



## Full wwPDB EM Validation Report ⓘ

Jun 16, 2025 – 01:24 PM JST

PDB ID : 9KM0 / pdb\_00009km0  
EMDB ID : EMD-62419  
Title : Cryo-EM structure of a tri-heme cytochrome-associated RC-LH1 complex from a marine photoheterotrophic bacterium, purified with EDTA-2Na-containing solutions  
Authors : Chen, J.H.  
Deposited on : 2024-11-15  
Resolution : 2.78 Å(reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : **FAILED**  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
MolProbity : 4-5-2 with Phenix2.0rc1  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : **FAILED**  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.44

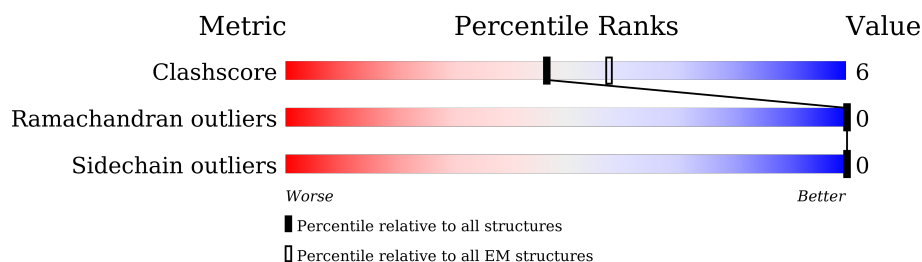
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 2.78 Å.

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














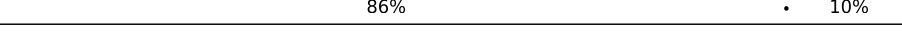







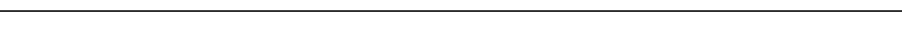

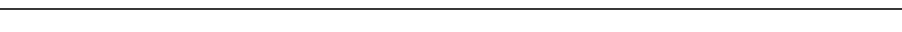
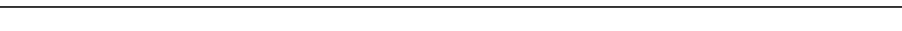


| Metric                | Whole archive<br>(#Entries) | EM structures<br>(#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Clashscore            | 210492                      | 15764                       |
| Ramachandran outliers | 207382                      | 16835                       |
| Sidechain outliers    | 206894                      | 16415                       |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ .

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | 1     | 53     | 83% 11% 6%       |
| 1   | A     | 53     | 83% 13% .        |
| 1   | B     | 53     | 87% 9% .         |
| 1   | D     | 53     | 89% 8% .         |
| 1   | E     | 53     | 77% 19% .        |
| 1   | F     | 53     | 94% . .          |
| 1   | G     | 53     | 89% 8% .         |
| 1   | I     | 53     | 91% 6% .         |
| 1   | J     | 53     | 77% 17% 6%       |



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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 1   | K     | 53     |  89% 8%        |
| 1   | N     | 53     |  83% 13%       |
| 1   | P     | 53     |  91% 6%        |
| 1   | Q     | 53     |  91% 6%        |
| 1   | R     | 53     |  81% 15%       |
| 1   | S     | 53     |  85% 11%       |
| 1   | T     | 53     |  74% 23%       |
| 1   | V     | 53     |  77% 19%       |
| 2   | O     | 239    |  20% 78%       |
| 3   | 2     | 49     |  82% 8% 10%    |
| 3   | a     | 49     |  86% 10%       |
| 3   | b     | 49     |  86% 10%       |
| 3   | d     | 49     |  73% 16% 10% |
| 3   | e     | 49     |  82% 8% 10%  |
| 3   | f     | 49     |  90% 10%     |
| 3   | g     | 49     |  82% 8% 10%  |
| 3   | i     | 49     |  82% 6% 12%  |
| 3   | j     | 49     |  78% 10% 12% |
| 3   | k     | 49     |  86% 12%     |
| 3   | n     | 49     |  86% 10%     |
| 3   | p     | 49     |  86% 10%     |
| 3   | q     | 49     |  86% 10%     |
| 3   | r     | 49     |  73% 14% 12% |
| 3   | s     | 49     |  80% 10% 10% |
| 3   | t     | 49     |  76% 12% 12% |

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| Mol | Chain | Length | Quality of chain  |
|-----|-------|--------|---|
| 3   | v     | 49     |  76%6%18% |
| 4   | M     | 330    |  82%16%.  |
| 5   | L     | 279    |  84%14%.  |
| 6   | H     | 256    |  89%11%   |
| 7   | C     | 360    |  83%15%.  |

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

| Mol | Type  | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|-------|-------|-----|-----------|----------|---------|------------------|
| 9   | A1EFU | 2     | 102 | -         | X        | -       | -                |

## 2 Entry composition

There are 16 unique types of molecules in this entry. The entry contains 28252 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Antenna pigment protein alpha chain.

| Mol | Chain | Residues | Atoms |     |    |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 1   | P     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 425   | 291 | 68 | 64 | 2 |         |       |
| 1   | V     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | S     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | T     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | Q     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | R     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | 1     | 50       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 417   | 286 | 67 | 63 | 1 |         |       |
| 1   | N     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | K     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | J     | 50       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 417   | 286 | 67 | 63 | 1 |         |       |
| 1   | I     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | G     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | F     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | E     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | D     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | B     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |
| 1   | A     | 51       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 422   | 289 | 68 | 64 | 1 |         |       |

- Molecule 2 is a protein called Reaction center protein O chain.

| Mol | Chain | Residues | Atoms |     |    |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 2   | O     | 52       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 371   | 249 | 56 | 59 | 7 |         |       |

- Molecule 3 is a protein called Antenna pigment protein beta chain.

| Mol | Chain | Residues | Atoms |     |    |    |   | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 3   | v     | 40       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 325   | 217 | 52 | 55 | 1 |         |       |
| 3   | t     | 43       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 350   | 235 | 55 | 59 | 1 |         |       |
| 3   | s     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | r     | 43       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 350   | 235 | 55 | 59 | 1 |         |       |
| 3   | q     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | p     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | 2     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | n     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | k     | 43       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 350   | 235 | 55 | 59 | 1 |         |       |
| 3   | j     | 43       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 350   | 235 | 55 | 59 | 1 |         |       |
| 3   | i     | 43       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 350   | 235 | 55 | 59 | 1 |         |       |
| 3   | g     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | f     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | e     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | d     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | b     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |
| 3   | a     | 44       | Total | C   | N  | O  | S | 0       | 0     |
|     |       |          | 358   | 239 | 56 | 62 | 1 |         |       |

- Molecule 4 is a protein called Reaction center protein M chain.

| Mol | Chain | Residues | Atoms |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 4   | M     | 325      | Total | C    | N   | O   | S | 0       | 0     |
|     |       |          | 2633  | 1752 | 421 | 452 | 8 |         |       |

- Molecule 5 is a protein called Reaction center protein L chain.

| Mol | Chain | Residues | Atoms |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 5   | L     | 274      | Total | C    | N   | O   | S | 0       | 0     |
|     |       |          | 2178  | 1469 | 346 | 354 | 9 |         |       |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment  | Reference  |
|-------|---------|----------|--------|----------|------------|
| L     | 278     | ASP      | GLY    | conflict | UNP A8LQ16 |
| L     | 279     | CYS      | LEU    | conflict | UNP A8LQ16 |

- Molecule 6 is a protein called Reaction center protein H chain.

| Mol | Chain | Residues | Atoms |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 6   | H     | 256      | Total | C    | N   | O   | S | 0       | 0     |
|     |       |          | 2022  | 1283 | 345 | 385 | 9 |         |       |

- Molecule 7 is a protein called Photosynthetic reaction center cytochrome c subunit.

| Mol | Chain | Residues | Atoms |      |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 7   | C     | 352      | Total | C    | N   | O   | S  | 0       | 0     |
|     |       |          | 2741  | 1732 | 455 | 540 | 14 |         |       |

- Molecule 8 is BACTERIOCHLOROPHYLL A (CCD ID: BCL) (formula: C<sub>55</sub>H<sub>74</sub>MgN<sub>4</sub>O<sub>6</sub>).



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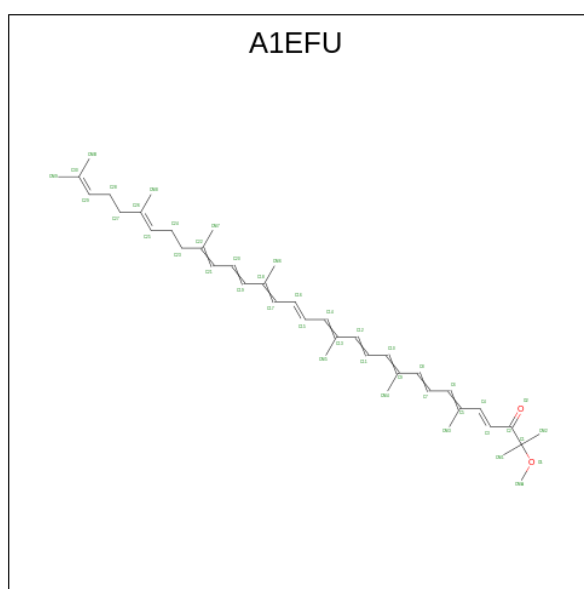
| Mol | Chain | Residues | Atoms       |         |         |        |        | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|--------|---------|
| 8   | n     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | N     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | k     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | K     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | j     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | J     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | i     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | I     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | G     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | G     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | F     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | F     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | e     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | E     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | d     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | D     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | b     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | B     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | a     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | A     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |
| 8   | M     | 1        | Total<br>66 | C<br>55 | Mg<br>1 | N<br>4 | O<br>6 | 0       |

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| Mol | Chain | Residues | Atoms |    |    |   |   | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| 8   | M     | 1        | Total | C  | Mg | N | O | 0       |
|     |       |          | 66    | 55 | 1  | 4 | 6 |         |
| 8   | L     | 1        | Total | C  | Mg | N | O | 0       |
|     |       |          | 66    | 55 | 1  | 4 | 6 |         |
| 8   | L     | 1        | Total | C  | Mg | N | O | 0       |
|     |       |          | 66    | 55 | 1  | 4 | 6 |         |

- Molecule 9 is (4 {E},16 {E},26 {E})-2-methoxy-2,6,10,14,19,23,27,31-octamethyl-dotriacont a-4,6,8,10,12,14,16,18,20,22,26,30-dodecaen-3-one (CCD ID: A1EFU) (formula: C<sub>41</sub>H<sub>58</sub>O<sub>2</sub>) (labeled as "Ligand of Interest" by depositor).



| Mol | Chain | Residues | Atoms |    |   | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 9   | P     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | v     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | v     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | T     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | s     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | s     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | s     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |

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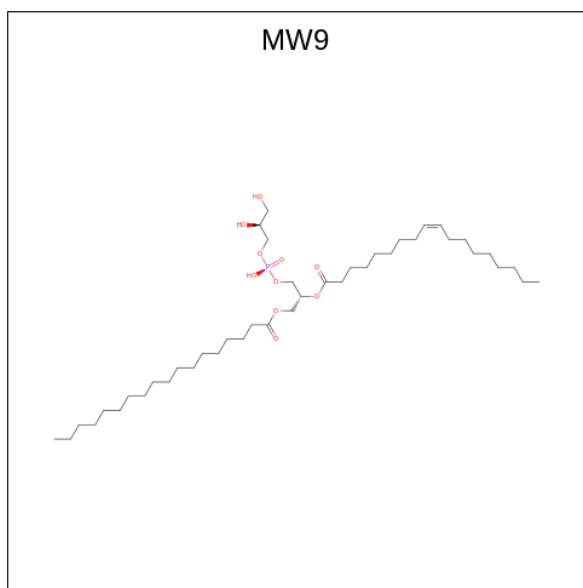
| Mol | Chain | Residues | Atoms       |         |        | AltConf |
|-----|-------|----------|-------------|---------|--------|---------|
| 9   | r     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | R     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | q     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | p     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | 2     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | 2     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | 2     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | N     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | k     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | K     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | j     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | j     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | J     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | J     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | I     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | G     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | G     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | f     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | F     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | E     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |
| 9   | E     | 1        | Total<br>43 | C<br>41 | O<br>2 | 0       |

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| Mol | Chain | Residues | Atoms |    |   | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 9   | D     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | D     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | B     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | B     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | a     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | A     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |
| 9   | M     | 1        | Total | C  | O | 0       |
|     |       |          | 43    | 41 | 2 |         |

- Molecule 10 is (21R,24R,27S)-24,27,28-trihydroxy-18,24-dioxo-19,23,25-trioxa-24lambda 5 - phosphaoctacosan-21-yl (9Z)-octadec-9-enoate (CCD ID: MW9) (formula: C<sub>42</sub>H<sub>81</sub>O<sub>10</sub>P).



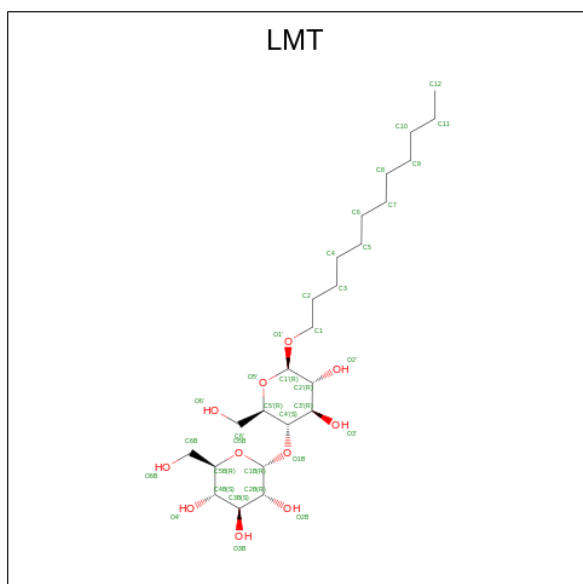
| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| 10  | R     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 45    | 34 | 10 | 1 |         |
| 10  | G     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |
| 10  | G     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 40    | 29 | 10 | 1 |         |
| 10  | F     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 43    | 32 | 10 | 1 |         |

Continued on next page...

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| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| 10  | D     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 53    | 42 | 10 | 1 |         |
| 10  | M     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 49    | 38 | 10 | 1 |         |
| 10  | M     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 53    | 42 | 10 | 1 |         |
| 10  | L     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 37    | 26 | 10 | 1 |         |
| 10  | H     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 48    | 37 | 10 | 1 |         |
| 10  | H     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 37    | 28 | 8  | 1 |         |

- Molecule 11 is DODECYL-BETA-D-MALTOSE (CCD ID: LMT) (formula:  $C_{24}H_{46}O_{11}$ ).

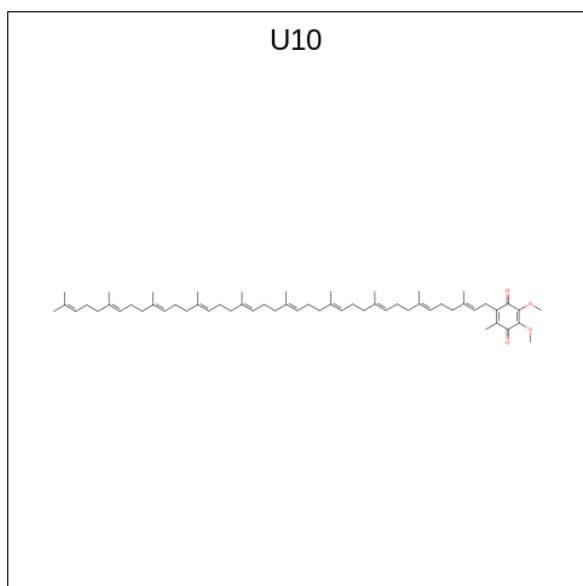


| Mol | Chain | Residues | Atoms |    |    | AltConf |
|-----|-------|----------|-------|----|----|---------|
| 11  | D     | 1        | Total | C  | O  | 0       |
|     |       |          | 35    | 24 | 11 |         |
| 11  | L     | 1        | Total | C  | O  | 0       |
|     |       |          | 24    | 18 | 6  |         |
| 11  | L     | 1        | Total | C  | O  | 0       |
|     |       |          | 24    | 19 | 5  |         |
| 11  | H     | 1        | Total | C  | O  | 0       |
|     |       |          | 24    | 18 | 6  |         |
| 11  | C     | 1        | Total | C  | O  | 0       |
|     |       |          | 24    | 18 | 6  |         |

- Molecule 12 is FE (III) ION (CCD ID: FE) (formula: Fe).

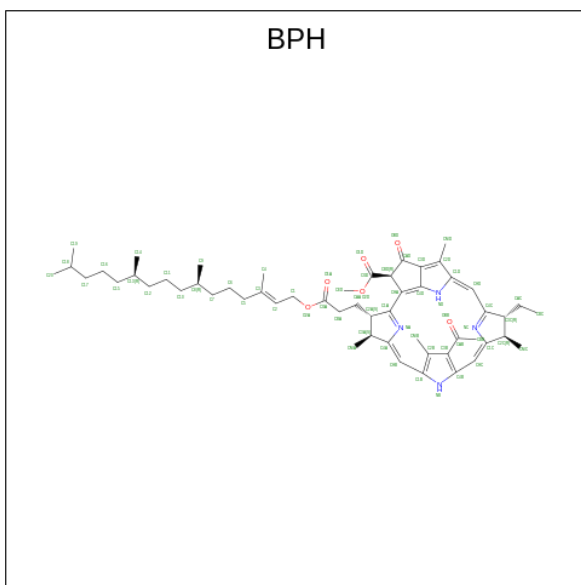
| Mol | Chain | Residues | Atoms |    | AltConf |
|-----|-------|----------|-------|----|---------|
| 12  | M     | 1        | Total | Fe | 0       |
|     |       |          | 1     | 1  |         |

- Molecule 13 is UBIQUINONE-10 (CCD ID: U10) (formula: C<sub>59</sub>H<sub>90</sub>O<sub>4</sub>) (labeled as "Ligand of Interest" by depositor).



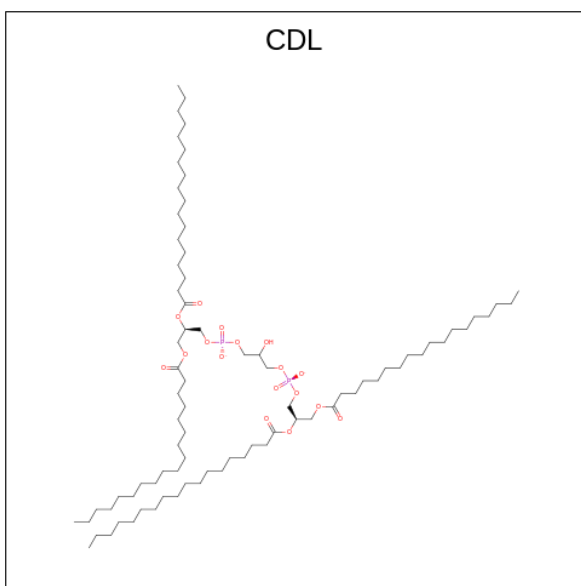
| Mol | Chain | Residues | Atoms |    |   | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 13  | M     | 1        | Total | C  | O | 0       |
|     |       |          | 63    | 59 | 4 |         |
| 13  | L     | 1        | Total | C  | O | 0       |
|     |       |          | 48    | 44 | 4 |         |

- Molecule 14 is BACTERIOPHEOPHYTIN A (CCD ID: BPH) (formula: C<sub>55</sub>H<sub>76</sub>N<sub>4</sub>O<sub>6</sub>).



| Mol | Chain | Residues | Atoms |    |   |   | AltConf |
|-----|-------|----------|-------|----|---|---|---------|
| 14  | M     | 1        | Total | C  | N | O | 0       |
|     |       |          | 65    | 55 | 4 | 6 |         |
| 14  | L     | 1        | Total | C  | N | O | 0       |
|     |       |          | 65    | 55 | 4 | 6 |         |

- Molecule 15 is CARDIOLIPIN (CCD ID: CDL) (formula:  $C_{81}H_{156}O_{17}P_2$ ).



| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| 15  | L     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 67    | 48 | 17 | 2 |         |
| 15  | H     | 1        | Total | C  | O  | P | 0       |
|     |       |          | 91    | 72 | 17 | 2 |         |

- # HEC

| Mol | Chain | Residues | Atoms       |         |         |        |        | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|--------|---------|
| 16  | C     | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4 | 0       |
| 16  | C     | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4 | 0       |
| 16  | C     | 1        | Total<br>43 | C<br>34 | Fe<br>1 | N<br>4 | O<br>4 | 0       |



### 3 Residue-property plots


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

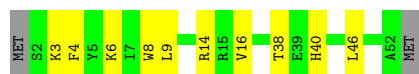
- Molecule 1: Antenna pigment protein alpha chain

Chain P:  91% 6% .




- Molecule 1: Antenna pigment protein alpha chain

Chain V:  77% 19% .



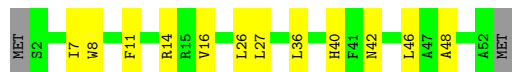
- Molecule 1: Antenna pigment protein alpha chain

Chain S:  85% 11% .



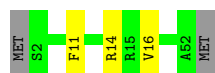
- Molecule 1: Antenna pigment protein alpha chain

Chain T:  74% 23% .




- Molecule 1: Antenna pigment protein alpha chain

Chain Q:  91% 6% .



- Molecule 1: Antenna pigment protein alpha chain

Chain R:  81% 15% .



- Molecule 1: Antenna pigment protein alpha chain

Chain 1: 83% 11% 6%



- Molecule 1: Antenna pigment protein alpha chain

Chain N: 83% 13% .



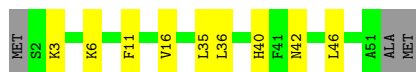
- Molecule 1: Antenna pigment protein alpha chain

Chain K: 89% 8% .



- Molecule 1: Antenna pigment protein alpha chain

Chain J: 77% 17% 6%



- Molecule 1: Antenna pigment protein alpha chain

Chain I: 91% 6% .



- Molecule 1: Antenna pigment protein alpha chain

Chain G: 89% 8% .



- Molecule 1: Antenna pigment protein alpha chain

Chain F: 94% . .



- Molecule 1: Antenna pigment protein alpha chain

Chain E: 77% 19% .



- Molecule 1: Antenna pigment protein alpha chain

Chain D: 89% 8% .



- Molecule 1: Antenna pigment protein alpha chain

Chain B: 87% 9% .



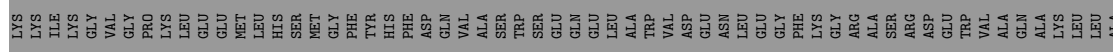
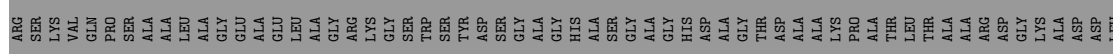
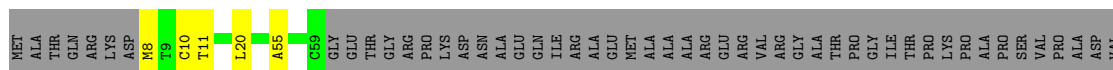
- Molecule 1: Antenna pigment protein alpha chain

Chain A: 83% 13% .



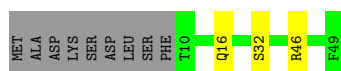
- Molecule 2: Reaction center protein O chain

Chain O: 20% . 78%

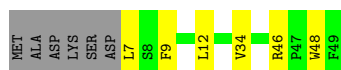
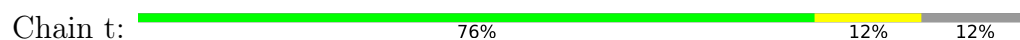


- Molecule 3: Antenna pigment protein beta chain

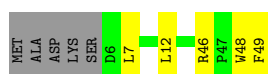
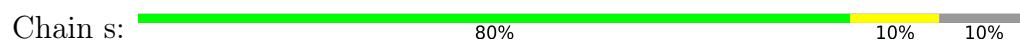
Chain v: 76% 6% 18%



- Molecule 3: Antenna pigment protein beta chain



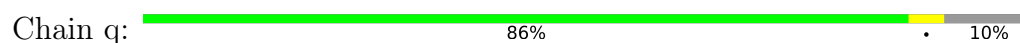
- Molecule 3: Antenna pigment protein beta chain



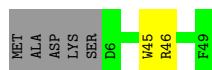
- Molecule 3: Antenna pigment protein beta chain



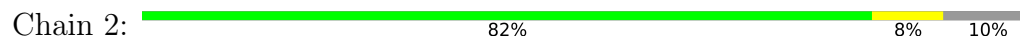
- Molecule 3: Antenna pigment protein beta chain



- Molecule 3: Antenna pigment protein beta chain

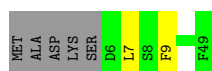


- Molecule 3: Antenna pigment protein beta chain

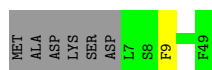
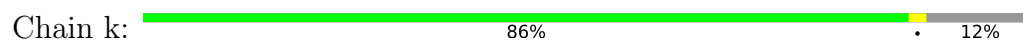


- Molecule 3: Antenna pigment protein beta chain

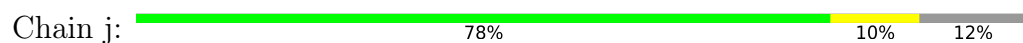




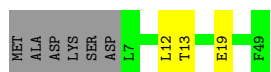
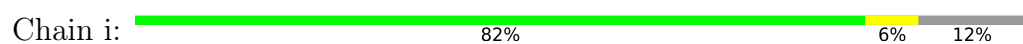
- Molecule 3: Antenna pigment protein beta chain



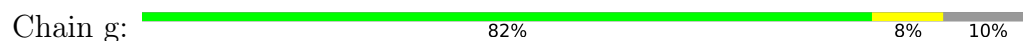
- Molecule 3: Antenna pigment protein beta chain



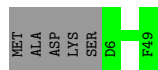
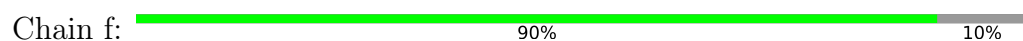
- Molecule 3: Antenna pigment protein beta chain



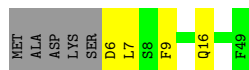
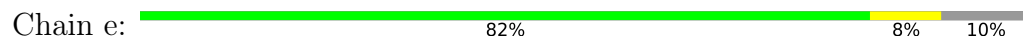
- Molecule 3: Antenna pigment protein beta chain



- Molecule 3: Antenna pigment protein beta chain



- Molecule 3: Antenna pigment protein beta chain



- Molecule 3: Antenna pigment protein beta chain





- Molecule 3: Antenna pigment protein beta chain

Chain b: 86% 10%



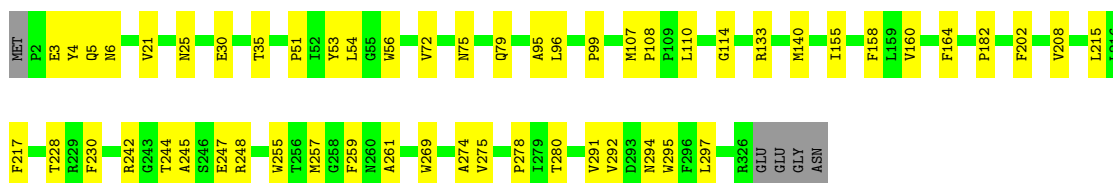
- Molecule 3: Antenna pigment protein beta chain

Chain a: 86% 10%



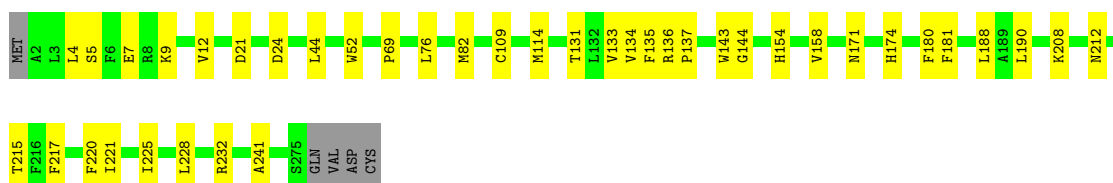
- Molecule 4: Reaction center protein M chain

Chain M: 82% 16%



- Molecule 5: Reaction center protein L chain

Chain L: 84% 14%



- Molecule 6: Reaction center protein H chain

Chain H: 89% 11%



- Molecule 7: Photosynthetic reaction center cytochrome c subunit

Chain C: 83% 15%



## 4 Experimental information

| Property                             | Value                   | Source    |
|--------------------------------------|-------------------------|-----------|
| EM reconstruction method             | SINGLE PARTICLE         | Depositor |
| Imposed symmetry                     | POINT, Not provided     |           |
| Number of particles used             | 230375                  | Depositor |
| Resolution determination method      | FSC 0.143 CUT-OFF       | Depositor |
| CTF correction method                | NONE                    | Depositor |
| Microscope                           | TFS KRIOS               | Depositor |
| Voltage (kV)                         | 300                     | Depositor |
| Electron dose ( $e^-/\text{\AA}^2$ ) | 50                      | Depositor |
| Minimum defocus (nm)                 | 1500                    | Depositor |
| Maximum defocus (nm)                 | 2500                    | Depositor |
| Magnification                        | Not provided            |           |
| Image detector                       | FEI FALCON IV (4k x 4k) | Depositor |



## 5 Model quality

### 5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A1EFU, LMT, U10, HEC, FE, MW9, CDL, BPH, BCL

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

| Mol | Chain | Bond lengths |             | Bond angles |             |
|-----|-------|--------------|-------------|-------------|-------------|
|     |       | RMSZ         | $\# Z  > 5$ | RMSZ        | $\# Z  > 5$ |
| 1   | 1     | 0.13         | 0/431       | 0.23        | 0/585       |
| 1   | A     | 0.11         | 0/436       | 0.22        | 0/592       |
| 1   | B     | 0.13         | 0/436       | 0.22        | 0/592       |
| 1   | D     | 0.14         | 0/436       | 0.23        | 0/592       |
| 1   | E     | 0.16         | 0/436       | 0.24        | 0/592       |
| 1   | F     | 0.14         | 0/436       | 0.21        | 0/592       |
| 1   | G     | 0.14         | 0/436       | 0.24        | 0/592       |
| 1   | I     | 0.14         | 0/436       | 0.26        | 0/592       |
| 1   | J     | 0.13         | 0/431       | 0.23        | 0/585       |
| 1   | K     | 0.13         | 0/436       | 0.32        | 0/592       |
| 1   | N     | 0.14         | 0/436       | 0.28        | 0/592       |
| 1   | P     | 0.12         | 0/439       | 0.25        | 0/595       |
| 1   | Q     | 0.11         | 0/436       | 0.20        | 0/592       |
| 1   | R     | 0.11         | 0/436       | 0.21        | 0/592       |
| 1   | S     | 0.12         | 0/436       | 0.24        | 0/592       |
| 1   | T     | 0.12         | 0/436       | 0.23        | 0/592       |
| 1   | V     | 0.10         | 0/436       | 0.21        | 0/592       |
| 2   | O     | 0.11         | 0/378       | 0.24        | 0/516       |
| 3   | 2     | 0.12         | 0/371       | 0.21        | 0/508       |
| 3   | a     | 0.09         | 0/371       | 0.18        | 0/508       |
| 3   | b     | 0.12         | 0/371       | 0.19        | 0/508       |
| 3   | d     | 0.14         | 0/371       | 0.21        | 0/508       |
| 3   | e     | 0.13         | 0/371       | 0.16        | 0/508       |
| 3   | f     | 0.13         | 0/371       | 0.20        | 0/508       |
| 3   | g     | 0.12         | 0/371       | 0.17        | 0/508       |
| 3   | i     | 0.12         | 0/363       | 0.24        | 0/497       |
| 3   | j     | 0.12         | 0/363       | 0.24        | 0/497       |
| 3   | k     | 0.11         | 0/363       | 0.22        | 0/497       |
| 3   | n     | 0.11         | 0/371       | 0.18        | 0/508       |
| 3   | p     | 0.11         | 0/371       | 0.28        | 0/508       |
| 3   | q     | 0.11         | 0/371       | 0.21        | 0/508       |
| 3   | r     | 0.11         | 0/363       | 0.21        | 0/497       |

| Mol | Chain | Bond lengths |         | Bond angles |         |
|-----|-------|--------------|---------|-------------|---------|
|     |       | RMSZ         | # Z  >5 | RMSZ        | # Z  >5 |
| 3   | s     | 0.12         | 0/371   | 0.25        | 0/508   |
| 3   | t     | 0.09         | 0/363   | 0.17        | 0/497   |
| 3   | v     | 0.08         | 0/337   | 0.15        | 0/462   |
| 4   | M     | 0.16         | 0/2731  | 0.27        | 0/3735  |
| 5   | L     | 0.16         | 0/2267  | 0.28        | 0/3105  |
| 6   | H     | 0.13         | 0/2072  | 0.23        | 0/2804  |
| 7   | C     | 0.15         | 0/2819  | 0.31        | 0/3869  |
| All | All   | 0.13         | 0/23905 | 0.25        | 0/32617 |

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

## 5.2 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 the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1   | 1     | 417   | 0        | 419      | 5       | 0            |
| 1   | A     | 422   | 0        | 426      | 9       | 0            |
| 1   | B     | 422   | 0        | 426      | 4       | 0            |
| 1   | D     | 422   | 0        | 426      | 4       | 0            |
| 1   | E     | 422   | 0        | 426      | 9       | 0            |
| 1   | F     | 422   | 0        | 425      | 2       | 0            |
| 1   | G     | 422   | 0        | 426      | 3       | 0            |
| 1   | I     | 422   | 0        | 426      | 2       | 0            |
| 1   | J     | 417   | 0        | 421      | 7       | 0            |
| 1   | K     | 422   | 0        | 426      | 3       | 0            |
| 1   | N     | 422   | 0        | 426      | 4       | 0            |
| 1   | P     | 425   | 0        | 433      | 3       | 0            |
| 1   | Q     | 422   | 0        | 426      | 2       | 0            |
| 1   | R     | 422   | 0        | 426      | 6       | 0            |
| 1   | S     | 422   | 0        | 426      | 6       | 0            |
| 1   | T     | 422   | 0        | 426      | 9       | 0            |
| 1   | V     | 422   | 0        | 426      | 8       | 0            |
| 2   | O     | 371   | 0        | 395      | 3       | 0            |

*Continued on next page...*

*Continued from previous page...*

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 3   | 2     | 358   | 0        | 338      | 5       | 0            |
| 3   | a     | 358   | 0        | 338      | 2       | 0            |
| 3   | b     | 358   | 0        | 338      | 2       | 0            |
| 3   | d     | 358   | 0        | 338      | 9       | 0            |
| 3   | e     | 358   | 0        | 338      | 5       | 0            |
| 3   | f     | 358   | 0        | 338      | 0       | 0            |
| 3   | g     | 358   | 0        | 338      | 2       | 0            |
| 3   | i     | 350   | 0        | 334      | 2       | 0            |
| 3   | j     | 350   | 0        | 334      | 5       | 0            |
| 3   | k     | 350   | 0        | 334      | 1       | 0            |
| 3   | n     | 358   | 0        | 338      | 5       | 0            |
| 3   | p     | 358   | 0        | 338      | 2       | 0            |
| 3   | q     | 358   | 0        | 338      | 2       | 0            |
| 3   | r     | 350   | 0        | 334      | 6       | 0            |
| 3   | s     | 358   | 0        | 338      | 4       | 0            |
| 3   | t     | 350   | 0        | 334      | 9       | 0            |
| 3   | v     | 325   | 0        | 309      | 4       | 0            |
| 4   | M     | 2633  | 0        | 2524     | 42      | 0            |
| 5   | L     | 2178  | 0        | 2118     | 36      | 0            |
| 6   | H     | 2022  | 0        | 1971     | 23      | 0            |
| 7   | C     | 2741  | 0        | 2584     | 40      | 0            |
| 8   | 1     | 66    | 0        | 74       | 0       | 0            |
| 8   | 2     | 66    | 0        | 74       | 4       | 0            |
| 8   | A     | 66    | 0        | 74       | 5       | 0            |
| 8   | B     | 66    | 0        | 74       | 4       | 0            |
| 8   | D     | 66    | 0        | 74       | 2       | 0            |
| 8   | E     | 66    | 0        | 74       | 2       | 0            |
| 8   | F     | 132   | 0        | 146      | 4       | 0            |
| 8   | G     | 132   | 0        | 146      | 4       | 0            |
| 8   | I     | 66    | 0        | 74       | 1       | 0            |
| 8   | J     | 66    | 0        | 74       | 3       | 0            |
| 8   | K     | 66    | 0        | 74       | 2       | 0            |
| 8   | L     | 132   | 0        | 143      | 8       | 0            |
| 8   | M     | 132   | 0        | 144      | 5       | 0            |
| 8   | N     | 66    | 0        | 74       | 2       | 0            |
| 8   | P     | 132   | 0        | 146      | 2       | 0            |
| 8   | Q     | 66    | 0        | 74       | 1       | 0            |
| 8   | R     | 66    | 0        | 74       | 6       | 0            |
| 8   | S     | 66    | 0        | 74       | 0       | 0            |
| 8   | V     | 66    | 0        | 72       | 3       | 0            |
| 8   | a     | 66    | 0        | 74       | 2       | 0            |
| 8   | b     | 66    | 0        | 74       | 2       | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 8   | d     | 66    | 0        | 74       | 8       | 0            |
| 8   | e     | 66    | 0        | 74       | 4       | 0            |
| 8   | i     | 66    | 0        | 74       | 2       | 0            |
| 8   | j     | 66    | 0        | 74       | 7       | 0            |
| 8   | k     | 66    | 0        | 74       | 1       | 0            |
| 8   | n     | 66    | 0        | 74       | 3       | 0            |
| 8   | q     | 66    | 0        | 74       | 2       | 0            |
| 8   | r     | 66    | 0        | 74       | 4       | 0            |
| 8   | s     | 132   | 0        | 147      | 8       | 0            |
| 8   | t     | 66    | 0        | 73       | 9       | 0            |
| 8   | v     | 66    | 0        | 74       | 5       | 0            |
| 9   | 2     | 129   | 0        | 0        | 0       | 0            |
| 9   | A     | 43    | 0        | 0        | 0       | 0            |
| 9   | B     | 86    | 0        | 0        | 0       | 0            |
| 9   | D     | 86    | 0        | 0        | 0       | 0            |
| 9   | E     | 86    | 0        | 0        | 0       | 0            |
| 9   | F     | 43    | 0        | 0        | 0       | 0            |
| 9   | G     | 86    | 0        | 0        | 0       | 0            |
| 9   | I     | 43    | 0        | 0        | 0       | 0            |
| 9   | J     | 86    | 0        | 0        | 0       | 0            |
| 9   | K     | 43    | 0        | 0        | 0       | 0            |
| 9   | M     | 43    | 0        | 0        | 0       | 0            |
| 9   | N     | 43    | 0        | 0        | 0       | 0            |
| 9   | P     | 43    | 0        | 0        | 0       | 0            |
| 9   | R     | 43    | 0        | 0        | 0       | 0            |
| 9   | T     | 43    | 0        | 0        | 0       | 0            |
| 9   | a     | 43    | 0        | 0        | 0       | 0            |
| 9   | f     | 43    | 0        | 0        | 0       | 0            |
| 9   | j     | 86    | 0        | 0        | 0       | 0            |
| 9   | k     | 43    | 0        | 0        | 0       | 0            |
| 9   | p     | 43    | 0        | 0        | 0       | 0            |
| 9   | q     | 43    | 0        | 0        | 0       | 0            |
| 9   | r     | 43    | 0        | 0        | 0       | 0            |
| 9   | s     | 129   | 0        | 0        | 1       | 0            |
| 9   | v     | 86    | 0        | 0        | 0       | 0            |
| 10  | D     | 53    | 0        | 0        | 0       | 0            |
| 10  | F     | 43    | 0        | 0        | 0       | 0            |
| 10  | G     | 89    | 0        | 0        | 0       | 0            |
| 10  | H     | 85    | 0        | 0        | 0       | 0            |
| 10  | L     | 37    | 0        | 0        | 0       | 0            |
| 10  | M     | 102   | 0        | 0        | 0       | 0            |
| 10  | R     | 45    | 0        | 0        | 1       | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 11  | C     | 24    | 0        | 34       | 2       | 0            |
| 11  | D     | 35    | 0        | 45       | 1       | 0            |
| 11  | H     | 24    | 0        | 34       | 0       | 0            |
| 11  | L     | 48    | 0        | 65       | 1       | 0            |
| 12  | M     | 1     | 0        | 0        | 0       | 0            |
| 13  | L     | 48    | 0        | 63       | 5       | 0            |
| 13  | M     | 63    | 0        | 90       | 7       | 0            |
| 14  | L     | 65    | 0        | 76       | 0       | 0            |
| 14  | M     | 65    | 0        | 73       | 2       | 0            |
| 15  | H     | 91    | 0        | 135      | 3       | 0            |
| 15  | L     | 67    | 0        | 78       | 1       | 0            |
| 16  | C     | 129   | 0        | 88       | 5       | 0            |
| All | All   | 28252 | 0        | 26099    | 322     | 0            |

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 6.

All (322) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 7:C:144:MET:SD    | 16:C:401:HEC:NC   | 2.37                     | 0.98              |
| 5:L:131:THR:HA    | 5:L:135:PHE:HB2   | 1.63                     | 0.81              |
| 7:C:144:MET:SD    | 16:C:401:HEC:FE   | 1.73                     | 0.80              |
| 7:C:144:MET:SD    | 16:C:401:HEC:NB   | 2.58                     | 0.77              |
| 3:d:48:TRP:CE2    | 8:d:101:BCL:HHC   | 2.22                     | 0.74              |
| 4:M:269:TRP:HE1   | 6:H:34:ASN:HD21   | 1.35                     | 0.74              |
| 7:C:147:MET:HE2   | 7:C:302:TRP:HB3   | 1.69                     | 0.74              |
| 8:d:101:BCL:H3C   | 1:D:35:LEU:HD11   | 1.70                     | 0.73              |
| 7:C:330:THR:O     | 7:C:333:LYS:NZ    | 2.23                     | 0.70              |
| 5:L:190:LEU:HB2   | 13:L:303:U10:H1M2 | 1.73                     | 0.69              |
| 3:q:13:THR:H      | 3:q:16:GLN:HE21   | 1.41                     | 0.68              |
| 4:M:21:VAL:HG22   | 5:L:215:THR:HG21  | 1.78                     | 0.66              |
| 7:C:168:THR:HG23  | 7:C:170:PHE:H     | 1.62                     | 0.64              |
| 4:M:95:ALA:HB2    | 4:M:182:PRO:HG2   | 1.79                     | 0.64              |
| 7:C:148:ASN:HD21  | 7:C:168:THR:HA    | 1.61                     | 0.64              |
| 13:M:404:U10:H103 | 13:M:404:U10:H171 | 1.80                     | 0.64              |
| 5:L:181:PHE:CE2   | 8:L:301:BCL:H3A   | 2.33                     | 0.64              |
| 3:j:13:THR:H      | 3:j:16:GLN:HE21   | 1.48                     | 0.62              |
| 3:e:16:GLN:HE21   | 3:d:7:LEU:HB2     | 1.65                     | 0.62              |
| 1:A:25:PHE:HB2    | 8:A:101:BCL:H52   | 1.82                     | 0.62              |
| 1:S:10:ILE:HG23   | 1:T:14:ARG:HG2    | 1.81                     | 0.62              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:M:35:THR:HG22   | 4:M:51:PRO:HD3    | 1.82                     | 0.62              |
| 7:C:200:GLN:NE2   | 7:C:249:GLU:OE2   | 2.31                     | 0.62              |
| 1:G:33:LEU:HD21   | 11:L:305:LMT:H42  | 1.82                     | 0.61              |
| 3:t:46:ARG:HH21   | 1:T:46:LEU:HD11   | 1.64                     | 0.61              |
| 8:L:301:BCL:H111  | 8:L:304:BCL:HBB2  | 1.82                     | 0.61              |
| 6:H:42:GLU:OE2    | 6:H:81:ARG:NH2    | 2.33                     | 0.61              |
| 7:C:71:ASP:HB3    | 7:C:74:ILE:HG13   | 1.83                     | 0.61              |
| 1:T:8:TRP:HZ3     | 1:T:16:VAL:HG11   | 1.66                     | 0.60              |
| 3:t:48:TRP:HE1    | 8:t:101:BCL:HBB2  | 1.66                     | 0.60              |
| 7:C:212:LEU:HB3   | 7:C:253:SER:HB2   | 1.84                     | 0.59              |
| 8:e:101:BCL:HAC2  | 1:E:35:LEU:HD11   | 1.83                     | 0.59              |
| 1:V:6:LYS:HA      | 1:V:9:LEU:HD23    | 1.85                     | 0.59              |
| 4:M:215:LEU:HD21  | 13:M:404:U10:H211 | 1.85                     | 0.59              |
| 3:q:13:THR:HB     | 3:q:16:GLN:HG2    | 1.84                     | 0.59              |
| 5:L:225:ILE:H     | 13:L:303:U10:H3M3 | 1.68                     | 0.58              |
| 6:H:211:ILE:HG23  | 6:H:215:HIS:HB2   | 1.85                     | 0.58              |
| 4:M:217:PHE:HB2   | 5:L:188:LEU:HD13  | 1.86                     | 0.58              |
| 1:A:15:ARG:HB3    | 7:C:20:PRO:HG2    | 1.85                     | 0.58              |
| 7:C:144:MET:SD    | 16:C:401:HEC:ND   | 2.77                     | 0.57              |
| 8:v:101:BCL:HAA1  | 8:v:101:BCL:H52   | 1.87                     | 0.57              |
| 6:H:10:ASP:OD2    | 7:C:235:ARG:NH1   | 2.38                     | 0.57              |
| 1:S:16:VAL:HG21   | 8:s:102:BCL:H142  | 1.84                     | 0.57              |
| 13:M:404:U10:H251 | 15:H:304:CDL:H551 | 1.87                     | 0.57              |
| 7:C:221:LEU:HD13  | 7:C:295:VAL:HG11  | 1.87                     | 0.57              |
| 4:M:269:TRP:NE1   | 6:H:34:ASN:HD21   | 2.03                     | 0.57              |
| 4:M:242:ARG:NH1   | 4:M:247:GLU:OE2   | 2.38                     | 0.56              |
| 4:M:3:GLU:O       | 4:M:5:GLN:NE2     | 2.38                     | 0.56              |
| 4:M:278:PRO:HD3   | 14:M:408:BPH:HBC1 | 1.88                     | 0.56              |
| 3:r:46:ARG:HH21   | 1:R:46:LEU:HD11   | 1.70                     | 0.56              |
| 8:a:101:BCL:H92   | 8:a:101:BCL:HAA1  | 1.88                     | 0.56              |
| 3:e:9:PHE:HB2     | 1:E:10:ILE:HA     | 1.88                     | 0.56              |
| 4:M:269:TRP:HE1   | 6:H:34:ASN:ND2    | 2.03                     | 0.56              |
| 7:C:10:ASN:O      | 7:C:12:LYS:NZ     | 2.39                     | 0.55              |
| 8:F:101:BCL:HBB2  | 8:F:101:BCL:H143  | 1.87                     | 0.55              |
| 1:E:6:LYS:HA      | 1:E:9:LEU:HD13    | 1.88                     | 0.55              |
| 4:M:4:TYR:HA      | 6:H:200:ARG:HH21  | 1.72                     | 0.55              |
| 1:1:33:LEU:HB3    | 4:M:107:MET:HE2   | 1.88                     | 0.55              |
| 8:F:101:BCL:H92   | 8:F:101:BCL:HAA1  | 1.89                     | 0.55              |
| 4:M:208:VAL:HG22  | 8:L:304:BCL:HAA2  | 1.89                     | 0.54              |
| 7:C:200:GLN:OE1   | 7:C:201:ASN:ND2   | 2.40                     | 0.54              |
| 8:r:101:BCL:H111  | 8:r:101:BCL:H2    | 1.90                     | 0.54              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 7:C:53:PRO:O     | 7:C:56:THR:OG1    | 2.26                     | 0.54              |
| 7:C:216:ALA:HB1  | 7:C:254:LEU:HB2   | 1.88                     | 0.54              |
| 2:O:20:LEU:HD13  | 1:T:26:LEU:HD11   | 1.89                     | 0.53              |
| 3:g:13:THR:HG23  | 3:g:16:GLN:H      | 1.74                     | 0.53              |
| 1:S:8:TRP:HZ3    | 1:S:16:VAL:HG11   | 1.72                     | 0.53              |
| 1:V:8:TRP:HZ3    | 1:V:16:VAL:HG11   | 1.73                     | 0.53              |
| 8:t:101:BCL:HAA1 | 8:t:101:BCL:H8    | 1.91                     | 0.53              |
| 3:g:45:TRP:CD2   | 3:g:46:ARG:HG2    | 2.44                     | 0.53              |
| 1:N:3:LYS:HD2    | 1:N:6:LYS:HD2     | 1.90                     | 0.52              |
| 3:t:12:LEU:HD11  | 3:s:7:LEU:HD13    | 1.90                     | 0.52              |
| 3:r:46:ARG:NH2   | 1:R:46:LEU:HD11   | 2.25                     | 0.52              |
| 1:R:2:SER:OG     | 1:R:3:LYS:N       | 2.43                     | 0.52              |
| 1:J:3:LYS:HG2    | 1:J:6:LYS:HD2     | 1.91                     | 0.52              |
| 8:d:101:BCL:HAC1 | 1:D:35:LEU:HD21   | 1.91                     | 0.52              |
| 1:P:10:ILE:HG23  | 1:Q:14:ARG:HG2    | 1.91                     | 0.52              |
| 5:L:180:PHE:HB3  | 5:L:241:ALA:HB2   | 1.92                     | 0.52              |
| 8:V:101:BCL:C1B  | 8:t:101:BCL:HMB2  | 2.39                     | 0.52              |
| 8:L:304:BCL:H143 | 8:L:304:BCL:HMA1  | 1.92                     | 0.52              |
| 1:J:11:PHE:HB3   | 1:J:16:VAL:HG21   | 1.91                     | 0.52              |
| 1:1:14:ARG:NH2   | 3:n:9:PHE:HB3     | 2.24                     | 0.51              |
| 1:R:45:GLU:OE2   | 10:R:103:MW9:O6   | 2.27                     | 0.51              |
| 3:2:16:GLN:HE22  | 3:n:7:LEU:HD13    | 1.75                     | 0.51              |
| 4:M:255:TRP:NE1  | 5:L:7:GLU:OE2     | 2.29                     | 0.51              |
| 3:e:16:GLN:NE2   | 3:d:7:LEU:HB2     | 2.25                     | 0.51              |
| 5:L:181:PHE:CE1  | 5:L:241:ALA:HB1   | 2.45                     | 0.51              |
| 8:F:101:BCL:CAD  | 8:F:102:BCL:HBD   | 2.40                     | 0.51              |
| 5:L:217:PHE:HD1  | 5:L:221:ILE:HG12  | 1.76                     | 0.51              |
| 4:M:99:PRO:HB3   | 4:M:108:PRO:HG3   | 1.93                     | 0.51              |
| 5:L:9:LYS:HD2    | 6:H:113:SER:HB2   | 1.93                     | 0.51              |
| 5:L:225:ILE:HG22 | 13:L:303:U10:H3M3 | 1.93                     | 0.51              |
| 7:C:41:GLY:HA3   | 11:C:404:LMT:H6E  | 1.93                     | 0.51              |
| 8:n:101:BCL:HBD  | 8:N:101:BCL:HBD   | 1.94                     | 0.50              |
| 4:M:6:ASN:OD1    | 5:L:232:ARG:NH2   | 2.44                     | 0.50              |
| 6:H:212:TYR:OH   | 6:H:248:ASP:OD1   | 2.25                     | 0.50              |
| 4:M:292:VAL:HG21 | 4:M:295:TRP:CH2   | 2.46                     | 0.50              |
| 8:d:101:BCL:H91  | 8:d:101:BCL:HAA1  | 1.93                     | 0.50              |
| 3:j:32:SER:HB3   | 8:j:102:BCL:H72   | 1.93                     | 0.49              |
| 8:V:101:BCL:HBB3 | 8:t:101:BCL:NB    | 2.27                     | 0.49              |
| 1:N:36:LEU:O     | 1:N:42:ASN:ND2    | 2.45                     | 0.49              |
| 8:j:102:BCL:H12  | 8:j:102:BCL:H102  | 1.93                     | 0.49              |
| 4:M:53:TYR:O     | 4:M:133:ARG:NH2   | 2.41                     | 0.49              |

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| Atom-1           | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-------------------|--------------------------|-------------------|
| 1:B:8:TRP:HZ3    | 1:B:16:VAL:HG11   | 1.77                     | 0.49              |
| 4:M:257:MET:CE   | 13:M:404:U10:H13  | 2.41                     | 0.49              |
| 1:K:48:ALA:HB2   | 1:J:40:HIS:HB2    | 1.94                     | 0.49              |
| 7:C:207:SER:O    | 7:C:210:THR:OG1   | 2.28                     | 0.49              |
| 7:C:251:THR:O    | 7:C:255:MET:HG2   | 2.12                     | 0.49              |
| 3:i:19:GLU:OE2   | 1:G:3:LYS:NZ      | 2.31                     | 0.49              |
| 8:B:101:BCL:HBB2 | 1:A:31:ILE:HD12   | 1.95                     | 0.49              |
| 1:P:46:LEU:HD22  | 3:p:46:ARG:HH11   | 1.77                     | 0.49              |
| 3:d:49:PHE:HZ    | 8:d:101:BCL:HBB1  | 1.78                     | 0.49              |
| 5:L:225:ILE:HB   | 13:L:303:U10:H4M2 | 1.93                     | 0.49              |
| 1:V:38:THR:HG21  | 1:A:44:PHE:HB3    | 1.96                     | 0.48              |
| 8:F:101:BCL:O2D  | 8:F:101:BCL:H2A   | 2.13                     | 0.48              |
| 3:t:48:TRP:CZ2   | 8:t:101:BCL:HHC   | 2.48                     | 0.48              |
| 3:r:21:HIS:CE1   | 3:r:25:MET:HE3    | 2.49                     | 0.48              |
| 3:n:7:LEU:HD11   | 3:n:9:PHE:CE1     | 2.49                     | 0.48              |
| 4:M:160:VAL:HA   | 4:M:164:PHE:HB2   | 1.96                     | 0.48              |
| 1:1:19:ALA:HB2   | 4:M:56:TRP:CH2    | 2.48                     | 0.48              |
| 8:E:101:BCL:H61  | 8:E:101:BCL:H41   | 1.62                     | 0.48              |
| 3:s:46:ARG:HG3   | 3:s:46:ARG:HH11   | 1.77                     | 0.48              |
| 7:C:185:ARG:HE   | 7:C:187:ASP:HB2   | 1.78                     | 0.48              |
| 1:1:27:LEU:O     | 1:1:31:ILE:HG13   | 2.14                     | 0.48              |
| 1:R:8:TRP:HZ3    | 1:R:16:VAL:HG11   | 1.78                     | 0.48              |
| 3:2:16:GLN:NE2   | 3:n:7:LEU:HD13    | 2.29                     | 0.48              |
| 1:E:37:SER:HB2   | 5:L:82:MET:HE3    | 1.94                     | 0.48              |
| 6:H:111:PRO:HB2  | 6:H:242:GLY:HA2   | 1.96                     | 0.48              |
| 3:k:9:PHE:HD1    | 1:K:10:ILE:HG22   | 1.78                     | 0.48              |
| 4:M:294:ASN:ND2  | 7:C:231:ASP:O     | 2.44                     | 0.48              |
| 8:t:101:BCL:HED3 | 1:T:27:LEU:HD23   | 1.96                     | 0.47              |
| 1:R:36:LEU:O     | 1:R:42:ASN:ND2    | 2.46                     | 0.47              |
| 3:s:12:LEU:HD11  | 3:r:9:PHE:HZ      | 1.79                     | 0.47              |
| 8:A:101:BCL:H41  | 8:A:101:BCL:H61   | 1.44                     | 0.47              |
| 4:M:261:ALA:HA   | 6:H:34:ASN:HB3    | 1.95                     | 0.47              |
| 3:v:16:GLN:HG2   | 3:t:7:LEU:HD23    | 1.95                     | 0.47              |
| 8:s:102:BCL:H2C  | 8:s:102:BCL:HBC3  | 1.58                     | 0.47              |
| 1:E:33:LEU:HD21  | 11:D:102:LMT:H72  | 1.96                     | 0.47              |
| 4:M:30:GLU:HB2   | 4:M:53:TYR:CE2    | 2.50                     | 0.47              |
| 4:M:228:THR:HG23 | 6:H:197:GLU:HG2   | 1.96                     | 0.47              |
| 3:2:21:HIS:CE1   | 3:2:25:MET:HE2    | 2.50                     | 0.47              |
| 4:M:257:MET:HE1  | 13:M:404:U10:H13  | 1.97                     | 0.47              |
| 1:I:36:LEU:O     | 1:I:42:ASN:ND2    | 2.45                     | 0.47              |
| 8:e:101:BCL:HBC3 | 8:e:101:BCL:H2C   | 1.63                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:L:44:LEU:HG     | 15:H:304:CDL:H431 | 1.97                     | 0.47              |
| 2:O:11:THR:HG23   | 2:O:55:ALA:HB1    | 1.97                     | 0.47              |
| 3:e:7:LEU:O       | 1:E:9:LEU:HD23    | 2.15                     | 0.47              |
| 14:M:408:BPH:HBA1 | 14:M:408:BPH:H3A  | 1.45                     | 0.47              |
| 3:d:13:THR:HG23   | 3:d:16:GLN:H      | 1.81                     | 0.46              |
| 3:d:12:LEU:HD11   | 3:b:9:PHE:HZ      | 1.80                     | 0.46              |
| 7:C:187:ASP:HB3   | 7:C:188:PRO:HD3   | 1.97                     | 0.46              |
| 8:Q:101:BCL:HBD   | 8:q:102:BCL:HBD   | 1.98                     | 0.46              |
| 8:j:102:BCL:H192  | 8:j:102:BCL:H162  | 1.76                     | 0.46              |
| 8:n:101:BCL:HBC3  | 1:N:35:LEU:HD11   | 1.97                     | 0.46              |
| 4:M:259:PHE:HE1   | 13:M:404:U10:H262 | 1.80                     | 0.46              |
| 8:k:102:BCL:HBD   | 8:K:101:BCL:HBD   | 1.97                     | 0.46              |
| 5:L:76:LEU:O      | 5:L:143:TRP:NE1   | 2.49                     | 0.46              |
| 3:t:46:ARG:HD3    | 1:T:40:HIS:CE1    | 2.50                     | 0.46              |
| 8:s:102:BCL:H3A   | 9:s:104:A1EFU:C7  | 2.46                     | 0.46              |
| 1:I:3:LYS:HE3     | 1:I:3:LYS:HB2     | 1.63                     | 0.46              |
| 8:j:102:BCL:CAD   | 8:J:101:BCL:HBD   | 2.46                     | 0.45              |
| 8:L:304:BCL:H61   | 8:L:304:BCL:H41   | 1.65                     | 0.45              |
| 8:A:101:BCL:H13   | 8:A:101:BCL:H102  | 1.73                     | 0.45              |
| 3:2:49:PHE:HD2    | 8:2:103:BCL:H203  | 1.81                     | 0.45              |
| 8:R:102:BCL:H61   | 8:R:102:BCL:H102  | 1.82                     | 0.45              |
| 3:2:16:GLN:NE2    | 3:n:7:LEU:HB2     | 2.32                     | 0.45              |
| 3:d:21:HIS:CE1    | 3:d:25:MET:HE3    | 2.51                     | 0.45              |
| 4:M:275:VAL:O     | 4:M:278:PRO:HD2   | 2.17                     | 0.45              |
| 8:M:402:BCL:HAA2  | 8:M:403:BCL:HBC1  | 1.98                     | 0.45              |
| 8:j:102:BCL:HAC2  | 1:J:35:LEU:HD11   | 1.99                     | 0.45              |
| 8:v:101:BCL:H41   | 8:v:101:BCL:H62   | 1.59                     | 0.45              |
| 8:A:101:BCL:H161  | 8:A:101:BCL:H192  | 1.68                     | 0.45              |
| 7:C:220:TYR:O     | 7:C:296:GLN:NE2   | 2.43                     | 0.45              |
| 4:M:110:LEU:HA    | 4:M:114:GLY:HA3   | 1.99                     | 0.45              |
| 6:H:170:ASP:O     | 6:H:174:GLN:N     | 2.50                     | 0.45              |
| 5:L:5:SER:HB3     | 6:H:38:GLY:HA2    | 1.98                     | 0.45              |
| 5:L:217:PHE:HA    | 5:L:220:PHE:HB3   | 1.99                     | 0.45              |
| 3:t:34:VAL:HG23   | 8:s:102:BCL:HED2  | 1.99                     | 0.44              |
| 1:G:12:ASP:OD1    | 1:G:14:ARG:HG2    | 2.17                     | 0.44              |
| 3:a:9:PHE:HB2     | 1:A:10:ILE:HA     | 1.99                     | 0.44              |
| 3:r:13:THR:HG23   | 3:r:16:GLN:H      | 1.81                     | 0.44              |
| 1:J:36:LEU:O      | 1:J:42:ASN:ND2    | 2.50                     | 0.44              |
| 1:D:32:HIS:HE1    | 8:D:101:BCL:NA    | 2.15                     | 0.44              |
| 8:B:101:BCL:HBA1  | 8:B:101:BCL:H3A   | 1.56                     | 0.44              |
| 4:M:274:ALA:HB2   | 5:L:188:LEU:HD23  | 1.98                     | 0.44              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:L:134:VAL:HA    | 5:L:143:TRP:HZ3   | 1.83                     | 0.44              |
| 6:H:82:ARG:NH1    | 6:H:108:GLY:O     | 2.38                     | 0.44              |
| 7:C:115:ARG:NH2   | 7:C:350:GLU:OE2   | 2.50                     | 0.44              |
| 7:C:199:VAL:O     | 7:C:213:PRO:HA    | 2.17                     | 0.44              |
| 8:R:102:BCL:H142  | 8:R:102:BCL:H112  | 1.77                     | 0.44              |
| 8:b:101:BCL:H161  | 8:b:101:BCL:H143  | 1.62                     | 0.44              |
| 5:L:208:LYS:HB3   | 5:L:212:ASN:HB2   | 1.98                     | 0.44              |
| 13:L:303:U10:H271 | 13:L:303:U10:H251 | 1.86                     | 0.44              |
| 1:V:46:LEU:HD11   | 3:v:46:ARG:NH2    | 2.33                     | 0.44              |
| 8:2:103:BCL:H192  | 8:2:103:BCL:H161  | 1.63                     | 0.44              |
| 1:F:36:LEU:HD13   | 5:L:52:TRP:HZ3    | 1.82                     | 0.44              |
| 6:H:189:ASP:OD1   | 6:H:190:GLY:N     | 2.51                     | 0.44              |
| 7:C:200:GLN:HE21  | 7:C:249:GLU:CD    | 2.26                     | 0.44              |
| 8:r:101:BCL:HBD   | 8:R:102:BCL:HBD   | 2.00                     | 0.44              |
| 1:K:2:SER:OG      | 1:K:3:LYS:N       | 2.51                     | 0.44              |
| 3:a:46:ARG:HD2    | 1:A:40:HIS:NE2    | 2.32                     | 0.44              |
| 5:L:12:VAL:HG21   | 6:H:111:PRO:HD3   | 1.99                     | 0.44              |
| 8:L:304:BCL:H91   | 8:L:304:BCL:H112  | 1.76                     | 0.44              |
| 8:e:101:BCL:H162  | 8:e:101:BCL:H141  | 1.60                     | 0.44              |
| 4:M:75:ASN:O      | 4:M:79:GLN:HG3    | 2.18                     | 0.44              |
| 5:L:220:PHE:CD2   | 5:L:221:ILE:HG23  | 2.53                     | 0.44              |
| 1:N:12:ASP:HB2    | 1:N:15:ARG:HH21   | 1.83                     | 0.44              |
| 8:e:101:BCL:H112  | 8:e:101:BCL:H142  | 1.75                     | 0.43              |
| 8:E:101:BCL:HBC3  | 8:E:101:BCL:H2C   | 1.75                     | 0.43              |
| 4:M:25:ASN:ND2    | 4:M:140:MET:O     | 2.46                     | 0.43              |
| 2:O:8:MET:C       | 2:O:10:CYS:H      | 2.27                     | 0.43              |
| 3:p:45:TRP:CD2    | 3:p:46:ARG:HG2    | 2.53                     | 0.43              |
| 8:i:101:BCL:H141  | 8:i:101:BCL:H162  | 1.72                     | 0.43              |
| 8:G:102:BCL:H162  | 8:G:102:BCL:H122  | 1.76                     | 0.43              |
| 4:M:155:ILE:HA    | 4:M:158:PHE:HB3   | 1.99                     | 0.43              |
| 3:d:48:TRP:CZ2    | 8:d:101:BCL:HHC   | 2.52                     | 0.43              |
| 1:B:48:ALA:HB2    | 1:A:40:HIS:HB2    | 2.01                     | 0.43              |
| 8:R:102:BCL:H2C   | 8:R:102:BCL:HBC3  | 1.67                     | 0.43              |
| 8:M:403:BCL:H91   | 8:M:403:BCL:H111  | 1.78                     | 0.43              |
| 8:v:101:BCL:H93   | 8:v:101:BCL:H111  | 1.53                     | 0.43              |
| 8:s:103:BCL:H61   | 8:s:103:BCL:H41   | 1.74                     | 0.43              |
| 8:M:403:BCL:H152  | 8:M:403:BCL:H112  | 1.76                     | 0.43              |
| 5:L:4:LEU:HB2     | 5:L:7:GLU:HB2     | 2.01                     | 0.43              |
| 1:P:27:LEU:HB3    | 8:P:102:BCL:HED3  | 1.90                     | 0.43              |
| 8:j:102:BCL:H2C   | 8:j:102:BCL:HBC3  | 1.78                     | 0.43              |
| 3:t:48:TRP:HE1    | 8:t:101:BCL:CBB   | 2.30                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:Q:11:PHE:HB3    | 1:Q:16:VAL:HG21   | 2.00                     | 0.43              |
| 8:B:101:BCL:H92   | 8:B:101:BCL:H62   | 1.87                     | 0.43              |
| 8:K:101:BCL:HBC3  | 8:K:101:BCL:H2C   | 1.82                     | 0.42              |
| 8:G:102:BCL:H2C   | 8:G:102:BCL:HBC3  | 1.67                     | 0.42              |
| 3:v:32:SER:HB2    | 8:v:101:BCL:H42   | 2.01                     | 0.42              |
| 8:D:101:BCL:H91   | 1:B:20:GLN:HG3    | 2.02                     | 0.42              |
| 4:M:297:LEU:HG    | 7:C:276:TYR:OH    | 2.19                     | 0.42              |
| 5:L:109:CYS:HB2   | 5:L:114:MET:HG3   | 2.00                     | 0.42              |
| 5:L:154:HIS:O     | 5:L:158:VAL:HG23  | 2.19                     | 0.42              |
| 3:d:49:PHE:CZ     | 8:d:101:BCL:HBB1  | 2.53                     | 0.42              |
| 5:L:171:ASN:HB3   | 5:L:174:HIS:HB2   | 2.01                     | 0.42              |
| 1:S:31:ILE:HD11   | 8:s:102:BCL:HBB2  | 2.00                     | 0.42              |
| 8:2:103:BCL:H162  | 8:2:103:BCL:H141  | 1.76                     | 0.42              |
| 8:J:101:BCL:HBC3  | 8:J:101:BCL:H2C   | 1.80                     | 0.42              |
| 8:d:101:BCL:H161  | 8:d:101:BCL:H141  | 1.73                     | 0.42              |
| 8:a:101:BCL:H142  | 8:a:101:BCL:H111  | 1.77                     | 0.42              |
| 1:A:27:LEU:O      | 1:A:31:ILE:HG12   | 2.20                     | 0.42              |
| 4:M:72:VAL:HA     | 4:M:96:LEU:HD22   | 2.02                     | 0.42              |
| 8:M:402:BCL:HAA2  | 8:M:402:BCL:HBD   | 2.01                     | 0.42              |
| 5:L:136:ARG:HB3   | 5:L:137:PRO:HD3   | 2.02                     | 0.42              |
| 1:S:40:HIS:HB2    | 1:T:48:ALA:HB2    | 2.01                     | 0.42              |
| 8:2:103:BCL:HHH   | 1:1:35:LEU:HD11   | 2.01                     | 0.42              |
| 1:E:11:PHE:HB3    | 1:E:16:VAL:HG21   | 2.02                     | 0.42              |
| 3:e:6:ASP:OD1     | 3:e:6:ASP:N       | 2.53                     | 0.42              |
| 6:H:208:VAL:HG11  | 6:H:216:PHE:HZ    | 1.84                     | 0.42              |
| 5:L:133:VAL:O     | 5:L:137:PRO:HG2   | 2.20                     | 0.42              |
| 5:L:190:LEU:HD22  | 5:L:217:PHE:HZ    | 1.85                     | 0.42              |
| 6:H:178:TYR:OH    | 6:H:237:MET:HE3   | 2.19                     | 0.42              |
| 7:C:17:ILE:HG23   | 7:C:18:TYR:CD2    | 2.54                     | 0.42              |
| 8:s:102:BCL:H161  | 8:s:102:BCL:H192  | 1.72                     | 0.42              |
| 7:C:303:ILE:HG13  | 7:C:326:LEU:HD23  | 2.01                     | 0.42              |
| 1:V:3:LYS:HG3     | 1:V:4:PHE:N       | 2.35                     | 0.42              |
| 8:n:101:BCL:H111  | 8:n:101:BCL:H93   | 1.66                     | 0.42              |
| 1:D:27:LEU:O      | 1:D:31:ILE:HG13   | 2.20                     | 0.41              |
| 15:L:308:CDL:H311 | 15:L:308:CDL:HA62 | 1.94                     | 0.41              |
| 6:H:115:SER:N     | 6:H:234:ASP:OD2   | 2.45                     | 0.41              |
| 1:S:28:ALA:HA     | 1:S:31:ILE:HG22   | 2.02                     | 0.41              |
| 8:s:102:BCL:HBB1  | 8:s:103:BCL:HMC3  | 2.02                     | 0.41              |
| 3:b:46:ARG:HH21   | 1:B:40:HIS:CE1    | 2.38                     | 0.41              |
| 8:M:402:BCL:H143  | 8:M:402:BCL:H161  | 1.81                     | 0.41              |
| 1:V:3:LYS:HG3     | 1:V:4:PHE:H       | 1.84                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:s:48:TRP:CD1    | 3:s:49:PHE:HD1    | 2.39                     | 0.41              |
| 1:E:46:LEU:HD23   | 1:E:46:LEU:HA     | 1.89                     | 0.41              |
| 1:T:7:ILE:HD11    | 1:T:11:PHE:HE2    | 1.84                     | 0.41              |
| 8:q:102:BCL:H52   | 8:q:102:BCL:H8    | 1.87                     | 0.41              |
| 6:H:112:ALA:HB2   | 6:H:242:GLY:HA3   | 2.01                     | 0.41              |
| 8:v:101:BCL:H162  | 8:v:101:BCL:H141  | 1.56                     | 0.41              |
| 1:T:36:LEU:O      | 1:T:42:ASN:ND2    | 2.54                     | 0.41              |
| 3:r:24:TYR:HD1    | 3:r:25:MET:HE2    | 1.84                     | 0.41              |
| 8:J:101:BCL:H162  | 8:J:101:BCL:H122  | 1.70                     | 0.41              |
| 8:G:101:BCL:H162  | 8:G:101:BCL:H192  | 1.82                     | 0.41              |
| 8:B:101:BCL:H143  | 8:B:101:BCL:H161  | 1.76                     | 0.41              |
| 4:M:291:VAL:O     | 7:C:235:ARG:HG2   | 2.21                     | 0.41              |
| 6:H:42:GLU:HA     | 6:H:48:THR:HA     | 2.03                     | 0.41              |
| 7:C:144:MET:SD    | 16:C:401:HEC:NA   | 2.94                     | 0.41              |
| 8:V:101:BCL:H111  | 8:V:101:BCL:H93   | 1.76                     | 0.41              |
| 8:R:102:BCL:H91   | 8:R:102:BCL:H111  | 1.87                     | 0.41              |
| 8:b:101:BCL:H41   | 8:b:101:BCL:H61   | 1.76                     | 0.41              |
| 3:j:28:LEU:HD21   | 8:j:102:BCL:H42   | 2.01                     | 0.41              |
| 4:M:230:PHE:HB2   | 4:M:245:ALA:HB2   | 2.03                     | 0.41              |
| 4:M:244:THR:O     | 4:M:248:ARG:HG3   | 2.21                     | 0.41              |
| 8:L:301:BCL:H143  | 8:L:301:BCL:H161  | 1.82                     | 0.41              |
| 7:C:185:ARG:NH2   | 7:C:187:ASP:OD2   | 2.43                     | 0.41              |
| 8:t:101:BCL:H202  | 8:t:101:BCL:H162  | 1.84                     | 0.41              |
| 8:I:101:BCL:H2C   | 8:I:101:BCL:HBC3  | 1.76                     | 0.41              |
| 4:M:202:PHE:HD1   | 4:M:280:THR:HG23  | 1.86                     | 0.41              |
| 7:C:37:LEU:HD13   | 11:C:404:LMT:H51  | 2.02                     | 0.41              |
| 1:V:40:HIS:NE2    | 3:v:46:ARG:HD2    | 2.36                     | 0.41              |
| 8:r:101:BCL:H13   | 8:r:101:BCL:H102  | 1.81                     | 0.41              |
| 1:F:36:LEU:HD13   | 5:L:52:TRP:CZ3    | 2.56                     | 0.41              |
| 4:M:30:GLU:HB3    | 4:M:54:LEU:O      | 2.20                     | 0.41              |
| 4:M:292:VAL:HG12  | 4:M:294:ASN:H     | 1.86                     | 0.41              |
| 13:M:404:U10:H421 | 15:H:304:CDL:H471 | 2.02                     | 0.41              |
| 5:L:21:ASP:HA     | 5:L:24:ASP:HB3    | 2.03                     | 0.41              |
| 5:L:69:PRO:HB2    | 5:L:144:GLY:HA2   | 2.02                     | 0.41              |
| 8:L:304:BCL:H172  | 8:L:304:BCL:H13   | 1.88                     | 0.41              |
| 6:H:131:ILE:HD13  | 6:H:178:TYR:HE2   | 1.86                     | 0.41              |
| 7:C:186:ILE:O     | 7:C:186:ILE:HG13  | 2.21                     | 0.41              |
| 8:R:102:BCL:H192  | 8:R:102:BCL:H161  | 1.71                     | 0.41              |
| 7:C:261:SER:HA    | 7:C:329:LYS:HG3   | 2.03                     | 0.41              |
| 8:G:101:BCL:H162  | 8:G:101:BCL:H141  | 1.70                     | 0.40              |
| 1:A:25:PHE:HB2    | 8:A:101:BCL:H71   | 2.04                     | 0.40              |

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| Atom-1           | Atom-2           | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 7:C:12:LYS:HB2   | 7:C:12:LYS:HE2   | 1.87                     | 0.40              |
| 8:r:101:BCL:H2   | 8:r:101:BCL:H142 | 2.03                     | 0.40              |
| 3:i:12:LEU:HD23  | 3:i:13:THR:O     | 2.21                     | 0.40              |
| 8:t:101:BCL:CAB  | 8:t:101:BCL:H143 | 2.52                     | 0.40              |
| 3:j:46:ARG:HH21  | 1:J:40:HIS:CD2   | 2.38                     | 0.40              |
| 3:j:46:ARG:NH1   | 1:J:46:LEU:HD11  | 2.36                     | 0.40              |
| 7:C:258:PHE:O    | 7:C:262:LEU:HD23 | 2.21                     | 0.40              |
| 8:P:102:BCL:H62  | 8:P:102:BCL:H102 | 1.83                     | 0.40              |
| 8:N:101:BCL:H162 | 8:N:101:BCL:H141 | 1.79                     | 0.40              |
| 8:i:101:BCL:H162 | 8:i:101:BCL:H192 | 1.78                     | 0.40              |
| 5:L:228:LEU:HD21 | 5:L:232:ARG:NH2  | 2.37                     | 0.40              |
| 7:C:117:LEU:HD21 | 7:C:121:ARG:CZ   | 2.51                     | 0.40              |
| 1:V:14:ARG:HE    | 3:t:9:PHE:HD1    | 1.69                     | 0.40              |
| 1:E:24:LEU:HD23  | 1:E:24:LEU:HA    | 1.87                     | 0.40              |

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed    | Favoured  | Allowed | Outliers | Percentiles |     |
|-----|-------|-------------|-----------|---------|----------|-------------|-----|
| 1   | 1     | 48/53 (91%) | 48 (100%) | 0       | 0        | 100         | 100 |
| 1   | A     | 49/53 (92%) | 48 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 1   | B     | 49/53 (92%) | 48 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 1   | D     | 49/53 (92%) | 49 (100%) | 0       | 0        | 100         | 100 |
| 1   | E     | 49/53 (92%) | 48 (98%)  | 1 (2%)  | 0        | 100         | 100 |
| 1   | F     | 49/53 (92%) | 49 (100%) | 0       | 0        | 100         | 100 |
| 1   | G     | 49/53 (92%) | 49 (100%) | 0       | 0        | 100         | 100 |
| 1   | I     | 49/53 (92%) | 49 (100%) | 0       | 0        | 100         | 100 |
| 1   | J     | 48/53 (91%) | 48 (100%) | 0       | 0        | 100         | 100 |

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| Mol | Chain | Analysed        | Favoured   | Allowed | Outliers | Percentiles |     |
|-----|-------|-----------------|------------|---------|----------|-------------|-----|
| 1   | K     | 49/53 (92%)     | 48 (98%)   | 1 (2%)  | 0        | 100         | 100 |
| 1   | N     | 49/53 (92%)     | 49 (100%)  | 0       | 0        | 100         | 100 |
| 1   | P     | 49/53 (92%)     | 49 (100%)  | 0       | 0        | 100         | 100 |
| 1   | Q     | 49/53 (92%)     | 49 (100%)  | 0       | 0        | 100         | 100 |
| 1   | R     | 49/53 (92%)     | 49 (100%)  | 0       | 0        | 100         | 100 |
| 1   | S     | 49/53 (92%)     | 49 (100%)  | 0       | 0        | 100         | 100 |
| 1   | T     | 49/53 (92%)     | 48 (98%)   | 1 (2%)  | 0        | 100         | 100 |
| 1   | V     | 49/53 (92%)     | 49 (100%)  | 0       | 0        | 100         | 100 |
| 2   | O     | 50/239 (21%)    | 46 (92%)   | 4 (8%)  | 0        | 100         | 100 |
| 3   | 2     | 42/49 (86%)     | 41 (98%)   | 1 (2%)  | 0        | 100         | 100 |
| 3   | a     | 42/49 (86%)     | 42 (100%)  | 0       | 0        | 100         | 100 |
| 3   | b     | 42/49 (86%)     | 42 (100%)  | 0       | 0        | 100         | 100 |
| 3   | d     | 42/49 (86%)     | 42 (100%)  | 0       | 0        | 100         | 100 |
| 3   | e     | 42/49 (86%)     | 41 (98%)   | 1 (2%)  | 0        | 100         | 100 |
| 3   | f     | 42/49 (86%)     | 42 (100%)  | 0       | 0        | 100         | 100 |
| 3   | g     | 42/49 (86%)     | 41 (98%)   | 1 (2%)  | 0        | 100         | 100 |
| 3   | i     | 41/49 (84%)     | 41 (100%)  | 0       | 0        | 100         | 100 |
| 3   | j     | 41/49 (84%)     | 41 (100%)  | 0       | 0        | 100         | 100 |
| 3   | k     | 41/49 (84%)     | 41 (100%)  | 0       | 0        | 100         | 100 |
| 3   | n     | 42/49 (86%)     | 42 (100%)  | 0       | 0        | 100         | 100 |
| 3   | p     | 42/49 (86%)     | 41 (98%)   | 1 (2%)  | 0        | 100         | 100 |
| 3   | q     | 42/49 (86%)     | 42 (100%)  | 0       | 0        | 100         | 100 |
| 3   | r     | 41/49 (84%)     | 41 (100%)  | 0       | 0        | 100         | 100 |
| 3   | s     | 42/49 (86%)     | 40 (95%)   | 2 (5%)  | 0        | 100         | 100 |
| 3   | t     | 41/49 (84%)     | 41 (100%)  | 0       | 0        | 100         | 100 |
| 3   | v     | 38/49 (78%)     | 38 (100%)  | 0       | 0        | 100         | 100 |
| 4   | M     | 323/330 (98%)   | 312 (97%)  | 11 (3%) | 0        | 100         | 100 |
| 5   | L     | 272/279 (98%)   | 266 (98%)  | 6 (2%)  | 0        | 100         | 100 |
| 6   | H     | 254/256 (99%)   | 250 (98%)  | 4 (2%)  | 0        | 100         | 100 |
| 7   | C     | 350/360 (97%)   | 330 (94%)  | 20 (6%) | 0        | 100         | 100 |
| All | All   | 2785/3198 (87%) | 2729 (98%) | 56 (2%) | 0        | 100         | 100 |

There are no Ramachandran outliers to report.

