



Full wwPDB NMR Structure Validation Report ⓘ

Jun 4, 2023 – 01:59 AM EDT

PDB ID : 2LGM
BMRB ID : 17814
Title : Structure of DNA Containing an Aristolactam II-dA Lesion
Authors : Lukin, M.; Zaliznyak, T.; Johnson, F.; de los Santos, C.
Deposited on : 2011-07-28

This is a Full wwPDB NMR Structure 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/NMRValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
wwPDB-RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
wwPDB-ShiftChecker : v1.2
BMRB Restraints Analysis : v1.2
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.33

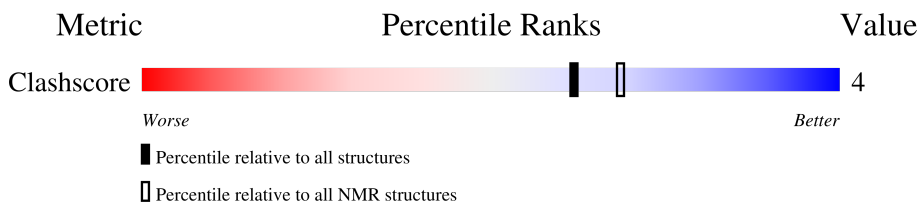
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

SOLUTION NMR



The overall completeness of chemical shifts assignment is 17%.

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) | NMR archive (#Entries) |
|------------|-----------------------------|---------------------------|
| Clashscore | 158937 | 12864 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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 $\leq 5\%$

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 1 | 1 | 11 |  18% 45% 36% |
| 2 | 2 | 11 |  45% 55% |

2 Ensemble composition and analysis

This entry contains 26 models. This entry does not contain polypeptide chains, therefore identification of well-defined residues and clustering analysis are not possible. All residues are included in the validation scores.

3 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 723 atoms, of which 258 are hydrogens and 0 are deuteriums.

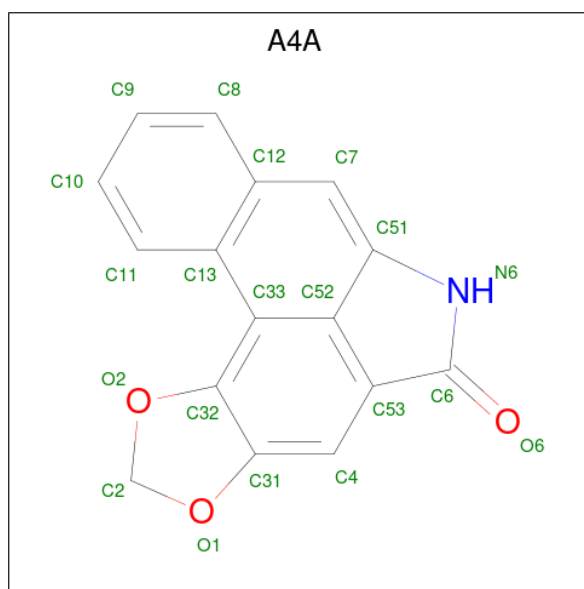
- Molecule 1 is a DNA chain called DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3').

| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|-----|-----|----|----|----|-------|
| | | | Total | C | H | N | O | P | |
| 1 | 1 | 11 | 344 | 106 | 124 | 41 | 63 | 10 | 0 |

- Molecule 2 is a DNA chain called DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3').

| Mol | Chain | Residues | Atoms | | | | | | Trace |
|-----|-------|----------|-------|-----|-----|----|----|----|-------|
| | | | Total | C | H | N | O | P | |
| 2 | 2 | 11 | 351 | 108 | 126 | 42 | 65 | 10 | 0 |

- Molecule 3 is [1,3]benzodioxolo[6,5,4-cd]benzo[f]indol-5(6H)-one (three-letter code: A4A) (formula: C₁₆H₉NO₃).



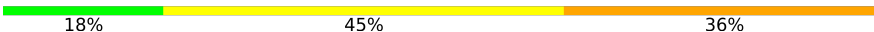
| Mol | Chain | Residues | Atoms | | | | |
|-----|-------|----------|-------|----|---|---|---|
| | | | Total | C | H | N | O |
| 3 | 1 | 1 | 28 | 16 | 8 | 1 | 3 |

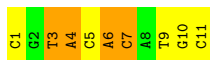
4 Residue-property plots

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-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. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1: 



- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2: 

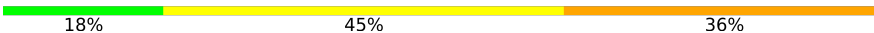


4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1: 



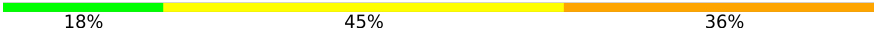
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

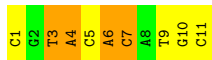
Chain 2: 



4.2.2 Score per residue for model 2

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

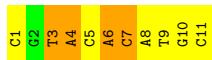
Chain 2:  64% 36%



4.2.3 Score per residue for model 3

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  9% 55% 36%




- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  55% 36% 9%



4.2.4 Score per residue for model 4

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 55% 27%



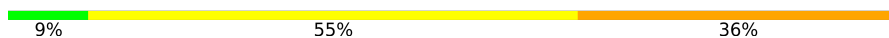
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

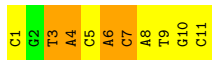
Chain 2:  45% 55%



4.2.5 Score per residue for model 5

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1: 




- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

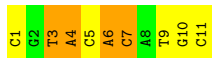
Chain 2: 



4.2.6 Score per residue for model 6

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1: 



- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2: 



4.2.7 Score per residue for model 7

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:




- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

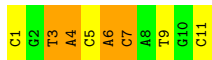
Chain 2:



4.2.8 Score per residue for model 8

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 36% 36%



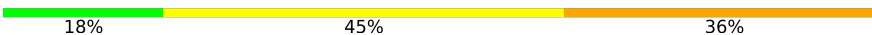
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

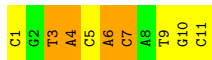
Chain 2:  64% 36%



4.2.9 Score per residue for model 9

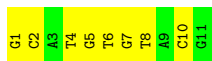
- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



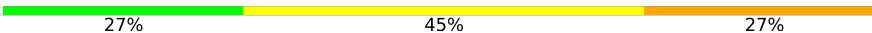
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  27% 73%



4.2.10 Score per residue for model 10

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 45% 27%



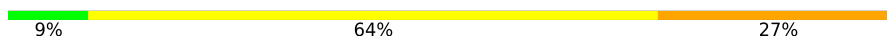
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  45% 55%



4.2.11 Score per residue for model 11

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  9% 64% 27%



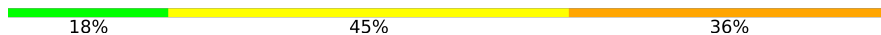
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

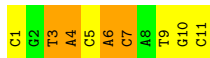
Chain 2:  45% 55%



4.2.12 Score per residue for model 12

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



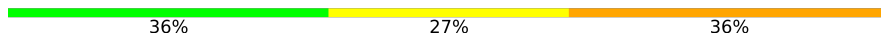
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  45% 55%



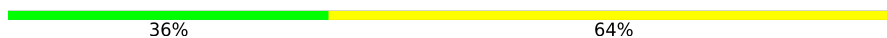
4.2.13 Score per residue for model 13

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  36% 27% 36%



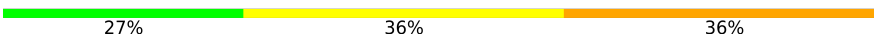
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  36% 64%



4.2.14 Score per residue for model 14

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 36% 36%



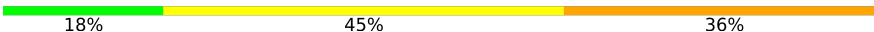
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  45% 55%



4.2.15 Score per residue for model 15

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



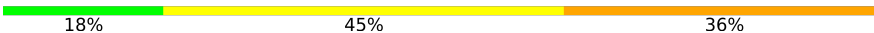
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  45% 55%



4.2.16 Score per residue for model 16

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



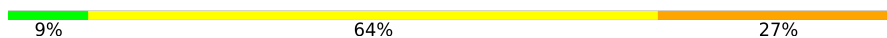
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

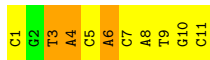
Chain 2:  55% 36% 9%



4.2.17 Score per residue for model 17

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  9% 64% 27%



- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

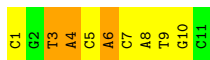
Chain 2:  36% 64%



4.2.18 Score per residue for model 18

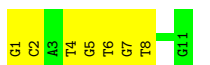
- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 55% 27%



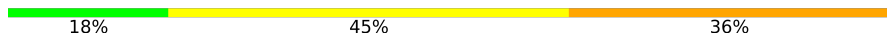
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  36% 64%



4.2.19 Score per residue for model 19

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%




- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

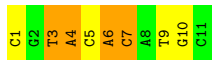
Chain 2:  45% 55%



4.2.20 Score per residue for model 20

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 36% 36%




- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

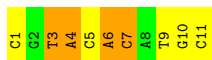
Chain 2:  36% 64%



4.2.21 Score per residue for model 21

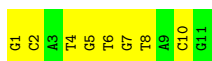
- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



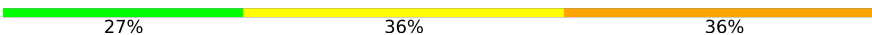
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

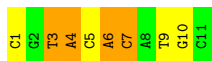
Chain 2:  27% 73%



4.2.22 Score per residue for model 22

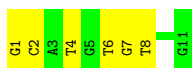
- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 36% 36%




- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  45% 55%



4.2.23 Score per residue for model 23

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 36% 36%



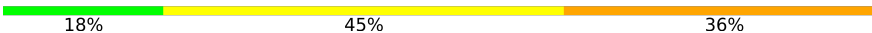
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

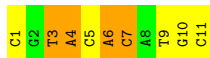
Chain 2:  45% 55%



4.2.24 Score per residue for model 24

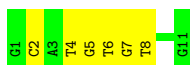
- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  45% 55%



4.2.25 Score per residue for model 25

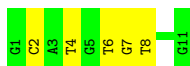
- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  27% 36% 36%



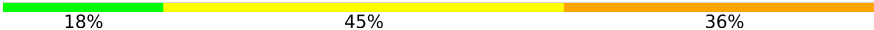
- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  55% 45%



4.2.26 Score per residue for model 26

- Molecule 1: DNA (5'-D(*CP*GP*TP*AP*CP*AP*CP*AP*TP*GP*C)-3')

Chain 1:  18% 45% 36%



- Molecule 2: DNA (5'-D(*GP*CP*AP*TP*GP*TP*GP*TP*AP*CP*G)-3')

Chain 2:  64% 36%



5 Refinement protocol and experimental data overview

The models were refined using the following method: *molecular dynamics*.

Of the 26 calculated structures, 26 were deposited, based on the following criterion: *all calculated structures submitted*.

The following table shows the software used for structure solution, optimisation and refinement.

| Software name | Classification | Version |
|---------------|-----------------------|---------|
| X-PLOR NIH | structure solution | |
| HYPER | geometry optimization | |
| X-PLOR NIH | refinement | |

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

| Chemical shift file(s) | working_cs.cif |
|--|----------------|
| Number of chemical shift lists | 1 |
| Total number of shifts | 82 |
| Number of shifts mapped to atoms | 82 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 0 |
| Number of shifts with mapping warnings | 0 |
| Assignment completeness (well-defined parts) | 17% |

6 Model quality i

6.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: A4A

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 (average) 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 | 1 | 1.19±0.03 | 2±1/246 (0.7± 0.3%) | 2.18±0.02 | 16±2/377 (4.2± 0.5%) |
| 2 | 2 | 1.27±0.02 | 3±0/252 (1.2± 0.1%) | 1.97±0.04 | 9±2/388 (2.3± 0.4%) |
| All | All | 1.23 | 120/12948 (0.9%) | 2.07 | 647/19890 (3.3%) |

All unique bond outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) | Models | |
|-----|-------|-----|------|---------|-------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 1 | 1 | 9 | DT | C5-C7 | 7.08 | 1.54 | 1.50 | 22 | 26 |
| 2 | 2 | 8 | DT | C5-C7 | 7.05 | 1.54 | 1.50 | 26 | 26 |
| 2 | 2 | 6 | DT | C5-C7 | 7.00 | 1.54 | 1.50 | 20 | 26 |
| 1 | 1 | 3 | DT | C5-C7 | 6.49 | 1.53 | 1.50 | 18 | 13 |
| 2 | 2 | 4 | DT | C5-C7 | 6.47 | 1.53 | 1.50 | 3 | 24 |
| 2 | 2 | 1 | DG | O5'-C5' | -5.90 | 1.27 | 1.42 | 1 | 1 |
| 1 | 1 | 5 | DC | C2'-C1' | 5.40 | 1.57 | 1.52 | 24 | 4 |

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) | Models | |
|-----|-------|-----|------|------------|-------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 2 | 2 | 6 | DT | P-O3'-C3' | 11.06 | 132.98 | 119.70 | 16 | 3 |
| 1 | 1 | 3 | DT | O4'-C1'-N1 | 11.04 | 115.73 | 108.00 | 13 | 26 |
| 1 | 1 | 6 | DA | N1-C6-N6 | 10.79 | 125.07 | 118.60 | 22 | 26 |
| 2 | 2 | 6 | DT | O4'-C1'-N1 | -9.80 | 101.14 | 108.00 | 19 | 25 |
| 2 | 2 | 7 | DG | O4'-C1'-N9 | 8.89 | 114.22 | 108.00 | 3 | 21 |
| 1 | 1 | 9 | DT | O4'-C1'-N1 | 8.48 | 113.94 | 108.00 | 17 | 26 |
| 2 | 2 | 5 | DG | P-O3'-C3' | 7.97 | 129.26 | 119.70 | 24 | 6 |
| 2 | 2 | 6 | DT | C6-C5-C7 | -7.96 | 118.12 | 122.90 | 16 | 26 |
| 1 | 1 | 4 | DA | O4'-C1'-N9 | 7.69 | 113.39 | 108.00 | 3 | 26 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) | Models | |
|-----|-------|-----|------|-------------|-------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 1 | 1 | 6 | DA | O4'-C1'-N9 | 7.46 | 113.22 | 108.00 | 24 | 6 |
| 2 | 2 | 1 | DG | O4'-C1'-N9 | 7.33 | 113.14 | 108.00 | 22 | 7 |
| 1 | 1 | 6 | DA | C5-C6-N6 | -7.30 | 117.86 | 123.70 | 22 | 26 |
| 1 | 1 | 11 | DC | O4'-C1'-N1 | 7.13 | 112.99 | 108.00 | 4 | 8 |
| 1 | 1 | 7 | DC | O4'-C1'-C2' | -6.98 | 100.31 | 105.90 | 16 | 26 |
| 1 | 1 | 1 | DC | P-O3'-C3' | 6.89 | 127.97 | 119.70 | 4 | 13 |
| 2 | 2 | 6 | DT | C4'-C3'-C2' | -6.78 | 97.00 | 103.10 | 16 | 24 |
| 1 | 1 | 4 | DA | O4'-C1'-C2' | -6.73 | 100.51 | 105.90 | 15 | 26 |
| 2 | 2 | 4 | DT | C6-C5-C7 | -6.59 | 118.94 | 122.90 | 3 | 26 |
| 1 | 1 | 6 | DA | P-O3'-C3' | 6.41 | 127.39 | 119.70 | 10 | 8 |
| 1 | 1 | 10 | DG | P-O3'-C3' | 6.35 | 127.32 | 119.70 | 1 | 22 |
| 1 | 1 | 7 | DC | N1-C2-O2 | 6.25 | 122.65 | 118.90 | 16 | 26 |
| 1 | 1 | 3 | DT | C6-C5-C7 | -6.22 | 119.17 | 122.90 | 11 | 24 |
| 1 | 1 | 5 | DC | N1-C2-O2 | 6.14 | 122.58 | 118.90 | 9 | 26 |
| 1 | 1 | 1 | DC | N1-C2-O2 | 6.05 | 122.53 | 118.90 | 21 | 21 |
| 1 | 1 | 4 | DA | P-O3'-C3' | 5.94 | 126.83 | 119.70 | 7 | 2 |
| 2 | 2 | 8 | DT | C6-C5-C7 | -5.92 | 119.35 | 122.90 | 16 | 26 |
| 1 | 1 | 9 | DT | C6-C5-C7 | -5.87 | 119.38 | 122.90 | 16 | 19 |
| 1 | 1 | 11 | DC | N1-C2-O2 | 5.81 | 122.39 | 118.90 | 8 | 18 |
| 1 | 1 | 1 | DC | O4'-C4'-C3' | 5.81 | 109.49 | 106.00 | 19 | 5 |
| 2 | 2 | 1 | DG | C8-N9-C4 | -5.76 | 104.09 | 106.40 | 6 | 14 |
| 2 | 2 | 2 | DC | N1-C2-O2 | 5.61 | 122.26 | 118.90 | 6 | 25 |
| 2 | 2 | 1 | DG | O4'-C4'-C3' | 5.53 | 109.32 | 106.00 | 6 | 6 |
| 1 | 1 | 6 | DA | O4'-C4'-C3' | 5.50 | 109.30 | 106.00 | 10 | 1 |
| 1 | 1 | 3 | DT | C4-C5-C6 | 5.45 | 121.27 | 118.00 | 10 | 7 |
| 1 | 1 | 3 | DT | O4'-C1'-C2' | -5.43 | 101.56 | 105.90 | 22 | 17 |
| 1 | 1 | 8 | DA | O4'-C4'-C3' | 5.35 | 109.21 | 106.00 | 17 | 5 |
| 2 | 2 | 1 | DG | C8-N9-C1' | 5.34 | 133.94 | 127.00 | 22 | 3 |
| 2 | 2 | 10 | DC | O4'-C1'-C2' | -5.28 | 101.67 | 105.90 | 17 | 6 |
| 2 | 2 | 7 | DG | C3'-C2'-C1' | 5.24 | 108.79 | 102.50 | 25 | 14 |
| 2 | 2 | 10 | DC | N1-C2-O2 | 5.21 | 122.03 | 118.90 | 21 | 3 |
| 2 | 2 | 1 | DG | N9-C4-C5 | 5.05 | 107.42 | 105.40 | 11 | 1 |
| 2 | 2 | 6 | DT | C4-C5-C6 | 5.00 | 121.00 | 118.00 | 16 | 1 |

There are no chirality outliers.

There are no planarity outliers.

6.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in each 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 averaged over the ensemble.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes |
|-----|-------|-------|----------|----------|---------|
| 1 | 1 | 220 | 124 | 124 | 3±1 |
| 2 | 2 | 225 | 126 | 126 | 0±0 |
| 3 | 1 | 20 | 8 | 8 | 1±0 |
| All | All | 12090 | 6708 | 6708 | 84 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 4.

All unique clashes are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Clash(Å) | Distance(Å) | Models | |
|---------------|---------------|----------|-------------|--------|-------|
| | | | | Worst | Total |
| 1:1:6:DA:N1 | 3:1:12:A4A:N6 | 0.57 | 2.53 | 8 | 26 |
| 1:1:5:DC:OP2 | 1:1:5:DC:H2' | 0.49 | 2.07 | 15 | 2 |
| 1:1:3:DT:H2'' | 1:1:4:DA:O5' | 0.47 | 2.09 | 18 | 26 |
| 1:1:6:DA:H2'' | 1:1:7:DC:O5' | 0.47 | 2.10 | 26 | 20 |
| 2:2:6:DT:OP2 | 2:2:6:DT:H6 | 0.47 | 1.93 | 16 | 3 |
| 1:1:4:DA:H2'' | 1:1:5:DC:OP2 | 0.45 | 2.11 | 7 | 2 |
| 1:1:6:DA:H1' | 1:1:7:DC:O4' | 0.44 | 2.13 | 5 | 5 |

6.3 Torsion angles [i](#)

6.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

6.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

6.3.3 RNA [i](#)

There are no RNA molecules in this entry.

