



## Full wwPDB EM Validation Report ⓘ

Oct 28, 2024 – 09:00 am GMT

PDB ID : 7BLZ  
EMDB ID : EMD-12228  
Title : Red alga *C. merolae* Photosystem I  
Authors : Nelson, N.; Klaiman, D.; Hippler, M.  
Deposited on : 2021-01-19  
Resolution : 3.10 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 : 0.0.1.dev113  
Mogul : 1.8.4, CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

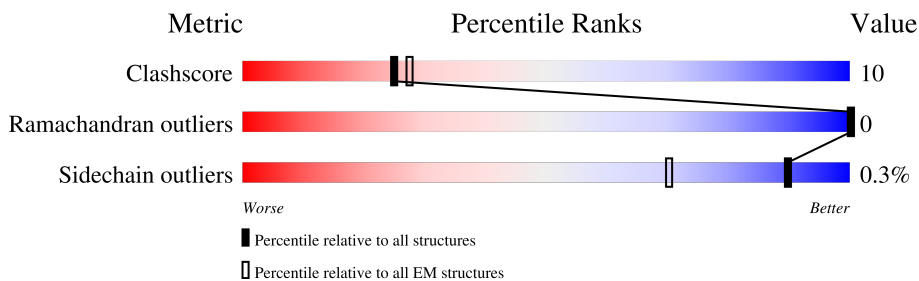
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.10 Å.

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



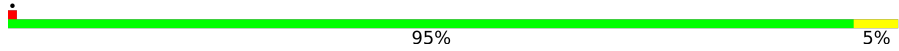


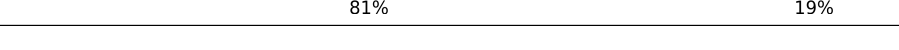

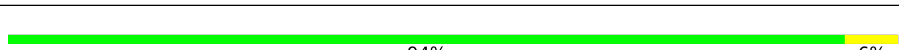
| Metric                | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|--------------------------|--------------------------|
| Clashscore            | 210492                   | 15764                    |
| Ramachandran outliers | 207382                   | 16835                    |
| 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  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 1   | 1     | 173    |                  |
| 2   | 2     | 179    |                  |
| 3   | 3     | 174    |                  |
| 4   | A     | 743    |                  |
| 5   | B     | 731    |                  |
| 6   | C     | 80     |                  |
| 7   | D     | 138    |                  |
| 8   | E     | 61     |                  |

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| Mol | Chain | Length | Quality of chain   |
|-----|-------|--------|--|
| 9   | F     | 155    |  95% 5%  |
| 10  | I     | 31     |  87% 13% |
| 11  | J     | 38     |  89% 11% |
| 12  | K     | 54     |  81% 19% |
| 13  | L     | 136    |  88% 11% |
| 14  | M     | 27     |  93% 7%  |
| 15  | O     | 97     |  94% 6%  |

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 |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 16  | CLA  | 1     | 601 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 602 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 603 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 604 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 605 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 606 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 607 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 608 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 609 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 610 | X         | -        | -       | -                |
| 16  | CLA  | 1     | 611 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 601 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 602 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 603 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 604 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 605 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 606 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 607 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 608 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 609 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 610 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 611 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 612 | X         | -        | -       | -                |
| 16  | CLA  | 2     | 613 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 203 | X         | -        | -       | -                |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 16  | CLA  | 3     | 204 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 205 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 206 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 207 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 208 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 209 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 210 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 211 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 212 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 213 | X         | -        | -       | -                |
| 16  | CLA  | 3     | 214 | X         | -        | -       | -                |
| 16  | CLA  | A     | 802 | X         | -        | -       | -                |
| 16  | CLA  | A     | 803 | X         | -        | -       | -                |
| 16  | CLA  | A     | 804 | X         | -        | -       | -                |
| 16  | CLA  | A     | 805 | X         | -        | -       | -                |
| 16  | CLA  | A     | 806 | X         | -        | -       | -                |
| 16  | CLA  | A     | 807 | X         | -        | -       | -                |
| 16  | CLA  | A     | 808 | X         | -        | -       | -                |
| 16  | CLA  | A     | 809 | X         | -        | -       | -                |
| 16  | CLA  | A     | 810 | X         | -        | -       | -                |
| 16  | CLA  | A     | 811 | X         | -        | -       | -                |
| 16  | CLA  | A     | 812 | X         | -        | -       | -                |
| 16  | CLA  | A     | 813 | X         | -        | -       | -                |
| 16  | CLA  | A     | 814 | X         | -        | -       | -                |
| 16  | CLA  | A     | 815 | X         | -        | -       | -                |
| 16  | CLA  | A     | 816 | X         | -        | -       | -                |
| 16  | CLA  | A     | 817 | X         | -        | -       | -                |
| 16  | CLA  | A     | 818 | X         | -        | -       | -                |
| 16  | CLA  | A     | 819 | X         | -        | -       | -                |
| 16  | CLA  | A     | 820 | X         | -        | -       | -                |
| 16  | CLA  | A     | 821 | X         | -        | -       | -                |
| 16  | CLA  | A     | 822 | X         | -        | -       | -                |
| 16  | CLA  | A     | 823 | X         | -        | -       | -                |
| 16  | CLA  | A     | 824 | X         | -        | -       | -                |
| 16  | CLA  | A     | 825 | X         | -        | -       | -                |
| 16  | CLA  | A     | 826 | X         | -        | -       | -                |
| 16  | CLA  | A     | 827 | X         | -        | -       | -                |
| 16  | CLA  | A     | 828 | X         | -        | -       | -                |
| 16  | CLA  | A     | 829 | X         | -        | -       | -                |
| 16  | CLA  | A     | 830 | X         | -        | -       | -                |
| 16  | CLA  | A     | 831 | X         | -        | -       | -                |
| 16  | CLA  | A     | 832 | X         | -        | -       | -                |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 16  | CLA  | A     | 833 | X         | -        | -       | -                |
| 16  | CLA  | A     | 834 | X         | -        | -       | -                |
| 16  | CLA  | A     | 835 | X         | -        | -       | -                |
| 16  | CLA  | A     | 836 | X         | -        | -       | -                |
| 16  | CLA  | A     | 837 | X         | -        | -       | -                |
| 16  | CLA  | A     | 838 | X         | -        | -       | -                |
| 16  | CLA  | A     | 839 | X         | -        | -       | -                |
| 16  | CLA  | A     | 854 | X         | -        | -       | -                |
| 16  | CLA  | A     | 855 | X         | -        | -       | -                |
| 16  | CLA  | A     | 856 | X         | -        | -       | -                |
| 16  | CLA  | B     | 801 | X         | -        | -       | -                |
| 16  | CLA  | B     | 802 | X         | -        | -       | -                |
| 16  | CLA  | B     | 803 | X         | -        | -       | -                |
| 16  | CLA  | B     | 804 | X         | -        | -       | -                |
| 16  | CLA  | B     | 805 | X         | -        | -       | -                |
| 16  | CLA  | B     | 806 | X         | -        | -       | -                |
| 16  | CLA  | B     | 807 | X         | -        | -       | -                |
| 16  | CLA  | B     | 808 | X         | -        | -       | -                |
| 16  | CLA  | B     | 809 | X         | -        | -       | -                |
| 16  | CLA  | B     | 810 | X         | -        | -       | -                |
| 16  | CLA  | B     | 811 | X         | -        | -       | -                |
| 16  | CLA  | B     | 812 | X         | -        | -       | -                |
| 16  | CLA  | B     | 813 | X         | -        | -       | -                |
| 16  | CLA  | B     | 814 | X         | -        | -       | -                |
| 16  | CLA  | B     | 815 | X         | -        | -       | -                |
| 16  | CLA  | B     | 816 | X         | -        | -       | -                |
| 16  | CLA  | B     | 817 | X         | -        | -       | -                |
| 16  | CLA  | B     | 818 | X         | -        | -       | -                |
| 16  | CLA  | B     | 819 | X         | -        | -       | -                |
| 16  | CLA  | B     | 820 | X         | -        | -       | -                |
| 16  | CLA  | B     | 821 | X         | -        | -       | -                |
| 16  | CLA  | B     | 822 | X         | -        | -       | -                |
| 16  | CLA  | B     | 823 | X         | -        | -       | -                |
| 16  | CLA  | B     | 824 | X         | -        | -       | -                |
| 16  | CLA  | B     | 825 | X         | -        | -       | -                |
| 16  | CLA  | B     | 826 | X         | -        | -       | -                |
| 16  | CLA  | B     | 827 | X         | -        | -       | -                |
| 16  | CLA  | B     | 828 | X         | -        | -       | -                |
| 16  | CLA  | B     | 829 | X         | -        | -       | -                |
| 16  | CLA  | B     | 830 | X         | -        | -       | -                |
| 16  | CLA  | B     | 831 | X         | -        | -       | -                |
| 16  | CLA  | B     | 832 | X         | -        | -       | -                |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 16  | CLA  | B     | 833 | X         | -        | -       | -                |
| 16  | CLA  | B     | 834 | X         | -        | -       | -                |
| 16  | CLA  | B     | 835 | X         | -        | -       | -                |
| 16  | CLA  | B     | 836 | X         | -        | -       | -                |
| 16  | CLA  | B     | 837 | X         | -        | -       | -                |
| 16  | CLA  | B     | 838 | X         | -        | -       | -                |
| 16  | CLA  | F     | 201 | X         | -        | -       | -                |
| 16  | CLA  | F     | 202 | X         | -        | -       | -                |
| 16  | CLA  | F     | 204 | X         | -        | -       | -                |
| 16  | CLA  | F     | 205 | X         | -        | -       | -                |
| 16  | CLA  | I     | 101 | X         | -        | -       | -                |
| 16  | CLA  | I     | 102 | X         | -        | -       | -                |
| 16  | CLA  | J     | 102 | X         | -        | -       | -                |
| 16  | CLA  | K     | 101 | X         | -        | -       | -                |
| 16  | CLA  | K     | 102 | X         | -        | -       | -                |
| 16  | CLA  | L     | 201 | X         | -        | -       | -                |
| 16  | CLA  | L     | 203 | X         | -        | -       | -                |
| 16  | CLA  | L     | 204 | X         | -        | -       | -                |
| 16  | CLA  | L     | 205 | X         | -        | -       | -                |
| 16  | CLA  | O     | 201 | X         | -        | -       | -                |
| 16  | CLA  | O     | 202 | X         | -        | -       | -                |
| 16  | CLA  | O     | 203 | X         | -        | -       | -                |
| 16  | CLA  | O     | 204 | X         | -        | -       | -                |
| 17  | C7Z  | 1     | 612 | X         | -        | -       | -                |
| 17  | C7Z  | 1     | 614 | X         | -        | -       | -                |
| 17  | C7Z  | 1     | 615 | X         | -        | -       | -                |
| 17  | C7Z  | 1     | 616 | X         | -        | -       | -                |
| 17  | C7Z  | 2     | 614 | X         | -        | -       | -                |
| 17  | C7Z  | 2     | 615 | X         | -        | -       | -                |
| 17  | C7Z  | 3     | 201 | X         | -        | -       | -                |
| 17  | C7Z  | 3     | 215 | X         | -        | -       | -                |
| 17  | C7Z  | 3     | 216 | X         | -        | -       | -                |
| 17  | C7Z  | 3     | 217 | X         | -        | -       | -                |
| 17  | C7Z  | 3     | 218 | X         | -        | -       | -                |
| 17  | C7Z  | A     | 843 | X         | -        | -       | -                |
| 17  | C7Z  | J     | 104 | X         | -        | -       | -                |
| 18  | RRX  | 1     | 613 | X         | -        | -       | -                |
| 18  | RRX  | 2     | 616 | X         | -        | -       | -                |
| 18  | RRX  | A     | 847 | X         | -        | -       | -                |
| 18  | RRX  | J     | 103 | X         | X        | -       | -                |
| 18  | RRX  | K     | 103 | X         | -        | -       | -                |
| 20  | ERG  | 1     | 618 | X         | -        | -       | -                |

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| <b>Mol</b> | <b>Type</b> | <b>Chain</b> | <b>Res</b> | <b>Chirality</b> | <b>Geometry</b> | <b>Clashes</b> | <b>Electron density</b> |
|------------|-------------|--------------|------------|------------------|-----------------|----------------|-------------------------|
| 20         | ERG         | 2            | 618        | X                | -               | -              | -                       |
| 20         | ERG         | 2            | 621        | X                | -               | -              | -                       |
| 22         | PGT         | 2            | 619        | X                | -               | -              | -                       |
| 22         | PGT         | B            | 848        | X                | -               | -              | -                       |
| 26         | CL0         | A            | 801        | X                | -               | -              | -                       |

## 2 Entry composition i

There are 33 unique types of molecules in this entry. The entry contains 68571 atoms, of which 34687 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 Similar to light harvesting protein.

| Mol | Chain | Residues | Atoms |     |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
|     |       |          | Total | C   | H    | N   | O   | S |         |       |
| 1   | 1     | 173      | 2734  | 906 | 1353 | 232 | 235 | 8 | 0       | 0     |

- Molecule 2 is a protein called Similar to chlorophyll a/b-binding protein, CP24.

| Mol | Chain | Residues | Atoms |     |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
|     |       |          | Total | C   | H    | N   | O   | S |         |       |
| 2   | 2     | 179      | 2780  | 906 | 1385 | 237 | 244 | 8 | 0       | 0     |

- Molecule 3 is a protein called Lhcr3.

| Mol | Chain | Residues | Atoms |     |      |     |     |   | AltConf | Trace |
|-----|-------|----------|-------|-----|------|-----|-----|---|---------|-------|
|     |       |          | Total | C   | H    | N   | O   | S |         |       |
| 3   | 3     | 174      | 2689  | 871 | 1348 | 226 | 237 | 7 | 0       | 0     |

- Molecule 4 is a protein called Photosystem I P700 chlorophyll a apoprotein A1.

| Mol | Chain | Residues | Atoms |      |      |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|----|---------|-------|
|     |       |          | Total | C    | H    | N   | O   | S  |         |       |
| 4   | A     | 743      | 11555 | 3802 | 5740 | 999 | 987 | 27 | 0       | 0     |

- Molecule 5 is a protein called Photosystem I P700 chlorophyll a apoprotein A2.

| Mol | Chain | Residues | Atoms |      |      |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|------|------|-----|-----|----|---------|-------|
|     |       |          | Total | C    | H    | N   | O   | S  |         |       |
| 5   | B     | 731      | 11464 | 3827 | 5645 | 982 | 991 | 19 | 0       | 0     |

- Molecule 6 is a protein called Photosystem I iron-sulfur center.

| Mol | Chain | Residues | Atoms |     |     |     |     |    | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|----|---------|-------|
|     |       |          | Total | C   | H   | N   | O   | S  |         |       |
| 6   | C     | 80       | 1173  | 367 | 576 | 104 | 114 | 12 | 0       | 0     |



- Molecule 7 is a protein called Photosystem I p700 chlorophyll A apoprotein A2.

| Mol | Chain | Residues | Atoms |     |      |     |     | AltConf | Trace |   |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
|     |       |          | Total | C   | H    | N   | O   |         |       | S |
| 7   | D     | 138      | 2187  | 694 | 1093 | 192 | 203 | 5       | 0     | 0 |

- Molecule 8 is a protein called Photosystem I iron-sulfur center subunit VII.

| Mol | Chain | Residues | Atoms |     |     |    |    | AltConf | Trace |   |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
|     |       |          | Total | C   | H   | N  | O  |         |       | S |
| 8   | E     | 61       | 1002  | 322 | 509 | 79 | 92 |         | 0     | 0 |

- Molecule 9 is a protein called PSI-F.

| Mol | Chain | Residues | Atoms |     |      |     |     | AltConf | Trace |   |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
|     |       |          | Total | C   | H    | N   | O   |         |       | S |
| 9   | F     | 155      | 2513  | 816 | 1243 | 215 | 235 | 4       | 0     | 0 |

- Molecule 10 is a protein called Photosystem I reaction center subunit VIII.

| Mol | Chain | Residues | Atoms |     |     |    |    | AltConf | Trace |   |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
|     |       |          | Total | C   | H   | N  | O  |         |       | S |
| 10  | I     | 31       | 483   | 158 | 253 | 32 | 39 | 1       | 0     | 0 |

- Molecule 11 is a protein called Photosystem I reaction center subunit IX.

| Mol | Chain | Residues | Atoms |     |     |    |    | AltConf | Trace |   |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
|     |       |          | Total | C   | H   | N  | O  |         |       | S |
| 11  | J     | 38       | 639   | 214 | 327 | 46 | 51 | 1       | 0     | 0 |

- Molecule 12 is a protein called PSI-K.

| Mol | Chain | Residues | Atoms |     |     |    |    | AltConf | Trace |   |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
|     |       |          | Total | C   | H   | N  | O  |         |       | S |
| 12  | K     | 54       | 809   | 253 | 419 | 65 | 68 | 4       | 0     | 0 |

- Molecule 13 is a protein called Photosystem I reaction center subunit XI.

| Mol | Chain | Residues | Atoms |     |      |     |     | AltConf | Trace |   |
|-----|-------|----------|-------|-----|------|-----|-----|---------|-------|---|
|     |       |          | Total | C   | H    | N   | O   |         |       | S |
| 13  | L     | 136      | 2096  | 682 | 1057 | 170 | 185 | 2       | 0     | 0 |

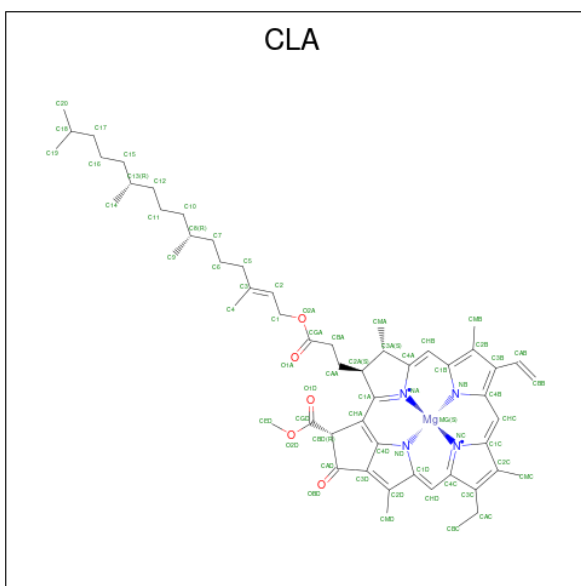
- Molecule 14 is a protein called Photosystem I reaction center subunit XII.

| Mol | Chain | Residues | Atoms |     |     |    |    | AltConf | Trace |   |
|-----|-------|----------|-------|-----|-----|----|----|---------|-------|---|
|     |       |          | Total | C   | H   | N  | O  |         |       | S |
| 14  | M     | 27       | 430   | 136 | 226 | 32 | 34 | 2       | 0     | 0 |

- Molecule 15 is a protein called PsaO.

| Mol | Chain | Residues | Atoms |     |     |     |     | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|-----|---------|-------|
|     |       |          | Total | C   | H   | N   | O   |         |       |
| 15  | O     | 97       | 1489  | 505 | 742 | 113 | 129 | 0       | 0     |

- Molecule 16 is CHLOROPHYLL A (three-letter code: CLA) (formula:  $C_{55}H_{72}MgN_4O_5$ ).



| Mol | Chain | Residues | Atoms |    |    |    |   | AltConf |   |
|-----|-------|----------|-------|----|----|----|---|---------|---|
|     |       |          | Total | C  | H  | Mg | N |         | O |
| 16  | 1     | 1        | 137   | 55 | 72 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 118   | 49 | 59 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 138   | 55 | 73 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 137   | 55 | 72 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 137   | 55 | 72 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 138   | 55 | 73 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 120   | 50 | 60 | 1  | 4 | 5       | 0 |
| 16  | 1     | 1        | 137   | 55 | 72 | 1  | 4 | 5       | 0 |

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| Mol | Chain | Residues | Atoms        |         |         |         |        |        | AltConf |
|-----|-------|----------|--------------|---------|---------|---------|--------|--------|---------|
|     |       |          | Total        | C       | H       | Mg      | N      | O      |         |
| 16  | 1     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 1     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 1     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>131 | C<br>53 | H<br>68 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 2     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>129 | C<br>53 | H<br>66 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>126 | C<br>52 | H<br>64 | Mg<br>1 | N<br>4 | O<br>5 | 0       |

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| Mol | Chain | Residues | Atoms        |         |         |         |        |        | AltConf |
|-----|-------|----------|--------------|---------|---------|---------|--------|--------|---------|
|     |       |          | Total        | C       | H       | Mg      | N      | O      |         |
| 16  | 3     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>113 | C<br>48 | H<br>55 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>79  | C<br>36 | H<br>33 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | 3     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |

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| Mol | Chain | Residues | Atoms        |         |         |         |        |        | AltConf |
|-----|-------|----------|--------------|---------|---------|---------|--------|--------|---------|
|     |       |          | Total        | C       | H       | Mg      | N      | O      |         |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |

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| Mol | Chain | Residues | Atoms        |         |         |         |        |        | AltConf |
|-----|-------|----------|--------------|---------|---------|---------|--------|--------|---------|
|     |       |          | Total        | C       | H       | Mg      | N      | O      |         |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | A     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>105 | C<br>45 | H<br>50 | Mg<br>1 | N<br>4 | O<br>5 | 0       |

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| Mol | Chain | Residues | Atoms        |         |         |         |        |        | AltConf |
|-----|-------|----------|--------------|---------|---------|---------|--------|--------|---------|
|     |       |          | Total        | C       | H       | Mg      | N      | O      |         |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>138 | C<br>55 | H<br>73 | Mg<br>1 | N<br>4 | O<br>5 | 0       |
| 16  | B     | 1        | Total<br>137 | C<br>55 | H<br>72 | Mg<br>1 | N<br>4 | O<br>5 | 0       |

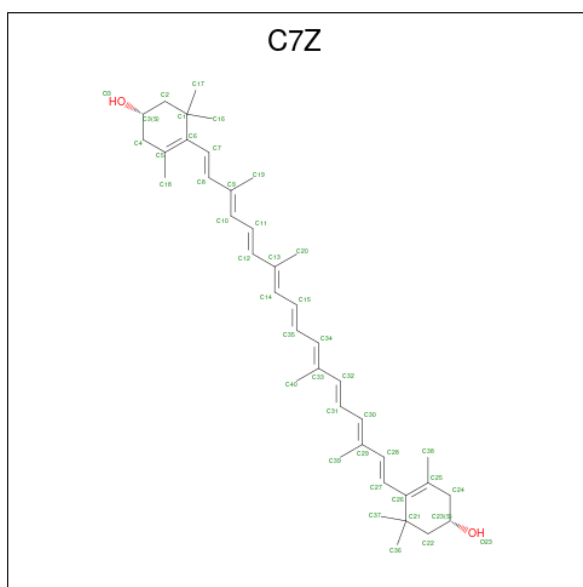
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| Mol | Chain | Residues | Atoms |    |    |    |   |   | AltConf |
|-----|-------|----------|-------|----|----|----|---|---|---------|
|     |       |          | Total | C  | H  | Mg | N | O |         |
| 16  | B     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | B     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | F     | 1        | 123   | 51 | 62 | 1  | 4 | 5 | 0       |
| 16  | F     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | F     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | F     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |
| 16  | I     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | I     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | J     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | K     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |
| 16  | K     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | L     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | L     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | L     | 1        | 138   | 55 | 73 | 1  | 4 | 5 | 0       |
| 16  | L     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |
| 16  | O     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |
| 16  | O     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |
| 16  | O     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |
| 16  | O     | 1        | 137   | 55 | 72 | 1  | 4 | 5 | 0       |

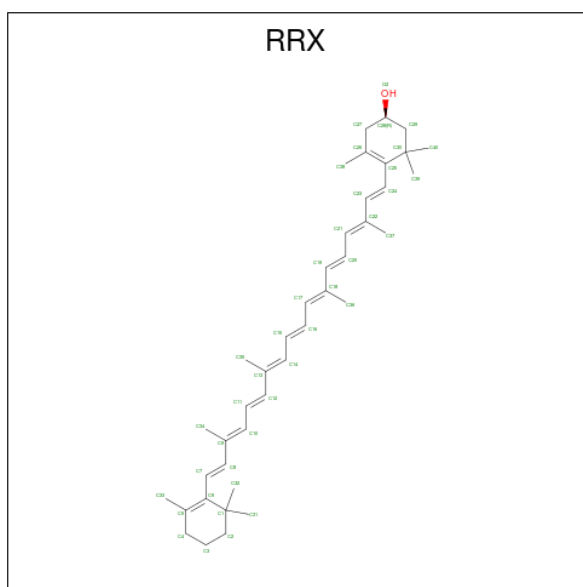
- Molecule 17 is (1 {S})-3,5,5-trimethyl-4-[(1 {E},3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E},17 {E})-3,7,12,16-tetramethyl-18-[(4 {S})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]octadeca-1,3,5,7,9,11,13,15,17-nonaenyl]cyclohex-3-en-1-ol (three-letter code: C7Z) (formula: C<sub>40</sub>H<sub>56</sub>O<sub>2</sub>).





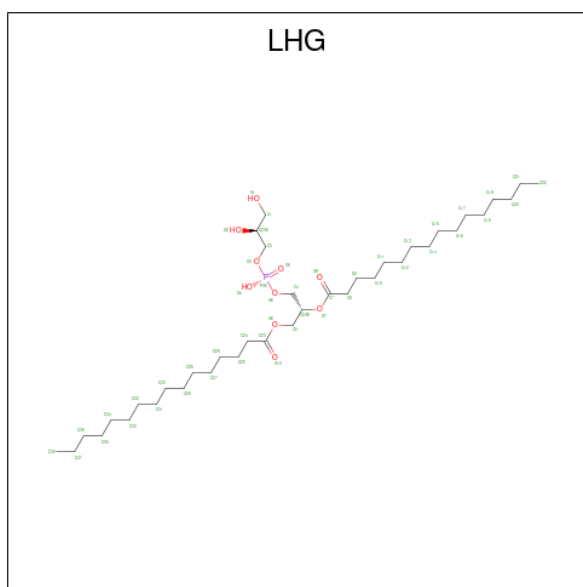
| Mol | Chain | Residues | Atoms |    |   | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 17  | 1     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 1     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 1     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 1     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 2     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 2     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 3     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 3     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 3     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | 3     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | A     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |
| 17  | J     | 1        | Total | C  | O | 0       |
|     |       |          | 42    | 40 | 2 |         |

- Molecule 18 is (3R)-beta,beta-caroten-3-ol (three-letter code: RRX) (formula: C<sub>40</sub>H<sub>56</sub>O).



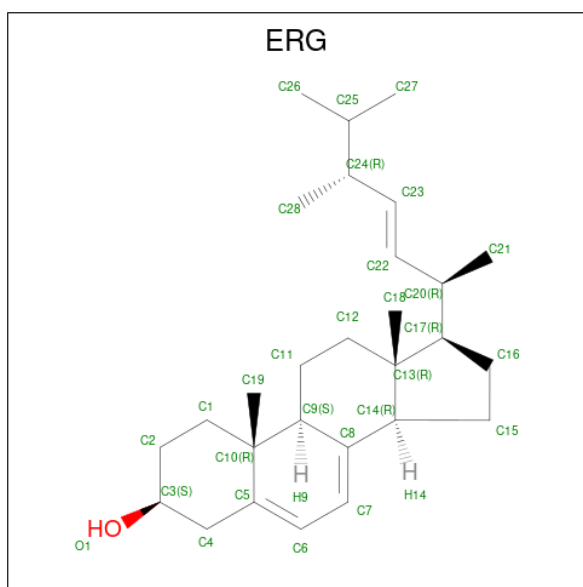
| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
|     |       |          | Total | C  | H  | O |         |
| 18  | 1     | 1        | 97    | 40 | 56 | 1 | 0       |
| 18  | 2     | 1        | 97    | 40 | 56 | 1 | 0       |
| 18  | A     | 1        | 96    | 40 | 55 | 1 | 0       |
| 18  | J     | 1        | 97    | 40 | 56 | 1 | 0       |
| 18  | K     | 1        | 97    | 40 | 56 | 1 | 0       |

- Molecule 19 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula:  $C_{38}H_{75}O_{10}P$ ).



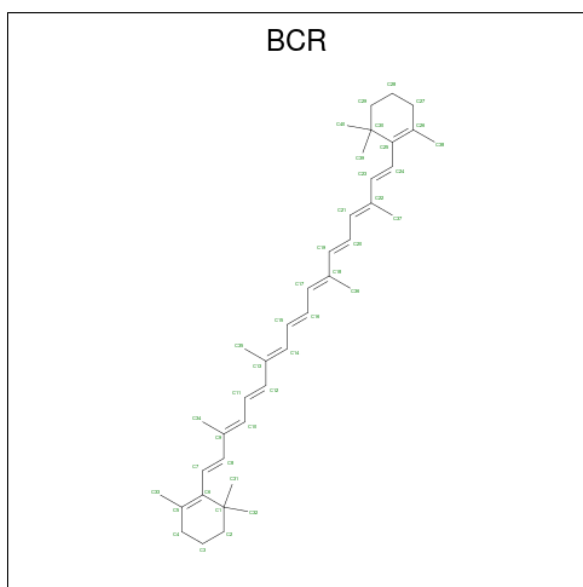
| Mol | Chain | Residues | Atoms |    |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|----|---|---------|
|     |       |          | Total | C  | H  | O  | P |         |
| 19  | 1     | 1        | 123   | 38 | 74 | 10 | 1 | 0       |
| 19  | 2     | 1        | 123   | 38 | 74 | 10 | 1 | 0       |
| 19  | 3     | 1        | 123   | 38 | 74 | 10 | 1 | 0       |
| 19  | A     | 1        | 123   | 38 | 74 | 10 | 1 | 0       |
| 19  | A     | 1        | 123   | 38 | 74 | 10 | 1 | 0       |
| 19  | B     | 1        | 108   | 34 | 63 | 10 | 1 | 0       |

- Molecule 20 is ERGOSTEROL (three-letter code: ERG) (formula:  $C_{28}H_{44}O$ ).



| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
|     |       |          | Total | C  | H  | O |         |
| 20  | 1     | 1        | 67    | 28 | 38 | 1 | 0       |
| 20  | 2     | 1        | 67    | 28 | 38 | 1 | 0       |
| 20  | 2     | 1        | 67    | 28 | 38 | 1 | 0       |

- Molecule 21 is BETA-CAROTENE (three-letter code: BCR) (formula:  $C_{40}H_{56}$ ).



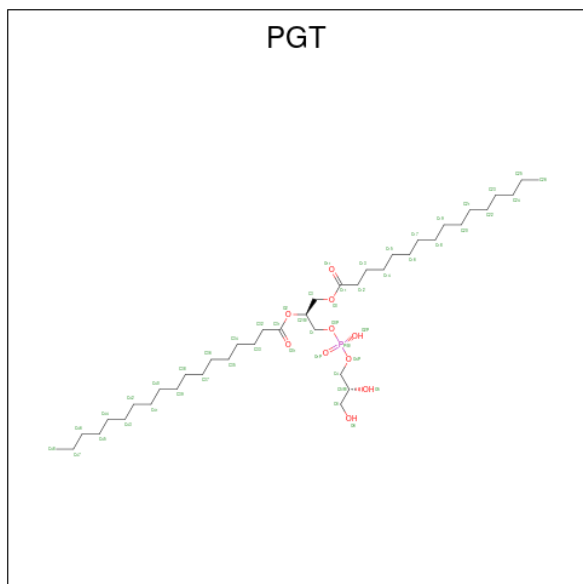
| Mol | Chain | Residues | Atoms |    |    | AltConf |
|-----|-------|----------|-------|----|----|---------|
|     |       |          | Total | C  | H  |         |
| 21  | 2     | 1        | 93    | 40 | 53 | 0       |

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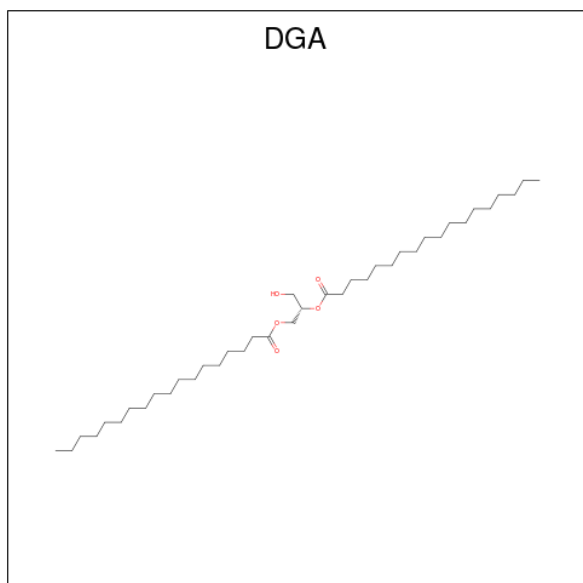
| Mol | Chain | Residues | Atoms |    |    | AltConf |
|-----|-------|----------|-------|----|----|---------|
|     |       |          | Total | C  | H  |         |
| 21  | A     | 1        | 92    | 40 | 52 | 0       |
| 21  | A     | 1        | 92    | 40 | 52 | 0       |
| 21  | A     | 1        | 92    | 40 | 52 | 0       |
| 21  | A     | 1        | 92    | 40 | 52 | 0       |
| 21  | A     | 1        | 92    | 40 | 52 | 0       |
| 21  | B     | 1        | 92    | 40 | 52 | 0       |
| 21  | B     | 1        | 92    | 40 | 52 | 0       |
| 21  | B     | 1        | 91    | 40 | 51 | 0       |
| 21  | B     | 1        | 91    | 40 | 51 | 0       |
| 21  | B     | 1        | 92    | 40 | 52 | 0       |
| 21  | B     | 1        | 92    | 40 | 52 | 0       |
| 21  | B     | 1        | 92    | 40 | 52 | 0       |
| 21  | B     | 1        | 91    | 40 | 51 | 0       |
| 21  | F     | 1        | 92    | 40 | 52 | 0       |
| 21  | F     | 1        | 92    | 40 | 52 | 0       |
| 21  | I     | 1        | 91    | 40 | 51 | 0       |
| 21  | K     | 1        | 91    | 40 | 51 | 0       |
| 21  | L     | 1        | 92    | 40 | 52 | 0       |
| 21  | L     | 1        | 92    | 40 | 52 | 0       |
| 21  | L     | 1        | 92    | 40 | 52 | 0       |
| 21  | O     | 1        | 92    | 40 | 52 | 0       |

- Molecule 22 is (1S)-2-{{[(2R)-2,3-DIHYDROXYPROPYL]OXY}(HYDROXY)PHOSPHORYL]OXY}-1-[(PALMITOYLOXY)METHYL]ETHYL STEARATE (three-letter code: PGT) (formula: C<sub>40</sub>H<sub>79</sub>O<sub>10</sub>P).



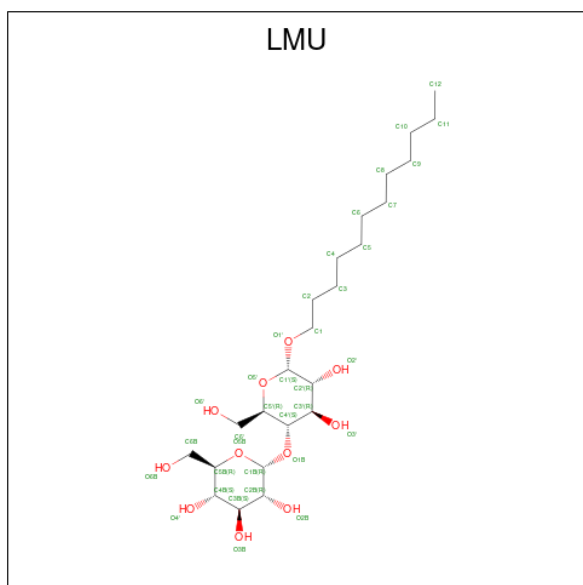
| Mol | Chain | Residues | Atoms |    |    |    | AltConf |   |
|-----|-------|----------|-------|----|----|----|---------|---|
|     |       |          | Total | C  | H  | O  |         | P |
| 22  | 2     | 1        | Total | C  | H  | O  | P       | 0 |
|     |       |          | 81    | 24 | 46 | 10 | 1       |   |
| 22  | B     | 1        | Total | C  | H  | O  | P       | 0 |
|     |       |          | 81    | 24 | 46 | 10 | 1       |   |

- Molecule 23 is DIACYL GLYCEROL (three-letter code: DGA) (formula: C<sub>39</sub>H<sub>76</sub>O<sub>5</sub>).



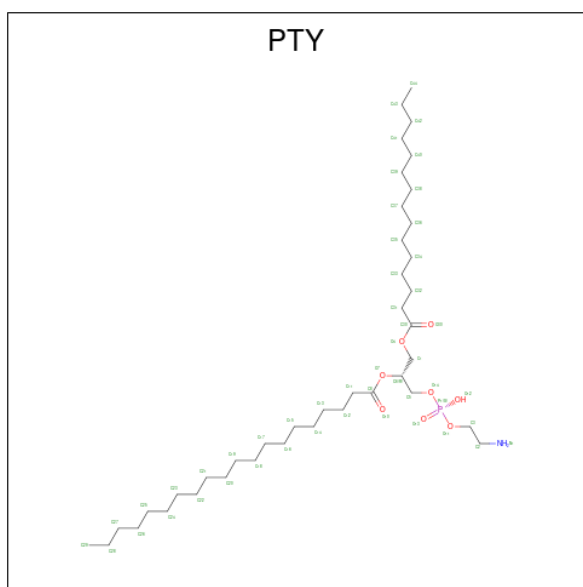
| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| 23  | 2     | 1        | Total | C  | H  | O | 0       |
|     |       |          | 120   | 39 | 76 | 5 |         |
| 23  | J     | 1        | Total | C  | H  | O | 0       |
|     |       |          | 120   | 39 | 76 | 5 |         |

- Molecule 24 is DODECYL-ALPHA-D-MALTOSE (three-letter code: LMU) (formula:  $C_{24}H_{46}O_{11}$ ).



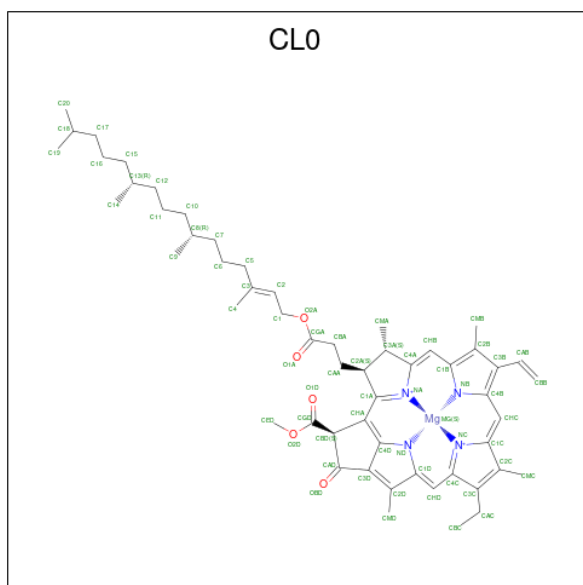
| Mol | Chain | Residues | Atoms |    |    |    | AltConf |
|-----|-------|----------|-------|----|----|----|---------|
| 24  | 3     | 1        | Total | C  | H  | O  | 0       |
|     |       |          | 81    | 24 | 46 | 11 |         |
| 24  | A     | 1        | Total | C  | H  | O  | 0       |
|     |       |          | 81    | 24 | 46 | 11 |         |

- Molecule 25 is PHOSPHATIDYLETHANOLAMINE (three-letter code: PTY) (formula:  $C_{40}H_{80}NO_8P$ ).



| Mol | Chain | Residues | Atoms |    |    |   |   | AltConf |   |
|-----|-------|----------|-------|----|----|---|---|---------|---|
|     |       |          | Total | C  | H  | N | O |         | P |
| 25  | 3     | 1        | Total | C  | H  | N | O | P       | 0 |
|     |       |          | 129   | 40 | 79 | 1 | 8 | 1       |   |
| 25  | 3     | 1        | Total | C  | H  | N | O | P       | 0 |
|     |       |          | 129   | 40 | 79 | 1 | 8 | 1       |   |
| 25  | A     | 1        | Total | C  | H  | N | O | P       | 0 |
|     |       |          | 113   | 37 | 66 | 1 | 8 | 1       |   |
| 25  | L     | 1        | Total | C  | H  | N | O | P       | 0 |
|     |       |          | 129   | 40 | 79 | 1 | 8 | 1       |   |

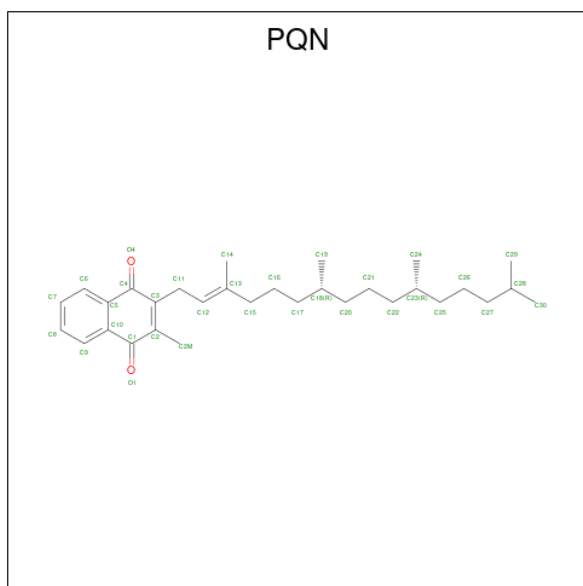
- Molecule 26 is CHLOROPHYLL A ISOMER (three-letter code: CL0) (formula: C<sub>55</sub>H<sub>72</sub>MgN<sub>4</sub>O<sub>5</sub>).





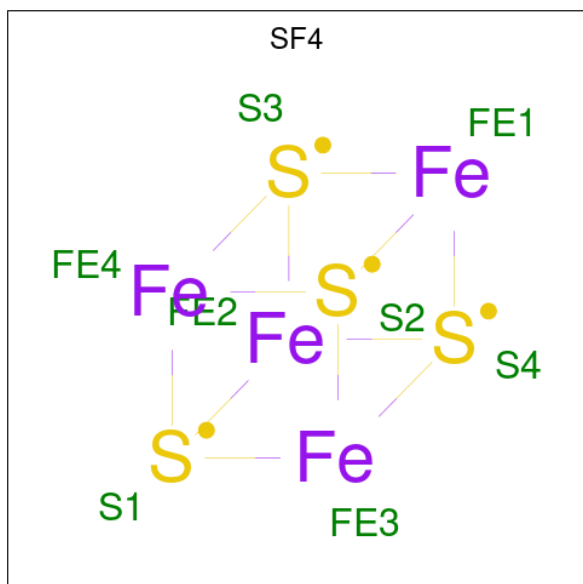
| Mol | Chain | Residues | Atoms |    |    |    |   | AltConf |   |
|-----|-------|----------|-------|----|----|----|---|---------|---|
|     |       |          | Total | C  | H  | Mg | N |         | O |
| 26  | A     | 1        | 138   | 55 | 73 | 1  | 4 | 5       | 0 |

- Molecule 27 is PHYLLOQUINONE (three-letter code: PQN) (formula:  $C_{31}H_{46}O_2$ ).



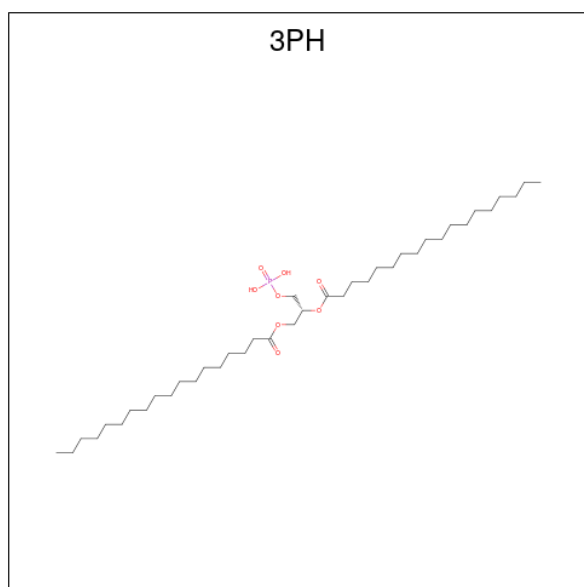
| Mol | Chain | Residues | Atoms |    |    |   | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
|     |       |          | Total | C  | H  | O |         |
| 27  | A     | 1        | 79    | 31 | 46 | 2 | 0       |
| 27  | B     | 1        | 79    | 31 | 46 | 2 | 0       |

- Molecule 28 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula:  $Fe_4S_4$ ).



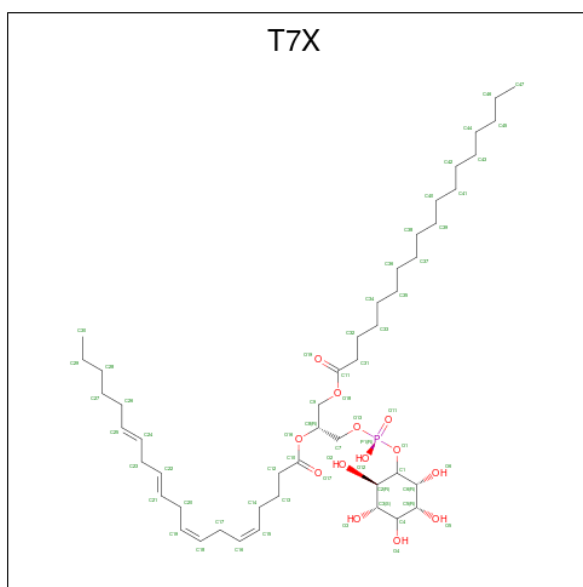
| Mol | Chain | Residues | Atoms |    |   | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 28  | A     | 1        | Total | Fe | S | 0       |
|     |       |          | 8     | 4  | 4 |         |
| 28  | C     | 1        | Total | Fe | S | 0       |
|     |       |          | 8     | 4  | 4 |         |
| 28  | C     | 1        | Total | Fe | S | 0       |
|     |       |          | 8     | 4  | 4 |         |

- Molecule 29 is 1,2-DIACYL-GLYCEROL-3-SN-PHOSPHATE (three-letter code: 3PH) (formula:  $C_{39}H_{77}O_8P$ ).



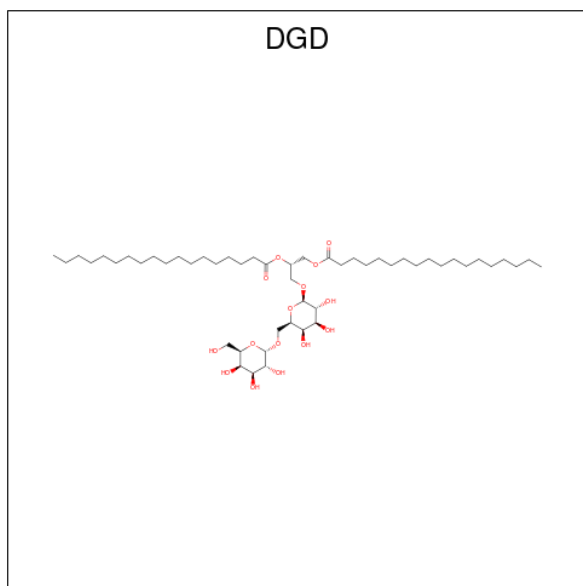
| Mol | Chain | Residues | Atoms |    |    |   |   | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| 29  | A     | 1        | Total | C  | H  | O | P | 0       |
|     |       |          | 123   | 39 | 75 | 8 | 1 |         |
| 29  | B     | 1        | Total | C  | H  | O | P | 0       |
|     |       |          | 123   | 39 | 75 | 8 | 1 |         |
| 29  | J     | 1        | Total | C  | H  | O | P | 0       |
|     |       |          | 123   | 39 | 75 | 8 | 1 |         |

- Molecule 30 is Phosphatidylinositol (three-letter code: T7X) (formula:  $C_{47}H_{83}O_{13}P$ ).



| Mol | Chain | Residues | Atoms |    |    |    | AltConf |   |
|-----|-------|----------|-------|----|----|----|---------|---|
|     |       |          | Total | C  | H  | O  |         | P |
| 30  | A     | 1        | 123   | 40 | 69 | 13 | 1       | 0 |

- Molecule 31 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula:  $C_{51}H_{96}O_{15}$ ).



| Mol | Chain | Residues | Atoms |    |    |    | AltConf |
|-----|-------|----------|-------|----|----|----|---------|
|     |       |          | Total | C  | H  | O  |         |
| 31  | B     | 1        | 150   | 51 | 84 | 15 | 0       |
| 31  | B     | 1        | 150   | 51 | 84 | 15 | 0       |

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| Mol | Chain | Residues | Atoms |    |    |    | AltConf |
|-----|-------|----------|-------|----|----|----|---------|
|     |       |          | Total | C  | H  | O  |         |
| 31  | B     | 1        | 150   | 51 | 84 | 15 | 0       |

- Molecule 32 is CALCIUM ION (three-letter code: CA) (formula: Ca).

| Mol | Chain | Residues | Atoms |    | AltConf |
|-----|-------|----------|-------|----|---------|
|     |       |          | Total | Ca |         |
| 32  | B     | 2        | 2     | 2  | 0       |

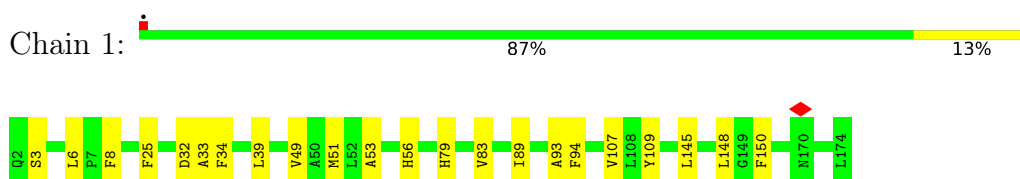
- Molecule 33 is water.

| Mol | Chain | Residues | Atoms |    | AltConf |
|-----|-------|----------|-------|----|---------|
|     |       |          | Total | O  |         |
| 33  | 1     | 15       | 15    | 15 | 0       |
| 33  | 2     | 8        | 8     | 8  | 0       |
| 33  | 3     | 6        | 6     | 6  | 0       |
| 33  | A     | 79       | 79    | 79 | 0       |
| 33  | B     | 68       | 68    | 68 | 0       |
| 33  | C     | 24       | 24    | 24 | 0       |
| 33  | D     | 14       | 14    | 14 | 0       |
| 33  | E     | 11       | 11    | 11 | 0       |
| 33  | F     | 11       | 11    | 11 | 0       |
| 33  | J     | 2        | 2     | 2  | 0       |
| 33  | K     | 2        | 2     | 2  | 0       |
| 33  | L     | 2        | 2     | 2  | 0       |
| 33  | M     | 2        | 2     | 2  | 0       |
| 33  | O     | 5        | 5     | 5  | 0       |

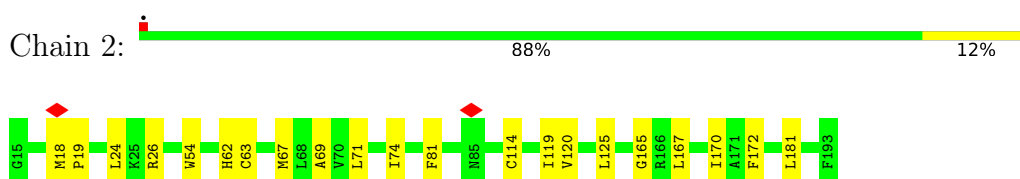
### 3 Residue-property plots

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 and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

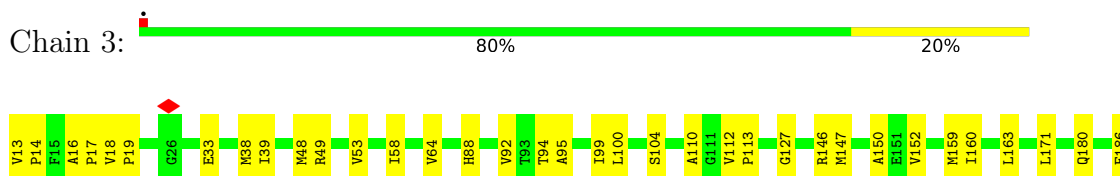
- Molecule 1: Similar to light harvesting protein



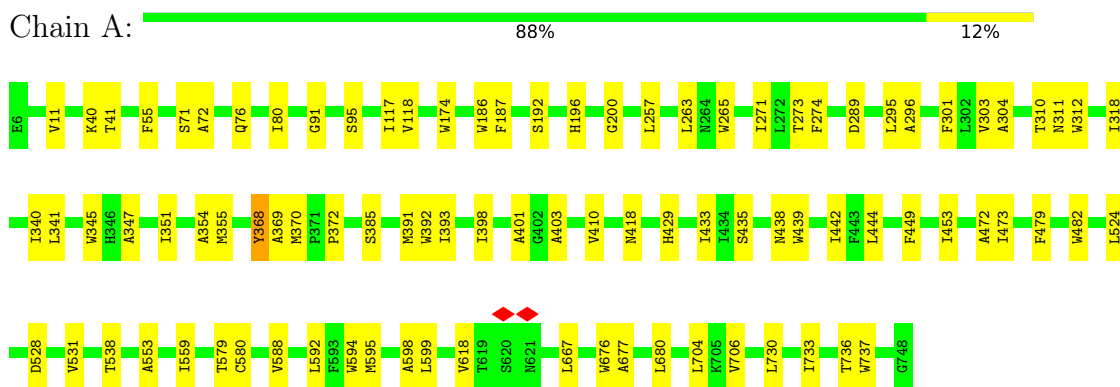
- Molecule 2: Similar to chlorophyll a/b-binding protein, CP24



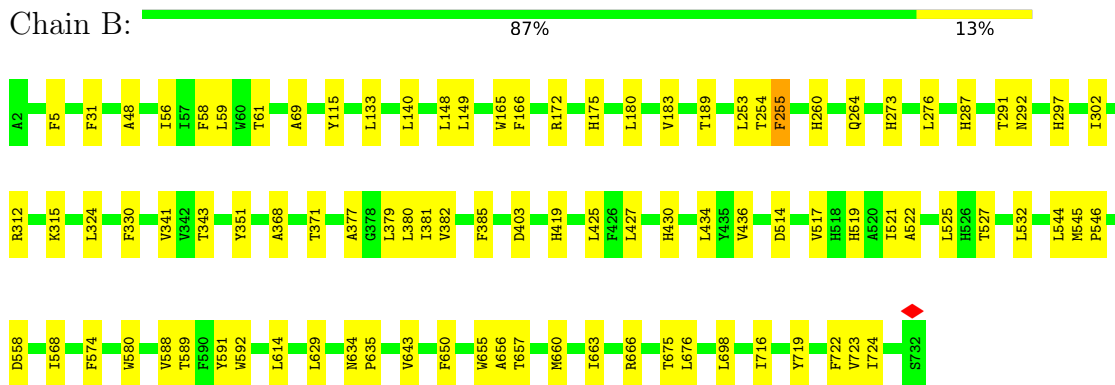
- Molecule 3: Lhcr3



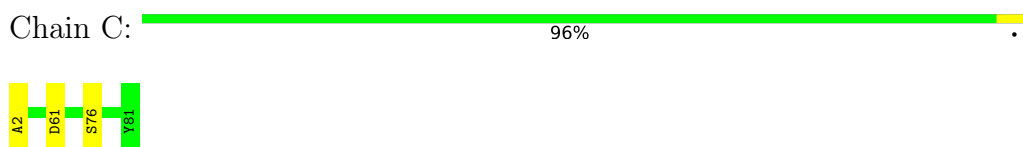
- Molecule 4: Photosystem I P700 chlorophyll a apoprotein A1



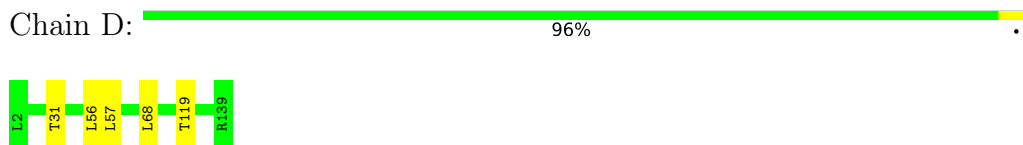
- Molecule 5: Photosystem I P700 chlorophyll a apoprotein A2



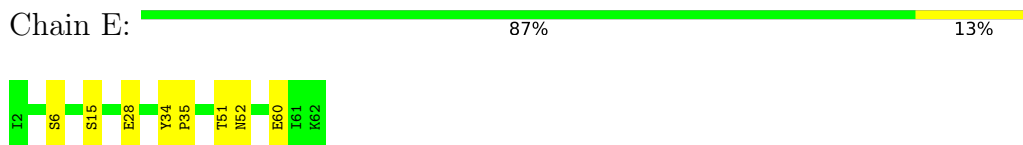
- Molecule 6: Photosystem I iron-sulfur center



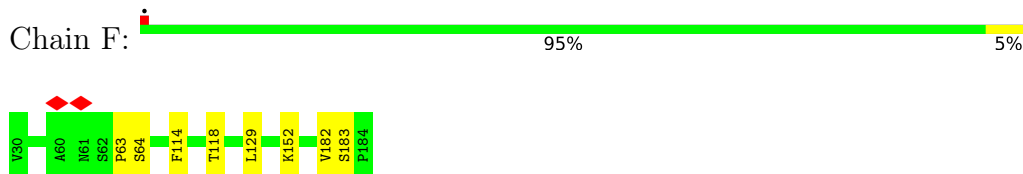
- Molecule 7: Photosystem I p700 chlorophyll A apoprotein A2



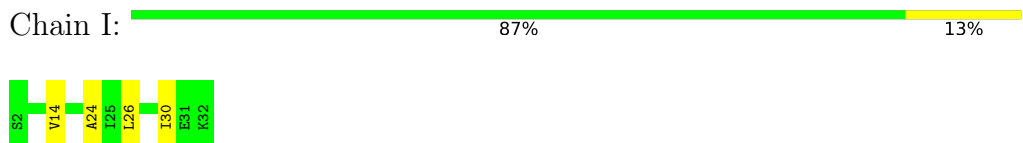
- Molecule 8: Photosystem I iron-sulfur center subunit VII




- Molecule 9: PSI-F



- Molecule 10: Photosystem I reaction center subunit VIII




- Molecule 11: Photosystem I reaction center subunit IX

Chain J:  89% 11%




- Molecule 12: PSI-K

Chain K:  81% 19%



- Molecule 13: Photosystem I reaction center subunit XI

Chain L:  88% 11%



- Molecule 14: Photosystem I reaction center subunit XII

Chain M:  93% 7%



- Molecule 15: PsaO

Chain O:  94% 6%



## 4 Experimental information

| Property                             | Value                           | Source    |
|--------------------------------------|---------------------------------|-----------|
| EM reconstruction method             | SINGLE PARTICLE                 | Depositor |
| Imposed symmetry                     | POINT, Not provided             |           |
| Number of particles used             | 128943                          | Depositor |
| Resolution determination method      | FSC 0.143 CUT-OFF               | Depositor |
| CTF correction method                | NONE                            | Depositor |
| Microscope                           | FEI TITAN KRIOS                 | Depositor |
| Voltage (kV)                         | 300                             | Depositor |
| Electron dose ( $e^-/\text{\AA}^2$ ) | 40.0                            | Depositor |
| Minimum defocus (nm)                 | Not provided                    |           |
| Maximum defocus (nm)                 | Not provided                    |           |
| Magnification                        | Not provided                    |           |
| Image detector                       | GATAN K3 BIOQUANTUM (6k x 4k)   | Depositor |
| Maximum map value                    | 0.163                           | Depositor |
| Minimum map value                    | -0.074                          | Depositor |
| Average map value                    | 0.000                           | Depositor |
| Map value standard deviation         | 0.007                           | Depositor |
| Recommended contour level            | 0.0186                          | Depositor |
| Map size ( $\text{\AA}$ )            | 315.59998, 315.59998, 315.59998 | wwPDB     |
| Map dimensions                       | 300, 300, 300                   | wwPDB     |
| Map angles ( $^\circ$ )              | 90.0, 90.0, 90.0                | wwPDB     |
| Pixel spacing ( $\text{\AA}$ )       | 1.0519999, 1.0519999, 1.0519999 | Depositor |



## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: T7X, PTY, LHG, CLA, PGT, CL0, 3PH, C7Z, BCR, SF4, PQN, ERG, LMU, DGA, RRX, DGD, CA

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     | 0.28         | 0/1426  | 0.52        | 0/1927         |
| 2   | 2     | 0.27         | 0/1431  | 0.50        | 0/1931         |
| 3   | 3     | 0.25         | 0/1376  | 0.52        | 0/1867         |
| 4   | A     | 0.26         | 0/6002  | 0.49        | 0/8179         |
| 5   | B     | 0.25         | 0/6028  | 0.47        | 0/8236         |
| 6   | C     | 0.24         | 0/607   | 0.53        | 0/822          |
| 7   | D     | 0.25         | 0/1118  | 0.53        | 0/1509         |
| 8   | E     | 0.24         | 0/502   | 0.50        | 0/680          |
| 9   | F     | 0.25         | 0/1304  | 0.51        | 0/1772         |
| 10  | I     | 0.25         | 0/235   | 0.44        | 0/321          |
| 11  | J     | 0.26         | 0/321   | 0.47        | 0/437          |
| 12  | K     | 0.25         | 0/394   | 0.46        | 0/534          |
| 13  | L     | 0.26         | 0/1064  | 0.53        | 1/1448 (0.1%)  |
| 14  | M     | 0.25         | 0/205   | 0.38        | 0/277          |
| 15  | O     | 0.27         | 0/773   | 0.45        | 0/1061         |
| All | All   | 0.26         | 0/22786 | 0.49        | 1/31001 (0.0%) |

There are no bond length outliers.

All (1) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms    | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|-------|-------------|----------|
| 13  | L     | 93  | MET  | CG-SD-CE | -6.72 | 89.44       | 100.20   |

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     | 1381  | 1353     | 1353     | 21      | 0            |
| 2   | 2     | 1395  | 1385     | 1385     | 21      | 0            |
| 3   | 3     | 1341  | 1348     | 1348     | 38      | 0            |
| 4   | A     | 5815  | 5740     | 5740     | 88      | 0            |
| 5   | B     | 5819  | 5645     | 5645     | 85      | 0            |
| 6   | C     | 597   | 576      | 576      | 2       | 0            |
| 7   | D     | 1094  | 1093     | 1093     | 3       | 0            |
| 8   | E     | 493   | 509      | 509      | 6       | 0            |
| 9   | F     | 1270  | 1243     | 1243     | 9       | 0            |
| 10  | I     | 230   | 253      | 253      | 4       | 0            |
| 11  | J     | 312   | 327      | 327      | 3       | 0            |
| 12  | K     | 390   | 419      | 419      | 8       | 0            |
| 13  | L     | 1039  | 1057     | 1057     | 15      | 0            |
| 14  | M     | 204   | 226      | 226      | 2       | 0            |
| 15  | O     | 747   | 742      | 742      | 8       | 0            |
| 16  | 1     | 704   | 770      | 759      | 36      | 0            |
| 16  | 2     | 843   | 938      | 928      | 42      | 0            |
| 16  | 3     | 749   | 798      | 786      | 49      | 0            |
| 16  | A     | 2665  | 2984     | 2944     | 151     | 0            |
| 16  | B     | 2460  | 2742     | 2705     | 132     | 0            |
| 16  | F     | 256   | 280      | 276      | 13      | 0            |
| 16  | I     | 130   | 146      | 144      | 9       | 0            |
| 16  | J     | 65    | 73       | 71       | 3       | 0            |
| 16  | K     | 130   | 145      | 144      | 6       | 0            |
| 16  | L     | 260   | 291      | 287      | 14      | 0            |
| 16  | O     | 260   | 288      | 284      | 13      | 0            |
| 17  | 1     | 168   | 0        | 0        | 7       | 0            |
| 17  | 2     | 84    | 0        | 0        | 0       | 0            |
| 17  | 3     | 210   | 0        | 0        | 11      | 0            |
| 17  | A     | 42    | 0        | 0        | 0       | 0            |
| 17  | J     | 42    | 0        | 0        | 0       | 0            |
| 18  | 1     | 41    | 56       | 56       | 10      | 0            |
| 18  | 2     | 41    | 56       | 56       | 2       | 0            |
| 18  | A     | 41    | 55       | 56       | 2       | 0            |
| 18  | J     | 41    | 56       | 56       | 2       | 0            |
| 18  | K     | 41    | 56       | 56       | 4       | 0            |
| 19  | 1     | 49    | 74       | 74       | 1       | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 19  | 2     | 49    | 74       | 74       | 1       | 0            |
| 19  | 3     | 49    | 74       | 74       | 2       | 0            |
| 19  | A     | 98    | 148      | 148      | 1       | 0            |
| 19  | B     | 45    | 63       | 63       | 0       | 0            |
| 20  | 1     | 29    | 38       | 38       | 4       | 0            |
| 20  | 2     | 58    | 76       | 76       | 9       | 0            |
| 21  | 2     | 40    | 53       | 54       | 10      | 0            |
| 21  | A     | 200   | 260      | 260      | 43      | 0            |
| 21  | B     | 320   | 413      | 415      | 47      | 0            |
| 21  | F     | 80    | 104      | 105      | 9       | 0            |
| 21  | I     | 40    | 51       | 53       | 3       | 0            |
| 21  | K     | 40    | 51       | 54       | 5       | 0            |
| 21  | L     | 120   | 156      | 156      | 20      | 0            |
| 21  | O     | 40    | 52       | 52       | 9       | 0            |
| 22  | 2     | 35    | 46       | 40       | 0       | 0            |
| 22  | B     | 35    | 46       | 40       | 0       | 0            |
| 23  | 2     | 44    | 76       | 76       | 0       | 0            |
| 23  | J     | 44    | 76       | 76       | 1       | 0            |
| 24  | 3     | 35    | 46       | 46       | 1       | 0            |
| 24  | A     | 35    | 46       | 46       | 0       | 0            |
| 25  | 3     | 100   | 158      | 158      | 0       | 0            |
| 25  | A     | 47    | 66       | 66       | 3       | 0            |
| 25  | L     | 50    | 79       | 79       | 0       | 0            |
| 26  | A     | 65    | 73       | 72       | 5       | 0            |
| 27  | A     | 33    | 46       | 46       | 0       | 0            |
| 27  | B     | 33    | 46       | 46       | 4       | 0            |
| 28  | A     | 8     | 0        | 0        | 0       | 0            |
| 28  | C     | 16    | 0        | 0        | 0       | 0            |
| 29  | A     | 48    | 75       | 75       | 0       | 0            |
| 29  | B     | 48    | 75       | 75       | 0       | 0            |
| 29  | J     | 48    | 75       | 75       | 0       | 0            |
| 30  | A     | 54    | 69       | 0        | 1       | 0            |
| 31  | B     | 198   | 252      | 288      | 9       | 0            |
| 32  | B     | 2     | 0        | 0        | 0       | 0            |
| 33  | 1     | 15    | 0        | 0        | 0       | 0            |
| 33  | 2     | 8     | 0        | 0        | 0       | 0            |
| 33  | 3     | 6     | 0        | 0        | 0       | 0            |
| 33  | A     | 79    | 0        | 0        | 0       | 0            |
| 33  | B     | 68    | 0        | 0        | 0       | 0            |
| 33  | C     | 24    | 0        | 0        | 0       | 0            |
| 33  | D     | 14    | 0        | 0        | 0       | 0            |
| 33  | E     | 11    | 0        | 0        | 0       | 0            |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 33  | F     | 11    | 0        | 0        | 0       | 0            |
| 33  | J     | 2     | 0        | 0        | 0       | 0            |
| 33  | K     | 2     | 0        | 0        | 0       | 0            |
| 33  | L     | 2     | 0        | 0        | 0       | 0            |
| 33  | M     | 2     | 0        | 0        | 0       | 0            |
| 33  | O     | 5     | 0        | 0        | 0       | 0            |
| All | All   | 33884 | 34687    | 34524    | 699     | 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 10.

