 126.13 | 129.30 |
| 26 | BB | 1085 | A | O5'-P-OP1 | -6.34 | 99.99 | 105.70 |
| 26 | BB | 1588 | G | C5-C6-O6 | -6.34 | 124.80 | 128.60 |
| 26 | BB | 1736 | U | C4'-C3'-C2' | -6.34 | 96.26 | 102.60 |
| 26 | BB | 1866 | A | O4'-C4'-C3' | -6.34 | 97.66 | 104.00 |
| 26 | BB | 1967 | C | C5'-C4'-O4' | 6.34 | 116.71 | 109.10 |
| 26 | BB | 2471 | A | N1-C6-N6 | -6.34 | 114.80 | 118.60 |
| 26 | BB | 2769 | U | C4-C5-C6 | 6.34 | 123.50 | 119.70 |
| 1 | AA | 557 | G | C8-N9-C4 | -6.34 | 103.86 | 106.40 |
| 1 | AA | 1011 | C | C2-N1-C1' | -6.34 | 111.83 | 118.80 |
| 4 | AD | 1 | C | N3-C2-O2 | -6.34 | 117.46 | 121.90 |
| 25 | BA | 102 | G | C8-N9-C4 | -6.34 | 103.86 | 106.40 |
| 26 | BB | 686 | U | C2-N1-C1' | 6.34 | 125.31 | 117.70 |
| 26 | BB | 1673 | G | O4'-C1'-N9 | 6.34 | 113.27 | 108.20 |
| 26 | BB | 1764 | C | N1-C2-O2 | 6.34 | 122.70 | 118.90 |
| 26 | BB | 2326 | C | C6-N1-C2 | -6.34 | 117.77 | 120.30 |
| 26 | BB | 2360 | G | C5-N7-C8 | 6.34 | 107.47 | 104.30 |
| 40 | BP | 65 | LEU | CB-CG-CD1 | 6.34 | 121.78 | 111.00 |
| 1 | AA | 193 | C | C5-C4-N4 | 6.34 | 124.64 | 120.20 |
| 1 | AA | 750 | C | N3-C2-O2 | -6.34 | 117.46 | 121.90 |
| 1 | AA | 894 | G | N9-C4-C5 | 6.34 | 107.94 | 105.40 |
| 1 | AA | 931 | C | O4'-C1'-N1 | 6.34 | 113.27 | 108.20 |
| 1 | AA | 1428 | A | N1-C6-N6 | -6.34 | 114.80 | 118.60 |
| 9 | AI | 24 | ARG | NE-CZ-NH2 | 6.34 | 123.47 | 120.30 |
| 26 | BB | 50 | U | C2-N3-C4 | 6.34 | 130.80 | 127.00 |
| 26 | BB | 291 | G | C5-C6-O6 | -6.34 | 124.80 | 128.60 |
| 26 | BB | 805 | G | C5-C6-O6 | 6.34 | 132.40 | 128.60 |
| 26 | BB | 1058 | U | C5'-C4'-O4' | 6.34 | 116.70 | 109.10 |
| 26 | BB | 1274 | A | N1-C2-N3 | 6.34 | 132.47 | 129.30 |
| 26 | BB | 1387 | A | C5-C6-N6 | -6.34 | 118.63 | 123.70 |
| 26 | BB | 1461 | C | C5-C6-N1 | 6.34 | 124.17 | 121.00 |
| 26 | BB | 1493 | C | N1-C2-O2 | 6.34 | 122.70 | 118.90 |
| 26 | BB | 1793 | C | O4'-C1'-N1 | 6.34 | 113.27 | 108.20 |
| 26 | BB | 2646 | C | N3-C2-O2 | -6.34 | 117.46 | 121.90 |
| 26 | BB | 2730 | C | N3-C4-C5 | -6.34 | 119.37 | 121.90 |
| 26 | BB | 2863 | C | N3-C4-N4 | 6.34 | 122.44 | 118.00 |
| 1 | AA | 541 | G | N7-C8-N9 | 6.33 | 116.27 | 113.10 |
| 2 | AB | 7 | G | C5-C6-O6 | -6.33 | 124.80 | 128.60 |
| 26 | BB | 402 | A | C5-C6-N6 | -6.33 | 118.63 | 123.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1483 | G | C5-C6-O6 | 6.33 | 132.40 | 128.60 |
| 26 | BB | 1666 | G | C5-C6-N1 | -6.33 | 108.33 | 111.50 |
| 26 | BB | 2026 | U | N1-C1'-C2' | -6.33 | 105.03 | 112.00 |
| 26 | BB | 2608 | G | C6-C5-N7 | 6.33 | 134.20 | 130.40 |
| 1 | AA | 217 | C | N1-C2-O2 | 6.33 | 122.70 | 118.90 |
| 1 | AA | 466 | A | C4-C5-N7 | -6.33 | 107.53 | 110.70 |
| 1 | AA | 1160 | G | C5-C6-O6 | -6.33 | 124.80 | 128.60 |
| 1 | AA | 1368 | A | C3'-C2'-C1' | 6.33 | 106.57 | 101.50 |
| 25 | BA | 112 | G | C5'-C4'-O4' | 6.33 | 116.70 | 109.10 |
| 26 | BB | 685 | A | C3'-C2'-C1' | 6.33 | 106.57 | 101.50 |
| 26 | BB | 954 | G | C6-C5-N7 | -6.33 | 126.60 | 130.40 |
| 26 | BB | 1076 | C | C6-N1-C1' | 6.33 | 128.40 | 120.80 |
| 26 | BB | 1097 | U | C5-C6-N1 | 6.33 | 125.87 | 122.70 |
| 26 | BB | 2063 | C | C2-N3-C4 | 6.33 | 123.07 | 119.90 |
| 26 | BB | 2307 | G | C4-C5-N7 | 6.33 | 113.33 | 110.80 |
| 26 | BB | 2453 | A | C4-C5-C6 | -6.33 | 113.83 | 117.00 |
| 1 | AA | 228 | A | N9-C4-C5 | 6.33 | 108.33 | 105.80 |
| 1 | AA | 380 | G | O4'-C4'-C3' | 6.33 | 111.17 | 106.10 |
| 1 | AA | 454 | G | C1'-O4'-C4' | 6.33 | 114.97 | 109.90 |
| 1 | AA | 739 | C | N1-C1'-C2' | -6.33 | 105.04 | 112.00 |
| 1 | AA | 897 | C | C5'-C4'-O4' | 6.33 | 116.70 | 109.10 |
| 1 | AA | 1364 | U | C2-N3-C4 | -6.33 | 123.20 | 127.00 |
| 3 | AC | 46 | C | N3-C4-N4 | 6.33 | 122.43 | 118.00 |
| 26 | BB | 396 | G | N1-C2-N3 | 6.33 | 127.70 | 123.90 |
| 26 | BB | 494 | G | C5-C6-O6 | -6.33 | 124.80 | 128.60 |
| 26 | BB | 583 | G | C2-N3-C4 | 6.33 | 115.07 | 111.90 |
| 26 | BB | 2268 | A | C8-N9-C4 | -6.33 | 103.27 | 105.80 |
| 26 | BB | 2308 | G | N7-C8-N9 | 6.33 | 116.27 | 113.10 |
| 26 | BB | 2836 | U | C5-C6-N1 | -6.33 | 119.53 | 122.70 |
| 32 | BH | 139 | VAL | CA-CB-CG1 | 6.33 | 120.40 | 110.90 |
| 1 | AA | 251 | G | O4'-C1'-N9 | 6.33 | 113.26 | 108.20 |
| 1 | AA | 462 | G | C6-N1-C2 | -6.33 | 121.30 | 125.10 |
| 4 | AD | 25 | U | O4'-C1'-N1 | 6.33 | 113.26 | 108.20 |
| 26 | BB | 837 | C | C5-C6-N1 | -6.33 | 117.83 | 121.00 |
| 26 | BB | 2402 | U | C6-N1-C2 | -6.33 | 117.20 | 121.00 |
| 26 | BB | 2550 | G | C8-N9-C4 | -6.33 | 103.87 | 106.40 |
| 1 | AA | 380 | G | N3-C4-C5 | -6.33 | 125.44 | 128.60 |
| 1 | AA | 714 | G | N3-C4-N9 | 6.33 | 129.80 | 126.00 |
| 1 | AA | 1111 | A | C5'-C4'-O4' | 6.33 | 116.69 | 109.10 |
| 1 | AA | 1231 | G | C3'-C2'-C1' | 6.33 | 106.56 | 101.50 |
| 13 | AM | 72 | ARG | NH1-CZ-NH2 | -6.33 | 112.44 | 119.40 |
| 26 | BB | 85 | G | C6-C5-N7 | -6.33 | 126.60 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1349 | C | C3'-C2'-C1' | 6.33 | 106.56 | 101.50 |
| 26 | BB | 1457 | U | C5-C6-N1 | -6.33 | 119.54 | 122.70 |
| 26 | BB | 1567 | G | N1-C2-N3 | 6.33 | 127.70 | 123.90 |
| 26 | BB | 2178 | C | C4'-C3'-C2' | -6.33 | 96.27 | 102.60 |
| 26 | BB | 2199 | A | C8-N9-C4 | -6.33 | 103.27 | 105.80 |
| 26 | BB | 2325 | G | C5'-C4'-O4' | 6.33 | 116.69 | 109.10 |
| 26 | BB | 2458 | G | C1'-O4'-C4' | -6.33 | 104.84 | 109.90 |
| 26 | BB | 2583 | G | N1-C6-O6 | -6.33 | 116.10 | 119.90 |
| 26 | BB | 2722 | G | C8-N9-C4 | -6.33 | 103.87 | 106.40 |
| 1 | AA | 938 | A | N1-C6-N6 | -6.33 | 114.80 | 118.60 |
| 26 | BB | 232 | G | N7-C8-N9 | 6.33 | 116.26 | 113.10 |
| 26 | BB | 977 | G | C4'-C3'-C2' | -6.33 | 96.27 | 102.60 |
| 26 | BB | 1001 | A | P-O3'-C3' | 6.33 | 127.29 | 119.70 |
| 26 | BB | 1866 | A | C5'-C4'-O4' | 6.33 | 116.69 | 109.10 |
| 1 | AA | 247 | G | C8-N9-C4 | -6.33 | 103.87 | 106.40 |
| 1 | AA | 450 | G | O4'-C1'-N9 | 6.33 | 113.26 | 108.20 |
| 1 | AA | 770 | C | N1-C2-O2 | 6.33 | 122.70 | 118.90 |
| 26 | BB | 109 | C | C6-N1-C2 | -6.33 | 117.77 | 120.30 |
| 26 | BB | 347 | A | P-O3'-C3' | 6.33 | 127.29 | 119.70 |
| 26 | BB | 542 | C | C5-C4-N4 | -6.33 | 115.77 | 120.20 |
| 26 | BB | 967 | U | C5-C6-N1 | 6.33 | 125.86 | 122.70 |
| 26 | BB | 1014 | A | N1-C6-N6 | -6.33 | 114.81 | 118.60 |
| 26 | BB | 1682 | G | C2-N3-C4 | 6.33 | 115.06 | 111.90 |
| 26 | BB | 1702 | G | C5'-C4'-O4' | 6.33 | 116.69 | 109.10 |
| 1 | AA | 794 | A | C5-C6-N6 | -6.32 | 118.64 | 123.70 |
| 1 | AA | 1196 | A | N7-C8-N9 | 6.32 | 116.96 | 113.80 |
| 1 | AA | 1216 | A | C4-C5-C6 | -6.32 | 113.84 | 117.00 |
| 26 | BB | 1839 | G | C5-C6-O6 | -6.32 | 124.81 | 128.60 |
| 26 | BB | 2165 | C | C1'-O4'-C4' | 6.32 | 114.96 | 109.90 |
| 26 | BB | 2792 | A | C5'-C4'-O4' | 6.32 | 116.69 | 109.10 |
| 1 | AA | 180 | U | N3-C4-C5 | 6.32 | 118.39 | 114.60 |
| 1 | AA | 812 | G | C1'-O4'-C4' | -6.32 | 104.84 | 109.90 |
| 1 | AA | 1150 | A | N7-C8-N9 | -6.32 | 110.64 | 113.80 |
| 1 | AA | 1459 | G | C6-N1-C2 | -6.32 | 121.31 | 125.10 |
| 26 | BB | 1787 | A | N3-C4-C5 | -6.32 | 122.38 | 126.80 |
| 1 | AA | 8 | A | P-O3'-C3' | 6.32 | 127.28 | 119.70 |
| 1 | AA | 141 | G | C1'-O4'-C4' | -6.32 | 104.84 | 109.90 |
| 1 | AA | 833 | G | C4'-C3'-C2' | -6.32 | 96.28 | 102.60 |
| 1 | AA | 1171 | A | C8-N9-C4 | -6.32 | 103.27 | 105.80 |
| 26 | BB | 642 | U | N3-C4-O4 | -6.32 | 114.98 | 119.40 |
| 26 | BB | 658 | U | C5'-C4'-O4' | 6.32 | 116.69 | 109.10 |
| 26 | BB | 944 | C | O4'-C4'-C3' | 6.32 | 111.16 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1264 | A | N9-C1'-C2' | -6.32 | 105.05 | 112.00 |
| 26 | BB | 1573 | G | C5'-C4'-O4' | 6.32 | 116.68 | 109.10 |
| 26 | BB | 1925 | C | C2-N3-C4 | 6.32 | 123.06 | 119.90 |
| 26 | BB | 2281 | A | N9-C4-C5 | 6.32 | 108.33 | 105.80 |
| 26 | BB | 2382 | G | N3-C4-C5 | -6.32 | 125.44 | 128.60 |
| 26 | BB | 2763 | G | N1-C2-N3 | 6.32 | 127.69 | 123.90 |
| 1 | AA | 1104 | G | C5-N7-C8 | -6.32 | 101.14 | 104.30 |
| 1 | AA | 1301 | U | C3'-C2'-C1' | -6.32 | 96.44 | 101.50 |
| 26 | BB | 9 | G | C8-N9-C4 | 6.32 | 108.93 | 106.40 |
| 26 | BB | 111 | A | N1-C2-N3 | -6.32 | 126.14 | 129.30 |
| 26 | BB | 1075 | C | C4'-C3'-C2' | -6.32 | 96.28 | 102.60 |
| 26 | BB | 2443 | C | C2-N3-C4 | 6.32 | 123.06 | 119.90 |
| 26 | BB | 2555 | U | C5-C6-N1 | -6.32 | 119.54 | 122.70 |
| 38 | BN | 120 | VAL | CG1-CB-CG2 | -6.32 | 100.79 | 110.90 |
| 1 | AA | 265 | G | C4'-C3'-C2' | -6.32 | 96.28 | 102.60 |
| 1 | AA | 607 | A | C4-C5-C6 | -6.32 | 113.84 | 117.00 |
| 1 | AA | 738 | C | C4-C5-C6 | -6.32 | 114.24 | 117.40 |
| 1 | AA | 1083 | U | N1-C2-N3 | 6.32 | 118.69 | 114.90 |
| 1 | AA | 1253 | G | C6-C5-N7 | -6.32 | 126.61 | 130.40 |
| 1 | AA | 1284 | C | C4'-C3'-C2' | -6.32 | 96.28 | 102.60 |
| 1 | AA | 1331 | G | C4-C5-C6 | 6.32 | 122.59 | 118.80 |
| 1 | AA | 1333 | A | N1-C6-N6 | -6.32 | 114.81 | 118.60 |
| 1 | AA | 1502 | A | N1-C6-N6 | -6.32 | 114.81 | 118.60 |
| 2 | AB | 66 | C | N1-C1'-C2' | -6.32 | 105.05 | 112.00 |
| 2 | AB | 73 | G | C2-N3-C4 | 6.32 | 115.06 | 111.90 |
| 3 | AC | 17 | U | N1-C2-O2 | 6.32 | 127.22 | 122.80 |
| 26 | BB | 450 | G | C5'-C4'-O4' | 6.32 | 116.68 | 109.10 |
| 26 | BB | 464 | U | O4'-C1'-C2' | -6.32 | 99.48 | 105.80 |
| 26 | BB | 724 | U | N1-C1'-C2' | -6.32 | 105.05 | 112.00 |
| 26 | BB | 1125 | G | O4'-C1'-N9 | 6.32 | 113.25 | 108.20 |
| 1 | AA | 200 | G | C8-N9-C4 | -6.32 | 103.87 | 106.40 |
| 1 | AA | 395 | C | C5-C6-N1 | 6.32 | 124.16 | 121.00 |
| 1 | AA | 646 | G | N1-C6-O6 | -6.32 | 116.11 | 119.90 |
| 1 | AA | 673 | A | C1'-O4'-C4' | 6.32 | 114.95 | 109.90 |
| 1 | AA | 848 | C | C4'-C3'-C2' | -6.32 | 96.28 | 102.60 |
| 1 | AA | 1353 | G | C6-N1-C2 | -6.32 | 121.31 | 125.10 |
| 1 | AA | 1486 | G | N9-C4-C5 | -6.32 | 102.87 | 105.40 |
| 25 | BA | 54 | G | C4-C5-N7 | -6.32 | 108.27 | 110.80 |
| 25 | BA | 92 | C | O4'-C1'-C2' | -6.32 | 99.48 | 105.80 |
| 26 | BB | 591 | U | C4'-C3'-C2' | -6.32 | 96.28 | 102.60 |
| 26 | BB | 1433 | A | C4-C5-C6 | -6.32 | 113.84 | 117.00 |
| 26 | BB | 1555 | G | C8-N9-C4 | 6.32 | 108.93 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2316 | G | N3-C4-C5 | -6.32 | 125.44 | 128.60 |
| 26 | BB | 2815 | C | N3-C4-C5 | -6.32 | 119.37 | 121.90 |
| 1 | AA | 303 | A | C1'-O4'-C4' | -6.31 | 104.85 | 109.90 |
| 1 | AA | 654 | G | N1-C2-N3 | -6.31 | 120.11 | 123.90 |
| 26 | BB | 99 | U | N1-C2-N3 | 6.31 | 118.69 | 114.90 |
| 26 | BB | 1026 | G | P-O3'-C3' | 6.31 | 127.28 | 119.70 |
| 26 | BB | 1310 | G | C2-N3-C4 | 6.31 | 115.06 | 111.90 |
| 26 | BB | 1904 | G | O5'-P-OP2 | -6.31 | 100.02 | 105.70 |
| 26 | BB | 2101 | A | N9-C4-C5 | 6.31 | 108.33 | 105.80 |
| 51 | B0 | 7 | ARG | NE-CZ-NH2 | -6.31 | 117.14 | 120.30 |
| 1 | AA | 17 | U | C4-C5-C6 | 6.31 | 123.49 | 119.70 |
| 1 | AA | 1247 | U | C4'-C3'-C2' | -6.31 | 96.29 | 102.60 |
| 1 | AA | 1288 | A | C5-C6-N6 | -6.31 | 118.65 | 123.70 |
| 1 | AA | 1307 | U | O4'-C1'-N1 | 6.31 | 113.25 | 108.20 |
| 25 | BA | 23 | G | C6-N1-C2 | -6.31 | 121.31 | 125.10 |
| 26 | BB | 1359 | A | O4'-C4'-C3' | 6.31 | 111.15 | 106.10 |
| 26 | BB | 2252 | G | N7-C8-N9 | 6.31 | 116.26 | 113.10 |
| 26 | BB | 2452 | C | O4'-C1'-C2' | -6.31 | 99.49 | 105.80 |
| 26 | BB | 2598 | A | C4-C5-C6 | -6.31 | 113.84 | 117.00 |
| 26 | BB | 2802 | G | N9-C4-C5 | 6.31 | 107.92 | 105.40 |
| 1 | AA | 22 | G | N9-C1'-C2' | -6.31 | 105.06 | 112.00 |
| 1 | AA | 173 | U | C4-C5-C6 | 6.31 | 123.49 | 119.70 |
| 1 | AA | 377 | G | C6-N1-C2 | -6.31 | 121.31 | 125.10 |
| 4 | AD | 15 | G | C5-C6-N1 | 6.31 | 114.66 | 111.50 |
| 4 | AD | 71 | G | C5'-C4'-O4' | 6.31 | 116.67 | 109.10 |
| 26 | BB | 460 | A | C5-C6-N1 | 6.31 | 120.86 | 117.70 |
| 26 | BB | 1840 | G | C4-C5-N7 | -6.31 | 108.28 | 110.80 |
| 26 | BB | 2138 | G | N1-C2-N3 | 6.31 | 127.69 | 123.90 |
| 1 | AA | 576 | C | C5'-C4'-C3' | -6.31 | 105.91 | 116.00 |
| 1 | AA | 1100 | C | C5-C4-N4 | 6.31 | 124.62 | 120.20 |
| 26 | BB | 32 | C | P-O3'-C3' | 6.31 | 127.27 | 119.70 |
| 26 | BB | 150 | U | C6-N1-C2 | -6.31 | 117.21 | 121.00 |
| 26 | BB | 1325 | U | P-O3'-C3' | 6.31 | 127.27 | 119.70 |
| 26 | BB | 2466 | C | O4'-C1'-N1 | 6.31 | 113.25 | 108.20 |
| 26 | BB | 2514 | U | P-O3'-C3' | 6.31 | 127.27 | 119.70 |
| 26 | BB | 2855 | C | C5-C6-N1 | -6.31 | 117.85 | 121.00 |
| 1 | AA | 163 | C | N1-C2-O2 | 6.31 | 122.69 | 118.90 |
| 1 | AA | 320 | A | O4'-C1'-N9 | 6.31 | 113.25 | 108.20 |
| 1 | AA | 796 | C | O4'-C1'-N1 | 6.31 | 113.25 | 108.20 |
| 1 | AA | 831 | A | C4'-C3'-C2' | -6.31 | 96.29 | 102.60 |
| 1 | AA | 874 | G | N3-C2-N2 | -6.31 | 115.48 | 119.90 |
| 1 | AA | 1314 | C | N3-C2-O2 | -6.31 | 117.48 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 5 | G | C5-C6-N1 | 6.31 | 114.65 | 111.50 |
| 26 | BB | 445 | C | N1-C2-O2 | 6.31 | 122.68 | 118.90 |
| 26 | BB | 502 | A | O4'-C1'-N9 | 6.31 | 113.25 | 108.20 |
| 26 | BB | 560 | C | O4'-C1'-N1 | 6.31 | 113.25 | 108.20 |
| 26 | BB | 725 | G | C6-N1-C2 | -6.31 | 121.31 | 125.10 |
| 26 | BB | 964 | C | C5-C4-N4 | -6.31 | 115.78 | 120.20 |
| 26 | BB | 1276 | A | C4-C5-N7 | -6.31 | 107.55 | 110.70 |
| 26 | BB | 1495 | A | N9-C4-C5 | -6.31 | 103.28 | 105.80 |
| 26 | BB | 130 | C | C2-N3-C4 | -6.31 | 116.75 | 119.90 |
| 26 | BB | 163 | C | N3-C2-O2 | -6.31 | 117.49 | 121.90 |
| 26 | BB | 349 | U | N1-C2-N3 | 6.31 | 118.68 | 114.90 |
| 26 | BB | 700 | G | C1'-O4'-C4' | 6.31 | 114.94 | 109.90 |
| 26 | BB | 1265 | A | C5'-C4'-C3' | -6.31 | 105.91 | 116.00 |
| 26 | BB | 2381 | A | OP1-P-OP2 | 6.31 | 129.06 | 119.60 |
| 1 | AA | 850 | U | O4'-C1'-N1 | 6.30 | 113.24 | 108.20 |
| 1 | AA | 880 | C | C5'-C4'-O4' | -6.30 | 101.54 | 109.10 |
| 1 | AA | 1237 | C | N3-C4-C5 | -6.30 | 119.38 | 121.90 |
| 1 | AA | 1453 | G | C4-C5-N7 | 6.30 | 113.32 | 110.80 |
| 4 | AD | 24 | C | C4'-C3'-C2' | -6.30 | 96.30 | 102.60 |
| 26 | BB | 507 | A | C4-C5-C6 | -6.30 | 113.85 | 117.00 |
| 26 | BB | 910 | A | C1'-O4'-C4' | -6.30 | 104.86 | 109.90 |
| 26 | BB | 1713 | A | N1-C6-N6 | -6.30 | 114.82 | 118.60 |
| 26 | BB | 2163 | A | N7-C8-N9 | -6.30 | 110.65 | 113.80 |
| 26 | BB | 2526 | G | C5-C6-O6 | 6.30 | 132.38 | 128.60 |
| 26 | BB | 2607 | G | N3-C4-C5 | -6.30 | 125.45 | 128.60 |
| 26 | BB | 2828 | G | C6-C5-N7 | -6.30 | 126.62 | 130.40 |
| 30 | BF | 33 | VAL | CG1-CB-CG2 | -6.30 | 100.81 | 110.90 |
| 1 | AA | 55 | A | C5-C6-N6 | -6.30 | 118.66 | 123.70 |
| 1 | AA | 213 | G | C5'-C4'-C3' | -6.30 | 105.92 | 116.00 |
| 1 | AA | 743 | A | C4'-C3'-C2' | -6.30 | 96.30 | 102.60 |
| 1 | AA | 1296 | C | N3-C4-N4 | 6.30 | 122.41 | 118.00 |
| 26 | BB | 451 | U | N1-C2-O2 | -6.30 | 118.39 | 122.80 |
| 26 | BB | 2528 | U | O4'-C1'-N1 | 6.30 | 113.24 | 108.20 |
| 1 | AA | 86 | G | C8-N9-C4 | -6.30 | 103.88 | 106.40 |
| 1 | AA | 716 | A | C6-N1-C2 | 6.30 | 122.38 | 118.60 |
| 1 | AA | 1324 | A | N9-C4-C5 | -6.30 | 103.28 | 105.80 |
| 1 | AA | 1346 | A | O3'-P-O5' | -6.30 | 92.03 | 104.00 |
| 1 | AA | 1464 | U | C6-N1-C2 | 6.30 | 124.78 | 121.00 |
| 25 | BA | 80 | U | N1-C2-N3 | 6.30 | 118.68 | 114.90 |
| 26 | BB | 45 | G | C2-N3-C4 | 6.30 | 115.05 | 111.90 |
| 26 | BB | 300 | A | C5-C6-N6 | 6.30 | 128.74 | 123.70 |
| 26 | BB | 630 | G | C3'-C2'-C1' | 6.30 | 106.54 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1059 | G | C5'-C4'-O4' | 6.30 | 116.66 | 109.10 |
| 1 | AA | 1246 | A | C4'-C3'-C2' | -6.30 | 96.30 | 102.60 |
| 1 | AA | 1439 | G | C4-C5-C6 | 6.30 | 122.58 | 118.80 |
| 2 | AB | 29 | G | C5-C6-N1 | -6.30 | 108.35 | 111.50 |
| 2 | AB | 38 | A | N3-C4-C5 | -6.30 | 122.39 | 126.80 |
| 26 | BB | 1537 | G | C2-N3-C4 | -6.30 | 108.75 | 111.90 |
| 26 | BB | 1875 | G | C5-C6-N1 | 6.30 | 114.65 | 111.50 |
| 26 | BB | 2722 | G | C4-C5-C6 | 6.30 | 122.58 | 118.80 |
| 26 | BB | 2876 | G | N3-C2-N2 | -6.30 | 115.49 | 119.90 |
| 1 | AA | 651 | C | O4'-C4'-C3' | 6.30 | 111.14 | 106.10 |
| 1 | AA | 1059 | C | C5'-C4'-C3' | -6.30 | 105.92 | 116.00 |
| 26 | BB | 510 | C | C5-C4-N4 | -6.30 | 115.79 | 120.20 |
| 26 | BB | 838 | C | C5'-C4'-C3' | -6.30 | 105.92 | 116.00 |
| 26 | BB | 901 | C | N3-C2-O2 | -6.30 | 117.49 | 121.90 |
| 26 | BB | 1218 | G | C8-N9-C4 | 6.30 | 108.92 | 106.40 |
| 26 | BB | 2078 | C | C2-N3-C4 | 6.30 | 123.05 | 119.90 |
| 26 | BB | 2167 | U | O4'-C1'-N1 | 6.30 | 113.24 | 108.20 |
| 26 | BB | 2607 | G | C5-N7-C8 | -6.30 | 101.15 | 104.30 |
| 1 | AA | 1333 | A | N1-C2-N3 | -6.30 | 126.15 | 129.30 |
| 26 | BB | 503 | A | N9-C4-C5 | -6.30 | 103.28 | 105.80 |
| 26 | BB | 619 | G | N9-C4-C5 | 6.30 | 107.92 | 105.40 |
| 26 | BB | 643 | A | C2'-C3'-O3' | 6.30 | 123.77 | 113.70 |
| 26 | BB | 1012 | U | C5-C6-N1 | -6.30 | 119.55 | 122.70 |
| 26 | BB | 1503 | A | N7-C8-N9 | 6.30 | 116.95 | 113.80 |
| 1 | AA | 554 | A | C6-C5-N7 | 6.29 | 136.71 | 132.30 |
| 1 | AA | 570 | G | C2-N3-C4 | 6.29 | 115.05 | 111.90 |
| 1 | AA | 1292 | G | C8-N9-C1' | 6.29 | 135.18 | 127.00 |
| 26 | BB | 1007 | C | N3-C4-N4 | -6.29 | 113.59 | 118.00 |
| 48 | BX | 91 | PHE | CG-CD1-CE1 | 6.29 | 127.72 | 120.80 |
| 1 | AA | 81 | A | C4-C5-C6 | -6.29 | 113.85 | 117.00 |
| 1 | AA | 247 | G | N3-C4-C5 | -6.29 | 125.45 | 128.60 |
| 1 | AA | 794 | A | N1-C6-N6 | 6.29 | 122.38 | 118.60 |
| 1 | AA | 1254 | A | C4'-C3'-C2' | -6.29 | 96.31 | 102.60 |
| 24 | AX | 36 | PHE | CD1-CE1-CZ | -6.29 | 112.55 | 120.10 |
| 26 | BB | 318 | C | C3'-C2'-C1' | 6.29 | 106.53 | 101.50 |
| 26 | BB | 513 | A | C3'-C2'-C1' | 6.29 | 106.53 | 101.50 |
| 26 | BB | 575 | A | C3'-C2'-C1' | -6.29 | 96.47 | 101.50 |
| 26 | BB | 1219 | U | C4-C5-C6 | 6.29 | 123.48 | 119.70 |
| 26 | BB | 1275 | A | C4-C5-N7 | 6.29 | 113.85 | 110.70 |
| 26 | BB | 2052 | A | C5-C6-N6 | -6.29 | 118.67 | 123.70 |
| 1 | AA | 534 | U | N3-C2-O2 | -6.29 | 117.80 | 122.20 |
| 1 | AA | 568 | G | C4-C5-N7 | 6.29 | 113.32 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 819 | A | O4'-C1'-N9 | 6.29 | 113.23 | 108.20 |
| 1 | AA | 1261 | A | C5-C6-N1 | 6.29 | 120.84 | 117.70 |
| 1 | AA | 1343 | G | C3'-C2'-C1' | 6.29 | 106.53 | 101.50 |
| 9 | AI | 78 | PHE | CB-CG-CD1 | 6.29 | 125.20 | 120.80 |
| 25 | BA | 41 | G | C4-C5-N7 | 6.29 | 113.32 | 110.80 |
| 26 | BB | 8 | C | N3-C4-C5 | -6.29 | 119.38 | 121.90 |
| 26 | BB | 401 | A | O4'-C4'-C3' | -6.29 | 97.71 | 104.00 |
| 26 | BB | 579 | G | N9-C4-C5 | -6.29 | 102.88 | 105.40 |
| 26 | BB | 768 | G | C8-N9-C4 | -6.29 | 103.88 | 106.40 |
| 26 | BB | 883 | G | C1'-O4'-C4' | 6.29 | 114.93 | 109.90 |
| 26 | BB | 900 | A | N3-C4-C5 | -6.29 | 122.40 | 126.80 |
| 26 | BB | 1278 | C | N3-C4-C5 | -6.29 | 119.38 | 121.90 |
| 26 | BB | 1581 | G | C1'-O4'-C4' | -6.29 | 104.87 | 109.90 |
| 26 | BB | 2093 | G | C5-C6-N1 | 6.29 | 114.65 | 111.50 |
| 26 | BB | 2376 | A | N1-C6-N6 | 6.29 | 122.37 | 118.60 |
| 29 | BE | 125 | TRP | CD1-NE1-CE2 | 6.29 | 114.66 | 109.00 |
| 1 | AA | 1501 | C | N3-C4-N4 | 6.29 | 122.40 | 118.00 |
| 3 | AC | 55 | A | C2-N3-C4 | 6.29 | 113.75 | 110.60 |
| 25 | BA | 9 | G | N3-C4-C5 | -6.29 | 125.45 | 128.60 |
| 26 | BB | 460 | A | C8-N9-C4 | -6.29 | 103.28 | 105.80 |
| 26 | BB | 2344 | U | C3'-C2'-C1' | -6.29 | 96.47 | 101.50 |
| 26 | BB | 2585 | U | C5-C6-N1 | -6.29 | 119.56 | 122.70 |
| 1 | AA | 50 | A | C8-N9-C4 | -6.29 | 103.28 | 105.80 |
| 1 | AA | 232 | G | C5-N7-C8 | 6.29 | 107.44 | 104.30 |
| 1 | AA | 620 | C | C5'-C4'-O4' | 6.29 | 116.65 | 109.10 |
| 22 | AV | 60 | PHE | CB-CG-CD1 | -6.29 | 116.40 | 120.80 |
| 26 | BB | 82 | U | N3-C4-C5 | -6.29 | 110.83 | 114.60 |
| 26 | BB | 161 | A | C4'-C3'-C2' | -6.29 | 96.31 | 102.60 |
| 26 | BB | 865 | C | N1-C2-N3 | -6.29 | 114.80 | 119.20 |
| 26 | BB | 2261 | C | C5'-C4'-C3' | -6.29 | 105.94 | 116.00 |
| 26 | BB | 2665 | A | N9-C4-C5 | 6.29 | 108.31 | 105.80 |
| 1 | AA | 113 | G | N3-C4-N9 | 6.29 | 129.77 | 126.00 |
| 1 | AA | 129 | A | C2-N3-C4 | 6.29 | 113.74 | 110.60 |
| 1 | AA | 965 | U | C2-N1-C1' | 6.29 | 125.25 | 117.70 |
| 1 | AA | 1473 | G | C5-C6-N1 | 6.29 | 114.64 | 111.50 |
| 2 | AB | 45 | U | C4'-C3'-C2' | -6.29 | 96.31 | 102.60 |
| 26 | BB | 117 | G | C8-N9-C4 | -6.29 | 103.89 | 106.40 |
| 26 | BB | 438 | G | C6-C5-N7 | -6.29 | 126.63 | 130.40 |
| 26 | BB | 1037 | G | C5-N7-C8 | -6.29 | 101.16 | 104.30 |
| 26 | BB | 1850 | G | C5-C6-N1 | 6.29 | 114.64 | 111.50 |
| 26 | BB | 1909 | C | C3'-C2'-C1' | -6.29 | 96.47 | 101.50 |
| 26 | BB | 2004 | G | C5-N7-C8 | -6.29 | 101.16 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 45 | G | N9-C4-C5 | 6.29 | 107.91 | 105.40 |
| 1 | AA | 691 | G | N1-C6-O6 | 6.29 | 123.67 | 119.90 |
| 1 | AA | 1244 | G | O4'-C1'-N9 | 6.29 | 113.23 | 108.20 |
| 2 | AB | 59 | G | C8-N9-C4 | -6.29 | 103.89 | 106.40 |
| 3 | AC | 22 | G | C2'-C3'-O3' | 6.29 | 123.76 | 113.70 |
| 25 | BA | 37 | C | C6-N1-C2 | -6.29 | 117.79 | 120.30 |
| 25 | BA | 120 | U | C5-C6-N1 | -6.29 | 119.56 | 122.70 |
| 26 | BB | 336 | C | C5-C4-N4 | -6.29 | 115.80 | 120.20 |
| 26 | BB | 618 | G | N1-C2-N2 | 6.29 | 121.86 | 116.20 |
| 26 | BB | 817 | C | N1-C2-N3 | -6.29 | 114.80 | 119.20 |
| 26 | BB | 2215 | C | C6-N1-C2 | -6.29 | 117.79 | 120.30 |
| 26 | BB | 2459 | A | C8-N9-C4 | -6.29 | 103.29 | 105.80 |
| 26 | BB | 2651 | C | C4'-C3'-C2' | -6.29 | 96.31 | 102.60 |
| 1 | AA | 67 | C | C5'-C4'-O4' | 6.28 | 116.64 | 109.10 |
| 1 | AA | 105 | G | C8-N9-C4 | -6.28 | 103.89 | 106.40 |
| 1 | AA | 1064 | G | C3'-C2'-C1' | 6.28 | 106.53 | 101.50 |
| 1 | AA | 1215 | G | N9-C1'-C2' | -6.28 | 105.09 | 112.00 |
| 1 | AA | 1238 | A | C4-C5-N7 | -6.28 | 107.56 | 110.70 |
| 2 | AB | 75 | C | P-O3'-C3' | 6.28 | 127.24 | 119.70 |
| 25 | BA | 38 | C | C6-N1-C2 | 6.28 | 122.81 | 120.30 |
| 26 | BB | 626 | A | C6-C5-N7 | 6.28 | 136.70 | 132.30 |
| 26 | BB | 1109 | C | N3-C4-N4 | -6.28 | 113.60 | 118.00 |
| 26 | BB | 1633 | G | C2-N3-C4 | 6.28 | 115.04 | 111.90 |
| 26 | BB | 1672 | A | C5'-C4'-O4' | 6.28 | 116.64 | 109.10 |
| 26 | BB | 1998 | A | C4'-C3'-C2' | -6.28 | 96.32 | 102.60 |
| 32 | BH | 168 | VAL | CA-CB-CG1 | 6.28 | 120.33 | 110.90 |
| 41 | BQ | 97 | PHE | CB-CG-CD2 | -6.28 | 116.40 | 120.80 |
| 1 | AA | 32 | A | N9-C1'-C2' | -6.28 | 105.09 | 112.00 |
| 1 | AA | 625 | U | N3-C2-O2 | -6.28 | 117.80 | 122.20 |
| 1 | AA | 771 | G | C6-N1-C2 | -6.28 | 121.33 | 125.10 |
| 26 | BB | 127 | A | C5'-C4'-O4' | 6.28 | 116.64 | 109.10 |
| 26 | BB | 148 | U | C2-N3-C4 | -6.28 | 123.23 | 127.00 |
| 26 | BB | 421 | C | N1-C2-O2 | 6.28 | 122.67 | 118.90 |
| 26 | BB | 491 | G | O4'-C1'-N9 | 6.28 | 113.22 | 108.20 |
| 26 | BB | 1138 | G | C5'-C4'-O4' | 6.28 | 116.64 | 109.10 |
| 26 | BB | 2764 | A | N9-C4-C5 | 6.28 | 108.31 | 105.80 |
| 1 | AA | 212 | G | C8-N9-C4 | -6.28 | 103.89 | 106.40 |
| 1 | AA | 253 | A | C8-N9-C4 | -6.28 | 103.29 | 105.80 |
| 1 | AA | 413 | G | C1'-O4'-C4' | -6.28 | 104.88 | 109.90 |
| 1 | AA | 493 | A | C6-C5-N7 | 6.28 | 136.70 | 132.30 |
| 1 | AA | 790 | A | C5-N7-C8 | -6.28 | 100.76 | 103.90 |
| 1 | AA | 962 | C | P-O3'-C3' | 6.28 | 127.24 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1312 | G | N1-C6-O6 | -6.28 | 116.13 | 119.90 |
| 2 | AB | 30 | G | C6-N1-C2 | -6.28 | 121.33 | 125.10 |
| 8 | AH | 68 | ARG | NE-CZ-NH1 | -6.28 | 117.16 | 120.30 |
| 17 | AQ | 32 | ASP | CB-CG-OD2 | -6.28 | 112.65 | 118.30 |
| 19 | AS | 39 | PHE | CB-CG-CD1 | -6.28 | 116.40 | 120.80 |
| 25 | BA | 10 | G | C5-N7-C8 | 6.28 | 107.44 | 104.30 |
| 26 | BB | 29 | U | P-O3'-C3' | 6.28 | 127.24 | 119.70 |
| 26 | BB | 55 | G | N7-C8-N9 | 6.28 | 116.24 | 113.10 |
| 26 | BB | 1053 | C | O4'-C1'-N1 | 6.28 | 113.22 | 108.20 |
| 26 | BB | 1536 | C | N3-C2-O2 | -6.28 | 117.50 | 121.90 |
| 26 | BB | 1622 | G | N1-C2-N2 | 6.28 | 121.85 | 116.20 |
| 26 | BB | 1787 | A | O4'-C1'-N9 | -6.28 | 103.17 | 108.20 |
| 26 | BB | 2037 | A | N3-C4-C5 | -6.28 | 122.40 | 126.80 |
| 26 | BB | 2499 | C | C4'-C3'-C2' | -6.28 | 96.32 | 102.60 |
| 26 | BB | 2550 | G | N7-C8-N9 | -6.28 | 109.96 | 113.10 |
| 26 | BB | 2601 | C | N3-C2-O2 | -6.28 | 117.50 | 121.90 |
| 1 | AA | 973 | G | O4'-C4'-C3' | 6.28 | 111.12 | 106.10 |
| 13 | AM | 9 | ARG | NE-CZ-NH2 | 6.28 | 123.44 | 120.30 |
| 26 | BB | 2008 | C | N3-C4-N4 | 6.28 | 122.40 | 118.00 |
| 26 | BB | 2173 | A | C5-N7-C8 | -6.28 | 100.76 | 103.90 |
| 26 | BB | 2764 | A | N7-C8-N9 | 6.28 | 116.94 | 113.80 |
| 1 | AA | 354 | G | N9-C4-C5 | -6.28 | 102.89 | 105.40 |
| 1 | AA | 923 | A | C5-N7-C8 | -6.28 | 100.76 | 103.90 |
| 1 | AA | 1147 | C | N3-C2-O2 | -6.28 | 117.51 | 121.90 |
| 1 | AA | 1335 | U | C5'-C4'-O4' | 6.28 | 116.63 | 109.10 |
| 25 | BA | 5 | U | C5-C6-N1 | -6.28 | 119.56 | 122.70 |
| 25 | BA | 112 | G | N1-C6-O6 | 6.28 | 123.67 | 119.90 |
| 26 | BB | 458 | G | N7-C8-N9 | 6.28 | 116.24 | 113.10 |
| 26 | BB | 500 | G | C4-C5-N7 | 6.28 | 113.31 | 110.80 |
| 26 | BB | 967 | U | N1-C1'-C2' | -6.28 | 105.10 | 112.00 |
| 26 | BB | 1717 | A | C4-C5-N7 | -6.28 | 107.56 | 110.70 |
| 26 | BB | 2481 | G | P-O3'-C3' | 6.28 | 127.23 | 119.70 |
| 26 | BB | 2640 | G | C4-C5-C6 | 6.28 | 122.57 | 118.80 |
| 26 | BB | 2876 | G | N3-C4-N9 | 6.28 | 129.77 | 126.00 |
| 1 | AA | 563 | A | N1-C2-N3 | 6.28 | 132.44 | 129.30 |
| 1 | AA | 1260 | G | C4-C5-N7 | 6.28 | 113.31 | 110.80 |
| 1 | AA | 1318 | A | C5-N7-C8 | 6.28 | 107.04 | 103.90 |
| 25 | BA | 47 | C | C2-N3-C4 | 6.28 | 123.04 | 119.90 |
| 26 | BB | 904 | G | N9-C4-C5 | 6.28 | 107.91 | 105.40 |
| 26 | BB | 996 | A | C1'-O4'-C4' | 6.28 | 114.92 | 109.90 |
| 26 | BB | 1024 | G | N3-C4-N9 | 6.28 | 129.77 | 126.00 |
| 26 | BB | 1235 | G | P-O3'-C3' | 6.28 | 127.23 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1530 | G | C5-C6-N1 | 6.28 | 114.64 | 111.50 |
| 26 | BB | 1845 | G | C5-N7-C8 | -6.28 | 101.16 | 104.30 |
| 26 | BB | 1877 | A | C5-C6-N1 | 6.28 | 120.84 | 117.70 |
| 26 | BB | 1897 | G | C6-C5-N7 | -6.28 | 126.64 | 130.40 |
| 26 | BB | 1971 | U | C5-C6-N1 | 6.28 | 125.84 | 122.70 |
| 26 | BB | 2122 | U | N1-C2-N3 | 6.28 | 118.67 | 114.90 |
| 26 | BB | 2301 | C | N1-C2-O2 | 6.28 | 122.67 | 118.90 |
| 26 | BB | 1885 | A | N1-C2-N3 | -6.27 | 126.16 | 129.30 |
| 26 | BB | 1956 | U | C5-C4-O4 | -6.27 | 122.14 | 125.90 |
| 26 | BB | 1993 | U | C4'-C3'-C2' | -6.27 | 96.33 | 102.60 |
| 26 | BB | 2799 | A | C2-N3-C4 | 6.27 | 113.74 | 110.60 |
| 1 | AA | 395 | C | O4'-C1'-N1 | 6.27 | 113.22 | 108.20 |
| 1 | AA | 730 | G | C3'-C2'-C1' | 6.27 | 106.52 | 101.50 |
| 1 | AA | 924 | C | C6-N1-C2 | -6.27 | 117.79 | 120.30 |
| 1 | AA | 1067 | A | O4'-C1'-C2' | -6.27 | 99.53 | 105.80 |
| 26 | BB | 56 | A | O4'-C4'-C3' | -6.27 | 97.73 | 104.00 |
| 26 | BB | 473 | G | C5-C6-N1 | -6.27 | 108.36 | 111.50 |
| 26 | BB | 1709 | U | N1-C1'-C2' | -6.27 | 105.10 | 112.00 |
| 26 | BB | 2057 | G | C8-N9-C4 | -6.27 | 103.89 | 106.40 |
| 26 | BB | 2224 | G | C4'-C3'-C2' | -6.27 | 96.33 | 102.60 |
| 26 | BB | 2352 | A | P-O3'-C3' | 6.27 | 127.23 | 119.70 |
| 26 | BB | 2701 | U | N1-C2-N3 | 6.27 | 118.66 | 114.90 |
| 26 | BB | 2759 | G | N1-C6-O6 | -6.27 | 116.14 | 119.90 |
| 26 | BB | 2799 | A | C3'-C2'-C1' | 6.27 | 106.52 | 101.50 |
| 4 | AD | 16 | C | C3'-C2'-C1' | 6.27 | 106.52 | 101.50 |
| 4 | AD | 41 | C | C4-C5-C6 | -6.27 | 114.27 | 117.40 |
| 25 | BA | 55 | U | N3-C4-O4 | 6.27 | 123.79 | 119.40 |
| 26 | BB | 108 | G | C6-C5-N7 | -6.27 | 126.64 | 130.40 |
| 26 | BB | 1063 | G | N3-C2-N2 | 6.27 | 124.29 | 119.90 |
| 26 | BB | 1679 | A | C1'-O4'-C4' | 6.27 | 114.92 | 109.90 |
| 26 | BB | 2025 | C | N3-C4-C5 | -6.27 | 119.39 | 121.90 |
| 26 | BB | 2854 | G | N7-C8-N9 | 6.27 | 116.24 | 113.10 |
| 1 | AA | 350 | G | N3-C2-N2 | -6.27 | 115.51 | 119.90 |
| 1 | AA | 714 | G | N3-C2-N2 | -6.27 | 115.51 | 119.90 |
| 1 | AA | 1251 | A | C5-N7-C8 | -6.27 | 100.77 | 103.90 |
| 1 | AA | 1466 | C | C4'-C3'-C2' | -6.27 | 96.33 | 102.60 |
| 25 | BA | 6 | G | C4-N9-C1' | -6.27 | 118.35 | 126.50 |
| 25 | BA | 31 | C | O4'-C1'-N1 | 6.27 | 113.22 | 108.20 |
| 26 | BB | 774 | G | N7-C8-N9 | 6.27 | 116.23 | 113.10 |
| 26 | BB | 1433 | A | N1-C6-N6 | -6.27 | 114.84 | 118.60 |
| 26 | BB | 1747 | U | O4'-C1'-N1 | 6.27 | 113.22 | 108.20 |
| 26 | BB | 2234 | G | O4'-C1'-N9 | 6.27 | 113.22 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2235 | G | C5-C6-O6 | -6.27 | 124.84 | 128.60 |
| 26 | BB | 2329 | U | C2-N3-C4 | -6.27 | 123.24 | 127.00 |
| 26 | BB | 2467 | C | N1-C2-O2 | 6.27 | 122.66 | 118.90 |
| 26 | BB | 2671 | G | C5-C6-O6 | -6.27 | 124.84 | 128.60 |
| 26 | BB | 2728 | U | C5-C4-O4 | -6.27 | 122.14 | 125.90 |
| 26 | BB | 2879 | A | C5-C6-N1 | 6.27 | 120.83 | 117.70 |
| 1 | AA | 766 | A | C4-C5-N7 | 6.27 | 113.83 | 110.70 |
| 1 | AA | 951 | G | C4-C5-C6 | 6.27 | 122.56 | 118.80 |
| 1 | AA | 976 | G | C5-N7-C8 | -6.27 | 101.17 | 104.30 |
| 1 | AA | 1016 | A | N9-C4-C5 | -6.27 | 103.29 | 105.80 |
| 1 | AA | 1228 | C | N1-C1'-C2' | -6.27 | 105.11 | 112.00 |
| 2 | AB | 5 | G | N7-C8-N9 | 6.27 | 116.23 | 113.10 |
| 26 | BB | 381 | G | C6-N1-C2 | -6.27 | 121.34 | 125.10 |
| 26 | BB | 479 | A | N1-C2-N3 | 6.27 | 132.43 | 129.30 |
| 26 | BB | 517 | C | N3-C2-O2 | 6.27 | 126.29 | 121.90 |
| 26 | BB | 1981 | A | C4-C5-N7 | -6.27 | 107.57 | 110.70 |
| 26 | BB | 2116 | G | C4-C5-N7 | -6.27 | 108.29 | 110.80 |
| 29 | BE | 60 | VAL | CA-CB-CG1 | 6.27 | 120.30 | 110.90 |
| 25 | BA | 15 | A | N9-C4-C5 | -6.27 | 103.29 | 105.80 |
| 26 | BB | 517 | C | C5'-C4'-C3' | -6.27 | 105.97 | 116.00 |
| 26 | BB | 1924 | C | C5-C4-N4 | -6.27 | 115.81 | 120.20 |
| 26 | BB | 2173 | A | C6-N1-C2 | 6.27 | 122.36 | 118.60 |
| 26 | BB | 2674 | G | C4-C5-N7 | -6.27 | 108.29 | 110.80 |
| 1 | AA | 511 | C | C5-C4-N4 | -6.26 | 115.81 | 120.20 |
| 26 | BB | 1216 | G | C6-C5-N7 | -6.26 | 126.64 | 130.40 |
| 26 | BB | 1285 | A | C5'-C4'-C3' | -6.26 | 105.97 | 116.00 |
| 1 | AA | 337 | G | C4'-C3'-C2' | -6.26 | 96.34 | 102.60 |
| 26 | BB | 423 | A | C5-N7-C8 | -6.26 | 100.77 | 103.90 |
| 26 | BB | 1946 | U | C5-C6-N1 | 6.26 | 125.83 | 122.70 |
| 1 | AA | 404 | G | C5'-C4'-O4' | 6.26 | 116.61 | 109.10 |
| 1 | AA | 1341 | U | C2-N3-C4 | -6.26 | 123.24 | 127.00 |
| 25 | BA | 50 | A | C5-C6-N1 | 6.26 | 120.83 | 117.70 |
| 26 | BB | 26 | G | N1-C6-O6 | -6.26 | 116.14 | 119.90 |
| 26 | BB | 350 | G | C5-N7-C8 | -6.26 | 101.17 | 104.30 |
| 26 | BB | 790 | U | C6-N1-C2 | -6.26 | 117.24 | 121.00 |
| 26 | BB | 794 | A | N3-C4-C5 | -6.26 | 122.42 | 126.80 |
| 26 | BB | 888 | C | N3-C2-O2 | -6.26 | 117.52 | 121.90 |
| 26 | BB | 971 | G | C5-N7-C8 | -6.26 | 101.17 | 104.30 |
| 26 | BB | 1449 | G | C6-N1-C2 | -6.26 | 121.34 | 125.10 |
| 26 | BB | 1667 | G | C4-C5-N7 | 6.26 | 113.31 | 110.80 |
| 26 | BB | 2293 | G | C5'-C4'-C3' | -6.26 | 105.98 | 116.00 |
| 26 | BB | 2296 | U | N3-C4-C5 | -6.26 | 110.84 | 114.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2636 | C | N3-C2-O2 | -6.26 | 117.52 | 121.90 |
| 1 | AA | 1103 | C | C4'-C3'-C2' | -6.26 | 96.34 | 102.60 |
| 26 | BB | 554 | U | C3'-C2'-C1' | 6.26 | 106.51 | 101.50 |
| 26 | BB | 732 | C | N1-C1'-C2' | -6.26 | 105.11 | 112.00 |
| 26 | BB | 770 | G | C5'-C4'-O4' | 6.26 | 116.61 | 109.10 |
| 26 | BB | 926 | G | C6-N1-C2 | -6.26 | 121.34 | 125.10 |
| 26 | BB | 1253 | A | C5'-C4'-O4' | 6.26 | 116.61 | 109.10 |
| 26 | BB | 1459 | G | N3-C4-C5 | -6.26 | 125.47 | 128.60 |
| 26 | BB | 1903 | G | C4-C5-N7 | -6.26 | 108.30 | 110.80 |
| 26 | BB | 2455 | G | C2-N3-C4 | 6.26 | 115.03 | 111.90 |
| 26 | BB | 2487 | G | P-O3'-C3' | 6.26 | 127.21 | 119.70 |
| 3 | AC | 59 | A | N1-C2-N3 | -6.26 | 126.17 | 129.30 |
| 26 | BB | 1454 | C | N3-C4-C5 | -6.26 | 119.40 | 121.90 |
| 26 | BB | 1478 | G | C4-C5-C6 | -6.26 | 115.05 | 118.80 |
| 26 | BB | 2842 | G | C5-C6-N1 | -6.26 | 108.37 | 111.50 |
| 1 | AA | 381 | C | O4'-C4'-C3' | 6.26 | 111.10 | 106.10 |
| 1 | AA | 1099 | G | C6-C5-N7 | -6.26 | 126.65 | 130.40 |
| 1 | AA | 1121 | U | C5'-C4'-C3' | -6.26 | 105.99 | 116.00 |
| 7 | AG | 50 | TYR | CB-CG-CD2 | -6.26 | 117.25 | 121.00 |
| 25 | BA | 95 | U | C5-C6-N1 | -6.26 | 119.57 | 122.70 |
| 26 | BB | 45 | G | N3-C2-N2 | 6.26 | 124.28 | 119.90 |
| 26 | BB | 287 | G | C1'-O4'-C4' | 6.26 | 114.91 | 109.90 |
| 26 | BB | 588 | U | N1-C2-O2 | 6.26 | 127.18 | 122.80 |
| 26 | BB | 655 | A | P-O3'-C3' | 6.26 | 127.21 | 119.70 |
| 26 | BB | 726 | G | N3-C4-C5 | -6.26 | 125.47 | 128.60 |
| 26 | BB | 887 | U | O4'-C1'-C2' | -6.26 | 99.54 | 105.80 |
| 26 | BB | 926 | G | C1'-O4'-C4' | -6.26 | 104.89 | 109.90 |
| 26 | BB | 1391 | U | C2'-C3'-O3' | 6.26 | 123.71 | 113.70 |
| 26 | BB | 1393 | A | C6-N1-C2 | -6.26 | 114.85 | 118.60 |
| 26 | BB | 1453 | A | N3-C4-C5 | -6.26 | 122.42 | 126.80 |
| 26 | BB | 2816 | G | C3'-C2'-C1' | -6.26 | 96.50 | 101.50 |
| 34 | BJ | 95 | PHE | CD1-CG-CD2 | 6.26 | 126.44 | 118.30 |
| 1 | AA | 1408 | A | N3-C4-C5 | -6.25 | 122.42 | 126.80 |
| 26 | BB | 442 | G | P-O3'-C3' | 6.25 | 127.21 | 119.70 |
| 26 | BB | 1423 | G | C4'-C3'-C2' | -6.25 | 96.34 | 102.60 |
| 26 | BB | 1441 | G | N7-C8-N9 | 6.25 | 116.23 | 113.10 |
| 26 | BB | 2058 | A | C4-C5-C6 | -6.25 | 113.87 | 117.00 |
| 26 | BB | 2175 | C | C5'-C4'-O4' | 6.25 | 116.61 | 109.10 |
| 26 | BB | 2197 | U | O4'-C1'-N1 | 6.25 | 113.20 | 108.20 |
| 1 | AA | 30 | U | C3'-C2'-C1' | 6.25 | 106.50 | 101.50 |
| 1 | AA | 412 | A | N1-C2-N3 | -6.25 | 126.17 | 129.30 |
| 1 | AA | 560 | A | C3'-C2'-C1' | 6.25 | 106.50 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 859 | G | O5'-P-OP1 | -6.25 | 100.07 | 105.70 |
| 1 | AA | 884 | U | O4'-C1'-N1 | 6.25 | 113.20 | 108.20 |
| 1 | AA | 938 | A | N1-C2-N3 | -6.25 | 126.17 | 129.30 |
| 5 | AE | 197 | PHE | CB-CG-CD1 | 6.25 | 125.18 | 120.80 |
| 13 | AM | 72 | ARG | NE-CZ-NH1 | 6.25 | 123.43 | 120.30 |
| 26 | BB | 231 | A | C4-C5-C6 | -6.25 | 113.87 | 117.00 |
| 26 | BB | 254 | G | N1-C6-O6 | -6.25 | 116.15 | 119.90 |
| 26 | BB | 707 | G | N7-C8-N9 | 6.25 | 116.23 | 113.10 |
| 26 | BB | 1255 | U | C5-C4-O4 | -6.25 | 122.15 | 125.90 |
| 26 | BB | 1353 | A | N1-C6-N6 | 6.25 | 122.35 | 118.60 |
| 26 | BB | 1959 | G | N9-C4-C5 | 6.25 | 107.90 | 105.40 |
| 26 | BB | 2043 | C | C4-C5-C6 | -6.25 | 114.27 | 117.40 |
| 26 | BB | 2320 | U | C5-C6-N1 | -6.25 | 119.57 | 122.70 |
| 1 | AA | 269 | C | O4'-C1'-N1 | 6.25 | 113.20 | 108.20 |
| 1 | AA | 278 | G | N3-C4-C5 | -6.25 | 125.47 | 128.60 |
| 1 | AA | 388 | G | C3'-C2'-C1' | -6.25 | 96.50 | 101.50 |
| 1 | AA | 1243 | C | C2-N1-C1' | -6.25 | 111.92 | 118.80 |
| 4 | AD | 16 | C | N3-C4-C5 | -6.25 | 119.40 | 121.90 |
| 4 | AD | 48 | U | N1-C2-O2 | 6.25 | 127.18 | 122.80 |
| 7 | AG | 50 | TYR | CB-CG-CD1 | -6.25 | 117.25 | 121.00 |
| 26 | BB | 171 | U | N3-C4-C5 | -6.25 | 110.85 | 114.60 |
| 26 | BB | 346 | A | C4'-C3'-C2' | -6.25 | 96.35 | 102.60 |
| 26 | BB | 1558 | C | N3-C2-O2 | -6.25 | 117.52 | 121.90 |
| 26 | BB | 1839 | G | N3-C4-N9 | -6.25 | 122.25 | 126.00 |
| 26 | BB | 1878 | G | C4-C5-C6 | 6.25 | 122.55 | 118.80 |
| 26 | BB | 2126 | A | N3-C4-N9 | -6.25 | 122.40 | 127.40 |
| 26 | BB | 2708 | G | C8-N9-C4 | -6.25 | 103.90 | 106.40 |
| 26 | BB | 2805 | C | C5'-C4'-O4' | 6.25 | 116.60 | 109.10 |
| 26 | BB | 2849 | U | C5-C6-N1 | -6.25 | 119.57 | 122.70 |
| 26 | BB | 2865 | U | N1-C2-N3 | 6.25 | 118.65 | 114.90 |
| 1 | AA | 413 | G | C5-C6-N1 | -6.25 | 108.38 | 111.50 |
| 1 | AA | 494 | G | N9-C4-C5 | -6.25 | 102.90 | 105.40 |
| 1 | AA | 983 | A | C1'-O4'-C4' | -6.25 | 104.90 | 109.90 |
| 26 | BB | 1085 | A | C4'-C3'-C2' | -6.25 | 96.35 | 102.60 |
| 26 | BB | 1088 | A | O4'-C1'-N9 | 6.25 | 113.20 | 108.20 |
| 26 | BB | 2186 | G | C5-N7-C8 | 6.25 | 107.42 | 104.30 |
| 54 | B3 | 12 | ARG | NE-CZ-NH2 | -6.25 | 117.17 | 120.30 |
| 1 | AA | 185 | U | C5'-C4'-O4' | 6.25 | 116.60 | 109.10 |
| 14 | AN | 52 | ARG | NE-CZ-NH2 | -6.25 | 117.18 | 120.30 |
| 20 | AT | 76 | ARG | NE-CZ-NH1 | 6.25 | 123.42 | 120.30 |
| 25 | BA | 21 | G | C4-C5-C6 | 6.25 | 122.55 | 118.80 |
| 26 | BB | 160 | A | N1-C2-N3 | -6.25 | 126.17 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 477 | A | N1-C2-N3 | -6.25 | 126.18 | 129.30 |
| 26 | BB | 1657 | U | C5'-C4'-O4' | 6.25 | 116.60 | 109.10 |
| 26 | BB | 1718 | G | N3-C4-N9 | 6.25 | 129.75 | 126.00 |
| 26 | BB | 2508 | G | C5-N7-C8 | -6.25 | 101.18 | 104.30 |
| 43 | BS | 5 | ARG | NE-CZ-NH1 | 6.25 | 123.42 | 120.30 |
| 46 | BV | 80 | TRP | NE1-CE2-CD2 | -6.25 | 101.05 | 107.30 |
| 1 | AA | 338 | A | C4-C5-C6 | 6.25 | 120.12 | 117.00 |
| 1 | AA | 746 | A | N1-C6-N6 | 6.25 | 122.35 | 118.60 |
| 1 | AA | 1300 | G | C5'-C4'-O4' | 6.25 | 116.59 | 109.10 |
| 1 | AA | 1315 | U | C5-C4-O4 | -6.25 | 122.15 | 125.90 |
| 2 | AB | 4 | G | C5-C6-O6 | -6.25 | 124.85 | 128.60 |
| 4 | AD | 41 | C | N3-C2-O2 | -6.25 | 117.53 | 121.90 |
| 26 | BB | 623 | C | C3'-C2'-C1' | -6.25 | 96.50 | 101.50 |
| 26 | BB | 924 | G | C4-C5-N7 | -6.25 | 108.30 | 110.80 |
| 26 | BB | 1273 | U | O4'-C1'-N1 | -6.25 | 103.20 | 108.20 |
| 26 | BB | 1538 | G | C5-C6-N1 | 6.25 | 114.62 | 111.50 |
| 26 | BB | 1571 | A | C5-N7-C8 | -6.25 | 100.78 | 103.90 |
| 26 | BB | 1674 | G | C4-C5-N7 | 6.25 | 113.30 | 110.80 |
| 26 | BB | 1823 | G | C2-N3-C4 | 6.25 | 115.02 | 111.90 |
| 26 | BB | 2121 | G | N9-C4-C5 | 6.25 | 107.90 | 105.40 |
| 26 | BB | 2128 | G | C6-N1-C2 | -6.25 | 121.35 | 125.10 |
| 26 | BB | 2626 | C | C6-N1-C2 | -6.25 | 117.80 | 120.30 |
| 46 | BV | 13 | ALA | N-CA-CB | -6.25 | 101.35 | 110.10 |
| 1 | AA | 545 | C | C5-C4-N4 | -6.25 | 115.83 | 120.20 |
| 1 | AA | 583 | A | N1-C2-N3 | 6.25 | 132.42 | 129.30 |
| 1 | AA | 1446 | A | C8-N9-C4 | 6.25 | 108.30 | 105.80 |
| 26 | BB | 163 | C | C5-C4-N4 | -6.25 | 115.83 | 120.20 |
| 26 | BB | 792 | A | C6-C5-N7 | 6.25 | 136.67 | 132.30 |
| 1 | AA | 106 | C | N3-C4-N4 | -6.24 | 113.63 | 118.00 |
| 1 | AA | 886 | G | C6-C5-N7 | -6.24 | 126.65 | 130.40 |
| 1 | AA | 927 | G | C5-C6-O6 | -6.24 | 124.85 | 128.60 |
| 1 | AA | 1079 | G | C8-N9-C4 | -6.24 | 103.90 | 106.40 |
| 1 | AA | 1092 | A | C5-C6-N1 | 6.24 | 120.82 | 117.70 |
| 1 | AA | 1130 | A | N1-C6-N6 | 6.24 | 122.35 | 118.60 |
| 2 | AB | 34 | C | N1-C2-O2 | 6.24 | 122.65 | 118.90 |
| 26 | BB | 857 | G | C3'-C2'-C1' | 6.24 | 106.50 | 101.50 |
| 26 | BB | 908 | C | C6-N1-C2 | 6.24 | 122.80 | 120.30 |
| 26 | BB | 1014 | A | C6-N1-C2 | -6.24 | 114.85 | 118.60 |
| 26 | BB | 1115 | G | N1-C6-O6 | -6.24 | 116.15 | 119.90 |
| 26 | BB | 1317 | G | N7-C8-N9 | -6.24 | 109.98 | 113.10 |
| 26 | BB | 1360 | G | C5-C6-N1 | 6.24 | 114.62 | 111.50 |
| 26 | BB | 1492 | G | N3-C4-C5 | -6.24 | 125.48 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1694 | C | C3'-C2'-C1' | -6.24 | 96.50 | 101.50 |
| 26 | BB | 2583 | G | O4'-C1'-C2' | 6.24 | 113.22 | 107.60 |
| 26 | BB | 2767 | C | N3-C2-O2 | -6.24 | 117.53 | 121.90 |
| 26 | BB | 2804 | U | O4'-C4'-C3' | 6.24 | 111.09 | 106.10 |
| 26 | BB | 2823 | A | N3-C4-C5 | -6.24 | 122.43 | 126.80 |
| 1 | AA | 576 | C | C5-C4-N4 | 6.24 | 124.57 | 120.20 |
| 1 | AA | 1184 | G | N9-C1'-C2' | -6.24 | 105.13 | 112.00 |
| 1 | AA | 1206 | G | C8-N9-C1' | 6.24 | 135.11 | 127.00 |
| 1 | AA | 1360 | A | C2-N3-C4 | 6.24 | 113.72 | 110.60 |
| 1 | AA | 1414 | U | N1-C2-O2 | 6.24 | 127.17 | 122.80 |
| 2 | AB | 42 | G | C2-N3-C4 | 6.24 | 115.02 | 111.90 |
| 26 | BB | 467 | G | C6-C5-N7 | -6.24 | 126.66 | 130.40 |
| 26 | BB | 2301 | C | C3'-C2'-C1' | 6.24 | 106.49 | 101.50 |
| 26 | BB | 2377 | A | C1'-O4'-C4' | -6.24 | 104.91 | 109.90 |
| 1 | AA | 278 | G | O4'-C4'-C3' | -6.24 | 97.76 | 104.00 |
| 1 | AA | 343 | U | C6-N1-C2 | 6.24 | 124.75 | 121.00 |
| 1 | AA | 671 | G | N7-C8-N9 | 6.24 | 116.22 | 113.10 |
| 26 | BB | 1066 | U | N3-C4-C5 | -6.24 | 110.86 | 114.60 |
| 26 | BB | 1101 | U | N3-C4-C5 | -6.24 | 110.86 | 114.60 |
| 26 | BB | 1309 | G | C3'-C2'-C1' | -6.24 | 96.51 | 101.50 |
| 26 | BB | 1690 | A | C6-C5-N7 | -6.24 | 127.93 | 132.30 |
| 26 | BB | 2185 | U | C2-N3-C4 | 6.24 | 130.74 | 127.00 |
| 26 | BB | 2351 | G | C4'-C3'-C2' | -6.24 | 96.36 | 102.60 |
| 45 | BU | 92 | ARG | NE-CZ-NH2 | -6.24 | 117.18 | 120.30 |
| 1 | AA | 236 | A | N9-C4-C5 | -6.24 | 103.31 | 105.80 |
| 1 | AA | 725 | G | N1-C2-N2 | -6.24 | 110.58 | 116.20 |
| 1 | AA | 1108 | G | N3-C4-C5 | -6.24 | 125.48 | 128.60 |
| 1 | AA | 1174 | G | O4'-C1'-N9 | 6.24 | 113.19 | 108.20 |
| 10 | AJ | 98 | LEU | CB-CG-CD2 | 6.24 | 121.61 | 111.00 |
| 22 | AV | 36 | ARG | NE-CZ-NH1 | 6.24 | 123.42 | 120.30 |
| 25 | BA | 74 | U | C1'-O4'-C4' | 6.24 | 114.89 | 109.90 |
| 26 | BB | 391 | A | C8-N9-C4 | -6.24 | 103.30 | 105.80 |
| 26 | BB | 552 | U | N3-C4-C5 | -6.24 | 110.86 | 114.60 |
| 26 | BB | 1576 | U | C3'-C2'-C1' | 6.24 | 106.49 | 101.50 |
| 26 | BB | 1626 | A | C5-C6-N1 | -6.24 | 114.58 | 117.70 |
| 26 | BB | 1860 | G | O4'-C4'-C3' | -6.24 | 97.76 | 104.00 |
| 26 | BB | 2418 | A | N9-C1'-C2' | -6.24 | 105.14 | 112.00 |
| 26 | BB | 2612 | C | C3'-C2'-C1' | 6.24 | 106.49 | 101.50 |
| 1 | AA | 153 | C | C5-C4-N4 | -6.24 | 115.83 | 120.20 |
| 2 | AB | 53 | G | C2-N3-C4 | 6.24 | 115.02 | 111.90 |
| 4 | AD | 59 | A | O4'-C1'-N9 | 6.24 | 113.19 | 108.20 |
| 26 | BB | 28 | A | C6-C5-N7 | 6.24 | 136.67 | 132.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 792 | A | C8-N9-C4 | -6.24 | 103.31 | 105.80 |
| 26 | BB | 1000 | A | C6-N1-C2 | -6.24 | 114.86 | 118.60 |
| 26 | BB | 1205 | A | O4'-C1'-C2' | -6.24 | 99.56 | 105.80 |
| 26 | BB | 1378 | A | C1'-O4'-C4' | -6.24 | 104.91 | 109.90 |
| 26 | BB | 1884 | G | C5-C6-O6 | 6.24 | 132.34 | 128.60 |
| 26 | BB | 2391 | G | N9-C4-C5 | -6.24 | 102.91 | 105.40 |
| 26 | BB | 2661 | G | C3'-C2'-C1' | 6.24 | 106.49 | 101.50 |
| 1 | AA | 26 | A | C6-N1-C2 | -6.24 | 114.86 | 118.60 |
| 1 | AA | 246 | A | C1'-O4'-C4' | -6.24 | 104.91 | 109.90 |
| 1 | AA | 835 | U | N1-C1'-C2' | -6.24 | 105.14 | 112.00 |
| 1 | AA | 1090 | U | O4'-C1'-N1 | 6.24 | 113.19 | 108.20 |
| 1 | AA | 1389 | C | N3-C4-N4 | 6.24 | 122.36 | 118.00 |
| 3 | AC | 24 | A | C8-N9-C4 | -6.24 | 103.31 | 105.80 |
| 4 | AD | 51 | U | N3-C4-O4 | -6.24 | 115.03 | 119.40 |
| 26 | BB | 781 | A | N1-C2-N3 | -6.24 | 126.18 | 129.30 |
| 26 | BB | 863 | A | N7-C8-N9 | 6.24 | 116.92 | 113.80 |
| 26 | BB | 1066 | U | N3-C2-O2 | -6.24 | 117.83 | 122.20 |
| 26 | BB | 1658 | C | O4'-C1'-N1 | 6.24 | 113.19 | 108.20 |
| 26 | BB | 1866 | A | C6-N1-C2 | 6.24 | 122.34 | 118.60 |
| 26 | BB | 1937 | A | N7-C8-N9 | -6.24 | 110.68 | 113.80 |
| 26 | BB | 2378 | A | C5-N7-C8 | 6.24 | 107.02 | 103.90 |
| 26 | BB | 2662 | A | C5-C6-N6 | 6.24 | 128.69 | 123.70 |
| 1 | AA | 511 | C | C2-N3-C4 | -6.23 | 116.78 | 119.90 |
| 25 | BA | 40 | U | C5'-C4'-C3' | -6.23 | 106.03 | 116.00 |
| 25 | BA | 44 | G | C5-C6-O6 | -6.23 | 124.86 | 128.60 |
| 26 | BB | 1392 | A | C3'-C2'-C1' | 6.23 | 106.49 | 101.50 |
| 1 | AA | 34 | C | N1-C2-O2 | 6.23 | 122.64 | 118.90 |
| 1 | AA | 115 | G | C5'-C4'-C3' | -6.23 | 106.03 | 116.00 |
| 1 | AA | 161 | A | C1'-O4'-C4' | 6.23 | 114.89 | 109.90 |
| 1 | AA | 196 | A | C6-C5-N7 | -6.23 | 127.94 | 132.30 |
| 1 | AA | 319 | G | O4'-C1'-C2' | -6.23 | 99.57 | 105.80 |
| 1 | AA | 423 | G | C8-N9-C4 | -6.23 | 103.91 | 106.40 |
| 1 | AA | 613 | C | N3-C2-O2 | -6.23 | 117.54 | 121.90 |
| 1 | AA | 860 | A | C6-C5-N7 | 6.23 | 136.66 | 132.30 |
| 1 | AA | 1047 | G | C4-C5-N7 | 6.23 | 113.29 | 110.80 |
| 1 | AA | 1326 | U | N3-C2-O2 | -6.23 | 117.84 | 122.20 |
| 25 | BA | 68 | C | C5'-C4'-C3' | 6.23 | 125.97 | 116.00 |
| 26 | BB | 481 | G | N1-C2-N3 | -6.23 | 120.16 | 123.90 |
| 26 | BB | 632 | A | N1-C2-N3 | 6.23 | 132.42 | 129.30 |
| 26 | BB | 1508 | A | C6-N1-C2 | -6.23 | 114.86 | 118.60 |
| 26 | BB | 1681 | G | N3-C2-N2 | 6.23 | 124.26 | 119.90 |
| 26 | BB | 1790 | C | C5-C4-N4 | -6.23 | 115.84 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 839 | C | N3-C4-C5 | -6.23 | 119.41 | 121.90 |
| 1 | AA | 943 | U | C6-N1-C2 | -6.23 | 117.26 | 121.00 |
| 1 | AA | 1412 | C | N1-C2-O2 | 6.23 | 122.64 | 118.90 |
| 26 | BB | 297 | G | C4-C5-C6 | 6.23 | 122.54 | 118.80 |
| 26 | BB | 441 | U | N3-C4-O4 | 6.23 | 123.76 | 119.40 |
| 26 | BB | 459 | U | C5-C4-O4 | -6.23 | 122.16 | 125.90 |
| 26 | BB | 503 | A | C2-N3-C4 | -6.23 | 107.48 | 110.60 |
| 26 | BB | 870 | U | C3'-C2'-C1' | -6.23 | 96.52 | 101.50 |
| 26 | BB | 1282 | U | C5'-C4'-O4' | 6.23 | 116.58 | 109.10 |
| 26 | BB | 1535 | A | C4'-C3'-C2' | -6.23 | 96.37 | 102.60 |
| 26 | BB | 1580 | A | N3-C4-C5 | -6.23 | 122.44 | 126.80 |
| 26 | BB | 1668 | A | N7-C8-N9 | 6.23 | 116.92 | 113.80 |
| 26 | BB | 1758 | U | C6-N1-C2 | -6.23 | 117.26 | 121.00 |
| 26 | BB | 2413 | G | N9-C4-C5 | 6.23 | 107.89 | 105.40 |
| 26 | BB | 2899 | A | C6-N1-C2 | -6.23 | 114.86 | 118.60 |
| 35 | BK | 114 | ALA | CB-CA-C | 6.23 | 119.45 | 110.10 |
| 49 | BY | 75 | ASN | O-C-N | 6.23 | 132.67 | 122.70 |
| 1 | AA | 1491 | G | C5-C6-N1 | 6.23 | 114.61 | 111.50 |
| 4 | AD | 15 | G | C4-C5-N7 | -6.23 | 108.31 | 110.80 |
| 26 | BB | 590 | A | C5-C6-N1 | 6.23 | 120.81 | 117.70 |
| 26 | BB | 892 | A | O4'-C1'-N9 | 6.23 | 113.18 | 108.20 |
| 26 | BB | 2266 | A | C5'-C4'-O4' | -6.23 | 101.63 | 109.10 |
| 1 | AA | 515 | G | N3-C2-N2 | -6.23 | 115.54 | 119.90 |
| 1 | AA | 664 | G | N7-C8-N9 | 6.23 | 116.21 | 113.10 |
| 1 | AA | 804 | U | C6-N1-C2 | -6.23 | 117.26 | 121.00 |
| 1 | AA | 852 | G | N9-C1'-C2' | -6.23 | 105.15 | 112.00 |
| 1 | AA | 909 | A | N7-C8-N9 | 6.23 | 116.91 | 113.80 |
| 1 | AA | 1483 | A | C5'-C4'-O4' | 6.23 | 116.57 | 109.10 |
| 12 | AL | 63 | TYR | CB-CG-CD2 | -6.23 | 117.26 | 121.00 |
| 25 | BA | 97 | C | N3-C4-C5 | 6.23 | 124.39 | 121.90 |
| 26 | BB | 208 | C | N1-C2-N3 | -6.23 | 114.84 | 119.20 |
| 26 | BB | 491 | G | O3'-P-O5' | -6.23 | 92.17 | 104.00 |
| 26 | BB | 1397 | U | N3-C4-C5 | -6.23 | 110.86 | 114.60 |
| 26 | BB | 1551 | A | O4'-C1'-N9 | 6.23 | 113.18 | 108.20 |
| 26 | BB | 1708 | C | N3-C4-C5 | -6.23 | 119.41 | 121.90 |
| 26 | BB | 2244 | U | C3'-C2'-C1' | -6.23 | 96.52 | 101.50 |
| 26 | BB | 2897 | U | C5-C6-N1 | -6.23 | 119.59 | 122.70 |
| 2 | AB | 76 | A | N3-C4-C5 | -6.23 | 122.44 | 126.80 |
| 26 | BB | 940 | G | N9-C1'-C2' | -6.23 | 105.15 | 112.00 |
| 26 | BB | 1003 | G | P-O3'-C3' | 6.23 | 127.17 | 119.70 |
| 26 | BB | 1183 | U | C5-C4-O4 | -6.23 | 122.17 | 125.90 |
| 38 | BN | 66 | PHE | CB-CG-CD1 | -6.23 | 116.44 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 603 | U | C6-N1-C2 | -6.22 | 117.27 | 121.00 |
| 1 | AA | 762 | U | C5-C4-O4 | -6.22 | 122.17 | 125.90 |
| 1 | AA | 1217 | C | N3-C4-C5 | 6.22 | 124.39 | 121.90 |
| 1 | AA | 1327 | C | O4'-C1'-N1 | 6.22 | 113.18 | 108.20 |
| 26 | BB | 303 | G | N3-C2-N2 | 6.22 | 124.26 | 119.90 |
| 26 | BB | 543 | G | N1-C6-O6 | 6.22 | 123.64 | 119.90 |
| 26 | BB | 1074 | G | C5-N7-C8 | -6.22 | 101.19 | 104.30 |
| 26 | BB | 1311 | G | C8-N9-C4 | -6.22 | 103.91 | 106.40 |
| 26 | BB | 1797 | G | N1-C6-O6 | 6.22 | 123.64 | 119.90 |
| 26 | BB | 2395 | C | O4'-C4'-C3' | -6.22 | 97.78 | 104.00 |
| 1 | AA | 541 | G | O4'-C1'-N9 | 6.22 | 113.18 | 108.20 |
| 1 | AA | 676 | A | C2-N3-C4 | 6.22 | 113.71 | 110.60 |
| 25 | BA | 31 | C | C6-N1-C2 | -6.22 | 117.81 | 120.30 |
| 25 | BA | 102 | G | C6-N1-C2 | -6.22 | 121.37 | 125.10 |
| 26 | BB | 442 | G | N1-C2-N2 | 6.22 | 121.80 | 116.20 |
| 26 | BB | 763 | G | N3-C4-N9 | 6.22 | 129.73 | 126.00 |
| 26 | BB | 1197 | G | N3-C4-N9 | 6.22 | 129.73 | 126.00 |
| 26 | BB | 2294 | G | N3-C4-C5 | -6.22 | 125.49 | 128.60 |
| 26 | BB | 2359 | C | N3-C2-O2 | -6.22 | 117.54 | 121.90 |
| 26 | BB | 2371 | G | C8-N9-C4 | -6.22 | 103.91 | 106.40 |
| 1 | AA | 629 | A | C1'-O4'-C4' | -6.22 | 104.92 | 109.90 |
| 1 | AA | 749 | A | C5'-C4'-C3' | -6.22 | 106.05 | 116.00 |
| 1 | AA | 1121 | U | C5'-C4'-O4' | 6.22 | 116.56 | 109.10 |
| 1 | AA | 1390 | U | N1-C1'-C2' | -6.22 | 105.16 | 112.00 |
| 26 | BB | 1224 | U | C3'-C2'-C1' | 6.22 | 106.48 | 101.50 |
| 26 | BB | 1231 | U | C2-N1-C1' | -6.22 | 110.23 | 117.70 |
| 26 | BB | 1648 | U | C5-C6-N1 | 6.22 | 125.81 | 122.70 |
| 26 | BB | 1663 | G | C5-N7-C8 | 6.22 | 107.41 | 104.30 |
| 26 | BB | 2195 | U | C1'-O4'-C4' | 6.22 | 114.88 | 109.90 |
| 26 | BB | 2510 | C | C6-N1-C2 | 6.22 | 122.79 | 120.30 |
| 26 | BB | 2866 | U | N3-C4-O4 | -6.22 | 115.05 | 119.40 |
| 1 | AA | 534 | U | N3-C4-C5 | -6.22 | 110.87 | 114.60 |
| 26 | BB | 96 | C | N3-C2-O2 | -6.22 | 117.55 | 121.90 |
| 26 | BB | 325 | G | N7-C8-N9 | -6.22 | 109.99 | 113.10 |
| 26 | BB | 344 | A | C5-N7-C8 | -6.22 | 100.79 | 103.90 |
| 26 | BB | 475 | C | C6-N1-C2 | -6.22 | 117.81 | 120.30 |
| 26 | BB | 682 | G | C6-C5-N7 | 6.22 | 134.13 | 130.40 |
| 26 | BB | 795 | C | C6-N1-C2 | -6.22 | 117.81 | 120.30 |
| 26 | BB | 2099 | U | C3'-C2'-C1' | -6.22 | 96.53 | 101.50 |
| 26 | BB | 2518 | A | N9-C4-C5 | 6.22 | 108.29 | 105.80 |
| 38 | BN | 19 | LEU | CB-CG-CD2 | 6.22 | 121.57 | 111.00 |
| 1 | AA | 130 | A | C4-C5-N7 | -6.22 | 107.59 | 110.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1314 | C | O4'-C4'-C3' | 6.22 | 111.08 | 106.10 |
| 26 | BB | 1300 | G | C5-N7-C8 | -6.22 | 101.19 | 104.30 |
| 1 | AA | 731 | G | C2-N3-C4 | 6.22 | 115.01 | 111.90 |
| 1 | AA | 1253 | G | C2-N3-C4 | 6.22 | 115.01 | 111.90 |
| 24 | AX | 36 | PHE | CG-CD1-CE1 | 6.22 | 127.64 | 120.80 |
| 26 | BB | 512 | G | C5-C6-O6 | -6.22 | 124.87 | 128.60 |
| 26 | BB | 638 | G | C1'-O4'-C4' | 6.22 | 114.87 | 109.90 |
| 26 | BB | 931 | U | N1-C2-O2 | 6.22 | 127.15 | 122.80 |
| 26 | BB | 1120 | G | C6-C5-N7 | 6.22 | 134.13 | 130.40 |
| 26 | BB | 1306 | C | C5-C6-N1 | -6.22 | 117.89 | 121.00 |
| 26 | BB | 1384 | A | C1'-O4'-C4' | -6.22 | 104.93 | 109.90 |
| 26 | BB | 1573 | G | C5-N7-C8 | 6.22 | 107.41 | 104.30 |
| 26 | BB | 2242 | G | N7-C8-N9 | -6.22 | 109.99 | 113.10 |
| 26 | BB | 2584 | U | C3'-C2'-C1' | 6.22 | 106.47 | 101.50 |
| 26 | BB | 2709 | G | C8-N9-C4 | -6.22 | 103.91 | 106.40 |
| 26 | BB | 2883 | A | N1-C6-N6 | 6.22 | 122.33 | 118.60 |
| 1 | AA | 410 | G | N3-C2-N2 | -6.21 | 115.55 | 119.90 |
| 1 | AA | 672 | U | C4-C5-C6 | 6.21 | 123.43 | 119.70 |
| 1 | AA | 672 | U | N3-C4-O4 | 6.21 | 123.75 | 119.40 |
| 1 | AA | 882 | C | C4-C5-C6 | 6.21 | 120.51 | 117.40 |
| 1 | AA | 1150 | A | N9-C4-C5 | -6.21 | 103.31 | 105.80 |
| 1 | AA | 1203 | C | N3-C4-C5 | 6.21 | 124.39 | 121.90 |
| 1 | AA | 1226 | C | P-O3'-C3' | 6.21 | 127.16 | 119.70 |
| 1 | AA | 1424 | U | C6-N1-C2 | -6.21 | 117.27 | 121.00 |
| 26 | BB | 173 | A | N1-C6-N6 | -6.21 | 114.87 | 118.60 |
| 26 | BB | 402 | A | C6-N1-C2 | 6.21 | 122.33 | 118.60 |
| 26 | BB | 1062 | G | C5'-C4'-O4' | 6.21 | 116.56 | 109.10 |
| 1 | AA | 614 | C | C3'-C2'-C1' | -6.21 | 96.53 | 101.50 |
| 1 | AA | 1318 | A | N7-C8-N9 | -6.21 | 110.69 | 113.80 |
| 26 | BB | 739 | A | C5-C6-N6 | -6.21 | 118.73 | 123.70 |
| 26 | BB | 1075 | C | C3'-C2'-C1' | 6.21 | 106.47 | 101.50 |
| 26 | BB | 1588 | G | N1-C6-O6 | 6.21 | 123.63 | 119.90 |
| 26 | BB | 2065 | C | O4'-C1'-C2' | 6.21 | 113.19 | 107.60 |
| 26 | BB | 2229 | U | N3-C2-O2 | -6.21 | 117.85 | 122.20 |
| 1 | AA | 154 | U | C5-C4-O4 | -6.21 | 122.17 | 125.90 |
| 1 | AA | 218 | U | C3'-C2'-C1' | -6.21 | 96.53 | 101.50 |
| 1 | AA | 978 | A | N1-C2-N3 | -6.21 | 126.19 | 129.30 |
| 1 | AA | 1252 | A | C5'-C4'-O4' | 6.21 | 116.55 | 109.10 |
| 26 | BB | 410 | G | N3-C2-N2 | -6.21 | 115.55 | 119.90 |
| 26 | BB | 418 | C | C5-C4-N4 | -6.21 | 115.85 | 120.20 |
| 26 | BB | 675 | A | C4-C5-N7 | 6.21 | 113.81 | 110.70 |
| 26 | BB | 739 | A | C6-C5-N7 | 6.21 | 136.65 | 132.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 791 | C | C2-N3-C4 | 6.21 | 123.01 | 119.90 |
| 26 | BB | 1096 | A | C8-N9-C4 | -6.21 | 103.31 | 105.80 |
| 26 | BB | 1857 | G | N3-C4-N9 | 6.21 | 129.73 | 126.00 |
| 26 | BB | 1913 | A | C5-C6-N6 | -6.21 | 118.73 | 123.70 |
| 26 | BB | 2169 | A | C6-C5-N7 | 6.21 | 136.65 | 132.30 |
| 26 | BB | 2677 | G | N3-C4-C5 | -6.21 | 125.49 | 128.60 |
| 26 | BB | 2869 | G | C8-N9-C1' | 6.21 | 135.08 | 127.00 |
| 26 | BB | 119 | A | N9-C4-C5 | 6.21 | 108.28 | 105.80 |
| 26 | BB | 327 | G | N1-C2-N3 | -6.21 | 120.17 | 123.90 |
| 26 | BB | 399 | U | N1-C2-O2 | 6.21 | 127.15 | 122.80 |
| 26 | BB | 1243 | C | C2-N1-C1' | -6.21 | 111.97 | 118.80 |
| 26 | BB | 1655 | A | C5-C6-N1 | 6.21 | 120.81 | 117.70 |
| 26 | BB | 2064 | C | O4'-C1'-N1 | 6.21 | 113.17 | 108.20 |
| 1 | AA | 268 | U | C6-N1-C2 | -6.21 | 117.28 | 121.00 |
| 1 | AA | 573 | A | C4'-C3'-C2' | -6.21 | 96.39 | 102.60 |
| 1 | AA | 722 | G | C5-C6-N1 | -6.21 | 108.39 | 111.50 |
| 1 | AA | 792 | A | C4-C5-N7 | 6.21 | 113.80 | 110.70 |
| 1 | AA | 890 | G | N3-C4-C5 | -6.21 | 125.50 | 128.60 |
| 1 | AA | 941 | G | C2-N3-C4 | 6.21 | 115.00 | 111.90 |
| 1 | AA | 1194 | U | N1-C1'-C2' | -6.21 | 105.17 | 112.00 |
| 1 | AA | 1453 | G | C8-N9-C4 | -6.21 | 103.92 | 106.40 |
| 25 | BA | 13 | G | C6-C5-N7 | -6.21 | 126.67 | 130.40 |
| 26 | BB | 709 | U | C4-C5-C6 | 6.21 | 123.42 | 119.70 |
| 26 | BB | 1477 | A | C8-N9-C4 | -6.21 | 103.32 | 105.80 |
| 26 | BB | 1494 | A | O4'-C1'-N9 | 6.21 | 113.17 | 108.20 |
| 26 | BB | 1536 | C | O4'-C1'-N1 | 6.21 | 113.17 | 108.20 |
| 26 | BB | 1873 | G | N3-C2-N2 | 6.21 | 124.25 | 119.90 |
| 26 | BB | 2271 | G | C5-C6-N1 | 6.21 | 114.61 | 111.50 |
| 26 | BB | 2602 | A | O4'-C4'-C3' | 6.21 | 111.07 | 106.10 |
| 26 | BB | 2739 | U | C5-C6-N1 | -6.21 | 119.60 | 122.70 |
| 26 | BB | 2770 | G | P-O3'-C3' | 6.21 | 127.15 | 119.70 |
| 1 | AA | 111 | G | C6-C5-N7 | 6.21 | 134.12 | 130.40 |
| 25 | BA | 20 | G | C5-C6-O6 | -6.21 | 124.88 | 128.60 |
| 26 | BB | 171 | U | C5'-C4'-O4' | 6.21 | 116.55 | 109.10 |
| 26 | BB | 350 | G | C5-C6-N1 | -6.21 | 108.40 | 111.50 |
| 26 | BB | 364 | C | N3-C2-O2 | 6.21 | 126.24 | 121.90 |
| 26 | BB | 1129 | A | C5-N7-C8 | -6.21 | 100.80 | 103.90 |
| 26 | BB | 2255 | G | O4'-C1'-N9 | 6.21 | 113.17 | 108.20 |
| 26 | BB | 2775 | G | P-O3'-C3' | 6.21 | 127.15 | 119.70 |
| 40 | BP | 37 | THR | O-C-N | -6.21 | 112.77 | 122.70 |
| 41 | BQ | 1 | MET | CG-SD-CE | 6.21 | 110.13 | 100.20 |
| 42 | BR | 77 | SER | N-CA-CB | -6.21 | 101.19 | 110.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 44 | BT | 84 | ARG | NE-CZ-NH2 | 6.21 | 123.40 | 120.30 |
| 6 | AF | 87 | ARG | NE-CZ-NH2 | -6.21 | 117.20 | 120.30 |
| 25 | BA | 94 | A | N3-C4-N9 | 6.21 | 132.36 | 127.40 |
| 26 | BB | 465 | G | C6-N1-C2 | -6.21 | 121.38 | 125.10 |
| 26 | BB | 615 | U | O4'-C1'-N1 | 6.21 | 113.16 | 108.20 |
| 26 | BB | 1513 | U | C4'-C3'-C2' | -6.21 | 96.39 | 102.60 |
| 26 | BB | 1675 | C | C3'-C2'-C1' | 6.21 | 106.46 | 101.50 |
| 26 | BB | 2136 | G | N1-C6-O6 | -6.21 | 116.18 | 119.90 |
| 26 | BB | 2634 | A | C1'-O4'-C4' | 6.21 | 114.86 | 109.90 |
| 38 | BN | 60 | ARG | NE-CZ-NH2 | 6.21 | 123.40 | 120.30 |
| 1 | AA | 2 | A | C8-N9-C4 | -6.20 | 103.32 | 105.80 |
| 1 | AA | 570 | G | C5'-C4'-O4' | 6.20 | 116.55 | 109.10 |
| 1 | AA | 582 | C | C4-C5-C6 | 6.20 | 120.50 | 117.40 |
| 1 | AA | 730 | G | C8-N9-C1' | 6.20 | 135.06 | 127.00 |
| 1 | AA | 1283 | U | N1-C2-N3 | 6.20 | 118.62 | 114.90 |
| 1 | AA | 1372 | U | O4'-C1'-N1 | 6.20 | 113.16 | 108.20 |
| 1 | AA | 1386 | G | O4'-C1'-N9 | 6.20 | 113.16 | 108.20 |
| 1 | AA | 1503 | A | N7-C8-N9 | 6.20 | 116.90 | 113.80 |
| 26 | BB | 420 | C | C5-C4-N4 | 6.20 | 124.54 | 120.20 |
| 26 | BB | 530 | G | C5-C6-O6 | -6.20 | 124.88 | 128.60 |
| 26 | BB | 562 | U | C5-C6-N1 | -6.20 | 119.60 | 122.70 |
| 26 | BB | 1296 | G | N1-C6-O6 | -6.20 | 116.18 | 119.90 |
| 26 | BB | 1386 | C | C5'-C4'-O4' | 6.20 | 116.54 | 109.10 |
| 26 | BB | 1524 | G | C5'-C4'-O4' | 6.20 | 116.55 | 109.10 |
| 26 | BB | 2029 | G | C8-N9-C4 | -6.20 | 103.92 | 106.40 |
| 26 | BB | 2038 | G | C4-C5-C6 | 6.20 | 122.52 | 118.80 |
| 47 | BW | 74 | ALA | CB-CA-C | 6.20 | 119.41 | 110.10 |
| 1 | AA | 109 | A | C5'-C4'-C3' | -6.20 | 106.08 | 116.00 |
| 26 | BB | 1704 | C | C5'-C4'-C3' | -6.20 | 106.08 | 116.00 |
| 35 | BK | 26 | ALA | N-CA-CB | -6.20 | 101.42 | 110.10 |
| 36 | BL | 74 | TYR | CB-CG-CD2 | -6.20 | 117.28 | 121.00 |
| 1 | AA | 27 | G | N1-C2-N2 | -6.20 | 110.62 | 116.20 |
| 1 | AA | 208 | U | C5-C4-O4 | 6.20 | 129.62 | 125.90 |
| 1 | AA | 1074 | G | C6-C5-N7 | -6.20 | 126.68 | 130.40 |
| 26 | BB | 420 | C | C2-N3-C4 | -6.20 | 116.80 | 119.90 |
| 26 | BB | 485 | C | N3-C4-C5 | -6.20 | 119.42 | 121.90 |
| 26 | BB | 870 | U | N3-C4-O4 | -6.20 | 115.06 | 119.40 |
| 26 | BB | 2174 | C | N3-C2-O2 | -6.20 | 117.56 | 121.90 |
| 26 | BB | 2497 | A | N1-C6-N6 | 6.20 | 122.32 | 118.60 |
| 26 | BB | 2627 | G | C8-N9-C4 | -6.20 | 103.92 | 106.40 |
| 26 | BB | 2708 | G | N9-C1'-C2' | -6.20 | 105.18 | 112.00 |
| 26 | BB | 2816 | G | N1-C2-N3 | -6.20 | 120.18 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 84 | U | N3-C4-O4 | 6.20 | 123.74 | 119.40 |
| 1 | AA | 376 | G | O4'-C1'-N9 | 6.20 | 113.16 | 108.20 |
| 1 | AA | 1047 | G | C6-N1-C2 | -6.20 | 121.38 | 125.10 |
| 1 | AA | 1190 | G | C6-C5-N7 | 6.20 | 134.12 | 130.40 |
| 3 | AC | 45 | G | N3-C4-C5 | -6.20 | 125.50 | 128.60 |
| 26 | BB | 27 | G | O4'-C4'-C3' | 6.20 | 111.06 | 106.10 |
| 26 | BB | 620 | G | C8-N9-C4 | -6.20 | 103.92 | 106.40 |
| 26 | BB | 821 | A | N1-C6-N6 | 6.20 | 122.32 | 118.60 |
| 26 | BB | 848 | C | P-O5'-C5' | -6.20 | 110.98 | 120.90 |
| 26 | BB | 907 | G | C4-C5-N7 | -6.20 | 108.32 | 110.80 |
| 26 | BB | 1723 | G | C2-N3-C4 | 6.20 | 115.00 | 111.90 |
| 26 | BB | 2223 | G | C4'-C3'-C2' | -6.20 | 96.40 | 102.60 |
| 26 | BB | 2439 | A | O4'-C1'-N9 | 6.20 | 113.16 | 108.20 |
| 1 | AA | 251 | G | C5-N7-C8 | -6.20 | 101.20 | 104.30 |
| 1 | AA | 933 | G | C4-C5-N7 | 6.20 | 113.28 | 110.80 |
| 26 | BB | 458 | G | C8-N9-C1' | 6.20 | 135.06 | 127.00 |
| 26 | BB | 556 | A | C6-N1-C2 | 6.20 | 122.32 | 118.60 |
| 26 | BB | 946 | C | C5-C6-N1 | -6.20 | 117.90 | 121.00 |
| 26 | BB | 1687 | G | N3-C4-N9 | 6.20 | 129.72 | 126.00 |
| 26 | BB | 2095 | A | O4'-C1'-N9 | 6.20 | 113.16 | 108.20 |
| 1 | AA | 21 | G | C4-C5-C6 | 6.20 | 122.52 | 118.80 |
| 1 | AA | 302 | G | N1-C6-O6 | 6.20 | 123.62 | 119.90 |
| 1 | AA | 545 | C | C6-N1-C2 | -6.20 | 117.82 | 120.30 |
| 1 | AA | 575 | G | N3-C4-C5 | -6.20 | 125.50 | 128.60 |
| 1 | AA | 725 | G | N3-C4-N9 | -6.20 | 122.28 | 126.00 |
| 1 | AA | 791 | G | O4'-C1'-N9 | 6.20 | 113.16 | 108.20 |
| 1 | AA | 1002 | G | C5-C6-O6 | 6.20 | 132.32 | 128.60 |
| 16 | AP | 22 | TYR | CG-CD1-CE1 | -6.20 | 116.34 | 121.30 |
| 26 | BB | 107 | G | C1'-O4'-C4' | -6.20 | 104.94 | 109.90 |
| 26 | BB | 277 | G | P-O3'-C3' | 6.20 | 127.14 | 119.70 |
| 26 | BB | 531 | C | C5-C6-N1 | 6.20 | 124.10 | 121.00 |
| 26 | BB | 760 | G | N3-C4-C5 | -6.20 | 125.50 | 128.60 |
| 26 | BB | 1517 | G | N3-C4-N9 | 6.20 | 129.72 | 126.00 |
| 26 | BB | 2138 | G | C3'-C2'-C1' | -6.20 | 96.54 | 101.50 |
| 26 | BB | 2172 | U | N3-C2-O2 | 6.20 | 126.54 | 122.20 |
| 26 | BB | 2755 | C | C5-C6-N1 | 6.20 | 124.10 | 121.00 |
| 1 | AA | 535 | A | O4'-C4'-C3' | 6.19 | 111.06 | 106.10 |
| 1 | AA | 807 | A | C4-C5-N7 | -6.19 | 107.60 | 110.70 |
| 25 | BA | 68 | C | C5-C4-N4 | -6.19 | 115.86 | 120.20 |
| 26 | BB | 1154 | G | N9-C1'-C2' | -6.19 | 105.19 | 112.00 |
| 26 | BB | 2098 | U | N1-C1'-C2' | -6.19 | 105.19 | 112.00 |
| 26 | BB | 2217 | G | N7-C8-N9 | 6.19 | 116.20 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 187 | G | C1'-O4'-C4' | 6.19 | 114.85 | 109.90 |
| 1 | AA | 247 | G | C5'-C4'-O4' | 6.19 | 116.53 | 109.10 |
| 1 | AA | 413 | G | N1-C2-N3 | 6.19 | 127.61 | 123.90 |
| 1 | AA | 531 | U | C6-N1-C2 | -6.19 | 117.28 | 121.00 |
| 1 | AA | 1387 | G | C1'-O4'-C4' | -6.19 | 104.95 | 109.90 |
| 26 | BB | 515 | A | C8-N9-C4 | 6.19 | 108.28 | 105.80 |
| 26 | BB | 725 | G | N3-C4-C5 | -6.19 | 125.50 | 128.60 |
| 26 | BB | 824 | U | C5-C4-O4 | 6.19 | 129.62 | 125.90 |
| 26 | BB | 1833 | C | C5'-C4'-O4' | 6.19 | 116.53 | 109.10 |
| 26 | BB | 2248 | C | O4'-C1'-N1 | 6.19 | 113.15 | 108.20 |
| 26 | BB | 2565 | A | C8-N9-C4 | -6.19 | 103.32 | 105.80 |
| 26 | BB | 2599 | G | O4'-C1'-N9 | 6.19 | 113.15 | 108.20 |
| 26 | BB | 2607 | G | O5'-P-OP1 | -6.19 | 100.13 | 105.70 |
| 1 | AA | 97 | G | N3-C4-N9 | 6.19 | 129.71 | 126.00 |
| 1 | AA | 241 | G | C6-C5-N7 | -6.19 | 126.69 | 130.40 |
| 1 | AA | 1400 | C | C2-N1-C1' | 6.19 | 125.61 | 118.80 |
| 26 | BB | 977 | G | N3-C4-C5 | -6.19 | 125.50 | 128.60 |
| 26 | BB | 1122 | G | C8-N9-C4 | -6.19 | 103.92 | 106.40 |
| 26 | BB | 1190 | G | O4'-C1'-N9 | 6.19 | 113.15 | 108.20 |
| 26 | BB | 2636 | C | O5'-P-OP2 | -6.19 | 100.13 | 105.70 |
| 35 | BK | 37 | PHE | CB-CG-CD2 | -6.19 | 116.47 | 120.80 |
| 1 | AA | 6 | G | N3-C2-N2 | -6.19 | 115.57 | 119.90 |
| 1 | AA | 606 | G | N3-C4-C5 | -6.19 | 125.51 | 128.60 |
| 1 | AA | 782 | A | P-O3'-C3' | 6.19 | 127.13 | 119.70 |
| 4 | AD | 22 | A | P-O5'-C5' | 6.19 | 130.80 | 120.90 |
| 26 | BB | 1079 | C | O5'-P-OP2 | -6.19 | 100.13 | 105.70 |
| 26 | BB | 1815 | A | N3-C4-C5 | 6.19 | 131.13 | 126.80 |
| 26 | BB | 1860 | G | N1-C2-N2 | 6.19 | 121.77 | 116.20 |
| 26 | BB | 2415 | G | N1-C2-N3 | -6.19 | 120.19 | 123.90 |
| 1 | AA | 647 | C | N1-C2-O2 | 6.19 | 122.61 | 118.90 |
| 1 | AA | 851 | G | C8-N9-C4 | -6.19 | 103.92 | 106.40 |
| 1 | AA | 940 | C | N1-C2-O2 | 6.19 | 122.61 | 118.90 |
| 1 | AA | 1344 | C | N3-C4-C5 | -6.19 | 119.42 | 121.90 |
| 1 | AA | 1360 | A | C6-N1-C2 | -6.19 | 114.89 | 118.60 |
| 3 | AC | 52 | U | C6-N1-C1' | -6.19 | 112.54 | 121.20 |
| 26 | BB | 35 | G | N3-C4-N9 | 6.19 | 129.71 | 126.00 |
| 26 | BB | 542 | C | C4-C5-C6 | -6.19 | 114.31 | 117.40 |
| 26 | BB | 633 | A | C5-N7-C8 | 6.19 | 106.99 | 103.90 |
| 26 | BB | 961 | C | C5-C4-N4 | -6.19 | 115.87 | 120.20 |
| 26 | BB | 1753 | G | C8-N9-C4 | -6.19 | 103.92 | 106.40 |
| 26 | BB | 1891 | G | C5-C6-N1 | 6.19 | 114.59 | 111.50 |
| 26 | BB | 2035 | G | C3'-C2'-C1' | -6.19 | 96.55 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2655 | G | N3-C2-N2 | -6.19 | 115.57 | 119.90 |
| 1 | AA | 541 | G | C8-N9-C4 | -6.19 | 103.93 | 106.40 |
| 1 | AA | 1383 | C | C6-N1-C2 | -6.19 | 117.83 | 120.30 |
| 1 | AA | 1500 | A | C5'-C4'-O4' | 6.19 | 116.52 | 109.10 |
| 26 | BB | 62 | U | O4'-C1'-N1 | 6.19 | 113.15 | 108.20 |
| 26 | BB | 959 | A | C4'-C3'-C2' | 6.19 | 108.79 | 102.60 |
| 1 | AA | 1117 | A | C5-N7-C8 | -6.18 | 100.81 | 103.90 |
| 1 | AA | 1475 | G | C2-N3-C4 | -6.18 | 108.81 | 111.90 |
| 26 | BB | 305 | C | C5'-C4'-C3' | -6.18 | 106.10 | 116.00 |
| 26 | BB | 560 | C | N3-C2-O2 | -6.18 | 117.57 | 121.90 |
| 26 | BB | 564 | C | C2-N3-C4 | 6.18 | 122.99 | 119.90 |
| 26 | BB | 1480 | C | C5-C4-N4 | 6.18 | 124.53 | 120.20 |
| 26 | BB | 1586 | A | C5-C6-N1 | -6.18 | 114.61 | 117.70 |
| 26 | BB | 2003 | A | C6-C5-N7 | -6.18 | 127.97 | 132.30 |
| 26 | BB | 2044 | C | C5-C6-N1 | 6.18 | 124.09 | 121.00 |
| 26 | BB | 2241 | A | C4-C5-C6 | -6.18 | 113.91 | 117.00 |
| 1 | AA | 513 | C | O4'-C1'-N1 | 6.18 | 113.15 | 108.20 |
| 1 | AA | 974 | A | C6-C5-N7 | 6.18 | 136.63 | 132.30 |
| 25 | BA | 84 | G | O4'-C1'-N9 | 6.18 | 113.15 | 108.20 |
| 26 | BB | 205 | G | N3-C4-N9 | 6.18 | 129.71 | 126.00 |
| 26 | BB | 1426 | G | N9-C4-C5 | 6.18 | 107.87 | 105.40 |
| 26 | BB | 1741 | C | C4'-C3'-C2' | -6.18 | 96.42 | 102.60 |
| 26 | BB | 1804 | C | C5'-C4'-O4' | 6.18 | 116.52 | 109.10 |
| 26 | BB | 2367 | G | C8-N9-C4 | -6.18 | 103.93 | 106.40 |
| 1 | AA | 169 | C | C5'-C4'-C3' | -6.18 | 106.11 | 116.00 |
| 1 | AA | 530 | G | N3-C2-N2 | 6.18 | 124.23 | 119.90 |
| 1 | AA | 832 | G | C8-N9-C4 | -6.18 | 103.93 | 106.40 |
| 2 | AB | 61 | C | C2-N3-C4 | -6.18 | 116.81 | 119.90 |
| 26 | BB | 519 | U | C2-N3-C4 | -6.18 | 123.29 | 127.00 |
| 26 | BB | 681 | G | C3'-C2'-C1' | -6.18 | 96.56 | 101.50 |
| 26 | BB | 1907 | G | C8-N9-C4 | -6.18 | 103.93 | 106.40 |
| 26 | BB | 1995 | U | O4'-C1'-N1 | 6.18 | 113.14 | 108.20 |
| 26 | BB | 2560 | A | C6-N1-C2 | -6.18 | 114.89 | 118.60 |
| 1 | AA | 147 | G | C1'-O4'-C4' | 6.18 | 114.84 | 109.90 |
| 1 | AA | 426 | U | N3-C2-O2 | 6.18 | 126.53 | 122.20 |
| 1 | AA | 1445 | U | C3'-C2'-C1' | -6.18 | 96.56 | 101.50 |
| 1 | AA | 1453 | G | C4'-C3'-C2' | -6.18 | 96.42 | 102.60 |
| 3 | AC | 14 | G | O4'-C4'-C3' | 6.18 | 111.04 | 106.10 |
| 21 | AU | 62 | ARG | NE-CZ-NH1 | 6.18 | 123.39 | 120.30 |
| 26 | BB | 138 | U | C3'-C2'-C1' | 6.18 | 106.44 | 101.50 |
| 26 | BB | 151 | C | C5-C4-N4 | 6.18 | 124.53 | 120.20 |
| 26 | BB | 314 | C | O4'-C1'-N1 | 6.18 | 113.14 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 452 | G | C3'-C2'-C1' | 6.18 | 106.44 | 101.50 |
| 26 | BB | 580 | U | C2-N3-C4 | -6.18 | 123.29 | 127.00 |
| 26 | BB | 651 | G | N7-C8-N9 | 6.18 | 116.19 | 113.10 |
| 26 | BB | 1198 | U | C5'-C4'-O4' | 6.18 | 116.51 | 109.10 |
| 26 | BB | 1282 | U | C5-C6-N1 | -6.18 | 119.61 | 122.70 |
| 26 | BB | 1309 | G | N9-C4-C5 | 6.18 | 107.87 | 105.40 |
| 26 | BB | 1420 | A | C4-C5-N7 | -6.18 | 107.61 | 110.70 |
| 26 | BB | 1493 | C | C4-C5-C6 | 6.18 | 120.49 | 117.40 |
| 26 | BB | 1619 | G | C5-C6-O6 | -6.18 | 124.89 | 128.60 |
| 26 | BB | 1816 | C | C1'-O4'-C4' | 6.18 | 114.84 | 109.90 |
| 26 | BB | 2398 | U | N3-C4-O4 | 6.18 | 123.73 | 119.40 |
| 26 | BB | 2512 | C | C5'-C4'-C3' | 6.18 | 125.89 | 116.00 |
| 51 | B0 | 23 | ARG | NE-CZ-NH2 | -6.18 | 117.21 | 120.30 |
| 1 | AA | 894 | G | C5-C6-N1 | -6.18 | 108.41 | 111.50 |
| 1 | AA | 1325 | C | N1-C2-O2 | 6.18 | 122.61 | 118.90 |
| 26 | BB | 1322 | A | C4-C5-C6 | -6.18 | 113.91 | 117.00 |
| 26 | BB | 1684 | G | N9-C4-C5 | 6.18 | 107.87 | 105.40 |
| 26 | BB | 2667 | C | N3-C4-C5 | -6.18 | 119.43 | 121.90 |
| 26 | BB | 2870 | C | N3-C4-N4 | 6.18 | 122.33 | 118.00 |
| 1 | AA | 2 | A | C6-C5-N7 | -6.18 | 127.98 | 132.30 |
| 1 | AA | 475 | C | O4'-C4'-C3' | 6.18 | 111.04 | 106.10 |
| 1 | AA | 1007 | U | C4-C5-C6 | 6.18 | 123.41 | 119.70 |
| 1 | AA | 1017 | U | C6-N1-C2 | -6.18 | 117.29 | 121.00 |
| 1 | AA | 1222 | G | C6-N1-C2 | -6.18 | 121.39 | 125.10 |
| 1 | AA | 1259 | C | C2-N3-C4 | 6.18 | 122.99 | 119.90 |
| 1 | AA | 1387 | G | C4-C5-N7 | 6.18 | 113.27 | 110.80 |
| 1 | AA | 1388 | C | C4'-C3'-C2' | -6.18 | 96.42 | 102.60 |
| 26 | BB | 524 | G | O4'-C1'-N9 | 6.18 | 113.14 | 108.20 |
| 26 | BB | 1338 | G | C8-N9-C4 | -6.18 | 103.93 | 106.40 |
| 26 | BB | 1489 | C | N1-C2-O2 | 6.18 | 122.61 | 118.90 |
| 26 | BB | 2313 | C | C6-N1-C2 | -6.18 | 117.83 | 120.30 |
| 26 | BB | 2446 | G | C4-C5-N7 | 6.18 | 113.27 | 110.80 |
| 26 | BB | 2588 | G | C8-N9-C1' | 6.18 | 135.03 | 127.00 |
| 50 | BZ | 44 | ARG | NE-CZ-NH2 | 6.18 | 123.39 | 120.30 |
| 1 | AA | 821 | G | O4'-C1'-N9 | 6.17 | 113.14 | 108.20 |
| 1 | AA | 995 | C | C5'-C4'-O4' | 6.17 | 116.51 | 109.10 |
| 1 | AA | 1097 | C | C5-C6-N1 | 6.17 | 124.09 | 121.00 |
| 1 | AA | 1151 | A | C3'-C2'-C1' | 6.17 | 106.44 | 101.50 |
| 1 | AA | 1472 | U | C4-C5-C6 | 6.17 | 123.40 | 119.70 |
| 2 | AB | 28 | C | N3-C4-C5 | -6.17 | 119.43 | 121.90 |
| 11 | AK | 79 | ARG | CD-NE-CZ | 6.17 | 132.24 | 123.60 |
| 26 | BB | 326 | G | C5-C6-N1 | -6.17 | 108.41 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 568 | U | N1-C1'-C2' | 6.17 | 122.03 | 114.00 |
| 26 | BB | 855 | G | C5-C6-N1 | 6.17 | 114.59 | 111.50 |
| 26 | BB | 1169 | A | C5-N7-C8 | -6.17 | 100.81 | 103.90 |
| 26 | BB | 1198 | U | C5-C4-O4 | -6.17 | 122.20 | 125.90 |
| 26 | BB | 1578 | U | P-O5'-C5' | 6.17 | 130.78 | 120.90 |
| 1 | AA | 151 | A | O4'-C1'-N9 | 6.17 | 113.14 | 108.20 |
| 1 | AA | 931 | C | N3-C2-O2 | -6.17 | 117.58 | 121.90 |
| 1 | AA | 1400 | C | N3-C4-C5 | -6.17 | 119.43 | 121.90 |
| 26 | BB | 1702 | G | C5-C6-N1 | 6.17 | 114.59 | 111.50 |
| 26 | BB | 1808 | A | N1-C6-N6 | 6.17 | 122.30 | 118.60 |
| 26 | BB | 2574 | G | C4'-C3'-C2' | -6.17 | 96.43 | 102.60 |
| 28 | BD | 102 | TYR | CA-CB-CG | 6.17 | 125.13 | 113.40 |
| 1 | AA | 283 | U | N3-C4-O4 | 6.17 | 123.72 | 119.40 |
| 1 | AA | 927 | G | C5-N7-C8 | -6.17 | 101.21 | 104.30 |
| 1 | AA | 963 | G | O4'-C1'-N9 | 6.17 | 113.14 | 108.20 |
| 1 | AA | 974 | A | C4'-C3'-C2' | -6.17 | 96.43 | 102.60 |
| 2 | AB | 12 | U | C4-C5-C6 | 6.17 | 123.40 | 119.70 |
| 3 | AC | 25 | U | C2-N1-C1' | 6.17 | 125.11 | 117.70 |
| 4 | AD | 72 | C | O4'-C1'-N1 | 6.17 | 113.14 | 108.20 |
| 26 | BB | 436 | C | N1-C2-N3 | -6.17 | 114.88 | 119.20 |
| 26 | BB | 595 | C | C5-C6-N1 | 6.17 | 124.09 | 121.00 |
| 26 | BB | 1424 | G | C8-N9-C1' | 6.17 | 135.02 | 127.00 |
| 26 | BB | 2079 | U | C5-C6-N1 | -6.17 | 119.61 | 122.70 |
| 26 | BB | 2687 | U | C5-C6-N1 | -6.17 | 119.61 | 122.70 |
| 54 | B3 | 12 | ARG | NE-CZ-NH1 | 6.17 | 123.39 | 120.30 |
| 1 | AA | 900 | A | N1-C6-N6 | 6.17 | 122.30 | 118.60 |
| 1 | AA | 1074 | G | C6-N1-C2 | -6.17 | 121.40 | 125.10 |
| 3 | AC | 55 | A | N3-C4-N9 | -6.17 | 122.46 | 127.40 |
| 15 | AO | 55 | ARG | NE-CZ-NH1 | 6.17 | 123.39 | 120.30 |
| 26 | BB | 562 | U | C5-C4-O4 | 6.17 | 129.60 | 125.90 |
| 26 | BB | 1970 | A | P-O3'-C3' | 6.17 | 127.10 | 119.70 |
| 26 | BB | 2333 | A | O4'-C4'-C3' | 6.17 | 111.04 | 106.10 |
| 1 | AA | 94 | G | N9-C4-C5 | 6.17 | 107.87 | 105.40 |
| 1 | AA | 408 | A | C6-N1-C2 | -6.17 | 114.90 | 118.60 |
| 1 | AA | 812 | G | C5'-C4'-C3' | -6.17 | 106.13 | 116.00 |
| 4 | AD | 61 | U | C5-C6-N1 | -6.17 | 119.61 | 122.70 |
| 26 | BB | 849 | A | C5-C6-N6 | -6.17 | 118.77 | 123.70 |
| 26 | BB | 1317 | G | N3-C4-C5 | -6.17 | 125.52 | 128.60 |
| 26 | BB | 1979 | U | C5-C4-O4 | 6.17 | 129.60 | 125.90 |
| 26 | BB | 2089 | C | N3-C2-O2 | -6.17 | 117.58 | 121.90 |
| 26 | BB | 2323 | G | N3-C4-N9 | 6.17 | 129.70 | 126.00 |
| 26 | BB | 2526 | G | N7-C8-N9 | 6.17 | 116.19 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2594 | C | C4-C5-C6 | 6.17 | 120.48 | 117.40 |
| 26 | BB | 2757 | A | N7-C8-N9 | -6.17 | 110.72 | 113.80 |
| 1 | AA | 64 | G | C5'-C4'-O4' | 6.17 | 116.50 | 109.10 |
| 1 | AA | 173 | U | C2'-C3'-O3' | 6.17 | 123.57 | 113.70 |
| 1 | AA | 188 | C | N1-C1'-C2' | 6.17 | 122.02 | 114.00 |
| 1 | AA | 710 | G | C4'-C3'-C2' | -6.17 | 96.43 | 102.60 |
| 1 | AA | 845 | A | C4-C5-N7 | 6.17 | 113.78 | 110.70 |
| 1 | AA | 878 | A | C5-C6-N6 | -6.17 | 118.77 | 123.70 |
| 1 | AA | 1221 | G | O3'-P-O5' | -6.17 | 92.28 | 104.00 |
| 1 | AA | 1305 | G | C6-C5-N7 | -6.17 | 126.70 | 130.40 |
| 1 | AA | 1513 | A | C5-N7-C8 | -6.17 | 100.82 | 103.90 |
| 25 | BA | 2 | G | N3-C2-N2 | -6.17 | 115.58 | 119.90 |
| 26 | BB | 37 | C | C6-N1-C2 | 6.17 | 122.77 | 120.30 |
| 26 | BB | 134 | G | C5-C6-N1 | 6.17 | 114.58 | 111.50 |
| 26 | BB | 278 | A | C5'-C4'-O4' | 6.17 | 116.50 | 109.10 |
| 26 | BB | 1130 | U | C5-C6-N1 | -6.17 | 119.62 | 122.70 |
| 26 | BB | 1792 | G | N3-C4-C5 | -6.17 | 125.52 | 128.60 |
| 26 | BB | 1813 | G | C8-N9-C4 | -6.17 | 103.93 | 106.40 |
| 26 | BB | 2510 | C | N3-C2-O2 | -6.17 | 117.58 | 121.90 |
| 1 | AA | 1159 | U | O4'-C1'-N1 | 6.17 | 113.13 | 108.20 |
| 21 | AU | 46 | THR | CA-CB-CG2 | -6.17 | 103.77 | 112.40 |
| 26 | BB | 572 | A | C6-C5-N7 | -6.17 | 127.98 | 132.30 |
| 26 | BB | 989 | G | C1'-O4'-C4' | -6.17 | 104.97 | 109.90 |
| 26 | BB | 996 | A | C5-C6-N1 | 6.17 | 120.78 | 117.70 |
| 26 | BB | 1413 | A | N9-C1'-C2' | -6.17 | 105.22 | 112.00 |
| 26 | BB | 1444 | G | C6-N1-C2 | -6.17 | 121.40 | 125.10 |
| 26 | BB | 2426 | A | C2-N3-C4 | 6.17 | 113.68 | 110.60 |
| 26 | BB | 2843 | G | C5-N7-C8 | 6.17 | 107.38 | 104.30 |
| 26 | BB | 2866 | U | O4'-C4'-C3' | 6.17 | 111.03 | 106.10 |
| 1 | AA | 134 | G | C4-C5-C6 | 6.16 | 122.50 | 118.80 |
| 1 | AA | 871 | U | N1-C2-N3 | 6.16 | 118.60 | 114.90 |
| 1 | AA | 1161 | C | N3-C2-O2 | -6.16 | 117.58 | 121.90 |
| 1 | AA | 1169 | A | N7-C8-N9 | -6.16 | 110.72 | 113.80 |
| 26 | BB | 257 | C | C1'-O4'-C4' | 6.16 | 114.83 | 109.90 |
| 26 | BB | 589 | U | N3-C2-O2 | -6.16 | 117.89 | 122.20 |
| 26 | BB | 853 | C | C1'-O4'-C4' | 6.16 | 114.83 | 109.90 |
| 26 | BB | 1126 | A | C6-C5-N7 | -6.16 | 127.99 | 132.30 |
| 26 | BB | 1360 | G | N3-C4-C5 | -6.16 | 125.52 | 128.60 |
| 26 | BB | 1906 | G | C6-N1-C2 | 6.16 | 128.80 | 125.10 |
| 26 | BB | 1968 | G | C5-C6-O6 | 6.16 | 132.30 | 128.60 |
| 1 | AA | 297 | G | N1-C2-N2 | -6.16 | 110.65 | 116.20 |
| 1 | AA | 576 | C | C5-C6-N1 | -6.16 | 117.92 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 39 | U | N3-C4-C5 | 6.16 | 118.30 | 114.60 |
| 26 | BB | 535 | G | N7-C8-N9 | 6.16 | 116.18 | 113.10 |
| 26 | BB | 635 | C | N1-C2-O2 | 6.16 | 122.60 | 118.90 |
| 26 | BB | 1956 | U | C5-C6-N1 | -6.16 | 119.62 | 122.70 |
| 26 | BB | 2554 | U | N3-C4-C5 | -6.16 | 110.90 | 114.60 |
| 26 | BB | 2631 | G | C6-N1-C2 | -6.16 | 121.40 | 125.10 |
| 1 | AA | 968 | A | N9-C1'-C2' | 6.16 | 122.01 | 114.00 |
| 26 | BB | 128 | C | N3-C4-N4 | 6.16 | 122.31 | 118.00 |
| 26 | BB | 979 | A | O4'-C1'-N9 | 6.16 | 113.13 | 108.20 |
| 26 | BB | 991 | C | C2-N3-C4 | 6.16 | 122.98 | 119.90 |
| 26 | BB | 1455 | G | C4-C5-C6 | 6.16 | 122.50 | 118.80 |
| 26 | BB | 2280 | G | C6-N1-C2 | -6.16 | 121.40 | 125.10 |
| 26 | BB | 2325 | G | C4'-C3'-C2' | 6.16 | 108.76 | 102.60 |
| 26 | BB | 2375 | G | N9-C4-C5 | 6.16 | 107.86 | 105.40 |
| 26 | BB | 2423 | U | P-O5'-C5' | 6.16 | 130.76 | 120.90 |
| 26 | BB | 2517 | C | C5-C4-N4 | 6.16 | 124.51 | 120.20 |
| 26 | BB | 2633 | G | N9-C1'-C2' | -6.16 | 105.22 | 112.00 |
| 1 | AA | 251 | G | C5-C6-N1 | 6.16 | 114.58 | 111.50 |
| 4 | AD | 64 | G | C4'-C3'-C2' | -6.16 | 96.44 | 102.60 |
| 26 | BB | 260 | G | C4-C5-N7 | -6.16 | 108.34 | 110.80 |
| 26 | BB | 298 | G | C4'-C3'-C2' | -6.16 | 96.44 | 102.60 |
| 26 | BB | 511 | U | O4'-C1'-C2' | -6.16 | 99.64 | 105.80 |
| 26 | BB | 865 | C | N3-C4-C5 | -6.16 | 119.44 | 121.90 |
| 26 | BB | 1076 | C | N1-C2-N3 | 6.16 | 123.51 | 119.20 |
| 26 | BB | 1136 | G | N1-C2-N3 | -6.16 | 120.20 | 123.90 |
| 26 | BB | 1631 | G | C5-N7-C8 | 6.16 | 107.38 | 104.30 |
| 26 | BB | 1876 | A | N7-C8-N9 | 6.16 | 116.88 | 113.80 |
| 26 | BB | 2031 | A | C5-N7-C8 | 6.16 | 106.98 | 103.90 |
| 26 | BB | 2649 | C | C4'-C3'-O3' | 6.16 | 125.32 | 113.00 |
| 1 | AA | 710 | G | C6-N1-C2 | -6.16 | 121.41 | 125.10 |
| 1 | AA | 1191 | A | C5-C6-N1 | 6.16 | 120.78 | 117.70 |
| 26 | BB | 1142 | A | P-O3'-C3' | 6.16 | 127.09 | 119.70 |
| 26 | BB | 1147 | A | C4-C5-N7 | -6.16 | 107.62 | 110.70 |
| 26 | BB | 1226 | A | C5-C6-N6 | -6.16 | 118.77 | 123.70 |
| 26 | BB | 2479 | U | N3-C2-O2 | -6.16 | 117.89 | 122.20 |
| 1 | AA | 509 | A | C1'-O4'-C4' | 6.16 | 114.82 | 109.90 |
| 1 | AA | 951 | G | N9-C1'-C2' | -6.16 | 105.23 | 112.00 |
| 1 | AA | 1222 | G | C5-C6-N1 | 6.16 | 114.58 | 111.50 |
| 1 | AA | 1511 | G | N9-C4-C5 | -6.16 | 102.94 | 105.40 |
| 2 | AB | 76 | A | C5'-C4'-O4' | 6.16 | 116.49 | 109.10 |
| 4 | AD | 51 | U | N1-C2-N3 | 6.16 | 118.59 | 114.90 |
| 4 | AD | 65 | G | C4-C5-N7 | -6.16 | 108.34 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 9 | AI | 114 | ASP | CB-CG-OD2 | 6.16 | 123.84 | 118.30 |
| 26 | BB | 1036 | G | N3-C4-C5 | -6.16 | 125.52 | 128.60 |
| 26 | BB | 1444 | G | N3-C4-C5 | -6.16 | 125.52 | 128.60 |
| 26 | BB | 1445 | G | N3-C2-N2 | 6.16 | 124.21 | 119.90 |
| 26 | BB | 1863 | G | C5-C6-O6 | -6.16 | 124.91 | 128.60 |
| 26 | BB | 2195 | U | C4-C5-C6 | 6.16 | 123.39 | 119.70 |
| 26 | BB | 2561 | U | N1-C1'-C2' | -6.16 | 105.23 | 112.00 |
| 26 | BB | 2661 | G | N1-C2-N2 | 6.16 | 121.74 | 116.20 |
| 26 | BB | 2773 | C | C4-C5-C6 | 6.16 | 120.48 | 117.40 |
| 26 | BB | 2820 | A | C4-C5-C6 | 6.16 | 120.08 | 117.00 |
| 32 | BH | 9 | VAL | CA-CB-CG2 | 6.16 | 120.13 | 110.90 |
| 36 | BL | 13 | ARG | NE-CZ-NH2 | 6.16 | 123.38 | 120.30 |
| 1 | AA | 848 | C | N1-C2-O2 | 6.15 | 122.59 | 118.90 |
| 1 | AA | 887 | G | N3-C2-N2 | -6.15 | 115.59 | 119.90 |
| 2 | AB | 10 | G | C5-C6-O6 | 6.15 | 132.29 | 128.60 |
| 26 | BB | 704 | G | C5-C6-N1 | 6.15 | 114.58 | 111.50 |
| 26 | BB | 1125 | G | C6-N1-C2 | -6.15 | 121.41 | 125.10 |
| 26 | BB | 2797 | U | C2-N1-C1' | 6.15 | 125.08 | 117.70 |
| 1 | AA | 76 | G | N9-C4-C5 | -6.15 | 102.94 | 105.40 |
| 1 | AA | 234 | C | C5'-C4'-O4' | 6.15 | 116.48 | 109.10 |
| 1 | AA | 249 | U | C6-N1-C1' | -6.15 | 112.58 | 121.20 |
| 1 | AA | 292 | G | C6-C5-N7 | -6.15 | 126.71 | 130.40 |
| 1 | AA | 983 | A | N1-C6-N6 | -6.15 | 114.91 | 118.60 |
| 1 | AA | 1253 | G | P-O3'-C3' | 6.15 | 127.08 | 119.70 |
| 4 | AD | 44 | A | C5-N7-C8 | -6.15 | 100.82 | 103.90 |
| 25 | BA | 50 | A | C5-C6-N6 | -6.15 | 118.78 | 123.70 |
| 26 | BB | 319 | G | C8-N9-C1' | 6.15 | 135.00 | 127.00 |
| 26 | BB | 432 | A | C8-N9-C4 | -6.15 | 103.34 | 105.80 |
| 26 | BB | 471 | A | N9-C4-C5 | 6.15 | 108.26 | 105.80 |
| 26 | BB | 570 | G | N1-C2-N3 | -6.15 | 120.21 | 123.90 |
| 26 | BB | 651 | G | P-O3'-C3' | 6.15 | 127.08 | 119.70 |
| 26 | BB | 888 | C | N3-C4-N4 | -6.15 | 113.69 | 118.00 |
| 26 | BB | 1013 | C | O4'-C1'-N1 | 6.15 | 113.12 | 108.20 |
| 26 | BB | 1422 | G | C8-N9-C4 | -6.15 | 103.94 | 106.40 |
| 26 | BB | 1654 | A | N1-C2-N3 | 6.15 | 132.38 | 129.30 |
| 26 | BB | 2153 | C | O4'-C4'-C3' | 6.15 | 111.02 | 106.10 |
| 26 | BB | 2224 | G | C3'-C2'-C1' | 6.15 | 106.42 | 101.50 |
| 26 | BB | 2393 | U | C5'-C4'-C3' | -6.15 | 106.16 | 116.00 |
| 26 | BB | 2527 | C | C5-C4-N4 | -6.15 | 115.89 | 120.20 |
| 1 | AA | 345 | C | N3-C4-N4 | -6.15 | 113.69 | 118.00 |
| 1 | AA | 834 | U | C5-C6-N1 | -6.15 | 119.62 | 122.70 |
| 8 | AH | 124 | ALA | CB-CA-C | 6.15 | 119.33 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 11 | AK | 24 | VAL | CA-CB-CG2 | 6.15 | 120.12 | 110.90 |
| 26 | BB | 72 | U | N1-C2-O2 | 6.15 | 127.11 | 122.80 |
| 26 | BB | 1073 | A | C5'-C4'-O4' | 6.15 | 116.48 | 109.10 |
| 26 | BB | 1107 | G | O4'-C1'-N9 | 6.15 | 113.12 | 108.20 |
| 26 | BB | 1425 | G | C4-N9-C1' | -6.15 | 118.50 | 126.50 |
| 26 | BB | 1947 | C | C3'-C2'-C1' | 6.15 | 106.42 | 101.50 |
| 26 | BB | 2616 | C | C6-N1-C1' | -6.15 | 113.42 | 120.80 |
| 1 | AA | 589 | U | O4'-C4'-C3' | 6.15 | 111.02 | 106.10 |
| 1 | AA | 1106 | G | C5-C6-N1 | 6.15 | 114.57 | 111.50 |
| 26 | BB | 254 | G | C5-C6-O6 | 6.15 | 132.29 | 128.60 |
| 26 | BB | 1204 | A | C4-C5-N7 | -6.15 | 107.63 | 110.70 |
| 26 | BB | 2083 | G | N9-C4-C5 | 6.15 | 107.86 | 105.40 |
| 26 | BB | 2352 | A | C3'-C2'-C1' | 6.15 | 106.42 | 101.50 |
| 54 | B3 | 51 | ARG | NE-CZ-NH2 | 6.15 | 123.37 | 120.30 |
| 1 | AA | 341 | C | O4'-C1'-N1 | 6.15 | 113.12 | 108.20 |
| 1 | AA | 497 | G | C5-N7-C8 | -6.15 | 101.23 | 104.30 |
| 1 | AA | 546 | A | N9-C4-C5 | 6.15 | 108.26 | 105.80 |
| 1 | AA | 575 | G | O4'-C4'-C3' | 6.15 | 111.02 | 106.10 |
| 1 | AA | 617 | G | C5-C6-N1 | 6.15 | 114.57 | 111.50 |
| 1 | AA | 647 | C | P-O3'-C3' | 6.15 | 127.08 | 119.70 |
| 1 | AA | 1005 | A | C4-C5-N7 | -6.15 | 107.63 | 110.70 |
| 1 | AA | 1190 | G | C5-N7-C8 | 6.15 | 107.37 | 104.30 |
| 3 | AC | 32 | U | C5'-C4'-O4' | 6.15 | 116.48 | 109.10 |
| 10 | AJ | 21 | LEU | CB-CG-CD1 | 6.15 | 121.45 | 111.00 |
| 26 | BB | 10 | A | N9-C4-C5 | -6.15 | 103.34 | 105.80 |
| 26 | BB | 13 | A | C5-C6-N1 | 6.15 | 120.77 | 117.70 |
| 26 | BB | 501 | A | N9-C4-C5 | 6.15 | 108.26 | 105.80 |
| 26 | BB | 1269 | A | C4-C5-N7 | 6.15 | 113.77 | 110.70 |
| 26 | BB | 1500 | G | C8-N9-C1' | 6.15 | 134.99 | 127.00 |
| 26 | BB | 1571 | A | C5-C6-N1 | 6.15 | 120.77 | 117.70 |
| 26 | BB | 1597 | A | C3'-C2'-C1' | 6.15 | 106.42 | 101.50 |
| 26 | BB | 1956 | U | N3-C2-O2 | -6.15 | 117.90 | 122.20 |
| 26 | BB | 2117 | A | C4'-C3'-C2' | -6.15 | 96.45 | 102.60 |
| 26 | BB | 2217 | G | N3-C4-N9 | -6.15 | 122.31 | 126.00 |
| 26 | BB | 2378 | A | C5-C6-N6 | -6.15 | 118.78 | 123.70 |
| 26 | BB | 2710 | C | C5-C6-N1 | 6.15 | 124.07 | 121.00 |
| 26 | BB | 2806 | C | N3-C2-O2 | -6.15 | 117.60 | 121.90 |
| 1 | AA | 57 | G | N3-C4-C5 | -6.15 | 125.53 | 128.60 |
| 1 | AA | 218 | U | C2-N3-C4 | -6.15 | 123.31 | 127.00 |
| 2 | AB | 4 | G | C4-C5-N7 | -6.15 | 108.34 | 110.80 |
| 2 | AB | 31 | U | C4-C5-C6 | 6.15 | 123.39 | 119.70 |
| 26 | BB | 98 | G | N9-C4-C5 | 6.15 | 107.86 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 697 | G | C5-C6-N1 | 6.15 | 114.57 | 111.50 |
| 26 | BB | 864 | G | P-O3'-C3' | 6.15 | 127.08 | 119.70 |
| 26 | BB | 2120 | G | N1-C2-N3 | -6.15 | 120.21 | 123.90 |
| 1 | AA | 35 | G | N9-C4-C5 | 6.14 | 107.86 | 105.40 |
| 1 | AA | 371 | A | C5-N7-C8 | -6.14 | 100.83 | 103.90 |
| 1 | AA | 422 | C | C4'-C3'-C2' | -6.14 | 96.46 | 102.60 |
| 1 | AA | 880 | C | C4-C5-C6 | 6.14 | 120.47 | 117.40 |
| 1 | AA | 1204 | A | N7-C8-N9 | -6.14 | 110.73 | 113.80 |
| 25 | BA | 105 | G | C4-C5-N7 | -6.14 | 108.34 | 110.80 |
| 26 | BB | 563 | A | C5-N7-C8 | 6.14 | 106.97 | 103.90 |
| 26 | BB | 1529 | G | C6-N1-C2 | -6.14 | 121.41 | 125.10 |
| 26 | BB | 2422 | C | C5-C4-N4 | -6.14 | 115.90 | 120.20 |
| 26 | BB | 2564 | A | C2-N3-C4 | 6.14 | 113.67 | 110.60 |
| 32 | BH | 169 | ARG | NE-CZ-NH2 | 6.14 | 123.37 | 120.30 |
| 1 | AA | 135 | C | C5'-C4'-C3' | -6.14 | 106.17 | 116.00 |
| 1 | AA | 517 | G | N1-C2-N3 | -6.14 | 120.22 | 123.90 |
| 1 | AA | 1160 | G | N7-C8-N9 | 6.14 | 116.17 | 113.10 |
| 1 | AA | 1374 | A | N9-C4-C5 | 6.14 | 108.26 | 105.80 |
| 1 | AA | 1463 | U | C2-N3-C4 | -6.14 | 123.31 | 127.00 |
| 1 | AA | 1495 | U | C4'-C3'-C2' | -6.14 | 96.46 | 102.60 |
| 4 | AD | 66 | C | C4-C5-C6 | -6.14 | 114.33 | 117.40 |
| 26 | BB | 2360 | G | C3'-C2'-C1' | 6.14 | 106.42 | 101.50 |
| 26 | BB | 2664 | G | C3'-C2'-C1' | -6.14 | 96.59 | 101.50 |
| 1 | AA | 317 | U | C2-N3-C4 | -6.14 | 123.31 | 127.00 |
| 1 | AA | 1477 | U | C4-C5-C6 | 6.14 | 123.39 | 119.70 |
| 26 | BB | 816 | C | C3'-C2'-C1' | -6.14 | 96.59 | 101.50 |
| 26 | BB | 1313 | U | N3-C4-C5 | -6.14 | 110.92 | 114.60 |
| 26 | BB | 1648 | U | C4'-C3'-C2' | -6.14 | 96.46 | 102.60 |
| 26 | BB | 2548 | U | C4-C5-C6 | 6.14 | 123.38 | 119.70 |
| 1 | AA | 237 | G | C8-N9-C4 | -6.14 | 103.94 | 106.40 |
| 1 | AA | 521 | G | N3-C4-C5 | -6.14 | 125.53 | 128.60 |
| 1 | AA | 653 | U | N1-C2-O2 | -6.14 | 118.50 | 122.80 |
| 1 | AA | 1125 | U | C5-C6-N1 | -6.14 | 119.63 | 122.70 |
| 1 | AA | 1185 | G | N9-C1'-C2' | -6.14 | 105.25 | 112.00 |
| 3 | AC | 44 | U | C1'-O4'-C4' | -6.14 | 104.99 | 109.90 |
| 26 | BB | 228 | C | N3-C2-O2 | -6.14 | 117.60 | 121.90 |
| 26 | BB | 302 | C | C5-C4-N4 | -6.14 | 115.90 | 120.20 |
| 26 | BB | 988 | A | O5'-P-OP2 | -6.14 | 100.17 | 105.70 |
| 26 | BB | 1496 | A | N7-C8-N9 | 6.14 | 116.87 | 113.80 |
| 26 | BB | 1507 | C | C5-C4-N4 | -6.14 | 115.90 | 120.20 |
| 26 | BB | 1970 | A | C5-C6-N6 | -6.14 | 118.79 | 123.70 |
| 26 | BB | 2198 | A | C5-N7-C8 | 6.14 | 106.97 | 103.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2243 | U | C5'-C4'-C3' | -6.14 | 106.18 | 116.00 |
| 26 | BB | 2894 | G | C6-N1-C2 | -6.14 | 121.42 | 125.10 |
| 1 | AA | 1312 | G | N1-C2-N2 | 6.14 | 121.72 | 116.20 |
| 25 | BA | 113 | C | C2-N3-C4 | 6.14 | 122.97 | 119.90 |
| 26 | BB | 2124 | G | C5-C6-O6 | 6.14 | 132.28 | 128.60 |
| 1 | AA | 17 | U | N3-C2-O2 | -6.14 | 117.90 | 122.20 |
| 1 | AA | 46 | G | C6-C5-N7 | 6.14 | 134.08 | 130.40 |
| 1 | AA | 538 | G | O5'-P-OP1 | -6.14 | 100.18 | 105.70 |
| 1 | AA | 859 | G | C8-N9-C4 | -6.14 | 103.94 | 106.40 |
| 1 | AA | 939 | G | C5-N7-C8 | -6.14 | 101.23 | 104.30 |
| 2 | AB | 26 | A | C1'-O4'-C4' | 6.14 | 114.81 | 109.90 |
| 25 | BA | 96 | G | N3-C4-C5 | -6.14 | 125.53 | 128.60 |
| 26 | BB | 2 | G | P-O3'-C3' | 6.14 | 127.06 | 119.70 |
| 26 | BB | 50 | U | O4'-C1'-N1 | 6.14 | 113.11 | 108.20 |
| 26 | BB | 301 | G | C2-N3-C4 | 6.14 | 114.97 | 111.90 |
| 26 | BB | 669 | G | N3-C4-C5 | -6.14 | 125.53 | 128.60 |
| 26 | BB | 1118 | C | C5-C4-N4 | -6.14 | 115.90 | 120.20 |
| 26 | BB | 1313 | U | C2-N1-C1' | 6.14 | 125.06 | 117.70 |
| 26 | BB | 1497 | U | C2-N3-C4 | -6.14 | 123.32 | 127.00 |
| 26 | BB | 1504 | A | O4'-C4'-C3' | -6.14 | 97.86 | 104.00 |
| 26 | BB | 2038 | G | C8-N9-C1' | 6.14 | 134.98 | 127.00 |
| 26 | BB | 2429 | G | N1-C6-O6 | -6.14 | 116.22 | 119.90 |
| 1 | AA | 47 | C | C4-C5-C6 | -6.13 | 114.33 | 117.40 |
| 1 | AA | 220 | G | N9-C4-C5 | -6.13 | 102.95 | 105.40 |
| 1 | AA | 344 | A | C5-C6-N6 | 6.13 | 128.61 | 123.70 |
| 1 | AA | 463 | U | O4'-C1'-N1 | 6.13 | 113.11 | 108.20 |
| 1 | AA | 1225 | A | N3-C4-N9 | -6.13 | 122.49 | 127.40 |
| 20 | AT | 39 | ARG | NE-CZ-NH1 | 6.13 | 123.37 | 120.30 |
| 26 | BB | 166 | U | C3'-C2'-C1' | -6.13 | 96.59 | 101.50 |
| 26 | BB | 412 | A | C5-N7-C8 | -6.13 | 100.83 | 103.90 |
| 26 | BB | 513 | A | C2-N3-C4 | 6.13 | 113.67 | 110.60 |
| 26 | BB | 1078 | U | C2-N3-C4 | -6.13 | 123.32 | 127.00 |
| 26 | BB | 1626 | A | C4-C5-C6 | 6.13 | 120.07 | 117.00 |
| 26 | BB | 1920 | C | C5-C4-N4 | -6.13 | 115.91 | 120.20 |
| 26 | BB | 2029 | G | N1-C6-O6 | -6.13 | 116.22 | 119.90 |
| 26 | BB | 2325 | G | O4'-C1'-C2' | 6.13 | 113.12 | 107.60 |
| 26 | BB | 2719 | G | P-O3'-C3' | 6.13 | 127.06 | 119.70 |
| 26 | BB | 2756 | U | C2'-C3'-O3' | 6.13 | 123.52 | 113.70 |
| 26 | BB | 2771 | C | C6-N1-C2 | 6.13 | 122.75 | 120.30 |
| 1 | AA | 860 | A | C5-C6-N6 | -6.13 | 118.79 | 123.70 |
| 26 | BB | 544 | C | C4'-C3'-C2' | -6.13 | 96.47 | 102.60 |
| 26 | BB | 1956 | U | O4'-C1'-N1 | 6.13 | 113.11 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2123 | G | C5-N7-C8 | -6.13 | 101.23 | 104.30 |
| 34 | BJ | 61 | ARG | NE-CZ-NH1 | 6.13 | 123.37 | 120.30 |
| 1 | AA | 624 | C | N3-C4-C5 | -6.13 | 119.45 | 121.90 |
| 1 | AA | 784 | A | O4'-C1'-N9 | 6.13 | 113.10 | 108.20 |
| 1 | AA | 1007 | U | N1-C2-N3 | 6.13 | 118.58 | 114.90 |
| 1 | AA | 1424 | U | C5-C4-O4 | -6.13 | 122.22 | 125.90 |
| 1 | AA | 1459 | G | N1-C2-N2 | -6.13 | 110.68 | 116.20 |
| 1 | AA | 1486 | G | N7-C8-N9 | 6.13 | 116.17 | 113.10 |
| 14 | AN | 55 | ARG | NE-CZ-NH2 | -6.13 | 117.23 | 120.30 |
| 26 | BB | 239 | C | O4'-C1'-N1 | 6.13 | 113.10 | 108.20 |
| 26 | BB | 400 | G | C1'-O4'-C4' | -6.13 | 105.00 | 109.90 |
| 26 | BB | 962 | G | N7-C8-N9 | -6.13 | 110.03 | 113.10 |
| 26 | BB | 1817 | G | N7-C8-N9 | 6.13 | 116.17 | 113.10 |
| 26 | BB | 2381 | A | C6-C5-N7 | 6.13 | 136.59 | 132.30 |
| 41 | BQ | 108 | ASP | CB-CG-OD2 | 6.13 | 123.82 | 118.30 |
| 1 | AA | 362 | G | N3-C4-C5 | -6.13 | 125.53 | 128.60 |
| 1 | AA | 803 | G | N9-C1'-C2' | -6.13 | 105.26 | 112.00 |
| 1 | AA | 913 | A | N7-C8-N9 | -6.13 | 110.73 | 113.80 |
| 26 | BB | 235 | U | C2-N3-C4 | -6.13 | 123.32 | 127.00 |
| 26 | BB | 584 | C | C1'-O4'-C4' | -6.13 | 105.00 | 109.90 |
| 26 | BB | 1878 | G | C5-C6-N1 | 6.13 | 114.56 | 111.50 |
| 26 | BB | 1983 | G | N3-C2-N2 | -6.13 | 115.61 | 119.90 |
| 53 | B2 | 63 | ARG | NH1-CZ-NH2 | -6.13 | 112.66 | 119.40 |
| 1 | AA | 371 | A | C4-C5-N7 | 6.13 | 113.77 | 110.70 |
| 1 | AA | 572 | A | C1'-O4'-C4' | -6.13 | 105.00 | 109.90 |
| 1 | AA | 1018 | G | C2-N3-C4 | 6.13 | 114.97 | 111.90 |
| 26 | BB | 397 | U | N1-C2-O2 | 6.13 | 127.09 | 122.80 |
| 26 | BB | 786 | C | C5'-C4'-O4' | 6.13 | 116.45 | 109.10 |
| 26 | BB | 1387 | A | O4'-C1'-N9 | 6.13 | 113.10 | 108.20 |
| 26 | BB | 1661 | G | C4'-C3'-C2' | -6.13 | 96.47 | 102.60 |
| 26 | BB | 1894 | C | O4'-C1'-N1 | 6.13 | 113.10 | 108.20 |
| 26 | BB | 2770 | G | C4-C5-C6 | 6.13 | 122.48 | 118.80 |
| 26 | BB | 2874 | C | C5-C6-N1 | -6.13 | 117.94 | 121.00 |
| 1 | AA | 47 | C | N3-C2-O2 | -6.13 | 117.61 | 121.90 |
| 1 | AA | 460 | A | C6-N1-C2 | -6.13 | 114.92 | 118.60 |
| 1 | AA | 746 | A | N3-C4-N9 | -6.13 | 122.50 | 127.40 |
| 1 | AA | 813 | U | P-O3'-C3' | 6.13 | 127.05 | 119.70 |
| 1 | AA | 876 | C | O4'-C1'-N1 | 6.13 | 113.10 | 108.20 |
| 5 | AE | 21 | TYR | CG-CD1-CE1 | -6.13 | 116.40 | 121.30 |
| 26 | BB | 64 | A | N9-C1'-C2' | -6.13 | 105.26 | 112.00 |
| 26 | BB | 1777 | U | C2-N3-C4 | -6.13 | 123.32 | 127.00 |
| 26 | BB | 1803 | A | C5-C6-N6 | 6.13 | 128.60 | 123.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1988 | G | N1-C2-N2 | 6.13 | 121.72 | 116.20 |
| 26 | BB | 2693 | G | N3-C2-N2 | -6.13 | 115.61 | 119.90 |
| 1 | AA | 558 | G | N3-C2-N2 | -6.12 | 115.61 | 119.90 |
| 1 | AA | 1345 | U | N3-C4-C5 | -6.12 | 110.92 | 114.60 |
| 26 | BB | 118 | A | C3'-C2'-C1' | 6.12 | 106.40 | 101.50 |
| 26 | BB | 1465 | G | P-O3'-C3' | 6.12 | 127.05 | 119.70 |
| 26 | BB | 1608 | A | N3-C4-N9 | 6.12 | 132.30 | 127.40 |
| 26 | BB | 1627 | G | N3-C4-C5 | -6.12 | 125.54 | 128.60 |
| 26 | BB | 1628 | G | C5'-C4'-C3' | -6.12 | 106.20 | 116.00 |
| 26 | BB | 2391 | G | C1'-O4'-C4' | -6.12 | 105.00 | 109.90 |
| 1 | AA | 136 | C | C4-C5-C6 | -6.12 | 114.34 | 117.40 |
| 1 | AA | 145 | G | N9-C1'-C2' | -6.12 | 105.26 | 112.00 |
| 1 | AA | 255 | G | P-O3'-C3' | 6.12 | 127.05 | 119.70 |
| 1 | AA | 426 | U | N1-C2-O2 | -6.12 | 118.51 | 122.80 |
| 1 | AA | 687 | A | C8-N9-C4 | -6.12 | 103.35 | 105.80 |
| 1 | AA | 1035 | A | C5-N7-C8 | -6.12 | 100.84 | 103.90 |
| 1 | AA | 1265 | C | N1-C1'-C2' | -6.12 | 105.27 | 112.00 |
| 26 | BB | 205 | G | C5'-C4'-O4' | -6.12 | 101.75 | 109.10 |
| 26 | BB | 549 | G | P-O3'-C3' | 6.12 | 127.05 | 119.70 |
| 26 | BB | 1391 | U | C3'-C2'-C1' | 6.12 | 106.40 | 101.50 |
| 26 | BB | 1598 | A | N9-C4-C5 | 6.12 | 108.25 | 105.80 |
| 26 | BB | 1783 | A | C5-C6-N6 | -6.12 | 118.80 | 123.70 |
| 26 | BB | 1786 | A | N1-C6-N6 | -6.12 | 114.93 | 118.60 |
| 26 | BB | 1970 | A | C5'-C4'-C3' | -6.12 | 106.20 | 116.00 |
| 26 | BB | 2143 | C | N3-C4-N4 | 6.12 | 122.29 | 118.00 |
| 26 | BB | 2421 | G | N9-C4-C5 | 6.12 | 107.85 | 105.40 |
| 26 | BB | 2508 | G | C5'-C4'-O4' | 6.12 | 116.45 | 109.10 |
| 26 | BB | 2612 | C | C6-N1-C2 | -6.12 | 117.85 | 120.30 |
| 53 | B2 | 49 | ARG | NE-CZ-NH1 | 6.12 | 123.36 | 120.30 |
| 1 | AA | 309 | A | C2-N3-C4 | 6.12 | 113.66 | 110.60 |
| 1 | AA | 325 | A | N7-C8-N9 | 6.12 | 116.86 | 113.80 |
| 1 | AA | 329 | A | C2-N3-C4 | 6.12 | 113.66 | 110.60 |
| 1 | AA | 482 | A | N3-C4-C5 | -6.12 | 122.52 | 126.80 |
| 1 | AA | 530 | G | N7-C8-N9 | 6.12 | 116.16 | 113.10 |
| 1 | AA | 1127 | G | O4'-C1'-N9 | 6.12 | 113.10 | 108.20 |
| 1 | AA | 1188 | A | N1-C2-N3 | -6.12 | 126.24 | 129.30 |
| 1 | AA | 1437 | A | N9-C4-C5 | -6.12 | 103.35 | 105.80 |
| 25 | BA | 112 | G | C4-C5-C6 | 6.12 | 122.47 | 118.80 |
| 26 | BB | 274 | C | C5'-C4'-C3' | -6.12 | 106.21 | 116.00 |
| 26 | BB | 432 | A | N3-C4-N9 | -6.12 | 122.50 | 127.40 |
| 26 | BB | 551 | G | N3-C4-N9 | 6.12 | 129.67 | 126.00 |
| 26 | BB | 568 | U | C4'-C3'-C2' | 6.12 | 108.72 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 718 | A | C4'-C3'-C2' | -6.12 | 96.48 | 102.60 |
| 26 | BB | 1682 | G | N9-C1'-C2' | -6.12 | 105.27 | 112.00 |
| 26 | BB | 1955 | U | N3-C2-O2 | 6.12 | 126.48 | 122.20 |
| 26 | BB | 2204 | G | N9-C1'-C2' | 6.12 | 121.96 | 114.00 |
| 26 | BB | 2275 | C | N1-C2-N3 | -6.12 | 114.92 | 119.20 |
| 26 | BB | 2363 | G | P-O3'-C3' | 6.12 | 127.05 | 119.70 |
| 26 | BB | 2477 | U | O4'-C1'-C2' | -6.12 | 99.68 | 105.80 |
| 26 | BB | 2654 | A | C4-C5-C6 | -6.12 | 113.94 | 117.00 |
| 30 | BF | 6 | LYS | N-CA-CB | -6.12 | 99.58 | 110.60 |
| 1 | AA | 165 | G | C5-C6-O6 | 6.12 | 132.27 | 128.60 |
| 1 | AA | 471 | U | C4'-C3'-C2' | -6.12 | 96.48 | 102.60 |
| 1 | AA | 934 | C | P-O3'-C3' | 6.12 | 127.04 | 119.70 |
| 25 | BA | 79 | G | C4-C5-N7 | -6.12 | 108.35 | 110.80 |
| 26 | BB | 236 | C | N3-C4-N4 | -6.12 | 113.72 | 118.00 |
| 26 | BB | 1582 | C | C6-N1-C2 | -6.12 | 117.85 | 120.30 |
| 26 | BB | 2720 | U | C5-C4-O4 | -6.12 | 122.23 | 125.90 |
| 1 | AA | 599 | C | N3-C4-C5 | 6.12 | 124.35 | 121.90 |
| 1 | AA | 733 | G | N3-C4-C5 | -6.12 | 125.54 | 128.60 |
| 1 | AA | 739 | C | C5'-C4'-C3' | -6.12 | 106.21 | 116.00 |
| 1 | AA | 805 | C | C6-N1-C2 | -6.12 | 117.85 | 120.30 |
| 1 | AA | 834 | U | C4'-C3'-C2' | -6.12 | 96.48 | 102.60 |
| 1 | AA | 1452 | C | C5'-C4'-C3' | -6.12 | 106.21 | 116.00 |
| 2 | AB | 29 | G | C4-C5-C6 | 6.12 | 122.47 | 118.80 |
| 7 | AG | 169 | TRP | NE1-CE2-CZ2 | 6.12 | 137.13 | 130.40 |
| 25 | BA | 84 | G | C6-N1-C2 | -6.12 | 121.43 | 125.10 |
| 26 | BB | 40 | U | O5'-P-OP2 | -6.12 | 100.19 | 105.70 |
| 26 | BB | 293 | U | C5-C4-O4 | -6.12 | 122.23 | 125.90 |
| 26 | BB | 695 | G | N3-C4-N9 | 6.12 | 129.67 | 126.00 |
| 26 | BB | 970 | U | N1-C2-O2 | 6.12 | 127.08 | 122.80 |
| 26 | BB | 1479 | G | C4-C5-N7 | 6.12 | 113.25 | 110.80 |
| 26 | BB | 1933 | G | N7-C8-N9 | 6.12 | 116.16 | 113.10 |
| 26 | BB | 2548 | U | O4'-C1'-C2' | 6.12 | 113.11 | 107.60 |
| 26 | BB | 2578 | G | C5'-C4'-O4' | 6.12 | 116.44 | 109.10 |
| 1 | AA | 944 | G | N3-C4-N9 | 6.12 | 129.67 | 126.00 |
| 26 | BB | 762 | U | C2-N1-C1' | 6.12 | 125.04 | 117.70 |
| 26 | BB | 1038 | G | C5-N7-C8 | 6.12 | 107.36 | 104.30 |
| 26 | BB | 1538 | G | C8-N9-C4 | -6.12 | 103.95 | 106.40 |
| 26 | BB | 1788 | C | C3'-C2'-C1' | -6.12 | 96.61 | 101.50 |
| 1 | AA | 83 | C | C5-C6-N1 | 6.12 | 124.06 | 121.00 |
| 1 | AA | 440 | C | N1-C2-O2 | 6.12 | 122.57 | 118.90 |
| 1 | AA | 858 | G | N9-C4-C5 | 6.12 | 107.85 | 105.40 |
| 2 | AB | 52 | A | C5'-C4'-O4' | 6.12 | 116.44 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 35 | C | C6-N1-C2 | -6.12 | 117.85 | 120.30 |
| 25 | BA | 118 | C | C2'-C3'-O3' | 6.12 | 123.48 | 113.70 |
| 26 | BB | 545 | U | C4'-C3'-C2' | 6.12 | 108.72 | 102.60 |
| 26 | BB | 1373 | A | N7-C8-N9 | 6.12 | 116.86 | 113.80 |
| 26 | BB | 1391 | U | O4'-C1'-C2' | -6.12 | 99.69 | 105.80 |
| 26 | BB | 1593 | A | N9-C4-C5 | 6.12 | 108.25 | 105.80 |
| 26 | BB | 2324 | U | N1-C2-N3 | 6.12 | 118.57 | 114.90 |
| 26 | BB | 2569 | G | N7-C8-N9 | 6.12 | 116.16 | 113.10 |
| 1 | AA | 481 | G | C6-N1-C2 | -6.11 | 121.43 | 125.10 |
| 1 | AA | 1189 | U | C5-C4-O4 | -6.11 | 122.23 | 125.90 |
| 3 | AC | 27 | A | C6-N1-C2 | -6.11 | 114.93 | 118.60 |
| 25 | BA | 110 | C | P-O3'-C3' | 6.11 | 127.04 | 119.70 |
| 26 | BB | 114 | U | C2-N3-C4 | -6.11 | 123.33 | 127.00 |
| 26 | BB | 132 | G | C8-N9-C1' | 6.11 | 134.95 | 127.00 |
| 26 | BB | 454 | A | C2-N3-C4 | 6.11 | 113.66 | 110.60 |
| 26 | BB | 621 | A | O4'-C1'-N9 | 6.11 | 113.09 | 108.20 |
| 26 | BB | 1689 | A | C5-C6-N6 | -6.11 | 118.81 | 123.70 |
| 26 | BB | 1858 | A | C1'-O4'-C4' | -6.11 | 105.01 | 109.90 |
| 26 | BB | 2126 | A | O4'-C1'-N9 | 6.11 | 113.09 | 108.20 |
| 26 | BB | 2221 | G | C5-C6-N1 | 6.11 | 114.56 | 111.50 |
| 41 | BQ | 36 | TYR | CB-CG-CD1 | -6.11 | 117.33 | 121.00 |
| 42 | BR | 43 | GLU | OE1-CD-OE2 | 6.11 | 130.63 | 123.30 |
| 1 | AA | 640 | A | C8-N9-C4 | -6.11 | 103.36 | 105.80 |
| 1 | AA | 1367 | C | C4'-C3'-C2' | -6.11 | 96.49 | 102.60 |
| 26 | BB | 489 | G | C4-C5-C6 | 6.11 | 122.47 | 118.80 |
| 26 | BB | 652 | U | C5-C6-N1 | 6.11 | 125.76 | 122.70 |
| 26 | BB | 1916 | A | N9-C4-C5 | 6.11 | 108.25 | 105.80 |
| 26 | BB | 2022 | U | C2-N3-C4 | -6.11 | 123.33 | 127.00 |
| 26 | BB | 2042 | A | N3-C4-C5 | -6.11 | 122.52 | 126.80 |
| 26 | BB | 2390 | U | O4'-C1'-N1 | 6.11 | 113.09 | 108.20 |
| 1 | AA | 157 | U | P-O3'-C3' | 6.11 | 127.03 | 119.70 |
| 1 | AA | 358 | U | C2-N3-C4 | -6.11 | 123.33 | 127.00 |
| 1 | AA | 404 | G | P-O3'-C3' | 6.11 | 127.03 | 119.70 |
| 1 | AA | 752 | G | N1-C6-O6 | 6.11 | 123.57 | 119.90 |
| 1 | AA | 1441 | A | C5-N7-C8 | -6.11 | 100.84 | 103.90 |
| 3 | AC | 18 | A | C4'-C3'-C2' | -6.11 | 96.49 | 102.60 |
| 22 | AV | 80 | ARG | NE-CZ-NH2 | 6.11 | 123.36 | 120.30 |
| 26 | BB | 2258 | C | N3-C2-O2 | -6.11 | 117.62 | 121.90 |
| 32 | BH | 175 | LYS | CA-CB-CG | 6.11 | 126.84 | 113.40 |
| 1 | AA | 820 | U | C4-C5-C6 | 6.11 | 123.36 | 119.70 |
| 1 | AA | 845 | A | P-O3'-C3' | 6.11 | 127.03 | 119.70 |
| 2 | AB | 21 | A | N7-C8-N9 | 6.11 | 116.86 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 567 | U | N1-C1'-C2' | -6.11 | 105.28 | 112.00 |
| 26 | BB | 1247 | A | N1-C2-N3 | -6.11 | 126.25 | 129.30 |
| 26 | BB | 1307 | A | C5-C6-N1 | 6.11 | 120.75 | 117.70 |
| 26 | BB | 1408 | G | N7-C8-N9 | -6.11 | 110.05 | 113.10 |
| 26 | BB | 2382 | G | C1'-O4'-C4' | -6.11 | 105.01 | 109.90 |
| 29 | BE | 101 | PHE | CB-CG-CD2 | -6.11 | 116.52 | 120.80 |
| 1 | AA | 367 | U | C5'-C4'-C3' | -6.11 | 106.23 | 116.00 |
| 1 | AA | 1168 | U | C2-N3-C4 | -6.11 | 123.33 | 127.00 |
| 1 | AA | 1234 | C | N1-C1'-C2' | -6.11 | 105.28 | 112.00 |
| 26 | BB | 359 | G | N7-C8-N9 | 6.11 | 116.15 | 113.10 |
| 26 | BB | 858 | G | N7-C8-N9 | -6.11 | 110.05 | 113.10 |
| 26 | BB | 1167 | C | C6-N1-C2 | -6.11 | 117.86 | 120.30 |
| 26 | BB | 1762 | A | C2'-C3'-O3' | 6.11 | 123.47 | 113.70 |
| 26 | BB | 1822 | C | N3-C2-O2 | 6.11 | 126.17 | 121.90 |
| 26 | BB | 2766 | A | N1-C6-N6 | 6.11 | 122.26 | 118.60 |
| 39 | BO | 130 | PHE | CB-CG-CD2 | -6.11 | 116.52 | 120.80 |
| 44 | BT | 66 | HIS | CB-CA-C | 6.11 | 122.61 | 110.40 |
| 1 | AA | 75 | G | N1-C6-O6 | 6.11 | 123.56 | 119.90 |
| 1 | AA | 530 | G | O3'-P-O5' | -6.11 | 92.40 | 104.00 |
| 1 | AA | 688 | G | N3-C4-C5 | -6.11 | 125.55 | 128.60 |
| 1 | AA | 808 | C | C5-C4-N4 | -6.11 | 115.93 | 120.20 |
| 1 | AA | 998 | C | C6-N1-C2 | 6.11 | 122.74 | 120.30 |
| 1 | AA | 1031 | C | C6-N1-C2 | 6.11 | 122.74 | 120.30 |
| 1 | AA | 1229 | A | O4'-C1'-N9 | 6.11 | 113.08 | 108.20 |
| 26 | BB | 117 | G | C5-C6-O6 | 6.11 | 132.26 | 128.60 |
| 26 | BB | 755 | U | C5-C6-N1 | -6.11 | 119.65 | 122.70 |
| 26 | BB | 1085 | A | C5'-C4'-C3' | -6.11 | 106.23 | 116.00 |
| 26 | BB | 1198 | U | O4'-C1'-N1 | 6.11 | 113.08 | 108.20 |
| 26 | BB | 2186 | G | N3-C2-N2 | 6.11 | 124.17 | 119.90 |
| 26 | BB | 2496 | C | C6-N1-C2 | -6.11 | 117.86 | 120.30 |
| 26 | BB | 2579 | C | C2-N3-C4 | 6.11 | 122.95 | 119.90 |
| 26 | BB | 2634 | A | O4'-C1'-C2' | -6.11 | 99.69 | 105.80 |
| 1 | AA | 624 | C | N1-C2-O2 | 6.10 | 122.56 | 118.90 |
| 1 | AA | 1138 | G | C4-C5-C6 | 6.10 | 122.46 | 118.80 |
| 1 | AA | 1218 | C | C2-N3-C4 | -6.10 | 116.85 | 119.90 |
| 1 | AA | 1271 | A | C5-N7-C8 | -6.10 | 100.85 | 103.90 |
| 1 | AA | 1329 | A | C2-N3-C4 | 6.10 | 113.65 | 110.60 |
| 25 | BA | 39 | A | C5'-C4'-C3' | -6.10 | 106.23 | 116.00 |
| 26 | BB | 2690 | U | O4'-C1'-N1 | 6.10 | 113.08 | 108.20 |
| 26 | BB | 2883 | A | C6-C5-N7 | -6.10 | 128.03 | 132.30 |
| 1 | AA | 1461 | G | C8-N9-C4 | -6.10 | 103.96 | 106.40 |
| 4 | AD | 19 | G | N3-C2-N2 | 6.10 | 124.17 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 835 | C | N1-C1'-C2' | -6.10 | 105.29 | 112.00 |
| 26 | BB | 985 | C | C5'-C4'-O4' | -6.10 | 101.78 | 109.10 |
| 26 | BB | 1034 | G | C4'-C3'-C2' | -6.10 | 96.50 | 102.60 |
| 26 | BB | 1102 | C | N3-C4-N4 | 6.10 | 122.27 | 118.00 |
| 26 | BB | 1360 | G | C6-C5-N7 | -6.10 | 126.74 | 130.40 |
| 26 | BB | 1704 | C | C2-N3-C4 | 6.10 | 122.95 | 119.90 |
| 26 | BB | 1929 | G | N1-C2-N3 | 6.10 | 127.56 | 123.90 |
| 26 | BB | 2111 | U | N1-C2-O2 | 6.10 | 127.07 | 122.80 |
| 26 | BB | 2122 | U | C5-C6-N1 | -6.10 | 119.65 | 122.70 |
| 26 | BB | 2162 | G | C2-N3-C4 | 6.10 | 114.95 | 111.90 |
| 26 | BB | 2327 | A | C4-C5-C6 | -6.10 | 113.95 | 117.00 |
| 26 | BB | 2739 | U | C4'-C3'-C2' | -6.10 | 96.50 | 102.60 |
| 26 | BB | 1829 | A | O4'-C1'-C2' | -6.10 | 99.70 | 105.80 |
| 26 | BB | 2109 | U | C2-N1-C1' | 6.10 | 125.02 | 117.70 |
| 26 | BB | 2490 | G | C1'-O4'-C4' | -6.10 | 105.02 | 109.90 |
| 1 | AA | 333 | U | C5-C4-O4 | -6.10 | 122.24 | 125.90 |
| 1 | AA | 673 | A | N1-C6-N6 | -6.10 | 114.94 | 118.60 |
| 1 | AA | 1383 | C | N3-C4-N4 | 6.10 | 122.27 | 118.00 |
| 16 | AP | 81 | ASP | CB-CG-OD2 | -6.10 | 112.81 | 118.30 |
| 25 | BA | 13 | G | N9-C4-C5 | 6.10 | 107.84 | 105.40 |
| 26 | BB | 507 | A | N1-C6-N6 | -6.10 | 114.94 | 118.60 |
| 26 | BB | 669 | G | C4-C5-N7 | -6.10 | 108.36 | 110.80 |
| 26 | BB | 1363 | C | N1-C2-O2 | 6.10 | 122.56 | 118.90 |
| 26 | BB | 1490 | A | O4'-C4'-C3' | 6.10 | 110.98 | 106.10 |
| 26 | BB | 1628 | G | C5-C6-N1 | 6.10 | 114.55 | 111.50 |
| 26 | BB | 2644 | G | C8-N9-C4 | -6.10 | 103.96 | 106.40 |
| 26 | BB | 2649 | C | C3'-C2'-C1' | 6.10 | 106.38 | 101.50 |
| 26 | BB | 2769 | U | O4'-C1'-N1 | 6.10 | 113.08 | 108.20 |
| 1 | AA | 711 | G | N3-C4-N9 | 6.10 | 129.66 | 126.00 |
| 1 | AA | 1175 | G | N3-C2-N2 | 6.10 | 124.17 | 119.90 |
| 26 | BB | 343 | C | N3-C4-N4 | 6.10 | 122.27 | 118.00 |
| 26 | BB | 781 | A | C8-N9-C4 | 6.10 | 108.24 | 105.80 |
| 26 | BB | 1066 | U | C5-C6-N1 | 6.10 | 125.75 | 122.70 |
| 26 | BB | 1542 | U | C4'-C3'-C2' | -6.10 | 96.50 | 102.60 |
| 36 | BL | 27 | ARG | NE-CZ-NH1 | 6.10 | 123.35 | 120.30 |
| 14 | AN | 43 | TRP | CE3-CZ3-CH2 | 6.10 | 127.91 | 121.20 |
| 26 | BB | 967 | U | C1'-O4'-C4' | 6.10 | 114.78 | 109.90 |
| 26 | BB | 2633 | G | C2-N3-C4 | 6.10 | 114.95 | 111.90 |
| 1 | AA | 330 | C | N3-C2-O2 | -6.09 | 117.63 | 121.90 |
| 1 | AA | 880 | C | N1-C2-N3 | 6.09 | 123.47 | 119.20 |
| 1 | AA | 1311 | A | C5-C6-N1 | 6.09 | 120.75 | 117.70 |
| 2 | AB | 34 | C | C5-C6-N1 | 6.09 | 124.05 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 23 | C | O4'-C4'-C3' | -6.09 | 97.91 | 104.00 |
| 5 | AE | 21 | TYR | CB-CG-CD1 | -6.09 | 117.34 | 121.00 |
| 12 | AL | 61 | ASP | CB-CG-OD2 | -6.09 | 112.81 | 118.30 |
| 26 | BB | 331 | C | O4'-C1'-N1 | 6.09 | 113.08 | 108.20 |
| 26 | BB | 695 | G | C8-N9-C4 | 6.09 | 108.84 | 106.40 |
| 26 | BB | 2830 | C | C6-N1-C2 | -6.09 | 117.86 | 120.30 |
| 1 | AA | 42 | G | C4-C5-N7 | -6.09 | 108.36 | 110.80 |
| 15 | AO | 30 | ARG | NE-CZ-NH1 | 6.09 | 123.35 | 120.30 |
| 26 | BB | 480 | A | C1'-O4'-C4' | -6.09 | 105.03 | 109.90 |
| 1 | AA | 1349 | A | P-O3'-C3' | 6.09 | 127.01 | 119.70 |
| 26 | BB | 715 | A | C2-N3-C4 | 6.09 | 113.65 | 110.60 |
| 26 | BB | 838 | C | C4'-C3'-C2' | -6.09 | 96.51 | 102.60 |
| 26 | BB | 909 | A | C8-N9-C4 | -6.09 | 103.36 | 105.80 |
| 26 | BB | 1192 | G | C5-C6-O6 | -6.09 | 124.94 | 128.60 |
| 26 | BB | 1425 | G | C5-C6-O6 | 6.09 | 132.25 | 128.60 |
| 26 | BB | 1729 | U | C2-N3-C4 | -6.09 | 123.34 | 127.00 |
| 26 | BB | 1789 | A | C8-N9-C4 | -6.09 | 103.36 | 105.80 |
| 26 | BB | 1860 | G | N3-C4-C5 | -6.09 | 125.55 | 128.60 |
| 26 | BB | 1970 | A | N1-C2-N3 | 6.09 | 132.35 | 129.30 |
| 26 | BB | 2344 | U | O4'-C1'-N1 | 6.09 | 113.07 | 108.20 |
| 26 | BB | 2491 | U | C6-N1-C1' | -6.09 | 112.67 | 121.20 |
| 26 | BB | 2561 | U | P-O3'-C3' | 6.09 | 127.01 | 119.70 |
| 26 | BB | 2637 | U | N3-C4-O4 | 6.09 | 123.66 | 119.40 |
| 1 | AA | 149 | A | C5-C6-N1 | -6.09 | 114.66 | 117.70 |
| 1 | AA | 833 | G | C6-N1-C2 | 6.09 | 128.75 | 125.10 |
| 1 | AA | 934 | C | N3-C4-N4 | -6.09 | 113.74 | 118.00 |
| 25 | BA | 86 | G | C4'-C3'-C2' | -6.09 | 96.51 | 102.60 |
| 26 | BB | 542 | C | N3-C2-O2 | -6.09 | 117.64 | 121.90 |
| 26 | BB | 575 | A | N7-C8-N9 | 6.09 | 116.84 | 113.80 |
| 26 | BB | 625 | G | C5'-C4'-O4' | 6.09 | 116.41 | 109.10 |
| 26 | BB | 1134 | A | C6-C5-N7 | 6.09 | 136.56 | 132.30 |
| 26 | BB | 2566 | A | C5'-C4'-O4' | 6.09 | 116.41 | 109.10 |
| 26 | BB | 2589 | A | C6-N1-C2 | 6.09 | 122.25 | 118.60 |
| 26 | BB | 2817 | U | C1'-O4'-C4' | -6.09 | 105.03 | 109.90 |
| 44 | BT | 21 | ARG | NE-CZ-NH2 | 6.09 | 123.34 | 120.30 |
| 1 | AA | 628 | G | N9-C4-C5 | 6.09 | 107.83 | 105.40 |
| 26 | BB | 405 | U | C3'-C2'-C1' | 6.09 | 106.37 | 101.50 |
| 26 | BB | 603 | A | C6-N1-C2 | -6.09 | 114.95 | 118.60 |
| 26 | BB | 1949 | G | C6-N1-C2 | -6.09 | 121.45 | 125.10 |
| 26 | BB | 2148 | G | N7-C8-N9 | 6.09 | 116.14 | 113.10 |
| 1 | AA | 196 | A | C3'-C2'-C1' | 6.09 | 106.37 | 101.50 |
| 1 | AA | 236 | A | C4'-C3'-C2' | -6.09 | 96.51 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 694 | A | C4-C5-N7 | -6.09 | 107.66 | 110.70 |
| 1 | AA | 723 | U | O4'-C4'-C3' | 6.09 | 110.97 | 106.10 |
| 3 | AC | 57 | C | C4'-C3'-C2' | -6.09 | 96.51 | 102.60 |
| 8 | AH | 28 | ARG | NE-CZ-NH1 | 6.09 | 123.34 | 120.30 |
| 25 | BA | 65 | U | C3'-C2'-C1' | 6.09 | 106.37 | 101.50 |
| 26 | BB | 381 | G | N1-C6-O6 | -6.09 | 116.25 | 119.90 |
| 26 | BB | 774 | G | C5'-C4'-C3' | -6.09 | 106.26 | 116.00 |
| 26 | BB | 902 | C | N3-C4-C5 | 6.09 | 124.33 | 121.90 |
| 26 | BB | 1206 | G | N1-C2-N3 | -6.09 | 120.25 | 123.90 |
| 26 | BB | 1215 | G | N3-C4-N9 | 6.09 | 129.65 | 126.00 |
| 26 | BB | 1425 | G | C4-C5-N7 | 6.09 | 113.23 | 110.80 |
| 26 | BB | 1653 | G | N3-C4-N9 | -6.09 | 122.35 | 126.00 |
| 26 | BB | 1906 | G | N9-C4-C5 | -6.09 | 102.97 | 105.40 |
| 26 | BB | 2446 | G | N1-C2-N3 | -6.09 | 120.25 | 123.90 |
| 26 | BB | 2483 | C | C3'-C2'-C1' | 6.09 | 106.37 | 101.50 |
| 4 | AD | 10 | G | P-O3'-C3' | 6.08 | 127.00 | 119.70 |
| 24 | AX | 37 | TYR | CB-CG-CD2 | 6.08 | 124.65 | 121.00 |
| 26 | BB | 131 | A | C5-N7-C8 | -6.08 | 100.86 | 103.90 |
| 26 | BB | 511 | U | O5'-P-OP2 | -6.08 | 100.22 | 105.70 |
| 26 | BB | 530 | G | C1'-O4'-C4' | -6.08 | 105.03 | 109.90 |
| 26 | BB | 973 | A | C3'-C2'-C1' | 6.08 | 106.37 | 101.50 |
| 26 | BB | 1058 | U | N1-C2-N3 | 6.08 | 118.55 | 114.90 |
| 26 | BB | 1536 | C | N1-C2-O2 | 6.08 | 122.55 | 118.90 |
| 26 | BB | 1550 | C | C4'-C3'-C2' | -6.08 | 96.52 | 102.60 |
| 26 | BB | 2374 | C | C6-N1-C2 | -6.08 | 117.87 | 120.30 |
| 26 | BB | 2877 | G | N1-C6-O6 | -6.08 | 116.25 | 119.90 |
| 1 | AA | 836 | G | C4'-C3'-C2' | -6.08 | 96.52 | 102.60 |
| 1 | AA | 1455 | G | O4'-C1'-N9 | 6.08 | 113.07 | 108.20 |
| 26 | BB | 3 | U | N1-C2-O2 | -6.08 | 118.54 | 122.80 |
| 26 | BB | 223 | A | C8-N9-C4 | -6.08 | 103.37 | 105.80 |
| 26 | BB | 454 | A | C6-N1-C2 | -6.08 | 114.95 | 118.60 |
| 26 | BB | 707 | G | C5-N7-C8 | -6.08 | 101.26 | 104.30 |
| 26 | BB | 1571 | A | N1-C6-N6 | 6.08 | 122.25 | 118.60 |
| 26 | BB | 2608 | G | C5-C6-O6 | 6.08 | 132.25 | 128.60 |
| 1 | AA | 740 | U | N3-C4-C5 | -6.08 | 110.95 | 114.60 |
| 1 | AA | 756 | C | N1-C1'-C2' | -6.08 | 105.31 | 112.00 |
| 1 | AA | 935 | A | O4'-C1'-N9 | 6.08 | 113.07 | 108.20 |
| 1 | AA | 993 | G | C3'-C2'-C1' | 6.08 | 106.36 | 101.50 |
| 26 | BB | 144 | A | C6-C5-N7 | 6.08 | 136.56 | 132.30 |
| 26 | BB | 181 | A | O4'-C4'-C3' | 6.08 | 110.96 | 106.10 |
| 26 | BB | 361 | G | N3-C4-N9 | 6.08 | 129.65 | 126.00 |
| 26 | BB | 518 | G | C5'-C4'-O4' | 6.08 | 116.40 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 699 | A | C8-N9-C4 | -6.08 | 103.37 | 105.80 |
| 26 | BB | 844 | A | N3-C4-C5 | -6.08 | 122.54 | 126.80 |
| 26 | BB | 1057 | A | N9-C1'-C2' | 6.08 | 121.91 | 114.00 |
| 26 | BB | 1307 | A | O4'-C4'-C3' | -6.08 | 97.92 | 104.00 |
| 26 | BB | 1666 | G | C6-C5-N7 | -6.08 | 126.75 | 130.40 |
| 26 | BB | 1912 | A | N3-C4-N9 | -6.08 | 122.53 | 127.40 |
| 26 | BB | 2422 | C | N3-C2-O2 | 6.08 | 126.16 | 121.90 |
| 26 | BB | 2649 | C | N1-C1'-C2' | -6.08 | 105.31 | 112.00 |
| 1 | AA | 1266 | G | C4-C5-N7 | -6.08 | 108.37 | 110.80 |
| 26 | BB | 1913 | A | C1'-O4'-C4' | -6.08 | 105.04 | 109.90 |
| 1 | AA | 318 | G | C5'-C4'-O4' | 6.08 | 116.39 | 109.10 |
| 1 | AA | 416 | G | N1-C2-N3 | -6.08 | 120.25 | 123.90 |
| 1 | AA | 865 | A | C1'-O4'-C4' | -6.08 | 105.04 | 109.90 |
| 1 | AA | 877 | G | C4-N9-C1' | -6.08 | 118.60 | 126.50 |
| 1 | AA | 1398 | A | C4'-C3'-C2' | -6.08 | 96.52 | 102.60 |
| 1 | AA | 1399 | C | N1-C1'-C2' | -6.08 | 105.31 | 112.00 |
| 3 | AC | 27 | A | C5-C6-N6 | -6.08 | 118.84 | 123.70 |
| 26 | BB | 579 | G | O4'-C1'-N9 | 6.08 | 113.06 | 108.20 |
| 26 | BB | 590 | A | N1-C6-N6 | -6.08 | 114.95 | 118.60 |
| 26 | BB | 696 | G | C4'-C3'-C2' | -6.08 | 96.52 | 102.60 |
| 26 | BB | 949 | G | N1-C2-N3 | -6.08 | 120.25 | 123.90 |
| 26 | BB | 1342 | A | N7-C8-N9 | -6.08 | 110.76 | 113.80 |
| 26 | BB | 1958 | C | O4'-C1'-N1 | 6.08 | 113.06 | 108.20 |
| 26 | BB | 1979 | U | N3-C2-O2 | -6.08 | 117.94 | 122.20 |
| 28 | BD | 173 | LEU | CB-CG-CD2 | 6.08 | 121.33 | 111.00 |
| 1 | AA | 517 | G | N7-C8-N9 | 6.08 | 116.14 | 113.10 |
| 1 | AA | 936 | C | C5-C6-N1 | 6.08 | 124.04 | 121.00 |
| 1 | AA | 945 | G | C8-N9-C4 | -6.08 | 103.97 | 106.40 |
| 1 | AA | 1112 | C | O4'-C4'-C3' | 6.08 | 110.96 | 106.10 |
| 21 | AU | 19 | GLU | OE1-CD-OE2 | 6.08 | 130.59 | 123.30 |
| 26 | BB | 1567 | G | C4-N9-C1' | 6.08 | 134.40 | 126.50 |
| 1 | AA | 177 | G | C4'-C3'-C2' | -6.08 | 96.52 | 102.60 |
| 1 | AA | 532 | A | C4-C5-N7 | -6.08 | 107.66 | 110.70 |
| 1 | AA | 612 | C | C4-C5-C6 | 6.08 | 120.44 | 117.40 |
| 1 | AA | 1242 | G | N1-C6-O6 | -6.08 | 116.25 | 119.90 |
| 1 | AA | 1259 | C | O4'-C1'-N1 | 6.08 | 113.06 | 108.20 |
| 26 | BB | 467 | G | N3-C4-N9 | 6.08 | 129.65 | 126.00 |
| 26 | BB | 576 | U | C3'-C2'-C1' | -6.08 | 96.64 | 101.50 |
| 26 | BB | 667 | U | N3-C4-C5 | 6.08 | 118.25 | 114.60 |
| 26 | BB | 1079 | C | P-O3'-C3' | 6.08 | 126.99 | 119.70 |
| 26 | BB | 1677 | A | C5'-C4'-O4' | 6.08 | 116.39 | 109.10 |
| 26 | BB | 1826 | G | O4'-C1'-N9 | 6.08 | 113.06 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1909 | C | O4'-C1'-N1 | 6.08 | 113.06 | 108.20 |
| 26 | BB | 2053 | G | O5'-C5'-C4' | -6.08 | 100.16 | 111.70 |
| 26 | BB | 2067 | G | C5'-C4'-O4' | 6.08 | 116.39 | 109.10 |
| 26 | BB | 2321 | U | P-O3'-C3' | 6.08 | 126.99 | 119.70 |
| 26 | BB | 2645 | G | N9-C4-C5 | 6.08 | 107.83 | 105.40 |
| 1 | AA | 253 | A | C5'-C4'-O4' | 6.07 | 116.39 | 109.10 |
| 1 | AA | 1105 | A | C1'-O4'-C4' | -6.07 | 105.04 | 109.90 |
| 25 | BA | 109 | A | N7-C8-N9 | 6.07 | 116.84 | 113.80 |
| 26 | BB | 26 | G | C1'-O4'-C4' | 6.07 | 114.76 | 109.90 |
| 26 | BB | 26 | G | N3-C2-N2 | 6.07 | 124.15 | 119.90 |
| 26 | BB | 585 | G | C5-C6-N1 | -6.07 | 108.46 | 111.50 |
| 26 | BB | 771 | G | C5-N7-C8 | -6.07 | 101.26 | 104.30 |
| 26 | BB | 1192 | G | N1-C6-O6 | 6.07 | 123.55 | 119.90 |
| 26 | BB | 1556 | C | N1-C2-O2 | 6.07 | 122.54 | 118.90 |
| 26 | BB | 1690 | A | C2-N3-C4 | 6.07 | 113.64 | 110.60 |
| 26 | BB | 1710 | G | N3-C4-N9 | 6.07 | 129.65 | 126.00 |
| 26 | BB | 1888 | G | O4'-C4'-C3' | -6.07 | 97.93 | 104.00 |
| 26 | BB | 2070 | A | O4'-C1'-N9 | 6.07 | 113.06 | 108.20 |
| 26 | BB | 2214 | C | C3'-C2'-C1' | 6.07 | 106.36 | 101.50 |
| 26 | BB | 2348 | U | O4'-C1'-C2' | 6.07 | 113.07 | 107.60 |
| 54 | B3 | 42 | ILE | CB-CA-C | 6.07 | 123.75 | 111.60 |
| 1 | AA | 372 | C | C4-C5-C6 | -6.07 | 114.36 | 117.40 |
| 1 | AA | 1313 | U | C2'-C3'-O3' | 6.07 | 123.42 | 113.70 |
| 26 | BB | 507 | A | P-O3'-C3' | 6.07 | 126.99 | 119.70 |
| 26 | BB | 1330 | C | O4'-C1'-N1 | 6.07 | 113.06 | 108.20 |
| 26 | BB | 1462 | C | C4-C5-C6 | 6.07 | 120.44 | 117.40 |
| 26 | BB | 2269 | G | C3'-C2'-C1' | 6.07 | 106.36 | 101.50 |
| 26 | BB | 2899 | A | C2-N3-C4 | 6.07 | 113.64 | 110.60 |
| 33 | BI | 51 | ARG | NE-CZ-NH2 | -6.07 | 117.26 | 120.30 |
| 50 | BZ | 17 | ARG | NE-CZ-NH1 | -6.07 | 117.26 | 120.30 |
| 58 | B7 | 24 | ARG | CD-NE-CZ | 6.07 | 132.10 | 123.60 |
| 1 | AA | 356 | A | N9-C1'-C2' | -6.07 | 105.32 | 112.00 |
| 1 | AA | 578 | C | O4'-C1'-N1 | 6.07 | 113.06 | 108.20 |
| 1 | AA | 616 | G | C8-N9-C1' | 6.07 | 134.89 | 127.00 |
| 1 | AA | 908 | A | C5-N7-C8 | 6.07 | 106.94 | 103.90 |
| 1 | AA | 999 | C | O4'-C1'-N1 | 6.07 | 113.06 | 108.20 |
| 1 | AA | 1032 | G | O4'-C1'-C2' | 6.07 | 113.06 | 107.60 |
| 1 | AA | 1120 | C | N1-C2-O2 | 6.07 | 122.54 | 118.90 |
| 1 | AA | 1483 | A | C2-N3-C4 | 6.07 | 113.64 | 110.60 |
| 26 | BB | 7 | G | N3-C4-C5 | -6.07 | 125.56 | 128.60 |
| 26 | BB | 84 | A | O4'-C1'-N9 | 6.07 | 113.06 | 108.20 |
| 26 | BB | 789 | A | C1'-O4'-C4' | 6.07 | 114.76 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1023 | U | C5-C6-N1 | -6.07 | 119.67 | 122.70 |
| 26 | BB | 1137 | G | C2-N3-C4 | 6.07 | 114.94 | 111.90 |
| 26 | BB | 1253 | A | C5-C6-N1 | 6.07 | 120.73 | 117.70 |
| 26 | BB | 1281 | G | C6-C5-N7 | -6.07 | 126.76 | 130.40 |
| 26 | BB | 1338 | G | C2'-C3'-O3' | 6.07 | 123.41 | 113.70 |
| 26 | BB | 1431 | A | C5-C6-N1 | 6.07 | 120.73 | 117.70 |
| 26 | BB | 1516 | G | C5'-C4'-O4' | 6.07 | 116.39 | 109.10 |
| 26 | BB | 2403 | C | C6-N1-C2 | -6.07 | 117.87 | 120.30 |
| 26 | BB | 2423 | U | C1'-O4'-C4' | -6.07 | 105.04 | 109.90 |
| 26 | BB | 2488 | G | N9-C4-C5 | 6.07 | 107.83 | 105.40 |
| 26 | BB | 2665 | A | N3-C4-C5 | -6.07 | 122.55 | 126.80 |
| 1 | AA | 293 | G | C5'-C4'-C3' | -6.07 | 106.29 | 116.00 |
| 1 | AA | 332 | G | N3-C4-N9 | -6.07 | 122.36 | 126.00 |
| 1 | AA | 1526 | G | C6-C5-N7 | -6.07 | 126.76 | 130.40 |
| 17 | AQ | 100 | TRP | CA-CB-CG | 6.07 | 125.23 | 113.70 |
| 26 | BB | 481 | G | N3-C4-N9 | 6.07 | 129.64 | 126.00 |
| 26 | BB | 517 | C | N1-C2-O2 | -6.07 | 115.26 | 118.90 |
| 26 | BB | 548 | G | C5-C6-N1 | -6.07 | 108.47 | 111.50 |
| 26 | BB | 945 | A | N9-C4-C5 | 6.07 | 108.23 | 105.80 |
| 26 | BB | 1878 | G | C4-C5-N7 | 6.07 | 113.23 | 110.80 |
| 26 | BB | 2708 | G | N1-C2-N3 | -6.07 | 120.26 | 123.90 |
| 1 | AA | 203 | G | N1-C6-O6 | -6.07 | 116.26 | 119.90 |
| 1 | AA | 392 | C | C1'-O4'-C4' | 6.07 | 114.75 | 109.90 |
| 1 | AA | 803 | G | C1'-O4'-C4' | -6.07 | 105.05 | 109.90 |
| 1 | AA | 804 | U | OP1-P-OP2 | 6.07 | 128.70 | 119.60 |
| 1 | AA | 1274 | A | C4-C5-C6 | 6.07 | 120.03 | 117.00 |
| 1 | AA | 1316 | G | C5-N7-C8 | 6.07 | 107.33 | 104.30 |
| 1 | AA | 1448 | C | C1'-O4'-C4' | -6.07 | 105.05 | 109.90 |
| 3 | AC | 20 | G | C2-N3-C4 | 6.07 | 114.93 | 111.90 |
| 26 | BB | 97 | C | N3-C4-N4 | -6.07 | 113.75 | 118.00 |
| 26 | BB | 347 | A | N9-C4-C5 | -6.07 | 103.37 | 105.80 |
| 26 | BB | 737 | C | N1-C2-O2 | 6.07 | 122.54 | 118.90 |
| 26 | BB | 1134 | A | C5-C6-N1 | 6.07 | 120.73 | 117.70 |
| 26 | BB | 1147 | A | C4'-C3'-C2' | -6.07 | 96.53 | 102.60 |
| 26 | BB | 1325 | U | N3-C2-O2 | -6.07 | 117.95 | 122.20 |
| 26 | BB | 1384 | A | C2-N3-C4 | 6.07 | 113.63 | 110.60 |
| 26 | BB | 1679 | A | C4-C5-N7 | -6.07 | 107.67 | 110.70 |
| 26 | BB | 2682 | A | C5-C6-N1 | 6.07 | 120.73 | 117.70 |
| 1 | AA | 92 | U | O4'-C1'-C2' | 6.07 | 113.06 | 107.60 |
| 7 | AG | 193 | ASP | CB-CG-OD1 | -6.07 | 112.84 | 118.30 |
| 26 | BB | 190 | A | C4-C5-N7 | 6.07 | 113.73 | 110.70 |
| 26 | BB | 494 | G | C2-N3-C4 | -6.07 | 108.87 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 546 | U | O4'-C1'-N1 | 6.07 | 113.05 | 108.20 |
| 26 | BB | 605 | G | C6-C5-N7 | 6.07 | 134.04 | 130.40 |
| 26 | BB | 864 | G | C5'-C4'-O4' | 6.07 | 116.38 | 109.10 |
| 26 | BB | 2024 | G | C2-N3-C4 | -6.07 | 108.87 | 111.90 |
| 26 | BB | 2126 | A | C3'-C2'-C1' | 6.07 | 106.35 | 101.50 |
| 26 | BB | 2289 | G | N9-C4-C5 | 6.07 | 107.83 | 105.40 |
| 26 | BB | 2293 | G | C8-N9-C4 | -6.07 | 103.97 | 106.40 |
| 26 | BB | 2808 | G | N9-C1'-C2' | -6.07 | 105.33 | 112.00 |
| 1 | AA | 728 | A | C4-C5-C6 | 6.06 | 120.03 | 117.00 |
| 3 | AC | 19 | A | O4'-C4'-C3' | 6.06 | 110.95 | 106.10 |
| 4 | AD | 58 | A | N9-C4-C5 | -6.06 | 103.37 | 105.80 |
| 18 | AR | 17 | ASP | CB-CG-OD2 | -6.06 | 112.84 | 118.30 |
| 26 | BB | 1884 | G | P-O3'-C3' | 6.06 | 126.98 | 119.70 |
| 1 | AA | 556 | C | C4-C5-C6 | 6.06 | 120.43 | 117.40 |
| 1 | AA | 674 | G | C8-N9-C4 | -6.06 | 103.97 | 106.40 |
| 1 | AA | 774 | G | C2-N3-C4 | 6.06 | 114.93 | 111.90 |
| 1 | AA | 777 | A | O5'-P-OP2 | -6.06 | 100.24 | 105.70 |
| 1 | AA | 1291 | U | N3-C2-O2 | -6.06 | 117.96 | 122.20 |
| 1 | AA | 1441 | A | C3'-C2'-C1' | 6.06 | 106.35 | 101.50 |
| 1 | AA | 1456 | A | O4'-C1'-N9 | 6.06 | 113.05 | 108.20 |
| 25 | BA | 115 | A | C4-C5-C6 | 6.06 | 120.03 | 117.00 |
| 26 | BB | 842 | U | C4-C5-C6 | 6.06 | 123.34 | 119.70 |
| 26 | BB | 1226 | A | N9-C4-C5 | 6.06 | 108.22 | 105.80 |
| 26 | BB | 1428 | C | N3-C2-O2 | -6.06 | 117.66 | 121.90 |
| 26 | BB | 1482 | G | N3-C4-N9 | 6.06 | 129.64 | 126.00 |
| 26 | BB | 1680 | U | C5-C6-N1 | -6.06 | 119.67 | 122.70 |
| 26 | BB | 2273 | A | C5-N7-C8 | -6.06 | 100.87 | 103.90 |
| 26 | BB | 2277 | G | C5'-C4'-C3' | -6.06 | 106.30 | 116.00 |
| 26 | BB | 2280 | G | C8-N9-C4 | -6.06 | 103.97 | 106.40 |
| 26 | BB | 2319 | G | C6-N1-C2 | 6.06 | 128.74 | 125.10 |
| 1 | AA | 560 | A | C5-C6-N1 | -6.06 | 114.67 | 117.70 |
| 1 | AA | 724 | G | C5'-C4'-C3' | -6.06 | 106.30 | 116.00 |
| 1 | AA | 1122 | U | O4'-C1'-N1 | 6.06 | 113.05 | 108.20 |
| 1 | AA | 1529 | G | N9-C4-C5 | 6.06 | 107.83 | 105.40 |
| 25 | BA | 4 | C | C6-N1-C2 | 6.06 | 122.72 | 120.30 |
| 25 | BA | 82 | U | C4'-C3'-C2' | -6.06 | 96.54 | 102.60 |
| 26 | BB | 555 | G | N9-C4-C5 | -6.06 | 102.98 | 105.40 |
| 26 | BB | 1536 | C | C5'-C4'-C3' | -6.06 | 106.30 | 116.00 |
| 26 | BB | 1676 | A | N1-C6-N6 | 6.06 | 122.24 | 118.60 |
| 1 | AA | 1153 | G | C6-C5-N7 | -6.06 | 126.76 | 130.40 |
| 1 | AA | 1374 | A | O4'-C1'-N9 | 6.06 | 113.05 | 108.20 |
| 1 | AA | 1438 | G | O4'-C1'-N9 | 6.06 | 113.05 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 164 | C | O4'-C1'-N1 | 6.06 | 113.05 | 108.20 |
| 26 | BB | 784 | G | C2-N3-C4 | -6.06 | 108.87 | 111.90 |
| 26 | BB | 1194 | A | O4'-C1'-N9 | 6.06 | 113.05 | 108.20 |
| 26 | BB | 1418 | G | C2-N3-C4 | 6.06 | 114.93 | 111.90 |
| 26 | BB | 1427 | A | C4-C5-C6 | -6.06 | 113.97 | 117.00 |
| 26 | BB | 1530 | G | C4-C5-N7 | -6.06 | 108.38 | 110.80 |
| 26 | BB | 1606 | C | C6-N1-C2 | -6.06 | 117.88 | 120.30 |
| 1 | AA | 149 | A | C6-N1-C2 | 6.06 | 122.23 | 118.60 |
| 1 | AA | 1422 | G | O4'-C1'-N9 | 6.06 | 113.05 | 108.20 |
| 4 | AD | 14 | A | O4'-C1'-N9 | 6.06 | 113.05 | 108.20 |
| 26 | BB | 115 | C | C3'-C2'-C1' | 6.06 | 106.35 | 101.50 |
| 26 | BB | 593 | U | N1-C1'-C2' | -6.06 | 105.34 | 112.00 |
| 26 | BB | 657 | U | C6-N1-C2 | -6.06 | 117.36 | 121.00 |
| 26 | BB | 734 | A | N9-C1'-C2' | 6.06 | 121.88 | 114.00 |
| 26 | BB | 1105 | U | O4'-C1'-N1 | 6.06 | 113.05 | 108.20 |
| 26 | BB | 1520 | U | C6-N1-C2 | -6.06 | 117.36 | 121.00 |
| 26 | BB | 1823 | G | C3'-C2'-C1' | -6.06 | 96.65 | 101.50 |
| 26 | BB | 1889 | A | C6-N1-C2 | -6.06 | 114.97 | 118.60 |
| 26 | BB | 2360 | G | N1-C2-N3 | -6.06 | 120.27 | 123.90 |
| 26 | BB | 2486 | C | N1-C1'-C2' | -6.06 | 105.34 | 112.00 |
| 26 | BB | 2488 | G | C4-C5-N7 | -6.06 | 108.38 | 110.80 |
| 26 | BB | 2717 | C | N1-C2-O2 | 6.06 | 122.53 | 118.90 |
| 1 | AA | 1332 | A | N9-C1'-C2' | -6.06 | 105.34 | 112.00 |
| 1 | AA | 1351 | U | C4-C5-C6 | -6.06 | 116.07 | 119.70 |
| 8 | AH | 92 | ARG | NE-CZ-NH1 | 6.06 | 123.33 | 120.30 |
| 26 | BB | 159 | G | C2-N3-C4 | 6.06 | 114.93 | 111.90 |
| 26 | BB | 1430 | G | C5-N7-C8 | 6.06 | 107.33 | 104.30 |
| 1 | AA | 619 | U | N3-C2-O2 | -6.05 | 117.96 | 122.20 |
| 1 | AA | 1091 | U | N3-C2-O2 | -6.05 | 117.96 | 122.20 |
| 1 | AA | 1159 | U | C6-N1-C2 | -6.05 | 117.37 | 121.00 |
| 1 | AA | 1372 | U | N1-C2-N3 | 6.05 | 118.53 | 114.90 |
| 1 | AA | 1476 | A | C2'-C3'-O3' | 6.05 | 123.39 | 113.70 |
| 26 | BB | 424 | G | C5-N7-C8 | 6.05 | 107.33 | 104.30 |
| 26 | BB | 811 | U | N3-C2-O2 | -6.05 | 117.96 | 122.20 |
| 26 | BB | 1506 | U | C4-C5-C6 | 6.05 | 123.33 | 119.70 |
| 26 | BB | 1784 | A | C5-C6-N6 | -6.05 | 118.86 | 123.70 |
| 26 | BB | 2121 | G | C4-C5-N7 | -6.05 | 108.38 | 110.80 |
| 26 | BB | 2267 | A | N9-C4-C5 | 6.05 | 108.22 | 105.80 |
| 26 | BB | 2863 | C | O4'-C1'-C2' | 6.05 | 113.05 | 107.60 |
| 32 | BH | 82 | PHE | CG-CD2-CE2 | -6.05 | 114.14 | 120.80 |
| 1 | AA | 167 | A | C6-C5-N7 | 6.05 | 136.54 | 132.30 |
| 26 | BB | 1295 | C | C5-C4-N4 | -6.05 | 115.96 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2502 | G | C5-C6-O6 | -6.05 | 124.97 | 128.60 |
| 1 | AA | 200 | G | C6-N1-C2 | -6.05 | 121.47 | 125.10 |
| 1 | AA | 671 | G | C5-C6-O6 | -6.05 | 124.97 | 128.60 |
| 1 | AA | 944 | G | P-O3'-C3' | 6.05 | 126.96 | 119.70 |
| 1 | AA | 1186 | G | N3-C4-N9 | 6.05 | 129.63 | 126.00 |
| 25 | BA | 115 | A | N3-C4-C5 | -6.05 | 122.56 | 126.80 |
| 26 | BB | 829 | A | C5-C6-N6 | 6.05 | 128.54 | 123.70 |
| 26 | BB | 1009 | A | P-O3'-C3' | 6.05 | 126.96 | 119.70 |
| 26 | BB | 1657 | U | C4-C5-C6 | 6.05 | 123.33 | 119.70 |
| 26 | BB | 2226 | C | O4'-C1'-N1 | 6.05 | 113.04 | 108.20 |
| 26 | BB | 2847 | U | C1'-O4'-C4' | -6.05 | 105.06 | 109.90 |
| 40 | BP | 118 | ARG | NE-CZ-NH1 | 6.05 | 123.33 | 120.30 |
| 1 | AA | 133 | U | N3-C4-O4 | 6.05 | 123.64 | 119.40 |
| 1 | AA | 542 | G | N1-C2-N3 | -6.05 | 120.27 | 123.90 |
| 1 | AA | 726 | C | C4'-C3'-C2' | -6.05 | 96.55 | 102.60 |
| 1 | AA | 1115 | U | C5'-C4'-O4' | 6.05 | 116.36 | 109.10 |
| 1 | AA | 1131 | G | N3-C4-C5 | -6.05 | 125.58 | 128.60 |
| 1 | AA | 1188 | A | N7-C8-N9 | 6.05 | 116.82 | 113.80 |
| 7 | AG | 64 | TYR | CG-CD2-CE2 | -6.05 | 116.46 | 121.30 |
| 25 | BA | 42 | C | C2-N3-C4 | 6.05 | 122.92 | 119.90 |
| 26 | BB | 127 | A | O4'-C1'-N9 | 6.05 | 113.04 | 108.20 |
| 26 | BB | 558 | U | C3'-C2'-C1' | 6.05 | 106.34 | 101.50 |
| 26 | BB | 941 | A | C4'-C3'-C2' | -6.05 | 96.55 | 102.60 |
| 26 | BB | 1218 | G | C6-C5-N7 | -6.05 | 126.77 | 130.40 |
| 26 | BB | 1369 | G | C5'-C4'-O4' | 6.05 | 116.36 | 109.10 |
| 26 | BB | 1630 | A | N1-C2-N3 | -6.05 | 126.28 | 129.30 |
| 26 | BB | 1848 | A | C1'-O4'-C4' | 6.05 | 114.74 | 109.90 |
| 26 | BB | 2200 | C | C4'-C3'-C2' | -6.05 | 96.55 | 102.60 |
| 26 | BB | 2400 | G | O4'-C1'-C2' | 6.05 | 113.04 | 107.60 |
| 1 | AA | 155 | A | N1-C6-N6 | 6.05 | 122.23 | 118.60 |
| 1 | AA | 533 | A | C4-C5-C6 | -6.05 | 113.98 | 117.00 |
| 1 | AA | 788 | U | N1-C2-O2 | -6.05 | 118.57 | 122.80 |
| 1 | AA | 1272 | G | C8-N9-C4 | -6.05 | 103.98 | 106.40 |
| 1 | AA | 1483 | A | C4-C5-C6 | -6.05 | 113.98 | 117.00 |
| 26 | BB | 369 | U | C5'-C4'-O4' | 6.05 | 116.36 | 109.10 |
| 26 | BB | 2093 | G | N1-C2-N3 | -6.05 | 120.27 | 123.90 |
| 31 | BG | 109 | ARG | NE-CZ-NH2 | -6.05 | 117.28 | 120.30 |
| 1 | AA | 370 | C | C5-C4-N4 | 6.05 | 124.43 | 120.20 |
| 1 | AA | 493 | A | N1-C6-N6 | -6.05 | 114.97 | 118.60 |
| 1 | AA | 533 | A | C1'-O4'-C4' | -6.05 | 105.06 | 109.90 |
| 1 | AA | 647 | C | C5-C4-N4 | 6.05 | 124.43 | 120.20 |
| 1 | AA | 697 | U | N3-C2-O2 | -6.05 | 117.97 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 729 | A | C3'-C2'-C1' | 6.05 | 106.34 | 101.50 |
| 1 | AA | 838 | G | C8-N9-C1' | 6.05 | 134.86 | 127.00 |
| 1 | AA | 959 | A | C6-C5-N7 | 6.05 | 136.53 | 132.30 |
| 1 | AA | 964 | A | C4-C5-C6 | 6.05 | 120.02 | 117.00 |
| 1 | AA | 1179 | A | C5-C6-N6 | -6.05 | 118.86 | 123.70 |
| 1 | AA | 1244 | G | N1-C6-O6 | 6.05 | 123.53 | 119.90 |
| 26 | BB | 208 | C | C5-C4-N4 | -6.05 | 115.97 | 120.20 |
| 26 | BB | 278 | A | P-O3'-C3' | 6.05 | 126.96 | 119.70 |
| 26 | BB | 647 | G | N3-C2-N2 | 6.05 | 124.13 | 119.90 |
| 26 | BB | 949 | G | N1-C6-O6 | 6.05 | 123.53 | 119.90 |
| 26 | BB | 1240 | U | N1-C2-N3 | 6.05 | 118.53 | 114.90 |
| 26 | BB | 1582 | C | C5'-C4'-O4' | 6.05 | 116.36 | 109.10 |
| 26 | BB | 1628 | G | N3-C2-N2 | -6.05 | 115.67 | 119.90 |
| 26 | BB | 2135 | A | C4'-C3'-C2' | -6.05 | 96.55 | 102.60 |
| 26 | BB | 2222 | C | C5'-C4'-O4' | 6.05 | 116.36 | 109.10 |
| 26 | BB | 2329 | U | N1-C2-N3 | 6.05 | 118.53 | 114.90 |
| 26 | BB | 2841 | C | C4'-C3'-C2' | -6.05 | 96.55 | 102.60 |
| 1 | AA | 526 | C | O4'-C1'-N1 | 6.04 | 113.04 | 108.20 |
| 1 | AA | 1198 | G | C1'-O4'-C4' | -6.04 | 105.06 | 109.90 |
| 1 | AA | 1332 | A | O4'-C1'-N9 | 6.04 | 113.04 | 108.20 |
| 2 | AB | 67 | G | C4-C5-C6 | 6.04 | 122.43 | 118.80 |
| 26 | BB | 1970 | A | C8-N9-C4 | -6.04 | 103.38 | 105.80 |
| 26 | BB | 2658 | C | N1-C2-O2 | 6.04 | 122.53 | 118.90 |
| 1 | AA | 767 | A | C4-C5-C6 | -6.04 | 113.98 | 117.00 |
| 1 | AA | 865 | A | O4'-C4'-C3' | 6.04 | 110.94 | 106.10 |
| 1 | AA | 1223 | C | C3'-C2'-C1' | 6.04 | 106.33 | 101.50 |
| 1 | AA | 1373 | G | N9-C4-C5 | 6.04 | 107.82 | 105.40 |
| 26 | BB | 468 | G | C6-N1-C2 | -6.04 | 121.47 | 125.10 |
| 26 | BB | 579 | G | C2-N3-C4 | 6.04 | 114.92 | 111.90 |
| 26 | BB | 923 | G | C6-C5-N7 | -6.04 | 126.77 | 130.40 |
| 26 | BB | 1214 | A | C1'-O4'-C4' | -6.04 | 105.06 | 109.90 |
| 26 | BB | 1304 | A | O4'-C1'-N9 | 6.04 | 113.03 | 108.20 |
| 26 | BB | 1682 | G | N1-C2-N2 | 6.04 | 121.64 | 116.20 |
| 26 | BB | 2379 | G | C6-C5-N7 | 6.04 | 134.03 | 130.40 |
| 26 | BB | 2553 | G | C5'-C4'-O4' | 6.04 | 116.35 | 109.10 |
| 26 | BB | 2812 | G | C2-N3-C4 | 6.04 | 114.92 | 111.90 |
| 26 | BB | 2817 | U | O4'-C1'-N1 | 6.04 | 113.03 | 108.20 |
| 1 | AA | 1 | A | C8-N9-C4 | -6.04 | 103.38 | 105.80 |
| 1 | AA | 360 | G | N3-C2-N2 | -6.04 | 115.67 | 119.90 |
| 1 | AA | 904 | U | N3-C4-O4 | 6.04 | 123.63 | 119.40 |
| 1 | AA | 1373 | G | O4'-C1'-C2' | -6.04 | 99.76 | 105.80 |
| 1 | AA | 1489 | G | C5-N7-C8 | -6.04 | 101.28 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 26 | C | C3'-C2'-C1' | 6.04 | 106.33 | 101.50 |
| 11 | AK | 127 | TYR | CB-CG-CD1 | 6.04 | 124.62 | 121.00 |
| 25 | BA | 45 | A | N7-C8-N9 | -6.04 | 110.78 | 113.80 |
| 26 | BB | 230 | G | N3-C4-N9 | 6.04 | 129.62 | 126.00 |
| 26 | BB | 272 | A | C4-C5-N7 | 6.04 | 113.72 | 110.70 |
| 26 | BB | 273 | G | N7-C8-N9 | 6.04 | 116.12 | 113.10 |
| 26 | BB | 361 | G | C5-N7-C8 | -6.04 | 101.28 | 104.30 |
| 26 | BB | 1112 | G | N7-C8-N9 | -6.04 | 110.08 | 113.10 |
| 26 | BB | 1557 | C | O4'-C1'-N1 | 6.04 | 113.03 | 108.20 |
| 26 | BB | 1565 | C | N1-C1'-C2' | 6.04 | 121.85 | 114.00 |
| 26 | BB | 1943 | U | N1-C1'-C2' | -6.04 | 105.35 | 112.00 |
| 26 | BB | 2301 | C | C4'-C3'-C2' | -6.04 | 96.56 | 102.60 |
| 25 | BA | 20 | G | C2-N3-C4 | 6.04 | 114.92 | 111.90 |
| 26 | BB | 582 | A | C6-N1-C2 | 6.04 | 122.22 | 118.60 |
| 26 | BB | 706 | A | N1-C6-N6 | -6.04 | 114.98 | 118.60 |
| 26 | BB | 798 | G | N3-C4-C5 | -6.04 | 125.58 | 128.60 |
| 26 | BB | 1471 | G | C4-C5-C6 | 6.04 | 122.42 | 118.80 |
| 26 | BB | 2316 | G | C6-N1-C2 | -6.04 | 121.48 | 125.10 |
| 26 | BB | 2369 | A | N1-C2-N3 | 6.04 | 132.32 | 129.30 |
| 26 | BB | 2459 | A | N7-C8-N9 | 6.04 | 116.82 | 113.80 |
| 26 | BB | 2670 | A | C5-C6-N1 | 6.04 | 120.72 | 117.70 |
| 1 | AA | 247 | G | P-O3'-C3' | 6.04 | 126.95 | 119.70 |
| 1 | AA | 295 | C | C5'-C4'-O4' | 6.04 | 116.34 | 109.10 |
| 1 | AA | 468 | A | C4-C5-N7 | 6.04 | 113.72 | 110.70 |
| 1 | AA | 848 | C | O4'-C1'-N1 | 6.04 | 113.03 | 108.20 |
| 1 | AA | 1330 | U | O4'-C4'-C3' | 6.04 | 110.93 | 106.10 |
| 25 | BA | 52 | A | O4'-C1'-N9 | 6.04 | 113.03 | 108.20 |
| 25 | BA | 84 | G | C3'-C2'-C1' | -6.04 | 96.67 | 101.50 |
| 26 | BB | 2 | G | C4-C5-N7 | -6.04 | 108.39 | 110.80 |
| 26 | BB | 660 | C | O3'-P-O5' | -6.04 | 92.53 | 104.00 |
| 26 | BB | 758 | C | O4'-C4'-C3' | -6.04 | 97.96 | 104.00 |
| 26 | BB | 1232 | G | C4-N9-C1' | -6.04 | 118.65 | 126.50 |
| 26 | BB | 2827 | C | N3-C4-N4 | 6.04 | 122.23 | 118.00 |
| 1 | AA | 468 | A | C6-N1-C2 | 6.04 | 122.22 | 118.60 |
| 1 | AA | 833 | G | C3'-C2'-C1' | 6.04 | 106.33 | 101.50 |
| 1 | AA | 1017 | U | C5-C4-O4 | 6.04 | 129.52 | 125.90 |
| 26 | BB | 415 | A | C5-N7-C8 | -6.04 | 100.88 | 103.90 |
| 26 | BB | 803 | U | N1-C2-N3 | 6.04 | 118.52 | 114.90 |
| 26 | BB | 993 | G | C6-N1-C2 | 6.04 | 128.72 | 125.10 |
| 26 | BB | 1725 | U | C1'-O4'-C4' | 6.04 | 114.73 | 109.90 |
| 42 | BR | 61 | ARG | NE-CZ-NH2 | 6.04 | 123.32 | 120.30 |
| 1 | AA | 64 | G | C4-C5-C6 | -6.04 | 115.18 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 76 | G | C5-N7-C8 | -6.04 | 101.28 | 104.30 |
| 1 | AA | 376 | G | C5-C6-O6 | 6.04 | 132.22 | 128.60 |
| 1 | AA | 632 | U | C1'-O4'-C4' | -6.04 | 105.07 | 109.90 |
| 1 | AA | 841 | C | N3-C2-O2 | -6.04 | 117.68 | 121.90 |
| 1 | AA | 1192 | C | O4'-C1'-N1 | 6.04 | 113.03 | 108.20 |
| 17 | AQ | 52 | ARG | NE-CZ-NH1 | 6.04 | 123.32 | 120.30 |
| 26 | BB | 221 | A | C8-N9-C4 | -6.04 | 103.39 | 105.80 |
| 26 | BB | 723 | C | C2-N3-C4 | -6.04 | 116.88 | 119.90 |
| 26 | BB | 1055 | G | C8-N9-C1' | 6.04 | 134.85 | 127.00 |
| 26 | BB | 1150 | C | O4'-C1'-N1 | 6.04 | 113.03 | 108.20 |
| 26 | BB | 1651 | G | C8-N9-C4 | -6.04 | 103.99 | 106.40 |
| 26 | BB | 1654 | A | C6-N1-C2 | -6.04 | 114.98 | 118.60 |
| 26 | BB | 1913 | A | N9-C4-C5 | 6.04 | 108.22 | 105.80 |
| 26 | BB | 2010 | G | C6-C5-N7 | -6.04 | 126.78 | 130.40 |
| 26 | BB | 2224 | G | C8-N9-C4 | -6.04 | 103.99 | 106.40 |
| 26 | BB | 2317 | A | C5-C6-N1 | -6.04 | 114.68 | 117.70 |
| 26 | BB | 2328 | A | N9-C4-C5 | 6.04 | 108.21 | 105.80 |
| 26 | BB | 2568 | U | O4'-C1'-N1 | 6.04 | 113.03 | 108.20 |
| 1 | AA | 38 | G | C4-C5-N7 | -6.03 | 108.39 | 110.80 |
| 1 | AA | 337 | G | N7-C8-N9 | 6.03 | 116.12 | 113.10 |
| 1 | AA | 488 | C | C5-C4-N4 | -6.03 | 115.98 | 120.20 |
| 1 | AA | 535 | A | C5-C6-N1 | 6.03 | 120.72 | 117.70 |
| 1 | AA | 764 | C | C2-N3-C4 | 6.03 | 122.92 | 119.90 |
| 1 | AA | 1125 | U | N1-C2-O2 | 6.03 | 127.02 | 122.80 |
| 1 | AA | 1404 | C | C5'-C4'-O4' | 6.03 | 116.34 | 109.10 |
| 2 | AB | 12 | U | C5'-C4'-O4' | 6.03 | 116.34 | 109.10 |
| 24 | AX | 46 | ARG | NE-CZ-NH2 | 6.03 | 123.32 | 120.30 |
| 26 | BB | 133 | U | O4'-C1'-N1 | 6.03 | 113.03 | 108.20 |
| 26 | BB | 459 | U | C5-C6-N1 | -6.03 | 119.68 | 122.70 |
| 26 | BB | 1750 | G | C8-N9-C4 | -6.03 | 103.99 | 106.40 |
| 26 | BB | 1865 | U | C3'-C2'-C1' | 6.03 | 106.33 | 101.50 |
| 26 | BB | 2272 | U | C4-C5-C6 | 6.03 | 123.32 | 119.70 |
| 26 | BB | 2458 | G | N3-C4-N9 | -6.03 | 122.38 | 126.00 |
| 27 | BC | 73 | VAL | CA-CB-CG1 | 6.03 | 119.95 | 110.90 |
| 1 | AA | 574 | A | C4-C5-C6 | -6.03 | 113.98 | 117.00 |
| 1 | AA | 601 | G | C4'-C3'-C2' | -6.03 | 96.57 | 102.60 |
| 1 | AA | 908 | A | C4-C5-N7 | -6.03 | 107.68 | 110.70 |
| 26 | BB | 2420 | C | C5'-C4'-C3' | -6.03 | 106.35 | 116.00 |
| 1 | AA | 54 | C | C3'-C2'-C1' | 6.03 | 106.32 | 101.50 |
| 1 | AA | 315 | A | C8-N9-C4 | -6.03 | 103.39 | 105.80 |
| 1 | AA | 566 | G | N9-C1'-C2' | -6.03 | 105.36 | 112.00 |
| 1 | AA | 596 | A | C5-C6-N1 | 6.03 | 120.72 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 707 | U | C5-C6-N1 | -6.03 | 119.69 | 122.70 |
| 2 | AB | 49 | G | N9-C4-C5 | -6.03 | 102.99 | 105.40 |
| 3 | AC | 26 | U | C5-C4-O4 | -6.03 | 122.28 | 125.90 |
| 25 | BA | 39 | A | C2-N3-C4 | -6.03 | 107.58 | 110.60 |
| 26 | BB | 388 | G | C5'-C4'-O4' | 6.03 | 116.34 | 109.10 |
| 26 | BB | 761 | A | C5'-C4'-O4' | 6.03 | 116.34 | 109.10 |
| 26 | BB | 898 | C | C2-N3-C4 | -6.03 | 116.88 | 119.90 |
| 26 | BB | 1229 | C | C2-N3-C4 | -6.03 | 116.89 | 119.90 |
| 26 | BB | 1643 | G | C6-N1-C2 | -6.03 | 121.48 | 125.10 |
| 26 | BB | 2488 | G | O4'-C1'-N9 | 6.03 | 113.03 | 108.20 |
| 26 | BB | 2507 | C | O4'-C1'-N1 | 6.03 | 113.03 | 108.20 |
| 47 | BW | 51 | LEU | CB-CG-CD1 | -6.03 | 100.75 | 111.00 |
| 1 | AA | 445 | G | C4-C5-N7 | -6.03 | 108.39 | 110.80 |
| 1 | AA | 529 | G | N7-C8-N9 | -6.03 | 110.09 | 113.10 |
| 1 | AA | 849 | G | N9-C4-C5 | 6.03 | 107.81 | 105.40 |
| 1 | AA | 854 | U | C4-C5-C6 | 6.03 | 123.32 | 119.70 |
| 1 | AA | 1157 | A | N3-C4-N9 | -6.03 | 122.58 | 127.40 |
| 1 | AA | 1435 | G | C4-C5-N7 | -6.03 | 108.39 | 110.80 |
| 1 | AA | 1465 | A | C6-C5-N7 | -6.03 | 128.08 | 132.30 |
| 26 | BB | 344 | A | C3'-C2'-C1' | -6.03 | 96.68 | 101.50 |
| 26 | BB | 557 | C | C5'-C4'-O4' | 6.03 | 116.33 | 109.10 |
| 26 | BB | 582 | A | C4'-C3'-C2' | -6.03 | 96.57 | 102.60 |
| 26 | BB | 1435 | G | C2-N3-C4 | 6.03 | 114.92 | 111.90 |
| 26 | BB | 1674 | G | N3-C4-N9 | 6.03 | 129.62 | 126.00 |
| 26 | BB | 1888 | G | P-O3'-C3' | 6.03 | 126.94 | 119.70 |
| 26 | BB | 2027 | G | C4-C5-N7 | 6.03 | 113.21 | 110.80 |
| 1 | AA | 595 | A | N9-C4-C5 | 6.03 | 108.21 | 105.80 |
| 1 | AA | 636 | U | N3-C2-O2 | -6.03 | 117.98 | 122.20 |
| 1 | AA | 747 | A | C4'-C3'-C2' | -6.03 | 96.57 | 102.60 |
| 1 | AA | 945 | G | C5'-C4'-O4' | 6.03 | 116.33 | 109.10 |
| 26 | BB | 101 | A | P-O3'-C3' | 6.03 | 126.93 | 119.70 |
| 26 | BB | 282 | A | C6-N1-C2 | 6.03 | 122.22 | 118.60 |
| 26 | BB | 776 | G | N1-C2-N2 | 6.03 | 121.62 | 116.20 |
| 26 | BB | 813 | U | C4'-C3'-C2' | -6.03 | 96.57 | 102.60 |
| 26 | BB | 960 | A | O4'-C1'-N9 | -6.03 | 103.38 | 108.20 |
| 26 | BB | 1116 | G | N9-C1'-C2' | -6.03 | 105.37 | 112.00 |
| 26 | BB | 1208 | C | C5-C4-N4 | -6.03 | 115.98 | 120.20 |
| 26 | BB | 1761 | C | C4-C5-C6 | -6.03 | 114.39 | 117.40 |
| 26 | BB | 2531 | A | O4'-C4'-C3' | 6.03 | 110.92 | 106.10 |
| 26 | BB | 2791 | G | C5-N7-C8 | 6.03 | 107.31 | 104.30 |
| 1 | AA | 633 | G | C6-N1-C2 | 6.03 | 128.72 | 125.10 |
| 25 | BA | 61 | G | C8-N9-C4 | -6.03 | 103.99 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 44 | A | N7-C8-N9 | 6.03 | 116.81 | 113.80 |
| 26 | BB | 1239 | G | N7-C8-N9 | 6.03 | 116.11 | 113.10 |
| 26 | BB | 1820 | U | C5'-C4'-O4' | -6.03 | 101.87 | 109.10 |
| 26 | BB | 1865 | U | C4'-C3'-C2' | -6.03 | 96.57 | 102.60 |
| 26 | BB | 1936 | A | N1-C2-N3 | 6.03 | 132.31 | 129.30 |
| 26 | BB | 2242 | G | C4'-C3'-C2' | -6.03 | 96.57 | 102.60 |
| 1 | AA | 1020 | G | C4-C5-N7 | -6.02 | 108.39 | 110.80 |
| 1 | AA | 1244 | G | C8-N9-C4 | -6.02 | 103.99 | 106.40 |
| 1 | AA | 1450 | U | N1-C1'-C2' | -6.02 | 105.37 | 112.00 |
| 26 | BB | 214 | G | N9-C4-C5 | 6.02 | 107.81 | 105.40 |
| 26 | BB | 903 | C | C6-N1-C2 | 6.02 | 122.71 | 120.30 |
| 26 | BB | 2096 | C | C2-N3-C4 | 6.02 | 122.91 | 119.90 |
| 26 | BB | 2206 | C | C5-C6-N1 | 6.02 | 124.01 | 121.00 |
| 26 | BB | 2432 | A | N1-C2-N3 | -6.02 | 126.29 | 129.30 |
| 1 | AA | 863 | U | O4'-C1'-N1 | 6.02 | 113.02 | 108.20 |
| 1 | AA | 954 | G | O4'-C1'-N9 | 6.02 | 113.02 | 108.20 |
| 1 | AA | 1336 | C | O4'-C1'-N1 | 6.02 | 113.02 | 108.20 |
| 1 | AA | 1454 | G | O4'-C1'-N9 | 6.02 | 113.02 | 108.20 |
| 26 | BB | 28 | A | N1-C2-N3 | -6.02 | 126.29 | 129.30 |
| 26 | BB | 58 | G | C5-C6-O6 | -6.02 | 124.99 | 128.60 |
| 26 | BB | 98 | G | C5-C6-O6 | -6.02 | 124.99 | 128.60 |
| 26 | BB | 282 | A | C5-C6-N1 | -6.02 | 114.69 | 117.70 |
| 26 | BB | 485 | C | C2-N3-C4 | 6.02 | 122.91 | 119.90 |
| 26 | BB | 498 | G | C4'-C3'-C2' | -6.02 | 96.58 | 102.60 |
| 26 | BB | 1650 | A | C4'-C3'-C2' | -6.02 | 96.58 | 102.60 |
| 26 | BB | 1682 | G | N7-C8-N9 | -6.02 | 110.09 | 113.10 |
| 26 | BB | 2168 | G | N3-C2-N2 | 6.02 | 124.11 | 119.90 |
| 1 | AA | 388 | G | C5-C6-O6 | -6.02 | 124.99 | 128.60 |
| 1 | AA | 1141 | C | N3-C2-O2 | -6.02 | 117.69 | 121.90 |
| 25 | BA | 18 | G | N1-C2-N3 | -6.02 | 120.29 | 123.90 |
| 26 | BB | 85 | G | C5-C6-O6 | 6.02 | 132.21 | 128.60 |
| 26 | BB | 119 | A | N7-C8-N9 | -6.02 | 110.79 | 113.80 |
| 26 | BB | 1293 | C | N3-C2-O2 | -6.02 | 117.69 | 121.90 |
| 26 | BB | 1418 | G | N3-C4-C5 | -6.02 | 125.59 | 128.60 |
| 1 | AA | 1129 | C | C3'-C2'-C1' | 6.02 | 106.32 | 101.50 |
| 1 | AA | 1513 | A | N1-C6-N6 | -6.02 | 114.99 | 118.60 |
| 5 | AE | 79 | VAL | CA-CB-CG2 | 6.02 | 119.93 | 110.90 |
| 26 | BB | 170 | U | N3-C2-O2 | -6.02 | 117.99 | 122.20 |
| 26 | BB | 394 | C | C5-C4-N4 | -6.02 | 115.99 | 120.20 |
| 26 | BB | 700 | G | C8-N9-C1' | 6.02 | 134.82 | 127.00 |
| 26 | BB | 883 | G | N3-C4-C5 | -6.02 | 125.59 | 128.60 |
| 26 | BB | 1137 | G | O4'-C1'-N9 | 6.02 | 113.02 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1564 | C | C4'-C3'-C2' | -6.02 | 96.58 | 102.60 |
| 26 | BB | 1883 | U | C4-C5-C6 | 6.02 | 123.31 | 119.70 |
| 26 | BB | 1890 | A | N1-C2-N3 | -6.02 | 126.29 | 129.30 |
| 26 | BB | 1988 | G | N3-C2-N2 | -6.02 | 115.69 | 119.90 |
| 26 | BB | 2036 | C | N3-C2-O2 | -6.02 | 117.69 | 121.90 |
| 26 | BB | 2222 | C | C5-C4-N4 | 6.02 | 124.41 | 120.20 |
| 26 | BB | 2314 | A | C6-N1-C2 | 6.02 | 122.21 | 118.60 |
| 26 | BB | 2470 | G | C3'-C2'-C1' | -6.02 | 96.68 | 101.50 |
| 1 | AA | 195 | A | C5-C6-N1 | 6.02 | 120.71 | 117.70 |
| 1 | AA | 222 | C | C5-C4-N4 | -6.02 | 115.99 | 120.20 |
| 1 | AA | 676 | A | C6-N1-C2 | 6.02 | 122.21 | 118.60 |
| 1 | AA | 911 | U | C5-C4-O4 | -6.02 | 122.29 | 125.90 |
| 1 | AA | 1387 | G | C5-C6-O6 | -6.02 | 124.99 | 128.60 |
| 26 | BB | 304 | U | C2-N3-C4 | -6.02 | 123.39 | 127.00 |
| 26 | BB | 426 | C | N1-C2-N3 | -6.02 | 114.99 | 119.20 |
| 26 | BB | 690 | G | C6-N1-C2 | -6.02 | 121.49 | 125.10 |
| 26 | BB | 1924 | C | C4'-C3'-C2' | -6.02 | 96.58 | 102.60 |
| 26 | BB | 2202 | U | N3-C4-O4 | 6.02 | 123.61 | 119.40 |
| 26 | BB | 2512 | C | N3-C2-O2 | -6.02 | 117.69 | 121.90 |
| 26 | BB | 2534 | A | C8-N9-C4 | -6.02 | 103.39 | 105.80 |
| 26 | BB | 2684 | U | C4'-C3'-C2' | -6.02 | 96.58 | 102.60 |
| 28 | BD | 101 | ARG | NE-CZ-NH1 | 6.02 | 123.31 | 120.30 |
| 1 | AA | 322 | C | C4-C5-C6 | 6.02 | 120.41 | 117.40 |
| 1 | AA | 872 | A | N1-C2-N3 | -6.02 | 126.29 | 129.30 |
| 26 | BB | 426 | C | O4'-C1'-N1 | 6.02 | 113.01 | 108.20 |
| 26 | BB | 1711 | A | C1'-O4'-C4' | 6.02 | 114.71 | 109.90 |
| 26 | BB | 2368 | C | C5'-C4'-O4' | 6.02 | 116.32 | 109.10 |
| 1 | AA | 241 | G | C4-C5-C6 | 6.01 | 122.41 | 118.80 |
| 1 | AA | 508 | U | N3-C2-O2 | -6.01 | 117.99 | 122.20 |
| 1 | AA | 1350 | A | N7-C8-N9 | 6.01 | 116.81 | 113.80 |
| 7 | AG | 55 | ARG | NE-CZ-NH2 | -6.01 | 117.29 | 120.30 |
| 26 | BB | 35 | G | C4-C5-N7 | 6.01 | 113.21 | 110.80 |
| 26 | BB | 37 | C | N3-C4-C5 | -6.01 | 119.49 | 121.90 |
| 26 | BB | 347 | A | N3-C4-N9 | 6.01 | 132.21 | 127.40 |
| 26 | BB | 386 | G | N9-C4-C5 | 6.01 | 107.81 | 105.40 |
| 26 | BB | 937 | C | C6-N1-C2 | -6.01 | 117.89 | 120.30 |
| 26 | BB | 2570 | G | N3-C4-N9 | 6.01 | 129.61 | 126.00 |
| 37 | BM | 78 | ARG | NE-CZ-NH2 | 6.01 | 123.31 | 120.30 |
| 1 | AA | 43 | C | C5'-C4'-O4' | 6.01 | 116.31 | 109.10 |
| 1 | AA | 78 | A | N7-C8-N9 | 6.01 | 116.81 | 113.80 |
| 1 | AA | 105 | G | C5-C6-O6 | 6.01 | 132.21 | 128.60 |
| 1 | AA | 495 | A | C6-N1-C2 | -6.01 | 114.99 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 674 | G | N7-C8-N9 | 6.01 | 116.11 | 113.10 |
| 1 | AA | 709 | U | C3'-C2'-C1' | 6.01 | 106.31 | 101.50 |
| 1 | AA | 753 | A | C4-C5-C6 | 6.01 | 120.01 | 117.00 |
| 20 | AT | 10 | ARG | NE-CZ-NH1 | 6.01 | 123.31 | 120.30 |
| 25 | BA | 67 | G | C6-C5-N7 | -6.01 | 126.79 | 130.40 |
| 26 | BB | 184 | C | P-O3'-C3' | 6.01 | 126.92 | 119.70 |
| 26 | BB | 261 | G | C4-C5-N7 | 6.01 | 113.20 | 110.80 |
| 26 | BB | 927 | A | N9-C4-C5 | 6.01 | 108.20 | 105.80 |
| 26 | BB | 964 | C | O4'-C1'-N1 | 6.01 | 113.01 | 108.20 |
| 26 | BB | 1004 | U | C6-N1-C2 | -6.01 | 117.39 | 121.00 |
| 26 | BB | 1101 | U | N1-C2-N3 | 6.01 | 118.51 | 114.90 |
| 26 | BB | 1551 | A | C2-N3-C4 | 6.01 | 113.61 | 110.60 |
| 26 | BB | 2455 | G | C5-C6-O6 | -6.01 | 124.99 | 128.60 |
| 26 | BB | 2630 | G | N9-C4-C5 | 6.01 | 107.81 | 105.40 |
| 26 | BB | 2701 | U | C1'-O4'-C4' | -6.01 | 105.09 | 109.90 |
| 26 | BB | 2729 | G | O4'-C1'-N9 | 6.01 | 113.01 | 108.20 |
| 1 | AA | 510 | A | N3-C4-C5 | -6.01 | 122.59 | 126.80 |
| 1 | AA | 786 | G | C6-C5-N7 | -6.01 | 126.79 | 130.40 |
| 1 | AA | 1346 | A | OP1-P-O3' | 6.01 | 118.42 | 105.20 |
| 1 | AA | 1490 | U | C4'-C3'-C2' | -6.01 | 96.59 | 102.60 |
| 26 | BB | 342 | A | N1-C2-N3 | -6.01 | 126.29 | 129.30 |
| 26 | BB | 520 | G | C5'-C4'-O4' | 6.01 | 116.31 | 109.10 |
| 26 | BB | 572 | A | N7-C8-N9 | -6.01 | 110.79 | 113.80 |
| 26 | BB | 1496 | A | N9-C4-C5 | 6.01 | 108.20 | 105.80 |
| 26 | BB | 2349 | G | C8-N9-C1' | 6.01 | 134.81 | 127.00 |
| 26 | BB | 2403 | C | N3-C4-C5 | -6.01 | 119.50 | 121.90 |
| 26 | BB | 2532 | G | P-O5'-C5' | 6.01 | 130.52 | 120.90 |
| 26 | BB | 2781 | A | C2-N3-C4 | 6.01 | 113.61 | 110.60 |
| 1 | AA | 36 | C | C1'-O4'-C4' | 6.01 | 114.71 | 109.90 |
| 1 | AA | 248 | C | C4-C5-C6 | -6.01 | 114.39 | 117.40 |
| 1 | AA | 1148 | U | C5-C6-N1 | -6.01 | 119.70 | 122.70 |
| 1 | AA | 1255 | G | C2-N3-C4 | 6.01 | 114.91 | 111.90 |
| 2 | AB | 58 | A | N1-C2-N3 | 6.01 | 132.31 | 129.30 |
| 3 | AC | 19 | A | O4'-C1'-C2' | -6.01 | 99.79 | 105.80 |
| 4 | AD | 70 | C | O4'-C4'-C3' | 6.01 | 110.91 | 106.10 |
| 26 | BB | 70 | G | N3-C4-N9 | 6.01 | 129.61 | 126.00 |
| 26 | BB | 228 | C | C4-C5-C6 | -6.01 | 114.39 | 117.40 |
| 26 | BB | 494 | G | N9-C4-C5 | -6.01 | 103.00 | 105.40 |
| 26 | BB | 692 | C | N1-C2-N3 | -6.01 | 114.99 | 119.20 |
| 26 | BB | 1037 | G | N3-C2-N2 | 6.01 | 124.11 | 119.90 |
| 26 | BB | 1097 | U | N3-C4-O4 | 6.01 | 123.61 | 119.40 |
| 26 | BB | 1584 | U | P-O3'-C3' | -6.01 | 112.49 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1590 | A | C5-C6-N6 | 6.01 | 128.51 | 123.70 |
| 26 | BB | 2566 | A | C6-N1-C2 | 6.01 | 122.21 | 118.60 |
| 1 | AA | 212 | G | N7-C8-N9 | 6.01 | 116.10 | 113.10 |
| 1 | AA | 505 | G | O4'-C1'-C2' | 6.01 | 113.00 | 107.60 |
| 1 | AA | 608 | A | P-O3'-C3' | 6.01 | 126.91 | 119.70 |
| 1 | AA | 999 | C | C1'-O4'-C4' | 6.01 | 114.71 | 109.90 |
| 1 | AA | 1305 | G | C5-C6-N1 | -6.01 | 108.50 | 111.50 |
| 26 | BB | 1060 | U | C2-N1-C1' | 6.01 | 124.91 | 117.70 |
| 26 | BB | 1079 | C | C1'-O4'-C4' | -6.01 | 105.09 | 109.90 |
| 26 | BB | 1132 | U | C5-C4-O4 | -6.01 | 122.30 | 125.90 |
| 26 | BB | 1241 | A | C4'-C3'-C2' | -6.01 | 96.59 | 102.60 |
| 26 | BB | 1984 | G | C5-C6-N1 | 6.01 | 114.50 | 111.50 |
| 34 | BJ | 50 | TYR | CD1-CG-CD2 | 6.01 | 124.51 | 117.90 |
| 55 | B4 | 28 | THR | CA-CB-OG1 | 6.01 | 121.61 | 109.00 |
| 1 | AA | 946 | A | C5'-C4'-O4' | 6.00 | 116.31 | 109.10 |
| 1 | AA | 1508 | A | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 26 | BB | 529 | A | P-O3'-C3' | 6.00 | 126.91 | 119.70 |
| 26 | BB | 1034 | G | N9-C1'-C2' | -6.00 | 105.39 | 112.00 |
| 26 | BB | 1317 | G | C5-N7-C8 | 6.00 | 107.30 | 104.30 |
| 26 | BB | 2412 | A | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 26 | BB | 2459 | A | C5'-C4'-O4' | 6.00 | 116.31 | 109.10 |
| 26 | BB | 2847 | U | O4'-C1'-N1 | 6.00 | 113.00 | 108.20 |
| 1 | AA | 174 | A | O5'-C5'-C4' | -6.00 | 100.29 | 111.70 |
| 1 | AA | 189 | A | C2-N3-C4 | 6.00 | 113.60 | 110.60 |
| 1 | AA | 316 | C | C6-N1-C2 | -6.00 | 117.90 | 120.30 |
| 1 | AA | 461 | A | C4-C5-N7 | -6.00 | 107.70 | 110.70 |
| 1 | AA | 482 | A | C3'-C2'-C1' | 6.00 | 106.30 | 101.50 |
| 1 | AA | 658 | C | O4'-C1'-N1 | 6.00 | 113.00 | 108.20 |
| 1 | AA | 1035 | A | C4-C5-C6 | -6.00 | 114.00 | 117.00 |
| 1 | AA | 1272 | G | C5-N7-C8 | -6.00 | 101.30 | 104.30 |
| 1 | AA | 1431 | A | C6-N1-C2 | 6.00 | 122.20 | 118.60 |
| 2 | AB | 76 | A | N7-C8-N9 | 6.00 | 116.80 | 113.80 |
| 26 | BB | 695 | G | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 26 | BB | 715 | A | N9-C4-C5 | 6.00 | 108.20 | 105.80 |
| 26 | BB | 898 | C | C6-N1-C2 | 6.00 | 122.70 | 120.30 |
| 26 | BB | 999 | U | C4-C5-C6 | 6.00 | 123.30 | 119.70 |
| 26 | BB | 1897 | G | C5'-C4'-O4' | 6.00 | 116.31 | 109.10 |
| 26 | BB | 2132 | U | N1-C2-N3 | 6.00 | 118.50 | 114.90 |
| 26 | BB | 2141 | G | N3-C2-N2 | -6.00 | 115.70 | 119.90 |
| 26 | BB | 2398 | U | C2-N3-C4 | -6.00 | 123.40 | 127.00 |
| 26 | BB | 2841 | C | C4-C5-C6 | 6.00 | 120.40 | 117.40 |
| 34 | BJ | 5 | GLN | CB-CG-CD | 6.00 | 127.21 | 111.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 454 | G | N3-C4-C5 | -6.00 | 125.60 | 128.60 |
| 1 | AA | 698 | G | P-O3'-C3' | 6.00 | 126.90 | 119.70 |
| 1 | AA | 1091 | U | C4-C5-C6 | 6.00 | 123.30 | 119.70 |
| 1 | AA | 1145 | A | C6-C5-N7 | 6.00 | 136.50 | 132.30 |
| 26 | BB | 209 | C | P-O3'-C3' | 6.00 | 126.90 | 119.70 |
| 26 | BB | 348 | A | N1-C2-N3 | -6.00 | 126.30 | 129.30 |
| 26 | BB | 681 | G | C5-N7-C8 | 6.00 | 107.30 | 104.30 |
| 26 | BB | 967 | U | N1-C2-N3 | 6.00 | 118.50 | 114.90 |
| 26 | BB | 1016 | G | C4-C5-N7 | -6.00 | 108.40 | 110.80 |
| 26 | BB | 1034 | G | C4-C5-C6 | 6.00 | 122.40 | 118.80 |
| 26 | BB | 1925 | C | C6-N1-C2 | 6.00 | 122.70 | 120.30 |
| 26 | BB | 2198 | A | C5'-C4'-C3' | -6.00 | 106.40 | 116.00 |
| 1 | AA | 220 | G | N1-C2-N3 | -6.00 | 120.30 | 123.90 |
| 25 | BA | 119 | A | C4-C5-N7 | 6.00 | 113.70 | 110.70 |
| 26 | BB | 1037 | G | C5'-C4'-C3' | 6.00 | 125.60 | 116.00 |
| 26 | BB | 1125 | G | N3-C4-C5 | -6.00 | 125.60 | 128.60 |
| 26 | BB | 2019 | A | C5-N7-C8 | 6.00 | 106.90 | 103.90 |
| 26 | BB | 2218 | G | N3-C4-N9 | 6.00 | 129.60 | 126.00 |
| 1 | AA | 53 | A | C4-C5-C6 | 6.00 | 120.00 | 117.00 |
| 1 | AA | 164 | G | C8-N9-C4 | -6.00 | 104.00 | 106.40 |
| 1 | AA | 424 | G | C6-C5-N7 | -6.00 | 126.80 | 130.40 |
| 1 | AA | 790 | A | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 1 | AA | 1153 | G | C4-C5-C6 | 6.00 | 122.40 | 118.80 |
| 1 | AA | 1523 | G | C5'-C4'-O4' | 6.00 | 116.30 | 109.10 |
| 11 | AK | 110 | MET | CG-SD-CE | 6.00 | 109.80 | 100.20 |