6.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

1 ligand is modelled in this entry.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds 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 is the number of standard deviations the observed value is removed from the expected value. A bond length with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

| Mol | Type | Chain | Res | Link | Bond lengths | | |
|-----|------|-------|-----|------|--------------|-----------|-------------|
| | | | | | Counts | RMSZ | #Z>2 |
| 3 | A4A | 1 | 12 | 1 | 24,24,24 | 2.00±0.01 | 4±0 (16±0%) |

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of 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 angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

| Mol | Type | Chain | Res | Link | Bond angles | | |
|-----|------|-------|-----|------|-------------|-----------|-------------|
| | | | | | Counts | RMSZ | #Z>2 |
| 3 | A4A | 1 | 12 | 1 | 36,37,37 | 1.72±0.02 | 7±0 (19±0%) |

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 |
|-----|------|-------|-----|------|---------|----------|-----------|
| 3 | A4A | 1 | 12 | 1 | - | - | 0±0,5,5,5 |

All unique bond outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) | Models | |
|-----|-------|-----|------|--------|------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 3 | 1 | 12 | A4A | C7-C51 | 6.56 | 1.44 | 1.36 | 5 | 26 |
| 3 | 1 | 12 | A4A | C53-C6 | 5.27 | 1.40 | 1.48 | 17 | 26 |
| 3 | 1 | 12 | A4A | C4-C31 | 2.80 | 1.43 | 1.38 | 3 | 26 |
| 3 | 1 | 12 | A4A | C4-C53 | 2.42 | 1.42 | 1.37 | 10 | 26 |

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

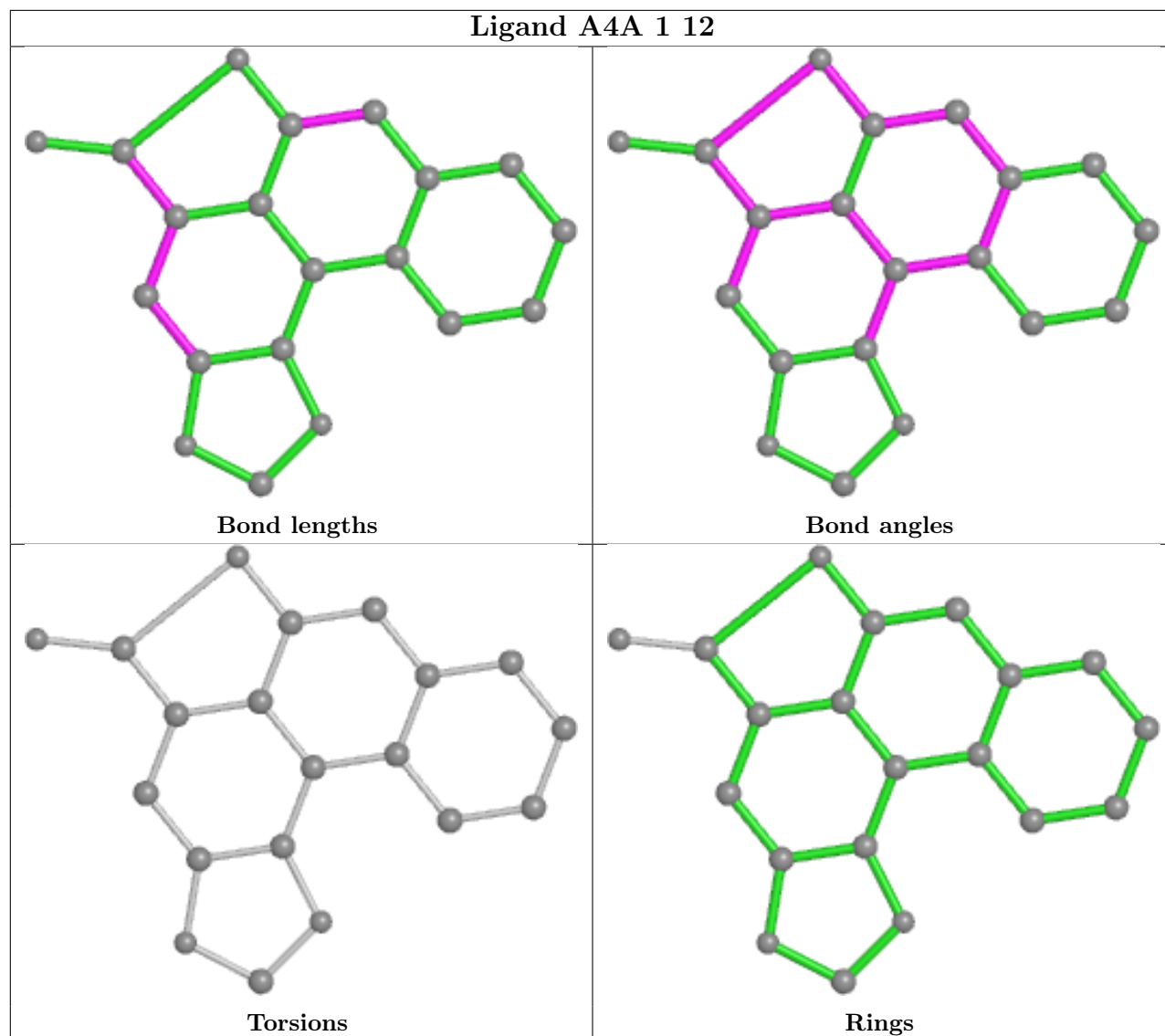
| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) | Models | |
|-----|-------|-----|------|-------------|------|-------------|----------|--------|-------|
| | | | | | | | | Worst | Total |
| 3 | 1 | 12 | A4A | C32-C33-C13 | 5.09 | 130.26 | 124.06 | 10 | 26 |
| 3 | 1 | 12 | A4A | C51-N6-C6 | 3.89 | 108.94 | 111.38 | 10 | 26 |
| 3 | 1 | 12 | A4A | C7-C51-N6 | 3.73 | 133.75 | 128.84 | 20 | 26 |
| 3 | 1 | 12 | A4A | C51-C7-C12 | 3.59 | 117.50 | 121.32 | 10 | 26 |
| 3 | 1 | 12 | A4A | C4-C53-C6 | 3.32 | 134.14 | 129.78 | 5 | 26 |
| 3 | 1 | 12 | A4A | C33-C13-C12 | 2.87 | 121.02 | 118.85 | 10 | 26 |
| 3 | 1 | 12 | A4A | C53-C52-C33 | 2.60 | 126.11 | 122.68 | 15 | 26 |
| 3 | 1 | 12 | A4A | C11-C13-C33 | 2.06 | 119.91 | 123.23 | 10 | 3 |

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation

The completeness of assignment taking into account all chemical shift lists is 17% for the well-defined parts and 17% for the entire structure.

7.1 Chemical shift list 1

File name: working_cs.cif

Chemical shift list name: *assigned_chem_shift_list_1*

7.1.1 Bookkeeping

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

| | |
|---|----|
| Total number of shifts | 82 |
| Number of shifts mapped to atoms | 82 |
| Number of unparsed shifts | 0 |
| Number of shifts with mapping errors | 0 |
| Number of shifts with mapping warnings | 0 |
| Number of shift outliers (ShiftChecker) | 0 |

7.1.2 Chemical shift referencing

No chemical shift referencing corrections were calculated (not enough data).

7.1.3 Completeness of resonance assignments

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is 17%, i.e. 73 atoms were assigned a chemical shift out of a possible 436. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹ H | ¹³ C | ¹⁵ N |
|---------|--------------|----------------|-----------------|-----------------|
| Sugar | 58/264 (22%) | 58/154 (38%) | 0/110 (0%) | 0/0 (—%) |
| Base | 15/172 (9%) | 15/106 (14%) | 0/38 (0%) | 0/28 (0%) |
| Overall | 73/436 (17%) | 73/260 (28%) | 0/148 (0%) | 0/28 (0%) |

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is 17%, i.e. 73 atoms were assigned a chemical shift out of a possible 436. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

| | Total | ¹H | ¹³C | ¹⁵N |
|---------|--------------|----------------------|-----------------------|-----------------------|
| Sugar | 58/264 (22%) | 58/154 (38%) | 0/110 (0%) | 0/0 (—%) |
| Base | 15/172 (9%) | 15/106 (14%) | 0/38 (0%) | 0/28 (0%) |
| Overall | 73/436 (17%) | 73/260 (28%) | 0/148 (0%) | 0/28 (0%) |

7.1.4 Statistically unusual chemical shifts [i](#)

There are no statistically unusual chemical shifts.

7.1.5 Random Coil Index (RCI) plots [i](#)

No *random coil index*(RCI) plot could be generated from the current chemical shift list. RCI is only applicable to proteins

8 NMR restraints analysis

8.1 Conformationally restricting restraints

The following table provides the summary of experimentally observed NMR restraints in different categories. Restraints are classified into different categories based on the sequence separation of the atoms involved.

| Description | Value |
|--|-------|
| Total distance restraints | 398 |
| Intra-residue ($ i-j =0$) | 265 |
| Sequential ($ i-j =1$) | 113 |
| Medium range ($ i-j >1$ and $ i-j <5$) | 1 |
| Long range ($ i-j \geq 5$) | 3 |
| Inter-chain | 16 |
| Hydrogen bond restraints | 0 |
| Disulfide bond restraints | 0 |
| Total dihedral-angle restraints | 0 |
| Number of unmapped restraints | 0 |
| Number of restraints per residue | 18.1 |
| Number of long range restraints per residue ¹ | 0.1 |

¹Long range hydrogen bonds and disulfide bonds are counted as long range restraints while calculating the number of long range restraints per residue

8.2 Residual restraint violations

This section provides the overview of the restraint violations analysis. The violations are binned as small, medium and large violations based on its absolute value. Average number of violations per model is calculated by dividing the total number of violations in each bin by the size of the ensemble.

8.2.1 Average number of distance violations per model

Distance violations less than 0.1 Å are not included in the calculation.

| Bins (Å) | Average number of violations per model | Max (Å) |
|------------------|--|---------|
| 0.1-0.2 (Small) | 29.9 | 0.2 |
| 0.2-0.5 (Medium) | 45.6 | 0.5 |
| >0.5 (Large) | 58.1 | 20.91 |

8.2.2 Average number of dihedral-angle violations per model

Dihedral-angle violations less than 1° are not included in the calculation. There are no dihedral-angle violations

9 Distance violation analysis

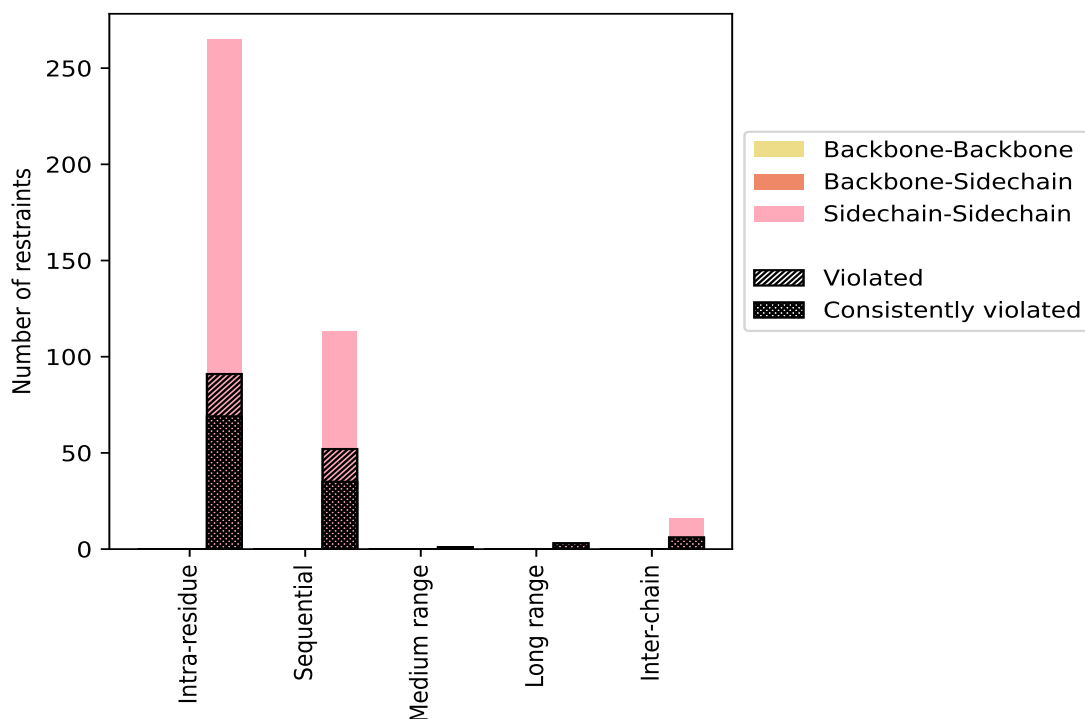
9.1 Summary of distance violations

The following table shows the summary of distance violations in different restraint categories based on the sequence separation of the atoms involved. Each category is further sub-divided into three sub-categories based on the atoms involved. Violations less than 0.1 Å are not included in the statistics.

| Restrains type | Count | % ¹ | Violated ³ | | | Consistently Violated ⁴ | | |
|---|------------|----------------|-----------------------|----------------|----------------|------------------------------------|----------------|----------------|
| | | | Count | % ² | % ¹ | Count | % ² | % ¹ |
| Intra-residue ($i-j =0$) | 265 | 66.6 | 91 | 34.3 | 22.9 | 69 | 26.0 | 17.3 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 265 | 66.6 | 91 | 34.3 | 22.9 | 69 | 26.0 | 17.3 |
| Sequential ($i-j =1$) | 113 | 28.4 | 52 | 46.0 | 13.1 | 35 | 31.0 | 8.8 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 113 | 28.4 | 52 | 46.0 | 13.1 | 35 | 31.0 | 8.8 |
| Medium range ($i-j >1$ & $i-j <5$) | 1 | 0.3 | 1 | 100.0 | 0.3 | 1 | 100.0 | 0.3 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 1 | 0.3 | 1 | 100.0 | 0.3 | 1 | 100.0 | 0.3 |
| Long range ($i-j \geq 5$) | 3 | 0.8 | 3 | 100.0 | 0.8 | 3 | 100.0 | 0.8 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 3 | 0.8 | 3 | 100.0 | 0.8 | 3 | 100.0 | 0.8 |
| Inter-chain | 16 | 4.0 | 6 | 37.5 | 1.5 | 6 | 37.5 | 1.5 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 16 | 4.0 | 6 | 37.5 | 1.5 | 6 | 37.5 | 1.5 |
| Hydrogen bond | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Disulfide bond | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Total | 398 | 100.0 | 153 | 38.4 | 38.4 | 114 | 28.6 | 28.6 |
| Backbone-Backbone | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Backbone-Sidechain | 0 | 0.0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0.0 |
| Sidechain-Sidechain | 398 | 100.0 | 153 | 38.4 | 38.4 | 114 | 28.6 | 28.6 |

¹ percentage calculated with respect to the total number of distance restraints, ² percentage calculated with respect to the number of restraints in a particular restraint category, ³ violated in at least one model, ⁴ violated in all the models

9.1.1 Bar chart : Distribution of distance restraints and violations [i](#)



Violated and consistently violated restraints are shown using different hatch patterns in their respective categories. The hydrogen bonds and disulfid bonds are counted in their appropriate category on the x-axis

9.2 Distance violation statistics for each model [i](#)

The following table provides the distance violation statistics for each model in the ensemble. Violations less than 0.1 Å are not included in the statistics.

| Model ID | Number of violations | | | | | | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | | | | |
| 1 | 80 | 43 | 1 | 3 | 6 | 133 | 1.38 | 20.65 | 2.84 | 0.42 |
| 2 | 81 | 44 | 1 | 3 | 6 | 135 | 1.37 | 20.3 | 2.78 | 0.43 |
| 3 | 78 | 44 | 1 | 3 | 6 | 132 | 1.38 | 20.6 | 2.84 | 0.44 |
| 4 | 80 | 44 | 1 | 3 | 6 | 134 | 1.36 | 20.73 | 2.83 | 0.42 |
| 5 | 80 | 44 | 1 | 3 | 6 | 134 | 1.36 | 20.6 | 2.83 | 0.42 |
| 6 | 80 | 43 | 1 | 3 | 6 | 133 | 1.38 | 20.46 | 2.8 | 0.44 |
| 7 | 81 | 44 | 1 | 3 | 6 | 135 | 1.35 | 20.53 | 2.8 | 0.41 |
| 8 | 79 | 44 | 1 | 3 | 6 | 133 | 1.4 | 20.54 | 2.82 | 0.44 |
| 9 | 81 | 39 | 1 | 3 | 6 | 130 | 1.41 | 20.73 | 2.86 | 0.43 |
| 10 | 81 | 44 | 1 | 3 | 6 | 135 | 1.35 | 20.77 | 2.83 | 0.43 |
| 11 | 80 | 40 | 1 | 3 | 6 | 130 | 1.43 | 20.9 | 2.9 | 0.43 |

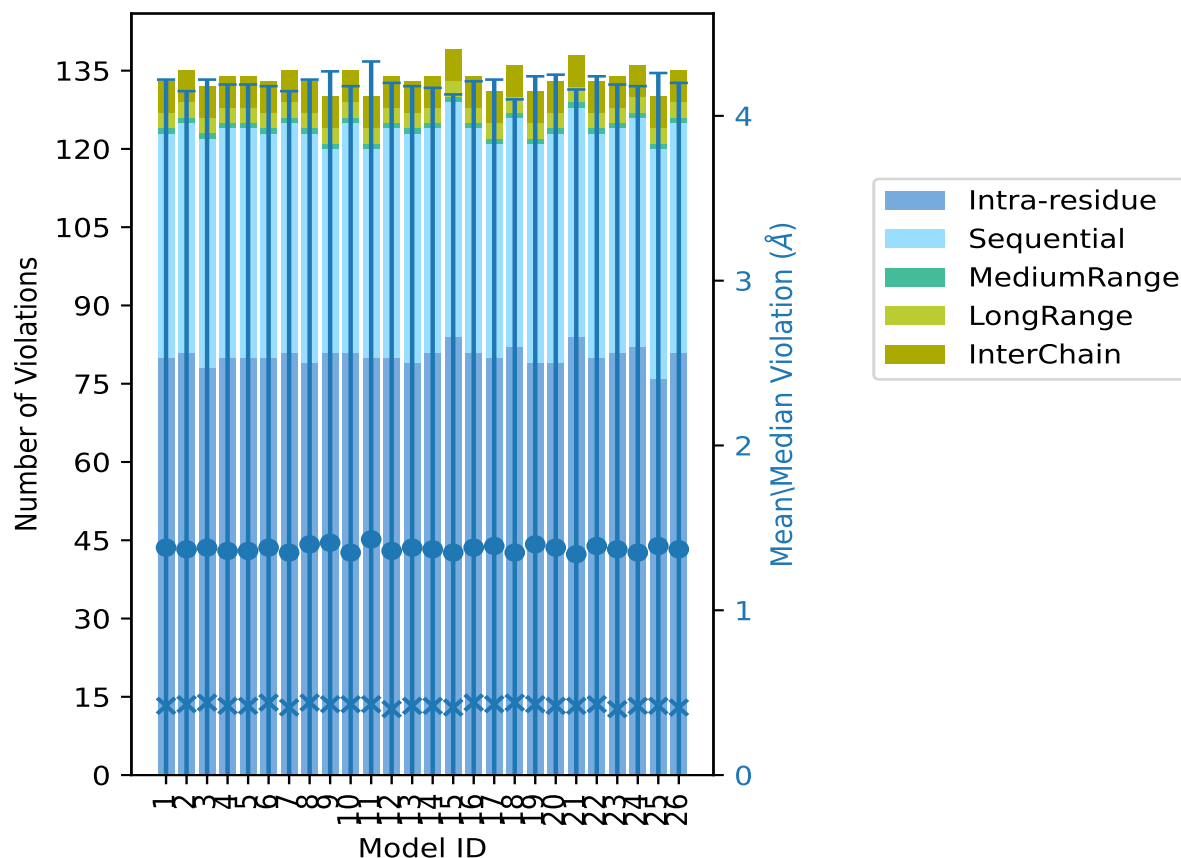
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| Model ID | Number of violations | | | | | | Mean (Å) | Max (Å) | SD ⁶ (Å) | Median (Å) |
|----------|----------------------|-----------------|-----------------|-----------------|-----------------|-------|----------|---------|---------------------|------------|
| | IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | | | | |
| 12 | 80 | 44 | 1 | 3 | 6 | 134 | 1.36 | 20.75 | 2.84 | 0.4 |
| 13 | 79 | 44 | 1 | 3 | 6 | 133 | 1.38 | 20.36 | 2.8 | 0.42 |
| 14 | 81 | 43 | 1 | 3 | 6 | 134 | 1.37 | 20.46 | 2.8 | 0.42 |
| 15 | 84 | 45 | 1 | 3 | 6 | 139 | 1.35 | 20.53 | 2.78 | 0.41 |
| 16 | 81 | 43 | 1 | 3 | 6 | 134 | 1.38 | 20.52 | 2.83 | 0.44 |
| 17 | 80 | 41 | 1 | 3 | 6 | 131 | 1.39 | 20.59 | 2.83 | 0.43 |
| 18 | 82 | 44 | 1 | 3 | 6 | 136 | 1.35 | 20.2 | 2.75 | 0.44 |
| 19 | 79 | 42 | 1 | 3 | 6 | 131 | 1.4 | 20.51 | 2.84 | 0.43 |
| 20 | 79 | 44 | 1 | 3 | 6 | 133 | 1.38 | 20.91 | 2.87 | 0.42 |
| 21 | 84 | 44 | 1 | 3 | 6 | 138 | 1.34 | 20.78 | 2.82 | 0.42 |
| 22 | 80 | 43 | 1 | 3 | 6 | 133 | 1.39 | 20.67 | 2.85 | 0.43 |
| 23 | 81 | 43 | 1 | 3 | 6 | 134 | 1.37 | 20.63 | 2.82 | 0.4 |
| 24 | 82 | 44 | 1 | 3 | 6 | 136 | 1.35 | 20.76 | 2.83 | 0.42 |
| 25 | 76 | 44 | 1 | 3 | 6 | 130 | 1.39 | 20.69 | 2.87 | 0.42 |
| 26 | 81 | 44 | 1 | 3 | 6 | 135 | 1.37 | 20.68 | 2.83 | 0.41 |

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints,
⁵Inter-chain restraints, ⁶Standard deviation

9.2.1 Bar graph : Distance Violation statistics for each model [i](#)



The mean(dot),median(x) and the standard deviation are shown in blue with respect to the y axis on the right

9.3 Distance violation statistics for the ensemble [i](#)

Violation analysis may find that some restraints are violated in few models and some are violated in most of models. The following table provides this information as number of violated restraints for a given fraction of the ensemble. In total, 245(IR:174, SQ:61, MR:0, LR:0, IC:10) restraints are not violated in the ensemble.

| Number of violated restraints | | | | | | Fraction of the ensemble | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|------|
| IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | Count ⁶ | % |
| 1 | 4 | 0 | 0 | 0 | 5 | 1 | 3.8 |
| 3 | 1 | 0 | 0 | 0 | 4 | 2 | 7.7 |
| 2 | 0 | 0 | 0 | 0 | 2 | 3 | 11.5 |
| 2 | 0 | 0 | 0 | 0 | 2 | 4 | 15.4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 5 | 19.2 |
| 0 | 0 | 0 | 0 | 0 | 0 | 6 | 23.1 |