All (699) 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) |
|-------------------|-------------------|--------------------------|-------------------|
| 20:2:621:ERG:C3   | 20:2:621:ERG:O1   | 1.70                     | 1.39              |
| 20:2:618:ERG:O1   | 20:2:618:ERG:C3   | 1.70                     | 1.37              |
| 20:1:618:ERG:C3   | 20:1:618:ERG:O1   | 1.70                     | 1.36              |
| 16:A:854:CLA:HBB1 | 16:A:854:CLA:HMB1 | 1.36                     | 1.04              |
| 16:A:828:CLA:HBB1 | 16:A:828:CLA:HMB1 | 1.37                     | 1.01              |
| 16:B:827:CLA:HBB1 | 16:B:827:CLA:HMB1 | 1.44                     | 1.00              |
| 16:A:802:CLA:HHC  | 16:A:802:CLA:HBB1 | 1.47                     | 0.94              |
| 16:B:817:CLA:HBB1 | 16:B:817:CLA:HMB1 | 1.48                     | 0.94              |
| 16:B:811:CLA:HHC  | 16:B:811:CLA:HBB1 | 1.51                     | 0.92              |
| 16:A:837:CLA:HBB1 | 16:A:837:CLA:HMB1 | 1.51                     | 0.91              |
| 16:A:822:CLA:HMB1 | 16:A:822:CLA:HBB1 | 1.53                     | 0.90              |
| 4:A:392:TRP:CD1   | 16:A:827:CLA:HAB  | 2.08                     | 0.89              |
| 16:B:836:CLA:HAB  | 27:B:839:PQN:H141 | 1.54                     | 0.89              |
| 16:B:828:CLA:HBB1 | 16:B:828:CLA:HMB1 | 1.55                     | 0.88              |
| 16:A:823:CLA:HMA1 | 16:O:201:CLA:HMC2 | 1.55                     | 0.87              |
| 16:I:102:CLA:HHC  | 16:I:102:CLA:HBB1 | 1.56                     | 0.87              |
| 16:A:819:CLA:HBB1 | 16:A:819:CLA:HMB1 | 1.56                     | 0.86              |
| 16:A:834:CLA:HHC  | 16:A:834:CLA:HBB1 | 1.58                     | 0.85              |
| 16:A:807:CLA:HBB1 | 16:A:807:CLA:HMB1 | 1.57                     | 0.85              |
| 16:A:829:CLA:HBB1 | 16:A:829:CLA:HMB1 | 1.57                     | 0.84              |
| 16:B:831:CLA:HMB1 | 16:B:831:CLA:HBB1 | 1.59                     | 0.83              |
| 16:B:825:CLA:HMB1 | 16:B:825:CLA:HBB1 | 1.61                     | 0.82              |
| 16:F:204:CLA:HBB1 | 16:F:204:CLA:HMB1 | 1.60                     | 0.82              |
| 16:B:802:CLA:HHC  | 16:B:802:CLA:HBB1 | 1.60                     | 0.82              |
| 16:2:606:CLA:HBB1 | 16:2:606:CLA:HMB1 | 1.61                     | 0.81              |
| 16:A:821:CLA:HMB1 | 16:A:821:CLA:HBB1 | 1.62                     | 0.81              |
| 16:B:834:CLA:HMB1 | 16:B:834:CLA:HBB1 | 1.62                     | 0.81              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:A:819:CLA:H201 | 21:A:850:BCR:H352 | 1.62                     | 0.80              |
| 16:B:818:CLA:HMB2 | 16:B:823:CLA:HMA3 | 1.63                     | 0.79              |
| 4:A:265:TRP:CH2   | 16:A:816:CLA:HBB1 | 2.17                     | 0.79              |
| 16:2:601:CLA:HHC  | 16:2:601:CLA:HBB1 | 1.65                     | 0.79              |
| 16:B:833:CLA:HMB1 | 16:B:833:CLA:HBB1 | 1.65                     | 0.78              |
| 5:B:656:ALA:HB3   | 16:B:801:CLA:HBB2 | 1.64                     | 0.78              |
| 3:3:163:LEU:HD13  | 16:3:205:CLA:HBB2 | 1.67                     | 0.77              |
| 21:B:840:BCR:HC8  | 21:B:840:BCR:H321 | 1.66                     | 0.77              |
| 16:2:608:CLA:H43  | 16:2:608:CLA:HMB2 | 1.67                     | 0.76              |
| 16:F:201:CLA:HMC2 | 21:F:203:BCR:H381 | 1.68                     | 0.75              |
| 21:A:844:BCR:H383 | 21:A:844:BCR:H23C | 1.69                     | 0.75              |
| 16:2:602:CLA:HBB1 | 16:2:602:CLA:HMB1 | 1.68                     | 0.75              |
| 16:A:835:CLA:HBB1 | 16:A:835:CLA:HMB1 | 1.70                     | 0.74              |
| 21:B:847:BCR:H393 | 21:B:847:BCR:H23C | 1.70                     | 0.74              |
| 16:2:604:CLA:HBC2 | 16:2:613:CLA:HAB  | 1.68                     | 0.73              |
| 21:A:845:BCR:H383 | 21:A:845:BCR:H23C | 1.71                     | 0.73              |
| 5:B:580:TRP:CH2   | 16:B:803:CLA:HAB  | 2.24                     | 0.73              |
| 21:B:855:BCR:H403 | 21:B:855:BCR:H23C | 1.70                     | 0.72              |
| 16:A:837:CLA:H92  | 21:A:845:BCR:H10C | 1.71                     | 0.72              |
| 16:A:809:CLA:HHC  | 16:A:809:CLA:HBB1 | 1.71                     | 0.72              |
| 16:1:611:CLA:HMB3 | 17:1:616:C7Z:C40  | 2.20                     | 0.71              |
| 4:A:55:PHE:CD2    | 16:A:804:CLA:HMC2 | 2.25                     | 0.71              |
| 21:B:855:BCR:HC8  | 21:B:855:BCR:H321 | 1.71                     | 0.71              |
| 16:O:202:CLA:HHC  | 16:O:202:CLA:HBB1 | 1.73                     | 0.71              |
| 16:3:213:CLA:HBB1 | 16:3:213:CLA:HMB1 | 1.73                     | 0.71              |
| 16:A:826:CLA:HBB1 | 16:A:826:CLA:HMB1 | 1.72                     | 0.71              |
| 16:B:813:CLA:HMB1 | 16:B:813:CLA:HBB1 | 1.73                     | 0.71              |
| 16:B:810:CLA:HMB1 | 16:B:810:CLA:HBB1 | 1.73                     | 0.70              |
| 16:A:855:CLA:CAD  | 16:B:804:CLA:HMB3 | 2.22                     | 0.70              |
| 4:A:677:ALA:HB3   | 16:A:854:CLA:HBB2 | 1.73                     | 0.69              |
| 16:A:854:CLA:HMB1 | 16:A:854:CLA:CBB  | 2.20                     | 0.69              |
| 21:B:840:BCR:H383 | 21:B:840:BCR:H23C | 1.75                     | 0.69              |
| 21:B:844:BCR:H321 | 21:B:844:BCR:HC8  | 1.75                     | 0.69              |
| 5:B:343:THR:HG23  | 5:B:377:ALA:HB2   | 1.74                     | 0.68              |
| 21:L:207:BCR:H321 | 21:L:207:BCR:HC8  | 1.76                     | 0.68              |
| 4:A:449:PHE:CZ    | 4:A:453:ILE:HD11  | 2.29                     | 0.68              |
| 5:B:148:LEU:HD21  | 21:B:847:BCR:H333 | 1.76                     | 0.68              |
| 16:3:214:CLA:HBC3 | 16:3:214:CLA:HHD  | 1.75                     | 0.67              |
| 16:A:811:CLA:HMB1 | 16:A:811:CLA:HBB1 | 1.76                     | 0.67              |
| 5:B:180:LEU:HD13  | 16:B:812:CLA:HBB  | 1.76                     | 0.67              |
| 20:1:618:ERG:O1   | 20:1:618:ERG:C2   | 2.39                     | 0.67              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:A:186:TRP:CZ2   | 16:A:809:CLA:HMA1 | 2.29                     | 0.67              |
| 16:2:608:CLA:HBC2 | 16:2:608:CLA:HHD  | 1.77                     | 0.67              |
| 5:B:650:PHE:CZ    | 21:B:845:BCR:H10C | 2.29                     | 0.67              |
| 16:L:203:CLA:HHC  | 16:L:203:CLA:HBB1 | 1.76                     | 0.67              |
| 5:B:165:TRP:CZ2   | 16:B:810:CLA:HMA1 | 2.29                     | 0.66              |
| 5:B:324:LEU:HD13  | 5:B:330:PHE:CD2   | 2.29                     | 0.66              |
| 4:A:594:TRP:CH2   | 16:A:855:CLA:HAB  | 2.30                     | 0.66              |
| 21:B:842:BCR:H383 | 21:B:842:BCR:H23C | 1.78                     | 0.66              |
| 21:A:857:BCR:H343 | 21:A:857:BCR:C33  | 2.26                     | 0.66              |
| 16:A:825:CLA:HAB  | 21:A:846:BCR:H311 | 1.76                     | 0.66              |
| 16:A:808:CLA:HAB  | 16:B:830:CLA:HMD2 | 1.76                     | 0.66              |
| 26:A:801:CL0:H13  | 16:B:803:CLA:OBD  | 1.96                     | 0.65              |
| 1:1:51:MET:HE2    | 16:1:607:CLA:HAB  | 1.78                     | 0.65              |
| 20:2:621:ERG:O1   | 20:2:621:ERG:C2   | 2.38                     | 0.65              |
| 4:A:559:ILE:HD11  | 4:A:579:THR:HG21  | 1.77                     | 0.65              |
| 26:A:801:CL0:H15  | 26:A:801:CL0:H11  | 1.79                     | 0.65              |
| 16:B:831:CLA:CHD  | 16:B:832:CLA:HAB  | 2.27                     | 0.65              |
| 16:A:818:CLA:HBB1 | 16:A:818:CLA:HMB1 | 1.77                     | 0.65              |
| 5:B:56:ILE:HG13   | 21:B:847:BCR:H332 | 1.79                     | 0.65              |
| 26:A:801:CL0:H13  | 16:B:803:CLA:CAD  | 2.27                     | 0.65              |
| 16:B:827:CLA:HMB1 | 16:B:827:CLA:CBB  | 2.25                     | 0.65              |
| 16:A:812:CLA:HMA2 | 16:A:812:CLA:C2   | 2.28                     | 0.64              |
| 16:A:828:CLA:HMB1 | 16:A:828:CLA:CBB  | 2.21                     | 0.64              |
| 17:1:614:C7Z:C15  | 16:2:605:CLA:HAB  | 2.27                     | 0.64              |
| 16:B:822:CLA:HAB  | 16:B:829:CLA:HMD2 | 1.79                     | 0.64              |
| 16:B:835:CLA:H52  | 21:B:844:BCR:H10C | 1.80                     | 0.64              |
| 16:A:822:CLA:CAB  | 16:O:201:CLA:HMC3 | 2.28                     | 0.64              |
| 16:A:827:CLA:O1D  | 16:A:828:CLA:HMA1 | 1.97                     | 0.64              |
| 4:A:354:ALA:HB1   | 21:A:846:BCR:H10C | 1.79                     | 0.64              |
| 5:B:341:VAL:CG2   | 21:B:844:BCR:H362 | 2.28                     | 0.64              |
| 16:1:602:CLA:HBB1 | 16:1:602:CLA:HMB1 | 1.79                     | 0.64              |
| 4:A:435:SER:HB3   | 5:B:675:THR:HG22  | 1.79                     | 0.64              |
| 21:I:103:BCR:H402 | 21:L:202:BCR:H361 | 1.80                     | 0.64              |
| 16:2:612:CLA:HBC3 | 21:2:617:BCR:C10  | 2.27                     | 0.63              |
| 21:L:202:BCR:H403 | 21:L:202:BCR:H23C | 1.80                     | 0.63              |
| 4:A:91:GLY:O      | 4:A:95:SER:OG     | 2.16                     | 0.63              |
| 16:A:821:CLA:HBC2 | 21:A:857:BCR:H372 | 1.81                     | 0.63              |
| 5:B:434:LEU:HD12  | 21:B:855:BCR:H383 | 1.79                     | 0.63              |
| 4:A:370:MET:SD    | 16:A:826:CLA:HAB  | 2.39                     | 0.63              |
| 16:A:802:CLA:HHC  | 16:A:802:CLA:CBB  | 2.26                     | 0.63              |
| 21:A:857:BCR:H343 | 21:A:857:BCR:H332 | 1.80                     | 0.63              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:3:53:VAL:HG21   | 3:3:127:GLY:HA3   | 1.80                     | 0.63              |
| 17:3:201:C7Z:C14  | 16:3:207:CLA:HAB  | 2.28                     | 0.63              |
| 16:A:855:CLA:OBD  | 16:B:804:CLA:HMB3 | 1.99                     | 0.63              |
| 16:B:831:CLA:C4C  | 16:B:832:CLA:HAB  | 2.28                     | 0.63              |
| 16:3:205:CLA:HMC1 | 16:3:208:CLA:CAB  | 2.29                     | 0.62              |
| 9:F:63:PRO:O      | 9:F:64:SER:OG     | 2.14                     | 0.62              |
| 16:1:610:CLA:HMD2 | 17:1:614:C7Z:C39  | 2.29                     | 0.62              |
| 16:2:606:CLA:H43  | 16:A:806:CLA:HMD1 | 1.81                     | 0.62              |
| 1:1:79:HIS:O      | 1:1:83:VAL:HG23   | 1.99                     | 0.62              |
| 20:2:621:ERG:O1   | 20:2:621:ERG:C4   | 2.41                     | 0.62              |
| 16:A:823:CLA:H41  | 16:A:823:CLA:H71  | 1.82                     | 0.62              |
| 21:A:846:BCR:H403 | 21:A:846:BCR:H23C | 1.81                     | 0.62              |
| 4:A:479:PHE:CE2   | 16:A:836:CLA:H42  | 2.35                     | 0.62              |
| 16:1:604:CLA:HHD  | 16:1:604:CLA:HBC2 | 1.80                     | 0.62              |
| 4:A:296:ALA:CB    | 16:A:817:CLA:HBB1 | 2.31                     | 0.61              |
| 16:A:825:CLA:H72  | 16:A:833:CLA:HAB  | 1.83                     | 0.61              |
| 16:A:827:CLA:H193 | 16:B:803:CLA:H142 | 1.82                     | 0.61              |
| 4:A:196:HIS:ND1   | 16:A:812:CLA:HMC2 | 2.16                     | 0.60              |
| 16:B:837:CLA:HBB1 | 16:B:837:CLA:HHC  | 1.82                     | 0.60              |
| 20:1:618:ERG:O1   | 20:1:618:ERG:C4   | 2.42                     | 0.60              |
| 18:K:103:RRX:H36  | 18:K:103:RRX:H42  | 1.84                     | 0.60              |
| 16:1:603:CLA:HMC2 | 18:1:613:RRX:H38  | 1.84                     | 0.60              |
| 3:3:17:PRO:HG2    | 16:3:203:CLA:HMA3 | 1.82                     | 0.60              |
| 16:A:823:CLA:HMA1 | 16:O:201:CLA:CMC  | 2.29                     | 0.60              |
| 21:L:206:BCR:H23C | 21:L:206:BCR:H392 | 1.83                     | 0.60              |
| 16:1:601:CLA:HMC3 | 2:2:120:VAL:HG21  | 1.83                     | 0.60              |
| 5:B:180:LEU:HD11  | 16:B:812:CLA:H12  | 1.83                     | 0.60              |
| 5:B:183:VAL:CG2   | 16:B:819:CLA:HMC1 | 2.31                     | 0.60              |
| 16:A:817:CLA:O1D  | 16:A:818:CLA:HMA1 | 2.01                     | 0.59              |
| 16:B:811:CLA:H143 | 21:B:841:BCR:H322 | 1.83                     | 0.59              |
| 16:A:811:CLA:O1D  | 16:A:812:CLA:HMC1 | 2.02                     | 0.59              |
| 2:2:67:MET:SD     | 16:2:608:CLA:HAB  | 2.41                     | 0.59              |
| 3:3:99:ILE:HG13   | 16:3:207:CLA:HMD3 | 1.84                     | 0.59              |
| 16:3:207:CLA:HBB1 | 16:3:207:CLA:HHC  | 1.84                     | 0.59              |
| 16:3:213:CLA:HAB  | 17:3:217:C7Z:C40  | 2.31                     | 0.59              |
| 16:B:806:CLA:HMB1 | 16:B:806:CLA:HBB1 | 1.84                     | 0.59              |
| 5:B:525:LEU:HD11  | 16:B:833:CLA:HBB1 | 1.84                     | 0.59              |
| 12:K:36:LEU:HD13  | 21:K:104:BCR:H352 | 1.83                     | 0.59              |
| 16:A:828:CLA:H43  | 21:A:844:BCR:H10C | 1.85                     | 0.59              |
| 13:L:50:ILE:HA    | 16:L:204:CLA:HED1 | 1.85                     | 0.59              |
| 16:O:203:CLA:HMD3 | 21:O:205:BCR:H343 | 1.83                     | 0.59              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:2:612:CLA:HMB3 | 21:2:617:BCR:H362 | 1.85                     | 0.58              |
| 16:3:211:CLA:C3D  | 16:3:212:CLA:HMA3 | 2.33                     | 0.58              |
| 16:B:817:CLA:HMB1 | 16:B:817:CLA:CBB  | 2.29                     | 0.58              |
| 21:O:205:BCR:H383 | 21:O:205:BCR:H23C | 1.85                     | 0.58              |
| 16:A:839:CLA:HMA2 | 21:L:202:BCR:H322 | 1.85                     | 0.58              |
| 18:A:847:RRX:H36  | 18:A:847:RRX:H42  | 1.86                     | 0.58              |
| 16:A:856:CLA:HAB  | 16:A:856:CLA:H111 | 1.86                     | 0.58              |
| 5:B:368:ALA:HB1   | 16:B:826:CLA:HMA1 | 1.84                     | 0.58              |
| 16:B:826:CLA:HBC3 | 31:B:846:DGD:HBS1 | 1.86                     | 0.58              |
| 21:L:202:BCR:HC8  | 21:L:202:BCR:H311 | 1.84                     | 0.58              |
| 16:3:205:CLA:HMC1 | 16:3:208:CLA:HAB  | 1.86                     | 0.58              |
| 16:B:829:CLA:HAB  | 16:B:835:CLA:CBB  | 2.34                     | 0.58              |
| 13:L:127:GLY:HA3  | 21:L:207:BCR:H312 | 1.85                     | 0.58              |
| 16:I:101:CLA:HBC3 | 14:M:14:ALA:HB2   | 1.86                     | 0.58              |
| 3:3:100:LEU:HD22  | 16:3:208:CLA:HMD2 | 1.84                     | 0.57              |
| 16:A:822:CLA:HMB1 | 16:A:822:CLA:CBB  | 2.30                     | 0.57              |
| 21:A:846:BCR:H311 | 21:A:846:BCR:HC8  | 1.85                     | 0.57              |
| 4:A:736:THR:HG23  | 16:A:827:CLA:HBB2 | 1.85                     | 0.57              |
| 16:B:811:CLA:HHC  | 16:B:811:CLA:CBB  | 2.30                     | 0.57              |
| 1:1:51:MET:CE     | 16:1:607:CLA:HAB  | 2.33                     | 0.57              |
| 5:B:59:LEU:HD22   | 16:I:101:CLA:H93  | 1.86                     | 0.57              |
| 21:A:844:BCR:H321 | 21:A:844:BCR:HC8  | 1.87                     | 0.57              |
| 5:B:61:THR:HG23   | 5:B:140:LEU:HD13  | 1.87                     | 0.57              |
| 21:B:843:BCR:H311 | 21:B:843:BCR:HC8  | 1.87                     | 0.57              |
| 16:2:605:CLA:HHC  | 16:2:605:CLA:HBB1 | 1.85                     | 0.57              |
| 21:A:850:BCR:H403 | 21:A:850:BCR:H23C | 1.87                     | 0.57              |
| 5:B:255:PHE:CE2   | 16:B:816:CLA:HBB1 | 2.39                     | 0.57              |
| 5:B:716:ILE:HD13  | 16:B:826:CLA:HMC2 | 1.85                     | 0.57              |
| 16:B:810:CLA:HMB1 | 16:B:810:CLA:CBB  | 2.35                     | 0.57              |
| 5:B:255:PHE:CD1   | 16:B:816:CLA:HMB2 | 2.40                     | 0.57              |
| 16:B:826:CLA:O1D  | 16:B:827:CLA:HMA1 | 2.05                     | 0.57              |
| 4:A:385:SER:HB3   | 16:A:827:CLA:HMA1 | 1.86                     | 0.57              |
| 16:A:825:CLA:C4B  | 21:A:846:BCR:H342 | 2.35                     | 0.56              |
| 5:B:656:ALA:C     | 16:B:801:CLA:HAB  | 2.26                     | 0.56              |
| 20:2:618:ERG:O1   | 20:2:618:ERG:C4   | 2.42                     | 0.56              |
| 1:1:49:VAL:HG12   | 18:1:613:RRX:H45  | 1.87                     | 0.56              |
| 16:A:816:CLA:HBC3 | 16:A:816:CLA:HMC1 | 1.87                     | 0.56              |
| 16:A:837:CLA:HMB1 | 16:A:837:CLA:CBB  | 2.31                     | 0.56              |
| 4:A:76:GLN:OE1    | 4:A:80:ILE:HD11   | 2.05                     | 0.56              |
| 16:B:821:CLA:HMB3 | 16:B:838:CLA:C1D  | 2.35                     | 0.56              |
| 16:A:819:CLA:HMB1 | 16:A:819:CLA:CBB  | 2.33                     | 0.56              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 21:B:842:BCR:H321 | 21:B:842:BCR:HC8  | 1.85                     | 0.56              |
| 11:J:9:THR:O      | 11:J:13:VAL:HG22  | 2.05                     | 0.56              |
| 16:2:612:CLA:CMB  | 21:2:617:BCR:H362 | 2.36                     | 0.56              |
| 16:A:826:CLA:HMB1 | 16:A:826:CLA:CBB  | 2.35                     | 0.56              |
| 25:A:852:PTY:C24  | 15:O:102:ILE:HD11 | 2.35                     | 0.56              |
| 16:B:825:CLA:H143 | 21:B:843:BCR:C19  | 2.36                     | 0.56              |
| 5:B:719:TYR:HB2   | 16:B:804:CLA:HED3 | 1.88                     | 0.55              |
| 16:B:828:CLA:HMB1 | 16:B:828:CLA:CBB  | 2.33                     | 0.55              |
| 4:A:118:VAL:HB    | 16:B:830:CLA:HMD1 | 1.86                     | 0.55              |
| 21:L:202:BCR:HC8  | 21:L:202:BCR:H321 | 1.88                     | 0.55              |
| 20:2:618:ERG:O1   | 20:2:618:ERG:C2   | 2.40                     | 0.55              |
| 4:A:71:SER:O      | 4:A:72:ALA:HB3    | 2.06                     | 0.55              |
| 16:F:204:CLA:HMB1 | 16:F:204:CLA:CBB  | 2.35                     | 0.55              |
| 2:2:81:PHE:CE1    | 16:2:613:CLA:HMB3 | 2.41                     | 0.55              |
| 16:A:822:CLA:HAB  | 16:O:201:CLA:HMC3 | 1.87                     | 0.55              |
| 5:B:287:HIS:NE2   | 21:B:840:BCR:H352 | 2.21                     | 0.55              |
| 16:B:808:CLA:C1A  | 16:B:808:CLA:CGA  | 2.84                     | 0.55              |
| 16:F:201:CLA:HHC  | 16:F:201:CLA:HBB1 | 1.86                     | 0.55              |
| 4:A:257:LEU:HD13  | 21:A:857:BCR:H322 | 1.89                     | 0.55              |
| 16:B:808:CLA:HAB  | 16:B:809:CLA:HAA1 | 1.88                     | 0.55              |
| 16:B:833:CLA:HMB1 | 16:B:833:CLA:CBB  | 2.36                     | 0.55              |
| 3:3:112:VAL:HG22  | 16:3:209:CLA:HMA1 | 1.87                     | 0.55              |
| 4:A:528:ASP:HA    | 4:A:531:VAL:HG12  | 1.89                     | 0.55              |
| 21:B:845:BCR:H382 | 21:B:845:BCR:H23C | 1.88                     | 0.55              |
| 16:A:829:CLA:HMB1 | 16:A:829:CLA:CBB  | 2.33                     | 0.55              |
| 16:B:815:CLA:C1D  | 16:B:816:CLA:HBB2 | 2.37                     | 0.55              |
| 16:B:835:CLA:C5   | 21:B:844:BCR:H10C | 2.37                     | 0.55              |
| 16:A:825:CLA:CHC  | 21:A:846:BCR:H342 | 2.36                     | 0.55              |
| 16:3:205:CLA:HMB1 | 16:3:205:CLA:HBB1 | 1.88                     | 0.54              |
| 3:3:58:ILE:HD12   | 16:3:209:CLA:HMD3 | 1.90                     | 0.54              |
| 19:A:842:LHG:H261 | 21:A:845:BCR:H341 | 1.90                     | 0.54              |
| 31:B:850:DGD:HAF1 | 31:B:850:DGD:HAT1 | 1.90                     | 0.54              |
| 4:A:200:GLY:HA3   | 16:A:812:CLA:HBB1 | 1.90                     | 0.54              |
| 16:A:824:CLA:HMB1 | 16:A:824:CLA:HBB1 | 1.89                     | 0.54              |
| 16:A:819:CLA:HMB3 | 12:K:41:CYS:SG    | 2.47                     | 0.54              |
| 16:B:831:CLA:HMB1 | 16:B:831:CLA:CBB  | 2.35                     | 0.54              |
| 20:2:621:ERG:H122 | 20:2:621:ERG:H212 | 1.88                     | 0.54              |
| 16:A:830:CLA:HAB  | 16:A:837:CLA:CBB  | 2.38                     | 0.54              |
| 5:B:287:HIS:CD2   | 21:B:840:BCR:H352 | 2.42                     | 0.54              |
| 4:A:429:HIS:CE1   | 4:A:433:ILE:HD11  | 2.42                     | 0.54              |
| 2:2:167:LEU:HD13  | 16:2:609:CLA:HBC1 | 1.89                     | 0.54              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:O:203:CLA:O1A  | 16:O:203:CLA:H43  | 2.08                     | 0.54              |
| 21:F:206:BCR:H392 | 21:F:206:BCR:H23C | 1.90                     | 0.54              |
| 21:L:207:BCR:H321 | 21:L:207:BCR:C8   | 2.37                     | 0.54              |
| 16:B:802:CLA:CAB  | 21:F:206:BCR:H362 | 2.38                     | 0.54              |
| 7:D:57:LEU:HD21   | 7:D:68:LEU:HD21   | 1.89                     | 0.54              |
| 18:1:613:RRX:H36  | 18:1:613:RRX:C10  | 2.37                     | 0.53              |
| 16:B:802:CLA:HHC  | 16:B:802:CLA:CBB  | 2.34                     | 0.53              |
| 31:B:849:DGD:HAT1 | 16:I:102:CLA:H111 | 1.89                     | 0.53              |
| 16:B:834:CLA:H93  | 16:B:834:CLA:CAB  | 2.38                     | 0.53              |
| 16:2:602:CLA:HMB1 | 16:2:602:CLA:CBB  | 2.38                     | 0.53              |
| 1:1:56:HIS:CD2    | 18:1:613:RRX:H54  | 2.43                     | 0.53              |
| 16:3:213:CLA:HMB1 | 16:3:213:CLA:CBB  | 2.39                     | 0.53              |
| 16:A:830:CLA:HAB  | 16:A:837:CLA:CAB  | 2.38                     | 0.53              |
| 16:B:838:CLA:H2A  | 16:B:838:CLA:HED2 | 1.91                     | 0.53              |
| 16:2:601:CLA:HHC  | 16:2:601:CLA:CBB  | 2.36                     | 0.53              |
| 3:3:49:ARG:NH2    | 3:3:152:VAL:HG21  | 2.24                     | 0.53              |
| 16:A:824:CLA:HMB1 | 16:A:824:CLA:CBB  | 2.39                     | 0.53              |
| 4:A:303:VAL:O     | 16:A:821:CLA:HBC1 | 2.09                     | 0.53              |
| 10:I:24:ALA:HB1   | 13:L:95:LEU:HD21  | 1.91                     | 0.53              |
| 13:L:64:GLN:HB2   | 16:L:205:CLA:HMA1 | 1.91                     | 0.53              |
| 21:F:206:BCR:HC8  | 21:F:206:BCR:H311 | 1.89                     | 0.53              |
| 16:B:837:CLA:HMD2 | 27:B:839:PQN:H192 | 1.91                     | 0.52              |
| 5:B:48:ALA:HB3    | 14:M:28:LEU:HD21  | 1.91                     | 0.52              |
| 5:B:291:THR:HG22  | 5:B:292:ASN:H     | 1.73                     | 0.52              |
| 16:B:825:CLA:HMB1 | 16:B:825:CLA:CBB  | 2.35                     | 0.52              |
| 16:B:806:CLA:H192 | 16:B:812:CLA:HMD1 | 1.90                     | 0.52              |
| 16:B:825:CLA:HMA3 | 21:B:844:BCR:H312 | 1.92                     | 0.52              |
| 16:1:602:CLA:HMC2 | 18:1:613:RRX:H25  | 1.90                     | 0.52              |
| 16:A:835:CLA:HMB1 | 16:A:835:CLA:CBB  | 2.38                     | 0.52              |
| 16:A:839:CLA:H93  | 16:A:839:CLA:HBB1 | 1.92                     | 0.52              |
| 16:B:821:CLA:CBB  | 21:B:843:BCR:H321 | 2.39                     | 0.52              |
| 16:B:821:CLA:HBB1 | 21:B:843:BCR:H321 | 1.92                     | 0.52              |
| 16:2:606:CLA:HMB1 | 16:2:606:CLA:CBB  | 2.37                     | 0.52              |
| 16:2:607:CLA:HMB2 | 23:J:101:DGA:HAH1 | 1.92                     | 0.52              |
| 18:2:616:RRX:H21  | 18:2:616:RRX:H11  | 1.92                     | 0.52              |
| 5:B:522:ALA:HB2   | 16:B:834:CLA:HMA1 | 1.91                     | 0.52              |
| 16:1:601:CLA:CMC  | 2:2:120:VAL:HG21  | 2.41                     | 0.51              |
| 3:3:39:ILE:HD13   | 16:3:204:CLA:H42  | 1.92                     | 0.51              |
| 16:A:807:CLA:HMB1 | 16:A:807:CLA:CBB  | 2.34                     | 0.51              |
| 16:A:855:CLA:O1D  | 16:B:804:CLA:HBB1 | 2.10                     | 0.51              |
| 15:O:42:LEU:CD2   | 21:O:205:BCR:H393 | 2.40                     | 0.51              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 1:1:53:ALA:HB1    | 1:1:150:PHE:CE1   | 2.45                     | 0.51              |
| 16:B:801:CLA:HBB1 | 16:B:801:CLA:HMB1 | 1.93                     | 0.51              |
| 2:2:114:CYS:CB    | 16:2:607:CLA:HAB  | 2.40                     | 0.51              |
| 4:A:192:SER:HA    | 4:A:310:THR:HG21  | 1.91                     | 0.51              |
| 4:A:304:ALA:HB2   | 16:A:820:CLA:HBC2 | 1.93                     | 0.51              |
| 4:A:347:ALA:HB1   | 21:A:845:BCR:H391 | 1.90                     | 0.51              |
| 4:A:482:TRP:CH2   | 15:O:102:ILE:HD12 | 2.45                     | 0.51              |
| 16:L:203:CLA:HHC  | 16:L:203:CLA:CBB  | 2.40                     | 0.51              |
| 1:1:107:VAL:O     | 16:1:606:CLA:HMA2 | 2.11                     | 0.51              |
| 16:3:203:CLA:HBC3 | 16:3:203:CLA:HHD  | 1.92                     | 0.51              |
| 5:B:592:TRP:CD1   | 16:B:833:CLA:HBC2 | 2.45                     | 0.51              |
| 13:L:21:ILE:HD11  | 16:L:201:CLA:C2D  | 2.40                     | 0.51              |
| 21:L:202:BCR:H403 | 21:L:202:BCR:C23  | 2.41                     | 0.51              |
| 18:1:613:RRX:H36  | 18:1:613:RRX:H42  | 1.92                     | 0.51              |
| 3:3:99:ILE:CG1    | 16:3:207:CLA:HMD3 | 2.41                     | 0.51              |
| 4:A:439:TRP:CZ2   | 16:L:201:CLA:HAB  | 2.45                     | 0.51              |
| 16:B:801:CLA:H111 | 21:B:845:BCR:H362 | 1.92                     | 0.51              |
| 16:I:102:CLA:HHC  | 16:I:102:CLA:CBB  | 2.35                     | 0.51              |
| 4:A:296:ALA:HB2   | 16:A:817:CLA:HBB1 | 1.93                     | 0.51              |
| 21:B:844:BCR:H23C | 21:B:844:BCR:C38  | 2.41                     | 0.51              |
| 16:1:607:CLA:HMB1 | 16:1:607:CLA:HBB1 | 1.91                     | 0.51              |
| 5:B:315:LYS:N     | 5:B:403:ASP:OD2   | 2.44                     | 0.51              |
| 16:A:805:CLA:C15  | 16:A:828:CLA:HBB2 | 2.40                     | 0.51              |
| 5:B:698:LEU:HD11  | 16:B:837:CLA:HMD3 | 1.92                     | 0.51              |
| 16:K:102:CLA:HMC2 | 18:K:103:RRX:H18  | 1.93                     | 0.51              |
| 2:2:24:LEU:HD12   | 16:2:601:CLA:HMB3 | 1.92                     | 0.51              |
| 20:2:618:ERG:C3   | 20:2:618:ERG:HO1  | 2.13                     | 0.51              |
| 4:A:680:LEU:HB2   | 16:A:854:CLA:HMC3 | 1.92                     | 0.51              |
| 4:A:345:TRP:NE1   | 16:A:824:CLA:H203 | 2.26                     | 0.50              |
| 16:A:823:CLA:H42  | 21:A:845:BCR:H363 | 1.92                     | 0.50              |
| 5:B:629:LEU:HD22  | 5:B:722:PHE:HA    | 1.94                     | 0.50              |
| 3:3:104:SER:CB    | 16:3:209:CLA:HAB  | 2.40                     | 0.50              |
| 5:B:273:HIS:ND1   | 16:B:816:CLA:HMB1 | 2.26                     | 0.50              |
| 16:B:829:CLA:HAB  | 16:B:835:CLA:HBB2 | 1.93                     | 0.50              |
| 10:I:14:VAL:HG21  | 16:I:101:CLA:H12  | 1.93                     | 0.50              |
| 11:J:6:TYR:O      | 11:J:9:THR:HG22   | 2.11                     | 0.50              |
| 4:A:403:ALA:HB2   | 4:A:588:VAL:HG11  | 1.92                     | 0.50              |
| 1:1:3:SER:OG      | 1:1:6:LEU:O       | 2.25                     | 0.50              |
| 2:2:18:MET:HB3    | 2:2:19:PRO:HD3    | 1.92                     | 0.50              |
| 16:3:210:CLA:HMC2 | 17:3:215:C7Z:C11  | 2.42                     | 0.50              |
| 16:3:214:CLA:H203 | 16:K:102:CLA:HAB  | 1.94                     | 0.50              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:A:733:ILE:HG21  | 16:A:827:CLA:HMC2 | 1.93                     | 0.50              |
| 5:B:580:TRP:HH2   | 16:B:803:CLA:HAB  | 1.75                     | 0.50              |
| 3:3:64:VAL:HG21   | 17:3:215:C7Z:C20  | 2.42                     | 0.50              |
| 3:3:171:LEU:HD22  | 16:3:213:CLA:HMD1 | 1.94                     | 0.50              |
| 16:1:609:CLA:HHC  | 16:1:609:CLA:HBB1 | 1.93                     | 0.50              |
| 4:A:347:ALA:HB1   | 21:A:845:BCR:C39  | 2.41                     | 0.50              |
| 16:A:811:CLA:HBB1 | 16:A:819:CLA:H91  | 1.93                     | 0.50              |
| 16:A:815:CLA:HBB1 | 16:A:815:CLA:HMB1 | 1.94                     | 0.50              |
| 16:2:607:CLA:H93  | 16:2:607:CLA:H51  | 1.94                     | 0.49              |
| 4:A:439:TRP:CE2   | 16:L:201:CLA:HAB  | 2.47                     | 0.49              |
| 3:3:100:LEU:CD2   | 16:3:208:CLA:HMD2 | 2.42                     | 0.49              |
| 25:A:852:PTY:C23  | 15:O:102:ILE:HD11 | 2.42                     | 0.49              |
| 5:B:5:PHE:CD1     | 10:I:30:ILE:HG22  | 2.47                     | 0.49              |
| 15:O:102:ILE:O    | 15:O:106:VAL:HG23 | 2.11                     | 0.49              |
| 16:A:821:CLA:CAD  | 21:A:857:BCR:H393 | 2.42                     | 0.49              |
| 5:B:341:VAL:HG21  | 21:B:844:BCR:H362 | 1.94                     | 0.49              |
| 16:B:811:CLA:H141 | 16:B:819:CLA:H91  | 1.94                     | 0.49              |
| 20:1:618:ERG:C3   | 20:1:618:ERG:HO1  | 2.13                     | 0.49              |
| 2:2:181:LEU:HD22  | 16:2:611:CLA:HMD1 | 1.94                     | 0.49              |
| 3:3:160:ILE:HG23  | 16:3:213:CLA:HMC3 | 1.94                     | 0.49              |
| 16:F:202:CLA:CBB  | 16:F:202:CLA:HHC  | 2.42                     | 0.49              |
| 15:O:119:TYR:O    | 15:O:123:ALA:HB3  | 2.12                     | 0.49              |
| 16:2:606:CLA:HMB3 | 21:2:617:BCR:HC41 | 1.94                     | 0.49              |
| 16:A:821:CLA:HMB1 | 16:A:821:CLA:CBB  | 2.40                     | 0.49              |
| 16:B:828:CLA:H112 | 31:B:846:DGD:HBH2 | 1.95                     | 0.49              |
| 16:B:830:CLA:HMB1 | 21:B:855:BCR:H373 | 1.95                     | 0.49              |
| 9:F:114:PHE:CZ    | 9:F:118:THR:HG21  | 2.48                     | 0.49              |
| 21:L:206:BCR:H331 | 21:L:206:BCR:HC8  | 1.93                     | 0.49              |
| 16:O:202:CLA:HHC  | 16:O:202:CLA:CBB  | 2.42                     | 0.49              |
| 16:3:205:CLA:HMB2 | 17:3:216:C7Z:C12  | 2.43                     | 0.49              |
| 21:A:845:BCR:H383 | 21:A:845:BCR:C23  | 2.42                     | 0.49              |
| 4:A:677:ALA:CB    | 16:A:854:CLA:HBB2 | 2.40                     | 0.49              |
| 5:B:149:LEU:HD23  | 16:B:810:CLA:HBC1 | 1.93                     | 0.49              |
| 16:B:801:CLA:HMB1 | 16:B:801:CLA:CBB  | 2.43                     | 0.49              |
| 21:B:855:BCR:H351 | 21:B:855:BCR:H15C | 1.69                     | 0.49              |
| 16:A:832:CLA:H152 | 21:L:202:BCR:H343 | 1.95                     | 0.49              |
| 16:F:202:CLA:HBC2 | 16:F:202:CLA:HHD  | 1.95                     | 0.49              |
| 17:1:612:C7Z:C39  | 17:1:612:C7Z:C32  | 2.91                     | 0.48              |
| 16:F:202:CLA:HBB2 | 21:F:203:BCR:HC41 | 1.95                     | 0.48              |
| 16:2:609:CLA:C4D  | 16:2:610:CLA:HMA3 | 2.43                     | 0.48              |
| 16:2:611:CLA:HMC1 | 16:2:611:CLA:HBC2 | 1.94                     | 0.48              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:B:808:CLA:HAB  | 16:B:809:CLA:CAA  | 2.43                     | 0.48              |
| 4:A:594:TRP:HH2   | 16:A:855:CLA:HAB  | 1.77                     | 0.48              |
| 16:B:834:CLA:HMB1 | 16:B:834:CLA:CBB  | 2.40                     | 0.48              |
| 3:3:180:GLN:HE21  | 16:3:213:CLA:HED1 | 1.78                     | 0.48              |
| 4:A:369:ALA:HB1   | 16:A:826:CLA:HMC1 | 1.94                     | 0.48              |
| 16:B:837:CLA:HBC3 | 21:B:845:BCR:C23  | 2.42                     | 0.48              |
| 1:1:34:PHE:HB2    | 1:1:39:LEU:HD11   | 1.96                     | 0.48              |
| 16:1:607:CLA:HMB1 | 16:1:607:CLA:CBB  | 2.43                     | 0.48              |
| 4:A:11:VAL:HG11   | 16:A:809:CLA:HAA2 | 1.95                     | 0.48              |
| 4:A:312:TRP:CZ2   | 21:A:850:BCR:H383 | 2.48                     | 0.48              |
| 4:A:318:ILE:HG21  | 16:A:824:CLA:HAC1 | 1.96                     | 0.48              |
| 4:A:372:PRO:HB3   | 16:A:818:CLA:HMA2 | 1.95                     | 0.48              |
| 6:C:2:ALA:N       | 6:C:76:SER:HG     | 2.11                     | 0.48              |
| 12:K:50:ILE:HG13  | 16:K:101:CLA:HMC3 | 1.95                     | 0.48              |
| 16:L:201:CLA:HBB1 | 16:L:201:CLA:HMB1 | 1.95                     | 0.48              |
| 2:2:71:LEU:HD11   | 16:2:613:CLA:HMC1 | 1.95                     | 0.48              |
| 16:J:102:CLA:HHC  | 16:J:102:CLA:HBB1 | 1.96                     | 0.48              |
| 16:3:204:CLA:HMC2 | 17:3:216:C7Z:C11  | 2.44                     | 0.48              |
| 4:A:410:VAL:HG23  | 4:A:553:ALA:HB1   | 1.94                     | 0.48              |
| 16:A:827:CLA:C1A  | 16:A:827:CLA:CGA  | 2.92                     | 0.48              |
| 24:3:202:LMU:O5B  | 24:3:202:LMU:O3'  | 2.16                     | 0.48              |
| 4:A:410:VAL:CG2   | 4:A:553:ALA:HB1   | 2.44                     | 0.48              |
| 16:B:813:CLA:HMB1 | 16:B:813:CLA:CBB  | 2.42                     | 0.48              |
| 16:A:805:CLA:H152 | 16:A:828:CLA:HBB2 | 1.96                     | 0.47              |
| 16:B:816:CLA:HMD2 | 16:B:817:CLA:H202 | 1.94                     | 0.47              |
| 16:B:834:CLA:HMC3 | 21:B:855:BCR:H401 | 1.95                     | 0.47              |
| 4:A:706:VAL:HG21  | 16:A:856:CLA:HMB3 | 1.95                     | 0.47              |
| 16:A:819:CLA:H203 | 21:A:844:BCR:H382 | 1.96                     | 0.47              |
| 16:A:838:CLA:H42  | 16:A:854:CLA:H18  | 1.96                     | 0.47              |
| 18:A:847:RRX:H36  | 18:A:847:RRX:C10  | 2.44                     | 0.47              |
| 16:B:814:CLA:C1C  | 21:B:840:BCR:H393 | 2.43                     | 0.47              |
| 4:A:704:LEU:HD22  | 16:B:802:CLA:HMD3 | 1.96                     | 0.47              |
| 16:B:818:CLA:HMD2 | 16:B:822:CLA:C9   | 2.44                     | 0.47              |
| 18:K:103:RRX:H36  | 18:K:103:RRX:C10  | 2.44                     | 0.47              |
| 13:L:8:TYR:HA     | 13:L:18:ALA:HB2   | 1.95                     | 0.47              |
| 16:2:605:CLA:HHC  | 16:2:605:CLA:CBB  | 2.43                     | 0.47              |
| 16:B:827:CLA:H143 | 21:B:841:BCR:C17  | 2.44                     | 0.47              |
| 7:D:31:THR:HG22   | 7:D:56:LEU:HD13   | 1.96                     | 0.47              |
| 16:L:201:CLA:HMB1 | 16:L:201:CLA:CBB  | 2.44                     | 0.47              |
| 4:A:677:ALA:O     | 16:A:854:CLA:HAB  | 2.15                     | 0.47              |
| 5:B:312:ARG:HG3   | 5:B:312:ARG:HH11  | 1.79                     | 0.47              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 21:L:202:BCR:H321 | 21:L:202:BCR:C8   | 2.43                     | 0.47              |
| 8:E:51:THR:HG22   | 8:E:52:ASN:N      | 2.29                     | 0.47              |
| 16:3:206:CLA:CGA  | 16:3:206:CLA:C1A  | 2.93                     | 0.47              |
| 16:3:207:CLA:HHC  | 16:3:207:CLA:CBB  | 2.45                     | 0.47              |
| 16:3:207:CLA:HMD2 | 17:3:218:C7Z:C34  | 2.45                     | 0.47              |
| 4:A:257:LEU:HD22  | 21:A:857:BCR:H313 | 1.95                     | 0.47              |
| 4:A:449:PHE:CE1   | 16:A:855:CLA:HMA1 | 2.50                     | 0.47              |
| 16:A:809:CLA:HHC  | 16:A:809:CLA:CBB  | 2.42                     | 0.47              |
| 16:A:836:CLA:H111 | 16:A:836:CLA:HMC2 | 1.97                     | 0.47              |
| 16:A:854:CLA:O2A  | 5:B:425:LEU:HD23  | 2.15                     | 0.47              |
| 5:B:175:HIS:NE2   | 16:B:819:CLA:HMD2 | 2.30                     | 0.47              |
| 16:F:201:CLA:HHC  | 16:F:201:CLA:CBB  | 2.45                     | 0.47              |
| 15:O:83:LEU:HB2   | 21:O:205:BCR:H313 | 1.96                     | 0.47              |
| 16:O:204:CLA:C3A  | 16:O:204:CLA:CGA  | 2.92                     | 0.47              |
| 21:O:205:BCR:H331 | 21:O:205:BCR:HC8  | 1.97                     | 0.47              |
| 16:A:803:CLA:H43  | 16:A:810:CLA:HMC2 | 1.96                     | 0.47              |
| 16:A:854:CLA:CGA  | 16:A:854:CLA:H3A  | 2.44                     | 0.47              |
| 5:B:519:HIS:CE1   | 21:B:855:BCR:H393 | 2.50                     | 0.47              |
| 10:I:26:LEU:O     | 10:I:30:ILE:HG23  | 2.15                     | 0.47              |
| 16:B:808:CLA:HMB3 | 16:I:101:CLA:HMA1 | 1.97                     | 0.47              |
| 16:2:608:CLA:HHH  | 16:2:608:CLA:CBC  | 2.45                     | 0.47              |
| 16:A:816:CLA:HBC2 | 16:K:101:CLA:HMD3 | 1.97                     | 0.46              |
| 21:A:857:BCR:C11  | 18:K:103:RRX:H19  | 2.45                     | 0.46              |
| 16:O:203:CLA:HMA1 | 21:O:205:BCR:H362 | 1.97                     | 0.46              |
| 16:2:611:CLA:HAC2 | 21:2:617:BCR:H363 | 1.96                     | 0.46              |
| 21:2:617:BCR:H24C | 21:2:617:BCR:H371 | 1.80                     | 0.46              |
| 16:A:832:CLA:H171 | 16:L:204:CLA:HMB2 | 1.96                     | 0.46              |
| 21:A:846:BCR:H311 | 21:A:846:BCR:C8   | 2.45                     | 0.46              |
| 5:B:69:ALA:HB2    | 5:B:133:LEU:HB2   | 1.97                     | 0.46              |
| 16:B:832:CLA:H3A  | 16:B:832:CLA:HBA2 | 1.62                     | 0.46              |
| 1:1:107:VAL:HB    | 16:1:606:CLA:HMA1 | 1.97                     | 0.46              |
| 5:B:175:HIS:ND1   | 16:B:812:CLA:HMC2 | 2.29                     | 0.46              |
| 3:3:94:THR:HG23   | 3:3:95:ALA:N      | 2.30                     | 0.46              |
| 3:3:146:ARG:NH1   | 3:3:150:ALA:HB2   | 2.30                     | 0.46              |
| 16:A:832:CLA:H2A  | 16:A:832:CLA:HED2 | 1.97                     | 0.46              |
| 5:B:655:TRP:CE3   | 16:B:804:CLA:HMA1 | 2.50                     | 0.46              |
| 21:L:206:BCR:HC8  | 21:L:206:BCR:C33  | 2.46                     | 0.46              |
| 4:A:444:LEU:HD23  | 30:A:851:T7X:C23  | 2.46                     | 0.46              |
| 16:B:837:CLA:HHC  | 16:B:837:CLA:CBB  | 2.46                     | 0.46              |
| 18:1:613:RRX:H25  | 18:1:613:RRX:H29  | 1.96                     | 0.46              |
| 2:2:26:ARG:HH12   | 3:3:113:PRO:C     | 2.18                     | 0.46              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:3:205:CLA:HMD2 | 16:3:209:CLA:C1D  | 2.46                     | 0.46              |
| 16:A:804:CLA:CBB  | 16:A:804:CLA:HMB1 | 2.46                     | 0.46              |
| 5:B:115:TYR:H     | 16:B:808:CLA:HMD1 | 1.81                     | 0.46              |
| 5:B:260:HIS:O     | 5:B:264:GLN:N     | 2.46                     | 0.46              |
| 21:B:855:BCR:HC8  | 21:B:855:BCR:C32  | 2.45                     | 0.46              |
| 1:1:32:ASP:O      | 1:1:33:ALA:HB3    | 2.15                     | 0.46              |
| 16:A:830:CLA:HMB1 | 16:A:830:CLA:HBB1 | 1.97                     | 0.46              |
| 5:B:434:LEU:HD21  | 21:B:855:BCR:H372 | 1.98                     | 0.46              |
| 16:F:202:CLA:HHC  | 16:F:202:CLA:HBB1 | 1.97                     | 0.46              |
| 16:1:602:CLA:H62  | 16:1:603:CLA:HMA1 | 1.98                     | 0.46              |
| 4:A:433:ILE:HG23  | 16:A:837:CLA:HBB2 | 1.97                     | 0.46              |
| 5:B:419:HIS:CD2   | 16:B:829:CLA:HMB1 | 2.50                     | 0.46              |
| 21:L:207:BCR:H351 | 21:L:207:BCR:H15C | 1.74                     | 0.46              |
| 2:2:54:TRP:CZ3    | 2:2:125:LEU:HD21  | 2.50                     | 0.46              |
| 3:3:38:MET:SD     | 21:K:104:BCR:H312 | 2.56                     | 0.46              |
| 4:A:730:LEU:HD22  | 16:A:838:CLA:HMA1 | 1.97                     | 0.46              |
| 5:B:614:LEU:HD13  | 16:B:803:CLA:HMA2 | 1.98                     | 0.46              |
| 16:B:818:CLA:HMD2 | 16:B:822:CLA:H92  | 1.98                     | 0.46              |
| 5:B:517:VAL:HG21  | 5:B:591:TYR:HB2   | 1.97                     | 0.45              |
| 17:1:614:C7Z:C12  | 17:1:614:C7Z:C19  | 2.94                     | 0.45              |
| 16:3:203:CLA:HMC2 | 19:3:219:LHG:H141 | 1.97                     | 0.45              |
| 4:A:355:MET:HG3   | 16:A:824:CLA:HHB  | 1.98                     | 0.45              |
| 4:A:391:MET:HG3   | 4:A:599:LEU:CD1   | 2.47                     | 0.45              |
| 16:A:804:CLA:HMB1 | 16:A:804:CLA:HBB1 | 1.98                     | 0.45              |
| 1:1:8:PHE:CE2     | 2:2:120:VAL:HG13  | 2.52                     | 0.45              |
| 16:1:602:CLA:HMB1 | 16:1:602:CLA:CBB  | 2.44                     | 0.45              |
| 20:2:621:ERG:C3   | 20:2:621:ERG:HO1  | 2.13                     | 0.45              |
| 16:A:808:CLA:HBB1 | 18:J:103:RRX:C8   | 2.47                     | 0.45              |
| 16:A:813:CLA:HMC1 | 16:A:814:CLA:HMB3 | 1.98                     | 0.45              |
| 21:A:844:BCR:H23C | 21:A:844:BCR:C38  | 2.44                     | 0.45              |
| 21:B:844:BCR:H321 | 21:B:844:BCR:C8   | 2.44                     | 0.45              |
| 15:O:106:VAL:HG22 | 16:O:203:CLA:H93  | 1.99                     | 0.45              |
| 4:A:71:SER:HB2    | 16:A:810:CLA:HMD3 | 1.99                     | 0.45              |
| 4:A:438:ASN:ND2   | 5:B:676:LEU:HD11  | 2.30                     | 0.45              |
| 21:A:845:BCR:H351 | 21:A:845:BCR:H15C | 1.74                     | 0.45              |
| 16:F:205:CLA:HMB2 | 21:F:206:BCR:H392 | 1.99                     | 0.45              |
| 21:O:205:BCR:H351 | 21:O:205:BCR:H15C | 1.72                     | 0.45              |
| 3:3:163:LEU:HG    | 16:3:213:CLA:HBC2 | 1.99                     | 0.45              |
| 16:A:820:CLA:HMB1 | 16:A:820:CLA:CBB  | 2.47                     | 0.45              |
| 16:L:201:CLA:HHD  | 16:L:201:CLA:HBC3 | 1.98                     | 0.45              |
| 1:1:89:ILE:HA     | 16:1:605:CLA:HED3 | 1.98                     | 0.45              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 3:3:48:MET:HB3    | 16:3:204:CLA:HMA1 | 1.98                     | 0.45              |
| 3:3:159:MET:SD    | 16:3:204:CLA:HAB  | 2.57                     | 0.45              |
| 4:A:351:ILE:HD11  | 21:A:845:BCR:H24C | 1.97                     | 0.45              |
| 16:I:101:CLA:CBB  | 16:I:101:CLA:HMB1 | 2.46                     | 0.45              |
| 4:A:524:LEU:HA    | 4:A:528:ASP:OD2   | 2.17                     | 0.45              |
| 16:B:819:CLA:H152 | 16:B:819:CLA:HMC2 | 1.98                     | 0.45              |
| 13:L:93:MET:HE1   | 21:L:206:BCR:H402 | 1.98                     | 0.45              |
| 1:1:148:LEU:HG    | 16:1:602:CLA:HMC1 | 1.99                     | 0.44              |
| 3:3:104:SER:CA    | 16:3:209:CLA:HAB  | 2.48                     | 0.44              |
| 16:A:825:CLA:HAB  | 21:A:846:BCR:C8   | 2.47                     | 0.44              |
| 21:I:103:BCR:H402 | 21:L:202:BCR:C36  | 2.46                     | 0.44              |
| 4:A:618:VAL:HG13  | 4:A:618:VAL:O     | 2.17                     | 0.44              |
| 16:A:809:CLA:H141 | 16:A:809:CLA:HMD2 | 1.98                     | 0.44              |
| 5:B:546:PRO:O     | 9:F:182:VAL:HG21  | 2.17                     | 0.44              |
| 6:C:61:ASP:OD2    | 8:E:15:SER:HA     | 2.18                     | 0.44              |
| 9:F:114:PHE:CE1   | 9:F:118:THR:HG21  | 2.52                     | 0.44              |
| 16:1:603:CLA:CBC  | 18:1:613:RRX:H44  | 2.47                     | 0.44              |
| 16:1:609:CLA:HBC3 | 17:1:612:C7Z:C14  | 2.47                     | 0.44              |
| 5:B:302:ILE:CG2   | 16:B:822:CLA:HED2 | 2.48                     | 0.44              |
| 5:B:716:ILE:CD1   | 16:B:826:CLA:HMC2 | 2.45                     | 0.44              |
| 16:2:603:CLA:HBB2 | 21:2:617:BCR:C15  | 2.47                     | 0.44              |
| 16:A:816:CLA:HBC2 | 16:K:101:CLA:CMD  | 2.48                     | 0.44              |
| 16:A:823:CLA:H142 | 16:A:830:CLA:HMC2 | 1.98                     | 0.44              |
| 5:B:381:ILE:HG21  | 16:B:824:CLA:C3C  | 2.47                     | 0.44              |
| 16:F:202:CLA:HBB2 | 21:F:203:BCR:HC31 | 2.00                     | 0.44              |
| 21:A:846:BCR:H23C | 21:A:846:BCR:C40  | 2.46                     | 0.44              |
| 21:B:841:BCR:H351 | 21:B:841:BCR:H15C | 1.83                     | 0.44              |
| 16:1:608:CLA:H3A  | 16:1:608:CLA:H51  | 2.00                     | 0.44              |
| 4:A:40:LYS:O      | 4:A:41:THR:HG23   | 2.17                     | 0.44              |
| 5:B:253:LEU:HD11  | 16:B:814:CLA:HBC1 | 2.00                     | 0.44              |
| 4:A:737:TRP:HA    | 16:A:827:CLA:HBB1 | 1.98                     | 0.44              |
| 16:A:832:CLA:HHD  | 16:B:809:CLA:HBB2 | 2.00                     | 0.44              |
| 16:A:836:CLA:H203 | 16:L:201:CLA:HMC2 | 2.00                     | 0.44              |
| 21:A:850:BCR:H351 | 21:A:850:BCR:H15C | 1.66                     | 0.44              |
| 16:B:834:CLA:H92  | 16:B:835:CLA:HAC2 | 2.00                     | 0.44              |
| 21:B:842:BCR:HC8  | 21:B:842:BCR:C32  | 2.48                     | 0.44              |
| 16:3:211:CLA:CAD  | 16:3:212:CLA:HMA3 | 2.48                     | 0.44              |
| 16:A:830:CLA:HMB1 | 16:A:830:CLA:CBB  | 2.47                     | 0.44              |
| 1:1:93:ALA:O      | 1:1:94:PHE:HB3    | 2.18                     | 0.43              |
| 16:1:609:CLA:HHC  | 16:1:609:CLA:CBB  | 2.48                     | 0.43              |
| 3:3:13:VAL:N      | 3:3:14:PRO:CD     | 2.81                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 4:A:580:CYS:O     | 5:B:666:ARG:O     | 2.35                     | 0.43              |
| 16:B:821:CLA:HBB  | 16:B:821:CLA:H43  | 1.99                     | 0.43              |
| 16:B:829:CLA:HMC2 | 16:B:838:CLA:H143 | 2.00                     | 0.43              |
| 3:3:53:VAL:HG21   | 3:3:127:GLY:CA    | 2.48                     | 0.43              |
| 16:A:818:CLA:HMB1 | 16:A:818:CLA:CBB  | 2.46                     | 0.43              |
| 5:B:527:THR:HG21  | 5:B:580:TRP:CZ2   | 2.53                     | 0.43              |
| 16:B:806:CLA:HMB1 | 16:B:806:CLA:CBB  | 2.48                     | 0.43              |
| 21:2:617:BCR:H373 | 17:3:201:C7Z:C35  | 2.47                     | 0.43              |
| 4:A:354:ALA:N     | 4:A:401:ALA:HB2   | 2.34                     | 0.43              |
| 3:3:18:VAL:CG2    | 3:3:19:PRO:HD3    | 2.48                     | 0.43              |
| 16:3:213:CLA:HMD2 | 17:3:217:C7Z:C19  | 2.48                     | 0.43              |
| 16:B:805:CLA:HBC2 | 31:B:846:DGD:HAH2 | 1.99                     | 0.43              |
| 16:2:601:CLA:CBC  | 21:2:617:BCR:H382 | 2.49                     | 0.43              |
| 21:A:846:BCR:H351 | 21:A:846:BCR:H15C | 1.88                     | 0.43              |
| 16:B:804:CLA:CBB  | 16:B:804:CLA:HMB1 | 2.48                     | 0.43              |
| 16:B:809:CLA:H43  | 21:I:103:BCR:H342 | 2.00                     | 0.43              |
| 21:F:203:BCR:H23C | 21:F:203:BCR:H392 | 2.01                     | 0.43              |
| 4:A:595:MET:CG    | 16:A:825:CLA:HBC1 | 2.49                     | 0.43              |
| 5:B:544:LEU:HD23  | 5:B:568:ILE:CD1   | 2.48                     | 0.43              |
| 16:B:821:CLA:HBB1 | 16:B:821:CLA:HHC  | 2.01                     | 0.43              |
| 21:B:844:BCR:H351 | 21:B:844:BCR:H15C | 1.72                     | 0.43              |
| 7:D:119:THR:HG23  | 8:E:34:TYR:OH     | 2.19                     | 0.43              |
| 21:L:206:BCR:H331 | 21:L:206:BCR:C8   | 2.48                     | 0.43              |
| 1:1:145:LEU:HD22  | 16:1:608:CLA:HHD  | 2.00                     | 0.43              |
| 2:2:69:ALA:HB1    | 2:2:172:PHE:CE1   | 2.53                     | 0.43              |
| 16:A:815:CLA:HMB1 | 16:A:815:CLA:CBB  | 2.48                     | 0.43              |
| 5:B:544:LEU:HD23  | 5:B:568:ILE:HD13  | 2.00                     | 0.43              |
| 21:B:843:BCR:H383 | 21:B:843:BCR:H23C | 2.00                     | 0.43              |
| 21:L:206:BCR:H392 | 21:L:206:BCR:C23  | 2.49                     | 0.43              |
| 5:B:545:MET:CE    | 5:B:558:ASP:HB2   | 2.49                     | 0.43              |
| 4:A:271:ILE:HD12  | 16:A:814:CLA:HBC3 | 2.00                     | 0.43              |
| 4:A:592:LEU:HD21  | 16:A:829:CLA:HBC1 | 2.00                     | 0.43              |
| 5:B:148:LEU:CD2   | 21:B:847:BCR:H333 | 2.45                     | 0.43              |
| 5:B:657:THR:O     | 5:B:660:MET:HB3   | 2.19                     | 0.43              |
| 8:E:28:GLU:HB2    | 8:E:35:PRO:CB     | 2.48                     | 0.43              |
| 1:1:49:VAL:CG1    | 18:1:613:RRX:H45  | 2.49                     | 0.43              |
| 16:1:601:CLA:HBC2 | 2:2:120:VAL:HG23  | 2.00                     | 0.43              |
| 16:1:610:CLA:HMB2 | 16:2:605:CLA:H171 | 2.01                     | 0.43              |
| 16:3:209:CLA:H18  | 16:3:214:CLA:HMD2 | 2.00                     | 0.43              |
| 4:A:117:ILE:CD1   | 11:J:30:ARG:HB3   | 2.48                     | 0.43              |
| 16:A:828:CLA:C4   | 21:A:844:BCR:H10C | 2.47                     | 0.43              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 5:B:343:THR:HG21  | 5:B:380:LEU:HD12  | 2.00                     | 0.43              |
| 5:B:656:ALA:CB    | 16:B:801:CLA:HBB2 | 2.43                     | 0.43              |
| 16:B:816:CLA:HBA2 | 16:B:825:CLA:HBB2 | 2.00                     | 0.43              |
| 2:2:63:CYS:HB3    | 2:2:165:GLY:HA3   | 2.00                     | 0.42              |
| 16:2:602:CLA:H141 | 16:2:612:CLA:HAB  | 2.01                     | 0.42              |
| 4:A:341:LEU:HD21  | 4:A:351:ILE:HD12  | 2.02                     | 0.42              |
| 27:B:839:PQN:H142 | 21:B:845:BCR:H272 | 2.02                     | 0.42              |
| 12:K:36:LEU:CD1   | 21:K:104:BCR:H352 | 2.50                     | 0.42              |
| 13:L:5:ILE:HG23   | 13:L:19:THR:HG22  | 2.01                     | 0.42              |
| 19:1:617:LHG:H222 | 2:2:119:ILE:HD13  | 2.01                     | 0.42              |
| 16:2:609:CLA:C3D  | 16:2:610:CLA:HMA3 | 2.49                     | 0.42              |
| 3:3:39:ILE:HD12   | 17:3:216:C7Z:C3   | 2.49                     | 0.42              |
| 4:A:301:PHE:CE2   | 16:A:820:CLA:HAB  | 2.54                     | 0.42              |
| 16:A:817:CLA:O2A  | 16:A:826:CLA:HBB2 | 2.18                     | 0.42              |
| 16:2:601:CLA:HMC3 | 3:3:110:ALA:HB2   | 2.02                     | 0.42              |
| 4:A:71:SER:O      | 4:A:72:ALA:CB     | 2.67                     | 0.42              |
| 16:A:806:CLA:HMA1 | 16:A:807:CLA:HMB3 | 2.02                     | 0.42              |
| 1:1:109:TYR:CE2   | 9:F:152:LYS:HA    | 2.54                     | 0.42              |
| 3:3:18:VAL:HG22   | 3:3:19:PRO:HD3    | 2.00                     | 0.42              |
| 3:3:104:SER:HB3   | 16:3:209:CLA:HAB  | 2.00                     | 0.42              |
| 16:A:839:CLA:H141 | 13:L:88:ILE:HG22  | 2.02                     | 0.42              |
| 16:A:839:CLA:HMD2 | 21:B:845:BCR:H383 | 2.01                     | 0.42              |
| 16:B:804:CLA:HBB1 | 16:B:804:CLA:HMB1 | 2.02                     | 0.42              |
| 2:2:114:CYS:HB3   | 16:2:607:CLA:HAB  | 2.01                     | 0.42              |
| 4:A:196:HIS:CE1   | 16:A:812:CLA:HMC2 | 2.54                     | 0.42              |
| 16:A:854:CLA:CGA  | 5:B:425:LEU:HA    | 2.50                     | 0.42              |
| 9:F:63:PRO:O      | 9:F:64:SER:CB     | 2.68                     | 0.42              |
| 16:1:603:CLA:HMD2 | 16:1:606:CLA:ND   | 2.35                     | 0.42              |
| 3:3:186:PHE:H     | 16:3:213:CLA:HED2 | 1.84                     | 0.42              |
| 4:A:538:THR:HB    | 4:A:598:ALA:HB2   | 2.02                     | 0.42              |
| 16:A:830:CLA:HMA2 | 13:L:19:THR:HG21  | 2.01                     | 0.42              |
| 5:B:31:PHE:CD2    | 16:B:806:CLA:HMC2 | 2.54                     | 0.42              |
| 5:B:436:VAL:CG2   | 16:B:830:CLA:HMC3 | 2.50                     | 0.42              |
| 16:L:203:CLA:CGA  | 16:L:203:CLA:C1A  | 2.97                     | 0.42              |
| 21:O:205:BCR:H331 | 21:O:205:BCR:C8   | 2.49                     | 0.42              |
| 1:1:25:PHE:CD2    | 16:1:601:CLA:HMD3 | 2.55                     | 0.42              |
| 21:2:617:BCR:H15C | 21:2:617:BCR:H351 | 1.75                     | 0.42              |
| 5:B:663:ILE:HD12  | 16:B:801:CLA:HMC1 | 2.02                     | 0.42              |
| 13:L:54:HIS:HA    | 13:L:57:PHE:CE2   | 2.55                     | 0.42              |
| 4:A:295:LEU:HD22  | 16:A:814:CLA:HMC1 | 2.01                     | 0.42              |
| 8:E:51:THR:CG2    | 8:E:52:ASN:N      | 2.83                     | 0.42              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:J:102:CLA:HHC  | 16:J:102:CLA:CBB  | 2.49                     | 0.42              |
| 16:1:610:CLA:CAD  | 16:2:605:CLA:HMA1 | 2.50                     | 0.41              |
| 2:2:62:HIS:CE1    | 16:2:607:CLA:HMD1 | 2.55                     | 0.41              |
| 18:2:616:RRX:H26  | 18:2:616:RRX:H22  | 1.97                     | 0.41              |
| 5:B:371:THR:HG23  | 5:B:589:THR:HG21  | 2.02                     | 0.41              |
| 5:B:521:ILE:HG12  | 5:B:588:VAL:HG22  | 2.01                     | 0.41              |
| 16:B:803:CLA:HMB3 | 16:B:804:CLA:H18  | 2.01                     | 0.41              |
| 9:F:114:PHE:CD2   | 9:F:114:PHE:C     | 2.91                     | 0.41              |
| 16:J:102:CLA:HMA2 | 16:J:102:CLA:HBA2 | 2.02                     | 0.41              |
| 12:K:32:ASP:HA    | 21:K:104:BCR:H332 | 2.02                     | 0.41              |
| 16:1:608:CLA:CAD  | 16:1:609:CLA:HMA3 | 2.50                     | 0.41              |
| 3:3:147:MET:HG3   | 16:3:210:CLA:HMA1 | 2.02                     | 0.41              |
| 16:3:211:CLA:HMC3 | 19:3:219:LHG:C6   | 2.50                     | 0.41              |
| 16:A:825:CLA:HAB  | 21:A:846:BCR:C31  | 2.48                     | 0.41              |
| 5:B:254:THR:HG22  | 5:B:255:PHE:N     | 2.35                     | 0.41              |
| 13:L:64:GLN:HB3   | 16:L:205:CLA:HMB3 | 2.02                     | 0.41              |
| 4:A:667:LEU:HD13  | 16:A:808:CLA:HMC1 | 2.03                     | 0.41              |
| 21:A:846:BCR:H24C | 21:A:846:BCR:H371 | 1.95                     | 0.41              |
| 16:I:101:CLA:HMB1 | 16:I:101:CLA:HBB1 | 2.02                     | 0.41              |
| 5:B:382:VAL:HG12  | 5:B:574:PHE:CE1   | 2.56                     | 0.41              |
| 12:K:9:ILE:HB     | 12:K:10:PRO:HD3   | 2.02                     | 0.41              |
| 16:2:607:CLA:H62  | 16:2:607:CLA:H41  | 1.93                     | 0.41              |
| 4:A:704:LEU:HD21  | 21:F:206:BCR:H342 | 2.02                     | 0.41              |
| 26:A:801:CL0:CGD  | 26:A:801:CL0:H8   | 2.50                     | 0.41              |
| 21:A:844:BCR:H351 | 21:A:844:BCR:H15C | 1.79                     | 0.41              |
| 5:B:189:THR:HG21  | 5:B:276:LEU:HB2   | 2.02                     | 0.41              |
| 16:1:606:CLA:C19  | 16:1:611:CLA:HAB  | 2.50                     | 0.41              |
| 2:2:74:ILE:HD12   | 19:2:622:LHG:H222 | 2.01                     | 0.41              |
| 3:3:88:HIS:O      | 3:3:92:VAL:HB     | 2.20                     | 0.41              |
| 16:A:805:CLA:HMB1 | 16:A:805:CLA:HBB1 | 2.02                     | 0.41              |
| 21:A:850:BCR:H23C | 21:A:850:BCR:C40  | 2.50                     | 0.41              |
| 13:L:51:GLY:O     | 13:L:125:ALA:HA   | 2.20                     | 0.41              |
| 13:L:93:MET:HB2   | 13:L:93:MET:HE3   | 1.97                     | 0.41              |
| 4:A:442:ILE:HD11  | 21:B:845:BCR:H402 | 2.02                     | 0.41              |
| 16:A:832:CLA:C15  | 21:L:202:BCR:H343 | 2.51                     | 0.41              |
| 5:B:634:ASN:HB2   | 5:B:635:PRO:HD2   | 2.03                     | 0.41              |
| 8:E:6:SER:OG      | 8:E:60:GLU:OE2    | 2.33                     | 0.41              |
| 16:1:604:CLA:HAB  | 17:1:615:C7Z:C10  | 2.51                     | 0.41              |
| 16:A:856:CLA:C1A  | 16:A:856:CLA:CGA  | 2.98                     | 0.41              |
| 5:B:297:HIS:HB3   | 5:B:302:ILE:HD11  | 2.02                     | 0.41              |
| 5:B:430:HIS:HB3   | 21:B:855:BCR:C24  | 2.51                     | 0.41              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:O:202:CLA:H41  | 16:O:202:CLA:H71  | 2.02                     | 0.41              |
| 1:1:148:LEU:HD11  | 16:1:602:CLA:HAC1 | 2.03                     | 0.41              |
| 1:1:150:PHE:CE2   | 18:1:613:RRX:H42  | 2.56                     | 0.41              |
| 16:1:607:CLA:H72  | 16:1:609:CLA:HMD1 | 2.02                     | 0.41              |
| 16:3:207:CLA:H41  | 16:3:207:CLA:H61  | 1.76                     | 0.41              |
| 16:3:210:CLA:HMB1 | 16:3:210:CLA:CBB  | 2.51                     | 0.41              |
| 4:A:186:TRP:O     | 4:A:187:PHE:HB2   | 2.21                     | 0.41              |
| 4:A:263:LEU:HD21  | 12:K:48:VAL:HG22  | 2.03                     | 0.41              |
| 4:A:340:ILE:HD11  | 4:A:418:ASN:OD1   | 2.21                     | 0.41              |
| 16:A:807:CLA:H122 | 18:J:103:RRX:H30  | 2.03                     | 0.41              |
| 5:B:379:LEU:CD1   | 16:B:826:CLA:HMC1 | 2.51                     | 0.41              |
| 5:B:385:PHE:CG    | 5:B:532:LEU:HB3   | 2.56                     | 0.41              |
| 5:B:427:LEU:HD21  | 16:B:834:CLA:CMB  | 2.51                     | 0.41              |
| 16:B:808:CLA:H202 | 16:B:826:CLA:H192 | 2.02                     | 0.41              |
| 16:B:831:CLA:C1D  | 16:B:832:CLA:HAB  | 2.50                     | 0.41              |
| 27:B:839:PQN:H142 | 21:B:845:BCR:C27  | 2.51                     | 0.41              |
| 31:B:850:DGD:HD2  | 31:B:850:DGD:HAH1 | 2.03                     | 0.41              |
| 12:K:21:VAL:HA    | 12:K:39:SER:HB3   | 2.02                     | 0.41              |
| 13:L:5:ILE:HG22   | 13:L:17:LEU:HD22  | 2.03                     | 0.41              |
| 3:3:16:ALA:O      | 3:3:19:PRO:HD2    | 2.20                     | 0.41              |
| 3:3:99:ILE:HD11   | 16:3:207:CLA:HMD3 | 2.03                     | 0.41              |
| 3:3:104:SER:HA    | 16:3:209:CLA:HAB  | 2.02                     | 0.41              |
| 16:3:212:CLA:HAB  | 17:3:215:C7Z:C39  | 2.51                     | 0.41              |
| 4:A:273:THR:OG1   | 4:A:289:ASP:OD1   | 2.39                     | 0.41              |
| 4:A:368:TYR:CD1   | 4:A:368:TYR:C     | 2.93                     | 0.41              |
| 4:A:676:TRP:CG    | 26:A:801:CL0:H5   | 2.55                     | 0.41              |
| 16:A:837:CLA:H121 | 21:A:846:BCR:H372 | 2.03                     | 0.41              |
| 25:A:852:PTY:C26  | 16:O:203:CLA:H141 | 2.51                     | 0.41              |
| 5:B:58:PHE:HA     | 5:B:61:THR:HG22   | 2.03                     | 0.41              |
| 16:1:601:CLA:H143 | 16:1:601:CLA:H111 | 1.97                     | 0.40              |
| 4:A:174:TRP:HB2   | 16:A:810:CLA:HMC3 | 2.01                     | 0.40              |
| 16:A:814:CLA:HMB1 | 16:A:814:CLA:CBB  | 2.51                     | 0.40              |
| 16:A:814:CLA:HMB1 | 16:A:814:CLA:HBB1 | 2.02                     | 0.40              |
| 5:B:166:PHE:O     | 5:B:172:ARG:NH2   | 2.54                     | 0.40              |
| 16:B:805:CLA:CBC  | 31:B:846:DGD:HAH2 | 2.51                     | 0.40              |
| 31:B:849:DGD:HA51 | 31:B:849:DGD:HA92 | 2.02                     | 0.40              |
| 9:F:129:LEU:HD11  | 16:F:201:CLA:HMD1 | 2.03                     | 0.40              |
| 2:2:170:ILE:HD11  | 16:2:602:CLA:HMC1 | 2.02                     | 0.40              |
| 3:3:33:GLU:OE1    | 3:3:33:GLU:N      | 2.55                     | 0.40              |
| 5:B:643:VAL:HG21  | 16:B:808:CLA:HAC1 | 2.02                     | 0.40              |
| 16:B:812:CLA:HBB1 | 16:B:812:CLA:HMB1 | 2.02                     | 0.40              |

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| Atom-1            | Atom-2            | Interatomic distance (Å) | Clash overlap (Å) |
|-------------------|-------------------|--------------------------|-------------------|
| 16:B:817:CLA:H61  | 16:B:817:CLA:H41  | 1.85                     | 0.40              |
| 16:1:610:CLA:H102 | 16:2:605:CLA:HBB1 | 2.04                     | 0.40              |
| 4:A:472:ALA:O     | 4:A:473:ILE:C     | 2.59                     | 0.40              |
| 16:A:818:CLA:HHD  | 21:A:844:BCR:H352 | 2.03                     | 0.40              |
| 5:B:427:LEU:HD21  | 16:B:834:CLA:HMB3 | 2.03                     | 0.40              |
| 16:B:821:CLA:CBB  | 16:B:838:CLA:HED1 | 2.51                     | 0.40              |
| 16:B:830:CLA:HMB2 | 16:F:202:CLA:CAB  | 2.51                     | 0.40              |
| 31:B:850:DGD:HAH2 | 31:B:850:DGD:HAV1 | 2.03                     | 0.40              |
| 16:K:102:CLA:H72  | 21:K:104:BCR:H351 | 2.02                     | 0.40              |
| 21:O:205:BCR:HC8  | 21:O:205:BCR:C33  | 2.52                     | 0.40              |
| 4:A:393:ILE:HG23  | 16:A:805:CLA:H143 | 2.03                     | 0.40              |
| 4:A:398:ILE:HG23  | 21:A:846:BCR:H343 | 2.03                     | 0.40              |
| 16:A:821:CLA:H62  | 16:A:821:CLA:H41  | 1.81                     | 0.40              |
| 16:A:830:CLA:HAB  | 16:A:837:CLA:HAB  | 2.03                     | 0.40              |
| 5:B:723:VAL:HG13  | 5:B:724:ILE:N     | 2.36                     | 0.40              |
| 9:F:182:VAL:O     | 9:F:183:SER:OG    | 2.37                     | 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     | 171/173 (99%)  | 163 (95%) | 8 (5%)  | 0        | 100         | 100 |
| 2   | 2     | 177/179 (99%)  | 167 (94%) | 10 (6%) | 0        | 100         | 100 |
| 3   | 3     | 172/174 (99%)  | 160 (93%) | 12 (7%) | 0        | 100         | 100 |
| 4   | A     | 741/743 (100%) | 714 (96%) | 27 (4%) | 0        | 100         | 100 |
| 5   | B     | 729/731 (100%) | 703 (96%) | 26 (4%) | 0        | 100         | 100 |
| 6   | C     | 78/80 (98%)    | 75 (96%)  | 3 (4%)  | 0        | 100         | 100 |
| 7   | D     | 136/138 (99%)  | 128 (94%) | 8 (6%)  | 0        | 100         | 100 |

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| Mol | Chain | Analysed        | Favoured   | Allowed  | Outliers | Percentiles |     |
|-----|-------|-----------------|------------|----------|----------|-------------|-----|
| 8   | E     | 59/61 (97%)     | 56 (95%)   | 3 (5%)   | 0        | 100         | 100 |
| 9   | F     | 153/155 (99%)   | 144 (94%)  | 9 (6%)   | 0        | 100         | 100 |
| 10  | I     | 29/31 (94%)     | 27 (93%)   | 2 (7%)   | 0        | 100         | 100 |
| 11  | J     | 36/38 (95%)     | 36 (100%)  | 0        | 0        | 100         | 100 |
| 12  | K     | 52/54 (96%)     | 52 (100%)  | 0        | 0        | 100         | 100 |
| 13  | L     | 134/136 (98%)   | 126 (94%)  | 8 (6%)   | 0        | 100         | 100 |
| 14  | M     | 25/27 (93%)     | 25 (100%)  | 0        | 0        | 100         | 100 |
| 15  | O     | 95/97 (98%)     | 92 (97%)   | 3 (3%)   | 0        | 100         | 100 |
| All | All   | 2787/2817 (99%) | 2668 (96%) | 119 (4%) | 0        | 100         | 100 |

There are no Ramachandran outliers to report.

### 5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed       | Rotameric  | Outliers | Percentiles |     |
|-----|-------|----------------|------------|----------|-------------|-----|
| 1   | 1     | 143/143 (100%) | 143 (100%) | 0        | 100         | 100 |
| 2   | 2     | 144/144 (100%) | 144 (100%) | 0        | 100         | 100 |
| 3   | 3     | 136/136 (100%) | 136 (100%) | 0        | 100         | 100 |
| 4   | A     | 600/600 (100%) | 597 (100%) | 3 (0%)   | 86          | 92  |
| 5   | B     | 598/598 (100%) | 595 (100%) | 3 (0%)   | 86          | 92  |
| 6   | C     | 66/66 (100%)   | 66 (100%)  | 0        | 100         | 100 |
| 7   | D     | 117/117 (100%) | 117 (100%) | 0        | 100         | 100 |
| 8   | E     | 58/58 (100%)   | 58 (100%)  | 0        | 100         | 100 |
| 9   | F     | 137/137 (100%) | 137 (100%) | 0        | 100         | 100 |
| 10  | I     | 26/26 (100%)   | 26 (100%)  | 0        | 100         | 100 |
| 11  | J     | 34/34 (100%)   | 34 (100%)  | 0        | 100         | 100 |
| 12  | K     | 43/43 (100%)   | 42 (98%)   | 1 (2%)   | 45          | 70  |
| 13  | L     | 109/109 (100%) | 109 (100%) | 0        | 100         | 100 |

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| Mol | Chain | Analysed         | Rotameric   | Outliers | Percentiles |     |
|-----|-------|------------------|-------------|----------|-------------|-----|
| 14  | M     | 22/22 (100%)     | 22 (100%)   | 0        | 100         | 100 |
| 15  | O     | 75/75 (100%)     | 75 (100%)   | 0        | 100         | 100 |
| All | All   | 2308/2308 (100%) | 2301 (100%) | 7 (0%)   | 90          | 95  |

All (7) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4   | A     | 274 | PHE  |
| 4   | A     | 311 | ASN  |
| 4   | A     | 368 | TYR  |
| 5   | B     | 255 | PHE  |
| 5   | B     | 351 | TYR  |
| 5   | B     | 514 | ASP  |
| 12  | K     | 25  | ARG  |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1   | 1     | 56  | HIS  |
| 2   | 2     | 130 | ASN  |
| 4   | A     | 533 | HIS  |
| 5   | B     | 437 | HIS  |

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 206 ligands modelled in this entry, 2 are monoatomic - leaving 204 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$ |
| 16  | CLA  | B     | 818 | 33   | 65,73,73     | 1.38 | 9 (13%)     | 76,113,113  | 1.97 | 13 (17%)    |
| 16  | CLA  | A     | 817 | -    | 65,73,73     | 1.37 | 8 (12%)     | 76,113,113  | 1.87 | 16 (21%)    |
| 16  | CLA  | A     | 819 | -    | 65,73,73     | 1.37 | 10 (15%)    | 76,113,113  | 1.96 | 16 (21%)    |
| 16  | CLA  | B     | 811 | -    | 65,73,73     | 1.38 | 9 (13%)     | 76,113,113  | 1.85 | 14 (18%)    |
| 18  | RRX  | 2     | 616 | -    | 42,42,42     | 5.00 | 25 (59%)    | 57,58,58    | 2.37 | 24 (42%)    |
| 21  | BCR  | I     | 103 | -    | 41,41,41     | 1.81 | 4 (9%)      | 56,56,56    | 5.34 | 25 (44%)    |
| 16  | CLA  | 1     | 602 | 1    | 59,67,73     | 1.42 | 8 (13%)     | 68,105,113  | 2.07 | 16 (23%)    |
| 16  | CLA  | B     | 820 | -    | 65,73,73     | 1.37 | 9 (13%)     | 76,113,113  | 1.96 | 15 (19%)    |
| 16  | CLA  | A     | 828 | -    | 65,73,73     | 1.37 | 9 (13%)     | 76,113,113  | 1.80 | 14 (18%)    |
| 19  | LHG  | 3     | 219 | -    | 48,48,48     | 0.41 | 0           | 51,54,54    | 0.93 | 3 (5%)      |
| 21  | BCR  | O     | 205 | -    | 41,41,41     | 1.83 | 4 (9%)      | 56,56,56    | 4.44 | 16 (28%)    |
| 16  | CLA  | F     | 204 | -    | 65,73,73     | 1.37 | 9 (13%)     | 76,113,113  | 1.82 | 14 (18%)    |
| 26  | CL0  | A     | 801 | -    | 65,73,73     | 2.35 | 19 (29%)    | 76,113,113  | 2.48 | 23 (30%)    |
| 17  | C7Z  | 3     | 218 | -    | 43,43,43     | 5.38 | 26 (60%)    | 58,60,60    | 2.50 | 25 (43%)    |
| 16  | CLA  | B     | 817 | -    | 65,73,73     | 1.36 | 9 (13%)     | 76,113,113  | 1.84 | 13 (17%)    |
| 16  | CLA  | B     | 834 | -    | 65,73,73     | 1.36 | 9 (13%)     | 76,113,113  | 1.99 | 18 (23%)    |
| 16  | CLA  | O     | 201 | -    | 65,73,73     | 1.33 | 8 (12%)     | 76,113,113  | 2.01 | 17 (22%)    |
| 21  | BCR  | 2     | 617 | -    | 41,41,41     | 1.90 | 5 (12%)     | 56,56,56    | 4.54 | 20 (35%)    |
| 17  | C7Z  | 3     | 215 | -    | 43,43,43     | 5.42 | 26 (60%)    | 58,60,60    | 2.20 | 14 (24%)    |
| 16  | CLA  | B     | 807 | -    | 65,73,73     | 1.33 | 7 (10%)     | 76,113,113  | 1.88 | 13 (17%)    |
| 16  | CLA  | 2     | 602 | 2    | 64,71,73     | 1.50 | 10 (15%)    | 74,110,113  | 1.89 | 15 (20%)    |
| 31  | DGD  | B     | 850 | -    | 67,67,67     | 1.18 | 7 (10%)     | 81,81,81    | 1.04 | 3 (3%)      |
| 23  | DGA  | 2     | 620 | -    | 43,43,43     | 1.17 | 3 (6%)      | 45,45,45    | 1.16 | 3 (6%)      |
| 20  | ERG  | 1     | 618 | -    | 31,32,32     | 8.17 | 18 (58%)    | 47,50,50    | 4.76 | 19 (40%)    |
| 21  | BCR  | F     | 203 | -    | 41,41,41     | 1.83 | 4 (9%)      | 56,56,56    | 4.72 | 22 (39%)    |
| 16  | CLA  | 1     | 601 | -    | 65,73,73     | 1.37 | 8 (12%)     | 76,113,113  | 1.87 | 15 (19%)    |
| 21  | BCR  | B     | 845 | -    | 41,41,41     | 1.84 | 4 (9%)      | 56,56,56    | 4.44 | 19 (33%)    |
| 16  | CLA  | A     | 838 | -    | 65,73,73     | 1.38 | 8 (12%)     | 76,113,113  | 1.88 | 16 (21%)    |
| 16  | CLA  | A     | 825 | -    | 65,73,73     | 1.39 | 9 (13%)     | 76,113,113  | 1.88 | 16 (21%)    |



| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 17  | C7Z  | J     | 104 | -    | 43,43,43     | 5.40 | 26 (60%) | 58,60,60    | 2.55 | 23 (39%) |
| 16  | CLA  | B     | 829 | -    | 65,73,73     | 1.37 | 10 (15%) | 76,113,113  | 1.88 | 14 (18%) |
| 19  | LHG  | A     | 841 | -    | 48,48,48     | 0.41 | 0        | 51,54,54    | 0.90 | 2 (3%)   |
| 16  | CLA  | 3     | 213 | -    | 46,54,73     | 1.61 | 9 (19%)  | 53,90,113   | 2.17 | 13 (24%) |
| 16  | CLA  | A     | 832 | -    | 65,73,73     | 1.37 | 10 (15%) | 76,113,113  | 1.88 | 15 (19%) |
| 16  | CLA  | A     | 820 | 33   | 65,73,73     | 1.38 | 10 (15%) | 76,113,113  | 1.84 | 13 (17%) |
| 16  | CLA  | B     | 809 | 5    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 2.07 | 19 (25%) |
| 29  | 3PH  | J     | 105 | -    | 47,47,47     | 0.88 | 3 (6%)   | 51,52,52    | 0.96 | 2 (3%)   |
| 16  | CLA  | A     | 806 | -    | 65,73,73     | 1.37 | 8 (12%)  | 76,113,113  | 1.93 | 14 (18%) |
| 16  | CLA  | L     | 205 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 1.97 | 14 (18%) |
| 17  | C7Z  | 1     | 616 | -    | 43,43,43     | 5.38 | 26 (60%) | 58,60,60    | 2.79 | 22 (37%) |
| 21  | BCR  | F     | 206 | -    | 41,41,41     | 1.86 | 4 (9%)   | 56,56,56    | 4.22 | 23 (41%) |
| 17  | C7Z  | 1     | 614 | -    | 43,43,43     | 5.41 | 26 (60%) | 58,60,60    | 2.32 | 17 (29%) |
| 16  | CLA  | A     | 810 | 16   | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.99 | 16 (21%) |
| 21  | BCR  | B     | 855 | -    | 41,41,41     | 1.85 | 4 (9%)   | 56,56,56    | 4.67 | 28 (50%) |
| 16  | CLA  | A     | 854 | -    | 65,73,73     | 1.34 | 8 (12%)  | 76,113,113  | 1.79 | 13 (17%) |
| 31  | DGD  | B     | 849 | -    | 67,67,67     | 1.20 | 8 (11%)  | 81,81,81    | 1.04 | 5 (6%)   |
| 20  | ERG  | 2     | 621 | -    | 31,32,32     | 8.27 | 19 (61%) | 47,50,50    | 2.95 | 18 (38%) |
| 16  | CLA  | 2     | 610 | 19   | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 2.00 | 17 (22%) |
| 16  | CLA  | 2     | 605 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.88 | 16 (21%) |
| 22  | PGT  | B     | 848 | 16   | 34,34,50     | 1.54 | 7 (20%)  | 37,40,56    | 1.06 | 2 (5%)   |
| 16  | CLA  | A     | 837 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.88 | 16 (21%) |
| 16  | CLA  | A     | 816 | -    | 65,73,73     | 1.40 | 8 (12%)  | 76,113,113  | 1.90 | 16 (21%) |
| 16  | CLA  | B     | 812 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.92 | 17 (22%) |
| 16  | CLA  | L     | 204 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.83 | 15 (19%) |
| 17  | C7Z  | 3     | 217 | -    | 43,43,43     | 5.36 | 25 (58%) | 58,60,60    | 2.58 | 22 (37%) |
| 16  | CLA  | A     | 814 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 1.97 | 17 (22%) |
| 25  | PTY  | 3     | 221 | -    | 49,49,49     | 0.89 | 4 (8%)   | 52,54,54    | 0.98 | 2 (3%)   |
| 30  | T7X  | A     | 851 | -    | 54,54,61     | 0.88 | 4 (7%)   | 64,66,73    | 1.00 | 3 (4%)   |
| 21  | BCR  | B     | 841 | -    | 41,41,41     | 1.79 | 4 (9%)   | 56,56,56    | 4.44 | 26 (46%) |
| 21  | BCR  | A     | 844 | -    | 41,41,41     | 1.86 | 4 (9%)   | 56,56,56    | 4.26 | 21 (37%) |
| 16  | CLA  | A     | 804 | -    | 65,73,73     | 1.39 | 11 (16%) | 76,113,113  | 1.91 | 18 (23%) |
| 16  | CLA  | B     | 828 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.83 | 13 (17%) |
| 19  | LHG  | 1     | 617 | 16   | 48,48,48     | 0.42 | 0        | 51,54,54    | 0.94 | 3 (5%)   |
| 27  | PQN  | B     | 839 | -    | 34,34,34     | 0.46 | 0        | 42,45,45    | 1.00 | 2 (4%)   |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 16  | CLA  | B     | 814 | -    | 65,73,73     | 1.36 | 10 (15%) | 76,113,113  | 1.88 | 14 (18%) |
| 16  | CLA  | F     | 201 | -    | 61,69,73     | 1.41 | 9 (14%)  | 71,108,113  | 1.81 | 14 (19%) |
| 16  | CLA  | 2     | 607 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.82 | 11 (14%) |
| 16  | CLA  | A     | 824 | 33   | 65,73,73     | 1.38 | 10 (15%) | 76,113,113  | 1.89 | 14 (18%) |
| 16  | CLA  | I     | 102 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.83 | 14 (18%) |
| 16  | CLA  | O     | 203 | -    | 65,73,73     | 1.39 | 9 (13%)  | 76,113,113  | 1.89 | 14 (18%) |
| 21  | BCR  | B     | 844 | -    | 41,41,41     | 1.82 | 4 (9%)   | 56,56,56    | 4.48 | 21 (37%) |
| 21  | BCR  | L     | 207 | -    | 41,41,41     | 1.85 | 4 (9%)   | 56,56,56    | 4.57 | 23 (41%) |
| 16  | CLA  | A     | 855 | 33   | 65,73,73     | 1.39 | 8 (12%)  | 76,113,113  | 1.76 | 13 (17%) |
| 16  | CLA  | 3     | 207 | -    | 62,70,73     | 1.39 | 8 (12%)  | 72,109,113  | 1.93 | 15 (20%) |
| 16  | CLA  | A     | 802 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 2.00 | 14 (18%) |
| 16  | CLA  | B     | 838 | 22   | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.93 | 17 (22%) |
| 16  | CLA  | 2     | 603 | -    | 65,73,73     | 1.37 | 11 (16%) | 76,113,113  | 1.85 | 15 (19%) |
| 16  | CLA  | B     | 815 | -    | 55,63,73     | 1.48 | 9 (16%)  | 64,101,113  | 1.97 | 14 (21%) |
| 16  | CLA  | A     | 827 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.89 | 14 (18%) |
| 16  | CLA  | A     | 835 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 2.03 | 16 (21%) |
| 16  | CLA  | 1     | 604 | -    | 65,73,73     | 1.38 | 8 (12%)  | 76,113,113  | 1.90 | 15 (19%) |
| 16  | CLA  | 3     | 209 | 3    | 65,73,73     | 1.37 | 10 (15%) | 76,113,113  | 1.91 | 15 (19%) |
| 16  | CLA  | A     | 809 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.80 | 14 (18%) |
| 16  | CLA  | A     | 834 | 4    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.88 | 16 (21%) |
| 16  | CLA  | F     | 202 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 2.12 | 20 (26%) |
| 16  | CLA  | 3     | 206 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.88 | 16 (21%) |
| 16  | CLA  | K     | 101 | -    | 65,73,73     | 1.38 | 10 (15%) | 76,113,113  | 1.88 | 17 (22%) |
| 21  | BCR  | B     | 840 | -    | 41,41,41     | 1.83 | 4 (9%)   | 56,56,56    | 4.56 | 18 (32%) |
| 28  | SF4  | C     | 102 | 6    | 0,12,12      | -    | -        | -           | -    | -        |
| 16  | CLA  | A     | 821 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.98 | 19 (25%) |
| 16  | CLA  | J     | 102 | 11   | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 2.06 | 17 (22%) |
| 16  | CLA  | 2     | 611 | 2    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.91 | 16 (21%) |
| 31  | DGD  | B     | 846 | -    | 67,67,67     | 1.19 | 7 (10%)  | 81,81,81    | 1.03 | 3 (3%)   |
| 16  | CLA  | 3     | 212 | -    | 58,66,73     | 1.44 | 9 (15%)  | 67,104,113  | 2.09 | 17 (25%) |
| 16  | CLA  | 3     | 203 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 2.01 | 16 (21%) |
| 16  | CLA  | A     | 807 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.92 | 15 (19%) |
| 16  | CLA  | B     | 837 | -    | 65,73,73     | 1.37 | 8 (12%)  | 76,113,113  | 2.08 | 17 (22%) |
| 16  | CLA  | B     | 810 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.87 | 15 (19%) |
| 17  | C7Z  | 2     | 615 | -    | 43,43,43     | 5.41 | 26 (60%) | 58,60,60    | 2.57 | 22 (37%) |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 16  | CLA  | 2     | 613 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.96 | 15 (19%) |
| 28  | SF4  | C     | 101 | 6    | 0,12,12      | -    | -        | -           |      |          |
| 16  | CLA  | B     | 825 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.92 | 13 (17%) |
| 16  | CLA  | B     | 819 | -    | 65,73,73     | 1.39 | 9 (13%)  | 76,113,113  | 1.93 | 14 (18%) |
| 16  | CLA  | L     | 203 | 13   | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.86 | 15 (19%) |
| 21  | BCR  | L     | 206 | -    | 41,41,41     | 1.82 | 5 (12%)  | 56,56,56    | 4.49 | 19 (33%) |
| 16  | CLA  | A     | 813 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.87 | 14 (18%) |
| 16  | CLA  | B     | 808 | -    | 65,73,73     | 1.37 | 10 (15%) | 76,113,113  | 1.92 | 15 (19%) |
| 16  | CLA  | A     | 823 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.83 | 15 (19%) |
| 16  | CLA  | A     | 811 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.88 | 15 (19%) |
| 16  | CLA  | B     | 831 | 33   | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.90 | 14 (18%) |
| 16  | CLA  | 1     | 603 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.92 | 18 (23%) |
| 16  | CLA  | 1     | 608 | 19   | 65,73,73     | 1.38 | 8 (12%)  | 76,113,113  | 1.84 | 15 (19%) |
| 21  | BCR  | B     | 842 | -    | 41,41,41     | 1.87 | 4 (9%)   | 56,56,56    | 4.46 | 21 (37%) |
| 17  | C7Z  | 1     | 615 | -    | 43,43,43     | 5.38 | 26 (60%) | 58,60,60    | 2.45 | 19 (32%) |
| 16  | CLA  | B     | 805 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.90 | 15 (19%) |
| 28  | SF4  | A     | 848 | 5,4  | 0,12,12      | -    | -        | -           |      |          |
| 16  | CLA  | 2     | 601 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.95 | 14 (18%) |
| 16  | CLA  | B     | 802 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.92 | 14 (18%) |
| 16  | CLA  | 1     | 607 | 1    | 60,68,73     | 1.41 | 8 (13%)  | 70,107,113  | 1.95 | 14 (20%) |
| 16  | CLA  | I     | 101 | -    | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 1.91 | 14 (18%) |
| 16  | CLA  | A     | 856 | -    | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 1.92 | 16 (21%) |
| 23  | DGA  | J     | 101 | -    | 43,43,43     | 1.15 | 3 (6%)   | 45,45,45    | 1.16 | 3 (6%)   |
| 16  | CLA  | 3     | 210 | 3    | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 2.17 | 18 (23%) |
| 16  | CLA  | 1     | 611 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.84 | 13 (17%) |
| 16  | CLA  | B     | 813 | -    | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 1.88 | 15 (19%) |
| 16  | CLA  | B     | 821 | -    | 65,73,73     | 1.39 | 9 (13%)  | 76,113,113  | 2.09 | 17 (22%) |
| 17  | C7Z  | 2     | 614 | -    | 43,43,43     | 5.39 | 26 (60%) | 58,60,60    | 2.31 | 17 (29%) |
| 16  | CLA  | 2     | 606 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.96 | 14 (18%) |
| 25  | PTY  | L     | 208 | -    | 49,49,49     | 0.89 | 4 (8%)   | 52,54,54    | 1.03 | 2 (3%)   |
| 24  | LMU  | A     | 853 | -    | 36,36,36     | 0.44 | 0        | 47,47,47    | 0.75 | 0        |
| 16  | CLA  | A     | 818 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 2.17 | 18 (23%) |
| 20  | ERG  | 2     | 618 | -    | 31,32,32     | 8.30 | 18 (58%) | 47,50,50    | 3.52 | 22 (46%) |
| 16  | CLA  | A     | 822 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.89 | 16 (21%) |
| 16  | CLA  | L     | 201 | -    | 65,73,73     | 1.39 | 9 (13%)  | 76,113,113  | 1.83 | 16 (21%) |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 17  | C7Z  | 3     | 216 | -    | 43,43,43     | 5.39 | 27 (62%) | 58,60,60    | 3.47 | 24 (41%) |
| 16  | CLA  | A     | 803 | 16   | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 1.99 | 16 (21%) |
| 17  | C7Z  | A     | 843 | -    | 43,43,43     | 5.41 | 26 (60%) | 58,60,60    | 2.24 | 18 (31%) |
| 16  | CLA  | B     | 832 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.92 | 16 (21%) |
| 16  | CLA  | B     | 803 | 33   | 65,73,73     | 1.40 | 9 (13%)  | 76,113,113  | 1.79 | 15 (19%) |
| 21  | BCR  | A     | 845 | -    | 41,41,41     | 1.82 | 4 (9%)   | 56,56,56    | 5.62 | 29 (51%) |
| 16  | CLA  | A     | 830 | -    | 65,73,73     | 1.40 | 9 (13%)  | 76,113,113  | 1.86 | 14 (18%) |
| 18  | RRX  | 1     | 613 | -    | 42,42,42     | 4.96 | 25 (59%) | 57,58,58    | 2.41 | 20 (35%) |
| 21  | BCR  | A     | 857 | -    | 41,41,41     | 1.85 | 4 (9%)   | 56,56,56    | 4.85 | 26 (46%) |
| 22  | PGT  | 2     | 619 | -    | 34,34,50     | 1.45 | 6 (17%)  | 37,40,56    | 1.03 | 2 (5%)   |
| 16  | CLA  | A     | 833 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.91 | 16 (21%) |
| 25  | PTY  | 3     | 220 | -    | 49,49,49     | 0.89 | 4 (8%)   | 52,54,54    | 1.06 | 2 (3%)   |
| 17  | C7Z  | 1     | 612 | -    | 43,43,43     | 5.41 | 25 (58%) | 58,60,60    | 2.10 | 16 (27%) |
| 16  | CLA  | 3     | 204 | 3    | 63,71,73     | 1.39 | 9 (14%)  | 73,110,113  | 1.90 | 12 (16%) |
| 16  | CLA  | 3     | 211 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.96 | 16 (21%) |
| 16  | CLA  | B     | 826 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.88 | 14 (18%) |
| 16  | CLA  | B     | 827 | -    | 65,73,73     | 1.37 | 10 (15%) | 76,113,113  | 1.80 | 15 (19%) |
| 16  | CLA  | B     | 822 | -    | 65,73,73     | 1.40 | 8 (12%)  | 76,113,113  | 1.82 | 15 (19%) |
| 27  | PQN  | A     | 840 | -    | 34,34,34     | 0.44 | 0        | 42,45,45    | 1.30 | 4 (9%)   |
| 21  | BCR  | K     | 104 | -    | 41,41,41     | 1.82 | 4 (9%)   | 56,56,56    | 4.15 | 26 (46%) |
| 16  | CLA  | O     | 202 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.88 | 13 (17%) |
| 16  | CLA  | A     | 831 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.83 | 14 (18%) |
| 21  | BCR  | A     | 850 | -    | 41,41,41     | 1.88 | 4 (9%)   | 56,56,56    | 4.87 | 23 (41%) |
| 16  | CLA  | B     | 824 | -    | 65,73,73     | 1.34 | 7 (10%)  | 76,113,113  | 1.90 | 17 (22%) |
| 16  | CLA  | 2     | 609 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.91 | 15 (19%) |
| 21  | BCR  | B     | 843 | -    | 41,41,41     | 1.84 | 4 (9%)   | 56,56,56    | 4.82 | 27 (48%) |
| 16  | CLA  | 1     | 610 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.98 | 15 (19%) |
| 16  | CLA  | 2     | 604 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 1.99 | 17 (22%) |
| 16  | CLA  | K     | 102 | -    | 65,73,73     | 1.37 | 8 (12%)  | 76,113,113  | 1.85 | 13 (17%) |
| 16  | CLA  | B     | 806 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 1.89 | 16 (21%) |
| 16  | CLA  | A     | 805 | -    | 65,73,73     | 1.34 | 8 (12%)  | 76,113,113  | 1.91 | 14 (18%) |
| 21  | BCR  | A     | 846 | -    | 41,41,41     | 1.80 | 4 (9%)   | 56,56,56    | 4.48 | 25 (44%) |
| 21  | BCR  | B     | 847 | -    | 41,41,41     | 1.88 | 4 (9%)   | 56,56,56    | 4.87 | 26 (46%) |
| 16  | CLA  | 1     | 606 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 2.10 | 18 (23%) |
| 19  | LHG  | 2     | 622 | 16   | 48,48,48     | 0.40 | 0        | 51,54,54    | 1.06 | 4 (7%)   |

| Mol | Type | Chain | Res | Link | Bond lengths |      |          | Bond angles |      |          |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
|     |      |       |     |      | Counts       | RMSZ | # Z  > 2 | Counts      | RMSZ | # Z  > 2 |
| 16  | CLA  | B     | 801 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.84 | 15 (19%) |
| 16  | CLA  | 1     | 605 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.88 | 15 (19%) |
| 16  | CLA  | B     | 804 | -    | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 1.92 | 16 (21%) |
| 16  | CLA  | B     | 816 | -    | 65,73,73     | 1.39 | 10 (15%) | 76,113,113  | 1.85 | 16 (21%) |
| 16  | CLA  | B     | 835 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.87 | 16 (21%) |
| 18  | RRX  | J     | 103 | -    | 42,42,42     | 4.92 | 24 (57%) | 57,58,58    | 3.14 | 30 (52%) |
| 29  | 3PH  | B     | 854 | -    | 47,47,47     | 0.87 | 4 (8%)   | 51,52,52    | 1.02 | 2 (3%)   |
| 16  | CLA  | 3     | 214 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.92 | 15 (19%) |
| 18  | RRX  | A     | 847 | -    | 42,42,42     | 4.98 | 25 (59%) | 57,58,58    | 2.92 | 26 (45%) |
| 16  | CLA  | B     | 830 | -    | 65,73,73     | 1.35 | 9 (13%)  | 76,113,113  | 1.83 | 15 (19%) |
| 25  | PTY  | A     | 852 | -    | 45,45,49     | 0.92 | 4 (8%)   | 47,49,54    | 1.01 | 2 (4%)   |
| 16  | CLA  | A     | 836 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.95 | 17 (22%) |
| 16  | CLA  | 3     | 205 | -    | 65,73,73     | 1.35 | 7 (10%)  | 76,113,113  | 2.21 | 22 (28%) |
| 16  | CLA  | B     | 823 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.83 | 14 (18%) |
| 16  | CLA  | A     | 815 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 2.05 | 17 (22%) |
| 16  | CLA  | A     | 812 | -    | 65,73,73     | 1.35 | 8 (12%)  | 76,113,113  | 1.89 | 14 (18%) |
| 16  | CLA  | A     | 829 | -    | 65,73,73     | 1.37 | 8 (12%)  | 76,113,113  | 1.83 | 12 (15%) |
| 16  | CLA  | A     | 826 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.89 | 12 (15%) |
| 24  | LMU  | 3     | 202 | -    | 36,36,36     | 0.46 | 0        | 47,47,47    | 0.74 | 0        |
| 17  | C7Z  | 3     | 201 | -    | 43,43,43     | 5.42 | 26 (60%) | 58,60,60    | 2.37 | 20 (34%) |
| 16  | CLA  | A     | 808 | 4    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.93 | 18 (23%) |
| 16  | CLA  | O     | 204 | -    | 65,73,73     | 1.37 | 9 (13%)  | 76,113,113  | 1.94 | 16 (21%) |
| 29  | 3PH  | A     | 849 | -    | 47,47,47     | 0.86 | 4 (8%)   | 51,52,52    | 1.07 | 2 (3%)   |
| 16  | CLA  | 3     | 208 | -    | 65,73,73     | 1.36 | 8 (12%)  | 76,113,113  | 1.93 | 16 (21%) |
| 16  | CLA  | 1     | 609 | -    | 65,73,73     | 1.40 | 8 (12%)  | 76,113,113  | 1.81 | 14 (18%) |
| 16  | CLA  | 2     | 612 | -    | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.85 | 15 (19%) |
| 19  | LHG  | A     | 842 | -    | 48,48,48     | 0.40 | 0        | 51,54,54    | 0.93 | 3 (5%)   |
| 16  | CLA  | B     | 836 | -    | 65,73,73     | 1.39 | 9 (13%)  | 76,113,113  | 1.87 | 13 (17%) |
| 19  | LHG  | B     | 851 | -    | 44,44,48     | 0.42 | 0        | 47,50,54    | 0.95 | 3 (6%)   |
| 16  | CLA  | 2     | 608 | -    | 65,73,73     | 1.39 | 8 (12%)  | 76,113,113  | 1.98 | 18 (23%) |
| 18  | RRX  | K     | 103 | -    | 42,42,42     | 4.99 | 26 (61%) | 57,58,58    | 2.35 | 22 (38%) |
| 16  | CLA  | A     | 839 | 33   | 65,73,73     | 1.38 | 9 (13%)  | 76,113,113  | 1.87 | 12 (15%) |
| 16  | CLA  | B     | 833 | -    | 65,73,73     | 1.36 | 9 (13%)  | 76,113,113  | 1.86 | 18 (23%) |
| 16  | CLA  | F     | 205 | 9    | 65,73,73     | 1.38 | 8 (12%)  | 76,113,113  | 1.94 | 14 (18%) |
| 21  | BCR  | L     | 202 | -    | 41,41,41     | 1.75 | 4 (9%)   | 56,56,56    | 4.40 | 19 (33%) |