| 26 | BB | 141 | G | C6-N1-C2 | -6.00 | 121.50 | 125.10 |
| 26 | BB | 861 | A | C4-C5-N7 | 6.00 | 113.70 | 110.70 |
| 26 | BB | 1202 | G | C4-C5-C6 | 6.00 | 122.40 | 118.80 |
| 26 | BB | 1332 | G | C1'-O4'-C4' | -6.00 | 105.10 | 109.90 |
| 26 | BB | 1369 | G | N1-C2-N2 | 6.00 | 121.60 | 116.20 |
| 26 | BB | 1514 | G | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 26 | BB | 1860 | G | C2-N3-C4 | 6.00 | 114.90 | 111.90 |
| 26 | BB | 2056 | G | N1-C2-N3 | -6.00 | 120.30 | 123.90 |
| 26 | BB | 2243 | U | C5'-C4'-O4' | 6.00 | 116.30 | 109.10 |
| 26 | BB | 2523 | G | P-O3'-C3' | 6.00 | 126.90 | 119.70 |
| 53 | B2 | 56 | ARG | NE-CZ-NH1 | 6.00 | 123.30 | 120.30 |
| 1 | AA | 113 | G | C5-C6-N1 | 6.00 | 114.50 | 111.50 |
| 1 | AA | 920 | U | O4'-C1'-N1 | 6.00 | 113.00 | 108.20 |
| 1 | AA | 1398 | A | C1'-O4'-C4' | -6.00 | 105.10 | 109.90 |
| 1 | AA | 1406 | U | C4-C5-C6 | -6.00 | 116.10 | 119.70 |
| 15 | AO | 113 | ARG | NH1-CZ-NH2 | -6.00 | 112.80 | 119.40 |
| 26 | BB | 254 | G | P-O3'-C3' | 6.00 | 126.90 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 274 | C | N3-C4-C5 | -6.00 | 119.50 | 121.90 |
| 26 | BB | 449 | A | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 26 | BB | 631 | A | P-O3'-C3' | 6.00 | 126.89 | 119.70 |
| 26 | BB | 919 | U | C5-C6-N1 | -6.00 | 119.70 | 122.70 |
| 26 | BB | 1009 | A | O5'-C5'-C4' | -6.00 | 100.31 | 111.70 |
| 26 | BB | 1168 | G | N3-C2-N2 | 6.00 | 124.10 | 119.90 |
| 26 | BB | 1530 | G | C6-C5-N7 | 6.00 | 134.00 | 130.40 |
| 26 | BB | 1656 | C | N1-C2-O2 | 6.00 | 122.50 | 118.90 |
| 26 | BB | 2264 | C | C4-C5-C6 | -6.00 | 114.40 | 117.40 |
| 26 | BB | 2518 | A | O4'-C1'-N9 | 6.00 | 113.00 | 108.20 |
| 26 | BB | 2661 | G | N9-C4-C5 | 6.00 | 107.80 | 105.40 |
| 43 | BS | 3 | VAL | CG1-CB-CG2 | -6.00 | 101.31 | 110.90 |
| 50 | BZ | 57 | VAL | CG1-CB-CG2 | -6.00 | 101.31 | 110.90 |
| 1 | AA | 894 | G | C4-C5-C6 | 6.00 | 122.40 | 118.80 |
| 1 | AA | 921 | U | N3-C4-C5 | -6.00 | 111.00 | 114.60 |
| 26 | BB | 168 | G | C4-C5-N7 | -6.00 | 108.40 | 110.80 |
| 26 | BB | 1930 | G | N3-C4-C5 | -6.00 | 125.60 | 128.60 |
| 2 | AB | 29 | G | C5-N7-C8 | -5.99 | 101.30 | 104.30 |
| 26 | BB | 238 | C | N3-C4-C5 | -5.99 | 119.50 | 121.90 |
| 26 | BB | 335 | C | N3-C2-O2 | 5.99 | 126.09 | 121.90 |
| 26 | BB | 458 | G | O4'-C1'-N9 | 5.99 | 112.99 | 108.20 |
| 26 | BB | 1028 | A | N9-C4-C5 | -5.99 | 103.40 | 105.80 |
| 26 | BB | 1240 | U | N3-C4-C5 | -5.99 | 111.00 | 114.60 |
| 26 | BB | 1295 | C | C5-C6-N1 | -5.99 | 118.00 | 121.00 |
| 26 | BB | 1895 | C | C5-C4-N4 | 5.99 | 124.40 | 120.20 |
| 26 | BB | 1945 | G | C5-C6-O6 | 5.99 | 132.20 | 128.60 |
| 26 | BB | 2351 | G | C6-C5-N7 | -5.99 | 126.80 | 130.40 |
| 26 | BB | 2382 | G | N1-C6-O6 | 5.99 | 123.50 | 119.90 |
| 26 | BB | 2800 | A | N9-C1'-C2' | -5.99 | 105.41 | 112.00 |
| 1 | AA | 170 | U | O5'-P-OP2 | -5.99 | 100.31 | 105.70 |
| 26 | BB | 94 | A | C4-C5-C6 | -5.99 | 114.00 | 117.00 |
| 26 | BB | 327 | G | C2-N3-C4 | 5.99 | 114.90 | 111.90 |
| 26 | BB | 788 | A | N1-C2-N3 | 5.99 | 132.30 | 129.30 |
| 26 | BB | 1181 | U | N3-C2-O2 | -5.99 | 118.00 | 122.20 |
| 26 | BB | 2363 | G | N3-C2-N2 | -5.99 | 115.71 | 119.90 |
| 26 | BB | 2728 | U | N3-C4-C5 | 5.99 | 118.19 | 114.60 |
| 26 | BB | 2784 | U | C5-C6-N1 | -5.99 | 119.70 | 122.70 |
| 1 | AA | 65 | A | N9-C4-C5 | -5.99 | 103.40 | 105.80 |
| 1 | AA | 286 | C | C5-C4-N4 | -5.99 | 116.01 | 120.20 |
| 1 | AA | 550 | G | N3-C4-C5 | -5.99 | 125.61 | 128.60 |
| 1 | AA | 1273 | C | O4'-C1'-N1 | 5.99 | 112.99 | 108.20 |
| 17 | AQ | 8 | ARG | NE-CZ-NH2 | 5.99 | 123.30 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 86 | G | C5-N7-C8 | -5.99 | 101.31 | 104.30 |
| 26 | BB | 19 | A | C6-N1-C2 | -5.99 | 115.01 | 118.60 |
| 26 | BB | 56 | A | C4-C5-N7 | 5.99 | 113.69 | 110.70 |
| 26 | BB | 1111 | A | O4'-C1'-N9 | 5.99 | 112.99 | 108.20 |
| 26 | BB | 1396 | U | O4'-C1'-N1 | -5.99 | 103.41 | 108.20 |
| 26 | BB | 1877 | A | C4'-C3'-C2' | -5.99 | 96.61 | 102.60 |
| 26 | BB | 2035 | G | C6-C5-N7 | 5.99 | 134.00 | 130.40 |
| 26 | BB | 2134 | A | P-O3'-C3' | 5.99 | 126.89 | 119.70 |
| 26 | BB | 2370 | G | N3-C4-C5 | 5.99 | 131.60 | 128.60 |
| 26 | BB | 2452 | C | O4'-C1'-N1 | 5.99 | 112.99 | 108.20 |
| 26 | BB | 2540 | C | N3-C4-N4 | 5.99 | 122.19 | 118.00 |
| 26 | BB | 2652 | C | N1-C2-N3 | 5.99 | 123.39 | 119.20 |
| 26 | BB | 2852 | G | C6-C5-N7 | -5.99 | 126.81 | 130.40 |
| 1 | AA | 437 | U | N3-C4-O4 | 5.99 | 123.59 | 119.40 |
| 1 | AA | 751 | U | N3-C4-O4 | 5.99 | 123.59 | 119.40 |
| 3 | AC | 16 | A | N3-C4-N9 | -5.99 | 122.61 | 127.40 |
| 19 | AS | 44 | SER | N-CA-CB | -5.99 | 101.52 | 110.50 |
| 26 | BB | 38 | A | C3'-C2'-C1' | 5.99 | 106.29 | 101.50 |
| 26 | BB | 60 | G | N1-C6-O6 | 5.99 | 123.49 | 119.90 |
| 26 | BB | 109 | C | C4-C5-C6 | -5.99 | 114.41 | 117.40 |
| 26 | BB | 309 | A | C2-N3-C4 | 5.99 | 113.59 | 110.60 |
| 26 | BB | 652 | U | C5-C4-O4 | -5.99 | 122.31 | 125.90 |
| 26 | BB | 1288 | G | C3'-C2'-C1' | 5.99 | 106.29 | 101.50 |
| 26 | BB | 1414 | C | C6-N1-C2 | 5.99 | 122.70 | 120.30 |
| 26 | BB | 1435 | G | C1'-O4'-C4' | 5.99 | 114.69 | 109.90 |
| 26 | BB | 1840 | G | N1-C6-O6 | 5.99 | 123.49 | 119.90 |
| 26 | BB | 1963 | U | P-O5'-C5' | 5.99 | 130.48 | 120.90 |
| 26 | BB | 2642 | G | O4'-C1'-N9 | 5.99 | 112.99 | 108.20 |
| 30 | BF | 35 | TYR | CD1-CG-CD2 | 5.99 | 124.49 | 117.90 |
| 2 | AB | 15 | A | C2-N3-C4 | 5.99 | 113.59 | 110.60 |
| 25 | BA | 108 | A | C3'-C2'-C1' | -5.99 | 96.71 | 101.50 |
| 26 | BB | 756 | A | N7-C8-N9 | 5.99 | 116.79 | 113.80 |
| 26 | BB | 1507 | C | C2-N3-C4 | 5.99 | 122.89 | 119.90 |
| 26 | BB | 2429 | G | C5-N7-C8 | 5.99 | 107.29 | 104.30 |
| 27 | BC | 204 | ALA | N-CA-CB | -5.99 | 101.72 | 110.10 |
| 1 | AA | 21 | G | N3-C2-N2 | 5.99 | 124.09 | 119.90 |
| 1 | AA | 41 | G | C4'-C3'-C2' | -5.99 | 96.61 | 102.60 |
| 1 | AA | 69 | G | C5-C6-O6 | -5.99 | 125.01 | 128.60 |
| 1 | AA | 313 | A | C2-N3-C4 | 5.99 | 113.59 | 110.60 |
| 1 | AA | 1060 | U | C1'-O4'-C4' | 5.99 | 114.69 | 109.90 |
| 1 | AA | 1065 | U | N3-C2-O2 | -5.99 | 118.01 | 122.20 |
| 1 | AA | 1139 | G | N1-C2-N3 | -5.99 | 120.31 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1269 | A | C2-N3-C4 | -5.99 | 107.61 | 110.60 |
| 1 | AA | 1333 | A | C1'-O4'-C4' | 5.99 | 114.69 | 109.90 |
| 25 | BA | 119 | A | C3'-C2'-C1' | -5.99 | 96.71 | 101.50 |
| 26 | BB | 1458 | U | N1-C2-N3 | 5.99 | 118.49 | 114.90 |
| 26 | BB | 2288 | A | C6-N1-C2 | 5.99 | 122.19 | 118.60 |
| 26 | BB | 2370 | G | C2-N3-C4 | -5.99 | 108.91 | 111.90 |
| 26 | BB | 2392 | A | N9-C4-C5 | 5.99 | 108.19 | 105.80 |
| 26 | BB | 2887 | A | O5'-C5'-C4' | 5.99 | 123.07 | 111.70 |
| 1 | AA | 271 | C | N3-C4-C5 | -5.98 | 119.51 | 121.90 |
| 1 | AA | 1172 | C | C6-N1-C2 | -5.98 | 117.91 | 120.30 |
| 26 | BB | 261 | G | C2-N3-C4 | 5.98 | 114.89 | 111.90 |
| 26 | BB | 1272 | A | C5-C6-N6 | 5.98 | 128.49 | 123.70 |
| 26 | BB | 1379 | U | C5'-C4'-O4' | 5.98 | 116.28 | 109.10 |
| 26 | BB | 1638 | C | C4'-C3'-C2' | -5.98 | 96.62 | 102.60 |
| 26 | BB | 2112 | G | C8-N9-C4 | 5.98 | 108.79 | 106.40 |
| 26 | BB | 2494 | G | N9-C1'-C2' | -5.98 | 105.42 | 112.00 |
| 26 | BB | 2786 | U | C6-N1-C2 | -5.98 | 117.41 | 121.00 |
| 1 | AA | 65 | A | C2-N3-C4 | 5.98 | 113.59 | 110.60 |
| 1 | AA | 321 | A | N1-C6-N6 | -5.98 | 115.01 | 118.60 |
| 1 | AA | 377 | G | C4-C5-N7 | -5.98 | 108.41 | 110.80 |
| 26 | BB | 825 | A | O4'-C1'-N9 | 5.98 | 112.98 | 108.20 |
| 26 | BB | 1155 | A | N9-C1'-C2' | -5.98 | 105.42 | 112.00 |
| 26 | BB | 1218 | G | N9-C1'-C2' | -5.98 | 105.42 | 112.00 |
| 26 | BB | 1360 | G | C4-C5-N7 | 5.98 | 113.19 | 110.80 |
| 26 | BB | 1697 | G | C3'-C2'-C1' | -5.98 | 96.72 | 101.50 |
| 26 | BB | 2246 | G | C6-N1-C2 | -5.98 | 121.51 | 125.10 |
| 26 | BB | 2426 | A | N7-C8-N9 | 5.98 | 116.79 | 113.80 |
| 26 | BB | 2551 | C | C6-N1-C2 | 5.98 | 122.69 | 120.30 |
| 26 | BB | 2880 | C | N3-C2-O2 | -5.98 | 117.71 | 121.90 |
| 1 | AA | 1140 | C | C2-N3-C4 | 5.98 | 122.89 | 119.90 |
| 25 | BA | 75 | G | N7-C8-N9 | -5.98 | 110.11 | 113.10 |
| 26 | BB | 109 | C | C5-C6-N1 | 5.98 | 123.99 | 121.00 |
| 26 | BB | 436 | C | O4'-C1'-N1 | 5.98 | 112.98 | 108.20 |
| 26 | BB | 963 | U | N1-C2-N3 | 5.98 | 118.49 | 114.90 |
| 26 | BB | 1715 | G | C5'-C4'-C3' | -5.98 | 106.43 | 116.00 |
| 26 | BB | 2053 | G | C4'-C3'-C2' | -5.98 | 96.62 | 102.60 |
| 28 | BD | 174 | ARG | CD-NE-CZ | 5.98 | 131.97 | 123.60 |
| 1 | AA | 338 | A | C5'-C4'-O4' | 5.98 | 116.28 | 109.10 |
| 1 | AA | 617 | G | N3-C2-N2 | -5.98 | 115.72 | 119.90 |
| 1 | AA | 858 | G | C8-N9-C4 | -5.98 | 104.01 | 106.40 |
| 1 | AA | 951 | G | N9-C4-C5 | 5.98 | 107.79 | 105.40 |
| 1 | AA | 1505 | G | N3-C4-C5 | -5.98 | 125.61 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 80 | G | O5'-P-OP2 | -5.98 | 100.32 | 105.70 |
| 26 | BB | 778 | G | N3-C2-N2 | 5.98 | 124.08 | 119.90 |
| 26 | BB | 1259 | G | C5-N7-C8 | 5.98 | 107.29 | 104.30 |
| 26 | BB | 1487 | U | C1'-O4'-C4' | 5.98 | 114.68 | 109.90 |
| 26 | BB | 2141 | G | N1-C2-N2 | 5.98 | 121.58 | 116.20 |
| 1 | AA | 29 | U | O5'-C5'-C4' | 5.98 | 123.06 | 111.70 |
| 1 | AA | 734 | G | C4'-C3'-C2' | 5.98 | 108.58 | 102.60 |
| 1 | AA | 984 | C | O4'-C1'-N1 | 5.98 | 112.98 | 108.20 |
| 1 | AA | 1427 | C | C5'-C4'-O4' | 5.98 | 116.27 | 109.10 |
| 3 | AC | 15 | G | C3'-C2'-C1' | -5.98 | 96.72 | 101.50 |
| 26 | BB | 134 | G | C4'-C3'-C2' | -5.98 | 96.62 | 102.60 |
| 26 | BB | 283 | G | P-O3'-C3' | 5.98 | 126.87 | 119.70 |
| 26 | BB | 476 | G | C8-N9-C4 | -5.98 | 104.01 | 106.40 |
| 26 | BB | 1033 | U | C5-C6-N1 | -5.98 | 119.71 | 122.70 |
| 26 | BB | 1857 | G | N3-C4-C5 | -5.98 | 125.61 | 128.60 |
| 26 | BB | 2311 | A | C4'-C3'-C2' | -5.98 | 96.62 | 102.60 |
| 26 | BB | 2870 | C | N1-C2-O2 | 5.98 | 122.49 | 118.90 |
| 1 | AA | 291 | U | N1-C1'-C2' | -5.98 | 105.43 | 112.00 |
| 1 | AA | 753 | A | C8-N9-C4 | -5.98 | 103.41 | 105.80 |
| 23 | AW | 50 | PHE | CB-CG-CD1 | -5.98 | 116.62 | 120.80 |
| 26 | BB | 263 | G | N3-C2-N2 | -5.98 | 115.72 | 119.90 |
| 26 | BB | 2867 | G | O4'-C1'-N9 | 5.98 | 112.98 | 108.20 |
| 1 | AA | 144 | G | C2-N3-C4 | 5.97 | 114.89 | 111.90 |
| 1 | AA | 563 | A | N1-C6-N6 | 5.97 | 122.19 | 118.60 |
| 1 | AA | 750 | C | C4'-C3'-C2' | 5.97 | 108.57 | 102.60 |
| 1 | AA | 827 | U | C5-C4-O4 | 5.97 | 129.49 | 125.90 |
| 1 | AA | 1101 | A | C5-C6-N1 | 5.97 | 120.69 | 117.70 |
| 1 | AA | 1265 | C | C2-N1-C1' | -5.97 | 112.23 | 118.80 |
| 25 | BA | 12 | C | N3-C2-O2 | -5.97 | 117.72 | 121.90 |
| 26 | BB | 17 | G | N3-C2-N2 | -5.97 | 115.72 | 119.90 |
| 26 | BB | 136 | G | C8-N9-C4 | -5.97 | 104.01 | 106.40 |
| 26 | BB | 169 | G | C2-N3-C4 | 5.97 | 114.89 | 111.90 |
| 26 | BB | 1438 | U | O4'-C1'-N1 | 5.97 | 112.98 | 108.20 |
| 26 | BB | 1762 | A | P-O3'-C3' | 5.97 | 126.87 | 119.70 |
| 26 | BB | 1776 | G | N3-C4-N9 | 5.97 | 129.59 | 126.00 |
| 26 | BB | 1893 | C | C4-C5-C6 | 5.97 | 120.39 | 117.40 |
| 26 | BB | 2240 | U | N1-C2-N3 | 5.97 | 118.48 | 114.90 |
| 26 | BB | 2903 | U | C3'-C2'-C1' | 5.97 | 106.28 | 101.50 |
| 1 | AA | 645 | G | C5'-C4'-O4' | 5.97 | 116.27 | 109.10 |
| 1 | AA | 828 | U | C5-C4-O4 | -5.97 | 122.32 | 125.90 |
| 1 | AA | 1020 | G | C4-C5-C6 | 5.97 | 122.38 | 118.80 |
| 4 | AD | 25 | U | N1-C1'-C2' | -5.97 | 105.43 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 6 | AF | 21 | TRP | NE1-CE2-CZ2 | 5.97 | 136.97 | 130.40 |
| 25 | BA | 20 | G | C6-C5-N7 | 5.97 | 133.98 | 130.40 |
| 26 | BB | 262 | A | C5-C6-N6 | -5.97 | 118.92 | 123.70 |
| 26 | BB | 1460 | U | O4'-C1'-C2' | -5.97 | 99.83 | 105.80 |
| 26 | BB | 1465 | G | N3-C4-C5 | -5.97 | 125.61 | 128.60 |
| 26 | BB | 1487 | U | O4'-C1'-C2' | -5.97 | 99.83 | 105.80 |
| 26 | BB | 1790 | C | C4-C5-C6 | 5.97 | 120.39 | 117.40 |
| 26 | BB | 2432 | A | C1'-O4'-C4' | -5.97 | 105.12 | 109.90 |
| 26 | BB | 2572 | A | C5-N7-C8 | -5.97 | 100.91 | 103.90 |
| 28 | BD | 121 | ALA | O-C-N | 5.97 | 132.25 | 122.70 |
| 43 | BS | 112 | ALA | N-CA-CB | -5.97 | 101.74 | 110.10 |
| 1 | AA | 380 | G | C5-C6-O6 | -5.97 | 125.02 | 128.60 |
| 26 | BB | 232 | G | C5-N7-C8 | -5.97 | 101.31 | 104.30 |
| 26 | BB | 907 | G | C8-N9-C4 | -5.97 | 104.01 | 106.40 |
| 26 | BB | 949 | G | C4'-C3'-O3' | 5.97 | 124.94 | 113.00 |
| 26 | BB | 1910 | G | C5-C6-O6 | -5.97 | 125.02 | 128.60 |
| 26 | BB | 1998 | A | N1-C6-N6 | 5.97 | 122.18 | 118.60 |
| 26 | BB | 2400 | G | N3-C2-N2 | -5.97 | 115.72 | 119.90 |
| 26 | BB | 2641 | G | C4-C5-C6 | 5.97 | 122.38 | 118.80 |
| 1 | AA | 4 | U | N1-C2-O2 | 5.97 | 126.98 | 122.80 |
| 1 | AA | 116 | A | O4'-C1'-N9 | 5.97 | 112.98 | 108.20 |
| 1 | AA | 431 | A | N9-C4-C5 | 5.97 | 108.19 | 105.80 |
| 1 | AA | 1015 | G | N7-C8-N9 | 5.97 | 116.08 | 113.10 |
| 1 | AA | 1099 | G | O4'-C1'-N9 | 5.97 | 112.97 | 108.20 |
| 1 | AA | 1422 | G | N3-C4-C5 | -5.97 | 125.62 | 128.60 |
| 1 | AA | 1540 | U | C5'-C4'-O4' | 5.97 | 116.26 | 109.10 |
| 3 | AC | 37 | G | C5-C6-N1 | 5.97 | 114.48 | 111.50 |
| 25 | BA | 86 | G | C3'-C2'-C1' | 5.97 | 106.28 | 101.50 |
| 26 | BB | 358 | U | C6-N1-C2 | -5.97 | 117.42 | 121.00 |
| 26 | BB | 776 | G | C4-C5-C6 | 5.97 | 122.38 | 118.80 |
| 26 | BB | 912 | C | P-O3'-C3' | 5.97 | 126.86 | 119.70 |
| 26 | BB | 1105 | U | N3-C4-C5 | 5.97 | 118.18 | 114.60 |
| 26 | BB | 1581 | G | C5-C6-N1 | 5.97 | 114.48 | 111.50 |
| 26 | BB | 1905 | C | N3-C4-N4 | -5.97 | 113.82 | 118.00 |
| 26 | BB | 1973 | G | C5'-C4'-C3' | -5.97 | 106.45 | 116.00 |
| 26 | BB | 2469 | A | P-O3'-C3' | 5.97 | 126.86 | 119.70 |
| 26 | BB | 2474 | U | C4-C5-C6 | 5.97 | 123.28 | 119.70 |
| 31 | BG | 122 | ASP | CB-CG-OD1 | -5.97 | 112.93 | 118.30 |
| 1 | AA | 33 | A | C5-N7-C8 | -5.97 | 100.92 | 103.90 |
| 1 | AA | 56 | U | O4'-C1'-N1 | 5.97 | 112.97 | 108.20 |
| 1 | AA | 386 | C | C5-C6-N1 | -5.97 | 118.02 | 121.00 |
| 1 | AA | 1140 | C | N1-C2-O2 | 5.97 | 122.48 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 12 | AL | 122 | ARG | NE-CZ-NH1 | 5.97 | 123.28 | 120.30 |
| 26 | BB | 498 | G | C2-N3-C4 | 5.97 | 114.88 | 111.90 |
| 26 | BB | 679 | C | C4'-C3'-C2' | -5.97 | 96.63 | 102.60 |
| 26 | BB | 1422 | G | C5-C6-O6 | -5.97 | 125.02 | 128.60 |
| 26 | BB | 1890 | A | C5'-C4'-O4' | 5.97 | 116.26 | 109.10 |
| 26 | BB | 2307 | G | P-O3'-C3' | 5.97 | 126.86 | 119.70 |
| 26 | BB | 2711 | A | N7-C8-N9 | 5.97 | 116.78 | 113.80 |
| 1 | AA | 41 | G | N7-C8-N9 | -5.97 | 110.12 | 113.10 |
| 1 | AA | 1320 | C | C1'-O4'-C4' | -5.97 | 105.13 | 109.90 |
| 1 | AA | 1475 | G | C1'-O4'-C4' | -5.97 | 105.13 | 109.90 |
| 25 | BA | 84 | G | C5-C6-N1 | 5.97 | 114.48 | 111.50 |
| 26 | BB | 108 | G | C4-C5-N7 | -5.97 | 108.41 | 110.80 |
| 26 | BB | 660 | C | C3'-C2'-C1' | 5.97 | 106.27 | 101.50 |
| 26 | BB | 963 | U | O4'-C1'-N1 | 5.97 | 112.97 | 108.20 |
| 26 | BB | 1021 | A | C2-N3-C4 | -5.97 | 107.62 | 110.60 |
| 26 | BB | 1241 | A | C3'-C2'-C1' | 5.97 | 106.27 | 101.50 |
| 26 | BB | 1274 | A | C4-C5-C6 | 5.97 | 119.98 | 117.00 |
| 26 | BB | 1361 | G | C5-N7-C8 | -5.97 | 101.32 | 104.30 |
| 26 | BB | 1440 | U | C6-N1-C2 | -5.97 | 117.42 | 121.00 |
| 26 | BB | 1481 | U | N3-C4-C5 | -5.97 | 111.02 | 114.60 |
| 26 | BB | 1525 | A | C6-N1-C2 | 5.97 | 122.18 | 118.60 |
| 26 | BB | 1983 | G | N1-C2-N2 | 5.97 | 121.57 | 116.20 |
| 26 | BB | 2350 | C | C2-N3-C4 | -5.97 | 116.92 | 119.90 |
| 26 | BB | 2371 | G | N3-C4-C5 | -5.97 | 125.62 | 128.60 |
| 26 | BB | 2659 | G | C2-N3-C4 | 5.97 | 114.88 | 111.90 |
| 1 | AA | 305 | G | O4'-C1'-N9 | 5.96 | 112.97 | 108.20 |
| 1 | AA | 818 | G | C6-C5-N7 | 5.96 | 133.98 | 130.40 |
| 1 | AA | 859 | G | C5-C6-N1 | 5.96 | 114.48 | 111.50 |
| 1 | AA | 955 | U | C2-N3-C4 | -5.96 | 123.42 | 127.00 |
| 4 | AD | 23 | G | N3-C4-N9 | -5.96 | 122.42 | 126.00 |
| 25 | BA | 101 | A | C5-C6-N1 | 5.96 | 120.68 | 117.70 |
| 26 | BB | 418 | C | N3-C4-N4 | 5.96 | 122.17 | 118.00 |
| 26 | BB | 886 | A | O4'-C1'-C2' | 5.96 | 112.97 | 107.60 |
| 26 | BB | 1182 | G | C6-C5-N7 | -5.96 | 126.82 | 130.40 |
| 26 | BB | 2180 | U | N1-C2-O2 | -5.96 | 118.62 | 122.80 |
| 26 | BB | 2727 | A | O5'-C5'-C4' | 5.96 | 123.03 | 111.70 |
| 26 | BB | 2747 | G | N3-C4-N9 | 5.96 | 129.58 | 126.00 |
| 26 | BB | 2813 | A | N9-C1'-C2' | -5.96 | 105.44 | 112.00 |
| 1 | AA | 694 | A | N9-C4-C5 | 5.96 | 108.19 | 105.80 |
| 1 | AA | 974 | A | P-O3'-C3' | 5.96 | 126.86 | 119.70 |
| 1 | AA | 1135 | U | P-O3'-C3' | 5.96 | 126.86 | 119.70 |
| 22 | AV | 67 | GLY | O-C-N | -5.96 | 113.16 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 992 | C | C2-N1-C1' | -5.96 | 112.24 | 118.80 |
| 26 | BB | 1706 | C | O3'-P-O5' | -5.96 | 92.67 | 104.00 |
| 1 | AA | 743 | A | C5-N7-C8 | 5.96 | 106.88 | 103.90 |
| 1 | AA | 864 | A | N1-C2-N3 | -5.96 | 126.32 | 129.30 |
| 1 | AA | 1000 | A | O3'-P-O5' | -5.96 | 92.67 | 104.00 |
| 1 | AA | 1218 | C | N3-C4-N4 | -5.96 | 113.83 | 118.00 |
| 1 | AA | 1223 | C | N3-C4-N4 | 5.96 | 122.17 | 118.00 |
| 1 | AA | 1430 | A | C4-C5-C6 | -5.96 | 114.02 | 117.00 |
| 26 | BB | 421 | C | O4'-C4'-C3' | 5.96 | 110.87 | 106.10 |
| 26 | BB | 673 | C | C5-C4-N4 | -5.96 | 116.03 | 120.20 |
| 26 | BB | 833 | A | C4'-C3'-C2' | -5.96 | 96.64 | 102.60 |
| 26 | BB | 1148 | U | N3-C2-O2 | -5.96 | 118.03 | 122.20 |
| 26 | BB | 1192 | G | N1-C2-N2 | 5.96 | 121.57 | 116.20 |
| 26 | BB | 1241 | A | N1-C2-N3 | 5.96 | 132.28 | 129.30 |
| 26 | BB | 1371 | G | C1'-O4'-C4' | -5.96 | 105.13 | 109.90 |
| 26 | BB | 1500 | G | C5-N7-C8 | -5.96 | 101.32 | 104.30 |
| 26 | BB | 2125 | G | C1'-O4'-C4' | -5.96 | 105.13 | 109.90 |
| 26 | BB | 2301 | C | C1'-O4'-C4' | -5.96 | 105.13 | 109.90 |
| 26 | BB | 2642 | G | C4-C5-C6 | 5.96 | 122.38 | 118.80 |
| 1 | AA | 1102 | A | C6-N1-C2 | -5.96 | 115.02 | 118.60 |
| 3 | AC | 22 | G | C3'-C2'-C1' | -5.96 | 96.73 | 101.50 |
| 26 | BB | 323 | C | C5-C4-N4 | -5.96 | 116.03 | 120.20 |
| 26 | BB | 2480 | C | C6-N1-C2 | 5.96 | 122.68 | 120.30 |
| 26 | BB | 2841 | C | N3-C4-N4 | 5.96 | 122.17 | 118.00 |
| 33 | BI | 47 | PHE | CB-CG-CD2 | -5.96 | 116.63 | 120.80 |
| 1 | AA | 254 | G | C1'-O4'-C4' | -5.96 | 105.13 | 109.90 |
| 1 | AA | 394 | G | C5-N7-C8 | 5.96 | 107.28 | 104.30 |
| 1 | AA | 763 | G | C5-C6-O6 | -5.96 | 125.02 | 128.60 |
| 1 | AA | 847 | G | C8-N9-C4 | -5.96 | 104.02 | 106.40 |
| 1 | AA | 1088 | G | N1-C6-O6 | -5.96 | 116.33 | 119.90 |
| 1 | AA | 1180 | A | N1-C2-N3 | 5.96 | 132.28 | 129.30 |
| 1 | AA | 1301 | U | O4'-C1'-N1 | 5.96 | 112.97 | 108.20 |
| 26 | BB | 124 | G | N3-C2-N2 | -5.96 | 115.73 | 119.90 |
| 26 | BB | 417 | C | C5'-C4'-O4' | 5.96 | 116.25 | 109.10 |
| 26 | BB | 1059 | G | N9-C1'-C2' | -5.96 | 105.45 | 112.00 |
| 26 | BB | 1386 | C | N1-C2-N3 | -5.96 | 115.03 | 119.20 |
| 26 | BB | 1768 | C | C2-N3-C4 | 5.96 | 122.88 | 119.90 |
| 26 | BB | 2062 | A | C4-C5-N7 | 5.96 | 113.68 | 110.70 |
| 26 | BB | 2690 | U | N1-C2-N3 | 5.96 | 118.47 | 114.90 |
| 26 | BB | 2724 | U | N3-C2-O2 | -5.96 | 118.03 | 122.20 |
| 1 | AA | 116 | A | C5-N7-C8 | 5.96 | 106.88 | 103.90 |
| 1 | AA | 383 | A | N9-C4-C5 | -5.96 | 103.42 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 593 | U | O4'-C1'-N1 | 5.96 | 112.97 | 108.20 |
| 1 | AA | 841 | C | N1-C2-O2 | 5.96 | 122.47 | 118.90 |
| 1 | AA | 847 | G | C4-C5-C6 | 5.96 | 122.37 | 118.80 |
| 1 | AA | 1014 | A | N1-C6-N6 | 5.96 | 122.17 | 118.60 |
| 1 | AA | 1031 | C | N1-C2-N3 | -5.96 | 115.03 | 119.20 |
| 1 | AA | 1053 | G | N1-C2-N3 | -5.96 | 120.33 | 123.90 |
| 4 | AD | 57 | C | N3-C4-C5 | -5.96 | 119.52 | 121.90 |
| 13 | AM | 44 | THR | O-C-N | 5.96 | 132.23 | 122.70 |
| 25 | BA | 44 | G | C4-C5-C6 | 5.96 | 122.37 | 118.80 |
| 25 | BA | 67 | G | N3-C4-C5 | -5.96 | 125.62 | 128.60 |
| 25 | BA | 97 | C | C3'-C2'-C1' | 5.96 | 106.27 | 101.50 |
| 25 | BA | 111 | U | C4-C5-C6 | -5.96 | 116.13 | 119.70 |
| 26 | BB | 521 | U | C1'-O4'-C4' | -5.96 | 105.14 | 109.90 |
| 26 | BB | 820 | A | N9-C1'-C2' | -5.96 | 105.45 | 112.00 |
| 26 | BB | 1460 | U | O4'-C4'-C3' | 5.96 | 110.86 | 106.10 |
| 26 | BB | 1496 | A | C1'-O4'-C4' | 5.96 | 114.67 | 109.90 |
| 26 | BB | 2009 | A | N9-C4-C5 | 5.96 | 108.18 | 105.80 |
| 26 | BB | 2637 | U | C6-N1-C2 | -5.96 | 117.43 | 121.00 |
| 26 | BB | 2710 | C | P-O5'-C5' | 5.96 | 130.43 | 120.90 |
| 26 | BB | 2803 | G | C5-C6-O6 | -5.96 | 125.03 | 128.60 |
| 33 | BI | 116 | ARG | NE-CZ-NH1 | 5.96 | 123.28 | 120.30 |
| 1 | AA | 149 | A | C3'-C2'-C1' | 5.96 | 106.26 | 101.50 |
| 1 | AA | 1337 | G | O4'-C1'-N9 | 5.96 | 112.96 | 108.20 |
| 13 | AM | 75 | ASP | CB-CG-OD1 | -5.96 | 112.94 | 118.30 |
| 26 | BB | 554 | U | C4-C5-C6 | 5.96 | 123.27 | 119.70 |
| 26 | BB | 788 | A | C6-C5-N7 | -5.96 | 128.13 | 132.30 |
| 26 | BB | 1190 | G | N3-C2-N2 | -5.96 | 115.73 | 119.90 |
| 26 | BB | 1288 | G | C4-C5-N7 | -5.96 | 108.42 | 110.80 |
| 26 | BB | 2276 | G | N3-C4-C5 | -5.96 | 125.62 | 128.60 |
| 26 | BB | 2741 | A | N9-C4-C5 | 5.96 | 108.18 | 105.80 |
| 1 | AA | 28 | A | C6-N1-C2 | -5.95 | 115.03 | 118.60 |
| 1 | AA | 176 | C | C4-C5-C6 | 5.95 | 120.38 | 117.40 |
| 1 | AA | 298 | A | N1-C6-N6 | 5.95 | 122.17 | 118.60 |
| 1 | AA | 497 | G | N9-C4-C5 | 5.95 | 107.78 | 105.40 |
| 1 | AA | 697 | U | O4'-C1'-N1 | 5.95 | 112.96 | 108.20 |
| 26 | BB | 64 | A | C4-C5-C6 | 5.95 | 119.98 | 117.00 |
| 26 | BB | 675 | A | C6-C5-N7 | -5.95 | 128.13 | 132.30 |
| 26 | BB | 1244 | A | O4'-C1'-N9 | 5.95 | 112.96 | 108.20 |
| 26 | BB | 1284 | A | N1-C2-N3 | -5.95 | 126.32 | 129.30 |
| 26 | BB | 1361 | G | N3-C4-N9 | 5.95 | 129.57 | 126.00 |
| 26 | BB | 1481 | U | C6-N1-C2 | -5.95 | 117.43 | 121.00 |
| 26 | BB | 1678 | A | O4'-C1'-N9 | 5.95 | 112.96 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1876 | A | C5'-C4'-O4' | 5.95 | 116.24 | 109.10 |
| 26 | BB | 1922 | G | C5'-C4'-O4' | 5.95 | 116.24 | 109.10 |
| 26 | BB | 2574 | G | C3'-C2'-C1' | 5.95 | 106.26 | 101.50 |
| 1 | AA | 198 | G | C8-N9-C4 | -5.95 | 104.02 | 106.40 |
| 26 | BB | 2248 | C | C1'-O4'-C4' | 5.95 | 114.66 | 109.90 |
| 26 | BB | 2373 | G | N1-C6-O6 | -5.95 | 116.33 | 119.90 |
| 26 | BB | 2543 | G | C6-C5-N7 | -5.95 | 126.83 | 130.40 |
| 1 | AA | 302 | G | N1-C2-N3 | -5.95 | 120.33 | 123.90 |
| 1 | AA | 591 | U | C2-N3-C4 | -5.95 | 123.43 | 127.00 |
| 1 | AA | 851 | G | N9-C4-C5 | 5.95 | 107.78 | 105.40 |
| 1 | AA | 917 | G | C5'-C4'-C3' | -5.95 | 106.48 | 116.00 |
| 1 | AA | 923 | A | P-O3'-C3' | 5.95 | 126.84 | 119.70 |
| 1 | AA | 1308 | U | N3-C4-C5 | -5.95 | 111.03 | 114.60 |
| 3 | AC | 38 | G | N9-C1'-C2' | -5.95 | 105.45 | 112.00 |
| 20 | AT | 36 | PHE | CB-CG-CD2 | -5.95 | 116.64 | 120.80 |
| 26 | BB | 111 | A | C4'-C3'-C2' | -5.95 | 96.65 | 102.60 |
| 26 | BB | 389 | G | C8-N9-C4 | -5.95 | 104.02 | 106.40 |
| 26 | BB | 410 | G | N3-C4-C5 | -5.95 | 125.62 | 128.60 |
| 26 | BB | 495 | G | C6-C5-N7 | 5.95 | 133.97 | 130.40 |
| 26 | BB | 1260 | A | N1-C2-N3 | -5.95 | 126.33 | 129.30 |
| 26 | BB | 1488 | C | C2-N3-C4 | -5.95 | 116.92 | 119.90 |
| 26 | BB | 1500 | G | N7-C8-N9 | 5.95 | 116.08 | 113.10 |
| 26 | BB | 1540 | G | C8-N9-C4 | -5.95 | 104.02 | 106.40 |
| 26 | BB | 2373 | G | C3'-C2'-C1' | -5.95 | 96.74 | 101.50 |
| 26 | BB | 2441 | U | N3-C2-O2 | -5.95 | 118.03 | 122.20 |
| 26 | BB | 2764 | A | C4'-C3'-C2' | -5.95 | 96.65 | 102.60 |
| 41 | BQ | 31 | THR | CA-CB-CG2 | 5.95 | 120.73 | 112.40 |
| 1 | AA | 111 | G | C1'-O4'-C4' | 5.95 | 114.66 | 109.90 |
| 1 | AA | 640 | A | C5-C6-N6 | -5.95 | 118.94 | 123.70 |
| 1 | AA | 1121 | U | C6-N1-C2 | -5.95 | 117.43 | 121.00 |
| 1 | AA | 1327 | C | C3'-C2'-C1' | 5.95 | 106.26 | 101.50 |
| 1 | AA | 1388 | C | C5-C6-N1 | -5.95 | 118.03 | 121.00 |
| 26 | BB | 190 | A | C4'-C3'-C2' | -5.95 | 96.65 | 102.60 |
| 26 | BB | 751 | A | O4'-C1'-N9 | 5.95 | 112.96 | 108.20 |
| 26 | BB | 1105 | U | C2-N3-C4 | -5.95 | 123.43 | 127.00 |
| 26 | BB | 1393 | A | N1-C2-N3 | 5.95 | 132.27 | 129.30 |
| 26 | BB | 1922 | G | N7-C8-N9 | 5.95 | 116.07 | 113.10 |
| 39 | BO | 68 | PHE | CB-CG-CD2 | -5.95 | 116.64 | 120.80 |
| 41 | BQ | 2 | ASP | CB-CG-OD2 | -5.95 | 112.95 | 118.30 |
| 4 | AD | 16 | C | C1'-O4'-C4' | 5.95 | 114.66 | 109.90 |
| 26 | BB | 1246 | A | N1-C2-N3 | -5.95 | 126.33 | 129.30 |
| 26 | BB | 1775 | U | N1-C2-N3 | 5.95 | 118.47 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2032 | G | O4'-C1'-N9 | 5.95 | 112.96 | 108.20 |
| 26 | BB | 2033 | A | C5-N7-C8 | 5.95 | 106.87 | 103.90 |
| 26 | BB | 2901 | C | N1-C2-O2 | -5.95 | 115.33 | 118.90 |
| 1 | AA | 6 | G | C5'-C4'-O4' | 5.95 | 116.23 | 109.10 |
| 1 | AA | 269 | C | N1-C2-O2 | -5.95 | 115.33 | 118.90 |
| 1 | AA | 313 | A | N9-C1'-C2' | -5.95 | 105.46 | 112.00 |
| 1 | AA | 855 | U | O3'-P-O5' | 5.95 | 115.30 | 104.00 |
| 1 | AA | 905 | U | O4'-C1'-N1 | 5.95 | 112.96 | 108.20 |
| 1 | AA | 1405 | G | C3'-C2'-C1' | -5.95 | 96.74 | 101.50 |
| 25 | BA | 65 | U | O3'-P-O5' | 5.95 | 115.30 | 104.00 |
| 26 | BB | 1068 | G | O4'-C1'-N9 | -5.95 | 103.44 | 108.20 |
| 26 | BB | 1452 | G | O4'-C4'-C3' | 5.95 | 110.86 | 106.10 |
| 26 | BB | 2049 | G | C8-N9-C4 | -5.95 | 104.02 | 106.40 |
| 26 | BB | 2429 | G | C6-N1-C2 | -5.95 | 121.53 | 125.10 |
| 26 | BB | 2435 | A | N9-C1'-C2' | -5.95 | 105.46 | 112.00 |
| 26 | BB | 2531 | A | C5-C6-N6 | -5.95 | 118.94 | 123.70 |
| 26 | BB | 2799 | A | C4'-C3'-C2' | -5.95 | 96.65 | 102.60 |
| 1 | AA | 627 | G | N3-C2-N2 | -5.94 | 115.74 | 119.90 |
| 1 | AA | 1086 | U | C1'-O4'-C4' | 5.94 | 114.66 | 109.90 |
| 1 | AA | 1180 | A | N9-C1'-C2' | -5.94 | 105.46 | 112.00 |
| 1 | AA | 1288 | A | N1-C6-N6 | 5.94 | 122.17 | 118.60 |
| 26 | BB | 328 | U | P-O3'-C3' | 5.94 | 126.83 | 119.70 |
| 26 | BB | 574 | A | C5-N7-C8 | -5.94 | 100.93 | 103.90 |
| 41 | BQ | 102 | ARG | NE-CZ-NH2 | 5.94 | 123.27 | 120.30 |
| 1 | AA | 22 | G | N1-C2-N3 | -5.94 | 120.33 | 123.90 |
| 1 | AA | 68 | G | C6-N1-C2 | -5.94 | 121.53 | 125.10 |
| 1 | AA | 344 | A | C2-N3-C4 | -5.94 | 107.63 | 110.60 |
| 1 | AA | 651 | C | C4'-C3'-C2' | -5.94 | 96.66 | 102.60 |
| 1 | AA | 727 | G | N3-C4-N9 | 5.94 | 129.57 | 126.00 |
| 1 | AA | 1004 | A | N7-C8-N9 | 5.94 | 116.77 | 113.80 |
| 10 | AJ | 72 | VAL | CA-CB-CG2 | 5.94 | 119.81 | 110.90 |
| 26 | BB | 151 | C | P-O3'-C3' | 5.94 | 126.83 | 119.70 |
| 26 | BB | 289 | G | C4'-C3'-C2' | -5.94 | 96.66 | 102.60 |
| 26 | BB | 415 | A | C4-C5-C6 | -5.94 | 114.03 | 117.00 |
| 26 | BB | 600 | G | N1-C2-N2 | -5.94 | 110.85 | 116.20 |
| 26 | BB | 750 | A | C5'-C4'-C3' | -5.94 | 106.49 | 116.00 |
| 26 | BB | 892 | A | O3'-P-O5' | -5.94 | 92.71 | 104.00 |
| 26 | BB | 976 | G | C8-N9-C4 | -5.94 | 104.02 | 106.40 |
| 26 | BB | 1023 | U | N3-C4-O4 | 5.94 | 123.56 | 119.40 |
| 26 | BB | 1731 | G | C5-C6-N1 | 5.94 | 114.47 | 111.50 |
| 26 | BB | 1733 | G | C5'-C4'-O4' | 5.94 | 116.23 | 109.10 |
| 26 | BB | 2376 | A | C5-C6-N1 | 5.94 | 120.67 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2494 | G | N3-C4-N9 | 5.94 | 129.56 | 126.00 |
| 1 | AA | 327 | A | N7-C8-N9 | 5.94 | 116.77 | 113.80 |
| 1 | AA | 786 | G | C5-C6-O6 | 5.94 | 132.16 | 128.60 |
| 1 | AA | 1070 | U | O4'-C1'-N1 | 5.94 | 112.95 | 108.20 |
| 1 | AA | 1185 | G | N3-C4-N9 | 5.94 | 129.56 | 126.00 |
| 1 | AA | 1454 | G | C5-C6-O6 | 5.94 | 132.16 | 128.60 |
| 26 | BB | 648 | G | C4'-C3'-C2' | -5.94 | 96.66 | 102.60 |
| 26 | BB | 807 | U | O4'-C1'-N1 | 5.94 | 112.95 | 108.20 |
| 26 | BB | 1619 | G | N1-C2-N3 | -5.94 | 120.33 | 123.90 |
| 26 | BB | 1637 | A | C4-C5-N7 | -5.94 | 107.73 | 110.70 |
| 26 | BB | 2236 | U | C5-C6-N1 | -5.94 | 119.73 | 122.70 |
| 26 | BB | 2783 | U | N3-C4-C5 | -5.94 | 111.03 | 114.60 |
| 1 | AA | 653 | U | C2-N3-C4 | 5.94 | 130.56 | 127.00 |
| 26 | BB | 473 | G | C6-N1-C2 | -5.94 | 121.54 | 125.10 |
| 26 | BB | 693 | A | C2-N3-C4 | 5.94 | 113.57 | 110.60 |
| 26 | BB | 1895 | C | N3-C2-O2 | -5.94 | 117.74 | 121.90 |
| 26 | BB | 1985 | C | C6-N1-C2 | 5.94 | 122.68 | 120.30 |
| 26 | BB | 2557 | G | O4'-C1'-N9 | 5.94 | 112.95 | 108.20 |
| 1 | AA | 204 | G | N3-C4-N9 | 5.94 | 129.56 | 126.00 |
| 1 | AA | 270 | A | C8-N9-C4 | -5.94 | 103.42 | 105.80 |
| 1 | AA | 399 | G | P-O3'-C3' | 5.94 | 126.83 | 119.70 |
| 1 | AA | 550 | G | C4-C5-N7 | -5.94 | 108.42 | 110.80 |
| 1 | AA | 552 | U | O4'-C1'-N1 | 5.94 | 112.95 | 108.20 |
| 1 | AA | 752 | G | N3-C2-N2 | 5.94 | 124.06 | 119.90 |
| 26 | BB | 414 | C | N3-C4-C5 | -5.94 | 119.53 | 121.90 |
| 26 | BB | 901 | C | C5-C4-N4 | -5.94 | 116.04 | 120.20 |
| 26 | BB | 1144 | A | O4'-C1'-N9 | 5.94 | 112.95 | 108.20 |
| 26 | BB | 1172 | C | P-O3'-C3' | 5.94 | 126.82 | 119.70 |
| 26 | BB | 1988 | G | C8-N9-C4 | -5.94 | 104.03 | 106.40 |
| 26 | BB | 2287 | A | C2-N3-C4 | 5.94 | 113.57 | 110.60 |
| 49 | BY | 55 | ASP | CB-CG-OD1 | 5.94 | 123.64 | 118.30 |
| 56 | B5 | 28 | ARG | NE-CZ-NH1 | 5.94 | 123.27 | 120.30 |
| 1 | AA | 391 | G | C5-C6-O6 | -5.94 | 125.04 | 128.60 |
| 1 | AA | 489 | C | C4-C5-C6 | -5.94 | 114.43 | 117.40 |
| 1 | AA | 1072 | G | C8-N9-C4 | -5.94 | 104.03 | 106.40 |
| 1 | AA | 1257 | A | C3'-C2'-C1' | 5.94 | 106.25 | 101.50 |
| 26 | BB | 432 | A | C2-N3-C4 | 5.94 | 113.57 | 110.60 |
| 26 | BB | 561 | G | C4'-C3'-C2' | -5.94 | 96.66 | 102.60 |
| 26 | BB | 1039 | A | C5'-C4'-O4' | 5.94 | 116.22 | 109.10 |
| 26 | BB | 1186 | G | C5-N7-C8 | -5.94 | 101.33 | 104.30 |
| 26 | BB | 1227 | G | C5-C6-O6 | -5.94 | 125.04 | 128.60 |
| 26 | BB | 1372 | U | C5'-C4'-O4' | 5.94 | 116.22 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1428 | C | C4-C5-C6 | 5.94 | 120.37 | 117.40 |
| 26 | BB | 1788 | C | N3-C4-C5 | 5.94 | 124.27 | 121.90 |
| 1 | AA | 452 | A | N9-C4-C5 | 5.93 | 108.17 | 105.80 |
| 1 | AA | 1018 | G | C4-C5-C6 | 5.93 | 122.36 | 118.80 |
| 1 | AA | 1506 | U | C4'-C3'-O3' | -5.93 | 96.94 | 109.40 |
| 26 | BB | 263 | G | N9-C1'-C2' | -5.93 | 105.47 | 112.00 |
| 26 | BB | 344 | A | N1-C2-N3 | 5.93 | 132.27 | 129.30 |
| 26 | BB | 370 | G | O4'-C1'-N9 | 5.93 | 112.95 | 108.20 |
| 26 | BB | 797 | G | C4-C5-N7 | 5.93 | 113.17 | 110.80 |
| 26 | BB | 1276 | A | C4-C5-C6 | 5.93 | 119.97 | 117.00 |
| 26 | BB | 1526 | C | C2-N3-C4 | 5.93 | 122.87 | 119.90 |
| 26 | BB | 1528 | A | N1-C6-N6 | -5.93 | 115.04 | 118.60 |
| 26 | BB | 2415 | G | C5-C6-N1 | 5.93 | 114.47 | 111.50 |
| 26 | BB | 2541 | A | C5-N7-C8 | -5.93 | 100.93 | 103.90 |
| 1 | AA | 106 | C | C4-C5-C6 | -5.93 | 114.43 | 117.40 |
| 1 | AA | 185 | U | N3-C4-O4 | 5.93 | 123.55 | 119.40 |
| 1 | AA | 621 | A | C8-N9-C4 | -5.93 | 103.43 | 105.80 |
| 1 | AA | 1021 | A | C5'-C4'-C3' | -5.93 | 106.51 | 116.00 |
| 1 | AA | 1023 | U | C5-C4-O4 | -5.93 | 122.34 | 125.90 |
| 1 | AA | 1025 | U | N1-C2-O2 | 5.93 | 126.95 | 122.80 |
| 1 | AA | 1192 | C | C5'-C4'-O4' | 5.93 | 116.22 | 109.10 |
| 1 | AA | 1256 | A | C5-C6-N1 | 5.93 | 120.67 | 117.70 |
| 26 | BB | 94 | A | N1-C2-N3 | -5.93 | 126.33 | 129.30 |
| 26 | BB | 322 | A | C2-N3-C4 | -5.93 | 107.63 | 110.60 |
| 26 | BB | 493 | G | C4-C5-N7 | -5.93 | 108.43 | 110.80 |
| 26 | BB | 662 | G | O5'-C5'-C4' | 5.93 | 122.97 | 111.70 |
| 26 | BB | 1030 | C | C2-N3-C4 | 5.93 | 122.87 | 119.90 |
| 26 | BB | 2543 | G | O5'-P-OP2 | -5.93 | 100.36 | 105.70 |
| 26 | BB | 2637 | U | C5'-C4'-O4' | 5.93 | 116.22 | 109.10 |
| 26 | BB | 2705 | A | N3-C4-N9 | -5.93 | 122.65 | 127.40 |
| 26 | BB | 2808 | G | O4'-C1'-N9 | 5.93 | 112.95 | 108.20 |
| 26 | BB | 445 | C | O4'-C1'-N1 | 5.93 | 112.94 | 108.20 |
| 26 | BB | 758 | C | N1-C2-N3 | -5.93 | 115.05 | 119.20 |
| 26 | BB | 1135 | C | N3-C4-N4 | -5.93 | 113.85 | 118.00 |
| 26 | BB | 2075 | U | N1-C2-O2 | -5.93 | 118.65 | 122.80 |
| 26 | BB | 2176 | A | C3'-C2'-C1' | 5.93 | 106.25 | 101.50 |
| 26 | BB | 2382 | G | C8-N9-C4 | -5.93 | 104.03 | 106.40 |
| 1 | AA | 78 | A | C6-C5-N7 | -5.93 | 128.15 | 132.30 |
| 1 | AA | 115 | G | C4-C5-N7 | -5.93 | 108.43 | 110.80 |
| 1 | AA | 309 | A | O4'-C1'-N9 | 5.93 | 112.94 | 108.20 |
| 1 | AA | 898 | G | C8-N9-C4 | -5.93 | 104.03 | 106.40 |
| 1 | AA | 1346 | A | N1-C2-N3 | -5.93 | 126.33 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 2 | G | N1-C2-N3 | -5.93 | 120.34 | 123.90 |
| 7 | AG | 114 | ARG | NE-CZ-NH2 | 5.93 | 123.27 | 120.30 |
| 21 | AU | 42 | ARG | CD-NE-CZ | 5.93 | 131.90 | 123.60 |
| 26 | BB | 278 | A | C6-N1-C2 | 5.93 | 122.16 | 118.60 |
| 26 | BB | 392 | U | N3-C4-O4 | 5.93 | 123.55 | 119.40 |
| 26 | BB | 409 | G | N9-C4-C5 | 5.93 | 107.77 | 105.40 |
| 26 | BB | 736 | C | C4'-C3'-C2' | -5.93 | 96.67 | 102.60 |
| 26 | BB | 1396 | U | C2-N3-C4 | -5.93 | 123.44 | 127.00 |
| 26 | BB | 1488 | C | C5-C6-N1 | 5.93 | 123.96 | 121.00 |
| 26 | BB | 1652 | A | C3'-C2'-C1' | 5.93 | 106.24 | 101.50 |
| 26 | BB | 2900 | A | N7-C8-N9 | -5.93 | 110.83 | 113.80 |
| 54 | B3 | 21 | LEU | CB-CG-CD2 | -5.93 | 100.92 | 111.00 |
| 1 | AA | 32 | A | P-O3'-C3' | 5.93 | 126.81 | 119.70 |
| 1 | AA | 760 | G | C5'-C4'-O4' | 5.93 | 116.21 | 109.10 |
| 1 | AA | 773 | G | C6-C5-N7 | -5.93 | 126.84 | 130.40 |
| 2 | AB | 5 | G | C6-C5-N7 | -5.93 | 126.84 | 130.40 |
| 25 | BA | 4 | C | N3-C4-N4 | 5.93 | 122.15 | 118.00 |
| 26 | BB | 188 | G | N1-C6-O6 | 5.93 | 123.46 | 119.90 |
| 26 | BB | 471 | A | C3'-C2'-C1' | -5.93 | 96.76 | 101.50 |
| 26 | BB | 530 | G | C5-C6-N1 | 5.93 | 114.46 | 111.50 |
| 26 | BB | 2791 | G | N9-C1'-C2' | -5.93 | 105.48 | 112.00 |
| 1 | AA | 1270 | G | N3-C4-C5 | -5.93 | 125.64 | 128.60 |
| 1 | AA | 1272 | G | C6-N1-C2 | -5.93 | 121.54 | 125.10 |
| 1 | AA | 1328 | C | C5-C4-N4 | -5.93 | 116.05 | 120.20 |
| 6 | AF | 164 | THR | CA-CB-CG2 | -5.93 | 104.10 | 112.40 |
| 26 | BB | 395 | U | N3-C4-C5 | 5.93 | 118.16 | 114.60 |
| 26 | BB | 984 | A | O4'-C1'-N9 | 5.93 | 112.94 | 108.20 |
| 26 | BB | 1229 | C | O4'-C1'-C2' | 5.93 | 112.94 | 107.60 |
| 26 | BB | 2289 | G | C5'-C4'-O4' | 5.93 | 116.21 | 109.10 |
| 26 | BB | 2543 | G | C4-C5-C6 | 5.93 | 122.36 | 118.80 |
| 26 | BB | 2668 | G | C5-C6-O6 | 5.93 | 132.16 | 128.60 |
| 26 | BB | 2811 | G | N9-C4-C5 | 5.93 | 107.77 | 105.40 |
| 26 | BB | 2885 | G | C4-C5-C6 | 5.93 | 122.36 | 118.80 |
| 1 | AA | 628 | G | C8-N9-C1' | 5.92 | 134.70 | 127.00 |
| 1 | AA | 1375 | A | C6-N1-C2 | -5.92 | 115.05 | 118.60 |
| 25 | BA | 75 | G | N9-C1'-C2' | 5.92 | 121.70 | 114.00 |
| 26 | BB | 14 | A | N9-C4-C5 | 5.92 | 108.17 | 105.80 |
| 26 | BB | 2192 | U | C6-N1-C2 | -5.92 | 117.44 | 121.00 |
| 26 | BB | 2373 | G | N3-C2-N2 | -5.92 | 115.75 | 119.90 |
| 26 | BB | 2502 | G | O4'-C1'-N9 | -5.92 | 103.46 | 108.20 |
| 26 | BB | 2850 | A | C4'-C3'-C2' | -5.92 | 96.68 | 102.60 |
| 26 | BB | 2856 | A | C5-C6-N1 | 5.92 | 120.66 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1229 | C | C4-C5-C6 | 5.92 | 120.36 | 117.40 |
| 26 | BB | 2143 | C | C5-C4-N4 | -5.92 | 116.05 | 120.20 |
| 26 | BB | 2673 | G | C6-C5-N7 | -5.92 | 126.85 | 130.40 |
| 1 | AA | 15 | G | N3-C4-N9 | -5.92 | 122.45 | 126.00 |
| 1 | AA | 22 | G | N3-C4-C5 | -5.92 | 125.64 | 128.60 |
| 1 | AA | 279 | A | C5-C6-N1 | 5.92 | 120.66 | 117.70 |
| 1 | AA | 645 | G | C5-C6-N1 | 5.92 | 114.46 | 111.50 |
| 1 | AA | 795 | C | C4'-C3'-C2' | 5.92 | 108.52 | 102.60 |
| 1 | AA | 1525 | G | C8-N9-C4 | -5.92 | 104.03 | 106.40 |
| 2 | AB | 1 | A | N3-C4-C5 | -5.92 | 122.66 | 126.80 |
| 7 | AG | 180 | THR | O-C-N | -5.92 | 113.23 | 122.70 |
| 25 | BA | 56 | G | N3-C4-N9 | 5.92 | 129.55 | 126.00 |
| 26 | BB | 211 | C | C3'-C2'-C1' | 5.92 | 106.24 | 101.50 |
| 26 | BB | 350 | G | O4'-C1'-C2' | -5.92 | 99.88 | 105.80 |
| 26 | BB | 427 | U | C4-C5-C6 | 5.92 | 123.25 | 119.70 |
| 26 | BB | 437 | U | C3'-C2'-C1' | -5.92 | 96.76 | 101.50 |
| 26 | BB | 696 | G | C5-N7-C8 | 5.92 | 107.26 | 104.30 |
| 26 | BB | 1262 | A | C1'-O4'-C4' | 5.92 | 114.64 | 109.90 |
| 26 | BB | 1377 | G | C6-N1-C2 | -5.92 | 121.55 | 125.10 |
| 26 | BB | 1599 | U | N3-C4-C5 | -5.92 | 111.05 | 114.60 |
| 26 | BB | 1795 | C | C6-N1-C2 | 5.92 | 122.67 | 120.30 |
| 26 | BB | 2037 | A | C5'-C4'-O4' | 5.92 | 116.20 | 109.10 |
| 26 | BB | 2307 | G | C6-C5-N7 | -5.92 | 126.85 | 130.40 |
| 26 | BB | 2549 | G | C5-C6-N1 | 5.92 | 114.46 | 111.50 |
| 26 | BB | 2646 | C | O4'-C1'-N1 | 5.92 | 112.94 | 108.20 |
| 1 | AA | 8 | A | O4'-C1'-C2' | -5.92 | 99.88 | 105.80 |
| 1 | AA | 118 | U | N3-C2-O2 | -5.92 | 118.06 | 122.20 |
| 1 | AA | 377 | G | C8-N9-C4 | -5.92 | 104.03 | 106.40 |
| 1 | AA | 923 | A | C4-C5-C6 | -5.92 | 114.04 | 117.00 |
| 25 | BA | 88 | C | N1-C2-N3 | -5.92 | 115.06 | 119.20 |
| 26 | BB | 178 | G | C6-C5-N7 | -5.92 | 126.85 | 130.40 |
| 26 | BB | 358 | U | C3'-C2'-C1' | 5.92 | 106.24 | 101.50 |
| 26 | BB | 1392 | A | N3-C4-N9 | 5.92 | 132.14 | 127.40 |
| 46 | BV | 42 | GLU | OE1-CD-OE2 | 5.92 | 130.40 | 123.30 |
| 1 | AA | 210 | C | C5-C6-N1 | 5.92 | 123.96 | 121.00 |
| 1 | AA | 375 | U | C4-C5-C6 | 5.92 | 123.25 | 119.70 |
| 1 | AA | 380 | G | C1'-O4'-C4' | -5.92 | 105.17 | 109.90 |
| 1 | AA | 804 | U | C5-C4-O4 | 5.92 | 129.45 | 125.90 |
| 1 | AA | 848 | C | C5'-C4'-C3' | -5.92 | 106.53 | 116.00 |
| 1 | AA | 923 | A | C4-C5-N7 | 5.92 | 113.66 | 110.70 |
| 1 | AA | 927 | G | C5-C6-N1 | 5.92 | 114.46 | 111.50 |
| 1 | AA | 1120 | C | N3-C2-O2 | -5.92 | 117.76 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1133 | G | C4'-C3'-C2' | -5.92 | 96.68 | 102.60 |
| 3 | AC | 57 | C | P-O3'-C3' | 5.92 | 126.80 | 119.70 |
| 26 | BB | 68 | G | C5-C6-O6 | -5.92 | 125.05 | 128.60 |
| 26 | BB | 97 | C | N1-C2-O2 | 5.92 | 122.45 | 118.90 |
| 26 | BB | 217 | A | C2-N3-C4 | 5.92 | 113.56 | 110.60 |
| 26 | BB | 245 | G | N7-C8-N9 | 5.92 | 116.06 | 113.10 |
| 26 | BB | 592 | A | C4-C5-N7 | 5.92 | 113.66 | 110.70 |
| 26 | BB | 604 | G | C4-C5-C6 | 5.92 | 122.35 | 118.80 |
| 26 | BB | 805 | G | P-O3'-C3' | 5.92 | 126.80 | 119.70 |
| 26 | BB | 1002 | G | N3-C4-C5 | -5.92 | 125.64 | 128.60 |
| 26 | BB | 1383 | A | N7-C8-N9 | 5.92 | 116.76 | 113.80 |
| 26 | BB | 1556 | C | N3-C2-O2 | -5.92 | 117.76 | 121.90 |
| 26 | BB | 1563 | U | P-O3'-C3' | 5.92 | 126.80 | 119.70 |
| 26 | BB | 2007 | U | C1'-O4'-C4' | -5.92 | 105.17 | 109.90 |
| 32 | BH | 15 | ASP | CB-CG-OD1 | -5.92 | 112.97 | 118.30 |
| 1 | AA | 205 | A | C5-C6-N6 | -5.92 | 118.97 | 123.70 |
| 1 | AA | 546 | A | C6-N1-C2 | 5.92 | 122.15 | 118.60 |
| 1 | AA | 635 | A | C4-C5-C6 | 5.92 | 119.96 | 117.00 |
| 1 | AA | 670 | G | C4-C5-N7 | 5.92 | 113.17 | 110.80 |
| 26 | BB | 48 | G | N3-C4-C5 | -5.92 | 125.64 | 128.60 |
| 26 | BB | 237 | C | C5-C6-N1 | -5.92 | 118.04 | 121.00 |
| 26 | BB | 677 | A | N3-C4-N9 | -5.92 | 122.67 | 127.40 |
| 26 | BB | 863 | A | C2-N3-C4 | 5.92 | 113.56 | 110.60 |
| 26 | BB | 1239 | G | C5-C6-O6 | 5.92 | 132.15 | 128.60 |
| 26 | BB | 1584 | U | N3-C4-O4 | 5.92 | 123.54 | 119.40 |
| 26 | BB | 1733 | G | C5-C6-O6 | 5.92 | 132.15 | 128.60 |
| 26 | BB | 2087 | G | C6-N1-C2 | -5.92 | 121.55 | 125.10 |
| 26 | BB | 2217 | G | C6-N1-C2 | -5.92 | 121.55 | 125.10 |
| 26 | BB | 2269 | G | N1-C2-N2 | 5.92 | 121.53 | 116.20 |
| 1 | AA | 289 | G | N3-C4-N9 | 5.92 | 129.55 | 126.00 |
| 1 | AA | 1179 | A | N1-C6-N6 | 5.92 | 122.15 | 118.60 |
| 4 | AD | 22 | A | C1'-O4'-C4' | -5.92 | 105.17 | 109.90 |
| 10 | AJ | 63 | VAL | CG1-CB-CG2 | -5.92 | 101.44 | 110.90 |
| 26 | BB | 275 | C | N1-C2-O2 | 5.92 | 122.45 | 118.90 |
| 26 | BB | 318 | C | C4'-C3'-C2' | -5.92 | 96.69 | 102.60 |
| 26 | BB | 381 | G | C8-N9-C4 | -5.92 | 104.03 | 106.40 |
| 26 | BB | 789 | A | C6-C5-N7 | -5.92 | 128.16 | 132.30 |
| 26 | BB | 1343 | G | C4-C5-C6 | 5.92 | 122.35 | 118.80 |
| 26 | BB | 1844 | C | C4'-C3'-C2' | -5.92 | 96.69 | 102.60 |
| 26 | BB | 1859 | U | N1-C2-N3 | 5.92 | 118.45 | 114.90 |
| 26 | BB | 1933 | G | O4'-C1'-C2' | -5.92 | 99.89 | 105.80 |
| 26 | BB | 2680 | U | C6-N1-C2 | -5.92 | 117.45 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 857 | C | N3-C4-C5 | 5.91 | 124.27 | 121.90 |
| 1 | AA | 868 | C | O4'-C1'-N1 | 5.91 | 112.93 | 108.20 |
| 1 | AA | 1132 | C | N1-C1'-C2' | -5.91 | 105.50 | 112.00 |
| 26 | BB | 218 | A | C2-N3-C4 | 5.91 | 113.56 | 110.60 |
| 26 | BB | 1138 | G | N9-C4-C5 | 5.91 | 107.77 | 105.40 |
| 26 | BB | 1313 | U | N1-C1'-C2' | 5.91 | 121.69 | 114.00 |
| 26 | BB | 1776 | G | O4'-C4'-C3' | 5.91 | 110.83 | 106.10 |
| 26 | BB | 1943 | U | P-O3'-C3' | 5.91 | 126.80 | 119.70 |
| 26 | BB | 2072 | C | N1-C2-O2 | -5.91 | 115.35 | 118.90 |
| 26 | BB | 2508 | G | N9-C1'-C2' | -5.91 | 105.50 | 112.00 |
| 26 | BB | 2731 | G | C4-C5-N7 | -5.91 | 108.43 | 110.80 |
| 1 | AA | 197 | A | C3'-C2'-C1' | -5.91 | 96.77 | 101.50 |
| 1 | AA | 320 | A | C5-N7-C8 | -5.91 | 100.94 | 103.90 |
| 1 | AA | 574 | A | N7-C8-N9 | -5.91 | 110.84 | 113.80 |
| 3 | AC | 53 | G | C5-N7-C8 | 5.91 | 107.26 | 104.30 |
| 26 | BB | 797 | G | N7-C8-N9 | 5.91 | 116.06 | 113.10 |
| 26 | BB | 2167 | U | C3'-C2'-C1' | -5.91 | 96.77 | 101.50 |
| 26 | BB | 2884 | U | C6-N1-C2 | 5.91 | 124.55 | 121.00 |
| 1 | AA | 66 | A | C8-N9-C4 | -5.91 | 103.44 | 105.80 |
| 1 | AA | 532 | A | C4'-C3'-C2' | 5.91 | 108.51 | 102.60 |
| 1 | AA | 580 | C | C4-C5-C6 | 5.91 | 120.36 | 117.40 |
| 1 | AA | 711 | G | C6-C5-N7 | -5.91 | 126.85 | 130.40 |
| 1 | AA | 976 | G | O4'-C1'-N9 | 5.91 | 112.93 | 108.20 |
| 2 | AB | 67 | G | N3-C4-C5 | -5.91 | 125.64 | 128.60 |
| 4 | AD | 71 | G | C4-C5-N7 | -5.91 | 108.44 | 110.80 |
| 25 | BA | 78 | A | C8-N9-C4 | -5.91 | 103.44 | 105.80 |
| 26 | BB | 370 | G | N1-C6-O6 | -5.91 | 116.35 | 119.90 |
| 26 | BB | 373 | U | C6-N1-C2 | -5.91 | 117.45 | 121.00 |
| 26 | BB | 399 | U | N3-C4-O4 | 5.91 | 123.54 | 119.40 |
| 26 | BB | 1499 | C | C2-N3-C4 | 5.91 | 122.86 | 119.90 |
| 26 | BB | 1691 | C | C6-N1-C2 | -5.91 | 117.94 | 120.30 |
| 26 | BB | 2317 | A | C2-N3-C4 | -5.91 | 107.64 | 110.60 |
| 38 | BN | 59 | ARG | NH1-CZ-NH2 | -5.91 | 112.90 | 119.40 |
| 47 | BW | 93 | ARG | NE-CZ-NH2 | -5.91 | 117.34 | 120.30 |
| 1 | AA | 7 | A | C3'-C2'-C1' | 5.91 | 106.23 | 101.50 |
| 1 | AA | 594 | U | C5-C6-N1 | -5.91 | 119.75 | 122.70 |
| 1 | AA | 611 | C | C5'-C4'-O4' | 5.91 | 116.19 | 109.10 |
| 2 | AB | 60 | U | N3-C4-C5 | -5.91 | 111.06 | 114.60 |
| 26 | BB | 20 | C | N3-C2-O2 | -5.91 | 117.76 | 121.90 |
| 26 | BB | 761 | A | O5'-C5'-C4' | -5.91 | 100.47 | 111.70 |
| 26 | BB | 881 | G | N3-C4-C5 | -5.91 | 125.65 | 128.60 |
| 26 | BB | 1186 | G | C6-N1-C2 | -5.91 | 121.56 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1210 | G | C5-C6-O6 | -5.91 | 125.06 | 128.60 |
| 26 | BB | 1238 | G | N3-C4-N9 | -5.91 | 122.45 | 126.00 |
| 26 | BB | 1297 | C | C5-C4-N4 | 5.91 | 124.34 | 120.20 |
| 26 | BB | 1361 | G | N7-C8-N9 | 5.91 | 116.06 | 113.10 |
| 26 | BB | 1418 | G | N7-C8-N9 | 5.91 | 116.05 | 113.10 |
| 26 | BB | 1966 | A | O5'-C5'-C4' | -5.91 | 100.47 | 111.70 |
| 26 | BB | 2081 | U | C2-N3-C4 | -5.91 | 123.45 | 127.00 |
| 26 | BB | 2120 | G | C2-N3-C4 | 5.91 | 114.86 | 111.90 |
| 26 | BB | 2183 | A | C4-C5-N7 | -5.91 | 107.75 | 110.70 |
| 26 | BB | 2682 | A | N1-C6-N6 | -5.91 | 115.05 | 118.60 |
| 1 | AA | 1003 | G | N1-C2-N3 | -5.91 | 120.36 | 123.90 |
| 3 | AC | 44 | U | C5'-C4'-C3' | -5.91 | 106.55 | 116.00 |
| 26 | BB | 407 | G | N3-C4-C5 | -5.91 | 125.65 | 128.60 |
| 26 | BB | 914 | G | N9-C4-C5 | -5.91 | 103.04 | 105.40 |
| 26 | BB | 1628 | G | C1'-O4'-C4' | -5.91 | 105.17 | 109.90 |
| 26 | BB | 2013 | A | C4-C5-C6 | -5.91 | 114.05 | 117.00 |
| 26 | BB | 2502 | G | C6-N1-C2 | -5.91 | 121.56 | 125.10 |
| 26 | BB | 2672 | U | C2-N3-C4 | -5.91 | 123.46 | 127.00 |
| 1 | AA | 155 | A | O4'-C1'-N9 | 5.91 | 112.92 | 108.20 |
| 1 | AA | 862 | C | P-O3'-C3' | 5.91 | 126.79 | 119.70 |
| 1 | AA | 1266 | G | C5-N7-C8 | 5.91 | 107.25 | 104.30 |
| 1 | AA | 1322 | C | N1-C2-N3 | -5.91 | 115.07 | 119.20 |
| 2 | AB | 29 | G | O5'-P-OP1 | -5.91 | 100.39 | 105.70 |
| 4 | AD | 50 | G | C8-N9-C1' | 5.91 | 134.68 | 127.00 |
| 26 | BB | 479 | A | C3'-C2'-C1' | 5.91 | 106.22 | 101.50 |
| 26 | BB | 623 | C | C1'-O4'-C4' | -5.91 | 105.17 | 109.90 |
| 26 | BB | 784 | G | C8-N9-C1' | 5.91 | 134.68 | 127.00 |
| 26 | BB | 984 | A | C5'-C4'-O4' | 5.91 | 116.19 | 109.10 |
| 26 | BB | 1033 | U | O3'-P-O5' | -5.91 | 92.78 | 104.00 |
| 26 | BB | 1227 | G | O4'-C1'-N9 | 5.91 | 112.92 | 108.20 |
| 26 | BB | 1661 | G | C4-C5-N7 | -5.91 | 108.44 | 110.80 |
| 26 | BB | 1787 | A | O3'-P-O5' | -5.91 | 92.78 | 104.00 |
| 26 | BB | 2706 | A | C5-C6-N1 | -5.91 | 114.75 | 117.70 |
| 26 | BB | 2857 | G | N1-C2-N2 | 5.91 | 121.52 | 116.20 |
| 2 | AB | 35 | C | N1-C2-O2 | 5.90 | 122.44 | 118.90 |
| 26 | BB | 822 | G | C6-N1-C2 | 5.90 | 128.64 | 125.10 |
| 26 | BB | 989 | G | C5'-C4'-C3' | -5.90 | 106.55 | 116.00 |
| 26 | BB | 1466 | U | P-O3'-C3' | 5.90 | 126.78 | 119.70 |
| 26 | BB | 2325 | G | N1-C6-O6 | -5.90 | 116.36 | 119.90 |
| 26 | BB | 2768 | U | O4'-C1'-N1 | 5.90 | 112.92 | 108.20 |
| 1 | AA | 173 | U | N3-C4-O4 | 5.90 | 123.53 | 119.40 |
| 1 | AA | 918 | A | C4-C5-N7 | -5.90 | 107.75 | 110.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1417 | G | C4-N9-C1' | 5.90 | 134.17 | 126.50 |
| 10 | AJ | 159 | ARG | NH1-CZ-NH2 | -5.90 | 112.91 | 119.40 |
| 26 | BB | 390 | U | N1-C1'-C2' | 5.90 | 121.67 | 114.00 |
| 26 | BB | 1149 | G | C2-N3-C4 | 5.90 | 114.85 | 111.90 |
| 26 | BB | 1798 | U | C1'-O4'-C4' | -5.90 | 105.18 | 109.90 |
| 26 | BB | 1892 | C | C3'-C2'-C1' | 5.90 | 106.22 | 101.50 |
| 26 | BB | 2200 | C | O4'-C1'-N1 | 5.90 | 112.92 | 108.20 |
| 26 | BB | 2226 | C | N3-C2-O2 | -5.90 | 117.77 | 121.90 |
| 26 | BB | 2680 | U | N3-C2-O2 | -5.90 | 118.07 | 122.20 |
| 1 | AA | 427 | U | C5'-C4'-C3' | -5.90 | 106.56 | 116.00 |
| 1 | AA | 563 | A | C6-C5-N7 | 5.90 | 136.43 | 132.30 |
| 1 | AA | 1450 | U | C1'-O4'-C4' | 5.90 | 114.62 | 109.90 |
| 26 | BB | 421 | C | N3-C4-N4 | 5.90 | 122.13 | 118.00 |
| 26 | BB | 456 | C | C4-C5-C6 | -5.90 | 114.45 | 117.40 |
| 26 | BB | 1311 | G | N1-C2-N3 | -5.90 | 120.36 | 123.90 |
| 26 | BB | 1397 | U | N1-C2-O2 | 5.90 | 126.93 | 122.80 |
| 26 | BB | 1929 | G | C5-C6-O6 | -5.90 | 125.06 | 128.60 |
| 26 | BB | 2135 | A | C5-C6-N1 | -5.90 | 114.75 | 117.70 |
| 26 | BB | 2330 | G | C5-N7-C8 | -5.90 | 101.35 | 104.30 |
| 26 | BB | 2747 | G | N3-C4-C5 | -5.90 | 125.65 | 128.60 |
| 1 | AA | 610 | U | N3-C4-O4 | 5.90 | 123.53 | 119.40 |
| 1 | AA | 822 | U | C2-N3-C4 | -5.90 | 123.46 | 127.00 |
| 25 | BA | 115 | A | C4-C5-N7 | -5.90 | 107.75 | 110.70 |
| 26 | BB | 505 | A | C4-C5-C6 | 5.90 | 119.95 | 117.00 |
| 26 | BB | 1187 | G | N7-C8-N9 | 5.90 | 116.05 | 113.10 |
| 26 | BB | 1534 | U | C2-N3-C4 | -5.90 | 123.46 | 127.00 |
| 26 | BB | 1641 | A | N9-C4-C5 | 5.90 | 108.16 | 105.80 |
| 26 | BB | 1644 | C | N1-C2-O2 | 5.90 | 122.44 | 118.90 |
| 26 | BB | 1908 | C | C3'-C2'-C1' | 5.90 | 106.22 | 101.50 |
| 1 | AA | 302 | G | N7-C8-N9 | 5.90 | 116.05 | 113.10 |
| 1 | AA | 1020 | G | C8-N9-C4 | -5.90 | 104.04 | 106.40 |
| 26 | BB | 688 | U | C2-N3-C4 | -5.90 | 123.46 | 127.00 |
| 26 | BB | 1078 | U | P-O3'-C3' | 5.90 | 126.78 | 119.70 |
| 26 | BB | 1275 | A | C5-C6-N1 | 5.90 | 120.65 | 117.70 |
| 26 | BB | 1279 | G | C5-N7-C8 | -5.90 | 101.35 | 104.30 |
| 26 | BB | 2165 | C | N3-C2-O2 | -5.90 | 117.77 | 121.90 |
| 26 | BB | 2178 | C | O4'-C1'-C2' | -5.90 | 99.90 | 105.80 |
| 26 | BB | 2599 | G | C4-C5-N7 | -5.90 | 108.44 | 110.80 |
| 28 | BD | 236 | GLY | CA-C-O | -5.90 | 109.98 | 120.60 |
| 37 | BM | 52 | VAL | CG1-CB-CG2 | -5.90 | 101.46 | 110.90 |
| 55 | B4 | 50 | GLU | OE1-CD-OE2 | 5.90 | 130.38 | 123.30 |
| 8 | AH | 160 | VAL | CG1-CB-CG2 | -5.90 | 101.47 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 248 | G | N7-C8-N9 | 5.90 | 116.05 | 113.10 |
| 26 | BB | 599 | A | C4-C5-N7 | -5.90 | 107.75 | 110.70 |
| 26 | BB | 625 | G | N3-C2-N2 | 5.90 | 124.03 | 119.90 |
| 26 | BB | 1309 | G | P-O3'-C3' | 5.90 | 126.78 | 119.70 |
| 26 | BB | 2158 | A | N3-C4-N9 | -5.90 | 122.68 | 127.40 |
| 1 | AA | 86 | G | N1-C6-O6 | -5.89 | 116.36 | 119.90 |
| 1 | AA | 133 | U | P-O3'-C3' | 5.89 | 126.77 | 119.70 |
| 1 | AA | 361 | G | N3-C4-N9 | 5.89 | 129.54 | 126.00 |
| 1 | AA | 1442 | G | N7-C8-N9 | 5.89 | 116.05 | 113.10 |
| 26 | BB | 82 | U | C4'-C3'-C2' | -5.89 | 96.70 | 102.60 |
| 26 | BB | 351 | C | N3-C4-C5 | -5.89 | 119.54 | 121.90 |
| 26 | BB | 428 | A | O4'-C1'-N9 | 5.89 | 112.92 | 108.20 |
| 26 | BB | 463 | G | C4-C5-C6 | 5.89 | 122.34 | 118.80 |
| 26 | BB | 653 | U | N3-C2-O2 | -5.89 | 118.07 | 122.20 |
| 26 | BB | 1148 | U | C5'-C4'-C3' | -5.89 | 106.57 | 116.00 |
| 26 | BB | 1792 | G | C8-N9-C1' | 5.89 | 134.66 | 127.00 |
| 26 | BB | 2216 | G | C2-N3-C4 | 5.89 | 114.85 | 111.90 |
| 26 | BB | 2683 | C | C5-C6-N1 | 5.89 | 123.95 | 121.00 |
| 26 | BB | 2767 | C | O4'-C1'-C2' | 5.89 | 112.90 | 107.60 |
| 1 | AA | 255 | G | C2-N3-C4 | 5.89 | 114.85 | 111.90 |
| 1 | AA | 555 | U | C5'-C4'-C3' | -5.89 | 106.57 | 116.00 |
| 1 | AA | 968 | A | N1-C2-N3 | -5.89 | 126.35 | 129.30 |
| 4 | AD | 47 | A | C5-C6-N1 | 5.89 | 120.65 | 117.70 |
| 26 | BB | 3 | U | N1-C2-N3 | 5.89 | 118.44 | 114.90 |
| 26 | BB | 238 | C | N1-C2-O2 | 5.89 | 122.44 | 118.90 |
| 26 | BB | 438 | G | N9-C4-C5 | 5.89 | 107.76 | 105.40 |
| 26 | BB | 1166 | G | N1-C2-N3 | -5.89 | 120.36 | 123.90 |
| 26 | BB | 1188 | U | O4'-C1'-N1 | 5.89 | 112.91 | 108.20 |
| 26 | BB | 1725 | U | O4'-C1'-C2' | -5.89 | 99.91 | 105.80 |
| 26 | BB | 1757 | A | C4'-C3'-C2' | -5.89 | 96.71 | 102.60 |
| 26 | BB | 1986 | C | N3-C2-O2 | -5.89 | 117.78 | 121.90 |
| 26 | BB | 2185 | U | N3-C4-C5 | -5.89 | 111.06 | 114.60 |
| 26 | BB | 2475 | C | C5'-C4'-O4' | 5.89 | 116.17 | 109.10 |
| 26 | BB | 2698 | U | C1'-O4'-C4' | 5.89 | 114.61 | 109.90 |
| 43 | BS | 69 | ARG | NE-CZ-NH2 | -5.89 | 117.35 | 120.30 |
| 1 | AA | 454 | G | C8-N9-C4 | -5.89 | 104.04 | 106.40 |
| 1 | AA | 1135 | U | C4'-C3'-C2' | -5.89 | 96.71 | 102.60 |
| 4 | AD | 60 | A | O4'-C4'-C3' | 5.89 | 110.81 | 106.10 |
| 26 | BB | 462 | C | N3-C4-C5 | 5.89 | 124.26 | 121.90 |
| 26 | BB | 1963 | U | C6-N1-C2 | -5.89 | 117.47 | 121.00 |
| 26 | BB | 2624 | G | N3-C4-N9 | 5.89 | 129.53 | 126.00 |
| 51 | B0 | 54 | LYS | CB-CG-CD | 5.89 | 126.92 | 111.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 572 | A | C4-C5-C6 | -5.89 | 114.06 | 117.00 |
| 1 | AA | 768 | A | O4'-C1'-N9 | 5.89 | 112.91 | 108.20 |
| 26 | BB | 1275 | A | C5'-C4'-O4' | 5.89 | 116.17 | 109.10 |
| 26 | BB | 1429 | G | N3-C4-C5 | -5.89 | 125.66 | 128.60 |
| 26 | BB | 1429 | G | O4'-C4'-C3' | 5.89 | 110.81 | 106.10 |
| 26 | BB | 1610 | A | O5'-C5'-C4' | 5.89 | 122.89 | 111.70 |
| 26 | BB | 1631 | G | O4'-C1'-N9 | 5.89 | 112.91 | 108.20 |
| 26 | BB | 1997 | C | C4'-C3'-C2' | -5.89 | 96.71 | 102.60 |
| 26 | BB | 2346 | A | C5'-C4'-C3' | -5.89 | 106.58 | 116.00 |
| 26 | BB | 2812 | G | C1'-O4'-C4' | 5.89 | 114.61 | 109.90 |
| 1 | AA | 476 | U | N3-C2-O2 | -5.89 | 118.08 | 122.20 |
| 1 | AA | 710 | G | C5-C6-N1 | 5.89 | 114.44 | 111.50 |
| 26 | BB | 2442 | C | C5-C6-N1 | 5.89 | 123.94 | 121.00 |
| 45 | BU | 76 | VAL | CG1-CB-CG2 | -5.89 | 101.48 | 110.90 |
| 1 | AA | 420 | U | P-O3'-C3' | 5.89 | 126.76 | 119.70 |
| 1 | AA | 993 | G | C6-C5-N7 | -5.89 | 126.87 | 130.40 |
| 1 | AA | 1094 | G | P-O3'-C3' | 5.89 | 126.76 | 119.70 |
| 1 | AA | 1141 | C | O4'-C4'-C3' | 5.89 | 110.81 | 106.10 |
| 1 | AA | 1369 | C | C5'-C4'-O4' | 5.89 | 116.16 | 109.10 |
| 1 | AA | 1521 | C | C5-C6-N1 | 5.89 | 123.94 | 121.00 |
| 3 | AC | 44 | U | C5-C6-N1 | -5.89 | 119.76 | 122.70 |
| 4 | AD | 45 | A | N7-C8-N9 | -5.89 | 110.86 | 113.80 |
| 20 | AT | 47 | ASP | CB-CG-OD1 | -5.89 | 113.00 | 118.30 |
| 25 | BA | 20 | G | C6-N1-C2 | -5.89 | 121.57 | 125.10 |
| 26 | BB | 235 | U | O4'-C1'-N1 | 5.89 | 112.91 | 108.20 |
| 26 | BB | 452 | G | C8-N9-C4 | -5.89 | 104.05 | 106.40 |
| 26 | BB | 519 | U | C1'-O4'-C4' | 5.89 | 114.61 | 109.90 |
| 26 | BB | 625 | G | C4-N9-C1' | -5.89 | 118.85 | 126.50 |
| 26 | BB | 993 | G | C5-C6-N1 | -5.89 | 108.56 | 111.50 |
| 26 | BB | 1445 | G | N9-C1'-C2' | -5.89 | 105.53 | 112.00 |
| 26 | BB | 1560 | G | C6-C5-N7 | -5.89 | 126.87 | 130.40 |
| 26 | BB | 2334 | U | N1-C2-O2 | 5.89 | 126.92 | 122.80 |
| 26 | BB | 2340 | A | O4'-C1'-C2' | -5.89 | 99.91 | 105.80 |
| 26 | BB | 2726 | A | N7-C8-N9 | 5.89 | 116.74 | 113.80 |
| 1 | AA | 449 | G | N1-C6-O6 | 5.88 | 123.43 | 119.90 |
| 1 | AA | 772 | U | C6-N1-C2 | -5.88 | 117.47 | 121.00 |
| 26 | BB | 41 | C | C5-C6-N1 | -5.88 | 118.06 | 121.00 |
| 26 | BB | 276 | U | C6-N1-C2 | -5.88 | 117.47 | 121.00 |
| 26 | BB | 741 | U | C3'-C2'-C1' | -5.88 | 96.79 | 101.50 |
| 26 | BB | 857 | G | C5-C6-O6 | -5.88 | 125.07 | 128.60 |
| 26 | BB | 933 | A | C4-C5-N7 | -5.88 | 107.76 | 110.70 |
| 26 | BB | 1040 | A | C2-N3-C4 | 5.88 | 113.54 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1068 | G | C2-N3-C4 | 5.88 | 114.84 | 111.90 |
| 26 | BB | 1123 | C | N1-C1'-C2' | -5.88 | 105.53 | 112.00 |
| 26 | BB | 1606 | C | N3-C2-O2 | -5.88 | 117.78 | 121.90 |
| 26 | BB | 2088 | A | C1'-O4'-C4' | 5.88 | 114.61 | 109.90 |
| 26 | BB | 2162 | G | C6-C5-N7 | -5.88 | 126.87 | 130.40 |
| 26 | BB | 2342 | C | C4-C5-C6 | 5.88 | 120.34 | 117.40 |
| 26 | BB | 2353 | G | N1-C2-N3 | 5.88 | 127.43 | 123.90 |
| 26 | BB | 2452 | C | C2-N3-C4 | 5.88 | 122.84 | 119.90 |
| 1 | AA | 128 | G | P-O3'-C3' | 5.88 | 126.76 | 119.70 |
| 1 | AA | 576 | C | C4-C5-C6 | 5.88 | 120.34 | 117.40 |
| 1 | AA | 1334 | G | N7-C8-N9 | 5.88 | 116.04 | 113.10 |
| 26 | BB | 358 | U | N3-C4-O4 | 5.88 | 123.52 | 119.40 |
| 26 | BB | 589 | U | C2-N3-C4 | -5.88 | 123.47 | 127.00 |
| 26 | BB | 1030 | C | C5-C4-N4 | 5.88 | 124.32 | 120.20 |
| 26 | BB | 1070 | A | N7-C8-N9 | 5.88 | 116.74 | 113.80 |
| 26 | BB | 1371 | G | C8-N9-C1' | 5.88 | 134.65 | 127.00 |
| 1 | AA | 573 | A | N9-C4-C5 | 5.88 | 108.15 | 105.80 |
| 1 | AA | 955 | U | N3-C4-O4 | -5.88 | 115.28 | 119.40 |
| 1 | AA | 973 | G | P-O3'-C3' | 5.88 | 126.76 | 119.70 |
| 25 | BA | 13 | G | N1-C2-N2 | 5.88 | 121.49 | 116.20 |
| 26 | BB | 6 | A | O4'-C1'-C2' | 5.88 | 112.89 | 107.60 |
| 26 | BB | 713 | G | C6-N1-C2 | -5.88 | 121.57 | 125.10 |
| 26 | BB | 786 | C | C4-C5-C6 | -5.88 | 114.46 | 117.40 |
| 26 | BB | 1101 | U | C1'-O4'-C4' | -5.88 | 105.19 | 109.90 |
| 26 | BB | 1119 | U | N3-C4-O4 | 5.88 | 123.52 | 119.40 |
| 26 | BB | 1263 | U | C1'-O4'-C4' | 5.88 | 114.61 | 109.90 |
| 26 | BB | 1855 | U | C1'-O4'-C4' | 5.88 | 114.61 | 109.90 |
| 26 | BB | 2214 | C | C5'-C4'-O4' | 5.88 | 116.16 | 109.10 |
| 26 | BB | 2295 | C | C2-N3-C4 | 5.88 | 122.84 | 119.90 |
| 26 | BB | 2310 | C | N1-C2-O2 | 5.88 | 122.43 | 118.90 |
| 26 | BB | 2423 | U | C5-C4-O4 | -5.88 | 122.37 | 125.90 |
| 26 | BB | 2444 | G | C5-C6-N1 | -5.88 | 108.56 | 111.50 |
| 26 | BB | 2714 | G | O4'-C1'-N9 | 5.88 | 112.91 | 108.20 |
| 1 | AA | 327 | A | C8-N9-C4 | -5.88 | 103.45 | 105.80 |
| 1 | AA | 568 | G | C6-N1-C2 | 5.88 | 128.63 | 125.10 |
| 1 | AA | 912 | C | O3'-P-O5' | -5.88 | 92.83 | 104.00 |
| 1 | AA | 1292 | G | N7-C8-N9 | 5.88 | 116.04 | 113.10 |
| 26 | BB | 2147 | A | O4'-C1'-N9 | 5.88 | 112.90 | 108.20 |
| 1 | AA | 422 | C | C5'-C4'-O4' | 5.88 | 116.16 | 109.10 |
| 1 | AA | 833 | G | N1-C2-N3 | -5.88 | 120.37 | 123.90 |
| 1 | AA | 924 | C | N3-C4-N4 | 5.88 | 122.12 | 118.00 |
| 1 | AA | 1111 | A | P-O3'-C3' | 5.88 | 126.75 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1176 | A | C4-C5-C6 | -5.88 | 114.06 | 117.00 |
| 9 | AI | 32 | ALA | CB-CA-C | 5.88 | 118.92 | 110.10 |
| 9 | AI | 74 | LEU | CB-CG-CD2 | 5.88 | 120.99 | 111.00 |
| 22 | AV | 1 | PRO | CA-N-CD | -5.88 | 103.27 | 111.50 |
| 26 | BB | 54 | G | C1'-O4'-C4' | -5.88 | 105.20 | 109.90 |
| 26 | BB | 332 | A | C4'-C3'-C2' | -5.88 | 96.72 | 102.60 |
| 26 | BB | 419 | U | N3-C4-O4 | -5.88 | 115.28 | 119.40 |
| 26 | BB | 969 | G | N1-C6-O6 | 5.88 | 123.43 | 119.90 |
| 26 | BB | 1074 | G | O4'-C1'-N9 | 5.88 | 112.90 | 108.20 |
| 26 | BB | 1320 | C | N1-C2-O2 | 5.88 | 122.43 | 118.90 |
| 26 | BB | 1901 | A | C4-C5-N7 | -5.88 | 107.76 | 110.70 |
| 26 | BB | 1964 | G | C4-C5-C6 | -5.88 | 115.27 | 118.80 |
| 26 | BB | 2259 | U | C2-N3-C4 | -5.88 | 123.47 | 127.00 |
| 26 | BB | 2322 | A | C5-C6-N6 | -5.88 | 119.00 | 123.70 |
| 1 | AA | 142 | G | C1'-O4'-C4' | 5.88 | 114.60 | 109.90 |
| 1 | AA | 364 | A | C4-C5-C6 | -5.88 | 114.06 | 117.00 |
| 1 | AA | 631 | C | O4'-C1'-N1 | -5.88 | 103.50 | 108.20 |
| 1 | AA | 674 | G | O4'-C1'-N9 | 5.88 | 112.90 | 108.20 |
| 1 | AA | 979 | C | C4'-C3'-C2' | -5.88 | 96.72 | 102.60 |
| 1 | AA | 1046 | A | C4'-C3'-C2' | -5.88 | 96.72 | 102.60 |
| 1 | AA | 1072 | G | C8-N9-C1' | 5.88 | 134.64 | 127.00 |
| 1 | AA | 1493 | A | N9-C4-C5 | 5.88 | 108.15 | 105.80 |
| 4 | AD | 48 | U | C3'-C2'-C1' | 5.88 | 106.20 | 101.50 |
| 4 | AD | 62 | C | C5'-C4'-O4' | 5.88 | 116.15 | 109.10 |
| 26 | BB | 390 | U | C5-C4-O4 | 5.88 | 129.43 | 125.90 |
| 26 | BB | 620 | G | C3'-C2'-C1' | -5.88 | 96.80 | 101.50 |
| 26 | BB | 1137 | G | N3-C2-N2 | 5.88 | 124.01 | 119.90 |
| 26 | BB | 1435 | G | C5-C6-O6 | -5.88 | 125.07 | 128.60 |
| 26 | BB | 2257 | U | N3-C2-O2 | -5.88 | 118.09 | 122.20 |
| 26 | BB | 2558 | C | C5-C6-N1 | 5.88 | 123.94 | 121.00 |
| 26 | BB | 2883 | A | O4'-C1'-N9 | 5.88 | 112.90 | 108.20 |
| 1 | AA | 1096 | C | C3'-C2'-C1' | 5.88 | 106.20 | 101.50 |
| 1 | AA | 1418 | A | C2-N3-C4 | -5.88 | 107.66 | 110.60 |
| 25 | BA | 2 | G | C2-N3-C4 | 5.88 | 114.84 | 111.90 |
| 26 | BB | 1089 | A | N1-C2-N3 | 5.88 | 132.24 | 129.30 |
| 1 | AA | 363 | A | N1-C2-N3 | 5.87 | 132.24 | 129.30 |
| 1 | AA | 801 | U | N3-C2-O2 | -5.87 | 118.09 | 122.20 |
| 1 | AA | 1181 | G | C6-N1-C2 | -5.87 | 121.58 | 125.10 |
| 1 | AA | 1357 | A | N9-C4-C5 | 5.87 | 108.15 | 105.80 |
| 3 | AC | 24 | A | N9-C1'-C2' | -5.87 | 105.54 | 112.00 |
| 10 | AJ | 95 | ARG | NE-CZ-NH2 | -5.87 | 117.36 | 120.30 |
| 26 | BB | 29 | U | N3-C2-O2 | -5.87 | 118.09 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 317 | G | N9-C1'-C2' | -5.87 | 105.54 | 112.00 |
| 26 | BB | 1049 | C | C2'-C3'-O3' | 5.87 | 123.10 | 113.70 |
| 26 | BB | 1121 | C | C4-C5-C6 | -5.87 | 114.46 | 117.40 |
| 26 | BB | 2014 | A | C6-C5-N7 | 5.87 | 136.41 | 132.30 |
| 26 | BB | 2103 | C | N3-C2-O2 | -5.87 | 117.79 | 121.90 |
| 26 | BB | 2309 | A | N7-C8-N9 | 5.87 | 116.74 | 113.80 |
| 26 | BB | 2454 | G | O4'-C1'-N9 | 5.87 | 112.90 | 108.20 |
| 26 | BB | 2713 | U | N1-C2-N3 | 5.87 | 118.42 | 114.90 |
| 26 | BB | 2755 | C | O4'-C4'-C3' | -5.87 | 98.13 | 104.00 |
| 26 | BB | 2851 | A | N7-C8-N9 | -5.87 | 110.86 | 113.80 |
| 1 | AA | 1452 | C | C3'-C2'-C1' | 5.87 | 106.20 | 101.50 |
| 3 | AC | 35 | G | N3-C4-C5 | -5.87 | 125.66 | 128.60 |
| 26 | BB | 53 | A | N9-C1'-C2' | -5.87 | 105.54 | 112.00 |
| 26 | BB | 472 | A | N3-C4-C5 | -5.87 | 122.69 | 126.80 |
| 26 | BB | 489 | G | N3-C4-C5 | -5.87 | 125.66 | 128.60 |
| 26 | BB | 650 | C | N3-C4-N4 | 5.87 | 122.11 | 118.00 |
| 26 | BB | 1189 | A | C6-N1-C2 | 5.87 | 122.12 | 118.60 |
| 26 | BB | 2141 | G | N9-C4-C5 | 5.87 | 107.75 | 105.40 |
| 26 | BB | 2268 | A | C6-C5-N7 | 5.87 | 136.41 | 132.30 |
| 26 | BB | 2661 | G | O4'-C1'-N9 | 5.87 | 112.90 | 108.20 |
| 26 | BB | 2768 | U | N3-C2-O2 | -5.87 | 118.09 | 122.20 |
| 1 | AA | 559 | A | P-O3'-C3' | 5.87 | 126.74 | 119.70 |
| 1 | AA | 819 | A | N1-C6-N6 | 5.87 | 122.12 | 118.60 |
| 1 | AA | 996 | A | C5-C6-N6 | -5.87 | 119.00 | 123.70 |
| 1 | AA | 1106 | G | N9-C1'-C2' | -5.87 | 105.54 | 112.00 |
| 1 | AA | 1458 | G | N1-C6-O6 | -5.87 | 116.38 | 119.90 |
| 26 | BB | 543 | G | N3-C4-N9 | -5.87 | 122.48 | 126.00 |
| 26 | BB | 684 | G | C2-N3-C4 | 5.87 | 114.83 | 111.90 |
| 26 | BB | 1637 | A | C5-N7-C8 | 5.87 | 106.83 | 103.90 |
| 26 | BB | 1770 | G | N3-C4-N9 | 5.87 | 129.52 | 126.00 |
| 26 | BB | 1877 | A | C2-N3-C4 | 5.87 | 113.53 | 110.60 |
| 26 | BB | 2157 | G | C3'-C2'-C1' | 5.87 | 106.20 | 101.50 |
| 26 | BB | 2399 | G | C4-C5-N7 | -5.87 | 108.45 | 110.80 |
| 26 | BB | 2792 | A | N3-C4-N9 | 5.87 | 132.10 | 127.40 |
| 1 | AA | 809 | G | O4'-C4'-C3' | 5.87 | 110.80 | 106.10 |
| 1 | AA | 829 | G | C8-N9-C4 | -5.87 | 104.05 | 106.40 |
| 1 | AA | 1145 | A | C4-C5-N7 | -5.87 | 107.77 | 110.70 |
| 1 | AA | 1226 | C | C2'-C3'-O3' | 5.87 | 123.09 | 113.70 |
| 26 | BB | 45 | G | N9-C4-C5 | -5.87 | 103.05 | 105.40 |
| 26 | BB | 787 | C | O4'-C1'-N1 | 5.87 | 112.89 | 108.20 |
| 26 | BB | 838 | C | C2-N3-C4 | 5.87 | 122.83 | 119.90 |
| 26 | BB | 1028 | A | C3'-C2'-C1' | -5.87 | 96.81 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1215 | G | C3'-C2'-C1' | -5.87 | 96.81 | 101.50 |
| 26 | BB | 2128 | G | C4-N9-C1' | -5.87 | 118.87 | 126.50 |
| 26 | BB | 2486 | C | C5'-C4'-O4' | 5.87 | 116.14 | 109.10 |
| 1 | AA | 617 | G | N9-C4-C5 | 5.87 | 107.75 | 105.40 |
| 4 | AD | 57 | C | C4-C5-C6 | 5.87 | 120.33 | 117.40 |
| 26 | BB | 326 | G | N1-C2-N2 | 5.87 | 121.48 | 116.20 |
| 26 | BB | 2094 | A | O4'-C1'-N9 | 5.87 | 112.89 | 108.20 |
| 26 | BB | 2121 | G | N3-C2-N2 | 5.87 | 124.01 | 119.90 |
| 26 | BB | 2497 | A | C5'-C4'-O4' | -5.87 | 102.06 | 109.10 |
| 30 | BF | 61 | ARG | NE-CZ-NH2 | 5.87 | 123.23 | 120.30 |
| 1 | AA | 11 | G | N7-C8-N9 | 5.87 | 116.03 | 113.10 |
| 1 | AA | 385 | C | P-O3'-C3' | 5.87 | 126.74 | 119.70 |
| 1 | AA | 1027 | C | O4'-C4'-C3' | 5.87 | 110.79 | 106.10 |
| 1 | AA | 1423 | G | C1'-O4'-C4' | 5.87 | 114.59 | 109.90 |
| 5 | AE | 168 | GLU | C-N-CA | 5.87 | 136.36 | 121.70 |
| 16 | AP | 56 | ARG | NE-CZ-NH1 | 5.87 | 123.23 | 120.30 |
| 26 | BB | 500 | G | C5-C6-O6 | 5.87 | 132.12 | 128.60 |
| 26 | BB | 560 | C | C5-C4-N4 | -5.87 | 116.09 | 120.20 |
| 26 | BB | 1192 | G | C6-N1-C2 | 5.87 | 128.62 | 125.10 |
| 26 | BB | 1318 | U | C1'-O4'-C4' | -5.87 | 105.21 | 109.90 |
| 26 | BB | 1399 | C | N3-C4-C5 | 5.87 | 124.25 | 121.90 |
| 26 | BB | 1576 | U | C4'-C3'-C2' | -5.87 | 96.73 | 102.60 |
| 26 | BB | 2286 | G | C8-N9-C4 | -5.87 | 104.05 | 106.40 |
| 31 | BG | 174 | PHE | CG-CD2-CE2 | -5.87 | 114.35 | 120.80 |
| 1 | AA | 197 | A | C1'-O4'-C4' | -5.86 | 105.21 | 109.90 |
| 1 | AA | 965 | U | N1-C2-N3 | 5.86 | 118.42 | 114.90 |
| 1 | AA | 1235 | U | C5-C4-O4 | 5.86 | 129.42 | 125.90 |
| 1 | AA | 1357 | A | C5-N7-C8 | 5.86 | 106.83 | 103.90 |
| 3 | AC | 42 | U | N3-C2-O2 | -5.86 | 118.09 | 122.20 |
| 5 | AE | 15 | PHE | CZ-CE2-CD2 | -5.86 | 113.06 | 120.10 |
| 26 | BB | 34 | U | C3'-C2'-C1' | 5.86 | 106.19 | 101.50 |
| 26 | BB | 114 | U | P-O3'-C3' | 5.86 | 126.74 | 119.70 |
| 26 | BB | 378 | C | N3-C4-C5 | 5.86 | 124.25 | 121.90 |
| 26 | BB | 466 | A | N3-C4-C5 | -5.86 | 122.70 | 126.80 |
| 26 | BB | 505 | A | O4'-C1'-N9 | 5.86 | 112.89 | 108.20 |
| 26 | BB | 584 | C | O4'-C1'-N1 | 5.86 | 112.89 | 108.20 |
| 26 | BB | 864 | G | N9-C4-C5 | 5.86 | 107.75 | 105.40 |
| 26 | BB | 974 | G | N7-C8-N9 | 5.86 | 116.03 | 113.10 |
| 26 | BB | 1290 | C | O4'-C1'-N1 | 5.86 | 112.89 | 108.20 |
| 26 | BB | 1913 | A | C8-N9-C4 | -5.86 | 103.45 | 105.80 |
| 26 | BB | 2081 | U | C5-C4-O4 | 5.86 | 129.42 | 125.90 |
| 26 | BB | 2398 | U | C5-C6-N1 | 5.86 | 125.63 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2464 | G | C5-N7-C8 | -5.86 | 101.37 | 104.30 |
| 26 | BB | 2695 | U | N1-C2-O2 | 5.86 | 126.91 | 122.80 |
| 1 | AA | 253 | A | C4-C5-C6 | -5.86 | 114.07 | 117.00 |
| 1 | AA | 1123 | U | O4'-C1'-C2' | 5.86 | 112.88 | 107.60 |
| 26 | BB | 356 | G | N1-C6-O6 | -5.86 | 116.38 | 119.90 |
| 26 | BB | 516 | C | N1-C2-O2 | 5.86 | 122.42 | 118.90 |
| 26 | BB | 662 | G | N9-C4-C5 | 5.86 | 107.75 | 105.40 |
| 26 | BB | 1109 | C | C2-N3-C4 | -5.86 | 116.97 | 119.90 |
| 26 | BB | 1358 | G | N3-C4-C5 | -5.86 | 125.67 | 128.60 |
| 26 | BB | 1682 | G | N1-C2-N3 | -5.86 | 120.38 | 123.90 |
| 26 | BB | 1867 | G | N9-C4-C5 | 5.86 | 107.75 | 105.40 |
| 26 | BB | 2311 | A | P-O3'-C3' | 5.86 | 126.73 | 119.70 |
| 26 | BB | 2594 | C | C5-C6-N1 | -5.86 | 118.07 | 121.00 |
| 26 | BB | 2897 | U | O3'-P-O5' | 5.86 | 115.14 | 104.00 |
| 1 | AA | 323 | U | N3-C4-C5 | -5.86 | 111.08 | 114.60 |
| 1 | AA | 863 | U | C4'-C3'-C2' | -5.86 | 96.74 | 102.60 |
| 1 | AA | 896 | C | N1-C2-O2 | 5.86 | 122.42 | 118.90 |
| 1 | AA | 1155 | A | C1'-O4'-C4' | -5.86 | 105.21 | 109.90 |
| 1 | AA | 1297 | G | N1-C6-O6 | 5.86 | 123.42 | 119.90 |
| 1 | AA | 1372 | U | C1'-O4'-C4' | -5.86 | 105.21 | 109.90 |
| 2 | AB | 30 | G | O4'-C1'-N9 | 5.86 | 112.89 | 108.20 |
| 2 | AB | 68 | C | C4'-C3'-C2' | -5.86 | 96.74 | 102.60 |
| 26 | BB | 473 | G | N3-C4-N9 | 5.86 | 129.52 | 126.00 |
| 26 | BB | 671 | C | C3'-C2'-C1' | -5.86 | 96.81 | 101.50 |
| 26 | BB | 820 | A | C4-C5-N7 | -5.86 | 107.77 | 110.70 |
| 26 | BB | 1033 | U | C3'-C2'-C1' | -5.86 | 96.81 | 101.50 |
| 26 | BB | 1183 | U | O4'-C4'-C3' | 5.86 | 110.79 | 106.10 |
| 26 | BB | 1496 | A | O4'-C4'-C3' | -5.86 | 98.14 | 104.00 |
| 46 | BV | 80 | TRP | CD1-NE1-CE2 | 5.86 | 114.27 | 109.00 |
| 1 | AA | 164 | G | C6-N1-C2 | -5.86 | 121.58 | 125.10 |
| 1 | AA | 196 | A | N9-C4-C5 | -5.86 | 103.46 | 105.80 |
| 1 | AA | 501 | C | C3'-C2'-C1' | 5.86 | 106.19 | 101.50 |
| 1 | AA | 1080 | A | N1-C2-N3 | -5.86 | 126.37 | 129.30 |
| 1 | AA | 1110 | A | C6-N1-C2 | 5.86 | 122.12 | 118.60 |
| 1 | AA | 1198 | G | N3-C4-N9 | 5.86 | 129.51 | 126.00 |
| 2 | AB | 27 | C | C4-C5-C6 | -5.86 | 114.47 | 117.40 |
| 26 | BB | 171 | U | N3-C2-O2 | -5.86 | 118.10 | 122.20 |
| 26 | BB | 337 | C | C5-C6-N1 | 5.86 | 123.93 | 121.00 |
| 26 | BB | 492 | A | C2-N3-C4 | 5.86 | 113.53 | 110.60 |
| 26 | BB | 2263 | C | C4'-C3'-C2' | -5.86 | 96.74 | 102.60 |
| 1 | AA | 933 | G | C6-C5-N7 | -5.86 | 126.89 | 130.40 |
| 1 | AA | 1054 | C | N3-C4-N4 | 5.86 | 122.10 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 258 | G | C5-C6-O6 | 5.86 | 132.12 | 128.60 |
| 26 | BB | 428 | A | N9-C4-C5 | 5.86 | 108.14 | 105.80 |
| 26 | BB | 598 | U | O4'-C1'-N1 | 5.86 | 112.89 | 108.20 |
| 26 | BB | 868 | U | C2-N1-C1' | -5.86 | 110.67 | 117.70 |
| 26 | BB | 1250 | G | C6-N1-C2 | -5.86 | 121.59 | 125.10 |
| 26 | BB | 1622 | G | C6-C5-N7 | -5.86 | 126.89 | 130.40 |
| 26 | BB | 1868 | C | O5'-C5'-C4' | -5.86 | 100.57 | 111.70 |
| 26 | BB | 1925 | C | O4'-C1'-C2' | -5.86 | 99.94 | 105.80 |
| 26 | BB | 2039 | U | N3-C4-C5 | -5.86 | 111.08 | 114.60 |
| 26 | BB | 2686 | G | N9-C4-C5 | 5.86 | 107.74 | 105.40 |
| 36 | BL | 125 | TYR | CB-CG-CD1 | -5.86 | 117.49 | 121.00 |
| 1 | AA | 121 | U | O4'-C1'-C2' | -5.86 | 99.94 | 105.80 |
| 1 | AA | 313 | A | O4'-C1'-N9 | 5.86 | 112.88 | 108.20 |
| 1 | AA | 603 | U | O4'-C1'-N1 | 5.86 | 112.88 | 108.20 |
| 1 | AA | 898 | G | N7-C8-N9 | 5.86 | 116.03 | 113.10 |
| 1 | AA | 993 | G | C5-N7-C8 | -5.86 | 101.37 | 104.30 |
| 1 | AA | 1097 | C | C3'-C2'-C1' | 5.86 | 106.19 | 101.50 |
| 1 | AA | 1421 | G | C4'-C3'-C2' | -5.86 | 96.75 | 102.60 |
| 2 | AB | 71 | C | C5'-C4'-C3' | -5.86 | 106.63 | 116.00 |
| 25 | BA | 62 | C | N3-C4-C5 | -5.86 | 119.56 | 121.90 |
| 26 | BB | 53 | A | C6-C5-N7 | 5.86 | 136.40 | 132.30 |
| 26 | BB | 248 | G | C4-C5-C6 | 5.86 | 122.31 | 118.80 |
| 26 | BB | 335 | C | O4'-C4'-C3' | 5.86 | 110.78 | 106.10 |
| 26 | BB | 373 | U | C3'-C2'-C1' | -5.86 | 96.82 | 101.50 |
| 26 | BB | 388 | G | C5-C6-O6 | -5.86 | 125.09 | 128.60 |
| 26 | BB | 735 | A | N7-C8-N9 | 5.86 | 116.73 | 113.80 |
| 26 | BB | 858 | G | C8-N9-C4 | 5.86 | 108.74 | 106.40 |
| 26 | BB | 903 | C | C2'-C3'-O3' | 5.86 | 123.07 | 113.70 |
| 26 | BB | 1628 | G | N3-C4-N9 | 5.86 | 129.51 | 126.00 |
| 26 | BB | 2279 | G | C5-C6-N1 | 5.86 | 114.43 | 111.50 |
| 26 | BB | 2787 | C | N3-C2-O2 | -5.86 | 117.80 | 121.90 |
| 26 | BB | 2852 | G | C5-N7-C8 | -5.86 | 101.37 | 104.30 |
| 41 | BQ | 27 | VAL | CG1-CB-CG2 | 5.86 | 120.27 | 110.90 |
| 1 | AA | 563 | A | C6-N1-C2 | -5.85 | 115.09 | 118.60 |
| 1 | AA | 653 | U | N3-C4-C5 | -5.85 | 111.09 | 114.60 |
| 3 | AC | 38 | G | N1-C2-N2 | 5.85 | 121.47 | 116.20 |
| 23 | AW | 28 | ARG | CD-NE-CZ | 5.85 | 131.80 | 123.60 |
| 26 | BB | 177 | G | N1-C6-O6 | 5.85 | 123.41 | 119.90 |
| 26 | BB | 324 | A | N9-C1'-C2' | -5.85 | 105.56 | 112.00 |
| 26 | BB | 444 | C | C4-C5-C6 | -5.85 | 114.47 | 117.40 |
| 26 | BB | 576 | U | C4-C5-C6 | 5.85 | 123.21 | 119.70 |
| 26 | BB | 1238 | G | C5'-C4'-O4' | 5.85 | 116.12 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1311 | G | N3-C4-C5 | -5.85 | 125.67 | 128.60 |
| 26 | BB | 1343 | G | N1-C2-N2 | 5.85 | 121.47 | 116.20 |
| 26 | BB | 1496 | A | C5-N7-C8 | -5.85 | 100.97 | 103.90 |
| 26 | BB | 1687 | G | C6-N1-C2 | -5.85 | 121.59 | 125.10 |
| 1 | AA | 62 | U | P-O3'-C3' | 5.85 | 126.72 | 119.70 |
| 1 | AA | 107 | G | O4'-C1'-N9 | 5.85 | 112.88 | 108.20 |
| 1 | AA | 401 | C | C5-C6-N1 | 5.85 | 123.93 | 121.00 |
| 25 | BA | 24 | G | N3-C2-N2 | 5.85 | 124.00 | 119.90 |
| 26 | BB | 1332 | G | C6-N1-C2 | -5.85 | 121.59 | 125.10 |
| 26 | BB | 1427 | A | P-O3'-C3' | 5.85 | 126.72 | 119.70 |
| 26 | BB | 1958 | C | C6-N1-C2 | 5.85 | 122.64 | 120.30 |
| 26 | BB | 2328 | A | C4-C5-N7 | -5.85 | 107.77 | 110.70 |
| 26 | BB | 2421 | G | N3-C4-C5 | -5.85 | 125.67 | 128.60 |
| 26 | BB | 2462 | C | C1'-O4'-C4' | -5.85 | 105.22 | 109.90 |
| 31 | BG | 176 | PHE | CB-CG-CD1 | -5.85 | 116.70 | 120.80 |
| 1 | AA | 676 | A | N1-C6-N6 | 5.85 | 122.11 | 118.60 |
| 1 | AA | 1275 | A | N7-C8-N9 | 5.85 | 116.72 | 113.80 |
| 26 | BB | 28 | A | O3'-P-O5' | -5.85 | 92.88 | 104.00 |
| 26 | BB | 875 | G | N3-C2-N2 | -5.85 | 115.80 | 119.90 |
| 26 | BB | 1675 | C | C4-C5-C6 | -5.85 | 114.47 | 117.40 |
| 26 | BB | 2587 | A | C8-N9-C4 | -5.85 | 103.46 | 105.80 |
| 26 | BB | 2744 | G | N9-C4-C5 | 5.85 | 107.74 | 105.40 |
| 26 | BB | 2843 | G | O4'-C1'-N9 | 5.85 | 112.88 | 108.20 |
| 1 | AA | 31 | G | N1-C2-N3 | 5.85 | 127.41 | 123.90 |
| 1 | AA | 588 | G | N3-C2-N2 | 5.85 | 124.00 | 119.90 |
| 1 | AA | 685 | G | C4'-C3'-C2' | -5.85 | 96.75 | 102.60 |
| 1 | AA | 1189 | U | O4'-C1'-N1 | 5.85 | 112.88 | 108.20 |
| 1 | AA | 1461 | G | C6-C5-N7 | -5.85 | 126.89 | 130.40 |
| 4 | AD | 12 | G | C6-N1-C2 | -5.85 | 121.59 | 125.10 |
| 4 | AD | 67 | C | O4'-C1'-N1 | 5.85 | 112.88 | 108.20 |
| 9 | AI | 123 | ASP | CB-CG-OD1 | -5.85 | 113.03 | 118.30 |
| 26 | BB | 361 | G | C2-N3-C4 | 5.85 | 114.83 | 111.90 |
| 26 | BB | 852 | U | C5-C4-O4 | 5.85 | 129.41 | 125.90 |
| 26 | BB | 1984 | G | N1-C6-O6 | -5.85 | 116.39 | 119.90 |
| 26 | BB | 2553 | G | C4-C5-C6 | -5.85 | 115.29 | 118.80 |
| 26 | BB | 2878 | U | C6-N1-C2 | -5.85 | 117.49 | 121.00 |
| 1 | AA | 446 | G | C5-C6-O6 | -5.85 | 125.09 | 128.60 |
| 1 | AA | 763 | G | C5'-C4'-O4' | 5.85 | 116.12 | 109.10 |
| 1 | AA | 1239 | A | C5-C6-N1 | 5.85 | 120.62 | 117.70 |
| 1 | AA | 1352 | C | P-O3'-C3' | 5.85 | 126.72 | 119.70 |
| 2 | AB | 29 | G | C2-N3-C4 | 5.85 | 114.82 | 111.90 |
| 4 | AD | 1 | C | O4'-C1'-N1 | 5.85 | 112.88 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 60 | G | N3-C4-C5 | -5.85 | 125.68 | 128.60 |
| 26 | BB | 1007 | C | N3-C2-O2 | -5.85 | 117.81 | 121.90 |
| 26 | BB | 1236 | G | C5'-C4'-O4' | 5.85 | 116.12 | 109.10 |
| 26 | BB | 1770 | G | N1-C2-N3 | -5.85 | 120.39 | 123.90 |
| 26 | BB | 1972 | G | N1-C6-O6 | -5.85 | 116.39 | 119.90 |
| 26 | BB | 2207 | C | C6-N1-C2 | 5.85 | 122.64 | 120.30 |
| 26 | BB | 2368 | C | N3-C4-C5 | -5.85 | 119.56 | 121.90 |
| 1 | AA | 315 | A | C3'-C2'-C1' | -5.85 | 96.82 | 101.50 |
| 1 | AA | 510 | A | C5'-C4'-C3' | -5.85 | 106.65 | 116.00 |
| 1 | AA | 801 | U | C1'-O4'-C4' | 5.85 | 114.58 | 109.90 |
| 1 | AA | 1277 | C | O4'-C1'-N1 | 5.85 | 112.88 | 108.20 |
| 26 | BB | 7 | G | N1-C2-N3 | 5.85 | 127.41 | 123.90 |
| 26 | BB | 1884 | G | O4'-C1'-N9 | 5.85 | 112.88 | 108.20 |
| 26 | BB | 2712 | C | N1-C2-O2 | 5.85 | 122.41 | 118.90 |
| 1 | AA | 1198 | G | C5-N7-C8 | 5.84 | 107.22 | 104.30 |
| 1 | AA | 1312 | G | N7-C8-N9 | 5.84 | 116.02 | 113.10 |
| 26 | BB | 122 | G | C5'-C4'-O4' | 5.84 | 116.11 | 109.10 |
| 26 | BB | 226 | A | C2-N3-C4 | 5.84 | 113.52 | 110.60 |
| 26 | BB | 1124 | G | N3-C4-C5 | -5.84 | 125.68 | 128.60 |
| 26 | BB | 1504 | A | C6-C5-N7 | -5.84 | 128.21 | 132.30 |
| 26 | BB | 1588 | G | N7-C8-N9 | 5.84 | 116.02 | 113.10 |
| 26 | BB | 2029 | G | C4-C5-N7 | -5.84 | 108.46 | 110.80 |
| 26 | BB | 2073 | C | C3'-C2'-C1' | -5.84 | 96.83 | 101.50 |
| 26 | BB | 2291 | U | C5-C4-O4 | -5.84 | 122.39 | 125.90 |
| 26 | BB | 2389 | G | C8-N9-C1' | 5.84 | 134.60 | 127.00 |
| 32 | BH | 162 | ARG | NE-CZ-NH1 | -5.84 | 117.38 | 120.30 |
| 1 | AA | 1339 | A | C5-C6-N1 | 5.84 | 120.62 | 117.70 |
| 1 | AA | 1379 | G | N9-C1'-C2' | -5.84 | 105.57 | 112.00 |
| 26 | BB | 236 | C | C1'-O4'-C4' | 5.84 | 114.58 | 109.90 |
| 26 | BB | 1024 | G | N7-C8-N9 | 5.84 | 116.02 | 113.10 |
| 26 | BB | 2043 | C | C5'-C4'-C3' | -5.84 | 106.65 | 116.00 |
| 26 | BB | 2244 | U | C5-C6-N1 | -5.84 | 119.78 | 122.70 |
| 1 | AA | 646 | G | N7-C8-N9 | 5.84 | 116.02 | 113.10 |
| 1 | AA | 1018 | G | N3-C4-N9 | 5.84 | 129.50 | 126.00 |
| 1 | AA | 1193 | G | C5-C6-N1 | 5.84 | 114.42 | 111.50 |
| 26 | BB | 195 | A | O4'-C4'-C3' | 5.84 | 110.77 | 106.10 |
| 26 | BB | 770 | G | N1-C6-O6 | -5.84 | 116.39 | 119.90 |
| 26 | BB | 1448 | G | N9-C1'-C2' | -5.84 | 105.57 | 112.00 |
| 26 | BB | 1571 | A | O4'-C1'-C2' | -5.84 | 99.96 | 105.80 |
| 26 | BB | 1955 | U | C2-N3-C4 | -5.84 | 123.50 | 127.00 |
| 26 | BB | 2102 | G | C8-N9-C1' | 5.84 | 134.59 | 127.00 |
| 26 | BB | 2526 | G | N3-C4-N9 | 5.84 | 129.50 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2829 | A | P-O3'-C3' | 5.84 | 126.71 | 119.70 |
| 1 | AA | 59 | A | C5-C6-N1 | 5.84 | 120.62 | 117.70 |
| 1 | AA | 169 | C | O4'-C1'-N1 | 5.84 | 112.87 | 108.20 |
| 1 | AA | 349 | A | N1-C2-N3 | -5.84 | 126.38 | 129.30 |
| 1 | AA | 887 | G | N1-C2-N3 | 5.84 | 127.40 | 123.90 |
| 5 | AE | 31 | PHE | CB-CG-CD2 | -5.84 | 116.71 | 120.80 |
| 21 | AU | 24 | ASP | CB-CG-OD2 | -5.84 | 113.04 | 118.30 |
| 26 | BB | 925 | A | C5'-C4'-C3' | -5.84 | 106.66 | 116.00 |
| 26 | BB | 936 | A | N3-C4-C5 | -5.84 | 122.71 | 126.80 |
| 26 | BB | 1475 | G | C6-N1-C2 | -5.84 | 121.60 | 125.10 |
| 26 | BB | 1841 | U | C5'-C4'-O4' | 5.84 | 116.11 | 109.10 |
| 26 | BB | 1932 | A | C2-N3-C4 | -5.84 | 107.68 | 110.60 |
| 26 | BB | 2463 | C | C3'-C2'-C1' | -5.84 | 96.83 | 101.50 |
| 26 | BB | 2810 | A | C8-N9-C4 | -5.84 | 103.46 | 105.80 |
| 1 | AA | 377 | G | O4'-C1'-N9 | 5.84 | 112.87 | 108.20 |
| 1 | AA | 590 | U | C6-N1-C2 | 5.84 | 124.50 | 121.00 |
| 1 | AA | 1509 | C | C4'-C3'-C2' | -5.84 | 96.76 | 102.60 |
| 26 | BB | 367 | G | C5'-C4'-C3' | -5.84 | 106.66 | 116.00 |
| 26 | BB | 543 | G | C5-C6-O6 | -5.84 | 125.10 | 128.60 |
| 26 | BB | 554 | U | C4'-C3'-C2' | -5.84 | 96.76 | 102.60 |
| 26 | BB | 1126 | A | N9-C4-C5 | -5.84 | 103.47 | 105.80 |
| 26 | BB | 1300 | G | C8-N9-C4 | 5.84 | 108.73 | 106.40 |
| 26 | BB | 1603 | A | N1-C2-N3 | 5.84 | 132.22 | 129.30 |
| 26 | BB | 1657 | U | C2-N3-C4 | -5.84 | 123.50 | 127.00 |
| 26 | BB | 2046 | G | C5-N7-C8 | 5.84 | 107.22 | 104.30 |
| 26 | BB | 2330 | G | C4'-C3'-C2' | -5.84 | 96.76 | 102.60 |
| 26 | BB | 2666 | C | N1-C2-O2 | 5.84 | 122.40 | 118.90 |
| 1 | AA | 244 | U | N1-C2-O2 | 5.84 | 126.89 | 122.80 |
| 1 | AA | 384 | G | C6-C5-N7 | -5.84 | 126.90 | 130.40 |
| 1 | AA | 584 | G | O4'-C1'-N9 | 5.84 | 112.87 | 108.20 |
| 1 | AA | 589 | U | C1'-O4'-C4' | -5.84 | 105.23 | 109.90 |
| 1 | AA | 741 | G | C5-C6-N1 | 5.84 | 114.42 | 111.50 |
| 1 | AA | 797 | C | C3'-C2'-C1' | -5.84 | 96.83 | 101.50 |
| 1 | AA | 841 | C | C6-N1-C2 | -5.84 | 117.97 | 120.30 |
| 1 | AA | 903 | G | C3'-C2'-C1' | -5.84 | 96.83 | 101.50 |
| 1 | AA | 1155 | A | C5-C6-N1 | -5.84 | 114.78 | 117.70 |
| 1 | AA | 1234 | C | OP1-P-OP2 | -5.84 | 110.84 | 119.60 |
| 1 | AA | 1261 | A | C4-C5-C6 | 5.84 | 119.92 | 117.00 |
| 2 | AB | 57 | G | N7-C8-N9 | 5.84 | 116.02 | 113.10 |
| 6 | AF | 7 | ASN | CA-C-O | -5.84 | 107.84 | 120.10 |
| 26 | BB | 427 | U | C2-N1-C1' | 5.84 | 124.70 | 117.70 |
| 26 | BB | 511 | U | N3-C4-O4 | -5.84 | 115.31 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 551 | G | C8-N9-C4 | -5.84 | 104.06 | 106.40 |
| 26 | BB | 903 | C | C4-C5-C6 | 5.84 | 120.32 | 117.40 |
| 26 | BB | 1003 | G | C5-C6-O6 | -5.84 | 125.10 | 128.60 |
| 26 | BB | 1270 | C | P-O3'-C3' | 5.84 | 126.70 | 119.70 |
| 26 | BB | 1877 | A | N9-C4-C5 | 5.84 | 108.13 | 105.80 |
| 26 | BB | 2191 | A | C6-N1-C2 | -5.84 | 115.10 | 118.60 |
| 26 | BB | 2485 | G | N9-C1'-C2' | -5.84 | 105.58 | 112.00 |
| 30 | BF | 158 | PHE | CB-CG-CD2 | -5.84 | 116.71 | 120.80 |
| 1 | AA | 355 | C | N3-C4-N4 | 5.83 | 122.08 | 118.00 |
| 1 | AA | 497 | G | C5-C6-O6 | -5.83 | 125.10 | 128.60 |
| 1 | AA | 1089 | G | C6-N1-C2 | -5.83 | 121.60 | 125.10 |
| 2 | AB | 53 | G | C3'-C2'-C1' | 5.83 | 106.17 | 101.50 |
| 2 | AB | 53 | G | C6-C5-N7 | 5.83 | 133.90 | 130.40 |
| 4 | AD | 10 | G | C6-C5-N7 | 5.83 | 133.90 | 130.40 |
| 26 | BB | 1898 | U | P-O5'-C5' | 5.83 | 130.24 | 120.90 |
| 26 | BB | 2049 | G | C4-C5-C6 | -5.83 | 115.30 | 118.80 |
| 26 | BB | 2869 | G | O5'-C5'-C4' | -5.83 | 100.61 | 111.70 |
| 1 | AA | 16 | A | N1-C2-N3 | 5.83 | 132.22 | 129.30 |
| 1 | AA | 168 | G | C5'-C4'-O4' | 5.83 | 116.10 | 109.10 |
| 1 | AA | 175 | C | C5-C6-N1 | 5.83 | 123.92 | 121.00 |
| 1 | AA | 195 | A | C5'-C4'-O4' | 5.83 | 116.10 | 109.10 |
| 1 | AA | 238 | A | C5-C6-N1 | 5.83 | 120.62 | 117.70 |
| 1 | AA | 750 | C | C3'-C2'-C1' | -5.83 | 96.83 | 101.50 |
| 1 | AA | 1441 | A | C4-C5-N7 | 5.83 | 113.62 | 110.70 |
| 1 | AA | 1464 | U | C1'-O4'-C4' | -5.83 | 105.23 | 109.90 |
| 2 | AB | 23 | A | N7-C8-N9 | 5.83 | 116.72 | 113.80 |
| 3 | AC | 59 | A | C6-C5-N7 | 5.83 | 136.38 | 132.30 |
| 4 | AD | 73 | A | N1-C2-N3 | -5.83 | 126.38 | 129.30 |
| 10 | AJ | 93 | VAL | CA-CB-CG1 | 5.83 | 119.65 | 110.90 |
| 26 | BB | 41 | C | O4'-C1'-N1 | 5.83 | 112.87 | 108.20 |
| 26 | BB | 49 | A | N3-C4-C5 | -5.83 | 122.72 | 126.80 |
| 26 | BB | 241 | A | C5-C6-N1 | 5.83 | 120.62 | 117.70 |
| 26 | BB | 274 | C | N1-C2-O2 | 5.83 | 122.40 | 118.90 |
| 26 | BB | 389 | G | N9-C1'-C2' | 5.83 | 121.58 | 114.00 |
| 26 | BB | 682 | G | N3-C4-C5 | -5.83 | 125.68 | 128.60 |
| 26 | BB | 972 | A | N7-C8-N9 | 5.83 | 116.72 | 113.80 |
| 26 | BB | 1819 | A | C5-N7-C8 | -5.83 | 100.98 | 103.90 |
| 1 | AA | 301 | G | N3-C2-N2 | 5.83 | 123.98 | 119.90 |
| 1 | AA | 766 | A | N9-C4-C5 | -5.83 | 103.47 | 105.80 |
| 1 | AA | 791 | G | C5-C6-O6 | -5.83 | 125.10 | 128.60 |
| 1 | AA | 888 | G | N9-C4-C5 | 5.83 | 107.73 | 105.40 |
| 1 | AA | 1150 | A | C4-C5-C6 | -5.83 | 114.08 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1388 | C | C3'-C2'-C1' | 5.83 | 106.17 | 101.50 |
| 26 | BB | 2 | G | C5-C6-N1 | 5.83 | 114.42 | 111.50 |
| 26 | BB | 217 | A | C4-C5-N7 | -5.83 | 107.78 | 110.70 |
| 26 | BB | 569 | U | C3'-C2'-C1' | 5.83 | 106.17 | 101.50 |
| 26 | BB | 1870 | C | C4-C5-C6 | -5.83 | 114.48 | 117.40 |
| 26 | BB | 1989 | G | N9-C1'-C2' | -5.83 | 105.58 | 112.00 |
| 26 | BB | 2844 | G | O4'-C1'-N9 | 5.83 | 112.87 | 108.20 |
| 1 | AA | 80 | A | C6-C5-N7 | -5.83 | 128.22 | 132.30 |
| 1 | AA | 951 | G | C2-N3-C4 | 5.83 | 114.81 | 111.90 |
| 1 | AA | 958 | A | C2-N3-C4 | -5.83 | 107.69 | 110.60 |
| 1 | AA | 1130 | A | N7-C8-N9 | -5.83 | 110.89 | 113.80 |
| 2 | AB | 4 | G | N3-C4-C5 | -5.83 | 125.69 | 128.60 |
| 3 | AC | 48 | C | C4-C5-C6 | -5.83 | 114.48 | 117.40 |
| 26 | BB | 766 | U | N3-C4-O4 | -5.83 | 115.32 | 119.40 |
| 26 | BB | 1387 | A | C5-N7-C8 | 5.83 | 106.81 | 103.90 |
| 26 | BB | 1739 | A | N3-C4-C5 | -5.83 | 122.72 | 126.80 |
| 1 | AA | 3 | A | O4'-C1'-N9 | 5.83 | 112.86 | 108.20 |
| 1 | AA | 639 | G | C5-N7-C8 | 5.83 | 107.22 | 104.30 |
| 2 | AB | 21 | A | P-O3'-C3' | 5.83 | 126.69 | 119.70 |
| 26 | BB | 469 | G | N3-C4-C5 | -5.83 | 125.69 | 128.60 |
| 26 | BB | 478 | A | C3'-C2'-C1' | 5.83 | 106.16 | 101.50 |
| 26 | BB | 938 | G | C2-N3-C4 | 5.83 | 114.81 | 111.90 |
| 26 | BB | 941 | A | O4'-C1'-N9 | 5.83 | 112.86 | 108.20 |
| 26 | BB | 1069 | A | C6-C5-N7 | -5.83 | 128.22 | 132.30 |
| 26 | BB | 1645 | G | C5-C6-O6 | -5.83 | 125.10 | 128.60 |
| 26 | BB | 1659 | G | C8-N9-C4 | -5.83 | 104.07 | 106.40 |
| 26 | BB | 1781 | U | C1'-O4'-C4' | 5.83 | 114.56 | 109.90 |
| 26 | BB | 2124 | G | C2-N3-C4 | 5.83 | 114.81 | 111.90 |
| 26 | BB | 2184 | A | O4'-C1'-N9 | 5.83 | 112.86 | 108.20 |
| 26 | BB | 2579 | C | N3-C4-C5 | 5.83 | 124.23 | 121.90 |
| 31 | BG | 147 | ARG | CD-NE-CZ | 5.83 | 131.76 | 123.60 |
| 32 | BH | 94 | ARG | NE-CZ-NH2 | 5.83 | 123.21 | 120.30 |
| 1 | AA | 1165 | U | C1'-O4'-C4' | 5.83 | 114.56 | 109.90 |
| 26 | BB | 452 | G | N3-C4-C5 | -5.83 | 125.69 | 128.60 |
| 26 | BB | 637 | A | C5'-C4'-C3' | -5.83 | 106.68 | 116.00 |
| 26 | BB | 2483 | C | C4-C5-C6 | -5.83 | 114.49 | 117.40 |
| 31 | BG | 129 | MET | CB-CA-C | 5.83 | 122.05 | 110.40 |
| 1 | AA | 130 | A | C1'-O4'-C4' | 5.83 | 114.56 | 109.90 |
| 1 | AA | 137 | U | C1'-O4'-C4' | 5.83 | 114.56 | 109.90 |
| 1 | AA | 255 | G | C5'-C4'-O4' | 5.83 | 116.09 | 109.10 |
| 1 | AA | 413 | G | C4-C5-N7 | -5.83 | 108.47 | 110.80 |
| 1 | AA | 1188 | A | C2-N3-C4 | 5.83 | 113.51 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1236 | A | C4-C5-N7 | 5.83 | 113.61 | 110.70 |
| 1 | AA | 1376 | U | C4'-C3'-C2' | 5.83 | 108.43 | 102.60 |
| 26 | BB | 880 | G | C8-N9-C1' | 5.83 | 134.57 | 127.00 |
| 26 | BB | 981 | A | C5'-C4'-O4' | 5.83 | 116.09 | 109.10 |
| 26 | BB | 983 | A | C5-C6-N1 | -5.83 | 114.79 | 117.70 |
| 26 | BB | 1011 | G | C6-N1-C2 | -5.83 | 121.60 | 125.10 |
| 26 | BB | 1782 | U | O4'-C1'-N1 | 5.83 | 112.86 | 108.20 |
| 26 | BB | 1819 | A | C6-C5-N7 | -5.83 | 128.22 | 132.30 |
| 26 | BB | 2032 | G | P-O3'-C3' | 5.83 | 126.69 | 119.70 |
| 26 | BB | 2794 | C | C4-C5-C6 | -5.83 | 114.49 | 117.40 |
| 29 | BE | 33 | ARG | NE-CZ-NH1 | -5.83 | 117.39 | 120.30 |
| 1 | AA | 38 | G | O4'-C1'-N9 | -5.82 | 103.54 | 108.20 |
| 1 | AA | 186 | C | C6-N1-C2 | -5.82 | 117.97 | 120.30 |
| 1 | AA | 1120 | C | O4'-C1'-N1 | 5.82 | 112.86 | 108.20 |
| 1 | AA | 1294 | G | N7-C8-N9 | 5.82 | 116.01 | 113.10 |
| 11 | AK | 116 | ARG | NE-CZ-NH2 | -5.82 | 117.39 | 120.30 |
| 16 | AP | 105 | ALA | N-CA-C | 5.82 | 126.72 | 111.00 |
| 26 | BB | 241 | A | C5-N7-C8 | 5.82 | 106.81 | 103.90 |
| 26 | BB | 408 | G | C8-N9-C4 | -5.82 | 104.07 | 106.40 |
| 26 | BB | 908 | C | P-O3'-C3' | 5.82 | 126.69 | 119.70 |
| 26 | BB | 2201 | G | C4-N9-C1' | 5.82 | 134.07 | 126.50 |
| 26 | BB | 2465 | C | C5-C4-N4 | -5.82 | 116.12 | 120.20 |
| 26 | BB | 2614 | A | O4'-C4'-C3' | 5.82 | 110.76 | 106.10 |
| 26 | BB | 2662 | A | N1-C6-N6 | -5.82 | 115.11 | 118.60 |
| 26 | BB | 2787 | C | N3-C4-N4 | -5.82 | 113.92 | 118.00 |
| 1 | AA | 89 | U | C5-C6-N1 | -5.82 | 119.79 | 122.70 |
| 1 | AA | 109 | A | N9-C1'-C2' | -5.82 | 105.60 | 112.00 |
| 26 | BB | 1517 | G | C6-C5-N7 | -5.82 | 126.91 | 130.40 |
| 26 | BB | 1980 | G | N7-C8-N9 | 5.82 | 116.01 | 113.10 |
| 1 | AA | 776 | G | N9-C4-C5 | 5.82 | 107.73 | 105.40 |
| 1 | AA | 1512 | U | C2'-C3'-O3' | 5.82 | 123.01 | 113.70 |
| 4 | AD | 42 | C | C6-N1-C2 | -5.82 | 117.97 | 120.30 |
| 4 | AD | 61 | U | P-O5'-C5' | 5.82 | 130.21 | 120.90 |
| 26 | BB | 59 | U | O3'-P-O5' | -5.82 | 92.94 | 104.00 |
| 26 | BB | 231 | A | C5-C6-N6 | -5.82 | 119.04 | 123.70 |
| 26 | BB | 269 | C | N1-C2-O2 | 5.82 | 122.39 | 118.90 |
| 26 | BB | 389 | G | N9-C4-C5 | 5.82 | 107.73 | 105.40 |
| 26 | BB | 1587 | G | C4'-C3'-C2' | -5.82 | 96.78 | 102.60 |
| 26 | BB | 2034 | U | C6-N1-C2 | -5.82 | 117.51 | 121.00 |
| 1 | AA | 730 | G | N3-C2-N2 | -5.82 | 115.83 | 119.90 |
| 26 | BB | 244 | A | C6-C5-N7 | 5.82 | 136.37 | 132.30 |
| 26 | BB | 542 | C | C2-N1-C1' | -5.82 | 112.40 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 796 | C | N1-C2-O2 | 5.82 | 122.39 | 118.90 |
| 26 | BB | 1686 | C | C3'-C2'-C1' | 5.82 | 106.16 | 101.50 |
| 26 | BB | 1846 | G | N3-C2-N2 | -5.82 | 115.83 | 119.90 |
| 26 | BB | 2049 | G | N1-C6-O6 | -5.82 | 116.41 | 119.90 |
| 1 | AA | 127 | G | C4-C5-C6 | 5.82 | 122.29 | 118.80 |
| 1 | AA | 957 | U | N3-C2-O2 | -5.82 | 118.13 | 122.20 |
| 1 | AA | 1535 | C | C2-N1-C1' | 5.82 | 125.20 | 118.80 |
| 26 | BB | 148 | U | N1-C2-O2 | -5.82 | 118.73 | 122.80 |
| 26 | BB | 1793 | C | C4'-C3'-C2' | -5.82 | 96.78 | 102.60 |
| 26 | BB | 1810 | A | C1'-O4'-C4' | 5.82 | 114.55 | 109.90 |
| 26 | BB | 2312 | U | N3-C4-O4 | -5.82 | 115.33 | 119.40 |
| 26 | BB | 2614 | A | C5'-C4'-O4' | 5.82 | 116.08 | 109.10 |
| 26 | BB | 2697 | G | C3'-C2'-C1' | -5.82 | 96.85 | 101.50 |
| 26 | BB | 2719 | G | N9-C4-C5 | 5.82 | 107.73 | 105.40 |
| 1 | AA | 508 | U | C4-C5-C6 | 5.82 | 123.19 | 119.70 |
| 1 | AA | 718 | A | C4-C5-C6 | -5.82 | 114.09 | 117.00 |
| 1 | AA | 819 | A | C5-N7-C8 | -5.82 | 100.99 | 103.90 |
| 26 | BB | 362 | A | C6-N1-C2 | -5.82 | 115.11 | 118.60 |
| 26 | BB | 787 | C | N3-C4-N4 | 5.82 | 122.07 | 118.00 |
| 26 | BB | 1326 | U | C5'-C4'-C3' | -5.82 | 106.70 | 116.00 |
| 26 | BB | 1351 | C | P-O3'-C3' | 5.82 | 126.68 | 119.70 |
| 26 | BB | 1787 | A | N9-C1'-C2' | 5.82 | 121.56 | 114.00 |
| 26 | BB | 2009 | A | N9-C1'-C2' | -5.82 | 105.60 | 112.00 |
| 26 | BB | 2147 | A | P-O5'-C5' | 5.82 | 130.20 | 120.90 |
| 26 | BB | 2473 | U | C5-C4-O4 | -5.82 | 122.41 | 125.90 |
| 26 | BB | 2588 | G | N7-C8-N9 | 5.82 | 116.01 | 113.10 |
| 1 | AA | 243 | A | O4'-C4'-C3' | -5.81 | 98.19 | 104.00 |
| 4 | AD | 43 | G | N1-C6-O6 | 5.81 | 123.39 | 119.90 |
| 26 | BB | 211 | C | C1'-O4'-C4' | 5.81 | 114.55 | 109.90 |
| 26 | BB | 1304 | A | C5-N7-C8 | -5.81 | 100.99 | 103.90 |
| 26 | BB | 1653 | G | C6-N1-C2 | -5.81 | 121.61 | 125.10 |
| 26 | BB | 1827 | U | C5-C6-N1 | -5.81 | 119.79 | 122.70 |
| 26 | BB | 2073 | C | O4'-C1'-N1 | 5.81 | 112.85 | 108.20 |
| 26 | BB | 2506 | U | O4'-C1'-N1 | 5.81 | 112.85 | 108.20 |
| 26 | BB | 2737 | G | C5'-C4'-O4' | 5.81 | 116.08 | 109.10 |
| 1 | AA | 16 | A | N9-C4-C5 | -5.81 | 103.47 | 105.80 |
| 1 | AA | 170 | U | N3-C4-O4 | 5.81 | 123.47 | 119.40 |
| 1 | AA | 1329 | A | C4'-C3'-C2' | -5.81 | 96.79 | 102.60 |
| 2 | AB | 36 | A | C4'-C3'-C2' | -5.81 | 96.79 | 102.60 |
| 26 | BB | 212 | G | C3'-C2'-C1' | 5.81 | 106.15 | 101.50 |
| 26 | BB | 294 | A | O4'-C1'-N9 | 5.81 | 112.85 | 108.20 |
| 26 | BB | 608 | A | N1-C6-N6 | 5.81 | 122.09 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2139 | U | C6-N1-C2 | -5.81 | 117.51 | 121.00 |
| 26 | BB | 2155 | U | C1'-O4'-C4' | 5.81 | 114.55 | 109.90 |
| 26 | BB | 2240 | U | O4'-C1'-N1 | 5.81 | 112.85 | 108.20 |
| 26 | BB | 2381 | A | C4'-C3'-C2' | -5.81 | 96.79 | 102.60 |
| 1 | AA | 323 | U | C5'-C4'-O4' | 5.81 | 116.07 | 109.10 |
| 4 | AD | 59 | A | C5-C6-N1 | -5.81 | 114.79 | 117.70 |
| 26 | BB | 416 | U | N1-C2-O2 | 5.81 | 126.87 | 122.80 |
| 26 | BB | 468 | G | C3'-C2'-C1' | 5.81 | 106.15 | 101.50 |
| 26 | BB | 1983 | G | C4-C5-N7 | -5.81 | 108.48 | 110.80 |
| 26 | BB | 2152 | G | N3-C2-N2 | 5.81 | 123.97 | 119.90 |
| 1 | AA | 557 | G | C3'-C2'-C1' | -5.81 | 96.85 | 101.50 |
| 3 | AC | 38 | G | C5-C6-O6 | 5.81 | 132.09 | 128.60 |
| 26 | BB | 54 | G | C6-N1-C2 | -5.81 | 121.61 | 125.10 |
| 26 | BB | 110 | G | N1-C2-N3 | -5.81 | 120.42 | 123.90 |
| 26 | BB | 113 | U | N1-C2-O2 | 5.81 | 126.87 | 122.80 |
| 26 | BB | 236 | C | C4-C5-C6 | -5.81 | 114.50 | 117.40 |
| 26 | BB | 255 | A | C5-C6-N6 | -5.81 | 119.05 | 123.70 |
| 26 | BB | 268 | C | O4'-C1'-N1 | 5.81 | 112.85 | 108.20 |
| 26 | BB | 749 | A | C4-C5-C6 | -5.81 | 114.10 | 117.00 |
| 26 | BB | 1002 | G | N9-C4-C5 | 5.81 | 107.72 | 105.40 |
| 26 | BB | 1447 | C | C5'-C4'-O4' | 5.81 | 116.07 | 109.10 |
| 26 | BB | 1585 | C | C6-N1-C2 | -5.81 | 117.98 | 120.30 |
| 26 | BB | 2325 | G | C4-C5-C6 | 5.81 | 122.28 | 118.80 |
| 26 | BB | 2783 | U | O4'-C1'-N1 | 5.81 | 112.85 | 108.20 |
| 30 | BF | 178 | VAL | CG1-CB-CG2 | -5.81 | 101.61 | 110.90 |
| 1 | AA | 406 | G | N3-C2-N2 | -5.81 | 115.83 | 119.90 |
| 1 | AA | 864 | A | C8-N9-C4 | -5.81 | 103.48 | 105.80 |
| 1 | AA | 945 | G | N3-C2-N2 | -5.81 | 115.83 | 119.90 |
| 8 | AH | 97 | PRO | N-CD-CG | 5.81 | 111.91 | 103.20 |
| 25 | BA | 71 | C | C5-C6-N1 | -5.81 | 118.10 | 121.00 |
| 26 | BB | 52 | A | C3'-C2'-C1' | -5.81 | 96.85 | 101.50 |
| 26 | BB | 157 | C | C1'-O4'-C4' | 5.81 | 114.55 | 109.90 |
| 26 | BB | 420 | C | C5-C6-N1 | 5.81 | 123.90 | 121.00 |
| 26 | BB | 469 | G | N1-C2-N2 | -5.81 | 110.97 | 116.20 |
| 26 | BB | 533 | G | C6-C5-N7 | -5.81 | 126.92 | 130.40 |
| 26 | BB | 996 | A | O5'-C5'-C4' | 5.81 | 122.73 | 111.70 |
| 26 | BB | 1178 | C | N1-C1'-C2' | -5.81 | 105.61 | 112.00 |
| 26 | BB | 1206 | G | N3-C4-C5 | -5.81 | 125.70 | 128.60 |
| 26 | BB | 1308 | A | C3'-C2'-C1' | 5.81 | 106.14 | 101.50 |
| 26 | BB | 1317 | G | C2-N3-C4 | 5.81 | 114.80 | 111.90 |
| 26 | BB | 1628 | G | C2-N3-C4 | 5.81 | 114.80 | 111.90 |
| 26 | BB | 1998 | A | N9-C1'-C2' | -5.81 | 105.61 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2826 | A | C5'-C4'-O4' | 5.81 | 116.07 | 109.10 |
| 28 | BD | 202 | ARG | NE-CZ-NH2 | -5.81 | 117.40 | 120.30 |
| 34 | BJ | 137 | ARG | CD-NE-CZ | 5.81 | 131.73 | 123.60 |
| 1 | AA | 686 | U | C6-N1-C2 | -5.81 | 117.52 | 121.00 |
| 1 | AA | 1158 | C | N1-C2-N3 | -5.81 | 115.14 | 119.20 |
| 1 | AA | 1286 | U | C5'-C4'-O4' | 5.81 | 116.07 | 109.10 |
| 4 | AD | 13 | C | C6-N1-C2 | -5.81 | 117.98 | 120.30 |
| 25 | BA | 44 | G | N1-C2-N3 | 5.81 | 127.38 | 123.90 |
| 26 | BB | 377 | G | C8-N9-C4 | -5.81 | 104.08 | 106.40 |
| 26 | BB | 1011 | G | C8-N9-C4 | -5.81 | 104.08 | 106.40 |
| 26 | BB | 1492 | G | N3-C2-N2 | 5.81 | 123.96 | 119.90 |
| 26 | BB | 1830 | C | P-O3'-C3' | 5.81 | 126.67 | 119.70 |
| 26 | BB | 2097 | A | C5'-C4'-O4' | 5.81 | 116.07 | 109.10 |
| 1 | AA | 324 | G | C4'-C3'-C2' | -5.80 | 96.80 | 102.60 |
| 1 | AA | 722 | G | C4-C5-N7 | -5.80 | 108.48 | 110.80 |
| 1 | AA | 733 | G | C2-N3-C4 | 5.80 | 114.80 | 111.90 |
| 17 | AQ | 68 | ARG | NE-CZ-NH2 | -5.80 | 117.40 | 120.30 |
| 25 | BA | 4 | C | N1-C2-O2 | 5.80 | 122.38 | 118.90 |
| 26 | BB | 35 | G | N1-C6-O6 | 5.80 | 123.38 | 119.90 |
| 26 | BB | 337 | C | N1-C2-O2 | 5.80 | 122.38 | 118.90 |
| 26 | BB | 860 | U | P-O3'-C3' | 5.80 | 126.67 | 119.70 |
| 26 | BB | 874 | G | C5-C6-O6 | -5.80 | 125.12 | 128.60 |
| 26 | BB | 945 | A | C1'-O4'-C4' | -5.80 | 105.26 | 109.90 |
| 26 | BB | 1262 | A | C8-N9-C4 | -5.80 | 103.48 | 105.80 |
| 26 | BB | 1515 | A | N9-C4-C5 | 5.80 | 108.12 | 105.80 |
| 26 | BB | 1588 | G | O4'-C4'-C3' | -5.80 | 98.19 | 104.00 |
| 26 | BB | 1603 | A | C6-N1-C2 | -5.80 | 115.12 | 118.60 |
| 26 | BB | 1910 | G | C4-C5-N7 | -5.80 | 108.48 | 110.80 |
| 26 | BB | 1925 | C | C2-N1-C1' | -5.80 | 112.41 | 118.80 |
| 26 | BB | 2086 | U | N3-C4-O4 | 5.80 | 123.46 | 119.40 |
| 26 | BB | 2493 | U | C5-C6-N1 | -5.80 | 119.80 | 122.70 |
| 26 | BB | 2544 | G | O3'-P-O5' | 5.80 | 115.03 | 104.00 |
| 29 | BE | 98 | VAL | CA-CB-CG2 | 5.80 | 119.61 | 110.90 |
| 1 | AA | 1300 | G | O4'-C1'-N9 | -5.80 | 103.56 | 108.20 |
| 26 | BB | 873 | C | O3'-P-O5' | -5.80 | 92.97 | 104.00 |
| 26 | BB | 1308 | A | C1'-O4'-C4' | 5.80 | 114.54 | 109.90 |
| 26 | BB | 1655 | A | N9-C4-C5 | -5.80 | 103.48 | 105.80 |
| 26 | BB | 2650 | U | N1-C2-O2 | -5.80 | 118.74 | 122.80 |
| 1 | AA | 171 | A | C4-C5-C6 | -5.80 | 114.10 | 117.00 |
| 1 | AA | 322 | C | O4'-C1'-N1 | 5.80 | 112.84 | 108.20 |
| 1 | AA | 458 | U | C1'-O4'-C4' | -5.80 | 105.26 | 109.90 |
| 1 | AA | 867 | G | N9-C1'-C2' | -5.80 | 105.62 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1067 | A | P-O3'-C3' | 5.80 | 126.66 | 119.70 |
| 1 | AA | 1535 | C | N3-C2-O2 | -5.80 | 117.84 | 121.90 |
| 25 | BA | 65 | U | C4'-C3'-C2' | -5.80 | 96.80 | 102.60 |
| 26 | BB | 376 | G | C4-C5-N7 | -5.80 | 108.48 | 110.80 |
| 26 | BB | 577 | G | C5-C6-N1 | 5.80 | 114.40 | 111.50 |
| 26 | BB | 1095 | A | C2-N3-C4 | 5.80 | 113.50 | 110.60 |
| 26 | BB | 1109 | C | C3'-C2'-C1' | 5.80 | 106.14 | 101.50 |
| 26 | BB | 1237 | A | C5-C6-N1 | 5.80 | 120.60 | 117.70 |
| 26 | BB | 1283 | G | C8-N9-C1' | 5.80 | 134.54 | 127.00 |
| 26 | BB | 2091 | C | N3-C4-N4 | 5.80 | 122.06 | 118.00 |
| 26 | BB | 2196 | C | C5-C6-N1 | 5.80 | 123.90 | 121.00 |
| 26 | BB | 2236 | U | O4'-C1'-N1 | 5.80 | 112.84 | 108.20 |
| 26 | BB | 2533 | U | N1-C2-O2 | -5.80 | 118.74 | 122.80 |
| 26 | BB | 2595 | G | C5-N7-C8 | -5.80 | 101.40 | 104.30 |
| 26 | BB | 2769 | U | N3-C4-O4 | 5.80 | 123.46 | 119.40 |
| 26 | BB | 2881 | U | C5-C6-N1 | -5.80 | 119.80 | 122.70 |
| 41 | BQ | 9 | ARG | CD-NE-CZ | 5.80 | 131.72 | 123.60 |
| 46 | BV | 25 | GLU | OE1-CD-OE2 | 5.80 | 130.26 | 123.30 |
| 1 | AA | 934 | C | O4'-C1'-C2' | -5.80 | 100.00 | 105.80 |
| 1 | AA | 985 | C | N3-C4-N4 | 5.80 | 122.06 | 118.00 |
| 1 | AA | 1235 | U | N1-C1'-C2' | -5.80 | 105.62 | 112.00 |
| 1 | AA | 1237 | C | N1-C2-O2 | 5.80 | 122.38 | 118.90 |
| 24 | AX | 61 | ARG | NH1-CZ-NH2 | -5.80 | 113.02 | 119.40 |
| 26 | BB | 313 | G | C3'-C2'-C1' | 5.80 | 106.14 | 101.50 |
| 26 | BB | 789 | A | N1-C6-N6 | 5.80 | 122.08 | 118.60 |
| 26 | BB | 1145 | C | P-O3'-C3' | 5.80 | 126.66 | 119.70 |
| 26 | BB | 2311 | A | O5'-C5'-C4' | -5.80 | 100.68 | 111.70 |
| 26 | BB | 2326 | C | N3-C4-N4 | 5.80 | 122.06 | 118.00 |
| 26 | BB | 2403 | C | C4'-C3'-C2' | -5.80 | 96.80 | 102.60 |
| 1 | AA | 1461 | G | C6-N1-C2 | -5.80 | 121.62 | 125.10 |
| 25 | BA | 27 | C | C6-N1-C2 | -5.80 | 117.98 | 120.30 |
| 26 | BB | 112 | U | C5-C4-O4 | -5.80 | 122.42 | 125.90 |
| 26 | BB | 658 | U | C4-C5-C6 | 5.80 | 123.18 | 119.70 |
| 26 | BB | 1691 | C | N3-C2-O2 | -5.80 | 117.84 | 121.90 |
| 26 | BB | 2390 | U | C2-N3-C4 | -5.80 | 123.52 | 127.00 |
| 39 | BO | 81 | ARG | NE-CZ-NH2 | -5.80 | 117.40 | 120.30 |
| 1 | AA | 43 | C | N3-C4-C5 | 5.80 | 124.22 | 121.90 |
| 1 | AA | 209 | U | C1'-O4'-C4' | -5.80 | 105.26 | 109.90 |
| 1 | AA | 540 | G | C5-C6-N1 | 5.80 | 114.40 | 111.50 |
| 1 | AA | 949 | A | N7-C8-N9 | -5.80 | 110.90 | 113.80 |
| 2 | AB | 50 | G | N1-C2-N3 | -5.80 | 120.42 | 123.90 |
| 26 | BB | 380 | G | C5'-C4'-O4' | 5.80 | 116.06 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 936 | A | C5'-C4'-C3' | -5.80 | 106.72 | 116.00 |
| 26 | BB | 1080 | A | N1-C2-N3 | -5.80 | 126.40 | 129.30 |
| 26 | BB | 1113 | U | C6-N1-C2 | -5.80 | 117.52 | 121.00 |
| 26 | BB | 1157 | G | N1-C2-N3 | 5.80 | 127.38 | 123.90 |
| 26 | BB | 1235 | G | C4'-C3'-C2' | -5.80 | 96.80 | 102.60 |
| 26 | BB | 2237 | G | C8-N9-C4 | -5.80 | 104.08 | 106.40 |
| 26 | BB | 2412 | A | C5-C6-N1 | 5.80 | 120.60 | 117.70 |
| 35 | BK | 64 | ARG | NH1-CZ-NH2 | -5.80 | 113.02 | 119.40 |
| 38 | BN | 2 | ARG | NE-CZ-NH1 | 5.80 | 123.20 | 120.30 |
| 43 | BS | 50 | ARG | NH1-CZ-NH2 | -5.80 | 113.02 | 119.40 |
| 1 | AA | 68 | G | O4'-C1'-N9 | 5.79 | 112.84 | 108.20 |
| 1 | AA | 173 | U | P-O3'-C3' | 5.79 | 126.65 | 119.70 |
| 1 | AA | 676 | A | C8-N9-C4 | -5.79 | 103.48 | 105.80 |
| 26 | BB | 54 | G | N1-C2-N2 | 5.79 | 121.42 | 116.20 |
| 26 | BB | 1037 | G | C2-N3-C4 | 5.79 | 114.80 | 111.90 |
| 26 | BB | 1315 | C | OP1-P-OP2 | 5.79 | 128.29 | 119.60 |
| 26 | BB | 1415 | U | C6-N1-C2 | -5.79 | 117.52 | 121.00 |
| 26 | BB | 1633 | G | N1-C2-N3 | -5.79 | 120.42 | 123.90 |
| 26 | BB | 2820 | A | C1'-O4'-C4' | -5.79 | 105.26 | 109.90 |
| 1 | AA | 310 | G | C5-N7-C8 | 5.79 | 107.20 | 104.30 |
| 1 | AA | 421 | U | N3-C2-O2 | -5.79 | 118.14 | 122.20 |
| 1 | AA | 811 | C | N3-C4-C5 | -5.79 | 119.58 | 121.90 |
| 1 | AA | 979 | C | C4-C5-C6 | 5.79 | 120.30 | 117.40 |
| 1 | AA | 1170 | A | N3-C4-C5 | -5.79 | 122.74 | 126.80 |
| 1 | AA | 1175 | G | C5'-C4'-C3' | -5.79 | 106.73 | 116.00 |
| 1 | AA | 1175 | G | O4'-C1'-N9 | 5.79 | 112.83 | 108.20 |
| 14 | AN | 85 | VAL | CA-CB-CG2 | 5.79 | 119.59 | 110.90 |
| 26 | BB | 38 | A | N1-C6-N6 | -5.79 | 115.12 | 118.60 |
| 26 | BB | 45 | G | C8-N9-C4 | 5.79 | 108.72 | 106.40 |
| 26 | BB | 375 | G | N7-C8-N9 | 5.79 | 116.00 | 113.10 |
| 26 | BB | 1374 | G | N3-C4-N9 | 5.79 | 129.48 | 126.00 |
| 26 | BB | 1897 | G | N1-C2-N3 | 5.79 | 127.38 | 123.90 |
| 26 | BB | 2022 | U | C4'-C3'-C2' | -5.79 | 96.81 | 102.60 |
| 26 | BB | 2213 | U | OP1-P-O3' | 5.79 | 117.94 | 105.20 |
| 26 | BB | 2741 | A | P-O3'-C3' | 5.79 | 126.65 | 119.70 |
| 1 | AA | 268 | U | C4-C5-C6 | 5.79 | 123.17 | 119.70 |
| 1 | AA | 632 | U | O5'-P-OP1 | 5.79 | 117.65 | 110.70 |
| 1 | AA | 810 | C | C4'-C3'-C2' | -5.79 | 96.81 | 102.60 |
| 1 | AA | 843 | U | N1-C2-N3 | 5.79 | 118.38 | 114.90 |
| 1 | AA | 1121 | U | C5-C6-N1 | 5.79 | 125.59 | 122.70 |
| 26 | BB | 114 | U | N3-C2-O2 | -5.79 | 118.15 | 122.20 |
| 26 | BB | 645 | C | O4'-C4'-C3' | 5.79 | 110.73 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 777 | G | C4-C5-N7 | -5.79 | 108.48 | 110.80 |
| 26 | BB | 904 | G | C6-C5-N7 | -5.79 | 126.92 | 130.40 |
| 26 | BB | 1155 | A | C5-N7-C8 | -5.79 | 101.00 | 103.90 |
| 26 | BB | 1389 | G | C3'-C2'-C1' | -5.79 | 96.87 | 101.50 |
| 26 | BB | 1785 | A | N1-C6-N6 | -5.79 | 115.12 | 118.60 |
| 26 | BB | 1795 | C | N1-C2-N3 | -5.79 | 115.15 | 119.20 |
| 26 | BB | 2010 | G | N7-C8-N9 | -5.79 | 110.20 | 113.10 |
| 26 | BB | 2389 | G | N3-C2-N2 | -5.79 | 115.85 | 119.90 |
| 26 | BB | 2578 | G | N3-C4-N9 | 5.79 | 129.47 | 126.00 |
| 26 | BB | 1398 | C | C5-C6-N1 | -5.79 | 118.11 | 121.00 |
| 26 | BB | 1500 | G | N3-C4-C5 | -5.79 | 125.70 | 128.60 |
| 26 | BB | 2585 | U | P-O3'-C3' | 5.79 | 126.65 | 119.70 |
| 26 | BB | 2852 | G | C8-N9-C4 | 5.79 | 108.72 | 106.40 |
| 1 | AA | 69 | G | P-O3'-C3' | 5.79 | 126.65 | 119.70 |
| 1 | AA | 230 | G | C4-C5-C6 | 5.79 | 122.27 | 118.80 |
| 1 | AA | 462 | G | C5'-C4'-C3' | -5.79 | 106.74 | 116.00 |
| 1 | AA | 1050 | G | O4'-C4'-C3' | 5.79 | 110.73 | 106.10 |
| 1 | AA | 1270 | G | N3-C4-N9 | 5.79 | 129.47 | 126.00 |
| 25 | BA | 93 | C | N1-C2-N3 | 5.79 | 123.25 | 119.20 |
| 26 | BB | 432 | A | C3'-C2'-C1' | 5.79 | 106.13 | 101.50 |
| 26 | BB | 547 | A | C2-N3-C4 | 5.79 | 113.49 | 110.60 |
| 26 | BB | 843 | G | N9-C4-C5 | 5.79 | 107.72 | 105.40 |
| 26 | BB | 1054 | A | C5-N7-C8 | 5.79 | 106.79 | 103.90 |
| 26 | BB | 1099 | G | N3-C4-N9 | 5.79 | 129.47 | 126.00 |
| 26 | BB | 1367 | A | P-O3'-C3' | 5.79 | 126.65 | 119.70 |
| 26 | BB | 1381 | G | C8-N9-C1' | 5.79 | 134.53 | 127.00 |
| 26 | BB | 2225 | A | C6-C5-N7 | -5.79 | 128.25 | 132.30 |
| 26 | BB | 2835 | A | C4-C5-N7 | 5.79 | 113.59 | 110.70 |
| 26 | BB | 2837 | A | C6-N1-C2 | -5.79 | 115.13 | 118.60 |
| 26 | BB | 2863 | C | N1-C2-N3 | -5.79 | 115.15 | 119.20 |
| 30 | BF | 40 | ARG | NE-CZ-NH2 | -5.79 | 117.41 | 120.30 |
| 44 | BT | 92 | TRP | CE2-CD2-CG | 5.79 | 111.93 | 107.30 |
| 1 | AA | 191 | G | N1-C6-O6 | 5.79 | 123.37 | 119.90 |
| 1 | AA | 1215 | G | C4-C5-C6 | 5.79 | 122.27 | 118.80 |
| 1 | AA | 1335 | U | O4'-C4'-C3' | 5.79 | 110.73 | 106.10 |
| 26 | BB | 315 | G | C4-C5-C6 | 5.79 | 122.27 | 118.80 |
| 26 | BB | 592 | A | N3-C4-C5 | 5.79 | 130.85 | 126.80 |
| 26 | BB | 1718 | G | C8-N9-C4 | -5.79 | 104.08 | 106.40 |
| 26 | BB | 2201 | G | C5-N7-C8 | -5.79 | 101.41 | 104.30 |
| 26 | BB | 2468 | A | O3'-P-O5' | -5.79 | 93.00 | 104.00 |
| 26 | BB | 2550 | G | N1-C6-O6 | -5.79 | 116.43 | 119.90 |
| 34 | BJ | 45 | ARG | NE-CZ-NH2 | -5.79 | 117.41 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 375 | U | N3-C2-O2 | -5.79 | 118.15 | 122.20 |
| 1 | AA | 596 | A | C8-N9-C4 | -5.79 | 103.49 | 105.80 |
| 1 | AA | 896 | C | C1'-O4'-C4' | -5.79 | 105.27 | 109.90 |
| 1 | AA | 1186 | G | C6-N1-C2 | 5.79 | 128.57 | 125.10 |
| 1 | AA | 1418 | A | N1-C6-N6 | -5.79 | 115.13 | 118.60 |
| 25 | BA | 73 | A | O4'-C1'-N9 | -5.79 | 103.57 | 108.20 |
| 26 | BB | 45 | G | N3-C4-C5 | -5.79 | 125.71 | 128.60 |
| 26 | BB | 289 | G | C3'-C2'-C1' | 5.79 | 106.13 | 101.50 |
| 26 | BB | 814 | C | N3-C4-N4 | 5.79 | 122.05 | 118.00 |
| 26 | BB | 921 | C | C1'-O4'-C4' | -5.79 | 105.27 | 109.90 |
| 26 | BB | 927 | A | N7-C8-N9 | 5.79 | 116.69 | 113.80 |
| 26 | BB | 1240 | U | C6-N1-C2 | -5.79 | 117.53 | 121.00 |
| 26 | BB | 1281 | G | N1-C6-O6 | 5.79 | 123.37 | 119.90 |
| 26 | BB | 1570 | A | N1-C2-N3 | -5.79 | 126.41 | 129.30 |
| 26 | BB | 2303 | G | C4-C5-N7 | 5.79 | 113.11 | 110.80 |
| 26 | BB | 2399 | G | C1'-O4'-C4' | -5.79 | 105.27 | 109.90 |
| 26 | BB | 2706 | A | C5-N7-C8 | -5.79 | 101.01 | 103.90 |
| 26 | BB | 2822 | G | C2-N3-C4 | 5.79 | 114.79 | 111.90 |
| 29 | BE | 151 | THR | CA-CB-CG2 | 5.79 | 120.50 | 112.40 |
| 1 | AA | 151 | A | C1'-O4'-C4' | 5.78 | 114.53 | 109.90 |
| 1 | AA | 186 | C | N3-C2-O2 | -5.78 | 117.85 | 121.90 |
| 1 | AA | 357 | G | C5-N7-C8 | 5.78 | 107.19 | 104.30 |
| 1 | AA | 810 | C | N3-C4-N4 | 5.78 | 122.05 | 118.00 |
| 4 | AD | 4 | G | N3-C2-N2 | -5.78 | 115.85 | 119.90 |
| 26 | BB | 242 | G | C6-C5-N7 | 5.78 | 133.87 | 130.40 |
| 26 | BB | 563 | A | C5'-C4'-C3' | -5.78 | 106.75 | 116.00 |
| 26 | BB | 684 | G | N1-C2-N3 | -5.78 | 120.43 | 123.90 |
| 26 | BB | 828 | U | C4-C5-C6 | 5.78 | 123.17 | 119.70 |
| 26 | BB | 989 | G | C4-C5-C6 | 5.78 | 122.27 | 118.80 |
| 26 | BB | 1281 | G | O4'-C1'-N9 | 5.78 | 112.83 | 108.20 |
| 1 | AA | 242 | G | N3-C4-C5 | -5.78 | 125.71 | 128.60 |
| 1 | AA | 907 | A | C5'-C4'-O4' | 5.78 | 116.04 | 109.10 |
| 1 | AA | 1156 | G | N9-C4-C5 | 5.78 | 107.71 | 105.40 |
| 26 | BB | 266 | G | N3-C2-N2 | -5.78 | 115.85 | 119.90 |
| 26 | BB | 1078 | U | N3-C2-O2 | -5.78 | 118.15 | 122.20 |
| 26 | BB | 1679 | A | C8-N9-C4 | -5.78 | 103.49 | 105.80 |
| 26 | BB | 2648 | G | C6-N1-C2 | 5.78 | 128.57 | 125.10 |
| 26 | BB | 2778 | A | P-O3'-C3' | 5.78 | 126.64 | 119.70 |
| 43 | BS | 44 | TYR | CB-CG-CD1 | -5.78 | 117.53 | 121.00 |
| 1 | AA | 475 | C | C4'-C3'-C2' | -5.78 | 96.82 | 102.60 |
| 1 | AA | 597 | G | C4-C5-N7 | -5.78 | 108.49 | 110.80 |
| 1 | AA | 857 | C | N1-C2-O2 | 5.78 | 122.37 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1197 | A | C5-C6-N1 | 5.78 | 120.59 | 117.70 |
| 1 | AA | 1403 | C | C2-N3-C4 | 5.78 | 122.79 | 119.90 |
| 3 | AC | 14 | G | N3-C2-N2 | 5.78 | 123.95 | 119.90 |
| 4 | AD | 27 | G | C5'-C4'-C3' | -5.78 | 106.75 | 116.00 |
| 26 | BB | 23 | G | N1-C2-N3 | -5.78 | 120.43 | 123.90 |
| 26 | BB | 42 | A | C5-C6-N6 | 5.78 | 128.32 | 123.70 |
| 26 | BB | 1360 | G | N1-C2-N2 | -5.78 | 111.00 | 116.20 |
| 26 | BB | 1513 | U | N3-C4-O4 | 5.78 | 123.45 | 119.40 |
| 26 | BB | 1592 | C | O4'-C1'-N1 | 5.78 | 112.82 | 108.20 |
| 26 | BB | 2110 | G | N3-C2-N2 | -5.78 | 115.85 | 119.90 |
| 26 | BB | 2545 | G | N1-C2-N2 | -5.78 | 111.00 | 116.20 |
| 26 | BB | 2743 | U | C6-N1-C2 | 5.78 | 124.47 | 121.00 |
| 37 | BM | 59 | LYS | CB-CA-C | 5.78 | 121.96 | 110.40 |
| 41 | BQ | 81 | ARG | NE-CZ-NH2 | -5.78 | 117.41 | 120.30 |
| 1 | AA | 416 | G | N1-C2-N2 | 5.78 | 121.40 | 116.20 |
| 25 | BA | 29 | A | C8-N9-C4 | -5.78 | 103.49 | 105.80 |
| 26 | BB | 86 | G | C5-C6-O6 | -5.78 | 125.13 | 128.60 |
| 26 | BB | 513 | A | O4'-C1'-N9 | 5.78 | 112.82 | 108.20 |
| 26 | BB | 797 | G | C3'-C2'-C1' | 5.78 | 106.12 | 101.50 |
| 26 | BB | 877 | A | O4'-C1'-N9 | 5.78 | 112.82 | 108.20 |
| 26 | BB | 1925 | C | N1-C2-N3 | -5.78 | 115.16 | 119.20 |
| 26 | BB | 2518 | A | C3'-C2'-C1' | 5.78 | 106.12 | 101.50 |
| 39 | BO | 44 | ARG | NE-CZ-NH1 | 5.78 | 123.19 | 120.30 |
| 1 | AA | 130 | A | N7-C8-N9 | 5.78 | 116.69 | 113.80 |
| 1 | AA | 425 | G | N3-C2-N2 | -5.78 | 115.86 | 119.90 |
| 1 | AA | 1015 | G | C4'-C3'-C2' | -5.78 | 96.82 | 102.60 |
| 1 | AA | 1159 | U | N1-C2-N3 | 5.78 | 118.37 | 114.90 |
| 1 | AA | 1422 | G | N9-C1'-C2' | -5.78 | 105.64 | 112.00 |
| 1 | AA | 1510 | C | C5'-C4'-O4' | 5.78 | 116.03 | 109.10 |
| 4 | AD | 70 | C | C4-C5-C6 | -5.78 | 114.51 | 117.40 |
| 13 | AM | 27 | GLU | OE1-CD-OE2 | 5.78 | 130.23 | 123.30 |
| 26 | BB | 195 | A | N7-C8-N9 | -5.78 | 110.91 | 113.80 |
| 26 | BB | 230 | G | C4-C5-N7 | 5.78 | 113.11 | 110.80 |
| 26 | BB | 659 | G | N9-C1'-C2' | -5.78 | 105.64 | 112.00 |
| 26 | BB | 1574 | C | N1-C2-O2 | 5.78 | 122.37 | 118.90 |
| 26 | BB | 1628 | G | C5-C6-O6 | -5.78 | 125.13 | 128.60 |
| 26 | BB | 2763 | G | C3'-C2'-C1' | 5.78 | 106.12 | 101.50 |
| 1 | AA | 356 | A | C4-C5-C6 | -5.78 | 114.11 | 117.00 |
| 1 | AA | 385 | C | C3'-C2'-C1' | -5.78 | 96.88 | 101.50 |
| 1 | AA | 480 | U | C5'-C4'-C3' | -5.78 | 106.76 | 116.00 |
| 1 | AA | 717 | U | P-O3'-C3' | 5.78 | 126.63 | 119.70 |
| 1 | AA | 796 | C | C5-C6-N1 | -5.78 | 118.11 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1187 | G | C6-C5-N7 | -5.78 | 126.94 | 130.40 |
| 1 | AA | 1442 | G | N9-C4-C5 | -5.78 | 103.09 | 105.40 |
| 26 | BB | 172 | A | P-O3'-C3' | 5.78 | 126.63 | 119.70 |
| 26 | BB | 243 | U | O4'-C1'-N1 | 5.78 | 112.82 | 108.20 |
| 26 | BB | 312 | G | N3-C4-N9 | 5.78 | 129.47 | 126.00 |
| 26 | BB | 339 | U | C2-N3-C4 | -5.78 | 123.53 | 127.00 |
| 26 | BB | 379 | G | N9-C4-C5 | -5.78 | 103.09 | 105.40 |
| 26 | BB | 1212 | G | C5-C6-O6 | 5.78 | 132.07 | 128.60 |
| 26 | BB | 1404 | C | C6-N1-C2 | 5.78 | 122.61 | 120.30 |
| 26 | BB | 1655 | A | C6-N1-C2 | -5.78 | 115.13 | 118.60 |
| 26 | BB | 1937 | A | C8-N9-C4 | 5.78 | 108.11 | 105.80 |
| 26 | BB | 2513 | A | C5-C6-N1 | 5.78 | 120.59 | 117.70 |
| 26 | BB | 2750 | A | C3'-C2'-C1' | -5.78 | 96.88 | 101.50 |
| 34 | BJ | 55 | ARG | CD-NE-CZ | 5.78 | 131.69 | 123.60 |
| 43 | BS | 46 | TYR | CZ-CE2-CD2 | 5.78 | 125.00 | 119.80 |
| 45 | BU | 92 | ARG | NE-CZ-NH1 | 5.78 | 123.19 | 120.30 |
| 1 | AA | 41 | G | C5-C6-N1 | 5.77 | 114.39 | 111.50 |
| 1 | AA | 863 | U | C5'-C4'-O4' | 5.77 | 116.03 | 109.10 |
| 1 | AA | 1182 | G | P-O3'-C3' | 5.77 | 126.63 | 119.70 |
| 1 | AA | 1260 | G | C5'-C4'-O4' | 5.77 | 116.03 | 109.10 |
| 1 | AA | 1301 | U | C6-N1-C2 | -5.77 | 117.54 | 121.00 |
| 1 | AA | 1488 | G | N1-C6-O6 | 5.77 | 123.36 | 119.90 |
| 26 | BB | 258 | G | N7-C8-N9 | 5.77 | 115.99 | 113.10 |
| 26 | BB | 715 | A | O4'-C1'-C2' | -5.77 | 100.03 | 105.80 |
| 26 | BB | 858 | G | O4'-C1'-N9 | 5.77 | 112.82 | 108.20 |
| 26 | BB | 1359 | A | C4-C5-C6 | 5.77 | 119.89 | 117.00 |
| 1 | AA | 82 | G | C1'-O4'-C4' | -5.77 | 105.28 | 109.90 |
| 1 | AA | 174 | A | N9-C4-C5 | 5.77 | 108.11 | 105.80 |
| 1 | AA | 664 | G | C1'-O4'-C4' | -5.77 | 105.28 | 109.90 |
| 1 | AA | 1054 | C | P-O3'-C3' | 5.77 | 126.63 | 119.70 |
| 1 | AA | 1211 | U | N1-C2-O2 | -5.77 | 118.76 | 122.80 |
| 25 | BA | 10 | G | C5-C6-O6 | 5.77 | 132.06 | 128.60 |
| 26 | BB | 99 | U | C3'-C2'-C1' | -5.77 | 96.88 | 101.50 |
| 26 | BB | 498 | G | N9-C1'-C2' | -5.77 | 105.65 | 112.00 |
| 26 | BB | 542 | C | C5-C6-N1 | 5.77 | 123.89 | 121.00 |
| 26 | BB | 881 | G | N3-C4-N9 | 5.77 | 129.46 | 126.00 |
| 26 | BB | 1235 | G | C6-N1-C2 | -5.77 | 121.64 | 125.10 |
| 26 | BB | 1625 | C | N1-C2-O2 | 5.77 | 122.36 | 118.90 |
| 26 | BB | 1723 | G | N3-C4-N9 | 5.77 | 129.46 | 126.00 |
| 26 | BB | 2148 | G | O4'-C1'-N9 | 5.77 | 112.82 | 108.20 |
| 26 | BB | 2305 | U | C5-C4-O4 | -5.77 | 122.44 | 125.90 |
| 26 | BB | 2577 | A | N1-C6-N6 | -5.77 | 115.14 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 670 | G | C6-C5-N7 | -5.77 | 126.94 | 130.40 |
| 1 | AA | 828 | U | C4-C5-C6 | -5.77 | 116.24 | 119.70 |
| 26 | BB | 2800 | A | O4'-C4'-C3' | 5.77 | 110.72 | 106.10 |
| 1 | AA | 115 | G | P-O3'-C3' | 5.77 | 126.62 | 119.70 |
| 1 | AA | 132 | C | C2-N3-C4 | -5.77 | 117.02 | 119.90 |
| 1 | AA | 170 | U | C5'-C4'-O4' | 5.77 | 116.02 | 109.10 |
| 1 | AA | 1284 | C | O4'-C1'-C2' | -5.77 | 100.03 | 105.80 |
| 1 | AA | 1486 | G | C5-N7-C8 | -5.77 | 101.42 | 104.30 |
| 4 | AD | 38 | A | O4'-C1'-N9 | 5.77 | 112.81 | 108.20 |
| 26 | BB | 176 | A | C2-N3-C4 | 5.77 | 113.48 | 110.60 |
| 26 | BB | 329 | G | C5-C6-O6 | 5.77 | 132.06 | 128.60 |
| 26 | BB | 430 | A | C5-C6-N6 | -5.77 | 119.08 | 123.70 |
| 26 | BB | 677 | A | C5-N7-C8 | 5.77 | 106.78 | 103.90 |
| 26 | BB | 2063 | C | N3-C4-C5 | -5.77 | 119.59 | 121.90 |
| 26 | BB | 2410 | G | P-O3'-C3' | 5.77 | 126.62 | 119.70 |
| 26 | BB | 2549 | G | C5-N7-C8 | -5.77 | 101.42 | 104.30 |
| 26 | BB | 2613 | U | C4'-C3'-C2' | -5.77 | 96.83 | 102.60 |
| 26 | BB | 2870 | C | C4'-C3'-C2' | -5.77 | 96.83 | 102.60 |
| 49 | BY | 9 | THR | CA-CB-CG2 | 5.77 | 120.48 | 112.40 |
| 1 | AA | 68 | G | C8-N9-C4 | -5.77 | 104.09 | 106.40 |
| 1 | AA | 218 | U | N3-C4-C5 | 5.77 | 118.06 | 114.60 |
| 1 | AA | 620 | C | C4-C5-C6 | 5.77 | 120.28 | 117.40 |
| 1 | AA | 636 | U | O4'-C1'-N1 | 5.77 | 112.81 | 108.20 |
| 1 | AA | 766 | A | C2-N3-C4 | -5.77 | 107.72 | 110.60 |
| 1 | AA | 766 | A | C5'-C4'-O4' | 5.77 | 116.02 | 109.10 |
| 1 | AA | 874 | G | C3'-C2'-C1' | -5.77 | 96.89 | 101.50 |
| 1 | AA | 903 | G | C5-C6-O6 | -5.77 | 125.14 | 128.60 |
| 1 | AA | 1155 | A | O4'-C1'-C2' | 5.77 | 112.79 | 107.60 |
| 1 | AA | 1531 | A | C8-N9-C4 | 5.77 | 108.11 | 105.80 |
| 26 | BB | 33 | C | C2-N3-C4 | -5.77 | 117.02 | 119.90 |
| 26 | BB | 644 | A | C6-N1-C2 | -5.77 | 115.14 | 118.60 |
| 26 | BB | 794 | A | C6-N1-C2 | -5.77 | 115.14 | 118.60 |
| 26 | BB | 1304 | A | N3-C4-C5 | 5.77 | 130.84 | 126.80 |
| 26 | BB | 1754 | A | C4-C5-C6 | -5.77 | 114.12 | 117.00 |
| 26 | BB | 2170 | A | C2-N3-C4 | 5.77 | 113.48 | 110.60 |
| 26 | BB | 2293 | G | N3-C4-C5 | -5.77 | 125.72 | 128.60 |
| 1 | AA | 414 | A | C4-C5-C6 | -5.77 | 114.12 | 117.00 |
| 1 | AA | 944 | G | N9-C1'-C2' | -5.77 | 105.66 | 112.00 |
| 2 | AB | 38 | A | C2-N3-C4 | 5.77 | 113.48 | 110.60 |
| 12 | AL | 63 | TYR | CD1-CG-CD2 | 5.77 | 124.24 | 117.90 |
| 26 | BB | 1155 | A | O4'-C1'-N9 | -5.77 | 103.59 | 108.20 |
| 26 | BB | 1262 | A | C5-N7-C8 | 5.77 | 106.78 | 103.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1339 | G | P-O3'-C3' | 5.77 | 126.62 | 119.70 |
| 26 | BB | 1573 | G | N7-C8-N9 | -5.77 | 110.22 | 113.10 |
| 26 | BB | 1856 | U | C5-C4-O4 | 5.77 | 129.36 | 125.90 |
| 26 | BB | 1879 | C | C4'-C3'-C2' | -5.77 | 96.83 | 102.60 |
| 26 | BB | 2003 | A | N1-C6-N6 | -5.77 | 115.14 | 118.60 |
| 26 | BB | 2434 | A | N3-C4-C5 | -5.77 | 122.76 | 126.80 |
| 26 | BB | 2463 | C | C4-C5-C6 | -5.77 | 114.52 | 117.40 |
| 1 | AA | 698 | G | C4-C5-C6 | 5.76 | 122.26 | 118.80 |
| 1 | AA | 1280 | A | C8-N9-C4 | -5.76 | 103.49 | 105.80 |
| 1 | AA | 1358 | U | N3-C2-O2 | -5.76 | 118.17 | 122.20 |
| 2 | AB | 10 | G | N3-C4-N9 | 5.76 | 129.46 | 126.00 |
| 16 | AP | 106 | ARG | CD-NE-CZ | 5.76 | 131.67 | 123.60 |
| 26 | BB | 135 | U | N3-C4-O4 | 5.76 | 123.44 | 119.40 |
| 26 | BB | 574 | A | N1-C6-N6 | -5.76 | 115.14 | 118.60 |
| 26 | BB | 1161 | C | C5'-C4'-O4' | 5.76 | 116.02 | 109.10 |
| 26 | BB | 1760 | C | C5-C4-N4 | -5.76 | 116.17 | 120.20 |
| 26 | BB | 2415 | G | C4'-C3'-C2' | -5.76 | 96.83 | 102.60 |
| 26 | BB | 2422 | C | N1-C2-N3 | -5.76 | 115.16 | 119.20 |
| 26 | BB | 2557 | G | N1-C6-O6 | 5.76 | 123.36 | 119.90 |
| 26 | BB | 2649 | C | C4-C5-C6 | -5.76 | 114.52 | 117.40 |
| 1 | AA | 309 | A | N9-C4-C5 | 5.76 | 108.11 | 105.80 |
| 1 | AA | 461 | A | C3'-C2'-C1' | 5.76 | 106.11 | 101.50 |
| 1 | AA | 733 | G | C5-C6-N1 | 5.76 | 114.38 | 111.50 |
| 26 | BB | 326 | G | O4'-C1'-N9 | 5.76 | 112.81 | 108.20 |
| 26 | BB | 539 | G | N9-C1'-C2' | -5.76 | 105.66 | 112.00 |
| 26 | BB | 1223 | G | N3-C4-C5 | -5.76 | 125.72 | 128.60 |
| 26 | BB | 2167 | U | O4'-C1'-C2' | 5.76 | 112.79 | 107.60 |
| 1 | AA | 53 | A | C4-C5-N7 | -5.76 | 107.82 | 110.70 |
| 1 | AA | 388 | G | P-O3'-C3' | 5.76 | 126.61 | 119.70 |
| 1 | AA | 545 | C | C4-C5-C6 | 5.76 | 120.28 | 117.40 |
| 1 | AA | 648 | A | C2-N3-C4 | -5.76 | 107.72 | 110.60 |
| 1 | AA | 664 | G | N1-C6-O6 | 5.76 | 123.36 | 119.90 |
| 1 | AA | 689 | C | C5-C6-N1 | -5.76 | 118.12 | 121.00 |
| 1 | AA | 1011 | C | C6-N1-C2 | 5.76 | 122.61 | 120.30 |
| 1 | AA | 1081 | A | C5-C6-N1 | 5.76 | 120.58 | 117.70 |
| 2 | AB | 70 | C | C5-C6-N1 | 5.76 | 123.88 | 121.00 |
| 9 | AI | 44 | ARG | NE-CZ-NH1 | 5.76 | 123.18 | 120.30 |
| 10 | AJ | 17 | PHE | CB-CG-CD2 | 5.76 | 124.83 | 120.80 |
| 26 | BB | 631 | A | C3'-C2'-C1' | 5.76 | 106.11 | 101.50 |
| 26 | BB | 858 | G | N9-C4-C5 | -5.76 | 103.10 | 105.40 |
| 26 | BB | 1214 | A | C5-C6-N6 | 5.76 | 128.31 | 123.70 |
| 26 | BB | 1407 | G | C4'-C3'-C2' | -5.76 | 96.84 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1595 | C | C6-N1-C1' | 5.76 | 127.71 | 120.80 |
| 26 | BB | 2192 | U | C5-C4-O4 | -5.76 | 122.44 | 125.90 |
| 26 | BB | 2293 | G | C5-N7-C8 | 5.76 | 107.18 | 104.30 |
| 26 | BB | 2632 | A | C8-N9-C4 | -5.76 | 103.50 | 105.80 |
| 33 | BI | 93 | SER | C-N-CA | 5.76 | 136.10 | 121.70 |
| 1 | AA | 43 | C | C2-N3-C4 | -5.76 | 117.02 | 119.90 |
| 1 | AA | 57 | G | P-O3'-C3' | 5.76 | 126.61 | 119.70 |
| 1 | AA | 87 | C | N3-C4-N4 | 5.76 | 122.03 | 118.00 |
| 1 | AA | 487 | A | C6-C5-N7 | -5.76 | 128.27 | 132.30 |
| 1 | AA | 963 | G | N9-C4-C5 | 5.76 | 107.70 | 105.40 |
| 1 | AA | 1048 | G | N3-C2-N2 | 5.76 | 123.93 | 119.90 |
| 1 | AA | 1087 | G | O4'-C1'-N9 | 5.76 | 112.81 | 108.20 |
| 1 | AA | 1100 | C | N1-C2-O2 | 5.76 | 122.36 | 118.90 |
| 1 | AA | 1350 | A | N1-C2-N3 | -5.76 | 126.42 | 129.30 |
| 1 | AA | 1515 | G | C6-N1-C2 | -5.76 | 121.64 | 125.10 |
| 26 | BB | 261 | G | C5-N7-C8 | -5.76 | 101.42 | 104.30 |
| 26 | BB | 642 | U | C3'-C2'-C1' | -5.76 | 96.89 | 101.50 |
| 26 | BB | 769 | U | O5'-C5'-C4' | 5.76 | 122.64 | 111.70 |
| 26 | BB | 831 | G | N3-C4-N9 | 5.76 | 129.46 | 126.00 |
| 26 | BB | 903 | C | N3-C4-C5 | -5.76 | 119.60 | 121.90 |
| 26 | BB | 1016 | G | C8-N9-C1' | 5.76 | 134.49 | 127.00 |
| 26 | BB | 1230 | A | C2-N3-C4 | 5.76 | 113.48 | 110.60 |
| 26 | BB | 1398 | C | N3-C2-O2 | -5.76 | 117.87 | 121.90 |
| 26 | BB | 1423 | G | N7-C8-N9 | 5.76 | 115.98 | 113.10 |
| 26 | BB | 1533 | C | C3'-C2'-C1' | 5.76 | 106.11 | 101.50 |
| 26 | BB | 1728 | C | C3'-C2'-C1' | 5.76 | 106.11 | 101.50 |
| 1 | AA | 857 | C | N3-C4-N4 | 5.76 | 122.03 | 118.00 |
| 1 | AA | 1177 | G | O4'-C4'-C3' | 5.76 | 110.71 | 106.10 |
| 4 | AD | 58 | A | C5-C6-N6 | 5.76 | 128.31 | 123.70 |
| 26 | BB | 422 | A | C5-C6-N1 | 5.76 | 120.58 | 117.70 |
| 26 | BB | 1314 | C | C4-C5-C6 | 5.76 | 120.28 | 117.40 |
| 26 | BB | 1435 | G | N3-C4-C5 | -5.76 | 125.72 | 128.60 |
| 1 | AA | 29 | U | C4-C5-C6 | 5.76 | 123.15 | 119.70 |
| 4 | AD | 54 | G | C5-N7-C8 | 5.76 | 107.18 | 104.30 |
| 26 | BB | 798 | G | N1-C6-O6 | 5.76 | 123.35 | 119.90 |
| 26 | BB | 862 | G | N9-C4-C5 | 5.76 | 107.70 | 105.40 |
| 26 | BB | 1633 | G | C5-N7-C8 | 5.76 | 107.18 | 104.30 |
| 26 | BB | 1754 | A | C1'-O4'-C4' | 5.76 | 114.50 | 109.90 |
| 26 | BB | 1847 | A | N7-C8-N9 | 5.76 | 116.68 | 113.80 |
| 26 | BB | 2136 | G | N1-C2-N3 | -5.76 | 120.45 | 123.90 |
| 26 | BB | 2461 | A | N3-C4-C5 | -5.76 | 122.77 | 126.80 |
| 26 | BB | 2523 | G | C4-C5-C6 | 5.76 | 122.25 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2597 | G | C4-C5-N7 | -5.76 | 108.50 | 110.80 |
| 1 | AA | 178 | C | C2-N3-C4 | 5.75 | 122.78 | 119.90 |
| 1 | AA | 374 | A | N9-C4-C5 | 5.75 | 108.10 | 105.80 |
| 1 | AA | 706 | A | O4'-C1'-C2' | -5.75 | 100.05 | 105.80 |
| 1 | AA | 1326 | U | C6-N1-C2 | -5.75 | 117.55 | 121.00 |
| 2 | AB | 38 | A | N7-C8-N9 | 5.75 | 116.68 | 113.80 |
| 26 | BB | 485 | C | N1-C2-O2 | 5.75 | 122.35 | 118.90 |
| 26 | BB | 1023 | U | N1-C2-N3 | 5.75 | 118.35 | 114.90 |
| 26 | BB | 1216 | G | N1-C2-N3 | -5.75 | 120.45 | 123.90 |
| 26 | BB | 2091 | C | O4'-C1'-N1 | 5.75 | 112.80 | 108.20 |
| 26 | BB | 2235 | G | C4-C5-N7 | -5.75 | 108.50 | 110.80 |
| 26 | BB | 2256 | G | N1-C6-O6 | 5.75 | 123.35 | 119.90 |
| 26 | BB | 2262 | U | P-O3'-C3' | 5.75 | 126.61 | 119.70 |
| 26 | BB | 2860 | A | N7-C8-N9 | 5.75 | 116.68 | 113.80 |
| 29 | BE | 22 | ILE | CA-CB-CG1 | 5.75 | 121.93 | 111.00 |
| 1 | AA | 418 | C | C2-N3-C4 | -5.75 | 117.02 | 119.90 |
| 1 | AA | 1066 | C | C3'-C2'-C1' | 5.75 | 106.10 | 101.50 |
| 1 | AA | 1318 | A | C3'-C2'-C1' | 5.75 | 106.10 | 101.50 |
| 1 | AA | 1387 | G | C5-C6-N1 | 5.75 | 114.38 | 111.50 |
| 1 | AA | 1410 | A | C4-C5-C6 | 5.75 | 119.88 | 117.00 |
| 1 | AA | 1429 | A | C3'-C2'-C1' | -5.75 | 96.90 | 101.50 |
| 1 | AA | 1458 | G | O4'-C4'-C3' | 5.75 | 110.70 | 106.10 |
| 26 | BB | 74 | A | C5-C6-N1 | 5.75 | 120.58 | 117.70 |
| 26 | BB | 591 | U | O4'-C1'-N1 | 5.75 | 112.80 | 108.20 |
| 26 | BB | 878 | A | N1-C6-N6 | 5.75 | 122.05 | 118.60 |
| 26 | BB | 1427 | A | C6-N1-C2 | 5.75 | 122.05 | 118.60 |
| 26 | BB | 1797 | G | C8-N9-C4 | -5.75 | 104.10 | 106.40 |
| 26 | BB | 1977 | A | C4-C5-C6 | -5.75 | 114.12 | 117.00 |
| 26 | BB | 2437 | G | C4'-C3'-C2' | -5.75 | 96.85 | 102.60 |
| 1 | AA | 315 | A | C2-N3-C4 | 5.75 | 113.47 | 110.60 |
| 1 | AA | 627 | G | C4'-C3'-C2' | -5.75 | 96.85 | 102.60 |
| 1 | AA | 647 | C | N3-C2-O2 | -5.75 | 117.87 | 121.90 |
| 1 | AA | 771 | G | O4'-C1'-N9 | 5.75 | 112.80 | 108.20 |
| 1 | AA | 820 | U | N3-C4-O4 | 5.75 | 123.43 | 119.40 |
| 1 | AA | 1210 | C | N1-C2-O2 | 5.75 | 122.35 | 118.90 |
| 1 | AA | 1431 | A | C2-N3-C4 | 5.75 | 113.48 | 110.60 |
| 1 | AA | 1482 | G | N1-C6-O6 | 5.75 | 123.35 | 119.90 |
| 26 | BB | 201 | C | C6-N1-C1' | 5.75 | 127.70 | 120.80 |
| 26 | BB | 219 | A | C5'-C4'-C3' | -5.75 | 106.80 | 116.00 |
| 26 | BB | 242 | G | C1'-O4'-C4' | -5.75 | 105.30 | 109.90 |
| 26 | BB | 303 | G | C6-N1-C2 | 5.75 | 128.55 | 125.10 |
| 26 | BB | 545 | U | C5-C6-N1 | -5.75 | 119.82 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 618 | G | N1-C6-O6 | -5.75 | 116.45 | 119.90 |
| 26 | BB | 676 | A | C8-N9-C4 | -5.75 | 103.50 | 105.80 |
| 26 | BB | 1273 | U | C5'-C4'-C3' | -5.75 | 106.80 | 116.00 |
| 26 | BB | 1646 | C | N3-C4-N4 | 5.75 | 122.03 | 118.00 |
| 26 | BB | 1767 | G | C5-C6-N1 | 5.75 | 114.38 | 111.50 |
| 26 | BB | 2753 | A | N1-C6-N6 | 5.75 | 122.05 | 118.60 |
| 1 | AA | 1525 | G | P-O3'-C3' | 5.75 | 126.60 | 119.70 |
| 25 | BA | 95 | U | P-O3'-C3' | 5.75 | 126.60 | 119.70 |
| 26 | BB | 801 | G | C8-N9-C4 | -5.75 | 104.10 | 106.40 |
| 26 | BB | 1135 | C | P-O3'-C3' | 5.75 | 126.60 | 119.70 |
| 26 | BB | 1632 | A | C5-C6-N1 | -5.75 | 114.83 | 117.70 |
| 26 | BB | 1652 | A | N1-C2-N3 | -5.75 | 126.42 | 129.30 |
| 1 | AA | 845 | A | C5'-C4'-O4' | 5.75 | 116.00 | 109.10 |
| 1 | AA | 1241 | G | N3-C4-C5 | -5.75 | 125.73 | 128.60 |
| 1 | AA | 1385 | G | N1-C2-N2 | 5.75 | 121.37 | 116.20 |
| 25 | BA | 93 | C | N3-C2-O2 | -5.75 | 117.88 | 121.90 |
| 26 | BB | 547 | A | C8-N9-C4 | 5.75 | 108.10 | 105.80 |
| 26 | BB | 671 | C | N3-C4-C5 | 5.75 | 124.20 | 121.90 |
| 26 | BB | 673 | C | C4'-C3'-C2' | -5.75 | 96.85 | 102.60 |
| 26 | BB | 755 | U | C5'-C4'-O4' | 5.75 | 116.00 | 109.10 |
| 26 | BB | 816 | C | C5-C4-N4 | 5.75 | 124.22 | 120.20 |
| 26 | BB | 1343 | G | N9-C4-C5 | 5.75 | 107.70 | 105.40 |
| 26 | BB | 1427 | A | N1-C2-N3 | -5.75 | 126.42 | 129.30 |
| 26 | BB | 1841 | U | C1'-O4'-C4' | -5.75 | 105.30 | 109.90 |
| 26 | BB | 1869 | G | C5-N7-C8 | -5.75 | 101.43 | 104.30 |
| 26 | BB | 2763 | G | N1-C2-N2 | -5.75 | 111.03 | 116.20 |
| 1 | AA | 236 | A | C5-N7-C8 | 5.75 | 106.77 | 103.90 |
| 1 | AA | 301 | G | C5-C6-N1 | -5.75 | 108.63 | 111.50 |
| 1 | AA | 350 | G | C5-C6-O6 | 5.75 | 132.05 | 128.60 |
| 2 | AB | 48 | U | N1-C2-N3 | -5.75 | 111.45 | 114.90 |
| 26 | BB | 178 | G | N9-C1'-C2' | -5.75 | 105.68 | 112.00 |
| 26 | BB | 228 | C | C5-C4-N4 | -5.75 | 116.18 | 120.20 |
| 26 | BB | 328 | U | N3-C2-O2 | -5.75 | 118.18 | 122.20 |
| 26 | BB | 707 | G | C5-C6-O6 | 5.75 | 132.05 | 128.60 |
| 26 | BB | 881 | G | C5-C6-N1 | 5.75 | 114.37 | 111.50 |
| 26 | BB | 987 | C | C5-C6-N1 | 5.75 | 123.87 | 121.00 |
| 26 | BB | 1445 | G | C5-N7-C8 | -5.75 | 101.43 | 104.30 |
| 26 | BB | 1539 | U | C3'-C2'-C1' | 5.75 | 106.10 | 101.50 |
| 26 | BB | 2821 | A | P-O3'-C3' | 5.75 | 126.59 | 119.70 |
| 1 | AA | 116 | A | N1-C6-N6 | -5.75 | 115.15 | 118.60 |
| 1 | AA | 378 | G | C5-C6-O6 | 5.75 | 132.05 | 128.60 |
| 1 | AA | 937 | A | C6-C5-N7 | -5.75 | 128.28 | 132.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1205 | U | N3-C4-C5 | 5.75 | 118.05 | 114.60 |
| 1 | AA | 1292 | G | C5'-C4'-O4' | 5.75 | 115.99 | 109.10 |
| 26 | BB | 279 | A | C1'-O4'-C4' | -5.75 | 105.30 | 109.90 |
| 26 | BB | 1032 | A | N7-C8-N9 | 5.75 | 116.67 | 113.80 |
| 26 | BB | 1072 | C | C5'-C4'-O4' | 5.75 | 116.00 | 109.10 |
| 26 | BB | 1103 | A | P-O3'-C3' | 5.75 | 126.59 | 119.70 |
| 26 | BB | 2437 | G | N1-C2-N3 | 5.75 | 127.35 | 123.90 |
| 1 | AA | 375 | U | N3-C4-C5 | -5.74 | 111.15 | 114.60 |
| 1 | AA | 393 | A | N3-C4-C5 | -5.74 | 122.78 | 126.80 |
| 1 | AA | 425 | G | N9-C1'-C2' | -5.74 | 105.68 | 112.00 |
| 1 | AA | 598 | U | O4'-C1'-C2' | 5.74 | 112.77 | 107.60 |
| 1 | AA | 851 | G | N3-C4-C5 | -5.74 | 125.73 | 128.60 |
| 1 | AA | 910 | C | C2-N3-C4 | 5.74 | 122.77 | 119.90 |
| 1 | AA | 974 | A | N9-C1'-C2' | 5.74 | 121.47 | 114.00 |
| 1 | AA | 1009 | U | C4'-C3'-C2' | -5.74 | 96.86 | 102.60 |
| 1 | AA | 1416 | G | C2-N3-C4 | 5.74 | 114.77 | 111.90 |
| 4 | AD | 29 | C | C4-C5-C6 | -5.74 | 114.53 | 117.40 |
| 25 | BA | 86 | G | O4'-C4'-C3' | 5.74 | 110.69 | 106.10 |
| 26 | BB | 125 | A | C5-N7-C8 | -5.74 | 101.03 | 103.90 |
| 26 | BB | 362 | A | C1'-O4'-C4' | -5.74 | 105.31 | 109.90 |
| 26 | BB | 563 | A | C1'-O4'-C4' | -5.74 | 105.31 | 109.90 |
| 26 | BB | 858 | G | N1-C2-N3 | 5.74 | 127.35 | 123.90 |
| 26 | BB | 1398 | C | O4'-C4'-C3' | 5.74 | 110.69 | 106.10 |
| 26 | BB | 1500 | G | N3-C4-N9 | 5.74 | 129.45 | 126.00 |
| 26 | BB | 1661 | G | N9-C1'-C2' | -5.74 | 105.68 | 112.00 |
| 26 | BB | 2017 | U | C5'-C4'-O4' | 5.74 | 115.99 | 109.10 |
| 26 | BB | 2436 | G | C5-C6-N1 | -5.74 | 108.63 | 111.50 |
| 26 | BB | 2655 | G | C5-N7-C8 | 5.74 | 107.17 | 104.30 |
| 26 | BB | 2661 | G | N7-C8-N9 | 5.74 | 115.97 | 113.10 |
| 30 | BF | 60 | TRP | CZ3-CH2-CZ2 | -5.74 | 114.71 | 121.60 |
| 1 | AA | 6 | G | C6-C5-N7 | -5.74 | 126.95 | 130.40 |
| 1 | AA | 562 | U | O4'-C1'-C2' | 5.74 | 112.77 | 107.60 |
| 1 | AA | 582 | C | C4'-C3'-C2' | -5.74 | 96.86 | 102.60 |
| 1 | AA | 888 | G | C5-N7-C8 | 5.74 | 107.17 | 104.30 |
| 19 | AS | 70 | ARG | NE-CZ-NH2 | -5.74 | 117.43 | 120.30 |
| 26 | BB | 198 | C | C6-N1-C2 | -5.74 | 118.00 | 120.30 |
| 26 | BB | 724 | U | C2-N3-C4 | -5.74 | 123.56 | 127.00 |
| 26 | BB | 1551 | A | C5-N7-C8 | -5.74 | 101.03 | 103.90 |
| 26 | BB | 2415 | G | N1-C6-O6 | -5.74 | 116.45 | 119.90 |
| 1 | AA | 119 | A | O4'-C1'-N9 | 5.74 | 112.79 | 108.20 |
| 1 | AA | 587 | G | N3-C4-C5 | -5.74 | 125.73 | 128.60 |
| 1 | AA | 852 | G | P-O3'-C3' | 5.74 | 126.59 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1004 | A | C4'-C3'-C2' | -5.74 | 96.86 | 102.60 |
| 3 | AC | 44 | U | C4-C5-C6 | 5.74 | 123.14 | 119.70 |
| 26 | BB | 567 | U | C5-C4-O4 | -5.74 | 122.46 | 125.90 |
| 26 | BB | 813 | U | C5-C6-N1 | -5.74 | 119.83 | 122.70 |
| 26 | BB | 1034 | G | C2-N3-C4 | -5.74 | 109.03 | 111.90 |
| 26 | BB | 1120 | G | N9-C4-C5 | 5.74 | 107.70 | 105.40 |
| 26 | BB | 1220 | G | N1-C2-N2 | -5.74 | 111.03 | 116.20 |
| 26 | BB | 1223 | G | O4'-C1'-N9 | 5.74 | 112.79 | 108.20 |
| 26 | BB | 1239 | G | C5-C6-N1 | -5.74 | 108.63 | 111.50 |
| 26 | BB | 1844 | C | C1'-O4'-C4' | -5.74 | 105.31 | 109.90 |
| 26 | BB | 2009 | A | OP1-P-O3' | 5.74 | 117.83 | 105.20 |
| 26 | BB | 2047 | C | C2-N3-C4 | -5.74 | 117.03 | 119.90 |
| 26 | BB | 2323 | G | C5-C6-O6 | -5.74 | 125.16 | 128.60 |
| 26 | BB | 2451 | A | C5'-C4'-C3' | -5.74 | 106.81 | 116.00 |
| 26 | BB | 2493 | U | C1'-O4'-C4' | -5.74 | 105.31 | 109.90 |
| 1 | AA | 86 | G | O4'-C4'-C3' | -5.74 | 98.26 | 104.00 |
| 1 | AA | 786 | G | N9-C4-C5 | -5.74 | 103.10 | 105.40 |
| 6 | AF | 21 | TRP | CH2-CZ2-CE2 | 5.74 | 123.14 | 117.40 |
| 26 | BB | 719 | C | N1-C2-O2 | -5.74 | 115.46 | 118.90 |
| 26 | BB | 841 | G | C5-N7-C8 | -5.74 | 101.43 | 104.30 |
| 26 | BB | 1829 | A | C2-N3-C4 | 5.74 | 113.47 | 110.60 |
| 26 | BB | 2225 | A | C5'-C4'-O4' | 5.74 | 115.99 | 109.10 |
| 26 | BB | 2489 | U | C5-C4-O4 | -5.74 | 122.46 | 125.90 |
| 26 | BB | 2603 | G | C2-N3-C4 | 5.74 | 114.77 | 111.90 |
| 26 | BB | 2867 | G | N7-C8-N9 | 5.74 | 115.97 | 113.10 |
| 26 | BB | 2903 | U | C4'-C3'-C2' | -5.74 | 96.86 | 102.60 |
| 29 | BE | 125 | TRP | NE1-CE2-CD2 | -5.74 | 101.56 | 107.30 |
| 29 | BE | 128 | ARG | CD-NE-CZ | 5.74 | 131.63 | 123.60 |
| 1 | AA | 354 | G | N7-C8-N9 | 5.74 | 115.97 | 113.10 |
| 4 | AD | 41 | C | O4'-C1'-N1 | 5.74 | 112.79 | 108.20 |
| 26 | BB | 137 | U | N1-C1'-C2' | -5.74 | 105.69 | 112.00 |
| 26 | BB | 1401 | G | C5-C6-O6 | 5.74 | 132.04 | 128.60 |
| 26 | BB | 1771 | C | OP2-P-O3' | 5.74 | 117.82 | 105.20 |
| 26 | BB | 1981 | A | C3'-C2'-C1' | 5.74 | 106.09 | 101.50 |
| 1 | AA | 1245 | C | C2-N3-C4 | 5.74 | 122.77 | 119.90 |
| 25 | BA | 12 | C | P-O3'-C3' | 5.74 | 126.58 | 119.70 |
| 26 | BB | 187 | G | C8-N9-C4 | -5.74 | 104.11 | 106.40 |
| 26 | BB | 195 | A | C4-C5-C6 | -5.74 | 114.13 | 117.00 |
| 26 | BB | 489 | G | N9-C4-C5 | 5.74 | 107.69 | 105.40 |
| 26 | BB | 662 | G | C5'-C4'-O4' | 5.74 | 115.98 | 109.10 |
| 26 | BB | 776 | G | N7-C8-N9 | 5.74 | 115.97 | 113.10 |
| 26 | BB | 857 | G | C8-N9-C4 | -5.74 | 104.11 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1581 | G | O4'-C4'-C3' | 5.74 | 110.69 | 106.10 |
| 26 | BB | 2019 | A | C5-C6-N1 | -5.74 | 114.83 | 117.70 |
| 26 | BB | 2710 | C | P-O3'-C3' | 5.74 | 126.58 | 119.70 |
| 1 | AA | 468 | A | O4'-C4'-C3' | 5.73 | 110.69 | 106.10 |
| 1 | AA | 616 | G | O4'-C1'-N9 | -5.73 | 103.61 | 108.20 |
| 1 | AA | 1414 | U | C2-N3-C4 | -5.73 | 123.56 | 127.00 |
| 1 | AA | 1445 | U | C4'-C3'-C2' | 5.73 | 108.33 | 102.60 |
| 25 | BA | 82 | U | O4'-C1'-N1 | 5.73 | 112.79 | 108.20 |
| 26 | BB | 485 | C | N3-C2-O2 | -5.73 | 117.89 | 121.90 |
| 26 | BB | 771 | G | O5'-C5'-C4' | 5.73 | 122.59 | 111.70 |
| 1 | AA | 302 | G | C4-C5-N7 | 5.73 | 113.09 | 110.80 |
| 1 | AA | 496 | A | C4'-C3'-C2' | -5.73 | 96.87 | 102.60 |
| 1 | AA | 496 | A | C4-C5-C6 | -5.73 | 114.13 | 117.00 |
| 1 | AA | 690 | G | N3-C4-N9 | 5.73 | 129.44 | 126.00 |
| 26 | BB | 255 | A | C5'-C4'-O4' | 5.73 | 115.98 | 109.10 |
| 26 | BB | 431 | U | N3-C2-O2 | -5.73 | 118.19 | 122.20 |
| 26 | BB | 535 | G | O4'-C1'-N9 | 5.73 | 112.79 | 108.20 |
| 26 | BB | 610 | C | C2-N3-C4 | 5.73 | 122.77 | 119.90 |
| 26 | BB | 725 | G | N1-C6-O6 | -5.73 | 116.46 | 119.90 |
| 26 | BB | 785 | G | N1-C6-O6 | -5.73 | 116.46 | 119.90 |
| 26 | BB | 1243 | C | C4'-C3'-C2' | -5.73 | 96.87 | 102.60 |
| 26 | BB | 1360 | G | C5-N7-C8 | -5.73 | 101.43 | 104.30 |
| 26 | BB | 1515 | A | O4'-C1'-N9 | 5.73 | 112.79 | 108.20 |
| 26 | BB | 1600 | C | C5'-C4'-O4' | 5.73 | 115.98 | 109.10 |
| 26 | BB | 1703 | G | C8-N9-C4 | -5.73 | 104.11 | 106.40 |
| 26 | BB | 1903 | G | N3-C4-N9 | 5.73 | 129.44 | 126.00 |
| 26 | BB | 2067 | G | C2-N3-C4 | 5.73 | 114.77 | 111.90 |
| 26 | BB | 2101 | A | C6-N1-C2 | -5.73 | 115.16 | 118.60 |
| 26 | BB | 2451 | A | C6-C5-N7 | -5.73 | 128.29 | 132.30 |
| 26 | BB | 2458 | G | C5-C6-N1 | 5.73 | 114.37 | 111.50 |
| 26 | BB | 2617 | U | P-O3'-C3' | 5.73 | 126.58 | 119.70 |
| 26 | BB | 2659 | G | C3'-C2'-C1' | -5.73 | 96.92 | 101.50 |
| 47 | BW | 7 | ASP | CB-CG-OD1 | -5.73 | 113.14 | 118.30 |
| 1 | AA | 80 | A | C6-N1-C2 | -5.73 | 115.16 | 118.60 |
| 1 | AA | 603 | U | N1-C2-N3 | 5.73 | 118.34 | 114.90 |
| 1 | AA | 892 | A | C1'-O4'-C4' | -5.73 | 105.32 | 109.90 |
| 1 | AA | 1013 | G | C6-C5-N7 | 5.73 | 133.84 | 130.40 |
| 1 | AA | 1059 | C | N1-C2-N3 | 5.73 | 123.21 | 119.20 |
| 1 | AA | 1223 | C | C5'-C4'-O4' | 5.73 | 115.98 | 109.10 |
| 25 | BA | 29 | A | C4-C5-N7 | 5.73 | 113.56 | 110.70 |
| 26 | BB | 160 | A | N7-C8-N9 | -5.73 | 110.93 | 113.80 |
| 26 | BB | 323 | C | N1-C2-O2 | 5.73 | 122.34 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 509 | C | C5-C6-N1 | 5.73 | 123.86 | 121.00 |
| 26 | BB | 603 | A | C4-C5-C6 | -5.73 | 114.13 | 117.00 |
| 26 | BB | 1395 | A | C6-N1-C2 | 5.73 | 122.04 | 118.60 |
| 26 | BB | 1567 | G | P-O3'-C3' | 5.73 | 126.58 | 119.70 |
| 26 | BB | 1700 | A | N1-C2-N3 | 5.73 | 132.17 | 129.30 |
| 26 | BB | 1961 | C | N3-C2-O2 | -5.73 | 117.89 | 121.90 |
| 26 | BB | 2127 | G | C1'-O4'-C4' | -5.73 | 105.31 | 109.90 |
| 26 | BB | 2288 | A | N7-C8-N9 | -5.73 | 110.94 | 113.80 |
| 26 | BB | 2390 | U | N3-C4-C5 | 5.73 | 118.04 | 114.60 |
| 26 | BB | 2424 | C | C4-C5-C6 | -5.73 | 114.53 | 117.40 |
| 26 | BB | 2688 | G | C5-C6-N1 | -5.73 | 108.64 | 111.50 |
| 26 | BB | 2711 | A | C1'-O4'-C4' | -5.73 | 105.32 | 109.90 |
| 26 | BB | 2825 | G | N3-C4-C5 | -5.73 | 125.73 | 128.60 |
| 1 | AA | 86 | G | C4-N9-C1' | -5.73 | 119.05 | 126.50 |
| 1 | AA | 795 | C | N3-C4-C5 | -5.73 | 119.61 | 121.90 |
| 25 | BA | 46 | A | C5'-C4'-C3' | 5.73 | 125.17 | 116.00 |
| 26 | BB | 260 | G | C5-C6-N1 | 5.73 | 114.36 | 111.50 |
| 26 | BB | 1483 | G | C5'-C4'-O4' | -5.73 | 102.22 | 109.10 |
| 1 | AA | 40 | C | N1-C1'-C2' | -5.73 | 105.70 | 112.00 |
| 1 | AA | 193 | C | C4'-C3'-C2' | -5.73 | 96.87 | 102.60 |
| 1 | AA | 373 | A | C5'-C4'-O4' | 5.73 | 115.97 | 109.10 |
| 1 | AA | 767 | A | N7-C8-N9 | 5.73 | 116.66 | 113.80 |
| 1 | AA | 1223 | C | C5'-C4'-C3' | -5.73 | 106.83 | 116.00 |
| 1 | AA | 1303 | C | N1-C1'-C2' | -5.73 | 105.70 | 112.00 |
| 20 | AT | 65 | PRO | N-CA-CB | 5.73 | 110.17 | 103.30 |
| 26 | BB | 439 | A | C5-N7-C8 | -5.73 | 101.04 | 103.90 |
| 26 | BB | 792 | A | C2-N3-C4 | 5.73 | 113.46 | 110.60 |
| 26 | BB | 1185 | G | C5-C6-N1 | 5.73 | 114.36 | 111.50 |
| 26 | BB | 1384 | A | C5-C6-N1 | -5.73 | 114.84 | 117.70 |
| 26 | BB | 1610 | A | O4'-C1'-C2' | 5.73 | 112.75 | 107.60 |
| 26 | BB | 1937 | A | O4'-C4'-C3' | 5.73 | 110.68 | 106.10 |
| 26 | BB | 2032 | G | C5'-C4'-O4' | 5.73 | 115.97 | 109.10 |
| 26 | BB | 2493 | U | O4'-C1'-N1 | 5.73 | 112.78 | 108.20 |
| 26 | BB | 2759 | G | O4'-C4'-C3' | -5.73 | 98.27 | 104.00 |
| 46 | BV | 40 | LYS | C-N-CA | 5.73 | 136.02 | 121.70 |
| 1 | AA | 313 | A | C4-C5-C6 | -5.73 | 114.14 | 117.00 |
| 1 | AA | 532 | A | C5'-C4'-O4' | 5.73 | 115.97 | 109.10 |
| 1 | AA | 1037 | C | N3-C4-C5 | 5.73 | 124.19 | 121.90 |
| 1 | AA | 1163 | A | N7-C8-N9 | -5.73 | 110.94 | 113.80 |
| 1 | AA | 1240 | U | N3-C4-O4 | -5.73 | 115.39 | 119.40 |
| 1 | AA | 1512 | U | C4-C5-C6 | 5.73 | 123.14 | 119.70 |
| 7 | AG | 69 | ARG | NE-CZ-NH1 | 5.73 | 123.16 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 602 | A | N9-C4-C5 | 5.73 | 108.09 | 105.80 |
| 26 | BB | 713 | G | N1-C6-O6 | 5.73 | 123.34 | 119.90 |
| 26 | BB | 1968 | G | C6-C5-N7 | -5.73 | 126.96 | 130.40 |
| 38 | BN | 50 | PHE | CB-CG-CD1 | -5.73 | 116.79 | 120.80 |
| 1 | AA | 85 | U | C2-N1-C1' | 5.72 | 124.57 | 117.70 |
| 1 | AA | 98 | A | N7-C8-N9 | -5.72 | 110.94 | 113.80 |
| 1 | AA | 468 | A | C5-C6-N1 | -5.72 | 114.84 | 117.70 |
| 1 | AA | 700 | G | N1-C6-O6 | -5.72 | 116.47 | 119.90 |
| 1 | AA | 726 | C | C3'-C2'-C1' | 5.72 | 106.08 | 101.50 |
| 1 | AA | 1226 | C | C4-C5-C6 | -5.72 | 114.54 | 117.40 |
| 1 | AA | 1319 | A | O5'-C5'-C4' | 5.72 | 122.58 | 111.70 |
| 3 | AC | 47 | C | P-O3'-C3' | 5.72 | 126.57 | 119.70 |
| 20 | AT | 61 | ARG | NH1-CZ-NH2 | -5.72 | 113.10 | 119.40 |
| 26 | BB | 1 | G | C6-N1-C2 | -5.72 | 121.67 | 125.10 |
| 26 | BB | 100 | U | C5-C6-N1 | -5.72 | 119.84 | 122.70 |
| 26 | BB | 358 | U | P-O3'-C3' | 5.72 | 126.57 | 119.70 |
| 26 | BB | 358 | U | C2-N3-C4 | -5.72 | 123.57 | 127.00 |
| 26 | BB | 461 | C | O3'-P-O5' | -5.72 | 93.12 | 104.00 |
| 26 | BB | 466 | A | N1-C2-N3 | -5.72 | 126.44 | 129.30 |
| 26 | BB | 513 | A | C6-C5-N7 | 5.72 | 136.31 | 132.30 |
| 26 | BB | 638 | G | C2-N3-C4 | 5.72 | 114.76 | 111.90 |
| 26 | BB | 976 | G | C4-C5-C6 | 5.72 | 122.23 | 118.80 |
| 26 | BB | 1151 | A | N3-C4-N9 | -5.72 | 122.82 | 127.40 |
| 26 | BB | 1587 | G | O4'-C1'-N9 | 5.72 | 112.78 | 108.20 |
| 26 | BB | 1801 | A | N7-C8-N9 | -5.72 | 110.94 | 113.80 |
| 26 | BB | 1949 | G | N9-C4-C5 | 5.72 | 107.69 | 105.40 |
| 26 | BB | 2044 | C | C5'-C4'-O4' | 5.72 | 115.97 | 109.10 |
| 26 | BB | 2376 | A | C8-N9-C4 | -5.72 | 103.51 | 105.80 |
| 1 | AA | 132 | C | C5-C6-N1 | -5.72 | 118.14 | 121.00 |
| 1 | AA | 134 | G | C5-N7-C8 | 5.72 | 107.16 | 104.30 |
| 1 | AA | 213 | G | C5'-C4'-O4' | 5.72 | 115.97 | 109.10 |
| 1 | AA | 604 | G | N3-C2-N2 | -5.72 | 115.89 | 119.90 |
| 1 | AA | 1494 | G | C5-N7-C8 | -5.72 | 101.44 | 104.30 |
| 2 | AB | 64 | U | N1-C1'-C2' | 5.72 | 121.44 | 114.00 |
| 3 | AC | 37 | G | C5'-C4'-O4' | 5.72 | 115.97 | 109.10 |
| 26 | BB | 288 | U | C5'-C4'-C3' | 5.72 | 125.16 | 116.00 |
| 26 | BB | 542 | C | N3-C4-C5 | 5.72 | 124.19 | 121.90 |
| 26 | BB | 1534 | U | N3-C2-O2 | -5.72 | 118.19 | 122.20 |
| 26 | BB | 1935 | G | C5-C6-O6 | 5.72 | 132.03 | 128.60 |
| 26 | BB | 1963 | U | N3-C4-O4 | 5.72 | 123.41 | 119.40 |
| 26 | BB | 2061 | G | P-O3'-C3' | 5.72 | 126.57 | 119.70 |
| 26 | BB | 2157 | G | C6-C5-N7 | 5.72 | 133.83 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2183 | A | C5-C6-N1 | 5.72 | 120.56 | 117.70 |
| 26 | BB | 2678 | C | C6-N1-C2 | -5.72 | 118.01 | 120.30 |
| 26 | BB | 2866 | U | N3-C2-O2 | -5.72 | 118.19 | 122.20 |
| 1 | AA | 53 | A | C5-C6-N1 | -5.72 | 114.84 | 117.70 |
| 1 | AA | 1357 | A | C4-C5-N7 | -5.72 | 107.84 | 110.70 |
| 1 | AA | 1482 | G | N3-C4-C5 | 5.72 | 131.46 | 128.60 |
| 20 | AT | 72 | TRP | CE2-CD2-CE3 | -5.72 | 111.83 | 118.70 |
| 26 | BB | 1037 | G | N1-C2-N3 | -5.72 | 120.47 | 123.90 |
| 26 | BB | 1282 | U | P-O3'-C3' | 5.72 | 126.57 | 119.70 |
| 26 | BB | 1878 | G | N7-C8-N9 | 5.72 | 115.96 | 113.10 |
| 26 | BB | 1887 | C | C5'-C4'-O4' | 5.72 | 115.97 | 109.10 |
| 26 | BB | 2133 | G | C4-C5-C6 | 5.72 | 122.23 | 118.80 |
| 1 | AA | 503 | C | C5-C6-N1 | 5.72 | 123.86 | 121.00 |
| 1 | AA | 550 | G | N1-C6-O6 | 5.72 | 123.33 | 119.90 |
| 1 | AA | 814 | A | C4-C5-N7 | 5.72 | 113.56 | 110.70 |
| 1 | AA | 1034 | G | N1-C2-N3 | -5.72 | 120.47 | 123.90 |
| 4 | AD | 31 | G | C5'-C4'-O4' | 5.72 | 115.96 | 109.10 |
| 25 | BA | 9 | G | N1-C2-N2 | 5.72 | 121.35 | 116.20 |
| 25 | BA | 24 | G | C6-C5-N7 | 5.72 | 133.83 | 130.40 |
| 26 | BB | 649 | G | C5'-C4'-C3' | -5.72 | 106.85 | 116.00 |
| 26 | BB | 1729 | U | N1-C2-N3 | 5.72 | 118.33 | 114.90 |
| 26 | BB | 2012 | G | C5-C6-N1 | -5.72 | 108.64 | 111.50 |
| 26 | BB | 2323 | G | C3'-C2'-C1' | 5.72 | 106.08 | 101.50 |
| 26 | BB | 2535 | G | N1-C6-O6 | 5.72 | 123.33 | 119.90 |
| 26 | BB | 2868 | A | C3'-C2'-C1' | 5.72 | 106.08 | 101.50 |
| 26 | BB | 542 | C | N1-C2-O2 | 5.72 | 122.33 | 118.90 |
| 26 | BB | 1291 | C | N1-C2-O2 | 5.72 | 122.33 | 118.90 |
| 26 | BB | 1352 | U | C2-N3-C4 | -5.72 | 123.57 | 127.00 |
| 26 | BB | 1405 | U | C5'-C4'-O4' | 5.72 | 115.96 | 109.10 |
| 26 | BB | 1649 | G | N3-C2-N2 | 5.72 | 123.90 | 119.90 |
| 26 | BB | 2284 | A | C5-C6-N6 | -5.72 | 119.12 | 123.70 |
| 26 | BB | 2793 | C | C2-N3-C4 | 5.72 | 122.76 | 119.90 |
| 26 | BB | 2830 | C | C2-N3-C4 | 5.72 | 122.76 | 119.90 |
| 28 | BD | 166 | ARG | NE-CZ-NH2 | -5.72 | 117.44 | 120.30 |
| 1 | AA | 198 | G | N9-C4-C5 | 5.72 | 107.69 | 105.40 |
| 1 | AA | 335 | C | N3-C4-N4 | 5.72 | 122.00 | 118.00 |
| 1 | AA | 369 | G | N3-C2-N2 | 5.72 | 123.90 | 119.90 |
| 1 | AA | 445 | G | C3'-C2'-C1' | 5.72 | 106.07 | 101.50 |
| 1 | AA | 681 | A | N7-C8-N9 | 5.72 | 116.66 | 113.80 |
| 1 | AA | 730 | G | C5-C6-O6 | -5.72 | 125.17 | 128.60 |
| 1 | AA | 779 | C | C4-C5-C6 | -5.72 | 114.54 | 117.40 |
| 1 | AA | 812 | G | C8-N9-C4 | 5.72 | 108.69 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 2 | G | N1-C6-O6 | -5.72 | 116.47 | 119.90 |
| 26 | BB | 136 | G | N9-C1'-C2' | -5.72 | 105.71 | 112.00 |
| 26 | BB | 279 | A | C5-N7-C8 | -5.72 | 101.04 | 103.90 |
| 26 | BB | 585 | G | C6-C5-N7 | -5.72 | 126.97 | 130.40 |
| 26 | BB | 930 | G | C4-C5-C6 | 5.72 | 122.23 | 118.80 |
| 26 | BB | 1517 | G | C3'-C2'-C1' | 5.72 | 106.07 | 101.50 |
| 26 | BB | 1615 | C | O3'-P-O5' | -5.72 | 93.14 | 104.00 |
| 26 | BB | 1872 | A | C5-N7-C8 | 5.72 | 106.76 | 103.90 |
| 26 | BB | 2060 | A | N1-C2-N3 | -5.72 | 126.44 | 129.30 |
| 26 | BB | 2181 | U | C2-N3-C4 | -5.72 | 123.57 | 127.00 |
| 26 | BB | 2281 | A | C5'-C4'-O4' | 5.72 | 115.96 | 109.10 |
| 26 | BB | 2809 | A | C4'-C3'-C2' | -5.72 | 96.88 | 102.60 |
| 1 | AA | 7 | A | O4'-C4'-C3' | 5.71 | 110.67 | 106.10 |
| 1 | AA | 183 | C | N3-C4-C5 | -5.71 | 119.61 | 121.90 |
| 1 | AA | 274 | A | C4-C5-N7 | -5.71 | 107.84 | 110.70 |
| 1 | AA | 311 | C | O5'-P-OP1 | -5.71 | 100.56 | 105.70 |
| 1 | AA | 368 | U | C4-C5-C6 | 5.71 | 123.13 | 119.70 |
| 1 | AA | 660 | C | C4-C5-C6 | -5.71 | 114.54 | 117.40 |
| 1 | AA | 716 | A | C4'-C3'-C2' | -5.71 | 96.89 | 102.60 |
| 1 | AA | 1061 | G | N3-C4-N9 | 5.71 | 129.43 | 126.00 |
| 1 | AA | 1373 | G | C8-N9-C4 | -5.71 | 104.11 | 106.40 |
| 1 | AA | 1541 | U | C6-N1-C2 | -5.71 | 117.57 | 121.00 |
| 26 | BB | 464 | U | C4-C5-C6 | 5.71 | 123.13 | 119.70 |
| 26 | BB | 621 | A | C5-N7-C8 | -5.71 | 101.04 | 103.90 |
| 26 | BB | 698 | C | C2-N3-C4 | -5.71 | 117.04 | 119.90 |
| 26 | BB | 704 | G | N7-C8-N9 | -5.71 | 110.24 | 113.10 |
| 26 | BB | 728 | G | O4'-C1'-N9 | 5.71 | 112.77 | 108.20 |
| 26 | BB | 928 | A | C2-N3-C4 | 5.71 | 113.46 | 110.60 |
| 26 | BB | 1333 | G | C5-C6-N1 | 5.71 | 114.36 | 111.50 |
| 26 | BB | 1702 | G | C3'-C2'-C1' | -5.71 | 96.93 | 101.50 |
| 26 | BB | 1744 | A | C1'-O4'-C4' | -5.71 | 105.33 | 109.90 |
| 26 | BB | 1968 | G | N1-C6-O6 | -5.71 | 116.47 | 119.90 |
| 26 | BB | 2047 | C | N3-C4-C5 | -5.71 | 119.61 | 121.90 |
| 26 | BB | 2410 | G | C5-N7-C8 | -5.71 | 101.44 | 104.30 |
| 1 | AA | 583 | A | C4-C5-N7 | -5.71 | 107.84 | 110.70 |
| 1 | AA | 1115 | U | N3-C4-C5 | 5.71 | 118.03 | 114.60 |
| 25 | BA | 104 | A | N1-C6-N6 | -5.71 | 115.17 | 118.60 |
| 26 | BB | 1846 | G | O5'-P-OP2 | -5.71 | 100.56 | 105.70 |
| 1 | AA | 735 | C | C4'-C3'-C2' | -5.71 | 96.89 | 102.60 |
| 1 | AA | 1003 | G | C4'-C3'-C2' | -5.71 | 96.89 | 102.60 |
| 25 | BA | 118 | C | C4'-C3'-C2' | -5.71 | 96.89 | 102.60 |
| 26 | BB | 630 | G | N9-C4-C5 | 5.71 | 107.69 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1145 | C | O4'-C1'-N1 | 5.71 | 112.77 | 108.20 |
| 26 | BB | 1279 | G | O4'-C1'-N9 | 5.71 | 112.77 | 108.20 |
| 26 | BB | 1367 | A | C3'-C2'-C1' | -5.71 | 96.93 | 101.50 |
| 26 | BB | 1569 | A | C6-C5-N7 | 5.71 | 136.30 | 132.30 |
| 26 | BB | 1845 | G | C6-N1-C2 | -5.71 | 121.67 | 125.10 |
| 26 | BB | 1893 | C | O4'-C1'-N1 | 5.71 | 112.77 | 108.20 |
| 26 | BB | 2574 | G | O4'-C1'-N9 | 5.71 | 112.77 | 108.20 |
| 40 | BP | 90 | ARG | NH1-CZ-NH2 | -5.71 | 113.12 | 119.40 |
| 43 | BS | 50 | ARG | NE-CZ-NH2 | 5.71 | 123.16 | 120.30 |
| 1 | AA | 75 | G | C8-N9-C4 | -5.71 | 104.12 | 106.40 |
| 1 | AA | 640 | A | O4'-C1'-N9 | -5.71 | 103.63 | 108.20 |
| 1 | AA | 980 | C | O5'-C5'-C4' | 5.71 | 122.55 | 111.70 |
| 26 | BB | 97 | C | OP1-P-OP2 | -5.71 | 111.03 | 119.60 |
| 26 | BB | 1083 | U | P-O3'-C3' | 5.71 | 126.55 | 119.70 |
| 26 | BB | 1455 | G | N3-C4-N9 | 5.71 | 129.43 | 126.00 |
| 26 | BB | 1736 | U | C2-N3-C4 | -5.71 | 123.57 | 127.00 |
| 26 | BB | 2732 | G | C5-C6-N1 | 5.71 | 114.36 | 111.50 |
| 1 | AA | 484 | G | C4-C5-N7 | -5.71 | 108.52 | 110.80 |
| 1 | AA | 963 | G | P-O5'-C5' | 5.71 | 130.03 | 120.90 |
| 1 | AA | 1087 | G | N7-C8-N9 | 5.71 | 115.95 | 113.10 |
| 1 | AA | 1278 | G | C5'-C4'-O4' | 5.71 | 115.95 | 109.10 |
| 1 | AA | 1390 | U | C4'-C3'-C2' | -5.71 | 96.89 | 102.60 |
| 1 | AA | 1524 | C | P-O3'-C3' | 5.71 | 126.55 | 119.70 |
| 3 | AC | 35 | G | O4'-C1'-N9 | 5.71 | 112.77 | 108.20 |
| 26 | BB | 48 | G | C5'-C4'-O4' | 5.71 | 115.95 | 109.10 |
| 26 | BB | 59 | U | C6-N1-C2 | -5.71 | 117.58 | 121.00 |
| 26 | BB | 308 | G | N9-C4-C5 | 5.71 | 107.68 | 105.40 |
| 26 | BB | 367 | G | N3-C4-N9 | 5.71 | 129.43 | 126.00 |
| 26 | BB | 944 | C | C6-N1-C2 | -5.71 | 118.02 | 120.30 |
| 26 | BB | 958 | U | C2-N3-C4 | -5.71 | 123.58 | 127.00 |
| 26 | BB | 976 | G | C5-C6-N1 | -5.71 | 108.65 | 111.50 |
| 26 | BB | 983 | A | C4-C5-C6 | 5.71 | 119.85 | 117.00 |
| 26 | BB | 1094 | U | C5-C4-O4 | 5.71 | 129.32 | 125.90 |
| 26 | BB | 1451 | C | C5-C6-N1 | 5.71 | 123.85 | 121.00 |
| 26 | BB | 1483 | G | C6-C5-N7 | -5.71 | 126.97 | 130.40 |
| 26 | BB | 1791 | A | C6-N1-C2 | 5.71 | 122.03 | 118.60 |
| 26 | BB | 1820 | U | C4-C5-C6 | 5.71 | 123.12 | 119.70 |
| 26 | BB | 1933 | G | C6-C5-N7 | -5.71 | 126.97 | 130.40 |
| 26 | BB | 2120 | G | C5'-C4'-O4' | 5.71 | 115.95 | 109.10 |
| 26 | BB | 2341 | G | C5-C6-O6 | -5.71 | 125.17 | 128.60 |
| 26 | BB | 2361 | G | C2-N3-C4 | 5.71 | 114.75 | 111.90 |
| 26 | BB | 2576 | G | C6-C5-N7 | -5.71 | 126.97 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2846 | G | C4-C5-C6 | 5.71 | 122.23 | 118.80 |
| 34 | BJ | 68 | PHE | CB-CG-CD2 | -5.71 | 116.80 | 120.80 |
| 1 | AA | 308 | C | N3-C2-O2 | -5.71 | 117.91 | 121.90 |
| 1 | AA | 897 | C | N3-C4-N4 | 5.71 | 122.00 | 118.00 |
| 1 | AA | 1139 | G | N3-C2-N2 | 5.71 | 123.89 | 119.90 |
| 1 | AA | 1190 | G | N1-C2-N3 | -5.71 | 120.48 | 123.90 |
| 2 | AB | 14 | A | C5'-C4'-C3' | -5.71 | 106.87 | 116.00 |
| 2 | AB | 66 | C | O4'-C1'-N1 | 5.71 | 112.77 | 108.20 |
| 14 | AN | 52 | ARG | NE-CZ-NH1 | 5.71 | 123.15 | 120.30 |
| 26 | BB | 285 | G | N1-C2-N2 | 5.71 | 121.34 | 116.20 |
| 26 | BB | 729 | G | N1-C6-O6 | -5.71 | 116.48 | 119.90 |
| 26 | BB | 828 | U | C4'-C3'-C2' | -5.71 | 96.89 | 102.60 |
| 26 | BB | 964 | C | P-O3'-C3' | 5.71 | 126.55 | 119.70 |
| 26 | BB | 1315 | C | N3-C4-C5 | 5.71 | 124.18 | 121.90 |
| 26 | BB | 1380 | G | N3-C4-N9 | 5.71 | 129.42 | 126.00 |
| 26 | BB | 1424 | G | N7-C8-N9 | 5.71 | 115.95 | 113.10 |
| 26 | BB | 2032 | G | C4-C5-C6 | 5.71 | 122.22 | 118.80 |
| 26 | BB | 2068 | U | N1-C2-O2 | -5.71 | 118.81 | 122.80 |
| 26 | BB | 2661 | G | C5'-C4'-O4' | 5.71 | 115.95 | 109.10 |
| 37 | BM | 35 | VAL | CG1-CB-CG2 | -5.71 | 101.77 | 110.90 |
| 1 | AA | 571 | U | C5-C6-N1 | -5.71 | 119.85 | 122.70 |
| 1 | AA | 947 | G | P-O3'-C3' | 5.71 | 126.55 | 119.70 |
| 26 | BB | 471 | A | C5-C6-N1 | 5.71 | 120.55 | 117.70 |
| 26 | BB | 490 | C | N3-C4-C5 | -5.71 | 119.62 | 121.90 |
| 26 | BB | 668 | A | C5'-C4'-O4' | 5.71 | 115.95 | 109.10 |
| 26 | BB | 1473 | G | C5'-C4'-O4' | 5.71 | 115.95 | 109.10 |
| 26 | BB | 1682 | G | N3-C4-N9 | 5.71 | 129.42 | 126.00 |
| 26 | BB | 1689 | A | N3-C4-C5 | -5.71 | 122.81 | 126.80 |
| 26 | BB | 1728 | C | C4-C5-C6 | 5.71 | 120.25 | 117.40 |
| 26 | BB | 2084 | C | C5-C4-N4 | -5.71 | 116.21 | 120.20 |
| 26 | BB | 2100 | G | N9-C4-C5 | 5.71 | 107.68 | 105.40 |
| 1 | AA | 94 | G | C5'-C4'-C3' | -5.70 | 106.87 | 116.00 |
| 1 | AA | 419 | C | C2-N3-C4 | -5.70 | 117.05 | 119.90 |
| 1 | AA | 898 | G | C4'-C3'-C2' | -5.70 | 96.90 | 102.60 |
| 1 | AA | 1435 | G | C4'-C3'-C2' | -5.70 | 96.90 | 102.60 |
| 4 | AD | 20 | G | C2-N3-C4 | 5.70 | 114.75 | 111.90 |
| 4 | AD | 44 | A | C3'-C2'-C1' | -5.70 | 96.94 | 101.50 |
| 26 | BB | 304 | U | N3-C4-C5 | 5.70 | 118.02 | 114.60 |
| 26 | BB | 307 | G | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 507 | A | N1-C2-N3 | -5.70 | 126.45 | 129.30 |
| 26 | BB | 530 | G | N7-C8-N9 | 5.70 | 115.95 | 113.10 |
| 26 | BB | 638 | G | N9-C4-C5 | 5.70 | 107.68 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1156 | A | N3-C4-C5 | -5.70 | 122.81 | 126.80 |
| 26 | BB | 1541 | C | C5-C4-N4 | 5.70 | 124.19 | 120.20 |
| 26 | BB | 1580 | A | C4'-C3'-C2' | -5.70 | 96.90 | 102.60 |
| 26 | BB | 1656 | C | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 2093 | G | C1'-O4'-C4' | -5.70 | 105.34 | 109.90 |