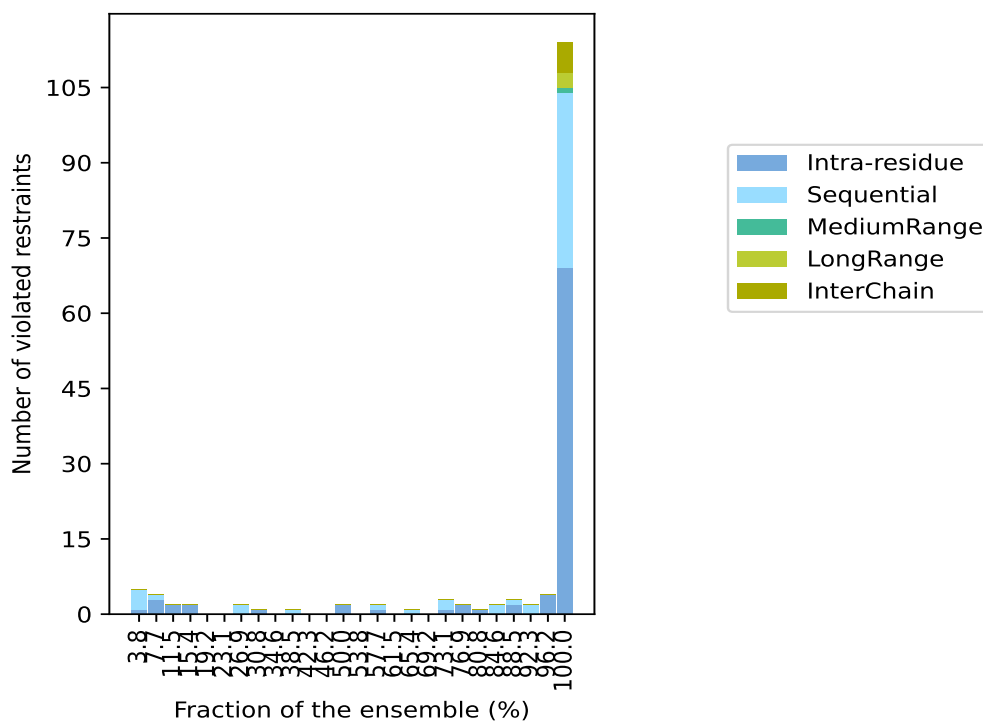
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| Number of violated restraints | | | | | | Fraction of the ensemble | |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-------|--------------------------|-------|
| IR ¹ | SQ ² | MR ³ | LR ⁴ | IC ⁵ | Total | Count ⁶ | % |
| 0 | 2 | 0 | 0 | 0 | 2 | 7 | 26.9 |
| 1 | 0 | 0 | 0 | 0 | 1 | 8 | 30.8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 9 | 34.6 |
| 0 | 1 | 0 | 0 | 0 | 1 | 10 | 38.5 |
| 0 | 0 | 0 | 0 | 0 | 0 | 11 | 42.3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 12 | 46.2 |
| 2 | 0 | 0 | 0 | 0 | 2 | 13 | 50.0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 14 | 53.8 |
| 1 | 1 | 0 | 0 | 0 | 2 | 15 | 57.7 |
| 0 | 0 | 0 | 0 | 0 | 0 | 16 | 61.5 |
| 0 | 1 | 0 | 0 | 0 | 1 | 17 | 65.4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 18 | 69.2 |
| 1 | 2 | 0 | 0 | 0 | 3 | 19 | 73.1 |
| 2 | 0 | 0 | 0 | 0 | 2 | 20 | 76.9 |
| 1 | 0 | 0 | 0 | 0 | 1 | 21 | 80.8 |
| 0 | 2 | 0 | 0 | 0 | 2 | 22 | 84.6 |
| 2 | 1 | 0 | 0 | 0 | 3 | 23 | 88.5 |
| 0 | 2 | 0 | 0 | 0 | 2 | 24 | 92.3 |
| 4 | 0 | 0 | 0 | 0 | 4 | 25 | 96.2 |
| 69 | 35 | 1 | 3 | 6 | 114 | 26 | 100.0 |

¹Intra-residue restraints, ²Sequential restraints, ³Medium range restraints, ⁴Long range restraints, ⁵Inter-chain restraints, ⁶ Number of models with violations

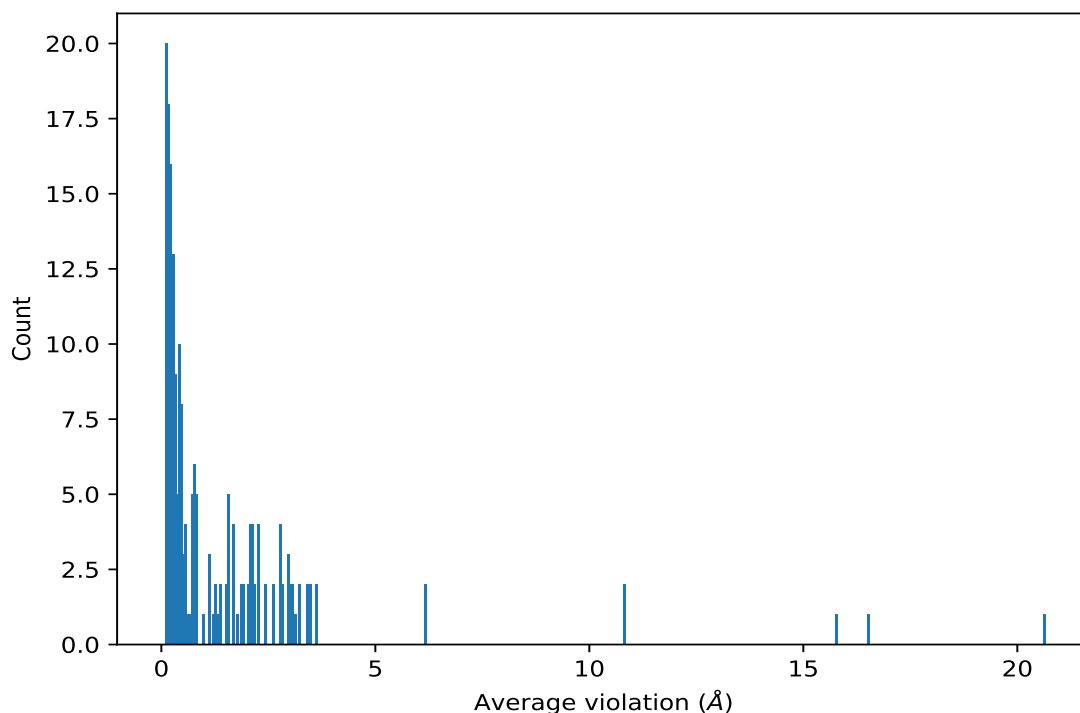
9.3.1 Bar graph : Distance violation statistics for the ensemble [i](#)



9.4 Most violated distance restraints in the ensemble [i](#)

9.4.1 Histogram : Distribution of mean distance violations [i](#)

The following histogram shows the distribution of the average value of the violation. The average is calculated for each restraint that is violated in more than one model over all the violated models in the ensemble



9.4.2 Table: Most violated distance restraints [i](#)

The following table provides the mean and the standard deviation of the violation for each restraint sorted by number of violated models and the mean value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|---------------|----------------|---------------------|----------|---------------------|------------|
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 26 | 20.61 | 0.17 | 20.62 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 26 | 16.51 | 0.18 | 16.48 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 26 | 15.77 | 0.24 | 15.81 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 26 | 10.84 | 0.13 | 10.84 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 26 | 10.84 | 0.13 | 10.84 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 26 | 6.15 | 0.13 | 6.14 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 26 | 6.15 | 0.13 | 6.14 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 26 | 3.61 | 0.02 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 26 | 3.61 | 0.02 | 3.61 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 26 | 3.45 | 0.02 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 26 | 3.45 | 0.02 | 3.45 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 26 | 3.42 | 0.08 | 3.4 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 26 | 3.42 | 0.08 | 3.4 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 26 | 3.21 | 0.11 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 26 | 3.21 | 0.11 | 3.24 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 26 | 3.11 | 0.13 | 3.15 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|---------------|---------------|---------------------|----------|---------------------|------------|
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 26 | 3.08 | 0.01 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 26 | 3.08 | 0.01 | 3.08 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 26 | 3.01 | 0.01 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 26 | 3.01 | 0.01 | 3.01 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 26 | 2.97 | 0.11 | 2.98 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 26 | 2.96 | 0.15 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 26 | 2.96 | 0.15 | 3.03 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 26 | 2.81 | 0.08 | 2.82 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 26 | 2.81 | 0.08 | 2.82 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 26 | 2.79 | 0.01 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 26 | 2.79 | 0.01 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 26 | 2.77 | 0.01 | 2.78 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 26 | 2.77 | 0.01 | 2.78 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 26 | 2.63 | 0.08 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 26 | 2.63 | 0.08 | 2.62 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 26 | 2.42 | 0.07 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 26 | 2.42 | 0.07 | 2.43 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 26 | 2.28 | 0.07 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 26 | 2.28 | 0.07 | 2.28 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 26 | 2.28 | 0.08 | 2.28 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 26 | 2.28 | 0.08 | 2.28 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 26 | 2.19 | 0.1 | 2.17 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 26 | 2.17 | 0.33 | 2.02 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 26 | 2.13 | 0.01 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 26 | 2.13 | 0.01 | 2.13 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 26 | 2.11 | 0.05 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 26 | 2.11 | 0.05 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 26 | 2.09 | 0.08 | 2.09 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 26 | 2.09 | 0.08 | 2.09 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 26 | 2.07 | 0.08 | 2.08 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 26 | 2.07 | 0.08 | 2.08 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 26 | 2.02 | 0.01 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 26 | 2.02 | 0.01 | 2.02 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 26 | 1.92 | 0.01 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 26 | 1.92 | 0.01 | 1.92 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 26 | 1.88 | 0.07 | 1.9 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 26 | 1.88 | 0.07 | 1.9 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 26 | 1.79 | 0.1 | 1.81 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 26 | 1.65 | 0.08 | 1.66 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 26 | 1.65 | 0.08 | 1.66 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 26 | 1.65 | 0.08 | 1.65 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 26 | 1.65 | 0.08 | 1.65 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|---------------|----------------|---------------------|----------|---------------------|------------|
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 26 | 1.58 | 0.15 | 1.63 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 26 | 1.58 | 0.15 | 1.63 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 26 | 1.56 | 0.02 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 26 | 1.56 | 0.02 | 1.55 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 26 | 1.51 | 0.01 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 26 | 1.51 | 0.01 | 1.51 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 26 | 1.38 | 0.01 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 26 | 1.38 | 0.01 | 1.38 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 26 | 1.33 | 0.06 | 1.33 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 26 | 1.28 | 0.1 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 26 | 1.28 | 0.1 | 1.24 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 26 | 1.21 | 0.03 | 1.21 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 26 | 1.14 | 0.02 | 1.14 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 26 | 1.1 | 0.33 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 26 | 1.1 | 0.33 | 0.94 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 26 | 0.99 | 0.13 | 0.99 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 26 | 0.84 | 0.39 | 0.64 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 26 | 0.84 | 0.39 | 0.64 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 26 | 0.8 | 0.04 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 26 | 0.79 | 0.02 | 0.79 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 26 | 0.76 | 0.23 | 0.7 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 26 | 0.76 | 0.23 | 0.7 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 26 | 0.76 | 0.13 | 0.76 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 26 | 0.75 | 0.21 | 0.66 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 26 | 0.75 | 0.21 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 26 | 0.7 | 0.04 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 26 | 0.7 | 0.04 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 26 | 0.7 | 0.04 | 0.7 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 26 | 0.69 | 0.02 | 0.7 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 26 | 0.62 | 0.02 | 0.62 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 26 | 0.59 | 0.11 | 0.58 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 26 | 0.59 | 0.04 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 26 | 0.58 | 0.01 | 0.58 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 26 | 0.57 | 0.02 | 0.57 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 26 | 0.52 | 0.05 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 26 | 0.52 | 0.05 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 26 | 0.52 | 0.05 | 0.51 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 26 | 0.49 | 0.03 | 0.49 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 26 | 0.49 | 0.02 | 0.48 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 26 | 0.46 | 0.02 | 0.46 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 26 | 0.45 | 0.06 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 26 | 0.45 | 0.01 | 0.45 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|----------------|---------------|---------------------|----------|---------------------|------------|
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 26 | 0.45 | 0.01 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 26 | 0.44 | 0.01 | 0.44 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 26 | 0.42 | 0.02 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 26 | 0.42 | 0.02 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 26 | 0.42 | 0.02 | 0.42 |
| (1,261) | 2:2:10:DC:H2'' | 2:2:11:DG:H8 | 26 | 0.41 | 0.06 | 0.41 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 26 | 0.41 | 0.04 | 0.42 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 26 | 0.41 | 0.05 | 0.43 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 26 | 0.4 | 0.01 | 0.4 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 26 | 0.37 | 0.01 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 26 | 0.37 | 0.03 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 26 | 0.37 | 0.01 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 26 | 0.36 | 0.02 | 0.37 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 26 | 0.36 | 0.04 | 0.36 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 26 | 0.34 | 0.02 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 26 | 0.33 | 0.03 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 26 | 0.33 | 0.02 | 0.34 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 26 | 0.33 | 0.08 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 26 | 0.33 | 0.08 | 0.3 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 26 | 0.32 | 0.04 | 0.32 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 26 | 0.31 | 0.19 | 0.2 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 26 | 0.29 | 0.04 | 0.28 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 26 | 0.28 | 0.02 | 0.28 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 26 | 0.27 | 0.03 | 0.27 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 26 | 0.27 | 0.04 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 26 | 0.27 | 0.07 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 26 | 0.27 | 0.07 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 26 | 0.27 | 0.07 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 26 | 0.26 | 0.02 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 26 | 0.26 | 0.02 | 0.25 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 26 | 0.25 | 0.03 | 0.26 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 26 | 0.25 | 0.06 | 0.28 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 26 | 0.24 | 0.03 | 0.22 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 26 | 0.24 | 0.02 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 26 | 0.24 | 0.03 | 0.24 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 26 | 0.22 | 0.01 | 0.22 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 26 | 0.22 | 0.03 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 26 | 0.22 | 0.01 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 26 | 0.22 | 0.01 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 26 | 0.22 | 0.02 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 26 | 0.22 | 0.01 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 26 | 0.21 | 0.01 | 0.21 |

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| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|---------------|----------------|---------------------|----------|---------------------|------------|
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 26 | 0.21 | 0.02 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 26 | 0.21 | 0.01 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 26 | 0.2 | 0.01 | 0.2 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 26 | 0.19 | 0.01 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 26 | 0.19 | 0.01 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 26 | 0.19 | 0.01 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 26 | 0.19 | 0.02 | 0.19 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 26 | 0.18 | 0.01 | 0.18 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 26 | 0.17 | 0.02 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 26 | 0.16 | 0.0 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 26 | 0.16 | 0.01 | 0.16 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 26 | 0.14 | 0.01 | 0.14 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 26 | 0.12 | 0.01 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 26 | 0.12 | 0.01 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 26 | 0.11 | 0.0 | 0.11 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 25 | 0.34 | 0.11 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 25 | 0.34 | 0.11 | 0.4 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 25 | 0.17 | 0.04 | 0.17 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 25 | 0.13 | 0.01 | 0.13 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 25 | 0.12 | 0.01 | 0.12 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 24 | 0.4 | 0.06 | 0.38 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 24 | 0.4 | 0.06 | 0.38 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 24 | 0.23 | 0.04 | 0.24 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 23 | 0.2 | 0.04 | 0.2 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 23 | 0.15 | 0.02 | 0.15 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 23 | 0.13 | 0.02 | 0.12 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 22 | 0.23 | 0.07 | 0.22 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 22 | 0.17 | 0.04 | 0.18 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 21 | 0.14 | 0.02 | 0.13 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 20 | 0.74 | 0.14 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 20 | 0.74 | 0.14 | 0.78 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 20 | 0.11 | 0.0 | 0.11 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 19 | 0.17 | 0.05 | 0.17 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 19 | 0.17 | 0.03 | 0.17 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 19 | 0.15 | 0.01 | 0.15 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 17 | 0.27 | 0.05 | 0.27 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 17 | 0.27 | 0.05 | 0.27 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 15 | 0.12 | 0.01 | 0.12 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 15 | 0.12 | 0.01 | 0.12 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 13 | 0.17 | 0.04 | 0.16 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 13 | 0.17 | 0.04 | 0.16 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 13 | 0.11 | 0.0 | 0.11 |

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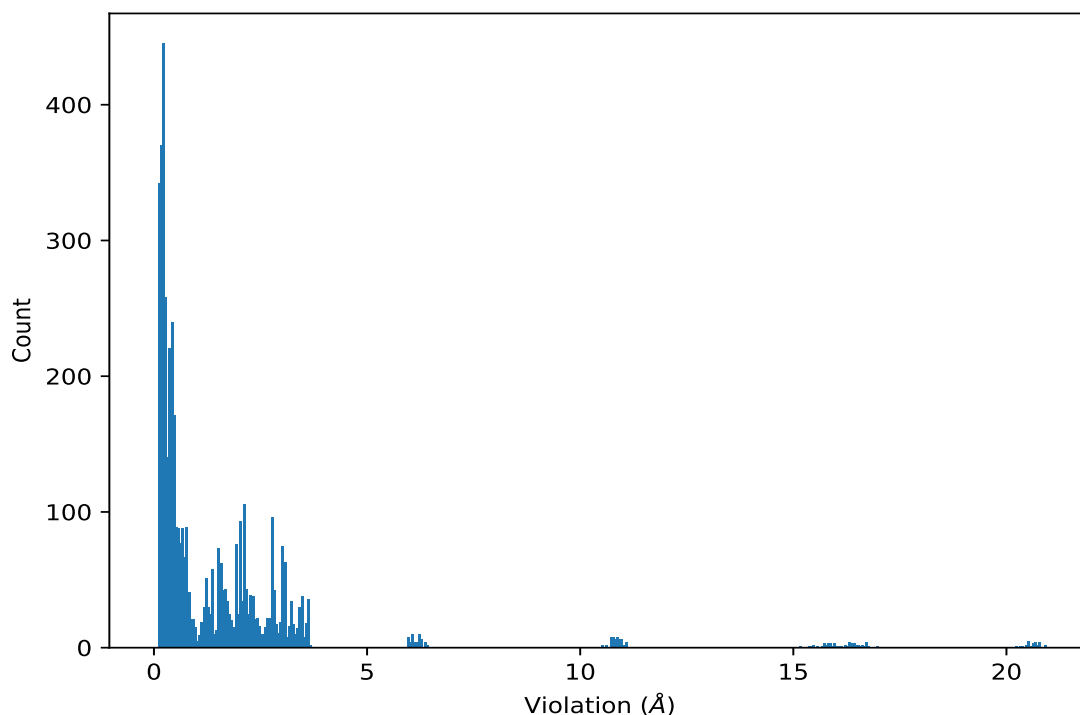
| Key | Atom-1 | Atom-2 | Models ¹ | Mean (Å) | SD ¹ (Å) | Median (Å) |
|---------|----------------|----------------|---------------------|----------|---------------------|------------|
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 10 | 0.13 | 0.02 | 0.12 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 8 | 0.13 | 0.02 | 0.12 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 7 | 1.56 | 0.31 | 1.71 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 7 | 0.15 | 0.02 | 0.14 |
| (1,223) | 2:2:7:DG:H2' | 2:2:7:DG:H8 | 4 | 0.13 | 0.01 | 0.14 |
| (1,209) | 2:2:6:DT:H4' | 2:2:6:DT:H1' | 4 | 0.12 | 0.01 | 0.12 |
| (1,188) | 2:2:5:DG:H3' | 2:2:5:DG:H8 | 3 | 0.18 | 0.01 | 0.18 |
| (1,390) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 3 | 0.12 | 0.0 | 0.12 |
| (1,99) | 2:2:10:DC:H2'' | 2:2:11:DG:H5' | 2 | 0.81 | 0.15 | 0.81 |
| (1,99) | 2:2:10:DC:H2'' | 2:2:11:DG:H5'' | 2 | 0.81 | 0.15 | 0.81 |
| (1,107) | 2:2:11:DG:H2'' | 2:2:11:DG:H5' | 2 | 0.47 | 0.01 | 0.47 |
| (1,107) | 2:2:11:DG:H2'' | 2:2:11:DG:H5'' | 2 | 0.47 | 0.01 | 0.47 |
| (1,366) | 2:2:6:DT:H5' | 2:2:6:DT:H3' | 2 | 0.14 | 0.02 | 0.14 |
| (1,303) | 2:2:5:DG:H2' | 2:2:5:DG:H5' | 2 | 0.13 | 0.02 | 0.13 |
| (1,303) | 2:2:5:DG:H2' | 2:2:5:DG:H5'' | 2 | 0.13 | 0.02 | 0.13 |

¹Number of violated models, ²Standard deviation

9.5 All violated distance restraints [i](#)

9.5.1 Histogram : Distribution of distance violations [i](#)

The following histogram shows the distribution of the absolute value of the violation for all violated restraints in the ensemble.



9.5.2 Table : All distance violations [i](#)

The following table lists the absolute value of the violation for each restraint in the ensemble sorted by its value. The Key (restraint list ID, restraint ID) is the unique identifier for a given restraint. Rows with same key represent combinatorial or ambiguous restraints and are counted as a single restraint.