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   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 16  | CLA  | B     | 818 | 33   | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | A     | 817 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | A     | 819 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | B     | 811 | -    | 1/1/19/20 | 8/37/115/115  | -       |
| 18  | RRX  | 2     | 616 | -    | 1/1/25/25 | 13/29/65/65   | 0/2/2/2 |
| 26  | CL0  | A     | 801 | -    | 3/3/24/25 | 15/37/135/135 | -       |
| 16  | CLA  | 1     | 602 | 1    | 1/1/17/20 | 8/30/108/115  | -       |
| 16  | CLA  | B     | 820 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | A     | 828 | -    | 1/1/19/20 | 7/37/115/115  | -       |
| 19  | LHG  | 3     | 219 | -    | -         | 32/53/53/53   | -       |
| 21  | BCR  | I     | 103 | -    | -         | 10/29/63/63   | 0/2/2/2 |
| 16  | CLA  | F     | 204 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 17  | C7Z  | 3     | 218 | -    | 1/1/12/26 | 8/29/67/67    | 0/2/2/2 |
| 21  | BCR  | O     | 205 | -    | -         | 11/29/63/63   | 0/2/2/2 |
| 16  | CLA  | B     | 817 | -    | 1/1/19/20 | 7/37/115/115  | -       |
| 16  | CLA  | B     | 834 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | O     | 201 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 21  | BCR  | 2     | 617 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 17  | C7Z  | 3     | 215 | -    | 1/1/12/26 | 9/29/67/67    | 0/2/2/2 |
| 16  | CLA  | B     | 807 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | 2     | 602 | 2    | 1/1/19/20 | 13/35/113/115 | -       |
| 31  | DGD  | B     | 850 | -    | -         | 18/55/95/95   | 0/2/2/2 |
| 23  | DGA  | 2     | 620 | -    | -         | 21/45/45/45   | -       |
| 20  | ERG  | 1     | 618 | -    | 6/6/15/15 | 3/13/71/71    | 0/4/4/4 |
| 21  | BCR  | F     | 203 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 16  | CLA  | 1     | 601 | -    | 1/1/19/20 | 16/37/115/115 | -       |
| 21  | BCR  | B     | 845 | -    | -         | 12/29/63/63   | 0/2/2/2 |
| 16  | CLA  | A     | 838 | -    | 1/1/19/20 | 6/37/115/115  | -       |
| 16  | CLA  | A     | 825 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 17  | C7Z  | J     | 104 | -    | 1/1/12/26 | 6/29/67/67    | 0/2/2/2 |
| 16  | CLA  | B     | 829 | -    | 1/1/19/20 | 12/37/115/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 19  | LHG  | A     | 841 | -    | -         | 35/53/53/53   | -       |
| 16  | CLA  | 3     | 213 | -    | 1/1/14/20 | 9/15/93/115   | -       |
| 16  | CLA  | A     | 832 | -    | 1/1/19/20 | 10/37/115/115 | -       |
| 16  | CLA  | A     | 820 | 33   | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | B     | 809 | 5    | 1/1/19/20 | 17/37/115/115 | -       |
| 29  | 3PH  | J     | 105 | -    | -         | 20/49/49/49   | -       |
| 16  | CLA  | A     | 806 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | L     | 205 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 17  | C7Z  | 1     | 616 | -    | 1/1/12/26 | 7/29/67/67    | 0/2/2/2 |
| 21  | BCR  | F     | 206 | -    | -         | 10/29/63/63   | 0/2/2/2 |
| 17  | C7Z  | 1     | 614 | -    | 1/1/12/26 | 13/29/67/67   | 0/2/2/2 |
| 16  | CLA  | A     | 810 | 16   | 1/1/19/20 | 11/37/115/115 | -       |
| 21  | BCR  | B     | 855 | -    | -         | 9/29/63/63    | 0/2/2/2 |
| 16  | CLA  | A     | 854 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 31  | DGD  | B     | 849 | -    | -         | 16/55/95/95   | 0/2/2/2 |
| 20  | ERG  | 2     | 621 | -    | 5/5/15/15 | 4/13/71/71    | 0/4/4/4 |
| 16  | CLA  | 2     | 610 | 19   | 1/1/19/20 | 16/37/115/115 | -       |
| 16  | CLA  | 2     | 605 | -    | 1/1/19/20 | 16/37/115/115 | -       |
| 22  | PGT  | B     | 848 | 16   | 1/1/5/5   | 21/38/38/55   | -       |
| 16  | CLA  | A     | 837 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | A     | 816 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | B     | 812 | -    | 1/1/19/20 | 20/37/115/115 | -       |
| 16  | CLA  | L     | 204 | -    | 1/1/19/20 | 21/37/115/115 | -       |
| 17  | C7Z  | 3     | 217 | -    | 1/1/12/26 | 11/29/67/67   | 0/2/2/2 |
| 16  | CLA  | A     | 814 | -    | 1/1/19/20 | 20/37/115/115 | -       |
| 25  | PTY  | 3     | 221 | -    | -         | 18/53/53/53   | -       |
| 30  | T7X  | A     | 851 | -    | -         | 19/49/73/80   | 0/1/1/1 |
| 21  | BCR  | B     | 841 | -    | -         | 10/29/63/63   | 0/2/2/2 |
| 21  | BCR  | A     | 844 | -    | -         | 6/29/63/63    | 0/2/2/2 |
| 16  | CLA  | A     | 804 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | B     | 828 | -    | 1/1/19/20 | 7/37/115/115  | -       |
| 19  | LHG  | 1     | 617 | 16   | -         | 29/53/53/53   | -       |
| 27  | PQN  | B     | 839 | -    | -         | 9/23/43/43    | 0/2/2/2 |
| 16  | CLA  | B     | 814 | -    | 1/1/19/20 | 12/37/115/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 16  | CLA  | F     | 201 | -    | 1/1/18/20 | 15/33/111/115 | -       |
| 16  | CLA  | 2     | 607 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 16  | CLA  | A     | 824 | 33   | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | I     | 102 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | O     | 203 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 21  | BCR  | B     | 844 | -    | -         | 7/29/63/63    | 0/2/2/2 |
| 21  | BCR  | L     | 207 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 16  | CLA  | A     | 855 | 33   | 1/1/19/20 | 10/37/115/115 | -       |
| 16  | CLA  | 3     | 207 | -    | 1/1/18/20 | 14/34/112/115 | -       |
| 16  | CLA  | A     | 802 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | B     | 838 | 22   | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | 2     | 603 | -    | 1/1/19/20 | 9/37/115/115  | -       |
| 16  | CLA  | B     | 815 | -    | 1/1/17/20 | 9/25/103/115  | -       |
| 16  | CLA  | A     | 827 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | A     | 835 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | 1     | 604 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | 3     | 209 | 3    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | A     | 809 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | A     | 834 | 4    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | F     | 202 | -    | 2/2/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | 3     | 206 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | K     | 101 | -    | 1/1/19/20 | 16/37/115/115 | -       |
| 21  | BCR  | B     | 840 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 28  | SF4  | C     | 102 | 6    | -         | -             | 0/6/5/5 |
| 16  | CLA  | A     | 821 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | J     | 102 | 11   | 2/2/19/20 | 18/37/115/115 | -       |
| 16  | CLA  | 2     | 611 | 2    | 1/1/19/20 | 15/37/115/115 | -       |
| 31  | DGD  | B     | 846 | -    | -         | 20/55/95/95   | 0/2/2/2 |
| 16  | CLA  | 3     | 212 | -    | 1/1/17/20 | 12/29/107/115 | -       |
| 16  | CLA  | 3     | 203 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | A     | 807 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | B     | 837 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | B     | 810 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 17  | C7Z  | 2     | 615 | -    | 1/1/12/26 | 8/29/67/67    | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 16  | CLA  | 2     | 613 | -    | 1/1/19/20 | 18/37/115/115 | -       |
| 28  | SF4  | C     | 101 | 6    | -         | -             | 0/6/5/5 |
| 16  | CLA  | B     | 825 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 16  | CLA  | B     | 819 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | L     | 203 | 13   | 1/1/19/20 | 12/37/115/115 | -       |
| 21  | BCR  | L     | 206 | -    | -         | 8/29/63/63    | 0/2/2/2 |
| 16  | CLA  | A     | 813 | -    | 1/1/19/20 | 16/37/115/115 | -       |
| 16  | CLA  | B     | 808 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | A     | 823 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | A     | 811 | -    | 1/1/19/20 | 10/37/115/115 | -       |
| 16  | CLA  | B     | 831 | 33   | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | 1     | 603 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | 1     | 608 | 19   | 1/1/19/20 | 14/37/115/115 | -       |
| 21  | BCR  | B     | 842 | -    | -         | 6/29/63/63    | 0/2/2/2 |
| 17  | C7Z  | 1     | 615 | -    | 1/1/12/26 | 11/29/67/67   | 0/2/2/2 |
| 16  | CLA  | B     | 805 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 28  | SF4  | A     | 848 | 5,4  | -         | -             | 0/6/5/5 |
| 16  | CLA  | 2     | 601 | -    | 1/1/19/20 | 20/37/115/115 | -       |
| 16  | CLA  | B     | 802 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 16  | CLA  | 1     | 607 | 1    | 1/1/18/20 | 12/31/109/115 | -       |
| 16  | CLA  | I     | 101 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 16  | CLA  | A     | 856 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 23  | DGA  | J     | 101 | -    | -         | 17/45/45/45   | -       |
| 16  | CLA  | 3     | 210 | 3    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | 1     | 611 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | B     | 813 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 16  | CLA  | B     | 821 | -    | 2/2/19/20 | 13/37/115/115 | -       |
| 17  | C7Z  | 2     | 614 | -    | 1/1/12/26 | 10/29/67/67   | 0/2/2/2 |
| 16  | CLA  | 2     | 606 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 25  | PTY  | L     | 208 | -    | -         | 23/53/53/53   | -       |
| 24  | LMU  | A     | 853 | -    | -         | 7/21/61/61    | 0/2/2/2 |
| 16  | CLA  | A     | 818 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 20  | ERG  | 2     | 618 | -    | 4/4/15/15 | 10/13/71/71   | 0/4/4/4 |
| 16  | CLA  | A     | 822 | -    | 1/1/19/20 | 13/37/115/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 16  | CLA  | L     | 201 | -    | 1/1/19/20 | 8/37/115/115  | -       |
| 17  | C7Z  | 3     | 216 | -    | 1/1/12/26 | 9/29/67/67    | 0/2/2/2 |
| 16  | CLA  | A     | 803 | 16   | 1/1/19/20 | 13/37/115/115 | -       |
| 17  | C7Z  | A     | 843 | -    | 1/1/12/26 | 12/29/67/67   | 0/2/2/2 |
| 16  | CLA  | B     | 832 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | B     | 803 | 33   | 1/1/19/20 | 9/37/115/115  | -       |
| 21  | BCR  | A     | 845 | -    | -         | 11/29/63/63   | 0/2/2/2 |
| 16  | CLA  | A     | 830 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 18  | RRX  | 1     | 613 | -    | 1/1/25/25 | 20/29/65/65   | 0/2/2/2 |
| 22  | PGT  | 2     | 619 | -    | 1/1/5/5   | 20/38/38/55   | -       |
| 21  | BCR  | A     | 857 | -    | -         | 9/29/63/63    | 0/2/2/2 |
| 16  | CLA  | A     | 833 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 25  | PTY  | 3     | 220 | -    | -         | 19/53/53/53   | -       |
| 17  | C7Z  | 1     | 612 | -    | 1/1/12/26 | 11/29/67/67   | 0/2/2/2 |
| 16  | CLA  | 3     | 204 | 3    | 1/1/18/20 | 8/35/113/115  | -       |
| 16  | CLA  | 3     | 211 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | B     | 826 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 16  | CLA  | B     | 827 | -    | 1/1/19/20 | 12/37/115/115 | -       |
| 16  | CLA  | B     | 822 | -    | 1/1/19/20 | 6/37/115/115  | -       |
| 27  | PQN  | A     | 840 | -    | -         | 10/23/43/43   | 0/2/2/2 |
| 21  | BCR  | K     | 104 | -    | -         | 14/29/63/63   | 0/2/2/2 |
| 16  | CLA  | O     | 202 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | A     | 831 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 21  | BCR  | A     | 850 | -    | -         | 14/29/63/63   | 0/2/2/2 |
| 16  | CLA  | B     | 824 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | 2     | 609 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 21  | BCR  | B     | 843 | -    | -         | 9/29/63/63    | 0/2/2/2 |
| 16  | CLA  | 1     | 610 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | 2     | 604 | -    | 1/1/19/20 | 10/37/115/115 | -       |
| 16  | CLA  | K     | 102 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | B     | 806 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | A     | 805 | -    | 1/1/19/20 | 18/37/115/115 | -       |
| 21  | BCR  | A     | 846 | -    | -         | 6/29/63/63    | 0/2/2/2 |
| 21  | BCR  | B     | 847 | -    | -         | 15/29/63/63   | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 16  | CLA  | 1     | 606 | -    | 1/1/19/20 | 17/37/115/115 | -       |
| 19  | LHG  | 2     | 622 | 16   | -         | 30/53/53/53   | -       |
| 16  | CLA  | B     | 801 | -    | 1/1/19/20 | 16/37/115/115 | -       |
| 16  | CLA  | 1     | 605 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | B     | 804 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | B     | 816 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | B     | 835 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 18  | RRX  | J     | 103 | -    | 1/1/25/25 | 16/29/65/65   | 0/2/2/2 |
| 29  | 3PH  | B     | 854 | -    | -         | 28/49/49/49   | -       |
| 16  | CLA  | 3     | 214 | -    | 1/1/19/20 | 16/37/115/115 | -       |
| 18  | RRX  | A     | 847 | -    | 1/1/24/25 | 13/29/65/65   | 0/2/2/2 |
| 16  | CLA  | B     | 830 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 25  | PTY  | A     | 852 | -    | -         | 23/48/48/53   | -       |
| 16  | CLA  | A     | 836 | -    | 1/1/19/20 | 9/37/115/115  | -       |
| 16  | CLA  | 3     | 205 | -    | 1/1/19/20 | 11/37/115/115 | -       |
| 16  | CLA  | B     | 823 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | A     | 815 | -    | 1/1/19/20 | 21/37/115/115 | -       |
| 16  | CLA  | A     | 812 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | A     | 829 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | A     | 826 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 24  | LMU  | 3     | 202 | -    | -         | 13/21/61/61   | 0/2/2/2 |
| 17  | C7Z  | 3     | 201 | -    | 1/1/12/26 | 10/29/67/67   | 0/2/2/2 |
| 16  | CLA  | A     | 808 | 4    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | O     | 204 | -    | 1/1/19/20 | 10/37/115/115 | -       |
| 29  | 3PH  | A     | 849 | -    | -         | 19/49/49/49   | -       |
| 16  | CLA  | 3     | 208 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 16  | CLA  | 1     | 609 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 16  | CLA  | 2     | 612 | -    | 1/1/19/20 | 14/37/115/115 | -       |
| 19  | LHG  | A     | 842 | -    | -         | 28/53/53/53   | -       |
| 16  | CLA  | B     | 836 | -    | 1/1/19/20 | 13/37/115/115 | -       |
| 19  | LHG  | B     | 851 | -    | -         | 24/49/49/53   | -       |
| 16  | CLA  | 2     | 608 | -    | 1/1/19/20 | 21/37/115/115 | -       |
| 18  | RRX  | K     | 103 | -    | 1/1/25/25 | 16/29/65/65   | 0/2/2/2 |
| 16  | CLA  | A     | 839 | 33   | 1/1/19/20 | 12/37/115/115 | -       |

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| Mol | Type | Chain | Res | Link | Chirals   | Torsions      | Rings   |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 16  | CLA  | B     | 833 | -    | 1/1/19/20 | 15/37/115/115 | -       |
| 16  | CLA  | F     | 205 | 9    | 1/1/19/20 | 17/37/115/115 | -       |
| 21  | BCR  | L     | 202 | -    | -         | 8/29/63/63    | 0/2/2/2 |

All (1855) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms   | Z      | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 20  | 2     | 621 | ERG  | C1-C10  | -24.95 | 1.06        | 1.54     |
| 20  | 2     | 618 | ERG  | C1-C10  | -24.94 | 1.06        | 1.54     |
| 20  | 1     | 618 | ERG  | C1-C10  | -24.51 | 1.07        | 1.54     |
| 20  | 2     | 618 | ERG  | C10-C9  | -22.33 | 1.26        | 1.55     |
| 20  | 2     | 621 | ERG  | C10-C9  | -21.86 | 1.26        | 1.55     |
| 20  | 1     | 618 | ERG  | C10-C9  | -21.21 | 1.27        | 1.55     |
| 17  | 3     | 216 | C7Z  | C25-C26 | 16.04  | 1.62        | 1.34     |
| 17  | 3     | 215 | C7Z  | C25-C26 | 16.04  | 1.62        | 1.34     |
| 20  | 2     | 618 | ERG  | C10-C5  | -16.03 | 1.21        | 1.52     |
| 18  | 2     | 616 | RRX  | C26-C25 | 15.96  | 1.62        | 1.34     |
| 17  | 1     | 612 | C7Z  | C25-C26 | 15.95  | 1.62        | 1.34     |
| 17  | 1     | 614 | C7Z  | C25-C26 | 15.94  | 1.62        | 1.34     |
| 20  | 2     | 621 | ERG  | C10-C5  | -15.89 | 1.21        | 1.52     |
| 17  | 1     | 615 | C7Z  | C25-C26 | 15.89  | 1.62        | 1.34     |
| 17  | A     | 843 | C7Z  | C25-C26 | 15.87  | 1.61        | 1.34     |
| 17  | 3     | 201 | C7Z  | C25-C26 | 15.87  | 1.61        | 1.34     |
| 17  | 2     | 614 | C7Z  | C25-C26 | 15.87  | 1.61        | 1.34     |
| 17  | 3     | 218 | C7Z  | C25-C26 | 15.72  | 1.61        | 1.34     |
| 17  | 1     | 616 | C7Z  | C25-C26 | 15.72  | 1.61        | 1.34     |
| 17  | 2     | 615 | C7Z  | C25-C26 | 15.67  | 1.61        | 1.34     |
| 17  | J     | 104 | C7Z  | C25-C26 | 15.65  | 1.61        | 1.34     |
| 18  | A     | 847 | RRX  | C26-C25 | 15.60  | 1.61        | 1.34     |
| 17  | 3     | 217 | C7Z  | C25-C26 | 15.59  | 1.61        | 1.34     |
| 20  | 1     | 618 | ERG  | C10-C5  | -15.47 | 1.22        | 1.52     |
| 17  | 3     | 215 | C7Z  | C5-C6   | 15.35  | 1.61        | 1.34     |
| 17  | 1     | 614 | C7Z  | C5-C6   | 15.33  | 1.61        | 1.34     |
| 18  | K     | 103 | RRX  | C26-C25 | 15.24  | 1.60        | 1.34     |
| 17  | 3     | 201 | C7Z  | C5-C6   | 15.21  | 1.60        | 1.34     |
| 17  | 2     | 615 | C7Z  | C5-C6   | 15.17  | 1.60        | 1.34     |
| 17  | 1     | 616 | C7Z  | C5-C6   | 15.13  | 1.60        | 1.34     |
| 17  | 2     | 614 | C7Z  | C5-C6   | 15.11  | 1.60        | 1.34     |
| 18  | 1     | 613 | RRX  | C5-C6   | 15.10  | 1.60        | 1.34     |
| 17  | 1     | 612 | C7Z  | C5-C6   | 15.10  | 1.60        | 1.34     |
| 17  | 3     | 217 | C7Z  | C5-C6   | 15.06  | 1.60        | 1.34     |
| 17  | A     | 843 | C7Z  | C5-C6   | 15.05  | 1.60        | 1.34     |

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| Mol | Chain | Res | Type | Atoms   | Z      | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 18  | J     | 103 | RRX  | C26-C25 | 15.03  | 1.60        | 1.34     |
| 17  | 3     | 218 | C7Z  | C5-C6   | 15.03  | 1.60        | 1.34     |
| 17  | J     | 104 | C7Z  | C5-C6   | 15.00  | 1.60        | 1.34     |
| 17  | 3     | 216 | C7Z  | C5-C6   | 14.99  | 1.60        | 1.34     |
| 17  | 1     | 615 | C7Z  | C5-C6   | 14.91  | 1.60        | 1.34     |
| 18  | 1     | 613 | RRX  | C26-C25 | 14.84  | 1.60        | 1.34     |
| 18  | J     | 103 | RRX  | C5-C6   | 14.84  | 1.60        | 1.34     |
| 18  | A     | 847 | RRX  | C5-C6   | 14.72  | 1.59        | 1.34     |
| 18  | K     | 103 | RRX  | C5-C6   | 14.71  | 1.59        | 1.34     |
| 18  | 2     | 616 | RRX  | C5-C6   | 14.69  | 1.59        | 1.34     |
| 20  | 2     | 618 | ERG  | C4-C3   | -14.13 | 1.27        | 1.52     |
| 20  | 2     | 621 | ERG  | C4-C3   | -14.11 | 1.27        | 1.52     |
| 20  | 1     | 618 | ERG  | C4-C3   | -14.06 | 1.27        | 1.52     |
| 17  | 2     | 615 | C7Z  | C24-C23 | 12.06  | 1.73        | 1.52     |
| 17  | 1     | 616 | C7Z  | C24-C23 | 11.90  | 1.73        | 1.52     |
| 17  | J     | 104 | C7Z  | C24-C23 | 11.90  | 1.73        | 1.52     |
| 17  | 3     | 218 | C7Z  | C24-C23 | 11.86  | 1.72        | 1.52     |
| 17  | A     | 843 | C7Z  | C24-C23 | 11.84  | 1.72        | 1.52     |
| 17  | 3     | 201 | C7Z  | C24-C23 | 11.83  | 1.72        | 1.52     |
| 20  | 2     | 621 | ERG  | C2-C3   | -11.81 | 1.23        | 1.51     |
| 17  | 1     | 615 | C7Z  | C24-C23 | 11.77  | 1.72        | 1.52     |
| 20  | 1     | 618 | ERG  | C2-C3   | -11.76 | 1.23        | 1.51     |
| 17  | 1     | 614 | C7Z  | C24-C23 | 11.73  | 1.72        | 1.52     |
| 20  | 2     | 618 | ERG  | C2-C3   | -11.70 | 1.23        | 1.51     |
| 17  | 3     | 215 | C7Z  | C24-C23 | 11.65  | 1.72        | 1.52     |
| 17  | 3     | 216 | C7Z  | C24-C23 | 11.60  | 1.72        | 1.52     |
| 17  | 2     | 614 | C7Z  | C24-C23 | 11.57  | 1.72        | 1.52     |
| 17  | 1     | 612 | C7Z  | C24-C23 | 11.52  | 1.72        | 1.52     |
| 17  | 3     | 217 | C7Z  | C24-C23 | 11.38  | 1.72        | 1.52     |
| 17  | 3     | 215 | C7Z  | C22-C23 | -10.89 | 1.36        | 1.52     |
| 17  | 3     | 216 | C7Z  | C22-C23 | -10.88 | 1.36        | 1.52     |
| 17  | 3     | 217 | C7Z  | C22-C23 | -10.86 | 1.36        | 1.52     |
| 17  | 1     | 612 | C7Z  | C22-C23 | -10.82 | 1.36        | 1.52     |
| 17  | 2     | 614 | C7Z  | C22-C23 | -10.73 | 1.36        | 1.52     |
| 17  | 3     | 201 | C7Z  | C2-C3   | -10.72 | 1.36        | 1.52     |
| 17  | 1     | 614 | C7Z  | C2-C3   | -10.71 | 1.36        | 1.52     |
| 17  | 3     | 215 | C7Z  | C2-C3   | -10.68 | 1.36        | 1.52     |
| 17  | 1     | 615 | C7Z  | C22-C23 | -10.63 | 1.37        | 1.52     |
| 17  | 1     | 614 | C7Z  | C22-C23 | -10.61 | 1.37        | 1.52     |
| 17  | 3     | 201 | C7Z  | C22-C23 | -10.57 | 1.37        | 1.52     |
| 17  | J     | 104 | C7Z  | C22-C23 | -10.52 | 1.37        | 1.52     |
| 17  | 2     | 615 | C7Z  | C22-C23 | -10.49 | 1.37        | 1.52     |

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| Mol | Chain | Res | Type | Atoms   | Z      | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 17  | 2     | 615 | C7Z  | C2-C3   | -10.47 | 1.37        | 1.52     |
| 17  | A     | 843 | C7Z  | C22-C23 | -10.47 | 1.37        | 1.52     |
| 17  | 1     | 616 | C7Z  | C22-C23 | -10.44 | 1.37        | 1.52     |
| 17  | 2     | 614 | C7Z  | C2-C3   | -10.44 | 1.37        | 1.52     |
| 17  | J     | 104 | C7Z  | C2-C3   | -10.40 | 1.37        | 1.52     |
| 17  | A     | 843 | C7Z  | C2-C3   | -10.38 | 1.37        | 1.52     |
| 17  | 3     | 217 | C7Z  | C2-C3   | -10.37 | 1.37        | 1.52     |
| 17  | 3     | 218 | C7Z  | C22-C23 | -10.37 | 1.37        | 1.52     |
| 17  | 3     | 216 | C7Z  | C2-C3   | -10.37 | 1.37        | 1.52     |
| 17  | 3     | 218 | C7Z  | C2-C3   | -10.36 | 1.37        | 1.52     |
| 17  | 1     | 616 | C7Z  | C2-C3   | -10.34 | 1.37        | 1.52     |
| 17  | 1     | 615 | C7Z  | C2-C3   | -10.33 | 1.37        | 1.52     |
| 17  | 1     | 612 | C7Z  | C2-C3   | -10.33 | 1.37        | 1.52     |
| 18  | 2     | 616 | RRX  | C29-C28 | -10.11 | 1.37        | 1.52     |
| 20  | 1     | 618 | ERG  | C12-C13 | 10.07  | 1.72        | 1.54     |
| 18  | A     | 847 | RRX  | C29-C28 | -10.01 | 1.37        | 1.52     |
| 18  | K     | 103 | RRX  | C29-C28 | -9.78  | 1.38        | 1.52     |
| 18  | J     | 103 | RRX  | C29-C28 | -9.39  | 1.38        | 1.52     |
| 18  | 1     | 613 | RRX  | C29-C28 | -9.14  | 1.39        | 1.52     |
| 20  | 2     | 618 | ERG  | O1-C3   | 9.10   | 1.70        | 1.43     |
| 20  | 1     | 618 | ERG  | O1-C3   | 9.10   | 1.70        | 1.43     |
| 20  | 2     | 621 | ERG  | O1-C3   | 9.08   | 1.70        | 1.43     |
| 26  | A     | 801 | CL0  | MG-NA   | 8.92   | 2.27        | 2.06     |
| 20  | 1     | 618 | ERG  | C6-C5   | 8.73   | 1.54        | 1.33     |
| 20  | 2     | 618 | ERG  | C6-C5   | 8.72   | 1.54        | 1.33     |
| 20  | 2     | 621 | ERG  | C6-C5   | 8.72   | 1.53        | 1.33     |
| 17  | A     | 843 | C7Z  | C4-C3   | 8.58   | 1.67        | 1.52     |
| 20  | 2     | 618 | ERG  | C12-C13 | 8.57   | 1.69        | 1.54     |
| 17  | 3     | 218 | C7Z  | C4-C3   | 8.56   | 1.67        | 1.52     |
| 17  | 1     | 616 | C7Z  | C4-C3   | 8.56   | 1.67        | 1.52     |
| 17  | 3     | 217 | C7Z  | C4-C3   | 8.55   | 1.67        | 1.52     |
| 17  | J     | 104 | C7Z  | C4-C3   | 8.54   | 1.67        | 1.52     |
| 17  | 1     | 612 | C7Z  | C4-C3   | 8.51   | 1.67        | 1.52     |
| 17  | 1     | 615 | C7Z  | C4-C3   | 8.51   | 1.67        | 1.52     |
| 17  | 2     | 615 | C7Z  | C4-C3   | 8.49   | 1.67        | 1.52     |
| 17  | 3     | 216 | C7Z  | C4-C3   | 8.47   | 1.67        | 1.52     |
| 20  | 2     | 621 | ERG  | C12-C13 | 8.47   | 1.69        | 1.54     |
| 17  | 2     | 614 | C7Z  | C4-C3   | 8.44   | 1.66        | 1.52     |
| 17  | 3     | 201 | C7Z  | C4-C3   | 8.34   | 1.66        | 1.52     |
| 18  | J     | 103 | RRX  | C27-C28 | 8.27   | 1.66        | 1.52     |
| 17  | 1     | 614 | C7Z  | C4-C3   | 8.23   | 1.66        | 1.52     |
| 18  | 1     | 613 | RRX  | C27-C28 | 8.21   | 1.66        | 1.52     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 3     | 215 | C7Z  | C4-C3   | 8.21  | 1.66        | 1.52     |
| 18  | A     | 847 | RRX  | C27-C28 | 8.17  | 1.66        | 1.52     |
| 18  | K     | 103 | RRX  | C27-C28 | 8.17  | 1.66        | 1.52     |
| 18  | 2     | 616 | RRX  | C27-C28 | 8.01  | 1.66        | 1.52     |
| 21  | F     | 206 | BCR  | C10-C9  | 7.55  | 1.45        | 1.35     |
| 21  | B     | 842 | BCR  | C10-C9  | 7.37  | 1.45        | 1.35     |
| 21  | A     | 850 | BCR  | C10-C9  | 7.31  | 1.45        | 1.35     |
| 21  | L     | 207 | BCR  | C10-C9  | 7.31  | 1.45        | 1.35     |
| 21  | 2     | 617 | BCR  | C10-C9  | 7.28  | 1.45        | 1.35     |
| 21  | B     | 840 | BCR  | C10-C9  | 7.19  | 1.45        | 1.35     |
| 21  | A     | 844 | BCR  | C10-C9  | 7.15  | 1.45        | 1.35     |
| 21  | A     | 845 | BCR  | C10-C9  | 7.14  | 1.45        | 1.35     |
| 21  | B     | 845 | BCR  | C10-C9  | 7.06  | 1.45        | 1.35     |
| 21  | B     | 847 | BCR  | C10-C9  | 7.06  | 1.45        | 1.35     |
| 21  | B     | 843 | BCR  | C10-C9  | 7.04  | 1.45        | 1.35     |
| 21  | F     | 203 | BCR  | C10-C9  | 7.02  | 1.45        | 1.35     |
| 21  | B     | 844 | BCR  | C10-C9  | 6.96  | 1.45        | 1.35     |
| 21  | B     | 855 | BCR  | C10-C9  | 6.95  | 1.45        | 1.35     |
| 21  | O     | 205 | BCR  | C10-C9  | 6.94  | 1.45        | 1.35     |
| 21  | I     | 103 | BCR  | C10-C9  | 6.93  | 1.45        | 1.35     |
| 21  | B     | 841 | BCR  | C10-C9  | 6.74  | 1.44        | 1.35     |
| 21  | A     | 857 | BCR  | C10-C9  | 6.73  | 1.44        | 1.35     |
| 21  | K     | 104 | BCR  | C10-C9  | 6.59  | 1.44        | 1.35     |
| 21  | L     | 206 | BCR  | C10-C9  | 6.52  | 1.44        | 1.35     |
| 18  | 1     | 613 | RRX  | C2-C3   | -6.52 | 1.36        | 1.52     |
| 18  | J     | 103 | RRX  | C2-C3   | -6.43 | 1.36        | 1.52     |
| 18  | K     | 103 | RRX  | C2-C3   | -6.41 | 1.36        | 1.52     |
| 21  | L     | 202 | BCR  | C10-C9  | 6.40  | 1.44        | 1.35     |
| 18  | 2     | 616 | RRX  | C2-C3   | -6.40 | 1.36        | 1.52     |
| 21  | A     | 846 | BCR  | C10-C9  | 6.39  | 1.44        | 1.35     |
| 16  | B     | 837 | CLA  | MG-NA   | 6.38  | 2.21        | 2.06     |
| 16  | A     | 804 | CLA  | MG-NA   | 6.38  | 2.21        | 2.06     |
| 16  | A     | 839 | CLA  | MG-NA   | 6.37  | 2.21        | 2.06     |
| 18  | A     | 847 | RRX  | C2-C3   | -6.37 | 1.36        | 1.52     |
| 16  | B     | 821 | CLA  | MG-NA   | 6.36  | 2.21        | 2.06     |
| 16  | 1     | 609 | CLA  | MG-NA   | 6.36  | 2.21        | 2.06     |
| 16  | A     | 815 | CLA  | MG-NA   | 6.35  | 2.21        | 2.06     |
| 16  | 3     | 203 | CLA  | MG-NA   | 6.35  | 2.21        | 2.06     |
| 16  | 3     | 205 | CLA  | MG-NA   | 6.35  | 2.21        | 2.06     |
| 16  | O     | 203 | CLA  | MG-NA   | 6.35  | 2.21        | 2.06     |
| 16  | B     | 825 | CLA  | MG-NA   | 6.33  | 2.21        | 2.06     |
| 16  | 1     | 605 | CLA  | MG-NA   | 6.33  | 2.21        | 2.06     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 822 | CLA  | MG-NA   | 6.33  | 2.21        | 2.06     |
| 16  | 2     | 603 | CLA  | MG-NA   | 6.32  | 2.21        | 2.06     |
| 16  | A     | 831 | CLA  | MG-NA   | 6.32  | 2.21        | 2.06     |
| 16  | A     | 830 | CLA  | MG-NA   | 6.31  | 2.21        | 2.06     |
| 16  | B     | 838 | CLA  | MG-NA   | 6.31  | 2.21        | 2.06     |
| 16  | A     | 837 | CLA  | MG-NA   | 6.30  | 2.21        | 2.06     |
| 16  | B     | 803 | CLA  | MG-NA   | 6.30  | 2.21        | 2.06     |
| 16  | B     | 836 | CLA  | MG-NA   | 6.30  | 2.21        | 2.06     |
| 16  | L     | 203 | CLA  | MG-NA   | 6.30  | 2.21        | 2.06     |
| 16  | A     | 824 | CLA  | MG-NA   | 6.30  | 2.21        | 2.06     |
| 16  | A     | 836 | CLA  | MG-NA   | 6.30  | 2.21        | 2.06     |
| 16  | A     | 816 | CLA  | MG-NA   | 6.29  | 2.21        | 2.06     |
| 16  | B     | 816 | CLA  | MG-NA   | 6.29  | 2.21        | 2.06     |
| 20  | 2     | 618 | ERG  | C16-C17 | -6.29 | 1.41        | 1.54     |
| 16  | 3     | 211 | CLA  | MG-NA   | 6.29  | 2.21        | 2.06     |
| 16  | 1     | 608 | CLA  | MG-NA   | 6.29  | 2.21        | 2.06     |
| 16  | 2     | 611 | CLA  | MG-NA   | 6.28  | 2.21        | 2.06     |
| 16  | B     | 832 | CLA  | MG-NA   | 6.28  | 2.21        | 2.06     |
| 16  | B     | 814 | CLA  | MG-NA   | 6.28  | 2.21        | 2.06     |
| 16  | F     | 202 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | I     | 102 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | F     | 204 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | L     | 201 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | 2     | 601 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | B     | 820 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | 2     | 610 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | B     | 812 | CLA  | MG-NA   | 6.27  | 2.21        | 2.06     |
| 16  | A     | 802 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | 3     | 213 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | B     | 815 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | 3     | 214 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | A     | 855 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | K     | 101 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | O     | 204 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | B     | 802 | CLA  | MG-NA   | 6.26  | 2.21        | 2.06     |
| 16  | 1     | 611 | CLA  | MG-NA   | 6.25  | 2.21        | 2.06     |
| 16  | 2     | 612 | CLA  | MG-NA   | 6.25  | 2.21        | 2.06     |
| 16  | J     | 102 | CLA  | MG-NA   | 6.25  | 2.21        | 2.06     |
| 16  | F     | 201 | CLA  | MG-NA   | 6.24  | 2.21        | 2.06     |
| 16  | 3     | 212 | CLA  | MG-NA   | 6.24  | 2.21        | 2.06     |
| 16  | 2     | 609 | CLA  | MG-NA   | 6.24  | 2.21        | 2.06     |
| 16  | 1     | 604 | CLA  | MG-NA   | 6.24  | 2.21        | 2.06     |