| 1 | AA | 26 | A | O4'-C1'-N9 | -5.70 | 103.64 | 108.20 |
| 1 | AA | 1090 | U | C4'-C3'-C2' | -5.70 | 96.90 | 102.60 |
| 25 | BA | 21 | G | C8-N9-C4 | -5.70 | 104.12 | 106.40 |
| 26 | BB | 412 | A | N7-C8-N9 | 5.70 | 116.65 | 113.80 |
| 26 | BB | 579 | G | N1-C2-N3 | -5.70 | 120.48 | 123.90 |
| 26 | BB | 812 | C | C5-C6-N1 | 5.70 | 123.85 | 121.00 |
| 26 | BB | 1410 | G | C5'-C4'-O4' | 5.70 | 115.94 | 109.10 |
| 26 | BB | 1457 | U | O3'-P-O5' | -5.70 | 93.17 | 104.00 |
| 26 | BB | 2037 | A | C2-N3-C4 | 5.70 | 113.45 | 110.60 |
| 26 | BB | 2059 | A | N1-C6-N6 | -5.70 | 115.18 | 118.60 |
| 26 | BB | 2222 | C | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 2864 | G | C4-C5-N7 | -5.70 | 108.52 | 110.80 |
| 1 | AA | 7 | A | C5'-C4'-C3' | -5.70 | 106.88 | 116.00 |
| 1 | AA | 102 | G | N9-C4-C5 | 5.70 | 107.68 | 105.40 |
| 1 | AA | 108 | G | N1-C2-N3 | -5.70 | 120.48 | 123.90 |
| 1 | AA | 390 | U | N1-C2-O2 | -5.70 | 118.81 | 122.80 |
| 1 | AA | 585 | G | N1-C2-N3 | -5.70 | 120.48 | 123.90 |
| 1 | AA | 953 | G | C8-N9-C4 | -5.70 | 104.12 | 106.40 |
| 1 | AA | 1105 | A | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 1 | AA | 1181 | G | N3-C2-N2 | -5.70 | 115.91 | 119.90 |
| 16 | AP | 76 | ILE | CB-CA-C | 5.70 | 123.00 | 111.60 |
| 26 | BB | 254 | G | C2-N3-C4 | 5.70 | 114.75 | 111.90 |
| 26 | BB | 278 | A | N7-C8-N9 | 5.70 | 116.65 | 113.80 |
| 26 | BB | 800 | A | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 1431 | A | C5-N7-C8 | -5.70 | 101.05 | 103.90 |
| 26 | BB | 1594 | U | C4-C5-C6 | 5.70 | 123.12 | 119.70 |
| 26 | BB | 2429 | G | C5-C6-N1 | 5.70 | 114.35 | 111.50 |
| 26 | BB | 2532 | G | C8-N9-C4 | 5.70 | 108.68 | 106.40 |
| 26 | BB | 2801 | G | C1'-O4'-C4' | 5.70 | 114.46 | 109.90 |
| 26 | BB | 2895 | G | C1'-O4'-C4' | -5.70 | 105.34 | 109.90 |
| 1 | AA | 110 | C | C6-N1-C2 | 5.70 | 122.58 | 120.30 |
| 1 | AA | 270 | A | C6-C5-N7 | 5.70 | 136.29 | 132.30 |
| 1 | AA | 746 | A | C4-C5-N7 | -5.70 | 107.85 | 110.70 |
| 1 | AA | 1112 | C | N3-C4-N4 | 5.70 | 121.99 | 118.00 |
| 1 | AA | 1302 | C | O3'-P-O5' | -5.70 | 93.17 | 104.00 |
| 2 | AB | 52 | A | N1-C6-N6 | -5.70 | 115.18 | 118.60 |
| 4 | AD | 15 | G | C6-C5-N7 | 5.70 | 133.82 | 130.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 58 | G | N1-C2-N2 | 5.70 | 121.33 | 116.20 |
| 26 | BB | 68 | G | C2-N3-C4 | -5.70 | 109.05 | 111.90 |
| 26 | BB | 397 | U | C5-C4-O4 | 5.70 | 129.32 | 125.90 |
| 26 | BB | 804 | A | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 928 | A | N3-C4-N9 | 5.70 | 131.96 | 127.40 |
| 26 | BB | 1058 | U | O4'-C1'-N1 | 5.70 | 112.76 | 108.20 |
| 26 | BB | 1144 | A | N9-C4-C5 | -5.70 | 103.52 | 105.80 |
| 26 | BB | 1721 | G | C3'-C2'-C1' | -5.70 | 96.94 | 101.50 |
| 26 | BB | 1984 | G | C5-N7-C8 | -5.70 | 101.45 | 104.30 |
| 26 | BB | 2235 | G | C3'-C2'-C1' | 5.70 | 106.06 | 101.50 |
| 26 | BB | 2425 | A | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 2466 | C | N1-C2-O2 | 5.70 | 122.32 | 118.90 |
| 26 | BB | 2471 | A | P-O3'-C3' | 5.70 | 126.54 | 119.70 |
| 26 | BB | 2596 | U | C5'-C4'-C3' | -5.70 | 106.88 | 116.00 |
| 26 | BB | 2690 | U | N3-C2-O2 | -5.70 | 118.21 | 122.20 |
| 26 | BB | 2896 | C | N1-C2-O2 | 5.70 | 122.32 | 118.90 |
| 24 | AX | 52 | VAL | CG1-CB-CG2 | -5.70 | 101.78 | 110.90 |
| 26 | BB | 917 | A | C2-N3-C4 | 5.70 | 113.45 | 110.60 |
| 26 | BB | 1058 | U | C5'-C4'-C3' | -5.70 | 106.89 | 116.00 |
| 26 | BB | 1920 | C | C5-C6-N1 | 5.70 | 123.85 | 121.00 |
| 1 | AA | 505 | G | C6-C5-N7 | -5.70 | 126.98 | 130.40 |
| 1 | AA | 514 | C | N3-C4-N4 | 5.70 | 121.99 | 118.00 |
| 1 | AA | 669 | G | C6-N1-C2 | -5.70 | 121.68 | 125.10 |
| 1 | AA | 676 | A | C5'-C4'-C3' | -5.70 | 106.89 | 116.00 |
| 1 | AA | 738 | C | N3-C2-O2 | -5.70 | 117.91 | 121.90 |
| 1 | AA | 1512 | U | C5-C6-N1 | -5.70 | 119.85 | 122.70 |
| 26 | BB | 33 | C | C4-C5-C6 | -5.70 | 114.55 | 117.40 |
| 26 | BB | 240 | C | C2-N3-C4 | 5.70 | 122.75 | 119.90 |
| 26 | BB | 756 | A | C4'-C3'-C2' | -5.70 | 96.90 | 102.60 |
| 26 | BB | 911 | A | C6-N1-C2 | -5.70 | 115.18 | 118.60 |
| 26 | BB | 1161 | C | C5-C4-N4 | -5.70 | 116.21 | 120.20 |
| 26 | BB | 1869 | G | C1'-O4'-C4' | -5.70 | 105.34 | 109.90 |
| 26 | BB | 2076 | U | P-O3'-C3' | 5.70 | 126.53 | 119.70 |
| 26 | BB | 2357 | G | C4'-C3'-C2' | -5.70 | 96.91 | 102.60 |
| 31 | BG | 94 | ARG | NE-CZ-NH1 | 5.70 | 123.15 | 120.30 |
| 1 | AA | 38 | G | O5'-P-OP1 | -5.69 | 100.58 | 105.70 |
| 1 | AA | 351 | G | C6-N1-C2 | -5.69 | 121.68 | 125.10 |
| 1 | AA | 665 | A | C4-C5-N7 | -5.69 | 107.85 | 110.70 |
| 1 | AA | 697 | U | C5-C6-N1 | -5.69 | 119.85 | 122.70 |
| 1 | AA | 1028 | C | O4'-C1'-N1 | 5.69 | 112.75 | 108.20 |
| 25 | BA | 9 | G | C3'-C2'-C1' | 5.69 | 106.06 | 101.50 |
| 26 | BB | 387 | U | N3-C2-O2 | -5.69 | 118.21 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 501 | A | C2-N3-C4 | -5.69 | 107.75 | 110.60 |
| 26 | BB | 1479 | G | C6-N1-C2 | -5.69 | 121.68 | 125.10 |
| 26 | BB | 1729 | U | P-O3'-C3' | 5.69 | 126.53 | 119.70 |
| 26 | BB | 1753 | G | O4'-C1'-N9 | 5.69 | 112.75 | 108.20 |
| 26 | BB | 1856 | U | C2-N3-C4 | 5.69 | 130.42 | 127.00 |
| 26 | BB | 2053 | G | C6-C5-N7 | -5.69 | 126.98 | 130.40 |
| 26 | BB | 2305 | U | N3-C4-O4 | 5.69 | 123.39 | 119.40 |
| 26 | BB | 2771 | C | N1-C1'-C2' | -5.69 | 105.74 | 112.00 |
| 48 | BX | 31 | TYR | CG-CD1-CE1 | -5.69 | 116.74 | 121.30 |
| 1 | AA | 74 | A | N3-C4-N9 | 5.69 | 131.95 | 127.40 |
| 1 | AA | 305 | G | C4-N9-C1' | -5.69 | 119.10 | 126.50 |
| 1 | AA | 505 | G | C1'-O4'-C4' | -5.69 | 105.35 | 109.90 |
| 1 | AA | 777 | A | C4-C5-N7 | -5.69 | 107.85 | 110.70 |
| 1 | AA | 1228 | C | O4'-C1'-N1 | 5.69 | 112.75 | 108.20 |
| 2 | AB | 36 | A | C3'-C2'-C1' | 5.69 | 106.05 | 101.50 |
| 3 | AC | 40 | G | N9-C4-C5 | 5.69 | 107.68 | 105.40 |
| 4 | AD | 34 | U | C5'-C4'-O4' | 5.69 | 115.93 | 109.10 |
| 26 | BB | 277 | G | N9-C4-C5 | -5.69 | 103.12 | 105.40 |
| 26 | BB | 382 | A | O4'-C1'-N9 | 5.69 | 112.75 | 108.20 |
| 26 | BB | 393 | C | OP1-P-OP2 | 5.69 | 128.14 | 119.60 |
| 26 | BB | 635 | C | C3'-C2'-C1' | -5.69 | 96.94 | 101.50 |
| 26 | BB | 772 | C | C3'-C2'-C1' | 5.69 | 106.05 | 101.50 |
| 26 | BB | 813 | U | N1-C1'-C2' | -5.69 | 105.74 | 112.00 |
| 26 | BB | 2501 | C | N3-C4-C5 | -5.69 | 119.62 | 121.90 |
| 43 | BS | 10 | ARG | NH1-CZ-NH2 | -5.69 | 113.14 | 119.40 |
| 1 | AA | 401 | C | N3-C4-N4 | 5.69 | 121.98 | 118.00 |
| 1 | AA | 1180 | A | C5'-C4'-O4' | 5.69 | 115.93 | 109.10 |
| 1 | AA | 1338 | G | C3'-C2'-C1' | -5.69 | 96.95 | 101.50 |
| 25 | BA | 77 | U | C2-N3-C4 | -5.69 | 123.58 | 127.00 |
| 26 | BB | 182 | A | O4'-C4'-C3' | 5.69 | 110.65 | 106.10 |
| 26 | BB | 336 | C | N3-C4-N4 | 5.69 | 121.98 | 118.00 |
| 26 | BB | 544 | C | C4-C5-C6 | 5.69 | 120.25 | 117.40 |
| 26 | BB | 1596 | A | C2-N3-C4 | 5.69 | 113.44 | 110.60 |
| 26 | BB | 1943 | U | N3-C4-C5 | -5.69 | 111.19 | 114.60 |
| 1 | AA | 494 | G | C2-N3-C4 | 5.69 | 114.75 | 111.90 |
| 1 | AA | 986 | U | N3-C4-C5 | -5.69 | 111.19 | 114.60 |
| 1 | AA | 1252 | A | C1'-O4'-C4' | -5.69 | 105.35 | 109.90 |
| 2 | AB | 30 | G | C4-C5-N7 | 5.69 | 113.08 | 110.80 |
| 3 | AC | 38 | G | O4'-C1'-N9 | 5.69 | 112.75 | 108.20 |
| 26 | BB | 61 | C | O4'-C1'-N1 | 5.69 | 112.75 | 108.20 |
| 26 | BB | 1118 | C | C5'-C4'-O4' | 5.69 | 115.93 | 109.10 |
| 26 | BB | 1982 | U | C4-C5-C6 | -5.69 | 116.29 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 198 | G | C4-C5-C6 | 5.69 | 122.21 | 118.80 |
| 1 | AA | 478 | A | C5-N7-C8 | -5.69 | 101.06 | 103.90 |
| 1 | AA | 480 | U | O4'-C1'-N1 | 5.69 | 112.75 | 108.20 |
| 1 | AA | 766 | A | N7-C8-N9 | 5.69 | 116.64 | 113.80 |
| 3 | AC | 14 | G | C8-N9-C1' | 5.69 | 134.39 | 127.00 |
| 13 | AM | 37 | ARG | NE-CZ-NH1 | -5.69 | 117.46 | 120.30 |
| 26 | BB | 139 | U | C2-N3-C4 | -5.69 | 123.59 | 127.00 |
| 26 | BB | 323 | C | C5'-C4'-C3' | -5.69 | 106.90 | 116.00 |
| 26 | BB | 907 | G | O4'-C1'-N9 | 5.69 | 112.75 | 108.20 |
| 26 | BB | 1225 | G | P-O3'-C3' | 5.69 | 126.53 | 119.70 |
| 26 | BB | 1530 | G | N3-C4-N9 | 5.69 | 129.41 | 126.00 |
| 26 | BB | 1701 | A | C1'-O4'-C4' | 5.69 | 114.45 | 109.90 |
| 26 | BB | 2093 | G | O4'-C1'-N9 | 5.69 | 112.75 | 108.20 |
| 26 | BB | 2529 | G | C4'-C3'-C2' | -5.69 | 96.91 | 102.60 |
| 26 | BB | 2797 | U | N3-C4-C5 | 5.69 | 118.01 | 114.60 |
| 31 | BG | 145 | VAL | CA-CB-CG2 | 5.69 | 119.43 | 110.90 |
| 1 | AA | 208 | U | N3-C4-C5 | -5.69 | 111.19 | 114.60 |
| 1 | AA | 604 | G | C2-N3-C4 | 5.69 | 114.74 | 111.90 |
| 1 | AA | 712 | A | N1-C6-N6 | 5.69 | 122.01 | 118.60 |
| 1 | AA | 815 | A | N9-C4-C5 | 5.69 | 108.07 | 105.80 |
| 1 | AA | 1038 | C | O4'-C1'-N1 | 5.69 | 112.75 | 108.20 |
| 1 | AA | 1190 | G | N9-C1'-C2' | -5.69 | 105.75 | 112.00 |
| 24 | AX | 54 | ARG | NH1-CZ-NH2 | -5.69 | 113.14 | 119.40 |
| 26 | BB | 224 | U | C5'-C4'-O4' | 5.69 | 115.92 | 109.10 |
| 26 | BB | 817 | C | N3-C4-C5 | -5.69 | 119.63 | 121.90 |
| 1 | AA | 16 | A | N3-C4-N9 | 5.68 | 131.95 | 127.40 |
| 1 | AA | 680 | C | N3-C2-O2 | -5.68 | 117.92 | 121.90 |
| 1 | AA | 813 | U | C4-C5-C6 | 5.68 | 123.11 | 119.70 |
| 1 | AA | 1023 | U | O4'-C1'-N1 | 5.68 | 112.75 | 108.20 |
| 1 | AA | 1150 | A | C2-N3-C4 | 5.68 | 113.44 | 110.60 |
| 1 | AA | 1163 | A | N1-C6-N6 | 5.68 | 122.01 | 118.60 |
| 1 | AA | 1187 | G | N9-C1'-C2' | -5.68 | 105.75 | 112.00 |
| 1 | AA | 1240 | U | N3-C2-O2 | -5.68 | 118.22 | 122.20 |
| 1 | AA | 1336 | C | C1'-O4'-C4' | -5.68 | 105.35 | 109.90 |
| 1 | AA | 1383 | C | N1-C1'-C2' | -5.68 | 105.75 | 112.00 |
| 26 | BB | 676 | A | C6-C5-N7 | -5.68 | 128.32 | 132.30 |
| 26 | BB | 1017 | G | N7-C8-N9 | -5.68 | 110.26 | 113.10 |
| 26 | BB | 1036 | G | N3-C4-N9 | 5.68 | 129.41 | 126.00 |
| 26 | BB | 1088 | A | N1-C2-N3 | -5.68 | 126.46 | 129.30 |
| 26 | BB | 1140 | C | C4-C5-C6 | 5.68 | 120.24 | 117.40 |
| 26 | BB | 2022 | U | N3-C2-O2 | -5.68 | 118.22 | 122.20 |
| 26 | BB | 2479 | U | N1-C2-O2 | 5.68 | 126.78 | 122.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2529 | G | C5-C6-O6 | 5.68 | 132.01 | 128.60 |
| 1 | AA | 7 | A | C8-N9-C4 | -5.68 | 103.53 | 105.80 |
| 1 | AA | 163 | C | C2-N3-C4 | 5.68 | 122.74 | 119.90 |
| 1 | AA | 238 | A | O4'-C1'-N9 | 5.68 | 112.75 | 108.20 |
| 1 | AA | 451 | A | N3-C4-C5 | 5.68 | 130.78 | 126.80 |
| 2 | AB | 30 | G | P-O3'-C3' | 5.68 | 126.52 | 119.70 |
| 4 | AD | 73 | A | O5'-P-OP2 | -5.68 | 100.59 | 105.70 |
| 7 | AG | 167 | PRO | N-CD-CG | 5.68 | 111.72 | 103.20 |
| 25 | BA | 116 | G | N9-C1'-C2' | -5.68 | 105.75 | 112.00 |
| 26 | BB | 152 | A | C6-C5-N7 | -5.68 | 128.32 | 132.30 |
| 26 | BB | 300 | A | O3'-P-O5' | 5.68 | 114.80 | 104.00 |
| 26 | BB | 306 | U | C5-C4-O4 | 5.68 | 129.31 | 125.90 |
| 26 | BB | 503 | A | C6-N1-C2 | -5.68 | 115.19 | 118.60 |
| 26 | BB | 665 | U | O4'-C4'-C3' | 5.68 | 110.64 | 106.10 |
| 26 | BB | 1615 | C | N3-C4-N4 | 5.68 | 121.98 | 118.00 |
| 26 | BB | 1645 | G | O4'-C1'-N9 | 5.68 | 112.75 | 108.20 |
| 26 | BB | 2380 | C | C6-N1-C2 | 5.68 | 122.57 | 120.30 |
| 26 | BB | 2491 | U | O4'-C1'-C2' | -5.68 | 100.12 | 105.80 |
| 17 | AQ | 48 | GLN | CB-CA-C | 5.68 | 121.76 | 110.40 |
| 26 | BB | 263 | G | N3-C4-N9 | -5.68 | 122.59 | 126.00 |
| 26 | BB | 294 | A | C1'-O4'-C4' | -5.68 | 105.36 | 109.90 |
| 26 | BB | 1159 | U | C5'-C4'-C3' | -5.68 | 106.91 | 116.00 |
| 26 | BB | 1467 | U | N1-C2-O2 | 5.68 | 126.78 | 122.80 |
| 26 | BB | 1587 | G | C6-C5-N7 | 5.68 | 133.81 | 130.40 |
| 1 | AA | 171 | A | O3'-P-O5' | -5.68 | 93.21 | 104.00 |
| 1 | AA | 191 | G | C5-C6-O6 | -5.68 | 125.19 | 128.60 |
| 1 | AA | 294 | U | N1-C1'-C2' | -5.68 | 105.75 | 112.00 |
| 1 | AA | 468 | A | C4'-C3'-C2' | -5.68 | 96.92 | 102.60 |
| 1 | AA | 490 | C | N3-C4-C5 | 5.68 | 124.17 | 121.90 |
| 1 | AA | 499 | A | C3'-C2'-C1' | -5.68 | 96.96 | 101.50 |
| 1 | AA | 715 | A | O4'-C1'-N9 | 5.68 | 112.74 | 108.20 |
| 1 | AA | 1045 | C | C5-C4-N4 | -5.68 | 116.22 | 120.20 |
| 1 | AA | 1392 | G | N3-C4-N9 | 5.68 | 129.41 | 126.00 |
| 21 | AU | 2 | ARG | CD-NE-CZ | 5.68 | 131.55 | 123.60 |
| 25 | BA | 74 | U | N1-C2-N3 | 5.68 | 118.31 | 114.90 |
| 26 | BB | 154 | U | P-O5'-C5' | 5.68 | 129.99 | 120.90 |
| 26 | BB | 390 | U | C6-N1-C2 | -5.68 | 117.59 | 121.00 |
| 26 | BB | 891 | G | C4-N9-C1' | -5.68 | 119.12 | 126.50 |
| 26 | BB | 1510 | G | C3'-C2'-C1' | -5.68 | 96.96 | 101.50 |
| 26 | BB | 1742 | U | C5-C4-O4 | -5.68 | 122.49 | 125.90 |
| 26 | BB | 2257 | U | C5-C6-N1 | -5.68 | 119.86 | 122.70 |
| 26 | BB | 2599 | G | C8-N9-C4 | -5.68 | 104.13 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2673 | G | O4'-C1'-N9 | 5.68 | 112.74 | 108.20 |
| 1 | AA | 877 | G | C8-N9-C1' | 5.68 | 134.38 | 127.00 |
| 1 | AA | 1419 | G | C5'-C4'-O4' | 5.68 | 115.91 | 109.10 |
| 1 | AA | 1525 | G | N1-C2-N2 | 5.68 | 121.31 | 116.20 |
| 3 | AC | 51 | C | N1-C2-O2 | -5.68 | 115.49 | 118.90 |
| 26 | BB | 797 | G | N9-C1'-C2' | -5.68 | 105.75 | 112.00 |
| 26 | BB | 1059 | G | C3'-C2'-C1' | -5.68 | 96.96 | 101.50 |
| 26 | BB | 1079 | C | C4'-C3'-O3' | 5.68 | 124.36 | 113.00 |
| 26 | BB | 1912 | A | N9-C4-C5 | 5.68 | 108.07 | 105.80 |
| 26 | BB | 2078 | C | N3-C4-C5 | -5.68 | 119.63 | 121.90 |
| 26 | BB | 2274 | A | N1-C6-N6 | -5.68 | 115.19 | 118.60 |
| 1 | AA | 304 | U | O4'-C1'-N1 | 5.68 | 112.74 | 108.20 |
| 1 | AA | 1170 | A | O5'-P-OP2 | -5.68 | 100.59 | 105.70 |
| 1 | AA | 1415 | G | N1-C2-N3 | -5.68 | 120.49 | 123.90 |
| 26 | BB | 338 | G | C5-N7-C8 | 5.68 | 107.14 | 104.30 |
| 26 | BB | 717 | C | C4-C5-C6 | -5.68 | 114.56 | 117.40 |
| 26 | BB | 913 | U | C5-C4-O4 | -5.68 | 122.49 | 125.90 |
| 26 | BB | 1918 | A | C4-C5-C6 | 5.68 | 119.84 | 117.00 |
| 26 | BB | 2375 | G | N9-C1'-C2' | -5.68 | 105.76 | 112.00 |
| 26 | BB | 2823 | A | C5-N7-C8 | 5.68 | 106.74 | 103.90 |
| 1 | AA | 1216 | A | C5-C6-N6 | -5.67 | 119.16 | 123.70 |
| 4 | AD | 4 | G | C5-N7-C8 | -5.67 | 101.46 | 104.30 |
| 21 | AU | 72 | ARG | NE-CZ-NH1 | 5.67 | 123.14 | 120.30 |
| 26 | BB | 42 | A | C5'-C4'-O4' | 5.67 | 115.91 | 109.10 |
| 26 | BB | 200 | U | C1'-O4'-C4' | 5.67 | 114.44 | 109.90 |
| 26 | BB | 422 | A | N1-C2-N3 | -5.67 | 126.46 | 129.30 |
| 26 | BB | 604 | G | N3-C4-N9 | 5.67 | 129.41 | 126.00 |
| 26 | BB | 978 | G | O4'-C4'-C3' | -5.67 | 98.33 | 104.00 |
| 26 | BB | 1003 | G | O4'-C1'-N9 | 5.67 | 112.74 | 108.20 |
| 26 | BB | 1310 | G | N3-C2-N2 | 5.67 | 123.87 | 119.90 |
| 26 | BB | 1389 | G | C4-C5-C6 | 5.67 | 122.20 | 118.80 |
| 26 | BB | 1444 | G | C5-N7-C8 | 5.67 | 107.14 | 104.30 |
| 26 | BB | 2172 | U | C6-N1-C2 | 5.67 | 124.41 | 121.00 |
| 26 | BB | 2262 | U | C5'-C4'-O4' | 5.67 | 115.91 | 109.10 |
| 26 | BB | 2286 | G | C1'-O4'-C4' | -5.67 | 105.36 | 109.90 |
| 26 | BB | 2624 | G | C5-C6-O6 | -5.67 | 125.19 | 128.60 |
| 26 | BB | 2791 | G | N1-C6-O6 | -5.67 | 116.50 | 119.90 |
| 31 | BG | 176 | PHE | CB-CG-CD2 | 5.67 | 124.77 | 120.80 |
| 1 | AA | 1037 | C | C5-C6-N1 | -5.67 | 118.16 | 121.00 |
| 1 | AA | 1145 | A | C2-N3-C4 | 5.67 | 113.44 | 110.60 |
| 1 | AA | 1291 | U | C2-N3-C4 | 5.67 | 130.40 | 127.00 |
| 1 | AA | 1316 | G | C3'-C2'-C1' | 5.67 | 106.04 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 3 | G | C5-N7-C8 | 5.67 | 107.14 | 104.30 |
| 25 | BA | 114 | C | O4'-C4'-C3' | -5.67 | 98.33 | 104.00 |
| 26 | BB | 171 | U | C4'-C3'-C2' | -5.67 | 96.93 | 102.60 |
| 26 | BB | 1125 | G | C5-N7-C8 | 5.67 | 107.14 | 104.30 |
| 26 | BB | 1676 | A | N1-C2-N3 | 5.67 | 132.14 | 129.30 |
| 26 | BB | 2168 | G | N7-C8-N9 | 5.67 | 115.94 | 113.10 |
| 28 | BD | 88 | ALA | CB-CA-C | -5.67 | 101.59 | 110.10 |
| 1 | AA | 76 | G | C4'-C3'-C2' | -5.67 | 96.93 | 102.60 |
| 1 | AA | 126 | G | C8-N9-C1' | 5.67 | 134.37 | 127.00 |
| 1 | AA | 798 | U | C6-N1-C2 | 5.67 | 124.40 | 121.00 |
| 1 | AA | 858 | G | O4'-C1'-N9 | 5.67 | 112.74 | 108.20 |
| 1 | AA | 883 | C | P-O5'-C5' | 5.67 | 129.98 | 120.90 |
| 1 | AA | 1049 | U | N3-C4-O4 | 5.67 | 123.37 | 119.40 |
| 1 | AA | 1373 | G | C6-C5-N7 | -5.67 | 127.00 | 130.40 |
| 26 | BB | 74 | A | C4-C5-N7 | 5.67 | 113.53 | 110.70 |
| 26 | BB | 505 | A | C4-C5-N7 | -5.67 | 107.86 | 110.70 |
| 26 | BB | 818 | G | N7-C8-N9 | 5.67 | 115.94 | 113.10 |
| 26 | BB | 911 | A | C4'-C3'-C2' | -5.67 | 96.93 | 102.60 |
| 26 | BB | 1360 | G | O4'-C1'-N9 | 5.67 | 112.74 | 108.20 |
| 26 | BB | 2094 | A | C4'-C3'-O3' | -5.67 | 97.49 | 109.40 |
| 26 | BB | 2275 | C | P-O3'-C3' | 5.67 | 126.51 | 119.70 |
| 26 | BB | 2313 | C | C5-C4-N4 | -5.67 | 116.23 | 120.20 |
| 1 | AA | 45 | G | C4-C5-C6 | 5.67 | 122.20 | 118.80 |
| 1 | AA | 800 | G | C2-N3-C4 | 5.67 | 114.73 | 111.90 |
| 1 | AA | 1067 | A | N7-C8-N9 | 5.67 | 116.64 | 113.80 |
| 1 | AA | 1376 | U | O4'-C1'-N1 | 5.67 | 112.74 | 108.20 |
| 26 | BB | 342 | A | N9-C4-C5 | 5.67 | 108.07 | 105.80 |
| 26 | BB | 731 | C | O4'-C4'-C3' | 5.67 | 110.64 | 106.10 |
| 26 | BB | 753 | A | C1'-O4'-C4' | -5.67 | 105.36 | 109.90 |
| 26 | BB | 1090 | A | P-O3'-C3' | 5.67 | 126.50 | 119.70 |
| 26 | BB | 1298 | C | O4'-C1'-C2' | 5.67 | 112.70 | 107.60 |
| 26 | BB | 2303 | G | C5'-C4'-O4' | 5.67 | 115.90 | 109.10 |
| 26 | BB | 2668 | G | N1-C6-O6 | -5.67 | 116.50 | 119.90 |
| 26 | BB | 2883 | A | N9-C4-C5 | 5.67 | 108.07 | 105.80 |
| 1 | AA | 2 | A | N3-C4-N9 | 5.67 | 131.94 | 127.40 |
| 1 | AA | 11 | G | P-O3'-C3' | 5.67 | 126.50 | 119.70 |
| 1 | AA | 303 | A | C6-C5-N7 | 5.67 | 136.27 | 132.30 |
| 1 | AA | 898 | G | C3'-C2'-C1' | 5.67 | 106.03 | 101.50 |
| 1 | AA | 917 | G | N3-C2-N2 | 5.67 | 123.87 | 119.90 |
| 1 | AA | 935 | A | N7-C8-N9 | -5.67 | 110.97 | 113.80 |
| 13 | AM | 58 | ASN | CB-CA-C | 5.67 | 121.74 | 110.40 |
| 15 | AO | 36 | VAL | CA-CB-CG1 | 5.67 | 119.40 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 477 | A | O4'-C4'-C3' | 5.67 | 110.64 | 106.10 |
| 26 | BB | 514 | A | O5'-P-OP1 | 5.67 | 117.50 | 110.70 |
| 26 | BB | 653 | U | C2-N3-C4 | -5.67 | 123.60 | 127.00 |
| 26 | BB | 859 | G | C5-C6-N1 | 5.67 | 114.33 | 111.50 |
| 26 | BB | 920 | A | C3'-C2'-C1' | -5.67 | 96.97 | 101.50 |
| 26 | BB | 1363 | C | C5-C4-N4 | -5.67 | 116.23 | 120.20 |
| 26 | BB | 1419 | A | C5'-C4'-C3' | -5.67 | 106.93 | 116.00 |
| 26 | BB | 1990 | C | C2-N3-C4 | 5.67 | 122.73 | 119.90 |
| 26 | BB | 2143 | C | C3'-C2'-C1' | 5.67 | 106.03 | 101.50 |
| 26 | BB | 2306 | C | O4'-C1'-N1 | 5.67 | 112.73 | 108.20 |
| 26 | BB | 2417 | C | C5-C4-N4 | 5.67 | 124.17 | 120.20 |
| 26 | BB | 2441 | U | C4'-C3'-C2' | -5.67 | 96.93 | 102.60 |
| 26 | BB | 2624 | G | C4-N9-C1' | -5.67 | 119.13 | 126.50 |
| 1 | AA | 44 | A | C5'-C4'-O4' | 5.67 | 115.90 | 109.10 |
| 1 | AA | 327 | A | C3'-C2'-C1' | -5.67 | 96.97 | 101.50 |
| 1 | AA | 397 | A | N1-C6-N6 | -5.67 | 115.20 | 118.60 |
| 1 | AA | 1071 | C | C2-N3-C4 | -5.67 | 117.07 | 119.90 |
| 2 | AB | 9 | A | P-O3'-C3' | 5.67 | 126.50 | 119.70 |
| 4 | AD | 6 | G | C4-C5-C6 | -5.67 | 115.40 | 118.80 |
| 12 | AL | 121 | ARG | CD-NE-CZ | 5.67 | 131.53 | 123.60 |
| 23 | AW | 73 | ARG | O-C-N | 5.67 | 131.77 | 122.70 |
| 25 | BA | 11 | C | N3-C4-C5 | -5.67 | 119.63 | 121.90 |
| 26 | BB | 730 | A | C5-N7-C8 | -5.67 | 101.07 | 103.90 |
| 26 | BB | 855 | G | N7-C8-N9 | -5.67 | 110.27 | 113.10 |
| 26 | BB | 890 | C | C4-C5-C6 | 5.67 | 120.23 | 117.40 |
| 26 | BB | 1177 | G | C4-C5-C6 | 5.67 | 122.20 | 118.80 |
| 26 | BB | 1522 | A | C6-C5-N7 | 5.67 | 136.27 | 132.30 |
| 26 | BB | 1821 | A | C5-N7-C8 | -5.67 | 101.07 | 103.90 |
| 26 | BB | 1991 | U | O3'-P-O5' | 5.67 | 114.77 | 104.00 |
| 26 | BB | 2206 | C | N1-C2-N3 | -5.67 | 115.23 | 119.20 |
| 26 | BB | 2219 | U | N1-C1'-C2' | -5.67 | 105.77 | 112.00 |
| 26 | BB | 2320 | U | C5'-C4'-O4' | 5.67 | 115.90 | 109.10 |
| 26 | BB | 2686 | G | C5-N7-C8 | 5.67 | 107.13 | 104.30 |
| 26 | BB | 2814 | A | C1'-O4'-C4' | -5.67 | 105.37 | 109.90 |
| 36 | BL | 4 | PHE | CB-CG-CD2 | -5.67 | 116.83 | 120.80 |
| 37 | BM | 76 | VAL | CA-CB-CG2 | 5.67 | 119.40 | 110.90 |
| 1 | AA | 1047 | G | N3-C2-N2 | -5.67 | 115.93 | 119.90 |
| 1 | AA | 1091 | U | C5'-C4'-O4' | 5.67 | 115.90 | 109.10 |
| 4 | AD | 40 | C | C5-C6-N1 | 5.67 | 123.83 | 121.00 |
| 26 | BB | 2134 | A | C4-C5-C6 | -5.67 | 114.17 | 117.00 |
| 26 | BB | 2595 | G | C5'-C4'-C3' | -5.67 | 106.94 | 116.00 |
| 1 | AA | 734 | G | C5-C6-N1 | -5.66 | 108.67 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1165 | U | C4-C5-C6 | 5.66 | 123.10 | 119.70 |
| 1 | AA | 1418 | A | C5'-C4'-O4' | 5.66 | 115.89 | 109.10 |
| 26 | BB | 61 | C | C4'-C3'-C2' | -5.66 | 96.94 | 102.60 |
| 26 | BB | 64 | A | C5-C6-N1 | -5.66 | 114.87 | 117.70 |
| 26 | BB | 135 | U | C5-C4-O4 | -5.66 | 122.50 | 125.90 |
| 26 | BB | 265 | A | O4'-C1'-N9 | 5.66 | 112.73 | 108.20 |
| 26 | BB | 1514 | G | C4-C5-N7 | -5.66 | 108.53 | 110.80 |
| 26 | BB | 2119 | A | N1-C2-N3 | -5.66 | 126.47 | 129.30 |
| 26 | BB | 2266 | A | N1-C2-N3 | -5.66 | 126.47 | 129.30 |
| 26 | BB | 2355 | G | C6-C5-N7 | -5.66 | 127.00 | 130.40 |
| 26 | BB | 2662 | A | C2-N3-C4 | -5.66 | 107.77 | 110.60 |
| 26 | BB | 2715 | C | N1-C2-O2 | -5.66 | 115.50 | 118.90 |
| 1 | AA | 64 | G | N3-C4-N9 | -5.66 | 122.60 | 126.00 |
| 1 | AA | 926 | G | C5-N7-C8 | -5.66 | 101.47 | 104.30 |
| 1 | AA | 1399 | C | C4'-C3'-C2' | -5.66 | 96.94 | 102.60 |
| 26 | BB | 1367 | A | O4'-C1'-C2' | 5.66 | 112.70 | 107.60 |
| 1 | AA | 189 | A | C4'-C3'-C2' | -5.66 | 96.94 | 102.60 |
| 1 | AA | 234 | C | C6-N1-C2 | 5.66 | 122.56 | 120.30 |
| 1 | AA | 442 | G | C5-C6-N1 | 5.66 | 114.33 | 111.50 |
| 1 | AA | 890 | G | C6-C5-N7 | -5.66 | 127.00 | 130.40 |
| 1 | AA | 1083 | U | C3'-C2'-C1' | 5.66 | 106.03 | 101.50 |
| 1 | AA | 1169 | A | N9-C4-C5 | -5.66 | 103.54 | 105.80 |
| 1 | AA | 1431 | A | C5-C6-N6 | 5.66 | 128.23 | 123.70 |
| 26 | BB | 489 | G | C2-N3-C4 | -5.66 | 109.07 | 111.90 |
| 26 | BB | 576 | U | C5'-C4'-O4' | 5.66 | 115.89 | 109.10 |
| 26 | BB | 981 | A | C4-C5-C6 | 5.66 | 119.83 | 117.00 |
| 26 | BB | 1004 | U | C4'-C3'-C2' | -5.66 | 96.94 | 102.60 |
| 26 | BB | 1041 | G | N3-C2-N2 | 5.66 | 123.86 | 119.90 |
| 26 | BB | 1345 | C | C6-N1-C2 | -5.66 | 118.04 | 120.30 |
| 26 | BB | 1870 | C | N1-C2-O2 | 5.66 | 122.30 | 118.90 |
| 26 | BB | 1948 | G | C1'-O4'-C4' | -5.66 | 105.37 | 109.90 |
| 26 | BB | 2262 | U | C5-C4-O4 | -5.66 | 122.50 | 125.90 |
| 26 | BB | 2775 | G | N3-C2-N2 | -5.66 | 115.94 | 119.90 |
| 1 | AA | 306 | A | C5-C6-N6 | -5.66 | 119.17 | 123.70 |
| 1 | AA | 685 | G | C5-C6-O6 | -5.66 | 125.20 | 128.60 |
| 1 | AA | 755 | G | C1'-O4'-C4' | -5.66 | 105.37 | 109.90 |
| 1 | AA | 1100 | C | C4'-C3'-C2' | -5.66 | 96.94 | 102.60 |
| 1 | AA | 1404 | C | C3'-C2'-C1' | -5.66 | 96.97 | 101.50 |
| 26 | BB | 633 | A | C8-N9-C4 | -5.66 | 103.54 | 105.80 |
| 26 | BB | 844 | A | N9-C4-C5 | 5.66 | 108.06 | 105.80 |
| 26 | BB | 975 | A | C6-C5-N7 | 5.66 | 136.26 | 132.30 |
| 26 | BB | 1055 | G | C4-N9-C1' | -5.66 | 119.14 | 126.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1150 | C | C4'-C3'-C2' | 5.66 | 108.26 | 102.60 |
| 26 | BB | 1537 | G | N9-C4-C5 | -5.66 | 103.14 | 105.40 |
| 26 | BB | 1908 | C | C5-C6-N1 | 5.66 | 123.83 | 121.00 |
| 26 | BB | 1913 | A | C6-C5-N7 | 5.66 | 136.26 | 132.30 |
| 26 | BB | 1938 | A | C5-C6-N6 | 5.66 | 128.23 | 123.70 |
| 26 | BB | 2058 | A | C5'-C4'-O4' | 5.66 | 115.89 | 109.10 |
| 26 | BB | 2642 | G | C6-C5-N7 | -5.66 | 127.00 | 130.40 |
| 1 | AA | 691 | G | C4-C5-C6 | 5.66 | 122.19 | 118.80 |
| 26 | BB | 221 | A | N1-C2-N3 | -5.66 | 126.47 | 129.30 |
| 26 | BB | 450 | G | N7-C8-N9 | 5.66 | 115.93 | 113.10 |
| 26 | BB | 1543 | G | P-O3'-C3' | 5.66 | 126.49 | 119.70 |
| 26 | BB | 1681 | G | N1-C6-O6 | -5.66 | 116.51 | 119.90 |
| 26 | BB | 2189 | U | N1-C1'-C2' | -5.66 | 105.78 | 112.00 |
| 26 | BB | 2298 | A | N7-C8-N9 | -5.66 | 110.97 | 113.80 |
| 26 | BB | 2305 | U | C1'-O4'-C4' | -5.66 | 105.37 | 109.90 |
| 1 | AA | 9 | G | N7-C8-N9 | -5.66 | 110.27 | 113.10 |
| 1 | AA | 725 | G | N1-C2-N3 | 5.66 | 127.29 | 123.90 |
| 1 | AA | 728 | A | O4'-C4'-C3' | 5.66 | 110.62 | 106.10 |
| 1 | AA | 861 | G | C4'-C3'-C2' | -5.66 | 96.94 | 102.60 |
| 1 | AA | 926 | G | C6-N1-C2 | -5.66 | 121.71 | 125.10 |
| 1 | AA | 1374 | A | C2-N3-C4 | 5.66 | 113.43 | 110.60 |
| 26 | BB | 40 | U | C5-C6-N1 | 5.66 | 125.53 | 122.70 |
| 26 | BB | 296 | U | O4'-C1'-N1 | 5.66 | 112.72 | 108.20 |
| 26 | BB | 314 | C | C3'-C2'-C1' | -5.66 | 96.98 | 101.50 |
| 26 | BB | 464 | U | O4'-C1'-N1 | 5.66 | 112.72 | 108.20 |
| 26 | BB | 707 | G | C5'-C4'-O4' | 5.66 | 115.89 | 109.10 |
| 26 | BB | 1017 | G | C1'-O4'-C4' | -5.66 | 105.38 | 109.90 |
| 26 | BB | 1033 | U | C5'-C4'-O4' | 5.66 | 115.89 | 109.10 |
| 26 | BB | 1329 | U | C5-C6-N1 | -5.66 | 119.87 | 122.70 |
| 26 | BB | 1483 | G | N1-C6-O6 | -5.66 | 116.51 | 119.90 |
| 26 | BB | 1486 | U | N1-C2-O2 | 5.66 | 126.76 | 122.80 |
| 26 | BB | 1666 | G | C4-C5-N7 | -5.66 | 108.54 | 110.80 |
| 26 | BB | 1780 | A | N1-C2-N3 | -5.66 | 126.47 | 129.30 |
| 26 | BB | 2353 | G | O4'-C1'-N9 | 5.66 | 112.72 | 108.20 |
| 26 | BB | 2866 | U | O4'-C1'-N1 | 5.66 | 112.72 | 108.20 |
| 31 | BG | 67 | THR | CA-CB-OG1 | 5.66 | 120.88 | 109.00 |
| 1 | AA | 254 | G | N3-C4-C5 | -5.65 | 125.77 | 128.60 |
| 1 | AA | 445 | G | N1-C2-N2 | 5.65 | 121.29 | 116.20 |
| 1 | AA | 547 | A | N1-C2-N3 | -5.65 | 126.47 | 129.30 |
| 1 | AA | 726 | C | C6-N1-C2 | 5.65 | 122.56 | 120.30 |
| 1 | AA | 847 | G | N9-C1'-C2' | -5.65 | 105.78 | 112.00 |
| 26 | BB | 251 | A | N3-C4-C5 | 5.65 | 130.76 | 126.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 465 | G | C8-N9-C4 | -5.65 | 104.14 | 106.40 |
| 26 | BB | 627 | A | C4-C5-C6 | -5.65 | 114.17 | 117.00 |
| 26 | BB | 2172 | U | N3-C4-O4 | -5.65 | 115.44 | 119.40 |
| 1 | AA | 96 | U | P-O3'-C3' | 5.65 | 126.48 | 119.70 |
| 1 | AA | 506 | G | N3-C4-C5 | -5.65 | 125.77 | 128.60 |
| 1 | AA | 634 | C | N3-C2-O2 | -5.65 | 117.94 | 121.90 |
| 1 | AA | 1214 | C | P-O3'-C3' | 5.65 | 126.48 | 119.70 |
| 1 | AA | 1247 | U | N3-C4-O4 | 5.65 | 123.36 | 119.40 |
| 2 | AB | 33 | U | N3-C2-O2 | -5.65 | 118.24 | 122.20 |
| 2 | AB | 47 | U | C5-C6-N1 | -5.65 | 119.87 | 122.70 |
| 4 | AD | 62 | C | N3-C2-O2 | -5.65 | 117.94 | 121.90 |
| 26 | BB | 195 | A | C5'-C4'-O4' | 5.65 | 115.88 | 109.10 |
| 26 | BB | 352 | A | C5-C6-N1 | 5.65 | 120.53 | 117.70 |
| 26 | BB | 797 | G | C5'-C4'-C3' | -5.65 | 106.96 | 116.00 |
| 26 | BB | 872 | U | C1'-O4'-C4' | -5.65 | 105.38 | 109.90 |
| 26 | BB | 1000 | A | C3'-C2'-C1' | 5.65 | 106.02 | 101.50 |
| 26 | BB | 1239 | G | N3-C2-N2 | -5.65 | 115.94 | 119.90 |
| 26 | BB | 1267 | U | N3-C4-O4 | 5.65 | 123.36 | 119.40 |
| 26 | BB | 1469 | A | O4'-C1'-N9 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 1797 | G | C4-C5-N7 | 5.65 | 113.06 | 110.80 |
| 26 | BB | 2056 | G | N3-C4-C5 | -5.65 | 125.77 | 128.60 |
| 26 | BB | 2586 | U | C5'-C4'-C3' | -5.65 | 106.95 | 116.00 |
| 26 | BB | 2593 | U | O4'-C1'-N1 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 2698 | U | C2-N1-C1' | -5.65 | 110.92 | 117.70 |
| 26 | BB | 2740 | A | O4'-C1'-N9 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 2850 | A | C3'-C2'-C1' | 5.65 | 106.02 | 101.50 |
| 1 | AA | 74 | A | N9-C4-C5 | -5.65 | 103.54 | 105.80 |
| 1 | AA | 294 | U | O4'-C1'-N1 | 5.65 | 112.72 | 108.20 |
| 1 | AA | 301 | G | C4-C5-N7 | -5.65 | 108.54 | 110.80 |
| 1 | AA | 479 | U | N1-C2-O2 | 5.65 | 126.75 | 122.80 |
| 1 | AA | 1037 | C | C4'-C3'-C2' | -5.65 | 96.95 | 102.60 |
| 25 | BA | 69 | G | C5'-C4'-O4' | 5.65 | 115.88 | 109.10 |
| 26 | BB | 73 | A | N3-C4-N9 | -5.65 | 122.88 | 127.40 |
| 26 | BB | 914 | G | C1'-O4'-C4' | -5.65 | 105.38 | 109.90 |
| 26 | BB | 1480 | C | O4'-C1'-N1 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 1648 | U | C5'-C4'-C3' | -5.65 | 106.96 | 116.00 |
| 26 | BB | 1725 | U | O4'-C1'-N1 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 2166 | U | C3'-C2'-C1' | 5.65 | 106.02 | 101.50 |
| 26 | BB | 2299 | U | C4-C5-C6 | 5.65 | 123.09 | 119.70 |
| 26 | BB | 2775 | G | C3'-C2'-C1' | 5.65 | 106.02 | 101.50 |
| 26 | BB | 2865 | U | O4'-C1'-C2' | 5.65 | 112.69 | 107.60 |
| 1 | AA | 699 | C | N3-C4-N4 | 5.65 | 121.95 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1538 | C | C1'-O4'-C4' | -5.65 | 105.38 | 109.90 |
| 2 | AB | 15 | A | C6-C5-N7 | -5.65 | 128.35 | 132.30 |
| 2 | AB | 63 | C | N1-C2-O2 | 5.65 | 122.29 | 118.90 |
| 2 | AB | 75 | C | C4-C5-C6 | 5.65 | 120.22 | 117.40 |
| 26 | BB | 83 | A | O4'-C1'-N9 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 1075 | C | O4'-C1'-N1 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 1446 | C | C1'-O4'-C4' | 5.65 | 114.42 | 109.90 |
| 26 | BB | 1660 | G | N7-C8-N9 | 5.65 | 115.92 | 113.10 |
| 26 | BB | 2233 | U | N1-C2-N3 | 5.65 | 118.29 | 114.90 |
| 26 | BB | 2640 | G | C2-N3-C4 | 5.65 | 114.72 | 111.90 |
| 26 | BB | 2699 | C | C5'-C4'-C3' | 5.65 | 125.04 | 116.00 |
| 26 | BB | 2796 | U | C4'-C3'-C2' | -5.65 | 96.95 | 102.60 |
| 1 | AA | 450 | G | N7-C8-N9 | 5.65 | 115.92 | 113.10 |
| 1 | AA | 620 | C | C4'-C3'-C2' | -5.65 | 96.95 | 102.60 |
| 1 | AA | 624 | C | N3-C4-N4 | 5.65 | 121.95 | 118.00 |
| 1 | AA | 1092 | A | C5'-C4'-O4' | 5.65 | 115.88 | 109.10 |
| 1 | AA | 1094 | G | C4'-C3'-C2' | -5.65 | 96.95 | 102.60 |
| 25 | BA | 106 | G | C4-C5-C6 | 5.65 | 122.19 | 118.80 |
| 26 | BB | 29 | U | O4'-C1'-N1 | 5.65 | 112.72 | 108.20 |
| 26 | BB | 166 | U | N1-C2-O2 | -5.65 | 118.85 | 122.80 |
| 26 | BB | 264 | C | P-O3'-C3' | 5.65 | 126.48 | 119.70 |
| 26 | BB | 491 | G | C8-N9-C4 | -5.65 | 104.14 | 106.40 |
| 26 | BB | 833 | A | C8-N9-C4 | -5.65 | 103.54 | 105.80 |
| 26 | BB | 1146 | C | N3-C4-C5 | -5.65 | 119.64 | 121.90 |
| 26 | BB | 1500 | G | N1-C2-N3 | 5.65 | 127.29 | 123.90 |
| 26 | BB | 1620 | G | C6-N1-C2 | -5.65 | 121.71 | 125.10 |
| 26 | BB | 1874 | C | C2-N1-C1' | 5.65 | 125.01 | 118.80 |
| 26 | BB | 2015 | A | C5-C6-N1 | -5.65 | 114.88 | 117.70 |
| 26 | BB | 2144 | G | C4'-C3'-C2' | 5.65 | 108.25 | 102.60 |
| 26 | BB | 2236 | U | C2-N3-C4 | -5.65 | 123.61 | 127.00 |
| 26 | BB | 2513 | A | C4'-C3'-C2' | 5.65 | 108.25 | 102.60 |
| 26 | BB | 2786 | U | N3-C4-O4 | 5.65 | 123.35 | 119.40 |
| 1 | AA | 406 | G | C5-C6-N1 | -5.65 | 108.68 | 111.50 |
| 1 | AA | 720 | C | C4'-C3'-C2' | -5.65 | 96.95 | 102.60 |
| 1 | AA | 778 | G | N9-C4-C5 | 5.65 | 107.66 | 105.40 |
| 2 | AB | 7 | G | N3-C4-C5 | -5.65 | 125.78 | 128.60 |
| 26 | BB | 1536 | C | C6-N1-C2 | -5.65 | 118.04 | 120.30 |
| 26 | BB | 2125 | G | C6-C5-N7 | 5.65 | 133.79 | 130.40 |
| 26 | BB | 2659 | G | C5-C6-O6 | -5.65 | 125.21 | 128.60 |
| 53 | B2 | 50 | ASP | CB-CG-OD2 | -5.65 | 113.22 | 118.30 |
| 1 | AA | 734 | G | C8-N9-C4 | -5.64 | 104.14 | 106.40 |
| 1 | AA | 866 | C | N1-C1'-C2' | -5.64 | 105.79 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1010 | U | C3'-C2'-C1' | 5.64 | 106.02 | 101.50 |
| 1 | AA | 1261 | A | C5'-C4'-O4' | 5.64 | 115.87 | 109.10 |
| 1 | AA | 1345 | U | C6-N1-C2 | -5.64 | 117.61 | 121.00 |
| 1 | AA | 1417 | G | N3-C4-C5 | -5.64 | 125.78 | 128.60 |
| 25 | BA | 42 | C | O4'-C1'-N1 | -5.64 | 103.68 | 108.20 |
| 25 | BA | 112 | G | C6-C5-N7 | -5.64 | 127.01 | 130.40 |
| 26 | BB | 724 | U | C4-C5-C6 | 5.64 | 123.09 | 119.70 |
| 26 | BB | 938 | G | C8-N9-C4 | -5.64 | 104.14 | 106.40 |
| 26 | BB | 1794 | A | C5'-C4'-O4' | 5.64 | 115.87 | 109.10 |
| 26 | BB | 2107 | G | C5'-C4'-O4' | 5.64 | 115.87 | 109.10 |
| 26 | BB | 2144 | G | C6-N1-C2 | -5.64 | 121.71 | 125.10 |
| 26 | BB | 2223 | G | N1-C2-N2 | 5.64 | 121.28 | 116.20 |
| 26 | BB | 2345 | G | C4-C5-C6 | 5.64 | 122.19 | 118.80 |
| 26 | BB | 2375 | G | C6-C5-N7 | -5.64 | 127.01 | 130.40 |
| 26 | BB | 2561 | U | C4'-C3'-C2' | -5.64 | 96.96 | 102.60 |
| 26 | BB | 2586 | U | C2-N3-C4 | -5.64 | 123.61 | 127.00 |
| 26 | BB | 2775 | G | N7-C8-N9 | 5.64 | 115.92 | 113.10 |
| 1 | AA | 216 | U | N1-C2-N3 | 5.64 | 118.28 | 114.90 |
| 1 | AA | 541 | G | N1-C2-N3 | -5.64 | 120.52 | 123.90 |
| 1 | AA | 673 | A | C4-C5-N7 | -5.64 | 107.88 | 110.70 |
| 1 | AA | 1019 | A | C2-N3-C4 | 5.64 | 113.42 | 110.60 |
| 1 | AA | 1184 | G | C2-N3-C4 | 5.64 | 114.72 | 111.90 |
| 1 | AA | 1367 | C | N1-C1'-C2' | -5.64 | 105.79 | 112.00 |
| 1 | AA | 1454 | G | N3-C4-C5 | -5.64 | 125.78 | 128.60 |
| 1 | AA | 1478 | U | C2-N3-C4 | -5.64 | 123.61 | 127.00 |
| 2 | AB | 19 | G | C4-C5-C6 | 5.64 | 122.19 | 118.80 |
| 21 | AU | 18 | GLN | CA-CB-CG | 5.64 | 125.81 | 113.40 |
| 25 | BA | 27 | C | C5-C6-N1 | 5.64 | 123.82 | 121.00 |
| 26 | BB | 54 | G | N9-C4-C5 | 5.64 | 107.66 | 105.40 |
| 26 | BB | 60 | G | C8-N9-C4 | -5.64 | 104.14 | 106.40 |
| 26 | BB | 294 | A | C5'-C4'-O4' | 5.64 | 115.87 | 109.10 |
| 26 | BB | 455 | C | O3'-P-O5' | 5.64 | 114.72 | 104.00 |
| 26 | BB | 856 | G | C6-N1-C2 | -5.64 | 121.71 | 125.10 |
| 26 | BB | 1097 | U | C5-C4-O4 | -5.64 | 122.51 | 125.90 |
| 26 | BB | 1148 | U | C3'-C2'-C1' | -5.64 | 96.99 | 101.50 |
| 26 | BB | 1300 | G | N3-C2-N2 | 5.64 | 123.85 | 119.90 |
| 26 | BB | 1625 | C | C5-C6-N1 | -5.64 | 118.18 | 121.00 |
| 26 | BB | 2559 | C | P-O3'-C3' | 5.64 | 126.47 | 119.70 |
| 1 | AA | 1198 | G | N9-C4-C5 | -5.64 | 103.14 | 105.40 |
| 25 | BA | 76 | G | C6-C5-N7 | -5.64 | 127.02 | 130.40 |
| 26 | BB | 350 | G | N9-C4-C5 | 5.64 | 107.66 | 105.40 |
| 26 | BB | 1276 | A | N1-C2-N3 | -5.64 | 126.48 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2331 | G | C2-N3-C4 | -5.64 | 109.08 | 111.90 |
| 26 | BB | 2483 | C | C5-C6-N1 | 5.64 | 123.82 | 121.00 |
| 26 | BB | 2899 | A | C4-C5-N7 | -5.64 | 107.88 | 110.70 |
| 30 | BF | 117 | ARG | CD-NE-CZ | 5.64 | 131.50 | 123.60 |
| 1 | AA | 361 | G | P-O3'-C3' | 5.64 | 126.47 | 119.70 |
| 1 | AA | 645 | G | N1-C6-O6 | -5.64 | 116.52 | 119.90 |
| 1 | AA | 1103 | C | N1-C2-O2 | 5.64 | 122.28 | 118.90 |
| 1 | AA | 1202 | U | C4'-C3'-C2' | -5.64 | 96.96 | 102.60 |
| 3 | AC | 26 | U | C5'-C4'-O4' | 5.64 | 115.87 | 109.10 |
| 17 | AQ | 60 | ARG | NE-CZ-NH1 | 5.64 | 123.12 | 120.30 |
| 20 | AT | 42 | LYS | CA-CB-CG | 5.64 | 125.81 | 113.40 |
| 26 | BB | 690 | G | C5-N7-C8 | -5.64 | 101.48 | 104.30 |
| 26 | BB | 815 | C | N3-C4-N4 | 5.64 | 121.95 | 118.00 |
| 26 | BB | 2014 | A | C3'-C2'-C1' | -5.64 | 96.99 | 101.50 |
| 26 | BB | 2110 | G | C6-N1-C2 | -5.64 | 121.72 | 125.10 |
| 26 | BB | 2182 | U | C4-C5-C6 | 5.64 | 123.08 | 119.70 |
| 26 | BB | 2710 | C | C2-N3-C4 | 5.64 | 122.72 | 119.90 |
| 1 | AA | 1 | A | P-O3'-C3' | 5.64 | 126.47 | 119.70 |
| 1 | AA | 61 | G | N1-C2-N3 | -5.64 | 120.52 | 123.90 |
| 1 | AA | 469 | C | C5'-C4'-O4' | 5.64 | 115.87 | 109.10 |
| 1 | AA | 792 | A | C8-N9-C4 | 5.64 | 108.06 | 105.80 |
| 26 | BB | 1473 | G | C1'-O4'-C4' | -5.64 | 105.39 | 109.90 |
| 26 | BB | 1738 | G | C5-C6-N1 | 5.64 | 114.32 | 111.50 |
| 26 | BB | 2756 | U | O4'-C1'-C2' | -5.64 | 100.16 | 105.80 |
| 1 | AA | 626 | G | C3'-C2'-C1' | 5.64 | 106.01 | 101.50 |
| 1 | AA | 1084 | G | N3-C4-N9 | 5.64 | 129.38 | 126.00 |
| 1 | AA | 1124 | G | C5-C6-O6 | 5.64 | 131.98 | 128.60 |
| 1 | AA | 1185 | G | C5-N7-C8 | -5.64 | 101.48 | 104.30 |
| 1 | AA | 1405 | G | N7-C8-N9 | -5.64 | 110.28 | 113.10 |
| 1 | AA | 1500 | A | N7-C8-N9 | -5.64 | 110.98 | 113.80 |
| 26 | BB | 214 | G | C5-C6-O6 | -5.64 | 125.22 | 128.60 |
| 26 | BB | 316 | C | N3-C4-C5 | -5.64 | 119.64 | 121.90 |
| 26 | BB | 602 | A | C8-N9-C4 | -5.64 | 103.55 | 105.80 |
| 26 | BB | 673 | C | C5-C6-N1 | -5.64 | 118.18 | 121.00 |
| 26 | BB | 733 | G | O3'-P-O5' | -5.64 | 93.29 | 104.00 |
| 26 | BB | 733 | G | C4'-C3'-C2' | -5.64 | 96.96 | 102.60 |
| 26 | BB | 740 | C | C2-N3-C4 | -5.64 | 117.08 | 119.90 |
| 26 | BB | 869 | G | C4'-C3'-C2' | -5.64 | 96.96 | 102.60 |
| 26 | BB | 1875 | G | N1-C2-N2 | 5.64 | 121.27 | 116.20 |
| 26 | BB | 2394 | C | N3-C2-O2 | 5.64 | 125.84 | 121.90 |
| 26 | BB | 2486 | C | N3-C2-O2 | -5.64 | 117.95 | 121.90 |
| 26 | BB | 2735 | G | C5-C6-O6 | -5.64 | 125.22 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2825 | G | O4'-C1'-N9 | 5.64 | 112.71 | 108.20 |
| 45 | BU | 109 | ASP | CB-CG-OD2 | -5.64 | 113.23 | 118.30 |
| 1 | AA | 299 | G | N1-C2-N3 | -5.63 | 120.52 | 123.90 |
| 1 | AA | 352 | C | C5-C6-N1 | -5.63 | 118.18 | 121.00 |
| 1 | AA | 551 | U | O4'-C1'-N1 | 5.63 | 112.71 | 108.20 |
| 1 | AA | 572 | A | O4'-C1'-N9 | -5.63 | 103.69 | 108.20 |
| 1 | AA | 588 | G | C5-N7-C8 | -5.63 | 101.48 | 104.30 |
| 1 | AA | 1440 | U | N3-C4-O4 | 5.63 | 123.34 | 119.40 |
| 2 | AB | 14 | A | C6-C5-N7 | 5.63 | 136.24 | 132.30 |
| 25 | BA | 104 | A | C1'-O4'-C4' | -5.63 | 105.39 | 109.90 |
| 26 | BB | 149 | A | C5-C6-N1 | -5.63 | 114.88 | 117.70 |
| 26 | BB | 265 | A | C4-C5-N7 | -5.63 | 107.88 | 110.70 |
| 26 | BB | 275 | C | C5'-C4'-O4' | 5.63 | 115.86 | 109.10 |
| 26 | BB | 1282 | U | C2-N3-C4 | -5.63 | 123.62 | 127.00 |
| 26 | BB | 1448 | G | C5'-C4'-O4' | 5.63 | 115.86 | 109.10 |
| 26 | BB | 1506 | U | N3-C4-C5 | -5.63 | 111.22 | 114.60 |
| 26 | BB | 1821 | A | C5-C6-N6 | -5.63 | 119.19 | 123.70 |
| 26 | BB | 2818 | U | N1-C2-O2 | -5.63 | 118.86 | 122.80 |
| 28 | BD | 213 | ARG | NE-CZ-NH2 | -5.63 | 117.48 | 120.30 |
| 57 | B6 | 29 | ARG | NE-CZ-NH2 | 5.63 | 123.12 | 120.30 |
| 1 | AA | 429 | U | C5-C4-O4 | 5.63 | 129.28 | 125.90 |
| 1 | AA | 600 | A | O4'-C1'-N9 | 5.63 | 112.71 | 108.20 |
| 1 | AA | 737 | C | C5-C4-N4 | 5.63 | 124.14 | 120.20 |
| 1 | AA | 1147 | C | C4'-C3'-C2' | -5.63 | 96.97 | 102.60 |
| 3 | AC | 59 | A | N9-C4-C5 | 5.63 | 108.05 | 105.80 |
| 4 | AD | 71 | G | N1-C2-N3 | -5.63 | 120.52 | 123.90 |
| 26 | BB | 73 | A | O3'-P-O5' | -5.63 | 93.30 | 104.00 |
| 26 | BB | 123 | G | C2-N3-C4 | 5.63 | 114.72 | 111.90 |
| 26 | BB | 2296 | U | N3-C4-O4 | 5.63 | 123.34 | 119.40 |
| 1 | AA | 381 | C | N1-C2-N3 | 5.63 | 123.14 | 119.20 |
| 1 | AA | 415 | A | O4'-C1'-N9 | 5.63 | 112.70 | 108.20 |
| 1 | AA | 1465 | A | OP2-P-O3' | 5.63 | 117.59 | 105.20 |
| 3 | AC | 33 | A | C1'-O4'-C4' | 5.63 | 114.41 | 109.90 |
| 26 | BB | 772 | C | N1-C2-N3 | 5.63 | 123.14 | 119.20 |
| 26 | BB | 845 | A | C8-N9-C4 | 5.63 | 108.05 | 105.80 |
| 26 | BB | 969 | G | C8-N9-C4 | -5.63 | 104.15 | 106.40 |
| 26 | BB | 1092 | C | N3-C4-N4 | -5.63 | 114.06 | 118.00 |
| 26 | BB | 1590 | A | C4'-C3'-C2' | -5.63 | 96.97 | 102.60 |
| 26 | BB | 1593 | A | C5-C6-N6 | 5.63 | 128.21 | 123.70 |
| 26 | BB | 1927 | A | C4-C5-N7 | -5.63 | 107.88 | 110.70 |
| 26 | BB | 1981 | A | C5'-C4'-O4' | 5.63 | 115.86 | 109.10 |
| 26 | BB | 2203 | U | C6-N1-C1' | -5.63 | 113.32 | 121.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2886 | A | N3-C4-C5 | 5.63 | 130.74 | 126.80 |
| 1 | AA | 518 | C | N1-C2-O2 | 5.63 | 122.28 | 118.90 |
| 1 | AA | 627 | G | N3-C4-N9 | -5.63 | 122.62 | 126.00 |
| 1 | AA | 630 | A | C4-C5-C6 | 5.63 | 119.81 | 117.00 |
| 1 | AA | 1202 | U | N1-C1'-C2' | -5.63 | 105.81 | 112.00 |
| 26 | BB | 576 | U | N3-C4-O4 | 5.63 | 123.34 | 119.40 |
| 26 | BB | 1014 | A | N9-C4-C5 | 5.63 | 108.05 | 105.80 |
| 26 | BB | 1416 | G | C4-N9-C1' | -5.63 | 119.18 | 126.50 |
| 26 | BB | 1456 | G | N3-C4-N9 | 5.63 | 129.38 | 126.00 |
| 26 | BB | 1860 | G | C6-C5-N7 | -5.63 | 127.02 | 130.40 |
| 26 | BB | 2296 | U | P-O5'-C5' | 5.63 | 129.91 | 120.90 |
| 26 | BB | 2654 | A | C2-N3-C4 | -5.63 | 107.78 | 110.60 |
| 31 | BG | 17 | THR | CA-CB-CG2 | 5.63 | 120.28 | 112.40 |
| 35 | BK | 63 | ASP | CB-CG-OD1 | -5.63 | 113.23 | 118.30 |
| 1 | AA | 325 | A | C1'-O4'-C4' | -5.63 | 105.40 | 109.90 |
| 1 | AA | 695 | A | C5'-C4'-O4' | 5.63 | 115.85 | 109.10 |
| 1 | AA | 764 | C | C4'-C3'-C2' | -5.63 | 96.97 | 102.60 |
| 1 | AA | 939 | G | N1-C2-N2 | 5.63 | 121.27 | 116.20 |
| 1 | AA | 1171 | A | C3'-C2'-C1' | -5.63 | 97.00 | 101.50 |
| 1 | AA | 1353 | G | N1-C2-N2 | -5.63 | 111.13 | 116.20 |
| 10 | AJ | 54 | GLY | O-C-N | 5.63 | 131.71 | 122.70 |
| 26 | BB | 68 | G | C6-N1-C2 | -5.63 | 121.72 | 125.10 |
| 26 | BB | 97 | C | C4-C5-C6 | -5.63 | 114.58 | 117.40 |
| 26 | BB | 250 | G | C5'-C4'-O4' | 5.63 | 115.85 | 109.10 |
| 26 | BB | 629 | G | C5'-C4'-C3' | -5.63 | 106.99 | 116.00 |
| 26 | BB | 1106 | G | C6-N1-C2 | -5.63 | 121.72 | 125.10 |
| 26 | BB | 1663 | G | C5-C6-N1 | 5.63 | 114.31 | 111.50 |
| 26 | BB | 2446 | G | N3-C2-N2 | 5.63 | 123.84 | 119.90 |
| 26 | BB | 2564 | A | C1'-O4'-C4' | -5.63 | 105.40 | 109.90 |
| 26 | BB | 2813 | A | N1-C6-N6 | -5.63 | 115.22 | 118.60 |
| 47 | BW | 54 | PRO | N-CA-CB | 5.63 | 110.05 | 103.30 |
| 1 | AA | 987 | G | N9-C4-C5 | -5.63 | 103.15 | 105.40 |
| 1 | AA | 1032 | G | C5-C6-O6 | 5.63 | 131.97 | 128.60 |
| 1 | AA | 1131 | G | N1-C6-O6 | -5.63 | 116.52 | 119.90 |
| 1 | AA | 1198 | G | C5-C6-O6 | -5.63 | 125.22 | 128.60 |
| 1 | AA | 1239 | A | C3'-C2'-C1' | 5.63 | 106.00 | 101.50 |
| 1 | AA | 1331 | G | C5-C6-O6 | 5.63 | 131.98 | 128.60 |
| 3 | AC | 19 | A | C4-C5-C6 | -5.63 | 114.19 | 117.00 |
| 26 | BB | 254 | G | C5-N7-C8 | 5.63 | 107.11 | 104.30 |
| 26 | BB | 494 | G | C5'-C4'-O4' | 5.63 | 115.85 | 109.10 |
| 26 | BB | 758 | C | N3-C4-N4 | 5.63 | 121.94 | 118.00 |
| 26 | BB | 1148 | U | C5'-C4'-O4' | 5.63 | 115.85 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1247 | A | C6-C5-N7 | 5.63 | 136.24 | 132.30 |
| 26 | BB | 1967 | C | C5'-C4'-C3' | -5.63 | 107.00 | 116.00 |
| 26 | BB | 2023 | C | N3-C2-O2 | 5.63 | 125.84 | 121.90 |
| 26 | BB | 2311 | A | N1-C6-N6 | 5.63 | 121.98 | 118.60 |
| 26 | BB | 2428 | G | O4'-C4'-C3' | 5.63 | 110.60 | 106.10 |
| 28 | BD | 12 | ARG | CD-NE-CZ | 5.63 | 131.48 | 123.60 |
| 1 | AA | 255 | G | C6-C5-N7 | 5.62 | 133.78 | 130.40 |
| 1 | AA | 588 | G | N9-C4-C5 | 5.62 | 107.65 | 105.40 |
| 2 | AB | 15 | A | N9-C4-C5 | -5.62 | 103.55 | 105.80 |
| 2 | AB | 64 | U | N3-C4-O4 | 5.62 | 123.34 | 119.40 |
| 26 | BB | 472 | A | O5'-P-OP2 | -5.62 | 100.64 | 105.70 |
| 26 | BB | 878 | A | C5-C6-N1 | -5.62 | 114.89 | 117.70 |
| 26 | BB | 1571 | A | C6-N1-C2 | -5.62 | 115.22 | 118.60 |
| 26 | BB | 2570 | G | C2'-C3'-O3' | 5.62 | 122.70 | 113.70 |
| 28 | BD | 86 | ARG | CD-NE-CZ | 5.62 | 131.47 | 123.60 |
| 32 | BH | 50 | THR | O-C-N | 5.62 | 131.70 | 122.70 |
| 38 | BN | 60 | ARG | NE-CZ-NH1 | 5.62 | 123.11 | 120.30 |
| 1 | AA | 181 | A | C2-N3-C4 | 5.62 | 113.41 | 110.60 |
| 1 | AA | 326 | G | C2-N3-C4 | 5.62 | 114.71 | 111.90 |
| 1 | AA | 477 | C | O4'-C1'-N1 | 5.62 | 112.70 | 108.20 |
| 1 | AA | 663 | A | C2-N3-C4 | -5.62 | 107.79 | 110.60 |
| 1 | AA | 1148 | U | C5'-C4'-O4' | 5.62 | 115.85 | 109.10 |
| 4 | AD | 35 | C | P-O3'-C3' | 5.62 | 126.45 | 119.70 |
| 23 | AW | 50 | PHE | CB-CG-CD2 | 5.62 | 124.74 | 120.80 |
| 25 | BA | 18 | G | N3-C2-N2 | -5.62 | 115.96 | 119.90 |
| 26 | BB | 581 | C | C4-C5-C6 | -5.62 | 114.59 | 117.40 |
| 26 | BB | 965 | C | N1-C2-N3 | 5.62 | 123.14 | 119.20 |
| 26 | BB | 973 | A | C4'-C3'-C2' | -5.62 | 96.98 | 102.60 |
| 26 | BB | 1077 | A | N1-C2-N3 | 5.62 | 132.11 | 129.30 |
| 26 | BB | 1370 | C | C4'-C3'-C2' | -5.62 | 96.98 | 102.60 |
| 26 | BB | 1401 | G | C4'-C3'-C2' | -5.62 | 96.98 | 102.60 |
| 26 | BB | 1899 | A | N9-C4-C5 | 5.62 | 108.05 | 105.80 |
| 26 | BB | 2178 | C | C5-C6-N1 | 5.62 | 123.81 | 121.00 |
| 26 | BB | 2585 | U | C3'-C2'-C1' | 5.62 | 106.00 | 101.50 |
| 26 | BB | 2864 | G | N9-C1'-C2' | -5.62 | 105.81 | 112.00 |
| 1 | AA | 556 | C | N3-C2-O2 | -5.62 | 117.97 | 121.90 |
| 1 | AA | 617 | G | OP1-P-OP2 | -5.62 | 111.17 | 119.60 |
| 1 | AA | 1000 | A | C5-N7-C8 | -5.62 | 101.09 | 103.90 |
| 1 | AA | 1364 | U | C4'-C3'-C2' | -5.62 | 96.98 | 102.60 |
| 1 | AA | 1415 | G | C3'-C2'-C1' | 5.62 | 106.00 | 101.50 |
| 1 | AA | 1510 | C | C3'-C2'-C1' | -5.62 | 97.00 | 101.50 |
| 26 | BB | 178 | G | N9-C4-C5 | -5.62 | 103.15 | 105.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 250 | G | C5-C6-N1 | 5.62 | 114.31 | 111.50 |
| 26 | BB | 659 | G | N9-C4-C5 | 5.62 | 107.65 | 105.40 |
| 26 | BB | 860 | U | N1-C2-O2 | 5.62 | 126.73 | 122.80 |
| 26 | BB | 918 | A | C5-C6-N6 | -5.62 | 119.20 | 123.70 |
| 26 | BB | 1133 | A | C1'-O4'-C4' | -5.62 | 105.40 | 109.90 |
| 26 | BB | 1268 | A | C5'-C4'-O4' | 5.62 | 115.84 | 109.10 |
| 26 | BB | 2488 | G | N7-C8-N9 | 5.62 | 115.91 | 113.10 |
| 1 | AA | 93 | U | N3-C4-O4 | 5.62 | 123.33 | 119.40 |
| 1 | AA | 798 | U | C5-C6-N1 | -5.62 | 119.89 | 122.70 |
| 1 | AA | 844 | G | N9-C4-C5 | 5.62 | 107.65 | 105.40 |
| 1 | AA | 1299 | A | N1-C6-N6 | 5.62 | 121.97 | 118.60 |
| 26 | BB | 772 | C | C1'-O4'-C4' | 5.62 | 114.40 | 109.90 |
| 26 | BB | 2432 | A | N1-C6-N6 | -5.62 | 115.23 | 118.60 |
| 26 | BB | 2599 | G | N1-C2-N2 | 5.62 | 121.26 | 116.20 |
| 1 | AA | 17 | U | C1'-O4'-C4' | -5.62 | 105.41 | 109.90 |
| 1 | AA | 122 | G | C2'-C3'-O3' | 5.62 | 122.69 | 113.70 |
| 1 | AA | 496 | A | C5'-C4'-O4' | 5.62 | 115.84 | 109.10 |
| 1 | AA | 761 | G | C6-C5-N7 | -5.62 | 127.03 | 130.40 |
| 1 | AA | 1363 | A | C5-C6-N1 | -5.62 | 114.89 | 117.70 |
| 1 | AA | 1529 | G | C2-N3-C4 | 5.62 | 114.71 | 111.90 |
| 1 | AA | 1531 | A | P-O5'-C5' | 5.62 | 129.89 | 120.90 |
| 1 | AA | 1542 | A | C8-N9-C4 | -5.62 | 103.55 | 105.80 |
| 2 | AB | 75 | C | N1-C2-O2 | 5.62 | 122.27 | 118.90 |
| 4 | AD | 5 | G | C4'-C3'-C2' | -5.62 | 96.98 | 102.60 |
| 25 | BA | 54 | G | C3'-C2'-C1' | 5.62 | 106.00 | 101.50 |
| 26 | BB | 257 | C | N3-C2-O2 | -5.62 | 117.97 | 121.90 |
| 26 | BB | 533 | G | C6-N1-C2 | -5.62 | 121.73 | 125.10 |
| 26 | BB | 700 | G | C6-C5-N7 | -5.62 | 127.03 | 130.40 |
| 26 | BB | 776 | G | C6-C5-N7 | -5.62 | 127.03 | 130.40 |
| 26 | BB | 1663 | G | C5-C6-O6 | -5.62 | 125.23 | 128.60 |
| 26 | BB | 2244 | U | C1'-O4'-C4' | -5.62 | 105.41 | 109.90 |
| 26 | BB | 2660 | A | C4-C5-N7 | 5.62 | 113.51 | 110.70 |
| 26 | BB | 2837 | A | N1-C2-N3 | 5.62 | 132.11 | 129.30 |
| 1 | AA | 1190 | G | C6-N1-C2 | -5.62 | 121.73 | 125.10 |
| 1 | AA | 1324 | A | C2-N3-C4 | -5.62 | 107.79 | 110.60 |
| 2 | AB | 65 | C | P-O3'-C3' | 5.62 | 126.44 | 119.70 |
| 25 | BA | 94 | A | N7-C8-N9 | 5.62 | 116.61 | 113.80 |
| 26 | BB | 300 | A | C1'-O4'-C4' | -5.62 | 105.41 | 109.90 |
| 26 | BB | 382 | A | C6-C5-N7 | 5.62 | 136.23 | 132.30 |
| 26 | BB | 995 | C | C2-N3-C4 | -5.62 | 117.09 | 119.90 |
| 26 | BB | 1031 | G | C5-C6-O6 | -5.62 | 125.23 | 128.60 |
| 26 | BB | 1102 | C | C1'-O4'-C4' | -5.62 | 105.41 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1558 | C | N3-C4-C5 | -5.62 | 119.65 | 121.90 |
| 1 | AA | 176 | C | C5-C6-N1 | -5.62 | 118.19 | 121.00 |
| 1 | AA | 231 | U | C5-C6-N1 | -5.62 | 119.89 | 122.70 |
| 1 | AA | 320 | A | N9-C4-C5 | -5.62 | 103.55 | 105.80 |
| 1 | AA | 505 | G | C3'-C2'-C1' | -5.62 | 97.01 | 101.50 |
| 1 | AA | 546 | A | C5-C6-N6 | 5.62 | 128.19 | 123.70 |
| 1 | AA | 642 | A | N9-C4-C5 | -5.62 | 103.55 | 105.80 |
| 1 | AA | 946 | A | N3-C4-C5 | -5.62 | 122.87 | 126.80 |
| 1 | AA | 1119 | C | O4'-C1'-N1 | 5.62 | 112.69 | 108.20 |
| 1 | AA | 1194 | U | C5'-C4'-O4' | 5.62 | 115.84 | 109.10 |
| 1 | AA | 1334 | G | C5-C6-O6 | -5.62 | 125.23 | 128.60 |
| 1 | AA | 1389 | C | P-O3'-C3' | 5.62 | 126.44 | 119.70 |
| 2 | AB | 2 | G | C5'-C4'-O4' | 5.62 | 115.84 | 109.10 |
| 3 | AC | 37 | G | N1-C2-N3 | -5.62 | 120.53 | 123.90 |
| 4 | AD | 47 | A | N7-C8-N9 | -5.62 | 110.99 | 113.80 |
| 4 | AD | 74 | A | O5'-C5'-C4' | -5.62 | 101.03 | 111.70 |
| 16 | AP | 24 | VAL | CA-CB-CG1 | 5.62 | 119.32 | 110.90 |
| 25 | BA | 9 | G | C5-C6-N1 | 5.62 | 114.31 | 111.50 |
| 26 | BB | 590 | A | C5-N7-C8 | -5.62 | 101.09 | 103.90 |
| 26 | BB | 803 | U | C4-C5-C6 | 5.62 | 123.07 | 119.70 |
| 26 | BB | 1278 | C | N1-C2-N3 | -5.62 | 115.27 | 119.20 |
| 26 | BB | 1704 | C | N1-C2-N3 | -5.62 | 115.27 | 119.20 |
| 26 | BB | 1928 | A | O4'-C1'-N9 | -5.62 | 103.71 | 108.20 |
| 26 | BB | 2051 | A | C4-C5-C6 | -5.62 | 114.19 | 117.00 |
| 26 | BB | 2186 | G | C5'-C4'-O4' | 5.62 | 115.84 | 109.10 |
| 26 | BB | 2402 | U | C5-C6-N1 | 5.62 | 125.51 | 122.70 |
| 26 | BB | 2462 | C | C2-N1-C1' | -5.62 | 112.62 | 118.80 |
| 26 | BB | 2760 | C | O4'-C1'-N1 | 5.62 | 112.69 | 108.20 |
| 1 | AA | 78 | A | O4'-C1'-N9 | 5.61 | 112.69 | 108.20 |
| 1 | AA | 498 | A | C5-C6-N1 | 5.61 | 120.51 | 117.70 |
| 1 | AA | 508 | U | C5'-C4'-C3' | -5.61 | 107.02 | 116.00 |
| 1 | AA | 1030 | U | O4'-C1'-N1 | 5.61 | 112.69 | 108.20 |
| 1 | AA | 1319 | A | O5'-P-OP2 | -5.61 | 100.65 | 105.70 |
| 2 | AB | 41 | C | C6-N1-C1' | 5.61 | 127.54 | 120.80 |
| 9 | AI | 24 | ARG | NH1-CZ-NH2 | -5.61 | 113.22 | 119.40 |
| 20 | AT | 22 | VAL | CA-CB-CG1 | -5.61 | 102.48 | 110.90 |
| 26 | BB | 6 | A | C3'-C2'-C1' | -5.61 | 97.01 | 101.50 |
| 26 | BB | 512 | G | O4'-C1'-N9 | 5.61 | 112.69 | 108.20 |
| 26 | BB | 663 | G | C5-C6-N1 | 5.61 | 114.31 | 111.50 |
| 26 | BB | 1055 | G | C5'-C4'-C3' | -5.61 | 107.02 | 116.00 |
| 26 | BB | 1621 | U | N1-C2-O2 | 5.61 | 126.73 | 122.80 |
| 26 | BB | 2763 | G | C2-N3-C4 | -5.61 | 109.09 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2798 | U | N1-C2-O2 | -5.61 | 118.87 | 122.80 |
| 26 | BB | 2887 | A | C4-C5-N7 | -5.61 | 107.89 | 110.70 |
| 1 | AA | 344 | A | C8-N9-C4 | -5.61 | 103.56 | 105.80 |
| 1 | AA | 345 | C | C5'-C4'-C3' | -5.61 | 107.02 | 116.00 |
| 1 | AA | 555 | U | N3-C2-O2 | -5.61 | 118.27 | 122.20 |
| 26 | BB | 76 | C | C6-N1-C2 | -5.61 | 118.06 | 120.30 |
| 26 | BB | 114 | U | C6-N1-C2 | -5.61 | 117.63 | 121.00 |
| 26 | BB | 549 | G | N9-C4-C5 | 5.61 | 107.64 | 105.40 |
| 26 | BB | 590 | A | C8-N9-C4 | -5.61 | 103.56 | 105.80 |
| 26 | BB | 994 | C | O4'-C1'-N1 | 5.61 | 112.69 | 108.20 |
| 26 | BB | 1040 | A | C6-C5-N7 | 5.61 | 136.23 | 132.30 |
| 26 | BB | 2406 | A | N9-C4-C5 | 5.61 | 108.05 | 105.80 |
| 1 | AA | 174 | A | C4-C5-N7 | -5.61 | 107.89 | 110.70 |
| 1 | AA | 673 | A | C3'-C2'-C1' | 5.61 | 105.99 | 101.50 |
| 18 | AR | 77 | TYR | CB-CG-CD2 | -5.61 | 117.63 | 121.00 |
| 25 | BA | 35 | C | C2'-C3'-O3' | 5.61 | 122.68 | 113.70 |
| 26 | BB | 278 | A | N1-C2-N3 | -5.61 | 126.50 | 129.30 |
| 26 | BB | 354 | A | C4-C5-C6 | 5.61 | 119.81 | 117.00 |
| 26 | BB | 401 | A | N9-C1'-C2' | -5.61 | 105.83 | 112.00 |
| 26 | BB | 595 | C | O4'-C1'-C2' | -5.61 | 100.19 | 105.80 |
| 26 | BB | 1267 | U | O5'-C5'-C4' | -5.61 | 101.04 | 111.70 |
| 26 | BB | 1307 | A | O4'-C1'-N9 | 5.61 | 112.69 | 108.20 |
| 26 | BB | 1430 | G | C8-N9-C4 | 5.61 | 108.64 | 106.40 |
| 26 | BB | 1587 | G | P-O5'-C5' | 5.61 | 129.88 | 120.90 |
| 26 | BB | 2114 | A | O4'-C4'-C3' | 5.61 | 110.59 | 106.10 |
| 26 | BB | 2795 | C | C5-C6-N1 | 5.61 | 123.81 | 121.00 |
| 29 | BE | 119 | ALA | C-N-CA | 5.61 | 134.08 | 122.30 |
| 1 | AA | 67 | C | N3-C4-C5 | 5.61 | 124.14 | 121.90 |
| 1 | AA | 240 | G | N7-C8-N9 | 5.61 | 115.90 | 113.10 |
| 1 | AA | 481 | G | C6-C5-N7 | -5.61 | 127.03 | 130.40 |
| 1 | AA | 558 | G | N1-C2-N2 | 5.61 | 121.25 | 116.20 |
| 1 | AA | 861 | G | C2-N3-C4 | 5.61 | 114.70 | 111.90 |
| 1 | AA | 996 | A | N3-C4-N9 | 5.61 | 131.89 | 127.40 |
| 2 | AB | 11 | U | C5-C4-O4 | -5.61 | 122.53 | 125.90 |
| 26 | BB | 496 | G | N3-C2-N2 | -5.61 | 115.97 | 119.90 |
| 26 | BB | 529 | A | C3'-C2'-C1' | -5.61 | 97.01 | 101.50 |
| 26 | BB | 936 | A | C5-C6-N1 | 5.61 | 120.50 | 117.70 |
| 26 | BB | 1672 | A | N9-C1'-C2' | -5.61 | 105.83 | 112.00 |
| 26 | BB | 1856 | U | O4'-C1'-C2' | 5.61 | 112.65 | 107.60 |
| 26 | BB | 2309 | A | P-O3'-C3' | 5.61 | 126.43 | 119.70 |
| 26 | BB | 2655 | G | C6-C5-N7 | 5.61 | 133.76 | 130.40 |
| 1 | AA | 276 | G | P-O3'-C3' | 5.61 | 126.43 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 376 | G | C2-N3-C4 | 5.61 | 114.70 | 111.90 |
| 1 | AA | 428 | G | N1-C2-N3 | -5.61 | 120.53 | 123.90 |
| 1 | AA | 456 | A | C4-C5-N7 | -5.61 | 107.90 | 110.70 |
| 1 | AA | 457 | G | C5'-C4'-O4' | 5.61 | 115.83 | 109.10 |
| 1 | AA | 584 | G | N3-C2-N2 | -5.61 | 115.97 | 119.90 |
| 1 | AA | 801 | U | O4'-C1'-C2' | -5.61 | 100.19 | 105.80 |
| 1 | AA | 997 | U | C6-N1-C2 | 5.61 | 124.36 | 121.00 |
| 1 | AA | 1374 | A | P-O3'-C3' | 5.61 | 126.43 | 119.70 |
| 26 | BB | 56 | A | C4'-C3'-C2' | 5.61 | 108.21 | 102.60 |
| 26 | BB | 609 | A | N9-C4-C5 | -5.61 | 103.56 | 105.80 |
| 26 | BB | 839 | U | P-O3'-C3' | 5.61 | 126.43 | 119.70 |
| 26 | BB | 1137 | G | N3-C4-N9 | -5.61 | 122.64 | 126.00 |
| 26 | BB | 1867 | G | N9-C1'-C2' | -5.61 | 105.83 | 112.00 |
| 26 | BB | 2071 | A | C1'-O4'-C4' | -5.61 | 105.41 | 109.90 |
| 26 | BB | 2375 | G | N3-C4-C5 | -5.61 | 125.80 | 128.60 |
| 26 | BB | 2681 | C | N3-C2-O2 | -5.61 | 117.97 | 121.90 |
| 1 | AA | 332 | G | N1-C2-N3 | 5.61 | 127.26 | 123.90 |
| 1 | AA | 737 | C | N3-C2-O2 | -5.61 | 117.98 | 121.90 |
| 1 | AA | 1234 | C | N1-C2-O2 | 5.61 | 122.26 | 118.90 |
| 1 | AA | 1497 | G | C5'-C4'-O4' | 5.61 | 115.83 | 109.10 |
| 26 | BB | 1142 | A | C2'-C3'-O3' | 5.61 | 122.67 | 113.70 |
| 26 | BB | 1530 | G | N3-C4-C5 | -5.61 | 125.80 | 128.60 |
| 26 | BB | 2373 | G | C5'-C4'-C3' | 5.61 | 124.97 | 116.00 |
| 1 | AA | 542 | G | C4-N9-C1' | -5.60 | 119.21 | 126.50 |
| 1 | AA | 609 | A | C5'-C4'-O4' | 5.60 | 115.83 | 109.10 |
| 1 | AA | 1264 | U | C4-C5-C6 | 5.60 | 123.06 | 119.70 |
| 3 | AC | 53 | G | P-O3'-C3' | 5.60 | 126.42 | 119.70 |
| 26 | BB | 8 | C | N1-C1'-C2' | -5.60 | 105.84 | 112.00 |
| 26 | BB | 1138 | G | N3-C4-C5 | -5.60 | 125.80 | 128.60 |
| 26 | BB | 1597 | A | C5'-C4'-C3' | -5.60 | 107.03 | 116.00 |
| 26 | BB | 1642 | G | N7-C8-N9 | 5.60 | 115.90 | 113.10 |
| 26 | BB | 2397 | G | C4-C5-N7 | -5.60 | 108.56 | 110.80 |
| 26 | BB | 2420 | C | N3-C4-C5 | -5.60 | 119.66 | 121.90 |
| 44 | BT | 78 | ARG | NH1-CZ-NH2 | -5.60 | 113.24 | 119.40 |
| 1 | AA | 184 | G | N7-C8-N9 | 5.60 | 115.90 | 113.10 |
| 1 | AA | 196 | A | C4'-C3'-O3' | 5.60 | 124.20 | 113.00 |
| 1 | AA | 630 | A | C4'-C3'-C2' | -5.60 | 97.00 | 102.60 |
| 1 | AA | 651 | C | C1'-O4'-C4' | -5.60 | 105.42 | 109.90 |
| 1 | AA | 696 | A | N1-C6-N6 | -5.60 | 115.24 | 118.60 |
| 26 | BB | 287 | G | P-O3'-C3' | 5.60 | 126.42 | 119.70 |
| 26 | BB | 296 | U | N1-C2-N3 | 5.60 | 118.26 | 114.90 |
| 26 | BB | 425 | G | N1-C6-O6 | -5.60 | 116.54 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 513 | A | O4'-C4'-C3' | 5.60 | 110.58 | 106.10 |
| 26 | BB | 711 | G | N3-C4-C5 | -5.60 | 125.80 | 128.60 |
| 26 | BB | 1000 | A | N3-C4-C5 | -5.60 | 122.88 | 126.80 |
| 26 | BB | 1537 | G | C4-C5-C6 | -5.60 | 115.44 | 118.80 |
| 26 | BB | 1804 | C | C5-C6-N1 | 5.60 | 123.80 | 121.00 |
| 26 | BB | 2016 | U | C4-C5-C6 | -5.60 | 116.34 | 119.70 |
| 26 | BB | 2195 | U | C4'-C3'-C2' | -5.60 | 97.00 | 102.60 |
| 1 | AA | 64 | G | C4-C5-N7 | -5.60 | 108.56 | 110.80 |
| 1 | AA | 608 | A | N9-C1'-C2' | -5.60 | 105.84 | 112.00 |
| 23 | AW | 79 | THR | CA-CB-CG2 | 5.60 | 120.24 | 112.40 |
| 26 | BB | 114 | U | C2'-C3'-O3' | 5.60 | 122.66 | 113.70 |
| 26 | BB | 1105 | U | C6-N1-C2 | 5.60 | 124.36 | 121.00 |
| 26 | BB | 1585 | C | P-O5'-C5' | 5.60 | 129.86 | 120.90 |
| 26 | BB | 2726 | A | O4'-C1'-N9 | 5.60 | 112.68 | 108.20 |
| 26 | BB | 2846 | G | C2-N3-C4 | 5.60 | 114.70 | 111.90 |
| 1 | AA | 283 | U | N3-C2-O2 | -5.60 | 118.28 | 122.20 |
| 1 | AA | 581 | G | N7-C8-N9 | 5.60 | 115.90 | 113.10 |
| 1 | AA | 639 | G | P-O3'-C3' | 5.60 | 126.42 | 119.70 |
| 1 | AA | 848 | C | N3-C2-O2 | -5.60 | 117.98 | 121.90 |
| 1 | AA | 1031 | C | C5'-C4'-C3' | -5.60 | 107.04 | 116.00 |
| 1 | AA | 1129 | C | C5'-C4'-C3' | 5.60 | 124.96 | 116.00 |
| 3 | AC | 35 | G | N3-C4-N9 | 5.60 | 129.36 | 126.00 |
| 25 | BA | 72 | G | N3-C4-N9 | -5.60 | 122.64 | 126.00 |
| 26 | BB | 34 | U | C2-N3-C4 | -5.60 | 123.64 | 127.00 |
| 26 | BB | 339 | U | C1'-O4'-C4' | 5.60 | 114.38 | 109.90 |
| 26 | BB | 355 | U | N1-C2-N3 | 5.60 | 118.26 | 114.90 |
| 26 | BB | 621 | A | C5-C6-N6 | 5.60 | 128.18 | 123.70 |
| 26 | BB | 1001 | A | N9-C4-C5 | -5.60 | 103.56 | 105.80 |
| 26 | BB | 1031 | G | C4'-C3'-C2' | -5.60 | 97.00 | 102.60 |
| 26 | BB | 1275 | A | N7-C8-N9 | 5.60 | 116.60 | 113.80 |
| 26 | BB | 2195 | U | C5-C6-N1 | -5.60 | 119.90 | 122.70 |
| 26 | BB | 2214 | C | O4'-C1'-C2' | -5.60 | 100.20 | 105.80 |
| 26 | BB | 2294 | G | C5-C6-O6 | -5.60 | 125.24 | 128.60 |
| 26 | BB | 2299 | U | C6-N1-C2 | -5.60 | 117.64 | 121.00 |
| 1 | AA | 198 | G | C5'-C4'-O4' | 5.60 | 115.82 | 109.10 |
| 1 | AA | 270 | A | P-O3'-C3' | 5.60 | 126.42 | 119.70 |
| 1 | AA | 668 | G | C8-N9-C4 | -5.60 | 104.16 | 106.40 |
| 1 | AA | 884 | U | N3-C2-O2 | -5.60 | 118.28 | 122.20 |
| 1 | AA | 935 | A | O4'-C1'-C2' | -5.60 | 100.20 | 105.80 |
| 1 | AA | 1469 | C | C6-N1-C2 | 5.60 | 122.54 | 120.30 |
| 9 | AI | 41 | ASP | CB-CG-OD1 | -5.60 | 113.26 | 118.30 |
| 26 | BB | 856 | G | C1'-O4'-C4' | -5.60 | 105.42 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 930 | G | C6-N1-C2 | -5.60 | 121.74 | 125.10 |
| 26 | BB | 1085 | A | C6-N1-C2 | 5.60 | 121.96 | 118.60 |
| 26 | BB | 1673 | G | O3'-P-O5' | 5.60 | 114.64 | 104.00 |
| 26 | BB | 2002 | G | C6-N1-C2 | -5.60 | 121.74 | 125.10 |
| 26 | BB | 2599 | G | N9-C4-C5 | 5.60 | 107.64 | 105.40 |
| 26 | BB | 2638 | G | C2-N3-C4 | 5.60 | 114.70 | 111.90 |
| 26 | BB | 2644 | G | N1-C6-O6 | -5.60 | 116.54 | 119.90 |
| 1 | AA | 713 | G | C4-C5-C6 | 5.60 | 122.16 | 118.80 |
| 1 | AA | 1373 | G | O5'-P-OP2 | -5.60 | 100.66 | 105.70 |
| 21 | AU | 13 | THR | CA-CB-CG2 | 5.60 | 120.23 | 112.40 |
| 25 | BA | 77 | U | C5'-C4'-O4' | 5.60 | 115.81 | 109.10 |
| 26 | BB | 700 | G | C3'-C2'-C1' | -5.60 | 97.02 | 101.50 |
| 26 | BB | 1328 | A | O4'-C4'-C3' | 5.60 | 110.58 | 106.10 |
| 26 | BB | 2554 | U | N3-C2-O2 | -5.60 | 118.28 | 122.20 |
| 1 | AA | 470 | C | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 1 | AA | 542 | G | N9-C4-C5 | -5.59 | 103.16 | 105.40 |
| 1 | AA | 575 | G | N1-C2-N3 | -5.59 | 120.54 | 123.90 |
| 1 | AA | 585 | G | P-O3'-C3' | -5.59 | 112.99 | 119.70 |
| 1 | AA | 730 | G | N1-C2-N2 | 5.59 | 121.23 | 116.20 |
| 1 | AA | 821 | G | N3-C4-N9 | 5.59 | 129.36 | 126.00 |
| 1 | AA | 861 | G | C4-C5-N7 | 5.59 | 113.04 | 110.80 |
| 1 | AA | 958 | A | O4'-C4'-C3' | 5.59 | 110.58 | 106.10 |
| 4 | AD | 39 | A | C5-C6-N1 | 5.59 | 120.50 | 117.70 |
| 20 | AT | 33 | TYR | CA-CB-CG | 5.59 | 124.03 | 113.40 |
| 25 | BA | 107 | G | C6-C5-N7 | -5.59 | 127.04 | 130.40 |
| 26 | BB | 39 | G | N1-C2-N3 | 5.59 | 127.26 | 123.90 |
| 26 | BB | 116 | C | C2-N3-C4 | -5.59 | 117.10 | 119.90 |
| 26 | BB | 312 | G | N9-C4-C5 | -5.59 | 103.16 | 105.40 |
| 26 | BB | 1378 | A | N9-C4-C5 | 5.59 | 108.04 | 105.80 |
| 26 | BB | 1511 | G | N7-C8-N9 | 5.59 | 115.90 | 113.10 |
| 26 | BB | 2370 | G | C3'-C2'-C1' | -5.59 | 97.02 | 101.50 |
| 26 | BB | 2478 | A | C5'-C4'-O4' | 5.59 | 115.81 | 109.10 |
| 26 | BB | 2585 | U | N3-C2-O2 | -5.59 | 118.28 | 122.20 |
| 26 | BB | 2633 | G | C4-C5-C6 | 5.59 | 122.16 | 118.80 |
| 29 | BE | 196 | ALA | N-CA-CB | -5.59 | 102.27 | 110.10 |
| 1 | AA | 371 | A | C6-N1-C2 | 5.59 | 121.96 | 118.60 |
| 1 | AA | 565 | U | C6-N1-C2 | -5.59 | 117.64 | 121.00 |
| 14 | AN | 71 | ASP | CB-CG-OD1 | -5.59 | 113.27 | 118.30 |
| 26 | BB | 350 | G | N7-C8-N9 | 5.59 | 115.90 | 113.10 |
| 26 | BB | 444 | C | N3-C4-C5 | -5.59 | 119.66 | 121.90 |
| 26 | BB | 630 | G | N3-C2-N2 | -5.59 | 115.98 | 119.90 |
| 26 | BB | 827 | U | C6-N1-C2 | -5.59 | 117.64 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1090 | A | O4'-C1'-N9 | 5.59 | 112.67 | 108.20 |
| 26 | BB | 1362 | C | C4-C5-C6 | -5.59 | 114.60 | 117.40 |
| 26 | BB | 1609 | A | O4'-C4'-C3' | 5.59 | 110.58 | 106.10 |
| 26 | BB | 2020 | A | C6-N1-C2 | 5.59 | 121.96 | 118.60 |
| 1 | AA | 3 | A | N3-C4-C5 | 5.59 | 130.71 | 126.80 |
| 1 | AA | 135 | C | P-O3'-C3' | 5.59 | 126.41 | 119.70 |
| 1 | AA | 945 | G | C5-N7-C8 | -5.59 | 101.50 | 104.30 |
| 4 | AD | 50 | G | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 4 | AD | 61 | U | C2-N3-C4 | -5.59 | 123.64 | 127.00 |
| 26 | BB | 863 | A | N9-C1'-C2' | -5.59 | 105.85 | 112.00 |
| 26 | BB | 1486 | U | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 26 | BB | 1651 | G | N9-C4-C5 | 5.59 | 107.64 | 105.40 |
| 26 | BB | 1717 | A | C5-N7-C8 | 5.59 | 106.70 | 103.90 |
| 26 | BB | 1782 | U | O4'-C4'-C3' | 5.59 | 110.57 | 106.10 |
| 26 | BB | 1826 | G | N3-C4-C5 | -5.59 | 125.81 | 128.60 |
| 26 | BB | 1984 | G | N7-C8-N9 | 5.59 | 115.90 | 113.10 |
| 26 | BB | 2097 | A | O4'-C1'-N9 | 5.59 | 112.67 | 108.20 |
| 26 | BB | 2301 | C | C2'-C3'-O3' | 5.59 | 122.65 | 113.70 |
| 35 | BK | 120 | ASP | CB-CG-OD2 | -5.59 | 113.27 | 118.30 |
| 1 | AA | 769 | G | C6-N1-C2 | -5.59 | 121.75 | 125.10 |
| 1 | AA | 812 | G | N9-C4-C5 | -5.59 | 103.16 | 105.40 |
| 1 | AA | 964 | A | C8-N9-C4 | -5.59 | 103.56 | 105.80 |
| 1 | AA | 1306 | A | N7-C8-N9 | 5.59 | 116.59 | 113.80 |
| 1 | AA | 1327 | C | N1-C2-O2 | 5.59 | 122.25 | 118.90 |
| 1 | AA | 1377 | A | O3'-P-O5' | -5.59 | 93.38 | 104.00 |
| 25 | BA | 62 | C | C1'-O4'-C4' | 5.59 | 114.37 | 109.90 |
| 26 | BB | 430 | A | C4-C5-C6 | -5.59 | 114.20 | 117.00 |
| 26 | BB | 601 | C | P-O3'-C3' | 5.59 | 126.41 | 119.70 |
| 26 | BB | 603 | A | C5'-C4'-O4' | 5.59 | 115.81 | 109.10 |
| 26 | BB | 727 | A | C3'-C2'-C1' | -5.59 | 97.03 | 101.50 |
| 26 | BB | 2618 | G | C6-N1-C2 | -5.59 | 121.75 | 125.10 |
| 26 | BB | 2656 | U | C5-C4-O4 | -5.59 | 122.55 | 125.90 |
| 26 | BB | 2670 | A | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 31 | BG | 145 | VAL | CG1-CB-CG2 | -5.59 | 101.96 | 110.90 |
| 49 | BY | 59 | PHE | CG-CD2-CE2 | -5.59 | 114.65 | 120.80 |
| 1 | AA | 511 | C | N3-C4-N4 | 5.59 | 121.91 | 118.00 |
| 1 | AA | 1295 | U | C5'-C4'-O4' | 5.59 | 115.81 | 109.10 |
| 1 | AA | 1399 | C | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 2 | AB | 68 | C | C3'-C2'-C1' | -5.59 | 97.03 | 101.50 |
| 26 | BB | 300 | A | C8-N9-C4 | -5.59 | 103.56 | 105.80 |
| 26 | BB | 437 | U | O4'-C1'-N1 | 5.59 | 112.67 | 108.20 |
| 26 | BB | 805 | G | O3'-P-O5' | 5.59 | 114.62 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1233 | C | C6-N1-C2 | 5.59 | 122.53 | 120.30 |
| 26 | BB | 1377 | G | C5'-C4'-O4' | 5.59 | 115.81 | 109.10 |
| 26 | BB | 1436 | G | N3-C4-N9 | -5.59 | 122.65 | 126.00 |
| 26 | BB | 1817 | G | C4-C5-N7 | 5.59 | 113.03 | 110.80 |
| 26 | BB | 1932 | A | C5'-C4'-O4' | 5.59 | 115.81 | 109.10 |
| 26 | BB | 2815 | C | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 29 | BE | 87 | GLY | O-C-N | 5.59 | 131.64 | 122.70 |
| 1 | AA | 15 | G | N1-C6-O6 | 5.59 | 123.25 | 119.90 |
| 1 | AA | 31 | G | N3-C4-N9 | -5.59 | 122.65 | 126.00 |
| 1 | AA | 560 | A | C4-C5-N7 | -5.59 | 107.91 | 110.70 |
| 1 | AA | 933 | G | C3'-C2'-C1' | 5.59 | 105.97 | 101.50 |
| 1 | AA | 1384 | C | C5-C4-N4 | -5.59 | 116.29 | 120.20 |
| 2 | AB | 19 | G | C8-N9-C4 | -5.59 | 104.17 | 106.40 |
| 4 | AD | 40 | C | C4-C5-C6 | 5.59 | 120.19 | 117.40 |
| 4 | AD | 73 | A | P-O3'-C3' | 5.59 | 126.40 | 119.70 |
| 26 | BB | 369 | U | N3-C2-O2 | -5.59 | 118.29 | 122.20 |
| 26 | BB | 401 | A | C5-C6-N6 | -5.59 | 119.23 | 123.70 |
| 26 | BB | 532 | A | C5-C6-N1 | 5.59 | 120.49 | 117.70 |
| 26 | BB | 819 | A | C5-N7-C8 | 5.59 | 106.69 | 103.90 |
| 26 | BB | 917 | A | C6-N1-C2 | 5.59 | 121.95 | 118.60 |
| 26 | BB | 1359 | A | C2-N3-C4 | -5.59 | 107.81 | 110.60 |
| 26 | BB | 2399 | G | N1-C2-N3 | -5.59 | 120.55 | 123.90 |
| 26 | BB | 2613 | U | O4'-C1'-N1 | 5.59 | 112.67 | 108.20 |
| 26 | BB | 2717 | C | C4-C5-C6 | -5.59 | 114.61 | 117.40 |
| 26 | BB | 2873 | A | N7-C8-N9 | -5.59 | 111.01 | 113.80 |
| 30 | BF | 109 | LEU | CB-CG-CD1 | -5.59 | 101.50 | 111.00 |
| 1 | AA | 833 | G | C8-N9-C4 | 5.58 | 108.63 | 106.40 |
| 1 | AA | 968 | A | O3'-P-O5' | -5.58 | 93.39 | 104.00 |
| 1 | AA | 1359 | C | O3'-P-O5' | -5.58 | 93.39 | 104.00 |
| 1 | AA | 1444 | U | C5-C4-O4 | -5.58 | 122.55 | 125.90 |
| 1 | AA | 1472 | U | C5-C6-N1 | -5.58 | 119.91 | 122.70 |
| 26 | BB | 396 | G | C5-N7-C8 | 5.58 | 107.09 | 104.30 |
| 26 | BB | 651 | G | C6-N1-C2 | -5.58 | 121.75 | 125.10 |
| 26 | BB | 755 | U | O4'-C1'-N1 | 5.58 | 112.67 | 108.20 |
| 26 | BB | 1060 | U | C5-C4-O4 | -5.58 | 122.55 | 125.90 |
| 26 | BB | 1278 | C | C1'-O4'-C4' | -5.58 | 105.43 | 109.90 |
| 26 | BB | 1346 | G | C5-C6-O6 | 5.58 | 131.95 | 128.60 |
| 26 | BB | 1579 | A | C3'-C2'-C1' | -5.58 | 97.03 | 101.50 |
| 26 | BB | 1950 | G | N1-C6-O6 | -5.58 | 116.55 | 119.90 |
| 26 | BB | 2699 | C | C6-N1-C2 | -5.58 | 118.07 | 120.30 |
| 1 | AA | 91 | U | C5'-C4'-O4' | 5.58 | 115.80 | 109.10 |
| 1 | AA | 308 | C | C1'-O4'-C4' | 5.58 | 114.37 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 577 | G | C6-N1-C2 | -5.58 | 121.75 | 125.10 |
| 1 | AA | 858 | G | C4-C5-C6 | 5.58 | 122.15 | 118.80 |
| 1 | AA | 883 | C | N1-C2-O2 | 5.58 | 122.25 | 118.90 |
| 4 | AD | 59 | A | C1'-O4'-C4' | 5.58 | 114.37 | 109.90 |
| 26 | BB | 633 | A | N9-C1'-C2' | -5.58 | 105.86 | 112.00 |
| 26 | BB | 668 | A | C2-N3-C4 | 5.58 | 113.39 | 110.60 |
| 26 | BB | 744 | U | C4'-C3'-C2' | -5.58 | 97.02 | 102.60 |
| 26 | BB | 874 | G | C6-N1-C2 | -5.58 | 121.75 | 125.10 |
| 26 | BB | 1243 | C | P-O3'-C3' | 5.58 | 126.40 | 119.70 |
| 26 | BB | 1266 | G | C4-C5-C6 | 5.58 | 122.15 | 118.80 |
| 26 | BB | 2032 | G | N9-C1'-C2' | 5.58 | 121.26 | 114.00 |
| 26 | BB | 2769 | U | C2-N3-C4 | 5.58 | 130.35 | 127.00 |
| 1 | AA | 319 | G | C5'-C4'-O4' | 5.58 | 115.80 | 109.10 |
| 1 | AA | 377 | G | C4'-C3'-C2' | -5.58 | 97.02 | 102.60 |
| 1 | AA | 574 | A | N1-C2-N3 | -5.58 | 126.51 | 129.30 |
| 1 | AA | 596 | A | N7-C8-N9 | 5.58 | 116.59 | 113.80 |
| 1 | AA | 622 | A | C5-C6-N6 | 5.58 | 128.16 | 123.70 |
| 1 | AA | 1079 | G | C5'-C4'-O4' | 5.58 | 115.80 | 109.10 |
| 4 | AD | 11 | A | C3'-C2'-C1' | -5.58 | 97.03 | 101.50 |
| 25 | BA | 56 | G | C4-C5-N7 | -5.58 | 108.57 | 110.80 |
| 26 | BB | 58 | G | C4-C5-C6 | -5.58 | 115.45 | 118.80 |
| 26 | BB | 78 | U | O4'-C1'-N1 | 5.58 | 112.67 | 108.20 |
| 26 | BB | 431 | U | N1-C1'-C2' | -5.58 | 105.86 | 112.00 |
| 26 | BB | 769 | U | N3-C4-O4 | -5.58 | 115.49 | 119.40 |
| 26 | BB | 847 | U | OP2-P-O3' | 5.58 | 117.48 | 105.20 |
| 26 | BB | 1035 | U | C1'-O4'-C4' | -5.58 | 105.44 | 109.90 |
| 26 | BB | 1113 | U | C5-C6-N1 | 5.58 | 125.49 | 122.70 |
| 26 | BB | 1253 | A | C8-N9-C4 | -5.58 | 103.57 | 105.80 |
| 26 | BB | 1433 | A | C1'-O4'-C4' | -5.58 | 105.44 | 109.90 |
| 26 | BB | 2469 | A | N1-C6-N6 | -5.58 | 115.25 | 118.60 |
| 26 | BB | 2832 | U | P-O3'-C3' | 5.58 | 126.40 | 119.70 |
| 26 | BB | 2835 | A | C5-N7-C8 | -5.58 | 101.11 | 103.90 |
| 31 | BG | 6 | TYR | CB-CG-CD2 | -5.58 | 117.65 | 121.00 |
| 49 | BY | 42 | THR | CA-CB-CG2 | 5.58 | 120.22 | 112.40 |
| 1 | AA | 674 | G | C5-C6-O6 | 5.58 | 131.95 | 128.60 |
| 1 | AA | 859 | G | N1-C2-N3 | -5.58 | 120.55 | 123.90 |
| 26 | BB | 164 | C | C5-C4-N4 | -5.58 | 116.29 | 120.20 |
| 26 | BB | 544 | C | N3-C2-O2 | -5.58 | 117.99 | 121.90 |
| 26 | BB | 1225 | G | C1'-O4'-C4' | -5.58 | 105.44 | 109.90 |
| 26 | BB | 1536 | C | C4'-C3'-C2' | -5.58 | 97.02 | 102.60 |
| 26 | BB | 2168 | G | C4-C5-N7 | 5.58 | 113.03 | 110.80 |
| 26 | BB | 2377 | A | C3'-C2'-C1' | 5.58 | 105.96 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2630 | G | C4-C5-N7 | -5.58 | 108.57 | 110.80 |
| 39 | BO | 75 | GLU | N-CA-CB | -5.58 | 100.56 | 110.60 |
| 1 | AA | 346 | G | O3'-P-O5' | 5.58 | 114.60 | 104.00 |
| 1 | AA | 928 | G | N1-C6-O6 | 5.58 | 123.25 | 119.90 |
| 4 | AD | 68 | C | N1-C1'-C2' | -5.58 | 105.86 | 112.00 |
| 25 | BA | 73 | A | C1'-O4'-C4' | -5.58 | 105.44 | 109.90 |
| 26 | BB | 24 | G | N3-C2-N2 | 5.58 | 123.80 | 119.90 |
| 26 | BB | 193 | U | N3-C4-O4 | -5.58 | 115.50 | 119.40 |
| 26 | BB | 263 | G | N1-C6-O6 | -5.58 | 116.55 | 119.90 |
| 26 | BB | 399 | U | O4'-C1'-C2' | 5.58 | 112.62 | 107.60 |
| 26 | BB | 410 | G | C5-C6-N1 | 5.58 | 114.29 | 111.50 |
| 26 | BB | 426 | C | C5-C6-N1 | 5.58 | 123.79 | 121.00 |
| 26 | BB | 625 | G | C2-N3-C4 | 5.58 | 114.69 | 111.90 |
| 26 | BB | 891 | G | C5-N7-C8 | 5.58 | 107.09 | 104.30 |
| 26 | BB | 1399 | C | C5-C4-N4 | -5.58 | 116.30 | 120.20 |
| 26 | BB | 1847 | A | C8-N9-C4 | -5.58 | 103.57 | 105.80 |
| 26 | BB | 2341 | G | C5-N7-C8 | 5.58 | 107.09 | 104.30 |
| 26 | BB | 2392 | A | C4-C5-C6 | 5.58 | 119.79 | 117.00 |
| 1 | AA | 916 | U | N1-C2-N3 | 5.58 | 118.25 | 114.90 |
| 1 | AA | 1405 | G | N3-C4-N9 | -5.58 | 122.65 | 126.00 |
| 26 | BB | 354 | A | C8-N9-C4 | -5.58 | 103.57 | 105.80 |
| 26 | BB | 2494 | G | C8-N9-C1' | 5.58 | 134.25 | 127.00 |
| 1 | AA | 255 | G | C5-C6-N1 | 5.58 | 114.29 | 111.50 |
| 1 | AA | 874 | G | C8-N9-C4 | -5.58 | 104.17 | 106.40 |
| 1 | AA | 1064 | G | C5-N7-C8 | 5.58 | 107.09 | 104.30 |
| 1 | AA | 1089 | G | C5-C6-N1 | 5.58 | 114.29 | 111.50 |
| 1 | AA | 1101 | A | N3-C4-N9 | -5.58 | 122.94 | 127.40 |
| 1 | AA | 1111 | A | C6-N1-C2 | -5.58 | 115.25 | 118.60 |
| 1 | AA | 1312 | G | C8-N9-C4 | -5.58 | 104.17 | 106.40 |
| 3 | AC | 41 | A | P-O3'-C3' | 5.58 | 126.39 | 119.70 |
| 13 | AM | 79 | PRO | N-CD-CG | 5.58 | 111.56 | 103.20 |
| 26 | BB | 811 | U | C5'-C4'-O4' | -5.58 | 102.41 | 109.10 |
| 26 | BB | 1142 | A | C4-C5-C6 | 5.58 | 119.79 | 117.00 |
| 26 | BB | 1274 | A | C6-C5-N7 | -5.58 | 128.40 | 132.30 |
| 26 | BB | 2104 | C | C6-N1-C2 | -5.58 | 118.07 | 120.30 |
| 26 | BB | 2125 | G | N7-C8-N9 | -5.58 | 110.31 | 113.10 |
| 26 | BB | 2178 | C | C3'-C2'-C1' | 5.58 | 105.96 | 101.50 |
| 26 | BB | 2736 | A | C4'-C3'-C2' | -5.58 | 97.03 | 102.60 |
| 26 | BB | 2796 | U | C1'-O4'-C4' | -5.58 | 105.44 | 109.90 |
| 46 | BV | 79 | ASP | CB-CG-OD2 | -5.58 | 113.28 | 118.30 |
| 1 | AA | 468 | A | C1'-O4'-C4' | -5.57 | 105.44 | 109.90 |
| 1 | AA | 470 | C | N1-C2-O2 | 5.57 | 122.24 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1033 | G | C5-C6-O6 | 5.57 | 131.94 | 128.60 |
| 1 | AA | 1117 | A | C6-N1-C2 | -5.57 | 115.26 | 118.60 |
| 1 | AA | 1531 | A | C1'-O4'-C4' | -5.57 | 105.44 | 109.90 |
| 2 | AB | 5 | G | C4-C5-C6 | 5.57 | 122.14 | 118.80 |
| 26 | BB | 183 | C | N3-C4-N4 | 5.57 | 121.90 | 118.00 |
| 26 | BB | 283 | G | C3'-C2'-C1' | -5.57 | 97.04 | 101.50 |
| 26 | BB | 529 | A | O4'-C1'-N9 | 5.57 | 112.66 | 108.20 |
| 26 | BB | 624 | C | O4'-C1'-N1 | 5.57 | 112.66 | 108.20 |
| 26 | BB | 676 | A | C1'-O4'-C4' | 5.57 | 114.36 | 109.90 |
| 26 | BB | 819 | A | N7-C8-N9 | -5.57 | 111.01 | 113.80 |
| 26 | BB | 839 | U | C5'-C4'-C3' | -5.57 | 107.08 | 116.00 |
| 26 | BB | 1129 | A | N9-C1'-C2' | 5.57 | 121.25 | 114.00 |
| 26 | BB | 1214 | A | C6-N1-C2 | 5.57 | 121.94 | 118.60 |
| 26 | BB | 1236 | G | N3-C4-N9 | -5.57 | 122.66 | 126.00 |
| 26 | BB | 1515 | A | C5-C6-N6 | 5.57 | 128.16 | 123.70 |
| 26 | BB | 1874 | C | N3-C4-C5 | -5.57 | 119.67 | 121.90 |
| 26 | BB | 2381 | A | C5-C6-N1 | 5.57 | 120.49 | 117.70 |
| 26 | BB | 2472 | G | C4-C5-N7 | -5.57 | 108.57 | 110.80 |
| 41 | BQ | 69 | ASP | CB-CG-OD1 | -5.57 | 113.28 | 118.30 |
| 1 | AA | 481 | G | C4-C5-C6 | 5.57 | 122.14 | 118.80 |
| 1 | AA | 904 | U | N1-C1'-C2' | -5.57 | 105.87 | 112.00 |
| 26 | BB | 295 | G | C4-C5-N7 | -5.57 | 108.57 | 110.80 |
| 26 | BB | 1348 | C | O4'-C1'-N1 | 5.57 | 112.66 | 108.20 |
| 26 | BB | 1612 | C | C4'-C3'-C2' | -5.57 | 97.03 | 102.60 |
| 26 | BB | 1978 | A | C4-C5-N7 | -5.57 | 107.91 | 110.70 |
| 26 | BB | 2211 | A | O5'-C5'-C4' | 5.57 | 122.29 | 111.70 |
| 26 | BB | 2319 | G | C1'-O4'-C4' | -5.57 | 105.44 | 109.90 |
| 26 | BB | 2779 | U | C5-C4-O4 | -5.57 | 122.56 | 125.90 |
| 1 | AA | 841 | C | N1-C1'-C2' | 5.57 | 121.24 | 114.00 |
| 1 | AA | 1230 | C | N3-C2-O2 | -5.57 | 118.00 | 121.90 |
| 1 | AA | 1448 | C | C2-N3-C4 | 5.57 | 122.69 | 119.90 |
| 2 | AB | 26 | A | N1-C6-N6 | 5.57 | 121.94 | 118.60 |
| 11 | AK | 113 | ARG | NE-CZ-NH2 | -5.57 | 117.51 | 120.30 |
| 25 | BA | 7 | G | C2-N3-C4 | 5.57 | 114.69 | 111.90 |
| 26 | BB | 454 | A | N1-C6-N6 | -5.57 | 115.26 | 118.60 |
| 26 | BB | 767 | U | N3-C4-C5 | 5.57 | 117.94 | 114.60 |
| 26 | BB | 1084 | A | C3'-C2'-C1' | 5.57 | 105.96 | 101.50 |
| 26 | BB | 1348 | C | N3-C2-O2 | -5.57 | 118.00 | 121.90 |
| 26 | BB | 1684 | G | P-O3'-C3' | 5.57 | 126.39 | 119.70 |
| 26 | BB | 2794 | C | C5'-C4'-O4' | 5.57 | 115.78 | 109.10 |
| 32 | BH | 103 | ASN | C-N-CA | 5.57 | 135.63 | 121.70 |
| 1 | AA | 799 | G | O4'-C1'-N9 | 5.57 | 112.66 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 910 | C | N3-C4-N4 | 5.57 | 121.90 | 118.00 |
| 26 | BB | 2335 | A | C5'-C4'-O4' | 5.57 | 115.78 | 109.10 |
| 1 | AA | 135 | C | N3-C2-O2 | -5.57 | 118.00 | 121.90 |
| 1 | AA | 142 | G | C5'-C4'-O4' | 5.57 | 115.78 | 109.10 |
| 1 | AA | 151 | A | N1-C6-N6 | -5.57 | 115.26 | 118.60 |
| 1 | AA | 336 | A | N3-C4-C5 | -5.57 | 122.90 | 126.80 |
| 1 | AA | 374 | A | N9-C1'-C2' | -5.57 | 105.88 | 112.00 |
| 1 | AA | 609 | A | C5-N7-C8 | -5.57 | 101.12 | 103.90 |
| 1 | AA | 618 | C | C6-N1-C2 | 5.57 | 122.53 | 120.30 |
| 1 | AA | 833 | G | C6-C5-N7 | -5.57 | 127.06 | 130.40 |
| 1 | AA | 978 | A | N7-C8-N9 | -5.57 | 111.02 | 113.80 |
| 1 | AA | 1072 | G | C1'-O4'-C4' | 5.57 | 114.35 | 109.90 |
| 1 | AA | 1436 | U | O4'-C1'-N1 | 5.57 | 112.66 | 108.20 |
| 2 | AB | 48 | U | N3-C4-O4 | -5.57 | 115.50 | 119.40 |
| 26 | BB | 124 | G | O4'-C4'-C3' | -5.57 | 98.43 | 104.00 |
| 26 | BB | 742 | A | N1-C2-N3 | -5.57 | 126.52 | 129.30 |
| 26 | BB | 800 | A | C4'-C3'-C2' | 5.57 | 108.17 | 102.60 |
| 26 | BB | 809 | G | C3'-C2'-C1' | -5.57 | 97.05 | 101.50 |
| 26 | BB | 933 | A | C8-N9-C4 | -5.57 | 103.57 | 105.80 |
| 26 | BB | 1002 | G | C6-N1-C2 | -5.57 | 121.76 | 125.10 |
| 26 | BB | 1677 | A | C8-N9-C4 | 5.57 | 108.03 | 105.80 |
| 26 | BB | 1876 | A | C1'-O4'-C4' | 5.57 | 114.35 | 109.90 |
| 26 | BB | 2207 | C | C3'-C2'-C1' | -5.57 | 97.05 | 101.50 |
| 26 | BB | 2395 | C | N3-C2-O2 | -5.57 | 118.00 | 121.90 |
| 26 | BB | 2451 | A | C1'-O4'-C4' | -5.57 | 105.44 | 109.90 |
| 26 | BB | 2558 | C | P-O5'-C5' | 5.57 | 129.81 | 120.90 |
| 26 | BB | 2801 | G | C8-N9-C4 | -5.57 | 104.17 | 106.40 |
| 1 | AA | 19 | A | O4'-C1'-N9 | 5.57 | 112.65 | 108.20 |
| 1 | AA | 464 | U | O4'-C1'-N1 | 5.57 | 112.65 | 108.20 |
| 1 | AA | 645 | G | C8-N9-C4 | 5.57 | 108.63 | 106.40 |
| 1 | AA | 752 | G | C8-N9-C4 | -5.57 | 104.17 | 106.40 |
| 1 | AA | 840 | C | C5-C4-N4 | 5.57 | 124.10 | 120.20 |
| 1 | AA | 1325 | C | C5-C6-N1 | -5.57 | 118.22 | 121.00 |
| 1 | AA | 1532 | U | C5'-C4'-C3' | -5.57 | 107.09 | 116.00 |
| 4 | AD | 23 | G | N9-C4-C5 | 5.57 | 107.63 | 105.40 |
| 26 | BB | 43 | G | P-O3'-C3' | 5.57 | 126.38 | 119.70 |
| 26 | BB | 83 | A | N9-C4-C5 | -5.57 | 103.57 | 105.80 |
| 26 | BB | 240 | C | C4-C5-C6 | 5.57 | 120.18 | 117.40 |
| 26 | BB | 478 | A | N3-C4-C5 | 5.57 | 130.70 | 126.80 |
| 26 | BB | 963 | U | C1'-O4'-C4' | -5.57 | 105.45 | 109.90 |
| 26 | BB | 1047 | G | C5'-C4'-O4' | 5.57 | 115.78 | 109.10 |
| 26 | BB | 1191 | G | N9-C1'-C2' | -5.57 | 105.88 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1626 | A | C5-C6-N6 | 5.57 | 128.15 | 123.70 |
| 26 | BB | 2064 | C | N1-C2-O2 | 5.57 | 122.24 | 118.90 |
| 26 | BB | 2225 | A | C5-C6-N1 | -5.57 | 114.92 | 117.70 |
| 26 | BB | 2333 | A | C4'-C3'-C2' | -5.57 | 97.03 | 102.60 |
| 26 | BB | 2781 | A | C5'-C4'-O4' | 5.57 | 115.78 | 109.10 |
| 26 | BB | 2816 | G | N1-C6-O6 | -5.57 | 116.56 | 119.90 |
| 1 | AA | 599 | C | C3'-C2'-C1' | 5.56 | 105.95 | 101.50 |
| 1 | AA | 1189 | U | O5'-P-OP2 | -5.56 | 100.69 | 105.70 |
| 1 | AA | 1522 | U | N1-C2-O2 | 5.56 | 126.69 | 122.80 |
| 6 | AF | 200 | TRP | NE1-CE2-CZ2 | 5.56 | 136.52 | 130.40 |
| 8 | AH | 156 | ARG | NE-CZ-NH1 | 5.56 | 123.08 | 120.30 |
| 15 | AO | 37 | TYR | CG-CD2-CE2 | -5.56 | 116.85 | 121.30 |
| 26 | BB | 214 | G | C2-N3-C4 | 5.56 | 114.68 | 111.90 |
| 26 | BB | 388 | G | C8-N9-C4 | -5.56 | 104.17 | 106.40 |
| 26 | BB | 1320 | C | C1'-O4'-C4' | -5.56 | 105.45 | 109.90 |
| 26 | BB | 1525 | A | N9-C1'-C2' | -5.56 | 105.88 | 112.00 |
| 1 | AA | 242 | G | C5-N7-C8 | -5.56 | 101.52 | 104.30 |
| 1 | AA | 616 | G | N1-C2-N2 | 5.56 | 121.21 | 116.20 |
| 1 | AA | 788 | U | C5-C6-N1 | 5.56 | 125.48 | 122.70 |
| 1 | AA | 976 | G | C1'-O4'-C4' | 5.56 | 114.35 | 109.90 |
| 1 | AA | 1242 | G | C3'-C2'-C1' | 5.56 | 105.95 | 101.50 |
| 1 | AA | 1261 | A | C5-C6-N6 | -5.56 | 119.25 | 123.70 |
| 3 | AC | 26 | U | N1-C2-N3 | 5.56 | 118.24 | 114.90 |
| 10 | AJ | 90 | VAL | CA-CB-CG1 | -5.56 | 102.56 | 110.90 |
| 25 | BA | 24 | G | P-O3'-C3' | 5.56 | 126.37 | 119.70 |
| 26 | BB | 171 | U | O4'-C1'-C2' | -5.56 | 100.24 | 105.80 |
| 26 | BB | 629 | G | C5-C6-N1 | 5.56 | 114.28 | 111.50 |
| 26 | BB | 1091 | G | C8-N9-C4 | -5.56 | 104.17 | 106.40 |
| 26 | BB | 1229 | C | C5'-C4'-C3' | -5.56 | 107.10 | 116.00 |
| 26 | BB | 1509 | A | C6-N1-C2 | -5.56 | 115.26 | 118.60 |
| 26 | BB | 1666 | G | N3-C2-N2 | 5.56 | 123.79 | 119.90 |
| 26 | BB | 1695 | G | N7-C8-N9 | 5.56 | 115.88 | 113.10 |
| 26 | BB | 1972 | G | N3-C4-N9 | 5.56 | 129.34 | 126.00 |
| 26 | BB | 2053 | G | C4-C5-C6 | 5.56 | 122.14 | 118.80 |
| 26 | BB | 2363 | G | C4-C5-C6 | 5.56 | 122.14 | 118.80 |
| 26 | BB | 2431 | U | C4'-C3'-C2' | -5.56 | 97.04 | 102.60 |
| 26 | BB | 2818 | U | C4-C5-C6 | 5.56 | 123.04 | 119.70 |
| 26 | BB | 2825 | G | N3-C4-N9 | 5.56 | 129.34 | 126.00 |
| 26 | BB | 2864 | G | C6-N1-C2 | -5.56 | 121.76 | 125.10 |
| 45 | BU | 75 | PHE | CB-CG-CD2 | -5.56 | 116.91 | 120.80 |
| 26 | BB | 943 | A | C5-C6-N1 | -5.56 | 114.92 | 117.70 |
| 26 | BB | 1036 | G | N1-C6-O6 | -5.56 | 116.56 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1673 | G | O4'-C4'-C3' | 5.56 | 110.55 | 106.10 |
| 26 | BB | 1922 | G | C6-N1-C2 | -5.56 | 121.76 | 125.10 |
| 26 | BB | 2337 | G | O4'-C1'-N9 | 5.56 | 112.65 | 108.20 |
| 1 | AA | 9 | G | O5'-P-OP2 | -5.56 | 100.70 | 105.70 |
| 1 | AA | 195 | A | C3'-C2'-C1' | 5.56 | 105.95 | 101.50 |
| 1 | AA | 361 | G | C4-C5-C6 | 5.56 | 122.14 | 118.80 |
| 1 | AA | 781 | A | C4-C5-N7 | -5.56 | 107.92 | 110.70 |
| 1 | AA | 1313 | U | C5-C4-O4 | -5.56 | 122.56 | 125.90 |
| 4 | AD | 53 | G | C5-N7-C8 | 5.56 | 107.08 | 104.30 |
| 6 | AF | 145 | ALA | CB-CA-C | 5.56 | 118.44 | 110.10 |
| 25 | BA | 73 | A | P-O3'-C3' | 5.56 | 126.37 | 119.70 |
| 26 | BB | 239 | C | O4'-C4'-C3' | 5.56 | 110.55 | 106.10 |
| 26 | BB | 273 | G | N9-C4-C5 | 5.56 | 107.62 | 105.40 |
| 26 | BB | 330 | A | C5'-C4'-O4' | 5.56 | 115.77 | 109.10 |
| 26 | BB | 544 | C | N1-C2-O2 | 5.56 | 122.24 | 118.90 |
| 26 | BB | 695 | G | C4-C5-N7 | 5.56 | 113.02 | 110.80 |
| 26 | BB | 800 | A | C5-C6-N6 | 5.56 | 128.15 | 123.70 |
| 26 | BB | 1785 | A | C5'-C4'-O4' | 5.56 | 115.77 | 109.10 |
| 26 | BB | 1914 | C | O4'-C1'-N1 | 5.56 | 112.65 | 108.20 |
| 26 | BB | 1921 | G | C6-C5-N7 | -5.56 | 127.06 | 130.40 |
| 26 | BB | 1970 | A | C4-C5-N7 | -5.56 | 107.92 | 110.70 |
| 26 | BB | 2812 | G | N1-C2-N3 | -5.56 | 120.56 | 123.90 |
| 1 | AA | 453 | G | N9-C1'-C2' | -5.56 | 105.89 | 112.00 |
| 1 | AA | 1458 | G | N3-C2-N2 | -5.56 | 116.01 | 119.90 |
| 1 | AA | 1502 | A | C4'-C3'-C2' | -5.56 | 97.04 | 102.60 |
| 3 | AC | 30 | U | P-O3'-C3' | 5.56 | 126.37 | 119.70 |
| 4 | AD | 9 | G | C5-C6-N1 | 5.56 | 114.28 | 111.50 |
| 26 | BB | 173 | A | N7-C8-N9 | 5.56 | 116.58 | 113.80 |
| 26 | BB | 577 | G | C1'-O4'-C4' | 5.56 | 114.35 | 109.90 |
| 26 | BB | 750 | A | C3'-C2'-C1' | 5.56 | 105.95 | 101.50 |
| 26 | BB | 1014 | A | C5-C6-N6 | -5.56 | 119.25 | 123.70 |
| 26 | BB | 1421 | G | C4-C5-C6 | -5.56 | 115.47 | 118.80 |
| 26 | BB | 1507 | C | N3-C2-O2 | -5.56 | 118.01 | 121.90 |
| 26 | BB | 1761 | C | O4'-C1'-N1 | 5.56 | 112.65 | 108.20 |
| 26 | BB | 2084 | C | C5-C6-N1 | 5.56 | 123.78 | 121.00 |
| 26 | BB | 2086 | U | C5-C6-N1 | -5.56 | 119.92 | 122.70 |
| 26 | BB | 2307 | G | N9-C4-C5 | -5.56 | 103.18 | 105.40 |
| 1 | AA | 635 | A | O4'-C1'-N9 | 5.56 | 112.64 | 108.20 |
| 1 | AA | 665 | A | C3'-C2'-C1' | -5.56 | 97.06 | 101.50 |
| 26 | BB | 355 | U | N1-C2-O2 | 5.56 | 126.69 | 122.80 |
| 26 | BB | 724 | U | N1-C2-N3 | 5.56 | 118.23 | 114.90 |
| 26 | BB | 1614 | A | P-O3'-C3' | 5.56 | 126.37 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2232 | C | O4'-C1'-C2' | -5.56 | 100.24 | 105.80 |
| 1 | AA | 56 | U | C6-N1-C2 | -5.55 | 117.67 | 121.00 |
| 26 | BB | 156 | A | N3-C4-C5 | -5.55 | 122.91 | 126.80 |
| 26 | BB | 281 | C | N3-C2-O2 | -5.55 | 118.01 | 121.90 |
| 26 | BB | 303 | G | P-O3'-C3' | 5.55 | 126.36 | 119.70 |
| 26 | BB | 915 | C | N3-C4-C5 | 5.55 | 124.12 | 121.90 |
| 26 | BB | 1505 | A | C5-C6-N1 | 5.55 | 120.48 | 117.70 |
| 26 | BB | 1525 | A | C5-C6-N1 | -5.55 | 114.92 | 117.70 |
| 26 | BB | 1623 | G | O4'-C1'-N9 | 5.55 | 112.64 | 108.20 |
| 26 | BB | 1739 | A | C8-N9-C4 | -5.55 | 103.58 | 105.80 |
| 26 | BB | 2446 | G | O4'-C1'-C2' | 5.55 | 112.60 | 107.60 |
| 1 | AA | 422 | C | N3-C2-O2 | 5.55 | 125.79 | 121.90 |
| 1 | AA | 542 | G | C5'-C4'-C3' | -5.55 | 107.11 | 116.00 |
| 1 | AA | 1058 | G | C4-C5-N7 | -5.55 | 108.58 | 110.80 |
| 3 | AC | 33 | A | C5-C6-N6 | -5.55 | 119.26 | 123.70 |
| 3 | AC | 45 | G | C6-C5-N7 | -5.55 | 127.07 | 130.40 |
| 26 | BB | 154 | U | C4'-C3'-C2' | -5.55 | 97.05 | 102.60 |
| 26 | BB | 309 | A | N9-C4-C5 | 5.55 | 108.02 | 105.80 |
| 26 | BB | 670 | A | C5'-C4'-O4' | -5.55 | 102.44 | 109.10 |
| 26 | BB | 946 | C | N3-C4-N4 | 5.55 | 121.89 | 118.00 |
| 26 | BB | 2067 | G | C4-C5-N7 | -5.55 | 108.58 | 110.80 |
| 1 | AA | 97 | G | C6-C5-N7 | -5.55 | 127.07 | 130.40 |
| 1 | AA | 148 | G | C4-C5-C6 | 5.55 | 122.13 | 118.80 |
| 1 | AA | 387 | U | N3-C4-O4 | 5.55 | 123.29 | 119.40 |
| 2 | AB | 10 | G | C3'-C2'-C1' | 5.55 | 105.94 | 101.50 |
| 16 | AP | 2 | ARG | CD-NE-CZ | 5.55 | 131.37 | 123.60 |
| 25 | BA | 27 | C | C2-N3-C4 | 5.55 | 122.68 | 119.90 |
| 25 | BA | 108 | A | C4'-C3'-C2' | 5.55 | 108.15 | 102.60 |
| 26 | BB | 636 | G | C3'-C2'-C1' | 5.55 | 105.94 | 101.50 |
| 26 | BB | 788 | A | N7-C8-N9 | 5.55 | 116.58 | 113.80 |
| 26 | BB | 888 | C | C5-C4-N4 | 5.55 | 124.09 | 120.20 |
| 26 | BB | 1025 | G | C5-C6-N1 | 5.55 | 114.28 | 111.50 |
| 26 | BB | 1497 | U | N3-C2-O2 | -5.55 | 118.31 | 122.20 |
| 26 | BB | 1574 | C | C6-N1-C2 | -5.55 | 118.08 | 120.30 |
| 26 | BB | 1695 | G | C3'-C2'-C1' | 5.55 | 105.94 | 101.50 |
| 26 | BB | 1988 | G | O4'-C1'-N9 | 5.55 | 112.64 | 108.20 |
| 26 | BB | 2553 | G | C5-C6-N1 | 5.55 | 114.28 | 111.50 |
| 26 | BB | 2560 | A | C5-C6-N6 | -5.55 | 119.26 | 123.70 |
| 26 | BB | 2577 | A | C6-N1-C2 | -5.55 | 115.27 | 118.60 |
| 34 | BJ | 54 | VAL | CA-CB-CG2 | 5.55 | 119.23 | 110.90 |
| 1 | AA | 30 | U | N3-C4-C5 | 5.55 | 117.93 | 114.60 |
| 1 | AA | 362 | G | N3-C2-N2 | 5.55 | 123.78 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 432 | A | O4'-C1'-N9 | 5.55 | 112.64 | 108.20 |
| 1 | AA | 643 | C | C5-C6-N1 | -5.55 | 118.22 | 121.00 |
| 1 | AA | 1533 | C | C5-C4-N4 | 5.55 | 124.08 | 120.20 |
| 26 | BB | 420 | C | N1-C2-N3 | 5.55 | 123.08 | 119.20 |
| 26 | BB | 840 | C | C4-C5-C6 | -5.55 | 114.63 | 117.40 |
| 26 | BB | 1011 | G | O4'-C1'-N9 | 5.55 | 112.64 | 108.20 |
| 26 | BB | 1204 | A | N3-C4-C5 | -5.55 | 122.92 | 126.80 |
| 26 | BB | 1816 | C | C5'-C4'-C3' | -5.55 | 107.12 | 116.00 |
| 26 | BB | 1956 | U | N3-C4-O4 | 5.55 | 123.28 | 119.40 |
| 26 | BB | 2225 | A | N3-C4-C5 | -5.55 | 122.92 | 126.80 |
| 26 | BB | 2481 | G | C4-N9-C1' | 5.55 | 133.71 | 126.50 |
| 26 | BB | 2578 | G | C5-C6-O6 | -5.55 | 125.27 | 128.60 |
| 26 | BB | 2602 | A | C6-C5-N7 | -5.55 | 128.42 | 132.30 |
| 1 | AA | 251 | G | O3'-P-O5' | -5.55 | 93.46 | 104.00 |
| 1 | AA | 706 | A | C1'-O4'-C4' | 5.55 | 114.34 | 109.90 |
| 1 | AA | 1316 | G | N3-C4-C5 | -5.55 | 125.83 | 128.60 |
| 10 | AJ | 98 | LEU | CB-CG-CD1 | -5.55 | 101.57 | 111.00 |
| 26 | BB | 468 | G | N9-C4-C5 | 5.55 | 107.62 | 105.40 |
| 26 | BB | 704 | G | C6-N1-C2 | -5.55 | 121.77 | 125.10 |
| 26 | BB | 901 | C | C6-N1-C2 | 5.55 | 122.52 | 120.30 |
| 26 | BB | 1081 | U | P-O5'-C5' | 5.55 | 129.78 | 120.90 |
| 26 | BB | 1838 | C | N1-C2-O2 | 5.55 | 122.23 | 118.90 |
| 26 | BB | 1928 | A | OP1-P-OP2 | -5.55 | 111.28 | 119.60 |
| 26 | BB | 2397 | G | C8-N9-C4 | -5.55 | 104.18 | 106.40 |
| 29 | BE | 22 | ILE | CG1-CB-CG2 | -5.55 | 99.19 | 111.40 |
| 1 | AA | 1160 | G | N9-C4-C5 | 5.55 | 107.62 | 105.40 |
| 1 | AA | 1448 | C | C4-C5-C6 | 5.55 | 120.17 | 117.40 |
| 3 | AC | 26 | U | O4'-C1'-C2' | -5.55 | 100.25 | 105.80 |
| 3 | AC | 31 | U | N1-C2-O2 | 5.55 | 126.68 | 122.80 |
| 25 | BA | 79 | G | C1'-O4'-C4' | -5.55 | 105.46 | 109.90 |
| 26 | BB | 203 | A | C4-C5-C6 | -5.55 | 114.23 | 117.00 |
| 26 | BB | 834 | G | C2-N3-C4 | 5.55 | 114.67 | 111.90 |
| 26 | BB | 925 | A | C2-N3-C4 | -5.55 | 107.83 | 110.60 |
| 26 | BB | 1473 | G | O4'-C1'-N9 | -5.55 | 103.76 | 108.20 |
| 26 | BB | 1889 | A | N1-C2-N3 | 5.55 | 132.07 | 129.30 |
| 26 | BB | 1953 | A | C4'-C3'-C2' | -5.55 | 97.05 | 102.60 |
| 26 | BB | 2625 | G | C5-C6-O6 | -5.55 | 125.27 | 128.60 |
| 39 | BO | 6 | ARG | NE-CZ-NH2 | -5.55 | 117.53 | 120.30 |
| 1 | AA | 766 | A | O4'-C1'-N9 | 5.54 | 112.64 | 108.20 |
| 9 | AI | 47 | LEU | CB-CG-CD1 | -5.54 | 101.57 | 111.00 |
| 26 | BB | 58 | G | C5'-C4'-O4' | 5.54 | 115.75 | 109.10 |
| 26 | BB | 124 | G | C4-C5-N7 | -5.54 | 108.58 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 619 | G | C4-C5-N7 | -5.54 | 108.58 | 110.80 |
| 26 | BB | 1603 | A | C4-C5-C6 | -5.54 | 114.23 | 117.00 |
| 26 | BB | 2158 | A | C4-C5-N7 | -5.54 | 107.93 | 110.70 |
| 29 | BE | 34 | VAL | CA-CB-CG2 | 5.54 | 119.22 | 110.90 |
| 1 | AA | 260 | G | C6-N1-C2 | -5.54 | 121.77 | 125.10 |
| 1 | AA | 384 | G | C4'-C3'-C2' | -5.54 | 97.06 | 102.60 |
| 1 | AA | 411 | A | O4'-C4'-C3' | 5.54 | 110.53 | 106.10 |
| 1 | AA | 1100 | C | N3-C2-O2 | -5.54 | 118.02 | 121.90 |
| 1 | AA | 1300 | G | C4-N9-C1' | -5.54 | 119.29 | 126.50 |
| 1 | AA | 1388 | C | C5'-C4'-O4' | 5.54 | 115.75 | 109.10 |
| 1 | AA | 1392 | G | N3-C4-C5 | -5.54 | 125.83 | 128.60 |
| 2 | AB | 18 | G | N9-C1'-C2' | 5.54 | 121.20 | 114.00 |
| 2 | AB | 41 | C | C4-C5-C6 | 5.54 | 120.17 | 117.40 |
| 11 | AK | 76 | ARG | CD-NE-CZ | 5.54 | 131.36 | 123.60 |
| 25 | BA | 38 | C | N3-C4-C5 | -5.54 | 119.68 | 121.90 |
| 26 | BB | 537 | G | N9-C1'-C2' | -5.54 | 105.90 | 112.00 |
| 26 | BB | 613 | A | P-O5'-C5' | 5.54 | 129.77 | 120.90 |
| 26 | BB | 795 | C | N3-C4-C5 | 5.54 | 124.12 | 121.90 |
| 26 | BB | 1551 | A | N1-C2-N3 | -5.54 | 126.53 | 129.30 |
| 26 | BB | 1925 | C | C1'-O4'-C4' | 5.54 | 114.33 | 109.90 |
| 26 | BB | 1977 | A | N1-C2-N3 | 5.54 | 132.07 | 129.30 |
| 26 | BB | 2318 | G | N1-C2-N3 | -5.54 | 120.57 | 123.90 |
| 26 | BB | 2408 | U | C4-C5-C6 | 5.54 | 123.03 | 119.70 |
| 1 | AA | 160 | A | C5-N7-C8 | -5.54 | 101.13 | 103.90 |
| 1 | AA | 299 | G | N3-C2-N2 | 5.54 | 123.78 | 119.90 |
| 1 | AA | 667 | G | N3-C4-C5 | -5.54 | 125.83 | 128.60 |
| 1 | AA | 1080 | A | C3'-C2'-C1' | 5.54 | 105.93 | 101.50 |
| 1 | AA | 1406 | U | N1-C2-N3 | 5.54 | 118.22 | 114.90 |
| 1 | AA | 1439 | G | C4-C5-N7 | -5.54 | 108.58 | 110.80 |
| 26 | BB | 116 | C | C4'-C3'-C2' | -5.54 | 97.06 | 102.60 |
| 26 | BB | 352 | A | C3'-C2'-C1' | 5.54 | 105.93 | 101.50 |
| 26 | BB | 947 | A | C5-C6-N1 | -5.54 | 114.93 | 117.70 |
| 26 | BB | 1003 | G | C4-C5-N7 | 5.54 | 113.02 | 110.80 |
| 26 | BB | 1084 | A | O5'-C5'-C4' | -5.54 | 101.17 | 111.70 |
| 26 | BB | 1127 | A | C4-C5-N7 | -5.54 | 107.93 | 110.70 |
| 26 | BB | 1267 | U | N3-C4-C5 | -5.54 | 111.28 | 114.60 |
| 26 | BB | 1828 | G | C5'-C4'-O4' | -5.54 | 102.45 | 109.10 |
| 26 | BB | 1966 | A | C8-N9-C4 | -5.54 | 103.58 | 105.80 |
| 26 | BB | 2269 | G | N7-C8-N9 | -5.54 | 110.33 | 113.10 |
| 26 | BB | 2386 | A | N1-C6-N6 | -5.54 | 115.28 | 118.60 |
| 26 | BB | 2693 | G | C4'-C3'-C2' | -5.54 | 97.06 | 102.60 |
| 28 | BD | 180 | MET | CB-CA-C | 5.54 | 121.48 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 388 | G | C5-C6-N1 | 5.54 | 114.27 | 111.50 |
| 1 | AA | 1240 | U | O4'-C1'-C2' | -5.54 | 100.26 | 105.80 |
| 26 | BB | 245 | G | N1-C6-O6 | 5.54 | 123.22 | 119.90 |
| 26 | BB | 540 | C | O4'-C1'-N1 | 5.54 | 112.63 | 108.20 |
| 26 | BB | 1062 | G | N7-C8-N9 | 5.54 | 115.87 | 113.10 |
| 26 | BB | 1319 | C | C2-N3-C4 | -5.54 | 117.13 | 119.90 |
| 26 | BB | 1496 | A | C6-C5-N7 | -5.54 | 128.42 | 132.30 |
| 26 | BB | 1734 | G | C4-C5-N7 | -5.54 | 108.58 | 110.80 |
| 26 | BB | 1824 | G | N9-C4-C5 | 5.54 | 107.62 | 105.40 |
| 49 | BY | 39 | GLN | CA-CB-CG | 5.54 | 125.59 | 113.40 |
| 1 | AA | 748 | G | N9-C4-C5 | 5.54 | 107.61 | 105.40 |
| 1 | AA | 1367 | C | C5'-C4'-C3' | -5.54 | 107.14 | 116.00 |
| 26 | BB | 116 | C | C6-N1-C2 | 5.54 | 122.52 | 120.30 |
| 26 | BB | 217 | A | O4'-C4'-C3' | 5.54 | 110.53 | 106.10 |
| 26 | BB | 572 | A | C3'-C2'-C1' | 5.54 | 105.93 | 101.50 |
| 26 | BB | 721 | A | N1-C2-N3 | 5.54 | 132.07 | 129.30 |
| 26 | BB | 772 | C | C2-N1-C1' | -5.54 | 112.71 | 118.80 |
| 26 | BB | 1233 | C | N1-C2-N3 | -5.54 | 115.32 | 119.20 |
| 26 | BB | 1304 | A | C2-N3-C4 | -5.54 | 107.83 | 110.60 |
| 26 | BB | 1385 | A | C5'-C4'-O4' | -5.54 | 102.45 | 109.10 |
| 26 | BB | 1499 | C | C5'-C4'-O4' | 5.54 | 115.75 | 109.10 |
| 26 | BB | 1739 | A | C5'-C4'-O4' | 5.54 | 115.75 | 109.10 |
| 26 | BB | 1925 | C | C5'-C4'-C3' | 5.54 | 124.86 | 116.00 |
| 26 | BB | 2310 | C | N3-C4-N4 | 5.54 | 121.88 | 118.00 |
| 26 | BB | 2405 | G | N1-C2-N3 | -5.54 | 120.58 | 123.90 |
| 26 | BB | 2518 | A | C6-C5-N7 | 5.54 | 136.18 | 132.30 |
| 26 | BB | 2551 | C | C5-C6-N1 | -5.54 | 118.23 | 121.00 |
| 28 | BD | 160 | TYR | CB-CG-CD2 | 5.54 | 124.32 | 121.00 |
| 1 | AA | 544 | G | C4-C5-C6 | 5.54 | 122.12 | 118.80 |
| 1 | AA | 1000 | A | C5-C6-N6 | -5.54 | 119.27 | 123.70 |
| 1 | AA | 1177 | G | C3'-C2'-C1' | 5.54 | 105.93 | 101.50 |
| 25 | BA | 15 | A | N7-C8-N9 | 5.54 | 116.57 | 113.80 |
| 26 | BB | 2474 | U | C6-N1-C2 | 5.54 | 124.32 | 121.00 |
| 26 | BB | 2573 | C | C6-N1-C2 | -5.54 | 118.08 | 120.30 |
| 28 | BD | 211 | ARG | NE-CZ-NH1 | -5.54 | 117.53 | 120.30 |
| 1 | AA | 628 | G | N3-C4-C5 | -5.54 | 125.83 | 128.60 |
| 1 | AA | 1263 | C | C3'-C2'-C1' | 5.54 | 105.93 | 101.50 |
| 1 | AA | 1279 | G | P-O3'-C3' | 5.54 | 126.34 | 119.70 |
| 1 | AA | 1309 | G | O4'-C1'-N9 | 5.54 | 112.63 | 108.20 |
| 1 | AA | 1494 | G | N1-C2-N3 | 5.54 | 127.22 | 123.90 |
| 4 | AD | 2 | G | C6-C5-N7 | -5.54 | 127.08 | 130.40 |
| 4 | AD | 41 | C | N3-C4-C5 | -5.54 | 119.69 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 71 | A | O4'-C4'-C3' | 5.54 | 110.53 | 106.10 |
| 26 | BB | 251 | A | C4'-C3'-C2' | -5.54 | 97.06 | 102.60 |
| 26 | BB | 784 | G | C1'-O4'-C4' | -5.54 | 105.47 | 109.90 |
| 26 | BB | 1040 | A | C4-C5-C6 | -5.54 | 114.23 | 117.00 |
| 26 | BB | 1142 | A | C4-C5-N7 | -5.54 | 107.93 | 110.70 |
| 26 | BB | 1178 | C | P-O3'-C3' | 5.54 | 126.34 | 119.70 |
| 26 | BB | 1403 | A | O4'-C1'-N9 | 5.54 | 112.63 | 108.20 |
| 26 | BB | 1517 | G | O4'-C1'-N9 | 5.54 | 112.63 | 108.20 |
| 26 | BB | 1615 | C | C1'-O4'-C4' | -5.54 | 105.47 | 109.90 |
| 26 | BB | 1868 | C | C5'-C4'-O4' | 5.54 | 115.74 | 109.10 |
| 26 | BB | 1890 | A | C4'-C3'-O3' | 5.54 | 124.07 | 113.00 |
| 26 | BB | 2265 | U | N1-C1'-C2' | -5.54 | 105.91 | 112.00 |
| 26 | BB | 2711 | A | P-O3'-C3' | 5.54 | 126.34 | 119.70 |
| 46 | BV | 55 | VAL | CG1-CB-CG2 | -5.54 | 102.04 | 110.90 |
| 1 | AA | 355 | C | C5-C6-N1 | -5.53 | 118.23 | 121.00 |
| 1 | AA | 695 | A | N7-C8-N9 | -5.53 | 111.03 | 113.80 |
| 1 | AA | 742 | G | C4-N9-C1' | -5.53 | 119.31 | 126.50 |
| 1 | AA | 773 | G | C1'-O4'-C4' | -5.53 | 105.47 | 109.90 |
| 4 | AD | 60 | A | N1-C2-N3 | 5.53 | 132.07 | 129.30 |
| 26 | BB | 57 | C | O4'-C1'-C2' | -5.53 | 100.27 | 105.80 |
| 26 | BB | 160 | A | N9-C4-C5 | -5.53 | 103.59 | 105.80 |
| 26 | BB | 277 | G | C5-N7-C8 | -5.53 | 101.53 | 104.30 |
| 26 | BB | 314 | C | P-O3'-C3' | 5.53 | 126.34 | 119.70 |
| 26 | BB | 611 | C | P-O3'-C3' | 5.53 | 126.34 | 119.70 |
| 26 | BB | 627 | A | O3'-P-O5' | -5.53 | 93.48 | 104.00 |
| 26 | BB | 642 | U | O4'-C1'-N1 | 5.53 | 112.63 | 108.20 |
| 26 | BB | 831 | G | O5'-C5'-C4' | 5.53 | 122.22 | 111.70 |
| 26 | BB | 856 | G | N7-C8-N9 | 5.53 | 115.87 | 113.10 |
| 26 | BB | 923 | G | C3'-C2'-C1' | 5.53 | 105.93 | 101.50 |
| 26 | BB | 1793 | C | N3-C4-C5 | -5.53 | 119.69 | 121.90 |
| 26 | BB | 1818 | U | C5-C4-O4 | -5.53 | 122.58 | 125.90 |
| 26 | BB | 1852 | U | C4'-C3'-C2' | -5.53 | 97.07 | 102.60 |
| 26 | BB | 1854 | A | C5'-C4'-O4' | 5.53 | 115.74 | 109.10 |
| 26 | BB | 1888 | G | N9-C4-C5 | 5.53 | 107.61 | 105.40 |
| 26 | BB | 2280 | G | C5-N7-C8 | -5.53 | 101.53 | 104.30 |
| 26 | BB | 2543 | G | C5'-C4'-C3' | -5.53 | 107.15 | 116.00 |
| 43 | BS | 23 | TYR | CA-CB-CG | 5.53 | 123.91 | 113.40 |
| 1 | AA | 907 | A | C8-N9-C4 | 5.53 | 108.01 | 105.80 |
| 1 | AA | 1029 | U | O3'-P-O5' | -5.53 | 93.49 | 104.00 |
| 2 | AB | 52 | A | O4'-C1'-C2' | -5.53 | 100.27 | 105.80 |
| 9 | AI | 86 | ARG | NE-CZ-NH2 | 5.53 | 123.07 | 120.30 |
| 26 | BB | 427 | U | C6-N1-C2 | -5.53 | 117.68 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1082 | U | C4'-C3'-C2' | -5.53 | 97.07 | 102.60 |
| 26 | BB | 2828 | G | C5'-C4'-O4' | 5.53 | 115.74 | 109.10 |
| 1 | AA | 32 | A | C4-C5-C6 | -5.53 | 114.23 | 117.00 |
| 1 | AA | 329 | A | N1-C2-N3 | -5.53 | 126.53 | 129.30 |
| 1 | AA | 498 | A | O4'-C1'-N9 | 5.53 | 112.62 | 108.20 |
| 1 | AA | 684 | U | N3-C4-C5 | 5.53 | 117.92 | 114.60 |
| 1 | AA | 838 | G | N3-C4-C5 | 5.53 | 131.37 | 128.60 |
| 1 | AA | 975 | A | P-O3'-C3' | 5.53 | 126.34 | 119.70 |
| 1 | AA | 1172 | C | C4'-C3'-C2' | -5.53 | 97.07 | 102.60 |
| 1 | AA | 1203 | C | C2-N3-C4 | -5.53 | 117.14 | 119.90 |
| 1 | AA | 1275 | A | C3'-C2'-C1' | -5.53 | 97.08 | 101.50 |
| 3 | AC | 16 | A | N7-C8-N9 | 5.53 | 116.56 | 113.80 |
| 26 | BB | 226 | A | C3'-C2'-C1' | 5.53 | 105.92 | 101.50 |
| 26 | BB | 564 | C | C5'-C4'-C3' | -5.53 | 107.15 | 116.00 |
| 26 | BB | 629 | G | C4'-C3'-C2' | -5.53 | 97.07 | 102.60 |
| 26 | BB | 794 | A | N3-C4-N9 | 5.53 | 131.82 | 127.40 |
| 26 | BB | 916 | G | C5-C6-O6 | -5.53 | 125.28 | 128.60 |
| 26 | BB | 1401 | G | C5-N7-C8 | -5.53 | 101.53 | 104.30 |
| 26 | BB | 1649 | G | C2-N3-C4 | -5.53 | 109.14 | 111.90 |
| 26 | BB | 1667 | G | C2-N3-C4 | 5.53 | 114.67 | 111.90 |
| 26 | BB | 1815 | A | N9-C1'-C2' | -5.53 | 105.92 | 112.00 |
| 26 | BB | 2117 | A | O4'-C4'-C3' | 5.53 | 110.52 | 106.10 |
| 26 | BB | 2174 | C | O4'-C1'-N1 | 5.53 | 112.62 | 108.20 |
| 26 | BB | 2205 | A | N1-C2-N3 | -5.53 | 126.53 | 129.30 |
| 26 | BB | 2308 | G | O4'-C1'-C2' | 5.53 | 112.58 | 107.60 |
| 26 | BB | 2484 | G | N9-C4-C5 | 5.53 | 107.61 | 105.40 |
| 26 | BB | 2529 | G | N1-C6-O6 | -5.53 | 116.58 | 119.90 |
| 26 | BB | 2571 | U | P-O3'-C3' | 5.53 | 126.34 | 119.70 |
| 1 | AA | 1039 | G | N1-C2-N3 | -5.53 | 120.58 | 123.90 |
| 9 | AI | 133 | GLU | OE1-CD-OE2 | 5.53 | 129.94 | 123.30 |
| 14 | AN | 92 | ARG | CD-NE-CZ | 5.53 | 131.34 | 123.60 |
| 26 | BB | 93 | G | C8-N9-C1' | 5.53 | 134.19 | 127.00 |
| 26 | BB | 377 | G | N1-C6-O6 | -5.53 | 116.58 | 119.90 |
| 26 | BB | 402 | A | C5-N7-C8 | -5.53 | 101.14 | 103.90 |
| 26 | BB | 1610 | A | N9-C1'-C2' | -5.53 | 105.92 | 112.00 |
| 26 | BB | 1861 | G | C5-N7-C8 | 5.53 | 107.06 | 104.30 |
| 1 | AA | 288 | A | C5-C6-N6 | 5.53 | 128.12 | 123.70 |
| 1 | AA | 733 | G | N9-C4-C5 | 5.53 | 107.61 | 105.40 |
| 1 | AA | 940 | C | C5'-C4'-O4' | 5.53 | 115.73 | 109.10 |
| 4 | AD | 68 | C | C5-C4-N4 | 5.53 | 124.07 | 120.20 |
| 26 | BB | 137 | U | N3-C4-O4 | 5.53 | 123.27 | 119.40 |
| 26 | BB | 579 | G | N1-C6-O6 | -5.53 | 116.58 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 915 | C | N1-C2-O2 | 5.53 | 122.22 | 118.90 |
| 26 | BB | 1041 | G | C8-N9-C4 | -5.53 | 104.19 | 106.40 |
| 26 | BB | 1064 | C | N3-C4-C5 | 5.53 | 124.11 | 121.90 |
| 26 | BB | 1419 | A | C4'-C3'-C2' | -5.53 | 97.07 | 102.60 |
| 26 | BB | 1576 | U | C5-C6-N1 | 5.53 | 125.46 | 122.70 |
| 26 | BB | 1620 | G | C2-N3-C4 | 5.53 | 114.66 | 111.90 |
| 26 | BB | 1655 | A | C4-C5-C6 | -5.53 | 114.24 | 117.00 |
| 26 | BB | 2321 | U | O4'-C4'-C3' | 5.53 | 110.52 | 106.10 |
| 26 | BB | 2529 | G | O4'-C1'-N9 | -5.53 | 103.78 | 108.20 |
| 26 | BB | 2859 | G | O4'-C1'-C2' | -5.53 | 100.27 | 105.80 |
| 53 | B2 | 59 | ARG | CD-NE-CZ | 5.53 | 131.34 | 123.60 |
| 1 | AA | 306 | A | O5'-C5'-C4' | 5.53 | 122.20 | 111.70 |
| 1 | AA | 538 | G | C6-N1-C2 | -5.53 | 121.78 | 125.10 |
| 1 | AA | 765 | G | C3'-C2'-C1' | 5.53 | 105.92 | 101.50 |
| 1 | AA | 942 | G | N9-C4-C5 | 5.53 | 107.61 | 105.40 |
| 1 | AA | 1310 | G | C4'-C3'-O3' | 5.53 | 124.05 | 113.00 |
| 8 | AH | 20 | VAL | CG1-CB-CG2 | 5.53 | 119.74 | 110.90 |
| 25 | BA | 8 | C | C4-C5-C6 | -5.53 | 114.64 | 117.40 |
| 26 | BB | 930 | G | C4'-C3'-C2' | -5.53 | 97.07 | 102.60 |
| 26 | BB | 1193 | G | C5-N7-C8 | -5.53 | 101.54 | 104.30 |
| 26 | BB | 1612 | C | O4'-C1'-N1 | 5.53 | 112.62 | 108.20 |
| 26 | BB | 1718 | G | N9-C4-C5 | 5.53 | 107.61 | 105.40 |
| 26 | BB | 2293 | G | C5'-C4'-O4' | 5.53 | 115.73 | 109.10 |
| 26 | BB | 2500 | U | O5'-C5'-C4' | 5.53 | 122.20 | 111.70 |
| 26 | BB | 2518 | A | C2-N3-C4 | 5.53 | 113.36 | 110.60 |
| 26 | BB | 2691 | C | N1-C1'-C2' | -5.53 | 105.92 | 112.00 |
| 26 | BB | 2708 | G | C4-C5-C6 | -5.53 | 115.48 | 118.80 |
| 26 | BB | 2858 | C | P-O3'-C3' | 5.53 | 126.33 | 119.70 |
| 1 | AA | 617 | G | C6-N1-C2 | -5.52 | 121.78 | 125.10 |
| 1 | AA | 706 | A | C5'-C4'-O4' | 5.52 | 115.73 | 109.10 |
| 1 | AA | 1181 | G | N3-C4-C5 | -5.52 | 125.84 | 128.60 |
| 2 | AB | 21 | A | N1-C6-N6 | 5.52 | 121.92 | 118.60 |
| 3 | AC | 29 | G | C4-C5-N7 | -5.52 | 108.59 | 110.80 |
| 25 | BA | 57 | A | N9-C1'-C2' | 5.52 | 121.18 | 114.00 |
| 26 | BB | 591 | U | N1-C2-N3 | 5.52 | 118.22 | 114.90 |
| 26 | BB | 818 | G | N3-C4-N9 | 5.52 | 129.31 | 126.00 |
| 26 | BB | 2114 | A | O5'-C5'-C4' | -5.52 | 101.20 | 111.70 |
| 1 | AA | 81 | A | N9-C4-C5 | -5.52 | 103.59 | 105.80 |
| 1 | AA | 657 | U | C6-N1-C2 | 5.52 | 124.31 | 121.00 |
| 1 | AA | 787 | A | P-O3'-C3' | 5.52 | 126.33 | 119.70 |
| 1 | AA | 953 | G | N9-C4-C5 | 5.52 | 107.61 | 105.40 |
| 4 | AD | 76 | C | C6-N1-C2 | -5.52 | 118.09 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 4 | U | C2-N3-C4 | -5.52 | 123.69 | 127.00 |
| 26 | BB | 17 | G | C5'-C4'-O4' | 5.52 | 115.73 | 109.10 |
| 26 | BB | 82 | U | C5-C4-O4 | -5.52 | 122.59 | 125.90 |
| 26 | BB | 142 | A | O4'-C1'-N9 | 5.52 | 112.62 | 108.20 |
| 26 | BB | 375 | G | N3-C4-N9 | 5.52 | 129.31 | 126.00 |
| 26 | BB | 579 | G | N3-C4-N9 | 5.52 | 129.31 | 126.00 |
| 26 | BB | 653 | U | C6-N1-C2 | 5.52 | 124.31 | 121.00 |
| 26 | BB | 770 | G | N9-C4-C5 | -5.52 | 103.19 | 105.40 |
| 26 | BB | 1054 | A | C1'-O4'-C4' | 5.52 | 114.32 | 109.90 |
| 26 | BB | 1091 | G | C1'-O4'-C4' | -5.52 | 105.48 | 109.90 |
| 26 | BB | 1121 | C | C1'-O4'-C4' | -5.52 | 105.48 | 109.90 |
| 26 | BB | 1193 | G | N1-C6-O6 | 5.52 | 123.21 | 119.90 |
| 26 | BB | 1377 | G | C8-N9-C1' | 5.52 | 134.18 | 127.00 |
| 26 | BB | 1656 | C | C4-C5-C6 | -5.52 | 114.64 | 117.40 |
| 26 | BB | 1732 | C | C6-N1-C2 | -5.52 | 118.09 | 120.30 |
| 26 | BB | 2035 | G | N3-C4-N9 | -5.52 | 122.69 | 126.00 |
| 26 | BB | 2517 | C | C2-N1-C1' | -5.52 | 112.72 | 118.80 |
| 26 | BB | 2559 | C | C4-C5-C6 | -5.52 | 114.64 | 117.40 |
| 37 | BM | 11 | ALA | N-CA-CB | -5.52 | 102.37 | 110.10 |
| 1 | AA | 1291 | U | C5-C4-O4 | 5.52 | 129.21 | 125.90 |
| 4 | AD | 23 | G | N1-C2-N2 | 5.52 | 121.17 | 116.20 |
| 26 | BB | 1081 | U | N1-C2-O2 | 5.52 | 126.66 | 122.80 |
| 26 | BB | 1095 | A | C6-N1-C2 | 5.52 | 121.91 | 118.60 |
| 26 | BB | 1396 | U | C5-C4-O4 | -5.52 | 122.59 | 125.90 |
| 26 | BB | 1574 | C | C5'-C4'-O4' | 5.52 | 115.73 | 109.10 |
| 26 | BB | 1817 | G | C5-C6-O6 | 5.52 | 131.91 | 128.60 |
| 26 | BB | 2167 | U | C1'-O4'-C4' | -5.52 | 105.48 | 109.90 |
| 26 | BB | 2398 | U | C5-C4-O4 | -5.52 | 122.59 | 125.90 |
| 26 | BB | 2811 | G | C3'-C2'-C1' | 5.52 | 105.92 | 101.50 |
| 1 | AA | 303 | A | N9-C4-C5 | 5.52 | 108.01 | 105.80 |
| 1 | AA | 439 | U | N3-C2-O2 | -5.52 | 118.34 | 122.20 |
| 1 | AA | 629 | A | C3'-C2'-C1' | 5.52 | 105.92 | 101.50 |
| 1 | AA | 847 | G | N3-C4-N9 | 5.52 | 129.31 | 126.00 |
| 1 | AA | 1044 | A | C5-C6-N6 | -5.52 | 119.28 | 123.70 |
| 1 | AA | 1409 | C | C4-C5-C6 | 5.52 | 120.16 | 117.40 |
| 24 | AX | 32 | ARG | NE-CZ-NH1 | 5.52 | 123.06 | 120.30 |
| 24 | AX | 34 | ARG | NE-CZ-NH2 | -5.52 | 117.54 | 120.30 |
| 25 | BA | 61 | G | O4'-C1'-N9 | 5.52 | 112.62 | 108.20 |
| 26 | BB | 726 | G | O3'-P-O5' | -5.52 | 93.51 | 104.00 |
| 26 | BB | 1100 | C | C4'-C3'-C2' | -5.52 | 97.08 | 102.60 |
| 26 | BB | 1459 | G | C4'-C3'-C2' | -5.52 | 97.08 | 102.60 |
| 26 | BB | 1714 | U | C1'-O4'-C4' | -5.52 | 105.48 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1800 | C | O3'-P-O5' | -5.52 | 93.51 | 104.00 |
| 26 | BB | 1895 | C | N3-C4-C5 | -5.52 | 119.69 | 121.90 |
| 26 | BB | 1975 | G | N1-C2-N3 | 5.52 | 127.21 | 123.90 |
| 26 | BB | 2122 | U | N3-C4-C5 | 5.52 | 117.91 | 114.60 |
| 26 | BB | 2194 | U | C4-C5-C6 | 5.52 | 123.01 | 119.70 |
| 26 | BB | 2507 | C | C5'-C4'-O4' | 5.52 | 115.72 | 109.10 |
| 26 | BB | 2663 | G | C5-C6-N1 | 5.52 | 114.26 | 111.50 |
| 1 | AA | 251 | G | C4'-C3'-C2' | 5.52 | 108.12 | 102.60 |
| 1 | AA | 415 | A | C5-N7-C8 | 5.52 | 106.66 | 103.90 |
| 1 | AA | 1238 | A | O4'-C1'-C2' | 5.52 | 112.57 | 107.60 |
| 26 | BB | 12 | U | C5-C6-N1 | -5.52 | 119.94 | 122.70 |
| 26 | BB | 14 | A | C4-C5-N7 | -5.52 | 107.94 | 110.70 |
| 26 | BB | 386 | G | C8-N9-C1' | 5.52 | 134.17 | 127.00 |
| 26 | BB | 557 | C | C5-C6-N1 | -5.52 | 118.24 | 121.00 |
| 26 | BB | 591 | U | N1-C2-O2 | 5.52 | 126.66 | 122.80 |
| 26 | BB | 790 | U | C4'-C3'-C2' | -5.52 | 97.08 | 102.60 |
| 26 | BB | 1110 | G | C8-N9-C4 | -5.52 | 104.19 | 106.40 |
| 26 | BB | 1192 | G | P-O3'-C3' | 5.52 | 126.32 | 119.70 |
| 26 | BB | 1473 | G | C4-C5-N7 | -5.52 | 108.59 | 110.80 |
| 26 | BB | 2694 | G | N1-C2-N2 | 5.52 | 121.17 | 116.20 |
| 26 | BB | 2740 | A | N1-C6-N6 | 5.52 | 121.91 | 118.60 |
| 1 | AA | 141 | G | C4-N9-C1' | -5.52 | 119.33 | 126.50 |
| 1 | AA | 478 | A | C6-N1-C2 | -5.52 | 115.29 | 118.60 |
| 1 | AA | 773 | G | C6-N1-C2 | -5.52 | 121.79 | 125.10 |
| 1 | AA | 867 | G | C4'-C3'-C2' | -5.52 | 97.08 | 102.60 |
| 1 | AA | 1119 | C | C4'-C3'-C2' | -5.52 | 97.08 | 102.60 |
| 4 | AD | 52 | C | N1-C1'-C2' | -5.52 | 105.93 | 112.00 |
| 6 | AF | 231 | ARG | NE-CZ-NH1 | -5.52 | 117.54 | 120.30 |
| 25 | BA | 23 | G | C5-C6-O6 | -5.52 | 125.29 | 128.60 |
| 26 | BB | 896 | A | C6-C5-N7 | 5.52 | 136.16 | 132.30 |
| 26 | BB | 2259 | U | N3-C2-O2 | -5.52 | 118.34 | 122.20 |
| 34 | BJ | 68 | PHE | CD1-CG-CD2 | 5.52 | 125.47 | 118.30 |
| 1 | AA | 121 | U | C4'-C3'-C2' | -5.51 | 97.08 | 102.60 |
| 1 | AA | 400 | C | C5-C6-N1 | 5.51 | 123.76 | 121.00 |
| 1 | AA | 401 | C | N3-C2-O2 | 5.51 | 125.76 | 121.90 |
| 1 | AA | 453 | G | O4'-C1'-N9 | 5.51 | 112.61 | 108.20 |
| 1 | AA | 851 | G | C6-C5-N7 | 5.51 | 133.71 | 130.40 |
| 1 | AA | 1096 | C | N3-C2-O2 | -5.51 | 118.04 | 121.90 |
| 7 | AG | 170 | LEU | CB-CA-C | 5.51 | 120.68 | 110.20 |
| 11 | AK | 54 | THR | CA-CB-CG2 | 5.51 | 120.12 | 112.40 |
| 12 | AL | 28 | VAL | CA-CB-CG2 | -5.51 | 102.63 | 110.90 |
| 26 | BB | 385 | C | C2-N3-C4 | 5.51 | 122.66 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 395 | U | C5-C4-O4 | -5.51 | 122.59 | 125.90 |
| 26 | BB | 961 | C | N3-C4-C5 | -5.51 | 119.69 | 121.90 |
| 26 | BB | 1128 | G | C6-C5-N7 | -5.51 | 127.09 | 130.40 |
| 26 | BB | 1631 | G | C5'-C4'-O4' | 5.51 | 115.72 | 109.10 |
| 26 | BB | 1825 | U | C5-C4-O4 | -5.51 | 122.59 | 125.90 |
| 26 | BB | 1829 | A | O4'-C1'-N9 | 5.51 | 112.61 | 108.20 |
| 26 | BB | 1875 | G | OP1-P-O3' | 5.51 | 117.33 | 105.20 |
| 26 | BB | 2051 | A | P-O3'-C3' | 5.51 | 126.32 | 119.70 |
| 26 | BB | 2303 | G | O4'-C1'-N9 | 5.51 | 112.61 | 108.20 |
| 26 | BB | 2467 | C | OP1-P-O3' | 5.51 | 117.33 | 105.20 |
| 26 | BB | 2626 | C | C4-C5-C6 | -5.51 | 114.64 | 117.40 |
| 52 | B1 | 52 | PHE | CB-CG-CD1 | -5.51 | 116.94 | 120.80 |
| 1 | AA | 58 | C | C3'-C2'-C1' | 5.51 | 105.91 | 101.50 |
| 1 | AA | 303 | A | C2-N3-C4 | 5.51 | 113.36 | 110.60 |
| 1 | AA | 462 | G | N3-C2-N2 | -5.51 | 116.04 | 119.90 |
| 1 | AA | 682 | G | C2'-C3'-O3' | 5.51 | 122.52 | 113.70 |
| 1 | AA | 793 | U | N3-C2-O2 | -5.51 | 118.34 | 122.20 |
| 1 | AA | 1002 | G | N1-C6-O6 | -5.51 | 116.59 | 119.90 |
| 1 | AA | 1482 | G | C6-N1-C2 | -5.51 | 121.79 | 125.10 |
| 26 | BB | 396 | G | C8-N9-C4 | -5.51 | 104.19 | 106.40 |
| 26 | BB | 1208 | C | C5-C6-N1 | 5.51 | 123.76 | 121.00 |
| 26 | BB | 1573 | G | N3-C4-C5 | -5.51 | 125.84 | 128.60 |
| 26 | BB | 1700 | A | C3'-C2'-C1' | -5.51 | 97.09 | 101.50 |
| 26 | BB | 1931 | U | N1-C2-N3 | 5.51 | 118.21 | 114.90 |
| 26 | BB | 2190 | G | C5-C6-O6 | -5.51 | 125.29 | 128.60 |
| 26 | BB | 2209 | G | C5-C6-N1 | 5.51 | 114.26 | 111.50 |
| 39 | BO | 49 | ALA | CB-CA-C | 5.51 | 118.37 | 110.10 |
| 42 | BR | 30 | TRP | CG-CD2-CE3 | 5.51 | 138.86 | 133.90 |
| 1 | AA | 11 | G | C4-C5-C6 | 5.51 | 122.11 | 118.80 |
| 1 | AA | 279 | A | N1-C2-N3 | -5.51 | 126.54 | 129.30 |
| 1 | AA | 381 | C | O4'-C1'-C2' | -5.51 | 100.29 | 105.80 |
| 1 | AA | 482 | A | C5-N7-C8 | 5.51 | 106.66 | 103.90 |
| 1 | AA | 736 | C | O4'-C1'-N1 | 5.51 | 112.61 | 108.20 |
| 1 | AA | 1325 | C | N1-C2-N3 | 5.51 | 123.06 | 119.20 |
| 1 | AA | 1327 | C | C4'-C3'-C2' | -5.51 | 97.09 | 102.60 |
| 1 | AA | 1434 | A | N9-C1'-C2' | -5.51 | 105.94 | 112.00 |
| 26 | BB | 983 | A | C3'-C2'-C1' | 5.51 | 105.91 | 101.50 |
| 26 | BB | 1062 | G | C6-C5-N7 | -5.51 | 127.09 | 130.40 |
| 26 | BB | 1206 | G | C2-N3-C4 | 5.51 | 114.66 | 111.90 |
| 26 | BB | 1637 | A | N9-C4-C5 | 5.51 | 108.00 | 105.80 |
| 26 | BB | 1643 | G | C4'-C3'-C2' | -5.51 | 97.09 | 102.60 |
| 26 | BB | 1906 | G | N7-C8-N9 | -5.51 | 110.34 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2105 | U | C5-C4-O4 | 5.51 | 129.21 | 125.90 |
| 26 | BB | 2313 | C | N3-C4-N4 | 5.51 | 121.86 | 118.00 |
| 26 | BB | 2458 | G | N9-C4-C5 | 5.51 | 107.61 | 105.40 |
| 26 | BB | 2485 | G | C2-N3-C4 | 5.51 | 114.66 | 111.90 |
| 26 | BB | 2873 | A | C4-C5-C6 | 5.51 | 119.76 | 117.00 |
| 1 | AA | 348 | G | C6-N1-C2 | -5.51 | 121.79 | 125.10 |
| 1 | AA | 350 | G | N1-C2-N2 | 5.51 | 121.16 | 116.20 |
| 1 | AA | 473 | U | C5-C6-N1 | -5.51 | 119.95 | 122.70 |
| 1 | AA | 761 | G | C3'-C2'-C1' | 5.51 | 105.91 | 101.50 |
| 1 | AA | 1134 | G | P-O3'-C3' | 5.51 | 126.31 | 119.70 |
| 21 | AU | 28 | LEU | CB-CG-CD1 | -5.51 | 101.64 | 111.00 |
| 26 | BB | 31 | C | N1-C2-O2 | 5.51 | 122.21 | 118.90 |
| 26 | BB | 130 | C | N1-C2-N3 | 5.51 | 123.06 | 119.20 |
| 26 | BB | 157 | C | C2-N3-C4 | 5.51 | 122.66 | 119.90 |
| 26 | BB | 324 | A | C5-C6-N6 | 5.51 | 128.11 | 123.70 |
| 26 | BB | 482 | A | N1-C6-N6 | -5.51 | 115.29 | 118.60 |
| 26 | BB | 555 | G | C5-C6-O6 | -5.51 | 125.29 | 128.60 |
| 26 | BB | 1409 | U | C5-C4-O4 | -5.51 | 122.59 | 125.90 |
| 26 | BB | 1605 | C | C5-C4-N4 | -5.51 | 116.34 | 120.20 |
| 26 | BB | 1712 | U | N3-C4-O4 | -5.51 | 115.54 | 119.40 |
| 26 | BB | 1723 | G | O4'-C1'-N9 | 5.51 | 112.61 | 108.20 |
| 26 | BB | 1891 | G | C2-N3-C4 | 5.51 | 114.66 | 111.90 |
| 26 | BB | 2156 | G | O4'-C4'-C3' | 5.51 | 110.51 | 106.10 |
| 26 | BB | 2164 | C | N3-C4-N4 | -5.51 | 114.14 | 118.00 |
| 26 | BB | 2607 | G | N7-C8-N9 | 5.51 | 115.85 | 113.10 |
| 1 | AA | 679 | C | C5-C4-N4 | -5.51 | 116.34 | 120.20 |
| 1 | AA | 1300 | G | N3-C2-N2 | -5.51 | 116.04 | 119.90 |
| 26 | BB | 479 | A | C2-N3-C4 | -5.51 | 107.85 | 110.60 |
| 26 | BB | 668 | A | N1-C6-N6 | -5.51 | 115.30 | 118.60 |
| 26 | BB | 984 | A | C6-N1-C2 | 5.51 | 121.91 | 118.60 |
| 26 | BB | 1779 | U | C5-C4-O4 | -5.51 | 122.59 | 125.90 |
| 26 | BB | 2683 | C | N3-C4-N4 | -5.51 | 114.14 | 118.00 |
| 45 | BU | 8 | ARG | NE-CZ-NH2 | -5.51 | 117.55 | 120.30 |
| 1 | AA | 334 | C | N1-C2-O2 | 5.51 | 122.20 | 118.90 |
| 1 | AA | 400 | C | C4-C5-C6 | -5.51 | 114.65 | 117.40 |
| 1 | AA | 982 | U | P-O3'-C3' | 5.51 | 126.31 | 119.70 |
| 1 | AA | 999 | C | C5'-C4'-O4' | 5.51 | 115.71 | 109.10 |
| 1 | AA | 1121 | U | N1-C2-O2 | 5.51 | 126.65 | 122.80 |
| 1 | AA | 1270 | G | C2'-C3'-O3' | 5.51 | 122.51 | 113.70 |
| 1 | AA | 1305 | G | P-O3'-C3' | 5.51 | 126.31 | 119.70 |
| 2 | AB | 14 | A | N7-C8-N9 | 5.51 | 116.55 | 113.80 |
| 3 | AC | 41 | A | C3'-C2'-C1' | 5.51 | 105.91 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 92 | C | C6-N1-C2 | -5.51 | 118.10 | 120.30 |
| 26 | BB | 70 | G | C4'-C3'-C2' | -5.51 | 97.09 | 102.60 |
| 26 | BB | 227 | A | C5'-C4'-O4' | 5.51 | 115.71 | 109.10 |
| 26 | BB | 673 | C | C4-C5-C6 | 5.51 | 120.15 | 117.40 |
| 26 | BB | 753 | A | N3-C4-N9 | 5.51 | 131.81 | 127.40 |
| 26 | BB | 1134 | A | O5'-P-OP1 | -5.51 | 100.74 | 105.70 |
| 26 | BB | 1410 | G | N9-C1'-C2' | -5.51 | 105.94 | 112.00 |
| 26 | BB | 1910 | G | O4'-C4'-C3' | 5.51 | 110.50 | 106.10 |
| 26 | BB | 2274 | A | C5-C6-N1 | 5.51 | 120.45 | 117.70 |
| 26 | BB | 2444 | G | C4'-C3'-C2' | -5.51 | 97.09 | 102.60 |
| 26 | BB | 2700 | A | C3'-C2'-C1' | 5.51 | 105.91 | 101.50 |
| 49 | BY | 22 | VAL | CA-CB-CG1 | 5.51 | 119.16 | 110.90 |
| 1 | AA | 275 | G | C2-N3-C4 | -5.50 | 109.15 | 111.90 |
| 1 | AA | 1528 | U | N3-C2-O2 | -5.50 | 118.35 | 122.20 |
| 3 | AC | 55 | A | O3'-P-O5' | 5.50 | 114.46 | 104.00 |
| 26 | BB | 238 | C | N1-C1'-C2' | -5.50 | 105.94 | 112.00 |
| 26 | BB | 253 | C | N3-C4-N4 | 5.50 | 121.85 | 118.00 |
| 26 | BB | 613 | A | N1-C2-N3 | -5.50 | 126.55 | 129.30 |
| 26 | BB | 1138 | G | N7-C8-N9 | 5.50 | 115.85 | 113.10 |
| 26 | BB | 1144 | A | N3-C4-C5 | -5.50 | 122.95 | 126.80 |
| 26 | BB | 1595 | C | C5-C6-N1 | 5.50 | 123.75 | 121.00 |
| 1 | AA | 113 | G | N3-C4-C5 | -5.50 | 125.85 | 128.60 |
| 1 | AA | 125 | U | O4'-C1'-N1 | 5.50 | 112.60 | 108.20 |
| 1 | AA | 400 | C | C2-N3-C4 | 5.50 | 122.65 | 119.90 |
| 1 | AA | 544 | G | C3'-C2'-C1' | 5.50 | 105.90 | 101.50 |
| 1 | AA | 628 | G | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 1 | AA | 872 | A | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 1 | AA | 997 | U | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 1 | AA | 1182 | G | O4'-C4'-C3' | -5.50 | 98.50 | 104.00 |
| 2 | AB | 53 | G | C5'-C4'-C3' | -5.50 | 107.19 | 116.00 |
| 4 | AD | 28 | U | O4'-C1'-N1 | 5.50 | 112.60 | 108.20 |
| 26 | BB | 42 | A | O4'-C1'-N9 | 5.50 | 112.60 | 108.20 |
| 26 | BB | 477 | A | C3'-C2'-C1' | 5.50 | 105.90 | 101.50 |
| 26 | BB | 697 | G | N3-C2-N2 | 5.50 | 123.75 | 119.90 |
| 26 | BB | 765 | C | N3-C4-N4 | 5.50 | 121.85 | 118.00 |
| 26 | BB | 903 | C | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 26 | BB | 1056 | G | N1-C2-N2 | 5.50 | 121.15 | 116.20 |
| 26 | BB | 1256 | G | N7-C8-N9 | 5.50 | 115.85 | 113.10 |
| 26 | BB | 1432 | G | C5-N7-C8 | -5.50 | 101.55 | 104.30 |
| 26 | BB | 1779 | U | C5-C6-N1 | -5.50 | 119.95 | 122.70 |
| 26 | BB | 2135 | A | C4-C5-C6 | 5.50 | 119.75 | 117.00 |
| 26 | BB | 2155 | U | C3'-C2'-C1' | 5.50 | 105.90 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 31 | BG | 21 | TYR | CB-CG-CD2 | -5.50 | 117.70 | 121.00 |
| 1 | AA | 260 | G | C2-N3-C4 | 5.50 | 114.65 | 111.90 |
| 1 | AA | 514 | C | C5'-C4'-O4' | 5.50 | 115.70 | 109.10 |
| 1 | AA | 1158 | C | C6-N1-C1' | -5.50 | 114.20 | 120.80 |
| 1 | AA | 1166 | G | C5-C6-O6 | 5.50 | 131.90 | 128.60 |
| 11 | AK | 64 | TYR | CB-CG-CD2 | -5.50 | 117.70 | 121.00 |
| 26 | BB | 31 | C | C5-C4-N4 | -5.50 | 116.35 | 120.20 |
| 26 | BB | 121 | G | C3'-C2'-C1' | -5.50 | 97.10 | 101.50 |
| 26 | BB | 228 | C | C6-N1-C2 | -5.50 | 118.10 | 120.30 |
| 26 | BB | 252 | G | N3-C4-C5 | -5.50 | 125.85 | 128.60 |
| 26 | BB | 277 | G | N9-C1'-C2' | -5.50 | 105.95 | 112.00 |
| 26 | BB | 309 | A | N1-C2-N3 | -5.50 | 126.55 | 129.30 |
| 26 | BB | 439 | A | O4'-C1'-C2' | 5.50 | 112.55 | 107.60 |
| 26 | BB | 1123 | C | P-O3'-C3' | 5.50 | 126.30 | 119.70 |
| 26 | BB | 1271 | G | C5-C6-N1 | 5.50 | 114.25 | 111.50 |
| 26 | BB | 1504 | A | N1-C6-N6 | 5.50 | 121.90 | 118.60 |
| 26 | BB | 1876 | A | C2-N3-C4 | 5.50 | 113.35 | 110.60 |
| 26 | BB | 2549 | G | N1-C2-N3 | -5.50 | 120.60 | 123.90 |
| 26 | BB | 2633 | G | N1-C6-O6 | -5.50 | 116.60 | 119.90 |
| 26 | BB | 2694 | G | N7-C8-N9 | 5.50 | 115.85 | 113.10 |
| 32 | BH | 93 | TYR | N-CA-CB | -5.50 | 100.70 | 110.60 |
| 49 | BY | 1 | ALA | CB-CA-C | 5.50 | 118.35 | 110.10 |
| 52 | B1 | 38 | GLU | OE1-CD-OE2 | 5.50 | 129.90 | 123.30 |
| 54 | B3 | 24 | VAL | CA-CB-CG2 | -5.50 | 102.65 | 110.90 |
| 1 | AA | 121 | U | C5-C4-O4 | 5.50 | 129.20 | 125.90 |
| 1 | AA | 165 | G | N1-C6-O6 | -5.50 | 116.60 | 119.90 |
| 1 | AA | 392 | C | C2-N3-C4 | 5.50 | 122.65 | 119.90 |
| 1 | AA | 399 | G | C5'-C4'-C3' | 5.50 | 124.80 | 116.00 |
| 26 | BB | 151 | C | C2-N3-C4 | 5.50 | 122.65 | 119.90 |
| 26 | BB | 1128 | G | C4-C5-C6 | 5.50 | 122.10 | 118.80 |
| 26 | BB | 1884 | G | C5-C6-N1 | -5.50 | 108.75 | 111.50 |
| 26 | BB | 2755 | C | C1'-O4'-C4' | 5.50 | 114.30 | 109.90 |
| 1 | AA | 71 | A | C1'-O4'-C4' | -5.50 | 105.50 | 109.90 |
| 1 | AA | 325 | A | C4-C5-C6 | -5.50 | 114.25 | 117.00 |
| 1 | AA | 821 | G | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 1 | AA | 1054 | C | N1-C2-O2 | 5.50 | 122.20 | 118.90 |
| 4 | AD | 23 | G | O4'-C1'-N9 | 5.50 | 112.60 | 108.20 |
| 13 | AM | 55 | PRO | CA-N-CD | -5.50 | 103.80 | 111.50 |
| 26 | BB | 57 | C | O4'-C1'-N1 | 5.50 | 112.60 | 108.20 |
| 26 | BB | 205 | G | C5-N7-C8 | 5.50 | 107.05 | 104.30 |
| 26 | BB | 367 | G | N1-C2-N2 | 5.50 | 121.15 | 116.20 |
| 26 | BB | 475 | C | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 629 | G | C3'-C2'-C1' | 5.50 | 105.90 | 101.50 |
| 26 | BB | 979 | A | C8-N9-C1' | 5.50 | 137.60 | 127.70 |
| 26 | BB | 1239 | G | O4'-C1'-N9 | 5.50 | 112.60 | 108.20 |
| 26 | BB | 1370 | C | O4'-C4'-C3' | 5.50 | 110.50 | 106.10 |
| 26 | BB | 1472 | C | C5'-C4'-C3' | -5.50 | 107.20 | 116.00 |
| 26 | BB | 1595 | C | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 26 | BB | 1768 | C | N3-C4-N4 | 5.50 | 121.85 | 118.00 |
| 26 | BB | 1920 | C | N1-C1'-C2' | -5.50 | 105.95 | 112.00 |
| 26 | BB | 1975 | G | C6-N1-C2 | -5.50 | 121.80 | 125.10 |
| 26 | BB | 2004 | G | N9-C1'-C2' | -5.50 | 105.95 | 112.00 |
| 26 | BB | 2724 | U | N1-C2-N3 | 5.50 | 118.20 | 114.90 |
| 1 | AA | 5 | U | C6-N1-C1' | -5.50 | 113.50 | 121.20 |
| 1 | AA | 220 | G | C4-N9-C1' | -5.50 | 119.36 | 126.50 |
| 1 | AA | 282 | A | C5-C6-N1 | -5.50 | 114.95 | 117.70 |
| 1 | AA | 983 | A | N9-C4-C5 | 5.50 | 108.00 | 105.80 |
| 1 | AA | 1106 | G | O4'-C1'-C2' | 5.50 | 112.55 | 107.60 |
| 1 | AA | 1274 | A | C5-C6-N1 | -5.50 | 114.95 | 117.70 |
| 1 | AA | 1297 | G | C2-N3-C4 | 5.50 | 114.65 | 111.90 |
| 1 | AA | 1494 | G | C5'-C4'-C3' | -5.50 | 107.20 | 116.00 |
| 25 | BA | 79 | G | C4-C5-C6 | -5.50 | 115.50 | 118.80 |
| 26 | BB | 33 | C | N3-C4-N4 | 5.50 | 121.85 | 118.00 |
| 26 | BB | 539 | G | C8-N9-C4 | -5.50 | 104.20 | 106.40 |
| 26 | BB | 604 | G | N3-C2-N2 | -5.50 | 116.05 | 119.90 |
| 26 | BB | 890 | C | C3'-C2'-C1' | -5.50 | 97.10 | 101.50 |
| 26 | BB | 1750 | G | C4'-C3'-C2' | 5.50 | 108.10 | 102.60 |
| 26 | BB | 1816 | C | N1-C2-N3 | 5.50 | 123.05 | 119.20 |
| 26 | BB | 1901 | A | C4'-C3'-C2' | -5.50 | 97.10 | 102.60 |
| 26 | BB | 2509 | G | C6-N1-C2 | -5.50 | 121.80 | 125.10 |
| 26 | BB | 2709 | G | C4-C5-C6 | 5.50 | 122.10 | 118.80 |
| 1 | AA | 868 | C | C5-C6-N1 | -5.50 | 118.25 | 121.00 |
| 1 | AA | 1448 | C | O5'-C5'-C4' | -5.50 | 101.26 | 111.70 |
| 25 | BA | 29 | A | C5-C6-N6 | -5.50 | 119.30 | 123.70 |
| 26 | BB | 725 | G | C8-N9-C4 | -5.50 | 104.20 | 106.40 |
| 26 | BB | 1308 | A | C5-C6-N6 | -5.50 | 119.30 | 123.70 |
| 26 | BB | 1564 | C | N3-C2-O2 | -5.50 | 118.05 | 121.90 |
| 26 | BB | 1880 | U | N1-C2-N3 | 5.50 | 118.20 | 114.90 |
| 26 | BB | 2315 | G | C3'-C2'-C1' | 5.50 | 105.90 | 101.50 |
| 26 | BB | 2329 | U | N3-C2-O2 | -5.50 | 118.35 | 122.20 |
| 1 | AA | 35 | G | N3-C2-N2 | 5.49 | 123.75 | 119.90 |
| 1 | AA | 226 | G | C2-N3-C4 | 5.49 | 114.65 | 111.90 |
| 1 | AA | 324 | G | C2-N3-C4 | -5.49 | 109.15 | 111.90 |
| 1 | AA | 861 | G | O3'-P-O5' | 5.49 | 114.44 | 104.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 895 | G | C3'-C2'-C1' | -5.49 | 97.11 | 101.50 |
| 1 | AA | 1028 | C | C5'-C4'-O4' | 5.49 | 115.69 | 109.10 |
| 1 | AA | 1213 | A | N1-C2-N3 | -5.49 | 126.55 | 129.30 |
| 1 | AA | 1251 | A | N9-C1'-C2' | -5.49 | 105.96 | 112.00 |
| 26 | BB | 171 | U | C4-C5-C6 | 5.49 | 123.00 | 119.70 |
| 26 | BB | 570 | G | C5'-C4'-C3' | -5.49 | 107.21 | 116.00 |
| 26 | BB | 972 | A | C5-N7-C8 | -5.49 | 101.15 | 103.90 |
| 26 | BB | 1356 | G | C5-C6-N1 | 5.49 | 114.25 | 111.50 |
| 26 | BB | 2237 | G | N3-C4-C5 | -5.49 | 125.85 | 128.60 |
| 26 | BB | 2641 | G | C6-N1-C2 | -5.49 | 121.80 | 125.10 |
| 26 | BB | 2700 | A | C8-N9-C4 | -5.49 | 103.60 | 105.80 |
| 26 | BB | 2733 | A | C2-N3-C4 | 5.49 | 113.35 | 110.60 |
| 26 | BB | 2879 | A | N1-C6-N6 | -5.49 | 115.30 | 118.60 |
| 1 | AA | 128 | G | C2'-C3'-O3' | 5.49 | 122.49 | 113.70 |
| 1 | AA | 1072 | G | N1-C2-N3 | -5.49 | 120.61 | 123.90 |
| 1 | AA | 1204 | A | C2-N3-C4 | -5.49 | 107.85 | 110.60 |
| 1 | AA | 1393 | U | C5-C4-O4 | -5.49 | 122.61 | 125.90 |
| 26 | BB | 684 | G | N3-C4-N9 | 5.49 | 129.29 | 126.00 |
| 26 | BB | 735 | A | C6-C5-N7 | 5.49 | 136.14 | 132.30 |
| 26 | BB | 1968 | G | N7-C8-N9 | 5.49 | 115.85 | 113.10 |
| 26 | BB | 2604 | U | N3-C4-O4 | 5.49 | 123.25 | 119.40 |
| 26 | BB | 2755 | C | C2-N1-C1' | 5.49 | 124.84 | 118.80 |
| 1 | AA | 186 | C | C2-N3-C4 | 5.49 | 122.65 | 119.90 |
| 1 | AA | 695 | A | O5'-P-OP1 | -5.49 | 100.76 | 105.70 |
| 1 | AA | 1176 | A | C4-C5-N7 | 5.49 | 113.44 | 110.70 |
| 1 | AA | 1281 | C | N3-C4-C5 | -5.49 | 119.70 | 121.90 |
| 26 | BB | 172 | A | C4-C5-N7 | 5.49 | 113.45 | 110.70 |
| 26 | BB | 360 | U | N3-C2-O2 | -5.49 | 118.36 | 122.20 |
| 26 | BB | 412 | A | C5-C6-N1 | 5.49 | 120.44 | 117.70 |
| 26 | BB | 484 | C | C4'-C3'-C2' | -5.49 | 97.11 | 102.60 |
| 26 | BB | 689 | A | C8-N9-C4 | -5.49 | 103.60 | 105.80 |
| 26 | BB | 759 | G | N9-C4-C5 | -5.49 | 103.20 | 105.40 |
| 26 | BB | 1544 | A | C4'-C3'-C2' | -5.49 | 97.11 | 102.60 |
| 26 | BB | 1921 | G | N9-C1'-C2' | -5.49 | 105.96 | 112.00 |
| 26 | BB | 2257 | U | C3'-C2'-C1' | 5.49 | 105.89 | 101.50 |
| 26 | BB | 2711 | A | C5'-C4'-O4' | 5.49 | 115.69 | 109.10 |
| 43 | BS | 47 | ARG | NE-CZ-NH1 | 5.49 | 123.05 | 120.30 |
| 1 | AA | 312 | C | C5-C6-N1 | 5.49 | 123.74 | 121.00 |
| 1 | AA | 639 | G | N3-C2-N2 | -5.49 | 116.06 | 119.90 |
| 1 | AA | 827 | U | N3-C4-O4 | -5.49 | 115.56 | 119.40 |
| 1 | AA | 994 | A | N3-C4-N9 | 5.49 | 131.79 | 127.40 |
| 1 | AA | 1237 | C | C6-N1-C1' | 5.49 | 127.39 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 10 | G | N7-C8-N9 | 5.49 | 115.84 | 113.10 |
| 4 | AD | 17 | C | O4'-C1'-N1 | 5.49 | 112.59 | 108.20 |
| 26 | BB | 66 | C | C5-C4-N4 | -5.49 | 116.36 | 120.20 |
| 26 | BB | 295 | G | C4-C5-C6 | 5.49 | 122.09 | 118.80 |
| 26 | BB | 333 | G | C5'-C4'-O4' | 5.49 | 115.69 | 109.10 |
| 26 | BB | 451 | U | C4-C5-C6 | 5.49 | 122.99 | 119.70 |
| 26 | BB | 589 | U | O4'-C1'-N1 | 5.49 | 112.59 | 108.20 |
| 26 | BB | 645 | C | N1-C2-N3 | -5.49 | 115.36 | 119.20 |
| 26 | BB | 926 | G | C5-N7-C8 | -5.49 | 101.56 | 104.30 |
| 26 | BB | 1000 | A | C2-N3-C4 | 5.49 | 113.34 | 110.60 |
| 26 | BB | 1285 | A | C4-C5-N7 | -5.49 | 107.96 | 110.70 |
| 26 | BB | 1288 | G | O4'-C1'-C2' | -5.49 | 100.31 | 105.80 |
| 26 | BB | 1553 | A | C2-N3-C4 | 5.49 | 113.34 | 110.60 |
| 26 | BB | 2165 | C | C5-C6-N1 | -5.49 | 118.25 | 121.00 |
| 26 | BB | 2347 | C | C4'-C3'-C2' | -5.49 | 97.11 | 102.60 |
| 26 | BB | 2553 | G | O4'-C1'-N9 | 5.49 | 112.59 | 108.20 |
| 26 | BB | 2576 | G | N1-C2-N3 | -5.49 | 120.61 | 123.90 |
| 27 | BC | 194 | VAL | CA-CB-CG2 | 5.49 | 119.13 | 110.90 |
| 1 | AA | 1233 | G | C5-C6-O6 | -5.49 | 125.31 | 128.60 |
| 26 | BB | 150 | U | C5-C4-O4 | 5.49 | 129.19 | 125.90 |
| 26 | BB | 858 | G | C5-C6-N1 | 5.49 | 114.24 | 111.50 |
| 26 | BB | 1220 | G | N1-C6-O6 | -5.49 | 116.61 | 119.90 |
| 26 | BB | 1977 | A | P-O3'-C3' | 5.49 | 126.28 | 119.70 |
| 26 | BB | 2410 | G | C8-N9-C4 | -5.49 | 104.20 | 106.40 |
| 26 | BB | 2434 | A | C1'-O4'-C4' | -5.49 | 105.51 | 109.90 |
| 33 | BI | 29 | PHE | CB-CG-CD1 | -5.49 | 116.96 | 120.80 |
| 1 | AA | 199 | A | C2-N3-C4 | -5.49 | 107.86 | 110.60 |
| 1 | AA | 576 | C | N3-C2-O2 | 5.49 | 125.74 | 121.90 |
| 1 | AA | 626 | G | O4'-C1'-N9 | 5.49 | 112.59 | 108.20 |
| 1 | AA | 963 | G | C2-N3-C4 | 5.49 | 114.64 | 111.90 |
| 1 | AA | 1075 | U | N3-C4-C5 | 5.49 | 117.89 | 114.60 |
| 2 | AB | 53 | G | N7-C8-N9 | -5.49 | 110.36 | 113.10 |
| 26 | BB | 3 | U | C4-C5-C6 | 5.49 | 122.99 | 119.70 |
| 26 | BB | 29 | U | C5'-C4'-O4' | 5.49 | 115.68 | 109.10 |
| 26 | BB | 215 | G | N3-C2-N2 | 5.49 | 123.74 | 119.90 |
| 26 | BB | 218 | A | C5-N7-C8 | 5.49 | 106.64 | 103.90 |
| 26 | BB | 282 | A | N7-C8-N9 | 5.49 | 116.54 | 113.80 |
| 26 | BB | 446 | G | C2-N3-C4 | -5.49 | 109.16 | 111.90 |
| 26 | BB | 479 | A | C1'-O4'-C4' | 5.49 | 114.29 | 109.90 |
| 26 | BB | 529 | A | O3'-P-O5' | -5.49 | 93.58 | 104.00 |
| 26 | BB | 600 | G | C2-N3-C4 | -5.49 | 109.16 | 111.90 |
| 26 | BB | 633 | A | O4'-C1'-N9 | 5.49 | 112.59 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 712 | G | N1-C2-N3 | -5.49 | 120.61 | 123.90 |
| 26 | BB | 820 | A | C2-N3-C4 | -5.49 | 107.86 | 110.60 |
| 26 | BB | 1167 | C | N1-C1'-C2' | -5.49 | 105.97 | 112.00 |
| 26 | BB | 1179 | G | C5-C6-N1 | 5.49 | 114.24 | 111.50 |
| 26 | BB | 1356 | G | N9-C1'-C2' | -5.49 | 105.97 | 112.00 |
| 26 | BB | 1703 | G | C6-C5-N7 | 5.49 | 133.69 | 130.40 |
| 26 | BB | 2223 | G | C4-C5-N7 | 5.49 | 112.99 | 110.80 |
| 26 | BB | 2324 | U | C2-N1-C1' | -5.49 | 111.12 | 117.70 |
| 26 | BB | 2509 | G | C5'-C4'-O4' | 5.49 | 115.68 | 109.10 |
| 26 | BB | 2871 | U | C4-C5-C6 | -5.49 | 116.41 | 119.70 |
| 1 | AA | 1287 | A | C3'-C2'-C1' | -5.48 | 97.11 | 101.50 |
| 26 | BB | 196 | A | P-O3'-C3' | 5.48 | 126.28 | 119.70 |
| 26 | BB | 1337 | G | C4-C5-N7 | -5.48 | 108.61 | 110.80 |
| 26 | BB | 2585 | U | N1-C2-N3 | 5.48 | 118.19 | 114.90 |
| 26 | BB | 2652 | C | C5-C6-N1 | 5.48 | 123.74 | 121.00 |
| 1 | AA | 117 | G | C6-N1-C2 | -5.48 | 121.81 | 125.10 |
| 1 | AA | 730 | G | N9-C4-C5 | 5.48 | 107.59 | 105.40 |
| 1 | AA | 1073 | U | N3-C4-C5 | -5.48 | 111.31 | 114.60 |
| 1 | AA | 1327 | C | C6-N1-C2 | 5.48 | 122.49 | 120.30 |
| 1 | AA | 1503 | A | C3'-C2'-C1' | -5.48 | 97.11 | 101.50 |
| 4 | AD | 35 | C | C2-N3-C4 | 5.48 | 122.64 | 119.90 |
| 25 | BA | 107 | G | C2-N3-C4 | 5.48 | 114.64 | 111.90 |
| 26 | BB | 59 | U | O4'-C1'-N1 | 5.48 | 112.58 | 108.20 |
| 26 | BB | 330 | A | O4'-C1'-N9 | 5.48 | 112.58 | 108.20 |
| 26 | BB | 670 | A | N7-C8-N9 | -5.48 | 111.06 | 113.80 |
| 26 | BB | 705 | A | C5-C6-N6 | -5.48 | 119.31 | 123.70 |
| 26 | BB | 1227 | G | N1-C2-N3 | 5.48 | 127.19 | 123.90 |
| 26 | BB | 1237 | A | N7-C8-N9 | 5.48 | 116.54 | 113.80 |
| 26 | BB | 1459 | G | N9-C4-C5 | 5.48 | 107.59 | 105.40 |
| 26 | BB | 1552 | A | C4-C5-C6 | -5.48 | 114.26 | 117.00 |
| 26 | BB | 2340 | A | N9-C1'-C2' | -5.48 | 105.97 | 112.00 |
| 26 | BB | 2629 | U | N3-C2-O2 | -5.48 | 118.36 | 122.20 |
| 26 | BB | 2640 | G | N1-C2-N2 | 5.48 | 121.13 | 116.20 |
| 26 | BB | 2653 | U | C4-C5-C6 | 5.48 | 122.99 | 119.70 |
| 26 | BB | 2757 | A | C5-N7-C8 | 5.48 | 106.64 | 103.90 |
| 26 | BB | 2841 | C | O4'-C4'-C3' | 5.48 | 110.49 | 106.10 |
| 45 | BU | 14 | ALA | N-CA-CB | -5.48 | 102.43 | 110.10 |
| 49 | BY | 44 | PHE | CB-CG-CD1 | -5.48 | 116.96 | 120.80 |
| 1 | AA | 37 | U | C2-N3-C4 | -5.48 | 123.71 | 127.00 |
| 1 | AA | 106 | C | C5'-C4'-C3' | 5.48 | 124.77 | 116.00 |
| 1 | AA | 211 | G | C5-N7-C8 | 5.48 | 107.04 | 104.30 |
| 1 | AA | 465 | A | C4-C5-C6 | 5.48 | 119.74 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 739 | C | N1-C2-O2 | 5.48 | 122.19 | 118.90 |
| 4 | AD | 13 | C | P-O3'-C3' | 5.48 | 126.28 | 119.70 |
| 11 | AK | 97 | GLY | O-C-N | 5.48 | 131.47 | 122.70 |
| 26 | BB | 182 | A | C4'-C3'-C2' | -5.48 | 97.12 | 102.60 |
| 26 | BB | 656 | G | N1-C2-N2 | 5.48 | 121.13 | 116.20 |
| 26 | BB | 657 | U | C4-C5-C6 | 5.48 | 122.99 | 119.70 |
| 26 | BB | 1101 | U | C4-C5-C6 | 5.48 | 122.99 | 119.70 |
| 26 | BB | 1383 | A | N9-C4-C5 | 5.48 | 107.99 | 105.80 |
| 26 | BB | 1522 | A | C8-N9-C4 | -5.48 | 103.61 | 105.80 |
| 26 | BB | 1571 | A | P-O3'-C3' | 5.48 | 126.28 | 119.70 |
| 26 | BB | 1839 | G | N1-C2-N2 | -5.48 | 111.27 | 116.20 |
| 26 | BB | 2233 | U | C5'-C4'-O4' | 5.48 | 115.68 | 109.10 |
| 26 | BB | 2497 | A | N3-C4-N9 | -5.48 | 123.02 | 127.40 |
| 26 | BB | 2576 | G | N7-C8-N9 | 5.48 | 115.84 | 113.10 |
| 26 | BB | 2585 | U | C2-N3-C4 | -5.48 | 123.71 | 127.00 |
| 26 | BB | 2675 | A | C5'-C4'-O4' | 5.48 | 115.68 | 109.10 |
| 1 | AA | 254 | G | N9-C4-C5 | 5.48 | 107.59 | 105.40 |
| 1 | AA | 699 | C | C5'-C4'-C3' | -5.48 | 107.23 | 116.00 |
| 1 | AA | 748 | G | C5-C6-N1 | 5.48 | 114.24 | 111.50 |
| 1 | AA | 1446 | A | O4'-C1'-C2' | -5.48 | 100.32 | 105.80 |
| 26 | BB | 805 | G | C2'-C3'-O3' | 5.48 | 122.47 | 113.70 |
| 26 | BB | 1063 | G | N3-C4-C5 | -5.48 | 125.86 | 128.60 |
| 26 | BB | 1977 | A | C5-C6-N1 | 5.48 | 120.44 | 117.70 |
| 26 | BB | 2387 | U | N1-C2-O2 | 5.48 | 126.64 | 122.80 |
| 26 | BB | 2651 | C | N3-C4-C5 | 5.48 | 124.09 | 121.90 |
| 42 | BR | 61 | ARG | CD-NE-CZ | 5.48 | 131.27 | 123.60 |
| 1 | AA | 9 | G | N1-C2-N2 | 5.48 | 121.13 | 116.20 |
| 1 | AA | 11 | G | C2-N3-C4 | 5.48 | 114.64 | 111.90 |
| 1 | AA | 351 | G | N1-C2-N3 | -5.48 | 120.61 | 123.90 |
| 1 | AA | 600 | A | C3'-C2'-C1' | -5.48 | 97.12 | 101.50 |
| 1 | AA | 803 | G | C4-C5-C6 | 5.48 | 122.09 | 118.80 |
| 1 | AA | 1394 | A | C6-N1-C2 | 5.48 | 121.89 | 118.60 |
| 2 | AB | 40 | C | N1-C2-O2 | 5.48 | 122.19 | 118.90 |
| 7 | AG | 96 | ARG | NE-CZ-NH2 | 5.48 | 123.04 | 120.30 |
| 25 | BA | 69 | G | N9-C4-C5 | 5.48 | 107.59 | 105.40 |
| 25 | BA | 70 | C | C6-N1-C2 | -5.48 | 118.11 | 120.30 |
| 26 | BB | 327 | G | N3-C2-N2 | 5.48 | 123.73 | 119.90 |
| 26 | BB | 766 | U | N1-C2-N3 | 5.48 | 118.19 | 114.90 |
| 26 | BB | 1219 | U | C6-N1-C2 | -5.48 | 117.71 | 121.00 |
| 26 | BB | 1535 | A | C3'-C2'-C1' | 5.48 | 105.88 | 101.50 |
| 26 | BB | 1637 | A | C5-C6-N1 | -5.48 | 114.96 | 117.70 |
| 26 | BB | 1956 | U | N1-C1'-C2' | -5.48 | 105.97 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2110 | G | P-O3'-C3' | 5.48 | 126.27 | 119.70 |
| 26 | BB | 2158 | A | C6-N1-C2 | -5.48 | 115.31 | 118.60 |
| 26 | BB | 2686 | G | N7-C8-N9 | -5.48 | 110.36 | 113.10 |
| 1 | AA | 58 | C | C5'-C4'-C3' | -5.48 | 107.24 | 116.00 |
| 26 | BB | 2821 | A | N7-C8-N9 | 5.48 | 116.54 | 113.80 |
| 1 | AA | 8 | A | C2-N3-C4 | -5.47 | 107.86 | 110.60 |
| 1 | AA | 146 | G | C4'-C3'-C2' | -5.47 | 97.12 | 102.60 |
| 1 | AA | 1175 | G | C4-C5-C6 | 5.47 | 122.08 | 118.80 |
| 4 | AD | 41 | C | C2-N3-C4 | 5.47 | 122.64 | 119.90 |
| 4 | AD | 44 | A | C5'-C4'-C3' | -5.47 | 107.24 | 116.00 |
| 7 | AG | 159 | GLU | OE1-CD-OE2 | 5.47 | 129.87 | 123.30 |
| 26 | BB | 386 | G | C4-N9-C1' | -5.47 | 119.38 | 126.50 |
| 26 | BB | 708 | G | N1-C2-N2 | 5.47 | 121.13 | 116.20 |
| 26 | BB | 750 | A | N9-C4-C5 | -5.47 | 103.61 | 105.80 |
| 26 | BB | 750 | A | O5'-P-OP2 | -5.47 | 100.77 | 105.70 |
| 26 | BB | 861 | A | C6-N1-C2 | 5.47 | 121.89 | 118.60 |
| 26 | BB | 1935 | G | N9-C1'-C2' | -5.47 | 105.98 | 112.00 |
| 26 | BB | 2046 | G | N9-C1'-C2' | -5.47 | 105.98 | 112.00 |
| 26 | BB | 2302 | U | O4'-C4'-C3' | -5.47 | 98.53 | 104.00 |
| 26 | BB | 2894 | G | N1-C2-N2 | 5.47 | 121.13 | 116.20 |
| 31 | BG | 44 | ALA | CB-CA-C | 5.47 | 118.31 | 110.10 |
| 42 | BR | 70 | GLU | OE1-CD-OE2 | 5.47 | 129.87 | 123.30 |
| 1 | AA | 15 | G | C8-N9-C4 | -5.47 | 104.21 | 106.40 |
| 1 | AA | 442 | G | C8-N9-C1' | 5.47 | 134.12 | 127.00 |
| 1 | AA | 1064 | G | O4'-C1'-N9 | 5.47 | 112.58 | 108.20 |
| 1 | AA | 1072 | G | P-O3'-C3' | 5.47 | 126.27 | 119.70 |
| 1 | AA | 1111 | A | C3'-C2'-C1' | 5.47 | 105.88 | 101.50 |
| 1 | AA | 1210 | C | C5-C6-N1 | -5.47 | 118.26 | 121.00 |
| 1 | AA | 1466 | C | C3'-C2'-C1' | 5.47 | 105.88 | 101.50 |
| 4 | AD | 5 | G | C4-C5-N7 | 5.47 | 112.99 | 110.80 |
| 25 | BA | 74 | U | O4'-C1'-N1 | 5.47 | 112.58 | 108.20 |
| 26 | BB | 22 | C | C5'-C4'-C3' | -5.47 | 107.24 | 116.00 |
| 26 | BB | 131 | A | N7-C8-N9 | 5.47 | 116.54 | 113.80 |
| 26 | BB | 165 | A | N1-C2-N3 | -5.47 | 126.56 | 129.30 |
| 26 | BB | 476 | G | C6-N1-C2 | -5.47 | 121.82 | 125.10 |
| 26 | BB | 801 | G | C6-N1-C2 | -5.47 | 121.82 | 125.10 |
| 26 | BB | 833 | A | C5-N7-C8 | -5.47 | 101.16 | 103.90 |
| 26 | BB | 935 | C | N3-C4-N4 | 5.47 | 121.83 | 118.00 |
| 26 | BB | 1450 | G | C8-N9-C4 | -5.47 | 104.21 | 106.40 |
| 26 | BB | 1682 | G | C5'-C4'-C3' | -5.47 | 107.24 | 116.00 |
| 26 | BB | 1776 | G | C5'-C4'-C3' | -5.47 | 107.24 | 116.00 |
| 26 | BB | 2274 | A | C6-N1-C2 | -5.47 | 115.32 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2102 | G | N9-C4-C5 | 5.47 | 107.59 | 105.40 |
| 26 | BB | 2772 | C | P-O3'-C3' | 5.47 | 126.27 | 119.70 |
| 1 | AA | 55 | A | N7-C8-N9 | 5.47 | 116.53 | 113.80 |
| 1 | AA | 105 | G | N3-C4-N9 | -5.47 | 122.72 | 126.00 |
| 1 | AA | 365 | U | O4'-C1'-N1 | 5.47 | 112.58 | 108.20 |
| 1 | AA | 525 | C | C6-N1-C2 | -5.47 | 118.11 | 120.30 |
| 1 | AA | 1486 | G | C6-C5-N7 | -5.47 | 127.12 | 130.40 |
| 2 | AB | 12 | U | N3-C4-O4 | 5.47 | 123.23 | 119.40 |
| 9 | AI | 42 | TRP | CG-CD2-CE3 | -5.47 | 128.98 | 133.90 |
| 25 | BA | 109 | A | C4-C5-N7 | -5.47 | 107.97 | 110.70 |
| 26 | BB | 53 | A | O4'-C1'-N9 | 5.47 | 112.58 | 108.20 |
| 26 | BB | 447 | A | P-O3'-C3' | 5.47 | 126.26 | 119.70 |
| 26 | BB | 528 | A | O4'-C1'-N9 | 5.47 | 112.58 | 108.20 |
| 26 | BB | 689 | A | C1'-O4'-C4' | -5.47 | 105.52 | 109.90 |
| 26 | BB | 1419 | A | C8-N9-C4 | -5.47 | 103.61 | 105.80 |
| 26 | BB | 1616 | A | C4-C5-N7 | 5.47 | 113.44 | 110.70 |
| 26 | BB | 1810 | A | C4-C5-C6 | 5.47 | 119.73 | 117.00 |
| 26 | BB | 1979 | U | N1-C2-O2 | 5.47 | 126.63 | 122.80 |
| 26 | BB | 2341 | G | N7-C8-N9 | 5.47 | 115.83 | 113.10 |
| 26 | BB | 2540 | C | O4'-C1'-N1 | 5.47 | 112.58 | 108.20 |
| 1 | AA | 269 | C | C5'-C4'-O4' | 5.47 | 115.66 | 109.10 |
| 1 | AA | 464 | U | C5-C6-N1 | -5.47 | 119.97 | 122.70 |
| 26 | BB | 71 | A | N9-C4-C5 | -5.47 | 103.61 | 105.80 |
| 26 | BB | 1168 | G | C5-N7-C8 | -5.47 | 101.57 | 104.30 |
| 26 | BB | 1522 | A | N1-C2-N3 | -5.47 | 126.57 | 129.30 |
| 26 | BB | 1977 | A | N9-C1'-C2' | -5.47 | 105.98 | 112.00 |
| 26 | BB | 2420 | C | C1'-O4'-C4' | -5.47 | 105.53 | 109.90 |
| 26 | BB | 2839 | G | N3-C4-C5 | -5.47 | 125.87 | 128.60 |
| 1 | AA | 107 | G | N9-C4-C5 | 5.47 | 107.59 | 105.40 |
| 1 | AA | 191 | G | O4'-C1'-N9 | 5.47 | 112.57 | 108.20 |
| 1 | AA | 323 | U | N1-C2-N3 | 5.47 | 118.18 | 114.90 |
| 1 | AA | 448 | A | N1-C2-N3 | -5.47 | 126.57 | 129.30 |
| 1 | AA | 775 | G | C5'-C4'-O4' | 5.47 | 115.66 | 109.10 |
| 1 | AA | 1389 | C | C3'-C2'-C1' | 5.47 | 105.87 | 101.50 |
| 14 | AN | 92 | ARG | NE-CZ-NH1 | 5.47 | 123.03 | 120.30 |
| 26 | BB | 919 | U | N3-C4-O4 | 5.47 | 123.23 | 119.40 |
| 26 | BB | 953 | G | C2-N3-C4 | -5.47 | 109.17 | 111.90 |
| 26 | BB | 979 | A | N3-C4-C5 | -5.47 | 122.97 | 126.80 |
| 26 | BB | 1169 | A | C5-C6-N6 | -5.47 | 119.33 | 123.70 |
| 26 | BB | 1212 | G | O4'-C1'-C2' | 5.47 | 112.52 | 107.60 |
| 26 | BB | 1247 | A | C4-C5-N7 | -5.47 | 107.97 | 110.70 |
| 26 | BB | 1607 | C | N1-C2-O2 | 5.47 | 122.18 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2246 | G | N3-C4-C5 | -5.47 | 125.87 | 128.60 |
| 26 | BB | 2770 | G | C8-N9-C4 | -5.47 | 104.21 | 106.40 |
| 26 | BB | 2808 | G | C2-N3-C4 | 5.47 | 114.63 | 111.90 |
| 1 | AA | 226 | G | N7-C8-N9 | 5.46 | 115.83 | 113.10 |
| 1 | AA | 292 | G | N3-C4-N9 | 5.46 | 129.28 | 126.00 |
| 1 | AA | 694 | A | C5-C6-N1 | 5.46 | 120.43 | 117.70 |
| 1 | AA | 921 | U | C6-N1-C2 | -5.46 | 117.72 | 121.00 |
| 1 | AA | 943 | U | P-O5'-C5' | -5.46 | 112.16 | 120.90 |
| 1 | AA | 1166 | G | C5-C6-N1 | -5.46 | 108.77 | 111.50 |
| 1 | AA | 1360 | A | O4'-C1'-C2' | 5.46 | 112.52 | 107.60 |
| 1 | AA | 1441 | A | C1'-O4'-C4' | -5.46 | 105.53 | 109.90 |
| 2 | AB | 7 | G | C5'-C4'-O4' | 5.46 | 115.66 | 109.10 |
| 3 | AC | 16 | A | C6-C5-N7 | 5.46 | 136.12 | 132.30 |
| 25 | BA | 33 | G | P-O3'-C3' | -5.46 | 113.14 | 119.70 |
| 25 | BA | 108 | A | C6-C5-N7 | 5.46 | 136.13 | 132.30 |
| 26 | BB | 106 | C | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |
| 26 | BB | 237 | C | C1'-O4'-C4' | 5.46 | 114.27 | 109.90 |
| 26 | BB | 304 | U | N3-C2-O2 | -5.46 | 118.38 | 122.20 |
| 26 | BB | 381 | G | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |
| 26 | BB | 672 | C | N1-C1'-C2' | -5.46 | 105.99 | 112.00 |
| 26 | BB | 697 | G | N7-C8-N9 | 5.46 | 115.83 | 113.10 |
| 26 | BB | 981 | A | C6-N1-C2 | -5.46 | 115.32 | 118.60 |
| 26 | BB | 1596 | A | C6-C5-N7 | 5.46 | 136.12 | 132.30 |
| 26 | BB | 1758 | U | O4'-C1'-N1 | 5.46 | 112.57 | 108.20 |
| 26 | BB | 1934 | C | C3'-C2'-C1' | -5.46 | 97.13 | 101.50 |
| 26 | BB | 1986 | C | N1-C1'-C2' | -5.46 | 105.99 | 112.00 |
| 26 | BB | 2008 | C | C1'-O4'-C4' | 5.46 | 114.27 | 109.90 |
| 26 | BB | 2435 | A | C3'-C2'-C1' | 5.46 | 105.87 | 101.50 |
| 26 | BB | 2481 | G | C5-N7-C8 | -5.46 | 101.57 | 104.30 |
| 26 | BB | 2845 | U | C5-C6-N1 | -5.46 | 119.97 | 122.70 |
| 26 | BB | 2896 | C | C5-C6-N1 | 5.46 | 123.73 | 121.00 |
| 32 | BH | 34 | ARG | CA-CB-CG | 5.46 | 125.42 | 113.40 |
| 1 | AA | 363 | A | C5-C6-N6 | -5.46 | 119.33 | 123.70 |
| 1 | AA | 775 | G | O4'-C4'-C3' | 5.46 | 110.47 | 106.10 |
| 1 | AA | 1040 | U | N1-C2-O2 | 5.46 | 126.62 | 122.80 |
| 26 | BB | 133 | U | N1-C2-N3 | 5.46 | 118.18 | 114.90 |
| 26 | BB | 843 | G | C5'-C4'-O4' | 5.46 | 115.66 | 109.10 |
| 26 | BB | 1223 | G | C5'-C4'-C3' | -5.46 | 107.26 | 116.00 |
| 26 | BB | 2153 | C | P-O3'-C3' | 5.46 | 126.26 | 119.70 |
| 26 | BB | 2506 | U | O5'-P-OP1 | 5.46 | 117.26 | 110.70 |
| 26 | BB | 2718 | G | C4-C5-C6 | 5.46 | 122.08 | 118.80 |
| 26 | BB | 2762 | C | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 33 | A | N1-C6-N6 | 5.46 | 121.88 | 118.60 |
| 1 | AA | 141 | G | O4'-C1'-N9 | 5.46 | 112.57 | 108.20 |
| 1 | AA | 256 | U | N1-C2-O2 | 5.46 | 126.62 | 122.80 |
| 1 | AA | 275 | G | P-O5'-C5' | 5.46 | 129.64 | 120.90 |
| 1 | AA | 548 | G | C5-C6-N1 | -5.46 | 108.77 | 111.50 |
| 1 | AA | 851 | G | P-O3'-C3' | 5.46 | 126.25 | 119.70 |
| 1 | AA | 1297 | G | C3'-C2'-C1' | -5.46 | 97.13 | 101.50 |
| 4 | AD | 12 | G | N7-C8-N9 | 5.46 | 115.83 | 113.10 |
| 25 | BA | 36 | C | O5'-C5'-C4' | -5.46 | 101.32 | 111.70 |
| 26 | BB | 587 | C | C4'-C3'-C2' | 5.46 | 108.06 | 102.60 |
| 26 | BB | 986 | C | C5'-C4'-O4' | 5.46 | 115.65 | 109.10 |
| 26 | BB | 1163 | G | C1'-O4'-C4' | -5.46 | 105.53 | 109.90 |
| 26 | BB | 1218 | G | O4'-C1'-N9 | 5.46 | 112.57 | 108.20 |
| 26 | BB | 1902 | C | C4'-C3'-C2' | 5.46 | 108.06 | 102.60 |
| 26 | BB | 2016 | U | N3-C2-O2 | -5.46 | 118.38 | 122.20 |
| 26 | BB | 2238 | G | N1-C2-N2 | -5.46 | 111.28 | 116.20 |
| 26 | BB | 2299 | U | C5-C6-N1 | -5.46 | 119.97 | 122.70 |
| 26 | BB | 2339 | C | C2-N1-C1' | -5.46 | 112.79 | 118.80 |
| 26 | BB | 2381 | A | C4-C5-C6 | -5.46 | 114.27 | 117.00 |
| 26 | BB | 2623 | G | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |
| 26 | BB | 2834 | G | N3-C4-N9 | 5.46 | 129.28 | 126.00 |
| 48 | BX | 38 | LEU | CB-CG-CD1 | 5.46 | 120.28 | 111.00 |
| 1 | AA | 267 | C | N1-C1'-C2' | -5.46 | 105.99 | 112.00 |
| 26 | BB | 1051 | G | C2-N3-C4 | 5.46 | 114.63 | 111.90 |
| 26 | BB | 1324 | G | C2-N3-C4 | -5.46 | 109.17 | 111.90 |
| 26 | BB | 1990 | C | O4'-C1'-N1 | 5.46 | 112.57 | 108.20 |
| 1 | AA | 92 | U | C3'-C2'-C1' | -5.46 | 97.13 | 101.50 |
| 1 | AA | 560 | A | O4'-C1'-C2' | -5.46 | 100.34 | 105.80 |
| 1 | AA | 616 | G | N3-C4-C5 | -5.46 | 125.87 | 128.60 |
| 1 | AA | 656 | G | N3-C4-C5 | -5.46 | 125.87 | 128.60 |
| 1 | AA | 717 | U | C1'-O4'-C4' | -5.46 | 105.53 | 109.90 |
| 1 | AA | 1025 | U | C4'-C3'-C2' | 5.46 | 108.06 | 102.60 |
| 1 | AA | 1038 | C | C2-N1-C1' | -5.46 | 112.80 | 118.80 |
| 1 | AA | 1290 | G | N3-C4-C5 | -5.46 | 125.87 | 128.60 |
| 1 | AA | 1473 | G | C6-N1-C2 | -5.46 | 121.83 | 125.10 |
| 3 | AC | 21 | U | C1'-O4'-C4' | -5.46 | 105.53 | 109.90 |
| 26 | BB | 240 | C | C1'-O4'-C4' | 5.46 | 114.27 | 109.90 |
| 26 | BB | 650 | C | O4'-C1'-N1 | 5.46 | 112.57 | 108.20 |
| 26 | BB | 721 | A | C4-C5-N7 | -5.46 | 107.97 | 110.70 |
| 26 | BB | 1162 | G | C5-N7-C8 | -5.46 | 101.57 | 104.30 |
| 26 | BB | 1238 | G | N7-C8-N9 | 5.46 | 115.83 | 113.10 |
| 26 | BB | 1488 | C | N3-C2-O2 | -5.46 | 118.08 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1578 | U | O3'-P-O5' | 5.46 | 114.37 | 104.00 |
| 26 | BB | 1739 | A | C5'-C4'-C3' | -5.46 | 107.27 | 116.00 |
| 26 | BB | 1809 | A | C8-N9-C4 | -5.46 | 103.62 | 105.80 |
| 26 | BB | 1924 | C | N3-C4-C5 | 5.46 | 124.08 | 121.90 |
| 26 | BB | 2079 | U | N1-C1'-C2' | -5.46 | 106.00 | 112.00 |
| 26 | BB | 2359 | C | C5-C4-N4 | 5.46 | 124.02 | 120.20 |
| 26 | BB | 2573 | C | N3-C4-C5 | -5.46 | 119.72 | 121.90 |
| 26 | BB | 2788 | C | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |
| 1 | AA | 484 | G | C4'-C3'-C2' | 5.46 | 108.06 | 102.60 |
| 1 | AA | 557 | G | N9-C1'-C2' | -5.46 | 106.00 | 112.00 |
| 1 | AA | 846 | G | O5'-C5'-C4' | 5.46 | 122.07 | 111.70 |
| 1 | AA | 1053 | G | N9-C1'-C2' | 5.46 | 121.09 | 114.00 |
| 1 | AA | 1494 | G | N1-C2-N2 | -5.46 | 111.29 | 116.20 |
| 2 | AB | 25 | C | O4'-C1'-N1 | 5.46 | 112.57 | 108.20 |
| 6 | AF | 183 | TYR | CB-CG-CD2 | 5.46 | 124.27 | 121.00 |
| 25 | BA | 63 | C | N3-C4-C5 | -5.46 | 119.72 | 121.90 |
| 26 | BB | 173 | A | N1-C2-N3 | 5.46 | 132.03 | 129.30 |
| 26 | BB | 225 | C | C2-N3-C4 | 5.46 | 122.63 | 119.90 |
| 26 | BB | 701 | G | O4'-C1'-N9 | -5.46 | 103.83 | 108.20 |
| 26 | BB | 703 | U | N3-C4-C5 | -5.46 | 111.33 | 114.60 |
| 26 | BB | 1666 | G | C1'-O4'-C4' | -5.46 | 105.53 | 109.90 |
| 26 | BB | 1685 | C | N3-C4-C5 | -5.46 | 119.72 | 121.90 |
| 26 | BB | 1688 | U | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |
| 26 | BB | 1903 | G | C8-N9-C4 | -5.46 | 104.22 | 106.40 |
| 26 | BB | 2727 | A | C5-C6-N1 | -5.46 | 114.97 | 117.70 |
| 26 | BB | 2742 | G | C4'-C3'-C2' | -5.46 | 97.14 | 102.60 |
| 42 | BR | 42 | PHE | CB-CG-CD2 | -5.46 | 116.98 | 120.80 |
| 47 | BW | 82 | VAL | CG1-CB-CG2 | -5.46 | 102.17 | 110.90 |
| 1 | AA | 567 | G | C4-C5-C6 | 5.46 | 122.07 | 118.80 |
| 1 | AA | 606 | G | O5'-C5'-C4' | 5.46 | 122.06 | 111.70 |
| 1 | AA | 938 | A | N9-C4-C5 | 5.46 | 107.98 | 105.80 |
| 1 | AA | 971 | G | OP1-P-OP2 | -5.46 | 111.42 | 119.60 |
| 25 | BA | 39 | A | O4'-C1'-N9 | -5.46 | 103.84 | 108.20 |
| 26 | BB | 237 | C | N1-C2-N3 | 5.46 | 123.02 | 119.20 |
| 26 | BB | 582 | A | C5-N7-C8 | -5.46 | 101.17 | 103.90 |
| 26 | BB | 1516 | G | N3-C4-C5 | -5.46 | 125.87 | 128.60 |
| 26 | BB | 1788 | C | N1-C1'-C2' | -5.46 | 106.00 | 112.00 |
| 26 | BB | 2371 | G | P-O3'-C3' | 5.46 | 126.25 | 119.70 |
| 28 | BD | 174 | ARG | NE-CZ-NH1 | 5.46 | 123.03 | 120.30 |
| 1 | AA | 149 | A | N9-C1'-C2' | -5.45 | 106.00 | 112.00 |
| 1 | AA | 152 | A | C2-N3-C4 | 5.45 | 113.33 | 110.60 |
| 1 | AA | 387 | U | N1-C2-O2 | -5.45 | 118.98 | 122.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 536 | C | O4'-C1'-N1 | 5.45 | 112.56 | 108.20 |
| 1 | AA | 800 | G | C4'-C3'-O3' | 5.45 | 123.91 | 113.00 |
| 1 | AA | 813 | U | C1'-O4'-C4' | -5.45 | 105.54 | 109.90 |
| 1 | AA | 1143 | G | N3-C4-N9 | -5.45 | 122.73 | 126.00 |
| 4 | AD | 11 | A | C4-C5-C6 | 5.45 | 119.73 | 117.00 |
| 25 | BA | 96 | G | C5'-C4'-O4' | 5.45 | 115.64 | 109.10 |
| 26 | BB | 1441 | G | C6-N1-C2 | -5.45 | 121.83 | 125.10 |
| 26 | BB | 1474 | U | C3'-C2'-C1' | 5.45 | 105.86 | 101.50 |
| 26 | BB | 1534 | U | N1-C2-N3 | 5.45 | 118.17 | 114.90 |
| 26 | BB | 1950 | G | O4'-C1'-N9 | 5.45 | 112.56 | 108.20 |
| 26 | BB | 1956 | U | C3'-C2'-C1' | 5.45 | 105.86 | 101.50 |
| 26 | BB | 2732 | G | O4'-C1'-N9 | 5.45 | 112.56 | 108.20 |
| 26 | BB | 2836 | U | N3-C4-O4 | 5.45 | 123.22 | 119.40 |
| 45 | BU | 22 | ASP | CB-CG-OD2 | 5.45 | 123.21 | 118.30 |
| 1 | AA | 743 | A | C8-N9-C4 | -5.45 | 103.62 | 105.80 |
| 1 | AA | 972 | C | C6-N1-C2 | -5.45 | 118.12 | 120.30 |
| 1 | AA | 1191 | A | C6-C5-N7 | 5.45 | 136.12 | 132.30 |
| 26 | BB | 216 | A | N3-C4-C5 | -5.45 | 122.98 | 126.80 |
| 26 | BB | 1027 | A | C5-C6-N1 | 5.45 | 120.43 | 117.70 |
| 26 | BB | 2123 | G | C6-N1-C2 | -5.45 | 121.83 | 125.10 |
| 1 | AA | 10 | A | C6-C5-N7 | 5.45 | 136.12 | 132.30 |
| 1 | AA | 301 | G | N3-C4-N9 | 5.45 | 129.27 | 126.00 |
| 1 | AA | 354 | G | C5-N7-C8 | -5.45 | 101.58 | 104.30 |
| 1 | AA | 378 | G | N1-C2-N3 | -5.45 | 120.63 | 123.90 |
| 1 | AA | 661 | G | C6-C5-N7 | 5.45 | 133.67 | 130.40 |
| 1 | AA | 664 | G | N3-C4-C5 | -5.45 | 125.87 | 128.60 |
| 1 | AA | 816 | A | C5'-C4'-O4' | 5.45 | 115.64 | 109.10 |
| 1 | AA | 940 | C | N3-C4-C5 | 5.45 | 124.08 | 121.90 |
| 1 | AA | 944 | G | O4'-C1'-N9 | 5.45 | 112.56 | 108.20 |
| 1 | AA | 1383 | C | N1-C2-N3 | -5.45 | 115.39 | 119.20 |
| 2 | AB | 41 | C | N3-C2-O2 | -5.45 | 118.08 | 121.90 |
| 26 | BB | 100 | U | N3-C4-C5 | 5.45 | 117.87 | 114.60 |
| 26 | BB | 242 | G | C8-N9-C1' | 5.45 | 134.09 | 127.00 |
| 26 | BB | 998 | C | C2'-C3'-O3' | 5.45 | 122.42 | 113.70 |
| 26 | BB | 1892 | C | C5'-C4'-O4' | 5.45 | 115.64 | 109.10 |
| 26 | BB | 2124 | G | C5'-C4'-O4' | 5.45 | 115.64 | 109.10 |
| 26 | BB | 2490 | G | C5'-C4'-C3' | 5.45 | 124.72 | 116.00 |
| 26 | BB | 2546 | U | C2-N1-C1' | 5.45 | 124.24 | 117.70 |
| 26 | BB | 2623 | G | C6-N1-C2 | -5.45 | 121.83 | 125.10 |
| 26 | BB | 2895 | G | C5-C6-N1 | 5.45 | 114.22 | 111.50 |
| 30 | BF | 91 | ASP | CB-CG-OD2 | 5.45 | 123.21 | 118.30 |
| 1 | AA | 269 | C | P-O3'-C3' | 5.45 | 126.24 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 386 | C | C1'-O4'-C4' | 5.45 | 114.26 | 109.90 |
| 1 | AA | 476 | U | N3-C4-O4 | 5.45 | 123.21 | 119.40 |
| 1 | AA | 1104 | G | C4'-C3'-C2' | -5.45 | 97.15 | 102.60 |
| 1 | AA | 1421 | G | N1-C2-N2 | 5.45 | 121.10 | 116.20 |
| 26 | BB | 47 | C | C4-C5-C6 | -5.45 | 114.67 | 117.40 |
| 26 | BB | 107 | G | C2-N3-C4 | 5.45 | 114.62 | 111.90 |
| 26 | BB | 465 | G | N1-C2-N3 | 5.45 | 127.17 | 123.90 |
| 26 | BB | 540 | C | N1-C2-O2 | 5.45 | 122.17 | 118.90 |
| 26 | BB | 572 | A | N3-C4-C5 | 5.45 | 130.61 | 126.80 |
| 26 | BB | 606 | U | C3'-C2'-C1' | -5.45 | 97.14 | 101.50 |
| 26 | BB | 797 | G | N1-C6-O6 | -5.45 | 116.63 | 119.90 |
| 26 | BB | 1042 | G | C5-C6-O6 | -5.45 | 125.33 | 128.60 |
| 26 | BB | 1058 | U | N1-C2-O2 | 5.45 | 126.61 | 122.80 |
| 26 | BB | 1086 | A | C4-C5-C6 | -5.45 | 114.28 | 117.00 |
| 26 | BB | 1674 | G | N1-C2-N3 | -5.45 | 120.63 | 123.90 |
| 26 | BB | 1727 | C | C4-C5-C6 | -5.45 | 114.68 | 117.40 |
| 26 | BB | 2012 | G | C4-C5-N7 | -5.45 | 108.62 | 110.80 |
| 26 | BB | 2022 | U | P-O3'-C3' | -5.45 | 113.16 | 119.70 |
| 26 | BB | 2190 | G | C4'-C3'-C2' | -5.45 | 97.15 | 102.60 |
| 26 | BB | 2683 | C | C4-C5-C6 | -5.45 | 114.68 | 117.40 |