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed     | Rotameric | Outliers | Percentiles |     |
|-----|-------|--------------|-----------|----------|-------------|-----|
| 1   | 1     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | A     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | B     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | D     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | E     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | F     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | G     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | I     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | J     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | K     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | N     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | P     | 43/44 (98%)  | 43 (100%) | 0        | 100         | 100 |
| 1   | Q     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | R     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | S     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | T     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 1   | V     | 42/44 (96%)  | 42 (100%) | 0        | 100         | 100 |
| 2   | O     | 39/174 (22%) | 39 (100%) | 0        | 100         | 100 |
| 3   | 2     | 37/41 (90%)  | 37 (100%) | 0        | 100         | 100 |
| 3   | a     | 37/41 (90%)  | 37 (100%) | 0        | 100         | 100 |
| 3   | b     | 37/41 (90%)  | 37 (100%) | 0        | 100         | 100 |
| 3   | d     | 37/41 (90%)  | 37 (100%) | 0        | 100         | 100 |
| 3   | e     | 37/41 (90%)  | 37 (100%) | 0        | 100         | 100 |
| 3   | f     | 37/41 (90%)  | 37 (100%) | 0        | 100         | 100 |

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| Mol | Chain | Analysed        | Rotameric   | Outliers | Percentiles |     |
|-----|-------|-----------------|-------------|----------|-------------|-----|
| 3   | g     | 37/41 (90%)     | 37 (100%)   | 0        | 100         | 100 |
| 3   | i     | 36/41 (88%)     | 36 (100%)   | 0        | 100         | 100 |
| 3   | j     | 36/41 (88%)     | 36 (100%)   | 0        | 100         | 100 |
| 3   | k     | 36/41 (88%)     | 36 (100%)   | 0        | 100         | 100 |
| 3   | n     | 37/41 (90%)     | 37 (100%)   | 0        | 100         | 100 |
| 3   | p     | 37/41 (90%)     | 37 (100%)   | 0        | 100         | 100 |
| 3   | q     | 37/41 (90%)     | 37 (100%)   | 0        | 100         | 100 |
| 3   | r     | 36/41 (88%)     | 36 (100%)   | 0        | 100         | 100 |
| 3   | s     | 37/41 (90%)     | 37 (100%)   | 0        | 100         | 100 |
| 3   | t     | 36/41 (88%)     | 36 (100%)   | 0        | 100         | 100 |
| 3   | v     | 33/41 (80%)     | 33 (100%)   | 0        | 100         | 100 |
| 4   | M     | 266/270 (98%)   | 266 (100%)  | 0        | 100         | 100 |
| 5   | L     | 218/223 (98%)   | 218 (100%)  | 0        | 100         | 100 |
| 6   | H     | 214/214 (100%)  | 214 (100%)  | 0        | 100         | 100 |
| 7   | C     | 299/307 (97%)   | 299 (100%)  | 0        | 100         | 100 |
| All | All   | 2371/2633 (90%) | 2371 (100%) | 0        | 100         | 100 |

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (21) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | V     | 20  | GLN  |
| 1   | S     | 42  | ASN  |
| 3   | s     | 16  | GLN  |
| 3   | q     | 16  | GLN  |
| 3   | 2     | 16  | GLN  |
| 1   | 1     | 40  | HIS  |
| 3   | k     | 16  | GLN  |
| 3   | j     | 16  | GLN  |
| 1   | I     | 40  | HIS  |
| 3   | f     | 16  | GLN  |
| 1   | B     | 42  | ASN  |
| 4   | M     | 70  | ASN  |
| 4   | M     | 260 | ASN  |
| 5   | L     | 212 | ASN  |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 6   | H     | 34  | ASN  |
| 6   | H     | 67  | HIS  |
| 6   | H     | 174 | GLN  |
| 7   | C     | 42  | GLN  |
| 7   | C     | 201 | ASN  |
| 7   | C     | 300 | ASN  |
| 7   | C     | 321 | ASN  |

### 5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

### 5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

### 5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

### 5.6 Ligand geometry ⓘ

Of 98 ligands modelled in this entry, 1 is monoatomic - leaving 97 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Type  | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|-------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |       |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 9   | A1EFU | G     | 105 | -    | 40,42,42     | 1.69 | 8 (20%)  | 45,52,52    | 3.57 | 19 (42%) |
| 9   | A1EFU | r     | 102 | -    | 40,42,42     | 1.70 | 9 (22%)  | 45,52,52    | 3.78 | 19 (42%) |
| 8   | BCL   | R     | 102 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.24 | 27 (34%) |
| 13  | U10   | L     | 303 | -    | 48,48,63     | 0.17 | 0        | 58,61,79    | 0.44 | 1 (1%)   |
| 8   | BCL   | t     | 101 | -    | 64,74,74     | 1.76 | 13 (20%) | 78,115,115  | 2.09 | 25 (32%) |

| Mol | Type  | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|-------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |       |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 10  | MW9   | F     | 103 | -    | 42,42,52     | 1.43 | 6 (14%)  | 45,48,58    | 1.46 | 3 (6%)   |
| 8   | BCL   | P     | 102 | -    | 64,74,74     | 1.73 | 13 (20%) | 78,115,115  | 2.20 | 24 (30%) |
| 9   | A1EFU | K     | 102 | -    | 40,42,42     | 1.70 | 9 (22%)  | 45,52,52    | 3.65 | 20 (44%) |
| 8   | BCL   | K     | 101 | -    | 64,74,74     | 1.73 | 11 (17%) | 78,115,115  | 2.31 | 27 (34%) |
| 11  | LMT   | H     | 302 | -    | 24,24,36     | 1.04 | 2 (8%)   | 29,29,47    | 1.07 | 2 (6%)   |
| 9   | A1EFU | M     | 407 | -    | 40,42,42     | 1.68 | 8 (20%)  | 45,52,52    | 3.56 | 20 (44%) |
| 11  | LMT   | L     | 306 | -    | 24,24,36     | 1.04 | 2 (8%)   | 29,29,47    | 1.18 | 2 (6%)   |
| 9   | A1EFU | B     | 103 | -    | 40,42,42     | 1.68 | 8 (20%)  | 45,52,52    | 3.68 | 20 (44%) |
| 8   | BCL   | s     | 102 | -    | 64,74,74     | 1.73 | 14 (21%) | 78,115,115  | 2.34 | 28 (35%) |
| 8   | BCL   | q     | 102 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.26 | 29 (37%) |
| 9   | A1EFU | E     | 103 | -    | 40,42,42     | 1.68 | 7 (17%)  | 45,52,52    | 3.82 | 20 (44%) |
| 8   | BCL   | P     | 101 | -    | 64,74,74     | 1.71 | 11 (17%) | 78,115,115  | 2.24 | 26 (33%) |
| 9   | A1EFU | N     | 102 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.69 | 20 (44%) |
| 8   | BCL   | 2     | 103 | -    | 64,74,74     | 1.72 | 13 (20%) | 78,115,115  | 2.30 | 28 (35%) |
| 8   | BCL   | s     | 103 | -    | 64,74,74     | 1.72 | 11 (17%) | 78,115,115  | 2.24 | 26 (33%) |
| 10  | MW9   | M     | 406 | -    | 52,52,52     | 1.45 | 6 (11%)  | 55,58,58    | 1.47 | 3 (5%)   |
| 9   | A1EFU | j     | 101 | -    | 40,42,42     | 1.68 | 9 (22%)  | 45,52,52    | 3.99 | 20 (44%) |
| 8   | BCL   | e     | 101 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.26 | 27 (34%) |
| 8   | BCL   | l     | 101 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.30 | 27 (34%) |
| 8   | BCL   | E     | 101 | -    | 64,74,74     | 1.73 | 12 (18%) | 78,115,115  | 2.30 | 29 (37%) |
| 10  | MW9   | H     | 301 | -    | 47,47,52     | 1.39 | 6 (12%)  | 50,53,58    | 1.45 | 4 (8%)   |
| 9   | A1EFU | q     | 101 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.70 | 21 (46%) |
| 9   | A1EFU | P     | 103 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.73 | 20 (44%) |
| 8   | BCL   | L     | 301 | -    | 64,74,74     | 1.71 | 12 (18%) | 78,115,115  | 2.38 | 29 (37%) |
| 8   | BCL   | G     | 101 | -    | 64,74,74     | 1.72 | 11 (17%) | 78,115,115  | 2.27 | 27 (34%) |
| 9   | A1EFU | s     | 105 | -    | 40,42,42     | 1.68 | 9 (22%)  | 45,52,52    | 3.80 | 20 (44%) |
| 14  | BPH   | M     | 408 | -    | 51,70,70     | 0.82 | 2 (3%)   | 52,101,101  | 0.66 | 1 (1%)   |
| 9   | A1EFU | 2     | 102 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.66 | 20 (44%) |
| 11  | LMT   | D     | 102 | -    | 36,36,36     | 1.17 | 5 (13%)  | 47,47,47    | 0.96 | 2 (4%)   |
| 8   | BCL   | i     | 101 | -    | 64,74,74     | 1.73 | 11 (17%) | 78,115,115  | 2.32 | 27 (34%) |
| 8   | BCL   | G     | 102 | -    | 64,74,74     | 1.73 | 12 (18%) | 78,115,115  | 2.30 | 27 (34%) |
| 8   | BCL   | I     | 101 | -    | 64,74,74     | 1.73 | 11 (17%) | 78,115,115  | 2.33 | 26 (33%) |
| 9   | A1EFU | D     | 104 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.63 | 20 (44%) |
| 9   | A1EFU | f     | 101 | -    | 40,42,42     | 1.68 | 8 (20%)  | 45,52,52    | 3.79 | 19 (42%) |
| 8   | BCL   | B     | 101 | -    | 64,74,74     | 1.70 | 11 (17%) | 78,115,115  | 2.29 | 26 (33%) |

| Mol | Type  | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|-------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |       |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 9   | A1EFU | J     | 102 | -    | 40,42,42     | 1.70 | 9 (22%)  | 45,52,52    | 3.56 | 20 (44%) |
| 8   | BCL   | L     | 304 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.37 | 29 (37%) |
| 10  | MW9   | R     | 103 | -    | 44,44,52     | 1.47 | 5 (11%)  | 47,50,58    | 1.52 | 3 (6%)   |
| 16  | HEC   | C     | 402 | 7    | 32,50,50     | 2.04 | 4 (12%)  | 24,82,82    | 2.30 | 10 (41%) |
| 8   | BCL   | a     | 101 | -    | 64,74,74     | 1.73 | 12 (18%) | 78,115,115  | 2.29 | 28 (35%) |
| 9   | A1EFU | R     | 101 | -    | 40,42,42     | 1.68 | 8 (20%)  | 45,52,52    | 3.67 | 20 (44%) |
| 9   | A1EFU | v     | 102 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.73 | 20 (44%) |
| 9   | A1EFU | s     | 101 | -    | 40,42,42     | 1.68 | 7 (17%)  | 45,52,52    | 3.88 | 20 (44%) |
| 8   | BCL   | F     | 101 | -    | 64,74,74     | 1.72 | 10 (15%) | 78,115,115  | 2.23 | 29 (37%) |
| 13  | U10   | M     | 404 | -    | 63,63,63     | 0.17 | 0        | 76,79,79    | 0.41 | 1 (1%)   |
| 9   | A1EFU | v     | 103 | -    | 40,42,42     | 1.67 | 8 (20%)  | 45,52,52    | 3.69 | 19 (42%) |
| 9   | A1EFU | p     | 101 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.91 | 20 (44%) |
| 8   | BCL   | r     | 101 | -    | 64,74,74     | 1.73 | 12 (18%) | 78,115,115  | 2.25 | 26 (33%) |
| 9   | A1EFU | J     | 103 | -    | 40,42,42     | 1.68 | 9 (22%)  | 45,52,52    | 3.93 | 20 (44%) |
| 8   | BCL   | D     | 101 | -    | 64,74,74     | 1.71 | 11 (17%) | 78,115,115  | 2.26 | 27 (34%) |
| 9   | A1EFU | j     | 103 | -    | 40,42,42     | 1.69 | 8 (20%)  | 45,52,52    | 3.79 | 20 (44%) |
| 10  | MW9   | L     | 307 | -    | 36,36,52     | 1.47 | 5 (13%)  | 39,42,58    | 1.54 | 3 (7%)   |
| 8   | BCL   | S     | 101 | -    | 64,74,74     | 1.71 | 12 (18%) | 78,115,115  | 2.25 | 26 (33%) |
| 10  | MW9   | G     | 103 | -    | 48,48,52     | 1.49 | 6 (12%)  | 51,54,58    | 1.48 | 4 (7%)   |
| 10  | MW9   | D     | 103 | -    | 52,52,52     | 1.45 | 6 (11%)  | 55,58,58    | 1.46 | 3 (5%)   |
| 9   | A1EFU | B     | 102 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.69 | 20 (44%) |
| 9   | A1EFU | D     | 105 | -    | 40,42,42     | 1.68 | 8 (20%)  | 45,52,52    | 3.91 | 20 (44%) |
| 8   | BCL   | v     | 101 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.25 | 26 (33%) |
| 8   | BCL   | Q     | 101 | -    | 64,74,74     | 1.72 | 11 (17%) | 78,115,115  | 2.25 | 26 (33%) |
| 9   | A1EFU | A     | 102 | -    | 40,42,42     | 1.70 | 9 (22%)  | 45,52,52    | 3.77 | 19 (42%) |
| 15  | CDL   | H     | 304 | -    | 90,90,99     | 0.91 | 8 (8%)   | 96,102,111  | 1.14 | 4 (4%)   |
| 8   | BCL   | M     | 402 | -    | 64,74,74     | 1.72 | 10 (15%) | 78,115,115  | 2.23 | 24 (30%) |
| 14  | BPH   | L     | 302 | -    | 51,70,70     | 0.52 | 1 (1%)   | 52,101,101  | 0.71 | 1 (1%)   |
| 11  | LMT   | C     | 404 | -    | 24,24,36     | 1.05 | 2 (8%)   | 29,29,47    | 1.06 | 1 (3%)   |
| 16  | HEC   | C     | 401 | 7    | 32,50,50     | 2.01 | 4 (12%)  | 24,82,82    | 2.25 | 11 (45%) |
| 9   | A1EFU | 2     | 101 | -    | 40,42,42     | 1.68 | 9 (22%)  | 45,52,52    | 3.77 | 20 (44%) |
| 8   | BCL   | k     | 102 | -    | 64,74,74     | 1.73 | 11 (17%) | 78,115,115  | 2.26 | 26 (33%) |
| 10  | MW9   | H     | 303 | -    | 36,36,52     | 1.56 | 7 (19%)  | 39,41,58    | 1.88 | 3 (7%)   |
| 8   | BCL   | N     | 101 | -    | 64,74,74     | 1.72 | 12 (18%) | 78,115,115  | 2.31 | 26 (33%) |
| 15  | CDL   | L     | 308 | -    | 66,66,99     | 1.05 | 8 (12%)  | 72,78,111   | 1.16 | 4 (5%)   |

| Mol | Type  | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|-------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |       |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 8   | BCL   | F     | 102 | -    | 64,74,74     | 1.73 | 12 (18%) | 78,115,115  | 2.30 | 28 (35%) |
| 9   | A1EFU | E     | 102 | -    | 40,42,42     | 1.69 | 7 (17%)  | 45,52,52    | 3.67 | 19 (42%) |
| 8   | BCL   | V     | 101 | -    | 64,74,74     | 1.69 | 11 (17%) | 78,115,115  | 2.27 | 29 (37%) |
| 8   | BCL   | b     | 101 | -    | 64,74,74     | 1.72 | 11 (17%) | 78,115,115  | 2.26 | 28 (35%) |
| 11  | LMT   | L     | 305 | -    | 24,24,36     | 1.05 | 2 (8%)   | 29,29,47    | 1.10 | 2 (6%)   |
| 8   | BCL   | M     | 403 | -    | 64,74,74     | 1.72 | 13 (20%) | 78,115,115  | 2.30 | 28 (35%) |
| 9   | A1EFU | T     | 101 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.72 | 20 (44%) |
| 9   | A1EFU | F     | 104 | -    | 40,42,42     | 1.68 | 7 (17%)  | 45,52,52    | 3.74 | 19 (42%) |
| 9   | A1EFU | I     | 102 | -    | 40,42,42     | 1.68 | 7 (17%)  | 45,52,52    | 3.98 | 20 (44%) |
| 9   | A1EFU | G     | 106 | -    | 40,42,42     | 1.67 | 7 (17%)  | 45,52,52    | 4.00 | 19 (42%) |
| 8   | BCL   | J     | 101 | -    | 64,74,74     | 1.73 | 11 (17%) | 78,115,115  | 2.30 | 27 (34%) |
| 8   | BCL   | n     | 101 | -    | 64,74,74     | 1.73 | 13 (20%) | 78,115,115  | 2.25 | 27 (34%) |
| 10  | MW9   | M     | 405 | -    | 48,48,52     | 1.48 | 6 (12%)  | 51,54,58    | 1.51 | 3 (5%)   |
| 9   | A1EFU | s     | 104 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.26 | 20 (44%) |
| 10  | MW9   | G     | 104 | -    | 39,39,52     | 1.42 | 5 (12%)  | 42,45,58    | 1.18 | 3 (7%)   |
| 9   | A1EFU | k     | 101 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.98 | 20 (44%) |
| 8   | BCL   | d     | 101 | -    | 64,74,74     | 1.74 | 11 (17%) | 78,115,115  | 2.26 | 23 (29%) |
| 9   | A1EFU | 2     | 104 | -    | 40,42,42     | 1.69 | 9 (22%)  | 45,52,52    | 3.48 | 21 (46%) |
| 8   | BCL   | j     | 102 | -    | 64,74,74     | 1.73 | 12 (18%) | 78,115,115  | 2.28 | 27 (34%) |
| 8   | BCL   | A     | 101 | -    | 64,74,74     | 1.73 | 13 (20%) | 78,115,115  | 2.18 | 26 (33%) |
| 9   | A1EFU | a     | 102 | -    | 40,42,42     | 1.70 | 9 (22%)  | 45,52,52    | 4.01 | 20 (44%) |
| 16  | HEC   | C     | 403 | 7    | 32,50,50     | 2.02 | 4 (12%)  | 24,82,82    | 2.32 | 12 (50%) |

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   |
|-----|-------|-------|-----|------|---------|---------------|---------|
| 9   | A1EFU | G     | 105 | -    | -       | 25/50/51/51   | -       |
| 9   | A1EFU | r     | 102 | -    | -       | 21/50/51/51   | -       |
| 8   | BCL   | R     | 102 | -    | -       | 9/37/137/137  | -       |
| 13  | U10   | L     | 303 | -    | -       | 13/45/69/87   | 0/1/1/1 |
| 8   | BCL   | t     | 101 | -    | -       | 12/37/137/137 | -       |
| 10  | MW9   | F     | 103 | -    | -       | 33/47/47/57   | -       |
| 8   | BCL   | P     | 102 | -    | -       | 16/37/137/137 | -       |

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| Mol | Type  | Chain | Res | Link | Chirals | Torsions      | Rings   |
|-----|-------|-------|-----|------|---------|---------------|---------|
| 9   | A1EFU | K     | 102 | -    | -       | 21/50/51/51   | -       |
| 8   | BCL   | K     | 101 | -    | -       | 10/37/137/137 | -       |
| 11  | LMT   | H     | 302 | -    | -       | 6/15/35/61    | 0/1/1/2 |
| 9   | A1EFU | M     | 407 | -    | -       | 17/50/51/51   | -       |
| 11  | LMT   | L     | 306 | -    | -       | 8/15/35/61    | 0/1/1/2 |
| 9   | A1EFU | B     | 103 | -    | -       | 19/50/51/51   | -       |
| 8   | BCL   | s     | 102 | -    | -       | 10/37/137/137 | -       |
| 8   | BCL   | q     | 102 | -    | -       | 14/37/137/137 | -       |
| 9   | A1EFU | E     | 103 | -    | -       | 19/50/51/51   | -       |
| 8   | BCL   | P     | 101 | -    | -       | 14/37/137/137 | -       |
| 9   | A1EFU | N     | 102 | -    | -       | 23/50/51/51   | -       |
| 8   | BCL   | 2     | 103 | -    | -       | 20/37/137/137 | -       |
| 8   | BCL   | s     | 103 | -    | -       | 19/37/137/137 | -       |
| 10  | MW9   | M     | 406 | -    | -       | 34/57/57/57   | -       |
| 9   | A1EFU | j     | 101 | -    | -       | 25/50/51/51   | -       |
| 8   | BCL   | e     | 101 | -    | -       | 11/37/137/137 | -       |
| 8   | BCL   | 1     | 101 | -    | -       | 13/37/137/137 | -       |
| 8   | BCL   | E     | 101 | -    | -       | 10/37/137/137 | -       |
| 10  | MW9   | H     | 301 | -    | -       | 27/52/52/57   | -       |
| 9   | A1EFU | q     | 101 | -    | -       | 24/50/51/51   | -       |
| 9   | A1EFU | P     | 103 | -    | -       | 22/50/51/51   | -       |
| 8   | BCL   | L     | 301 | -    | -       | 17/37/137/137 | -       |
| 8   | BCL   | G     | 101 | -    | -       | 13/37/137/137 | -       |
| 9   | A1EFU | s     | 105 | -    | -       | 24/50/51/51   | -       |
| 14  | BPH   | M     | 408 | -    | -       | 10/37/105/105 | 0/5/6/6 |
| 9   | A1EFU | 2     | 102 | -    | -       | 29/50/51/51   | -       |
| 11  | LMT   | D     | 102 | -    | -       | 7/21/61/61    | 0/2/2/2 |
| 8   | BCL   | i     | 101 | -    | -       | 21/37/137/137 | -       |
| 8   | BCL   | G     | 102 | -    | -       | 15/37/137/137 | -       |
| 8   | BCL   | I     | 101 | -    | -       | 11/37/137/137 | -       |
| 9   | A1EFU | D     | 104 | -    | -       | 17/50/51/51   | -       |
| 9   | A1EFU | f     | 101 | -    | -       | 18/50/51/51   | -       |
| 8   | BCL   | B     | 101 | -    | -       | 15/37/137/137 | -       |
| 9   | A1EFU | J     | 102 | -    | -       | 14/50/51/51   | -       |

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| Mol | Type  | Chain | Res | Link | Chirals | Torsions       | Rings   |
|-----|-------|-------|-----|------|---------|----------------|---------|
| 8   | BCL   | L     | 304 | -    | -       | 17/37/137/137  | -       |
| 10  | MW9   | R     | 103 | -    | -       | 34/49/49/57    | -       |
| 16  | HEC   | C     | 402 | 7    | -       | 4/10/54/54     | -       |
| 8   | BCL   | a     | 101 | -    | -       | 19/37/137/137  | -       |
| 9   | A1EFU | R     | 101 | -    | -       | 19/50/51/51    | -       |
| 9   | A1EFU | v     | 102 | -    | -       | 23/50/51/51    | -       |
| 9   | A1EFU | s     | 101 | -    | -       | 20/50/51/51    | -       |
| 8   | BCL   | F     | 101 | -    | -       | 16/37/137/137  | -       |
| 13  | U10   | M     | 404 | -    | -       | 10/63/87/87    | 0/1/1/1 |
| 9   | A1EFU | v     | 103 | -    | -       | 24/50/51/51    | -       |
| 9   | A1EFU | p     | 101 | -    | -       | 19/50/51/51    | -       |
| 8   | BCL   | r     | 101 | -    | -       | 11/37/137/137  | -       |
| 9   | A1EFU | J     | 103 | -    | -       | 20/50/51/51    | -       |
| 8   | BCL   | D     | 101 | -    | -       | 9/37/137/137   | -       |
| 9   | A1EFU | j     | 103 | -    | -       | 19/50/51/51    | -       |
| 10  | MW9   | L     | 307 | -    | -       | 15/41/41/57    | -       |
| 8   | BCL   | S     | 101 | -    | -       | 13/37/137/137  | -       |
| 10  | MW9   | G     | 103 | -    | -       | 27/53/53/57    | -       |
| 10  | MW9   | D     | 103 | -    | -       | 29/57/57/57    | -       |
| 9   | A1EFU | B     | 102 | -    | -       | 16/50/51/51    | -       |
| 9   | A1EFU | D     | 105 | -    | -       | 19/50/51/51    | -       |
| 8   | BCL   | v     | 101 | -    | -       | 19/37/137/137  | -       |
| 8   | BCL   | Q     | 101 | -    | -       | 21/37/137/137  | -       |
| 9   | A1EFU | A     | 102 | -    | -       | 19/50/51/51    | -       |
| 15  | CDL   | H     | 304 | -    | -       | 46/101/101/110 | -       |
| 8   | BCL   | M     | 402 | -    | -       | 14/37/137/137  | -       |
| 14  | BPH   | L     | 302 | -    | -       | 8/37/105/105   | 0/5/6/6 |
| 11  | LMT   | C     | 404 | -    | -       | 5/15/35/61     | 0/1/1/2 |
| 16  | HEC   | C     | 401 | 7    | -       | 3/10/54/54     | -       |
| 9   | A1EFU | 2     | 101 | -    | -       | 20/50/51/51    | -       |
| 8   | BCL   | k     | 102 | -    | -       | 10/37/137/137  | -       |
| 10  | MW9   | H     | 303 | -    | -       | 22/38/38/57    | -       |
| 8   | BCL   | N     | 101 | -    | -       | 10/37/137/137  | -       |
| 15  | CDL   | L     | 308 | -    | -       | 41/77/77/110   | -       |

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| Mol | Type  | Chain | Res | Link | Chirals | Torsions      | Rings   |
|-----|-------|-------|-----|------|---------|---------------|---------|
| 8   | BCL   | F     | 102 | -    | -       | 10/37/137/137 | -       |
| 9   | A1EFU | E     | 102 | -    | -       | 18/50/51/51   | -       |
| 8   | BCL   | V     | 101 | -    | -       | 7/37/137/137  | -       |
| 8   | BCL   | b     | 101 | -    | -       | 11/37/137/137 | -       |
| 11  | LMT   | L     | 305 | -    | -       | 5/15/35/61    | 0/1/1/2 |
| 8   | BCL   | M     | 403 | -    | -       | 20/37/137/137 | -       |
| 9   | A1EFU | T     | 101 | -    | -       | 21/50/51/51   | -       |
| 9   | A1EFU | F     | 104 | -    | -       | 21/50/51/51   | -       |
| 9   | A1EFU | I     | 102 | -    | -       | 20/50/51/51   | -       |
| 9   | A1EFU | G     | 106 | -    | -       | 24/50/51/51   | -       |
| 8   | BCL   | J     | 101 | -    | -       | 12/37/137/137 | -       |
| 8   | BCL   | n     | 101 | -    | -       | 11/37/137/137 | -       |
| 10  | MW9   | M     | 405 | -    | -       | 30/53/53/57   | -       |
| 9   | A1EFU | s     | 104 | -    | -       | 22/50/51/51   | -       |
| 10  | MW9   | G     | 104 | -    | -       | 27/44/44/57   | -       |
| 9   | A1EFU | k     | 101 | -    | -       | 25/50/51/51   | -       |
| 8   | BCL   | d     | 101 | -    | -       | 25/37/137/137 | -       |
| 9   | A1EFU | 2     | 104 | -    | -       | 22/50/51/51   | -       |
| 8   | BCL   | j     | 102 | -    | -       | 14/37/137/137 | -       |
| 8   | BCL   | A     | 101 | -    | -       | 14/37/137/137 | -       |
| 9   | A1EFU | a     | 102 | -    | -       | 18/50/51/51   | -       |
| 16  | HEC   | C     | 403 | 7    | -       | 2/10/54/54    | -       |

All (843) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | C     | 402 | HEC  | C3C-C2C | -6.54 | 1.33        | 1.40     |
| 16  | C     | 403 | HEC  | C3C-C2C | -6.44 | 1.34        | 1.40     |
| 16  | C     | 401 | HEC  | C2B-C3B | -6.28 | 1.34        | 1.40     |
| 16  | C     | 402 | HEC  | C2B-C3B | -6.27 | 1.34        | 1.40     |
| 16  | C     | 401 | HEC  | C3C-C2C | -6.20 | 1.34        | 1.40     |
| 16  | C     | 403 | HEC  | C2B-C3B | -6.15 | 1.34        | 1.40     |
| 8   | t     | 101 | BCL  | MG-ND   | -6.07 | 1.93        | 2.05     |
| 8   | d     | 101 | BCL  | MG-ND   | -5.99 | 1.93        | 2.05     |
| 8   | I     | 101 | BCL  | MG-ND   | -5.90 | 1.94        | 2.05     |
| 8   | J     | 101 | BCL  | MG-ND   | -5.89 | 1.94        | 2.05     |
| 8   | 1     | 101 | BCL  | MG-ND   | -5.87 | 1.94        | 2.05     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | F     | 102 | BCL   | MG-ND   | -5.86 | 1.94        | 2.05     |
| 8   | E     | 101 | BCL   | MG-ND   | -5.85 | 1.94        | 2.05     |
| 8   | Q     | 101 | BCL   | MG-ND   | -5.84 | 1.94        | 2.05     |
| 8   | G     | 102 | BCL   | MG-ND   | -5.84 | 1.94        | 2.05     |
| 8   | K     | 101 | BCL   | MG-ND   | -5.83 | 1.94        | 2.05     |
| 8   | P     | 101 | BCL   | MG-ND   | -5.80 | 1.94        | 2.05     |
| 8   | R     | 102 | BCL   | MG-ND   | -5.79 | 1.94        | 2.05     |
| 8   | j     | 102 | BCL   | MG-ND   | -5.79 | 1.94        | 2.05     |
| 8   | e     | 101 | BCL   | MG-ND   | -5.77 | 1.94        | 2.05     |
| 8   | N     | 101 | BCL   | MG-ND   | -5.75 | 1.94        | 2.05     |
| 8   | D     | 101 | BCL   | MG-ND   | -5.74 | 1.94        | 2.05     |
| 8   | S     | 101 | BCL   | MG-ND   | -5.74 | 1.94        | 2.05     |
| 8   | F     | 101 | BCL   | MG-ND   | -5.72 | 1.94        | 2.05     |
| 8   | k     | 102 | BCL   | MG-ND   | -5.72 | 1.94        | 2.05     |
| 8   | A     | 101 | BCL   | MG-ND   | -5.72 | 1.94        | 2.05     |
| 8   | i     | 101 | BCL   | MG-ND   | -5.71 | 1.94        | 2.05     |
| 8   | s     | 103 | BCL   | MG-ND   | -5.71 | 1.94        | 2.05     |
| 8   | q     | 102 | BCL   | MG-ND   | -5.70 | 1.94        | 2.05     |
| 8   | M     | 403 | BCL   | MG-ND   | -5.70 | 1.94        | 2.05     |
| 9   | E     | 102 | A1EFU | C19-C18 | -5.69 | 1.33        | 1.45     |
| 8   | b     | 101 | BCL   | MG-ND   | -5.67 | 1.94        | 2.05     |
| 9   | D     | 104 | A1EFU | C19-C18 | -5.67 | 1.33        | 1.45     |
| 8   | a     | 101 | BCL   | MG-ND   | -5.65 | 1.94        | 2.05     |
| 9   | B     | 102 | A1EFU | C19-C18 | -5.65 | 1.33        | 1.45     |
| 8   | V     | 101 | BCL   | MG-ND   | -5.65 | 1.94        | 2.05     |
| 8   | G     | 101 | BCL   | MG-ND   | -5.64 | 1.94        | 2.05     |
| 9   | F     | 104 | A1EFU | C19-C18 | -5.64 | 1.33        | 1.45     |
| 8   | L     | 304 | BCL   | MG-ND   | -5.64 | 1.94        | 2.05     |
| 8   | M     | 402 | BCL   | MG-ND   | -5.63 | 1.94        | 2.05     |
| 9   | P     | 103 | A1EFU | C19-C18 | -5.63 | 1.33        | 1.45     |
| 8   | v     | 101 | BCL   | MG-ND   | -5.62 | 1.94        | 2.05     |
| 8   | n     | 101 | BCL   | MG-ND   | -5.62 | 1.94        | 2.05     |
| 9   | r     | 102 | A1EFU | C19-C18 | -5.62 | 1.33        | 1.45     |
| 8   | r     | 101 | BCL   | MG-ND   | -5.61 | 1.94        | 2.05     |
| 9   | R     | 101 | A1EFU | C19-C18 | -5.61 | 1.33        | 1.45     |
| 8   | P     | 102 | BCL   | MG-ND   | -5.61 | 1.94        | 2.05     |
| 9   | q     | 101 | A1EFU | C19-C18 | -5.60 | 1.33        | 1.45     |
| 9   | I     | 102 | A1EFU | C19-C18 | -5.59 | 1.33        | 1.45     |
| 9   | 2     | 101 | A1EFU | C19-C18 | -5.59 | 1.33        | 1.45     |
| 8   | B     | 101 | BCL   | MG-ND   | -5.58 | 1.94        | 2.05     |
| 9   | T     | 101 | A1EFU | C19-C18 | -5.58 | 1.34        | 1.45     |
| 9   | G     | 106 | A1EFU | C19-C18 | -5.57 | 1.34        | 1.45     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 9   | s     | 101 | A1EFU | C19-C18 | -5.57 | 1.34        | 1.45     |
| 9   | B     | 103 | A1EFU | C19-C18 | -5.57 | 1.34        | 1.45     |
| 9   | j     | 103 | A1EFU | C19-C18 | -5.56 | 1.34        | 1.45     |
| 8   | 2     | 103 | BCL   | MG-ND   | -5.56 | 1.94        | 2.05     |
| 8   | s     | 102 | BCL   | MG-ND   | -5.55 | 1.94        | 2.05     |
| 9   | k     | 101 | A1EFU | C19-C18 | -5.55 | 1.34        | 1.45     |
| 9   | A     | 102 | A1EFU | C19-C18 | -5.55 | 1.34        | 1.45     |
| 9   | E     | 103 | A1EFU | C19-C18 | -5.55 | 1.34        | 1.45     |
| 9   | G     | 105 | A1EFU | C19-C18 | -5.53 | 1.34        | 1.45     |
| 9   | p     | 101 | A1EFU | C19-C18 | -5.52 | 1.34        | 1.45     |
| 9   | v     | 103 | A1EFU | C19-C18 | -5.52 | 1.34        | 1.45     |
| 9   | s     | 105 | A1EFU | C19-C18 | -5.52 | 1.34        | 1.45     |
| 9   | j     | 101 | A1EFU | C19-C18 | -5.51 | 1.34        | 1.45     |
| 9   | N     | 102 | A1EFU | C19-C18 | -5.50 | 1.34        | 1.45     |
| 9   | v     | 102 | A1EFU | C19-C18 | -5.50 | 1.34        | 1.45     |
| 9   | K     | 102 | A1EFU | C19-C18 | -5.50 | 1.34        | 1.45     |
| 9   | D     | 105 | A1EFU | C19-C18 | -5.49 | 1.34        | 1.45     |
| 9   | a     | 102 | A1EFU | C19-C18 | -5.49 | 1.34        | 1.45     |
| 9   | M     | 407 | A1EFU | C19-C18 | -5.49 | 1.34        | 1.45     |
| 8   | L     | 301 | BCL   | MG-ND   | -5.49 | 1.94        | 2.05     |
| 9   | J     | 102 | A1EFU | C19-C18 | -5.48 | 1.34        | 1.45     |
| 9   | J     | 103 | A1EFU | C19-C18 | -5.47 | 1.34        | 1.45     |
| 9   | f     | 101 | A1EFU | C19-C18 | -5.46 | 1.34        | 1.45     |
| 9   | 2     | 102 | A1EFU | C19-C18 | -5.43 | 1.34        | 1.45     |
| 9   | 2     | 104 | A1EFU | C19-C18 | -5.42 | 1.34        | 1.45     |
| 9   | s     | 104 | A1EFU | C19-C18 | -5.41 | 1.34        | 1.45     |
| 8   | t     | 101 | BCL   | OBD-CAD | 4.70  | 1.30        | 1.22     |
| 8   | t     | 101 | BCL   | C4D-ND  | -4.69 | 1.31        | 1.37     |
| 8   | s     | 102 | BCL   | OBD-CAD | 4.68  | 1.30        | 1.22     |
| 8   | s     | 103 | BCL   | OBD-CAD | 4.68  | 1.30        | 1.22     |
| 8   | v     | 101 | BCL   | OBD-CAD | 4.67  | 1.30        | 1.22     |
| 8   | V     | 101 | BCL   | OBD-CAD | 4.67  | 1.30        | 1.22     |
| 8   | n     | 101 | BCL   | OBD-CAD | 4.66  | 1.30        | 1.22     |
| 8   | F     | 102 | BCL   | OBD-CAD | 4.66  | 1.30        | 1.22     |
| 8   | 2     | 103 | BCL   | OBD-CAD | 4.65  | 1.30        | 1.22     |
| 8   | L     | 301 | BCL   | OBD-CAD | 4.65  | 1.30        | 1.22     |
| 8   | J     | 101 | BCL   | OBD-CAD | 4.65  | 1.30        | 1.22     |
| 8   | Q     | 101 | BCL   | OBD-CAD | 4.64  | 1.30        | 1.22     |
| 8   | F     | 101 | BCL   | OBD-CAD | 4.64  | 1.30        | 1.22     |
| 8   | j     | 102 | BCL   | OBD-CAD | 4.64  | 1.30        | 1.22     |
| 8   | G     | 102 | BCL   | OBD-CAD | 4.64  | 1.30        | 1.22     |
| 8   | N     | 101 | BCL   | OBD-CAD | 4.64  | 1.30        | 1.22     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 8   | k     | 102 | BCL  | OBD-CAD | 4.64  | 1.30        | 1.22     |
| 8   | a     | 101 | BCL  | OBD-CAD | 4.63  | 1.30        | 1.22     |
| 8   | r     | 101 | BCL  | OBD-CAD | 4.63  | 1.30        | 1.22     |
| 8   | i     | 101 | BCL  | OBD-CAD | 4.63  | 1.30        | 1.22     |
| 8   | K     | 101 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | e     | 101 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | R     | 102 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | A     | 101 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | q     | 102 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | P     | 101 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | D     | 101 | BCL  | OBD-CAD | 4.62  | 1.30        | 1.22     |
| 8   | I     | 101 | BCL  | OBD-CAD | 4.61  | 1.30        | 1.22     |
| 8   | d     | 101 | BCL  | OBD-CAD | 4.61  | 1.30        | 1.22     |
| 8   | P     | 102 | BCL  | OBD-CAD | 4.61  | 1.30        | 1.22     |
| 8   | l     | 101 | BCL  | OBD-CAD | 4.61  | 1.30        | 1.22     |
| 8   | S     | 101 | BCL  | OBD-CAD | 4.61  | 1.30        | 1.22     |
| 8   | E     | 101 | BCL  | OBD-CAD | 4.59  | 1.30        | 1.22     |
| 8   | G     | 101 | BCL  | OBD-CAD | 4.59  | 1.30        | 1.22     |
| 8   | B     | 101 | BCL  | OBD-CAD | 4.58  | 1.30        | 1.22     |
| 8   | d     | 101 | BCL  | C4D-ND  | -4.58 | 1.31        | 1.37     |
| 8   | b     | 101 | BCL  | OBD-CAD | 4.58  | 1.30        | 1.22     |
| 8   | M     | 402 | BCL  | OBD-CAD | 4.55  | 1.30        | 1.22     |
| 8   | L     | 304 | BCL  | OBD-CAD | 4.55  | 1.30        | 1.22     |
| 8   | E     | 101 | BCL  | C4D-ND  | -4.54 | 1.31        | 1.37     |
| 8   | M     | 403 | BCL  | OBD-CAD | 4.52  | 1.30        | 1.22     |
| 10  | G     | 103 | MW9  | C35-C34 | -4.51 | 1.34        | 1.52     |
| 8   | F     | 102 | BCL  | C4D-ND  | -4.51 | 1.31        | 1.37     |
| 14  | M     | 408 | BPH  | C2C-C3C | 4.50  | 1.58        | 1.54     |
| 8   | K     | 101 | BCL  | C4D-ND  | -4.50 | 1.31        | 1.37     |
| 10  | M     | 405 | MW9  | C35-C34 | -4.50 | 1.34        | 1.52     |
| 8   | M     | 402 | BCL  | C4D-ND  | -4.49 | 1.31        | 1.37     |
| 10  | M     | 406 | MW9  | C35-C34 | -4.48 | 1.34        | 1.52     |
| 10  | D     | 103 | MW9  | C35-C34 | -4.47 | 1.34        | 1.52     |
| 8   | i     | 101 | BCL  | C4D-ND  | -4.45 | 1.31        | 1.37     |
| 8   | G     | 102 | BCL  | C4D-ND  | -4.44 | 1.31        | 1.37     |
| 8   | b     | 101 | BCL  | C4D-ND  | -4.43 | 1.31        | 1.37     |
| 8   | J     | 101 | BCL  | C4D-ND  | -4.43 | 1.31        | 1.37     |
| 10  | R     | 103 | MW9  | C35-C34 | -4.42 | 1.34        | 1.52     |
| 8   | j     | 102 | BCL  | C4D-ND  | -4.40 | 1.31        | 1.37     |
| 8   | M     | 403 | BCL  | C4D-ND  | -4.38 | 1.31        | 1.37     |
| 8   | R     | 102 | BCL  | C4D-ND  | -4.37 | 1.31        | 1.37     |
| 8   | n     | 101 | BCL  | C4D-ND  | -4.37 | 1.31        | 1.37     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 8   | e     | 101 | BCL  | C4D-ND  | -4.36 | 1.31        | 1.37     |
| 8   | k     | 102 | BCL  | C4D-ND  | -4.36 | 1.31        | 1.37     |
| 8   | q     | 102 | BCL  | C4D-ND  | -4.36 | 1.31        | 1.37     |
| 8   | s     | 103 | BCL  | C4D-ND  | -4.36 | 1.31        | 1.37     |
| 8   | v     | 101 | BCL  | C4D-ND  | -4.36 | 1.31        | 1.37     |
| 8   | I     | 101 | BCL  | C4D-ND  | -4.35 | 1.31        | 1.37     |
| 8   | 2     | 103 | BCL  | C4D-ND  | -4.34 | 1.31        | 1.37     |
| 8   | s     | 102 | BCL  | C4D-ND  | -4.34 | 1.31        | 1.37     |
| 8   | D     | 101 | BCL  | C4D-ND  | -4.32 | 1.31        | 1.37     |
| 8   | A     | 101 | BCL  | C4D-ND  | -4.32 | 1.31        | 1.37     |
| 8   | a     | 101 | BCL  | C4D-ND  | -4.32 | 1.31        | 1.37     |
| 8   | N     | 101 | BCL  | C4D-ND  | -4.30 | 1.31        | 1.37     |
| 8   | B     | 101 | BCL  | C4D-ND  | -4.29 | 1.31        | 1.37     |
| 8   | S     | 101 | BCL  | C4D-ND  | -4.28 | 1.31        | 1.37     |
| 8   | r     | 101 | BCL  | C4D-ND  | -4.28 | 1.31        | 1.37     |
| 8   | Q     | 101 | BCL  | C4D-ND  | -4.23 | 1.31        | 1.37     |
| 8   | 1     | 101 | BCL  | C4D-ND  | -4.22 | 1.31        | 1.37     |
| 8   | V     | 101 | BCL  | C4D-ND  | -4.21 | 1.31        | 1.37     |
| 8   | P     | 102 | BCL  | C4D-ND  | -4.20 | 1.31        | 1.37     |
| 8   | P     | 101 | BCL  | C4D-ND  | -4.19 | 1.31        | 1.37     |
| 8   | L     | 304 | BCL  | C4D-ND  | -4.18 | 1.32        | 1.37     |
| 10  | F     | 103 | MW9  | C33-C32 | 4.13  | 1.55        | 1.31     |
| 10  | R     | 103 | MW9  | C33-C32 | 4.12  | 1.55        | 1.31     |
| 10  | L     | 307 | MW9  | C33-C32 | 4.12  | 1.55        | 1.31     |
| 8   | F     | 101 | BCL  | O1D-CGD | -4.12 | 1.10        | 1.21     |
| 10  | D     | 103 | MW9  | C33-C32 | 4.12  | 1.55        | 1.31     |
| 10  | M     | 406 | MW9  | C33-C32 | 4.11  | 1.55        | 1.31     |
| 10  | H     | 301 | MW9  | C33-C32 | 4.11  | 1.55        | 1.31     |
| 8   | L     | 304 | BCL  | O1D-CGD | -4.11 | 1.10        | 1.21     |
| 10  | M     | 405 | MW9  | C33-C32 | 4.10  | 1.55        | 1.31     |
| 8   | F     | 101 | BCL  | C4D-ND  | -4.10 | 1.32        | 1.37     |
| 10  | G     | 103 | MW9  | C33-C32 | 4.10  | 1.55        | 1.31     |
| 8   | d     | 101 | BCL  | O1D-CGD | -4.10 | 1.10        | 1.21     |
| 8   | 1     | 101 | BCL  | O1D-CGD | -4.09 | 1.11        | 1.21     |
| 10  | H     | 303 | MW9  | C33-C32 | 4.09  | 1.55        | 1.31     |
| 8   | G     | 101 | BCL  | C4D-ND  | -4.08 | 1.32        | 1.37     |
| 8   | b     | 101 | BCL  | O1D-CGD | -4.07 | 1.11        | 1.21     |
| 8   | M     | 403 | BCL  | O1D-CGD | -4.07 | 1.11        | 1.21     |
| 8   | j     | 102 | BCL  | O1D-CGD | -4.07 | 1.11        | 1.21     |
| 8   | a     | 101 | BCL  | O1D-CGD | -4.07 | 1.11        | 1.21     |
| 8   | R     | 102 | BCL  | O1D-CGD | -4.07 | 1.11        | 1.21     |
| 8   | q     | 102 | BCL  | O1D-CGD | -4.06 | 1.11        | 1.21     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | N     | 101 | BCL   | O1D-CGD | -4.06 | 1.11        | 1.21     |
| 8   | e     | 101 | BCL   | O1D-CGD | -4.06 | 1.11        | 1.21     |
| 8   | 2     | 103 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | S     | 101 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | k     | 102 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | M     | 402 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | n     | 101 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | Q     | 101 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | L     | 301 | BCL   | O1D-CGD | -4.05 | 1.11        | 1.21     |
| 8   | B     | 101 | BCL   | O1D-CGD | -4.04 | 1.11        | 1.21     |
| 8   | L     | 301 | BCL   | C4D-ND  | -4.03 | 1.32        | 1.37     |
| 8   | G     | 102 | BCL   | O1D-CGD | -4.03 | 1.11        | 1.21     |
| 8   | E     | 101 | BCL   | O1D-CGD | -4.03 | 1.11        | 1.21     |
| 8   | D     | 101 | BCL   | O1D-CGD | -4.03 | 1.11        | 1.21     |
| 8   | P     | 101 | BCL   | O1D-CGD | -4.03 | 1.11        | 1.21     |
| 8   | t     | 101 | BCL   | O1D-CGD | -4.02 | 1.11        | 1.21     |
| 8   | F     | 102 | BCL   | O1D-CGD | -4.02 | 1.11        | 1.21     |
| 8   | J     | 101 | BCL   | O1D-CGD | -4.02 | 1.11        | 1.21     |
| 8   | s     | 103 | BCL   | O1D-CGD | -4.01 | 1.11        | 1.21     |
| 8   | i     | 101 | BCL   | O1D-CGD | -4.01 | 1.11        | 1.21     |
| 8   | s     | 102 | BCL   | O1D-CGD | -4.01 | 1.11        | 1.21     |
| 8   | I     | 101 | BCL   | O1D-CGD | -4.01 | 1.11        | 1.21     |
| 8   | v     | 101 | BCL   | O1D-CGD | -4.01 | 1.11        | 1.21     |
| 8   | V     | 101 | BCL   | O1D-CGD | -4.01 | 1.11        | 1.21     |
| 10  | G     | 104 | MW9   | C33-C32 | 4.01  | 1.55        | 1.28     |
| 8   | r     | 101 | BCL   | O1D-CGD | -4.00 | 1.11        | 1.21     |
| 8   | A     | 101 | BCL   | O1D-CGD | -4.00 | 1.11        | 1.21     |
| 8   | K     | 101 | BCL   | O1D-CGD | -3.98 | 1.11        | 1.21     |
| 8   | P     | 102 | BCL   | O1D-CGD | -3.97 | 1.11        | 1.21     |
| 8   | G     | 101 | BCL   | O1D-CGD | -3.97 | 1.11        | 1.21     |
| 8   | G     | 101 | BCL   | O2D-CED | 3.67  | 1.53        | 1.45     |
| 8   | P     | 102 | BCL   | O2D-CED | 3.66  | 1.53        | 1.45     |
| 8   | F     | 101 | BCL   | O2D-CED | 3.65  | 1.53        | 1.45     |
| 9   | N     | 102 | A1EFU | C11-C10 | 3.62  | 1.54        | 1.43     |
| 9   | s     | 104 | A1EFU | C11-C10 | 3.62  | 1.54        | 1.43     |
| 9   | s     | 104 | A1EFU | C7-C6   | 3.61  | 1.54        | 1.43     |
| 9   | N     | 102 | A1EFU | C7-C6   | 3.56  | 1.54        | 1.43     |
| 9   | 2     | 104 | A1EFU | C7-C6   | 3.56  | 1.54        | 1.43     |
| 9   | 2     | 104 | A1EFU | C11-C10 | 3.55  | 1.54        | 1.43     |
| 9   | 2     | 102 | A1EFU | C7-C6   | 3.55  | 1.54        | 1.43     |
| 9   | K     | 102 | A1EFU | C11-C10 | 3.54  | 1.54        | 1.43     |
| 9   | T     | 101 | A1EFU | C7-C6   | 3.54  | 1.54        | 1.43     |

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| Mol | Chain | Res | Type  | Atoms   | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|------|-------------|----------|
| 9   | K     | 102 | A1EFU | C7-C6   | 3.54 | 1.54        | 1.43     |
| 9   | a     | 102 | A1EFU | C7-C6   | 3.53 | 1.54        | 1.43     |
| 9   | P     | 103 | A1EFU | C11-C10 | 3.53 | 1.54        | 1.43     |
| 9   | J     | 102 | A1EFU | C7-C6   | 3.53 | 1.54        | 1.43     |
| 9   | G     | 105 | A1EFU | C11-C10 | 3.53 | 1.54        | 1.43     |
| 9   | 2     | 101 | A1EFU | C7-C6   | 3.52 | 1.54        | 1.43     |
| 9   | G     | 105 | A1EFU | C7-C6   | 3.52 | 1.54        | 1.43     |
| 9   | A     | 102 | A1EFU | C7-C6   | 3.52 | 1.54        | 1.43     |
| 9   | q     | 101 | A1EFU | C11-C10 | 3.52 | 1.54        | 1.43     |
| 9   | P     | 103 | A1EFU | C7-C6   | 3.51 | 1.54        | 1.43     |
| 9   | r     | 102 | A1EFU | C7-C6   | 3.51 | 1.54        | 1.43     |
| 9   | 2     | 102 | A1EFU | C11-C10 | 3.51 | 1.54        | 1.43     |
| 9   | v     | 102 | A1EFU | C11-C10 | 3.50 | 1.54        | 1.43     |
| 9   | B     | 103 | A1EFU | C7-C6   | 3.50 | 1.54        | 1.43     |
| 9   | v     | 103 | A1EFU | C11-C10 | 3.50 | 1.54        | 1.43     |
| 9   | s     | 105 | A1EFU | C7-C6   | 3.50 | 1.54        | 1.43     |
| 9   | R     | 101 | A1EFU | C11-C10 | 3.49 | 1.54        | 1.43     |
| 9   | E     | 102 | A1EFU | C7-C6   | 3.49 | 1.54        | 1.43     |
| 9   | j     | 103 | A1EFU | C7-C6   | 3.49 | 1.54        | 1.43     |
| 9   | p     | 101 | A1EFU | C7-C6   | 3.48 | 1.54        | 1.43     |
| 9   | v     | 102 | A1EFU | C7-C6   | 3.48 | 1.54        | 1.43     |
| 8   | v     | 101 | BCL   | O2D-CED | 3.48 | 1.53        | 1.45     |
| 9   | B     | 102 | A1EFU | C7-C6   | 3.48 | 1.54        | 1.43     |
| 9   | T     | 101 | A1EFU | C11-C10 | 3.48 | 1.54        | 1.43     |
| 9   | D     | 104 | A1EFU | C7-C6   | 3.48 | 1.54        | 1.43     |
| 9   | A     | 102 | A1EFU | C11-C10 | 3.48 | 1.54        | 1.43     |
| 9   | J     | 102 | A1EFU | C11-C10 | 3.48 | 1.54        | 1.43     |
| 9   | f     | 101 | A1EFU | C7-C6   | 3.47 | 1.54        | 1.43     |
| 9   | v     | 103 | A1EFU | C7-C6   | 3.47 | 1.54        | 1.43     |
| 9   | R     | 101 | A1EFU | C7-C6   | 3.47 | 1.54        | 1.43     |
| 9   | M     | 407 | A1EFU | C11-C10 | 3.47 | 1.54        | 1.43     |
| 8   | s     | 103 | BCL   | O2D-CED | 3.46 | 1.53        | 1.45     |
| 9   | D     | 105 | A1EFU | C7-C6   | 3.46 | 1.54        | 1.43     |
| 9   | s     | 105 | A1EFU | C11-C10 | 3.46 | 1.54        | 1.43     |
| 9   | q     | 101 | A1EFU | C7-C6   | 3.46 | 1.54        | 1.43     |
| 9   | r     | 102 | A1EFU | C11-C10 | 3.45 | 1.54        | 1.43     |
| 9   | j     | 103 | A1EFU | C11-C10 | 3.45 | 1.54        | 1.43     |
| 9   | M     | 407 | A1EFU | C7-C6   | 3.45 | 1.54        | 1.43     |
| 9   | 2     | 104 | A1EFU | C16-C17 | 3.45 | 1.54        | 1.43     |
| 9   | E     | 102 | A1EFU | C11-C10 | 3.45 | 1.54        | 1.43     |
| 8   | A     | 101 | BCL   | O2D-CED | 3.45 | 1.53        | 1.45     |
| 8   | G     | 102 | BCL   | O2D-CED | 3.44 | 1.53        | 1.45     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 9   | a     | 102 | A1EFU | C11-C10 | 3.44  | 1.54        | 1.43     |
| 9   | B     | 103 | A1EFU | C11-C10 | 3.44  | 1.54        | 1.43     |
| 9   | D     | 104 | A1EFU | C11-C10 | 3.44  | 1.54        | 1.43     |
| 8   | V     | 101 | BCL   | O2D-CED | 3.44  | 1.53        | 1.45     |
| 8   | d     | 101 | BCL   | O2D-CED | 3.44  | 1.53        | 1.45     |
| 9   | B     | 102 | A1EFU | C11-C10 | 3.44  | 1.54        | 1.43     |
| 8   | J     | 101 | BCL   | O2D-CED | 3.44  | 1.53        | 1.45     |
| 8   | E     | 101 | BCL   | O2D-CED | 3.44  | 1.53        | 1.45     |
| 9   | E     | 103 | A1EFU | C7-C6   | 3.44  | 1.54        | 1.43     |
| 9   | J     | 103 | A1EFU | C11-C10 | 3.43  | 1.54        | 1.43     |
| 8   | q     | 102 | BCL   | O2D-CED | 3.43  | 1.53        | 1.45     |
| 9   | I     | 102 | A1EFU | C7-C6   | 3.43  | 1.54        | 1.43     |
| 9   | j     | 101 | A1EFU | C7-C6   | 3.43  | 1.54        | 1.43     |
| 8   | j     | 102 | BCL   | O2D-CED | 3.43  | 1.53        | 1.45     |
| 9   | s     | 101 | A1EFU | C7-C6   | 3.43  | 1.54        | 1.43     |
| 8   | 2     | 103 | BCL   | O2D-CED | 3.43  | 1.53        | 1.45     |
| 9   | F     | 104 | A1EFU | C7-C6   | 3.43  | 1.54        | 1.43     |
| 9   | D     | 105 | A1EFU | C11-C10 | 3.42  | 1.54        | 1.43     |
| 8   | 1     | 101 | BCL   | O2D-CED | 3.42  | 1.53        | 1.45     |
| 8   | R     | 102 | BCL   | O2D-CED | 3.42  | 1.53        | 1.45     |
| 8   | M     | 402 | BCL   | O2D-CED | 3.42  | 1.53        | 1.45     |
| 8   | i     | 101 | BCL   | O2D-CED | 3.42  | 1.53        | 1.45     |
| 16  | C     | 401 | HEC   | CBC-CAC | -3.42 | 1.36        | 1.49     |
| 8   | a     | 101 | BCL   | O2D-CED | 3.42  | 1.53        | 1.45     |
| 9   | p     | 101 | A1EFU | C11-C10 | 3.41  | 1.54        | 1.43     |
| 9   | I     | 102 | A1EFU | C11-C10 | 3.41  | 1.54        | 1.43     |
| 8   | I     | 101 | BCL   | O2D-CED | 3.41  | 1.53        | 1.45     |
| 9   | 2     | 101 | A1EFU | C11-C10 | 3.41  | 1.54        | 1.43     |
| 9   | G     | 106 | A1EFU | C7-C6   | 3.41  | 1.54        | 1.43     |
| 9   | f     | 101 | A1EFU | C11-C10 | 3.40  | 1.54        | 1.43     |
| 9   | s     | 104 | A1EFU | C16-C17 | 3.40  | 1.54        | 1.43     |
| 16  | C     | 403 | HEC   | CBC-CAC | -3.40 | 1.36        | 1.49     |
| 9   | F     | 104 | A1EFU | C11-C10 | 3.40  | 1.54        | 1.43     |
| 9   | E     | 103 | A1EFU | C11-C10 | 3.40  | 1.54        | 1.43     |
| 9   | k     | 101 | A1EFU | C7-C6   | 3.40  | 1.54        | 1.43     |
| 9   | 2     | 104 | A1EFU | C15-C14 | 3.40  | 1.54        | 1.43     |
| 8   | F     | 102 | BCL   | O2D-CED | 3.40  | 1.53        | 1.45     |
| 8   | t     | 101 | BCL   | O2D-CED | 3.40  | 1.53        | 1.45     |
| 8   | Q     | 101 | BCL   | O2D-CED | 3.40  | 1.53        | 1.45     |
| 8   | r     | 101 | BCL   | O2D-CED | 3.40  | 1.53        | 1.45     |
| 9   | G     | 106 | A1EFU | C11-C10 | 3.40  | 1.54        | 1.43     |
| 9   | J     | 103 | A1EFU | C7-C6   | 3.39  | 1.54        | 1.43     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | k     | 102 | BCL   | O2D-CED | 3.39  | 1.53        | 1.45     |
| 16  | C     | 402 | HEC   | CBC-CAC | -3.39 | 1.36        | 1.49     |
| 9   | K     | 102 | A1EFU | C16-C17 | 3.39  | 1.53        | 1.43     |
| 8   | S     | 101 | BCL   | O2D-CED | 3.39  | 1.53        | 1.45     |
| 9   | k     | 101 | A1EFU | C11-C10 | 3.39  | 1.53        | 1.43     |
| 9   | j     | 101 | A1EFU | C11-C10 | 3.38  | 1.53        | 1.43     |
| 8   | b     | 101 | BCL   | O2D-CED | 3.38  | 1.53        | 1.45     |
| 9   | J     | 102 | A1EFU | C16-C17 | 3.38  | 1.53        | 1.43     |
| 9   | s     | 101 | A1EFU | C11-C10 | 3.38  | 1.53        | 1.43     |
| 8   | N     | 101 | BCL   | O2D-CED | 3.38  | 1.53        | 1.45     |
| 9   | N     | 102 | A1EFU | C16-C17 | 3.37  | 1.53        | 1.43     |
| 8   | n     | 101 | BCL   | O2D-CED | 3.37  | 1.53        | 1.45     |
| 8   | L     | 304 | BCL   | O2D-CED | 3.37  | 1.53        | 1.45     |
| 9   | v     | 102 | A1EFU | C20-C21 | 3.37  | 1.53        | 1.43     |
| 9   | K     | 102 | A1EFU | C15-C14 | 3.37  | 1.53        | 1.43     |
| 8   | P     | 101 | BCL   | O2D-CED | 3.36  | 1.53        | 1.45     |
| 9   | v     | 102 | A1EFU | C15-C14 | 3.35  | 1.53        | 1.43     |
| 8   | s     | 102 | BCL   | O2D-CED | 3.35  | 1.53        | 1.45     |
| 9   | 2     | 102 | A1EFU | C16-C17 | 3.35  | 1.53        | 1.43     |
| 9   | s     | 104 | A1EFU | C15-C14 | 3.35  | 1.53        | 1.43     |
| 9   | p     | 101 | A1EFU | C20-C21 | 3.35  | 1.53        | 1.43     |
| 8   | K     | 101 | BCL   | O2D-CED | 3.34  | 1.53        | 1.45     |
| 8   | B     | 101 | BCL   | O2D-CED | 3.34  | 1.53        | 1.45     |
| 9   | s     | 104 | A1EFU | C20-C21 | 3.34  | 1.53        | 1.43     |
| 8   | D     | 101 | BCL   | O2D-CED | 3.34  | 1.53        | 1.45     |
| 9   | K     | 102 | A1EFU | C20-C21 | 3.34  | 1.53        | 1.43     |
| 8   | L     | 301 | BCL   | O2D-CED | 3.34  | 1.53        | 1.45     |
| 8   | e     | 101 | BCL   | O2D-CED | 3.34  | 1.53        | 1.45     |
| 9   | j     | 103 | A1EFU | C16-C17 | 3.34  | 1.53        | 1.43     |
| 9   | p     | 101 | A1EFU | C16-C17 | 3.33  | 1.53        | 1.43     |
| 9   | N     | 102 | A1EFU | C15-C14 | 3.33  | 1.53        | 1.43     |
| 9   | G     | 105 | A1EFU | C20-C21 | 3.33  | 1.53        | 1.43     |
| 9   | 2     | 104 | A1EFU | C20-C21 | 3.33  | 1.53        | 1.43     |
| 9   | 2     | 102 | A1EFU | C15-C14 | 3.33  | 1.53        | 1.43     |
| 9   | M     | 407 | A1EFU | C20-C21 | 3.32  | 1.53        | 1.43     |
| 9   | 2     | 102 | A1EFU | C20-C21 | 3.32  | 1.53        | 1.43     |
| 9   | J     | 102 | A1EFU | C15-C14 | 3.32  | 1.53        | 1.43     |
| 9   | p     | 101 | A1EFU | C15-C14 | 3.31  | 1.53        | 1.43     |
| 9   | J     | 102 | A1EFU | C20-C21 | 3.31  | 1.53        | 1.43     |
| 9   | M     | 407 | A1EFU | C16-C17 | 3.31  | 1.53        | 1.43     |
| 9   | v     | 102 | A1EFU | C16-C17 | 3.31  | 1.53        | 1.43     |
| 9   | R     | 101 | A1EFU | C16-C17 | 3.31  | 1.53        | 1.43     |

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| Mol | Chain | Res | Type  | Atoms   | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|------|-------------|----------|
| 9   | 2     | 101 | A1EFU | C15-C14 | 3.30 | 1.53        | 1.43     |
| 9   | A     | 102 | A1EFU | C20-C21 | 3.30 | 1.53        | 1.43     |
| 9   | q     | 101 | A1EFU | C16-C17 | 3.30 | 1.53        | 1.43     |
| 9   | f     | 101 | A1EFU | C15-C14 | 3.29 | 1.53        | 1.43     |
| 9   | A     | 102 | A1EFU | C16-C17 | 3.29 | 1.53        | 1.43     |
| 9   | k     | 101 | A1EFU | C16-C17 | 3.29 | 1.53        | 1.43     |
| 9   | R     | 101 | A1EFU | C20-C21 | 3.28 | 1.53        | 1.43     |
| 9   | G     | 105 | A1EFU | C16-C17 | 3.28 | 1.53        | 1.43     |
| 9   | v     | 103 | A1EFU | C20-C21 | 3.28 | 1.53        | 1.43     |
| 9   | f     | 101 | A1EFU | C16-C17 | 3.28 | 1.53        | 1.43     |
| 9   | G     | 105 | A1EFU | C15-C14 | 3.28 | 1.53        | 1.43     |
| 9   | B     | 103 | A1EFU | C20-C21 | 3.28 | 1.53        | 1.43     |
| 9   | D     | 104 | A1EFU | C15-C14 | 3.28 | 1.53        | 1.43     |
| 9   | D     | 105 | A1EFU | C20-C21 | 3.27 | 1.53        | 1.43     |
| 9   | T     | 101 | A1EFU | C20-C21 | 3.27 | 1.53        | 1.43     |
| 9   | a     | 102 | A1EFU | C16-C17 | 3.27 | 1.53        | 1.43     |
| 9   | P     | 103 | A1EFU | C20-C21 | 3.27 | 1.53        | 1.43     |
| 9   | k     | 101 | A1EFU | C15-C14 | 3.27 | 1.53        | 1.43     |
| 9   | M     | 407 | A1EFU | C15-C14 | 3.26 | 1.53        | 1.43     |
| 9   | f     | 101 | A1EFU | C20-C21 | 3.26 | 1.53        | 1.43     |
| 9   | T     | 101 | A1EFU | C15-C14 | 3.26 | 1.53        | 1.43     |
| 9   | j     | 101 | A1EFU | C20-C21 | 3.26 | 1.53        | 1.43     |
| 9   | q     | 101 | A1EFU | C20-C21 | 3.25 | 1.53        | 1.43     |
| 9   | T     | 101 | A1EFU | C16-C17 | 3.25 | 1.53        | 1.43     |
| 9   | B     | 102 | A1EFU | C16-C17 | 3.25 | 1.53        | 1.43     |
| 9   | N     | 102 | A1EFU | C20-C21 | 3.25 | 1.53        | 1.43     |
| 9   | I     | 102 | A1EFU | C20-C21 | 3.25 | 1.53        | 1.43     |
| 9   | B     | 103 | A1EFU | C16-C17 | 3.25 | 1.53        | 1.43     |
| 9   | s     | 101 | A1EFU | C20-C21 | 3.25 | 1.53        | 1.43     |
| 9   | E     | 103 | A1EFU | C20-C21 | 3.25 | 1.53        | 1.43     |
| 9   | 2     | 101 | A1EFU | C20-C21 | 3.25 | 1.53        | 1.43     |
| 9   | q     | 101 | A1EFU | C15-C14 | 3.25 | 1.53        | 1.43     |
| 9   | P     | 103 | A1EFU | C15-C14 | 3.24 | 1.53        | 1.43     |
| 9   | s     | 105 | A1EFU | C16-C17 | 3.24 | 1.53        | 1.43     |
| 9   | s     | 105 | A1EFU | C20-C21 | 3.24 | 1.53        | 1.43     |
| 8   | M     | 403 | BCL   | O2D-CED | 3.24 | 1.52        | 1.45     |
| 9   | k     | 101 | A1EFU | C20-C21 | 3.24 | 1.53        | 1.43     |
| 9   | j     | 103 | A1EFU | C15-C14 | 3.24 | 1.53        | 1.43     |
| 9   | A     | 102 | A1EFU | C15-C14 | 3.24 | 1.53        | 1.43     |
| 9   | j     | 103 | A1EFU | C20-C21 | 3.24 | 1.53        | 1.43     |
| 9   | F     | 104 | A1EFU | C16-C17 | 3.24 | 1.53        | 1.43     |
| 9   | B     | 102 | A1EFU | C20-C21 | 3.24 | 1.53        | 1.43     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 9   | J     | 103 | A1EFU | C20-C21 | 3.24  | 1.53        | 1.43     |
| 9   | B     | 103 | A1EFU | C15-C14 | 3.24  | 1.53        | 1.43     |
| 9   | a     | 102 | A1EFU | C20-C21 | 3.24  | 1.53        | 1.43     |
| 9   | P     | 103 | A1EFU | C16-C17 | 3.24  | 1.53        | 1.43     |
| 9   | s     | 105 | A1EFU | C15-C14 | 3.23  | 1.53        | 1.43     |
| 9   | r     | 102 | A1EFU | C20-C21 | 3.23  | 1.53        | 1.43     |
| 9   | E     | 103 | A1EFU | C16-C17 | 3.23  | 1.53        | 1.43     |
| 9   | D     | 104 | A1EFU | C16-C17 | 3.23  | 1.53        | 1.43     |
| 9   | B     | 102 | A1EFU | C15-C14 | 3.23  | 1.53        | 1.43     |
| 9   | v     | 103 | A1EFU | C16-C17 | 3.22  | 1.53        | 1.43     |
| 9   | G     | 106 | A1EFU | C20-C21 | 3.22  | 1.53        | 1.43     |
| 9   | F     | 104 | A1EFU | C20-C21 | 3.22  | 1.53        | 1.43     |
| 9   | j     | 101 | A1EFU | C16-C17 | 3.22  | 1.53        | 1.43     |
| 9   | R     | 101 | A1EFU | C15-C14 | 3.22  | 1.53        | 1.43     |
| 9   | j     | 101 | A1EFU | C15-C14 | 3.22  | 1.53        | 1.43     |
| 9   | D     | 105 | A1EFU | C15-C14 | 3.21  | 1.53        | 1.43     |
| 9   | D     | 104 | A1EFU | C20-C21 | 3.21  | 1.53        | 1.43     |
| 9   | s     | 101 | A1EFU | C16-C17 | 3.21  | 1.53        | 1.43     |
| 9   | J     | 103 | A1EFU | C15-C14 | 3.21  | 1.53        | 1.43     |
| 9   | r     | 102 | A1EFU | C16-C17 | 3.21  | 1.53        | 1.43     |
| 9   | D     | 105 | A1EFU | C16-C17 | 3.21  | 1.53        | 1.43     |
| 9   | E     | 102 | A1EFU | C16-C17 | 3.20  | 1.53        | 1.43     |
| 9   | r     | 102 | A1EFU | C15-C14 | 3.20  | 1.53        | 1.43     |
| 9   | J     | 103 | A1EFU | C16-C17 | 3.20  | 1.53        | 1.43     |
| 9   | a     | 102 | A1EFU | C15-C14 | 3.19  | 1.53        | 1.43     |
| 9   | E     | 103 | A1EFU | C15-C14 | 3.19  | 1.53        | 1.43     |
| 9   | I     | 102 | A1EFU | C16-C17 | 3.19  | 1.53        | 1.43     |
| 9   | E     | 102 | A1EFU | C20-C21 | 3.19  | 1.53        | 1.43     |
| 9   | E     | 102 | A1EFU | C15-C14 | 3.19  | 1.53        | 1.43     |
| 9   | s     | 101 | A1EFU | C15-C14 | 3.19  | 1.53        | 1.43     |
| 9   | I     | 102 | A1EFU | C15-C14 | 3.19  | 1.53        | 1.43     |
| 9   | 2     | 101 | A1EFU | C16-C17 | 3.17  | 1.53        | 1.43     |
| 9   | v     | 103 | A1EFU | C15-C14 | 3.17  | 1.53        | 1.43     |
| 9   | F     | 104 | A1EFU | C15-C14 | 3.17  | 1.53        | 1.43     |
| 9   | G     | 106 | A1EFU | C15-C14 | 3.16  | 1.53        | 1.43     |
| 10  | H     | 301 | MW9   | C7-C6   | -3.15 | 1.33        | 1.51     |
| 10  | M     | 406 | MW9   | C7-C6   | -3.14 | 1.34        | 1.51     |
| 10  | M     | 405 | MW9   | C7-C6   | -3.14 | 1.34        | 1.51     |
| 10  | D     | 103 | MW9   | C7-C6   | -3.11 | 1.34        | 1.51     |
| 9   | G     | 106 | A1EFU | C16-C17 | 3.10  | 1.53        | 1.43     |
| 8   | K     | 101 | BCL   | O2A-CGA | -3.08 | 1.24        | 1.33     |
| 10  | G     | 103 | MW9   | C7-C6   | -3.08 | 1.34        | 1.51     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 8   | 1     | 101 | BCL  | O2A-CGA | -3.08 | 1.24        | 1.33     |
| 8   | K     | 101 | BCL  | O2D-CGD | -3.07 | 1.25        | 1.33     |
| 8   | I     | 101 | BCL  | O2A-CGA | -3.07 | 1.24        | 1.33     |
| 8   | M     | 402 | BCL  | O2A-CGA | -3.06 | 1.24        | 1.33     |
| 8   | N     | 101 | BCL  | O2A-CGA | -3.05 | 1.24        | 1.33     |
| 8   | G     | 102 | BCL  | O2A-CGA | -3.05 | 1.24        | 1.33     |
| 8   | i     | 101 | BCL  | O2D-CGD | -3.04 | 1.25        | 1.33     |
| 10  | L     | 307 | MW9  | O1-C17  | 3.04  | 1.42        | 1.33     |
| 8   | J     | 101 | BCL  | O2A-CGA | -3.04 | 1.24        | 1.33     |
| 8   | I     | 101 | BCL  | O2D-CGD | -3.04 | 1.25        | 1.33     |
| 10  | M     | 406 | MW9  | O1-C17  | 3.03  | 1.42        | 1.33     |
| 8   | M     | 403 | BCL  | O2A-CGA | -3.03 | 1.24        | 1.33     |
| 8   | L     | 304 | BCL  | O2A-CGA | -3.03 | 1.24        | 1.33     |
| 8   | E     | 101 | BCL  | O2D-CGD | -3.03 | 1.25        | 1.33     |
| 8   | D     | 101 | BCL  | O2A-CGA | -3.02 | 1.24        | 1.33     |
| 8   | R     | 102 | BCL  | O2A-CGA | -3.02 | 1.24        | 1.33     |
| 8   | B     | 101 | BCL  | O2A-CGA | -3.02 | 1.24        | 1.33     |
| 8   | M     | 403 | BCL  | O2D-CGD | -3.02 | 1.25        | 1.33     |
| 8   | F     | 102 | BCL  | O2D-CGD | -3.02 | 1.25        | 1.33     |
| 10  | G     | 103 | MW9  | O1-C17  | 3.02  | 1.42        | 1.33     |
| 10  | G     | 104 | MW9  | O1-C17  | 3.01  | 1.42        | 1.33     |
| 8   | s     | 103 | BCL  | O2A-CGA | -3.01 | 1.24        | 1.33     |
| 8   | 2     | 103 | BCL  | O2D-CGD | -3.01 | 1.25        | 1.33     |
| 10  | D     | 103 | MW9  | O1-C17  | 3.01  | 1.42        | 1.33     |
| 10  | H     | 303 | MW9  | P-O5    | 3.01  | 1.66        | 1.54     |
| 8   | J     | 101 | BCL  | O2D-CGD | -3.01 | 1.25        | 1.33     |
| 8   | r     | 101 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 8   | d     | 101 | BCL  | O2D-CGD | -3.00 | 1.25        | 1.33     |
| 8   | G     | 102 | BCL  | O2D-CGD | -3.00 | 1.25        | 1.33     |
| 8   | Q     | 101 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 8   | 2     | 103 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 8   | E     | 101 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 8   | b     | 101 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 10  | R     | 103 | MW9  | O1-C17  | 3.00  | 1.42        | 1.33     |
| 8   | a     | 101 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 8   | s     | 102 | BCL  | O2A-CGA | -3.00 | 1.24        | 1.33     |
| 8   | P     | 101 | BCL  | O2A-CGA | -2.99 | 1.24        | 1.33     |
| 8   | F     | 101 | BCL  | O2A-CGA | -2.99 | 1.24        | 1.33     |
| 8   | V     | 101 | BCL  | O2A-CGA | -2.99 | 1.24        | 1.33     |
| 8   | L     | 304 | BCL  | O2D-CGD | -2.98 | 1.25        | 1.33     |
| 10  | M     | 405 | MW9  | O1-C17  | 2.98  | 1.42        | 1.33     |
| 8   | n     | 101 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 8   | d     | 101 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |
| 8   | t     | 101 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |
| 8   | q     | 102 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |
| 8   | G     | 101 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |
| 8   | S     | 101 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |
| 8   | F     | 102 | BCL  | O2A-CGA | -2.98 | 1.24        | 1.33     |
| 8   | L     | 301 | BCL  | O2A-CGA | -2.97 | 1.24        | 1.33     |
| 10  | F     | 103 | MW9  | O1-C17  | 2.97  | 1.42        | 1.33     |
| 8   | i     | 101 | BCL  | O2A-CGA | -2.97 | 1.24        | 1.33     |
| 8   | j     | 102 | BCL  | O2A-CGA | -2.96 | 1.24        | 1.33     |
| 8   | s     | 102 | BCL  | O2D-CGD | -2.96 | 1.26        | 1.33     |
| 8   | e     | 101 | BCL  | O2D-CGD | -2.95 | 1.26        | 1.33     |
| 8   | k     | 102 | BCL  | O2A-CGA | -2.95 | 1.24        | 1.33     |
| 10  | H     | 303 | MW9  | O1-C17  | 2.95  | 1.41        | 1.33     |
| 8   | v     | 101 | BCL  | O2A-CGA | -2.95 | 1.24        | 1.33     |
| 8   | A     | 101 | BCL  | O2A-CGA | -2.94 | 1.24        | 1.33     |
| 8   | L     | 301 | BCL  | O2D-CGD | -2.94 | 1.26        | 1.33     |
| 8   | l     | 101 | BCL  | O2D-CGD | -2.94 | 1.26        | 1.33     |
| 8   | b     | 101 | BCL  | O2D-CGD | -2.94 | 1.26        | 1.33     |
| 8   | n     | 101 | BCL  | O2D-CGD | -2.93 | 1.26        | 1.33     |
| 8   | e     | 101 | BCL  | O2A-CGA | -2.93 | 1.24        | 1.33     |
| 8   | k     | 102 | BCL  | O2D-CGD | -2.91 | 1.26        | 1.33     |
| 8   | D     | 101 | BCL  | O2D-CGD | -2.91 | 1.26        | 1.33     |
| 8   | B     | 101 | BCL  | O2D-CGD | -2.91 | 1.26        | 1.33     |
| 8   | P     | 102 | BCL  | O2A-CGA | -2.91 | 1.24        | 1.33     |
| 8   | q     | 102 | BCL  | O2D-CGD | -2.90 | 1.26        | 1.33     |
| 8   | A     | 101 | BCL  | O2D-CGD | -2.90 | 1.26        | 1.33     |
| 8   | Q     | 101 | BCL  | O2D-CGD | -2.90 | 1.26        | 1.33     |
| 8   | V     | 101 | BCL  | O2D-CGD | -2.90 | 1.26        | 1.33     |
| 8   | S     | 101 | BCL  | O1A-CGA | -2.90 | 1.13        | 1.22     |
| 8   | M     | 402 | BCL  | O2D-CGD | -2.90 | 1.26        | 1.33     |
| 8   | J     | 101 | BCL  | O1A-CGA | -2.90 | 1.13        | 1.22     |
| 8   | P     | 101 | BCL  | O2D-CGD | -2.89 | 1.26        | 1.33     |
| 8   | I     | 101 | BCL  | O1A-CGA | -2.89 | 1.14        | 1.22     |
| 8   | N     | 101 | BCL  | O2D-CGD | -2.89 | 1.26        | 1.33     |
| 8   | S     | 101 | BCL  | O2D-CGD | -2.89 | 1.26        | 1.33     |
| 8   | R     | 102 | BCL  | O2D-CGD | -2.88 | 1.26        | 1.33     |
| 8   | j     | 102 | BCL  | O2D-CGD | -2.88 | 1.26        | 1.33     |
| 8   | a     | 101 | BCL  | O2D-CGD | -2.88 | 1.26        | 1.33     |
| 8   | R     | 102 | BCL  | O1A-CGA | -2.88 | 1.14        | 1.22     |
| 8   | n     | 101 | BCL  | O1A-CGA | -2.88 | 1.14        | 1.22     |
| 10  | H     | 301 | MW9  | O1-C17  | 2.88  | 1.41        | 1.33     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 8   | G     | 102 | BCL  | O1A-CGA | -2.87 | 1.14        | 1.22     |
| 8   | L     | 301 | BCL  | O1A-CGA | -2.87 | 1.14        | 1.22     |
| 8   | B     | 101 | BCL  | O1A-CGA | -2.86 | 1.14        | 1.22     |
| 8   | L     | 304 | BCL  | O1A-CGA | -2.85 | 1.14        | 1.22     |
| 8   | V     | 101 | BCL  | O1A-CGA | -2.85 | 1.14        | 1.22     |
| 8   | s     | 103 | BCL  | O2D-CGD | -2.85 | 1.26        | 1.33     |
| 8   | r     | 101 | BCL  | O2D-CGD | -2.85 | 1.26        | 1.33     |
| 8   | K     | 101 | BCL  | O1A-CGA | -2.85 | 1.14        | 1.22     |
| 8   | l     | 101 | BCL  | O1A-CGA | -2.85 | 1.14        | 1.22     |
| 8   | D     | 101 | BCL  | O1A-CGA | -2.85 | 1.14        | 1.22     |
| 8   | P     | 101 | BCL  | O1A-CGA | -2.84 | 1.14        | 1.22     |
| 8   | d     | 101 | BCL  | O1A-CGA | -2.84 | 1.14        | 1.22     |
| 8   | Q     | 101 | BCL  | O1A-CGA | -2.84 | 1.14        | 1.22     |
| 8   | s     | 102 | BCL  | O1A-CGA | -2.84 | 1.14        | 1.22     |
| 8   | M     | 402 | BCL  | O1A-CGA | -2.84 | 1.14        | 1.22     |
| 8   | v     | 101 | BCL  | O2D-CGD | -2.84 | 1.26        | 1.33     |
| 8   | t     | 101 | BCL  | O2D-CGD | -2.84 | 1.26        | 1.33     |
| 8   | b     | 101 | BCL  | O1A-CGA | -2.83 | 1.14        | 1.22     |
| 8   | M     | 403 | BCL  | O1A-CGA | -2.83 | 1.14        | 1.22     |
| 8   | F     | 101 | BCL  | O2D-CGD | -2.82 | 1.26        | 1.33     |
| 8   | k     | 102 | BCL  | O1A-CGA | -2.82 | 1.14        | 1.22     |
| 8   | F     | 101 | BCL  | O1A-CGA | -2.82 | 1.14        | 1.22     |
| 8   | N     | 101 | BCL  | O1A-CGA | -2.82 | 1.14        | 1.22     |
| 8   | e     | 101 | BCL  | O1A-CGA | -2.82 | 1.14        | 1.22     |
| 8   | j     | 102 | BCL  | O1A-CGA | -2.82 | 1.14        | 1.22     |
| 8   | i     | 101 | BCL  | O1A-CGA | -2.82 | 1.14        | 1.22     |
| 11  | L     | 305 | LMT  | O3'-C3' | -2.81 | 1.36        | 1.43     |
| 8   | q     | 102 | BCL  | O1A-CGA | -2.81 | 1.14        | 1.22     |
| 8   | v     | 101 | BCL  | O1A-CGA | -2.81 | 1.14        | 1.22     |
| 8   | r     | 101 | BCL  | O1A-CGA | -2.81 | 1.14        | 1.22     |
| 8   | A     | 101 | BCL  | O1A-CGA | -2.81 | 1.14        | 1.22     |
| 8   | a     | 101 | BCL  | O1A-CGA | -2.80 | 1.14        | 1.22     |
| 8   | s     | 103 | BCL  | O1A-CGA | -2.80 | 1.14        | 1.22     |
| 8   | 2     | 103 | BCL  | O1A-CGA | -2.80 | 1.14        | 1.22     |
| 8   | t     | 101 | BCL  | O1A-CGA | -2.79 | 1.14        | 1.22     |
| 8   | P     | 102 | BCL  | O1A-CGA | -2.79 | 1.14        | 1.22     |
| 8   | G     | 101 | BCL  | O1A-CGA | -2.79 | 1.14        | 1.22     |
| 8   | G     | 101 | BCL  | O2D-CGD | -2.77 | 1.26        | 1.33     |
| 10  | M     | 406 | MW9  | O8-C24  | 2.75  | 1.42        | 1.34     |
| 10  | D     | 103 | MW9  | O8-C24  | 2.74  | 1.42        | 1.34     |
| 8   | P     | 102 | BCL  | O2D-CGD | -2.72 | 1.26        | 1.33     |
| 11  | D     | 102 | LMT  | O3'-C3' | -2.70 | 1.36        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 11  | H     | 302 | LMT  | O3'-C3' | -2.70 | 1.36        | 1.43     |
| 10  | L     | 307 | MW9  | O8-C24  | 2.68  | 1.41        | 1.34     |
| 10  | G     | 103 | MW9  | O8-C24  | 2.67  | 1.41        | 1.34     |
| 10  | R     | 103 | MW9  | O8-C24  | 2.67  | 1.41        | 1.34     |
| 11  | C     | 404 | LMT  | O3'-C3' | -2.66 | 1.36        | 1.43     |
| 15  | H     | 304 | CDL  | OB6-CB4 | -2.66 | 1.39        | 1.46     |
| 10  | H     | 303 | MW9  | O8-C24  | 2.66  | 1.41        | 1.34     |
| 10  | F     | 103 | MW9  | O8-C24  | 2.63  | 1.41        | 1.34     |
| 11  | L     | 306 | LMT  | O3'-C3' | -2.63 | 1.36        | 1.43     |
| 10  | G     | 104 | MW9  | O8-C24  | 2.62  | 1.41        | 1.34     |
| 8   | F     | 102 | BCL  | O1A-CGA | -2.61 | 1.14        | 1.22     |
| 10  | H     | 301 | MW9  | O8-C19  | -2.60 | 1.40        | 1.46     |
| 10  | F     | 103 | MW9  | O8-C19  | -2.60 | 1.40        | 1.46     |
| 10  | H     | 301 | MW9  | O8-C24  | 2.59  | 1.41        | 1.34     |
| 10  | M     | 405 | MW9  | O8-C24  | 2.58  | 1.41        | 1.34     |
| 10  | M     | 405 | MW9  | O8-C19  | -2.57 | 1.40        | 1.46     |
| 10  | G     | 103 | MW9  | O8-C19  | -2.55 | 1.40        | 1.46     |
| 10  | H     | 303 | MW9  | O8-C19  | -2.54 | 1.40        | 1.46     |
| 8   | P     | 102 | BCL  | C4B-NB  | 2.54  | 1.37        | 1.35     |
| 10  | G     | 104 | MW9  | O8-C19  | -2.54 | 1.40        | 1.46     |
| 8   | E     | 101 | BCL  | O1A-CGA | -2.53 | 1.15        | 1.22     |
| 10  | R     | 103 | MW9  | O8-C19  | -2.53 | 1.40        | 1.46     |
| 8   | D     | 101 | BCL  | C1D-C2D | -2.52 | 1.40        | 1.45     |
| 10  | M     | 406 | MW9  | O8-C19  | -2.50 | 1.40        | 1.46     |
| 10  | D     | 103 | MW9  | O8-C19  | -2.50 | 1.40        | 1.46     |
| 8   | Q     | 101 | BCL  | C1D-C2D | -2.50 | 1.40        | 1.45     |
| 11  | L     | 305 | LMT  | O2'-C2' | -2.49 | 1.37        | 1.43     |
| 8   | I     | 101 | BCL  | C1D-C2D | -2.49 | 1.40        | 1.45     |
| 10  | H     | 303 | MW9  | C6-C7   | -2.49 | 1.34        | 1.51     |
| 10  | F     | 103 | MW9  | C6-C7   | -2.48 | 1.34        | 1.51     |
| 8   | d     | 101 | BCL  | C1D-C2D | -2.48 | 1.40        | 1.45     |
| 8   | k     | 102 | BCL  | C1D-C2D | -2.48 | 1.40        | 1.45     |
| 10  | G     | 104 | MW9  | C6-C7   | -2.48 | 1.34        | 1.51     |
| 8   | l     | 101 | BCL  | C1D-C2D | -2.48 | 1.40        | 1.45     |
| 8   | s     | 103 | BCL  | C1D-C2D | -2.47 | 1.40        | 1.45     |
| 8   | P     | 101 | BCL  | C1D-C2D | -2.46 | 1.40        | 1.45     |
| 10  | L     | 307 | MW9  | O8-C19  | -2.46 | 1.40        | 1.46     |
| 15  | L     | 308 | CDL  | OB6-CB4 | -2.45 | 1.40        | 1.46     |
| 8   | F     | 101 | BCL  | C1D-C2D | -2.45 | 1.40        | 1.45     |
| 8   | s     | 102 | BCL  | C1D-C2D | -2.44 | 1.40        | 1.45     |
| 8   | K     | 101 | BCL  | C1D-C2D | -2.43 | 1.40        | 1.45     |
| 8   | r     | 101 | BCL  | C4B-NB  | 2.43  | 1.37        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 8   | A     | 101 | BCL  | C4B-NB  | 2.43  | 1.37        | 1.35     |
| 11  | D     | 102 | LMT  | O2'-C2' | -2.43 | 1.37        | 1.43     |
| 8   | n     | 101 | BCL  | C1D-C2D | -2.43 | 1.40        | 1.45     |
| 8   | G     | 101 | BCL  | C1D-C2D | -2.42 | 1.40        | 1.45     |
| 8   | A     | 101 | BCL  | C1D-C2D | -2.42 | 1.40        | 1.45     |
| 8   | J     | 101 | BCL  | C1D-C2D | -2.42 | 1.40        | 1.45     |
| 10  | H     | 301 | MW9  | C35-C34 | -2.41 | 1.34        | 1.51     |
| 8   | L     | 301 | BCL  | C1D-C2D | -2.41 | 1.40        | 1.45     |
| 8   | B     | 101 | BCL  | C1D-C2D | -2.41 | 1.40        | 1.45     |
| 10  | L     | 307 | MW9  | C35-C34 | -2.41 | 1.34        | 1.51     |
| 8   | j     | 102 | BCL  | C1D-C2D | -2.41 | 1.40        | 1.45     |
| 14  | L     | 302 | BPH  | C3B-C2B | 2.40  | 1.43        | 1.39     |
| 8   | P     | 102 | BCL  | C1D-C2D | -2.40 | 1.40        | 1.45     |
| 10  | F     | 103 | MW9  | C35-C34 | -2.40 | 1.34        | 1.51     |
| 15  | L     | 308 | CDL  | OB8-CB7 | 2.40  | 1.40        | 1.33     |
| 8   | i     | 101 | BCL  | C1D-C2D | -2.39 | 1.40        | 1.45     |
| 8   | b     | 101 | BCL  | C1D-C2D | -2.39 | 1.40        | 1.45     |
| 8   | q     | 102 | BCL  | C1D-C2D | -2.39 | 1.40        | 1.45     |
| 8   | N     | 101 | BCL  | C1D-C2D | -2.39 | 1.40        | 1.45     |
| 8   | S     | 101 | BCL  | C1D-C2D | -2.39 | 1.40        | 1.45     |
| 8   | n     | 101 | BCL  | C4B-NB  | 2.39  | 1.37        | 1.35     |
| 15  | L     | 308 | CDL  | OA8-CA7 | 2.38  | 1.40        | 1.33     |
| 11  | H     | 302 | LMT  | O2'-C2' | -2.38 | 1.37        | 1.43     |
| 8   | L     | 304 | BCL  | C1D-C2D | -2.38 | 1.40        | 1.45     |
| 8   | V     | 101 | BCL  | C1D-C2D | -2.37 | 1.40        | 1.45     |
| 11  | D     | 102 | LMT  | O2B-C2B | -2.36 | 1.37        | 1.43     |
| 8   | r     | 101 | BCL  | C1D-C2D | -2.36 | 1.40        | 1.45     |
| 11  | D     | 102 | LMT  | O3B-C3B | -2.35 | 1.37        | 1.43     |
| 15  | H     | 304 | CDL  | OA6-CA4 | -2.35 | 1.40        | 1.46     |
| 8   | v     | 101 | BCL  | C1D-C2D | -2.35 | 1.40        | 1.45     |
| 8   | F     | 102 | BCL  | C1D-C2D | -2.35 | 1.40        | 1.45     |
| 8   | M     | 403 | BCL  | C1D-C2D | -2.35 | 1.40        | 1.45     |
| 8   | E     | 101 | BCL  | C1D-C2D | -2.34 | 1.40        | 1.45     |
| 8   | d     | 101 | BCL  | C3B-CAB | 2.33  | 1.55        | 1.49     |
| 8   | r     | 101 | BCL  | C3B-C2B | -2.32 | 1.35        | 1.39     |
| 16  | C     | 401 | HEC  | CBB-CAB | -2.32 | 1.40        | 1.49     |
| 16  | C     | 402 | HEC  | CBB-CAB | -2.32 | 1.40        | 1.49     |
| 8   | G     | 102 | BCL  | C1D-C2D | -2.32 | 1.40        | 1.45     |
| 8   | 2     | 103 | BCL  | C1D-C2D | -2.32 | 1.40        | 1.45     |
| 8   | e     | 101 | BCL  | C1D-C2D | -2.32 | 1.40        | 1.45     |
| 16  | C     | 403 | HEC  | CBB-CAB | -2.31 | 1.40        | 1.49     |
| 8   | n     | 101 | BCL  | C3B-C2B | -2.31 | 1.35        | 1.39     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 15  | H     | 304 | CDL   | OB8-CB6 | -2.31 | 1.39        | 1.45     |
| 8   | F     | 102 | BCL   | C3D-C4D | -2.30 | 1.39        | 1.44     |
| 10  | H     | 303 | MW9   | C35-C34 | -2.30 | 1.34        | 1.49     |
| 15  | H     | 304 | CDL   | OA8-CA7 | 2.30  | 1.40        | 1.33     |
| 11  | C     | 404 | LMT   | O2'-C2' | -2.30 | 1.37        | 1.43     |
| 15  | H     | 304 | CDL   | OB8-CB7 | 2.29  | 1.40        | 1.33     |
| 8   | s     | 102 | BCL   | C1B-NB  | 2.29  | 1.37        | 1.35     |
| 9   | s     | 104 | A1EFU | C8-C9   | 2.28  | 1.50        | 1.45     |
| 8   | e     | 101 | BCL   | C3D-C4D | -2.28 | 1.39        | 1.44     |
| 8   | t     | 101 | BCL   | C3B-C2B | -2.28 | 1.35        | 1.39     |
| 8   | M     | 402 | BCL   | C1D-C2D | -2.28 | 1.40        | 1.45     |
| 9   | 2     | 104 | A1EFU | C12-C13 | 2.28  | 1.50        | 1.45     |
| 15  | L     | 308 | CDL   | OA6-CA4 | -2.28 | 1.40        | 1.46     |
| 8   | L     | 301 | BCL   | C4B-NB  | 2.28  | 1.37        | 1.35     |
| 8   | d     | 101 | BCL   | C3D-C4D | -2.28 | 1.39        | 1.44     |
| 8   | a     | 101 | BCL   | C1D-C2D | -2.28 | 1.40        | 1.45     |
| 15  | L     | 308 | CDL   | OA6-CA5 | 2.27  | 1.40        | 1.34     |
| 8   | A     | 101 | BCL   | C3B-C2B | -2.27 | 1.35        | 1.39     |
| 9   | a     | 102 | A1EFU | C12-C13 | 2.27  | 1.50        | 1.45     |
| 8   | P     | 102 | BCL   | C3B-C2B | -2.27 | 1.35        | 1.39     |
| 11  | L     | 306 | LMT   | O2'-C2' | -2.26 | 1.37        | 1.43     |
| 8   | R     | 102 | BCL   | C1D-C2D | -2.26 | 1.40        | 1.45     |
| 14  | M     | 408 | BPH   | C3B-C2B | 2.26  | 1.43        | 1.39     |
| 8   | I     | 101 | BCL   | C3D-C4D | -2.25 | 1.39        | 1.44     |
| 9   | v     | 102 | A1EFU | C12-C13 | 2.24  | 1.50        | 1.45     |
| 8   | E     | 101 | BCL   | C3D-C4D | -2.24 | 1.39        | 1.44     |
| 8   | i     | 101 | BCL   | C3D-C4D | -2.23 | 1.39        | 1.44     |
| 8   | M     | 403 | BCL   | C3D-C4D | -2.23 | 1.39        | 1.44     |
| 9   | K     | 102 | A1EFU | C12-C13 | 2.23  | 1.50        | 1.45     |
| 15  | H     | 304 | CDL   | OA6-CA5 | 2.23  | 1.40        | 1.34     |
| 8   | b     | 101 | BCL   | C3D-C4D | -2.23 | 1.39        | 1.44     |
| 8   | a     | 101 | BCL   | C3D-C4D | -2.22 | 1.39        | 1.44     |
| 8   | t     | 101 | BCL   | C3D-C4D | -2.22 | 1.39        | 1.44     |
| 9   | s     | 104 | A1EFU | C12-C13 | 2.22  | 1.50        | 1.45     |
| 8   | G     | 102 | BCL   | C3D-C4D | -2.22 | 1.39        | 1.44     |
| 8   | R     | 102 | BCL   | C3D-C4D | -2.21 | 1.39        | 1.44     |
| 8   | J     | 101 | BCL   | C3D-C4D | -2.21 | 1.39        | 1.44     |
| 8   | P     | 102 | BCL   | C3D-C4D | -2.21 | 1.39        | 1.44     |
| 8   | j     | 102 | BCL   | C3D-C4D | -2.21 | 1.39        | 1.44     |
| 8   | l     | 101 | BCL   | C3D-C4D | -2.21 | 1.39        | 1.44     |
| 8   | n     | 101 | BCL   | C3D-C4D | -2.21 | 1.39        | 1.44     |
| 8   | t     | 101 | BCL   | C1D-C2D | -2.20 | 1.41        | 1.45     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | F     | 101 | BCL   | C3D-C4D | -2.20 | 1.39        | 1.44     |
| 9   | a     | 102 | A1EFU | C8-C9   | 2.20  | 1.50        | 1.45     |
| 8   | Q     | 101 | BCL   | C3D-C4D | -2.19 | 1.39        | 1.44     |
| 8   | s     | 103 | BCL   | C3D-C4D | -2.19 | 1.39        | 1.44     |
| 8   | D     | 101 | BCL   | C3D-C4D | -2.19 | 1.39        | 1.44     |
| 8   | K     | 101 | BCL   | C3D-C4D | -2.19 | 1.39        | 1.44     |
| 8   | G     | 101 | BCL   | C3D-C4D | -2.19 | 1.39        | 1.44     |
| 8   | v     | 101 | BCL   | C3D-C4D | -2.18 | 1.39        | 1.44     |
| 8   | N     | 101 | BCL   | C3D-C4D | -2.18 | 1.39        | 1.44     |
| 9   | N     | 102 | A1EFU | C8-C9   | 2.18  | 1.50        | 1.45     |
| 15  | L     | 308 | CDL   | OB6-CB5 | 2.18  | 1.40        | 1.34     |
| 9   | P     | 103 | A1EFU | C12-C13 | 2.17  | 1.50        | 1.45     |
| 8   | k     | 102 | BCL   | C3D-C4D | -2.17 | 1.39        | 1.44     |
| 9   | 2     | 104 | A1EFU | C8-C9   | 2.17  | 1.50        | 1.45     |
| 9   | K     | 102 | A1EFU | C8-C9   | 2.17  | 1.50        | 1.45     |
| 8   | r     | 101 | BCL   | C3D-C4D | -2.17 | 1.39        | 1.44     |
| 15  | H     | 304 | CDL   | OA8-CA6 | -2.16 | 1.40        | 1.45     |
| 8   | s     | 102 | BCL   | C4B-NB  | 2.16  | 1.37        | 1.35     |
| 8   | L     | 304 | BCL   | C3D-C4D | -2.16 | 1.39        | 1.44     |
| 8   | M     | 402 | BCL   | C3D-C4D | -2.16 | 1.39        | 1.44     |
| 8   | L     | 304 | BCL   | C4B-NB  | 2.15  | 1.37        | 1.35     |
| 8   | s     | 102 | BCL   | C3D-C4D | -2.15 | 1.39        | 1.44     |
| 8   | q     | 102 | BCL   | C3D-C4D | -2.15 | 1.39        | 1.44     |
| 8   | A     | 101 | BCL   | C3D-C4D | -2.15 | 1.39        | 1.44     |
| 8   | 2     | 103 | BCL   | C3D-C4D | -2.15 | 1.39        | 1.44     |
| 8   | L     | 301 | BCL   | C3D-C2D | -2.15 | 1.33        | 1.39     |
| 8   | S     | 101 | BCL   | C3D-C4D | -2.15 | 1.39        | 1.44     |
| 8   | t     | 101 | BCL   | C3B-CAB | 2.15  | 1.54        | 1.49     |
| 9   | M     | 407 | A1EFU | C12-C13 | 2.14  | 1.50        | 1.45     |
| 8   | a     | 101 | BCL   | C4B-NB  | 2.14  | 1.37        | 1.35     |
| 8   | B     | 101 | BCL   | C3D-C4D | -2.14 | 1.39        | 1.44     |
| 9   | J     | 102 | A1EFU | C12-C13 | 2.14  | 1.50        | 1.45     |
| 8   | P     | 101 | BCL   | C3D-C4D | -2.14 | 1.39        | 1.44     |
| 8   | V     | 101 | BCL   | C3D-C4D | -2.13 | 1.39        | 1.44     |
| 8   | G     | 101 | BCL   | C4B-NB  | 2.13  | 1.37        | 1.35     |
| 9   | G     | 105 | A1EFU | C12-C13 | 2.13  | 1.50        | 1.45     |
| 8   | R     | 102 | BCL   | C4B-NB  | 2.12  | 1.37        | 1.35     |
| 8   | 1     | 101 | BCL   | C4B-NB  | 2.12  | 1.37        | 1.35     |
| 9   | j     | 103 | A1EFU | C8-C9   | 2.12  | 1.50        | 1.45     |
| 9   | q     | 101 | A1EFU | C12-C13 | 2.12  | 1.50        | 1.45     |
| 9   | a     | 102 | A1EFU | C4-C5   | 2.12  | 1.50        | 1.45     |
| 15  | L     | 308 | CDL   | OB8-CB6 | -2.12 | 1.40        | 1.45     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | i     | 101 | BCL   | C4B-NB  | 2.12  | 1.37        | 1.35     |
| 9   | j     | 101 | A1EFU | C8-C9   | 2.11  | 1.50        | 1.45     |
| 9   | K     | 102 | A1EFU | C4-C5   | 2.11  | 1.50        | 1.45     |
| 9   | j     | 103 | A1EFU | C12-C13 | 2.11  | 1.50        | 1.45     |
| 9   | r     | 102 | A1EFU | C4-C5   | 2.11  | 1.50        | 1.45     |
| 9   | T     | 101 | A1EFU | C12-C13 | 2.11  | 1.50        | 1.45     |
| 9   | E     | 103 | A1EFU | C4-C5   | 2.11  | 1.50        | 1.45     |
| 9   | P     | 103 | A1EFU | C8-C9   | 2.11  | 1.50        | 1.45     |
| 9   | B     | 103 | A1EFU | C4-C5   | 2.10  | 1.50        | 1.45     |
| 8   | Q     | 101 | BCL   | C3D-C2D | -2.10 | 1.33        | 1.39     |
| 9   | D     | 105 | A1EFU | C4-C5   | 2.10  | 1.50        | 1.45     |
| 8   | L     | 301 | BCL   | C3D-C4D | -2.10 | 1.39        | 1.44     |
| 8   | B     | 101 | BCL   | C3D-C2D | -2.09 | 1.33        | 1.39     |
| 9   | A     | 102 | A1EFU | C12-C13 | 2.09  | 1.50        | 1.45     |
| 9   | T     | 101 | A1EFU | C8-C9   | 2.09  | 1.50        | 1.45     |
| 9   | f     | 101 | A1EFU | C4-C5   | 2.09  | 1.50        | 1.45     |
| 15  | L     | 308 | CDL   | OA8-CA6 | -2.09 | 1.40        | 1.45     |
| 11  | D     | 102 | LMT   | O4'-C4B | -2.09 | 1.38        | 1.43     |
| 9   | s     | 101 | A1EFU | C4-C5   | 2.09  | 1.50        | 1.45     |
| 9   | 2     | 104 | A1EFU | C4-C5   | 2.08  | 1.50        | 1.45     |
| 9   | q     | 101 | A1EFU | C8-C9   | 2.08  | 1.50        | 1.45     |
| 9   | D     | 104 | A1EFU | C12-C13 | 2.08  | 1.50        | 1.45     |
| 9   | J     | 103 | A1EFU | C4-C5   | 2.08  | 1.50        | 1.45     |
| 9   | p     | 101 | A1EFU | C12-C13 | 2.08  | 1.50        | 1.45     |
| 9   | G     | 106 | A1EFU | C4-C5   | 2.08  | 1.50        | 1.45     |
| 9   | 2     | 101 | A1EFU | C12-C13 | 2.08  | 1.50        | 1.45     |
| 9   | I     | 102 | A1EFU | C4-C5   | 2.08  | 1.50        | 1.45     |
| 9   | A     | 102 | A1EFU | C4-C5   | 2.08  | 1.50        | 1.45     |
| 8   | t     | 101 | BCL   | C4B-NB  | 2.08  | 1.37        | 1.35     |
| 8   | P     | 101 | BCL   | C3D-C2D | -2.07 | 1.33        | 1.39     |
| 9   | s     | 105 | A1EFU | C4-C5   | 2.07  | 1.50        | 1.45     |
| 8   | 2     | 103 | BCL   | C4B-NB  | 2.07  | 1.37        | 1.35     |
| 8   | I     | 101 | BCL   | C3D-C2D | -2.07 | 1.33        | 1.39     |
| 9   | T     | 101 | A1EFU | C4-C5   | 2.07  | 1.50        | 1.45     |
| 9   | r     | 102 | A1EFU | C8-C9   | 2.07  | 1.50        | 1.45     |
| 9   | 2     | 102 | A1EFU | C8-C9   | 2.07  | 1.50        | 1.45     |
| 9   | J     | 102 | A1EFU | C4-C5   | 2.06  | 1.50        | 1.45     |
| 9   | J     | 103 | A1EFU | C8-C9   | 2.06  | 1.50        | 1.45     |
| 9   | B     | 102 | A1EFU | C4-C5   | 2.06  | 1.50        | 1.45     |
| 9   | v     | 103 | A1EFU | C4-C5   | 2.06  | 1.50        | 1.45     |
| 9   | s     | 104 | A1EFU | C4-C5   | 2.06  | 1.50        | 1.45     |
| 9   | R     | 101 | A1EFU | C8-C9   | 2.06  | 1.50        | 1.45     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | s     | 103 | BCL   | C4B-NB  | 2.06  | 1.37        | 1.35     |
| 8   | D     | 101 | BCL   | C3D-C2D | -2.06 | 1.33        | 1.39     |
| 8   | v     | 101 | BCL   | C4B-NB  | 2.06  | 1.37        | 1.35     |
| 9   | D     | 104 | A1EFU | C8-C9   | 2.06  | 1.50        | 1.45     |
| 9   | G     | 105 | A1EFU | C8-C9   | 2.06  | 1.50        | 1.45     |
| 9   | A     | 102 | A1EFU | C8-C9   | 2.06  | 1.50        | 1.45     |
| 9   | v     | 102 | A1EFU | C8-C9   | 2.05  | 1.50        | 1.45     |
| 9   | R     | 101 | A1EFU | C12-C13 | 2.05  | 1.50        | 1.45     |
| 9   | v     | 103 | A1EFU | C8-C9   | 2.05  | 1.50        | 1.45     |
| 9   | B     | 102 | A1EFU | C12-C13 | 2.05  | 1.50        | 1.45     |
| 9   | N     | 102 | A1EFU | C12-C13 | 2.05  | 1.50        | 1.45     |
| 8   | G     | 102 | BCL   | C3D-C2D | -2.05 | 1.33        | 1.39     |
| 9   | N     | 102 | A1EFU | C4-C5   | 2.05  | 1.50        | 1.45     |
| 9   | E     | 102 | A1EFU | C12-C13 | 2.05  | 1.50        | 1.45     |
| 15  | H     | 304 | CDL   | OB6-CB5 | 2.05  | 1.40        | 1.34     |
| 9   | B     | 103 | A1EFU | C8-C9   | 2.05  | 1.50        | 1.45     |
| 9   | D     | 105 | A1EFU | C8-C9   | 2.05  | 1.50        | 1.45     |
| 9   | 2     | 102 | A1EFU | C12-C13 | 2.05  | 1.50        | 1.45     |
| 8   | s     | 102 | BCL   | C3D-C2D | -2.04 | 1.33        | 1.39     |
| 9   | v     | 102 | A1EFU | C4-C5   | 2.04  | 1.50        | 1.45     |
| 8   | L     | 304 | BCL   | C2C-C3C | -2.04 | 1.48        | 1.54     |
| 9   | j     | 101 | A1EFU | C4-C5   | 2.04  | 1.50        | 1.45     |
| 9   | s     | 105 | A1EFU | C12-C13 | 2.04  | 1.50        | 1.45     |
| 8   | 1     | 101 | BCL   | C3D-C2D | -2.04 | 1.33        | 1.39     |
| 9   | B     | 102 | A1EFU | C8-C9   | 2.04  | 1.50        | 1.45     |
| 9   | 2     | 101 | A1EFU | C4-C5   | 2.04  | 1.50        | 1.45     |
| 9   | k     | 101 | A1EFU | C12-C13 | 2.03  | 1.50        | 1.45     |
| 8   | A     | 101 | BCL   | C3D-C2D | -2.03 | 1.33        | 1.39     |
| 8   | M     | 403 | BCL   | C4B-NB  | 2.03  | 1.37        | 1.35     |
| 9   | F     | 104 | A1EFU | C12-C13 | 2.03  | 1.50        | 1.45     |
| 8   | v     | 101 | BCL   | C3B-CAB | 2.03  | 1.54        | 1.49     |
| 9   | p     | 101 | A1EFU | C4-C5   | 2.03  | 1.50        | 1.45     |
| 8   | F     | 102 | BCL   | C3D-C2D | -2.03 | 1.33        | 1.39     |
| 8   | E     | 101 | BCL   | C4B-NB  | 2.03  | 1.37        | 1.35     |
| 9   | M     | 407 | A1EFU | C8-C9   | 2.03  | 1.50        | 1.45     |
| 9   | k     | 101 | A1EFU | C8-C9   | 2.03  | 1.50        | 1.45     |
| 8   | 2     | 103 | BCL   | C3D-C2D | -2.02 | 1.33        | 1.39     |
| 8   | S     | 101 | BCL   | C4B-NB  | 2.02  | 1.37        | 1.35     |
| 8   | J     | 101 | BCL   | C3D-C2D | -2.02 | 1.33        | 1.39     |
| 8   | q     | 102 | BCL   | C3D-C2D | -2.02 | 1.33        | 1.39     |
| 9   | P     | 103 | A1EFU | C4-C5   | 2.02  | 1.50        | 1.45     |
| 8   | s     | 102 | BCL   | C3B-CAB | 2.02  | 1.54        | 1.49     |