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| Mol | Chain | Res | Type | Atoms | Z    | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 16  | B     | 805 | CLA  | MG-NA | 6.24 | 2.21        | 2.06     |
| 16  | B     | 806 | CLA  | MG-NA | 6.23 | 2.21        | 2.06     |
| 16  | A     | 835 | CLA  | MG-NA | 6.23 | 2.21        | 2.06     |
| 16  | 2     | 613 | CLA  | MG-NA | 6.23 | 2.21        | 2.06     |
| 16  | B     | 811 | CLA  | MG-NA | 6.23 | 2.21        | 2.06     |
| 16  | 1     | 603 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | 3     | 207 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | B     | 829 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | A     | 825 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | A     | 817 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | O     | 202 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | A     | 828 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | A     | 813 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | B     | 809 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | B     | 833 | CLA  | MG-NA | 6.22 | 2.21        | 2.06     |
| 16  | A     | 811 | CLA  | MG-NA | 6.21 | 2.21        | 2.06     |
| 16  | B     | 817 | CLA  | MG-NA | 6.21 | 2.21        | 2.06     |
| 16  | 1     | 601 | CLA  | MG-NA | 6.20 | 2.21        | 2.06     |
| 16  | B     | 819 | CLA  | MG-NA | 6.20 | 2.21        | 2.06     |
| 16  | A     | 808 | CLA  | MG-NA | 6.20 | 2.21        | 2.06     |
| 16  | A     | 821 | CLA  | MG-NA | 6.20 | 2.21        | 2.06     |
| 16  | L     | 205 | CLA  | MG-NA | 6.20 | 2.21        | 2.06     |
| 16  | K     | 102 | CLA  | MG-NA | 6.19 | 2.21        | 2.06     |
| 16  | A     | 834 | CLA  | MG-NA | 6.19 | 2.21        | 2.06     |
| 16  | B     | 810 | CLA  | MG-NA | 6.18 | 2.21        | 2.06     |
| 16  | L     | 204 | CLA  | MG-NA | 6.18 | 2.21        | 2.06     |
| 16  | 2     | 602 | CLA  | MG-NA | 6.18 | 2.20        | 2.06     |
| 16  | B     | 813 | CLA  | MG-NA | 6.18 | 2.20        | 2.06     |
| 16  | 2     | 605 | CLA  | MG-NA | 6.17 | 2.20        | 2.06     |
| 16  | 2     | 606 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | 2     | 608 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | A     | 819 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | A     | 806 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | A     | 809 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | B     | 823 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | B     | 835 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | F     | 205 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | 3     | 208 | CLA  | MG-NA | 6.16 | 2.20        | 2.06     |
| 16  | 1     | 610 | CLA  | MG-NA | 6.15 | 2.20        | 2.06     |
| 16  | 1     | 607 | CLA  | MG-NA | 6.15 | 2.20        | 2.06     |
| 16  | B     | 801 | CLA  | MG-NA | 6.14 | 2.20        | 2.06     |
| 16  | 2     | 607 | CLA  | MG-NA | 6.14 | 2.20        | 2.06     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 828 | CLA  | MG-NA   | 6.13  | 2.20        | 2.06     |
| 16  | 3     | 209 | CLA  | MG-NA   | 6.13  | 2.20        | 2.06     |
| 16  | 1     | 606 | CLA  | MG-NA   | 6.13  | 2.20        | 2.06     |
| 16  | 3     | 206 | CLA  | MG-NA   | 6.13  | 2.20        | 2.06     |
| 16  | A     | 807 | CLA  | MG-NA   | 6.13  | 2.20        | 2.06     |
| 16  | A     | 856 | CLA  | MG-NA   | 6.12  | 2.20        | 2.06     |
| 16  | A     | 838 | CLA  | MG-NA   | 6.12  | 2.20        | 2.06     |
| 16  | B     | 827 | CLA  | MG-NA   | 6.12  | 2.20        | 2.06     |
| 16  | O     | 201 | CLA  | MG-NA   | 6.11  | 2.20        | 2.06     |
| 16  | A     | 827 | CLA  | MG-NA   | 6.11  | 2.20        | 2.06     |
| 16  | B     | 826 | CLA  | MG-NA   | 6.11  | 2.20        | 2.06     |
| 16  | B     | 834 | CLA  | MG-NA   | 6.10  | 2.20        | 2.06     |
| 16  | 2     | 604 | CLA  | MG-NA   | 6.10  | 2.20        | 2.06     |
| 16  | B     | 830 | CLA  | MG-NA   | 6.09  | 2.20        | 2.06     |
| 16  | 1     | 602 | CLA  | MG-NA   | 6.09  | 2.20        | 2.06     |
| 16  | A     | 822 | CLA  | MG-NA   | 6.09  | 2.20        | 2.06     |
| 16  | A     | 823 | CLA  | MG-NA   | 6.08  | 2.20        | 2.06     |
| 20  | 2     | 621 | ERG  | C16-C17 | -6.08 | 1.41        | 1.54     |
| 16  | A     | 805 | CLA  | MG-NA   | 6.08  | 2.20        | 2.06     |
| 16  | A     | 814 | CLA  | MG-NA   | 6.07  | 2.20        | 2.06     |
| 16  | A     | 826 | CLA  | MG-NA   | 6.07  | 2.20        | 2.06     |
| 16  | 3     | 210 | CLA  | MG-NA   | 6.06  | 2.20        | 2.06     |
| 16  | A     | 833 | CLA  | MG-NA   | 6.05  | 2.20        | 2.06     |
| 16  | A     | 820 | CLA  | MG-NA   | 6.05  | 2.20        | 2.06     |
| 16  | A     | 810 | CLA  | MG-NA   | 6.05  | 2.20        | 2.06     |
| 16  | B     | 807 | CLA  | MG-NA   | 6.05  | 2.20        | 2.06     |
| 21  | 2     | 617 | BCR  | C24-C23 | 6.05  | 1.51        | 1.33     |
| 16  | A     | 803 | CLA  | MG-NA   | 6.04  | 2.20        | 2.06     |
| 16  | A     | 829 | CLA  | MG-NA   | 6.04  | 2.20        | 2.06     |
| 20  | 2     | 621 | ERG  | C13-C14 | -6.04 | 1.46        | 1.56     |
| 16  | B     | 808 | CLA  | MG-NA   | 6.04  | 2.20        | 2.06     |
| 16  | 3     | 204 | CLA  | MG-NA   | 6.03  | 2.20        | 2.06     |
| 16  | A     | 812 | CLA  | MG-NA   | 6.03  | 2.20        | 2.06     |
| 17  | J     | 104 | C7Z  | C12-C13 | 6.03  | 1.58        | 1.45     |
| 16  | I     | 101 | CLA  | MG-NA   | 6.03  | 2.20        | 2.06     |
| 16  | B     | 831 | CLA  | MG-NA   | 6.03  | 2.20        | 2.06     |
| 16  | B     | 818 | CLA  | MG-NA   | 6.02  | 2.20        | 2.06     |
| 16  | A     | 832 | CLA  | MG-NA   | 6.01  | 2.20        | 2.06     |
| 16  | B     | 824 | CLA  | MG-NA   | 5.99  | 2.20        | 2.06     |
| 16  | A     | 818 | CLA  | MG-NA   | 5.98  | 2.20        | 2.06     |
| 21  | B     | 842 | BCR  | C24-C23 | 5.97  | 1.51        | 1.33     |
| 16  | B     | 804 | CLA  | MG-NA   | 5.96  | 2.20        | 2.06     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 1     | 612 | C7Z  | C12-C13 | 5.96  | 1.58        | 1.45     |
| 21  | B     | 855 | BCR  | C24-C23 | 5.94  | 1.51        | 1.33     |
| 21  | A     | 850 | BCR  | C24-C23 | 5.94  | 1.51        | 1.33     |
| 17  | 2     | 615 | C7Z  | C12-C13 | 5.94  | 1.58        | 1.45     |
| 21  | B     | 845 | BCR  | C24-C23 | 5.94  | 1.51        | 1.33     |
| 21  | A     | 844 | BCR  | C24-C23 | 5.92  | 1.51        | 1.33     |
| 21  | L     | 207 | BCR  | C24-C23 | 5.92  | 1.51        | 1.33     |
| 21  | B     | 844 | BCR  | C24-C23 | 5.91  | 1.50        | 1.33     |
| 17  | 3     | 201 | C7Z  | C12-C13 | 5.90  | 1.58        | 1.45     |
| 17  | A     | 843 | C7Z  | C12-C13 | 5.89  | 1.58        | 1.45     |
| 21  | F     | 206 | BCR  | C24-C23 | 5.87  | 1.50        | 1.33     |
| 21  | O     | 205 | BCR  | C24-C23 | 5.86  | 1.50        | 1.33     |
| 18  | K     | 103 | RRX  | C19-C18 | 5.86  | 1.58        | 1.45     |
| 21  | B     | 843 | BCR  | C24-C23 | 5.84  | 1.50        | 1.33     |
| 21  | I     | 103 | BCR  | C24-C23 | 5.83  | 1.50        | 1.33     |
| 21  | K     | 104 | BCR  | C24-C23 | 5.83  | 1.50        | 1.33     |
| 21  | A     | 857 | BCR  | C24-C23 | 5.82  | 1.50        | 1.33     |
| 18  | 1     | 613 | RRX  | C1-C6   | -5.82 | 1.45        | 1.53     |
| 18  | J     | 103 | RRX  | C19-C18 | 5.81  | 1.58        | 1.45     |
| 16  | A     | 854 | CLA  | MG-NA   | 5.81  | 2.20        | 2.06     |
| 21  | B     | 847 | BCR  | C24-C23 | 5.78  | 1.50        | 1.33     |
| 17  | 1     | 615 | C7Z  | C12-C13 | 5.77  | 1.58        | 1.45     |
| 21  | B     | 840 | BCR  | C24-C23 | 5.77  | 1.50        | 1.33     |
| 17  | 1     | 616 | C7Z  | C12-C13 | 5.77  | 1.58        | 1.45     |
| 17  | 2     | 614 | C7Z  | C12-C13 | 5.76  | 1.58        | 1.45     |
| 17  | 3     | 215 | C7Z  | C12-C13 | 5.75  | 1.58        | 1.45     |
| 21  | F     | 203 | BCR  | C24-C23 | 5.74  | 1.50        | 1.33     |
| 17  | 3     | 216 | C7Z  | C1-C6   | -5.74 | 1.45        | 1.53     |
| 20  | 1     | 618 | ERG  | C16-C17 | -5.72 | 1.42        | 1.54     |
| 18  | 2     | 616 | RRX  | C19-C18 | 5.72  | 1.58        | 1.45     |
| 17  | 3     | 218 | C7Z  | C12-C13 | 5.70  | 1.58        | 1.45     |
| 17  | 3     | 217 | C7Z  | C12-C13 | 5.68  | 1.58        | 1.45     |
| 21  | A     | 845 | BCR  | C24-C23 | 5.68  | 1.50        | 1.33     |
| 17  | 1     | 614 | C7Z  | C12-C13 | 5.68  | 1.58        | 1.45     |
| 21  | L     | 202 | BCR  | C24-C23 | 5.67  | 1.50        | 1.33     |
| 21  | L     | 206 | BCR  | C24-C23 | 5.65  | 1.50        | 1.33     |
| 21  | A     | 846 | BCR  | C24-C23 | 5.64  | 1.50        | 1.33     |
| 18  | 2     | 616 | RRX  | C1-C6   | -5.64 | 1.46        | 1.53     |
| 18  | J     | 103 | RRX  | C1-C6   | -5.64 | 1.46        | 1.53     |
| 21  | B     | 841 | BCR  | C24-C23 | 5.61  | 1.50        | 1.33     |
| 17  | 3     | 217 | C7Z  | C1-C6   | -5.61 | 1.46        | 1.53     |
| 17  | 1     | 615 | C7Z  | C1-C6   | -5.60 | 1.46        | 1.53     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 3     | 218 | C7Z  | C1-C6   | -5.57 | 1.46        | 1.53     |
| 18  | 1     | 613 | RRX  | C19-C18 | 5.54  | 1.57        | 1.45     |
| 17  | A     | 843 | C7Z  | C1-C6   | -5.54 | 1.46        | 1.53     |
| 21  | L     | 206 | BCR  | C11-C12 | -5.53 | 1.20        | 1.34     |
| 18  | A     | 847 | RRX  | C1-C6   | -5.53 | 1.46        | 1.53     |
| 17  | 3     | 201 | C7Z  | C1-C6   | -5.53 | 1.46        | 1.53     |
| 18  | J     | 103 | RRX  | C30-C25 | -5.50 | 1.46        | 1.53     |
| 17  | 2     | 615 | C7Z  | C1-C6   | -5.50 | 1.46        | 1.53     |
| 17  | 1     | 616 | C7Z  | C1-C6   | -5.49 | 1.46        | 1.53     |
| 17  | 2     | 614 | C7Z  | C1-C6   | -5.48 | 1.46        | 1.53     |
| 17  | 1     | 612 | C7Z  | C1-C6   | -5.47 | 1.46        | 1.53     |
| 17  | 3     | 216 | C7Z  | C12-C13 | 5.47  | 1.57        | 1.45     |
| 17  | J     | 104 | C7Z  | C1-C6   | -5.46 | 1.46        | 1.53     |
| 21  | A     | 846 | BCR  | C11-C12 | -5.42 | 1.20        | 1.34     |
| 18  | K     | 103 | RRX  | C1-C6   | -5.39 | 1.46        | 1.53     |
| 18  | A     | 847 | RRX  | C30-C25 | -5.38 | 1.46        | 1.53     |
| 18  | A     | 847 | RRX  | C8-C9   | 5.38  | 1.57        | 1.45     |
| 18  | A     | 847 | RRX  | C2-C1   | 5.38  | 1.66        | 1.54     |
| 17  | 1     | 614 | C7Z  | C1-C6   | -5.36 | 1.46        | 1.53     |
| 18  | A     | 847 | RRX  | C19-C18 | 5.34  | 1.57        | 1.45     |
| 26  | A     | 801 | CL0  | CHC-C1C | 5.33  | 1.48        | 1.35     |
| 18  | J     | 103 | RRX  | C2-C1   | 5.30  | 1.66        | 1.54     |
| 18  | 2     | 616 | RRX  | C2-C1   | 5.29  | 1.66        | 1.54     |
| 21  | A     | 844 | BCR  | C11-C12 | -5.26 | 1.21        | 1.34     |
| 18  | K     | 103 | RRX  | C2-C1   | 5.24  | 1.66        | 1.54     |
| 20  | 1     | 618 | ERG  | C13-C14 | -5.24 | 1.47        | 1.56     |
| 21  | A     | 857 | BCR  | C11-C12 | -5.24 | 1.21        | 1.34     |
| 18  | 1     | 613 | RRX  | C8-C9   | 5.23  | 1.57        | 1.45     |
| 17  | A     | 843 | C7Z  | C28-C29 | 5.23  | 1.57        | 1.45     |
| 20  | 2     | 618 | ERG  | C13-C14 | -5.22 | 1.47        | 1.56     |
| 17  | 2     | 615 | C7Z  | C28-C29 | 5.22  | 1.57        | 1.45     |
| 21  | B     | 841 | BCR  | C11-C12 | -5.21 | 1.21        | 1.34     |
| 17  | 3     | 201 | C7Z  | C28-C29 | 5.20  | 1.57        | 1.45     |
| 17  | 3     | 216 | C7Z  | C28-C29 | 5.19  | 1.57        | 1.45     |
| 17  | 3     | 218 | C7Z  | C28-C29 | 5.17  | 1.57        | 1.45     |
| 20  | 2     | 618 | ERG  | C12-C11 | -5.17 | 1.42        | 1.53     |
| 26  | A     | 801 | CL0  | O2D-CGD | 5.16  | 1.45        | 1.33     |
| 21  | B     | 840 | BCR  | C11-C12 | -5.15 | 1.21        | 1.34     |
| 21  | B     | 847 | BCR  | C11-C12 | -5.15 | 1.21        | 1.34     |
| 21  | A     | 845 | BCR  | C11-C12 | -5.15 | 1.21        | 1.34     |
| 17  | 3     | 215 | C7Z  | C28-C29 | 5.14  | 1.57        | 1.45     |
| 21  | L     | 202 | BCR  | C11-C12 | -5.13 | 1.21        | 1.34     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 18  | K     | 103 | RRX  | C30-C25 | -5.12 | 1.46        | 1.53     |
| 21  | B     | 844 | BCR  | C11-C12 | -5.12 | 1.21        | 1.34     |
| 17  | 1     | 616 | C7Z  | C28-C29 | 5.12  | 1.56        | 1.45     |
| 17  | 1     | 614 | C7Z  | C28-C29 | 5.12  | 1.56        | 1.45     |
| 17  | 1     | 612 | C7Z  | C28-C29 | 5.12  | 1.56        | 1.45     |
| 17  | J     | 104 | C7Z  | C28-C29 | 5.11  | 1.56        | 1.45     |
| 21  | B     | 855 | BCR  | C11-C12 | -5.11 | 1.21        | 1.34     |
| 21  | I     | 103 | BCR  | C11-C12 | -5.11 | 1.21        | 1.34     |
| 17  | 2     | 614 | C7Z  | C28-C29 | 5.11  | 1.56        | 1.45     |
| 17  | 3     | 217 | C7Z  | C24-C25 | -5.10 | 1.43        | 1.51     |
| 17  | 3     | 215 | C7Z  | C1-C6   | -5.10 | 1.46        | 1.53     |
| 21  | K     | 104 | BCR  | C11-C12 | -5.08 | 1.21        | 1.34     |
| 21  | F     | 203 | BCR  | C11-C12 | -5.07 | 1.21        | 1.34     |
| 21  | B     | 843 | BCR  | C11-C12 | -5.07 | 1.21        | 1.34     |
| 17  | 1     | 612 | C7Z  | C32-C33 | 5.07  | 1.56        | 1.45     |
| 18  | 1     | 613 | RRX  | C12-C13 | 5.07  | 1.56        | 1.45     |
| 26  | A     | 801 | CL0  | O2A-C1  | 5.07  | 1.60        | 1.46     |
| 18  | 1     | 613 | RRX  | C2-C1   | 5.07  | 1.65        | 1.54     |
| 18  | K     | 103 | RRX  | C23-C22 | 5.06  | 1.56        | 1.45     |
| 17  | 2     | 615 | C7Z  | C32-C33 | 5.06  | 1.56        | 1.45     |
| 17  | A     | 843 | C7Z  | C32-C33 | 5.05  | 1.56        | 1.45     |
| 17  | 1     | 615 | C7Z  | C28-C29 | 5.04  | 1.56        | 1.45     |
| 21  | L     | 207 | BCR  | C11-C12 | -5.04 | 1.21        | 1.34     |
| 21  | O     | 205 | BCR  | C11-C12 | -5.03 | 1.21        | 1.34     |
| 17  | J     | 104 | C7Z  | C32-C33 | 5.00  | 1.56        | 1.45     |
| 18  | K     | 103 | RRX  | C8-C9   | 5.00  | 1.56        | 1.45     |
| 18  | 2     | 616 | RRX  | C8-C9   | 4.99  | 1.56        | 1.45     |
| 17  | 3     | 201 | C7Z  | C32-C33 | 4.98  | 1.56        | 1.45     |
| 21  | B     | 845 | BCR  | C11-C12 | -4.97 | 1.21        | 1.34     |
| 21  | A     | 850 | BCR  | C11-C12 | -4.97 | 1.21        | 1.34     |
| 21  | B     | 842 | BCR  | C11-C12 | -4.96 | 1.21        | 1.34     |
| 18  | J     | 103 | RRX  | C8-C9   | 4.96  | 1.56        | 1.45     |
| 21  | 2     | 617 | BCR  | C11-C12 | -4.95 | 1.21        | 1.34     |
| 20  | 2     | 621 | ERG  | C12-C11 | -4.93 | 1.42        | 1.53     |
| 17  | 1     | 616 | C7Z  | C32-C33 | 4.89  | 1.56        | 1.45     |
| 21  | F     | 206 | BCR  | C11-C12 | -4.88 | 1.22        | 1.34     |
| 18  | K     | 103 | RRX  | C12-C13 | 4.88  | 1.56        | 1.45     |
| 17  | 1     | 614 | C7Z  | C32-C33 | 4.88  | 1.56        | 1.45     |
| 17  | 3     | 215 | C7Z  | C32-C33 | 4.87  | 1.56        | 1.45     |
| 18  | A     | 847 | RRX  | C12-C13 | 4.86  | 1.56        | 1.45     |
| 17  | 3     | 217 | C7Z  | C28-C29 | 4.86  | 1.56        | 1.45     |
| 20  | 2     | 621 | ERG  | C7-C6   | -4.83 | 1.27        | 1.41     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 18  | 1     | 613 | RRX  | C30-C25 | -4.83 | 1.47        | 1.53     |
| 17  | 2     | 614 | C7Z  | C32-C33 | 4.83  | 1.56        | 1.45     |
| 17  | 3     | 218 | C7Z  | C32-C33 | 4.82  | 1.56        | 1.45     |
| 20  | 1     | 618 | ERG  | C13-C17 | 4.82  | 1.64        | 1.55     |
| 18  | 2     | 616 | RRX  | C30-C25 | -4.78 | 1.47        | 1.53     |
| 18  | 1     | 613 | RRX  | C23-C22 | 4.78  | 1.56        | 1.45     |
| 17  | 1     | 615 | C7Z  | C32-C33 | 4.77  | 1.56        | 1.45     |
| 17  | 1     | 612 | C7Z  | C24-C25 | -4.77 | 1.43        | 1.51     |
| 17  | 2     | 614 | C7Z  | C24-C25 | -4.77 | 1.43        | 1.51     |
| 17  | 3     | 216 | C7Z  | C32-C33 | 4.77  | 1.56        | 1.45     |
| 17  | 1     | 612 | C7Z  | C31-C30 | 4.77  | 1.58        | 1.43     |
| 17  | J     | 104 | C7Z  | C8-C9   | 4.75  | 1.56        | 1.45     |
| 26  | A     | 801 | CL0  | C3B-C2B | 4.73  | 1.46        | 1.40     |
| 17  | 3     | 218 | C7Z  | C24-C25 | -4.72 | 1.43        | 1.51     |
| 20  | 2     | 618 | ERG  | C7-C6   | -4.71 | 1.27        | 1.41     |
| 17  | J     | 104 | C7Z  | C24-C25 | -4.69 | 1.43        | 1.51     |
| 20  | 1     | 618 | ERG  | C7-C6   | -4.68 | 1.27        | 1.41     |
| 17  | 1     | 616 | C7Z  | C24-C25 | -4.68 | 1.43        | 1.51     |
| 18  | 2     | 616 | RRX  | C12-C13 | 4.66  | 1.56        | 1.45     |
| 17  | 3     | 216 | C7Z  | C24-C25 | -4.66 | 1.43        | 1.51     |
| 17  | 3     | 201 | C7Z  | C24-C25 | -4.65 | 1.43        | 1.51     |
| 26  | A     | 801 | CL0  | CHD-C1D | 4.64  | 1.47        | 1.38     |
| 17  | 1     | 614 | C7Z  | C24-C25 | -4.64 | 1.43        | 1.51     |
| 17  | A     | 843 | C7Z  | C24-C25 | -4.64 | 1.43        | 1.51     |
| 18  | J     | 103 | RRX  | C12-C13 | 4.63  | 1.55        | 1.45     |
| 18  | 1     | 613 | RRX  | C27-C26 | -4.62 | 1.43        | 1.51     |
| 18  | 2     | 616 | RRX  | C23-C22 | 4.61  | 1.55        | 1.45     |
| 17  | 1     | 615 | C7Z  | C24-C25 | -4.59 | 1.43        | 1.51     |
| 17  | 1     | 612 | C7Z  | C8-C9   | 4.58  | 1.55        | 1.45     |
| 17  | A     | 843 | C7Z  | C31-C30 | 4.57  | 1.57        | 1.43     |
| 17  | 3     | 217 | C7Z  | C32-C33 | 4.56  | 1.55        | 1.45     |
| 17  | 3     | 215 | C7Z  | C24-C25 | -4.55 | 1.44        | 1.51     |
| 17  | 3     | 201 | C7Z  | C31-C30 | 4.54  | 1.57        | 1.43     |
| 17  | 2     | 615 | C7Z  | C8-C9   | 4.53  | 1.55        | 1.45     |
| 17  | 2     | 615 | C7Z  | C31-C30 | 4.52  | 1.57        | 1.43     |
| 17  | 2     | 615 | C7Z  | C24-C25 | -4.52 | 1.44        | 1.51     |
| 18  | 2     | 616 | RRX  | C20-C21 | 4.52  | 1.57        | 1.43     |
| 17  | J     | 104 | C7Z  | C31-C30 | 4.51  | 1.57        | 1.43     |
| 18  | A     | 847 | RRX  | C23-C22 | 4.50  | 1.55        | 1.45     |
| 26  | A     | 801 | CL0  | C3C-C2C | 4.50  | 1.46        | 1.36     |
| 18  | K     | 103 | RRX  | C20-C21 | 4.48  | 1.57        | 1.43     |
| 21  | K     | 104 | BCR  | C16-C17 | -4.48 | 1.29        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 3     | 215 | C7Z  | C31-C30 | 4.48  | 1.57        | 1.43     |
| 17  | 3     | 201 | C7Z  | C8-C9   | 4.46  | 1.55        | 1.45     |
| 17  | 1     | 614 | C7Z  | C31-C30 | 4.46  | 1.57        | 1.43     |
| 17  | 1     | 616 | C7Z  | C8-C9   | 4.45  | 1.55        | 1.45     |
| 18  | J     | 103 | RRX  | C27-C26 | -4.45 | 1.44        | 1.51     |
| 17  | A     | 843 | C7Z  | C8-C9   | 4.45  | 1.55        | 1.45     |
| 17  | 1     | 616 | C7Z  | C31-C30 | 4.43  | 1.57        | 1.43     |
| 18  | J     | 103 | RRX  | C23-C22 | 4.42  | 1.55        | 1.45     |
| 17  | 3     | 216 | C7Z  | C31-C30 | 4.42  | 1.57        | 1.43     |
| 21  | 2     | 617 | BCR  | C16-C17 | -4.42 | 1.29        | 1.43     |
| 18  | 1     | 613 | RRX  | C20-C21 | 4.42  | 1.57        | 1.43     |
| 31  | B     | 846 | DGD  | O1G-C1A | 4.42  | 1.46        | 1.33     |
| 17  | 2     | 614 | C7Z  | C31-C30 | 4.41  | 1.57        | 1.43     |
| 17  | 2     | 614 | C7Z  | C8-C9   | 4.40  | 1.55        | 1.45     |
| 17  | 3     | 215 | C7Z  | C8-C9   | 4.40  | 1.55        | 1.45     |
| 17  | 3     | 218 | C7Z  | C31-C30 | 4.40  | 1.57        | 1.43     |
| 17  | J     | 104 | C7Z  | C11-C10 | 4.39  | 1.57        | 1.43     |
| 17  | 3     | 218 | C7Z  | C8-C9   | 4.39  | 1.55        | 1.45     |
| 17  | 3     | 217 | C7Z  | C8-C9   | 4.38  | 1.55        | 1.45     |
| 17  | 1     | 615 | C7Z  | C31-C30 | 4.37  | 1.57        | 1.43     |
| 21  | B     | 847 | BCR  | C16-C17 | -4.36 | 1.29        | 1.43     |
| 17  | 3     | 216 | C7Z  | C4-C5   | -4.36 | 1.44        | 1.51     |
| 17  | 1     | 612 | C7Z  | C11-C10 | 4.36  | 1.56        | 1.43     |
| 17  | 1     | 614 | C7Z  | C11-C10 | 4.35  | 1.56        | 1.43     |
| 18  | J     | 103 | RRX  | C20-C21 | 4.35  | 1.56        | 1.43     |
| 17  | 3     | 215 | C7Z  | C4-C5   | -4.34 | 1.44        | 1.51     |
| 17  | 2     | 615 | C7Z  | C11-C10 | 4.30  | 1.56        | 1.43     |
| 18  | 1     | 613 | RRX  | C3-C4   | 4.30  | 1.66        | 1.52     |
| 17  | 1     | 615 | C7Z  | C4-C5   | -4.30 | 1.44        | 1.51     |
| 31  | B     | 849 | DGD  | O1G-C1A | 4.30  | 1.45        | 1.33     |
| 31  | B     | 850 | DGD  | O1G-C1A | 4.29  | 1.45        | 1.33     |
| 18  | A     | 847 | RRX  | C3-C4   | 4.29  | 1.66        | 1.52     |
| 20  | 1     | 618 | ERG  | C16-C15 | 4.28  | 1.65        | 1.54     |
| 17  | 1     | 614 | C7Z  | C4-C5   | -4.28 | 1.44        | 1.51     |
| 18  | 2     | 616 | RRX  | C15-C14 | 4.28  | 1.56        | 1.43     |
| 17  | A     | 843 | C7Z  | C11-C10 | 4.27  | 1.56        | 1.43     |
| 18  | K     | 103 | RRX  | C3-C4   | 4.27  | 1.65        | 1.52     |
| 17  | 1     | 615 | C7Z  | C8-C9   | 4.27  | 1.55        | 1.45     |
| 18  | J     | 103 | RRX  | C15-C14 | 4.27  | 1.56        | 1.43     |
| 17  | 2     | 614 | C7Z  | C4-C5   | -4.27 | 1.44        | 1.51     |
| 21  | B     | 855 | BCR  | C16-C17 | -4.26 | 1.30        | 1.43     |
| 17  | 1     | 614 | C7Z  | C8-C9   | 4.26  | 1.55        | 1.45     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 3     | 201 | C7Z  | C11-C10 | 4.24  | 1.56        | 1.43     |
| 16  | A     | 855 | CLA  | MG-ND   | -4.24 | 1.97        | 2.05     |
| 20  | 2     | 618 | ERG  | C1-C2   | 4.23  | 1.62        | 1.53     |
| 21  | O     | 205 | BCR  | C16-C17 | -4.22 | 1.30        | 1.43     |
| 17  | 1     | 612 | C7Z  | C4-C5   | -4.22 | 1.44        | 1.51     |
| 17  | 1     | 616 | C7Z  | C11-C10 | 4.22  | 1.56        | 1.43     |
| 17  | J     | 104 | C7Z  | C4-C5   | -4.21 | 1.44        | 1.51     |
| 21  | A     | 846 | BCR  | C16-C17 | -4.21 | 1.30        | 1.43     |
| 17  | 3     | 201 | C7Z  | C4-C5   | -4.21 | 1.44        | 1.51     |
| 17  | 3     | 217 | C7Z  | C31-C30 | 4.21  | 1.56        | 1.43     |
| 18  | 2     | 616 | RRX  | C3-C4   | 4.20  | 1.65        | 1.52     |
| 17  | 3     | 217 | C7Z  | C4-C5   | -4.20 | 1.44        | 1.51     |
| 17  | 1     | 616 | C7Z  | C4-C5   | -4.20 | 1.44        | 1.51     |
| 21  | B     | 843 | BCR  | C16-C17 | -4.20 | 1.30        | 1.43     |
| 17  | 3     | 218 | C7Z  | C4-C5   | -4.19 | 1.44        | 1.51     |
| 17  | 3     | 215 | C7Z  | C11-C10 | 4.19  | 1.56        | 1.43     |
| 17  | 2     | 614 | C7Z  | C11-C10 | 4.19  | 1.56        | 1.43     |
| 18  | J     | 103 | RRX  | C3-C4   | 4.18  | 1.65        | 1.52     |
| 26  | A     | 801 | CL0  | C3D-C4D | -4.18 | 1.34        | 1.44     |
| 17  | 1     | 615 | C7Z  | C11-C10 | 4.18  | 1.56        | 1.43     |
| 16  | A     | 830 | CLA  | MG-ND   | -4.17 | 1.97        | 2.05     |
| 17  | 3     | 217 | C7Z  | C11-C10 | 4.16  | 1.56        | 1.43     |
| 17  | 3     | 218 | C7Z  | C11-C10 | 4.15  | 1.56        | 1.43     |
| 18  | K     | 103 | RRX  | C15-C14 | 4.15  | 1.56        | 1.43     |
| 17  | A     | 843 | C7Z  | C4-C5   | -4.14 | 1.44        | 1.51     |
| 18  | K     | 103 | RRX  | C27-C26 | -4.14 | 1.44        | 1.51     |
| 21  | A     | 850 | BCR  | C16-C17 | -4.13 | 1.30        | 1.43     |
| 20  | 2     | 618 | ERG  | C13-C17 | 4.12  | 1.62        | 1.55     |
| 17  | 2     | 615 | C7Z  | C4-C5   | -4.11 | 1.44        | 1.51     |
| 17  | 3     | 216 | C7Z  | C8-C9   | 4.09  | 1.54        | 1.45     |
| 18  | A     | 847 | RRX  | C15-C14 | 4.09  | 1.56        | 1.43     |
| 18  | A     | 847 | RRX  | C20-C21 | 4.09  | 1.56        | 1.43     |
| 21  | L     | 206 | BCR  | C16-C17 | -4.08 | 1.30        | 1.43     |
| 16  | B     | 801 | CLA  | MG-ND   | -4.08 | 1.97        | 2.05     |
| 20  | 2     | 621 | ERG  | C16-C15 | 4.07  | 1.65        | 1.54     |
| 20  | 2     | 621 | ERG  | C13-C17 | 4.06  | 1.62        | 1.55     |
| 16  | B     | 803 | CLA  | MG-ND   | -4.06 | 1.97        | 2.05     |
| 16  | B     | 828 | CLA  | MG-ND   | -4.05 | 1.97        | 2.05     |
| 20  | 2     | 621 | ERG  | C1-C2   | 4.05  | 1.62        | 1.53     |
| 18  | A     | 847 | RRX  | C27-C26 | -4.05 | 1.44        | 1.51     |
| 16  | B     | 823 | CLA  | MG-ND   | -4.04 | 1.97        | 2.05     |
| 20  | 1     | 618 | ERG  | C1-C2   | 4.03  | 1.62        | 1.53     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 21  | B     | 842 | BCR  | C16-C17 | -4.02 | 1.31        | 1.43     |
| 26  | A     | 801 | CL0  | CHD-C4C | 4.02  | 1.48        | 1.39     |
| 16  | A     | 819 | CLA  | MG-ND   | -4.02 | 1.97        | 2.05     |
| 21  | A     | 857 | BCR  | C16-C17 | -4.02 | 1.31        | 1.43     |
| 16  | A     | 828 | CLA  | MG-ND   | -4.02 | 1.97        | 2.05     |
| 16  | B     | 826 | CLA  | MG-ND   | -4.01 | 1.97        | 2.05     |
| 21  | A     | 845 | BCR  | C16-C17 | -4.01 | 1.31        | 1.43     |
| 21  | A     | 844 | BCR  | C16-C17 | -4.01 | 1.31        | 1.43     |
| 16  | A     | 826 | CLA  | MG-ND   | -4.01 | 1.97        | 2.05     |
| 16  | B     | 804 | CLA  | MG-ND   | -4.01 | 1.97        | 2.05     |
| 16  | B     | 825 | CLA  | MG-ND   | -4.01 | 1.97        | 2.05     |
| 16  | 1     | 601 | CLA  | MG-ND   | -4.00 | 1.97        | 2.05     |
| 17  | A     | 843 | C7Z  | C15-C14 | 4.00  | 1.55        | 1.43     |
| 16  | A     | 831 | CLA  | MG-ND   | -4.00 | 1.97        | 2.05     |
| 18  | 1     | 613 | RRX  | C15-C14 | 4.00  | 1.55        | 1.43     |
| 17  | 3     | 216 | C7Z  | C11-C10 | 4.00  | 1.55        | 1.43     |
| 17  | 1     | 612 | C7Z  | C15-C14 | 4.00  | 1.55        | 1.43     |
| 16  | B     | 816 | CLA  | MG-ND   | -3.99 | 1.97        | 2.05     |
| 16  | B     | 830 | CLA  | MG-ND   | -3.99 | 1.97        | 2.05     |
| 16  | B     | 822 | CLA  | MG-ND   | -3.99 | 1.97        | 2.05     |
| 16  | B     | 836 | CLA  | MG-ND   | -3.98 | 1.97        | 2.05     |
| 16  | B     | 812 | CLA  | MG-ND   | -3.98 | 1.97        | 2.05     |
| 21  | B     | 845 | BCR  | C16-C17 | -3.98 | 1.31        | 1.43     |
| 18  | A     | 847 | RRX  | C11-C10 | 3.98  | 1.55        | 1.43     |
| 17  | J     | 104 | C7Z  | C15-C14 | 3.98  | 1.55        | 1.43     |
| 16  | F     | 204 | CLA  | MG-ND   | -3.98 | 1.97        | 2.05     |
| 16  | B     | 821 | CLA  | MG-ND   | -3.97 | 1.97        | 2.05     |
| 16  | 2     | 608 | CLA  | MG-ND   | -3.97 | 1.97        | 2.05     |
| 16  | A     | 822 | CLA  | MG-ND   | -3.97 | 1.97        | 2.05     |
| 16  | 1     | 607 | CLA  | MG-ND   | -3.97 | 1.97        | 2.05     |
| 16  | A     | 827 | CLA  | MG-ND   | -3.97 | 1.97        | 2.05     |
| 16  | A     | 829 | CLA  | MG-ND   | -3.96 | 1.97        | 2.05     |
| 20  | 2     | 618 | ERG  | C16-C15 | 3.96  | 1.64        | 1.54     |
| 16  | A     | 839 | CLA  | MG-ND   | -3.96 | 1.97        | 2.05     |
| 16  | 3     | 209 | CLA  | MG-ND   | -3.95 | 1.97        | 2.05     |
| 16  | A     | 825 | CLA  | MG-ND   | -3.95 | 1.98        | 2.05     |
| 16  | B     | 815 | CLA  | MG-ND   | -3.95 | 1.98        | 2.05     |
| 16  | B     | 820 | CLA  | MG-ND   | -3.95 | 1.98        | 2.05     |
| 21  | I     | 103 | BCR  | C16-C17 | -3.95 | 1.31        | 1.43     |
| 16  | B     | 833 | CLA  | MG-ND   | -3.95 | 1.98        | 2.05     |
| 21  | B     | 841 | BCR  | C16-C17 | -3.95 | 1.31        | 1.43     |
| 16  | A     | 813 | CLA  | MG-ND   | -3.94 | 1.98        | 2.05     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 18  | 2     | 616 | RRX  | C27-C26 | -3.94 | 1.44        | 1.51     |
| 21  | F     | 203 | BCR  | C16-C17 | -3.94 | 1.31        | 1.43     |
| 16  | B     | 827 | CLA  | MG-ND   | -3.94 | 1.98        | 2.05     |
| 16  | 2     | 607 | CLA  | MG-ND   | -3.94 | 1.98        | 2.05     |
| 16  | B     | 808 | CLA  | MG-ND   | -3.94 | 1.98        | 2.05     |
| 16  | A     | 804 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | A     | 833 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | B     | 819 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | 1     | 605 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | A     | 810 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | A     | 815 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | B     | 817 | CLA  | MG-ND   | -3.93 | 1.98        | 2.05     |
| 16  | 1     | 609 | CLA  | MG-ND   | -3.92 | 1.98        | 2.05     |
| 16  | A     | 835 | CLA  | MG-ND   | -3.92 | 1.98        | 2.05     |
| 16  | 2     | 602 | CLA  | C3C-C4C | 3.92  | 1.46        | 1.40     |
| 16  | A     | 824 | CLA  | MG-ND   | -3.92 | 1.98        | 2.05     |
| 16  | A     | 820 | CLA  | MG-ND   | -3.92 | 1.98        | 2.05     |
| 21  | B     | 840 | BCR  | C16-C17 | -3.91 | 1.31        | 1.43     |
| 16  | 2     | 601 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | 2     | 611 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | 3     | 203 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | A     | 808 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | 3     | 205 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | 3     | 204 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | 3     | 214 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | L     | 201 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | A     | 821 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | A     | 837 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | 2     | 606 | CLA  | MG-ND   | -3.91 | 1.98        | 2.05     |
| 16  | A     | 811 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | B     | 829 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | 1     | 602 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | 2     | 603 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | A     | 803 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | A     | 802 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | 1     | 611 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | A     | 834 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | B     | 802 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 16  | B     | 813 | CLA  | MG-ND   | -3.90 | 1.98        | 2.05     |
| 17  | 1     | 616 | C7Z  | C15-C14 | 3.89  | 1.55        | 1.43     |
| 21  | L     | 202 | BCR  | C16-C17 | -3.89 | 1.31        | 1.43     |
| 16  | 3     | 211 | CLA  | MG-ND   | -3.89 | 1.98        | 2.05     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | 3     | 210 | CLA  | MG-ND   | -3.89 | 1.98        | 2.05     |
| 16  | I     | 102 | CLA  | MG-ND   | -3.89 | 1.98        | 2.05     |
| 16  | K     | 101 | CLA  | MG-ND   | -3.89 | 1.98        | 2.05     |
| 16  | B     | 811 | CLA  | MG-ND   | -3.89 | 1.98        | 2.05     |
| 16  | A     | 812 | CLA  | MG-ND   | -3.89 | 1.98        | 2.05     |
| 17  | 3     | 217 | C7Z  | C22-C21 | 3.88  | 1.67        | 1.54     |
| 16  | A     | 814 | CLA  | MG-ND   | -3.88 | 1.98        | 2.05     |
| 16  | 2     | 612 | CLA  | MG-ND   | -3.88 | 1.98        | 2.05     |
| 16  | A     | 856 | CLA  | MG-ND   | -3.88 | 1.98        | 2.05     |
| 16  | B     | 824 | CLA  | MG-ND   | -3.88 | 1.98        | 2.05     |
| 16  | A     | 805 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | O     | 203 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | 1     | 603 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | L     | 204 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | B     | 835 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | A     | 854 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | L     | 203 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | K     | 102 | CLA  | MG-ND   | -3.87 | 1.98        | 2.05     |
| 16  | 2     | 613 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | L     | 205 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | B     | 810 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 17  | 3     | 218 | C7Z  | C22-C21 | 3.86  | 1.66        | 1.54     |
| 16  | B     | 809 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | F     | 205 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 20  | 1     | 618 | ERG  | C12-C11 | -3.86 | 1.45        | 1.53     |
| 16  | 3     | 208 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | B     | 814 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | 3     | 212 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | B     | 838 | CLA  | MG-ND   | -3.86 | 1.98        | 2.05     |
| 16  | B     | 806 | CLA  | MG-ND   | -3.85 | 1.98        | 2.05     |
| 16  | B     | 832 | CLA  | MG-ND   | -3.85 | 1.98        | 2.05     |
| 17  | 3     | 215 | C7Z  | C15-C14 | 3.85  | 1.55        | 1.43     |
| 16  | B     | 834 | CLA  | MG-ND   | -3.85 | 1.98        | 2.05     |
| 16  | F     | 202 | CLA  | MG-ND   | -3.84 | 1.98        | 2.05     |
| 16  | 3     | 206 | CLA  | MG-ND   | -3.84 | 1.98        | 2.05     |
| 16  | A     | 806 | CLA  | MG-ND   | -3.84 | 1.98        | 2.05     |
| 18  | 1     | 613 | RRX  | C11-C10 | 3.84  | 1.55        | 1.43     |
| 16  | B     | 807 | CLA  | MG-ND   | -3.84 | 1.98        | 2.05     |
| 16  | B     | 805 | CLA  | MG-ND   | -3.84 | 1.98        | 2.05     |
| 17  | 2     | 614 | C7Z  | C22-C21 | 3.84  | 1.66        | 1.54     |
| 16  | F     | 201 | CLA  | MG-ND   | -3.84 | 1.98        | 2.05     |
| 16  | 1     | 608 | CLA  | MG-ND   | -3.83 | 1.98        | 2.05     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 1     | 614 | C7Z  | C15-C14 | 3.83  | 1.55        | 1.43     |
| 16  | 1     | 604 | CLA  | MG-ND   | -3.83 | 1.98        | 2.05     |
| 16  | B     | 831 | CLA  | MG-ND   | -3.83 | 1.98        | 2.05     |
| 16  | J     | 102 | CLA  | MG-ND   | -3.83 | 1.98        | 2.05     |
| 16  | 2     | 605 | CLA  | MG-ND   | -3.83 | 1.98        | 2.05     |
| 17  | 1     | 612 | C7Z  | C22-C21 | 3.83  | 1.66        | 1.54     |
| 16  | 1     | 606 | CLA  | MG-ND   | -3.82 | 1.98        | 2.05     |
| 16  | 2     | 609 | CLA  | MG-ND   | -3.82 | 1.98        | 2.05     |
| 17  | 2     | 614 | C7Z  | C15-C14 | 3.82  | 1.55        | 1.43     |
| 17  | A     | 843 | C7Z  | C22-C21 | 3.82  | 1.66        | 1.54     |
| 16  | A     | 832 | CLA  | MG-ND   | -3.82 | 1.98        | 2.05     |
| 16  | 3     | 213 | CLA  | MG-ND   | -3.82 | 1.98        | 2.05     |
| 17  | A     | 843 | C7Z  | C35-C34 | 3.82  | 1.55        | 1.43     |
| 16  | A     | 823 | CLA  | MG-ND   | -3.82 | 1.98        | 2.05     |
| 16  | A     | 816 | CLA  | MG-ND   | -3.81 | 1.98        | 2.05     |
| 17  | J     | 104 | C7Z  | C35-C34 | 3.81  | 1.55        | 1.43     |
| 17  | 3     | 201 | C7Z  | C22-C21 | 3.81  | 1.66        | 1.54     |
| 17  | 2     | 615 | C7Z  | C35-C34 | 3.81  | 1.55        | 1.43     |
| 16  | O     | 204 | CLA  | MG-ND   | -3.81 | 1.98        | 2.05     |
| 17  | 3     | 216 | C7Z  | C15-C14 | 3.81  | 1.55        | 1.43     |
| 16  | A     | 817 | CLA  | MG-ND   | -3.80 | 1.98        | 2.05     |
| 16  | A     | 809 | CLA  | MG-ND   | -3.80 | 1.98        | 2.05     |
| 17  | 1     | 616 | C7Z  | C22-C21 | 3.80  | 1.66        | 1.54     |
| 16  | A     | 838 | CLA  | MG-ND   | -3.80 | 1.98        | 2.05     |
| 16  | B     | 837 | CLA  | MG-ND   | -3.80 | 1.98        | 2.05     |
| 16  | 1     | 610 | CLA  | MG-ND   | -3.80 | 1.98        | 2.05     |
| 16  | 2     | 602 | CLA  | MG-ND   | -3.80 | 1.98        | 2.05     |
| 17  | 1     | 615 | C7Z  | C15-C14 | 3.80  | 1.55        | 1.43     |
| 17  | 1     | 614 | C7Z  | C22-C21 | 3.79  | 1.66        | 1.54     |
| 16  | A     | 807 | CLA  | MG-ND   | -3.79 | 1.98        | 2.05     |
| 16  | 2     | 610 | CLA  | MG-ND   | -3.79 | 1.98        | 2.05     |
| 16  | O     | 201 | CLA  | MG-ND   | -3.79 | 1.98        | 2.05     |
| 16  | A     | 836 | CLA  | MG-ND   | -3.79 | 1.98        | 2.05     |
| 21  | B     | 844 | BCR  | C16-C17 | -3.79 | 1.31        | 1.43     |
| 16  | 3     | 207 | CLA  | MG-ND   | -3.78 | 1.98        | 2.05     |
| 16  | B     | 818 | CLA  | MG-ND   | -3.78 | 1.98        | 2.05     |
| 16  | 2     | 604 | CLA  | MG-ND   | -3.78 | 1.98        | 2.05     |
| 17  | 2     | 615 | C7Z  | C15-C14 | 3.78  | 1.55        | 1.43     |
| 16  | A     | 818 | CLA  | MG-ND   | -3.77 | 1.98        | 2.05     |
| 17  | 3     | 201 | C7Z  | C15-C14 | 3.77  | 1.55        | 1.43     |
| 17  | J     | 104 | C7Z  | C22-C21 | 3.77  | 1.66        | 1.54     |
| 17  | 3     | 216 | C7Z  | C22-C21 | 3.77  | 1.66        | 1.54     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 1     | 615 | C7Z  | C22-C21 | 3.76  | 1.66        | 1.54     |
| 18  | 2     | 616 | RRX  | C24-C25 | 3.76  | 1.58        | 1.45     |
| 17  | 3     | 217 | C7Z  | C15-C14 | 3.76  | 1.55        | 1.43     |
| 17  | 3     | 218 | C7Z  | C15-C14 | 3.75  | 1.55        | 1.43     |
| 16  | I     | 101 | CLA  | MG-ND   | -3.75 | 1.98        | 2.05     |
| 17  | 1     | 615 | C7Z  | C35-C34 | 3.75  | 1.55        | 1.43     |
| 21  | F     | 206 | BCR  | C16-C17 | -3.73 | 1.31        | 1.43     |
| 17  | 3     | 215 | C7Z  | C22-C21 | 3.72  | 1.66        | 1.54     |
| 21  | L     | 207 | BCR  | C16-C17 | -3.72 | 1.31        | 1.43     |
| 17  | 3     | 201 | C7Z  | C35-C34 | 3.72  | 1.55        | 1.43     |
| 17  | 3     | 216 | C7Z  | C27-C26 | 3.72  | 1.58        | 1.45     |
| 17  | 1     | 612 | C7Z  | C27-C26 | 3.71  | 1.58        | 1.45     |
| 17  | 2     | 615 | C7Z  | C27-C26 | 3.71  | 1.58        | 1.45     |
| 18  | 1     | 613 | RRX  | C29-C30 | 3.70  | 1.66        | 1.54     |
| 16  | O     | 202 | CLA  | MG-ND   | -3.70 | 1.98        | 2.05     |
| 17  | 3     | 201 | C7Z  | C27-C26 | 3.70  | 1.58        | 1.45     |
| 17  | A     | 843 | C7Z  | C27-C26 | 3.68  | 1.58        | 1.45     |
| 18  | 2     | 616 | RRX  | C11-C10 | 3.68  | 1.54        | 1.43     |
| 17  | 2     | 615 | C7Z  | C22-C21 | 3.68  | 1.66        | 1.54     |
| 17  | 1     | 614 | C7Z  | C35-C34 | 3.67  | 1.54        | 1.43     |
| 17  | 3     | 218 | C7Z  | C27-C26 | 3.67  | 1.58        | 1.45     |
| 18  | K     | 103 | RRX  | C11-C10 | 3.67  | 1.54        | 1.43     |
| 17  | 3     | 215 | C7Z  | C27-C26 | 3.66  | 1.58        | 1.45     |
| 18  | K     | 103 | RRX  | C16-C17 | 3.66  | 1.54        | 1.43     |
| 17  | J     | 104 | C7Z  | C27-C26 | 3.65  | 1.58        | 1.45     |
| 26  | A     | 801 | CL0  | OBD-CAD | 3.65  | 1.28        | 1.22     |
| 17  | 1     | 614 | C7Z  | C27-C26 | 3.64  | 1.58        | 1.45     |
| 17  | 1     | 616 | C7Z  | C27-C26 | 3.64  | 1.58        | 1.45     |
| 17  | 2     | 614 | C7Z  | C35-C34 | 3.64  | 1.54        | 1.43     |
| 17  | 3     | 215 | C7Z  | C35-C34 | 3.64  | 1.54        | 1.43     |
| 17  | 1     | 612 | C7Z  | C35-C34 | 3.63  | 1.54        | 1.43     |
| 17  | 2     | 614 | C7Z  | C27-C26 | 3.63  | 1.58        | 1.45     |
| 17  | 3     | 218 | C7Z  | C35-C34 | 3.60  | 1.54        | 1.43     |
| 17  | 3     | 215 | C7Z  | C2-C1   | 3.59  | 1.66        | 1.54     |
| 18  | J     | 103 | RRX  | C16-C17 | 3.59  | 1.54        | 1.43     |
| 17  | 3     | 216 | C7Z  | C35-C34 | 3.59  | 1.54        | 1.43     |
| 17  | 1     | 615 | C7Z  | C27-C26 | 3.58  | 1.57        | 1.45     |
| 16  | A     | 826 | CLA  | C1C-NC  | -3.57 | 1.32        | 1.37     |
| 17  | 3     | 217 | C7Z  | C35-C34 | 3.57  | 1.54        | 1.43     |
| 17  | 3     | 218 | C7Z  | C2-C1   | 3.56  | 1.66        | 1.54     |
| 18  | 1     | 613 | RRX  | C16-C17 | 3.56  | 1.54        | 1.43     |
| 17  | 2     | 614 | C7Z  | C2-C1   | 3.54  | 1.65        | 1.54     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 18  | J     | 103 | RRX  | C29-C30 | 3.54  | 1.65        | 1.54     |
| 17  | 1     | 616 | C7Z  | C35-C34 | 3.54  | 1.54        | 1.43     |
| 17  | 1     | 612 | C7Z  | C2-C1   | 3.54  | 1.65        | 1.54     |
| 17  | 1     | 615 | C7Z  | C2-C1   | 3.53  | 1.65        | 1.54     |
| 18  | K     | 103 | RRX  | C24-C25 | 3.53  | 1.57        | 1.45     |
| 17  | 3     | 216 | C7Z  | C2-C1   | 3.52  | 1.65        | 1.54     |
| 18  | J     | 103 | RRX  | C11-C10 | 3.52  | 1.54        | 1.43     |
| 17  | J     | 104 | C7Z  | C2-C1   | 3.52  | 1.65        | 1.54     |
| 18  | K     | 103 | RRX  | C29-C30 | 3.51  | 1.65        | 1.54     |
| 17  | 3     | 217 | C7Z  | C2-C1   | 3.51  | 1.65        | 1.54     |
| 17  | 2     | 615 | C7Z  | C2-C1   | 3.50  | 1.65        | 1.54     |
| 17  | A     | 843 | C7Z  | C2-C1   | 3.50  | 1.65        | 1.54     |
| 16  | A     | 812 | CLA  | C1C-NC  | -3.50 | 1.32        | 1.37     |
| 16  | B     | 802 | CLA  | C1C-NC  | -3.49 | 1.32        | 1.37     |
| 17  | 1     | 616 | C7Z  | C2-C1   | 3.49  | 1.65        | 1.54     |
| 17  | 3     | 217 | C7Z  | C27-C26 | 3.49  | 1.57        | 1.45     |
| 17  | 3     | 201 | C7Z  | C2-C1   | 3.48  | 1.65        | 1.54     |
| 16  | A     | 829 | CLA  | C1C-NC  | -3.47 | 1.32        | 1.37     |
| 18  | J     | 103 | RRX  | C24-C25 | 3.47  | 1.57        | 1.45     |
| 18  | 1     | 613 | RRX  | C24-C25 | 3.47  | 1.57        | 1.45     |
| 17  | 2     | 615 | C7Z  | C7-C6   | 3.47  | 1.57        | 1.45     |
| 26  | A     | 801 | CL0  | C1D-ND  | -3.47 | 1.33        | 1.37     |
| 17  | 1     | 612 | C7Z  | C7-C6   | 3.46  | 1.57        | 1.45     |
| 18  | A     | 847 | RRX  | C24-C25 | 3.46  | 1.57        | 1.45     |
| 23  | 2     | 620 | DGA  | OG1-CA1 | 3.45  | 1.43        | 1.33     |
| 17  | 1     | 615 | C7Z  | C38-C25 | 3.45  | 1.56        | 1.50     |
| 16  | B     | 825 | CLA  | C1C-NC  | -3.45 | 1.32        | 1.37     |
| 16  | B     | 828 | CLA  | C1C-NC  | -3.44 | 1.32        | 1.37     |
| 17  | 3     | 217 | C7Z  | C38-C25 | 3.44  | 1.56        | 1.50     |
| 23  | J     | 101 | DGA  | OG2-CB1 | 3.43  | 1.44        | 1.34     |
| 17  | 1     | 614 | C7Z  | C2-C1   | 3.43  | 1.65        | 1.54     |
| 23  | 2     | 620 | DGA  | OG2-CB1 | 3.43  | 1.44        | 1.34     |
| 17  | A     | 843 | C7Z  | C7-C6   | 3.41  | 1.57        | 1.45     |
| 16  | 1     | 602 | CLA  | C1C-NC  | -3.41 | 1.32        | 1.37     |
| 16  | A     | 816 | CLA  | C1C-NC  | -3.41 | 1.32        | 1.37     |
| 18  | 2     | 616 | RRX  | C16-C17 | 3.40  | 1.54        | 1.43     |
| 17  | 2     | 614 | C7Z  | C38-C25 | 3.40  | 1.56        | 1.50     |
| 17  | 3     | 201 | C7Z  | C38-C25 | 3.40  | 1.56        | 1.50     |
| 17  | 3     | 218 | C7Z  | C38-C25 | 3.39  | 1.56        | 1.50     |
| 17  | 1     | 616 | C7Z  | C7-C6   | 3.39  | 1.57        | 1.45     |
| 16  | 3     | 210 | CLA  | C1C-NC  | -3.39 | 1.32        | 1.37     |
| 18  | A     | 847 | RRX  | C16-C17 | 3.39  | 1.54        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 823 | CLA  | C1C-NC  | -3.39 | 1.32        | 1.37     |
| 17  | 1     | 616 | C7Z  | C38-C25 | 3.39  | 1.56        | 1.50     |
| 16  | B     | 802 | CLA  | CBB-CAB | 3.39  | 1.51        | 1.29     |
| 17  | 1     | 614 | C7Z  | C38-C25 | 3.38  | 1.56        | 1.50     |
| 17  | A     | 843 | C7Z  | C38-C25 | 3.38  | 1.56        | 1.50     |
| 16  | B     | 831 | CLA  | C1C-NC  | -3.38 | 1.32        | 1.37     |
| 17  | 3     | 201 | C7Z  | C7-C6   | 3.38  | 1.57        | 1.45     |
| 17  | 1     | 612 | C7Z  | C38-C25 | 3.38  | 1.56        | 1.50     |
| 16  | 2     | 608 | CLA  | C1C-NC  | -3.38 | 1.32        | 1.37     |
| 16  | 2     | 602 | CLA  | C1C-C2C | 3.37  | 1.48        | 1.42     |
| 17  | J     | 104 | C7Z  | C38-C25 | 3.37  | 1.56        | 1.50     |
| 17  | 3     | 215 | C7Z  | C7-C6   | 3.37  | 1.57        | 1.45     |
| 17  | 2     | 614 | C7Z  | C7-C6   | 3.37  | 1.57        | 1.45     |
| 16  | A     | 813 | CLA  | CBB-CAB | 3.37  | 1.51        | 1.29     |
| 16  | A     | 802 | CLA  | C1C-NC  | -3.36 | 1.32        | 1.37     |
| 16  | 3     | 207 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 17  | 2     | 615 | C7Z  | C38-C25 | 3.36  | 1.56        | 1.50     |
| 16  | B     | 809 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 17  | 3     | 218 | C7Z  | C7-C6   | 3.36  | 1.57        | 1.45     |
| 16  | 3     | 212 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 16  | A     | 818 | CLA  | C1C-NC  | -3.36 | 1.32        | 1.37     |
| 16  | A     | 819 | CLA  | C1C-NC  | -3.36 | 1.32        | 1.37     |
| 16  | 3     | 208 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 16  | O     | 204 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 16  | I     | 102 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 16  | B     | 834 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 16  | A     | 854 | CLA  | CBB-CAB | 3.36  | 1.51        | 1.29     |
| 16  | 1     | 601 | CLA  | C1C-NC  | -3.35 | 1.32        | 1.37     |
| 16  | B     | 812 | CLA  | C1C-NC  | -3.35 | 1.32        | 1.37     |
| 16  | B     | 837 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | A     | 804 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | A     | 814 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | B     | 823 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | A     | 829 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | B     | 806 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | I     | 101 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | 3     | 203 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | B     | 828 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | 2     | 605 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | F     | 204 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | L     | 203 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | O     | 202 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 804 | CLA  | C1C-NC  | -3.35 | 1.32        | 1.37     |
| 16  | A     | 822 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | B     | 812 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | 2     | 609 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | A     | 827 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | 2     | 612 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | A     | 815 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | B     | 822 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | B     | 824 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | 2     | 613 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 16  | 3     | 206 | CLA  | CBB-CAB | 3.35  | 1.51        | 1.29     |
| 17  | 3     | 217 | C7Z  | C7-C6   | 3.34  | 1.57        | 1.45     |
| 16  | L     | 201 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 2     | 601 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 1     | 606 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 3     | 213 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | A     | 807 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | B     | 838 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 3     | 211 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | B     | 803 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | A     | 810 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | B     | 805 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 1     | 611 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | A     | 821 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | K     | 101 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 1     | 608 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | B     | 818 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | A     | 836 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | 2     | 608 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | I     | 101 | CLA  | C1C-NC  | -3.34 | 1.32        | 1.37     |
| 16  | A     | 856 | CLA  | CBB-CAB | 3.34  | 1.51        | 1.29     |
| 16  | B     | 830 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 2     | 607 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 805 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | J     | 102 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 3     | 209 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 806 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 826 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 1     | 605 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 815 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 17  | 3     | 215 | C7Z  | C38-C25 | 3.33  | 1.56        | 1.50     |
| 16  | A     | 838 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 819 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 2     | 603 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 1     | 609 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 3     | 205 | CLA  | C1C-NC  | -3.33 | 1.32        | 1.37     |
| 16  | A     | 811 | CLA  | C1C-NC  | -3.33 | 1.32        | 1.37     |
| 16  | 3     | 204 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 2     | 611 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 820 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 832 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 1     | 604 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 2     | 604 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 2     | 610 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 828 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 830 | CLA  | C1C-NC  | -3.33 | 1.32        | 1.37     |
| 16  | 3     | 205 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 830 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 807 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 1     | 607 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 3     | 214 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 801 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 808 | CLA  | C1C-NC  | -3.33 | 1.32        | 1.37     |
| 16  | B     | 811 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 831 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | 2     | 606 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 817 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 810 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 803 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 836 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | B     | 829 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | L     | 204 | CLA  | CBB-CAB | 3.33  | 1.51        | 1.29     |
| 16  | A     | 820 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | 1     | 602 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | F     | 205 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | 1     | 610 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | A     | 802 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | O     | 201 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | B     | 833 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | O     | 203 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | 1     | 601 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | A     | 834 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | B     | 835 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | F     | 205 | CLA  | C1C-NC  | -3.32 | 1.32        | 1.37     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 811 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | B     | 814 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | 1     | 603 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | 2     | 602 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | A     | 855 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | A     | 809 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | A     | 839 | CLA  | CBB-CAB | 3.32  | 1.51        | 1.29     |
| 16  | B     | 833 | CLA  | C1C-NC  | -3.31 | 1.32        | 1.37     |
| 16  | A     | 812 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | A     | 825 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | A     | 818 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | B     | 832 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | A     | 833 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 17  | J     | 104 | C7Z  | C7-C6   | 3.31  | 1.56        | 1.45     |
| 16  | A     | 824 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | A     | 826 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | B     | 811 | CLA  | C1C-NC  | -3.31 | 1.32        | 1.37     |
| 16  | A     | 819 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | B     | 813 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | L     | 205 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | A     | 808 | CLA  | CBB-CAB | 3.31  | 1.51        | 1.29     |
| 16  | B     | 808 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | A     | 823 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | B     | 804 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | K     | 102 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | A     | 816 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | A     | 837 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | B     | 831 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 23  | J     | 101 | DGA  | OG1-CA1 | 3.30  | 1.43        | 1.33     |
| 16  | B     | 827 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 16  | F     | 201 | CLA  | CBB-CAB | 3.30  | 1.51        | 1.29     |
| 18  | 2     | 616 | RRX  | C29-C30 | 3.29  | 1.65        | 1.54     |
| 16  | F     | 202 | CLA  | CBB-CAB | 3.29  | 1.51        | 1.29     |
| 16  | B     | 816 | CLA  | CBB-CAB | 3.29  | 1.51        | 1.29     |
| 16  | A     | 814 | CLA  | C1C-NC  | -3.29 | 1.32        | 1.37     |
| 17  | 3     | 216 | C7Z  | C38-C25 | 3.29  | 1.56        | 1.50     |
| 16  | B     | 821 | CLA  | CBB-CAB | 3.28  | 1.51        | 1.29     |
| 16  | 3     | 210 | CLA  | CBB-CAB | 3.28  | 1.51        | 1.29     |
| 16  | B     | 825 | CLA  | CBB-CAB | 3.28  | 1.51        | 1.29     |
| 16  | A     | 810 | CLA  | C1C-NC  | -3.28 | 1.32        | 1.37     |
| 16  | 3     | 204 | CLA  | C1C-NC  | -3.28 | 1.32        | 1.37     |
| 16  | B     | 827 | CLA  | C1C-NC  | -3.28 | 1.32        | 1.37     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 835 | CLA  | CBB-CAB | 3.28  | 1.51        | 1.29     |
| 16  | A     | 806 | CLA  | C1C-NC  | -3.28 | 1.32        | 1.37     |
| 16  | A     | 820 | CLA  | C1C-NC  | -3.28 | 1.32        | 1.37     |
| 16  | B     | 819 | CLA  | C1C-NC  | -3.28 | 1.32        | 1.37     |
| 17  | 1     | 615 | C7Z  | C7-C6   | 3.27  | 1.56        | 1.45     |
| 16  | A     | 835 | CLA  | C1C-NC  | -3.27 | 1.32        | 1.37     |
| 18  | A     | 847 | RRX  | C29-C30 | 3.27  | 1.65        | 1.54     |
| 16  | L     | 201 | CLA  | C1C-NC  | -3.27 | 1.32        | 1.37     |
| 17  | 1     | 614 | C7Z  | C7-C6   | 3.27  | 1.56        | 1.45     |
| 16  | A     | 803 | CLA  | C1C-NC  | -3.26 | 1.32        | 1.37     |
| 16  | 3     | 209 | CLA  | C1C-NC  | -3.26 | 1.32        | 1.37     |
| 16  | B     | 830 | CLA  | C1C-NC  | -3.26 | 1.32        | 1.37     |
| 16  | 3     | 214 | CLA  | C1C-NC  | -3.26 | 1.32        | 1.37     |
| 16  | I     | 102 | CLA  | C1C-NC  | -3.25 | 1.32        | 1.37     |
| 16  | B     | 826 | CLA  | C1C-NC  | -3.25 | 1.32        | 1.37     |
| 16  | 2     | 607 | CLA  | C1C-NC  | -3.25 | 1.32        | 1.37     |
| 26  | A     | 801 | CL0  | MG-NC   | 3.25  | 2.14        | 2.06     |
| 16  | B     | 824 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 16  | K     | 102 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 31  | B     | 846 | DGD  | CAB-C9B | -3.24 | 1.33        | 1.51     |
| 16  | B     | 816 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 31  | B     | 849 | DGD  | CAA-C9A | -3.24 | 1.33        | 1.51     |
| 16  | 2     | 612 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 31  | B     | 849 | DGD  | CAB-C9B | -3.24 | 1.33        | 1.51     |
| 16  | B     | 814 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 16  | A     | 805 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 16  | A     | 821 | CLA  | C1C-NC  | -3.24 | 1.33        | 1.37     |
| 16  | 2     | 611 | CLA  | C1C-NC  | -3.23 | 1.33        | 1.37     |
| 31  | B     | 850 | DGD  | CGB-CFB | -3.23 | 1.33        | 1.51     |
| 31  | B     | 849 | DGD  | CDA-CCA | -3.23 | 1.33        | 1.51     |
| 16  | 3     | 208 | CLA  | C1C-NC  | -3.23 | 1.33        | 1.37     |
| 16  | 1     | 605 | CLA  | C1C-NC  | -3.23 | 1.33        | 1.37     |
| 18  | 1     | 613 | RRX  | C7-C6   | 3.23  | 1.56        | 1.45     |
| 31  | B     | 849 | DGD  | CDB-CCB | -3.23 | 1.33        | 1.51     |
| 16  | A     | 817 | CLA  | CBB-CAB | 3.23  | 1.50        | 1.29     |
| 16  | A     | 832 | CLA  | C1C-NC  | -3.23 | 1.33        | 1.37     |
| 31  | B     | 846 | DGD  | CGB-CFB | -3.23 | 1.33        | 1.51     |
| 31  | B     | 850 | DGD  | CAB-C9B | -3.22 | 1.33        | 1.51     |
| 31  | B     | 849 | DGD  | CGB-CFB | -3.22 | 1.33        | 1.51     |
| 31  | B     | 849 | DGD  | CGA-CFA | -3.22 | 1.33        | 1.51     |
| 16  | F     | 204 | CLA  | C1C-NC  | -3.22 | 1.33        | 1.37     |
| 16  | A     | 828 | CLA  | C1C-NC  | -3.22 | 1.33        | 1.37     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 836 | CLA  | C1C-NC  | -3.22 | 1.33        | 1.37     |
| 16  | F     | 202 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | 2     | 606 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | L     | 204 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | 1     | 603 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | 2     | 602 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | A     | 822 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | 3     | 213 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | B     | 809 | CLA  | C1C-NC  | -3.21 | 1.33        | 1.37     |
| 16  | B     | 817 | CLA  | C1C-NC  | -3.20 | 1.33        | 1.37     |
| 16  | B     | 818 | CLA  | C1C-NC  | -3.20 | 1.33        | 1.37     |
| 31  | B     | 850 | DGD  | CAA-C9A | -3.20 | 1.33        | 1.51     |
| 17  | 3     | 216 | C7Z  | C7-C6   | 3.20  | 1.56        | 1.45     |
| 16  | 1     | 610 | CLA  | C1C-NC  | -3.20 | 1.33        | 1.37     |
| 16  | A     | 839 | CLA  | C1C-NC  | -3.20 | 1.33        | 1.37     |
| 16  | B     | 810 | CLA  | C1C-NC  | -3.20 | 1.33        | 1.37     |
| 16  | L     | 203 | CLA  | C1C-NC  | -3.19 | 1.33        | 1.37     |
| 16  | B     | 807 | CLA  | C1C-NC  | -3.19 | 1.33        | 1.37     |
| 16  | O     | 202 | CLA  | C1C-NC  | -3.19 | 1.33        | 1.37     |
| 31  | B     | 846 | DGD  | CAA-C9A | -3.19 | 1.33        | 1.51     |
| 16  | 1     | 609 | CLA  | C1C-NC  | -3.19 | 1.33        | 1.37     |
| 16  | 3     | 207 | CLA  | C1C-NC  | -3.19 | 1.33        | 1.37     |
| 16  | A     | 831 | CLA  | C1C-NC  | -3.19 | 1.33        | 1.37     |
| 31  | B     | 850 | DGD  | CDB-CCB | -3.18 | 1.33        | 1.51     |
| 16  | A     | 807 | CLA  | C1C-NC  | -3.18 | 1.33        | 1.37     |
| 16  | B     | 821 | CLA  | C1C-NC  | -3.18 | 1.33        | 1.37     |
| 18  | J     | 103 | RRX  | C4-C5   | -3.18 | 1.44        | 1.51     |
| 31  | B     | 846 | DGD  | CDB-CCB | -3.18 | 1.33        | 1.51     |
| 16  | 3     | 206 | CLA  | C1C-NC  | -3.18 | 1.33        | 1.37     |
| 16  | A     | 838 | CLA  | C1C-NC  | -3.18 | 1.33        | 1.37     |
| 16  | B     | 822 | CLA  | C1C-NC  | -3.18 | 1.33        | 1.37     |
| 31  | B     | 850 | DGD  | CGA-CFA | -3.17 | 1.33        | 1.51     |
| 16  | A     | 808 | CLA  | C1C-NC  | -3.17 | 1.33        | 1.37     |
| 22  | B     | 848 | PGT  | P-O3P   | 3.17  | 1.72        | 1.59     |
| 16  | F     | 201 | CLA  | C1C-NC  | -3.17 | 1.33        | 1.37     |
| 16  | 2     | 605 | CLA  | C1C-NC  | -3.17 | 1.33        | 1.37     |
| 16  | 1     | 604 | CLA  | C1C-NC  | -3.17 | 1.33        | 1.37     |
| 16  | B     | 815 | CLA  | C1C-NC  | -3.17 | 1.33        | 1.37     |
| 16  | B     | 805 | CLA  | C1C-NC  | -3.16 | 1.33        | 1.37     |
| 16  | B     | 820 | CLA  | C1C-NC  | -3.16 | 1.33        | 1.37     |
| 16  | B     | 801 | CLA  | C1C-NC  | -3.15 | 1.33        | 1.37     |
| 22  | 2     | 619 | PGT  | C3-C2   | 3.15  | 1.60        | 1.50     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | 3     | 203 | CLA  | C1C-NC  | -3.15 | 1.33        | 1.37     |
| 22  | 2     | 619 | PGT  | P-O3P   | 3.15  | 1.72        | 1.59     |
| 31  | B     | 850 | DGD  | CDA-CCA | -3.15 | 1.33        | 1.51     |
| 31  | B     | 846 | DGD  | CGA-CFA | -3.15 | 1.33        | 1.51     |
| 16  | 2     | 604 | CLA  | C1C-NC  | -3.15 | 1.33        | 1.37     |
| 16  | B     | 837 | CLA  | C1C-NC  | -3.15 | 1.33        | 1.37     |
| 16  | B     | 829 | CLA  | C1C-NC  | -3.15 | 1.33        | 1.37     |
| 16  | B     | 823 | CLA  | C1C-NC  | -3.14 | 1.33        | 1.37     |
| 16  | A     | 824 | CLA  | C1C-NC  | -3.14 | 1.33        | 1.37     |
| 16  | 2     | 603 | CLA  | C1C-NC  | -3.14 | 1.33        | 1.37     |
| 16  | L     | 205 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | K     | 101 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | O     | 203 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | 2     | 613 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | B     | 832 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | 2     | 601 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | 1     | 607 | CLA  | C1C-NC  | -3.13 | 1.33        | 1.37     |
| 16  | 2     | 609 | CLA  | C1C-NC  | -3.12 | 1.33        | 1.37     |
| 31  | B     | 846 | DGD  | CDA-CCA | -3.12 | 1.34        | 1.51     |
| 16  | B     | 838 | CLA  | C1C-NC  | -3.12 | 1.33        | 1.37     |
| 16  | 1     | 611 | CLA  | C1C-NC  | -3.12 | 1.33        | 1.37     |
| 18  | 2     | 616 | RRX  | C4-C5   | -3.12 | 1.44        | 1.51     |
| 18  | K     | 103 | RRX  | C21-C22 | 3.12  | 1.39        | 1.35     |
| 16  | 2     | 610 | CLA  | C1C-NC  | -3.12 | 1.33        | 1.37     |
| 16  | B     | 835 | CLA  | C1C-NC  | -3.12 | 1.33        | 1.37     |
| 17  | 2     | 615 | C7Z  | C21-C26 | -3.12 | 1.49        | 1.53     |
| 16  | B     | 813 | CLA  | C1C-NC  | -3.12 | 1.33        | 1.37     |
| 16  | A     | 809 | CLA  | C1C-NC  | -3.11 | 1.33        | 1.37     |
| 16  | 3     | 212 | CLA  | C1C-NC  | -3.11 | 1.33        | 1.37     |
| 16  | A     | 813 | CLA  | C1C-NC  | -3.11 | 1.33        | 1.37     |
| 16  | 1     | 606 | CLA  | C1C-NC  | -3.11 | 1.33        | 1.37     |
| 16  | J     | 102 | CLA  | C1C-NC  | -3.10 | 1.33        | 1.37     |
| 16  | A     | 815 | CLA  | C1C-NC  | -3.10 | 1.33        | 1.37     |
| 16  | A     | 825 | CLA  | C1C-NC  | -3.10 | 1.33        | 1.37     |
| 16  | A     | 836 | CLA  | C1C-NC  | -3.10 | 1.33        | 1.37     |
| 18  | A     | 847 | RRX  | C4-C5   | -3.09 | 1.44        | 1.51     |
| 18  | K     | 103 | RRX  | C7-C6   | 3.09  | 1.56        | 1.45     |
| 16  | 1     | 608 | CLA  | C1C-NC  | -3.08 | 1.33        | 1.37     |
| 16  | A     | 804 | CLA  | C1C-NC  | -3.08 | 1.33        | 1.37     |
| 16  | O     | 204 | CLA  | C1C-NC  | -3.08 | 1.33        | 1.37     |
| 16  | A     | 856 | CLA  | C1C-NC  | -3.07 | 1.33        | 1.37     |
| 18  | J     | 103 | RRX  | C7-C6   | 3.06  | 1.56        | 1.45     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 18  | 2     | 616 | RRX  | C7-C6   | 3.06  | 1.56        | 1.45     |
| 16  | A     | 817 | CLA  | C1C-NC  | -3.06 | 1.33        | 1.37     |
| 16  | A     | 833 | CLA  | C1C-NC  | -3.06 | 1.33        | 1.37     |
| 16  | A     | 834 | CLA  | C1C-NC  | -3.05 | 1.33        | 1.37     |
| 16  | A     | 854 | CLA  | CHC-C1C | 3.05  | 1.42        | 1.35     |
| 17  | J     | 104 | C7Z  | C21-C26 | -3.04 | 1.49        | 1.53     |
| 16  | B     | 803 | CLA  | C1C-NC  | -3.04 | 1.33        | 1.37     |
| 16  | 3     | 211 | CLA  | C1C-NC  | -3.04 | 1.33        | 1.37     |
| 17  | 3     | 218 | C7Z  | C21-C26 | -3.04 | 1.49        | 1.53     |
| 18  | K     | 103 | RRX  | C4-C5   | -3.03 | 1.45        | 1.51     |
| 16  | B     | 806 | CLA  | C1C-NC  | -3.03 | 1.33        | 1.37     |
| 16  | O     | 201 | CLA  | C1C-NC  | -3.02 | 1.33        | 1.37     |
| 16  | A     | 837 | CLA  | C1C-NC  | -3.02 | 1.33        | 1.37     |
| 16  | A     | 817 | CLA  | CHC-C1C | 3.01  | 1.42        | 1.35     |
| 16  | A     | 854 | CLA  | C1C-NC  | -3.01 | 1.33        | 1.37     |
| 22  | B     | 848 | PGT  | C1-C2   | 3.00  | 1.59        | 1.50     |
| 16  | B     | 835 | CLA  | CHC-C1C | 2.98  | 1.42        | 1.35     |
| 22  | B     | 848 | PGT  | C3-C2   | 2.98  | 1.59        | 1.50     |
| 22  | B     | 848 | PGT  | P-O4P   | 2.98  | 1.71        | 1.59     |
| 16  | B     | 834 | CLA  | C1C-NC  | -2.98 | 1.33        | 1.37     |
| 26  | A     | 801 | CL0  | C3D-C2D | 2.98  | 1.47        | 1.39     |
| 17  | 1     | 616 | C7Z  | C21-C26 | -2.97 | 1.49        | 1.53     |
| 16  | A     | 833 | CLA  | CHC-C1C | 2.97  | 1.42        | 1.35     |
| 16  | B     | 834 | CLA  | CHC-C1C | 2.97  | 1.42        | 1.35     |
| 16  | A     | 827 | CLA  | C1C-NC  | -2.96 | 1.33        | 1.37     |
| 20  | 1     | 618 | ERG  | C11-C9  | 2.94  | 1.59        | 1.53     |
| 16  | A     | 855 | CLA  | C1C-NC  | -2.93 | 1.33        | 1.37     |
| 22  | 2     | 619 | PGT  | C1-C2   | 2.93  | 1.59        | 1.50     |
| 22  | 2     | 619 | PGT  | P-O4P   | 2.93  | 1.71        | 1.59     |
| 16  | A     | 809 | CLA  | CHC-C1C | 2.90  | 1.42        | 1.35     |
| 16  | B     | 801 | CLA  | CHC-C1C | 2.90  | 1.42        | 1.35     |
| 16  | B     | 821 | CLA  | C3B-C2B | -2.90 | 1.36        | 1.40     |
| 18  | A     | 847 | RRX  | C32-C1  | 2.90  | 1.59        | 1.53     |
| 16  | A     | 827 | CLA  | CHC-C1C | 2.89  | 1.42        | 1.35     |
| 16  | F     | 201 | CLA  | CHC-C1C | 2.88  | 1.42        | 1.35     |
| 16  | A     | 807 | CLA  | CHC-C1C | 2.88  | 1.42        | 1.35     |
| 16  | O     | 204 | CLA  | CHC-C1C | 2.87  | 1.42        | 1.35     |
| 17  | 1     | 615 | C7Z  | C21-C26 | -2.87 | 1.49        | 1.53     |
| 16  | A     | 855 | CLA  | C3B-C2B | -2.86 | 1.36        | 1.40     |
| 16  | A     | 808 | CLA  | CHC-C1C | 2.86  | 1.42        | 1.35     |
| 16  | A     | 836 | CLA  | CHC-C1C | 2.86  | 1.42        | 1.35     |
| 26  | A     | 801 | CL0  | C4D-CHA | 2.86  | 1.48        | 1.38     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 824 | CLA  | CHC-C1C | 2.86  | 1.42        | 1.35     |
| 18  | K     | 103 | RRX  | C32-C1  | 2.85  | 1.59        | 1.53     |
| 17  | 1     | 614 | C7Z  | C21-C26 | -2.85 | 1.49        | 1.53     |
| 16  | L     | 201 | CLA  | CHC-C1C | 2.85  | 1.42        | 1.35     |
| 18  | A     | 847 | RRX  | C7-C6   | 2.85  | 1.55        | 1.45     |
| 16  | A     | 856 | CLA  | CHC-C1C | 2.84  | 1.42        | 1.35     |
| 20  | 2     | 621 | ERG  | C9-C8   | 2.84  | 1.59        | 1.51     |
| 16  | A     | 838 | CLA  | CHC-C1C | 2.84  | 1.42        | 1.35     |
| 17  | 3     | 201 | C7Z  | C21-C26 | -2.84 | 1.49        | 1.53     |
| 16  | B     | 803 | CLA  | CHC-C1C | 2.84  | 1.42        | 1.35     |
| 16  | A     | 832 | CLA  | CHC-C1C | 2.84  | 1.42        | 1.35     |
| 16  | O     | 202 | CLA  | CHC-C1C | 2.84  | 1.42        | 1.35     |
| 17  | A     | 843 | C7Z  | C21-C26 | -2.83 | 1.49        | 1.53     |
| 16  | K     | 101 | CLA  | CHC-C1C | 2.83  | 1.42        | 1.35     |
| 16  | 2     | 602 | CLA  | CHC-C1C | 2.82  | 1.42        | 1.35     |
| 16  | A     | 813 | CLA  | CHC-C1C | 2.82  | 1.42        | 1.35     |
| 16  | 1     | 607 | CLA  | CHC-C1C | 2.82  | 1.42        | 1.35     |
| 16  | B     | 832 | CLA  | CHC-C1C | 2.82  | 1.42        | 1.35     |
| 16  | A     | 834 | CLA  | CHC-C1C | 2.82  | 1.42        | 1.35     |
| 16  | 1     | 609 | CLA  | CHC-C1C | 2.81  | 1.42        | 1.35     |
| 16  | 1     | 603 | CLA  | CHC-C1C | 2.81  | 1.42        | 1.35     |
| 16  | O     | 203 | CLA  | CHC-C1C | 2.81  | 1.42        | 1.35     |
| 16  | B     | 822 | CLA  | C3B-C2B | -2.81 | 1.36        | 1.40     |
| 16  | 1     | 608 | CLA  | CHC-C1C | 2.81  | 1.42        | 1.35     |
| 16  | B     | 815 | CLA  | CHC-C1C | 2.81  | 1.42        | 1.35     |
| 18  | 2     | 616 | RRX  | C32-C1  | 2.81  | 1.59        | 1.53     |
| 16  | 1     | 604 | CLA  | CHC-C1C | 2.80  | 1.42        | 1.35     |
| 16  | O     | 201 | CLA  | CHC-C1C | 2.80  | 1.42        | 1.35     |
| 16  | 2     | 612 | CLA  | CHC-C1C | 2.80  | 1.42        | 1.35     |
| 16  | A     | 828 | CLA  | CHC-C1C | 2.80  | 1.42        | 1.35     |
| 16  | A     | 822 | CLA  | CHC-C1C | 2.79  | 1.42        | 1.35     |
| 16  | A     | 837 | CLA  | CHC-C1C | 2.79  | 1.42        | 1.35     |
| 16  | 2     | 604 | CLA  | CHC-C1C | 2.79  | 1.42        | 1.35     |
| 16  | B     | 822 | CLA  | CHC-C1C | 2.79  | 1.42        | 1.35     |
| 16  | B     | 830 | CLA  | CHC-C1C | 2.79  | 1.42        | 1.35     |
| 16  | 2     | 610 | CLA  | CHC-C1C | 2.79  | 1.42        | 1.35     |
| 18  | 1     | 613 | RRX  | C32-C1  | 2.79  | 1.59        | 1.53     |
| 16  | B     | 811 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |
| 16  | J     | 102 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |
| 16  | L     | 204 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |
| 16  | 3     | 206 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |
| 16  | 3     | 209 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 823 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |
| 16  | B     | 813 | CLA  | CHC-C1C | 2.78  | 1.42        | 1.35     |
| 16  | 2     | 601 | CLA  | C3B-C2B | -2.77 | 1.36        | 1.40     |
| 18  | J     | 103 | RRX  | C32-C1  | 2.77  | 1.59        | 1.53     |
| 16  | A     | 804 | CLA  | CHC-C1C | 2.77  | 1.42        | 1.35     |
| 18  | 1     | 613 | RRX  | C4-C5   | -2.77 | 1.45        | 1.51     |
| 16  | B     | 805 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | A     | 855 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | B     | 833 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | 3     | 212 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | 3     | 214 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | 3     | 211 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | A     | 810 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | B     | 838 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | 2     | 607 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | B     | 821 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | 3     | 204 | CLA  | CHC-C1C | 2.76  | 1.42        | 1.35     |
| 16  | A     | 816 | CLA  | CHC-C1C | 2.75  | 1.42        | 1.35     |
| 16  | I     | 102 | CLA  | CHC-C1C | 2.75  | 1.42        | 1.35     |
| 16  | 2     | 609 | CLA  | CHC-C1C | 2.75  | 1.42        | 1.35     |
| 16  | B     | 832 | CLA  | C3B-C2B | -2.75 | 1.36        | 1.40     |
| 16  | B     | 806 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | 2     | 605 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | F     | 202 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | K     | 102 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | 1     | 610 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | F     | 202 | CLA  | C3B-C2B | -2.74 | 1.36        | 1.40     |
| 16  | A     | 815 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | A     | 824 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | B     | 818 | CLA  | CHC-C1C | 2.74  | 1.42        | 1.35     |
| 16  | 2     | 611 | CLA  | CHC-C1C | 2.73  | 1.42        | 1.35     |
| 16  | 2     | 608 | CLA  | CHC-C1C | 2.73  | 1.42        | 1.35     |
| 16  | 3     | 203 | CLA  | CHC-C1C | 2.73  | 1.42        | 1.35     |
| 16  | 2     | 613 | CLA  | CHC-C1C | 2.73  | 1.42        | 1.35     |
| 16  | B     | 820 | CLA  | CHC-C1C | 2.73  | 1.42        | 1.35     |
| 16  | B     | 818 | CLA  | C3B-C2B | -2.73 | 1.36        | 1.40     |
| 16  | A     | 817 | CLA  | C3B-C2B | -2.73 | 1.36        | 1.40     |
| 16  | A     | 820 | CLA  | C3B-C2B | -2.73 | 1.36        | 1.40     |
| 16  | L     | 203 | CLA  | CHC-C1C | 2.72  | 1.42        | 1.35     |
| 16  | A     | 806 | CLA  | CHC-C1C | 2.72  | 1.41        | 1.35     |
| 18  | 1     | 613 | RRX  | C21-C22 | 2.72  | 1.39        | 1.35     |
| 16  | 1     | 605 | CLA  | CHC-C1C | 2.72  | 1.41        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 825 | CLA  | CHC-C1C | 2.72  | 1.41        | 1.35     |
| 26  | A     | 801 | CL0  | C4B-CHC | 2.72  | 1.48        | 1.41     |
| 16  | 1     | 606 | CLA  | CHC-C1C | 2.71  | 1.41        | 1.35     |
| 16  | 2     | 603 | CLA  | CHC-C1C | 2.71  | 1.41        | 1.35     |
| 16  | A     | 825 | CLA  | C3B-C2B | -2.71 | 1.36        | 1.40     |
| 16  | F     | 204 | CLA  | CHC-C1C | 2.71  | 1.41        | 1.35     |
| 16  | B     | 837 | CLA  | C3B-C2B | -2.71 | 1.36        | 1.40     |
| 16  | B     | 803 | CLA  | C3B-C2B | -2.71 | 1.36        | 1.40     |
| 16  | 3     | 207 | CLA  | CHC-C1C | 2.71  | 1.41        | 1.35     |
| 16  | B     | 836 | CLA  | C3B-C2B | -2.70 | 1.36        | 1.40     |
| 16  | B     | 816 | CLA  | CHC-C1C | 2.70  | 1.41        | 1.35     |
| 16  | B     | 810 | CLA  | CHC-C1C | 2.70  | 1.41        | 1.35     |
| 16  | 3     | 211 | CLA  | C3B-C2B | -2.70 | 1.36        | 1.40     |
| 16  | B     | 814 | CLA  | CHC-C1C | 2.70  | 1.41        | 1.35     |
| 16  | B     | 819 | CLA  | CHC-C1C | 2.70  | 1.41        | 1.35     |
| 16  | B     | 819 | CLA  | C3B-C2B | -2.69 | 1.36        | 1.40     |
| 16  | A     | 823 | CLA  | CHC-C1C | 2.69  | 1.41        | 1.35     |
| 16  | A     | 839 | CLA  | CHC-C1C | 2.69  | 1.41        | 1.35     |
| 16  | B     | 826 | CLA  | CHC-C1C | 2.69  | 1.41        | 1.35     |
| 26  | A     | 801 | CL0  | C1B-CHB | 2.69  | 1.48        | 1.41     |
| 16  | B     | 807 | CLA  | CHC-C1C | 2.69  | 1.41        | 1.35     |
| 16  | A     | 835 | CLA  | CHC-C1C | 2.69  | 1.41        | 1.35     |
| 16  | B     | 808 | CLA  | C3B-C2B | -2.69 | 1.36        | 1.40     |
| 17  | 3     | 217 | C7Z  | C21-C26 | -2.68 | 1.50        | 1.53     |
| 16  | A     | 820 | CLA  | CHC-C1C | 2.68  | 1.41        | 1.35     |
| 16  | A     | 838 | CLA  | C1B-NB  | 2.68  | 1.37        | 1.35     |
| 16  | B     | 827 | CLA  | CHC-C1C | 2.68  | 1.41        | 1.35     |
| 16  | B     | 817 | CLA  | CHC-C1C | 2.68  | 1.41        | 1.35     |
| 16  | B     | 808 | CLA  | CHC-C1C | 2.68  | 1.41        | 1.35     |
| 16  | A     | 832 | CLA  | C3B-C2B | -2.68 | 1.36        | 1.40     |
| 17  | 3     | 215 | C7Z  | C21-C26 | -2.68 | 1.50        | 1.53     |
| 16  | B     | 829 | CLA  | C3B-C2B | -2.68 | 1.36        | 1.40     |
| 16  | 2     | 613 | CLA  | C1B-NB  | 2.67  | 1.37        | 1.35     |
| 16  | 2     | 610 | CLA  | C3B-C2B | -2.67 | 1.36        | 1.40     |
| 16  | I     | 101 | CLA  | CHC-C1C | 2.67  | 1.41        | 1.35     |
| 16  | 3     | 208 | CLA  | CHC-C1C | 2.67  | 1.41        | 1.35     |
| 17  | 2     | 614 | C7Z  | C21-C26 | -2.67 | 1.50        | 1.53     |
| 16  | B     | 809 | CLA  | CHC-C1C | 2.67  | 1.41        | 1.35     |
| 16  | A     | 831 | CLA  | CHC-C1C | 2.66  | 1.41        | 1.35     |
| 16  | A     | 803 | CLA  | CHC-C1C | 2.66  | 1.41        | 1.35     |
| 16  | 1     | 611 | CLA  | CHC-C1C | 2.66  | 1.41        | 1.35     |
| 16  | 3     | 213 | CLA  | CHC-C1C | 2.66  | 1.41        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 802 | CLA  | CHC-C1C | 2.66  | 1.41        | 1.35     |
| 16  | B     | 837 | CLA  | CHC-C1C | 2.65  | 1.41        | 1.35     |
| 16  | B     | 819 | CLA  | C1B-NB  | 2.65  | 1.37        | 1.35     |
| 16  | A     | 809 | CLA  | C3B-C2B | -2.65 | 1.36        | 1.40     |
| 16  | A     | 821 | CLA  | CHC-C1C | 2.64  | 1.41        | 1.35     |
| 16  | 2     | 601 | CLA  | CHC-C1C | 2.64  | 1.41        | 1.35     |
| 16  | 1     | 611 | CLA  | C3B-C2B | -2.64 | 1.36        | 1.40     |
| 16  | A     | 838 | CLA  | C3B-C2B | -2.64 | 1.36        | 1.40     |
| 16  | A     | 819 | CLA  | CHC-C1C | 2.64  | 1.41        | 1.35     |
| 16  | 1     | 601 | CLA  | CHC-C1C | 2.63  | 1.41        | 1.35     |
| 16  | F     | 205 | CLA  | CHC-C1C | 2.63  | 1.41        | 1.35     |
| 16  | K     | 101 | CLA  | C3B-C2B | -2.63 | 1.36        | 1.40     |
| 16  | B     | 829 | CLA  | CHC-C1C | 2.63  | 1.41        | 1.35     |
| 16  | A     | 814 | CLA  | CHC-C1C | 2.63  | 1.41        | 1.35     |
| 16  | A     | 826 | CLA  | CHC-C1C | 2.62  | 1.41        | 1.35     |
| 16  | A     | 830 | CLA  | CHC-C1C | 2.62  | 1.41        | 1.35     |
| 16  | B     | 831 | CLA  | CHC-C1C | 2.62  | 1.41        | 1.35     |
| 16  | 1     | 602 | CLA  | CHC-C1C | 2.62  | 1.41        | 1.35     |
| 16  | L     | 205 | CLA  | CHC-C1C | 2.62  | 1.41        | 1.35     |
| 16  | A     | 818 | CLA  | CHC-C1C | 2.61  | 1.41        | 1.35     |
| 16  | A     | 805 | CLA  | CHC-C1C | 2.61  | 1.41        | 1.35     |
| 16  | B     | 816 | CLA  | C3B-C2B | -2.61 | 1.36        | 1.40     |
| 16  | B     | 836 | CLA  | CHC-C1C | 2.61  | 1.41        | 1.35     |
| 16  | 2     | 610 | CLA  | C1B-NB  | 2.61  | 1.37        | 1.35     |
| 16  | L     | 201 | CLA  | C1B-NB  | 2.61  | 1.37        | 1.35     |
| 16  | L     | 204 | CLA  | C1B-NB  | 2.61  | 1.37        | 1.35     |
| 16  | A     | 811 | CLA  | CHC-C1C | 2.61  | 1.41        | 1.35     |
| 16  | 2     | 606 | CLA  | CHC-C1C | 2.60  | 1.41        | 1.35     |
| 16  | A     | 829 | CLA  | CHC-C1C | 2.60  | 1.41        | 1.35     |
| 16  | B     | 802 | CLA  | C3B-C2B | -2.60 | 1.36        | 1.40     |
| 16  | 2     | 607 | CLA  | C3B-C2B | -2.59 | 1.36        | 1.40     |
| 16  | 3     | 209 | CLA  | C3B-C2B | -2.59 | 1.36        | 1.40     |
| 20  | 1     | 618 | ERG  | C9-C8   | 2.59  | 1.58        | 1.51     |
| 16  | 2     | 613 | CLA  | C3B-C2B | -2.59 | 1.36        | 1.40     |
| 16  | A     | 809 | CLA  | C1B-NB  | 2.59  | 1.37        | 1.35     |
| 16  | A     | 812 | CLA  | CHC-C1C | 2.58  | 1.41        | 1.35     |
| 16  | A     | 834 | CLA  | C3B-C2B | -2.58 | 1.36        | 1.40     |
| 16  | 3     | 205 | CLA  | CHC-C1C | 2.58  | 1.41        | 1.35     |
| 17  | 3     | 216 | C7Z  | C21-C26 | -2.58 | 1.50        | 1.53     |
| 16  | F     | 201 | CLA  | C3B-C2B | -2.57 | 1.36        | 1.40     |
| 20  | 2     | 618 | ERG  | C9-C8   | 2.57  | 1.58        | 1.51     |
| 16  | A     | 810 | CLA  | C3B-C2B | -2.57 | 1.36        | 1.40     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 18  | J     | 103 | RRX  | C35-C13 | 2.57  | 1.56        | 1.50     |
| 16  | F     | 205 | CLA  | C3B-C2B | -2.57 | 1.36        | 1.40     |
| 16  | K     | 102 | CLA  | C1B-NB  | 2.56  | 1.37        | 1.35     |
| 16  | F     | 205 | CLA  | C1B-NB  | 2.56  | 1.37        | 1.35     |
| 16  | 1     | 604 | CLA  | C3B-C2B | -2.56 | 1.36        | 1.40     |
| 16  | B     | 805 | CLA  | C3B-C2B | -2.56 | 1.36        | 1.40     |
| 16  | B     | 818 | CLA  | C1B-NB  | 2.55  | 1.37        | 1.35     |
| 16  | B     | 812 | CLA  | CHC-C1C | 2.55  | 1.41        | 1.35     |
| 16  | 1     | 603 | CLA  | C3B-C2B | -2.55 | 1.36        | 1.40     |
| 26  | A     | 801 | CL0  | C1C-NC  | -2.55 | 1.34        | 1.37     |
| 29  | J     | 105 | 3PH  | O31-C31 | 2.55  | 1.40        | 1.33     |
| 16  | A     | 824 | CLA  | C3B-C2B | -2.54 | 1.36        | 1.40     |
| 16  | 2     | 612 | CLA  | C3B-C2B | -2.54 | 1.36        | 1.40     |
| 16  | B     | 802 | CLA  | CHC-C1C | 2.54  | 1.41        | 1.35     |
| 16  | B     | 831 | CLA  | C1B-NB  | 2.54  | 1.37        | 1.35     |
| 16  | 1     | 608 | CLA  | C3B-C2B | -2.54 | 1.36        | 1.40     |
| 16  | 3     | 210 | CLA  | CHC-C1C | 2.53  | 1.41        | 1.35     |
| 16  | B     | 834 | CLA  | C1C-C2C | 2.53  | 1.49        | 1.44     |
| 16  | B     | 820 | CLA  | C3B-C2B | -2.53 | 1.36        | 1.40     |
| 18  | K     | 103 | RRX  | C35-C13 | 2.52  | 1.56        | 1.50     |
| 16  | L     | 204 | CLA  | C3B-C2B | -2.52 | 1.36        | 1.40     |
| 16  | 1     | 609 | CLA  | C3B-C2B | -2.52 | 1.36        | 1.40     |
| 16  | O     | 203 | CLA  | C1B-NB  | 2.52  | 1.37        | 1.35     |
| 16  | A     | 816 | CLA  | C3B-C2B | -2.52 | 1.36        | 1.40     |
| 16  | B     | 804 | CLA  | CHC-C1C | 2.52  | 1.41        | 1.35     |
| 25  | A     | 852 | PTY  | O7-C6   | -2.51 | 1.40        | 1.46     |
| 16  | A     | 831 | CLA  | C3B-C2B | -2.51 | 1.36        | 1.40     |
| 29  | B     | 854 | 3PH  | O21-C2  | -2.51 | 1.40        | 1.46     |
| 16  | J     | 102 | CLA  | C3B-C2B | -2.50 | 1.36        | 1.40     |
| 16  | K     | 102 | CLA  | C3B-C2B | -2.50 | 1.36        | 1.40     |
| 16  | L     | 203 | CLA  | C3B-C2B | -2.50 | 1.36        | 1.40     |
| 16  | A     | 813 | CLA  | C3B-C2B | -2.49 | 1.36        | 1.40     |
| 17  | 3     | 201 | C7Z  | C20-C13 | 2.49  | 1.56        | 1.50     |
| 16  | B     | 828 | CLA  | C3B-C2B | -2.49 | 1.36        | 1.40     |
| 16  | I     | 102 | CLA  | C3B-C2B | -2.49 | 1.36        | 1.40     |
| 16  | O     | 203 | CLA  | C3B-C2B | -2.49 | 1.36        | 1.40     |
| 16  | B     | 822 | CLA  | C1B-NB  | 2.49  | 1.37        | 1.35     |
| 16  | A     | 806 | CLA  | C3B-C2B | -2.49 | 1.36        | 1.40     |
| 16  | B     | 825 | CLA  | CHC-C1C | 2.48  | 1.41        | 1.35     |
| 16  | A     | 854 | CLA  | C1C-C2C | 2.48  | 1.49        | 1.44     |
| 17  | A     | 843 | C7Z  | C20-C13 | 2.48  | 1.56        | 1.50     |
| 16  | 2     | 608 | CLA  | C1B-NB  | 2.48  | 1.37        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 17  | 1     | 612 | C7Z  | C20-C13 | 2.48  | 1.56        | 1.50     |
| 17  | 3     | 217 | C7Z  | C20-C13 | 2.48  | 1.56        | 1.50     |
| 17  | 1     | 615 | C7Z  | C20-C13 | 2.47  | 1.56        | 1.50     |
| 16  | A     | 802 | CLA  | C3B-C2B | -2.47 | 1.36        | 1.40     |
| 16  | 2     | 602 | CLA  | C1B-NB  | 2.47  | 1.37        | 1.35     |
| 25  | 3     | 220 | PTY  | O7-C6   | -2.47 | 1.40        | 1.46     |
| 16  | B     | 804 | CLA  | C3B-C2B | -2.47 | 1.36        | 1.40     |
| 29  | B     | 854 | 3PH  | O31-C31 | 2.46  | 1.40        | 1.33     |
| 17  | J     | 104 | C7Z  | C20-C13 | 2.46  | 1.56        | 1.50     |
| 16  | 2     | 603 | CLA  | C3B-C2B | -2.46 | 1.37        | 1.40     |
| 16  | O     | 202 | CLA  | C3B-C2B | -2.46 | 1.37        | 1.40     |
| 17  | 2     | 614 | C7Z  | C20-C13 | 2.46  | 1.56        | 1.50     |
| 17  | 3     | 216 | C7Z  | C20-C13 | 2.46  | 1.56        | 1.50     |
| 16  | 2     | 605 | CLA  | C3B-C2B | -2.45 | 1.37        | 1.40     |
| 17  | 2     | 615 | C7Z  | C20-C13 | 2.45  | 1.55        | 1.50     |
| 16  | A     | 839 | CLA  | C3B-C2B | -2.45 | 1.37        | 1.40     |
| 16  | B     | 811 | CLA  | C3B-C2B | -2.45 | 1.37        | 1.40     |
| 16  | B     | 803 | CLA  | C1B-NB  | 2.45  | 1.37        | 1.35     |
| 17  | 1     | 616 | C7Z  | C20-C13 | 2.45  | 1.55        | 1.50     |
| 16  | 1     | 605 | CLA  | C3B-C2B | -2.45 | 1.37        | 1.40     |
| 18  | 1     | 613 | RRX  | C35-C13 | 2.44  | 1.55        | 1.50     |
| 16  | A     | 830 | CLA  | C3B-C2B | -2.44 | 1.37        | 1.40     |
| 16  | 1     | 604 | CLA  | C1B-NB  | 2.44  | 1.37        | 1.35     |
| 16  | O     | 202 | CLA  | C1B-NB  | 2.44  | 1.37        | 1.35     |
| 16  | 1     | 610 | CLA  | C3B-C2B | -2.44 | 1.37        | 1.40     |
| 17  | 3     | 217 | C7Z  | C18-C5  | 2.44  | 1.54        | 1.50     |
| 17  | 1     | 614 | C7Z  | C20-C13 | 2.44  | 1.55        | 1.50     |
| 16  | 1     | 603 | CLA  | C1B-NB  | 2.43  | 1.37        | 1.35     |
| 17  | 3     | 218 | C7Z  | C20-C13 | 2.43  | 1.55        | 1.50     |
| 16  | B     | 814 | CLA  | C3B-C2B | -2.43 | 1.37        | 1.40     |
| 16  | I     | 101 | CLA  | C1B-NB  | 2.43  | 1.37        | 1.35     |
| 16  | A     | 808 | CLA  | C3B-C2B | -2.43 | 1.37        | 1.40     |
| 29  | A     | 849 | 3PH  | O21-C2  | -2.43 | 1.40        | 1.46     |
| 16  | A     | 829 | CLA  | C3B-C2B | -2.43 | 1.37        | 1.40     |
| 16  | B     | 812 | CLA  | C1B-NB  | 2.43  | 1.37        | 1.35     |
| 17  | 1     | 616 | C7Z  | C18-C5  | 2.43  | 1.54        | 1.50     |
| 22  | B     | 848 | PGT  | O2-C31  | 2.43  | 1.41        | 1.34     |
| 16  | 3     | 203 | CLA  | C3B-C2B | -2.43 | 1.37        | 1.40     |
| 16  | O     | 204 | CLA  | C1B-NB  | 2.43  | 1.37        | 1.35     |
| 16  | F     | 201 | CLA  | C1C-C2C | 2.42  | 1.49        | 1.44     |
| 25  | L     | 208 | PTY  | O4-C30  | 2.42  | 1.40        | 1.33     |
| 16  | 3     | 207 | CLA  | C3B-C2B | -2.42 | 1.37        | 1.40     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 830 | CLA  | C3B-C2B | -2.42 | 1.37        | 1.40     |
| 17  | 3     | 215 | C7Z  | C18-C5  | 2.42  | 1.54        | 1.50     |
| 16  | K     | 101 | CLA  | C1B-NB  | 2.42  | 1.37        | 1.35     |
| 16  | B     | 828 | CLA  | CHC-C1C | 2.42  | 1.41        | 1.35     |
| 16  | 1     | 601 | CLA  | C3B-C2B | -2.42 | 1.37        | 1.40     |
| 16  | B     | 835 | CLA  | C3B-C2B | -2.42 | 1.37        | 1.40     |
| 16  | 2     | 611 | CLA  | C1B-NB  | 2.41  | 1.37        | 1.35     |
| 16  | A     | 816 | CLA  | C1B-NB  | 2.41  | 1.37        | 1.35     |
| 25  | A     | 852 | PTY  | O4-C30  | 2.41  | 1.40        | 1.33     |
| 29  | A     | 849 | 3PH  | O31-C31 | 2.41  | 1.40        | 1.33     |
| 16  | 3     | 213 | CLA  | C1B-NB  | 2.41  | 1.37        | 1.35     |
| 16  | A     | 820 | CLA  | C1B-NB  | 2.41  | 1.37        | 1.35     |
| 17  | 2     | 614 | C7Z  | C18-C5  | 2.41  | 1.54        | 1.50     |
| 16  | B     | 835 | CLA  | C1C-C2C | 2.41  | 1.49        | 1.44     |
| 16  | A     | 833 | CLA  | C3B-C2B | -2.41 | 1.37        | 1.40     |
| 16  | A     | 819 | CLA  | C1B-NB  | 2.41  | 1.37        | 1.35     |
| 17  | 1     | 614 | C7Z  | C18-C5  | 2.41  | 1.54        | 1.50     |
| 16  | A     | 823 | CLA  | C3B-C2B | -2.41 | 1.37        | 1.40     |
| 17  | J     | 104 | C7Z  | C18-C5  | 2.41  | 1.54        | 1.50     |
| 17  | 3     | 218 | C7Z  | C18-C5  | 2.41  | 1.54        | 1.50     |
| 25  | 3     | 220 | PTY  | O4-C30  | 2.41  | 1.40        | 1.33     |
| 16  | 1     | 606 | CLA  | C3B-C2B | -2.41 | 1.37        | 1.40     |
| 18  | 2     | 616 | RRX  | C35-C13 | 2.41  | 1.55        | 1.50     |
| 16  | A     | 836 | CLA  | C3B-C2B | -2.40 | 1.37        | 1.40     |
| 16  | B     | 825 | CLA  | C1B-NB  | 2.40  | 1.37        | 1.35     |
| 16  | 1     | 610 | CLA  | C1B-NB  | 2.40  | 1.37        | 1.35     |
| 16  | I     | 101 | CLA  | C3B-C2B | -2.40 | 1.37        | 1.40     |
| 17  | A     | 843 | C7Z  | C18-C5  | 2.40  | 1.54        | 1.50     |
| 17  | 1     | 612 | C7Z  | C21-C26 | -2.40 | 1.50        | 1.53     |
| 16  | 2     | 611 | CLA  | C3B-C2B | -2.40 | 1.37        | 1.40     |
| 17  | 1     | 615 | C7Z  | C18-C5  | 2.40  | 1.54        | 1.50     |
| 16  | O     | 201 | CLA  | C1C-C2C | 2.40  | 1.49        | 1.44     |
| 16  | O     | 203 | CLA  | C1C-C2C | 2.40  | 1.49        | 1.44     |
| 29  | J     | 105 | 3PH  | O21-C2  | -2.39 | 1.40        | 1.46     |
| 16  | A     | 822 | CLA  | C1B-NB  | 2.39  | 1.37        | 1.35     |
| 16  | 2     | 608 | CLA  | C3B-C2B | -2.39 | 1.37        | 1.40     |
| 16  | B     | 810 | CLA  | C3B-C2B | -2.39 | 1.37        | 1.40     |
| 16  | 1     | 611 | CLA  | C1B-NB  | 2.39  | 1.37        | 1.35     |
| 16  | A     | 835 | CLA  | C1B-NB  | 2.39  | 1.37        | 1.35     |
| 16  | A     | 809 | CLA  | C1C-C2C | 2.39  | 1.49        | 1.44     |
| 16  | B     | 811 | CLA  | C1B-NB  | 2.38  | 1.37        | 1.35     |
| 16  | B     | 810 | CLA  | C1B-NB  | 2.38  | 1.37        | 1.35     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 826 | CLA  | C3B-C2B | -2.38 | 1.37        | 1.40     |
| 25  | 3     | 221 | PTY  | O4-C30  | 2.38  | 1.40        | 1.33     |
| 16  | A     | 856 | CLA  | C3B-C2B | -2.38 | 1.37        | 1.40     |
| 16  | A     | 804 | CLA  | C3B-C2B | -2.38 | 1.37        | 1.40     |
| 16  | A     | 808 | CLA  | C1B-NB  | 2.38  | 1.37        | 1.35     |
| 16  | 1     | 609 | CLA  | C1B-NB  | 2.38  | 1.37        | 1.35     |
| 16  | 3     | 214 | CLA  | C3B-C2B | -2.38 | 1.37        | 1.40     |
| 16  | A     | 806 | CLA  | C1B-NB  | 2.37  | 1.37        | 1.35     |
| 16  | 2     | 606 | CLA  | C1B-NB  | 2.37  | 1.37        | 1.35     |
| 16  | B     | 807 | CLA  | C3B-C2B | -2.36 | 1.37        | 1.40     |
| 17  | 3     | 216 | C7Z  | C18-C5  | 2.36  | 1.54        | 1.50     |
| 16  | B     | 821 | CLA  | C1B-NB  | 2.36  | 1.37        | 1.35     |
| 16  | 1     | 607 | CLA  | C3B-C2B | -2.36 | 1.37        | 1.40     |
| 16  | 3     | 204 | CLA  | C3B-C2B | -2.36 | 1.37        | 1.40     |
| 16  | O     | 201 | CLA  | C1B-NB  | 2.36  | 1.37        | 1.35     |
| 16  | A     | 826 | CLA  | C3B-C2B | -2.36 | 1.37        | 1.40     |
| 16  | B     | 815 | CLA  | C1C-C2C | 2.36  | 1.49        | 1.44     |
| 16  | A     | 823 | CLA  | C1B-NB  | 2.35  | 1.37        | 1.35     |
| 16  | A     | 817 | CLA  | C1C-C2C | 2.35  | 1.49        | 1.44     |
| 16  | 2     | 612 | CLA  | C1B-NB  | 2.35  | 1.37        | 1.35     |
| 16  | F     | 201 | CLA  | C1B-NB  | 2.35  | 1.37        | 1.35     |
| 16  | 1     | 607 | CLA  | C1C-C2C | 2.35  | 1.49        | 1.44     |
| 16  | 3     | 206 | CLA  | C3B-C2B | -2.35 | 1.37        | 1.40     |
| 16  | B     | 802 | CLA  | C1B-NB  | 2.35  | 1.37        | 1.35     |
| 30  | A     | 851 | T7X  | O18-C11 | 2.35  | 1.40        | 1.33     |
| 17  | 3     | 201 | C7Z  | C18-C5  | 2.34  | 1.54        | 1.50     |
| 16  | J     | 102 | CLA  | C1B-NB  | 2.34  | 1.37        | 1.35     |
| 16  | 3     | 214 | CLA  | C1B-NB  | 2.34  | 1.37        | 1.35     |
| 16  | F     | 204 | CLA  | C1B-NB  | 2.34  | 1.37        | 1.35     |
| 16  | A     | 836 | CLA  | C1B-NB  | 2.34  | 1.37        | 1.35     |
| 17  | 3     | 215 | C7Z  | C20-C13 | 2.34  | 1.55        | 1.50     |
| 18  | A     | 847 | RRX  | C35-C13 | 2.34  | 1.55        | 1.50     |
| 16  | B     | 804 | CLA  | C1B-NB  | 2.34  | 1.37        | 1.35     |
| 16  | A     | 827 | CLA  | C1C-C2C | 2.34  | 1.49        | 1.44     |
| 16  | B     | 835 | CLA  | C1B-NB  | 2.34  | 1.37        | 1.35     |
| 16  | 2     | 609 | CLA  | C3B-C2B | -2.33 | 1.37        | 1.40     |
| 16  | B     | 815 | CLA  | C3B-C2B | -2.33 | 1.37        | 1.40     |
| 16  | B     | 801 | CLA  | C1C-C2C | 2.33  | 1.49        | 1.44     |
| 16  | 3     | 210 | CLA  | C3B-C2B | -2.33 | 1.37        | 1.40     |
| 16  | L     | 205 | CLA  | C3B-C2B | -2.33 | 1.37        | 1.40     |
| 16  | B     | 820 | CLA  | C1B-NB  | 2.33  | 1.37        | 1.35     |
| 16  | L     | 201 | CLA  | C1C-C2C | 2.32  | 1.49        | 1.44     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | 2     | 609 | CLA  | C1B-NB  | 2.32  | 1.37        | 1.35     |
| 16  | A     | 811 | CLA  | C1B-NB  | 2.32  | 1.37        | 1.35     |
| 17  | 2     | 615 | C7Z  | C18-C5  | 2.32  | 1.54        | 1.50     |
| 16  | B     | 801 | CLA  | C3B-C2B | -2.32 | 1.37        | 1.40     |
| 16  | B     | 805 | CLA  | C1B-NB  | 2.32  | 1.37        | 1.35     |
| 16  | A     | 807 | CLA  | C1B-NB  | 2.32  | 1.37        | 1.35     |
| 25  | L     | 208 | PTY  | O7-C6   | -2.32 | 1.40        | 1.46     |
| 16  | F     | 204 | CLA  | C1C-C2C | 2.32  | 1.49        | 1.44     |
| 16  | A     | 837 | CLA  | C1C-C2C | 2.31  | 1.49        | 1.44     |
| 16  | 3     | 204 | CLA  | C1B-NB  | 2.31  | 1.37        | 1.35     |
| 16  | A     | 828 | CLA  | C3B-C2B | -2.31 | 1.37        | 1.40     |
| 16  | 3     | 209 | CLA  | C1B-NB  | 2.31  | 1.37        | 1.35     |
| 16  | F     | 202 | CLA  | C1B-NB  | 2.31  | 1.37        | 1.35     |
| 16  | 1     | 608 | CLA  | C1B-NB  | 2.31  | 1.37        | 1.35     |
| 16  | O     | 204 | CLA  | C3B-C2B | -2.31 | 1.37        | 1.40     |
| 16  | L     | 201 | CLA  | C3B-C2B | -2.31 | 1.37        | 1.40     |
| 16  | A     | 807 | CLA  | C1C-C2C | 2.30  | 1.49        | 1.44     |
| 16  | 3     | 211 | CLA  | C1B-NB  | 2.30  | 1.37        | 1.35     |
| 16  | A     | 833 | CLA  | C1C-C2C | 2.30  | 1.49        | 1.44     |
| 30  | A     | 851 | T7X  | O16-C8  | -2.30 | 1.40        | 1.46     |
| 16  | B     | 803 | CLA  | C1C-C2C | 2.29  | 1.49        | 1.44     |
| 16  | A     | 815 | CLA  | C3B-C2B | -2.29 | 1.37        | 1.40     |
| 16  | A     | 837 | CLA  | C1B-NB  | 2.29  | 1.37        | 1.35     |
| 16  | F     | 202 | CLA  | C1C-C2C | 2.29  | 1.49        | 1.44     |
| 17  | 1     | 612 | C7Z  | C18-C5  | 2.29  | 1.54        | 1.50     |
| 16  | B     | 832 | CLA  | C1B-NB  | 2.29  | 1.37        | 1.35     |
| 16  | L     | 203 | CLA  | C1B-NB  | 2.28  | 1.37        | 1.35     |
| 16  | 2     | 613 | CLA  | C1C-C2C | 2.28  | 1.49        | 1.44     |
| 16  | 1     | 610 | CLA  | C1C-C2C | 2.28  | 1.49        | 1.44     |
| 16  | 1     | 602 | CLA  | C1B-NB  | 2.28  | 1.37        | 1.35     |
| 16  | O     | 204 | CLA  | C1C-C2C | 2.28  | 1.49        | 1.44     |
| 25  | L     | 208 | PTY  | O7-C8   | 2.28  | 1.40        | 1.34     |
| 16  | A     | 827 | CLA  | C3B-C2B | -2.28 | 1.37        | 1.40     |
| 20  | 2     | 618 | ERG  | C14-C8  | 2.28  | 1.57        | 1.51     |
| 16  | 2     | 604 | CLA  | C1B-NB  | 2.27  | 1.37        | 1.35     |
| 16  | A     | 821 | CLA  | C1B-NB  | 2.27  | 1.37        | 1.35     |
| 16  | 1     | 609 | CLA  | C1C-C2C | 2.27  | 1.49        | 1.44     |
| 16  | 2     | 607 | CLA  | C1B-NB  | 2.27  | 1.37        | 1.35     |
| 16  | A     | 836 | CLA  | C1C-C2C | 2.27  | 1.49        | 1.44     |
| 16  | A     | 802 | CLA  | C1B-NB  | 2.27  | 1.37        | 1.35     |
| 16  | K     | 101 | CLA  | C1C-C2C | 2.27  | 1.49        | 1.44     |
| 25  | 3     | 221 | PTY  | O7-C8   | 2.27  | 1.40        | 1.34     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | 3     | 206 | CLA  | C1B-NB  | 2.27  | 1.37        | 1.35     |
| 16  | A     | 856 | CLA  | C1C-C2C | 2.26  | 1.48        | 1.44     |
| 16  | 2     | 605 | CLA  | C1B-NB  | 2.26  | 1.37        | 1.35     |
| 16  | B     | 809 | CLA  | C3B-C2B | -2.26 | 1.37        | 1.40     |
| 16  | L     | 205 | CLA  | C1B-NB  | 2.26  | 1.37        | 1.35     |
| 16  | 2     | 604 | CLA  | C1C-C2C | 2.25  | 1.48        | 1.44     |
| 16  | A     | 818 | CLA  | C1B-NB  | 2.25  | 1.37        | 1.35     |
| 16  | 1     | 605 | CLA  | C1B-NB  | 2.25  | 1.37        | 1.35     |
| 16  | A     | 829 | CLA  | C1B-NB  | 2.25  | 1.37        | 1.35     |
| 16  | A     | 803 | CLA  | C3B-C2B | -2.25 | 1.37        | 1.40     |
| 16  | 2     | 605 | CLA  | C1C-C2C | 2.25  | 1.48        | 1.44     |
| 16  | A     | 838 | CLA  | C1C-C2C | 2.25  | 1.48        | 1.44     |
| 16  | B     | 808 | CLA  | C1B-NB  | 2.25  | 1.37        | 1.35     |
| 16  | A     | 805 | CLA  | C1B-NB  | 2.25  | 1.37        | 1.35     |
| 16  | 2     | 604 | CLA  | C3B-C2B | -2.25 | 1.37        | 1.40     |
| 16  | J     | 102 | CLA  | C1C-C2C | 2.25  | 1.48        | 1.44     |
| 16  | A     | 814 | CLA  | C1B-NB  | 2.25  | 1.37        | 1.35     |
| 16  | A     | 815 | CLA  | C1B-NB  | 2.24  | 1.37        | 1.35     |
| 16  | 3     | 205 | CLA  | C1A-CHA | 2.24  | 1.52        | 1.43     |
| 16  | A     | 805 | CLA  | C3B-C2B | -2.24 | 1.37        | 1.40     |
| 16  | B     | 813 | CLA  | C1B-NB  | 2.24  | 1.37        | 1.35     |
| 16  | B     | 824 | CLA  | C3B-C2B | -2.24 | 1.37        | 1.40     |
| 16  | A     | 815 | CLA  | C1C-C2C | 2.24  | 1.48        | 1.44     |
| 20  | 2     | 621 | ERG  | C14-C8  | 2.24  | 1.57        | 1.51     |
| 16  | A     | 831 | CLA  | C1B-NB  | 2.24  | 1.37        | 1.35     |
| 29  | J     | 105 | 3PH  | O21-C21 | 2.23  | 1.40        | 1.34     |
| 16  | B     | 822 | CLA  | C1C-C2C | 2.23  | 1.48        | 1.44     |
| 16  | 2     | 611 | CLA  | C1C-C2C | 2.23  | 1.48        | 1.44     |
| 16  | A     | 812 | CLA  | C3B-C2B | -2.23 | 1.37        | 1.40     |
| 17  | 1     | 615 | C7Z  | C40-C33 | 2.23  | 1.55        | 1.50     |
| 16  | B     | 806 | CLA  | C1C-C2C | 2.23  | 1.48        | 1.44     |
| 16  | A     | 830 | CLA  | C1C-C2C | 2.23  | 1.48        | 1.44     |
| 16  | 3     | 203 | CLA  | C1C-C2C | 2.22  | 1.48        | 1.44     |
| 16  | 3     | 203 | CLA  | C1B-NB  | 2.22  | 1.37        | 1.35     |
| 16  | A     | 813 | CLA  | C1B-NB  | 2.22  | 1.37        | 1.35     |
| 16  | 3     | 210 | CLA  | C1B-NB  | 2.22  | 1.37        | 1.35     |
| 16  | 1     | 603 | CLA  | C1C-C2C | 2.22  | 1.48        | 1.44     |
| 16  | A     | 817 | CLA  | C1B-NB  | 2.22  | 1.37        | 1.35     |
| 16  | A     | 830 | CLA  | C1B-NB  | 2.22  | 1.37        | 1.35     |
| 16  | L     | 204 | CLA  | C1C-C2C | 2.21  | 1.48        | 1.44     |
| 16  | B     | 838 | CLA  | C1C-C2C | 2.21  | 1.48        | 1.44     |
| 16  | B     | 827 | CLA  | C3B-C2B | -2.21 | 1.37        | 1.40     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 825 | CLA  | C3B-C2B | -2.21 | 1.37        | 1.40     |
| 16  | B     | 806 | CLA  | C1B-NB  | 2.21  | 1.37        | 1.35     |
| 16  | B     | 826 | CLA  | C1B-NB  | 2.21  | 1.37        | 1.35     |
| 16  | B     | 837 | CLA  | C1B-NB  | 2.21  | 1.37        | 1.35     |
| 16  | A     | 808 | CLA  | C1C-C2C | 2.20  | 1.48        | 1.44     |
| 16  | 3     | 213 | CLA  | C1C-C2C | 2.20  | 1.48        | 1.44     |
| 16  | A     | 822 | CLA  | C3B-C2B | -2.20 | 1.37        | 1.40     |
| 16  | B     | 823 | CLA  | C3B-C2B | -2.20 | 1.37        | 1.40     |
| 16  | B     | 834 | CLA  | C1B-NB  | 2.20  | 1.37        | 1.35     |
| 18  | 2     | 616 | RRX  | C21-C22 | 2.20  | 1.38        | 1.35     |
| 16  | B     | 838 | CLA  | C1B-NB  | 2.19  | 1.37        | 1.35     |
| 17  | 3     | 216 | C7Z  | C10-C9  | -2.19 | 1.32        | 1.35     |
| 16  | B     | 805 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 16  | A     | 804 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 31  | B     | 849 | DGD  | O3G-C1D | 2.19  | 1.43        | 1.40     |
| 16  | A     | 819 | CLA  | C3B-C2B | -2.19 | 1.37        | 1.40     |
| 16  | 2     | 601 | CLA  | C1B-NB  | 2.19  | 1.37        | 1.35     |
| 16  | B     | 821 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 16  | 2     | 610 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 16  | B     | 817 | CLA  | C3B-C2B | -2.19 | 1.37        | 1.40     |
| 16  | A     | 830 | CLA  | C1A-CHA | 2.19  | 1.52        | 1.43     |
| 16  | O     | 202 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 16  | B     | 816 | CLA  | C1B-NB  | 2.19  | 1.37        | 1.35     |
| 16  | 3     | 211 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 16  | 2     | 602 | CLA  | C3B-C2B | -2.19 | 1.37        | 1.40     |
| 16  | 1     | 602 | CLA  | C1C-C2C | 2.19  | 1.48        | 1.44     |
| 16  | B     | 812 | CLA  | C3B-C2B | -2.19 | 1.37        | 1.40     |
| 16  | 1     | 606 | CLA  | C1B-NB  | 2.19  | 1.37        | 1.35     |
| 16  | 2     | 601 | CLA  | C1C-C2C | 2.18  | 1.48        | 1.44     |
| 20  | 2     | 621 | ERG  | C11-C9  | 2.18  | 1.57        | 1.53     |
| 16  | 1     | 611 | CLA  | C1C-C2C | 2.18  | 1.48        | 1.44     |
| 16  | B     | 824 | CLA  | C1C-C2C | 2.18  | 1.48        | 1.44     |
| 16  | 2     | 606 | CLA  | C3B-C2B | -2.18 | 1.37        | 1.40     |
| 16  | B     | 833 | CLA  | C3B-C2B | -2.18 | 1.37        | 1.40     |
| 16  | B     | 828 | CLA  | C1B-NB  | 2.18  | 1.37        | 1.35     |
| 16  | 3     | 208 | CLA  | C3B-C2B | -2.18 | 1.37        | 1.40     |
| 16  | A     | 812 | CLA  | C1B-NB  | 2.18  | 1.37        | 1.35     |
| 25  | 3     | 221 | PTY  | O7-C6   | -2.18 | 1.41        | 1.46     |
| 16  | 1     | 605 | CLA  | C1A-CHA | 2.18  | 1.52        | 1.43     |
| 25  | 3     | 220 | PTY  | O7-C8   | 2.18  | 1.40        | 1.34     |
| 16  | 3     | 203 | CLA  | C1A-CHA | 2.18  | 1.52        | 1.43     |
| 16  | 3     | 213 | CLA  | C3B-C2B | -2.18 | 1.37        | 1.40     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 854 | CLA  | C3B-C2B | -2.18 | 1.37        | 1.40     |
| 16  | A     | 814 | CLA  | C3B-C2B | -2.17 | 1.37        | 1.40     |
| 16  | L     | 203 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | B     | 817 | CLA  | C1A-CHA | 2.17  | 1.52        | 1.43     |
| 16  | 3     | 211 | CLA  | C1A-CHA | 2.17  | 1.52        | 1.43     |
| 16  | I     | 101 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | A     | 835 | CLA  | C3B-C2B | -2.17 | 1.37        | 1.40     |
| 16  | B     | 836 | CLA  | C1B-NB  | 2.17  | 1.37        | 1.35     |
| 16  | A     | 831 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | B     | 823 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | 1     | 608 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | 1     | 605 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | B     | 827 | CLA  | C1B-NB  | 2.17  | 1.37        | 1.35     |
| 16  | B     | 825 | CLA  | C1A-CHA | 2.17  | 1.52        | 1.43     |
| 16  | A     | 822 | CLA  | C1C-C2C | 2.17  | 1.48        | 1.44     |
| 16  | B     | 815 | CLA  | C1B-NB  | 2.17  | 1.37        | 1.35     |
| 16  | I     | 102 | CLA  | C1B-NB  | 2.17  | 1.37        | 1.35     |
| 16  | 1     | 602 | CLA  | C3B-C2B | -2.16 | 1.37        | 1.40     |
| 16  | A     | 839 | CLA  | C1B-NB  | 2.16  | 1.37        | 1.35     |
| 16  | 2     | 612 | CLA  | C1C-C2C | 2.16  | 1.48        | 1.44     |
| 18  | A     | 847 | RRX  | C21-C22 | 2.16  | 1.38        | 1.35     |
| 16  | B     | 832 | CLA  | C1C-C2C | 2.16  | 1.48        | 1.44     |
| 29  | A     | 849 | 3PH  | O21-C21 | 2.16  | 1.40        | 1.34     |
| 16  | A     | 803 | CLA  | C1A-CHA | 2.16  | 1.52        | 1.43     |
| 16  | A     | 824 | CLA  | C1B-NB  | 2.16  | 1.37        | 1.35     |
| 16  | A     | 834 | CLA  | C1C-C2C | 2.16  | 1.48        | 1.44     |
| 16  | A     | 813 | CLA  | C1C-C2C | 2.16  | 1.48        | 1.44     |
| 16  | A     | 821 | CLA  | C3B-C2B | -2.16 | 1.37        | 1.40     |
| 16  | 2     | 611 | CLA  | C1A-CHA | 2.16  | 1.52        | 1.43     |
| 16  | A     | 818 | CLA  | C3B-C2B | -2.15 | 1.37        | 1.40     |
| 16  | B     | 831 | CLA  | C3B-C2B | -2.15 | 1.37        | 1.40     |
| 16  | A     | 855 | CLA  | C1C-C2C | 2.15  | 1.48        | 1.44     |
| 16  | 2     | 609 | CLA  | C1C-C2C | 2.15  | 1.48        | 1.44     |
| 16  | 2     | 603 | CLA  | C1B-NB  | 2.15  | 1.37        | 1.35     |
| 30  | A     | 851 | T7X  | O18-C9  | -2.15 | 1.40        | 1.45     |
| 16  | F     | 204 | CLA  | C3B-C2B | -2.15 | 1.37        | 1.40     |
| 17  | J     | 104 | C7Z  | C40-C33 | 2.15  | 1.55        | 1.50     |
| 16  | B     | 817 | CLA  | C1C-C2C | 2.15  | 1.48        | 1.44     |
| 16  | B     | 833 | CLA  | C1C-C2C | 2.15  | 1.48        | 1.44     |
| 16  | 2     | 607 | CLA  | C1C-C2C | 2.15  | 1.48        | 1.44     |
| 17  | 3     | 215 | C7Z  | C40-C33 | 2.14  | 1.55        | 1.50     |
| 16  | A     | 806 | CLA  | C1C-C2C | 2.14  | 1.48        | 1.44     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 26  | A     | 801 | CL0  | C1D-C2D | 2.14  | 1.49        | 1.45     |
| 16  | A     | 810 | CLA  | C1B-NB  | 2.14  | 1.37        | 1.35     |
| 16  | 2     | 613 | CLA  | C1A-CHA | 2.14  | 1.52        | 1.43     |
| 16  | B     | 820 | CLA  | C1C-C2C | 2.14  | 1.48        | 1.44     |
| 16  | 3     | 212 | CLA  | C1C-C2C | 2.14  | 1.48        | 1.44     |
| 29  | B     | 854 | 3PH  | O21-C21 | 2.14  | 1.40        | 1.34     |
| 16  | B     | 817 | CLA  | C1B-NB  | 2.14  | 1.37        | 1.35     |
| 16  | A     | 814 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 16  | A     | 802 | CLA  | C1A-CHA | 2.13  | 1.52        | 1.43     |
| 16  | B     | 812 | CLA  | C1A-CHA | 2.13  | 1.52        | 1.43     |
| 16  | A     | 839 | CLA  | C1A-CHA | 2.13  | 1.52        | 1.43     |
| 25  | A     | 852 | PTY  | O7-C8   | 2.13  | 1.40        | 1.34     |
| 16  | A     | 819 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 20  | 2     | 621 | ERG  | C4-C5   | 2.13  | 1.56        | 1.51     |
| 16  | 3     | 208 | CLA  | C1B-NB  | 2.13  | 1.37        | 1.35     |
| 16  | A     | 821 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 16  | B     | 812 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 16  | I     | 102 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 16  | A     | 837 | CLA  | C3B-C2B | -2.13 | 1.37        | 1.40     |
| 17  | 1     | 614 | C7Z  | C40-C33 | 2.13  | 1.55        | 1.50     |
| 16  | 3     | 204 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 16  | A     | 856 | CLA  | C1A-CHA | 2.13  | 1.51        | 1.43     |
| 16  | A     | 823 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 16  | A     | 825 | CLA  | C1C-C2C | 2.13  | 1.48        | 1.44     |
| 30  | A     | 851 | T7X  | O16-C10 | 2.13  | 1.40        | 1.34     |
| 16  | B     | 829 | CLA  | CHD-C1D | 2.12  | 1.42        | 1.38     |
| 16  | A     | 812 | CLA  | C1A-CHA | 2.12  | 1.51        | 1.43     |
| 16  | A     | 835 | CLA  | C1C-C2C | 2.12  | 1.48        | 1.44     |
| 16  | 3     | 206 | CLA  | C1C-C2C | 2.12  | 1.48        | 1.44     |
| 29  | A     | 849 | 3PH  | O31-C3  | -2.12 | 1.40        | 1.45     |
| 17  | A     | 843 | C7Z  | C40-C33 | 2.12  | 1.55        | 1.50     |
| 16  | A     | 828 | CLA  | C1C-C2C | 2.12  | 1.48        | 1.44     |
| 16  | B     | 811 | CLA  | C1C-C2C | 2.12  | 1.48        | 1.44     |
| 16  | B     | 810 | CLA  | C1C-C2C | 2.12  | 1.48        | 1.44     |
| 16  | 3     | 212 | CLA  | C3B-C2B | -2.12 | 1.37        | 1.40     |
| 16  | F     | 204 | CLA  | C1A-CHA | 2.12  | 1.51        | 1.43     |
| 16  | 2     | 606 | CLA  | C1A-CHA | 2.12  | 1.51        | 1.43     |
| 16  | 3     | 213 | CLA  | C1A-CHA | 2.12  | 1.51        | 1.43     |
| 16  | 3     | 208 | CLA  | C1C-C2C | 2.12  | 1.48        | 1.44     |
| 16  | B     | 815 | CLA  | C1A-CHA | 2.11  | 1.51        | 1.43     |
| 22  | B     | 848 | PGT  | C4-C5   | 2.11  | 1.58        | 1.51     |
| 16  | B     | 803 | CLA  | C1A-CHA | 2.11  | 1.51        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 816 | CLA  | CHD-C1D | 2.11  | 1.42        | 1.38     |
| 16  | 2     | 612 | CLA  | C1A-CHA | 2.11  | 1.51        | 1.43     |
| 17  | 3     | 218 | C7Z  | C40-C33 | 2.11  | 1.55        | 1.50     |
| 16  | 2     | 601 | CLA  | C1A-CHA | 2.11  | 1.51        | 1.43     |
| 20  | 1     | 618 | ERG  | C4-C5   | 2.11  | 1.56        | 1.51     |
| 23  | J     | 101 | DGA  | OG2-CG2 | -2.11 | 1.41        | 1.46     |
| 17  | 2     | 614 | C7Z  | C40-C33 | 2.11  | 1.55        | 1.50     |
| 16  | A     | 839 | CLA  | C1C-C2C | 2.11  | 1.48        | 1.44     |
| 16  | A     | 802 | CLA  | C1C-C2C | 2.11  | 1.48        | 1.44     |
| 16  | A     | 810 | CLA  | C1C-C2C | 2.11  | 1.48        | 1.44     |
| 16  | A     | 833 | CLA  | C1B-NB  | 2.11  | 1.37        | 1.35     |
| 16  | A     | 804 | CLA  | C1B-NB  | 2.11  | 1.37        | 1.35     |
| 16  | A     | 827 | CLA  | C1A-CHA | 2.11  | 1.51        | 1.43     |
| 25  | 3     | 220 | PTY  | O4-C1   | -2.10 | 1.40        | 1.45     |
| 16  | 3     | 209 | CLA  | C1A-CHA | 2.10  | 1.51        | 1.43     |
| 16  | 3     | 212 | CLA  | C1B-NB  | 2.10  | 1.37        | 1.35     |
| 16  | A     | 828 | CLA  | C1B-NB  | 2.10  | 1.37        | 1.35     |
| 16  | 3     | 209 | CLA  | C1C-C2C | 2.10  | 1.48        | 1.44     |
| 16  | A     | 815 | CLA  | C1A-CHA | 2.10  | 1.51        | 1.43     |
| 22  | 2     | 619 | PGT  | O2-C31  | 2.10  | 1.40        | 1.34     |
| 16  | 3     | 212 | CLA  | C1A-CHA | 2.10  | 1.51        | 1.43     |
| 16  | A     | 824 | CLA  | C1C-C2C | 2.10  | 1.48        | 1.44     |
| 16  | 3     | 207 | CLA  | C1C-C2C | 2.10  | 1.48        | 1.44     |
| 16  | B     | 819 | CLA  | C3D-C4D | -2.10 | 1.39        | 1.44     |
| 17  | 3     | 216 | C7Z  | C40-C33 | 2.10  | 1.55        | 1.50     |
| 16  | 2     | 607 | CLA  | C1A-CHA | 2.10  | 1.51        | 1.43     |
| 16  | 2     | 606 | CLA  | C1C-C2C | 2.10  | 1.48        | 1.44     |
| 16  | B     | 813 | CLA  | C1C-C2C | 2.10  | 1.48        | 1.44     |
| 16  | A     | 826 | CLA  | C1B-NB  | 2.10  | 1.37        | 1.35     |
| 23  | 2     | 620 | DGA  | OG2-CG2 | -2.09 | 1.41        | 1.46     |
| 16  | J     | 102 | CLA  | C1A-CHA | 2.09  | 1.51        | 1.43     |
| 16  | 1     | 606 | CLA  | C1C-C2C | 2.09  | 1.48        | 1.44     |
| 16  | 1     | 604 | CLA  | C1C-C2C | 2.09  | 1.48        | 1.44     |
| 16  | A     | 819 | CLA  | C1A-CHA | 2.09  | 1.51        | 1.43     |
| 16  | B     | 830 | CLA  | C1C-C2C | 2.09  | 1.48        | 1.44     |
| 16  | B     | 818 | CLA  | C1C-C2C | 2.09  | 1.48        | 1.44     |
| 16  | B     | 828 | CLA  | C3D-C4D | -2.09 | 1.39        | 1.44     |
| 16  | A     | 807 | CLA  | C3B-C2B | -2.09 | 1.37        | 1.40     |
| 16  | 3     | 207 | CLA  | C1B-NB  | 2.09  | 1.37        | 1.35     |
| 16  | A     | 825 | CLA  | C1A-CHA | 2.09  | 1.51        | 1.43     |
| 16  | B     | 829 | CLA  | C1B-NB  | 2.09  | 1.37        | 1.35     |
| 16  | B     | 838 | CLA  | C1A-CHA | 2.09  | 1.51        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 834 | CLA  | C1A-CHA | 2.09  | 1.51        | 1.43     |
| 16  | A     | 832 | CLA  | C1B-NB  | 2.08  | 1.37        | 1.35     |
| 16  | B     | 826 | CLA  | C1A-CHA | 2.08  | 1.51        | 1.43     |
| 21  | 2     | 617 | BCR  | C1-C6   | -2.08 | 1.50        | 1.53     |
| 16  | B     | 833 | CLA  | C1B-NB  | 2.08  | 1.37        | 1.35     |
| 16  | B     | 816 | CLA  | C3D-C4D | -2.08 | 1.39        | 1.44     |
| 16  | B     | 809 | CLA  | C1B-NB  | 2.08  | 1.37        | 1.35     |
| 16  | B     | 825 | CLA  | C1C-C2C | 2.08  | 1.48        | 1.44     |
| 16  | 2     | 604 | CLA  | C1A-CHA | 2.08  | 1.51        | 1.43     |
| 16  | A     | 854 | CLA  | C1B-NB  | 2.08  | 1.37        | 1.35     |
| 16  | 3     | 214 | CLA  | C1C-C2C | 2.08  | 1.48        | 1.44     |
| 16  | A     | 837 | CLA  | C1A-CHA | 2.08  | 1.51        | 1.43     |
| 16  | B     | 801 | CLA  | C1A-CHA | 2.08  | 1.51        | 1.43     |
| 16  | B     | 836 | CLA  | CHD-C1D | 2.08  | 1.42        | 1.38     |
| 17  | 3     | 201 | C7Z  | C40-C33 | 2.07  | 1.55        | 1.50     |
| 17  | 1     | 616 | C7Z  | C40-C33 | 2.07  | 1.55        | 1.50     |
| 16  | F     | 205 | CLA  | C1A-CHA | 2.07  | 1.51        | 1.43     |
| 16  | A     | 813 | CLA  | C1A-CHA | 2.07  | 1.51        | 1.43     |
| 25  | L     | 208 | PTY  | O4-C1   | -2.07 | 1.40        | 1.45     |
| 16  | 1     | 610 | CLA  | C1A-CHA | 2.07  | 1.51        | 1.43     |
| 16  | A     | 804 | CLA  | C1A-CHA | 2.07  | 1.51        | 1.43     |
| 17  | 2     | 615 | C7Z  | C40-C33 | 2.07  | 1.55        | 1.50     |
| 29  | B     | 854 | 3PH  | O31-C3  | -2.07 | 1.40        | 1.45     |
| 16  | B     | 831 | CLA  | C1C-C2C | 2.06  | 1.48        | 1.44     |
| 16  | A     | 826 | CLA  | C3D-C4D | -2.06 | 1.39        | 1.44     |
| 16  | B     | 806 | CLA  | C3B-C2B | -2.06 | 1.37        | 1.40     |
| 16  | B     | 821 | CLA  | C1A-CHA | 2.06  | 1.51        | 1.43     |
| 16  | 3     | 205 | CLA  | C3B-C2B | -2.06 | 1.37        | 1.40     |
| 16  | 3     | 210 | CLA  | C1C-C2C | 2.06  | 1.48        | 1.44     |
| 16  | A     | 825 | CLA  | C1B-NB  | 2.06  | 1.37        | 1.35     |
| 16  | A     | 818 | CLA  | CHD-C1D | 2.06  | 1.42        | 1.38     |
| 16  | 1     | 601 | CLA  | C1A-CHA | 2.06  | 1.51        | 1.43     |
| 16  | 1     | 611 | CLA  | C1A-CHA | 2.06  | 1.51        | 1.43     |
| 22  | B     | 848 | PGT  | C32-C31 | 2.06  | 1.56        | 1.50     |
| 16  | B     | 808 | CLA  | C1A-CHA | 2.05  | 1.51        | 1.43     |
| 16  | A     | 821 | CLA  | C1A-CHA | 2.05  | 1.51        | 1.43     |
| 16  | B     | 806 | CLA  | C1A-CHA | 2.05  | 1.51        | 1.43     |
| 16  | B     | 836 | CLA  | C3D-C4D | -2.05 | 1.39        | 1.44     |
| 16  | A     | 811 | CLA  | C1C-C2C | 2.05  | 1.48        | 1.44     |
| 16  | B     | 814 | CLA  | C1B-NB  | 2.05  | 1.37        | 1.35     |
| 16  | B     | 807 | CLA  | C1C-C2C | 2.05  | 1.48        | 1.44     |
| 16  | L     | 203 | CLA  | C1A-CHA | 2.05  | 1.51        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | O     | 201 | CLA  | C3B-C2B | -2.05 | 1.37        | 1.40     |
| 16  | K     | 102 | CLA  | C1C-C2C | 2.05  | 1.48        | 1.44     |
| 16  | B     | 813 | CLA  | C3B-C2B | -2.05 | 1.37        | 1.40     |
| 16  | B     | 828 | CLA  | CHD-C1D | 2.05  | 1.42        | 1.38     |
| 16  | B     | 834 | CLA  | C1A-CHA | 2.05  | 1.51        | 1.43     |
| 25  | A     | 852 | PTY  | O4-C1   | -2.05 | 1.40        | 1.45     |
| 16  | 3     | 204 | CLA  | C3D-C4D | -2.05 | 1.39        | 1.44     |
| 16  | B     | 805 | CLA  | C1A-CHA | 2.05  | 1.51        | 1.43     |
| 16  | A     | 828 | CLA  | C3D-C4D | -2.05 | 1.39        | 1.44     |
| 16  | A     | 818 | CLA  | C3D-C4D | -2.05 | 1.39        | 1.44     |
| 16  | A     | 810 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | 2     | 609 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | B     | 804 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | B     | 833 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | L     | 205 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | 2     | 603 | CLA  | C1C-C2C | 2.04  | 1.48        | 1.44     |
| 16  | B     | 809 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | B     | 823 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | F     | 202 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | A     | 811 | CLA  | CHD-C1D | 2.04  | 1.42        | 1.38     |
| 16  | B     | 820 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | B     | 819 | CLA  | C1C-C2C | 2.04  | 1.48        | 1.44     |
| 16  | B     | 835 | CLA  | C3D-C4D | -2.04 | 1.39        | 1.44     |
| 16  | A     | 814 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | B     | 834 | CLA  | C3B-C2B | -2.04 | 1.37        | 1.40     |
| 16  | A     | 826 | CLA  | C1A-CHA | 2.04  | 1.51        | 1.43     |
| 16  | B     | 830 | CLA  | C1B-NB  | 2.04  | 1.37        | 1.35     |
| 16  | O     | 203 | CLA  | C3D-C4D | -2.04 | 1.39        | 1.44     |
| 25  | 3     | 221 | PTY  | O4-C1   | -2.04 | 1.40        | 1.45     |
| 16  | A     | 820 | CLA  | C1C-C2C | 2.04  | 1.48        | 1.44     |
| 21  | L     | 206 | BCR  | C12-C13 | -2.04 | 1.41        | 1.45     |
| 16  | 3     | 206 | CLA  | C1A-CHA | 2.03  | 1.51        | 1.43     |
| 16  | B     | 829 | CLA  | C1C-C2C | 2.03  | 1.48        | 1.44     |
| 16  | B     | 827 | CLA  | C1C-C2C | 2.03  | 1.48        | 1.44     |
| 16  | B     | 814 | CLA  | C1A-CHA | 2.03  | 1.51        | 1.43     |
| 16  | 3     | 214 | CLA  | C1A-CHA | 2.03  | 1.51        | 1.43     |
| 16  | B     | 809 | CLA  | C1C-C2C | 2.03  | 1.48        | 1.44     |
| 16  | 2     | 602 | CLA  | C3D-C4D | -2.03 | 1.39        | 1.44     |
| 16  | A     | 803 | CLA  | C1B-NB  | 2.02  | 1.37        | 1.35     |
| 16  | A     | 808 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 18  | K     | 103 | RRX  | C17-C18 | 2.02  | 1.38        | 1.35     |
| 16  | F     | 201 | CLA  | C1A-CHA | 2.02  | 1.51        | 1.43     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | B     | 829 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 16  | 1     | 601 | CLA  | C1B-NB  | 2.02  | 1.37        | 1.35     |
| 16  | B     | 811 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 16  | B     | 802 | CLA  | C1A-CHA | 2.02  | 1.51        | 1.43     |
| 16  | A     | 809 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 16  | A     | 833 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 16  | A     | 819 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 16  | A     | 804 | CLA  | CHD-C1D | 2.02  | 1.42        | 1.38     |
| 16  | 2     | 608 | CLA  | C3D-C4D | -2.02 | 1.39        | 1.44     |
| 16  | A     | 836 | CLA  | C1A-CHA | 2.02  | 1.51        | 1.43     |
| 16  | B     | 826 | CLA  | C1C-C2C | 2.02  | 1.48        | 1.44     |
| 22  | 2     | 619 | PGT  | C4-C5   | 2.02  | 1.58        | 1.51     |
| 16  | A     | 824 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | A     | 805 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | 2     | 603 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | A     | 832 | CLA  | CHD-C1D | 2.01  | 1.42        | 1.38     |
| 26  | A     | 801 | CL0  | C1C-C2C | 2.01  | 1.48        | 1.44     |
| 16  | A     | 816 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | B     | 814 | CLA  | C1C-C2C | 2.01  | 1.48        | 1.44     |
| 16  | O     | 204 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 20  | 2     | 618 | ERG  | C4-C5   | 2.01  | 1.56        | 1.51     |
| 16  | 1     | 606 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | A     | 829 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | B     | 830 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | B     | 816 | CLA  | C1C-C2C | 2.01  | 1.48        | 1.44     |
| 16  | 2     | 610 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | B     | 808 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | B     | 837 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | A     | 804 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | 2     | 603 | CLA  | CHD-C1D | 2.01  | 1.42        | 1.38     |
| 16  | A     | 827 | CLA  | C1B-NB  | 2.01  | 1.37        | 1.35     |
| 16  | A     | 824 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | A     | 831 | CLA  | C1A-CHA | 2.01  | 1.51        | 1.43     |
| 16  | A     | 820 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | K     | 101 | CLA  | C3D-C4D | -2.01 | 1.39        | 1.44     |
| 16  | B     | 838 | CLA  | C3B-C2B | -2.00 | 1.37        | 1.40     |
| 16  | A     | 820 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |
| 16  | A     | 832 | CLA  | C3D-C4D | -2.00 | 1.39        | 1.44     |
| 16  | 1     | 607 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |
| 16  | K     | 101 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |
| 16  | A     | 832 | CLA  | C1C-C2C | 2.00  | 1.48        | 1.44     |
| 16  | B     | 818 | CLA  | CHD-C1D | 2.00  | 1.42        | 1.38     |