| 26 | BB | 2787 | C | N1-C1'-C2' | -5.45 | 106.01 | 112.00 |
| 28 | BD | 83 | ASP | CB-CG-OD2 | 5.45 | 123.20 | 118.30 |
| 1 | AA | 186 | C | C5-C4-N4 | 5.45 | 124.01 | 120.20 |
| 1 | AA | 267 | C | C4-C5-C6 | 5.45 | 120.12 | 117.40 |
| 1 | AA | 551 | U | N1-C2-O2 | -5.45 | 118.99 | 122.80 |
| 1 | AA | 622 | A | N9-C1'-C2' | -5.45 | 106.01 | 112.00 |
| 1 | AA | 1360 | A | N9-C1'-C2' | -5.45 | 106.01 | 112.00 |
| 2 | AB | 29 | G | C1'-O4'-C4' | 5.45 | 114.26 | 109.90 |
| 4 | AD | 34 | U | C6-N1-C2 | -5.45 | 117.73 | 121.00 |
| 25 | BA | 18 | G | C4-C5-C6 | 5.45 | 122.07 | 118.80 |
| 26 | BB | 868 | U | N3-C4-O4 | 5.45 | 123.21 | 119.40 |
| 26 | BB | 1086 | A | N1-C2-N3 | 5.45 | 132.02 | 129.30 |
| 26 | BB | 2627 | G | N3-C2-N2 | -5.45 | 116.09 | 119.90 |
| 1 | AA | 20 | U | N3-C2-O2 | -5.45 | 118.39 | 122.20 |
| 1 | AA | 755 | G | C6-C5-N7 | -5.45 | 127.13 | 130.40 |
| 18 | AR | 63 | ARG | NE-CZ-NH1 | -5.45 | 117.58 | 120.30 |
| 26 | BB | 577 | G | C8-N9-C4 | 5.45 | 108.58 | 106.40 |
| 26 | BB | 945 | A | N7-C8-N9 | 5.45 | 116.52 | 113.80 |
| 26 | BB | 1234 | U | N3-C4-C5 | 5.45 | 117.87 | 114.60 |
| 26 | BB | 1383 | A | C3'-C2'-C1' | 5.45 | 105.86 | 101.50 |
| 26 | BB | 1441 | G | C5'-C4'-C3' | -5.45 | 107.29 | 116.00 |
| 26 | BB | 1585 | C | O4'-C4'-C3' | 5.45 | 110.46 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2069 | 7MG | P-O3'-C3' | 5.45 | 126.23 | 119.70 |
| 26 | BB | 2199 | A | C4-C5-N7 | 5.45 | 113.42 | 110.70 |
| 26 | BB | 2206 | C | C2-N3-C4 | 5.45 | 122.62 | 119.90 |
| 26 | BB | 2576 | G | C2-N3-C4 | 5.45 | 114.62 | 111.90 |
| 26 | BB | 2658 | C | N3-C4-N4 | 5.45 | 121.81 | 118.00 |
| 1 | AA | 147 | G | N1-C2-N3 | -5.44 | 120.63 | 123.90 |
| 1 | AA | 382 | A | C8-N9-C4 | -5.44 | 103.62 | 105.80 |
| 1 | AA | 1478 | U | C1'-O4'-C4' | -5.44 | 105.55 | 109.90 |
| 26 | BB | 43 | G | C5-C6-O6 | -5.44 | 125.33 | 128.60 |
| 26 | BB | 337 | C | N3-C2-O2 | -5.44 | 118.09 | 121.90 |
| 26 | BB | 1004 | U | O4'-C1'-C2' | -5.44 | 100.36 | 105.80 |
| 26 | BB | 1458 | U | C4-C5-C6 | 5.44 | 122.97 | 119.70 |
| 26 | BB | 1573 | G | N1-C2-N2 | -5.44 | 111.30 | 116.20 |
| 26 | BB | 1836 | C | C4'-C3'-C2' | -5.44 | 97.16 | 102.60 |
| 26 | BB | 2777 | G | N7-C8-N9 | 5.44 | 115.82 | 113.10 |
| 1 | AA | 158 | G | N1-C6-O6 | -5.44 | 116.63 | 119.90 |
| 1 | AA | 240 | G | N3-C2-N2 | -5.44 | 116.09 | 119.90 |
| 1 | AA | 697 | U | C4-C5-C6 | 5.44 | 122.97 | 119.70 |
| 1 | AA | 823 | C | C4-C5-C6 | 5.44 | 120.12 | 117.40 |
| 1 | AA | 837 | U | C5-C4-O4 | 5.44 | 129.17 | 125.90 |
| 1 | AA | 1058 | G | C5-N7-C8 | 5.44 | 107.02 | 104.30 |
| 2 | AB | 70 | C | N1-C2-O2 | 5.44 | 122.17 | 118.90 |
| 4 | AD | 30 | G | N3-C2-N2 | 5.44 | 123.71 | 119.90 |
| 26 | BB | 32 | C | C6-N1-C2 | 5.44 | 122.48 | 120.30 |
| 26 | BB | 107 | G | N3-C4-C5 | -5.44 | 125.88 | 128.60 |
| 26 | BB | 179 | C | C4-C5-C6 | 5.44 | 120.12 | 117.40 |
| 26 | BB | 846 | U | C1'-O4'-C4' | -5.44 | 105.55 | 109.90 |
| 26 | BB | 1281 | G | C8-N9-C4 | -5.44 | 104.22 | 106.40 |
| 26 | BB | 1344 | U | N3-C4-O4 | -5.44 | 115.59 | 119.40 |
| 26 | BB | 1568 | G | C4-C5-C6 | 5.44 | 122.06 | 118.80 |
| 26 | BB | 1934 | C | N1-C1'-C2' | -5.44 | 106.01 | 112.00 |
| 26 | BB | 1971 | U | N1-C2-O2 | 5.44 | 126.61 | 122.80 |
| 26 | BB | 2162 | G | C4-C5-N7 | 5.44 | 112.98 | 110.80 |
| 26 | BB | 2304 | G | C1'-O4'-C4' | -5.44 | 105.55 | 109.90 |
| 26 | BB | 2353 | G | N7-C8-N9 | -5.44 | 110.38 | 113.10 |
| 27 | BC | 44 | VAL | CG1-CB-CG2 | -5.44 | 102.19 | 110.90 |
| 1 | AA | 4 | U | C5-C4-O4 | -5.44 | 122.64 | 125.90 |
| 1 | AA | 241 | G | P-O3'-C3' | 5.44 | 126.23 | 119.70 |
| 1 | AA | 408 | A | C6-C5-N7 | 5.44 | 136.11 | 132.30 |
| 1 | AA | 1135 | U | C3'-C2'-C1' | 5.44 | 105.85 | 101.50 |
| 1 | AA | 1154 | G | N9-C1'-C2' | -5.44 | 106.02 | 112.00 |
| 1 | AA | 1323 | G | C1'-O4'-C4' | -5.44 | 105.55 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 7 | AG | 153 | ARG | CD-NE-CZ | 5.44 | 131.22 | 123.60 |
| 25 | BA | 44 | G | C4-N9-C1' | -5.44 | 119.43 | 126.50 |
| 25 | BA | 60 | C | C4-C5-C6 | -5.44 | 114.68 | 117.40 |
| 26 | BB | 52 | A | P-O3'-C3' | 5.44 | 126.23 | 119.70 |
| 26 | BB | 845 | A | N7-C8-N9 | -5.44 | 111.08 | 113.80 |
| 26 | BB | 890 | C | N1-C2-N3 | -5.44 | 115.39 | 119.20 |
| 26 | BB | 992 | C | O5'-C5'-C4' | -5.44 | 101.36 | 111.70 |
| 26 | BB | 1445 | G | N1-C2-N2 | -5.44 | 111.30 | 116.20 |
| 26 | BB | 1774 | C | C5-C6-N1 | 5.44 | 123.72 | 121.00 |
| 26 | BB | 1842 | G | P-O3'-C3' | 5.44 | 126.23 | 119.70 |
| 26 | BB | 2168 | G | O3'-P-O5' | 5.44 | 114.34 | 104.00 |
| 26 | BB | 2324 | U | C6-N1-C2 | -5.44 | 117.73 | 121.00 |
| 26 | BB | 2520 | C | C2-N1-C1' | -5.44 | 112.81 | 118.80 |
| 26 | BB | 2872 | A | N9-C4-C5 | 5.44 | 107.98 | 105.80 |
| 42 | BR | 38 | ARG | NE-CZ-NH1 | -5.44 | 117.58 | 120.30 |
| 1 | AA | 128 | G | O4'-C4'-C3' | -5.44 | 98.56 | 104.00 |
| 1 | AA | 1098 | C | O4'-C1'-N1 | 5.44 | 112.55 | 108.20 |
| 26 | BB | 444 | C | C1'-O4'-C4' | -5.44 | 105.55 | 109.90 |
| 26 | BB | 642 | U | O5'-C5'-C4' | -5.44 | 101.37 | 111.70 |
| 26 | BB | 888 | C | N1-C2-O2 | 5.44 | 122.16 | 118.90 |
| 26 | BB | 1204 | A | N9-C1'-C2' | -5.44 | 106.02 | 112.00 |
| 49 | BY | 23 | LYS | CB-CA-C | 5.44 | 121.28 | 110.40 |
| 1 | AA | 28 | A | C3'-C2'-C1' | -5.44 | 97.15 | 101.50 |
| 1 | AA | 362 | G | C5-C6-O6 | -5.44 | 125.34 | 128.60 |
| 1 | AA | 578 | C | C5-C6-N1 | 5.44 | 123.72 | 121.00 |
| 1 | AA | 599 | C | C6-N1-C2 | -5.44 | 118.12 | 120.30 |
| 1 | AA | 1323 | G | P-O5'-C5' | 5.44 | 129.60 | 120.90 |
| 1 | AA | 1455 | G | C8-N9-C1' | 5.44 | 134.07 | 127.00 |
| 2 | AB | 73 | G | C4-C5-C6 | 5.44 | 122.06 | 118.80 |
| 5 | AE | 82 | ALA | N-CA-CB | -5.44 | 102.49 | 110.10 |
| 6 | AF | 172 | VAL | CA-CB-CG2 | 5.44 | 119.06 | 110.90 |
| 22 | AV | 79 | TYR | CB-CG-CD2 | 5.44 | 124.26 | 121.00 |
| 25 | BA | 23 | G | C6-C5-N7 | 5.44 | 133.66 | 130.40 |
| 26 | BB | 157 | C | P-O3'-C3' | 5.44 | 126.22 | 119.70 |
| 26 | BB | 199 | A | N1-C6-N6 | -5.44 | 115.34 | 118.60 |
| 26 | BB | 291 | G | N1-C6-O6 | 5.44 | 123.16 | 119.90 |
| 26 | BB | 370 | G | N7-C8-N9 | 5.44 | 115.82 | 113.10 |
| 26 | BB | 592 | A | N3-C4-N9 | -5.44 | 123.05 | 127.40 |
| 26 | BB | 909 | A | N9-C4-C5 | 5.44 | 107.97 | 105.80 |
| 26 | BB | 1021 | A | N1-C2-N3 | 5.44 | 132.02 | 129.30 |
| 26 | BB | 1220 | G | C1'-O4'-C4' | -5.44 | 105.55 | 109.90 |
| 26 | BB | 1334 | G | C4-C5-N7 | -5.44 | 108.62 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1413 | A | C3'-C2'-C1' | 5.44 | 105.85 | 101.50 |
| 26 | BB | 1447 | C | N3-C4-C5 | -5.44 | 119.72 | 121.90 |
| 26 | BB | 1641 | A | C2-N3-C4 | -5.44 | 107.88 | 110.60 |
| 26 | BB | 1747 | U | C2-N3-C4 | -5.44 | 123.74 | 127.00 |
| 26 | BB | 2142 | A | C5-N7-C8 | 5.44 | 106.62 | 103.90 |
| 26 | BB | 2378 | A | N1-C6-N6 | 5.44 | 121.86 | 118.60 |
| 26 | BB | 2835 | A | N9-C4-C5 | 5.44 | 107.97 | 105.80 |
| 38 | BN | 60 | ARG | NH1-CZ-NH2 | -5.44 | 113.42 | 119.40 |
| 1 | AA | 551 | U | C4-C5-C6 | 5.44 | 122.96 | 119.70 |
| 1 | AA | 620 | C | N1-C2-O2 | 5.44 | 122.16 | 118.90 |
| 1 | AA | 727 | G | N3-C4-C5 | -5.44 | 125.88 | 128.60 |
| 26 | BB | 26 | G | C4-C5-N7 | -5.44 | 108.63 | 110.80 |
| 26 | BB | 1020 | A | C5-N7-C8 | -5.44 | 101.18 | 103.90 |
| 26 | BB | 1646 | C | N3-C4-C5 | -5.44 | 119.73 | 121.90 |
| 1 | AA | 311 | C | C3'-C2'-C1' | -5.43 | 97.15 | 101.50 |
| 1 | AA | 1033 | G | N1-C6-O6 | -5.43 | 116.64 | 119.90 |
| 1 | AA | 1375 | A | N1-C2-N3 | 5.43 | 132.02 | 129.30 |
| 4 | AD | 15 | G | N9-C4-C5 | 5.43 | 107.57 | 105.40 |
| 26 | BB | 67 | U | C4-C5-C6 | -5.43 | 116.44 | 119.70 |
| 26 | BB | 146 | A | C2-N3-C4 | 5.43 | 113.32 | 110.60 |
| 26 | BB | 201 | C | N3-C4-N4 | 5.43 | 121.80 | 118.00 |
| 26 | BB | 581 | C | C4'-C3'-C2' | -5.43 | 97.17 | 102.60 |
| 26 | BB | 726 | G | C5'-C4'-O4' | 5.43 | 115.62 | 109.10 |
| 26 | BB | 910 | A | C3'-C2'-C1' | -5.43 | 97.15 | 101.50 |
| 26 | BB | 970 | U | C5-C4-O4 | -5.43 | 122.64 | 125.90 |
| 26 | BB | 1085 | A | C5'-C4'-O4' | 5.43 | 115.62 | 109.10 |
| 26 | BB | 1933 | G | C6-N1-C2 | 5.43 | 128.36 | 125.10 |
| 26 | BB | 2876 | G | N1-C2-N2 | 5.43 | 121.09 | 116.20 |
| 26 | BB | 2894 | G | C4-C5-C6 | -5.43 | 115.54 | 118.80 |
| 1 | AA | 11 | G | N3-C4-N9 | 5.43 | 129.26 | 126.00 |
| 1 | AA | 461 | A | O4'-C4'-C3' | 5.43 | 110.45 | 106.10 |
| 1 | AA | 522 | C | C3'-C2'-C1' | 5.43 | 105.85 | 101.50 |
| 1 | AA | 615 | G | O4'-C4'-C3' | 5.43 | 110.45 | 106.10 |
| 1 | AA | 1461 | G | C5'-C4'-O4' | 5.43 | 115.62 | 109.10 |
| 2 | AB | 58 | A | C4-C5-N7 | 5.43 | 113.42 | 110.70 |
| 3 | AC | 22 | G | C4'-C3'-C2' | -5.43 | 97.17 | 102.60 |
| 25 | BA | 44 | G | N1-C2-N2 | -5.43 | 111.31 | 116.20 |
| 26 | BB | 176 | A | O4'-C4'-C3' | -5.43 | 98.57 | 104.00 |
| 26 | BB | 892 | A | C4'-C3'-C2' | -5.43 | 97.17 | 102.60 |
| 26 | BB | 1635 | A | C5'-C4'-C3' | -5.43 | 107.31 | 116.00 |
| 26 | BB | 1812 | U | N3-C2-O2 | -5.43 | 118.40 | 122.20 |
| 26 | BB | 1936 | A | C2-N3-C4 | -5.43 | 107.88 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1956 | U | C6-N1-C2 | -5.43 | 117.74 | 121.00 |
| 26 | BB | 2159 | G | C5-N7-C8 | -5.43 | 101.58 | 104.30 |
| 26 | BB | 2244 | U | C5-C4-O4 | 5.43 | 129.16 | 125.90 |
| 26 | BB | 2260 | C | C4-C5-C6 | 5.43 | 120.12 | 117.40 |
| 26 | BB | 2667 | C | C5'-C4'-O4' | 5.43 | 115.62 | 109.10 |
| 1 | AA | 246 | A | N7-C8-N9 | -5.43 | 111.08 | 113.80 |
| 1 | AA | 313 | A | C5-C6-N1 | 5.43 | 120.42 | 117.70 |
| 1 | AA | 959 | A | C4-C5-N7 | -5.43 | 107.98 | 110.70 |
| 1 | AA | 1136 | C | N3-C4-C5 | -5.43 | 119.73 | 121.90 |
| 1 | AA | 1255 | G | N1-C2-N3 | -5.43 | 120.64 | 123.90 |
| 1 | AA | 1336 | C | C2-N1-C1' | 5.43 | 124.77 | 118.80 |
| 26 | BB | 538 | A | O4'-C4'-C3' | 5.43 | 110.44 | 106.10 |
| 26 | BB | 942 | G | C4'-C3'-C2' | -5.43 | 97.17 | 102.60 |
| 26 | BB | 1482 | G | C5-C6-O6 | -5.43 | 125.34 | 128.60 |
| 26 | BB | 1661 | G | C5-C6-O6 | -5.43 | 125.34 | 128.60 |
| 26 | BB | 2648 | G | O5'-P-OP2 | -5.43 | 100.81 | 105.70 |
| 26 | BB | 2809 | A | N3-C4-C5 | -5.43 | 123.00 | 126.80 |
| 26 | BB | 2871 | U | N3-C4-O4 | -5.43 | 115.60 | 119.40 |
| 40 | BP | 125 | ALA | N-CA-CB | 5.43 | 117.70 | 110.10 |
| 1 | AA | 510 | A | C4-C5-C6 | 5.43 | 119.72 | 117.00 |
| 1 | AA | 571 | U | C5'-C4'-O4' | 5.43 | 115.62 | 109.10 |
| 1 | AA | 1329 | A | N7-C8-N9 | 5.43 | 116.52 | 113.80 |
| 1 | AA | 1430 | A | O4'-C1'-N9 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 290 | U | O4'-C1'-N1 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 676 | A | C3'-C2'-C1' | 5.43 | 105.84 | 101.50 |
| 26 | BB | 855 | G | C5-C6-O6 | -5.43 | 125.34 | 128.60 |
| 26 | BB | 1198 | U | C2-N3-C4 | -5.43 | 123.74 | 127.00 |
| 26 | BB | 1307 | A | C4-C5-C6 | -5.43 | 114.28 | 117.00 |
| 26 | BB | 1444 | G | C4'-C3'-C2' | -5.43 | 97.17 | 102.60 |
| 26 | BB | 1660 | G | O4'-C1'-N9 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 1823 | G | N3-C4-N9 | 5.43 | 129.26 | 126.00 |
| 26 | BB | 2170 | A | C5-C6-N6 | -5.43 | 119.36 | 123.70 |
| 26 | BB | 2570 | G | N7-C8-N9 | -5.43 | 110.39 | 113.10 |
| 26 | BB | 2647 | U | C3'-C2'-C1' | 5.43 | 105.84 | 101.50 |
| 26 | BB | 2760 | C | O5'-C5'-C4' | 5.43 | 122.02 | 111.70 |
| 1 | AA | 125 | U | C2-N3-C4 | 5.43 | 130.26 | 127.00 |
| 1 | AA | 842 | U | C4-C5-C6 | -5.43 | 116.44 | 119.70 |
| 1 | AA | 953 | G | C6-N1-C2 | -5.43 | 121.84 | 125.10 |
| 1 | AA | 1517 | G | N7-C8-N9 | 5.43 | 115.81 | 113.10 |
| 26 | BB | 354 | A | N3-C4-C5 | -5.43 | 123.00 | 126.80 |
| 26 | BB | 671 | C | C5'-C4'-O4' | 5.43 | 115.61 | 109.10 |
| 26 | BB | 813 | U | C5-C4-O4 | -5.43 | 122.64 | 125.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1020 | A | C5-C6-N1 | 5.43 | 120.41 | 117.70 |
| 26 | BB | 1693 | U | C4-C5-C6 | 5.43 | 122.96 | 119.70 |
| 26 | BB | 1951 | U | O4'-C1'-N1 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 2040 | G | C3'-C2'-C1' | 5.43 | 105.84 | 101.50 |
| 26 | BB | 2156 | G | C4-C5-C6 | 5.43 | 122.06 | 118.80 |
| 26 | BB | 2167 | U | C2-N3-C4 | -5.43 | 123.74 | 127.00 |
| 26 | BB | 2482 | A | C2'-C3'-O3' | 5.43 | 122.39 | 113.70 |
| 1 | AA | 767 | A | C2-N3-C4 | 5.43 | 113.31 | 110.60 |
| 1 | AA | 844 | G | C4-C5-N7 | -5.43 | 108.63 | 110.80 |
| 1 | AA | 1014 | A | C4'-C3'-C2' | -5.43 | 97.17 | 102.60 |
| 1 | AA | 1034 | G | N1-C2-N2 | 5.43 | 121.08 | 116.20 |
| 1 | AA | 1196 | A | C8-N9-C4 | -5.43 | 103.63 | 105.80 |
| 1 | AA | 1450 | U | N1-C2-O2 | 5.43 | 126.60 | 122.80 |
| 26 | BB | 108 | G | N1-C6-O6 | -5.43 | 116.64 | 119.90 |
| 26 | BB | 333 | G | C1'-O4'-C4' | -5.43 | 105.56 | 109.90 |
| 26 | BB | 536 | G | C6-C5-N7 | 5.43 | 133.66 | 130.40 |
| 26 | BB | 598 | U | N3-C4-C5 | -5.43 | 111.34 | 114.60 |
| 26 | BB | 669 | G | O4'-C1'-N9 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 981 | A | O4'-C4'-C3' | 5.43 | 110.44 | 106.10 |
| 26 | BB | 1147 | A | O4'-C1'-N9 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 1174 | U | O4'-C1'-C2' | 5.43 | 112.48 | 107.60 |
| 26 | BB | 1819 | A | N1-C2-N3 | -5.43 | 126.59 | 129.30 |
| 26 | BB | 1821 | A | N9-C4-C5 | 5.43 | 107.97 | 105.80 |
| 26 | BB | 2182 | U | N3-C2-O2 | -5.43 | 118.40 | 122.20 |
| 26 | BB | 2245 | U | C2-N3-C4 | -5.43 | 123.75 | 127.00 |
| 26 | BB | 2325 | G | N3-C4-N9 | 5.43 | 129.25 | 126.00 |
| 26 | BB | 2537 | U | O4'-C1'-N1 | 5.43 | 112.54 | 108.20 |
| 26 | BB | 2735 | G | N1-C2-N2 | 5.43 | 121.08 | 116.20 |
| 26 | BB | 2862 | G | P-O3'-C3' | 5.43 | 126.21 | 119.70 |
| 1 | AA | 321 | A | N7-C8-N9 | 5.42 | 116.51 | 113.80 |
| 1 | AA | 688 | G | C6-C5-N7 | 5.42 | 133.66 | 130.40 |
| 1 | AA | 898 | G | N3-C4-C5 | -5.42 | 125.89 | 128.60 |
| 1 | AA | 1204 | A | C8-N9-C4 | 5.42 | 107.97 | 105.80 |
| 1 | AA | 1419 | G | N1-C2-N2 | -5.42 | 111.32 | 116.20 |
| 1 | AA | 1529 | G | C4-C5-C6 | 5.42 | 122.06 | 118.80 |
| 26 | BB | 194 | G | C4-C5-N7 | -5.42 | 108.63 | 110.80 |
| 26 | BB | 320 | A | N1-C6-N6 | -5.42 | 115.34 | 118.60 |
| 26 | BB | 373 | U | N3-C2-O2 | -5.42 | 118.40 | 122.20 |
| 26 | BB | 701 | G | C2-N3-C4 | 5.42 | 114.61 | 111.90 |
| 26 | BB | 1038 | G | N3-C2-N2 | 5.42 | 123.70 | 119.90 |
| 26 | BB | 1537 | G | C5-C6-O6 | -5.42 | 125.34 | 128.60 |
| 26 | BB | 1619 | G | O4'-C1'-N9 | 5.42 | 112.54 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1686 | C | N1-C2-N3 | 5.42 | 123.00 | 119.20 |
| 26 | BB | 1872 | A | N3-C4-N9 | -5.42 | 123.06 | 127.40 |
| 26 | BB | 2111 | U | C5-C6-N1 | -5.42 | 119.99 | 122.70 |
| 26 | BB | 2561 | U | C5'-C4'-O4' | 5.42 | 115.61 | 109.10 |
| 1 | AA | 24 | U | C3'-C2'-C1' | 5.42 | 105.84 | 101.50 |
| 1 | AA | 1037 | C | O4'-C4'-C3' | 5.42 | 110.44 | 106.10 |
| 26 | BB | 223 | A | O3'-P-O5' | -5.42 | 93.70 | 104.00 |
| 26 | BB | 1633 | G | C5-C6-O6 | -5.42 | 125.35 | 128.60 |
| 26 | BB | 2081 | U | N1-C2-O2 | 5.42 | 126.60 | 122.80 |
| 26 | BB | 2300 | C | C5'-C4'-O4' | 5.42 | 115.61 | 109.10 |
| 1 | AA | 460 | A | C8-N9-C4 | -5.42 | 103.63 | 105.80 |
| 1 | AA | 640 | A | O4'-C1'-C2' | 5.42 | 112.48 | 107.60 |
| 1 | AA | 723 | U | N3-C2-O2 | -5.42 | 118.41 | 122.20 |
| 1 | AA | 818 | G | N1-C2-N3 | -5.42 | 120.65 | 123.90 |
| 1 | AA | 879 | C | C1'-O4'-C4' | -5.42 | 105.56 | 109.90 |
| 1 | AA | 1042 | A | N1-C6-N6 | -5.42 | 115.35 | 118.60 |
| 1 | AA | 1088 | G | C4'-C3'-C2' | -5.42 | 97.18 | 102.60 |
| 1 | AA | 1343 | G | C6-N1-C2 | -5.42 | 121.85 | 125.10 |
| 3 | AC | 50 | U | C2-N3-C4 | -5.42 | 123.75 | 127.00 |
| 26 | BB | 138 | U | N1-C2-O2 | -5.42 | 119.01 | 122.80 |
| 26 | BB | 294 | A | C5-N7-C8 | 5.42 | 106.61 | 103.90 |
| 26 | BB | 709 | U | N3-C4-C5 | -5.42 | 111.35 | 114.60 |
| 26 | BB | 1149 | G | C1'-O4'-C4' | -5.42 | 105.56 | 109.90 |
| 26 | BB | 1286 | A | N1-C6-N6 | -5.42 | 115.35 | 118.60 |
| 26 | BB | 1506 | U | C5'-C4'-O4' | 5.42 | 115.61 | 109.10 |
| 26 | BB | 1936 | A | C5-C6-N1 | 5.42 | 120.41 | 117.70 |
| 26 | BB | 1988 | G | C3'-C2'-C1' | -5.42 | 97.16 | 101.50 |
| 26 | BB | 2054 | A | O3'-P-O5' | 5.42 | 114.30 | 104.00 |
| 26 | BB | 2066 | C | N1-C2-N3 | 5.42 | 123.00 | 119.20 |
| 1 | AA | 226 | G | C4-C5-C6 | -5.42 | 115.55 | 118.80 |
| 1 | AA | 696 | A | O5'-P-OP1 | -5.42 | 100.82 | 105.70 |
| 1 | AA | 1322 | C | O4'-C1'-N1 | -5.42 | 103.86 | 108.20 |
| 1 | AA | 1392 | G | N1-C6-O6 | 5.42 | 123.15 | 119.90 |
| 5 | AE | 240 | GLU | OE1-CD-OE2 | 5.42 | 129.80 | 123.30 |
| 25 | BA | 41 | G | C3'-C2'-C1' | -5.42 | 97.16 | 101.50 |
| 26 | BB | 90 | U | N1-C2-O2 | 5.42 | 126.59 | 122.80 |
| 26 | BB | 144 | A | C4'-C3'-C2' | -5.42 | 97.18 | 102.60 |
| 26 | BB | 383 | C | N1-C2-O2 | 5.42 | 122.15 | 118.90 |
| 26 | BB | 622 | G | N7-C8-N9 | -5.42 | 110.39 | 113.10 |
| 26 | BB | 1075 | C | O4'-C4'-C3' | 5.42 | 110.44 | 106.10 |
| 26 | BB | 1128 | G | N7-C8-N9 | -5.42 | 110.39 | 113.10 |
| 26 | BB | 1204 | A | P-O3'-C3' | 5.42 | 126.20 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1209 | U | N1-C2-O2 | 5.42 | 126.59 | 122.80 |
| 28 | BD | 2 | VAL | CA-CB-CG2 | 5.42 | 119.03 | 110.90 |
| 1 | AA | 39 | G | C8-N9-C4 | -5.42 | 104.23 | 106.40 |
| 1 | AA | 454 | G | N7-C8-N9 | 5.42 | 115.81 | 113.10 |
| 1 | AA | 575 | G | C4-C5-C6 | 5.42 | 122.05 | 118.80 |
| 1 | AA | 596 | A | C4'-C3'-C2' | -5.42 | 97.18 | 102.60 |
| 1 | AA | 691 | G | C5-N7-C8 | 5.42 | 107.01 | 104.30 |
| 1 | AA | 877 | G | O5'-C5'-C4' | 5.42 | 121.99 | 111.70 |
| 1 | AA | 1417 | G | N9-C4-C5 | 5.42 | 107.57 | 105.40 |
| 1 | AA | 1492 | A | C5'-C4'-C3' | -5.42 | 107.33 | 116.00 |
| 2 | AB | 21 | A | C5-N7-C8 | -5.42 | 101.19 | 103.90 |
| 2 | AB | 29 | G | C5-C6-O6 | 5.42 | 131.85 | 128.60 |
| 9 | AI | 91 | ARG | NH1-CZ-NH2 | -5.42 | 113.44 | 119.40 |
| 25 | BA | 100 | G | C5'-C4'-O4' | 5.42 | 115.60 | 109.10 |
| 26 | BB | 628 | G | C4-C5-C6 | 5.42 | 122.05 | 118.80 |
| 26 | BB | 641 | U | O4'-C1'-N1 | -5.42 | 103.86 | 108.20 |
| 26 | BB | 655 | A | C4'-C3'-C2' | -5.42 | 97.18 | 102.60 |
| 26 | BB | 969 | G | C5'-C4'-O4' | 5.42 | 115.60 | 109.10 |
| 26 | BB | 1207 | C | O4'-C1'-N1 | 5.42 | 112.53 | 108.20 |
| 26 | BB | 1317 | G | N3-C4-N9 | 5.42 | 129.25 | 126.00 |
| 26 | BB | 1374 | G | N9-C1'-C2' | -5.42 | 106.04 | 112.00 |
| 26 | BB | 1631 | G | N3-C2-N2 | 5.42 | 123.69 | 119.90 |
| 26 | BB | 1856 | U | O3'-P-O5' | 5.42 | 114.30 | 104.00 |
| 26 | BB | 2097 | A | C4-C5-N7 | 5.42 | 113.41 | 110.70 |
| 26 | BB | 2282 | G | C4-C5-N7 | -5.42 | 108.63 | 110.80 |
| 26 | BB | 2653 | U | C5-C6-N1 | -5.42 | 119.99 | 122.70 |
| 26 | BB | 2846 | G | N1-C2-N3 | -5.42 | 120.65 | 123.90 |
| 52 | B1 | 50 | VAL | CA-CB-CG2 | 5.42 | 119.03 | 110.90 |
| 1 | AA | 68 | G | C5'-C4'-O4' | 5.42 | 115.60 | 109.10 |
| 1 | AA | 72 | A | C5'-C4'-O4' | 5.42 | 115.60 | 109.10 |
| 1 | AA | 148 | G | N7-C8-N9 | 5.42 | 115.81 | 113.10 |
| 1 | AA | 492 | C | C4'-C3'-C2' | -5.42 | 97.18 | 102.60 |
| 1 | AA | 606 | G | N1-C6-O6 | 5.42 | 123.15 | 119.90 |
| 25 | BA | 41 | G | O5'-C5'-C4' | -5.42 | 101.41 | 111.70 |
| 25 | BA | 81 | G | P-O3'-C3' | 5.42 | 126.20 | 119.70 |
| 26 | BB | 693 | A | C3'-C2'-C1' | 5.42 | 105.83 | 101.50 |
| 26 | BB | 706 | A | O4'-C1'-N9 | 5.42 | 112.53 | 108.20 |
| 26 | BB | 917 | A | C1'-O4'-C4' | 5.42 | 114.23 | 109.90 |
| 26 | BB | 1812 | U | P-O3'-C3' | 5.42 | 126.20 | 119.70 |
| 26 | BB | 2125 | G | C5-C6-N1 | 5.42 | 114.21 | 111.50 |
| 26 | BB | 2218 | G | N1-C2-N2 | 5.42 | 121.07 | 116.20 |
| 26 | BB | 2371 | G | C5'-C4'-O4' | 5.42 | 115.60 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2386 | A | N3-C4-N9 | -5.42 | 123.07 | 127.40 |
| 26 | BB | 2666 | C | N3-C4-N4 | -5.42 | 114.21 | 118.00 |
| 1 | AA | 385 | C | C4'-C3'-O3' | -5.42 | 98.03 | 109.40 |
| 26 | BB | 776 | G | C5-C6-N1 | -5.42 | 108.79 | 111.50 |
| 26 | BB | 1971 | U | C2-N1-C1' | 5.42 | 124.20 | 117.70 |
| 26 | BB | 2431 | U | C4-C5-C6 | 5.42 | 122.95 | 119.70 |
| 1 | AA | 377 | G | N3-C2-N2 | -5.41 | 116.11 | 119.90 |
| 1 | AA | 409 | U | N1-C2-N3 | 5.41 | 118.15 | 114.90 |
| 1 | AA | 452 | A | C8-N9-C4 | -5.41 | 103.63 | 105.80 |
| 1 | AA | 606 | G | N3-C4-N9 | 5.41 | 129.25 | 126.00 |
| 1 | AA | 1459 | G | N3-C4-C5 | -5.41 | 125.89 | 128.60 |
| 26 | BB | 345 | A | N9-C4-C5 | -5.41 | 103.64 | 105.80 |
| 26 | BB | 837 | C | C2-N3-C4 | -5.41 | 117.19 | 119.90 |
| 26 | BB | 849 | A | N1-C2-N3 | 5.41 | 132.01 | 129.30 |
| 26 | BB | 1113 | U | O4'-C1'-N1 | 5.41 | 112.53 | 108.20 |
| 26 | BB | 1203 | U | C4-C5-C6 | 5.41 | 122.95 | 119.70 |
| 26 | BB | 1284 | A | C1'-O4'-C4' | -5.41 | 105.57 | 109.90 |
| 26 | BB | 1414 | C | N3-C4-N4 | 5.41 | 121.79 | 118.00 |
| 26 | BB | 1608 | A | C8-N9-C4 | 5.41 | 107.97 | 105.80 |
| 26 | BB | 1696 | G | C4'-C3'-C2' | -5.41 | 97.19 | 102.60 |
| 26 | BB | 1796 | U | O4'-C1'-N1 | 5.41 | 112.53 | 108.20 |
| 26 | BB | 1868 | C | O4'-C1'-N1 | 5.41 | 112.53 | 108.20 |
| 26 | BB | 1910 | G | C5-N7-C8 | 5.41 | 107.01 | 104.30 |
| 26 | BB | 1968 | G | C8-N9-C4 | -5.41 | 104.23 | 106.40 |
| 26 | BB | 1997 | C | C6-N1-C2 | -5.41 | 118.13 | 120.30 |
| 26 | BB | 2384 | U | P-O5'-C5' | 5.41 | 129.56 | 120.90 |
| 1 | AA | 118 | U | C4'-C3'-C2' | -5.41 | 97.19 | 102.60 |
| 1 | AA | 872 | A | C5-C6-N1 | -5.41 | 114.99 | 117.70 |
| 1 | AA | 1377 | A | C5'-C4'-C3' | 5.41 | 124.66 | 116.00 |
| 25 | BA | 53 | A | N9-C4-C5 | 5.41 | 107.97 | 105.80 |
| 26 | BB | 1266 | G | N3-C4-N9 | 5.41 | 129.25 | 126.00 |
| 26 | BB | 1458 | U | C2-N1-C1' | 5.41 | 124.19 | 117.70 |
| 26 | BB | 2502 | G | C4-C5-C6 | -5.41 | 115.55 | 118.80 |
| 26 | BB | 2544 | G | C5-N7-C8 | -5.41 | 101.59 | 104.30 |
| 26 | BB | 2879 | A | C3'-C2'-C1' | 5.41 | 105.83 | 101.50 |
| 32 | BH | 101 | VAL | CA-CB-CG1 | 5.41 | 119.02 | 110.90 |
| 1 | AA | 60 | A | C5-N7-C8 | -5.41 | 101.19 | 103.90 |
| 1 | AA | 404 | G | C3'-C2'-C1' | -5.41 | 97.17 | 101.50 |
| 1 | AA | 643 | C | C2-N1-C1' | -5.41 | 112.85 | 118.80 |
| 1 | AA | 717 | U | N3-C4-C5 | -5.41 | 111.35 | 114.60 |
| 1 | AA | 760 | G | C6-N1-C2 | -5.41 | 121.85 | 125.10 |
| 1 | AA | 1034 | G | C1'-O4'-C4' | 5.41 | 114.23 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1391 | U | N1-C2-O2 | 5.41 | 126.59 | 122.80 |
| 7 | AG | 53 | GLN | CB-CA-C | 5.41 | 121.22 | 110.40 |
| 25 | BA | 27 | C | N1-C2-O2 | 5.41 | 122.15 | 118.90 |
| 26 | BB | 76 | C | C4-C5-C6 | -5.41 | 114.69 | 117.40 |
| 26 | BB | 410 | G | N3-C4-N9 | 5.41 | 129.25 | 126.00 |
| 26 | BB | 743 | A | C4'-C3'-C2' | -5.41 | 97.19 | 102.60 |
| 26 | BB | 1031 | G | N3-C2-N2 | 5.41 | 123.69 | 119.90 |
| 26 | BB | 1821 | A | C6-N1-C2 | -5.41 | 115.35 | 118.60 |
| 26 | BB | 2042 | A | C8-N9-C4 | -5.41 | 103.64 | 105.80 |
| 26 | BB | 2158 | A | C4-C5-C6 | -5.41 | 114.30 | 117.00 |
| 26 | BB | 2774 | C | N1-C2-O2 | 5.41 | 122.15 | 118.90 |
| 26 | BB | 2862 | G | C4-C5-N7 | 5.41 | 112.96 | 110.80 |
| 37 | BM | 32 | TYR | CB-CG-CD2 | -5.41 | 117.75 | 121.00 |
| 58 | B7 | 8 | LYS | CA-CB-CG | 5.41 | 125.30 | 113.40 |
| 1 | AA | 36 | C | P-O3'-C3' | 5.41 | 126.19 | 119.70 |
| 1 | AA | 445 | G | C6-N1-C2 | -5.41 | 121.85 | 125.10 |
| 1 | AA | 1434 | A | C5'-C4'-C3' | -5.41 | 107.35 | 116.00 |
| 3 | AC | 40 | G | C4-C5-N7 | -5.41 | 108.64 | 110.80 |
| 4 | AD | 31 | G | N1-C2-N3 | -5.41 | 120.65 | 123.90 |
| 26 | BB | 109 | C | O4'-C1'-C2' | 5.41 | 112.47 | 107.60 |
| 26 | BB | 725 | G | P-O3'-C3' | 5.41 | 126.19 | 119.70 |
| 26 | BB | 967 | U | O4'-C4'-C3' | -5.41 | 98.59 | 104.00 |
| 26 | BB | 1068 | G | N3-C4-C5 | -5.41 | 125.90 | 128.60 |
| 26 | BB | 1154 | G | C4'-C3'-C2' | -5.41 | 97.19 | 102.60 |
| 26 | BB | 1996 | C | N3-C4-C5 | -5.41 | 119.74 | 121.90 |
| 26 | BB | 2026 | U | O4'-C1'-N1 | 5.41 | 112.53 | 108.20 |
| 26 | BB | 2382 | G | C5-C6-N1 | 5.41 | 114.20 | 111.50 |
| 26 | BB | 2778 | A | O4'-C1'-C2' | -5.41 | 100.39 | 105.80 |
| 1 | AA | 111 | G | N3-C4-C5 | -5.41 | 125.90 | 128.60 |
| 1 | AA | 625 | U | N3-C4-O4 | -5.41 | 115.61 | 119.40 |
| 1 | AA | 1276 | G | C5'-C4'-O4' | 5.41 | 115.59 | 109.10 |
| 26 | BB | 232 | G | C5-C6-N1 | 5.41 | 114.20 | 111.50 |
| 26 | BB | 930 | G | C4-N9-C1' | -5.41 | 119.47 | 126.50 |
| 26 | BB | 1007 | C | N1-C1'-C2' | -5.41 | 106.05 | 112.00 |
| 26 | BB | 1311 | G | N1-C2-N2 | 5.41 | 121.07 | 116.20 |
| 26 | BB | 1390 | U | N3-C4-C5 | -5.41 | 111.36 | 114.60 |
| 26 | BB | 1483 | G | O4'-C1'-N9 | 5.41 | 112.53 | 108.20 |
| 26 | BB | 1584 | U | C5'-C4'-C3' | -5.41 | 107.35 | 116.00 |
| 26 | BB | 2122 | U | C2'-C3'-O3' | 5.41 | 122.35 | 113.70 |
| 1 | AA | 268 | U | N1-C2-O2 | -5.41 | 119.02 | 122.80 |
| 1 | AA | 535 | A | O4'-C1'-N9 | -5.41 | 103.88 | 108.20 |
| 1 | AA | 826 | C | N3-C2-O2 | -5.41 | 118.12 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 903 | G | C2-N3-C4 | 5.41 | 114.60 | 111.90 |
| 1 | AA | 952 | U | N3-C4-C5 | 5.41 | 117.84 | 114.60 |
| 26 | BB | 161 | A | P-O3'-C3' | 5.41 | 126.19 | 119.70 |
| 26 | BB | 465 | G | C5-N7-C8 | 5.41 | 107.00 | 104.30 |
| 26 | BB | 919 | U | C2-N3-C4 | -5.41 | 123.76 | 127.00 |
| 26 | BB | 1255 | U | N1-C2-N3 | 5.41 | 118.14 | 114.90 |
| 26 | BB | 1305 | C | N3-C4-C5 | 5.41 | 124.06 | 121.90 |
| 26 | BB | 1454 | C | O4'-C4'-C3' | 5.41 | 110.42 | 106.10 |
| 26 | BB | 1749 | A | C3'-C2'-C1' | 5.41 | 105.83 | 101.50 |
| 26 | BB | 2131 | U | C6-N1-C2 | -5.41 | 117.76 | 121.00 |
| 26 | BB | 2562 | U | C5-C4-O4 | -5.41 | 122.66 | 125.90 |
| 26 | BB | 2769 | U | O4'-C4'-C3' | 5.41 | 110.42 | 106.10 |
| 26 | BB | 2864 | G | N3-C4-C5 | -5.41 | 125.90 | 128.60 |
| 33 | BI | 63 | ALA | O-C-N | -5.41 | 114.05 | 122.70 |
| 1 | AA | 1077 | G | C6-N1-C2 | -5.40 | 121.86 | 125.10 |
| 1 | AA | 1150 | A | C8-N9-C4 | 5.40 | 107.96 | 105.80 |
| 1 | AA | 1486 | G | C8-N9-C4 | -5.40 | 104.24 | 106.40 |
| 1 | AA | 1520 | C | N3-C4-C5 | -5.40 | 119.74 | 121.90 |
| 4 | AD | 20 | G | C5-C6-O6 | -5.40 | 125.36 | 128.60 |
| 26 | BB | 289 | G | P-O3'-C3' | 5.40 | 126.19 | 119.70 |
| 26 | BB | 327 | G | C4-N9-C1' | -5.40 | 119.47 | 126.50 |
| 26 | BB | 1055 | G | C5'-C4'-O4' | 5.40 | 115.58 | 109.10 |
| 26 | BB | 1334 | G | N3-C4-C5 | -5.40 | 125.90 | 128.60 |
| 26 | BB | 1408 | G | O4'-C4'-C3' | -5.40 | 98.60 | 104.00 |
| 26 | BB | 2484 | G | C1'-O4'-C4' | 5.40 | 114.22 | 109.90 |
| 1 | AA | 111 | G | O4'-C1'-C2' | -5.40 | 100.40 | 105.80 |
| 1 | AA | 1020 | G | C8-N9-C1' | 5.40 | 134.02 | 127.00 |
| 1 | AA | 1466 | C | P-O5'-C5' | 5.40 | 129.54 | 120.90 |
| 2 | AB | 59 | G | N3-C4-N9 | 5.40 | 129.24 | 126.00 |
| 4 | AD | 5 | G | C5'-C4'-C3' | -5.40 | 107.36 | 116.00 |
| 26 | BB | 571 | U | P-O3'-C3' | 5.40 | 126.18 | 119.70 |
| 26 | BB | 578 | G | C8-N9-C4 | -5.40 | 104.24 | 106.40 |
| 26 | BB | 643 | A | C2-N3-C4 | -5.40 | 107.90 | 110.60 |
| 26 | BB | 655 | A | O4'-C4'-C3' | 5.40 | 110.42 | 106.10 |
| 26 | BB | 676 | A | O4'-C1'-N9 | 5.40 | 112.52 | 108.20 |
| 26 | BB | 1068 | G | C5'-C4'-C3' | -5.40 | 107.36 | 116.00 |
| 26 | BB | 1274 | A | P-O5'-C5' | 5.40 | 129.54 | 120.90 |
| 26 | BB | 1462 | C | C5-C6-N1 | -5.40 | 118.30 | 121.00 |
| 26 | BB | 1564 | C | N3-C4-N4 | 5.40 | 121.78 | 118.00 |
| 26 | BB | 2526 | G | C4-C5-C6 | 5.40 | 122.04 | 118.80 |
| 26 | BB | 2526 | G | C4-C5-N7 | 5.40 | 112.96 | 110.80 |
| 26 | BB | 2791 | G | N1-C2-N3 | -5.40 | 120.66 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2814 | A | C5-C6-N6 | -5.40 | 119.38 | 123.70 |
| 33 | BI | 37 | VAL | CG1-CB-CG2 | -5.40 | 102.25 | 110.90 |
| 1 | AA | 36 | C | N3-C2-O2 | -5.40 | 118.12 | 121.90 |
| 1 | AA | 196 | A | O4'-C4'-C3' | 5.40 | 110.42 | 106.10 |
| 1 | AA | 392 | C | C4-C5-C6 | -5.40 | 114.70 | 117.40 |
| 1 | AA | 519 | C | O5'-C5'-C4' | -5.40 | 101.44 | 111.70 |
| 1 | AA | 577 | G | N3-C4-C5 | 5.40 | 131.30 | 128.60 |
| 1 | AA | 716 | A | C5-C6-N6 | 5.40 | 128.02 | 123.70 |
| 1 | AA | 869 | G | C1'-O4'-C4' | 5.40 | 114.22 | 109.90 |
| 1 | AA | 987 | G | C2'-C3'-O3' | 5.40 | 122.34 | 113.70 |
| 15 | AO | 53 | ARG | NH1-CZ-NH2 | 5.40 | 125.34 | 119.40 |
| 26 | BB | 78 | U | C4-C5-C6 | 5.40 | 122.94 | 119.70 |
| 26 | BB | 474 | G | C5-C6-O6 | -5.40 | 125.36 | 128.60 |
| 26 | BB | 731 | C | C4'-C3'-C2' | -5.40 | 97.20 | 102.60 |
| 26 | BB | 781 | A | N1-C6-N6 | -5.40 | 115.36 | 118.60 |
| 26 | BB | 1051 | G | C1'-O4'-C4' | 5.40 | 114.22 | 109.90 |
| 26 | BB | 1163 | G | C6-C5-N7 | -5.40 | 127.16 | 130.40 |
| 26 | BB | 1187 | G | C4-C5-N7 | -5.40 | 108.64 | 110.80 |
| 26 | BB | 1266 | G | O4'-C1'-N9 | 5.40 | 112.52 | 108.20 |
| 26 | BB | 1472 | C | C5-C4-N4 | 5.40 | 123.98 | 120.20 |
| 26 | BB | 1805 | A | N3-C4-C5 | 5.40 | 130.58 | 126.80 |
| 26 | BB | 1909 | C | C5-C4-N4 | -5.40 | 116.42 | 120.20 |
| 26 | BB | 2128 | G | P-O3'-C3' | 5.40 | 126.18 | 119.70 |
| 26 | BB | 2162 | G | N7-C8-N9 | 5.40 | 115.80 | 113.10 |
| 26 | BB | 2353 | G | C5'-C4'-O4' | 5.40 | 115.58 | 109.10 |
| 26 | BB | 2371 | G | N9-C4-C5 | 5.40 | 107.56 | 105.40 |
| 26 | BB | 2550 | G | C4-C5-C6 | 5.40 | 122.04 | 118.80 |
| 26 | BB | 2785 | C | N1-C2-O2 | 5.40 | 122.14 | 118.90 |
| 1 | AA | 1061 | G | C5'-C4'-C3' | -5.40 | 107.36 | 116.00 |
| 4 | AD | 54 | G | N3-C4-C5 | -5.40 | 125.90 | 128.60 |
| 26 | BB | 81 | G | C2-N3-C4 | 5.40 | 114.60 | 111.90 |
| 26 | BB | 316 | C | O3'-P-O5' | -5.40 | 93.74 | 104.00 |
| 26 | BB | 1119 | U | C2-N3-C4 | -5.40 | 123.76 | 127.00 |
| 26 | BB | 1486 | U | N3-C4-O4 | 5.40 | 123.18 | 119.40 |
| 26 | BB | 1847 | A | C4-C5-C6 | -5.40 | 114.30 | 117.00 |
| 26 | BB | 2004 | G | N7-C8-N9 | 5.40 | 115.80 | 113.10 |
| 26 | BB | 2249 | U | N1-C1'-C2' | -5.40 | 106.06 | 112.00 |
| 1 | AA | 234 | C | OP1-P-OP2 | 5.40 | 127.70 | 119.60 |
| 1 | AA | 496 | A | N7-C8-N9 | 5.40 | 116.50 | 113.80 |
| 1 | AA | 548 | G | N9-C4-C5 | 5.40 | 107.56 | 105.40 |
| 1 | AA | 798 | U | C2'-C3'-O3' | 5.40 | 122.33 | 113.70 |
| 1 | AA | 958 | A | O4'-C1'-N9 | 5.40 | 112.52 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1165 | U | C6-N1-C2 | 5.40 | 124.24 | 121.00 |
| 1 | AA | 1279 | G | C2-N3-C4 | -5.40 | 109.20 | 111.90 |
| 2 | AB | 34 | C | C5'-C4'-C3' | -5.40 | 107.36 | 116.00 |
| 3 | AC | 18 | A | C3'-C2'-C1' | 5.40 | 105.82 | 101.50 |
| 4 | AD | 59 | A | O4'-C1'-C2' | -5.40 | 100.40 | 105.80 |
| 25 | BA | 67 | G | P-O3'-C3' | 5.40 | 126.18 | 119.70 |
| 26 | BB | 153 | U | C6-N1-C2 | -5.40 | 117.76 | 121.00 |
| 26 | BB | 170 | U | N3-C4-O4 | 5.40 | 123.18 | 119.40 |
| 26 | BB | 751 | A | N1-C2-N3 | -5.40 | 126.60 | 129.30 |
| 26 | BB | 801 | G | N3-C4-C5 | -5.40 | 125.90 | 128.60 |
| 26 | BB | 1050 | A | C5-C6-N1 | 5.40 | 120.40 | 117.70 |
| 26 | BB | 1088 | A | C4-C5-N7 | -5.40 | 108.00 | 110.70 |
| 26 | BB | 1226 | A | N1-C6-N6 | 5.40 | 121.84 | 118.60 |
| 26 | BB | 1309 | G | N1-C6-O6 | -5.40 | 116.66 | 119.90 |
| 26 | BB | 1395 | A | C8-N9-C4 | 5.40 | 107.96 | 105.80 |
| 26 | BB | 2331 | G | C6-C5-N7 | -5.40 | 127.16 | 130.40 |
| 26 | BB | 2365 | G | P-O5'-C5' | 5.40 | 129.54 | 120.90 |
| 26 | BB | 2443 | C | N1-C1'-C2' | -5.40 | 106.06 | 112.00 |
| 32 | BH | 11 | PRO | CA-N-CD | -5.40 | 103.94 | 111.50 |
| 35 | BK | 77 | VAL | CA-CB-CG2 | -5.40 | 102.80 | 110.90 |
| 48 | BX | 55 | GLU | OE1-CD-OE2 | -5.40 | 116.82 | 123.30 |
| 1 | AA | 1054 | C | C2-N3-C4 | 5.40 | 122.60 | 119.90 |
| 1 | AA | 1088 | G | C5-C6-O6 | -5.40 | 125.36 | 128.60 |
| 1 | AA | 1438 | G | C5'-C4'-O4' | 5.40 | 115.58 | 109.10 |
| 1 | AA | 1447 | A | O4'-C4'-C3' | 5.40 | 110.42 | 106.10 |
| 1 | AA | 1526 | G | C2-N3-C4 | 5.40 | 114.60 | 111.90 |
| 4 | AD | 35 | C | N3-C2-O2 | -5.40 | 118.12 | 121.90 |
| 26 | BB | 1975 | G | C8-N9-C4 | -5.40 | 104.24 | 106.40 |
| 26 | BB | 2462 | C | C4'-C3'-O3' | 5.40 | 123.79 | 113.00 |
| 26 | BB | 2808 | G | C4-C5-N7 | -5.40 | 108.64 | 110.80 |
| 1 | AA | 276 | G | N3-C4-N9 | 5.39 | 129.24 | 126.00 |
| 1 | AA | 303 | A | C4-C5-N7 | -5.39 | 108.00 | 110.70 |
| 1 | AA | 384 | G | N9-C4-C5 | 5.39 | 107.56 | 105.40 |
| 1 | AA | 394 | G | C1'-O4'-C4' | -5.39 | 105.58 | 109.90 |
| 1 | AA | 447 | G | N3-C2-N2 | 5.39 | 123.68 | 119.90 |
| 1 | AA | 483 | C | N3-C4-N4 | 5.39 | 121.78 | 118.00 |
| 1 | AA | 530 | G | C5-N7-C8 | 5.39 | 107.00 | 104.30 |
| 1 | AA | 671 | G | N1-C2-N3 | 5.39 | 127.14 | 123.90 |
| 1 | AA | 799 | G | N1-C2-N3 | 5.39 | 127.14 | 123.90 |
| 1 | AA | 1025 | U | C6-N1-C2 | -5.39 | 117.76 | 121.00 |
| 1 | AA | 1041 | G | N9-C1'-C2' | -5.39 | 106.07 | 112.00 |
| 4 | AD | 31 | G | C2-N3-C4 | 5.39 | 114.60 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 75 | C | C6-N1-C2 | 5.39 | 122.46 | 120.30 |
| 26 | BB | 125 | A | O4'-C1'-N9 | 5.39 | 112.52 | 108.20 |
| 26 | BB | 160 | A | C1'-O4'-C4' | -5.39 | 105.58 | 109.90 |
| 26 | BB | 372 | G | N9-C4-C5 | 5.39 | 107.56 | 105.40 |
| 26 | BB | 408 | G | C5'-C4'-O4' | 5.39 | 115.57 | 109.10 |
| 26 | BB | 913 | U | C1'-O4'-C4' | -5.39 | 105.58 | 109.90 |
| 26 | BB | 1686 | C | N3-C4-N4 | 5.39 | 121.78 | 118.00 |
| 26 | BB | 2032 | G | C6-N1-C2 | -5.39 | 121.86 | 125.10 |
| 26 | BB | 2239 | G | C5-C6-N1 | 5.39 | 114.20 | 111.50 |
| 26 | BB | 2617 | U | C5-C4-O4 | -5.39 | 122.66 | 125.90 |
| 26 | BB | 2737 | G | C2-N3-C4 | -5.39 | 109.20 | 111.90 |
| 26 | BB | 2747 | G | C2-N3-C4 | 5.39 | 114.60 | 111.90 |
| 26 | BB | 2845 | U | O4'-C1'-C2' | -5.39 | 100.41 | 105.80 |
| 36 | BL | 19 | ASP | CB-CG-OD2 | -5.39 | 113.44 | 118.30 |
| 1 | AA | 154 | U | C5-C6-N1 | -5.39 | 120.00 | 122.70 |
| 1 | AA | 306 | A | C2-N3-C4 | 5.39 | 113.30 | 110.60 |
| 1 | AA | 499 | A | C5-N7-C8 | 5.39 | 106.60 | 103.90 |
| 1 | AA | 511 | C | N3-C2-O2 | -5.39 | 118.12 | 121.90 |
| 1 | AA | 654 | G | N1-C6-O6 | -5.39 | 116.67 | 119.90 |
| 1 | AA | 912 | C | N3-C2-O2 | -5.39 | 118.13 | 121.90 |
| 1 | AA | 1126 | U | C1'-O4'-C4' | 5.39 | 114.21 | 109.90 |
| 1 | AA | 1141 | C | C4-C5-C6 | -5.39 | 114.70 | 117.40 |
| 1 | AA | 1429 | A | N9-C4-C5 | 5.39 | 107.96 | 105.80 |
| 1 | AA | 1470 | U | N1-C2-N3 | 5.39 | 118.14 | 114.90 |
| 1 | AA | 1491 | G | N1-C6-O6 | -5.39 | 116.67 | 119.90 |
| 26 | BB | 273 | G | C4-C5-C6 | 5.39 | 122.03 | 118.80 |
| 26 | BB | 345 | A | C8-N9-C4 | 5.39 | 107.96 | 105.80 |
| 26 | BB | 405 | U | C5-C6-N1 | -5.39 | 120.00 | 122.70 |
| 26 | BB | 474 | G | C5-C6-N1 | 5.39 | 114.20 | 111.50 |
| 26 | BB | 630 | G | C4'-C3'-C2' | -5.39 | 97.21 | 102.60 |
| 26 | BB | 757 | G | N9-C4-C5 | 5.39 | 107.56 | 105.40 |
| 26 | BB | 979 | A | C3'-C2'-C1' | -5.39 | 97.19 | 101.50 |
| 26 | BB | 1378 | A | N3-C4-C5 | -5.39 | 123.03 | 126.80 |
| 26 | BB | 1391 | U | O4'-C1'-N1 | 5.39 | 112.52 | 108.20 |
| 26 | BB | 1862 | G | C5-N7-C8 | 5.39 | 107.00 | 104.30 |
| 26 | BB | 1912 | A | C2-N3-C4 | -5.39 | 107.90 | 110.60 |
| 26 | BB | 2581 | G | N1-C2-N2 | 5.39 | 121.05 | 116.20 |
| 26 | BB | 2860 | A | N1-C6-N6 | 5.39 | 121.84 | 118.60 |
| 1 | AA | 251 | G | C6-N1-C2 | -5.39 | 121.86 | 125.10 |
| 1 | AA | 1055 | A | N1-C6-N6 | 5.39 | 121.83 | 118.60 |
| 25 | BA | 79 | G | C2-N3-C4 | 5.39 | 114.60 | 111.90 |
| 26 | BB | 780 | G | N1-C2-N2 | -5.39 | 111.35 | 116.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 950 | G | N9-C4-C5 | 5.39 | 107.56 | 105.40 |
| 26 | BB | 1689 | A | N1-C6-N6 | 5.39 | 121.83 | 118.60 |
| 26 | BB | 2256 | G | C4-C5-N7 | 5.39 | 112.96 | 110.80 |
| 26 | BB | 2357 | G | C5-N7-C8 | 5.39 | 107.00 | 104.30 |
| 26 | BB | 2727 | A | C4-C5-C6 | 5.39 | 119.69 | 117.00 |
| 33 | BI | 116 | ARG | CD-NE-CZ | 5.39 | 131.15 | 123.60 |
| 1 | AA | 37 | U | C5'-C4'-O4' | 5.39 | 115.57 | 109.10 |
| 1 | AA | 215 | C | N3-C4-C5 | -5.39 | 119.74 | 121.90 |
| 1 | AA | 1138 | G | C1'-O4'-C4' | -5.39 | 105.59 | 109.90 |
| 1 | AA | 1502 | A | C8-N9-C1' | -5.39 | 118.00 | 127.70 |
| 24 | AX | 5 | VAL | CA-CB-CG2 | 5.39 | 118.98 | 110.90 |
| 26 | BB | 179 | C | N1-C1'-C2' | -5.39 | 106.07 | 112.00 |
| 26 | BB | 212 | G | C6-N1-C2 | 5.39 | 128.33 | 125.10 |
| 26 | BB | 533 | G | C5'-C4'-C3' | -5.39 | 107.38 | 116.00 |
| 26 | BB | 1277 | G | C6-C5-N7 | -5.39 | 127.17 | 130.40 |
| 26 | BB | 1279 | G | N1-C6-O6 | 5.39 | 123.13 | 119.90 |
| 26 | BB | 1474 | U | C5'-C4'-O4' | 5.39 | 115.57 | 109.10 |
| 26 | BB | 1543 | G | O4'-C1'-N9 | 5.39 | 112.51 | 108.20 |
| 26 | BB | 2009 | A | N3-C4-C5 | -5.39 | 123.03 | 126.80 |
| 26 | BB | 2237 | G | C4-C5-N7 | -5.39 | 108.64 | 110.80 |
| 26 | BB | 2265 | U | C5'-C4'-O4' | 5.39 | 115.57 | 109.10 |
| 26 | BB | 2364 | C | C5'-C4'-O4' | 5.39 | 115.57 | 109.10 |
| 27 | BC | 9 | ARG | NH1-CZ-NH2 | 5.39 | 125.33 | 119.40 |
| 1 | AA | 289 | G | N1-C2-N2 | 5.39 | 121.05 | 116.20 |
| 1 | AA | 482 | A | N7-C8-N9 | -5.39 | 111.11 | 113.80 |
| 1 | AA | 789 | U | C3'-C2'-C1' | 5.39 | 105.81 | 101.50 |
| 1 | AA | 1116 | U | C4'-C3'-C2' | -5.39 | 97.21 | 102.60 |
| 3 | AC | 27 | A | N1-C6-N6 | 5.39 | 121.83 | 118.60 |
| 26 | BB | 614 | A | C6-N1-C2 | 5.39 | 121.83 | 118.60 |
| 26 | BB | 1815 | A | C5-N7-C8 | -5.39 | 101.21 | 103.90 |
| 26 | BB | 2073 | C | O4'-C4'-C3' | -5.39 | 98.61 | 104.00 |
| 26 | BB | 2203 | U | N1-C2-N3 | -5.39 | 111.67 | 114.90 |
| 31 | BG | 70 | ARG | NH1-CZ-NH2 | -5.39 | 113.47 | 119.40 |
| 1 | AA | 26 | A | N3-C4-C5 | -5.39 | 123.03 | 126.80 |
| 1 | AA | 334 | C | N1-C2-N3 | -5.39 | 115.43 | 119.20 |
| 1 | AA | 789 | U | C5'-C4'-O4' | 5.39 | 115.56 | 109.10 |
| 1 | AA | 1093 | A | C2-N3-C4 | 5.39 | 113.29 | 110.60 |
| 1 | AA | 1323 | G | C2-N3-C4 | 5.39 | 114.59 | 111.90 |
| 4 | AD | 34 | U | C2-N3-C4 | -5.39 | 123.77 | 127.00 |
| 26 | BB | 58 | G | N7-C8-N9 | 5.39 | 115.79 | 113.10 |
| 26 | BB | 87 | U | C5'-C4'-O4' | 5.39 | 115.56 | 109.10 |
| 26 | BB | 108 | G | C5-C6-N1 | -5.39 | 108.81 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 769 | U | C1'-O4'-C4' | 5.39 | 114.21 | 109.90 |
| 26 | BB | 1110 | G | C5'-C4'-C3' | -5.39 | 107.38 | 116.00 |
| 26 | BB | 1333 | G | C5-N7-C8 | 5.39 | 106.99 | 104.30 |
| 26 | BB | 1699 | G | OP2-P-O3' | 5.39 | 117.05 | 105.20 |
| 26 | BB | 1819 | A | N7-C8-N9 | 5.39 | 116.49 | 113.80 |
| 26 | BB | 1961 | C | C6-N1-C2 | -5.39 | 118.14 | 120.30 |
| 26 | BB | 2169 | A | C1'-O4'-C4' | 5.39 | 114.21 | 109.90 |
| 26 | BB | 2221 | G | C8-N9-C4 | -5.39 | 104.25 | 106.40 |
| 26 | BB | 2309 | A | P-O5'-C5' | 5.39 | 129.52 | 120.90 |
| 28 | BD | 131 | MET | CG-SD-CE | -5.39 | 91.58 | 100.20 |
| 32 | BH | 38 | ASP | CB-CG-OD2 | -5.39 | 113.45 | 118.30 |
| 36 | BL | 16 | TYR | CG-CD2-CE2 | -5.39 | 116.99 | 121.30 |
| 42 | BR | 46 | VAL | CA-CB-CG1 | 5.39 | 118.98 | 110.90 |
| 1 | AA | 77 | A | C5'-C4'-O4' | 5.38 | 115.56 | 109.10 |
| 1 | AA | 293 | G | C3'-C2'-C1' | -5.38 | 97.19 | 101.50 |
| 1 | AA | 913 | A | C6-N1-C2 | -5.38 | 115.37 | 118.60 |
| 1 | AA | 1326 | U | C4'-C3'-C2' | 5.38 | 107.98 | 102.60 |
| 1 | AA | 1393 | U | C3'-C2'-C1' | 5.38 | 105.81 | 101.50 |
| 25 | BA | 36 | C | C5'-C4'-C3' | 5.38 | 124.62 | 116.00 |
| 26 | BB | 86 | G | C5'-C4'-O4' | 5.38 | 115.56 | 109.10 |
| 26 | BB | 177 | G | N7-C8-N9 | -5.38 | 110.41 | 113.10 |
| 26 | BB | 580 | U | C6-N1-C2 | 5.38 | 124.23 | 121.00 |
| 26 | BB | 945 | A | C8-N9-C4 | -5.38 | 103.65 | 105.80 |
| 26 | BB | 1157 | G | O4'-C1'-N9 | 5.38 | 112.51 | 108.20 |
| 26 | BB | 1189 | A | C4-C5-N7 | -5.38 | 108.01 | 110.70 |
| 26 | BB | 1381 | G | O4'-C4'-C3' | 5.38 | 110.41 | 106.10 |
| 26 | BB | 1754 | A | C8-N9-C4 | 5.38 | 107.95 | 105.80 |
| 26 | BB | 2742 | G | C6-N1-C2 | -5.38 | 121.87 | 125.10 |
| 26 | BB | 2760 | C | N1-C2-O2 | 5.38 | 122.13 | 118.90 |
| 1 | AA | 331 | G | C8-N9-C1' | 5.38 | 134.00 | 127.00 |
| 1 | AA | 1164 | G | P-O3'-C3' | 5.38 | 126.16 | 119.70 |
| 1 | AA | 1296 | C | C5'-C4'-C3' | -5.38 | 107.39 | 116.00 |
| 26 | BB | 389 | G | C5'-C4'-C3' | -5.38 | 107.39 | 116.00 |
| 26 | BB | 1026 | G | N3-C2-N2 | 5.38 | 123.67 | 119.90 |
| 26 | BB | 1966 | A | O4'-C1'-C2' | 5.38 | 112.44 | 107.60 |
| 26 | BB | 2202 | U | C5-C6-N1 | -5.38 | 120.01 | 122.70 |
| 26 | BB | 2334 | U | C5-C4-O4 | 5.38 | 129.13 | 125.90 |
| 26 | BB | 2477 | U | N1-C1'-C2' | 5.38 | 121.00 | 114.00 |
| 26 | BB | 2578 | G | N3-C4-C5 | -5.38 | 125.91 | 128.60 |
| 38 | BN | 48 | ARG | NE-CZ-NH1 | -5.38 | 117.61 | 120.30 |
| 1 | AA | 13 | U | N1-C1'-C2' | 5.38 | 121.00 | 114.00 |
| 1 | AA | 134 | G | C8-N9-C4 | -5.38 | 104.25 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 173 | U | N1-C1'-C2' | 5.38 | 121.00 | 114.00 |
| 1 | AA | 186 | C | N1-C2-O2 | 5.38 | 122.13 | 118.90 |
| 8 | AH | 28 | ARG | NE-CZ-NH2 | -5.38 | 117.61 | 120.30 |
| 25 | BA | 92 | C | C4'-C3'-C2' | -5.38 | 97.22 | 102.60 |
| 25 | BA | 94 | A | C4-C5-N7 | 5.38 | 113.39 | 110.70 |
| 26 | BB | 198 | C | N3-C4-C5 | 5.38 | 124.05 | 121.90 |
| 26 | BB | 264 | C | C2-N3-C4 | -5.38 | 117.21 | 119.90 |
| 26 | BB | 452 | G | O4'-C1'-C2' | -5.38 | 100.42 | 105.80 |
| 26 | BB | 709 | U | P-O3'-C3' | 5.38 | 126.16 | 119.70 |
| 26 | BB | 1146 | C | C2-N1-C1' | 5.38 | 124.72 | 118.80 |
| 26 | BB | 1389 | G | O4'-C1'-C2' | 5.38 | 112.44 | 107.60 |
| 26 | BB | 1514 | G | C3'-C2'-C1' | -5.38 | 97.19 | 101.50 |
| 26 | BB | 1769 | U | C4-C5-C6 | 5.38 | 122.93 | 119.70 |
| 26 | BB | 2087 | G | N9-C4-C5 | 5.38 | 107.55 | 105.40 |
| 26 | BB | 2145 | C | N1-C2-O2 | 5.38 | 122.13 | 118.90 |
| 1 | AA | 75 | G | N3-C4-C5 | -5.38 | 125.91 | 128.60 |
| 1 | AA | 491 | G | N9-C1'-C2' | -5.38 | 106.08 | 112.00 |
| 1 | AA | 786 | G | C5-C6-N1 | -5.38 | 108.81 | 111.50 |
| 1 | AA | 972 | C | C1'-O4'-C4' | 5.38 | 114.20 | 109.90 |
| 4 | AD | 16 | C | N3-C4-N4 | 5.38 | 121.77 | 118.00 |
| 15 | AO | 109 | ARG | NE-CZ-NH1 | 5.38 | 122.99 | 120.30 |
| 26 | BB | 1277 | G | N1-C2-N2 | 5.38 | 121.04 | 116.20 |
| 26 | BB | 1529 | G | N3-C4-C5 | -5.38 | 125.91 | 128.60 |
| 26 | BB | 1741 | C | C3'-C2'-C1' | 5.38 | 105.80 | 101.50 |
| 26 | BB | 2027 | G | N3-C2-N2 | 5.38 | 123.67 | 119.90 |
| 26 | BB | 2219 | U | C3'-C2'-C1' | 5.38 | 105.80 | 101.50 |
| 26 | BB | 2408 | U | C1'-O4'-C4' | 5.38 | 114.20 | 109.90 |
| 26 | BB | 2679 | A | C3'-C2'-C1' | 5.38 | 105.80 | 101.50 |
| 1 | AA | 612 | C | C2-N3-C4 | 5.38 | 122.59 | 119.90 |
| 1 | AA | 762 | U | N1-C1'-C2' | -5.38 | 106.08 | 112.00 |
| 1 | AA | 859 | G | N3-C4-C5 | -5.38 | 125.91 | 128.60 |
| 1 | AA | 983 | A | C3'-C2'-C1' | -5.38 | 97.20 | 101.50 |
| 1 | AA | 1019 | A | C4-C5-N7 | -5.38 | 108.01 | 110.70 |
| 1 | AA | 1179 | A | N3-C4-N9 | 5.38 | 131.70 | 127.40 |
| 25 | BA | 10 | G | C5'-C4'-O4' | 5.38 | 115.55 | 109.10 |
| 25 | BA | 22 | U | N3-C4-C5 | -5.38 | 111.37 | 114.60 |
| 25 | BA | 58 | A | C2-N3-C4 | -5.38 | 107.91 | 110.60 |
| 25 | BA | 61 | G | C5-N7-C8 | -5.38 | 101.61 | 104.30 |
| 26 | BB | 700 | G | N9-C4-C5 | -5.38 | 103.25 | 105.40 |
| 26 | BB | 1753 | G | P-O3'-C3' | 5.38 | 126.15 | 119.70 |
| 26 | BB | 2230 | G | C4'-C3'-C2' | -5.38 | 97.22 | 102.60 |
| 26 | BB | 2574 | G | C5-N7-C8 | -5.38 | 101.61 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2620 | C | C4'-C3'-C2' | -5.38 | 97.22 | 102.60 |
| 26 | BB | 2667 | C | O4'-C1'-C2' | -5.38 | 100.42 | 105.80 |
| 26 | BB | 2704 | C | N3-C4-C5 | -5.38 | 119.75 | 121.90 |
| 26 | BB | 2824 | C | N1-C2-N3 | -5.38 | 115.44 | 119.20 |
| 1 | AA | 196 | A | C4-C5-N7 | 5.38 | 113.39 | 110.70 |
| 1 | AA | 201 | G | C8-N9-C1' | 5.38 | 133.99 | 127.00 |
| 1 | AA | 228 | A | O4'-C4'-C3' | 5.38 | 110.40 | 106.10 |
| 1 | AA | 756 | C | C5-C4-N4 | -5.38 | 116.44 | 120.20 |
| 1 | AA | 1066 | C | O5'-C5'-C4' | 5.38 | 121.92 | 111.70 |
| 1 | AA | 1110 | A | C8-N9-C4 | -5.38 | 103.65 | 105.80 |
| 1 | AA | 1153 | G | C5-C6-N1 | -5.38 | 108.81 | 111.50 |
| 1 | AA | 1186 | G | N1-C2-N2 | 5.38 | 121.04 | 116.20 |
| 6 | AF | 155 | ARG | CD-NE-CZ | 5.38 | 131.13 | 123.60 |
| 21 | AU | 12 | PHE | CG-CD1-CE1 | -5.38 | 114.89 | 120.80 |
| 25 | BA | 56 | G | O4'-C4'-C3' | 5.38 | 110.40 | 106.10 |
| 25 | BA | 63 | C | C1'-O4'-C4' | 5.38 | 114.20 | 109.90 |
| 25 | BA | 104 | A | O5'-C5'-C4' | -5.38 | 101.48 | 111.70 |
| 26 | BB | 241 | A | N3-C4-N9 | -5.38 | 123.10 | 127.40 |
| 26 | BB | 332 | A | C3'-C2'-C1' | 5.38 | 105.80 | 101.50 |
| 26 | BB | 514 | A | C5'-C4'-C3' | -5.38 | 107.40 | 116.00 |
| 26 | BB | 871 | U | C5-C6-N1 | -5.38 | 120.01 | 122.70 |
| 26 | BB | 906 | U | C2-N3-C4 | -5.38 | 123.77 | 127.00 |
| 26 | BB | 1079 | C | C5-C4-N4 | -5.38 | 116.44 | 120.20 |
| 26 | BB | 1117 | C | C6-N1-C2 | -5.38 | 118.15 | 120.30 |
| 26 | BB | 1597 | A | C5-C6-N6 | 5.38 | 128.00 | 123.70 |
| 26 | BB | 1634 | A | C8-N9-C4 | -5.38 | 103.65 | 105.80 |
| 26 | BB | 2201 | G | N3-C4-N9 | -5.38 | 122.77 | 126.00 |
| 26 | BB | 2616 | C | C5'-C4'-C3' | 5.38 | 124.60 | 116.00 |
| 35 | BK | 107 | GLU | OE1-CD-OE2 | 5.38 | 129.75 | 123.30 |
| 40 | BP | 91 | ALA | N-CA-CB | 5.38 | 117.63 | 110.10 |
| 1 | AA | 143 | A | C3'-C2'-C1' | -5.38 | 97.20 | 101.50 |
| 1 | AA | 542 | G | C8-N9-C1' | 5.38 | 133.99 | 127.00 |
| 1 | AA | 893 | C | N3-C2-O2 | -5.38 | 118.14 | 121.90 |
| 1 | AA | 1321 | U | C5'-C4'-O4' | -5.38 | 102.65 | 109.10 |
| 1 | AA | 1446 | A | N7-C8-N9 | -5.38 | 111.11 | 113.80 |
| 3 | AC | 51 | C | C1'-O4'-C4' | -5.38 | 105.60 | 109.90 |
| 26 | BB | 963 | U | C2-N3-C4 | -5.38 | 123.78 | 127.00 |
| 26 | BB | 1261 | C | N3-C4-C5 | -5.38 | 119.75 | 121.90 |
| 26 | BB | 1300 | G | P-O5'-C5' | 5.38 | 129.50 | 120.90 |
| 26 | BB | 2656 | U | N3-C2-O2 | -5.38 | 118.44 | 122.20 |
| 50 | BZ | 36 | ARG | NE-CZ-NH1 | -5.38 | 117.61 | 120.30 |
| 1 | AA | 233 | C | N3-C2-O2 | -5.37 | 118.14 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 823 | C | N3-C4-C5 | -5.37 | 119.75 | 121.90 |
| 1 | AA | 1398 | A | P-O3'-C3' | 5.37 | 126.15 | 119.70 |
| 4 | AD | 71 | G | N9-C1'-C2' | -5.37 | 106.09 | 112.00 |
| 9 | AI | 109 | ARG | NH1-CZ-NH2 | -5.37 | 113.49 | 119.40 |
| 26 | BB | 361 | G | N7-C8-N9 | 5.37 | 115.79 | 113.10 |
| 26 | BB | 925 | A | C5-C6-N1 | 5.37 | 120.39 | 117.70 |
| 26 | BB | 1310 | G | C3'-C2'-C1' | 5.37 | 105.80 | 101.50 |
| 26 | BB | 1987 | A | O4'-C1'-N9 | 5.37 | 112.50 | 108.20 |
| 26 | BB | 1988 | G | C4-C5-C6 | 5.37 | 122.02 | 118.80 |
| 26 | BB | 2153 | C | C5'-C4'-O4' | -5.37 | 102.65 | 109.10 |
| 26 | BB | 2289 | G | C5-C6-N1 | 5.37 | 114.19 | 111.50 |
| 26 | BB | 2889 | C | O4'-C1'-N1 | 5.37 | 112.50 | 108.20 |
| 40 | BP | 4 | ARG | NE-CZ-NH1 | -5.37 | 117.61 | 120.30 |
| 43 | BS | 26 | ALA | N-CA-CB | -5.37 | 102.58 | 110.10 |
| 1 | AA | 300 | A | N3-C4-C5 | -5.37 | 123.04 | 126.80 |
| 1 | AA | 348 | G | C2-N3-C4 | 5.37 | 114.59 | 111.90 |
| 1 | AA | 360 | G | C6-C5-N7 | -5.37 | 127.18 | 130.40 |
| 1 | AA | 583 | A | C2-N3-C4 | -5.37 | 107.91 | 110.60 |
| 1 | AA | 651 | C | N1-C2-N3 | -5.37 | 115.44 | 119.20 |
| 1 | AA | 756 | C | C4-C5-C6 | -5.37 | 114.71 | 117.40 |
| 1 | AA | 1242 | G | P-O3'-C3' | 5.37 | 126.14 | 119.70 |
| 26 | BB | 99 | U | C2-N1-C1' | 5.37 | 124.15 | 117.70 |
| 26 | BB | 1333 | G | C8-N9-C4 | 5.37 | 108.55 | 106.40 |
| 26 | BB | 1671 | U | N1-C1'-C2' | -5.37 | 106.09 | 112.00 |
| 26 | BB | 2215 | C | O4'-C4'-C3' | -5.37 | 98.63 | 104.00 |
| 26 | BB | 2570 | G | C4-C5-N7 | 5.37 | 112.95 | 110.80 |
| 26 | BB | 2641 | G | OP2-P-O3' | 5.37 | 117.02 | 105.20 |
| 26 | BB | 2857 | G | C3'-C2'-C1' | -5.37 | 97.20 | 101.50 |
| 36 | BL | 48 | VAL | CA-CB-CG2 | 5.37 | 118.96 | 110.90 |
| 48 | BX | 84 | PRO | O-C-N | 5.37 | 131.29 | 122.70 |
| 1 | AA | 524 | G | C5-C6-O6 | 5.37 | 131.82 | 128.60 |
| 26 | BB | 872 | U | P-O5'-C5' | 5.37 | 129.49 | 120.90 |
| 26 | BB | 1545 | A | C1'-O4'-C4' | -5.37 | 105.60 | 109.90 |
| 26 | BB | 1985 | C | N3-C2-O2 | -5.37 | 118.14 | 121.90 |
| 26 | BB | 2558 | C | C2-N3-C4 | 5.37 | 122.58 | 119.90 |
| 1 | AA | 393 | A | O5'-P-OP2 | -5.37 | 100.87 | 105.70 |
| 1 | AA | 424 | G | O4'-C1'-N9 | 5.37 | 112.49 | 108.20 |
| 4 | AD | 25 | U | C4-C5-C6 | 5.37 | 122.92 | 119.70 |
| 26 | BB | 430 | A | C5-N7-C8 | -5.37 | 101.22 | 103.90 |
| 26 | BB | 433 | C | C4'-C3'-C2' | 5.37 | 107.97 | 102.60 |
| 26 | BB | 625 | G | C5-N7-C8 | 5.37 | 106.98 | 104.30 |
| 26 | BB | 1339 | G | C5-C6-N1 | 5.37 | 114.18 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1897 | G | N3-C4-N9 | 5.37 | 129.22 | 126.00 |
| 26 | BB | 2183 | A | P-O5'-C5' | 5.37 | 129.49 | 120.90 |
| 26 | BB | 2196 | C | N1-C2-O2 | 5.37 | 122.12 | 118.90 |
| 26 | BB | 2436 | G | C3'-C2'-C1' | -5.37 | 97.20 | 101.50 |
| 26 | BB | 2669 | G | N1-C2-N3 | -5.37 | 120.68 | 123.90 |
| 28 | BD | 220 | ARG | NE-CZ-NH2 | -5.37 | 117.62 | 120.30 |
| 55 | B4 | 20 | TYR | CB-CG-CD2 | -5.37 | 117.78 | 121.00 |
| 1 | AA | 788 | U | C1'-O4'-C4' | 5.37 | 114.19 | 109.90 |
| 1 | AA | 1179 | A | C2-N3-C4 | 5.37 | 113.28 | 110.60 |
| 1 | AA | 1287 | A | O3'-P-O5' | 5.37 | 114.20 | 104.00 |
| 25 | BA | 51 | G | C5-C6-O6 | -5.37 | 125.38 | 128.60 |
| 26 | BB | 344 | A | C8-N9-C4 | 5.37 | 107.95 | 105.80 |
| 26 | BB | 495 | G | O5'-P-OP1 | 5.37 | 117.14 | 110.70 |
| 26 | BB | 1018 | U | O4'-C4'-C3' | 5.37 | 110.39 | 106.10 |
| 26 | BB | 1102 | C | C4-C5-C6 | -5.37 | 114.72 | 117.40 |
| 26 | BB | 1666 | G | N3-C4-C5 | -5.37 | 125.92 | 128.60 |
| 26 | BB | 2808 | G | N3-C4-N9 | -5.37 | 122.78 | 126.00 |
| 50 | BZ | 42 | GLU | C-N-CA | 5.37 | 135.12 | 121.70 |
| 1 | AA | 87 | C | N1-C2-N3 | 5.37 | 122.96 | 119.20 |
| 1 | AA | 502 | A | C6-N1-C2 | 5.37 | 121.82 | 118.60 |
| 1 | AA | 506 | G | O4'-C1'-N9 | 5.37 | 112.49 | 108.20 |
| 1 | AA | 668 | G | N1-C6-O6 | -5.37 | 116.68 | 119.90 |
| 1 | AA | 1028 | C | C3'-C2'-C1' | 5.37 | 105.79 | 101.50 |
| 1 | AA | 1035 | A | C1'-O4'-C4' | -5.37 | 105.61 | 109.90 |
| 1 | AA | 1157 | A | C6-C5-N7 | 5.37 | 136.06 | 132.30 |
| 1 | AA | 1211 | U | P-O3'-C3' | 5.37 | 126.14 | 119.70 |
| 1 | AA | 1272 | G | C4'-C3'-C2' | -5.37 | 97.23 | 102.60 |
| 1 | AA | 1287 | A | C5-C6-N1 | -5.37 | 115.02 | 117.70 |
| 2 | AB | 36 | A | C1'-O4'-C4' | -5.37 | 105.61 | 109.90 |
| 4 | AD | 13 | C | O4'-C4'-C3' | 5.37 | 110.39 | 106.10 |
| 25 | BA | 22 | U | C6-N1-C2 | -5.37 | 117.78 | 121.00 |
| 25 | BA | 98 | G | N3-C4-N9 | 5.37 | 129.22 | 126.00 |
| 26 | BB | 1005 | C | C1'-O4'-C4' | 5.37 | 114.19 | 109.90 |
| 26 | BB | 1111 | A | C4-C5-C6 | -5.37 | 114.32 | 117.00 |
| 26 | BB | 1164 | C | N1-C1'-C2' | -5.37 | 106.10 | 112.00 |
| 26 | BB | 1450 | G | C4-C5-C6 | 5.37 | 122.02 | 118.80 |
| 26 | BB | 1896 | G | C5'-C4'-O4' | 5.37 | 115.54 | 109.10 |
| 26 | BB | 2691 | C | C3'-C2'-C1' | 5.37 | 105.79 | 101.50 |
| 32 | BH | 169 | ARG | CD-NE-CZ | 5.37 | 131.11 | 123.60 |
| 50 | BZ | 47 | THR | CA-CB-CG2 | 5.37 | 119.91 | 112.40 |
| 1 | AA | 279 | A | C5-C6-N6 | -5.36 | 119.41 | 123.70 |
| 1 | AA | 399 | G | N1-C2-N3 | 5.36 | 127.12 | 123.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 468 | A | C5'-C4'-C3' | -5.36 | 107.42 | 116.00 |
| 1 | AA | 474 | G | C6-C5-N7 | -5.36 | 127.18 | 130.40 |
| 1 | AA | 786 | G | C5-N7-C8 | -5.36 | 101.62 | 104.30 |
| 1 | AA | 1145 | A | N1-C6-N6 | -5.36 | 115.38 | 118.60 |
| 1 | AA | 1277 | C | N3-C4-N4 | -5.36 | 114.25 | 118.00 |
| 1 | AA | 1429 | A | N1-C6-N6 | 5.36 | 121.82 | 118.60 |
| 6 | AF | 126 | ARG | CD-NE-CZ | 5.36 | 131.11 | 123.60 |
| 26 | BB | 901 | C | N3-C4-C5 | -5.36 | 119.75 | 121.90 |
| 26 | BB | 1047 | G | N3-C4-C5 | -5.36 | 125.92 | 128.60 |
| 26 | BB | 2386 | A | C2-N3-C4 | -5.36 | 107.92 | 110.60 |
| 30 | BF | 86 | ALA | O-C-N | 5.36 | 131.28 | 122.70 |
| 56 | B5 | 19 | ARG | CD-NE-CZ | 5.36 | 131.11 | 123.60 |
| 1 | AA | 59 | A | O4'-C4'-C3' | 5.36 | 110.39 | 106.10 |
| 1 | AA | 1344 | C | N1-C2-O2 | 5.36 | 122.12 | 118.90 |
| 26 | BB | 398 | C | N3-C2-O2 | -5.36 | 118.15 | 121.90 |
| 26 | BB | 518 | G | O4'-C1'-N9 | 5.36 | 112.49 | 108.20 |
| 26 | BB | 1161 | C | C2-N3-C4 | 5.36 | 122.58 | 119.90 |
| 26 | BB | 1759 | A | C5'-C4'-C3' | 5.36 | 124.58 | 116.00 |
| 26 | BB | 2037 | A | C4-C5-C6 | 5.36 | 119.68 | 117.00 |
| 1 | AA | 306 | A | N3-C4-N9 | -5.36 | 123.11 | 127.40 |
| 1 | AA | 920 | U | O4'-C4'-C3' | -5.36 | 98.64 | 104.00 |
| 1 | AA | 994 | A | N9-C4-C5 | -5.36 | 103.66 | 105.80 |
| 1 | AA | 1238 | A | O5'-P-OP1 | -5.36 | 100.88 | 105.70 |
| 1 | AA | 1301 | U | C2-N3-C4 | -5.36 | 123.78 | 127.00 |
| 26 | BB | 300 | A | C2-N3-C4 | 5.36 | 113.28 | 110.60 |
| 26 | BB | 623 | C | C6-N1-C1' | -5.36 | 114.37 | 120.80 |
| 26 | BB | 703 | U | P-O3'-C3' | 5.36 | 126.13 | 119.70 |
| 26 | BB | 899 | A | N3-C4-N9 | -5.36 | 123.11 | 127.40 |
| 26 | BB | 1127 | A | C5-N7-C8 | 5.36 | 106.58 | 103.90 |
| 26 | BB | 1307 | A | C2-N3-C4 | 5.36 | 113.28 | 110.60 |
| 26 | BB | 1455 | G | C6-N1-C2 | -5.36 | 121.88 | 125.10 |
| 26 | BB | 1718 | G | O4'-C4'-C3' | 5.36 | 110.39 | 106.10 |
| 26 | BB | 2158 | A | N1-C2-N3 | 5.36 | 131.98 | 129.30 |
| 26 | BB | 2224 | G | C4-C5-C6 | 5.36 | 122.02 | 118.80 |
| 26 | BB | 2435 | A | C5-C6-N1 | 5.36 | 120.38 | 117.70 |
| 26 | BB | 2443 | C | C1'-O4'-C4' | -5.36 | 105.61 | 109.90 |
| 26 | BB | 2472 | G | O4'-C1'-N9 | -5.36 | 103.91 | 108.20 |
| 26 | BB | 2620 | C | C5'-C4'-O4' | 5.36 | 115.53 | 109.10 |
| 26 | BB | 2722 | G | N3-C4-C5 | -5.36 | 125.92 | 128.60 |
| 26 | BB | 2888 | C | C5-C4-N4 | -5.36 | 116.45 | 120.20 |
| 1 | AA | 490 | C | C5'-C4'-O4' | 5.36 | 115.53 | 109.10 |
| 1 | AA | 1463 | U | N1-C2-N3 | 5.36 | 118.12 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 23 | AW | 23 | ARG | NE-CZ-NH2 | -5.36 | 117.62 | 120.30 |
| 26 | BB | 861 | A | C5-C6-N6 | -5.36 | 119.41 | 123.70 |
| 26 | BB | 2140 | G | C8-N9-C4 | 5.36 | 108.54 | 106.40 |
| 26 | BB | 2169 | A | C5-C6-N1 | 5.36 | 120.38 | 117.70 |
| 26 | BB | 2791 | G | N1-C2-N2 | 5.36 | 121.02 | 116.20 |
| 1 | AA | 166 | U | C2-N3-C4 | -5.36 | 123.79 | 127.00 |
| 4 | AD | 45 | A | C5-N7-C8 | 5.36 | 106.58 | 103.90 |
| 4 | AD | 71 | G | C6-C5-N7 | -5.36 | 127.19 | 130.40 |
| 6 | AF | 51 | VAL | CB-CA-C | -5.36 | 101.22 | 111.40 |
| 25 | BA | 28 | C | C2-N3-C4 | -5.36 | 117.22 | 119.90 |
| 26 | BB | 398 | C | C4'-C3'-C2' | -5.36 | 97.24 | 102.60 |
| 26 | BB | 575 | A | O4'-C1'-C2' | 5.36 | 112.42 | 107.60 |
| 26 | BB | 810 | U | N3-C2-O2 | -5.36 | 118.45 | 122.20 |
| 26 | BB | 824 | U | N1-C2-N3 | 5.36 | 118.11 | 114.90 |
| 26 | BB | 909 | A | C1'-O4'-C4' | 5.36 | 114.19 | 109.90 |
| 26 | BB | 1406 | U | C5-C4-O4 | -5.36 | 122.69 | 125.90 |
| 26 | BB | 1555 | G | N7-C8-N9 | -5.36 | 110.42 | 113.10 |
| 26 | BB | 1765 | U | C3'-C2'-C1' | 5.36 | 105.79 | 101.50 |
| 26 | BB | 1813 | G | C5-C6-N1 | 5.36 | 114.18 | 111.50 |
| 26 | BB | 2298 | A | C3'-C2'-C1' | -5.36 | 97.21 | 101.50 |
| 26 | BB | 2657 | A | N1-C6-N6 | 5.36 | 121.81 | 118.60 |
| 28 | BD | 228 | ASP | CB-CG-OD1 | -5.36 | 113.48 | 118.30 |
| 29 | BE | 181 | ASP | CB-CG-OD1 | -5.36 | 113.48 | 118.30 |
| 1 | AA | 245 | U | O4'-C1'-N1 | 5.36 | 112.48 | 108.20 |
| 1 | AA | 694 | A | C5-N7-C8 | 5.36 | 106.58 | 103.90 |
| 1 | AA | 699 | C | N3-C2-O2 | -5.36 | 118.15 | 121.90 |
| 1 | AA | 872 | A | C5-N7-C8 | -5.36 | 101.22 | 103.90 |
| 1 | AA | 936 | C | N3-C4-N4 | 5.36 | 121.75 | 118.00 |
| 1 | AA | 1246 | A | C4-C5-C6 | 5.36 | 119.68 | 117.00 |
| 2 | AB | 53 | G | N9-C4-C5 | 5.36 | 107.54 | 105.40 |
| 26 | BB | 165 | A | C2-N3-C4 | 5.36 | 113.28 | 110.60 |
| 26 | BB | 498 | G | C3'-C2'-C1' | 5.36 | 105.78 | 101.50 |
| 26 | BB | 798 | G | C5-C6-O6 | -5.36 | 125.39 | 128.60 |
| 26 | BB | 923 | G | C5-C6-O6 | -5.36 | 125.39 | 128.60 |
| 26 | BB | 1318 | U | O4'-C1'-N1 | 5.36 | 112.48 | 108.20 |
| 26 | BB | 1363 | C | C4-C5-C6 | 5.36 | 120.08 | 117.40 |
| 26 | BB | 1364 | G | N1-C2-N2 | 5.36 | 121.02 | 116.20 |
| 26 | BB | 1753 | G | N9-C4-C5 | 5.36 | 107.54 | 105.40 |
| 26 | BB | 1889 | A | C3'-C2'-C1' | -5.36 | 97.22 | 101.50 |
| 26 | BB | 2075 | U | P-O5'-C5' | 5.36 | 129.47 | 120.90 |
| 26 | BB | 2241 | A | C5-N7-C8 | -5.36 | 101.22 | 103.90 |
| 26 | BB | 2244 | U | O4'-C1'-C2' | 5.36 | 112.42 | 107.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2301 | C | C5-C6-N1 | 5.36 | 123.68 | 121.00 |
| 26 | BB | 2314 | A | C1'-O4'-C4' | -5.36 | 105.62 | 109.90 |
| 26 | BB | 2336 | A | C3'-C2'-C1' | 5.36 | 105.78 | 101.50 |
| 26 | BB | 2507 | C | N3-C4-N4 | 5.36 | 121.75 | 118.00 |
| 26 | BB | 2546 | U | C5-C4-O4 | -5.36 | 122.69 | 125.90 |
| 26 | BB | 2850 | A | O5'-C5'-C4' | -5.36 | 101.52 | 111.70 |
| 1 | AA | 624 | C | O4'-C1'-N1 | 5.35 | 112.48 | 108.20 |
| 1 | AA | 642 | A | C5-C6-N1 | 5.35 | 120.38 | 117.70 |
| 26 | BB | 1242 | U | N3-C4-C5 | 5.35 | 117.81 | 114.60 |
| 26 | BB | 1364 | G | C6-N1-C2 | 5.35 | 128.31 | 125.10 |
| 26 | BB | 1586 | A | C5-N7-C8 | 5.35 | 106.58 | 103.90 |
| 26 | BB | 1639 | C | C4-C5-C6 | -5.35 | 114.72 | 117.40 |
| 26 | BB | 2328 | A | C4-C5-C6 | 5.35 | 119.68 | 117.00 |
| 38 | BN | 64 | PHE | CB-CG-CD1 | 5.35 | 124.55 | 120.80 |
| 1 | AA | 15 | G | C6-C5-N7 | -5.35 | 127.19 | 130.40 |
| 1 | AA | 413 | G | N3-C4-N9 | -5.35 | 122.79 | 126.00 |
| 1 | AA | 491 | G | C5'-C4'-O4' | 5.35 | 115.52 | 109.10 |
| 1 | AA | 722 | G | O4'-C4'-C3' | -5.35 | 98.65 | 104.00 |
| 1 | AA | 1379 | G | C8-N9-C1' | 5.35 | 133.96 | 127.00 |
| 25 | BA | 46 | A | N9-C4-C5 | -5.35 | 103.66 | 105.80 |
| 26 | BB | 43 | G | C6-C5-N7 | -5.35 | 127.19 | 130.40 |
| 26 | BB | 242 | G | C4-C5-C6 | -5.35 | 115.59 | 118.80 |
| 26 | BB | 334 | C | C4-C5-C6 | -5.35 | 114.72 | 117.40 |
| 26 | BB | 555 | G | C5-C6-N1 | 5.35 | 114.18 | 111.50 |
| 26 | BB | 673 | C | N3-C4-C5 | -5.35 | 119.76 | 121.90 |
| 26 | BB | 776 | G | N1-C2-N3 | -5.35 | 120.69 | 123.90 |
| 26 | BB | 1016 | G | N3-C4-C5 | -5.35 | 125.92 | 128.60 |
| 26 | BB | 1022 | G | C4'-C3'-C2' | -5.35 | 97.25 | 102.60 |
| 26 | BB | 1280 | G | P-O3'-C3' | 5.35 | 126.12 | 119.70 |
| 26 | BB | 1743 | G | C2-N3-C4 | 5.35 | 114.58 | 111.90 |
| 26 | BB | 1759 | A | OP1-P-O3' | 5.35 | 116.98 | 105.20 |
| 26 | BB | 1804 | C | O4'-C1'-N1 | 5.35 | 112.48 | 108.20 |
| 26 | BB | 1938 | A | C8-N9-C4 | -5.35 | 103.66 | 105.80 |
| 32 | BH | 51 | PHE | CZ-CE2-CD2 | 5.35 | 126.52 | 120.10 |
| 48 | BX | 92 | VAL | CA-CB-CG1 | 5.35 | 118.93 | 110.90 |
| 56 | B5 | 9 | VAL | CA-CB-CG1 | 5.35 | 118.93 | 110.90 |
| 1 | AA | 2 | A | P-O3'-C3' | 5.35 | 126.12 | 119.70 |
| 1 | AA | 1290 | G | O4'-C1'-N9 | 5.35 | 112.48 | 108.20 |
| 1 | AA | 1293 | C | C3'-C2'-C1' | -5.35 | 97.22 | 101.50 |
| 1 | AA | 1368 | A | C4-C5-N7 | 5.35 | 113.38 | 110.70 |
| 1 | AA | 1537 | U | N3-C4-C5 | 5.35 | 117.81 | 114.60 |
| 3 | AC | 21 | U | N1-C2-O2 | 5.35 | 126.55 | 122.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 480 | A | N1-C2-N3 | 5.35 | 131.97 | 129.30 |
| 26 | BB | 654 | A | C5'-C4'-C3' | 5.35 | 124.56 | 116.00 |
| 26 | BB | 725 | G | C4-C5-C6 | 5.35 | 122.01 | 118.80 |
| 26 | BB | 776 | G | C5-N7-C8 | -5.35 | 101.62 | 104.30 |
| 26 | BB | 843 | G | C6-C5-N7 | -5.35 | 127.19 | 130.40 |
| 1 | AA | 593 | U | C1'-O4'-C4' | 5.35 | 114.18 | 109.90 |
| 1 | AA | 669 | G | N1-C2-N2 | 5.35 | 121.02 | 116.20 |
| 1 | AA | 840 | C | C2'-C3'-O3' | 5.35 | 122.26 | 113.70 |
| 1 | AA | 889 | A | C6-N1-C2 | -5.35 | 115.39 | 118.60 |
| 1 | AA | 1052 | U | C4-C5-C6 | 5.35 | 122.91 | 119.70 |
| 1 | AA | 1206 | G | N1-C2-N2 | -5.35 | 111.39 | 116.20 |
| 1 | AA | 1466 | C | C2-N3-C4 | 5.35 | 122.58 | 119.90 |
| 26 | BB | 565 | C | C1'-O4'-C4' | -5.35 | 105.62 | 109.90 |
| 26 | BB | 1232 | G | N9-C1'-C2' | -5.35 | 106.12 | 112.00 |
| 26 | BB | 1842 | G | N3-C2-N2 | 5.35 | 123.64 | 119.90 |
| 26 | BB | 1955 | U | N3-C4-C5 | 5.35 | 117.81 | 114.60 |
| 26 | BB | 2154 | A | C1'-O4'-C4' | -5.35 | 105.62 | 109.90 |
| 26 | BB | 2428 | G | P-O3'-C3' | 5.35 | 126.12 | 119.70 |
| 26 | BB | 2589 | A | N9-C4-C5 | 5.35 | 107.94 | 105.80 |
| 1 | AA | 86 | G | C4'-C3'-C2' | 5.35 | 107.95 | 102.60 |
| 1 | AA | 895 | G | N9-C1'-C2' | -5.35 | 106.12 | 112.00 |
| 1 | AA | 1000 | A | N7-C8-N9 | 5.35 | 116.47 | 113.80 |
| 26 | BB | 8 | C | N3-C2-O2 | -5.35 | 118.16 | 121.90 |
| 26 | BB | 78 | U | C5-C6-N1 | -5.35 | 120.03 | 122.70 |
| 26 | BB | 83 | A | C4-C5-N7 | 5.35 | 113.37 | 110.70 |
| 26 | BB | 233 | A | N7-C8-N9 | 5.35 | 116.47 | 113.80 |
| 26 | BB | 278 | A | C5-C6-N6 | 5.35 | 127.98 | 123.70 |
| 26 | BB | 500 | G | C6-C5-N7 | -5.35 | 127.19 | 130.40 |
| 26 | BB | 576 | U | N3-C4-C5 | -5.35 | 111.39 | 114.60 |
| 26 | BB | 862 | G | C2'-C3'-O3' | 5.35 | 122.26 | 113.70 |
| 26 | BB | 1132 | U | N3-C4-O4 | 5.35 | 123.14 | 119.40 |
| 26 | BB | 1457 | U | C5'-C4'-O4' | 5.35 | 115.52 | 109.10 |
| 26 | BB | 1467 | U | O4'-C1'-N1 | 5.35 | 112.48 | 108.20 |
| 26 | BB | 1811 | G | O4'-C1'-N9 | 5.35 | 112.48 | 108.20 |
| 26 | BB | 2018 | G | C5'-C4'-O4' | 5.35 | 115.52 | 109.10 |
| 26 | BB | 2049 | G | C4'-C3'-C2' | -5.35 | 97.25 | 102.60 |
| 26 | BB | 2058 | A | N1-C6-N6 | -5.35 | 115.39 | 118.60 |
| 26 | BB | 2067 | G | N7-C8-N9 | 5.35 | 115.77 | 113.10 |
| 26 | BB | 2337 | G | C4'-C3'-C2' | -5.35 | 97.25 | 102.60 |
| 1 | AA | 351 | G | C5-N7-C8 | -5.35 | 101.63 | 104.30 |
| 1 | AA | 442 | G | P-O3'-C3' | 5.35 | 126.11 | 119.70 |
| 1 | AA | 528 | C | C2'-C3'-O3' | 5.35 | 122.25 | 113.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 524 | G | P-O3'-C3' | 5.35 | 126.11 | 119.70 |
| 26 | BB | 654 | A | N1-C6-N6 | -5.35 | 115.39 | 118.60 |
| 26 | BB | 1544 | A | N3-C4-C5 | -5.35 | 123.06 | 126.80 |
| 26 | BB | 1946 | U | N3-C4-O4 | 5.35 | 123.14 | 119.40 |
| 26 | BB | 1956 | U | C4'-C3'-C2' | -5.35 | 97.25 | 102.60 |
| 26 | BB | 2065 | C | C3'-C2'-C1' | -5.35 | 97.22 | 101.50 |
| 26 | BB | 2846 | G | N3-C2-N2 | 5.35 | 123.64 | 119.90 |
| 1 | AA | 32 | A | O3'-P-O5' | 5.34 | 114.15 | 104.00 |
| 1 | AA | 152 | A | C1'-O4'-C4' | -5.34 | 105.62 | 109.90 |
| 1 | AA | 176 | C | N1-C2-O2 | -5.34 | 115.69 | 118.90 |
| 1 | AA | 493 | A | C5'-C4'-O4' | 5.34 | 115.51 | 109.10 |
| 1 | AA | 512 | U | C4-C5-C6 | 5.34 | 122.91 | 119.70 |
| 1 | AA | 642 | A | C4-C5-N7 | 5.34 | 113.37 | 110.70 |
| 1 | AA | 647 | C | N3-C4-C5 | -5.34 | 119.76 | 121.90 |
| 1 | AA | 1466 | C | C6-N1-C1' | -5.34 | 114.39 | 120.80 |
| 8 | AH | 44 | ARG | NE-CZ-NH2 | -5.34 | 117.63 | 120.30 |
| 26 | BB | 59 | U | P-O3'-C3' | 5.34 | 126.11 | 119.70 |
| 26 | BB | 136 | G | N3-C4-C5 | -5.34 | 125.93 | 128.60 |
| 26 | BB | 325 | G | C5'-C4'-C3' | -5.34 | 107.45 | 116.00 |
| 26 | BB | 549 | G | N3-C2-N2 | -5.34 | 116.16 | 119.90 |
| 26 | BB | 971 | G | C5-C6-N1 | 5.34 | 114.17 | 111.50 |
| 26 | BB | 1084 | A | C4-C5-C6 | 5.34 | 119.67 | 117.00 |
| 26 | BB | 1120 | G | C4-C5-N7 | -5.34 | 108.66 | 110.80 |
| 26 | BB | 1139 | G | C6-C5-N7 | -5.34 | 127.19 | 130.40 |
| 26 | BB | 1291 | C | N3-C2-O2 | -5.34 | 118.16 | 121.90 |
| 26 | BB | 1834 | U | C2-N3-C4 | -5.34 | 123.79 | 127.00 |
| 26 | BB | 1919 | A | C4-C5-N7 | -5.34 | 108.03 | 110.70 |
| 26 | BB | 1977 | A | N7-C8-N9 | 5.34 | 116.47 | 113.80 |
| 26 | BB | 2007 | U | C5-C6-N1 | -5.34 | 120.03 | 122.70 |
| 26 | BB | 2325 | G | N9-C4-C5 | 5.34 | 107.54 | 105.40 |
| 26 | BB | 2721 | A | N3-C4-C5 | -5.34 | 123.06 | 126.80 |
| 41 | BQ | 111 | ARG | NE-CZ-NH2 | -5.34 | 117.63 | 120.30 |
| 1 | AA | 99 | C | C4'-C3'-C2' | -5.34 | 97.26 | 102.60 |
| 1 | AA | 489 | C | C2-N3-C4 | 5.34 | 122.57 | 119.90 |
| 1 | AA | 1136 | C | N1-C2-O2 | 5.34 | 122.11 | 118.90 |
| 1 | AA | 1138 | G | N1-C6-O6 | 5.34 | 123.11 | 119.90 |
| 1 | AA | 1239 | A | C4'-C3'-C2' | -5.34 | 97.26 | 102.60 |
| 26 | BB | 1637 | A | N1-C2-N3 | 5.34 | 131.97 | 129.30 |
| 26 | BB | 2098 | U | N3-C4-O4 | -5.34 | 115.66 | 119.40 |
| 26 | BB | 2121 | G | C6-C5-N7 | -5.34 | 127.19 | 130.40 |
| 26 | BB | 2211 | A | C2-N3-C4 | 5.34 | 113.27 | 110.60 |
| 26 | BB | 2327 | A | N1-C2-N3 | -5.34 | 126.63 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 46 | BV | 12 | ARG | NE-CZ-NH2 | -5.34 | 117.63 | 120.30 |
| 1 | AA | 447 | G | O4'-C1'-N9 | 5.34 | 112.47 | 108.20 |
| 1 | AA | 1220 | G | C8-N9-C1' | 5.34 | 133.94 | 127.00 |
| 1 | AA | 1510 | C | C4'-C3'-C2' | -5.34 | 97.26 | 102.60 |
| 25 | BA | 25 | U | C2-N1-C1' | 5.34 | 124.11 | 117.70 |
| 25 | BA | 88 | C | N3-C2-O2 | -5.34 | 118.16 | 121.90 |
| 26 | BB | 257 | C | N1-C2-O2 | 5.34 | 122.11 | 118.90 |
| 26 | BB | 693 | A | C4-C5-C6 | -5.34 | 114.33 | 117.00 |
| 26 | BB | 869 | G | C5-N7-C8 | -5.34 | 101.63 | 104.30 |
| 26 | BB | 946 | C | C2-N3-C4 | -5.34 | 117.23 | 119.90 |
| 26 | BB | 1060 | U | N1-C2-O2 | -5.34 | 119.06 | 122.80 |
| 26 | BB | 1288 | G | N9-C4-C5 | 5.34 | 107.54 | 105.40 |
| 26 | BB | 2472 | G | N1-C6-O6 | 5.34 | 123.11 | 119.90 |
| 26 | BB | 2541 | A | C6-N1-C2 | 5.34 | 121.81 | 118.60 |
| 26 | BB | 2562 | U | N1-C2-O2 | -5.34 | 119.06 | 122.80 |
| 26 | BB | 2665 | A | C6-N1-C2 | -5.34 | 115.40 | 118.60 |
| 26 | BB | 2694 | G | N9-C4-C5 | 5.34 | 107.54 | 105.40 |
| 26 | BB | 2729 | G | N9-C1'-C2' | -5.34 | 106.12 | 112.00 |
| 26 | BB | 2741 | A | C8-N9-C4 | -5.34 | 103.66 | 105.80 |
| 26 | BB | 2885 | G | N3-C4-C5 | -5.34 | 125.93 | 128.60 |
| 1 | AA | 236 | A | O4'-C1'-N9 | 5.34 | 112.47 | 108.20 |
| 1 | AA | 405 | U | N3-C2-O2 | -5.34 | 118.46 | 122.20 |
| 1 | AA | 491 | G | C1'-O4'-C4' | -5.34 | 105.63 | 109.90 |
| 1 | AA | 760 | G | O5'-C5'-C4' | 5.34 | 121.84 | 111.70 |
| 1 | AA | 813 | U | N1-C2-N3 | 5.34 | 118.10 | 114.90 |
| 1 | AA | 1013 | G | O4'-C4'-C3' | 5.34 | 110.37 | 106.10 |
| 1 | AA | 1156 | G | C5'-C4'-O4' | 5.34 | 115.51 | 109.10 |
| 1 | AA | 1395 | C | N3-C2-O2 | -5.34 | 118.16 | 121.90 |
| 25 | BA | 73 | A | N9-C1'-C2' | -5.34 | 106.13 | 112.00 |
| 25 | BA | 76 | G | C5-N7-C8 | -5.34 | 101.63 | 104.30 |
| 26 | BB | 342 | A | C3'-C2'-C1' | -5.34 | 97.23 | 101.50 |
| 26 | BB | 713 | G | N9-C4-C5 | 5.34 | 107.54 | 105.40 |
| 26 | BB | 1633 | G | O4'-C4'-C3' | 5.34 | 110.37 | 106.10 |
| 26 | BB | 1677 | A | N3-C4-C5 | -5.34 | 123.06 | 126.80 |
| 26 | BB | 1691 | C | O4'-C1'-N1 | 5.34 | 112.47 | 108.20 |
| 26 | BB | 1867 | G | C4-C5-C6 | 5.34 | 122.00 | 118.80 |
| 26 | BB | 2518 | A | O4'-C4'-C3' | 5.34 | 110.37 | 106.10 |
| 1 | AA | 600 | A | C8-N9-C4 | -5.34 | 103.67 | 105.80 |
| 26 | BB | 28 | A | C8-N9-C4 | -5.34 | 103.67 | 105.80 |
| 26 | BB | 385 | C | O4'-C4'-C3' | 5.34 | 110.37 | 106.10 |
| 26 | BB | 535 | G | C2-N3-C4 | 5.34 | 114.57 | 111.90 |
| 26 | BB | 699 | A | N1-C2-N3 | -5.34 | 126.63 | 129.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1640 | A | O4'-C1'-N9 | 5.34 | 112.47 | 108.20 |
| 26 | BB | 1724 | G | C5-C6-N1 | -5.34 | 108.83 | 111.50 |
| 26 | BB | 1760 | C | N1-C2-N3 | -5.34 | 115.46 | 119.20 |
| 26 | BB | 1807 | G | N1-C2-N2 | 5.34 | 121.00 | 116.20 |
| 1 | AA | 225 | C | C6-N1-C2 | -5.34 | 118.17 | 120.30 |
| 1 | AA | 467 | U | O4'-C1'-N1 | 5.34 | 112.47 | 108.20 |
| 1 | AA | 507 | C | N3-C4-C5 | 5.34 | 124.03 | 121.90 |
| 1 | AA | 522 | C | N3-C4-C5 | -5.34 | 119.77 | 121.90 |
| 1 | AA | 821 | G | C5'-C4'-O4' | 5.34 | 115.50 | 109.10 |
| 1 | AA | 977 | A | C4-C5-N7 | -5.34 | 108.03 | 110.70 |
| 2 | AB | 22 | G | P-O3'-C3' | 5.34 | 126.10 | 119.70 |
| 26 | BB | 44 | A | C5-N7-C8 | -5.34 | 101.23 | 103.90 |
| 26 | BB | 574 | A | C5-C6-N1 | 5.34 | 120.37 | 117.70 |
| 26 | BB | 741 | U | C5'-C4'-O4' | 5.34 | 115.50 | 109.10 |
| 26 | BB | 820 | A | P-O3'-C3' | 5.34 | 126.10 | 119.70 |
| 26 | BB | 911 | A | C2-N3-C4 | -5.34 | 107.93 | 110.60 |
| 26 | BB | 956 | G | C6-N1-C2 | -5.34 | 121.90 | 125.10 |
| 26 | BB | 1314 | C | P-O3'-C3' | 5.34 | 126.10 | 119.70 |
| 26 | BB | 2040 | G | N7-C8-N9 | 5.34 | 115.77 | 113.10 |
| 26 | BB | 2172 | U | O4'-C4'-C3' | 5.34 | 110.37 | 106.10 |
| 26 | BB | 2443 | C | C5'-C4'-C3' | -5.34 | 107.46 | 116.00 |
| 26 | BB | 2443 | C | N3-C4-N4 | 5.34 | 121.73 | 118.00 |
| 26 | BB | 2654 | A | C8-N9-C4 | -5.34 | 103.67 | 105.80 |
| 26 | BB | 2725 | A | C5'-C4'-C3' | -5.34 | 107.46 | 116.00 |
| 26 | BB | 2770 | G | N1-C2-N3 | 5.34 | 127.10 | 123.90 |
| 53 | B2 | 49 | ARG | NH1-CZ-NH2 | -5.34 | 113.53 | 119.40 |
| 1 | AA | 36 | C | O4'-C1'-C2' | -5.33 | 100.47 | 105.80 |
| 1 | AA | 199 | A | C5'-C4'-O4' | 5.33 | 115.50 | 109.10 |
| 1 | AA | 557 | G | C5-C6-N1 | -5.33 | 108.83 | 111.50 |
| 1 | AA | 632 | U | O3'-P-O5' | -5.33 | 93.86 | 104.00 |
| 1 | AA | 1137 | C | C5-C6-N1 | 5.33 | 123.67 | 121.00 |
| 1 | AA | 1254 | A | N9-C4-C5 | 5.33 | 107.93 | 105.80 |
| 1 | AA | 1468 | A | N9-C1'-C2' | -5.33 | 106.13 | 112.00 |
| 25 | BA | 120 | U | N1-C2-N3 | 5.33 | 118.10 | 114.90 |
| 26 | BB | 134 | G | C8-N9-C4 | -5.33 | 104.27 | 106.40 |
| 26 | BB | 648 | G | C4-C5-C6 | 5.33 | 122.00 | 118.80 |
| 26 | BB | 1493 | C | C5-C4-N4 | 5.33 | 123.93 | 120.20 |
| 26 | BB | 1494 | A | O4'-C4'-C3' | -5.33 | 98.67 | 104.00 |
| 26 | BB | 1771 | C | C1'-O4'-C4' | 5.33 | 114.17 | 109.90 |
| 26 | BB | 1862 | G | O4'-C4'-C3' | -5.33 | 98.67 | 104.00 |
| 26 | BB | 2156 | G | N1-C6-O6 | 5.33 | 123.10 | 119.90 |
| 1 | AA | 314 | C | N3-C4-C5 | -5.33 | 119.77 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 391 | G | C4'-C3'-C2' | -5.33 | 97.27 | 102.60 |
| 25 | BA | 89 | U | C5'-C4'-C3' | -5.33 | 107.47 | 116.00 |
| 26 | BB | 227 | A | N9-C1'-C2' | 5.33 | 120.93 | 114.00 |
| 26 | BB | 435 | C | P-O5'-C5' | 5.33 | 129.44 | 120.90 |
| 26 | BB | 621 | A | C6-C5-N7 | 5.33 | 136.03 | 132.30 |
| 26 | BB | 663 | G | N9-C4-C5 | 5.33 | 107.53 | 105.40 |
| 26 | BB | 866 | A | N7-C8-N9 | -5.33 | 111.13 | 113.80 |
| 26 | BB | 1030 | C | P-O3'-C3' | 5.33 | 126.10 | 119.70 |
| 26 | BB | 1107 | G | C4'-C3'-C2' | -5.33 | 97.27 | 102.60 |
| 26 | BB | 1255 | U | C2-N3-C4 | -5.33 | 123.80 | 127.00 |
| 26 | BB | 1349 | C | C4'-C3'-C2' | -5.33 | 97.27 | 102.60 |
| 26 | BB | 1531 | C | C5-C6-N1 | -5.33 | 118.33 | 121.00 |
| 26 | BB | 1536 | C | C1'-O4'-C4' | -5.33 | 105.63 | 109.90 |
| 26 | BB | 1656 | C | O4'-C4'-C3' | -5.33 | 98.67 | 104.00 |
| 26 | BB | 1681 | G | C5'-C4'-C3' | 5.33 | 124.53 | 116.00 |
| 26 | BB | 2053 | G | C5-C6-N1 | 5.33 | 114.17 | 111.50 |
| 26 | BB | 2264 | C | N3-C4-C5 | 5.33 | 124.03 | 121.90 |
| 26 | BB | 2554 | U | O4'-C1'-N1 | 5.33 | 112.47 | 108.20 |
| 26 | BB | 2723 | C | C6-N1-C1' | 5.33 | 127.20 | 120.80 |
| 1 | AA | 18 | C | N1-C1'-C2' | -5.33 | 106.14 | 112.00 |
| 1 | AA | 51 | A | C2'-C3'-O3' | 5.33 | 122.23 | 113.70 |
| 1 | AA | 365 | U | C2-N3-C4 | -5.33 | 123.80 | 127.00 |
| 1 | AA | 459 | A | C5-C6-N1 | 5.33 | 120.37 | 117.70 |
| 1 | AA | 476 | U | O5'-C5'-C4' | -5.33 | 101.57 | 111.70 |
| 1 | AA | 710 | G | C4-C5-N7 | -5.33 | 108.67 | 110.80 |
| 4 | AD | 46 | G | P-O5'-C5' | 5.33 | 129.43 | 120.90 |
| 26 | BB | 15 | G | C8-N9-C4 | -5.33 | 104.27 | 106.40 |
| 26 | BB | 425 | G | C4'-C3'-C2' | -5.33 | 97.27 | 102.60 |
| 26 | BB | 1025 | G | C5-C6-O6 | -5.33 | 125.40 | 128.60 |
| 26 | BB | 1679 | A | C3'-C2'-C1' | 5.33 | 105.77 | 101.50 |
| 26 | BB | 1977 | A | C8-N9-C4 | -5.33 | 103.67 | 105.80 |
| 26 | BB | 2141 | G | C4-C5-C6 | 5.33 | 122.00 | 118.80 |
| 26 | BB | 2389 | G | C4-N9-C1' | -5.33 | 119.57 | 126.50 |
| 26 | BB | 2567 | G | N3-C4-C5 | 5.33 | 131.27 | 128.60 |
| 26 | BB | 2610 | C | N3-C4-C5 | 5.33 | 124.03 | 121.90 |
| 26 | BB | 2786 | U | N3-C2-O2 | -5.33 | 118.47 | 122.20 |
| 1 | AA | 372 | C | C5-C4-N4 | 5.33 | 123.93 | 120.20 |
| 1 | AA | 955 | U | C5'-C4'-C3' | 5.33 | 124.53 | 116.00 |
| 6 | AF | 21 | TRP | CZ3-CH2-CZ2 | -5.33 | 115.20 | 121.60 |
| 26 | BB | 336 | C | C6-N1-C1' | 5.33 | 127.20 | 120.80 |
| 26 | BB | 1186 | G | O4'-C1'-N9 | 5.33 | 112.46 | 108.20 |
| 26 | BB | 1832 | C | N3-C2-O2 | -5.33 | 118.17 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2267 | A | C6-C5-N7 | 5.33 | 136.03 | 132.30 |
| 1 | AA | 213 | G | C8-N9-C4 | -5.33 | 104.27 | 106.40 |
| 1 | AA | 414 | A | C5-C6-N1 | 5.33 | 120.36 | 117.70 |
| 1 | AA | 548 | G | P-O5'-C5' | 5.33 | 129.43 | 120.90 |
| 1 | AA | 593 | U | C3'-C2'-C1' | 5.33 | 105.76 | 101.50 |
| 1 | AA | 613 | C | C2-N3-C4 | 5.33 | 122.56 | 119.90 |
| 1 | AA | 824 | G | C5-C6-O6 | -5.33 | 125.40 | 128.60 |
| 1 | AA | 1128 | C | N3-C4-N4 | 5.33 | 121.73 | 118.00 |
| 26 | BB | 353 | C | N1-C2-O2 | 5.33 | 122.10 | 118.90 |
| 26 | BB | 442 | G | N3-C4-N9 | 5.33 | 129.20 | 126.00 |
| 26 | BB | 754 | U | C5-C6-N1 | -5.33 | 120.04 | 122.70 |
| 26 | BB | 978 | G | C2-N3-C4 | 5.33 | 114.56 | 111.90 |
| 26 | BB | 1076 | C | C4'-C3'-O3' | 5.33 | 123.66 | 113.00 |
| 26 | BB | 1730 | C | N3-C4-C5 | -5.33 | 119.77 | 121.90 |
| 26 | BB | 2873 | A | C4-C5-N7 | -5.33 | 108.04 | 110.70 |
| 1 | AA | 17 | U | C5-C4-O4 | 5.33 | 129.10 | 125.90 |
| 1 | AA | 1209 | C | P-O3'-C3' | 5.33 | 126.09 | 119.70 |
| 26 | BB | 112 | U | O4'-C1'-C2' | 5.33 | 112.39 | 107.60 |
| 26 | BB | 341 | C | C1'-O4'-C4' | 5.33 | 114.16 | 109.90 |
| 26 | BB | 524 | G | C5'-C4'-O4' | 5.33 | 115.49 | 109.10 |
| 26 | BB | 621 | A | C1'-O4'-C4' | 5.33 | 114.16 | 109.90 |
| 26 | BB | 1399 | C | O4'-C4'-C3' | 5.33 | 110.36 | 106.10 |
| 1 | AA | 4 | U | N3-C2-O2 | -5.33 | 118.47 | 122.20 |
| 1 | AA | 62 | U | C2-N3-C4 | -5.33 | 123.81 | 127.00 |
| 1 | AA | 412 | A | N9-C1'-C2' | -5.33 | 106.14 | 112.00 |
| 1 | AA | 506 | G | OP2-P-O3' | 5.33 | 116.92 | 105.20 |
| 1 | AA | 639 | G | C1'-O4'-C4' | 5.33 | 114.16 | 109.90 |
| 1 | AA | 660 | C | C5'-C4'-C3' | -5.33 | 107.48 | 116.00 |
| 1 | AA | 686 | U | C5'-C4'-C3' | -5.33 | 107.48 | 116.00 |
| 1 | AA | 780 | A | N3-C4-C5 | -5.33 | 123.07 | 126.80 |
| 1 | AA | 816 | A | N7-C8-N9 | 5.33 | 116.46 | 113.80 |
| 1 | AA | 852 | G | C4'-C3'-C2' | -5.33 | 97.28 | 102.60 |
| 1 | AA | 897 | C | C3'-C2'-C1' | -5.33 | 97.24 | 101.50 |
| 1 | AA | 1171 | A | N9-C4-C5 | 5.33 | 107.93 | 105.80 |
| 1 | AA | 1201 | A | C6-N1-C2 | -5.33 | 115.41 | 118.60 |
| 2 | AB | 5 | G | N1-C6-O6 | -5.33 | 116.70 | 119.90 |
| 20 | AT | 72 | TRP | NE1-CE2-CD2 | -5.33 | 101.97 | 107.30 |
| 26 | BB | 102 | U | N3-C2-O2 | -5.33 | 118.47 | 122.20 |
| 26 | BB | 254 | G | N3-C4-N9 | 5.33 | 129.19 | 126.00 |
| 26 | BB | 303 | G | C8-N9-C4 | -5.33 | 104.27 | 106.40 |
| 26 | BB | 314 | C | C6-N1-C2 | -5.33 | 118.17 | 120.30 |
| 26 | BB | 819 | A | C5-C6-N6 | -5.33 | 119.44 | 123.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 990 | A | N1-C2-N3 | 5.33 | 131.96 | 129.30 |
| 26 | BB | 1017 | G | C6-C5-N7 | 5.33 | 133.60 | 130.40 |
| 26 | BB | 1142 | A | C2-N3-C4 | -5.33 | 107.94 | 110.60 |
| 26 | BB | 1522 | A | C3'-C2'-C1' | 5.33 | 105.76 | 101.50 |
| 26 | BB | 1736 | U | O4'-C1'-N1 | 5.33 | 112.46 | 108.20 |
| 26 | BB | 1888 | G | C1'-O4'-C4' | -5.33 | 105.64 | 109.90 |
| 26 | BB | 2013 | A | C4-C5-N7 | -5.33 | 108.04 | 110.70 |
| 26 | BB | 2179 | C | N3-C4-C5 | -5.33 | 119.77 | 121.90 |
| 26 | BB | 2226 | C | N3-C4-N4 | -5.33 | 114.27 | 118.00 |
| 26 | BB | 2289 | G | O4'-C4'-C3' | 5.33 | 110.36 | 106.10 |
| 26 | BB | 2296 | U | N1-C2-O2 | 5.33 | 126.53 | 122.80 |
| 26 | BB | 2620 | C | C5-C6-N1 | -5.33 | 118.34 | 121.00 |
| 26 | BB | 2673 | G | C5'-C4'-C3' | -5.33 | 107.48 | 116.00 |
| 44 | BT | 11 | GLN | CB-CG-CD | 5.33 | 125.44 | 111.60 |
| 1 | AA | 389 | A | N1-C2-N3 | -5.32 | 126.64 | 129.30 |
| 1 | AA | 661 | G | C5-C6-N1 | 5.32 | 114.16 | 111.50 |
| 1 | AA | 1024 | G | O4'-C1'-N9 | -5.32 | 103.94 | 108.20 |
| 1 | AA | 1385 | G | C4-C5-N7 | -5.32 | 108.67 | 110.80 |
| 1 | AA | 1482 | G | N1-C2-N3 | 5.32 | 127.09 | 123.90 |
| 25 | BA | 52 | A | C3'-C2'-C1' | -5.32 | 97.24 | 101.50 |
| 26 | BB | 882 | G | C5-N7-C8 | -5.32 | 101.64 | 104.30 |
| 26 | BB | 971 | G | C5'-C4'-O4' | 5.32 | 115.49 | 109.10 |
| 26 | BB | 1420 | A | N1-C2-N3 | 5.32 | 131.96 | 129.30 |
| 26 | BB | 2287 | A | C3'-C2'-C1' | 5.32 | 105.76 | 101.50 |
| 26 | BB | 2661 | G | C5-C6-N1 | 5.32 | 114.16 | 111.50 |
| 26 | BB | 2808 | G | C6-C5-N7 | -5.32 | 127.21 | 130.40 |
| 26 | BB | 2861 | U | C5'-C4'-O4' | 5.32 | 115.49 | 109.10 |
| 26 | BB | 2868 | A | C6-N1-C2 | 5.32 | 121.79 | 118.60 |
| 1 | AA | 540 | G | C5-C6-O6 | -5.32 | 125.41 | 128.60 |
| 1 | AA | 1248 | A | C6-C5-N7 | 5.32 | 136.03 | 132.30 |
| 26 | BB | 1425 | G | N3-C2-N2 | -5.32 | 116.17 | 119.90 |
| 26 | BB | 1881 | C | C3'-C2'-C1' | 5.32 | 105.76 | 101.50 |
| 26 | BB | 2047 | C | N1-C2-O2 | 5.32 | 122.09 | 118.90 |
| 26 | BB | 2074 | U | C5-C6-N1 | -5.32 | 120.04 | 122.70 |
| 26 | BB | 2595 | G | N1-C2-N2 | 5.32 | 120.99 | 116.20 |
| 26 | BB | 2840 | C | N3-C4-C5 | 5.32 | 124.03 | 121.90 |
| 1 | AA | 185 | U | N1-C1'-C2' | -5.32 | 106.15 | 112.00 |
| 1 | AA | 1378 | C | C4-C5-C6 | -5.32 | 114.74 | 117.40 |
| 3 | AC | 23 | C | C5-C6-N1 | 5.32 | 123.66 | 121.00 |
| 25 | BA | 83 | G | C1'-O4'-C4' | 5.32 | 114.16 | 109.90 |
| 26 | BB | 628 | G | N1-C2-N2 | -5.32 | 111.41 | 116.20 |
| 26 | BB | 651 | G | C8-N9-C4 | -5.32 | 104.27 | 106.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 844 | A | N1-C2-N3 | -5.32 | 126.64 | 129.30 |
| 26 | BB | 1229 | C | N3-C2-O2 | -5.32 | 118.17 | 121.90 |
| 26 | BB | 1298 | C | C6-N1-C2 | 5.32 | 122.43 | 120.30 |
| 26 | BB | 1356 | G | N3-C2-N2 | -5.32 | 116.17 | 119.90 |
| 26 | BB | 1670 | C | O4'-C1'-N1 | 5.32 | 112.46 | 108.20 |
| 26 | BB | 1973 | G | N1-C6-O6 | 5.32 | 123.09 | 119.90 |
| 26 | BB | 2038 | G | N1-C2-N2 | 5.32 | 120.99 | 116.20 |
| 26 | BB | 2236 | U | C2'-C3'-O3' | 5.32 | 122.21 | 113.70 |
| 26 | BB | 2819 | G | C5'-C4'-O4' | 5.32 | 115.48 | 109.10 |
| 48 | BX | 19 | ARG | CD-NE-CZ | 5.32 | 131.05 | 123.60 |
| 48 | BX | 66 | ASP | CB-CG-OD2 | -5.32 | 113.51 | 118.30 |
| 1 | AA | 543 | U | N1-C1'-C2' | -5.32 | 106.15 | 112.00 |
| 1 | AA | 713 | G | N1-C2-N3 | -5.32 | 120.71 | 123.90 |
| 1 | AA | 868 | C | C4'-C3'-C2' | -5.32 | 97.28 | 102.60 |
| 1 | AA | 1440 | U | C4'-C3'-C2' | -5.32 | 97.28 | 102.60 |
| 1 | AA | 1541 | U | O4'-C4'-C3' | -5.32 | 98.68 | 104.00 |
| 19 | AS | 66 | THR | CA-CB-CG2 | -5.32 | 104.95 | 112.40 |
| 25 | BA | 8 | C | N1-C2-O2 | 5.32 | 122.09 | 118.90 |
| 26 | BB | 266 | G | O4'-C4'-C3' | -5.32 | 98.68 | 104.00 |
| 26 | BB | 472 | A | O3'-P-O5' | -5.32 | 93.89 | 104.00 |
| 26 | BB | 905 | A | C5-C6-N6 | -5.32 | 119.44 | 123.70 |
| 26 | BB | 1877 | A | C6-N1-C2 | -5.32 | 115.41 | 118.60 |
| 26 | BB | 2080 | A | N3-C4-N9 | -5.32 | 123.14 | 127.40 |
| 26 | BB | 2868 | A | C5'-C4'-C3' | 5.32 | 124.51 | 116.00 |
| 1 | AA | 39 | G | O4'-C1'-N9 | 5.32 | 112.45 | 108.20 |
| 1 | AA | 139 | A | C6-C5-N7 | -5.32 | 128.58 | 132.30 |
| 1 | AA | 414 | A | C6-N1-C2 | 5.32 | 121.79 | 118.60 |
| 1 | AA | 473 | U | O3'-P-O5' | -5.32 | 93.90 | 104.00 |
| 1 | AA | 481 | G | C4'-C3'-C2' | 5.32 | 107.92 | 102.60 |
| 1 | AA | 520 | A | C2'-C3'-O3' | 5.32 | 122.21 | 113.70 |
| 1 | AA | 701 | U | N3-C4-C5 | 5.32 | 117.79 | 114.60 |
| 1 | AA | 1144 | G | O4'-C1'-N9 | 5.32 | 112.45 | 108.20 |
| 1 | AA | 1227 | A | N1-C6-N6 | 5.32 | 121.79 | 118.60 |
| 1 | AA | 1269 | A | C4'-C3'-C2' | -5.32 | 97.28 | 102.60 |
| 1 | AA | 1322 | C | C6-N1-C1' | -5.32 | 114.42 | 120.80 |
| 1 | AA | 1356 | G | N1-C2-N3 | 5.32 | 127.09 | 123.90 |
| 3 | AC | 24 | A | C5-C6-N1 | 5.32 | 120.36 | 117.70 |
| 26 | BB | 111 | A | C8-N9-C4 | 5.32 | 107.93 | 105.80 |
| 26 | BB | 386 | G | C5'-C4'-O4' | -5.32 | 102.72 | 109.10 |
| 26 | BB | 564 | C | O4'-C1'-C2' | 5.32 | 112.39 | 107.60 |
| 26 | BB | 701 | G | C5'-C4'-O4' | 5.32 | 115.48 | 109.10 |
| 26 | BB | 783 | A | C3'-C2'-C1' | -5.32 | 97.25 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 787 | C | C4'-C3'-C2' | -5.32 | 97.28 | 102.60 |
| 26 | BB | 965 | C | O4'-C1'-N1 | 5.32 | 112.45 | 108.20 |
| 26 | BB | 1060 | U | N3-C4-O4 | 5.32 | 123.12 | 119.40 |
| 26 | BB | 1307 | A | N1-C6-N6 | -5.32 | 115.41 | 118.60 |
| 26 | BB | 1529 | G | O4'-C1'-N9 | 5.32 | 112.45 | 108.20 |
| 26 | BB | 1566 | A | N1-C2-N3 | -5.32 | 126.64 | 129.30 |
| 26 | BB | 1625 | C | C6-N1-C2 | 5.32 | 122.43 | 120.30 |
| 26 | BB | 1723 | G | O4'-C1'-C2' | 5.32 | 112.39 | 107.60 |
| 26 | BB | 1806 | C | C1'-O4'-C4' | 5.32 | 114.15 | 109.90 |
| 26 | BB | 2135 | A | N7-C8-N9 | -5.32 | 111.14 | 113.80 |
| 26 | BB | 2146 | C | C5-C4-N4 | 5.32 | 123.92 | 120.20 |
| 26 | BB | 2421 | G | C8-N9-C4 | -5.32 | 104.27 | 106.40 |
| 26 | BB | 2533 | U | C2-N3-C4 | -5.32 | 123.81 | 127.00 |
| 32 | BH | 152 | ARG | CD-NE-CZ | 5.32 | 131.04 | 123.60 |
| 1 | AA | 330 | C | C2-N3-C4 | 5.32 | 122.56 | 119.90 |
| 1 | AA | 551 | U | C5-C6-N1 | -5.32 | 120.04 | 122.70 |
| 1 | AA | 903 | G | O4'-C1'-N9 | 5.32 | 112.45 | 108.20 |
| 1 | AA | 1046 | A | N3-C4-C5 | -5.32 | 123.08 | 126.80 |
| 1 | AA | 1380 | U | N1-C2-N3 | 5.32 | 118.09 | 114.90 |
| 1 | AA | 1488 | G | N9-C1'-C2' | -5.32 | 106.15 | 112.00 |
| 26 | BB | 369 | U | C5-C4-O4 | 5.32 | 129.09 | 125.90 |
| 26 | BB | 538 | A | C1'-O4'-C4' | -5.32 | 105.65 | 109.90 |
| 26 | BB | 705 | A | N9-C4-C5 | 5.32 | 107.93 | 105.80 |
| 26 | BB | 890 | C | N3-C4-C5 | -5.32 | 119.77 | 121.90 |
| 26 | BB | 894 | U | P-O3'-C3' | 5.32 | 126.08 | 119.70 |
| 26 | BB | 1052 | C | C5-C4-N4 | 5.32 | 123.92 | 120.20 |
| 26 | BB | 1565 | C | C5-C6-N1 | 5.32 | 123.66 | 121.00 |
| 26 | BB | 1870 | C | C5-C6-N1 | 5.32 | 123.66 | 121.00 |
| 26 | BB | 1899 | A | P-O3'-C3' | 5.32 | 126.08 | 119.70 |
| 26 | BB | 2145 | C | C1'-O4'-C4' | 5.32 | 114.15 | 109.90 |
| 26 | BB | 2486 | C | N3-C4-N4 | 5.32 | 121.72 | 118.00 |
| 26 | BB | 2607 | G | O4'-C1'-N9 | 5.32 | 112.45 | 108.20 |
| 26 | BB | 2876 | G | O5'-P-OP2 | -5.32 | 100.92 | 105.70 |
| 26 | BB | 2890 | G | C6-C5-N7 | -5.32 | 127.21 | 130.40 |
| 1 | AA | 326 | G | C5-C6-N1 | 5.31 | 114.16 | 111.50 |
| 1 | AA | 852 | G | C3'-C2'-C1' | 5.31 | 105.75 | 101.50 |
| 1 | AA | 888 | G | P-O3'-C3' | 5.31 | 126.08 | 119.70 |
| 1 | AA | 1231 | G | C6-C5-N7 | 5.31 | 133.59 | 130.40 |
| 1 | AA | 1264 | U | C4'-C3'-C2' | -5.31 | 97.29 | 102.60 |
| 26 | BB | 233 | A | C5-N7-C8 | -5.31 | 101.24 | 103.90 |
| 26 | BB | 563 | A | C5-C6-N6 | 5.31 | 127.95 | 123.70 |
| 26 | BB | 772 | C | C5'-C4'-O4' | 5.31 | 115.48 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1491 | G | C6-C5-N7 | -5.31 | 127.21 | 130.40 |
| 26 | BB | 2050 | C | O4'-C1'-C2' | -5.31 | 100.49 | 105.80 |
| 26 | BB | 2140 | G | O4'-C4'-C3' | 5.31 | 110.35 | 106.10 |
| 26 | BB | 2576 | G | C4-C5-C6 | 5.31 | 121.99 | 118.80 |
| 1 | AA | 265 | G | C4-C5-N7 | 5.31 | 112.92 | 110.80 |
| 1 | AA | 735 | C | N1-C2-N3 | 5.31 | 122.92 | 119.20 |
| 1 | AA | 965 | U | C4'-C3'-C2' | -5.31 | 97.29 | 102.60 |
| 1 | AA | 1362 | A | C6-N1-C2 | -5.31 | 115.41 | 118.60 |
| 1 | AA | 1448 | C | C5'-C4'-C3' | -5.31 | 107.50 | 116.00 |
| 1 | AA | 1483 | A | C5-C6-N6 | -5.31 | 119.45 | 123.70 |
| 2 | AB | 2 | G | N7-C8-N9 | 5.31 | 115.76 | 113.10 |
| 9 | AI | 114 | ASP | CB-CG-OD1 | -5.31 | 113.52 | 118.30 |
| 15 | AO | 11 | ARG | NE-CZ-NH1 | 5.31 | 122.96 | 120.30 |
| 25 | BA | 85 | G | N3-C4-C5 | -5.31 | 125.94 | 128.60 |
| 26 | BB | 194 | G | C6-N1-C2 | -5.31 | 121.91 | 125.10 |
| 26 | BB | 495 | G | C4-C5-N7 | -5.31 | 108.67 | 110.80 |
| 26 | BB | 1473 | G | P-O3'-C3' | 5.31 | 126.08 | 119.70 |
| 26 | BB | 1613 | G | N3-C2-N2 | 5.31 | 123.62 | 119.90 |
| 26 | BB | 1828 | G | N9-C4-C5 | -5.31 | 103.28 | 105.40 |
| 26 | BB | 1866 | A | C2-N3-C4 | 5.31 | 113.26 | 110.60 |
| 26 | BB | 2339 | C | C5-C6-N1 | -5.31 | 118.34 | 121.00 |
| 28 | BD | 136 | VAL | CB-CA-C | 5.31 | 121.49 | 111.40 |
| 32 | BH | 7 | PRO | N-CA-CB | 5.31 | 109.68 | 103.30 |
| 32 | BH | 32 | LEU | CB-CG-CD2 | -5.31 | 101.97 | 111.00 |
| 1 | AA | 493 | A | N3-C4-N9 | -5.31 | 123.15 | 127.40 |
| 1 | AA | 658 | C | C1'-O4'-C4' | 5.31 | 114.15 | 109.90 |
| 1 | AA | 685 | G | C2-N3-C4 | 5.31 | 114.56 | 111.90 |
| 1 | AA | 841 | C | C2-N3-C4 | 5.31 | 122.56 | 119.90 |
| 1 | AA | 979 | C | C2'-C3'-O3' | 5.31 | 122.20 | 113.70 |
| 26 | BB | 175 | G | C6-C5-N7 | -5.31 | 127.21 | 130.40 |
| 26 | BB | 443 | A | C6-N1-C2 | 5.31 | 121.79 | 118.60 |
| 26 | BB | 1002 | G | C4'-C3'-C2' | -5.31 | 97.29 | 102.60 |
| 26 | BB | 1478 | G | N1-C2-N2 | 5.31 | 120.98 | 116.20 |
| 26 | BB | 2501 | C | C4-C5-C6 | 5.31 | 120.06 | 117.40 |
| 26 | BB | 2534 | A | N9-C1'-C2' | -5.31 | 106.16 | 112.00 |
| 1 | AA | 812 | G | N1-C2-N3 | 5.31 | 127.08 | 123.90 |
| 1 | AA | 964 | A | N7-C8-N9 | 5.31 | 116.45 | 113.80 |
| 1 | AA | 1204 | A | C6-C5-N7 | 5.31 | 136.02 | 132.30 |
| 2 | AB | 70 | C | C6-N1-C2 | -5.31 | 118.18 | 120.30 |
| 17 | AQ | 63 | CYS | CA-CB-SG | -5.31 | 104.44 | 114.00 |
| 26 | BB | 439 | A | N1-C2-N3 | 5.31 | 131.96 | 129.30 |
| 26 | BB | 717 | C | C4'-C3'-C2' | -5.31 | 97.29 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1037 | G | C4-C5-N7 | -5.31 | 108.68 | 110.80 |
| 26 | BB | 1349 | C | C4-C5-C6 | 5.31 | 120.06 | 117.40 |
| 26 | BB | 1577 | C | N1-C1'-C2' | 5.31 | 120.90 | 114.00 |
| 26 | BB | 1634 | A | O4'-C1'-C2' | 5.31 | 112.38 | 107.60 |
| 26 | BB | 1841 | U | N3-C4-O4 | -5.31 | 115.68 | 119.40 |
| 36 | BL | 15 | TRP | CA-CB-CG | 5.31 | 123.79 | 113.70 |
| 1 | AA | 116 | A | OP2-P-O3' | 5.31 | 116.88 | 105.20 |
| 1 | AA | 619 | U | C2-N3-C4 | -5.31 | 123.82 | 127.00 |
| 1 | AA | 1403 | C | O4'-C1'-N1 | 5.31 | 112.45 | 108.20 |
| 2 | AB | 23 | A | C1'-O4'-C4' | -5.31 | 105.65 | 109.90 |
| 25 | BA | 49 | C | N1-C1'-C2' | -5.31 | 106.16 | 112.00 |
| 26 | BB | 744 | U | N3-C4-O4 | 5.31 | 123.12 | 119.40 |
| 26 | BB | 786 | C | N1-C2-O2 | 5.31 | 122.08 | 118.90 |
| 26 | BB | 855 | G | C4-N9-C1' | -5.31 | 119.60 | 126.50 |
| 26 | BB | 1192 | G | N9-C4-C5 | 5.31 | 107.52 | 105.40 |
| 26 | BB | 1536 | C | C5-C4-N4 | 5.31 | 123.92 | 120.20 |
| 26 | BB | 1996 | C | C5-C4-N4 | -5.31 | 116.48 | 120.20 |
| 26 | BB | 2290 | G | O4'-C4'-C3' | 5.31 | 110.34 | 106.10 |
| 26 | BB | 2517 | C | P-O3'-C3' | 5.31 | 126.07 | 119.70 |
| 26 | BB | 2718 | G | N3-C2-N2 | 5.31 | 123.61 | 119.90 |
| 42 | BR | 52 | ARG | NE-CZ-NH1 | 5.31 | 122.95 | 120.30 |
| 1 | AA | 974 | A | O5'-P-OP2 | -5.31 | 100.92 | 105.70 |
| 1 | AA | 1042 | A | C5'-C4'-O4' | 5.31 | 115.47 | 109.10 |
| 1 | AA | 1263 | C | C5-C6-N1 | 5.31 | 123.65 | 121.00 |
| 1 | AA | 1278 | G | N1-C2-N2 | -5.31 | 111.42 | 116.20 |
| 2 | AB | 5 | G | C5-C6-O6 | 5.31 | 131.78 | 128.60 |
| 8 | AH | 149 | PRO | N-CA-CB | 5.31 | 109.67 | 103.30 |
| 26 | BB | 420 | C | C1'-O4'-C4' | 5.31 | 114.14 | 109.90 |
| 26 | BB | 691 | C | N3-C4-C5 | 5.31 | 124.02 | 121.90 |
| 26 | BB | 1224 | U | C5-C4-O4 | 5.31 | 129.08 | 125.90 |
| 26 | BB | 1420 | A | C4'-C3'-C2' | -5.31 | 97.29 | 102.60 |
| 26 | BB | 2195 | U | C3'-C2'-C1' | 5.31 | 105.74 | 101.50 |
| 26 | BB | 2388 | A | P-O5'-C5' | -5.31 | 112.41 | 120.90 |
| 26 | BB | 2636 | C | C5'-C4'-C3' | -5.31 | 107.51 | 116.00 |
| 1 | AA | 189 | A | N1-C2-N3 | -5.30 | 126.65 | 129.30 |
| 1 | AA | 193 | C | N1-C2-O2 | 5.30 | 122.08 | 118.90 |
| 1 | AA | 470 | C | C5-C6-N1 | 5.30 | 123.65 | 121.00 |
| 1 | AA | 581 | G | C2'-C3'-O3' | 5.30 | 122.19 | 113.70 |
| 1 | AA | 895 | G | C4-C5-C6 | 5.30 | 121.98 | 118.80 |
| 1 | AA | 932 | C | N3-C4-C5 | -5.30 | 119.78 | 121.90 |
| 1 | AA | 1250 | A | C5-N7-C8 | -5.30 | 101.25 | 103.90 |
| 1 | AA | 1255 | G | C5-C6-O6 | -5.30 | 125.42 | 128.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1328 | C | N1-C2-O2 | 5.30 | 122.08 | 118.90 |
| 1 | AA | 1355 | G | C4-C5-N7 | 5.30 | 112.92 | 110.80 |
| 1 | AA | 1403 | C | N3-C4-N4 | 5.30 | 121.71 | 118.00 |
| 1 | AA | 1411 | C | C3'-C2'-C1' | -5.30 | 97.26 | 101.50 |
| 1 | AA | 1425 | U | C3'-C2'-C1' | 5.30 | 105.74 | 101.50 |
| 3 | AC | 38 | G | N1-C6-O6 | -5.30 | 116.72 | 119.90 |
| 25 | BA | 67 | G | N1-C2-N3 | 5.30 | 127.08 | 123.90 |
| 26 | BB | 136 | G | O5'-C5'-C4' | 5.30 | 121.78 | 111.70 |
| 26 | BB | 571 | U | C3'-C2'-C1' | 5.30 | 105.74 | 101.50 |
| 26 | BB | 1078 | U | C2-N1-C1' | -5.30 | 111.33 | 117.70 |
| 26 | BB | 1467 | U | C4-C5-C6 | 5.30 | 122.88 | 119.70 |
| 26 | BB | 1539 | U | C4'-C3'-C2' | -5.30 | 97.30 | 102.60 |
| 26 | BB | 1588 | G | O4'-C1'-N9 | 5.30 | 112.44 | 108.20 |
| 26 | BB | 1592 | C | N3-C4-C5 | -5.30 | 119.78 | 121.90 |
| 26 | BB | 1687 | G | C4'-C3'-C2' | -5.30 | 97.30 | 102.60 |
| 26 | BB | 1957 | C | N1-C2-O2 | 5.30 | 122.08 | 118.90 |
| 26 | BB | 1978 | A | C5-C6-N6 | 5.30 | 127.94 | 123.70 |
| 26 | BB | 2763 | G | C4-C5-N7 | 5.30 | 112.92 | 110.80 |
| 36 | BL | 53 | TYR | CD1-CE1-CZ | 5.30 | 124.57 | 119.80 |
| 43 | BS | 35 | PHE | CB-CG-CD2 | 5.30 | 124.51 | 120.80 |
| 1 | AA | 113 | G | N7-C8-N9 | 5.30 | 115.75 | 113.10 |
| 1 | AA | 881 | G | N3-C4-N9 | 5.30 | 129.18 | 126.00 |
| 1 | AA | 1070 | U | C2-N3-C4 | -5.30 | 123.82 | 127.00 |
| 1 | AA | 1132 | C | C4'-C3'-C2' | -5.30 | 97.30 | 102.60 |
| 3 | AC | 51 | C | P-O3'-C3' | 5.30 | 126.06 | 119.70 |
| 6 | AF | 183 | TYR | CG-CD1-CE1 | 5.30 | 125.54 | 121.30 |
| 15 | AO | 82 | ARG | CB-CA-C | 5.30 | 121.01 | 110.40 |
| 26 | BB | 1418 | G | C5-C6-O6 | -5.30 | 125.42 | 128.60 |
| 1 | AA | 307 | C | C1'-O4'-C4' | 5.30 | 114.14 | 109.90 |
| 1 | AA | 466 | A | OP1-P-OP2 | -5.30 | 111.65 | 119.60 |
| 1 | AA | 536 | C | C5'-C4'-O4' | 5.30 | 115.46 | 109.10 |
| 1 | AA | 738 | C | N3-C4-C5 | 5.30 | 124.02 | 121.90 |
| 1 | AA | 759 | A | C5-N7-C8 | -5.30 | 101.25 | 103.90 |
| 1 | AA | 1205 | U | N1-C2-N3 | 5.30 | 118.08 | 114.90 |
| 4 | AD | 59 | A | C4-C5-N7 | -5.30 | 108.05 | 110.70 |
| 5 | AE | 152 | ASP | CB-CG-OD1 | -5.30 | 113.53 | 118.30 |
| 12 | AL | 37 | TYR | CB-CG-CD2 | 5.30 | 124.18 | 121.00 |
| 25 | BA | 89 | U | N3-C2-O2 | -5.30 | 118.49 | 122.20 |
| 26 | BB | 553 | G | C2-N3-C4 | 5.30 | 114.55 | 111.90 |
| 26 | BB | 743 | A | O5'-P-OP1 | -5.30 | 100.93 | 105.70 |
| 26 | BB | 774 | G | N3-C2-N2 | 5.30 | 123.61 | 119.90 |
| 26 | BB | 996 | A | C4-C5-C6 | -5.30 | 114.35 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1265 | A | C4'-C3'-C2' | 5.30 | 107.90 | 102.60 |
| 26 | BB | 1889 | A | N9-C4-C5 | 5.30 | 107.92 | 105.80 |
| 26 | BB | 2356 | U | N1-C1'-C2' | -5.30 | 106.17 | 112.00 |
| 1 | AA | 61 | G | C3'-C2'-C1' | -5.30 | 97.26 | 101.50 |
| 1 | AA | 900 | A | O4'-C1'-N9 | -5.30 | 103.96 | 108.20 |
| 1 | AA | 936 | C | C2-N3-C4 | 5.30 | 122.55 | 119.90 |
| 1 | AA | 1285 | A | N9-C4-C5 | -5.30 | 103.68 | 105.80 |
| 1 | AA | 1298 | U | C5-C4-O4 | -5.30 | 122.72 | 125.90 |
| 1 | AA | 1406 | U | O4'-C1'-N1 | 5.30 | 112.44 | 108.20 |
| 2 | AB | 43 | G | C2-N3-C4 | 5.30 | 114.55 | 111.90 |
| 26 | BB | 481 | G | C5-C6-N1 | 5.30 | 114.15 | 111.50 |
| 26 | BB | 644 | A | C2-N3-C4 | 5.30 | 113.25 | 110.60 |
| 26 | BB | 711 | G | N3-C2-N2 | -5.30 | 116.19 | 119.90 |
| 26 | BB | 749 | A | C4-C5-N7 | 5.30 | 113.35 | 110.70 |
| 26 | BB | 1147 | A | C5-N7-C8 | 5.30 | 106.55 | 103.90 |
| 26 | BB | 1163 | G | N3-C4-C5 | -5.30 | 125.95 | 128.60 |
| 26 | BB | 1165 | A | C5-C6-N6 | -5.30 | 119.46 | 123.70 |
| 26 | BB | 1842 | G | N7-C8-N9 | 5.30 | 115.75 | 113.10 |
| 26 | BB | 1889 | A | C5'-C4'-O4' | 5.30 | 115.46 | 109.10 |
| 26 | BB | 1912 | A | O4'-C1'-N9 | 5.30 | 112.44 | 108.20 |
| 26 | BB | 2057 | G | O4'-C1'-C2' | 5.30 | 112.37 | 107.60 |
| 26 | BB | 2422 | C | P-O3'-C3' | 5.30 | 126.06 | 119.70 |
| 26 | BB | 2479 | U | O3'-P-O5' | -5.30 | 93.93 | 104.00 |
| 1 | AA | 427 | U | OP1-P-O3' | 5.30 | 116.86 | 105.20 |
| 1 | AA | 721 | G | P-O3'-C3' | 5.30 | 126.06 | 119.70 |
| 1 | AA | 971 | G | C4-C5-N7 | -5.30 | 108.68 | 110.80 |
| 1 | AA | 1159 | U | N1-C2-O2 | -5.30 | 119.09 | 122.80 |
| 1 | AA | 1508 | A | N9-C1'-C2' | 5.30 | 120.89 | 114.00 |
| 25 | BA | 79 | G | C6-N1-C2 | -5.30 | 121.92 | 125.10 |
| 26 | BB | 551 | G | C4-C5-N7 | -5.30 | 108.68 | 110.80 |
| 26 | BB | 1623 | G | N1-C6-O6 | -5.30 | 116.72 | 119.90 |
| 26 | BB | 2879 | A | N9-C4-C5 | 5.30 | 107.92 | 105.80 |
| 1 | AA | 166 | U | C1'-O4'-C4' | -5.30 | 105.66 | 109.90 |
| 1 | AA | 548 | G | C5-N7-C8 | 5.30 | 106.95 | 104.30 |
| 1 | AA | 621 | A | C1'-O4'-C4' | 5.30 | 114.14 | 109.90 |
| 1 | AA | 732 | C | N3-C4-C5 | -5.30 | 119.78 | 121.90 |
| 1 | AA | 798 | U | N1-C2-N3 | -5.30 | 111.72 | 114.90 |
| 1 | AA | 968 | A | N9-C4-C5 | 5.30 | 107.92 | 105.80 |
| 1 | AA | 1219 | A | C2-N3-C4 | 5.30 | 113.25 | 110.60 |
| 1 | AA | 1531 | A | N3-C4-N9 | 5.30 | 131.64 | 127.40 |
| 3 | AC | 45 | G | N9-C4-C5 | 5.30 | 107.52 | 105.40 |
| 8 | AH | 150 | GLU | O-C-N | 5.30 | 131.17 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 363 | G | O4'-C1'-N9 | 5.30 | 112.44 | 108.20 |
| 26 | BB | 1020 | A | C5'-C4'-C3' | -5.30 | 107.52 | 116.00 |
| 26 | BB | 1687 | G | O4'-C4'-C3' | 5.30 | 110.34 | 106.10 |
| 26 | BB | 2086 | U | N1-C2-O2 | -5.30 | 119.09 | 122.80 |
| 26 | BB | 2333 | A | O4'-C1'-N9 | 5.30 | 112.44 | 108.20 |
| 26 | BB | 2772 | C | N3-C4-N4 | -5.30 | 114.29 | 118.00 |
| 26 | BB | 2803 | G | C5-C6-N1 | 5.30 | 114.15 | 111.50 |
| 26 | BB | 2842 | G | C4-C5-N7 | 5.30 | 112.92 | 110.80 |
| 26 | BB | 2842 | G | C6-N1-C2 | 5.30 | 128.28 | 125.10 |
| 26 | BB | 2886 | A | C4-C5-N7 | 5.30 | 113.35 | 110.70 |
| 28 | BD | 97 | ASP | CB-CA-C | 5.30 | 120.99 | 110.40 |
| 42 | BR | 50 | ARG | NE-CZ-NH1 | 5.30 | 122.95 | 120.30 |
| 1 | AA | 414 | A | C1'-O4'-C4' | -5.29 | 105.66 | 109.90 |
| 1 | AA | 930 | C | C5'-C4'-O4' | 5.29 | 115.45 | 109.10 |
| 26 | BB | 125 | A | C4-C5-C6 | 5.29 | 119.65 | 117.00 |
| 26 | BB | 162 | U | C5-C6-N1 | -5.29 | 120.05 | 122.70 |
| 26 | BB | 509 | C | O5'-P-OP2 | -5.29 | 100.94 | 105.70 |
| 26 | BB | 909 | A | P-O3'-C3' | 5.29 | 126.06 | 119.70 |
| 26 | BB | 1172 | C | N3-C4-C5 | -5.29 | 119.78 | 121.90 |
| 26 | BB | 2096 | C | C5-C4-N4 | -5.29 | 116.49 | 120.20 |
| 26 | BB | 2217 | G | C1'-O4'-C4' | 5.29 | 114.14 | 109.90 |
| 26 | BB | 2342 | C | C5'-C4'-O4' | 5.29 | 115.45 | 109.10 |
| 26 | BB | 2453 | A | N1-C6-N6 | -5.29 | 115.42 | 118.60 |
| 1 | AA | 72 | A | C6-C5-N7 | 5.29 | 136.00 | 132.30 |
| 1 | AA | 590 | U | O5'-P-OP2 | -5.29 | 100.94 | 105.70 |
| 1 | AA | 725 | G | C6-N1-C2 | -5.29 | 121.92 | 125.10 |
| 1 | AA | 1005 | A | O4'-C4'-C3' | 5.29 | 110.33 | 106.10 |
| 1 | AA | 1056 | U | C3'-C2'-C1' | 5.29 | 105.73 | 101.50 |
| 1 | AA | 1240 | U | N1-C2-O2 | 5.29 | 126.50 | 122.80 |
| 1 | AA | 1338 | G | C6-N1-C2 | -5.29 | 121.92 | 125.10 |
| 1 | AA | 1500 | A | C8-N9-C4 | 5.29 | 107.92 | 105.80 |
| 16 | AP | 41 | ASP | CB-CG-OD2 | 5.29 | 123.06 | 118.30 |
| 26 | BB | 77 | G | C6-N1-C2 | -5.29 | 121.92 | 125.10 |
| 26 | BB | 268 | C | N3-C2-O2 | -5.29 | 118.19 | 121.90 |
| 26 | BB | 531 | C | N3-C4-C5 | 5.29 | 124.02 | 121.90 |
| 26 | BB | 597 | G | O3'-P-O5' | -5.29 | 93.94 | 104.00 |
| 26 | BB | 736 | C | O4'-C1'-N1 | 5.29 | 112.44 | 108.20 |
| 26 | BB | 783 | A | C4'-C3'-C2' | 5.29 | 107.89 | 102.60 |
| 26 | BB | 898 | C | N3-C4-N4 | 5.29 | 121.71 | 118.00 |
| 26 | BB | 1101 | U | N1-C1'-C2' | -5.29 | 106.18 | 112.00 |
| 26 | BB | 1189 | A | N1-C6-N6 | -5.29 | 115.42 | 118.60 |
| 26 | BB | 1234 | U | C3'-C2'-C1' | -5.29 | 97.27 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1286 | A | C8-N9-C4 | -5.29 | 103.68 | 105.80 |
| 26 | BB | 1317 | G | C4-C5-C6 | 5.29 | 121.98 | 118.80 |
| 26 | BB | 1342 | A | C2-N3-C4 | -5.29 | 107.95 | 110.60 |
| 26 | BB | 1445 | G | C3'-C2'-C1' | 5.29 | 105.73 | 101.50 |
| 26 | BB | 1566 | A | O4'-C4'-C3' | 5.29 | 110.33 | 106.10 |
| 26 | BB | 1899 | A | O3'-P-O5' | 5.29 | 114.06 | 104.00 |
| 26 | BB | 2444 | G | C5-C6-O6 | -5.29 | 125.42 | 128.60 |
| 26 | BB | 2472 | G | N9-C4-C5 | 5.29 | 107.52 | 105.40 |
| 26 | BB | 2746 | U | C4'-C3'-C2' | -5.29 | 97.31 | 102.60 |
| 1 | AA | 177 | G | C5-C6-O6 | 5.29 | 131.77 | 128.60 |
| 1 | AA | 366 | A | C5-C6-N1 | 5.29 | 120.35 | 117.70 |
| 1 | AA | 417 | G | C4-C5-N7 | 5.29 | 112.92 | 110.80 |
| 1 | AA | 546 | A | C6-C5-N7 | 5.29 | 136.00 | 132.30 |
| 1 | AA | 597 | G | C4'-C3'-C2' | -5.29 | 97.31 | 102.60 |
| 1 | AA | 797 | C | C5-C6-N1 | -5.29 | 118.35 | 121.00 |
| 26 | BB | 139 | U | C2-N1-C1' | 5.29 | 124.05 | 117.70 |
| 26 | BB | 799 | G | C1'-O4'-C4' | 5.29 | 114.13 | 109.90 |
| 26 | BB | 1052 | C | N3-C4-N4 | -5.29 | 114.30 | 118.00 |
| 26 | BB | 1510 | G | C5'-C4'-O4' | 5.29 | 115.45 | 109.10 |
| 26 | BB | 1736 | U | N1-C2-N3 | 5.29 | 118.07 | 114.90 |
| 26 | BB | 1747 | U | C4-C5-C6 | 5.29 | 122.88 | 119.70 |
| 26 | BB | 1843 | C | C4-C5-C6 | 5.29 | 120.05 | 117.40 |
| 26 | BB | 2061 | G | C6-N1-C2 | -5.29 | 121.92 | 125.10 |
| 26 | BB | 2212 | A | C4'-C3'-C2' | -5.29 | 97.31 | 102.60 |
| 26 | BB | 2383 | G | C4'-C3'-C2' | -5.29 | 97.31 | 102.60 |
| 26 | BB | 2705 | A | C8-N9-C4 | -5.29 | 103.68 | 105.80 |
| 26 | BB | 2734 | A | C5-N7-C8 | 5.29 | 106.55 | 103.90 |
| 1 | AA | 655 | A | N9-C4-C5 | 5.29 | 107.92 | 105.80 |
| 1 | AA | 817 | C | N3-C4-C5 | -5.29 | 119.78 | 121.90 |
| 1 | AA | 1360 | A | N3-C4-C5 | -5.29 | 123.10 | 126.80 |
| 25 | BA | 12 | C | C6-N1-C2 | -5.29 | 118.18 | 120.30 |
| 26 | BB | 2471 | A | N1-C2-N3 | -5.29 | 126.66 | 129.30 |
| 1 | AA | 40 | C | C5'-C4'-O4' | 5.29 | 115.44 | 109.10 |
| 1 | AA | 447 | G | C4-C5-N7 | -5.29 | 108.68 | 110.80 |
| 1 | AA | 864 | A | C5-N7-C8 | -5.29 | 101.25 | 103.90 |
| 1 | AA | 1008 | U | C4-C5-C6 | 5.29 | 122.87 | 119.70 |
| 1 | AA | 1170 | A | C8-N9-C4 | -5.29 | 103.69 | 105.80 |
| 15 | AO | 98 | ARG | NH1-CZ-NH2 | -5.29 | 113.58 | 119.40 |
| 23 | AW | 37 | ALA | CB-CA-C | 5.29 | 118.03 | 110.10 |
| 26 | BB | 349 | U | N3-C4-C5 | -5.29 | 111.43 | 114.60 |
| 26 | BB | 684 | G | O5'-C5'-C4' | 5.29 | 121.75 | 111.70 |
| 26 | BB | 731 | C | C3'-C2'-C1' | 5.29 | 105.73 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 869 | G | O4'-C1'-C2' | 5.29 | 112.36 | 107.60 |
| 26 | BB | 873 | C | P-O3'-C3' | 5.29 | 126.05 | 119.70 |
| 26 | BB | 1475 | G | C5-C6-N1 | 5.29 | 114.14 | 111.50 |
| 26 | BB | 1562 | U | C5-C6-N1 | -5.29 | 120.06 | 122.70 |
| 26 | BB | 1986 | C | N1-C2-O2 | 5.29 | 122.07 | 118.90 |
| 26 | BB | 2208 | C | O4'-C1'-N1 | 5.29 | 112.43 | 108.20 |
| 26 | BB | 2408 | U | C5'-C4'-O4' | 5.29 | 115.45 | 109.10 |
| 26 | BB | 2460 | U | O4'-C1'-C2' | -5.29 | 100.51 | 105.80 |
| 38 | BN | 110 | VAL | CG1-CB-CG2 | -5.29 | 102.44 | 110.90 |
| 1 | AA | 92 | U | C1'-O4'-C4' | -5.29 | 105.67 | 109.90 |
| 1 | AA | 1185 | G | O4'-C1'-N9 | 5.29 | 112.43 | 108.20 |
| 2 | AB | 44 | G | C8-N9-C1' | 5.29 | 133.87 | 127.00 |
| 26 | BB | 553 | G | N9-C1'-C2' | -5.29 | 106.18 | 112.00 |
| 26 | BB | 566 | U | N1-C2-N3 | 5.29 | 118.07 | 114.90 |
| 26 | BB | 939 | G | C2-N3-C4 | 5.29 | 114.54 | 111.90 |
| 26 | BB | 956 | G | C4-N9-C1' | -5.29 | 119.63 | 126.50 |
| 26 | BB | 1271 | G | C4-C5-N7 | -5.29 | 108.69 | 110.80 |
| 26 | BB | 1342 | A | N1-C6-N6 | 5.29 | 121.77 | 118.60 |
| 26 | BB | 1900 | A | C5-C6-N6 | -5.29 | 119.47 | 123.70 |
| 26 | BB | 2545 | G | N1-C6-O6 | -5.29 | 116.73 | 119.90 |
| 1 | AA | 53 | A | C5-N7-C8 | 5.29 | 106.54 | 103.90 |
| 1 | AA | 144 | G | C4-C5-N7 | 5.29 | 112.92 | 110.80 |
| 1 | AA | 215 | C | C6-N1-C1' | 5.29 | 127.14 | 120.80 |
| 1 | AA | 700 | G | N3-C4-C5 | -5.29 | 125.96 | 128.60 |
| 1 | AA | 1201 | A | C4-C5-C6 | -5.29 | 114.36 | 117.00 |
| 1 | AA | 1344 | C | C2'-C3'-O3' | 5.29 | 122.16 | 113.70 |
| 1 | AA | 1355 | G | C5-C6-N1 | 5.29 | 114.14 | 111.50 |
| 1 | AA | 1370 | G | C6-N1-C2 | -5.29 | 121.93 | 125.10 |
| 12 | AL | 129 | ARG | CB-CG-CD | 5.29 | 125.34 | 111.60 |
| 25 | BA | 109 | A | C8-N9-C4 | -5.29 | 103.69 | 105.80 |
| 26 | BB | 21 | A | C4'-C3'-C2' | 5.29 | 107.89 | 102.60 |
| 26 | BB | 600 | G | C5'-C4'-O4' | 5.29 | 115.44 | 109.10 |
| 26 | BB | 1282 | U | N1-C2-O2 | 5.29 | 126.50 | 122.80 |
| 26 | BB | 1303 | G | C4-C5-N7 | -5.29 | 108.69 | 110.80 |
| 26 | BB | 2022 | U | C3'-C2'-C1' | 5.29 | 105.73 | 101.50 |
| 26 | BB | 2184 | A | O5'-P-OP2 | -5.29 | 100.94 | 105.70 |
| 26 | BB | 2667 | C | C1'-O4'-C4' | 5.29 | 114.13 | 109.90 |
| 26 | BB | 2766 | A | C8-N9-C4 | -5.29 | 103.69 | 105.80 |
| 33 | BI | 25 | TYR | CG-CD2-CE2 | -5.29 | 117.07 | 121.30 |
| 1 | AA | 114 | U | O4'-C4'-C3' | -5.28 | 98.72 | 104.00 |
| 1 | AA | 207 | C | P-O5'-C5' | 5.28 | 129.35 | 120.90 |
| 1 | AA | 314 | C | P-O3'-C3' | 5.28 | 126.04 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 363 | A | C5-N7-C8 | -5.28 | 101.26 | 103.90 |
| 1 | AA | 617 | G | C5-C6-O6 | -5.28 | 125.43 | 128.60 |
| 1 | AA | 736 | C | N3-C4-C5 | -5.28 | 119.79 | 121.90 |
| 1 | AA | 813 | U | C4'-C3'-C2' | -5.28 | 97.32 | 102.60 |
| 1 | AA | 970 | C | C5'-C4'-C3' | -5.28 | 107.55 | 116.00 |
| 26 | BB | 325 | G | C5-C6-N1 | 5.28 | 114.14 | 111.50 |
| 26 | BB | 709 | U | C6-N1-C2 | -5.28 | 117.83 | 121.00 |
| 26 | BB | 817 | C | C5-C6-N1 | 5.28 | 123.64 | 121.00 |
| 26 | BB | 943 | A | C5'-C4'-O4' | 5.28 | 115.44 | 109.10 |
| 26 | BB | 1521 | G | C8-N9-C1' | 5.28 | 133.87 | 127.00 |
| 26 | BB | 1761 | C | C2-N3-C4 | 5.28 | 122.54 | 119.90 |
| 26 | BB | 2097 | A | C5-C6-N6 | 5.28 | 127.93 | 123.70 |
| 26 | BB | 2255 | G | N9-C4-C5 | 5.28 | 107.51 | 105.40 |
| 26 | BB | 2369 | A | O4'-C1'-N9 | 5.28 | 112.43 | 108.20 |
| 26 | BB | 2400 | G | C5'-C4'-O4' | 5.28 | 115.44 | 109.10 |
| 26 | BB | 2485 | G | C4'-C3'-C2' | -5.28 | 97.32 | 102.60 |
| 26 | BB | 2811 | G | C6-C5-N7 | 5.28 | 133.57 | 130.40 |
| 1 | AA | 8 | A | N9-C4-C5 | -5.28 | 103.69 | 105.80 |
| 1 | AA | 505 | G | N9-C1'-C2' | -5.28 | 106.19 | 112.00 |
| 1 | AA | 747 | A | C5-C6-N1 | 5.28 | 120.34 | 117.70 |
| 1 | AA | 1528 | U | C1'-O4'-C4' | -5.28 | 105.67 | 109.90 |
| 3 | AC | 31 | U | O4'-C1'-N1 | -5.28 | 103.97 | 108.20 |
| 22 | AV | 60 | PHE | CB-CG-CD2 | 5.28 | 124.50 | 120.80 |
| 24 | AX | 27 | VAL | CG1-CB-CG2 | -5.28 | 102.45 | 110.90 |
| 25 | BA | 31 | C | N1-C2-N3 | 5.28 | 122.90 | 119.20 |
| 26 | BB | 400 | G | N3-C4-C5 | -5.28 | 125.96 | 128.60 |
| 26 | BB | 529 | A | N1-C6-N6 | 5.28 | 121.77 | 118.60 |
| 26 | BB | 818 | G | P-O3'-C3' | 5.28 | 126.04 | 119.70 |
| 26 | BB | 905 | A | N1-C6-N6 | 5.28 | 121.77 | 118.60 |
| 26 | BB | 1271 | G | N9-C1'-C2' | -5.28 | 106.19 | 112.00 |
| 26 | BB | 1416 | G | N7-C8-N9 | -5.28 | 110.46 | 113.10 |
| 26 | BB | 1528 | A | C4-C5-N7 | -5.28 | 108.06 | 110.70 |
| 26 | BB | 1950 | G | C1'-O4'-C4' | -5.28 | 105.67 | 109.90 |
| 1 | AA | 299 | G | O4'-C4'-C3' | 5.28 | 110.33 | 106.10 |
| 1 | AA | 678 | U | N3-C2-O2 | -5.28 | 118.50 | 122.20 |
| 1 | AA | 845 | A | N9-C4-C5 | -5.28 | 103.69 | 105.80 |
| 1 | AA | 900 | A | C5-C6-N6 | -5.28 | 119.48 | 123.70 |
| 1 | AA | 964 | A | N9-C4-C5 | 5.28 | 107.91 | 105.80 |
| 1 | AA | 1095 | U | N1-C2-O2 | 5.28 | 126.50 | 122.80 |
| 1 | AA | 1141 | C | N1-C1'-C2' | -5.28 | 106.19 | 112.00 |
| 1 | AA | 1178 | G | N7-C8-N9 | -5.28 | 110.46 | 113.10 |
| 3 | AC | 24 | A | C4-C5-C6 | -5.28 | 114.36 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 7 | AG | 62 | ARG | NE-CZ-NH2 | -5.28 | 117.66 | 120.30 |
| 12 | AL | 126 | PHE | CB-CG-CD2 | 5.28 | 124.50 | 120.80 |
| 17 | AQ | 80 | ARG | NE-CZ-NH1 | 5.28 | 122.94 | 120.30 |
| 25 | BA | 60 | C | C6-N1-C2 | -5.28 | 118.19 | 120.30 |
| 26 | BB | 1930 | G | C6-N1-C2 | -5.28 | 121.93 | 125.10 |
| 1 | AA | 208 | U | P-O3'-C3' | 5.28 | 126.03 | 119.70 |
| 1 | AA | 667 | G | C6-C5-N7 | -5.28 | 127.23 | 130.40 |
| 7 | AG | 50 | TYR | CG-CD1-CE1 | -5.28 | 117.08 | 121.30 |
| 26 | BB | 265 | A | C4'-C3'-C2' | -5.28 | 97.32 | 102.60 |
| 26 | BB | 837 | C | C1'-O4'-C4' | -5.28 | 105.68 | 109.90 |
| 26 | BB | 1089 | A | C4-C5-N7 | -5.28 | 108.06 | 110.70 |
| 26 | BB | 1322 | A | C5-C6-N6 | -5.28 | 119.48 | 123.70 |
| 26 | BB | 1366 | A | N3-C4-C5 | -5.28 | 123.11 | 126.80 |
| 26 | BB | 1371 | G | O4'-C4'-C3' | 5.28 | 110.32 | 106.10 |
| 26 | BB | 1728 | C | N1-C2-O2 | 5.28 | 122.07 | 118.90 |
| 26 | BB | 2721 | A | C5'-C4'-O4' | 5.28 | 115.44 | 109.10 |
| 29 | BE | 13 | ARG | NH1-CZ-NH2 | 5.28 | 125.21 | 119.40 |
| 1 | AA | 84 | U | N3-C2-O2 | -5.28 | 118.51 | 122.20 |
| 1 | AA | 107 | G | N9-C1'-C2' | -5.28 | 106.19 | 112.00 |
| 1 | AA | 921 | U | C5'-C4'-O4' | -5.28 | 102.77 | 109.10 |
| 1 | AA | 926 | G | O3'-P-O5' | 5.28 | 114.03 | 104.00 |
| 1 | AA | 979 | C | C2-N3-C4 | -5.28 | 117.26 | 119.90 |
| 1 | AA | 1300 | G | N1-C6-O6 | -5.28 | 116.73 | 119.90 |
| 6 | AF | 178 | ARG | CB-CA-C | 5.28 | 120.95 | 110.40 |
| 17 | AQ | 38 | GLU | OE1-CD-OE2 | 5.28 | 129.63 | 123.30 |
| 26 | BB | 489 | G | O4'-C1'-N9 | 5.28 | 112.42 | 108.20 |
| 26 | BB | 514 | A | C2-N3-C4 | -5.28 | 107.96 | 110.60 |
| 26 | BB | 539 | G | C5-N7-C8 | 5.28 | 106.94 | 104.30 |
| 26 | BB | 570 | G | C6-N1-C2 | 5.28 | 128.27 | 125.10 |
| 26 | BB | 755 | U | N3-C4-C5 | -5.28 | 111.43 | 114.60 |
| 26 | BB | 844 | A | C4'-C3'-C2' | -5.28 | 97.32 | 102.60 |
| 26 | BB | 986 | C | C2-N3-C4 | 5.28 | 122.54 | 119.90 |
| 26 | BB | 1017 | G | N9-C1'-C2' | -5.28 | 106.19 | 112.00 |
| 26 | BB | 1296 | G | C4-C5-N7 | -5.28 | 108.69 | 110.80 |
| 26 | BB | 1318 | U | N1-C1'-C2' | -5.28 | 106.20 | 112.00 |
| 26 | BB | 1561 | C | O4'-C1'-N1 | 5.28 | 112.42 | 108.20 |
| 26 | BB | 1856 | U | O4'-C1'-N1 | 5.28 | 112.42 | 108.20 |
| 26 | BB | 2058 | A | N9-C4-C5 | -5.28 | 103.69 | 105.80 |
| 26 | BB | 2347 | C | C6-N1-C2 | -5.28 | 118.19 | 120.30 |
| 47 | BW | 17 | ASP | CB-CG-OD2 | 5.28 | 123.05 | 118.30 |
| 1 | AA | 171 | A | C4-C5-N7 | 5.28 | 113.34 | 110.70 |
| 1 | AA | 478 | A | N3-C4-C5 | -5.28 | 123.11 | 126.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 650 | G | N3-C4-C5 | -5.28 | 125.96 | 128.60 |
| 1 | AA | 1120 | C | C5-C6-N1 | 5.28 | 123.64 | 121.00 |
| 1 | AA | 1146 | A | P-O3'-C3' | 5.28 | 126.03 | 119.70 |
| 1 | AA | 1520 | C | C1'-O4'-C4' | 5.28 | 114.12 | 109.90 |
| 21 | AU | 19 | GLU | N-CA-CB | -5.28 | 101.10 | 110.60 |
| 25 | BA | 52 | A | C1'-O4'-C4' | -5.28 | 105.68 | 109.90 |
| 26 | BB | 37 | C | C5'-C4'-C3' | -5.28 | 107.56 | 116.00 |
| 26 | BB | 309 | A | C5-C6-N1 | -5.28 | 115.06 | 117.70 |
| 26 | BB | 947 | A | P-O5'-C5' | 5.28 | 129.34 | 120.90 |
| 26 | BB | 1032 | A | C5-C6-N6 | 5.28 | 127.92 | 123.70 |
| 26 | BB | 1159 | U | C5-C4-O4 | -5.28 | 122.73 | 125.90 |
| 26 | BB | 1568 | G | N3-C4-N9 | 5.28 | 129.17 | 126.00 |
| 26 | BB | 2206 | C | N1-C2-O2 | 5.28 | 122.06 | 118.90 |
| 26 | BB | 2364 | C | O4'-C1'-N1 | 5.28 | 112.42 | 108.20 |
| 26 | BB | 2385 | C | N3-C4-N4 | -5.28 | 114.31 | 118.00 |
| 48 | BX | 72 | VAL | CG1-CB-CG2 | -5.28 | 102.46 | 110.90 |
| 55 | B4 | 11 | VAL | CB-CA-C | 5.28 | 121.42 | 111.40 |
| 1 | AA | 673 | A | C5-N7-C8 | 5.27 | 106.54 | 103.90 |
| 1 | AA | 949 | A | C4-C5-N7 | -5.27 | 108.06 | 110.70 |
| 26 | BB | 558 | U | C4-C5-C6 | 5.27 | 122.86 | 119.70 |
| 26 | BB | 1166 | G | C5'-C4'-O4' | 5.27 | 115.43 | 109.10 |
| 26 | BB | 1862 | G | C2-N3-C4 | 5.27 | 114.54 | 111.90 |
| 26 | BB | 1982 | U | C5-C6-N1 | 5.27 | 125.34 | 122.70 |
| 26 | BB | 2160 | C | O4'-C1'-N1 | 5.27 | 112.42 | 108.20 |
| 26 | BB | 2765 | A | P-O3'-C3' | 5.27 | 126.03 | 119.70 |
| 1 | AA | 172 | A | C5-N7-C8 | 5.27 | 106.54 | 103.90 |
| 1 | AA | 294 | U | C3'-C2'-C1' | -5.27 | 97.28 | 101.50 |
| 1 | AA | 771 | G | C4-C5-N7 | -5.27 | 108.69 | 110.80 |
| 1 | AA | 1154 | G | C3'-C2'-C1' | 5.27 | 105.72 | 101.50 |
| 1 | AA | 1540 | U | O4'-C1'-N1 | 5.27 | 112.42 | 108.20 |
| 2 | AB | 45 | U | N3-C2-O2 | -5.27 | 118.51 | 122.20 |
| 24 | AX | 20 | ARG | CA-CB-CG | 5.27 | 125.00 | 113.40 |
| 25 | BA | 15 | A | C5-C6-N1 | 5.27 | 120.34 | 117.70 |
| 25 | BA | 87 | U | C3'-C2'-C1' | 5.27 | 105.72 | 101.50 |
| 26 | BB | 167 | A | C5-C6-N1 | -5.27 | 115.06 | 117.70 |
| 26 | BB | 1099 | G | O4'-C1'-N9 | 5.27 | 112.42 | 108.20 |
| 26 | BB | 1793 | C | C5-C6-N1 | 5.27 | 123.64 | 121.00 |
| 26 | BB | 2083 | G | C4'-C3'-C2' | -5.27 | 97.33 | 102.60 |
| 26 | BB | 2452 | C | C4-C5-C6 | -5.27 | 114.76 | 117.40 |
| 26 | BB | 2903 | U | N1-C2-N3 | 5.27 | 118.06 | 114.90 |
| 1 | AA | 1259 | C | C5-C4-N4 | -5.27 | 116.51 | 120.20 |
| 1 | AA | 1264 | U | O4'-C1'-N1 | 5.27 | 112.42 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1391 | U | P-O5'-C5' | 5.27 | 129.33 | 120.90 |
| 1 | AA | 1421 | G | C1'-O4'-C4' | -5.27 | 105.68 | 109.90 |
| 2 | AB | 51 | G | N1-C2-N3 | -5.27 | 120.74 | 123.90 |
| 26 | BB | 309 | A | N7-C8-N9 | -5.27 | 111.17 | 113.80 |
| 26 | BB | 315 | G | N3-C4-N9 | -5.27 | 122.84 | 126.00 |
| 26 | BB | 465 | G | C4-C5-N7 | -5.27 | 108.69 | 110.80 |
| 26 | BB | 950 | G | O5'-C5'-C4' | 5.27 | 121.72 | 111.70 |
| 26 | BB | 1160 | G | N9-C1'-C2' | -5.27 | 106.20 | 112.00 |
| 26 | BB | 1647 | U | C4'-C3'-C2' | -5.27 | 97.33 | 102.60 |
| 26 | BB | 1652 | A | O4'-C4'-C3' | 5.27 | 110.32 | 106.10 |
| 1 | AA | 189 | A | C6-C5-N7 | 5.27 | 135.99 | 132.30 |
| 1 | AA | 529 | G | C5-N7-C8 | 5.27 | 106.93 | 104.30 |
| 1 | AA | 567 | G | C4'-C3'-C2' | 5.27 | 107.87 | 102.60 |
| 1 | AA | 618 | C | C5'-C4'-O4' | 5.27 | 115.42 | 109.10 |
| 1 | AA | 911 | U | N3-C4-O4 | 5.27 | 123.09 | 119.40 |
| 1 | AA | 943 | U | N3-C4-O4 | 5.27 | 123.09 | 119.40 |
| 1 | AA | 1077 | G | C5-C6-N1 | 5.27 | 114.14 | 111.50 |
| 1 | AA | 1138 | G | N3-C4-C5 | -5.27 | 125.97 | 128.60 |
| 1 | AA | 1416 | G | C8-N9-C4 | -5.27 | 104.29 | 106.40 |
| 2 | AB | 39 | A | N7-C8-N9 | -5.27 | 111.17 | 113.80 |
| 26 | BB | 470 | A | O4'-C4'-C3' | -5.27 | 98.73 | 104.00 |
| 26 | BB | 1163 | G | C6-N1-C2 | 5.27 | 128.26 | 125.10 |
| 26 | BB | 1177 | G | C6-C5-N7 | -5.27 | 127.24 | 130.40 |
| 26 | BB | 1738 | G | C5-C6-O6 | -5.27 | 125.44 | 128.60 |
| 26 | BB | 1871 | A | C3'-C2'-C1' | -5.27 | 97.28 | 101.50 |
| 26 | BB | 2530 | A | C3'-C2'-C1' | 5.27 | 105.72 | 101.50 |
| 26 | BB | 2545 | G | N9-C1'-C2' | -5.27 | 106.20 | 112.00 |
| 26 | BB | 2560 | A | C5'-C4'-C3' | 5.27 | 124.43 | 116.00 |
| 29 | BE | 37 | VAL | CG1-CB-CG2 | -5.27 | 102.47 | 110.90 |
| 51 | B0 | 39 | GLN | CA-CB-CG | 5.27 | 124.99 | 113.40 |
| 1 | AA | 219 | U | C4'-C3'-C2' | -5.27 | 97.33 | 102.60 |
| 1 | AA | 302 | G | C6-C5-N7 | -5.27 | 127.24 | 130.40 |
| 1 | AA | 334 | C | P-O3'-C3' | 5.27 | 126.02 | 119.70 |
| 1 | AA | 1078 | U | C5'-C4'-C3' | -5.27 | 107.57 | 116.00 |
| 25 | BA | 63 | C | C5-C4-N4 | -5.27 | 116.51 | 120.20 |
| 26 | BB | 27 | G | C6-N1-C2 | 5.27 | 128.26 | 125.10 |
| 26 | BB | 48 | G | C1'-O4'-C4' | -5.27 | 105.69 | 109.90 |
| 26 | BB | 183 | C | C5-C4-N4 | -5.27 | 116.51 | 120.20 |
| 26 | BB | 333 | G | C5-C6-N1 | 5.27 | 114.13 | 111.50 |
| 26 | BB | 534 | U | C5'-C4'-O4' | 5.27 | 115.42 | 109.10 |
| 26 | BB | 548 | G | C5-N7-C8 | 5.27 | 106.93 | 104.30 |
| 26 | BB | 740 | C | O4'-C1'-C2' | -5.27 | 100.53 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1054 | A | C4'-C3'-C2' | -5.27 | 97.33 | 102.60 |
| 26 | BB | 1283 | G | C5-C6-N1 | -5.27 | 108.87 | 111.50 |
| 26 | BB | 1779 | U | O5'-P-OP2 | -5.27 | 100.96 | 105.70 |
| 26 | BB | 1949 | G | N1-C2-N2 | 5.27 | 120.94 | 116.20 |
| 26 | BB | 2153 | C | P-O5'-C5' | 5.27 | 129.33 | 120.90 |
| 26 | BB | 2236 | U | N3-C2-O2 | -5.27 | 118.51 | 122.20 |
| 26 | BB | 2237 | G | C6-N1-C2 | -5.27 | 121.94 | 125.10 |
| 26 | BB | 2599 | G | N3-C4-N9 | -5.27 | 122.84 | 126.00 |
| 26 | BB | 2766 | A | C5-N7-C8 | -5.27 | 101.27 | 103.90 |
| 26 | BB | 2777 | G | O4'-C1'-C2' | -5.27 | 100.53 | 105.80 |
| 26 | BB | 2805 | C | N3-C4-C5 | -5.27 | 119.79 | 121.90 |
| 1 | AA | 399 | G | N9-C4-C5 | -5.27 | 103.29 | 105.40 |
| 1 | AA | 1085 | U | C1'-O4'-C4' | -5.27 | 105.69 | 109.90 |
| 3 | AC | 20 | G | C8-N9-C4 | -5.27 | 104.29 | 106.40 |
| 11 | AK | 121 | GLY | O-C-N | 5.27 | 132.15 | 123.20 |
| 26 | BB | 829 | A | N9-C4-C5 | 5.27 | 107.91 | 105.80 |
| 26 | BB | 1057 | A | O4'-C1'-N9 | -5.27 | 103.99 | 108.20 |
| 26 | BB | 1198 | U | C1'-O4'-C4' | 5.27 | 114.11 | 109.90 |
| 26 | BB | 1400 | U | N3-C2-O2 | -5.27 | 118.51 | 122.20 |
| 26 | BB | 1433 | A | C6-N1-C2 | 5.27 | 121.76 | 118.60 |
| 26 | BB | 1957 | C | C1'-O4'-C4' | 5.27 | 114.11 | 109.90 |
| 26 | BB | 2100 | G | C5'-C4'-O4' | 5.27 | 115.42 | 109.10 |
| 26 | BB | 2327 | A | C4-C5-N7 | 5.27 | 113.33 | 110.70 |
| 26 | BB | 2827 | C | C2-N1-C1' | 5.27 | 124.59 | 118.80 |
| 1 | AA | 215 | C | C4'-C3'-O3' | 5.26 | 123.53 | 113.00 |
| 1 | AA | 559 | A | C2-N3-C4 | 5.26 | 113.23 | 110.60 |
| 1 | AA | 596 | A | C1'-O4'-C4' | -5.26 | 105.69 | 109.90 |
| 1 | AA | 664 | G | C4-C5-C6 | 5.26 | 121.96 | 118.80 |
| 1 | AA | 701 | U | C2-N3-C4 | -5.26 | 123.84 | 127.00 |
| 1 | AA | 802 | A | C1'-O4'-C4' | 5.26 | 114.11 | 109.90 |
| 1 | AA | 867 | G | C8-N9-C4 | -5.26 | 104.29 | 106.40 |
| 1 | AA | 1508 | A | C2'-C3'-O3' | 5.26 | 122.12 | 113.70 |
| 1 | AA | 1525 | G | C2'-C3'-O3' | 5.26 | 122.12 | 113.70 |
| 3 | AC | 37 | G | N9-C1'-C2' | -5.26 | 106.21 | 112.00 |
| 5 | AE | 114 | LYS | N-CA-CB | -5.26 | 101.12 | 110.60 |
| 26 | BB | 119 | A | O4'-C4'-C3' | 5.26 | 110.31 | 106.10 |
| 26 | BB | 458 | G | C1'-O4'-C4' | -5.26 | 105.69 | 109.90 |
| 26 | BB | 751 | A | C5'-C4'-O4' | 5.26 | 115.42 | 109.10 |
| 26 | BB | 969 | G | P-O3'-C3' | 5.26 | 126.02 | 119.70 |
| 26 | BB | 1245 | G | C4-N9-C1' | -5.26 | 119.66 | 126.50 |
| 26 | BB | 1251 | C | N1-C1'-C2' | 5.26 | 120.84 | 114.00 |
| 26 | BB | 1461 | C | C5-C4-N4 | -5.26 | 116.52 | 120.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2154 | A | N7-C8-N9 | 5.26 | 116.43 | 113.80 |
| 26 | BB | 2758 | A | N1-C2-N3 | 5.26 | 131.93 | 129.30 |
| 31 | BG | 76 | PHE | CB-CG-CD2 | 5.26 | 124.48 | 120.80 |
| 34 | BJ | 95 | PHE | CB-CG-CD2 | -5.26 | 117.11 | 120.80 |
| 36 | BL | 15 | TRP | CG-CD2-CE3 | 5.26 | 138.64 | 133.90 |
| 1 | AA | 467 | U | O4'-C4'-C3' | -5.26 | 98.74 | 104.00 |
| 1 | AA | 591 | U | C6-N1-C2 | -5.26 | 117.84 | 121.00 |
| 1 | AA | 717 | U | C4'-C3'-C2' | -5.26 | 97.34 | 102.60 |
| 1 | AA | 973 | G | N3-C2-N2 | 5.26 | 123.58 | 119.90 |
| 1 | AA | 1282 | C | C5-C6-N1 | 5.26 | 123.63 | 121.00 |
| 26 | BB | 713 | G | O4'-C4'-C3' | 5.26 | 110.31 | 106.10 |
| 26 | BB | 1112 | G | C4-C5-N7 | 5.26 | 112.91 | 110.80 |
| 26 | BB | 2010 | G | N3-C4-N9 | 5.26 | 129.16 | 126.00 |
| 26 | BB | 2170 | A | C4-C5-N7 | 5.26 | 113.33 | 110.70 |
| 26 | BB | 2172 | U | N1-C2-N3 | -5.26 | 111.74 | 114.90 |
| 26 | BB | 2558 | C | C5'-C4'-O4' | 5.26 | 115.42 | 109.10 |
| 26 | BB | 2617 | U | C6-N1-C2 | -5.26 | 117.84 | 121.00 |
| 32 | BH | 78 | VAL | CA-CB-CG1 | 5.26 | 118.80 | 110.90 |
| 1 | AA | 263 | A | C5-C6-N6 | -5.26 | 119.49 | 123.70 |
| 1 | AA | 540 | G | C1'-O4'-C4' | 5.26 | 114.11 | 109.90 |
| 1 | AA | 603 | U | N1-C2-O2 | -5.26 | 119.12 | 122.80 |
| 1 | AA | 679 | C | O4'-C1'-N1 | 5.26 | 112.41 | 108.20 |
| 1 | AA | 743 | A | C5'-C4'-O4' | 5.26 | 115.42 | 109.10 |
| 1 | AA | 1502 | A | OP1-P-OP2 | 5.26 | 127.49 | 119.60 |
| 2 | AB | 14 | A | O4'-C1'-N9 | 5.26 | 112.41 | 108.20 |
| 4 | AD | 5 | G | N1-C6-O6 | -5.26 | 116.74 | 119.90 |
| 4 | AD | 38 | A | C5-C6-N1 | -5.26 | 115.07 | 117.70 |
| 11 | AK | 104 | SER | N-CA-CB | -5.26 | 102.61 | 110.50 |
| 12 | AL | 112 | ARG | NE-CZ-NH1 | 5.26 | 122.93 | 120.30 |
| 26 | BB | 130 | C | C5-C4-N4 | -5.26 | 116.52 | 120.20 |
| 26 | BB | 524 | G | C4-C5-C6 | 5.26 | 121.96 | 118.80 |
| 26 | BB | 542 | C | O5'-C5'-C4' | 5.26 | 121.69 | 111.70 |
| 26 | BB | 888 | C | C4-C5-C6 | -5.26 | 114.77 | 117.40 |
| 26 | BB | 1351 | C | N3-C4-N4 | -5.26 | 114.32 | 118.00 |
| 26 | BB | 2083 | G | N3-C4-C5 | -5.26 | 125.97 | 128.60 |
| 26 | BB | 2208 | C | C4'-C3'-C2' | -5.26 | 97.34 | 102.60 |
| 26 | BB | 2319 | G | C5-C6-O6 | 5.26 | 131.76 | 128.60 |
| 26 | BB | 2475 | C | O4'-C1'-N1 | 5.26 | 112.41 | 108.20 |
| 26 | BB | 2761 | A | C5-N7-C8 | -5.26 | 101.27 | 103.90 |
| 26 | BB | 2896 | C | C2-N3-C4 | 5.26 | 122.53 | 119.90 |
| 1 | AA | 224 | U | C5-C6-N1 | 5.26 | 125.33 | 122.70 |
| 1 | AA | 572 | A | C5-C6-N6 | -5.26 | 119.49 | 123.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 613 | C | O4'-C1'-N1 | 5.26 | 112.41 | 108.20 |
| 1 | AA | 1466 | C | N1-C2-N3 | -5.26 | 115.52 | 119.20 |
| 1 | AA | 1524 | C | P-O5'-C5' | 5.26 | 129.31 | 120.90 |
| 26 | BB | 186 | G | N3-C4-C5 | -5.26 | 125.97 | 128.60 |
| 26 | BB | 614 | A | C4-C5-C6 | -5.26 | 114.37 | 117.00 |
| 26 | BB | 618 | G | O4'-C4'-C3' | 5.26 | 110.31 | 106.10 |
| 26 | BB | 723 | C | C4-C5-C6 | -5.26 | 114.77 | 117.40 |
| 26 | BB | 1238 | G | N9-C1'-C2' | -5.26 | 106.21 | 112.00 |
| 26 | BB | 1379 | U | C2-N3-C4 | -5.26 | 123.84 | 127.00 |
| 26 | BB | 1657 | U | O4'-C1'-N1 | 5.26 | 112.41 | 108.20 |
| 26 | BB | 1771 | C | N3-C2-O2 | -5.26 | 118.22 | 121.90 |
| 26 | BB | 1918 | A | C2-N3-C4 | 5.26 | 113.23 | 110.60 |
| 26 | BB | 1928 | A | C5'-C4'-O4' | 5.26 | 115.41 | 109.10 |
| 26 | BB | 2266 | A | C4-C5-C6 | -5.26 | 114.37 | 117.00 |
| 26 | BB | 2336 | A | C2'-C3'-O3' | 5.26 | 122.11 | 113.70 |
| 26 | BB | 2569 | G | C5-N7-C8 | -5.26 | 101.67 | 104.30 |
| 26 | BB | 2659 | G | O4'-C1'-C2' | 5.26 | 112.33 | 107.60 |
| 47 | BW | 88 | ASP | CB-CG-OD2 | -5.26 | 113.57 | 118.30 |
| 1 | AA | 192 | A | N9-C4-C5 | 5.26 | 107.90 | 105.80 |
| 1 | AA | 690 | G | C8-N9-C4 | -5.26 | 104.30 | 106.40 |
| 1 | AA | 1418 | A | C4-C5-N7 | -5.26 | 108.07 | 110.70 |
| 1 | AA | 1501 | C | C4'-C3'-C2' | 5.26 | 107.86 | 102.60 |
| 15 | AO | 61 | GLU | N-CA-CB | -5.26 | 101.14 | 110.60 |
| 26 | BB | 1087 | G | N1-C6-O6 | -5.26 | 116.75 | 119.90 |
| 26 | BB | 1838 | C | C4-C5-C6 | 5.26 | 120.03 | 117.40 |
| 26 | BB | 2339 | C | C3'-C2'-C1' | 5.26 | 105.71 | 101.50 |
| 26 | BB | 2433 | A | O4'-C1'-N9 | 5.26 | 112.41 | 108.20 |
| 26 | BB | 2648 | G | P-O3'-C3' | 5.26 | 126.01 | 119.70 |
| 26 | BB | 2765 | A | C5'-C4'-O4' | 5.26 | 115.41 | 109.10 |
| 48 | BX | 70 | ILE | CB-CA-C | 5.26 | 122.12 | 111.60 |
| 1 | AA | 233 | C | C5-C6-N1 | -5.26 | 118.37 | 121.00 |
| 1 | AA | 392 | C | N1-C2-N3 | -5.26 | 115.52 | 119.20 |
| 1 | AA | 593 | U | C4'-C3'-C2' | -5.26 | 97.34 | 102.60 |
| 1 | AA | 879 | C | C5-C4-N4 | -5.26 | 116.52 | 120.20 |
| 1 | AA | 924 | C | N1-C2-O2 | 5.26 | 122.05 | 118.90 |
| 1 | AA | 1000 | A | C6-N1-C2 | -5.26 | 115.45 | 118.60 |
| 1 | AA | 1012 | A | C4-C5-C6 | -5.26 | 114.37 | 117.00 |
| 1 | AA | 1179 | A | N3-C4-C5 | -5.26 | 123.12 | 126.80 |
| 1 | AA | 1343 | G | C4-C5-C6 | 5.26 | 121.95 | 118.80 |
| 1 | AA | 1534 | A | C8-N9-C4 | -5.26 | 103.70 | 105.80 |
| 3 | AC | 19 | A | C5-C6-N6 | -5.26 | 119.50 | 123.70 |
| 4 | AD | 37 | U | C4'-C3'-C2' | -5.26 | 97.34 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 395 | U | C5-C6-N1 | -5.26 | 120.07 | 122.70 |
| 26 | BB | 416 | U | C4-C5-C6 | 5.26 | 122.85 | 119.70 |
| 26 | BB | 425 | G | N3-C2-N2 | -5.26 | 116.22 | 119.90 |
| 26 | BB | 526 | A | C5-C6-N6 | 5.26 | 127.91 | 123.70 |
| 26 | BB | 1628 | G | N3-C4-C5 | -5.26 | 125.97 | 128.60 |
| 26 | BB | 1643 | G | O4'-C4'-C3' | 5.26 | 110.31 | 106.10 |
| 26 | BB | 1680 | U | N3-C4-O4 | 5.26 | 123.08 | 119.40 |
| 26 | BB | 2326 | C | N1-C2-O2 | 5.26 | 122.05 | 118.90 |
| 26 | BB | 2432 | A | O4'-C1'-N9 | 5.26 | 112.41 | 108.20 |
| 26 | BB | 2490 | G | O5'-P-OP1 | -5.26 | 100.97 | 105.70 |
| 26 | BB | 2520 | C | C5'-C4'-O4' | 5.26 | 115.41 | 109.10 |
| 1 | AA | 1162 | C | C6-N1-C2 | -5.25 | 118.20 | 120.30 |
| 1 | AA | 1188 | A | C5-N7-C8 | -5.25 | 101.27 | 103.90 |
| 26 | BB | 363 | G | N9-C4-C5 | 5.25 | 107.50 | 105.40 |
| 26 | BB | 1278 | C | N3-C2-O2 | -5.25 | 118.22 | 121.90 |
| 26 | BB | 2299 | U | P-O3'-C3' | -5.25 | 113.39 | 119.70 |
| 1 | AA | 1 | A | O4'-C4'-C3' | 5.25 | 110.30 | 106.10 |
| 1 | AA | 16 | A | C3'-C2'-C1' | -5.25 | 97.30 | 101.50 |
| 1 | AA | 641 | U | O4'-C4'-C3' | 5.25 | 110.30 | 106.10 |
| 1 | AA | 775 | G | N1-C2-N2 | 5.25 | 120.93 | 116.20 |
| 1 | AA | 825 | A | N3-C4-C5 | -5.25 | 123.12 | 126.80 |
| 1 | AA | 1249 | C | C6-N1-C2 | -5.25 | 118.20 | 120.30 |
| 1 | AA | 1273 | C | C5-C6-N1 | -5.25 | 118.37 | 121.00 |
| 26 | BB | 30 | G | C5-C6-O6 | -5.25 | 125.45 | 128.60 |
| 26 | BB | 31 | C | C2'-C3'-O3' | 5.25 | 122.11 | 113.70 |
| 26 | BB | 205 | G | C6-C5-N7 | -5.25 | 127.25 | 130.40 |
| 26 | BB | 249 | C | C4-C5-C6 | -5.25 | 114.77 | 117.40 |
| 26 | BB | 295 | G | N7-C8-N9 | 5.25 | 115.73 | 113.10 |
| 26 | BB | 347 | A | C5'-C4'-O4' | 5.25 | 115.40 | 109.10 |
| 26 | BB | 438 | G | N9-C1'-C2' | -5.25 | 106.22 | 112.00 |
| 26 | BB | 507 | A | C4-C5-N7 | 5.25 | 113.33 | 110.70 |
| 26 | BB | 767 | U | C5'-C4'-O4' | 5.25 | 115.40 | 109.10 |
| 26 | BB | 774 | G | C6-C5-N7 | 5.25 | 133.55 | 130.40 |
| 26 | BB | 1525 | A | C4-C5-C6 | 5.25 | 119.63 | 117.00 |
| 26 | BB | 2162 | G | N3-C4-C5 | -5.25 | 125.97 | 128.60 |
| 26 | BB | 2249 | U | N3-C4-C5 | -5.25 | 111.45 | 114.60 |
| 26 | BB | 2399 | G | C6-N1-C2 | 5.25 | 128.25 | 125.10 |
| 1 | AA | 89 | U | N1-C1'-C2' | -5.25 | 106.22 | 112.00 |
| 1 | AA | 391 | G | N9-C4-C5 | -5.25 | 103.30 | 105.40 |
| 1 | AA | 808 | C | C5'-C4'-O4' | -5.25 | 102.80 | 109.10 |
| 1 | AA | 903 | G | N3-C2-N2 | -5.25 | 116.22 | 119.90 |
| 1 | AA | 953 | G | C5-N7-C8 | 5.25 | 106.92 | 104.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1225 | A | C5'-C4'-O4' | 5.25 | 115.40 | 109.10 |
| 1 | AA | 1517 | G | N9-C4-C5 | 5.25 | 107.50 | 105.40 |
| 26 | BB | 532 | A | N1-C6-N6 | -5.25 | 115.45 | 118.60 |
| 26 | BB | 762 | U | C5'-C4'-C3' | -5.25 | 107.60 | 116.00 |
| 26 | BB | 1024 | G | C5'-C4'-O4' | 5.25 | 115.40 | 109.10 |
| 26 | BB | 1095 | A | N7-C8-N9 | -5.25 | 111.17 | 113.80 |
| 26 | BB | 1468 | U | C5-C4-O4 | -5.25 | 122.75 | 125.90 |
| 26 | BB | 1756 | G | O4'-C1'-N9 | 5.25 | 112.40 | 108.20 |
| 26 | BB | 1815 | A | C5'-C4'-O4' | -5.25 | 102.80 | 109.10 |
| 26 | BB | 2025 | C | C5'-C4'-C3' | -5.25 | 107.60 | 116.00 |
| 26 | BB | 2092 | U | N1-C2-N3 | 5.25 | 118.05 | 114.90 |
| 26 | BB | 2340 | A | N1-C2-N3 | -5.25 | 126.67 | 129.30 |
| 26 | BB | 2551 | C | C5'-C4'-C3' | -5.25 | 107.60 | 116.00 |
| 26 | BB | 2618 | G | N9-C4-C5 | 5.25 | 107.50 | 105.40 |
| 26 | BB | 2625 | G | N7-C8-N9 | 5.25 | 115.73 | 113.10 |
| 26 | BB | 2692 | G | N3-C4-N9 | 5.25 | 129.15 | 126.00 |
| 26 | BB | 2793 | C | O4'-C4'-C3' | 5.25 | 110.30 | 106.10 |
| 1 | AA | 802 | A | N9-C4-C5 | -5.25 | 103.70 | 105.80 |
| 1 | AA | 805 | C | C2'-C3'-O3' | 5.25 | 122.10 | 113.70 |
| 1 | AA | 960 | U | C2-N1-C1' | 5.25 | 124.00 | 117.70 |
| 26 | BB | 1728 | C | C5-C6-N1 | -5.25 | 118.38 | 121.00 |
| 26 | BB | 1840 | G | C6-N1-C2 | -5.25 | 121.95 | 125.10 |
| 26 | BB | 2249 | U | N1-C2-N3 | 5.25 | 118.05 | 114.90 |
| 26 | BB | 2428 | G | C6-C5-N7 | -5.25 | 127.25 | 130.40 |
| 26 | BB | 2476 | A | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 26 | BB | 2711 | A | C5-C6-N1 | 5.25 | 120.33 | 117.70 |
| 1 | AA | 1419 | G | N7-C8-N9 | -5.25 | 110.48 | 113.10 |
| 2 | AB | 1 | A | N7-C8-N9 | 5.25 | 116.42 | 113.80 |
| 7 | AG | 114 | ARG | CD-NE-CZ | 5.25 | 130.95 | 123.60 |
| 25 | BA | 66 | A | C6-N1-C2 | 5.25 | 121.75 | 118.60 |
| 26 | BB | 42 | A | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 26 | BB | 76 | C | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 26 | BB | 174 | U | N1-C2-O2 | 5.25 | 126.47 | 122.80 |
| 26 | BB | 246 | C | C4-C5-C6 | -5.25 | 114.78 | 117.40 |
| 26 | BB | 250 | G | C4-N9-C1' | -5.25 | 119.68 | 126.50 |
| 26 | BB | 348 | A | N1-C6-N6 | -5.25 | 115.45 | 118.60 |
| 26 | BB | 447 | A | C2-N3-C4 | -5.25 | 107.98 | 110.60 |
| 26 | BB | 909 | A | C5-C6-N1 | 5.25 | 120.33 | 117.70 |
| 26 | BB | 1501 | G | C2-N3-C4 | 5.25 | 114.53 | 111.90 |
| 26 | BB | 1663 | G | C6-C5-N7 | 5.25 | 133.55 | 130.40 |
| 26 | BB | 2165 | C | O4'-C1'-N1 | 5.25 | 112.40 | 108.20 |
| 26 | BB | 2171 | A | C1'-O4'-C4' | -5.25 | 105.70 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2242 | G | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 26 | BB | 2331 | G | N9-C1'-C2' | -5.25 | 106.23 | 112.00 |
| 26 | BB | 2376 | A | N3-C4-C5 | -5.25 | 123.13 | 126.80 |
| 26 | BB | 2515 | C | OP2-P-O3' | 5.25 | 116.75 | 105.20 |
| 26 | BB | 2860 | A | C5-C6-N6 | -5.25 | 119.50 | 123.70 |
| 26 | BB | 2888 | C | C5'-C4'-C3' | -5.25 | 107.60 | 116.00 |
| 29 | BE | 180 | VAL | CA-CB-CG1 | 5.25 | 118.77 | 110.90 |
| 37 | BM | 79 | PHE | CB-CG-CD1 | 5.25 | 124.47 | 120.80 |
| 47 | BW | 70 | ALA | CB-CA-C | 5.25 | 117.97 | 110.10 |
| 1 | AA | 362 | G | C6-C5-N7 | -5.25 | 127.25 | 130.40 |
| 1 | AA | 728 | A | N3-C4-C5 | -5.25 | 123.13 | 126.80 |
| 1 | AA | 859 | G | N1-C6-O6 | -5.25 | 116.75 | 119.90 |
| 1 | AA | 1425 | U | N3-C2-O2 | -5.25 | 118.53 | 122.20 |
| 4 | AD | 20 | G | N1-C2-N2 | 5.25 | 120.92 | 116.20 |
| 14 | AN | 126 | ARG | NE-CZ-NH1 | 5.25 | 122.92 | 120.30 |
| 26 | BB | 36 | G | C5-C6-O6 | -5.25 | 125.45 | 128.60 |
| 26 | BB | 212 | G | C5-C6-O6 | -5.25 | 125.45 | 128.60 |
| 26 | BB | 659 | G | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 26 | BB | 724 | U | N3-C2-O2 | -5.25 | 118.53 | 122.20 |
| 26 | BB | 973 | A | N9-C4-C5 | 5.25 | 107.90 | 105.80 |
| 26 | BB | 995 | C | C1'-O4'-C4' | -5.25 | 105.70 | 109.90 |
| 26 | BB | 1379 | U | C3'-C2'-C1' | 5.25 | 105.70 | 101.50 |
| 26 | BB | 1626 | A | C2'-C3'-O3' | 5.25 | 122.09 | 113.70 |
| 26 | BB | 2085 | U | P-O3'-C3' | 5.25 | 126.00 | 119.70 |
| 26 | BB | 2349 | G | N1-C2-N2 | -5.25 | 111.48 | 116.20 |
| 26 | BB | 2409 | G | N1-C2-N3 | -5.25 | 120.75 | 123.90 |
| 26 | BB | 2536 | G | C5-N7-C8 | 5.25 | 106.92 | 104.30 |
| 26 | BB | 2550 | G | C2-N3-C4 | -5.25 | 109.28 | 111.90 |
| 26 | BB | 2686 | G | O4'-C1'-N9 | 5.25 | 112.40 | 108.20 |
| 39 | BO | 9 | PHE | CB-CG-CD1 | -5.25 | 117.13 | 120.80 |
| 40 | BP | 51 | LEU | CB-CG-CD2 | 5.25 | 119.92 | 111.00 |
| 1 | AA | 118 | U | C1'-O4'-C4' | -5.25 | 105.70 | 109.90 |
| 1 | AA | 416 | G | N3-C2-N2 | -5.25 | 116.23 | 119.90 |
| 1 | AA | 703 | G | N3-C4-N9 | -5.25 | 122.85 | 126.00 |
| 1 | AA | 871 | U | N3-C2-O2 | -5.25 | 118.53 | 122.20 |
| 26 | BB | 456 | C | C5-C6-N1 | 5.25 | 123.62 | 121.00 |
| 26 | BB | 555 | G | C6-N1-C2 | -5.25 | 121.95 | 125.10 |
| 26 | BB | 1187 | G | C5-C6-O6 | -5.25 | 125.45 | 128.60 |
| 26 | BB | 1305 | C | O4'-C1'-N1 | 5.25 | 112.40 | 108.20 |
| 26 | BB | 1779 | U | N1-C2-N3 | 5.25 | 118.05 | 114.90 |
| 26 | BB | 2341 | G | C5'-C4'-O4' | 5.25 | 115.39 | 109.10 |
| 1 | AA | 154 | U | P-O3'-C3' | 5.24 | 125.99 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 575 | G | C5-C6-N1 | -5.24 | 108.88 | 111.50 |
| 1 | AA | 928 | G | C6-C5-N7 | -5.24 | 127.25 | 130.40 |
| 2 | AB | 3 | G | C2-N3-C4 | 5.24 | 114.52 | 111.90 |
| 25 | BA | 25 | U | P-O3'-C3' | 5.24 | 125.99 | 119.70 |
| 25 | BA | 29 | A | N7-C8-N9 | 5.24 | 116.42 | 113.80 |
| 25 | BA | 54 | G | C8-N9-C4 | -5.24 | 104.30 | 106.40 |
| 25 | BA | 59 | A | N9-C1'-C2' | -5.24 | 106.23 | 112.00 |
| 26 | BB | 68 | G | N7-C8-N9 | -5.24 | 110.48 | 113.10 |
| 26 | BB | 300 | A | O5'-P-OP2 | -5.24 | 100.98 | 105.70 |
| 26 | BB | 1385 | A | O4'-C1'-C2' | -5.24 | 100.56 | 105.80 |
| 26 | BB | 1556 | C | O4'-C1'-N1 | 5.24 | 112.39 | 108.20 |
| 26 | BB | 1654 | A | C5'-C4'-O4' | 5.24 | 115.39 | 109.10 |
| 26 | BB | 2031 | A | C5'-C4'-O4' | 5.24 | 115.39 | 109.10 |
| 26 | BB | 2120 | G | O3'-P-O5' | -5.24 | 94.04 | 104.00 |
| 26 | BB | 2524 | G | C5'-C4'-O4' | 5.24 | 115.39 | 109.10 |
| 26 | BB | 2538 | C | C4-C5-C6 | 5.24 | 120.02 | 117.40 |
| 26 | BB | 2558 | C | N1-C2-O2 | 5.24 | 122.05 | 118.90 |
| 46 | BV | 77 | ARG | NE-CZ-NH1 | -5.24 | 117.68 | 120.30 |
| 1 | AA | 835 | U | C5-C6-N1 | -5.24 | 120.08 | 122.70 |
| 1 | AA | 1155 | A | C4-C5-N7 | -5.24 | 108.08 | 110.70 |
| 26 | BB | 319 | G | N3-C2-N2 | 5.24 | 123.57 | 119.90 |
| 26 | BB | 609 | A | N1-C6-N6 | -5.24 | 115.45 | 118.60 |
| 26 | BB | 883 | G | C2'-C3'-O3' | 5.24 | 122.09 | 113.70 |
| 26 | BB | 1418 | G | C3'-C2'-C1' | -5.24 | 97.31 | 101.50 |
| 26 | BB | 2037 | A | C1'-O4'-C4' | 5.24 | 114.09 | 109.90 |
| 26 | BB | 2175 | C | C3'-C2'-C1' | 5.24 | 105.69 | 101.50 |
| 26 | BB | 2505 | G | O4'-C1'-C2' | -5.24 | 100.56 | 105.80 |
| 1 | AA | 103 | U | O5'-C5'-C4' | 5.24 | 121.66 | 111.70 |
| 1 | AA | 147 | G | N1-C2-N2 | 5.24 | 120.92 | 116.20 |
| 1 | AA | 321 | A | O4'-C1'-N9 | 5.24 | 112.39 | 108.20 |
| 1 | AA | 789 | U | N3-C4-O4 | 5.24 | 123.07 | 119.40 |
| 1 | AA | 1208 | C | C6-N1-C2 | -5.24 | 118.20 | 120.30 |
| 1 | AA | 1305 | G | C4-C5-C6 | 5.24 | 121.94 | 118.80 |
| 1 | AA | 1305 | G | N9-C4-C5 | 5.24 | 107.50 | 105.40 |
| 2 | AB | 65 | C | C5-C4-N4 | 5.24 | 123.87 | 120.20 |
| 11 | AK | 64 | TYR | CG-CD1-CE1 | -5.24 | 117.11 | 121.30 |
| 26 | BB | 167 | A | C3'-C2'-C1' | 5.24 | 105.69 | 101.50 |
| 26 | BB | 505 | A | C5-C6-N1 | -5.24 | 115.08 | 117.70 |
| 26 | BB | 697 | G | C5-N7-C8 | -5.24 | 101.68 | 104.30 |
| 26 | BB | 875 | G | O4'-C1'-N9 | -5.24 | 104.01 | 108.20 |
| 26 | BB | 1199 | U | C5-C6-N1 | -5.24 | 120.08 | 122.70 |
| 26 | BB | 1951 | U | C6-N1-C2 | -5.24 | 117.86 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1991 | U | O4'-C4'-C3' | -5.24 | 98.76 | 104.00 |
| 26 | BB | 2266 | A | C6-N1-C2 | 5.24 | 121.74 | 118.60 |
| 26 | BB | 2521 | C | C1'-O4'-C4' | -5.24 | 105.71 | 109.90 |
| 26 | BB | 2637 | U | N1-C2-N3 | -5.24 | 111.76 | 114.90 |
| 30 | BF | 177 | PRO | N-CA-CB | 5.24 | 109.59 | 103.30 |
| 1 | AA | 45 | G | N1-C6-O6 | -5.24 | 116.76 | 119.90 |
| 1 | AA | 272 | C | C5-C4-N4 | -5.24 | 116.53 | 120.20 |
| 1 | AA | 1133 | G | C3'-C2'-C1' | 5.24 | 105.69 | 101.50 |
| 2 | AB | 33 | U | C6-N1-C2 | 5.24 | 124.14 | 121.00 |
| 2 | AB | 68 | C | C6-N1-C1' | 5.24 | 127.09 | 120.80 |
| 14 | AN | 68 | ARG | NE-CZ-NH2 | -5.24 | 117.68 | 120.30 |
| 25 | BA | 13 | G | N1-C6-O6 | -5.24 | 116.76 | 119.90 |
| 26 | BB | 38 | A | C4'-C3'-C2' | -5.24 | 97.36 | 102.60 |
| 26 | BB | 600 | G | C6-N1-C2 | -5.24 | 121.96 | 125.10 |
| 26 | BB | 686 | U | C6-N1-C1' | -5.24 | 113.87 | 121.20 |
| 26 | BB | 795 | C | C2-N3-C4 | -5.24 | 117.28 | 119.90 |
| 26 | BB | 1059 | G | C6-C5-N7 | -5.24 | 127.26 | 130.40 |
| 26 | BB | 1674 | G | C3'-C2'-C1' | 5.24 | 105.69 | 101.50 |
| 26 | BB | 1807 | G | C4-N9-C1' | 5.24 | 133.31 | 126.50 |
| 26 | BB | 2242 | G | N1-C6-O6 | 5.24 | 123.04 | 119.90 |
| 26 | BB | 2376 | A | O4'-C1'-N9 | -5.24 | 104.01 | 108.20 |
| 26 | BB | 2408 | U | P-O3'-C3' | 5.24 | 125.99 | 119.70 |
| 26 | BB | 2617 | U | N3-C4-O4 | 5.24 | 123.07 | 119.40 |
| 1 | AA | 134 | G | C5-C6-O6 | 5.24 | 131.74 | 128.60 |
| 1 | AA | 341 | C | C4'-C3'-O3' | 5.24 | 123.47 | 113.00 |
| 1 | AA | 1233 | G | N3-C4-C5 | -5.24 | 125.98 | 128.60 |
| 1 | AA | 1234 | C | C5-C6-N1 | 5.24 | 123.62 | 121.00 |
| 1 | AA | 1423 | G | C5-C6-N1 | -5.24 | 108.88 | 111.50 |
| 2 | AB | 14 | A | C1'-O4'-C4' | 5.24 | 114.09 | 109.90 |
| 17 | AQ | 93 | PRO | N-CD-CG | 5.24 | 111.06 | 103.20 |
| 25 | BA | 5 | U | C3'-C2'-C1' | 5.24 | 105.69 | 101.50 |
| 25 | BA | 47 | C | C5-C6-N1 | -5.24 | 118.38 | 121.00 |
| 26 | BB | 273 | G | N3-C2-N2 | -5.24 | 116.23 | 119.90 |
| 26 | BB | 379 | G | C4'-C3'-C2' | -5.24 | 97.36 | 102.60 |
| 26 | BB | 947 | A | C5-N7-C8 | -5.24 | 101.28 | 103.90 |
| 26 | BB | 2299 | U | N1-C2-N3 | 5.24 | 118.04 | 114.90 |
| 26 | BB | 2522 | U | N3-C2-O2 | -5.24 | 118.53 | 122.20 |
| 26 | BB | 2654 | A | N3-C4-N9 | -5.24 | 123.21 | 127.40 |
| 50 | BZ | 45 | PHE | CB-CG-CD1 | -5.24 | 117.13 | 120.80 |
| 1 | AA | 1 | A | N3-C4-C5 | -5.24 | 123.14 | 126.80 |
| 1 | AA | 361 | G | N7-C8-N9 | 5.24 | 115.72 | 113.10 |
| 1 | AA | 841 | C | N3-C4-N4 | 5.24 | 121.67 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 864 | A | C4-C5-N7 | 5.24 | 113.32 | 110.70 |
| 1 | AA | 1300 | G | N3-C4-C5 | -5.24 | 125.98 | 128.60 |
| 2 | AB | 11 | U | N1-C2-O2 | 5.24 | 126.47 | 122.80 |
| 4 | AD | 73 | A | C2-N3-C4 | 5.24 | 113.22 | 110.60 |
| 25 | BA | 64 | G | C3'-C2'-C1' | 5.24 | 105.69 | 101.50 |
| 26 | BB | 11 | C | O5'-P-OP2 | -5.24 | 100.99 | 105.70 |
| 26 | BB | 177 | G | C8-N9-C1' | -5.24 | 120.19 | 127.00 |
| 26 | BB | 296 | U | C5'-C4'-C3' | -5.24 | 107.62 | 116.00 |
| 26 | BB | 351 | C | C5-C6-N1 | 5.24 | 123.62 | 121.00 |
| 26 | BB | 421 | C | C4'-C3'-C2' | -5.24 | 97.36 | 102.60 |
| 26 | BB | 498 | G | C6-N1-C2 | -5.24 | 121.96 | 125.10 |
| 26 | BB | 549 | G | C2-N3-C4 | 5.24 | 114.52 | 111.90 |
| 26 | BB | 1182 | G | P-O3'-C3' | 5.24 | 125.98 | 119.70 |
| 26 | BB | 1544 | A | N7-C8-N9 | -5.24 | 111.18 | 113.80 |
| 26 | BB | 1613 | G | N7-C8-N9 | 5.24 | 115.72 | 113.10 |
| 26 | BB | 2364 | C | P-O3'-C3' | 5.24 | 125.98 | 119.70 |
| 26 | BB | 2456 | C | N3-C2-O2 | 5.24 | 125.56 | 121.90 |
| 26 | BB | 2493 | U | O3'-P-O5' | -5.24 | 94.05 | 104.00 |
| 1 | AA | 330 | C | C1'-O4'-C4' | -5.23 | 105.71 | 109.90 |
| 1 | AA | 407 | U | N1-C2-O2 | 5.23 | 126.46 | 122.80 |
| 1 | AA | 877 | G | C4-C5-N7 | -5.23 | 108.71 | 110.80 |
| 26 | BB | 245 | G | P-O3'-C3' | 5.23 | 125.98 | 119.70 |
| 26 | BB | 909 | A | C5-N7-C8 | 5.23 | 106.52 | 103.90 |
| 26 | BB | 1080 | A | N3-C4-C5 | 5.23 | 130.46 | 126.80 |
| 26 | BB | 1485 | U | C5'-C4'-O4' | 5.23 | 115.38 | 109.10 |
| 26 | BB | 1731 | G | N3-C4-N9 | 5.23 | 129.14 | 126.00 |
| 48 | BX | 79 | ARG | CA-CB-CG | -5.23 | 101.88 | 113.40 |
| 1 | AA | 175 | C | N1-C1'-C2' | -5.23 | 106.25 | 112.00 |
| 1 | AA | 288 | A | C1'-O4'-C4' | 5.23 | 114.09 | 109.90 |
| 1 | AA | 362 | G | N1-C6-O6 | 5.23 | 123.04 | 119.90 |
| 1 | AA | 400 | C | N1-C2-N3 | -5.23 | 115.54 | 119.20 |
| 1 | AA | 639 | G | C6-C5-N7 | 5.23 | 133.54 | 130.40 |
| 1 | AA | 1317 | C | P-O3'-C3' | 5.23 | 125.98 | 119.70 |
| 1 | AA | 1433 | A | C5-N7-C8 | -5.23 | 101.28 | 103.90 |
| 7 | AG | 134 | TYR | CA-CB-CG | 5.23 | 123.34 | 113.40 |
| 25 | BA | 61 | G | O4'-C4'-C3' | 5.23 | 110.29 | 106.10 |
| 26 | BB | 236 | C | N3-C4-C5 | 5.23 | 123.99 | 121.90 |
| 26 | BB | 748 | G | N9-C4-C5 | 5.23 | 107.49 | 105.40 |
| 26 | BB | 816 | C | N1-C2-O2 | 5.23 | 122.04 | 118.90 |
| 26 | BB | 879 | G | C2-N3-C4 | -5.23 | 109.28 | 111.90 |
| 26 | BB | 919 | U | C5-C4-O4 | -5.23 | 122.76 | 125.90 |
| 26 | BB | 1204 | A | C3'-C2'-C1' | -5.23 | 97.31 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1223 | G | C5'-C4'-O4' | 5.23 | 115.38 | 109.10 |
| 26 | BB | 1640 | A | C5-N7-C8 | -5.23 | 101.28 | 103.90 |
| 26 | BB | 2317 | A | N3-C4-N9 | -5.23 | 123.21 | 127.40 |
| 26 | BB | 2413 | G | O4'-C4'-C3' | 5.23 | 110.29 | 106.10 |
| 26 | BB | 2632 | A | C5-N7-C8 | 5.23 | 106.52 | 103.90 |
| 26 | BB | 2749 | A | C5-N7-C8 | 5.23 | 106.52 | 103.90 |
| 26 | BB | 2777 | G | P-O3'-C3' | 5.23 | 125.98 | 119.70 |
| 26 | BB | 2821 | A | C4-C5-C6 | 5.23 | 119.62 | 117.00 |
| 52 | B1 | 15 | ARG | CB-CG-CD | 5.23 | 125.20 | 111.60 |
| 1 | AA | 26 | A | N1-C2-N3 | 5.23 | 131.91 | 129.30 |
| 1 | AA | 257 | G | C5-C6-O6 | -5.23 | 125.46 | 128.60 |
| 1 | AA | 313 | A | N1-C6-N6 | -5.23 | 115.46 | 118.60 |
| 1 | AA | 482 | A | O4'-C1'-C2' | -5.23 | 100.57 | 105.80 |
| 1 | AA | 1270 | G | C5-C6-N1 | 5.23 | 114.11 | 111.50 |
| 1 | AA | 1412 | C | O4'-C1'-N1 | 5.23 | 112.38 | 108.20 |
| 1 | AA | 1499 | A | N9-C4-C5 | 5.23 | 107.89 | 105.80 |
| 11 | AK | 12 | ARG | CD-NE-CZ | 5.23 | 130.92 | 123.60 |
| 26 | BB | 460 | A | C4'-C3'-C2' | -5.23 | 97.37 | 102.60 |
| 26 | BB | 517 | C | C2-N3-C4 | 5.23 | 122.52 | 119.90 |
| 26 | BB | 983 | A | P-O3'-C3' | 5.23 | 125.98 | 119.70 |
| 26 | BB | 1076 | C | C4-C5-C6 | -5.23 | 114.78 | 117.40 |
| 26 | BB | 1421 | G | C4'-C3'-C2' | -5.23 | 97.37 | 102.60 |
| 26 | BB | 1682 | G | C1'-O4'-C4' | -5.23 | 105.72 | 109.90 |
| 26 | BB | 1860 | G | N1-C2-N3 | -5.23 | 120.76 | 123.90 |
| 26 | BB | 2072 | C | C3'-C2'-C1' | 5.23 | 105.69 | 101.50 |
| 26 | BB | 2262 | U | P-O5'-C5' | -5.23 | 112.53 | 120.90 |
| 26 | BB | 2452 | C | C5-C4-N4 | -5.23 | 116.54 | 120.20 |
| 26 | BB | 2478 | A | C4'-C3'-C2' | -5.23 | 97.37 | 102.60 |
| 26 | BB | 2592 | G | C4-C5-N7 | -5.23 | 108.71 | 110.80 |
| 1 | AA | 1209 | C | C2-N3-C4 | -5.23 | 117.28 | 119.90 |
| 1 | AA | 1360 | A | C5-N7-C8 | -5.23 | 101.29 | 103.90 |
| 1 | AA | 1382 | C | N3-C2-O2 | -5.23 | 118.24 | 121.90 |
| 1 | AA | 1384 | C | N1-C2-O2 | 5.23 | 122.04 | 118.90 |
| 2 | AB | 21 | A | C4-C5-C6 | -5.23 | 114.39 | 117.00 |
| 25 | BA | 9 | G | N1-C6-O6 | -5.23 | 116.76 | 119.90 |
| 26 | BB | 1393 | A | C3'-C2'-C1' | -5.23 | 97.32 | 101.50 |
| 1 | AA | 242 | G | C6-N1-C2 | -5.23 | 121.96 | 125.10 |
| 1 | AA | 684 | U | C3'-C2'-C1' | -5.23 | 97.32 | 101.50 |
| 1 | AA | 688 | G | O4'-C4'-C3' | 5.23 | 110.28 | 106.10 |
| 1 | AA | 869 | G | N3-C4-C5 | -5.23 | 125.99 | 128.60 |
| 1 | AA | 1068 | G | N1-C6-O6 | 5.23 | 123.04 | 119.90 |
| 2 | AB | 60 | U | C5'-C4'-O4' | 5.23 | 115.37 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 3 | AC | 50 | U | C4'-C3'-C2' | -5.23 | 97.37 | 102.60 |
| 10 | AJ | 153 | TYR | CB-CG-CD1 | 5.23 | 124.14 | 121.00 |
| 23 | AW | 62 | ALA | N-CA-CB | -5.23 | 102.78 | 110.10 |
| 26 | BB | 494 | G | C1'-O4'-C4' | 5.23 | 114.08 | 109.90 |
| 26 | BB | 968 | C | C4'-C3'-C2' | -5.23 | 97.37 | 102.60 |
| 26 | BB | 1370 | C | C1'-O4'-C4' | -5.23 | 105.72 | 109.90 |
| 26 | BB | 1918 | A | O4'-C1'-N9 | 5.23 | 112.38 | 108.20 |
| 26 | BB | 2079 | U | N3-C4-O4 | 5.23 | 123.06 | 119.40 |
| 26 | BB | 2432 | A | C3'-C2'-C1' | -5.23 | 97.32 | 101.50 |
| 26 | BB | 2588 | G | P-O3'-C3' | 5.23 | 125.97 | 119.70 |
| 26 | BB | 2661 | G | C6-N1-C2 | -5.23 | 121.96 | 125.10 |
| 2 | AB | 14 | A | C4-C5-C6 | -5.23 | 114.39 | 117.00 |
| 26 | BB | 30 | G | C5'-C4'-O4' | 5.23 | 115.37 | 109.10 |
| 26 | BB | 385 | C | P-O5'-C5' | 5.23 | 129.26 | 120.90 |
| 26 | BB | 448 | U | N3-C2-O2 | -5.23 | 118.54 | 122.20 |
| 26 | BB | 1212 | G | N1-C6-O6 | -5.23 | 116.76 | 119.90 |
| 26 | BB | 1285 | A | C5'-C4'-O4' | 5.23 | 115.37 | 109.10 |
| 26 | BB | 1984 | G | N3-C4-C5 | -5.23 | 125.99 | 128.60 |
| 26 | BB | 2107 | G | N7-C8-N9 | 5.23 | 115.71 | 113.10 |
| 1 | AA | 172 | A | N7-C8-N9 | -5.22 | 111.19 | 113.80 |
| 1 | AA | 1243 | C | C2-N3-C4 | 5.22 | 122.51 | 119.90 |
| 1 | AA | 1478 | U | C5-C4-O4 | -5.22 | 122.77 | 125.90 |
| 1 | AA | 1535 | C | C5-C4-N4 | 5.22 | 123.86 | 120.20 |
| 26 | BB | 136 | G | C2-N3-C4 | 5.22 | 114.51 | 111.90 |
| 26 | BB | 218 | A | C5'-C4'-C3' | -5.22 | 107.64 | 116.00 |
| 26 | BB | 260 | G | C5'-C4'-C3' | -5.22 | 107.64 | 116.00 |
| 26 | BB | 700 | G | N7-C8-N9 | -5.22 | 110.49 | 113.10 |
| 26 | BB | 706 | A | C2-N3-C4 | 5.22 | 113.21 | 110.60 |
| 26 | BB | 854 | C | N1-C2-O2 | 5.22 | 122.03 | 118.90 |
| 26 | BB | 874 | G | C5'-C4'-C3' | 5.22 | 124.36 | 116.00 |
| 26 | BB | 942 | G | N3-C2-N2 | -5.22 | 116.24 | 119.90 |
| 26 | BB | 1157 | G | N3-C2-N2 | -5.22 | 116.24 | 119.90 |
| 26 | BB | 1426 | G | N3-C4-C5 | -5.22 | 125.99 | 128.60 |
| 26 | BB | 1663 | G | O4'-C1'-N9 | 5.22 | 112.38 | 108.20 |
| 26 | BB | 1992 | G | N1-C2-N2 | 5.22 | 120.90 | 116.20 |
| 26 | BB | 2604 | U | O5'-C5'-C4' | -5.22 | 101.77 | 111.70 |
| 27 | BC | 178 | VAL | CA-CB-CG1 | 5.22 | 118.74 | 110.90 |
| 1 | AA | 591 | U | C4-C5-C6 | 5.22 | 122.83 | 119.70 |
| 1 | AA | 682 | G | C5-N7-C8 | -5.22 | 101.69 | 104.30 |
| 1 | AA | 1057 | G | C8-N9-C1' | 5.22 | 133.79 | 127.00 |
| 1 | AA | 1441 | A | N3-C4-C5 | 5.22 | 130.46 | 126.80 |
| 1 | AA | 1511 | G | C4'-C3'-C2' | 5.22 | 107.82 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 8 | AH | 53 | ARG | N-CA-CB | -5.22 | 101.20 | 110.60 |
| 19 | AS | 39 | PHE | CB-CG-CD2 | 5.22 | 124.46 | 120.80 |
| 26 | BB | 187 | G | N1-C2-N3 | -5.22 | 120.77 | 123.90 |
| 26 | BB | 243 | U | C5'-C4'-O4' | 5.22 | 115.37 | 109.10 |
| 26 | BB | 1141 | U | C4'-C3'-C2' | -5.22 | 97.38 | 102.60 |
| 26 | BB | 1282 | U | N1-C2-N3 | 5.22 | 118.03 | 114.90 |
| 26 | BB | 1724 | G | C4-C5-C6 | 5.22 | 121.93 | 118.80 |
| 26 | BB | 1900 | A | N7-C8-N9 | -5.22 | 111.19 | 113.80 |
| 26 | BB | 1935 | G | N1-C2-N2 | 5.22 | 120.90 | 116.20 |
| 26 | BB | 1974 | C | C2'-C3'-O3' | 5.22 | 122.06 | 113.70 |
| 26 | BB | 2633 | G | C5-C6-O6 | 5.22 | 131.73 | 128.60 |
| 26 | BB | 2660 | A | P-O3'-C3' | 5.22 | 125.97 | 119.70 |
| 30 | BF | 152 | GLU | O-C-N | 5.22 | 131.06 | 122.70 |
| 48 | BX | 8 | VAL | CA-CB-CG2 | 5.22 | 118.73 | 110.90 |
| 16 | AP | 42 | VAL | CG1-CB-CG2 | 5.22 | 119.25 | 110.90 |
| 26 | BB | 961 | C | C1'-O4'-C4' | -5.22 | 105.72 | 109.90 |
| 26 | BB | 1048 | A | O3'-P-O5' | -5.22 | 94.08 | 104.00 |
| 26 | BB | 1258 | U | C2-N3-C4 | -5.22 | 123.87 | 127.00 |
| 26 | BB | 1416 | G | C8-N9-C4 | 5.22 | 108.49 | 106.40 |
| 26 | BB | 1882 | U | C5'-C4'-O4' | 5.22 | 115.36 | 109.10 |
| 26 | BB | 2780 | G | N3-C4-N9 | 5.22 | 129.13 | 126.00 |
| 26 | BB | 2828 | G | N3-C4-N9 | 5.22 | 129.13 | 126.00 |
| 26 | BB | 2838 | G | C2-N3-C4 | 5.22 | 114.51 | 111.90 |
| 1 | AA | 228 | A | C4-C5-N7 | -5.22 | 108.09 | 110.70 |
| 1 | AA | 654 | G | N1-C2-N2 | 5.22 | 120.90 | 116.20 |
| 1 | AA | 844 | G | C8-N9-C4 | -5.22 | 104.31 | 106.40 |
| 1 | AA | 1342 | C | C6-N1-C2 | -5.22 | 118.21 | 120.30 |
| 25 | BA | 105 | G | N9-C1'-C2' | -5.22 | 106.26 | 112.00 |
| 26 | BB | 51 | G | C8-N9-C4 | -5.22 | 104.31 | 106.40 |
| 26 | BB | 187 | G | O4'-C1'-N9 | 5.22 | 112.38 | 108.20 |
| 26 | BB | 586 | A | C6-N1-C2 | -5.22 | 115.47 | 118.60 |
| 26 | BB | 721 | A | C5-N7-C8 | -5.22 | 101.29 | 103.90 |
| 26 | BB | 1300 | G | C6-N1-C2 | 5.22 | 128.23 | 125.10 |
| 26 | BB | 1603 | A | O5'-P-OP2 | -5.22 | 101.00 | 105.70 |
| 26 | BB | 1839 | G | N1-C6-O6 | 5.22 | 123.03 | 119.90 |
| 26 | BB | 2193 | G | N9-C1'-C2' | -5.22 | 106.26 | 112.00 |
| 26 | BB | 2241 | A | N3-C4-C5 | 5.22 | 130.45 | 126.80 |
| 26 | BB | 2422 | C | C2-N3-C4 | 5.22 | 122.51 | 119.90 |
| 26 | BB | 2501 | C | C4'-C3'-O3' | 5.22 | 123.44 | 113.00 |
| 26 | BB | 2904 | U | N3-C2-O2 | -5.22 | 118.55 | 122.20 |
| 29 | BE | 79 | LEU | CB-CG-CD2 | 5.22 | 119.87 | 111.00 |
| 36 | BL | 53 | TYR | CG-CD1-CE1 | -5.22 | 117.12 | 121.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 98 | A | N9-C1'-C2' | -5.22 | 106.26 | 112.00 |
| 26 | BB | 328 | U | N1-C2-N3 | 5.22 | 118.03 | 114.90 |
| 26 | BB | 945 | A | O4'-C1'-N9 | 5.22 | 112.37 | 108.20 |
| 26 | BB | 1442 | U | N1-C2-N3 | 5.22 | 118.03 | 114.90 |
| 26 | BB | 2199 | A | C5'-C4'-O4' | 5.22 | 115.36 | 109.10 |
| 26 | BB | 2304 | G | C5'-C4'-C3' | 5.22 | 124.35 | 116.00 |
| 26 | BB | 2715 | C | C3'-C2'-C1' | 5.22 | 105.67 | 101.50 |
| 26 | BB | 2792 | A | N3-C4-C5 | -5.22 | 123.15 | 126.80 |
| 26 | BB | 2853 | C | C5'-C4'-O4' | 5.22 | 115.36 | 109.10 |
| 1 | AA | 135 | C | C3'-C2'-C1' | -5.22 | 97.33 | 101.50 |
| 1 | AA | 1143 | G | N7-C8-N9 | 5.22 | 115.71 | 113.10 |
| 1 | AA | 1263 | C | N3-C4-N4 | 5.22 | 121.65 | 118.00 |
| 2 | AB | 35 | C | P-O3'-C3' | 5.22 | 125.96 | 119.70 |
| 4 | AD | 65 | G | C6-N1-C2 | 5.22 | 128.23 | 125.10 |
| 25 | BA | 79 | G | N7-C8-N9 | 5.22 | 115.71 | 113.10 |
| 26 | BB | 26 | G | C5-C6-N1 | 5.22 | 114.11 | 111.50 |
| 26 | BB | 89 | A | C4'-C3'-C2' | -5.22 | 97.38 | 102.60 |
| 26 | BB | 171 | U | C6-N1-C2 | -5.22 | 117.87 | 121.00 |
| 26 | BB | 329 | G | C1'-O4'-C4' | 5.22 | 114.07 | 109.90 |
| 26 | BB | 369 | U | C4'-C3'-C2' | -5.22 | 97.38 | 102.60 |
| 26 | BB | 568 | U | OP1-P-OP2 | -5.22 | 111.78 | 119.60 |
| 26 | BB | 960 | A | N7-C8-N9 | -5.22 | 111.19 | 113.80 |
| 26 | BB | 962 | G | C2'-C3'-O3' | 5.22 | 122.05 | 113.70 |
| 26 | BB | 983 | A | O4'-C1'-N9 | 5.22 | 112.37 | 108.20 |
| 26 | BB | 1136 | G | C8-N9-C1' | 5.22 | 133.78 | 127.00 |
| 26 | BB | 1376 | C | C2-N3-C4 | 5.22 | 122.51 | 119.90 |
| 26 | BB | 1596 | A | N1-C2-N3 | -5.22 | 126.69 | 129.30 |
| 26 | BB | 1783 | A | C3'-C2'-C1' | -5.22 | 97.33 | 101.50 |
| 26 | BB | 2049 | G | C6-C5-N7 | 5.22 | 133.53 | 130.40 |
| 26 | BB | 2055 | C | O4'-C1'-C2' | 5.22 | 112.30 | 107.60 |
| 26 | BB | 2319 | G | C5-C6-N1 | -5.22 | 108.89 | 111.50 |
| 26 | BB | 2324 | U | C6-N1-C1' | 5.22 | 128.50 | 121.20 |
| 26 | BB | 2666 | C | C6-N1-C1' | -5.22 | 114.54 | 120.80 |
| 28 | BD | 141 | HIS | CA-CB-CG | 5.22 | 122.47 | 113.60 |