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|-------------|----------|---------------|
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 20 | 20.91 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 11 | 20.9 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 21 | 20.78 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 10 | 20.77 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 24 | 20.76 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 12 | 20.75 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 4 | 20.73 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 9 | 20.73 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 25 | 20.69 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 26 | 20.68 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 22 | 20.67 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 1 | 20.65 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 23 | 20.63 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 3 | 20.6 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 5 | 20.6 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 17 | 20.59 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|-------------|----------|---------------|
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 8 | 20.54 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 7 | 20.53 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 15 | 20.53 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 16 | 20.52 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 19 | 20.51 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 6 | 20.46 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 14 | 20.46 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 13 | 20.36 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 2 | 20.3 |
| (1,94) | 2:2:10:DC:H1' | 2:2:3:DA:H2 | 18 | 20.2 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 11 | 16.97 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 5 | 16.78 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 22 | 16.72 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 23 | 16.72 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 12 | 16.71 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 20 | 16.71 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 26 | 16.66 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 4 | 16.62 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 16 | 16.6 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 24 | 16.59 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 1 | 16.54 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 25 | 16.51 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 10 | 16.48 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 21 | 16.48 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 9 | 16.44 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 14 | 16.42 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 6 | 16.41 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 8 | 16.38 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 19 | 16.38 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 3 | 16.35 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 7 | 16.33 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 13 | 16.32 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 15 | 16.32 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 2 | 16.3 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 18 | 16.27 |
| (1,82) | 2:2:9:DA:H1' | 2:2:3:DA:H2 | 17 | 16.23 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 21 | 16.22 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 20 | 16.11 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 24 | 16.06 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 3 | 16.02 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 10 | 15.99 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 15 | 15.97 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 25 | 15.95 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 11 | 15.9 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 8 | 15.87 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 26 | 15.86 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 1 | 15.85 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 7 | 15.84 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 9 | 15.81 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 22 | 15.81 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 17 | 15.76 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 16 | 15.75 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 12 | 15.74 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 4 | 15.71 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 19 | 15.71 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 13 | 15.65 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 2 | 15.59 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 6 | 15.45 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 23 | 15.45 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 14 | 15.43 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 5 | 15.38 |
| (1,22) | 2:2:3:DA:H1' | 2:2:9:DA:H2 | 18 | 15.19 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 5 | 11.08 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 5 | 11.08 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 11 | 11.08 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 11 | 11.08 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 23 | 11.03 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 23 | 11.03 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 16 | 10.97 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 16 | 10.97 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 22 | 10.97 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 22 | 10.97 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 26 | 10.96 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 26 | 10.96 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 12 | 10.93 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 12 | 10.93 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 14 | 10.92 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 14 | 10.92 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 20 | 10.91 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 20 | 10.91 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 6 | 10.89 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 6 | 10.89 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 1 | 10.87 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 1 | 10.87 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 4 | 10.87 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 4 | 10.87 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 24 | 10.85 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 24 | 10.85 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 21 | 10.82 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 21 | 10.82 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 2 | 10.81 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 2 | 10.81 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 18 | 10.81 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 18 | 10.81 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 25 | 10.77 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 25 | 10.77 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 13 | 10.76 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 13 | 10.76 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 19 | 10.76 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 19 | 10.76 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 9 | 10.75 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 9 | 10.75 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 10 | 10.73 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 10 | 10.73 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 7 | 10.72 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 7 | 10.72 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 8 | 10.72 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 8 | 10.72 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 3 | 10.7 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 3 | 10.7 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 15 | 10.63 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 15 | 10.63 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2' | 17 | 10.52 |
| (1,156) | 2:2:4:DT:H1' | 2:2:8:DT:H2'' | 17 | 10.52 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 21 | 6.43 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 21 | 6.43 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 15 | 6.38 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 15 | 6.38 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 25 | 6.35 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 25 | 6.35 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 8 | 6.26 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 8 | 6.26 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 24 | 6.26 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 24 | 6.26 |
| (1,44) | 2:2:5:DG:H5' | 3:1:12:A4A:H9 | 20 | 6.25 |
| (1,44) | 2:2:5:DG:H5'' | 3:1:12:A4A:H9 | 20 | 6.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|--------------------------|---------------|----------|---------------|
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 2 | 6.23 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 2 | 6.23 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 18 | 6.22 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 18 | 6.22 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 17 | 6.21 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 17 | 6.21 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 16 | 6.2 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 16 | 6.2 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 26 | 6.2 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 26 | 6.2 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 9 | 6.19 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 9 | 6.19 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 1 | 6.15 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 1 | 6.15 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 3 | 6.12 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 3 | 6.12 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 11 | 6.11 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 11 | 6.11 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 5 | 6.09 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 5 | 6.09 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 13 | 6.08 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 13 | 6.08 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 19 | 6.08 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 19 | 6.08 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 4 | 6.06 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 4 | 6.06 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 7 | 6.05 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 7 | 6.05 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 14 | 6.02 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 14 | 6.02 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 10 | 6.0 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 10 | 6.0 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 6 | 5.98 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 6 | 5.98 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 23 | 5.98 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 23 | 5.98 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 12 | 5.97 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 12 | 5.97 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 22 | 5.96 |
| (1,44) | 2:2:5:DG:H5 ^γ | 3:1:12:A4A:H9 | 22 | 5.96 |
| (1,90) | 2:2:9:DA:H2 ^γ | 2:2:9:DA:H61 | 25 | 3.67 |
| (1,90) | 2:2:9:DA:H2 ^γ | 2:2:9:DA:H62 | 25 | 3.67 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 3 | 3.64 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 3 | 3.64 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 8 | 3.64 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 8 | 3.64 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 4 | 3.63 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 4 | 3.63 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 5 | 3.63 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 5 | 3.63 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 7 | 3.63 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 7 | 3.63 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 2 | 3.62 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 2 | 3.62 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 10 | 3.62 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 10 | 3.62 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 23 | 3.62 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 23 | 3.62 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 15 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 15 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 20 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 20 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 21 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 21 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 24 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 24 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 26 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 26 | 3.61 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 16 | 3.61 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 16 | 3.61 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 1 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 1 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 6 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 6 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 18 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 18 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 19 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 19 | 3.6 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 11 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 11 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 12 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 12 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 16 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 16 | 3.59 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 17 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 17 | 3.59 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 9 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 9 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 13 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 13 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 14 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 14 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H61 | 22 | 3.58 |
| (1,90) | 2:2:9:DA:H2'' | 2:2:9:DA:H62 | 22 | 3.58 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 26 | 3.57 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 26 | 3.57 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 11 | 3.54 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 11 | 3.54 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 25 | 3.53 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 25 | 3.53 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 15 | 3.52 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 15 | 3.52 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 3 | 3.52 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 3 | 3.52 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 2 | 3.49 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 2 | 3.49 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 5 | 3.48 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 5 | 3.48 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 25 | 3.48 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 25 | 3.48 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 8 | 3.47 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 8 | 3.47 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 7 | 3.47 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 7 | 3.47 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 21 | 3.47 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 21 | 3.47 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 1 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 1 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 2 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 2 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 8 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 8 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 16 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 16 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 24 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 24 | 3.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 26 | 3.46 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 26 | 3.46 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 1 | 3.45 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 1 | 3.45 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 5 | 3.45 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 5 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 4 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 4 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 6 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 6 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 10 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 10 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 15 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 15 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 20 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 20 | 3.45 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 13 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 13 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 14 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 14 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 18 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 18 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 22 | 3.44 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 22 | 3.44 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 18 | 3.43 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 18 | 3.43 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 23 | 3.43 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 23 | 3.43 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 23 | 3.43 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 23 | 3.43 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 12 | 3.42 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 12 | 3.42 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 22 | 3.41 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 22 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 9 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 9 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 11 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 11 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 17 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 17 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H61 | 19 | 3.41 |
| (1,27) | 2:2:3:DA:H2'' | 2:2:3:DA:H62 | 19 | 3.41 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 12 | 3.4 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 12 | 3.4 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 14 | 3.4 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 14 | 3.4 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 3 | 3.38 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 3 | 3.38 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 4 | 3.38 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 4 | 3.38 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 20 | 3.38 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 20 | 3.38 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 7 | 3.37 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 7 | 3.37 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 10 | 3.36 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 10 | 3.36 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 13 | 3.36 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 13 | 3.36 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 19 | 3.35 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 19 | 3.35 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 6 | 3.34 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 6 | 3.34 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 17 | 3.34 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 17 | 3.34 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 24 | 3.33 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 24 | 3.33 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 9 | 3.32 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 9 | 3.32 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 21 | 3.31 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 21 | 3.31 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 9 | 3.28 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2' | 9 | 3.28 |
| (1,55) | 2:2:7:DG:H1' | 2:2:6:DT:H2'' | 9 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 10 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 10 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 16 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 16 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 23 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 23 | 3.28 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 1 | 3.27 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 1 | 3.27 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 2 | 3.27 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 2 | 3.27 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 5 | 3.27 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 5 | 3.27 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 6 | 3.25 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 6 | 3.25 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 3 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 12 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 12 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 18 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 18 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 19 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 19 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 22 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 22 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 26 | 3.24 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 26 | 3.24 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 7 | 3.23 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 17 | 3.23 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 7 | 3.23 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 7 | 3.23 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 8 | 3.23 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 8 | 3.23 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 24 | 3.23 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 24 | 3.23 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 10 | 3.22 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 25 | 3.22 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 25 | 3.22 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 4 | 3.21 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 4 | 3.21 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 21 | 3.21 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 21 | 3.21 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 3 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 3 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 11 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 11 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 17 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 17 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 20 | 3.2 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 20 | 3.2 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 4 | 3.19 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 25 | 3.19 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 14 | 3.18 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 22 | 3.18 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 15 | 3.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 15 | 3.18 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 12 | 3.16 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 18 | 3.16 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 19 | 3.16 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 24 | 3.16 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 13 | 3.15 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 20 | 3.15 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 21 | 3.15 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 23 | 3.15 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 1 | 3.15 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 1 | 3.15 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 6 | 3.14 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 5 | 3.13 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 1 | 3.11 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 10 | 3.1 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 10 | 3.1 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 18 | 3.1 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 18 | 3.1 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 20 | 3.1 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 4 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 4 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 6 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 6 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 8 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 8 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 9 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 9 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 11 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 11 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 21 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 21 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 23 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 23 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 26 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 26 | 3.09 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 2 | 3.09 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 12 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 12 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 14 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 14 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 17 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 17 | 3.08 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 19 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 19 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 20 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 20 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 24 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 24 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 25 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 25 | 3.08 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 2 | 3.07 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 2 | 3.07 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 13 | 3.07 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 13 | 3.07 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 15 | 3.07 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 15 | 3.07 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 18 | 3.07 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 26 | 3.07 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 1 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 1 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 5 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 5 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 7 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 7 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 16 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 16 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 22 | 3.06 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 22 | 3.06 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 21 | 3.06 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 5 | 3.06 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 5 | 3.06 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 13 | 3.06 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 13 | 3.06 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 19 | 3.06 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 19 | 3.06 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 11 | 3.05 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 6 | 3.05 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 6 | 3.05 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 20 | 3.05 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 20 | 3.05 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 21 | 3.05 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 21 | 3.05 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H61 | 3 | 3.04 |
| (1,93) | 2:2:9:DA:H3' | 2:2:9:DA:H62 | 3 | 3.04 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 16 | 3.04 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 17 | 3.04 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 12 | 3.04 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 12 | 3.04 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 18 | 3.04 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 18 | 3.04 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 24 | 3.04 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 24 | 3.04 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 8 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 3 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 3 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 4 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 4 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 7 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 7 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 10 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 10 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 14 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 14 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 22 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 22 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 23 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 23 | 3.03 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 26 | 3.03 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 26 | 3.03 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 17 | 3.02 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 17 | 3.02 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 2 | 3.02 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 2 | 3.02 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 6 | 3.02 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 6 | 3.02 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 16 | 3.02 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 16 | 3.02 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 8 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 5 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 5 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 8 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 8 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 12 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 12 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 14 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 14 | 3.01 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 15 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 15 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 18 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 18 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 19 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 19 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 21 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 21 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 22 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 22 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 23 | 3.01 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 23 | 3.01 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 15 | 3.0 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 9 | 3.0 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 9 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 1 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 1 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 3 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 3 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 4 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 4 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 7 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 7 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 9 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 9 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 13 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 13 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 24 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 24 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 25 | 3.0 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 25 | 3.0 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 15 | 2.99 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 15 | 2.99 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 1 | 2.99 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 3 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 10 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 10 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 11 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 11 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 17 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 17 | 2.99 |
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H61 | 20 | 2.99 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,30) | 2:2:3:DA:H3' | 2:2:3:DA:H62 | 20 | 2.99 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 19 | 2.97 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 16 | 2.96 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 16 | 2.96 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 5 | 2.96 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 16 | 2.95 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 4 | 2.95 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 22 | 2.95 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 12 | 2.94 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 24 | 2.94 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 2 | 2.93 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 10 | 2.93 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 13 | 2.92 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 13 | 2.92 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 22 | 2.91 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 22 | 2.91 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 15 | 2.91 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 23 | 2.91 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 7 | 2.9 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 9 | 2.89 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 9 | 2.89 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 11 | 2.89 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 11 | 2.89 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 17 | 2.89 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 17 | 2.89 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 11 | 2.89 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 9 | 2.89 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 14 | 2.88 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 14 | 2.88 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 13 | 2.87 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 13 | 2.87 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 23 | 2.87 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 23 | 2.87 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 25 | 2.87 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 6 | 2.85 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 6 | 2.85 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 12 | 2.83 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 12 | 2.83 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 19 | 2.83 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 19 | 2.83 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 8 | 2.83 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 26 | 2.83 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 25 | 2.82 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 25 | 2.82 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 24 | 2.82 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 24 | 2.82 |
| (1,57) | 2:2:7:DG:H2' | 2:2:6:DT:H2'' | 26 | 2.82 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 4 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 4 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 8 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 8 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 11 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 11 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 23 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 23 | 2.81 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 5 | 2.81 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 5 | 2.81 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 13 | 2.81 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 6 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 6 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 9 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 9 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 10 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 10 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 15 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 15 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 20 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 20 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 21 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 21 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 26 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 26 | 2.8 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 18 | 2.8 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 18 | 2.8 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 25 | 2.8 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 25 | 2.8 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 3 | 2.8 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 3 | 2.8 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 5 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 5 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 7 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 7 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 12 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 12 | 2.79 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 13 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 13 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 17 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 17 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 18 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 18 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 19 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 19 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 24 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 24 | 2.79 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 26 | 2.79 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 26 | 2.79 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 11 | 2.79 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 14 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 2 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 2 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 5 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 5 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 16 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 16 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 26 | 2.79 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 26 | 2.79 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 1 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 1 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 2 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 2 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 14 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 14 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H61 | 16 | 2.78 |
| (1,87) | 2:2:9:DA:H2' | 2:2:9:DA:H62 | 16 | 2.78 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 20 | 2.78 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 20 | 2.78 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 21 | 2.78 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 21 | 2.78 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 15 | 2.78 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 15 | 2.78 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5' | 14 | 2.78 |
| (1,338) | 2:2:11:DG:H3' | 2:2:11:DG:H5'' | 14 | 2.78 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 8 | 2.78 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 8 | 2.78 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 6 | 2.78 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 6 | 2.78 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|--------------------------|--------------|----------|---------------|
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 7 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 7 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 8 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 8 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 15 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 15 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 18 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 18 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 21 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 21 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 22 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 22 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 25 | 2.78 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 25 | 2.78 |
| (1,87) | 2:2:9:DA:H2 [?] | 2:2:9:DA:H61 | 3 | 2.77 |
| (1,87) | 2:2:9:DA:H2 [?] | 2:2:9:DA:H62 | 3 | 2.77 |
| (1,87) | 2:2:9:DA:H2 [?] | 2:2:9:DA:H61 | 22 | 2.77 |
| (1,87) | 2:2:9:DA:H2 [?] | 2:2:9:DA:H62 | 22 | 2.77 |
| (1,75) | 2:2:8:DT:H2 [?] | 2:2:9:DA:H61 | 1 | 2.77 |
| (1,75) | 2:2:8:DT:H2 [?] | 2:2:9:DA:H62 | 1 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 1 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 1 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 4 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 4 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 13 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 13 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 14 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 14 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 23 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 23 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 24 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 24 | 2.77 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 10 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 10 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 12 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 12 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 17 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 17 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 19 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 19 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H61 | 20 | 2.76 |
| (1,25) | 2:2:3:DA:H2 [?] | 2:2:3:DA:H62 | 20 | 2.76 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 2 | 2.75 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 2 | 2.75 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 9 | 2.75 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 9 | 2.75 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H61 | 11 | 2.75 |
| (1,25) | 2:2:3:DA:H2' | 2:2:3:DA:H62 | 11 | 2.75 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 25 | 2.74 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 25 | 2.74 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 16 | 2.74 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 16 | 2.74 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 2 | 2.74 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 2 | 2.74 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 4 | 2.73 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 4 | 2.73 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 15 | 2.73 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 11 | 2.72 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 11 | 2.72 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 7 | 2.71 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 7 | 2.71 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 2 | 2.71 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 8 | 2.7 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 8 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 9 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 9 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 22 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 22 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 23 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 23 | 2.7 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 11 | 2.69 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 11 | 2.69 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 14 | 2.69 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 14 | 2.69 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 17 | 2.69 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 17 | 2.69 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 10 | 2.68 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 10 | 2.68 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 6 | 2.68 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 6 | 2.68 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 15 | 2.68 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 15 | 2.68 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 26 | 2.68 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 26 | 2.68 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 12 | 2.66 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 12 | 2.66 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H61 | 3 | 2.65 |
| (1,75) | 2:2:8:DT:H2'' | 2:2:9:DA:H62 | 3 | 2.65 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 13 | 2.65 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 13 | 2.65 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5' | 16 | 2.65 |
| (1,315) | 2:2:7:DG:H3' | 2:2:7:DG:H5'' | 16 | 2.65 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 19 | 2.64 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 19 | 2.64 |
| (1,36) | 2:2:5:DG:H1' | 3:1:12:A4A:H8 | 6 | 2.64 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 24 | 2.63 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 24 | 2.63 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 5 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 5 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 18 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 18 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 26 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 26 | 2.62 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 20 | 2.6 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 20 | 2.6 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 21 | 2.6 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 21 | 2.6 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 1 | 2.59 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 1 | 2.59 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 15 | 2.57 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 15 | 2.57 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 4 | 2.57 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 4 | 2.57 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 16 | 2.55 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 16 | 2.55 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 25 | 2.55 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 25 | 2.55 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 2 | 2.54 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 2 | 2.54 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 7 | 2.53 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 7 | 2.53 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 10 | 2.52 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 10 | 2.52 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 8 | 2.51 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 8 | 2.51 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 22 | 2.5 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|--------------|----------|---------------|
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 22 | 2.5 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 9 | 2.49 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 9 | 2.49 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 14 | 2.49 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 14 | 2.49 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 23 | 2.49 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 23 | 2.49 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 6 | 2.48 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 6 | 2.48 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 17 | 2.48 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 17 | 2.48 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 11 | 2.47 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 11 | 2.47 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 16 | 2.47 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H61 | 3 | 2.46 |
| (1,73) | 2:2:8:DT:H2' | 2:2:9:DA:H62 | 3 | 2.46 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 16 | 2.46 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 12 | 2.44 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 12 | 2.44 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 5 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 5 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 13 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 13 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 18 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 18 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 19 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 19 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 24 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 24 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 26 | 2.43 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 26 | 2.43 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 18 | 2.42 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 18 | 2.42 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 17 | 2.41 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 17 | 2.41 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 21 | 2.4 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 21 | 2.4 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 15 | 2.4 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 15 | 2.4 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 1 | 2.39 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 1 | 2.39 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 9 | 2.39 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 9 | 2.39 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 20 | 2.38 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 20 | 2.38 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 18 | 2.38 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 18 | 2.38 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 4 | 2.37 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 4 | 2.37 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 2 | 2.37 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 2 | 2.37 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 16 | 2.37 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 16 | 2.37 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 19 | 2.37 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 19 | 2.37 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 2 | 2.36 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 2 | 2.36 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 11 | 2.36 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 6 | 2.36 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 6 | 2.36 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 7 | 2.34 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 7 | 2.34 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 25 | 2.34 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 25 | 2.34 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 2 | 2.34 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 11 | 2.34 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 11 | 2.34 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 14 | 2.34 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 14 | 2.34 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 10 | 2.33 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 10 | 2.33 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 21 | 2.33 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 21 | 2.33 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 16 | 2.33 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 16 | 2.33 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 22 | 2.33 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 22 | 2.33 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 8 | 2.32 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 8 | 2.32 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 10 | 2.32 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 10 | 2.32 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 25 | 2.32 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 8 | 2.32 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 8 | 2.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 20 | 2.32 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 20 | 2.32 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 9 | 2.32 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 9 | 2.32 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 23 | 2.32 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 23 | 2.32 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 1 | 2.31 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 5 | 2.31 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 5 | 2.31 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 26 | 2.3 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 12 | 2.3 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 12 | 2.3 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 2 | 2.3 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 2 | 2.3 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 8 | 2.29 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 3 | 2.29 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 3 | 2.29 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 4 | 2.29 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 4 | 2.29 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 5 | 2.29 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 5 | 2.29 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 11 | 2.29 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 11 | 2.29 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 1 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 1 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 19 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 19 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 22 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 22 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 23 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 23 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 26 | 2.28 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 26 | 2.28 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 8 | 2.28 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 8 | 2.28 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 13 | 2.28 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 13 | 2.28 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H61 | 3 | 2.27 |
| (1,77) | 2:2:8:DT:H3' | 2:2:9:DA:H62 | 3 | 2.27 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 25 | 2.27 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 25 | 2.27 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 7 | 2.26 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 7 | 2.26 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 24 | 2.26 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 24 | 2.26 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 19 | 2.25 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 15 | 2.25 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 14 | 2.25 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 14 | 2.25 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 17 | 2.25 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 17 | 2.25 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 1 | 2.25 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 1 | 2.25 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 18 | 2.24 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 18 | 2.24 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 13 | 2.23 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 13 | 2.23 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 26 | 2.23 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 26 | 2.23 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 15 | 2.22 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 15 | 2.22 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 17 | 2.22 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 17 | 2.22 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 25 | 2.22 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 25 | 2.22 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 15 | 2.21 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 15 | 2.21 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 1 | 2.21 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 15 | 2.21 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 15 | 2.21 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 7 | 2.21 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 7 | 2.21 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 4 | 2.2 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 4 | 2.2 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 10 | 2.2 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 10 | 2.2 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 12 | 2.2 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 12 | 2.2 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 16 | 2.19 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 16 | 2.19 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 16 | 2.18 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 16 | 2.18 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 19 | 2.18 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 24 | 2.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 24 | 2.18 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 14 | 2.18 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 14 | 2.18 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 6 | 2.18 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 6 | 2.18 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 19 | 2.18 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 19 | 2.18 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 9 | 2.17 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 9 | 2.17 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 17 | 2.17 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 17 | 2.17 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 3 | 2.17 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 5 | 2.17 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 10 | 2.17 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 20 | 2.17 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 22 | 2.17 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 6 | 2.17 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 6 | 2.17 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 22 | 2.17 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 22 | 2.17 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 20 | 2.17 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 20 | 2.17 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 12 | 2.16 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 12 | 2.16 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 7 | 2.16 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 13 | 2.16 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 22 | 2.16 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 22 | 2.16 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 22 | 2.15 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 22 | 2.15 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 4 | 2.15 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 14 | 2.15 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 23 | 2.15 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 9 | 2.15 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 9 | 2.15 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 23 | 2.15 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 23 | 2.15 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 12 | 2.14 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 17 | 2.14 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 11 | 2.14 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 11 | 2.14 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 20 | 2.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 20 | 2.14 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 25 | 2.14 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 25 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 11 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 11 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 12 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 12 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 17 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 17 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 24 | 2.14 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 24 | 2.14 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 14 | 2.14 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 14 | 2.14 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 21 | 2.14 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 21 | 2.14 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 23 | 2.13 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 23 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 1 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 1 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 2 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 2 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 3 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 3 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 4 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 4 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 5 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 5 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 6 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 6 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 9 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 9 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 12 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 12 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 13 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 13 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 15 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 15 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 16 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 16 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 17 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 17 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 18 | 2.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 18 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 19 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 19 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 21 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 21 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 22 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 22 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 23 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 23 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 26 | 2.13 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 26 | 2.13 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 11 | 2.12 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 11 | 2.12 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 14 | 2.12 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 14 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 7 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 7 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 8 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 8 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 10 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 10 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 14 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 14 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2' | 24 | 2.12 |