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| Mol | Chain | Res | Type | Atoms   | Z     | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16  | A     | 855 | CLA  | C3D-C4D | -2.00 | 1.39        | 1.44     |
| 16  | B     | 832 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |
| 16  | L     | 204 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |
| 16  | L     | 205 | CLA  | CHD-C1D | 2.00  | 1.42        | 1.38     |
| 16  | B     | 808 | CLA  | C1C-C2C | 2.00  | 1.48        | 1.44     |
| 16  | A     | 811 | CLA  | C3B-C2B | -2.00 | 1.37        | 1.40     |
| 16  | B     | 802 | CLA  | C3D-C4D | -2.00 | 1.39        | 1.44     |
| 16  | 3     | 209 | CLA  | C3D-C4D | -2.00 | 1.39        | 1.44     |
| 16  | B     | 827 | CLA  | C3D-C4D | -2.00 | 1.39        | 1.44     |
| 16  | L     | 201 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |
| 16  | B     | 827 | CLA  | CHD-C1D | 2.00  | 1.42        | 1.38     |
| 16  | 1     | 603 | CLA  | C3D-C4D | -2.00 | 1.39        | 1.44     |
| 16  | B     | 814 | CLA  | CHD-C1D | 2.00  | 1.42        | 1.38     |
| 16  | 2     | 603 | CLA  | C1A-CHA | 2.00  | 1.51        | 1.43     |

All (3037) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 21  | K     | 104 | BCR  | C10-C11-C12 | 18.18  | 179.96      | 123.22   |
| 20  | 1     | 618 | ERG  | C18-C13-C12 | -18.17 | 81.89       | 110.59   |
| 21  | B     | 842 | BCR  | C10-C11-C12 | 17.98  | 179.32      | 123.22   |
| 21  | O     | 205 | BCR  | C10-C11-C12 | 17.86  | 178.94      | 123.22   |
| 21  | L     | 202 | BCR  | C10-C11-C12 | 17.78  | 178.71      | 123.22   |
| 21  | B     | 843 | BCR  | C10-C11-C12 | 17.76  | 178.64      | 123.22   |
| 21  | B     | 844 | BCR  | C10-C11-C12 | 17.75  | 178.62      | 123.22   |
| 21  | B     | 845 | BCR  | C10-C11-C12 | 17.74  | 178.57      | 123.22   |
| 21  | B     | 855 | BCR  | C10-C11-C12 | 17.64  | 178.26      | 123.22   |
| 21  | A     | 850 | BCR  | C10-C11-C12 | 17.60  | 178.14      | 123.22   |
| 21  | I     | 103 | BCR  | C10-C11-C12 | 17.54  | 177.96      | 123.22   |
| 21  | B     | 841 | BCR  | C10-C11-C12 | 17.43  | 177.60      | 123.22   |
| 21  | 2     | 617 | BCR  | C10-C11-C12 | 17.41  | 177.55      | 123.22   |
| 21  | A     | 846 | BCR  | C10-C11-C12 | 17.31  | 177.23      | 123.22   |
| 21  | A     | 844 | BCR  | C10-C11-C12 | 17.14  | 176.70      | 123.22   |
| 21  | B     | 840 | BCR  | C10-C11-C12 | 17.11  | 176.61      | 123.22   |
| 21  | L     | 207 | BCR  | C10-C11-C12 | 16.96  | 176.13      | 123.22   |
| 21  | L     | 206 | BCR  | C10-C11-C12 | 16.70  | 175.32      | 123.22   |
| 21  | B     | 843 | BCR  | C16-C15-C14 | 16.69  | 157.66      | 123.47   |
| 21  | A     | 857 | BCR  | C10-C11-C12 | 16.42  | 174.45      | 123.22   |
| 21  | F     | 203 | BCR  | C10-C11-C12 | 16.25  | 173.94      | 123.22   |
| 21  | A     | 845 | BCR  | C10-C11-C12 | 16.14  | 173.59      | 123.22   |
| 21  | F     | 206 | BCR  | C10-C11-C12 | 15.88  | 172.76      | 123.22   |
| 21  | B     | 847 | BCR  | C10-C11-C12 | 15.78  | 172.45      | 123.22   |

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| Mol | Chain | Res | Type | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 21  | A     | 845 | BCR  | C32-C1-C6   | -15.21 | 85.63       | 110.30   |
| 21  | F     | 203 | BCR  | C11-C10-C9  | 14.98  | 148.69      | 127.31   |
| 21  | A     | 845 | BCR  | C31-C1-C6   | -14.92 | 86.10       | 110.30   |
| 21  | I     | 103 | BCR  | C32-C1-C6   | -14.83 | 86.24       | 110.30   |
| 21  | F     | 203 | BCR  | C21-C20-C19 | 14.80  | 169.40      | 123.22   |
| 21  | I     | 103 | BCR  | C31-C1-C6   | -14.57 | 86.67       | 110.30   |
| 21  | F     | 206 | BCR  | C21-C20-C19 | 14.53  | 168.57      | 123.22   |
| 21  | B     | 855 | BCR  | C16-C15-C14 | 14.53  | 153.24      | 123.47   |
| 21  | B     | 847 | BCR  | C16-C15-C14 | 14.31  | 152.78      | 123.47   |
| 21  | B     | 840 | BCR  | C11-C10-C9  | 14.24  | 147.64      | 127.31   |
| 20  | 1     | 618 | ERG  | C18-C13-C17 | -14.08 | 85.46       | 111.71   |
| 21  | O     | 205 | BCR  | C21-C20-C19 | 14.05  | 167.06      | 123.22   |
| 21  | L     | 207 | BCR  | C16-C15-C14 | 13.93  | 152.01      | 123.47   |
| 21  | A     | 850 | BCR  | C16-C15-C14 | 13.90  | 151.95      | 123.47   |
| 21  | A     | 845 | BCR  | C11-C10-C9  | 13.88  | 147.11      | 127.31   |
| 21  | L     | 202 | BCR  | C21-C20-C19 | 13.74  | 166.09      | 123.22   |
| 20  | 2     | 618 | ERG  | C15-C14-C8  | -13.71 | 99.66       | 120.44   |
| 21  | B     | 845 | BCR  | C21-C20-C19 | 13.69  | 165.94      | 123.22   |
| 21  | B     | 840 | BCR  | C21-C20-C19 | 13.68  | 165.90      | 123.22   |
| 21  | B     | 842 | BCR  | C16-C15-C14 | 13.59  | 151.30      | 123.47   |
| 21  | O     | 205 | BCR  | C16-C15-C14 | 13.52  | 151.18      | 123.47   |
| 21  | L     | 206 | BCR  | C11-C10-C9  | 13.47  | 146.54      | 127.31   |
| 21  | A     | 846 | BCR  | C21-C20-C19 | 13.39  | 164.99      | 123.22   |
| 21  | I     | 103 | BCR  | C21-C20-C19 | 13.26  | 164.58      | 123.22   |
| 21  | B     | 844 | BCR  | C16-C15-C14 | 13.00  | 150.11      | 123.47   |
| 21  | A     | 857 | BCR  | C21-C20-C19 | 12.83  | 163.26      | 123.22   |
| 21  | B     | 847 | BCR  | C11-C10-C9  | 12.79  | 145.56      | 127.31   |
| 21  | A     | 850 | BCR  | C21-C20-C19 | 12.62  | 162.59      | 123.22   |
| 21  | B     | 844 | BCR  | C21-C20-C19 | 12.56  | 162.41      | 123.22   |
| 21  | A     | 845 | BCR  | C21-C20-C19 | 12.45  | 162.07      | 123.22   |
| 21  | 2     | 617 | BCR  | C16-C15-C14 | 12.37  | 148.82      | 123.47   |
| 21  | B     | 840 | BCR  | C16-C15-C14 | 12.32  | 148.70      | 123.47   |
| 21  | A     | 844 | BCR  | C16-C15-C14 | 12.27  | 148.62      | 123.47   |
| 21  | L     | 207 | BCR  | C21-C20-C19 | 12.23  | 161.38      | 123.22   |
| 21  | B     | 843 | BCR  | C21-C20-C19 | 12.22  | 161.34      | 123.22   |
| 21  | L     | 207 | BCR  | C20-C19-C18 | 12.20  | 160.70      | 126.42   |
| 21  | A     | 850 | BCR  | C20-C19-C18 | 12.18  | 160.64      | 126.42   |
| 21  | A     | 846 | BCR  | C16-C15-C14 | 12.18  | 148.43      | 123.47   |
| 21  | L     | 206 | BCR  | C21-C20-C19 | 12.13  | 161.08      | 123.22   |
| 21  | A     | 845 | BCR  | C16-C15-C14 | 12.06  | 148.17      | 123.47   |
| 21  | L     | 202 | BCR  | C11-C12-C13 | 11.98  | 160.06      | 126.42   |
| 21  | B     | 855 | BCR  | C11-C10-C9  | 11.97  | 144.39      | 127.31   |