| 30 | BF | 92 | HIS | CA-CB-CG | 5.22 | 122.47 | 113.60 |
| 1 | AA | 952 | U | N1-C2-O2 | -5.21 | 119.15 | 122.80 |
| 1 | AA | 970 | C | C4'-C3'-O3' | 5.21 | 123.43 | 113.00 |
| 1 | AA | 1308 | U | N1-C2-N3 | 5.21 | 118.03 | 114.90 |
| 6 | AF | 149 | LYS | CB-CG-CD | 5.21 | 125.16 | 111.60 |
| 25 | BA | 35 | C | C6-N1-C2 | 5.21 | 122.39 | 120.30 |
| 25 | BA | 41 | G | C1'-O4'-C4' | -5.21 | 105.73 | 109.90 |
| 26 | BB | 190 | A | C4-C5-C6 | -5.21 | 114.39 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 636 | G | N9-C4-C5 | -5.21 | 103.31 | 105.40 |
| 26 | BB | 860 | U | C2-N3-C4 | -5.21 | 123.87 | 127.00 |
| 26 | BB | 1268 | A | C5-C6-N1 | 5.21 | 120.31 | 117.70 |
| 26 | BB | 1388 | G | C5-C6-O6 | -5.21 | 125.47 | 128.60 |
| 26 | BB | 1438 | U | N1-C2-O2 | -5.21 | 119.15 | 122.80 |
| 26 | BB | 1869 | G | C2-N3-C4 | -5.21 | 109.29 | 111.90 |
| 26 | BB | 2166 | U | C5-C6-N1 | -5.21 | 120.09 | 122.70 |
| 26 | BB | 2189 | U | N1-C2-N3 | 5.21 | 118.03 | 114.90 |
| 26 | BB | 2507 | C | C4-C5-C6 | 5.21 | 120.01 | 117.40 |
| 26 | BB | 2657 | A | C8-N9-C4 | 5.21 | 107.89 | 105.80 |
| 26 | BB | 2702 | G | N3-C4-N9 | 5.21 | 129.13 | 126.00 |
| 26 | BB | 2821 | A | N3-C4-C5 | -5.21 | 123.15 | 126.80 |
| 1 | AA | 300 | A | C4-C5-C6 | 5.21 | 119.61 | 117.00 |
| 1 | AA | 1108 | G | C5-C6-O6 | -5.21 | 125.47 | 128.60 |
| 1 | AA | 1333 | A | N7-C8-N9 | 5.21 | 116.41 | 113.80 |
| 2 | AB | 12 | U | N1-C2-O2 | 5.21 | 126.45 | 122.80 |
| 7 | AG | 187 | ARG | NE-CZ-NH2 | -5.21 | 117.69 | 120.30 |
| 11 | AK | 89 | ASP | CB-CG-OD2 | -5.21 | 113.61 | 118.30 |
| 25 | BA | 19 | C | N3-C4-N4 | 5.21 | 121.65 | 118.00 |
| 26 | BB | 52 | A | O5'-P-OP1 | 5.21 | 116.95 | 110.70 |
| 26 | BB | 629 | G | C8-N9-C1' | 5.21 | 133.78 | 127.00 |
| 26 | BB | 1143 | A | C8-N9-C4 | -5.21 | 103.72 | 105.80 |
| 26 | BB | 1596 | A | C4-C5-N7 | -5.21 | 108.09 | 110.70 |
| 1 | AA | 22 | G | C6-C5-N7 | -5.21 | 127.27 | 130.40 |
| 1 | AA | 104 | G | P-O5'-C5' | 5.21 | 129.24 | 120.90 |
| 1 | AA | 266 | G | O3'-P-O5' | 5.21 | 113.90 | 104.00 |
| 1 | AA | 577 | G | C5-C6-O6 | -5.21 | 125.47 | 128.60 |
| 1 | AA | 693 | G | C2-N3-C4 | 5.21 | 114.51 | 111.90 |
| 1 | AA | 1205 | U | O4'-C1'-N1 | 5.21 | 112.37 | 108.20 |
| 2 | AB | 33 | U | C5'-C4'-O4' | 5.21 | 115.35 | 109.10 |
| 25 | BA | 38 | C | O4'-C1'-N1 | 5.21 | 112.37 | 108.20 |
| 26 | BB | 78 | U | P-O5'-C5' | 5.21 | 129.24 | 120.90 |
| 26 | BB | 83 | A | C8-N9-C4 | 5.21 | 107.89 | 105.80 |
| 26 | BB | 680 | C | N3-C2-O2 | -5.21 | 118.25 | 121.90 |
| 26 | BB | 730 | A | N9-C4-C5 | 5.21 | 107.88 | 105.80 |
| 26 | BB | 907 | G | C5-C6-O6 | 5.21 | 131.73 | 128.60 |
| 26 | BB | 1259 | G | O4'-C1'-C2' | 5.21 | 112.29 | 107.60 |
| 26 | BB | 2001 | C | N1-C2-O2 | -5.21 | 115.77 | 118.90 |
| 26 | BB | 2207 | C | C2-N1-C1' | -5.21 | 113.07 | 118.80 |
| 26 | BB | 2253 | G | C8-N9-C4 | -5.21 | 104.31 | 106.40 |
| 26 | BB | 2572 | A | C4-C5-N7 | 5.21 | 113.31 | 110.70 |
| 26 | BB | 2623 | G | C5-C6-N1 | 5.21 | 114.11 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 31 | BG | 21 | TYR | CB-CG-CD1 | 5.21 | 124.13 | 121.00 |
| 49 | BY | 4 | LYS | C-N-CA | 5.21 | 134.73 | 121.70 |
| 1 | AA | 395 | C | N1-C2-N3 | 5.21 | 122.85 | 119.20 |
| 1 | AA | 773 | G | C8-N9-C1' | 5.21 | 133.77 | 127.00 |
| 1 | AA | 1489 | G | O4'-C1'-N9 | 5.21 | 112.37 | 108.20 |
| 26 | BB | 939 | G | O4'-C1'-N9 | 5.21 | 112.37 | 108.20 |
| 26 | BB | 1704 | C | C5-C6-N1 | 5.21 | 123.61 | 121.00 |
| 26 | BB | 2160 | C | C5-C4-N4 | -5.21 | 116.55 | 120.20 |
| 26 | BB | 2867 | G | O4'-C4'-C3' | 5.21 | 110.27 | 106.10 |
| 26 | BB | 2873 | A | O4'-C1'-C2' | -5.21 | 100.59 | 105.80 |
| 30 | BF | 162 | ARG | CD-NE-CZ | 5.21 | 130.90 | 123.60 |
| 42 | BR | 30 | TRP | CZ3-CH2-CZ2 | -5.21 | 115.35 | 121.60 |
| 1 | AA | 229 | U | N1-C2-O2 | -5.21 | 119.15 | 122.80 |
| 1 | AA | 873 | A | C6-C5-N7 | -5.21 | 128.65 | 132.30 |
| 1 | AA | 910 | C | O3'-P-O5' | 5.21 | 113.90 | 104.00 |
| 1 | AA | 1136 | C | O4'-C1'-C2' | -5.21 | 100.59 | 105.80 |
| 1 | AA | 1270 | G | C6-N1-C2 | -5.21 | 121.97 | 125.10 |
| 1 | AA | 1280 | A | C6-N1-C2 | -5.21 | 115.47 | 118.60 |
| 1 | AA | 1302 | C | C2'-C3'-O3' | 5.21 | 122.03 | 113.70 |
| 1 | AA | 1322 | C | C6-N1-C2 | 5.21 | 122.38 | 120.30 |
| 1 | AA | 1427 | C | C5-C4-N4 | 5.21 | 123.85 | 120.20 |
| 13 | AM | 91 | ASP | CB-CG-OD2 | -5.21 | 113.61 | 118.30 |
| 25 | BA | 34 | A | C4'-C3'-O3' | 5.21 | 123.42 | 113.00 |
| 25 | BA | 79 | G | N3-C2-N2 | -5.21 | 116.25 | 119.90 |
| 26 | BB | 262 | A | N3-C4-N9 | -5.21 | 123.23 | 127.40 |
| 26 | BB | 324 | A | C6-C5-N7 | 5.21 | 135.94 | 132.30 |
| 26 | BB | 552 | U | C2-N1-C1' | 5.21 | 123.95 | 117.70 |
| 26 | BB | 779 | U | O4'-C1'-N1 | 5.21 | 112.37 | 108.20 |
| 26 | BB | 1018 | U | C4-C5-C6 | 5.21 | 122.83 | 119.70 |
| 26 | BB | 1445 | G | N9-C4-C5 | -5.21 | 103.32 | 105.40 |
| 26 | BB | 1559 | U | N3-C4-O4 | 5.21 | 123.05 | 119.40 |
| 26 | BB | 1579 | A | N1-C2-N3 | -5.21 | 126.70 | 129.30 |
| 26 | BB | 1684 | G | C6-N1-C2 | -5.21 | 121.97 | 125.10 |
| 26 | BB | 1789 | A | C5'-C4'-C3' | -5.21 | 107.67 | 116.00 |
| 26 | BB | 1830 | C | C2-N1-C1' | -5.21 | 113.07 | 118.80 |
| 26 | BB | 2326 | C | N1-C2-N3 | -5.21 | 115.55 | 119.20 |
| 26 | BB | 2327 | A | C2-N3-C4 | 5.21 | 113.20 | 110.60 |
| 26 | BB | 2588 | G | N9-C1'-C2' | -5.21 | 106.27 | 112.00 |
| 26 | BB | 2761 | A | C4-C5-N7 | 5.21 | 113.30 | 110.70 |
| 26 | BB | 2875 | C | C4-C5-C6 | -5.21 | 114.80 | 117.40 |
| 26 | BB | 2889 | C | N3-C4-C5 | -5.21 | 119.82 | 121.90 |
| 29 | BE | 170 | VAL | CA-CB-CG1 | 5.21 | 118.71 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 39 | BO | 64 | TRP | CE3-CZ3-CH2 | -5.21 | 115.47 | 121.20 |
| 1 | AA | 716 | A | C4-C5-N7 | -5.21 | 108.10 | 110.70 |
| 26 | BB | 150 | U | N1-C2-N3 | 5.21 | 118.02 | 114.90 |
| 26 | BB | 397 | U | O4'-C1'-N1 | 5.21 | 112.36 | 108.20 |
| 26 | BB | 1148 | U | N1-C1'-C2' | -5.21 | 106.27 | 112.00 |
| 26 | BB | 1196 | C | C5-C4-N4 | -5.21 | 116.56 | 120.20 |
| 26 | BB | 1322 | A | C6-C5-N7 | 5.21 | 135.94 | 132.30 |
| 26 | BB | 1340 | U | C4'-C3'-C2' | -5.21 | 97.39 | 102.60 |
| 26 | BB | 1826 | G | O4'-C1'-C2' | 5.21 | 112.29 | 107.60 |
| 26 | BB | 1901 | A | C5-N7-C8 | 5.21 | 106.50 | 103.90 |
| 26 | BB | 2157 | G | C5-C6-O6 | 5.21 | 131.72 | 128.60 |
| 26 | BB | 2193 | G | O4'-C1'-N9 | 5.21 | 112.36 | 108.20 |
| 26 | BB | 2199 | A | C5-N7-C8 | -5.21 | 101.30 | 103.90 |
| 26 | BB | 2531 | A | N1-C6-N6 | 5.21 | 121.72 | 118.60 |
| 30 | BF | 191 | ASP | CB-CG-OD2 | -5.21 | 113.61 | 118.30 |
| 39 | BO | 55 | ARG | NE-CZ-NH2 | -5.21 | 117.70 | 120.30 |
| 1 | AA | 172 | A | C3'-C2'-C1' | 5.21 | 105.66 | 101.50 |
| 1 | AA | 530 | G | P-O3'-C3' | 5.21 | 125.95 | 119.70 |
| 1 | AA | 684 | U | N1-C2-N3 | 5.21 | 118.02 | 114.90 |
| 1 | AA | 1181 | G | OP1-P-O3' | 5.21 | 116.65 | 105.20 |
| 2 | AB | 19 | G | C5'-C4'-O4' | 5.21 | 115.35 | 109.10 |
| 26 | BB | 622 | G | C5'-C4'-O4' | 5.21 | 115.35 | 109.10 |
| 26 | BB | 1202 | G | C6-C5-N7 | -5.21 | 127.28 | 130.40 |
| 26 | BB | 1817 | G | C2-N3-C4 | 5.21 | 114.50 | 111.90 |
| 43 | BS | 23 | TYR | CG-CD1-CE1 | -5.21 | 117.14 | 121.30 |
| 1 | AA | 556 | C | N3-C4-N4 | 5.20 | 121.64 | 118.00 |
| 1 | AA | 917 | G | C3'-C2'-C1' | 5.20 | 105.66 | 101.50 |
| 1 | AA | 1257 | A | N7-C8-N9 | -5.20 | 111.20 | 113.80 |
| 3 | AC | 28 | U | N3-C2-O2 | -5.20 | 118.56 | 122.20 |
| 3 | AC | 38 | G | N3-C4-N9 | 5.20 | 129.12 | 126.00 |
| 3 | AC | 41 | A | N3-C4-N9 | 5.20 | 131.56 | 127.40 |
| 3 | AC | 58 | C | N1-C2-O2 | 5.20 | 122.02 | 118.90 |
| 4 | AD | 39 | A | O4'-C1'-N9 | 5.20 | 112.36 | 108.20 |
| 25 | BA | 111 | U | P-O3'-C3' | 5.20 | 125.94 | 119.70 |
| 26 | BB | 221 | A | N1-C6-N6 | 5.20 | 121.72 | 118.60 |
| 26 | BB | 375 | G | P-O3'-C3' | 5.20 | 125.94 | 119.70 |
| 26 | BB | 750 | A | O4'-C4'-C3' | 5.20 | 110.26 | 106.10 |
| 26 | BB | 1833 | C | N3-C4-C5 | 5.20 | 123.98 | 121.90 |
| 1 | AA | 446 | G | N9-C1'-C2' | -5.20 | 106.28 | 112.00 |
| 1 | AA | 498 | A | N1-C6-N6 | -5.20 | 115.48 | 118.60 |
| 1 | AA | 640 | A | C6-N1-C2 | -5.20 | 115.48 | 118.60 |
| 1 | AA | 1540 | U | N3-C2-O2 | -5.20 | 118.56 | 122.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 197 | A | N7-C8-N9 | 5.20 | 116.40 | 113.80 |
| 26 | BB | 874 | G | C2-N3-C4 | 5.20 | 114.50 | 111.90 |
| 26 | BB | 1042 | G | O4'-C4'-C3' | 5.20 | 110.26 | 106.10 |
| 26 | BB | 1397 | U | C2-N3-C4 | 5.20 | 130.12 | 127.00 |
| 26 | BB | 1667 | G | C6-N1-C2 | 5.20 | 128.22 | 125.10 |
| 26 | BB | 2241 | A | N9-C4-C5 | -5.20 | 103.72 | 105.80 |
| 33 | BI | 103 | VAL | CA-CB-CG2 | 5.20 | 118.70 | 110.90 |
| 1 | AA | 210 | C | N3-C4-C5 | 5.20 | 123.98 | 121.90 |
| 1 | AA | 997 | U | N3-C4-O4 | -5.20 | 115.76 | 119.40 |
| 1 | AA | 1136 | C | C5-C4-N4 | 5.20 | 123.84 | 120.20 |
| 1 | AA | 1244 | G | N9-C4-C5 | 5.20 | 107.48 | 105.40 |
| 2 | AB | 43 | G | C6-N1-C2 | -5.20 | 121.98 | 125.10 |
| 6 | AF | 116 | ALA | N-CA-CB | -5.20 | 102.82 | 110.10 |
| 26 | BB | 110 | G | C1'-O4'-C4' | -5.20 | 105.74 | 109.90 |
| 26 | BB | 1227 | G | N3-C4-C5 | -5.20 | 126.00 | 128.60 |
| 26 | BB | 1334 | G | C8-N9-C1' | 5.20 | 133.76 | 127.00 |
| 26 | BB | 1667 | G | N9-C1'-C2' | -5.20 | 106.28 | 112.00 |
| 26 | BB | 1785 | A | O4'-C1'-N9 | 5.20 | 112.36 | 108.20 |
| 26 | BB | 2113 | U | N3-C4-C5 | 5.20 | 117.72 | 114.60 |
| 26 | BB | 2170 | A | C8-N9-C4 | -5.20 | 103.72 | 105.80 |
| 26 | BB | 2216 | G | C5-C6-N1 | 5.20 | 114.10 | 111.50 |
| 26 | BB | 2653 | U | N3-C4-C5 | -5.20 | 111.48 | 114.60 |
| 31 | BG | 177 | ARG | NE-CZ-NH2 | 5.20 | 122.90 | 120.30 |
| 46 | BV | 18 | GLU | CB-CA-C | 5.20 | 120.80 | 110.40 |
| 1 | AA | 35 | G | C5-C6-O6 | 5.20 | 131.72 | 128.60 |
| 1 | AA | 586 | C | N3-C2-O2 | -5.20 | 118.26 | 121.90 |
| 1 | AA | 774 | G | C4-C5-C6 | 5.20 | 121.92 | 118.80 |
| 1 | AA | 848 | C | O4'-C4'-C3' | 5.20 | 110.26 | 106.10 |
| 1 | AA | 850 | U | C5'-C4'-O4' | 5.20 | 115.34 | 109.10 |
| 1 | AA | 890 | G | P-O3'-C3' | 5.20 | 125.94 | 119.70 |
| 1 | AA | 916 | U | C2-N3-C4 | -5.20 | 123.88 | 127.00 |
| 1 | AA | 1147 | C | C5-C6-N1 | -5.20 | 118.40 | 121.00 |
| 1 | AA | 1241 | G | P-O5'-C5' | 5.20 | 129.22 | 120.90 |
| 1 | AA | 1365 | G | C1'-O4'-C4' | 5.20 | 114.06 | 109.90 |
| 4 | AD | 75 | C | N1-C2-N3 | -5.20 | 115.56 | 119.20 |
| 26 | BB | 820 | A | C5'-C4'-O4' | 5.20 | 115.34 | 109.10 |
| 26 | BB | 1027 | A | O4'-C4'-C3' | -5.20 | 98.80 | 104.00 |
| 26 | BB | 2043 | C | P-O5'-C5' | 5.20 | 129.22 | 120.90 |
| 26 | BB | 2658 | C | O4'-C1'-N1 | 5.20 | 112.36 | 108.20 |
| 1 | AA | 82 | G | C5-N7-C8 | -5.20 | 101.70 | 104.30 |
| 1 | AA | 127 | G | N3-C4-N9 | 5.20 | 129.12 | 126.00 |
| 26 | BB | 141 | G | C2-N3-C4 | 5.20 | 114.50 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 247 | G | O4'-C1'-C2' | -5.20 | 100.60 | 105.80 |
| 26 | BB | 831 | G | C3'-C2'-C1' | -5.20 | 97.34 | 101.50 |
| 26 | BB | 1734 | G | N9-C1'-C2' | -5.20 | 106.28 | 112.00 |
| 26 | BB | 2367 | G | C4-C5-N7 | -5.20 | 108.72 | 110.80 |
| 26 | BB | 2637 | U | C4'-C3'-C2' | -5.20 | 97.40 | 102.60 |
| 26 | BB | 2723 | C | C3'-C2'-C1' | 5.20 | 105.66 | 101.50 |
| 26 | BB | 2796 | U | C5-C6-N1 | -5.20 | 120.10 | 122.70 |
| 1 | AA | 127 | G | C5-C6-N1 | -5.20 | 108.90 | 111.50 |
| 1 | AA | 157 | U | O3'-P-O5' | -5.20 | 94.13 | 104.00 |
| 1 | AA | 243 | A | C1'-O4'-C4' | -5.20 | 105.74 | 109.90 |
| 1 | AA | 615 | G | O4'-C1'-C2' | 5.20 | 112.28 | 107.60 |
| 1 | AA | 747 | A | C5-N7-C8 | -5.20 | 101.30 | 103.90 |
| 1 | AA | 920 | U | C5'-C4'-O4' | 5.20 | 115.33 | 109.10 |
| 1 | AA | 1232 | U | C4'-C3'-C2' | -5.20 | 97.40 | 102.60 |
| 1 | AA | 1400 | C | C2-N3-C4 | 5.20 | 122.50 | 119.90 |
| 1 | AA | 1520 | C | C4'-C3'-C2' | -5.20 | 97.40 | 102.60 |
| 4 | AD | 32 | G | N3-C2-N2 | 5.20 | 123.54 | 119.90 |
| 26 | BB | 354 | A | N1-C6-N6 | 5.20 | 121.72 | 118.60 |
| 26 | BB | 389 | G | C5-N7-C8 | 5.20 | 106.90 | 104.30 |
| 26 | BB | 570 | G | C4-C5-N7 | -5.20 | 108.72 | 110.80 |
| 26 | BB | 576 | U | N1-C1'-C2' | 5.20 | 120.75 | 114.00 |
| 26 | BB | 758 | C | O4'-C1'-N1 | 5.20 | 112.36 | 108.20 |
| 26 | BB | 856 | G | N9-C4-C5 | 5.20 | 107.48 | 105.40 |
| 26 | BB | 871 | U | C4-C5-C6 | 5.20 | 122.82 | 119.70 |
| 26 | BB | 1828 | G | N3-C4-N9 | 5.20 | 129.12 | 126.00 |
| 26 | BB | 2218 | G | C3'-C2'-C1' | 5.20 | 105.66 | 101.50 |
| 26 | BB | 2485 | G | N1-C6-O6 | -5.20 | 116.78 | 119.90 |
| 26 | BB | 2512 | C | C4'-C3'-C2' | -5.20 | 97.40 | 102.60 |
| 26 | BB | 2682 | A | C6-N1-C2 | -5.20 | 115.48 | 118.60 |
| 26 | BB | 2818 | U | N3-C4-C5 | -5.20 | 111.48 | 114.60 |
| 1 | AA | 401 | C | C6-N1-C2 | 5.19 | 122.38 | 120.30 |
| 1 | AA | 459 | A | O4'-C1'-N9 | 5.19 | 112.36 | 108.20 |
| 1 | AA | 510 | A | O4'-C4'-C3' | 5.19 | 110.25 | 106.10 |
| 1 | AA | 1214 | C | C4-C5-C6 | -5.19 | 114.80 | 117.40 |
| 2 | AB | 3 | G | C5'-C4'-O4' | 5.19 | 115.33 | 109.10 |
| 14 | AN | 17 | ASP | CB-CG-OD2 | -5.19 | 113.62 | 118.30 |
| 26 | BB | 61 | C | C2-N1-C1' | -5.19 | 113.09 | 118.80 |
| 26 | BB | 416 | U | C5-C6-N1 | -5.19 | 120.10 | 122.70 |
| 26 | BB | 2392 | A | C3'-C2'-C1' | -5.19 | 97.34 | 101.50 |
| 26 | BB | 2640 | G | OP2-P-O3' | 5.19 | 116.63 | 105.20 |
| 26 | BB | 2648 | G | C4-C5-N7 | -5.19 | 108.72 | 110.80 |
| 1 | AA | 528 | C | P-O3'-C3' | 5.19 | 125.93 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1195 | C | C3'-C2'-C1' | 5.19 | 105.65 | 101.50 |
| 1 | AA | 1326 | U | N1-C1'-C2' | -5.19 | 106.29 | 112.00 |
| 1 | AA | 1524 | C | N1-C2-O2 | -5.19 | 115.78 | 118.90 |
| 25 | BA | 5 | U | N1-C1'-C2' | -5.19 | 106.29 | 112.00 |
| 26 | BB | 18 | U | N1-C2-O2 | -5.19 | 119.17 | 122.80 |
| 26 | BB | 325 | G | C6-N1-C2 | -5.19 | 121.98 | 125.10 |
| 26 | BB | 368 | A | N1-C2-N3 | 5.19 | 131.90 | 129.30 |
| 26 | BB | 845 | A | C5-N7-C8 | 5.19 | 106.50 | 103.90 |
| 26 | BB | 924 | G | N3-C4-N9 | 5.19 | 129.12 | 126.00 |
| 26 | BB | 1036 | G | C4-C5-C6 | -5.19 | 115.69 | 118.80 |
| 26 | BB | 1036 | G | C8-N9-C1' | 5.19 | 133.75 | 127.00 |
| 26 | BB | 1217 | U | C6-N1-C2 | -5.19 | 117.88 | 121.00 |
| 26 | BB | 1373 | A | O4'-C4'-C3' | -5.19 | 98.81 | 104.00 |
| 26 | BB | 1388 | G | N3-C4-N9 | 5.19 | 129.12 | 126.00 |
| 26 | BB | 2134 | A | N1-C2-N3 | -5.19 | 126.70 | 129.30 |
| 26 | BB | 2546 | U | N3-C4-O4 | 5.19 | 123.03 | 119.40 |
| 26 | BB | 2617 | U | C2-N1-C1' | -5.19 | 111.47 | 117.70 |
| 26 | BB | 2728 | U | O4'-C1'-N1 | 5.19 | 112.35 | 108.20 |
| 1 | AA | 55 | A | C5-N7-C8 | -5.19 | 101.31 | 103.90 |
| 1 | AA | 174 | A | N1-C6-N6 | -5.19 | 115.48 | 118.60 |
| 1 | AA | 582 | C | P-O3'-C3' | 5.19 | 125.93 | 119.70 |
| 1 | AA | 847 | G | C4'-C3'-C2' | -5.19 | 97.41 | 102.60 |
| 1 | AA | 1127 | G | C5-C6-O6 | -5.19 | 125.49 | 128.60 |
| 1 | AA | 1459 | G | N9-C4-C5 | 5.19 | 107.48 | 105.40 |
| 3 | AC | 16 | A | C2-N3-C4 | -5.19 | 108.00 | 110.60 |
| 6 | AF | 41 | TYR | CD1-CG-CD2 | 5.19 | 123.61 | 117.90 |
| 26 | BB | 321 | U | O4'-C1'-C2' | -5.19 | 100.61 | 105.80 |
| 26 | BB | 526 | A | C5'-C4'-O4' | 5.19 | 115.33 | 109.10 |
| 26 | BB | 528 | A | N1-C6-N6 | -5.19 | 115.48 | 118.60 |
| 26 | BB | 547 | A | N7-C8-N9 | -5.19 | 111.20 | 113.80 |
| 26 | BB | 559 | G | N3-C4-N9 | 5.19 | 129.12 | 126.00 |
| 26 | BB | 1011 | G | C5-C6-N1 | 5.19 | 114.10 | 111.50 |
| 26 | BB | 1215 | G | N7-C8-N9 | -5.19 | 110.50 | 113.10 |
| 26 | BB | 1337 | G | C4-C5-C6 | 5.19 | 121.91 | 118.80 |
| 26 | BB | 1511 | G | C6-C5-N7 | 5.19 | 133.51 | 130.40 |
| 26 | BB | 2181 | U | N3-C2-O2 | -5.19 | 118.57 | 122.20 |
| 26 | BB | 2238 | G | C5-C6-O6 | 5.19 | 131.72 | 128.60 |
| 26 | BB | 2722 | G | N1-C2-N2 | 5.19 | 120.87 | 116.20 |
| 32 | BH | 32 | LEU | CB-CG-CD1 | 5.19 | 119.82 | 111.00 |
| 45 | BU | 99 | ARG | NE-CZ-NH2 | 5.19 | 122.89 | 120.30 |
| 1 | AA | 259 | G | C5'-C4'-C3' | 5.19 | 124.30 | 116.00 |
| 1 | AA | 585 | G | C5-C6-N1 | 5.19 | 114.09 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1111 | A | N7-C8-N9 | 5.19 | 116.39 | 113.80 |
| 1 | AA | 1254 | A | C2-N3-C4 | 5.19 | 113.19 | 110.60 |
| 1 | AA | 1292 | G | C2-N3-C4 | 5.19 | 114.50 | 111.90 |
| 25 | BA | 111 | U | C6-N1-C2 | 5.19 | 124.11 | 121.00 |
| 26 | BB | 2 | G | C3'-C2'-C1' | -5.19 | 97.35 | 101.50 |
| 26 | BB | 512 | G | C8-N9-C1' | 5.19 | 133.75 | 127.00 |
| 26 | BB | 974 | G | N1-C2-N2 | 5.19 | 120.87 | 116.20 |
| 26 | BB | 1537 | G | C4-C5-N7 | 5.19 | 112.88 | 110.80 |
| 26 | BB | 2578 | G | C8-N9-C4 | -5.19 | 104.33 | 106.40 |
| 1 | AA | 330 | C | N1-C2-N3 | -5.19 | 115.57 | 119.20 |
| 1 | AA | 402 | G | N3-C4-N9 | 5.19 | 129.11 | 126.00 |
| 1 | AA | 661 | G | N7-C8-N9 | -5.19 | 110.51 | 113.10 |
| 1 | AA | 838 | G | C1'-O4'-C4' | -5.19 | 105.75 | 109.90 |
| 1 | AA | 1046 | A | C8-N9-C4 | -5.19 | 103.72 | 105.80 |
| 1 | AA | 1065 | U | C2-N3-C4 | -5.19 | 123.89 | 127.00 |
| 1 | AA | 1223 | C | N3-C2-O2 | -5.19 | 118.27 | 121.90 |
| 1 | AA | 1231 | G | C1'-O4'-C4' | -5.19 | 105.75 | 109.90 |
| 1 | AA | 1365 | G | N3-C4-C5 | 5.19 | 131.19 | 128.60 |
| 1 | AA | 1454 | G | N1-C2-N2 | 5.19 | 120.87 | 116.20 |
| 2 | AB | 22 | G | N9-C1'-C2' | -5.19 | 106.29 | 112.00 |
| 3 | AC | 16 | A | N1-C2-N3 | 5.19 | 131.89 | 129.30 |
| 14 | AN | 51 | PHE | CB-CG-CD1 | 5.19 | 124.43 | 120.80 |
| 15 | AO | 45 | ASN | N-CA-CB | -5.19 | 101.26 | 110.60 |
| 25 | BA | 72 | G | C5'-C4'-O4' | 5.19 | 115.32 | 109.10 |
| 25 | BA | 113 | C | C5-C4-N4 | -5.19 | 116.57 | 120.20 |
| 26 | BB | 493 | G | C6-N1-C2 | -5.19 | 121.99 | 125.10 |
| 26 | BB | 1071 | G | C4-C5-N7 | -5.19 | 108.72 | 110.80 |
| 26 | BB | 1091 | G | C5-N7-C8 | 5.19 | 106.89 | 104.30 |
| 26 | BB | 1447 | C | N1-C2-N3 | -5.19 | 115.57 | 119.20 |
| 26 | BB | 1560 | G | O4'-C4'-C3' | 5.19 | 110.25 | 106.10 |
| 26 | BB | 1734 | G | C4'-C3'-C2' | -5.19 | 97.41 | 102.60 |
| 26 | BB | 2006 | C | C4'-C3'-C2' | -5.19 | 97.41 | 102.60 |
| 26 | BB | 2302 | U | N3-C4-C5 | -5.19 | 111.49 | 114.60 |
| 26 | BB | 2335 | A | C8-N9-C4 | -5.19 | 103.72 | 105.80 |
| 26 | BB | 2435 | A | N7-C8-N9 | -5.19 | 111.21 | 113.80 |
| 26 | BB | 2796 | U | O4'-C4'-C3' | 5.19 | 110.25 | 106.10 |
| 1 | AA | 432 | A | N1-C6-N6 | -5.19 | 115.49 | 118.60 |
| 1 | AA | 1408 | A | N9-C1'-C2' | -5.19 | 106.30 | 112.00 |
| 1 | AA | 1537 | U | N1-C2-O2 | 5.19 | 126.43 | 122.80 |
| 2 | AB | 58 | A | C2-N3-C4 | -5.19 | 108.01 | 110.60 |
| 25 | BA | 89 | U | N3-C4-C5 | 5.19 | 117.71 | 114.60 |
| 26 | BB | 202 | U | N1-C2-N3 | 5.19 | 118.01 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 238 | C | O4'-C1'-N1 | 5.19 | 112.35 | 108.20 |
| 1 | AA | 622 | A | C4-C5-C6 | -5.18 | 114.41 | 117.00 |
| 1 | AA | 654 | G | C4-C5-N7 | -5.18 | 108.73 | 110.80 |
| 1 | AA | 1027 | C | N3-C4-N4 | 5.18 | 121.63 | 118.00 |
| 1 | AA | 1158 | C | C2-N1-C1' | 5.18 | 124.50 | 118.80 |
| 2 | AB | 58 | A | C5-C6-N1 | -5.18 | 115.11 | 117.70 |
| 26 | BB | 312 | G | N3-C4-C5 | -5.18 | 126.01 | 128.60 |
| 26 | BB | 808 | G | C3'-C2'-C1' | 5.18 | 105.65 | 101.50 |
| 26 | BB | 881 | G | O4'-C1'-N9 | 5.18 | 112.35 | 108.20 |
| 26 | BB | 984 | A | N1-C2-N3 | -5.18 | 126.71 | 129.30 |
| 26 | BB | 1474 | U | P-O3'-C3' | 5.18 | 125.92 | 119.70 |
| 26 | BB | 1714 | U | O5'-C5'-C4' | 5.18 | 121.55 | 111.70 |
| 26 | BB | 2191 | A | C3'-C2'-C1' | -5.18 | 97.35 | 101.50 |
| 26 | BB | 2554 | U | N1-C2-N3 | 5.18 | 118.01 | 114.90 |
| 26 | BB | 2895 | G | C5'-C4'-O4' | 5.18 | 115.32 | 109.10 |
| 1 | AA | 185 | U | C3'-C2'-C1' | -5.18 | 97.35 | 101.50 |
| 1 | AA | 939 | G | N1-C2-N3 | -5.18 | 120.79 | 123.90 |
| 1 | AA | 957 | U | N1-C2-O2 | 5.18 | 126.43 | 122.80 |
| 1 | AA | 1416 | G | C3'-C2'-C1' | -5.18 | 97.35 | 101.50 |
| 1 | AA | 1455 | G | O3'-P-O5' | -5.18 | 94.15 | 104.00 |
| 1 | AA | 1493 | A | C6-N1-C2 | 5.18 | 121.71 | 118.60 |
| 2 | AB | 4 | G | C2-N3-C4 | 5.18 | 114.49 | 111.90 |
| 2 | AB | 50 | G | C5-N7-C8 | -5.18 | 101.71 | 104.30 |
| 2 | AB | 72 | U | P-O3'-C3' | 5.18 | 125.92 | 119.70 |
| 13 | AM | 16 | ARG | CD-NE-CZ | 5.18 | 130.86 | 123.60 |
| 15 | AO | 59 | GLY | CA-C-O | -5.18 | 111.27 | 120.60 |
| 25 | BA | 28 | C | C5-C4-N4 | -5.18 | 116.57 | 120.20 |
| 25 | BA | 62 | C | C4-C5-C6 | 5.18 | 119.99 | 117.40 |
| 26 | BB | 159 | G | N9-C1'-C2' | -5.18 | 106.30 | 112.00 |
| 26 | BB | 774 | G | C4'-C3'-C2' | -5.18 | 97.42 | 102.60 |
| 26 | BB | 1016 | G | N3-C2-N2 | 5.18 | 123.53 | 119.90 |
| 26 | BB | 1282 | U | C4-C5-C6 | 5.18 | 122.81 | 119.70 |
| 26 | BB | 1377 | G | C4-N9-C1' | -5.18 | 119.76 | 126.50 |
| 26 | BB | 1387 | A | C4-C5-N7 | -5.18 | 108.11 | 110.70 |
| 26 | BB | 1764 | C | N1-C2-N3 | -5.18 | 115.57 | 119.20 |
| 26 | BB | 1781 | U | C4'-C3'-O3' | -5.18 | 98.52 | 109.40 |
| 26 | BB | 1947 | C | C4'-C3'-C2' | -5.18 | 97.42 | 102.60 |
| 26 | BB | 2157 | G | N7-C8-N9 | 5.18 | 115.69 | 113.10 |
| 26 | BB | 2361 | G | C5'-C4'-C3' | 5.18 | 124.29 | 116.00 |
| 26 | BB | 2461 | A | C4-C5-N7 | -5.18 | 108.11 | 110.70 |
| 26 | BB | 2566 | A | O4'-C1'-N9 | 5.18 | 112.35 | 108.20 |
| 26 | BB | 2903 | U | C2-N3-C4 | -5.18 | 123.89 | 127.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 47 | BW | 102 | ILE | CB-CA-C | 5.18 | 121.97 | 111.60 |
| 1 | AA | 68 | G | C6-C5-N7 | -5.18 | 127.29 | 130.40 |
| 1 | AA | 886 | G | C3'-C2'-C1' | 5.18 | 105.64 | 101.50 |
| 1 | AA | 908 | A | O4'-C4'-C3' | -5.18 | 98.82 | 104.00 |
| 1 | AA | 1213 | A | C4-C5-N7 | 5.18 | 113.29 | 110.70 |
| 8 | AH | 156 | ARG | CD-NE-CZ | 5.18 | 130.85 | 123.60 |
| 26 | BB | 478 | A | N9-C4-C5 | 5.18 | 107.87 | 105.80 |
| 26 | BB | 697 | G | N3-C4-N9 | -5.18 | 122.89 | 126.00 |
| 26 | BB | 1254 | A | C6-N1-C2 | 5.18 | 121.71 | 118.60 |
| 26 | BB | 1543 | G | C2-N3-C4 | 5.18 | 114.49 | 111.90 |
| 26 | BB | 2319 | G | C8-N9-C4 | -5.18 | 104.33 | 106.40 |
| 26 | BB | 2383 | G | N1-C2-N2 | -5.18 | 111.54 | 116.20 |
| 26 | BB | 2874 | C | C5'-C4'-O4' | 5.18 | 115.32 | 109.10 |
| 1 | AA | 38 | G | C4-C5-C6 | 5.18 | 121.91 | 118.80 |
| 1 | AA | 359 | G | C5-N7-C8 | 5.18 | 106.89 | 104.30 |
| 1 | AA | 491 | G | C8-N9-C4 | -5.18 | 104.33 | 106.40 |
| 1 | AA | 533 | A | C5-N7-C8 | -5.18 | 101.31 | 103.90 |
| 1 | AA | 887 | G | C6-N1-C2 | -5.18 | 121.99 | 125.10 |
| 1 | AA | 922 | G | C6-C5-N7 | -5.18 | 127.29 | 130.40 |
| 1 | AA | 1106 | G | C1'-O4'-C4' | -5.18 | 105.76 | 109.90 |
| 1 | AA | 1271 | A | P-O3'-C3' | 5.18 | 125.92 | 119.70 |
| 1 | AA | 1371 | G | N1-C2-N3 | -5.18 | 120.79 | 123.90 |
| 1 | AA | 1515 | G | N1-C2-N2 | 5.18 | 120.86 | 116.20 |
| 26 | BB | 60 | G | C6-N1-C2 | 5.18 | 128.21 | 125.10 |
| 26 | BB | 188 | G | C8-N9-C4 | -5.18 | 104.33 | 106.40 |
| 26 | BB | 218 | A | N1-C2-N3 | -5.18 | 126.71 | 129.30 |
| 26 | BB | 445 | C | C2-N1-C1' | -5.18 | 113.10 | 118.80 |
| 26 | BB | 597 | G | C6-N1-C2 | -5.18 | 121.99 | 125.10 |
| 26 | BB | 1209 | U | C4'-C3'-C2' | -5.18 | 97.42 | 102.60 |
| 26 | BB | 1239 | G | N9-C4-C5 | 5.18 | 107.47 | 105.40 |
| 26 | BB | 1286 | A | O4'-C1'-N9 | 5.18 | 112.34 | 108.20 |
| 26 | BB | 1907 | G | C6-C5-N7 | -5.18 | 127.29 | 130.40 |
| 26 | BB | 2238 | G | C2-N3-C4 | -5.18 | 109.31 | 111.90 |
| 26 | BB | 2571 | U | C6-N1-C2 | -5.18 | 117.89 | 121.00 |
| 26 | BB | 2628 | C | N1-C2-N3 | -5.18 | 115.57 | 119.20 |
| 31 | BG | 114 | ARG | NE-CZ-NH2 | -5.18 | 117.71 | 120.30 |
| 41 | BQ | 94 | ARG | CD-NE-CZ | 5.18 | 130.85 | 123.60 |
| 1 | AA | 973 | G | N9-C1'-C2' | 5.18 | 120.73 | 114.00 |
| 1 | AA | 1211 | U | C4'-C3'-C2' | 5.18 | 107.78 | 102.60 |
| 1 | AA | 1287 | A | C4'-C3'-C2' | -5.18 | 97.42 | 102.60 |
| 1 | AA | 1464 | U | C5-C6-N1 | -5.18 | 120.11 | 122.70 |
| 1 | AA | 1468 | A | C4'-C3'-C2' | 5.18 | 107.78 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 322 | A | N1-C2-N3 | 5.18 | 131.89 | 129.30 |
| 26 | BB | 553 | G | O4'-C1'-N9 | 5.18 | 112.34 | 108.20 |
| 26 | BB | 662 | G | C6-N1-C2 | -5.18 | 121.99 | 125.10 |
| 26 | BB | 1032 | A | C8-N9-C4 | -5.18 | 103.73 | 105.80 |
| 26 | BB | 1065 | U | C4'-C3'-C2' | 5.18 | 107.78 | 102.60 |
| 26 | BB | 1191 | G | N3-C4-N9 | 5.18 | 129.11 | 126.00 |
| 26 | BB | 2062 | A | C4'-C3'-C2' | -5.18 | 97.42 | 102.60 |
| 26 | BB | 2363 | G | N1-C2-N3 | 5.18 | 127.01 | 123.90 |
| 1 | AA | 200 | G | C5-N7-C8 | 5.18 | 106.89 | 104.30 |
| 1 | AA | 202 | G | N3-C4-N9 | -5.18 | 122.89 | 126.00 |
| 1 | AA | 422 | C | O4'-C4'-C3' | 5.18 | 110.24 | 106.10 |
| 1 | AA | 899 | C | C4-C5-C6 | 5.18 | 119.99 | 117.40 |
| 1 | AA | 1083 | U | C5'-C4'-C3' | -5.18 | 107.72 | 116.00 |
| 1 | AA | 1184 | G | C5'-C4'-O4' | 5.18 | 115.31 | 109.10 |
| 1 | AA | 1239 | A | C2-N3-C4 | 5.18 | 113.19 | 110.60 |
| 1 | AA | 1294 | G | C5-N7-C8 | -5.18 | 101.71 | 104.30 |
| 1 | AA | 1392 | G | C5-C6-O6 | -5.18 | 125.49 | 128.60 |
| 1 | AA | 1500 | A | C6-C5-N7 | 5.18 | 135.92 | 132.30 |
| 4 | AD | 20 | G | C4-C5-N7 | 5.18 | 112.87 | 110.80 |
| 25 | BA | 54 | G | N1-C2-N3 | 5.18 | 127.01 | 123.90 |
| 25 | BA | 64 | G | C5'-C4'-C3' | -5.18 | 107.72 | 116.00 |
| 26 | BB | 14 | A | C3'-C2'-C1' | 5.18 | 105.64 | 101.50 |
| 26 | BB | 352 | A | C6-N1-C2 | -5.18 | 115.49 | 118.60 |
| 26 | BB | 383 | C | O4'-C4'-C3' | 5.18 | 110.24 | 106.10 |
| 26 | BB | 493 | G | O4'-C1'-C2' | 5.18 | 112.26 | 107.60 |
| 26 | BB | 544 | C | C5-C4-N4 | -5.18 | 116.58 | 120.20 |
| 26 | BB | 1173 | U | O4'-C1'-N1 | 5.18 | 112.34 | 108.20 |
| 26 | BB | 1302 | A | N1-C6-N6 | -5.18 | 115.49 | 118.60 |
| 26 | BB | 1785 | A | C4'-C3'-C2' | -5.18 | 97.42 | 102.60 |
| 26 | BB | 2298 | A | C6-N1-C2 | -5.18 | 115.49 | 118.60 |
| 26 | BB | 2465 | C | N1-C2-O2 | 5.18 | 122.01 | 118.90 |
| 26 | BB | 2476 | A | O4'-C1'-C2' | -5.18 | 100.62 | 105.80 |
| 26 | BB | 2661 | G | C8-N9-C4 | -5.18 | 104.33 | 106.40 |
| 26 | BB | 2827 | C | C5-C6-N1 | 5.18 | 123.59 | 121.00 |
| 26 | BB | 2862 | G | C1'-O4'-C4' | 5.18 | 114.04 | 109.90 |
| 29 | BE | 13 | ARG | CB-CA-C | 5.18 | 120.75 | 110.40 |
| 1 | AA | 248 | C | C6-N1-C2 | 5.17 | 122.37 | 120.30 |
| 1 | AA | 292 | G | N1-C6-O6 | 5.17 | 123.00 | 119.90 |
| 1 | AA | 510 | A | C4'-C3'-C2' | -5.17 | 97.42 | 102.60 |
| 1 | AA | 534 | U | C5-C6-N1 | -5.17 | 120.11 | 122.70 |
| 1 | AA | 559 | A | C5'-C4'-C3' | -5.17 | 107.72 | 116.00 |
| 1 | AA | 768 | A | C4-C5-C6 | -5.17 | 114.41 | 117.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 8 | AH | 70 | MET | O-C-N | 5.17 | 130.98 | 122.70 |
| 26 | BB | 15 | G | C3'-C2'-C1' | -5.17 | 97.36 | 101.50 |
| 26 | BB | 90 | U | C2-N1-C1' | -5.17 | 111.49 | 117.70 |
| 26 | BB | 439 | A | C1'-O4'-C4' | -5.17 | 105.76 | 109.90 |
| 26 | BB | 440 | C | C5'-C4'-O4' | 5.17 | 115.31 | 109.10 |
| 26 | BB | 1047 | G | P-O3'-C3' | 5.17 | 125.91 | 119.70 |
| 26 | BB | 1112 | G | N9-C4-C5 | -5.17 | 103.33 | 105.40 |
| 26 | BB | 1195 | G | C4-C5-N7 | -5.17 | 108.73 | 110.80 |
| 26 | BB | 1197 | G | O5'-C5'-C4' | -5.17 | 101.87 | 111.70 |
| 26 | BB | 1347 | A | N7-C8-N9 | 5.17 | 116.39 | 113.80 |
| 26 | BB | 1505 | A | C4'-C3'-C2' | -5.17 | 97.43 | 102.60 |
| 26 | BB | 1597 | A | N1-C6-N6 | -5.17 | 115.50 | 118.60 |
| 26 | BB | 2011 | U | N3-C2-O2 | -5.17 | 118.58 | 122.20 |
| 26 | BB | 2312 | U | P-O3'-C3' | 5.17 | 125.91 | 119.70 |
| 26 | BB | 2607 | G | C4-C5-N7 | 5.17 | 112.87 | 110.80 |
| 31 | BG | 29 | ARG | CD-NE-CZ | 5.17 | 130.84 | 123.60 |
| 35 | BK | 113 | ALA | CB-CA-C | -5.17 | 102.34 | 110.10 |
| 1 | AA | 191 | G | C4'-C3'-C2' | -5.17 | 97.43 | 102.60 |
| 1 | AA | 381 | C | C2-N1-C1' | 5.17 | 124.49 | 118.80 |
| 1 | AA | 756 | C | C5-C6-N1 | 5.17 | 123.59 | 121.00 |
| 26 | BB | 1173 | U | C2'-C3'-O3' | 5.17 | 121.98 | 113.70 |
| 26 | BB | 2567 | G | C1'-O4'-C4' | -5.17 | 105.76 | 109.90 |
| 26 | BB | 2891 | U | N3-C4-C5 | -5.17 | 111.50 | 114.60 |
| 1 | AA | 278 | G | C5'-C4'-O4' | 5.17 | 115.31 | 109.10 |
| 1 | AA | 297 | G | N1-C2-N3 | 5.17 | 127.00 | 123.90 |
| 1 | AA | 314 | C | C1'-O4'-C4' | 5.17 | 114.04 | 109.90 |
| 1 | AA | 393 | A | C1'-O4'-C4' | 5.17 | 114.04 | 109.90 |
| 1 | AA | 782 | A | N1-C6-N6 | -5.17 | 115.50 | 118.60 |
| 1 | AA | 923 | A | C5-C6-N1 | 5.17 | 120.29 | 117.70 |
| 1 | AA | 1113 | C | C5'-C4'-C3' | 5.17 | 124.28 | 116.00 |
| 1 | AA | 1181 | G | C5'-C4'-C3' | -5.17 | 107.73 | 116.00 |
| 4 | AD | 3 | C | N1-C2-O2 | 5.17 | 122.00 | 118.90 |
| 6 | AF | 21 | TRP | CD1-NE1-CE2 | 5.17 | 113.65 | 109.00 |
| 22 | AV | 85 | ASP | O-C-N | 5.17 | 130.98 | 122.70 |
| 26 | BB | 54 | G | N3-C4-C5 | -5.17 | 126.01 | 128.60 |
| 26 | BB | 490 | C | N1-C1'-C2' | 5.17 | 120.72 | 114.00 |
| 26 | BB | 563 | A | N1-C2-N3 | 5.17 | 131.89 | 129.30 |
| 26 | BB | 1499 | C | C4-C5-C6 | -5.17 | 114.81 | 117.40 |
| 26 | BB | 1669 | A | C6-N1-C2 | -5.17 | 115.50 | 118.60 |
| 26 | BB | 2098 | U | N3-C2-O2 | 5.17 | 125.82 | 122.20 |
| 26 | BB | 2277 | G | C3'-C2'-C1' | -5.17 | 97.36 | 101.50 |
| 26 | BB | 2311 | A | C5-C6-N1 | -5.17 | 115.11 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2474 | U | C6-N1-C1' | -5.17 | 113.96 | 121.20 |
| 26 | BB | 2502 | G | O4'-C4'-C3' | 5.17 | 110.24 | 106.10 |
| 26 | BB | 2591 | C | O5'-P-OP2 | -5.17 | 101.05 | 105.70 |
| 26 | BB | 2681 | C | C5'-C4'-C3' | -5.17 | 107.73 | 116.00 |
| 1 | AA | 180 | U | C2-N3-C4 | -5.17 | 123.90 | 127.00 |
| 1 | AA | 496 | A | C6-N1-C2 | -5.17 | 115.50 | 118.60 |
| 1 | AA | 1315 | U | N3-C4-O4 | 5.17 | 123.02 | 119.40 |
| 1 | AA | 1521 | C | C4-C5-C6 | -5.17 | 114.81 | 117.40 |
| 25 | BA | 76 | G | O5'-P-OP1 | -5.17 | 101.05 | 105.70 |
| 26 | BB | 656 | G | C4-N9-C1' | -5.17 | 119.78 | 126.50 |
| 26 | BB | 797 | G | C1'-O4'-C4' | -5.17 | 105.76 | 109.90 |
| 26 | BB | 856 | G | C8-N9-C4 | -5.17 | 104.33 | 106.40 |
| 26 | BB | 1573 | G | C2-N3-C4 | 5.17 | 114.48 | 111.90 |
| 26 | BB | 2306 | C | N3-C2-O2 | -5.17 | 118.28 | 121.90 |
| 26 | BB | 2598 | A | C5-C6-N6 | -5.17 | 119.56 | 123.70 |
| 31 | BG | 41 | GLU | CB-CA-C | 5.17 | 120.74 | 110.40 |
| 1 | AA | 165 | G | C5-N7-C8 | -5.17 | 101.72 | 104.30 |
| 1 | AA | 300 | A | C5'-C4'-O4' | 5.17 | 115.30 | 109.10 |
| 1 | AA | 446 | G | C6-N1-C2 | -5.17 | 122.00 | 125.10 |
| 1 | AA | 721 | G | C4-C5-N7 | 5.17 | 112.87 | 110.80 |
| 1 | AA | 831 | A | O4'-C4'-C3' | 5.17 | 110.23 | 106.10 |
| 1 | AA | 859 | G | N1-C2-N2 | 5.17 | 120.85 | 116.20 |
| 1 | AA | 928 | G | C4'-C3'-C2' | -5.17 | 97.43 | 102.60 |
| 1 | AA | 1154 | G | O4'-C1'-C2' | -5.17 | 100.63 | 105.80 |
| 1 | AA | 1351 | U | C5-C6-N1 | 5.17 | 125.28 | 122.70 |
| 1 | AA | 1530 | G | C3'-C2'-C1' | 5.17 | 105.63 | 101.50 |
| 3 | AC | 51 | C | C4-C5-C6 | 5.17 | 119.98 | 117.40 |
| 7 | AG | 169 | TRP | CB-CG-CD1 | -5.17 | 120.28 | 127.00 |
| 26 | BB | 113 | U | C1'-O4'-C4' | 5.17 | 114.03 | 109.90 |
| 26 | BB | 452 | G | N3-C2-N2 | 5.17 | 123.52 | 119.90 |
| 26 | BB | 530 | G | N3-C4-C5 | -5.17 | 126.02 | 128.60 |
| 26 | BB | 647 | G | C5-N7-C8 | -5.17 | 101.72 | 104.30 |
| 26 | BB | 821 | A | C6-N1-C2 | -5.17 | 115.50 | 118.60 |
| 26 | BB | 1447 | C | N1-C2-O2 | 5.17 | 122.00 | 118.90 |
| 26 | BB | 2133 | G | C5-C6-O6 | 5.17 | 131.70 | 128.60 |
| 1 | AA | 1054 | C | C5'-C4'-O4' | 5.17 | 115.30 | 109.10 |
| 1 | AA | 1244 | G | C6-N1-C2 | -5.17 | 122.00 | 125.10 |
| 1 | AA | 1396 | A | C4-C5-C6 | -5.17 | 114.42 | 117.00 |
| 2 | AB | 12 | U | C5-C4-O4 | -5.17 | 122.80 | 125.90 |
| 4 | AD | 15 | G | N1-C6-O6 | -5.17 | 116.80 | 119.90 |
| 4 | AD | 32 | G | N7-C8-N9 | 5.17 | 115.68 | 113.10 |
| 10 | AJ | 17 | PHE | CZ-CE2-CD2 | -5.17 | 113.90 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 25 | BA | 87 | U | N1-C2-N3 | 5.17 | 118.00 | 114.90 |
| 26 | BB | 97 | C | N1-C1'-C2' | -5.17 | 106.32 | 112.00 |
| 26 | BB | 205 | G | C8-N9-C1' | 5.17 | 133.72 | 127.00 |
| 26 | BB | 206 | U | N3-C4-C5 | 5.17 | 117.70 | 114.60 |
| 26 | BB | 261 | G | C6-N1-C2 | -5.17 | 122.00 | 125.10 |
| 26 | BB | 377 | G | O3'-P-O5' | 5.17 | 113.81 | 104.00 |
| 26 | BB | 616 | A | C5-C6-N6 | -5.17 | 119.57 | 123.70 |
| 26 | BB | 757 | G | C5-C6-N1 | 5.17 | 114.08 | 111.50 |
| 26 | BB | 912 | C | N1-C2-O2 | -5.17 | 115.80 | 118.90 |
| 26 | BB | 940 | G | N1-C6-O6 | -5.17 | 116.80 | 119.90 |
| 26 | BB | 1145 | C | N3-C4-N4 | 5.17 | 121.62 | 118.00 |
| 26 | BB | 1298 | C | C5-C4-N4 | -5.17 | 116.58 | 120.20 |
| 26 | BB | 1358 | G | N3-C2-N2 | 5.17 | 123.52 | 119.90 |
| 26 | BB | 1766 | G | C5-C6-N1 | -5.17 | 108.92 | 111.50 |
| 26 | BB | 1811 | G | C3'-C2'-C1' | -5.17 | 97.37 | 101.50 |
| 26 | BB | 2447 | G | N3-C2-N2 | -5.17 | 116.28 | 119.90 |
| 26 | BB | 2596 | U | N1-C2-O2 | 5.17 | 126.42 | 122.80 |
| 26 | BB | 2709 | G | C5-C6-O6 | -5.17 | 125.50 | 128.60 |
| 26 | BB | 2811 | G | N1-C6-O6 | -5.17 | 116.80 | 119.90 |
| 12 | AL | 73 | GLY | CA-C-O | -5.17 | 111.30 | 120.60 |
| 26 | BB | 121 | G | N9-C4-C5 | 5.17 | 107.47 | 105.40 |
| 26 | BB | 180 | G | N7-C8-N9 | 5.17 | 115.68 | 113.10 |
| 26 | BB | 477 | A | C2-N3-C4 | 5.17 | 113.18 | 110.60 |
| 26 | BB | 1062 | G | C5-N7-C8 | -5.17 | 101.72 | 104.30 |
| 26 | BB | 1331 | G | N1-C6-O6 | 5.17 | 123.00 | 119.90 |
| 26 | BB | 1662 | U | C5-C6-N1 | -5.17 | 120.12 | 122.70 |
| 26 | BB | 1784 | A | P-O3'-C3' | 5.17 | 125.90 | 119.70 |
| 1 | AA | 728 | A | C5-N7-C8 | 5.16 | 106.48 | 103.90 |
| 1 | AA | 829 | G | N7-C8-N9 | 5.16 | 115.68 | 113.10 |
| 26 | BB | 185 | G | C6-N1-C2 | -5.16 | 122.00 | 125.10 |
| 26 | BB | 251 | A | C5-C6-N6 | -5.16 | 119.57 | 123.70 |
| 26 | BB | 788 | A | C5'-C4'-O4' | 5.16 | 115.30 | 109.10 |
| 26 | BB | 821 | A | P-O3'-C3' | 5.16 | 125.90 | 119.70 |
| 26 | BB | 1041 | G | C4-C5-C6 | 5.16 | 121.90 | 118.80 |
| 26 | BB | 1062 | G | N1-C2-N3 | -5.16 | 120.80 | 123.90 |
| 26 | BB | 1626 | A | C8-N9-C4 | -5.16 | 103.73 | 105.80 |
| 26 | BB | 1679 | A | O5'-P-OP2 | -5.16 | 101.05 | 105.70 |
| 26 | BB | 2077 | A | C5-C6-N6 | 5.16 | 127.83 | 123.70 |
| 26 | BB | 2397 | G | C5-C6-O6 | -5.16 | 125.50 | 128.60 |
| 1 | AA | 592 | G | N1-C2-N3 | -5.16 | 120.80 | 123.90 |
| 1 | AA | 994 | A | N3-C4-C5 | -5.16 | 123.19 | 126.80 |
| 17 | AQ | 30 | ILE | CG1-CB-CG2 | -5.16 | 100.04 | 111.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 406 | G | C8-N9-C1' | 5.16 | 133.71 | 127.00 |
| 26 | BB | 919 | U | C5'-C4'-O4' | 5.16 | 115.29 | 109.10 |
| 26 | BB | 1143 | A | N7-C8-N9 | 5.16 | 116.38 | 113.80 |
| 26 | BB | 1985 | C | C5-C4-N4 | -5.16 | 116.59 | 120.20 |
| 26 | BB | 2421 | G | O4'-C1'-N9 | 5.16 | 112.33 | 108.20 |
| 26 | BB | 2484 | G | C6-C5-N7 | -5.16 | 127.30 | 130.40 |
| 46 | BV | 10 | VAL | CG1-CB-CG2 | -5.16 | 102.64 | 110.90 |
| 1 | AA | 89 | U | C2-N3-C4 | -5.16 | 123.90 | 127.00 |
| 1 | AA | 303 | A | C5'-C4'-C3' | -5.16 | 107.74 | 116.00 |
| 1 | AA | 318 | G | N3-C2-N2 | 5.16 | 123.51 | 119.90 |
| 1 | AA | 702 | A | O3'-P-O5' | 5.16 | 113.80 | 104.00 |
| 1 | AA | 742 | G | N9-C4-C5 | 5.16 | 107.47 | 105.40 |
| 3 | AC | 38 | G | C5'-C4'-O4' | 5.16 | 115.29 | 109.10 |
| 25 | BA | 46 | A | C5-C6-N1 | 5.16 | 120.28 | 117.70 |
| 25 | BA | 54 | G | C8-N9-C1' | 5.16 | 133.71 | 127.00 |
| 26 | BB | 255 | A | C4-C5-N7 | 5.16 | 113.28 | 110.70 |
| 26 | BB | 313 | G | N3-C4-C5 | -5.16 | 126.02 | 128.60 |
| 26 | BB | 377 | G | C4-C5-C6 | 5.16 | 121.90 | 118.80 |
| 26 | BB | 1022 | G | O4'-C4'-C3' | 5.16 | 110.23 | 106.10 |
| 26 | BB | 1881 | C | O5'-P-OP1 | -5.16 | 101.06 | 105.70 |
| 26 | BB | 1991 | U | C6-N1-C2 | 5.16 | 124.10 | 121.00 |
| 26 | BB | 2277 | G | C6-N1-C2 | -5.16 | 122.00 | 125.10 |
| 26 | BB | 2281 | A | C4'-C3'-C2' | -5.16 | 97.44 | 102.60 |
| 1 | AA | 138 | G | O4'-C1'-N9 | 5.16 | 112.33 | 108.20 |
| 1 | AA | 235 | C | N1-C2-O2 | 5.16 | 122.00 | 118.90 |
| 1 | AA | 269 | C | N3-C2-O2 | 5.16 | 125.51 | 121.90 |
| 1 | AA | 1140 | C | C1'-O4'-C4' | 5.16 | 114.03 | 109.90 |
| 25 | BA | 71 | C | N3-C2-O2 | 5.16 | 125.51 | 121.90 |
| 25 | BA | 73 | A | N9-C4-C5 | 5.16 | 107.86 | 105.80 |
| 26 | BB | 40 | U | C6-N1-C2 | -5.16 | 117.91 | 121.00 |
| 26 | BB | 335 | C | C4'-C3'-C2' | -5.16 | 97.44 | 102.60 |
| 26 | BB | 618 | G | C8-N9-C1' | 5.16 | 133.71 | 127.00 |
| 26 | BB | 1111 | A | C2-N3-C4 | -5.16 | 108.02 | 110.60 |
| 26 | BB | 1144 | A | C2-N3-C4 | 5.16 | 113.18 | 110.60 |
| 26 | BB | 1505 | A | N3-C4-C5 | 5.16 | 130.41 | 126.80 |
| 26 | BB | 1755 | A | C8-N9-C4 | -5.16 | 103.74 | 105.80 |
| 26 | BB | 1802 | A | C4'-C3'-C2' | -5.16 | 97.44 | 102.60 |
| 26 | BB | 2096 | C | C6-N1-C2 | -5.16 | 118.24 | 120.30 |
| 26 | BB | 2100 | G | C3'-C2'-C1' | 5.16 | 105.63 | 101.50 |
| 26 | BB | 2664 | G | C6-C5-N7 | -5.16 | 127.31 | 130.40 |
| 26 | BB | 2801 | G | C6-N1-C2 | -5.16 | 122.00 | 125.10 |
| 38 | BN | 91 | ASP | CB-CG-OD2 | -5.16 | 113.66 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 975 | A | O4'-C1'-N9 | 5.16 | 112.33 | 108.20 |
| 1 | AA | 1200 | C | C6-N1-C2 | -5.16 | 118.24 | 120.30 |
| 1 | AA | 1368 | A | C6-C5-N7 | 5.16 | 135.91 | 132.30 |
| 26 | BB | 206 | U | N1-C1'-C2' | -5.16 | 106.33 | 112.00 |
| 26 | BB | 455 | C | N3-C4-N4 | -5.16 | 114.39 | 118.00 |
| 26 | BB | 551 | G | O4'-C4'-C3' | -5.16 | 98.84 | 104.00 |
| 26 | BB | 831 | G | N7-C8-N9 | -5.16 | 110.52 | 113.10 |
| 26 | BB | 929 | U | O4'-C1'-N1 | 5.16 | 112.33 | 108.20 |
| 1 | AA | 194 | C | C5-C6-N1 | -5.16 | 118.42 | 121.00 |
| 1 | AA | 411 | A | C5-N7-C8 | -5.16 | 101.32 | 103.90 |
| 1 | AA | 559 | A | C4-C5-N7 | -5.16 | 108.12 | 110.70 |
| 1 | AA | 652 | U | C1'-O4'-C4' | -5.16 | 105.78 | 109.90 |
| 1 | AA | 856 | C | C6-N1-C2 | -5.16 | 118.24 | 120.30 |
| 1 | AA | 1016 | A | N7-C8-N9 | 5.16 | 116.38 | 113.80 |
| 1 | AA | 1094 | G | C8-N9-C1' | 5.16 | 133.70 | 127.00 |
| 1 | AA | 1168 | U | C6-N1-C2 | -5.16 | 117.91 | 121.00 |
| 1 | AA | 1262 | C | C5-C4-N4 | -5.16 | 116.59 | 120.20 |
| 26 | BB | 65 | U | C4'-C3'-C2' | -5.16 | 97.44 | 102.60 |
| 26 | BB | 110 | G | C2-N3-C4 | 5.16 | 114.48 | 111.90 |
| 26 | BB | 799 | G | C5-C6-N1 | -5.16 | 108.92 | 111.50 |
| 26 | BB | 896 | A | N7-C8-N9 | 5.16 | 116.38 | 113.80 |
| 26 | BB | 1156 | A | C3'-C2'-C1' | 5.16 | 105.62 | 101.50 |
| 26 | BB | 1588 | G | N1-C2-N3 | 5.16 | 126.99 | 123.90 |
| 26 | BB | 1764 | C | C5'-C4'-O4' | 5.16 | 115.29 | 109.10 |
| 26 | BB | 1799 | G | P-O3'-C3' | 5.16 | 125.89 | 119.70 |
| 26 | BB | 2005 | A | C3'-C2'-C1' | 5.16 | 105.62 | 101.50 |
| 26 | BB | 2231 | U | C5'-C4'-C3' | -5.16 | 107.75 | 116.00 |
| 26 | BB | 2348 | U | C4'-C3'-C2' | -5.16 | 97.44 | 102.60 |
| 26 | BB | 2594 | C | C6-N1-C2 | 5.16 | 122.36 | 120.30 |
| 26 | BB | 2827 | C | C1'-O4'-C4' | -5.16 | 105.78 | 109.90 |
| 1 | AA | 724 | G | C2-N3-C4 | 5.15 | 114.48 | 111.90 |
| 1 | AA | 781 | A | C8-N9-C4 | 5.15 | 107.86 | 105.80 |
| 1 | AA | 1010 | U | C2-N3-C4 | -5.15 | 123.91 | 127.00 |
| 1 | AA | 1320 | C | C4-C5-C6 | -5.15 | 114.82 | 117.40 |
| 1 | AA | 1443 | C | P-O3'-C3' | 5.15 | 125.89 | 119.70 |
| 1 | AA | 1505 | G | C1'-O4'-C4' | 5.15 | 114.02 | 109.90 |
| 21 | AU | 6 | ARG | CB-CA-C | 5.15 | 120.71 | 110.40 |
| 26 | BB | 494 | G | P-O3'-C3' | 5.15 | 125.88 | 119.70 |
| 26 | BB | 932 | U | C6-N1-C1' | -5.15 | 113.98 | 121.20 |
| 26 | BB | 1030 | C | C5-C6-N1 | 5.15 | 123.58 | 121.00 |
| 26 | BB | 1316 | U | P-O3'-C3' | 5.15 | 125.89 | 119.70 |
| 26 | BB | 1875 | G | C6-N1-C2 | -5.15 | 122.01 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2114 | A | N3-C4-N9 | 5.15 | 131.52 | 127.40 |
| 1 | AA | 1 | A | C2-N3-C4 | 5.15 | 113.18 | 110.60 |
| 1 | AA | 240 | G | C3'-C2'-C1' | -5.15 | 97.38 | 101.50 |
| 1 | AA | 441 | A | N9-C1'-C2' | -5.15 | 106.33 | 112.00 |
| 1 | AA | 849 | G | N3-C4-C5 | -5.15 | 126.02 | 128.60 |
| 1 | AA | 942 | G | C6-N1-C2 | 5.15 | 128.19 | 125.10 |
| 2 | AB | 2 | G | C8-N9-C4 | -5.15 | 104.34 | 106.40 |
| 2 | AB | 56 | C | C4-C5-C6 | -5.15 | 114.82 | 117.40 |
| 4 | AD | 38 | A | P-O3'-C3' | 5.15 | 125.88 | 119.70 |
| 26 | BB | 221 | A | C5-C6-N6 | -5.15 | 119.58 | 123.70 |
| 26 | BB | 316 | C | O4'-C1'-N1 | 5.15 | 112.32 | 108.20 |
| 26 | BB | 653 | U | N1-C2-O2 | 5.15 | 126.41 | 122.80 |
| 26 | BB | 748 | G | C2-N3-C4 | 5.15 | 114.48 | 111.90 |
| 26 | BB | 779 | U | P-O3'-C3' | 5.15 | 125.88 | 119.70 |
| 26 | BB | 1091 | G | C4'-C3'-C2' | 5.15 | 107.75 | 102.60 |
| 26 | BB | 1493 | C | C3'-C2'-C1' | -5.15 | 97.38 | 101.50 |
| 26 | BB | 1899 | A | O4'-C1'-N9 | 5.15 | 112.32 | 108.20 |
| 26 | BB | 1943 | U | C5'-C4'-O4' | 5.15 | 115.28 | 109.10 |
| 26 | BB | 1982 | U | C5'-C4'-C3' | -5.15 | 107.76 | 116.00 |
| 26 | BB | 2584 | U | N1-C2-N3 | -5.15 | 111.81 | 114.90 |
| 26 | BB | 2763 | G | N3-C4-C5 | -5.15 | 126.02 | 128.60 |
| 1 | AA | 60 | A | C4-C5-C6 | -5.15 | 114.42 | 117.00 |
| 1 | AA | 354 | G | O5'-P-OP2 | -5.15 | 101.06 | 105.70 |
| 1 | AA | 359 | G | C6-N1-C2 | -5.15 | 122.01 | 125.10 |
| 1 | AA | 360 | G | C2-N3-C4 | 5.15 | 114.48 | 111.90 |
| 1 | AA | 431 | A | C4-C5-N7 | -5.15 | 108.12 | 110.70 |
| 1 | AA | 447 | G | N3-C4-C5 | -5.15 | 126.02 | 128.60 |
| 1 | AA | 1216 | A | N1-C6-N6 | 5.15 | 121.69 | 118.60 |
| 1 | AA | 1406 | U | N3-C4-C5 | 5.15 | 117.69 | 114.60 |
| 2 | AB | 27 | C | N1-C2-N3 | -5.15 | 115.59 | 119.20 |
| 4 | AD | 41 | C | N1-C2-O2 | 5.15 | 121.99 | 118.90 |
| 12 | AL | 65 | THR | CA-CB-CG2 | -5.15 | 105.19 | 112.40 |
| 26 | BB | 408 | G | O4'-C4'-C3' | 5.15 | 110.22 | 106.10 |
| 26 | BB | 448 | U | C4-C5-C6 | 5.15 | 122.79 | 119.70 |
| 26 | BB | 571 | U | N1-C2-N3 | 5.15 | 117.99 | 114.90 |
| 26 | BB | 688 | U | C5'-C4'-O4' | -5.15 | 102.92 | 109.10 |
| 26 | BB | 776 | G | O4'-C1'-N9 | 5.15 | 112.32 | 108.20 |
| 26 | BB | 864 | G | C2-N3-C4 | 5.15 | 114.48 | 111.90 |
| 26 | BB | 1110 | G | O5'-P-OP2 | -5.15 | 101.06 | 105.70 |
| 26 | BB | 1145 | C | N3-C2-O2 | -5.15 | 118.30 | 121.90 |
| 26 | BB | 1242 | U | O3'-P-O5' | -5.15 | 94.22 | 104.00 |
| 26 | BB | 1419 | A | C4-C5-N7 | 5.15 | 113.28 | 110.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1763 | G | N3-C4-N9 | -5.15 | 122.91 | 126.00 |
| 26 | BB | 2171 | A | N1-C2-N3 | -5.15 | 126.72 | 129.30 |
| 26 | BB | 2240 | U | C6-N1-C2 | -5.15 | 117.91 | 121.00 |
| 26 | BB | 2384 | U | N1-C2-O2 | 5.15 | 126.41 | 122.80 |
| 26 | BB | 2554 | U | O3'-P-O5' | 5.15 | 113.78 | 104.00 |
| 26 | BB | 2679 | A | C4-C5-N7 | -5.15 | 108.12 | 110.70 |
| 32 | BH | 108 | PHE | CB-CG-CD1 | -5.15 | 117.19 | 120.80 |
| 1 | AA | 211 | G | C5-C6-N1 | -5.15 | 108.93 | 111.50 |
| 1 | AA | 1343 | G | N3-C2-N2 | -5.15 | 116.30 | 119.90 |
| 1 | AA | 1476 | A | N7-C8-N9 | -5.15 | 111.23 | 113.80 |
| 26 | BB | 1337 | G | C5-C6-O6 | -5.15 | 125.51 | 128.60 |
| 26 | BB | 2089 | C | C6-N1-C2 | -5.15 | 118.24 | 120.30 |
| 26 | BB | 2417 | C | C4'-C3'-C2' | -5.15 | 97.45 | 102.60 |
| 26 | BB | 2813 | A | N1-C2-N3 | -5.15 | 126.73 | 129.30 |
| 35 | BK | 114 | ALA | N-CA-CB | -5.15 | 102.89 | 110.10 |
| 1 | AA | 33 | A | C6-N1-C2 | -5.15 | 115.51 | 118.60 |
| 1 | AA | 142 | G | C8-N9-C4 | -5.15 | 104.34 | 106.40 |
| 1 | AA | 294 | U | C1'-O4'-C4' | -5.15 | 105.78 | 109.90 |
| 1 | AA | 538 | G | C4-C5-C6 | 5.15 | 121.89 | 118.80 |
| 1 | AA | 932 | C | C5-C6-N1 | -5.15 | 118.43 | 121.00 |
| 1 | AA | 945 | G | C4-C5-N7 | 5.15 | 112.86 | 110.80 |
| 1 | AA | 1165 | U | C5'-C4'-C3' | -5.15 | 107.76 | 116.00 |
| 1 | AA | 1251 | A | C6-N1-C2 | 5.15 | 121.69 | 118.60 |
| 1 | AA | 1343 | G | C4'-C3'-C2' | -5.15 | 97.45 | 102.60 |
| 1 | AA | 1492 | A | C5-C6-N6 | 5.15 | 127.82 | 123.70 |
| 7 | AG | 21 | LYS | CB-CA-C | 5.15 | 120.69 | 110.40 |
| 25 | BA | 42 | C | C2-N1-C1' | -5.15 | 113.14 | 118.80 |
| 26 | BB | 617 | G | C4-C5-N7 | -5.15 | 108.74 | 110.80 |
| 26 | BB | 688 | U | C1'-O4'-C4' | -5.15 | 105.78 | 109.90 |
| 26 | BB | 781 | A | C5-N7-C8 | -5.15 | 101.33 | 103.90 |
| 26 | BB | 931 | U | O3'-P-O5' | -5.15 | 94.22 | 104.00 |
| 26 | BB | 1367 | A | C2-N3-C4 | 5.15 | 113.17 | 110.60 |
| 26 | BB | 1651 | G | C4-C5-N7 | -5.15 | 108.74 | 110.80 |
| 26 | BB | 2444 | G | C5'-C4'-C3' | -5.15 | 107.77 | 116.00 |
| 26 | BB | 2450 | A | C6-N1-C2 | -5.15 | 115.51 | 118.60 |
| 26 | BB | 2497 | A | C3'-C2'-C1' | 5.15 | 105.62 | 101.50 |
| 26 | BB | 2608 | G | N3-C4-N9 | -5.15 | 122.91 | 126.00 |
| 50 | BZ | 21 | LEU | CB-CG-CD2 | 5.15 | 119.75 | 111.00 |
| 1 | AA | 684 | U | N1-C2-O2 | -5.15 | 119.20 | 122.80 |
| 1 | AA | 1109 | C | C5-C4-N4 | 5.15 | 123.80 | 120.20 |
| 4 | AD | 45 | A | C4-C5-N7 | -5.15 | 108.13 | 110.70 |
| 6 | AF | 137 | VAL | CA-CB-CG1 | -5.15 | 103.18 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 483 | A | O4'-C1'-N9 | 5.15 | 112.32 | 108.20 |
| 26 | BB | 554 | U | C5-C4-O4 | 5.15 | 128.99 | 125.90 |
| 26 | BB | 1102 | C | O4'-C1'-N1 | 5.15 | 112.32 | 108.20 |
| 26 | BB | 1358 | G | C5-C6-N1 | -5.15 | 108.93 | 111.50 |
| 44 | BT | 92 | TRP | CG-CD2-CE3 | -5.15 | 129.27 | 133.90 |
| 1 | AA | 108 | G | C2-N3-C4 | 5.14 | 114.47 | 111.90 |
| 1 | AA | 511 | C | O3'-P-O5' | -5.14 | 94.23 | 104.00 |
| 1 | AA | 661 | G | C4-C5-N7 | -5.14 | 108.74 | 110.80 |
| 1 | AA | 1335 | U | P-O3'-C3' | 5.14 | 125.88 | 119.70 |
| 3 | AC | 21 | U | C3'-C2'-C1' | 5.14 | 105.62 | 101.50 |
| 3 | AC | 58 | C | C6-N1-C2 | -5.14 | 118.24 | 120.30 |
| 26 | BB | 73 | A | N1-C2-N3 | -5.14 | 126.73 | 129.30 |
| 26 | BB | 271 | G | N3-C4-N9 | -5.14 | 122.91 | 126.00 |
| 26 | BB | 410 | G | C1'-O4'-C4' | -5.14 | 105.78 | 109.90 |
| 26 | BB | 537 | G | P-O3'-C3' | 5.14 | 125.87 | 119.70 |
| 26 | BB | 663 | G | C5-N7-C8 | 5.14 | 106.87 | 104.30 |
| 26 | BB | 663 | G | C6-C5-N7 | 5.14 | 133.49 | 130.40 |
| 26 | BB | 706 | A | C5-N7-C8 | 5.14 | 106.47 | 103.90 |
| 26 | BB | 722 | A | N1-C6-N6 | 5.14 | 121.69 | 118.60 |
| 26 | BB | 732 | C | C4'-C3'-C2' | -5.14 | 97.46 | 102.60 |
| 26 | BB | 843 | G | C5-C6-O6 | -5.14 | 125.51 | 128.60 |
| 26 | BB | 1058 | U | N3-C4-C5 | -5.14 | 111.51 | 114.60 |
| 26 | BB | 1339 | G | C6-N1-C2 | -5.14 | 122.01 | 125.10 |
| 26 | BB | 1395 | A | C2-N3-C4 | 5.14 | 113.17 | 110.60 |
| 26 | BB | 2136 | G | P-O5'-C5' | 5.14 | 129.13 | 120.90 |
| 26 | BB | 2553 | G | N3-C2-N2 | 5.14 | 123.50 | 119.90 |
| 26 | BB | 2609 | U | C5'-C4'-O4' | -5.14 | 102.93 | 109.10 |
| 27 | BC | 15 | VAL | CA-CB-CG2 | 5.14 | 118.62 | 110.90 |
| 40 | BP | 21 | PHE | CB-CG-CD2 | 5.14 | 124.40 | 120.80 |
| 1 | AA | 29 | U | O4'-C4'-C3' | 5.14 | 110.21 | 106.10 |
| 1 | AA | 698 | G | C6-N1-C2 | 5.14 | 128.19 | 125.10 |
| 1 | AA | 1034 | G | O4'-C1'-N9 | 5.14 | 112.31 | 108.20 |
| 1 | AA | 1297 | G | C5-C6-O6 | -5.14 | 125.52 | 128.60 |
| 25 | BA | 2 | G | C4'-C3'-C2' | -5.14 | 97.46 | 102.60 |
| 26 | BB | 35 | G | C5-C6-O6 | -5.14 | 125.51 | 128.60 |
| 26 | BB | 221 | A | C5'-C4'-O4' | 5.14 | 115.27 | 109.10 |
| 26 | BB | 337 | C | C2'-C3'-O3' | 5.14 | 121.93 | 113.70 |
| 26 | BB | 705 | A | N7-C8-N9 | 5.14 | 116.37 | 113.80 |
| 26 | BB | 1089 | A | C1'-O4'-C4' | 5.14 | 114.02 | 109.90 |
| 26 | BB | 1099 | G | C1'-O4'-C4' | -5.14 | 105.79 | 109.90 |
| 26 | BB | 1382 | G | C3'-C2'-C1' | 5.14 | 105.61 | 101.50 |
| 26 | BB | 1864 | U | C5-C4-O4 | -5.14 | 122.81 | 125.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1907 | G | N9-C1'-C2' | -5.14 | 106.34 | 112.00 |
| 26 | BB | 2264 | C | O4'-C1'-N1 | 5.14 | 112.31 | 108.20 |
| 26 | BB | 2373 | G | N9-C4-C5 | 5.14 | 107.46 | 105.40 |
| 26 | BB | 2494 | G | C5-C6-N1 | -5.14 | 108.93 | 111.50 |
| 26 | BB | 2756 | U | N3-C2-O2 | -5.14 | 118.60 | 122.20 |
| 26 | BB | 2865 | U | C5'-C4'-C3' | -5.14 | 107.77 | 116.00 |
| 26 | BB | 2879 | A | P-O3'-C3' | 5.14 | 125.87 | 119.70 |
| 1 | AA | 341 | C | C5'-C4'-O4' | 5.14 | 115.27 | 109.10 |
| 1 | AA | 1132 | C | C5-C6-N1 | 5.14 | 123.57 | 121.00 |
| 1 | AA | 1173 | U | N3-C2-O2 | 5.14 | 125.80 | 122.20 |
| 1 | AA | 1303 | C | C3'-C2'-C1' | 5.14 | 105.61 | 101.50 |
| 1 | AA | 1309 | G | N9-C1'-C2' | -5.14 | 106.34 | 112.00 |
| 21 | AU | 47 | ARG | NE-CZ-NH2 | 5.14 | 122.87 | 120.30 |
| 25 | BA | 13 | G | O4'-C1'-N9 | -5.14 | 104.09 | 108.20 |
| 26 | BB | 1484 | U | C5'-C4'-O4' | 5.14 | 115.27 | 109.10 |
| 26 | BB | 2241 | A | N1-C2-N3 | -5.14 | 126.73 | 129.30 |
| 26 | BB | 2510 | C | C5-C4-N4 | -5.14 | 116.60 | 120.20 |
| 26 | BB | 2653 | U | O4'-C1'-N1 | 5.14 | 112.31 | 108.20 |
| 26 | BB | 2782 | G | C5-N7-C8 | 5.14 | 106.87 | 104.30 |
| 48 | BX | 34 | LYS | CB-CA-C | 5.14 | 120.68 | 110.40 |
| 1 | AA | 162 | A | C2-N3-C4 | 5.14 | 113.17 | 110.60 |
| 1 | AA | 298 | A | C4'-C3'-C2' | -5.14 | 97.46 | 102.60 |
| 1 | AA | 652 | U | C6-N1-C2 | -5.14 | 117.92 | 121.00 |
| 1 | AA | 1430 | A | N9-C1'-C2' | -5.14 | 106.35 | 112.00 |
| 2 | AB | 35 | C | C4'-C3'-C2' | 5.14 | 107.74 | 102.60 |
| 26 | BB | 118 | A | N1-C2-N3 | -5.14 | 126.73 | 129.30 |
| 26 | BB | 298 | G | N3-C4-N9 | -5.14 | 122.92 | 126.00 |
| 26 | BB | 472 | A | OP2-P-O3' | 5.14 | 116.51 | 105.20 |
| 26 | BB | 1123 | C | O4'-C1'-N1 | 5.14 | 112.31 | 108.20 |
| 26 | BB | 1134 | A | C8-N9-C4 | 5.14 | 107.86 | 105.80 |
| 26 | BB | 1260 | A | O4'-C4'-C3' | 5.14 | 110.21 | 106.10 |
| 26 | BB | 1263 | U | N1-C2-N3 | 5.14 | 117.98 | 114.90 |
| 26 | BB | 1459 | G | C5-C6-N1 | 5.14 | 114.07 | 111.50 |
| 26 | BB | 1617 | C | O4'-C1'-N1 | 5.14 | 112.31 | 108.20 |
| 27 | BC | 213 | SER | CB-CA-C | 5.14 | 119.87 | 110.10 |
| 1 | AA | 74 | A | C8-N9-C4 | 5.14 | 107.86 | 105.80 |
| 1 | AA | 143 | A | O4'-C1'-C2' | 5.14 | 112.22 | 107.60 |
| 1 | AA | 232 | G | N1-C2-N2 | -5.14 | 111.58 | 116.20 |
| 1 | AA | 954 | G | C5-C6-O6 | -5.14 | 125.52 | 128.60 |
| 1 | AA | 996 | A | N9-C1'-C2' | -5.14 | 106.35 | 112.00 |
| 1 | AA | 1461 | G | N3-C4-C5 | -5.14 | 126.03 | 128.60 |
| 26 | BB | 214 | G | N1-C2-N2 | 5.14 | 120.82 | 116.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 358 | U | N1-C2-N3 | 5.14 | 117.98 | 114.90 |
| 26 | BB | 831 | G | C5'-C4'-C3' | -5.14 | 107.78 | 116.00 |
| 26 | BB | 1520 | U | C4-C5-C6 | 5.14 | 122.78 | 119.70 |
| 26 | BB | 1820 | U | P-O3'-C3' | 5.14 | 125.86 | 119.70 |
| 26 | BB | 1971 | U | C5'-C4'-O4' | 5.14 | 115.27 | 109.10 |
| 26 | BB | 2250 | G | O4'-C1'-C2' | 5.14 | 112.22 | 107.60 |
| 1 | AA | 20 | U | O5'-C5'-C4' | -5.14 | 101.94 | 111.70 |
| 1 | AA | 741 | G | N9-C4-C5 | 5.14 | 107.45 | 105.40 |
| 1 | AA | 784 | A | O4'-C4'-C3' | 5.14 | 110.21 | 106.10 |
| 1 | AA | 809 | G | N3-C4-C5 | -5.14 | 126.03 | 128.60 |
| 1 | AA | 1430 | A | C6-C5-N7 | 5.14 | 135.90 | 132.30 |
| 6 | AF | 17 | TRP | CB-CG-CD2 | 5.14 | 133.28 | 126.60 |
| 10 | AJ | 1 | PRO | N-CD-CG | 5.14 | 110.90 | 103.20 |
| 15 | AO | 11 | ARG | NE-CZ-NH2 | -5.14 | 117.73 | 120.30 |
| 26 | BB | 44 | A | C1'-O4'-C4' | -5.14 | 105.79 | 109.90 |
| 26 | BB | 131 | A | O5'-P-OP1 | -5.14 | 101.08 | 105.70 |
| 26 | BB | 204 | A | C5-C6-N6 | -5.14 | 119.59 | 123.70 |
| 26 | BB | 356 | G | C4'-C3'-C2' | -5.14 | 97.46 | 102.60 |
| 26 | BB | 424 | G | C6-C5-N7 | 5.14 | 133.48 | 130.40 |
| 26 | BB | 449 | A | C6-N1-C2 | -5.14 | 115.52 | 118.60 |
| 26 | BB | 851 | C | C3'-C2'-C1' | 5.14 | 105.61 | 101.50 |
| 26 | BB | 888 | C | C4'-C3'-C2' | -5.14 | 97.46 | 102.60 |
| 26 | BB | 1168 | G | C4-C5-N7 | 5.14 | 112.86 | 110.80 |
| 26 | BB | 1253 | A | C3'-C2'-C1' | 5.14 | 105.61 | 101.50 |
| 26 | BB | 1415 | U | C4-C5-C6 | 5.14 | 122.78 | 119.70 |
| 26 | BB | 1639 | C | C3'-C2'-C1' | 5.14 | 105.61 | 101.50 |
| 26 | BB | 1661 | G | N1-C6-O6 | 5.14 | 122.98 | 119.90 |
| 26 | BB | 1832 | C | C2-N3-C4 | 5.14 | 122.47 | 119.90 |
| 26 | BB | 1927 | A | P-O3'-C3' | 5.14 | 125.86 | 119.70 |
| 26 | BB | 2345 | G | C6-C5-N7 | -5.14 | 127.32 | 130.40 |
| 26 | BB | 2693 | G | N1-C2-N3 | 5.14 | 126.98 | 123.90 |
| 26 | BB | 2749 | A | C3'-C2'-C1' | 5.14 | 105.61 | 101.50 |
| 26 | BB | 2836 | U | N3-C2-O2 | -5.14 | 118.61 | 122.20 |
| 26 | BB | 2862 | G | C5-C6-N1 | -5.14 | 108.93 | 111.50 |
| 1 | AA | 51 | A | C5'-C4'-O4' | 5.13 | 115.26 | 109.10 |
| 1 | AA | 122 | G | C5'-C4'-O4' | 5.13 | 115.26 | 109.10 |
| 1 | AA | 168 | G | N7-C8-N9 | 5.13 | 115.67 | 113.10 |
| 1 | AA | 179 | A | N1-C2-N3 | -5.13 | 126.73 | 129.30 |
| 1 | AA | 637 | C | C5-C6-N1 | -5.13 | 118.43 | 121.00 |
| 1 | AA | 915 | A | C5-C6-N1 | 5.13 | 120.27 | 117.70 |
| 25 | BA | 89 | U | O3'-P-O5' | -5.13 | 94.24 | 104.00 |
| 26 | BB | 10 | A | C5-C6-N1 | -5.13 | 115.13 | 117.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 379 | G | C5-C6-N1 | 5.13 | 114.07 | 111.50 |
| 26 | BB | 1133 | A | C6-C5-N7 | 5.13 | 135.89 | 132.30 |
| 26 | BB | 1155 | A | C8-N9-C4 | -5.13 | 103.75 | 105.80 |
| 26 | BB | 1269 | A | O5'-C5'-C4' | -5.13 | 101.94 | 111.70 |
| 26 | BB | 1741 | C | C1'-O4'-C4' | -5.13 | 105.79 | 109.90 |
| 26 | BB | 1905 | C | N3-C4-C5 | 5.13 | 123.95 | 121.90 |
| 26 | BB | 1997 | C | C5'-C4'-O4' | 5.13 | 115.26 | 109.10 |
| 26 | BB | 2049 | G | N3-C4-N9 | -5.13 | 122.92 | 126.00 |
| 26 | BB | 2866 | U | C3'-C2'-C1' | -5.13 | 97.39 | 101.50 |
| 36 | BL | 120 | ARG | NE-CZ-NH1 | -5.13 | 117.73 | 120.30 |
| 45 | BU | 20 | VAL | CA-CB-CG1 | -5.13 | 103.20 | 110.90 |
| 25 | BA | 118 | C | N3-C4-C5 | -5.13 | 119.85 | 121.90 |
| 26 | BB | 377 | G | N1-C2-N2 | -5.13 | 111.58 | 116.20 |
| 26 | BB | 654 | A | C4'-C3'-C2' | 5.13 | 107.73 | 102.60 |
| 26 | BB | 1007 | C | C4-C5-C6 | 5.13 | 119.97 | 117.40 |
| 26 | BB | 1709 | U | C4'-C3'-C2' | -5.13 | 97.47 | 102.60 |
| 26 | BB | 1858 | A | C8-N9-C4 | 5.13 | 107.85 | 105.80 |
| 26 | BB | 2890 | G | C2-N3-C4 | 5.13 | 114.47 | 111.90 |
| 1 | AA | 181 | A | C1'-O4'-C4' | -5.13 | 105.80 | 109.90 |
| 1 | AA | 210 | C | C4'-C3'-C2' | -5.13 | 97.47 | 102.60 |
| 1 | AA | 259 | G | N7-C8-N9 | 5.13 | 115.67 | 113.10 |
| 1 | AA | 361 | G | C2-N3-C4 | 5.13 | 114.47 | 111.90 |
| 1 | AA | 373 | A | O4'-C4'-C3' | -5.13 | 98.87 | 104.00 |
| 1 | AA | 407 | U | C3'-C2'-C1' | -5.13 | 97.39 | 101.50 |
| 1 | AA | 990 | C | O4'-C1'-C2' | -5.13 | 100.67 | 105.80 |
| 1 | AA | 1243 | C | C6-N1-C2 | 5.13 | 122.35 | 120.30 |
| 2 | AB | 72 | U | C5-C6-N1 | -5.13 | 120.14 | 122.70 |
| 14 | AN | 43 | TRP | CZ3-CH2-CZ2 | -5.13 | 115.44 | 121.60 |
| 25 | BA | 98 | G | C4-C5-C6 | 5.13 | 121.88 | 118.80 |
| 26 | BB | 5 | A | O4'-C1'-N9 | 5.13 | 112.31 | 108.20 |
| 26 | BB | 90 | U | C5'-C4'-O4' | 5.13 | 115.26 | 109.10 |
| 26 | BB | 172 | A | N9-C1'-C2' | -5.13 | 106.35 | 112.00 |
| 26 | BB | 290 | U | C1'-O4'-C4' | 5.13 | 114.01 | 109.90 |
| 26 | BB | 401 | A | C5'-C4'-O4' | 5.13 | 115.26 | 109.10 |
| 26 | BB | 511 | U | C4'-C3'-C2' | -5.13 | 97.47 | 102.60 |
| 26 | BB | 841 | G | C4'-C3'-C2' | -5.13 | 97.47 | 102.60 |
| 26 | BB | 860 | U | N1-C1'-C2' | -5.13 | 106.36 | 112.00 |
| 26 | BB | 1069 | A | C3'-C2'-C1' | -5.13 | 97.39 | 101.50 |
| 26 | BB | 1143 | A | C4-C5-N7 | 5.13 | 113.27 | 110.70 |
| 26 | BB | 1662 | U | N1-C1'-C2' | -5.13 | 106.36 | 112.00 |
| 26 | BB | 1784 | A | C8-N9-C4 | -5.13 | 103.75 | 105.80 |
| 26 | BB | 2179 | C | N1-C2-O2 | 5.13 | 121.98 | 118.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2394 | C | N1-C2-O2 | -5.13 | 115.82 | 118.90 |
| 26 | BB | 2616 | C | N1-C2-O2 | -5.13 | 115.82 | 118.90 |
| 26 | BB | 2738 | A | C1'-O4'-C4' | 5.13 | 114.00 | 109.90 |
| 36 | BL | 124 | VAL | CA-CB-CG2 | 5.13 | 118.60 | 110.90 |
| 1 | AA | 747 | A | C6-N1-C2 | -5.13 | 115.52 | 118.60 |
| 26 | BB | 180 | G | C2'-C3'-O3' | 5.13 | 121.91 | 113.70 |
| 26 | BB | 1288 | G | C5-N7-C8 | 5.13 | 106.86 | 104.30 |
| 26 | BB | 1471 | G | C4'-C3'-C2' | 5.13 | 107.73 | 102.60 |
| 26 | BB | 2508 | G | N3-C4-N9 | 5.13 | 129.08 | 126.00 |
| 26 | BB | 2876 | G | C4-C5-C6 | 5.13 | 121.88 | 118.80 |
| 1 | AA | 185 | U | C1'-O4'-C4' | -5.13 | 105.80 | 109.90 |
| 1 | AA | 276 | G | N7-C8-N9 | 5.13 | 115.67 | 113.10 |
| 1 | AA | 295 | C | O4'-C4'-C3' | -5.13 | 98.87 | 104.00 |
| 1 | AA | 804 | U | O5'-P-OP1 | -5.13 | 101.08 | 105.70 |
| 1 | AA | 1382 | C | O4'-C1'-N1 | 5.13 | 112.30 | 108.20 |
| 3 | AC | 13 | A | C4'-C3'-C2' | 5.13 | 107.73 | 102.60 |
| 3 | AC | 53 | G | C4-C5-N7 | -5.13 | 108.75 | 110.80 |
| 8 | AH | 47 | PHE | CG-CD2-CE2 | -5.13 | 115.16 | 120.80 |
| 26 | BB | 253 | C | C5-C6-N1 | 5.13 | 123.56 | 121.00 |
| 26 | BB | 253 | C | C6-N1-C2 | -5.13 | 118.25 | 120.30 |
| 26 | BB | 397 | U | C1'-O4'-C4' | -5.13 | 105.80 | 109.90 |
| 26 | BB | 567 | U | N3-C4-O4 | 5.13 | 122.99 | 119.40 |
| 26 | BB | 702 | U | N3-C4-O4 | 5.13 | 122.99 | 119.40 |
| 26 | BB | 1033 | U | C6-N1-C2 | -5.13 | 117.92 | 121.00 |
| 26 | BB | 1072 | C | C5-C6-N1 | 5.13 | 123.56 | 121.00 |
| 26 | BB | 1132 | U | C6-N1-C2 | 5.13 | 124.08 | 121.00 |
| 26 | BB | 1549 | A | N9-C1'-C2' | -5.13 | 106.36 | 112.00 |
| 26 | BB | 1763 | G | C5-C6-N1 | -5.13 | 108.94 | 111.50 |
| 26 | BB | 1767 | G | C6-C5-N7 | -5.13 | 127.32 | 130.40 |
| 26 | BB | 2057 | G | N3-C2-N2 | 5.13 | 123.49 | 119.90 |
| 26 | BB | 2252 | G | C5-C6-N1 | 5.13 | 114.06 | 111.50 |
| 26 | BB | 2271 | G | N1-C6-O6 | -5.13 | 116.82 | 119.90 |
| 26 | BB | 2381 | A | N9-C4-C5 | 5.13 | 107.85 | 105.80 |
| 26 | BB | 2766 | A | N7-C8-N9 | 5.13 | 116.36 | 113.80 |
| 1 | AA | 42 | G | C5-N7-C8 | 5.13 | 106.86 | 104.30 |
| 1 | AA | 184 | G | C6-N1-C2 | -5.13 | 122.02 | 125.10 |
| 1 | AA | 249 | U | C5-C4-O4 | 5.13 | 128.98 | 125.90 |
| 1 | AA | 285 | C | C2-N3-C4 | 5.13 | 122.46 | 119.90 |
| 1 | AA | 662 | U | N3-C4-C5 | -5.13 | 111.53 | 114.60 |
| 1 | AA | 865 | A | C2-N3-C4 | 5.13 | 113.16 | 110.60 |
| 1 | AA | 1450 | U | C4-C5-C6 | 5.13 | 122.78 | 119.70 |
| 25 | BA | 48 | U | C4-C5-C6 | 5.13 | 122.78 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 366 | C | O4'-C1'-N1 | 5.13 | 112.30 | 108.20 |
| 26 | BB | 442 | G | C4-C5-C6 | 5.13 | 121.88 | 118.80 |
| 26 | BB | 537 | G | C2-N3-C4 | 5.13 | 114.46 | 111.90 |
| 26 | BB | 1128 | G | C5'-C4'-O4' | 5.13 | 115.25 | 109.10 |
| 26 | BB | 1224 | U | N3-C4-O4 | -5.13 | 115.81 | 119.40 |
| 26 | BB | 1253 | A | N1-C2-N3 | 5.13 | 131.86 | 129.30 |
| 26 | BB | 1682 | G | C5-N7-C8 | 5.13 | 106.86 | 104.30 |
| 26 | BB | 1799 | G | C4-C5-N7 | -5.13 | 108.75 | 110.80 |
| 26 | BB | 2235 | G | O4'-C4'-C3' | 5.13 | 110.20 | 106.10 |
| 26 | BB | 2371 | G | C3'-C2'-C1' | -5.13 | 97.40 | 101.50 |
| 26 | BB | 2621 | G | C2-N3-C4 | 5.13 | 114.46 | 111.90 |
| 26 | BB | 2760 | C | N3-C4-N4 | 5.13 | 121.59 | 118.00 |
| 26 | BB | 2893 | A | C5-N7-C8 | 5.13 | 106.46 | 103.90 |
| 1 | AA | 85 | U | C3'-C2'-C1' | -5.12 | 97.40 | 101.50 |
| 1 | AA | 492 | C | O4'-C4'-C3' | 5.12 | 110.20 | 106.10 |
| 1 | AA | 718 | A | C6-C5-N7 | 5.12 | 135.89 | 132.30 |
| 1 | AA | 729 | A | C2-N3-C4 | -5.12 | 108.04 | 110.60 |
| 26 | BB | 811 | U | C6-N1-C2 | -5.12 | 117.92 | 121.00 |
| 26 | BB | 1052 | C | C5-C6-N1 | -5.12 | 118.44 | 121.00 |
| 26 | BB | 1507 | C | C5-C6-N1 | 5.12 | 123.56 | 121.00 |
| 26 | BB | 1777 | U | N1-C2-N3 | 5.12 | 117.97 | 114.90 |
| 26 | BB | 2017 | U | N3-C4-C5 | -5.12 | 111.53 | 114.60 |
| 26 | BB | 2419 | U | C5-C6-N1 | -5.12 | 120.14 | 122.70 |
| 1 | AA | 103 | U | N3-C4-O4 | -5.12 | 115.81 | 119.40 |
| 1 | AA | 543 | U | C1'-O4'-C4' | -5.12 | 105.80 | 109.90 |
| 1 | AA | 589 | U | C6-N1-C2 | -5.12 | 117.93 | 121.00 |
| 1 | AA | 1122 | U | N1-C2-O2 | -5.12 | 119.21 | 122.80 |
| 1 | AA | 1377 | A | C5-C6-N1 | -5.12 | 115.14 | 117.70 |
| 1 | AA | 1473 | G | N3-C4-C5 | -5.12 | 126.04 | 128.60 |
| 4 | AD | 34 | U | N1-C2-O2 | 5.12 | 126.39 | 122.80 |
| 25 | BA | 112 | G | N9-C4-C5 | 5.12 | 107.45 | 105.40 |
| 26 | BB | 240 | C | C4'-C3'-C2' | 5.12 | 107.72 | 102.60 |
| 26 | BB | 292 | U | N3-C4-O4 | -5.12 | 115.81 | 119.40 |
| 26 | BB | 319 | G | C2-N3-C4 | 5.12 | 114.46 | 111.90 |
| 26 | BB | 448 | U | N3-C4-O4 | 5.12 | 122.99 | 119.40 |
| 26 | BB | 484 | C | O4'-C1'-N1 | 5.12 | 112.30 | 108.20 |
| 26 | BB | 603 | A | C8-N9-C4 | -5.12 | 103.75 | 105.80 |
| 26 | BB | 663 | G | C5-C6-O6 | -5.12 | 125.53 | 128.60 |
| 26 | BB | 815 | C | C3'-C2'-C1' | 5.12 | 105.60 | 101.50 |
| 26 | BB | 1225 | G | C8-N9-C4 | -5.12 | 104.35 | 106.40 |
| 26 | BB | 1439 | A | C5-N7-C8 | 5.12 | 106.46 | 103.90 |
| 26 | BB | 1556 | C | P-O5'-C5' | 5.12 | 129.10 | 120.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1629 | U | N3-C2-O2 | -5.12 | 118.61 | 122.20 |
| 26 | BB | 1920 | C | C5'-C4'-O4' | 5.12 | 115.25 | 109.10 |
| 26 | BB | 2072 | C | P-O5'-C5' | 5.12 | 129.10 | 120.90 |
| 26 | BB | 2848 | G | O4'-C1'-N9 | 5.12 | 112.30 | 108.20 |
| 1 | AA | 105 | G | C5-N7-C8 | -5.12 | 101.74 | 104.30 |
| 1 | AA | 128 | G | C1'-O4'-C4' | 5.12 | 114.00 | 109.90 |
| 1 | AA | 195 | A | N1-C6-N6 | -5.12 | 115.53 | 118.60 |
| 1 | AA | 228 | A | C4-C5-C6 | 5.12 | 119.56 | 117.00 |
| 1 | AA | 285 | C | C5-C6-N1 | 5.12 | 123.56 | 121.00 |
| 1 | AA | 380 | G | P-O3'-C3' | 5.12 | 125.85 | 119.70 |
| 1 | AA | 398 | U | C2-N3-C4 | -5.12 | 123.93 | 127.00 |
| 1 | AA | 428 | G | C4-C5-C6 | 5.12 | 121.87 | 118.80 |
| 1 | AA | 1102 | A | N1-C6-N6 | -5.12 | 115.53 | 118.60 |
| 1 | AA | 1415 | G | C1'-O4'-C4' | 5.12 | 114.00 | 109.90 |
| 1 | AA | 1453 | G | C3'-C2'-C1' | 5.12 | 105.60 | 101.50 |
| 25 | BA | 120 | U | C3'-C2'-C1' | 5.12 | 105.60 | 101.50 |
| 26 | BB | 33 | C | C4'-C3'-C2' | -5.12 | 97.48 | 102.60 |
| 26 | BB | 109 | C | C5'-C4'-O4' | 5.12 | 115.25 | 109.10 |
| 26 | BB | 222 | A | N7-C8-N9 | -5.12 | 111.24 | 113.80 |
| 26 | BB | 933 | A | C8-N9-C1' | 5.12 | 136.92 | 127.70 |
| 26 | BB | 1470 | A | O4'-C1'-N9 | -5.12 | 104.10 | 108.20 |
| 26 | BB | 1941 | C | O4'-C1'-N1 | 5.12 | 112.30 | 108.20 |
| 26 | BB | 2187 | U | C6-N1-C2 | 5.12 | 124.07 | 121.00 |
| 26 | BB | 2201 | G | C5-C6-N1 | 5.12 | 114.06 | 111.50 |
| 26 | BB | 2269 | G | O4'-C1'-C2' | -5.12 | 100.68 | 105.80 |
| 26 | BB | 2429 | G | N9-C1'-C2' | 5.12 | 120.66 | 114.00 |
| 26 | BB | 2871 | U | C3'-C2'-C1' | -5.12 | 97.40 | 101.50 |
| 26 | BB | 2893 | A | C6-C5-N7 | 5.12 | 135.88 | 132.30 |
| 27 | BC | 41 | SER | N-CA-CB | -5.12 | 102.82 | 110.50 |
| 34 | BJ | 41 | ARG | NE-CZ-NH2 | -5.12 | 117.74 | 120.30 |
| 1 | AA | 174 | A | N3-C4-C5 | -5.12 | 123.22 | 126.80 |
| 1 | AA | 181 | A | O4'-C1'-C2' | -5.12 | 100.68 | 105.80 |
| 1 | AA | 199 | A | C6-N1-C2 | 5.12 | 121.67 | 118.60 |
| 1 | AA | 632 | U | C2'-C3'-O3' | 5.12 | 121.89 | 113.70 |
| 1 | AA | 645 | G | C4-N9-C1' | -5.12 | 119.84 | 126.50 |
| 1 | AA | 702 | A | N1-C6-N6 | -5.12 | 115.53 | 118.60 |
| 1 | AA | 801 | U | C5-C6-N1 | -5.12 | 120.14 | 122.70 |
| 21 | AU | 42 | ARG | NE-CZ-NH1 | -5.12 | 117.74 | 120.30 |
| 26 | BB | 169 | G | C3'-C2'-C1' | -5.12 | 97.40 | 101.50 |
| 26 | BB | 1084 | A | C2-N3-C4 | 5.12 | 113.16 | 110.60 |
| 26 | BB | 1717 | A | C4-C5-C6 | 5.12 | 119.56 | 117.00 |
| 26 | BB | 2377 | A | N1-C6-N6 | -5.12 | 115.53 | 118.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2669 | G | N1-C6-O6 | 5.12 | 122.97 | 119.90 |
| 34 | BJ | 7 | LYS | N-CA-CB | -5.12 | 101.38 | 110.60 |
| 38 | BN | 2 | ARG | CD-NE-CZ | 5.12 | 130.77 | 123.60 |
| 1 | AA | 413 | G | C4-C5-C6 | 5.12 | 121.87 | 118.80 |
| 1 | AA | 460 | A | P-O5'-C5' | 5.12 | 129.09 | 120.90 |
| 1 | AA | 482 | A | C5'-C4'-O4' | 5.12 | 115.24 | 109.10 |
| 1 | AA | 810 | C | N1-C2-O2 | 5.12 | 121.97 | 118.90 |
| 1 | AA | 1130 | A | C6-N1-C2 | -5.12 | 115.53 | 118.60 |
| 1 | AA | 1462 | C | C5-C4-N4 | -5.12 | 116.62 | 120.20 |
| 12 | AL | 112 | ARG | NE-CZ-NH2 | 5.12 | 122.86 | 120.30 |
| 26 | BB | 179 | C | C5-C4-N4 | -5.12 | 116.62 | 120.20 |
| 26 | BB | 340 | A | O4'-C1'-N9 | 5.12 | 112.30 | 108.20 |
| 26 | BB | 378 | C | C5'-C4'-O4' | 5.12 | 115.24 | 109.10 |
| 26 | BB | 451 | U | O4'-C1'-C2' | -5.12 | 100.68 | 105.80 |
| 26 | BB | 474 | G | N1-C2-N2 | -5.12 | 111.59 | 116.20 |
| 26 | BB | 963 | U | N1-C2-O2 | -5.12 | 119.22 | 122.80 |
| 26 | BB | 974 | G | C3'-C2'-C1' | 5.12 | 105.59 | 101.50 |
| 26 | BB | 1049 | C | C3'-C2'-C1' | 5.12 | 105.59 | 101.50 |
| 26 | BB | 1180 | U | C4'-C3'-C2' | -5.12 | 97.48 | 102.60 |
| 26 | BB | 1219 | U | N3-C4-O4 | 5.12 | 122.98 | 119.40 |
| 26 | BB | 1469 | A | C4-C5-C6 | -5.12 | 114.44 | 117.00 |
| 26 | BB | 1490 | A | C4-C5-N7 | -5.12 | 108.14 | 110.70 |
| 26 | BB | 2212 | A | O4'-C1'-C2' | -5.12 | 100.68 | 105.80 |
| 26 | BB | 2365 | G | C5-N7-C8 | 5.12 | 106.86 | 104.30 |
| 26 | BB | 2512 | C | OP1-P-O3' | 5.12 | 116.46 | 105.20 |
| 26 | BB | 2663 | G | P-O3'-C3' | 5.12 | 125.84 | 119.70 |
| 1 | AA | 220 | G | C5-C6-N1 | 5.12 | 114.06 | 111.50 |
| 1 | AA | 301 | G | C2-N3-C4 | 5.12 | 114.46 | 111.90 |
| 1 | AA | 732 | C | C3'-C2'-C1' | 5.12 | 105.59 | 101.50 |
| 1 | AA | 1187 | G | C4'-C3'-C2' | -5.12 | 97.48 | 102.60 |
| 1 | AA | 1391 | U | N3-C4-C5 | -5.12 | 111.53 | 114.60 |
| 2 | AB | 4 | G | N3-C2-N2 | -5.12 | 116.32 | 119.90 |
| 2 | AB | 47 | U | N3-C4-O4 | -5.12 | 115.82 | 119.40 |
| 3 | AC | 27 | A | N1-C2-N3 | 5.12 | 131.86 | 129.30 |
| 3 | AC | 44 | U | N3-C2-O2 | -5.12 | 118.62 | 122.20 |
| 26 | BB | 132 | G | C6-N1-C2 | -5.12 | 122.03 | 125.10 |
| 26 | BB | 549 | G | O4'-C1'-N9 | 5.12 | 112.29 | 108.20 |
| 26 | BB | 971 | G | N3-C4-N9 | 5.12 | 129.07 | 126.00 |
| 26 | BB | 1272 | A | C6-N1-C2 | 5.12 | 121.67 | 118.60 |
| 26 | BB | 1978 | A | C2-N3-C4 | 5.12 | 113.16 | 110.60 |
| 26 | BB | 2239 | G | C4-N9-C1' | 5.12 | 133.15 | 126.50 |
| 26 | BB | 2674 | G | C3'-C2'-C1' | -5.12 | 97.41 | 101.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 274 | A | C2-N3-C4 | -5.12 | 108.04 | 110.60 |
| 1 | AA | 563 | A | N3-C4-C5 | -5.12 | 123.22 | 126.80 |
| 1 | AA | 617 | G | C4-C5-N7 | -5.12 | 108.75 | 110.80 |
| 1 | AA | 978 | A | C2'-C3'-O3' | 5.12 | 121.89 | 113.70 |
| 1 | AA | 981 | U | O5'-P-OP1 | 5.12 | 116.84 | 110.70 |
| 1 | AA | 986 | U | C5'-C4'-C3' | -5.12 | 107.82 | 116.00 |
| 1 | AA | 1297 | G | C4-C5-C6 | 5.12 | 121.87 | 118.80 |
| 4 | AD | 42 | C | N3-C4-N4 | 5.12 | 121.58 | 118.00 |
| 26 | BB | 25 | U | N3-C4-O4 | 5.12 | 122.98 | 119.40 |
| 26 | BB | 254 | G | O4'-C1'-N9 | 5.12 | 112.29 | 108.20 |
| 26 | BB | 347 | A | C3'-C2'-C1' | -5.12 | 97.41 | 101.50 |
| 26 | BB | 1185 | G | C1'-O4'-C4' | -5.12 | 105.81 | 109.90 |
| 26 | BB | 1261 | C | C5-C6-N1 | 5.12 | 123.56 | 121.00 |
| 26 | BB | 1819 | A | C3'-C2'-C1' | 5.12 | 105.59 | 101.50 |
| 26 | BB | 2019 | A | C5'-C4'-O4' | 5.12 | 115.24 | 109.10 |
| 26 | BB | 2118 | U | P-O3'-C3' | 5.12 | 125.84 | 119.70 |
| 26 | BB | 2126 | A | C1'-O4'-C4' | 5.12 | 113.99 | 109.90 |
| 26 | BB | 2290 | G | C4'-C3'-O3' | 5.12 | 123.23 | 113.00 |
| 26 | BB | 2421 | G | C4-C5-N7 | -5.12 | 108.75 | 110.80 |
| 26 | BB | 2421 | G | N7-C8-N9 | 5.12 | 115.66 | 113.10 |
| 26 | BB | 2553 | G | C6-C5-N7 | 5.12 | 133.47 | 130.40 |
| 26 | BB | 2754 | U | C1'-O4'-C4' | 5.12 | 113.99 | 109.90 |
| 26 | BB | 2790 | U | O4'-C1'-C2' | -5.12 | 100.68 | 105.80 |
| 56 | B5 | 35 | ARG | NE-CZ-NH1 | 5.12 | 122.86 | 120.30 |
| 58 | B7 | 2 | LYS | O-C-N | -5.12 | 114.52 | 122.70 |
| 1 | AA | 175 | C | N1-C2-O2 | 5.11 | 121.97 | 118.90 |
| 1 | AA | 374 | A | N1-C2-N3 | 5.11 | 131.86 | 129.30 |
| 1 | AA | 498 | A | N7-C8-N9 | 5.11 | 116.36 | 113.80 |
| 1 | AA | 671 | G | C4-C5-N7 | -5.11 | 108.75 | 110.80 |
| 1 | AA | 700 | G | C5-C6-N1 | 5.11 | 114.06 | 111.50 |
| 1 | AA | 741 | G | N1-C6-O6 | -5.11 | 116.83 | 119.90 |
| 1 | AA | 1167 | A | O4'-C1'-N9 | 5.11 | 112.29 | 108.20 |
| 1 | AA | 1300 | G | C5-C6-O6 | -5.11 | 125.53 | 128.60 |
| 1 | AA | 1475 | G | C8-N9-C4 | -5.11 | 104.36 | 106.40 |
| 25 | BA | 58 | A | C6-N1-C2 | 5.11 | 121.67 | 118.60 |
| 26 | BB | 443 | A | N9-C4-C5 | 5.11 | 107.85 | 105.80 |
| 26 | BB | 468 | G | O4'-C1'-N9 | 5.11 | 112.29 | 108.20 |
| 26 | BB | 469 | G | O4'-C4'-C3' | 5.11 | 110.19 | 106.10 |
| 26 | BB | 470 | A | C2-N3-C4 | 5.11 | 113.16 | 110.60 |
| 26 | BB | 1054 | A | N3-C4-N9 | -5.11 | 123.31 | 127.40 |
| 26 | BB | 1460 | U | O3'-P-O5' | 5.11 | 113.72 | 104.00 |
| 26 | BB | 1500 | G | C4-N9-C1' | -5.11 | 119.85 | 126.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1631 | G | C4-C5-C6 | 5.11 | 121.87 | 118.80 |
| 26 | BB | 1750 | G | O4'-C1'-N9 | 5.11 | 112.29 | 108.20 |
| 26 | BB | 1953 | A | C5-N7-C8 | -5.11 | 101.34 | 103.90 |
| 1 | AA | 1084 | G | N3-C4-C5 | -5.11 | 126.04 | 128.60 |
| 26 | BB | 148 | U | O4'-C1'-N1 | 5.11 | 112.29 | 108.20 |
| 26 | BB | 190 | A | C6-N1-C2 | -5.11 | 115.53 | 118.60 |
| 26 | BB | 825 | A | C5'-C4'-C3' | -5.11 | 107.82 | 116.00 |
| 26 | BB | 918 | A | C3'-C2'-C1' | 5.11 | 105.59 | 101.50 |
| 26 | BB | 2901 | C | C1'-O4'-C4' | 5.11 | 113.99 | 109.90 |
| 1 | AA | 71 | A | C5-C6-N1 | 5.11 | 120.25 | 117.70 |
| 1 | AA | 377 | G | C3'-C2'-C1' | 5.11 | 105.59 | 101.50 |
| 1 | AA | 458 | U | C2-N1-C1' | -5.11 | 111.57 | 117.70 |
| 1 | AA | 603 | U | N1-C1'-C2' | -5.11 | 106.38 | 112.00 |
| 1 | AA | 637 | C | C5'-C4'-O4' | 5.11 | 115.23 | 109.10 |
| 1 | AA | 795 | C | N1-C2-N3 | 5.11 | 122.78 | 119.20 |
| 1 | AA | 881 | G | C4-C5-C6 | 5.11 | 121.87 | 118.80 |
| 1 | AA | 894 | G | N3-C2-N2 | -5.11 | 116.32 | 119.90 |
| 1 | AA | 902 | G | N9-C4-C5 | -5.11 | 103.36 | 105.40 |
| 1 | AA | 1040 | U | C5-C6-N1 | -5.11 | 120.14 | 122.70 |
| 1 | AA | 1294 | G | C5'-C4'-C3' | -5.11 | 107.82 | 116.00 |
| 2 | AB | 27 | C | C5'-C4'-O4' | 5.11 | 115.23 | 109.10 |
| 25 | BA | 79 | G | C5-C6-O6 | -5.11 | 125.53 | 128.60 |
| 26 | BB | 108 | G | OP1-P-O3' | 5.11 | 116.44 | 105.20 |
| 26 | BB | 520 | G | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 26 | BB | 575 | A | N1-C2-N3 | -5.11 | 126.74 | 129.30 |
| 26 | BB | 704 | G | C4-C5-C6 | -5.11 | 115.73 | 118.80 |
| 26 | BB | 1306 | C | C6-N1-C2 | 5.11 | 122.34 | 120.30 |
| 26 | BB | 1369 | G | N1-C6-O6 | 5.11 | 122.97 | 119.90 |
| 26 | BB | 1540 | G | N1-C2-N2 | 5.11 | 120.80 | 116.20 |
| 26 | BB | 1587 | G | C4-C5-N7 | -5.11 | 108.76 | 110.80 |
| 26 | BB | 2075 | U | N1-C1'-C2' | -5.11 | 106.38 | 112.00 |
| 26 | BB | 2278 | A | N3-C4-C5 | -5.11 | 123.22 | 126.80 |
| 26 | BB | 2349 | G | O5'-P-OP2 | 5.11 | 116.83 | 110.70 |
| 26 | BB | 2389 | G | OP1-P-O3' | 5.11 | 116.44 | 105.20 |
| 26 | BB | 2432 | A | C2'-C3'-O3' | 5.11 | 121.88 | 113.70 |
| 26 | BB | 2434 | A | C6-N1-C2 | -5.11 | 115.53 | 118.60 |
| 26 | BB | 2531 | A | N7-C8-N9 | 5.11 | 116.36 | 113.80 |
| 26 | BB | 2535 | G | C1'-O4'-C4' | 5.11 | 113.99 | 109.90 |
| 26 | BB | 2606 | C | C2-N3-C4 | 5.11 | 122.45 | 119.90 |
| 1 | AA | 659 | U | N3-C4-O4 | -5.11 | 115.82 | 119.40 |
| 1 | AA | 972 | C | N3-C4-N4 | 5.11 | 121.58 | 118.00 |
| 1 | AA | 1401 | G | C1'-O4'-C4' | 5.11 | 113.99 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 28 | A | O4'-C1'-N9 | 5.11 | 112.29 | 108.20 |
| 26 | BB | 252 | G | N9-C4-C5 | 5.11 | 107.44 | 105.40 |
| 26 | BB | 355 | U | C6-N1-C2 | -5.11 | 117.94 | 121.00 |
| 26 | BB | 918 | A | C8-N9-C4 | -5.11 | 103.76 | 105.80 |
| 26 | BB | 1336 | A | C4-C5-C6 | -5.11 | 114.44 | 117.00 |
| 26 | BB | 1784 | A | N7-C8-N9 | 5.11 | 116.35 | 113.80 |
| 26 | BB | 1832 | C | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 26 | BB | 2280 | G | N7-C8-N9 | 5.11 | 115.66 | 113.10 |
| 26 | BB | 2474 | U | C5-C4-O4 | -5.11 | 122.83 | 125.90 |
| 26 | BB | 2486 | C | N1-C2-O2 | 5.11 | 121.97 | 118.90 |
| 26 | BB | 2715 | C | N1-C2-N3 | 5.11 | 122.78 | 119.20 |
| 26 | BB | 2872 | A | C4-C5-C6 | -5.11 | 114.44 | 117.00 |
| 43 | BS | 33 | VAL | CG1-CB-CG2 | -5.11 | 102.73 | 110.90 |
| 1 | AA | 145 | G | C6-C5-N7 | 5.11 | 133.47 | 130.40 |
| 1 | AA | 255 | G | N1-C6-O6 | -5.11 | 116.84 | 119.90 |
| 1 | AA | 891 | U | N1-C2-N3 | 5.11 | 117.97 | 114.90 |
| 1 | AA | 1406 | U | N3-C2-O2 | -5.11 | 118.62 | 122.20 |
| 2 | AB | 56 | C | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 3 | AC | 39 | U | C5'-C4'-O4' | 5.11 | 115.23 | 109.10 |
| 4 | AD | 34 | U | N1-C2-N3 | 5.11 | 117.96 | 114.90 |
| 26 | BB | 369 | U | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 26 | BB | 382 | A | P-O3'-C3' | 5.11 | 125.83 | 119.70 |
| 26 | BB | 532 | A | C4-C5-N7 | -5.11 | 108.15 | 110.70 |
| 26 | BB | 540 | C | C5'-C4'-O4' | -5.11 | 102.97 | 109.10 |
| 26 | BB | 775 | G | C5'-C4'-O4' | 5.11 | 115.23 | 109.10 |
| 26 | BB | 831 | G | N3-C4-C5 | -5.11 | 126.05 | 128.60 |
| 26 | BB | 1133 | A | N3-C4-C5 | -5.11 | 123.22 | 126.80 |
| 26 | BB | 1249 | U | N1-C1'-C2' | -5.11 | 106.38 | 112.00 |
| 26 | BB | 1578 | U | C5'-C4'-C3' | -5.11 | 107.83 | 116.00 |
| 26 | BB | 1777 | U | N3-C2-O2 | -5.11 | 118.62 | 122.20 |
| 26 | BB | 2156 | G | O4'-C1'-N9 | 5.11 | 112.29 | 108.20 |
| 26 | BB | 2513 | A | O4'-C4'-C3' | -5.11 | 98.89 | 104.00 |
| 1 | AA | 68 | G | N1-C2-N3 | 5.11 | 126.96 | 123.90 |
| 1 | AA | 104 | G | O4'-C1'-N9 | 5.11 | 112.28 | 108.20 |
| 1 | AA | 129 | A | C4'-C3'-C2' | -5.11 | 97.49 | 102.60 |
| 1 | AA | 351 | G | N3-C4-C5 | -5.11 | 126.05 | 128.60 |
| 1 | AA | 468 | A | C2-N3-C4 | -5.11 | 108.05 | 110.60 |
| 1 | AA | 604 | G | C5'-C4'-C3' | -5.11 | 107.83 | 116.00 |
| 1 | AA | 829 | G | C5-C6-O6 | 5.11 | 131.66 | 128.60 |
| 1 | AA | 1389 | C | C5'-C4'-O4' | 5.11 | 115.23 | 109.10 |
| 20 | AT | 37 | ILE | CG1-CB-CG2 | 5.11 | 122.63 | 111.40 |
| 26 | BB | 693 | A | C5-C6-N6 | -5.11 | 119.62 | 123.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1276 | A | C6-N1-C2 | 5.11 | 121.66 | 118.60 |
| 26 | BB | 1319 | C | C3'-C2'-C1' | 5.11 | 105.58 | 101.50 |
| 26 | BB | 1445 | G | C4'-C3'-C2' | -5.11 | 97.49 | 102.60 |
| 26 | BB | 1534 | U | C2'-C3'-O3' | 5.11 | 121.87 | 113.70 |
| 26 | BB | 1679 | A | N3-C4-C5 | -5.11 | 123.23 | 126.80 |
| 26 | BB | 1710 | G | N3-C2-N2 | 5.11 | 123.47 | 119.90 |
| 26 | BB | 1861 | G | C4'-C3'-C2' | -5.11 | 97.50 | 102.60 |
| 26 | BB | 2168 | G | C5-C6-O6 | -5.11 | 125.54 | 128.60 |
| 26 | BB | 2209 | G | C1'-O4'-C4' | -5.11 | 105.82 | 109.90 |
| 26 | BB | 2326 | C | C3'-C2'-C1' | 5.11 | 105.58 | 101.50 |
| 26 | BB | 2583 | G | O4'-C4'-C3' | 5.11 | 110.18 | 106.10 |
| 26 | BB | 2689 | U | N3-C2-O2 | -5.11 | 118.63 | 122.20 |
| 26 | BB | 2742 | G | C3'-C2'-C1' | 5.11 | 105.58 | 101.50 |
| 39 | BO | 7 | THR | CA-CB-CG2 | 5.11 | 119.55 | 112.40 |
| 1 | AA | 199 | A | C4'-C3'-C2' | -5.10 | 97.50 | 102.60 |
| 1 | AA | 714 | G | C4-C5-N7 | 5.10 | 112.84 | 110.80 |
| 5 | AE | 113 | LEU | CB-CG-CD1 | 5.10 | 119.68 | 111.00 |
| 19 | AS | 80 | LYS | C-N-CA | 5.10 | 134.46 | 121.70 |
| 26 | BB | 91 | A | C2-N3-C4 | 5.10 | 113.15 | 110.60 |
| 26 | BB | 317 | G | C4-C5-N7 | -5.10 | 108.76 | 110.80 |
| 26 | BB | 1178 | C | N3-C2-O2 | -5.10 | 118.33 | 121.90 |
| 26 | BB | 1349 | C | C5-C4-N4 | 5.10 | 123.77 | 120.20 |
| 26 | BB | 1382 | G | N3-C4-N9 | 5.10 | 129.06 | 126.00 |
| 26 | BB | 1601 | G | C5-N7-C8 | 5.10 | 106.85 | 104.30 |
| 26 | BB | 2045 | C | C6-N1-C1' | -5.10 | 114.67 | 120.80 |
| 1 | AA | 48 | C | C5-C6-N1 | 5.10 | 123.55 | 121.00 |
| 1 | AA | 379 | C | N3-C4-N4 | 5.10 | 121.57 | 118.00 |
| 1 | AA | 399 | G | N3-C4-C5 | 5.10 | 131.15 | 128.60 |
| 1 | AA | 629 | A | N9-C4-C5 | 5.10 | 107.84 | 105.80 |
| 1 | AA | 1014 | A | C3'-C2'-C1' | 5.10 | 105.58 | 101.50 |
| 1 | AA | 1229 | A | O5'-P-OP2 | -5.10 | 101.11 | 105.70 |
| 26 | BB | 45 | G | N7-C8-N9 | -5.10 | 110.55 | 113.10 |
| 26 | BB | 120 | U | C2-N3-C4 | -5.10 | 123.94 | 127.00 |
| 26 | BB | 332 | A | N3-C4-C5 | 5.10 | 130.37 | 126.80 |
| 26 | BB | 404 | A | N3-C4-N9 | 5.10 | 131.48 | 127.40 |
| 26 | BB | 487 | C | C6-N1-C2 | 5.10 | 122.34 | 120.30 |
| 26 | BB | 542 | C | C2-N3-C4 | -5.10 | 117.35 | 119.90 |
| 26 | BB | 908 | C | C4-C5-C6 | -5.10 | 114.85 | 117.40 |
| 26 | BB | 1187 | G | C4-C5-C6 | 5.10 | 121.86 | 118.80 |
| 26 | BB | 1194 | A | P-O3'-C3' | 5.10 | 125.82 | 119.70 |
| 26 | BB | 1473 | G | N7-C8-N9 | 5.10 | 115.65 | 113.10 |
| 26 | BB | 1577 | C | C5'-C4'-C3' | 5.10 | 124.16 | 116.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2314 | A | N1-C2-N3 | -5.10 | 126.75 | 129.30 |
| 26 | BB | 2333 | A | C1'-O4'-C4' | -5.10 | 105.82 | 109.90 |
| 26 | BB | 2452 | C | C6-N1-C1' | 5.10 | 126.92 | 120.80 |
| 26 | BB | 2860 | A | N3-C4-C5 | -5.10 | 123.23 | 126.80 |
| 1 | AA | 15 | G | C5-C6-O6 | -5.10 | 125.54 | 128.60 |
| 1 | AA | 377 | G | C4-C5-C6 | 5.10 | 121.86 | 118.80 |
| 26 | BB | 449 | A | N9-C4-C5 | 5.10 | 107.84 | 105.80 |
| 26 | BB | 904 | G | C5'-C4'-O4' | 5.10 | 115.22 | 109.10 |
| 26 | BB | 1051 | G | O3'-P-O5' | -5.10 | 94.31 | 104.00 |
| 26 | BB | 1234 | U | N3-C2-O2 | -5.10 | 118.63 | 122.20 |
| 26 | BB | 1494 | A | N1-C6-N6 | 5.10 | 121.66 | 118.60 |
| 26 | BB | 1857 | G | C2-N3-C4 | 5.10 | 114.45 | 111.90 |
| 26 | BB | 2194 | U | C2-N3-C4 | -5.10 | 123.94 | 127.00 |
| 26 | BB | 2899 | A | N3-C4-N9 | 5.10 | 131.48 | 127.40 |
| 42 | BR | 80 | VAL | CG1-CB-CG2 | -5.10 | 102.74 | 110.90 |
| 1 | AA | 74 | A | C2-N3-C4 | 5.10 | 113.15 | 110.60 |
| 1 | AA | 97 | G | C4'-C3'-C2' | -5.10 | 97.50 | 102.60 |
| 1 | AA | 276 | G | C4-C5-C6 | 5.10 | 121.86 | 118.80 |
| 1 | AA | 341 | C | N1-C2-O2 | 5.10 | 121.96 | 118.90 |
| 1 | AA | 471 | U | O5'-P-OP1 | 5.10 | 116.82 | 110.70 |
| 1 | AA | 1160 | G | C3'-C2'-C1' | -5.10 | 97.42 | 101.50 |
| 1 | AA | 1423 | G | O4'-C1'-C2' | -5.10 | 100.70 | 105.80 |
| 4 | AD | 36 | A | N1-C6-N6 | 5.10 | 121.66 | 118.60 |
| 26 | BB | 384 | A | C1'-O4'-C4' | 5.10 | 113.98 | 109.90 |
| 26 | BB | 572 | A | C5-N7-C8 | 5.10 | 106.45 | 103.90 |
| 26 | BB | 631 | A | O5'-C5'-C4' | -5.10 | 102.01 | 111.70 |
| 26 | BB | 632 | A | N7-C8-N9 | 5.10 | 116.35 | 113.80 |
| 26 | BB | 853 | C | N3-C4-N4 | 5.10 | 121.57 | 118.00 |
| 26 | BB | 1227 | G | C3'-C2'-C1' | -5.10 | 97.42 | 101.50 |
| 26 | BB | 1278 | C | C2-N3-C4 | 5.10 | 122.45 | 119.90 |
| 26 | BB | 1599 | U | C5-C6-N1 | -5.10 | 120.15 | 122.70 |
| 26 | BB | 1719 | G | N3-C4-N9 | 5.10 | 129.06 | 126.00 |
| 26 | BB | 1886 | U | N3-C4-O4 | 5.10 | 122.97 | 119.40 |
| 26 | BB | 1947 | C | N3-C2-O2 | -5.10 | 118.33 | 121.90 |
| 26 | BB | 1980 | G | C2-N3-C4 | 5.10 | 114.45 | 111.90 |
| 26 | BB | 1981 | A | C6-C5-N7 | 5.10 | 135.87 | 132.30 |
| 26 | BB | 2216 | G | N9-C4-C5 | 5.10 | 107.44 | 105.40 |
| 26 | BB | 2391 | G | N1-C2-N3 | 5.10 | 126.96 | 123.90 |
| 26 | BB | 2414 | G | C3'-C2'-C1' | -5.10 | 97.42 | 101.50 |
| 1 | AA | 80 | A | N7-C8-N9 | 5.10 | 116.35 | 113.80 |
| 1 | AA | 213 | G | N7-C8-N9 | 5.10 | 115.65 | 113.10 |
| 1 | AA | 555 | U | C5'-C4'-O4' | 5.10 | 115.22 | 109.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 666 | G | N3-C2-N2 | -5.10 | 116.33 | 119.90 |
| 1 | AA | 1173 | U | N1-C2-O2 | -5.10 | 119.23 | 122.80 |
| 1 | AA | 1202 | U | C4-C5-C6 | 5.10 | 122.76 | 119.70 |
| 1 | AA | 1256 | A | N7-C8-N9 | -5.10 | 111.25 | 113.80 |
| 1 | AA | 1423 | G | OP1-P-OP2 | -5.10 | 111.95 | 119.60 |
| 1 | AA | 1444 | U | P-O3'-C3' | 5.10 | 125.82 | 119.70 |
| 1 | AA | 1524 | C | C5-C6-N1 | 5.10 | 123.55 | 121.00 |
| 1 | AA | 1525 | G | O4'-C1'-C2' | -5.10 | 100.70 | 105.80 |
| 5 | AE | 125 | PHE | CG-CD1-CE1 | -5.10 | 115.19 | 120.80 |
| 12 | AL | 124 | PRO | CA-N-CD | -5.10 | 104.36 | 111.50 |
| 25 | BA | 91 | C | C5'-C4'-O4' | 5.10 | 115.22 | 109.10 |
| 25 | BA | 104 | A | C3'-C2'-C1' | 5.10 | 105.58 | 101.50 |
| 26 | BB | 610 | C | C1'-O4'-C4' | 5.10 | 113.98 | 109.90 |
| 26 | BB | 644 | A | O3'-P-O5' | 5.10 | 113.68 | 104.00 |
| 26 | BB | 1109 | C | N3-C2-O2 | -5.10 | 118.33 | 121.90 |
| 26 | BB | 1201 | U | N3-C4-C5 | -5.10 | 111.54 | 114.60 |
| 26 | BB | 1283 | G | C5-C6-O6 | -5.10 | 125.54 | 128.60 |
| 26 | BB | 1424 | G | C5-N7-C8 | -5.10 | 101.75 | 104.30 |
| 26 | BB | 1714 | U | N3-C4-O4 | -5.10 | 115.83 | 119.40 |
| 26 | BB | 1776 | G | N1-C2-N2 | -5.10 | 111.61 | 116.20 |
| 26 | BB | 1819 | A | C8-N9-C4 | -5.10 | 103.76 | 105.80 |
| 26 | BB | 1848 | A | N9-C1'-C2' | -5.10 | 106.39 | 112.00 |
| 26 | BB | 2296 | U | O4'-C1'-N1 | 5.10 | 112.28 | 108.20 |
| 26 | BB | 2376 | A | C4-C5-C6 | -5.10 | 114.45 | 117.00 |
| 26 | BB | 2579 | C | N3-C4-N4 | -5.10 | 114.43 | 118.00 |
| 26 | BB | 2699 | C | P-O3'-C3' | 5.10 | 125.82 | 119.70 |
| 26 | BB | 2757 | A | C5'-C4'-O4' | 5.10 | 115.22 | 109.10 |
| 26 | BB | 2785 | C | C6-N1-C2 | 5.10 | 122.34 | 120.30 |
| 30 | BF | 35 | TYR | CD1-CE1-CZ | -5.10 | 115.21 | 119.80 |
| 40 | BP | 109 | PRO | N-CA-CB | 5.10 | 109.42 | 103.30 |
| 1 | AA | 233 | C | C3'-C2'-C1' | 5.10 | 105.58 | 101.50 |
| 1 | AA | 350 | G | N9-C1'-C2' | -5.10 | 106.39 | 112.00 |
| 1 | AA | 1123 | U | C2-N3-C4 | -5.10 | 123.94 | 127.00 |
| 1 | AA | 1234 | C | O4'-C1'-N1 | 5.10 | 112.28 | 108.20 |
| 26 | BB | 290 | U | C5'-C4'-C3' | -5.10 | 107.85 | 116.00 |
| 26 | BB | 907 | G | C5-C6-N1 | -5.10 | 108.95 | 111.50 |
| 26 | BB | 1469 | A | C4'-C3'-C2' | -5.10 | 97.50 | 102.60 |
| 26 | BB | 1610 | A | C5'-C4'-O4' | 5.10 | 115.22 | 109.10 |
| 26 | BB | 1664 | A | O4'-C4'-C3' | 5.10 | 110.18 | 106.10 |
| 26 | BB | 2027 | G | C5-C6-O6 | -5.10 | 125.54 | 128.60 |
| 26 | BB | 2284 | A | C6-N1-C2 | 5.10 | 121.66 | 118.60 |
| 26 | BB | 2473 | U | N1-C1'-C2' | 5.10 | 120.62 | 114.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2477 | U | O4'-C4'-C3' | 5.10 | 110.18 | 106.10 |
| 1 | AA | 49 | U | O4'-C1'-N1 | 5.09 | 112.28 | 108.20 |
| 1 | AA | 165 | G | N7-C8-N9 | 5.09 | 115.65 | 113.10 |
| 1 | AA | 281 | G | O4'-C4'-C3' | 5.09 | 110.18 | 106.10 |
| 1 | AA | 306 | A | O4'-C1'-N9 | 5.09 | 112.28 | 108.20 |
| 1 | AA | 328 | C | C6-N1-C1' | -5.09 | 114.69 | 120.80 |
| 1 | AA | 445 | G | C5-C6-N1 | 5.09 | 114.05 | 111.50 |
| 1 | AA | 597 | G | C2-N3-C4 | 5.09 | 114.45 | 111.90 |
| 1 | AA | 734 | G | N1-C6-O6 | 5.09 | 122.96 | 119.90 |
| 4 | AD | 75 | C | C4-C5-C6 | -5.09 | 114.85 | 117.40 |
| 9 | AI | 42 | TRP | NE1-CE2-CZ2 | 5.09 | 136.00 | 130.40 |
| 26 | BB | 103 | A | C1'-O4'-C4' | 5.09 | 113.97 | 109.90 |
| 26 | BB | 110 | G | C4'-C3'-C2' | -5.09 | 97.51 | 102.60 |
| 26 | BB | 239 | C | P-O3'-C3' | 5.09 | 125.81 | 119.70 |
| 26 | BB | 279 | A | C2-N3-C4 | 5.09 | 113.15 | 110.60 |
| 26 | BB | 376 | G | C5-C6-N1 | -5.09 | 108.95 | 111.50 |
| 26 | BB | 907 | G | C6-C5-N7 | -5.09 | 127.34 | 130.40 |
| 26 | BB | 915 | C | N3-C2-O2 | -5.09 | 118.33 | 121.90 |
| 26 | BB | 1096 | A | O3'-P-O5' | -5.09 | 94.32 | 104.00 |
| 26 | BB | 1960 | A | O4'-C1'-N9 | -5.09 | 104.12 | 108.20 |
| 26 | BB | 2405 | G | O4'-C1'-C2' | 5.09 | 112.19 | 107.60 |
| 26 | BB | 2593 | U | C6-N1-C2 | 5.09 | 124.06 | 121.00 |
| 36 | BL | 104 | ALA | CB-CA-C | 5.09 | 117.74 | 110.10 |
| 38 | BN | 116 | VAL | C-N-CA | 5.09 | 134.44 | 121.70 |
| 1 | AA | 604 | G | N1-C2-N2 | 5.09 | 120.78 | 116.20 |
| 1 | AA | 1289 | A | C6-N1-C2 | -5.09 | 115.54 | 118.60 |
| 26 | BB | 1948 | G | N1-C2-N3 | -5.09 | 120.84 | 123.90 |
| 26 | BB | 1992 | G | C4-C5-C6 | 5.09 | 121.86 | 118.80 |
| 26 | BB | 2018 | G | C4-C5-N7 | -5.09 | 108.76 | 110.80 |
| 26 | BB | 2729 | G | C6-C5-N7 | -5.09 | 127.34 | 130.40 |
| 26 | BB | 2810 | A | C5-C6-N1 | 5.09 | 120.25 | 117.70 |
| 1 | AA | 122 | G | O4'-C1'-N9 | 5.09 | 112.27 | 108.20 |
| 1 | AA | 229 | U | C6-N1-C2 | -5.09 | 117.94 | 121.00 |
| 1 | AA | 1022 | A | N3-C4-C5 | -5.09 | 123.24 | 126.80 |
| 1 | AA | 1113 | C | N3-C4-C5 | 5.09 | 123.94 | 121.90 |
| 1 | AA | 1263 | C | C5-C4-N4 | -5.09 | 116.64 | 120.20 |
| 1 | AA | 1428 | A | P-O3'-C3' | 5.09 | 125.81 | 119.70 |
| 1 | AA | 1468 | A | N7-C8-N9 | -5.09 | 111.25 | 113.80 |
| 25 | BA | 51 | G | N3-C4-N9 | 5.09 | 129.06 | 126.00 |
| 26 | BB | 159 | G | N1-C2-N3 | -5.09 | 120.84 | 123.90 |
| 26 | BB | 664 | G | C1'-O4'-C4' | -5.09 | 105.83 | 109.90 |
| 26 | BB | 912 | C | OP1-P-OP2 | -5.09 | 111.96 | 119.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 947 | A | C1'-O4'-C4' | 5.09 | 113.97 | 109.90 |
| 26 | BB | 1619 | G | C8-N9-C4 | -5.09 | 104.36 | 106.40 |
| 26 | BB | 1756 | G | N9-C4-C5 | 5.09 | 107.44 | 105.40 |
| 26 | BB | 1802 | A | N7-C8-N9 | 5.09 | 116.35 | 113.80 |
| 26 | BB | 1920 | C | N3-C2-O2 | 5.09 | 125.46 | 121.90 |
| 26 | BB | 2278 | A | N1-C2-N3 | 5.09 | 131.84 | 129.30 |
| 26 | BB | 2431 | U | N3-C4-O4 | 5.09 | 122.97 | 119.40 |
| 26 | BB | 2579 | C | N3-C2-O2 | 5.09 | 125.46 | 121.90 |
| 1 | AA | 648 | A | C3'-C2'-C1' | -5.09 | 97.43 | 101.50 |
| 26 | BB | 118 | A | C4'-C3'-C2' | -5.09 | 97.51 | 102.60 |
| 26 | BB | 821 | A | C5-N7-C8 | -5.09 | 101.36 | 103.90 |
| 26 | BB | 944 | C | P-O3'-C3' | 5.09 | 125.81 | 119.70 |
| 26 | BB | 1136 | G | N3-C2-N2 | -5.09 | 116.34 | 119.90 |
| 26 | BB | 1155 | A | C4'-C3'-C2' | -5.09 | 97.51 | 102.60 |
| 26 | BB | 1179 | G | N3-C4-N9 | -5.09 | 122.95 | 126.00 |
| 26 | BB | 1234 | U | O4'-C1'-C2' | 5.09 | 112.18 | 107.60 |
| 26 | BB | 1440 | U | O5'-P-OP2 | -5.09 | 101.12 | 105.70 |
| 26 | BB | 1709 | U | N3-C2-O2 | -5.09 | 118.64 | 122.20 |
| 26 | BB | 1934 | C | P-O3'-C3' | 5.09 | 125.81 | 119.70 |
| 26 | BB | 2533 | U | C4-C5-C6 | 5.09 | 122.75 | 119.70 |
| 26 | BB | 2547 | A | O4'-C1'-C2' | 5.09 | 112.18 | 107.60 |
| 27 | BC | 41 | SER | CB-CA-C | 5.09 | 119.77 | 110.10 |
| 31 | BG | 95 | MET | CA-CB-CG | 5.09 | 121.95 | 113.30 |
| 1 | AA | 312 | C | C4'-C3'-C2' | -5.09 | 97.51 | 102.60 |
| 1 | AA | 317 | U | N1-C2-N3 | 5.09 | 117.95 | 114.90 |
| 1 | AA | 510 | A | N7-C8-N9 | 5.09 | 116.34 | 113.80 |
| 26 | BB | 362 | A | C5-C6-N1 | 5.09 | 120.24 | 117.70 |
| 26 | BB | 505 | A | N9-C1'-C2' | -5.09 | 106.40 | 112.00 |
| 26 | BB | 1034 | G | N7-C8-N9 | 5.09 | 115.64 | 113.10 |
| 26 | BB | 1177 | G | N1-C2-N3 | 5.09 | 126.95 | 123.90 |
| 26 | BB | 2388 | A | C3'-C2'-C1' | -5.09 | 97.43 | 101.50 |
| 26 | BB | 2866 | U | C5'-C4'-C3' | -5.09 | 107.86 | 116.00 |
| 1 | AA | 284 | C | N1-C2-N3 | -5.09 | 115.64 | 119.20 |
| 1 | AA | 512 | U | O5'-C5'-C4' | -5.09 | 102.04 | 111.70 |
| 1 | AA | 934 | C | C1'-O4'-C4' | -5.09 | 105.83 | 109.90 |
| 1 | AA | 1209 | C | N3-C4-N4 | 5.09 | 121.56 | 118.00 |
| 7 | AG | 106 | PHE | CB-CG-CD1 | 5.09 | 124.36 | 120.80 |
| 20 | AT | 25 | GLU | CA-CB-CG | 5.09 | 124.59 | 113.40 |
| 26 | BB | 173 | A | C6-C5-N7 | 5.09 | 135.86 | 132.30 |
| 26 | BB | 503 | A | OP1-P-O3' | 5.09 | 116.39 | 105.20 |
| 26 | BB | 682 | G | O4'-C1'-N9 | 5.09 | 112.27 | 108.20 |
| 26 | BB | 864 | G | N1-C6-O6 | 5.09 | 122.95 | 119.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 934 | U | N3-C4-C5 | -5.09 | 111.55 | 114.60 |
| 26 | BB | 985 | C | C5-C4-N4 | -5.09 | 116.64 | 120.20 |
| 26 | BB | 1129 | A | N1-C2-N3 | -5.09 | 126.76 | 129.30 |
| 26 | BB | 1457 | U | C5-C4-O4 | 5.09 | 128.95 | 125.90 |
| 26 | BB | 2389 | G | C3'-C2'-C1' | 5.09 | 105.57 | 101.50 |
| 26 | BB | 2890 | G | C5-N7-C8 | -5.09 | 101.76 | 104.30 |
| 27 | BC | 162 | ARG | NE-CZ-NH1 | -5.09 | 117.76 | 120.30 |
| 34 | BJ | 152 | ARG | NE-CZ-NH2 | -5.09 | 117.76 | 120.30 |
| 1 | AA | 184 | G | C8-N9-C1' | 5.08 | 133.61 | 127.00 |
| 1 | AA | 519 | C | N3-C4-C5 | 5.08 | 123.93 | 121.90 |
| 1 | AA | 874 | G | C6-N1-C2 | -5.08 | 122.05 | 125.10 |
| 1 | AA | 1128 | C | P-O3'-C3' | 5.08 | 125.80 | 119.70 |
| 1 | AA | 1426 | G | C4'-C3'-C2' | -5.08 | 97.52 | 102.60 |
| 4 | AD | 1 | C | O3'-P-O5' | -5.08 | 94.34 | 104.00 |
| 26 | BB | 79 | C | N3-C4-N4 | -5.08 | 114.44 | 118.00 |
| 26 | BB | 671 | C | C4-C5-C6 | -5.08 | 114.86 | 117.40 |
| 26 | BB | 1165 | A | N1-C6-N6 | 5.08 | 121.65 | 118.60 |
| 26 | BB | 1330 | C | C1'-O4'-C4' | 5.08 | 113.97 | 109.90 |
| 26 | BB | 1770 | G | C6-C5-N7 | -5.08 | 127.35 | 130.40 |
| 26 | BB | 1903 | G | N1-C6-O6 | 5.08 | 122.95 | 119.90 |
| 26 | BB | 2048 | G | C5-C6-O6 | -5.08 | 125.55 | 128.60 |
| 26 | BB | 2834 | G | C5-N7-C8 | -5.08 | 101.76 | 104.30 |
| 56 | B5 | 43 | THR | CA-CB-CG2 | 5.08 | 119.52 | 112.40 |
| 1 | AA | 12 | U | P-O3'-C3' | 5.08 | 125.80 | 119.70 |
| 1 | AA | 182 | A | N9-C4-C5 | -5.08 | 103.77 | 105.80 |
| 1 | AA | 1228 | C | C4-C5-C6 | 5.08 | 119.94 | 117.40 |
| 1 | AA | 1529 | G | C4-C5-N7 | -5.08 | 108.77 | 110.80 |
| 3 | AC | 41 | A | N3-C4-C5 | -5.08 | 123.24 | 126.80 |
| 26 | BB | 24 | G | N9-C4-C5 | -5.08 | 103.37 | 105.40 |
| 26 | BB | 614 | A | C2-N3-C4 | 5.08 | 113.14 | 110.60 |
| 26 | BB | 949 | G | N3-C4-C5 | -5.08 | 126.06 | 128.60 |
| 26 | BB | 1170 | C | N1-C1'-C2' | -5.08 | 106.41 | 112.00 |
| 26 | BB | 1347 | A | C2-N3-C4 | -5.08 | 108.06 | 110.60 |
| 26 | BB | 1697 | G | N3-C4-C5 | -5.08 | 126.06 | 128.60 |
| 26 | BB | 1884 | G | C6-C5-N7 | -5.08 | 127.35 | 130.40 |
| 26 | BB | 2159 | G | O4'-C1'-N9 | 5.08 | 112.27 | 108.20 |
| 26 | BB | 2389 | G | C5-C6-O6 | -5.08 | 125.55 | 128.60 |
| 26 | BB | 2392 | A | N7-C8-N9 | 5.08 | 116.34 | 113.80 |
| 26 | BB | 2530 | A | N9-C4-C5 | -5.08 | 103.77 | 105.80 |
| 26 | BB | 2737 | G | N1-C6-O6 | 5.08 | 122.95 | 119.90 |
| 42 | BR | 1 | SER | O-C-N | 5.08 | 130.83 | 122.70 |
| 1 | AA | 82 | G | C2-N3-C4 | 5.08 | 114.44 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 321 | A | C4'-C3'-C2' | -5.08 | 97.52 | 102.60 |
| 1 | AA | 356 | A | C5'-C4'-O4' | 5.08 | 115.20 | 109.10 |
| 1 | AA | 481 | G | N1-C6-O6 | -5.08 | 116.85 | 119.90 |
| 1 | AA | 638 | U | C6-N1-C2 | -5.08 | 117.95 | 121.00 |
| 1 | AA | 672 | U | N1-C2-O2 | -5.08 | 119.24 | 122.80 |
| 1 | AA | 1021 | A | C4'-C3'-C2' | -5.08 | 97.52 | 102.60 |
| 1 | AA | 1378 | C | O4'-C1'-C2' | -5.08 | 100.72 | 105.80 |
| 1 | AA | 1472 | U | C5'-C4'-C3' | 5.08 | 124.13 | 116.00 |
| 18 | AR | 72 | LYS | CB-CA-C | 5.08 | 120.56 | 110.40 |
| 21 | AU | 4 | PHE | CB-CG-CD2 | -5.08 | 117.24 | 120.80 |
| 26 | BB | 349 | U | C5'-C4'-O4' | 5.08 | 115.20 | 109.10 |
| 26 | BB | 529 | A | O4'-C4'-C3' | -5.08 | 98.92 | 104.00 |
| 26 | BB | 640 | C | C5-C4-N4 | -5.08 | 116.64 | 120.20 |
| 26 | BB | 662 | G | C5'-C4'-C3' | -5.08 | 107.87 | 116.00 |
| 26 | BB | 715 | A | C6-C5-N7 | 5.08 | 135.86 | 132.30 |
| 26 | BB | 1103 | A | C6-N1-C2 | -5.08 | 115.55 | 118.60 |
| 26 | BB | 1613 | G | C2-N3-C4 | -5.08 | 109.36 | 111.90 |
| 26 | BB | 1724 | G | C8-N9-C1' | 5.08 | 133.60 | 127.00 |
| 26 | BB | 1994 | C | N1-C1'-C2' | -5.08 | 106.41 | 112.00 |
| 26 | BB | 2051 | A | C5-C6-N1 | 5.08 | 120.24 | 117.70 |
| 26 | BB | 2311 | A | C4-C5-N7 | 5.08 | 113.24 | 110.70 |
| 26 | BB | 2613 | U | C1'-O4'-C4' | -5.08 | 105.83 | 109.90 |
| 26 | BB | 2625 | G | C4-N9-C1' | -5.08 | 119.89 | 126.50 |
| 26 | BB | 2713 | U | P-O3'-C3' | 5.08 | 125.80 | 119.70 |
| 26 | BB | 2765 | A | C5-N7-C8 | -5.08 | 101.36 | 103.90 |
| 26 | BB | 2823 | A | C3'-C2'-C1' | 5.08 | 105.56 | 101.50 |
| 1 | AA | 119 | A | O4'-C1'-C2' | -5.08 | 100.72 | 105.80 |
| 1 | AA | 769 | G | N1-C6-O6 | -5.08 | 116.85 | 119.90 |
| 1 | AA | 808 | C | C4-C5-C6 | 5.08 | 119.94 | 117.40 |
| 2 | AB | 55 | PSU | P-O3'-C3' | 5.08 | 125.80 | 119.70 |
| 16 | AP | 56 | ARG | CB-CG-CD | 5.08 | 124.81 | 111.60 |
| 26 | BB | 21 | A | C5-N7-C8 | -5.08 | 101.36 | 103.90 |
| 26 | BB | 1031 | G | N1-C6-O6 | 5.08 | 122.95 | 119.90 |
| 26 | BB | 1389 | G | N7-C8-N9 | 5.08 | 115.64 | 113.10 |
| 26 | BB | 1394 | U | C5-C4-O4 | -5.08 | 122.85 | 125.90 |
| 26 | BB | 1588 | G | C4'-C3'-C2' | 5.08 | 107.68 | 102.60 |
| 1 | AA | 707 | U | N3-C4-O4 | -5.08 | 115.84 | 119.40 |
| 1 | AA | 734 | G | N3-C4-N9 | 5.08 | 129.05 | 126.00 |
| 1 | AA | 1094 | G | C2'-C3'-O3' | 5.08 | 121.83 | 113.70 |
| 1 | AA | 1386 | G | N1-C2-N3 | -5.08 | 120.85 | 123.90 |
| 6 | AF | 167 | TYR | CZ-CE2-CD2 | -5.08 | 115.23 | 119.80 |
| 26 | BB | 66 | C | N3-C2-O2 | -5.08 | 118.34 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 172 | A | N1-C6-N6 | 5.08 | 121.65 | 118.60 |
| 26 | BB | 403 | U | O4'-C4'-C3' | 5.08 | 110.16 | 106.10 |
| 26 | BB | 586 | A | C5-N7-C8 | 5.08 | 106.44 | 103.90 |
| 26 | BB | 835 | C | N3-C4-C5 | -5.08 | 119.87 | 121.90 |
| 26 | BB | 1408 | G | N1-C2-N3 | -5.08 | 120.85 | 123.90 |
| 26 | BB | 1525 | A | O4'-C1'-N9 | 5.08 | 112.26 | 108.20 |
| 26 | BB | 1740 | G | C5-N7-C8 | -5.08 | 101.76 | 104.30 |
| 26 | BB | 1910 | G | C5'-C4'-O4' | -5.08 | 103.01 | 109.10 |
| 26 | BB | 2025 | C | C4-C5-C6 | 5.08 | 119.94 | 117.40 |
| 26 | BB | 2814 | A | P-O5'-C5' | 5.08 | 129.03 | 120.90 |
| 1 | AA | 81 | A | N1-C2-N3 | 5.08 | 131.84 | 129.30 |
| 1 | AA | 1104 | G | N1-C2-N3 | -5.08 | 120.85 | 123.90 |
| 1 | AA | 1458 | G | N9-C1'-C2' | -5.08 | 106.42 | 112.00 |
| 2 | AB | 75 | C | C2-N1-C1' | 5.08 | 124.39 | 118.80 |
| 4 | AD | 46 | G | C5'-C4'-O4' | 5.08 | 115.19 | 109.10 |
| 26 | BB | 210 | C | P-O3'-C3' | 5.08 | 125.79 | 119.70 |
| 26 | BB | 1056 | G | C5-C6-O6 | -5.08 | 125.55 | 128.60 |
| 26 | BB | 1224 | U | N3-C2-O2 | -5.08 | 118.65 | 122.20 |
| 26 | BB | 1785 | A | C6-N1-C2 | -5.08 | 115.55 | 118.60 |
| 26 | BB | 2080 | A | O4'-C1'-N9 | 5.08 | 112.26 | 108.20 |
| 26 | BB | 2548 | U | N3-C2-O2 | -5.08 | 118.65 | 122.20 |
| 1 | AA | 31 | G | C2-N3-C4 | -5.08 | 109.36 | 111.90 |
| 1 | AA | 137 | U | C3'-C2'-C1' | 5.08 | 105.56 | 101.50 |
| 1 | AA | 289 | G | C6-C5-N7 | -5.08 | 127.36 | 130.40 |
| 1 | AA | 372 | C | P-O3'-C3' | 5.08 | 125.79 | 119.70 |
| 1 | AA | 988 | G | N9-C4-C5 | -5.08 | 103.37 | 105.40 |
| 1 | AA | 1219 | A | O3'-P-O5' | 5.08 | 113.64 | 104.00 |
| 1 | AA | 1370 | G | C4'-C3'-C2' | -5.08 | 97.53 | 102.60 |
| 1 | AA | 1421 | G | C8-N9-C4 | -5.08 | 104.37 | 106.40 |
| 1 | AA | 1466 | C | O4'-C1'-C2' | -5.08 | 100.72 | 105.80 |
| 26 | BB | 261 | G | C5-C6-O6 | -5.08 | 125.56 | 128.60 |
| 26 | BB | 285 | G | C6-N1-C2 | -5.08 | 122.05 | 125.10 |
| 26 | BB | 764 | A | C8-N9-C4 | -5.08 | 103.77 | 105.80 |
| 26 | BB | 984 | A | O5'-P-OP1 | -5.08 | 101.13 | 105.70 |
| 26 | BB | 1089 | A | C8-N9-C4 | 5.08 | 107.83 | 105.80 |
| 26 | BB | 1112 | G | C6-N1-C2 | -5.08 | 122.06 | 125.10 |
| 26 | BB | 1320 | C | C4'-C3'-O3' | -5.08 | 98.74 | 109.40 |
| 26 | BB | 1453 | A | N7-C8-N9 | 5.08 | 116.34 | 113.80 |
| 26 | BB | 1817 | G | C5-C6-N1 | -5.08 | 108.96 | 111.50 |
| 26 | BB | 1854 | A | C5-C6-N6 | -5.08 | 119.64 | 123.70 |
| 26 | BB | 2007 | U | N3-C4-O4 | -5.08 | 115.85 | 119.40 |
| 26 | BB | 2091 | C | N1-C1'-C2' | -5.08 | 106.42 | 112.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2490 | G | C3'-C2'-C1' | 5.08 | 105.56 | 101.50 |
| 26 | BB | 2796 | U | C4-C5-C6 | 5.08 | 122.75 | 119.70 |
| 26 | BB | 2842 | G | O5'-C5'-C4' | -5.08 | 102.06 | 111.70 |
| 1 | AA | 250 | A | N1-C2-N3 | 5.07 | 131.84 | 129.30 |
| 1 | AA | 505 | G | N3-C4-N9 | 5.07 | 129.04 | 126.00 |
| 1 | AA | 576 | C | C6-N1-C2 | 5.07 | 122.33 | 120.30 |
| 1 | AA | 655 | A | N9-C1'-C2' | -5.07 | 106.42 | 112.00 |
| 1 | AA | 776 | G | N3-C4-N9 | -5.07 | 122.95 | 126.00 |
| 1 | AA | 1108 | G | N1-C2-N3 | -5.07 | 120.86 | 123.90 |
| 1 | AA | 1242 | G | C4'-C3'-C2' | -5.07 | 97.53 | 102.60 |
| 1 | AA | 1296 | C | C1'-O4'-C4' | 5.07 | 113.96 | 109.90 |
| 4 | AD | 68 | C | C5-C6-N1 | 5.07 | 123.54 | 121.00 |
| 24 | AX | 18 | PHE | CG-CD1-CE1 | -5.07 | 115.22 | 120.80 |
| 26 | BB | 212 | G | C4-C5-C6 | -5.07 | 115.76 | 118.80 |
| 26 | BB | 497 | A | C3'-C2'-C1' | -5.07 | 97.44 | 101.50 |
| 26 | BB | 886 | A | C8-N9-C4 | -5.07 | 103.77 | 105.80 |
| 26 | BB | 895 | U | C5'-C4'-C3' | -5.07 | 107.88 | 116.00 |
| 26 | BB | 1037 | G | OP1-P-OP2 | -5.07 | 111.99 | 119.60 |
| 26 | BB | 1863 | G | C2-N3-C4 | 5.07 | 114.44 | 111.90 |
| 26 | BB | 2025 | C | C6-N1-C2 | -5.07 | 118.27 | 120.30 |
| 26 | BB | 2077 | A | N9-C4-C5 | -5.07 | 103.77 | 105.80 |
| 26 | BB | 2359 | C | N1-C2-O2 | 5.07 | 121.94 | 118.90 |
| 26 | BB | 2522 | U | C6-N1-C2 | -5.07 | 117.96 | 121.00 |
| 2 | AB | 76 | A | C5-N7-C8 | -5.07 | 101.36 | 103.90 |
| 26 | BB | 1236 | G | O5'-C5'-C4' | 5.07 | 121.34 | 111.70 |
| 26 | BB | 2142 | A | N9-C4-C5 | -5.07 | 103.77 | 105.80 |
| 26 | BB | 2201 | G | C4'-C3'-C2' | 5.07 | 107.67 | 102.60 |
| 26 | BB | 2437 | G | N3-C2-N2 | -5.07 | 116.35 | 119.90 |
| 26 | BB | 2452 | C | N3-C4-N4 | 5.07 | 121.55 | 118.00 |
| 26 | BB | 2508 | G | C4-C5-N7 | 5.07 | 112.83 | 110.80 |
| 1 | AA | 265 | G | N3-C4-C5 | -5.07 | 126.06 | 128.60 |
| 1 | AA | 314 | C | N1-C1'-C2' | -5.07 | 106.42 | 112.00 |
| 1 | AA | 665 | A | C4-C5-C6 | -5.07 | 114.47 | 117.00 |
| 1 | AA | 1171 | A | N1-C6-N6 | -5.07 | 115.56 | 118.60 |
| 1 | AA | 1276 | G | C8-N9-C4 | -5.07 | 104.37 | 106.40 |
| 4 | AD | 70 | C | N1-C2-N3 | -5.07 | 115.65 | 119.20 |
| 6 | AF | 17 | TRP | CZ3-CH2-CZ2 | -5.07 | 115.52 | 121.60 |
| 9 | AI | 91 | ARG | NE-CZ-NH1 | 5.07 | 122.83 | 120.30 |
| 21 | AU | 28 | LEU | CB-CG-CD2 | 5.07 | 119.62 | 111.00 |
| 25 | BA | 35 | C | C5'-C4'-O4' | 5.07 | 115.18 | 109.10 |
| 26 | BB | 529 | A | C5-N7-C8 | 5.07 | 106.44 | 103.90 |
| 26 | BB | 578 | G | N3-C4-N9 | 5.07 | 129.04 | 126.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 664 | G | N1-C2-N2 | 5.07 | 120.76 | 116.20 |
| 26 | BB | 766 | U | C6-N1-C2 | -5.07 | 117.96 | 121.00 |
| 26 | BB | 890 | C | C5-C4-N4 | -5.07 | 116.65 | 120.20 |
| 26 | BB | 986 | C | N3-C4-N4 | 5.07 | 121.55 | 118.00 |
| 26 | BB | 1256 | G | N1-C2-N3 | 5.07 | 126.94 | 123.90 |
| 26 | BB | 1616 | A | N3-C4-N9 | 5.07 | 131.46 | 127.40 |
| 26 | BB | 2199 | A | N9-C1'-C2' | -5.07 | 106.42 | 112.00 |
| 26 | BB | 2531 | A | O4'-C1'-N9 | 5.07 | 112.26 | 108.20 |
| 26 | BB | 2677 | G | C5'-C4'-O4' | -5.07 | 103.02 | 109.10 |
| 1 | AA | 228 | A | C8-N9-C4 | -5.07 | 103.77 | 105.80 |
| 1 | AA | 876 | C | C6-N1-C2 | -5.07 | 118.27 | 120.30 |
| 4 | AD | 64 | G | C5-N7-C8 | 5.07 | 106.83 | 104.30 |
| 20 | AT | 72 | TRP | CE2-CD2-CG | 5.07 | 111.36 | 107.30 |
| 21 | AU | 12 | PHE | CB-CG-CD2 | -5.07 | 117.25 | 120.80 |
| 26 | BB | 1467 | U | O5'-P-OP1 | 5.07 | 116.78 | 110.70 |
| 26 | BB | 1485 | U | C3'-C2'-C1' | 5.07 | 105.56 | 101.50 |
| 1 | AA | 102 | G | C6-N1-C2 | -5.07 | 122.06 | 125.10 |
| 1 | AA | 115 | G | C1'-O4'-C4' | -5.07 | 105.85 | 109.90 |
| 1 | AA | 223 | A | C4-C5-N7 | -5.07 | 108.17 | 110.70 |
| 1 | AA | 635 | A | C6-C5-N7 | -5.07 | 128.75 | 132.30 |
| 1 | AA | 919 | A | N1-C2-N3 | 5.07 | 131.83 | 129.30 |
| 6 | AF | 171 | ARG | NE-CZ-NH1 | 5.07 | 122.83 | 120.30 |
| 26 | BB | 874 | G | C1'-O4'-C4' | -5.07 | 105.85 | 109.90 |
| 26 | BB | 1334 | G | C4-C5-C6 | 5.07 | 121.84 | 118.80 |
| 26 | BB | 1375 | U | C3'-C2'-C1' | -5.07 | 97.45 | 101.50 |
| 26 | BB | 1418 | G | C5-C6-N1 | 5.07 | 114.03 | 111.50 |
| 26 | BB | 1463 | C | C5'-C4'-O4' | 5.07 | 115.18 | 109.10 |
| 26 | BB | 1487 | U | N3-C2-O2 | -5.07 | 118.65 | 122.20 |
| 26 | BB | 2219 | U | C4-C5-C6 | 5.07 | 122.74 | 119.70 |
| 26 | BB | 2380 | C | C6-N1-C1' | 5.07 | 126.88 | 120.80 |
| 26 | BB | 2391 | G | C4'-C3'-C2' | -5.07 | 97.53 | 102.60 |
| 26 | BB | 2397 | G | C4-C5-C6 | 5.07 | 121.84 | 118.80 |
| 26 | BB | 2563 | U | C6-N1-C2 | -5.07 | 117.96 | 121.00 |
| 26 | BB | 2749 | A | N9-C1'-C2' | -5.07 | 106.42 | 112.00 |
| 27 | BC | 48 | LEU | CB-CG-CD1 | -5.07 | 102.39 | 111.00 |
| 1 | AA | 433 | G | C5'-C4'-C3' | -5.07 | 107.89 | 116.00 |
| 1 | AA | 862 | C | C4-C5-C6 | -5.07 | 114.87 | 117.40 |
| 1 | AA | 1266 | G | P-O3'-C3' | 5.07 | 125.78 | 119.70 |
| 14 | AN | 43 | TRP | NE1-CE2-CD2 | -5.07 | 102.23 | 107.30 |
| 26 | BB | 575 | A | C6-C5-N7 | -5.07 | 128.75 | 132.30 |
| 26 | BB | 595 | C | C4-C5-C6 | -5.07 | 114.87 | 117.40 |
| 26 | BB | 652 | U | C4-C5-C6 | -5.07 | 116.66 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 935 | C | C5'-C4'-O4' | 5.07 | 115.18 | 109.10 |
| 26 | BB | 1355 | G | C4-C5-C6 | 5.07 | 121.84 | 118.80 |
| 26 | BB | 1412 | U | O4'-C4'-C3' | -5.07 | 98.93 | 104.00 |
| 26 | BB | 1814 | G | C6-C5-N7 | -5.07 | 127.36 | 130.40 |
| 26 | BB | 1905 | C | C5'-C4'-C3' | -5.07 | 107.89 | 116.00 |
| 1 | AA | 52 | C | N3-C4-N4 | -5.06 | 114.45 | 118.00 |
| 1 | AA | 271 | C | N1-C2-N3 | -5.06 | 115.66 | 119.20 |
| 1 | AA | 360 | G | N1-C2-N2 | 5.06 | 120.76 | 116.20 |
| 1 | AA | 632 | U | N1-C1'-C2' | 5.06 | 120.58 | 114.00 |
| 1 | AA | 825 | A | N1-C2-N3 | -5.06 | 126.77 | 129.30 |
| 1 | AA | 874 | G | C1'-O4'-C4' | 5.06 | 113.95 | 109.90 |
| 1 | AA | 1246 | A | O4'-C1'-N9 | 5.06 | 112.25 | 108.20 |
| 4 | AD | 5 | G | C4'-C3'-O3' | 5.06 | 123.13 | 113.00 |
| 26 | BB | 1037 | G | C8-N9-C1' | 5.06 | 133.58 | 127.00 |
| 26 | BB | 1151 | A | C4-C5-C6 | -5.06 | 114.47 | 117.00 |
| 26 | BB | 2303 | G | C5-N7-C8 | -5.06 | 101.77 | 104.30 |
| 26 | BB | 2356 | U | C4-C5-C6 | 5.06 | 122.74 | 119.70 |
| 26 | BB | 2407 | A | P-O3'-C3' | 5.06 | 125.78 | 119.70 |
| 1 | AA | 54 | C | P-O3'-C3' | 5.06 | 125.78 | 119.70 |
| 1 | AA | 265 | G | N9-C1'-C2' | -5.06 | 106.43 | 112.00 |
| 1 | AA | 394 | G | C5-C6-N1 | -5.06 | 108.97 | 111.50 |
| 1 | AA | 626 | G | N3-C4-N9 | 5.06 | 129.04 | 126.00 |
| 1 | AA | 674 | G | C5-C6-N1 | -5.06 | 108.97 | 111.50 |
| 1 | AA | 836 | G | N3-C2-N2 | -5.06 | 116.36 | 119.90 |
| 1 | AA | 1024 | G | N7-C8-N9 | 5.06 | 115.63 | 113.10 |
| 1 | AA | 1036 | A | C3'-C2'-C1' | 5.06 | 105.55 | 101.50 |
| 1 | AA | 1144 | G | C4-C5-C6 | 5.06 | 121.84 | 118.80 |
| 25 | BA | 33 | G | C5'-C4'-C3' | -5.06 | 107.90 | 116.00 |
| 26 | BB | 188 | G | N9-C4-C5 | 5.06 | 107.42 | 105.40 |
| 26 | BB | 311 | A | C5-C6-N6 | 5.06 | 127.75 | 123.70 |
| 26 | BB | 686 | U | N1-C1'-C2' | -5.06 | 106.43 | 112.00 |
| 26 | BB | 1370 | C | C3'-C2'-C1' | 5.06 | 105.55 | 101.50 |
| 26 | BB | 1372 | U | C6-N1-C2 | -5.06 | 117.96 | 121.00 |
| 26 | BB | 1503 | A | C5'-C4'-O4' | 5.06 | 115.17 | 109.10 |
| 26 | BB | 1684 | G | C2-N3-C4 | 5.06 | 114.43 | 111.90 |
| 26 | BB | 1902 | C | C2-N3-C4 | -5.06 | 117.37 | 119.90 |
| 26 | BB | 2055 | C | C3'-C2'-C1' | -5.06 | 97.45 | 101.50 |
| 26 | BB | 2577 | A | N3-C4-N9 | 5.06 | 131.45 | 127.40 |
| 26 | BB | 2630 | G | C2'-C3'-O3' | 5.06 | 121.80 | 113.70 |
| 1 | AA | 271 | C | N3-C4-N4 | 5.06 | 121.54 | 118.00 |
| 1 | AA | 380 | G | O4'-C1'-N9 | 5.06 | 112.25 | 108.20 |
| 1 | AA | 623 | C | P-O3'-C3' | 5.06 | 125.77 | 119.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 693 | G | O4'-C1'-N9 | 5.06 | 112.25 | 108.20 |
| 1 | AA | 750 | C | C5'-C4'-O4' | 5.06 | 115.17 | 109.10 |
| 1 | AA | 1155 | A | C5-N7-C8 | 5.06 | 106.43 | 103.90 |
| 7 | AG | 103 | ARG | NE-CZ-NH1 | 5.06 | 122.83 | 120.30 |
| 10 | AJ | 68 | VAL | CA-CB-CG2 | 5.06 | 118.49 | 110.90 |
| 26 | BB | 1715 | G | C5-C6-N1 | 5.06 | 114.03 | 111.50 |
| 26 | BB | 2278 | A | N3-C4-N9 | 5.06 | 131.45 | 127.40 |
| 26 | BB | 2392 | A | O4'-C1'-N9 | 5.06 | 112.25 | 108.20 |
| 26 | BB | 2446 | G | C2-N3-C4 | 5.06 | 114.43 | 111.90 |
| 1 | AA | 265 | G | N3-C4-N9 | 5.06 | 129.04 | 126.00 |
| 1 | AA | 356 | A | C6-C5-N7 | 5.06 | 135.84 | 132.30 |
| 1 | AA | 368 | U | C5-C6-N1 | -5.06 | 120.17 | 122.70 |
| 1 | AA | 775 | G | OP1-P-O3' | 5.06 | 116.33 | 105.20 |
| 1 | AA | 1167 | A | C4'-C3'-O3' | 5.06 | 123.12 | 113.00 |
| 1 | AA | 1375 | A | C2-N3-C4 | 5.06 | 113.13 | 110.60 |
| 5 | AE | 125 | PHE | CB-CG-CD1 | -5.06 | 117.26 | 120.80 |
| 25 | BA | 111 | U | C4'-C3'-C2' | -5.06 | 97.54 | 102.60 |
| 26 | BB | 192 | C | O4'-C4'-C3' | -5.06 | 98.94 | 104.00 |
| 26 | BB | 369 | U | N3-C4-O4 | -5.06 | 115.86 | 119.40 |
| 26 | BB | 445 | C | C4-C5-C6 | -5.06 | 114.87 | 117.40 |
| 26 | BB | 510 | C | N1-C2-O2 | 5.06 | 121.94 | 118.90 |
| 26 | BB | 655 | A | C5'-C4'-C3' | -5.06 | 107.91 | 116.00 |
| 26 | BB | 836 | G | C4'-C3'-C2' | -5.06 | 97.54 | 102.60 |
| 26 | BB | 1137 | G | C8-N9-C1' | 5.06 | 133.58 | 127.00 |
| 26 | BB | 1394 | U | C5-C6-N1 | 5.06 | 125.23 | 122.70 |
| 26 | BB | 1987 | A | C5-C6-N1 | 5.06 | 120.23 | 117.70 |
| 26 | BB | 2582 | G | N1-C6-O6 | 5.06 | 122.94 | 119.90 |
| 26 | BB | 2634 | A | C6-N1-C2 | 5.06 | 121.64 | 118.60 |
| 26 | BB | 2675 | A | N1-C2-N3 | -5.06 | 126.77 | 129.30 |
| 26 | BB | 2699 | C | N3-C4-N4 | 5.06 | 121.54 | 118.00 |
| 26 | BB | 2782 | G | N7-C8-N9 | -5.06 | 110.57 | 113.10 |
| 26 | BB | 2842 | G | C5'-C4'-C3' | -5.06 | 107.91 | 116.00 |
| 26 | BB | 2876 | G | C2-N3-C4 | 5.06 | 114.43 | 111.90 |
| 53 | B2 | 49 | ARG | NE-CZ-NH2 | 5.06 | 122.83 | 120.30 |
| 1 | AA | 17 | U | C6-N1-C2 | -5.06 | 117.97 | 121.00 |
| 1 | AA | 161 | A | N7-C8-N9 | 5.06 | 116.33 | 113.80 |
| 1 | AA | 822 | U | C3'-C2'-C1' | 5.06 | 105.55 | 101.50 |
| 1 | AA | 1176 | A | C3'-C2'-C1' | 5.06 | 105.55 | 101.50 |
| 1 | AA | 1470 | U | P-O3'-C3' | 5.06 | 125.77 | 119.70 |
| 25 | BA | 7 | G | N9-C4-C5 | 5.06 | 107.42 | 105.40 |
| 26 | BB | 609 | A | C6-N1-C2 | -5.06 | 115.56 | 118.60 |
| 26 | BB | 765 | C | C5'-C4'-C3' | -5.06 | 107.91 | 116.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 789 | A | N3-C4-C5 | -5.06 | 123.26 | 126.80 |
| 26 | BB | 1082 | U | OP2-P-O3' | 5.06 | 116.33 | 105.20 |
| 26 | BB | 1304 | A | C5'-C4'-O4' | -5.06 | 103.03 | 109.10 |
| 26 | BB | 1740 | G | O4'-C1'-C2' | -5.06 | 100.74 | 105.80 |
| 26 | BB | 1826 | G | C4'-C3'-C2' | -5.06 | 97.54 | 102.60 |
| 26 | BB | 1839 | G | C8-N9-C1' | 5.06 | 133.57 | 127.00 |
| 26 | BB | 1852 | U | O4'-C1'-C2' | -5.06 | 100.74 | 105.80 |
| 26 | BB | 2067 | G | N3-C2-N2 | 5.06 | 123.44 | 119.90 |
| 26 | BB | 2688 | G | C4'-C3'-C2' | -5.06 | 97.54 | 102.60 |
| 44 | BT | 92 | TRP | CB-CG-CD2 | 5.06 | 133.17 | 126.60 |
| 1 | AA | 534 | U | N1-C2-N3 | 5.06 | 117.93 | 114.90 |
| 1 | AA | 640 | A | C3'-C2'-C1' | -5.06 | 97.45 | 101.50 |
| 1 | AA | 824 | G | C4'-C3'-C2' | -5.06 | 97.54 | 102.60 |
| 1 | AA | 853 | C | C2-N1-C1' | -5.06 | 113.24 | 118.80 |
| 1 | AA | 965 | U | O4'-C1'-C2' | -5.06 | 100.74 | 105.80 |
| 26 | BB | 708 | G | C5-C6-N1 | -5.06 | 108.97 | 111.50 |
| 26 | BB | 774 | G | N9-C4-C5 | 5.06 | 107.42 | 105.40 |
| 26 | BB | 926 | G | N9-C1'-C2' | -5.06 | 106.44 | 112.00 |
| 26 | BB | 1062 | G | C2'-C3'-O3' | 5.06 | 121.79 | 113.70 |
| 26 | BB | 1534 | U | C4'-C3'-C2' | -5.06 | 97.54 | 102.60 |
| 26 | BB | 2775 | G | C2'-C3'-O3' | 5.06 | 121.79 | 113.70 |
| 1 | AA | 29 | U | C2-N3-C4 | -5.05 | 123.97 | 127.00 |
| 1 | AA | 97 | G | C8-N9-C4 | -5.05 | 104.38 | 106.40 |
| 1 | AA | 112 | G | C4-C5-C6 | 5.05 | 121.83 | 118.80 |
| 1 | AA | 232 | G | C6-N1-C2 | -5.05 | 122.07 | 125.10 |
| 1 | AA | 254 | G | C8-N9-C4 | -5.05 | 104.38 | 106.40 |
| 1 | AA | 1208 | C | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 1 | AA | 1268 | G | C2-N3-C4 | 5.05 | 114.43 | 111.90 |
| 1 | AA | 1352 | C | N1-C1'-C2' | -5.05 | 106.44 | 112.00 |
| 1 | AA | 1481 | U | C4-C5-C6 | 5.05 | 122.73 | 119.70 |
| 1 | AA | 1523 | G | N1-C2-N3 | -5.05 | 120.87 | 123.90 |
| 3 | AC | 35 | G | N3-C2-N2 | -5.05 | 116.36 | 119.90 |
| 25 | BA | 41 | G | N9-C4-C5 | -5.05 | 103.38 | 105.40 |
| 25 | BA | 85 | G | O4'-C4'-C3' | 5.05 | 110.14 | 106.10 |
| 26 | BB | 138 | U | C6-N1-C2 | -5.05 | 117.97 | 121.00 |
| 26 | BB | 155 | A | C5'-C4'-C3' | -5.05 | 107.91 | 116.00 |
| 26 | BB | 376 | G | N1-C2-N3 | -5.05 | 120.87 | 123.90 |
| 26 | BB | 757 | G | C8-N9-C4 | -5.05 | 104.38 | 106.40 |
| 26 | BB | 854 | C | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 26 | BB | 1183 | U | P-O3'-C3' | 5.05 | 125.77 | 119.70 |
| 26 | BB | 1740 | G | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 26 | BB | 1887 | C | N3-C4-N4 | 5.05 | 121.54 | 118.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1894 | C | C5'-C4'-C3' | -5.05 | 107.91 | 116.00 |
| 26 | BB | 1916 | A | N1-C2-N3 | -5.05 | 126.77 | 129.30 |
| 26 | BB | 2617 | U | C6-N1-C1' | 5.05 | 128.28 | 121.20 |
| 26 | BB | 2762 | C | N1-C1'-C2' | -5.05 | 106.44 | 112.00 |
| 26 | BB | 2808 | G | O3'-P-O5' | -5.05 | 94.40 | 104.00 |
| 28 | BD | 96 | LYS | O-C-N | -5.05 | 114.61 | 122.70 |
| 1 | AA | 29 | U | C6-N1-C2 | 5.05 | 124.03 | 121.00 |
| 1 | AA | 122 | G | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 1 | AA | 918 | A | N7-C8-N9 | 5.05 | 116.33 | 113.80 |
| 1 | AA | 1442 | G | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 4 | AD | 40 | C | P-O3'-C3' | 5.05 | 125.76 | 119.70 |
| 26 | BB | 389 | G | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 26 | BB | 548 | G | C8-N9-C4 | 5.05 | 108.42 | 106.40 |
| 26 | BB | 1268 | A | C3'-C2'-C1' | 5.05 | 105.54 | 101.50 |
| 26 | BB | 1438 | U | C2-N3-C4 | -5.05 | 123.97 | 127.00 |
| 26 | BB | 2169 | A | N7-C8-N9 | 5.05 | 116.33 | 113.80 |
| 26 | BB | 2279 | G | O5'-C5'-C4' | -5.05 | 102.10 | 111.70 |
| 26 | BB | 2430 | A | C1'-O4'-C4' | -5.05 | 105.86 | 109.90 |
| 26 | BB | 2690 | U | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 1 | AA | 112 | G | N3-C4-N9 | 5.05 | 129.03 | 126.00 |
| 1 | AA | 497 | G | N3-C2-N2 | -5.05 | 116.36 | 119.90 |
| 1 | AA | 1415 | G | C5-C6-O6 | -5.05 | 125.57 | 128.60 |
| 25 | BA | 40 | U | O4'-C4'-C3' | 5.05 | 110.14 | 106.10 |
| 25 | BA | 73 | A | C8-N9-C4 | 5.05 | 107.82 | 105.80 |
| 25 | BA | 110 | C | N3-C2-O2 | -5.05 | 118.36 | 121.90 |
| 26 | BB | 218 | A | C1'-O4'-C4' | 5.05 | 113.94 | 109.90 |
| 26 | BB | 227 | A | C6-C5-N7 | -5.05 | 128.76 | 132.30 |
| 26 | BB | 334 | C | C5-C6-N1 | 5.05 | 123.53 | 121.00 |
| 26 | BB | 353 | C | C5'-C4'-O4' | -5.05 | 103.04 | 109.10 |
| 26 | BB | 407 | G | C2-N3-C4 | 5.05 | 114.42 | 111.90 |
| 26 | BB | 661 | A | C5-N7-C8 | 5.05 | 106.43 | 103.90 |
| 26 | BB | 763 | G | N1-C2-N3 | 5.05 | 126.93 | 123.90 |
| 26 | BB | 1403 | A | C6-C5-N7 | 5.05 | 135.84 | 132.30 |
| 26 | BB | 1417 | C | C2-N1-C1' | -5.05 | 113.24 | 118.80 |
| 26 | BB | 1457 | U | O4'-C1'-N1 | 5.05 | 112.24 | 108.20 |
| 26 | BB | 1739 | A | N3-C4-N9 | 5.05 | 131.44 | 127.40 |
| 26 | BB | 1829 | A | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 26 | BB | 2170 | A | C4-C5-C6 | -5.05 | 114.47 | 117.00 |
| 26 | BB | 2596 | U | P-O5'-C5' | 5.05 | 128.98 | 120.90 |
| 26 | BB | 2739 | U | N1-C2-O2 | 5.05 | 126.34 | 122.80 |
| 26 | BB | 2747 | G | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 26 | BB | 2770 | G | C6-N1-C2 | -5.05 | 122.07 | 125.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 48 | BX | 66 | ASP | CB-CG-OD1 | 5.05 | 122.84 | 118.30 |
| 1 | AA | 155 | A | P-O5'-C5' | 5.05 | 128.98 | 120.90 |
| 1 | AA | 175 | C | C2-N1-C1' | -5.05 | 113.25 | 118.80 |
| 1 | AA | 441 | A | C2-N3-C4 | 5.05 | 113.12 | 110.60 |
| 1 | AA | 497 | G | C3'-C2'-C1' | 5.05 | 105.54 | 101.50 |
| 1 | AA | 797 | C | P-O3'-C3' | 5.05 | 125.76 | 119.70 |
| 1 | AA | 802 | A | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 1 | AA | 976 | G | C4-C5-N7 | 5.05 | 112.82 | 110.80 |
| 1 | AA | 1032 | G | C4-C5-N7 | 5.05 | 112.82 | 110.80 |
| 3 | AC | 28 | U | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 25 | BA | 73 | A | N3-C4-C5 | -5.05 | 123.27 | 126.80 |
| 26 | BB | 202 | U | N3-C2-O2 | -5.05 | 118.67 | 122.20 |
| 26 | BB | 260 | G | C6-C5-N7 | 5.05 | 133.43 | 130.40 |
| 26 | BB | 359 | G | C2-N3-C4 | 5.05 | 114.42 | 111.90 |
| 26 | BB | 562 | U | C2-N3-C4 | -5.05 | 123.97 | 127.00 |
| 26 | BB | 606 | U | C4-C5-C6 | 5.05 | 122.73 | 119.70 |
| 26 | BB | 624 | C | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 26 | BB | 684 | G | N3-C2-N2 | 5.05 | 123.44 | 119.90 |
| 26 | BB | 713 | G | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 26 | BB | 1001 | A | N1-C2-N3 | -5.05 | 126.78 | 129.30 |
| 26 | BB | 1104 | C | N3-C4-N4 | 5.05 | 121.53 | 118.00 |
| 26 | BB | 1215 | G | C6-N1-C2 | -5.05 | 122.07 | 125.10 |
| 26 | BB | 1277 | G | N9-C1'-C2' | -5.05 | 106.44 | 112.00 |
| 26 | BB | 1734 | G | N3-C4-C5 | -5.05 | 126.08 | 128.60 |
| 26 | BB | 1930 | G | C3'-C2'-C1' | -5.05 | 97.46 | 101.50 |
| 26 | BB | 2598 | A | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 26 | BB | 2640 | G | N9-C1'-C2' | -5.05 | 106.45 | 112.00 |
| 26 | BB | 2667 | C | C5-C6-N1 | 5.05 | 123.52 | 121.00 |
| 38 | BN | 10 | GLU | OE1-CD-OE2 | 5.05 | 129.36 | 123.30 |
| 39 | BO | 36 | VAL | CA-CB-CG2 | 5.05 | 118.48 | 110.90 |
| 1 | AA | 1178 | G | N1-C2-N3 | -5.05 | 120.87 | 123.90 |
| 1 | AA | 1541 | U | N3-C2-O2 | -5.05 | 118.67 | 122.20 |
| 3 | AC | 15 | G | C5-N7-C8 | -5.05 | 101.78 | 104.30 |
| 20 | AT | 72 | TRP | CD1-CG-CD2 | -5.05 | 102.26 | 106.30 |
| 26 | BB | 273 | G | C2-N3-C4 | 5.05 | 114.42 | 111.90 |
| 26 | BB | 707 | G | C2-N3-C4 | 5.05 | 114.42 | 111.90 |
| 26 | BB | 1802 | A | C5'-C4'-C3' | -5.05 | 107.92 | 116.00 |
| 26 | BB | 2118 | U | N1-C2-N3 | 5.05 | 117.93 | 114.90 |
| 26 | BB | 2249 | U | N1-C2-O2 | 5.05 | 126.33 | 122.80 |
| 26 | BB | 2902 | C | C2-N3-C4 | -5.05 | 117.38 | 119.90 |
| 1 | AA | 5 | U | P-O3'-C3' | 5.05 | 125.75 | 119.70 |
| 1 | AA | 124 | C | C5'-C4'-C3' | -5.05 | 107.93 | 116.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 129 | A | C1'-O4'-C4' | -5.05 | 105.86 | 109.90 |
| 1 | AA | 169 | C | C4-C5-C6 | 5.05 | 119.92 | 117.40 |
| 1 | AA | 239 | U | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 1 | AA | 390 | U | N3-C2-O2 | 5.05 | 125.73 | 122.20 |
| 1 | AA | 480 | U | C5'-C4'-O4' | 5.05 | 115.16 | 109.10 |
| 1 | AA | 1183 | U | C5-C6-N1 | -5.05 | 120.18 | 122.70 |
| 4 | AD | 61 | U | C3'-C2'-C1' | -5.05 | 97.46 | 101.50 |
| 26 | BB | 53 | A | C5-C6-N1 | 5.05 | 120.22 | 117.70 |
| 26 | BB | 184 | C | C4-C5-C6 | -5.05 | 114.88 | 117.40 |
| 26 | BB | 227 | A | C4'-C3'-C2' | -5.05 | 97.55 | 102.60 |
| 26 | BB | 463 | G | C8-N9-C4 | -5.05 | 104.38 | 106.40 |
| 26 | BB | 2185 | U | O4'-C4'-C3' | 5.05 | 110.14 | 106.10 |
| 26 | BB | 2405 | G | C5-C6-O6 | -5.05 | 125.57 | 128.60 |
| 26 | BB | 2407 | A | N9-C4-C5 | -5.05 | 103.78 | 105.80 |
| 26 | BB | 2764 | A | O3'-P-O5' | -5.05 | 94.41 | 104.00 |
| 26 | BB | 2816 | G | N3-C2-N2 | -5.05 | 116.37 | 119.90 |
| 38 | BN | 48 | ARG | NE-CZ-NH2 | 5.05 | 122.82 | 120.30 |
| 1 | AA | 530 | G | N1-C6-O6 | -5.04 | 116.87 | 119.90 |
| 1 | AA | 729 | A | C1'-O4'-C4' | -5.04 | 105.86 | 109.90 |
| 1 | AA | 901 | A | O4'-C1'-N9 | 5.04 | 112.24 | 108.20 |
| 26 | BB | 1093 | G | N3-C2-N2 | 5.04 | 123.43 | 119.90 |
| 26 | BB | 1394 | U | C6-N1-C2 | -5.04 | 117.97 | 121.00 |
| 26 | BB | 1473 | G | C2-N3-C4 | -5.04 | 109.38 | 111.90 |
| 26 | BB | 1814 | G | N1-C6-O6 | -5.04 | 116.87 | 119.90 |
| 26 | BB | 2039 | U | C4-C5-C6 | 5.04 | 122.73 | 119.70 |
| 1 | AA | 232 | G | N1-C2-N3 | 5.04 | 126.93 | 123.90 |
| 1 | AA | 416 | G | N9-C4-C5 | 5.04 | 107.42 | 105.40 |
| 1 | AA | 833 | G | N1-C6-O6 | 5.04 | 122.93 | 119.90 |
| 1 | AA | 951 | G | C5-C6-O6 | 5.04 | 131.63 | 128.60 |
| 1 | AA | 1072 | G | N9-C4-C5 | 5.04 | 107.42 | 105.40 |
| 1 | AA | 1226 | C | O4'-C4'-C3' | 5.04 | 110.13 | 106.10 |
| 1 | AA | 1320 | C | C4'-C3'-C2' | -5.04 | 97.56 | 102.60 |
| 1 | AA | 1500 | A | C6-N1-C2 | 5.04 | 121.63 | 118.60 |
| 26 | BB | 576 | U | C6-N1-C2 | -5.04 | 117.97 | 121.00 |
| 26 | BB | 638 | G | N3-C4-C5 | -5.04 | 126.08 | 128.60 |
| 26 | BB | 773 | U | N3-C2-O2 | 5.04 | 125.73 | 122.20 |
| 26 | BB | 830 | G | C5-C6-O6 | -5.04 | 125.57 | 128.60 |
| 26 | BB | 1034 | G | C5'-C4'-C3' | -5.04 | 107.93 | 116.00 |
| 26 | BB | 1100 | C | C2-N3-C4 | 5.04 | 122.42 | 119.90 |
| 26 | BB | 1358 | G | C4'-C3'-C2' | -5.04 | 97.56 | 102.60 |
| 26 | BB | 1589 | U | C3'-C2'-C1' | 5.04 | 105.53 | 101.50 |
| 26 | BB | 1829 | A | N7-C8-N9 | -5.04 | 111.28 | 113.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2059 | A | C5-C6-N1 | -5.04 | 115.18 | 117.70 |
| 26 | BB | 2121 | G | C1'-O4'-C4' | -5.04 | 105.86 | 109.90 |
| 26 | BB | 2264 | C | C6-N1-C2 | 5.04 | 122.32 | 120.30 |
| 26 | BB | 2410 | G | C8-N9-C1' | 5.04 | 133.56 | 127.00 |
| 26 | BB | 2497 | A | C2-N3-C4 | -5.04 | 108.08 | 110.60 |
| 29 | BE | 34 | VAL | CG1-CB-CG2 | -5.04 | 102.83 | 110.90 |
| 1 | AA | 28 | A | N1-C2-N3 | 5.04 | 131.82 | 129.30 |
| 1 | AA | 92 | U | C2-N3-C4 | -5.04 | 123.98 | 127.00 |
| 1 | AA | 178 | C | O4'-C1'-N1 | 5.04 | 112.23 | 108.20 |
| 1 | AA | 286 | C | N3-C2-O2 | -5.04 | 118.37 | 121.90 |
| 1 | AA | 378 | G | N1-C6-O6 | -5.04 | 116.88 | 119.90 |
| 1 | AA | 723 | U | C5'-C4'-O4' | -5.04 | 103.05 | 109.10 |
| 1 | AA | 1001 | C | C5'-C4'-O4' | 5.04 | 115.15 | 109.10 |
| 1 | AA | 1185 | G | C6-C5-N7 | -5.04 | 127.38 | 130.40 |
| 1 | AA | 1210 | C | C4-C5-C6 | 5.04 | 119.92 | 117.40 |
| 7 | AG | 173 | ASP | CB-CG-OD1 | -5.04 | 113.76 | 118.30 |
| 25 | BA | 51 | G | C1'-O4'-C4' | 5.04 | 113.93 | 109.90 |
| 26 | BB | 9 | G | C4-C5-C6 | -5.04 | 115.78 | 118.80 |
| 26 | BB | 161 | A | N1-C2-N3 | -5.04 | 126.78 | 129.30 |
| 26 | BB | 505 | A | C8-N9-C4 | -5.04 | 103.78 | 105.80 |
| 26 | BB | 643 | A | C3'-C2'-C1' | 5.04 | 105.53 | 101.50 |
| 26 | BB | 1144 | A | C6-N1-C2 | -5.04 | 115.58 | 118.60 |
| 26 | BB | 2121 | G | N3-C4-N9 | 5.04 | 129.02 | 126.00 |
| 26 | BB | 2284 | A | C5'-C4'-O4' | 5.04 | 115.15 | 109.10 |
| 26 | BB | 2378 | A | C3'-C2'-C1' | -5.04 | 97.47 | 101.50 |
| 26 | BB | 2543 | G | P-O5'-C5' | 5.04 | 128.97 | 120.90 |
| 1 | AA | 272 | C | N1-C2-O2 | 5.04 | 121.92 | 118.90 |
| 1 | AA | 1055 | A | N3-C4-N9 | 5.04 | 131.43 | 127.40 |
| 4 | AD | 20 | G | O5'-P-OP2 | -5.04 | 101.16 | 105.70 |
| 4 | AD | 42 | C | C1'-O4'-C4' | -5.04 | 105.87 | 109.90 |
| 8 | AH | 125 | LYS | O-C-N | 5.04 | 130.76 | 122.70 |
| 26 | BB | 286 | U | N3-C2-O2 | -5.04 | 118.67 | 122.20 |
| 26 | BB | 833 | A | C5'-C4'-O4' | 5.04 | 115.15 | 109.10 |
| 26 | BB | 1364 | G | C6-C5-N7 | -5.04 | 127.38 | 130.40 |
| 26 | BB | 1985 | C | C2-N3-C4 | -5.04 | 117.38 | 119.90 |
| 26 | BB | 2484 | G | C8-N9-C4 | -5.04 | 104.38 | 106.40 |
| 1 | AA | 182 | A | O4'-C1'-C2' | -5.04 | 100.76 | 105.80 |
| 1 | AA | 192 | A | N1-C2-N3 | 5.04 | 131.82 | 129.30 |
| 1 | AA | 518 | C | N1-C2-N3 | -5.04 | 115.67 | 119.20 |
| 1 | AA | 570 | G | N1-C2-N2 | 5.04 | 120.73 | 116.20 |
| 1 | AA | 813 | U | C2-N3-C4 | -5.04 | 123.98 | 127.00 |
| 1 | AA | 1233 | G | C4-C5-C6 | 5.04 | 121.82 | 118.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1396 | A | C5'-C4'-O4' | 5.04 | 115.15 | 109.10 |
| 8 | AH | 29 | ILE | CG1-CB-CG2 | 5.04 | 122.49 | 111.40 |
| 25 | BA | 51 | G | C5-N7-C8 | 5.04 | 106.82 | 104.30 |
| 26 | BB | 97 | C | C2'-C3'-O3' | 5.04 | 121.76 | 113.70 |
| 26 | BB | 709 | U | C5-C6-N1 | -5.04 | 120.18 | 122.70 |
| 26 | BB | 734 | A | C5-C6-N6 | -5.04 | 119.67 | 123.70 |
| 26 | BB | 901 | C | N1-C2-O2 | 5.04 | 121.92 | 118.90 |
| 26 | BB | 903 | C | N1-C2-O2 | 5.04 | 121.92 | 118.90 |
| 26 | BB | 938 | G | N3-C4-C5 | -5.04 | 126.08 | 128.60 |
| 26 | BB | 1082 | U | O4'-C1'-C2' | -5.04 | 100.76 | 105.80 |
| 26 | BB | 1135 | C | C5'-C4'-O4' | 5.04 | 115.15 | 109.10 |
| 26 | BB | 1259 | G | N3-C2-N2 | -5.04 | 116.37 | 119.90 |
| 26 | BB | 1458 | U | N3-C2-O2 | -5.04 | 118.67 | 122.20 |
| 26 | BB | 1463 | C | N3-C4-C5 | -5.04 | 119.89 | 121.90 |
| 26 | BB | 1767 | G | N7-C8-N9 | -5.04 | 110.58 | 113.10 |
| 26 | BB | 1990 | C | N1-C2-O2 | 5.04 | 121.92 | 118.90 |
| 26 | BB | 2117 | A | N3-C4-C5 | -5.04 | 123.27 | 126.80 |
| 26 | BB | 2164 | C | C3'-C2'-C1' | -5.04 | 97.47 | 101.50 |
| 26 | BB | 2239 | G | C8-N9-C4 | -5.04 | 104.39 | 106.40 |
| 26 | BB | 2485 | G | C6-N1-C2 | -5.04 | 122.08 | 125.10 |
| 1 | AA | 1225 | A | C2-N3-C4 | -5.04 | 108.08 | 110.60 |
| 4 | AD | 3 | C | C4'-C3'-C2' | -5.04 | 97.56 | 102.60 |
| 4 | AD | 30 | G | N3-C4-C5 | -5.04 | 126.08 | 128.60 |
| 8 | AH | 36 | THR | CA-CB-CG2 | 5.04 | 119.45 | 112.40 |
| 26 | BB | 218 | A | C4-C5-N7 | -5.04 | 108.18 | 110.70 |
| 26 | BB | 444 | C | C5-C6-N1 | 5.04 | 123.52 | 121.00 |
| 26 | BB | 778 | G | N7-C8-N9 | 5.04 | 115.62 | 113.10 |
| 26 | BB | 1007 | C | C2-N3-C4 | 5.04 | 122.42 | 119.90 |
| 26 | BB | 1482 | G | C5-N7-C8 | -5.04 | 101.78 | 104.30 |
| 26 | BB | 2600 | A | N1-C2-N3 | -5.04 | 126.78 | 129.30 |
| 1 | AA | 229 | U | N1-C2-N3 | 5.04 | 117.92 | 114.90 |
| 1 | AA | 394 | G | N1-C2-N3 | -5.04 | 120.88 | 123.90 |
| 1 | AA | 662 | U | O4'-C1'-N1 | 5.04 | 112.23 | 108.20 |
| 1 | AA | 937 | A | C4-C5-C6 | 5.04 | 119.52 | 117.00 |
| 1 | AA | 1184 | G | C5-C6-N1 | 5.04 | 114.02 | 111.50 |
| 1 | AA | 1339 | A | C5-N7-C8 | -5.04 | 101.38 | 103.90 |
| 23 | AW | 28 | ARG | NE-CZ-NH2 | -5.04 | 117.78 | 120.30 |
| 26 | BB | 34 | U | N3-C4-O4 | 5.04 | 122.92 | 119.40 |
| 26 | BB | 354 | A | C5-C6-N6 | -5.04 | 119.67 | 123.70 |
| 26 | BB | 516 | C | O4'-C1'-N1 | 5.04 | 112.23 | 108.20 |
| 26 | BB | 778 | G | N1-C6-O6 | -5.04 | 116.88 | 119.90 |
| 26 | BB | 2326 | C | C6-N1-C1' | 5.04 | 126.84 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2431 | U | C1'-O4'-C4' | -5.04 | 105.87 | 109.90 |
| 26 | BB | 2535 | G | C5-C6-O6 | -5.04 | 125.58 | 128.60 |
| 26 | BB | 2804 | U | N1-C2-O2 | 5.04 | 126.32 | 122.80 |
| 1 | AA | 24 | U | P-O5'-C5' | 5.03 | 128.95 | 120.90 |
| 1 | AA | 240 | G | N3-C4-N9 | -5.03 | 122.98 | 126.00 |
| 1 | AA | 343 | U | C5-C6-N1 | -5.03 | 120.18 | 122.70 |
| 1 | AA | 449 | G | C3'-C2'-C1' | 5.03 | 105.53 | 101.50 |
| 1 | AA | 793 | U | P-O3'-C3' | 5.03 | 125.74 | 119.70 |
| 1 | AA | 902 | G | C5-C6-N1 | 5.03 | 114.02 | 111.50 |
| 1 | AA | 1244 | G | C5-N7-C8 | -5.03 | 101.78 | 104.30 |
| 1 | AA | 1373 | G | C1'-O4'-C4' | 5.03 | 113.93 | 109.90 |
| 1 | AA | 1422 | G | C4-C5-C6 | 5.03 | 121.82 | 118.80 |
| 3 | AC | 51 | C | N3-C4-N4 | 5.03 | 121.52 | 118.00 |
| 4 | AD | 6 | G | N3-C4-N9 | 5.03 | 129.02 | 126.00 |
| 4 | AD | 30 | G | N1-C2-N2 | -5.03 | 111.67 | 116.20 |
| 18 | AR | 84 | LEU | CB-CG-CD1 | -5.03 | 102.44 | 111.00 |
| 26 | BB | 55 | G | N3-C4-N9 | -5.03 | 122.98 | 126.00 |
| 26 | BB | 272 | A | O5'-C5'-C4' | -5.03 | 102.14 | 111.70 |
| 26 | BB | 469 | G | C8-N9-C4 | -5.03 | 104.39 | 106.40 |
| 26 | BB | 488 | G | C3'-C2'-C1' | -5.03 | 97.47 | 101.50 |
| 26 | BB | 520 | G | N1-C2-N3 | -5.03 | 120.88 | 123.90 |
| 26 | BB | 726 | G | C2-N3-C4 | 5.03 | 114.42 | 111.90 |
| 26 | BB | 753 | A | O5'-P-OP1 | 5.03 | 116.74 | 110.70 |
| 26 | BB | 992 | C | N1-C2-O2 | 5.03 | 121.92 | 118.90 |
| 26 | BB | 1112 | G | C4-N9-C1' | -5.03 | 119.96 | 126.50 |
| 26 | BB | 1189 | A | C6-C5-N7 | 5.03 | 135.82 | 132.30 |
| 26 | BB | 1588 | G | O5'-C5'-C4' | -5.03 | 102.14 | 111.70 |
| 26 | BB | 1630 | A | C6-N1-C2 | 5.03 | 121.62 | 118.60 |
| 26 | BB | 2178 | C | C5'-C4'-C3' | -5.03 | 107.95 | 116.00 |
| 26 | BB | 2674 | G | C5'-C4'-O4' | 5.03 | 115.14 | 109.10 |
| 26 | BB | 2823 | A | C5'-C4'-C3' | -5.03 | 107.94 | 116.00 |
| 1 | AA | 9 | G | N1-C6-O6 | -5.03 | 116.88 | 119.90 |
| 1 | AA | 309 | A | C3'-C2'-C1' | -5.03 | 97.47 | 101.50 |
| 1 | AA | 1534 | A | C5-C6-N1 | -5.03 | 115.18 | 117.70 |
| 2 | AB | 29 | G | P-O3'-C3' | 5.03 | 125.74 | 119.70 |
| 26 | BB | 946 | C | N1-C2-O2 | 5.03 | 121.92 | 118.90 |
| 26 | BB | 1069 | A | C5'-C4'-O4' | 5.03 | 115.14 | 109.10 |
| 26 | BB | 1143 | A | P-O3'-C3' | 5.03 | 125.74 | 119.70 |
| 26 | BB | 1509 | A | N3-C4-C5 | -5.03 | 123.28 | 126.80 |
| 26 | BB | 1910 | G | C3'-C2'-C1' | 5.03 | 105.53 | 101.50 |
| 26 | BB | 1969 | A | P-O3'-C3' | 5.03 | 125.74 | 119.70 |
| 1 | AA | 486 | U | C5-C6-N1 | -5.03 | 120.19 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 574 | A | OP1-P-OP2 | -5.03 | 112.05 | 119.60 |
| 7 | AG | 183 | ARG | NE-CZ-NH1 | -5.03 | 117.78 | 120.30 |
| 26 | BB | 504 | A | C2-N3-C4 | -5.03 | 108.08 | 110.60 |
| 26 | BB | 716 | A | P-O3'-C3' | 5.03 | 125.74 | 119.70 |
| 26 | BB | 756 | A | C5-C6-N1 | 5.03 | 120.22 | 117.70 |
| 26 | BB | 1113 | U | N3-C2-O2 | -5.03 | 118.68 | 122.20 |
| 26 | BB | 1819 | A | C2-N3-C4 | 5.03 | 113.12 | 110.60 |
| 26 | BB | 1903 | G | C4'-C3'-C2' | -5.03 | 97.57 | 102.60 |
| 26 | BB | 2500 | U | C2-N3-C4 | -5.03 | 123.98 | 127.00 |
| 26 | BB | 2538 | C | C5'-C4'-O4' | 5.03 | 115.14 | 109.10 |
| 36 | BL | 35 | ARG | NE-CZ-NH1 | 5.03 | 122.82 | 120.30 |
| 1 | AA | 97 | G | C4-C5-C6 | 5.03 | 121.82 | 118.80 |
| 1 | AA | 348 | G | C4-C5-N7 | -5.03 | 108.79 | 110.80 |
| 1 | AA | 587 | G | O4'-C4'-C3' | 5.03 | 110.12 | 106.10 |
| 1 | AA | 738 | C | C3'-C2'-C1' | -5.03 | 97.48 | 101.50 |
| 1 | AA | 819 | A | P-O3'-C3' | 5.03 | 125.73 | 119.70 |
| 3 | AC | 43 | U | C5-C4-O4 | 5.03 | 128.92 | 125.90 |
| 25 | BA | 14 | U | C5'-C4'-O4' | -5.03 | 103.07 | 109.10 |
| 25 | BA | 72 | G | C5-C6-N1 | 5.03 | 114.02 | 111.50 |
| 26 | BB | 1417 | C | N3-C2-O2 | -5.03 | 118.38 | 121.90 |
| 26 | BB | 1795 | C | C4'-C3'-C2' | -5.03 | 97.57 | 102.60 |
| 26 | BB | 2344 | U | C2-N1-C1' | 5.03 | 123.73 | 117.70 |
| 26 | BB | 2375 | G | N1-C2-N3 | 5.03 | 126.92 | 123.90 |
| 26 | BB | 2483 | C | O4'-C1'-C2' | -5.03 | 100.77 | 105.80 |
| 26 | BB | 2582 | G | N3-C4-N9 | 5.03 | 129.02 | 126.00 |
| 30 | BF | 94 | GLN | CA-CB-CG | 5.03 | 124.47 | 113.40 |
| 31 | BG | 19 | PHE | CB-CG-CD1 | 5.03 | 124.32 | 120.80 |
| 1 | AA | 139 | A | O4'-C1'-N9 | -5.03 | 104.18 | 108.20 |
| 1 | AA | 1167 | A | C8-N9-C4 | -5.03 | 103.79 | 105.80 |
| 1 | AA | 1180 | A | C5-C6-N1 | 5.03 | 120.21 | 117.70 |
| 1 | AA | 1210 | C | C6-N1-C2 | 5.03 | 122.31 | 120.30 |
| 1 | AA | 1248 | A | C5'-C4'-O4' | 5.03 | 115.13 | 109.10 |
| 1 | AA | 1267 | C | N1-C2-O2 | 5.03 | 121.92 | 118.90 |
| 1 | AA | 1400 | C | O4'-C4'-C3' | 5.03 | 110.12 | 106.10 |
| 26 | BB | 372 | G | C8-N9-C4 | -5.03 | 104.39 | 106.40 |
| 26 | BB | 852 | U | N1-C1'-C2' | -5.03 | 106.47 | 112.00 |
| 26 | BB | 1650 | A | C6-C5-N7 | -5.03 | 128.78 | 132.30 |
| 26 | BB | 1716 | U | C4-C5-C6 | 5.03 | 122.72 | 119.70 |
| 26 | BB | 1740 | G | C8-N9-C1' | 5.03 | 133.54 | 127.00 |
| 26 | BB | 1994 | C | O4'-C1'-N1 | 5.03 | 112.22 | 108.20 |
| 26 | BB | 2178 | C | N3-C4-N4 | 5.03 | 121.52 | 118.00 |
| 26 | BB | 2282 | G | O4'-C4'-C3' | 5.03 | 110.12 | 106.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2480 | C | N3-C4-C5 | 5.03 | 123.91 | 121.90 |
| 26 | BB | 2855 | C | N1-C2-O2 | 5.03 | 121.92 | 118.90 |
| 1 | AA | 78 | A | C5-N7-C8 | -5.03 | 101.39 | 103.90 |
| 1 | AA | 182 | A | C8-N9-C4 | -5.03 | 103.79 | 105.80 |
| 1 | AA | 260 | G | C4'-C3'-C2' | -5.03 | 97.58 | 102.60 |
| 1 | AA | 454 | G | N9-C4-C5 | 5.03 | 107.41 | 105.40 |
| 1 | AA | 936 | C | C3'-C2'-C1' | -5.03 | 97.48 | 101.50 |
| 1 | AA | 1002 | G | N9-C1'-C2' | -5.03 | 106.47 | 112.00 |
| 1 | AA | 1529 | G | O4'-C1'-N9 | 5.03 | 112.22 | 108.20 |
| 3 | AC | 30 | U | O4'-C4'-C3' | 5.03 | 110.12 | 106.10 |
| 26 | BB | 80 | G | C8-N9-C4 | -5.03 | 104.39 | 106.40 |
| 26 | BB | 153 | U | C5-C6-N1 | -5.03 | 120.19 | 122.70 |
| 26 | BB | 216 | A | C5-N7-C8 | 5.03 | 106.41 | 103.90 |
| 26 | BB | 411 | G | C2-N3-C4 | 5.03 | 114.41 | 111.90 |
| 26 | BB | 673 | C | C5'-C4'-O4' | 5.03 | 115.13 | 109.10 |
| 26 | BB | 679 | C | C2-N3-C4 | 5.03 | 122.41 | 119.90 |
| 26 | BB | 876 | C | P-O3'-C3' | 5.03 | 125.73 | 119.70 |
| 26 | BB | 928 | A | N1-C6-N6 | -5.03 | 115.58 | 118.60 |
| 26 | BB | 1156 | A | C2-N3-C4 | 5.03 | 113.11 | 110.60 |
| 26 | BB | 1559 | U | N1-C2-N3 | 5.03 | 117.92 | 114.90 |
| 26 | BB | 1625 | C | O5'-C5'-C4' | -5.03 | 102.15 | 111.70 |
| 26 | BB | 1839 | G | O4'-C1'-C2' | -5.03 | 100.77 | 105.80 |
| 26 | BB | 1941 | C | C4'-C3'-C2' | 5.03 | 107.63 | 102.60 |
| 26 | BB | 2285 | C | C5-C4-N4 | 5.03 | 123.72 | 120.20 |
| 26 | BB | 2345 | G | C3'-C2'-C1' | 5.03 | 105.52 | 101.50 |
| 26 | BB | 2654 | A | C4'-C3'-C2' | 5.03 | 107.63 | 102.60 |
| 34 | BJ | 95 | PHE | CG-CD1-CE1 | -5.03 | 115.27 | 120.80 |
| 1 | AA | 403 | C | O4'-C1'-C2' | 5.02 | 112.12 | 107.60 |
| 1 | AA | 1326 | U | N3-C4-C5 | -5.02 | 111.58 | 114.60 |
| 1 | AA | 1506 | U | N3-C4-O4 | 5.02 | 122.92 | 119.40 |
| 2 | AB | 27 | C | O5'-C5'-C4' | -5.02 | 102.15 | 111.70 |
| 4 | AD | 27 | G | C4-C5-C6 | 5.02 | 121.81 | 118.80 |
| 25 | BA | 81 | G | C8-N9-C4 | 5.02 | 108.41 | 106.40 |
| 26 | BB | 483 | A | C4-C5-N7 | -5.02 | 108.19 | 110.70 |
| 26 | BB | 1392 | A | N1-C6-N6 | -5.02 | 115.58 | 118.60 |
| 26 | BB | 1923 | U | C6-N1-C2 | 5.02 | 124.01 | 121.00 |
| 26 | BB | 1925 | C | C4'-C3'-C2' | -5.02 | 97.58 | 102.60 |
| 26 | BB | 2178 | C | N1-C2-N3 | -5.02 | 115.68 | 119.20 |
| 26 | BB | 2426 | A | C3'-C2'-C1' | -5.02 | 97.48 | 101.50 |
| 26 | BB | 2814 | A | P-O3'-C3' | 5.02 | 125.73 | 119.70 |
| 1 | AA | 356 | A | C6-N1-C2 | -5.02 | 115.59 | 118.60 |
| 1 | AA | 411 | A | N9-C4-C5 | 5.02 | 107.81 | 105.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 602 | A | N9-C1'-C2' | -5.02 | 106.47 | 112.00 |
| 1 | AA | 753 | A | C5'-C4'-C3' | -5.02 | 107.96 | 116.00 |
| 1 | AA | 890 | G | C5-C6-N1 | 5.02 | 114.01 | 111.50 |
| 1 | AA | 1261 | A | N1-C2-N3 | -5.02 | 126.79 | 129.30 |
| 1 | AA | 1263 | C | O4'-C1'-C2' | -5.02 | 100.78 | 105.80 |
| 4 | AD | 1 | C | N1-C2-O2 | 5.02 | 121.91 | 118.90 |
| 4 | AD | 31 | G | N3-C4-N9 | 5.02 | 129.01 | 126.00 |
| 26 | BB | 137 | U | O3'-P-O5' | -5.02 | 94.46 | 104.00 |
| 26 | BB | 340 | A | C8-N9-C4 | 5.02 | 107.81 | 105.80 |
| 26 | BB | 574 | A | C6-N1-C2 | -5.02 | 115.59 | 118.60 |
| 26 | BB | 1294 | U | O4'-C1'-N1 | 5.02 | 112.22 | 108.20 |
| 26 | BB | 1814 | G | N3-C4-C5 | -5.02 | 126.09 | 128.60 |
| 26 | BB | 2127 | G | N3-C2-N2 | 5.02 | 123.42 | 119.90 |
| 26 | BB | 2129 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |
| 26 | BB | 2529 | G | N1-C2-N3 | 5.02 | 126.91 | 123.90 |
| 26 | BB | 2576 | G | N3-C4-N9 | 5.02 | 129.01 | 126.00 |
| 26 | BB | 2897 | U | N1-C2-N3 | 5.02 | 117.91 | 114.90 |
| 30 | BF | 116 | ASP | CB-CA-C | 5.02 | 120.44 | 110.40 |
| 1 | AA | 683 | G | C5-C6-O6 | -5.02 | 125.59 | 128.60 |
| 1 | AA | 879 | C | N3-C4-N4 | 5.02 | 121.51 | 118.00 |
| 1 | AA | 1400 | C | C3'-C2'-C1' | 5.02 | 105.52 | 101.50 |
| 26 | BB | 398 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |
| 26 | BB | 941 | A | O4'-C1'-C2' | -5.02 | 100.78 | 105.80 |
| 26 | BB | 1326 | U | C5'-C4'-O4' | 5.02 | 115.12 | 109.10 |
| 26 | BB | 1427 | A | C1'-O4'-C4' | -5.02 | 105.88 | 109.90 |
| 26 | BB | 2084 | C | N1-C2-O2 | 5.02 | 121.91 | 118.90 |
| 1 | AA | 65 | A | N1-C2-N3 | -5.02 | 126.79 | 129.30 |
| 1 | AA | 398 | U | N3-C2-O2 | -5.02 | 118.69 | 122.20 |
| 1 | AA | 428 | G | C5-C6-O6 | -5.02 | 125.59 | 128.60 |
| 1 | AA | 566 | G | N1-C2-N3 | -5.02 | 120.89 | 123.90 |
| 1 | AA | 617 | G | N7-C8-N9 | 5.02 | 115.61 | 113.10 |
| 1 | AA | 620 | C | C5-C6-N1 | -5.02 | 118.49 | 121.00 |
| 1 | AA | 642 | A | N9-C1'-C2' | 5.02 | 120.52 | 114.00 |
| 1 | AA | 806 | C | C2-N3-C4 | 5.02 | 122.41 | 119.90 |
| 1 | AA | 1019 | A | C1'-O4'-C4' | 5.02 | 113.92 | 109.90 |
| 1 | AA | 1092 | A | O4'-C4'-C3' | 5.02 | 110.12 | 106.10 |
| 1 | AA | 1157 | A | C4-C5-N7 | -5.02 | 108.19 | 110.70 |
| 7 | AG | 110 | ARG | NE-CZ-NH2 | -5.02 | 117.79 | 120.30 |
| 26 | BB | 396 | G | N1-C6-O6 | 5.02 | 122.91 | 119.90 |
| 26 | BB | 457 | A | C4'-C3'-C2' | -5.02 | 97.58 | 102.60 |
| 26 | BB | 478 | A | C5-N7-C8 | 5.02 | 106.41 | 103.90 |
| 26 | BB | 539 | G | N1-C2-N2 | -5.02 | 111.68 | 116.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 631 | A | N9-C1'-C2' | -5.02 | 106.48 | 112.00 |
| 26 | BB | 714 | U | N3-C2-O2 | -5.02 | 118.69 | 122.20 |
| 26 | BB | 771 | G | C3'-C2'-C1' | 5.02 | 105.52 | 101.50 |
| 26 | BB | 846 | U | C5-C6-N1 | -5.02 | 120.19 | 122.70 |
| 26 | BB | 920 | A | O4'-C1'-N9 | 5.02 | 112.22 | 108.20 |
| 26 | BB | 1323 | C | O4'-C1'-C2' | 5.02 | 112.12 | 107.60 |
| 26 | BB | 1428 | C | C5'-C4'-O4' | 5.02 | 115.12 | 109.10 |
| 26 | BB | 1704 | C | P-O5'-C5' | 5.02 | 128.93 | 120.90 |
| 26 | BB | 1733 | G | C5'-C4'-C3' | -5.02 | 107.97 | 116.00 |
| 26 | BB | 2238 | G | O5'-P-OP1 | -5.02 | 101.18 | 105.70 |
| 26 | BB | 2379 | G | C4'-C3'-C2' | -5.02 | 97.58 | 102.60 |
| 26 | BB | 2491 | U | O5'-C5'-C4' | -5.02 | 102.16 | 111.70 |
| 26 | BB | 2566 | A | P-O3'-C3' | 5.02 | 125.72 | 119.70 |
| 42 | BR | 20 | ARG | CD-NE-CZ | 5.02 | 130.63 | 123.60 |
| 1 | AA | 193 | C | O4'-C1'-C2' | 5.02 | 112.12 | 107.60 |
| 1 | AA | 384 | G | C3'-C2'-C1' | -5.02 | 97.49 | 101.50 |
| 1 | AA | 518 | C | C2-N3-C4 | 5.02 | 122.41 | 119.90 |
| 1 | AA | 676 | A | C4-C5-C6 | 5.02 | 119.51 | 117.00 |
| 1 | AA | 727 | G | N1-C6-O6 | -5.02 | 116.89 | 119.90 |
| 1 | AA | 1380 | U | N3-C2-O2 | -5.02 | 118.69 | 122.20 |
| 8 | AH | 122 | VAL | CG1-CB-CG2 | 5.02 | 118.93 | 110.90 |
| 25 | BA | 20 | G | C1'-O4'-C4' | -5.02 | 105.89 | 109.90 |
| 26 | BB | 168 | G | N3-C4-C5 | -5.02 | 126.09 | 128.60 |
| 26 | BB | 312 | G | C4-N9-C1' | -5.02 | 119.98 | 126.50 |
| 26 | BB | 1040 | A | C5'-C4'-C3' | -5.02 | 107.97 | 116.00 |
| 26 | BB | 1697 | G | C2-N3-C4 | 5.02 | 114.41 | 111.90 |
| 26 | BB | 2000 | C | C4-C5-C6 | -5.02 | 114.89 | 117.40 |
| 26 | BB | 2106 | U | C1'-O4'-C4' | 5.02 | 113.91 | 109.90 |
| 26 | BB | 2273 | A | C6-N1-C2 | 5.02 | 121.61 | 118.60 |
| 26 | BB | 2533 | U | C6-N1-C2 | 5.02 | 124.01 | 121.00 |
| 26 | BB | 2569 | G | C6-N1-C2 | -5.02 | 122.09 | 125.10 |
| 32 | BH | 128 | THR | CA-CB-OG1 | 5.02 | 119.54 | 109.00 |
| 1 | AA | 146 | G | N9-C1'-C2' | -5.02 | 106.48 | 112.00 |
| 1 | AA | 253 | A | N1-C6-N6 | -5.02 | 115.59 | 118.60 |
| 1 | AA | 1244 | G | C1'-O4'-C4' | -5.02 | 105.89 | 109.90 |
| 25 | BA | 78 | A | P-O5'-C5' | 5.02 | 128.93 | 120.90 |
| 26 | BB | 256 | A | C6-C5-N7 | 5.02 | 135.81 | 132.30 |
| 26 | BB | 274 | C | C6-N1-C2 | 5.02 | 122.31 | 120.30 |
| 26 | BB | 760 | G | C5-C6-N1 | 5.02 | 114.01 | 111.50 |
| 26 | BB | 949 | G | C5-C6-O6 | -5.02 | 125.59 | 128.60 |
| 26 | BB | 1095 | A | N3-C4-N9 | 5.02 | 131.41 | 127.40 |
| 26 | BB | 1199 | U | N1-C2-N3 | 5.02 | 117.91 | 114.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1504 | A | C8-N9-C4 | 5.02 | 107.81 | 105.80 |
| 26 | BB | 2061 | G | C1'-O4'-C4' | 5.02 | 113.91 | 109.90 |
| 26 | BB | 2420 | C | C2-N3-C4 | 5.02 | 122.41 | 119.90 |
| 28 | BD | 97 | ASP | C-N-CA | 5.02 | 132.83 | 122.30 |
| 34 | BJ | 68 | PHE | CB-CG-CD1 | -5.02 | 117.29 | 120.80 |
| 1 | AA | 185 | U | C5-C6-N1 | 5.01 | 125.21 | 122.70 |
| 1 | AA | 264 | C | O5'-C5'-C4' | 5.01 | 121.23 | 111.70 |
| 1 | AA | 298 | A | C5-C6-N1 | -5.01 | 115.19 | 117.70 |
| 1 | AA | 455 | G | O4'-C1'-N9 | 5.01 | 112.21 | 108.20 |
| 1 | AA | 564 | C | C4-C5-C6 | 5.01 | 119.91 | 117.40 |
| 1 | AA | 823 | C | N3-C2-O2 | -5.01 | 118.39 | 121.90 |
| 1 | AA | 897 | C | O4'-C1'-N1 | 5.01 | 112.21 | 108.20 |
| 1 | AA | 942 | G | C1'-O4'-C4' | 5.01 | 113.91 | 109.90 |
| 1 | AA | 1465 | A | N3-C4-N9 | 5.01 | 131.41 | 127.40 |
| 26 | BB | 590 | A | N7-C8-N9 | 5.01 | 116.31 | 113.80 |
| 26 | BB | 606 | U | N1-C2-N3 | 5.01 | 117.91 | 114.90 |
| 26 | BB | 873 | C | C2-N1-C1' | -5.01 | 113.28 | 118.80 |
| 26 | BB | 1155 | A | C8-N9-C1' | 5.01 | 136.72 | 127.70 |
| 26 | BB | 1637 | A | C6-C5-N7 | -5.01 | 128.79 | 132.30 |
| 26 | BB | 2199 | A | C1'-O4'-C4' | 5.01 | 113.91 | 109.90 |
| 26 | BB | 2249 | U | C6-N1-C2 | -5.01 | 117.99 | 121.00 |
| 26 | BB | 2848 | G | N9-C1'-C2' | 5.01 | 120.52 | 114.00 |
| 34 | BJ | 55 | ARG | NE-CZ-NH1 | 5.01 | 122.81 | 120.30 |
| 36 | BL | 71 | ASP | CB-CG-OD2 | -5.01 | 113.79 | 118.30 |
| 50 | BZ | 77 | TYR | CB-CG-CD1 | -5.01 | 117.99 | 121.00 |
| 1 | AA | 445 | G | C4'-C3'-C2' | -5.01 | 97.59 | 102.60 |
| 1 | AA | 897 | C | C2-N3-C4 | 5.01 | 122.41 | 119.90 |
| 16 | AP | 95 | PRO | N-CD-CG | 5.01 | 110.72 | 103.20 |
| 26 | BB | 391 | A | N3-C4-N9 | 5.01 | 131.41 | 127.40 |
| 26 | BB | 518 | G | N3-C4-C5 | -5.01 | 126.09 | 128.60 |
| 26 | BB | 967 | U | C4-C5-C6 | -5.01 | 116.69 | 119.70 |
| 26 | BB | 1702 | G | O4'-C1'-C2' | 5.01 | 112.11 | 107.60 |
| 26 | BB | 1723 | G | N1-C2-N2 | 5.01 | 120.71 | 116.20 |
| 1 | AA | 147 | G | P-O3'-C3' | 5.01 | 125.71 | 119.70 |
| 1 | AA | 304 | U | C4'-C3'-C2' | -5.01 | 97.59 | 102.60 |
| 1 | AA | 823 | C | C5-C6-N1 | -5.01 | 118.49 | 121.00 |
| 1 | AA | 848 | C | C5-C6-N1 | 5.01 | 123.51 | 121.00 |
| 1 | AA | 896 | C | P-O3'-C3' | 5.01 | 125.71 | 119.70 |
| 1 | AA | 1279 | G | N1-C2-N3 | 5.01 | 126.91 | 123.90 |
| 1 | AA | 1524 | C | C4-C5-C6 | -5.01 | 114.89 | 117.40 |
| 12 | AL | 4 | GLN | N-CA-CB | 5.01 | 119.62 | 110.60 |
| 25 | BA | 84 | G | C4-C5-N7 | -5.01 | 108.80 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 52 | A | N9-C4-C5 | -5.01 | 103.80 | 105.80 |
| 26 | BB | 274 | C | C5-C4-N4 | -5.01 | 116.69 | 120.20 |
| 26 | BB | 287 | G | N9-C4-C5 | 5.01 | 107.41 | 105.40 |
| 26 | BB | 731 | C | C5-C6-N1 | -5.01 | 118.49 | 121.00 |
| 26 | BB | 804 | A | C8-N9-C4 | -5.01 | 103.80 | 105.80 |
| 26 | BB | 981 | A | C5-N7-C8 | -5.01 | 101.39 | 103.90 |
| 26 | BB | 1413 | A | C5'-C4'-O4' | -5.01 | 103.09 | 109.10 |
| 26 | BB | 1589 | U | C4'-C3'-C2' | -5.01 | 97.59 | 102.60 |
| 26 | BB | 2082 | A | C6-N1-C2 | -5.01 | 115.59 | 118.60 |
| 26 | BB | 2349 | G | C8-N9-C4 | 5.01 | 108.41 | 106.40 |
| 26 | BB | 2632 | A | N1-C6-N6 | -5.01 | 115.59 | 118.60 |
| 26 | BB | 2857 | G | C8-N9-C4 | -5.01 | 104.39 | 106.40 |
| 1 | AA | 177 | G | C2-N3-C4 | 5.01 | 114.40 | 111.90 |
| 1 | AA | 245 | U | N1-C1'-C2' | -5.01 | 106.49 | 112.00 |
| 1 | AA | 544 | G | C8-N9-C4 | -5.01 | 104.40 | 106.40 |
| 1 | AA | 617 | G | C8-N9-C4 | -5.01 | 104.40 | 106.40 |
| 1 | AA | 1291 | U | O4'-C1'-N1 | 5.01 | 112.21 | 108.20 |
| 3 | AC | 48 | C | N1-C2-N3 | -5.01 | 115.69 | 119.20 |
| 8 | AH | 110 | MET | CG-SD-CE | -5.01 | 92.18 | 100.20 |
| 26 | BB | 107 | G | C8-N9-C1' | 5.01 | 133.51 | 127.00 |
| 26 | BB | 167 | A | N9-C4-C5 | 5.01 | 107.80 | 105.80 |
| 26 | BB | 178 | G | C4-C5-N7 | 5.01 | 112.80 | 110.80 |
| 26 | BB | 312 | G | N7-C8-N9 | -5.01 | 110.59 | 113.10 |
| 26 | BB | 449 | A | C6-C5-N7 | 5.01 | 135.81 | 132.30 |
| 26 | BB | 794 | A | N7-C8-N9 | -5.01 | 111.30 | 113.80 |
| 26 | BB | 1089 | A | C2-N3-C4 | 5.01 | 113.11 | 110.60 |
| 26 | BB | 1126 | A | C8-N9-C4 | -5.01 | 103.80 | 105.80 |
| 26 | BB | 1221 | C | C2-N3-C4 | 5.01 | 122.41 | 119.90 |
| 26 | BB | 1427 | A | C4'-C3'-C2' | -5.01 | 97.59 | 102.60 |
| 26 | BB | 1577 | C | O3'-P-O5' | 5.01 | 113.52 | 104.00 |
| 26 | BB | 1886 | U | N3-C4-C5 | -5.01 | 111.59 | 114.60 |
| 26 | BB | 1934 | C | O5'-C5'-C4' | 5.01 | 121.22 | 111.70 |
| 26 | BB | 2372 | U | O4'-C4'-C3' | -5.01 | 98.99 | 104.00 |
| 26 | BB | 2387 | U | C5-C4-O4 | -5.01 | 122.89 | 125.90 |
| 32 | BH | 61 | TRP | NE1-CE2-CD2 | -5.01 | 102.29 | 107.30 |
| 45 | BU | 75 | PHE | O-C-N | 5.01 | 130.72 | 122.70 |
| 1 | AA | 183 | C | C6-N1-C2 | 5.01 | 122.30 | 120.30 |
| 1 | AA | 233 | C | O4'-C1'-N1 | 5.01 | 112.21 | 108.20 |
| 1 | AA | 249 | U | C2-N1-C1' | 5.01 | 123.71 | 117.70 |
| 1 | AA | 422 | C | N3-C4-N4 | 5.01 | 121.50 | 118.00 |
| 1 | AA | 554 | A | C5-C6-N1 | 5.01 | 120.20 | 117.70 |
| 1 | AA | 1457 | G | P-O5'-C5' | -5.01 | 112.89 | 120.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 40 | U | P-O5'-C5' | 5.01 | 128.91 | 120.90 |
| 26 | BB | 231 | A | P-O3'-C3' | 5.01 | 125.71 | 119.70 |
| 26 | BB | 1034 | G | O4'-C4'-C3' | 5.01 | 110.11 | 106.10 |
| 26 | BB | 1325 | U | C6-N1-C2 | -5.01 | 118.00 | 121.00 |
| 26 | BB | 1584 | U | C5'-C4'-O4' | 5.01 | 115.11 | 109.10 |
| 26 | BB | 1797 | G | C6-N1-C2 | 5.01 | 128.10 | 125.10 |
| 26 | BB | 1953 | A | N1-C6-N6 | 5.01 | 121.61 | 118.60 |
| 26 | BB | 1986 | C | C4-C5-C6 | 5.01 | 119.90 | 117.40 |
| 26 | BB | 2070 | A | O5'-C5'-C4' | 5.01 | 121.22 | 111.70 |
| 26 | BB | 2333 | A | C6-C5-N7 | 5.01 | 135.81 | 132.30 |
| 26 | BB | 2663 | G | C2'-C3'-O3' | 5.01 | 121.71 | 113.70 |
| 1 | AA | 587 | G | C4-C5-N7 | -5.01 | 108.80 | 110.80 |
| 1 | AA | 652 | U | C5-C4-O4 | -5.01 | 122.90 | 125.90 |
| 1 | AA | 698 | G | O4'-C1'-N9 | 5.01 | 112.20 | 108.20 |
| 1 | AA | 1365 | G | O3'-P-O5' | -5.01 | 94.49 | 104.00 |
| 4 | AD | 62 | C | C5-C6-N1 | 5.01 | 123.50 | 121.00 |
| 16 | AP | 111 | PRO | N-CA-CB | 5.01 | 109.31 | 103.30 |
| 26 | BB | 145 | C | N1-C1'-C2' | -5.01 | 106.49 | 112.00 |
| 26 | BB | 190 | A | N7-C8-N9 | 5.01 | 116.30 | 113.80 |
| 26 | BB | 407 | G | P-O3'-C3' | -5.01 | 113.69 | 119.70 |
| 26 | BB | 451 | U | C3'-C2'-C1' | 5.01 | 105.50 | 101.50 |
| 26 | BB | 731 | C | N3-C4-C5 | 5.01 | 123.90 | 121.90 |
| 26 | BB | 1087 | G | C3'-C2'-C1' | 5.01 | 105.50 | 101.50 |
| 26 | BB | 1257 | C | N3-C2-O2 | -5.01 | 118.40 | 121.90 |
| 26 | BB | 1581 | G | C3'-C2'-C1' | 5.01 | 105.50 | 101.50 |
| 26 | BB | 1786 | A | C1'-O4'-C4' | -5.01 | 105.89 | 109.90 |
| 26 | BB | 1842 | G | C3'-C2'-C1' | -5.01 | 97.50 | 101.50 |
| 26 | BB | 1999 | C | C5'-C4'-O4' | 5.01 | 115.11 | 109.10 |
| 26 | BB | 2136 | G | C5-N7-C8 | -5.01 | 101.80 | 104.30 |
| 26 | BB | 2208 | C | N3-C2-O2 | -5.01 | 118.39 | 121.90 |
| 26 | BB | 2364 | C | C5-C6-N1 | 5.01 | 123.50 | 121.00 |
| 26 | BB | 2484 | G | C4-C5-C6 | 5.01 | 121.80 | 118.80 |
| 26 | BB | 2654 | A | N3-C4-C5 | 5.01 | 130.31 | 126.80 |
| 26 | BB | 2838 | G | O4'-C4'-C3' | 5.01 | 110.11 | 106.10 |
| 38 | BN | 126 | ARG | NH1-CZ-NH2 | 5.01 | 124.91 | 119.40 |
| 1 | AA | 580 | C | N1-C1'-C2' | -5.00 | 106.50 | 112.00 |
| 1 | AA | 1401 | G | C4-C5-C6 | -5.00 | 115.80 | 118.80 |
| 26 | BB | 167 | A | C5-N7-C8 | -5.00 | 101.40 | 103.90 |
| 26 | BB | 682 | G | C4-N9-C1' | -5.00 | 119.99 | 126.50 |
| 26 | BB | 1294 | U | P-O3'-C3' | 5.00 | 125.71 | 119.70 |
| 26 | BB | 1648 | U | N1-C1'-C2' | -5.00 | 106.49 | 112.00 |
| 26 | BB | 1816 | C | C4'-C3'-C2' | -5.00 | 97.59 | 102.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2319 | G | O4'-C1'-N9 | 5.00 | 112.20 | 108.20 |
| 26 | BB | 2545 | G | N1-C2-N3 | -5.00 | 120.90 | 123.90 |
| 1 | AA | 199 | A | C5-C6-N6 | -5.00 | 119.70 | 123.70 |
| 1 | AA | 276 | G | O4'-C4'-C3' | -5.00 | 99.00 | 104.00 |
| 1 | AA | 441 | A | C4-C5-N7 | 5.00 | 113.20 | 110.70 |
| 1 | AA | 600 | A | N9-C1'-C2' | -5.00 | 106.50 | 112.00 |
| 1 | AA | 704 | A | N1-C6-N6 | -5.00 | 115.60 | 118.60 |
| 1 | AA | 1319 | A | C5-C6-N6 | -5.00 | 119.70 | 123.70 |
| 1 | AA | 1496 | C | C6-N1-C2 | -5.00 | 118.30 | 120.30 |
| 26 | BB | 112 | U | N3-C4-O4 | 5.00 | 122.90 | 119.40 |
| 26 | BB | 398 | C | C2-N1-C1' | -5.00 | 113.30 | 118.80 |
| 26 | BB | 836 | G | C5-C6-N1 | 5.00 | 114.00 | 111.50 |
| 26 | BB | 1238 | G | N1-C6-O6 | 5.00 | 122.90 | 119.90 |
| 26 | BB | 1259 | G | N9-C4-C5 | 5.00 | 107.40 | 105.40 |
| 26 | BB | 1446 | C | O3'-P-O5' | -5.00 | 94.49 | 104.00 |
| 26 | BB | 1574 | C | C5-C6-N1 | -5.00 | 118.50 | 121.00 |
| 26 | BB | 1826 | G | C5-C6-N1 | 5.00 | 114.00 | 111.50 |
| 26 | BB | 2140 | G | C5-C6-O6 | -5.00 | 125.60 | 128.60 |
| 26 | BB | 2271 | G | C6-N1-C2 | -5.00 | 122.10 | 125.10 |
| 26 | BB | 2393 | U | C2-N3-C4 | -5.00 | 124.00 | 127.00 |
| 26 | BB | 2643 | G | C4-N9-C1' | -5.00 | 120.00 | 126.50 |
| 26 | BB | 2707 | U | O4'-C1'-C2' | -5.00 | 100.80 | 105.80 |
| 26 | BB | 2744 | G | N3-C4-C5 | -5.00 | 126.10 | 128.60 |
| 26 | BB | 2747 | G | O4'-C4'-C3' | -5.00 | 99.00 | 104.00 |
| 28 | BD | 190 | THR | CA-CB-CG2 | 5.00 | 119.40 | 112.40 |
| 45 | BU | 11 | ARG | NE-CZ-NH2 | -5.00 | 117.80 | 120.30 |
| 1 | AA | 149 | A | N3-C4-N9 | 5.00 | 131.40 | 127.40 |
| 1 | AA | 746 | A | C6-C5-N7 | 5.00 | 135.80 | 132.30 |
| 1 | AA | 1371 | G | C5-C6-O6 | -5.00 | 125.60 | 128.60 |
| 3 | AC | 43 | U | N3-C4-C5 | -5.00 | 111.60 | 114.60 |
| 26 | BB | 36 | G | C3'-C2'-C1' | -5.00 | 97.50 | 101.50 |
| 26 | BB | 71 | A | C6-N1-C2 | -5.00 | 115.60 | 118.60 |
| 26 | BB | 142 | A | C5-N7-C8 | -5.00 | 101.40 | 103.90 |
| 26 | BB | 388 | G | N3-C4-N9 | -5.00 | 123.00 | 126.00 |
| 26 | BB | 496 | G | C6-N1-C2 | -5.00 | 122.10 | 125.10 |
| 26 | BB | 733 | G | C5-C6-O6 | 5.00 | 131.60 | 128.60 |
| 26 | BB | 1089 | A | N3-C4-N9 | 5.00 | 131.40 | 127.40 |
| 26 | BB | 1342 | A | C5-N7-C8 | 5.00 | 106.40 | 103.90 |
| 26 | BB | 1382 | G | C6-C5-N7 | -5.00 | 127.40 | 130.40 |
| 26 | BB | 1512 | C | C6-N1-C2 | 5.00 | 122.30 | 120.30 |
| 26 | BB | 1750 | G | N3-C4-N9 | -5.00 | 123.00 | 126.00 |
| 26 | BB | 2545 | G | O4'-C1'-N9 | 5.00 | 112.20 | 108.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2702 | G | C5'-C4'-C3' | -5.00 | 108.00 | 116.00 |
| 34 | BJ | 137 | ARG | NE-CZ-NH2 | -5.00 | 117.80 | 120.30 |
| 36 | BL | 25 | LEU | O-C-N | -5.00 | 114.70 | 123.20 |