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| Mol | Chain | Res | Type  | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|-------|---------|-------|-------------|----------|
| 8   | n     | 101 | BCL   | C3D-C2D | -2.02 | 1.33        | 1.39     |
| 9   | 2     | 102 | A1EFU | C4-C5   | 2.02  | 1.50        | 1.45     |
| 9   | j     | 101 | A1EFU | C12-C13 | 2.02  | 1.50        | 1.45     |
| 8   | a     | 101 | BCL   | C5-C3   | 2.02  | 1.55        | 1.51     |
| 9   | D     | 104 | A1EFU | C4-C5   | 2.02  | 1.50        | 1.45     |
| 9   | s     | 105 | A1EFU | C8-C9   | 2.02  | 1.50        | 1.45     |
| 8   | M     | 403 | BCL   | C3D-C2D | -2.02 | 1.33        | 1.39     |
| 8   | N     | 101 | BCL   | C3D-C2D | -2.01 | 1.33        | 1.39     |
| 8   | E     | 101 | BCL   | C3D-C2D | -2.01 | 1.33        | 1.39     |
| 9   | q     | 101 | A1EFU | C4-C5   | 2.01  | 1.50        | 1.45     |
| 8   | k     | 102 | BCL   | C4B-NB  | 2.01  | 1.37        | 1.35     |
| 9   | r     | 102 | A1EFU | C12-C13 | 2.01  | 1.50        | 1.45     |
| 8   | q     | 102 | BCL   | C4B-NB  | 2.01  | 1.37        | 1.35     |
| 8   | e     | 101 | BCL   | C4B-NB  | 2.01  | 1.37        | 1.35     |
| 9   | p     | 101 | A1EFU | C8-C9   | 2.01  | 1.50        | 1.45     |
| 9   | f     | 101 | A1EFU | C12-C13 | 2.01  | 1.50        | 1.45     |
| 8   | V     | 101 | BCL   | C3D-C2D | -2.01 | 1.33        | 1.39     |
| 8   | R     | 102 | BCL   | C3D-C2D | -2.01 | 1.33        | 1.39     |
| 8   | K     | 101 | BCL   | C3D-C2D | -2.01 | 1.33        | 1.39     |
| 8   | F     | 102 | BCL   | C3B-C2B | -2.01 | 1.35        | 1.39     |
| 8   | M     | 403 | BCL   | C3B-C2B | -2.00 | 1.35        | 1.39     |
| 8   | S     | 101 | BCL   | C3D-C2D | -2.00 | 1.33        | 1.39     |
| 8   | j     | 102 | BCL   | C4B-NB  | 2.00  | 1.37        | 1.35     |
| 8   | 2     | 103 | BCL   | C3B-C2B | -2.00 | 1.35        | 1.39     |
| 9   | k     | 101 | A1EFU | C4-C5   | 2.00  | 1.50        | 1.45     |
| 8   | N     | 101 | BCL   | C4B-NB  | 2.00  | 1.37        | 1.35     |
| 8   | b     | 101 | BCL   | C3D-C2D | -2.00 | 1.33        | 1.39     |
| 9   | J     | 102 | A1EFU | C8-C9   | 2.00  | 1.50        | 1.45     |
| 8   | e     | 101 | BCL   | C3D-C2D | -2.00 | 1.33        | 1.39     |
| 9   | 2     | 101 | A1EFU | C8-C9   | 2.00  | 1.50        | 1.45     |
| 9   | J     | 103 | A1EFU | C12-C13 | 2.00  | 1.50        | 1.45     |
| 8   | G     | 102 | BCL   | C4B-NB  | 2.00  | 1.37        | 1.35     |
| 8   | P     | 102 | BCL   | C3B-CAB | 2.00  | 1.54        | 1.49     |
| 8   | j     | 102 | BCL   | C2C-C3C | -2.00 | 1.48        | 1.54     |

All (1801) bond angle outliers are listed below:

| Mol | Chain | Res | Type  | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|--------|-------------|----------|
| 9   | j     | 101 | A1EFU | C11-C10-C9  | -11.21 | 111.31      | 127.31   |
| 9   | k     | 101 | A1EFU | C7-C6-C5    | -10.60 | 112.18      | 127.31   |
| 9   | a     | 102 | A1EFU | C7-C6-C5    | -10.56 | 112.24      | 127.31   |
| 9   | a     | 102 | A1EFU | C15-C14-C13 | -10.54 | 112.27      | 127.31   |