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| Mol | Chain | Res | Type | Atoms       | Z      | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 21  | I     | 103 | BCR  | C16-C15-C14 | 11.93  | 147.91      | 123.47   |
| 17  | 3     | 216 | C7Z  | C35-C34-C33 | -11.87 | 110.37      | 127.31   |
| 21  | A     | 844 | BCR  | C20-C19-C18 | 11.80  | 159.58      | 126.42   |
| 21  | B     | 841 | BCR  | C16-C15-C14 | 11.66  | 147.37      | 123.47   |
| 16  | 3     | 205 | CLA  | C4A-NA-C1A  | 11.64  | 111.94      | 106.71   |
| 21  | A     | 857 | BCR  | C20-C19-C18 | 11.64  | 159.12      | 126.42   |
| 20  | 1     | 618 | ERG  | C12-C13-C17 | 11.62  | 133.97      | 116.57   |
| 21  | L     | 206 | BCR  | C16-C15-C14 | 11.48  | 147.00      | 123.47   |
| 21  | B     | 841 | BCR  | C20-C19-C18 | 11.44  | 158.56      | 126.42   |
| 21  | B     | 847 | BCR  | C8-C7-C6    | 11.43  | 159.30      | 127.20   |
| 21  | A     | 844 | BCR  | C21-C20-C19 | 11.36  | 158.68      | 123.22   |
| 21  | L     | 206 | BCR  | C20-C19-C18 | 11.33  | 158.26      | 126.42   |
| 21  | 2     | 617 | BCR  | C11-C10-C9  | 11.25  | 143.36      | 127.31   |
| 21  | L     | 202 | BCR  | C16-C15-C14 | 11.21  | 146.44      | 123.47   |
| 21  | B     | 841 | BCR  | C21-C20-C19 | 11.11  | 157.88      | 123.22   |
| 21  | B     | 844 | BCR  | C20-C19-C18 | 11.11  | 157.62      | 126.42   |
| 21  | A     | 857 | BCR  | C16-C15-C14 | 11.07  | 146.15      | 123.47   |
| 21  | I     | 103 | BCR  | C11-C12-C13 | 11.03  | 157.41      | 126.42   |
| 21  | A     | 857 | BCR  | C11-C10-C9  | 11.03  | 143.05      | 127.31   |
| 20  | 2     | 621 | ERG  | C15-C14-C8  | -11.00 | 103.78      | 120.44   |
| 21  | A     | 845 | BCR  | C20-C19-C18 | 10.92  | 157.10      | 126.42   |
| 16  | 3     | 210 | CLA  | C4A-NA-C1A  | 10.84  | 111.58      | 106.71   |
| 21  | L     | 206 | BCR  | C11-C12-C13 | 10.82  | 156.82      | 126.42   |
| 21  | B     | 843 | BCR  | C20-C19-C18 | 10.80  | 156.77      | 126.42   |
| 21  | F     | 203 | BCR  | C11-C12-C13 | 10.75  | 156.61      | 126.42   |
| 21  | 2     | 617 | BCR  | C11-C12-C13 | 10.72  | 156.52      | 126.42   |
| 16  | 1     | 606 | CLA  | C4A-NA-C1A  | 10.70  | 111.52      | 106.71   |
| 21  | F     | 206 | BCR  | C16-C15-C14 | 10.70  | 145.40      | 123.47   |
| 16  | A     | 818 | CLA  | C4A-NA-C1A  | 10.66  | 111.50      | 106.71   |
| 21  | B     | 845 | BCR  | C16-C15-C14 | 10.47  | 144.93      | 123.47   |
| 16  | B     | 804 | CLA  | C4A-NA-C1A  | 10.46  | 111.41      | 106.71   |
| 21  | F     | 203 | BCR  | C16-C15-C14 | 10.46  | 144.89      | 123.47   |
| 21  | B     | 845 | BCR  | C20-C19-C18 | 10.44  | 155.75      | 126.42   |
| 21  | B     | 840 | BCR  | C20-C19-C18 | 10.37  | 155.56      | 126.42   |
| 21  | B     | 847 | BCR  | C11-C12-C13 | 10.35  | 155.49      | 126.42   |
| 21  | L     | 207 | BCR  | C11-C10-C9  | 10.34  | 142.07      | 127.31   |
| 21  | A     | 850 | BCR  | C11-C12-C13 | 10.32  | 155.40      | 126.42   |
| 16  | B     | 809 | CLA  | C4A-NA-C1A  | 10.30  | 111.33      | 106.71   |
| 21  | A     | 846 | BCR  | C20-C19-C18 | 10.29  | 155.32      | 126.42   |
| 16  | B     | 821 | CLA  | C4A-NA-C1A  | 10.23  | 111.31      | 106.71   |
| 21  | L     | 202 | BCR  | C20-C19-C18 | 10.21  | 155.10      | 126.42   |
| 21  | A     | 846 | BCR  | C11-C12-C13 | 10.18  | 155.00      | 126.42   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | J     | 102 | CLA  | C4A-NA-C1A  | 10.15 | 111.27      | 106.71   |
| 21  | O     | 205 | BCR  | C20-C19-C18 | 10.13 | 154.89      | 126.42   |
| 21  | B     | 842 | BCR  | C11-C10-C9  | 10.10 | 141.73      | 127.31   |
| 21  | B     | 844 | BCR  | C11-C10-C9  | 10.05 | 141.66      | 127.31   |
| 16  | 2     | 606 | CLA  | C4A-NA-C1A  | 10.04 | 111.22      | 106.71   |
| 16  | F     | 202 | CLA  | C4A-NA-C1A  | 10.04 | 111.22      | 106.71   |
| 16  | 1     | 610 | CLA  | C4A-NA-C1A  | 10.02 | 111.21      | 106.71   |
| 21  | B     | 844 | BCR  | C11-C12-C13 | 10.02 | 154.56      | 126.42   |
| 21  | A     | 850 | BCR  | C11-C10-C9  | 9.98  | 141.56      | 127.31   |
| 16  | B     | 825 | CLA  | C4A-NA-C1A  | 9.95  | 111.18      | 106.71   |
| 16  | A     | 812 | CLA  | C4A-NA-C1A  | 9.94  | 111.18      | 106.71   |
| 16  | 3     | 203 | CLA  | C4A-NA-C1A  | 9.94  | 111.17      | 106.71   |
| 21  | L     | 207 | BCR  | C11-C12-C13 | 9.89  | 154.19      | 126.42   |
| 21  | B     | 842 | BCR  | C21-C20-C19 | 9.88  | 154.04      | 123.22   |
| 21  | B     | 841 | BCR  | C11-C10-C9  | 9.87  | 141.39      | 127.31   |
| 16  | A     | 815 | CLA  | C4A-NA-C1A  | 9.86  | 111.14      | 106.71   |
| 21  | B     | 845 | BCR  | C11-C10-C9  | 9.85  | 141.36      | 127.31   |
| 16  | 2     | 604 | CLA  | C4A-NA-C1A  | 9.84  | 111.13      | 106.71   |
| 16  | 2     | 611 | CLA  | C4A-NA-C1A  | 9.83  | 111.13      | 106.71   |
| 16  | 2     | 610 | CLA  | C4A-NA-C1A  | 9.82  | 111.12      | 106.71   |
| 16  | B     | 837 | CLA  | C4A-NA-C1A  | 9.82  | 111.12      | 106.71   |
| 16  | A     | 803 | CLA  | C4A-NA-C1A  | 9.81  | 111.12      | 106.71   |
| 21  | B     | 842 | BCR  | C20-C19-C18 | 9.81  | 153.96      | 126.42   |
| 16  | O     | 201 | CLA  | C4A-NA-C1A  | 9.80  | 111.11      | 106.71   |
| 16  | 2     | 613 | CLA  | C4A-NA-C1A  | 9.79  | 111.11      | 106.71   |
| 21  | A     | 845 | BCR  | C11-C12-C13 | 9.77  | 153.86      | 126.42   |
| 16  | A     | 835 | CLA  | C4A-NA-C1A  | 9.69  | 111.06      | 106.71   |
| 21  | B     | 855 | BCR  | C21-C20-C19 | 9.68  | 153.44      | 123.22   |
| 16  | A     | 802 | CLA  | C4A-NA-C1A  | 9.68  | 111.06      | 106.71   |
| 21  | F     | 206 | BCR  | C20-C19-C18 | 9.67  | 153.59      | 126.42   |
| 21  | B     | 841 | BCR  | C11-C12-C13 | 9.65  | 153.54      | 126.42   |
| 16  | L     | 205 | CLA  | C4A-NA-C1A  | 9.65  | 111.04      | 106.71   |
| 16  | B     | 831 | CLA  | C4A-NA-C1A  | 9.64  | 111.04      | 106.71   |
| 16  | A     | 826 | CLA  | C4A-NA-C1A  | 9.62  | 111.03      | 106.71   |
| 16  | 3     | 211 | CLA  | C4A-NA-C1A  | 9.62  | 111.03      | 106.71   |
| 16  | A     | 820 | CLA  | C4A-NA-C1A  | 9.62  | 111.03      | 106.71   |
| 16  | B     | 802 | CLA  | C4A-NA-C1A  | 9.60  | 111.02      | 106.71   |
| 16  | F     | 205 | CLA  | C4A-NA-C1A  | 9.60  | 111.02      | 106.71   |
| 16  | A     | 805 | CLA  | C4A-NA-C1A  | 9.59  | 111.02      | 106.71   |
| 17  | 3     | 216 | C7Z  | C11-C10-C9  | -9.54 | 113.69      | 127.31   |
| 16  | B     | 808 | CLA  | C4A-NA-C1A  | 9.54  | 111.00      | 106.71   |
| 16  | 3     | 213 | CLA  | C4A-NA-C1A  | 9.54  | 110.99      | 106.71   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 605 | CLA  | C4A-NA-C1A  | 9.51  | 110.98      | 106.71   |
| 17  | 3     | 216 | C7Z  | C31-C30-C29 | -9.50 | 113.75      | 127.31   |
| 16  | 3     | 212 | CLA  | C4A-NA-C1A  | 9.50  | 110.98      | 106.71   |
| 16  | A     | 810 | CLA  | C4A-NA-C1A  | 9.48  | 110.97      | 106.71   |
| 16  | B     | 820 | CLA  | C4A-NA-C1A  | 9.47  | 110.96      | 106.71   |
| 21  | B     | 847 | BCR  | C20-C19-C18 | 9.44  | 152.93      | 126.42   |
| 16  | A     | 819 | CLA  | C4A-NA-C1A  | 9.42  | 110.94      | 106.71   |
| 16  | A     | 814 | CLA  | C4A-NA-C1A  | 9.41  | 110.94      | 106.71   |
| 16  | B     | 812 | CLA  | C4A-NA-C1A  | 9.41  | 110.94      | 106.71   |
| 16  | A     | 811 | CLA  | C4A-NA-C1A  | 9.37  | 110.92      | 106.71   |
| 16  | A     | 821 | CLA  | C4A-NA-C1A  | 9.36  | 110.92      | 106.71   |
| 16  | B     | 818 | CLA  | C4A-NA-C1A  | 9.35  | 110.91      | 106.71   |
| 21  | O     | 205 | BCR  | C11-C12-C13 | 9.34  | 152.65      | 126.42   |
| 21  | B     | 843 | BCR  | C11-C12-C13 | 9.34  | 152.64      | 126.42   |
| 16  | A     | 839 | CLA  | C4A-NA-C1A  | 9.33  | 110.90      | 106.71   |
| 21  | B     | 855 | BCR  | C20-C19-C18 | 9.30  | 152.55      | 126.42   |
| 16  | B     | 807 | CLA  | C4A-NA-C1A  | 9.30  | 110.89      | 106.71   |
| 20  | 2     | 618 | ERG  | C14-C13-C17 | 9.29  | 109.63      | 99.72    |
| 16  | 3     | 209 | CLA  | C4A-NA-C1A  | 9.29  | 110.88      | 106.71   |
| 16  | 2     | 609 | CLA  | C4A-NA-C1A  | 9.28  | 110.88      | 106.71   |
| 16  | 3     | 206 | CLA  | C4A-NA-C1A  | 9.26  | 110.87      | 106.71   |
| 16  | B     | 817 | CLA  | C4A-NA-C1A  | 9.24  | 110.86      | 106.71   |
| 16  | 1     | 602 | CLA  | C4A-NA-C1A  | 9.24  | 110.86      | 106.71   |
| 16  | 2     | 607 | CLA  | C4A-NA-C1A  | 9.24  | 110.86      | 106.71   |
| 16  | B     | 833 | CLA  | C4A-NA-C1A  | 9.23  | 110.86      | 106.71   |
| 16  | B     | 834 | CLA  | C4A-NA-C1A  | 9.21  | 110.84      | 106.71   |
| 16  | 1     | 611 | CLA  | C4A-NA-C1A  | 9.20  | 110.84      | 106.71   |
| 16  | I     | 101 | CLA  | C4A-NA-C1A  | 9.19  | 110.84      | 106.71   |
| 16  | A     | 854 | CLA  | C4A-NA-C1A  | 9.18  | 110.83      | 106.71   |
| 16  | B     | 826 | CLA  | C4A-NA-C1A  | 9.18  | 110.83      | 106.71   |
| 16  | A     | 856 | CLA  | C4A-NA-C1A  | 9.17  | 110.83      | 106.71   |
| 16  | A     | 829 | CLA  | C4A-NA-C1A  | 9.17  | 110.83      | 106.71   |
| 16  | B     | 805 | CLA  | C4A-NA-C1A  | 9.17  | 110.83      | 106.71   |
| 16  | F     | 204 | CLA  | C4A-NA-C1A  | 9.16  | 110.82      | 106.71   |
| 16  | 3     | 214 | CLA  | C4A-NA-C1A  | 9.15  | 110.82      | 106.71   |
| 21  | B     | 840 | BCR  | C11-C12-C13 | 9.13  | 152.07      | 126.42   |
| 16  | K     | 101 | CLA  | C4A-NA-C1A  | 9.12  | 110.81      | 106.71   |
| 16  | A     | 827 | CLA  | C4A-NA-C1A  | 9.11  | 110.80      | 106.71   |
| 21  | F     | 203 | BCR  | C20-C19-C18 | 9.10  | 151.99      | 126.42   |
| 16  | A     | 822 | CLA  | C4A-NA-C1A  | 9.09  | 110.79      | 106.71   |
| 16  | B     | 801 | CLA  | C4A-NA-C1A  | 9.08  | 110.79      | 106.71   |
| 21  | I     | 103 | BCR  | C11-C10-C9  | 9.08  | 140.26      | 127.31   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 814 | CLA  | C4A-NA-C1A  | 9.08  | 110.79      | 106.71   |
| 16  | 1     | 604 | CLA  | C4A-NA-C1A  | 9.05  | 110.78      | 106.71   |
| 16  | B     | 824 | CLA  | C4A-NA-C1A  | 9.05  | 110.77      | 106.71   |
| 16  | O     | 204 | CLA  | C4A-NA-C1A  | 9.04  | 110.77      | 106.71   |
| 16  | A     | 823 | CLA  | C4A-NA-C1A  | 9.04  | 110.77      | 106.71   |
| 16  | 2     | 601 | CLA  | C4A-NA-C1A  | 9.02  | 110.76      | 106.71   |
| 16  | A     | 825 | CLA  | C4A-NA-C1A  | 9.02  | 110.76      | 106.71   |
| 16  | 1     | 601 | CLA  | C4A-NA-C1A  | 9.01  | 110.76      | 106.71   |
| 21  | 2     | 617 | BCR  | C23-C22-C21 | 9.01  | 132.77      | 118.94   |
| 16  | O     | 202 | CLA  | C4A-NA-C1A  | 8.99  | 110.75      | 106.71   |
| 16  | A     | 824 | CLA  | C4A-NA-C1A  | 8.96  | 110.73      | 106.71   |
| 16  | 3     | 204 | CLA  | C4A-NA-C1A  | 8.94  | 110.73      | 106.71   |
| 16  | A     | 838 | CLA  | C4A-NA-C1A  | 8.94  | 110.73      | 106.71   |
| 16  | B     | 819 | CLA  | C4A-NA-C1A  | 8.94  | 110.72      | 106.71   |
| 16  | B     | 828 | CLA  | C4A-NA-C1A  | 8.94  | 110.72      | 106.71   |
| 16  | A     | 830 | CLA  | C4A-NA-C1A  | 8.93  | 110.72      | 106.71   |
| 21  | K     | 104 | BCR  | C20-C19-C18 | 8.92  | 151.49      | 126.42   |
| 16  | O     | 203 | CLA  | C4A-NA-C1A  | 8.92  | 110.72      | 106.71   |
| 16  | A     | 836 | CLA  | C4A-NA-C1A  | 8.92  | 110.72      | 106.71   |
| 16  | K     | 102 | CLA  | C4A-NA-C1A  | 8.90  | 110.71      | 106.71   |
| 16  | B     | 836 | CLA  | C4A-NA-C1A  | 8.89  | 110.70      | 106.71   |
| 16  | 2     | 612 | CLA  | C4A-NA-C1A  | 8.89  | 110.70      | 106.71   |
| 21  | I     | 103 | BCR  | C2-C1-C6    | -8.89 | 96.80       | 110.48   |
| 16  | B     | 823 | CLA  | C4A-NA-C1A  | 8.88  | 110.70      | 106.71   |
| 16  | A     | 813 | CLA  | C4A-NA-C1A  | 8.87  | 110.69      | 106.71   |
| 16  | L     | 203 | CLA  | C4A-NA-C1A  | 8.87  | 110.69      | 106.71   |
| 16  | A     | 807 | CLA  | C4A-NA-C1A  | 8.86  | 110.69      | 106.71   |
| 21  | O     | 205 | BCR  | C11-C10-C9  | 8.86  | 139.95      | 127.31   |
| 16  | 3     | 208 | CLA  | C4A-NA-C1A  | 8.84  | 110.68      | 106.71   |
| 16  | A     | 809 | CLA  | C4A-NA-C1A  | 8.83  | 110.67      | 106.71   |
| 16  | B     | 810 | CLA  | C4A-NA-C1A  | 8.82  | 110.67      | 106.71   |
| 16  | B     | 806 | CLA  | C4A-NA-C1A  | 8.81  | 110.67      | 106.71   |
| 16  | L     | 204 | CLA  | C4A-NA-C1A  | 8.81  | 110.67      | 106.71   |
| 16  | 1     | 607 | CLA  | C4A-NA-C1A  | 8.80  | 110.66      | 106.71   |
| 16  | A     | 816 | CLA  | C4A-NA-C1A  | 8.77  | 110.65      | 106.71   |
| 16  | B     | 835 | CLA  | C4A-NA-C1A  | 8.77  | 110.65      | 106.71   |
| 16  | B     | 811 | CLA  | C4A-NA-C1A  | 8.76  | 110.64      | 106.71   |
| 16  | B     | 815 | CLA  | C4A-NA-C1A  | 8.76  | 110.64      | 106.71   |
| 16  | A     | 831 | CLA  | C4A-NA-C1A  | 8.76  | 110.64      | 106.71   |
| 21  | K     | 104 | BCR  | C12-C13-C14 | 8.74  | 132.35      | 118.94   |
| 16  | B     | 813 | CLA  | C4A-NA-C1A  | 8.72  | 110.63      | 106.71   |
| 21  | B     | 843 | BCR  | C11-C10-C9  | 8.72  | 139.75      | 127.31   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 20  | 1     | 618 | ERG  | C14-C13-C17 | 8.71  | 109.01      | 99.72    |
| 21  | B     | 847 | BCR  | C21-C20-C19 | 8.71  | 150.40      | 123.22   |
| 16  | 3     | 207 | CLA  | C4A-NA-C1A  | 8.71  | 110.62      | 106.71   |
| 17  | 1     | 616 | C7Z  | C15-C14-C13 | -8.70 | 114.89      | 127.31   |
| 16  | A     | 806 | CLA  | C4A-NA-C1A  | 8.70  | 110.62      | 106.71   |
| 16  | A     | 832 | CLA  | C4A-NA-C1A  | 8.70  | 110.62      | 106.71   |
| 16  | F     | 201 | CLA  | C4A-NA-C1A  | 8.69  | 110.61      | 106.71   |
| 21  | B     | 842 | BCR  | C11-C12-C13 | 8.68  | 150.81      | 126.42   |
| 16  | 2     | 605 | CLA  | C4A-NA-C1A  | 8.68  | 110.61      | 106.71   |
| 16  | 1     | 608 | CLA  | C4A-NA-C1A  | 8.67  | 110.60      | 106.71   |
| 16  | B     | 803 | CLA  | C4A-NA-C1A  | 8.67  | 110.60      | 106.71   |
| 21  | A     | 845 | BCR  | C2-C1-C6    | -8.66 | 97.14       | 110.48   |
| 16  | 2     | 608 | CLA  | C4A-NA-C1A  | 8.66  | 110.60      | 106.71   |
| 16  | B     | 838 | CLA  | C4A-NA-C1A  | 8.66  | 110.60      | 106.71   |
| 16  | 1     | 603 | CLA  | C4A-NA-C1A  | 8.61  | 110.58      | 106.71   |
| 16  | 2     | 603 | CLA  | C4A-NA-C1A  | 8.61  | 110.58      | 106.71   |
| 16  | A     | 808 | CLA  | C4A-NA-C1A  | 8.60  | 110.57      | 106.71   |
| 16  | B     | 830 | CLA  | C4A-NA-C1A  | 8.58  | 110.56      | 106.71   |
| 21  | K     | 104 | BCR  | C21-C20-C19 | 8.58  | 149.99      | 123.22   |
| 16  | L     | 201 | CLA  | C4A-NA-C1A  | 8.57  | 110.56      | 106.71   |
| 16  | B     | 822 | CLA  | C4A-NA-C1A  | 8.53  | 110.54      | 106.71   |
| 16  | A     | 834 | CLA  | C4A-NA-C1A  | 8.48  | 110.52      | 106.71   |
| 16  | B     | 832 | CLA  | C4A-NA-C1A  | 8.46  | 110.51      | 106.71   |
| 16  | 2     | 602 | CLA  | C4A-NA-C1A  | 8.45  | 110.50      | 106.71   |
| 16  | 1     | 609 | CLA  | C4A-NA-C1A  | 8.44  | 110.50      | 106.71   |
| 16  | A     | 833 | CLA  | C4A-NA-C1A  | 8.39  | 110.48      | 106.71   |
| 16  | B     | 827 | CLA  | C4A-NA-C1A  | 8.38  | 110.47      | 106.71   |
| 16  | A     | 837 | CLA  | C4A-NA-C1A  | 8.37  | 110.47      | 106.71   |
| 16  | B     | 829 | CLA  | C4A-NA-C1A  | 8.32  | 110.45      | 106.71   |
| 16  | I     | 102 | CLA  | C4A-NA-C1A  | 8.30  | 110.44      | 106.71   |
| 16  | A     | 828 | CLA  | C4A-NA-C1A  | 8.22  | 110.40      | 106.71   |
| 16  | A     | 804 | CLA  | C4A-NA-C1A  | 8.17  | 110.38      | 106.71   |
| 21  | A     | 857 | BCR  | C34-C9-C10  | -8.12 | 111.55      | 122.92   |
| 21  | 2     | 617 | BCR  | C37-C22-C21 | -8.07 | 111.62      | 122.92   |
| 16  | A     | 817 | CLA  | C4A-NA-C1A  | 8.07  | 110.33      | 106.71   |
| 21  | A     | 857 | BCR  | C11-C12-C13 | 8.06  | 149.07      | 126.42   |
| 21  | A     | 857 | BCR  | C34-C9-C8   | 8.03  | 130.73      | 118.08   |
| 21  | B     | 855 | BCR  | C11-C12-C13 | 8.00  | 148.88      | 126.42   |
| 21  | A     | 844 | BCR  | C11-C12-C13 | 7.95  | 148.76      | 126.42   |
| 20  | 1     | 618 | ERG  | C15-C14-C8  | -7.95 | 108.40      | 120.44   |
| 16  | B     | 816 | CLA  | C4A-NA-C1A  | 7.94  | 110.27      | 106.71   |
| 26  | A     | 801 | CL0  | C4A-NA-C1A  | 7.93  | 110.27      | 106.71   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 17  | 3     | 201 | C7Z  | C11-C10-C9  | -7.72 | 116.30      | 127.31   |
| 17  | J     | 104 | C7Z  | C15-C14-C13 | -7.62 | 116.44      | 127.31   |
| 16  | A     | 855 | CLA  | C4A-NA-C1A  | 7.61  | 110.13      | 106.71   |
| 21  | 2     | 617 | BCR  | C19-C18-C17 | 7.60  | 130.60      | 118.94   |
| 17  | 2     | 615 | C7Z  | C35-C34-C33 | -7.60 | 116.47      | 127.31   |
| 21  | A     | 850 | BCR  | C30-C25-C26 | -7.57 | 111.96      | 122.61   |
| 21  | A     | 844 | BCR  | C11-C10-C9  | 7.56  | 138.10      | 127.31   |
| 26  | A     | 801 | CL0  | CMD-C2D-C1D | 7.52  | 137.96      | 124.71   |
| 17  | 1     | 615 | C7Z  | C7-C8-C9    | -7.45 | 114.98      | 126.23   |
| 17  | 1     | 616 | C7Z  | C31-C30-C29 | -7.41 | 116.74      | 127.31   |
| 20  | 2     | 618 | ERG  | C19-C10-C9  | -7.39 | 98.61       | 111.03   |
| 21  | 2     | 617 | BCR  | C21-C20-C19 | 7.32  | 146.08      | 123.22   |
| 20  | 2     | 621 | ERG  | C19-C10-C9  | -7.31 | 98.74       | 111.03   |
| 18  | J     | 103 | RRX  | C35-C13-C14 | -7.30 | 112.69      | 122.92   |
| 20  | 1     | 618 | ERG  | C13-C17-C20 | -7.25 | 110.08      | 119.43   |
| 21  | A     | 857 | BCR  | C1-C6-C5    | -7.19 | 112.48      | 122.61   |
| 18  | A     | 847 | RRX  | C11-C10-C9  | -7.14 | 117.12      | 127.31   |
| 17  | 2     | 614 | C7Z  | C35-C34-C33 | -7.12 | 117.15      | 127.31   |
| 21  | B     | 845 | BCR  | C12-C13-C14 | 7.10  | 129.84      | 118.94   |
| 20  | 1     | 618 | ERG  | C18-C13-C14 | -7.09 | 98.75       | 110.24   |
| 21  | B     | 847 | BCR  | C27-C26-C25 | -7.04 | 112.52      | 122.73   |
| 17  | 3     | 217 | C7Z  | C35-C34-C33 | -7.00 | 117.32      | 127.31   |
| 17  | 1     | 616 | C7Z  | C35-C34-C33 | -6.96 | 117.38      | 127.31   |
| 18  | J     | 103 | RRX  | C12-C13-C14 | 6.95  | 129.60      | 118.94   |
| 18  | 1     | 613 | RRX  | C30-C25-C26 | -6.93 | 112.85      | 122.61   |
| 21  | 2     | 617 | BCR  | C20-C19-C18 | 6.92  | 145.85      | 126.42   |
| 21  | A     | 857 | BCR  | C28-C27-C26 | -6.88 | 101.78      | 114.08   |
| 21  | K     | 104 | BCR  | C35-C13-C14 | -6.84 | 113.34      | 122.92   |
| 18  | A     | 847 | RRX  | C1-C6-C5    | -6.81 | 113.02      | 122.61   |
| 21  | I     | 103 | BCR  | C20-C19-C18 | 6.79  | 145.48      | 126.42   |
| 17  | 3     | 217 | C7Z  | C27-C28-C29 | -6.77 | 116.00      | 126.23   |
| 21  | B     | 845 | BCR  | C11-C12-C13 | 6.76  | 145.40      | 126.42   |
| 18  | J     | 103 | RRX  | C16-C15-C14 | -6.71 | 109.72      | 123.47   |
| 21  | A     | 846 | BCR  | C11-C10-C9  | 6.69  | 136.86      | 127.31   |
| 18  | K     | 103 | RRX  | C30-C25-C26 | -6.60 | 113.32      | 122.61   |
| 17  | J     | 104 | C7Z  | C31-C30-C29 | -6.59 | 117.91      | 127.31   |
| 21  | B     | 847 | BCR  | C30-C25-C26 | -6.57 | 113.35      | 122.61   |
| 21  | B     | 855 | BCR  | C19-C18-C17 | 6.56  | 129.00      | 118.94   |
| 17  | 3     | 218 | C7Z  | C31-C30-C29 | -6.52 | 118.00      | 127.31   |
| 20  | 2     | 621 | ERG  | C19-C10-C1  | -6.51 | 99.15       | 109.43   |
| 17  | 1     | 616 | C7Z  | C27-C28-C29 | -6.49 | 116.43      | 126.23   |
| 21  | A     | 850 | BCR  | C1-C6-C5    | -6.47 | 113.50      | 122.61   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 17  | 2     | 615 | C7Z  | C31-C30-C29 | -6.43 | 118.14      | 127.31   |
| 17  | 2     | 615 | C7Z  | C38-C25-C26 | -6.38 | 117.36      | 124.53   |
| 18  | A     | 847 | RRX  | C19-C18-C17 | -6.38 | 109.15      | 118.94   |
| 16  | A     | 810 | CLA  | O2D-CGD-CBD | 6.34  | 122.53      | 111.27   |
| 17  | 1     | 615 | C7Z  | C31-C30-C29 | -6.30 | 118.32      | 127.31   |
| 17  | 1     | 614 | C7Z  | C31-C30-C29 | -6.29 | 118.33      | 127.31   |
| 21  | B     | 843 | BCR  | C15-C14-C13 | -6.29 | 118.33      | 127.31   |
| 21  | F     | 203 | BCR  | C19-C18-C17 | 6.28  | 128.58      | 118.94   |
| 18  | A     | 847 | RRX  | C8-C9-C10   | 6.25  | 128.54      | 118.94   |
| 21  | A     | 845 | BCR  | C28-C27-C26 | -6.25 | 102.92      | 114.08   |
| 17  | 2     | 614 | C7Z  | C31-C30-C29 | -6.23 | 118.42      | 127.31   |
| 18  | 2     | 616 | RRX  | C15-C14-C13 | -6.19 | 118.47      | 127.31   |
| 16  | 2     | 601 | CLA  | O2D-CGD-CBD | 6.17  | 122.23      | 111.27   |
| 26  | A     | 801 | CL0  | C2D-C1D-ND  | 6.15  | 114.64      | 110.10   |
| 18  | A     | 847 | RRX  | C20-C21-C22 | -6.12 | 118.58      | 127.31   |
| 17  | 1     | 614 | C7Z  | C35-C34-C33 | -6.10 | 118.61      | 127.31   |
| 21  | K     | 104 | BCR  | C19-C18-C17 | 6.09  | 128.28      | 118.94   |
| 17  | 3     | 215 | C7Z  | C15-C14-C13 | -6.08 | 118.63      | 127.31   |
| 16  | A     | 807 | CLA  | O2D-CGD-CBD | 6.04  | 122.00      | 111.27   |
| 17  | 3     | 216 | C7Z  | C27-C28-C29 | -6.02 | 117.14      | 126.23   |
| 17  | 1     | 616 | C7Z  | C11-C10-C9  | -6.00 | 118.74      | 127.31   |
| 16  | B     | 819 | CLA  | O2D-CGD-CBD | 6.00  | 121.92      | 111.27   |
| 17  | 3     | 201 | C7Z  | C18-C5-C6   | -5.96 | 117.84      | 124.53   |
| 16  | B     | 838 | CLA  | O2D-CGD-CBD | 5.96  | 121.85      | 111.27   |
| 16  | 3     | 210 | CLA  | CMA-C3A-C4A | 5.96  | 127.78      | 111.77   |
| 17  | A     | 843 | C7Z  | C31-C30-C29 | -5.94 | 118.84      | 127.31   |
| 16  | A     | 834 | CLA  | O2D-CGD-CBD | 5.92  | 121.78      | 111.27   |
| 17  | 3     | 216 | C7Z  | C35-C15-C14 | -5.91 | 111.36      | 123.47   |
| 16  | B     | 837 | CLA  | CMD-C2D-C1D | 5.89  | 135.10      | 124.71   |
| 18  | J     | 103 | RRX  | C11-C10-C9  | -5.89 | 118.91      | 127.31   |
| 21  | K     | 104 | BCR  | C30-C25-C26 | -5.88 | 114.33      | 122.61   |
| 20  | 1     | 618 | ERG  | C12-C13-C14 | 5.87  | 116.58      | 107.27   |
| 17  | 3     | 217 | C7Z  | C31-C30-C29 | -5.87 | 118.94      | 127.31   |
| 16  | 3     | 211 | CLA  | O2D-CGD-CBD | 5.86  | 121.68      | 111.27   |
| 17  | 3     | 218 | C7Z  | C11-C10-C9  | -5.84 | 118.97      | 127.31   |
| 17  | 3     | 215 | C7Z  | C31-C30-C29 | -5.83 | 118.98      | 127.31   |
| 16  | 1     | 604 | CLA  | O2D-CGD-CBD | 5.83  | 121.62      | 111.27   |
| 21  | K     | 104 | BCR  | C16-C15-C14 | 5.82  | 135.40      | 123.47   |
| 17  | 3     | 215 | C7Z  | C38-C25-C26 | -5.82 | 118.00      | 124.53   |
| 16  | B     | 819 | CLA  | CMD-C2D-C1D | 5.80  | 134.94      | 124.71   |
| 16  | A     | 818 | CLA  | CMA-C3A-C4A | 5.79  | 127.34      | 111.77   |
| 16  | O     | 203 | CLA  | CMD-C2D-C1D | 5.76  | 134.86      | 124.71   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 18  | 1     | 613 | RRX  | C35-C13-C14 | -5.76 | 114.86      | 122.92   |
| 17  | 3     | 216 | C7Z  | C7-C8-C9    | -5.74 | 117.56      | 126.23   |
| 16  | B     | 805 | CLA  | O2D-CGD-CBD | 5.74  | 121.46      | 111.27   |
| 20  | 1     | 618 | ERG  | C14-C8-C9   | -5.74 | 106.02      | 114.66   |
| 21  | B     | 845 | BCR  | C35-C13-C14 | -5.73 | 114.89      | 122.92   |
| 16  | A     | 835 | CLA  | O2D-CGD-CBD | 5.73  | 121.45      | 111.27   |
| 16  | F     | 202 | CLA  | CMA-C3A-C4A | 5.72  | 127.15      | 111.77   |
| 16  | A     | 830 | CLA  | O2D-CGD-CBD | 5.71  | 121.42      | 111.27   |
| 16  | 1     | 602 | CLA  | O2D-CGD-CBD | 5.69  | 121.38      | 111.27   |
| 16  | A     | 804 | CLA  | CMD-C2D-C1D | 5.68  | 134.73      | 124.71   |
| 16  | B     | 829 | CLA  | CMD-C2D-C1D | 5.68  | 134.72      | 124.71   |
| 16  | 2     | 608 | CLA  | O2D-CGD-CBD | 5.67  | 121.34      | 111.27   |
| 16  | 3     | 207 | CLA  | CMD-C2D-C1D | 5.67  | 134.70      | 124.71   |
| 16  | A     | 817 | CLA  | O2D-CGD-CBD | 5.66  | 121.33      | 111.27   |
| 16  | A     | 815 | CLA  | CMD-C2D-C1D | 5.65  | 134.68      | 124.71   |
| 16  | A     | 819 | CLA  | O2D-CGD-CBD | 5.65  | 121.31      | 111.27   |
| 16  | B     | 818 | CLA  | O2A-C1-C2   | 5.65  | 123.47      | 108.64   |
| 17  | 1     | 612 | C7Z  | C38-C25-C26 | -5.64 | 118.20      | 124.53   |
| 21  | A     | 845 | BCR  | C32-C1-C31  | 5.63  | 125.81      | 108.53   |
| 16  | B     | 813 | CLA  | O2D-CGD-CBD | 5.63  | 121.27      | 111.27   |
| 16  | B     | 808 | CLA  | O2D-CGD-CBD | 5.60  | 121.22      | 111.27   |
| 17  | 1     | 614 | C7Z  | C7-C8-C9    | -5.59 | 117.80      | 126.23   |
| 16  | F     | 202 | CLA  | O2D-CGD-CBD | 5.58  | 121.19      | 111.27   |
| 16  | A     | 817 | CLA  | CMD-C2D-C1D | 5.58  | 134.55      | 124.71   |
| 21  | F     | 206 | BCR  | C11-C12-C13 | 5.58  | 142.09      | 126.42   |
| 16  | B     | 806 | CLA  | CMD-C2D-C1D | 5.58  | 134.54      | 124.71   |
| 21  | K     | 104 | BCR  | C27-C26-C25 | -5.56 | 114.65      | 122.73   |
| 16  | 3     | 204 | CLA  | CMD-C2D-C1D | 5.56  | 134.51      | 124.71   |
| 16  | B     | 816 | CLA  | CMD-C2D-C1D | 5.55  | 134.49      | 124.71   |
| 16  | 2     | 602 | CLA  | CMD-C2D-C1D | 5.55  | 134.49      | 124.71   |
| 16  | B     | 818 | CLA  | CMD-C2D-C1D | 5.54  | 134.47      | 124.71   |
| 21  | A     | 850 | BCR  | C4-C5-C6    | -5.54 | 114.69      | 122.73   |
| 16  | A     | 823 | CLA  | CMD-C2D-C1D | 5.53  | 134.46      | 124.71   |
| 26  | A     | 801 | CL0  | C2C-C1C-NC  | 5.52  | 115.15      | 109.97   |
| 16  | B     | 835 | CLA  | CMD-C2D-C1D | 5.52  | 134.44      | 124.71   |
| 17  | 3     | 217 | C7Z  | C38-C25-C26 | -5.52 | 118.33      | 124.53   |
| 21  | F     | 206 | BCR  | C12-C13-C14 | 5.52  | 127.41      | 118.94   |
| 17  | 3     | 218 | C7Z  | C15-C14-C13 | -5.52 | 119.44      | 127.31   |
| 17  | 1     | 614 | C7Z  | C15-C14-C13 | -5.51 | 119.44      | 127.31   |
| 16  | B     | 821 | CLA  | O2D-CGD-CBD | 5.50  | 121.05      | 111.27   |
| 21  | I     | 103 | BCR  | C32-C1-C31  | 5.49  | 125.38      | 108.53   |
| 16  | 2     | 613 | CLA  | O2D-CGD-CBD | 5.49  | 121.03      | 111.27   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | F     | 203 | BCR  | C28-C27-C26 | -5.49 | 104.28      | 114.08   |
| 16  | A     | 813 | CLA  | CMD-C2D-C1D | 5.48  | 134.38      | 124.71   |
| 16  | 3     | 208 | CLA  | CMD-C2D-C1D | 5.48  | 134.38      | 124.71   |
| 16  | L     | 204 | CLA  | CMD-C2D-C1D | 5.48  | 134.37      | 124.71   |
| 16  | 3     | 206 | CLA  | CMD-C2D-C1D | 5.48  | 134.37      | 124.71   |
| 16  | B     | 806 | CLA  | O2D-CGD-CBD | 5.48  | 121.00      | 111.27   |
| 16  | 2     | 603 | CLA  | CMD-C2D-C1D | 5.48  | 134.37      | 124.71   |
| 16  | A     | 819 | CLA  | CMD-C2D-C1D | 5.47  | 134.36      | 124.71   |
| 16  | B     | 832 | CLA  | CMD-C2D-C1D | 5.47  | 134.35      | 124.71   |
| 16  | L     | 205 | CLA  | CMD-C2D-C1D | 5.47  | 134.35      | 124.71   |
| 16  | A     | 808 | CLA  | O2D-CGD-CBD | 5.47  | 120.99      | 111.27   |
| 16  | A     | 838 | CLA  | O2D-CGD-CBD | 5.47  | 120.98      | 111.27   |
| 16  | 2     | 604 | CLA  | O2D-CGD-CBD | 5.47  | 120.98      | 111.27   |
| 16  | A     | 806 | CLA  | O2D-CGD-CBD | 5.47  | 120.98      | 111.27   |
| 16  | 3     | 212 | CLA  | CMD-C2D-C1D | 5.47  | 134.34      | 124.71   |
| 16  | A     | 856 | CLA  | O2D-CGD-CBD | 5.46  | 120.98      | 111.27   |
| 16  | 2     | 612 | CLA  | CMD-C2D-C1D | 5.46  | 134.33      | 124.71   |
| 16  | A     | 806 | CLA  | CMD-C2D-C1D | 5.46  | 134.33      | 124.71   |
| 16  | B     | 811 | CLA  | CMD-C2D-C1D | 5.45  | 134.32      | 124.71   |
| 16  | B     | 837 | CLA  | O2D-CGD-CBD | 5.45  | 120.95      | 111.27   |
| 16  | A     | 822 | CLA  | O2D-CGD-CBD | 5.44  | 120.94      | 111.27   |
| 16  | B     | 835 | CLA  | O2D-CGD-CBD | 5.44  | 120.93      | 111.27   |
| 16  | A     | 818 | CLA  | CMD-C2D-C1D | 5.42  | 134.27      | 124.71   |
| 17  | 3     | 216 | C7Z  | C38-C25-C26 | -5.42 | 118.45      | 124.53   |
| 16  | O     | 204 | CLA  | CMD-C2D-C1D | 5.41  | 134.25      | 124.71   |
| 16  | A     | 832 | CLA  | CMD-C2D-C1D | 5.41  | 134.25      | 124.71   |
| 16  | 3     | 213 | CLA  | CMD-C2D-C1D | 5.41  | 134.24      | 124.71   |
| 16  | A     | 836 | CLA  | CMD-C2D-C1D | 5.41  | 134.24      | 124.71   |
| 21  | L     | 202 | BCR  | C11-C10-C9  | 5.40  | 135.02      | 127.31   |
| 16  | B     | 826 | CLA  | CMD-C2D-C1D | 5.40  | 134.23      | 124.71   |
| 16  | 3     | 203 | CLA  | CMD-C2D-C1D | 5.40  | 134.22      | 124.71   |
| 16  | 3     | 214 | CLA  | CMD-C2D-C1D | 5.39  | 134.22      | 124.71   |
| 16  | L     | 203 | CLA  | CMD-C2D-C1D | 5.39  | 134.21      | 124.71   |
| 16  | B     | 829 | CLA  | O2D-CGD-CBD | 5.39  | 120.84      | 111.27   |
| 17  | 1     | 615 | C7Z  | C27-C28-C29 | -5.38 | 118.10      | 126.23   |
| 16  | L     | 201 | CLA  | CMD-C2D-C1D | 5.38  | 134.19      | 124.71   |
| 21  | A     | 846 | BCR  | C34-C9-C10  | -5.38 | 115.39      | 122.92   |
| 16  | A     | 834 | CLA  | CMD-C2D-C1D | 5.36  | 134.17      | 124.71   |
| 16  | 2     | 606 | CLA  | CMD-C2D-C1D | 5.36  | 134.16      | 124.71   |
| 18  | J     | 103 | RRX  | C15-C16-C17 | 5.36  | 134.45      | 123.47   |
| 16  | O     | 201 | CLA  | CMD-C2D-C1D | 5.36  | 134.15      | 124.71   |
| 16  | B     | 834 | CLA  | O2D-CGD-CBD | 5.35  | 120.78      | 111.27   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 816 | CLA  | O2D-CGD-CBD | 5.35  | 120.77      | 111.27   |
| 16  | B     | 805 | CLA  | CMD-C2D-C1D | 5.35  | 134.14      | 124.71   |
| 16  | I     | 101 | CLA  | CMD-C2D-C1D | 5.34  | 134.13      | 124.71   |
| 16  | A     | 810 | CLA  | CMD-C2D-C1D | 5.34  | 134.13      | 124.71   |
| 16  | A     | 831 | CLA  | CMD-C2D-C1D | 5.34  | 134.13      | 124.71   |
| 16  | 1     | 603 | CLA  | CMD-C2D-C1D | 5.34  | 134.13      | 124.71   |
| 16  | 2     | 605 | CLA  | CMD-C2D-C1D | 5.34  | 134.12      | 124.71   |
| 16  | O     | 202 | CLA  | CMD-C2D-C1D | 5.33  | 134.11      | 124.71   |
| 16  | A     | 833 | CLA  | CMD-C2D-C1D | 5.33  | 134.11      | 124.71   |
| 16  | 3     | 205 | CLA  | CMD-C2D-C1D | 5.33  | 134.11      | 124.71   |
| 18  | A     | 847 | RRX  | C38-C26-C25 | -5.33 | 118.54      | 124.53   |
| 16  | A     | 816 | CLA  | CMD-C2D-C1D | 5.33  | 134.11      | 124.71   |
| 17  | A     | 843 | C7Z  | C27-C28-C29 | -5.33 | 118.18      | 126.23   |
| 16  | B     | 814 | CLA  | CMD-C2D-C1D | 5.33  | 134.10      | 124.71   |
| 16  | A     | 828 | CLA  | CMD-C2D-C1D | 5.33  | 134.10      | 124.71   |
| 16  | A     | 803 | CLA  | CMD-C2D-C1D | 5.33  | 134.10      | 124.71   |
| 17  | 2     | 614 | C7Z  | C38-C25-C26 | -5.32 | 118.55      | 124.53   |
| 16  | A     | 802 | CLA  | O2D-CGD-CBD | 5.32  | 120.72      | 111.27   |
| 16  | B     | 831 | CLA  | O2D-CGD-CBD | 5.32  | 120.72      | 111.27   |
| 16  | B     | 820 | CLA  | CMD-C2D-C1D | 5.32  | 134.08      | 124.71   |
| 17  | J     | 104 | C7Z  | C27-C28-C29 | -5.31 | 118.20      | 126.23   |
| 16  | B     | 824 | CLA  | CMD-C2D-C1D | 5.31  | 134.08      | 124.71   |
| 16  | A     | 804 | CLA  | O2A-C1-C2   | 5.31  | 122.60      | 108.64   |
| 16  | A     | 816 | CLA  | O2D-CGD-CBD | 5.31  | 120.70      | 111.27   |
| 16  | 1     | 604 | CLA  | CMD-C2D-C1D | 5.31  | 134.07      | 124.71   |
| 16  | A     | 814 | CLA  | O2D-CGD-CBD | 5.30  | 120.69      | 111.27   |
| 18  | J     | 103 | RRX  | C38-C26-C25 | -5.30 | 118.58      | 124.53   |
| 16  | B     | 834 | CLA  | CMD-C2D-C1D | 5.30  | 134.04      | 124.71   |
| 16  | A     | 832 | CLA  | O2D-CGD-CBD | 5.29  | 120.68      | 111.27   |
| 16  | 1     | 602 | CLA  | CMD-C2D-C1D | 5.28  | 134.02      | 124.71   |
| 16  | 2     | 610 | CLA  | CMD-C2D-C1D | 5.28  | 134.01      | 124.71   |
| 16  | A     | 826 | CLA  | O2D-CGD-CBD | 5.28  | 120.65      | 111.27   |
| 16  | 1     | 610 | CLA  | CMD-C2D-C1D | 5.28  | 134.01      | 124.71   |
| 16  | F     | 205 | CLA  | O2D-CGD-CBD | 5.27  | 120.64      | 111.27   |
| 16  | 2     | 608 | CLA  | CMD-C2D-C1D | 5.27  | 134.01      | 124.71   |
| 16  | B     | 809 | CLA  | CMA-C3A-C4A | 5.27  | 125.94      | 111.77   |
| 16  | B     | 838 | CLA  | CMD-C2D-C1D | 5.26  | 133.99      | 124.71   |
| 16  | 3     | 212 | CLA  | O2D-CGD-CBD | 5.26  | 120.62      | 111.27   |
| 17  | 3     | 216 | C7Z  | C31-C32-C33 | -5.26 | 111.64      | 126.42   |
| 16  | 1     | 606 | CLA  | O2D-CGD-CBD | 5.26  | 120.61      | 111.27   |
| 16  | 3     | 210 | CLA  | CMD-C2D-C1D | 5.26  | 133.98      | 124.71   |
| 16  | 2     | 601 | CLA  | CMD-C2D-C1D | 5.26  | 133.98      | 124.71   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 837 | CLA  | CMD-C2D-C1D | 5.26  | 133.98      | 124.71   |
| 16  | B     | 802 | CLA  | CMD-C2D-C1D | 5.26  | 133.97      | 124.71   |
| 16  | A     | 805 | CLA  | CMD-C2D-C1D | 5.25  | 133.97      | 124.71   |
| 16  | 2     | 609 | CLA  | CMD-C2D-C1D | 5.25  | 133.97      | 124.71   |
| 16  | A     | 822 | CLA  | CMD-C2D-C1D | 5.25  | 133.97      | 124.71   |
| 16  | B     | 809 | CLA  | CMD-C2D-C1D | 5.25  | 133.97      | 124.71   |
| 16  | 1     | 611 | CLA  | CMD-C2D-C1D | 5.25  | 133.97      | 124.71   |
| 18  | 2     | 616 | RRX  | C11-C10-C9  | -5.25 | 119.82      | 127.31   |
| 16  | A     | 808 | CLA  | CMD-C2D-C1D | 5.24  | 133.94      | 124.71   |
| 16  | B     | 837 | CLA  | CMA-C3A-C4A | 5.23  | 125.83      | 111.77   |
| 16  | J     | 102 | CLA  | CMA-C3A-C4A | 5.22  | 125.81      | 111.77   |
| 16  | K     | 101 | CLA  | O2D-CGD-CBD | 5.22  | 120.55      | 111.27   |
| 16  | 1     | 609 | CLA  | CMD-C2D-C1D | 5.22  | 133.92      | 124.71   |
| 17  | 1     | 614 | C7Z  | C18-C5-C6   | -5.22 | 118.66      | 124.53   |
| 16  | A     | 809 | CLA  | CMD-C2D-C1D | 5.22  | 133.92      | 124.71   |
| 16  | B     | 803 | CLA  | CMD-C2D-C1D | 5.22  | 133.91      | 124.71   |
| 16  | 2     | 613 | CLA  | CMD-C2D-C1D | 5.22  | 133.91      | 124.71   |
| 16  | B     | 808 | CLA  | CMD-C2D-C1D | 5.22  | 133.91      | 124.71   |
| 16  | K     | 102 | CLA  | CMD-C2D-C1D | 5.22  | 133.91      | 124.71   |
| 16  | 2     | 611 | CLA  | CMD-C2D-C1D | 5.21  | 133.90      | 124.71   |
| 16  | 3     | 210 | CLA  | O2D-CGD-CBD | 5.21  | 120.53      | 111.27   |
| 20  | 2     | 618 | ERG  | C12-C13-C14 | 5.21  | 115.53      | 107.27   |
| 16  | B     | 832 | CLA  | O2A-C1-C2   | 5.21  | 122.32      | 108.64   |
| 16  | B     | 821 | CLA  | CMA-C3A-C4A | 5.20  | 125.76      | 111.77   |
| 16  | A     | 816 | CLA  | O2A-C1-C2   | 5.20  | 122.31      | 108.64   |
| 16  | B     | 807 | CLA  | CMD-C2D-C1D | 5.20  | 133.88      | 124.71   |
| 16  | B     | 836 | CLA  | CMD-C2D-C1D | 5.20  | 133.87      | 124.71   |
| 16  | A     | 824 | CLA  | CMD-C2D-C1D | 5.20  | 133.87      | 124.71   |
| 16  | K     | 101 | CLA  | CMD-C2D-C1D | 5.19  | 133.87      | 124.71   |
| 16  | A     | 820 | CLA  | CMD-C2D-C1D | 5.19  | 133.87      | 124.71   |
| 16  | A     | 811 | CLA  | CMD-C2D-C1D | 5.19  | 133.87      | 124.71   |
| 17  | 3     | 218 | C7Z  | C35-C34-C33 | -5.19 | 119.91      | 127.31   |
| 16  | J     | 102 | CLA  | O2D-CGD-CBD | 5.19  | 120.48      | 111.27   |
| 16  | B     | 825 | CLA  | O2D-CGD-CBD | 5.18  | 120.47      | 111.27   |
| 17  | 1     | 615 | C7Z  | C1-C6-C5    | -5.18 | 115.32      | 122.61   |
| 16  | B     | 822 | CLA  | CMD-C2D-C1D | 5.17  | 133.82      | 124.71   |
| 16  | 3     | 203 | CLA  | O2D-CGD-CBD | 5.17  | 120.45      | 111.27   |
| 16  | B     | 810 | CLA  | CMD-C2D-C1D | 5.17  | 133.82      | 124.71   |
| 16  | F     | 205 | CLA  | CMD-C2D-C1D | 5.16  | 133.81      | 124.71   |
| 17  | 1     | 612 | C7Z  | C32-C33-C34 | 5.16  | 126.86      | 118.94   |
| 16  | A     | 838 | CLA  | CMD-C2D-C1D | 5.15  | 133.79      | 124.71   |
| 16  | A     | 814 | CLA  | CMD-C2D-C1D | 5.15  | 133.79      | 124.71   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 3     | 211 | CLA  | CMD-C2D-C1D | 5.15  | 133.79      | 124.71   |
| 16  | 1     | 608 | CLA  | CMD-C2D-C1D | 5.15  | 133.79      | 124.71   |
| 26  | A     | 801 | CL0  | O2A-CGA-O1A | -5.15 | 110.61      | 123.59   |
| 16  | A     | 803 | CLA  | O2D-CGD-CBD | 5.14  | 120.41      | 111.27   |
| 16  | 1     | 601 | CLA  | CMD-C2D-C1D | 5.14  | 133.78      | 124.71   |
| 16  | 3     | 209 | CLA  | CMD-C2D-C1D | 5.14  | 133.78      | 124.71   |
| 16  | 1     | 603 | CLA  | O2D-CGD-CBD | 5.14  | 120.41      | 111.27   |
| 16  | I     | 102 | CLA  | O2D-CGD-CBD | 5.14  | 120.40      | 111.27   |
| 16  | 3     | 214 | CLA  | O2D-CGD-CBD | 5.14  | 120.40      | 111.27   |
| 16  | A     | 831 | CLA  | O2D-CGD-CBD | 5.14  | 120.39      | 111.27   |
| 26  | A     | 801 | CL0  | C1C-C2C-C3C | -5.13 | 101.56      | 106.96   |
| 16  | J     | 102 | CLA  | CMD-C2D-C1D | 5.13  | 133.76      | 124.71   |
| 16  | A     | 836 | CLA  | O2D-CGD-CBD | 5.13  | 120.38      | 111.27   |
| 16  | B     | 832 | CLA  | O2D-CGD-CBD | 5.13  | 120.38      | 111.27   |
| 16  | B     | 828 | CLA  | CMD-C2D-C1D | 5.12  | 133.74      | 124.71   |
| 16  | A     | 833 | CLA  | O2A-C1-C2   | 5.12  | 122.10      | 108.64   |
| 16  | B     | 821 | CLA  | CMD-C2D-C1D | 5.12  | 133.73      | 124.71   |
| 16  | B     | 827 | CLA  | CMD-C2D-C1D | 5.11  | 133.72      | 124.71   |
| 16  | B     | 813 | CLA  | CMD-C2D-C1D | 5.11  | 133.72      | 124.71   |
| 18  | J     | 103 | RRX  | C19-C18-C17 | -5.11 | 111.10      | 118.94   |
| 16  | A     | 827 | CLA  | CMD-C2D-C1D | 5.11  | 133.71      | 124.71   |
| 16  | A     | 835 | CLA  | CMD-C2D-C1D | 5.11  | 133.71      | 124.71   |
| 16  | B     | 836 | CLA  | O2D-CGD-CBD | 5.10  | 120.34      | 111.27   |
| 16  | A     | 825 | CLA  | CMD-C2D-C1D | 5.10  | 133.69      | 124.71   |
| 17  | 3     | 218 | C7Z  | C21-C26-C25 | -5.09 | 115.44      | 122.61   |
| 16  | B     | 818 | CLA  | O2D-CGD-CBD | 5.09  | 120.31      | 111.27   |
| 20  | 2     | 621 | ERG  | C1-C10-C9   | 5.09  | 118.82      | 108.28   |
| 16  | A     | 813 | CLA  | O2D-CGD-CBD | 5.08  | 120.30      | 111.27   |
| 16  | A     | 829 | CLA  | CMD-C2D-C1D | 5.08  | 133.67      | 124.71   |
| 16  | B     | 810 | CLA  | O2D-CGD-CBD | 5.08  | 120.30      | 111.27   |
| 16  | A     | 821 | CLA  | CMD-C2D-C1D | 5.08  | 133.66      | 124.71   |
| 16  | A     | 820 | CLA  | O2D-CGD-CBD | 5.07  | 120.28      | 111.27   |
| 16  | A     | 833 | CLA  | O2D-CGD-CBD | 5.07  | 120.27      | 111.27   |
| 16  | F     | 204 | CLA  | O2D-CGD-CBD | 5.07  | 120.27      | 111.27   |
| 16  | B     | 820 | CLA  | O2D-CGD-CBD | 5.06  | 120.26      | 111.27   |
| 16  | A     | 809 | CLA  | O2D-CGD-CBD | 5.06  | 120.26      | 111.27   |
| 16  | I     | 102 | CLA  | CMD-C2D-C1D | 5.05  | 133.62      | 124.71   |
| 16  | I     | 101 | CLA  | O2D-CGD-CBD | 5.05  | 120.25      | 111.27   |
| 18  | K     | 103 | RRX  | C1-C6-C5    | -5.05 | 115.50      | 122.61   |
| 17  | A     | 843 | C7Z  | C7-C8-C9    | -5.05 | 118.61      | 126.23   |
| 16  | A     | 808 | CLA  | O2A-C1-C2   | 5.05  | 121.90      | 108.64   |
| 17  | A     | 843 | C7Z  | C21-C26-C25 | -5.04 | 115.51      | 122.61   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 817 | CLA  | CMD-C2D-C1D | 5.04  | 133.60      | 124.71   |
| 16  | B     | 824 | CLA  | O2D-CGD-CBD | 5.04  | 120.22      | 111.27   |
| 16  | 2     | 612 | CLA  | O2D-CGD-CBD | 5.04  | 120.22      | 111.27   |
| 16  | 1     | 607 | CLA  | CMD-C2D-C1D | 5.04  | 133.59      | 124.71   |
| 16  | 3     | 204 | CLA  | O2D-CGD-CBD | 5.04  | 120.22      | 111.27   |
| 16  | 2     | 610 | CLA  | O2D-CGD-CBD | 5.03  | 120.21      | 111.27   |
| 16  | F     | 202 | CLA  | CMD-C2D-C1D | 5.03  | 133.58      | 124.71   |
| 16  | A     | 837 | CLA  | O2D-CGD-CBD | 5.03  | 120.21      | 111.27   |
| 16  | A     | 807 | CLA  | CMD-C2D-C1D | 5.02  | 133.56      | 124.71   |
| 16  | B     | 812 | CLA  | O2D-CGD-CBD | 5.02  | 120.19      | 111.27   |
| 16  | A     | 855 | CLA  | O2D-CGD-CBD | 5.02  | 120.19      | 111.27   |
| 16  | B     | 831 | CLA  | CMD-C2D-C1D | 5.02  | 133.56      | 124.71   |
| 16  | 3     | 208 | CLA  | O2D-CGD-CBD | 5.02  | 120.18      | 111.27   |
| 16  | B     | 814 | CLA  | O2D-CGD-CBD | 5.01  | 120.18      | 111.27   |
| 16  | 2     | 607 | CLA  | O2D-CGD-CBD | 5.01  | 120.18      | 111.27   |
| 16  | O     | 201 | CLA  | O2D-CGD-CBD | 5.01  | 120.17      | 111.27   |
| 16  | B     | 807 | CLA  | O2D-CGD-CBD | 5.01  | 120.16      | 111.27   |
| 16  | A     | 805 | CLA  | O2D-CGD-CBD | 5.00  | 120.16      | 111.27   |
| 16  | A     | 830 | CLA  | CMD-C2D-C1D | 5.00  | 133.53      | 124.71   |
| 16  | 1     | 607 | CLA  | O2D-CGD-CBD | 4.99  | 120.14      | 111.27   |
| 16  | B     | 826 | CLA  | O2D-CGD-CBD | 4.99  | 120.14      | 111.27   |
| 16  | 3     | 206 | CLA  | O2D-CGD-CBD | 4.99  | 120.13      | 111.27   |
| 16  | A     | 812 | CLA  | O2D-CGD-CBD | 4.98  | 120.13      | 111.27   |
| 18  | J     | 103 | RRX  | C30-C25-C26 | -4.98 | 115.59      | 122.61   |
| 16  | 2     | 605 | CLA  | O2A-C1-C2   | 4.98  | 121.72      | 108.64   |
| 16  | A     | 806 | CLA  | O2A-C1-C2   | 4.97  | 121.71      | 108.64   |
| 21  | B     | 842 | BCR  | C1-C6-C7    | 4.97  | 129.85      | 115.78   |
| 16  | 1     | 606 | CLA  | CMA-C3A-C4A | 4.97  | 125.14      | 111.77   |
| 16  | 2     | 606 | CLA  | O2D-CGD-CBD | 4.97  | 120.10      | 111.27   |
| 16  | 2     | 602 | CLA  | O2D-CGD-CBD | 4.97  | 120.10      | 111.27   |
| 16  | A     | 812 | CLA  | CMD-C2D-C1D | 4.96  | 133.46      | 124.71   |
| 17  | J     | 104 | C7Z  | C21-C26-C25 | -4.96 | 115.62      | 122.61   |
| 21  | F     | 206 | BCR  | C19-C18-C17 | 4.96  | 126.56      | 118.94   |
| 17  | 3     | 218 | C7Z  | C7-C8-C9    | -4.96 | 118.74      | 126.23   |
| 18  | K     | 103 | RRX  | C11-C10-C9  | -4.96 | 120.23      | 127.31   |
| 27  | A     | 840 | PQN  | C14-C13-C15 | 4.96  | 123.61      | 115.27   |
| 16  | 3     | 207 | CLA  | O2D-CGD-CBD | 4.96  | 120.08      | 111.27   |
| 16  | 3     | 213 | CLA  | O2D-CGD-CBD | 4.96  | 120.08      | 111.27   |
| 16  | O     | 202 | CLA  | O2D-CGD-CBD | 4.96  | 120.08      | 111.27   |
| 16  | 1     | 605 | CLA  | CMD-C2D-C1D | 4.95  | 133.44      | 124.71   |
| 16  | A     | 815 | CLA  | O2D-CGD-CBD | 4.95  | 120.06      | 111.27   |
| 16  | 1     | 606 | CLA  | CMD-C2D-C1D | 4.94  | 133.43      | 124.71   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 2     | 604 | CLA  | CMD-C2D-C1D | 4.94  | 133.43      | 124.71   |
| 16  | 1     | 601 | CLA  | O2D-CGD-CBD | 4.94  | 120.05      | 111.27   |
| 16  | K     | 102 | CLA  | O2D-CGD-CBD | 4.94  | 120.05      | 111.27   |
| 17  | 2     | 614 | C7Z  | C18-C5-C6   | -4.94 | 118.98      | 124.53   |
| 16  | A     | 826 | CLA  | CMD-C2D-C1D | 4.94  | 133.41      | 124.71   |
| 16  | 1     | 607 | CLA  | O2A-C1-C2   | 4.94  | 121.61      | 108.64   |
| 16  | A     | 839 | CLA  | O2A-C1-C2   | 4.93  | 121.59      | 108.64   |
| 20  | 2     | 618 | ERG  | C1-C10-C9   | 4.93  | 118.49      | 108.28   |
| 21  | F     | 206 | BCR  | C33-C5-C6   | -4.93 | 119.00      | 124.53   |
| 21  | B     | 843 | BCR  | C34-C9-C10  | -4.93 | 116.02      | 122.92   |
| 16  | A     | 856 | CLA  | CMD-C2D-C1D | 4.92  | 133.39      | 124.71   |
| 17  | 1     | 615 | C7Z  | C38-C25-C26 | -4.92 | 119.00      | 124.53   |
| 16  | B     | 802 | CLA  | O2D-CGD-CBD | 4.92  | 120.01      | 111.27   |
| 22  | B     | 848 | PGT  | O2-C31-C32  | 4.92  | 122.09      | 111.50   |
| 21  | F     | 206 | BCR  | C34-C9-C10  | -4.91 | 116.04      | 122.92   |
| 16  | A     | 827 | CLA  | O2D-CGD-CBD | 4.91  | 119.99      | 111.27   |
| 16  | B     | 830 | CLA  | CMD-C2D-C1D | 4.91  | 133.36      | 124.71   |
| 16  | A     | 802 | CLA  | CMD-C2D-C1D | 4.90  | 133.35      | 124.71   |
| 17  | 1     | 612 | C7Z  | C1-C6-C5    | -4.90 | 115.72      | 122.61   |
| 16  | L     | 205 | CLA  | O2D-CGD-CBD | 4.89  | 119.96      | 111.27   |
| 16  | B     | 823 | CLA  | CMD-C2D-C1D | 4.89  | 133.33      | 124.71   |
| 16  | 1     | 605 | CLA  | O2D-CGD-CBD | 4.88  | 119.95      | 111.27   |
| 16  | B     | 833 | CLA  | O2D-CGD-CBD | 4.88  | 119.95      | 111.27   |
| 21  | A     | 850 | BCR  | C30-C25-C24 | 4.88  | 129.59      | 115.78   |
| 16  | A     | 818 | CLA  | O2D-CGD-CBD | 4.88  | 119.94      | 111.27   |
| 17  | 2     | 614 | C7Z  | C27-C28-C29 | -4.87 | 118.87      | 126.23   |
| 16  | 2     | 607 | CLA  | CMD-C2D-C1D | 4.87  | 133.30      | 124.71   |
| 21  | K     | 104 | BCR  | C11-C12-C13 | 4.87  | 140.10      | 126.42   |
| 16  | B     | 828 | CLA  | O2D-CGD-CBD | 4.87  | 119.92      | 111.27   |
| 26  | A     | 801 | CL0  | C3D-C2D-C1D | -4.86 | 99.20       | 105.83   |
| 16  | B     | 815 | CLA  | CMD-C2D-C1D | 4.86  | 133.27      | 124.71   |
| 18  | 2     | 616 | RRX  | C16-C17-C18 | -4.85 | 120.38      | 127.31   |
| 21  | B     | 843 | BCR  | C28-C27-C26 | -4.85 | 105.42      | 114.08   |
| 22  | 2     | 619 | PGT  | O2-C31-C32  | 4.85  | 121.95      | 111.50   |
| 16  | O     | 203 | CLA  | O2D-CGD-CBD | 4.84  | 119.87      | 111.27   |
| 16  | 2     | 609 | CLA  | O2A-C1-C2   | 4.84  | 121.36      | 108.64   |
| 16  | 2     | 603 | CLA  | O2D-CGD-CBD | 4.84  | 119.86      | 111.27   |
| 17  | 3     | 217 | C7Z  | C11-C10-C9  | -4.84 | 120.41      | 127.31   |
| 16  | A     | 821 | CLA  | O2A-C1-C2   | 4.83  | 121.32      | 108.64   |
| 16  | A     | 839 | CLA  | CMD-C2D-C1D | 4.83  | 133.22      | 124.71   |
| 16  | B     | 815 | CLA  | O2D-CGD-CBD | 4.82  | 119.83      | 111.27   |
| 20  | 2     | 618 | ERG  | C19-C10-C1  | -4.81 | 101.83      | 109.43   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | B     | 855 | BCR  | C30-C25-C26 | -4.80 | 115.85      | 122.61   |
| 16  | B     | 804 | CLA  | CMD-C2D-C1D | 4.80  | 133.17      | 124.71   |
| 18  | A     | 847 | RRX  | C16-C17-C18 | 4.80  | 134.16      | 127.31   |
| 16  | L     | 201 | CLA  | O2D-CGD-CBD | 4.80  | 119.79      | 111.27   |
| 16  | 2     | 604 | CLA  | O2A-C1-C2   | 4.80  | 121.24      | 108.64   |
| 16  | B     | 812 | CLA  | CMD-C2D-C1D | 4.78  | 133.14      | 124.71   |
| 21  | A     | 850 | BCR  | C29-C30-C25 | -4.78 | 103.13      | 110.48   |
| 21  | L     | 202 | BCR  | C34-C9-C10  | -4.77 | 116.24      | 122.92   |
| 16  | A     | 818 | CLA  | O2A-C1-C2   | 4.77  | 121.17      | 108.64   |
| 21  | K     | 104 | BCR  | C36-C18-C17 | -4.76 | 116.25      | 122.92   |
| 17  | 1     | 614 | C7Z  | C27-C28-C29 | -4.76 | 119.04      | 126.23   |
| 16  | 1     | 608 | CLA  | O2D-CGD-CBD | 4.76  | 119.73      | 111.27   |
| 16  | F     | 201 | CLA  | CMD-C2D-C1D | 4.76  | 133.10      | 124.71   |
| 16  | A     | 835 | CLA  | O2A-C1-C2   | 4.74  | 121.10      | 108.64   |
| 16  | A     | 829 | CLA  | O2D-CGD-CBD | 4.74  | 119.69      | 111.27   |
| 16  | B     | 810 | CLA  | O2A-C1-C2   | 4.74  | 121.08      | 108.64   |
| 21  | B     | 842 | BCR  | C1-C6-C5    | -4.73 | 115.94      | 122.61   |
| 16  | 3     | 212 | CLA  | O2A-C1-C2   | 4.73  | 121.08      | 108.64   |
| 16  | 3     | 209 | CLA  | O2D-CGD-CBD | 4.73  | 119.68      | 111.27   |
| 20  | 2     | 621 | ERG  | C14-C13-C17 | 4.73  | 104.77      | 99.72    |
| 16  | B     | 833 | CLA  | CMD-C2D-C1D | 4.73  | 133.05      | 124.71   |
| 16  | B     | 809 | CLA  | O2D-CGD-CBD | 4.73  | 119.67      | 111.27   |
| 17  | 3     | 201 | C7Z  | C7-C8-C9    | -4.73 | 119.09      | 126.23   |
| 16  | L     | 203 | CLA  | O2D-CGD-CBD | 4.71  | 119.65      | 111.27   |
| 16  | F     | 201 | CLA  | O2D-CGD-CBD | 4.71  | 119.64      | 111.27   |
| 18  | J     | 103 | RRX  | C7-C8-C9    | -4.71 | 119.12      | 126.23   |
| 16  | 2     | 608 | CLA  | CAC-C3C-C4C | 4.70  | 130.91      | 124.81   |
| 16  | B     | 801 | CLA  | O2D-CGD-CBD | 4.70  | 119.62      | 111.27   |
| 16  | B     | 831 | CLA  | O2A-C1-C2   | 4.70  | 120.98      | 108.64   |
| 16  | A     | 810 | CLA  | O2A-C1-C2   | 4.69  | 120.97      | 108.64   |
| 16  | 1     | 609 | CLA  | O2D-CGD-CBD | 4.69  | 119.61      | 111.27   |
| 17  | 3     | 218 | C7Z  | C1-C6-C5    | -4.69 | 116.00      | 122.61   |
| 18  | 1     | 613 | RRX  | C29-C28-C27 | 4.68  | 116.72      | 110.30   |
| 17  | 3     | 201 | C7Z  | C31-C30-C29 | -4.68 | 120.63      | 127.31   |
| 16  | A     | 838 | CLA  | O2A-C1-C2   | 4.67  | 120.92      | 108.64   |
| 16  | 2     | 611 | CLA  | O2D-CGD-CBD | 4.66  | 119.55      | 111.27   |
| 17  | J     | 104 | C7Z  | C18-C5-C6   | -4.65 | 119.30      | 124.53   |
| 17  | 1     | 612 | C7Z  | C7-C8-C9    | -4.64 | 119.22      | 126.23   |
| 16  | B     | 803 | CLA  | O2A-C1-C2   | 4.64  | 120.84      | 108.64   |
| 21  | A     | 846 | BCR  | C30-C25-C26 | -4.64 | 116.07      | 122.61   |
| 18  | K     | 103 | RRX  | C33-C5-C6   | -4.64 | 119.32      | 124.53   |
| 21  | O     | 205 | BCR  | C34-C9-C10  | -4.64 | 116.43      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | B     | 847 | BCR  | C30-C25-C24 | 4.64  | 128.90      | 115.78   |
| 17  | 2     | 615 | C7Z  | C15-C14-C13 | -4.64 | 120.69      | 127.31   |
| 18  | 1     | 613 | RRX  | C33-C5-C6   | -4.64 | 119.32      | 124.53   |
| 16  | A     | 855 | CLA  | CMD-C2D-C1D | 4.63  | 132.88      | 124.71   |
| 16  | B     | 830 | CLA  | O2D-CGD-CBD | 4.63  | 119.50      | 111.27   |
| 18  | 2     | 616 | RRX  | C20-C21-C22 | -4.63 | 120.71      | 127.31   |
| 16  | 1     | 611 | CLA  | O2D-CGD-CBD | 4.63  | 119.49      | 111.27   |
| 26  | A     | 801 | CL0  | O2D-CGD-CBD | 4.63  | 119.49      | 111.27   |
| 16  | 3     | 203 | CLA  | O2A-C1-C2   | 4.63  | 120.79      | 108.64   |
| 21  | B     | 841 | BCR  | C34-C9-C10  | -4.62 | 116.45      | 122.92   |
| 21  | B     | 855 | BCR  | C1-C6-C7    | 4.62  | 128.85      | 115.78   |
| 16  | 2     | 609 | CLA  | O2D-CGD-CBD | 4.62  | 119.48      | 111.27   |
| 18  | K     | 103 | RRX  | C4-C5-C6    | -4.61 | 116.04      | 122.73   |
| 17  | 3     | 201 | C7Z  | C35-C34-C33 | -4.61 | 120.73      | 127.31   |
| 17  | 3     | 216 | C7Z  | C32-C33-C34 | 4.61  | 126.01      | 118.94   |
| 16  | 2     | 610 | CLA  | CMA-C3A-C4A | 4.60  | 124.14      | 111.77   |
| 21  | A     | 845 | BCR  | C3-C4-C5    | -4.60 | 105.86      | 114.08   |
| 17  | 3     | 216 | C7Z  | C18-C5-C6   | -4.59 | 119.37      | 124.53   |
| 21  | L     | 202 | BCR  | C28-C27-C26 | -4.59 | 105.88      | 114.08   |
| 16  | A     | 839 | CLA  | O2D-CGD-CBD | 4.59  | 119.42      | 111.27   |
| 18  | J     | 103 | RRX  | C20-C19-C18 | -4.59 | 113.53      | 126.42   |
| 16  | A     | 821 | CLA  | O2D-CGD-CBD | 4.59  | 119.42      | 111.27   |
| 17  | 3     | 215 | C7Z  | C35-C34-C33 | -4.58 | 120.77      | 127.31   |
| 16  | 1     | 610 | CLA  | O2A-C1-C2   | 4.57  | 120.64      | 108.64   |
| 16  | B     | 804 | CLA  | O2D-CGD-CBD | 4.57  | 119.38      | 111.27   |
| 21  | F     | 206 | BCR  | C35-C13-C14 | -4.56 | 116.53      | 122.92   |
| 16  | L     | 204 | CLA  | O2D-CGD-CBD | 4.56  | 119.37      | 111.27   |
| 17  | J     | 104 | C7Z  | C11-C12-C13 | -4.55 | 113.63      | 126.42   |
| 21  | B     | 841 | BCR  | C27-C26-C25 | -4.55 | 116.12      | 122.73   |
| 16  | B     | 801 | CLA  | CMD-C2D-C1D | 4.54  | 132.72      | 124.71   |
| 21  | B     | 842 | BCR  | C37-C22-C21 | -4.53 | 116.58      | 122.92   |
| 20  | 2     | 621 | ERG  | C7-C6-C5    | -4.52 | 115.26      | 123.20   |
| 20  | 2     | 618 | ERG  | C19-C10-C5  | -4.52 | 101.02      | 108.34   |
| 16  | A     | 825 | CLA  | O2D-CGD-CBD | 4.52  | 119.29      | 111.27   |
| 16  | A     | 815 | CLA  | O2A-C1-C2   | 4.52  | 120.50      | 108.64   |
| 18  | J     | 103 | RRX  | C23-C22-C21 | -4.51 | 112.02      | 118.94   |
| 25  | L     | 208 | PTY  | O7-C8-C11   | 4.51  | 121.22      | 111.50   |
| 16  | O     | 204 | CLA  | O2A-C1-C2   | 4.51  | 120.48      | 108.64   |
| 16  | A     | 837 | CLA  | O2A-C1-C2   | 4.50  | 120.47      | 108.64   |
| 17  | A     | 843 | C7Z  | C18-C5-C6   | -4.50 | 119.47      | 124.53   |
| 16  | A     | 804 | CLA  | O2D-CGD-CBD | 4.50  | 119.26      | 111.27   |
| 16  | 2     | 610 | CLA  | O2A-C1-C2   | 4.50  | 120.46      | 108.64   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 811 | CLA  | O2A-C1-C2   | 4.50  | 120.46      | 108.64   |
| 17  | 1     | 615 | C7Z  | C18-C5-C6   | -4.50 | 119.48      | 124.53   |
| 16  | B     | 838 | CLA  | O2A-C1-C2   | 4.49  | 120.44      | 108.64   |
| 16  | B     | 823 | CLA  | O2D-CGD-CBD | 4.49  | 119.25      | 111.27   |
| 16  | B     | 821 | CLA  | O2A-C1-C2   | 4.49  | 120.43      | 108.64   |
| 17  | 3     | 217 | C7Z  | C15-C14-C13 | -4.49 | 120.91      | 127.31   |
| 21  | B     | 843 | BCR  | C19-C18-C17 | 4.48  | 125.82      | 118.94   |
| 18  | 1     | 613 | RRX  | C38-C26-C25 | -4.48 | 119.50      | 124.53   |
| 16  | B     | 809 | CLA  | O2A-C1-C2   | 4.47  | 120.39      | 108.64   |
| 16  | A     | 854 | CLA  | CMD-C2D-C1D | 4.47  | 132.59      | 124.71   |
| 16  | A     | 814 | CLA  | O2A-C1-C2   | 4.47  | 120.37      | 108.64   |
| 17  | 1     | 614 | C7Z  | C38-C25-C26 | -4.46 | 119.52      | 124.53   |
| 16  | B     | 825 | CLA  | CMD-C2D-C1D | 4.46  | 132.58      | 124.71   |
| 16  | B     | 834 | CLA  | O2A-C1-C2   | 4.46  | 120.36      | 108.64   |
| 16  | 2     | 613 | CLA  | O2A-C1-C2   | 4.46  | 120.36      | 108.64   |
| 17  | 3     | 217 | C7Z  | C1-C6-C5    | -4.46 | 116.33      | 122.61   |
| 21  | B     | 842 | BCR  | C23-C22-C21 | 4.46  | 125.78      | 118.94   |
| 18  | A     | 847 | RRX  | C36-C18-C19 | 4.44  | 125.08      | 118.08   |
| 21  | L     | 202 | BCR  | C19-C18-C17 | 4.44  | 125.76      | 118.94   |
| 16  | 1     | 610 | CLA  | O2D-CGD-CBD | 4.44  | 119.15      | 111.27   |
| 16  | I     | 102 | CLA  | O2A-C1-C2   | 4.44  | 120.29      | 108.64   |
| 16  | 2     | 602 | CLA  | O2A-C1-C2   | 4.42  | 120.26      | 108.64   |
| 16  | A     | 836 | CLA  | O2A-C1-C2   | 4.42  | 120.26      | 108.64   |
| 16  | A     | 824 | CLA  | O2D-CGD-CBD | 4.42  | 119.12      | 111.27   |
| 16  | 1     | 602 | CLA  | O2A-C1-C2   | 4.42  | 120.25      | 108.64   |
| 16  | 3     | 205 | CLA  | O2D-CGD-CBD | 4.41  | 119.10      | 111.27   |
| 19  | 2     | 622 | LHG  | O7-C7-C8    | 4.41  | 121.00      | 111.50   |
| 16  | F     | 204 | CLA  | CMD-C2D-C1D | 4.40  | 132.47      | 124.71   |
| 16  | A     | 823 | CLA  | O2D-CGD-CBD | 4.39  | 119.07      | 111.27   |
| 21  | L     | 206 | BCR  | C12-C13-C14 | -4.39 | 112.20      | 118.94   |
| 17  | 3     | 217 | C7Z  | C7-C8-C9    | -4.39 | 119.60      | 126.23   |
| 26  | A     | 801 | CL0  | O2A-C1-C2   | 4.39  | 120.17      | 108.64   |
| 21  | A     | 857 | BCR  | C7-C6-C5    | 4.39  | 132.09      | 121.46   |
| 16  | A     | 825 | CLA  | O2A-C1-C2   | 4.39  | 120.16      | 108.64   |
| 16  | A     | 829 | CLA  | O2A-C1-C2   | 4.38  | 120.16      | 108.64   |
| 16  | 1     | 611 | CLA  | O2A-C1-C2   | 4.38  | 120.14      | 108.64   |
| 16  | A     | 807 | CLA  | O2A-C1-C2   | 4.38  | 120.14      | 108.64   |
| 17  | J     | 104 | C7Z  | C35-C34-C33 | -4.37 | 121.07      | 127.31   |
| 16  | 3     | 205 | CLA  | CAA-C2A-C1A | 4.37  | 126.30      | 111.97   |
| 21  | B     | 847 | BCR  | C29-C30-C25 | -4.37 | 103.75      | 110.48   |
| 16  | 2     | 611 | CLA  | O2A-C1-C2   | 4.36  | 120.10      | 108.64   |
| 16  | O     | 204 | CLA  | O2D-CGD-CBD | 4.36  | 119.01      | 111.27   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | B     | 841 | BCR  | C30-C25-C26 | -4.36 | 116.47      | 122.61   |
| 21  | A     | 846 | BCR  | C30-C25-C24 | 4.35  | 128.09      | 115.78   |
| 18  | J     | 103 | RRX  | C16-C17-C18 | 4.35  | 133.51      | 127.31   |
| 25  | 3     | 221 | PTY  | O7-C8-C11   | 4.34  | 120.86      | 111.50   |
| 16  | B     | 827 | CLA  | O2D-CGD-CBD | 4.34  | 118.98      | 111.27   |
| 31  | B     | 849 | DGD  | O2G-C1B-C2B | 4.34  | 120.86      | 111.50   |
| 21  | B     | 847 | BCR  | C38-C26-C27 | 4.34  | 121.96      | 113.62   |
| 17  | 2     | 615 | C7Z  | C11-C10-C9  | -4.34 | 121.11      | 127.31   |
| 17  | 3     | 216 | C7Z  | C1-C6-C5    | -4.34 | 116.50      | 122.61   |
| 16  | A     | 832 | CLA  | O2A-C1-C2   | 4.33  | 120.01      | 108.64   |
| 17  | 3     | 216 | C7Z  | C40-C33-C34 | -4.32 | 116.87      | 122.92   |
| 16  | A     | 824 | CLA  | O2A-C1-C2   | 4.32  | 120.00      | 108.64   |
| 23  | 2     | 620 | DGA  | OG2-CB1-CB2 | 4.32  | 120.82      | 111.50   |
| 16  | A     | 811 | CLA  | O2D-CGD-CBD | 4.32  | 118.95      | 111.27   |
| 31  | B     | 850 | DGD  | O2G-C1B-C2B | 4.32  | 120.80      | 111.50   |
| 21  | B     | 847 | BCR  | C15-C14-C13 | -4.32 | 121.15      | 127.31   |
| 16  | 3     | 204 | CLA  | O2A-C1-C2   | 4.31  | 119.97      | 108.64   |
| 21  | A     | 844 | BCR  | C30-C25-C26 | -4.31 | 116.54      | 122.61   |
| 16  | I     | 101 | CLA  | O2A-C1-C2   | 4.31  | 119.96      | 108.64   |
| 16  | L     | 203 | CLA  | O2A-C1-C2   | 4.29  | 119.92      | 108.64   |
| 26  | A     | 801 | CL0  | O2A-CGA-CBA | 4.29  | 125.37      | 111.91   |
| 16  | B     | 826 | CLA  | O2A-C1-C2   | 4.29  | 119.90      | 108.64   |
| 16  | B     | 828 | CLA  | O2A-C1-C2   | 4.28  | 119.89      | 108.64   |
| 25  | 3     | 220 | PTY  | O7-C8-C11   | 4.28  | 120.73      | 111.50   |
| 16  | B     | 808 | CLA  | O2A-C1-C2   | 4.28  | 119.88      | 108.64   |
| 21  | F     | 203 | BCR  | C36-C18-C17 | -4.28 | 116.93      | 122.92   |
| 18  | 1     | 613 | RRX  | C20-C21-C22 | -4.28 | 121.20      | 127.31   |
| 16  | 2     | 608 | CLA  | O2A-C1-C2   | 4.27  | 119.84      | 108.64   |
| 20  | 2     | 618 | ERG  | C18-C13-C12 | -4.26 | 103.86      | 110.59   |
| 16  | B     | 817 | CLA  | O2D-CGD-CBD | 4.25  | 118.82      | 111.27   |
| 16  | B     | 812 | CLA  | O2A-C1-C2   | 4.25  | 119.81      | 108.64   |
| 16  | B     | 823 | CLA  | O2A-C1-C2   | 4.24  | 119.79      | 108.64   |
| 16  | 2     | 601 | CLA  | O2A-C1-C2   | 4.24  | 119.77      | 108.64   |
| 21  | O     | 205 | BCR  | C19-C18-C17 | 4.22  | 125.42      | 118.94   |
| 21  | A     | 857 | BCR  | C4-C5-C6    | -4.22 | 116.60      | 122.73   |
| 16  | B     | 822 | CLA  | O2D-CGD-CBD | 4.22  | 118.77      | 111.27   |
| 16  | B     | 807 | CLA  | O2A-C1-C2   | 4.22  | 119.72      | 108.64   |
| 16  | A     | 811 | CLA  | O2A-C1-C2   | 4.22  | 119.72      | 108.64   |
| 21  | A     | 857 | BCR  | C27-C26-C25 | -4.21 | 116.61      | 122.73   |
| 17  | 2     | 615 | C7Z  | C1-C6-C5    | -4.21 | 116.68      | 122.61   |
| 16  | O     | 203 | CLA  | O2A-C1-C2   | 4.20  | 119.67      | 108.64   |
| 18  | A     | 847 | RRX  | C15-C14-C13 | -4.20 | 121.32      | 127.31   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 820 | CLA  | O2A-C1-C2   | 4.19  | 119.66      | 108.64   |
| 20  | 2     | 618 | ERG  | C7-C6-C5    | -4.19 | 115.84      | 123.20   |
| 18  | A     | 847 | RRX  | C15-C16-C17 | -4.19 | 114.89      | 123.47   |
| 21  | A     | 846 | BCR  | C40-C30-C25 | 4.19  | 117.10      | 110.30   |
| 17  | 3     | 217 | C7Z  | C18-C5-C6   | -4.19 | 119.83      | 124.53   |
| 17  | 3     | 215 | C7Z  | C27-C28-C29 | -4.19 | 119.91      | 126.23   |
| 16  | 2     | 606 | CLA  | O2A-C1-C2   | 4.19  | 119.64      | 108.64   |
| 16  | B     | 811 | CLA  | O2D-CGD-CBD | 4.18  | 118.69      | 111.27   |
| 16  | A     | 803 | CLA  | O2A-C1-C2   | 4.18  | 119.61      | 108.64   |
| 21  | B     | 845 | BCR  | C37-C22-C21 | -4.17 | 117.08      | 122.92   |
| 16  | F     | 204 | CLA  | O2A-C1-C2   | 4.16  | 119.58      | 108.64   |
| 16  | A     | 822 | CLA  | O2A-C1-C2   | 4.16  | 119.58      | 108.64   |
| 17  | 1     | 616 | C7Z  | C18-C5-C6   | -4.16 | 119.86      | 124.53   |
| 20  | 2     | 621 | ERG  | C19-C10-C5  | -4.15 | 101.62      | 108.34   |
| 21  | L     | 207 | BCR  | C34-C9-C10  | -4.15 | 117.11      | 122.92   |
| 16  | L     | 201 | CLA  | O2A-C1-C2   | 4.15  | 119.55      | 108.64   |
| 16  | L     | 204 | CLA  | O2A-C1-C2   | 4.15  | 119.54      | 108.64   |
| 21  | B     | 847 | BCR  | C37-C22-C23 | 4.15  | 124.61      | 118.08   |
| 16  | B     | 833 | CLA  | O2A-C1-C2   | 4.14  | 119.52      | 108.64   |
| 18  | 1     | 613 | RRX  | C7-C8-C9    | -4.13 | 119.99      | 126.23   |
| 16  | B     | 835 | CLA  | O2A-C1-C2   | 4.13  | 119.49      | 108.64   |
| 16  | 3     | 214 | CLA  | O2A-C1-C2   | 4.13  | 119.48      | 108.64   |
| 16  | O     | 202 | CLA  | O2A-C1-C2   | 4.12  | 119.48      | 108.64   |
| 16  | L     | 205 | CLA  | O2A-C1-C2   | 4.12  | 119.47      | 108.64   |
| 17  | 3     | 201 | C7Z  | C27-C28-C29 | -4.12 | 120.01      | 126.23   |
| 21  | L     | 207 | BCR  | C30-C25-C26 | -4.12 | 116.81      | 122.61   |
| 21  | F     | 206 | BCR  | C37-C22-C21 | -4.11 | 117.16      | 122.92   |
| 26  | A     | 801 | CL0  | CHD-C1D-ND  | -4.11 | 120.67      | 124.45   |
| 16  | 3     | 207 | CLA  | O2A-C1-C2   | 4.11  | 119.44      | 108.64   |
| 16  | A     | 856 | CLA  | O2A-C1-C2   | 4.10  | 119.41      | 108.64   |
| 21  | I     | 103 | BCR  | C37-C22-C21 | -4.10 | 117.18      | 122.92   |
| 16  | A     | 828 | CLA  | O2D-CGD-CBD | 4.10  | 118.55      | 111.27   |
| 21  | I     | 103 | BCR  | C34-C9-C10  | -4.10 | 117.18      | 122.92   |
| 16  | A     | 813 | CLA  | O2A-C1-C2   | 4.09  | 119.39      | 108.64   |
| 21  | B     | 855 | BCR  | C1-C6-C5    | -4.09 | 116.85      | 122.61   |
| 16  | B     | 816 | CLA  | O2A-C1-C2   | 4.09  | 119.38      | 108.64   |
| 16  | A     | 854 | CLA  | O2D-CGD-CBD | 4.08  | 118.52      | 111.27   |
| 16  | A     | 831 | CLA  | O2A-C1-C2   | 4.08  | 119.36      | 108.64   |
| 16  | 1     | 604 | CLA  | O2A-C1-C2   | 4.08  | 119.35      | 108.64   |
| 17  | 1     | 612 | C7Z  | C18-C5-C6   | -4.07 | 119.95      | 124.53   |
| 16  | F     | 202 | CLA  | O2A-C1-C2   | 4.07  | 119.33      | 108.64   |
| 21  | B     | 847 | BCR  | C19-C18-C17 | 4.07  | 125.18      | 118.94   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 18  | K     | 103 | RRX  | C20-C21-C22 | -4.07 | 121.50      | 127.31   |
| 16  | B     | 819 | CLA  | O2A-C1-C2   | 4.06  | 119.31      | 108.64   |
| 17  | 3     | 215 | C7Z  | C11-C10-C9  | -4.06 | 121.52      | 127.31   |
| 16  | B     | 802 | CLA  | O2A-C1-C2   | 4.05  | 119.28      | 108.64   |
| 17  | 2     | 615 | C7Z  | C18-C5-C6   | -4.04 | 119.99      | 124.53   |
| 19  | 1     | 617 | LHG  | O7-C7-C8    | 4.04  | 120.22      | 111.50   |
| 16  | B     | 815 | CLA  | O2A-C1-C2   | 4.04  | 119.24      | 108.64   |
| 21  | B     | 845 | BCR  | C34-C9-C10  | -4.03 | 117.27      | 122.92   |
| 21  | 2     | 617 | BCR  | C36-C18-C17 | -4.03 | 117.28      | 122.92   |
| 16  | F     | 205 | CLA  | O2A-C1-C2   | 4.03  | 119.22      | 108.64   |
| 16  | 1     | 606 | CLA  | O2A-C1-C2   | 4.02  | 119.21      | 108.64   |
| 16  | 1     | 603 | CLA  | O2A-C1-C2   | 4.02  | 119.20      | 108.64   |
| 21  | L     | 207 | BCR  | C27-C26-C25 | -4.02 | 116.90      | 122.73   |
| 17  | 3     | 201 | C7Z  | C38-C25-C26 | -4.01 | 120.02      | 124.53   |
| 21  | A     | 845 | BCR  | C27-C26-C25 | -4.01 | 116.91      | 122.73   |
| 21  | B     | 855 | BCR  | C30-C25-C24 | 4.01  | 127.12      | 115.78   |
| 16  | B     | 829 | CLA  | O2A-C1-C2   | 4.01  | 119.17      | 108.64   |
| 16  | 2     | 605 | CLA  | O2D-CGD-CBD | 4.00  | 118.38      | 111.27   |
| 17  | 1     | 616 | C7Z  | C1-C6-C5    | -4.00 | 116.98      | 122.61   |
| 18  | 2     | 616 | RRX  | C30-C25-C26 | -3.99 | 116.99      | 122.61   |
| 16  | 3     | 208 | CLA  | O2A-C1-C2   | 3.99  | 119.13      | 108.64   |
| 16  | 3     | 209 | CLA  | O2A-C1-C2   | 3.99  | 119.13      | 108.64   |
| 16  | B     | 836 | CLA  | O2A-C1-C2   | 3.99  | 119.12      | 108.64   |
| 16  | 3     | 211 | CLA  | O2A-C1-C2   | 3.99  | 119.12      | 108.64   |
| 17  | 1     | 612 | C7Z  | C40-C33-C34 | -3.98 | 117.34      | 122.92   |
| 17  | 3     | 218 | C7Z  | C38-C25-C26 | -3.98 | 120.06      | 124.53   |
| 16  | A     | 802 | CLA  | C1-O2A-CGA  | 3.97  | 126.87      | 116.44   |
| 16  | A     | 854 | CLA  | O2A-C1-C2   | 3.96  | 119.05      | 108.64   |
| 21  | 2     | 617 | BCR  | C36-C18-C19 | -3.96 | 111.84      | 118.08   |
| 16  | J     | 102 | CLA  | O2A-C1-C2   | 3.95  | 119.02      | 108.64   |
| 16  | 3     | 210 | CLA  | O2A-C1-C2   | 3.95  | 119.01      | 108.64   |
| 16  | A     | 855 | CLA  | O2A-C1-C2   | 3.93  | 118.97      | 108.64   |
| 17  | 1     | 616 | C7Z  | C21-C26-C25 | -3.93 | 117.08      | 122.61   |
| 17  | 3     | 218 | C7Z  | C18-C5-C6   | -3.93 | 120.12      | 124.53   |
| 16  | A     | 819 | CLA  | O2A-C1-C2   | 3.92  | 118.94      | 108.64   |
| 21  | A     | 850 | BCR  | C33-C5-C4   | 3.92  | 121.15      | 113.62   |
| 17  | 1     | 616 | C7Z  | C38-C25-C26 | -3.92 | 120.13      | 124.53   |
| 16  | A     | 834 | CLA  | O2A-C1-C2   | 3.92  | 118.94      | 108.64   |
| 16  | K     | 102 | CLA  | O2A-C1-C2   | 3.92  | 118.93      | 108.64   |
| 23  | J     | 101 | DGA  | OG2-CB1-CB2 | 3.91  | 119.94      | 111.50   |
| 21  | A     | 845 | BCR  | C4-C5-C6    | -3.91 | 117.06      | 122.73   |
| 17  | 1     | 615 | C7Z  | C35-C15-C14 | -3.91 | 115.47      | 123.47   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29  | B     | 854 | 3PH  | O21-C21-C22 | 3.90  | 119.90      | 111.50   |
| 25  | A     | 852 | PTY  | O7-C8-C11   | 3.89  | 119.89      | 111.50   |
| 21  | F     | 206 | BCR  | C8-C9-C10   | 3.89  | 124.91      | 118.94   |
| 20  | 2     | 621 | ERG  | C6-C7-C8    | -3.89 | 114.42      | 122.07   |
| 16  | A     | 827 | CLA  | O2A-C1-C2   | 3.88  | 118.84      | 108.64   |
| 21  | L     | 207 | BCR  | C37-C22-C21 | -3.88 | 117.49      | 122.92   |
| 16  | K     | 101 | CLA  | O2A-C1-C2   | 3.88  | 118.83      | 108.64   |
| 16  | A     | 802 | CLA  | O2A-C1-C2   | 3.88  | 118.82      | 108.64   |
| 29  | A     | 849 | 3PH  | O21-C21-C22 | 3.87  | 119.85      | 111.50   |
| 16  | 1     | 608 | CLA  | O2A-C1-C2   | 3.87  | 118.80      | 108.64   |
| 21  | A     | 844 | BCR  | C34-C9-C10  | -3.86 | 117.51      | 122.92   |
| 17  | 1     | 612 | C7Z  | C11-C10-C9  | -3.86 | 121.80      | 127.31   |
| 21  | B     | 842 | BCR  | C34-C9-C10  | -3.86 | 117.52      | 122.92   |
| 21  | B     | 844 | BCR  | C3-C4-C5    | -3.86 | 107.19      | 114.08   |
| 16  | B     | 817 | CLA  | O2A-C1-C2   | 3.85  | 118.75      | 108.64   |
| 16  | B     | 825 | CLA  | CMA-C3A-C4A | 3.84  | 122.10      | 111.77   |
| 21  | F     | 206 | BCR  | C28-C27-C26 | -3.84 | 107.22      | 114.08   |
| 16  | 2     | 603 | CLA  | O2A-C1-C2   | 3.84  | 118.72      | 108.64   |
| 21  | A     | 857 | BCR  | C8-C7-C6    | 3.84  | 137.97      | 127.20   |
| 16  | B     | 827 | CLA  | O2A-C1-C2   | 3.83  | 118.71      | 108.64   |
| 21  | B     | 855 | BCR  | C36-C18-C17 | -3.83 | 117.56      | 122.92   |
| 17  | 2     | 615 | C7Z  | C22-C23-C24 | 3.83  | 115.55      | 110.30   |
| 16  | 3     | 206 | CLA  | O2A-C1-C2   | 3.82  | 118.68      | 108.64   |
| 21  | A     | 845 | BCR  | C33-C5-C4   | 3.82  | 120.96      | 113.62   |
| 17  | A     | 843 | C7Z  | C11-C10-C9  | -3.82 | 121.86      | 127.31   |
| 16  | 2     | 607 | CLA  | O2A-C1-C2   | 3.82  | 118.66      | 108.64   |
| 17  | 2     | 615 | C7Z  | C21-C26-C25 | -3.80 | 117.25      | 122.61   |
| 16  | B     | 813 | CLA  | O2A-C1-C2   | 3.80  | 118.63      | 108.64   |
| 30  | A     | 851 | T7X  | O16-C10-C12 | 3.80  | 119.70      | 111.50   |
| 16  | B     | 837 | CLA  | O2A-C1-C2   | 3.80  | 118.62      | 108.64   |
| 16  | A     | 823 | CLA  | O2A-C1-C2   | 3.79  | 118.61      | 108.64   |
| 16  | A     | 833 | CLA  | C1-O2A-CGA  | 3.79  | 126.38      | 116.44   |
| 16  | A     | 828 | CLA  | O2A-C1-C2   | 3.78  | 118.58      | 108.64   |
| 17  | 1     | 614 | C7Z  | C21-C26-C25 | -3.78 | 117.29      | 122.61   |
| 16  | 1     | 609 | CLA  | CMA-C3A-C4A | 3.78  | 121.93      | 111.77   |
| 17  | 2     | 615 | C7Z  | C7-C8-C9    | -3.78 | 120.53      | 126.23   |
| 19  | 3     | 219 | LHG  | O7-C7-C8    | 3.78  | 119.64      | 111.50   |
| 18  | J     | 103 | RRX  | C36-C18-C19 | 3.77  | 124.02      | 118.08   |
| 21  | B     | 843 | BCR  | C37-C22-C23 | 3.77  | 124.01      | 118.08   |
| 21  | K     | 104 | BCR  | C15-C14-C13 | 3.77  | 132.68      | 127.31   |
| 21  | B     | 845 | BCR  | C33-C5-C6   | -3.76 | 120.30      | 124.53   |
| 21  | 2     | 617 | BCR  | C34-C9-C10  | -3.76 | 117.66      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | O     | 201 | CLA  | C2D-C1D-ND  | 3.76  | 112.87      | 110.10   |
| 18  | K     | 103 | RRX  | C36-C18-C19 | 3.75  | 123.99      | 118.08   |
| 21  | B     | 843 | BCR  | C30-C25-C26 | -3.75 | 117.33      | 122.61   |
| 17  | A     | 843 | C7Z  | C1-C6-C5    | -3.75 | 117.33      | 122.61   |
| 21  | A     | 846 | BCR  | C3-C4-C5    | -3.75 | 107.39      | 114.08   |
| 21  | I     | 103 | BCR  | C3-C4-C5    | -3.74 | 107.39      | 114.08   |
| 18  | 2     | 616 | RRX  | C33-C5-C4   | 3.74  | 120.80      | 113.62   |
| 16  | B     | 814 | CLA  | O2A-C1-C2   | 3.73  | 118.45      | 108.64   |
| 16  | A     | 802 | CLA  | O2A-CGA-CBA | 3.73  | 123.62      | 111.91   |
| 18  | A     | 847 | RRX  | C4-C5-C6    | -3.73 | 117.31      | 122.73   |
| 16  | O     | 201 | CLA  | CMA-C3A-C4A | 3.73  | 121.80      | 111.77   |
| 18  | J     | 103 | RRX  | C15-C14-C13 | 3.73  | 132.63      | 127.31   |
| 21  | B     | 840 | BCR  | C19-C18-C17 | 3.73  | 124.66      | 118.94   |
| 21  | F     | 203 | BCR  | C33-C5-C6   | -3.73 | 120.34      | 124.53   |
| 17  | 3     | 217 | C7Z  | C31-C32-C33 | -3.73 | 115.95      | 126.42   |
| 21  | A     | 850 | BCR  | C40-C30-C25 | 3.72  | 116.34      | 110.30   |
| 17  | J     | 104 | C7Z  | C38-C25-C26 | -3.72 | 120.35      | 124.53   |
| 16  | A     | 827 | CLA  | C1-C2-C3    | -3.71 | 119.62      | 126.04   |
| 21  | A     | 845 | BCR  | C34-C9-C8   | 3.71  | 123.92      | 118.08   |
| 16  | 1     | 601 | CLA  | O2A-C1-C2   | 3.71  | 118.38      | 108.64   |
| 21  | B     | 855 | BCR  | C3-C4-C5    | -3.70 | 107.46      | 114.08   |
| 17  | 1     | 615 | C7Z  | C31-C32-C33 | -3.70 | 116.01      | 126.42   |
| 18  | K     | 103 | RRX  | C15-C14-C13 | -3.70 | 122.03      | 127.31   |
| 21  | B     | 842 | BCR  | C12-C13-C14 | 3.70  | 124.61      | 118.94   |
| 16  | 3     | 205 | CLA  | C2A-C1A-CHA | 3.70  | 130.32      | 123.86   |
| 21  | K     | 104 | BCR  | C11-C10-C9  | 3.70  | 132.58      | 127.31   |
| 16  | A     | 812 | CLA  | O2A-C1-C2   | 3.69  | 118.33      | 108.64   |
| 16  | O     | 203 | CLA  | CMA-C3A-C4A | 3.68  | 121.67      | 111.77   |
| 17  | J     | 104 | C7Z  | C1-C6-C5    | -3.68 | 117.43      | 122.61   |
| 17  | 2     | 615 | C7Z  | C27-C28-C29 | -3.67 | 120.70      | 126.23   |
| 17  | 3     | 216 | C7Z  | C39-C29-C30 | -3.67 | 117.79      | 122.92   |
| 18  | A     | 847 | RRX  | C33-C5-C4   | 3.66  | 120.66      | 113.62   |
| 18  | 2     | 616 | RRX  | C12-C13-C14 | 3.66  | 124.56      | 118.94   |
| 19  | A     | 841 | LHG  | O7-C7-C8    | 3.66  | 119.39      | 111.50   |
| 26  | A     | 801 | CL0  | C1D-ND-C4D  | -3.66 | 103.74      | 106.33   |
| 17  | 1     | 612 | C7Z  | C15-C14-C13 | -3.66 | 122.09      | 127.31   |
| 17  | 3     | 201 | C7Z  | C21-C26-C25 | -3.65 | 117.47      | 122.61   |
| 21  | A     | 844 | BCR  | C33-C5-C6   | -3.65 | 120.43      | 124.53   |
| 17  | A     | 843 | C7Z  | C38-C25-C26 | -3.64 | 120.44      | 124.53   |
| 16  | 3     | 203 | CLA  | CMA-C3A-C4A | 3.64  | 121.56      | 111.77   |
| 18  | K     | 103 | RRX  | C37-C22-C21 | -3.64 | 117.82      | 122.92   |
| 16  | B     | 803 | CLA  | O2D-CGD-CBD | 3.63  | 117.73      | 111.27   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 609 | CLA  | O2A-C1-C2   | 3.63  | 118.18      | 108.64   |
| 16  | A     | 824 | CLA  | CMA-C3A-C4A | 3.63  | 121.53      | 111.77   |
| 21  | B     | 855 | BCR  | C33-C5-C4   | 3.63  | 120.58      | 113.62   |
| 18  | K     | 103 | RRX  | C38-C26-C25 | -3.63 | 120.45      | 124.53   |
| 19  | A     | 842 | LHG  | O7-C7-C8    | 3.62  | 119.31      | 111.50   |
| 21  | B     | 841 | BCR  | C34-C9-C8   | 3.62  | 123.78      | 118.08   |
| 17  | 3     | 216 | C7Z  | C11-C12-C13 | -3.62 | 116.25      | 126.42   |
| 18  | J     | 103 | RRX  | C4-C5-C6    | -3.61 | 117.48      | 122.73   |
| 16  | B     | 822 | CLA  | O2A-C1-C2   | 3.61  | 118.12      | 108.64   |
| 21  | A     | 857 | BCR  | C36-C18-C17 | -3.61 | 117.87      | 122.92   |
| 16  | 3     | 205 | CLA  | O2A-C1-C2   | 3.61  | 118.11      | 108.64   |
| 21  | A     | 857 | BCR  | C30-C25-C24 | 3.61  | 125.98      | 115.78   |
| 21  | B     | 855 | BCR  | C15-C14-C13 | -3.60 | 122.17      | 127.31   |
| 21  | B     | 840 | BCR  | C1-C6-C7    | 3.60  | 125.97      | 115.78   |
| 16  | A     | 817 | CLA  | O2A-C1-C2   | 3.60  | 118.09      | 108.64   |
| 21  | B     | 845 | BCR  | C30-C25-C26 | -3.60 | 117.55      | 122.61   |
| 16  | A     | 835 | CLA  | CMA-C3A-C4A | 3.59  | 121.43      | 111.77   |
| 18  | 1     | 613 | RRX  | C11-C10-C9  | -3.59 | 122.18      | 127.31   |
| 19  | B     | 851 | LHG  | O7-C7-C8    | 3.59  | 119.24      | 111.50   |
| 20  | 2     | 621 | ERG  | C1-C10-C5   | 3.58  | 115.30      | 108.75   |
| 16  | B     | 825 | CLA  | O2A-C1-C2   | 3.57  | 118.03      | 108.64   |
| 21  | 2     | 617 | BCR  | C1-C6-C5    | -3.57 | 117.58      | 122.61   |
| 20  | 2     | 618 | ERG  | C14-C8-C7   | -3.56 | 117.37      | 124.38   |
| 29  | J     | 105 | 3PH  | O21-C21-C22 | 3.56  | 119.18      | 111.50   |
| 16  | B     | 802 | CLA  | C2C-C1C-NC  | 3.56  | 113.31      | 109.97   |
| 21  | K     | 104 | BCR  | C33-C5-C6   | -3.56 | 120.53      | 124.53   |
| 16  | B     | 818 | CLA  | C1-O2A-CGA  | 3.55  | 125.75      | 116.44   |
| 21  | I     | 103 | BCR  | C30-C25-C26 | -3.55 | 117.62      | 122.61   |
| 21  | A     | 857 | BCR  | C12-C13-C14 | -3.55 | 113.50      | 118.94   |
| 17  | J     | 104 | C7Z  | C20-C13-C14 | -3.55 | 117.96      | 122.92   |
| 16  | B     | 825 | CLA  | C2C-C1C-NC  | 3.54  | 113.29      | 109.97   |
| 16  | B     | 834 | CLA  | O2A-CGA-CBA | 3.54  | 123.01      | 111.91   |
| 20  | 2     | 618 | ERG  | C18-C13-C14 | -3.54 | 104.51      | 110.24   |
| 18  | 1     | 613 | RRX  | C36-C18-C17 | -3.53 | 117.98      | 122.92   |
| 18  | 2     | 616 | RRX  | C33-C5-C6   | -3.53 | 120.56      | 124.53   |
| 16  | A     | 836 | CLA  | CMA-C3A-C4A | 3.53  | 121.26      | 111.77   |
| 21  | F     | 203 | BCR  | C27-C26-C25 | -3.51 | 117.64      | 122.73   |
| 16  | 3     | 205 | CLA  | C3A-C2A-C1A | 3.51  | 106.59      | 101.34   |
| 17  | 1     | 615 | C7Z  | C8-C9-C10   | 3.51  | 124.32      | 118.94   |
| 16  | B     | 805 | CLA  | O2A-C1-C2   | 3.50  | 117.84      | 108.64   |
| 18  | A     | 847 | RRX  | C35-C13-C14 | -3.50 | 118.02      | 122.92   |
| 17  | 3     | 215 | C7Z  | C18-C5-C6   | -3.50 | 120.60      | 124.53   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 801 | CLA  | O2A-C1-C2   | 3.49  | 117.80      | 108.64   |
| 18  | J     | 103 | RRX  | C33-C5-C6   | -3.49 | 120.61      | 124.53   |
| 31  | B     | 846 | DGD  | O2G-C1B-C2B | 3.48  | 119.01      | 111.50   |
| 21  | L     | 206 | BCR  | C30-C25-C24 | 3.48  | 125.63      | 115.78   |
| 21  | K     | 104 | BCR  | C34-C9-C10  | -3.48 | 118.05      | 122.92   |
| 18  | A     | 847 | RRX  | C24-C23-C22 | -3.48 | 120.98      | 126.23   |
| 21  | 2     | 617 | BCR  | C4-C5-C6    | -3.47 | 117.69      | 122.73   |
| 17  | 2     | 614 | C7Z  | C11-C10-C9  | -3.46 | 122.37      | 127.31   |
| 21  | A     | 846 | BCR  | C33-C5-C6   | -3.46 | 120.65      | 124.53   |
| 17  | J     | 104 | C7Z  | C12-C13-C14 | 3.45  | 124.23      | 118.94   |
| 21  | L     | 206 | BCR  | C34-C9-C8   | 3.45  | 123.51      | 118.08   |
| 17  | 1     | 616 | C7Z  | C11-C12-C13 | -3.45 | 116.74      | 126.42   |
| 18  | 2     | 616 | RRX  | C4-C5-C6    | -3.45 | 117.73      | 122.73   |
| 21  | O     | 205 | BCR  | C28-C27-C26 | -3.44 | 107.93      | 114.08   |
| 21  | B     | 847 | BCR  | C23-C22-C21 | -3.44 | 113.66      | 118.94   |
| 21  | I     | 103 | BCR  | C27-C26-C25 | -3.44 | 117.73      | 122.73   |
| 21  | A     | 844 | BCR  | C33-C5-C4   | 3.44  | 120.23      | 113.62   |
| 21  | A     | 846 | BCR  | C34-C9-C8   | 3.44  | 123.50      | 118.08   |
| 21  | F     | 206 | BCR  | C33-C5-C4   | 3.44  | 120.22      | 113.62   |
| 17  | A     | 843 | C7Z  | C11-C12-C13 | -3.44 | 116.75      | 126.42   |
| 18  | K     | 103 | RRX  | C38-C26-C27 | 3.44  | 120.73      | 114.36   |
| 16  | B     | 830 | CLA  | O2A-C1-C2   | 3.44  | 117.67      | 108.64   |
| 16  | A     | 815 | CLA  | CMA-C3A-C4A | 3.44  | 121.02      | 111.77   |
| 18  | J     | 103 | RRX  | C29-C28-C27 | 3.44  | 115.01      | 110.30   |
| 21  | F     | 203 | BCR  | C12-C13-C14 | -3.44 | 113.67      | 118.94   |
| 20  | 2     | 618 | ERG  | C1-C10-C5   | 3.44  | 115.04      | 108.75   |
| 16  | A     | 833 | CLA  | O2A-CGA-CBA | 3.43  | 122.69      | 111.91   |
| 18  | J     | 103 | RRX  | C11-C12-C13 | -3.43 | 116.77      | 126.42   |
| 16  | J     | 102 | CLA  | CMA-C3A-C2A | 3.43  | 127.67      | 113.83   |
| 21  | L     | 202 | BCR  | C34-C9-C8   | 3.41  | 123.45      | 118.08   |
| 16  | A     | 809 | CLA  | O2A-C1-C2   | 3.41  | 117.59      | 108.64   |
| 21  | B     | 841 | BCR  | C1-C6-C5    | -3.40 | 117.83      | 122.61   |
| 21  | A     | 845 | BCR  | C35-C13-C12 | 3.39  | 123.43      | 118.08   |
| 21  | F     | 206 | BCR  | C11-C10-C9  | 3.39  | 132.15      | 127.31   |
| 16  | A     | 823 | CLA  | CHD-C1D-ND  | -3.39 | 121.33      | 124.45   |
| 16  | 1     | 603 | CLA  | C2D-C1D-ND  | 3.39  | 112.60      | 110.10   |
| 21  | A     | 857 | BCR  | C3-C4-C5    | -3.39 | 108.03      | 114.08   |
| 18  | K     | 103 | RRX  | C35-C13-C14 | -3.39 | 118.18      | 122.92   |
| 17  | 1     | 616 | C7Z  | C31-C32-C33 | -3.38 | 116.92      | 126.42   |
| 21  | B     | 843 | BCR  | C36-C18-C17 | -3.38 | 118.19      | 122.92   |
| 21  | B     | 842 | BCR  | C35-C13-C14 | -3.37 | 118.20      | 122.92   |
| 16  | B     | 821 | CLA  | CMA-C3A-C2A | 3.37  | 127.42      | 113.83   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 18  | A     | 847 | RRX  | C34-C9-C8   | -3.36 | 112.78      | 118.08   |
| 21  | B     | 844 | BCR  | C34-C9-C10  | -3.36 | 118.22      | 122.92   |
| 21  | B     | 842 | BCR  | C32-C1-C6   | 3.36  | 115.74      | 110.30   |
| 21  | A     | 857 | BCR  | C19-C18-C17 | 3.35  | 124.08      | 118.94   |
| 21  | L     | 202 | BCR  | C36-C18-C17 | -3.35 | 118.23      | 122.92   |
| 21  | A     | 844 | BCR  | C36-C18-C17 | -3.35 | 118.24      | 122.92   |
| 17  | 1     | 615 | C7Z  | C18-C5-C4   | 3.34  | 120.54      | 114.36   |
| 20  | 2     | 618 | ERG  | C6-C7-C8    | -3.34 | 115.50      | 122.07   |
| 16  | B     | 828 | CLA  | C2C-C1C-NC  | 3.33  | 113.09      | 109.97   |
| 16  | 3     | 212 | CLA  | CMA-C3A-C4A | 3.33  | 120.73      | 111.77   |
| 17  | 2     | 615 | C7Z  | C31-C32-C33 | -3.33 | 117.05      | 126.42   |
| 18  | 2     | 616 | RRX  | C2-C1-C6    | 3.32  | 115.59      | 110.48   |
| 21  | B     | 842 | BCR  | C33-C5-C4   | 3.32  | 119.98      | 113.62   |
| 21  | L     | 207 | BCR  | C30-C25-C24 | 3.31  | 125.14      | 115.78   |
| 21  | B     | 840 | BCR  | C36-C18-C17 | -3.30 | 118.30      | 122.92   |
| 17  | 2     | 614 | C7Z  | C35-C15-C14 | -3.30 | 116.72      | 123.47   |
| 21  | B     | 842 | BCR  | C3-C4-C5    | -3.30 | 108.19      | 114.08   |
| 17  | 3     | 201 | C7Z  | C20-C13-C14 | -3.30 | 118.30      | 122.92   |
| 27  | A     | 840 | PQN  | C15-C13-C12 | -3.30 | 114.45      | 121.12   |
| 16  | 3     | 210 | CLA  | C2C-C1C-NC  | 3.29  | 113.06      | 109.97   |
| 17  | 2     | 614 | C7Z  | C1-C6-C5    | -3.29 | 117.98      | 122.61   |
| 21  | B     | 844 | BCR  | C1-C6-C7    | 3.29  | 125.09      | 115.78   |
| 18  | 1     | 613 | RRX  | C27-C26-C25 | -3.28 | 113.53      | 120.85   |
| 21  | B     | 842 | BCR  | C4-C5-C6    | -3.28 | 117.97      | 122.73   |
| 21  | B     | 841 | BCR  | C3-C4-C5    | -3.27 | 108.23      | 114.08   |
| 16  | O     | 204 | CLA  | CMA-C3A-C4A | 3.27  | 120.57      | 111.77   |
| 16  | B     | 806 | CLA  | O2A-C1-C2   | 3.27  | 117.23      | 108.64   |
| 21  | B     | 845 | BCR  | C19-C18-C17 | 3.27  | 123.96      | 118.94   |
| 17  | 3     | 218 | C7Z  | C27-C28-C29 | -3.26 | 121.31      | 126.23   |
| 18  | A     | 847 | RRX  | C7-C8-C9    | 3.26  | 131.16      | 126.23   |
| 17  | 1     | 616 | C7Z  | C20-C13-C14 | -3.26 | 118.36      | 122.92   |
| 16  | B     | 836 | CLA  | C2C-C1C-NC  | 3.25  | 113.02      | 109.97   |
| 17  | 3     | 215 | C7Z  | C18-C5-C4   | 3.25  | 120.38      | 114.36   |
| 16  | 1     | 610 | CLA  | C2D-C1D-ND  | 3.25  | 112.50      | 110.10   |
| 21  | B     | 855 | BCR  | C37-C22-C21 | -3.25 | 118.37      | 122.92   |
| 16  | 1     | 607 | CLA  | C2D-C1D-ND  | 3.24  | 112.49      | 110.10   |
| 16  | B     | 837 | CLA  | C2C-C1C-NC  | 3.24  | 113.00      | 109.97   |
| 16  | B     | 818 | CLA  | O2A-CGA-CBA | 3.23  | 122.05      | 111.91   |
| 18  | 2     | 616 | RRX  | C11-C12-C13 | -3.23 | 117.35      | 126.42   |
| 16  | 1     | 602 | CLA  | C1-C2-C3    | -3.23 | 120.46      | 126.04   |
| 21  | K     | 104 | BCR  | C37-C22-C23 | 3.23  | 123.16      | 118.08   |
| 17  | 3     | 201 | C7Z  | C19-C9-C10  | -3.22 | 118.41      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 17  | 1     | 615 | C7Z  | C21-C26-C25 | -3.22 | 118.08      | 122.61   |
| 16  | B     | 837 | CLA  | CMA-C3A-C2A | 3.22  | 126.81      | 113.83   |
| 21  | A     | 845 | BCR  | C19-C18-C17 | 3.22  | 123.88      | 118.94   |
| 16  | A     | 821 | CLA  | C2D-C1D-ND  | 3.22  | 112.47      | 110.10   |
| 17  | 2     | 615 | C7Z  | C40-C33-C34 | -3.21 | 118.42      | 122.92   |
| 21  | B     | 843 | BCR  | C33-C5-C6   | -3.21 | 120.92      | 124.53   |
| 21  | F     | 206 | BCR  | C1-C6-C5    | -3.21 | 118.09      | 122.61   |
| 17  | 1     | 615 | C7Z  | C19-C9-C10  | -3.21 | 118.43      | 122.92   |
| 21  | A     | 857 | BCR  | C23-C22-C21 | 3.21  | 123.86      | 118.94   |
| 16  | A     | 830 | CLA  | O2A-C1-C2   | 3.20  | 117.04      | 108.64   |
| 16  | B     | 836 | CLA  | CMA-C3A-C4A | 3.20  | 120.37      | 111.77   |
| 16  | B     | 812 | CLA  | O2A-CGA-CBA | 3.20  | 121.94      | 111.91   |
| 21  | F     | 206 | BCR  | C23-C22-C21 | 3.19  | 123.84      | 118.94   |
| 21  | B     | 843 | BCR  | C27-C26-C25 | -3.19 | 118.11      | 122.73   |
| 18  | J     | 103 | RRX  | C1-C6-C5    | -3.18 | 118.13      | 122.61   |
| 21  | B     | 841 | BCR  | C28-C27-C26 | -3.18 | 108.40      | 114.08   |
| 21  | 2     | 617 | BCR  | C16-C17-C18 | 3.18  | 131.85      | 127.31   |
| 20  | 2     | 621 | ERG  | C17-C20-C22 | 3.18  | 116.31      | 110.27   |
| 16  | O     | 204 | CLA  | C1-O2A-CGA  | 3.18  | 124.78      | 116.44   |
| 16  | F     | 202 | CLA  | C1-C2-C3    | -3.18 | 120.55      | 126.04   |
| 21  | B     | 844 | BCR  | C33-C5-C6   | -3.17 | 120.96      | 124.53   |
| 16  | 3     | 207 | CLA  | C1-C2-C3    | -3.17 | 120.56      | 126.04   |
| 21  | I     | 103 | BCR  | C33-C5-C6   | -3.17 | 120.97      | 124.53   |
| 16  | 3     | 213 | CLA  | CMA-C3A-C4A | 3.17  | 120.29      | 111.77   |
| 21  | 2     | 617 | BCR  | C33-C5-C4   | 3.17  | 119.70      | 113.62   |
| 21  | K     | 104 | BCR  | C38-C26-C27 | 3.17  | 119.70      | 113.62   |
| 17  | 3     | 215 | C7Z  | C8-C7-C6    | -3.17 | 118.31      | 127.20   |
| 16  | A     | 819 | CLA  | C2C-C1C-NC  | 3.16  | 112.94      | 109.97   |
| 16  | A     | 835 | CLA  | C2C-C1C-NC  | 3.16  | 112.94      | 109.97   |
| 21  | B     | 845 | BCR  | C27-C26-C25 | -3.16 | 118.14      | 122.73   |
| 21  | B     | 855 | BCR  | C33-C5-C6   | -3.16 | 120.98      | 124.53   |
| 17  | A     | 843 | C7Z  | C38-C25-C24 | 3.16  | 120.21      | 114.36   |
| 21  | A     | 850 | BCR  | C34-C9-C10  | -3.16 | 118.50      | 122.92   |
| 18  | 2     | 616 | RRX  | C38-C26-C25 | -3.16 | 120.98      | 124.53   |
| 21  | F     | 206 | BCR  | C1-C6-C7    | 3.16  | 124.71      | 115.78   |
| 16  | A     | 811 | CLA  | C2C-C1C-NC  | 3.15  | 112.93      | 109.97   |
| 17  | 3     | 216 | C7Z  | C19-C9-C10  | -3.15 | 118.51      | 122.92   |
| 18  | 1     | 613 | RRX  | C1-C6-C5    | -3.15 | 118.17      | 122.61   |
| 17  | 2     | 614 | C7Z  | C15-C14-C13 | -3.15 | 122.81      | 127.31   |
| 17  | 2     | 614 | C7Z  | C8-C7-C6    | -3.15 | 118.35      | 127.20   |
| 16  | A     | 805 | CLA  | O2A-C1-C2   | 3.15  | 116.91      | 108.64   |
| 21  | O     | 205 | BCR  | C36-C18-C17 | -3.15 | 118.51      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 809 | CLA  | CMA-C3A-C2A | 3.15  | 126.52      | 113.83   |
| 21  | B     | 843 | BCR  | C33-C5-C4   | 3.14  | 119.65      | 113.62   |
| 16  | 2     | 611 | CLA  | CMA-C3A-C4A | 3.14  | 120.21      | 111.77   |
| 16  | B     | 822 | CLA  | CMA-C3A-C4A | 3.14  | 120.21      | 111.77   |
| 21  | A     | 846 | BCR  | C33-C5-C4   | 3.14  | 119.65      | 113.62   |
| 18  | J     | 103 | RRX  | C20-C21-C22 | 3.14  | 131.79      | 127.31   |
| 16  | B     | 811 | CLA  | CMA-C3A-C4A | 3.14  | 120.20      | 111.77   |
| 21  | B     | 841 | BCR  | C19-C18-C17 | 3.14  | 123.75      | 118.94   |
| 16  | I     | 102 | CLA  | C1-C2-C3    | -3.13 | 120.63      | 126.04   |
| 17  | A     | 843 | C7Z  | C15-C35-C34 | -3.12 | 117.07      | 123.47   |
| 16  | A     | 805 | CLA  | O2A-CGA-CBA | 3.12  | 121.71      | 111.91   |
| 17  | J     | 104 | C7Z  | C38-C25-C24 | 3.12  | 120.14      | 114.36   |
| 21  | A     | 844 | BCR  | C37-C22-C23 | 3.12  | 123.00      | 118.08   |
| 17  | 1     | 616 | C7Z  | C38-C25-C24 | 3.11  | 120.12      | 114.36   |
| 16  | 2     | 606 | CLA  | C2C-C1C-NC  | 3.10  | 112.88      | 109.97   |
| 17  | 3     | 216 | C7Z  | C20-C13-C14 | -3.10 | 118.58      | 122.92   |
| 21  | K     | 104 | BCR  | C28-C27-C26 | -3.10 | 108.53      | 114.08   |
| 16  | A     | 802 | CLA  | C2C-C1C-NC  | 3.10  | 112.88      | 109.97   |
| 18  | 1     | 613 | RRX  | C37-C22-C21 | -3.10 | 118.58      | 122.92   |
| 17  | A     | 843 | C7Z  | C35-C34-C33 | -3.10 | 122.89      | 127.31   |
| 17  | 1     | 612 | C7Z  | C28-C27-C26 | -3.10 | 118.50      | 127.20   |
| 16  | B     | 835 | CLA  | C2D-C1D-ND  | 3.10  | 112.39      | 110.10   |
| 16  | A     | 828 | CLA  | O2A-CGA-CBA | 3.10  | 121.63      | 111.91   |
| 16  | B     | 834 | CLA  | C2D-C1D-ND  | 3.10  | 112.39      | 110.10   |
| 21  | B     | 843 | BCR  | C1-C6-C5    | -3.10 | 118.25      | 122.61   |
| 18  | J     | 103 | RRX  | C33-C5-C4   | 3.09  | 119.55      | 113.62   |
| 21  | A     | 845 | BCR  | C36-C18-C17 | -3.09 | 118.60      | 122.92   |
| 21  | B     | 844 | BCR  | C37-C22-C21 | -3.09 | 118.60      | 122.92   |
| 21  | A     | 846 | BCR  | C28-C27-C26 | -3.09 | 108.56      | 114.08   |
| 18  | 2     | 616 | RRX  | C36-C18-C17 | -3.09 | 118.60      | 122.92   |
| 16  | A     | 825 | CLA  | C2C-C1C-NC  | 3.09  | 112.86      | 109.97   |
| 16  | A     | 831 | CLA  | C2C-C1C-NC  | 3.08  | 112.86      | 109.97   |
| 21  | L     | 207 | BCR  | C3-C4-C5    | -3.08 | 108.57      | 114.08   |
| 16  | F     | 204 | CLA  | C2D-C1D-ND  | 3.08  | 112.38      | 110.10   |
| 16  | 1     | 602 | CLA  | C2D-C1D-ND  | 3.08  | 112.38      | 110.10   |
| 16  | 2     | 609 | CLA  | CMA-C3A-C4A | 3.08  | 120.05      | 111.77   |
| 16  | 2     | 613 | CLA  | CMA-C3A-C4A | 3.08  | 120.04      | 111.77   |
| 20  | 1     | 618 | ERG  | C2-C3-C4    | 3.08  | 114.52      | 110.31   |
| 16  | 1     | 610 | CLA  | C1-O2A-CGA  | 3.08  | 124.52      | 116.44   |
| 18  | J     | 103 | RRX  | C23-C24-C25 | -3.08 | 118.56      | 127.20   |
| 16  | 1     | 610 | CLA  | CMA-C3A-C4A | 3.08  | 120.04      | 111.77   |
| 16  | A     | 803 | CLA  | C2C-C1C-NC  | 3.07  | 112.85      | 109.97   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | F     | 203 | BCR  | C30-C25-C24 | 3.07  | 124.46      | 115.78   |
| 16  | B     | 812 | CLA  | C2C-C1C-NC  | 3.06  | 112.84      | 109.97   |
| 16  | A     | 839 | CLA  | C2C-C1C-NC  | 3.06  | 112.84      | 109.97   |
| 21  | A     | 845 | BCR  | C12-C13-C14 | -3.06 | 114.24      | 118.94   |
| 16  | A     | 811 | CLA  | CMA-C3A-C4A | 3.06  | 120.00      | 111.77   |
| 16  | B     | 816 | CLA  | C2C-C1C-NC  | 3.06  | 112.84      | 109.97   |
| 26  | A     | 801 | CL0  | CMC-C2C-C1C | 3.06  | 129.69      | 125.04   |
| 16  | F     | 202 | CLA  | CMA-C3A-C2A | 3.06  | 126.16      | 113.83   |
| 18  | 1     | 613 | RRX  | C35-C13-C12 | 3.05  | 122.89      | 118.08   |
| 16  | A     | 826 | CLA  | C2C-C1C-NC  | 3.05  | 112.83      | 109.97   |
| 21  | B     | 855 | BCR  | C29-C28-C27 | 3.05  | 118.19      | 111.38   |
| 17  | 1     | 616 | C7Z  | C12-C13-C14 | 3.05  | 123.62      | 118.94   |
| 21  | B     | 847 | BCR  | C34-C9-C10  | -3.05 | 118.65      | 122.92   |
| 21  | L     | 202 | BCR  | C30-C25-C24 | 3.04  | 124.39      | 115.78   |
| 16  | B     | 832 | CLA  | C1-O2A-CGA  | 3.04  | 124.42      | 116.44   |
| 21  | B     | 843 | BCR  | C1-C6-C7    | 3.04  | 124.37      | 115.78   |
| 16  | O     | 202 | CLA  | CMA-C3A-C4A | 3.04  | 119.94      | 111.77   |
| 18  | 1     | 613 | RRX  | C16-C17-C18 | -3.03 | 122.98      | 127.31   |
| 16  | A     | 824 | CLA  | C2C-C1C-NC  | 3.03  | 112.81      | 109.97   |
| 18  | A     | 847 | RRX  | C34-C9-C10  | -3.03 | 118.68      | 122.92   |
| 16  | 3     | 211 | CLA  | CMA-C3A-C4A | 3.03  | 119.91      | 111.77   |
| 21  | B     | 855 | BCR  | C32-C1-C6   | 3.03  | 115.21      | 110.30   |
| 16  | A     | 854 | CLA  | CHD-C1D-ND  | -3.03 | 121.67      | 124.45   |
| 16  | B     | 833 | CLA  | C2D-C1D-ND  | 3.03  | 112.33      | 110.10   |
| 21  | L     | 206 | BCR  | C27-C26-C25 | -3.03 | 118.34      | 122.73   |
| 23  | 2     | 620 | DGA  | CDB-CCB-CBB | -3.02 | 99.07       | 114.42   |
| 16  | 1     | 605 | CLA  | CMA-C3A-C4A | 3.02  | 119.89      | 111.77   |
| 21  | B     | 843 | BCR  | C16-C17-C18 | 3.02  | 131.62      | 127.31   |
| 17  | 3     | 218 | C7Z  | C38-C25-C24 | 3.02  | 119.95      | 114.36   |
| 17  | 3     | 217 | C7Z  | C35-C15-C14 | -3.02 | 117.29      | 123.47   |
| 16  | A     | 818 | CLA  | C2C-C1C-NC  | 3.02  | 112.80      | 109.97   |
| 16  | B     | 801 | CLA  | C2D-C1D-ND  | 3.02  | 112.33      | 110.10   |
| 16  | B     | 801 | CLA  | CHD-C1D-ND  | -3.02 | 121.68      | 124.45   |
| 16  | A     | 830 | CLA  | C2C-C1C-NC  | 3.01  | 112.80      | 109.97   |
| 21  | B     | 855 | BCR  | C16-C17-C18 | 3.01  | 131.61      | 127.31   |
| 16  | B     | 802 | CLA  | CMA-C3A-C4A | 3.01  | 119.87      | 111.77   |
| 16  | A     | 811 | CLA  | C1-C2-C3    | -3.01 | 120.84      | 126.04   |
| 16  | 1     | 604 | CLA  | CMA-C3A-C4A | 3.00  | 119.85      | 111.77   |
| 16  | B     | 820 | CLA  | CMA-C3A-C4A | 3.00  | 119.84      | 111.77   |
| 16  | 1     | 605 | CLA  | C2D-C1D-ND  | 3.00  | 112.32      | 110.10   |
| 17  | J     | 104 | C7Z  | C19-C9-C8   | 3.00  | 122.81      | 118.08   |
| 16  | A     | 810 | CLA  | CHD-C1D-ND  | -3.00 | 121.70      | 124.45   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | F     | 202 | CLA  | C2D-C1D-ND  | 3.00  | 112.31      | 110.10   |
| 21  | B     | 842 | BCR  | C7-C6-C5    | -3.00 | 114.20      | 121.46   |
| 21  | K     | 104 | BCR  | C30-C25-C24 | 3.00  | 124.26      | 115.78   |
| 16  | 2     | 607 | CLA  | C2C-C1C-NC  | 3.00  | 112.78      | 109.97   |
| 16  | B     | 824 | CLA  | O2A-C1-C2   | 2.99  | 116.50      | 108.64   |
| 16  | A     | 802 | CLA  | CMA-C3A-C4A | 2.99  | 119.82      | 111.77   |
| 21  | A     | 844 | BCR  | C1-C6-C7    | 2.99  | 124.25      | 115.78   |
| 16  | 1     | 602 | CLA  | C2C-C1C-NC  | 2.99  | 112.78      | 109.97   |
| 16  | A     | 855 | CLA  | C2C-C1C-NC  | 2.99  | 112.77      | 109.97   |
| 16  | 3     | 210 | CLA  | C1C-C2C-C3C | -2.99 | 103.81      | 106.96   |
| 16  | B     | 831 | CLA  | C2C-C1C-NC  | 2.99  | 112.77      | 109.97   |
| 16  | 3     | 214 | CLA  | CMA-C3A-C4A | 2.99  | 119.81      | 111.77   |
| 16  | A     | 826 | CLA  | O2A-C1-C2   | 2.99  | 116.49      | 108.64   |
| 20  | 2     | 621 | ERG  | C18-C13-C12 | -2.99 | 105.87      | 110.59   |
| 16  | L     | 205 | CLA  | CMA-C3A-C4A | 2.99  | 119.80      | 111.77   |
| 21  | B     | 855 | BCR  | C7-C6-C5    | -2.98 | 114.23      | 121.46   |
| 21  | L     | 207 | BCR  | C38-C26-C27 | 2.98  | 119.35      | 113.62   |
| 16  | F     | 201 | CLA  | C2D-C1D-ND  | 2.98  | 112.30      | 110.10   |
| 16  | 3     | 205 | CLA  | C2C-C1C-NC  | 2.98  | 112.77      | 109.97   |
| 16  | 2     | 605 | CLA  | C2D-C1D-ND  | 2.98  | 112.30      | 110.10   |
| 16  | O     | 201 | CLA  | CMC-C2C-C1C | 2.98  | 129.58      | 125.04   |
| 16  | B     | 824 | CLA  | CMA-C3A-C4A | 2.98  | 119.78      | 111.77   |
| 16  | B     | 821 | CLA  | C2C-C1C-NC  | 2.98  | 112.76      | 109.97   |
| 18  | K     | 103 | RRX  | C33-C5-C4   | 2.98  | 119.34      | 113.62   |
| 16  | L     | 203 | CLA  | C2C-C1C-NC  | 2.98  | 112.76      | 109.97   |
| 17  | 3     | 201 | C7Z  | C12-C13-C14 | 2.98  | 123.51      | 118.94   |
| 21  | F     | 203 | BCR  | C23-C22-C21 | 2.98  | 123.51      | 118.94   |
| 21  | A     | 846 | BCR  | C27-C26-C25 | -2.98 | 118.41      | 122.73   |
| 16  | B     | 829 | CLA  | C2C-C1C-NC  | 2.98  | 112.76      | 109.97   |
| 16  | B     | 838 | CLA  | C1-C2-C3    | -2.98 | 120.90      | 126.04   |
| 21  | B     | 855 | BCR  | C36-C18-C19 | -2.97 | 113.39      | 118.08   |
| 17  | 3     | 216 | C7Z  | C18-C5-C4   | 2.97  | 119.86      | 114.36   |
| 16  | L     | 205 | CLA  | C2C-C1C-NC  | 2.97  | 112.75      | 109.97   |
| 16  | B     | 814 | CLA  | C5-C3-C2    | 2.97  | 127.13      | 121.12   |
| 21  | B     | 855 | BCR  | C4-C5-C6    | -2.97 | 118.42      | 122.73   |
| 21  | I     | 103 | BCR  | C38-C26-C27 | 2.97  | 119.31      | 113.62   |
| 16  | A     | 818 | CLA  | C1-O2A-CGA  | 2.96  | 124.22      | 116.44   |
| 16  | 1     | 606 | CLA  | CMA-C3A-C2A | 2.96  | 125.78      | 113.83   |
| 16  | 3     | 213 | CLA  | C2C-C1C-NC  | 2.96  | 112.75      | 109.97   |
| 16  | B     | 827 | CLA  | O2A-CGA-CBA | 2.96  | 121.20      | 111.91   |
| 16  | F     | 201 | CLA  | O2A-C1-C2   | 2.96  | 116.41      | 108.64   |
| 16  | A     | 854 | CLA  | C2D-C1D-ND  | 2.96  | 112.28      | 110.10   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 611 | CLA  | C2C-C1C-NC  | 2.96  | 112.74      | 109.97   |
| 16  | O     | 201 | CLA  | C1D-ND-C4D  | -2.96 | 104.23      | 106.33   |
| 16  | A     | 812 | CLA  | C2C-C1C-NC  | 2.95  | 112.74      | 109.97   |
| 16  | B     | 826 | CLA  | C2C-C1C-NC  | 2.95  | 112.74      | 109.97   |
| 21  | A     | 857 | BCR  | C33-C5-C4   | 2.95  | 119.28      | 113.62   |
| 16  | B     | 804 | CLA  | C2C-C1C-NC  | 2.95  | 112.74      | 109.97   |
| 16  | I     | 101 | CLA  | C2D-C1D-ND  | 2.95  | 112.28      | 110.10   |
| 21  | A     | 850 | BCR  | C15-C14-C13 | -2.95 | 123.10      | 127.31   |
| 16  | 2     | 611 | CLA  | C2D-C1D-ND  | 2.95  | 112.28      | 110.10   |
| 20  | 1     | 618 | ERG  | C15-C14-C13 | 2.95  | 106.83      | 104.21   |
| 17  | 1     | 616 | C7Z  | C8-C7-C6    | -2.94 | 118.93      | 127.20   |
| 18  | J     | 103 | RRX  | C37-C22-C23 | 2.94  | 122.72      | 118.08   |
| 16  | 2     | 613 | CLA  | C2C-C1C-NC  | 2.94  | 112.73      | 109.97   |
| 17  | 3     | 216 | C7Z  | C28-C29-C30 | 2.94  | 123.46      | 118.94   |
| 16  | 1     | 605 | CLA  | O2A-C1-C2   | 2.94  | 116.37      | 108.64   |
| 16  | O     | 201 | CLA  | O2A-C1-C2   | 2.94  | 116.37      | 108.64   |
| 16  | 2     | 604 | CLA  | C2D-C1D-ND  | 2.94  | 112.27      | 110.10   |
| 16  | A     | 856 | CLA  | C1-C2-C3    | -2.94 | 120.96      | 126.04   |
| 16  | 3     | 203 | CLA  | C2D-C1D-ND  | 2.94  | 112.27      | 110.10   |
| 16  | A     | 838 | CLA  | C1-O2A-CGA  | 2.93  | 124.14      | 116.44   |
| 16  | 2     | 605 | CLA  | CHD-C1D-ND  | -2.93 | 121.76      | 124.45   |
| 20  | 2     | 618 | ERG  | C12-C13-C17 | -2.93 | 112.18      | 116.57   |
| 21  | A     | 857 | BCR  | C24-C25-C26 | -2.93 | 114.36      | 121.46   |
| 16  | F     | 205 | CLA  | C2C-C1C-NC  | 2.93  | 112.72      | 109.97   |
| 16  | A     | 818 | CLA  | CHD-C1D-ND  | -2.93 | 121.76      | 124.45   |
| 16  | 1     | 605 | CLA  | C2C-C1C-NC  | 2.93  | 112.72      | 109.97   |
| 21  | B     | 840 | BCR  | C33-C5-C6   | -2.93 | 121.24      | 124.53   |
| 16  | A     | 814 | CLA  | CMA-C3A-C4A | 2.93  | 119.64      | 111.77   |
| 16  | B     | 810 | CLA  | C2C-C1C-NC  | 2.93  | 112.71      | 109.97   |
| 16  | K     | 102 | CLA  | C2C-C1C-NC  | 2.93  | 112.71      | 109.97   |
| 18  | 2     | 616 | RRX  | C23-C22-C21 | 2.93  | 123.43      | 118.94   |
| 16  | 2     | 611 | CLA  | C2C-C1C-NC  | 2.92  | 112.71      | 109.97   |
| 21  | 2     | 617 | BCR  | C20-C21-C22 | 2.92  | 131.48      | 127.31   |
| 21  | B     | 841 | BCR  | C38-C26-C27 | 2.92  | 119.23      | 113.62   |
| 17  | 3     | 217 | C7Z  | C18-C5-C4   | 2.92  | 119.77      | 114.36   |
| 21  | A     | 845 | BCR  | C34-C9-C10  | -2.92 | 118.83      | 122.92   |
| 16  | 2     | 603 | CLA  | C2C-C1C-NC  | 2.92  | 112.71      | 109.97   |
| 17  | 3     | 218 | C7Z  | C28-C27-C26 | -2.92 | 119.01      | 127.20   |
| 16  | B     | 827 | CLA  | C2C-C1C-NC  | 2.92  | 112.70      | 109.97   |
| 21  | K     | 104 | BCR  | C33-C5-C4   | 2.92  | 119.22      | 113.62   |
| 16  | A     | 804 | CLA  | C1-O2A-CGA  | 2.92  | 124.09      | 116.44   |
| 16  | 2     | 601 | CLA  | C2C-C1C-NC  | 2.92  | 112.70      | 109.97   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 3     | 207 | CLA  | C2C-C1C-NC  | 2.92  | 112.70      | 109.97   |
| 16  | B     | 804 | CLA  | C6-C5-C3    | -2.92 | 105.81      | 113.45   |
| 16  | 2     | 601 | CLA  | O2D-CGD-O1D | -2.91 | 118.15      | 123.84   |
| 21  | B     | 840 | BCR  | C34-C9-C10  | -2.91 | 118.85      | 122.92   |
| 21  | B     | 844 | BCR  | C38-C26-C25 | 2.91  | 127.79      | 124.53   |
| 16  | B     | 819 | CLA  | CMA-C3A-C4A | 2.90  | 119.58      | 111.77   |
| 16  | 1     | 606 | CLA  | C2C-C1C-NC  | 2.90  | 112.69      | 109.97   |
| 16  | 3     | 209 | CLA  | CMA-C3A-C4A | 2.90  | 119.58      | 111.77   |
| 18  | J     | 103 | RRX  | C30-C25-C24 | 2.90  | 123.99      | 115.78   |
| 16  | A     | 817 | CLA  | O2A-CGA-CBA | 2.90  | 121.01      | 111.91   |
| 16  | 1     | 611 | CLA  | C1-C2-C3    | -2.90 | 121.03      | 126.04   |
| 16  | A     | 820 | CLA  | O2A-C1-C2   | 2.90  | 116.26      | 108.64   |
| 16  | A     | 815 | CLA  | C2C-C1C-NC  | 2.90  | 112.69      | 109.97   |
| 16  | K     | 101 | CLA  | CMA-C3A-C4A | 2.90  | 119.56      | 111.77   |
| 16  | B     | 828 | CLA  | C1C-C2C-C3C | -2.90 | 103.91      | 106.96   |
| 16  | I     | 101 | CLA  | C1C-C2C-C3C | -2.90 | 103.91      | 106.96   |
| 16  | B     | 818 | CLA  | C2C-C1C-NC  | 2.90  | 112.69      | 109.97   |
| 16  | B     | 819 | CLA  | C2C-C1C-NC  | 2.90  | 112.69      | 109.97   |
| 16  | B     | 817 | CLA  | C2C-C1C-NC  | 2.90  | 112.69      | 109.97   |
| 21  | O     | 205 | BCR  | C16-C17-C18 | 2.90  | 131.44      | 127.31   |
| 16  | B     | 830 | CLA  | C6-C5-C3    | -2.89 | 105.86      | 113.45   |
| 16  | A     | 839 | CLA  | CMA-C3A-C4A | 2.89  | 119.55      | 111.77   |
| 16  | A     | 817 | CLA  | CHD-C1D-ND  | -2.89 | 121.80      | 124.45   |
| 21  | B     | 841 | BCR  | C37-C22-C23 | 2.89  | 122.64      | 118.08   |
| 21  | B     | 841 | BCR  | C23-C24-C25 | -2.89 | 119.08      | 127.20   |
| 16  | A     | 810 | CLA  | O2D-CGD-O1D | -2.89 | 118.18      | 123.84   |
| 16  | 3     | 203 | CLA  | C2C-C1C-NC  | 2.89  | 112.68      | 109.97   |
| 16  | A     | 829 | CLA  | C2C-C1C-NC  | 2.89  | 112.68      | 109.97   |
| 16  | B     | 812 | CLA  | C2D-C1D-ND  | 2.89  | 112.23      | 110.10   |
| 16  | F     | 204 | CLA  | C2C-C1C-NC  | 2.89  | 112.68      | 109.97   |
| 16  | A     | 820 | CLA  | C2C-C1C-NC  | 2.89  | 112.68      | 109.97   |
| 17  | 3     | 201 | C7Z  | C38-C25-C24 | 2.89  | 119.70      | 114.36   |
| 21  | A     | 846 | BCR  | C19-C18-C17 | 2.89  | 123.37      | 118.94   |
| 16  | 1     | 601 | CLA  | CMA-C3A-C4A | 2.89  | 119.53      | 111.77   |
| 16  | 3     | 214 | CLA  | C2C-C1C-NC  | 2.89  | 112.67      | 109.97   |
| 16  | A     | 805 | CLA  | C2C-C1C-NC  | 2.89  | 112.67      | 109.97   |
| 21  | A     | 846 | BCR  | C1-C6-C7    | 2.88  | 123.94      | 115.78   |
| 21  | L     | 207 | BCR  | C37-C22-C23 | 2.88  | 122.62      | 118.08   |
| 26  | A     | 801 | CL0  | CHB-C4A-NA  | 2.88  | 128.50      | 124.51   |
| 16  | A     | 821 | CLA  | C2C-C1C-NC  | 2.88  | 112.67      | 109.97   |
| 16  | B     | 830 | CLA  | CHD-C1D-ND  | -2.87 | 121.81      | 124.45   |
| 17  | 3     | 216 | C7Z  | C21-C26-C25 | -2.87 | 118.56      | 122.61   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 3     | 210 | CLA  | CMA-C3A-C2A | 2.87  | 125.42      | 113.83   |
| 16  | I     | 101 | CLA  | CHD-C1D-ND  | -2.87 | 121.81      | 124.45   |
| 16  | F     | 205 | CLA  | CMA-C3A-C4A | 2.87  | 119.49      | 111.77   |
| 16  | B     | 818 | CLA  | CHD-C1D-ND  | -2.87 | 121.82      | 124.45   |
| 16  | A     | 825 | CLA  | C5-C3-C2    | 2.87  | 126.92      | 121.12   |
| 16  | B     | 808 | CLA  | C1-C2-C3    | -2.87 | 121.09      | 126.04   |
| 21  | A     | 844 | BCR  | C1-C6-C5    | -2.86 | 118.58      | 122.61   |
| 17  | 2     | 615 | C7Z  | C32-C33-C34 | 2.86  | 123.33      | 118.94   |
| 16  | A     | 821 | CLA  | C1C-C2C-C3C | -2.86 | 103.95      | 106.96   |
| 16  | A     | 804 | CLA  | C1-C2-C3    | -2.86 | 121.10      | 126.04   |
| 16  | B     | 824 | CLA  | CHD-C1D-ND  | -2.86 | 121.83      | 124.45   |
| 16  | 1     | 602 | CLA  | C1C-C2C-C3C | -2.86 | 103.95      | 106.96   |
| 16  | 3     | 205 | CLA  | CMA-C3A-C4A | 2.86  | 119.45      | 111.77   |
| 16  | I     | 101 | CLA  | C2C-C1C-NC  | 2.86  | 112.65      | 109.97   |
| 18  | K     | 103 | RRX  | C16-C17-C18 | -2.85 | 123.24      | 127.31   |
| 21  | I     | 103 | BCR  | C33-C5-C4   | 2.85  | 119.10      | 113.62   |
| 16  | 1     | 603 | CLA  | O2A-CGA-CBA | 2.85  | 120.86      | 111.91   |
| 16  | B     | 814 | CLA  | C2C-C1C-NC  | 2.85  | 112.64      | 109.97   |
| 23  | J     | 101 | DGA  | CDB-CCB-CBB | -2.85 | 99.96       | 114.42   |
| 16  | 1     | 601 | CLA  | C2C-C1C-NC  | 2.85  | 112.64      | 109.97   |
| 16  | F     | 202 | CLA  | C2C-C1C-NC  | 2.85  | 112.64      | 109.97   |
| 16  | B     | 815 | CLA  | C2D-C1D-ND  | 2.85  | 112.20      | 110.10   |
| 16  | 3     | 208 | CLA  | C2C-C1C-NC  | 2.85  | 112.64      | 109.97   |
| 17  | 1     | 615 | C7Z  | C10-C11-C12 | -2.84 | 114.34      | 123.22   |
| 16  | B     | 832 | CLA  | C1-C2-C3    | -2.84 | 121.12      | 126.04   |
| 20  | 2     | 618 | ERG  | C2-C3-C4    | 2.84  | 114.20      | 110.31   |
| 16  | B     | 819 | CLA  | O2D-CGD-O1D | -2.84 | 118.29      | 123.84   |
| 16  | O     | 201 | CLA  | CHD-C1D-ND  | -2.84 | 121.85      | 124.45   |
| 16  | 2     | 608 | CLA  | C2C-C1C-NC  | 2.84  | 112.63      | 109.97   |
| 16  | 3     | 208 | CLA  | O2A-CGA-CBA | 2.84  | 120.81      | 111.91   |
| 16  | 2     | 605 | CLA  | C2C-C1C-NC  | 2.84  | 112.63      | 109.97   |
| 17  | 3     | 218 | C7Z  | C18-C5-C4   | 2.83  | 119.61      | 114.36   |
| 16  | B     | 829 | CLA  | C1C-C2C-C3C | -2.83 | 103.98      | 106.96   |
| 16  | O     | 204 | CLA  | O2A-CGA-CBA | 2.83  | 120.80      | 111.91   |
| 16  | 3     | 212 | CLA  | C2C-C1C-NC  | 2.83  | 112.62      | 109.97   |
| 16  | 2     | 608 | CLA  | CAC-C3C-C2C | -2.83 | 122.69      | 127.53   |
| 16  | B     | 833 | CLA  | C2C-C1C-NC  | 2.83  | 112.62      | 109.97   |
| 21  | B     | 841 | BCR  | C23-C22-C21 | -2.83 | 114.61      | 118.94   |
| 16  | B     | 825 | CLA  | C2D-C1D-ND  | 2.83  | 112.19      | 110.10   |
| 16  | B     | 813 | CLA  | C2C-C1C-NC  | 2.82  | 112.62      | 109.97   |
| 16  | A     | 806 | CLA  | C2C-C1C-NC  | 2.82  | 112.62      | 109.97   |
| 16  | A     | 837 | CLA  | C1-C2-C3    | -2.82 | 121.17      | 126.04   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 17  | J     | 104 | C7Z  | C18-C5-C4   | 2.82  | 119.57      | 114.36   |
| 16  | 1     | 610 | CLA  | C1C-C2C-C3C | -2.82 | 104.00      | 106.96   |
| 16  | A     | 837 | CLA  | C2C-C1C-NC  | 2.81  | 112.61      | 109.97   |
| 16  | B     | 811 | CLA  | C1-C2-C3    | -2.81 | 121.18      | 126.04   |
| 16  | A     | 813 | CLA  | CHD-C1D-ND  | -2.81 | 121.87      | 124.45   |
| 16  | 1     | 608 | CLA  | C2C-C1C-NC  | 2.81  | 112.61      | 109.97   |
| 16  | A     | 812 | CLA  | C2D-C1D-ND  | 2.81  | 112.17      | 110.10   |
| 16  | B     | 812 | CLA  | CMA-C3A-C4A | 2.81  | 119.33      | 111.77   |
| 16  | L     | 204 | CLA  | CHD-C1D-ND  | -2.81 | 121.87      | 124.45   |
| 16  | 2     | 609 | CLA  | C2C-C1C-NC  | 2.81  | 112.60      | 109.97   |
| 16  | B     | 838 | CLA  | C2C-C1C-NC  | 2.81  | 112.60      | 109.97   |
| 17  | 1     | 616 | C7Z  | C18-C5-C4   | 2.81  | 119.56      | 114.36   |
| 16  | J     | 102 | CLA  | O2A-CGA-CBA | 2.81  | 120.72      | 111.91   |
| 25  | L     | 208 | PTY  | O4-C30-C31  | 2.81  | 120.72      | 111.91   |
| 16  | B     | 820 | CLA  | C2C-C1C-NC  | 2.81  | 112.60      | 109.97   |
| 17  | A     | 843 | C7Z  | C18-C5-C4   | 2.81  | 119.55      | 114.36   |
| 21  | A     | 857 | BCR  | C37-C22-C21 | -2.80 | 119.00      | 122.92   |
| 16  | B     | 834 | CLA  | C5-C3-C2    | 2.80  | 126.78      | 121.12   |
| 21  | B     | 844 | BCR  | C39-C30-C25 | -2.80 | 105.76      | 110.30   |
| 21  | K     | 104 | BCR  | C3-C4-C5    | -2.80 | 109.08      | 114.08   |
| 20  | 1     | 618 | ERG  | C14-C8-C7   | -2.80 | 118.87      | 124.38   |
| 16  | B     | 829 | CLA  | CHD-C1D-ND  | -2.80 | 121.88      | 124.45   |
| 16  | 2     | 602 | CLA  | O2A-CGA-CBA | 2.80  | 120.68      | 111.91   |
| 16  | B     | 820 | CLA  | CHD-C1D-ND  | -2.80 | 121.89      | 124.45   |
| 16  | A     | 807 | CLA  | O2D-CGD-O1D | -2.79 | 118.37      | 123.84   |
| 21  | B     | 840 | BCR  | C1-C6-C5    | -2.79 | 118.68      | 122.61   |
| 21  | O     | 205 | BCR  | C15-C14-C13 | -2.79 | 123.32      | 127.31   |
| 16  | L     | 201 | CLA  | CHD-C1D-ND  | -2.79 | 121.89      | 124.45   |
| 16  | O     | 204 | CLA  | C2D-C1D-ND  | 2.79  | 112.16      | 110.10   |
| 16  | A     | 832 | CLA  | C1-O2A-CGA  | 2.79  | 123.77      | 116.44   |
| 21  | A     | 846 | BCR  | C12-C13-C14 | -2.79 | 114.66      | 118.94   |
| 16  | B     | 807 | CLA  | C2D-C1D-ND  | 2.79  | 112.16      | 110.10   |
| 21  | B     | 843 | BCR  | C23-C24-C25 | -2.79 | 119.37      | 127.20   |
| 21  | L     | 202 | BCR  | C33-C5-C6   | -2.78 | 121.40      | 124.53   |
| 16  | A     | 809 | CLA  | C2D-C1D-ND  | 2.78  | 112.15      | 110.10   |
| 21  | L     | 207 | BCR  | C15-C14-C13 | -2.78 | 123.34      | 127.31   |
| 16  | 2     | 612 | CLA  | O2A-C1-C2   | 2.78  | 115.94      | 108.64   |
| 16  | B     | 808 | CLA  | C2C-C1C-NC  | 2.78  | 112.58      | 109.97   |
| 18  | 1     | 613 | RRX  | C30-C29-C28 | 2.78  | 119.92      | 113.64   |
| 16  | 3     | 206 | CLA  | C2C-C1C-NC  | 2.78  | 112.57      | 109.97   |
| 16  | 2     | 606 | CLA  | CMA-C3A-C4A | 2.78  | 119.23      | 111.77   |
| 16  | A     | 835 | CLA  | C1-C2-C3    | -2.78 | 121.24      | 126.04   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 802 | CLA  | C2D-C1D-ND  | 2.77  | 112.15      | 110.10   |
| 16  | B     | 822 | CLA  | C2C-C1C-NC  | 2.77  | 112.57      | 109.97   |
| 16  | A     | 814 | CLA  | C1C-C2C-C3C | -2.77 | 104.04      | 106.96   |
| 16  | 1     | 608 | CLA  | CMA-C3A-C4A | 2.77  | 119.22      | 111.77   |
| 16  | A     | 805 | CLA  | C1-O2A-CGA  | 2.77  | 123.71      | 116.44   |
| 17  | 3     | 217 | C7Z  | C24-C25-C26 | -2.77 | 114.68      | 120.85   |
| 16  | B     | 835 | CLA  | CHD-C1D-ND  | -2.77 | 121.91      | 124.45   |
| 16  | A     | 814 | CLA  | C2C-C1C-NC  | 2.76  | 112.56      | 109.97   |
| 16  | A     | 828 | CLA  | C2C-C1C-NC  | 2.76  | 112.56      | 109.97   |
| 16  | 3     | 206 | CLA  | CHD-C1D-ND  | -2.76 | 121.92      | 124.45   |
| 16  | 3     | 211 | CLA  | C2C-C1C-NC  | 2.76  | 112.56      | 109.97   |
| 16  | 3     | 211 | CLA  | O2D-CGD-O1D | -2.76 | 118.44      | 123.84   |
| 16  | 2     | 612 | CLA  | C2C-C1C-NC  | 2.76  | 112.56      | 109.97   |
| 17  | 3     | 218 | C7Z  | C22-C23-C24 | 2.76  | 114.08      | 110.30   |
| 16  | 2     | 612 | CLA  | C5-C3-C2    | 2.76  | 126.69      | 121.12   |
| 21  | B     | 842 | BCR  | C16-C17-C18 | 2.76  | 131.24      | 127.31   |
| 26  | A     | 801 | CL0  | C1-C2-C3    | -2.76 | 121.28      | 126.04   |
| 16  | 2     | 613 | CLA  | C2D-C1D-ND  | 2.75  | 112.13      | 110.10   |
| 16  | B     | 820 | CLA  | O2A-CGA-CBA | 2.75  | 120.55      | 111.91   |
| 21  | L     | 206 | BCR  | C34-C9-C10  | -2.75 | 119.06      | 122.92   |
| 16  | 3     | 214 | CLA  | CHD-C1D-ND  | -2.75 | 121.92      | 124.45   |
| 21  | L     | 206 | BCR  | C30-C25-C26 | -2.75 | 118.74      | 122.61   |
| 16  | A     | 815 | CLA  | O2A-CGA-CBA | 2.75  | 120.54      | 111.91   |
| 16  | A     | 834 | CLA  | O2D-CGD-O1D | -2.75 | 118.46      | 123.84   |
| 16  | B     | 803 | CLA  | C2C-C1C-NC  | 2.75  | 112.55      | 109.97   |
| 16  | 3     | 204 | CLA  | CHD-C1D-ND  | -2.75 | 121.93      | 124.45   |
| 16  | 3     | 204 | CLA  | C2C-C1C-NC  | 2.75  | 112.54      | 109.97   |
| 16  | A     | 813 | CLA  | C2C-C1C-NC  | 2.75  | 112.54      | 109.97   |
| 16  | B     | 809 | CLA  | C2C-C1C-NC  | 2.75  | 112.54      | 109.97   |
| 16  | A     | 819 | CLA  | C1C-C2C-C3C | -2.75 | 104.07      | 106.96   |
| 17  | 1     | 614 | C7Z  | C39-C29-C30 | -2.74 | 119.08      | 122.92   |
| 16  | B     | 826 | CLA  | O2A-CGA-CBA | 2.74  | 120.52      | 111.91   |
| 16  | 3     | 207 | CLA  | CHD-C1D-ND  | -2.74 | 121.93      | 124.45   |
| 21  | L     | 206 | BCR  | C36-C18-C17 | -2.74 | 119.08      | 122.92   |
| 16  | A     | 807 | CLA  | C2D-C1D-ND  | 2.74  | 112.12      | 110.10   |
| 16  | B     | 810 | CLA  | C1C-C2C-C3C | -2.73 | 104.08      | 106.96   |
| 16  | K     | 101 | CLA  | C2C-C1C-NC  | 2.73  | 112.53      | 109.97   |
| 16  | A     | 836 | CLA  | CHD-C1D-ND  | -2.73 | 121.94      | 124.45   |
| 21  | L     | 202 | BCR  | C27-C26-C25 | -2.73 | 118.76      | 122.73   |
| 16  | A     | 825 | CLA  | C1C-C2C-C3C | -2.73 | 104.08      | 106.96   |
| 16  | A     | 822 | CLA  | C2D-C1D-ND  | 2.73  | 112.12      | 110.10   |
| 16  | B     | 835 | CLA  | C1D-ND-C4D  | -2.73 | 104.39      | 106.33   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 604 | CLA  | O2D-CGD-O1D | -2.73 | 118.50      | 123.84   |
| 21  | B     | 841 | BCR  | C12-C13-C14 | -2.73 | 114.75      | 118.94   |
| 16  | B     | 811 | CLA  | CHD-C1D-ND  | -2.73 | 121.94      | 124.45   |
| 20  | 1     | 618 | ERG  | C11-C12-C13 | 2.73  | 117.46      | 112.78   |
| 16  | O     | 203 | CLA  | C2C-C1C-NC  | 2.73  | 112.53      | 109.97   |
| 16  | B     | 804 | CLA  | C2D-C1D-ND  | 2.73  | 112.11      | 110.10   |
| 16  | B     | 832 | CLA  | CMA-C3A-C4A | 2.73  | 119.10      | 111.77   |
| 17  | 3     | 215 | C7Z  | C1-C6-C5    | -2.73 | 118.78      | 122.61   |
| 16  | O     | 201 | CLA  | C1-C2-C3    | -2.73 | 121.33      | 126.04   |
| 16  | 1     | 610 | CLA  | C5-C3-C2    | 2.72  | 126.63      | 121.12   |
| 16  | B     | 803 | CLA  | C2D-C1D-ND  | 2.72  | 112.11      | 110.10   |
| 16  | O     | 203 | CLA  | CHD-C1D-ND  | -2.72 | 121.95      | 124.45   |
| 16  | L     | 205 | CLA  | O2A-CGA-CBA | 2.72  | 120.46      | 111.91   |
| 16  | 3     | 208 | CLA  | CHD-C1D-ND  | -2.72 | 121.95      | 124.45   |
| 16  | L     | 205 | CLA  | CHD-C1D-ND  | -2.72 | 121.95      | 124.45   |
| 16  | B     | 807 | CLA  | C1C-C2C-C3C | -2.72 | 104.09      | 106.96   |
| 16  | A     | 838 | CLA  | C2D-C1D-ND  | 2.72  | 112.11      | 110.10   |
| 16  | A     | 830 | CLA  | O2D-CGD-O1D | -2.72 | 118.52      | 123.84   |
| 16  | A     | 814 | CLA  | CHD-C1D-ND  | -2.72 | 121.95      | 124.45   |
| 21  | F     | 203 | BCR  | C38-C26-C27 | 2.72  | 118.84      | 113.62   |
| 16  | A     | 823 | CLA  | C2D-C1D-ND  | 2.72  | 112.11      | 110.10   |
| 16  | B     | 838 | CLA  | O2A-CGA-CBA | 2.72  | 120.44      | 111.91   |
| 16  | A     | 803 | CLA  | C1-C2-C3    | -2.72 | 121.34      | 126.04   |
| 16  | B     | 806 | CLA  | C2C-C1C-NC  | 2.72  | 112.52      | 109.97   |
| 18  | 2     | 616 | RRX  | C8-C7-C6    | -2.71 | 119.58      | 127.20   |
| 16  | A     | 816 | CLA  | CMA-C3A-C4A | 2.71  | 119.06      | 111.77   |
| 16  | A     | 806 | CLA  | C1-O2A-CGA  | 2.71  | 123.56      | 116.44   |
| 16  | A     | 820 | CLA  | C1-O2A-CGA  | 2.71  | 123.56      | 116.44   |
| 16  | K     | 101 | CLA  | O2A-CGA-CBA | 2.71  | 120.42      | 111.91   |
| 16  | 1     | 609 | CLA  | C2C-C1C-NC  | 2.71  | 112.51      | 109.97   |
| 16  | B     | 807 | CLA  | C2C-C1C-NC  | 2.71  | 112.51      | 109.97   |
| 16  | B     | 819 | CLA  | CMD-C2D-C3D | -2.71 | 121.38      | 127.61   |
| 21  | A     | 850 | BCR  | C16-C17-C18 | 2.71  | 131.18      | 127.31   |
| 16  | B     | 836 | CLA  | C1C-C2C-C3C | -2.71 | 104.11      | 106.96   |
| 16  | A     | 806 | CLA  | O2D-CGD-O1D | -2.71 | 118.54      | 123.84   |
| 16  | A     | 821 | CLA  | C1-O2A-CGA  | 2.71  | 123.55      | 116.44   |
| 16  | 2     | 604 | CLA  | C1-O2A-CGA  | 2.71  | 123.55      | 116.44   |
| 18  | A     | 847 | RRX  | C7-C6-C5    | -2.71 | 114.90      | 121.46   |
| 20  | 1     | 618 | ERG  | C16-C17-C13 | 2.71  | 107.11      | 103.84   |
| 16  | 1     | 603 | CLA  | C1D-ND-C4D  | -2.71 | 104.41      | 106.33   |
| 21  | A     | 845 | BCR  | C29-C30-C25 | 2.71  | 114.65      | 110.48   |
| 21  | A     | 850 | BCR  | C36-C18-C17 | -2.71 | 119.13      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 831 | CLA  | C2D-C1D-ND  | 2.71  | 112.10      | 110.10   |
| 17  | J     | 104 | C7Z  | C39-C29-C30 | -2.70 | 119.14      | 122.92   |
| 21  | B     | 844 | BCR  | C7-C6-C5    | -2.70 | 114.91      | 121.46   |
| 16  | A     | 803 | CLA  | CHD-C1D-ND  | -2.70 | 121.97      | 124.45   |
| 16  | 3     | 205 | CLA  | C2D-C1D-ND  | 2.70  | 112.09      | 110.10   |
| 16  | 1     | 609 | CLA  | O2A-CGA-CBA | 2.70  | 120.39      | 111.91   |
| 16  | 2     | 601 | CLA  | C1C-C2C-C3C | -2.70 | 104.12      | 106.96   |
| 16  | O     | 201 | CLA  | C6-C5-C3    | -2.70 | 106.37      | 113.45   |
| 21  | A     | 850 | BCR  | C1-C6-C7    | 2.70  | 123.42      | 115.78   |
| 16  | A     | 833 | CLA  | CHD-C1D-ND  | -2.70 | 121.97      | 124.45   |
| 18  | A     | 847 | RRX  | C33-C5-C6   | -2.70 | 121.50      | 124.53   |
| 17  | 1     | 616 | C7Z  | C39-C29-C30 | -2.70 | 119.14      | 122.92   |
| 16  | 1     | 604 | CLA  | C2C-C1C-NC  | 2.70  | 112.50      | 109.97   |
| 16  | A     | 815 | CLA  | CHD-C1D-ND  | -2.69 | 121.98      | 124.45   |
| 16  | A     | 838 | CLA  | CHD-C1D-ND  | -2.69 | 121.98      | 124.45   |
| 17  | 3     | 217 | C7Z  | C21-C26-C25 | -2.69 | 118.82      | 122.61   |
| 16  | A     | 832 | CLA  | CHD-C1D-ND  | -2.69 | 121.98      | 124.45   |
| 18  | 2     | 616 | RRX  | C24-C23-C22 | -2.69 | 122.17      | 126.23   |
| 21  | B     | 843 | BCR  | C37-C22-C21 | -2.69 | 119.15      | 122.92   |
| 16  | A     | 826 | CLA  | OBD-CAD-C3D | -2.69 | 122.04      | 128.52   |
| 16  | 1     | 610 | CLA  | C2C-C1C-NC  | 2.69  | 112.49      | 109.97   |
| 16  | A     | 827 | CLA  | C2D-C1D-ND  | 2.69  | 112.08      | 110.10   |
| 16  | J     | 102 | CLA  | C2C-C1C-NC  | 2.69  | 112.49      | 109.97   |
| 16  | B     | 809 | CLA  | CHD-C1D-ND  | -2.69 | 121.99      | 124.45   |
| 16  | 2     | 604 | CLA  | CMA-C3A-C4A | 2.68  | 118.99      | 111.77   |
| 27  | B     | 839 | PQN  | C11-C12-C13 | -2.68 | 122.33      | 126.79   |
| 20  | 2     | 618 | ERG  | C13-C17-C20 | -2.68 | 115.97      | 119.43   |
| 16  | A     | 819 | CLA  | O2D-CGD-O1D | -2.68 | 118.60      | 123.84   |
| 21  | K     | 104 | BCR  | C23-C22-C21 | -2.68 | 114.83      | 118.94   |
| 16  | L     | 204 | CLA  | C2C-C1C-NC  | 2.68  | 112.48      | 109.97   |
| 16  | O     | 202 | CLA  | CHD-C1D-ND  | -2.68 | 121.99      | 124.45   |
| 21  | L     | 207 | BCR  | C8-C9-C10   | 2.68  | 123.05      | 118.94   |
| 16  | 1     | 607 | CLA  | C1C-C2C-C3C | -2.68 | 104.14      | 106.96   |
| 16  | 2     | 606 | CLA  | C1C-C2C-C3C | -2.68 | 104.14      | 106.96   |
| 16  | B     | 837 | CLA  | CHD-C1D-ND  | -2.68 | 121.99      | 124.45   |
| 16  | 1     | 603 | CLA  | C2C-C1C-NC  | 2.68  | 112.48      | 109.97   |
| 16  | B     | 838 | CLA  | O2D-CGD-O1D | -2.68 | 118.61      | 123.84   |
| 16  | 1     | 606 | CLA  | C2A-C3A-C4A | 2.68  | 106.19      | 101.87   |
| 17  | 1     | 612 | C7Z  | C31-C30-C29 | -2.67 | 123.49      | 127.31   |
| 16  | B     | 834 | CLA  | CHD-C1D-ND  | -2.67 | 122.00      | 124.45   |
| 16  | A     | 806 | CLA  | CHD-C1D-ND  | -2.67 | 122.00      | 124.45   |
| 16  | 3     | 213 | CLA  | C2D-C1D-ND  | 2.67  | 112.07      | 110.10   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 805 | CLA  | C2D-C1D-ND  | 2.67  | 112.07      | 110.10   |
| 16  | B     | 825 | CLA  | C1C-C2C-C3C | -2.67 | 104.15      | 106.96   |
| 16  | A     | 826 | CLA  | C2D-C1D-ND  | 2.67  | 112.07      | 110.10   |
| 16  | 1     | 606 | CLA  | O2D-CGD-O1D | -2.67 | 118.62      | 123.84   |
| 17  | J     | 104 | C7Z  | C22-C23-C24 | 2.67  | 113.95      | 110.30   |
| 25  | 3     | 220 | PTY  | O4-C30-C31  | 2.67  | 120.27      | 111.91   |
| 16  | B     | 804 | CLA  | C1-O2A-CGA  | 2.66  | 123.43      | 116.44   |
| 16  | 1     | 604 | CLA  | CHD-C1D-ND  | -2.66 | 122.01      | 124.45   |
| 16  | 3     | 210 | CLA  | C2D-C1D-ND  | 2.66  | 112.07      | 110.10   |
| 18  | A     | 847 | RRX  | C2-C1-C6    | 2.66  | 114.58      | 110.48   |
| 16  | B     | 816 | CLA  | C1-C2-C3    | -2.66 | 121.44      | 126.04   |
| 21  | A     | 850 | BCR  | C37-C22-C21 | -2.66 | 119.20      | 122.92   |
| 21  | F     | 206 | BCR  | C36-C18-C17 | -2.66 | 119.20      | 122.92   |
| 16  | A     | 803 | CLA  | O2A-CGA-CBA | 2.66  | 120.25      | 111.91   |
| 21  | F     | 203 | BCR  | C33-C5-C4   | 2.66  | 118.72      | 113.62   |
| 16  | O     | 204 | CLA  | CHD-C1D-ND  | -2.66 | 122.01      | 124.45   |
| 16  | B     | 827 | CLA  | C1C-C2C-C3C | -2.66 | 104.16      | 106.96   |
| 16  | B     | 832 | CLA  | C2C-C1C-NC  | 2.66  | 112.46      | 109.97   |
| 16  | L     | 201 | CLA  | C2D-C1D-ND  | 2.66  | 112.06      | 110.10   |
| 16  | A     | 835 | CLA  | O2D-CGD-O1D | -2.66 | 118.65      | 123.84   |
| 16  | A     | 835 | CLA  | C1C-C2C-C3C | -2.65 | 104.17      | 106.96   |
| 16  | B     | 813 | CLA  | O2D-CGD-O1D | -2.65 | 118.65      | 123.84   |
| 16  | B     | 837 | CLA  | C1C-C2C-C3C | -2.65 | 104.17      | 106.96   |
| 16  | B     | 819 | CLA  | CHD-C1D-ND  | -2.65 | 122.02      | 124.45   |
| 16  | B     | 805 | CLA  | C2D-C1D-ND  | 2.65  | 112.06      | 110.10   |
| 16  | A     | 831 | CLA  | C1C-C2C-C3C | -2.65 | 104.17      | 106.96   |
| 16  | B     | 809 | CLA  | C2D-C1D-ND  | 2.65  | 112.06      | 110.10   |
| 16  | A     | 822 | CLA  | C2C-C1C-NC  | 2.65  | 112.45      | 109.97   |
| 16  | 2     | 610 | CLA  | CHD-C1D-ND  | -2.65 | 122.02      | 124.45   |
| 17  | 3     | 216 | C7Z  | C8-C7-C6    | -2.65 | 119.77      | 127.20   |
| 16  | A     | 815 | CLA  | C2D-C1D-ND  | 2.65  | 112.05      | 110.10   |
| 16  | B     | 806 | CLA  | CHD-C1D-ND  | -2.65 | 122.02      | 124.45   |
| 16  | B     | 816 | CLA  | CHD-C1D-ND  | -2.65 | 122.02      | 124.45   |
| 21  | K     | 104 | BCR  | C29-C30-C25 | -2.65 | 106.41      | 110.48   |
| 18  | 2     | 616 | RRX  | C30-C25-C24 | 2.65  | 123.26      | 115.78   |
| 17  | 1     | 616 | C7Z  | C7-C8-C9    | -2.64 | 122.24      | 126.23   |
| 16  | A     | 803 | CLA  | C1C-C2C-C3C | -2.64 | 104.18      | 106.96   |
| 16  | A     | 856 | CLA  | C1C-C2C-C3C | -2.64 | 104.18      | 106.96   |
| 16  | 2     | 602 | CLA  | C1-C2-C3    | -2.64 | 121.47      | 126.04   |
| 21  | B     | 847 | BCR  | C31-C1-C6   | -2.64 | 106.01      | 110.30   |
| 20  | 1     | 618 | ERG  | C19-C10-C1  | -2.64 | 105.26      | 109.43   |
| 16  | A     | 826 | CLA  | O2D-CGD-O1D | -2.64 | 118.68      | 123.84   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 17  | 2     | 615 | C7Z  | C21-C26-C27 | 2.64  | 123.25      | 115.78   |
| 16  | A     | 855 | CLA  | C1C-C2C-C3C | -2.64 | 104.18      | 106.96   |
| 21  | A     | 845 | BCR  | C40-C30-C25 | -2.64 | 106.02      | 110.30   |
| 16  | A     | 814 | CLA  | C2D-C1D-ND  | 2.64  | 112.05      | 110.10   |
| 16  | 1     | 602 | CLA  | O2A-CGA-CBA | 2.64  | 120.19      | 111.91   |
| 17  | 2     | 614 | C7Z  | C7-C8-C9    | -2.64 | 122.25      | 126.23   |
| 16  | A     | 808 | CLA  | C1-O2A-CGA  | 2.64  | 123.37      | 116.44   |
| 16  | 2     | 602 | CLA  | C2C-C1C-NC  | 2.64  | 112.44      | 109.97   |
| 21  | K     | 104 | BCR  | C23-C24-C25 | -2.64 | 119.80      | 127.20   |
| 16  | B     | 817 | CLA  | C1C-C2C-C3C | -2.64 | 104.19      | 106.96   |
| 16  | B     | 806 | CLA  | O2D-CGD-O1D | -2.64 | 118.69      | 123.84   |
| 21  | B     | 847 | BCR  | C16-C17-C18 | 2.63  | 131.07      | 127.31   |
| 21  | B     | 844 | BCR  | C33-C5-C4   | 2.63  | 118.68      | 113.62   |
| 16  | J     | 102 | CLA  | C2D-C1D-ND  | 2.63  | 112.04      | 110.10   |
| 16  | 1     | 605 | CLA  | C5-C3-C2    | 2.63  | 126.44      | 121.12   |
| 16  | B     | 831 | CLA  | CHD-C1D-ND  | -2.63 | 122.04      | 124.45   |
| 16  | A     | 835 | CLA  | C2D-C1D-ND  | 2.63  | 112.04      | 110.10   |
| 16  | B     | 824 | CLA  | C2D-C1D-ND  | 2.63  | 112.04      | 110.10   |
| 16  | A     | 821 | CLA  | C1-C2-C3    | -2.63 | 121.49      | 126.04   |
| 16  | A     | 815 | CLA  | C1-C2-C3    | -2.63 | 121.49      | 126.04   |
| 16  | A     | 805 | CLA  | CHD-C1D-ND  | -2.63 | 122.04      | 124.45   |
| 16  | O     | 202 | CLA  | C2C-C1C-NC  | 2.63  | 112.44      | 109.97   |
| 16  | B     | 804 | CLA  | C1C-C2C-C3C | -2.63 | 104.19      | 106.96   |
| 18  | 2     | 616 | RRX  | C7-C8-C9    | -2.63 | 122.26      | 126.23   |
| 21  | B     | 842 | BCR  | C31-C1-C6   | -2.63 | 106.04      | 110.30   |
| 17  | 1     | 615 | C7Z  | C7-C6-C5    | -2.62 | 115.11      | 121.46   |
| 16  | 2     | 601 | CLA  | C2D-C1D-ND  | 2.62  | 112.04      | 110.10   |
| 16  | A     | 806 | CLA  | C1-C2-C3    | -2.62 | 121.51      | 126.04   |
| 16  | B     | 837 | CLA  | CMD-C2D-C3D | -2.62 | 121.59      | 127.61   |
| 16  | 3     | 210 | CLA  | C5-C3-C2    | 2.62  | 126.41      | 121.12   |
| 17  | J     | 104 | C7Z  | C8-C9-C10   | -2.62 | 114.93      | 118.94   |
| 16  | B     | 830 | CLA  | O2A-CGA-CBA | 2.61  | 120.11      | 111.91   |
| 16  | B     | 834 | CLA  | CMC-C2C-C1C | 2.61  | 129.02      | 125.04   |
| 21  | K     | 104 | BCR  | C8-C7-C6    | -2.61 | 119.86      | 127.20   |
| 16  | L     | 201 | CLA  | C2C-C1C-NC  | 2.61  | 112.42      | 109.97   |
| 16  | 2     | 603 | CLA  | C5-C3-C2    | 2.61  | 126.41      | 121.12   |
| 16  | A     | 829 | CLA  | C1C-C2C-C3C | -2.61 | 104.21      | 106.96   |
| 17  | 2     | 615 | C7Z  | C18-C5-C4   | 2.61  | 119.20      | 114.36   |
| 16  | I     | 101 | CLA  | O2A-CGA-CBA | 2.61  | 120.11      | 111.91   |
| 18  | A     | 847 | RRX  | C30-C25-C26 | -2.61 | 118.93      | 122.61   |
| 16  | B     | 806 | CLA  | C1C-C2C-C3C | -2.61 | 104.21      | 106.96   |
| 21  | L     | 206 | BCR  | C19-C18-C17 | 2.61  | 122.94      | 118.94   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 823 | CLA  | CMB-C2B-C3B | 2.61  | 129.56      | 124.68   |
| 16  | A     | 856 | CLA  | CMB-C2B-C3B | 2.61  | 129.56      | 124.68   |
| 16  | 1     | 606 | CLA  | C1C-C2C-C3C | -2.61 | 104.22      | 106.96   |
| 21  | L     | 202 | BCR  | C30-C25-C26 | -2.61 | 118.94      | 122.61   |
| 21  | B     | 855 | BCR  | C38-C26-C25 | -2.60 | 121.60      | 124.53   |
| 16  | A     | 805 | CLA  | C1C-C2C-C3C | -2.60 | 104.22      | 106.96   |
| 16  | A     | 832 | CLA  | C2C-C1C-NC  | 2.60  | 112.41      | 109.97   |
| 16  | A     | 856 | CLA  | O2D-CGD-O1D | -2.60 | 118.75      | 123.84   |
| 16  | A     | 834 | CLA  | CHD-C1D-ND  | -2.60 | 122.06      | 124.45   |
| 16  | F     | 204 | CLA  | C1-C2-C3    | -2.60 | 121.54      | 126.04   |
| 16  | A     | 814 | CLA  | O2D-CGD-O1D | -2.60 | 118.75      | 123.84   |
| 16  | A     | 838 | CLA  | O2D-CGD-O1D | -2.60 | 118.75      | 123.84   |
| 16  | B     | 808 | CLA  | O2D-CGD-O1D | -2.60 | 118.75      | 123.84   |
| 17  | 2     | 614 | C7Z  | C40-C33-C34 | -2.60 | 119.28      | 122.92   |
| 16  | 3     | 209 | CLA  | C2C-C1C-NC  | 2.60  | 112.41      | 109.97   |
| 16  | A     | 811 | CLA  | CHD-C1D-ND  | -2.60 | 122.06      | 124.45   |
| 16  | B     | 820 | CLA  | C1C-C2C-C3C | -2.60 | 104.22      | 106.96   |
| 17  | 3     | 216 | C7Z  | C15-C35-C34 | 2.60  | 128.80      | 123.47   |
| 21  | A     | 850 | BCR  | C19-C18-C17 | 2.60  | 122.93      | 118.94   |
| 16  | B     | 805 | CLA  | C2C-C1C-NC  | 2.60  | 112.41      | 109.97   |
| 16  | B     | 805 | CLA  | O2D-CGD-O1D | -2.60 | 118.76      | 123.84   |
| 16  | 1     | 605 | CLA  | C1C-C2C-C3C | -2.60 | 104.23      | 106.96   |
| 16  | A     | 810 | CLA  | C2D-C1D-ND  | 2.59  | 112.02      | 110.10   |
| 21  | B     | 847 | BCR  | C8-C9-C10   | 2.59  | 122.92      | 118.94   |
| 20  | 1     | 618 | ERG  | C6-C7-C8    | -2.59 | 116.96      | 122.07   |
| 16  | B     | 818 | CLA  | C1C-C2C-C3C | -2.59 | 104.23      | 106.96   |
| 16  | 1     | 602 | CLA  | O2D-CGD-O1D | -2.59 | 118.77      | 123.84   |
| 16  | O     | 203 | CLA  | CMD-C2D-C3D | -2.59 | 121.65      | 127.61   |
| 31  | B     | 849 | DGD  | O1G-C1A-C2A | 2.59  | 120.04      | 111.91   |
| 16  | A     | 811 | CLA  | C1C-C2C-C3C | -2.59 | 104.23      | 106.96   |
| 16  | 2     | 608 | CLA  | C2D-C1D-ND  | 2.59  | 112.01      | 110.10   |
| 16  | A     | 856 | CLA  | C2D-C1D-ND  | 2.59  | 112.01      | 110.10   |
| 16  | 2     | 610 | CLA  | C2C-C1C-NC  | 2.59  | 112.40      | 109.97   |
| 16  | 1     | 607 | CLA  | CHD-C1D-ND  | -2.59 | 122.07      | 124.45   |
| 16  | A     | 820 | CLA  | CHD-C1D-ND  | -2.59 | 122.07      | 124.45   |
| 16  | A     | 806 | CLA  | C1C-C2C-C3C | -2.59 | 104.24      | 106.96   |
| 16  | I     | 102 | CLA  | C2C-C1C-NC  | 2.59  | 112.39      | 109.97   |
| 16  | B     | 835 | CLA  | O2D-CGD-O1D | -2.59 | 118.78      | 123.84   |
| 16  | A     | 804 | CLA  | C2C-C1C-NC  | 2.59  | 112.39      | 109.97   |
| 16  | A     | 818 | CLA  | C1C-C2C-C3C | -2.58 | 104.24      | 106.96   |
| 18  | 2     | 616 | RRX  | C1-C6-C5    | -2.58 | 118.97      | 122.61   |
| 20  | 2     | 621 | ERG  | C20-C22-C23 | -2.58 | 117.65      | 125.67   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 837 | CLA  | C1C-C2C-C3C | -2.58 | 104.24      | 106.96   |
| 16  | B     | 829 | CLA  | O2D-CGD-O1D | -2.58 | 118.79      | 123.84   |
| 16  | 3     | 208 | CLA  | C1C-C2C-C3C | -2.58 | 104.24      | 106.96   |
| 16  | 3     | 206 | CLA  | C2D-C1D-ND  | 2.58  | 112.01      | 110.10   |
| 16  | B     | 823 | CLA  | C2C-C1C-NC  | 2.58  | 112.39      | 109.97   |
| 16  | A     | 829 | CLA  | C2D-C1D-ND  | 2.58  | 112.01      | 110.10   |
| 16  | A     | 836 | CLA  | C2D-C1D-ND  | 2.58  | 112.00      | 110.10   |
| 17  | 1     | 612 | C7Z  | C18-C5-C4   | 2.58  | 119.13      | 114.36   |
| 30  | A     | 851 | T7X  | O18-C11-C31 | 2.58  | 120.00      | 111.91   |
| 16  | A     | 836 | CLA  | C2C-C1C-NC  | 2.58  | 112.39      | 109.97   |
| 17  | 3     | 217 | C7Z  | C38-C25-C24 | 2.58  | 119.13      | 114.36   |
| 19  | 2     | 622 | LHG  | C5-O7-C7    | -2.58 | 111.45      | 117.79   |
| 16  | L     | 204 | CLA  | C2D-C1D-ND  | 2.58  | 112.00      | 110.10   |
| 21  | L     | 206 | BCR  | C35-C13-C12 | 2.58  | 122.14      | 118.08   |
| 16  | 3     | 203 | CLA  | C1C-C2C-C3C | -2.58 | 104.25      | 106.96   |
| 16  | B     | 811 | CLA  | C2C-C1C-NC  | 2.57  | 112.38      | 109.97   |
| 17  | 2     | 615 | C7Z  | C39-C29-C30 | -2.57 | 119.32      | 122.92   |
| 16  | 2     | 605 | CLA  | C1C-C2C-C3C | -2.57 | 104.25      | 106.96   |
| 21  | B     | 843 | BCR  | C38-C26-C27 | 2.57  | 118.56      | 113.62   |
| 16  | 1     | 611 | CLA  | C2D-C1D-ND  | 2.57  | 112.00      | 110.10   |
| 16  | A     | 837 | CLA  | CHD-C1D-ND  | -2.57 | 122.09      | 124.45   |
| 16  | B     | 807 | CLA  | CHD-C1D-ND  | -2.57 | 122.09      | 124.45   |
| 16  | A     | 855 | CLA  | CHA-C1A-NA  | -2.57 | 120.51      | 126.40   |
| 21  | 2     | 617 | BCR  | C30-C25-C24 | 2.57  | 123.05      | 115.78   |
| 16  | A     | 830 | CLA  | C1C-C2C-C3C | -2.57 | 104.26      | 106.96   |
| 16  | A     | 808 | CLA  | C2D-C1D-ND  | 2.57  | 112.00      | 110.10   |
| 16  | A     | 832 | CLA  | O2D-CGD-O1D | -2.57 | 118.82      | 123.84   |
| 17  | 3     | 218 | C7Z  | C39-C29-C30 | -2.56 | 119.33      | 122.92   |
| 16  | 2     | 604 | CLA  | CHD-C1D-ND  | -2.56 | 122.10      | 124.45   |
| 16  | A     | 816 | CLA  | C2C-C1C-NC  | 2.56  | 112.37      | 109.97   |
| 16  | B     | 830 | CLA  | CMA-C3A-C4A | 2.56  | 118.66      | 111.77   |
| 16  | B     | 803 | CLA  | CHD-C1D-ND  | -2.56 | 122.10      | 124.45   |
| 16  | A     | 808 | CLA  | O2D-CGD-O1D | -2.56 | 118.83      | 123.84   |
| 16  | A     | 818 | CLA  | CMA-C3A-C2A | 2.56  | 124.16      | 113.83   |
| 16  | 3     | 208 | CLA  | O2D-CGD-O1D | -2.56 | 118.83      | 123.84   |
| 17  | 3     | 216 | C7Z  | C8-C9-C10   | 2.56  | 122.87      | 118.94   |
| 16  | B     | 831 | CLA  | O2D-CGD-O1D | -2.56 | 118.83      | 123.84   |
| 16  | A     | 817 | CLA  | C2D-C1D-ND  | 2.56  | 111.99      | 110.10   |
| 16  | A     | 822 | CLA  | CHD-C1D-ND  | -2.56 | 122.10      | 124.45   |
| 20  | 2     | 621 | ERG  | C14-C8-C7   | -2.56 | 119.34      | 124.38   |
| 16  | A     | 819 | CLA  | CBA-CAA-C2A | 2.56  | 121.41      | 113.86   |
| 16  | 3     | 205 | CLA  | CHA-C4D-ND  | 2.56  | 137.85      | 132.50   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | I     | 103 | BCR  | C36-C18-C17 | -2.56 | 119.34      | 122.92   |
| 16  | I     | 101 | CLA  | C1D-ND-C4D  | -2.56 | 104.52      | 106.33   |
| 29  | A     | 849 | 3PH  | O31-C31-C32 | 2.56  | 119.93      | 111.91   |
| 21  | B     | 843 | BCR  | C34-C9-C8   | 2.56  | 122.11      | 118.08   |
| 16  | 3     | 206 | CLA  | C1C-C2C-C3C | -2.56 | 104.27      | 106.96   |
| 16  | A     | 824 | CLA  | C1C-C2C-C3C | -2.56 | 104.27      | 106.96   |
| 16  | B     | 816 | CLA  | C1C-C2C-C3C | -2.56 | 104.27      | 106.96   |
| 31  | B     | 850 | DGD  | O1G-C1A-C2A | 2.56  | 119.93      | 111.91   |
| 16  | A     | 809 | CLA  | CHD-C1D-ND  | -2.56 | 122.11      | 124.45   |
| 22  | 2     | 619 | PGT  | O2-C31-O31  | -2.56 | 117.53      | 123.70   |
| 16  | A     | 822 | CLA  | O2D-CGD-O1D | -2.56 | 118.84      | 123.84   |
| 16  | B     | 805 | CLA  | CMA-C3A-C4A | 2.55  | 118.64      | 111.77   |
| 16  | 1     | 608 | CLA  | C5-C3-C2    | 2.55  | 126.29      | 121.12   |
| 16  | 3     | 204 | CLA  | C1C-C2C-C3C | -2.55 | 104.27      | 106.96   |
| 16  | A     | 804 | CLA  | CHA-C4D-ND  | 2.55  | 137.84      | 132.50   |
| 16  | 3     | 211 | CLA  | C2D-C1D-ND  | 2.55  | 111.98      | 110.10   |
| 21  | B     | 841 | BCR  | C33-C5-C4   | 2.55  | 118.52      | 113.62   |
| 16  | B     | 815 | CLA  | C1-C2-C3    | -2.55 | 121.63      | 126.04   |
| 16  | O     | 204 | CLA  | C2C-C1C-NC  | 2.55  | 112.36      | 109.97   |
| 16  | A     | 814 | CLA  | O2A-CGA-CBA | 2.55  | 119.91      | 111.91   |
| 16  | F     | 204 | CLA  | C1C-C2C-C3C | -2.55 | 104.28      | 106.96   |
| 16  | 3     | 207 | CLA  | C1C-C2C-C3C | -2.55 | 104.28      | 106.96   |
| 16  | A     | 827 | CLA  | CMB-C2B-C3B | 2.55  | 129.44      | 124.68   |
| 16  | A     | 828 | CLA  | C1-O2A-CGA  | 2.54  | 123.12      | 116.44   |
| 19  | 2     | 622 | LHG  | O8-C23-C24  | 2.54  | 119.89      | 111.91   |
| 16  | B     | 832 | CLA  | CHD-C1D-ND  | -2.54 | 122.12      | 124.45   |
| 16  | F     | 205 | CLA  | O2D-CGD-O1D | -2.54 | 118.87      | 123.84   |
| 16  | L     | 205 | CLA  | C1C-C2C-C3C | -2.54 | 104.28      | 106.96   |
| 17  | 3     | 215 | C7Z  | C7-C8-C9    | -2.54 | 122.39      | 126.23   |
| 16  | B     | 833 | CLA  | C1C-C2C-C3C | -2.54 | 104.28      | 106.96   |
| 17  | 1     | 614 | C7Z  | C38-C25-C24 | 2.54  | 119.06      | 114.36   |
| 16  | 1     | 606 | CLA  | C2D-C1D-ND  | 2.54  | 111.98      | 110.10   |
| 18  | 2     | 616 | RRX  | C19-C18-C17 | 2.54  | 122.84      | 118.94   |
| 21  | B     | 840 | BCR  | C7-C6-C5    | -2.54 | 115.31      | 121.46   |
| 16  | B     | 838 | CLA  | C1C-C2C-C3C | -2.54 | 104.28      | 106.96   |
| 16  | A     | 810 | CLA  | O1D-CGD-CBD | -2.54 | 119.29      | 124.48   |
| 16  | A     | 835 | CLA  | CHD-C1D-ND  | -2.54 | 122.12      | 124.45   |
| 16  | 2     | 608 | CLA  | O2D-CGD-O1D | -2.54 | 118.87      | 123.84   |
| 16  | A     | 802 | CLA  | C1C-C2C-C3C | -2.54 | 104.29      | 106.96   |
| 16  | B     | 801 | CLA  | CMB-C2B-C3B | 2.54  | 129.43      | 124.68   |
| 21  | B     | 845 | BCR  | C33-C5-C4   | 2.54  | 118.49      | 113.62   |
| 17  | 3     | 217 | C7Z  | C8-C7-C6    | -2.54 | 120.08      | 127.20   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 815 | CLA  | C1C-C2C-C3C | -2.54 | 104.29      | 106.96   |
| 16  | B     | 808 | CLA  | O2A-CGA-CBA | 2.54  | 119.86      | 111.91   |
| 16  | A     | 802 | CLA  | O2D-CGD-O1D | -2.53 | 118.88      | 123.84   |
| 16  | B     | 817 | CLA  | C2D-C1D-ND  | 2.53  | 111.97      | 110.10   |
| 16  | O     | 202 | CLA  | C2D-C1D-ND  | 2.53  | 111.97      | 110.10   |
| 16  | B     | 831 | CLA  | C1C-C2C-C3C | -2.53 | 104.29      | 106.96   |
| 16  | B     | 828 | CLA  | O2A-CGA-CBA | 2.53  | 119.86      | 111.91   |
| 16  | L     | 203 | CLA  | C1C-C2C-C3C | -2.53 | 104.29      | 106.96   |
| 16  | L     | 204 | CLA  | C1C-C2C-C3C | -2.53 | 104.30      | 106.96   |
| 16  | 1     | 603 | CLA  | OBD-CAD-C3D | -2.53 | 122.43      | 128.52   |
| 16  | 3     | 205 | CLA  | CMB-C2B-C3B | 2.53  | 129.41      | 124.68   |
| 16  | B     | 827 | CLA  | CHD-C1D-ND  | -2.53 | 122.13      | 124.45   |
| 16  | O     | 201 | CLA  | C1C-C2C-C3C | -2.53 | 104.30      | 106.96   |
| 16  | 1     | 610 | CLA  | C1D-ND-C4D  | -2.53 | 104.54      | 106.33   |
| 16  | A     | 816 | CLA  | O2D-CGD-O1D | -2.53 | 118.90      | 123.84   |
| 25  | A     | 852 | PTY  | O4-C30-C31  | 2.53  | 119.84      | 111.91   |
| 16  | B     | 810 | CLA  | CHD-C1D-ND  | -2.53 | 122.13      | 124.45   |
| 16  | 2     | 603 | CLA  | O2A-CGA-CBA | 2.53  | 119.84      | 111.91   |
| 16  | B     | 816 | CLA  | O2A-CGA-CBA | 2.52  | 119.83      | 111.91   |
| 16  | B     | 837 | CLA  | O2D-CGD-O1D | -2.52 | 118.90      | 123.84   |
| 16  | 2     | 602 | CLA  | CHD-C1D-ND  | -2.52 | 122.14      | 124.45   |
| 16  | B     | 826 | CLA  | CHD-C1D-ND  | -2.52 | 122.14      | 124.45   |
| 17  | 1     | 615 | C7Z  | C38-C25-C24 | 2.52  | 119.03      | 114.36   |
| 16  | A     | 855 | CLA  | CHA-C4D-ND  | 2.52  | 137.77      | 132.50   |
| 16  | 1     | 611 | CLA  | C1C-C2C-C3C | -2.52 | 104.31      | 106.96   |
| 16  | 3     | 213 | CLA  | CHD-C1D-ND  | -2.52 | 122.14      | 124.45   |
| 16  | B     | 829 | CLA  | CMD-C2D-C3D | -2.52 | 121.82      | 127.61   |
| 16  | A     | 825 | CLA  | C2D-C1D-ND  | 2.52  | 111.96      | 110.10   |
| 16  | K     | 101 | CLA  | C2D-C1D-ND  | 2.52  | 111.96      | 110.10   |
| 16  | 3     | 214 | CLA  | O2D-CGD-O1D | -2.52 | 118.92      | 123.84   |
| 16  | 3     | 208 | CLA  | C1-O2A-CGA  | 2.52  | 123.05      | 116.44   |
| 16  | 2     | 613 | CLA  | C1C-C2C-C3C | -2.52 | 104.31      | 106.96   |
| 16  | A     | 804 | CLA  | CHD-C1D-ND  | -2.52 | 122.14      | 124.45   |
| 16  | B     | 814 | CLA  | O2D-CGD-O1D | -2.52 | 118.92      | 123.84   |
| 16  | A     | 839 | CLA  | C1C-C2C-C3C | -2.52 | 104.31      | 106.96   |
| 22  | B     | 848 | PGT  | O2-C31-O31  | -2.51 | 117.63      | 123.70   |
| 20  | 1     | 618 | ERG  | C7-C6-C5    | -2.51 | 118.79      | 123.20   |
| 21  | B     | 847 | BCR  | C28-C27-C26 | -2.51 | 109.59      | 114.08   |
| 16  | B     | 837 | CLA  | C1-C2-C3    | -2.51 | 121.69      | 126.04   |
| 16  | A     | 834 | CLA  | C2C-C1C-NC  | 2.51  | 112.33      | 109.97   |
| 16  | A     | 821 | CLA  | CHD-C1D-ND  | -2.51 | 122.15      | 124.45   |
| 29  | B     | 854 | 3PH  | O31-C31-C32 | 2.51  | 119.79      | 111.91   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 602 | CLA  | C1D-ND-C4D  | -2.51 | 104.55      | 106.33   |
| 16  | A     | 823 | CLA  | C2C-C1C-NC  | 2.51  | 112.32      | 109.97   |
| 16  | A     | 829 | CLA  | CHD-C1D-ND  | -2.51 | 122.15      | 124.45   |
| 23  | J     | 101 | DGA  | OG1-CA1-CA2 | 2.51  | 119.78      | 111.91   |
| 21  | B     | 841 | BCR  | C4-C5-C6    | -2.51 | 119.09      | 122.73   |
| 16  | B     | 820 | CLA  | C2D-C1D-ND  | 2.51  | 111.95      | 110.10   |
| 16  | B     | 803 | CLA  | O2A-CGA-CBA | 2.51  | 119.78      | 111.91   |
| 16  | 3     | 213 | CLA  | C1C-C2C-C3C | -2.51 | 104.32      | 106.96   |
| 17  | J     | 104 | C7Z  | C2-C3-C4    | 2.51  | 113.73      | 110.30   |
| 16  | 2     | 606 | CLA  | C2D-C1D-ND  | 2.51  | 111.95      | 110.10   |
| 16  | A     | 817 | CLA  | O2D-CGD-O1D | -2.51 | 118.94      | 123.84   |
| 16  | 2     | 603 | CLA  | C1C-C2C-C3C | -2.51 | 104.32      | 106.96   |
| 16  | A     | 807 | CLA  | C1C-C2C-C3C | -2.51 | 104.32      | 106.96   |
| 16  | A     | 837 | CLA  | O2A-CGA-CBA | 2.51  | 119.77      | 111.91   |
| 21  | B     | 855 | BCR  | C34-C9-C8   | 2.51  | 122.02      | 118.08   |
| 16  | A     | 837 | CLA  | C2D-C1D-ND  | 2.50  | 111.95      | 110.10   |
| 20  | 2     | 621 | ERG  | C2-C3-C4    | 2.50  | 113.74      | 110.31   |
| 16  | B     | 824 | CLA  | O2D-CGD-O1D | -2.50 | 118.94      | 123.84   |
| 16  | 2     | 613 | CLA  | O2D-CGD-O1D | -2.50 | 118.94      | 123.84   |
| 21  | I     | 103 | BCR  | C28-C27-C26 | -2.50 | 109.61      | 114.08   |
| 16  | 1     | 606 | CLA  | CHA-C4D-ND  | 2.50  | 137.73      | 132.50   |
| 16  | A     | 827 | CLA  | CHD-C1D-ND  | -2.50 | 122.16      | 124.45   |
| 16  | I     | 102 | CLA  | C2D-C1D-ND  | 2.50  | 111.94      | 110.10   |
| 16  | 2     | 610 | CLA  | CMA-C3A-C2A | 2.50  | 123.90      | 113.83   |
| 29  | J     | 105 | 3PH  | O31-C31-C32 | 2.50  | 119.74      | 111.91   |
| 18  | 1     | 613 | RRX  | C38-C26-C27 | 2.50  | 118.98      | 114.36   |
| 16  | O     | 203 | CLA  | CHA-C4D-ND  | 2.50  | 137.72      | 132.50   |
| 16  | A     | 825 | CLA  | CHD-C1D-ND  | -2.50 | 122.16      | 124.45   |
| 16  | 2     | 611 | CLA  | C1C-C2C-C3C | -2.49 | 104.33      | 106.96   |
| 16  | K     | 102 | CLA  | CHD-C1D-ND  | -2.49 | 122.16      | 124.45   |
| 16  | B     | 837 | CLA  | CHA-C4D-ND  | 2.49  | 137.71      | 132.50   |
| 16  | B     | 828 | CLA  | O2D-CGD-O1D | -2.49 | 118.96      | 123.84   |
| 18  | J     | 103 | RRX  | C2-C1-C6    | 2.49  | 114.32      | 110.48   |
| 16  | A     | 807 | CLA  | C2C-C1C-NC  | 2.49  | 112.31      | 109.97   |
| 16  | 1     | 604 | CLA  | C2D-C1D-ND  | 2.49  | 111.94      | 110.10   |
| 16  | I     | 102 | CLA  | O2D-CGD-O1D | -2.49 | 118.97      | 123.84   |
| 16  | 1     | 601 | CLA  | CHD-C1D-ND  | -2.49 | 122.17      | 124.45   |
| 16  | K     | 102 | CLA  | C1C-C2C-C3C | -2.49 | 104.34      | 106.96   |
| 16  | 3     | 205 | CLA  | O2A-CGA-CBA | 2.49  | 119.72      | 111.91   |
| 16  | 3     | 211 | CLA  | CHA-C4D-ND  | 2.49  | 137.71      | 132.50   |
| 21  | B     | 840 | BCR  | C3-C4-C5    | -2.49 | 109.63      | 114.08   |
| 16  | A     | 831 | CLA  | CHD-C1D-ND  | -2.49 | 122.17      | 124.45   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 828 | CLA  | CHD-C1D-ND  | -2.49 | 122.17      | 124.45   |
| 16  | B     | 834 | CLA  | O2D-CGD-O1D | -2.49 | 118.97      | 123.84   |
| 16  | B     | 815 | CLA  | C2C-C1C-NC  | 2.49  | 112.30      | 109.97   |
| 16  | 3     | 203 | CLA  | CHA-C4D-ND  | 2.49  | 137.70      | 132.50   |
| 16  | 2     | 609 | CLA  | C1C-C2C-C3C | -2.49 | 104.34      | 106.96   |
| 16  | A     | 802 | CLA  | CHD-C1D-ND  | -2.49 | 122.17      | 124.45   |
| 19  | B     | 851 | LHG  | C5-O7-C7    | -2.49 | 111.67      | 117.79   |
| 16  | 3     | 212 | CLA  | C1C-C2C-C3C | -2.49 | 104.34      | 106.96   |
| 16  | B     | 814 | CLA  | C1C-C2C-C3C | -2.49 | 104.34      | 106.96   |
| 16  | B     | 810 | CLA  | C2D-C1D-ND  | 2.49  | 111.94      | 110.10   |
| 16  | B     | 809 | CLA  | C1C-C2C-C3C | -2.49 | 104.34      | 106.96   |
| 17  | 2     | 614 | C7Z  | C38-C25-C24 | 2.49  | 118.96      | 114.36   |
| 16  | 1     | 601 | CLA  | O2D-CGD-O1D | -2.49 | 118.98      | 123.84   |
| 16  | J     | 102 | CLA  | O2D-CGD-O1D | -2.49 | 118.98      | 123.84   |
| 16  | 3     | 207 | CLA  | C4-C3-C5    | 2.48  | 119.45      | 115.27   |
| 16  | A     | 804 | CLA  | CMD-C2D-C3D | -2.48 | 121.90      | 127.61   |
| 16  | A     | 816 | CLA  | O2A-CGA-CBA | 2.48  | 119.70      | 111.91   |
| 16  | B     | 834 | CLA  | CMB-C2B-C3B | 2.48  | 129.33      | 124.68   |
| 16  | B     | 815 | CLA  | O2A-CGA-CBA | 2.48  | 119.70      | 111.91   |
| 16  | B     | 824 | CLA  | CAA-C2A-C1A | -2.48 | 103.84      | 111.97   |
| 16  | A     | 813 | CLA  | C2D-C1D-ND  | 2.48  | 111.93      | 110.10   |
| 21  | A     | 844 | BCR  | C19-C18-C17 | 2.48  | 122.75      | 118.94   |
| 16  | A     | 827 | CLA  | C2C-C1C-NC  | 2.48  | 112.30      | 109.97   |
| 16  | B     | 821 | CLA  | O2D-CGD-O1D | -2.48 | 118.98      | 123.84   |
| 16  | A     | 810 | CLA  | O2A-CGA-CBA | 2.48  | 119.70      | 111.91   |
| 16  | 3     | 210 | CLA  | CHD-C1D-ND  | -2.48 | 122.17      | 124.45   |
| 21  | B     | 847 | BCR  | C35-C13-C12 | 2.48  | 121.99      | 118.08   |
| 17  | 1     | 612 | C7Z  | C15-C35-C34 | -2.48 | 118.39      | 123.47   |
| 17  | A     | 843 | C7Z  | C39-C29-C30 | -2.48 | 119.45      | 122.92   |
| 16  | 1     | 601 | CLA  | C2D-C1D-ND  | 2.48  | 111.93      | 110.10   |
| 16  | A     | 834 | CLA  | CHA-C4D-ND  | 2.48  | 137.69      | 132.50   |
| 16  | 2     | 607 | CLA  | C1C-C2C-C3C | -2.48 | 104.35      | 106.96   |
| 16  | A     | 833 | CLA  | O2D-CGD-O1D | -2.48 | 118.99      | 123.84   |
| 16  | A     | 828 | CLA  | C1C-C2C-C3C | -2.48 | 104.35      | 106.96   |
| 16  | B     | 813 | CLA  | C1C-C2C-C3C | -2.48 | 104.35      | 106.96   |
| 16  | B     | 816 | CLA  | O2D-CGD-O1D | -2.48 | 118.99      | 123.84   |
| 16  | B     | 819 | CLA  | C1C-C2C-C3C | -2.48 | 104.35      | 106.96   |
| 16  | B     | 802 | CLA  | C2D-C1D-ND  | 2.48  | 111.93      | 110.10   |
| 16  | B     | 830 | CLA  | C2D-C1D-ND  | 2.48  | 111.93      | 110.10   |
| 16  | A     | 832 | CLA  | C1-C2-C3    | -2.48 | 121.76      | 126.04   |
| 16  | O     | 203 | CLA  | C1C-C2C-C3C | -2.48 | 104.35      | 106.96   |
| 16  | 3     | 209 | CLA  | O2A-CGA-CBA | 2.48  | 119.68      | 111.91   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 834 | CLA  | C1C-C2C-C3C | -2.48 | 104.35      | 106.96   |
| 16  | A     | 830 | CLA  | CHA-C4D-ND  | 2.47  | 137.68      | 132.50   |
| 16  | 3     | 205 | CLA  | CBA-CAA-C2A | 2.47  | 121.16      | 113.86   |
| 17  | 2     | 615 | C7Z  | C23-C24-C25 | 2.47  | 116.78      | 111.85   |
| 16  | A     | 856 | CLA  | CHD-C1D-ND  | -2.47 | 122.18      | 124.45   |
| 19  | A     | 841 | LHG  | O8-C23-C24  | 2.47  | 119.66      | 111.91   |
| 16  | 1     | 608 | CLA  | CHD-C1D-ND  | -2.47 | 122.19      | 124.45   |
| 16  | A     | 854 | CLA  | C1-O2A-CGA  | 2.47  | 122.92      | 116.44   |
| 16  | 3     | 203 | CLA  | C1-C2-C3    | -2.47 | 121.78      | 126.04   |
| 16  | 1     | 607 | CLA  | C2C-C1C-NC  | 2.47  | 112.28      | 109.97   |
| 16  | 1     | 606 | CLA  | O2A-CGA-CBA | 2.47  | 119.65      | 111.91   |
| 31  | B     | 846 | DGD  | O1G-C1A-C2A | 2.47  | 119.65      | 111.91   |
| 16  | B     | 806 | CLA  | CHA-C4D-ND  | 2.47  | 137.66      | 132.50   |
| 16  | A     | 833 | CLA  | C2D-C1D-ND  | 2.47  | 111.92      | 110.10   |
| 16  | L     | 203 | CLA  | C2D-C1D-ND  | 2.47  | 111.92      | 110.10   |
| 16  | 3     | 203 | CLA  | O2D-CGD-O1D | -2.47 | 119.02      | 123.84   |
| 16  | A     | 856 | CLA  | C2C-C1C-NC  | 2.46  | 112.28      | 109.97   |
| 16  | A     | 808 | CLA  | CHD-C1D-ND  | -2.46 | 122.19      | 124.45   |
| 16  | B     | 821 | CLA  | C2D-C1D-ND  | 2.46  | 111.92      | 110.10   |
| 16  | 2     | 604 | CLA  | C1C-C2C-C3C | -2.46 | 104.37      | 106.96   |
| 20  | 2     | 618 | ERG  | C13-C14-C8  | 2.46  | 118.26      | 113.48   |
| 16  | A     | 812 | CLA  | O2D-CGD-O1D | -2.46 | 119.02      | 123.84   |
| 16  | 1     | 610 | CLA  | CHD-C1D-ND  | -2.46 | 122.19      | 124.45   |
| 16  | B     | 819 | CLA  | CHA-C4D-ND  | 2.46  | 137.65      | 132.50   |
| 16  | B     | 814 | CLA  | CMA-C3A-C4A | 2.46  | 118.39      | 111.77   |
| 16  | J     | 102 | CLA  | CHA-C4D-ND  | 2.46  | 137.65      | 132.50   |
| 26  | A     | 801 | CL0  | CMB-C2B-C3B | 2.46  | 129.28      | 124.68   |
| 17  | 3     | 215 | C7Z  | C28-C27-C26 | -2.46 | 120.29      | 127.20   |
| 16  | I     | 101 | CLA  | C1-C2-C3    | -2.46 | 121.79      | 126.04   |
| 16  | 1     | 603 | CLA  | CHD-C1D-ND  | -2.46 | 122.19      | 124.45   |
| 16  | B     | 821 | CLA  | CHA-C4D-ND  | 2.46  | 137.65      | 132.50   |
| 16  | A     | 836 | CLA  | O2D-CGD-O1D | -2.46 | 119.03      | 123.84   |
| 17  | 1     | 615 | C7Z  | C2-C3-C4    | 2.46  | 113.67      | 110.30   |
| 16  | 3     | 214 | CLA  | C2D-C1D-ND  | 2.46  | 111.92      | 110.10   |
| 16  | A     | 855 | CLA  | CHD-C1D-ND  | -2.46 | 122.19      | 124.45   |
| 16  | B     | 802 | CLA  | CHD-C1D-ND  | -2.46 | 122.19      | 124.45   |
| 16  | A     | 803 | CLA  | CHA-C4D-ND  | 2.46  | 137.64      | 132.50   |
| 16  | A     | 829 | CLA  | O2D-CGD-O1D | -2.46 | 119.03      | 123.84   |
| 16  | F     | 205 | CLA  | C2D-C1D-ND  | 2.46  | 111.92      | 110.10   |
| 16  | A     | 810 | CLA  | C1C-C2C-C3C | -2.46 | 104.37      | 106.96   |
| 16  | B     | 814 | CLA  | CHD-C1D-ND  | -2.46 | 122.20      | 124.45   |
| 16  | B     | 801 | CLA  | O2A-CGA-CBA | 2.46  | 119.61      | 111.91   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | F     | 202 | CLA  | O2D-CGD-O1D | -2.46 | 119.04      | 123.84   |
| 16  | B     | 815 | CLA  | C1-O2A-CGA  | 2.45  | 122.89      | 116.44   |
| 16  | B     | 810 | CLA  | O2D-CGD-O1D | -2.45 | 119.04      | 123.84   |
| 16  | L     | 203 | CLA  | CHD-C1D-ND  | -2.45 | 122.20      | 124.45   |
| 16  | L     | 201 | CLA  | CMA-C3A-C4A | 2.45  | 118.37      | 111.77   |
| 16  | A     | 839 | CLA  | CHA-C4D-ND  | 2.45  | 137.63      | 132.50   |
| 16  | O     | 202 | CLA  | C1C-C2C-C3C | -2.45 | 104.38      | 106.96   |
| 16  | 2     | 612 | CLA  | CHA-C4D-ND  | 2.45  | 137.62      | 132.50   |
| 16  | 2     | 609 | CLA  | CHD-C1D-ND  | -2.45 | 122.20      | 124.45   |
| 16  | 3     | 210 | CLA  | O2D-CGD-O1D | -2.45 | 119.05      | 123.84   |
| 16  | 3     | 204 | CLA  | CMD-C2D-C3D | -2.45 | 121.98      | 127.61   |
| 16  | 3     | 212 | CLA  | CHD-C1D-ND  | -2.45 | 122.20      | 124.45   |
| 16  | 2     | 601 | CLA  | CHA-C4D-ND  | 2.45  | 137.62      | 132.50   |
| 17  | 2     | 614 | C7Z  | C39-C29-C30 | -2.45 | 119.50      | 122.92   |
| 16  | 2     | 609 | CLA  | C2D-C1D-ND  | 2.45  | 111.91      | 110.10   |
| 16  | 3     | 204 | CLA  | O2D-CGD-O1D | -2.45 | 119.06      | 123.84   |
| 16  | B     | 836 | CLA  | O2D-CGD-O1D | -2.45 | 119.06      | 123.84   |
| 16  | O     | 204 | CLA  | C1D-ND-C4D  | -2.45 | 104.60      | 106.33   |
| 16  | A     | 808 | CLA  | C2C-C1C-NC  | 2.44  | 112.26      | 109.97   |
| 16  | A     | 804 | CLA  | O2A-CGA-CBA | 2.44  | 119.58      | 111.91   |
| 16  | 1     | 611 | CLA  | CHD-C1D-ND  | -2.44 | 122.21      | 124.45   |
| 16  | 3     | 207 | CLA  | CMD-C2D-C3D | -2.44 | 121.99      | 127.61   |
| 16  | B     | 803 | CLA  | CHA-C4D-ND  | 2.44  | 137.61      | 132.50   |
| 23  | 2     | 620 | DGA  | OG1-CA1-CA2 | 2.44  | 119.57      | 111.91   |
| 16  | A     | 813 | CLA  | C1C-C2C-C3C | -2.44 | 104.39      | 106.96   |
| 16  | 1     | 603 | CLA  | O2D-CGD-O1D | -2.44 | 119.06      | 123.84   |
| 16  | A     | 820 | CLA  | C1C-C2C-C3C | -2.44 | 104.39      | 106.96   |
| 21  | L     | 207 | BCR  | C33-C5-C6   | -2.44 | 121.79      | 124.53   |
| 16  | 2     | 606 | CLA  | O2D-CGD-O1D | -2.44 | 119.07      | 123.84   |
| 16  | B     | 829 | CLA  | C5-C3-C2    | 2.44  | 126.06      | 121.12   |
| 16  | F     | 205 | CLA  | C1C-C2C-C3C | -2.44 | 104.39      | 106.96   |
| 16  | A     | 831 | CLA  | O2D-CGD-O1D | -2.44 | 119.07      | 123.84   |
| 16  | 1     | 607 | CLA  | C1D-ND-C4D  | -2.44 | 104.60      | 106.33   |
| 16  | B     | 808 | CLA  | C1C-C2C-C3C | -2.44 | 104.39      | 106.96   |
| 16  | A     | 821 | CLA  | CMA-C3A-C4A | 2.44  | 118.33      | 111.77   |
| 17  | 1     | 615 | C7Z  | C28-C27-C26 | -2.44 | 120.35      | 127.20   |
| 16  | A     | 830 | CLA  | C2D-C1D-ND  | 2.44  | 111.90      | 110.10   |
| 16  | A     | 820 | CLA  | O2D-CGD-O1D | -2.44 | 119.07      | 123.84   |
| 16  | A     | 815 | CLA  | CHA-C4D-ND  | 2.44  | 137.60      | 132.50   |
| 31  | B     | 849 | DGD  | C3G-O3G-C1D | 2.44  | 118.50      | 113.74   |
| 16  | 2     | 610 | CLA  | C1-O2A-CGA  | 2.44  | 122.83      | 116.44   |
| 16  | B     | 826 | CLA  | C2D-C1D-ND  | 2.44  | 111.90      | 110.10   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 2     | 604 | CLA  | C2C-C1C-NC  | 2.43  | 112.25      | 109.97   |
| 18  | J     | 103 | RRX  | C21-C20-C19 | 2.43  | 130.81      | 123.22   |
| 16  | 2     | 605 | CLA  | O2A-CGA-CBA | 2.43  | 119.55      | 111.91   |
| 16  | A     | 803 | CLA  | O2D-CGD-O1D | -2.43 | 119.08      | 123.84   |
| 16  | 1     | 606 | CLA  | CHD-C1D-ND  | -2.43 | 122.22      | 124.45   |
| 16  | B     | 813 | CLA  | O2A-CGA-CBA | 2.43  | 119.55      | 111.91   |
| 21  | F     | 206 | BCR  | C36-C18-C19 | -2.43 | 114.24      | 118.08   |
| 16  | J     | 102 | CLA  | C1-C2-C3    | -2.43 | 121.83      | 126.04   |
| 16  | B     | 822 | CLA  | CHD-C1D-ND  | -2.43 | 122.22      | 124.45   |
| 16  | 3     | 212 | CLA  | O2D-CGD-O1D | -2.43 | 119.08      | 123.84   |
| 16  | 2     | 602 | CLA  | C2D-C1D-ND  | 2.43  | 111.90      | 110.10   |
| 16  | A     | 821 | CLA  | C1D-ND-C4D  | -2.43 | 104.61      | 106.33   |
| 18  | A     | 847 | RRX  | C10-C11-C12 | 2.43  | 130.80      | 123.22   |
| 16  | A     | 820 | CLA  | CHA-C4D-ND  | 2.43  | 137.58      | 132.50   |
| 16  | 3     | 212 | CLA  | C2D-C1D-ND  | 2.43  | 111.89      | 110.10   |
| 16  | B     | 802 | CLA  | O2D-CGD-O1D | -2.43 | 119.09      | 123.84   |
| 16  | A     | 855 | CLA  | O2D-CGD-O1D | -2.43 | 119.09      | 123.84   |
| 17  | 2     | 615 | C7Z  | C28-C27-C26 | -2.43 | 120.38      | 127.20   |
| 21  | A     | 844 | BCR  | C29-C30-C25 | -2.43 | 106.74      | 110.48   |
| 17  | 3     | 215 | C7Z  | C20-C13-C14 | -2.43 | 119.52      | 122.92   |
| 16  | A     | 836 | CLA  | C1C-C2C-C3C | -2.43 | 104.40      | 106.96   |
| 16  | K     | 101 | CLA  | C1C-C2C-C3C | -2.43 | 104.40      | 106.96   |
| 21  | B     | 844 | BCR  | C19-C18-C17 | 2.43  | 122.67      | 118.94   |
| 17  | 2     | 615 | C7Z  | C20-C13-C14 | -2.43 | 119.52      | 122.92   |
| 16  | B     | 805 | CLA  | C1C-C2C-C3C | -2.43 | 104.41      | 106.96   |
| 16  | A     | 818 | CLA  | C1-C2-C3    | -2.42 | 121.85      | 126.04   |
| 16  | A     | 816 | CLA  | C2D-C1D-ND  | 2.42  | 111.89      | 110.10   |
| 16  | 1     | 608 | CLA  | C1C-C2C-C3C | -2.42 | 104.41      | 106.96   |
| 16  | B     | 829 | CLA  | CHA-C4D-ND  | 2.42  | 137.57      | 132.50   |
| 16  | B     | 838 | CLA  | CHA-C4D-ND  | 2.42  | 137.57      | 132.50   |
| 16  | B     | 832 | CLA  | O2D-CGD-O1D | -2.42 | 119.10      | 123.84   |
| 16  | 3     | 209 | CLA  | CHA-C4D-ND  | 2.42  | 137.57      | 132.50   |
| 16  | F     | 201 | CLA  | O2A-CGA-CBA | 2.42  | 119.52      | 111.91   |
| 16  | B     | 815 | CLA  | C1C-C2C-C3C | -2.42 | 104.41      | 106.96   |
| 16  | J     | 102 | CLA  | C1C-C2C-C3C | -2.42 | 104.41      | 106.96   |
| 16  | 3     | 206 | CLA  | C1-C2-C3    | -2.42 | 121.85      | 126.04   |
| 16  | B     | 838 | CLA  | O1D-CGD-CBD | -2.42 | 119.53      | 124.48   |
| 16  | 2     | 612 | CLA  | C4-C3-C2    | -2.42 | 117.46      | 123.68   |
| 16  | B     | 822 | CLA  | C2D-C1D-ND  | 2.42  | 111.89      | 110.10   |
| 16  | 2     | 607 | CLA  | O2D-CGD-O1D | -2.42 | 119.10      | 123.84   |
| 16  | B     | 817 | CLA  | CHA-C4D-ND  | 2.42  | 137.56      | 132.50   |
| 16  | B     | 825 | CLA  | O2A-CGA-CBA | 2.42  | 119.50      | 111.91   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 838 | CLA  | C2D-C1D-ND  | 2.42  | 111.89      | 110.10   |
| 16  | A     | 825 | CLA  | CHA-C4D-ND  | 2.42  | 137.56      | 132.50   |
| 16  | L     | 203 | CLA  | CHA-C4D-ND  | 2.42  | 137.56      | 132.50   |
| 16  | 2     | 604 | CLA  | O2D-CGD-O1D | -2.42 | 119.11      | 123.84   |
| 16  | 2     | 611 | CLA  | CHD-C1D-ND  | -2.42 | 122.23      | 124.45   |
| 26  | A     | 801 | CL0  | C4-C3-C5    | 2.42  | 119.34      | 115.27   |
| 16  | A     | 826 | CLA  | CHA-C4D-ND  | 2.42  | 137.56      | 132.50   |
| 16  | 3     | 211 | CLA  | C1C-C2C-C3C | -2.42 | 104.41      | 106.96   |
| 16  | B     | 808 | CLA  | C2D-C1D-ND  | 2.42  | 111.89      | 110.10   |
| 16  | 3     | 207 | CLA  | CHA-C4D-ND  | 2.42  | 137.56      | 132.50   |
| 21  | B     | 841 | BCR  | C36-C18-C17 | -2.42 | 119.54      | 122.92   |
| 16  | 2     | 607 | CLA  | CHA-C4D-ND  | 2.42  | 137.56      | 132.50   |
| 21  | O     | 205 | BCR  | C32-C1-C6   | -2.42 | 106.38      | 110.30   |
| 16  | B     | 835 | CLA  | C1C-C2C-C3C | -2.42 | 104.42      | 106.96   |
| 19  | A     | 842 | LHG  | O8-C23-C24  | 2.42  | 119.49      | 111.91   |
| 16  | B     | 820 | CLA  | O2D-CGD-O1D | -2.42 | 119.11      | 123.84   |
| 16  | 2     | 603 | CLA  | CHA-C4D-ND  | 2.42  | 137.55      | 132.50   |
| 16  | B     | 825 | CLA  | CHA-C4D-ND  | 2.42  | 137.55      | 132.50   |
| 16  | A     | 824 | CLA  | CHA-C4D-ND  | 2.42  | 137.55      | 132.50   |
| 16  | B     | 823 | CLA  | CHA-C4D-ND  | 2.42  | 137.55      | 132.50   |
| 16  | B     | 807 | CLA  | O2D-CGD-O1D | -2.42 | 119.12      | 123.84   |
| 17  | 2     | 614 | C7Z  | C28-C27-C26 | -2.41 | 120.42      | 127.20   |
| 16  | A     | 819 | CLA  | CHA-C4D-ND  | 2.41  | 137.55      | 132.50   |
| 16  | A     | 825 | CLA  | O2A-CGA-CBA | 2.41  | 119.48      | 111.91   |
| 16  | F     | 201 | CLA  | C2C-C1C-NC  | 2.41  | 112.23      | 109.97   |
| 17  | 2     | 614 | C7Z  | C18-C5-C4   | 2.41  | 118.83      | 114.36   |
| 16  | B     | 836 | CLA  | CHA-C4D-ND  | 2.41  | 137.55      | 132.50   |
| 16  | 1     | 608 | CLA  | C2D-C1D-ND  | 2.41  | 111.88      | 110.10   |
| 17  | 3     | 201 | C7Z  | C28-C27-C26 | -2.41 | 120.42      | 127.20   |
| 16  | 1     | 609 | CLA  | CHA-C4D-ND  | 2.41  | 137.55      | 132.50   |
| 16  | B     | 818 | CLA  | CHA-C4D-ND  | 2.41  | 137.55      | 132.50   |
| 16  | B     | 805 | CLA  | CHD-C1D-ND  | -2.41 | 122.24      | 124.45   |
| 16  | A     | 833 | CLA  | C1C-C2C-C3C | -2.41 | 104.42      | 106.96   |
| 17  | 3     | 216 | C7Z  | C2-C3-C4    | 2.41  | 113.61      | 110.30   |
| 16  | B     | 823 | CLA  | O2A-CGA-CBA | 2.41  | 119.48      | 111.91   |
| 16  | B     | 804 | CLA  | CHA-C4D-ND  | 2.41  | 137.54      | 132.50   |
| 16  | B     | 816 | CLA  | CMD-C2D-C3D | -2.41 | 122.07      | 127.61   |
| 16  | B     | 825 | CLA  | O2D-CGD-O1D | -2.41 | 119.12      | 123.84   |
| 19  | 1     | 617 | LHG  | C5-O7-C7    | -2.41 | 111.85      | 117.79   |
| 16  | B     | 832 | CLA  | C1C-C2C-C3C | -2.41 | 104.42      | 106.96   |
| 16  | A     | 813 | CLA  | CHA-C4D-ND  | 2.41  | 137.54      | 132.50   |
| 16  | K     | 101 | CLA  | O2D-CGD-O1D | -2.41 | 119.13      | 123.84   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | B     | 844 | BCR  | C27-C26-C25 | -2.41 | 119.23      | 122.73   |
| 16  | 2     | 610 | CLA  | C2D-C1D-ND  | 2.41  | 111.88      | 110.10   |
| 16  | B     | 803 | CLA  | OBD-CAD-C3D | -2.41 | 122.72      | 128.52   |
| 16  | B     | 818 | CLA  | O2D-CGD-O1D | -2.41 | 119.13      | 123.84   |
| 21  | L     | 206 | BCR  | C24-C25-C26 | -2.41 | 115.63      | 121.46   |
| 16  | 2     | 613 | CLA  | CHD-C1D-ND  | -2.41 | 122.24      | 124.45   |
| 16  | A     | 819 | CLA  | CHD-C1D-ND  | -2.41 | 122.24      | 124.45   |
| 16  | A     | 828 | CLA  | CHD-C1D-ND  | -2.41 | 122.24      | 124.45   |
| 16  | B     | 812 | CLA  | O2D-CGD-O1D | -2.41 | 119.13      | 123.84   |
| 18  | 2     | 616 | RRX  | C8-C9-C10   | 2.41  | 122.64      | 118.94   |
| 16  | 2     | 605 | CLA  | C1D-ND-C4D  | -2.41 | 104.62      | 106.33   |
| 16  | 2     | 609 | CLA  | C1-C2-C3    | -2.41 | 121.88      | 126.04   |
| 16  | A     | 831 | CLA  | CHA-C4D-ND  | 2.41  | 137.53      | 132.50   |
| 17  | 3     | 201 | C7Z  | C8-C9-C10   | 2.41  | 122.63      | 118.94   |
| 17  | 3     | 218 | C7Z  | C2-C3-C4    | 2.40  | 113.60      | 110.30   |
| 16  | 2     | 613 | CLA  | CHA-C4D-ND  | 2.40  | 137.53      | 132.50   |
| 16  | K     | 102 | CLA  | CMA-C3A-C4A | 2.40  | 118.23      | 111.77   |
| 16  | B     | 826 | CLA  | C1C-C2C-C3C | -2.40 | 104.43      | 106.96   |
| 16  | B     | 808 | CLA  | CHA-C4D-ND  | 2.40  | 137.53      | 132.50   |
| 16  | A     | 820 | CLA  | O2A-CGA-CBA | 2.40  | 119.45      | 111.91   |
| 16  | 3     | 207 | CLA  | C2D-C1D-ND  | 2.40  | 111.87      | 110.10   |
| 16  | 2     | 603 | CLA  | CHD-C1D-ND  | -2.40 | 122.25      | 124.45   |
| 21  | B     | 840 | BCR  | C33-C5-C4   | 2.40  | 118.23      | 113.62   |
| 18  | J     | 103 | RRX  | C38-C26-C27 | 2.40  | 118.80      | 114.36   |
| 16  | B     | 832 | CLA  | O2A-CGA-CBA | 2.40  | 119.44      | 111.91   |
| 16  | A     | 805 | CLA  | O2D-CGD-O1D | -2.40 | 119.14      | 123.84   |
| 16  | 2     | 601 | CLA  | CMA-C3A-C4A | 2.40  | 118.22      | 111.77   |
| 21  | L     | 207 | BCR  | C28-C27-C26 | -2.40 | 109.79      | 114.08   |
| 19  | 3     | 219 | LHG  | C5-O7-C7    | -2.40 | 111.89      | 117.79   |
| 16  | 3     | 207 | CLA  | O2D-CGD-O1D | -2.40 | 119.15      | 123.84   |
| 16  | A     | 809 | CLA  | C1D-ND-C4D  | -2.40 | 104.63      | 106.33   |
| 16  | A     | 813 | CLA  | C1-C2-C3    | -2.40 | 121.90      | 126.04   |
| 16  | A     | 827 | CLA  | CHA-C4D-ND  | 2.40  | 137.51      | 132.50   |
| 16  | L     | 204 | CLA  | CMA-C3A-C4A | 2.40  | 118.21      | 111.77   |
| 16  | K     | 102 | CLA  | CHA-C4D-ND  | 2.39  | 137.51      | 132.50   |
| 16  | F     | 205 | CLA  | CHD-C1D-ND  | -2.39 | 122.25      | 124.45   |
| 16  | B     | 815 | CLA  | O2D-CGD-O1D | -2.39 | 119.16      | 123.84   |
| 16  | B     | 816 | CLA  | CHA-C4D-ND  | 2.39  | 137.50      | 132.50   |
| 16  | B     | 824 | CLA  | O2A-CGA-CBA | 2.39  | 119.42      | 111.91   |
| 16  | 3     | 212 | CLA  | CHA-C4D-ND  | 2.39  | 137.50      | 132.50   |
| 21  | K     | 104 | BCR  | C35-C13-C12 | -2.39 | 114.31      | 118.08   |
| 17  | 1     | 614 | C7Z  | C40-C33-C34 | -2.39 | 119.57      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 824 | CLA  | C1-C2-C3    | -2.39 | 121.91      | 126.04   |
| 21  | B     | 855 | BCR  | C40-C30-C25 | 2.39  | 114.18      | 110.30   |
| 16  | B     | 802 | CLA  | C1C-C2C-C3C | -2.39 | 104.44      | 106.96   |
| 17  | 3     | 217 | C7Z  | C11-C12-C13 | -2.39 | 119.70      | 126.42   |
| 21  | B     | 844 | BCR  | C15-C14-C13 | -2.39 | 123.90      | 127.31   |
| 16  | B     | 834 | CLA  | C1D-ND-C4D  | -2.39 | 104.64      | 106.33   |
| 16  | B     | 835 | CLA  | CHA-C4D-ND  | 2.39  | 137.50      | 132.50   |
| 16  | A     | 817 | CLA  | CMD-C2D-C3D | -2.39 | 122.12      | 127.61   |
| 16  | B     | 818 | CLA  | CMD-C2D-C3D | -2.39 | 122.12      | 127.61   |
| 16  | K     | 102 | CLA  | O2D-CGD-O1D | -2.39 | 119.17      | 123.84   |
| 16  | K     | 101 | CLA  | CHA-C4D-ND  | 2.39  | 137.49      | 132.50   |
| 16  | 1     | 607 | CLA  | O2A-CGA-CBA | 2.39  | 119.40      | 111.91   |
| 16  | 2     | 612 | CLA  | CHD-C1D-ND  | -2.39 | 122.26      | 124.45   |
| 16  | O     | 202 | CLA  | O2D-CGD-O1D | -2.39 | 119.17      | 123.84   |
| 16  | A     | 827 | CLA  | C1C-C2C-C3C | -2.39 | 104.45      | 106.96   |
| 16  | A     | 832 | CLA  | CHA-C4D-ND  | 2.39  | 137.49      | 132.50   |
| 16  | A     | 856 | CLA  | O2A-CGA-CBA | 2.39  | 119.40      | 111.91   |
| 21  | B     | 845 | BCR  | C34-C9-C8   | 2.39  | 121.84      | 118.08   |
| 16  | 2     | 608 | CLA  | CHA-C4D-ND  | 2.38  | 137.49      | 132.50   |
| 16  | B     | 808 | CLA  | CHD-C1D-ND  | -2.38 | 122.26      | 124.45   |
| 16  | 3     | 213 | CLA  | CHA-C4D-ND  | 2.38  | 137.49      | 132.50   |
| 16  | 3     | 214 | CLA  | CHA-C4D-ND  | 2.38  | 137.49      | 132.50   |
| 16  | 2     | 602 | CLA  | CHA-C4D-ND  | 2.38  | 137.48      | 132.50   |
| 17  | 1     | 614 | C7Z  | C28-C27-C26 | -2.38 | 120.51      | 127.20   |
| 16  | A     | 816 | CLA  | CHD-C1D-ND  | -2.38 | 122.27      | 124.45   |
| 16  | A     | 810 | CLA  | CHA-C4D-ND  | 2.38  | 137.48      | 132.50   |
| 16  | A     | 804 | CLA  | O2D-CGD-O1D | -2.38 | 119.18      | 123.84   |
| 16  | A     | 809 | CLA  | O2D-CGD-O1D | -2.38 | 119.18      | 123.84   |
| 16  | 1     | 602 | CLA  | CHD-C1D-ND  | -2.38 | 122.27      | 124.45   |
| 20  | 2     | 621 | ERG  | C18-C13-C14 | -2.38 | 106.39      | 110.24   |
| 17  | J     | 104 | C7Z  | C31-C32-C33 | -2.38 | 119.73      | 126.42   |
| 16  | 2     | 609 | CLA  | O2D-CGD-O1D | -2.38 | 119.19      | 123.84   |
| 18  | 1     | 613 | RRX  | C24-C25-C26 | -2.38 | 115.70      | 121.46   |
| 16  | B     | 826 | CLA  | CHA-C4D-ND  | 2.38  | 137.48      | 132.50   |
| 16  | F     | 201 | CLA  | C1C-C2C-C3C | -2.38 | 104.45      | 106.96   |
| 16  | A     | 813 | CLA  | O2D-CGD-O1D | -2.38 | 119.19      | 123.84   |
| 16  | A     | 805 | CLA  | CHA-C4D-ND  | 2.38  | 137.47      | 132.50   |
| 16  | 2     | 601 | CLA  | O1D-CGD-CBD | -2.38 | 119.62      | 124.48   |
| 16  | L     | 203 | CLA  | O2A-CGA-CBA | 2.38  | 119.37      | 111.91   |
| 16  | A     | 814 | CLA  | CMB-C2B-C3B | 2.38  | 129.13      | 124.68   |
| 16  | B     | 824 | CLA  | C1C-C2C-C3C | -2.38 | 104.46      | 106.96   |
| 16  | B     | 805 | CLA  | CHA-C4D-ND  | 2.38  | 137.47      | 132.50   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 835 | CLA  | C2C-C1C-NC  | 2.38  | 112.20      | 109.97   |
| 16  | 1     | 607 | CLA  | O2D-CGD-O1D | -2.38 | 119.19      | 123.84   |
| 21  | A     | 846 | BCR  | C24-C25-C26 | -2.38 | 115.71      | 121.46   |
| 17  | 2     | 615 | C7Z  | C11-C12-C13 | -2.38 | 119.74      | 126.42   |
| 16  | F     | 204 | CLA  | O2D-CGD-O1D | -2.38 | 119.19      | 123.84   |
| 16  | L     | 205 | CLA  | CHA-C4D-ND  | 2.37  | 137.47      | 132.50   |
| 16  | A     | 818 | CLA  | CMD-C2D-C3D | -2.37 | 122.15      | 127.61   |
| 16  | 2     | 602 | CLA  | O2D-CGD-O1D | -2.37 | 119.19      | 123.84   |
| 16  | 2     | 612 | CLA  | C2D-C1D-ND  | 2.37  | 111.85      | 110.10   |
| 16  | A     | 828 | CLA  | CHA-C4D-ND  | 2.37  | 137.47      | 132.50   |
| 16  | B     | 822 | CLA  | CHA-C4D-ND  | 2.37  | 137.47      | 132.50   |
| 16  | 1     | 611 | CLA  | CHA-C4D-ND  | 2.37  | 137.47      | 132.50   |
| 16  | B     | 802 | CLA  | CHA-C4D-ND  | 2.37  | 137.47      | 132.50   |
| 16  | A     | 807 | CLA  | O1D-CGD-CBD | -2.37 | 119.63      | 124.48   |
| 16  | 2     | 610 | CLA  | O2D-CGD-O1D | -2.37 | 119.20      | 123.84   |
| 16  | A     | 807 | CLA  | CHA-C4D-ND  | 2.37  | 137.46      | 132.50   |
| 30  | A     | 851 | T7X  | C12-C13-C14 | -2.37 | 109.00      | 113.23   |
| 16  | 3     | 209 | CLA  | C2D-C1D-ND  | 2.37  | 111.85      | 110.10   |
| 16  | 3     | 204 | CLA  | O2A-CGA-CBA | 2.37  | 119.35      | 111.91   |
| 16  | A     | 818 | CLA  | O2D-CGD-O1D | -2.37 | 119.20      | 123.84   |
| 16  | 3     | 204 | CLA  | CHA-C4D-ND  | 2.37  | 137.46      | 132.50   |
| 16  | 3     | 205 | CLA  | C1C-C2C-C3C | -2.37 | 104.46      | 106.96   |
| 16  | B     | 833 | CLA  | C5-C3-C2    | 2.37  | 125.91      | 121.12   |
| 16  | 2     | 611 | CLA  | CHA-C4D-ND  | 2.37  | 137.46      | 132.50   |
| 16  | A     | 819 | CLA  | CAA-C2A-C3A | 2.37  | 119.26      | 112.78   |
| 16  | A     | 807 | CLA  | CHD-C1D-ND  | -2.37 | 122.28      | 124.45   |
| 16  | K     | 101 | CLA  | CHD-C1D-ND  | -2.37 | 122.28      | 124.45   |
| 16  | A     | 802 | CLA  | CHA-C4D-ND  | 2.37  | 137.45      | 132.50   |
| 16  | A     | 837 | CLA  | CHA-C4D-ND  | 2.37  | 137.45      | 132.50   |
| 16  | A     | 854 | CLA  | C1D-ND-C4D  | -2.37 | 104.65      | 106.33   |
| 21  | F     | 206 | BCR  | C30-C25-C26 | -2.37 | 119.28      | 122.61   |
| 16  | A     | 806 | CLA  | CMA-C3A-C4A | 2.37  | 118.13      | 111.77   |
| 31  | B     | 849 | DGD  | O3G-C1D-C2D | 2.37  | 112.00      | 108.30   |
| 16  | A     | 812 | CLA  | CHA-C4D-ND  | 2.37  | 137.45      | 132.50   |
| 16  | B     | 823 | CLA  | C1C-C2C-C3C | -2.37 | 104.47      | 106.96   |
| 16  | 2     | 608 | CLA  | C5-C3-C2    | 2.37  | 125.90      | 121.12   |
| 16  | A     | 834 | CLA  | C1-C2-C3    | -2.37 | 121.95      | 126.04   |
| 16  | A     | 833 | CLA  | CHA-C4D-ND  | 2.37  | 137.45      | 132.50   |
| 16  | A     | 819 | CLA  | C2D-C1D-ND  | 2.37  | 111.85      | 110.10   |
| 16  | 1     | 608 | CLA  | CHA-C4D-ND  | 2.36  | 137.44      | 132.50   |
| 21  | A     | 857 | BCR  | C38-C26-C27 | 2.36  | 118.16      | 113.62   |
| 16  | A     | 815 | CLA  | CMD-C2D-C3D | -2.36 | 122.18      | 127.61   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 21  | 2     | 617 | BCR  | C24-C25-C26 | -2.36 | 115.74      | 121.46   |
| 16  | A     | 838 | CLA  | CMA-C3A-C4A | 2.36  | 118.12      | 111.77   |
| 17  | 1     | 616 | C7Z  | C22-C23-C24 | 2.36  | 113.54      | 110.30   |
| 16  | B     | 832 | CLA  | CHA-C4D-ND  | 2.36  | 137.44      | 132.50   |
| 18  | A     | 847 | RRX  | C35-C13-C12 | 2.36  | 121.80      | 118.08   |
| 16  | A     | 825 | CLA  | C4-C3-C2    | -2.36 | 117.62      | 123.68   |
| 16  | B     | 814 | CLA  | CHA-C4D-ND  | 2.36  | 137.44      | 132.50   |
| 21  | F     | 203 | BCR  | C1-C6-C5    | -2.36 | 119.29      | 122.61   |
| 16  | L     | 205 | CLA  | O2D-CGD-O1D | -2.36 | 119.22      | 123.84   |
| 16  | B     | 804 | CLA  | O2A-C1-C2   | 2.36  | 114.84      | 108.64   |
| 16  | 1     | 601 | CLA  | C1C-C2C-C3C | -2.36 | 104.47      | 106.96   |
| 16  | B     | 833 | CLA  | CHA-C4D-ND  | 2.36  | 137.44      | 132.50   |
| 16  | B     | 801 | CLA  | OBD-CAD-C3D | -2.36 | 122.84      | 128.52   |
| 16  | 2     | 606 | CLA  | CHA-C4D-ND  | 2.36  | 137.43      | 132.50   |
| 16  | B     | 806 | CLA  | CMD-C2D-C3D | -2.36 | 122.19      | 127.61   |
| 16  | 1     | 603 | CLA  | C1-O2A-CGA  | 2.36  | 122.63      | 116.44   |
| 16  | A     | 821 | CLA  | CBC-CAC-C3C | -2.36 | 105.93      | 112.43   |
| 16  | B     | 822 | CLA  | O2A-CGA-CBA | 2.36  | 119.31      | 111.91   |
| 16  | I     | 102 | CLA  | C1C-C2C-C3C | -2.36 | 104.48      | 106.96   |
| 16  | 2     | 609 | CLA  | CHA-C4D-ND  | 2.36  | 137.43      | 132.50   |
| 16  | B     | 828 | CLA  | C1-O2A-CGA  | 2.36  | 122.63      | 116.44   |
| 16  | A     | 803 | CLA  | CMB-C2B-C3B | 2.36  | 129.09      | 124.68   |
| 16  | B     | 828 | CLA  | CHA-C4D-ND  | 2.35  | 137.43      | 132.50   |
| 16  | A     | 804 | CLA  | C1C-C2C-C3C | -2.35 | 104.48      | 106.96   |
| 17  | A     | 843 | C7Z  | C2-C3-C4    | 2.35  | 113.53      | 110.30   |
| 20  | 2     | 618 | ERG  | C20-C22-C23 | -2.35 | 118.37      | 125.67   |
| 21  | B     | 843 | BCR  | C30-C25-C24 | 2.35  | 122.44      | 115.78   |
| 16  | A     | 834 | CLA  | C2D-C1D-ND  | 2.35  | 111.84      | 110.10   |
| 16  | A     | 810 | CLA  | C1-O2A-CGA  | 2.35  | 122.61      | 116.44   |
| 16  | 1     | 603 | CLA  | CHA-C4D-ND  | 2.35  | 137.42      | 132.50   |
| 16  | B     | 832 | CLA  | C2D-C1D-ND  | 2.35  | 111.84      | 110.10   |
| 16  | A     | 832 | CLA  | C1C-C2C-C3C | -2.35 | 104.48      | 106.96   |
| 16  | B     | 811 | CLA  | CHA-C4D-ND  | 2.35  | 137.42      | 132.50   |
| 16  | B     | 838 | CLA  | CMA-C3A-C4A | 2.35  | 118.09      | 111.77   |
| 16  | A     | 809 | CLA  | CHA-C4D-ND  | 2.35  | 137.42      | 132.50   |
| 16  | B     | 815 | CLA  | CHA-C4D-ND  | 2.35  | 137.41      | 132.50   |
| 16  | A     | 830 | CLA  | C4-C3-C2    | -2.35 | 117.65      | 123.68   |
| 16  | A     | 810 | CLA  | C2C-C1C-NC  | 2.35  | 112.17      | 109.97   |
| 16  | A     | 838 | CLA  | C1D-ND-C4D  | -2.35 | 104.67      | 106.33   |
| 16  | F     | 201 | CLA  | CHD-C1D-ND  | -2.35 | 122.30      | 124.45   |
| 21  | A     | 850 | BCR  | C38-C26-C25 | -2.35 | 121.89      | 124.53   |
| 21  | O     | 205 | BCR  | C37-C22-C21 | -2.35 | 119.64      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 838 | CLA  | C2C-C1C-NC  | 2.35  | 112.17      | 109.97   |
| 16  | 2     | 610 | CLA  | CHA-C4D-ND  | 2.35  | 137.41      | 132.50   |
| 16  | B     | 813 | CLA  | CHA-C4D-ND  | 2.35  | 137.41      | 132.50   |
| 16  | 2     | 612 | CLA  | O2D-CGD-O1D | -2.35 | 119.25      | 123.84   |
| 16  | O     | 204 | CLA  | C1C-C2C-C3C | -2.34 | 104.49      | 106.96   |
| 16  | B     | 811 | CLA  | CMD-C2D-C3D | -2.34 | 122.22      | 127.61   |
| 16  | A     | 819 | CLA  | CMD-C2D-C3D | -2.34 | 122.22      | 127.61   |
| 16  | 2     | 607 | CLA  | C2D-C1D-ND  | 2.34  | 111.83      | 110.10   |
| 16  | 2     | 603 | CLA  | O2D-CGD-O1D | -2.34 | 119.26      | 123.84   |
| 16  | 1     | 605 | CLA  | CHA-C4D-ND  | 2.34  | 137.40      | 132.50   |
| 16  | 3     | 210 | CLA  | CHA-C4D-ND  | 2.34  | 137.40      | 132.50   |
| 16  | B     | 806 | CLA  | C2D-C1D-ND  | 2.34  | 111.83      | 110.10   |
| 16  | 2     | 602 | CLA  | CMD-C2D-C3D | -2.34 | 122.23      | 127.61   |
| 16  | B     | 816 | CLA  | OBD-CAD-C3D | -2.34 | 122.89      | 128.52   |
| 21  | F     | 203 | BCR  | C30-C25-C26 | -2.34 | 119.32      | 122.61   |
| 16  | B     | 812 | CLA  | C1C-C2C-C3C | -2.34 | 104.50      | 106.96   |
| 16  | B     | 812 | CLA  | CHA-C4D-ND  | 2.34  | 137.39      | 132.50   |
| 16  | I     | 101 | CLA  | O2D-CGD-O1D | -2.34 | 119.27      | 123.84   |
| 16  | A     | 816 | CLA  | C1-O2A-CGA  | 2.34  | 122.58      | 116.44   |
| 21  | A     | 844 | BCR  | C4-C5-C6    | -2.34 | 119.34      | 122.73   |
| 16  | 2     | 610 | CLA  | C1C-C2C-C3C | -2.34 | 104.50      | 106.96   |
| 16  | B     | 807 | CLA  | O2A-CGA-CBA | 2.34  | 119.24      | 111.91   |
| 16  | B     | 818 | CLA  | C2D-C1D-ND  | 2.34  | 111.83      | 110.10   |
| 16  | B     | 837 | CLA  | C2D-C1D-ND  | 2.34  | 111.83      | 110.10   |
| 16  | B     | 813 | CLA  | CHD-C1D-ND  | -2.34 | 122.31      | 124.45   |
| 16  | A     | 808 | CLA  | CAA-C2A-C1A | -2.34 | 104.32      | 111.97   |
| 26  | A     | 801 | CL0  | C4D-C3D-CAD | 2.33  | 110.85      | 108.10   |
| 16  | B     | 833 | CLA  | C4-C3-C2    | -2.33 | 117.69      | 123.68   |
| 16  | B     | 827 | CLA  | CHA-C4D-ND  | 2.33  | 137.38      | 132.50   |
| 16  | A     | 817 | CLA  | CHA-C4D-ND  | 2.33  | 137.38      | 132.50   |
| 16  | 3     | 208 | CLA  | CHA-C4D-ND  | 2.33  | 137.38      | 132.50   |
| 16  | B     | 814 | CLA  | C2D-C1D-ND  | 2.33  | 111.82      | 110.10   |
| 21  | B     | 841 | BCR  | C35-C13-C12 | 2.33  | 121.75      | 118.08   |
| 16  | B     | 824 | CLA  | CHA-C4D-ND  | 2.33  | 137.38      | 132.50   |
| 16  | 2     | 601 | CLA  | CHD-C1D-ND  | -2.33 | 122.31      | 124.45   |
| 16  | I     | 102 | CLA  | CHD-C1D-ND  | -2.33 | 122.31      | 124.45   |
| 16  | B     | 810 | CLA  | CMA-C3A-C4A | 2.33  | 118.04      | 111.77   |
| 16  | B     | 803 | CLA  | C1C-C2C-C3C | -2.33 | 104.50      | 106.96   |
| 16  | 2     | 609 | CLA  | C1-O2A-CGA  | 2.33  | 122.56      | 116.44   |
| 16  | B     | 809 | CLA  | O2D-CGD-O1D | -2.33 | 119.28      | 123.84   |
| 16  | A     | 832 | CLA  | C2D-C1D-ND  | 2.33  | 111.82      | 110.10   |
| 16  | 3     | 212 | CLA  | O2A-CGA-CBA | 2.33  | 119.22      | 111.91   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | O     | 201 | CLA  | C3D-C2D-C1D | -2.33 | 102.65      | 105.83   |
| 16  | 3     | 208 | CLA  | CMD-C2D-C3D | -2.33 | 122.25      | 127.61   |
| 16  | I     | 102 | CLA  | CHA-C4D-ND  | 2.33  | 137.37      | 132.50   |
| 16  | 1     | 610 | CLA  | CHA-C4D-ND  | 2.33  | 137.37      | 132.50   |
| 16  | O     | 202 | CLA  | CHA-C4D-ND  | 2.33  | 137.37      | 132.50   |
| 16  | 1     | 609 | CLA  | O2D-CGD-O1D | -2.33 | 119.28      | 123.84   |
| 16  | F     | 202 | CLA  | C1C-C2C-C3C | -2.33 | 104.51      | 106.96   |
| 17  | 3     | 215 | C7Z  | C39-C29-C30 | -2.33 | 119.66      | 122.92   |
| 16  | 1     | 605 | CLA  | O2D-CGD-O1D | -2.33 | 119.29      | 123.84   |
| 16  | A     | 856 | CLA  | CHA-C4D-ND  | 2.33  | 137.37      | 132.50   |
| 16  | A     | 839 | CLA  | C2D-C1D-ND  | 2.33  | 111.82      | 110.10   |
| 16  | 1     | 603 | CLA  | C1C-C2C-C3C | -2.33 | 104.51      | 106.96   |
| 16  | B     | 807 | CLA  | CHA-C4D-ND  | 2.33  | 137.37      | 132.50   |
| 16  | 1     | 607 | CLA  | CHA-C4D-ND  | 2.33  | 137.37      | 132.50   |
| 16  | A     | 812 | CLA  | C1-C2-C3    | -2.33 | 122.02      | 126.04   |
| 16  | B     | 802 | CLA  | C1-C2-C3    | -2.33 | 122.02      | 126.04   |
| 16  | L     | 201 | CLA  | C5-C3-C2    | 2.33  | 125.82      | 121.12   |
| 16  | B     | 821 | CLA  | C1C-C2C-C3C | -2.33 | 104.51      | 106.96   |
| 16  | O     | 203 | CLA  | C2D-C1D-ND  | 2.33  | 111.82      | 110.10   |
| 16  | A     | 822 | CLA  | CHA-C4D-ND  | 2.33  | 137.36      | 132.50   |
| 16  | B     | 820 | CLA  | CHA-C4D-ND  | 2.33  | 137.36      | 132.50   |
| 16  | A     | 829 | CLA  | CHA-C4D-ND  | 2.32  | 137.36      | 132.50   |
| 16  | B     | 803 | CLA  | CHA-C1A-NA  | -2.32 | 121.08      | 126.40   |
| 16  | A     | 824 | CLA  | CHD-C1D-ND  | -2.32 | 122.32      | 124.45   |
| 16  | A     | 817 | CLA  | O1D-CGD-CBD | -2.32 | 119.73      | 124.48   |
| 17  | 3     | 218 | C7Z  | C31-C32-C33 | -2.32 | 119.89      | 126.42   |
| 16  | 1     | 601 | CLA  | CHA-C4D-ND  | 2.32  | 137.36      | 132.50   |
| 16  | 2     | 602 | CLA  | CHC-C1C-C2C | -2.32 | 124.25      | 129.77   |
| 16  | B     | 830 | CLA  | C2C-C1C-NC  | 2.32  | 112.14      | 109.97   |
| 16  | B     | 822 | CLA  | C1C-C2C-C3C | -2.32 | 104.52      | 106.96   |
| 16  | L     | 204 | CLA  | CHA-C4D-ND  | 2.32  | 137.35      | 132.50   |
| 16  | A     | 836 | CLA  | CHA-C4D-ND  | 2.32  | 137.35      | 132.50   |
| 16  | A     | 837 | CLA  | O2D-CGD-O1D | -2.32 | 119.31      | 123.84   |
| 16  | B     | 807 | CLA  | C1D-ND-C4D  | -2.32 | 104.69      | 106.33   |
| 16  | A     | 804 | CLA  | C7-C6-C5    | 2.32  | 119.65      | 113.36   |
| 16  | A     | 806 | CLA  | C2D-C1D-ND  | 2.32  | 111.81      | 110.10   |
| 16  | 2     | 604 | CLA  | C1D-ND-C4D  | -2.32 | 104.69      | 106.33   |
| 16  | 3     | 206 | CLA  | CHA-C4D-ND  | 2.32  | 137.34      | 132.50   |
| 16  | A     | 808 | CLA  | CHA-C4D-ND  | 2.31  | 137.34      | 132.50   |
| 16  | A     | 811 | CLA  | CHA-C4D-ND  | 2.31  | 137.34      | 132.50   |
| 21  | L     | 207 | BCR  | C16-C17-C18 | 2.31  | 130.61      | 127.31   |
| 17  | 3     | 217 | C7Z  | C27-C26-C25 | -2.31 | 115.86      | 121.46   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 839 | CLA  | O2A-CGA-CBA | 2.31  | 119.17      | 111.91   |
| 16  | L     | 203 | CLA  | CMA-C3A-C4A | 2.31  | 117.99      | 111.77   |
| 16  | 3     | 209 | CLA  | CHD-C1D-ND  | -2.31 | 122.33      | 124.45   |
| 16  | 3     | 213 | CLA  | O2D-CGD-O1D | -2.31 | 119.32      | 123.84   |
| 16  | 1     | 605 | CLA  | C1-O2A-CGA  | 2.31  | 122.51      | 116.44   |
| 16  | A     | 834 | CLA  | O1D-CGD-CBD | -2.31 | 119.75      | 124.48   |
| 16  | 2     | 603 | CLA  | CMD-C2D-C3D | -2.31 | 122.30      | 127.61   |
| 16  | 1     | 608 | CLA  | O2D-CGD-O1D | -2.31 | 119.32      | 123.84   |
| 16  | L     | 201 | CLA  | C1C-C2C-C3C | -2.31 | 104.53      | 106.96   |
| 16  | A     | 820 | CLA  | C2D-C1D-ND  | 2.31  | 111.81      | 110.10   |
| 16  | F     | 202 | CLA  | CHA-C4D-ND  | 2.31  | 137.33      | 132.50   |
| 16  | 2     | 605 | CLA  | C5-C3-C2    | 2.31  | 125.78      | 121.12   |
| 17  | 3     | 201 | C7Z  | C22-C23-C24 | 2.31  | 113.46      | 110.30   |
| 16  | L     | 205 | CLA  | CMD-C2D-C3D | -2.31 | 122.31      | 127.61   |
| 16  | 3     | 214 | CLA  | C1C-C2C-C3C | -2.30 | 104.53      | 106.96   |
| 16  | F     | 202 | CLA  | O1D-CGD-CBD | -2.30 | 119.77      | 124.48   |
| 16  | 2     | 603 | CLA  | C2D-C1D-ND  | 2.30  | 111.80      | 110.10   |
| 16  | A     | 833 | CLA  | CMD-C2D-C3D | -2.30 | 122.31      | 127.61   |
| 21  | F     | 203 | BCR  | C36-C18-C19 | -2.30 | 114.45      | 118.08   |
| 16  | F     | 201 | CLA  | O2D-CGD-O1D | -2.30 | 119.34      | 123.84   |
| 16  | 2     | 606 | CLA  | C5-C3-C2    | 2.30  | 125.77      | 121.12   |
| 16  | B     | 836 | CLA  | CMD-C2D-C3D | -2.30 | 122.32      | 127.61   |
| 16  | F     | 205 | CLA  | CHA-C4D-ND  | 2.30  | 137.31      | 132.50   |
| 16  | A     | 810 | CLA  | CMA-C3A-C4A | 2.30  | 117.96      | 111.77   |
| 16  | B     | 805 | CLA  | O1D-CGD-CBD | -2.30 | 119.78      | 124.48   |
| 16  | B     | 809 | CLA  | CHA-C4D-ND  | 2.30  | 137.31      | 132.50   |
| 16  | O     | 203 | CLA  | O2D-CGD-O1D | -2.30 | 119.34      | 123.84   |
| 16  | 2     | 612 | CLA  | CMA-C3A-C4A | 2.30  | 117.95      | 111.77   |
| 16  | B     | 823 | CLA  | C2D-C1D-ND  | 2.30  | 111.80      | 110.10   |
| 16  | 2     | 606 | CLA  | CHD-C1D-ND  | -2.30 | 122.34      | 124.45   |
| 16  | 2     | 608 | CLA  | O1D-CGD-CBD | -2.30 | 119.78      | 124.48   |
| 16  | L     | 204 | CLA  | O2A-CGA-CBA | 2.30  | 119.12      | 111.91   |
| 21  | A     | 845 | BCR  | C33-C5-C6   | -2.30 | 121.95      | 124.53   |
| 21  | B     | 855 | BCR  | C31-C1-C6   | -2.30 | 106.57      | 110.30   |
| 16  | A     | 827 | CLA  | O2D-CGD-O1D | -2.30 | 119.35      | 123.84   |
| 16  | A     | 823 | CLA  | CMA-C3A-C4A | 2.30  | 117.94      | 111.77   |
| 16  | A     | 838 | CLA  | C1C-C2C-C3C | -2.30 | 104.54      | 106.96   |
| 16  | F     | 205 | CLA  | O2A-CGA-CBA | 2.30  | 119.11      | 111.91   |
| 16  | A     | 816 | CLA  | CHA-C4D-ND  | 2.29  | 137.30      | 132.50   |
| 16  | B     | 801 | CLA  | CHA-C4D-ND  | 2.29  | 137.30      | 132.50   |
| 16  | B     | 819 | CLA  | O1D-CGD-CBD | -2.29 | 119.79      | 124.48   |
| 17  | 1     | 614 | C7Z  | C8-C7-C6    | -2.29 | 120.76      | 127.20   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 808 | CLA  | C1C-C2C-C3C | -2.29 | 104.55      | 106.96   |
| 16  | B     | 834 | CLA  | CHA-C4D-ND  | 2.29  | 137.29      | 132.50   |
| 16  | A     | 825 | CLA  | O2D-CGD-O1D | -2.29 | 119.36      | 123.84   |
| 16  | O     | 201 | CLA  | O2D-CGD-O1D | -2.29 | 119.36      | 123.84   |
| 16  | B     | 812 | CLA  | C16-C15-C13 | -2.29 | 108.51      | 115.92   |
| 16  | A     | 838 | CLA  | C1-C2-C3    | -2.29 | 122.08      | 126.04   |
| 21  | F     | 206 | BCR  | C30-C25-C24 | 2.29  | 122.26      | 115.78   |
| 16  | A     | 832 | CLA  | C5-C3-C2    | 2.29  | 125.75      | 121.12   |
| 16  | B     | 833 | CLA  | O2A-CGA-CBA | 2.29  | 119.09      | 111.91   |
| 21  | A     | 850 | BCR  | C38-C26-C27 | 2.29  | 118.02      | 113.62   |
| 16  | B     | 806 | CLA  | O2A-CGA-CBA | 2.29  | 119.09      | 111.91   |
| 16  | L     | 203 | CLA  | O2D-CGD-O1D | -2.29 | 119.36      | 123.84   |
| 16  | 2     | 611 | CLA  | C1-O2A-CGA  | 2.29  | 122.45      | 116.44   |
| 16  | A     | 814 | CLA  | CHA-C4D-ND  | 2.29  | 137.28      | 132.50   |
| 17  | 3     | 218 | C7Z  | C24-C25-C26 | -2.29 | 115.75      | 120.85   |
| 16  | B     | 810 | CLA  | CHA-C4D-ND  | 2.29  | 137.28      | 132.50   |
| 17  | 1     | 612 | C7Z  | C38-C25-C24 | 2.29  | 118.59      | 114.36   |
| 16  | B     | 834 | CLA  | CBA-CAA-C2A | 2.29  | 120.61      | 113.86   |
| 21  | L     | 207 | BCR  | C1-C6-C7    | 2.29  | 122.25      | 115.78   |
| 16  | A     | 806 | CLA  | CHA-C4D-ND  | 2.29  | 137.28      | 132.50   |
| 16  | L     | 201 | CLA  | CHA-C4D-ND  | 2.29  | 137.28      | 132.50   |
| 16  | B     | 835 | CLA  | CMD-C2D-C3D | -2.29 | 122.36      | 127.61   |
| 16  | A     | 806 | CLA  | CMD-C2D-C3D | -2.28 | 122.36      | 127.61   |
| 16  | F     | 201 | CLA  | CHA-C4D-ND  | 2.28  | 137.28      | 132.50   |
| 16  | B     | 810 | CLA  | C1-C2-C3    | -2.28 | 122.09      | 126.04   |
| 16  | B     | 832 | CLA  | CMD-C2D-C3D | -2.28 | 122.36      | 127.61   |
| 17  | 1     | 614 | C7Z  | C18-C5-C4   | 2.28  | 118.59      | 114.36   |
| 16  | A     | 818 | CLA  | CHA-C4D-ND  | 2.28  | 137.28      | 132.50   |
| 16  | 2     | 612 | CLA  | CMD-C2D-C3D | -2.28 | 122.36      | 127.61   |
| 16  | A     | 817 | CLA  | C1D-ND-C4D  | -2.28 | 104.71      | 106.33   |
| 16  | A     | 829 | CLA  | O2A-CGA-CBA | 2.28  | 119.07      | 111.91   |
| 21  | B     | 843 | BCR  | C4-C5-C6    | -2.28 | 119.42      | 122.73   |
| 16  | A     | 835 | CLA  | CHA-C4D-ND  | 2.28  | 137.26      | 132.50   |
| 16  | A     | 836 | CLA  | C6-C5-C3    | -2.28 | 107.48      | 113.45   |
| 16  | 3     | 212 | CLA  | CMD-C2D-C3D | -2.28 | 122.37      | 127.61   |
| 17  | 3     | 218 | C7Z  | C11-C12-C13 | -2.28 | 120.02      | 126.42   |
| 18  | K     | 103 | RRX  | C2-C1-C6    | 2.28  | 113.99      | 110.48   |
| 17  | 1     | 615 | C7Z  | C20-C13-C12 | 2.28  | 121.67      | 118.08   |
| 16  | A     | 803 | CLA  | C2D-C1D-ND  | 2.28  | 111.78      | 110.10   |
| 16  | B     | 823 | CLA  | CHA-C1A-NA  | -2.28 | 121.19      | 126.40   |
| 21  | B     | 845 | BCR  | C1-C6-C5    | -2.28 | 119.41      | 122.61   |
| 17  | 3     | 217 | C7Z  | C2-C3-C4    | 2.27  | 113.42      | 110.30   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 3     | 214 | CLA  | CAC-C3C-C4C | 2.27  | 127.76      | 124.81   |
| 16  | A     | 825 | CLA  | CMA-C3A-C4A | 2.27  | 117.88      | 111.77   |
| 21  | B     | 844 | BCR  | C16-C17-C18 | 2.27  | 130.55      | 127.31   |
| 16  | 2     | 604 | CLA  | CHA-C4D-ND  | 2.27  | 137.25      | 132.50   |
| 16  | F     | 204 | CLA  | CHA-C4D-ND  | 2.27  | 137.25      | 132.50   |
| 19  | A     | 842 | LHG  | C5-O7-C7    | -2.27 | 112.20      | 117.79   |
| 16  | A     | 854 | CLA  | C1C-C2C-C3C | -2.27 | 104.57      | 106.96   |
| 16  | A     | 831 | CLA  | CMD-C2D-C3D | -2.27 | 122.39      | 127.61   |
| 21  | L     | 202 | BCR  | C38-C26-C27 | 2.27  | 117.97      | 113.62   |
| 16  | A     | 809 | CLA  | C4-C3-C2    | -2.27 | 117.86      | 123.68   |
| 16  | A     | 804 | CLA  | CHA-C1A-NA  | -2.27 | 121.21      | 126.40   |
| 16  | A     | 813 | CLA  | CMA-C3A-C4A | 2.27  | 117.86      | 111.77   |
| 16  | A     | 813 | CLA  | CMD-C2D-C3D | -2.27 | 122.40      | 127.61   |
| 19  | B     | 851 | LHG  | O8-C23-C24  | 2.27  | 119.02      | 111.91   |
| 16  | 3     | 209 | CLA  | O2D-CGD-O1D | -2.27 | 119.41      | 123.84   |
| 17  | 3     | 201 | C7Z  | C1-C6-C5    | -2.27 | 119.42      | 122.61   |
| 16  | 1     | 602 | CLA  | O1D-CGD-CBD | -2.27 | 119.85      | 124.48   |
| 16  | 3     | 212 | CLA  | CMB-C2B-C3B | 2.27  | 128.92      | 124.68   |
| 16  | F     | 201 | CLA  | C1D-ND-C4D  | -2.26 | 104.73      | 106.33   |
| 16  | A     | 838 | CLA  | CHA-C4D-ND  | 2.26  | 137.24      | 132.50   |
| 25  | 3     | 221 | PTY  | O4-C30-C31  | 2.26  | 119.01      | 111.91   |
| 16  | A     | 809 | CLA  | C2C-C1C-NC  | 2.26  | 112.09      | 109.97   |
| 17  | 2     | 614 | C7Z  | C10-C11-C12 | -2.26 | 116.15      | 123.22   |
| 21  | A     | 844 | BCR  | C34-C9-C8   | 2.26  | 121.64      | 118.08   |
| 16  | L     | 205 | CLA  | C2D-C1D-ND  | 2.26  | 111.77      | 110.10   |
| 16  | B     | 833 | CLA  | O2D-CGD-O1D | -2.26 | 119.41      | 123.84   |
| 16  | L     | 204 | CLA  | C1-C2-C3    | -2.26 | 122.13      | 126.04   |
| 16  | B     | 808 | CLA  | CMA-C3A-C4A | 2.26  | 117.85      | 111.77   |
| 16  | A     | 823 | CLA  | CMD-C2D-C3D | -2.26 | 122.41      | 127.61   |
| 16  | 3     | 206 | CLA  | CMD-C2D-C3D | -2.26 | 122.41      | 127.61   |
| 16  | L     | 204 | CLA  | CMD-C2D-C3D | -2.26 | 122.42      | 127.61   |
| 16  | A     | 828 | CLA  | CMD-C2D-C3D | -2.26 | 122.42      | 127.61   |
| 16  | B     | 809 | CLA  | C2A-C3A-C4A | 2.26  | 105.52      | 101.87   |
| 21  | L     | 206 | BCR  | C31-C1-C6   | -2.26 | 106.64      | 110.30   |
| 17  | 3     | 201 | C7Z  | C15-C14-C13 | -2.26 | 124.09      | 127.31   |
| 16  | B     | 809 | CLA  | O2A-CGA-CBA | 2.26  | 118.99      | 111.91   |
| 16  | A     | 823 | CLA  | C1D-ND-C4D  | -2.26 | 104.73      | 106.33   |
| 16  | A     | 833 | CLA  | C1D-ND-C4D  | -2.26 | 104.73      | 106.33   |
| 16  | 1     | 608 | CLA  | O2A-CGA-CBA | 2.26  | 118.99      | 111.91   |
| 16  | A     | 807 | CLA  | C1D-ND-C4D  | -2.26 | 104.73      | 106.33   |
| 16  | A     | 855 | CLA  | OBD-CAD-C3D | -2.25 | 123.09      | 128.52   |
| 16  | 3     | 211 | CLA  | O1D-CGD-CBD | -2.25 | 119.87      | 124.48   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | I     | 102 | CLA  | O2A-CGA-CBA | 2.25  | 118.98      | 111.91   |
| 16  | 3     | 208 | CLA  | C2D-C1D-ND  | 2.25  | 111.76      | 110.10   |
| 16  | 2     | 605 | CLA  | CHA-C4D-ND  | 2.25  | 137.21      | 132.50   |
| 17  | 1     | 612 | C7Z  | C2-C3-C4    | 2.25  | 113.39      | 110.30   |
| 26  | A     | 801 | CL0  | C3D-C4D-ND  | 2.25  | 113.88      | 110.24   |
| 17  | 1     | 614 | C7Z  | C20-C13-C14 | -2.25 | 119.77      | 122.92   |
| 16  | K     | 101 | CLA  | C1-C2-C3    | -2.25 | 122.15      | 126.04   |
| 16  | 3     | 206 | CLA  | O2D-CGD-O1D | -2.25 | 119.44      | 123.84   |
| 16  | 1     | 604 | CLA  | O1D-CGD-CBD | -2.25 | 119.88      | 124.48   |
| 16  | B     | 821 | CLA  | CHA-C1A-NA  | -2.25 | 121.24      | 126.40   |
| 18  | K     | 103 | RRX  | C21-C20-C19 | 2.25  | 130.24      | 123.22   |
| 16  | J     | 102 | CLA  | CHD-C1D-ND  | -2.25 | 122.39      | 124.45   |
| 16  | 1     | 604 | CLA  | CHA-C4D-ND  | 2.25  | 137.21      | 132.50   |
| 16  | A     | 821 | CLA  | CHA-C4D-ND  | 2.25  | 137.21      | 132.50   |
| 16  | A     | 832 | CLA  | CMD-C2D-C3D | -2.25 | 122.44      | 127.61   |
| 16  | 2     | 607 | CLA  | CHD-C1D-ND  | -2.25 | 122.39      | 124.45   |
| 16  | 3     | 203 | CLA  | O2A-CGA-CBA | 2.25  | 118.97      | 111.91   |
| 18  | A     | 847 | RRX  | C23-C24-C25 | -2.25 | 120.89      | 127.20   |
| 16  | A     | 822 | CLA  | C1D-ND-C4D  | -2.25 | 104.74      | 106.33   |
| 16  | K     | 102 | CLA  | C2D-C1D-ND  | 2.25  | 111.76      | 110.10   |
| 21  | L     | 207 | BCR  | C36-C18-C17 | -2.25 | 119.78      | 122.92   |
| 16  | B     | 831 | CLA  | CHA-C4D-ND  | 2.25  | 137.20      | 132.50   |
| 16  | B     | 826 | CLA  | O2D-CGD-O1D | -2.25 | 119.45      | 123.84   |
| 16  | B     | 817 | CLA  | CHD-C1D-ND  | -2.24 | 122.39      | 124.45   |
| 16  | O     | 204 | CLA  | CHA-C4D-ND  | 2.24  | 137.19      | 132.50   |
| 16  | A     | 826 | CLA  | C1-C2-C3    | -2.24 | 122.16      | 126.04   |
| 16  | 1     | 602 | CLA  | CHA-C4D-ND  | 2.24  | 137.19      | 132.50   |
| 16  | B     | 813 | CLA  | C2D-C1D-ND  | 2.24  | 111.76      | 110.10   |
| 16  | A     | 812 | CLA  | O2A-CGA-CBA | 2.24  | 118.94      | 111.91   |
| 16  | A     | 835 | CLA  | O1D-CGD-CBD | -2.24 | 119.90      | 124.48   |
| 16  | B     | 804 | CLA  | O2A-CGA-CBA | 2.24  | 118.94      | 111.91   |
| 16  | B     | 838 | CLA  | CHD-C1D-ND  | -2.24 | 122.39      | 124.45   |
| 16  | 1     | 606 | CLA  | C1-O2A-CGA  | 2.24  | 122.32      | 116.44   |
| 16  | A     | 811 | CLA  | C2D-C1D-ND  | 2.24  | 111.75      | 110.10   |
| 16  | F     | 202 | CLA  | CHA-C1A-NA  | -2.24 | 121.27      | 126.40   |
| 16  | 2     | 612 | CLA  | C1C-C2C-C3C | -2.24 | 104.60      | 106.96   |
| 16  | F     | 205 | CLA  | C5-C3-C2    | 2.24  | 125.64      | 121.12   |
| 16  | 3     | 208 | CLA  | CMA-C3A-C4A | 2.24  | 117.78      | 111.77   |
| 16  | A     | 811 | CLA  | O2D-CGD-O1D | -2.24 | 119.47      | 123.84   |
| 16  | A     | 807 | CLA  | C1-O2A-CGA  | 2.24  | 122.31      | 116.44   |
| 20  | 2     | 621 | ERG  | C10-C5-C6   | -2.23 | 118.65      | 122.58   |
| 16  | 2     | 604 | CLA  | O1D-CGD-CBD | -2.23 | 119.91      | 124.48   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 837 | CLA  | C2A-C3A-C4A | 2.23  | 105.48      | 101.87   |
| 17  | 3     | 201 | C7Z  | C35-C15-C14 | -2.23 | 118.90      | 123.47   |
| 16  | A     | 831 | CLA  | O2A-CGA-CBA | 2.23  | 118.92      | 111.91   |
| 16  | B     | 811 | CLA  | C2D-C1D-ND  | 2.23  | 111.75      | 110.10   |
| 16  | A     | 821 | CLA  | O2D-CGD-O1D | -2.23 | 119.47      | 123.84   |
| 16  | B     | 837 | CLA  | CHA-C1A-NA  | -2.23 | 121.29      | 126.40   |
| 16  | A     | 824 | CLA  | C2D-C1D-ND  | 2.23  | 111.75      | 110.10   |
| 16  | B     | 836 | CLA  | CHD-C1D-ND  | -2.23 | 122.40      | 124.45   |
| 16  | 2     | 608 | CLA  | CHD-C1D-ND  | -2.23 | 122.41      | 124.45   |
| 21  | A     | 844 | BCR  | C2-C1-C6    | -2.23 | 107.05      | 110.48   |
| 16  | B     | 831 | CLA  | O2A-CGA-CBA | 2.23  | 118.90      | 111.91   |
| 16  | B     | 820 | CLA  | C1-C2-C3    | -2.23 | 122.19      | 126.04   |
| 16  | B     | 824 | CLA  | C2C-C1C-NC  | 2.23  | 112.06      | 109.97   |
| 20  | 1     | 618 | ERG  | C12-C11-C9  | 2.23  | 118.20      | 112.60   |
| 16  | B     | 829 | CLA  | CMA-C3A-C4A | 2.23  | 117.76      | 111.77   |
| 16  | F     | 204 | CLA  | CMA-C3A-C4A | 2.23  | 117.76      | 111.77   |
| 16  | O     | 203 | CLA  | O2A-CGA-CBA | 2.23  | 118.89      | 111.91   |
| 16  | B     | 821 | CLA  | O2A-CGA-CBA | 2.22  | 118.89      | 111.91   |
| 16  | 1     | 609 | CLA  | C2D-C1D-ND  | 2.22  | 111.74      | 110.10   |
| 16  | F     | 204 | CLA  | CHA-C1A-NA  | -2.22 | 121.31      | 126.40   |
| 16  | I     | 102 | CLA  | CMA-C3A-C4A | 2.22  | 117.75      | 111.77   |
| 26  | A     | 801 | CL0  | O2D-CGD-O1D | -2.22 | 119.49      | 123.84   |
| 16  | 2     | 608 | CLA  | C1-O2A-CGA  | 2.22  | 122.28      | 116.44   |
| 16  | A     | 830 | CLA  | C5-C3-C2    | 2.22  | 125.61      | 121.12   |
| 16  | O     | 202 | CLA  | CMD-C2D-C3D | -2.22 | 122.50      | 127.61   |
| 17  | 1     | 616 | C7Z  | C19-C9-C10  | -2.22 | 119.81      | 122.92   |
| 16  | 1     | 603 | CLA  | C3D-C2D-C1D | -2.22 | 102.80      | 105.83   |
| 16  | A     | 836 | CLA  | CMD-C2D-C3D | -2.22 | 122.50      | 127.61   |
| 16  | O     | 204 | CLA  | C5-C3-C2    | 2.22  | 125.61      | 121.12   |
| 16  | A     | 809 | CLA  | C1C-C2C-C3C | -2.22 | 104.62      | 106.96   |
| 17  | 3     | 218 | C7Z  | C19-C9-C10  | -2.22 | 119.82      | 122.92   |
| 16  | 3     | 214 | CLA  | CMD-C2D-C3D | -2.22 | 122.51      | 127.61   |
| 17  | A     | 843 | C7Z  | C31-C32-C33 | -2.22 | 120.19      | 126.42   |
| 16  | 2     | 611 | CLA  | O2D-CGD-O1D | -2.22 | 119.50      | 123.84   |
| 16  | L     | 204 | CLA  | O2D-CGD-O1D | -2.22 | 119.50      | 123.84   |
| 16  | O     | 202 | CLA  | C1D-ND-C4D  | -2.22 | 104.76      | 106.33   |
| 16  | B     | 801 | CLA  | C1C-C2C-C3C | -2.22 | 104.63      | 106.96   |
| 16  | A     | 837 | CLA  | CHA-C1A-NA  | -2.22 | 121.32      | 126.40   |
| 16  | 1     | 609 | CLA  | CHD-C1D-ND  | -2.22 | 122.42      | 124.45   |
| 16  | A     | 815 | CLA  | O2D-CGD-O1D | -2.22 | 119.51      | 123.84   |
| 16  | B     | 815 | CLA  | CHD-C1D-ND  | -2.21 | 122.42      | 124.45   |
| 16  | A     | 834 | CLA  | CMD-C2D-C3D | -2.21 | 122.52      | 127.61   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 816 | CLA  | CHA-C1A-NA  | -2.21 | 121.33      | 126.40   |
| 21  | I     | 103 | BCR  | C37-C22-C23 | 2.21  | 121.56      | 118.08   |
| 16  | 1     | 606 | CLA  | C5-C3-C2    | 2.21  | 125.59      | 121.12   |
| 16  | B     | 830 | CLA  | CHA-C4D-ND  | 2.21  | 137.13      | 132.50   |
| 16  | A     | 822 | CLA  | C1C-C2C-C3C | -2.21 | 104.63      | 106.96   |
| 16  | B     | 813 | CLA  | C1-C2-C3    | -2.21 | 122.22      | 126.04   |
| 16  | O     | 204 | CLA  | CMD-C2D-C3D | -2.21 | 122.53      | 127.61   |
| 16  | B     | 821 | CLA  | O1D-CGD-CBD | -2.21 | 119.96      | 124.48   |
| 16  | B     | 826 | CLA  | CMD-C2D-C3D | -2.21 | 122.53      | 127.61   |
| 16  | 1     | 604 | CLA  | CAC-C3C-C4C | 2.21  | 127.68      | 124.81   |
| 16  | 1     | 609 | CLA  | C1C-C2C-C3C | -2.21 | 104.63      | 106.96   |
| 16  | I     | 101 | CLA  | CHA-C4D-ND  | 2.21  | 137.12      | 132.50   |
| 16  | O     | 201 | CLA  | C2C-C1C-NC  | 2.21  | 112.04      | 109.97   |
| 19  | 3     | 219 | LHG  | O8-C23-C24  | 2.21  | 118.84      | 111.91   |
| 21  | B     | 842 | BCR  | C33-C5-C6   | -2.21 | 122.05      | 124.53   |
| 16  | A     | 826 | CLA  | C1C-C2C-C3C | -2.21 | 104.64      | 106.96   |
| 17  | 2     | 615 | C7Z  | C8-C7-C6    | -2.21 | 121.01      | 127.20   |
| 16  | B     | 823 | CLA  | O2D-CGD-O1D | -2.20 | 119.53      | 123.84   |
| 21  | B     | 847 | BCR  | C35-C13-C14 | -2.20 | 119.83      | 122.92   |
| 16  | A     | 808 | CLA  | C1D-ND-C4D  | -2.20 | 104.77      | 106.33   |
| 21  | A     | 846 | BCR  | C7-C6-C5    | -2.20 | 116.12      | 121.46   |
| 31  | B     | 850 | DGD  | O2G-C1B-O1B | -2.20 | 118.38      | 123.70   |
| 16  | 1     | 601 | CLA  | C5-C3-C2    | 2.20  | 125.58      | 121.12   |
| 16  | B     | 814 | CLA  | CMD-C2D-C3D | -2.20 | 122.55      | 127.61   |
| 16  | 3     | 206 | CLA  | CMA-C3A-C4A | 2.20  | 117.69      | 111.77   |
| 16  | B     | 819 | CLA  | O2A-CGA-CBA | 2.20  | 118.82      | 111.91   |
| 21  | B     | 844 | BCR  | C34-C9-C8   | 2.20  | 121.55      | 118.08   |
| 18  | J     | 103 | RRX  | C1-C6-C7    | 2.20  | 122.00      | 115.78   |
| 16  | 1     | 611 | CLA  | O2D-CGD-O1D | -2.20 | 119.54      | 123.84   |
| 16  | B     | 831 | CLA  | C1D-ND-C4D  | -2.20 | 104.77      | 106.33   |
| 16  | B     | 828 | CLA  | CMD-C2D-C3D | -2.20 | 122.56      | 127.61   |
| 16  | A     | 816 | CLA  | CMD-C2D-C3D | -2.20 | 122.56      | 127.61   |
| 16  | B     | 811 | CLA  | C1C-C2C-C3C | -2.20 | 104.65      | 106.96   |
| 16  | A     | 817 | CLA  | C2C-C1C-NC  | 2.20  | 112.03      | 109.97   |
| 17  | J     | 104 | C7Z  | C15-C35-C34 | -2.19 | 118.98      | 123.47   |
| 16  | 2     | 612 | CLA  | C1-O2A-CGA  | 2.19  | 122.20      | 116.44   |
| 16  | L     | 203 | CLA  | CMD-C2D-C3D | -2.19 | 122.57      | 127.61   |
| 16  | F     | 201 | CLA  | C1-O2A-CGA  | 2.19  | 122.20      | 116.44   |
| 18  | 1     | 613 | RRX  | C1-C6-C7    | 2.19  | 121.98      | 115.78   |
| 18  | J     | 103 | RRX  | C27-C26-C25 | -2.19 | 115.96      | 120.85   |
| 21  | L     | 202 | BCR  | C35-C13-C12 | 2.19  | 121.53      | 118.08   |
| 16  | 3     | 205 | CLA  | O2D-CGD-O1D | -2.19 | 119.55      | 123.84   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 605 | CLA  | CHA-C1A-NA  | -2.19 | 121.38      | 126.40   |
| 16  | 3     | 211 | CLA  | C1-C2-C3    | -2.19 | 122.25      | 126.04   |
| 21  | B     | 845 | BCR  | C16-C17-C18 | 2.19  | 130.44      | 127.31   |
| 16  | 1     | 604 | CLA  | C1C-C2C-C3C | -2.19 | 104.65      | 106.96   |
| 16  | 2     | 610 | CLA  | CMD-C2D-C3D | -2.19 | 122.58      | 127.61   |
| 21  | F     | 203 | BCR  | C24-C25-C26 | -2.19 | 116.16      | 121.46   |
| 18  | 2     | 616 | RRX  | C35-C13-C14 | -2.19 | 119.86      | 122.92   |
| 16  | A     | 835 | CLA  | C1-O2A-CGA  | 2.19  | 122.19      | 116.44   |
| 16  | F     | 202 | CLA  | C1D-ND-C4D  | -2.19 | 104.78      | 106.33   |
| 16  | B     | 806 | CLA  | CMB-C2B-C3B | 2.19  | 128.77      | 124.68   |
| 16  | A     | 810 | CLA  | CMD-C2D-C3D | -2.19 | 122.58      | 127.61   |
| 16  | B     | 823 | CLA  | CHD-C1D-ND  | -2.19 | 122.44      | 124.45   |
| 16  | B     | 826 | CLA  | CMA-C3A-C4A | 2.19  | 117.65      | 111.77   |
| 18  | K     | 103 | RRX  | C30-C25-C24 | 2.19  | 121.97      | 115.78   |
| 20  | 2     | 618 | ERG  | C14-C8-C9   | 2.19  | 117.95      | 114.66   |
| 16  | 3     | 206 | CLA  | O2A-CGA-CBA | 2.19  | 118.77      | 111.91   |
| 16  | 1     | 605 | CLA  | CHD-C1D-ND  | -2.18 | 122.45      | 124.45   |
| 18  | K     | 103 | RRX  | C39-C30-C25 | -2.18 | 106.76      | 110.30   |
| 16  | A     | 803 | CLA  | CMA-C3A-C4A | 2.18  | 117.64      | 111.77   |
| 16  | 2     | 606 | CLA  | O2A-CGA-CBA | 2.18  | 118.76      | 111.91   |
| 16  | 2     | 606 | CLA  | CMD-C2D-C3D | -2.18 | 122.59      | 127.61   |
| 16  | B     | 808 | CLA  | O1D-CGD-CBD | -2.18 | 120.02      | 124.48   |
| 16  | A     | 833 | CLA  | C2C-C1C-NC  | 2.18  | 112.02      | 109.97   |
| 16  | 2     | 613 | CLA  | O1D-CGD-CBD | -2.18 | 120.03      | 124.48   |
| 21  | B     | 847 | BCR  | C39-C30-C25 | 2.18  | 113.83      | 110.30   |
| 16  | B     | 804 | CLA  | CBC-CAC-C3C | -2.18 | 106.43      | 112.43   |
| 16  | A     | 823 | CLA  | C1-O2A-CGA  | 2.18  | 122.15      | 116.44   |
| 17  | 3     | 218 | C7Z  | C20-C13-C14 | -2.18 | 119.88      | 122.92   |
| 16  | 3     | 203 | CLA  | CHD-C1D-ND  | -2.18 | 122.45      | 124.45   |
| 16  | A     | 823 | CLA  | CHA-C4D-ND  | 2.18  | 137.05      | 132.50   |
| 21  | B     | 844 | BCR  | C30-C25-C26 | -2.18 | 119.55      | 122.61   |
| 16  | A     | 815 | CLA  | CHA-C1A-NA  | -2.17 | 121.42      | 126.40   |
| 16  | A     | 803 | CLA  | CMD-C2D-C3D | -2.17 | 122.61      | 127.61   |
| 21  | B     | 840 | BCR  | C31-C1-C6   | -2.17 | 106.77      | 110.30   |
| 16  | 3     | 203 | CLA  | C3D-C2D-C1D | -2.17 | 102.86      | 105.83   |
| 16  | 1     | 605 | CLA  | C3D-C2D-C1D | -2.17 | 102.87      | 105.83   |
| 16  | K     | 102 | CLA  | C1-C2-C3    | -2.17 | 122.29      | 126.04   |
| 16  | A     | 821 | CLA  | C4-C3-C5    | 2.17  | 118.92      | 115.27   |
| 16  | 3     | 209 | CLA  | CBA-CAA-C2A | 2.17  | 120.27      | 113.86   |
| 16  | B     | 801 | CLA  | O2D-CGD-O1D | -2.17 | 119.59      | 123.84   |
| 16  | B     | 832 | CLA  | CHA-C1A-NA  | -2.17 | 121.43      | 126.40   |
| 16  | B     | 801 | CLA  | C2C-C1C-NC  | 2.17  | 112.00      | 109.97   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 604 | CLA  | CMD-C2D-C3D | -2.17 | 122.62      | 127.61   |
| 16  | B     | 821 | CLA  | C1-C2-C3    | -2.17 | 122.29      | 126.04   |
| 16  | A     | 804 | CLA  | C2D-C1D-ND  | 2.17  | 111.70      | 110.10   |
| 16  | A     | 831 | CLA  | CMA-C3A-C4A | 2.17  | 117.60      | 111.77   |
| 16  | B     | 801 | CLA  | CHA-C1A-NA  | -2.17 | 121.43      | 126.40   |
| 16  | B     | 834 | CLA  | C1C-C2C-C3C | -2.17 | 104.68      | 106.96   |
| 16  | A     | 830 | CLA  | CHA-C1A-NA  | -2.17 | 121.43      | 126.40   |
| 16  | A     | 827 | CLA  | O2A-CGA-CBA | 2.17  | 118.71      | 111.91   |
| 16  | A     | 854 | CLA  | CHA-C4D-ND  | 2.17  | 137.03      | 132.50   |
| 16  | A     | 823 | CLA  | C1C-C2C-C3C | -2.17 | 104.68      | 106.96   |
| 16  | 3     | 208 | CLA  | CMB-C2B-C3B | 2.17  | 128.73      | 124.68   |
| 21  | B     | 843 | BCR  | C35-C13-C14 | -2.17 | 119.89      | 122.92   |
| 17  | 1     | 614 | C7Z  | C31-C32-C33 | -2.17 | 120.33      | 126.42   |
| 16  | A     | 812 | CLA  | C1C-C2C-C3C | -2.17 | 104.68      | 106.96   |
| 16  | B     | 812 | CLA  | CAC-C3C-C4C | 2.17  | 127.62      | 124.81   |
| 17  | 3     | 217 | C7Z  | C40-C33-C34 | -2.17 | 119.89      | 122.92   |
| 16  | A     | 839 | CLA  | CHA-C1A-NA  | -2.16 | 121.44      | 126.40   |
| 21  | I     | 103 | BCR  | C35-C13-C12 | 2.16  | 121.49      | 118.08   |
| 27  | A     | 840 | PQN  | C12-C11-C3  | -2.16 | 106.21      | 112.05   |
| 21  | L     | 206 | BCR  | C40-C30-C25 | 2.16  | 113.81      | 110.30   |
| 16  | A     | 830 | CLA  | O1D-CGD-CBD | -2.16 | 120.06      | 124.48   |
| 16  | 2     | 603 | CLA  | CHA-C1A-NA  | -2.16 | 121.44      | 126.40   |
| 16  | A     | 837 | CLA  | C5-C3-C2    | 2.16  | 125.50      | 121.12   |
| 16  | A     | 834 | CLA  | CMB-C2B-C1B | -2.16 | 125.14      | 128.46   |
| 16  | A     | 822 | CLA  | O2A-CGA-CBA | 2.16  | 118.69      | 111.91   |
| 16  | B     | 830 | CLA  | O2D-CGD-O1D | -2.16 | 119.61      | 123.84   |
| 21  | A     | 857 | BCR  | C35-C13-C12 | 2.16  | 121.48      | 118.08   |
| 16  | A     | 808 | CLA  | O2A-CGA-CBA | 2.16  | 118.69      | 111.91   |
| 16  | B     | 805 | CLA  | O2A-CGA-CBA | 2.16  | 118.69      | 111.91   |
| 16  | A     | 817 | CLA  | C1C-C2C-C3C | -2.16 | 104.68      | 106.96   |
| 16  | B     | 824 | CLA  | CMD-C2D-C3D | -2.16 | 122.64      | 127.61   |
| 21  | A     | 846 | BCR  | C36-C18-C17 | -2.16 | 119.90      | 122.92   |
| 18  | 1     | 613 | RRX  | C12-C13-C14 | 2.16  | 122.26      | 118.94   |
| 16  | 1     | 609 | CLA  | CMD-C2D-C3D | -2.16 | 122.65      | 127.61   |
| 17  | 3     | 216 | C7Z  | C38-C25-C24 | 2.16  | 118.36      | 114.36   |
| 16  | A     | 812 | CLA  | CAC-C3C-C4C | 2.16  | 127.61      | 124.81   |
| 16  | 1     | 607 | CLA  | C3D-C2D-C1D | -2.16 | 102.89      | 105.83   |
| 16  | A     | 824 | CLA  | CMD-C2D-C3D | -2.16 | 122.65      | 127.61   |
| 21  | B     | 843 | BCR  | C12-C13-C14 | 2.16  | 122.25      | 118.94   |
| 16  | 3     | 209 | CLA  | C1C-C2C-C3C | -2.16 | 104.69      | 106.96   |
| 16  | A     | 814 | CLA  | C4-C3-C2    | -2.16 | 118.14      | 123.68   |
| 17  | 1     | 614 | C7Z  | C11-C12-C13 | -2.16 | 120.36      | 126.42   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | B     | 820 | CLA  | CMD-C2D-C3D | -2.16 | 122.65      | 127.61   |
| 16  | L     | 201 | CLA  | O2D-CGD-O1D | -2.16 | 119.62      | 123.84   |
| 16  | 3     | 213 | CLA  | CMD-C2D-C3D | -2.16 | 122.66      | 127.61   |
| 16  | A     | 815 | CLA  | C1D-ND-C4D  | -2.16 | 104.80      | 106.33   |
| 21  | B     | 847 | BCR  | C36-C18-C17 | -2.15 | 119.91      | 122.92   |
| 16  | B     | 817 | CLA  | C1-O2A-CGA  | 2.15  | 122.10      | 116.44   |
| 16  | B     | 813 | CLA  | O1D-CGD-CBD | -2.15 | 120.08      | 124.48   |
| 16  | 2     | 604 | CLA  | C1-C2-C3    | -2.15 | 122.32      | 126.04   |
| 16  | 2     | 602 | CLA  | C1D-ND-C4D  | -2.15 | 104.81      | 106.33   |
| 16  | A     | 828 | CLA  | C2D-C1D-ND  | 2.15  | 111.69      | 110.10   |
| 16  | A     | 836 | CLA  | C5-C3-C2    | 2.15  | 125.47      | 121.12   |
| 16  | L     | 201 | CLA  | CMD-C2D-C3D | -2.15 | 122.67      | 127.61   |
| 16  | A     | 839 | CLA  | O2D-CGD-O1D | -2.15 | 119.63      | 123.84   |
| 26  | A     | 801 | CL0  | CED-O2D-CGD | 2.15  | 120.80      | 115.94   |
| 16  | A     | 820 | CLA  | CMD-C2D-C3D | -2.15 | 122.67      | 127.61   |
| 16  | 3     | 204 | CLA  | C2D-C1D-ND  | 2.15  | 111.69      | 110.10   |
| 16  | B     | 833 | CLA  | C1-O2A-CGA  | 2.15  | 122.08      | 116.44   |
| 21  | I     | 103 | BCR  | C32-C1-C2   | 2.15  | 117.50      | 108.91   |
| 16  | 2     | 601 | CLA  | O2A-CGA-CBA | 2.15  | 118.64      | 111.91   |
| 16  | K     | 102 | CLA  | CMD-C2D-C3D | -2.15 | 122.68      | 127.61   |
| 16  | B     | 813 | CLA  | CMB-C2B-C3B | 2.15  | 128.69      | 124.68   |
| 16  | O     | 201 | CLA  | CHA-C4D-ND  | 2.15  | 136.99      | 132.50   |
| 16  | B     | 827 | CLA  | CMD-C2D-C3D | -2.15 | 122.68      | 127.61   |
| 16  | A     | 819 | CLA  | O1D-CGD-CBD | -2.15 | 120.09      | 124.48   |
| 16  | 2     | 609 | CLA  | CMD-C2D-C3D | -2.15 | 122.68      | 127.61   |
| 16  | A     | 804 | CLA  | CMA-C3A-C4A | 2.14  | 117.54      | 111.77   |
| 16  | B     | 816 | CLA  | CMA-C3A-C4A | 2.14  | 117.54      | 111.77   |
| 17  | 3     | 217 | C7Z  | C39-C29-C28 | 2.14  | 121.45      | 118.08   |
| 16  | A     | 837 | CLA  | CMB-C2B-C3B | 2.14  | 128.69      | 124.68   |
| 20  | 2     | 618 | ERG  | C10-C5-C6   | -2.14 | 118.81      | 122.58   |
| 16  | 3     | 210 | CLA  | O2A-CGA-CBA | 2.14  | 118.63      | 111.91   |
| 16  | O     | 204 | CLA  | O2D-CGD-O1D | -2.14 | 119.65      | 123.84   |
| 16  | 3     | 211 | CLA  | O2A-CGA-CBA | 2.14  | 118.62      | 111.91   |
| 16  | B     | 817 | CLA  | C1-C2-C3    | -2.14 | 122.34      | 126.04   |
| 17  | 3     | 218 | C7Z  | C40-C33-C34 | -2.14 | 119.93      | 122.92   |
| 16  | L     | 203 | CLA  | C1-C2-C3    | -2.14 | 122.34      | 126.04   |
| 17  | J     | 104 | C7Z  | C24-C25-C26 | -2.14 | 116.08      | 120.85   |
| 16  | 2     | 610 | CLA  | C5-C3-C2    | 2.14  | 125.45      | 121.12   |
| 16  | F     | 202 | CLA  | C5-C3-C2    | 2.14  | 125.45      | 121.12   |
| 17  | J     | 104 | C7Z  | C40-C33-C34 | -2.14 | 119.93      | 122.92   |
| 16  | B     | 833 | CLA  | CHA-C1A-NA  | -2.14 | 121.50      | 126.40   |
| 16  | A     | 803 | CLA  | CHA-C1A-NA  | -2.14 | 121.50      | 126.40   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 1     | 608 | CLA  | C4-C3-C2    | -2.14 | 118.19      | 123.68   |
| 16  | B     | 823 | CLA  | CMB-C2B-C1B | -2.14 | 125.18      | 128.46   |
| 16  | 1     | 610 | CLA  | C3D-C2D-C1D | -2.14 | 102.91      | 105.83   |
| 16  | B     | 827 | CLA  | C1-O2A-CGA  | 2.14  | 122.05      | 116.44   |
| 16  | B     | 805 | CLA  | CMD-C2D-C3D | -2.14 | 122.70      | 127.61   |
| 16  | 2     | 611 | CLA  | O2A-CGA-CBA | 2.14  | 118.61      | 111.91   |
| 17  | 1     | 616 | C7Z  | C2-C3-C4    | 2.14  | 113.23      | 110.30   |
| 16  | B     | 804 | CLA  | CHD-C1D-ND  | -2.14 | 122.49      | 124.45   |
| 16  | B     | 813 | CLA  | CMD-C2D-C3D | -2.14 | 122.70      | 127.61   |
| 16  | A     | 856 | CLA  | CMB-C2B-C1B | -2.14 | 125.18      | 128.46   |
| 16  | B     | 838 | CLA  | CMD-C2D-C3D | -2.14 | 122.70      | 127.61   |
| 16  | F     | 202 | CLA  | CHD-C1D-ND  | -2.13 | 122.49      | 124.45   |
| 17  | 1     | 612 | C7Z  | C27-C28-C29 | -2.13 | 123.01      | 126.23   |
| 16  | B     | 808 | CLA  | CMD-C2D-C3D | -2.13 | 122.70      | 127.61   |
| 16  | A     | 856 | CLA  | CMA-C3A-C4A | 2.13  | 117.51      | 111.77   |
| 16  | B     | 835 | CLA  | C5-C3-C2    | 2.13  | 125.43      | 121.12   |
| 16  | A     | 808 | CLA  | CMD-C2D-C3D | -2.13 | 122.71      | 127.61   |
| 16  | A     | 834 | CLA  | CMB-C2B-C3B | 2.13  | 128.66      | 124.68   |
| 16  | B     | 802 | CLA  | CMD-C2D-C3D | -2.13 | 122.71      | 127.61   |
| 16  | B     | 836 | CLA  | O2A-CGA-CBA | 2.13  | 118.59      | 111.91   |
| 16  | A     | 811 | CLA  | CMD-C2D-C3D | -2.13 | 122.71      | 127.61   |
| 16  | B     | 838 | CLA  | CMB-C2B-C3B | 2.13  | 128.66      | 124.68   |
| 16  | A     | 836 | CLA  | C1D-ND-C4D  | -2.13 | 104.82      | 106.33   |
| 16  | A     | 810 | CLA  | C1D-ND-C4D  | -2.13 | 104.82      | 106.33   |
| 16  | K     | 101 | CLA  | C1D-ND-C4D  | -2.13 | 104.82      | 106.33   |
| 16  | A     | 855 | CLA  | O2A-CGA-CBA | 2.13  | 118.58      | 111.91   |
| 18  | K     | 103 | RRX  | C34-C9-C10  | -2.13 | 119.94      | 122.92   |
| 16  | L     | 205 | CLA  | C1-C2-C3    | -2.12 | 122.37      | 126.04   |
| 20  | 2     | 618 | ERG  | C17-C20-C22 | -2.12 | 106.22      | 110.27   |
| 16  | K     | 101 | CLA  | CMD-C2D-C3D | -2.12 | 122.73      | 127.61   |
| 21  | A     | 845 | BCR  | C15-C14-C13 | -2.12 | 124.28      | 127.31   |
| 16  | B     | 824 | CLA  | CMB-C2B-C3B | 2.12  | 128.65      | 124.68   |
| 17  | 3     | 201 | C7Z  | C39-C29-C30 | -2.12 | 119.95      | 122.92   |
| 16  | I     | 101 | CLA  | CMD-C2D-C3D | -2.12 | 122.73      | 127.61   |
| 16  | A     | 824 | CLA  | O2D-CGD-O1D | -2.12 | 119.69      | 123.84   |
| 16  | B     | 806 | CLA  | CBA-CAA-C2A | 2.12  | 120.13      | 113.86   |
| 16  | B     | 837 | CLA  | O1D-CGD-CBD | -2.12 | 120.14      | 124.48   |
| 16  | A     | 807 | CLA  | CBA-CAA-C2A | 2.12  | 120.12      | 113.86   |
| 16  | A     | 828 | CLA  | CHA-C1A-NA  | -2.12 | 121.54      | 126.40   |
| 16  | A     | 835 | CLA  | CHA-C1A-NA  | -2.12 | 121.54      | 126.40   |
| 17  | 1     | 616 | C7Z  | C28-C29-C30 | 2.12  | 122.19      | 118.94   |
| 16  | A     | 832 | CLA  | O2A-CGA-CBA | 2.12  | 118.56      | 111.91   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 830 | CLA  | CHD-C1D-ND  | -2.12 | 122.51      | 124.45   |
| 16  | 2     | 605 | CLA  | C1-O2A-CGA  | 2.12  | 122.00      | 116.44   |
| 16  | A     | 809 | CLA  | CMD-C2D-C3D | -2.12 | 122.74      | 127.61   |
| 16  | A     | 822 | CLA  | CMD-C2D-C3D | -2.12 | 122.74      | 127.61   |
| 21  | B     | 855 | BCR  | C34-C9-C10  | -2.12 | 119.95      | 122.92   |
| 16  | B     | 817 | CLA  | O2D-CGD-O1D | -2.12 | 119.70      | 123.84   |
| 16  | 3     | 205 | CLA  | C5-C3-C2    | 2.12  | 125.40      | 121.12   |
| 16  | 2     | 608 | CLA  | CMD-C2D-C3D | -2.12 | 122.74      | 127.61   |
| 21  | A     | 844 | BCR  | C15-C14-C13 | -2.12 | 124.29      | 127.31   |
| 16  | B     | 830 | CLA  | C1D-ND-C4D  | -2.12 | 104.83      | 106.33   |
| 16  | B     | 830 | CLA  | C1C-C2C-C3C | -2.12 | 104.73      | 106.96   |
| 16  | B     | 822 | CLA  | CHA-C1A-NA  | -2.12 | 121.55      | 126.40   |
| 16  | A     | 818 | CLA  | C2D-C1D-ND  | 2.12  | 111.66      | 110.10   |
| 21  | O     | 205 | BCR  | C34-C9-C8   | 2.11  | 121.41      | 118.08   |
| 16  | 3     | 205 | CLA  | CHA-C1A-NA  | -2.11 | 121.56      | 126.40   |
| 16  | 2     | 608 | CLA  | CMA-C3A-C4A | 2.11  | 117.45      | 111.77   |
| 18  | J     | 103 | RRX  | C34-C9-C10  | -2.11 | 119.97      | 122.92   |
| 16  | B     | 804 | CLA  | O2D-CGD-O1D | -2.11 | 119.71      | 123.84   |
| 18  | K     | 103 | RRX  | C35-C13-C12 | 2.11  | 121.40      | 118.08   |
| 21  | A     | 846 | BCR  | C1-C6-C5    | -2.11 | 119.64      | 122.61   |
| 16  | A     | 818 | CLA  | C2A-C3A-C4A | 2.11  | 105.27      | 101.87   |
| 16  | B     | 833 | CLA  | CHD-C1D-ND  | -2.11 | 122.52      | 124.45   |
| 16  | 2     | 605 | CLA  | CMD-C2D-C3D | -2.11 | 122.77      | 127.61   |
| 20  | 2     | 621 | ERG  | C12-C13-C17 | 2.11  | 119.72      | 116.57   |
| 16  | B     | 824 | CLA  | C1D-ND-C4D  | -2.11 | 104.84      | 106.33   |
| 16  | 3     | 203 | CLA  | CHA-C1A-NA  | -2.11 | 121.57      | 126.40   |
| 16  | B     | 836 | CLA  | CAC-C3C-C4C | 2.11  | 127.54      | 124.81   |
| 16  | 2     | 608 | CLA  | O2A-CGA-CBA | 2.11  | 118.52      | 111.91   |
| 21  | L     | 202 | BCR  | C12-C13-C14 | -2.11 | 115.71      | 118.94   |
| 16  | A     | 802 | CLA  | CHA-C1A-NA  | -2.11 | 121.58      | 126.40   |
| 17  | 1     | 615 | C7Z  | C39-C29-C30 | -2.11 | 119.97      | 122.92   |
| 16  | 1     | 604 | CLA  | C1D-ND-C4D  | -2.11 | 104.84      | 106.33   |
| 16  | B     | 833 | CLA  | C1D-ND-C4D  | -2.11 | 104.84      | 106.33   |
| 16  | O     | 203 | CLA  | C1D-ND-C4D  | -2.11 | 104.84      | 106.33   |
| 21  | A     | 846 | BCR  | C4-C5-C6    | -2.11 | 119.67      | 122.73   |
| 16  | B     | 831 | CLA  | C1-O2A-CGA  | 2.11  | 121.97      | 116.44   |
| 21  | A     | 845 | BCR  | C23-C24-C25 | -2.11 | 121.29      | 127.20   |
| 16  | F     | 201 | CLA  | CMA-C3A-C4A | 2.11  | 117.43      | 111.77   |
| 17  | J     | 104 | C7Z  | C28-C27-C26 | -2.10 | 121.29      | 127.20   |
| 18  | K     | 103 | RRX  | C19-C18-C17 | -2.10 | 115.71      | 118.94   |
| 18  | 2     | 616 | RRX  | C37-C22-C21 | -2.10 | 119.98      | 122.92   |
| 27  | B     | 839 | PQN  | C14-C13-C15 | 2.10  | 118.81      | 115.27   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | F     | 204 | CLA  | O2A-CGA-CBA | 2.10  | 118.51      | 111.91   |
| 16  | 3     | 213 | CLA  | CHA-C1A-NA  | -2.10 | 121.58      | 126.40   |
| 16  | 3     | 205 | CLA  | CMB-C2B-C1B | -2.10 | 125.23      | 128.46   |
| 16  | A     | 833 | CLA  | CMB-C2B-C3B | 2.10  | 128.61      | 124.68   |
| 16  | 3     | 206 | CLA  | C1-O2A-CGA  | 2.10  | 121.96      | 116.44   |
| 16  | A     | 808 | CLA  | O1D-CGD-CBD | -2.10 | 120.18      | 124.48   |
| 16  | B     | 810 | CLA  | C1D-ND-C4D  | -2.10 | 104.84      | 106.33   |
| 16  | A     | 824 | CLA  | CHA-C1A-NA  | -2.10 | 121.59      | 126.40   |
| 16  | B     | 821 | CLA  | C2A-C3A-C4A | 2.10  | 105.26      | 101.87   |
| 21  | B     | 845 | BCR  | C38-C26-C27 | 2.10  | 117.65      | 113.62   |
| 16  | B     | 810 | CLA  | CMD-C2D-C3D | -2.10 | 122.78      | 127.61   |
| 16  | A     | 811 | CLA  | CMB-C2B-C3B | 2.10  | 128.61      | 124.68   |
| 16  | B     | 835 | CLA  | C1-O2A-CGA  | 2.10  | 121.95      | 116.44   |
| 17  | 3     | 217 | C7Z  | C28-C27-C26 | -2.10 | 121.31      | 127.20   |
| 16  | 1     | 603 | CLA  | C5-C3-C2    | 2.10  | 125.36      | 121.12   |
| 21  | B     | 840 | BCR  | C30-C25-C26 | -2.10 | 119.66      | 122.61   |
| 16  | 3     | 209 | CLA  | CHA-C1A-NA  | -2.10 | 121.60      | 126.40   |
| 20  | 2     | 621 | ERG  | C9-C8-C7    | -2.10 | 114.22      | 119.90   |
| 21  | A     | 857 | BCR  | C30-C25-C26 | -2.09 | 119.66      | 122.61   |
| 16  | A     | 821 | CLA  | C3D-C2D-C1D | -2.09 | 102.97      | 105.83   |
| 16  | B     | 821 | CLA  | CMD-C2D-C3D | -2.09 | 122.80      | 127.61   |
| 16  | B     | 809 | CLA  | C1-O2A-CGA  | 2.09  | 121.94      | 116.44   |
| 16  | A     | 831 | CLA  | CHA-C1A-NA  | -2.09 | 121.60      | 126.40   |
| 16  | A     | 822 | CLA  | CMA-C3A-C4A | 2.09  | 117.39      | 111.77   |
| 16  | A     | 819 | CLA  | OBD-CAD-C3D | -2.09 | 123.49      | 128.52   |
| 16  | 1     | 611 | CLA  | CMD-C2D-C3D | -2.09 | 122.80      | 127.61   |
| 16  | B     | 827 | CLA  | O2D-CGD-O1D | -2.09 | 119.75      | 123.84   |
| 16  | A     | 811 | CLA  | O2A-CGA-CBA | 2.09  | 118.47      | 111.91   |
| 16  | A     | 837 | CLA  | CMD-C2D-C3D | -2.09 | 122.81      | 127.61   |
| 16  | 1     | 603 | CLA  | C4-C3-C2    | -2.09 | 118.32      | 123.68   |
| 16  | B     | 809 | CLA  | C1D-ND-C4D  | -2.09 | 104.85      | 106.33   |
| 16  | 3     | 210 | CLA  | C1-O2A-CGA  | 2.09  | 121.92      | 116.44   |
| 21  | L     | 207 | BCR  | C33-C5-C4   | 2.09  | 117.62      | 113.62   |
| 16  | 1     | 606 | CLA  | C1D-ND-C4D  | -2.09 | 104.85      | 106.33   |
| 16  | A     | 805 | CLA  | CMD-C2D-C3D | -2.09 | 122.81      | 127.61   |
| 16  | B     | 810 | CLA  | O2A-CGA-CBA | 2.09  | 118.45      | 111.91   |
| 17  | 3     | 201 | C7Z  | C40-C33-C34 | -2.09 | 120.00      | 122.92   |
| 20  | 1     | 618 | ERG  | C1-C10-C9   | 2.09  | 112.60      | 108.28   |
| 16  | A     | 822 | CLA  | O1D-CGD-CBD | -2.08 | 120.22      | 124.48   |
| 16  | B     | 802 | CLA  | C1D-ND-C4D  | -2.08 | 104.85      | 106.33   |
| 16  | 3     | 211 | CLA  | CMD-C2D-C3D | -2.08 | 122.82      | 127.61   |
| 16  | B     | 812 | CLA  | CHA-C1A-NA  | -2.08 | 121.62      | 126.40   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 3     | 209 | CLA  | CMD-C2D-C3D | -2.08 | 122.82      | 127.61   |
| 16  | A     | 818 | CLA  | O2A-CGA-CBA | 2.08  | 118.45      | 111.91   |
| 16  | 1     | 607 | CLA  | CHA-C1A-NA  | -2.08 | 121.63      | 126.40   |
| 16  | 3     | 205 | CLA  | CMD-C2D-C3D | -2.08 | 122.82      | 127.61   |
| 16  | B     | 827 | CLA  | C2D-C1D-ND  | 2.08  | 111.64      | 110.10   |
| 16  | A     | 854 | CLA  | O2D-CGD-O1D | -2.08 | 119.77      | 123.84   |
| 16  | A     | 814 | CLA  | C1-C2-C3    | -2.08 | 122.44      | 126.04   |
| 16  | B     | 809 | CLA  | CMD-C2D-C3D | -2.08 | 122.82      | 127.61   |
| 16  | 2     | 613 | CLA  | C1D-ND-C4D  | -2.08 | 104.86      | 106.33   |
| 16  | 3     | 210 | CLA  | C1D-ND-C4D  | -2.08 | 104.86      | 106.33   |
| 16  | 1     | 608 | CLA  | CMD-C2D-C3D | -2.08 | 122.83      | 127.61   |
| 16  | 3     | 210 | CLA  | CMD-C2D-C3D | -2.08 | 122.83      | 127.61   |
| 16  | A     | 808 | CLA  | CMA-C3A-C4A | 2.08  | 117.36      | 111.77   |
| 16  | B     | 809 | CLA  | CHA-C1A-NA  | -2.08 | 121.64      | 126.40   |
| 26  | A     | 801 | CL0  | CMD-C2D-C3D | -2.08 | 122.83      | 127.61   |
| 31  | B     | 849 | DGD  | O6D-C5D-C6D | 2.08  | 110.86      | 106.67   |
| 18  | K     | 103 | RRX  | C20-C19-C18 | 2.08  | 132.25      | 126.42   |
| 16  | 1     | 602 | CLA  | C3D-C2D-C1D | -2.08 | 103.00      | 105.83   |
| 16  | B     | 816 | CLA  | O1D-CGD-CBD | -2.08 | 120.23      | 124.48   |
| 16  | B     | 822 | CLA  | CMD-C2D-C3D | -2.08 | 122.84      | 127.61   |
| 21  | B     | 840 | BCR  | C15-C14-C13 | -2.08 | 124.35      | 127.31   |
| 16  | B     | 804 | CLA  | C7-C6-C5    | 2.08  | 119.00      | 113.36   |
| 16  | A     | 826 | CLA  | C1-O2A-CGA  | 2.08  | 121.89      | 116.44   |
| 17  | 3     | 218 | C7Z  | C8-C7-C6    | -2.08 | 121.37      | 127.20   |
| 16  | 2     | 601 | CLA  | CMD-C2D-C3D | -2.08 | 122.84      | 127.61   |
| 16  | B     | 834 | CLA  | C3D-C2D-C1D | -2.08 | 103.00      | 105.83   |
| 16  | A     | 838 | CLA  | CMD-C2D-C3D | -2.07 | 122.84      | 127.61   |
| 21  | F     | 203 | BCR  | C34-C9-C8   | 2.07  | 121.34      | 118.08   |
| 16  | 2     | 610 | CLA  | C1D-ND-C4D  | -2.07 | 104.86      | 106.33   |
| 16  | B     | 807 | CLA  | CMD-C2D-C3D | -2.07 | 122.84      | 127.61   |
| 16  | A     | 814 | CLA  | C1D-ND-C4D  | -2.07 | 104.86      | 106.33   |
| 17  | 1     | 612 | C7Z  | C4-C5-C6    | -2.07 | 116.23      | 120.85   |
| 18  | 1     | 613 | RRX  | C37-C22-C23 | 2.07  | 121.34      | 118.08   |
| 16  | J     | 102 | CLA  | C2A-C3A-C4A | 2.07  | 105.21      | 101.87   |
| 31  | B     | 846 | DGD  | O5D-C6D-C5D | 2.07  | 112.88      | 109.05   |
| 27  | A     | 840 | PQN  | C2M-C2-C3   | -2.07 | 121.02      | 124.40   |
| 16  | A     | 835 | CLA  | O2A-CGA-CBA | 2.07  | 118.40      | 111.91   |
| 16  | B     | 831 | CLA  | C1-C2-C3    | -2.07 | 122.46      | 126.04   |
| 16  | A     | 823 | CLA  | O2D-CGD-O1D | -2.07 | 119.79      | 123.84   |
| 16  | B     | 834 | CLA  | O1D-CGD-CBD | -2.07 | 120.25      | 124.48   |
| 16  | 1     | 603 | CLA  | CMA-C3A-C4A | 2.07  | 117.33      | 111.77   |
| 16  | B     | 824 | CLA  | C1-C2-C3    | -2.07 | 122.47      | 126.04   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | F     | 204 | CLA  | C3D-C2D-C1D | -2.06 | 103.01      | 105.83   |
| 16  | 2     | 605 | CLA  | C1-C2-C3    | -2.06 | 122.47      | 126.04   |
| 16  | A     | 819 | CLA  | O2A-CGA-CBA | 2.06  | 118.39      | 111.91   |
| 16  | F     | 202 | CLA  | O2A-CGA-CBA | 2.06  | 118.39      | 111.91   |
| 16  | A     | 815 | CLA  | C1-O2A-CGA  | 2.06  | 121.86      | 116.44   |
| 16  | A     | 807 | CLA  | CAA-C2A-C1A | -2.06 | 105.21      | 111.97   |
| 16  | B     | 815 | CLA  | C1D-ND-C4D  | -2.06 | 104.87      | 106.33   |
| 21  | A     | 844 | BCR  | C12-C13-C14 | -2.06 | 115.78      | 118.94   |
| 16  | A     | 838 | CLA  | O1D-CGD-CBD | -2.06 | 120.26      | 124.48   |
| 16  | A     | 816 | CLA  | C1D-ND-C4D  | -2.06 | 104.87      | 106.33   |
| 21  | L     | 202 | BCR  | C24-C25-C26 | -2.06 | 116.47      | 121.46   |
| 16  | B     | 838 | CLA  | CHA-C1A-NA  | -2.06 | 121.68      | 126.40   |
| 16  | 2     | 608 | CLA  | C1D-ND-C4D  | -2.06 | 104.87      | 106.33   |
| 16  | A     | 812 | CLA  | CHD-C1D-ND  | -2.06 | 122.56      | 124.45   |
| 16  | A     | 856 | CLA  | O1D-CGD-CBD | -2.06 | 120.27      | 124.48   |
| 16  | A     | 805 | CLA  | C1D-ND-C4D  | -2.06 | 104.87      | 106.33   |
| 21  | I     | 103 | BCR  | C12-C13-C14 | -2.06 | 115.78      | 118.94   |
| 16  | F     | 202 | CLA  | OBD-CAD-C3D | -2.06 | 123.57      | 128.52   |
| 16  | B     | 835 | CLA  | O1D-CGD-CBD | -2.06 | 120.27      | 124.48   |
| 16  | 3     | 205 | CLA  | OBD-CAD-C3D | -2.06 | 123.57      | 128.52   |
| 16  | 2     | 604 | CLA  | CMC-C2C-C1C | 2.06  | 128.17      | 125.04   |
| 16  | B     | 817 | CLA  | CHA-C1A-NA  | -2.06 | 121.69      | 126.40   |
| 16  | B     | 820 | CLA  | CHA-C1A-NA  | -2.06 | 121.69      | 126.40   |
| 21  | A     | 845 | BCR  | C32-C1-C2   | 2.06  | 117.13      | 108.91   |
| 16  | A     | 821 | CLA  | O2A-CGA-CBA | 2.06  | 118.36      | 111.91   |
| 16  | B     | 830 | CLA  | CMB-C2B-C3B | 2.06  | 128.52      | 124.68   |
| 16  | B     | 835 | CLA  | O2A-CGA-CBA | 2.05  | 118.35      | 111.91   |
| 16  | A     | 829 | CLA  | C1-O2A-CGA  | 2.05  | 121.83      | 116.44   |
| 19  | 2     | 622 | LHG  | O7-C7-O9    | -2.05 | 118.74      | 123.70   |
| 21  | 2     | 617 | BCR  | C15-C14-C13 | -2.05 | 124.38      | 127.31   |
| 20  | 2     | 618 | ERG  | C9-C8-C7    | -2.05 | 114.34      | 119.90   |
| 16  | L     | 201 | CLA  | O2A-CGA-CBA | 2.05  | 118.34      | 111.91   |
| 21  | I     | 103 | BCR  | C31-C1-C2   | 2.05  | 117.11      | 108.91   |
| 16  | F     | 202 | CLA  | C3D-C2D-C1D | -2.05 | 103.03      | 105.83   |
| 16  | A     | 823 | CLA  | O2A-CGA-CBA | 2.05  | 118.34      | 111.91   |
| 16  | 1     | 611 | CLA  | CHA-C1A-NA  | -2.05 | 121.70      | 126.40   |
| 16  | A     | 833 | CLA  | C1-C2-C3    | -2.05 | 122.50      | 126.04   |
| 16  | B     | 804 | CLA  | C1D-ND-C4D  | -2.05 | 104.88      | 106.33   |
| 16  | A     | 816 | CLA  | C1C-C2C-C3C | -2.05 | 104.80      | 106.96   |
| 16  | F     | 205 | CLA  | CMD-C2D-C3D | -2.05 | 122.90      | 127.61   |
| 16  | B     | 828 | CLA  | CMA-C3A-C4A | 2.05  | 117.28      | 111.77   |
| 16  | 3     | 212 | CLA  | CHA-C1A-NA  | -2.05 | 121.71      | 126.40   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | A     | 836 | CLA  | C1-C2-C3    | -2.05 | 122.50      | 126.04   |
| 16  | B     | 814 | CLA  | CHA-C1A-NA  | -2.05 | 121.71      | 126.40   |
| 16  | 3     | 207 | CLA  | C1D-ND-C4D  | -2.05 | 104.88      | 106.33   |
| 16  | 3     | 212 | CLA  | O1D-CGD-CBD | -2.05 | 120.30      | 124.48   |
| 16  | L     | 203 | CLA  | CHA-C1A-NA  | -2.05 | 121.71      | 126.40   |
| 16  | B     | 803 | CLA  | C2A-C1A-CHA | 2.05  | 127.44      | 123.86   |
| 16  | A     | 814 | CLA  | CMD-C2D-C3D | -2.04 | 122.91      | 127.61   |
| 17  | A     | 843 | C7Z  | C1-C6-C7    | 2.04  | 121.56      | 115.78   |
| 16  | A     | 827 | CLA  | CAA-C2A-C3A | -2.04 | 107.18      | 112.78   |
| 16  | A     | 855 | CLA  | C2A-C1A-CHA | 2.04  | 127.43      | 123.86   |
| 16  | 3     | 203 | CLA  | CMD-C2D-C3D | -2.04 | 122.91      | 127.61   |
| 16  | B     | 825 | CLA  | CHA-C1A-NA  | -2.04 | 121.72      | 126.40   |
| 16  | 3     | 205 | CLA  | C3D-C2D-C1D | -2.04 | 103.04      | 105.83   |
| 16  | B     | 806 | CLA  | O1D-CGD-CBD | -2.04 | 120.30      | 124.48   |
| 16  | J     | 102 | CLA  | CMD-C2D-C3D | -2.04 | 122.92      | 127.61   |
| 16  | 1     | 609 | CLA  | CHA-C1A-NA  | -2.04 | 121.72      | 126.40   |
| 17  | A     | 843 | C7Z  | C24-C25-C26 | -2.04 | 116.30      | 120.85   |
| 16  | 2     | 607 | CLA  | O2A-CGA-CBA | 2.04  | 118.31      | 111.91   |
| 16  | 2     | 611 | CLA  | C1D-ND-C4D  | -2.04 | 104.89      | 106.33   |
| 16  | L     | 204 | CLA  | C1D-ND-C4D  | -2.04 | 104.89      | 106.33   |
| 26  | A     | 801 | CL0  | C3C-C4C-NC  | 2.04  | 112.86      | 110.57   |
| 16  | 3     | 211 | CLA  | CHA-C1A-NA  | -2.04 | 121.72      | 126.40   |
| 16  | 2     | 611 | CLA  | C3D-C2D-C1D | -2.04 | 103.05      | 105.83   |
| 21  | B     | 841 | BCR  | C31-C1-C6   | -2.04 | 106.99      | 110.30   |
| 16  | A     | 836 | CLA  | O2A-CGA-CBA | 2.04  | 118.31      | 111.91   |
| 16  | 2     | 613 | CLA  | O2A-CGA-CBA | 2.04  | 118.31      | 111.91   |
| 16  | 2     | 613 | CLA  | CMD-C2D-C3D | -2.04 | 122.92      | 127.61   |
| 16  | A     | 809 | CLA  | CMA-C3A-C4A | 2.04  | 117.25      | 111.77   |
| 16  | B     | 811 | CLA  | O2D-CGD-O1D | -2.04 | 119.85      | 123.84   |
| 16  | 1     | 610 | CLA  | O2D-CGD-O1D | -2.04 | 119.86      | 123.84   |
| 16  | B     | 829 | CLA  | CHA-C1A-NA  | -2.04 | 121.73      | 126.40   |
| 16  | 2     | 603 | CLA  | OBD-CAD-C3D | -2.04 | 123.62      | 128.52   |
| 16  | 3     | 210 | CLA  | CBC-CAC-C3C | -2.04 | 106.82      | 112.43   |
| 21  | B     | 841 | BCR  | C33-C5-C6   | -2.04 | 122.24      | 124.53   |
| 16  | L     | 201 | CLA  | C1D-ND-C4D  | -2.04 | 104.89      | 106.33   |
| 16  | 3     | 212 | CLA  | CMA-C3A-C2A | 2.04  | 122.04      | 113.83   |
| 16  | B     | 812 | CLA  | C3D-C2D-C1D | -2.03 | 103.05      | 105.83   |
| 16  | 3     | 211 | CLA  | CHD-C1D-ND  | -2.03 | 122.58      | 124.45   |
| 16  | 3     | 207 | CLA  | CHA-C1A-NA  | -2.03 | 121.74      | 126.40   |
| 16  | 3     | 208 | CLA  | C1-C2-C3    | -2.03 | 122.53      | 126.04   |
| 16  | A     | 834 | CLA  | C11-C12-C13 | -2.03 | 109.35      | 115.92   |
| 18  | A     | 847 | RRX  | C37-C22-C21 | -2.03 | 120.08      | 122.92   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | K     | 101 | CLA  | O1D-CGD-CBD | -2.03 | 120.32      | 124.48   |
| 16  | B     | 827 | CLA  | CHA-C1A-NA  | -2.03 | 121.74      | 126.40   |
| 21  | B     | 841 | BCR  | C29-C30-C25 | -2.03 | 107.35      | 110.48   |
| 18  | A     | 847 | RRX  | C36-C18-C17 | 2.03  | 125.77      | 122.92   |
| 16  | A     | 854 | CLA  | CMC-C2C-C1C | 2.03  | 128.13      | 125.04   |
| 21  | L     | 206 | BCR  | C28-C27-C26 | -2.03 | 110.45      | 114.08   |
| 16  | B     | 812 | CLA  | CHD-C1D-ND  | -2.03 | 122.59      | 124.45   |
| 16  | L     | 201 | CLA  | C1-O2A-CGA  | 2.03  | 121.77      | 116.44   |
| 21  | A     | 845 | BCR  | C31-C1-C2   | 2.03  | 117.02      | 108.91   |
| 16  | B     | 834 | CLA  | CMD-C2D-C3D | -2.03 | 122.95      | 127.61   |
| 16  | 1     | 601 | CLA  | CMD-C2D-C3D | -2.03 | 122.95      | 127.61   |
| 16  | O     | 201 | CLA  | CMB-C2B-C3B | 2.03  | 128.47      | 124.68   |
| 21  | L     | 207 | BCR  | C7-C6-C5    | -2.03 | 116.55      | 121.46   |
| 16  | B     | 826 | CLA  | CHA-C1A-NA  | -2.03 | 121.76      | 126.40   |
| 19  | 1     | 617 | LHG  | O8-C23-C24  | 2.02  | 118.26      | 111.91   |
| 21  | A     | 845 | BCR  | C38-C26-C27 | 2.02  | 117.50      | 113.62   |
| 16  | A     | 808 | CLA  | C5-C3-C2    | 2.02  | 125.21      | 121.12   |
| 16  | A     | 822 | CLA  | C5-C3-C2    | 2.02  | 125.21      | 121.12   |
| 16  | B     | 822 | CLA  | C5-C3-C2    | 2.02  | 125.21      | 121.12   |
| 16  | A     | 828 | CLA  | C1-C2-C3    | -2.02 | 122.54      | 126.04   |
| 16  | 1     | 601 | CLA  | CMB-C2B-C3B | 2.02  | 128.46      | 124.68   |
| 16  | 2     | 609 | CLA  | O2A-CGA-CBA | 2.02  | 118.26      | 111.91   |
| 16  | A     | 831 | CLA  | C2D-C1D-ND  | 2.02  | 111.59      | 110.10   |
| 17  | 3     | 218 | C7Z  | C15-C35-C34 | -2.02 | 119.33      | 123.47   |
| 16  | B     | 801 | CLA  | C3D-C2D-C1D | -2.02 | 103.07      | 105.83   |
| 16  | A     | 817 | CLA  | OBD-CAD-C3D | -2.02 | 123.66      | 128.52   |
| 16  | 1     | 602 | CLA  | CMD-C2D-C3D | -2.02 | 122.97      | 127.61   |
| 16  | B     | 806 | CLA  | CHA-C1A-NA  | -2.02 | 121.77      | 126.40   |
| 16  | 2     | 604 | CLA  | C5-C3-C2    | 2.02  | 125.20      | 121.12   |
| 16  | A     | 825 | CLA  | C1-O2A-CGA  | 2.02  | 121.74      | 116.44   |
| 16  | B     | 825 | CLA  | C3D-C2D-C1D | -2.02 | 103.08      | 105.83   |
| 16  | J     | 102 | CLA  | C1D-ND-C4D  | -2.02 | 104.90      | 106.33   |
| 16  | B     | 803 | CLA  | C3D-C2D-C1D | -2.02 | 103.08      | 105.83   |
| 21  | A     | 846 | BCR  | C29-C30-C25 | -2.02 | 107.38      | 110.48   |
| 16  | B     | 822 | CLA  | C1-O2A-CGA  | 2.02  | 121.73      | 116.44   |
| 16  | B     | 809 | CLA  | CMB-C2B-C3B | 2.02  | 128.45      | 124.68   |
| 16  | 1     | 601 | CLA  | CHA-C1A-NA  | -2.02 | 121.78      | 126.40   |
| 16  | A     | 825 | CLA  | CHA-C1A-NA  | -2.02 | 121.78      | 126.40   |
| 16  | B     | 833 | CLA  | C3D-C2D-C1D | -2.02 | 103.08      | 105.83   |
| 16  | K     | 101 | CLA  | CHA-C1A-NA  | -2.01 | 121.78      | 126.40   |
| 16  | B     | 811 | CLA  | C1D-ND-C4D  | -2.01 | 104.90      | 106.33   |
| 21  | O     | 205 | BCR  | C8-C9-C10   | 2.01  | 122.03      | 118.94   |