There are no chirality outliers.

All (2949) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 100 | G | Sidechain |
| 1 | AA | 1000 | A | Sidechain |
| 1 | AA | 1002 | G | Sidechain |
| 1 | AA | 1003 | G | Sidechain |
| 1 | AA | 1006 | G | Sidechain |
| 1 | AA | 1008 | U | Sidechain |
| 1 | AA | 1009 | U | Sidechain |
| 1 | AA | 1011 | C | Sidechain |
| 1 | AA | 1012 | A | Sidechain |
| 1 | AA | 1014 | A | Sidechain |
| 1 | AA | 1016 | A | Sidechain |
| 1 | AA | 1017 | U | Sidechain |
| 1 | AA | 1021 | A | Sidechain |
| 1 | AA | 1022 | A | Sidechain |
| 1 | AA | 1023 | U | Sidechain |
| 1 | AA | 1024 | G | Sidechain |
| 1 | AA | 1025 | U | Sidechain |
| 1 | AA | 1026 | G | Sidechain |
| 1 | AA | 1028 | C | Sidechain |
| 1 | AA | 1030 | U | Sidechain |
| 1 | AA | 1033 | G | Sidechain |
| 1 | AA | 1034 | G | Sidechain |
| 1 | AA | 1036 | A | Sidechain |
| 1 | AA | 1038 | C | Sidechain |
| 1 | AA | 1039 | G | Sidechain |
| 1 | AA | 1040 | U | Sidechain |
| 1 | AA | 1041 | G | Sidechain |
| 1 | AA | 1042 | A | Sidechain |
| 1 | AA | 1043 | G | Sidechain |
| 1 | AA | 1044 | A | Sidechain |
| 1 | AA | 1045 | C | Sidechain |
| 1 | AA | 1046 | A | Sidechain |
| 1 | AA | 1049 | U | Sidechain |
| 1 | AA | 1050 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 1052 | U | Sidechain |
| 1 | AA | 1053 | G | Sidechain |
| 1 | AA | 1054 | C | Sidechain |
| 1 | AA | 1055 | A | Sidechain |
| 1 | AA | 1056 | U | Sidechain |
| 1 | AA | 1059 | C | Sidechain |
| 1 | AA | 106 | C | Sidechain |
| 1 | AA | 1060 | U | Sidechain |
| 1 | AA | 1061 | G | Sidechain |
| 1 | AA | 1062 | U | Sidechain |
| 1 | AA | 1063 | C | Sidechain |
| 1 | AA | 1064 | G | Sidechain |
| 1 | AA | 1066 | C | Sidechain |
| 1 | AA | 1067 | A | Sidechain |
| 1 | AA | 1068 | G | Sidechain |
| 1 | AA | 107 | G | Sidechain |
| 1 | AA | 1070 | U | Sidechain |
| 1 | AA | 1071 | C | Sidechain |
| 1 | AA | 1073 | U | Sidechain |
| 1 | AA | 1074 | G | Sidechain |
| 1 | AA | 1075 | U | Sidechain |
| 1 | AA | 1076 | U | Sidechain |
| 1 | AA | 1077 | G | Sidechain |
| 1 | AA | 1079 | G | Sidechain |
| 1 | AA | 108 | G | Sidechain |
| 1 | AA | 1080 | A | Sidechain |
| 1 | AA | 1081 | A | Sidechain |
| 1 | AA | 1087 | G | Sidechain |
| 1 | AA | 1089 | G | Sidechain |
| 1 | AA | 1090 | U | Sidechain |
| 1 | AA | 1092 | A | Sidechain |
| 1 | AA | 1093 | A | Sidechain |
| 1 | AA | 1094 | G | Sidechain |
| 1 | AA | 1096 | C | Sidechain |
| 1 | AA | 1099 | G | Sidechain |
| 1 | AA | 11 | G | Sidechain |
| 1 | AA | 1100 | C | Sidechain |
| 1 | AA | 1106 | G | Sidechain |
| 1 | AA | 1108 | G | Sidechain |
| 1 | AA | 1109 | C | Sidechain |
| 1 | AA | 111 | G | Sidechain |
| 1 | AA | 1110 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 1114 | C | Sidechain |
| 1 | AA | 1116 | U | Sidechain |
| 1 | AA | 112 | G | Sidechain |
| 1 | AA | 1122 | U | Sidechain |
| 1 | AA | 1123 | U | Sidechain |
| 1 | AA | 1124 | G | Sidechain |
| 1 | AA | 1125 | U | Sidechain |
| 1 | AA | 1126 | U | Sidechain |
| 1 | AA | 1127 | G | Sidechain |
| 1 | AA | 1128 | C | Sidechain |
| 1 | AA | 1129 | C | Sidechain |
| 1 | AA | 113 | G | Sidechain |
| 1 | AA | 1131 | G | Sidechain |
| 1 | AA | 1132 | C | Sidechain |
| 1 | AA | 1133 | G | Sidechain |
| 1 | AA | 1134 | G | Sidechain |
| 1 | AA | 1135 | U | Sidechain |
| 1 | AA | 1136 | C | Sidechain |
| 1 | AA | 1138 | G | Sidechain |
| 1 | AA | 1139 | G | Sidechain |
| 1 | AA | 1140 | C | Sidechain |
| 1 | AA | 1143 | G | Sidechain |
| 1 | AA | 1145 | A | Sidechain |
| 1 | AA | 1148 | U | Sidechain |
| 1 | AA | 1149 | C | Sidechain |
| 1 | AA | 1150 | A | Sidechain |
| 1 | AA | 1151 | A | Sidechain |
| 1 | AA | 1152 | A | Sidechain |
| 1 | AA | 1153 | G | Sidechain |
| 1 | AA | 1155 | A | Sidechain |
| 1 | AA | 1159 | U | Sidechain |
| 1 | AA | 116 | A | Sidechain |
| 1 | AA | 1161 | C | Sidechain |
| 1 | AA | 1162 | C | Sidechain |
| 1 | AA | 1164 | G | Sidechain |
| 1 | AA | 1165 | U | Sidechain |
| 1 | AA | 1166 | G | Sidechain |
| 1 | AA | 1167 | A | Sidechain |
| 1 | AA | 117 | G | Sidechain |
| 1 | AA | 1170 | A | Sidechain |
| 1 | AA | 1171 | A | Sidechain |
| 1 | AA | 1173 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 1174 | G | Sidechain |
| 1 | AA | 1175 | G | Sidechain |
| 1 | AA | 1177 | G | Sidechain |
| 1 | AA | 1178 | G | Sidechain |
| 1 | AA | 1179 | A | Sidechain |
| 1 | AA | 1181 | G | Sidechain |
| 1 | AA | 1182 | G | Sidechain |
| 1 | AA | 1183 | U | Sidechain |
| 1 | AA | 1185 | G | Sidechain |
| 1 | AA | 1187 | G | Sidechain |
| 1 | AA | 1190 | G | Sidechain |
| 1 | AA | 1197 | A | Sidechain |
| 1 | AA | 1199 | U | Sidechain |
| 1 | AA | 12 | U | Sidechain |
| 1 | AA | 120 | A | Sidechain |
| 1 | AA | 1201 | A | Sidechain |
| 1 | AA | 1202 | U | Sidechain |
| 1 | AA | 1203 | C | Sidechain |
| 1 | AA | 1204 | A | Sidechain |
| 1 | AA | 1205 | U | Sidechain |
| 1 | AA | 1206 | G | Sidechain |
| 1 | AA | 1209 | C | Sidechain |
| 1 | AA | 121 | U | Sidechain |
| 1 | AA | 1211 | U | Sidechain |
| 1 | AA | 1213 | A | Sidechain |
| 1 | AA | 1214 | C | Sidechain |
| 1 | AA | 1215 | G | Sidechain |
| 1 | AA | 1216 | A | Sidechain |
| 1 | AA | 1218 | C | Sidechain |
| 1 | AA | 1219 | A | Sidechain |
| 1 | AA | 122 | G | Sidechain |
| 1 | AA | 1220 | G | Sidechain |
| 1 | AA | 1222 | G | Sidechain |
| 1 | AA | 1223 | C | Sidechain |
| 1 | AA | 1224 | U | Sidechain |
| 1 | AA | 123 | U | Sidechain |
| 1 | AA | 1230 | C | Sidechain |
| 1 | AA | 1231 | G | Sidechain |
| 1 | AA | 1232 | U | Sidechain |
| 1 | AA | 1233 | G | Sidechain |
| 1 | AA | 1234 | C | Sidechain |
| 1 | AA | 1236 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 1239 | A | Sidechain |
| 1 | AA | 124 | C | Sidechain |
| 1 | AA | 1240 | U | Sidechain |
| 1 | AA | 1241 | G | Sidechain |
| 1 | AA | 1243 | C | Sidechain |
| 1 | AA | 1250 | A | Sidechain |
| 1 | AA | 1253 | G | Sidechain |
| 1 | AA | 1254 | A | Sidechain |
| 1 | AA | 1255 | G | Sidechain |
| 1 | AA | 1258 | G | Sidechain |
| 1 | AA | 126 | G | Sidechain |
| 1 | AA | 1260 | G | Sidechain |
| 1 | AA | 1264 | U | Sidechain |
| 1 | AA | 1266 | G | Sidechain |
| 1 | AA | 1269 | A | Sidechain |
| 1 | AA | 127 | G | Sidechain |
| 1 | AA | 1271 | A | Sidechain |
| 1 | AA | 1272 | G | Sidechain |
| 1 | AA | 1274 | A | Sidechain |
| 1 | AA | 1277 | C | Sidechain |
| 1 | AA | 1278 | G | Sidechain |
| 1 | AA | 1279 | G | Sidechain |
| 1 | AA | 128 | G | Sidechain |
| 1 | AA | 1282 | C | Sidechain |
| 1 | AA | 1284 | C | Sidechain |
| 1 | AA | 1289 | A | Sidechain |
| 1 | AA | 129 | A | Sidechain |
| 1 | AA | 1292 | G | Sidechain |
| 1 | AA | 1293 | C | Sidechain |
| 1 | AA | 1295 | U | Sidechain |
| 1 | AA | 1298 | U | Sidechain |
| 1 | AA | 130 | A | Sidechain |
| 1 | AA | 1300 | G | Sidechain |
| 1 | AA | 1301 | U | Sidechain |
| 1 | AA | 1302 | C | Sidechain |
| 1 | AA | 1303 | C | Sidechain |
| 1 | AA | 1304 | G | Sidechain |
| 1 | AA | 1305 | G | Sidechain |
| 1 | AA | 1308 | U | Sidechain |
| 1 | AA | 1309 | G | Sidechain |
| 1 | AA | 131 | A | Sidechain |
| 1 | AA | 1310 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 1312 | G | Sidechain |
| 1 | AA | 1316 | G | Sidechain |
| 1 | AA | 1317 | C | Sidechain |
| 1 | AA | 1319 | A | Sidechain |
| 1 | AA | 1321 | U | Sidechain |
| 1 | AA | 1322 | C | Sidechain |
| 1 | AA | 1323 | G | Sidechain |
| 1 | AA | 1326 | U | Sidechain |
| 1 | AA | 133 | U | Sidechain |
| 1 | AA | 1330 | U | Sidechain |
| 1 | AA | 1332 | A | Sidechain |
| 1 | AA | 1334 | G | Sidechain |
| 1 | AA | 1335 | U | Sidechain |
| 1 | AA | 1336 | C | Sidechain |
| 1 | AA | 1337 | G | Sidechain |
| 1 | AA | 1338 | G | Sidechain |
| 1 | AA | 1339 | A | Sidechain |
| 1 | AA | 134 | G | Sidechain |
| 1 | AA | 1341 | U | Sidechain |
| 1 | AA | 1342 | C | Sidechain |
| 1 | AA | 1343 | G | Sidechain |
| 1 | AA | 1344 | C | Sidechain |
| 1 | AA | 1345 | U | Sidechain |
| 1 | AA | 1346 | A | Sidechain |
| 1 | AA | 1347 | G | Sidechain |
| 1 | AA | 1348 | U | Sidechain |
| 1 | AA | 1350 | A | Sidechain |
| 1 | AA | 1351 | U | Sidechain |
| 1 | AA | 1352 | C | Sidechain |
| 1 | AA | 1354 | U | Sidechain |
| 1 | AA | 1355 | G | Sidechain |
| 1 | AA | 1356 | G | Sidechain |
| 1 | AA | 1357 | A | Sidechain |
| 1 | AA | 1358 | U | Sidechain |
| 1 | AA | 1359 | C | Sidechain |
| 1 | AA | 136 | C | Sidechain |
| 1 | AA | 1360 | A | Sidechain |
| 1 | AA | 1361 | G | Sidechain |
| 1 | AA | 1362 | A | Sidechain |
| 1 | AA | 1363 | A | Sidechain |
| 1 | AA | 1364 | U | Sidechain |
| 1 | AA | 1365 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 1366 | C | Sidechain |
| 1 | AA | 1367 | C | Sidechain |
| 1 | AA | 1368 | A | Sidechain |
| 1 | AA | 1369 | C | Sidechain |
| 1 | AA | 137 | U | Sidechain |
| 1 | AA | 1370 | G | Sidechain |
| 1 | AA | 1371 | G | Sidechain |
| 1 | AA | 1373 | G | Sidechain |
| 1 | AA | 1374 | A | Sidechain |
| 1 | AA | 1375 | A | Sidechain |
| 1 | AA | 1376 | U | Sidechain |
| 1 | AA | 1379 | G | Sidechain |
| 1 | AA | 138 | G | Sidechain |
| 1 | AA | 1381 | U | Sidechain |
| 1 | AA | 1382 | C | Sidechain |
| 1 | AA | 1383 | C | Sidechain |
| 1 | AA | 1386 | G | Sidechain |
| 1 | AA | 1388 | C | Sidechain |
| 1 | AA | 139 | A | Sidechain |
| 1 | AA | 1390 | U | Sidechain |
| 1 | AA | 1392 | G | Sidechain |
| 1 | AA | 1393 | U | Sidechain |
| 1 | AA | 1395 | C | Sidechain |
| 1 | AA | 1396 | A | Sidechain |
| 1 | AA | 140 | U | Sidechain |
| 1 | AA | 1403 | C | Sidechain |
| 1 | AA | 1404 | C | Sidechain |
| 1 | AA | 1405 | G | Sidechain |
| 1 | AA | 1408 | A | Sidechain |
| 1 | AA | 1409 | C | Sidechain |
| 1 | AA | 141 | G | Sidechain |
| 1 | AA | 1412 | C | Sidechain |
| 1 | AA | 1413 | A | Sidechain |
| 1 | AA | 1415 | G | Sidechain |
| 1 | AA | 1416 | G | Sidechain |
| 1 | AA | 1417 | G | Sidechain |
| 1 | AA | 142 | G | Sidechain |
| 1 | AA | 1421 | G | Sidechain |
| 1 | AA | 1422 | G | Sidechain |
| 1 | AA | 1423 | G | Sidechain |
| 1 | AA | 1426 | G | Sidechain |
| 1 | AA | 1427 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 143 | A | Sidechain |
| 1 | AA | 1430 | A | Sidechain |
| 1 | AA | 1431 | A | Sidechain |
| 1 | AA | 1432 | G | Sidechain |
| 1 | AA | 1434 | A | Sidechain |
| 1 | AA | 1435 | G | Sidechain |
| 1 | AA | 1436 | U | Sidechain |
| 1 | AA | 1437 | A | Sidechain |
| 1 | AA | 1438 | G | Sidechain |
| 1 | AA | 144 | G | Sidechain |
| 1 | AA | 1440 | U | Sidechain |
| 1 | AA | 1445 | U | Sidechain |
| 1 | AA | 1446 | A | Sidechain |
| 1 | AA | 145 | G | Sidechain |
| 1 | AA | 1450 | U | Sidechain |
| 1 | AA | 1452 | C | Sidechain |
| 1 | AA | 1453 | G | Sidechain |
| 1 | AA | 1456 | A | Sidechain |
| 1 | AA | 1461 | G | Sidechain |
| 1 | AA | 1462 | C | Sidechain |
| 1 | AA | 1463 | U | Sidechain |
| 1 | AA | 1464 | U | Sidechain |
| 1 | AA | 147 | G | Sidechain |
| 1 | AA | 1470 | U | Sidechain |
| 1 | AA | 1473 | G | Sidechain |
| 1 | AA | 1475 | G | Sidechain |
| 1 | AA | 1476 | A | Sidechain |
| 1 | AA | 1478 | U | Sidechain |
| 1 | AA | 148 | G | Sidechain |
| 1 | AA | 1482 | G | Sidechain |
| 1 | AA | 1485 | U | Sidechain |
| 1 | AA | 1487 | G | Sidechain |
| 1 | AA | 1488 | G | Sidechain |
| 1 | AA | 1489 | G | Sidechain |
| 1 | AA | 1491 | G | Sidechain |
| 1 | AA | 1495 | U | Sidechain |
| 1 | AA | 1497 | G | Sidechain |
| 1 | AA | 1499 | A | Sidechain |
| 1 | AA | 1502 | A | Sidechain |
| 1 | AA | 1504 | G | Sidechain |
| 1 | AA | 1507 | A | Sidechain |
| 1 | AA | 1508 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 151 | A | Sidechain |
| 1 | AA | 1511 | G | Sidechain |
| 1 | AA | 1512 | U | Sidechain |
| 1 | AA | 1513 | A | Sidechain |
| 1 | AA | 1514 | G | Sidechain |
| 1 | AA | 1515 | G | Sidechain |
| 1 | AA | 1517 | G | Sidechain |
| 1 | AA | 152 | A | Sidechain |
| 1 | AA | 1523 | G | Sidechain |
| 1 | AA | 1524 | C | Sidechain |
| 1 | AA | 1525 | G | Sidechain |
| 1 | AA | 1527 | U | Sidechain |
| 1 | AA | 1528 | U | Sidechain |
| 1 | AA | 153 | C | Sidechain |
| 1 | AA | 1530 | G | Sidechain |
| 1 | AA | 1531 | A | Sidechain |
| 1 | AA | 1534 | A | Sidechain |
| 1 | AA | 1535 | C | Sidechain |
| 1 | AA | 1537 | U | Sidechain |
| 1 | AA | 1539 | C | Sidechain |
| 1 | AA | 1541 | U | Sidechain |
| 1 | AA | 158 | G | Sidechain |
| 1 | AA | 159 | G | Sidechain |
| 1 | AA | 16 | A | Sidechain |
| 1 | AA | 161 | A | Sidechain |
| 1 | AA | 164 | G | Sidechain |
| 1 | AA | 165 | G | Sidechain |
| 1 | AA | 167 | A | Sidechain |
| 1 | AA | 169 | C | Sidechain |
| 1 | AA | 170 | U | Sidechain |
| 1 | AA | 172 | A | Sidechain |
| 1 | AA | 178 | C | Sidechain |
| 1 | AA | 18 | C | Sidechain |
| 1 | AA | 180 | U | Sidechain |
| 1 | AA | 181 | A | Sidechain |
| 1 | AA | 182 | A | Sidechain |
| 1 | AA | 183 | C | Sidechain |
| 1 | AA | 184 | G | Sidechain |
| 1 | AA | 185 | U | Sidechain |
| 1 | AA | 187 | G | Sidechain |
| 1 | AA | 190 | A | Sidechain |
| 1 | AA | 191 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 192 | A | Sidechain |
| 1 | AA | 193 | C | Sidechain |
| 1 | AA | 194 | C | Sidechain |
| 1 | AA | 196 | A | Sidechain |
| 1 | AA | 197 | A | Sidechain |
| 1 | AA | 198 | G | Sidechain |
| 1 | AA | 199 | A | Sidechain |
| 1 | AA | 20 | U | Sidechain |
| 1 | AA | 200 | G | Sidechain |
| 1 | AA | 202 | G | Sidechain |
| 1 | AA | 203 | G | Sidechain |
| 1 | AA | 204 | G | Sidechain |
| 1 | AA | 206 | C | Sidechain |
| 1 | AA | 208 | U | Sidechain |
| 1 | AA | 210 | C | Sidechain |
| 1 | AA | 211 | G | Sidechain |
| 1 | AA | 213 | G | Sidechain |
| 1 | AA | 214 | C | Sidechain |
| 1 | AA | 216 | U | Sidechain |
| 1 | AA | 218 | U | Sidechain |
| 1 | AA | 219 | U | Sidechain |
| 1 | AA | 220 | G | Sidechain |
| 1 | AA | 223 | A | Sidechain |
| 1 | AA | 225 | C | Sidechain |
| 1 | AA | 226 | G | Sidechain |
| 1 | AA | 227 | G | Sidechain |
| 1 | AA | 230 | G | Sidechain |
| 1 | AA | 233 | C | Sidechain |
| 1 | AA | 234 | C | Sidechain |
| 1 | AA | 236 | A | Sidechain |
| 1 | AA | 238 | A | Sidechain |
| 1 | AA | 239 | U | Sidechain |
| 1 | AA | 24 | U | Sidechain |
| 1 | AA | 240 | G | Sidechain |
| 1 | AA | 241 | G | Sidechain |
| 1 | AA | 244 | U | Sidechain |
| 1 | AA | 247 | G | Sidechain |
| 1 | AA | 248 | C | Sidechain |
| 1 | AA | 249 | U | Sidechain |
| 1 | AA | 250 | A | Sidechain |
| 1 | AA | 253 | A | Sidechain |
| 1 | AA | 254 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 255 | G | Sidechain |
| 1 | AA | 256 | U | Sidechain |
| 1 | AA | 257 | G | Sidechain |
| 1 | AA | 258 | G | Sidechain |
| 1 | AA | 26 | A | Sidechain |
| 1 | AA | 260 | G | Sidechain |
| 1 | AA | 261 | U | Sidechain |
| 1 | AA | 262 | A | Sidechain |
| 1 | AA | 264 | C | Sidechain |
| 1 | AA | 265 | G | Sidechain |
| 1 | AA | 267 | C | Sidechain |
| 1 | AA | 27 | G | Sidechain |
| 1 | AA | 271 | C | Sidechain |
| 1 | AA | 274 | A | Sidechain |
| 1 | AA | 275 | G | Sidechain |
| 1 | AA | 276 | G | Sidechain |
| 1 | AA | 278 | G | Sidechain |
| 1 | AA | 282 | A | Sidechain |
| 1 | AA | 283 | U | Sidechain |
| 1 | AA | 285 | C | Sidechain |
| 1 | AA | 286 | C | Sidechain |
| 1 | AA | 288 | A | Sidechain |
| 1 | AA | 289 | G | Sidechain |
| 1 | AA | 291 | U | Sidechain |
| 1 | AA | 292 | G | Sidechain |
| 1 | AA | 297 | G | Sidechain |
| 1 | AA | 298 | A | Sidechain |
| 1 | AA | 299 | G | Sidechain |
| 1 | AA | 3 | A | Sidechain |
| 1 | AA | 301 | G | Sidechain |
| 1 | AA | 302 | G | Sidechain |
| 1 | AA | 303 | A | Sidechain |
| 1 | AA | 307 | C | Sidechain |
| 1 | AA | 308 | C | Sidechain |
| 1 | AA | 311 | C | Sidechain |
| 1 | AA | 312 | C | Sidechain |
| 1 | AA | 313 | A | Sidechain |
| 1 | AA | 314 | C | Sidechain |
| 1 | AA | 316 | C | Sidechain |
| 1 | AA | 318 | G | Sidechain |
| 1 | AA | 319 | G | Sidechain |
| 1 | AA | 32 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 323 | U | Sidechain |
| 1 | AA | 324 | G | Sidechain |
| 1 | AA | 325 | A | Sidechain |
| 1 | AA | 326 | G | Sidechain |
| 1 | AA | 328 | C | Sidechain |
| 1 | AA | 329 | A | Sidechain |
| 1 | AA | 330 | C | Sidechain |
| 1 | AA | 331 | G | Sidechain |
| 1 | AA | 332 | G | Sidechain |
| 1 | AA | 333 | U | Sidechain |
| 1 | AA | 335 | C | Sidechain |
| 1 | AA | 336 | A | Sidechain |
| 1 | AA | 337 | G | Sidechain |
| 1 | AA | 338 | A | Sidechain |
| 1 | AA | 340 | U | Sidechain |
| 1 | AA | 341 | C | Sidechain |
| 1 | AA | 342 | C | Sidechain |
| 1 | AA | 348 | G | Sidechain |
| 1 | AA | 35 | G | Sidechain |
| 1 | AA | 351 | G | Sidechain |
| 1 | AA | 352 | C | Sidechain |
| 1 | AA | 354 | G | Sidechain |
| 1 | AA | 355 | C | Sidechain |
| 1 | AA | 356 | A | Sidechain |
| 1 | AA | 359 | G | Sidechain |
| 1 | AA | 36 | C | Sidechain |
| 1 | AA | 361 | G | Sidechain |
| 1 | AA | 362 | G | Sidechain |
| 1 | AA | 365 | U | Sidechain |
| 1 | AA | 366 | A | Sidechain |
| 1 | AA | 367 | U | Sidechain |
| 1 | AA | 369 | G | Sidechain |
| 1 | AA | 37 | U | Sidechain |
| 1 | AA | 370 | C | Sidechain |
| 1 | AA | 372 | C | Sidechain |
| 1 | AA | 373 | A | Sidechain |
| 1 | AA | 374 | A | Sidechain |
| 1 | AA | 378 | G | Sidechain |
| 1 | AA | 380 | G | Sidechain |
| 1 | AA | 382 | A | Sidechain |
| 1 | AA | 383 | A | Sidechain |
| 1 | AA | 384 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 386 | C | Sidechain |
| 1 | AA | 388 | G | Sidechain |
| 1 | AA | 389 | A | Sidechain |
| 1 | AA | 390 | U | Sidechain |
| 1 | AA | 391 | G | Sidechain |
| 1 | AA | 392 | C | Sidechain |
| 1 | AA | 393 | A | Sidechain |
| 1 | AA | 394 | G | Sidechain |
| 1 | AA | 396 | C | Sidechain |
| 1 | AA | 397 | A | Sidechain |
| 1 | AA | 398 | U | Sidechain |
| 1 | AA | 399 | G | Sidechain |
| 1 | AA | 4 | U | Sidechain |
| 1 | AA | 402 | G | Sidechain |
| 1 | AA | 403 | C | Sidechain |
| 1 | AA | 404 | G | Sidechain |
| 1 | AA | 406 | G | Sidechain |
| 1 | AA | 409 | U | Sidechain |
| 1 | AA | 41 | G | Sidechain |
| 1 | AA | 410 | G | Sidechain |
| 1 | AA | 412 | A | Sidechain |
| 1 | AA | 413 | G | Sidechain |
| 1 | AA | 415 | A | Sidechain |
| 1 | AA | 416 | G | Sidechain |
| 1 | AA | 417 | G | Sidechain |
| 1 | AA | 418 | C | Sidechain |
| 1 | AA | 419 | C | Sidechain |
| 1 | AA | 421 | U | Sidechain |
| 1 | AA | 423 | G | Sidechain |
| 1 | AA | 425 | G | Sidechain |
| 1 | AA | 428 | G | Sidechain |
| 1 | AA | 430 | A | Sidechain |
| 1 | AA | 432 | A | Sidechain |
| 1 | AA | 435 | A | Sidechain |
| 1 | AA | 436 | C | Sidechain |
| 1 | AA | 44 | A | Sidechain |
| 1 | AA | 441 | A | Sidechain |
| 1 | AA | 442 | G | Sidechain |
| 1 | AA | 443 | C | Sidechain |
| 1 | AA | 445 | G | Sidechain |
| 1 | AA | 446 | G | Sidechain |
| 1 | AA | 447 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 448 | A | Sidechain |
| 1 | AA | 450 | G | Sidechain |
| 1 | AA | 455 | G | Sidechain |
| 1 | AA | 458 | U | Sidechain |
| 1 | AA | 459 | A | Sidechain |
| 1 | AA | 462 | G | Sidechain |
| 1 | AA | 465 | A | Sidechain |
| 1 | AA | 466 | A | Sidechain |
| 1 | AA | 47 | C | Sidechain |
| 1 | AA | 474 | G | Sidechain |
| 1 | AA | 475 | C | Sidechain |
| 1 | AA | 476 | U | Sidechain |
| 1 | AA | 477 | C | Sidechain |
| 1 | AA | 478 | A | Sidechain |
| 1 | AA | 479 | U | Sidechain |
| 1 | AA | 48 | C | Sidechain |
| 1 | AA | 481 | G | Sidechain |
| 1 | AA | 483 | C | Sidechain |
| 1 | AA | 484 | G | Sidechain |
| 1 | AA | 486 | U | Sidechain |
| 1 | AA | 49 | U | Sidechain |
| 1 | AA | 490 | C | Sidechain |
| 1 | AA | 491 | G | Sidechain |
| 1 | AA | 492 | C | Sidechain |
| 1 | AA | 493 | A | Sidechain |
| 1 | AA | 495 | A | Sidechain |
| 1 | AA | 497 | G | Sidechain |
| 1 | AA | 499 | A | Sidechain |
| 1 | AA | 5 | U | Sidechain |
| 1 | AA | 50 | A | Sidechain |
| 1 | AA | 500 | G | Sidechain |
| 1 | AA | 502 | A | Sidechain |
| 1 | AA | 505 | G | Sidechain |
| 1 | AA | 506 | G | Sidechain |
| 1 | AA | 510 | A | Sidechain |
| 1 | AA | 511 | C | Sidechain |
| 1 | AA | 517 | G | Sidechain |
| 1 | AA | 519 | C | Sidechain |
| 1 | AA | 520 | A | Sidechain |
| 1 | AA | 523 | A | Sidechain |
| 1 | AA | 525 | C | Sidechain |
| 1 | AA | 529 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 530 | G | Sidechain |
| 1 | AA | 533 | A | Sidechain |
| 1 | AA | 535 | A | Sidechain |
| 1 | AA | 537 | G | Sidechain |
| 1 | AA | 539 | A | Sidechain |
| 1 | AA | 54 | C | Sidechain |
| 1 | AA | 542 | G | Sidechain |
| 1 | AA | 544 | G | Sidechain |
| 1 | AA | 546 | A | Sidechain |
| 1 | AA | 547 | A | Sidechain |
| 1 | AA | 548 | G | Sidechain |
| 1 | AA | 549 | C | Sidechain |
| 1 | AA | 55 | A | Sidechain |
| 1 | AA | 550 | G | Sidechain |
| 1 | AA | 552 | U | Sidechain |
| 1 | AA | 553 | A | Sidechain |
| 1 | AA | 557 | G | Sidechain |
| 1 | AA | 558 | G | Sidechain |
| 1 | AA | 56 | U | Sidechain |
| 1 | AA | 560 | A | Sidechain |
| 1 | AA | 561 | U | Sidechain |
| 1 | AA | 562 | U | Sidechain |
| 1 | AA | 563 | A | Sidechain |
| 1 | AA | 565 | U | Sidechain |
| 1 | AA | 567 | G | Sidechain |
| 1 | AA | 569 | C | Sidechain |
| 1 | AA | 57 | G | Sidechain |
| 1 | AA | 570 | G | Sidechain |
| 1 | AA | 572 | A | Sidechain |
| 1 | AA | 573 | A | Sidechain |
| 1 | AA | 574 | A | Sidechain |
| 1 | AA | 576 | C | Sidechain |
| 1 | AA | 578 | C | Sidechain |
| 1 | AA | 579 | A | Sidechain |
| 1 | AA | 58 | C | Sidechain |
| 1 | AA | 581 | G | Sidechain |
| 1 | AA | 584 | G | Sidechain |
| 1 | AA | 587 | G | Sidechain |
| 1 | AA | 591 | U | Sidechain |
| 1 | AA | 594 | U | Sidechain |
| 1 | AA | 595 | A | Sidechain |
| 1 | AA | 597 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 599 | C | Sidechain |
| 1 | AA | 6 | G | Sidechain |
| 1 | AA | 600 | A | Sidechain |
| 1 | AA | 601 | G | Sidechain |
| 1 | AA | 603 | U | Sidechain |
| 1 | AA | 604 | G | Sidechain |
| 1 | AA | 605 | U | Sidechain |
| 1 | AA | 608 | A | Sidechain |
| 1 | AA | 609 | A | Sidechain |
| 1 | AA | 61 | G | Sidechain |
| 1 | AA | 611 | C | Sidechain |
| 1 | AA | 615 | G | Sidechain |
| 1 | AA | 616 | G | Sidechain |
| 1 | AA | 617 | G | Sidechain |
| 1 | AA | 618 | C | Sidechain |
| 1 | AA | 62 | U | Sidechain |
| 1 | AA | 620 | C | Sidechain |
| 1 | AA | 621 | A | Sidechain |
| 1 | AA | 622 | A | Sidechain |
| 1 | AA | 623 | C | Sidechain |
| 1 | AA | 625 | U | Sidechain |
| 1 | AA | 626 | G | Sidechain |
| 1 | AA | 628 | G | Sidechain |
| 1 | AA | 63 | C | Sidechain |
| 1 | AA | 630 | A | Sidechain |
| 1 | AA | 632 | U | Sidechain |
| 1 | AA | 633 | G | Sidechain |
| 1 | AA | 634 | C | Sidechain |
| 1 | AA | 637 | C | Sidechain |
| 1 | AA | 638 | U | Sidechain |
| 1 | AA | 64 | G | Sidechain |
| 1 | AA | 640 | A | Sidechain |
| 1 | AA | 641 | U | Sidechain |
| 1 | AA | 646 | G | Sidechain |
| 1 | AA | 647 | C | Sidechain |
| 1 | AA | 65 | A | Sidechain |
| 1 | AA | 651 | C | Sidechain |
| 1 | AA | 652 | U | Sidechain |
| 1 | AA | 653 | U | Sidechain |
| 1 | AA | 658 | C | Sidechain |
| 1 | AA | 661 | G | Sidechain |
| 1 | AA | 663 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 664 | G | Sidechain |
| 1 | AA | 665 | A | Sidechain |
| 1 | AA | 666 | G | Sidechain |
| 1 | AA | 668 | G | Sidechain |
| 1 | AA | 669 | G | Sidechain |
| 1 | AA | 670 | G | Sidechain |
| 1 | AA | 671 | G | Sidechain |
| 1 | AA | 673 | A | Sidechain |
| 1 | AA | 674 | G | Sidechain |
| 1 | AA | 675 | A | Sidechain |
| 1 | AA | 677 | U | Sidechain |
| 1 | AA | 678 | U | Sidechain |
| 1 | AA | 679 | C | Sidechain |
| 1 | AA | 680 | C | Sidechain |
| 1 | AA | 681 | A | Sidechain |
| 1 | AA | 682 | G | Sidechain |
| 1 | AA | 683 | G | Sidechain |
| 1 | AA | 684 | U | Sidechain |
| 1 | AA | 685 | G | Sidechain |
| 1 | AA | 686 | U | Sidechain |
| 1 | AA | 687 | A | Sidechain |
| 1 | AA | 688 | G | Sidechain |
| 1 | AA | 689 | C | Sidechain |
| 1 | AA | 69 | G | Sidechain |
| 1 | AA | 692 | U | Sidechain |
| 1 | AA | 693 | G | Sidechain |
| 1 | AA | 694 | A | Sidechain |
| 1 | AA | 695 | A | Sidechain |
| 1 | AA | 697 | U | Sidechain |
| 1 | AA | 698 | G | Sidechain |
| 1 | AA | 699 | C | Sidechain |
| 1 | AA | 70 | U | Sidechain |
| 1 | AA | 703 | G | Sidechain |
| 1 | AA | 704 | A | Sidechain |
| 1 | AA | 705 | G | Sidechain |
| 1 | AA | 710 | G | Sidechain |
| 1 | AA | 711 | G | Sidechain |
| 1 | AA | 713 | G | Sidechain |
| 1 | AA | 714 | G | Sidechain |
| 1 | AA | 717 | U | Sidechain |
| 1 | AA | 718 | A | Sidechain |
| 1 | AA | 720 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 722 | G | Sidechain |
| 1 | AA | 726 | C | Sidechain |
| 1 | AA | 727 | G | Sidechain |
| 1 | AA | 730 | G | Sidechain |
| 1 | AA | 731 | G | Sidechain |
| 1 | AA | 732 | C | Sidechain |
| 1 | AA | 733 | G | Sidechain |
| 1 | AA | 734 | G | Sidechain |
| 1 | AA | 736 | C | Sidechain |
| 1 | AA | 737 | C | Sidechain |
| 1 | AA | 740 | U | Sidechain |
| 1 | AA | 741 | G | Sidechain |
| 1 | AA | 742 | G | Sidechain |
| 1 | AA | 745 | G | Sidechain |
| 1 | AA | 746 | A | Sidechain |
| 1 | AA | 747 | A | Sidechain |
| 1 | AA | 748 | G | Sidechain |
| 1 | AA | 752 | G | Sidechain |
| 1 | AA | 753 | A | Sidechain |
| 1 | AA | 757 | U | Sidechain |
| 1 | AA | 758 | C | Sidechain |
| 1 | AA | 76 | G | Sidechain |
| 1 | AA | 760 | G | Sidechain |
| 1 | AA | 761 | G | Sidechain |
| 1 | AA | 762 | U | Sidechain |
| 1 | AA | 763 | G | Sidechain |
| 1 | AA | 764 | C | Sidechain |
| 1 | AA | 769 | G | Sidechain |
| 1 | AA | 771 | G | Sidechain |
| 1 | AA | 772 | U | Sidechain |
| 1 | AA | 773 | G | Sidechain |
| 1 | AA | 774 | G | Sidechain |
| 1 | AA | 775 | G | Sidechain |
| 1 | AA | 776 | G | Sidechain |
| 1 | AA | 777 | A | Sidechain |
| 1 | AA | 78 | A | Sidechain |
| 1 | AA | 780 | A | Sidechain |
| 1 | AA | 782 | A | Sidechain |
| 1 | AA | 783 | C | Sidechain |
| 1 | AA | 784 | A | Sidechain |
| 1 | AA | 786 | G | Sidechain |
| 1 | AA | 787 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 788 | U | Sidechain |
| 1 | AA | 789 | U | Sidechain |
| 1 | AA | 79 | G | Sidechain |
| 1 | AA | 791 | G | Sidechain |
| 1 | AA | 794 | A | Sidechain |
| 1 | AA | 796 | C | Sidechain |
| 1 | AA | 797 | C | Sidechain |
| 1 | AA | 799 | G | Sidechain |
| 1 | AA | 800 | G | Sidechain |
| 1 | AA | 802 | A | Sidechain |
| 1 | AA | 805 | C | Sidechain |
| 1 | AA | 808 | C | Sidechain |
| 1 | AA | 809 | G | Sidechain |
| 1 | AA | 810 | C | Sidechain |
| 1 | AA | 813 | U | Sidechain |
| 1 | AA | 815 | A | Sidechain |
| 1 | AA | 816 | A | Sidechain |
| 1 | AA | 817 | C | Sidechain |
| 1 | AA | 818 | G | Sidechain |
| 1 | AA | 819 | A | Sidechain |
| 1 | AA | 82 | G | Sidechain |
| 1 | AA | 820 | U | Sidechain |
| 1 | AA | 821 | G | Sidechain |
| 1 | AA | 822 | U | Sidechain |
| 1 | AA | 823 | C | Sidechain |
| 1 | AA | 824 | G | Sidechain |
| 1 | AA | 827 | U | Sidechain |
| 1 | AA | 829 | G | Sidechain |
| 1 | AA | 83 | C | Sidechain |
| 1 | AA | 832 | G | Sidechain |
| 1 | AA | 833 | G | Sidechain |
| 1 | AA | 834 | U | Sidechain |
| 1 | AA | 835 | U | Sidechain |
| 1 | AA | 838 | G | Sidechain |
| 1 | AA | 84 | U | Sidechain |
| 1 | AA | 841 | C | Sidechain |
| 1 | AA | 842 | U | Sidechain |
| 1 | AA | 843 | U | Sidechain |
| 1 | AA | 845 | A | Sidechain |
| 1 | AA | 846 | G | Sidechain |
| 1 | AA | 851 | G | Sidechain |
| 1 | AA | 852 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 854 | U | Sidechain |
| 1 | AA | 856 | C | Sidechain |
| 1 | AA | 858 | G | Sidechain |
| 1 | AA | 859 | G | Sidechain |
| 1 | AA | 86 | G | Sidechain |
| 1 | AA | 860 | A | Sidechain |
| 1 | AA | 862 | C | Sidechain |
| 1 | AA | 864 | A | Sidechain |
| 1 | AA | 865 | A | Sidechain |
| 1 | AA | 869 | G | Sidechain |
| 1 | AA | 87 | C | Sidechain |
| 1 | AA | 870 | U | Sidechain |
| 1 | AA | 872 | A | Sidechain |
| 1 | AA | 873 | A | Sidechain |
| 1 | AA | 874 | G | Sidechain |
| 1 | AA | 877 | G | Sidechain |
| 1 | AA | 878 | A | Sidechain |
| 1 | AA | 879 | C | Sidechain |
| 1 | AA | 882 | C | Sidechain |
| 1 | AA | 883 | C | Sidechain |
| 1 | AA | 884 | U | Sidechain |
| 1 | AA | 885 | G | Sidechain |
| 1 | AA | 886 | G | Sidechain |
| 1 | AA | 887 | G | Sidechain |
| 1 | AA | 888 | G | Sidechain |
| 1 | AA | 889 | A | Sidechain |
| 1 | AA | 89 | U | Sidechain |
| 1 | AA | 893 | C | Sidechain |
| 1 | AA | 894 | G | Sidechain |
| 1 | AA | 897 | C | Sidechain |
| 1 | AA | 898 | G | Sidechain |
| 1 | AA | 90 | C | Sidechain |
| 1 | AA | 902 | G | Sidechain |
| 1 | AA | 904 | U | Sidechain |
| 1 | AA | 906 | A | Sidechain |
| 1 | AA | 908 | A | Sidechain |
| 1 | AA | 912 | C | Sidechain |
| 1 | AA | 913 | A | Sidechain |
| 1 | AA | 914 | A | Sidechain |
| 1 | AA | 915 | A | Sidechain |
| 1 | AA | 916 | U | Sidechain |
| 1 | AA | 917 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 918 | A | Sidechain |
| 1 | AA | 92 | U | Sidechain |
| 1 | AA | 922 | G | Sidechain |
| 1 | AA | 926 | G | Sidechain |
| 1 | AA | 927 | G | Sidechain |
| 1 | AA | 928 | G | Sidechain |
| 1 | AA | 929 | G | Sidechain |
| 1 | AA | 930 | C | Sidechain |
| 1 | AA | 934 | C | Sidechain |
| 1 | AA | 935 | A | Sidechain |
| 1 | AA | 937 | A | Sidechain |
| 1 | AA | 939 | G | Sidechain |
| 1 | AA | 94 | G | Sidechain |
| 1 | AA | 942 | G | Sidechain |
| 1 | AA | 943 | U | Sidechain |
| 1 | AA | 944 | G | Sidechain |
| 1 | AA | 945 | G | Sidechain |
| 1 | AA | 946 | A | Sidechain |
| 1 | AA | 950 | U | Sidechain |
| 1 | AA | 954 | G | Sidechain |
| 1 | AA | 955 | U | Sidechain |
| 1 | AA | 958 | A | Sidechain |
| 1 | AA | 959 | A | Sidechain |
| 1 | AA | 96 | U | Sidechain |
| 1 | AA | 960 | U | Sidechain |
| 1 | AA | 962 | C | Sidechain |
| 1 | AA | 965 | U | Sidechain |
| 1 | AA | 970 | C | Sidechain |
| 1 | AA | 971 | G | Sidechain |
| 1 | AA | 972 | C | Sidechain |
| 1 | AA | 973 | G | Sidechain |
| 1 | AA | 974 | A | Sidechain |
| 1 | AA | 975 | A | Sidechain |
| 1 | AA | 976 | G | Sidechain |
| 1 | AA | 978 | A | Sidechain |
| 1 | AA | 980 | C | Sidechain |
| 1 | AA | 981 | U | Sidechain |
| 1 | AA | 983 | A | Sidechain |
| 1 | AA | 984 | C | Sidechain |
| 1 | AA | 986 | U | Sidechain |
| 1 | AA | 987 | G | Sidechain |
| 1 | AA | 990 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 1 | AA | 991 | U | Sidechain |
| 1 | AA | 994 | A | Sidechain |
| 1 | AA | 995 | C | Sidechain |
| 1 | AA | 996 | A | Sidechain |
| 1 | AA | 997 | U | Sidechain |
| 1 | AA | 998 | C | Sidechain |
| 1 | AA | 999 | C | Sidechain |
| 2 | AB | 10 | G | Sidechain |
| 2 | AB | 15 | A | Sidechain |
| 2 | AB | 18 | G | Sidechain |
| 2 | AB | 19 | G | Sidechain |
| 2 | AB | 2 | G | Sidechain |
| 2 | AB | 23 | A | Sidechain |
| 2 | AB | 26 | A | Sidechain |
| 2 | AB | 27 | C | Sidechain |
| 2 | AB | 31 | U | Sidechain |
| 2 | AB | 34 | C | Sidechain |
| 2 | AB | 35 | C | Sidechain |
| 2 | AB | 38 | A | Sidechain |
| 2 | AB | 39 | A | Sidechain |
| 2 | AB | 40 | C | Sidechain |
| 2 | AB | 41 | C | Sidechain |
| 2 | AB | 42 | G | Sidechain |
| 2 | AB | 43 | G | Sidechain |
| 2 | AB | 45 | U | Sidechain |
| 2 | AB | 47 | U | Sidechain |
| 2 | AB | 48 | U | Sidechain |
| 2 | AB | 49 | G | Sidechain |
| 2 | AB | 5 | G | Sidechain |
| 2 | AB | 50 | G | Sidechain |
| 2 | AB | 51 | G | Sidechain |
| 2 | AB | 53 | G | Sidechain |
| 2 | AB | 57 | G | Sidechain |
| 2 | AB | 58 | A | Sidechain |
| 2 | AB | 60 | U | Sidechain |
| 2 | AB | 61 | C | Sidechain |
| 2 | AB | 62 | U | Sidechain |
| 2 | AB | 63 | C | Sidechain |
| 2 | AB | 64 | U | Sidechain |
| 2 | AB | 65 | C | Sidechain |
| 2 | AB | 67 | G | Sidechain |
| 2 | AB | 68 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 2 | AB | 69 | C | Sidechain |
| 2 | AB | 7 | G | Sidechain |
| 2 | AB | 72 | U | Sidechain |
| 2 | AB | 73 | G | Sidechain |
| 2 | AB | 76 | A | Sidechain |
| 3 | AC | 14 | G | Sidechain |
| 3 | AC | 15 | G | Sidechain |
| 3 | AC | 16 | A | Sidechain |
| 3 | AC | 17 | U | Sidechain |
| 3 | AC | 19 | A | Sidechain |
| 3 | AC | 21 | U | Sidechain |
| 3 | AC | 24 | A | Sidechain |
| 3 | AC | 25 | U | Sidechain |
| 3 | AC | 29 | G | Sidechain |
| 3 | AC | 30 | U | Sidechain |
| 3 | AC | 31 | U | Sidechain |
| 3 | AC | 33 | A | Sidechain |
| 3 | AC | 34 | U | Sidechain |
| 3 | AC | 37 | G | Sidechain |
| 3 | AC | 40 | G | Sidechain |
| 3 | AC | 41 | A | Sidechain |
| 3 | AC | 42 | U | Sidechain |
| 3 | AC | 43 | U | Sidechain |
| 3 | AC | 45 | G | Sidechain |
| 3 | AC | 48 | C | Sidechain |
| 3 | AC | 49 | U | Sidechain |
| 3 | AC | 50 | U | Sidechain |
| 3 | AC | 51 | C | Sidechain |
| 3 | AC | 53 | G | Sidechain |
| 3 | AC | 54 | U | Sidechain |
| 3 | AC | 56 | G | Sidechain |
| 3 | AC | 58 | C | Sidechain |
| 3 | AC | 59 | A | Sidechain |
| 4 | AD | 1 | C | Sidechain |
| 4 | AD | 10 | G | Sidechain |
| 4 | AD | 11 | A | Sidechain |
| 4 | AD | 12 | G | Sidechain |
| 4 | AD | 14 | A | Sidechain |
| 4 | AD | 19 | G | Sidechain |
| 4 | AD | 20 | G | Sidechain |
| 4 | AD | 22 | A | Sidechain |
| 4 | AD | 23 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 4 | AD | 25 | U | Sidechain |
| 4 | AD | 28 | U | Sidechain |
| 4 | AD | 30 | G | Sidechain |
| 4 | AD | 34 | U | Sidechain |
| 4 | AD | 35 | C | Sidechain |
| 4 | AD | 37 | U | Sidechain |
| 4 | AD | 39 | A | Sidechain |
| 4 | AD | 4 | G | Sidechain |
| 4 | AD | 42 | C | Sidechain |
| 4 | AD | 43 | G | Sidechain |
| 4 | AD | 45 | A | Sidechain |
| 4 | AD | 46 | G | Sidechain |
| 4 | AD | 48 | U | Sidechain |
| 4 | AD | 49 | C | Sidechain |
| 4 | AD | 50 | G | Sidechain |
| 4 | AD | 53 | G | Sidechain |
| 4 | AD | 54 | G | Sidechain |
| 4 | AD | 57 | C | Sidechain |
| 4 | AD | 58 | A | Sidechain |
| 4 | AD | 59 | A | Sidechain |
| 4 | AD | 6 | G | Sidechain |
| 4 | AD | 60 | A | Sidechain |
| 4 | AD | 61 | U | Sidechain |
| 4 | AD | 64 | G | Sidechain |
| 4 | AD | 65 | G | Sidechain |
| 4 | AD | 68 | C | Sidechain |
| 4 | AD | 69 | C | Sidechain |
| 4 | AD | 7 | G | Sidechain |
| 4 | AD | 70 | C | Sidechain |
| 4 | AD | 73 | A | Sidechain |
| 4 | AD | 75 | C | Sidechain |
| 4 | AD | 76 | C | Sidechain |
| 4 | AD | 9 | G | Sidechain |
| 5 | AE | 198 | VAL | Peptide |
| 5 | AE | 212 | TYR | Sidechain |
| 5 | AE | 62 | ARG | Sidechain |
| 6 | AF | 129 | PHE | Sidechain |
| 6 | AF | 163 | ARG | Sidechain |
| 6 | AF | 178 | ARG | Sidechain |
| 6 | AF | 189 | HIS | Sidechain |
| 6 | AF | 192 | TYR | Sidechain |
| 6 | AF | 22 | PHE | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 6 | AF | 231 | ARG | Sidechain |
| 6 | AF | 36 | PHE | Sidechain |
| 6 | AF | 41 | TYR | Sidechain |
| 6 | AF | 5 | HIS | Peptide |
| 6 | AF | 64 | ARG | Sidechain |
| 7 | AG | 102 | TYR | Sidechain |
| 7 | AG | 134 | TYR | Sidechain |
| 7 | AG | 183 | ARG | Sidechain |
| 7 | AG | 203 | TYR | Sidechain |
| 7 | AG | 3 | TYR | Sidechain |
| 7 | AG | 82 | LYS | Peptide |
| 8 | AH | 49 | TYR | Sidechain |
| 8 | AH | 53 | ARG | Sidechain |
| 9 | AI | 24 | ARG | Sidechain |
| 9 | AI | 38 | ARG | Sidechain |
| 9 | AI | 64 | VAL | Peptide |
| 9 | AI | 8 | PHE | Sidechain |
| 10 | AJ | 131 | GLY | Peptide |
| 10 | AJ | 43 | TYR | Sidechain |
| 10 | AJ | 52 | ARG | Sidechain |
| 10 | AJ | 91 | ARG | Sidechain |
| 11 | AK | 115 | ALA | Mainchain |
| 11 | AK | 44 | PHE | Peptide |
| 12 | AL | 105 | ARG | Sidechain |
| 12 | AL | 80 | HIS | Sidechain |
| 14 | AN | 117 | HIS | Sidechain |
| 14 | AN | 76 | TYR | Sidechain |
| 14 | AN | 97 | ARG | Sidechain |
| 15 | AO | 113 | ARG | Sidechain |
| 15 | AO | 30 | ARG | Sidechain |
| 15 | AO | 37 | TYR | Peptide,Sidechain |
| 16 | AP | 108 | ARG | Sidechain |
| 17 | AQ | 19 | TYR | Sidechain |
| 17 | AQ | 52 | ARG | Sidechain |
| 17 | AQ | 68 | ARG | Sidechain |
| 17 | AQ | 76 | PHE | Sidechain |
| 18 | AR | 79 | ARG | Sidechain |
| 19 | AS | 61 | VAL | Mainchain |
| 19 | AS | 70 | ARG | Sidechain |
| 20 | AT | 33 | TYR | Sidechain |
| 21 | AU | 10 | CYS | Peptide |
| 21 | AU | 22 | TYR | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 21 | AU | 31 | TYR | Sidechain |
| 22 | AV | 56 | HIS | Sidechain |
| 22 | AV | 89 | LYS | Mainchain |
| 23 | AW | 50 | PHE | Sidechain |
| 24 | AX | 37 | TYR | Sidechain |
| 24 | AX | 69 | LEU | Peptide |
| 51 | B0 | 47 | ARG | Sidechain |
| 52 | B1 | 30 | ARG | Peptide |
| 53 | B2 | 3 | LYS | Mainchain |
| 53 | B2 | 43 | PHE | Sidechain |
| 53 | B2 | 49 | ARG | Peptide |
| 53 | B2 | 9 | TYR | Sidechain |
| 54 | B3 | 47 | TYR | Sidechain |
| 55 | B4 | 1 | ALA | Peptide |
| 55 | B4 | 20 | TYR | Sidechain |
| 55 | B4 | 38 | PHE | Sidechain |
| 55 | B4 | 48 | TYR | Sidechain |
| 56 | B5 | 18 | PHE | Sidechain |
| 56 | B5 | 42 | LEU | Mainchain |
| 57 | B6 | 44 | ARG | Sidechain |
| 57 | B6 | 63 | TYR | Sidechain |
| 25 | BA | 1 | U | Sidechain |
| 25 | BA | 10 | G | Sidechain |
| 25 | BA | 100 | G | Sidechain |
| 25 | BA | 101 | A | Sidechain |
| 25 | BA | 102 | G | Sidechain |
| 25 | BA | 104 | A | Sidechain |
| 25 | BA | 106 | G | Sidechain |
| 25 | BA | 107 | G | Sidechain |
| 25 | BA | 108 | A | Sidechain |
| 25 | BA | 11 | C | Sidechain |
| 25 | BA | 110 | C | Sidechain |
| 25 | BA | 111 | U | Sidechain |
| 25 | BA | 113 | C | Sidechain |
| 25 | BA | 119 | A | Sidechain |
| 25 | BA | 12 | C | Sidechain |
| 25 | BA | 13 | G | Sidechain |
| 25 | BA | 14 | U | Sidechain |
| 25 | BA | 16 | G | Sidechain |
| 25 | BA | 17 | C | Sidechain |
| 25 | BA | 2 | G | Sidechain |
| 25 | BA | 20 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 25 | BA | 23 | G | Sidechain |
| 25 | BA | 24 | G | Sidechain |
| 25 | BA | 27 | C | Sidechain |
| 25 | BA | 28 | C | Sidechain |
| 25 | BA | 29 | A | Sidechain |
| 25 | BA | 30 | C | Sidechain |
| 25 | BA | 31 | C | Sidechain |
| 25 | BA | 32 | U | Sidechain |
| 25 | BA | 33 | G | Sidechain |
| 25 | BA | 34 | A | Sidechain |
| 25 | BA | 38 | C | Sidechain |
| 25 | BA | 39 | A | Sidechain |
| 25 | BA | 40 | U | Sidechain |
| 25 | BA | 41 | G | Sidechain |
| 25 | BA | 42 | C | Sidechain |
| 25 | BA | 43 | C | Sidechain |
| 25 | BA | 48 | U | Sidechain |
| 25 | BA | 49 | C | Sidechain |
| 25 | BA | 5 | U | Sidechain |
| 25 | BA | 50 | A | Sidechain |
| 25 | BA | 51 | G | Sidechain |
| 25 | BA | 52 | A | Sidechain |
| 25 | BA | 53 | A | Sidechain |
| 25 | BA | 55 | U | Sidechain |
| 25 | BA | 56 | G | Sidechain |
| 25 | BA | 57 | A | Sidechain |
| 25 | BA | 59 | A | Sidechain |
| 25 | BA | 6 | G | Sidechain |
| 25 | BA | 60 | C | Sidechain |
| 25 | BA | 61 | G | Sidechain |
| 25 | BA | 62 | C | Sidechain |
| 25 | BA | 64 | G | Sidechain |
| 25 | BA | 68 | C | Sidechain |
| 25 | BA | 7 | G | Sidechain |
| 25 | BA | 72 | G | Sidechain |
| 25 | BA | 73 | A | Sidechain |
| 25 | BA | 76 | G | Sidechain |
| 25 | BA | 77 | U | Sidechain |
| 25 | BA | 78 | A | Sidechain |
| 25 | BA | 79 | G | Sidechain |
| 25 | BA | 8 | C | Sidechain |
| 25 | BA | 80 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 25 | BA | 81 | G | Sidechain |
| 25 | BA | 83 | G | Sidechain |
| 25 | BA | 84 | G | Sidechain |
| 25 | BA | 86 | G | Sidechain |
| 25 | BA | 87 | U | Sidechain |
| 25 | BA | 88 | C | Sidechain |
| 25 | BA | 89 | U | Sidechain |
| 25 | BA | 90 | C | Sidechain |
| 25 | BA | 94 | A | Sidechain |
| 25 | BA | 95 | U | Sidechain |
| 25 | BA | 98 | G | Sidechain |
| 25 | BA | 99 | A | Sidechain |
| 26 | BB | 1 | G | Sidechain |
| 26 | BB | 10 | A | Sidechain |
| 26 | BB | 100 | U | Sidechain |
| 26 | BB | 1000 | A | Sidechain |
| 26 | BB | 1002 | G | Sidechain |
| 26 | BB | 1003 | G | Sidechain |
| 26 | BB | 1004 | U | Sidechain |
| 26 | BB | 1005 | C | Sidechain |
| 26 | BB | 1007 | C | Sidechain |
| 26 | BB | 101 | A | Sidechain |
| 26 | BB | 1010 | A | Sidechain |
| 26 | BB | 1013 | C | Sidechain |
| 26 | BB | 1014 | A | Sidechain |
| 26 | BB | 1015 | U | Sidechain |
| 26 | BB | 1016 | G | Sidechain |
| 26 | BB | 1017 | G | Sidechain |
| 26 | BB | 1018 | U | Sidechain |
| 26 | BB | 1019 | U | Sidechain |
| 26 | BB | 1021 | A | Sidechain |
| 26 | BB | 1023 | U | Sidechain |
| 26 | BB | 1024 | G | Sidechain |
| 26 | BB | 1025 | G | Sidechain |
| 26 | BB | 1026 | G | Sidechain |
| 26 | BB | 1027 | A | Sidechain |
| 26 | BB | 103 | A | Sidechain |
| 26 | BB | 1031 | G | Sidechain |
| 26 | BB | 1032 | A | Sidechain |
| 26 | BB | 1033 | U | Sidechain |
| 26 | BB | 1034 | G | Sidechain |
| 26 | BB | 1035 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1036 | G | Sidechain |
| 26 | BB | 1038 | G | Sidechain |
| 26 | BB | 104 | A | Sidechain |
| 26 | BB | 1040 | A | Sidechain |
| 26 | BB | 1041 | G | Sidechain |
| 26 | BB | 1042 | G | Sidechain |
| 26 | BB | 1044 | C | Sidechain |
| 26 | BB | 1047 | G | Sidechain |
| 26 | BB | 1048 | A | Sidechain |
| 26 | BB | 1049 | C | Sidechain |
| 26 | BB | 1051 | G | Sidechain |
| 26 | BB | 1055 | G | Sidechain |
| 26 | BB | 1056 | G | Sidechain |
| 26 | BB | 1057 | A | Sidechain |
| 26 | BB | 1058 | U | Sidechain |
| 26 | BB | 106 | C | Sidechain |
| 26 | BB | 1061 | U | Sidechain |
| 26 | BB | 1062 | G | Sidechain |
| 26 | BB | 1063 | G | Sidechain |
| 26 | BB | 1064 | C | Sidechain |
| 26 | BB | 1065 | U | Sidechain |
| 26 | BB | 1068 | G | Sidechain |
| 26 | BB | 1069 | A | Sidechain |
| 26 | BB | 107 | G | Sidechain |
| 26 | BB | 1070 | A | Sidechain |
| 26 | BB | 1072 | C | Sidechain |
| 26 | BB | 1073 | A | Sidechain |
| 26 | BB | 1075 | C | Sidechain |
| 26 | BB | 1078 | U | Sidechain |
| 26 | BB | 108 | G | Sidechain |
| 26 | BB | 1080 | A | Sidechain |
| 26 | BB | 1081 | U | Sidechain |
| 26 | BB | 1083 | U | Sidechain |
| 26 | BB | 1084 | A | Sidechain |
| 26 | BB | 1086 | A | Sidechain |
| 26 | BB | 1087 | G | Sidechain |
| 26 | BB | 1088 | A | Sidechain |
| 26 | BB | 109 | C | Sidechain |
| 26 | BB | 1090 | A | Sidechain |
| 26 | BB | 1094 | U | Sidechain |
| 26 | BB | 1095 | A | Sidechain |
| 26 | BB | 1096 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1099 | G | Sidechain |
| 26 | BB | 11 | C | Sidechain |
| 26 | BB | 110 | G | Sidechain |
| 26 | BB | 1106 | G | Sidechain |
| 26 | BB | 1107 | G | Sidechain |
| 26 | BB | 111 | A | Sidechain |
| 26 | BB | 1110 | G | Sidechain |
| 26 | BB | 1113 | U | Sidechain |
| 26 | BB | 1115 | G | Sidechain |
| 26 | BB | 1116 | G | Sidechain |
| 26 | BB | 1118 | C | Sidechain |
| 26 | BB | 112 | U | Sidechain |
| 26 | BB | 1121 | C | Sidechain |
| 26 | BB | 1122 | G | Sidechain |
| 26 | BB | 1124 | G | Sidechain |
| 26 | BB | 1125 | G | Sidechain |
| 26 | BB | 1126 | A | Sidechain |
| 26 | BB | 1127 | A | Sidechain |
| 26 | BB | 1128 | G | Sidechain |
| 26 | BB | 1129 | A | Sidechain |
| 26 | BB | 1130 | U | Sidechain |
| 26 | BB | 1131 | G | Sidechain |
| 26 | BB | 1132 | U | Sidechain |
| 26 | BB | 1135 | C | Sidechain |
| 26 | BB | 1137 | G | Sidechain |
| 26 | BB | 1138 | G | Sidechain |
| 26 | BB | 1139 | G | Sidechain |
| 26 | BB | 1142 | A | Sidechain |
| 26 | BB | 1144 | A | Sidechain |
| 26 | BB | 1148 | U | Sidechain |
| 26 | BB | 1149 | G | Sidechain |
| 26 | BB | 115 | C | Sidechain |
| 26 | BB | 1150 | C | Sidechain |
| 26 | BB | 1152 | C | Sidechain |
| 26 | BB | 1153 | C | Sidechain |
| 26 | BB | 1154 | G | Sidechain |
| 26 | BB | 1155 | A | Sidechain |
| 26 | BB | 1156 | A | Sidechain |
| 26 | BB | 1158 | C | Sidechain |
| 26 | BB | 1159 | U | Sidechain |
| 26 | BB | 1160 | G | Sidechain |
| 26 | BB | 1161 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1163 | G | Sidechain |
| 26 | BB | 1164 | C | Sidechain |
| 26 | BB | 1165 | A | Sidechain |
| 26 | BB | 1166 | G | Sidechain |
| 26 | BB | 1169 | A | Sidechain |
| 26 | BB | 117 | G | Sidechain |
| 26 | BB | 1170 | C | Sidechain |
| 26 | BB | 1172 | C | Sidechain |
| 26 | BB | 1175 | A | Sidechain |
| 26 | BB | 1176 | U | Sidechain |
| 26 | BB | 1179 | G | Sidechain |
| 26 | BB | 118 | A | Sidechain |
| 26 | BB | 1181 | U | Sidechain |
| 26 | BB | 1182 | G | Sidechain |
| 26 | BB | 1185 | G | Sidechain |
| 26 | BB | 1186 | G | Sidechain |
| 26 | BB | 1188 | U | Sidechain |
| 26 | BB | 1189 | A | Sidechain |
| 26 | BB | 1190 | G | Sidechain |
| 26 | BB | 1191 | G | Sidechain |
| 26 | BB | 1192 | G | Sidechain |
| 26 | BB | 1193 | G | Sidechain |
| 26 | BB | 1194 | A | Sidechain |
| 26 | BB | 1197 | G | Sidechain |
| 26 | BB | 1200 | C | Sidechain |
| 26 | BB | 1201 | U | Sidechain |
| 26 | BB | 1202 | G | Sidechain |
| 26 | BB | 1206 | G | Sidechain |
| 26 | BB | 1209 | U | Sidechain |
| 26 | BB | 121 | G | Sidechain |
| 26 | BB | 1210 | G | Sidechain |
| 26 | BB | 1215 | G | Sidechain |
| 26 | BB | 1216 | G | Sidechain |
| 26 | BB | 1217 | U | Sidechain |
| 26 | BB | 1219 | U | Sidechain |
| 26 | BB | 122 | G | Sidechain |
| 26 | BB | 1220 | G | Sidechain |
| 26 | BB | 1223 | G | Sidechain |
| 26 | BB | 1225 | G | Sidechain |
| 26 | BB | 1226 | A | Sidechain |
| 26 | BB | 1227 | G | Sidechain |
| 26 | BB | 1228 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1229 | C | Sidechain |
| 26 | BB | 123 | G | Sidechain |
| 26 | BB | 1231 | U | Sidechain |
| 26 | BB | 1232 | G | Sidechain |
| 26 | BB | 1234 | U | Sidechain |
| 26 | BB | 1235 | G | Sidechain |
| 26 | BB | 1236 | G | Sidechain |
| 26 | BB | 1238 | G | Sidechain |
| 26 | BB | 1240 | U | Sidechain |
| 26 | BB | 1241 | A | Sidechain |
| 26 | BB | 1243 | C | Sidechain |
| 26 | BB | 1245 | G | Sidechain |
| 26 | BB | 1246 | A | Sidechain |
| 26 | BB | 1248 | G | Sidechain |
| 26 | BB | 1252 | G | Sidechain |
| 26 | BB | 1253 | A | Sidechain |
| 26 | BB | 1254 | A | Sidechain |
| 26 | BB | 1256 | G | Sidechain |
| 26 | BB | 1257 | C | Sidechain |
| 26 | BB | 1258 | U | Sidechain |
| 26 | BB | 1259 | G | Sidechain |
| 26 | BB | 1260 | A | Sidechain |
| 26 | BB | 1261 | C | Sidechain |
| 26 | BB | 1262 | A | Sidechain |
| 26 | BB | 1266 | G | Sidechain |
| 26 | BB | 1269 | A | Sidechain |
| 26 | BB | 127 | A | Sidechain |
| 26 | BB | 1270 | C | Sidechain |
| 26 | BB | 1271 | G | Sidechain |
| 26 | BB | 1273 | U | Sidechain |
| 26 | BB | 1274 | A | Sidechain |
| 26 | BB | 1275 | A | Sidechain |
| 26 | BB | 1276 | A | Sidechain |
| 26 | BB | 1277 | G | Sidechain |
| 26 | BB | 1278 | C | Sidechain |
| 26 | BB | 1279 | G | Sidechain |
| 26 | BB | 1281 | G | Sidechain |
| 26 | BB | 1282 | U | Sidechain |
| 26 | BB | 1283 | G | Sidechain |
| 26 | BB | 1285 | A | Sidechain |
| 26 | BB | 1286 | A | Sidechain |
| 26 | BB | 1287 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1288 | G | Sidechain |
| 26 | BB | 1289 | C | Sidechain |
| 26 | BB | 1290 | C | Sidechain |
| 26 | BB | 1293 | C | Sidechain |
| 26 | BB | 1294 | U | Sidechain |
| 26 | BB | 1295 | C | Sidechain |
| 26 | BB | 1296 | G | Sidechain |
| 26 | BB | 1297 | C | Sidechain |
| 26 | BB | 130 | C | Sidechain |
| 26 | BB | 1300 | G | Sidechain |
| 26 | BB | 1301 | A | Sidechain |
| 26 | BB | 1302 | A | Sidechain |
| 26 | BB | 1303 | G | Sidechain |
| 26 | BB | 1304 | A | Sidechain |
| 26 | BB | 1305 | C | Sidechain |
| 26 | BB | 1306 | C | Sidechain |
| 26 | BB | 1307 | A | Sidechain |
| 26 | BB | 1309 | G | Sidechain |
| 26 | BB | 131 | A | Sidechain |
| 26 | BB | 1310 | G | Sidechain |
| 26 | BB | 1312 | U | Sidechain |
| 26 | BB | 1313 | U | Sidechain |
| 26 | BB | 1315 | C | Sidechain |
| 26 | BB | 1316 | U | Sidechain |
| 26 | BB | 1317 | G | Sidechain |
| 26 | BB | 1319 | C | Sidechain |
| 26 | BB | 1322 | A | Sidechain |
| 26 | BB | 1324 | G | Sidechain |
| 26 | BB | 1325 | U | Sidechain |
| 26 | BB | 1329 | U | Sidechain |
| 26 | BB | 133 | U | Sidechain |
| 26 | BB | 1332 | G | Sidechain |
| 26 | BB | 1334 | G | Sidechain |
| 26 | BB | 1336 | A | Sidechain |
| 26 | BB | 1337 | G | Sidechain |
| 26 | BB | 1339 | G | Sidechain |
| 26 | BB | 134 | G | Sidechain |
| 26 | BB | 1340 | U | Sidechain |
| 26 | BB | 1341 | G | Sidechain |
| 26 | BB | 1342 | A | Sidechain |
| 26 | BB | 1343 | G | Sidechain |
| 26 | BB | 1344 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1345 | C | Sidechain |
| 26 | BB | 1347 | A | Sidechain |
| 26 | BB | 1348 | C | Sidechain |
| 26 | BB | 1349 | C | Sidechain |
| 26 | BB | 135 | U | Sidechain |
| 26 | BB | 1350 | C | Sidechain |
| 26 | BB | 1354 | A | Sidechain |
| 26 | BB | 1355 | G | Sidechain |
| 26 | BB | 1356 | G | Sidechain |
| 26 | BB | 136 | G | Sidechain |
| 26 | BB | 1360 | G | Sidechain |
| 26 | BB | 1361 | G | Sidechain |
| 26 | BB | 1363 | C | Sidechain |
| 26 | BB | 1366 | A | Sidechain |
| 26 | BB | 1367 | A | Sidechain |
| 26 | BB | 1369 | G | Sidechain |
| 26 | BB | 137 | U | Sidechain |
| 26 | BB | 1374 | G | Sidechain |
| 26 | BB | 1377 | G | Sidechain |
| 26 | BB | 1378 | A | Sidechain |
| 26 | BB | 1380 | G | Sidechain |
| 26 | BB | 1381 | G | Sidechain |
| 26 | BB | 1383 | A | Sidechain |
| 26 | BB | 1384 | A | Sidechain |
| 26 | BB | 1386 | C | Sidechain |
| 26 | BB | 1389 | G | Sidechain |
| 26 | BB | 1390 | U | Sidechain |
| 26 | BB | 1393 | A | Sidechain |
| 26 | BB | 1395 | A | Sidechain |
| 26 | BB | 1397 | U | Sidechain |
| 26 | BB | 1398 | C | Sidechain |
| 26 | BB | 14 | A | Sidechain |
| 26 | BB | 140 | C | Sidechain |
| 26 | BB | 1400 | U | Sidechain |
| 26 | BB | 1402 | U | Sidechain |
| 26 | BB | 1404 | C | Sidechain |
| 26 | BB | 1405 | U | Sidechain |
| 26 | BB | 1406 | U | Sidechain |
| 26 | BB | 1407 | G | Sidechain |
| 26 | BB | 1408 | G | Sidechain |
| 26 | BB | 1409 | U | Sidechain |
| 26 | BB | 141 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1410 | G | Sidechain |
| 26 | BB | 1411 | U | Sidechain |
| 26 | BB | 1415 | U | Sidechain |
| 26 | BB | 1416 | G | Sidechain |
| 26 | BB | 1419 | A | Sidechain |
| 26 | BB | 142 | A | Sidechain |
| 26 | BB | 1420 | A | Sidechain |
| 26 | BB | 1421 | G | Sidechain |
| 26 | BB | 1422 | G | Sidechain |
| 26 | BB | 1424 | G | Sidechain |
| 26 | BB | 1425 | G | Sidechain |
| 26 | BB | 1428 | C | Sidechain |
| 26 | BB | 143 | C | Sidechain |
| 26 | BB | 1430 | G | Sidechain |
| 26 | BB | 1432 | G | Sidechain |
| 26 | BB | 1434 | A | Sidechain |
| 26 | BB | 1436 | G | Sidechain |
| 26 | BB | 1437 | C | Sidechain |
| 26 | BB | 1438 | U | Sidechain |
| 26 | BB | 1439 | A | Sidechain |
| 26 | BB | 144 | A | Sidechain |
| 26 | BB | 1440 | U | Sidechain |
| 26 | BB | 1441 | G | Sidechain |
| 26 | BB | 1443 | U | Sidechain |
| 26 | BB | 1447 | C | Sidechain |
| 26 | BB | 1449 | G | Sidechain |
| 26 | BB | 145 | C | Sidechain |
| 26 | BB | 1450 | G | Sidechain |
| 26 | BB | 1451 | C | Sidechain |
| 26 | BB | 1453 | A | Sidechain |
| 26 | BB | 1454 | C | Sidechain |
| 26 | BB | 1456 | G | Sidechain |
| 26 | BB | 1457 | U | Sidechain |
| 26 | BB | 146 | A | Sidechain |
| 26 | BB | 1460 | U | Sidechain |
| 26 | BB | 1461 | C | Sidechain |
| 26 | BB | 1462 | C | Sidechain |
| 26 | BB | 1470 | A | Sidechain |
| 26 | BB | 1471 | G | Sidechain |
| 26 | BB | 1472 | C | Sidechain |
| 26 | BB | 1473 | G | Sidechain |
| 26 | BB | 1474 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1475 | G | Sidechain |
| 26 | BB | 1476 | U | Sidechain |
| 26 | BB | 1477 | A | Sidechain |
| 26 | BB | 1478 | G | Sidechain |
| 26 | BB | 1479 | G | Sidechain |
| 26 | BB | 148 | U | Sidechain |
| 26 | BB | 1481 | U | Sidechain |
| 26 | BB | 1482 | G | Sidechain |
| 26 | BB | 1483 | G | Sidechain |
| 26 | BB | 1484 | U | Sidechain |
| 26 | BB | 1486 | U | Sidechain |
| 26 | BB | 1491 | G | Sidechain |
| 26 | BB | 1492 | G | Sidechain |
| 26 | BB | 1494 | A | Sidechain |
| 26 | BB | 1495 | A | Sidechain |
| 26 | BB | 1496 | A | Sidechain |
| 26 | BB | 1498 | C | Sidechain |
| 26 | BB | 15 | G | Sidechain |
| 26 | BB | 150 | U | Sidechain |
| 26 | BB | 1503 | A | Sidechain |
| 26 | BB | 1504 | A | Sidechain |
| 26 | BB | 1506 | U | Sidechain |
| 26 | BB | 1508 | A | Sidechain |
| 26 | BB | 1509 | A | Sidechain |
| 26 | BB | 1512 | C | Sidechain |
| 26 | BB | 1513 | U | Sidechain |
| 26 | BB | 1514 | G | Sidechain |
| 26 | BB | 1515 | A | Sidechain |
| 26 | BB | 1517 | G | Sidechain |
| 26 | BB | 1518 | C | Sidechain |
| 26 | BB | 1519 | G | Sidechain |
| 26 | BB | 152 | A | Sidechain |
| 26 | BB | 1521 | G | Sidechain |
| 26 | BB | 1523 | U | Sidechain |
| 26 | BB | 1524 | G | Sidechain |
| 26 | BB | 1525 | A | Sidechain |
| 26 | BB | 1526 | C | Sidechain |
| 26 | BB | 1527 | G | Sidechain |
| 26 | BB | 1528 | A | Sidechain |
| 26 | BB | 1529 | G | Sidechain |
| 26 | BB | 153 | U | Sidechain |
| 26 | BB | 1530 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1532 | A | Sidechain |
| 26 | BB | 1534 | U | Sidechain |
| 26 | BB | 1535 | A | Sidechain |
| 26 | BB | 1536 | C | Sidechain |
| 26 | BB | 1538 | G | Sidechain |
| 26 | BB | 1539 | U | Sidechain |
| 26 | BB | 1542 | U | Sidechain |
| 26 | BB | 1545 | A | Sidechain |
| 26 | BB | 1547 | C | Sidechain |
| 26 | BB | 1548 | A | Sidechain |
| 26 | BB | 1551 | A | Sidechain |
| 26 | BB | 1552 | A | Sidechain |
| 26 | BB | 1553 | A | Sidechain |
| 26 | BB | 1554 | U | Sidechain |
| 26 | BB | 1557 | C | Sidechain |
| 26 | BB | 1558 | C | Sidechain |
| 26 | BB | 1559 | U | Sidechain |
| 26 | BB | 156 | A | Sidechain |
| 26 | BB | 1565 | C | Sidechain |
| 26 | BB | 1567 | G | Sidechain |
| 26 | BB | 1568 | G | Sidechain |
| 26 | BB | 1570 | A | Sidechain |
| 26 | BB | 1571 | A | Sidechain |
| 26 | BB | 1572 | A | Sidechain |
| 26 | BB | 1573 | G | Sidechain |
| 26 | BB | 1574 | C | Sidechain |
| 26 | BB | 1575 | C | Sidechain |
| 26 | BB | 1576 | U | Sidechain |
| 26 | BB | 1578 | U | Sidechain |
| 26 | BB | 1579 | A | Sidechain |
| 26 | BB | 1582 | C | Sidechain |
| 26 | BB | 1583 | A | Sidechain |
| 26 | BB | 1584 | U | Sidechain |
| 26 | BB | 1588 | G | Sidechain |
| 26 | BB | 159 | G | Sidechain |
| 26 | BB | 1591 | A | Sidechain |
| 26 | BB | 1592 | C | Sidechain |
| 26 | BB | 1595 | C | Sidechain |
| 26 | BB | 1596 | A | Sidechain |
| 26 | BB | 16 | C | Sidechain |
| 26 | BB | 160 | A | Sidechain |
| 26 | BB | 1602 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1603 | A | Sidechain |
| 26 | BB | 1604 | C | Sidechain |
| 26 | BB | 1605 | C | Sidechain |
| 26 | BB | 1607 | C | Sidechain |
| 26 | BB | 1608 | A | Sidechain |
| 26 | BB | 1609 | A | Sidechain |
| 26 | BB | 161 | A | Sidechain |
| 26 | BB | 1610 | A | Sidechain |
| 26 | BB | 1611 | C | Sidechain |
| 26 | BB | 1612 | C | Sidechain |
| 26 | BB | 1613 | G | Sidechain |
| 26 | BB | 1614 | A | Sidechain |
| 26 | BB | 1616 | A | Sidechain |
| 26 | BB | 1617 | C | Sidechain |
| 26 | BB | 1619 | G | Sidechain |
| 26 | BB | 1621 | U | Sidechain |
| 26 | BB | 1622 | G | Sidechain |
| 26 | BB | 1625 | C | Sidechain |
| 26 | BB | 1626 | A | Sidechain |
| 26 | BB | 1628 | G | Sidechain |
| 26 | BB | 1629 | U | Sidechain |
| 26 | BB | 1630 | A | Sidechain |
| 26 | BB | 1633 | G | Sidechain |
| 26 | BB | 1636 | U | Sidechain |
| 26 | BB | 1637 | A | Sidechain |
| 26 | BB | 1638 | C | Sidechain |
| 26 | BB | 1639 | C | Sidechain |
| 26 | BB | 164 | C | Sidechain |
| 26 | BB | 1640 | A | Sidechain |
| 26 | BB | 1641 | A | Sidechain |
| 26 | BB | 1642 | G | Sidechain |
| 26 | BB | 1644 | C | Sidechain |
| 26 | BB | 1645 | G | Sidechain |
| 26 | BB | 1646 | C | Sidechain |
| 26 | BB | 1647 | U | Sidechain |
| 26 | BB | 1650 | A | Sidechain |
| 26 | BB | 1653 | G | Sidechain |
| 26 | BB | 1655 | A | Sidechain |
| 26 | BB | 1656 | C | Sidechain |
| 26 | BB | 1657 | U | Sidechain |
| 26 | BB | 1659 | G | Sidechain |
| 26 | BB | 1660 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1661 | G | Sidechain |
| 26 | BB | 1663 | G | Sidechain |
| 26 | BB | 1664 | A | Sidechain |
| 26 | BB | 1667 | G | Sidechain |
| 26 | BB | 1669 | A | Sidechain |
| 26 | BB | 1672 | A | Sidechain |
| 26 | BB | 1674 | G | Sidechain |
| 26 | BB | 1675 | C | Sidechain |
| 26 | BB | 1676 | A | Sidechain |
| 26 | BB | 1677 | A | Sidechain |
| 26 | BB | 1678 | A | Sidechain |
| 26 | BB | 1679 | A | Sidechain |
| 26 | BB | 168 | G | Sidechain |
| 26 | BB | 1680 | U | Sidechain |
| 26 | BB | 1681 | G | Sidechain |
| 26 | BB | 1682 | G | Sidechain |
| 26 | BB | 1685 | C | Sidechain |
| 26 | BB | 1686 | C | Sidechain |
| 26 | BB | 1687 | G | Sidechain |
| 26 | BB | 169 | G | Sidechain |
| 26 | BB | 1690 | A | Sidechain |
| 26 | BB | 1691 | C | Sidechain |
| 26 | BB | 1693 | U | Sidechain |
| 26 | BB | 1694 | C | Sidechain |
| 26 | BB | 1695 | G | Sidechain |
| 26 | BB | 1696 | G | Sidechain |
| 26 | BB | 1697 | G | Sidechain |
| 26 | BB | 170 | U | Sidechain |
| 26 | BB | 1700 | A | Sidechain |
| 26 | BB | 1701 | A | Sidechain |
| 26 | BB | 1705 | A | Sidechain |
| 26 | BB | 1706 | C | Sidechain |
| 26 | BB | 1707 | G | Sidechain |
| 26 | BB | 1709 | U | Sidechain |
| 26 | BB | 171 | U | Sidechain |
| 26 | BB | 1710 | G | Sidechain |
| 26 | BB | 1711 | A | Sidechain |
| 26 | BB | 1712 | U | Sidechain |
| 26 | BB | 1713 | A | Sidechain |
| 26 | BB | 1715 | G | Sidechain |
| 26 | BB | 1716 | U | Sidechain |
| 26 | BB | 1718 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1719 | G | Sidechain |
| 26 | BB | 1720 | U | Sidechain |
| 26 | BB | 1721 | G | Sidechain |
| 26 | BB | 1722 | A | Sidechain |
| 26 | BB | 1724 | G | Sidechain |
| 26 | BB | 1727 | C | Sidechain |
| 26 | BB | 1729 | U | Sidechain |
| 26 | BB | 173 | A | Sidechain |
| 26 | BB | 1733 | G | Sidechain |
| 26 | BB | 1734 | G | Sidechain |
| 26 | BB | 1735 | A | Sidechain |
| 26 | BB | 1737 | G | Sidechain |
| 26 | BB | 1738 | G | Sidechain |
| 26 | BB | 1739 | A | Sidechain |
| 26 | BB | 1740 | G | Sidechain |
| 26 | BB | 1743 | G | Sidechain |
| 26 | BB | 1744 | A | Sidechain |
| 26 | BB | 175 | G | Sidechain |
| 26 | BB | 1750 | G | Sidechain |
| 26 | BB | 1751 | U | Sidechain |
| 26 | BB | 1752 | C | Sidechain |
| 26 | BB | 1753 | G | Sidechain |
| 26 | BB | 1756 | G | Sidechain |
| 26 | BB | 1758 | U | Sidechain |
| 26 | BB | 1759 | A | Sidechain |
| 26 | BB | 1763 | G | Sidechain |
| 26 | BB | 1766 | G | Sidechain |
| 26 | BB | 1767 | G | Sidechain |
| 26 | BB | 1769 | U | Sidechain |
| 26 | BB | 177 | G | Sidechain |
| 26 | BB | 1770 | G | Sidechain |
| 26 | BB | 1771 | C | Sidechain |
| 26 | BB | 1772 | A | Sidechain |
| 26 | BB | 1776 | G | Sidechain |
| 26 | BB | 1778 | U | Sidechain |
| 26 | BB | 1780 | A | Sidechain |
| 26 | BB | 1781 | U | Sidechain |
| 26 | BB | 1785 | A | Sidechain |
| 26 | BB | 1786 | A | Sidechain |
| 26 | BB | 1788 | C | Sidechain |
| 26 | BB | 1789 | A | Sidechain |
| 26 | BB | 179 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1791 | A | Sidechain |
| 26 | BB | 1792 | G | Sidechain |
| 26 | BB | 1793 | C | Sidechain |
| 26 | BB | 1796 | U | Sidechain |
| 26 | BB | 1798 | U | Sidechain |
| 26 | BB | 1799 | G | Sidechain |
| 26 | BB | 18 | U | Sidechain |
| 26 | BB | 180 | G | Sidechain |
| 26 | BB | 1801 | A | Sidechain |
| 26 | BB | 1802 | A | Sidechain |
| 26 | BB | 1803 | A | Sidechain |
| 26 | BB | 1804 | C | Sidechain |
| 26 | BB | 1806 | C | Sidechain |
| 26 | BB | 1807 | G | Sidechain |
| 26 | BB | 181 | A | Sidechain |
| 26 | BB | 1810 | A | Sidechain |
| 26 | BB | 1811 | G | Sidechain |
| 26 | BB | 1814 | G | Sidechain |
| 26 | BB | 1816 | C | Sidechain |
| 26 | BB | 182 | A | Sidechain |
| 26 | BB | 1820 | U | Sidechain |
| 26 | BB | 1821 | A | Sidechain |
| 26 | BB | 1822 | C | Sidechain |
| 26 | BB | 1823 | G | Sidechain |
| 26 | BB | 1825 | U | Sidechain |
| 26 | BB | 1827 | U | Sidechain |
| 26 | BB | 1828 | G | Sidechain |
| 26 | BB | 1831 | G | Sidechain |
| 26 | BB | 1833 | C | Sidechain |
| 26 | BB | 1836 | C | Sidechain |
| 26 | BB | 1837 | C | Sidechain |
| 26 | BB | 1839 | G | Sidechain |
| 26 | BB | 1840 | G | Sidechain |
| 26 | BB | 1844 | C | Sidechain |
| 26 | BB | 1845 | G | Sidechain |
| 26 | BB | 1846 | G | Sidechain |
| 26 | BB | 1848 | A | Sidechain |
| 26 | BB | 185 | G | Sidechain |
| 26 | BB | 1850 | G | Sidechain |
| 26 | BB | 1857 | G | Sidechain |
| 26 | BB | 1858 | A | Sidechain |
| 26 | BB | 1859 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 186 | G | Sidechain |
| 26 | BB | 1861 | G | Sidechain |
| 26 | BB | 1862 | G | Sidechain |
| 26 | BB | 1863 | G | Sidechain |
| 26 | BB | 1864 | U | Sidechain |
| 26 | BB | 1865 | U | Sidechain |
| 26 | BB | 1866 | A | Sidechain |
| 26 | BB | 1867 | G | Sidechain |
| 26 | BB | 1869 | G | Sidechain |
| 26 | BB | 187 | G | Sidechain |
| 26 | BB | 1872 | A | Sidechain |
| 26 | BB | 1873 | G | Sidechain |
| 26 | BB | 1875 | G | Sidechain |
| 26 | BB | 1878 | G | Sidechain |
| 26 | BB | 1879 | C | Sidechain |
| 26 | BB | 188 | G | Sidechain |
| 26 | BB | 1880 | U | Sidechain |
| 26 | BB | 1881 | C | Sidechain |
| 26 | BB | 1884 | G | Sidechain |
| 26 | BB | 1888 | G | Sidechain |
| 26 | BB | 1890 | A | Sidechain |
| 26 | BB | 1891 | G | Sidechain |
| 26 | BB | 1894 | C | Sidechain |
| 26 | BB | 1895 | C | Sidechain |
| 26 | BB | 1896 | G | Sidechain |
| 26 | BB | 1897 | G | Sidechain |
| 26 | BB | 190 | A | Sidechain |
| 26 | BB | 1900 | A | Sidechain |
| 26 | BB | 1902 | C | Sidechain |
| 26 | BB | 1903 | G | Sidechain |
| 26 | BB | 1904 | G | Sidechain |
| 26 | BB | 1905 | C | Sidechain |
| 26 | BB | 1907 | G | Sidechain |
| 26 | BB | 1909 | C | Sidechain |
| 26 | BB | 1910 | G | Sidechain |
| 26 | BB | 1912 | A | Sidechain |
| 26 | BB | 1913 | A | Sidechain |
| 26 | BB | 1918 | A | Sidechain |
| 26 | BB | 1919 | A | Sidechain |
| 26 | BB | 192 | C | Sidechain |
| 26 | BB | 1920 | C | Sidechain |
| 26 | BB | 1922 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1923 | U | Sidechain |
| 26 | BB | 1924 | C | Sidechain |
| 26 | BB | 1926 | U | Sidechain |
| 26 | BB | 1928 | A | Sidechain |
| 26 | BB | 1929 | G | Sidechain |
| 26 | BB | 1930 | G | Sidechain |
| 26 | BB | 1931 | U | Sidechain |
| 26 | BB | 1932 | A | Sidechain |
| 26 | BB | 1934 | C | Sidechain |
| 26 | BB | 1935 | G | Sidechain |
| 26 | BB | 1936 | A | Sidechain |
| 26 | BB | 1937 | A | Sidechain |
| 26 | BB | 194 | G | Sidechain |
| 26 | BB | 1943 | U | Sidechain |
| 26 | BB | 1945 | G | Sidechain |
| 26 | BB | 1946 | U | Sidechain |
| 26 | BB | 1947 | C | Sidechain |
| 26 | BB | 1948 | G | Sidechain |
| 26 | BB | 1949 | G | Sidechain |
| 26 | BB | 195 | A | Sidechain |
| 26 | BB | 1950 | G | Sidechain |
| 26 | BB | 1951 | U | Sidechain |
| 26 | BB | 1952 | A | Sidechain |
| 26 | BB | 1954 | G | Sidechain |
| 26 | BB | 1955 | U | Sidechain |
| 26 | BB | 1956 | U | Sidechain |
| 26 | BB | 1957 | C | Sidechain |
| 26 | BB | 1958 | C | Sidechain |
| 26 | BB | 1959 | G | Sidechain |
| 26 | BB | 1960 | A | Sidechain |
| 26 | BB | 1964 | G | Sidechain |
| 26 | BB | 1967 | C | Sidechain |
| 26 | BB | 1968 | G | Sidechain |
| 26 | BB | 1969 | A | Sidechain |
| 26 | BB | 1970 | A | Sidechain |
| 26 | BB | 1973 | G | Sidechain |
| 26 | BB | 1974 | C | Sidechain |
| 26 | BB | 1975 | G | Sidechain |
| 26 | BB | 1978 | A | Sidechain |
| 26 | BB | 1980 | G | Sidechain |
| 26 | BB | 1981 | A | Sidechain |
| 26 | BB | 1982 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 1984 | G | Sidechain |
| 26 | BB | 1989 | G | Sidechain |
| 26 | BB | 1992 | G | Sidechain |
| 26 | BB | 1993 | U | Sidechain |
| 26 | BB | 1994 | C | Sidechain |
| 26 | BB | 1997 | C | Sidechain |
| 26 | BB | 1999 | C | Sidechain |
| 26 | BB | 2 | G | Sidechain |
| 26 | BB | 20 | C | Sidechain |
| 26 | BB | 200 | U | Sidechain |
| 26 | BB | 2002 | G | Sidechain |
| 26 | BB | 2004 | G | Sidechain |
| 26 | BB | 2005 | A | Sidechain |
| 26 | BB | 2006 | C | Sidechain |
| 26 | BB | 2007 | U | Sidechain |
| 26 | BB | 2008 | C | Sidechain |
| 26 | BB | 201 | C | Sidechain |
| 26 | BB | 2010 | G | Sidechain |
| 26 | BB | 2011 | U | Sidechain |
| 26 | BB | 2012 | G | Sidechain |
| 26 | BB | 2013 | A | Sidechain |
| 26 | BB | 2015 | A | Sidechain |
| 26 | BB | 2016 | U | Sidechain |
| 26 | BB | 202 | U | Sidechain |
| 26 | BB | 2020 | A | Sidechain |
| 26 | BB | 2021 | C | Sidechain |
| 26 | BB | 2022 | U | Sidechain |
| 26 | BB | 2024 | G | Sidechain |
| 26 | BB | 2026 | U | Sidechain |
| 26 | BB | 2032 | G | Sidechain |
| 26 | BB | 2033 | A | Sidechain |
| 26 | BB | 2034 | U | Sidechain |
| 26 | BB | 2035 | G | Sidechain |
| 26 | BB | 2038 | G | Sidechain |
| 26 | BB | 2039 | U | Sidechain |
| 26 | BB | 204 | A | Sidechain |
| 26 | BB | 2040 | G | Sidechain |
| 26 | BB | 2041 | U | Sidechain |
| 26 | BB | 2043 | C | Sidechain |
| 26 | BB | 2045 | C | Sidechain |
| 26 | BB | 2046 | G | Sidechain |
| 26 | BB | 2047 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2048 | G | Sidechain |
| 26 | BB | 2049 | G | Sidechain |
| 26 | BB | 205 | G | Sidechain |
| 26 | BB | 2050 | C | Sidechain |
| 26 | BB | 2051 | A | Sidechain |
| 26 | BB | 2052 | A | Sidechain |
| 26 | BB | 2054 | A | Sidechain |
| 26 | BB | 2056 | G | Sidechain |
| 26 | BB | 2057 | G | Sidechain |
| 26 | BB | 2058 | A | Sidechain |
| 26 | BB | 2059 | A | Sidechain |
| 26 | BB | 2060 | A | Sidechain |
| 26 | BB | 2061 | G | Sidechain |
| 26 | BB | 2064 | C | Sidechain |
| 26 | BB | 2067 | G | Sidechain |
| 26 | BB | 207 | A | Sidechain |
| 26 | BB | 2070 | A | Sidechain |
| 26 | BB | 2071 | A | Sidechain |
| 26 | BB | 2072 | C | Sidechain |
| 26 | BB | 2074 | U | Sidechain |
| 26 | BB | 2076 | U | Sidechain |
| 26 | BB | 2077 | A | Sidechain |
| 26 | BB | 208 | C | Sidechain |
| 26 | BB | 2081 | U | Sidechain |
| 26 | BB | 2083 | G | Sidechain |
| 26 | BB | 2084 | C | Sidechain |
| 26 | BB | 2085 | U | Sidechain |
| 26 | BB | 2086 | U | Sidechain |
| 26 | BB | 2087 | G | Sidechain |
| 26 | BB | 2088 | A | Sidechain |
| 26 | BB | 2089 | C | Sidechain |
| 26 | BB | 2091 | C | Sidechain |
| 26 | BB | 2092 | U | Sidechain |
| 26 | BB | 2093 | G | Sidechain |
| 26 | BB | 2094 | A | Sidechain |
| 26 | BB | 2096 | C | Sidechain |
| 26 | BB | 2098 | U | Sidechain |
| 26 | BB | 2100 | G | Sidechain |
| 26 | BB | 2101 | A | Sidechain |
| 26 | BB | 2102 | G | Sidechain |
| 26 | BB | 2103 | C | Sidechain |
| 26 | BB | 2105 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2107 | G | Sidechain |
| 26 | BB | 2109 | U | Sidechain |
| 26 | BB | 2111 | U | Sidechain |
| 26 | BB | 2112 | G | Sidechain |
| 26 | BB | 2113 | U | Sidechain |
| 26 | BB | 2114 | A | Sidechain |
| 26 | BB | 2115 | G | Sidechain |
| 26 | BB | 2116 | G | Sidechain |
| 26 | BB | 2119 | A | Sidechain |
| 26 | BB | 2123 | G | Sidechain |
| 26 | BB | 2124 | G | Sidechain |
| 26 | BB | 2125 | G | Sidechain |
| 26 | BB | 2127 | G | Sidechain |
| 26 | BB | 213 | A | Sidechain |
| 26 | BB | 2130 | U | Sidechain |
| 26 | BB | 2131 | U | Sidechain |
| 26 | BB | 2133 | G | Sidechain |
| 26 | BB | 2136 | G | Sidechain |
| 26 | BB | 2138 | G | Sidechain |
| 26 | BB | 214 | G | Sidechain |
| 26 | BB | 2141 | G | Sidechain |
| 26 | BB | 2142 | A | Sidechain |
| 26 | BB | 2145 | C | Sidechain |
| 26 | BB | 2146 | C | Sidechain |
| 26 | BB | 2147 | A | Sidechain |
| 26 | BB | 2148 | G | Sidechain |
| 26 | BB | 215 | G | Sidechain |
| 26 | BB | 2151 | U | Sidechain |
| 26 | BB | 2152 | G | Sidechain |
| 26 | BB | 2153 | C | Sidechain |
| 26 | BB | 2156 | G | Sidechain |
| 26 | BB | 2157 | G | Sidechain |
| 26 | BB | 2158 | A | Sidechain |
| 26 | BB | 2159 | G | Sidechain |
| 26 | BB | 216 | A | Sidechain |
| 26 | BB | 2162 | G | Sidechain |
| 26 | BB | 2163 | A | Sidechain |
| 26 | BB | 2164 | C | Sidechain |
| 26 | BB | 2165 | C | Sidechain |
| 26 | BB | 2166 | U | Sidechain |
| 26 | BB | 2168 | G | Sidechain |
| 26 | BB | 2169 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2170 | A | Sidechain |
| 26 | BB | 2171 | A | Sidechain |
| 26 | BB | 2172 | U | Sidechain |
| 26 | BB | 2174 | C | Sidechain |
| 26 | BB | 2176 | A | Sidechain |
| 26 | BB | 2177 | C | Sidechain |
| 26 | BB | 2178 | C | Sidechain |
| 26 | BB | 2179 | C | Sidechain |
| 26 | BB | 218 | A | Sidechain |
| 26 | BB | 2180 | U | Sidechain |
| 26 | BB | 2182 | U | Sidechain |
| 26 | BB | 2183 | A | Sidechain |
| 26 | BB | 2184 | A | Sidechain |
| 26 | BB | 2185 | U | Sidechain |
| 26 | BB | 219 | A | Sidechain |
| 26 | BB | 2191 | A | Sidechain |
| 26 | BB | 2193 | G | Sidechain |
| 26 | BB | 2194 | U | Sidechain |
| 26 | BB | 2195 | U | Sidechain |
| 26 | BB | 2196 | C | Sidechain |
| 26 | BB | 2197 | U | Sidechain |
| 26 | BB | 2198 | A | Sidechain |
| 26 | BB | 22 | C | Sidechain |
| 26 | BB | 220 | G | Sidechain |
| 26 | BB | 2201 | G | Sidechain |
| 26 | BB | 2202 | U | Sidechain |
| 26 | BB | 2203 | U | Sidechain |
| 26 | BB | 2204 | G | Sidechain |
| 26 | BB | 2206 | C | Sidechain |
| 26 | BB | 2210 | U | Sidechain |
| 26 | BB | 2212 | A | Sidechain |
| 26 | BB | 2213 | U | Sidechain |
| 26 | BB | 2215 | C | Sidechain |
| 26 | BB | 2217 | G | Sidechain |
| 26 | BB | 2219 | U | Sidechain |
| 26 | BB | 222 | A | Sidechain |
| 26 | BB | 2221 | G | Sidechain |
| 26 | BB | 2228 | G | Sidechain |
| 26 | BB | 223 | A | Sidechain |
| 26 | BB | 2230 | G | Sidechain |
| 26 | BB | 2231 | U | Sidechain |
| 26 | BB | 2232 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2233 | U | Sidechain |
| 26 | BB | 2234 | G | Sidechain |
| 26 | BB | 2235 | G | Sidechain |
| 26 | BB | 2238 | G | Sidechain |
| 26 | BB | 2240 | U | Sidechain |
| 26 | BB | 2242 | G | Sidechain |
| 26 | BB | 2243 | U | Sidechain |
| 26 | BB | 2244 | U | Sidechain |
| 26 | BB | 2246 | G | Sidechain |
| 26 | BB | 2247 | A | Sidechain |
| 26 | BB | 2248 | C | Sidechain |
| 26 | BB | 2253 | G | Sidechain |
| 26 | BB | 2256 | G | Sidechain |
| 26 | BB | 2257 | U | Sidechain |
| 26 | BB | 226 | A | Sidechain |
| 26 | BB | 2260 | C | Sidechain |
| 26 | BB | 2262 | U | Sidechain |
| 26 | BB | 2263 | C | Sidechain |
| 26 | BB | 2266 | A | Sidechain |
| 26 | BB | 2267 | A | Sidechain |
| 26 | BB | 2268 | A | Sidechain |
| 26 | BB | 2269 | G | Sidechain |
| 26 | BB | 2270 | A | Sidechain |
| 26 | BB | 2271 | G | Sidechain |
| 26 | BB | 2273 | A | Sidechain |
| 26 | BB | 2274 | A | Sidechain |
| 26 | BB | 2276 | G | Sidechain |
| 26 | BB | 2279 | G | Sidechain |
| 26 | BB | 228 | C | Sidechain |
| 26 | BB | 2280 | G | Sidechain |
| 26 | BB | 2281 | A | Sidechain |
| 26 | BB | 2282 | G | Sidechain |
| 26 | BB | 2283 | C | Sidechain |
| 26 | BB | 2284 | A | Sidechain |
| 26 | BB | 2287 | A | Sidechain |
| 26 | BB | 2288 | A | Sidechain |
| 26 | BB | 229 | C | Sidechain |
| 26 | BB | 2290 | G | Sidechain |
| 26 | BB | 2294 | G | Sidechain |
| 26 | BB | 2295 | C | Sidechain |
| 26 | BB | 2296 | U | Sidechain |
| 26 | BB | 2297 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2299 | U | Sidechain |
| 26 | BB | 2303 | G | Sidechain |
| 26 | BB | 2304 | G | Sidechain |
| 26 | BB | 2306 | C | Sidechain |
| 26 | BB | 2308 | G | Sidechain |
| 26 | BB | 2309 | A | Sidechain |
| 26 | BB | 231 | A | Sidechain |
| 26 | BB | 2310 | C | Sidechain |
| 26 | BB | 2313 | C | Sidechain |
| 26 | BB | 2314 | A | Sidechain |
| 26 | BB | 2315 | G | Sidechain |
| 26 | BB | 2318 | G | Sidechain |
| 26 | BB | 232 | G | Sidechain |
| 26 | BB | 2321 | U | Sidechain |
| 26 | BB | 2324 | U | Sidechain |
| 26 | BB | 2325 | G | Sidechain |
| 26 | BB | 2327 | A | Sidechain |
| 26 | BB | 233 | A | Sidechain |
| 26 | BB | 2330 | G | Sidechain |
| 26 | BB | 2334 | U | Sidechain |
| 26 | BB | 2335 | A | Sidechain |
| 26 | BB | 2336 | A | Sidechain |
| 26 | BB | 2337 | G | Sidechain |
| 26 | BB | 2338 | C | Sidechain |
| 26 | BB | 2339 | C | Sidechain |
| 26 | BB | 2340 | A | Sidechain |
| 26 | BB | 2342 | C | Sidechain |
| 26 | BB | 2345 | G | Sidechain |
| 26 | BB | 2347 | C | Sidechain |
| 26 | BB | 2349 | G | Sidechain |
| 26 | BB | 235 | U | Sidechain |
| 26 | BB | 2350 | C | Sidechain |
| 26 | BB | 2353 | G | Sidechain |
| 26 | BB | 2355 | G | Sidechain |
| 26 | BB | 2356 | U | Sidechain |
| 26 | BB | 2357 | G | Sidechain |
| 26 | BB | 2358 | A | Sidechain |
| 26 | BB | 2361 | G | Sidechain |
| 26 | BB | 2363 | G | Sidechain |
| 26 | BB | 2365 | G | Sidechain |
| 26 | BB | 2367 | G | Sidechain |
| 26 | BB | 2368 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2369 | A | Sidechain |
| 26 | BB | 2370 | G | Sidechain |
| 26 | BB | 2371 | G | Sidechain |
| 26 | BB | 2374 | C | Sidechain |
| 26 | BB | 2375 | G | Sidechain |
| 26 | BB | 2376 | A | Sidechain |
| 26 | BB | 2379 | G | Sidechain |
| 26 | BB | 2381 | A | Sidechain |
| 26 | BB | 2382 | G | Sidechain |
| 26 | BB | 2383 | G | Sidechain |
| 26 | BB | 2384 | U | Sidechain |
| 26 | BB | 2386 | A | Sidechain |
| 26 | BB | 2387 | U | Sidechain |
| 26 | BB | 2388 | A | Sidechain |
| 26 | BB | 2389 | G | Sidechain |
| 26 | BB | 239 | C | Sidechain |
| 26 | BB | 2390 | U | Sidechain |
| 26 | BB | 2392 | A | Sidechain |
| 26 | BB | 2393 | U | Sidechain |
| 26 | BB | 2394 | C | Sidechain |
| 26 | BB | 2395 | C | Sidechain |
| 26 | BB | 2396 | G | Sidechain |
| 26 | BB | 2398 | U | Sidechain |
| 26 | BB | 2399 | G | Sidechain |
| 26 | BB | 24 | G | Sidechain |
| 26 | BB | 240 | C | Sidechain |
| 26 | BB | 2401 | U | Sidechain |
| 26 | BB | 2402 | U | Sidechain |
| 26 | BB | 2405 | G | Sidechain |
| 26 | BB | 2409 | G | Sidechain |
| 26 | BB | 241 | A | Sidechain |
| 26 | BB | 2411 | A | Sidechain |
| 26 | BB | 2412 | A | Sidechain |
| 26 | BB | 2413 | G | Sidechain |
| 26 | BB | 2414 | G | Sidechain |
| 26 | BB | 2415 | G | Sidechain |
| 26 | BB | 242 | G | Sidechain |
| 26 | BB | 2420 | C | Sidechain |
| 26 | BB | 2422 | C | Sidechain |
| 26 | BB | 2424 | C | Sidechain |
| 26 | BB | 2428 | G | Sidechain |
| 26 | BB | 2429 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 243 | U | Sidechain |
| 26 | BB | 2431 | U | Sidechain |
| 26 | BB | 2432 | A | Sidechain |
| 26 | BB | 2435 | A | Sidechain |
| 26 | BB | 2436 | G | Sidechain |
| 26 | BB | 2438 | U | Sidechain |
| 26 | BB | 2439 | A | Sidechain |
| 26 | BB | 2441 | U | Sidechain |
| 26 | BB | 2442 | C | Sidechain |
| 26 | BB | 2443 | C | Sidechain |
| 26 | BB | 2446 | G | Sidechain |
| 26 | BB | 2447 | G | Sidechain |
| 26 | BB | 2448 | A | Sidechain |
| 26 | BB | 245 | G | Sidechain |
| 26 | BB | 2451 | A | Sidechain |
| 26 | BB | 2452 | C | Sidechain |
| 26 | BB | 2454 | G | Sidechain |
| 26 | BB | 2456 | C | Sidechain |
| 26 | BB | 2458 | G | Sidechain |
| 26 | BB | 2461 | A | Sidechain |
| 26 | BB | 2462 | C | Sidechain |
| 26 | BB | 2463 | C | Sidechain |
| 26 | BB | 2464 | G | Sidechain |
| 26 | BB | 2469 | A | Sidechain |
| 26 | BB | 2472 | G | Sidechain |
| 26 | BB | 2473 | U | Sidechain |
| 26 | BB | 2474 | U | Sidechain |
| 26 | BB | 2475 | C | Sidechain |
| 26 | BB | 2477 | U | Sidechain |
| 26 | BB | 2478 | A | Sidechain |
| 26 | BB | 248 | G | Sidechain |
| 26 | BB | 2480 | C | Sidechain |
| 26 | BB | 2481 | G | Sidechain |
| 26 | BB | 2484 | G | Sidechain |
| 26 | BB | 2485 | G | Sidechain |
| 26 | BB | 2486 | C | Sidechain |
| 26 | BB | 2487 | G | Sidechain |
| 26 | BB | 2488 | G | Sidechain |
| 26 | BB | 2489 | U | Sidechain |
| 26 | BB | 249 | C | Sidechain |
| 26 | BB | 2490 | G | Sidechain |
| 26 | BB | 2491 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2493 | U | Sidechain |
| 26 | BB | 2494 | G | Sidechain |
| 26 | BB | 2495 | G | Sidechain |
| 26 | BB | 2496 | C | Sidechain |
| 26 | BB | 2497 | A | Sidechain |
| 26 | BB | 2500 | U | Sidechain |
| 26 | BB | 2501 | C | Sidechain |
| 26 | BB | 2505 | G | Sidechain |
| 26 | BB | 2507 | C | Sidechain |
| 26 | BB | 2508 | G | Sidechain |
| 26 | BB | 2509 | G | Sidechain |
| 26 | BB | 2511 | U | Sidechain |
| 26 | BB | 2512 | C | Sidechain |
| 26 | BB | 2517 | C | Sidechain |
| 26 | BB | 2519 | U | Sidechain |
| 26 | BB | 2520 | C | Sidechain |
| 26 | BB | 2521 | C | Sidechain |
| 26 | BB | 2522 | U | Sidechain |
| 26 | BB | 2523 | G | Sidechain |
| 26 | BB | 2524 | G | Sidechain |
| 26 | BB | 2525 | G | Sidechain |
| 26 | BB | 2526 | G | Sidechain |
| 26 | BB | 2527 | C | Sidechain |
| 26 | BB | 2528 | U | Sidechain |
| 26 | BB | 2529 | G | Sidechain |
| 26 | BB | 254 | G | Sidechain |
| 26 | BB | 2541 | A | Sidechain |
| 26 | BB | 2542 | A | Sidechain |
| 26 | BB | 2544 | G | Sidechain |
| 26 | BB | 2545 | G | Sidechain |
| 26 | BB | 2546 | U | Sidechain |
| 26 | BB | 2547 | A | Sidechain |
| 26 | BB | 2548 | U | Sidechain |
| 26 | BB | 2549 | G | Sidechain |
| 26 | BB | 2550 | G | Sidechain |
| 26 | BB | 2554 | U | Sidechain |
| 26 | BB | 2557 | G | Sidechain |
| 26 | BB | 2560 | A | Sidechain |
| 26 | BB | 2561 | U | Sidechain |
| 26 | BB | 2562 | U | Sidechain |
| 26 | BB | 2567 | G | Sidechain |
| 26 | BB | 2569 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 257 | C | Sidechain |
| 26 | BB | 2571 | U | Sidechain |
| 26 | BB | 2572 | A | Sidechain |
| 26 | BB | 2573 | C | Sidechain |
| 26 | BB | 2576 | G | Sidechain |
| 26 | BB | 2577 | A | Sidechain |
| 26 | BB | 2578 | G | Sidechain |
| 26 | BB | 2579 | C | Sidechain |
| 26 | BB | 258 | G | Sidechain |
| 26 | BB | 2581 | G | Sidechain |
| 26 | BB | 2582 | G | Sidechain |
| 26 | BB | 2583 | G | Sidechain |
| 26 | BB | 2584 | U | Sidechain |
| 26 | BB | 2585 | U | Sidechain |
| 26 | BB | 2586 | U | Sidechain |
| 26 | BB | 2589 | A | Sidechain |
| 26 | BB | 259 | G | Sidechain |
| 26 | BB | 2590 | A | Sidechain |
| 26 | BB | 2591 | C | Sidechain |
| 26 | BB | 2592 | G | Sidechain |
| 26 | BB | 2594 | C | Sidechain |
| 26 | BB | 2595 | G | Sidechain |
| 26 | BB | 2596 | U | Sidechain |
| 26 | BB | 2597 | G | Sidechain |
| 26 | BB | 2598 | A | Sidechain |
| 26 | BB | 2599 | G | Sidechain |
| 26 | BB | 260 | G | Sidechain |
| 26 | BB | 2600 | A | Sidechain |
| 26 | BB | 2601 | C | Sidechain |
| 26 | BB | 2603 | G | Sidechain |
| 26 | BB | 2604 | U | Sidechain |
| 26 | BB | 2607 | G | Sidechain |
| 26 | BB | 2608 | G | Sidechain |
| 26 | BB | 261 | G | Sidechain |
| 26 | BB | 2610 | C | Sidechain |
| 26 | BB | 2612 | C | Sidechain |
| 26 | BB | 2613 | U | Sidechain |
| 26 | BB | 2616 | C | Sidechain |
| 26 | BB | 2619 | C | Sidechain |
| 26 | BB | 262 | A | Sidechain |
| 26 | BB | 2621 | G | Sidechain |
| 26 | BB | 2624 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2625 | G | Sidechain |
| 26 | BB | 2626 | C | Sidechain |
| 26 | BB | 2628 | C | Sidechain |
| 26 | BB | 263 | G | Sidechain |
| 26 | BB | 2631 | G | Sidechain |
| 26 | BB | 2633 | G | Sidechain |
| 26 | BB | 2637 | U | Sidechain |
| 26 | BB | 264 | C | Sidechain |
| 26 | BB | 2641 | G | Sidechain |
| 26 | BB | 2643 | G | Sidechain |
| 26 | BB | 2644 | G | Sidechain |
| 26 | BB | 2646 | C | Sidechain |
| 26 | BB | 2647 | U | Sidechain |
| 26 | BB | 2648 | G | Sidechain |
| 26 | BB | 2650 | U | Sidechain |
| 26 | BB | 2653 | U | Sidechain |
| 26 | BB | 2654 | A | Sidechain |
| 26 | BB | 2655 | G | Sidechain |
| 26 | BB | 2658 | C | Sidechain |
| 26 | BB | 2659 | G | Sidechain |
| 26 | BB | 266 | G | Sidechain |
| 26 | BB | 2661 | G | Sidechain |
| 26 | BB | 2662 | A | Sidechain |
| 26 | BB | 2665 | A | Sidechain |
| 26 | BB | 2667 | C | Sidechain |
| 26 | BB | 267 | C | Sidechain |
| 26 | BB | 2670 | A | Sidechain |
| 26 | BB | 2671 | G | Sidechain |
| 26 | BB | 2672 | U | Sidechain |
| 26 | BB | 2673 | G | Sidechain |
| 26 | BB | 2674 | G | Sidechain |
| 26 | BB | 268 | C | Sidechain |
| 26 | BB | 2680 | U | Sidechain |
| 26 | BB | 2681 | C | Sidechain |
| 26 | BB | 2682 | A | Sidechain |
| 26 | BB | 2686 | G | Sidechain |
| 26 | BB | 2687 | U | Sidechain |
| 26 | BB | 2689 | U | Sidechain |
| 26 | BB | 2692 | G | Sidechain |
| 26 | BB | 2694 | G | Sidechain |
| 26 | BB | 2697 | G | Sidechain |
| 26 | BB | 2698 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2699 | C | Sidechain |
| 26 | BB | 270 | A | Sidechain |
| 26 | BB | 2702 | G | Sidechain |
| 26 | BB | 2703 | C | Sidechain |
| 26 | BB | 2704 | C | Sidechain |
| 26 | BB | 2705 | A | Sidechain |
| 26 | BB | 2706 | A | Sidechain |
| 26 | BB | 2707 | U | Sidechain |
| 26 | BB | 2708 | G | Sidechain |
| 26 | BB | 271 | G | Sidechain |
| 26 | BB | 2712 | C | Sidechain |
| 26 | BB | 2713 | U | Sidechain |
| 26 | BB | 2714 | G | Sidechain |
| 26 | BB | 2719 | G | Sidechain |
| 26 | BB | 2720 | U | Sidechain |
| 26 | BB | 2721 | A | Sidechain |
| 26 | BB | 2723 | C | Sidechain |
| 26 | BB | 2724 | U | Sidechain |
| 26 | BB | 2725 | A | Sidechain |
| 26 | BB | 2726 | A | Sidechain |
| 26 | BB | 2727 | A | Sidechain |
| 26 | BB | 2728 | U | Sidechain |
| 26 | BB | 2729 | G | Sidechain |
| 26 | BB | 273 | G | Sidechain |
| 26 | BB | 2731 | G | Sidechain |
| 26 | BB | 2732 | G | Sidechain |
| 26 | BB | 2733 | A | Sidechain |
| 26 | BB | 2734 | A | Sidechain |
| 26 | BB | 2737 | G | Sidechain |
| 26 | BB | 2739 | U | Sidechain |
| 26 | BB | 2740 | A | Sidechain |
| 26 | BB | 2741 | A | Sidechain |
| 26 | BB | 2742 | G | Sidechain |
| 26 | BB | 2743 | U | Sidechain |
| 26 | BB | 2744 | G | Sidechain |
| 26 | BB | 2745 | C | Sidechain |
| 26 | BB | 2747 | G | Sidechain |
| 26 | BB | 2748 | A | Sidechain |
| 26 | BB | 2749 | A | Sidechain |
| 26 | BB | 2751 | G | Sidechain |
| 26 | BB | 2752 | C | Sidechain |
| 26 | BB | 2754 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2756 | U | Sidechain |
| 26 | BB | 276 | U | Sidechain |
| 26 | BB | 2760 | C | Sidechain |
| 26 | BB | 2763 | G | Sidechain |
| 26 | BB | 2765 | A | Sidechain |
| 26 | BB | 2766 | A | Sidechain |
| 26 | BB | 2767 | C | Sidechain |
| 26 | BB | 2768 | U | Sidechain |
| 26 | BB | 2769 | U | Sidechain |
| 26 | BB | 2771 | C | Sidechain |
| 26 | BB | 2772 | C | Sidechain |
| 26 | BB | 2773 | C | Sidechain |
| 26 | BB | 2775 | G | Sidechain |
| 26 | BB | 2777 | G | Sidechain |
| 26 | BB | 2778 | A | Sidechain |
| 26 | BB | 278 | A | Sidechain |
| 26 | BB | 2780 | G | Sidechain |
| 26 | BB | 2781 | A | Sidechain |
| 26 | BB | 2784 | U | Sidechain |
| 26 | BB | 2789 | C | Sidechain |
| 26 | BB | 279 | A | Sidechain |
| 26 | BB | 2793 | C | Sidechain |
| 26 | BB | 2794 | C | Sidechain |
| 26 | BB | 2798 | U | Sidechain |
| 26 | BB | 2801 | G | Sidechain |
| 26 | BB | 2803 | G | Sidechain |
| 26 | BB | 2804 | U | Sidechain |
| 26 | BB | 2805 | C | Sidechain |
| 26 | BB | 2807 | U | Sidechain |
| 26 | BB | 2808 | G | Sidechain |
| 26 | BB | 2809 | A | Sidechain |
| 26 | BB | 281 | C | Sidechain |
| 26 | BB | 2810 | A | Sidechain |
| 26 | BB | 2811 | G | Sidechain |
| 26 | BB | 2812 | G | Sidechain |
| 26 | BB | 2816 | G | Sidechain |
| 26 | BB | 2822 | G | Sidechain |
| 26 | BB | 2824 | C | Sidechain |
| 26 | BB | 2825 | G | Sidechain |
| 26 | BB | 283 | G | Sidechain |
| 26 | BB | 2830 | C | Sidechain |
| 26 | BB | 2833 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2835 | A | Sidechain |
| 26 | BB | 2836 | U | Sidechain |
| 26 | BB | 2837 | A | Sidechain |
| 26 | BB | 2838 | G | Sidechain |
| 26 | BB | 2841 | C | Sidechain |
| 26 | BB | 2842 | G | Sidechain |
| 26 | BB | 2844 | G | Sidechain |
| 26 | BB | 2845 | U | Sidechain |
| 26 | BB | 2846 | G | Sidechain |
| 26 | BB | 2847 | U | Sidechain |
| 26 | BB | 2848 | G | Sidechain |
| 26 | BB | 2849 | U | Sidechain |
| 26 | BB | 285 | G | Sidechain |
| 26 | BB | 2852 | G | Sidechain |
| 26 | BB | 2853 | C | Sidechain |
| 26 | BB | 2854 | G | Sidechain |
| 26 | BB | 2857 | G | Sidechain |
| 26 | BB | 2863 | C | Sidechain |
| 26 | BB | 2864 | G | Sidechain |
| 26 | BB | 2865 | U | Sidechain |
| 26 | BB | 2866 | U | Sidechain |
| 26 | BB | 2867 | G | Sidechain |
| 26 | BB | 2868 | A | Sidechain |
| 26 | BB | 2869 | G | Sidechain |
| 26 | BB | 2871 | U | Sidechain |
| 26 | BB | 2874 | C | Sidechain |
| 26 | BB | 2877 | G | Sidechain |
| 26 | BB | 2879 | A | Sidechain |
| 26 | BB | 288 | U | Sidechain |
| 26 | BB | 2880 | C | Sidechain |
| 26 | BB | 2882 | A | Sidechain |
| 26 | BB | 2884 | U | Sidechain |
| 26 | BB | 2885 | G | Sidechain |
| 26 | BB | 2886 | A | Sidechain |
| 26 | BB | 2889 | C | Sidechain |
| 26 | BB | 289 | G | Sidechain |
| 26 | BB | 2890 | G | Sidechain |
| 26 | BB | 2891 | U | Sidechain |
| 26 | BB | 2892 | G | Sidechain |
| 26 | BB | 2894 | G | Sidechain |
| 26 | BB | 2895 | G | Sidechain |
| 26 | BB | 2897 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 2898 | U | Sidechain |
| 26 | BB | 2901 | C | Sidechain |
| 26 | BB | 2902 | C | Sidechain |
| 26 | BB | 2903 | U | Sidechain |
| 26 | BB | 291 | G | Sidechain |
| 26 | BB | 292 | U | Sidechain |
| 26 | BB | 294 | A | Sidechain |
| 26 | BB | 295 | G | Sidechain |
| 26 | BB | 297 | G | Sidechain |
| 26 | BB | 298 | G | Sidechain |
| 26 | BB | 30 | G | Sidechain |
| 26 | BB | 300 | A | Sidechain |
| 26 | BB | 301 | G | Sidechain |
| 26 | BB | 306 | U | Sidechain |
| 26 | BB | 307 | G | Sidechain |
| 26 | BB | 308 | G | Sidechain |
| 26 | BB | 311 | A | Sidechain |
| 26 | BB | 312 | G | Sidechain |
| 26 | BB | 313 | G | Sidechain |
| 26 | BB | 315 | G | Sidechain |
| 26 | BB | 317 | G | Sidechain |
| 26 | BB | 318 | C | Sidechain |
| 26 | BB | 32 | C | Sidechain |
| 26 | BB | 320 | A | Sidechain |
| 26 | BB | 321 | U | Sidechain |
| 26 | BB | 322 | A | Sidechain |
| 26 | BB | 325 | G | Sidechain |
| 26 | BB | 327 | G | Sidechain |
| 26 | BB | 328 | U | Sidechain |
| 26 | BB | 329 | G | Sidechain |
| 26 | BB | 33 | C | Sidechain |
| 26 | BB | 330 | A | Sidechain |
| 26 | BB | 331 | C | Sidechain |
| 26 | BB | 332 | A | Sidechain |
| 26 | BB | 333 | G | Sidechain |
| 26 | BB | 336 | C | Sidechain |
| 26 | BB | 340 | A | Sidechain |
| 26 | BB | 341 | C | Sidechain |
| 26 | BB | 343 | C | Sidechain |
| 26 | BB | 346 | A | Sidechain |
| 26 | BB | 35 | G | Sidechain |
| 26 | BB | 350 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 354 | A | Sidechain |
| 26 | BB | 356 | G | Sidechain |
| 26 | BB | 358 | U | Sidechain |
| 26 | BB | 359 | G | Sidechain |
| 26 | BB | 362 | A | Sidechain |
| 26 | BB | 363 | G | Sidechain |
| 26 | BB | 364 | C | Sidechain |
| 26 | BB | 366 | C | Sidechain |
| 26 | BB | 367 | G | Sidechain |
| 26 | BB | 368 | A | Sidechain |
| 26 | BB | 37 | C | Sidechain |
| 26 | BB | 370 | G | Sidechain |
| 26 | BB | 372 | G | Sidechain |
| 26 | BB | 373 | U | Sidechain |
| 26 | BB | 374 | A | Sidechain |
| 26 | BB | 375 | G | Sidechain |
| 26 | BB | 376 | G | Sidechain |
| 26 | BB | 380 | G | Sidechain |
| 26 | BB | 386 | G | Sidechain |
| 26 | BB | 388 | G | Sidechain |
| 26 | BB | 389 | G | Sidechain |
| 26 | BB | 39 | G | Sidechain |
| 26 | BB | 390 | U | Sidechain |
| 26 | BB | 391 | A | Sidechain |
| 26 | BB | 392 | U | Sidechain |
| 26 | BB | 393 | C | Sidechain |
| 26 | BB | 394 | C | Sidechain |
| 26 | BB | 395 | U | Sidechain |
| 26 | BB | 396 | G | Sidechain |
| 26 | BB | 398 | C | Sidechain |
| 26 | BB | 399 | U | Sidechain |
| 26 | BB | 4 | U | Sidechain |
| 26 | BB | 400 | G | Sidechain |
| 26 | BB | 401 | A | Sidechain |
| 26 | BB | 404 | A | Sidechain |
| 26 | BB | 405 | U | Sidechain |
| 26 | BB | 406 | G | Sidechain |
| 26 | BB | 407 | G | Sidechain |
| 26 | BB | 41 | C | Sidechain |
| 26 | BB | 410 | G | Sidechain |
| 26 | BB | 411 | G | Sidechain |
| 26 | BB | 414 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 416 | U | Sidechain |
| 26 | BB | 42 | A | Sidechain |
| 26 | BB | 421 | C | Sidechain |
| 26 | BB | 423 | A | Sidechain |
| 26 | BB | 424 | G | Sidechain |
| 26 | BB | 425 | G | Sidechain |
| 26 | BB | 43 | G | Sidechain |
| 26 | BB | 430 | A | Sidechain |
| 26 | BB | 436 | C | Sidechain |
| 26 | BB | 438 | G | Sidechain |
| 26 | BB | 44 | A | Sidechain |
| 26 | BB | 441 | U | Sidechain |
| 26 | BB | 442 | G | Sidechain |
| 26 | BB | 443 | A | Sidechain |
| 26 | BB | 444 | C | Sidechain |
| 26 | BB | 445 | C | Sidechain |
| 26 | BB | 446 | G | Sidechain |
| 26 | BB | 447 | A | Sidechain |
| 26 | BB | 448 | U | Sidechain |
| 26 | BB | 450 | G | Sidechain |
| 26 | BB | 451 | U | Sidechain |
| 26 | BB | 458 | G | Sidechain |
| 26 | BB | 459 | U | Sidechain |
| 26 | BB | 46 | G | Sidechain |
| 26 | BB | 463 | G | Sidechain |
| 26 | BB | 464 | U | Sidechain |
| 26 | BB | 466 | A | Sidechain |
| 26 | BB | 467 | G | Sidechain |
| 26 | BB | 468 | G | Sidechain |
| 26 | BB | 470 | A | Sidechain |
| 26 | BB | 473 | G | Sidechain |
| 26 | BB | 474 | G | Sidechain |
| 26 | BB | 476 | G | Sidechain |
| 26 | BB | 477 | A | Sidechain |
| 26 | BB | 479 | A | Sidechain |
| 26 | BB | 48 | G | Sidechain |
| 26 | BB | 480 | A | Sidechain |
| 26 | BB | 481 | G | Sidechain |
| 26 | BB | 485 | C | Sidechain |
| 26 | BB | 488 | G | Sidechain |
| 26 | BB | 489 | G | Sidechain |
| 26 | BB | 49 | A | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 490 | C | Sidechain |
| 26 | BB | 491 | G | Sidechain |
| 26 | BB | 492 | A | Sidechain |
| 26 | BB | 493 | G | Sidechain |
| 26 | BB | 494 | G | Sidechain |
| 26 | BB | 495 | G | Sidechain |
| 26 | BB | 496 | G | Sidechain |
| 26 | BB | 498 | G | Sidechain |
| 26 | BB | 499 | U | Sidechain |
| 26 | BB | 5 | A | Sidechain |
| 26 | BB | 501 | A | Sidechain |
| 26 | BB | 504 | A | Sidechain |
| 26 | BB | 506 | G | Sidechain |
| 26 | BB | 507 | A | Sidechain |
| 26 | BB | 509 | C | Sidechain |
| 26 | BB | 51 | G | Sidechain |
| 26 | BB | 510 | C | Sidechain |
| 26 | BB | 511 | U | Sidechain |
| 26 | BB | 512 | G | Sidechain |
| 26 | BB | 515 | A | Sidechain |
| 26 | BB | 518 | G | Sidechain |
| 26 | BB | 519 | U | Sidechain |
| 26 | BB | 52 | A | Sidechain |
| 26 | BB | 523 | C | Sidechain |
| 26 | BB | 524 | G | Sidechain |
| 26 | BB | 527 | C | Sidechain |
| 26 | BB | 528 | A | Sidechain |
| 26 | BB | 529 | A | Sidechain |
| 26 | BB | 530 | G | Sidechain |
| 26 | BB | 531 | C | Sidechain |
| 26 | BB | 532 | A | Sidechain |
| 26 | BB | 533 | G | Sidechain |
| 26 | BB | 534 | U | Sidechain |
| 26 | BB | 535 | G | Sidechain |
| 26 | BB | 536 | G | Sidechain |
| 26 | BB | 538 | A | Sidechain |
| 26 | BB | 54 | G | Sidechain |
| 26 | BB | 542 | C | Sidechain |
| 26 | BB | 543 | G | Sidechain |
| 26 | BB | 545 | U | Sidechain |
| 26 | BB | 546 | U | Sidechain |
| 26 | BB | 548 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 550 | C | Sidechain |
| 26 | BB | 551 | G | Sidechain |
| 26 | BB | 553 | G | Sidechain |
| 26 | BB | 554 | U | Sidechain |
| 26 | BB | 555 | G | Sidechain |
| 26 | BB | 556 | A | Sidechain |
| 26 | BB | 558 | U | Sidechain |
| 26 | BB | 56 | A | Sidechain |
| 26 | BB | 561 | G | Sidechain |
| 26 | BB | 564 | C | Sidechain |
| 26 | BB | 566 | U | Sidechain |
| 26 | BB | 568 | U | Sidechain |
| 26 | BB | 573 | U | Sidechain |
| 26 | BB | 574 | A | Sidechain |
| 26 | BB | 575 | A | Sidechain |
| 26 | BB | 576 | U | Sidechain |
| 26 | BB | 577 | G | Sidechain |
| 26 | BB | 579 | G | Sidechain |
| 26 | BB | 58 | G | Sidechain |
| 26 | BB | 580 | U | Sidechain |
| 26 | BB | 582 | A | Sidechain |
| 26 | BB | 583 | G | Sidechain |
| 26 | BB | 585 | G | Sidechain |
| 26 | BB | 587 | C | Sidechain |
| 26 | BB | 589 | U | Sidechain |
| 26 | BB | 590 | A | Sidechain |
| 26 | BB | 593 | U | Sidechain |
| 26 | BB | 596 | U | Sidechain |
| 26 | BB | 597 | G | Sidechain |
| 26 | BB | 6 | A | Sidechain |
| 26 | BB | 60 | G | Sidechain |
| 26 | BB | 601 | C | Sidechain |
| 26 | BB | 602 | A | Sidechain |
| 26 | BB | 605 | G | Sidechain |
| 26 | BB | 606 | U | Sidechain |
| 26 | BB | 607 | U | Sidechain |
| 26 | BB | 609 | A | Sidechain |
| 26 | BB | 610 | C | Sidechain |
| 26 | BB | 611 | C | Sidechain |
| 26 | BB | 612 | G | Sidechain |
| 26 | BB | 614 | A | Sidechain |
| 26 | BB | 615 | U | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 616 | A | Sidechain |
| 26 | BB | 617 | G | Sidechain |
| 26 | BB | 618 | G | Sidechain |
| 26 | BB | 62 | U | Sidechain |
| 26 | BB | 620 | G | Sidechain |
| 26 | BB | 621 | A | Sidechain |
| 26 | BB | 622 | G | Sidechain |
| 26 | BB | 624 | C | Sidechain |
| 26 | BB | 625 | G | Sidechain |
| 26 | BB | 628 | G | Sidechain |
| 26 | BB | 629 | G | Sidechain |
| 26 | BB | 631 | A | Sidechain |
| 26 | BB | 636 | G | Sidechain |
| 26 | BB | 637 | A | Sidechain |
| 26 | BB | 638 | G | Sidechain |
| 26 | BB | 639 | U | Sidechain |
| 26 | BB | 64 | A | Sidechain |
| 26 | BB | 640 | C | Sidechain |
| 26 | BB | 641 | U | Sidechain |
| 26 | BB | 642 | U | Sidechain |
| 26 | BB | 643 | A | Sidechain |
| 26 | BB | 645 | C | Sidechain |
| 26 | BB | 648 | G | Sidechain |
| 26 | BB | 650 | C | Sidechain |
| 26 | BB | 651 | G | Sidechain |
| 26 | BB | 653 | U | Sidechain |
| 26 | BB | 654 | A | Sidechain |
| 26 | BB | 655 | A | Sidechain |
| 26 | BB | 657 | U | Sidechain |
| 26 | BB | 658 | U | Sidechain |
| 26 | BB | 659 | G | Sidechain |
| 26 | BB | 66 | C | Sidechain |
| 26 | BB | 662 | G | Sidechain |
| 26 | BB | 663 | G | Sidechain |
| 26 | BB | 665 | U | Sidechain |
| 26 | BB | 668 | A | Sidechain |
| 26 | BB | 669 | G | Sidechain |
| 26 | BB | 67 | U | Sidechain |
| 26 | BB | 670 | A | Sidechain |
| 26 | BB | 671 | C | Sidechain |
| 26 | BB | 672 | C | Sidechain |
| 26 | BB | 673 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 674 | G | Sidechain |
| 26 | BB | 675 | A | Sidechain |
| 26 | BB | 676 | A | Sidechain |
| 26 | BB | 68 | G | Sidechain |
| 26 | BB | 682 | G | Sidechain |
| 26 | BB | 683 | U | Sidechain |
| 26 | BB | 684 | G | Sidechain |
| 26 | BB | 685 | A | Sidechain |
| 26 | BB | 686 | U | Sidechain |
| 26 | BB | 687 | C | Sidechain |
| 26 | BB | 688 | U | Sidechain |
| 26 | BB | 69 | C | Sidechain |
| 26 | BB | 690 | G | Sidechain |
| 26 | BB | 694 | U | Sidechain |
| 26 | BB | 695 | G | Sidechain |
| 26 | BB | 696 | G | Sidechain |
| 26 | BB | 698 | C | Sidechain |
| 26 | BB | 699 | A | Sidechain |
| 26 | BB | 7 | G | Sidechain |
| 26 | BB | 70 | G | Sidechain |
| 26 | BB | 700 | G | Sidechain |
| 26 | BB | 701 | G | Sidechain |
| 26 | BB | 703 | U | Sidechain |
| 26 | BB | 704 | G | Sidechain |
| 26 | BB | 706 | A | Sidechain |
| 26 | BB | 707 | G | Sidechain |
| 26 | BB | 708 | G | Sidechain |
| 26 | BB | 709 | U | Sidechain |
| 26 | BB | 71 | A | Sidechain |
| 26 | BB | 710 | U | Sidechain |
| 26 | BB | 711 | G | Sidechain |
| 26 | BB | 712 | G | Sidechain |
| 26 | BB | 716 | A | Sidechain |
| 26 | BB | 717 | C | Sidechain |
| 26 | BB | 718 | A | Sidechain |
| 26 | BB | 719 | C | Sidechain |
| 26 | BB | 72 | U | Sidechain |
| 26 | BB | 720 | U | Sidechain |
| 26 | BB | 721 | A | Sidechain |
| 26 | BB | 722 | A | Sidechain |
| 26 | BB | 725 | G | Sidechain |
| 26 | BB | 726 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 728 | G | Sidechain |
| 26 | BB | 729 | G | Sidechain |
| 26 | BB | 730 | A | Sidechain |
| 26 | BB | 733 | G | Sidechain |
| 26 | BB | 735 | A | Sidechain |
| 26 | BB | 736 | C | Sidechain |
| 26 | BB | 737 | C | Sidechain |
| 26 | BB | 738 | G | Sidechain |
| 26 | BB | 739 | A | Sidechain |
| 26 | BB | 740 | C | Sidechain |
| 26 | BB | 741 | U | Sidechain |
| 26 | BB | 744 | U | Sidechain |
| 26 | BB | 748 | G | Sidechain |
| 26 | BB | 75 | G | Sidechain |
| 26 | BB | 752 | A | Sidechain |
| 26 | BB | 754 | U | Sidechain |
| 26 | BB | 758 | C | Sidechain |
| 26 | BB | 759 | G | Sidechain |
| 26 | BB | 76 | C | Sidechain |
| 26 | BB | 762 | U | Sidechain |
| 26 | BB | 763 | G | Sidechain |
| 26 | BB | 767 | U | Sidechain |
| 26 | BB | 768 | G | Sidechain |
| 26 | BB | 77 | G | Sidechain |
| 26 | BB | 771 | G | Sidechain |
| 26 | BB | 774 | G | Sidechain |
| 26 | BB | 775 | G | Sidechain |
| 26 | BB | 776 | G | Sidechain |
| 26 | BB | 777 | G | Sidechain |
| 26 | BB | 778 | G | Sidechain |
| 26 | BB | 779 | U | Sidechain |
| 26 | BB | 78 | U | Sidechain |
| 26 | BB | 780 | G | Sidechain |
| 26 | BB | 781 | A | Sidechain |
| 26 | BB | 783 | A | Sidechain |
| 26 | BB | 784 | G | Sidechain |
| 26 | BB | 786 | C | Sidechain |
| 26 | BB | 793 | A | Sidechain |
| 26 | BB | 794 | A | Sidechain |
| 26 | BB | 796 | C | Sidechain |
| 26 | BB | 797 | G | Sidechain |
| 26 | BB | 8 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 800 | A | Sidechain |
| 26 | BB | 801 | G | Sidechain |
| 26 | BB | 802 | A | Sidechain |
| 26 | BB | 803 | U | Sidechain |
| 26 | BB | 804 | A | Sidechain |
| 26 | BB | 805 | G | Sidechain |
| 26 | BB | 806 | C | Sidechain |
| 26 | BB | 808 | G | Sidechain |
| 26 | BB | 81 | G | Sidechain |
| 26 | BB | 810 | U | Sidechain |
| 26 | BB | 811 | U | Sidechain |
| 26 | BB | 814 | C | Sidechain |
| 26 | BB | 815 | C | Sidechain |
| 26 | BB | 816 | C | Sidechain |
| 26 | BB | 818 | G | Sidechain |
| 26 | BB | 819 | A | Sidechain |
| 26 | BB | 82 | U | Sidechain |
| 26 | BB | 820 | A | Sidechain |
| 26 | BB | 822 | G | Sidechain |
| 26 | BB | 823 | C | Sidechain |
| 26 | BB | 825 | A | Sidechain |
| 26 | BB | 826 | U | Sidechain |
| 26 | BB | 827 | U | Sidechain |
| 26 | BB | 828 | U | Sidechain |
| 26 | BB | 829 | A | Sidechain |
| 26 | BB | 83 | A | Sidechain |
| 26 | BB | 831 | G | Sidechain |
| 26 | BB | 832 | U | Sidechain |
| 26 | BB | 834 | G | Sidechain |
| 26 | BB | 835 | C | Sidechain |
| 26 | BB | 838 | C | Sidechain |
| 26 | BB | 840 | C | Sidechain |
| 26 | BB | 841 | G | Sidechain |
| 26 | BB | 843 | G | Sidechain |
| 26 | BB | 844 | A | Sidechain |
| 26 | BB | 845 | A | Sidechain |
| 26 | BB | 847 | U | Sidechain |
| 26 | BB | 85 | G | Sidechain |
| 26 | BB | 850 | U | Sidechain |
| 26 | BB | 852 | U | Sidechain |
| 26 | BB | 854 | C | Sidechain |
| 26 | BB | 857 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 858 | G | Sidechain |
| 26 | BB | 859 | G | Sidechain |
| 26 | BB | 86 | G | Sidechain |
| 26 | BB | 860 | U | Sidechain |
| 26 | BB | 862 | G | Sidechain |
| 26 | BB | 864 | G | Sidechain |
| 26 | BB | 866 | A | Sidechain |
| 26 | BB | 869 | G | Sidechain |
| 26 | BB | 87 | U | Sidechain |
| 26 | BB | 870 | U | Sidechain |
| 26 | BB | 871 | U | Sidechain |
| 26 | BB | 872 | U | Sidechain |
| 26 | BB | 874 | G | Sidechain |
| 26 | BB | 875 | G | Sidechain |
| 26 | BB | 876 | C | Sidechain |
| 26 | BB | 877 | A | Sidechain |
| 26 | BB | 88 | G | Sidechain |
| 26 | BB | 881 | G | Sidechain |
| 26 | BB | 883 | G | Sidechain |
| 26 | BB | 884 | U | Sidechain |
| 26 | BB | 889 | C | Sidechain |
| 26 | BB | 89 | A | Sidechain |
| 26 | BB | 890 | C | Sidechain |
| 26 | BB | 891 | G | Sidechain |
| 26 | BB | 892 | A | Sidechain |
| 26 | BB | 893 | C | Sidechain |
| 26 | BB | 894 | U | Sidechain |
| 26 | BB | 895 | U | Sidechain |
| 26 | BB | 896 | A | Sidechain |
| 26 | BB | 897 | C | Sidechain |
| 26 | BB | 898 | C | Sidechain |
| 26 | BB | 899 | A | Sidechain |
| 26 | BB | 9 | G | Sidechain |
| 26 | BB | 900 | A | Sidechain |
| 26 | BB | 901 | C | Sidechain |
| 26 | BB | 902 | C | Sidechain |
| 26 | BB | 904 | G | Sidechain |
| 26 | BB | 905 | A | Sidechain |
| 26 | BB | 907 | G | Sidechain |
| 26 | BB | 909 | A | Sidechain |
| 26 | BB | 910 | A | Sidechain |
| 26 | BB | 914 | G | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 919 | U | Sidechain |
| 26 | BB | 92 | U | Sidechain |
| 26 | BB | 923 | G | Sidechain |
| 26 | BB | 924 | G | Sidechain |
| 26 | BB | 928 | A | Sidechain |
| 26 | BB | 929 | U | Sidechain |
| 26 | BB | 930 | G | Sidechain |
| 26 | BB | 931 | U | Sidechain |
| 26 | BB | 933 | A | Sidechain |
| 26 | BB | 934 | U | Sidechain |
| 26 | BB | 937 | C | Sidechain |
| 26 | BB | 938 | G | Sidechain |
| 26 | BB | 939 | G | Sidechain |
| 26 | BB | 940 | G | Sidechain |
| 26 | BB | 942 | G | Sidechain |
| 26 | BB | 943 | A | Sidechain |
| 26 | BB | 944 | C | Sidechain |
| 26 | BB | 945 | A | Sidechain |
| 26 | BB | 947 | A | Sidechain |
| 26 | BB | 949 | G | Sidechain |
| 26 | BB | 95 | A | Sidechain |
| 26 | BB | 951 | C | Sidechain |
| 26 | BB | 954 | G | Sidechain |
| 26 | BB | 956 | G | Sidechain |
| 26 | BB | 957 | C | Sidechain |
| 26 | BB | 959 | A | Sidechain |
| 26 | BB | 960 | A | Sidechain |
| 26 | BB | 964 | C | Sidechain |
| 26 | BB | 968 | C | Sidechain |
| 26 | BB | 969 | G | Sidechain |
| 26 | BB | 97 | C | Sidechain |
| 26 | BB | 971 | G | Sidechain |
| 26 | BB | 973 | A | Sidechain |
| 26 | BB | 974 | G | Sidechain |
| 26 | BB | 976 | G | Sidechain |
| 26 | BB | 977 | G | Sidechain |
| 26 | BB | 98 | G | Sidechain |
| 26 | BB | 980 | A | Sidechain |
| 26 | BB | 981 | A | Sidechain |
| 26 | BB | 982 | C | Sidechain |
| 26 | BB | 983 | A | Sidechain |
| 26 | BB | 987 | C | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 26 | BB | 988 | A | Sidechain |
| 26 | BB | 989 | G | Sidechain |
| 26 | BB | 99 | U | Sidechain |
| 26 | BB | 990 | A | Sidechain |
| 26 | BB | 993 | G | Sidechain |
| 26 | BB | 994 | C | Sidechain |
| 26 | BB | 995 | C | Sidechain |
| 26 | BB | 997 | G | Sidechain |
| 26 | BB | 998 | C | Sidechain |
| 26 | BB | 999 | U | Sidechain |
| 27 | BC | 134 | ARG | Sidechain |
| 27 | BC | 220 | ALA | Peptide |
| 28 | BD | 132 | ARG | Sidechain |
| 28 | BD | 164 | VAL | Peptide |
| 28 | BD | 174 | ARG | Sidechain |
| 28 | BD | 181 | ARG | Sidechain |
| 28 | BD | 220 | ARG | Sidechain |
| 28 | BD | 243 | PRO | Peptide |
| 28 | BD | 82 | TYR | Sidechain |
| 28 | BD | 9 | SER | Peptide |
| 28 | BD | 95 | TYR | Sidechain |
| 29 | BE | 113 | SER | Peptide |
| 29 | BE | 114 | LYS | Peptide |
| 29 | BE | 176 | ASP | Peptide |
| 29 | BE | 179 | ARG | Sidechain |
| 30 | BF | 162 | ARG | Sidechain |
| 30 | BF | 35 | TYR | Sidechain |
| 30 | BF | 40 | ARG | Sidechain |
| 31 | BG | 137 | PHE | Sidechain |
| 31 | BG | 142 | TYR | Sidechain |
| 31 | BG | 147 | ARG | Sidechain |
| 31 | BG | 176 | PHE | Sidechain |
| 31 | BG | 82 | TYR | Sidechain |
| 31 | BG | 91 | ARG | Sidechain |
| 32 | BH | 162 | ARG | Sidechain |
| 32 | BH | 69 | ALA | Mainchain |
| 32 | BH | 82 | PHE | Sidechain |
| 33 | BI | 139 | PHE | Sidechain |
| 34 | BJ | 129 | PRO | Peptide |
| 34 | BJ | 140 | ALA | Mainchain |
| 34 | BJ | 45 | ARG | Sidechain |
| 34 | BJ | 75 | PHE | Sidechain |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 34 | BJ | 98 | PHE | Sidechain |
| 35 | BK | 37 | PHE | Sidechain |
| 35 | BK | 64 | ARG | Sidechain |
| 35 | BK | 7 | TYR | Sidechain |
| 36 | BL | 16 | TYR | Sidechain |
| 36 | BL | 53 | TYR | Sidechain |
| 37 | BM | 111 | LYS | Mainchain |
| 37 | BM | 26 | GLY | Peptide |
| 37 | BM | 31 | ARG | Sidechain |
| 37 | BM | 4 | GLU | Peptide |
| 37 | BM | 64 | ARG | Sidechain |
| 38 | BN | 126 | ARG | Sidechain |
| 38 | BN | 3 | LEU | Mainchain |
| 39 | BO | 44 | ARG | Sidechain |
| 39 | BO | 59 | ARG | Sidechain |
| 39 | BO | 66 | ARG | Sidechain |
| 40 | BP | 103 | ARG | Sidechain |
| 40 | BP | 123 | GLU | Peptide |
| 40 | BP | 22 | ARG | Sidechain |
| 40 | BP | 8 | ARG | Sidechain |
| 41 | BQ | 10 | ARG | Sidechain |
| 41 | BQ | 102 | ARG | Sidechain |
| 41 | BQ | 34 | HIS | Sidechain |
| 41 | BQ | 64 | TYR | Sidechain |
| 41 | BQ | 81 | ARG | Sidechain |
| 41 | BQ | 99 | TYR | Sidechain |
| 42 | BR | 102 | ARG | Sidechain |
| 42 | BR | 39 | LEU | Mainchain |
| 42 | BR | 42 | PHE | Sidechain |
| 42 | BR | 98 | TYR | Sidechain |
| 43 | BS | 12 | ARG | Sidechain |
| 43 | BS | 19 | GLN | Sidechain |
| 43 | BS | 23 | TYR | Sidechain |
| 43 | BS | 31 | TYR | Sidechain |
| 43 | BS | 46 | TYR | Sidechain |
| 43 | BS | 56 | PHE | Sidechain |
| 44 | BT | 2 | TYR | Sidechain |
| 44 | BT | 83 | TYR | Sidechain |
| 44 | BT | 84 | ARG | Sidechain |
| 44 | BT | 90 | ARG | Sidechain |
| 45 | BU | 4 | ILE | Peptide |
| 45 | BU | 6 | LYS | Peptide |