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| Mol | Chain | Res | Type  | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|--------|-------------|----------|
| 9   | I     | 102 | A1EFU | C7-C6-C5    | -10.35 | 112.53      | 127.31   |
| 9   | E     | 103 | A1EFU | C7-C6-C5    | -10.35 | 112.54      | 127.31   |
| 9   | G     | 106 | A1EFU | C7-C6-C5    | -10.30 | 112.62      | 127.31   |
| 9   | p     | 101 | A1EFU | C7-C6-C5    | -10.21 | 112.74      | 127.31   |
| 9   | J     | 103 | A1EFU | C7-C6-C5    | -10.16 | 112.81      | 127.31   |
| 9   | k     | 101 | A1EFU | C15-C14-C13 | -10.14 | 112.84      | 127.31   |
| 9   | I     | 102 | A1EFU | C11-C10-C9  | -10.10 | 112.90      | 127.31   |
| 9   | p     | 101 | A1EFU | C16-C17-C18 | -10.07 | 112.93      | 127.31   |
| 9   | B     | 103 | A1EFU | C7-C6-C5    | -10.07 | 112.93      | 127.31   |
| 9   | I     | 102 | A1EFU | C15-C14-C13 | -10.06 | 112.96      | 127.31   |
| 9   | 2     | 101 | A1EFU | C11-C10-C9  | -10.03 | 113.00      | 127.31   |
| 9   | f     | 101 | A1EFU | C11-C10-C9  | -10.01 | 113.02      | 127.31   |
| 9   | G     | 106 | A1EFU | C11-C10-C9  | -10.01 | 113.03      | 127.31   |
| 9   | D     | 105 | A1EFU | C7-C6-C5    | -9.96  | 113.10      | 127.31   |
| 9   | s     | 101 | A1EFU | C7-C6-C5    | -9.91  | 113.17      | 127.31   |
| 9   | s     | 105 | A1EFU | C11-C10-C9  | -9.90  | 113.18      | 127.31   |
| 9   | J     | 103 | A1EFU | C11-C10-C9  | -9.86  | 113.24      | 127.31   |
| 9   | v     | 102 | A1EFU | C7-C6-C5    | -9.81  | 113.31      | 127.31   |
| 9   | M     | 407 | A1EFU | C7-C6-C5    | -9.68  | 113.50      | 127.31   |
| 9   | 2     | 102 | A1EFU | C15-C14-C13 | -9.68  | 113.50      | 127.31   |
| 9   | G     | 106 | A1EFU | C15-C14-C13 | -9.64  | 113.56      | 127.31   |
| 9   | D     | 105 | A1EFU | C11-C10-C9  | -9.63  | 113.57      | 127.31   |
| 9   | s     | 101 | A1EFU | C11-C10-C9  | -9.58  | 113.64      | 127.31   |
| 9   | r     | 102 | A1EFU | C7-C6-C5    | -9.57  | 113.64      | 127.31   |
| 9   | r     | 102 | A1EFU | C15-C14-C13 | -9.57  | 113.64      | 127.31   |
| 9   | j     | 103 | A1EFU | C16-C17-C18 | -9.56  | 113.66      | 127.31   |
| 9   | R     | 101 | A1EFU | C7-C6-C5    | -9.55  | 113.69      | 127.31   |
| 9   | k     | 101 | A1EFU | C11-C10-C9  | -9.52  | 113.73      | 127.31   |
| 9   | A     | 102 | A1EFU | C11-C10-C9  | -9.51  | 113.74      | 127.31   |
| 9   | T     | 101 | A1EFU | C15-C14-C13 | -9.50  | 113.75      | 127.31   |
| 9   | j     | 101 | A1EFU | C16-C17-C18 | -9.50  | 113.76      | 127.31   |
| 9   | G     | 106 | A1EFU | C16-C17-C18 | -9.50  | 113.76      | 127.31   |
| 9   | q     | 101 | A1EFU | C16-C17-C18 | -9.48  | 113.78      | 127.31   |
| 9   | A     | 102 | A1EFU | C15-C14-C13 | -9.46  | 113.81      | 127.31   |
| 9   | j     | 101 | A1EFU | C7-C6-C5    | -9.44  | 113.84      | 127.31   |
| 9   | N     | 102 | A1EFU | C11-C10-C9  | -9.41  | 113.88      | 127.31   |
| 9   | D     | 105 | A1EFU | C15-C14-C13 | -9.40  | 113.90      | 127.31   |
| 9   | 2     | 101 | A1EFU | C7-C6-C5    | -9.40  | 113.90      | 127.31   |
| 9   | T     | 101 | A1EFU | C11-C10-C9  | -9.39  | 113.91      | 127.31   |
| 9   | F     | 104 | A1EFU | C15-C14-C13 | -9.39  | 113.91      | 127.31   |
| 9   | E     | 102 | A1EFU | C15-C14-C13 | -9.33  | 114.00      | 127.31   |
| 9   | v     | 103 | A1EFU | C7-C6-C5    | -9.32  | 114.01      | 127.31   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | B     | 102 | A1EFU | C15-C14-C13 | -9.31 | 114.03      | 127.31   |
| 9   | K     | 102 | A1EFU | C11-C10-C9  | -9.26 | 114.09      | 127.31   |
| 9   | E     | 103 | A1EFU | C11-C10-C9  | -9.25 | 114.11      | 127.31   |
| 9   | E     | 102 | A1EFU | C11-C10-C9  | -9.24 | 114.12      | 127.31   |
| 9   | M     | 407 | A1EFU | C11-C10-C9  | -9.21 | 114.16      | 127.31   |
| 9   | B     | 102 | A1EFU | C11-C10-C9  | -9.21 | 114.17      | 127.31   |
| 9   | s     | 105 | A1EFU | C7-C6-C5    | -9.18 | 114.20      | 127.31   |
| 9   | J     | 103 | A1EFU | C15-C14-C13 | -9.17 | 114.22      | 127.31   |
| 9   | J     | 102 | A1EFU | C11-C10-C9  | -9.17 | 114.23      | 127.31   |
| 9   | F     | 104 | A1EFU | C11-C10-C9  | -9.16 | 114.24      | 127.31   |
| 9   | P     | 103 | A1EFU | C15-C14-C13 | -9.16 | 114.24      | 127.31   |
| 9   | v     | 102 | A1EFU | C11-C10-C9  | -9.16 | 114.24      | 127.31   |
| 9   | J     | 103 | A1EFU | C16-C17-C18 | -9.15 | 114.25      | 127.31   |
| 9   | p     | 101 | A1EFU | C11-C10-C9  | -9.13 | 114.28      | 127.31   |
| 9   | f     | 101 | A1EFU | C7-C6-C5    | -9.12 | 114.29      | 127.31   |
| 9   | p     | 101 | A1EFU | C15-C14-C13 | -9.06 | 114.38      | 127.31   |
| 9   | k     | 101 | A1EFU | C16-C17-C18 | -9.05 | 114.40      | 127.31   |
| 9   | j     | 101 | A1EFU | C15-C14-C13 | -9.04 | 114.41      | 127.31   |
| 9   | J     | 102 | A1EFU | C15-C14-C13 | -8.99 | 114.48      | 127.31   |
| 9   | G     | 105 | A1EFU | C16-C17-C18 | -8.96 | 114.53      | 127.31   |
| 9   | F     | 104 | A1EFU | C7-C6-C5    | -8.95 | 114.54      | 127.31   |
| 9   | j     | 103 | A1EFU | C15-C14-C13 | -8.94 | 114.54      | 127.31   |
| 9   | s     | 101 | A1EFU | C16-C17-C18 | -8.94 | 114.55      | 127.31   |
| 9   | A     | 102 | A1EFU | C7-C6-C5    | -8.93 | 114.57      | 127.31   |
| 9   | a     | 102 | A1EFU | C16-C17-C18 | -8.93 | 114.57      | 127.31   |
| 9   | N     | 102 | A1EFU | C15-C14-C13 | -8.92 | 114.58      | 127.31   |
| 9   | s     | 101 | A1EFU | C15-C14-C13 | -8.91 | 114.60      | 127.31   |
| 9   | R     | 101 | A1EFU | C11-C10-C9  | -8.88 | 114.64      | 127.31   |
| 9   | q     | 101 | A1EFU | C7-C6-C5    | -8.88 | 114.64      | 127.31   |
| 9   | D     | 105 | A1EFU | C16-C17-C18 | -8.87 | 114.65      | 127.31   |
| 9   | v     | 103 | A1EFU | C15-C14-C13 | -8.86 | 114.67      | 127.31   |
| 9   | D     | 104 | A1EFU | C11-C10-C9  | -8.83 | 114.71      | 127.31   |
| 9   | R     | 101 | A1EFU | C15-C14-C13 | -8.81 | 114.73      | 127.31   |
| 9   | j     | 103 | A1EFU | C7-C6-C5    | -8.81 | 114.73      | 127.31   |
| 9   | D     | 104 | A1EFU | C16-C17-C18 | -8.79 | 114.76      | 127.31   |
| 9   | P     | 103 | A1EFU | C7-C6-C5    | -8.79 | 114.77      | 127.31   |
| 9   | N     | 102 | A1EFU | C7-C6-C5    | -8.77 | 114.80      | 127.31   |
| 10  | H     | 303 | MW9   | C35-C34-C33 | 8.75  | 152.75      | 112.71   |
| 9   | v     | 103 | A1EFU | C16-C17-C18 | -8.71 | 114.87      | 127.31   |
| 9   | f     | 101 | A1EFU | C15-C14-C13 | -8.71 | 114.88      | 127.31   |
| 9   | P     | 103 | A1EFU | C11-C10-C9  | -8.70 | 114.89      | 127.31   |
| 9   | 2     | 102 | A1EFU | C7-C6-C5    | -8.68 | 114.92      | 127.31   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | s     | 105 | A1EFU | C15-C14-C13 | -8.67 | 114.94      | 127.31   |
| 9   | G     | 105 | A1EFU | C15-C14-C13 | -8.64 | 114.98      | 127.31   |
| 9   | 2     | 101 | A1EFU | C16-C17-C18 | -8.62 | 115.01      | 127.31   |
| 9   | I     | 102 | A1EFU | C16-C17-C18 | -8.61 | 115.02      | 127.31   |
| 9   | J     | 102 | A1EFU | C7-C6-C5    | -8.60 | 115.03      | 127.31   |
| 9   | j     | 103 | A1EFU | C11-C10-C9  | -8.59 | 115.05      | 127.31   |
| 9   | 2     | 104 | A1EFU | C11-C10-C9  | -8.59 | 115.05      | 127.31   |
| 9   | P     | 103 | A1EFU | C16-C17-C18 | -8.58 | 115.06      | 127.31   |
| 9   | D     | 104 | A1EFU | C7-C6-C5    | -8.57 | 115.08      | 127.31   |
| 9   | T     | 101 | A1EFU | C7-C6-C5    | -8.55 | 115.10      | 127.31   |
| 9   | f     | 101 | A1EFU | C16-C17-C18 | -8.55 | 115.11      | 127.31   |
| 9   | 2     | 101 | A1EFU | C15-C14-C13 | -8.53 | 115.14      | 127.31   |
| 9   | K     | 102 | A1EFU | C7-C6-C5    | -8.52 | 115.15      | 127.31   |
| 9   | B     | 102 | A1EFU | C7-C6-C5    | -8.50 | 115.17      | 127.31   |
| 9   | E     | 103 | A1EFU | C15-C14-C13 | -8.50 | 115.18      | 127.31   |
| 9   | B     | 103 | A1EFU | C11-C10-C9  | -8.48 | 115.21      | 127.31   |
| 9   | v     | 102 | A1EFU | C16-C17-C18 | -8.47 | 115.22      | 127.31   |
| 9   | 2     | 102 | A1EFU | C11-C10-C9  | -8.44 | 115.27      | 127.31   |
| 9   | r     | 102 | A1EFU | C11-C10-C9  | -8.41 | 115.30      | 127.31   |
| 9   | K     | 102 | A1EFU | C15-C14-C13 | -8.40 | 115.32      | 127.31   |
| 9   | K     | 102 | A1EFU | C16-C17-C18 | -8.36 | 115.37      | 127.31   |
| 9   | v     | 102 | A1EFU | C15-C14-C13 | -8.34 | 115.40      | 127.31   |
| 9   | E     | 103 | A1EFU | C16-C17-C18 | -8.34 | 115.41      | 127.31   |
| 9   | 2     | 102 | A1EFU | C16-C17-C18 | -8.32 | 115.43      | 127.31   |
| 9   | B     | 103 | A1EFU | C15-C14-C13 | -8.29 | 115.48      | 127.31   |
| 9   | r     | 102 | A1EFU | C16-C17-C18 | -8.28 | 115.50      | 127.31   |
| 9   | N     | 102 | A1EFU | C16-C17-C18 | -8.23 | 115.56      | 127.31   |
| 9   | s     | 105 | A1EFU | C16-C17-C18 | -8.20 | 115.61      | 127.31   |
| 9   | q     | 101 | A1EFU | C15-C14-C13 | -8.13 | 115.71      | 127.31   |
| 9   | M     | 407 | A1EFU | C15-C14-C13 | -8.13 | 115.71      | 127.31   |
| 9   | G     | 105 | A1EFU | C7-C6-C5    | -8.12 | 115.72      | 127.31   |
| 9   | a     | 102 | A1EFU | C11-C10-C9  | -8.10 | 115.76      | 127.31   |
| 9   | v     | 103 | A1EFU | C11-C10-C9  | -8.09 | 115.77      | 127.31   |
| 9   | A     | 102 | A1EFU | C16-C17-C18 | -8.06 | 115.80      | 127.31   |
| 9   | 2     | 104 | A1EFU | C7-C6-C5    | -8.01 | 115.88      | 127.31   |
| 9   | G     | 105 | A1EFU | C11-C10-C9  | -7.93 | 116.00      | 127.31   |
| 9   | q     | 101 | A1EFU | C11-C10-C9  | -7.86 | 116.09      | 127.31   |
| 9   | B     | 103 | A1EFU | C16-C17-C18 | -7.82 | 116.15      | 127.31   |
| 9   | E     | 102 | A1EFU | C7-C6-C5    | -7.76 | 116.24      | 127.31   |
| 9   | F     | 104 | A1EFU | C16-C17-C18 | -7.67 | 116.36      | 127.31   |
| 9   | B     | 102 | A1EFU | C16-C17-C18 | -7.65 | 116.39      | 127.31   |
| 9   | T     | 101 | A1EFU | C16-C17-C18 | -7.65 | 116.40      | 127.31   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | s     | 104 | A1EFU | C16-C17-C18 | -7.62 | 116.43      | 127.31   |
| 9   | 2     | 104 | A1EFU | C15-C14-C13 | -7.59 | 116.47      | 127.31   |
| 9   | 2     | 104 | A1EFU | C16-C17-C18 | -7.54 | 116.55      | 127.31   |
| 9   | R     | 101 | A1EFU | C16-C17-C18 | -7.53 | 116.57      | 127.31   |
| 9   | E     | 102 | A1EFU | C16-C17-C18 | -7.48 | 116.63      | 127.31   |
| 9   | s     | 104 | A1EFU | C15-C14-C13 | -7.43 | 116.71      | 127.31   |
| 9   | J     | 102 | A1EFU | C16-C17-C18 | -7.40 | 116.74      | 127.31   |
| 9   | s     | 104 | A1EFU | C11-C10-C9  | -7.39 | 116.77      | 127.31   |
| 9   | s     | 104 | A1EFU | C7-C6-C5    | -7.29 | 116.91      | 127.31   |
| 9   | D     | 104 | A1EFU | C15-C14-C13 | -7.28 | 116.92      | 127.31   |
| 10  | M     | 405 | MW9   | C35-C34-C33 | 7.06  | 152.91      | 112.43   |
| 10  | M     | 406 | MW9   | C35-C34-C33 | 7.06  | 152.89      | 112.43   |
| 10  | R     | 103 | MW9   | C35-C34-C33 | 7.02  | 152.65      | 112.43   |
| 9   | M     | 407 | A1EFU | C16-C17-C18 | -6.99 | 117.33      | 127.31   |
| 10  | D     | 103 | MW9   | C35-C34-C33 | 6.98  | 152.42      | 112.43   |
| 10  | G     | 103 | MW9   | C35-C34-C33 | 6.96  | 152.32      | 112.43   |
| 8   | n     | 101 | BCL   | C1D-ND-C4D  | -6.60 | 101.65      | 106.33   |
| 9   | a     | 102 | A1EFU | CM4-C9-C10  | -6.55 | 113.75      | 122.92   |
| 8   | s     | 102 | BCL   | C1D-ND-C4D  | -6.51 | 101.71      | 106.33   |
| 8   | 2     | 103 | BCL   | C1D-ND-C4D  | -6.49 | 101.72      | 106.33   |
| 8   | M     | 403 | BCL   | CMB-C2B-C1B | -6.43 | 118.59      | 128.46   |
| 8   | P     | 102 | BCL   | C1D-ND-C4D  | -6.42 | 101.77      | 106.33   |
| 8   | d     | 101 | BCL   | CMB-C2B-C1B | -6.42 | 118.60      | 128.46   |
| 8   | L     | 304 | BCL   | CMB-C2B-C1B | -6.39 | 118.64      | 128.46   |
| 8   | G     | 101 | BCL   | C1D-ND-C4D  | -6.36 | 101.81      | 106.33   |
| 8   | i     | 101 | BCL   | CMB-C2B-C1B | -6.36 | 118.69      | 128.46   |
| 8   | r     | 101 | BCL   | C1D-ND-C4D  | -6.36 | 101.82      | 106.33   |
| 9   | a     | 102 | A1EFU | CM5-C13-C14 | -6.36 | 114.02      | 122.92   |
| 8   | L     | 301 | BCL   | C1D-ND-C4D  | -6.33 | 101.84      | 106.33   |
| 8   | j     | 102 | BCL   | CMB-C2B-C1B | -6.32 | 118.74      | 128.46   |
| 8   | I     | 101 | BCL   | CMB-C2B-C1B | -6.32 | 118.74      | 128.46   |
| 8   | i     | 101 | BCL   | C1D-ND-C4D  | -6.32 | 101.84      | 106.33   |
| 8   | 2     | 103 | BCL   | CMB-C2B-C1B | -6.30 | 118.79      | 128.46   |
| 8   | q     | 102 | BCL   | CMB-C2B-C1B | -6.29 | 118.79      | 128.46   |
| 8   | B     | 101 | BCL   | C1D-ND-C4D  | -6.29 | 101.86      | 106.33   |
| 8   | J     | 101 | BCL   | CMB-C2B-C1B | -6.29 | 118.80      | 128.46   |
| 8   | G     | 102 | BCL   | CMB-C2B-C1B | -6.28 | 118.81      | 128.46   |
| 8   | k     | 102 | BCL   | CMB-C2B-C1B | -6.28 | 118.81      | 128.46   |
| 8   | a     | 101 | BCL   | CMB-C2B-C1B | -6.28 | 118.81      | 128.46   |
| 8   | e     | 101 | BCL   | CMB-C2B-C1B | -6.27 | 118.83      | 128.46   |
| 8   | F     | 101 | BCL   | CMB-C2B-C1B | -6.27 | 118.83      | 128.46   |
| 8   | L     | 301 | BCL   | CMB-C2B-C1B | -6.27 | 118.83      | 128.46   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | 1     | 101 | BCL   | CMB-C2B-C1B | -6.26 | 118.84      | 128.46   |
| 8   | N     | 101 | BCL   | CMB-C2B-C1B | -6.26 | 118.84      | 128.46   |
| 8   | E     | 101 | BCL   | CMB-C2B-C1B | -6.25 | 118.86      | 128.46   |
| 8   | v     | 101 | BCL   | CMB-C2B-C1B | -6.24 | 118.87      | 128.46   |
| 8   | v     | 101 | BCL   | C1D-ND-C4D  | -6.24 | 101.90      | 106.33   |
| 8   | G     | 101 | BCL   | CMB-C2B-C1B | -6.23 | 118.88      | 128.46   |
| 8   | M     | 402 | BCL   | CMB-C2B-C1B | -6.23 | 118.89      | 128.46   |
| 8   | s     | 103 | BCL   | CMB-C2B-C1B | -6.23 | 118.89      | 128.46   |
| 8   | s     | 103 | BCL   | C1D-ND-C4D  | -6.22 | 101.91      | 106.33   |
| 8   | Q     | 101 | BCL   | CMB-C2B-C1B | -6.22 | 118.90      | 128.46   |
| 8   | R     | 102 | BCL   | CMB-C2B-C1B | -6.22 | 118.90      | 128.46   |
| 8   | F     | 102 | BCL   | CMB-C2B-C1B | -6.21 | 118.91      | 128.46   |
| 8   | D     | 101 | BCL   | CMB-C2B-C1B | -6.21 | 118.92      | 128.46   |
| 8   | B     | 101 | BCL   | CMB-C2B-C1B | -6.19 | 118.95      | 128.46   |
| 8   | M     | 402 | BCL   | C1D-ND-C4D  | -6.19 | 101.94      | 106.33   |
| 10  | H     | 301 | MW9   | C35-C34-C33 | 6.19  | 152.74      | 112.55   |
| 9   | p     | 101 | A1EFU | CM6-C18-C17 | -6.19 | 114.25      | 122.92   |
| 8   | b     | 101 | BCL   | C1D-ND-C4D  | -6.17 | 101.95      | 106.33   |
| 8   | S     | 101 | BCL   | CMB-C2B-C1B | -6.17 | 118.98      | 128.46   |
| 8   | b     | 101 | BCL   | CMB-C2B-C1B | -6.17 | 118.98      | 128.46   |
| 8   | a     | 101 | BCL   | C1D-ND-C4D  | -6.16 | 101.96      | 106.33   |
| 8   | K     | 101 | BCL   | CMB-C2B-C1B | -6.16 | 119.00      | 128.46   |
| 8   | k     | 102 | BCL   | C1D-ND-C4D  | -6.15 | 101.96      | 106.33   |
| 10  | F     | 103 | MW9   | C35-C34-C33 | 6.15  | 152.48      | 112.55   |
| 8   | P     | 101 | BCL   | CMB-C2B-C1B | -6.14 | 119.03      | 128.46   |
| 8   | q     | 102 | BCL   | C1D-ND-C4D  | -6.14 | 101.98      | 106.33   |
| 9   | D     | 104 | A1EFU | C16-C15-C14 | -6.13 | 110.93      | 123.47   |
| 8   | s     | 102 | BCL   | C1C-NC-C4C  | -6.12 | 103.95      | 106.71   |
| 10  | L     | 307 | MW9   | C35-C34-C33 | 6.12  | 152.28      | 112.55   |
| 8   | S     | 101 | BCL   | C1D-ND-C4D  | -6.09 | 102.01      | 106.33   |
| 9   | E     | 102 | A1EFU | C15-C16-C17 | -6.09 | 111.00      | 123.47   |
| 9   | j     | 101 | A1EFU | CM4-C9-C10  | -6.07 | 114.42      | 122.92   |
| 8   | K     | 101 | BCL   | C1D-ND-C4D  | -6.06 | 102.03      | 106.33   |
| 8   | L     | 304 | BCL   | C1D-ND-C4D  | -6.05 | 102.04      | 106.33   |
| 8   | A     | 101 | BCL   | C1D-ND-C4D  | -6.05 | 102.04      | 106.33   |
| 9   | v     | 103 | A1EFU | CM5-C13-C14 | -6.04 | 114.46      | 122.92   |
| 8   | N     | 101 | BCL   | C1D-ND-C4D  | -6.01 | 102.07      | 106.33   |
| 8   | E     | 101 | BCL   | C1D-ND-C4D  | -6.00 | 102.07      | 106.33   |
| 8   | e     | 101 | BCL   | C1D-ND-C4D  | -5.96 | 102.10      | 106.33   |
| 8   | j     | 102 | BCL   | C1D-ND-C4D  | -5.95 | 102.11      | 106.33   |
| 8   | G     | 102 | BCL   | C1D-ND-C4D  | -5.95 | 102.11      | 106.33   |
| 9   | s     | 105 | A1EFU | CM3-C5-C6   | -5.93 | 114.61      | 122.92   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | T     | 101 | A1EFU | C15-C16-C17 | -5.93 | 111.33      | 123.47   |
| 9   | j     | 103 | A1EFU | CM6-C18-C17 | -5.92 | 114.62      | 122.92   |
| 8   | M     | 403 | BCL   | C1D-ND-C4D  | -5.91 | 102.14      | 106.33   |
| 8   | D     | 101 | BCL   | C1D-ND-C4D  | -5.90 | 102.14      | 106.33   |
| 8   | V     | 101 | BCL   | C1D-ND-C4D  | -5.90 | 102.15      | 106.33   |
| 9   | k     | 101 | A1EFU | CM5-C13-C14 | -5.89 | 114.67      | 122.92   |
| 9   | f     | 101 | A1EFU | CM3-C5-C6   | -5.89 | 114.67      | 122.92   |
| 9   | F     | 104 | A1EFU | C15-C16-C17 | -5.89 | 111.41      | 123.47   |
| 9   | j     | 101 | A1EFU | CM6-C18-C17 | -5.87 | 114.69      | 122.92   |
| 9   | G     | 105 | A1EFU | CM6-C18-C17 | -5.87 | 114.69      | 122.92   |
| 9   | q     | 101 | A1EFU | C16-C15-C14 | -5.86 | 111.46      | 123.47   |
| 9   | G     | 106 | A1EFU | CM6-C18-C17 | -5.86 | 114.72      | 122.92   |
| 8   | F     | 102 | BCL   | C1D-ND-C4D  | -5.85 | 102.18      | 106.33   |
| 8   | V     | 101 | BCL   | CMB-C2B-C1B | -5.85 | 119.47      | 128.46   |
| 9   | B     | 102 | A1EFU | C15-C16-C17 | -5.85 | 111.49      | 123.47   |
| 8   | P     | 101 | BCL   | C1D-ND-C4D  | -5.83 | 102.19      | 106.33   |
| 9   | r     | 102 | A1EFU | C15-C16-C17 | -5.81 | 111.57      | 123.47   |
| 9   | P     | 103 | A1EFU | CM5-C13-C14 | -5.81 | 114.79      | 122.92   |
| 8   | l     | 101 | BCL   | C1D-ND-C4D  | -5.78 | 102.23      | 106.33   |
| 9   | q     | 101 | A1EFU | CM6-C18-C17 | -5.77 | 114.84      | 122.92   |
| 9   | J     | 103 | A1EFU | CM6-C18-C17 | -5.76 | 114.86      | 122.92   |
| 8   | L     | 301 | BCL   | C2D-C1D-ND  | 5.76  | 114.35      | 110.10   |
| 9   | j     | 103 | A1EFU | CM5-C13-C14 | -5.76 | 114.86      | 122.92   |
| 8   | I     | 101 | BCL   | C1D-ND-C4D  | -5.74 | 102.26      | 106.33   |
| 9   | N     | 102 | A1EFU | CM4-C9-C10  | -5.74 | 114.89      | 122.92   |
| 8   | J     | 101 | BCL   | C1D-ND-C4D  | -5.73 | 102.26      | 106.33   |
| 9   | A     | 102 | A1EFU | C15-C16-C17 | -5.73 | 111.74      | 123.47   |
| 8   | R     | 102 | BCL   | C1D-ND-C4D  | -5.73 | 102.27      | 106.33   |
| 9   | D     | 105 | A1EFU | CM3-C5-C6   | -5.72 | 114.91      | 122.92   |
| 8   | Q     | 101 | BCL   | C1D-ND-C4D  | -5.70 | 102.29      | 106.33   |
| 9   | a     | 102 | A1EFU | C15-C16-C17 | -5.68 | 111.84      | 123.47   |
| 9   | G     | 105 | A1EFU | CM5-C13-C14 | -5.67 | 114.97      | 122.92   |
| 9   | s     | 101 | A1EFU | C16-C15-C14 | -5.67 | 111.85      | 123.47   |
| 8   | F     | 101 | BCL   | C1D-ND-C4D  | -5.67 | 102.31      | 106.33   |
| 9   | R     | 101 | A1EFU | C15-C16-C17 | -5.65 | 111.91      | 123.47   |
| 9   | 2     | 101 | A1EFU | CM6-C18-C17 | -5.64 | 115.02      | 122.92   |
| 8   | s     | 102 | BCL   | C2D-C1D-ND  | 5.64  | 114.26      | 110.10   |
| 8   | 2     | 103 | BCL   | C2D-C1D-ND  | 5.64  | 114.26      | 110.10   |
| 8   | n     | 101 | BCL   | C2D-C1D-ND  | 5.64  | 114.26      | 110.10   |
| 9   | J     | 103 | A1EFU | C16-C15-C14 | -5.63 | 111.95      | 123.47   |
| 9   | r     | 102 | A1EFU | CM3-C5-C6   | -5.63 | 115.04      | 122.92   |
| 9   | a     | 102 | A1EFU | CM6-C18-C17 | -5.62 | 115.05      | 122.92   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | E     | 103 | A1EFU | C16-C15-C14 | -5.62 | 111.96      | 123.47   |
| 8   | B     | 101 | BCL   | C2D-C1D-ND  | 5.59  | 114.22      | 110.10   |
| 9   | I     | 102 | A1EFU | C15-C16-C17 | -5.59 | 112.03      | 123.47   |
| 8   | S     | 101 | BCL   | C2D-C1D-ND  | 5.58  | 114.22      | 110.10   |
| 8   | F     | 101 | BCL   | O2D-CGD-CBD | 5.57  | 121.17      | 111.27   |
| 9   | p     | 101 | A1EFU | CM4-C9-C10  | -5.57 | 115.12      | 122.92   |
| 9   | J     | 103 | A1EFU | CM3-C5-C6   | -5.57 | 115.12      | 122.92   |
| 9   | P     | 103 | A1EFU | CM6-C18-C17 | -5.56 | 115.13      | 122.92   |
| 9   | v     | 102 | A1EFU | CM3-C5-C6   | -5.56 | 115.13      | 122.92   |
| 9   | G     | 106 | A1EFU | CM3-C5-C6   | -5.56 | 115.14      | 122.92   |
| 9   | q     | 101 | A1EFU | CM5-C13-C14 | -5.56 | 115.14      | 122.92   |
| 9   | 2     | 102 | A1EFU | CM5-C13-C14 | -5.55 | 115.14      | 122.92   |
| 8   | P     | 102 | BCL   | CMB-C2B-C1B | -5.55 | 119.93      | 128.46   |
| 9   | D     | 105 | A1EFU | CM6-C18-C17 | -5.55 | 115.15      | 122.92   |
| 9   | B     | 103 | A1EFU | CM3-C5-C6   | -5.55 | 115.15      | 122.92   |
| 9   | k     | 101 | A1EFU | CM6-C18-C17 | -5.55 | 115.16      | 122.92   |
| 9   | E     | 103 | A1EFU | CM3-C5-C6   | -5.54 | 115.16      | 122.92   |
| 9   | s     | 101 | A1EFU | CM3-C5-C6   | -5.54 | 115.16      | 122.92   |
| 9   | I     | 102 | A1EFU | CM3-C5-C6   | -5.53 | 115.17      | 122.92   |
| 9   | I     | 102 | A1EFU | CM5-C13-C14 | -5.53 | 115.18      | 122.92   |
| 9   | p     | 101 | A1EFU | CM3-C5-C6   | -5.53 | 115.18      | 122.92   |
| 9   | k     | 101 | A1EFU | CM3-C5-C6   | -5.52 | 115.19      | 122.92   |
| 8   | i     | 101 | BCL   | O2D-CGD-CBD | 5.52  | 121.07      | 111.27   |
| 8   | N     | 101 | BCL   | C1C-NC-C4C  | -5.52 | 104.23      | 106.71   |
| 8   | r     | 101 | BCL   | CMB-C2B-C1B | -5.51 | 119.99      | 128.46   |
| 8   | i     | 101 | BCL   | C2D-C1D-ND  | 5.51  | 114.17      | 110.10   |
| 8   | d     | 101 | BCL   | C1D-ND-C4D  | -5.50 | 102.43      | 106.33   |
| 9   | 2     | 101 | A1EFU | CM4-C9-C10  | -5.50 | 115.22      | 122.92   |
| 9   | j     | 101 | A1EFU | C16-C15-C14 | -5.50 | 112.21      | 123.47   |
| 9   | v     | 103 | A1EFU | C16-C15-C14 | -5.50 | 112.21      | 123.47   |
| 8   | r     | 101 | BCL   | C2D-C1D-ND  | 5.50  | 114.15      | 110.10   |
| 9   | T     | 101 | A1EFU | CM5-C13-C14 | -5.48 | 115.25      | 122.92   |
| 9   | r     | 102 | A1EFU | CM5-C13-C14 | -5.47 | 115.26      | 122.92   |
| 8   | k     | 102 | BCL   | C2D-C1D-ND  | 5.47  | 114.14      | 110.10   |
| 8   | P     | 102 | BCL   | C2D-C1D-ND  | 5.47  | 114.14      | 110.10   |
| 9   | J     | 103 | A1EFU | CM5-C13-C14 | -5.46 | 115.27      | 122.92   |
| 8   | d     | 101 | BCL   | O2D-CGD-CBD | 5.46  | 120.97      | 111.27   |
| 8   | I     | 101 | BCL   | C1C-NC-C4C  | -5.46 | 104.25      | 106.71   |
| 9   | f     | 101 | A1EFU | C16-C15-C14 | -5.46 | 112.30      | 123.47   |
| 8   | v     | 101 | BCL   | C2D-C1D-ND  | 5.45  | 114.12      | 110.10   |
| 9   | p     | 101 | A1EFU | C16-C15-C14 | -5.44 | 112.33      | 123.47   |
| 9   | s     | 105 | A1EFU | C16-C15-C14 | -5.44 | 112.33      | 123.47   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | j     | 103 | A1EFU | CM3-C5-C6   | -5.43 | 115.32      | 122.92   |
| 9   | s     | 101 | A1EFU | CM6-C18-C17 | -5.43 | 115.32      | 122.92   |
| 8   | l     | 101 | BCL   | C1C-NC-C4C  | -5.42 | 104.27      | 106.71   |
| 9   | D     | 105 | A1EFU | CM5-C13-C14 | -5.42 | 115.33      | 122.92   |
| 9   | B     | 103 | A1EFU | C16-C15-C14 | -5.41 | 112.38      | 123.47   |
| 8   | s     | 103 | BCL   | C2D-C1D-ND  | 5.41  | 114.09      | 110.10   |
| 8   | s     | 102 | BCL   | CMB-C2B-C1B | -5.41 | 120.15      | 128.46   |
| 9   | E     | 102 | A1EFU | CM5-C13-C14 | -5.41 | 115.35      | 122.92   |
| 8   | A     | 101 | BCL   | CMB-C2B-C1B | -5.41 | 120.15      | 128.46   |
| 9   | K     | 102 | A1EFU | CM4-C9-C10  | -5.40 | 115.36      | 122.92   |
| 8   | n     | 101 | BCL   | CMB-C2B-C1B | -5.39 | 120.17      | 128.46   |
| 8   | D     | 101 | BCL   | C2D-C1D-ND  | 5.38  | 114.07      | 110.10   |
| 9   | 2     | 102 | A1EFU | C15-C16-C17 | -5.38 | 112.45      | 123.47   |
| 8   | K     | 101 | BCL   | C2D-C1D-ND  | 5.38  | 114.07      | 110.10   |
| 9   | E     | 103 | A1EFU | CM5-C13-C14 | -5.38 | 115.39      | 122.92   |
| 9   | E     | 102 | A1EFU | CM4-C9-C10  | -5.37 | 115.39      | 122.92   |
| 9   | I     | 102 | A1EFU | CM6-C18-C17 | -5.37 | 115.40      | 122.92   |
| 9   | k     | 101 | A1EFU | C15-C16-C17 | -5.37 | 112.48      | 123.47   |
| 9   | f     | 101 | A1EFU | CM6-C18-C17 | -5.36 | 115.41      | 122.92   |
| 9   | A     | 102 | A1EFU | CM5-C13-C14 | -5.36 | 115.41      | 122.92   |
| 9   | G     | 106 | A1EFU | CM5-C13-C14 | -5.36 | 115.42      | 122.92   |
| 8   | L     | 304 | BCL   | C2D-C1D-ND  | 5.36  | 114.05      | 110.10   |
| 9   | J     | 102 | A1EFU | CM5-C13-C14 | -5.35 | 115.42      | 122.92   |
| 9   | J     | 103 | A1EFU | CM4-C9-C10  | -5.35 | 115.43      | 122.92   |
| 8   | G     | 101 | BCL   | C2D-C1D-ND  | 5.35  | 114.05      | 110.10   |
| 9   | T     | 101 | A1EFU | CM4-C9-C10  | -5.35 | 115.43      | 122.92   |
| 8   | A     | 101 | BCL   | C2D-C1D-ND  | 5.35  | 114.04      | 110.10   |
| 9   | j     | 103 | A1EFU | CM4-C9-C10  | -5.35 | 115.43      | 122.92   |
| 9   | P     | 103 | A1EFU | CM4-C9-C10  | -5.34 | 115.45      | 122.92   |
| 9   | F     | 104 | A1EFU | CM5-C13-C14 | -5.33 | 115.45      | 122.92   |
| 9   | s     | 104 | A1EFU | C16-C15-C14 | -5.33 | 112.56      | 123.47   |
| 9   | B     | 102 | A1EFU | CM5-C13-C14 | -5.33 | 115.46      | 122.92   |
| 9   | s     | 101 | A1EFU | CM5-C13-C14 | -5.33 | 115.46      | 122.92   |
| 9   | v     | 102 | A1EFU | CM6-C18-C17 | -5.33 | 115.46      | 122.92   |
| 8   | 2     | 103 | BCL   | O2D-CGD-CBD | 5.33  | 120.73      | 111.27   |
| 9   | s     | 105 | A1EFU | CM4-C9-C10  | -5.32 | 115.47      | 122.92   |
| 8   | N     | 101 | BCL   | C2D-C1D-ND  | 5.32  | 114.02      | 110.10   |
| 8   | I     | 101 | BCL   | C2D-C1D-ND  | 5.32  | 114.02      | 110.10   |
| 9   | v     | 103 | A1EFU | CM6-C18-C17 | -5.32 | 115.48      | 122.92   |
| 9   | v     | 102 | A1EFU | C15-C16-C17 | -5.32 | 112.58      | 123.47   |
| 8   | d     | 101 | BCL   | CAC-C3C-C2C | -5.31 | 100.99      | 114.26   |
| 9   | G     | 106 | A1EFU | C15-C16-C17 | -5.31 | 112.60      | 123.47   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | G     | 102 | BCL   | O2D-CGD-CBD | 5.31  | 120.70      | 111.27   |
| 8   | Q     | 101 | BCL   | C2D-C1D-ND  | 5.31  | 114.02      | 110.10   |
| 8   | M     | 402 | BCL   | C2D-C1D-ND  | 5.31  | 114.02      | 110.10   |
| 9   | M     | 407 | A1EFU | CM3-C5-C6   | -5.31 | 115.49      | 122.92   |
| 9   | D     | 104 | A1EFU | CM4-C9-C10  | -5.30 | 115.50      | 122.92   |
| 8   | q     | 102 | BCL   | C2D-C1D-ND  | 5.30  | 114.01      | 110.10   |
| 9   | 2     | 102 | A1EFU | CM6-C18-C17 | -5.29 | 115.51      | 122.92   |
| 9   | v     | 103 | A1EFU | C15-C16-C17 | -5.29 | 112.63      | 123.47   |
| 9   | v     | 103 | A1EFU | CM3-C5-C6   | -5.29 | 115.51      | 122.92   |
| 8   | I     | 101 | BCL   | O2D-CGD-CBD | 5.29  | 120.67      | 111.27   |
| 9   | K     | 102 | A1EFU | CM5-C13-C14 | -5.28 | 115.52      | 122.92   |
| 9   | G     | 106 | A1EFU | CM4-C9-C10  | -5.28 | 115.53      | 122.92   |
| 9   | A     | 102 | A1EFU | CM3-C5-C6   | -5.27 | 115.53      | 122.92   |
| 9   | N     | 102 | A1EFU | C15-C16-C17 | -5.27 | 112.68      | 123.47   |
| 8   | j     | 102 | BCL   | C2D-C1D-ND  | 5.27  | 113.99      | 110.10   |
| 9   | r     | 102 | A1EFU | CM6-C18-C17 | -5.27 | 115.55      | 122.92   |
| 9   | B     | 102 | A1EFU | CM4-C9-C10  | -5.26 | 115.56      | 122.92   |
| 8   | P     | 101 | BCL   | C2D-C1D-ND  | 5.25  | 113.98      | 110.10   |
| 8   | b     | 101 | BCL   | C2D-C1D-ND  | 5.25  | 113.97      | 110.10   |
| 9   | A     | 102 | A1EFU | CM6-C18-C17 | -5.25 | 115.57      | 122.92   |
| 8   | a     | 101 | BCL   | C2D-C1D-ND  | 5.25  | 113.97      | 110.10   |
| 9   | K     | 102 | A1EFU | CM6-C18-C17 | -5.24 | 115.58      | 122.92   |
| 9   | F     | 104 | A1EFU | CM3-C5-C6   | -5.24 | 115.58      | 122.92   |
| 9   | s     | 101 | A1EFU | C15-C16-C17 | -5.24 | 112.74      | 123.47   |
| 9   | F     | 104 | A1EFU | CM4-C9-C10  | -5.24 | 115.59      | 122.92   |
| 8   | E     | 101 | BCL   | C2D-C1D-ND  | 5.24  | 113.96      | 110.10   |
| 9   | P     | 103 | A1EFU | CM3-C5-C6   | -5.23 | 115.59      | 122.92   |
| 9   | B     | 103 | A1EFU | C15-C16-C17 | -5.23 | 112.77      | 123.47   |
| 9   | K     | 102 | A1EFU | CM3-C5-C6   | -5.22 | 115.61      | 122.92   |
| 9   | s     | 101 | A1EFU | CM4-C9-C10  | -5.22 | 115.61      | 122.92   |
| 9   | I     | 102 | A1EFU | CM4-C9-C10  | -5.22 | 115.61      | 122.92   |
| 9   | E     | 103 | A1EFU | C15-C16-C17 | -5.22 | 112.78      | 123.47   |
| 9   | r     | 102 | A1EFU | C16-C15-C14 | -5.22 | 112.79      | 123.47   |
| 8   | J     | 101 | BCL   | C2D-C1D-ND  | 5.21  | 113.95      | 110.10   |
| 9   | A     | 102 | A1EFU | CM4-C9-C10  | -5.21 | 115.62      | 122.92   |
| 9   | E     | 103 | A1EFU | CM6-C18-C17 | -5.21 | 115.62      | 122.92   |
| 9   | s     | 105 | A1EFU | C15-C16-C17 | -5.21 | 112.81      | 123.47   |
| 8   | F     | 102 | BCL   | O2D-CGD-CBD | 5.20  | 120.52      | 111.27   |
| 8   | L     | 304 | BCL   | CAC-C3C-C2C | -5.20 | 101.26      | 114.26   |
| 9   | p     | 101 | A1EFU | CM5-C13-C14 | -5.20 | 115.64      | 122.92   |
| 9   | s     | 105 | A1EFU | CM5-C13-C14 | -5.20 | 115.64      | 122.92   |
| 9   | j     | 101 | A1EFU | CM5-C13-C14 | -5.19 | 115.65      | 122.92   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | f     | 101 | A1EFU | CM5-C13-C14 | -5.19 | 115.65      | 122.92   |
| 9   | D     | 105 | A1EFU | C15-C16-C17 | -5.19 | 112.84      | 123.47   |
| 9   | 2     | 101 | A1EFU | C15-C16-C17 | -5.19 | 112.85      | 123.47   |
| 9   | R     | 101 | A1EFU | CM3-C5-C6   | -5.19 | 115.66      | 122.92   |
| 9   | R     | 101 | A1EFU | CM5-C13-C14 | -5.18 | 115.66      | 122.92   |
| 9   | J     | 102 | A1EFU | C15-C16-C17 | -5.18 | 112.86      | 123.47   |
| 9   | f     | 101 | A1EFU | C15-C16-C17 | -5.18 | 112.87      | 123.47   |
| 9   | j     | 101 | A1EFU | CM3-C5-C6   | -5.17 | 115.68      | 122.92   |
| 9   | k     | 101 | A1EFU | CM4-C9-C10  | -5.17 | 115.68      | 122.92   |
| 8   | E     | 101 | BCL   | O2D-CGD-CBD | 5.17  | 120.45      | 111.27   |
| 9   | K     | 102 | A1EFU | C16-C15-C14 | -5.17 | 112.89      | 123.47   |
| 8   | G     | 102 | BCL   | C2D-C1D-ND  | 5.16  | 113.91      | 110.10   |
| 8   | 1     | 101 | BCL   | C2D-C1D-ND  | 5.16  | 113.91      | 110.10   |
| 9   | M     | 407 | A1EFU | CM4-C9-C10  | -5.16 | 115.70      | 122.92   |
| 9   | R     | 101 | A1EFU | CM4-C9-C10  | -5.16 | 115.70      | 122.92   |
| 9   | N     | 102 | A1EFU | CM6-C18-C17 | -5.16 | 115.70      | 122.92   |
| 8   | V     | 101 | BCL   | C2D-C1D-ND  | 5.15  | 113.90      | 110.10   |
| 9   | 2     | 104 | A1EFU | CM4-C9-C10  | -5.15 | 115.71      | 122.92   |
| 9   | j     | 103 | A1EFU | C16-C15-C14 | -5.14 | 112.94      | 123.47   |
| 9   | N     | 102 | A1EFU | CM3-C5-C6   | -5.13 | 115.73      | 122.92   |
| 9   | D     | 104 | A1EFU | CM3-C5-C6   | -5.13 | 115.74      | 122.92   |
| 9   | f     | 101 | A1EFU | CM4-C9-C10  | -5.13 | 115.74      | 122.92   |
| 9   | D     | 105 | A1EFU | CM4-C9-C10  | -5.12 | 115.75      | 122.92   |
| 9   | J     | 103 | A1EFU | C15-C16-C17 | -5.12 | 112.99      | 123.47   |
| 8   | M     | 403 | BCL   | C2D-C1D-ND  | 5.12  | 113.88      | 110.10   |
| 9   | a     | 102 | A1EFU | CM3-C5-C6   | -5.12 | 115.76      | 122.92   |
| 9   | j     | 101 | A1EFU | C15-C16-C17 | -5.11 | 113.00      | 123.47   |
| 9   | E     | 103 | A1EFU | CM4-C9-C10  | -5.11 | 115.76      | 122.92   |
| 8   | D     | 101 | BCL   | CAC-C3C-C2C | -5.11 | 101.49      | 114.26   |
| 9   | s     | 105 | A1EFU | CM6-C18-C17 | -5.11 | 115.77      | 122.92   |
| 9   | D     | 105 | A1EFU | C16-C15-C14 | -5.11 | 113.02      | 123.47   |
| 9   | 2     | 101 | A1EFU | CM3-C5-C6   | -5.10 | 115.77      | 122.92   |
| 8   | K     | 101 | BCL   | O2D-CGD-CBD | 5.10  | 120.34      | 111.27   |
| 9   | v     | 102 | A1EFU | CM5-C13-C14 | -5.09 | 115.80      | 122.92   |
| 8   | J     | 101 | BCL   | O2D-CGD-CBD | 5.08  | 120.30      | 111.27   |
| 9   | D     | 104 | A1EFU | CM6-C18-C17 | -5.08 | 115.81      | 122.92   |
| 9   | v     | 102 | A1EFU | C16-C15-C14 | -5.08 | 113.07      | 123.47   |
| 8   | d     | 101 | BCL   | C2D-C1D-ND  | 5.08  | 113.84      | 110.10   |
| 9   | T     | 101 | A1EFU | CM6-C18-C17 | -5.07 | 115.82      | 122.92   |
| 8   | K     | 101 | BCL   | C1C-NC-C4C  | -5.06 | 104.43      | 106.71   |
| 9   | G     | 106 | A1EFU | C16-C15-C14 | -5.06 | 113.10      | 123.47   |
| 8   | Q     | 101 | BCL   | O2D-CGD-CBD | 5.06  | 120.27      | 111.27   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | e     | 101 | BCL   | C2D-C1D-ND  | 5.06  | 113.83      | 110.10   |
| 8   | e     | 101 | BCL   | CAC-C3C-C2C | -5.06 | 101.62      | 114.26   |
| 9   | N     | 102 | A1EFU | CM5-C13-C14 | -5.06 | 115.84      | 122.92   |
| 9   | B     | 102 | A1EFU | CM3-C5-C6   | -5.04 | 115.86      | 122.92   |
| 8   | F     | 101 | BCL   | C2D-C1D-ND  | 5.04  | 113.82      | 110.10   |
| 9   | v     | 102 | A1EFU | CM4-C9-C10  | -5.04 | 115.87      | 122.92   |
| 8   | j     | 102 | BCL   | O2D-CGD-CBD | 5.01  | 120.17      | 111.27   |
| 8   | G     | 101 | BCL   | O2D-CGD-CBD | 5.01  | 120.17      | 111.27   |
| 9   | R     | 101 | A1EFU | C16-C15-C14 | -5.01 | 113.22      | 123.47   |
| 8   | F     | 102 | BCL   | C2D-C1D-ND  | 5.00  | 113.79      | 110.10   |
| 8   | R     | 102 | BCL   | C2D-C1D-ND  | 4.99  | 113.78      | 110.10   |
| 8   | L     | 301 | BCL   | C4A-NA-C1A  | -4.98 | 104.47      | 106.71   |
| 8   | q     | 102 | BCL   | O2D-CGD-CBD | 4.98  | 120.12      | 111.27   |
| 9   | T     | 101 | A1EFU | CM3-C5-C6   | -4.98 | 115.95      | 122.92   |
| 9   | M     | 407 | A1EFU | C15-C16-C17 | -4.98 | 113.28      | 123.47   |
| 9   | I     | 102 | A1EFU | C16-C15-C14 | -4.97 | 113.29      | 123.47   |
| 9   | s     | 104 | A1EFU | CM6-C18-C17 | -4.97 | 115.96      | 122.92   |
| 9   | J     | 102 | A1EFU | CM4-C9-C10  | -4.97 | 115.96      | 122.92   |
| 8   | k     | 102 | BCL   | O2D-CGD-CBD | 4.96  | 120.08      | 111.27   |
| 8   | L     | 304 | BCL   | O2D-CGD-CBD | 4.96  | 120.08      | 111.27   |
| 8   | M     | 403 | BCL   | CAC-C3C-C2C | -4.96 | 101.88      | 114.26   |
| 8   | n     | 101 | BCL   | O2D-CGD-CBD | 4.95  | 120.06      | 111.27   |
| 8   | s     | 103 | BCL   | O2D-CGD-CBD | 4.94  | 120.04      | 111.27   |
| 9   | q     | 101 | A1EFU | CM3-C5-C6   | -4.93 | 116.02      | 122.92   |
| 9   | 2     | 104 | A1EFU | CM7-C22-C21 | -4.92 | 109.88      | 122.59   |
| 8   | e     | 101 | BCL   | O2D-CGD-CBD | 4.92  | 120.02      | 111.27   |
| 9   | F     | 104 | A1EFU | C16-C15-C14 | -4.92 | 113.39      | 123.47   |
| 9   | k     | 101 | A1EFU | C16-C15-C14 | -4.92 | 113.40      | 123.47   |
| 8   | t     | 101 | BCL   | O2D-CGD-CBD | 4.91  | 120.00      | 111.27   |
| 8   | P     | 101 | BCL   | CAC-C3C-C2C | -4.91 | 101.99      | 114.26   |
| 9   | M     | 407 | A1EFU | CM5-C13-C14 | -4.91 | 116.05      | 122.92   |
| 8   | S     | 101 | BCL   | CAC-C3C-C2C | -4.90 | 102.01      | 114.26   |
| 9   | J     | 102 | A1EFU | C16-C15-C14 | -4.89 | 113.46      | 123.47   |
| 8   | b     | 101 | BCL   | O2D-CGD-CBD | 4.89  | 119.95      | 111.27   |
| 9   | M     | 407 | A1EFU | C16-C15-C14 | -4.89 | 113.46      | 123.47   |
| 9   | 2     | 104 | A1EFU | CM3-C5-C6   | -4.89 | 116.08      | 122.92   |
| 8   | N     | 101 | BCL   | O2D-CGD-CBD | 4.89  | 119.95      | 111.27   |
| 8   | a     | 101 | BCL   | CAC-C3C-C2C | -4.89 | 102.05      | 114.26   |
| 9   | B     | 102 | A1EFU | CM6-C18-C17 | -4.88 | 116.08      | 122.92   |
| 8   | V     | 101 | BCL   | CAC-C3C-C2C | -4.87 | 102.08      | 114.26   |
| 9   | 2     | 104 | A1EFU | CM5-C13-C14 | -4.87 | 116.10      | 122.92   |
| 8   | Q     | 101 | BCL   | CAC-C3C-C2C | -4.87 | 102.09      | 114.26   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | V     | 101 | BCL   | O2D-CGD-CBD | 4.87  | 119.92      | 111.27   |
| 9   | 2     | 101 | A1EFU | CM5-C13-C14 | -4.87 | 116.11      | 122.92   |
| 8   | B     | 101 | BCL   | CAC-C3C-C2C | -4.86 | 102.10      | 114.26   |
| 9   | B     | 103 | A1EFU | CM4-C9-C10  | -4.86 | 116.11      | 122.92   |
| 8   | 2     | 103 | BCL   | CAC-C3C-C2C | -4.86 | 102.12      | 114.26   |
| 9   | A     | 102 | A1EFU | C16-C15-C14 | -4.85 | 113.54      | 123.47   |
| 8   | F     | 101 | BCL   | CAC-C3C-C2C | -4.85 | 102.14      | 114.26   |
| 8   | r     | 101 | BCL   | O2D-CGD-CBD | 4.85  | 119.89      | 111.27   |
| 8   | G     | 101 | BCL   | CAC-C3C-C2C | -4.85 | 102.15      | 114.26   |
| 9   | E     | 102 | A1EFU | C16-C15-C14 | -4.84 | 113.56      | 123.47   |
| 9   | G     | 105 | A1EFU | CM4-C9-C10  | -4.84 | 116.14      | 122.92   |
| 9   | F     | 104 | A1EFU | CM6-C18-C17 | -4.84 | 116.14      | 122.92   |
| 8   | a     | 101 | BCL   | O2D-CGD-CBD | 4.84  | 119.86      | 111.27   |
| 9   | 2     | 104 | A1EFU | C16-C15-C14 | -4.83 | 113.57      | 123.47   |
| 8   | b     | 101 | BCL   | CAC-C3C-C2C | -4.83 | 102.20      | 114.26   |
| 9   | K     | 102 | A1EFU | C15-C16-C17 | -4.82 | 113.60      | 123.47   |
| 8   | B     | 101 | BCL   | O2D-CGD-CBD | 4.82  | 119.83      | 111.27   |
| 8   | A     | 101 | BCL   | O2D-CGD-CBD | 4.82  | 119.83      | 111.27   |
| 8   | r     | 101 | BCL   | CAC-C3C-C2C | -4.82 | 102.23      | 114.26   |
| 9   | q     | 101 | A1EFU | CM4-C9-C10  | -4.82 | 116.18      | 122.92   |
| 9   | s     | 104 | A1EFU | C15-C16-C17 | -4.81 | 113.62      | 123.47   |
| 9   | J     | 102 | A1EFU | CM3-C5-C6   | -4.81 | 116.18      | 122.92   |
| 8   | i     | 101 | BCL   | CAC-C3C-C2C | -4.81 | 102.24      | 114.26   |
| 8   | P     | 102 | BCL   | O2D-CGD-CBD | 4.81  | 119.81      | 111.27   |
| 9   | a     | 102 | A1EFU | C16-C15-C14 | -4.80 | 113.63      | 123.47   |
| 9   | 2     | 104 | A1EFU | CM6-C18-C17 | -4.80 | 116.19      | 122.92   |
| 8   | v     | 101 | BCL   | O2D-CGD-CBD | 4.80  | 119.80      | 111.27   |
| 9   | B     | 102 | A1EFU | C16-C15-C14 | -4.80 | 113.64      | 123.47   |
| 8   | P     | 102 | BCL   | CAC-C3C-C2C | -4.80 | 102.28      | 114.26   |
| 8   | d     | 101 | BCL   | C1C-NC-C4C  | -4.78 | 104.56      | 106.71   |
| 9   | N     | 102 | A1EFU | C16-C15-C14 | -4.78 | 113.68      | 123.47   |
| 8   | k     | 102 | BCL   | CAC-C3C-C2C | -4.78 | 102.33      | 114.26   |
| 8   | L     | 304 | BCL   | C1C-NC-C4C  | -4.78 | 104.56      | 106.71   |
| 8   | t     | 101 | BCL   | C1D-ND-C4D  | -4.77 | 102.94      | 106.33   |
| 8   | A     | 101 | BCL   | CAC-C3C-C2C | -4.77 | 102.33      | 114.26   |
| 9   | E     | 102 | A1EFU | CM6-C18-C17 | -4.77 | 116.24      | 122.92   |
| 8   | D     | 101 | BCL   | O2D-CGD-CBD | 4.75  | 119.70      | 111.27   |
| 8   | G     | 102 | BCL   | C1C-NC-C4C  | -4.74 | 104.57      | 106.71   |
| 9   | R     | 101 | A1EFU | CM6-C18-C17 | -4.74 | 116.28      | 122.92   |
| 9   | B     | 103 | A1EFU | CM6-C18-C17 | -4.73 | 116.29      | 122.92   |
| 8   | R     | 102 | BCL   | O2D-CGD-CBD | 4.73  | 119.67      | 111.27   |
| 9   | 2     | 101 | A1EFU | C16-C15-C14 | -4.73 | 113.79      | 123.47   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | 2     | 102 | A1EFU | CM3-C5-C6   | -4.72 | 116.31      | 122.92   |
| 9   | D     | 104 | A1EFU | CM5-C13-C14 | -4.72 | 116.31      | 122.92   |
| 9   | P     | 103 | A1EFU | C16-C15-C14 | -4.71 | 113.82      | 123.47   |
| 8   | v     | 101 | BCL   | CAC-C3C-C2C | -4.71 | 102.48      | 114.26   |
| 9   | 2     | 102 | A1EFU | CM4-C9-C10  | -4.71 | 116.32      | 122.92   |
| 8   | q     | 102 | BCL   | CAC-C3C-C2C | -4.71 | 102.49      | 114.26   |
| 8   | s     | 103 | BCL   | CAC-C3C-C2C | -4.71 | 102.49      | 114.26   |
| 9   | T     | 101 | A1EFU | C16-C15-C14 | -4.71 | 113.83      | 123.47   |
| 8   | M     | 402 | BCL   | CAC-C3C-C2C | -4.71 | 102.50      | 114.26   |
| 9   | J     | 102 | A1EFU | CM6-C18-C17 | -4.70 | 116.34      | 122.92   |
| 8   | j     | 102 | BCL   | CAC-C3C-C2C | -4.70 | 102.53      | 114.26   |
| 9   | B     | 103 | A1EFU | CM5-C13-C14 | -4.69 | 116.35      | 122.92   |
| 8   | F     | 102 | BCL   | C1C-NC-C4C  | -4.68 | 104.60      | 106.71   |
| 9   | s     | 104 | A1EFU | CM4-C9-C10  | -4.68 | 116.36      | 122.92   |
| 9   | G     | 105 | A1EFU | CM3-C5-C6   | -4.67 | 116.39      | 122.92   |
| 9   | P     | 103 | A1EFU | C15-C16-C17 | -4.66 | 113.92      | 123.47   |
| 9   | s     | 104 | A1EFU | CM5-C13-C14 | -4.66 | 116.39      | 122.92   |
| 8   | d     | 101 | BCL   | O2D-CGD-O1D | -4.66 | 114.73      | 123.84   |
| 8   | l     | 101 | BCL   | O2D-CGD-CBD | 4.65  | 119.53      | 111.27   |
| 8   | n     | 101 | BCL   | CAC-C3C-C2C | -4.65 | 102.64      | 114.26   |
| 8   | L     | 301 | BCL   | CAC-C3C-C2C | -4.64 | 102.67      | 114.26   |
| 8   | P     | 101 | BCL   | O2D-CGD-CBD | 4.63  | 119.50      | 111.27   |
| 9   | p     | 101 | A1EFU | C15-C16-C17 | -4.63 | 113.98      | 123.47   |
| 8   | S     | 101 | BCL   | O2D-CGD-CBD | 4.63  | 119.49      | 111.27   |
| 8   | J     | 101 | BCL   | C1C-NC-C4C  | -4.62 | 104.63      | 106.71   |
| 9   | a     | 102 | A1EFU | CM5-C13-C12 | 4.62  | 125.35      | 118.08   |
| 9   | q     | 101 | A1EFU | C15-C16-C17 | -4.61 | 114.04      | 123.47   |
| 9   | 2     | 104 | A1EFU | C15-C16-C17 | -4.60 | 114.04      | 123.47   |
| 8   | s     | 102 | BCL   | O2D-CGD-CBD | 4.60  | 119.44      | 111.27   |
| 9   | G     | 105 | A1EFU | C16-C15-C14 | -4.58 | 114.08      | 123.47   |
| 8   | R     | 102 | BCL   | CAC-C3C-C2C | -4.58 | 102.81      | 114.26   |
| 9   | a     | 102 | A1EFU | CM4-C9-C8   | 4.57  | 125.28      | 118.08   |
| 9   | E     | 102 | A1EFU | CM3-C5-C6   | -4.57 | 116.53      | 122.92   |
| 8   | J     | 101 | BCL   | CAC-C3C-C2C | -4.55 | 102.88      | 114.26   |
| 8   | E     | 101 | BCL   | C1C-NC-C4C  | -4.54 | 104.67      | 106.71   |
| 9   | s     | 101 | A1EFU | CM3-C5-C4   | 4.54  | 125.22      | 118.08   |
| 8   | R     | 102 | BCL   | C1C-NC-C4C  | -4.53 | 104.67      | 106.71   |
| 9   | 2     | 102 | A1EFU | C16-C15-C14 | -4.53 | 114.20      | 123.47   |
| 9   | p     | 101 | A1EFU | CM7-C22-C21 | -4.53 | 110.92      | 122.59   |
| 8   | i     | 101 | BCL   | O2D-CGD-O1D | -4.52 | 115.00      | 123.84   |
| 8   | s     | 102 | BCL   | CAC-C3C-C2C | -4.50 | 103.00      | 114.26   |
| 9   | r     | 102 | A1EFU | CM4-C9-C10  | -4.50 | 116.62      | 122.92   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | j     | 103 | A1EFU | C15-C16-C17 | -4.48 | 114.29      | 123.47   |
| 9   | r     | 102 | A1EFU | CM7-C22-C21 | -4.48 | 111.04      | 122.59   |
| 9   | j     | 103 | A1EFU | CM7-C22-C21 | -4.47 | 111.06      | 122.59   |
| 9   | D     | 104 | A1EFU | C15-C16-C17 | -4.46 | 114.33      | 123.47   |
| 8   | K     | 101 | BCL   | CAC-C3C-C2C | -4.45 | 103.14      | 114.26   |
| 16  | C     | 402 | HEC   | CBD-CAD-C3D | 4.44  | 120.19      | 112.62   |
| 9   | 2     | 101 | A1EFU | CM7-C22-C21 | -4.43 | 111.15      | 122.59   |
| 9   | I     | 102 | A1EFU | CM3-C5-C4   | 4.43  | 125.06      | 118.08   |
| 8   | F     | 101 | BCL   | O2D-CGD-O1D | -4.42 | 115.19      | 123.84   |
| 9   | G     | 106 | A1EFU | CM7-C22-C21 | -4.42 | 111.20      | 122.59   |
| 8   | G     | 102 | BCL   | CAC-C3C-C2C | -4.41 | 103.24      | 114.26   |
| 8   | I     | 101 | BCL   | CAC-C3C-C2C | -4.41 | 103.25      | 114.26   |
| 8   | F     | 102 | BCL   | CAC-C3C-C2C | -4.41 | 103.25      | 114.26   |
| 9   | 2     | 102 | A1EFU | CM7-C22-C21 | -4.40 | 111.24      | 122.59   |
| 9   | D     | 105 | A1EFU | CM3-C5-C4   | 4.40  | 125.01      | 118.08   |
| 9   | M     | 407 | A1EFU | CM7-C22-C21 | -4.39 | 111.26      | 122.59   |
| 9   | j     | 101 | A1EFU | CM7-C22-C21 | -4.39 | 111.28      | 122.59   |
| 9   | M     | 407 | A1EFU | CM6-C18-C17 | -4.38 | 116.79      | 122.92   |
| 8   | t     | 101 | BCL   | C2D-C1D-ND  | 4.37  | 113.33      | 110.10   |
| 9   | f     | 101 | A1EFU | CM7-C22-C21 | -4.37 | 111.32      | 122.59   |
| 8   | t     | 101 | BCL   | CAC-C3C-C2C | -4.37 | 103.34      | 114.26   |
| 8   | F     | 102 | BCL   | O2D-CGD-O1D | -4.37 | 115.30      | 123.84   |
| 9   | j     | 101 | A1EFU | CM4-C9-C8   | 4.37  | 124.96      | 118.08   |
| 9   | N     | 102 | A1EFU | C23-C22-C21 | -4.37 | 108.76      | 121.98   |
| 9   | r     | 102 | A1EFU | CM3-C5-C4   | 4.37  | 124.95      | 118.08   |
| 9   | s     | 104 | A1EFU | CM7-C22-C21 | -4.36 | 111.33      | 122.59   |
| 9   | D     | 105 | A1EFU | CM7-C22-C21 | -4.36 | 111.34      | 122.59   |
| 8   | I     | 101 | BCL   | O2D-CGD-O1D | -4.36 | 115.31      | 123.84   |
| 8   | 2     | 103 | BCL   | O2D-CGD-O1D | -4.35 | 115.33      | 123.84   |
| 8   | E     | 101 | BCL   | O2D-CGD-O1D | -4.35 | 115.34      | 123.84   |
| 9   | G     | 106 | A1EFU | CM3-C5-C4   | 4.35  | 124.92      | 118.08   |
| 9   | s     | 105 | A1EFU | CM7-C22-C21 | -4.34 | 111.38      | 122.59   |
| 9   | a     | 102 | A1EFU | CM7-C22-C21 | -4.34 | 111.39      | 122.59   |
| 8   | G     | 102 | BCL   | O2D-CGD-O1D | -4.33 | 115.36      | 123.84   |
| 8   | M     | 403 | BCL   | CMB-C2B-C3B | 4.33  | 132.78      | 124.68   |
| 9   | E     | 103 | A1EFU | CM3-C5-C4   | 4.33  | 124.89      | 118.08   |
| 8   | M     | 403 | BCL   | CHD-C1D-ND  | -4.32 | 120.48      | 124.45   |
| 8   | E     | 101 | BCL   | CAC-C3C-C2C | -4.31 | 103.48      | 114.26   |
| 9   | G     | 105 | A1EFU | C15-C16-C17 | -4.29 | 114.68      | 123.47   |
| 8   | N     | 101 | BCL   | CAC-C3C-C2C | -4.29 | 103.53      | 114.26   |
| 9   | G     | 106 | A1EFU | C23-C22-C21 | -4.29 | 108.99      | 121.98   |
| 8   | M     | 402 | BCL   | O2D-CGD-CBD | 4.28  | 118.88      | 111.27   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | f     | 101 | A1EFU | C6-C7-C8    | -4.28 | 109.85      | 123.22   |
| 16  | C     | 402 | HEC   | CMD-C2D-C1D | -4.28 | 121.88      | 128.46   |
| 9   | I     | 102 | A1EFU | CM7-C22-C21 | -4.28 | 111.55      | 122.59   |
| 8   | K     | 101 | BCL   | O2D-CGD-O1D | -4.28 | 115.47      | 123.84   |
| 9   | f     | 101 | A1EFU | CM3-C5-C4   | 4.27  | 124.81      | 118.08   |
| 9   | k     | 101 | A1EFU | CM7-C22-C21 | -4.27 | 111.57      | 122.59   |
| 8   | t     | 101 | BCL   | OBB-CAB-CBB | -4.27 | 110.56      | 120.17   |
| 9   | N     | 102 | A1EFU | CM7-C22-C21 | -4.27 | 111.58      | 122.59   |
| 8   | t     | 101 | BCL   | CHD-C1D-ND  | -4.26 | 120.53      | 124.45   |
| 9   | s     | 101 | A1EFU | CM7-C22-C21 | -4.26 | 111.59      | 122.59   |
| 9   | q     | 101 | A1EFU | CM7-C22-C21 | -4.26 | 111.61      | 122.59   |
| 8   | J     | 101 | BCL   | O2D-CGD-O1D | -4.26 | 115.51      | 123.84   |
| 9   | B     | 103 | A1EFU | CM3-C5-C4   | 4.25  | 124.78      | 118.08   |
| 9   | J     | 103 | A1EFU | CM7-C22-C21 | -4.25 | 111.62      | 122.59   |
| 9   | T     | 101 | A1EFU | CM7-C22-C21 | -4.25 | 111.63      | 122.59   |
| 8   | G     | 101 | BCL   | O2D-CGD-O1D | -4.24 | 115.55      | 123.84   |
| 9   | j     | 101 | A1EFU | CM3-C5-C4   | 4.24  | 124.75      | 118.08   |
| 8   | L     | 301 | BCL   | O2D-CGD-CBD | 4.24  | 118.80      | 111.27   |
| 9   | v     | 103 | A1EFU | CM4-C9-C10  | -4.23 | 117.00      | 122.92   |
| 9   | J     | 103 | A1EFU | CM3-C5-C4   | 4.23  | 124.74      | 118.08   |
| 9   | A     | 102 | A1EFU | CM7-C22-C21 | -4.23 | 111.68      | 122.59   |
| 16  | C     | 401 | HEC   | CMD-C2D-C1D | -4.23 | 121.97      | 128.46   |
| 9   | B     | 103 | A1EFU | CM7-C22-C21 | -4.22 | 111.69      | 122.59   |
| 9   | v     | 103 | A1EFU | CM7-C22-C21 | -4.22 | 111.69      | 122.59   |
| 9   | s     | 105 | A1EFU | CM4-C9-C8   | 4.22  | 124.72      | 118.08   |
| 9   | B     | 102 | A1EFU | CM7-C22-C21 | -4.21 | 111.72      | 122.59   |
| 9   | D     | 104 | A1EFU | CM4-C9-C8   | 4.21  | 124.72      | 118.08   |
| 9   | E     | 103 | A1EFU | CM7-C22-C21 | -4.21 | 111.73      | 122.59   |
| 9   | B     | 103 | A1EFU | C10-C11-C12 | -4.21 | 110.08      | 123.22   |
| 9   | s     | 105 | A1EFU | C6-C7-C8    | -4.20 | 110.11      | 123.22   |
| 9   | E     | 102 | A1EFU | CM4-C9-C8   | 4.20  | 124.69      | 118.08   |
| 16  | C     | 403 | HEC   | CMD-C2D-C1D | -4.20 | 122.01      | 128.46   |
| 8   | L     | 304 | BCL   | O2D-CGD-O1D | -4.20 | 115.63      | 123.84   |
| 9   | P     | 103 | A1EFU | CM7-C22-C21 | -4.20 | 111.76      | 122.59   |
| 8   | e     | 101 | BCL   | O2D-CGD-O1D | -4.20 | 115.63      | 123.84   |
| 8   | L     | 304 | BCL   | CMB-C2B-C3B | 4.19  | 132.53      | 124.68   |
| 9   | E     | 102 | A1EFU | CM7-C22-C21 | -4.19 | 111.78      | 122.59   |
| 9   | q     | 101 | A1EFU | CM5-C13-C12 | 4.19  | 124.67      | 118.08   |
| 10  | D     | 103 | MW9   | O8-C24-C25  | 4.18  | 120.52      | 111.50   |
| 9   | v     | 102 | A1EFU | CM3-C5-C4   | 4.18  | 124.67      | 118.08   |
| 9   | s     | 105 | A1EFU | CM3-C5-C4   | 4.18  | 124.67      | 118.08   |
| 8   | t     | 101 | BCL   | O2D-CGD-O1D | -4.18 | 115.67      | 123.84   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | V     | 101 | BCL   | CMB-C2B-C3B | 4.18  | 132.50      | 124.68   |
| 9   | E     | 102 | A1EFU | C6-C7-C8    | -4.18 | 110.18      | 123.22   |
| 8   | j     | 102 | BCL   | O2D-CGD-O1D | -4.18 | 115.67      | 123.84   |
| 8   | q     | 102 | BCL   | O2D-CGD-O1D | -4.17 | 115.69      | 123.84   |
| 8   | V     | 101 | BCL   | C4B-CHC-C1C | -4.17 | 121.87      | 130.12   |
| 8   | r     | 101 | BCL   | O2D-CGD-O1D | -4.16 | 115.70      | 123.84   |
| 9   | E     | 103 | A1EFU | C23-C22-C21 | -4.16 | 109.38      | 121.98   |
| 9   | J     | 102 | A1EFU | CM7-C22-C21 | -4.16 | 111.86      | 122.59   |
| 9   | q     | 101 | A1EFU | C10-C11-C12 | -4.16 | 110.24      | 123.22   |
| 10  | L     | 307 | MW9   | O8-C24-C25  | 4.16  | 120.46      | 111.50   |
| 9   | T     | 101 | A1EFU | CM3-C5-C4   | 4.16  | 124.63      | 118.08   |
| 8   | s     | 102 | BCL   | OBB-CAB-CBB | -4.16 | 110.81      | 120.17   |
| 9   | 2     | 101 | A1EFU | C23-C22-C21 | -4.16 | 109.39      | 121.98   |
| 9   | F     | 104 | A1EFU | CM3-C5-C4   | 4.16  | 124.63      | 118.08   |
| 10  | H     | 303 | MW9   | O8-C24-C25  | 4.16  | 120.46      | 111.50   |
| 10  | G     | 103 | MW9   | O8-C24-C25  | 4.15  | 120.45      | 111.50   |
| 9   | p     | 101 | A1EFU | CM3-C5-C4   | 4.15  | 124.62      | 118.08   |
| 8   | t     | 101 | BCL   | C1C-NC-C4C  | -4.15 | 104.84      | 106.71   |
| 8   | l     | 101 | BCL   | CAC-C3C-C2C | -4.15 | 103.89      | 114.26   |
| 9   | s     | 101 | A1EFU | CM4-C9-C8   | 4.15  | 124.61      | 118.08   |
| 8   | s     | 103 | BCL   | O2D-CGD-O1D | -4.15 | 115.73      | 123.84   |
| 9   | I     | 102 | A1EFU | C23-C22-C21 | -4.14 | 109.44      | 121.98   |
| 8   | M     | 403 | BCL   | O2D-CGD-CBD | 4.14  | 118.62      | 111.27   |
| 10  | H     | 301 | MW9   | O8-C24-C25  | 4.14  | 120.42      | 111.50   |
| 9   | B     | 102 | A1EFU | C6-C7-C8    | -4.14 | 110.31      | 123.22   |
| 8   | b     | 101 | BCL   | O2D-CGD-O1D | -4.13 | 115.75      | 123.84   |
| 9   | 2     | 102 | A1EFU | C23-C22-C21 | -4.13 | 109.46      | 121.98   |
| 8   | Q     | 101 | BCL   | O2D-CGD-O1D | -4.13 | 115.76      | 123.84   |
| 8   | j     | 102 | BCL   | C1C-NC-C4C  | -4.13 | 104.85      | 106.71   |
| 8   | i     | 101 | BCL   | CMB-C2B-C3B | 4.12  | 132.40      | 124.68   |
| 9   | D     | 105 | A1EFU | C23-C22-C21 | -4.12 | 109.50      | 121.98   |
| 9   | v     | 102 | A1EFU | CM7-C22-C21 | -4.12 | 111.96      | 122.59   |
| 8   | n     | 101 | BCL   | O2D-CGD-O1D | -4.12 | 115.78      | 123.84   |
| 8   | 2     | 103 | BCL   | CMB-C2B-C3B | 4.12  | 132.39      | 124.68   |
| 8   | N     | 101 | BCL   | CMB-C2B-C3B | 4.12  | 132.39      | 124.68   |
| 9   | v     | 103 | A1EFU | CM3-C5-C4   | 4.12  | 124.57      | 118.08   |
| 15  | L     | 308 | CDL   | OB6-CB5-C51 | 4.12  | 120.37      | 111.50   |
| 10  | M     | 405 | MW9   | O8-C24-C25  | 4.11  | 120.37      | 111.50   |
| 9   | R     | 101 | A1EFU | CM7-C22-C21 | -4.11 | 111.98      | 122.59   |
| 15  | H     | 304 | CDL   | OB6-CB5-C51 | 4.11  | 120.36      | 111.50   |
| 8   | q     | 102 | BCL   | CMB-C2B-C3B | 4.11  | 132.37      | 124.68   |
| 8   | J     | 101 | BCL   | CMB-C2B-C3B | 4.11  | 132.36      | 124.68   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | D     | 101 | BCL   | CMB-C2B-C3B | 4.11  | 132.36      | 124.68   |
| 8   | v     | 101 | BCL   | O2D-CGD-O1D | -4.10 | 115.82      | 123.84   |
| 8   | V     | 101 | BCL   | O2D-CGD-O1D | -4.10 | 115.83      | 123.84   |
| 9   | k     | 101 | A1EFU | CM3-C5-C4   | 4.10  | 124.53      | 118.08   |
| 10  | M     | 406 | MW9   | O8-C24-C25  | 4.10  | 120.33      | 111.50   |
| 9   | F     | 104 | A1EFU | CM7-C22-C21 | -4.10 | 112.02      | 122.59   |
| 9   | A     | 102 | A1EFU | CM3-C5-C4   | 4.09  | 124.53      | 118.08   |
| 8   | B     | 101 | BCL   | CMB-C2B-C3B | 4.09  | 132.34      | 124.68   |
| 8   | G     | 102 | BCL   | CMB-C2B-C3B | 4.09  | 132.33      | 124.68   |
| 8   | N     | 101 | BCL   | O2D-CGD-O1D | -4.09 | 115.85      | 123.84   |
| 8   | k     | 102 | BCL   | O2D-CGD-O1D | -4.09 | 115.85      | 123.84   |
| 8   | I     | 101 | BCL   | CMB-C2B-C3B | 4.09  | 132.32      | 124.68   |
| 8   | A     | 101 | BCL   | O2D-CGD-O1D | -4.09 | 115.85      | 123.84   |
| 8   | P     | 102 | BCL   | O2D-CGD-O1D | -4.08 | 115.85      | 123.84   |
| 8   | B     | 101 | BCL   | O2D-CGD-O1D | -4.08 | 115.86      | 123.84   |
| 8   | F     | 101 | BCL   | CMB-C2B-C3B | 4.08  | 132.31      | 124.68   |
| 8   | e     | 101 | BCL   | CMB-C2B-C3B | 4.08  | 132.31      | 124.68   |
| 8   | L     | 301 | BCL   | CMB-C2B-C3B | 4.08  | 132.31      | 124.68   |
| 9   | j     | 103 | A1EFU | C6-C7-C8    | -4.08 | 110.48      | 123.22   |
| 9   | D     | 104 | A1EFU | CM5-C13-C12 | 4.08  | 124.50      | 118.08   |
| 10  | R     | 103 | MW9   | O8-C24-C25  | 4.08  | 120.29      | 111.50   |
| 8   | a     | 101 | BCL   | O2D-CGD-O1D | -4.08 | 115.86      | 123.84   |
| 9   | j     | 103 | A1EFU | CM4-C9-C8   | 4.08  | 124.50      | 118.08   |
| 8   | l     | 101 | BCL   | CMB-C2B-C3B | 4.08  | 132.31      | 124.68   |
| 8   | b     | 101 | BCL   | CMB-C2B-C3B | 4.08  | 132.31      | 124.68   |
| 9   | G     | 106 | A1EFU | CM6-C18-C19 | 4.07  | 124.50      | 118.08   |
| 9   | a     | 102 | A1EFU | CM3-C5-C4   | 4.07  | 124.49      | 118.08   |
| 8   | j     | 102 | BCL   | CMB-C2B-C3B | 4.07  | 132.29      | 124.68   |
| 9   | k     | 101 | A1EFU | C10-C11-C12 | -4.07 | 110.52      | 123.22   |
| 9   | B     | 102 | A1EFU | CM4-C9-C8   | 4.07  | 124.49      | 118.08   |
| 8   | Q     | 101 | BCL   | CMB-C2B-C3B | 4.07  | 132.29      | 124.68   |
| 9   | F     | 104 | A1EFU | CM4-C9-C8   | 4.07  | 124.48      | 118.08   |
| 8   | P     | 101 | BCL   | O2D-CGD-O1D | -4.07 | 115.89      | 123.84   |
| 8   | R     | 102 | BCL   | O2D-CGD-O1D | -4.06 | 115.89      | 123.84   |
| 8   | a     | 101 | BCL   | CMB-C2B-C3B | 4.06  | 132.27      | 124.68   |
| 8   | G     | 101 | BCL   | CMB-C2B-C3B | 4.06  | 132.27      | 124.68   |
| 9   | j     | 103 | A1EFU | CM3-C5-C4   | 4.06  | 124.47      | 118.08   |
| 9   | F     | 104 | A1EFU | C6-C7-C8    | -4.06 | 110.56      | 123.22   |
| 9   | K     | 102 | A1EFU | CM7-C22-C21 | -4.06 | 112.13      | 122.59   |
| 8   | k     | 102 | BCL   | CMB-C2B-C3B | 4.06  | 132.26      | 124.68   |
| 8   | E     | 101 | BCL   | CMB-C2B-C3B | 4.05  | 132.26      | 124.68   |
| 9   | I     | 102 | A1EFU | CM6-C18-C19 | 4.05  | 124.46      | 118.08   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | D     | 101 | BCL   | O2D-CGD-O1D | -4.05 | 115.92      | 123.84   |
| 9   | a     | 102 | A1EFU | C23-C22-C21 | -4.04 | 109.74      | 121.98   |
| 8   | F     | 102 | BCL   | CMB-C2B-C3B | 4.04  | 132.24      | 124.68   |
| 9   | s     | 101 | A1EFU | C6-C7-C8    | -4.04 | 110.61      | 123.22   |
| 8   | v     | 101 | BCL   | CMB-C2B-C3B | 4.04  | 132.23      | 124.68   |
| 8   | s     | 103 | BCL   | CMB-C2B-C3B | 4.04  | 132.23      | 124.68   |
| 8   | S     | 101 | BCL   | O2D-CGD-O1D | -4.03 | 115.95      | 123.84   |
| 9   | K     | 102 | A1EFU | CM3-C5-C4   | 4.03  | 124.43      | 118.08   |
| 9   | P     | 103 | A1EFU | C23-C22-C21 | -4.03 | 109.78      | 121.98   |
| 9   | B     | 102 | A1EFU | CM3-C5-C4   | 4.03  | 124.42      | 118.08   |
| 9   | q     | 101 | A1EFU | CM3-C5-C4   | 4.03  | 124.42      | 118.08   |
| 8   | M     | 402 | BCL   | CMB-C2B-C3B | 4.02  | 132.20      | 124.68   |
| 9   | 2     | 104 | A1EFU | C21-C20-C19 | -4.02 | 110.67      | 123.22   |
| 9   | 2     | 102 | A1EFU | C10-C11-C12 | -4.02 | 110.68      | 123.22   |
| 9   | D     | 104 | A1EFU | CM7-C22-C21 | -4.02 | 112.22      | 122.59   |
| 9   | T     | 101 | A1EFU | CM4-C9-C8   | 4.02  | 124.41      | 118.08   |
| 9   | G     | 105 | A1EFU | CM7-C22-C21 | -4.02 | 112.23      | 122.59   |
| 8   | M     | 403 | BCL   | C1C-NC-C4C  | -4.01 | 104.90      | 106.71   |
| 8   | R     | 102 | BCL   | CMB-C2B-C3B | 4.01  | 132.18      | 124.68   |
| 8   | S     | 101 | BCL   | CMB-C2B-C3B | 4.01  | 132.18      | 124.68   |
| 8   | V     | 101 | BCL   | OBB-CAB-CBB | -4.01 | 111.15      | 120.17   |
| 15  | H     | 304 | CDL   | OA6-CA5-C11 | 4.01  | 120.13      | 111.50   |
| 9   | D     | 104 | A1EFU | C10-C11-C12 | -4.00 | 110.72      | 123.22   |
| 9   | 2     | 104 | A1EFU | CM3-C5-C4   | 4.00  | 124.39      | 118.08   |
| 9   | A     | 102 | A1EFU | CM4-C9-C8   | 4.00  | 124.39      | 118.08   |
| 8   | K     | 101 | BCL   | CMB-C2B-C3B | 4.00  | 132.17      | 124.68   |
| 9   | k     | 101 | A1EFU | C23-C22-C21 | -4.00 | 109.86      | 121.98   |
| 15  | L     | 308 | CDL   | OA6-CA5-C11 | 4.00  | 120.13      | 111.50   |
| 9   | s     | 101 | A1EFU | C10-C11-C12 | -4.00 | 110.73      | 123.22   |
| 9   | A     | 102 | A1EFU | C6-C7-C8    | -4.00 | 110.73      | 123.22   |
| 9   | R     | 101 | A1EFU | CM3-C5-C4   | 4.00  | 124.38      | 118.08   |
| 9   | E     | 102 | A1EFU | C23-C22-C21 | -4.00 | 109.87      | 121.98   |
| 8   | P     | 101 | BCL   | CMB-C2B-C3B | 3.99  | 132.15      | 124.68   |
| 9   | 2     | 101 | A1EFU | CM6-C18-C19 | 3.99  | 124.37      | 118.08   |
| 9   | M     | 407 | A1EFU | CM3-C5-C4   | 3.99  | 124.36      | 118.08   |
| 9   | D     | 104 | A1EFU | C6-C7-C8    | -3.99 | 110.77      | 123.22   |
| 9   | B     | 103 | A1EFU | CM4-C9-C8   | 3.99  | 124.36      | 118.08   |
| 8   | L     | 301 | BCL   | O2D-CGD-O1D | -3.98 | 116.05      | 123.84   |
| 9   | a     | 102 | A1EFU | CM6-C18-C19 | 3.98  | 124.35      | 118.08   |
| 9   | D     | 105 | A1EFU | CM6-C18-C19 | 3.98  | 124.34      | 118.08   |
| 9   | r     | 102 | A1EFU | CM5-C13-C12 | 3.98  | 124.34      | 118.08   |
| 9   | F     | 104 | A1EFU | C10-C11-C12 | -3.97 | 110.82      | 123.22   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | P     | 103 | A1EFU | CM4-C9-C8   | 3.97  | 124.33      | 118.08   |
| 9   | D     | 104 | A1EFU | CM3-C5-C4   | 3.97  | 124.33      | 118.08   |
| 9   | J     | 103 | A1EFU | CM5-C13-C12 | 3.97  | 124.33      | 118.08   |
| 8   | 1     | 101 | BCL   | O2D-CGD-O1D | -3.97 | 116.08      | 123.84   |
| 10  | G     | 104 | MW9   | O8-C24-C25  | 3.96  | 120.03      | 111.50   |
| 8   | F     | 102 | BCL   | CHD-C1D-ND  | -3.96 | 120.82      | 124.45   |
| 8   | s     | 102 | BCL   | O2D-CGD-O1D | -3.96 | 116.10      | 123.84   |
| 9   | r     | 102 | A1EFU | C6-C7-C8    | -3.95 | 110.88      | 123.22   |
| 8   | S     | 101 | BCL   | CHD-C1D-ND  | -3.95 | 120.82      | 124.45   |
| 9   | D     | 104 | A1EFU | C23-C22-C21 | -3.95 | 110.01      | 121.98   |
| 9   | T     | 101 | A1EFU | C6-C7-C8    | -3.95 | 110.89      | 123.22   |
| 9   | F     | 104 | A1EFU | CM5-C13-C12 | 3.95  | 124.29      | 118.08   |
| 8   | M     | 402 | BCL   | O2D-CGD-O1D | -3.94 | 116.13      | 123.84   |
| 8   | e     | 101 | BCL   | OBB-CAB-CBB | -3.94 | 111.30      | 120.17   |
| 9   | P     | 103 | A1EFU | CM3-C5-C4   | 3.94  | 124.29      | 118.08   |
| 9   | G     | 105 | A1EFU | CM3-C5-C4   | 3.94  | 124.28      | 118.08   |
| 10  | F     | 103 | MW9   | O8-C24-C25  | 3.94  | 119.98      | 111.50   |
| 8   | d     | 101 | BCL   | CMB-C2B-C3B | 3.93  | 132.04      | 124.68   |
| 9   | r     | 102 | A1EFU | CM4-C9-C8   | 3.93  | 124.27      | 118.08   |
| 9   | 2     | 101 | A1EFU | CM3-C5-C4   | 3.93  | 124.27      | 118.08   |
| 9   | E     | 102 | A1EFU | CM3-C5-C4   | 3.93  | 124.27      | 118.08   |
| 9   | E     | 103 | A1EFU | C10-C11-C12 | -3.93 | 110.96      | 123.22   |
| 9   | j     | 101 | A1EFU | C23-C22-C21 | -3.93 | 110.09      | 121.98   |
| 9   | D     | 105 | A1EFU | C6-C7-C8    | -3.92 | 110.99      | 123.22   |
| 9   | P     | 103 | A1EFU | C6-C7-C8    | -3.92 | 111.00      | 123.22   |
| 8   | L     | 301 | BCL   | OBB-CAB-CBB | -3.92 | 111.36      | 120.17   |
| 9   | G     | 105 | A1EFU | C10-C11-C12 | -3.91 | 111.01      | 123.22   |
| 8   | M     | 403 | BCL   | O2D-CGD-O1D | -3.91 | 116.19      | 123.84   |
| 9   | j     | 103 | A1EFU | C23-C22-C21 | -3.91 | 110.15      | 121.98   |
| 9   | r     | 102 | A1EFU | C10-C11-C12 | -3.91 | 111.02      | 123.22   |
| 8   | j     | 102 | BCL   | OBB-CAB-CBB | -3.91 | 111.38      | 120.17   |
| 8   | a     | 101 | BCL   | OBB-CAB-CBB | -3.90 | 111.40      | 120.17   |
| 9   | j     | 103 | A1EFU | C10-C11-C12 | -3.90 | 111.06      | 123.22   |
| 9   | F     | 104 | A1EFU | C23-C22-C21 | -3.89 | 110.19      | 121.98   |
| 8   | F     | 101 | BCL   | OBB-CAB-CBB | -3.89 | 111.41      | 120.17   |
| 8   | q     | 102 | BCL   | OBB-CAB-CBB | -3.89 | 111.41      | 120.17   |
| 8   | G     | 101 | BCL   | OBB-CAB-CBB | -3.89 | 111.41      | 120.17   |
| 8   | b     | 101 | BCL   | OBB-CAB-CBB | -3.89 | 111.42      | 120.17   |
| 8   | L     | 304 | BCL   | OBB-CAB-CBB | -3.89 | 111.42      | 120.17   |
| 8   | I     | 101 | BCL   | OBB-CAB-CBB | -3.89 | 111.43      | 120.17   |
| 8   | M     | 402 | BCL   | OBB-CAB-CBB | -3.88 | 111.43      | 120.17   |
| 9   | B     | 102 | A1EFU | C23-C22-C21 | -3.88 | 110.23      | 121.98   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | v     | 103 | A1EFU | C6-C7-C8    | -3.88 | 111.11      | 123.22   |
| 9   | R     | 101 | A1EFU | CM5-C13-C12 | 3.88  | 124.19      | 118.08   |
| 9   | J     | 103 | A1EFU | C23-C22-C21 | -3.88 | 110.24      | 121.98   |
| 9   | E     | 102 | A1EFU | CM5-C13-C12 | 3.88  | 124.19      | 118.08   |
| 8   | s     | 103 | BCL   | OBB-CAB-CBB | -3.87 | 111.45      | 120.17   |
| 9   | q     | 101 | A1EFU | CM4-C9-C8   | 3.87  | 124.18      | 118.08   |
| 9   | j     | 103 | A1EFU | CM5-C13-C12 | 3.87  | 124.18      | 118.08   |
| 8   | k     | 102 | BCL   | OBB-CAB-CBB | -3.87 | 111.46      | 120.17   |
| 8   | G     | 102 | BCL   | CHD-C1D-ND  | -3.87 | 120.90      | 124.45   |
| 8   | P     | 101 | BCL   | OBB-CAB-CBB | -3.87 | 111.47      | 120.17   |
| 8   | M     | 402 | BCL   | CHD-C1D-ND  | -3.87 | 120.90      | 124.45   |
| 9   | E     | 103 | A1EFU | CM4-C9-C8   | 3.86  | 124.17      | 118.08   |
| 9   | 2     | 104 | A1EFU | C6-C7-C8    | -3.86 | 111.16      | 123.22   |
| 8   | l     | 101 | BCL   | C2C-C3C-C4C | -3.86 | 95.55       | 101.34   |
| 8   | v     | 101 | BCL   | OBB-CAB-CBB | -3.86 | 111.49      | 120.17   |
| 9   | P     | 103 | A1EFU | CM5-C13-C12 | 3.85  | 124.15      | 118.08   |
| 8   | N     | 101 | BCL   | OBB-CAB-CBB | -3.85 | 111.50      | 120.17   |
| 9   | s     | 104 | A1EFU | C10-C11-C12 | -3.85 | 111.20      | 123.22   |
| 9   | G     | 105 | A1EFU | C6-C7-C8    | -3.85 | 111.20      | 123.22   |
| 9   | R     | 101 | A1EFU | C10-C11-C12 | -3.85 | 111.21      | 123.22   |
| 8   | R     | 102 | BCL   | OBB-CAB-CBB | -3.85 | 111.51      | 120.17   |
| 16  | C     | 401 | HEC   | CMC-C2C-C3C | 3.84  | 130.34      | 125.82   |
| 8   | E     | 101 | BCL   | CHD-C1D-ND  | -3.84 | 120.92      | 124.45   |
| 9   | I     | 102 | A1EFU | C21-C20-C19 | -3.84 | 111.23      | 123.22   |
| 8   | l     | 101 | BCL   | OBB-CAB-CBB | -3.84 | 111.53      | 120.17   |
| 9   | R     | 101 | A1EFU | C23-C22-C21 | -3.84 | 110.36      | 121.98   |
| 8   | G     | 102 | BCL   | OBB-CAB-CBB | -3.83 | 111.54      | 120.17   |
| 8   | i     | 101 | BCL   | OBB-CAB-CBB | -3.83 | 111.55      | 120.17   |
| 9   | r     | 102 | A1EFU | CM6-C18-C19 | 3.83  | 124.11      | 118.08   |
| 9   | A     | 102 | A1EFU | CM6-C18-C19 | 3.82  | 124.10      | 118.08   |
| 8   | r     | 101 | BCL   | OBB-CAB-CBB | -3.82 | 111.57      | 120.17   |
| 8   | S     | 101 | BCL   | OBB-CAB-CBB | -3.82 | 111.58      | 120.17   |
| 9   | G     | 105 | A1EFU | CM4-C9-C8   | 3.82  | 124.09      | 118.08   |
| 8   | L     | 301 | BCL   | CHD-C1D-ND  | -3.82 | 120.95      | 124.45   |
| 9   | A     | 102 | A1EFU | CM5-C13-C12 | 3.82  | 124.09      | 118.08   |
| 8   | J     | 101 | BCL   | OBB-CAB-CBB | -3.82 | 111.58      | 120.17   |
| 9   | E     | 102 | A1EFU | C10-C11-C12 | -3.81 | 111.32      | 123.22   |
| 9   | T     | 101 | A1EFU | CM5-C13-C12 | 3.81  | 124.08      | 118.08   |
| 9   | E     | 103 | A1EFU | CM6-C18-C19 | 3.81  | 124.08      | 118.08   |
| 9   | s     | 105 | A1EFU | C23-C22-C21 | -3.81 | 110.44      | 121.98   |
| 8   | n     | 101 | BCL   | OBB-CAB-CBB | -3.81 | 111.60      | 120.17   |
| 9   | D     | 105 | A1EFU | CM4-C9-C8   | 3.81  | 124.08      | 118.08   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | K     | 101 | BCL   | OBB-CAB-CBB | -3.81 | 111.60      | 120.17   |
| 9   | B     | 102 | A1EFU | CM5-C13-C12 | 3.81  | 124.08      | 118.08   |
| 9   | k     | 101 | A1EFU | C21-C20-C19 | -3.81 | 111.34      | 123.22   |
| 9   | G     | 106 | A1EFU | C6-C7-C8    | -3.80 | 111.34      | 123.22   |
| 8   | Q     | 101 | BCL   | OBB-CAB-CBB | -3.80 | 111.61      | 120.17   |
| 9   | s     | 104 | A1EFU | CM5-C13-C12 | 3.80  | 124.07      | 118.08   |
| 9   | E     | 102 | A1EFU | CM6-C18-C19 | 3.80  | 124.07      | 118.08   |
| 8   | E     | 101 | BCL   | OBB-CAB-CBB | -3.80 | 111.62      | 120.17   |
| 8   | n     | 101 | BCL   | CHD-C1D-ND  | -3.80 | 120.96      | 124.45   |
| 8   | 2     | 103 | BCL   | OBB-CAB-CBB | -3.80 | 111.62      | 120.17   |
| 8   | F     | 102 | BCL   | OBB-CAB-CBB | -3.80 | 111.63      | 120.17   |
| 8   | B     | 101 | BCL   | OBB-CAB-CBB | -3.80 | 111.63      | 120.17   |
| 9   | v     | 102 | A1EFU | CM4-C9-C8   | 3.79  | 124.05      | 118.08   |
| 8   | L     | 304 | BCL   | CHD-C1D-ND  | -3.79 | 120.97      | 124.45   |
| 9   | s     | 101 | A1EFU | CM6-C18-C19 | 3.79  | 124.05      | 118.08   |
| 9   | J     | 102 | A1EFU | C6-C7-C8    | -3.79 | 111.40      | 123.22   |
| 8   | D     | 101 | BCL   | CHD-C1D-ND  | -3.78 | 120.98      | 124.45   |
| 8   | L     | 301 | BCL   | C2A-C3A-C4A | -3.78 | 95.76       | 101.87   |
| 9   | I     | 102 | A1EFU | C6-C7-C8    | -3.78 | 111.42      | 123.22   |
| 8   | P     | 102 | BCL   | OBB-CAB-CBB | -3.77 | 111.69      | 120.17   |
| 8   | M     | 403 | BCL   | OBB-CAB-CBB | -3.77 | 111.69      | 120.17   |
| 9   | q     | 101 | A1EFU | C6-C7-C8    | -3.77 | 111.45      | 123.22   |
| 9   | B     | 103 | A1EFU | C23-C22-C21 | -3.77 | 110.57      | 121.98   |
| 8   | A     | 101 | BCL   | OBB-CAB-CBB | -3.77 | 111.69      | 120.17   |
| 9   | E     | 103 | A1EFU | CM5-C13-C12 | 3.77  | 124.01      | 118.08   |
| 9   | B     | 102 | A1EFU | C10-C11-C12 | -3.76 | 111.48      | 123.22   |
| 9   | R     | 101 | A1EFU | CM4-C9-C8   | 3.76  | 124.00      | 118.08   |
| 9   | 2     | 101 | A1EFU | CM4-C9-C8   | 3.76  | 124.00      | 118.08   |
| 9   | G     | 106 | A1EFU | C10-C11-C12 | -3.76 | 111.50      | 123.22   |
| 9   | I     | 102 | A1EFU | CM4-C9-C8   | 3.75  | 123.99      | 118.08   |
| 9   | E     | 103 | A1EFU | C6-C7-C8    | -3.75 | 111.50      | 123.22   |
| 9   | f     | 101 | A1EFU | CM4-C9-C8   | 3.74  | 123.97      | 118.08   |
| 9   | s     | 101 | A1EFU | CM5-C13-C12 | 3.74  | 123.97      | 118.08   |
| 9   | B     | 103 | A1EFU | C6-C7-C8    | -3.74 | 111.55      | 123.22   |
| 8   | D     | 101 | BCL   | OBB-CAB-CBB | -3.74 | 111.76      | 120.17   |
| 9   | a     | 102 | A1EFU | C10-C11-C12 | -3.73 | 111.56      | 123.22   |
| 9   | G     | 106 | A1EFU | CM5-C13-C12 | 3.73  | 123.96      | 118.08   |
| 8   | M     | 402 | BCL   | C1C-NC-C4C  | -3.73 | 105.03      | 106.71   |
| 9   | v     | 102 | A1EFU | C23-C22-C21 | -3.73 | 110.68      | 121.98   |
| 9   | j     | 101 | A1EFU | CM5-C13-C12 | 3.73  | 123.95      | 118.08   |
| 9   | 2     | 102 | A1EFU | CM3-C5-C4   | 3.73  | 123.95      | 118.08   |
| 9   | p     | 101 | A1EFU | CM6-C18-C19 | 3.73  | 123.95      | 118.08   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | P     | 103 | A1EFU | C10-C11-C12 | -3.72 | 111.59      | 123.22   |
| 8   | K     | 101 | BCL   | CHD-C1D-ND  | -3.72 | 121.03      | 124.45   |
| 9   | v     | 103 | A1EFU | CM5-C13-C12 | 3.72  | 123.94      | 118.08   |
| 9   | v     | 102 | A1EFU | C6-C7-C8    | -3.72 | 111.61      | 123.22   |
| 9   | k     | 101 | A1EFU | CM4-C9-C8   | 3.72  | 123.94      | 118.08   |
| 9   | I     | 102 | A1EFU | CM5-C13-C12 | 3.72  | 123.94      | 118.08   |
| 8   | D     | 101 | BCL   | C1C-NC-C4C  | -3.71 | 105.04      | 106.71   |
| 9   | r     | 102 | A1EFU | C23-C22-C21 | -3.71 | 110.74      | 121.98   |
| 9   | B     | 103 | A1EFU | CM5-C13-C12 | 3.70  | 123.91      | 118.08   |
| 8   | n     | 101 | BCL   | C16-C15-C13 | -3.70 | 103.95      | 115.92   |
| 9   | v     | 102 | A1EFU | CM6-C18-C19 | 3.70  | 123.91      | 118.08   |
| 9   | E     | 102 | A1EFU | C21-C20-C19 | -3.70 | 111.66      | 123.22   |
| 9   | K     | 102 | A1EFU | CM4-C9-C8   | 3.70  | 123.91      | 118.08   |
| 8   | B     | 101 | BCL   | CHD-C1D-ND  | -3.70 | 121.06      | 124.45   |
| 9   | D     | 105 | A1EFU | C21-C20-C19 | -3.69 | 111.69      | 123.22   |
| 9   | p     | 101 | A1EFU | C10-C11-C12 | -3.69 | 111.69      | 123.22   |
| 9   | v     | 103 | A1EFU | CM6-C18-C19 | 3.69  | 123.89      | 118.08   |
| 9   | J     | 102 | A1EFU | CM4-C9-C8   | 3.68  | 123.88      | 118.08   |
| 9   | K     | 102 | A1EFU | CM5-C13-C12 | 3.68  | 123.87      | 118.08   |
| 8   | 2     | 103 | BCL   | CHD-C1D-ND  | -3.67 | 121.08      | 124.45   |
| 9   | K     | 102 | A1EFU | C6-C7-C8    | -3.67 | 111.76      | 123.22   |
| 9   | s     | 105 | A1EFU | CM6-C18-C19 | 3.67  | 123.86      | 118.08   |
| 9   | J     | 103 | A1EFU | CM4-C9-C8   | 3.67  | 123.86      | 118.08   |
| 9   | T     | 101 | A1EFU | CM6-C18-C19 | 3.67  | 123.86      | 118.08   |
| 8   | R     | 102 | BCL   | CHD-C1D-ND  | -3.67 | 121.08      | 124.45   |
| 9   | K     | 102 | A1EFU | C23-C22-C21 | -3.67 | 110.88      | 121.98   |
| 9   | 2     | 101 | A1EFU | C21-C20-C19 | -3.67 | 111.78      | 123.22   |
| 16  | C     | 402 | HEC   | CMC-C2C-C3C | 3.66  | 130.13      | 125.82   |
| 9   | v     | 103 | A1EFU | C10-C11-C12 | -3.66 | 111.80      | 123.22   |
| 9   | J     | 103 | A1EFU | CM6-C18-C19 | 3.66  | 123.84      | 118.08   |
| 8   | e     | 101 | BCL   | CHD-C1D-ND  | -3.65 | 121.10      | 124.45   |
| 8   | t     | 101 | BCL   | CHA-C1A-NA  | -3.65 | 118.03      | 126.40   |
| 9   | 2     | 102 | A1EFU | C6-C7-C8    | -3.65 | 111.83      | 123.22   |
| 9   | s     | 104 | A1EFU | CM4-C9-C8   | 3.65  | 123.82      | 118.08   |
| 9   | D     | 105 | A1EFU | C10-C11-C12 | -3.64 | 111.87      | 123.22   |
| 9   | f     | 101 | A1EFU | CM6-C18-C19 | 3.64  | 123.81      | 118.08   |
| 16  | C     | 403 | HEC   | CMB-C2B-C3B | 3.64  | 130.09      | 125.82   |
| 8   | B     | 101 | BCL   | C1C-NC-C4C  | -3.63 | 105.07      | 106.71   |
| 8   | a     | 101 | BCL   | CHD-C1D-ND  | -3.63 | 121.11      | 124.45   |
| 9   | p     | 101 | A1EFU | C6-C7-C8    | -3.63 | 111.88      | 123.22   |
| 9   | v     | 102 | A1EFU | CM5-C13-C12 | 3.63  | 123.80      | 118.08   |
| 9   | T     | 101 | A1EFU | C23-C22-C21 | -3.63 | 110.99      | 121.98   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | J     | 102 | A1EFU | CM3-C5-C4   | 3.63  | 123.79      | 118.08   |
| 9   | q     | 101 | A1EFU | C23-C22-C21 | -3.63 | 111.00      | 121.98   |
| 9   | 2     | 104 | A1EFU | CM4-C9-C8   | 3.63  | 123.79      | 118.08   |
| 9   | p     | 101 | A1EFU | CM4-C9-C8   | 3.63  | 123.79      | 118.08   |
| 9   | G     | 106 | A1EFU | C21-C20-C19 | -3.63 | 111.90      | 123.22   |
| 9   | s     | 105 | A1EFU | CM5-C13-C12 | 3.62  | 123.79      | 118.08   |
| 9   | s     | 101 | A1EFU | C23-C22-C21 | -3.62 | 111.01      | 121.98   |
| 9   | 2     | 101 | A1EFU | C6-C7-C8    | -3.62 | 111.91      | 123.22   |
| 9   | T     | 101 | A1EFU | C10-C11-C12 | -3.62 | 111.92      | 123.22   |
| 16  | C     | 403 | HEC   | CBD-CAD-C3D | 3.62  | 118.80      | 112.62   |
| 9   | p     | 101 | A1EFU | CM5-C13-C12 | 3.61  | 123.77      | 118.08   |
| 9   | a     | 102 | A1EFU | C21-C20-C19 | -3.61 | 111.94      | 123.22   |
| 8   | r     | 101 | BCL   | CHD-C1D-ND  | -3.61 | 121.14      | 124.45   |
| 8   | Q     | 101 | BCL   | CHD-C1D-ND  | -3.61 | 121.14      | 124.45   |
| 9   | s     | 105 | A1EFU | C10-C11-C12 | -3.61 | 111.97      | 123.22   |
| 9   | G     | 106 | A1EFU | CM4-C9-C8   | 3.60  | 123.75      | 118.08   |
| 9   | M     | 407 | A1EFU | CM4-C9-C8   | 3.60  | 123.75      | 118.08   |
| 9   | M     | 407 | A1EFU | C10-C11-C12 | -3.60 | 111.98      | 123.22   |
| 9   | M     | 407 | A1EFU | CM5-C13-C12 | 3.60  | 123.74      | 118.08   |
| 9   | A     | 102 | A1EFU | C10-C11-C12 | -3.60 | 112.00      | 123.22   |
| 8   | q     | 102 | BCL   | CHD-C1D-ND  | -3.59 | 121.15      | 124.45   |
| 9   | J     | 102 | A1EFU | CM5-C13-C12 | 3.59  | 123.74      | 118.08   |
| 9   | G     | 105 | A1EFU | CM5-C13-C12 | 3.59  | 123.74      | 118.08   |
| 9   | A     | 102 | A1EFU | C23-C22-C21 | -3.59 | 111.11      | 121.98   |
| 9   | B     | 103 | A1EFU | CM6-C18-C19 | 3.59  | 123.73      | 118.08   |
| 8   | j     | 102 | BCL   | CHD-C1D-ND  | -3.59 | 121.15      | 124.45   |
| 9   | I     | 102 | A1EFU | C10-C11-C12 | -3.58 | 112.04      | 123.22   |
| 8   | I     | 101 | BCL   | CHD-C1D-ND  | -3.58 | 121.17      | 124.45   |
| 9   | F     | 104 | A1EFU | CM6-C18-C19 | 3.58  | 123.71      | 118.08   |
| 8   | d     | 101 | BCL   | CHD-C1D-ND  | -3.57 | 121.17      | 124.45   |
| 8   | 2     | 103 | BCL   | C16-C15-C13 | -3.57 | 104.38      | 115.92   |
| 9   | J     | 103 | A1EFU | C10-C11-C12 | -3.57 | 112.09      | 123.22   |
| 8   | J     | 101 | BCL   | CHD-C1D-ND  | -3.57 | 121.18      | 124.45   |
| 8   | i     | 101 | BCL   | CHD-C1D-ND  | -3.56 | 121.18      | 124.45   |
| 16  | C     | 403 | HEC   | CMB-C2B-C1B | -3.56 | 122.99      | 128.46   |
| 8   | P     | 101 | BCL   | CHD-C1D-ND  | -3.56 | 121.19      | 124.45   |
| 9   | D     | 105 | A1EFU | CM5-C13-C12 | 3.55  | 123.68      | 118.08   |
| 9   | f     | 101 | A1EFU | C23-C22-C21 | -3.55 | 111.23      | 121.98   |
| 9   | M     | 407 | A1EFU | C6-C7-C8    | -3.55 | 112.14      | 123.22   |
| 8   | e     | 101 | BCL   | C1C-NC-C4C  | -3.55 | 105.11      | 106.71   |
| 9   | v     | 103 | A1EFU | C23-C22-C21 | -3.55 | 111.24      | 121.98   |
| 8   | d     | 101 | BCL   | OBB-CAB-CBB | -3.54 | 112.20      | 120.17   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | s     | 102 | BCL   | C16-C15-C13 | -3.54 | 104.47      | 115.92   |
| 8   | Q     | 101 | BCL   | C4B-CHC-C1C | -3.54 | 123.11      | 130.12   |
| 8   | A     | 101 | BCL   | CHD-C1D-ND  | -3.54 | 121.20      | 124.45   |
| 9   | R     | 101 | A1EFU | CM6-C18-C19 | 3.54  | 123.65      | 118.08   |
| 9   | P     | 103 | A1EFU | C21-C20-C19 | -3.53 | 112.19      | 123.22   |
| 9   | F     | 104 | A1EFU | C21-C20-C19 | -3.53 | 112.19      | 123.22   |
| 8   | N     | 101 | BCL   | CHD-C1D-ND  | -3.53 | 121.21      | 124.45   |
| 9   | J     | 103 | A1EFU | C6-C7-C8    | -3.53 | 112.22      | 123.22   |
| 8   | G     | 101 | BCL   | CHD-C1D-ND  | -3.52 | 121.22      | 124.45   |
| 8   | t     | 101 | BCL   | C4B-CHC-C1C | -3.52 | 123.14      | 130.12   |
| 9   | k     | 101 | A1EFU | CM6-C18-C19 | 3.52  | 123.62      | 118.08   |
| 9   | N     | 102 | A1EFU | CM3-C5-C4   | 3.52  | 123.62      | 118.08   |
| 9   | R     | 101 | A1EFU | C6-C7-C8    | -3.52 | 112.25      | 123.22   |
| 9   | j     | 101 | A1EFU | CM6-C18-C19 | 3.51  | 123.61      | 118.08   |
| 9   | s     | 104 | A1EFU | CM3-C5-C6   | -3.51 | 118.00      | 122.92   |
| 9   | R     | 101 | A1EFU | C21-C20-C19 | -3.51 | 112.25      | 123.22   |
| 9   | N     | 102 | A1EFU | C21-C20-C19 | -3.51 | 112.27      | 123.22   |
| 8   | b     | 101 | BCL   | CHD-C1D-ND  | -3.50 | 121.23      | 124.45   |
| 8   | v     | 101 | BCL   | CHD-C1D-ND  | -3.50 | 121.24      | 124.45   |
| 9   | N     | 102 | A1EFU | CM5-C13-C12 | 3.50  | 123.59      | 118.08   |
| 9   | G     | 105 | A1EFU | C23-C22-C21 | -3.50 | 111.39      | 121.98   |
| 9   | E     | 103 | A1EFU | C21-C20-C19 | -3.49 | 112.31      | 123.22   |
| 9   | K     | 102 | A1EFU | C21-C20-C19 | -3.49 | 112.32      | 123.22   |
| 9   | M     | 407 | A1EFU | C23-C22-C21 | -3.49 | 111.42      | 121.98   |
| 8   | k     | 102 | BCL   | CHD-C1D-ND  | -3.49 | 121.25      | 124.45   |
| 9   | s     | 105 | A1EFU | C21-C20-C19 | -3.49 | 112.33      | 123.22   |
| 8   | a     | 101 | BCL   | C16-C15-C13 | -3.49 | 104.65      | 115.92   |
| 9   | p     | 101 | A1EFU | C23-C22-C21 | -3.49 | 111.42      | 121.98   |
| 8   | L     | 304 | BCL   | C16-C15-C13 | -3.49 | 104.65      | 115.92   |
| 9   | J     | 102 | A1EFU | C23-C22-C21 | -3.48 | 111.44      | 121.98   |
| 9   | v     | 103 | A1EFU | CM4-C9-C8   | 3.48  | 123.56      | 118.08   |
| 8   | P     | 102 | BCL   | CHD-C1D-ND  | -3.48 | 121.26      | 124.45   |
| 9   | B     | 102 | A1EFU | CM6-C18-C19 | 3.47  | 123.55      | 118.08   |
| 9   | 2     | 104 | A1EFU | C10-C11-C12 | -3.47 | 112.40      | 123.22   |
| 9   | s     | 104 | A1EFU | CM3-C5-C4   | 3.46  | 123.54      | 118.08   |
| 9   | G     | 105 | A1EFU | CM6-C18-C19 | 3.46  | 123.53      | 118.08   |
| 9   | B     | 103 | A1EFU | C21-C20-C19 | -3.46 | 112.42      | 123.22   |
| 9   | 2     | 102 | A1EFU | CM4-C9-C8   | 3.46  | 123.53      | 118.08   |
| 9   | B     | 102 | A1EFU | C21-C20-C19 | -3.46 | 112.43      | 123.22   |
| 9   | 2     | 104 | A1EFU | CM5-C13-C12 | 3.46  | 123.52      | 118.08   |
| 8   | L     | 301 | BCL   | C1C-NC-C4C  | -3.46 | 105.15      | 106.71   |
| 9   | f     | 101 | A1EFU | C10-C11-C12 | -3.45 | 112.44      | 123.22   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | N     | 101 | BCL   | C2C-C3C-C4C | -3.45 | 96.17       | 101.34   |
| 8   | P     | 101 | BCL   | C4B-CHC-C1C | -3.45 | 123.29      | 130.12   |
| 8   | S     | 101 | BCL   | C4B-CHC-C1C | -3.44 | 123.31      | 130.12   |
| 9   | k     | 101 | A1EFU | C6-C7-C8    | -3.43 | 112.50      | 123.22   |
| 9   | k     | 101 | A1EFU | CM5-C13-C12 | 3.42  | 123.47      | 118.08   |
| 8   | s     | 102 | BCL   | CHD-C1D-ND  | -3.42 | 121.31      | 124.45   |
| 8   | E     | 101 | BCL   | CHA-C1A-NA  | -3.41 | 118.58      | 126.40   |
| 8   | 1     | 101 | BCL   | CHD-C1D-ND  | -3.41 | 121.32      | 124.45   |
| 16  | C     | 403 | HEC   | CMC-C2C-C3C | 3.41  | 129.83      | 125.82   |
| 8   | s     | 103 | BCL   | CHD-C1D-ND  | -3.41 | 121.32      | 124.45   |
| 8   | M     | 403 | BCL   | C16-C15-C13 | -3.40 | 104.92      | 115.92   |
| 8   | F     | 101 | BCL   | CHD-C1D-ND  | -3.40 | 121.33      | 124.45   |
| 9   | v     | 102 | A1EFU | C10-C11-C12 | -3.40 | 112.61      | 123.22   |
| 9   | s     | 104 | A1EFU | C23-C22-C21 | -3.40 | 111.69      | 121.98   |
| 8   | r     | 101 | BCL   | C4A-NA-C1A  | -3.40 | 105.18      | 106.71   |
| 8   | r     | 101 | BCL   | C16-C15-C13 | -3.40 | 104.94      | 115.92   |
| 8   | k     | 102 | BCL   | C16-C15-C13 | -3.39 | 104.95      | 115.92   |
| 9   | 2     | 104 | A1EFU | C23-C22-C21 | -3.39 | 111.71      | 121.98   |
| 8   | Q     | 101 | BCL   | C16-C15-C13 | -3.39 | 104.97      | 115.92   |
| 9   | P     | 103 | A1EFU | CM6-C18-C19 | 3.39  | 123.41      | 118.08   |
| 9   | A     | 102 | A1EFU | C21-C20-C19 | -3.38 | 112.67      | 123.22   |
| 9   | f     | 101 | A1EFU | CM5-C13-C12 | 3.38  | 123.40      | 118.08   |
| 16  | C     | 402 | HEC   | CMB-C2B-C1B | -3.37 | 123.28      | 128.46   |
| 8   | M     | 402 | BCL   | C4B-CHC-C1C | -3.37 | 123.45      | 130.12   |
| 8   | A     | 101 | BCL   | C16-C15-C13 | -3.37 | 105.03      | 115.92   |
| 8   | q     | 102 | BCL   | C16-C15-C13 | -3.36 | 105.05      | 115.92   |
| 9   | j     | 101 | A1EFU | C21-C20-C19 | -3.36 | 112.72      | 123.22   |
| 9   | J     | 103 | A1EFU | C21-C20-C19 | -3.36 | 112.73      | 123.22   |
| 8   | Q     | 101 | BCL   | C1C-NC-C4C  | -3.36 | 105.20      | 106.71   |
| 9   | J     | 102 | A1EFU | C10-C11-C12 | -3.35 | 112.76      | 123.22   |
| 8   | t     | 101 | BCL   | C16-C15-C13 | -3.35 | 105.10      | 115.92   |
| 8   | d     | 101 | BCL   | CHA-C1A-NA  | -3.34 | 118.74      | 126.40   |
| 9   | K     | 102 | A1EFU | C10-C11-C12 | -3.34 | 112.79      | 123.22   |
| 8   | V     | 101 | BCL   | CHD-C1D-ND  | -3.34 | 121.39      | 124.45   |
| 9   | j     | 101 | A1EFU | C6-C7-C8    | -3.34 | 112.81      | 123.22   |
| 8   | I     | 101 | BCL   | C16-C15-C13 | -3.33 | 105.15      | 115.92   |
| 16  | C     | 401 | HEC   | CMC-C2C-C1C | -3.33 | 123.35      | 128.46   |
| 9   | q     | 101 | A1EFU | C21-C20-C19 | -3.32 | 112.84      | 123.22   |
| 9   | D     | 104 | A1EFU | C21-C20-C19 | -3.32 | 112.84      | 123.22   |
| 16  | C     | 402 | HEC   | CMB-C2B-C3B | 3.32  | 129.72      | 125.82   |
| 8   | D     | 101 | BCL   | C4B-CHC-C1C | -3.31 | 123.56      | 130.12   |
| 9   | N     | 102 | A1EFU | CM4-C9-C8   | 3.31  | 123.29      | 118.08   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | B     | 101 | BCL   | C4B-CHC-C1C | -3.31 | 123.56      | 130.12   |
| 8   | s     | 103 | BCL   | C16-C15-C13 | -3.30 | 105.24      | 115.92   |
| 11  | L     | 306 | LMT   | C3'-C4'-C5' | -3.30 | 105.44      | 110.30   |
| 8   | P     | 101 | BCL   | C16-C15-C13 | -3.30 | 105.25      | 115.92   |
| 8   | G     | 101 | BCL   | C4A-NA-C1A  | -3.30 | 105.22      | 106.71   |
| 9   | T     | 101 | A1EFU | C21-C20-C19 | -3.29 | 112.94      | 123.22   |
| 8   | i     | 101 | BCL   | C16-C15-C13 | -3.29 | 105.28      | 115.92   |
| 8   | v     | 101 | BCL   | C1C-NC-C4C  | -3.29 | 105.23      | 106.71   |
| 8   | R     | 102 | BCL   | C16-C15-C13 | -3.29 | 105.29      | 115.92   |
| 8   | F     | 102 | BCL   | CHA-C1A-NA  | -3.27 | 118.90      | 126.40   |
| 8   | s     | 102 | BCL   | CMB-C2B-C3B | 3.27  | 130.80      | 124.68   |
| 9   | r     | 102 | A1EFU | C21-C20-C19 | -3.27 | 113.01      | 123.22   |
| 9   | D     | 104 | A1EFU | CM6-C18-C19 | 3.27  | 123.22      | 118.08   |
| 8   | k     | 102 | BCL   | CHA-C1A-NA  | -3.27 | 118.92      | 126.40   |
| 8   | s     | 102 | BCL   | C2C-C3C-C4C | -3.27 | 96.45       | 101.34   |
| 9   | j     | 101 | A1EFU | C10-C11-C12 | -3.26 | 113.05      | 123.22   |
| 8   | M     | 402 | BCL   | CHA-C1A-NA  | -3.25 | 118.96      | 126.40   |
| 9   | 2     | 102 | A1EFU | C21-C20-C19 | -3.25 | 113.08      | 123.22   |
| 8   | P     | 101 | BCL   | CHA-C1A-NA  | -3.25 | 118.96      | 126.40   |
| 9   | 2     | 101 | A1EFU | C10-C11-C12 | -3.25 | 113.09      | 123.22   |
| 8   | P     | 101 | BCL   | C1C-NC-C4C  | -3.25 | 105.25      | 106.71   |
| 8   | E     | 101 | BCL   | C2C-C3C-C4C | -3.24 | 96.48       | 101.34   |
| 8   | S     | 101 | BCL   | C16-C15-C13 | -3.24 | 105.46      | 115.92   |
| 8   | l     | 101 | BCL   | CHA-C1A-NA  | -3.23 | 119.00      | 126.40   |
| 8   | b     | 101 | BCL   | CHA-C1A-NA  | -3.23 | 119.00      | 126.40   |
| 8   | P     | 102 | BCL   | CMB-C2B-C3B | 3.23  | 130.72      | 124.68   |
| 8   | r     | 101 | BCL   | CMB-C2B-C3B | 3.23  | 130.72      | 124.68   |
| 8   | d     | 101 | BCL   | O2A-CGA-O1A | -3.23 | 115.45      | 123.59   |
| 9   | N     | 102 | A1EFU | C6-C7-C8    | -3.22 | 113.16      | 123.22   |
| 8   | J     | 101 | BCL   | CHA-C1A-NA  | -3.22 | 119.02      | 126.40   |
| 8   | J     | 101 | BCL   | C4B-CHC-C1C | -3.22 | 123.75      | 130.12   |
| 8   | M     | 403 | BCL   | C4D-CHA-C1A | 3.21  | 125.16      | 121.25   |
| 8   | F     | 101 | BCL   | C4B-CHC-C1C | -3.21 | 123.77      | 130.12   |
| 16  | C     | 401 | HEC   | CBD-CAD-C3D | 3.20  | 118.09      | 112.62   |
| 8   | l     | 101 | BCL   | C4B-CHC-C1C | -3.20 | 123.77      | 130.12   |
| 8   | j     | 102 | BCL   | CHA-C1A-NA  | -3.20 | 119.06      | 126.40   |
| 8   | F     | 101 | BCL   | C16-C15-C13 | -3.20 | 105.57      | 115.92   |
| 8   | G     | 101 | BCL   | C16-C15-C13 | -3.20 | 105.57      | 115.92   |
| 8   | N     | 101 | BCL   | CHA-C1A-NA  | -3.19 | 119.08      | 126.40   |
| 8   | G     | 102 | BCL   | CHA-C1A-NA  | -3.19 | 119.09      | 126.40   |
| 8   | I     | 101 | BCL   | C4B-CHC-C1C | -3.19 | 123.80      | 130.12   |
| 8   | k     | 102 | BCL   | C4B-CHC-C1C | -3.19 | 123.80      | 130.12   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | Q     | 101 | BCL   | CGD-CBD-CAD | -3.19 | 100.41      | 110.73   |
| 9   | q     | 101 | A1EFU | CM6-C18-C19 | 3.19  | 123.10      | 118.08   |
| 9   | s     | 104 | A1EFU | C6-C7-C8    | -3.19 | 113.28      | 123.22   |
| 8   | n     | 101 | BCL   | CMB-C2B-C3B | 3.18  | 130.63      | 124.68   |
| 8   | M     | 402 | BCL   | C7-C6-C5    | -3.18 | 104.72      | 113.36   |
| 8   | V     | 101 | BCL   | C1C-NC-C4C  | -3.18 | 105.28      | 106.71   |
| 8   | I     | 101 | BCL   | CHA-C1A-NA  | -3.18 | 119.12      | 126.40   |
| 8   | e     | 101 | BCL   | C4B-CHC-C1C | -3.17 | 123.83      | 130.12   |
| 9   | 2     | 101 | A1EFU | CM5-C13-C12 | 3.17  | 123.06      | 118.08   |
| 9   | v     | 103 | A1EFU | C21-C20-C19 | -3.16 | 113.34      | 123.22   |
| 8   | s     | 103 | BCL   | CHA-C1A-NA  | -3.16 | 119.15      | 126.40   |
| 9   | v     | 102 | A1EFU | C21-C20-C19 | -3.16 | 113.35      | 123.22   |
| 9   | f     | 101 | A1EFU | C21-C20-C19 | -3.16 | 113.36      | 123.22   |
| 8   | R     | 102 | BCL   | CHA-C1A-NA  | -3.16 | 119.17      | 126.40   |
| 8   | t     | 101 | BCL   | CMB-C2B-C1B | -3.15 | 123.62      | 128.46   |
| 8   | G     | 101 | BCL   | C4B-CHC-C1C | -3.15 | 123.87      | 130.12   |
| 8   | a     | 101 | BCL   | CHA-C1A-NA  | -3.15 | 119.18      | 126.40   |
| 9   | J     | 102 | A1EFU | CM6-C18-C19 | 3.15  | 123.04      | 118.08   |
| 8   | F     | 102 | BCL   | O2A-CGA-O1A | -3.14 | 115.66      | 123.59   |
| 8   | M     | 403 | BCL   | O2A-CGA-O1A | -3.14 | 115.67      | 123.59   |
| 8   | A     | 101 | BCL   | CMB-C2B-C3B | 3.14  | 130.55      | 124.68   |
| 8   | e     | 101 | BCL   | CHA-C1A-NA  | -3.14 | 119.22      | 126.40   |
| 8   | K     | 101 | BCL   | CHA-C1A-NA  | -3.13 | 119.22      | 126.40   |
| 8   | G     | 102 | BCL   | C7-C6-C5    | -3.13 | 104.85      | 113.36   |
| 9   | 2     | 102 | A1EFU | CM6-C18-C19 | 3.13  | 123.01      | 118.08   |
| 8   | D     | 101 | BCL   | C16-C15-C13 | -3.13 | 105.80      | 115.92   |
| 8   | P     | 102 | BCL   | C16-C15-C13 | -3.13 | 105.81      | 115.92   |
| 8   | V     | 101 | BCL   | C16-C15-C13 | -3.13 | 105.81      | 115.92   |
| 8   | P     | 101 | BCL   | C4D-CHA-C1A | 3.12  | 125.05      | 121.25   |
| 8   | q     | 102 | BCL   | C4B-CHC-C1C | -3.12 | 123.94      | 130.12   |
| 8   | N     | 101 | BCL   | C4B-CHC-C1C | -3.12 | 123.94      | 130.12   |
| 8   | l     | 101 | BCL   | C7-C6-C5    | -3.12 | 104.89      | 113.36   |
| 8   | v     | 101 | BCL   | CHA-C1A-NA  | -3.11 | 119.28      | 126.40   |
| 8   | J     | 101 | BCL   | C16-C15-C13 | -3.11 | 105.87      | 115.92   |
| 8   | A     | 101 | BCL   | CHA-C1A-NA  | -3.11 | 119.28      | 126.40   |
| 8   | K     | 101 | BCL   | C4B-CHC-C1C | -3.10 | 123.97      | 130.12   |
| 8   | S     | 101 | BCL   | C4D-CHA-C1A | 3.10  | 125.02      | 121.25   |
| 8   | V     | 101 | BCL   | CHA-C1A-NA  | -3.10 | 119.30      | 126.40   |
| 8   | Q     | 101 | BCL   | CHA-C1A-NA  | -3.10 | 119.30      | 126.40   |
| 8   | E     | 101 | BCL   | C16-C15-C13 | -3.10 | 105.90      | 115.92   |
| 8   | r     | 101 | BCL   | C4B-CHC-C1C | -3.10 | 123.98      | 130.12   |
| 8   | v     | 101 | BCL   | C4B-CHC-C1C | -3.10 | 123.98      | 130.12   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | a     | 101 | BCL   | C11-C10-C8  | -3.10 | 105.91      | 115.92   |
| 9   | M     | 407 | A1EFU | CM6-C18-C19 | 3.09  | 122.95      | 118.08   |
| 8   | n     | 101 | BCL   | CHA-C1A-NA  | -3.09 | 119.31      | 126.40   |
| 8   | D     | 101 | BCL   | C4D-CHA-C1A | 3.09  | 125.01      | 121.25   |
| 8   | v     | 101 | BCL   | O2A-CGA-O1A | -3.09 | 115.79      | 123.59   |
| 9   | M     | 407 | A1EFU | C21-C20-C19 | -3.09 | 113.58      | 123.22   |
| 8   | P     | 101 | BCL   | C7-C6-C5    | -3.08 | 104.98      | 113.36   |
| 8   | J     | 101 | BCL   | C11-C10-C8  | -3.08 | 105.95      | 115.92   |
| 8   | G     | 102 | BCL   | C4B-CHC-C1C | -3.08 | 124.01      | 130.12   |
| 8   | 1     | 101 | BCL   | C11-C10-C8  | -3.08 | 105.96      | 115.92   |
| 8   | L     | 304 | BCL   | C4A-NA-C1A  | -3.08 | 105.32      | 106.71   |
| 8   | V     | 101 | BCL   | C7-C6-C5    | -3.07 | 105.01      | 113.36   |
| 8   | a     | 101 | BCL   | C1C-NC-C4C  | -3.07 | 105.32      | 106.71   |
| 8   | 1     | 101 | BCL   | C4D-CHA-C1A | 3.07  | 124.99      | 121.25   |
| 16  | C     | 403 | HEC   | O1D-CGD-CBD | -3.07 | 113.21      | 123.08   |
| 9   | s     | 101 | A1EFU | C21-C20-C19 | -3.07 | 113.64      | 123.22   |
| 8   | N     | 101 | BCL   | C7-C6-C5    | -3.07 | 105.02      | 113.36   |
| 11  | L     | 306 | LMT   | C1'-O5'-C5' | -3.07 | 108.39      | 113.67   |
| 8   | B     | 101 | BCL   | C16-C15-C13 | -3.07 | 106.00      | 115.92   |
| 16  | C     | 401 | HEC   | CMB-C2B-C1B | -3.07 | 123.75      | 128.46   |
| 8   | F     | 102 | BCL   | C4B-CHC-C1C | -3.06 | 124.06      | 130.12   |
| 8   | M     | 402 | BCL   | C16-C15-C13 | -3.05 | 106.05      | 115.92   |
| 8   | d     | 101 | BCL   | C11-C10-C8  | -3.05 | 106.05      | 115.92   |
| 8   | b     | 101 | BCL   | C4B-CHC-C1C | -3.05 | 124.07      | 130.12   |
| 9   | j     | 103 | A1EFU | C21-C20-C19 | -3.05 | 113.69      | 123.22   |
| 8   | B     | 101 | BCL   | C11-C10-C8  | -3.05 | 106.06      | 115.92   |
| 8   | q     | 102 | BCL   | CHA-C1A-NA  | -3.05 | 119.42      | 126.40   |
| 8   | L     | 304 | BCL   | C11-C10-C8  | -3.05 | 106.06      | 115.92   |
| 8   | P     | 102 | BCL   | C4A-NA-C1A  | -3.05 | 105.34      | 106.71   |
| 8   | F     | 102 | BCL   | C16-C15-C13 | -3.05 | 106.07      | 115.92   |
| 8   | P     | 102 | BCL   | O2A-CGA-O1A | -3.04 | 115.91      | 123.59   |
| 8   | V     | 101 | BCL   | O2A-CGA-O1A | -3.04 | 115.92      | 123.59   |
| 16  | C     | 402 | HEC   | CMC-C2C-C1C | -3.04 | 123.79      | 128.46   |
| 9   | N     | 102 | A1EFU | C10-C11-C12 | -3.04 | 113.73      | 123.22   |
| 8   | L     | 301 | BCL   | O2A-CGA-O1A | -3.04 | 115.93      | 123.59   |
| 8   | K     | 101 | BCL   | C7-C6-C5    | -3.04 | 105.11      | 113.36   |
| 8   | E     | 101 | BCL   | C4B-CHC-C1C | -3.04 | 124.10      | 130.12   |
| 8   | 2     | 103 | BCL   | C4B-CHC-C1C | -3.04 | 124.11      | 130.12   |
| 8   | G     | 102 | BCL   | C16-C15-C13 | -3.03 | 106.12      | 115.92   |
| 8   | 1     | 101 | BCL   | C16-C15-C13 | -3.03 | 106.12      | 115.92   |
| 8   | a     | 101 | BCL   | C4D-CHA-C1A | 3.03  | 124.94      | 121.25   |
| 8   | j     | 102 | BCL   | C16-C15-C13 | -3.03 | 106.13      | 115.92   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 9   | j     | 103 | A1EFU | CM6-C18-C19 | 3.03  | 122.85      | 118.08   |
| 8   | R     | 102 | BCL   | C7-C6-C5    | -3.02 | 105.14      | 113.36   |
| 8   | R     | 102 | BCL   | C4B-CHC-C1C | -3.02 | 124.13      | 130.12   |
| 8   | D     | 101 | BCL   | C7-C6-C5    | -3.02 | 105.15      | 113.36   |
| 8   | r     | 101 | BCL   | C1C-NC-C4C  | -3.02 | 105.35      | 106.71   |
| 8   | a     | 101 | BCL   | C4B-CHC-C1C | -3.01 | 124.15      | 130.12   |
| 8   | A     | 101 | BCL   | C11-C10-C8  | -3.01 | 106.19      | 115.92   |
| 8   | D     | 101 | BCL   | CHA-C1A-NA  | -3.01 | 119.51      | 126.40   |
| 8   | i     | 101 | BCL   | CHA-C1A-NA  | -3.01 | 119.52      | 126.40   |
| 8   | 2     | 103 | BCL   | CHA-C1A-NA  | -3.00 | 119.53      | 126.40   |
| 8   | L     | 304 | BCL   | CHA-C1A-NA  | -3.00 | 119.53      | 126.40   |
| 8   | b     | 101 | BCL   | C11-C10-C8  | -3.00 | 106.23      | 115.92   |
| 8   | n     | 101 | BCL   | C4B-CHC-C1C | -2.99 | 124.19      | 130.12   |
| 8   | I     | 101 | BCL   | C7-C6-C5    | -2.99 | 105.23      | 113.36   |
| 8   | s     | 102 | BCL   | C7-C6-C5    | -2.99 | 105.23      | 113.36   |
| 9   | N     | 102 | A1EFU | CM6-C18-C19 | 2.99  | 122.79      | 118.08   |
| 8   | v     | 101 | BCL   | C16-C15-C13 | -2.98 | 106.27      | 115.92   |
| 8   | j     | 102 | BCL   | C4B-CHC-C1C | -2.98 | 124.21      | 130.12   |
| 8   | d     | 101 | BCL   | C16-C15-C13 | -2.98 | 106.27      | 115.92   |
| 8   | q     | 102 | BCL   | C11-C10-C8  | -2.98 | 106.28      | 115.92   |
| 8   | P     | 102 | BCL   | C11-C10-C8  | -2.98 | 106.29      | 115.92   |
| 8   | V     | 101 | BCL   | C4A-NA-C1A  | -2.98 | 105.37      | 106.71   |
| 8   | K     | 101 | BCL   | C4D-CHA-C1A | 2.98  | 124.87      | 121.25   |
| 8   | n     | 101 | BCL   | C7-C6-C5    | -2.97 | 105.28      | 113.36   |
| 8   | i     | 101 | BCL   | C4B-CHC-C1C | -2.97 | 124.23      | 130.12   |
| 8   | B     | 101 | BCL   | CHA-C1A-NA  | -2.97 | 119.59      | 126.40   |
| 8   | S     | 101 | BCL   | CHA-C1A-NA  | -2.97 | 119.60      | 126.40   |
| 8   | r     | 101 | BCL   | CHA-C1A-NA  | -2.97 | 119.60      | 126.40   |
| 8   | B     | 101 | BCL   | C7-C6-C5    | -2.97 | 105.30      | 113.36   |
| 9   | s     | 104 | A1EFU | C21-C20-C19 | -2.97 | 113.96      | 123.22   |
| 8   | N     | 101 | BCL   | C16-C15-C13 | -2.96 | 106.34      | 115.92   |
| 8   | L     | 301 | BCL   | C16-C15-C13 | -2.96 | 106.36      | 115.92   |
| 8   | k     | 102 | BCL   | C1C-NC-C4C  | -2.96 | 105.38      | 106.71   |
| 8   | 2     | 103 | BCL   | C11-C10-C8  | -2.96 | 106.37      | 115.92   |
| 8   | r     | 101 | BCL   | O2A-CGA-O1A | -2.95 | 116.14      | 123.59   |
| 8   | i     | 101 | BCL   | C4A-NA-C1A  | -2.95 | 105.38      | 106.71   |
| 8   | L     | 301 | BCL   | C11-C10-C8  | -2.95 | 106.39      | 115.92   |
| 8   | P     | 102 | BCL   | C1C-NC-C4C  | -2.95 | 105.38      | 106.71   |
| 9   | J     | 102 | A1EFU | C21-C20-C19 | -2.95 | 114.02      | 123.22   |
| 8   | J     | 101 | BCL   | O2A-CGA-O1A | -2.95 | 116.16      | 123.59   |
| 8   | L     | 301 | BCL   | C3D-C2D-C1D | -2.94 | 101.81      | 105.83   |
| 8   | M     | 402 | BCL   | CMC-C2C-C3C | -2.94 | 101.96      | 113.83   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | L     | 304 | BCL   | C4D-CHA-C1A | 2.94  | 124.83      | 121.25   |
| 8   | J     | 101 | BCL   | C7-C6-C5    | -2.94 | 105.39      | 113.36   |
| 8   | F     | 102 | BCL   | C7-C6-C5    | -2.93 | 105.39      | 113.36   |
| 9   | G     | 105 | A1EFU | C21-C20-C19 | -2.93 | 114.07      | 123.22   |
| 8   | I     | 101 | BCL   | C3D-C2D-C1D | -2.92 | 101.85      | 105.83   |
| 8   | K     | 101 | BCL   | C16-C15-C13 | -2.92 | 106.49      | 115.92   |
| 8   | a     | 101 | BCL   | C4A-NA-C1A  | -2.92 | 105.39      | 106.71   |
| 8   | v     | 101 | BCL   | C7-C6-C5    | -2.92 | 105.44      | 113.36   |
| 8   | G     | 101 | BCL   | C7-C6-C5    | -2.91 | 105.44      | 113.36   |
| 8   | B     | 101 | BCL   | O2A-CGA-O1A | -2.91 | 116.24      | 123.59   |
| 8   | n     | 101 | BCL   | C4D-CHA-C1A | 2.91  | 124.79      | 121.25   |
| 8   | S     | 101 | BCL   | C1C-NC-C4C  | -2.91 | 105.40      | 106.71   |
| 8   | S     | 101 | BCL   | C3D-C2D-C1D | -2.91 | 101.86      | 105.83   |
| 8   | s     | 102 | BCL   | CHA-C1A-NA  | -2.91 | 119.74      | 126.40   |
| 16  | C     | 403 | HEC   | CMC-C2C-C1C | -2.90 | 124.00      | 128.46   |
| 8   | F     | 101 | BCL   | C11-C10-C8  | -2.90 | 106.54      | 115.92   |
| 8   | v     | 101 | BCL   | C4D-CHA-C1A | 2.90  | 124.78      | 121.25   |
| 8   | Q     | 101 | BCL   | C7-C6-C5    | -2.90 | 105.48      | 113.36   |
| 8   | d     | 101 | BCL   | C4B-CHC-C1C | -2.90 | 124.37      | 130.12   |
| 8   | N     | 101 | BCL   | C11-C10-C8  | -2.90 | 106.55      | 115.92   |
| 8   | b     | 101 | BCL   | C11-C12-C13 | -2.90 | 106.55      | 115.92   |
| 8   | s     | 102 | BCL   | C11-C10-C8  | -2.90 | 106.56      | 115.92   |
| 8   | 2     | 103 | BCL   | O2A-CGA-O1A | -2.89 | 116.29      | 123.59   |
| 8   | q     | 102 | BCL   | C1C-NC-C4C  | -2.89 | 105.41      | 106.71   |
| 8   | M     | 402 | BCL   | C11-C10-C8  | -2.89 | 106.57      | 115.92   |
| 8   | S     | 101 | BCL   | O2A-CGA-O1A | -2.89 | 116.30      | 123.59   |
| 16  | C     | 401 | HEC   | CMB-C2B-C3B | 2.89  | 129.22      | 125.82   |
| 8   | P     | 101 | BCL   | C11-C10-C8  | -2.89 | 106.59      | 115.92   |
| 8   | j     | 102 | BCL   | O2A-CGA-O1A | -2.88 | 116.31      | 123.59   |
| 8   | j     | 102 | BCL   | C11-C10-C8  | -2.88 | 106.61      | 115.92   |
| 8   | k     | 102 | BCL   | C7-C6-C5    | -2.88 | 105.53      | 113.36   |
| 8   | L     | 304 | BCL   | C4B-CHC-C1C | -2.88 | 124.41      | 130.12   |
| 8   | L     | 304 | BCL   | C2C-C3C-C4C | -2.88 | 97.03       | 101.34   |
| 9   | K     | 102 | A1EFU | CM6-C18-C19 | 2.88  | 122.61      | 118.08   |
| 8   | 2     | 103 | BCL   | C3D-C2D-C1D | -2.87 | 101.91      | 105.83   |
| 8   | a     | 101 | BCL   | O2A-CGA-O1A | -2.87 | 116.34      | 123.59   |
| 8   | Q     | 101 | BCL   | C3D-C2D-C1D | -2.87 | 101.91      | 105.83   |
| 8   | A     | 101 | BCL   | O2A-CGA-O1A | -2.87 | 116.34      | 123.59   |
| 8   | L     | 301 | BCL   | CMC-C2C-C3C | -2.87 | 102.25      | 113.83   |
| 8   | F     | 102 | BCL   | C4D-CHA-C1A | 2.87  | 124.74      | 121.25   |
| 16  | C     | 401 | HEC   | O1D-CGD-CBD | -2.87 | 113.87      | 123.08   |
| 8   | J     | 101 | BCL   | C3D-C2D-C1D | -2.87 | 101.92      | 105.83   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | B     | 101 | BCL   | C3D-C2D-C1D | -2.87 | 101.92      | 105.83   |
| 8   | e     | 101 | BCL   | C16-C15-C13 | -2.86 | 106.66      | 115.92   |
| 8   | N     | 101 | BCL   | O2A-CGA-O1A | -2.86 | 116.36      | 123.59   |
| 8   | D     | 101 | BCL   | O2A-CGA-O1A | -2.86 | 116.37      | 123.59   |
| 8   | d     | 101 | BCL   | C3D-C2D-C1D | -2.86 | 101.92      | 105.83   |
| 8   | M     | 403 | BCL   | CHA-C1A-NA  | -2.86 | 119.85      | 126.40   |
| 8   | A     | 101 | BCL   | C4B-CHC-C1C | -2.86 | 124.45      | 130.12   |
| 8   | E     | 101 | BCL   | C11-C10-C8  | -2.86 | 106.68      | 115.92   |
| 16  | C     | 402 | HEC   | O1D-CGD-CBD | -2.86 | 113.90      | 123.08   |
| 8   | I     | 101 | BCL   | C2C-C3C-C4C | -2.86 | 97.06       | 101.34   |
| 8   | R     | 102 | BCL   | O2A-CGA-O1A | -2.85 | 116.39      | 123.59   |
| 8   | s     | 102 | BCL   | C3D-C2D-C1D | -2.85 | 101.94      | 105.83   |
| 8   | G     | 102 | BCL   | C11-C10-C8  | -2.85 | 106.72      | 115.92   |
| 8   | r     | 101 | BCL   | C11-C10-C8  | -2.85 | 106.72      | 115.92   |
| 9   | 2     | 102 | A1EFU | CM5-C13-C12 | 2.85  | 122.56      | 118.08   |
| 8   | G     | 102 | BCL   | O2A-CGA-O1A | -2.84 | 116.42      | 123.59   |
| 8   | A     | 101 | BCL   | C7-C6-C5    | -2.84 | 105.64      | 113.36   |
| 8   | M     | 403 | BCL   | C4B-CHC-C1C | -2.84 | 124.49      | 130.12   |
| 8   | L     | 301 | BCL   | CMA-C3A-C4A | -2.84 | 104.15      | 111.77   |
| 8   | N     | 101 | BCL   | C4D-CHA-C1A | 2.84  | 124.70      | 121.25   |
| 8   | A     | 101 | BCL   | C1C-NC-C4C  | -2.84 | 105.43      | 106.71   |
| 8   | J     | 101 | BCL   | C4D-CHA-C1A | 2.83  | 124.70      | 121.25   |
| 8   | M     | 403 | BCL   | C7-C6-C5    | -2.83 | 105.67      | 113.36   |
| 8   | e     | 101 | BCL   | C4D-CHA-C1A | 2.83  | 124.69      | 121.25   |
| 8   | s     | 103 | BCL   | O2A-CGA-O1A | -2.83 | 116.45      | 123.59   |
| 8   | P     | 102 | BCL   | CHA-C1A-NA  | -2.83 | 119.93      | 126.40   |
| 8   | k     | 102 | BCL   | C11-C10-C8  | -2.83 | 106.79      | 115.92   |
| 8   | K     | 101 | BCL   | C11-C10-C8  | -2.83 | 106.79      | 115.92   |
| 8   | K     | 101 | BCL   | C3D-C2D-C1D | -2.82 | 101.98      | 105.83   |
| 10  | L     | 307 | MW9   | O1-C17-C16  | 2.82  | 120.75      | 111.91   |
| 8   | I     | 101 | BCL   | C11-C12-C13 | -2.82 | 106.81      | 115.92   |
| 8   | i     | 101 | BCL   | C3D-C2D-C1D | -2.82 | 101.99      | 105.83   |
| 8   | E     | 101 | BCL   | O2A-CGA-O1A | -2.82 | 116.48      | 123.59   |
| 8   | M     | 403 | BCL   | C11-C10-C8  | -2.82 | 106.82      | 115.92   |
| 8   | l     | 101 | BCL   | O2A-CGA-O1A | -2.81 | 116.49      | 123.59   |
| 8   | n     | 101 | BCL   | C11-C12-C13 | -2.81 | 106.82      | 115.92   |
| 8   | Q     | 101 | BCL   | C4D-CHA-C1A | 2.81  | 124.67      | 121.25   |
| 8   | A     | 101 | BCL   | C4D-CHA-C1A | 2.81  | 124.67      | 121.25   |
| 8   | L     | 301 | BCL   | C11-C12-C13 | -2.81 | 106.83      | 115.92   |
| 8   | L     | 301 | BCL   | CHA-C1A-NA  | -2.81 | 119.96      | 126.40   |
| 8   | t     | 101 | BCL   | C2C-C3C-C4C | -2.81 | 97.13       | 101.34   |
| 8   | v     | 101 | BCL   | C3D-C2D-C1D | -2.81 | 102.00      | 105.83   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | F     | 101 | BCL   | CHA-C1A-NA  | -2.81 | 119.97      | 126.40   |
| 8   | F     | 101 | BCL   | O2A-CGA-O1A | -2.81 | 116.51      | 123.59   |
| 8   | F     | 102 | BCL   | CMA-C3A-C4A | -2.80 | 104.23      | 111.77   |
| 8   | i     | 101 | BCL   | C7-C6-C5    | -2.80 | 105.74      | 113.36   |
| 8   | s     | 103 | BCL   | C4B-CHC-C1C | -2.80 | 124.56      | 130.12   |
| 8   | D     | 101 | BCL   | CMA-C3A-C4A | -2.80 | 104.24      | 111.77   |
| 8   | M     | 402 | BCL   | O2A-CGA-O1A | -2.80 | 116.52      | 123.59   |
| 8   | R     | 102 | BCL   | C11-C10-C8  | -2.80 | 106.87      | 115.92   |
| 8   | D     | 101 | BCL   | C3D-C2D-C1D | -2.80 | 102.01      | 105.83   |
| 8   | Q     | 101 | BCL   | C11-C10-C8  | -2.80 | 106.88      | 115.92   |
| 8   | s     | 103 | BCL   | C7-C6-C5    | -2.80 | 105.77      | 113.36   |
| 8   | L     | 304 | BCL   | C7-C6-C5    | -2.80 | 105.77      | 113.36   |
| 11  | H     | 302 | LMT   | C1'-O5'-C5' | -2.80 | 108.20      | 113.69   |
| 8   | j     | 102 | BCL   | C7-C6-C5    | -2.80 | 105.77      | 113.36   |
| 8   | i     | 101 | BCL   | O2A-CGA-O1A | -2.79 | 116.54      | 123.59   |
| 8   | b     | 101 | BCL   | C4D-CHA-C1A | 2.79  | 124.65      | 121.25   |
| 8   | s     | 102 | BCL   | O2A-CGA-O1A | -2.79 | 116.54      | 123.59   |
| 8   | j     | 102 | BCL   | C3D-C2D-C1D | -2.79 | 102.02      | 105.83   |
| 8   | r     | 101 | BCL   | C7-C6-C5    | -2.79 | 105.78      | 113.36   |
| 11  | C     | 404 | LMT   | C1'-O5'-C5' | -2.79 | 108.21      | 113.69   |
| 8   | P     | 102 | BCL   | CMA-C3A-C4A | -2.79 | 104.28      | 111.77   |
| 8   | E     | 101 | BCL   | C3D-C2D-C1D | -2.79 | 102.03      | 105.83   |
| 8   | n     | 101 | BCL   | C3D-C2D-C1D | -2.79 | 102.03      | 105.83   |
| 8   | b     | 101 | BCL   | C7-C6-C5    | -2.79 | 105.79      | 113.36   |
| 8   | P     | 102 | BCL   | C4D-CHA-C1A | 2.79  | 124.64      | 121.25   |
| 8   | t     | 101 | BCL   | O2A-CGA-O1A | -2.79 | 116.56      | 123.59   |
| 8   | Q     | 101 | BCL   | O2A-CGA-O1A | -2.79 | 116.56      | 123.59   |
| 8   | P     | 101 | BCL   | O2A-CGA-O1A | -2.78 | 116.56      | 123.59   |
| 8   | B     | 101 | BCL   | C4D-CHA-C1A | 2.78  | 124.64      | 121.25   |
| 8   | I     | 101 | BCL   | C4D-CHA-C1A | 2.78  | 124.64      | 121.25   |
| 8   | i     | 101 | BCL   | C1C-NC-C4C  | -2.78 | 105.45      | 106.71   |
| 9   | a     | 102 | A1EFU | C6-C7-C8    | -2.78 | 114.54      | 123.22   |
| 8   | r     | 101 | BCL   | C3D-C2D-C1D | -2.78 | 102.04      | 105.83   |
| 8   | G     | 101 | BCL   | C11-C10-C8  | -2.78 | 106.93      | 115.92   |
| 8   | G     | 102 | BCL   | C3D-C2D-C1D | -2.78 | 102.04      | 105.83   |
| 8   | Q     | 101 | BCL   | CMA-C3A-C4A | -2.78 | 104.31      | 111.77   |
| 8   | L     | 304 | BCL   | CMA-C3A-C4A | -2.78 | 104.31      | 111.77   |
| 8   | M     | 403 | BCL   | CMC-C2C-C3C | -2.78 | 102.63      | 113.83   |
| 8   | F     | 101 | BCL   | C7-C6-C5    | -2.77 | 105.83      | 113.36   |
| 8   | Q     | 101 | BCL   | CMC-C2C-C3C | -2.77 | 102.66      | 113.83   |
| 8   | F     | 102 | BCL   | C2C-C3C-C4C | -2.77 | 97.19       | 101.34   |
| 8   | q     | 102 | BCL   | C7-C6-C5    | -2.77 | 105.84      | 113.36   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 8   | s     | 103 | BCL  | CMC-C2C-C3C | -2.77 | 102.66      | 113.83   |
| 8   | a     | 101 | BCL  | C3D-C2D-C1D | -2.77 | 102.06      | 105.83   |
| 8   | e     | 101 | BCL  | C11-C10-C8  | -2.76 | 106.99      | 115.92   |
| 8   | L     | 304 | BCL  | C3D-C2D-C1D | -2.76 | 102.06      | 105.83   |
| 8   | G     | 102 | BCL  | C4D-CHA-C1A | 2.76  | 124.61      | 121.25   |
| 8   | t     | 101 | BCL  | C7-C6-C5    | -2.76 | 105.86      | 113.36   |
| 8   | A     | 101 | BCL  | C3D-C2D-C1D | -2.76 | 102.07      | 105.83   |
| 8   | S     | 101 | BCL  | C7-C6-C5    | -2.76 | 105.87      | 113.36   |
| 8   | M     | 402 | BCL  | C3D-C2D-C1D | -2.76 | 102.07      | 105.83   |
| 8   | F     | 102 | BCL  | C11-C10-C8  | -2.76 | 107.01      | 115.92   |
| 8   | N     | 101 | BCL  | C3D-C2D-C1D | -2.75 | 102.07      | 105.83   |
| 8   | R     | 102 | BCL  | C3D-C2D-C1D | -2.75 | 102.07      | 105.83   |
| 8   | n     | 101 | BCL  | CMC-C2C-C3C | -2.75 | 102.72      | 113.83   |
| 8   | V     | 101 | BCL  | CMC-C2C-C3C | -2.75 | 102.73      | 113.83   |
| 8   | L     | 304 | BCL  | O2A-CGA-O1A | -2.75 | 116.65      | 123.59   |
| 8   | K     | 101 | BCL  | O2A-CGA-O1A | -2.75 | 116.65      | 123.59   |
| 8   | I     | 101 | BCL  | CMC-C2C-C3C | -2.75 | 102.74      | 113.83   |
| 8   | n     | 101 | BCL  | CMA-C3A-C4A | -2.75 | 104.39      | 111.77   |
| 8   | i     | 101 | BCL  | C11-C10-C8  | -2.75 | 107.03      | 115.92   |
| 15  | L     | 308 | CDL  | OB8-CB7-C71 | 2.75  | 120.53      | 111.91   |
| 8   | L     | 301 | BCL  | C4B-CHC-C1C | -2.75 | 124.68      | 130.12   |
| 8   | i     | 101 | BCL  | CMC-C2C-C3C | -2.75 | 102.75      | 113.83   |
| 8   | M     | 403 | BCL  | C3D-C2D-C1D | -2.74 | 102.09      | 105.83   |
| 8   | l     | 101 | BCL  | C3D-C2D-C1D | -2.74 | 102.09      | 105.83   |
| 8   | G     | 101 | BCL  | CHA-C1A-NA  | -2.74 | 120.12      | 126.40   |
| 8   | F     | 102 | BCL  | C3D-C2D-C1D | -2.74 | 102.09      | 105.83   |
| 8   | G     | 101 | BCL  | O2A-CGA-O1A | -2.74 | 116.68      | 123.59   |
| 8   | P     | 101 | BCL  | C3D-C2D-C1D | -2.74 | 102.09      | 105.83   |
| 8   | S     | 101 | BCL  | CMC-C2C-C3C | -2.74 | 102.78      | 113.83   |
| 8   | R     | 102 | BCL  | C2C-C3C-C4C | -2.74 | 97.24       | 101.34   |
| 8   | r     | 101 | BCL  | C4D-CHA-C1A | 2.74  | 124.58      | 121.25   |
| 8   | k     | 102 | BCL  | C3D-C2D-C1D | -2.73 | 102.10      | 105.83   |
| 8   | e     | 101 | BCL  | C3D-C2D-C1D | -2.73 | 102.10      | 105.83   |
| 8   | B     | 101 | BCL  | CMC-C2C-C3C | -2.73 | 102.80      | 113.83   |
| 15  | L     | 308 | CDL  | OA8-CA7-C31 | 2.73  | 120.48      | 111.91   |
| 8   | I     | 101 | BCL  | C11-C10-C8  | -2.73 | 107.09      | 115.92   |
| 8   | s     | 102 | BCL  | C4B-CHC-C1C | -2.73 | 124.71      | 130.12   |
| 8   | E     | 101 | BCL  | C11-C12-C13 | -2.73 | 107.10      | 115.92   |
| 8   | q     | 102 | BCL  | C3D-C2D-C1D | -2.73 | 102.11      | 105.83   |
| 8   | D     | 101 | BCL  | CMC-C2C-C3C | -2.73 | 102.83      | 113.83   |
| 8   | G     | 102 | BCL  | CMC-C2C-C3C | -2.72 | 102.84      | 113.83   |
| 8   | n     | 101 | BCL  | O2A-CGA-O1A | -2.72 | 116.72      | 123.59   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | e     | 101 | BCL   | C7-C6-C5    | -2.72 | 105.96      | 113.36   |
| 8   | V     | 101 | BCL   | C3D-C2D-C1D | -2.72 | 102.12      | 105.83   |
| 8   | i     | 101 | BCL   | C4D-CHA-C1A | 2.71  | 124.55      | 121.25   |
| 8   | L     | 301 | BCL   | C7-C6-C5    | -2.71 | 106.00      | 113.36   |
| 8   | s     | 103 | BCL   | C3D-C2D-C1D | -2.71 | 102.13      | 105.83   |
| 8   | J     | 101 | BCL   | CMC-C2C-C3C | -2.71 | 102.89      | 113.83   |
| 8   | s     | 103 | BCL   | C11-C10-C8  | -2.71 | 107.16      | 115.92   |
| 9   | s     | 104 | A1EFU | CM6-C18-C19 | 2.71  | 122.34      | 118.08   |
| 11  | L     | 305 | LMT   | C3'-C4'-C5' | -2.70 | 105.42      | 110.24   |
| 8   | q     | 102 | BCL   | CMC-C2C-C3C | -2.70 | 102.93      | 113.83   |
| 8   | b     | 101 | BCL   | C3D-C2D-C1D | -2.70 | 102.14      | 105.83   |
| 8   | j     | 102 | BCL   | CMC-C2C-C3C | -2.70 | 102.94      | 113.83   |
| 8   | j     | 102 | BCL   | CMA-C3A-C4A | -2.70 | 104.52      | 111.77   |
| 8   | G     | 102 | BCL   | CMA-C3A-C4A | -2.70 | 104.52      | 111.77   |
| 8   | s     | 102 | BCL   | C4D-CHA-C1A | 2.70  | 124.53      | 121.25   |
| 8   | P     | 102 | BCL   | C3D-C2D-C1D | -2.70 | 102.15      | 105.83   |
| 8   | e     | 101 | BCL   | O2A-CGA-O1A | -2.70 | 116.78      | 123.59   |
| 8   | M     | 403 | BCL   | CMA-C3A-C4A | -2.70 | 104.52      | 111.77   |
| 8   | d     | 101 | BCL   | C4D-CHA-C1A | 2.69  | 124.53      | 121.25   |
| 8   | 2     | 103 | BCL   | CMC-C2C-C3C | -2.69 | 102.97      | 113.83   |
| 8   | 2     | 103 | BCL   | C4A-NA-C1A  | -2.69 | 105.50      | 106.71   |
| 8   | k     | 102 | BCL   | C4D-CHA-C1A | 2.69  | 124.52      | 121.25   |
| 8   | G     | 102 | BCL   | C2C-C3C-C4C | -2.69 | 97.31       | 101.34   |
| 8   | r     | 101 | BCL   | CMC-C2C-C3C | -2.68 | 103.00      | 113.83   |
| 8   | v     | 101 | BCL   | CMC-C2C-C3C | -2.68 | 103.01      | 113.83   |
| 8   | b     | 101 | BCL   | CMA-C3A-C4A | -2.68 | 104.58      | 111.77   |
| 8   | I     | 101 | BCL   | O2A-CGA-O1A | -2.68 | 116.84      | 123.59   |
| 10  | F     | 103 | MW9   | O1-C17-C16  | 2.68  | 120.31      | 111.91   |
| 8   | P     | 101 | BCL   | CGD-CBD-CAD | -2.67 | 102.07      | 110.73   |
| 8   | 1     | 101 | BCL   | C11-C12-C13 | -2.67 | 107.27      | 115.92   |
| 8   | A     | 101 | BCL   | CMC-C2C-C3C | -2.67 | 103.04      | 113.83   |
| 8   | J     | 101 | BCL   | CGD-CBD-CAD | -2.67 | 102.08      | 110.73   |
| 8   | P     | 102 | BCL   | C4B-CHC-C1C | -2.67 | 124.83      | 130.12   |
| 8   | t     | 101 | BCL   | C4D-CHA-C1A | 2.67  | 124.50      | 121.25   |
| 8   | k     | 102 | BCL   | O2A-CGA-O1A | -2.67 | 116.87      | 123.59   |
| 8   | b     | 101 | BCL   | C1C-NC-C4C  | -2.66 | 105.51      | 106.71   |
| 8   | t     | 101 | BCL   | CMC-C2C-C3C | -2.66 | 103.08      | 113.83   |
| 8   | P     | 101 | BCL   | CMC-C2C-C3C | -2.66 | 103.08      | 113.83   |
| 8   | G     | 101 | BCL   | CMC-C2C-C3C | -2.66 | 103.08      | 113.83   |
| 8   | K     | 101 | BCL   | CMC-C2C-C3C | -2.66 | 103.09      | 113.83   |
| 8   | k     | 102 | BCL   | CMC-C2C-C3C | -2.66 | 103.09      | 113.83   |
| 8   | t     | 101 | BCL   | C3D-C2D-C1D | -2.66 | 102.20      | 105.83   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 8   | b     | 101 | BCL  | O2A-CGA-O1A | -2.66 | 116.88      | 123.59   |
| 8   | P     | 102 | BCL  | CMC-C2C-C3C | -2.66 | 103.10      | 113.83   |
| 8   | q     | 102 | BCL  | O2A-CGA-O1A | -2.66 | 116.89      | 123.59   |
| 8   | P     | 101 | BCL  | CMA-C3A-C4A | -2.65 | 104.64      | 111.77   |
| 10  | D     | 103 | MW9  | O1-C17-C16  | 2.65  | 120.23      | 111.91   |
| 8   | L     | 301 | BCL  | C2A-C1A-CHA | 2.65  | 128.50      | 123.86   |
| 8   | E     | 101 | BCL  | CMC-C2C-C3C | -2.65 | 103.14      | 113.83   |
| 10  | M     | 405 | MW9  | O1-C17-C16  | 2.65  | 120.22      | 111.91   |
| 8   | I     | 101 | BCL  | CMA-C3A-C4A | -2.65 | 104.66      | 111.77   |
| 8   | F     | 101 | BCL  | CMA-C3A-C4A | -2.65 | 104.66      | 111.77   |
| 8   | S     | 101 | BCL  | CMA-C3A-C4A | -2.65 | 104.66      | 111.77   |
| 10  | H     | 303 | MW9  | O1-C17-C16  | 2.64  | 120.21      | 111.91   |
| 8   | d     | 101 | BCL  | C2A-C1A-CHA | 2.64  | 128.48      | 123.86   |
| 8   | R     | 102 | BCL  | CMC-C2C-C3C | -2.64 | 103.17      | 113.83   |
| 10  | M     | 406 | MW9  | O1-C17-C16  | 2.64  | 120.19      | 111.91   |
| 8   | j     | 102 | BCL  | C11-C12-C13 | -2.64 | 107.40      | 115.92   |
| 8   | B     | 101 | BCL  | CMA-C3A-C4A | -2.64 | 104.69      | 111.77   |
| 8   | I     | 101 | BCL  | CGD-CBD-CAD | -2.63 | 102.22      | 110.73   |
| 8   | L     | 304 | BCL  | CMC-C2C-C3C | -2.63 | 103.22      | 113.83   |
| 8   | q     | 102 | BCL  | CMA-C3A-C4A | -2.63 | 104.71      | 111.77   |
| 8   | J     | 101 | BCL  | C11-C12-C13 | -2.63 | 107.43      | 115.92   |
| 8   | e     | 101 | BCL  | CMC-C2C-C3C | -2.63 | 103.23      | 113.83   |
| 8   | B     | 101 | BCL  | C11-C12-C13 | -2.63 | 107.43      | 115.92   |
| 8   | K     | 101 | BCL  | C11-C12-C13 | -2.62 | 107.44      | 115.92   |
| 8   | b     | 101 | BCL  | C16-C15-C13 | -2.62 | 107.45      | 115.92   |
| 8   | G     | 102 | BCL  | C11-C12-C13 | -2.62 | 107.46      | 115.92   |
| 8   | N     | 101 | BCL  | CMA-C3A-C4A | -2.62 | 104.74      | 111.77   |
| 8   | G     | 101 | BCL  | C3D-C2D-C1D | -2.62 | 102.26      | 105.83   |
| 10  | R     | 103 | MW9  | O1-C17-C16  | 2.61  | 120.11      | 111.91   |
| 15  | H     | 304 | CDL  | OB8-CB7-C71 | 2.61  | 120.11      | 111.91   |
| 8   | k     | 102 | BCL  | CMA-C3A-C4A | -2.61 | 104.75      | 111.77   |
| 11  | L     | 305 | LMT  | C1'-O5'-C5' | -2.61 | 108.56      | 113.69   |
| 8   | F     | 101 | BCL  | C3D-C2D-C1D | -2.61 | 102.27      | 105.83   |
| 8   | E     | 101 | BCL  | C4D-CHA-C1A | 2.61  | 124.42      | 121.25   |
| 8   | s     | 103 | BCL  | CMA-C3A-C4A | -2.61 | 104.76      | 111.77   |
| 16  | C     | 403 | HEC  | C4C-C3C-C2C | 2.61  | 109.17      | 106.35   |
| 8   | E     | 101 | BCL  | CMA-C3A-C4A | -2.61 | 104.77      | 111.77   |
| 8   | V     | 101 | BCL  | C4D-CHA-C1A | 2.60  | 124.42      | 121.25   |
| 8   | 2     | 103 | BCL  | C2A-C1A-CHA | 2.60  | 128.41      | 123.86   |
| 11  | D     | 102 | LMT  | C1'-O5'-C5' | -2.60 | 108.58      | 113.69   |
| 8   | s     | 102 | BCL  | C11-C12-C13 | -2.60 | 107.51      | 115.92   |
| 8   | v     | 101 | BCL  | C4A-NA-C1A  | -2.60 | 105.54      | 106.71   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | Q     | 101 | BCL   | C11-C12-C13 | -2.60 | 107.52      | 115.92   |
| 8   | N     | 101 | BCL   | CMC-C2C-C3C | -2.60 | 103.34      | 113.83   |
| 8   | i     | 101 | BCL   | CMA-C3A-C4A | -2.60 | 104.80      | 111.77   |
| 8   | 2     | 103 | BCL   | C4D-CHA-C1A | 2.60  | 124.41      | 121.25   |
| 8   | s     | 102 | BCL   | CMC-C2C-C3C | -2.60 | 103.36      | 113.83   |
| 8   | A     | 101 | BCL   | CMA-C3A-C4A | -2.59 | 104.80      | 111.77   |
| 8   | b     | 101 | BCL   | CMC-C2C-C3C | -2.59 | 103.37      | 113.83   |
| 8   | a     | 101 | BCL   | CMC-C2C-C3C | -2.59 | 103.37      | 113.83   |
| 8   | F     | 101 | BCL   | CMC-C2C-C3C | -2.59 | 103.37      | 113.83   |
| 8   | V     | 101 | BCL   | CMA-C3A-C4A | -2.59 | 104.81      | 111.77   |
| 8   | S     | 101 | BCL   | C11-C10-C8  | -2.59 | 107.55      | 115.92   |
| 10  | G     | 103 | MW9   | O1-C17-C16  | 2.59  | 120.03      | 111.91   |
| 8   | R     | 102 | BCL   | C4D-CHA-C1A | 2.59  | 124.40      | 121.25   |
| 8   | J     | 101 | BCL   | CMA-C3A-C4A | -2.58 | 104.83      | 111.77   |
| 8   | E     | 101 | BCL   | C7-C6-C5    | -2.58 | 106.35      | 113.36   |
| 8   | G     | 101 | BCL   | CMA-C3A-C4A | -2.58 | 104.84      | 111.77   |
| 8   | F     | 102 | BCL   | CMC-C2C-C3C | -2.58 | 103.42      | 113.83   |
| 8   | F     | 102 | BCL   | C11-C12-C13 | -2.58 | 107.58      | 115.92   |
| 8   | e     | 101 | BCL   | CMA-C3A-C4A | -2.58 | 104.84      | 111.77   |
| 8   | 2     | 103 | BCL   | C7-C6-C5    | -2.58 | 106.36      | 113.36   |
| 8   | a     | 101 | BCL   | C7-C6-C5    | -2.58 | 106.36      | 113.36   |
| 9   | q     | 101 | A1EFU | CM7-C22-C23 | -2.57 | 110.94      | 115.27   |
| 16  | C     | 401 | HEC   | O1A-CGA-CBA | -2.57 | 114.81      | 123.08   |
| 10  | G     | 104 | MW9   | O1-C17-C16  | 2.57  | 119.98      | 111.91   |
| 8   | j     | 102 | BCL   | C4D-CHA-C1A | 2.57  | 124.38      | 121.25   |
| 8   | S     | 101 | BCL   | CGD-CBD-CAD | -2.57 | 102.41      | 110.73   |
| 8   | a     | 101 | BCL   | CMA-C3A-C4A | -2.57 | 104.88      | 111.77   |
| 8   | B     | 101 | BCL   | CGD-CBD-CAD | -2.56 | 102.43      | 110.73   |
| 8   | R     | 102 | BCL   | CMA-C3A-C4A | -2.56 | 104.88      | 111.77   |
| 8   | n     | 101 | BCL   | C1C-NC-C4C  | -2.56 | 105.55      | 106.71   |
| 8   | P     | 101 | BCL   | C11-C12-C13 | -2.56 | 107.64      | 115.92   |
| 8   | 1     | 101 | BCL   | CMA-C3A-C4A | -2.56 | 104.90      | 111.77   |
| 9   | p     | 101 | A1EFU | CM7-C22-C23 | -2.55 | 110.97      | 115.27   |
| 8   | j     | 102 | BCL   | C2C-C3C-C4C | -2.55 | 97.52       | 101.34   |
| 8   | 2     | 103 | BCL   | C1C-NC-C4C  | -2.55 | 105.56      | 106.71   |
| 8   | b     | 101 | BCL   | C4A-NA-C1A  | -2.55 | 105.56      | 106.71   |
| 8   | K     | 101 | BCL   | C2C-C3C-C4C | -2.55 | 97.53       | 101.34   |
| 8   | V     | 101 | BCL   | C11-C12-C13 | -2.54 | 107.70      | 115.92   |
| 16  | C     | 403 | HEC   | O1A-CGA-CBA | -2.54 | 114.92      | 123.08   |
| 8   | q     | 102 | BCL   | C4D-CHA-C1A | 2.54  | 124.34      | 121.25   |
| 8   | M     | 403 | BCL   | C1B-CHB-C4A | -2.54 | 125.09      | 130.12   |
| 8   | 1     | 101 | BCL   | CMC-C2C-C3C | -2.54 | 103.60      | 113.83   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | G     | 101 | BCL   | C1C-NC-C4C  | -2.53 | 105.57      | 106.71   |
| 8   | 1     | 101 | BCL   | CGD-CBD-CAD | -2.53 | 102.53      | 110.73   |
| 10  | H     | 301 | MW9   | O1-C17-C16  | 2.53  | 119.85      | 111.91   |
| 8   | 2     | 103 | BCL   | CMA-C3A-C4A | -2.53 | 104.97      | 111.77   |
| 15  | H     | 304 | CDL   | OA8-CA7-C31 | 2.53  | 119.84      | 111.91   |
| 8   | n     | 101 | BCL   | C4A-NA-C1A  | -2.53 | 105.57      | 106.71   |
| 8   | a     | 101 | BCL   | C11-C12-C13 | -2.52 | 107.76      | 115.92   |
| 8   | P     | 102 | BCL   | C7-C6-C5    | -2.52 | 106.50      | 113.36   |
| 16  | C     | 401 | HEC   | CMD-C2D-C3D | 2.52  | 129.70      | 124.94   |
| 8   | M     | 403 | BCL   | C11-C12-C13 | -2.52 | 107.78      | 115.92   |
| 8   | n     | 101 | BCL   | C11-C10-C8  | -2.52 | 107.78      | 115.92   |
| 8   | e     | 101 | BCL   | C2A-C1A-CHA | 2.52  | 128.26      | 123.86   |
| 8   | M     | 402 | BCL   | C11-C12-C13 | -2.51 | 107.79      | 115.92   |
| 10  | G     | 104 | MW9   | C31-C32-C33 | -2.51 | 109.79      | 126.84   |
| 8   | t     | 101 | BCL   | C11-C12-C13 | -2.51 | 107.81      | 115.92   |
| 8   | D     | 101 | BCL   | CGD-CBD-CAD | -2.50 | 102.63      | 110.73   |
| 8   | L     | 301 | BCL   | CMD-C2D-C1D | 2.50  | 129.12      | 124.71   |
| 8   | S     | 101 | BCL   | C11-C12-C13 | -2.50 | 107.85      | 115.92   |
| 16  | C     | 402 | HEC   | O1A-CGA-CBA | -2.49 | 115.07      | 123.08   |
| 16  | C     | 403 | HEC   | CMD-C2D-C3D | 2.49  | 129.63      | 124.94   |
| 8   | G     | 102 | BCL   | C2A-C1A-CHA | 2.49  | 128.21      | 123.86   |
| 8   | s     | 102 | BCL   | CGD-CBD-CAD | -2.48 | 102.69      | 110.73   |
| 8   | G     | 101 | BCL   | C4D-CHA-C1A | 2.48  | 124.27      | 121.25   |
| 8   | J     | 101 | BCL   | C2C-C3C-C4C | -2.48 | 97.62       | 101.34   |
| 8   | M     | 403 | BCL   | CMD-C2D-C1D | 2.48  | 129.08      | 124.71   |
| 8   | F     | 101 | BCL   | C1C-NC-C4C  | -2.48 | 105.59      | 106.71   |
| 8   | B     | 101 | BCL   | CMD-C2D-C1D | 2.48  | 129.08      | 124.71   |
| 8   | r     | 101 | BCL   | CMA-C3A-C4A | -2.47 | 105.13      | 111.77   |
| 8   | R     | 102 | BCL   | CGD-CBD-CAD | -2.47 | 102.74      | 110.73   |
| 8   | d     | 101 | BCL   | C7-C6-C5    | -2.47 | 106.66      | 113.36   |
| 8   | s     | 103 | BCL   | C11-C12-C13 | -2.46 | 107.96      | 115.92   |
| 8   | L     | 301 | BCL   | C3C-C2C-C1C | 2.46  | 105.84      | 101.87   |
| 8   | v     | 101 | BCL   | CMA-C3A-C4A | -2.46 | 105.16      | 111.77   |
| 8   | A     | 101 | BCL   | C11-C12-C13 | -2.46 | 107.97      | 115.92   |
| 9   | 2     | 104 | A1EFU | CM7-C22-C23 | -2.46 | 111.14      | 115.27   |
| 8   | F     | 102 | BCL   | C2A-C1A-CHA | 2.46  | 128.16      | 123.86   |
| 8   | R     | 102 | BCL   | C11-C12-C13 | -2.46 | 107.98      | 115.92   |
| 8   | K     | 101 | BCL   | CMA-C3A-C4A | -2.46 | 105.17      | 111.77   |
| 8   | t     | 101 | BCL   | CHB-C4A-NA  | -2.45 | 121.12      | 124.51   |
| 9   | B     | 103 | A1EFU | CM7-C22-C23 | -2.45 | 111.15      | 115.27   |
| 8   | t     | 101 | BCL   | C11-C10-C8  | -2.45 | 108.00      | 115.92   |
| 8   | E     | 101 | BCL   | C2A-C1A-CHA | 2.45  | 128.14      | 123.86   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | k     | 102 | BCL   | C11-C12-C13 | -2.44 | 108.02      | 115.92   |
| 8   | J     | 101 | BCL   | C2A-C1A-CHA | 2.44  | 128.13      | 123.86   |
| 8   | S     | 101 | BCL   | C3C-C2C-C1C | 2.44  | 105.81      | 101.87   |
| 8   | 2     | 103 | BCL   | C3C-C2C-C1C | 2.44  | 105.81      | 101.87   |
| 8   | M     | 402 | BCL   | CMA-C3A-C4A | -2.44 | 105.22      | 111.77   |
| 8   | s     | 102 | BCL   | C1B-CHB-C4A | -2.43 | 125.30      | 130.12   |
| 8   | i     | 101 | BCL   | C2A-C1A-CHA | 2.43  | 128.11      | 123.86   |
| 8   | K     | 101 | BCL   | C2A-C1A-CHA | 2.43  | 128.11      | 123.86   |
| 8   | I     | 101 | BCL   | C2A-C1A-CHA | 2.43  | 128.11      | 123.86   |
| 16  | C     | 402 | HEC   | CMD-C2D-C3D | 2.42  | 129.51      | 124.94   |
| 9   | J     | 102 | A1EFU | CM7-C22-C23 | -2.42 | 111.20      | 115.27   |
| 8   | G     | 102 | BCL   | CMD-C2D-C1D | 2.42  | 128.97      | 124.71   |
| 8   | L     | 304 | BCL   | C11-C12-C13 | -2.42 | 108.11      | 115.92   |
| 8   | B     | 101 | BCL   | C3C-C2C-C1C | 2.42  | 105.77      | 101.87   |
| 8   | D     | 101 | BCL   | C11-C12-C13 | -2.41 | 108.12      | 115.92   |
| 8   | D     | 101 | BCL   | C3C-C2C-C1C | 2.41  | 105.76      | 101.87   |
| 8   | s     | 102 | BCL   | CBB-CAB-C3B | 2.41  | 127.49      | 120.34   |
| 8   | N     | 101 | BCL   | C11-C12-C13 | -2.41 | 108.14      | 115.92   |
| 8   | j     | 102 | BCL   | CGD-CBD-CAD | -2.40 | 102.95      | 110.73   |
| 8   | r     | 101 | BCL   | C2A-C1A-CHA | 2.40  | 128.05      | 123.86   |
| 8   | d     | 101 | BCL   | CMA-C3A-C4A | -2.40 | 105.33      | 111.77   |
| 8   | L     | 301 | BCL   | CGD-CBD-CAD | -2.39 | 102.98      | 110.73   |
| 8   | R     | 102 | BCL   | C2A-C1A-CHA | 2.39  | 128.04      | 123.86   |
| 8   | d     | 101 | BCL   | CMC-C2C-C3C | -2.39 | 104.19      | 113.83   |
| 8   | s     | 103 | BCL   | C3C-C2C-C1C | 2.39  | 105.73      | 101.87   |
| 8   | A     | 101 | BCL   | C3C-C2C-C1C | 2.39  | 105.72      | 101.87   |
| 8   | V     | 101 | BCL   | C11-C10-C8  | -2.39 | 108.21      | 115.92   |
| 8   | S     | 101 | BCL   | C12-C11-C10 | -2.39 | 102.28      | 113.24   |
| 8   | s     | 102 | BCL   | CMA-C3A-C4A | -2.38 | 105.37      | 111.77   |
| 8   | t     | 101 | BCL   | OBB-CAB-C3B | 2.38  | 124.21      | 119.99   |
| 8   | s     | 103 | BCL   | C4D-CHA-C1A | 2.38  | 124.14      | 121.25   |
| 8   | F     | 102 | BCL   | CMD-C2D-C1D | 2.38  | 128.90      | 124.71   |
| 8   | i     | 101 | BCL   | C3C-C2C-C1C | 2.37  | 105.70      | 101.87   |
| 8   | n     | 101 | BCL   | C3C-C2C-C1C | 2.37  | 105.69      | 101.87   |
| 8   | s     | 103 | BCL   | C1C-NC-C4C  | -2.36 | 105.64      | 106.71   |
| 9   | B     | 102 | A1EFU | CM7-C22-C23 | -2.36 | 111.30      | 115.27   |
| 8   | V     | 101 | BCL   | CGD-CBD-CAD | -2.36 | 103.09      | 110.73   |
| 8   | A     | 101 | BCL   | CGD-CBD-CAD | -2.36 | 103.09      | 110.73   |
| 8   | R     | 102 | BCL   | CMD-C2D-C1D | 2.36  | 128.87      | 124.71   |
| 8   | Q     | 101 | BCL   | CMD-C2D-C1D | 2.35  | 128.86      | 124.71   |
| 8   | b     | 101 | BCL   | C2A-C1A-CHA | 2.35  | 127.96      | 123.86   |
| 13  | M     | 404 | U10   | C7-C6-C5    | -2.34 | 115.66      | 118.48   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | I     | 101 | BCL   | CBB-CAB-C3B | 2.34  | 127.30      | 120.34   |
| 9   | v     | 102 | A1EFU | CM7-C22-C23 | -2.34 | 111.33      | 115.27   |
| 9   | I     | 102 | A1EFU | CM7-C22-C23 | -2.34 | 111.33      | 115.27   |
| 8   | N     | 101 | BCL   | CGD-CBD-CAD | -2.34 | 103.16      | 110.73   |
| 9   | j     | 103 | A1EFU | C19-C18-C17 | 2.33  | 122.52      | 118.94   |
| 8   | q     | 102 | BCL   | CGD-CBD-CAD | -2.33 | 103.18      | 110.73   |
| 8   | P     | 102 | BCL   | C3C-C2C-C1C | 2.33  | 105.64      | 101.87   |
| 8   | J     | 101 | BCL   | CMD-C2D-C1D | 2.33  | 128.82      | 124.71   |
| 8   | M     | 402 | BCL   | CBB-CAB-C3B | 2.33  | 127.25      | 120.34   |
| 8   | e     | 101 | BCL   | CMD-C2D-C1D | 2.33  | 128.82      | 124.71   |
| 8   | q     | 102 | BCL   | C11-C12-C13 | -2.33 | 108.40      | 115.92   |
| 8   | D     | 101 | BCL   | C12-C11-C10 | -2.32 | 102.57      | 113.24   |
| 8   | V     | 101 | BCL   | C4B-C3B-CAB | -2.32 | 122.65      | 127.13   |
| 8   | P     | 102 | BCL   | C11-C12-C13 | -2.32 | 108.43      | 115.92   |
| 8   | G     | 102 | BCL   | CBB-CAB-C3B | 2.32  | 127.22      | 120.34   |
| 8   | i     | 101 | BCL   | C11-C12-C13 | -2.32 | 108.44      | 115.92   |
| 8   | L     | 301 | BCL   | CBB-CAB-C3B | 2.31  | 127.21      | 120.34   |
| 9   | k     | 101 | A1EFU | CM7-C22-C23 | -2.31 | 111.38      | 115.27   |
| 16  | C     | 402 | HEC   | C1D-C2D-C3D | 2.31  | 108.60      | 107.00   |
| 8   | L     | 301 | BCL   | C1B-CHB-C4A | -2.31 | 125.55      | 130.12   |
| 9   | s     | 105 | A1EFU | CM7-C22-C23 | -2.31 | 111.39      | 115.27   |
| 8   | Q     | 101 | BCL   | C12-C11-C10 | -2.31 | 102.64      | 113.24   |
| 8   | s     | 103 | BCL   | CGD-CBD-CAD | -2.31 | 103.26      | 110.73   |
| 8   | K     | 101 | BCL   | CBB-CAB-C3B | 2.31  | 127.19      | 120.34   |
| 8   | q     | 102 | BCL   | C3C-C2C-C1C | 2.31  | 105.59      | 101.87   |
| 8   | I     | 101 | BCL   | CMD-C2D-C1D | 2.30  | 128.78      | 124.71   |
| 8   | F     | 101 | BCL   | C2A-C1A-CHA | 2.30  | 127.89      | 123.86   |
| 8   | F     | 101 | BCL   | C11-C12-C13 | -2.30 | 108.47      | 115.92   |
| 8   | q     | 102 | BCL   | CBB-CAB-C3B | 2.30  | 127.17      | 120.34   |
| 8   | e     | 101 | BCL   | C2C-C3C-C4C | -2.30 | 97.89       | 101.34   |
| 8   | G     | 101 | BCL   | C11-C12-C13 | -2.30 | 108.49      | 115.92   |
| 8   | F     | 102 | BCL   | CBB-CAB-C3B | 2.30  | 127.16      | 120.34   |
| 8   | G     | 101 | BCL   | C2A-C1A-CHA | 2.30  | 127.87      | 123.86   |
| 8   | S     | 101 | BCL   | CMD-C2D-C1D | 2.29  | 128.76      | 124.71   |
| 9   | s     | 101 | A1EFU | CM7-C22-C23 | -2.29 | 111.41      | 115.27   |
| 8   | Q     | 101 | BCL   | CBB-CAB-C3B | 2.29  | 127.15      | 120.34   |
| 8   | k     | 102 | BCL   | CBB-CAB-C3B | 2.29  | 127.15      | 120.34   |
| 8   | B     | 101 | BCL   | CBB-CAB-C3B | 2.29  | 127.14      | 120.34   |
| 8   | v     | 101 | BCL   | C11-C12-C13 | -2.29 | 108.53      | 115.92   |
| 8   | N     | 101 | BCL   | CBB-CAB-C3B | 2.29  | 127.12      | 120.34   |
| 9   | J     | 103 | A1EFU | CM7-C22-C23 | -2.28 | 111.43      | 115.27   |
| 8   | 1     | 101 | BCL   | CBB-CAB-C3B | 2.28  | 127.12      | 120.34   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | S     | 101 | BCL   | CBB-CAB-C3B | 2.28  | 127.11      | 120.34   |
| 8   | L     | 304 | BCL   | C12-C11-C10 | -2.28 | 102.77      | 113.24   |
| 8   | L     | 304 | BCL   | CHC-C1C-NC  | 2.28  | 127.66      | 124.51   |
| 13  | L     | 303 | U10   | C7-C6-C5    | -2.28 | 115.74      | 118.48   |
| 8   | R     | 102 | BCL   | CBB-CAB-C3B | 2.28  | 127.10      | 120.34   |
| 8   | 2     | 103 | BCL   | C11-C12-C13 | -2.27 | 108.57      | 115.92   |
| 8   | F     | 101 | BCL   | C3C-C2C-C1C | 2.27  | 105.54      | 101.87   |
| 8   | M     | 402 | BCL   | CMD-C2D-C1D | 2.27  | 128.72      | 124.71   |
| 8   | J     | 101 | BCL   | CBB-CAB-C3B | 2.27  | 127.08      | 120.34   |
| 8   | i     | 101 | BCL   | C12-C11-C10 | -2.27 | 102.80      | 113.24   |
| 8   | V     | 101 | BCL   | CBB-CAB-C3B | 2.27  | 127.08      | 120.34   |
| 8   | K     | 101 | BCL   | CGD-CBD-CAD | -2.27 | 103.39      | 110.73   |
| 8   | G     | 101 | BCL   | CBB-CAB-C3B | 2.27  | 127.07      | 120.34   |
| 8   | P     | 101 | BCL   | C3C-C2C-C1C | 2.27  | 105.53      | 101.87   |
| 9   | N     | 102 | A1EFU | CM7-C22-C23 | -2.27 | 111.46      | 115.27   |
| 8   | F     | 101 | BCL   | CBB-CAB-C3B | 2.27  | 127.07      | 120.34   |
| 8   | E     | 101 | BCL   | CBB-CAB-C3B | 2.27  | 127.07      | 120.34   |
| 8   | s     | 103 | BCL   | CBB-CAB-C3B | 2.27  | 127.07      | 120.34   |
| 8   | V     | 101 | BCL   | C3C-C2C-C1C | 2.27  | 105.53      | 101.87   |
| 8   | k     | 102 | BCL   | C3C-C2C-C1C | 2.27  | 105.53      | 101.87   |
| 8   | i     | 101 | BCL   | CBB-CAB-C3B | 2.26  | 127.06      | 120.34   |
| 8   | D     | 101 | BCL   | CMD-C2D-C1D | 2.26  | 128.70      | 124.71   |
| 8   | M     | 402 | BCL   | C12-C11-C10 | -2.26 | 102.84      | 113.24   |
| 8   | s     | 102 | BCL   | CMD-C2D-C1D | 2.26  | 128.70      | 124.71   |
| 8   | V     | 101 | BCL   | C2A-C1A-CHA | 2.26  | 127.81      | 123.86   |
| 8   | P     | 101 | BCL   | CMD-C2D-C1D | 2.26  | 128.69      | 124.71   |
| 8   | e     | 101 | BCL   | CBB-CAB-C3B | 2.26  | 127.04      | 120.34   |
| 9   | P     | 103 | A1EFU | CM7-C22-C23 | -2.26 | 111.47      | 115.27   |
| 8   | V     | 101 | BCL   | CMD-C2D-C1D | 2.26  | 128.69      | 124.71   |
| 8   | e     | 101 | BCL   | CGD-CBD-CAD | -2.25 | 103.43      | 110.73   |
| 8   | v     | 101 | BCL   | CBB-CAB-C3B | 2.25  | 127.03      | 120.34   |
| 8   | M     | 403 | BCL   | CBB-CAB-C3B | 2.25  | 127.03      | 120.34   |
| 8   | 1     | 101 | BCL   | CMD-C2D-C1D | 2.25  | 128.68      | 124.71   |
| 9   | D     | 105 | A1EFU | CM7-C22-C23 | -2.25 | 111.48      | 115.27   |
| 8   | r     | 101 | BCL   | C11-C12-C13 | -2.25 | 108.64      | 115.92   |
| 8   | Q     | 101 | BCL   | C3C-C2C-C1C | 2.25  | 105.50      | 101.87   |
| 8   | D     | 101 | BCL   | CBB-CAB-C3B | 2.25  | 127.02      | 120.34   |
| 8   | L     | 304 | BCL   | CBB-CAB-C3B | 2.25  | 127.02      | 120.34   |
| 8   | 2     | 103 | BCL   | CBB-CAB-C3B | 2.24  | 127.00      | 120.34   |
| 8   | q     | 102 | BCL   | CMD-C2D-C1D | 2.24  | 128.66      | 124.71   |
| 8   | P     | 101 | BCL   | CBB-CAB-C3B | 2.24  | 126.98      | 120.34   |
| 14  | L     | 302 | BPH   | CMD-C2D-C3D | 2.23  | 128.85      | 124.68   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | b     | 101 | BCL   | CBB-CAB-C3B | 2.23  | 126.96      | 120.34   |
| 8   | L     | 304 | BCL   | C2A-C3A-C4A | -2.23 | 98.27       | 101.87   |
| 8   | N     | 101 | BCL   | CMD-C2D-C1D | 2.22  | 128.63      | 124.71   |
| 8   | a     | 101 | BCL   | CBB-CAB-C3B | 2.22  | 126.94      | 120.34   |
| 8   | b     | 101 | BCL   | C3C-C2C-C1C | 2.22  | 105.46      | 101.87   |
| 8   | j     | 102 | BCL   | CBB-CAB-C3B | 2.22  | 126.93      | 120.34   |
| 8   | s     | 102 | BCL   | C12-C11-C10 | -2.22 | 103.05      | 113.24   |
| 8   | r     | 101 | BCL   | CMD-C2D-C1D | 2.22  | 128.62      | 124.71   |
| 8   | D     | 101 | BCL   | C11-C10-C8  | -2.22 | 108.75      | 115.92   |
| 8   | L     | 304 | BCL   | C1B-CHB-C4A | -2.22 | 125.73      | 130.12   |
| 8   | M     | 402 | BCL   | C4D-CHA-C1A | 2.22  | 123.95      | 121.25   |
| 8   | t     | 101 | BCL   | C12-C11-C10 | -2.21 | 103.06      | 113.24   |
| 8   | r     | 101 | BCL   | CGD-CBD-CAD | -2.21 | 103.56      | 110.73   |
| 8   | t     | 101 | BCL   | CGD-CBD-CAD | -2.21 | 103.57      | 110.73   |
| 9   | K     | 102 | A1EFU | CM7-C22-C23 | -2.21 | 111.55      | 115.27   |
| 8   | N     | 101 | BCL   | C12-C11-C10 | -2.21 | 103.10      | 113.24   |
| 9   | 2     | 104 | A1EFU | C19-C18-C17 | 2.21  | 122.33      | 118.94   |
| 8   | P     | 101 | BCL   | C12-C11-C10 | -2.21 | 103.10      | 113.24   |
| 9   | D     | 104 | A1EFU | CM7-C22-C23 | -2.21 | 111.56      | 115.27   |
| 8   | j     | 102 | BCL   | C12-C11-C10 | -2.20 | 103.11      | 113.24   |
| 9   | p     | 101 | A1EFU | C21-C20-C19 | -2.20 | 116.34      | 123.22   |
| 8   | G     | 102 | BCL   | CGD-CBD-CAD | -2.20 | 103.61      | 110.73   |
| 14  | M     | 408 | BPH   | CMD-C2D-C3D | 2.20  | 128.79      | 124.68   |
| 8   | k     | 102 | BCL   | C12-C11-C10 | -2.20 | 103.15      | 113.24   |
| 8   | F     | 101 | BCL   | CGD-CBD-CAD | -2.19 | 103.63      | 110.73   |
| 9   | s     | 104 | A1EFU | CM7-C22-C23 | -2.19 | 111.58      | 115.27   |
| 8   | L     | 304 | BCL   | CMD-C2D-C1D | 2.19  | 128.57      | 124.71   |
| 8   | G     | 101 | BCL   | C12-C11-C10 | -2.19 | 103.18      | 113.24   |
| 8   | F     | 101 | BCL   | C4A-NA-C1A  | -2.19 | 105.72      | 106.71   |
| 9   | 2     | 102 | A1EFU | C12-C13-C14 | 2.19  | 122.30      | 118.94   |
| 8   | v     | 101 | BCL   | C11-C10-C8  | -2.19 | 108.86      | 115.92   |
| 8   | F     | 102 | BCL   | C12-C11-C10 | -2.19 | 103.20      | 113.24   |
| 8   | a     | 101 | BCL   | CGD-CBD-CAD | -2.18 | 103.66      | 110.73   |
| 9   | R     | 101 | A1EFU | CM7-C22-C23 | -2.18 | 111.60      | 115.27   |
| 8   | G     | 101 | BCL   | C3C-C2C-C1C | 2.18  | 105.39      | 101.87   |
| 8   | a     | 101 | BCL   | C2A-C1A-CHA | 2.18  | 127.67      | 123.86   |
| 8   | e     | 101 | BCL   | C12-C11-C10 | -2.17 | 103.27      | 113.24   |
| 8   | j     | 102 | BCL   | CMD-C2D-C1D | 2.17  | 128.53      | 124.71   |
| 8   | V     | 101 | BCL   | C12-C11-C10 | -2.17 | 103.28      | 113.24   |
| 8   | K     | 101 | BCL   | C12-C11-C10 | -2.17 | 103.28      | 113.24   |
| 9   | T     | 101 | A1EFU | CM7-C22-C23 | -2.17 | 111.63      | 115.27   |
| 8   | B     | 101 | BCL   | C12-C11-C10 | -2.16 | 103.32      | 113.24   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | v     | 101 | BCL   | C12-C11-C10 | -2.16 | 103.33      | 113.24   |
| 9   | 2     | 104 | A1EFU | CM6-C18-C19 | 2.16  | 121.47      | 118.08   |
| 8   | G     | 102 | BCL   | C12-C11-C10 | -2.15 | 103.34      | 113.24   |
| 8   | J     | 101 | BCL   | C12-C11-C10 | -2.15 | 103.35      | 113.24   |
| 8   | 2     | 103 | BCL   | CMD-C2D-C1D | 2.15  | 128.50      | 124.71   |
| 8   | a     | 101 | BCL   | CMD-C2D-C1D | 2.15  | 128.50      | 124.71   |
| 8   | A     | 101 | BCL   | CMD-C2D-C1D | 2.15  | 128.50      | 124.71   |
| 8   | E     | 101 | BCL   | CGD-CBD-CAD | -2.15 | 103.78      | 110.73   |
| 8   | r     | 101 | BCL   | C3C-C2C-C1C | 2.14  | 105.33      | 101.87   |
| 8   | K     | 101 | BCL   | CMD-C2D-C1D | 2.14  | 128.48      | 124.71   |
| 9   | a     | 102 | A1EFU | CM7-C22-C23 | -2.14 | 111.68      | 115.27   |
| 8   | d     | 101 | BCL   | CMD-C2D-C1D | 2.14  | 128.48      | 124.71   |
| 8   | E     | 101 | BCL   | CMD-C2D-C1D | 2.13  | 128.47      | 124.71   |
| 8   | b     | 101 | BCL   | C2A-C3A-C4A | -2.13 | 98.43       | 101.87   |
| 8   | e     | 101 | BCL   | C11-C12-C13 | -2.13 | 109.04      | 115.92   |
| 8   | D     | 101 | BCL   | C2A-C1A-CHA | 2.13  | 127.58      | 123.86   |
| 8   | 1     | 101 | BCL   | C12-C11-C10 | -2.12 | 103.47      | 113.24   |
| 16  | C     | 403 | HEC   | CMA-C3A-C2A | 2.12  | 128.94      | 124.94   |
| 8   | M     | 403 | BCL   | CHC-C1C-NC  | 2.12  | 127.44      | 124.51   |
| 8   | n     | 101 | BCL   | CMD-C2D-C1D | 2.12  | 128.45      | 124.71   |
| 8   | q     | 102 | BCL   | C12-C11-C10 | -2.12 | 103.51      | 113.24   |
| 8   | s     | 103 | BCL   | C2A-C1A-CHA | 2.12  | 127.56      | 123.86   |
| 8   | s     | 102 | BCL   | C2A-C1A-CHA | 2.12  | 127.56      | 123.86   |
| 8   | l     | 101 | BCL   | C2A-C1A-CHA | 2.11  | 127.55      | 123.86   |
| 8   | q     | 102 | BCL   | C2A-C1A-CHA | 2.11  | 127.55      | 123.86   |
| 8   | A     | 101 | BCL   | C2A-C1A-CHA | 2.11  | 127.55      | 123.86   |
| 8   | n     | 101 | BCL   | CGD-CBD-CAD | -2.11 | 103.90      | 110.73   |
| 8   | j     | 102 | BCL   | C2A-C1A-CHA | 2.11  | 127.54      | 123.86   |
| 8   | F     | 101 | BCL   | C2A-C3A-C4A | -2.11 | 98.47       | 101.87   |
| 8   | s     | 103 | BCL   | C12-C11-C10 | -2.11 | 103.56      | 113.24   |
| 9   | j     | 101 | A1EFU | CM7-C22-C23 | -2.10 | 111.74      | 115.27   |
| 16  | C     | 401 | HEC   | CMA-C3A-C2A | 2.10  | 128.89      | 124.94   |
| 8   | v     | 101 | BCL   | CMD-C2D-C1D | 2.09  | 128.40      | 124.71   |
| 8   | L     | 301 | BCL   | CHC-C1C-NC  | 2.09  | 127.40      | 124.51   |
| 16  | C     | 401 | HEC   | C2B-C3B-C4B | 2.09  | 108.61      | 106.35   |
| 9   | M     | 407 | A1EFU | CM7-C22-C23 | -2.08 | 111.77      | 115.27   |
| 8   | n     | 101 | BCL   | C12-C11-C10 | -2.08 | 103.70      | 113.24   |
| 8   | b     | 101 | BCL   | C12-C11-C10 | -2.07 | 103.71      | 113.24   |
| 8   | b     | 101 | BCL   | CMD-C2D-C1D | 2.07  | 128.37      | 124.71   |
| 8   | t     | 101 | BCL   | CMD-C2D-C1D | 2.07  | 128.36      | 124.71   |
| 8   | a     | 101 | BCL   | CHC-C1C-NC  | 2.07  | 127.37      | 124.51   |
| 8   | F     | 102 | BCL   | CGD-CBD-CAD | -2.07 | 104.03      | 110.73   |