| (1,46) | 2:2:6:DT:H1' | 2:2:6:DT:H2'' | 24 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 5 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 5 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 13 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 13 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 19 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 19 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 21 | 2.12 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 21 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 2 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 2 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 9 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 9 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 16 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 16 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 23 | 2.12 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 23 | 2.12 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 19 | 2.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 19 | 2.11 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 9 | 2.11 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 18 | 2.11 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 26 | 2.11 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 26 | 2.11 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 6 | 2.1 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 6 | 2.1 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 15 | 2.1 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 15 | 2.1 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 1 | 2.1 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 1 | 2.1 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 18 | 2.1 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 18 | 2.1 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 5 | 2.1 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 5 | 2.1 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 8 | 2.1 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 8 | 2.1 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 13 | 2.09 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 13 | 2.09 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 24 | 2.09 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 24 | 2.09 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 7 | 2.09 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 7 | 2.09 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 20 | 2.09 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 20 | 2.09 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 11 | 2.09 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 11 | 2.09 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 13 | 2.09 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 13 | 2.09 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H61 | 3 | 2.09 |
| (1,15) | 2:2:2:DC:H2' | 2:2:3:DA:H62 | 3 | 2.09 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 20 | 2.08 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 21 | 2.07 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 21 | 2.07 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 21 | 2.07 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2' | 6 | 2.07 |
| (1,40) | 2:2:5:DG:H2'' | 2:2:6:DT:H2'' | 6 | 2.07 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 4 | 2.07 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 4 | 2.07 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 24 | 2.07 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 24 | 2.07 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 20 | 2.06 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 20 | 2.06 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 26 | 2.06 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 26 | 2.06 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 6 | 2.05 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 21 | 2.05 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 1 | 2.05 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 1 | 2.05 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 26 | 2.05 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 26 | 2.05 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 1 | 2.04 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 1 | 2.04 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 8 | 2.04 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 8 | 2.04 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 3 | 2.04 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 13 | 2.04 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 8 | 2.04 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 8 | 2.04 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 25 | 2.04 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 25 | 2.04 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 18 | 2.03 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 18 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 2 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 2 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 5 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 5 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 7 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 7 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 15 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 15 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 18 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 18 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 25 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 25 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 26 | 2.03 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 26 | 2.03 |
| (1,54) | 2:2:7:DG:H1' | 2:2:6:DT:H1' | 24 | 2.03 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 2 | 2.03 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 2 | 2.03 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 10 | 2.03 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 10 | 2.03 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 15 | 2.02 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 15 | 2.02 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 4 | 2.02 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 4 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 1 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 1 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 3 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 3 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 4 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 4 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 10 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 10 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 11 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 11 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 12 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 12 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 14 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 14 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 16 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 16 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 19 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 19 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 20 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 20 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 21 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 21 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 22 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 22 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 23 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 23 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 24 | 2.02 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 24 | 2.02 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 7 | 2.02 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 9 | 2.02 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 17 | 2.02 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 24 | 2.02 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 4 | 2.02 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 4 | 2.02 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 7 | 2.02 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 7 | 2.02 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 25 | 2.02 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 25 | 2.02 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 7 | 2.01 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 7 | 2.01 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 6 | 2.01 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 6 | 2.01 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 13 | 2.01 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 13 | 2.01 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H61 | 3 | 2.01 |
| (1,331) | 2:2:9:DA:H5' | 2:2:9:DA:H62 | 3 | 2.01 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 12 | 2.01 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 12 | 2.01 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 5 | 2.0 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 5 | 2.0 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 9 | 2.0 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 9 | 2.0 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2' | 17 | 2.0 |
| (1,69) | 2:2:8:DT:H1' | 2:2:8:DT:H2'' | 17 | 2.0 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 6 | 2.0 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 10 | 2.0 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 10 | 2.0 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 10 | 2.0 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 10 | 1.99 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 10 | 1.99 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 20 | 1.98 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 20 | 1.98 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 16 | 1.97 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 16 | 1.97 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 4 | 1.97 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 21 | 1.97 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 21 | 1.97 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 9 | 1.96 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 9 | 1.96 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 12 | 1.96 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 12 | 1.96 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 5 | 1.96 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 12 | 1.96 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 3 | 1.96 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 17 | 1.95 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 17 | 1.95 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 22 | 1.95 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 22 | 1.95 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 2 | 1.95 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 2 | 1.95 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 25 | 1.95 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 25 | 1.95 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 9 | 1.95 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 11 | 1.94 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 11 | 1.94 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 8 | 1.94 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 8 | 1.94 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 14 | 1.94 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 2 | 1.94 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 2 | 1.94 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 7 | 1.94 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 7 | 1.94 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 26 | 1.94 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 26 | 1.94 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 23 | 1.93 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 23 | 1.93 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 22 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 3 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 3 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 5 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 5 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 8 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 8 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 10 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 10 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 16 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 16 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 18 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 18 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 22 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 22 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 23 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 23 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 24 | 1.93 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 24 | 1.93 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 14 | 1.92 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 14 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 1 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 1 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 4 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 4 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 6 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 6 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 12 | 1.92 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|--------------|---------------|----------|---------------|
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 12 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 13 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 13 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 14 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 14 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 15 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 15 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 19 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 19 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 20 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 20 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 21 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 21 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 25 | 1.92 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 25 | 1.92 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 6 | 1.91 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 6 | 1.91 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 19 | 1.91 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 19 | 1.91 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H61 | 3 | 1.91 |
| (1,70) | 2:2:8:DT:H1' | 2:2:9:DA:H62 | 3 | 1.91 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 23 | 1.91 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 7 | 1.91 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H61 | 3 | 1.91 |
| (1,288) | 2:2:2:DC:H3' | 2:2:3:DA:H62 | 3 | 1.91 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 11 | 1.91 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 11 | 1.91 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 17 | 1.91 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 17 | 1.91 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 24 | 1.9 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 24 | 1.9 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 26 | 1.9 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 26 | 1.9 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2' | 9 | 1.9 |
| (1,282) | 2:2:4:DT:H1' | 2:2:4:DT:H2'' | 9 | 1.9 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 13 | 1.89 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 13 | 1.89 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 21 | 1.89 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 21 | 1.89 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 10 | 1.89 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 17 | 1.89 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 20 | 1.88 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 20 | 1.88 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 19 | 1.88 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 4 | 1.86 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 1 | 1.85 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 1 | 1.85 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 4 | 1.85 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 4 | 1.85 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 20 | 1.85 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 18 | 1.84 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 18 | 1.84 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 14 | 1.83 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 22 | 1.83 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 7 | 1.82 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 7 | 1.82 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 10 | 1.82 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 10 | 1.82 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 18 | 1.82 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 13 | 1.82 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 5 | 1.81 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 5 | 1.81 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 1 | 1.81 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 12 | 1.81 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 20 | 1.81 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 20 | 1.81 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 5 | 1.8 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 21 | 1.8 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 18 | 1.8 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 18 | 1.8 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 25 | 1.79 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 25 | 1.79 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 8 | 1.78 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 8 | 1.78 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 15 | 1.78 |
| (1,67) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 25 | 1.78 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 6 | 1.78 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 23 | 1.78 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 26 | 1.78 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 26 | 1.78 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 15 | 1.78 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 15 | 1.78 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 17 | 1.78 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 17 | 1.78 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 26 | 1.77 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 24 | 1.77 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 8 | 1.76 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 8 | 1.76 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 15 | 1.76 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 15 | 1.76 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 2 | 1.75 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 2 | 1.75 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 18 | 1.75 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 19 | 1.75 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 19 | 1.75 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 6 | 1.74 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 6 | 1.74 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 19 | 1.74 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 19 | 1.74 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 22 | 1.74 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 22 | 1.74 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 6 | 1.74 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 6 | 1.74 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 15 | 1.74 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 15 | 1.74 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 18 | 1.74 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 18 | 1.74 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H61 | 3 | 1.73 |
| (1,79) | 2:2:8:DT:H4' | 2:2:9:DA:H62 | 3 | 1.73 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 11 | 1.73 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 8 | 1.73 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 17 | 1.73 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 17 | 1.73 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 8 | 1.71 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 11 | 1.71 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 11 | 1.71 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 25 | 1.71 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 25 | 1.71 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 14 | 1.71 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 14 | 1.71 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 23 | 1.71 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 23 | 1.71 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 2 | 1.7 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 22 | 1.7 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 22 | 1.7 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 2 | 1.7 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|--------|---------------|---------------|----------|---------------|
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 2 | 1.7 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 9 | 1.7 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 9 | 1.7 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 2 | 1.69 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 2 | 1.69 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 2 | 1.69 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 3 | 1.69 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 3 | 1.69 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 9 | 1.69 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 9 | 1.69 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 13 | 1.69 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 13 | 1.69 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 23 | 1.69 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 23 | 1.69 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 16 | 1.69 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 16 | 1.69 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 22 | 1.69 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 22 | 1.69 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 16 | 1.68 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 10 | 1.68 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 10 | 1.68 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 14 | 1.68 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 14 | 1.68 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 16 | 1.68 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 16 | 1.68 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 2 | 1.68 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 2 | 1.68 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 8 | 1.68 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 8 | 1.68 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 8 | 1.67 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 8 | 1.67 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 2 | 1.66 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 2 | 1.66 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 4 | 1.66 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 4 | 1.66 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 8 | 1.66 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 8 | 1.66 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 13 | 1.66 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 13 | 1.66 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 19 | 1.66 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 19 | 1.66 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 26 | 1.66 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 26 | 1.66 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 25 | 1.65 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 11 | 1.65 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 11 | 1.65 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 11 | 1.64 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 1 | 1.64 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 1 | 1.64 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 11 | 1.64 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 11 | 1.64 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 12 | 1.64 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 12 | 1.64 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 11 | 1.64 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 11 | 1.64 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 12 | 1.64 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 12 | 1.64 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 5 | 1.63 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 5 | 1.63 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 26 | 1.63 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 26 | 1.63 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 7 | 1.62 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 7 | 1.62 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 1 | 1.62 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 1 | 1.62 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 1 | 1.62 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 1 | 1.62 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 13 | 1.62 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 13 | 1.62 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 13 | 1.62 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 13 | 1.62 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 5 | 1.61 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 5 | 1.61 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 23 | 1.61 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 23 | 1.61 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 26 | 1.61 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 26 | 1.61 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 24 | 1.61 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 24 | 1.61 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 5 | 1.61 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 5 | 1.61 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 24 | 1.61 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 24 | 1.61 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 14 | 1.61 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 14 | 1.61 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 15 | 1.6 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 12 | 1.6 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 12 | 1.6 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 16 | 1.59 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 16 | 1.59 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 18 | 1.59 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 18 | 1.59 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 4 | 1.59 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 4 | 1.59 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 25 | 1.59 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 25 | 1.59 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 7 | 1.59 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 7 | 1.59 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 6 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 6 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 8 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 8 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 15 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 15 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 21 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 21 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 26 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 26 | 1.58 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 4 | 1.58 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 4 | 1.58 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 10 | 1.58 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 10 | 1.58 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 2 | 1.57 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 2 | 1.57 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 4 | 1.57 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 4 | 1.57 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 7 | 1.57 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 7 | 1.57 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 21 | 1.57 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 21 | 1.57 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 10 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 10 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 13 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 13 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 22 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 22 | 1.56 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 25 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 25 | 1.56 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 20 | 1.56 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 20 | 1.56 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 25 | 1.56 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 25 | 1.56 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 5 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 5 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 7 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 7 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 14 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 14 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 20 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 20 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 23 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 23 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 24 | 1.55 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 24 | 1.55 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 10 | 1.55 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 10 | 1.55 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 21 | 1.55 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 21 | 1.55 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 13 | 1.55 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 13 | 1.55 |
| (1,56) | 2:2:7:DG:H2' | 2:2:6:DT:H1' | 26 | 1.54 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 21 | 1.54 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 21 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 1 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 1 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 3 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 3 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 12 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 12 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 16 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 16 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 19 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 19 | 1.54 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 9 | 1.53 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 9 | 1.53 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 11 | 1.53 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 11 | 1.53 |
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H61 | 17 | 1.53 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|--------------|----------|---------------|
| (1,330) | 2:2:9:DA:H4' | 2:2:9:DA:H62 | 17 | 1.53 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 24 | 1.52 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 24 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 6 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 6 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 21 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 21 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 26 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 26 | 1.52 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 20 | 1.52 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 20 | 1.52 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 2 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 2 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 3 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 3 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 5 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 5 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 7 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 7 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 8 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 8 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 12 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 12 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 14 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 14 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 15 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 15 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 16 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 16 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 18 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 18 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 22 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 22 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 24 | 1.51 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 24 | 1.51 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 6 | 1.5 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 6 | 1.5 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 14 | 1.5 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 14 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 1 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 1 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 4 | 1.5 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 4 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 10 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 10 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 13 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 13 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 19 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 19 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 20 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 20 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 23 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 23 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 25 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 25 | 1.5 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 9 | 1.49 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 9 | 1.49 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 11 | 1.49 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 11 | 1.49 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H61 | 17 | 1.49 |
| (1,21) | 2:2:3:DA:H1' | 2:2:3:DA:H62 | 17 | 1.49 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 14 | 1.49 |
| (1,105) | 2:2:11:DG:H2'' | 2:2:11:DG:H5'' | 14 | 1.49 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 3 | 1.49 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H61 | 3 | 1.48 |
| (1,17) | 2:2:2:DC:H2'' | 2:2:3:DA:H62 | 3 | 1.48 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 9 | 1.47 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 9 | 1.47 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 16 | 1.43 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 16 | 1.43 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H61 | 3 | 1.43 |
| (1,11) | 2:2:2:DC:H1' | 2:2:3:DA:H62 | 3 | 1.43 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 2 | 1.43 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 13 | 1.43 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 18 | 1.4 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 18 | 1.4 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 22 | 1.4 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 22 | 1.4 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 2 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 2 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 4 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 4 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 8 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 8 | 1.39 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 21 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 21 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 23 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 23 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 24 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 24 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 25 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 25 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 26 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 26 | 1.39 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 8 | 1.39 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 3 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 3 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 5 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 5 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 6 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 6 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 7 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 7 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 10 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 10 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 12 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 12 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 13 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 13 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 15 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 15 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 20 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 20 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 22 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 22 | 1.38 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 21 | 1.38 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 21 | 1.38 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 7 | 1.38 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 22 | 1.38 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 1 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 1 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 11 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 11 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 14 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 14 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 17 | 1.37 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 17 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 19 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 19 | 1.37 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 5 | 1.37 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 9 | 1.36 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 9 | 1.36 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H61 | 16 | 1.36 |
| (1,81) | 2:2:9:DA:H1' | 2:2:9:DA:H62 | 16 | 1.36 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 16 | 1.36 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 25 | 1.36 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 8 | 1.34 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 8 | 1.34 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 16 | 1.34 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 18 | 1.34 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 3 | 1.33 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 3 | 1.33 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 1 | 1.33 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 10 | 1.33 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 19 | 1.33 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 21 | 1.33 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 9 | 1.32 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 9 | 1.32 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 4 | 1.32 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 5 | 1.32 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 5 | 1.32 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 20 | 1.31 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 20 | 1.31 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 20 | 1.31 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 24 | 1.31 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 16 | 1.31 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 16 | 1.31 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 15 | 1.3 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 26 | 1.3 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 2 | 1.3 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 2 | 1.3 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 12 | 1.29 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 17 | 1.29 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 22 | 1.29 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 22 | 1.29 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 11 | 1.28 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 8 | 1.28 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 8 | 1.28 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 10 | 1.28 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 10 | 1.28 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 25 | 1.28 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 25 | 1.28 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 3 | 1.27 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 23 | 1.27 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 3 | 1.27 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 3 | 1.27 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 14 | 1.26 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 14 | 1.26 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 18 | 1.26 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 18 | 1.26 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 1 | 1.26 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 14 | 1.26 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 7 | 1.26 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 7 | 1.26 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 21 | 1.26 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 21 | 1.26 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 17 | 1.25 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 17 | 1.25 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 5 | 1.25 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 25 | 1.25 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 9 | 1.25 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 2 | 1.24 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 10 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 1 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 1 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 9 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 9 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 18 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 18 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 23 | 1.24 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 23 | 1.24 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 15 | 1.23 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 15 | 1.23 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 4 | 1.23 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 16 | 1.23 |
| (1,102) | 2:2:10:DC:H4' | 2:2:9:DA:H1' | 6 | 1.23 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 15 | 1.23 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 15 | 1.23 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 19 | 1.23 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 19 | 1.23 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 13 | 1.22 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 17 | 1.22 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 19 | 1.22 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 20 | 1.22 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 4 | 1.22 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 4 | 1.22 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 6 | 1.22 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 6 | 1.22 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 24 | 1.22 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 24 | 1.22 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 9 | 1.21 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 11 | 1.21 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 18 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 11 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 11 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 12 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 12 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 20 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 20 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 26 | 1.21 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 26 | 1.21 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 23 | 1.2 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 23 | 1.2 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 8 | 1.2 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 8 | 1.2 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 26 | 1.2 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 26 | 1.2 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 7 | 1.2 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 8 | 1.2 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 14 | 1.2 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 24 | 1.2 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 26 | 1.2 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 6 | 1.19 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 6 | 1.19 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 3 | 1.19 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 21 | 1.19 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 22 | 1.19 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 23 | 1.19 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5' | 17 | 1.19 |
| (1,101) | 2:2:10:DC:H3' | 2:2:11:DG:H5'' | 17 | 1.19 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 19 | 1.17 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 6 | 1.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 6 | 1.16 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 7 | 1.16 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 12 | 1.16 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 21 | 1.16 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 26 | 1.16 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 12 | 1.16 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 19 | 1.15 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 19 | 1.15 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 9 | 1.15 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 11 | 1.15 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 11 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 2 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 3 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 5 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 8 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 13 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 22 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 23 | 1.15 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 25 | 1.15 |
| (1,127) | 2:2:2:DC:H2' | 2:2:1:DG:H2'' | 15 | 1.15 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 17 | 1.14 |
| (1,45) | 2:2:5:DG:H5' | 2:2:4:DT:H1' | 18 | 1.14 |
| (1,45) | 2:2:5:DG:H5'' | 2:2:4:DT:H1' | 18 | 1.14 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 1 | 1.14 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 4 | 1.14 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 10 | 1.14 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 14 | 1.14 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 18 | 1.14 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 20 | 1.14 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 20 | 1.13 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 16 | 1.13 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 24 | 1.13 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 15 | 1.12 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 19 | 1.12 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 7 | 1.11 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 9 | 1.11 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 11 | 1.11 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 10 | 1.1 |
| (1,134) | 2:2:2:DC:H2'' | 2:2:3:DA:H8 | 17 | 1.1 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 1 | 1.09 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 1 | 1.09 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 15 | 1.08 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 15 | 1.08 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 4 | 1.07 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 21 | 1.06 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 1 | 1.05 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 2 | 1.05 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 2 | 1.05 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 13 | 1.04 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 19 | 1.02 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 19 | 1.02 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 24 | 1.01 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 14 | 1.0 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 12 | 0.98 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 22 | 0.98 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 9 | 0.98 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 9 | 0.98 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 17 | 0.98 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 17 | 0.98 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 6 | 0.97 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 23 | 0.97 |
| (1,99) | 2:2:10:DC:H2'' | 2:2:11:DG:H5' | 13 | 0.96 |
| (1,99) | 2:2:10:DC:H2'' | 2:2:11:DG:H5'' | 13 | 0.96 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 5 | 0.95 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 3 | 0.95 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 3 | 0.95 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 16 | 0.95 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 18 | 0.95 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 8 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 10 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 10 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 13 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 13 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 21 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 21 | 0.94 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 2 | 0.94 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 7 | 0.93 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 7 | 0.93 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 20 | 0.93 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 20 | 0.93 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 24 | 0.93 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 24 | 0.93 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 4 | 0.92 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 4 | 0.92 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 2 | 0.91 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 13 | 0.91 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 25 | 0.91 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 25 | 0.91 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 2 | 0.9 |
| (1,68) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 25 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 12 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 12 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 14 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 14 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 22 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 22 | 0.89 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 6 | 0.88 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 6 | 0.88 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 23 | 0.88 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 23 | 0.88 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 18 | 0.87 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 18 | 0.86 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 5 | 0.86 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 5 | 0.86 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5' | 18 | 0.86 |
| (1,51) | 2:2:6:DT:H2'' | 2:2:7:DG:H5'' | 18 | 0.86 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 1 | 0.86 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 1 | 0.86 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 21 | 0.86 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 8 | 0.85 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 22 | 0.84 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 13 | 0.84 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 13 | 0.84 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 11 | 0.84 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 25 | 0.84 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 16 | 0.84 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 8 | 0.83 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 15 | 0.83 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 1 | 0.83 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 1 | 0.83 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 11 | 0.82 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 6 | 0.82 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 1 | 0.82 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 5 | 0.81 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 9 | 0.81 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 14 | 0.81 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 17 | 0.81 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 20 | 0.81 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 20 | 0.81 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 5 | 0.81 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 10 | 0.81 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 12 | 0.81 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 13 | 0.81 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 17 | 0.81 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 20 | 0.81 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 25 | 0.8 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 13 | 0.8 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 13 | 0.8 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 1 | 0.8 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 15 | 0.8 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 3 | 0.8 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 4 | 0.8 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 11 | 0.8 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 23 | 0.8 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 15 | 0.8 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 15 | 0.8 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 15 | 0.8 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 5 | 0.8 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 5 | 0.8 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 9 | 0.8 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 9 | 0.8 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 1 | 0.79 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 16 | 0.79 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 19 | 0.79 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 23 | 0.79 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 26 | 0.79 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 3 | 0.79 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 3 | 0.79 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 17 | 0.79 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 17 | 0.79 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 19 | 0.79 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 19 | 0.79 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 10 | 0.79 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 19 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 5 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 7 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 9 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 14 | 0.79 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 19 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 22 | 0.79 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 25 | 0.79 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 16 | 0.79 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 16 | 0.79 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 6 | 0.78 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 10 | 0.78 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 15 | 0.78 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 20 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 4 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 4 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 10 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 10 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 21 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 21 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 23 | 0.78 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 23 | 0.78 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 26 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 6 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 8 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 16 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 18 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 21 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 24 | 0.78 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 26 | 0.78 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 18 | 0.78 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 18 | 0.78 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 3 | 0.77 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 4 | 0.77 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 24 | 0.77 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 26 | 0.77 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 5 | 0.77 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 5 | 0.77 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 7 | 0.77 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 7 | 0.77 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 24 | 0.77 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 24 | 0.77 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 2 | 0.77 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 2 | 0.77 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 2 | 0.77 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 23 | 0.77 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 23 | 0.77 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 21 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 12 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 12 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 14 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 14 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 18 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 18 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 22 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 22 | 0.76 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 19 | 0.76 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 19 | 0.76 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 4 | 0.76 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 11 | 0.76 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 20 | 0.76 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 8 | 0.76 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 8 | 0.76 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 8 | 0.76 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 2 | 0.76 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 2 | 0.76 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 10 | 0.76 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 10 | 0.76 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 12 | 0.76 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 12 | 0.76 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 6 | 0.75 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 6 | 0.75 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 23 | 0.75 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 24 | 0.75 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 2 | 0.75 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 22 | 0.75 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 22 | 0.75 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 7 | 0.74 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 16 | 0.74 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 16 | 0.74 |
| (1,198) | 2:2:6:DT:H2' | 2:2:6:DT:H6 | 15 | 0.74 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 21 | 0.74 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 21 | 0.74 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 21 | 0.74 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 9 | 0.74 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 17 | 0.74 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 9 | 0.73 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 9 | 0.73 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 12 | 0.73 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 15 | 0.73 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 17 | 0.73 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 2 | 0.73 |
| (1,84) | 2:2:9:DA:H2' | 2:2:8:DT:H2'' | 12 | 0.72 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 3 | 0.72 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 9 | 0.72 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 9 | 0.72 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 9 | 0.72 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 13 | 0.72 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 13 | 0.72 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 13 | 0.72 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 13 | 0.72 |
| (1,63) | 2:2:7:DG:H3' | 2:2:6:DT:H1' | 16 | 0.71 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 22 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 3 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 3 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 3 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 17 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 17 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 17 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 18 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 18 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 18 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 24 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 24 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 24 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 26 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 26 | 0.71 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 26 | 0.71 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 6 | 0.71 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 10 | 0.71 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 11 | 0.71 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 15 | 0.71 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 23 | 0.71 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 24 | 0.71 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 5 | 0.7 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 5 | 0.7 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 9 | 0.7 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 9 | 0.7 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 9 | 0.7 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 14 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 6 | 0.7 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 6 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 6 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 14 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 14 | 0.7 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 14 | 0.7 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 14 | 0.7 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 18 | 0.7 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 20 | 0.7 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 25 | 0.7 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 6 | 0.7 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 6 | 0.7 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 25 | 0.7 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 25 | 0.7 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 17 | 0.69 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 17 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 5 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 5 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 5 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 10 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 10 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 10 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 11 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 11 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 11 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 16 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 16 | 0.69 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 16 | 0.69 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 19 | 0.69 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 22 | 0.69 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 3 | 0.69 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 3 | 0.69 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 3 | 0.68 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 3 | 0.68 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 20 | 0.68 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 20 | 0.68 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 7 | 0.68 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 13 | 0.68 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 22 | 0.68 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 1 | 0.68 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 1 | 0.68 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 1 | 0.68 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 2 | 0.68 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 7 | 0.68 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 8 | 0.68 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 12 | 0.68 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 1 | 0.68 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 1 | 0.68 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 25 | 0.67 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 5 | 0.67 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 7 | 0.67 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 7 | 0.67 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 7 | 0.67 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 20 | 0.67 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 20 | 0.67 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 20 | 0.67 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 6 | 0.67 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 6 | 0.67 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 6 | 0.67 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 1 | 0.67 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 4 | 0.67 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 26 | 0.67 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 15 | 0.67 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 15 | 0.67 |