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| Mol | Chain | Res | Type | Group |
|---|---|---|---|---|
| 45 | BU | 75 | PHE | Sidechain |
| 45 | BU | 84 | ARG | Sidechain |
| 45 | BU | 88 | ARG | Sidechain |
| 46 | BV | 69 | ARG | Sidechain |
| 46 | BV | 76 | ARG | Sidechain |
| 48 | BX | 31 | TYR | Sidechain |
| 48 | BX | 65 | VAL | Mainchain |
| 48 | BX | 79 | ARG | Sidechain |
| 48 | BX | 82 | TYR | Sidechain |
| 49 | BY | 13 | ARG | Peptide |
| 49 | BY | 14 | ASP | Peptide |
| 49 | BY | 16 | GLU | Peptide |
| 49 | BY | 19 | ARG | Peptide |
| 49 | BY | 81 | ILE | Peptide |
| 50 | BZ | 10 | ARG | Sidechain |
| 50 | BZ | 29 | LEU | Peptide |

## 5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 1 | AA | 33089 | 0 | 16619 | 0 | 0 |
| 2 | AB | 1627 | 0 | 844 | 0 | 0 |
| 3 | AC | 993 | 0 | 501 | 0 | 0 |
| 4 | AD | 1641 | 0 | 840 | 0 | 0 |
| 5 | AE | 1872 | 0 | 1885 | 0 | 0 |
| 6 | AF | 1822 | 0 | 1913 | 0 | 0 |
| 7 | AG | 1643 | 0 | 1710 | 0 | 0 |
| 8 | AH | 1225 | 0 | 1273 | 0 | 0 |
| 9 | AI | 1101 | 0 | 1050 | 0 | 0 |
| 10 | AJ | 1400 | 0 | 1449 | 0 | 0 |
| 11 | AK | 979 | 0 | 1034 | 0 | 0 |
| 12 | AL | 1036 | 0 | 1084 | 0 | 0 |
| 13 | AM | 825 | 0 | 865 | 0 | 0 |
| 14 | AN | 965 | 0 | 997 | 0 | 0 |
| 15 | AO | 955 | 0 | 1019 | 0 | 0 |
| 16 | AP | 910 | 0 | 981 | 0 | 0 |
| 17 | AQ | 805 | 0 | 847 | 0 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 18 | AR | 716 | 0 | 742 | 0 | 0 |
| 19 | AS | 649 | 0 | 666 | 0 | 0 |
| 20 | AT | 672 | 0 | 716 | 0 | 0 |
| 21 | AU | 626 | 0 | 651 | 0 | 0 |
| 22 | AV | 727 | 0 | 769 | 0 | 0 |
| 23 | AW | 670 | 0 | 722 | 0 | 0 |
| 24 | AX | 590 | 0 | 631 | 0 | 0 |
| 25 | BA | 2566 | 0 | 1296 | 0 | 0 |
| 26 | BB | 62351 | 0 | 31238 | 0 | 0 |
| 27 | BC | 1733 | 0 | 1824 | 0 | 0 |
| 28 | BD | 2092 | 0 | 2170 | 0 | 0 |
| 29 | BE | 1565 | 0 | 1616 | 0 | 0 |
| 30 | BF | 1552 | 0 | 1619 | 0 | 0 |
| 31 | BG | 1420 | 0 | 1460 | 0 | 0 |
| 32 | BH | 1323 | 0 | 1374 | 0 | 0 |
| 33 | BI | 1111 | 0 | 1148 | 0 | 0 |
| 34 | BJ | 1233 | 0 | 1283 | 0 | 0 |
| 35 | BK | 1032 | 0 | 1088 | 0 | 0 |
| 36 | BL | 1129 | 0 | 1162 | 0 | 0 |
| 37 | BM | 947 | 0 | 1023 | 0 | 0 |
| 38 | BN | 1053 | 0 | 1129 | 0 | 0 |
| 39 | BO | 1074 | 0 | 1157 | 0 | 0 |
| 40 | BP | 1008 | 0 | 1045 | 0 | 0 |
| 41 | BQ | 900 | 0 | 935 | 0 | 0 |
| 42 | BR | 917 | 0 | 965 | 0 | 0 |
| 43 | BS | 947 | 0 | 1022 | 0 | 0 |
| 44 | BT | 816 | 0 | 839 | 0 | 0 |
| 45 | BU | 857 | 0 | 922 | 0 | 0 |
| 46 | BV | 787 | 0 | 846 | 0 | 0 |
| 47 | BW | 789 | 0 | 847 | 0 | 0 |
| 48 | BX | 753 | 0 | 780 | 0 | 0 |
| 49 | BY | 634 | 0 | 656 | 0 | 0 |
| 50 | BZ | 625 | 0 | 655 | 0 | 0 |
| 51 | B0 | 509 | 0 | 543 | 0 | 0 |
| 52 | B1 | 449 | 0 | 491 | 0 | 0 |
| 53 | B2 | 549 | 0 | 552 | 0 | 0 |
| 54 | B3 | 444 | 0 | 461 | 0 | 0 |
| 55 | B4 | 441 | 0 | 485 | 0 | 0 |
| 56 | B5 | 377 | 0 | 418 | 0 | 0 |
| 57 | B6 | 504 | 0 | 574 | 0 | 0 |
| 58 | B7 | 302 | 0 | 343 | 0 | 0 |
| 59 | AB | 14 | 0 | 9 | 0 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|---|---|---|---|---|---|---|
| 60 | BB | 10 | 0 | 10 | 0 | 0 |
| All | All | 152351 | 0 | 103793 | 0 | 0 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). Clashscore could not be calculated for this entry.