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| Mol | Chain | Res | Type  | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|-------|-------------|-------|-------------|----------|
| 8   | d     | 101 | BCL   | CGD-CBD-CAD | -2.07 | 104.04      | 110.73   |
| 8   | n     | 101 | BCL   | C2A-C1A-CHA | 2.07  | 127.47      | 123.86   |
| 8   | 2     | 103 | BCL   | C2A-C3A-C4A | -2.06 | 98.53       | 101.87   |
| 8   | F     | 101 | BCL   | C4D-CHA-C1A | 2.06  | 123.76      | 121.25   |
| 8   | M     | 403 | BCL   | CHB-C4A-NA  | -2.06 | 121.66      | 124.51   |
| 8   | M     | 403 | BCL   | C4A-NA-C1A  | -2.06 | 105.78      | 106.71   |
| 8   | F     | 102 | BCL   | C1-O2A-CGA  | 2.06  | 121.85      | 116.44   |
| 8   | F     | 101 | BCL   | CMD-C2D-C1D | 2.06  | 128.34      | 124.71   |
| 8   | R     | 102 | BCL   | C12-C11-C10 | -2.05 | 103.80      | 113.24   |
| 8   | G     | 101 | BCL   | C2A-C3A-C4A | -2.05 | 98.55       | 101.87   |
| 8   | i     | 101 | BCL   | CMD-C2D-C1D | 2.05  | 128.33      | 124.71   |
| 8   | E     | 101 | BCL   | C2A-C3A-C4A | -2.05 | 98.56       | 101.87   |
| 8   | k     | 102 | BCL   | CGD-CBD-CAD | -2.05 | 104.10      | 110.73   |
| 8   | q     | 102 | BCL   | C4A-NA-C1A  | -2.05 | 105.78      | 106.71   |
| 8   | M     | 403 | BCL   | C12-C11-C10 | -2.05 | 103.84      | 113.24   |
| 8   | a     | 101 | BCL   | C12-C11-C10 | -2.04 | 103.85      | 113.24   |
| 11  | D     | 102 | LMT   | C3'-C4'-C5' | -2.04 | 106.24      | 110.93   |
| 16  | C     | 403 | HEC   | C2B-C3B-C4B | 2.04  | 108.56      | 106.35   |
| 8   | E     | 101 | BCL   | CHC-C1C-NC  | 2.04  | 127.33      | 124.51   |
| 11  | H     | 302 | LMT   | C3'-C4'-C5' | -2.04 | 106.60      | 110.24   |
| 9   | q     | 101 | A1EFU | C19-C18-C17 | 2.04  | 122.07      | 118.94   |
| 10  | G     | 103 | MW9   | C31-C32-C33 | -2.03 | 109.15      | 124.73   |
| 8   | k     | 102 | BCL   | C4A-NA-C1A  | -2.03 | 105.79      | 106.71   |
| 8   | A     | 101 | BCL   | C12-C11-C10 | -2.03 | 103.92      | 113.24   |
| 8   | F     | 101 | BCL   | C12-C11-C10 | -2.03 | 103.93      | 113.24   |
| 8   | E     | 101 | BCL   | C12-C11-C10 | -2.02 | 103.94      | 113.24   |
| 8   | P     | 102 | BCL   | CMD-C2D-C1D | 2.02  | 128.28      | 124.71   |
| 8   | q     | 102 | BCL   | C2A-C3A-C4A | -2.02 | 98.61       | 101.87   |
| 8   | 2     | 103 | BCL   | C12-C11-C10 | -2.02 | 103.98      | 113.24   |
| 9   | E     | 103 | A1EFU | CM7-C22-C23 | -2.01 | 111.90      | 115.27   |
| 9   | 2     | 101 | A1EFU | CM7-C22-C23 | -2.00 | 111.90      | 115.27   |
| 10  | H     | 301 | MW9   | C34-C33-C32 | -2.00 | 109.35      | 124.73   |
| 8   | v     | 101 | BCL   | CGD-CBD-CAD | -2.00 | 104.25      | 110.73   |

There are no chirality outliers.