| (1,99) | 2:2:10:DC:H2'' | 2:2:11:DG:H5' | 14 | 0.66 |
| (1,99) | 2:2:10:DC:H2'' | 2:2:11:DG:H5'' | 14 | 0.66 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 13 | 0.66 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 13 | 0.66 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 21 | 0.66 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 21 | 0.66 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 6 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 4 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 4 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 4 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 19 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 19 | 0.66 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 19 | 0.66 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 16 | 0.66 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 3 | 0.66 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 16 | 0.66 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 5 | 0.66 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 19 | 0.66 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 19 | 0.66 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 26 | 0.66 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 26 | 0.66 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 4 | 0.65 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 4 | 0.65 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 10 | 0.65 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 10 | 0.65 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 12 | 0.65 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 12 | 0.65 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 12 | 0.65 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 25 | 0.65 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 25 | 0.65 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 25 | 0.65 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 21 | 0.65 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 7 | 0.65 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 7 | 0.65 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 8 | 0.65 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 8 | 0.65 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 21 | 0.65 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 21 | 0.65 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 7 | 0.64 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 7 | 0.64 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 24 | 0.64 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 24 | 0.64 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 26 | 0.64 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 9 | 0.64 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 17 | 0.64 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 6 | 0.64 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 14 | 0.64 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 15 | 0.64 |
| (1,117) | 2:2:1:DG:H2'' | 2:2:1:DG:H8 | 5 | 0.64 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 21 | 0.64 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 22 | 0.63 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 22 | 0.63 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 11 | 0.63 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 15 | 0.63 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 1 | 0.63 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 2 | 0.63 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 17 | 0.63 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 18 | 0.63 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 19 | 0.63 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 24 | 0.63 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 1 | 0.63 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 19 | 0.63 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 22 | 0.63 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 5 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 5 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 12 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 12 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 14 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 14 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 23 | 0.62 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 23 | 0.62 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 16 | 0.62 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 25 | 0.62 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 18 | 0.62 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 23 | 0.62 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 23 | 0.62 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 23 | 0.62 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 15 | 0.62 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 15 | 0.62 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 15 | 0.62 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 24 | 0.62 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 24 | 0.62 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 24 | 0.62 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 5 | 0.62 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 7 | 0.62 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 8 | 0.62 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 23 | 0.62 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 25 | 0.62 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 16 | 0.62 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 24 | 0.62 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 24 | 0.62 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 2 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 9 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 10 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 11 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 12 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 13 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 21 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 22 | 0.61 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 26 | 0.61 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 20 | 0.61 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 3 | 0.61 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 4 | 0.61 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 4 | 0.61 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 4 | 0.61 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 6 | 0.6 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 6 | 0.6 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 18 | 0.6 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 18 | 0.6 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 11 | 0.6 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 3 | 0.6 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 4 | 0.6 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 3 | 0.6 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 2 | 0.6 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 9 | 0.6 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 3 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 4 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 7 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 12 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 18 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 19 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 20 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 21 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 22 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 23 | 0.59 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 24 | 0.59 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 8 | 0.59 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 23 | 0.59 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H41 | 22 | 0.59 |
| (1,194) | 2:2:6:DT:H2' | 1:1:1:DC:H42 | 22 | 0.59 |
| (1,194) | 2:2:6:DT:H2' | 3:1:12:A4A:H4 | 22 | 0.59 |
| (1,148) | 2:2:3:DA:H2'' | 2:2:3:DA:H8 | 20 | 0.59 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 4 | 0.59 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 7 | 0.59 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 8 | 0.59 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 14 | 0.59 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 26 | 0.59 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 4 | 0.58 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 4 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 1 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 2 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 5 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 6 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 8 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 9 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 10 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 13 | 0.58 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 14 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 15 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 17 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 25 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 26 | 0.58 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 19 | 0.58 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 24 | 0.58 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 10 | 0.58 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 11 | 0.58 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 21 | 0.58 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 22 | 0.58 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 10 | 0.58 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 11 | 0.58 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 12 | 0.58 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 20 | 0.58 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 11 | 0.58 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 11 | 0.58 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 11 | 0.57 |
| (1,61) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 16 | 0.57 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 1 | 0.57 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 17 | 0.57 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 17 | 0.57 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 17 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 5 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 7 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 9 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 12 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 13 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 24 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 25 | 0.57 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 26 | 0.57 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 23 | 0.57 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 12 | 0.56 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 11 | 0.56 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 11 | 0.56 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 18 | 0.56 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 18 | 0.56 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 13 | 0.56 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 13 | 0.56 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 13 | 0.56 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 1 | 0.56 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 8 | 0.56 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 23 | 0.56 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 25 | 0.56 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 20 | 0.56 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 20 | 0.56 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 16 | 0.55 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 2 | 0.55 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 6 | 0.55 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 14 | 0.55 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 17 | 0.55 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 18 | 0.55 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 18 | 0.55 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 24 | 0.55 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5' | 17 | 0.55 |
| (1,105) | 2:2:11:DG:H2' | 2:2:11:DG:H5'' | 17 | 0.55 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 10 | 0.54 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 10 | 0.54 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 15 | 0.54 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 14 | 0.54 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 3 | 0.54 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 2 | 0.54 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 14 | 0.54 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 14 | 0.54 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 14 | 0.54 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 21 | 0.54 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 21 | 0.54 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 21 | 0.54 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 15 | 0.54 |
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 19 | 0.54 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 6 | 0.54 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 2 | 0.53 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 2 | 0.53 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 7 | 0.53 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 7 | 0.53 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 2 | 0.53 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 8 | 0.53 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 11 | 0.53 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 26 | 0.53 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 8 | 0.53 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 25 | 0.53 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 4 | 0.53 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 4 | 0.53 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 4 | 0.53 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,145) | 2:2:3:DA:H2' | 2:2:3:DA:H8 | 16 | 0.53 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 13 | 0.53 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 15 | 0.53 |
| (1,114) | 2:2:1:DG:H2' | 2:2:1:DG:H8 | 17 | 0.53 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 18 | 0.52 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 18 | 0.52 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 4 | 0.52 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 26 | 0.52 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 26 | 0.52 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 7 | 0.52 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 12 | 0.52 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 23 | 0.52 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 21 | 0.52 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 26 | 0.52 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 23 | 0.52 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 23 | 0.52 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 23 | 0.52 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 9 | 0.51 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 10 | 0.51 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 17 | 0.51 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 1 | 0.51 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 10 | 0.51 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 25 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 1 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 1 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 1 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 8 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 8 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 8 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 12 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 12 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 12 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 16 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 16 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 16 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 18 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 18 | 0.51 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 18 | 0.51 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 19 | 0.5 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 1 | 0.5 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 16 | 0.5 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 9 | 0.5 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 14 | 0.5 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 18 | 0.5 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 19 | 0.5 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 16 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 3 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 3 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 3 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 5 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 5 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 5 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 10 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 10 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 10 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 20 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 20 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 20 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 26 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 26 | 0.5 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 26 | 0.5 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 7 | 0.49 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 21 | 0.49 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 2 | 0.49 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 2 | 0.49 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 6 | 0.49 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 21 | 0.49 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 2 | 0.49 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 4 | 0.49 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 5 | 0.49 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 15 | 0.49 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 22 | 0.49 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 18 | 0.49 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 20 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 7 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 7 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 7 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 22 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 22 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 22 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 25 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 25 | 0.49 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 25 | 0.49 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 3 | 0.49 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 15 | 0.49 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 20 | 0.48 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 24 | 0.48 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 24 | 0.48 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 24 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 5 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 7 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 13 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 18 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 19 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 20 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 22 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 23 | 0.48 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 24 | 0.48 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 26 | 0.48 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 15 | 0.48 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 15 | 0.48 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 15 | 0.48 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 19 | 0.48 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 19 | 0.48 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 19 | 0.48 |
| (1,107) | 2:2:11:DG:H2'' | 2:2:11:DG:H5' | 13 | 0.48 |
| (1,107) | 2:2:11:DG:H2'' | 2:2:11:DG:H5'' | 13 | 0.48 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 16 | 0.47 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 16 | 0.47 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 3 | 0.47 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 26 | 0.47 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 3 | 0.47 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 4 | 0.47 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 10 | 0.47 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 12 | 0.47 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 14 | 0.47 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 25 | 0.47 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 6 | 0.47 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 8 | 0.47 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 13 | 0.47 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 3 | 0.47 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 3 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 2 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 2 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 2 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 9 | 0.47 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 9 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 9 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H41 | 11 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 1:1:1:DC:H42 | 11 | 0.47 |
| (1,177) | 2:2:5:DG:H2' | 3:1:12:A4A:H4 | 11 | 0.47 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 16 | 0.47 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 7 | 0.47 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 7 | 0.47 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 16 | 0.47 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 25 | 0.47 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 26 | 0.47 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 10 | 0.46 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 10 | 0.46 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 2 | 0.46 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 16 | 0.46 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 1 | 0.46 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 23 | 0.46 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 16 | 0.46 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 16 | 0.46 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 9 | 0.46 |
| (1,64) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 17 | 0.46 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 17 | 0.46 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 20 | 0.46 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 24 | 0.46 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 8 | 0.46 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 22 | 0.46 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 7 | 0.46 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 12 | 0.46 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 15 | 0.46 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 15 | 0.46 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 15 | 0.46 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 2 | 0.46 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 11 | 0.46 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 15 | 0.46 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 26 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 2 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 3 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 8 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 16 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 22 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 23 | 0.46 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 26 | 0.46 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 1 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 2 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 4 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 6 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 8 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 12 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 13 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 17 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 18 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 21 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 23 | 0.46 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 24 | 0.46 |
| (1,107) | 2:2:11:DG:H2'' | 2:2:11:DG:H5' | 14 | 0.46 |
| (1,107) | 2:2:11:DG:H2'' | 2:2:11:DG:H5'' | 14 | 0.46 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 5 | 0.45 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 5 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 3 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 5 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 7 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 8 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 14 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 15 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 18 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 22 | 0.45 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 26 | 0.45 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 11 | 0.45 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 1 | 0.45 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 1 | 0.45 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 15 | 0.45 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 15 | 0.45 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 4 | 0.45 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 10 | 0.45 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 6 | 0.45 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 22 | 0.45 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 5 | 0.45 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 9 | 0.45 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 6 | 0.45 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 6 | 0.45 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 6 | 0.45 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 18 | 0.45 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 18 | 0.45 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 18 | 0.45 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 1 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 7 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 8 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 10 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 12 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 13 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 17 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 21 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 22 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 23 | 0.45 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 24 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 1 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 5 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 6 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 10 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 15 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 18 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 24 | 0.45 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 25 | 0.45 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 5 | 0.45 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 11 | 0.45 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 14 | 0.45 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 6 | 0.44 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 6 | 0.44 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 21 | 0.44 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 21 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 1 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 6 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 10 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 19 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 21 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 23 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 24 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 25 | 0.44 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 6 | 0.44 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 15 | 0.44 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 12 | 0.44 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 12 | 0.44 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 9 | 0.44 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 9 | 0.44 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 24 | 0.44 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 24 | 0.44 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 3 | 0.44 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 8 | 0.44 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 25 | 0.44 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 21 | 0.44 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 26 | 0.44 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 4 | 0.44 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 4 | 0.44 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 7 | 0.44 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 14 | 0.44 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 17 | 0.44 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 18 | 0.44 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 20 | 0.44 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 6 | 0.44 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 6 | 0.44 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 6 | 0.44 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 21 | 0.44 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 21 | 0.44 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 21 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 4 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 6 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 9 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 18 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 19 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 20 | 0.44 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 25 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 4 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 12 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 13 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 14 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 19 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 20 | 0.44 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 21 | 0.44 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 10 | 0.44 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 20 | 0.44 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 22 | 0.44 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 4 | 0.43 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 12 | 0.43 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 16 | 0.43 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 1 | 0.43 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 1 | 0.43 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 17 | 0.43 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 17 | 0.43 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 2 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 7 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 9 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 11 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 13 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 17 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 19 | 0.43 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 20 | 0.43 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 11 | 0.43 |
| (1,273) | 2:2:11:DG:H2' | 2:2:11:DG:H8 | 21 | 0.43 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 5 | 0.43 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 10 | 0.43 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 18 | 0.43 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 10 | 0.43 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 21 | 0.43 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 22 | 0.43 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 23 | 0.43 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 24 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 9 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 9 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 9 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 13 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 13 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 13 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 17 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 17 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 17 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 24 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 24 | 0.43 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 24 | 0.43 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 3 | 0.43 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 14 | 0.43 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 11 | 0.43 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 17 | 0.43 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 19 | 0.43 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 8 | 0.42 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 8 | 0.42 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 9 | 0.42 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 13 | 0.42 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 17 | 0.42 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 20 | 0.42 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 5 | 0.42 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 25 | 0.42 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 15 | 0.42 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 11 | 0.42 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 1 | 0.42 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 6 | 0.42 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 12 | 0.42 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 13 | 0.42 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 19 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 2 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 2 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 2 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 11 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 11 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 11 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 14 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 14 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 14 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 16 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 16 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 16 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 20 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 20 | 0.42 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 20 | 0.42 |
| (1,166) | 2:2:4:DT:H2'' | 2:2:4:DT:H6 | 5 | 0.42 |
| (1,165) | 2:2:4:DT:H2'' | 2:2:4:DT:H1' | 9 | 0.42 |
| (1,120) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 9 | 0.42 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 1 | 0.41 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 1 | 0.41 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 19 | 0.41 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 19 | 0.41 |
| (1,89) | 2:2:9:DA:H2'' | 2:2:9:DA:H1' | 11 | 0.41 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 8 | 0.41 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 14 | 0.41 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 22 | 0.41 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 15 | 0.41 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 15 | 0.41 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 17 | 0.41 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 17 | 0.41 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5' | 25 | 0.41 |
| (1,8) | 2:2:1:DG:H2' | 2:2:1:DG:H5'' | 25 | 0.41 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 3 | 0.41 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 3 | 0.41 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 5 | 0.41 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 5 | 0.41 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 21 | 0.41 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 21 | 0.41 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 1 | 0.41 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 18 | 0.41 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 1 | 0.41 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 9 | 0.41 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 19 | 0.41 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 13 | 0.41 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 24 | 0.41 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 24 | 0.41 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 24 | 0.41 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 7 | 0.41 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 7 | 0.41 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 7 | 0.41 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 26 | 0.41 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 26 | 0.41 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 26 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 1 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 2 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 6 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 7 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 8 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 10 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 12 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 13 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 14 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 16 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 21 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 24 | 0.41 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 26 | 0.41 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 23 | 0.4 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 23 | 0.4 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 18 | 0.4 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 18 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 4 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 4 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 7 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 7 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 10 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 10 | 0.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 12 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 12 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 13 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 13 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 14 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 14 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 17 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 17 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 18 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 18 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 19 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 19 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 20 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 20 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 22 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 22 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 23 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 23 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 24 | 0.4 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 24 | 0.4 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 13 | 0.4 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 17 | 0.4 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 15 | 0.4 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 5 | 0.4 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 12 | 0.4 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 22 | 0.4 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 14 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 1 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 1 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 1 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 3 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 3 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 3 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 4 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 4 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 4 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 8 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 8 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 8 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 12 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 12 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 12 | 0.4 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|----------------|----------|---------------|
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 25 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 25 | 0.4 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 25 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 4 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 5 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 11 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 19 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 22 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 23 | 0.4 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 25 | 0.4 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 26 | 0.39 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 26 | 0.39 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 6 | 0.39 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 6 | 0.39 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 21 | 0.39 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 21 | 0.39 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5' | 25 | 0.39 |
| (1,49) | 2:2:6:DT:H2' | 2:2:7:DG:H5'' | 25 | 0.39 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 2 | 0.39 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 6 | 0.39 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 8 | 0.39 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 14 | 0.39 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 9 | 0.39 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 18 | 0.39 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 21 | 0.39 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 21 | 0.39 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 23 | 0.39 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 24 | 0.39 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 26 | 0.39 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 4 | 0.39 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 15 | 0.39 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 17 | 0.39 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 24 | 0.39 |
| (1,242) | 2:2:8:DT:H6 | 2:2:9:DA:H8 | 10 | 0.39 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 6 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 5 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 5 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 5 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 10 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 10 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 10 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 19 | 0.39 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 19 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 19 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 22 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 22 | 0.39 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 22 | 0.39 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 16 | 0.39 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 3 | 0.39 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 9 | 0.39 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 15 | 0.39 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 20 | 0.39 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 9 | 0.39 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 23 | 0.39 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 14 | 0.39 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 17 | 0.39 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 20 | 0.39 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 24 | 0.39 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 4 | 0.38 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 4 | 0.38 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 22 | 0.38 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 22 | 0.38 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 9 | 0.38 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 9 | 0.38 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 4 | 0.38 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 16 | 0.38 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 20 | 0.38 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 25 | 0.38 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 9 | 0.38 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 18 | 0.38 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 6 | 0.38 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 6 | 0.38 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 3 | 0.38 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 17 | 0.38 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H41 | 23 | 0.38 |
| (1,213) | 2:2:6:DT:H5' | 1:1:1:DC:H42 | 23 | 0.38 |
| (1,213) | 2:2:6:DT:H5' | 3:1:12:A4A:H4 | 23 | 0.38 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 1 | 0.38 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 2 | 0.38 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 9 | 0.38 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 11 | 0.38 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 13 | 0.38 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 17 | 0.38 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 4 | 0.38 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 23 | 0.38 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 18 | 0.38 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 22 | 0.38 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 7 | 0.38 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 11 | 0.38 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 21 | 0.38 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 26 | 0.38 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 9 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 9 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 11 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 11 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 12 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 12 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 17 | 0.37 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 17 | 0.37 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 1 | 0.37 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 23 | 0.37 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 26 | 0.37 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 17 | 0.37 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 6 | 0.37 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 24 | 0.37 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 14 | 0.37 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 23 | 0.37 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 2 | 0.37 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 5 | 0.37 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 8 | 0.37 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 15 | 0.37 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 23 | 0.37 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 3 | 0.37 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 4 | 0.37 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 8 | 0.37 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 10 | 0.37 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 18 | 0.37 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 25 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 1 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 6 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 7 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 9 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 11 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 12 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 13 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 14 | 0.37 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 15 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 18 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 20 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 21 | 0.37 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 22 | 0.37 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 7 | 0.37 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 19 | 0.37 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 9 | 0.37 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 13 | 0.37 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 18 | 0.37 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 22 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 3 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 4 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 6 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 7 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 8 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 13 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 15 | 0.37 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 19 | 0.37 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 18 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 3 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 5 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 7 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 10 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 11 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 12 | 0.36 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 19 | 0.36 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 13 | 0.36 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 15 | 0.36 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 14 | 0.36 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 14 | 0.36 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 7 | 0.36 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 25 | 0.36 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 20 | 0.36 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 25 | 0.36 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 26 | 0.36 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 8 | 0.36 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 21 | 0.36 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 21 | 0.36 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 21 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 5 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 6 | 0.36 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 7 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 12 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 15 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 19 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 20 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 21 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 22 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 23 | 0.36 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 26 | 0.36 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 6 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 2 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 5 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 8 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 10 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 16 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 19 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 24 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 25 | 0.36 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 26 | 0.36 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 1 | 0.36 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 13 | 0.36 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 21 | 0.36 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 1 | 0.36 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 2 | 0.36 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 18 | 0.36 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 20 | 0.35 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 20 | 0.35 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 24 | 0.35 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 24 | 0.35 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 22 | 0.35 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 14 | 0.35 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 20 | 0.35 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 22 | 0.35 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 23 | 0.35 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 6 | 0.35 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 12 | 0.35 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 20 | 0.35 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 9 | 0.35 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 12 | 0.35 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 14 | 0.35 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 19 | 0.35 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 25 | 0.35 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 14 | 0.35 |
| (1,201) | 2:2:6:DT:H2'' | 2:2:6:DT:H3' | 24 | 0.35 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 6 | 0.35 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 7 | 0.35 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 21 | 0.35 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 23 | 0.35 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 25 | 0.35 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 13 | 0.35 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 3 | 0.35 |
| (1,169) | 2:2:4:DT:H3' | 2:2:4:DT:H1' | 17 | 0.35 |
| (1,149) | 2:2:3:DA:H2'' | 2:2:4:DT:H6 | 17 | 0.35 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 5 | 0.35 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 10 | 0.35 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 11 | 0.35 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 14 | 0.35 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 23 | 0.35 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 5 | 0.35 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 12 | 0.35 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 16 | 0.35 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 22 | 0.35 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 25 | 0.35 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 15 | 0.34 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 15 | 0.34 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 13 | 0.34 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 24 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 6 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 7 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 10 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 11 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 25 | 0.34 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 6 | 0.34 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 4 | 0.34 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 7 | 0.34 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 2 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 4 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 5 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 12 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 13 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 14 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 18 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 20 | 0.34 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 22 | 0.34 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 26 | 0.34 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 2 | 0.34 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 4 | 0.34 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 16 | 0.34 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 20 | 0.34 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 10 | 0.34 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 14 | 0.34 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 15 | 0.34 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 20 | 0.34 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 23 | 0.34 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 2 | 0.33 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 8 | 0.33 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 12 | 0.33 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 19 | 0.33 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 24 | 0.33 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 11 | 0.33 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 21 | 0.33 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 11 | 0.33 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 1 | 0.33 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 3 | 0.33 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 8 | 0.33 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 15 | 0.33 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 19 | 0.33 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 24 | 0.33 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 15 | 0.33 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 18 | 0.33 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 25 | 0.33 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 6 | 0.33 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 24 | 0.33 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 9 | 0.33 |
| (1,106) | 2:2:11:DG:H2'' | 2:2:11:DG:H1' | 10 | 0.33 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 3 | 0.32 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 3 | 0.32 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 23 | 0.32 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 23 | 0.32 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 21 | 0.32 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 4 | 0.32 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 26 | 0.32 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 16 | 0.32 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 16 | 0.32 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 16 | 0.32 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 15 | 0.32 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 15 | 0.32 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 1 | 0.32 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 3 | 0.32 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 10 | 0.32 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 15 | 0.32 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 25 | 0.32 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 26 | 0.32 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 10 | 0.32 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 11 | 0.32 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 2 | 0.32 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 17 | 0.32 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 18 | 0.32 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 24 | 0.32 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 3 | 0.32 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 8 | 0.32 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 15 | 0.32 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 24 | 0.32 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 18 | 0.32 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 2 | 0.32 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 11 | 0.32 |
| (1,88) | 2:2:9:DA:H2'' | 2:2:8:DT:H1' | 2 | 0.31 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 14 | 0.31 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 14 | 0.31 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 22 | 0.31 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 22 | 0.31 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 26 | 0.31 |
| (1,339) | 2:2:11:DG:H4' | 2:2:10:DC:H1' | 13 | 0.31 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 12 | 0.31 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 12 | 0.31 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 23 | 0.31 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 23 | 0.31 |
| (1,283) | 2:2:9:DA:H2' | 2:2:9:DA:H8 | 16 | 0.31 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 24 | 0.31 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 15 | 0.31 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 17 | 0.31 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 1 | 0.31 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 9 | 0.31 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 6 | 0.31 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 12 | 0.31 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 17 | 0.31 |
| (1,121) | 2:2:1:DG:H3' | 2:2:1:DG:H8 | 26 | 0.31 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 16 | 0.31 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|----------------|----------|---------------|
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 25 | 0.3 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 25 | 0.3 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 6 | 0.3 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 6 | 0.3 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 9 | 0.3 |
| (1,41) | 2:2:5:DG:H3' | 2:2:5:DG:H1' | 18 | 0.3 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 1 | 0.3 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 5 | 0.3 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 16 | 0.3 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 21 | 0.3 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 2 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 1 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 1 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 4 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 4 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 7 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 7 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 11 | 0.3 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 11 | 0.3 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 13 | 0.3 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 2 | 0.3 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 8 | 0.3 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 11 | 0.3 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 26 | 0.3 |
| (1,225) | 2:2:7:DG:H2'' | 2:2:7:DG:H8 | 16 | 0.3 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 3 | 0.3 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 19 | 0.3 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 9 | 0.3 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 7 | 0.3 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 10 | 0.3 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 13 | 0.3 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 17 | 0.3 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 23 | 0.3 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 25 | 0.3 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 23 | 0.3 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5' | 7 | 0.29 |
| (1,97) | 2:2:10:DC:H2' | 2:2:11:DG:H5'' | 7 | 0.29 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 5 | 0.29 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 5 | 0.29 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 12 | 0.29 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 12 | 0.29 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 24 | 0.29 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 24 | 0.29 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 4 | 0.29 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 12 | 0.29 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 23 | 0.29 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 5 | 0.29 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 23 | 0.29 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 26 | 0.29 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 5 | 0.29 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 5 | 0.29 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 19 | 0.29 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 19 | 0.29 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 26 | 0.29 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 26 | 0.29 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 11 | 0.29 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 16 | 0.29 |
| (1,23) | 2:2:3:DA:H2' | 2:2:2:DC:H2'' | 16 | 0.29 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 18 | 0.29 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 18 | 0.29 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 18 | 0.29 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 9 | 0.29 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 11 | 0.29 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 20 | 0.29 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 2 | 0.29 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 16 | 0.29 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 21 | 0.29 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 2 | 0.29 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 5 | 0.29 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 14 | 0.29 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 20 | 0.29 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 22 | 0.29 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 17 | 0.29 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 19 | 0.29 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 3 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 5 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 7 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 9 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 10 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 14 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 17 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 18 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 20 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 21 | 0.28 |