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| Mol | Chain | Res | Type | Atoms       | Z     | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16  | 3     | 214 | CLA  | C1-C2-C3    | -2.01 | 122.56      | 126.04   |
| 16  | A     | 817 | CLA  | CHA-C1A-NA  | -2.01 | 121.79      | 126.40   |
| 21  | A     | 850 | BCR  | C29-C28-C27 | 2.01  | 115.87      | 111.38   |
| 16  | 2     | 605 | CLA  | CHA-C1A-NA  | -2.01 | 121.79      | 126.40   |
| 21  | B     | 847 | BCR  | C36-C18-C19 | -2.01 | 114.91      | 118.08   |
| 16  | 2     | 610 | CLA  | O2A-CGA-CBA | 2.01  | 118.22      | 111.91   |
| 16  | A     | 818 | CLA  | C1D-ND-C4D  | -2.01 | 104.91      | 106.33   |
| 16  | B     | 805 | CLA  | C1D-ND-C4D  | -2.01 | 104.91      | 106.33   |
| 16  | B     | 829 | CLA  | O1D-CGD-CBD | -2.01 | 120.37      | 124.48   |
| 16  | 1     | 606 | CLA  | CMD-C2D-C3D | -2.01 | 122.99      | 127.61   |
| 16  | A     | 804 | CLA  | CMC-C2C-C1C | 2.01  | 128.10      | 125.04   |
| 16  | A     | 821 | CLA  | C4-C3-C2    | -2.01 | 118.53      | 123.68   |
| 16  | B     | 812 | CLA  | CMC-C2C-C1C | 2.01  | 128.09      | 125.04   |
| 16  | I     | 102 | CLA  | CMD-C2D-C3D | -2.01 | 123.00      | 127.61   |
| 16  | B     | 833 | CLA  | OBD-CAD-C3D | -2.01 | 123.69      | 128.52   |
| 17  | 3     | 218 | C7Z  | C4-C5-C6    | -2.01 | 116.38      | 120.85   |
| 16  | A     | 813 | CLA  | CHA-C1A-NA  | -2.01 | 121.81      | 126.40   |
| 16  | 2     | 602 | CLA  | CMA-C3A-C4A | 2.01  | 117.16      | 111.77   |
| 16  | A     | 812 | CLA  | C1D-ND-C4D  | -2.00 | 104.91      | 106.33   |
| 16  | B     | 819 | CLA  | C1D-ND-C4D  | -2.00 | 104.91      | 106.33   |
| 16  | A     | 854 | CLA  | CMB-C2B-C3B | 2.00  | 128.43      | 124.68   |
| 16  | B     | 803 | CLA  | CMD-C2D-C3D | -2.00 | 123.00      | 127.61   |
| 21  | F     | 206 | BCR  | C3-C4-C5    | -2.00 | 110.50      | 114.08   |
| 16  | 3     | 214 | CLA  | O2A-CGA-CBA | 2.00  | 118.19      | 111.91   |
| 16  | B     | 827 | CLA  | CMA-C3A-C4A | 2.00  | 117.15      | 111.77   |
| 16  | 3     | 213 | CLA  | C3D-C2D-C1D | -2.00 | 103.10      | 105.83   |
| 18  | 2     | 616 | RRX  | C20-C19-C18 | -2.00 | 120.79      | 126.42   |
| 16  | 2     | 611 | CLA  | CHA-C1A-NA  | -2.00 | 121.82      | 126.40   |
| 16  | 3     | 206 | CLA  | C1D-ND-C4D  | -2.00 | 104.91      | 106.33   |
| 21  | F     | 203 | BCR  | C37-C22-C21 | -2.00 | 120.12      | 122.92   |
| 16  | A     | 816 | CLA  | CAC-C3C-C4C | 2.00  | 127.41      | 124.81   |