There are no clashes within the asymmetric unit.

There are no symmetry-related clashes.

## 5.3 Torsion angles (i)

### 5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 5 | AE | 238/240 (99%) | 211 (89%) | 24 (10%) | 3 (1%) | 12 | 48 |
| 6 | AF | 230/232 (99%) | 204 (89%) | 20 (9%) | 6 (3%) | 5 | 31 |
| 7 | AG | 203/205 (99%) | 182 (90%) | 17 (8%) | 4 (2%) | 7 | 38 |
| 8 | AH | 164/166 (99%) | 146 (89%) | 15 (9%) | 3 (2%) | 8 | 40 |
| 9 | AI | 133/135 (98%) | 118 (89%) | 12 (9%) | 3 (2%) | 6 | 34 |
| 10 | AJ | 176/178 (99%) | 163 (93%) | 11 (6%) | 2 (1%) | 14 | 52 |
| 11 | AK | 127/129 (98%) | 116 (91%) | 9 (7%) | 2 (2%) | 9 | 44 |
| 12 | AL | 127/129 (98%) | 118 (93%) | 7 (6%) | 2 (2%) | 9 | 44 |
| 13 | AM | 101/103 (98%) | 92 (91%) | 5 (5%) | 4 (4%) | 3 | 23 |
| 14 | AN | 126/128 (98%) | 111 (88%) | 15 (12%) | 0 | 100 | 100 |
| 15 | AO | 121/123 (98%) | 103 (85%) | 14 (12%) | 4 (3%) | 4 | 26 |
| 16 | AP | 115/117 (98%) | 101 (88%) | 11 (10%) | 3 (3%) | 5 | 31 |
| 17 | AQ | 98/100 (98%) | 79 (81%) | 13 (13%) | 6 (6%) | 1 | 17 |
| 18 | AR | 86/88 (98%) | 82 (95%) | 3 (4%) | 1 (1%) | 13 | 50 |
| 19 | AS | 80/82 (98%) | 75 (94%) | 4 (5%) | 1 (1%) | 12 | 48 |
| 20 | AT | 81/83 (98%) | 66 (82%) | 14 (17%) | 1 (1%) | 13 | 50 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 21 | AU | 72/74 (97%) | 63 (88%) | 6 (8%) | 3 (4%) | 3 | 22 |
| 22 | AV | 89/91 (98%) | 79 (89%) | 6 (7%) | 4 (4%) | 2 | 22 |
| 23 | AW | 84/86 (98%) | 78 (93%) | 4 (5%) | 2 (2%) | 6 | 33 |
| 24 | AX | 68/70 (97%) | 53 (78%) | 13 (19%) | 2 (3%) | 4 | 29 |
| 27 | BC | 232/234 (99%) | 207 (89%) | 20 (9%) | 5 (2%) | 6 | 35 |
| 28 | BD | 270/272 (99%) | 232 (86%) | 30 (11%) | 8 (3%) | 4 | 28 |
| 29 | BE | 207/209 (99%) | 171 (83%) | 31 (15%) | 5 (2%) | 6 | 33 |
| 30 | BF | 199/201 (99%) | 171 (86%) | 16 (8%) | 12 (6%) | 1 | 17 |
| 31 | BG | 176/178 (99%) | 142 (81%) | 24 (14%) | 10 (6%) | 1 | 18 |
| 32 | BH | 174/176 (99%) | 149 (86%) | 22 (13%) | 3 (2%) | 9 | 42 |
| 33 | BI | 147/149 (99%) | 124 (84%) | 21 (14%) | 2 (1%) | 11 | 46 |
| 34 | BJ | 162/164 (99%) | 147 (91%) | 13 (8%) | 2 (1%) | 13 | 50 |
| 35 | BK | 139/141 (99%) | 126 (91%) | 12 (9%) | 1 (1%) | 22 | 63 |
| 36 | BL | 140/142 (99%) | 112 (80%) | 21 (15%) | 7 (5%) | 2 | 20 |
| 37 | BM | 121/123 (98%) | 104 (86%) | 13 (11%) | 4 (3%) | 4 | 26 |
| 38 | BN | 142/144 (99%) | 121 (85%) | 17 (12%) | 4 (3%) | 5 | 30 |
| 39 | BO | 134/136 (98%) | 116 (87%) | 14 (10%) | 4 (3%) | 4 | 28 |
| 40 | BP | 125/127 (98%) | 116 (93%) | 8 (6%) | 1 (1%) | 19 | 60 |
| 41 | BQ | 115/117 (98%) | 109 (95%) | 4 (4%) | 2 (2%) | 9 | 42 |
| 42 | BR | 112/114 (98%) | 88 (79%) | 22 (20%) | 2 (2%) | 8 | 40 |
| 43 | BS | 115/117 (98%) | 106 (92%) | 7 (6%) | 2 (2%) | 9 | 42 |
| 44 | BT | 101/103 (98%) | 90 (89%) | 8 (8%) | 3 (3%) | 4 | 28 |
| 45 | BU | 108/110 (98%) | 101 (94%) | 4 (4%) | 3 (3%) | 5 | 30 |
| 46 | BV | 98/100 (98%) | 78 (80%) | 14 (14%) | 6 (6%) | 1 | 17 |
| 47 | BW | 101/103 (98%) | 85 (84%) | 13 (13%) | 3 (3%) | 4 | 28 |
| 48 | BX | 92/94 (98%) | 82 (89%) | 9 (10%) | 1 (1%) | 14 | 52 |
| 49 | BY | 82/84 (98%) | 60 (73%) | 18 (22%) | 4 (5%) | 2 | 20 |
| 50 | BZ | 75/77 (97%) | 65 (87%) | 6 (8%) | 4 (5%) | 2 | 19 |
| 51 | B0 | 61/63 (97%) | 55 (90%) | 5 (8%) | 1 (2%) | 9 | 44 |
| 52 | B1 | 56/58 (97%) | 50 (89%) | 5 (9%) | 1 (2%) | 8 | 40 |
| 53 | B2 | 68/70 (97%) | 45 (66%) | 18 (26%) | 5 (7%) | 1 | 14 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|---|---|---|---|---|---|---|---|
| 54 | B3 | 54/56 (96%) | 44 (82%) | 9 (17%) | 1 (2%) | 8 | 38 |
| 55 | B4 | 52/54 (96%) | 45 (86%) | 4 (8%) | 3 (6%) | 1 | 18 |
| 56 | B5 | 44/46 (96%) | 40 (91%) | 2 (4%) | 2 (4%) | 2 | 22 |
| 57 | B6 | 62/64 (97%) | 54 (87%) | 6 (10%) | 2 (3%) | 4 | 26 |
| 58 | B7 | 36/38 (95%) | 31 (86%) | 4 (11%) | 1 (3%) | 5 | 30 |
| All | All | 6319/6423 (98%) | 5506 (87%) | 643 (10%) | 170 (3%) | 8 | 31 |

All (170) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 12 | AL | 86 | LEU |
| 13 | AM | 42 | LEU |
| 13 | AM | 57 | VAL |
| 16 | AP | 22 | TYR |
| 21 | AU | 11 | ARG |
| 28 | BD | 64 | VAL |
| 31 | BG | 35 | LEU |
| 31 | BG | 88 | VAL |
| 31 | BG | 148 | VAL |
| 35 | BK | 6 | ALA |
| 37 | BM | 71 | ARG |
| 42 | BR | 25 | VAL |
| 43 | BS | 5 | ARG |
| 46 | BV | 35 | ALA |
| 46 | BV | 69 | ARG |
| 47 | BW | 74 | ALA |
| 49 | BY | 25 | PHE |
| 52 | B1 | 51 | SER |
| 55 | B4 | 52 | LYS |
| 5 | AE | 22 | TRP |
| 6 | AF | 145 | ALA |
| 6 | AF | 179 | ALA |
| 8 | AH | 2 | HIS |
| 8 | AH | 23 | THR |
| 9 | AI | 54 | LEU |
| 10 | AJ | 165 | ALA |
| 13 | AM | 62 | ARG |
| 13 | AM | 74 | VAL |
| 17 | AQ | 52 | ARG |
| 17 | AQ | 70 | HIS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 20 | AT | 50 | ASN |
| 24 | AX | 3 | ILE |
| 28 | BD | 204 | LEU |
| 29 | BE | 37 | VAL |
| 29 | BE | 173 | GLN |
| 30 | BF | 44 | ARG |
| 30 | BF | 62 | GLN |
| 30 | BF | 96 | VAL |
| 30 | BF | 120 | VAL |
| 30 | BF | 123 | LYS |
| 31 | BG | 43 | ILE |
| 31 | BG | 66 | ILE |
| 31 | BG | 141 | ASP |
| 31 | BG | 169 | LEU |
| 36 | BL | 39 | LYS |
| 39 | BO | 135 | VAL |
| 41 | BQ | 101 | GLY |
| 42 | BR | 63 | ILE |
| 44 | BT | 91 | GLN |
| 46 | BV | 40 | LYS |
| 47 | BW | 91 | LYS |
| 48 | BX | 71 | LYS |
| 49 | BY | 75 | ASN |
| 50 | BZ | 27 | ARG |
| 54 | B3 | 54 | ILE |
| 6 | AF | 79 | LYS |
| 7 | AG | 27 | ILE |
| 9 | AI | 53 | LYS |
| 9 | AI | 127 | GLY |
| 10 | AJ | 2 | ARG |
| 15 | AO | 122 | LYS |
| 17 | AQ | 32 | ASP |
| 17 | AQ | 37 | ASP |
| 18 | AR | 86 | LEU |
| 21 | AU | 12 | PHE |
| 22 | AV | 36 | ARG |
| 24 | AX | 26 | GLY |
| 28 | BD | 205 | GLY |
| 28 | BD | 237 | ARG |
| 29 | BE | 136 | ASN |
| 29 | BE | 151 | THR |
| 29 | BE | 153 | GLY |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 31 | BG | 150 | GLY |
| 32 | BH | 94 | ARG |
| 36 | BL | 120 | ARG |
| 37 | BM | 46 | ALA |
| 37 | BM | 81 | GLY |
| 38 | BN | 44 | GLY |
| 45 | BU | 89 | ALA |
| 47 | BW | 39 | ASN |
| 50 | BZ | 2 | ARG |
| 50 | BZ | 16 | ASN |
| 55 | B4 | 3 | GLY |
| 5 | AE | 64 | GLY |
| 6 | AF | 24 | ASN |
| 7 | AG | 41 | GLY |
| 8 | AH | 150 | GLU |
| 12 | AL | 3 | ASN |
| 15 | AO | 91 | GLY |
| 16 | AP | 3 | ILE |
| 17 | AQ | 2 | LYS |
| 17 | AQ | 62 | ARG |
| 21 | AU | 18 | GLN |
| 22 | AV | 5 | LYS |
| 23 | AW | 7 | LYS |
| 27 | BC | 74 | ARG |
| 27 | BC | 206 | GLY |
| 28 | BD | 254 | LYS |
| 30 | BF | 11 | ALA |
| 30 | BF | 50 | ALA |
| 30 | BF | 64 | GLY |
| 30 | BF | 119 | ILE |
| 30 | BF | 188 | MET |
| 31 | BG | 99 | PHE |
| 32 | BH | 27 | GLY |
| 32 | BH | 107 | GLY |
| 33 | BI | 113 | SER |
| 34 | BJ | 30 | ARG |
| 34 | BJ | 33 | THR |
| 36 | BL | 78 | THR |
| 37 | BM | 72 | PRO |
| 38 | BN | 16 | GLY |
| 40 | BP | 94 | TYR |
| 45 | BU | 28 | LYS |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 45 | BU | 65 | ASP |
| 46 | BV | 29 | THR |
| 51 | B0 | 62 | GLY |
| 53 | B2 | 16 | CYS |
| 7 | AG | 28 | ASP |
| 15 | AO | 116 | TYR |
| 16 | AP | 98 | GLY |
| 22 | AV | 31 | ARG |
| 23 | AW | 67 | HIS |
| 27 | BC | 219 | GLY |
| 28 | BD | 176 | ARG |
| 33 | BI | 11 | ASN |
| 36 | BL | 96 | ARG |
| 36 | BL | 111 | LYS |
| 38 | BN | 46 | VAL |
| 39 | BO | 79 | ALA |
| 44 | BT | 9 | GLY |
| 44 | BT | 101 | ILE |
| 46 | BV | 16 | VAL |
| 50 | BZ | 53 | LYS |
| 57 | B6 | 26 | ALA |
| 57 | B6 | 31 | ILE |
| 58 | B7 | 6 | SER |
| 5 | AE | 12 | GLY |
| 6 | AF | 5 | HIS |
| 6 | AF | 80 | GLY |
| 11 | AK | 70 | VAL |
| 15 | AO | 27 | PRO |
| 27 | BC | 159 | GLY |
| 30 | BF | 6 | LYS |
| 49 | BY | 51 | GLY |
| 53 | B2 | 41 | HIS |
| 53 | B2 | 63 | ARG |
| 55 | B4 | 51 | ALA |
| 53 | B2 | 54 | GLY |
| 11 | AK | 91 | LEU |
| 28 | BD | 106 | PRO |
| 28 | BD | 158 | GLY |
| 30 | BF | 82 | GLY |
| 36 | BL | 136 | GLN |
| 39 | BO | 23 | GLY |
| 39 | BO | 36 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 43 | BS | 7 | VAL |
| 53 | B2 | 55 | GLY |
| 56 | B5 | 17 | GLY |
| 7 | AG | 65 | GLY |
| 22 | AV | 10 | ILE |
| 27 | BC | 169 | GLY |
| 36 | BL | 137 | PRO |
| 38 | BN | 8 | PRO |
| 46 | BV | 75 | GLY |
| 31 | BG | 84 | ILE |
| 49 | BY | 37 | VAL |
| 19 | AS | 64 | GLY |
| 41 | BQ | 114 | GLY |
| 56 | B5 | 44 | VAL |

### 5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 5 | AE | 198/198 (100%) | 191 (96%) | 7 (4%) | 36 | 59 |
| 6 | AF | 189/189 (100%) | 176 (93%) | 13 (7%) | 15 | 40 |
| 7 | AG | 172/172 (100%) | 165 (96%) | 7 (4%) | 30 | 55 |
| 8 | AH | 125/125 (100%) | 119 (95%) | 6 (5%) | 25 | 51 |
| 9 | AI | 116/116 (100%) | 109 (94%) | 7 (6%) | 19 | 44 |
| 10 | AJ | 146/146 (100%) | 139 (95%) | 7 (5%) | 25 | 51 |
| 11 | AK | 104/104 (100%) | 102 (98%) | 2 (2%) | 57 | 75 |
| 12 | AL | 106/106 (100%) | 104 (98%) | 2 (2%) | 57 | 75 |
| 13 | AM | 90/90 (100%) | 82 (91%) | 8 (9%) | 9 | 30 |
| 14 | AN | 98/98 (100%) | 95 (97%) | 3 (3%) | 40 | 62 |
| 15 | AO | 103/103 (100%) | 95 (92%) | 8 (8%) | 12 | 36 |
| 16 | AP | 95/95 (100%) | 90 (95%) | 5 (5%) | 22 | 47 |
| 17 | AQ | 83/83 (100%) | 82 (99%) | 1 (1%) | 71 | 83 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 18 | AR | 76/76 (100%) | 74 (97%) | 2 (3%) | 46 | 66 |
| 19 | AS | 65/65 (100%) | 63 (97%) | 2 (3%) | 40 | 62 |
| 20 | AT | 77/77 (100%) | 71 (92%) | 6 (8%) | 12 | 36 |
| 21 | AU | 64/64 (100%) | 59 (92%) | 5 (8%) | 12 | 36 |
| 22 | AV | 78/78 (100%) | 72 (92%) | 6 (8%) | 13 | 37 |
| 23 | AW | 65/65 (100%) | 62 (95%) | 3 (5%) | 27 | 52 |
| 24 | AX | 60/60 (100%) | 54 (90%) | 6 (10%) | 7 | 26 |
| 27 | BC | 181/181 (100%) | 171 (94%) | 10 (6%) | 21 | 47 |
| 28 | BD | 217/217 (100%) | 208 (96%) | 9 (4%) | 30 | 55 |
| 29 | BE | 164/164 (100%) | 156 (95%) | 8 (5%) | 25 | 50 |
| 30 | BF | 165/165 (100%) | 157 (95%) | 8 (5%) | 25 | 51 |
| 31 | BG | 149/149 (100%) | 141 (95%) | 8 (5%) | 22 | 47 |
| 32 | BH | 137/137 (100%) | 128 (93%) | 9 (7%) | 16 | 41 |
| 33 | BI | 114/114 (100%) | 108 (95%) | 6 (5%) | 22 | 47 |
| 34 | BJ | 122/122 (100%) | 118 (97%) | 4 (3%) | 38 | 61 |
| 35 | BK | 109/109 (100%) | 106 (97%) | 3 (3%) | 43 | 65 |
| 36 | BL | 116/116 (100%) | 111 (96%) | 5 (4%) | 29 | 53 |
| 37 | BM | 104/104 (100%) | 97 (93%) | 7 (7%) | 16 | 41 |
| 38 | BN | 103/103 (100%) | 97 (94%) | 6 (6%) | 20 | 45 |
| 39 | BO | 109/109 (100%) | 101 (93%) | 8 (7%) | 14 | 39 |
| 40 | BP | 103/103 (100%) | 97 (94%) | 6 (6%) | 20 | 45 |
| 41 | BQ | 87/87 (100%) | 83 (95%) | 4 (5%) | 27 | 52 |
| 42 | BR | 99/99 (100%) | 91 (92%) | 8 (8%) | 11 | 35 |
| 43 | BS | 89/89 (100%) | 87 (98%) | 2 (2%) | 52 | 71 |
| 44 | BT | 84/84 (100%) | 79 (94%) | 5 (6%) | 19 | 44 |
| 45 | BU | 93/93 (100%) | 92 (99%) | 1 (1%) | 73 | 84 |
| 46 | BV | 84/84 (100%) | 75 (89%) | 9 (11%) | 6 | 23 |
| 47 | BW | 84/84 (100%) | 79 (94%) | 5 (6%) | 19 | 44 |
| 48 | BX | 78/78 (100%) | 75 (96%) | 3 (4%) | 33 | 57 |
| 49 | BY | 62/62 (100%) | 60 (97%) | 2 (3%) | 39 | 61 |
| 50 | BZ | 67/67 (100%) | 63 (94%) | 4 (6%) | 19 | 44 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|---|---|---|---|---|---|---|
| 51 | B0 | 55/55 (100%) | 53 (96%) | 2 (4%) | 35 | 59 |
| 52 | B1 | 48/48 (100%) | 46 (96%) | 2 (4%) | 30 | 54 |
| 53 | B2 | 62/62 (100%) | 57 (92%) | 5 (8%) | 11 | 35 |
| 54 | B3 | 47/47 (100%) | 42 (89%) | 5 (11%) | 6 | 24 |
| 55 | B4 | 48/48 (100%) | 47 (98%) | 1 (2%) | 53 | 72 |
| 56 | B5 | 38/38 (100%) | 37 (97%) | 1 (3%) | 46 | 66 |
| 57 | B6 | 51/51 (100%) | 45 (88%) | 6 (12%) | 5 | 20 |
| 58 | B7 | 34/34 (100%) | 32 (94%) | 2 (6%) | 19 | 45 |
| All | All | 5213/5213 (100%) | 4943 (95%) | 270 (5%) | 27 | 48 |

All (270) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 5 | AE | 14 | HIS |
| 5 | AE | 69 | VAL |
| 5 | AE | 131 | LYS |
| 5 | AE | 172 | ILE |
| 5 | AE | 206 | ILE |
| 5 | AE | 233 | GLU |
| 5 | AE | 234 | GLU |
| 6 | AF | 17 | TRP |
| 6 | AF | 21 | TRP |
| 6 | AF | 22 | PHE |
| 6 | AF | 62 | SER |
| 6 | AF | 71 | ARG |
| 6 | AF | 106 | ARG |
| 6 | AF | 124 | GLU |
| 6 | AF | 166 | TRP |
| 6 | AF | 167 | TYR |
| 6 | AF | 189 | HIS |
| 6 | AF | 194 | VAL |
| 6 | AF | 215 | GLN |
| 6 | AF | 227 | GLN |
| 7 | AG | 2 | ARG |
| 7 | AG | 29 | THR |
| 7 | AG | 46 | ARG |
| 7 | AG | 80 | ARG |
| 7 | AG | 128 | VAL |
| 7 | AG | 171 | GLU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 7 | AG | 199 | ILE |
| 8 | AH | 49 | TYR |
| 8 | AH | 82 | HIS |
| 8 | AH | 96 | GLN |
| 8 | AH | 105 | ILE |
| 8 | AH | 127 | TYR |
| 8 | AH | 151 | MET |
| 9 | AI | 58 | HIS |
| 9 | AI | 71 | ILE |
| 9 | AI | 80 | PHE |
| 9 | AI | 102 | MET |
| 9 | AI | 103 | VAL |
| 9 | AI | 104 | LYS |
| 9 | AI | 114 | ASP |
| 10 | AJ | 37 | THR |
| 10 | AJ | 83 | THR |
| 10 | AJ | 137 | ARG |
| 10 | AJ | 138 | GLU |
| 10 | AJ | 142 | ARG |
| 10 | AJ | 153 | TYR |
| 10 | AJ | 155 | TRP |
| 11 | AK | 26 | MET |
| 11 | AK | 87 | ARG |
| 12 | AL | 65 | THR |
| 12 | AL | 129 | ARG |
| 13 | AM | 9 | ARG |
| 13 | AM | 13 | PHE |
| 13 | AM | 44 | THR |
| 13 | AM | 52 | LEU |
| 13 | AM | 69 | THR |
| 13 | AM | 79 | PRO |
| 13 | AM | 85 | ASP |
| 13 | AM | 98 | VAL |
| 14 | AN | 23 | HIS |
| 14 | AN | 55 | ARG |
| 14 | AN | 93 | GLU |
| 15 | AO | 15 | VAL |
| 15 | AO | 28 | GLN |
| 15 | AO | 29 | LYS |
| 15 | AO | 72 | ASN |
| 15 | AO | 87 | LYS |
| 15 | AO | 118 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 15 | AO | 119 | LYS |
| 15 | AO | 120 | ARG |
| 16 | AP | 6 | ILE |
| 16 | AP | 20 | SER |
| 16 | AP | 27 | THR |
| 16 | AP | 71 | GLU |
| 16 | AP | 108 | ARG |
| 17 | AQ | 5 | MET |
| 18 | AR | 9 | LYS |
| 18 | AR | 48 | ASP |
| 19 | AS | 4 | ILE |
| 19 | AS | 16 | PHE |
| 20 | AT | 5 | ARG |
| 20 | AT | 13 | SER |
| 20 | AT | 26 | ARG |
| 20 | AT | 44 | HIS |
| 20 | AT | 68 | LYS |
| 20 | AT | 79 | GLU |
| 21 | AU | 18 | GLN |
| 21 | AU | 19 | GLU |
| 21 | AU | 42 | ARG |
| 21 | AU | 47 | ARG |
| 21 | AU | 56 | ARG |
| 22 | AV | 9 | PHE |
| 22 | AV | 13 | HIS |
| 22 | AV | 23 | GLU |
| 22 | AV | 46 | LEU |
| 22 | AV | 62 | THR |
| 22 | AV | 80 | ARG |
| 23 | AW | 7 | LYS |
| 23 | AW | 8 | LYS |
| 23 | AW | 58 | ASP |
| 24 | AX | 1 | PRO |
| 24 | AX | 7 | GLU |
| 24 | AX | 16 | ARG |
| 24 | AX | 19 | LYS |
| 24 | AX | 23 | GLU |
| 24 | AX | 48 | LYS |
| 27 | BC | 18 | THR |
| 27 | BC | 99 | ASP |
| 27 | BC | 121 | MET |
| 27 | BC | 131 | LEU |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 27 | BC | 157 | LYS |
| 27 | BC | 162 | ARG |
| 27 | BC | 172 | HIS |
| 27 | BC | 174 | THR |
| 27 | BC | 189 | LEU |
| 27 | BC | 193 | LEU |
| 28 | BD | 25 | LYS |
| 28 | BD | 27 | LYS |
| 28 | BD | 34 | GLU |
| 28 | BD | 62 | ARG |
| 28 | BD | 114 | GLN |
| 28 | BD | 173 | LEU |
| 28 | BD | 174 | ARG |
| 28 | BD | 212 | TRP |
| 28 | BD | 244 | VAL |
| 29 | BE | 45 | TYR |
| 29 | BE | 68 | PHE |
| 29 | BE | 70 | LYS |
| 29 | BE | 99 | GLU |
| 29 | BE | 156 | PHE |
| 29 | BE | 175 | LEU |
| 29 | BE | 176 | ASP |
| 29 | BE | 181 | ASP |
| 30 | BF | 27 | LEU |
| 30 | BF | 79 | ARG |
| 30 | BF | 84 | THR |
| 30 | BF | 94 | GLN |
| 30 | BF | 96 | VAL |
| 30 | BF | 116 | ASP |
| 30 | BF | 134 | LEU |
| 30 | BF | 146 | VAL |
| 31 | BG | 45 | ASP |
| 31 | BG | 91 | ARG |
| 31 | BG | 104 | THR |
| 31 | BG | 112 | ASP |
| 31 | BG | 127 | TYR |
| 31 | BG | 134 | GLN |
| 31 | BG | 148 | VAL |
| 31 | BG | 168 | LEU |
| 32 | BH | 2 | ARG |
| 32 | BH | 68 | ARG |
| 32 | BH | 102 | ILE |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 32 | BH | 123 | GLU |
| 32 | BH | 127 | GLN |
| 32 | BH | 153 | PRO |
| 32 | BH | 166 | GLU |
| 32 | BH | 170 | THR |
| 32 | BH | 175 | LYS |
| 33 | BI | 40 | THR |
| 33 | BI | 44 | ILE |
| 33 | BI | 45 | GLU |
| 33 | BI | 83 | LYS |
| 33 | BI | 97 | ARG |
| 33 | BI | 119 | ASN |
| 34 | BJ | 54 | VAL |
| 34 | BJ | 87 | HIS |
| 34 | BJ | 112 | PHE |
| 34 | BJ | 150 | LEU |
| 35 | BK | 50 | LYS |
| 35 | BK | 68 | PHE |
| 35 | BK | 112 | LYS |
| 36 | BL | 37 | ARG |
| 36 | BL | 39 | LYS |
| 36 | BL | 50 | THR |
| 36 | BL | 120 | ARG |
| 36 | BL | 123 | LYS |
| 37 | BM | 4 | GLU |
| 37 | BM | 5 | GLN |
| 37 | BM | 8 | LEU |
| 37 | BM | 31 | ARG |
| 37 | BM | 54 | LYS |
| 37 | BM | 114 | LYS |
| 37 | BM | 121 | GLU |
| 38 | BN | 57 | LEU |
| 38 | BN | 80 | SER |
| 38 | BN | 85 | VAL |
| 38 | BN | 104 | GLN |
| 38 | BN | 123 | ARG |
| 38 | BN | 126 | ARG |
| 39 | BO | 5 | LYS |
| 39 | BO | 10 | ARG |
| 39 | BO | 18 | ARG |
| 39 | BO | 31 | PHE |
| 39 | BO | 50 | ARG |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 39 | BO | 59 | ARG |
| 39 | BO | 93 | VAL |
| 39 | BO | 118 | LYS |
| 40 | BP | 9 | GLN |
| 40 | BP | 24 | MET |
| 40 | BP | 65 | LEU |
| 40 | BP | 72 | ASP |
| 40 | BP | 80 | PHE |
| 40 | BP | 82 | GLU |
| 41 | BQ | 3 | LYS |
| 41 | BQ | 30 | ARG |
| 41 | BQ | 40 | ILE |
| 41 | BQ | 58 | ILE |
| 42 | BR | 14 | GLN |
| 42 | BR | 15 | ASP |
| 42 | BR | 17 | PRO |
| 42 | BR | 19 | PHE |
| 42 | BR | 25 | VAL |
| 42 | BR | 36 | LYS |
| 42 | BR | 49 | ILE |
| 42 | BR | 98 | TYR |
| 43 | BS | 8 | ILE |
| 43 | BS | 91 | ARG |
| 44 | BT | 6 | GLN |
| 44 | BT | 14 | VAL |
| 44 | BT | 21 | ARG |
| 44 | BT | 89 | HIS |
| 44 | BT | 95 | ASP |
| 45 | BU | 13 | SER |
| 46 | BV | 3 | ARG |
| 46 | BV | 30 | ILE |
| 46 | BV | 49 | LYS |
| 46 | BV | 51 | PHE |
| 46 | BV | 58 | VAL |
| 46 | BV | 70 | HIS |
| 46 | BV | 79 | ASP |
| 46 | BV | 89 | GLU |
| 46 | BV | 91 | GLN |
| 47 | BW | 14 | THR |
| 47 | BW | 21 | ARG |
| 47 | BW | 46 | LYS |
| 47 | BW | 69 | VAL |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 47 | BW | 97 | SER |
| 48 | BX | 9 | ARG |
| 48 | BX | 35 | GLU |
| 48 | BX | 53 | LYS |
| 49 | BY | 37 | VAL |
| 49 | BY | 39 | GLN |
| 50 | BZ | 7 | THR |
| 50 | BZ | 32 | LEU |
| 50 | BZ | 58 | ILE |
| 50 | BZ | 71 | ARG |
| 51 | B0 | 39 | GLN |
| 51 | B0 | 53 | VAL |
| 52 | B1 | 6 | ILE |
| 52 | B1 | 35 | VAL |
| 53 | B2 | 1 | MET |
| 53 | B2 | 12 | ILE |
| 53 | B2 | 25 | ARG |
| 53 | B2 | 38 | SER |
| 53 | B2 | 43 | PHE |
| 54 | B3 | 29 | VAL |
| 54 | B3 | 31 | LYS |
| 54 | B3 | 35 | GLU |
| 54 | B3 | 37 | HIS |
| 54 | B3 | 54 | ILE |
| 55 | B4 | 21 | THR |
| 56 | B5 | 41 | ARG |
| 57 | B6 | 1 | PRO |
| 57 | B6 | 4 | LYS |
| 57 | B6 | 12 | ARG |
| 57 | B6 | 15 | LYS |
| 57 | B6 | 22 | LYS |
| 57 | B6 | 39 | ARG |
| 58 | B7 | 8 | LYS |
| 58 | B7 | 17 | VAL |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. There are no such sidechains identified.

### 5.3.3 RNA (i)

| Mol | Chain | Analysed | Backbone Outliers | Pucker Outliers |
|---|---|---|---|---|
| 1 | AA | 1538/1542 (99%) | 291 (18%) | 99 (6%) |
| 2 | AB | 74/76 (97%) | 23 (31%) | 6 (8%) |
| 25 | BA | 119/120 (99%) | 16 (13%) | 10 (8%) |
| 26 | BB | 2898/2904 (99%) | 544 (18%) | 186 (6%) |
| 3 | AC | 46/47 (97%) | 18 (39%) | 6 (13%) |
| 4 | AD | 76/77 (98%) | 17 (22%) | 4 (5%) |
| All | All | 4751/4766 (99%) | 909 (19%) | 311 (6%) |

All (909) RNA backbone outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 8 | A |
| 1 | AA | 32 | A |
| 1 | AA | 36 | C |
| 1 | AA | 47 | C |
| 1 | AA | 48 | C |
| 1 | AA | 49 | U |
| 1 | AA | 52 | C |
| 1 | AA | 53 | A |
| 1 | AA | 54 | C |
| 1 | AA | 60 | A |
| 1 | AA | 61 | G |
| 1 | AA | 83 | C |
| 1 | AA | 87 | C |
| 1 | AA | 98 | A |
| 1 | AA | 108 | G |
| 1 | AA | 122 | G |
| 1 | AA | 123 | U |
| 1 | AA | 129 | A |
| 1 | AA | 153 | C |
| 1 | AA | 164 | G |
| 1 | AA | 166 | U |
| 1 | AA | 171 | A |
| 1 | AA | 174 | A |
| 1 | AA | 182 | A |
| 1 | AA | 184 | G |
| 1 | AA | 188 | C |
| 1 | AA | 189 | A |
| 1 | AA | 197 | A |
| 1 | AA | 198 | G |
| 1 | AA | 200 | G |
| 1 | AA | 204 | G |
| 1 | AA | 209 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 210 | C |
| 1 | AA | 212 | G |
| 1 | AA | 225 | C |
| 1 | AA | 228 | A |
| 1 | AA | 229 | U |
| 1 | AA | 244 | U |
| 1 | AA | 245 | U |
| 1 | AA | 247 | G |
| 1 | AA | 251 | G |
| 1 | AA | 252 | U |
| 1 | AA | 262 | A |
| 1 | AA | 266 | G |
| 1 | AA | 267 | C |
| 1 | AA | 272 | C |
| 1 | AA | 280 | C |
| 1 | AA | 289 | G |
| 1 | AA | 293 | G |
| 1 | AA | 306 | A |
| 1 | AA | 307 | C |
| 1 | AA | 308 | C |
| 1 | AA | 316 | C |
| 1 | AA | 317 | U |
| 1 | AA | 319 | G |
| 1 | AA | 328 | C |
| 1 | AA | 329 | A |
| 1 | AA | 332 | G |
| 1 | AA | 344 | A |
| 1 | AA | 352 | C |
| 1 | AA | 353 | A |
| 1 | AA | 354 | G |
| 1 | AA | 365 | U |
| 1 | AA | 367 | U |
| 1 | AA | 372 | C |
| 1 | AA | 373 | A |
| 1 | AA | 374 | A |
| 1 | AA | 381 | C |
| 1 | AA | 382 | A |
| 1 | AA | 384 | G |
| 1 | AA | 389 | A |
| 1 | AA | 390 | U |
| 1 | AA | 392 | C |
| 1 | AA | 395 | C |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 398 | U |
| 1 | AA | 406 | G |
| 1 | AA | 411 | A |
| 1 | AA | 413 | G |
| 1 | AA | 415 | A |
| 1 | AA | 429 | U |
| 1 | AA | 444 | G |
| 1 | AA | 463 | U |
| 1 | AA | 464 | U |
| 1 | AA | 467 | U |
| 1 | AA | 468 | A |
| 1 | AA | 479 | U |
| 1 | AA | 481 | G |
| 1 | AA | 482 | A |
| 1 | AA | 485 | U |
| 1 | AA | 486 | U |
| 1 | AA | 496 | A |
| 1 | AA | 497 | G |
| 1 | AA | 498 | A |
| 1 | AA | 505 | G |
| 1 | AA | 508 | U |
| 1 | AA | 510 | A |
| 1 | AA | 518 | C |
| 1 | AA | 528 | C |
| 1 | AA | 532 | A |
| 1 | AA | 533 | A |
| 1 | AA | 534 | U |
| 1 | AA | 547 | A |
| 1 | AA | 552 | U |
| 1 | AA | 553 | A |
| 1 | AA | 562 | U |
| 1 | AA | 566 | G |
| 1 | AA | 572 | A |
| 1 | AA | 573 | A |
| 1 | AA | 575 | G |
| 1 | AA | 576 | C |
| 1 | AA | 577 | G |
| 1 | AA | 578 | C |
| 1 | AA | 583 | A |
| 1 | AA | 588 | G |
| 1 | AA | 615 | G |
| 1 | AA | 631 | C |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 633 | G |
| 1 | AA | 636 | U |
| 1 | AA | 642 | A |
| 1 | AA | 650 | G |
| 1 | AA | 653 | U |
| 1 | AA | 654 | G |
| 1 | AA | 687 | A |
| 1 | AA | 688 | G |
| 1 | AA | 695 | A |
| 1 | AA | 702 | A |
| 1 | AA | 704 | A |
| 1 | AA | 718 | A |
| 1 | AA | 719 | C |
| 1 | AA | 720 | C |
| 1 | AA | 721 | G |
| 1 | AA | 724 | G |
| 1 | AA | 729 | A |
| 1 | AA | 755 | G |
| 1 | AA | 760 | G |
| 1 | AA | 765 | G |
| 1 | AA | 766 | A |
| 1 | AA | 777 | A |
| 1 | AA | 783 | C |
| 1 | AA | 789 | U |
| 1 | AA | 790 | A |
| 1 | AA | 791 | G |
| 1 | AA | 793 | U |
| 1 | AA | 805 | C |
| 1 | AA | 810 | C |
| 1 | AA | 812 | G |
| 1 | AA | 816 | A |
| 1 | AA | 817 | C |
| 1 | AA | 819 | A |
| 1 | AA | 821 | G |
| 1 | AA | 828 | U |
| 1 | AA | 829 | G |
| 1 | AA | 840 | C |
| 1 | AA | 841 | C |
| 1 | AA | 842 | U |
| 1 | AA | 844 | G |
| 1 | AA | 845 | A |
| 1 | AA | 846 | G |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 853 | C |
| 1 | AA | 870 | U |
| 1 | AA | 873 | A |
| 1 | AA | 874 | G |
| 1 | AA | 876 | C |
| 1 | AA | 890 | G |
| 1 | AA | 899 | C |
| 1 | AA | 900 | A |
| 1 | AA | 910 | C |
| 1 | AA | 914 | A |
| 1 | AA | 926 | G |
| 1 | AA | 927 | G |
| 1 | AA | 935 | A |
| 1 | AA | 938 | A |
| 1 | AA | 939 | G |
| 1 | AA | 945 | G |
| 1 | AA | 960 | U |
| 1 | AA | 961 | U |
| 1 | AA | 962 | C |
| 1 | AA | 968 | A |
| 1 | AA | 969 | A |
| 1 | AA | 973 | G |
| 1 | AA | 974 | A |
| 1 | AA | 975 | A |
| 1 | AA | 977 | A |
| 1 | AA | 978 | A |
| 1 | AA | 980 | C |
| 1 | AA | 981 | U |
| 1 | AA | 984 | C |
| 1 | AA | 992 | U |
| 1 | AA | 993 | G |
| 1 | AA | 994 | A |
| 1 | AA | 995 | C |
| 1 | AA | 1004 | A |
| 1 | AA | 1006 | G |
| 1 | AA | 1014 | A |
| 1 | AA | 1015 | G |
| 1 | AA | 1026 | G |
| 1 | AA | 1028 | C |
| 1 | AA | 1030 | U |
| 1 | AA | 1032 | G |
| 1 | AA | 1049 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 1050 | G |
| 1 | AA | 1064 | G |
| 1 | AA | 1065 | U |
| 1 | AA | 1081 | A |
| 1 | AA | 1092 | A |
| 1 | AA | 1093 | A |
| 1 | AA | 1094 | G |
| 1 | AA | 1095 | U |
| 1 | AA | 1101 | A |
| 1 | AA | 1118 | U |
| 1 | AA | 1135 | U |
| 1 | AA | 1137 | C |
| 1 | AA | 1148 | U |
| 1 | AA | 1149 | C |
| 1 | AA | 1152 | A |
| 1 | AA | 1154 | G |
| 1 | AA | 1159 | U |
| 1 | AA | 1168 | U |
| 1 | AA | 1181 | G |
| 1 | AA | 1182 | G |
| 1 | AA | 1183 | U |
| 1 | AA | 1190 | G |
| 1 | AA | 1197 | A |
| 1 | AA | 1198 | G |
| 1 | AA | 1200 | C |
| 1 | AA | 1201 | A |
| 1 | AA | 1202 | U |
| 1 | AA | 1208 | C |
| 1 | AA | 1212 | U |
| 1 | AA | 1214 | C |
| 1 | AA | 1215 | G |
| 1 | AA | 1223 | C |
| 1 | AA | 1224 | U |
| 1 | AA | 1226 | C |
| 1 | AA | 1227 | A |
| 1 | AA | 1238 | A |
| 1 | AA | 1240 | U |
| 1 | AA | 1241 | G |
| 1 | AA | 1250 | A |
| 1 | AA | 1254 | A |
| 1 | AA | 1256 | A |
| 1 | AA | 1257 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 1264 | U |
| 1 | AA | 1270 | G |
| 1 | AA | 1278 | G |
| 1 | AA | 1280 | A |
| 1 | AA | 1286 | U |
| 1 | AA | 1290 | G |
| 1 | AA | 1297 | G |
| 1 | AA | 1300 | G |
| 1 | AA | 1301 | U |
| 1 | AA | 1303 | C |
| 1 | AA | 1305 | G |
| 1 | AA | 1315 | U |
| 1 | AA | 1317 | C |
| 1 | AA | 1318 | A |
| 1 | AA | 1319 | A |
| 1 | AA | 1322 | C |
| 1 | AA | 1323 | G |
| 1 | AA | 1340 | A |
| 1 | AA | 1345 | U |
| 1 | AA | 1346 | A |
| 1 | AA | 1347 | G |
| 1 | AA | 1348 | U |
| 1 | AA | 1360 | A |
| 1 | AA | 1368 | A |
| 1 | AA | 1378 | C |
| 1 | AA | 1397 | C |
| 1 | AA | 1398 | A |
| 1 | AA | 1401 | G |
| 1 | AA | 1431 | A |
| 1 | AA | 1432 | G |
| 1 | AA | 1437 | A |
| 1 | AA | 1446 | A |
| 1 | AA | 1448 | C |
| 1 | AA | 1452 | C |
| 1 | AA | 1453 | G |
| 1 | AA | 1454 | G |
| 1 | AA | 1490 | U |
| 1 | AA | 1492 | A |
| 1 | AA | 1493 | A |
| 1 | AA | 1494 | G |
| 1 | AA | 1502 | A |
| 1 | AA | 1503 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 1506 | U |
| 1 | AA | 1529 | G |
| 1 | AA | 1530 | G |
| 1 | AA | 1531 | A |
| 1 | AA | 1537 | U |
| 1 | AA | 1539 | C |
| 1 | AA | 1540 | U |
| 2 | AB | 8 | 4SU |
| 2 | AB | 9 | A |
| 2 | AB | 10 | G |
| 2 | AB | 11 | U |
| 2 | AB | 17 | H2U |
| 2 | AB | 20 | H2U |
| 2 | AB | 23 | A |
| 2 | AB | 24 | G |
| 2 | AB | 34 | C |
| 2 | AB | 35 | C |
| 2 | AB | 36 | A |
| 2 | AB | 46 | 7MG |
| 2 | AB | 47 | U |
| 2 | AB | 48 | U |
| 2 | AB | 49 | G |
| 2 | AB | 58 | A |
| 2 | AB | 59 | G |
| 2 | AB | 60 | U |
| 2 | AB | 61 | C |
| 2 | AB | 65 | C |
| 2 | AB | 73 | G |
| 2 | AB | 74 | C |
| 2 | AB | 75 | C |
| 3 | AC | 17 | U |
| 3 | AC | 18 | A |
| 3 | AC | 19 | A |
| 3 | AC | 20 | G |
| 3 | AC | 21 | U |
| 3 | AC | 22 | G |
| 3 | AC | 23 | C |
| 3 | AC | 25 | U |
| 3 | AC | 29 | G |
| 3 | AC | 30 | U |
| 3 | AC | 34 | U |
| 3 | AC | 40 | G |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 3 | AC | 41 | A |
| 3 | AC | 42 | U |
| 3 | AC | 44 | U |
| 3 | AC | 45 | G |
| 3 | AC | 48 | C |
| 3 | AC | 52 | U |
| 4 | AD | 8 | 4SU |
| 4 | AD | 9 | G |
| 4 | AD | 10 | G |
| 4 | AD | 17 | C |
| 4 | AD | 18 | U |
| 4 | AD | 19 | G |
| 4 | AD | 20 | G |
| 4 | AD | 21 | H2U |
| 4 | AD | 22 | A |
| 4 | AD | 38 | A |
| 4 | AD | 47 | A |
| 4 | AD | 48 | U |
| 4 | AD | 49 | C |
| 4 | AD | 50 | G |
| 4 | AD | 74 | A |
| 4 | AD | 75 | C |
| 4 | AD | 76 | C |
| 25 | BA | 9 | G |
| 25 | BA | 13 | G |
| 25 | BA | 25 | U |
| 25 | BA | 26 | C |
| 25 | BA | 35 | C |
| 25 | BA | 41 | G |
| 25 | BA | 42 | C |
| 25 | BA | 44 | G |
| 25 | BA | 51 | G |
| 25 | BA | 58 | A |
| 25 | BA | 66 | A |
| 25 | BA | 67 | G |
| 25 | BA | 73 | A |
| 25 | BA | 88 | C |
| 25 | BA | 90 | C |
| 25 | BA | 99 | A |
| 26 | BB | 14 | A |
| 26 | BB | 18 | U |
| 26 | BB | 30 | G |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 34 | U |
| 26 | BB | 35 | G |
| 26 | BB | 42 | A |
| 26 | BB | 43 | G |
| 26 | BB | 45 | G |
| 26 | BB | 46 | G |
| 26 | BB | 49 | A |
| 26 | BB | 50 | U |
| 26 | BB | 71 | A |
| 26 | BB | 75 | G |
| 26 | BB | 85 | G |
| 26 | BB | 91 | A |
| 26 | BB | 92 | U |
| 26 | BB | 95 | A |
| 26 | BB | 98 | G |
| 26 | BB | 101 | A |
| 26 | BB | 102 | U |
| 26 | BB | 103 | A |
| 26 | BB | 113 | U |
| 26 | BB | 115 | C |
| 26 | BB | 119 | A |
| 26 | BB | 120 | U |
| 26 | BB | 128 | C |
| 26 | BB | 140 | C |
| 26 | BB | 194 | G |
| 26 | BB | 196 | A |
| 26 | BB | 197 | A |
| 26 | BB | 199 | A |
| 26 | BB | 204 | A |
| 26 | BB | 205 | G |
| 26 | BB | 215 | G |
| 26 | BB | 216 | A |
| 26 | BB | 218 | A |
| 26 | BB | 222 | A |
| 26 | BB | 224 | U |
| 26 | BB | 225 | C |
| 26 | BB | 232 | G |
| 26 | BB | 242 | G |
| 26 | BB | 243 | U |
| 26 | BB | 248 | G |
| 26 | BB | 250 | G |
| 26 | BB | 255 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 265 | A |
| 26 | BB | 266 | G |
| 26 | BB | 267 | C |
| 26 | BB | 271 | G |
| 26 | BB | 277 | G |
| 26 | BB | 295 | G |
| 26 | BB | 311 | A |
| 26 | BB | 330 | A |
| 26 | BB | 332 | A |
| 26 | BB | 333 | G |
| 26 | BB | 338 | G |
| 26 | BB | 367 | G |
| 26 | BB | 370 | G |
| 26 | BB | 371 | A |
| 26 | BB | 372 | G |
| 26 | BB | 386 | G |
| 26 | BB | 387 | U |
| 26 | BB | 388 | G |
| 26 | BB | 391 | A |
| 26 | BB | 396 | G |
| 26 | BB | 404 | A |
| 26 | BB | 405 | U |
| 26 | BB | 406 | G |
| 26 | BB | 411 | G |
| 26 | BB | 418 | C |
| 26 | BB | 424 | G |
| 26 | BB | 431 | U |
| 26 | BB | 436 | C |
| 26 | BB | 443 | A |
| 26 | BB | 444 | C |
| 26 | BB | 447 | A |
| 26 | BB | 451 | U |
| 26 | BB | 452 | G |
| 26 | BB | 453 | A |
| 26 | BB | 454 | A |
| 26 | BB | 456 | C |
| 26 | BB | 464 | U |
| 26 | BB | 472 | A |
| 26 | BB | 479 | A |
| 26 | BB | 480 | A |
| 26 | BB | 481 | G |
| 26 | BB | 484 | C |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 489 | G |
| 26 | BB | 504 | A |
| 26 | BB | 505 | A |
| 26 | BB | 508 | A |
| 26 | BB | 509 | C |
| 26 | BB | 527 | C |
| 26 | BB | 532 | A |
| 26 | BB | 545 | U |
| 26 | BB | 546 | U |
| 26 | BB | 547 | A |
| 26 | BB | 550 | C |
| 26 | BB | 562 | U |
| 26 | BB | 563 | A |
| 26 | BB | 568 | U |
| 26 | BB | 569 | U |
| 26 | BB | 570 | G |
| 26 | BB | 573 | U |
| 26 | BB | 574 | A |
| 26 | BB | 575 | A |
| 26 | BB | 603 | A |
| 26 | BB | 604 | G |
| 26 | BB | 612 | G |
| 26 | BB | 613 | A |
| 26 | BB | 614 | A |
| 26 | BB | 615 | U |
| 26 | BB | 621 | A |
| 26 | BB | 626 | A |
| 26 | BB | 627 | A |
| 26 | BB | 635 | C |
| 26 | BB | 637 | A |
| 26 | BB | 643 | A |
| 26 | BB | 644 | A |
| 26 | BB | 645 | C |
| 26 | BB | 646 | U |
| 26 | BB | 654 | A |
| 26 | BB | 655 | A |
| 26 | BB | 671 | C |
| 26 | BB | 675 | A |
| 26 | BB | 686 | U |
| 26 | BB | 696 | G |
| 26 | BB | 715 | A |
| 26 | BB | 716 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 718 | A |
| 26 | BB | 719 | C |
| 26 | BB | 728 | G |
| 26 | BB | 730 | A |
| 26 | BB | 732 | C |
| 26 | BB | 736 | C |
| 26 | BB | 746 | PSU |
| 26 | BB | 747 | 5MU |
| 26 | BB | 748 | G |
| 26 | BB | 752 | A |
| 26 | BB | 753 | A |
| 26 | BB | 758 | C |
| 26 | BB | 763 | G |
| 26 | BB | 764 | A |
| 26 | BB | 775 | G |
| 26 | BB | 776 | G |
| 26 | BB | 777 | G |
| 26 | BB | 782 | A |
| 26 | BB | 784 | G |
| 26 | BB | 786 | C |
| 26 | BB | 789 | A |
| 26 | BB | 793 | A |
| 26 | BB | 802 | A |
| 26 | BB | 805 | G |
| 26 | BB | 806 | C |
| 26 | BB | 812 | C |
| 26 | BB | 846 | U |
| 26 | BB | 847 | U |
| 26 | BB | 848 | C |
| 26 | BB | 859 | G |
| 26 | BB | 870 | U |
| 26 | BB | 889 | C |
| 26 | BB | 894 | U |
| 26 | BB | 896 | A |
| 26 | BB | 897 | C |
| 26 | BB | 901 | C |
| 26 | BB | 910 | A |
| 26 | BB | 915 | C |
| 26 | BB | 925 | A |
| 26 | BB | 932 | U |
| 26 | BB | 933 | A |
| 26 | BB | 938 | G |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 941 | A |
| 26 | BB | 945 | A |
| 26 | BB | 946 | C |
| 26 | BB | 961 | C |
| 26 | BB | 973 | A |
| 26 | BB | 974 | G |
| 26 | BB | 975 | A |
| 26 | BB | 980 | A |
| 26 | BB | 981 | A |
| 26 | BB | 983 | A |
| 26 | BB | 985 | C |
| 26 | BB | 986 | C |
| 26 | BB | 990 | A |
| 26 | BB | 995 | C |
| 26 | BB | 996 | A |
| 26 | BB | 1002 | G |
| 26 | BB | 1003 | G |
| 26 | BB | 1005 | C |
| 26 | BB | 1008 | A |
| 26 | BB | 1010 | A |
| 26 | BB | 1013 | C |
| 26 | BB | 1022 | G |
| 26 | BB | 1025 | G |
| 26 | BB | 1026 | G |
| 26 | BB | 1044 | C |
| 26 | BB | 1048 | A |
| 26 | BB | 1052 | C |
| 26 | BB | 1060 | U |
| 26 | BB | 1061 | U |
| 26 | BB | 1062 | G |
| 26 | BB | 1068 | G |
| 26 | BB | 1069 | A |
| 26 | BB | 1070 | A |
| 26 | BB | 1073 | A |
| 26 | BB | 1079 | C |
| 26 | BB | 1081 | U |
| 26 | BB | 1083 | U |
| 26 | BB | 1084 | A |
| 26 | BB | 1085 | A |
| 26 | BB | 1087 | G |
| 26 | BB | 1094 | U |
| 26 | BB | 1098 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 1104 | C |
| 26 | BB | 1109 | C |
| 26 | BB | 1110 | G |
| 26 | BB | 1112 | G |
| 26 | BB | 1123 | C |
| 26 | BB | 1128 | G |
| 26 | BB | 1129 | A |
| 26 | BB | 1130 | U |
| 26 | BB | 1132 | U |
| 26 | BB | 1134 | A |
| 26 | BB | 1135 | C |
| 26 | BB | 1143 | A |
| 26 | BB | 1158 | C |
| 26 | BB | 1173 | U |
| 26 | BB | 1177 | G |
| 26 | BB | 1184 | U |
| 26 | BB | 1204 | A |
| 26 | BB | 1205 | A |
| 26 | BB | 1211 | C |
| 26 | BB | 1236 | G |
| 26 | BB | 1237 | A |
| 26 | BB | 1238 | G |
| 26 | BB | 1239 | G |
| 26 | BB | 1241 | A |
| 26 | BB | 1253 | A |
| 26 | BB | 1254 | A |
| 26 | BB | 1255 | U |
| 26 | BB | 1256 | G |
| 26 | BB | 1266 | G |
| 26 | BB | 1272 | A |
| 26 | BB | 1273 | U |
| 26 | BB | 1274 | A |
| 26 | BB | 1283 | G |
| 26 | BB | 1284 | A |
| 26 | BB | 1300 | G |
| 26 | BB | 1301 | A |
| 26 | BB | 1302 | A |
| 26 | BB | 1303 | G |
| 26 | BB | 1307 | A |
| 26 | BB | 1308 | A |
| 26 | BB | 1318 | U |
| 26 | BB | 1321 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 1323 | C |
| 26 | BB | 1329 | U |
| 26 | BB | 1341 | G |
| 26 | BB | 1342 | A |
| 26 | BB | 1349 | C |
| 26 | BB | 1354 | A |
| 26 | BB | 1362 | C |
| 26 | BB | 1363 | C |
| 26 | BB | 1365 | A |
| 26 | BB | 1368 | G |
| 26 | BB | 1378 | A |
| 26 | BB | 1379 | U |
| 26 | BB | 1383 | A |
| 26 | BB | 1384 | A |
| 26 | BB | 1385 | A |
| 26 | BB | 1386 | C |
| 26 | BB | 1391 | U |
| 26 | BB | 1392 | A |
| 26 | BB | 1395 | A |
| 26 | BB | 1396 | U |
| 26 | BB | 1416 | G |
| 26 | BB | 1417 | C |
| 26 | BB | 1420 | A |
| 26 | BB | 1421 | G |
| 26 | BB | 1455 | G |
| 26 | BB | 1458 | U |
| 26 | BB | 1459 | G |
| 26 | BB | 1460 | U |
| 26 | BB | 1461 | C |
| 26 | BB | 1482 | G |
| 26 | BB | 1490 | A |
| 26 | BB | 1494 | A |
| 26 | BB | 1509 | A |
| 26 | BB | 1514 | G |
| 26 | BB | 1515 | A |
| 26 | BB | 1522 | A |
| 26 | BB | 1523 | U |
| 26 | BB | 1524 | G |
| 26 | BB | 1552 | A |
| 26 | BB | 1558 | C |
| 26 | BB | 1565 | C |
| 26 | BB | 1566 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 1567 | G |
| 26 | BB | 1568 | G |
| 26 | BB | 1569 | A |
| 26 | BB | 1578 | U |
| 26 | BB | 1584 | U |
| 26 | BB | 1585 | C |
| 26 | BB | 1608 | A |
| 26 | BB | 1610 | A |
| 26 | BB | 1612 | C |
| 26 | BB | 1616 | A |
| 26 | BB | 1617 | C |
| 26 | BB | 1635 | A |
| 26 | BB | 1636 | U |
| 26 | BB | 1646 | C |
| 26 | BB | 1648 | U |
| 26 | BB | 1654 | A |
| 26 | BB | 1669 | A |
| 26 | BB | 1674 | G |
| 26 | BB | 1675 | C |
| 26 | BB | 1676 | A |
| 26 | BB | 1679 | A |
| 26 | BB | 1713 | A |
| 26 | BB | 1715 | G |
| 26 | BB | 1724 | G |
| 26 | BB | 1730 | C |
| 26 | BB | 1758 | U |
| 26 | BB | 1761 | C |
| 26 | BB | 1762 | A |
| 26 | BB | 1763 | G |
| 26 | BB | 1764 | C |
| 26 | BB | 1773 | A |
| 26 | BB | 1782 | U |
| 26 | BB | 1786 | A |
| 26 | BB | 1787 | A |
| 26 | BB | 1800 | C |
| 26 | BB | 1808 | A |
| 26 | BB | 1809 | A |
| 26 | BB | 1815 | A |
| 26 | BB | 1825 | U |
| 26 | BB | 1830 | C |
| 26 | BB | 1831 | G |
| 26 | BB | 1833 | C |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 1851 | U |
| 26 | BB | 1873 | G |
| 26 | BB | 1899 | A |
| 26 | BB | 1901 | A |
| 26 | BB | 1912 | A |
| 26 | BB | 1913 | A |
| 26 | BB | 1914 | C |
| 26 | BB | 1928 | A |
| 26 | BB | 1930 | G |
| 26 | BB | 1938 | A |
| 26 | BB | 1941 | C |
| 26 | BB | 1944 | U |
| 26 | BB | 1945 | G |
| 26 | BB | 1952 | A |
| 26 | BB | 1954 | G |
| 26 | BB | 1955 | U |
| 26 | BB | 1963 | U |
| 26 | BB | 1964 | G |
| 26 | BB | 1965 | C |
| 26 | BB | 1968 | G |
| 26 | BB | 1970 | A |
| 26 | BB | 1971 | U |
| 26 | BB | 1972 | G |
| 26 | BB | 1982 | U |
| 26 | BB | 1993 | U |
| 26 | BB | 1996 | C |
| 26 | BB | 1997 | C |
| 26 | BB | 2004 | G |
| 26 | BB | 2012 | G |
| 26 | BB | 2020 | A |
| 26 | BB | 2021 | C |
| 26 | BB | 2022 | U |
| 26 | BB | 2023 | C |
| 26 | BB | 2031 | A |
| 26 | BB | 2034 | U |
| 26 | BB | 2040 | G |
| 26 | BB | 2043 | C |
| 26 | BB | 2055 | C |
| 26 | BB | 2056 | G |
| 26 | BB | 2059 | A |
| 26 | BB | 2061 | G |
| 26 | BB | 2069 | 7MG |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 2077 | A |
| 26 | BB | 2084 | C |
| 26 | BB | 2095 | A |
| 26 | BB | 2107 | G |
| 26 | BB | 2111 | U |
| 26 | BB | 2112 | G |
| 26 | BB | 2118 | U |
| 26 | BB | 2127 | G |
| 26 | BB | 2128 | G |
| 26 | BB | 2130 | U |
| 26 | BB | 2131 | U |
| 26 | BB | 2132 | U |
| 26 | BB | 2133 | G |
| 26 | BB | 2134 | A |
| 26 | BB | 2137 | U |
| 26 | BB | 2143 | C |
| 26 | BB | 2148 | G |
| 26 | BB | 2154 | A |
| 26 | BB | 2157 | G |
| 26 | BB | 2158 | A |
| 26 | BB | 2162 | G |
| 26 | BB | 2163 | A |
| 26 | BB | 2198 | A |
| 26 | BB | 2199 | A |
| 26 | BB | 2203 | U |
| 26 | BB | 2204 | G |
| 26 | BB | 2211 | A |
| 26 | BB | 2212 | A |
| 26 | BB | 2213 | U |
| 26 | BB | 2214 | C |
| 26 | BB | 2215 | C |
| 26 | BB | 2224 | G |
| 26 | BB | 2225 | A |
| 26 | BB | 2237 | G |
| 26 | BB | 2238 | G |
| 26 | BB | 2239 | G |
| 26 | BB | 2246 | G |
| 26 | BB | 2249 | U |
| 26 | BB | 2250 | G |
| 26 | BB | 2254 | C |
| 26 | BB | 2266 | A |
| 26 | BB | 2270 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 2272 | U |
| 26 | BB | 2282 | G |
| 26 | BB | 2283 | C |
| 26 | BB | 2287 | A |
| 26 | BB | 2288 | A |
| 26 | BB | 2306 | C |
| 26 | BB | 2307 | G |
| 26 | BB | 2312 | U |
| 26 | BB | 2321 | U |
| 26 | BB | 2322 | A |
| 26 | BB | 2325 | G |
| 26 | BB | 2335 | A |
| 26 | BB | 2336 | A |
| 26 | BB | 2337 | G |
| 26 | BB | 2340 | A |
| 26 | BB | 2345 | G |
| 26 | BB | 2346 | A |
| 26 | BB | 2347 | C |
| 26 | BB | 2350 | C |
| 26 | BB | 2354 | C |
| 26 | BB | 2358 | A |
| 26 | BB | 2383 | G |
| 26 | BB | 2385 | C |
| 26 | BB | 2389 | G |
| 26 | BB | 2390 | U |
| 26 | BB | 2402 | U |
| 26 | BB | 2403 | C |
| 26 | BB | 2406 | A |
| 26 | BB | 2407 | A |
| 26 | BB | 2411 | A |
| 26 | BB | 2426 | A |
| 26 | BB | 2427 | C |
| 26 | BB | 2428 | G |
| 26 | BB | 2429 | G |
| 26 | BB | 2432 | A |
| 26 | BB | 2433 | A |
| 26 | BB | 2435 | A |
| 26 | BB | 2439 | A |
| 26 | BB | 2440 | C |
| 26 | BB | 2441 | U |
| 26 | BB | 2448 | A |
| 26 | BB | 2449 | H2U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 2450 | A |
| 26 | BB | 2472 | G |
| 26 | BB | 2476 | A |
| 26 | BB | 2478 | A |
| 26 | BB | 2486 | C |
| 26 | BB | 2491 | U |
| 26 | BB | 2494 | G |
| 26 | BB | 2501 | C |
| 26 | BB | 2502 | G |
| 26 | BB | 2504 | PSU |
| 26 | BB | 2505 | G |
| 26 | BB | 2515 | C |
| 26 | BB | 2516 | A |
| 26 | BB | 2518 | A |
| 26 | BB | 2519 | U |
| 26 | BB | 2530 | A |
| 26 | BB | 2547 | A |
| 26 | BB | 2566 | A |
| 26 | BB | 2567 | G |
| 26 | BB | 2572 | A |
| 26 | BB | 2573 | C |
| 26 | BB | 2585 | U |
| 26 | BB | 2586 | U |
| 26 | BB | 2587 | A |
| 26 | BB | 2599 | G |
| 26 | BB | 2606 | C |
| 26 | BB | 2613 | U |
| 26 | BB | 2616 | C |
| 26 | BB | 2628 | C |
| 26 | BB | 2629 | U |
| 26 | BB | 2639 | A |
| 26 | BB | 2654 | A |
| 26 | BB | 2655 | G |
| 26 | BB | 2656 | U |
| 26 | BB | 2664 | G |
| 26 | BB | 2685 | G |
| 26 | BB | 2689 | U |
| 26 | BB | 2690 | U |
| 26 | BB | 2714 | G |
| 26 | BB | 2737 | G |
| 26 | BB | 2739 | U |
| 26 | BB | 2742 | G |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 2744 | G |
| 26 | BB | 2757 | A |
| 26 | BB | 2765 | A |
| 26 | BB | 2766 | A |
| 26 | BB | 2769 | U |
| 26 | BB | 2771 | C |
| 26 | BB | 2774 | C |
| 26 | BB | 2777 | G |
| 26 | BB | 2778 | A |
| 26 | BB | 2779 | U |
| 26 | BB | 2782 | G |
| 26 | BB | 2791 | G |
| 26 | BB | 2798 | U |
| 26 | BB | 2800 | A |
| 26 | BB | 2807 | U |
| 26 | BB | 2821 | A |
| 26 | BB | 2823 | A |
| 26 | BB | 2824 | C |
| 26 | BB | 2825 | G |
| 26 | BB | 2832 | U |
| 26 | BB | 2833 | U |
| 26 | BB | 2842 | G |
| 26 | BB | 2849 | U |
| 26 | BB | 2858 | C |
| 26 | BB | 2859 | G |
| 26 | BB | 2861 | U |
| 26 | BB | 2864 | G |
| 26 | BB | 2868 | A |
| 26 | BB | 2873 | A |
| 26 | BB | 2879 | A |
| 26 | BB | 2880 | C |
| 26 | BB | 2883 | A |
| 26 | BB | 2886 | A |
| 26 | BB | 2889 | C |
| 26 | BB | 2893 | A |
| 26 | BB | 2895 | G |
| 26 | BB | 2903 | U |

All (311) RNA pucker outliers are listed below:

| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 5 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 7 | A |
| 1 | AA | 32 | A |
| 1 | AA | 37 | U |
| 1 | AA | 39 | G |
| 1 | AA | 48 | C |
| 1 | AA | 51 | A |
| 1 | AA | 128 | G |
| 1 | AA | 129 | A |
| 1 | AA | 164 | G |
| 1 | AA | 173 | U |
| 1 | AA | 178 | C |
| 1 | AA | 181 | A |
| 1 | AA | 187 | G |
| 1 | AA | 188 | C |
| 1 | AA | 206 | C |
| 1 | AA | 224 | U |
| 1 | AA | 243 | A |
| 1 | AA | 244 | U |
| 1 | AA | 251 | G |
| 1 | AA | 272 | C |
| 1 | AA | 279 | A |
| 1 | AA | 306 | A |
| 1 | AA | 328 | C |
| 1 | AA | 366 | A |
| 1 | AA | 372 | C |
| 1 | AA | 373 | A |
| 1 | AA | 410 | G |
| 1 | AA | 422 | C |
| 1 | AA | 429 | U |
| 1 | AA | 481 | G |
| 1 | AA | 485 | U |
| 1 | AA | 497 | G |
| 1 | AA | 509 | A |
| 1 | AA | 533 | A |
| 1 | AA | 552 | U |
| 1 | AA | 582 | C |
| 1 | AA | 653 | U |
| 1 | AA | 682 | G |
| 1 | AA | 700 | G |
| 1 | AA | 717 | U |
| 1 | AA | 719 | C |
| 1 | AA | 730 | G |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 764 | C |
| 1 | AA | 765 | G |
| 1 | AA | 775 | G |
| 1 | AA | 782 | A |
| 1 | AA | 790 | A |
| 1 | AA | 792 | A |
| 1 | AA | 815 | A |
| 1 | AA | 816 | A |
| 1 | AA | 820 | U |
| 1 | AA | 840 | C |
| 1 | AA | 870 | U |
| 1 | AA | 872 | A |
| 1 | AA | 897 | C |
| 1 | AA | 899 | C |
| 1 | AA | 926 | G |
| 1 | AA | 931 | C |
| 1 | AA | 937 | A |
| 1 | AA | 944 | G |
| 1 | AA | 952 | U |
| 1 | AA | 960 | U |
| 1 | AA | 968 | A |
| 1 | AA | 974 | A |
| 1 | AA | 977 | A |
| 1 | AA | 992 | U |
| 1 | AA | 993 | G |
| 1 | AA | 1004 | A |
| 1 | AA | 1014 | A |
| 1 | AA | 1028 | C |
| 1 | AA | 1029 | U |
| 1 | AA | 1092 | A |
| 1 | AA | 1101 | A |
| 1 | AA | 1143 | G |
| 1 | AA | 1167 | A |
| 1 | AA | 1182 | G |
| 1 | AA | 1192 | C |
| 1 | AA | 1201 | A |
| 1 | AA | 1211 | U |
| 1 | AA | 1213 | A |
| 1 | AA | 1214 | C |
| 1 | AA | 1226 | C |
| 1 | AA | 1253 | G |
| 1 | AA | 1256 | A |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 1 | AA | 1286 | U |
| 1 | AA | 1289 | A |
| 1 | AA | 1302 | C |
| 1 | AA | 1310 | G |
| 1 | AA | 1313 | U |
| 1 | AA | 1322 | C |
| 1 | AA | 1329 | A |
| 1 | AA | 1335 | U |
| 1 | AA | 1346 | A |
| 1 | AA | 1347 | G |
| 1 | AA | 1394 | A |
| 1 | AA | 1491 | G |
| 1 | AA | 1502 | A |
| 1 | AA | 1536 | C |
| 2 | AB | 9 | A |
| 2 | AB | 34 | C |
| 2 | AB | 47 | U |
| 2 | AB | 58 | A |
| 2 | AB | 59 | G |
| 2 | AB | 74 | C |
| 3 | AC | 17 | U |
| 3 | AC | 22 | G |
| 3 | AC | 29 | G |
| 3 | AC | 39 | U |
| 3 | AC | 40 | G |
| 3 | AC | 52 | U |
| 4 | AD | 9 | G |
| 4 | AD | 22 | A |
| 4 | AD | 75 | C |
| 4 | AD | 76 | C |
| 25 | BA | 25 | U |
| 25 | BA | 34 | A |
| 25 | BA | 35 | C |
| 25 | BA | 41 | G |
| 25 | BA | 42 | C |
| 25 | BA | 44 | G |
| 25 | BA | 57 | A |
| 25 | BA | 66 | A |
| 25 | BA | 87 | U |
| 25 | BA | 106 | G |
| 26 | BB | 13 | A |
| 26 | BB | 34 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 49 | A |
| 26 | BB | 53 | A |
| 26 | BB | 57 | C |
| 26 | BB | 63 | A |
| 26 | BB | 69 | C |
| 26 | BB | 71 | A |
| 26 | BB | 91 | A |
| 26 | BB | 94 | A |
| 26 | BB | 99 | U |
| 26 | BB | 114 | U |
| 26 | BB | 140 | C |
| 26 | BB | 196 | A |
| 26 | BB | 199 | A |
| 26 | BB | 228 | C |
| 26 | BB | 231 | A |
| 26 | BB | 241 | A |
| 26 | BB | 242 | G |
| 26 | BB | 265 | A |
| 26 | BB | 294 | A |
| 26 | BB | 332 | A |
| 26 | BB | 387 | U |
| 26 | BB | 428 | A |
| 26 | BB | 443 | A |
| 26 | BB | 451 | U |
| 26 | BB | 452 | G |
| 26 | BB | 453 | A |
| 26 | BB | 463 | G |
| 26 | BB | 479 | A |
| 26 | BB | 545 | U |
| 26 | BB | 546 | U |
| 26 | BB | 561 | G |
| 26 | BB | 568 | U |
| 26 | BB | 569 | U |
| 26 | BB | 574 | A |
| 26 | BB | 575 | A |
| 26 | BB | 603 | A |
| 26 | BB | 611 | C |
| 26 | BB | 620 | G |
| 26 | BB | 626 | A |
| 26 | BB | 628 | G |
| 26 | BB | 635 | C |
| 26 | BB | 671 | C |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 689 | A |
| 26 | BB | 714 | U |
| 26 | BB | 715 | A |
| 26 | BB | 776 | G |
| 26 | BB | 805 | G |
| 26 | BB | 847 | U |
| 26 | BB | 870 | U |
| 26 | BB | 900 | A |
| 26 | BB | 928 | A |
| 26 | BB | 945 | A |
| 26 | BB | 974 | G |
| 26 | BB | 982 | C |
| 26 | BB | 992 | C |
| 26 | BB | 1012 | U |
| 26 | BB | 1035 | U |
| 26 | BB | 1040 | A |
| 26 | BB | 1043 | C |
| 26 | BB | 1061 | U |
| 26 | BB | 1069 | A |
| 26 | BB | 1083 | U |
| 26 | BB | 1115 | G |
| 26 | BB | 1129 | A |
| 26 | BB | 1130 | U |
| 26 | BB | 1133 | A |
| 26 | BB | 1134 | A |
| 26 | BB | 1135 | C |
| 26 | BB | 1142 | A |
| 26 | BB | 1155 | A |
| 26 | BB | 1157 | G |
| 26 | BB | 1200 | C |
| 26 | BB | 1210 | G |
| 26 | BB | 1239 | G |
| 26 | BB | 1254 | A |
| 26 | BB | 1284 | A |
| 26 | BB | 1288 | G |
| 26 | BB | 1329 | U |
| 26 | BB | 1341 | G |
| 26 | BB | 1349 | C |
| 26 | BB | 1351 | C |
| 26 | BB | 1383 | A |
| 26 | BB | 1386 | C |
| 26 | BB | 1391 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 1395 | A |
| 26 | BB | 1451 | C |
| 26 | BB | 1458 | U |
| 26 | BB | 1460 | U |
| 26 | BB | 1476 | U |
| 26 | BB | 1493 | C |
| 26 | BB | 1567 | G |
| 26 | BB | 1608 | A |
| 26 | BB | 1616 | A |
| 26 | BB | 1626 | A |
| 26 | BB | 1634 | A |
| 26 | BB | 1640 | A |
| 26 | BB | 1675 | C |
| 26 | BB | 1677 | A |
| 26 | BB | 1693 | U |
| 26 | BB | 1715 | G |
| 26 | BB | 1717 | A |
| 26 | BB | 1723 | G |
| 26 | BB | 1759 | A |
| 26 | BB | 1762 | A |
| 26 | BB | 1778 | U |
| 26 | BB | 1784 | A |
| 26 | BB | 1786 | A |
| 26 | BB | 1807 | G |
| 26 | BB | 1828 | G |
| 26 | BB | 1882 | U |
| 26 | BB | 1912 | A |
| 26 | BB | 1927 | A |
| 26 | BB | 1939 | 5MU |
| 26 | BB | 1940 | U |
| 26 | BB | 1944 | U |
| 26 | BB | 1951 | U |
| 26 | BB | 1955 | U |
| 26 | BB | 2019 | A |
| 26 | BB | 2020 | A |
| 26 | BB | 2021 | C |
| 26 | BB | 2031 | A |
| 26 | BB | 2068 | U |
| 26 | BB | 2079 | U |
| 26 | BB | 2092 | U |
| 26 | BB | 2106 | U |
| 26 | BB | 2111 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 2112 | G |
| 26 | BB | 2118 | U |
| 26 | BB | 2133 | G |
| 26 | BB | 2162 | G |
| 26 | BB | 2178 | C |
| 26 | BB | 2198 | A |
| 26 | BB | 2213 | U |
| 26 | BB | 2223 | G |
| 26 | BB | 2225 | A |
| 26 | BB | 2236 | U |
| 26 | BB | 2238 | G |
| 26 | BB | 2249 | U |
| 26 | BB | 2253 | G |
| 26 | BB | 2272 | U |
| 26 | BB | 2282 | G |
| 26 | BB | 2287 | A |
| 26 | BB | 2321 | U |
| 26 | BB | 2336 | A |
| 26 | BB | 2385 | C |
| 26 | BB | 2402 | U |
| 26 | BB | 2406 | A |
| 26 | BB | 2425 | A |
| 26 | BB | 2432 | A |
| 26 | BB | 2434 | A |
| 26 | BB | 2439 | A |
| 26 | BB | 2440 | C |
| 26 | BB | 2452 | C |
| 26 | BB | 2515 | C |
| 26 | BB | 2554 | U |
| 26 | BB | 2567 | G |
| 26 | BB | 2571 | U |
| 26 | BB | 2581 | G |
| 26 | BB | 2588 | G |
| 26 | BB | 2602 | A |
| 26 | BB | 2610 | C |
| 26 | BB | 2613 | U |
| 26 | BB | 2616 | C |
| 26 | BB | 2628 | C |
| 26 | BB | 2655 | G |
| 26 | BB | 2663 | G |
| 26 | BB | 2670 | A |
| 26 | BB | 2756 | U |

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| Mol | Chain | Res | Type |
|---|---|---|---|
| 26 | BB | 2763 | G |
| 26 | BB | 2765 | A |
| 26 | BB | 2771 | C |
| 26 | BB | 2777 | G |
| 26 | BB | 2781 | A |
| 26 | BB | 2791 | G |
| 26 | BB | 2798 | U |
| 26 | BB | 2802 | G |
| 26 | BB | 2806 | C |
| 26 | BB | 2808 | G |
| 26 | BB | 2820 | A |
| 26 | BB | 2835 | A |
| 26 | BB | 2842 | G |
| 26 | BB | 2858 | C |
| 26 | BB | 2861 | U |
| 26 | BB | 2879 | A |

## 5.4 Non-standard residues in protein, DNA, RNA chains (i)

49 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Counts | RMSZ | $\#\|Z\| > 2$ | Counts | RMSZ | $\#\|Z\| > 2$ |
| 2 | H2U | AB | 17 | 2 | 18,21,22 | 1.42 | 2 (11%) | 21,30,33 | 2.16 | 5 (23%) |
| 26 | 5MC | BB | 1962 | 26 | 18,22,23 | 1.10 | 2 (11%) | 26,32,35 | 1.52 | 3 (11%) |
| 26 | CH | BB | 2575 | 26 | 16,21,22 | 1.85 | 5 (31%) | 20,30,33 | 1.80 | 5 (25%) |
| 26 | OMU | BB | 2552 | 26 | 19,22,23 | 1.35 | 3 (15%) | 26,31,34 | 2.28 | 11 (42%) |
| 26 | 6MZ | BB | 1618 | 26 | 18,25,26 | 1.78 | 6 (33%) | 16,36,39 | 1.68 | 3 (18%) |
| 26 | PSU | BB | 1911 | 26 | 18,21,22 | 1.80 | 4 (22%) | 22,30,33 | 1.22 | 2 (9%) |
| 4 | OMC | AD | 33 | 4 | 19,22,23 | 0.91 | 0 | 26,31,34 | 1.83 | 5 (19%) |
| 1 | 5MC | AA | 967 | 1 | 18,22,23 | 1.39 | 3 (16%) | 26,32,35 | 1.86 | 5 (19%) |
| 1 | 2MG | AA | 1516 | 1 | 18,26,27 | 2.24 | 10 (55%) | 16,38,41 | 1.33 | 3 (18%) |
| 4 | 4SU | AD | 8 | 4 | 18,21,22 | 2.10 | 5 (27%) | 26,30,33 | 1.68 | 7 (26%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Counts | RMSZ | $\#\|Z\| > 2$ | Counts | RMSZ | $\#\|Z\| > 2$ |
| 4 | 5MU | AD | 55 | 4 | 19,22,23 | 1.46 | 2 (10%) | 28,32,35 | 1.88 | 7 (25%) |
| 26 | 2MG | BB | 2445 | 26 | 18,26,27 | 1.92 | 4 (22%) | 16,38,41 | 1.23 | 1 (6%) |
| 1 | MA6 | AA | 1519 | 1 | 18,26,27 | 1.56 | 4 (22%) | 19,38,41 | 1.50 | 4 (21%) |
| 1 | 7MG | AA | 527 | 1 | 22,26,27 | 4.77 | 4 (18%) | 29,39,42 | 1.96 | 7 (24%) |
| 1 | MA6 | AA | 1518 | 1 | 18,26,27 | 1.36 | 2 (11%) | 19,38,41 | 1.60 | 5 (26%) |
| 26 | PSU | BB | 2504 | 26 | 18,21,22 | 1.85 | 4 (22%) | 22,30,33 | 1.65 | 5 (22%) |
| 26 | PSU | BB | 2605 | 26 | 18,21,22 | 1.98 | 5 (27%) | 22,30,33 | 2.36 | 7 (31%) |
| 2 | H2U | AB | 20 | 2 | 18,21,22 | 1.56 | 4 (22%) | 21,30,33 | 1.87 | 7 (33%) |
| 2 | 5MU | AB | 54 | 2 | 19,22,23 | 1.56 | 4 (21%) | 28,32,35 | 1.93 | 9 (32%) |
| 2 | 7MG | AB | 46 | 2 | 22,26,27 | 5.32 | 4 (18%) | 29,39,42 | 1.92 | 4 (13%) |
| 26 | 5MU | BB | 1939 | 26 | 19,22,23 | 1.54 | 5 (26%) | 28,32,35 | 2.02 | 8 (28%) |
| 26 | 2MG | BB | 1835 | 26 | 18,26,27 | 1.45 | 3 (16%) | 16,38,41 | 1.66 | 5 (31%) |
| 26 | OMG | BB | 2251 | 26 | 18,26,27 | 1.70 | 4 (22%) | 19,38,41 | 1.43 | 2 (10%) |
| 2 | MIA | AB | 37 | 2 | 24,31,32 | 2.36 | 9 (37%) | 26,44,47 | 2.16 | 6 (23%) |
| 1 | 5MC | AA | 1407 | 1 | 18,22,23 | 1.27 | 1 (5%) | 26,32,35 | 1.67 | 10 (38%) |
| 26 | PSU | BB | 955 | 26 | 18,21,22 | 1.78 | 5 (27%) | 22,30,33 | 1.70 | 6 (27%) |
| 26 | PSU | BB | 1917 | 26 | 18,21,22 | 1.98 | 2 (11%) | 22,30,33 | 1.77 | 5 (22%) |
| 26 | 2MA | BB | 2503 | 26 | 17,25,26 | 1.93 | 4 (23%) | 17,37,40 | 1.26 | 2 (11%) |
| 2 | OMC | AB | 32 | 2 | 19,22,23 | 1.20 | 2 (10%) | 26,31,34 | 1.31 | 4 (15%) |
| 1 | UR3 | AA | 1498 | 1 | 19,22,23 | 1.26 | 3 (15%) | 26,32,35 | 1.27 | 3 (11%) |
| 26 | 1MG | BB | 745 | 26 | 18,26,27 | 1.62 | 4 (22%) | 19,39,42 | 1.84 | 6 (31%) |
| 1 | 2MG | AA | 966 | 1 | 18,26,27 | 1.16 | 1 (5%) | 16,38,41 | 1.00 | 0 |
| 1 | 4OC | AA | 1402 | 1 | 20,23,24 | 1.29 | 2 (10%) | 26,32,35 | 1.12 | 2 (7%) |
| 26 | 7MG | BB | 2069 | 26 | 22,26,27 | 3.61 | 6 (27%) | 29,39,42 | 1.82 | 4 (13%) |
| 2 | PSU | AB | 55 | 2 | 18,21,22 | 1.53 | 3 (16%) | 22,30,33 | 1.39 | 4 (18%) |
| 4 | PSU | AD | 56 | 4 | 18,21,22 | 1.48 | 3 (16%) | 22,30,33 | 1.31 | 1 (4%) |
| 26 | PSU | BB | 2580 | 26 | 18,21,22 | 2.07 | 7 (38%) | 22,30,33 | 1.95 | 6 (27%) |
| 2 | 4SU | AB | 8 | 2 | 18,21,22 | 1.37 | 3 (16%) | 26,30,33 | 1.66 | 6 (23%) |
| 26 | 3TD | BB | 1915 | 26 | 18,22,23 | 1.32 | 2 (11%) | 22,32,35 | 1.20 | 2 (9%) |
| 26 | PSU | BB | 2457 | 26 | 18,21,22 | 2.10 | 5 (27%) | 22,30,33 | 1.70 | 4 (18%) |
| 2 | H2U | AB | 16 | 2 | 18,21,22 | 1.22 | 2 (11%) | 21,30,33 | 2.19 | 9 (42%) |
| 26 | 6MZ | BB | 2030 | 26 | 18,25,26 | 1.48 | 4 (22%) | 16,36,39 | 1.76 | 3 (18%) |
| 1 | PSU | AA | 516 | 1 | 18,21,22 | 1.99 | 7 (38%) | 22,30,33 | 3.00 | 13 (59%) |
| 26 | PSU | BB | 746 | 26 | 18,21,22 | 1.90 | 6 (33%) | 22,30,33 | 1.28 | 3 (13%) |
| 26 | H2U | BB | 2449 | 26 | 18,21,22 | 1.51 | 2 (11%) | 21,30,33 | 1.85 | 5 (23%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Counts | RMSZ | $\#\|Z\| > 2$ | Counts | RMSZ | $\#\|Z\| > 2$ |
| 26 | OMC | BB | 2498 | 26 | 19,22,23 | 1.21 | 2 (10%) | 26,31,34 | 1.64 | 5 (19%) |
| 26 | 5MU | BB | 747 | 26 | 19,22,23 | 1.58 | 4 (21%) | 28,32,35 | 2.85 | 8 (28%) |
| 4 | H2U | AD | 21 | 4 | 18,21,22 | 1.57 | 2 (11%) | 21,30,33 | 1.55 | 5 (23%) |
| 1 | 2MG | AA | 1207 | 1 | 18,26,27 | 1.67 | 5 (27%) | 16,38,41 | 2.04 | 5 (31%) |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|---|---|---|---|---|---|---|---|
| 2 | H2U | AB | 17 | 2 | - | 1/7/38/39 | 0/2/2/2 |
| 26 | 5MC | BB | 1962 | 26 | - | 1/7/25/26 | 0/2/2/2 |
| 26 | CH | BB | 2575 | 26 | - | 0/5/25/26 | 0/2/2/2 |
| 26 | OMU | BB | 2552 | 26 | - | 0/9/27/28 | 0/2/2/2 |
| 26 | 6MZ | BB | 1618 | 26 | - | 0/5/27/28 | 0/3/3/3 |
| 26 | PSU | BB | 1911 | 26 | - | 1/7/25/26 | 0/2/2/2 |
| 4 | OMC | AD | 33 | 4 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | 5MC | AA | 967 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 1 | 2MG | AA | 1516 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 4 | 4SU | AD | 8 | 4 | - | 0/7/25/26 | 0/2/2/2 |
| 4 | 5MU | AD | 55 | 4 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | 2MG | BB | 2445 | 26 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | MA6 | AA | 1519 | 1 | - | 0/7/29/30 | 0/3/3/3 |
| 1 | 7MG | AA | 527 | 1 | - | 1/7/37/38 | 0/3/3/3 |
| 1 | MA6 | AA | 1518 | 1 | - | 0/7/29/30 | 0/3/3/3 |
| 26 | PSU | BB | 2504 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | PSU | BB | 2605 | 26 | - | 3/7/25/26 | 0/2/2/2 |
| 2 | H2U | AB | 20 | 2 | - | 2/7/38/39 | 0/2/2/2 |
| 2 | 5MU | AB | 54 | 2 | - | 0/7/25/26 | 0/2/2/2 |
| 2 | 7MG | AB | 46 | 2 | - | 2/7/37/38 | 0/3/3/3 |
| 26 | 5MU | BB | 1939 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | 2MG | BB | 1835 | 26 | - | 0/5/27/28 | 0/3/3/3 |
| 26 | OMG | BB | 2251 | 26 | - | 0/5/27/28 | 0/3/3/3 |
| 2 | MIA | AB | 37 | 2 | - | 2/11/33/34 | 0/3/3/3 |
| 1 | 5MC | AA | 1407 | 1 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | PSU | BB | 955 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | PSU | BB | 1917 | 26 | - | 1/7/25/26 | 0/2/2/2 |
| 26 | 2MA | BB | 2503 | 26 | - | 0/3/25/26 | 0/3/3/3 |
| 2 | OMC | AB | 32 | 2 | - | 0/9/27/28 | 0/2/2/2 |
| 1 | UR3 | AA | 1498 | 1 | - | 0/7/25/26 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|---|---|---|---|---|---|---|---|
| 26 | 1MG | BB | 745 | 26 | - | 0/3/25/26 | 0/3/3/3 |
| 1 | 2MG | AA | 966 | 1 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | 4OC | AA | 1402 | 1 | - | 0/9/29/30 | 0/2/2/2 |
| 26 | 7MG | BB | 2069 | 26 | - | 0/7/37/38 | 0/3/3/3 |
| 2 | PSU | AB | 55 | 2 | - | 2/7/25/26 | 0/2/2/2 |
| 4 | PSU | AD | 56 | 4 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | PSU | BB | 2580 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 2 | 4SU | AB | 8 | 2 | - | 5/7/25/26 | 0/2/2/2 |
| 26 | 3TD | BB | 1915 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 26 | PSU | BB | 2457 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 2 | H2U | AB | 16 | 2 | - | 0/7/38/39 | 0/2/2/2 |
| 26 | 6MZ | BB | 2030 | 26 | - | 0/5/27/28 | 0/3/3/3 |
| 1 | PSU | AA | 516 | 1 | - | 4/7/25/26 | 0/2/2/2 |
| 26 | PSU | BB | 746 | 26 | - | 1/7/25/26 | 0/2/2/2 |
| 26 | H2U | BB | 2449 | 26 | - | 0/7/38/39 | 0/2/2/2 |
| 26 | OMC | BB | 2498 | 26 | - | 0/9/27/28 | 0/2/2/2 |
| 26 | 5MU | BB | 747 | 26 | - | 0/7/25/26 | 0/2/2/2 |
| 4 | H2U | AD | 21 | 4 | - | 3/7/38/39 | 0/2/2/2 |
| 1 | 2MG | AA | 1207 | 1 | - | 0/5/27/28 | 0/3/3/3 |

All (185) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 2 | AB | 46 | 7MG | C8-N9 | -24.11 | 1.32 | 1.46 |
| 1 | AA | 527 | 7MG | C8-N9 | -21.69 | 1.33 | 1.46 |
| 26 | BB | 2069 | 7MG | C8-N9 | -15.54 | 1.37 | 1.46 |
| 2 | AB | 37 | MIA | C2-S10 | -8.16 | 1.68 | 1.75 |
| 26 | BB | 1917 | PSU | C2-N1 | 7.04 | 1.46 | 1.36 |
| 4 | AD | 8 | 4SU | C5-C4 | -6.22 | 1.34 | 1.42 |
| 26 | BB | 2503 | 2MA | C2'-C1' | -5.74 | 1.45 | 1.53 |
| 26 | BB | 2457 | PSU | C2-N1 | 5.72 | 1.44 | 1.36 |
| 26 | BB | 2504 | PSU | C6-C5 | 5.32 | 1.41 | 1.35 |
| 26 | BB | 2445 | 2MG | C6-N1 | 5.15 | 1.45 | 1.37 |
| 26 | BB | 2580 | PSU | C2-N1 | 4.76 | 1.43 | 1.36 |
| 1 | AA | 1516 | 2MG | O4'-C1' | 4.65 | 1.47 | 1.41 |
| 26 | BB | 955 | PSU | C2-N1 | 4.40 | 1.42 | 1.36 |
| 26 | BB | 746 | PSU | C2'-C1' | -4.40 | 1.48 | 1.53 |
| 26 | BB | 2605 | PSU | C2-N3 | 4.16 | 1.44 | 1.37 |
| 26 | BB | 2251 | OMG | O4'-C4' | -3.97 | 1.36 | 1.45 |
| 26 | BB | 2449 | H2U | O4'-C4' | -3.95 | 1.36 | 1.45 |
| 1 | AA | 1516 | 2MG | CM2-N2 | 3.92 | 1.52 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 4 | AD | 8 | 4SU | C4-N3 | 3.92 | 1.41 | 1.37 |
| 4 | AD | 21 | H2U | C2-N3 | -3.89 | 1.31 | 1.38 |
| 26 | BB | 2445 | 2MG | O4'-C1' | -3.87 | 1.35 | 1.41 |
| 1 | AA | 516 | PSU | O5'-C5' | -3.86 | 1.35 | 1.44 |
| 26 | BB | 2580 | PSU | C1'-C5 | 3.84 | 1.59 | 1.50 |
| 4 | AD | 21 | H2U | C4-N3 | -3.61 | 1.31 | 1.37 |
| 26 | BB | 1835 | 2MG | C8-N7 | -3.60 | 1.28 | 1.35 |
| 26 | BB | 1915 | 3TD | C1'-C5 | 3.58 | 1.58 | 1.50 |
| 1 | AA | 1519 | MA6 | C8-N7 | -3.54 | 1.28 | 1.34 |
| 26 | BB | 2575 | CH | C6-N1 | 3.54 | 1.44 | 1.36 |
| 26 | BB | 2504 | PSU | O4'-C1' | 3.54 | 1.48 | 1.43 |
| 26 | BB | 2251 | OMG | C8-N7 | -3.53 | 1.29 | 1.35 |
| 1 | AA | 967 | 5MC | C3'-C4' | 3.48 | 1.61 | 1.53 |
| 26 | BB | 1618 | 6MZ | O4'-C1' | 3.46 | 1.45 | 1.41 |
| 26 | BB | 1911 | PSU | O5'-C5' | -3.40 | 1.36 | 1.44 |
| 2 | AB | 37 | MIA | C2-N1 | 3.37 | 1.39 | 1.34 |
| 1 | AA | 1207 | 2MG | C5-C6 | -3.36 | 1.40 | 1.47 |
| 2 | AB | 17 | H2U | O2'-C2' | -3.36 | 1.35 | 1.43 |
| 1 | AA | 1518 | MA6 | C2-N3 | 3.34 | 1.37 | 1.32 |
| 26 | BB | 2069 | 7MG | C2-N1 | 3.34 | 1.45 | 1.37 |
| 26 | BB | 1618 | 6MZ | C2'-C1' | -3.33 | 1.48 | 1.53 |
| 4 | AD | 56 | PSU | C2-N1 | -3.33 | 1.32 | 1.36 |
| 2 | AB | 54 | 5MU | C2-N1 | 3.31 | 1.43 | 1.38 |
| 2 | AB | 17 | H2U | C5-C4 | 3.25 | 1.57 | 1.50 |
| 26 | BB | 2605 | PSU | O4'-C1' | -3.25 | 1.39 | 1.43 |
| 26 | BB | 2445 | 2MG | C5-C4 | -3.22 | 1.34 | 1.43 |
| 26 | BB | 2605 | PSU | O4'-C4' | -3.21 | 1.37 | 1.45 |
| 2 | AB | 54 | 5MU | C3'-C2' | 3.20 | 1.62 | 1.53 |
| 1 | AA | 1516 | 2MG | C5-C6 | -3.16 | 1.41 | 1.47 |
| 1 | AA | 1516 | 2MG | C2'-C1' | -3.15 | 1.49 | 1.53 |
| 1 | AA | 966 | 2MG | C2'-C1' | 3.13 | 1.58 | 1.53 |
| 26 | BB | 2457 | PSU | O4'-C1' | 3.13 | 1.48 | 1.43 |
| 26 | BB | 2575 | CH | C5-C4 | 3.13 | 1.44 | 1.39 |
| 1 | AA | 1207 | 2MG | C8-N7 | -3.12 | 1.29 | 1.35 |
| 26 | BB | 1911 | PSU | C2-N1 | 3.09 | 1.40 | 1.36 |
| 26 | BB | 1618 | 6MZ | C2-N3 | 3.09 | 1.37 | 1.32 |
| 1 | AA | 516 | PSU | O4'-C1' | -3.08 | 1.39 | 1.43 |
| 26 | BB | 745 | 1MG | O6-C6 | 3.07 | 1.28 | 1.22 |
| 26 | BB | 745 | 1MG | C5-C4 | -3.05 | 1.35 | 1.43 |
| 26 | BB | 746 | PSU | C4-C5 | 3.04 | 1.52 | 1.44 |
| 26 | BB | 2575 | CH | O2'-C2' | 3.04 | 1.50 | 1.43 |
| 26 | BB | 1939 | 5MU | C5M-C5 | 3.03 | 1.58 | 1.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 516 | PSU | C1'-C5 | 3.01 | 1.57 | 1.50 |
| 26 | BB | 2552 | OMU | C2-N1 | 3.00 | 1.43 | 1.38 |
| 26 | BB | 2575 | CH | O5'-C5' | -3.00 | 1.37 | 1.44 |
| 1 | AA | 516 | PSU | O2'-C2' | -2.97 | 1.36 | 1.43 |
| 26 | BB | 2605 | PSU | C1'-C5 | 2.94 | 1.57 | 1.50 |
| 26 | BB | 1835 | 2MG | O5'-C5' | -2.93 | 1.37 | 1.44 |
| 26 | BB | 2605 | PSU | C4-N3 | 2.92 | 1.44 | 1.38 |
| 26 | BB | 2069 | 7MG | C5-N7 | 2.90 | 1.39 | 1.35 |
| 2 | AB | 8 | 4SU | C1'-N1 | 2.89 | 1.55 | 1.47 |
| 26 | BB | 2449 | H2U | C1'-N1 | 2.88 | 1.52 | 1.46 |
| 2 | AB | 55 | PSU | C2-N1 | 2.86 | 1.40 | 1.36 |
| 26 | BB | 2457 | PSU | C6-N1 | 2.86 | 1.41 | 1.36 |
| 2 | AB | 20 | H2U | C6-C5 | 2.86 | 1.59 | 1.52 |
| 1 | AA | 527 | 7MG | O3'-C3' | 2.85 | 1.49 | 1.43 |
| 26 | BB | 2552 | OMU | O4'-C1' | -2.84 | 1.35 | 1.42 |
| 26 | BB | 955 | PSU | C2'-C1' | -2.81 | 1.50 | 1.53 |
| 2 | AB | 55 | PSU | C1'-C5 | 2.80 | 1.56 | 1.50 |
| 26 | BB | 2457 | PSU | C2-N3 | 2.80 | 1.42 | 1.37 |
| 1 | AA | 1519 | MA6 | C10-N6 | 2.79 | 1.52 | 1.45 |
| 2 | AB | 32 | OMC | C2-N1 | 2.78 | 1.46 | 1.40 |
| 1 | AA | 1402 | 4OC | C3'-C4' | 2.78 | 1.60 | 1.53 |
| 26 | BB | 1618 | 6MZ | C3'-C2' | -2.76 | 1.45 | 1.53 |
| 4 | AD | 55 | 5MU | O4'-C4' | -2.74 | 1.38 | 1.45 |
| 2 | AB | 37 | MIA | C3'-C4' | -2.74 | 1.46 | 1.53 |
| 26 | BB | 955 | PSU | O3'-C3' | -2.72 | 1.36 | 1.43 |
| 26 | BB | 1911 | PSU | O4'-C1' | 2.70 | 1.47 | 1.43 |
| 1 | AA | 516 | PSU | C6-N1 | 2.69 | 1.40 | 1.36 |
| 2 | AB | 37 | MIA | O4'-C4' | -2.69 | 1.39 | 1.45 |
| 1 | AA | 967 | 5MC | C5'-C4' | 2.69 | 1.60 | 1.51 |
| 4 | AD | 55 | 5MU | O2'-C2' | -2.68 | 1.36 | 1.43 |
| 26 | BB | 2457 | PSU | C4-N3 | 2.66 | 1.43 | 1.38 |
| 2 | AB | 54 | 5MU | O4'-C4' | -2.66 | 1.39 | 1.45 |
| 26 | BB | 747 | 5MU | C2-N3 | 2.65 | 1.42 | 1.38 |
| 2 | AB | 16 | H2U | C3'-C4' | 2.65 | 1.59 | 1.53 |
| 1 | AA | 516 | PSU | C2-N1 | 2.63 | 1.40 | 1.36 |
| 2 | AB | 46 | 7MG | C5-N7 | 2.63 | 1.38 | 1.35 |
| 1 | AA | 1519 | MA6 | C6-N1 | 2.62 | 1.36 | 1.33 |
| 26 | BB | 747 | 5MU | C4-C5 | -2.61 | 1.40 | 1.44 |
| 2 | AB | 16 | H2U | O5'-C5' | -2.61 | 1.38 | 1.44 |
| 26 | BB | 1939 | 5MU | C2-N1 | 2.61 | 1.42 | 1.38 |
| 2 | AB | 37 | MIA | C8-N7 | -2.60 | 1.30 | 1.34 |
| 2 | AB | 37 | MIA | C13-C14 | 2.60 | 1.39 | 1.32 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1917 | PSU | C6-N1 | 2.59 | 1.40 | 1.36 |
| 26 | BB | 1962 | 5MC | C2'-C3' | -2.57 | 1.46 | 1.53 |
| 26 | BB | 746 | PSU | O2-C2 | -2.55 | 1.18 | 1.23 |
| 26 | BB | 2504 | PSU | C2-N1 | 2.55 | 1.40 | 1.36 |
| 1 | AA | 967 | 5MC | O4'-C4' | -2.51 | 1.39 | 1.45 |
| 26 | BB | 2030 | 6MZ | C6-N1 | 2.50 | 1.37 | 1.34 |
| 1 | AA | 1402 | 4OC | O2-C2 | -2.50 | 1.19 | 1.23 |
| 26 | BB | 1962 | 5MC | O5'-C5' | -2.49 | 1.38 | 1.44 |
| 1 | AA | 1207 | 2MG | O6-C6 | -2.49 | 1.18 | 1.23 |
| 1 | AA | 1407 | 5MC | CM5-C5 | 2.48 | 1.56 | 1.50 |
| 2 | AB | 37 | MIA | C4-N3 | 2.48 | 1.39 | 1.35 |
| 26 | BB | 746 | PSU | O4'-C1' | 2.46 | 1.47 | 1.43 |
| 26 | BB | 2445 | 2MG | C2-N1 | 2.43 | 1.40 | 1.36 |
| 1 | AA | 1519 | MA6 | C2'-C1' | -2.42 | 1.50 | 1.53 |
| 26 | BB | 745 | 1MG | C5-C6 | -2.42 | 1.40 | 1.47 |
| 4 | AD | 56 | PSU | O4-C4 | -2.41 | 1.19 | 1.23 |
| 2 | AB | 46 | 7MG | O4'-C4' | -2.40 | 1.39 | 1.45 |
| 26 | BB | 1911 | PSU | C6-C5 | 2.39 | 1.38 | 1.35 |
| 4 | AD | 8 | 4SU | C5'-C4' | 2.38 | 1.59 | 1.51 |
| 2 | AB | 37 | MIA | C2'-C1' | 2.38 | 1.57 | 1.53 |
| 26 | BB | 955 | PSU | C1'-C5 | 2.37 | 1.55 | 1.50 |
| 2 | AB | 20 | H2U | C2-N3 | -2.36 | 1.33 | 1.38 |
| 1 | AA | 1498 | UR3 | C2-N3 | 2.36 | 1.43 | 1.39 |
| 26 | BB | 2030 | 6MZ | O4'-C4' | -2.35 | 1.39 | 1.45 |
| 1 | AA | 1516 | 2MG | C8-N7 | -2.35 | 1.31 | 1.35 |
| 2 | AB | 46 | 7MG | O2'-C2' | 2.35 | 1.48 | 1.43 |
| 26 | BB | 2580 | PSU | C4-C5 | 2.35 | 1.50 | 1.44 |
| 26 | BB | 2503 | 2MA | O4'-C4' | -2.33 | 1.39 | 1.45 |
| 1 | AA | 1498 | UR3 | C5'-C4' | 2.32 | 1.58 | 1.51 |
| 26 | BB | 1915 | 3TD | C3'-C2' | -2.32 | 1.47 | 1.53 |
| 26 | BB | 2069 | 7MG | O3'-C3' | -2.32 | 1.37 | 1.43 |
| 26 | BB | 2498 | OMC | C5'-C4' | 2.31 | 1.58 | 1.51 |
| 26 | BB | 2504 | PSU | O4'-C4' | -2.31 | 1.39 | 1.45 |
| 4 | AD | 8 | 4SU | C1'-N1 | 2.30 | 1.54 | 1.47 |
| 26 | BB | 2069 | 7MG | O5'-C5' | -2.30 | 1.39 | 1.44 |
| 26 | BB | 2030 | 6MZ | C4-N3 | -2.30 | 1.32 | 1.35 |
| 2 | AB | 55 | PSU | C6-C5 | 2.29 | 1.38 | 1.35 |
| 1 | AA | 1516 | 2MG | O2'-C2' | -2.28 | 1.37 | 1.43 |
| 26 | BB | 747 | 5MU | C3'-C2' | 2.28 | 1.59 | 1.53 |
| 26 | BB | 1618 | 6MZ | C6-N1 | 2.28 | 1.37 | 1.34 |
| 4 | AD | 8 | 4SU | O4'-C4' | 2.27 | 1.50 | 1.45 |
| 26 | BB | 1618 | 6MZ | C8-N7 | -2.26 | 1.30 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2580 | PSU | C2'-C1' | -2.26 | 1.50 | 1.53 |
| 26 | BB | 955 | PSU | O4'-C4' | -2.26 | 1.39 | 1.45 |
| 1 | AA | 527 | 7MG | C5-N7 | 2.26 | 1.38 | 1.35 |
| 1 | AA | 1516 | 2MG | C5-C4 | -2.25 | 1.37 | 1.43 |
| 1 | AA | 1207 | 2MG | O4'-C1' | -2.25 | 1.37 | 1.41 |
| 26 | BB | 2251 | OMG | C5-C4 | -2.24 | 1.37 | 1.43 |
| 26 | BB | 745 | 1MG | O4'-C4' | -2.24 | 1.40 | 1.45 |
| 26 | BB | 1939 | 5MU | O2-C2 | -2.22 | 1.19 | 1.23 |
| 1 | AA | 527 | 7MG | C2-N3 | 2.22 | 1.38 | 1.33 |
| 2 | AB | 20 | H2U | C5'-C4' | 2.22 | 1.58 | 1.51 |
| 26 | BB | 2030 | 6MZ | O3'-C3' | 2.20 | 1.48 | 1.43 |
| 2 | AB | 54 | 5MU | C1'-N1 | 2.19 | 1.53 | 1.47 |
| 26 | BB | 2552 | OMU | O5'-C5' | -2.19 | 1.39 | 1.44 |
| 2 | AB | 37 | MIA | C6-N1 | 2.17 | 1.35 | 1.32 |
| 4 | AD | 56 | PSU | O2'-C2' | 2.17 | 1.48 | 1.43 |
| 26 | BB | 2503 | 2MA | C6-N6 | 2.16 | 1.37 | 1.28 |
| 26 | BB | 2069 | 7MG | C6-N1 | 2.16 | 1.42 | 1.38 |
| 2 | AB | 20 | H2U | O4'-C1' | 2.16 | 1.47 | 1.42 |
| 1 | AA | 1498 | UR3 | C3'-C4' | 2.14 | 1.58 | 1.53 |
| 26 | BB | 2498 | OMC | C1'-N1 | 2.14 | 1.53 | 1.47 |
| 2 | AB | 8 | 4SU | C2-N3 | 2.14 | 1.41 | 1.38 |
| 26 | BB | 2575 | CH | C5'-C4' | 2.13 | 1.58 | 1.51 |
| 26 | BB | 2503 | 2MA | C5-C4 | -2.13 | 1.37 | 1.43 |
| 1 | AA | 1518 | MA6 | C5'-C4' | 2.11 | 1.58 | 1.51 |
| 26 | BB | 2580 | PSU | C3'-C4' | -2.11 | 1.47 | 1.53 |
| 26 | BB | 1939 | 5MU | C6-N1 | 2.11 | 1.41 | 1.38 |
| 26 | BB | 746 | PSU | O4'-C4' | -2.11 | 1.40 | 1.45 |
| 2 | AB | 8 | 4SU | C2-N1 | 2.11 | 1.41 | 1.38 |
| 26 | BB | 1835 | 2MG | O4'-C1' | 2.08 | 1.44 | 1.41 |
| 26 | BB | 2251 | OMG | O3'-C3' | 2.06 | 1.47 | 1.43 |
| 26 | BB | 2580 | PSU | O4'-C4' | -2.06 | 1.40 | 1.45 |
| 2 | AB | 32 | OMC | O4'-C4' | 2.05 | 1.49 | 1.45 |
| 26 | BB | 747 | 5MU | C2'-C1' | 2.05 | 1.60 | 1.53 |
| 26 | BB | 746 | PSU | C4-N3 | 2.04 | 1.42 | 1.38 |
| 1 | AA | 1516 | 2MG | O5'-C5' | -2.04 | 1.39 | 1.44 |
| 1 | AA | 1516 | 2MG | C5'-C4' | 2.03 | 1.57 | 1.51 |
| 26 | BB | 2580 | PSU | O5'-C5' | -2.02 | 1.39 | 1.44 |
| 26 | BB | 1939 | 5MU | C2-N3 | 2.02 | 1.41 | 1.38 |
| 1 | AA | 1207 | 2MG | C2'-C1' | -2.01 | 1.50 | 1.53 |
| 1 | AA | 516 | PSU | C2-N3 | 2.01 | 1.40 | 1.37 |
| 1 | AA | 1516 | 2MG | C2-N2 | 2.00 | 1.37 | 1.33 |

All (247) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 747 | 5MU | C6-C5-C4 | 9.28 | 125.79 | 118.03 |
| 1 | AA | 516 | PSU | C6-C5-C4 | 8.98 | 124.48 | 118.20 |
| 26 | BB | 2605 | PSU | C6-C5-C4 | 8.50 | 124.14 | 118.20 |
| 26 | BB | 2069 | 7MG | N9-C8-N7 | 7.05 | 113.46 | 103.38 |
| 26 | BB | 747 | 5MU | C5M-C5-C6 | -7.05 | 113.44 | 122.85 |
| 2 | AB | 46 | 7MG | N9-C8-N7 | 6.45 | 112.61 | 103.38 |
| 1 | AA | 527 | 7MG | N9-C8-N7 | 5.90 | 111.81 | 103.38 |
| 2 | AB | 17 | H2U | N3-C2-N1 | 5.86 | 122.85 | 116.65 |
| 2 | AB | 37 | MIA | C2-N3-C4 | -5.85 | 107.25 | 115.32 |
| 26 | BB | 1917 | PSU | C3'-C2'-C1' | 5.57 | 108.13 | 101.64 |
| 26 | BB | 747 | 5MU | C5-C6-N1 | -5.52 | 117.66 | 123.34 |
| 1 | AA | 516 | PSU | C3'-C2'-C1' | 5.42 | 107.95 | 101.64 |
| 26 | BB | 2552 | OMU | N3-C2-N1 | 5.32 | 121.95 | 114.89 |
| 4 | AD | 33 | OMC | O2-C2-N3 | -5.28 | 113.75 | 122.33 |
| 4 | AD | 55 | 5MU | C6-C5-C4 | 5.13 | 122.32 | 118.03 |
| 2 | AB | 37 | MIA | C11-S10-C2 | 5.01 | 106.01 | 102.27 |
| 2 | AB | 54 | 5MU | C6-C5-C4 | 5.01 | 122.22 | 118.03 |
| 2 | AB | 16 | H2U | C4-N3-C2 | -4.97 | 121.67 | 125.79 |
| 1 | AA | 967 | 5MC | C5-C6-N1 | -4.96 | 118.23 | 123.34 |
| 26 | BB | 1618 | 6MZ | C9-N6-C6 | 4.87 | 127.07 | 122.87 |
| 26 | BB | 2580 | PSU | C6-N1-C2 | 4.81 | 127.60 | 122.68 |
| 26 | BB | 1939 | 5MU | C5M-C5-C6 | -4.77 | 116.48 | 122.85 |
| 26 | BB | 2030 | 6MZ | C9-N6-C6 | 4.66 | 126.88 | 122.87 |
| 1 | AA | 967 | 5MC | CM5-C5-C6 | -4.63 | 116.66 | 122.85 |
| 26 | BB | 1939 | 5MU | C6-C5-C4 | 4.50 | 121.80 | 118.03 |
| 1 | AA | 527 | 7MG | C6-C5-N7 | 4.47 | 138.94 | 131.91 |
| 1 | AA | 1207 | 2MG | C2'-C3'-C4' | -4.43 | 94.03 | 102.64 |
| 26 | BB | 745 | 1MG | C3'-C2'-C1' | 4.43 | 107.64 | 100.98 |
| 26 | BB | 1939 | 5MU | C5-C6-N1 | -4.41 | 118.80 | 123.34 |
| 2 | AB | 46 | 7MG | C2'-C3'-C4' | -4.38 | 94.14 | 102.64 |
| 26 | BB | 955 | PSU | C3'-C2'-C1' | 4.33 | 106.68 | 101.64 |
| 26 | BB | 2580 | PSU | N1-C2-N3 | -4.30 | 110.25 | 115.13 |
| 26 | BB | 2552 | OMU | C4-N3-C2 | -4.29 | 120.92 | 126.58 |
| 2 | AB | 37 | MIA | C5-C6-N1 | -4.27 | 117.26 | 120.81 |
| 2 | AB | 20 | H2U | C4-N3-C2 | 4.16 | 129.24 | 125.79 |
| 26 | BB | 2575 | CH | C4'-O4'-C1' | -4.02 | 106.03 | 109.85 |
| 4 | AD | 8 | 4SU | C6-N1-C2 | -4.00 | 115.87 | 120.99 |
| 26 | BB | 1962 | 5MC | C6-N1-C2 | -4.00 | 115.33 | 120.87 |
| 4 | AD | 55 | 5MU | O4-C4-C5 | 3.98 | 129.51 | 124.90 |
| 2 | AB | 17 | H2U | O4-C4-N3 | 3.93 | 126.51 | 120.28 |
| 2 | AB | 16 | H2U | C2'-C3'-C4' | -3.93 | 95.01 | 102.64 |
| 2 | AB | 8 | 4SU | C3'-C2'-C1' | 3.93 | 108.88 | 101.43 |
| 4 | AD | 56 | PSU | O2'-C2'-C1' | 3.89 | 120.50 | 111.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 1962 | 5MC | O4'-C1'-N1 | 3.88 | 117.24 | 108.36 |
| 26 | BB | 2449 | H2U | C5-C4-N3 | 3.87 | 120.99 | 116.65 |
| 26 | BB | 2552 | OMU | C3'-C2'-C1' | -3.77 | 95.80 | 102.89 |
| 1 | AA | 527 | 7MG | C5-C4-N9 | 3.75 | 111.22 | 106.35 |
| 26 | BB | 2457 | PSU | C6-N1-C2 | -3.74 | 118.86 | 122.68 |
| 26 | BB | 2449 | H2U | O2-C2-N1 | 3.68 | 127.73 | 123.11 |
| 26 | BB | 2503 | 2MA | C5-C6-N1 | 3.66 | 120.34 | 114.02 |
| 4 | AD | 55 | 5MU | C5M-C5-C6 | -3.59 | 118.05 | 122.85 |
| 26 | BB | 1939 | 5MU | C4-N3-C2 | -3.59 | 122.71 | 127.35 |
| 4 | AD | 21 | H2U | N3-C2-N1 | 3.59 | 120.44 | 116.65 |
| 2 | AB | 17 | H2U | C4-N3-C2 | -3.57 | 122.83 | 125.79 |
| 26 | BB | 746 | PSU | C3'-C2'-C1' | 3.56 | 105.78 | 101.64 |
| 26 | BB | 2498 | OMC | O2-C2-N1 | 3.48 | 126.08 | 118.89 |
| 26 | BB | 1835 | 2MG | O6-C6-C5 | 3.47 | 131.16 | 124.37 |
| 26 | BB | 2449 | H2U | O4'-C1'-N1 | 3.47 | 114.03 | 109.30 |
| 26 | BB | 747 | 5MU | O2-C2-N1 | 3.47 | 127.40 | 122.79 |
| 1 | AA | 1519 | MA6 | N1-C6-N6 | 3.46 | 120.70 | 117.06 |
| 1 | AA | 1498 | UR3 | O4'-C1'-N1 | 3.37 | 116.07 | 108.36 |
| 1 | AA | 516 | PSU | C5-C6-N1 | -3.36 | 117.08 | 122.11 |
| 2 | AB | 17 | H2U | O2-C2-N3 | -3.34 | 115.28 | 121.50 |
| 2 | AB | 16 | H2U | O4'-C1'-N1 | 3.30 | 113.79 | 109.30 |
| 2 | AB | 55 | PSU | C6-C5-C4 | 3.29 | 120.50 | 118.20 |
| 2 | AB | 46 | 7MG | C6-C5-N7 | 3.29 | 137.08 | 131.91 |
| 1 | AA | 516 | PSU | O2-C2-N3 | 3.28 | 128.01 | 121.82 |
| 4 | AD | 33 | OMC | C5-C4-N4 | 3.20 | 125.61 | 120.57 |
| 2 | AB | 54 | 5MU | C5M-C5-C6 | -3.19 | 118.59 | 122.85 |
| 1 | AA | 516 | PSU | N1-C2-N3 | -3.18 | 111.53 | 115.13 |
| 26 | BB | 747 | 5MU | C2'-C3'-C4' | -3.18 | 96.47 | 102.64 |
| 26 | BB | 2504 | PSU | C4'-O4'-C1' | -3.17 | 100.58 | 108.55 |
| 26 | BB | 2580 | PSU | C5-C6-N1 | -3.16 | 117.37 | 122.11 |
| 2 | AB | 37 | MIA | C12-C13-C14 | -3.15 | 121.00 | 127.14 |
| 26 | BB | 2575 | CH | O4'-C1'-C2' | 3.13 | 111.50 | 106.93 |
| 2 | AB | 20 | H2U | O2-C2-N1 | 3.12 | 127.02 | 123.11 |
| 2 | AB | 16 | H2U | N3-C2-N1 | 3.09 | 119.93 | 116.65 |
| 26 | BB | 1618 | 6MZ | C2-N1-C6 | 3.07 | 119.22 | 116.59 |
| 26 | BB | 1939 | 5MU | O3'-C3'-C4' | -3.03 | 102.27 | 111.05 |
| 1 | AA | 516 | PSU | C2'-C3'-C4' | -3.03 | 96.75 | 102.64 |
| 26 | BB | 2552 | OMU | C6-N1-C2 | -3.02 | 117.13 | 120.99 |
| 4 | AD | 21 | H2U | O4'-C4'-C5' | 3.01 | 119.28 | 109.37 |
| 1 | AA | 1518 | MA6 | O2'-C2'-C1' | -3.00 | 99.77 | 110.85 |
| 1 | AA | 1498 | UR3 | C4-N3-C2 | -2.99 | 121.75 | 124.56 |
| 26 | BB | 745 | 1MG | C2-N1-C6 | 2.99 | 123.38 | 120.95 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1207 | 2MG | C3'-C2'-C1' | 2.96 | 105.44 | 100.98 |
| 4 | AD | 33 | OMC | O2-C2-N1 | 2.95 | 124.98 | 118.89 |
| 26 | BB | 2605 | PSU | O2'-C2'-C1' | -2.94 | 104.22 | 111.23 |
| 26 | BB | 745 | 1MG | C2'-C3'-C4' | -2.93 | 96.94 | 102.64 |
| 26 | BB | 2552 | OMU | C2'-C1'-N1 | -2.93 | 108.53 | 114.22 |
| 26 | BB | 2580 | PSU | C2'-C3'-C4' | 2.93 | 108.34 | 102.64 |
| 2 | AB | 32 | OMC | O3'-C3'-C2' | 2.91 | 119.42 | 111.17 |
| 26 | BB | 2498 | OMC | O2-C2-N3 | -2.90 | 117.62 | 122.33 |
| 26 | BB | 1917 | PSU | C2'-C3'-C4' | -2.88 | 97.04 | 102.64 |
| 26 | BB | 1911 | PSU | O4'-C1'-C2' | 2.86 | 109.17 | 105.14 |
| 26 | BB | 1915 | 3TD | O4'-C4'-C5' | 2.85 | 118.75 | 109.37 |
| 26 | BB | 2552 | OMU | CM2-O2'-C2' | -2.85 | 107.06 | 114.52 |
| 26 | BB | 1917 | PSU | O2'-C2'-C1' | -2.82 | 104.50 | 111.23 |
| 26 | BB | 955 | PSU | C6-N1-C2 | -2.81 | 119.81 | 122.68 |
| 2 | AB | 8 | 4SU | O4'-C1'-C2' | -2.80 | 100.53 | 106.64 |
| 26 | BB | 1917 | PSU | C6-N1-C2 | -2.80 | 119.82 | 122.68 |
| 2 | AB | 54 | 5MU | O4'-C4'-C3' | -2.78 | 99.62 | 105.11 |
| 26 | BB | 2552 | OMU | O4'-C4'-C3' | -2.77 | 99.64 | 105.11 |
| 4 | AD | 55 | 5MU | O4-C4-N3 | -2.74 | 114.87 | 120.12 |
| 26 | BB | 1911 | PSU | C6-C5-C4 | 2.73 | 120.11 | 118.20 |
| 1 | AA | 1516 | 2MG | O6-C6-N1 | -2.73 | 117.42 | 120.65 |
| 1 | AA | 1407 | 5MC | O3'-C3'-C2' | 2.73 | 120.65 | 111.82 |
| 2 | AB | 54 | 5MU | O4-C4-C5 | -2.71 | 121.76 | 124.90 |
| 1 | AA | 1402 | 4OC | CM4-N4-C4 | 2.69 | 127.72 | 122.45 |
| 1 | AA | 967 | 5MC | O2-C2-N3 | -2.69 | 117.95 | 122.33 |
| 4 | AD | 8 | 4SU | C5-C6-N1 | 2.67 | 126.28 | 121.81 |
| 1 | AA | 1518 | MA6 | C3'-C2'-C1' | 2.67 | 104.99 | 100.98 |
| 26 | BB | 2504 | PSU | C6-C5-C4 | 2.66 | 120.06 | 118.20 |
| 26 | BB | 955 | PSU | O4'-C4'-C3' | 2.65 | 110.36 | 105.11 |
| 26 | BB | 2251 | OMG | N2-C2-N3 | 2.64 | 124.87 | 119.74 |
| 26 | BB | 2251 | OMG | O5'-C5'-C4' | 2.63 | 117.96 | 108.99 |
| 26 | BB | 2498 | OMC | C6-C5-C4 | -2.63 | 113.25 | 117.50 |
| 26 | BB | 2445 | 2MG | O4'-C4'-C3' | -2.63 | 99.91 | 105.11 |
| 2 | AB | 20 | H2U | O3'-C3'-C4' | 2.62 | 118.64 | 111.05 |
| 2 | AB | 8 | 4SU | O4'-C4'-C3' | 2.62 | 110.29 | 105.11 |
| 4 | AD | 8 | 4SU | C1'-N1-C2 | 2.61 | 122.29 | 117.57 |
| 1 | AA | 1407 | 5MC | O4'-C1'-C2' | -2.60 | 100.97 | 106.64 |
| 1 | AA | 1207 | 2MG | CM2-N2-C2 | 2.60 | 129.60 | 123.86 |
| 2 | AB | 54 | 5MU | O2-C2-N1 | -2.59 | 119.34 | 122.79 |
| 4 | AD | 33 | OMC | C6-C5-C4 | 2.58 | 121.67 | 117.50 |
| 26 | BB | 2580 | PSU | O2-C2-N3 | 2.57 | 126.67 | 121.82 |
| 2 | AB | 55 | PSU | O4'-C1'-C2' | 2.56 | 108.76 | 105.14 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 2069 | 7MG | O5'-C5'-C4' | 2.56 | 117.71 | 108.99 |
| 2 | AB | 32 | OMC | N1-C2-N3 | -2.55 | 114.17 | 118.81 |
| 26 | BB | 2605 | PSU | O2-C2-N3 | 2.55 | 126.61 | 121.82 |
| 2 | AB | 32 | OMC | O4'-C1'-N1 | 2.53 | 114.15 | 108.36 |
| 26 | BB | 955 | PSU | O3'-C3'-C4' | 2.53 | 118.37 | 111.05 |
| 2 | AB | 20 | H2U | C5'-C4'-C3' | -2.53 | 105.69 | 115.18 |
| 26 | BB | 747 | 5MU | O2-C2-N3 | -2.53 | 116.79 | 121.50 |
| 4 | AD | 21 | H2U | O2-C2-N3 | -2.53 | 116.79 | 121.50 |
| 26 | BB | 2580 | PSU | C6-C5-C4 | 2.50 | 119.95 | 118.20 |
| 2 | AB | 46 | 7MG | C6-C5-C4 | -2.50 | 117.47 | 122.62 |
| 26 | BB | 2457 | PSU | O2'-C2'-C1' | -2.50 | 105.27 | 111.23 |
| 2 | AB | 54 | 5MU | C2'-C1'-N1 | -2.49 | 106.16 | 113.22 |
| 4 | AD | 33 | OMC | C1'-N1-C6 | 2.49 | 126.27 | 120.84 |
| 2 | AB | 54 | 5MU | C5-C6-N1 | -2.48 | 120.78 | 123.34 |
| 26 | BB | 2552 | OMU | C5'-C4'-C3' | -2.48 | 105.88 | 115.18 |
| 1 | AA | 527 | 7MG | N9-C4-N3 | -2.48 | 121.75 | 125.47 |
| 4 | AD | 55 | 5MU | C5-C6-N1 | -2.48 | 120.79 | 123.34 |
| 1 | AA | 1407 | 5MC | O5'-C5'-C4' | 2.47 | 117.39 | 108.99 |
| 26 | BB | 2552 | OMU | O2-C2-N1 | -2.47 | 119.51 | 122.79 |
| 26 | BB | 747 | 5MU | C4-N3-C2 | -2.47 | 124.16 | 127.35 |
| 1 | AA | 516 | PSU | O2-C2-N1 | -2.46 | 120.08 | 122.79 |
| 1 | AA | 1516 | 2MG | O6-C6-C5 | 2.46 | 129.19 | 124.37 |
| 1 | AA | 1516 | 2MG | O3'-C3'-C2' | 2.46 | 119.79 | 111.82 |
| 26 | BB | 955 | PSU | O2-C2-N1 | -2.45 | 120.10 | 122.79 |
| 26 | BB | 2575 | CH | C6-N1-C2 | -2.43 | 116.34 | 121.03 |
| 26 | BB | 2605 | PSU | O2-C2-N1 | -2.42 | 120.12 | 122.79 |
| 26 | BB | 2503 | 2MA | C3'-C2'-C1' | 2.42 | 104.62 | 100.98 |
| 4 | AD | 8 | 4SU | C3'-C2'-C1' | 2.42 | 106.02 | 101.43 |
| 1 | AA | 967 | 5MC | O4'-C1'-C2' | 2.42 | 111.90 | 106.64 |
| 2 | AB | 16 | H2U | C4'-O4'-C1' | -2.41 | 104.15 | 109.47 |
| 1 | AA | 1519 | MA6 | C3'-C2'-C1' | 2.41 | 104.61 | 100.98 |
| 26 | BB | 2498 | OMC | C5-C4-N3 | 2.41 | 125.42 | 121.33 |
| 26 | BB | 2069 | 7MG | O4'-C4'-C3' | -2.39 | 100.38 | 105.11 |
| 1 | AA | 516 | PSU | C4-N3-C2 | 2.39 | 129.78 | 126.34 |
| 1 | AA | 516 | PSU | C5-C4-N3 | -2.39 | 111.18 | 116.58 |
| 4 | AD | 55 | 5MU | C4-N3-C2 | -2.39 | 124.26 | 127.35 |
| 4 | AD | 55 | 5MU | O4'-C4'-C3' | -2.39 | 100.39 | 105.11 |
| 1 | AA | 516 | PSU | O4'-C4'-C3' | 2.38 | 109.83 | 105.11 |
| 1 | AA | 1407 | 5MC | O2-C2-N3 | -2.37 | 118.47 | 122.33 |
| 26 | BB | 2504 | PSU | C5-C6-N1 | -2.36 | 118.58 | 122.11 |
| 2 | AB | 20 | H2U | C4'-O4'-C1' | -2.35 | 104.28 | 109.47 |
| 2 | AB | 55 | PSU | C6-N1-C2 | -2.35 | 120.28 | 122.68 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 26 | BB | 745 | 1MG | CM1-N1-C6 | -2.35 | 114.33 | 117.55 |
| 1 | AA | 1518 | MA6 | O3'-C3'-C2' | 2.34 | 119.40 | 111.82 |
| 26 | BB | 1917 | PSU | C6-C5-C4 | 2.34 | 119.83 | 118.20 |
| 26 | BB | 745 | 1MG | O4'-C1'-C2' | -2.34 | 103.51 | 106.93 |
| 26 | BB | 2069 | 7MG | O4'-C1'-N9 | 2.34 | 112.48 | 109.30 |
| 4 | AD | 8 | 4SU | O4'-C1'-N1 | 2.33 | 113.70 | 108.36 |
| 26 | BB | 746 | PSU | C2'-C3'-C4' | 2.33 | 107.18 | 102.64 |
| 26 | BB | 747 | 5MU | O4-C4-C5 | 2.33 | 127.60 | 124.90 |
| 26 | BB | 2575 | CH | O4'-C4'-C5' | 2.33 | 117.02 | 109.37 |
| 1 | AA | 516 | PSU | O4-C4-C5 | 2.32 | 130.14 | 124.05 |
| 26 | BB | 2504 | PSU | C2'-C3'-C4' | -2.32 | 98.13 | 102.64 |
| 26 | BB | 745 | 1MG | O5'-C5'-C4' | 2.32 | 116.89 | 108.99 |
| 26 | BB | 2457 | PSU | C6-C5-C4 | 2.32 | 119.82 | 118.20 |
| 2 | AB | 55 | PSU | O4'-C4'-C5' | 2.32 | 117.00 | 109.37 |
| 1 | AA | 527 | 7MG | C4-C5-N7 | -2.32 | 102.32 | 105.53 |
| 1 | AA | 1518 | MA6 | O2'-C2'-C3' | 2.31 | 119.29 | 111.82 |
| 26 | BB | 1835 | 2MG | CM2-N2-C2 | 2.31 | 128.97 | 123.86 |
| 2 | AB | 8 | 4SU | O3'-C3'-C4' | 2.30 | 117.71 | 111.05 |
| 1 | AA | 1407 | 5MC | O2-C2-N1 | 2.30 | 123.64 | 118.89 |
| 2 | AB | 20 | H2U | O2'-C2'-C1' | 2.30 | 117.71 | 110.02 |
| 26 | BB | 955 | PSU | C2'-C3'-C4' | -2.30 | 98.18 | 102.64 |
| 26 | BB | 2030 | 6MZ | O5'-C5'-C4' | 2.28 | 116.76 | 108.99 |
| 26 | BB | 2449 | H2U | O2'-C2'-C1' | 2.28 | 117.65 | 110.02 |
| 2 | AB | 16 | H2U | C3'-C2'-C1' | -2.28 | 97.09 | 101.43 |
| 1 | AA | 1519 | MA6 | C9-N6-C6 | 2.28 | 126.42 | 119.51 |
| 1 | AA | 1207 | 2MG | C8-N7-C5 | 2.28 | 107.33 | 102.99 |
| 4 | AD | 21 | H2U | O4-C4-N3 | 2.28 | 123.89 | 120.28 |
| 1 | AA | 1207 | 2MG | O2'-C2'-C1' | -2.27 | 102.46 | 110.85 |
| 26 | BB | 1915 | 3TD | C5'-C4'-C3' | -2.27 | 106.67 | 115.18 |
| 1 | AA | 1402 | 4OC | C1'-N1-C6 | 2.25 | 125.74 | 120.84 |
| 26 | BB | 1618 | 6MZ | C4-C5-N7 | 2.25 | 111.74 | 109.40 |
| 2 | AB | 17 | H2U | C5-C4-N3 | -2.24 | 114.13 | 116.65 |
| 26 | BB | 1939 | 5MU | C5-C4-N3 | 2.24 | 117.22 | 115.31 |
| 1 | AA | 527 | 7MG | O4'-C4'-C3' | 2.23 | 109.53 | 105.11 |
| 26 | BB | 2449 | H2U | N3-C2-N1 | -2.22 | 114.30 | 116.65 |
| 26 | BB | 1962 | 5MC | C1'-N1-C2 | 2.22 | 123.37 | 118.42 |
| 1 | AA | 516 | PSU | O2'-C2'-C1' | -2.22 | 105.94 | 111.23 |
| 4 | AD | 8 | 4SU | O3'-C3'-C4' | -2.21 | 104.65 | 111.05 |
| 1 | AA | 1407 | 5MC | C1'-N1-C6 | 2.20 | 124.79 | 121.12 |
| 1 | AA | 1407 | 5MC | C5-C4-N4 | -2.19 | 118.20 | 121.48 |
| 2 | AB | 54 | 5MU | O4-C4-N3 | 2.19 | 124.31 | 120.12 |
| 2 | AB | 8 | 4SU | C2'-C3'-C4' | -2.18 | 98.40 | 102.64 |

*Continued on next page...*

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| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 1 | AA | 1518 | MA6 | N3-C2-N1 | -2.18 | 125.28 | 128.68 |
| 2 | AB | 16 | H2U | O2-C2-N3 | -2.17 | 117.46 | 121.50 |
| 2 | AB | 20 | H2U | O2-C2-N3 | -2.16 | 117.48 | 121.50 |
| 2 | AB | 8 | 4SU | O2-C2-N1 | -2.13 | 119.96 | 122.79 |
| 26 | BB | 2457 | PSU | O4'-C4'-C5' | 2.13 | 116.37 | 109.37 |
| 4 | AD | 21 | H2U | O4'-C1'-N1 | -2.12 | 106.41 | 109.30 |
| 26 | BB | 746 | PSU | C6-N1-C2 | 2.11 | 124.84 | 122.68 |
| 26 | BB | 2030 | 6MZ | C4-C5-N7 | 2.11 | 111.60 | 109.40 |
| 2 | AB | 37 | MIA | O3'-C3'-C2' | -2.11 | 104.99 | 111.82 |
| 1 | AA | 1519 | MA6 | O3'-C3'-C4' | 2.11 | 117.15 | 111.05 |
| 26 | BB | 2605 | PSU | C5-C4-N3 | -2.11 | 111.81 | 116.58 |
| 1 | AA | 967 | 5MC | N4-C4-N3 | -2.11 | 114.63 | 118.48 |
| 1 | AA | 1407 | 5MC | O4'-C1'-N1 | 2.11 | 113.18 | 108.36 |
| 1 | AA | 1498 | UR3 | O3'-C3'-C2' | -2.10 | 105.02 | 111.82 |
| 26 | BB | 2552 | OMU | C1'-N1-C6 | 2.10 | 125.42 | 120.84 |
| 1 | AA | 1407 | 5MC | C3'-C2'-C1' | 2.10 | 105.41 | 101.43 |
| 2 | AB | 16 | H2U | O4'-C4'-C3' | -2.09 | 100.97 | 105.11 |
| 2 | AB | 54 | 5MU | C3'-C2'-C1' | -2.09 | 97.45 | 101.43 |
| 26 | BB | 2605 | PSU | N1-C2-N3 | -2.09 | 112.77 | 115.13 |
| 26 | BB | 2552 | OMU | O4'-C1'-C2' | 2.07 | 110.21 | 106.57 |
| 2 | AB | 37 | MIA | C4-C5-N7 | -2.07 | 107.24 | 109.40 |
| 26 | BB | 1835 | 2MG | O6-C6-N1 | -2.07 | 118.20 | 120.65 |
| 26 | BB | 1939 | 5MU | O4-C4-C5 | -2.06 | 122.52 | 124.90 |
| 2 | AB | 32 | OMC | O2-C2-N1 | 2.05 | 123.12 | 118.89 |
| 26 | BB | 1835 | 2MG | O3'-C3'-C4' | 2.04 | 116.96 | 111.05 |
| 26 | BB | 2504 | PSU | O2'-C2'-C1' | -2.04 | 106.36 | 111.23 |
| 26 | BB | 1939 | 5MU | C2'-C1'-N1 | 2.04 | 118.99 | 113.22 |
| 1 | AA | 1407 | 5MC | C2'-C3'-C4' | -2.04 | 98.69 | 102.64 |
| 26 | BB | 2498 | OMC | C6-N1-C2 | 2.04 | 124.03 | 120.49 |
| 26 | BB | 1835 | 2MG | C5-C6-N1 | -2.03 | 110.37 | 113.95 |
| 26 | BB | 2575 | CH | O5'-C5'-C4' | 2.02 | 115.88 | 108.99 |
| 4 | AD | 8 | 4SU | C5'-C4'-C3' | -2.02 | 107.63 | 115.18 |
| 2 | AB | 16 | H2U | O5'-C5'-C4' | 2.01 | 115.83 | 108.99 |
| 26 | BB | 2605 | PSU | O4-C4-N3 | 2.01 | 123.96 | 120.12 |
| 1 | AA | 516 | PSU | C6-N1-C2 | 2.01 | 124.73 | 122.68 |
| 1 | AA | 527 | 7MG | C6-C5-C4 | -2.00 | 118.49 | 122.62 |

There are no chirality outliers.

All (29) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|---|---|---|---|---|
| 1 | AA | 516 | PSU | C2'-C1'-C5-C4 |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Res | Type | Atoms |
|---|---|---|---|---|
| 1 | AA | 516 | PSU | C2'-C1'-C5-C6 |
| 2 | AB | 8 | 4SU | C2'-C1'-N1-C2 |
| 2 | AB | 8 | 4SU | C2'-C1'-N1-C6 |
| 26 | BB | 746 | PSU | O4'-C1'-C5-C6 |
| 26 | BB | 2605 | PSU | C2'-C1'-C5-C4 |
| 26 | BB | 2605 | PSU | C2'-C1'-C5-C6 |
| 2 | AB | 46 | 7MG | C4'-C5'-O5'-P |
| 2 | AB | 20 | H2U | O4'-C4'-C5'-O5' |
| 1 | AA | 527 | 7MG | C4'-C5'-O5'-P |
| 2 | AB | 8 | 4SU | C4'-C5'-O5'-P |
| 2 | AB | 8 | 4SU | O4'-C1'-N1-C6 |
| 2 | AB | 37 | MIA | O4'-C4'-C5'-O5' |
| 26 | BB | 1962 | 5MC | O4'-C1'-N1-C6 |
| 2 | AB | 37 | MIA | C3'-C4'-C5'-O5' |
| 4 | AD | 21 | H2U | O4'-C1'-N1-C2 |
| 1 | AA | 516 | PSU | O4'-C1'-C5-C4 |
| 2 | AB | 55 | PSU | O4'-C1'-C5-C4 |
| 2 | AB | 17 | H2U | O4'-C4'-C5'-O5' |
| 2 | AB | 20 | H2U | C3'-C4'-C5'-O5' |
| 4 | AD | 21 | H2U | C2'-C1'-N1-C2 |
| 1 | AA | 516 | PSU | O4'-C1'-C5-C6 |
| 2 | AB | 55 | PSU | O4'-C1'-C5-C6 |
| 26 | BB | 1911 | PSU | O4'-C1'-C5-C6 |
| 26 | BB | 1917 | PSU | O4'-C1'-C5-C6 |
| 26 | BB | 2605 | PSU | O4'-C1'-C5-C6 |
| 2 | AB | 8 | 4SU | O4'-C1'-N1-C2 |
| 4 | AD | 21 | H2U | C2'-C1'-N1-C6 |
| 2 | AB | 46 | 7MG | O4'-C4'-C5'-O5' |

There are no ring outliers.

No monomer is involved in short contacts.

## 5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry (i)

2 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and

the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Counts | RMSZ | $\#\|Z\| > 2$ | Counts | RMSZ | $\#\|Z\| > 2$ |
| 59 | TRP | AB | 101 | 60,2 | 14,15,16 | 1.99 | 3 (21%) | 13,20,22 | 2.27 | 5 (38%) |
| 60 | FME | BB | 3001 | 59 | 8,9,10 | 1.23 | 2 (25%) | 7,9,11 | 1.40 | 1 (14%) |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|---|---|---|---|---|---|---|---|
| 59 | TRP | AB | 101 | 60,2 | - | 0/5/6/8 | 0/2/2/2 |
| 60 | FME | BB | 3001 | 59 | - | 2/7/9/11 | - |

All (5) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|---|---|---|---|---|---|---|---|
| 59 | AB | 101 | TRP | OXT-C | -5.01 | 1.21 | 1.42 |
| 59 | AB | 101 | TRP | CH2-CZ2 | 3.05 | 1.43 | 1.36 |
| 59 | AB | 101 | TRP | C-CA | 2.83 | 1.57 | 1.52 |
| 60 | BB | 3001 | FME | CB-CG | 2.21 | 1.60 | 1.51 |
| 60 | BB | 3001 | FME | CE-SD | 2.14 | 1.91 | 1.78 |

All (6) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed($^o$) | Ideal($^o$) |
|---|---|---|---|---|---|---|---|
| 59 | AB | 101 | TRP | CH2-CZ3-CE3 | 4.81 | 127.18 | 120.44 |
| 59 | AB | 101 | TRP | CZ3-CH2-CZ2 | -3.88 | 115.00 | 120.44 |
| 59 | AB | 101 | TRP | CE3-CD2-CE2 | -2.82 | 114.43 | 118.17 |
| 59 | AB | 101 | TRP | CZ2-CE2-CD2 | 2.30 | 124.96 | 120.76 |
| 59 | AB | 101 | TRP | CD2-CE2-NE1 | -2.04 | 103.39 | 107.92 |
| 60 | BB | 3001 | FME | O1-CN-N | -2.03 | 119.94 | 125.27 |

There are no chirality outliers.

All (2) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|---|---|---|---|---|
| 60 | BB | 3001 | FME | O1-CN-N-CA |
| 60 | BB | 3001 | FME | CB-CA-N-CN |

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers (i)

There are no such residues in this entry.

## 5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|---|---|---|
| 26 | BB | 1 |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|---|---|---|---|---|---|---|
| 1 | BB | 2677:G | O3' | 2678:C | P | 1.76 |

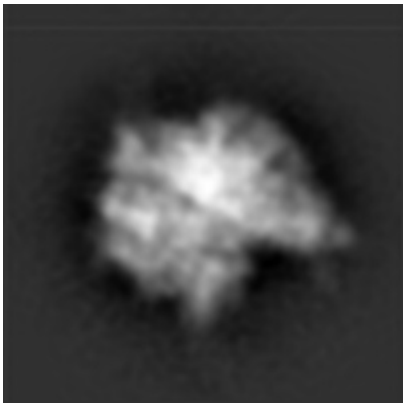
# 6 Map visualisation (i)

This section contains visualisations of the EMDB entry EMD-5364. These allow visual inspection of the internal detail of the map and identification of artifacts.

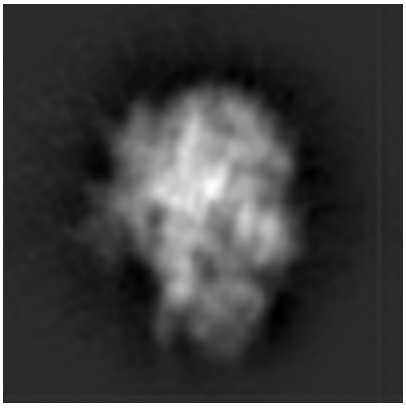
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

## 6.1 Orthogonal projections (i)

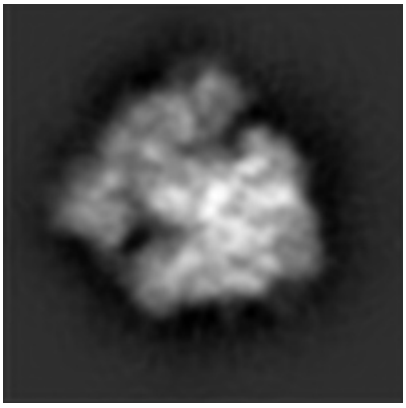
### 6.1.1 Primary map



X



Y

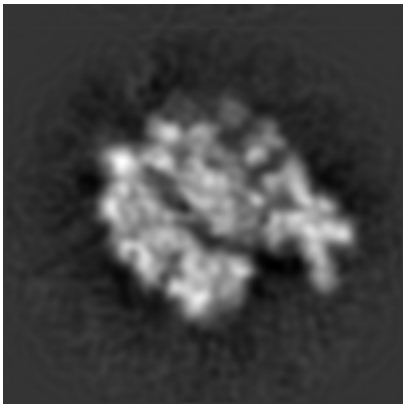


Z

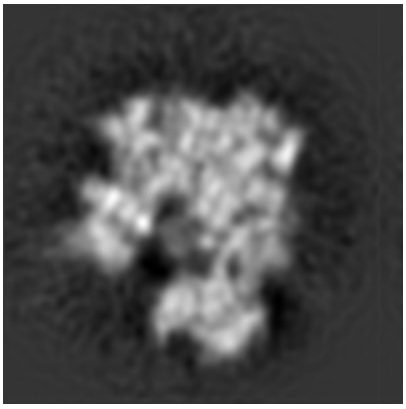
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices (i)

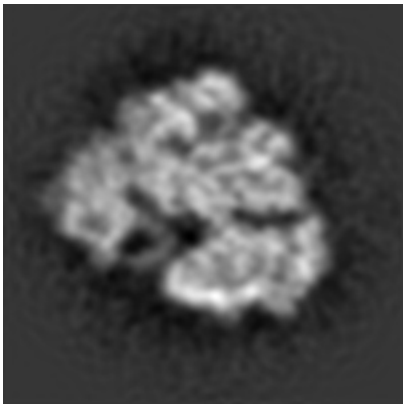
### 6.2.1 Primary map



X Index: 125



Y Index: 125

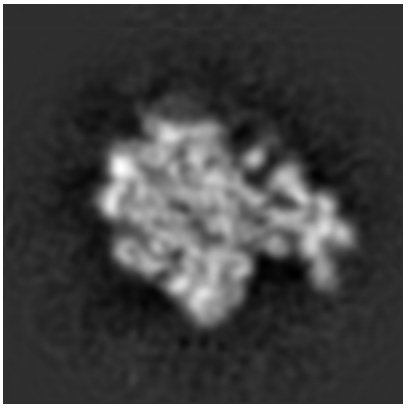


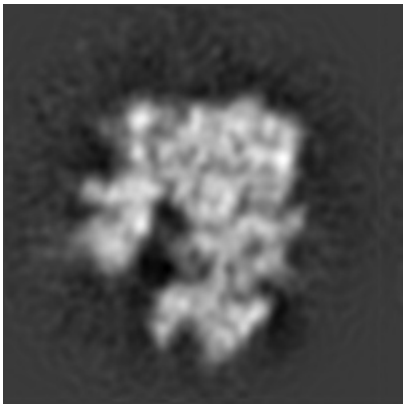
Z Index: 125

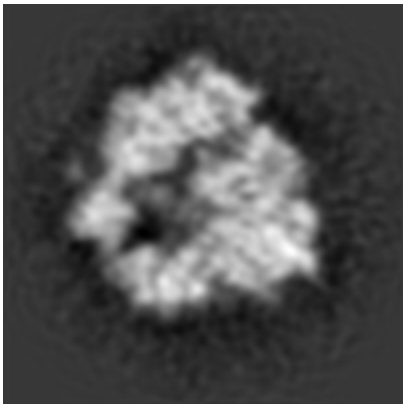
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices (i)

### 6.3.1 Primary map


X Index: 130

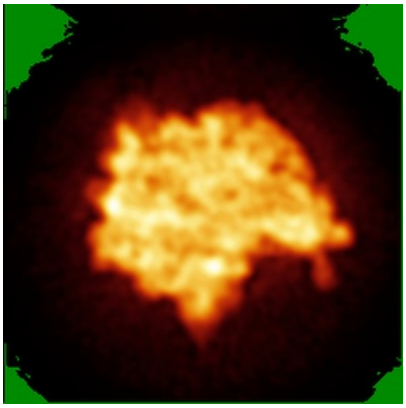

Y Index: 130

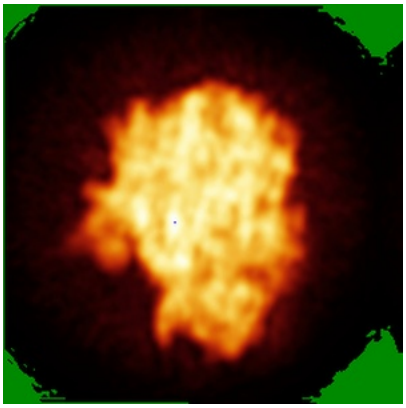

Z Index: 114

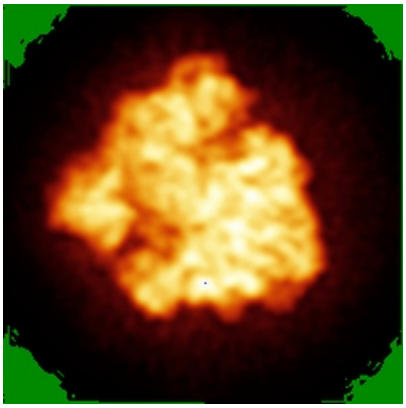
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal standard-deviation projections (False-color) (i)

### 6.4.1 Primary map


X


Y


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

## 6.5 Orthogonal surface views (i)

### 6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

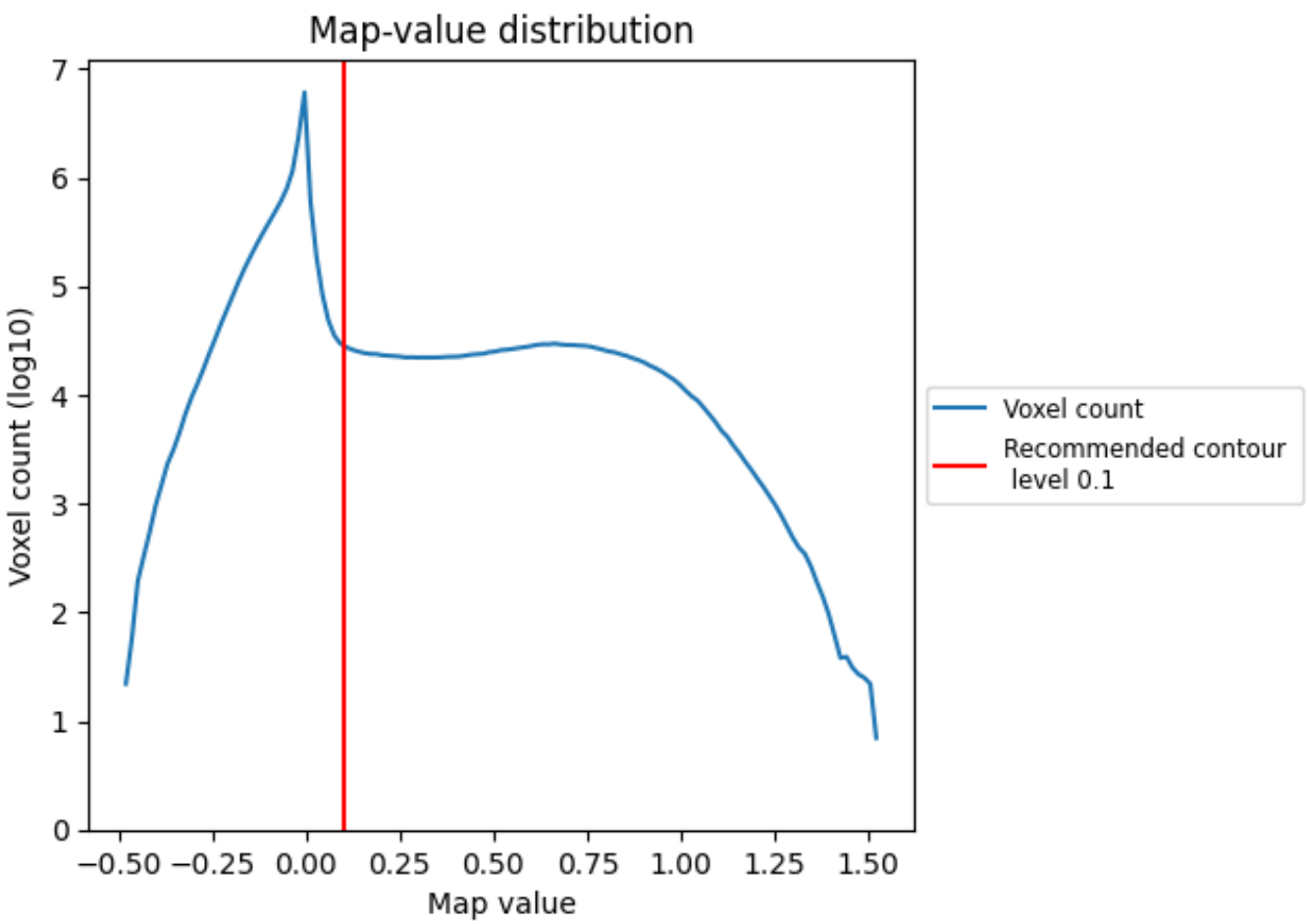
## 6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

# 7 Map analysis (i)

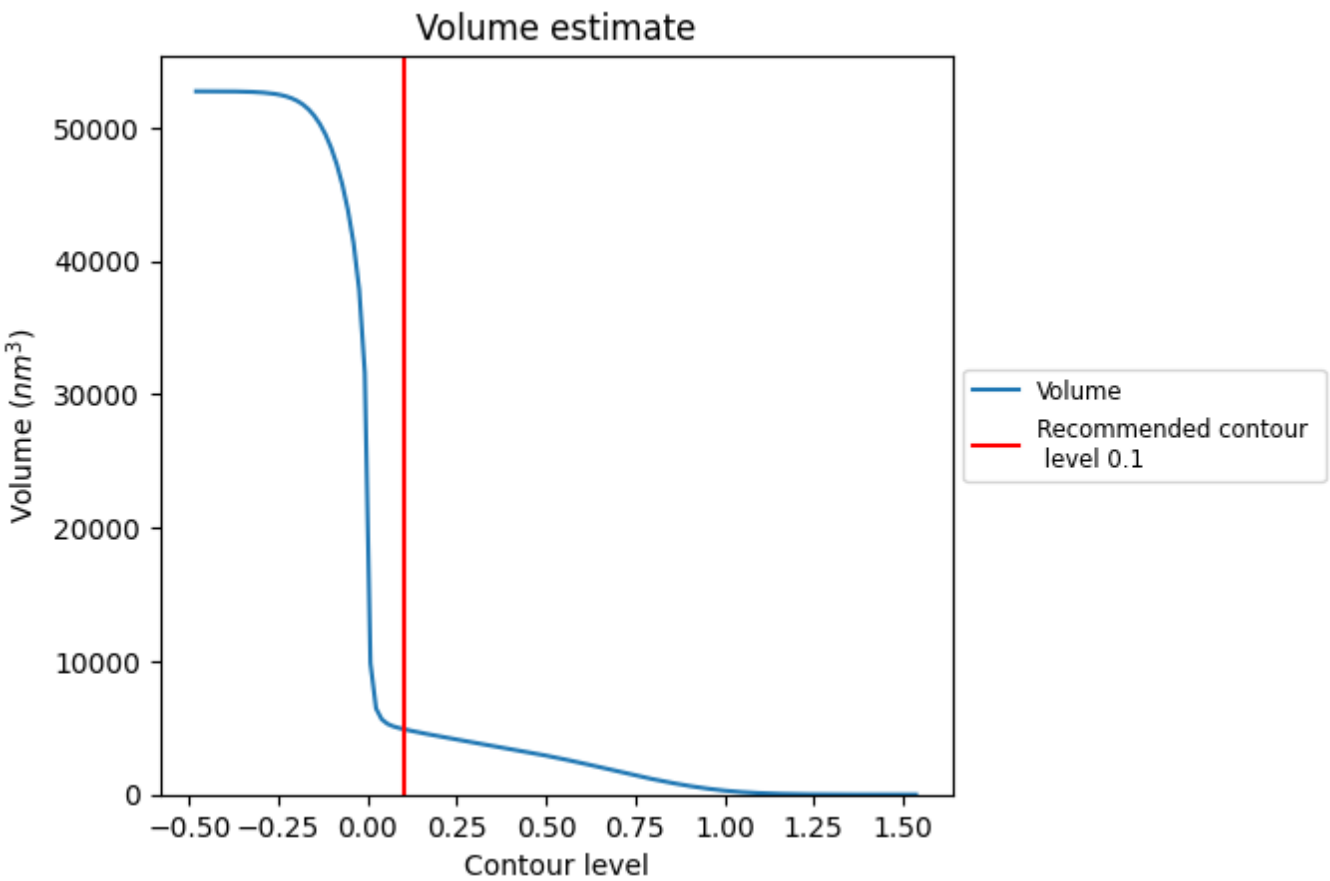
This section contains the results of statistical analysis of the map.

## 7.1 Map-value distribution (i)




The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

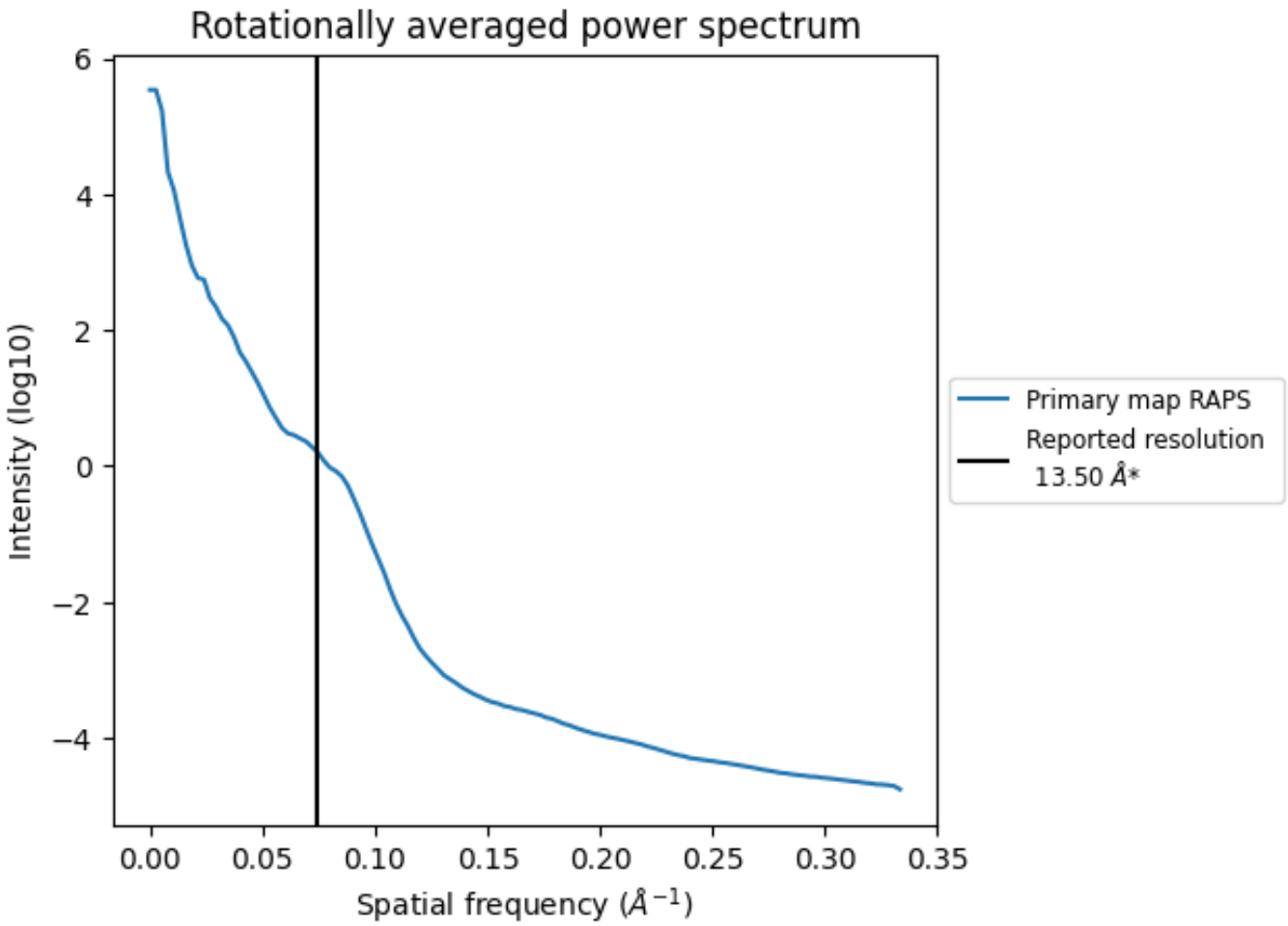
## 7.2 Volume estimate (i)




The volume at the recommended contour level is 4913 $nm^3$; this corresponds to an approximate mass of 4438 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

## 7.3 Rotationally averaged power spectrum (i)




*Reported resolution corresponds to spatial frequency of 0.074 Å$^{-1}$

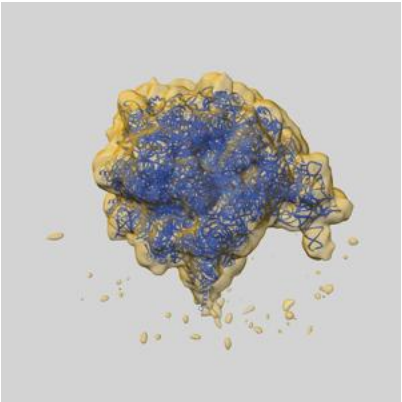
# 8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

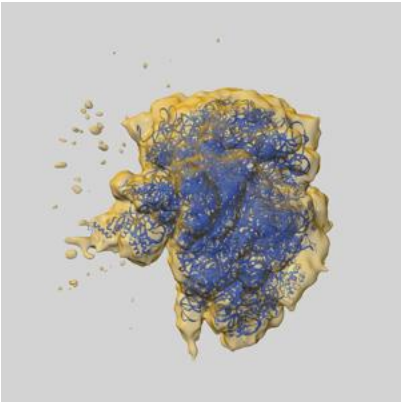
# 9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-5364 and PDB model 4V6P. Per-residue inclusion information can be found in section 3 on page 15.

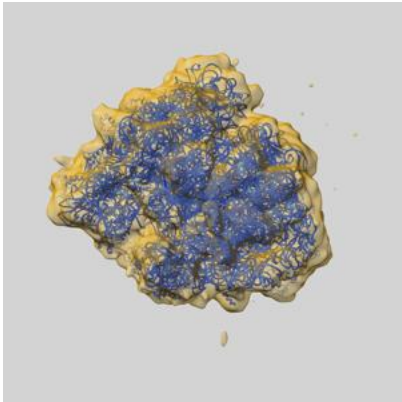
## 9.1 Map-model overlay (i)



X



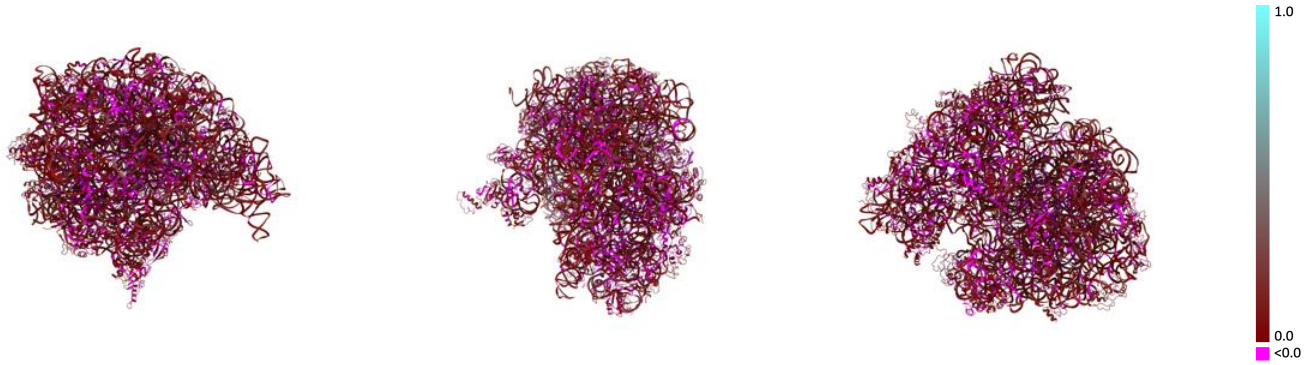
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

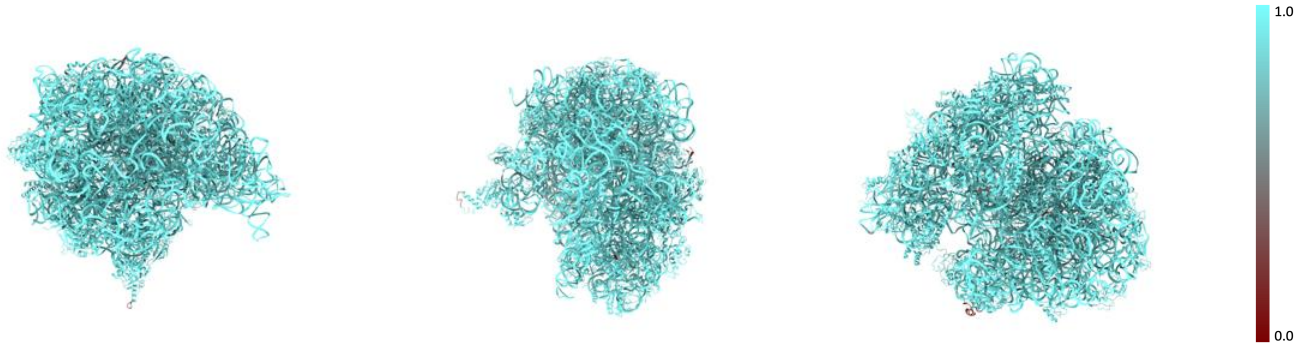
## 9.2 Q-score mapped to coordinate model (i)




X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

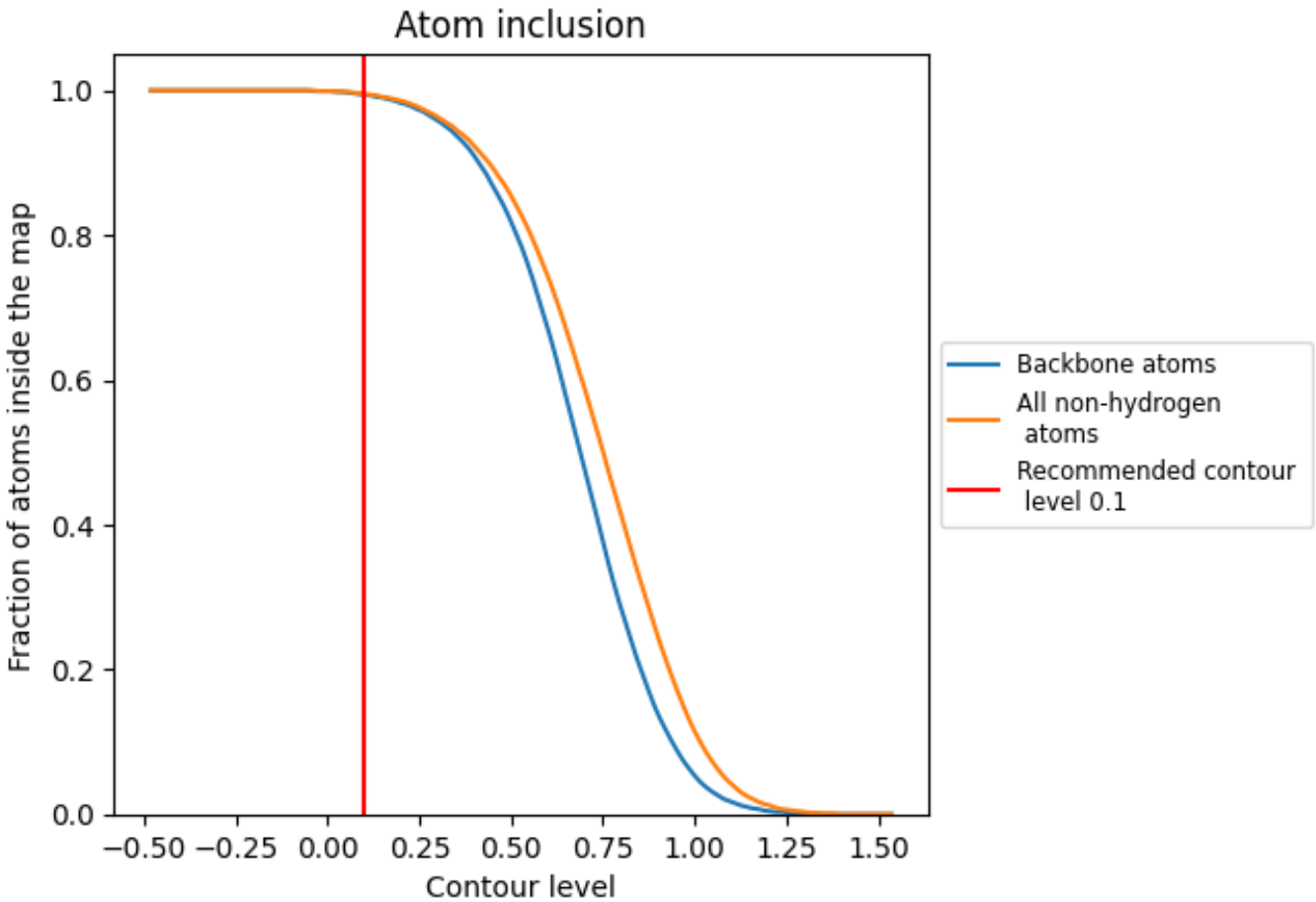
## 9.3 Atom inclusion mapped to coordinate model (i)




X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.1).

## 9.4 Atom inclusion (i)




At the recommended contour level, 99% of all backbone atoms, 100% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|---|---|---|
| All | 0.9950 | 0.0640 |
| AA | 0.9990 | 0.0780 |
| AB | 0.9570 | 0.0490 |
| AC | 0.9190 | -0.0060 |
| AD | 0.9460 | 0.0460 |
| AE | 0.9900 | 0.0400 |
| AF | 0.9990 | 0.0530 |
| AG | 1.0000 | 0.0350 |
| AH | 1.0000 | 0.0530 |
| AI | 0.9780 | 0.0440 |
| AJ | 1.0000 | 0.0500 |
| AK | 0.9960 | 0.0360 |
| AL | 0.9990 | 0.0480 |
| AM | 1.0000 | 0.0260 |
| AN | 1.0000 | 0.0430 |
| AO | 0.9910 | 0.0130 |
| AP | 1.0000 | 0.0490 |
| AQ | 1.0000 | 0.0080 |
| AR | 1.0000 | 0.0430 |
| AS | 1.0000 | 0.0320 |
| AT | 1.0000 | 0.0420 |
| AU | 1.0000 | 0.0640 |
| AV | 0.9560 | 0.0190 |
| AW | 1.0000 | 0.0310 |
| AX | 0.9840 | 0.0110 |
| B0 | 1.0000 | 0.0200 |
| B1 | 1.0000 | 0.0440 |
| B2 | 0.9980 | 0.0410 |
| B3 | 1.0000 | 0.0340 |
| B4 | 1.0000 | 0.0440 |
| B5 | 1.0000 | 0.0120 |
| B6 | 1.0000 | -0.0200 |
| B7 | 1.0000 | 0.0490 |
| BA | 1.0000 | 0.0900 |
| BB | 0.9990 | 0.0820 |

*Continued on next page...*

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| Chain | Atom inclusion | Q-score |
|---|---|---|
| BC | 0.9240 | 0.0270 |
| BD | 1.0000 | 0.0120 |
| BE | 1.0000 | 0.0220 |
| BF | 1.0000 | 0.0580 |
| BG | 1.0000 | 0.0490 |
| BH | 1.0000 | 0.0260 |
| BI | 0.9260 | 0.0230 |
| BJ | 0.9490 | 0.0530 |
| BK | 0.9800 | 0.0350 |
| BL | 1.0000 | 0.0110 |
| BM | 0.9960 | 0.0340 |
| BN | 1.0000 | 0.0120 |
| BO | 1.0000 | 0.0240 |
| BP | 1.0000 | 0.0150 |
| BQ | 0.9980 | 0.0620 |
| BR | 0.9940 | 0.0170 |
| BS | 0.9920 | 0.0070 |
| BT | 1.0000 | 0.0430 |
| BU | 1.0000 | 0.0100 |
| BV | 1.0000 | 0.0120 |
| BW | 0.9940 | 0.0540 |
| BX | 1.0000 | 0.0680 |
| BY | 0.9810 | -0.0030 |
| BZ | 1.0000 | 0.0140 |