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Continued from previous page...

| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 22 | 0.28 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 24 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 2 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 3 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 7 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 11 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 12 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 16 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 19 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 20 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 22 | 0.28 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 25 | 0.28 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 15 | 0.28 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 16 | 0.28 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 13 | 0.28 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 13 | 0.28 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 2 | 0.28 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 21 | 0.28 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 24 | 0.28 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 18 | 0.28 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 26 | 0.28 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 26 | 0.28 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 26 | 0.28 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 5 | 0.28 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 6 | 0.28 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 17 | 0.28 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 4 | 0.28 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 8 | 0.28 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 11 | 0.28 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 14 | 0.28 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 6 | 0.28 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 9 | 0.28 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 22 | 0.28 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 6 | 0.28 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 9 | 0.28 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 11 | 0.28 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 19 | 0.28 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 24 | 0.28 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 3 | 0.28 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 4 | 0.28 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 25 | 0.28 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 5 | 0.28 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 9 | 0.28 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 10 | 0.28 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 12 | 0.28 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 4 | 0.27 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 4 | 0.27 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 6 | 0.27 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 13 | 0.27 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 19 | 0.27 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 17 | 0.27 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 1 | 0.27 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 8 | 0.27 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 10 | 0.27 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 15 | 0.27 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 23 | 0.27 |
| (1,340) | 2:2:11:DG:H5' | 2:2:10:DC:H1' | 13 | 0.27 |
| (1,340) | 2:2:11:DG:H5'' | 2:2:10:DC:H1' | 13 | 0.27 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 8 | 0.27 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 8 | 0.27 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 17 | 0.27 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 6 | 0.27 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 11 | 0.27 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 21 | 0.27 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 22 | 0.27 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 26 | 0.27 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 2 | 0.27 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 1 | 0.27 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 16 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 1 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 4 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 7 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 10 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 12 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 13 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 22 | 0.27 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 26 | 0.27 |
| (1,197) | 2:2:6:DT:H2' | 2:2:6:DT:H3' | 16 | 0.27 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 20 | 0.27 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 15 | 0.27 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 1 | 0.27 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 3 | 0.27 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 15 | 0.27 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 1 | 0.27 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 8 | 0.27 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 19 | 0.27 |
| (1,398) | 2:2:2:DC:H2'' | 2:2:2:DC:H6 | 3 | 0.26 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 1 | 0.26 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 14 | 0.26 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 6 | 0.26 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 13 | 0.26 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 4 | 0.26 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 6 | 0.26 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 14 | 0.26 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 7 | 0.26 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 18 | 0.26 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 26 | 0.26 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 2 | 0.26 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 2 | 0.26 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 10 | 0.26 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 10 | 0.26 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 8 | 0.26 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 24 | 0.26 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 9 | 0.26 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 12 | 0.26 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 18 | 0.26 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 20 | 0.26 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 23 | 0.26 |
| (1,261) | 2:2:10:DC:H2' | 2:2:11:DG:H8 | 13 | 0.26 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 26 | 0.26 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 6 | 0.26 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 21 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 11 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 11 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 11 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 13 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 13 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 13 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 17 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 17 | 0.26 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 17 | 0.26 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 8 | 0.26 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 14 | 0.26 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 15 | 0.26 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 23 | 0.26 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 3 | 0.26 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 10 | 0.26 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 22 | 0.26 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 23 | 0.26 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 5 | 0.26 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 4 | 0.26 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 8 | 0.26 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 16 | 0.26 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 12 | 0.26 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 21 | 0.26 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 26 | 0.26 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 2 | 0.26 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 6 | 0.26 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 16 | 0.26 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 18 | 0.26 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 25 | 0.26 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 10 | 0.25 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 10 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 2 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 4 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 11 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 15 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 16 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 20 | 0.25 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 25 | 0.25 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 2 | 0.25 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 3 | 0.25 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 13 | 0.25 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 22 | 0.25 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 22 | 0.25 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 2 | 0.25 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 16 | 0.25 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 13 | 0.25 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 20 | 0.25 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 1 | 0.25 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 3 | 0.25 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 7 | 0.25 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 17 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 5 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 7 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 13 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 18 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 19 | 0.25 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 20 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 22 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 23 | 0.25 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 24 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 2 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 2 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 2 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 9 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 9 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 9 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 12 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 12 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 12 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 20 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 20 | 0.25 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 20 | 0.25 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 18 | 0.25 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 21 | 0.25 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 24 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 5 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 7 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 12 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 19 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 24 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 25 | 0.25 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 26 | 0.25 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 8 | 0.25 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 23 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 1 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 3 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 4 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 7 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 11 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 13 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 15 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 20 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 21 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 22 | 0.25 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 24 | 0.25 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 3 | 0.25 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 15 | 0.25 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 7 | 0.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 7 | 0.24 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 21 | 0.24 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 21 | 0.24 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 21 | 0.24 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 25 | 0.24 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 8 | 0.24 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 23 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 1 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 3 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 5 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 7 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 8 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 10 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 12 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 14 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 19 | 0.24 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 22 | 0.24 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 17 | 0.24 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 20 | 0.24 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 24 | 0.24 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 1 | 0.24 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 1 | 0.24 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 25 | 0.24 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 25 | 0.24 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 6 | 0.24 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 4 | 0.24 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 14 | 0.24 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 8 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 3 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 4 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 10 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 12 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 14 | 0.24 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 25 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 3 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 3 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 3 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 8 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 8 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 8 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 14 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 14 | 0.24 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 14 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 23 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 23 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 23 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 25 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 25 | 0.24 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 25 | 0.24 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 2 | 0.24 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 1 | 0.24 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 3 | 0.24 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 14 | 0.24 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 18 | 0.24 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 3 | 0.24 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 10 | 0.24 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 11 | 0.24 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 24 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 4 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 5 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 6 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 10 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 11 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 14 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 16 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 18 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 20 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 21 | 0.24 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 24 | 0.24 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 26 | 0.24 |
| (1,115) | 2:2:1:DG:H2' | 2:2:2:DC:H5 | 5 | 0.24 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 8 | 0.24 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 14 | 0.24 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 17 | 0.24 |
| (1,108) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 26 | 0.24 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 18 | 0.23 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 23 | 0.23 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 9 | 0.23 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 9 | 0.23 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 13 | 0.23 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 13 | 0.23 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 15 | 0.23 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 14 | 0.23 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 7 | 0.23 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 23 | 0.23 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 26 | 0.23 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 4 | 0.23 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 14 | 0.23 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 3 | 0.23 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 3 | 0.23 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 25 | 0.23 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 25 | 0.23 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 12 | 0.23 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 12 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 9 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 11 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 14 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 17 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 18 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 19 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 22 | 0.23 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 23 | 0.23 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 8 | 0.23 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 18 | 0.23 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 2 | 0.23 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 4 | 0.23 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 26 | 0.23 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 19 | 0.23 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 3 | 0.23 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 14 | 0.23 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 8 | 0.23 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 9 | 0.23 |
| (1,226) | 2:2:7:DG:H3' | 2:2:7:DG:H1' | 17 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 3 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 4 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 7 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 12 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 18 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 19 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 20 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 21 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 22 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 23 | 0.23 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 24 | 0.23 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 10 | 0.23 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 10 | 0.23 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 10 | 0.23 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 5 | 0.23 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 11 | 0.23 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 12 | 0.23 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 22 | 0.23 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 23 | 0.23 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 17 | 0.23 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 4 | 0.23 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 9 | 0.23 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 16 | 0.23 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 20 | 0.23 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 1 | 0.23 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 2 | 0.23 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 3 | 0.23 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 12 | 0.23 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 15 | 0.23 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 21 | 0.23 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 7 | 0.23 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 16 | 0.23 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 25 | 0.23 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 26 | 0.23 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 1 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 2 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 4 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 5 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 6 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 7 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 8 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 11 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 13 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 15 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 20 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 21 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 22 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 24 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 26 | 0.22 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 17 | 0.22 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 17 | 0.22 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 10 | 0.22 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 17 | 0.22 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 19 | 0.22 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 12 | 0.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|--------------|----------|---------------|
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 24 | 0.22 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 13 | 0.22 |
| (1,358) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 17 | 0.22 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 1 | 0.22 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 25 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 1 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 2 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 4 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 6 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 8 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 12 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 13 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 15 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 16 | 0.22 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 26 | 0.22 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 3 | 0.22 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 15 | 0.22 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 3 | 0.22 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 15 | 0.22 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 19 | 0.22 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 22 | 0.22 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 7 | 0.22 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 8 | 0.22 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 1 | 0.22 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 6 | 0.22 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 7 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 2 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 5 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 7 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 15 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 18 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 25 | 0.22 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 26 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 1 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 2 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 5 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 6 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 8 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 9 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 10 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 13 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 14 | 0.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 15 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 17 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 25 | 0.22 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 26 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 1 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 1 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 1 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 4 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 4 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 4 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 5 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 5 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 5 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 7 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 7 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 7 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 19 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 19 | 0.22 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 19 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 3 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 7 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 10 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 13 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 16 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 17 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 19 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 25 | 0.22 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 26 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 1 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 4 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 6 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 7 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 8 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 9 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 13 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 19 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 20 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 24 | 0.22 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 25 | 0.22 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 1 | 0.22 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 5 | 0.22 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 7 | 0.22 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 25 | 0.22 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 26 | 0.22 |
| (1,119) | 2:2:1:DG:H2'' | 2:2:2:DC:H6 | 12 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 1 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 2 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 4 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 6 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 8 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 12 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 13 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 17 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 18 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 21 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 23 | 0.22 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 24 | 0.22 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 3 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 9 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 10 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 12 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 14 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 16 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 17 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 19 | 0.21 |
| (1,98) | 2:2:10:DC:H2'' | 2:2:10:DC:H1' | 25 | 0.21 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 2 | 0.21 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 9 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 1 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 5 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 9 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 11 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 12 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 13 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 22 | 0.21 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 25 | 0.21 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 17 | 0.21 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 20 | 0.21 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 25 | 0.21 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 3 | 0.21 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 12 | 0.21 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 7 | 0.21 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 21 | 0.21 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 24 | 0.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 5 | 0.21 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 7 | 0.21 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 10 | 0.21 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 20 | 0.21 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 21 | 0.21 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 24 | 0.21 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 25 | 0.21 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 23 | 0.21 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 1 | 0.21 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 9 | 0.21 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 14 | 0.21 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 5 | 0.21 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 8 | 0.21 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 15 | 0.21 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 18 | 0.21 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 24 | 0.21 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 26 | 0.21 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 2 | 0.21 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 25 | 0.21 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 25 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 3 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 4 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 10 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 11 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 12 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 14 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 16 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 19 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 20 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 21 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 22 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 23 | 0.21 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 24 | 0.21 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 11 | 0.21 |
| (1,224) | 2:2:7:DG:H2'' | 2:2:7:DG:H1' | 16 | 0.21 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 22 | 0.21 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 2 | 0.21 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 4 | 0.21 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 20 | 0.21 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 2 | 0.21 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 10 | 0.21 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 15 | 0.21 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 22 | 0.21 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 23 | 0.21 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 13 | 0.21 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 14 | 0.21 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 17 | 0.21 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 19 | 0.21 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 25 | 0.21 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 7 | 0.21 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 17 | 0.21 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 15 | 0.21 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 16 | 0.21 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 2 | 0.21 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 5 | 0.21 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 11 | 0.21 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 14 | 0.21 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 12 | 0.2 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 3 | 0.2 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 3 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 2 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 3 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 4 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 6 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 7 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 8 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 15 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 18 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 20 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 21 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 23 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 24 | 0.2 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 26 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 3 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 4 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 9 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 11 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 12 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 24 | 0.2 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 26 | 0.2 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 5 | 0.2 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 11 | 0.2 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 24 | 0.2 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 8 | 0.2 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 3 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 5 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 6 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 10 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 14 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 18 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 22 | 0.2 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 23 | 0.2 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5' | 20 | 0.2 |
| (1,301) | 2:2:4:DT:H2' | 2:2:5:DG:H5'' | 20 | 0.2 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 17 | 0.2 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 17 | 0.2 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 18 | 0.2 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 10 | 0.2 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 25 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 1 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 2 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 3 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 6 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 12 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 14 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 19 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 21 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 22 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 23 | 0.2 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 25 | 0.2 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 5 | 0.2 |
| (1,263) | 2:2:10:DC:H2'' | 2:2:10:DC:H6 | 10 | 0.2 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 15 | 0.2 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 16 | 0.2 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 22 | 0.2 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 1 | 0.2 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 6 | 0.2 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 13 | 0.2 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 22 | 0.2 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 22 | 0.2 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 22 | 0.2 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 4 | 0.2 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 19 | 0.2 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 20 | 0.2 |
| (1,202) | 2:2:6:DT:H2'' | 2:2:6:DT:H6 | 16 | 0.2 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 3 | 0.2 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 4 | 0.2 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 23 | 0.2 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 26 | 0.2 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 21 | 0.2 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 8 | 0.2 |
| (1,179) | 2:2:5:DG:H2' | 2:2:5:DG:H8 | 14 | 0.2 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 11 | 0.2 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 12 | 0.2 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 16 | 0.2 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 21 | 0.2 |
| (1,163) | 2:2:4:DT:H2' | 2:2:4:DT:H6 | 26 | 0.2 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 15 | 0.2 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 21 | 0.2 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 23 | 0.2 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 13 | 0.2 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 7 | 0.2 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 12 | 0.2 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 23 | 0.2 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 24 | 0.2 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 25 | 0.2 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 16 | 0.2 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 10 | 0.2 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 20 | 0.2 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 22 | 0.2 |
| (1,66) | 2:2:7:DG:H5' | 2:2:6:DT:H1' | 20 | 0.19 |
| (1,66) | 2:2:7:DG:H5'' | 2:2:6:DT:H1' | 20 | 0.19 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 8 | 0.19 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 14 | 0.19 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 16 | 0.19 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 26 | 0.19 |
| (1,383) | 2:2:10:DC:H2' | 2:2:10:DC:H4' | 16 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 1 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 7 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 8 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 15 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 19 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 21 | 0.19 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 23 | 0.19 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 1 | 0.19 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 5 | 0.19 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 10 | 0.19 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 11 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 4 | 0.19 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 12 | 0.19 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 13 | 0.19 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 19 | 0.19 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 20 | 0.19 |