All (1706) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 8   | P     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | P     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | P     | 101 | BCL  | C4C-C3C-CAC-CBC |
| 8   | P     | 102 | BCL  | O1A-CGA-O2A-C1  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 8   | P     | 102 | BCL  | C1-C2-C3-C4     |
| 8   | V     | 101 | BCL  | C4C-C3C-CAC-CBC |
| 8   | v     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | v     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | v     | 101 | BCL  | C2C-C3C-CAC-CBC |
| 8   | v     | 101 | BCL  | C2-C3-C5-C6     |
| 8   | S     | 101 | BCL  | C2C-C3C-CAC-CBC |
| 8   | S     | 101 | BCL  | C4C-C3C-CAC-CBC |
| 8   | S     | 101 | BCL  | C1-C2-C3-C4     |
| 8   | S     | 101 | BCL  | C2-C3-C5-C6     |
| 8   | t     | 101 | BCL  | C1-C2-C3-C5     |
| 8   | s     | 102 | BCL  | C2C-C3C-CAC-CBC |
| 8   | Q     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | Q     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | Q     | 101 | BCL  | C2C-C3C-CAC-CBC |
| 8   | Q     | 101 | BCL  | C4C-C3C-CAC-CBC |
| 8   | Q     | 101 | BCL  | C1-C2-C3-C5     |
| 8   | r     | 101 | BCL  | C2C-C3C-CAC-CBC |
| 8   | R     | 102 | BCL  | C2A-CAA-CBA-CGA |
| 8   | q     | 102 | BCL  | C1A-C2A-CAA-CBA |
| 8   | q     | 102 | BCL  | C2-C3-C5-C6     |
| 8   | 2     | 103 | BCL  | C1A-C2A-CAA-CBA |
| 8   | 2     | 103 | BCL  | C3A-C2A-CAA-CBA |
| 8   | 2     | 103 | BCL  | C2C-C3C-CAC-CBC |
| 8   | 1     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | 1     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | n     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | n     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | N     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | k     | 102 | BCL  | C2C-C3C-CAC-CBC |
| 8   | i     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | i     | 101 | BCL  | C3A-C2A-CAA-CBA |
| 8   | i     | 101 | BCL  | C2C-C3C-CAC-CBC |
| 8   | i     | 101 | BCL  | CAD-CBD-CGD-O1D |
| 8   | i     | 101 | BCL  | O2A-C1-C2-C3    |
| 8   | i     | 101 | BCL  | C1-C2-C3-C4     |
| 8   | i     | 101 | BCL  | C1-C2-C3-C5     |
| 8   | G     | 101 | BCL  | C1A-C2A-CAA-CBA |
| 8   | G     | 102 | BCL  | C1A-C2A-CAA-CBA |
| 8   | e     | 101 | BCL  | C1-C2-C3-C4     |
| 8   | E     | 101 | BCL  | C1-C2-C3-C4     |
| 8   | E     | 101 | BCL  | C1-C2-C3-C5     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | E     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | d     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | d     | 101 | BCL   | CHA-CBD-CGD-O1D |
| 8   | d     | 101 | BCL   | CHA-CBD-CGD-O2D |
| 8   | d     | 101 | BCL   | CAD-CBD-CGD-O1D |
| 8   | d     | 101 | BCL   | CAD-CBD-CGD-O2D |
| 8   | d     | 101 | BCL   | C1-C2-C3-C4     |
| 8   | d     | 101 | BCL   | C1-C2-C3-C5     |
| 8   | D     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 8   | D     | 101 | BCL   | C4C-C3C-CAC-CBC |
| 8   | b     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | b     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | b     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | B     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | B     | 101 | BCL   | C4C-C3C-CAC-CBC |
| 8   | a     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | a     | 101 | BCL   | C1-C2-C3-C4     |
| 8   | a     | 101 | BCL   | C1-C2-C3-C5     |
| 8   | A     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | A     | 101 | BCL   | C4C-C3C-CAC-CBC |
| 8   | A     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | M     | 402 | BCL   | C1A-C2A-CAA-CBA |
| 8   | M     | 402 | BCL   | CHA-CBD-CGD-O1D |
| 8   | M     | 402 | BCL   | CHA-CBD-CGD-O2D |
| 8   | M     | 403 | BCL   | C4C-C3C-CAC-CBC |
| 8   | M     | 403 | BCL   | CHA-CBD-CGD-O1D |
| 8   | M     | 403 | BCL   | CHA-CBD-CGD-O2D |
| 8   | M     | 403 | BCL   | O2A-C1-C2-C3    |
| 8   | M     | 403 | BCL   | C1-C2-C3-C4     |
| 8   | M     | 403 | BCL   | C1-C2-C3-C5     |
| 8   | M     | 403 | BCL   | C2-C3-C5-C6     |
| 8   | L     | 301 | BCL   | C1A-C2A-CAA-CBA |
| 8   | L     | 301 | BCL   | C2C-C3C-CAC-CBC |
| 8   | L     | 301 | BCL   | C4C-C3C-CAC-CBC |
| 8   | L     | 301 | BCL   | C2-C3-C5-C6     |
| 8   | L     | 304 | BCL   | C3A-C2A-CAA-CBA |
| 8   | L     | 304 | BCL   | C4C-C3C-CAC-CBC |
| 8   | L     | 304 | BCL   | O2A-C1-C2-C3    |
| 8   | L     | 304 | BCL   | C1-C2-C3-C4     |
| 8   | L     | 304 | BCL   | C1-C2-C3-C5     |
| 9   | P     | 103 | A1EFU | C4-C5-C6-C7     |
| 9   | P     | 103 | A1EFU | CM3-C5-C6-C7    |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | P     | 103 | A1EFU | C6-C7-C8-C9     |
| 9   | P     | 103 | A1EFU | C10-C11-C12-C13 |
| 9   | P     | 103 | A1EFU | C14-C15-C16-C17 |
| 9   | P     | 103 | A1EFU | C18-C19-C20-C21 |
| 9   | P     | 103 | A1EFU | C16-C17-C18-C19 |
| 9   | P     | 103 | A1EFU | C16-C17-C18-CM6 |
| 9   | P     | 103 | A1EFU | C11-C10-C9-C8   |
| 9   | P     | 103 | A1EFU | C11-C10-C9-CM4  |
| 9   | P     | 103 | A1EFU | C15-C16-C17-C18 |
| 9   | P     | 103 | A1EFU | C12-C13-C14-C15 |
| 9   | P     | 103 | A1EFU | CM5-C13-C14-C15 |
| 9   | P     | 103 | A1EFU | C20-C21-C22-CM7 |
| 9   | P     | 103 | A1EFU | C21-C22-C23-C24 |
| 9   | v     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | v     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | v     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | v     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | v     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | v     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | v     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | v     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | v     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | v     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | v     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | v     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | v     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | v     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | v     | 103 | A1EFU | C1-C2-C3-C4     |
| 9   | v     | 103 | A1EFU | O2-C2-C3-C4     |
| 9   | v     | 103 | A1EFU | C2-C3-C4-C5     |
| 9   | v     | 103 | A1EFU | C4-C5-C6-C7     |
| 9   | v     | 103 | A1EFU | CM3-C5-C6-C7    |
| 9   | v     | 103 | A1EFU | C10-C11-C12-C13 |
| 9   | v     | 103 | A1EFU | C14-C15-C16-C17 |
| 9   | v     | 103 | A1EFU | C18-C19-C20-C21 |
| 9   | v     | 103 | A1EFU | C16-C17-C18-C19 |
| 9   | v     | 103 | A1EFU | C16-C17-C18-CM6 |
| 9   | v     | 103 | A1EFU | C20-C21-C22-C23 |
| 9   | v     | 103 | A1EFU | C20-C21-C22-CM7 |
| 9   | v     | 103 | A1EFU | C25-C26-C27-C28 |
| 9   | v     | 103 | A1EFU | CM8-C26-C27-C28 |
| 9   | T     | 101 | A1EFU | C4-C5-C6-C7     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | T     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | T     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | T     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | T     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | T     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | T     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | T     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | T     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | T     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | T     | 101 | A1EFU | C20-C21-C22-C23 |
| 9   | T     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | T     | 101 | A1EFU | C26-C27-C28-C29 |
| 9   | s     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | s     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | s     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | s     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | s     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | s     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | s     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | s     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | s     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | s     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | s     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | s     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | s     | 104 | A1EFU | C2-C3-C4-C5     |
| 9   | s     | 104 | A1EFU | C6-C7-C8-C9     |
| 9   | s     | 104 | A1EFU | C2-C1-O1-CMA    |
| 9   | s     | 104 | A1EFU | CM1-C1-O1-CMA   |
| 9   | s     | 104 | A1EFU | C18-C19-C20-C21 |
| 9   | s     | 104 | A1EFU | C20-C21-C22-CM7 |
| 9   | s     | 104 | A1EFU | C26-C27-C28-C29 |
| 9   | s     | 105 | A1EFU | C2-C3-C4-C5     |
| 9   | s     | 105 | A1EFU | C6-C7-C8-C9     |
| 9   | s     | 105 | A1EFU | C10-C11-C12-C13 |
| 9   | s     | 105 | A1EFU | C2-C1-O1-CMA    |
| 9   | s     | 105 | A1EFU | CM1-C1-O1-CMA   |
| 9   | s     | 105 | A1EFU | CM2-C1-O1-CMA   |
| 9   | s     | 105 | A1EFU | C18-C19-C20-C21 |
| 9   | s     | 105 | A1EFU | C16-C17-C18-C19 |
| 9   | s     | 105 | A1EFU | C16-C17-C18-CM6 |
| 9   | s     | 105 | A1EFU | C11-C10-C9-C8   |
| 9   | s     | 105 | A1EFU | C11-C10-C9-CM4  |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | s     | 105 | A1EFU | C12-C13-C14-C15 |
| 9   | s     | 105 | A1EFU | CM5-C13-C14-C15 |
| 9   | s     | 105 | A1EFU | C20-C21-C22-C23 |
| 9   | s     | 105 | A1EFU | C20-C21-C22-CM7 |
| 9   | s     | 105 | A1EFU | C22-C23-C24-C25 |
| 9   | r     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | r     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | r     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | r     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | r     | 102 | A1EFU | C14-C15-C16-C17 |
| 9   | r     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | r     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | r     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | r     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | r     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | r     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | r     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | r     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | R     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | R     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | R     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | R     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | R     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | R     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | R     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | R     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | R     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | R     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | R     | 101 | A1EFU | C20-C21-C22-C23 |
| 9   | R     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | q     | 101 | A1EFU | O1-C1-C2-O2     |
| 9   | q     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | q     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | q     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | q     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | q     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | q     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | q     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | q     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | q     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | q     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | q     | 101 | A1EFU | C20-C21-C22-C23 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | q     | 101 | A1EFU | C21-C22-C23-C24 |
| 9   | p     | 101 | A1EFU | O1-C1-C2-O2     |
| 9   | p     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | p     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | p     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | p     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | p     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | p     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | p     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | p     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | p     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | p     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | p     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | 2     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | 2     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | 2     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | 2     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | 2     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | 2     | 101 | A1EFU | C14-C15-C16-C17 |
| 9   | 2     | 101 | A1EFU | C13-C14-C15-C16 |
| 9   | 2     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | 2     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | 2     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | 2     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | 2     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | 2     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | 2     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | 2     | 101 | A1EFU | C21-C22-C23-C24 |
| 9   | 2     | 101 | A1EFU | C26-C27-C28-C29 |
| 9   | 2     | 102 | A1EFU | C1-C2-C3-C4     |
| 9   | 2     | 102 | A1EFU | O2-C2-C3-C4     |
| 9   | 2     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | 2     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | 2     | 102 | A1EFU | C13-C14-C15-C16 |
| 9   | 2     | 102 | A1EFU | C17-C18-C19-C20 |
| 9   | 2     | 102 | A1EFU | CM6-C18-C19-C20 |
| 9   | 2     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | 2     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | 2     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | 2     | 102 | A1EFU | C15-C16-C17-C18 |
| 9   | 2     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | 2     | 102 | A1EFU | CM5-C13-C14-C15 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | 2     | 102 | A1EFU | C11-C12-C13-C14 |
| 9   | 2     | 102 | A1EFU | C11-C12-C13-CM5 |
| 9   | 2     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | 2     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | 2     | 102 | A1EFU | C21-C22-C23-C24 |
| 9   | 2     | 104 | A1EFU | C4-C5-C6-C7     |
| 9   | 2     | 104 | A1EFU | CM3-C5-C6-C7    |
| 9   | 2     | 104 | A1EFU | C6-C7-C8-C9     |
| 9   | 2     | 104 | A1EFU | C10-C11-C12-C13 |
| 9   | 2     | 104 | A1EFU | C17-C18-C19-C20 |
| 9   | 2     | 104 | A1EFU | CM6-C18-C19-C20 |
| 9   | 2     | 104 | A1EFU | C18-C19-C20-C21 |
| 9   | 2     | 104 | A1EFU | C16-C17-C18-CM6 |
| 9   | 2     | 104 | A1EFU | C11-C10-C9-C8   |
| 9   | 2     | 104 | A1EFU | C11-C10-C9-CM4  |
| 9   | 2     | 104 | A1EFU | C19-C20-C21-C22 |
| 9   | 2     | 104 | A1EFU | C20-C21-C22-C23 |
| 9   | 2     | 104 | A1EFU | C21-C22-C23-C24 |
| 9   | N     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | N     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | N     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | N     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | N     | 102 | A1EFU | C17-C18-C19-C20 |
| 9   | N     | 102 | A1EFU | CM6-C18-C19-C20 |
| 9   | N     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | N     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | N     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | N     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | N     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | N     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | N     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | k     | 101 | A1EFU | O1-C1-C2-O2     |
| 9   | k     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | k     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | k     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | k     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | k     | 101 | A1EFU | C14-C15-C16-C17 |
| 9   | k     | 101 | A1EFU | C13-C14-C15-C16 |
| 9   | k     | 101 | A1EFU | C17-C18-C19-C20 |
| 9   | k     | 101 | A1EFU | CM6-C18-C19-C20 |
| 9   | k     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | k     | 101 | A1EFU | C16-C17-C18-C19 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | k     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | k     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | k     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | k     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | k     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | k     | 101 | A1EFU | C11-C12-C13-C14 |
| 9   | k     | 101 | A1EFU | C11-C12-C13-CM5 |
| 9   | k     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | k     | 101 | A1EFU | C26-C27-C28-C29 |
| 9   | K     | 102 | A1EFU | O1-C1-C2-O2     |
| 9   | K     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | K     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | K     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | K     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | K     | 102 | A1EFU | C17-C18-C19-C20 |
| 9   | K     | 102 | A1EFU | CM6-C18-C19-C20 |
| 9   | K     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | K     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | K     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | K     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | K     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | K     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | K     | 102 | A1EFU | C19-C20-C21-C22 |
| 9   | K     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | K     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | j     | 101 | A1EFU | C1-C2-C3-C4     |
| 9   | j     | 101 | A1EFU | O2-C2-C3-C4     |
| 9   | j     | 101 | A1EFU | O1-C1-C2-O2     |
| 9   | j     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | j     | 101 | A1EFU | C4-C5-C6-C7     |
| 9   | j     | 101 | A1EFU | CM3-C5-C6-C7    |
| 9   | j     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | j     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | j     | 101 | A1EFU | C17-C18-C19-C20 |
| 9   | j     | 101 | A1EFU | CM6-C18-C19-C20 |
| 9   | j     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | j     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | j     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | j     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | j     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | j     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | j     | 101 | A1EFU | CM5-C13-C14-C15 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | j     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | j     | 101 | A1EFU | C21-C22-C23-C24 |
| 9   | j     | 103 | A1EFU | C2-C3-C4-C5     |
| 9   | j     | 103 | A1EFU | C4-C5-C6-C7     |
| 9   | j     | 103 | A1EFU | CM3-C5-C6-C7    |
| 9   | j     | 103 | A1EFU | C6-C7-C8-C9     |
| 9   | j     | 103 | A1EFU | C10-C11-C12-C13 |
| 9   | j     | 103 | A1EFU | C14-C15-C16-C17 |
| 9   | j     | 103 | A1EFU | C13-C14-C15-C16 |
| 9   | j     | 103 | A1EFU | C18-C19-C20-C21 |
| 9   | j     | 103 | A1EFU | C16-C17-C18-C19 |
| 9   | j     | 103 | A1EFU | C16-C17-C18-CM6 |
| 9   | j     | 103 | A1EFU | C11-C10-C9-C8   |
| 9   | j     | 103 | A1EFU | C11-C10-C9-CM4  |
| 9   | j     | 103 | A1EFU | C12-C13-C14-C15 |
| 9   | j     | 103 | A1EFU | CM5-C13-C14-C15 |
| 9   | j     | 103 | A1EFU | C20-C21-C22-C23 |
| 9   | j     | 103 | A1EFU | CM7-C22-C23-C24 |
| 9   | j     | 103 | A1EFU | C26-C27-C28-C29 |
| 9   | J     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | J     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | J     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | J     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | J     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | J     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | J     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | J     | 102 | A1EFU | C22-C23-C24-C25 |
| 9   | J     | 103 | A1EFU | O1-C1-C2-O2     |
| 9   | J     | 103 | A1EFU | C2-C3-C4-C5     |
| 9   | J     | 103 | A1EFU | C4-C5-C6-C7     |
| 9   | J     | 103 | A1EFU | CM3-C5-C6-C7    |
| 9   | J     | 103 | A1EFU | C6-C7-C8-C9     |
| 9   | J     | 103 | A1EFU | C9-C10-C11-C12  |
| 9   | J     | 103 | A1EFU | C10-C11-C12-C13 |
| 9   | J     | 103 | A1EFU | C17-C18-C19-C20 |
| 9   | J     | 103 | A1EFU | CM6-C18-C19-C20 |
| 9   | J     | 103 | A1EFU | C16-C17-C18-C19 |
| 9   | J     | 103 | A1EFU | C16-C17-C18-CM6 |
| 9   | J     | 103 | A1EFU | C11-C10-C9-C8   |
| 9   | J     | 103 | A1EFU | C11-C10-C9-CM4  |
| 9   | J     | 103 | A1EFU | C12-C13-C14-C15 |
| 9   | J     | 103 | A1EFU | CM5-C13-C14-C15 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | J     | 103 | A1EFU | C19-C20-C21-C22 |
| 9   | J     | 103 | A1EFU | C20-C21-C22-C23 |
| 9   | J     | 103 | A1EFU | C20-C21-C22-CM7 |
| 9   | I     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | I     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | I     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | I     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | I     | 102 | A1EFU | C14-C15-C16-C17 |
| 9   | I     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | I     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | I     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | I     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | I     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | I     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | I     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | I     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | I     | 102 | A1EFU | C21-C22-C23-C24 |
| 9   | I     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | G     | 105 | A1EFU | O1-C1-C2-O2     |
| 9   | G     | 105 | A1EFU | C4-C5-C6-C7     |
| 9   | G     | 105 | A1EFU | CM3-C5-C6-C7    |
| 9   | G     | 105 | A1EFU | C14-C15-C16-C17 |
| 9   | G     | 105 | A1EFU | C16-C17-C18-C19 |
| 9   | G     | 105 | A1EFU | C16-C17-C18-CM6 |
| 9   | G     | 105 | A1EFU | C11-C10-C9-C8   |
| 9   | G     | 105 | A1EFU | C11-C10-C9-CM4  |
| 9   | G     | 105 | A1EFU | C15-C16-C17-C18 |
| 9   | G     | 105 | A1EFU | C12-C13-C14-C15 |
| 9   | G     | 105 | A1EFU | CM5-C13-C14-C15 |
| 9   | G     | 105 | A1EFU | C20-C21-C22-C23 |
| 9   | G     | 105 | A1EFU | C20-C21-C22-CM7 |
| 9   | G     | 105 | A1EFU | CM7-C22-C23-C24 |
| 9   | G     | 105 | A1EFU | C26-C27-C28-C29 |
| 9   | G     | 106 | A1EFU | C2-C3-C4-C5     |
| 9   | G     | 106 | A1EFU | C4-C5-C6-C7     |
| 9   | G     | 106 | A1EFU | CM3-C5-C6-C7    |
| 9   | G     | 106 | A1EFU | C6-C7-C8-C9     |
| 9   | G     | 106 | A1EFU | C10-C11-C12-C13 |
| 9   | G     | 106 | A1EFU | C14-C15-C16-C17 |
| 9   | G     | 106 | A1EFU | C16-C17-C18-C19 |
| 9   | G     | 106 | A1EFU | C16-C17-C18-CM6 |
| 9   | G     | 106 | A1EFU | C11-C10-C9-C8   |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | G     | 106 | A1EFU | C11-C10-C9-CM4  |
| 9   | G     | 106 | A1EFU | C12-C13-C14-C15 |
| 9   | G     | 106 | A1EFU | CM5-C13-C14-C15 |
| 9   | G     | 106 | A1EFU | C20-C21-C22-CM7 |
| 9   | G     | 106 | A1EFU | C21-C22-C23-C24 |
| 9   | f     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | f     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | f     | 101 | A1EFU | C10-C11-C12-C13 |
| 9   | f     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | f     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | f     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | f     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | f     | 101 | A1EFU | C12-C13-C14-C15 |
| 9   | f     | 101 | A1EFU | CM5-C13-C14-C15 |
| 9   | f     | 101 | A1EFU | C20-C21-C22-CM7 |
| 9   | f     | 101 | A1EFU | CM7-C22-C23-C24 |
| 9   | f     | 101 | A1EFU | C26-C27-C28-C29 |
| 9   | F     | 104 | A1EFU | C4-C5-C6-C7     |
| 9   | F     | 104 | A1EFU | CM3-C5-C6-C7    |
| 9   | F     | 104 | A1EFU | C6-C7-C8-C9     |
| 9   | F     | 104 | A1EFU | C10-C11-C12-C13 |
| 9   | F     | 104 | A1EFU | C18-C19-C20-C21 |
| 9   | F     | 104 | A1EFU | C16-C17-C18-C19 |
| 9   | F     | 104 | A1EFU | C16-C17-C18-CM6 |
| 9   | F     | 104 | A1EFU | C11-C10-C9-C8   |
| 9   | F     | 104 | A1EFU | C11-C10-C9-CM4  |
| 9   | F     | 104 | A1EFU | C12-C13-C14-C15 |
| 9   | F     | 104 | A1EFU | CM5-C13-C14-C15 |
| 9   | F     | 104 | A1EFU | C20-C21-C22-C23 |
| 9   | F     | 104 | A1EFU | C20-C21-C22-CM7 |
| 9   | F     | 104 | A1EFU | C22-C23-C24-C25 |
| 9   | E     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | E     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | E     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | E     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | E     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | E     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | E     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | E     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | E     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | E     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | E     | 102 | A1EFU | C20-C21-C22-CM7 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | E     | 102 | A1EFU | C22-C23-C24-C25 |
| 9   | E     | 102 | A1EFU | C25-C26-C27-C28 |
| 9   | E     | 102 | A1EFU | CM8-C26-C27-C28 |
| 9   | E     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | E     | 103 | A1EFU | O1-C1-C2-O2     |
| 9   | E     | 103 | A1EFU | C2-C3-C4-C5     |
| 9   | E     | 103 | A1EFU | C4-C5-C6-C7     |
| 9   | E     | 103 | A1EFU | CM3-C5-C6-C7    |
| 9   | E     | 103 | A1EFU | C6-C7-C8-C9     |
| 9   | E     | 103 | A1EFU | C10-C11-C12-C13 |
| 9   | E     | 103 | A1EFU | C16-C17-C18-C19 |
| 9   | E     | 103 | A1EFU | C16-C17-C18-CM6 |
| 9   | E     | 103 | A1EFU | C11-C10-C9-C8   |
| 9   | E     | 103 | A1EFU | C11-C10-C9-CM4  |
| 9   | E     | 103 | A1EFU | C12-C13-C14-C15 |
| 9   | E     | 103 | A1EFU | CM5-C13-C14-C15 |
| 9   | E     | 103 | A1EFU | C20-C21-C22-CM7 |
| 9   | E     | 103 | A1EFU | C21-C22-C23-C24 |
| 9   | E     | 103 | A1EFU | C26-C27-C28-C29 |
| 9   | D     | 104 | A1EFU | C4-C5-C6-C7     |
| 9   | D     | 104 | A1EFU | CM3-C5-C6-C7    |
| 9   | D     | 104 | A1EFU | C6-C7-C8-C9     |
| 9   | D     | 104 | A1EFU | C10-C11-C12-C13 |
| 9   | D     | 104 | A1EFU | C16-C17-C18-C19 |
| 9   | D     | 104 | A1EFU | C16-C17-C18-CM6 |
| 9   | D     | 104 | A1EFU | C11-C10-C9-C8   |
| 9   | D     | 104 | A1EFU | C11-C10-C9-CM4  |
| 9   | D     | 104 | A1EFU | CM5-C13-C14-C15 |
| 9   | D     | 104 | A1EFU | C20-C21-C22-CM7 |
| 9   | D     | 104 | A1EFU | C22-C23-C24-C25 |
| 9   | D     | 104 | A1EFU | C26-C27-C28-C29 |
| 9   | D     | 105 | A1EFU | C1-C2-C3-C4     |
| 9   | D     | 105 | A1EFU | O2-C2-C3-C4     |
| 9   | D     | 105 | A1EFU | O1-C1-C2-O2     |
| 9   | D     | 105 | A1EFU | C2-C3-C4-C5     |
| 9   | D     | 105 | A1EFU | C4-C5-C6-C7     |
| 9   | D     | 105 | A1EFU | CM3-C5-C6-C7    |
| 9   | D     | 105 | A1EFU | C6-C7-C8-C9     |
| 9   | D     | 105 | A1EFU | C10-C11-C12-C13 |
| 9   | D     | 105 | A1EFU | C14-C15-C16-C17 |
| 9   | D     | 105 | A1EFU | C16-C17-C18-C19 |
| 9   | D     | 105 | A1EFU | C16-C17-C18-CM6 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | D     | 105 | A1EFU | C11-C10-C9-C8   |
| 9   | D     | 105 | A1EFU | C11-C10-C9-CM4  |
| 9   | D     | 105 | A1EFU | C12-C13-C14-C15 |
| 9   | D     | 105 | A1EFU | CM5-C13-C14-C15 |
| 9   | D     | 105 | A1EFU | C20-C21-C22-CM7 |
| 9   | D     | 105 | A1EFU | C26-C27-C28-C29 |
| 9   | B     | 102 | A1EFU | O1-C1-C2-O2     |
| 9   | B     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | B     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | B     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | B     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | B     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | B     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | B     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | B     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | B     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | B     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | B     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | B     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | B     | 103 | A1EFU | O1-C1-C2-O2     |
| 9   | B     | 103 | A1EFU | C2-C3-C4-C5     |
| 9   | B     | 103 | A1EFU | C4-C5-C6-C7     |
| 9   | B     | 103 | A1EFU | CM3-C5-C6-C7    |
| 9   | B     | 103 | A1EFU | C6-C7-C8-C9     |
| 9   | B     | 103 | A1EFU | C10-C11-C12-C13 |
| 9   | B     | 103 | A1EFU | C14-C15-C16-C17 |
| 9   | B     | 103 | A1EFU | C11-C10-C9-C8   |
| 9   | B     | 103 | A1EFU | C11-C10-C9-CM4  |
| 9   | B     | 103 | A1EFU | C12-C13-C14-C15 |
| 9   | B     | 103 | A1EFU | CM5-C13-C14-C15 |
| 9   | B     | 103 | A1EFU | C20-C21-C22-CM7 |
| 9   | B     | 103 | A1EFU | C26-C27-C28-C29 |
| 9   | a     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | a     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | a     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | a     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | a     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | a     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | a     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | a     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | a     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | a     | 102 | A1EFU | C20-C21-C22-CM7 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | A     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | A     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | A     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | A     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | A     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | A     | 102 | A1EFU | C2-C1-O1-CMA    |
| 9   | A     | 102 | A1EFU | CM1-C1-O1-CMA   |
| 9   | A     | 102 | A1EFU | CM2-C1-O1-CMA   |
| 9   | A     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | A     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | A     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | A     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | A     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | A     | 102 | A1EFU | C12-C13-C14-C15 |
| 9   | A     | 102 | A1EFU | CM5-C13-C14-C15 |
| 9   | A     | 102 | A1EFU | C20-C21-C22-CM7 |
| 9   | M     | 407 | A1EFU | C2-C3-C4-C5     |
| 9   | M     | 407 | A1EFU | C4-C5-C6-C7     |
| 9   | M     | 407 | A1EFU | CM3-C5-C6-C7    |
| 9   | M     | 407 | A1EFU | C6-C7-C8-C9     |
| 9   | M     | 407 | A1EFU | C10-C11-C12-C13 |
| 9   | M     | 407 | A1EFU | C14-C15-C16-C17 |
| 9   | M     | 407 | A1EFU | C11-C10-C9-C8   |
| 9   | M     | 407 | A1EFU | C11-C10-C9-CM4  |
| 9   | M     | 407 | A1EFU | C12-C13-C14-C15 |
| 9   | M     | 407 | A1EFU | CM5-C13-C14-C15 |
| 9   | M     | 407 | A1EFU | C20-C21-C22-C23 |
| 9   | M     | 407 | A1EFU | C20-C21-C22-CM7 |
| 9   | M     | 407 | A1EFU | CM7-C22-C23-C24 |
| 10  | R     | 103 | MW9   | C33-C34-C35-C36 |
| 10  | R     | 103 | MW9   | C20-O2-P-O3     |
| 10  | R     | 103 | MW9   | C21-O5-P-O2     |
| 10  | R     | 103 | MW9   | C21-O5-P-O3     |
| 10  | R     | 103 | MW9   | C21-O5-P-O4     |
| 10  | G     | 103 | MW9   | C21-C22-C23-O6  |
| 10  | G     | 103 | MW9   | O7-C22-C23-O6   |
| 10  | G     | 103 | MW9   | O9-C24-O8-C19   |
| 10  | G     | 104 | MW9   | C25-C24-O8-C19  |
| 10  | G     | 104 | MW9   | C21-O5-P-O3     |
| 10  | G     | 104 | MW9   | C21-O5-P-O4     |
| 10  | F     | 103 | MW9   | O5-C21-C22-C23  |
| 10  | F     | 103 | MW9   | C25-C24-O8-C19  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 10  | F     | 103 | MW9  | C21-O5-P-O4     |
| 10  | D     | 103 | MW9  | O9-C24-O8-C19   |
| 10  | D     | 103 | MW9  | C33-C34-C35-C36 |
| 10  | D     | 103 | MW9  | C20-O2-P-O3     |
| 10  | D     | 103 | MW9  | C20-O2-P-O4     |
| 10  | M     | 405 | MW9  | C33-C34-C35-C36 |
| 10  | M     | 405 | MW9  | C20-O2-P-O3     |
| 10  | M     | 405 | MW9  | C20-O2-P-O4     |
| 10  | M     | 405 | MW9  | C20-O2-P-O5     |
| 10  | M     | 406 | MW9  | C16-C17-O1-C18  |
| 10  | M     | 406 | MW9  | O5-C21-C22-C23  |
| 10  | M     | 406 | MW9  | C25-C24-O8-C19  |
| 10  | M     | 406 | MW9  | O9-C24-O8-C19   |
| 10  | M     | 406 | MW9  | C21-O5-P-O2     |
| 10  | M     | 406 | MW9  | C21-O5-P-O3     |
| 10  | L     | 307 | MW9  | O5-C21-C22-C23  |
| 10  | L     | 307 | MW9  | O5-C21-C22-O7   |
| 10  | L     | 307 | MW9  | C21-C22-C23-O6  |
| 10  | H     | 303 | MW9  | C20-O2-P-O3     |
| 10  | H     | 303 | MW9  | C20-O2-P-O5     |
| 11  | D     | 102 | LMT  | C2-C1-O1'-C1'   |
| 11  | L     | 305 | LMT  | O5'-C1'-O1'-C1  |
| 11  | L     | 305 | LMT  | C2-C1-O1'-C1'   |
| 11  | L     | 306 | LMT  | C2'-C1'-O1'-C1  |
| 11  | L     | 306 | LMT  | O5'-C1'-O1'-C1  |
| 11  | L     | 306 | LMT  | C2-C1-O1'-C1'   |
| 11  | H     | 302 | LMT  | C2'-C1'-O1'-C1  |
| 11  | H     | 302 | LMT  | O5'-C1'-O1'-C1  |
| 11  | C     | 404 | LMT  | O5'-C1'-O1'-C1  |
| 13  | M     | 404 | U10  | C14-C16-C17-C18 |
| 13  | M     | 404 | U10  | C19-C21-C22-C23 |
| 13  | M     | 404 | U10  | C34-C36-C37-C38 |
| 13  | M     | 404 | U10  | C49-C51-C52-C53 |
| 13  | L     | 303 | U10  | C25-C24-C26-C27 |
| 14  | M     | 408 | BPH  | C3A-C2A-CAA-CBA |
| 14  | M     | 408 | BPH  | C1A-C2A-CAA-CBA |
| 14  | M     | 408 | BPH  | C2A-CAA-CBA-CGA |
| 15  | L     | 308 | CDL  | CB2-C1-CA2-OA2  |
| 15  | L     | 308 | CDL  | CA2-OA2-PA1-OA5 |
| 15  | L     | 308 | CDL  | CA3-OA5-PA1-OA2 |
| 15  | L     | 308 | CDL  | CA3-OA5-PA1-OA3 |
| 15  | L     | 308 | CDL  | CA3-OA5-PA1-OA4 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 15  | L     | 308 | CDL   | C31-CA7-OA8-CA6 |
| 15  | L     | 308 | CDL   | CB3-OB5-PB2-OB3 |
| 15  | L     | 308 | CDL   | CB3-OB5-PB2-OB4 |
| 15  | H     | 304 | CDL   | CA2-OA2-PA1-OA3 |
| 15  | H     | 304 | CDL   | CA2-OA2-PA1-OA4 |
| 15  | H     | 304 | CDL   | CB3-OB5-PB2-OB3 |
| 15  | H     | 304 | CDL   | CB3-OB5-PB2-OB4 |
| 15  | H     | 304 | CDL   | C51-CB5-OB6-CB4 |
| 8   | F     | 102 | BCL   | O1A-CGA-O2A-C1  |
| 8   | E     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 10  | R     | 103 | MW9   | O-C17-O1-C18    |
| 10  | F     | 103 | MW9   | O-C17-O1-C18    |
| 10  | M     | 406 | MW9   | O-C17-O1-C18    |
| 15  | L     | 308 | CDL   | OA9-CA7-OA8-CA6 |
| 8   | F     | 102 | BCL   | CBA-CGA-O2A-C1  |
| 10  | R     | 103 | MW9   | C16-C17-O1-C18  |
| 10  | F     | 103 | MW9   | C16-C17-O1-C18  |
| 15  | H     | 304 | CDL   | OA9-CA7-OA8-CA6 |
| 10  | G     | 104 | MW9   | O9-C24-O8-C19   |
| 10  | F     | 103 | MW9   | O9-C24-O8-C19   |
| 15  | L     | 308 | CDL   | OA7-CA5-OA6-CA4 |
| 15  | H     | 304 | CDL   | OA7-CA5-OA6-CA4 |
| 15  | H     | 304 | CDL   | OB7-CB5-OB6-CB4 |
| 8   | d     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | P     | 102 | BCL   | CBA-CGA-O2A-C1  |
| 8   | E     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 15  | H     | 304 | CDL   | C31-CA7-OA8-CA6 |
| 10  | G     | 103 | MW9   | C25-C24-O8-C19  |
| 10  | D     | 103 | MW9   | C25-C24-O8-C19  |
| 15  | L     | 308 | CDL   | C11-CA5-OA6-CA4 |
| 15  | H     | 304 | CDL   | C11-CA5-OA6-CA4 |
| 11  | D     | 102 | LMT   | O5'-C5'-C6'-O6' |
| 8   | L     | 301 | BCL   | C4-C3-C5-C6     |
| 8   | L     | 304 | BCL   | C4-C3-C5-C6     |
| 9   | T     | 101 | A1EFU | CM8-C26-C27-C28 |
| 9   | s     | 101 | A1EFU | CM8-C26-C27-C28 |
| 9   | 2     | 102 | A1EFU | CM7-C22-C23-C24 |
| 9   | K     | 102 | A1EFU | CM7-C22-C23-C24 |
| 9   | F     | 104 | A1EFU | CM7-C22-C23-C24 |
| 9   | E     | 103 | A1EFU | CM7-C22-C23-C24 |
| 9   | A     | 102 | A1EFU | CM7-C22-C23-C24 |
| 8   | s     | 103 | BCL   | C2-C3-C5-C6     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | T     | 101 | A1EFU | C25-C26-C27-C28 |
| 13  | L     | 303 | U10   | C23-C24-C26-C27 |
| 8   | G     | 102 | BCL   | C2A-CAA-CBA-CGA |
| 10  | G     | 103 | MW9   | C5-C6-C7-C8     |
| 10  | H     | 301 | MW9   | C5-C6-C7-C8     |
| 11  | D     | 102 | LMT   | C3'-C4'-O1B-C1B |
| 8   | n     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 10  | G     | 104 | MW9   | C16-C17-O1-C18  |
| 10  | L     | 307 | MW9   | C16-C17-O1-C18  |
| 10  | M     | 405 | MW9   | C31-C32-C33-C34 |
| 8   | s     | 103 | BCL   | C1-C2-C3-C5     |
| 8   | n     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 8   | L     | 301 | BCL   | O1A-CGA-O2A-C1  |
| 10  | G     | 104 | MW9   | O-C17-O1-C18    |
| 10  | L     | 307 | MW9   | O-C17-O1-C18    |
| 9   | P     | 103 | A1EFU | C13-C14-C15-C16 |
| 9   | s     | 104 | A1EFU | C5-C6-C7-C8     |
| 9   | r     | 102 | A1EFU | C9-C10-C11-C12  |
| 9   | 2     | 101 | A1EFU | C15-C16-C17-C18 |
| 9   | 2     | 102 | A1EFU | C5-C6-C7-C8     |
| 9   | 2     | 104 | A1EFU | C15-C16-C17-C18 |
| 9   | N     | 102 | A1EFU | C19-C20-C21-C22 |
| 9   | j     | 101 | A1EFU | C19-C20-C21-C22 |
| 9   | G     | 105 | A1EFU | C13-C14-C15-C16 |
| 9   | G     | 106 | A1EFU | C13-C14-C15-C16 |
| 10  | F     | 103 | MW9   | O5-C21-C22-O7   |
| 10  | M     | 406 | MW9   | O5-C21-C22-O7   |
| 15  | L     | 308 | CDL   | O1-C1-CA2-OA2   |
| 8   | S     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | t     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | 2     | 103 | BCL   | C3-C5-C6-C7     |
| 8   | i     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 9   | 2     | 102 | A1EFU | C14-C15-C16-C17 |
| 8   | b     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | B     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | M     | 403 | BCL   | C3-C5-C6-C7     |
| 8   | i     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 9   | s     | 104 | A1EFU | CM8-C26-C27-C28 |
| 9   | r     | 102 | A1EFU | CM7-C22-C23-C24 |
| 9   | q     | 101 | A1EFU | CM8-C26-C27-C28 |
| 11  | D     | 102 | LMT   | C4'-C5'-C6'-O6' |
| 8   | A     | 101 | BCL   | C2-C3-C5-C6     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | q     | 101 | A1EFU | C25-C26-C27-C28 |
| 9   | p     | 101 | A1EFU | C21-C22-C23-C24 |
| 9   | N     | 102 | A1EFU | C21-C22-C23-C24 |
| 9   | k     | 101 | A1EFU | C21-C22-C23-C24 |
| 9   | D     | 105 | A1EFU | C21-C22-C23-C24 |
| 9   | B     | 103 | A1EFU | C21-C22-C23-C24 |
| 9   | a     | 102 | A1EFU | C21-C22-C23-C24 |
| 8   | I     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 8   | v     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 9   | v     | 102 | A1EFU | C22-C23-C24-C25 |
| 9   | s     | 101 | A1EFU | C22-C23-C24-C25 |
| 9   | s     | 104 | A1EFU | C22-C23-C24-C25 |
| 9   | s     | 105 | A1EFU | C26-C27-C28-C29 |
| 9   | q     | 101 | A1EFU | C22-C23-C24-C25 |
| 9   | p     | 101 | A1EFU | C26-C27-C28-C29 |
| 9   | k     | 101 | A1EFU | C22-C23-C24-C25 |
| 9   | j     | 101 | A1EFU | C26-C27-C28-C29 |
| 13  | L     | 303 | U10   | C9-C11-C12-C13  |
| 13  | L     | 303 | U10   | C19-C21-C22-C23 |
| 13  | L     | 303 | U10   | C29-C31-C32-C33 |
| 8   | v     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 8   | L     | 301 | BCL   | CBA-CGA-O2A-C1  |
| 10  | D     | 103 | MW9   | O5-C21-C22-C23  |
| 10  | H     | 301 | MW9   | O5-C21-C22-C23  |
| 15  | L     | 308 | CDL   | CA2-C1-CB2-OB2  |
| 8   | M     | 403 | BCL   | CBA-CGA-O2A-C1  |
| 9   | N     | 102 | A1EFU | C9-C10-C11-C12  |
| 10  | R     | 103 | MW9   | C12-C13-C14-C15 |
| 10  | G     | 104 | MW9   | O8-C19-C20-O2   |
| 10  | D     | 103 | MW9   | O5-C21-C22-O7   |
| 9   | s     | 101 | A1EFU | C25-C26-C27-C28 |
| 8   | s     | 103 | BCL   | C6-C7-C8-C9     |
| 8   | 2     | 103 | BCL   | C6-C7-C8-C9     |
| 8   | j     | 102 | BCL   | C6-C7-C8-C9     |
| 8   | i     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | M     | 402 | BCL   | C6-C7-C8-C9     |
| 8   | M     | 403 | BCL   | C6-C7-C8-C9     |
| 8   | L     | 304 | BCL   | C6-C7-C8-C9     |
| 14  | L     | 302 | BPH   | C14-C13-C15-C16 |
| 8   | P     | 102 | BCL   | C8-C10-C11-C12  |
| 10  | M     | 405 | MW9   | C25-C24-O8-C19  |
| 10  | M     | 406 | MW9   | C6-C7-C8-C9     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 15  | L     | 308 | CDL   | CB7-C71-C72-C73 |
| 15  | H     | 304 | CDL   | CA7-C31-C32-C33 |
| 8   | d     | 101 | BCL   | C15-C16-C17-C18 |
| 8   | i     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | A     | 101 | BCL   | C3-C5-C6-C7     |
| 16  | C     | 401 | HEC   | C3D-CAD-CBD-CGD |
| 8   | k     | 102 | BCL   | C10-C11-C12-C13 |
| 8   | J     | 101 | BCL   | C10-C11-C12-C13 |
| 8   | e     | 101 | BCL   | C8-C10-C11-C12  |
| 10  | M     | 405 | MW9   | C24-C25-C26-C27 |
| 8   | v     | 101 | BCL   | C15-C16-C17-C18 |
| 8   | F     | 101 | BCL   | C5-C6-C7-C8     |
| 10  | H     | 301 | MW9   | C14-C15-C16-C17 |
| 15  | H     | 304 | CDL   | CA5-C11-C12-C13 |
| 15  | H     | 304 | CDL   | CB7-C71-C72-C73 |
| 8   | l     | 101 | BCL   | C10-C11-C12-C13 |
| 8   | n     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | G     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | F     | 101 | BCL   | C10-C11-C12-C13 |
| 8   | k     | 102 | BCL   | C5-C6-C7-C8     |
| 8   | B     | 101 | BCL   | C10-C11-C12-C13 |
| 10  | G     | 104 | MW9   | C30-C31-C32-C33 |
| 9   | G     | 105 | A1EFU | CM1-C1-C2-O2    |
| 8   | 2     | 103 | BCL   | C11-C10-C8-C7   |
| 8   | j     | 102 | BCL   | C6-C7-C8-C10    |
| 8   | E     | 101 | BCL   | C11-C12-C13-C15 |
| 14  | L     | 302 | BPH   | C11-C12-C13-C15 |
| 9   | j     | 101 | A1EFU | C15-C16-C17-C18 |
| 9   | I     | 102 | A1EFU | C13-C14-C15-C16 |
| 9   | M     | 407 | A1EFU | C19-C20-C21-C22 |
| 10  | H     | 303 | MW9   | C24-C25-C26-C27 |
| 8   | B     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 9   | v     | 103 | A1EFU | C22-C23-C24-C25 |
| 9   | N     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | J     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | I     | 102 | A1EFU | C22-C23-C24-C25 |
| 9   | f     | 101 | A1EFU | C22-C23-C24-C25 |
| 9   | B     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | a     | 102 | A1EFU | C22-C23-C24-C25 |
| 13  | M     | 404 | U10   | C29-C31-C32-C33 |
| 13  | L     | 303 | U10   | C14-C16-C17-C18 |
| 9   | v     | 103 | A1EFU | C6-C7-C8-C9     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | T     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | s     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | s     | 104 | A1EFU | C10-C11-C12-C13 |
| 9   | r     | 102 | A1EFU | C10-C11-C12-C13 |
| 9   | r     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | 2     | 101 | A1EFU | C18-C19-C20-C21 |
| 9   | k     | 101 | A1EFU | C6-C7-C8-C9     |
| 9   | I     | 102 | A1EFU | C6-C7-C8-C9     |
| 9   | G     | 105 | A1EFU | C6-C7-C8-C9     |
| 9   | G     | 105 | A1EFU | C10-C11-C12-C13 |
| 9   | G     | 105 | A1EFU | C18-C19-C20-C21 |
| 9   | E     | 103 | A1EFU | C18-C19-C20-C21 |
| 9   | D     | 105 | A1EFU | C18-C19-C20-C21 |
| 9   | a     | 102 | A1EFU | C18-C19-C20-C21 |
| 9   | v     | 102 | A1EFU | CM1-C1-C2-C3    |
| 10  | G     | 104 | MW9   | C5-C6-C7-C8     |
| 10  | F     | 103 | MW9   | C5-C6-C7-C8     |
| 10  | G     | 103 | MW9   | O5-C21-C22-O7   |
| 10  | H     | 301 | MW9   | O5-C21-C22-O7   |
| 15  | L     | 308 | CDL   | O1-C1-CB2-OB2   |
| 10  | M     | 405 | MW9   | O9-C24-O8-C19   |
| 8   | P     | 102 | BCL   | C15-C16-C17-C18 |
| 8   | r     | 101 | BCL   | C13-C15-C16-C17 |
| 8   | e     | 101 | BCL   | C10-C11-C12-C13 |
| 10  | G     | 103 | MW9   | C14-C15-C16-C17 |
| 8   | q     | 102 | BCL   | C15-C16-C17-C18 |
| 8   | 2     | 103 | BCL   | C15-C16-C17-C18 |
| 8   | a     | 101 | BCL   | C10-C11-C12-C13 |
| 8   | 2     | 103 | BCL   | C10-C11-C12-C13 |
| 8   | j     | 102 | BCL   | C5-C6-C7-C8     |
| 10  | G     | 103 | MW9   | C20-O2-P-O5     |
| 10  | G     | 104 | MW9   | C21-O5-P-O2     |
| 10  | D     | 103 | MW9   | C20-O2-P-O5     |
| 10  | D     | 103 | MW9   | C21-O5-P-O2     |
| 10  | H     | 301 | MW9   | C21-O5-P-O2     |
| 15  | L     | 308 | CDL   | CB3-OB5-PB2-OB2 |
| 15  | H     | 304 | CDL   | CA2-OA2-PA1-OA5 |
| 15  | H     | 304 | CDL   | CB3-OB5-PB2-OB2 |
| 10  | M     | 406 | MW9   | C14-C15-C16-C17 |
| 10  | G     | 103 | MW9   | O5-C21-C22-C23  |
| 9   | J     | 102 | A1EFU | CM8-C26-C27-C28 |
| 14  | M     | 408 | BPH   | C4-C3-C5-C6     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | j     | 103 | A1EFU | C21-C22-C23-C24 |
| 8   | F     | 101 | BCL   | C13-C15-C16-C17 |
| 8   | I     | 101 | BCL   | C16-C17-C18-C20 |
| 8   | Q     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | G     | 101 | BCL   | C10-C11-C12-C13 |
| 8   | b     | 101 | BCL   | C13-C15-C16-C17 |
| 9   | v     | 102 | A1EFU | C19-C20-C21-C22 |
| 9   | R     | 101 | A1EFU | C5-C6-C7-C8     |
| 9   | 2     | 102 | A1EFU | C19-C20-C21-C22 |
| 10  | G     | 104 | MW9   | C14-C15-C16-C17 |
| 8   | s     | 103 | BCL   | C5-C6-C7-C8     |
| 8   | j     | 102 | BCL   | C15-C16-C17-C18 |
| 9   | s     | 104 | A1EFU | CM5-C13-C14-C15 |
| 9   | s     | 105 | A1EFU | CM3-C5-C6-C7    |
| 9   | R     | 101 | A1EFU | C16-C17-C18-CM6 |
| 9   | p     | 101 | A1EFU | C11-C10-C9-CM4  |
| 9   | 2     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | 2     | 104 | A1EFU | CM5-C13-C14-C15 |
| 9   | N     | 102 | A1EFU | C16-C17-C18-CM6 |
| 9   | J     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | E     | 102 | A1EFU | CM3-C5-C6-C7    |
| 9   | B     | 103 | A1EFU | C16-C17-C18-CM6 |
| 9   | a     | 102 | A1EFU | C11-C10-C9-CM4  |
| 10  | G     | 104 | MW9   | C13-C14-C15-C16 |
| 10  | D     | 103 | MW9   | C6-C7-C8-C9     |
| 10  | M     | 405 | MW9   | C13-C14-C15-C16 |
| 10  | M     | 406 | MW9   | C13-C14-C15-C16 |
| 15  | L     | 308 | CDL   | C54-C55-C56-C57 |
| 8   | Q     | 101 | BCL   | C16-C17-C18-C19 |
| 10  | F     | 103 | MW9   | C13-C14-C15-C16 |
| 10  | H     | 303 | MW9   | C10-C11-C12-C13 |
| 10  | H     | 303 | MW9   | C7-C8-C9-C10    |
| 11  | D     | 102 | LMT   | C2-C3-C4-C5     |
| 10  | F     | 103 | MW9   | C11-C12-C13-C14 |
| 10  | F     | 103 | MW9   | C28-C29-C30-C31 |
| 15  | L     | 308 | CDL   | C11-C12-C13-C14 |
| 15  | L     | 308 | CDL   | C55-C56-C57-C58 |
| 10  | H     | 301 | MW9   | C4-C5-C6-C7     |
| 15  | H     | 304 | CDL   | C58-C59-C60-C61 |
| 15  | H     | 304 | CDL   | C76-C77-C78-C79 |
| 10  | G     | 104 | MW9   | O5-C21-C22-O7   |
| 10  | M     | 406 | MW9   | C4-C5-C6-C7     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | L     | 301 | BCL   | C3-C5-C6-C7     |
| 9   | s     | 104 | A1EFU | CM2-C1-O1-CMA   |
| 9   | s     | 104 | A1EFU | C12-C13-C14-C15 |
| 9   | s     | 105 | A1EFU | C4-C5-C6-C7     |
| 9   | R     | 101 | A1EFU | C16-C17-C18-C19 |
| 9   | p     | 101 | A1EFU | C11-C10-C9-C8   |
| 9   | 2     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | 2     | 104 | A1EFU | C16-C17-C18-C19 |
| 9   | 2     | 104 | A1EFU | C12-C13-C14-C15 |
| 9   | N     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | K     | 102 | A1EFU | C16-C17-C18-C19 |
| 9   | J     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | E     | 102 | A1EFU | C4-C5-C6-C7     |
| 9   | D     | 104 | A1EFU | C12-C13-C14-C15 |
| 9   | B     | 103 | A1EFU | C16-C17-C18-C19 |
| 9   | a     | 102 | A1EFU | C11-C10-C9-C8   |
| 11  | L     | 305 | LMT   | C2'-C1'-O1'-C1  |
| 8   | A     | 101 | BCL   | C1-C2-C3-C5     |
| 10  | M     | 406 | MW9   | C27-C28-C29-C30 |
| 10  | H     | 303 | MW9   | C13-C14-C15-C16 |
| 11  | C     | 404 | LMT   | C2-C3-C4-C5     |
| 10  | G     | 103 | MW9   | C10-C11-C12-C13 |
| 10  | F     | 103 | MW9   | C9-C10-C11-C12  |
| 10  | M     | 405 | MW9   | C9-C10-C11-C12  |
| 10  | M     | 406 | MW9   | C7-C8-C9-C10    |
| 10  | H     | 301 | MW9   | C12-C13-C14-C15 |
| 10  | H     | 301 | MW9   | C13-C14-C15-C16 |
| 8   | a     | 101 | BCL   | C2-C3-C5-C6     |
| 14  | M     | 408 | BPH   | C2-C3-C5-C6     |
| 8   | q     | 102 | BCL   | C11-C10-C8-C9   |
| 8   | N     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | F     | 102 | BCL   | C6-C7-C8-C9     |
| 8   | E     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | M     | 402 | BCL   | C11-C10-C8-C9   |
| 10  | F     | 103 | MW9   | C6-C7-C8-C9     |
| 10  | M     | 406 | MW9   | C35-C36-C37-C38 |
| 15  | H     | 304 | CDL   | C32-C33-C34-C35 |
| 10  | M     | 405 | MW9   | C26-C27-C28-C29 |
| 10  | H     | 301 | MW9   | C2-C3-C4-C5     |
| 15  | L     | 308 | CDL   | C52-C53-C54-C55 |
| 10  | R     | 103 | MW9   | C21-C22-C23-O6  |
| 10  | F     | 103 | MW9   | C21-C22-C23-O6  |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 10  | M     | 405 | MW9   | C21-C22-C23-O6  |
| 10  | H     | 301 | MW9   | C21-C22-C23-O6  |
| 10  | H     | 301 | MW9   | C25-C24-O8-C19  |
| 10  | G     | 103 | MW9   | C27-C28-C29-C30 |
| 10  | H     | 301 | MW9   | C6-C7-C8-C9     |
| 15  | L     | 308 | CDL   | C14-C15-C16-C17 |
| 15  | L     | 308 | CDL   | C16-C17-C18-C19 |
| 10  | H     | 301 | MW9   | C29-C30-C31-C32 |
| 10  | R     | 103 | MW9   | C27-C28-C29-C30 |
| 10  | G     | 103 | MW9   | C13-C14-C15-C16 |
| 15  | H     | 304 | CDL   | C11-C12-C13-C14 |
| 8   | Q     | 101 | BCL   | C16-C17-C18-C20 |
| 8   | I     | 101 | BCL   | C16-C17-C18-C19 |
| 9   | T     | 101 | A1EFU | C22-C23-C24-C25 |
| 9   | 2     | 102 | A1EFU | C26-C27-C28-C29 |
| 10  | D     | 103 | MW9   | C12-C13-C14-C15 |
| 10  | D     | 103 | MW9   | C4-C5-C6-C7     |
| 10  | M     | 406 | MW9   | C10-C11-C12-C13 |
| 10  | L     | 307 | MW9   | C13-C14-C15-C16 |
| 10  | H     | 301 | MW9   | C27-C28-C29-C30 |
| 15  | H     | 304 | CDL   | C72-C73-C74-C75 |
| 10  | G     | 103 | MW9   | C7-C8-C9-C10    |
| 10  | M     | 406 | MW9   | C11-C12-C13-C14 |
| 9   | E     | 102 | A1EFU | C2-C3-C4-C5     |
| 8   | i     | 101 | BCL   | C10-C11-C12-C13 |
| 8   | G     | 101 | BCL   | C8-C10-C11-C12  |
| 10  | G     | 104 | MW9   | C26-C27-C28-C29 |
| 10  | L     | 307 | MW9   | C26-C27-C28-C29 |
| 8   | t     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | s     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | s     | 103 | BCL   | C3A-C2A-CAA-CBA |
| 8   | r     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | R     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | q     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | K     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | j     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | G     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | G     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | F     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | d     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | a     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | A     | 101 | BCL   | C3A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | M     | 402 | BCL   | C3A-C2A-CAA-CBA |
| 8   | d     | 101 | BCL   | C10-C11-C12-C13 |
| 11  | H     | 302 | LMT   | C2-C1-O1'-C1'   |
| 10  | R     | 103 | MW9   | C11-C12-C13-C14 |
| 10  | G     | 103 | MW9   | C26-C27-C28-C29 |
| 10  | F     | 103 | MW9   | C10-C11-C12-C13 |
| 15  | H     | 304 | CDL   | C74-C75-C76-C77 |
| 8   | e     | 101 | BCL   | C16-C17-C18-C20 |
| 10  | R     | 103 | MW9   | C13-C14-C15-C16 |
| 10  | R     | 103 | MW9   | C25-C26-C27-C28 |
| 10  | H     | 301 | MW9   | C10-C11-C12-C13 |
| 10  | D     | 103 | MW9   | C24-C25-C26-C27 |
| 8   | d     | 101 | BCL   | C4-C3-C5-C6     |
| 9   | D     | 104 | A1EFU | CM8-C26-C27-C28 |
| 8   | 2     | 103 | BCL   | C2-C3-C5-C6     |
| 9   | s     | 104 | A1EFU | C25-C26-C27-C28 |
| 10  | M     | 406 | MW9   | C9-C10-C11-C12  |
| 10  | M     | 405 | MW9   | O7-C22-C23-O6   |
| 10  | L     | 307 | MW9   | O7-C22-C23-O6   |
| 8   | s     | 103 | BCL   | C15-C16-C17-C18 |
| 10  | G     | 103 | MW9   | C6-C7-C8-C9     |
| 10  | M     | 406 | MW9   | C25-C26-C27-C28 |
| 11  | C     | 404 | LMT   | C3-C4-C5-C6     |
| 10  | D     | 103 | MW9   | C27-C28-C29-C30 |
| 10  | R     | 103 | MW9   | C10-C11-C12-C13 |
| 10  | G     | 104 | MW9   | C27-C28-C29-C30 |
| 10  | M     | 405 | MW9   | C11-C12-C13-C14 |
| 10  | H     | 301 | MW9   | O9-C24-O8-C19   |
| 10  | H     | 303 | MW9   | C12-C13-C14-C15 |
| 11  | L     | 306 | LMT   | C5-C6-C7-C8     |
| 15  | L     | 308 | CDL   | C15-C16-C17-C18 |
| 8   | L     | 304 | BCL   | O1A-CGA-O2A-C1  |
| 8   | G     | 102 | BCL   | CBA-CGA-O2A-C1  |
| 10  | G     | 104 | MW9   | C10-C11-C12-C13 |
| 9   | P     | 103 | A1EFU | CM8-C26-C27-C28 |
| 9   | s     | 101 | A1EFU | CM7-C22-C23-C24 |
| 8   | P     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | s     | 103 | BCL   | C6-C7-C8-C10    |
| 8   | q     | 102 | BCL   | C11-C10-C8-C7   |
| 8   | N     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | j     | 102 | BCL   | C11-C10-C8-C7   |
| 8   | F     | 102 | BCL   | C6-C7-C8-C10    |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | B     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | M     | 402 | BCL   | C6-C7-C8-C10    |
| 8   | M     | 402 | BCL   | C11-C10-C8-C7   |
| 8   | M     | 403 | BCL   | C6-C7-C8-C10    |
| 8   | L     | 304 | BCL   | C6-C7-C8-C10    |
| 10  | R     | 103 | MW9   | C31-C32-C33-C34 |
| 8   | a     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 9   | v     | 103 | A1EFU | C5-C6-C7-C8     |
| 8   | s     | 103 | BCL   | C16-C17-C18-C20 |
| 8   | L     | 301 | BCL   | C16-C17-C18-C19 |
| 10  | R     | 103 | MW9   | C29-C30-C31-C32 |
| 10  | R     | 103 | MW9   | O9-C24-O8-C19   |
| 8   | L     | 304 | BCL   | CBA-CGA-O2A-C1  |
| 10  | M     | 405 | MW9   | C16-C17-O1-C18  |
| 10  | H     | 303 | MW9   | C16-C17-O1-C18  |
| 8   | v     | 101 | BCL   | C8-C10-C11-C12  |
| 15  | H     | 304 | CDL   | C60-C61-C62-C63 |
| 15  | H     | 304 | CDL   | C75-C76-C77-C78 |
| 10  | G     | 103 | MW9   | C9-C10-C11-C12  |
| 15  | L     | 308 | CDL   | C13-C14-C15-C16 |
| 10  | R     | 103 | MW9   | C35-C36-C37-C38 |
| 10  | G     | 104 | MW9   | C6-C7-C8-C9     |
| 8   | l     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 8   | K     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 8   | e     | 101 | BCL   | C16-C17-C18-C19 |
| 10  | D     | 103 | MW9   | C14-C15-C16-C17 |
| 10  | R     | 103 | MW9   | C25-C24-O8-C19  |
| 9   | J     | 103 | A1EFU | C18-C19-C20-C21 |
| 10  | F     | 103 | MW9   | C12-C13-C14-C15 |
| 9   | j     | 101 | A1EFU | C14-C15-C16-C17 |
| 8   | A     | 101 | BCL   | C15-C16-C17-C18 |
| 8   | s     | 103 | BCL   | O1A-CGA-O2A-C1  |
| 8   | P     | 102 | BCL   | C10-C11-C12-C13 |
| 8   | s     | 102 | BCL   | C13-C15-C16-C17 |
| 10  | M     | 406 | MW9   | C29-C30-C31-C32 |
| 8   | v     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | S     | 101 | BCL   | C4-C3-C5-C6     |
| 9   | I     | 102 | A1EFU | CM8-C26-C27-C28 |
| 9   | M     | 407 | A1EFU | CM8-C26-C27-C28 |
| 9   | J     | 102 | A1EFU | C25-C26-C27-C28 |
| 8   | t     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | s     | 102 | BCL   | C6-C7-C8-C9     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | 2     | 103 | BCL   | C11-C10-C8-C9   |
| 8   | j     | 102 | BCL   | C11-C10-C8-C9   |
| 8   | G     | 102 | BCL   | C6-C7-C8-C9     |
| 8   | B     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | L     | 301 | BCL   | C11-C10-C8-C9   |
| 8   | N     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 8   | A     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 10  | H     | 301 | MW9   | C3-C4-C5-C6     |
| 8   | K     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 8   | t     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | s     | 103 | BCL   | C1A-C2A-CAA-CBA |
| 8   | R     | 102 | BCL   | C1A-C2A-CAA-CBA |
| 8   | N     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | B     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | a     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | L     | 304 | BCL   | C1A-C2A-CAA-CBA |
| 8   | P     | 102 | BCL   | C16-C17-C18-C20 |
| 8   | S     | 101 | BCL   | C16-C17-C18-C20 |
| 10  | G     | 103 | MW9   | C34-C35-C36-C37 |
| 10  | D     | 103 | MW9   | C13-C14-C15-C16 |
| 10  | D     | 103 | MW9   | C34-C35-C36-C37 |
| 10  | L     | 307 | MW9   | C30-C31-C32-C33 |
| 9   | a     | 102 | A1EFU | C13-C14-C15-C16 |
| 8   | v     | 101 | BCL   | C10-C11-C12-C13 |
| 10  | R     | 103 | MW9   | C20-O2-P-O5     |
| 11  | D     | 102 | LMT   | C5'-C4'-O1B-C1B |
| 14  | M     | 408 | BPH   | C8-C10-C11-C12  |
| 10  | R     | 103 | MW9   | C18-C19-C20-O2  |
| 10  | G     | 104 | MW9   | C18-C19-C20-O2  |
| 10  | H     | 303 | MW9   | C29-C30-C31-C32 |
| 8   | P     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | V     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | q     | 102 | BCL   | C2C-C3C-CAC-CBC |
| 8   | G     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | D     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | B     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | A     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | L     | 304 | BCL   | C2C-C3C-CAC-CBC |
| 8   | N     | 101 | BCL   | C15-C16-C17-C18 |
| 8   | e     | 101 | BCL   | C15-C16-C17-C18 |
| 8   | d     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 10  | M     | 405 | MW9   | O-C17-O1-C18    |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | s     | 103 | BCL   | C16-C17-C18-C19 |
| 15  | H     | 304 | CDL   | C33-C34-C35-C36 |
| 10  | D     | 103 | MW9   | C26-C27-C28-C29 |
| 10  | H     | 303 | MW9   | O-C17-O1-C18    |
| 10  | M     | 405 | MW9   | C7-C8-C9-C10    |
| 9   | q     | 101 | A1EFU | C26-C27-C28-C29 |
| 10  | H     | 301 | MW9   | O7-C22-C23-O6   |
| 10  | G     | 104 | MW9   | C29-C30-C31-C32 |
| 10  | F     | 103 | MW9   | C29-C30-C31-C32 |
| 10  | M     | 405 | MW9   | C29-C30-C31-C32 |
| 8   | S     | 101 | BCL   | C15-C16-C17-C18 |
| 10  | H     | 301 | MW9   | C11-C12-C13-C14 |
| 10  | H     | 301 | MW9   | C9-C10-C11-C12  |
| 8   | L     | 301 | BCL   | C15-C16-C17-C18 |
| 9   | 2     | 102 | A1EFU | C11-C10-C9-CM4  |
| 9   | f     | 101 | A1EFU | CM3-C5-C6-C7    |
| 8   | 2     | 103 | BCL   | C4-C3-C5-C6     |
| 11  | H     | 302 | LMT   | C7-C8-C9-C10    |
| 10  | R     | 103 | MW9   | C14-C15-C16-C17 |
| 8   | S     | 101 | BCL   | C16-C17-C18-C19 |
| 11  | H     | 302 | LMT   | O5'-C5'-C6'-O6' |
| 10  | D     | 103 | MW9   | C10-C11-C12-C13 |
| 8   | G     | 102 | BCL   | C5-C6-C7-C8     |
| 8   | L     | 304 | BCL   | C5-C6-C7-C8     |
| 10  | H     | 303 | MW9   | C20-O2-P-O4     |
| 10  | H     | 303 | MW9   | C27-C28-C29-C30 |
| 15  | H     | 304 | CDL   | C54-C55-C56-C57 |
| 10  | H     | 303 | MW9   | C19-C18-O1-C17  |
| 10  | M     | 406 | MW9   | O8-C19-C20-O2   |
| 15  | H     | 304 | CDL   | OA5-CA3-CA4-OA6 |
| 8   | P     | 102 | BCL   | C16-C17-C18-C19 |
| 10  | F     | 103 | MW9   | C14-C15-C16-C17 |
| 8   | F     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 10  | M     | 406 | MW9   | C34-C35-C36-C37 |
| 8   | 2     | 103 | BCL   | C5-C6-C7-C8     |
| 8   | a     | 101 | BCL   | C8-C10-C11-C12  |
| 8   | L     | 301 | BCL   | C13-C15-C16-C17 |
| 9   | T     | 101 | A1EFU | CM1-C1-O1-CMA   |
| 9   | T     | 101 | A1EFU | CM2-C1-O1-CMA   |
| 9   | F     | 104 | A1EFU | CM1-C1-O1-CMA   |
| 9   | F     | 104 | A1EFU | CM2-C1-O1-CMA   |
| 9   | M     | 407 | A1EFU | CM2-C1-O1-CMA   |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 11  | D     | 102 | LMT   | C2'-C1'-O1'-C1  |
| 11  | C     | 404 | LMT   | C2'-C1'-O1'-C1  |
| 10  | R     | 103 | MW9   | O1-C18-C19-O8   |
| 15  | L     | 308 | CDL   | OA6-CA4-CA6-OA8 |
| 8   | 2     | 103 | BCL   | C1-C2-C3-C5     |
| 10  | H     | 303 | MW9   | C25-C26-C27-C28 |
| 8   | v     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | t     | 101 | BCL   | C11-C12-C13-C15 |
| 8   | s     | 102 | BCL   | C6-C7-C8-C10    |
| 8   | s     | 103 | BCL   | C11-C12-C13-C15 |
| 8   | s     | 103 | BCL   | C12-C13-C15-C16 |
| 8   | R     | 102 | BCL   | C12-C13-C15-C16 |
| 8   | G     | 102 | BCL   | C6-C7-C8-C10    |
| 8   | d     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | a     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | L     | 301 | BCL   | C11-C10-C8-C7   |
| 8   | L     | 304 | BCL   | C12-C13-C15-C16 |
| 9   | D     | 104 | A1EFU | C25-C26-C27-C28 |
| 8   | R     | 102 | BCL   | C3-C5-C6-C7     |
| 10  | G     | 103 | MW9   | C4-C5-C6-C7     |
| 8   | P     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | v     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | s     | 103 | BCL   | C11-C12-C13-C14 |
| 8   | s     | 103 | BCL   | C14-C13-C15-C16 |
| 8   | R     | 102 | BCL   | C14-C13-C15-C16 |
| 8   | d     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | d     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | a     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | L     | 301 | BCL   | C6-C7-C8-C9     |
| 14  | M     | 408 | BPH   | C6-C7-C8-C9     |
| 8   | G     | 102 | BCL   | C16-C17-C18-C19 |
| 11  | L     | 305 | LMT   | C3-C4-C5-C6     |
| 10  | G     | 104 | MW9   | O5-C21-C22-C23  |
| 15  | H     | 304 | CDL   | C15-C16-C17-C18 |
| 8   | R     | 102 | BCL   | CBA-CGA-O2A-C1  |
| 10  | H     | 303 | MW9   | C11-C12-C13-C14 |
| 8   | d     | 101 | BCL   | C5-C6-C7-C8     |
| 10  | D     | 103 | MW9   | C3-C4-C5-C6     |
| 10  | G     | 103 | MW9   | C18-C19-C20-O2  |
| 10  | F     | 103 | MW9   | C18-C19-C20-O2  |
| 9   | v     | 102 | A1EFU | C26-C27-C28-C29 |
| 9   | r     | 102 | A1EFU | C22-C23-C24-C25 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | j     | 101 | A1EFU | C22-C23-C24-C25 |
| 13  | M     | 404 | U10   | C9-C11-C12-C13  |
| 10  | M     | 406 | MW9   | C36-C37-C38-C39 |
| 8   | G     | 102 | BCL   | C10-C11-C12-C13 |
| 8   | q     | 102 | BCL   | C4-C3-C5-C6     |
| 9   | 2     | 104 | A1EFU | CM7-C22-C23-C24 |
| 8   | d     | 101 | BCL   | C2-C3-C5-C6     |
| 9   | v     | 103 | A1EFU | CM1-C1-C2-C3    |
| 9   | T     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | s     | 105 | A1EFU | CM1-C1-C2-C3    |
| 9   | G     | 105 | A1EFU | CM1-C1-C2-C3    |
| 10  | H     | 303 | MW9   | C6-C7-C8-C9     |
| 10  | R     | 103 | MW9   | O5-C21-C22-O7   |
| 15  | H     | 304 | CDL   | C13-C14-C15-C16 |
| 10  | H     | 303 | MW9   | C9-C10-C11-C12  |
| 8   | q     | 102 | BCL   | CBA-CGA-O2A-C1  |
| 10  | G     | 104 | MW9   | C22-C21-O5-P    |
| 10  | M     | 406 | MW9   | C22-C21-O5-P    |
| 15  | H     | 304 | CDL   | C1-CA2-OA2-PA1  |
| 8   | P     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | L     | 301 | BCL   | C3A-C2A-CAA-CBA |
| 9   | r     | 102 | A1EFU | C15-C16-C17-C18 |
| 9   | q     | 101 | A1EFU | C15-C16-C17-C18 |
| 11  | C     | 404 | LMT   | C2-C1-O1'-C1'   |
| 8   | b     | 101 | BCL   | C10-C11-C12-C13 |
| 10  | D     | 103 | MW9   | O1-C18-C19-C20  |
| 10  | M     | 405 | MW9   | O1-C18-C19-C20  |
| 10  | M     | 406 | MW9   | C12-C13-C14-C15 |
| 8   | r     | 101 | BCL   | C3-C5-C6-C7     |
| 15  | H     | 304 | CDL   | C79-C80-C81-C82 |
| 8   | M     | 403 | BCL   | O1A-CGA-O2A-C1  |
| 8   | j     | 102 | BCL   | O1A-CGA-O2A-C1  |
| 8   | a     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | Q     | 101 | BCL   | C15-C16-C17-C18 |
| 10  | R     | 103 | MW9   | O8-C19-C20-O2   |
| 10  | F     | 103 | MW9   | O8-C19-C20-O2   |
| 8   | M     | 402 | BCL   | CBA-CGA-O2A-C1  |
| 10  | D     | 103 | MW9   | C7-C8-C9-C10    |
| 8   | I     | 101 | BCL   | C15-C16-C17-C18 |
| 9   | s     | 101 | A1EFU | C26-C27-C28-C29 |
| 10  | R     | 103 | MW9   | O5-C21-C22-C23  |
| 13  | L     | 303 | U10   | C34-C36-C37-C38 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 15  | H     | 304 | CDL   | CA2-C1-CB2-OB2  |
| 10  | F     | 103 | MW9   | C7-C8-C9-C10    |
| 11  | L     | 306 | LMT   | C3-C4-C5-C6     |
| 8   | D     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | P     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | V     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | 1     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | K     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | G     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | A     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | M     | 402 | BCL   | C2-C1-O2A-CGA   |
| 10  | M     | 405 | MW9   | C4-C5-C6-C7     |
| 8   | v     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | Q     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | k     | 102 | BCL   | C6-C7-C8-C9     |
| 8   | J     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | B     | 101 | BCL   | C6-C7-C8-C9     |
| 14  | M     | 408 | BPH   | C14-C13-C15-C16 |
| 8   | P     | 102 | BCL   | C13-C15-C16-C17 |
| 8   | 1     | 101 | BCL   | C8-C10-C11-C12  |
| 8   | b     | 101 | BCL   | C15-C16-C17-C18 |
| 10  | D     | 103 | MW9   | C19-C20-O2-P    |
| 8   | L     | 304 | BCL   | C3-C5-C6-C7     |
| 8   | F     | 101 | BCL   | C8-C10-C11-C12  |
| 8   | s     | 103 | BCL   | CBA-CGA-O2A-C1  |
| 8   | r     | 101 | BCL   | C4C-C3C-CAC-CBC |
| 10  | H     | 303 | MW9   | C25-C24-O8-C19  |
| 8   | L     | 301 | BCL   | C16-C17-C18-C20 |
| 10  | H     | 303 | MW9   | C32-C33-C34-C35 |
| 15  | L     | 308 | CDL   | C32-C33-C34-C35 |
| 8   | J     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | v     | 101 | BCL   | C11-C12-C13-C15 |
| 8   | Q     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | 1     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | J     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | i     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | i     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | d     | 101 | BCL   | C6-C7-C8-C10    |
| 14  | M     | 408 | BPH   | C6-C7-C8-C10    |
| 8   | M     | 402 | BCL   | O1A-CGA-O2A-C1  |
| 8   | Q     | 101 | BCL   | C1-C2-C3-C4     |
| 9   | N     | 102 | A1EFU | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | G     | 106 | A1EFU | C5-C6-C7-C8     |
| 9   | f     | 101 | A1EFU | C13-C14-C15-C16 |
| 9   | f     | 101 | A1EFU | C19-C20-C21-C22 |
| 8   | J     | 101 | BCL   | C8-C10-C11-C12  |
| 8   | M     | 403 | BCL   | C5-C6-C7-C8     |
| 8   | s     | 102 | BCL   | C2A-CAA-CBA-CGA |
| 8   | K     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 9   | s     | 104 | A1EFU | C11-C10-C9-CM4  |
| 8   | a     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 10  | H     | 301 | MW9   | C26-C27-C28-C29 |
| 8   | G     | 102 | BCL   | CAD-CBD-CGD-O2D |
| 8   | F     | 101 | BCL   | CAD-CBD-CGD-O2D |
| 15  | L     | 308 | CDL   | CA6-CA4-OA6-CA5 |
| 15  | H     | 304 | CDL   | CA6-CA4-OA6-CA5 |
| 8   | V     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | J     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | i     | 101 | BCL   | C4-C3-C5-C6     |
| 9   | 2     | 101 | A1EFU | CM7-C22-C23-C24 |
| 10  | R     | 103 | MW9   | O1-C18-C19-C20  |
| 10  | G     | 104 | MW9   | O1-C18-C19-C20  |
| 15  | L     | 308 | CDL   | C1-CB2-OB2-PB2  |
| 15  | L     | 308 | CDL   | CB3-CB4-CB6-OB8 |
| 10  | G     | 103 | MW9   | O8-C19-C20-O2   |
| 8   | P     | 101 | BCL   | C5-C6-C7-C8     |
| 9   | p     | 101 | A1EFU | C14-C15-C16-C17 |
| 9   | s     | 104 | A1EFU | CM1-C1-C2-C3    |
| 9   | q     | 101 | A1EFU | CM2-C1-C2-C3    |
| 10  | H     | 303 | MW9   | O9-C24-O8-C19   |
| 8   | P     | 102 | BCL   | CHA-CBD-CGD-O1D |
| 8   | P     | 102 | BCL   | CHA-CBD-CGD-O2D |
| 8   | i     | 101 | BCL   | CHA-CBD-CGD-O1D |
| 8   | i     | 101 | BCL   | CHA-CBD-CGD-O2D |
| 8   | G     | 101 | BCL   | CHA-CBD-CGD-O1D |
| 8   | G     | 101 | BCL   | CHA-CBD-CGD-O2D |
| 8   | F     | 101 | BCL   | CHA-CBD-CGD-O1D |
| 8   | F     | 102 | BCL   | CHA-CBD-CGD-O1D |
| 8   | F     | 102 | BCL   | CHA-CBD-CGD-O2D |
| 8   | E     | 101 | BCL   | CHA-CBD-CGD-O1D |
| 10  | L     | 307 | MW9   | C27-C28-C29-C30 |
| 9   | 2     | 102 | A1EFU | C11-C10-C9-C8   |
| 9   | f     | 101 | A1EFU | C4-C5-C6-C7     |
| 15  | L     | 308 | CDL   | OB6-CB4-CB6-OB8 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | R     | 102 | BCL   | C15-C16-C17-C18 |
| 8   | V     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 10  | F     | 103 | MW9   | O7-C22-C23-O6   |
| 8   | M     | 402 | BCL   | C3-C5-C6-C7     |
| 8   | B     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | N     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 8   | G     | 102 | BCL   | O1A-CGA-O2A-C1  |
| 8   | B     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | G     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | d     | 101 | BCL   | C6-C7-C8-C9     |
| 9   | J     | 102 | A1EFU | O1-C1-C2-O2     |
| 9   | A     | 102 | A1EFU | O1-C1-C2-O2     |
| 15  | H     | 304 | CDL   | C77-C78-C79-C80 |
| 8   | s     | 102 | BCL   | C1A-C2A-CAA-CBA |
| 8   | r     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | K     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | j     | 102 | BCL   | C1A-C2A-CAA-CBA |
| 8   | J     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | I     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | F     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | 2     | 103 | BCL   | C16-C17-C18-C19 |
| 9   | D     | 104 | A1EFU | C19-C20-C21-C22 |
| 10  | F     | 103 | MW9   | C21-O5-P-O2     |
| 15  | H     | 304 | CDL   | CA3-OA5-PA1-OA2 |
| 8   | 1     | 101 | BCL   | C4-C3-C5-C6     |
| 13  | L     | 303 | U10   | C15-C14-C16-C17 |
| 10  | G     | 104 | MW9   | C19-C20-O2-P    |
| 10  | F     | 103 | MW9   | C22-C21-O5-P    |
| 9   | P     | 103 | A1EFU | C25-C26-C27-C28 |
| 8   | 1     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 10  | R     | 103 | MW9   | C20-O2-P-O4     |
| 10  | G     | 103 | MW9   | C20-O2-P-O4     |
| 10  | D     | 103 | MW9   | C21-O5-P-O4     |
| 10  | M     | 406 | MW9   | C21-O5-P-O4     |
| 10  | H     | 301 | MW9   | C21-O5-P-O4     |
| 15  | L     | 308 | CDL   | CA2-OA2-PA1-OA4 |
| 15  | H     | 304 | CDL   | CA3-OA5-PA1-OA3 |
| 8   | r     | 101 | BCL   | C16-C17-C18-C20 |
| 10  | M     | 406 | MW9   | C18-C19-C20-O2  |
| 9   | G     | 106 | A1EFU | C26-C27-C28-C29 |
| 9   | v     | 102 | A1EFU | CM1-C1-C2-O2    |
| 9   | v     | 103 | A1EFU | CM1-C1-C2-O2    |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | s     | 105 | A1EFU | CM1-C1-C2-O2    |
| 8   | F     | 102 | BCL   | CAD-CBD-CGD-O1D |
| 8   | E     | 101 | BCL   | CAD-CBD-CGD-O1D |
| 9   | N     | 102 | A1EFU | C2-C3-C4-C5     |
| 9   | G     | 105 | A1EFU | C2-C3-C4-C5     |
| 15  | L     | 308 | CDL   | CA5-C11-C12-C13 |
| 8   | 2     | 103 | BCL   | C16-C17-C18-C20 |
| 8   | P     | 102 | BCL   | C11-C10-C8-C7   |
| 8   | r     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | q     | 102 | BCL   | C6-C7-C8-C10    |
| 8   | 2     | 103 | BCL   | C6-C7-C8-C10    |
| 8   | n     | 101 | BCL   | C6-C7-C8-C10    |
| 8   | n     | 101 | BCL   | C12-C13-C15-C16 |
| 8   | G     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | D     | 101 | BCL   | C11-C12-C13-C15 |
| 8   | b     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 8   | A     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | M     | 403 | BCL   | C2C-C3C-CAC-CBC |
| 9   | s     | 104 | A1EFU | C20-C21-C22-C23 |
| 9   | M     | 407 | A1EFU | C25-C26-C27-C28 |
| 15  | H     | 304 | CDL   | O1-C1-CB2-OB2   |
| 8   | G     | 102 | BCL   | C16-C17-C18-C20 |
| 10  | D     | 103 | MW9   | C37-C38-C39-C40 |
| 10  | G     | 103 | MW9   | O1-C18-C19-C20  |
| 10  | D     | 103 | MW9   | C2-C3-C4-C5     |
| 15  | L     | 308 | CDL   | CA3-CA4-CA6-OA8 |
| 15  | H     | 304 | CDL   | CA3-CA4-CA6-OA8 |
| 10  | G     | 104 | MW9   | O1-C18-C19-O8   |
| 10  | D     | 103 | MW9   | O1-C18-C19-O8   |
| 10  | M     | 405 | MW9   | O1-C18-C19-O8   |
| 15  | H     | 304 | CDL   | OA6-CA4-CA6-OA8 |
| 10  | F     | 103 | MW9   | C31-C32-C33-C34 |
| 8   | v     | 101 | BCL   | C13-C15-C16-C17 |
| 8   | j     | 102 | BCL   | C8-C10-C11-C12  |
| 9   | v     | 103 | A1EFU | CM7-C22-C23-C24 |
| 8   | P     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | s     | 103 | BCL   | C10-C11-C12-C13 |
| 8   | r     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | l     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | i     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | F     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | L     | 304 | BCL   | C14-C13-C15-C16 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 15  | H     | 304 | CDL   | C62-C63-C64-C65 |
| 8   | j     | 102 | BCL   | C1-C2-C3-C5     |
| 10  | R     | 103 | MW9   | O7-C22-C23-O6   |
| 15  | L     | 308 | CDL   | C56-C57-C58-C59 |
| 9   | v     | 102 | A1EFU | C5-C6-C7-C8     |
| 9   | s     | 104 | A1EFU | C15-C16-C17-C18 |
| 9   | 2     | 104 | A1EFU | CM2-C1-C2-C3    |
| 8   | q     | 102 | BCL   | O1A-CGA-O2A-C1  |
| 13  | L     | 303 | U10   | C20-C19-C21-C22 |
| 9   | I     | 102 | A1EFU | C25-C26-C27-C28 |
| 15  | L     | 308 | CDL   | C72-C73-C74-C75 |
| 8   | 2     | 103 | BCL   | CAA-CBA-CGA-O2A |
| 15  | H     | 304 | CDL   | C80-C81-C82-C83 |
| 8   | b     | 101 | BCL   | C2-C1-O2A-CGA   |
| 15  | H     | 304 | CDL   | C73-C74-C75-C76 |
| 10  | D     | 103 | MW9   | C30-C31-C32-C33 |
| 9   | f     | 101 | A1EFU | C9-C10-C11-C12  |
| 8   | S     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 10  | G     | 104 | MW9   | C12-C13-C14-C15 |
| 14  | L     | 302 | BPH   | C16-C17-C18-C20 |
| 9   | s     | 104 | A1EFU | CM1-C1-C2-O2    |
| 9   | q     | 101 | A1EFU | CM2-C1-C2-O2    |
| 9   | G     | 106 | A1EFU | CM2-C1-C2-O2    |
| 8   | V     | 101 | BCL   | C16-C17-C18-C20 |
| 8   | J     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 9   | R     | 101 | A1EFU | C26-C27-C28-C29 |
| 8   | P     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 10  | L     | 307 | MW9   | C20-O2-P-O5     |
| 10  | L     | 307 | MW9   | C21-O5-P-O2     |
| 15  | L     | 308 | CDL   | CB2-OB2-PB2-OB5 |
| 14  | L     | 302 | BPH   | CHA-CBD-CGD-O2D |
| 10  | F     | 103 | MW9   | C27-C28-C29-C30 |
| 8   | F     | 101 | BCL   | C11-C10-C8-C7   |
| 8   | a     | 101 | BCL   | C12-C13-C15-C16 |
| 13  | L     | 303 | U10   | C13-C14-C16-C17 |
| 8   | P     | 102 | BCL   | C11-C10-C8-C9   |
| 8   | q     | 102 | BCL   | C6-C7-C8-C9     |
| 8   | n     | 101 | BCL   | C6-C7-C8-C9     |
| 8   | n     | 101 | BCL   | C14-C13-C15-C16 |
| 8   | A     | 101 | BCL   | C11-C10-C8-C9   |
| 9   | J     | 103 | A1EFU | C13-C14-C15-C16 |
| 10  | G     | 103 | MW9   | C11-C12-C13-C14 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | Q     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 10  | H     | 301 | MW9   | C19-C20-O2-P    |
| 10  | F     | 103 | MW9   | C32-C33-C34-C35 |
| 10  | M     | 406 | MW9   | C32-C33-C34-C35 |
| 8   | D     | 101 | BCL   | C10-C11-C12-C13 |
| 13  | L     | 303 | U10   | C30-C29-C31-C32 |
| 8   | Q     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | F     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 10  | L     | 307 | MW9   | C32-C33-C34-C35 |
| 9   | R     | 101 | A1EFU | C19-C20-C21-C22 |
| 9   | q     | 101 | A1EFU | C5-C6-C7-C8     |
| 9   | 2     | 101 | A1EFU | C9-C10-C11-C12  |
| 9   | K     | 102 | A1EFU | C15-C16-C17-C18 |
| 9   | j     | 101 | A1EFU | C9-C10-C11-C12  |
| 9   | G     | 105 | A1EFU | C5-C6-C7-C8     |
| 9   | B     | 103 | A1EFU | C5-C6-C7-C8     |
| 9   | a     | 102 | A1EFU | C5-C6-C7-C8     |
| 15  | H     | 304 | CDL   | OA5-CA3-CA4-CA6 |
| 9   | p     | 101 | A1EFU | C22-C23-C24-C25 |
| 9   | N     | 102 | A1EFU | C22-C23-C24-C25 |
| 9   | B     | 103 | A1EFU | C18-C19-C20-C21 |
| 8   | t     | 101 | BCL   | C5-C6-C7-C8     |
| 9   | P     | 103 | A1EFU | CM1-C1-C2-C3    |
| 9   | v     | 102 | A1EFU | CM2-C1-C2-C3    |
| 9   | q     | 101 | A1EFU | C2-C3-C4-C5     |
| 9   | G     | 106 | A1EFU | CM2-C1-C2-C3    |
| 10  | M     | 406 | MW9   | C30-C31-C32-C33 |
| 8   | N     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | A     | 101 | BCL   | C5-C6-C7-C8     |
| 10  | H     | 301 | MW9   | C25-C26-C27-C28 |
| 8   | e     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | L     | 301 | BCL   | C2-C1-O2A-CGA   |
| 10  | M     | 406 | MW9   | C19-C20-O2-P    |
| 8   | M     | 403 | BCL   | C3A-C2A-CAA-CBA |
| 16  | C     | 402 | HEC   | CAA-CBA-CGA-O2A |
| 10  | H     | 301 | MW9   | C32-C33-C34-C35 |
| 8   | G     | 102 | BCL   | C4-C3-C5-C6     |
| 8   | D     | 101 | BCL   | C2-C3-C5-C6     |
| 11  | H     | 302 | LMT   | C3-C4-C5-C6     |
| 8   | v     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | D     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | v     | 101 | BCL   | C16-C17-C18-C20 |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 11  | L     | 306 | LMT   | C7-C8-C9-C10    |
| 8   | B     | 101 | BCL   | C15-C16-C17-C18 |
| 8   | q     | 102 | BCL   | C5-C6-C7-C8     |
| 9   | v     | 103 | A1EFU | CM5-C13-C14-C15 |
| 10  | F     | 103 | MW9   | C30-C31-C32-C33 |
| 8   | M     | 402 | BCL   | C2A-CAA-CBA-CGA |
| 10  | R     | 103 | MW9   | C34-C35-C36-C37 |
| 14  | L     | 302 | BPH   | O2A-C1-C2-C3    |
| 15  | L     | 308 | CDL   | CA7-C31-C32-C33 |
| 13  | M     | 404 | U10   | C44-C46-C47-C48 |
| 8   | K     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | P     | 102 | BCL   | C1A-C2A-CAA-CBA |
| 8   | S     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | k     | 102 | BCL   | C1A-C2A-CAA-CBA |
| 8   | e     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | M     | 403 | BCL   | C1A-C2A-CAA-CBA |
| 8   | S     | 101 | BCL   | C11-C12-C13-C15 |
| 8   | Q     | 101 | BCL   | C11-C12-C13-C15 |
| 8   | l     | 101 | BCL   | C11-C10-C8-C7   |
| 9   | G     | 106 | A1EFU | C15-C16-C17-C18 |
| 9   | E     | 103 | A1EFU | C5-C6-C7-C8     |
| 8   | s     | 102 | BCL   | C15-C16-C17-C18 |
| 15  | L     | 308 | CDL   | C53-C54-C55-C56 |
| 8   | B     | 101 | BCL   | C8-C10-C11-C12  |
| 8   | I     | 101 | BCL   | C3-C5-C6-C7     |
| 8   | d     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 8   | I     | 101 | BCL   | C8-C10-C11-C12  |
| 10  | H     | 303 | MW9   | O8-C19-C20-O2   |
| 15  | L     | 308 | CDL   | OA5-CA3-CA4-CA6 |
| 8   | P     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | K     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | B     | 101 | BCL   | C5-C6-C7-C8     |
| 9   | R     | 101 | A1EFU | C25-C26-C27-C28 |
| 10  | M     | 405 | MW9   | C25-C26-C27-C28 |
| 13  | M     | 404 | U10   | C5-C4-O4-C4M    |
| 9   | v     | 103 | A1EFU | C12-C13-C14-C15 |
| 15  | H     | 304 | CDL   | C43-C44-C45-C46 |
| 10  | M     | 405 | MW9   | C10-C11-C12-C13 |
| 10  | M     | 405 | MW9   | C27-C28-C29-C30 |
| 8   | F     | 102 | BCL   | C4-C3-C5-C6     |
| 8   | d     | 101 | BCL   | C2-C1-O2A-CGA   |
| 8   | a     | 101 | BCL   | C2-C1-O2A-CGA   |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | t     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | K     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | i     | 101 | BCL   | C2-C3-C5-C6     |
| 13  | L     | 303 | U10   | C28-C29-C31-C32 |
| 8   | Q     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 14  | L     | 302 | BPH   | C11-C12-C13-C14 |
| 10  | M     | 406 | MW9   | C3-C4-C5-C6     |
| 9   | P     | 103 | A1EFU | CM2-C1-C2-C3    |
| 9   | 2     | 102 | A1EFU | CM1-C1-C2-C3    |
| 9   | 2     | 104 | A1EFU | CM2-C1-C2-O2    |
| 15  | L     | 308 | CDL   | C34-C35-C36-C37 |
| 9   | B     | 103 | A1EFU | C13-C14-C15-C16 |
| 8   | N     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | G     | 101 | BCL   | C4-C3-C5-C6     |
| 9   | R     | 101 | A1EFU | CM8-C26-C27-C28 |
| 8   | t     | 101 | BCL   | C4C-C3C-CAC-CBC |
| 8   | K     | 101 | BCL   | C4C-C3C-CAC-CBC |
| 8   | j     | 102 | BCL   | C4C-C3C-CAC-CBC |
| 8   | M     | 402 | BCL   | C16-C17-C18-C20 |
| 8   | J     | 101 | BCL   | C2-C3-C5-C6     |
| 13  | L     | 303 | U10   | C18-C19-C21-C22 |
| 9   | s     | 101 | A1EFU | C14-C15-C16-C17 |
| 10  | G     | 103 | MW9   | C12-C13-C14-C15 |
| 10  | R     | 103 | MW9   | C32-C33-C34-C35 |
| 8   | Q     | 101 | BCL   | C2A-CAA-CBA-CGA |
| 16  | C     | 403 | HEC   | CAD-CBD-CGD-O1D |
| 8   | e     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | I     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 8   | F     | 101 | BCL   | C4-C3-C5-C6     |
| 9   | G     | 106 | A1EFU | CM7-C22-C23-C24 |
| 9   | K     | 102 | A1EFU | C22-C23-C24-C25 |
| 13  | M     | 404 | U10   | C24-C26-C27-C28 |
| 8   | N     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | F     | 102 | BCL   | C2-C3-C5-C6     |
| 8   | b     | 101 | BCL   | C6-C7-C8-C10    |
| 9   | s     | 105 | A1EFU | C21-C22-C23-C24 |
| 14  | M     | 408 | BPH   | C12-C13-C15-C16 |
| 8   | s     | 102 | BCL   | C5-C6-C7-C8     |
| 8   | M     | 403 | BCL   | C8-C10-C11-C12  |
| 10  | M     | 405 | MW9   | C32-C33-C34-C35 |
| 8   | P     | 101 | BCL   | C1-C2-C3-C4     |
| 8   | t     | 101 | BCL   | C1-C2-C3-C4     |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | 2     | 103 | BCL   | C1-C2-C3-C4     |
| 8   | k     | 102 | BCL   | C1-C2-C3-C4     |
| 9   | q     | 101 | A1EFU | C19-C20-C21-C22 |
| 9   | E     | 103 | A1EFU | C19-C20-C21-C22 |
| 10  | M     | 405 | MW9   | C36-C37-C38-C39 |
| 8   | a     | 101 | BCL   | C5-C6-C7-C8     |
| 8   | r     | 101 | BCL   | C16-C17-C18-C19 |
| 8   | I     | 101 | BCL   | CBA-CGA-O2A-C1  |
| 8   | j     | 102 | BCL   | CAA-CBA-CGA-O2A |
| 8   | t     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | s     | 102 | BCL   | C4-C3-C5-C6     |
| 8   | r     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | n     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | e     | 101 | BCL   | C4-C3-C5-C6     |
| 8   | l     | 101 | BCL   | C2-C3-C5-C6     |
| 9   | v     | 102 | A1EFU | C21-C22-C23-C24 |
| 11  | L     | 305 | LMT   | C1-C2-C3-C4     |
| 8   | S     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | Q     | 101 | BCL   | C11-C12-C13-C14 |
| 8   | l     | 101 | BCL   | C11-C10-C8-C9   |
| 8   | k     | 102 | BCL   | C3A-C2A-CAA-CBA |
| 8   | J     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | I     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | e     | 101 | BCL   | C3A-C2A-CAA-CBA |
| 8   | P     | 101 | BCL   | O1A-CGA-O2A-C1  |
| 8   | J     | 101 | BCL   | CAD-CBD-CGD-O2D |
| 8   | i     | 101 | BCL   | CAD-CBD-CGD-O2D |
| 8   | I     | 101 | BCL   | CAD-CBD-CGD-O2D |
| 9   | q     | 101 | A1EFU | C20-C21-C22-CM7 |
| 8   | i     | 101 | BCL   | C8-C10-C11-C12  |
| 8   | a     | 101 | BCL   | C13-C15-C16-C17 |
| 8   | j     | 102 | BCL   | C10-C11-C12-C13 |
| 16  | C     | 402 | HEC   | CAA-CBA-CGA-O1A |
| 8   | G     | 102 | BCL   | C8-C10-C11-C12  |
| 8   | k     | 102 | BCL   | C4-C3-C5-C6     |
| 8   | k     | 102 | BCL   | C8-C10-C11-C12  |
| 8   | V     | 101 | BCL   | C2-C3-C5-C6     |
| 8   | G     | 102 | BCL   | C2-C3-C5-C6     |
| 10  | R     | 103 | MW9   | C36-C37-C38-C39 |
| 10  | G     | 103 | MW9   | C32-C33-C34-C35 |
| 10  | M     | 405 | MW9   | C6-C7-C8-C9     |
| 16  | C     | 402 | HEC   | CAD-CBD-CGD-O1D |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 10  | M     | 405 | MW9   | O8-C24-C25-C26  |
| 8   | G     | 101 | BCL   | O2A-C1-C2-C3    |
| 10  | M     | 405 | MW9   | C34-C35-C36-C37 |
| 9   | P     | 103 | A1EFU | CM1-C1-C2-O2    |
| 9   | v     | 102 | A1EFU | CM2-C1-C2-O2    |
| 9   | v     | 103 | A1EFU | CM2-C1-C2-O2    |
| 9   | s     | 104 | A1EFU | CM2-C1-C2-O2    |
| 9   | s     | 105 | A1EFU | CM2-C1-C2-O2    |
| 9   | 2     | 102 | A1EFU | CM1-C1-C2-O2    |
| 9   | G     | 105 | A1EFU | CM2-C1-C2-O2    |
| 9   | G     | 106 | A1EFU | CM1-C1-C2-O2    |
| 9   | F     | 104 | A1EFU | CM2-C1-C2-O2    |
| 16  | C     | 403 | HEC   | CAD-CBD-CGD-O2D |
| 9   | 2     | 104 | A1EFU | CM1-C1-C2-C3    |
| 9   | G     | 105 | A1EFU | CM2-C1-C2-C3    |
| 9   | G     | 106 | A1EFU | CM1-C1-C2-C3    |
| 10  | D     | 103 | MW9   | C32-C33-C34-C35 |
| 8   | Q     | 101 | BCL   | CHA-CBD-CGD-O1D |
| 8   | Q     | 101 | BCL   | CHA-CBD-CGD-O2D |
| 8   | 2     | 103 | BCL   | CHA-CBD-CGD-O1D |
| 8   | 2     | 103 | BCL   | CHA-CBD-CGD-O2D |
| 8   | F     | 101 | BCL   | CHA-CBD-CGD-O2D |
| 8   | E     | 101 | BCL   | CHA-CBD-CGD-O2D |
| 8   | L     | 304 | BCL   | CHA-CBD-CGD-O1D |
| 9   | j     | 103 | A1EFU | C15-C16-C17-C18 |
| 10  | L     | 307 | MW9   | C11-C12-C13-C14 |
| 11  | L     | 306 | LMT   | C6-C7-C8-C9     |
| 10  | H     | 303 | MW9   | C18-C19-C20-O2  |
| 16  | C     | 401 | HEC   | CAA-CBA-CGA-O1A |
| 8   | F     | 101 | BCL   | CAA-CBA-CGA-O2A |
| 15  | H     | 304 | CDL   | C57-C58-C59-C60 |
| 8   | v     | 101 | BCL   | CAA-CBA-CGA-O2A |
| 8   | s     | 103 | BCL   | CAA-CBA-CGA-O2A |
| 9   | F     | 104 | A1EFU | C2-C1-O1-CMA    |
| 15  | H     | 304 | CDL   | C71-CB7-OB8-CB6 |
| 10  | G     | 104 | MW9   | O8-C24-C25-C26  |
| 9   | T     | 101 | A1EFU | C21-C22-C23-C24 |
| 14  | L     | 302 | BPH   | C2-C3-C5-C6     |
| 8   | s     | 103 | BCL   | C8-C10-C11-C12  |
| 8   | k     | 102 | BCL   | CAA-CBA-CGA-O2A |
| 8   | a     | 101 | BCL   | C14-C13-C15-C16 |
| 9   | a     | 102 | A1EFU | C9-C10-C11-C12  |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 9   | s     | 101 | A1EFU | O1-C1-C2-O2     |
| 15  | H     | 304 | CDL   | OB9-CB7-OB8-CB6 |
| 9   | D     | 104 | A1EFU | C27-C28-C29-C30 |
| 8   | F     | 101 | BCL   | CAA-CBA-CGA-O1A |
| 10  | M     | 406 | MW9   | C21-C22-C23-O6  |
| 8   | d     | 101 | BCL   | CAA-CBA-CGA-O1A |
| 10  | M     | 406 | MW9   | C2-C3-C4-C5     |
| 8   | D     | 101 | BCL   | C1A-C2A-CAA-CBA |
| 8   | v     | 101 | BCL   | CAA-CBA-CGA-O1A |
| 11  | L     | 306 | LMT   | C4-C5-C6-C7     |
| 8   | M     | 403 | BCL   | CAA-CBA-CGA-O1A |
| 10  | F     | 103 | MW9   | O8-C24-C25-C26  |
| 8   | a     | 101 | BCL   | C4-C3-C5-C6     |
| 10  | H     | 301 | MW9   | O8-C24-C25-C26  |
| 8   | F     | 102 | BCL   | C5-C6-C7-C8     |
| 10  | F     | 103 | MW9   | C26-C27-C28-C29 |
| 10  | G     | 103 | MW9   | C21-O5-P-O4     |
| 10  | L     | 307 | MW9   | C20-O2-P-O4     |
| 13  | M     | 404 | U10   | C6-C7-C8-C9     |
| 15  | L     | 308 | CDL   | CB2-OB2-PB2-OB3 |
| 8   | P     | 101 | BCL   | C16-C17-C18-C20 |
| 8   | M     | 403 | BCL   | CAA-CBA-CGA-O2A |
| 9   | K     | 102 | A1EFU | C26-C27-C28-C29 |
| 8   | M     | 403 | BCL   | C15-C16-C17-C18 |
| 9   | 2     | 104 | A1EFU | CM1-C1-C2-O2    |
| 8   | Q     | 101 | BCL   | C5-C6-C7-C8     |
| 10  | M     | 405 | MW9   | O9-C24-C25-C26  |
| 16  | C     | 402 | HEC   | CAD-CBD-CGD-O2D |
| 8   | P     | 102 | BCL   | C5-C6-C7-C8     |
| 9   | r     | 102 | A1EFU | CM8-C26-C27-C28 |
| 9   | B     | 102 | A1EFU | C21-C22-C23-C24 |
| 8   | t     | 101 | BCL   | CAD-CBD-CGD-O1D |
| 9   | v     | 103 | A1EFU | CM2-C1-C2-C3    |
| 9   | s     | 104 | A1EFU | CM2-C1-C2-C3    |
| 9   | s     | 105 | A1EFU | CM2-C1-C2-C3    |
| 9   | F     | 104 | A1EFU | CM2-C1-C2-C3    |
| 8   | J     | 101 | BCL   | C11-C10-C8-C9   |
| 10  | F     | 103 | MW9   | C15-C16-C17-O1  |
| 10  | G     | 103 | MW9   | C29-C30-C31-C32 |
| 9   | k     | 101 | A1EFU | C23-C24-C25-C26 |
| 9   | F     | 104 | A1EFU | C27-C28-C29-C30 |
| 8   | R     | 102 | BCL   | C8-C10-C11-C12  |

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| Mol | Chain | Res | Type  | Atoms           |
|-----|-------|-----|-------|-----------------|
| 8   | d     | 101 | BCL   | C13-C15-C16-C17 |
| 14  | L     | 302 | BPH   | C4-C3-C5-C6     |
| 8   | n     | 101 | BCL   | C2C-C3C-CAC-CBC |
| 9   | r     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | B     | 102 | A1EFU | C20-C21-C22-C23 |
| 9   | A     | 102 | A1EFU | C20-C21-C22-C23 |
| 10  | R     | 103 | MW9   | O8-C24-C25-C26  |
| 10  | M     | 406 | MW9   | O8-C24-C25-C26  |
| 8   | q     | 102 | BCL   | CAA-CBA-CGA-O1A |
| 10  | F     | 103 | MW9   | O9-C24-C25-C26  |
| 16  | C     | 401 | HEC   | CAD-CBD-CGD-O1D |
| 9   | P     | 103 | A1EFU | C19-C20-C21-C22 |
| 9   | p     | 101 | A1EFU | C19-C20-C21-C22 |
| 9   | N     | 102 | A1EFU | C5-C6-C7-C8     |
| 9   | k     | 101 | A1EFU | C9-C10-C11-C12  |
| 9   | G     | 106 | A1EFU | C9-C10-C11-C12  |
| 8   | b     | 101 | BCL   | C16-C17-C18-C20 |
| 10  | R     | 103 | MW9   | O9-C24-C25-C26  |
| 10  | G     | 104 | MW9   | O9-C24-C25-C26  |
| 10  | F     | 103 | MW9   | C15-C16-C17-O   |
| 10  | H     | 301 | MW9   | O9-C24-C25-C26  |
| 8   | d     | 101 | BCL   | CAA-CBA-CGA-O2A |

There are no ring outliers.