| (1,29) | 2:2:3:DA:H3' | 2:2:3:DA:H1' | 3 | 0.19 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 8 | 0.19 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 13 | 0.19 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 22 | 0.19 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 10 | 0.19 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 26 | 0.19 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 5 | 0.19 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 9 | 0.19 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 10 | 0.19 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 12 | 0.19 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 5 | 0.19 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 7 | 0.19 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 18 | 0.19 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 4 | 0.19 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 9 | 0.19 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 10 | 0.19 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 13 | 0.19 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 16 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 1 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 2 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 3 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 5 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 6 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 7 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 8 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 10 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 14 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 15 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 16 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 18 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 20 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 21 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 22 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 24 | 0.19 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 26 | 0.19 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 5 | 0.19 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 13 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|--------------|----------|---------------|
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 21 | 0.19 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 24 | 0.19 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 9 | 0.19 |
| (1,235) | 2:2:8:DT:H2'' | 2:2:8:DT:H1' | 17 | 0.19 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 11 | 0.19 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 23 | 0.19 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 16 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 1 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 2 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 5 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 6 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 7 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 8 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 9 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 10 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 11 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 12 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 14 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 16 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 17 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 18 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 19 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 20 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 21 | 0.19 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 25 | 0.19 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 9 | 0.19 |
| (1,188) | 2:2:5:DG:H3' | 2:2:5:DG:H8 | 9 | 0.19 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 9 | 0.19 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 20 | 0.19 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 8 | 0.19 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 12 | 0.19 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 26 | 0.19 |
| (1,124) | 2:2:1:DG:H4' | 2:2:1:DG:H8 | 19 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 1 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 2 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 3 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 13 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 16 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 17 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 18 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 20 | 0.19 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 26 | 0.19 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 10 | 0.19 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 13 | 0.19 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 22 | 0.19 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 19 | 0.19 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 24 | 0.18 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 25 | 0.18 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 11 | 0.18 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 6 | 0.18 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 10 | 0.18 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 16 | 0.18 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 18 | 0.18 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 21 | 0.18 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 1 | 0.18 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 9 | 0.18 |
| (1,317) | 2:2:7:DG:H5' | 2:2:7:DG:H1' | 17 | 0.18 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 15 | 0.18 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 15 | 0.18 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 16 | 0.18 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 16 | 0.18 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 1 | 0.18 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 5 | 0.18 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 26 | 0.18 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 7 | 0.18 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 25 | 0.18 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 19 | 0.18 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 3 | 0.18 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 12 | 0.18 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 16 | 0.18 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 11 | 0.18 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 17 | 0.18 |
| (1,272) | 2:2:11:DG:H1' | 2:2:11:DG:H8 | 20 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 4 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 9 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 11 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 12 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 13 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 19 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 23 | 0.18 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 25 | 0.18 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 10 | 0.18 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 23 | 0.18 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 13 | 0.18 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 15 | 0.18 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 22 | 0.18 |
| (1,19) | 2:2:2:DC:H3' | 2:2:2:DC:H1' | 24 | 0.18 |
| (1,188) | 2:2:5:DG:H3' | 2:2:5:DG:H8 | 21 | 0.18 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 17 | 0.18 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 2 | 0.18 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 6 | 0.18 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 13 | 0.18 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 4 | 0.18 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 6 | 0.18 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 8 | 0.18 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 10 | 0.18 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 19 | 0.18 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 21 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 1 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 5 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 8 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 9 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 11 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 12 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 15 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 18 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 19 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 21 | 0.18 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 23 | 0.18 |
| (1,10) | 2:2:1:DG:H3' | 2:2:1:DG:H1' | 9 | 0.18 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 12 | 0.17 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 24 | 0.17 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 1 | 0.17 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 18 | 0.17 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 19 | 0.17 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 20 | 0.17 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 2 | 0.17 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 3 | 0.17 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 4 | 0.17 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 18 | 0.17 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 20 | 0.17 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 13 | 0.17 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 4 | 0.17 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 19 | 0.17 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 20 | 0.17 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 22 | 0.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 25 | 0.17 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 21 | 0.17 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 6 | 0.17 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 14 | 0.17 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 1 | 0.17 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 5 | 0.17 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 6 | 0.17 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 21 | 0.17 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 2 | 0.17 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 6 | 0.17 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 16 | 0.17 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 18 | 0.17 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 25 | 0.17 |
| (1,26) | 2:2:3:DA:H2'' | 2:2:3:DA:H1' | 17 | 0.17 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 4 | 0.17 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 5 | 0.17 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 6 | 0.17 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 18 | 0.17 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H41 | 16 | 0.17 |
| (1,217) | 2:2:6:DT:H5'' | 1:1:1:DC:H42 | 16 | 0.17 |
| (1,217) | 2:2:6:DT:H5'' | 3:1:12:A4A:H4 | 16 | 0.17 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 7 | 0.17 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 10 | 0.17 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 13 | 0.17 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 25 | 0.17 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 2 | 0.17 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 2 | 0.17 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 16 | 0.17 |
| (1,188) | 2:2:5:DG:H3' | 2:2:5:DG:H8 | 18 | 0.17 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 11 | 0.17 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 18 | 0.17 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 22 | 0.17 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 18 | 0.17 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 5 | 0.17 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 9 | 0.17 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 11 | 0.17 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 14 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 3 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 4 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 6 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 7 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 14 | 0.17 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 17 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 20 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 25 | 0.17 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 26 | 0.17 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 22 | 0.16 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 8 | 0.16 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 8 | 0.16 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 11 | 0.16 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 11 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 1 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 2 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 3 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 4 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 5 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 6 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 7 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 8 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 9 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 10 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 11 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 13 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 14 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 15 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 16 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 17 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 18 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 19 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 20 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 21 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 22 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 23 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 25 | 0.16 |
| (1,59) | 2:2:7:DG:H2' | 2:2:7:DG:H2'' | 26 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 1 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 5 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 7 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 8 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 9 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 12 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 13 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 16 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 21 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|----------------|---------------|----------|---------------|
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 23 | 0.16 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 26 | 0.16 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 1 | 0.16 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 5 | 0.16 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 14 | 0.16 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 16 | 0.16 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 18 | 0.16 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 22 | 0.16 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 1 | 0.16 |
| (1,359) | 2:2:5:DG:H2' | 2:2:5:DG:H4' | 9 | 0.16 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 2 | 0.16 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 2 | 0.16 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 24 | 0.16 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 24 | 0.16 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 7 | 0.16 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 21 | 0.16 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 24 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 1 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 3 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 4 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 7 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 11 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 13 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 15 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 20 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 21 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 22 | 0.16 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 24 | 0.16 |
| (1,276) | 2:2:11:DG:H2'' | 2:2:11:DG:H8 | 23 | 0.16 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 20 | 0.16 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 21 | 0.16 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 23 | 0.16 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 1 | 0.16 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 5 | 0.16 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 12 | 0.16 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 25 | 0.16 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 15 | 0.16 |
| (1,189) | 2:2:5:DG:H3' | 2:2:6:DT:H6 | 18 | 0.16 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 12 | 0.16 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 15 | 0.16 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 23 | 0.16 |
| (1,110) | 2:2:1:DG:H1' | 2:2:1:DG:H8 | 22 | 0.16 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 15 | 0.16 |
| (1,100) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 24 | 0.16 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 7 | 0.15 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 2 | 0.15 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 16 | 0.15 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 5 | 0.15 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 23 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 6 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 10 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 14 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 15 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 19 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 22 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 24 | 0.15 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 25 | 0.15 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 2 | 0.15 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 3 | 0.15 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 9 | 0.15 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 10 | 0.15 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 19 | 0.15 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 23 | 0.15 |
| (1,382) | 2:2:10:DC:H2' | 2:2:10:DC:H3' | 2 | 0.15 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 11 | 0.15 |
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 10 | 0.15 |
| (1,366) | 2:2:6:DT:H5' | 2:2:6:DT:H3' | 16 | 0.15 |
| (1,350) | 2:2:2:DC:H5 | 2:2:1:DG:H1' | 22 | 0.15 |
| (1,303) | 2:2:5:DG:H2' | 2:2:5:DG:H5' | 6 | 0.15 |
| (1,303) | 2:2:5:DG:H2' | 2:2:5:DG:H5'' | 6 | 0.15 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 26 | 0.15 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 26 | 0.15 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 25 | 0.15 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 4 | 0.15 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 8 | 0.15 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 14 | 0.15 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 17 | 0.15 |
| (1,277) | 2:2:11:DG:H3' | 2:2:11:DG:H1' | 26 | 0.15 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 2 | 0.15 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 20 | 0.15 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 1 | 0.15 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 4 | 0.15 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 7 | 0.15 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 12 | 0.15 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 14 | 0.15 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 22 | 0.15 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 24 | 0.15 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 3 | 0.15 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 14 | 0.15 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 17 | 0.15 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 12 | 0.15 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 25 | 0.15 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 6 | 0.15 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 10 | 0.15 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 25 | 0.15 |
| (1,131) | 2:2:2:DC:H2' | 2:2:3:DA:H8 | 22 | 0.15 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 3 | 0.15 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 11 | 0.15 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 12 | 0.15 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 17 | 0.15 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 2 | 0.14 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 2 | 0.14 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 26 | 0.14 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 26 | 0.14 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 15 | 0.14 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 3 | 0.14 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 7 | 0.14 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 17 | 0.14 |
| (1,42) | 2:2:5:DG:H4' | 2:2:4:DT:H1' | 18 | 0.14 |
| (1,39) | 2:2:5:DG:H2'' | 2:2:5:DG:H1' | 17 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 4 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 6 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 7 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 8 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 16 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 20 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 24 | 0.14 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 26 | 0.14 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 2 | 0.14 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 11 | 0.14 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 2 | 0.14 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 13 | 0.14 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 15 | 0.14 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 16 | 0.14 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 19 | 0.14 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 26 | 0.14 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,367) | 2:2:6:DT:H5'' | 2:2:5:DG:H1' | 13 | 0.14 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 5 | 0.14 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 5 | 0.14 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 16 | 0.14 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 19 | 0.14 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 10 | 0.14 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 13 | 0.14 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 19 | 0.14 |
| (1,223) | 2:2:7:DG:H2' | 2:2:7:DG:H8 | 16 | 0.14 |
| (1,223) | 2:2:7:DG:H2' | 2:2:7:DG:H8 | 26 | 0.14 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 8 | 0.14 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 26 | 0.14 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 11 | 0.14 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 15 | 0.14 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 8 | 0.14 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 9 | 0.14 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 18 | 0.14 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 8 | 0.14 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 4 | 0.14 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 7 | 0.14 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 14 | 0.14 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 19 | 0.14 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 24 | 0.14 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 9 | 0.14 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 19 | 0.14 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 22 | 0.14 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 24 | 0.14 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 9 | 0.13 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 19 | 0.13 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 7 | 0.13 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 15 | 0.13 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 15 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 1 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 2 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 4 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 9 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 10 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 11 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 13 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 16 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 17 | 0.13 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 20 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 25 | 0.13 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 4 | 0.13 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 11 | 0.13 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 13 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 5 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 11 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 14 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 15 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 18 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 21 | 0.13 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 25 | 0.13 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 8 | 0.13 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 15 | 0.13 |
| (1,370) | 2:2:7:DG:H2' | 2:2:7:DG:H4' | 26 | 0.13 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 6 | 0.13 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 8 | 0.13 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 20 | 0.13 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 21 | 0.13 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 24 | 0.13 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 25 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 1 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 3 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 5 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 6 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 8 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 13 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 15 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 17 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 18 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 20 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 21 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 22 | 0.13 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 24 | 0.13 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 4 | 0.13 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 4 | 0.13 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 10 | 0.13 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 10 | 0.13 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5' | 11 | 0.13 |
| (1,291) | 2:2:1:DG:H2'' | 2:2:1:DG:H5'' | 11 | 0.13 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 10 | 0.13 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 14 | 0.13 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 24 | 0.13 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 10 | 0.13 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 13 | 0.13 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 22 | 0.13 |
| (1,247) | 2:2:9:DA:H2' | 2:2:10:DC:H5 | 12 | 0.13 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 3 | 0.13 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 17 | 0.13 |
| (1,223) | 2:2:7:DG:H2' | 2:2:7:DG:H8 | 15 | 0.13 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 8 | 0.13 |
| (1,209) | 2:2:6:DT:H4' | 2:2:6:DT:H1' | 6 | 0.13 |
| (1,209) | 2:2:6:DT:H4' | 2:2:6:DT:H1' | 24 | 0.13 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 21 | 0.13 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 24 | 0.13 |
| (1,171) | 2:2:4:DT:H3' | 2:2:5:DG:H8 | 15 | 0.13 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 4 | 0.13 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 5 | 0.13 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 21 | 0.13 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 2 | 0.13 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 8 | 0.13 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 26 | 0.13 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 2 | 0.13 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 7 | 0.13 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 21 | 0.13 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 23 | 0.13 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 2 | 0.12 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 14 | 0.12 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 15 | 0.12 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 23 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 4 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 9 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 15 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 17 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 19 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 21 | 0.12 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 24 | 0.12 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5' | 16 | 0.12 |
| (1,62) | 2:2:7:DG:H2'' | 2:2:7:DG:H5'' | 16 | 0.12 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5' | 25 | 0.12 |
| (1,60) | 2:2:7:DG:H2' | 2:2:7:DG:H5'' | 25 | 0.12 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 8 | 0.12 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 9 | 0.12 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 18 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 3 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 5 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 6 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 7 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 8 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 12 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 15 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 18 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 19 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 21 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 22 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 23 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 24 | 0.12 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 26 | 0.12 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 22 | 0.12 |
| (1,390) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 9 | 0.12 |
| (1,390) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 18 | 0.12 |
| (1,390) | 2:2:5:DG:H2' | 2:2:5:DG:H3' | 21 | 0.12 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 12 | 0.12 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 13 | 0.12 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 17 | 0.12 |
| (1,386) | 2:2:11:DG:H2' | 2:2:11:DG:H3' | 22 | 0.12 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 4 | 0.12 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 10 | 0.12 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 12 | 0.12 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 14 | 0.12 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 22 | 0.12 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 23 | 0.12 |
| (1,366) | 2:2:6:DT:H5' | 2:2:6:DT:H3' | 2 | 0.12 |
| (1,35) | 2:2:5:DG:H1' | 2:2:4:DT:H2' | 15 | 0.12 |
| (1,35) | 2:2:5:DG:H1' | 2:2:4:DT:H2'' | 15 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 2 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 4 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 7 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 9 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 10 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 11 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 12 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 14 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 16 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 19 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 23 | 0.12 |
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 25 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,298) | 2:2:3:DA:H2' | 2:2:3:DA:H3' | 26 | 0.12 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 19 | 0.12 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 20 | 0.12 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 23 | 0.12 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 20 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 1 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 5 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 8 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 9 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 11 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 12 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 15 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 18 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 19 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 21 | 0.12 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 23 | 0.12 |
| (1,212) | 2:2:6:DT:H4' | 2:2:7:DG:H8 | 26 | 0.12 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 1 | 0.12 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 6 | 0.12 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 11 | 0.12 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 13 | 0.12 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 17 | 0.12 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 26 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 3 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 6 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 7 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 8 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 14 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 21 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 23 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 24 | 0.12 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 26 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 2 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 6 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 9 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 16 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 22 | 0.12 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 26 | 0.12 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 1 | 0.12 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 3 | 0.12 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 19 | 0.12 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 26 | 0.12 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 21 | 0.12 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 7 | 0.12 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 15 | 0.12 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 18 | 0.12 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 22 | 0.12 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 23 | 0.12 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 1 | 0.12 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 4 | 0.12 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 5 | 0.12 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 10 | 0.12 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 20 | 0.12 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 5 | 0.11 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 10 | 0.11 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 13 | 0.11 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 16 | 0.11 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 18 | 0.11 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 21 | 0.11 |
| (1,9) | 2:2:1:DG:H2'' | 2:2:1:DG:H1' | 24 | 0.11 |
| (1,83) | 2:2:9:DA:H2' | 2:2:8:DT:H1' | 20 | 0.11 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 21 | 0.11 |
| (1,52) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 24 | 0.11 |
| (1,48) | 2:2:6:DT:H2' | 2:2:6:DT:H2'' | 14 | 0.11 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 10 | 0.11 |
| (1,43) | 2:2:5:DG:H4' | 2:2:5:DG:H1' | 12 | 0.11 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 3 | 0.11 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 5 | 0.11 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 7 | 0.11 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 17 | 0.11 |
| (1,369) | 2:2:7:DG:H2' | 2:2:7:DG:H3' | 18 | 0.11 |
| (1,368) | 2:2:6:DT:H5'' | 2:2:6:DT:H3' | 15 | 0.11 |
| (1,303) | 2:2:5:DG:H2' | 2:2:5:DG:H5' | 17 | 0.11 |
| (1,303) | 2:2:5:DG:H2' | 2:2:5:DG:H5'' | 17 | 0.11 |
| (1,287) | 2:2:9:DA:H3' | 2:2:10:DC:H6 | 12 | 0.11 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 13 | 0.11 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 22 | 0.11 |
| (1,284) | 2:2:8:DT:H2'' | 2:2:9:DA:H8 | 23 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 3 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 4 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 6 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 7 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 14 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 17 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 20 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 25 | 0.11 |
| (1,264) | 2:2:10:DC:H3' | 2:2:10:DC:H1' | 26 | 0.11 |
| (1,228) | 2:2:7:DG:H3' | 2:2:8:DT:H6 | 9 | 0.11 |
| (1,223) | 2:2:7:DG:H2' | 2:2:7:DG:H8 | 11 | 0.11 |
| (1,216) | 2:2:6:DT:H5' | 2:2:6:DT:H6 | 9 | 0.11 |
| (1,209) | 2:2:6:DT:H4' | 2:2:6:DT:H1' | 15 | 0.11 |
| (1,209) | 2:2:6:DT:H4' | 2:2:6:DT:H1' | 21 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 3 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 4 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 5 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 7 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 10 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 14 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 19 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 22 | 0.11 |
| (1,205) | 2:2:6:DT:H3' | 2:2:6:DT:H1' | 23 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 1 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 2 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 4 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 5 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 10 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 11 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 12 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 15 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 16 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 18 | 0.11 |
| (1,154) | 2:2:3:DA:H4' | 2:2:3:DA:H8 | 20 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 1 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 3 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 4 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 5 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 7 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 8 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 10 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 11 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 12 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 13 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 14 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 15 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 17 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 18 | 0.11 |

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| Key | Atom-1 | Atom-2 | Model ID | Violation (Å) |
|---------|---------------|---------------|----------|---------------|
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 19 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 20 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 21 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 23 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 24 | 0.11 |
| (1,144) | 2:2:3:DA:H2' | 2:2:3:DA:H2'' | 25 | 0.11 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 2 | 0.11 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 10 | 0.11 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 16 | 0.11 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 17 | 0.11 |
| (1,137) | 2:2:2:DC:H5 | 2:2:1:DG:H8 | 18 | 0.11 |
| (1,133) | 2:2:2:DC:H2'' | 2:2:2:DC:H5 | 1 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 6 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 8 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 12 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 14 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 20 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 21 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 24 | 0.11 |
| (1,132) | 2:2:2:DC:H2'' | 2:2:2:DC:H1' | 26 | 0.11 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 6 | 0.11 |
| (1,103) | 2:2:10:DC:H4' | 2:2:10:DC:H1' | 26 | 0.11 |

10 Dihedral-angle violation analysis

No dihedral-angle restraints found