46 monomers are involved in 134 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 8   | R     | 102 | BCL  | 6       | 0            |
| 13  | L     | 303 | U10  | 5       | 0            |
| 8   | t     | 101 | BCL  | 9       | 0            |
| 8   | P     | 102 | BCL  | 2       | 0            |
| 8   | K     | 101 | BCL  | 2       | 0            |
| 8   | s     | 102 | BCL  | 7       | 0            |
| 8   | q     | 102 | BCL  | 2       | 0            |
| 8   | 2     | 103 | BCL  | 4       | 0            |
| 8   | s     | 103 | BCL  | 2       | 0            |
| 8   | e     | 101 | BCL  | 4       | 0            |
| 8   | E     | 101 | BCL  | 2       | 0            |
| 8   | L     | 301 | BCL  | 3       | 0            |
| 8   | G     | 101 | BCL  | 2       | 0            |
| 14  | M     | 408 | BPH  | 2       | 0            |
| 11  | D     | 102 | LMT  | 1       | 0            |

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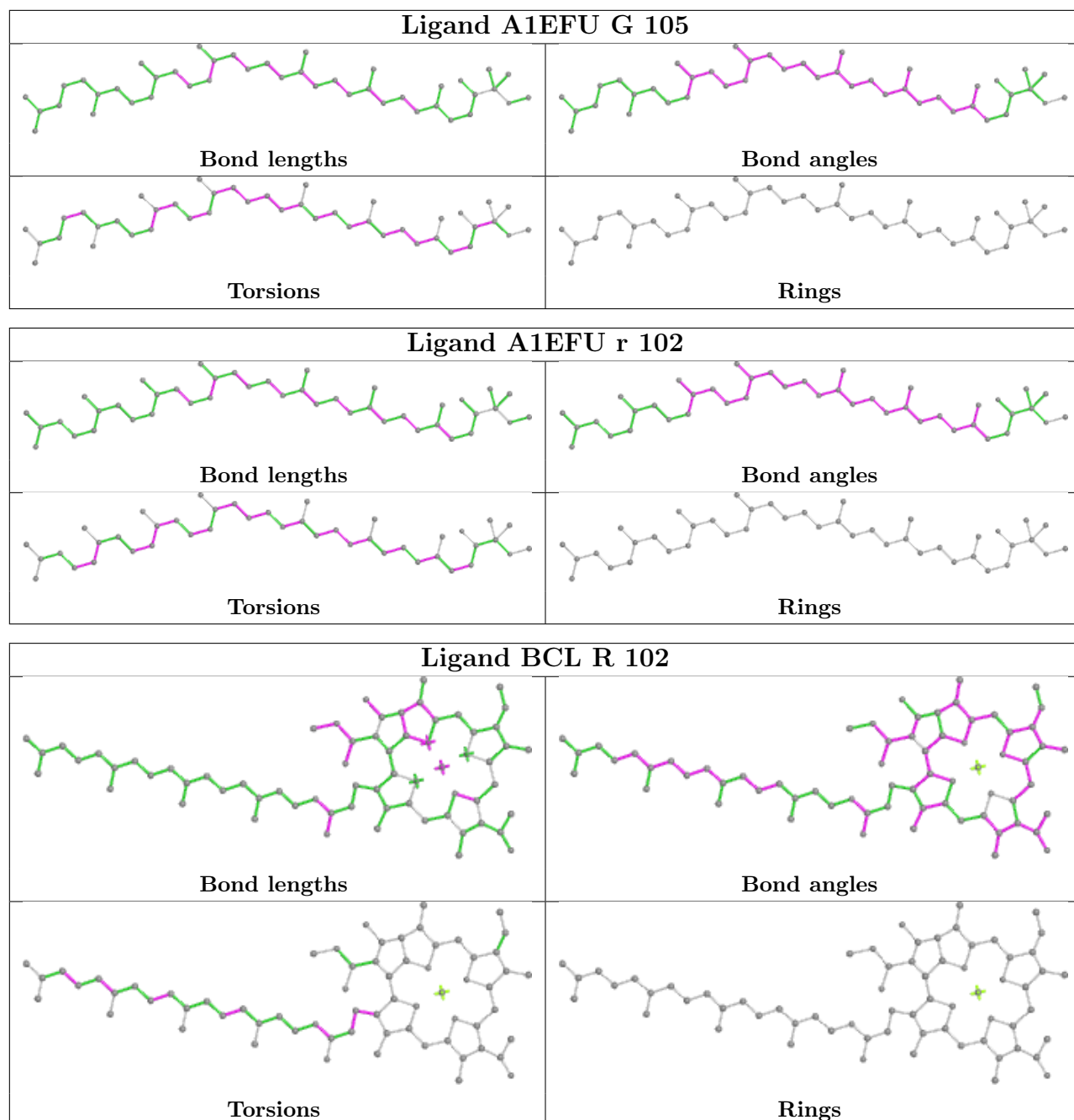
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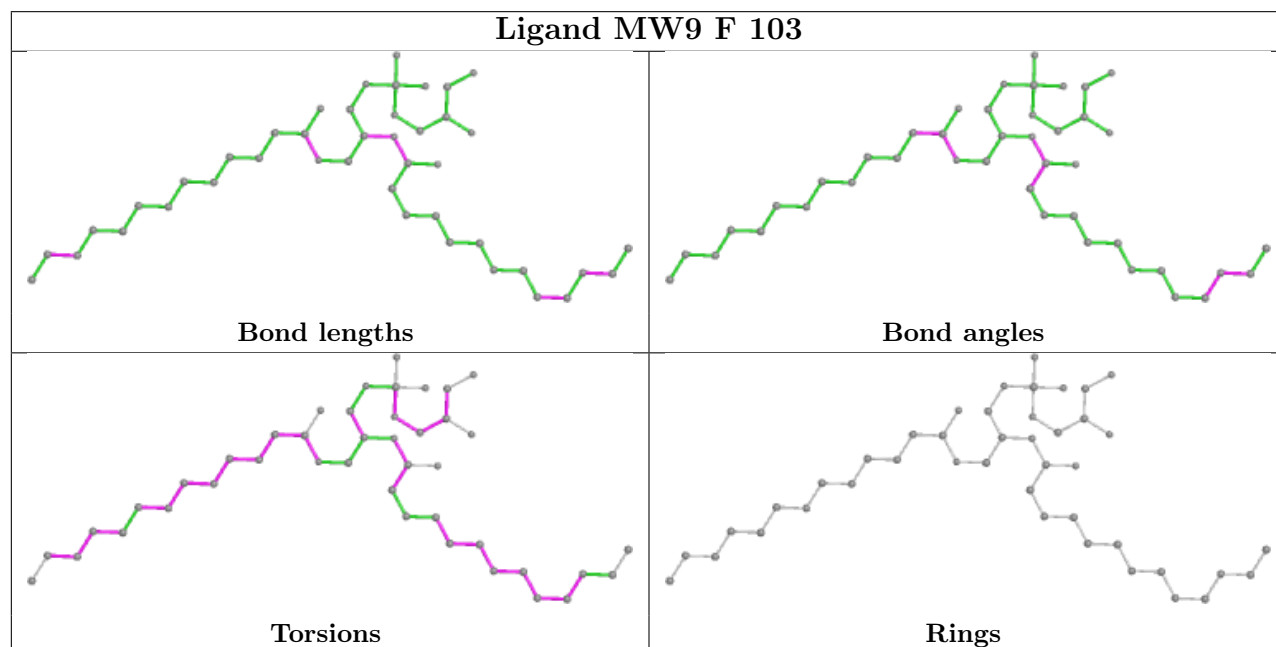
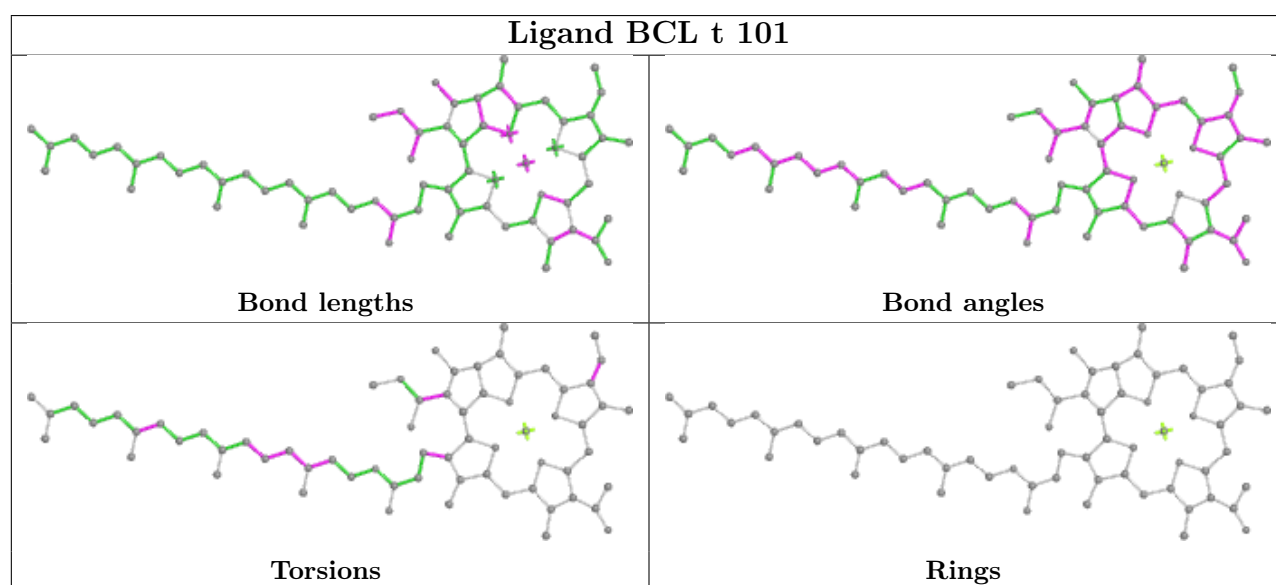
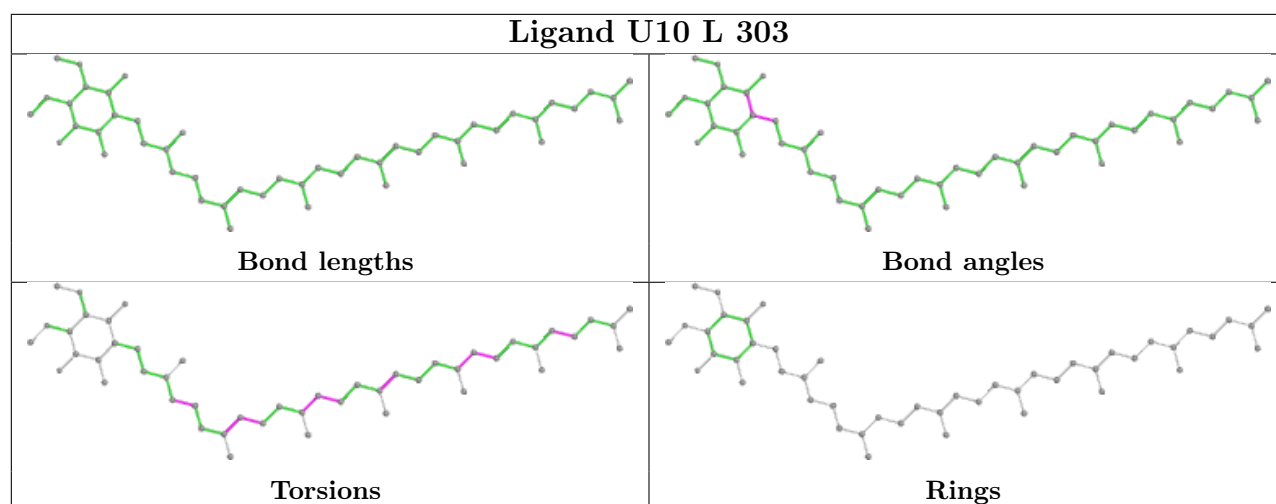
| Mol | Chain | Res | Type  | Clashes | Symm-Clashes |
|-----|-------|-----|-------|---------|--------------|
| 8   | i     | 101 | BCL   | 2       | 0            |
| 8   | G     | 102 | BCL   | 2       | 0            |
| 8   | I     | 101 | BCL   | 1       | 0            |
| 8   | B     | 101 | BCL   | 4       | 0            |
| 8   | L     | 304 | BCL   | 6       | 0            |
| 10  | R     | 103 | MW9   | 1       | 0            |
| 8   | a     | 101 | BCL   | 2       | 0            |
| 8   | F     | 101 | BCL   | 4       | 0            |
| 13  | M     | 404 | U10   | 7       | 0            |
| 8   | r     | 101 | BCL   | 4       | 0            |
| 8   | D     | 101 | BCL   | 2       | 0            |
| 8   | v     | 101 | BCL   | 5       | 0            |
| 8   | Q     | 101 | BCL   | 1       | 0            |
| 15  | H     | 304 | CDL   | 3       | 0            |
| 8   | M     | 402 | BCL   | 3       | 0            |
| 11  | C     | 404 | LMT   | 2       | 0            |
| 16  | C     | 401 | HEC   | 5       | 0            |
| 8   | k     | 102 | BCL   | 1       | 0            |
| 8   | N     | 101 | BCL   | 2       | 0            |
| 15  | L     | 308 | CDL   | 1       | 0            |
| 8   | F     | 102 | BCL   | 1       | 0            |
| 8   | V     | 101 | BCL   | 3       | 0            |
| 8   | b     | 101 | BCL   | 2       | 0            |
| 11  | L     | 305 | LMT   | 1       | 0            |
| 8   | M     | 403 | BCL   | 3       | 0            |
| 8   | J     | 101 | BCL   | 3       | 0            |
| 8   | n     | 101 | BCL   | 3       | 0            |
| 9   | s     | 104 | A1EFU | 1       | 0            |
| 8   | d     | 101 | BCL   | 8       | 0            |
| 8   | j     | 102 | BCL   | 7       | 0            |
| 8   | A     | 101 | BCL   | 5       | 0            |

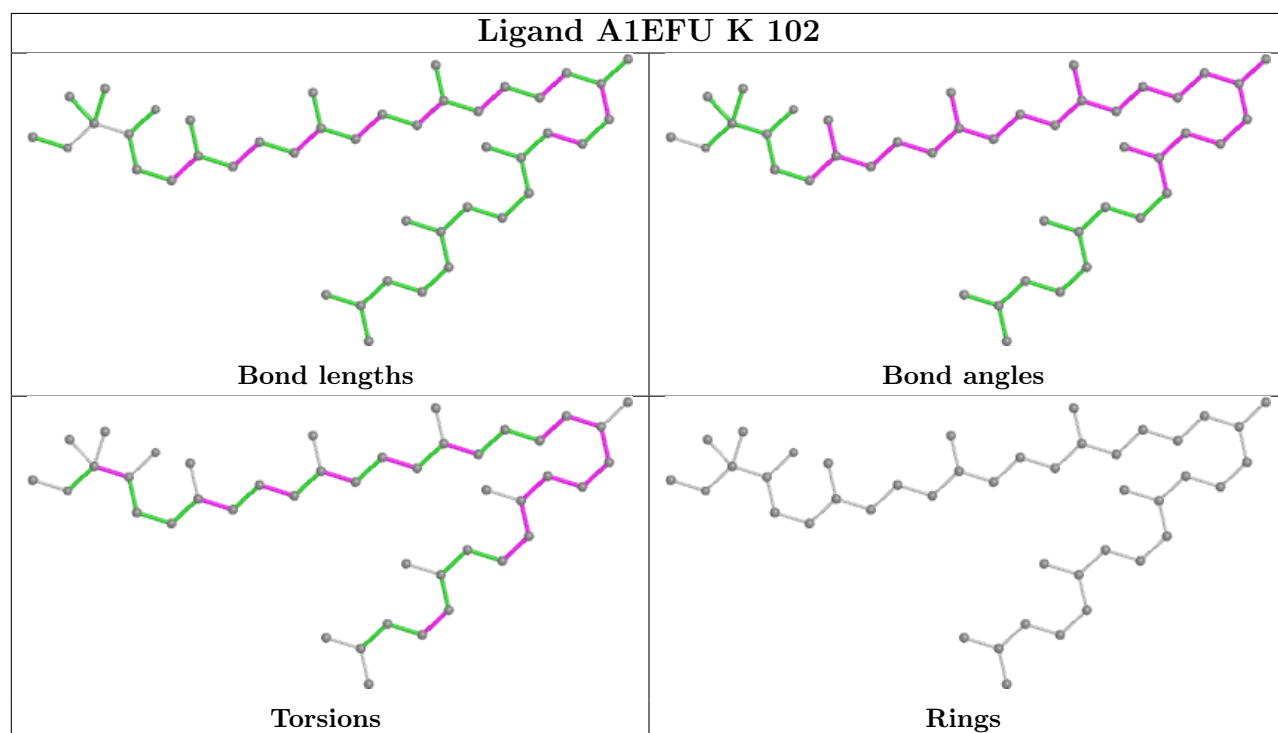
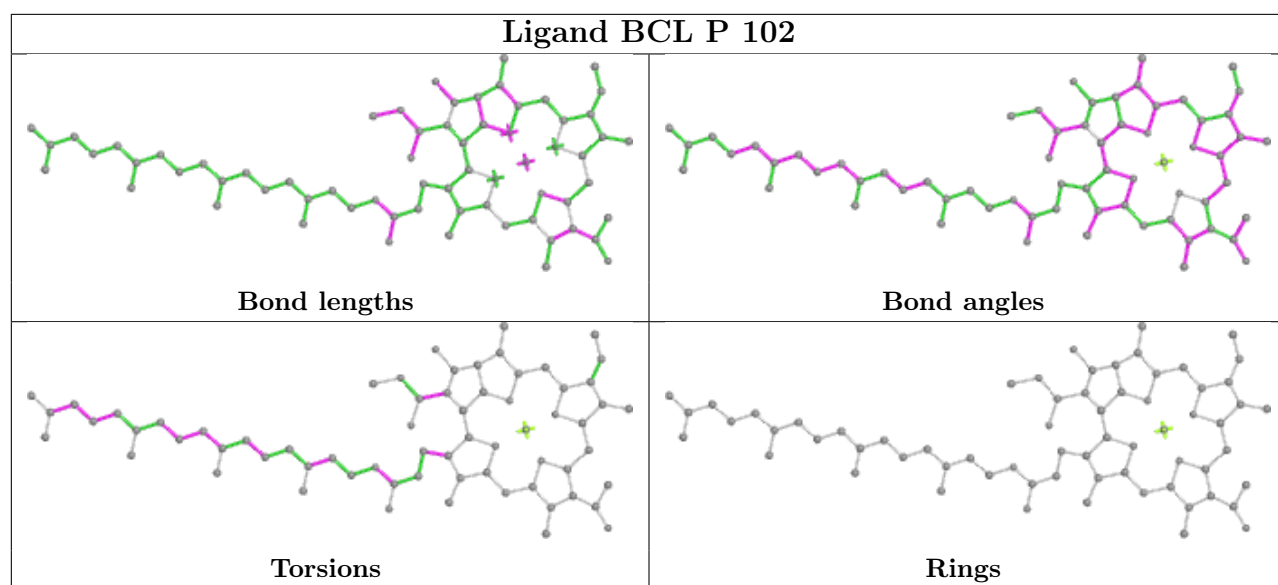
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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

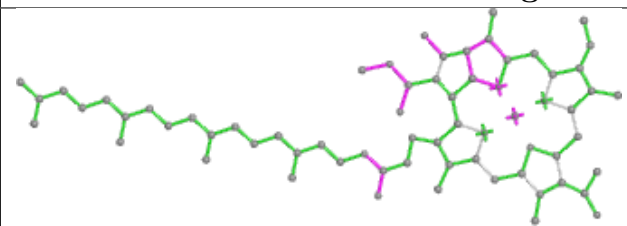
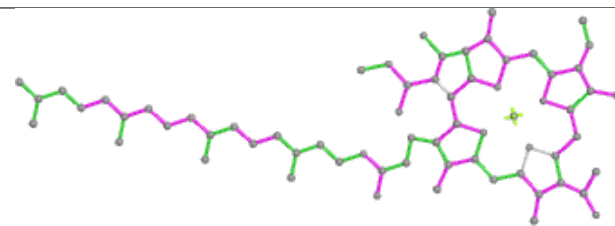
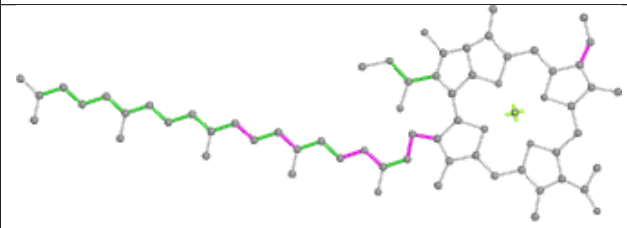
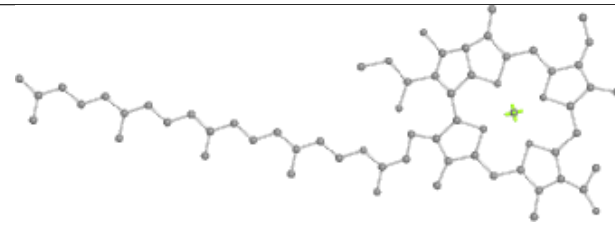


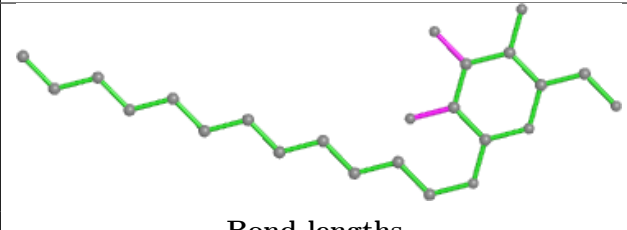
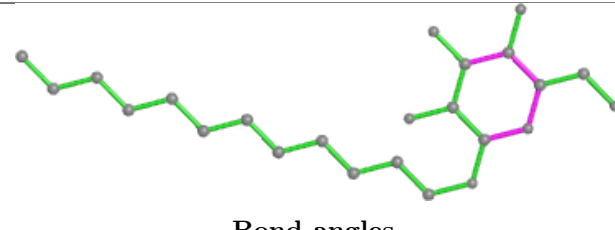
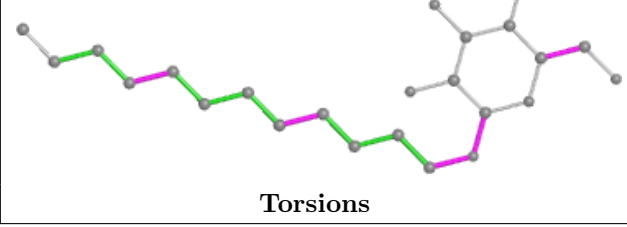
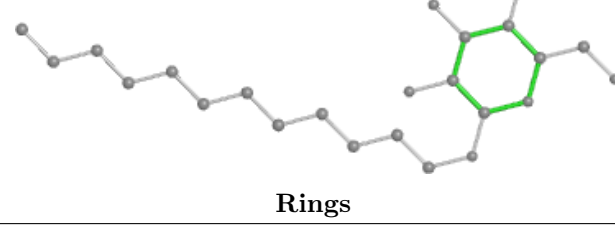
equivalents in the CSD to analyse the geometry.

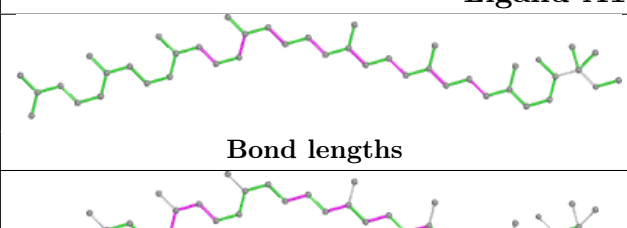
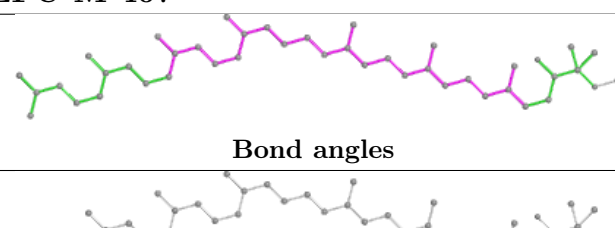




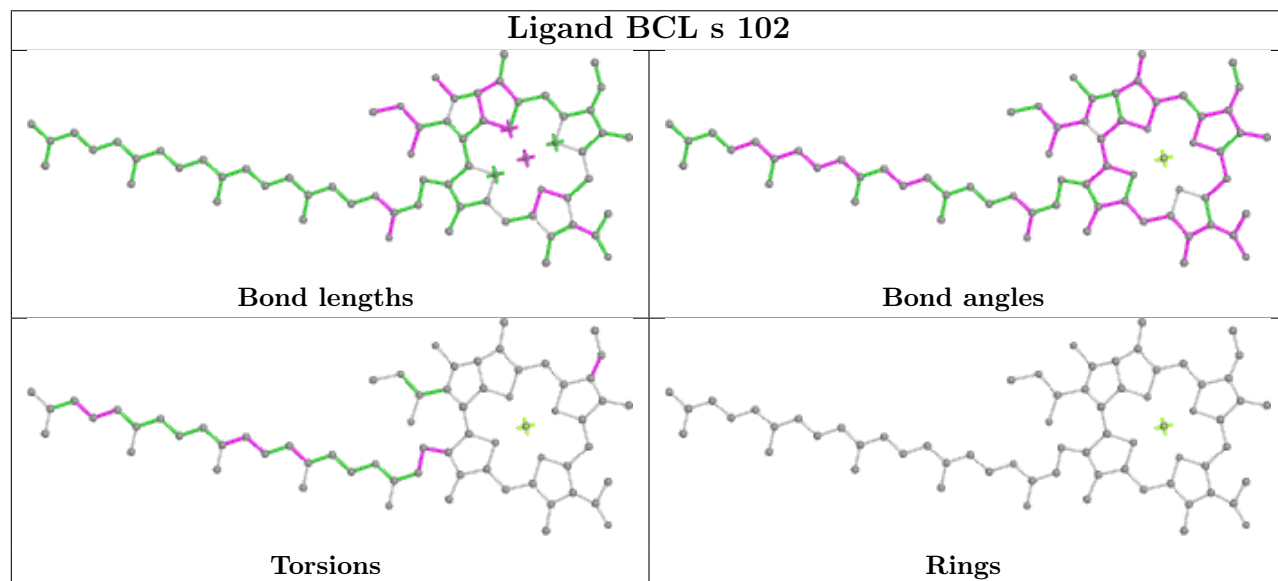
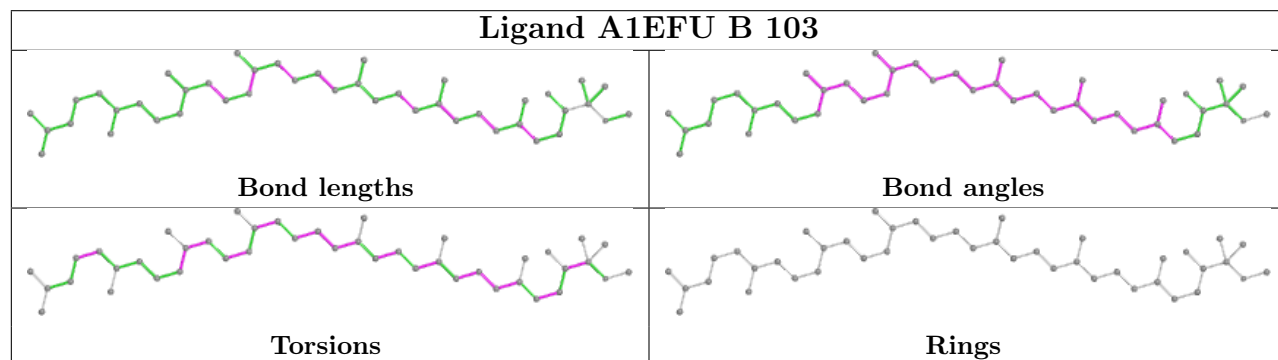
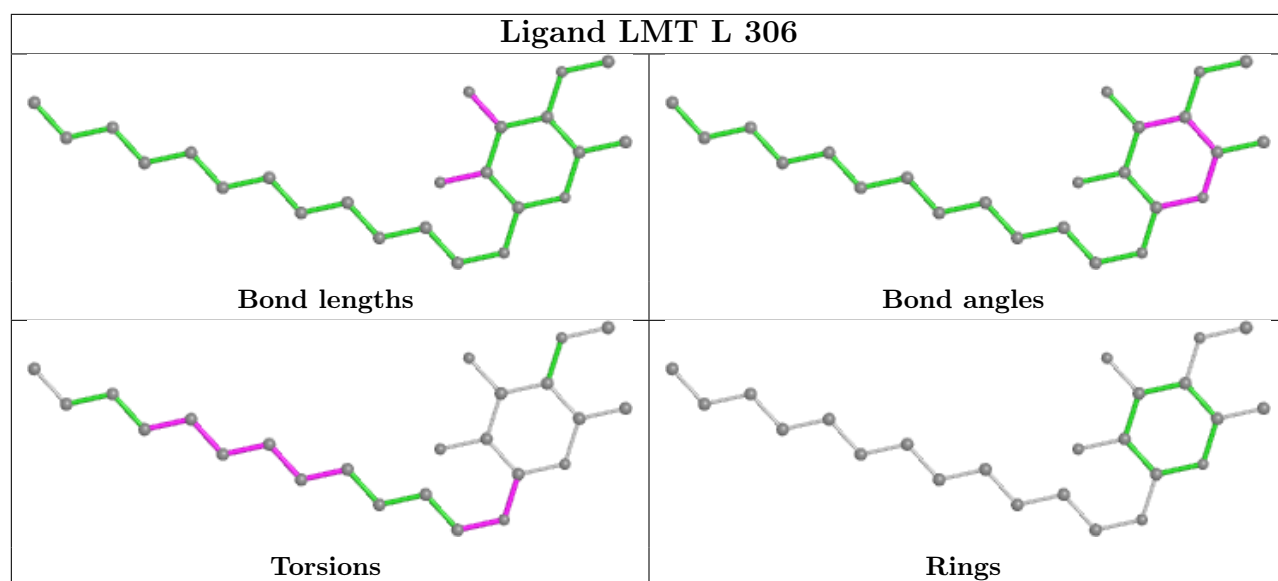


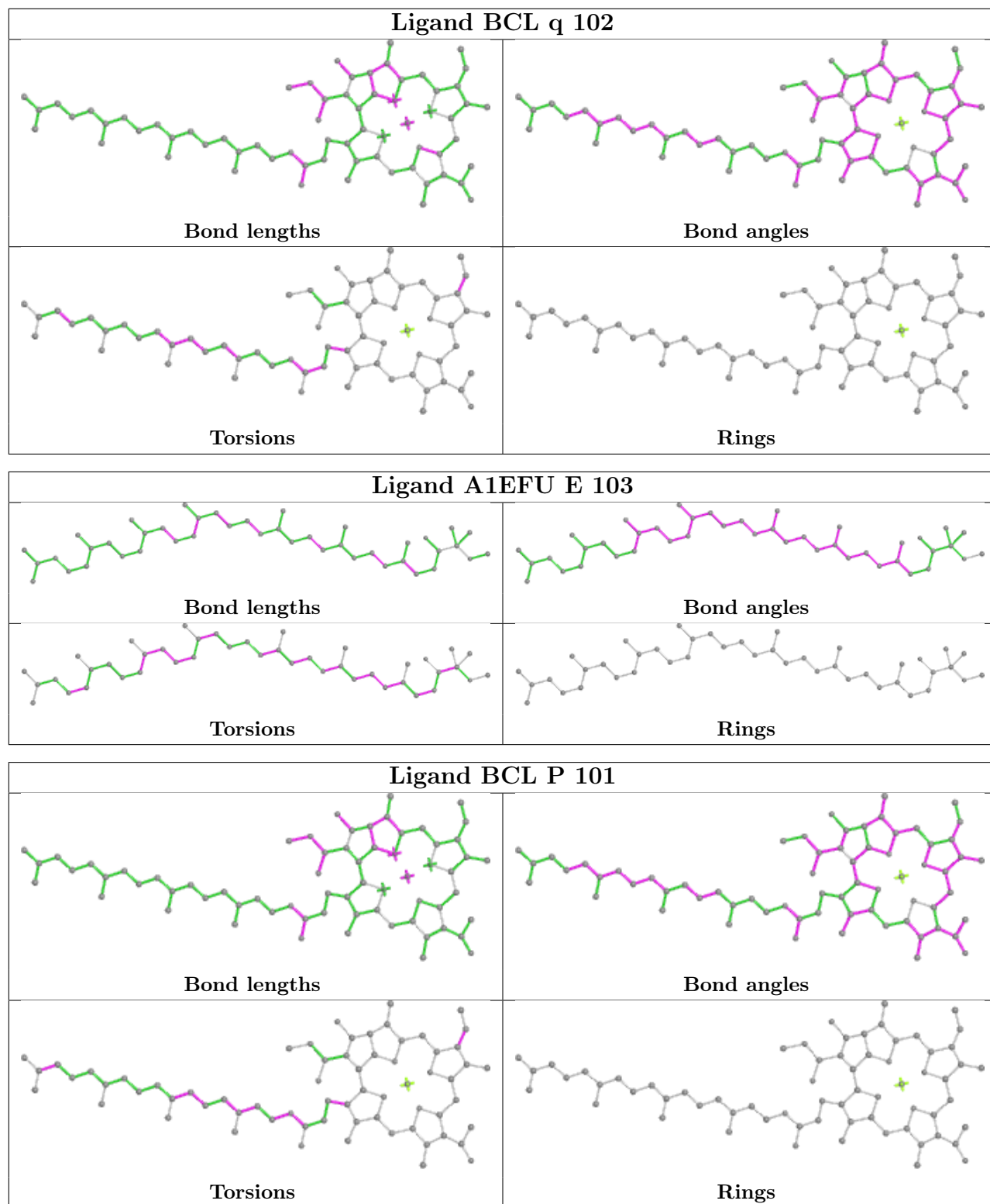


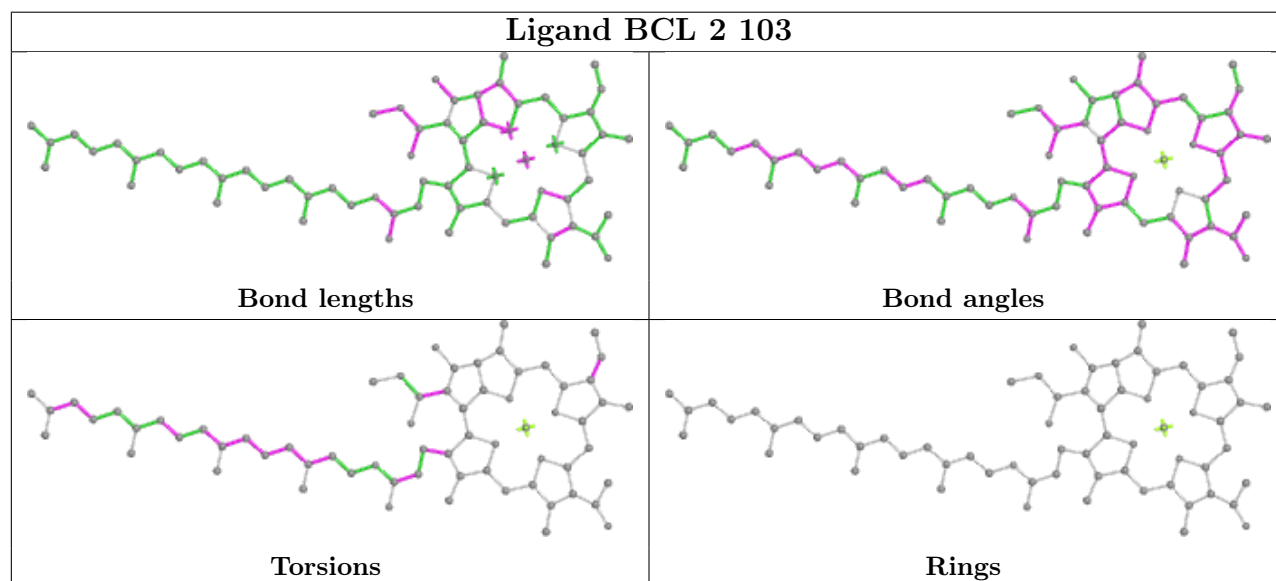
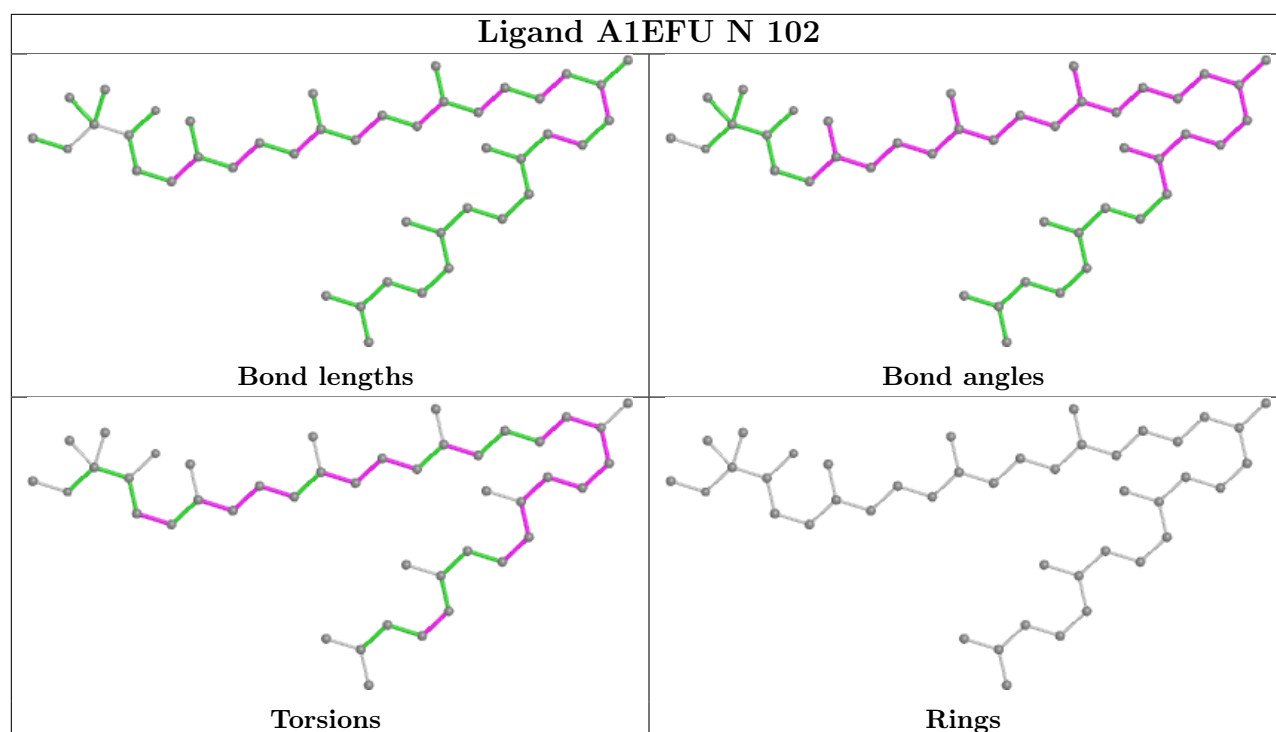
| Ligand BCL K 101  |  |
|---|--|
|  |  |
| Bond lengths  | Bond angles  |
|  |  |
| Torsions  | Rings  |

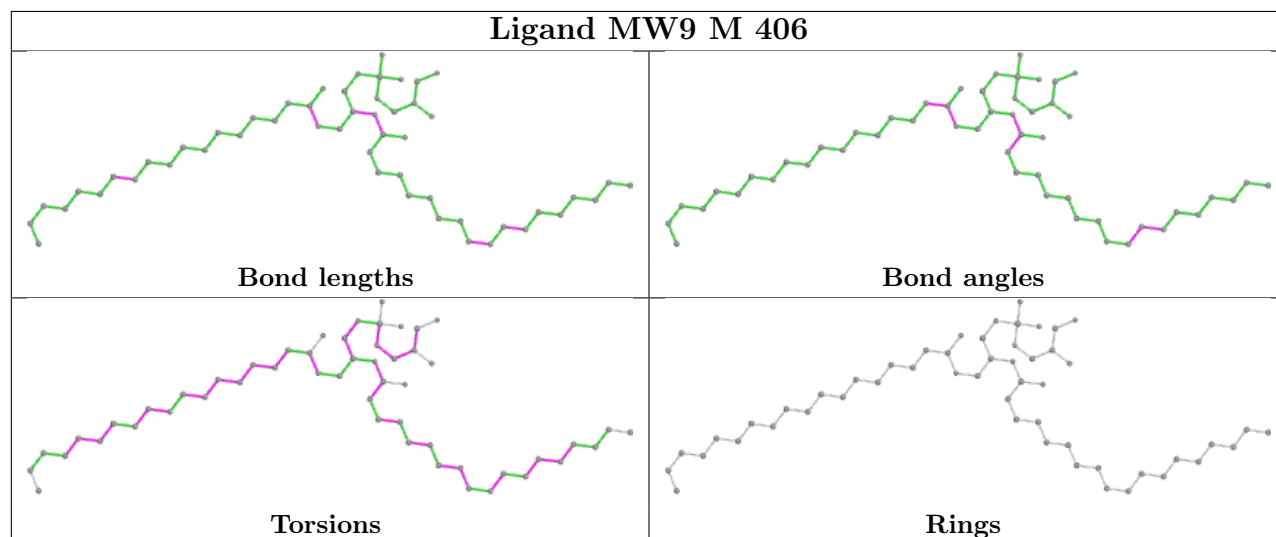
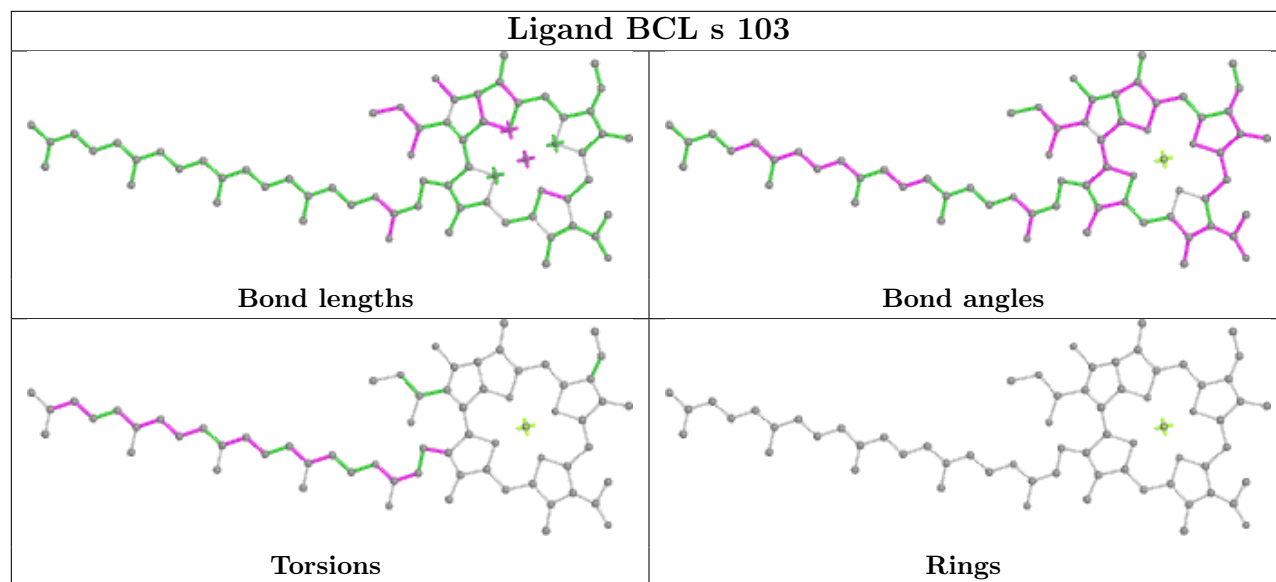
| Ligand LMT H 302  |  |
|---|--|
|   |   |
| Bond lengths  | Bond angles  |
|  |  |
| Torsions  | Rings  |

| Ligand A1EFU M 407  |  |
|---|--|
|  |  |
| Bond lengths  | Bond angles  |
|  |  |
| Torsions  | Rings  |

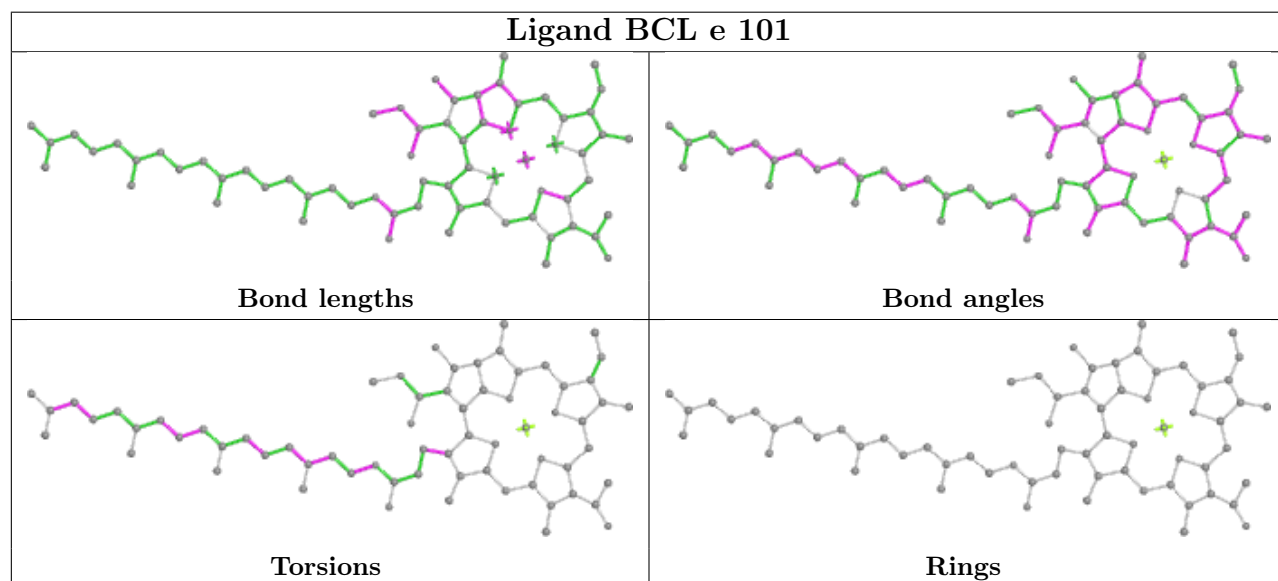
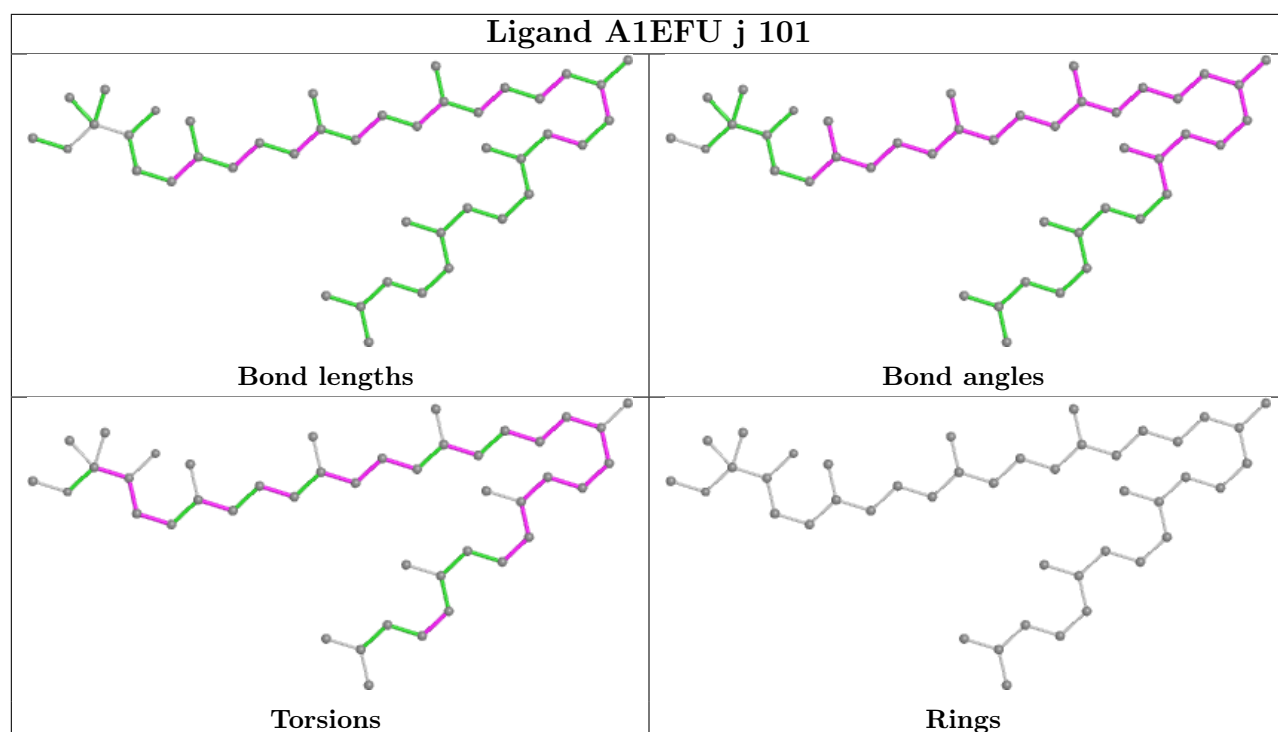


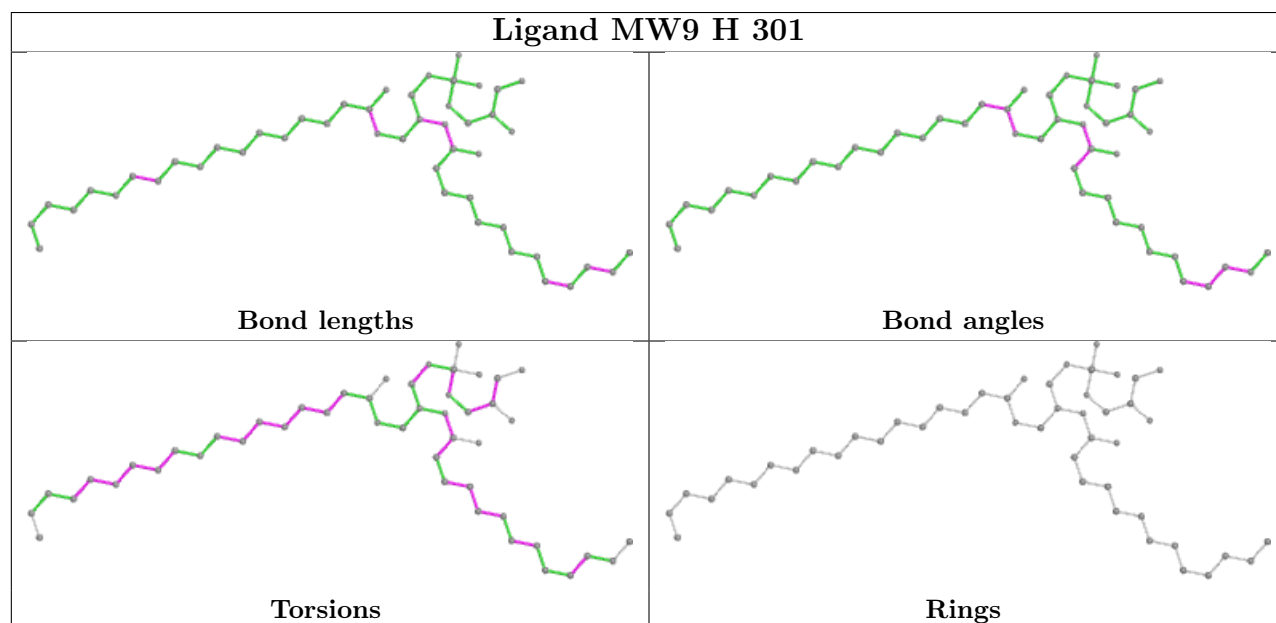
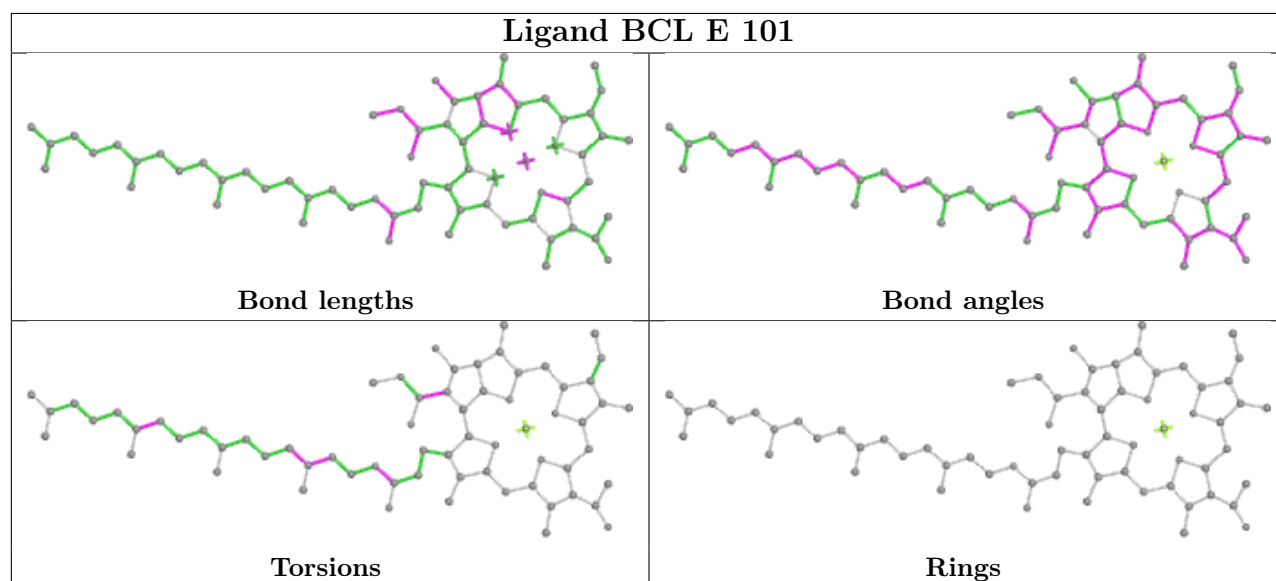
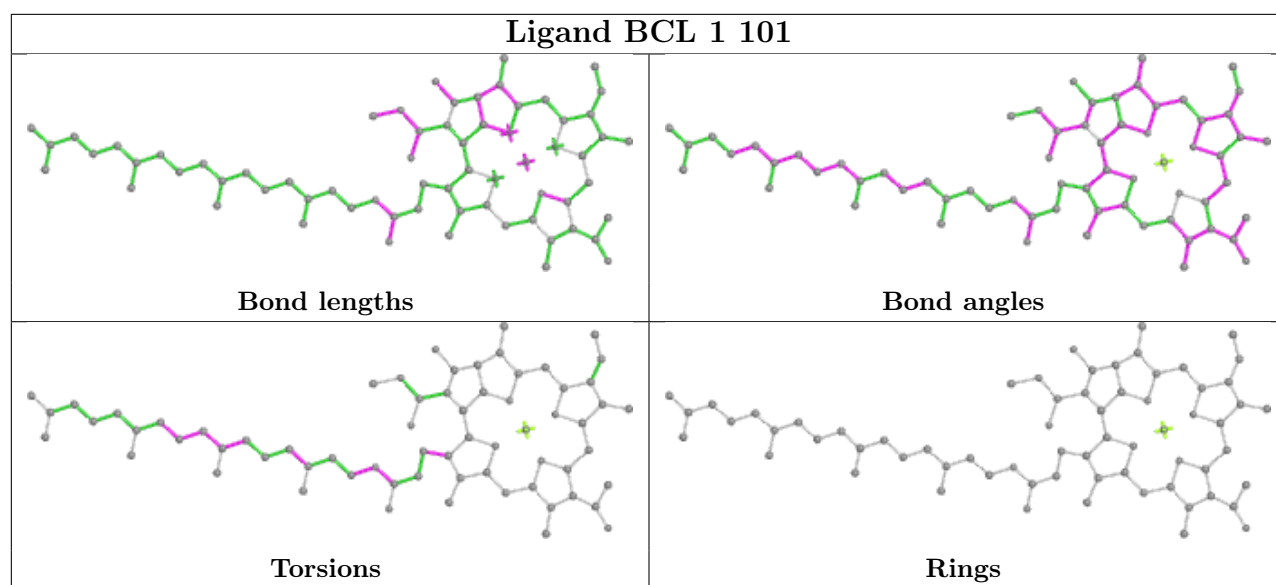


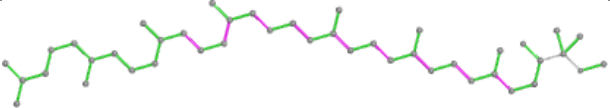
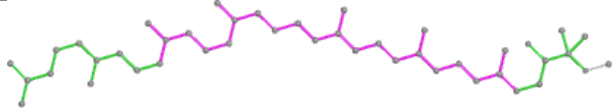
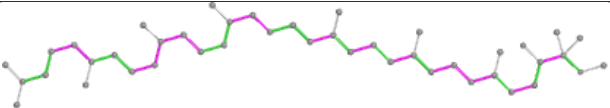
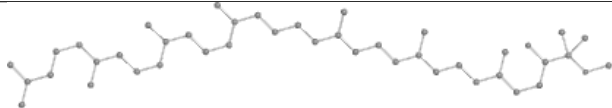
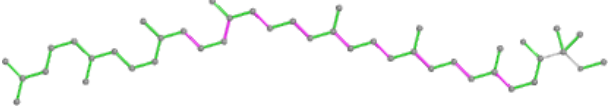
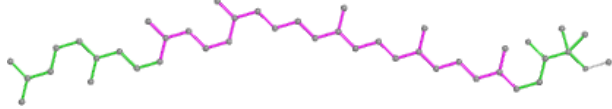
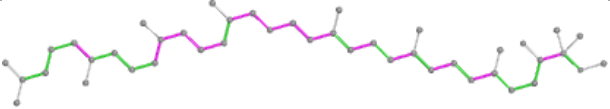
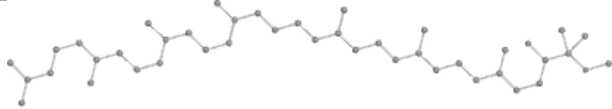
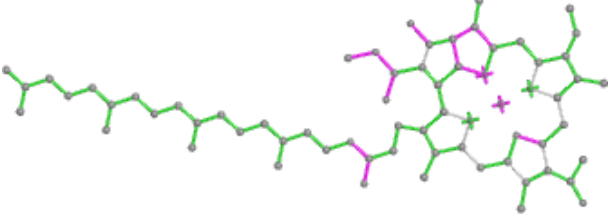
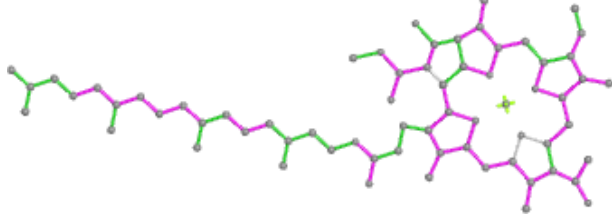
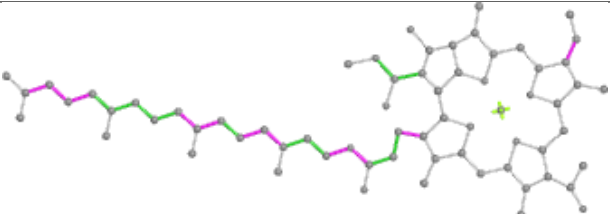
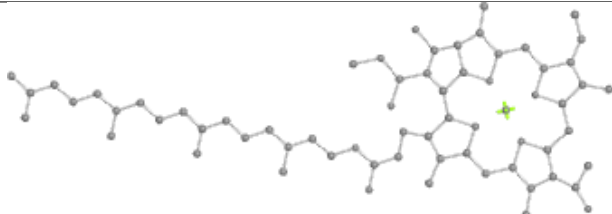


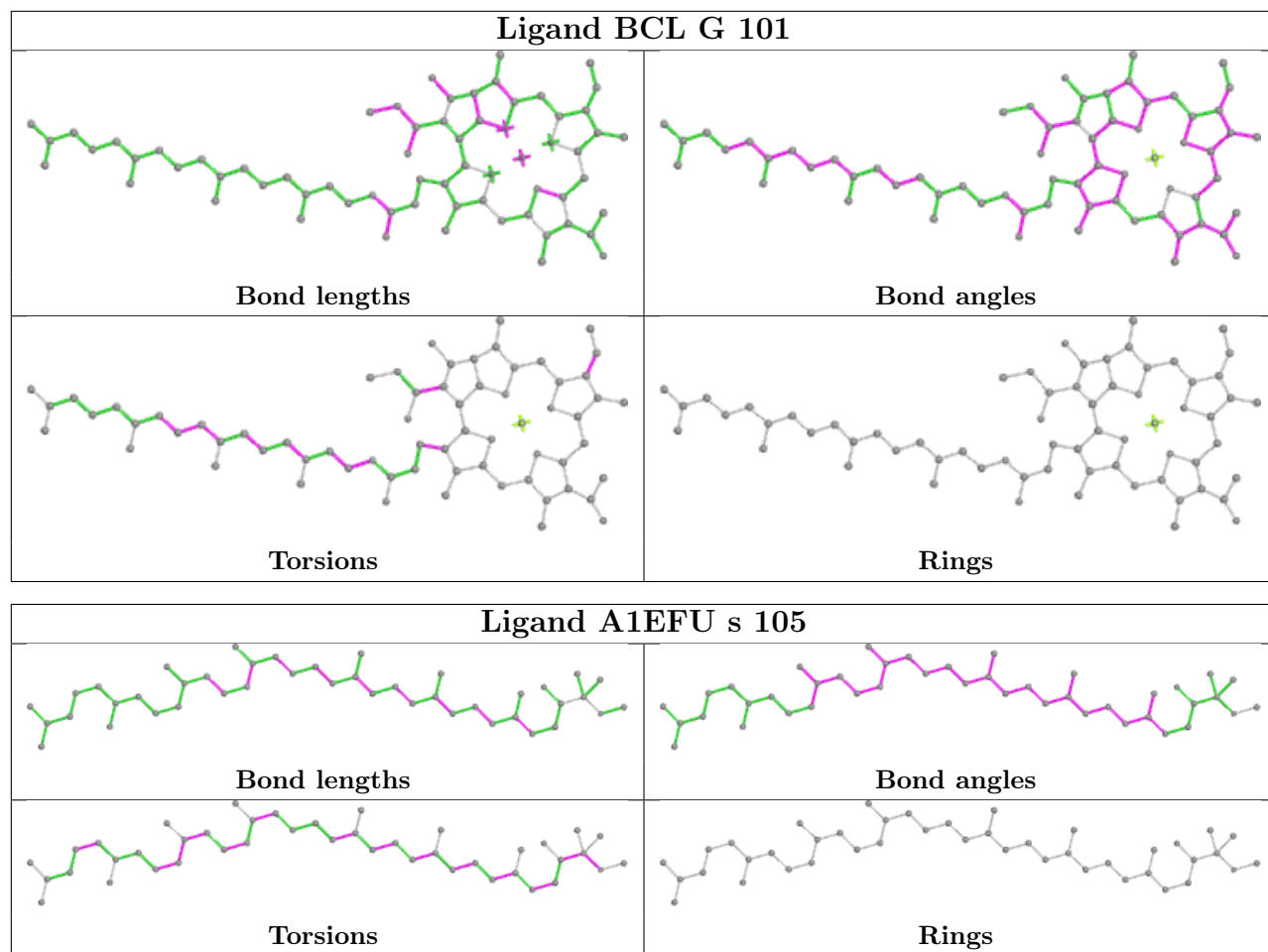


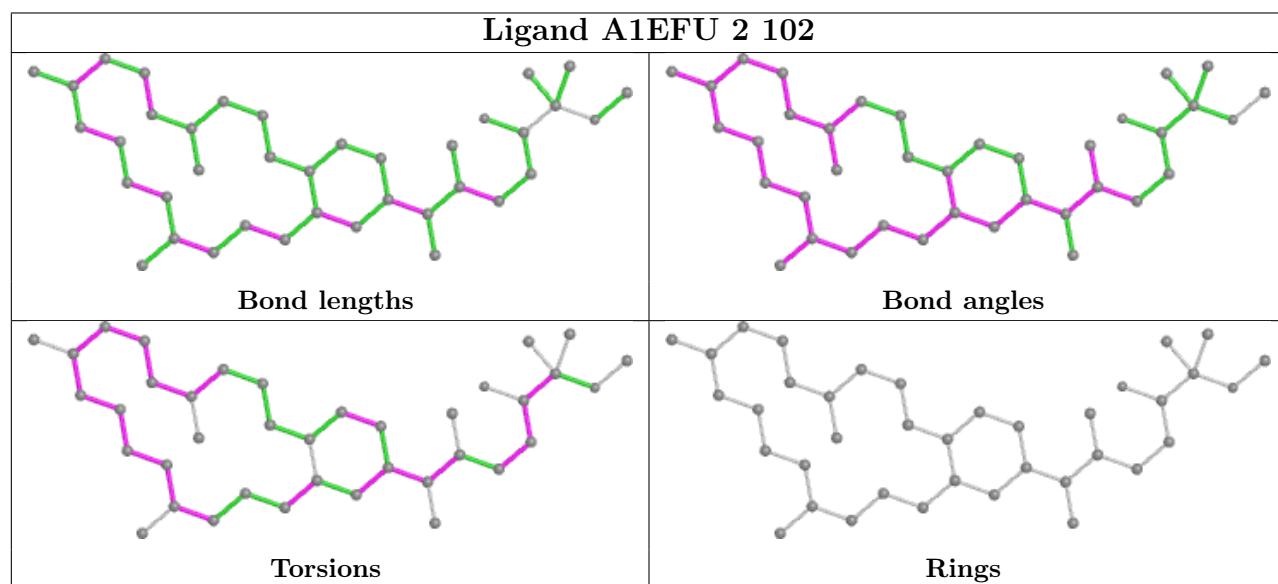
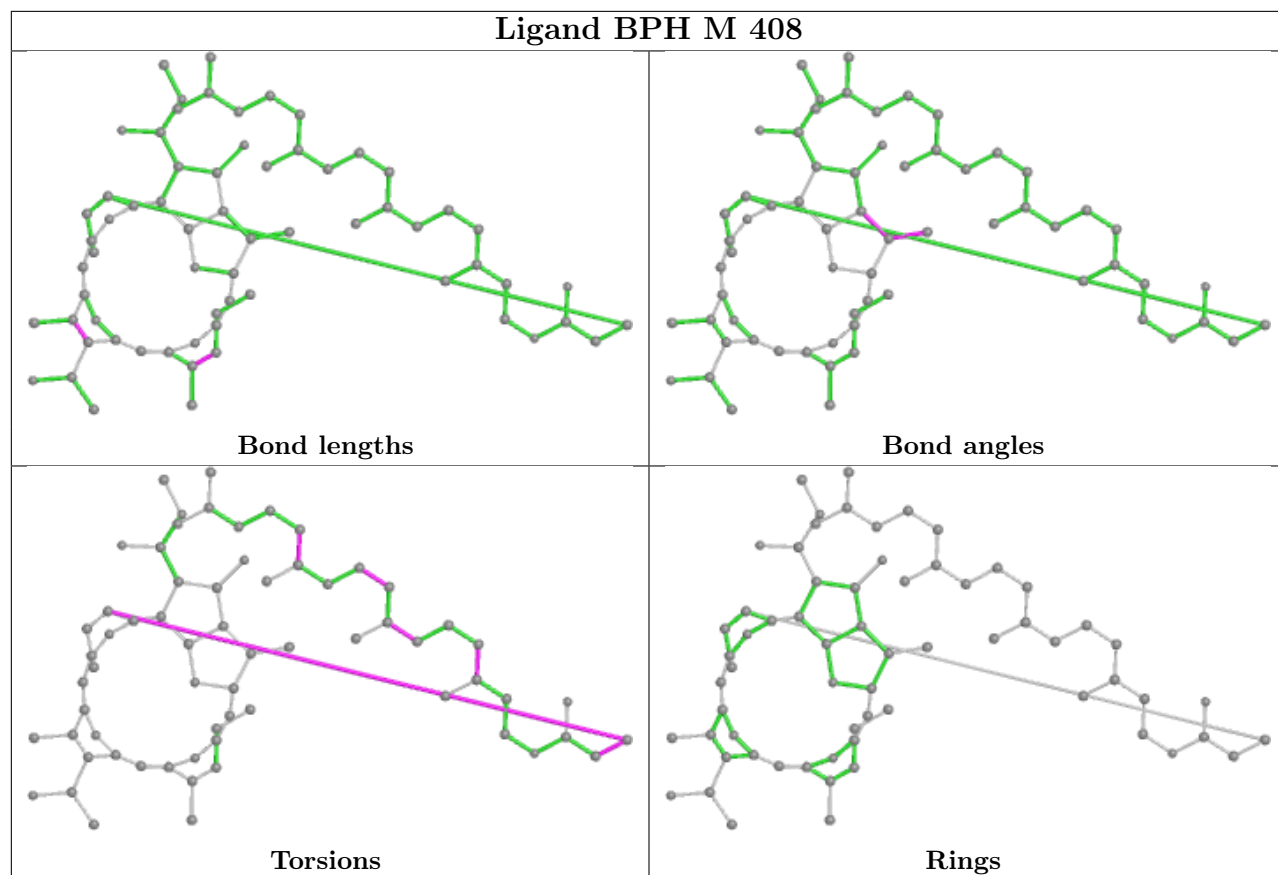


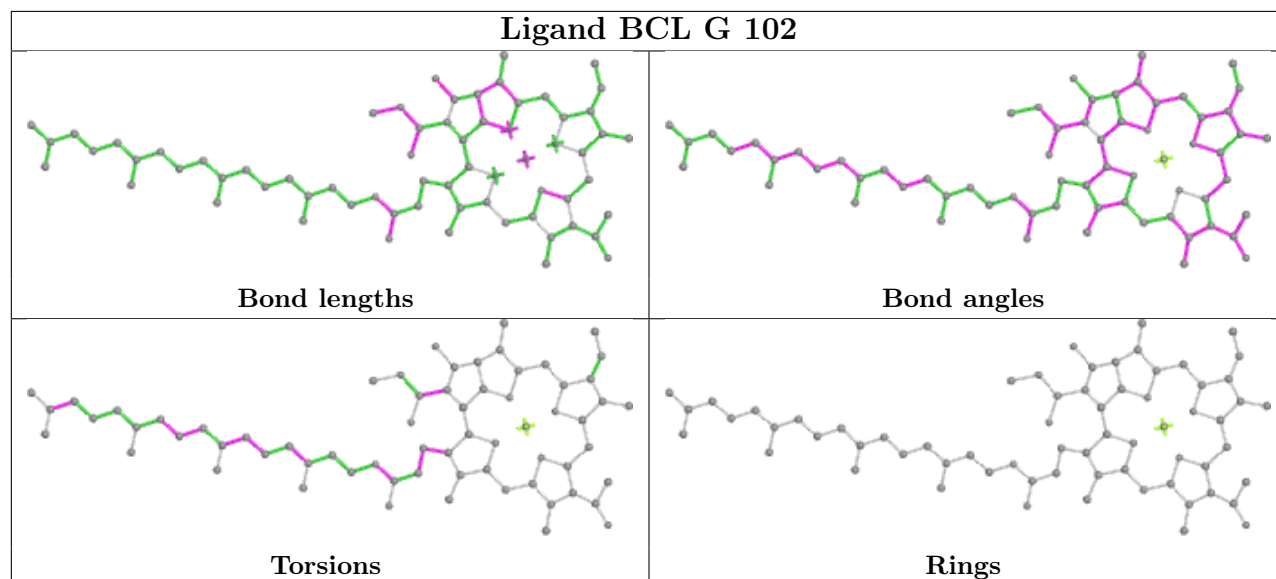
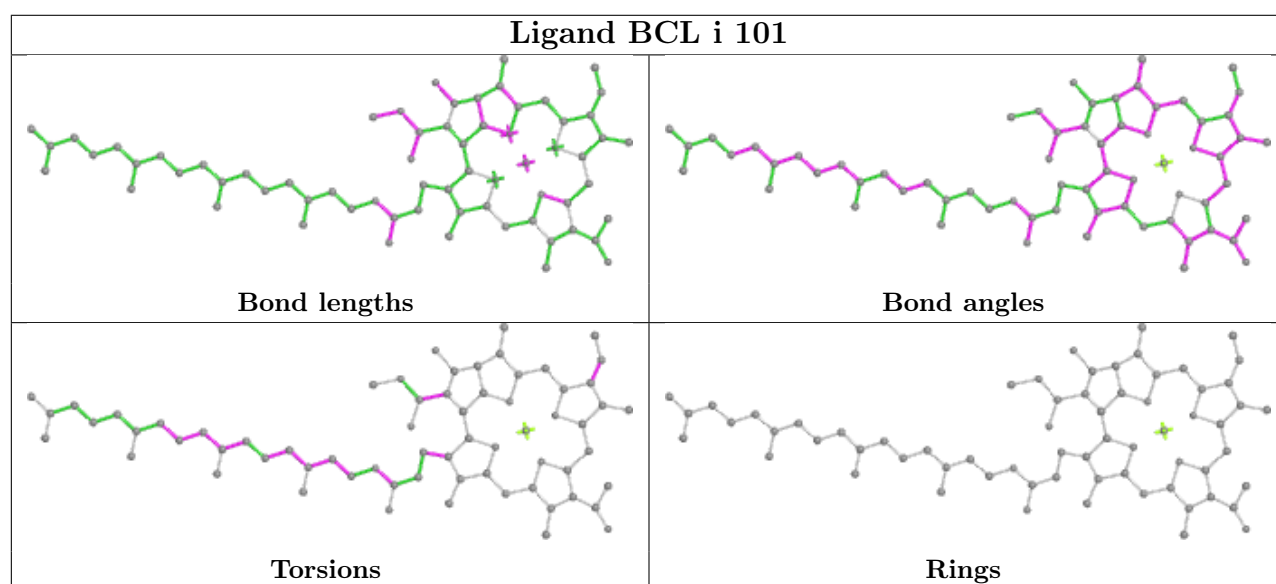
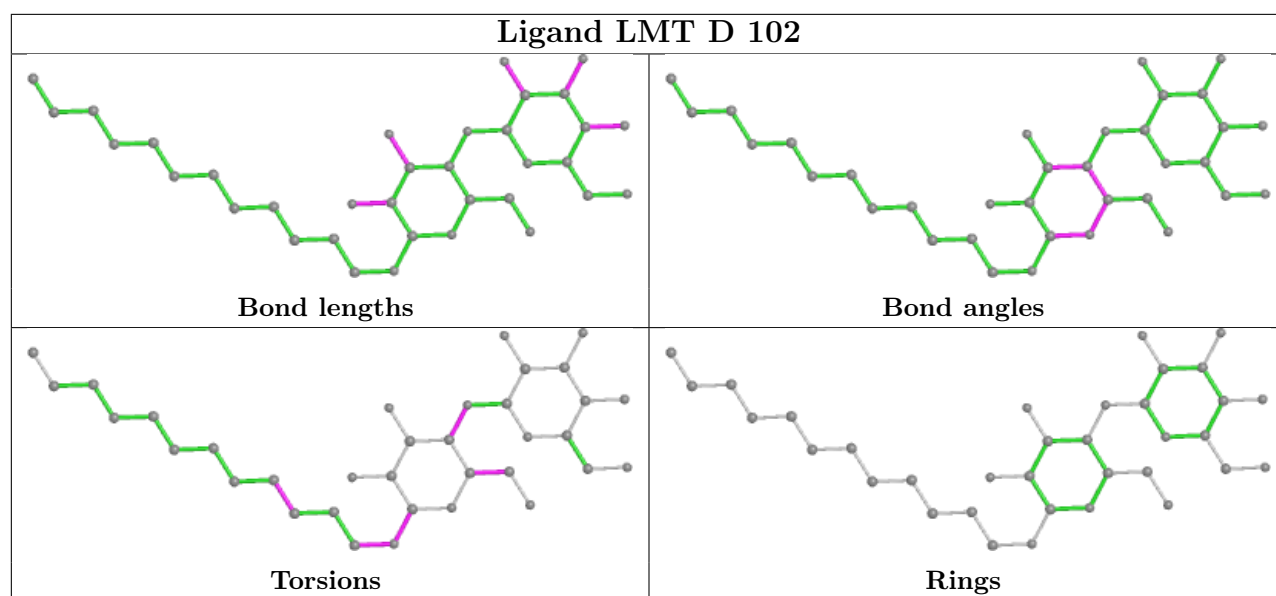


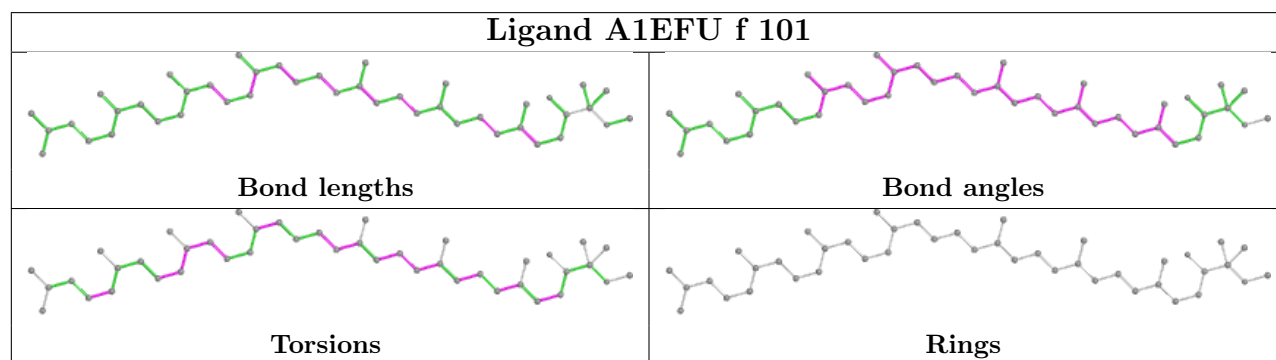
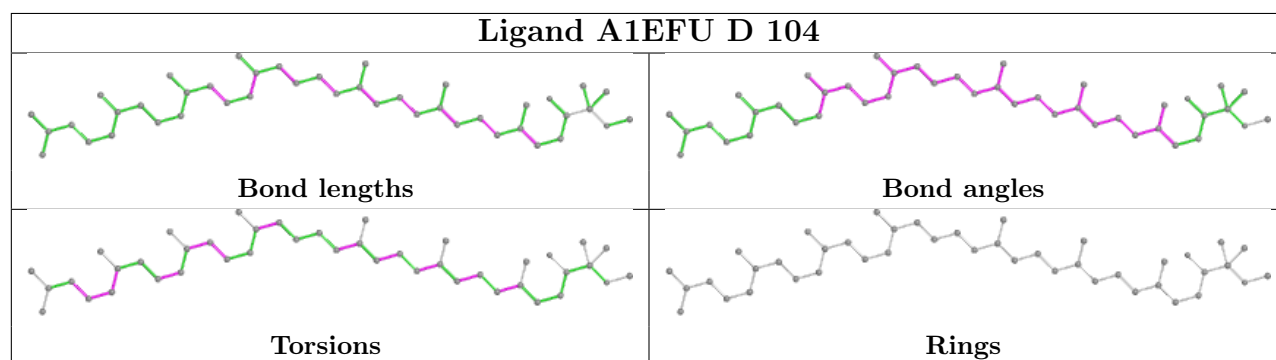
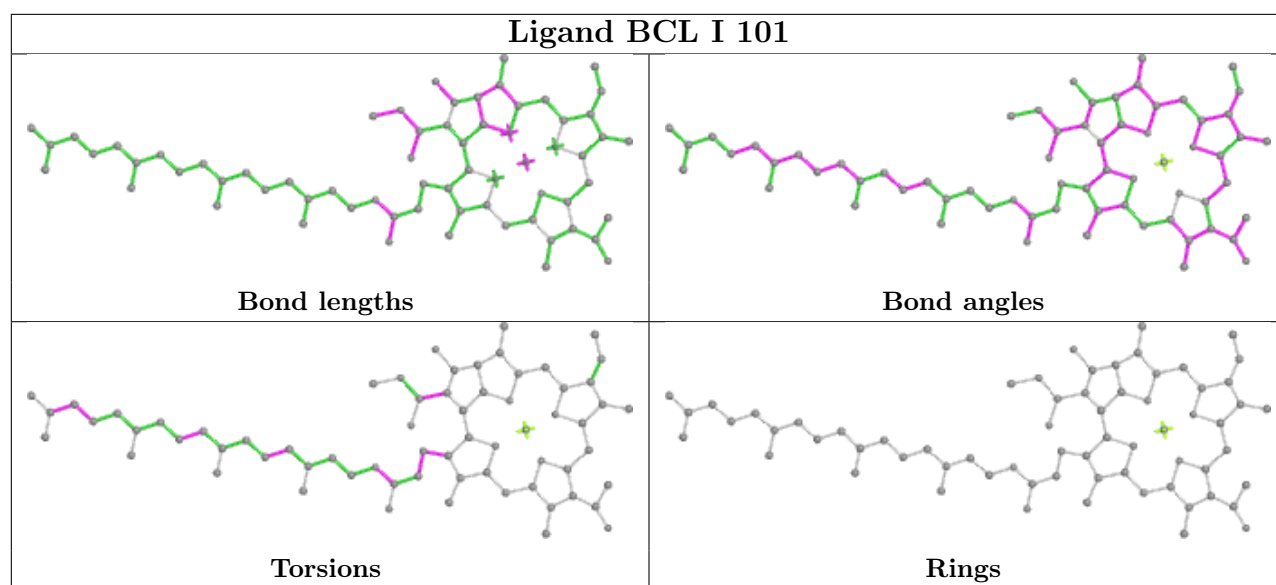


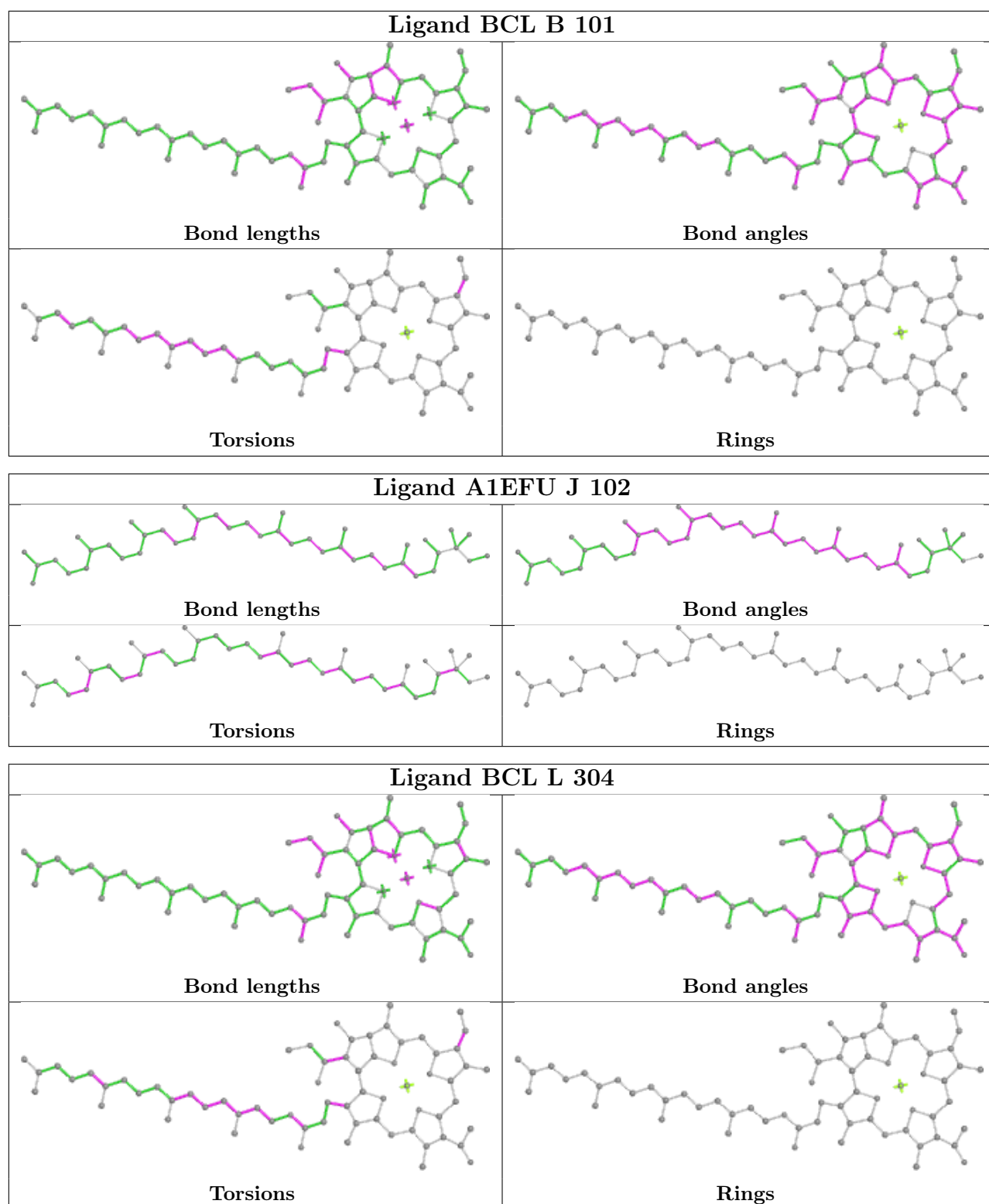
| Ligand A1EFU q 101   |  |
|--|--|
|  <p>Bond lengths</p>  |  <p>Bond angles</p>  |
|  <p>Torsions</p>      |  <p>Rings</p>        |
| Ligand A1EFU P 103   |  |
|  <p>Bond lengths</p>  |  <p>Bond angles</p>  |
|  <p>Torsions</p>      |  <p>Rings</p>        |
| Ligand BCL L 301   |  |
|  <p>Bond lengths</p> |  <p>Bond angles</p> |
|  <p>Torsions</p>    |  <p>Rings</p>      |





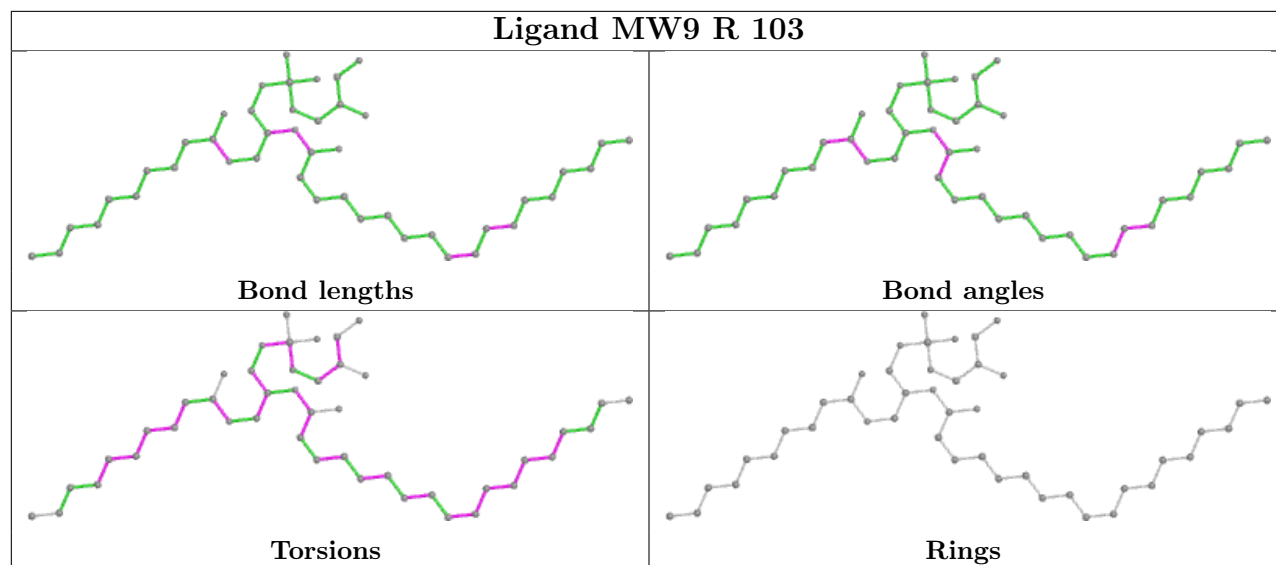




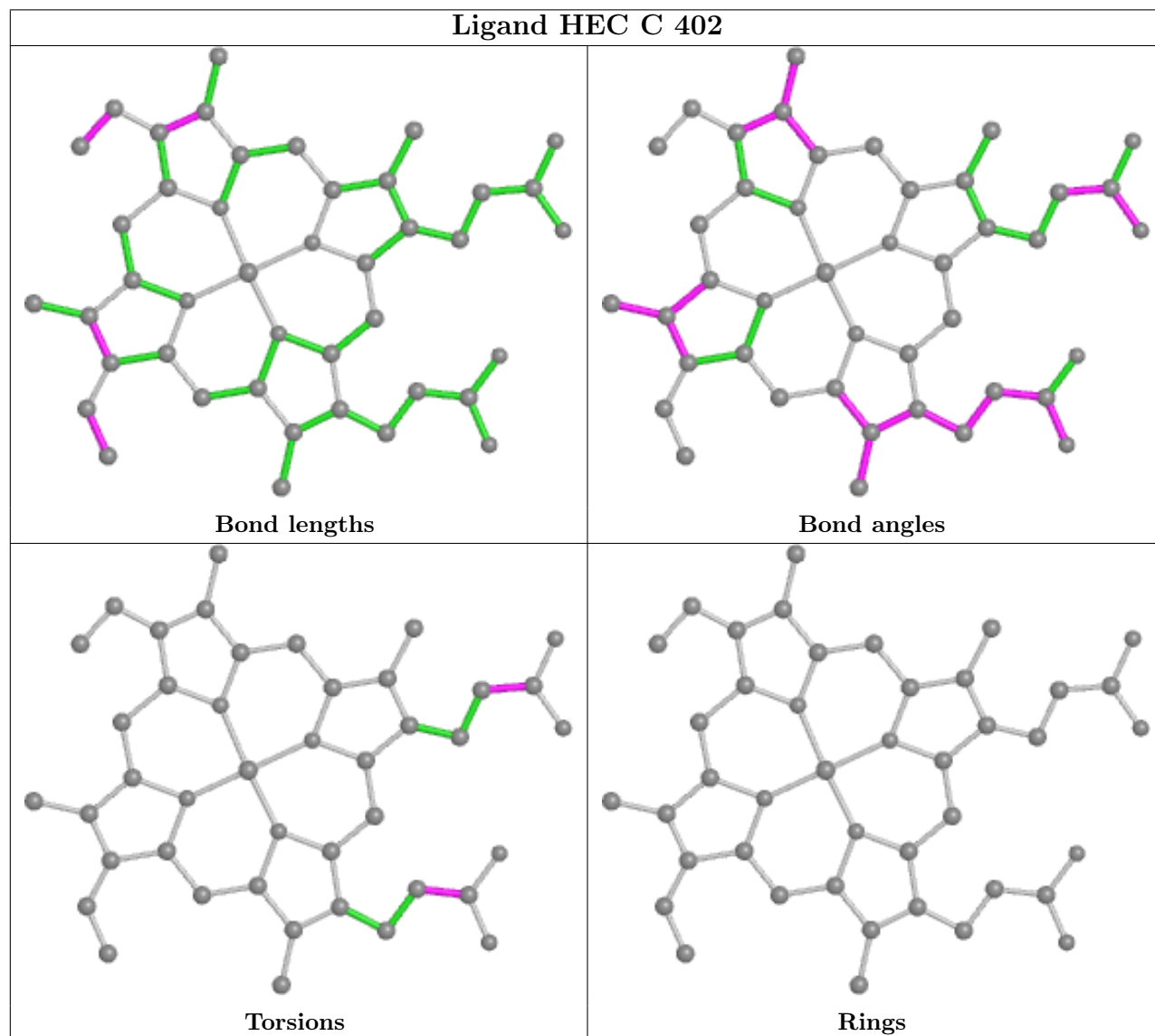


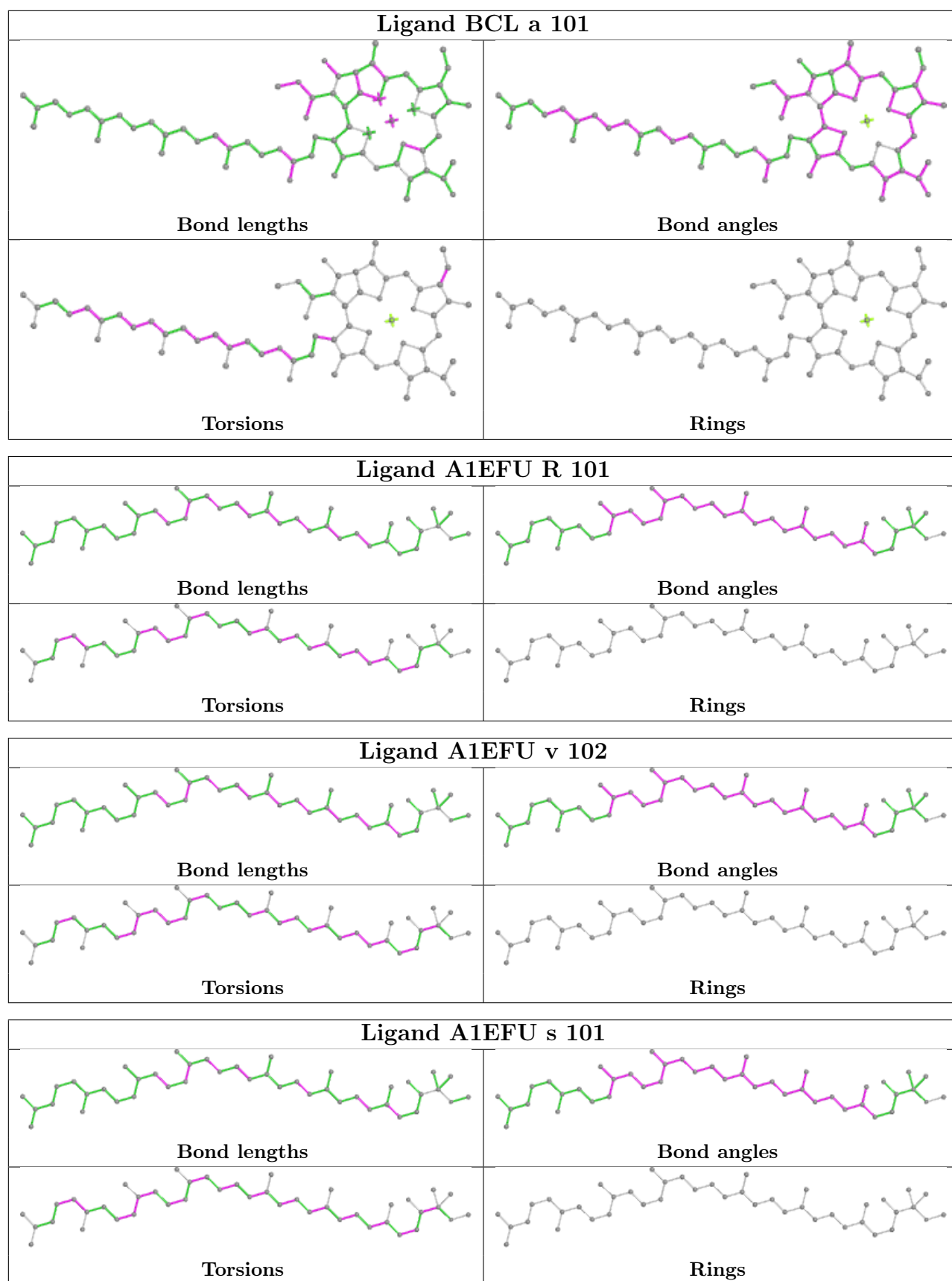


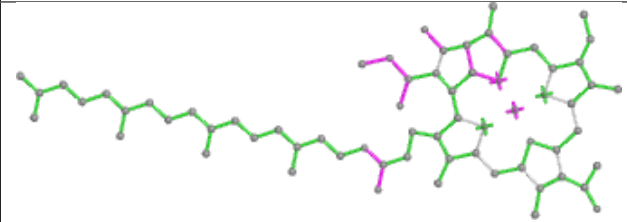
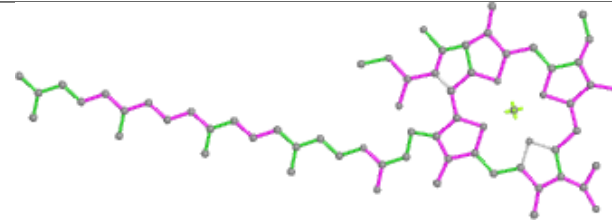
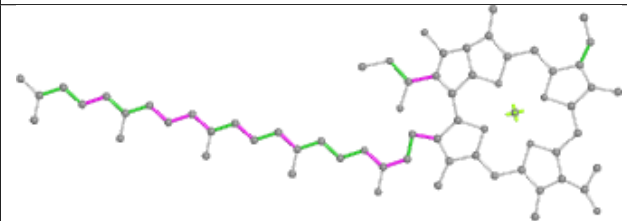
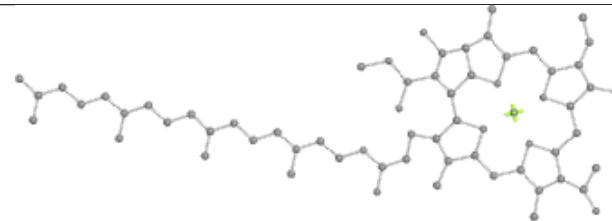
## Ligand MW9 R 103

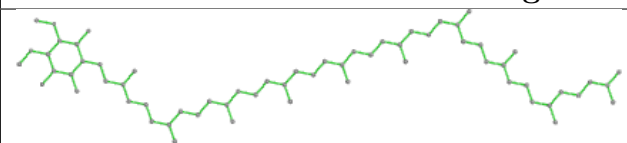
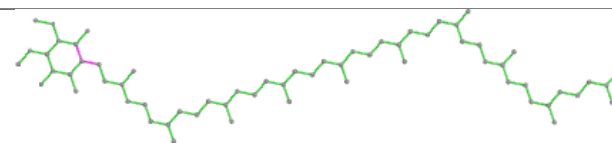
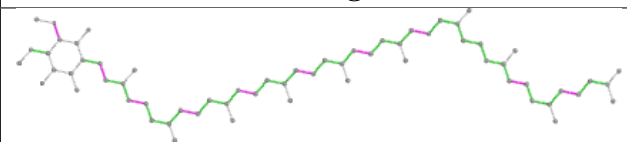
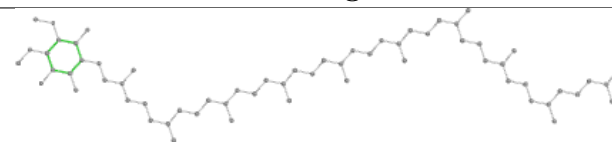


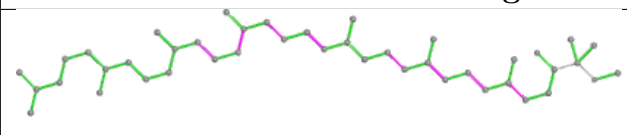
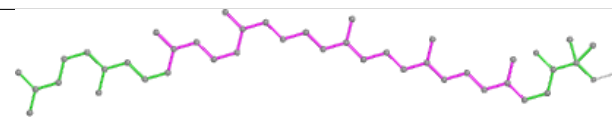
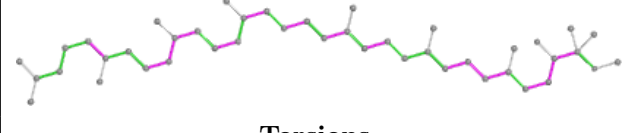
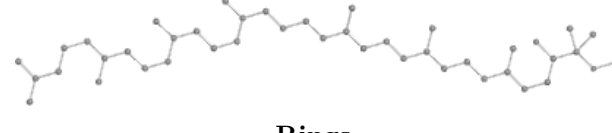
## Ligand HEC C 402

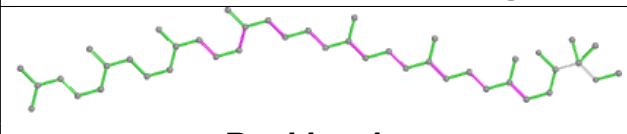
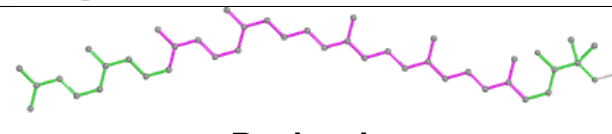
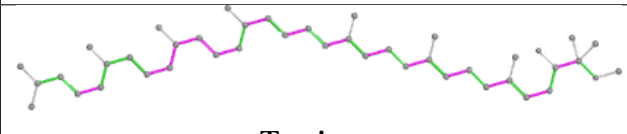
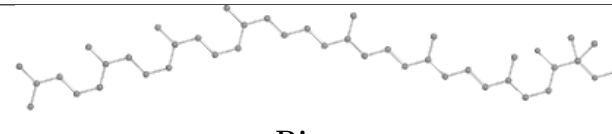


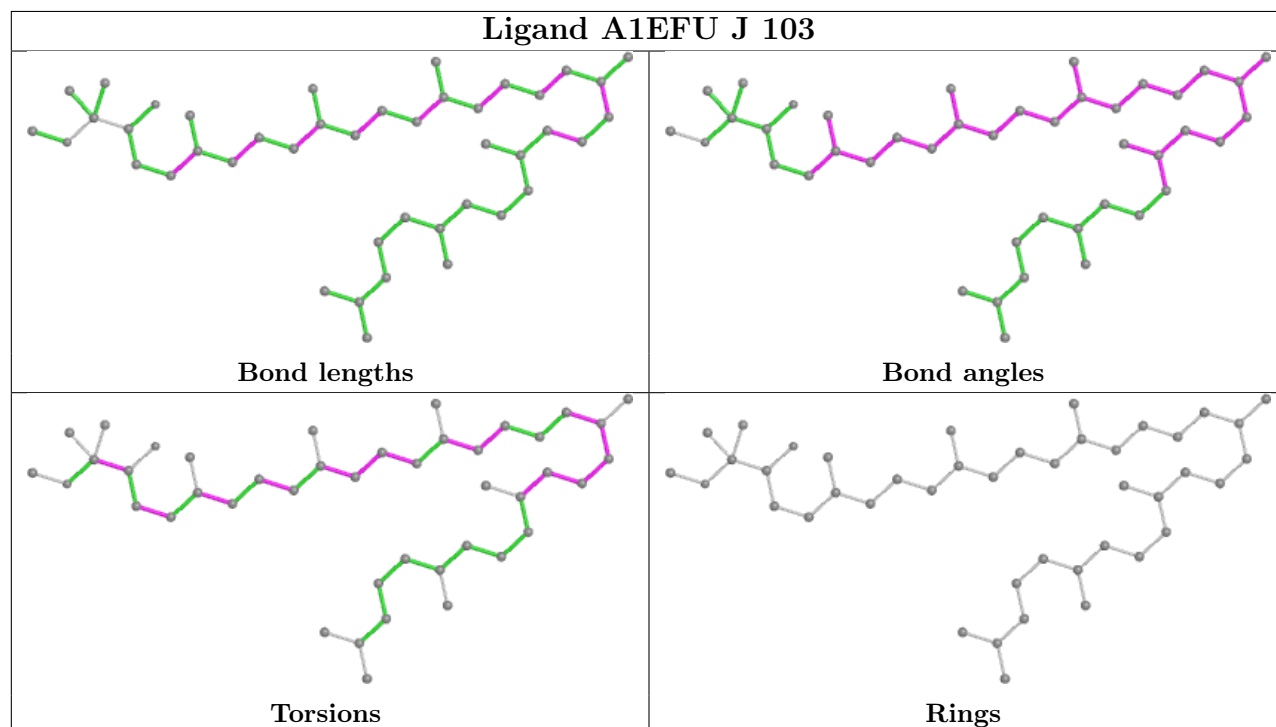
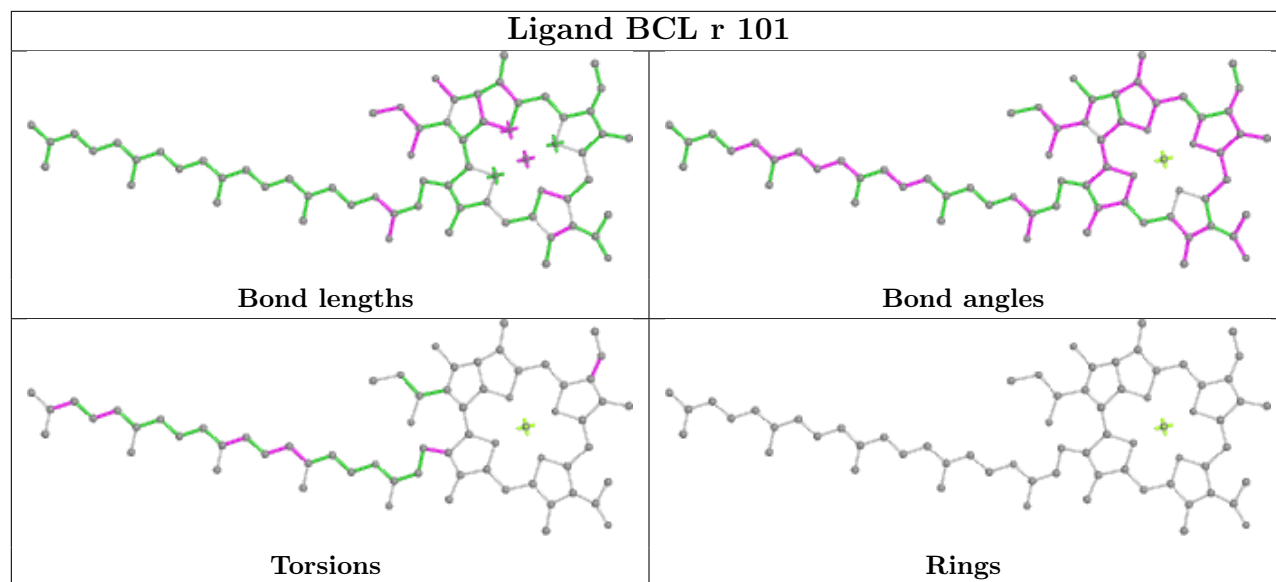


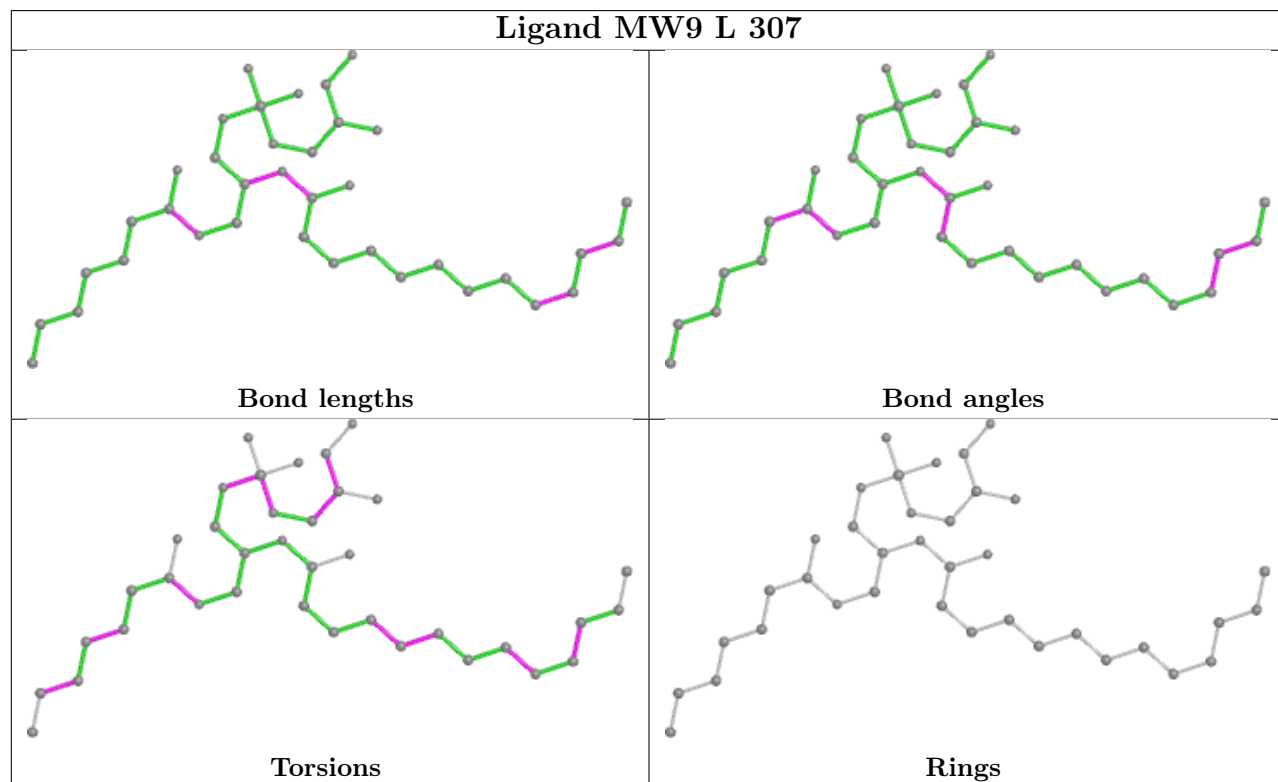
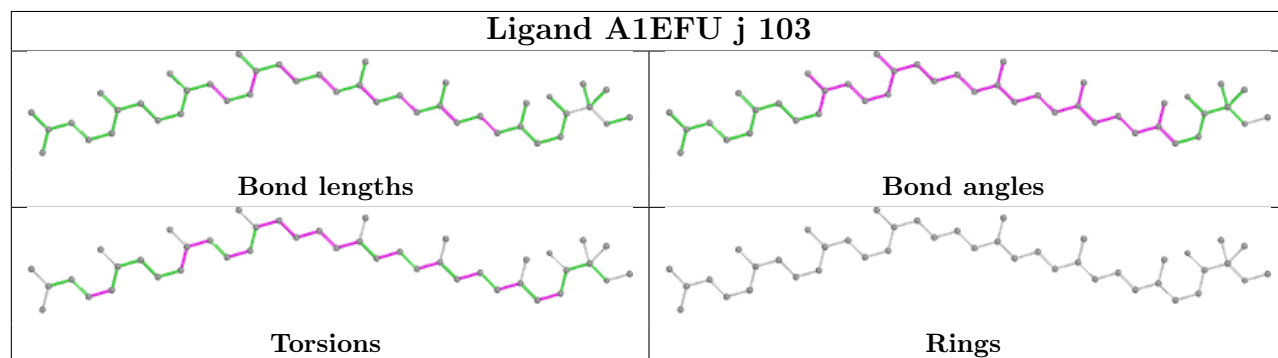
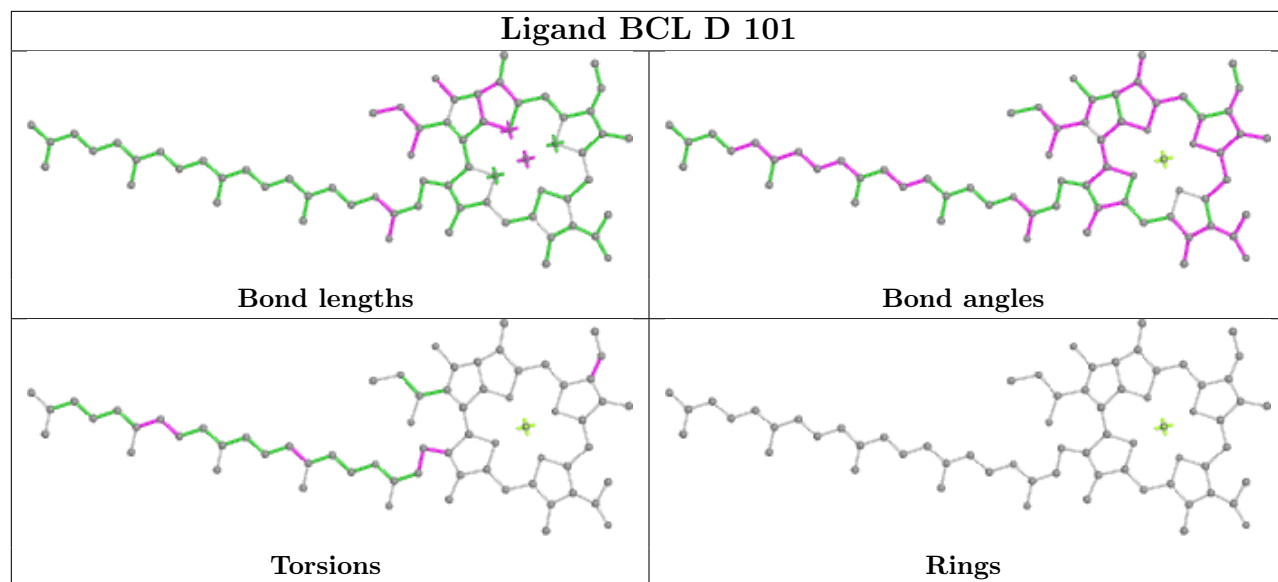
| Ligand BCL F 101  |  |
|---|--|
|  |  |
| Bond lengths  | Bond angles  |
|  |  |
| Torsions  | Rings  |

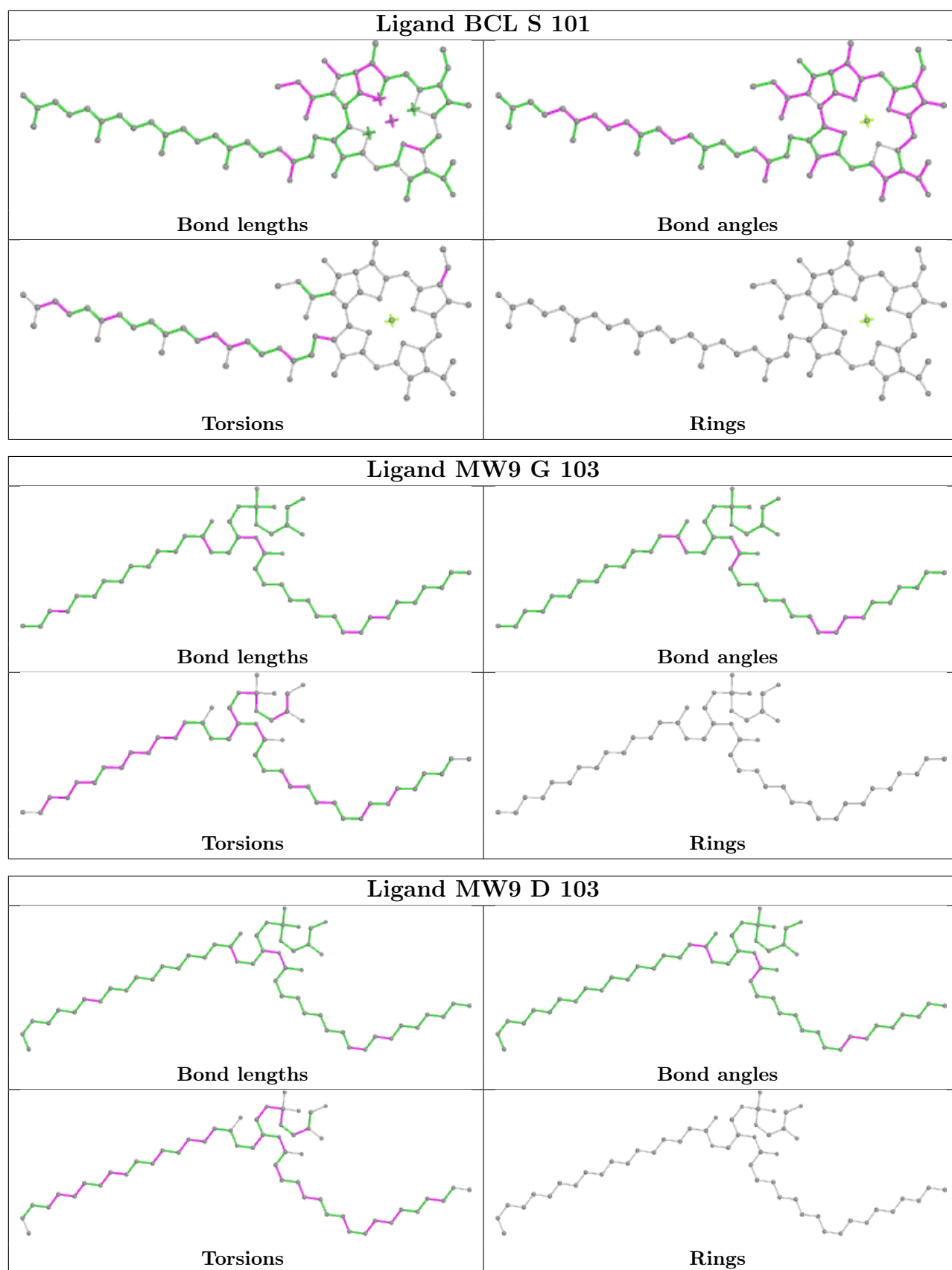
| Ligand U10 M 404   |   |
|--|---|
|   |   |
| Bond lengths   | Bond angles   |
|  |  |
| Torsions   | Rings   |

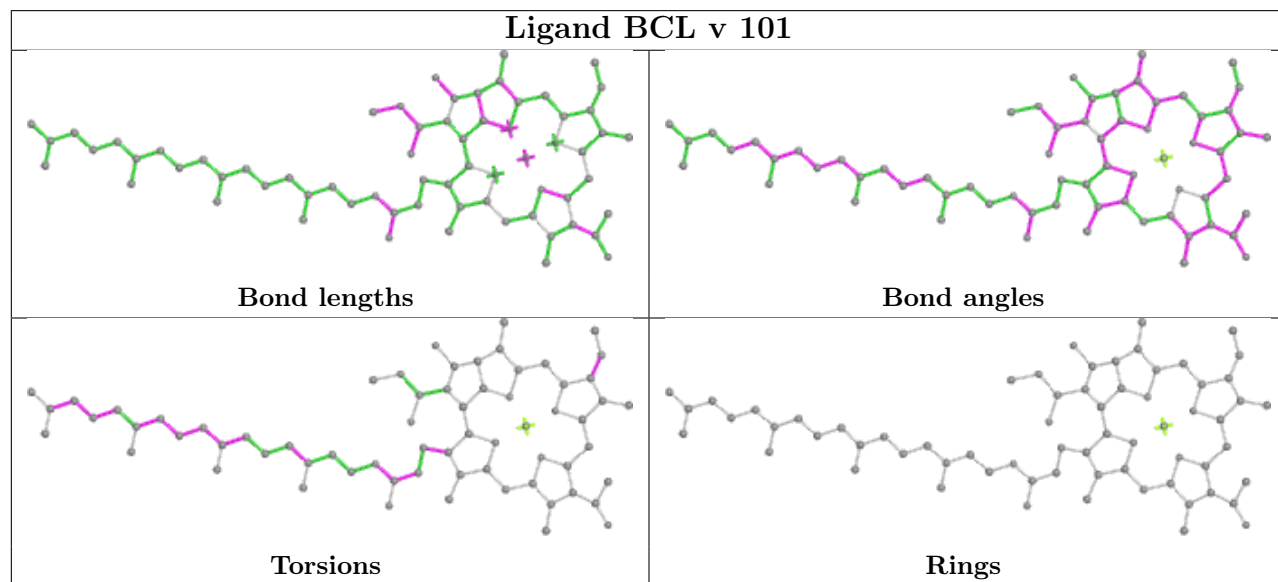
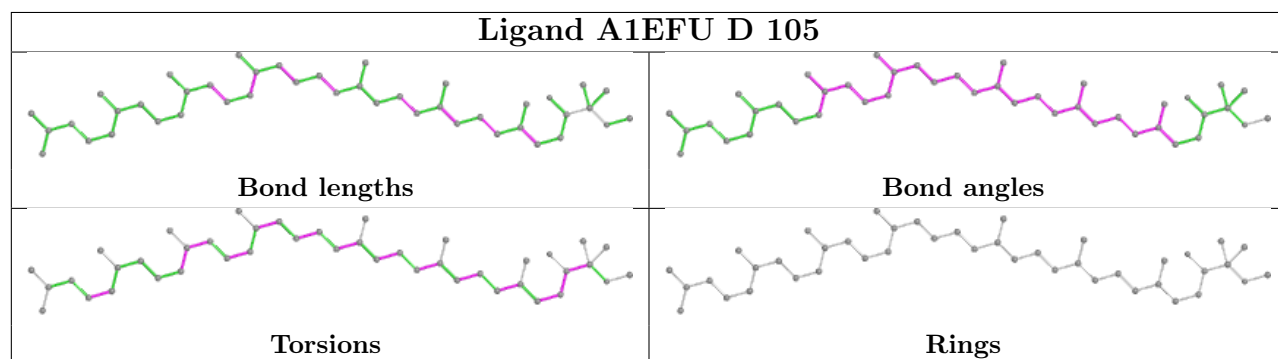
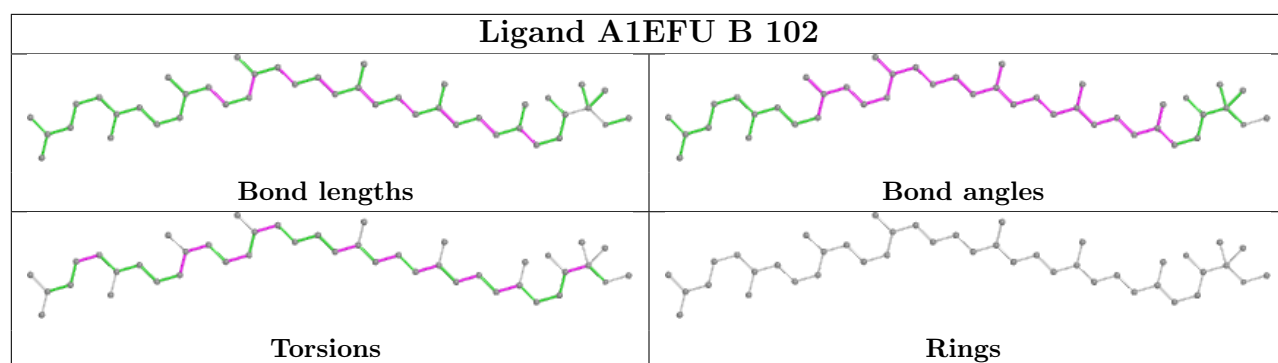
| Ligand A1EFU v 103  |  |
|---|--|
|  |  |
| Bond lengths  | Bond angles  |
|  |  |
| Torsions  | Rings  |

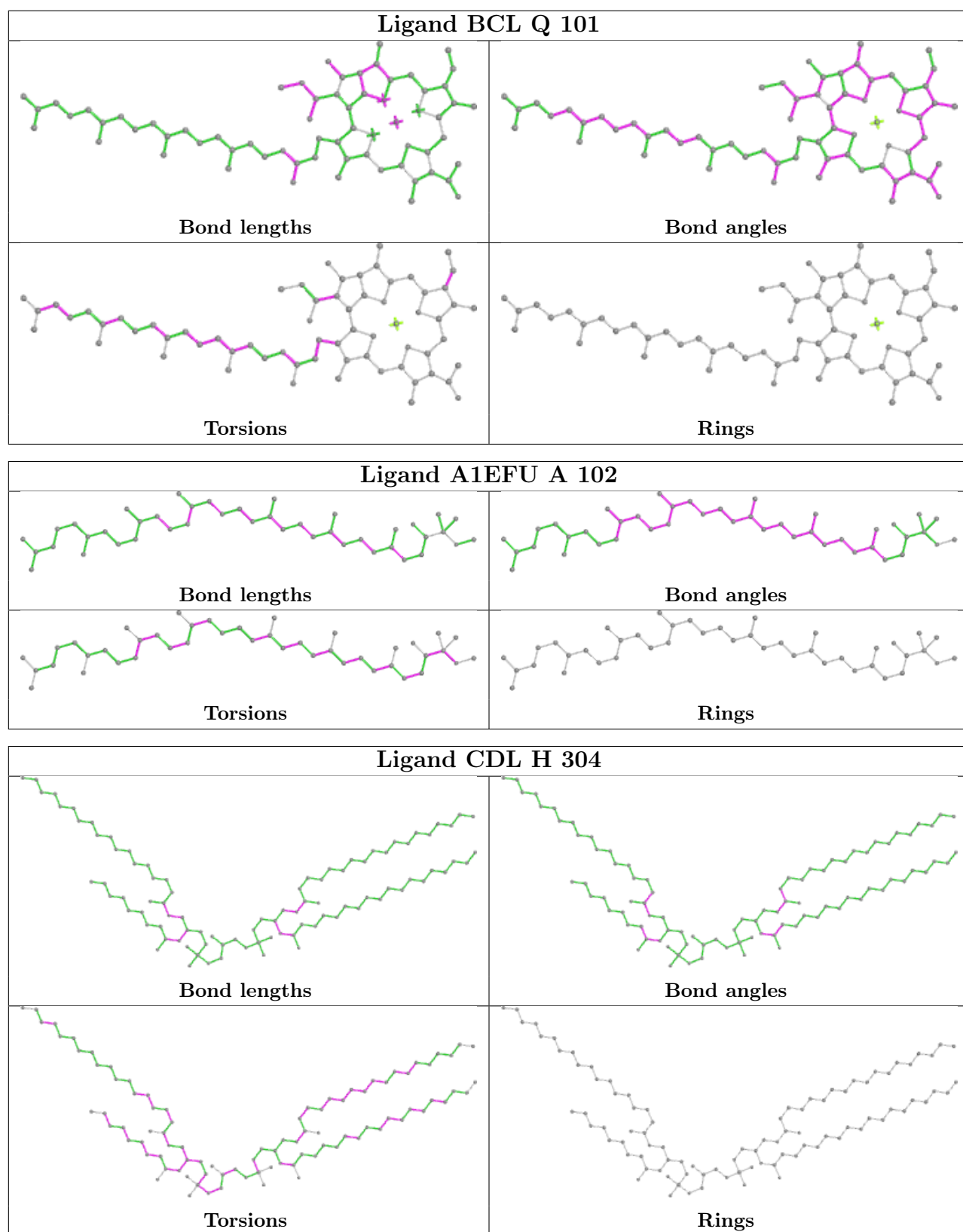
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|---|--|
|  |  |
| Bond lengths  | Bond angles  |
|  |  |
| Torsions  | Rings  |



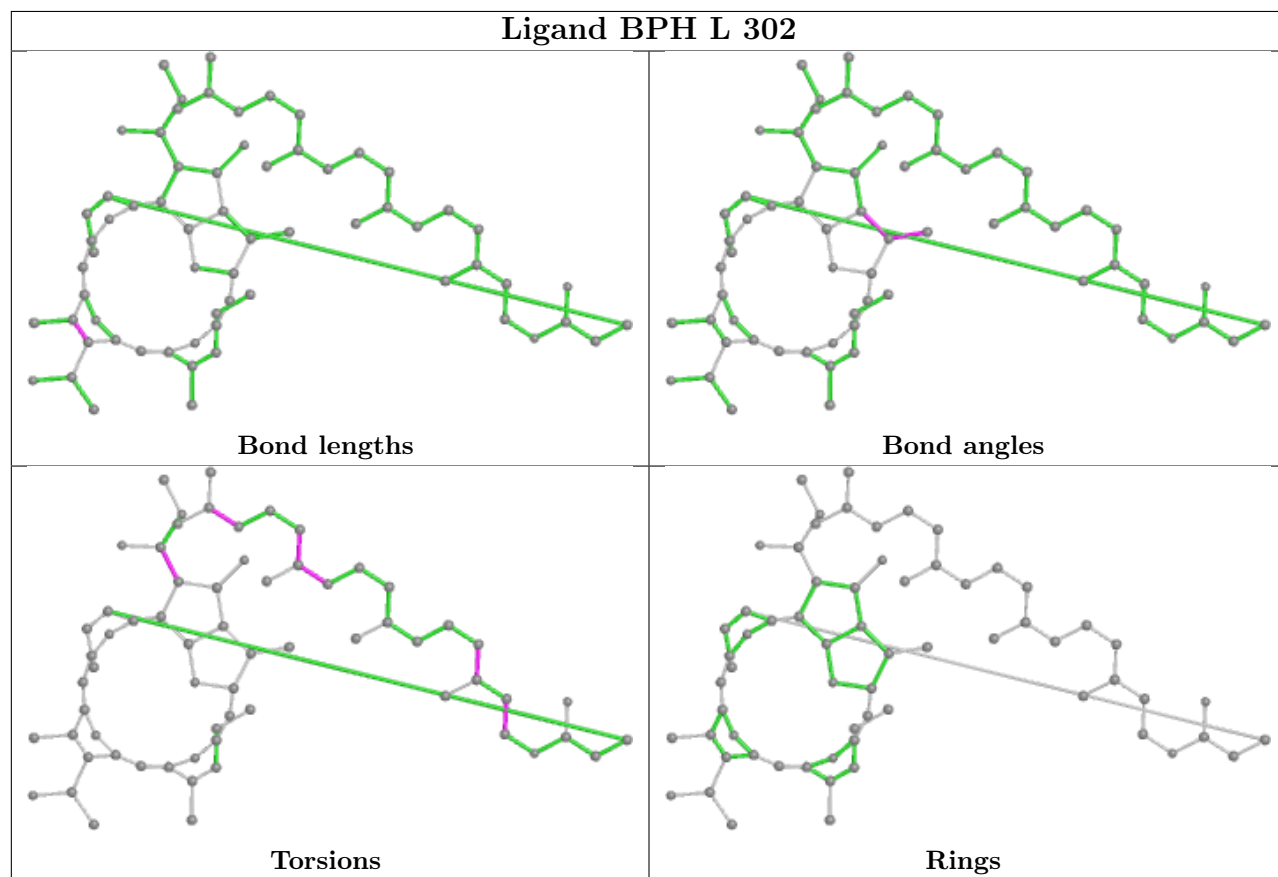
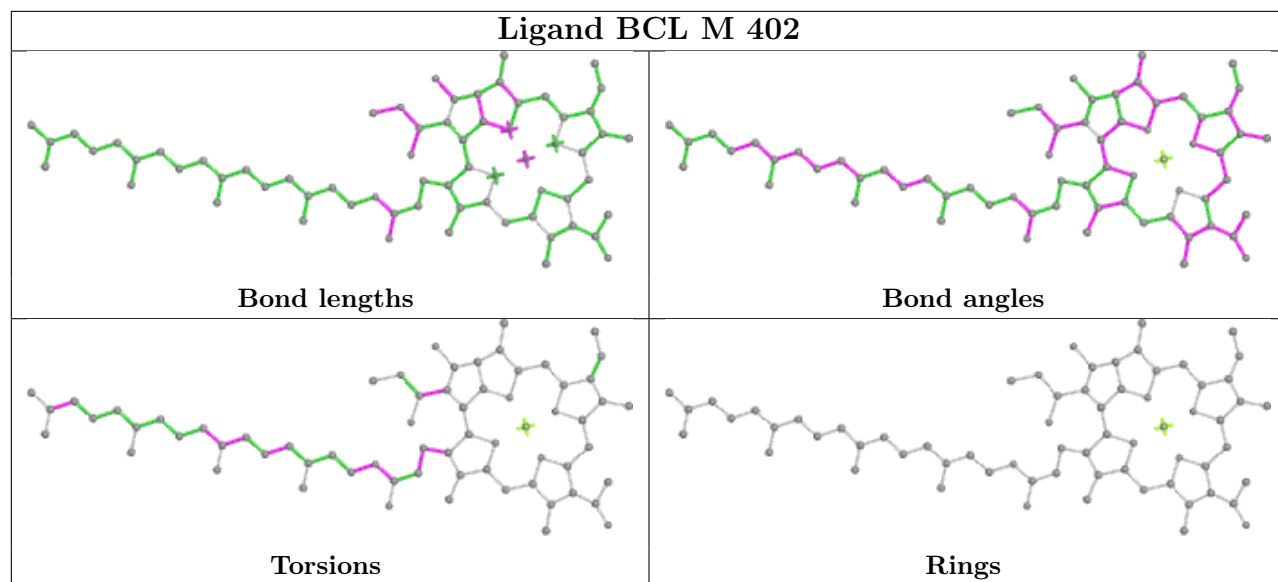


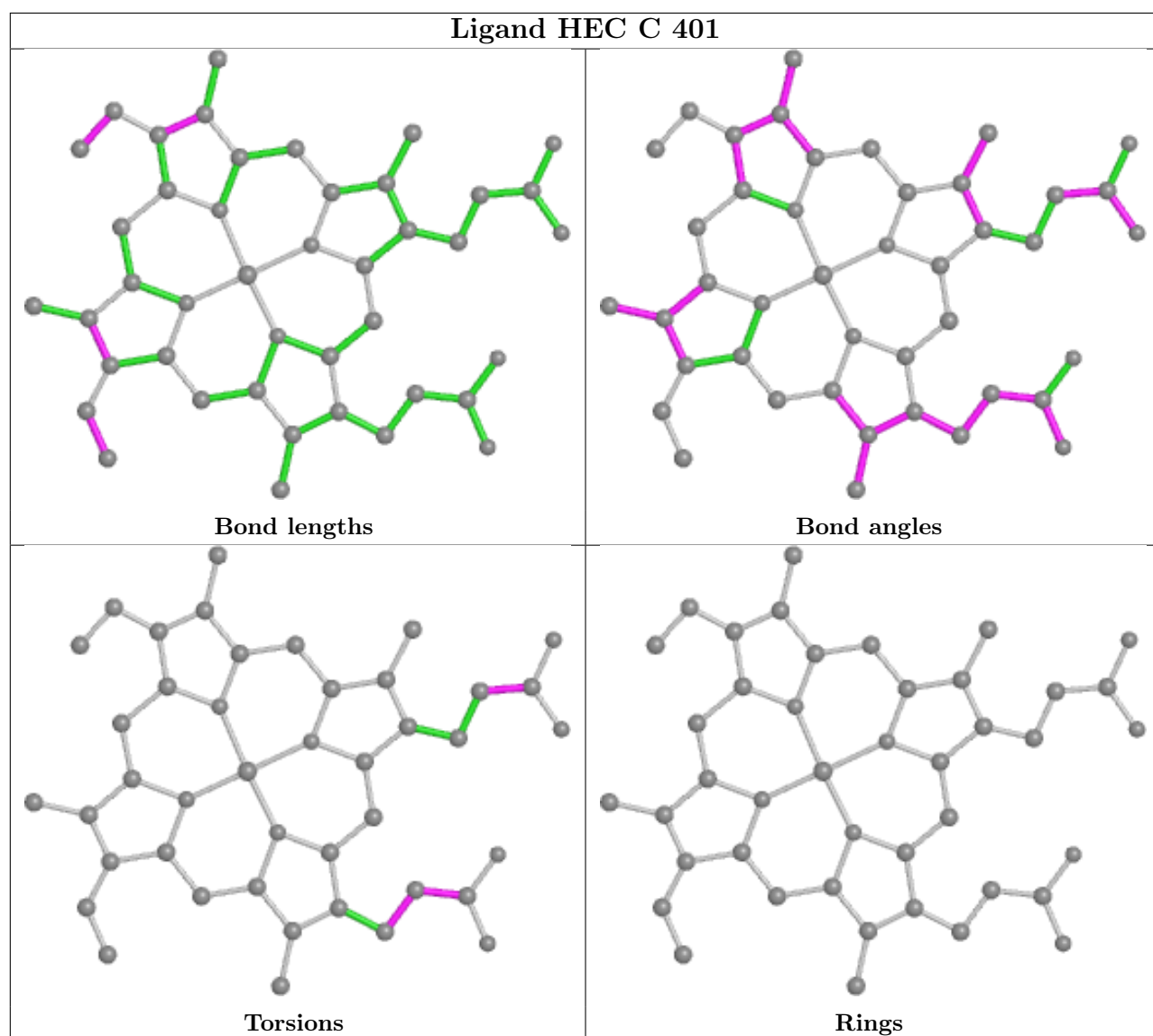
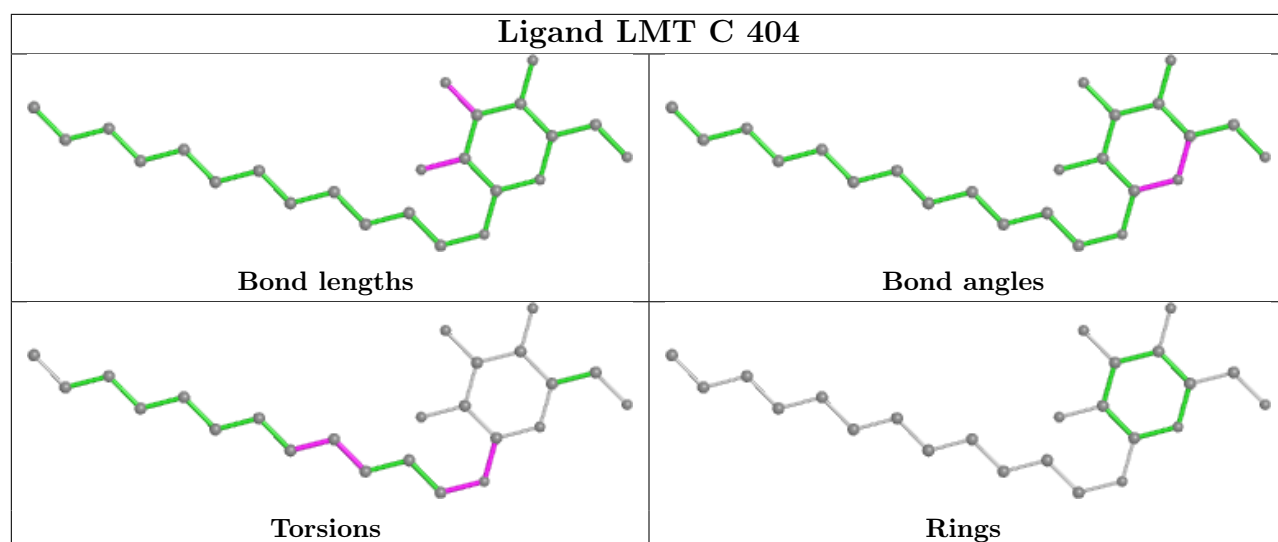


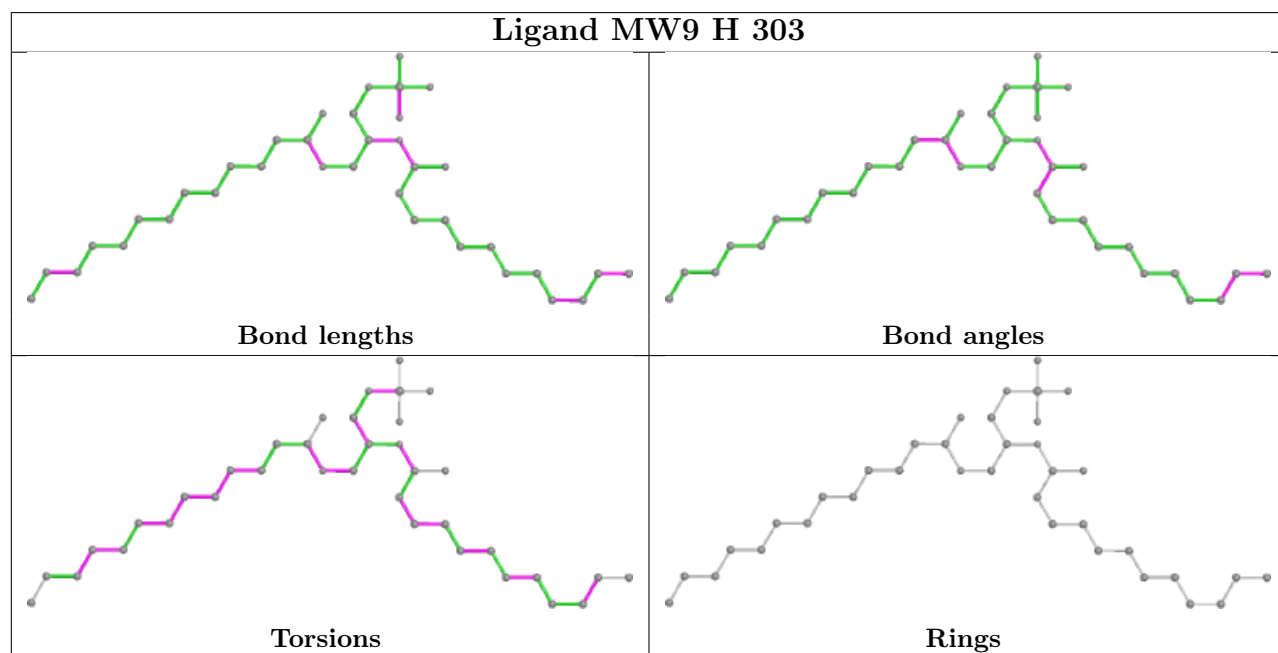
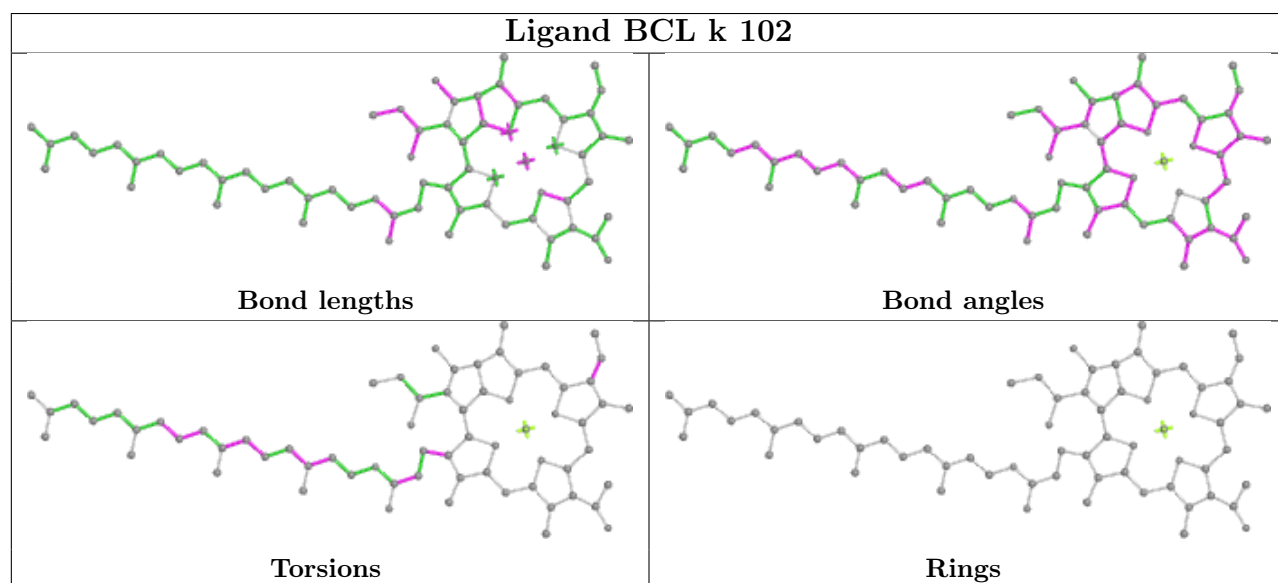
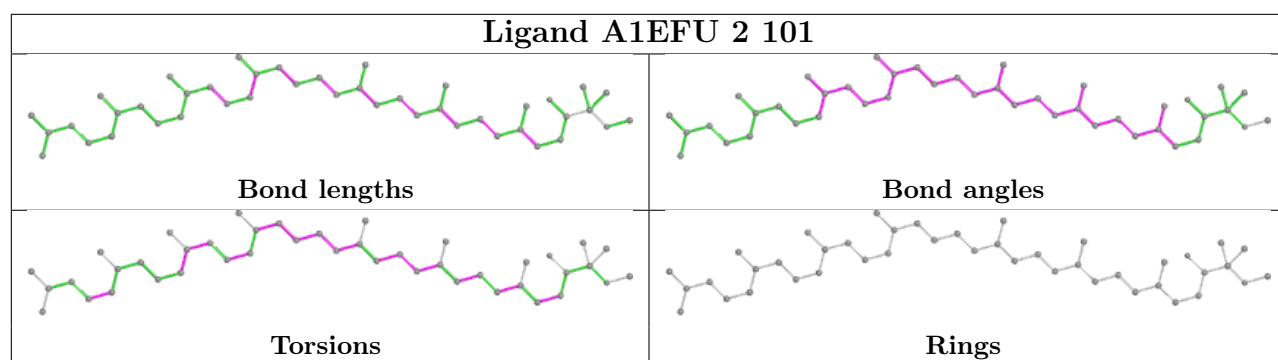


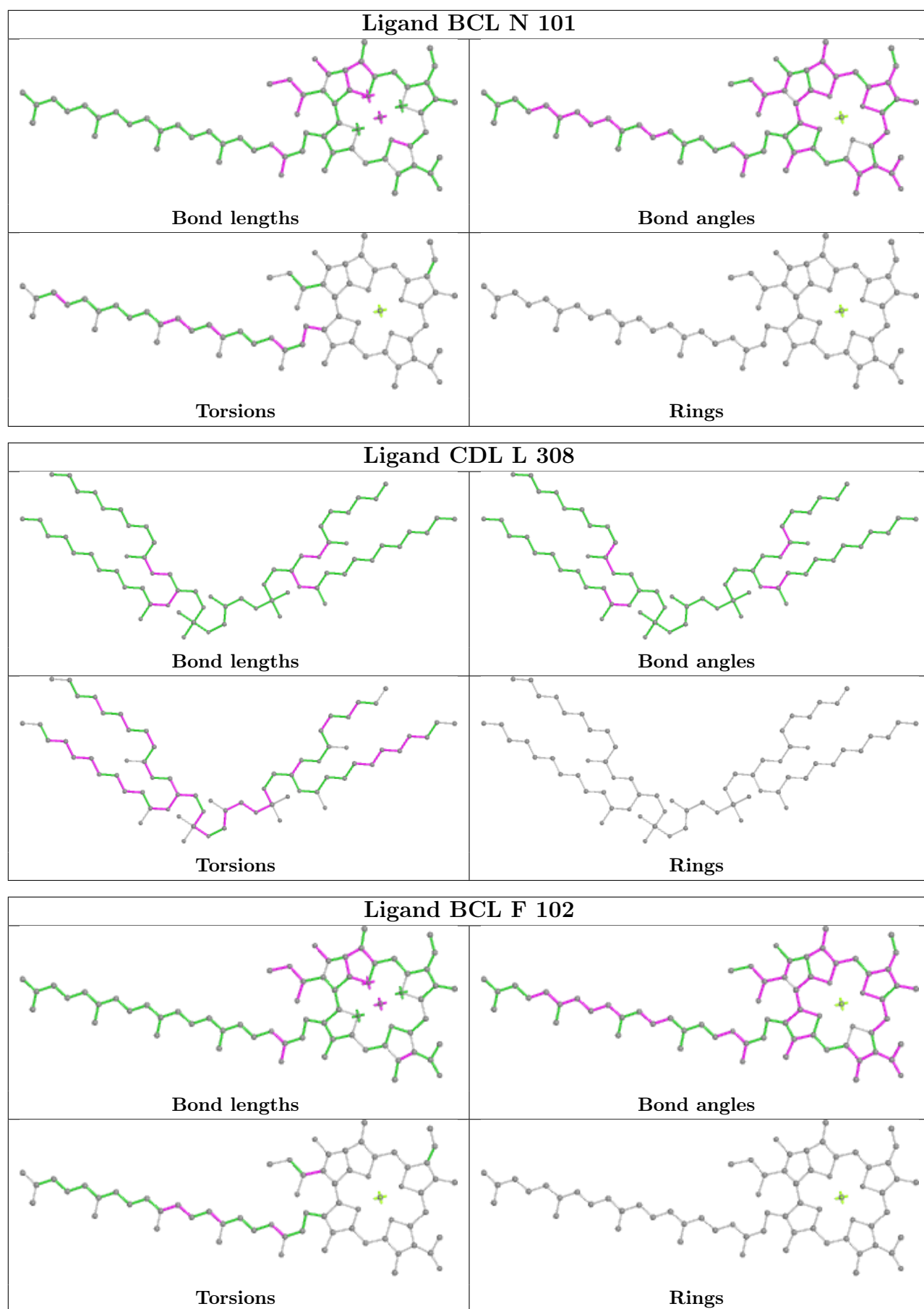


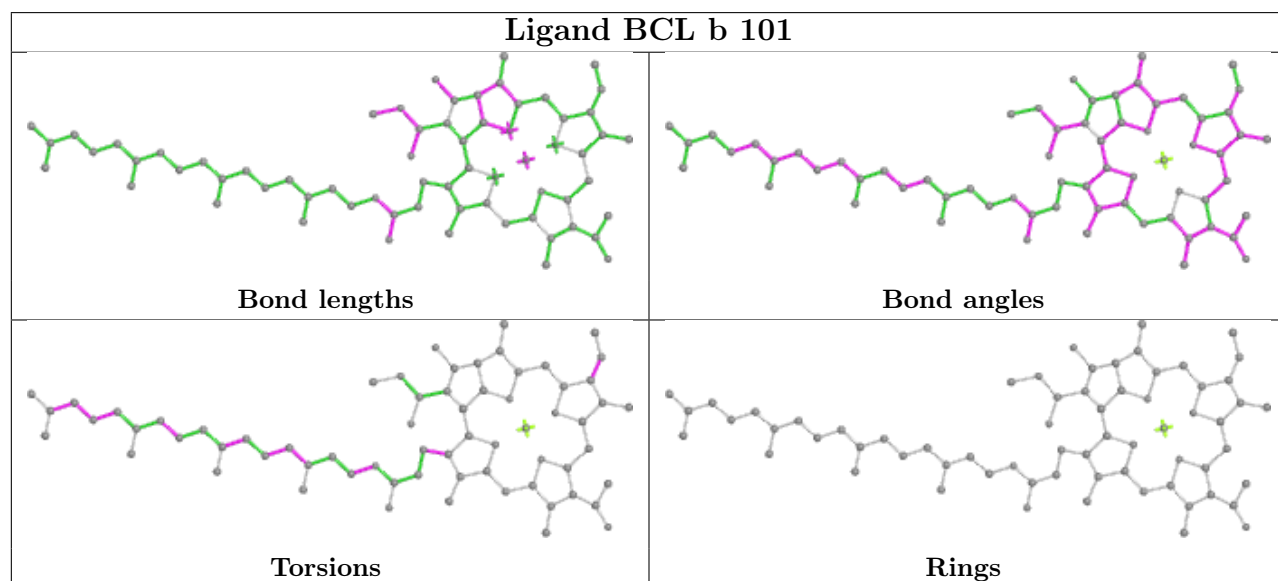
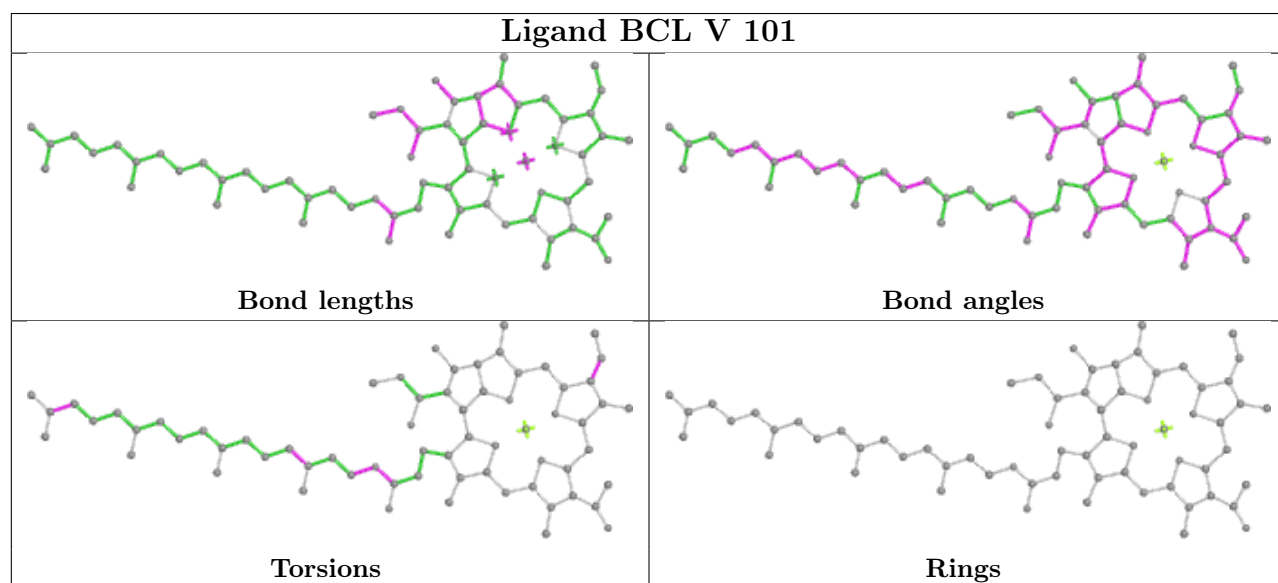
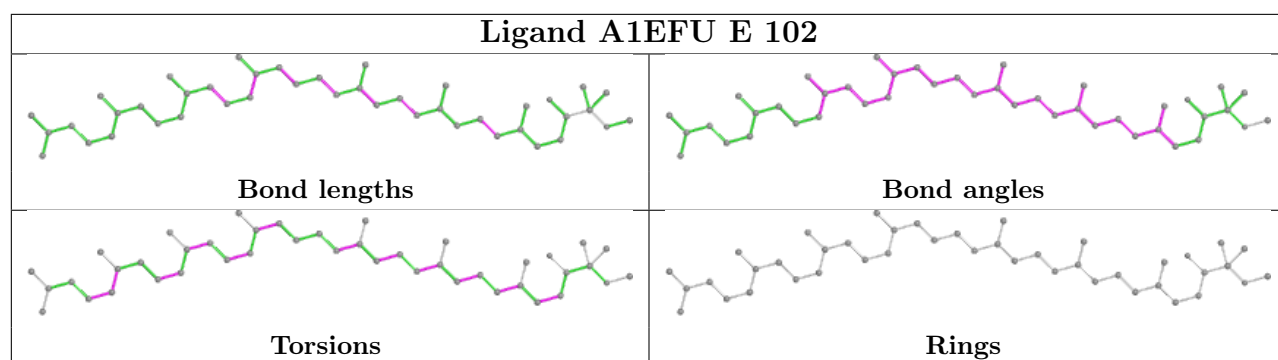


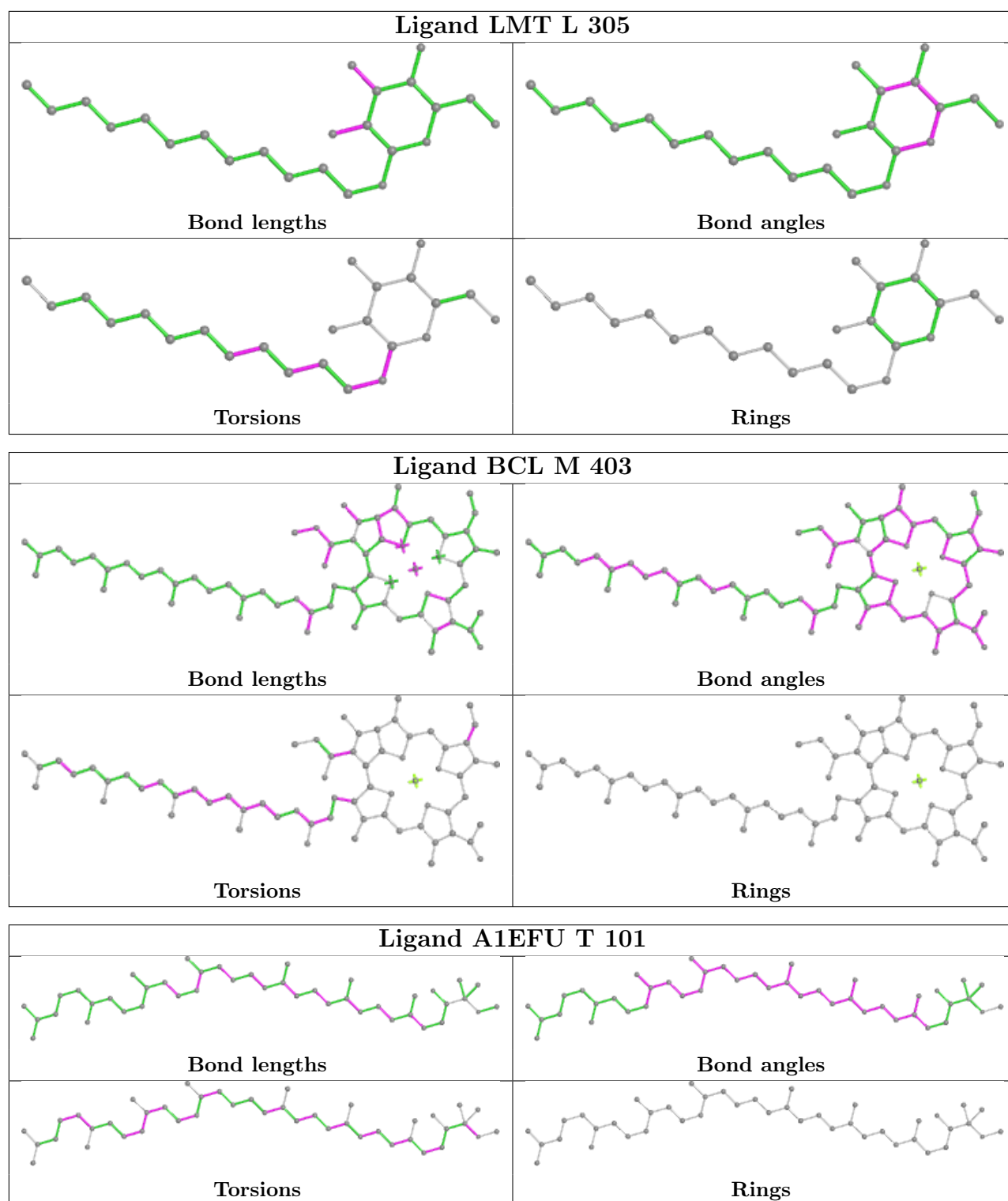


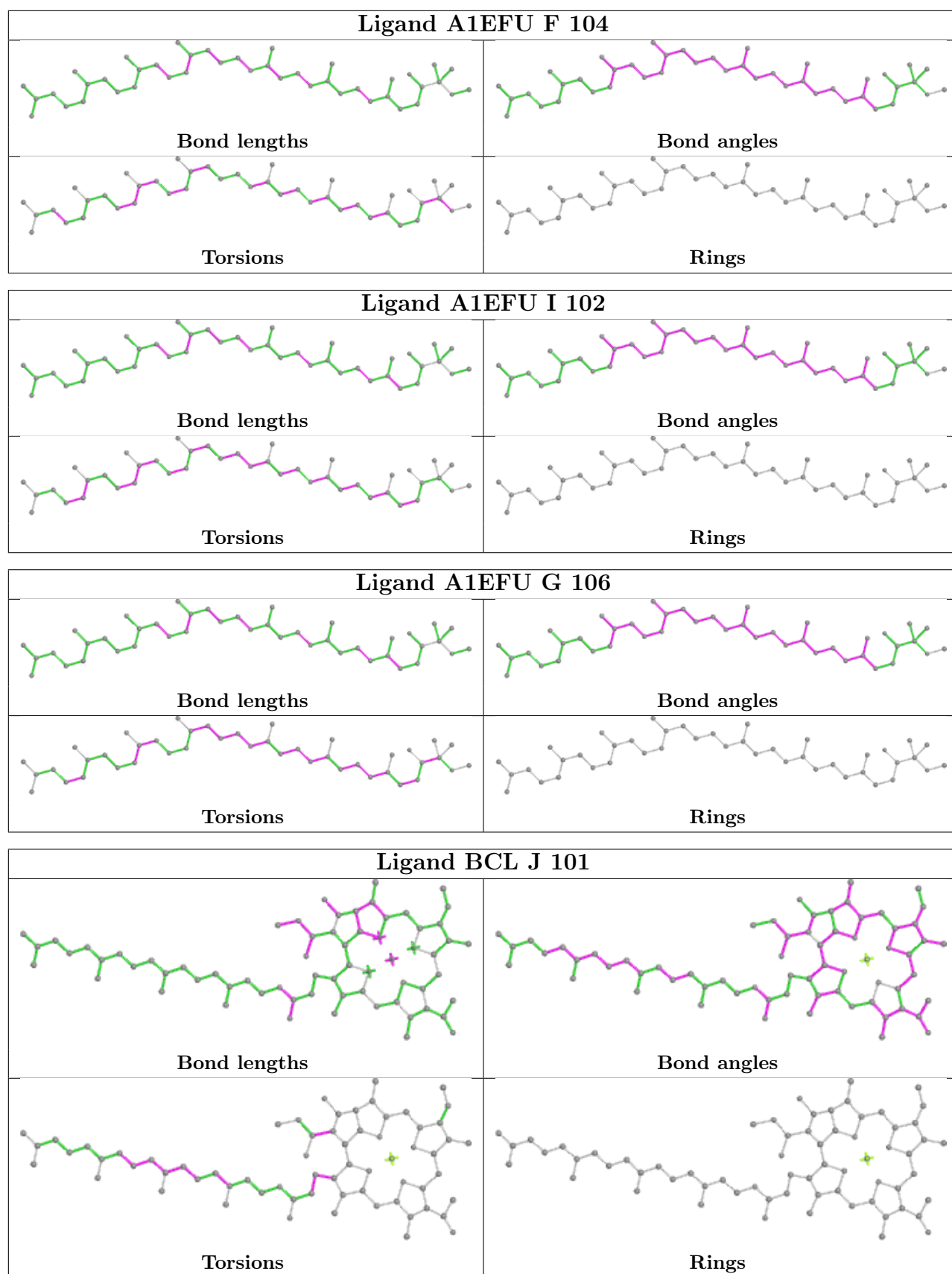


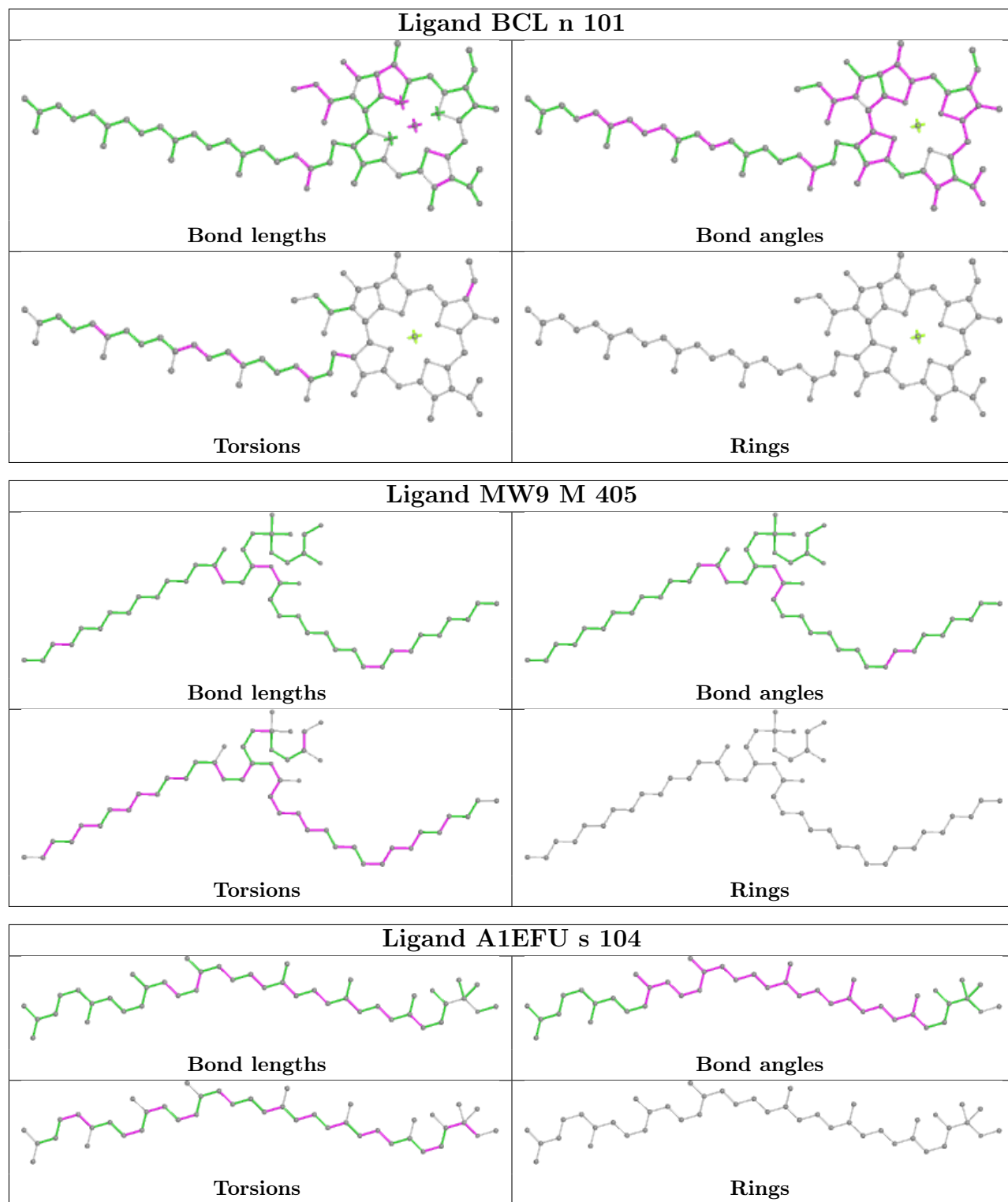




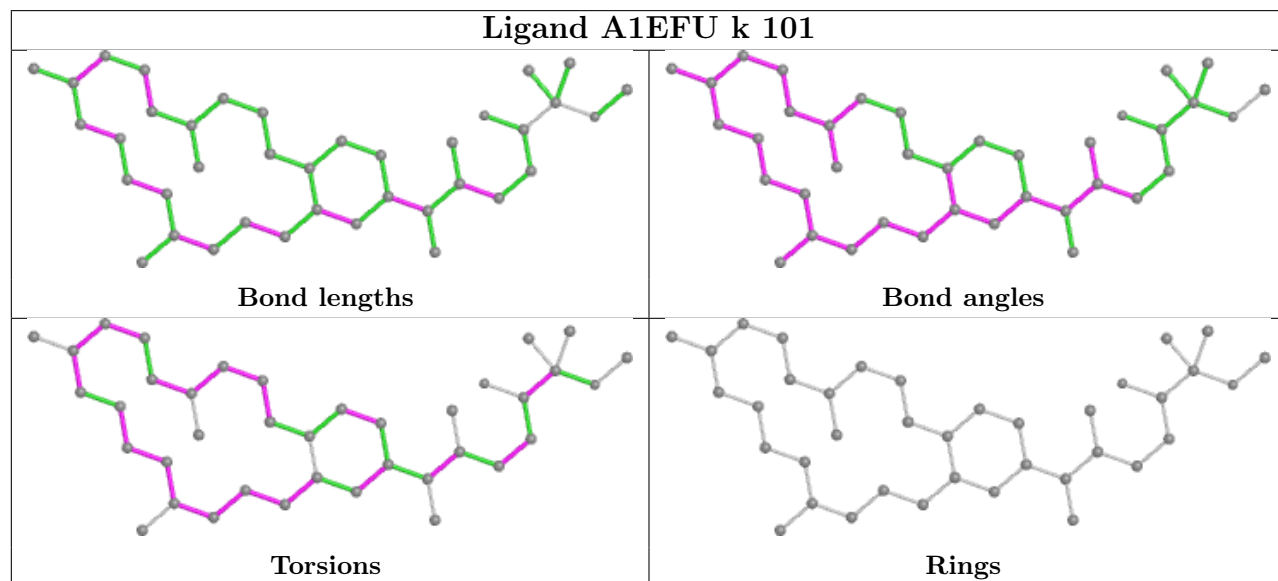
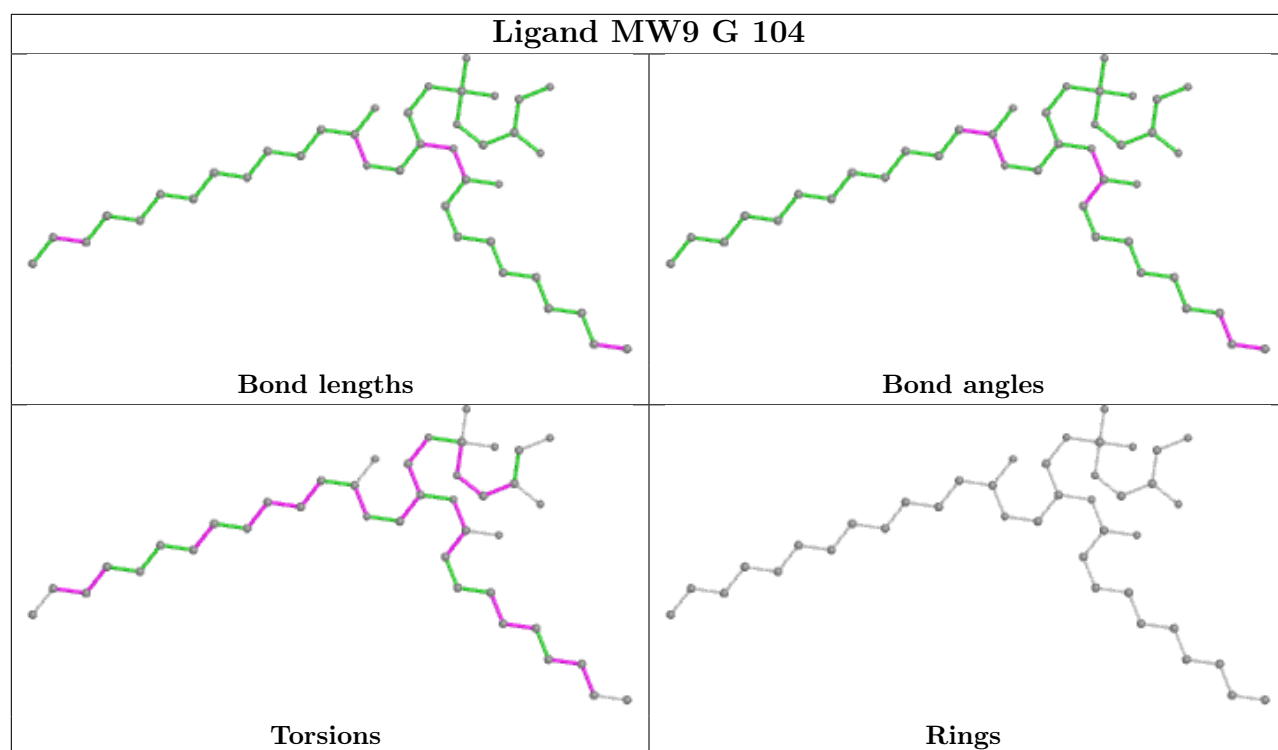


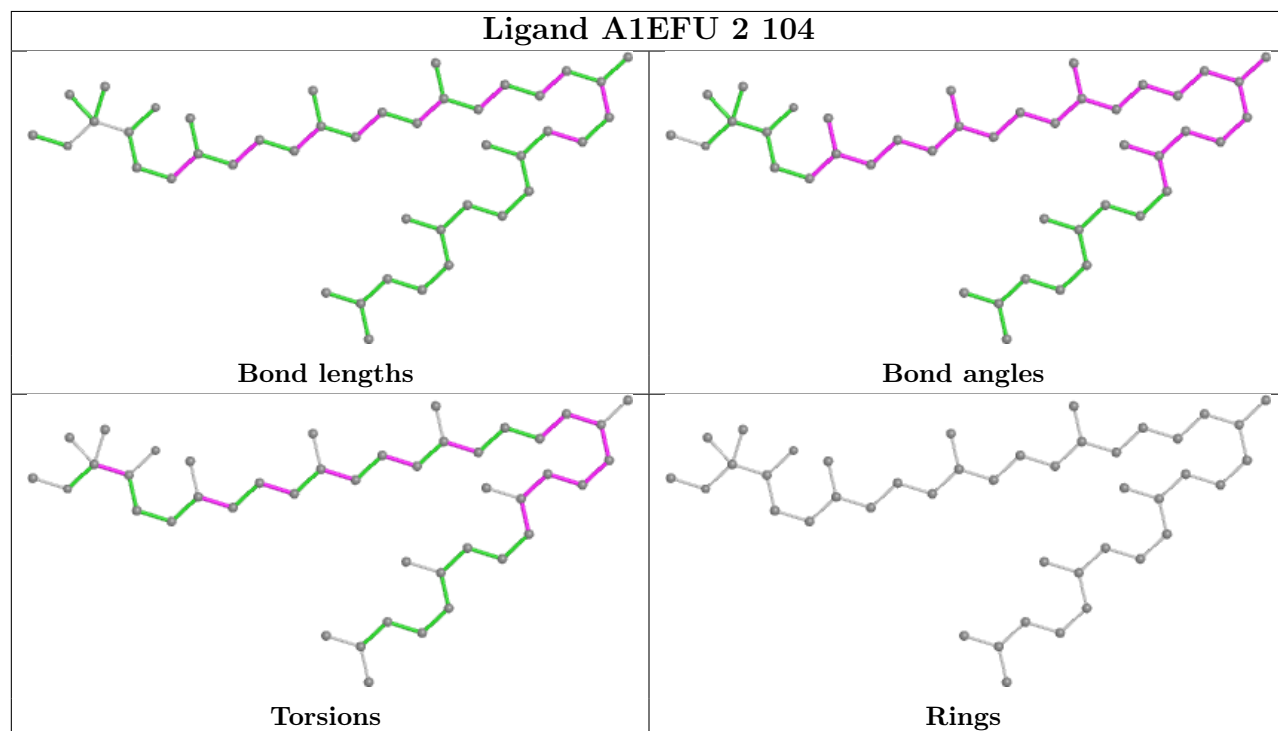
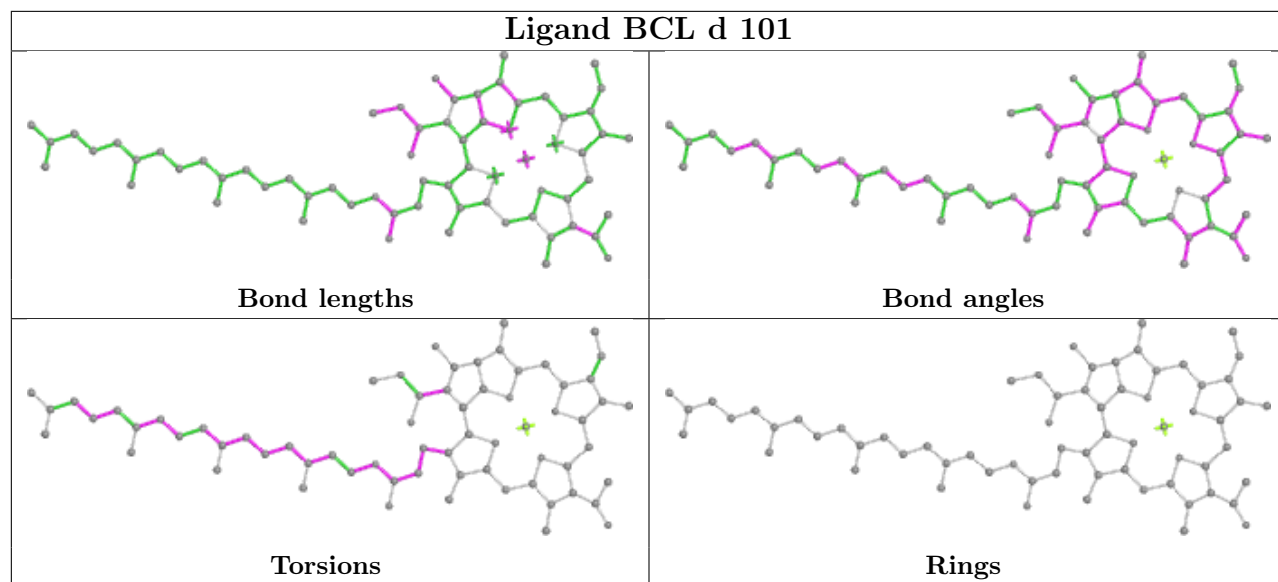


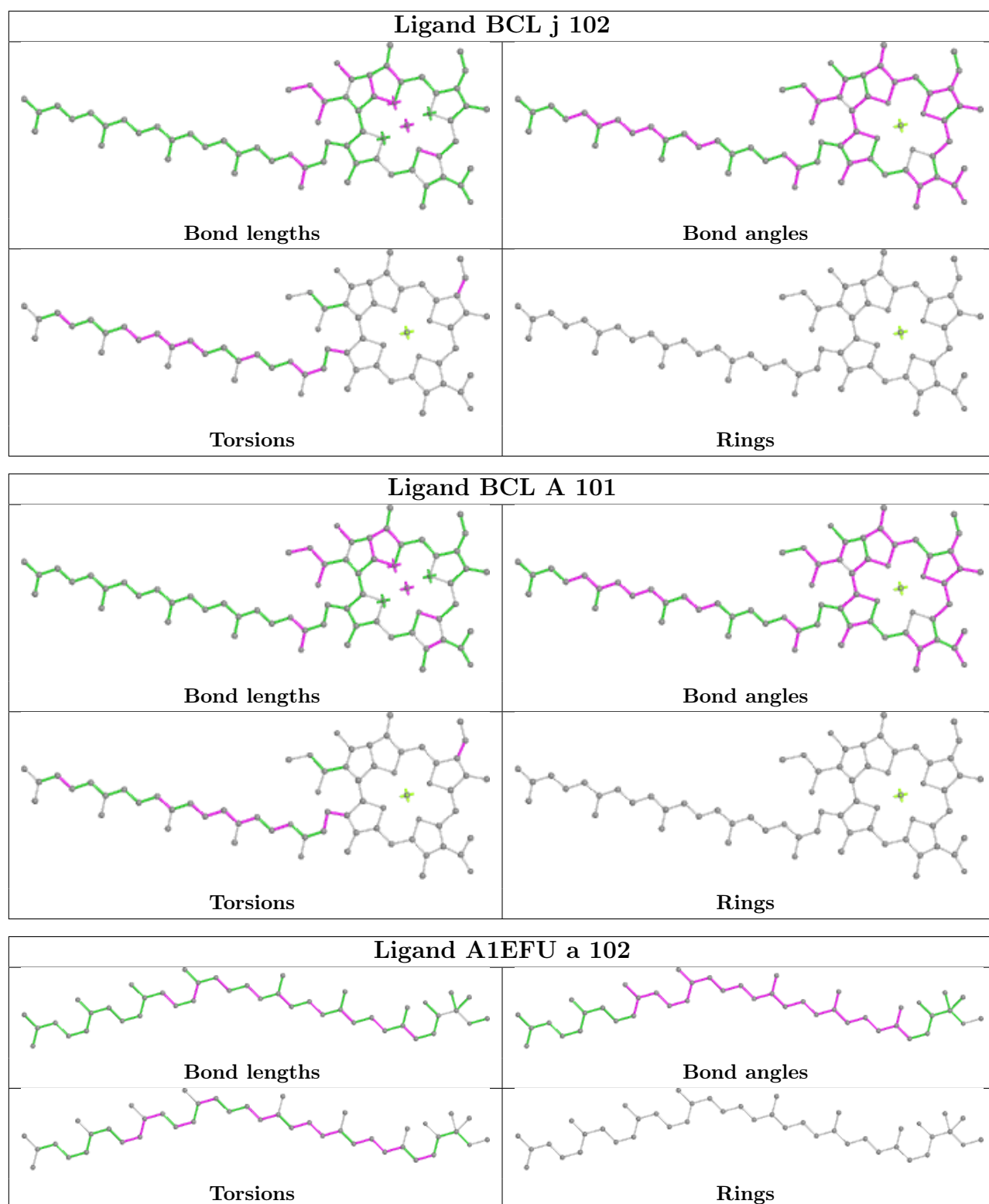


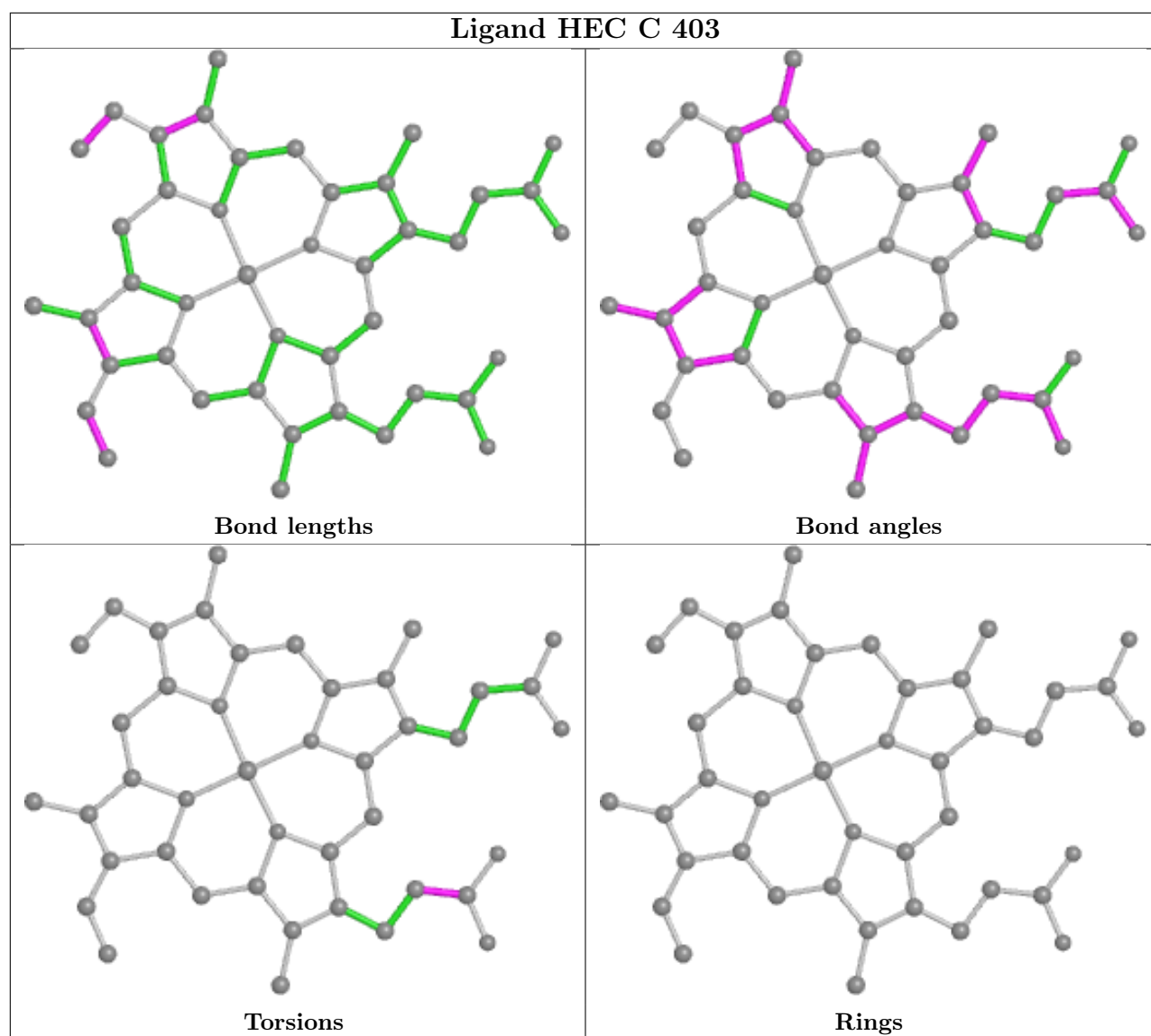












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.