All (173) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 16  | 1     | 601 | CLA  | ND   |
| 16  | 1     | 602 | CLA  | ND   |
| 16  | 1     | 603 | CLA  | ND   |
| 16  | 1     | 604 | CLA  | ND   |
| 16  | 1     | 605 | CLA  | ND   |
| 16  | 1     | 606 | CLA  | ND   |
| 16  | 1     | 607 | CLA  | ND   |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atom</b> |
|------------|--------------|------------|-------------|-------------|
| 16         | 1            | 608        | CLA         | ND          |
| 16         | 1            | 609        | CLA         | ND          |
| 16         | 1            | 610        | CLA         | ND          |
| 16         | 1            | 611        | CLA         | ND          |
| 16         | 2            | 601        | CLA         | ND          |
| 16         | 2            | 602        | CLA         | ND          |
| 16         | 2            | 603        | CLA         | ND          |
| 16         | 2            | 604        | CLA         | ND          |
| 16         | 2            | 605        | CLA         | ND          |
| 16         | 2            | 606        | CLA         | ND          |
| 16         | 2            | 607        | CLA         | ND          |
| 16         | 2            | 608        | CLA         | ND          |
| 16         | 2            | 609        | CLA         | ND          |
| 16         | 2            | 610        | CLA         | ND          |
| 16         | 2            | 611        | CLA         | ND          |
| 16         | 2            | 612        | CLA         | ND          |
| 16         | 2            | 613        | CLA         | ND          |
| 16         | 3            | 203        | CLA         | ND          |
| 16         | 3            | 204        | CLA         | ND          |
| 16         | 3            | 205        | CLA         | ND          |
| 16         | 3            | 206        | CLA         | ND          |
| 16         | 3            | 207        | CLA         | ND          |
| 16         | 3            | 208        | CLA         | ND          |
| 16         | 3            | 209        | CLA         | ND          |
| 16         | 3            | 210        | CLA         | ND          |
| 16         | 3            | 211        | CLA         | ND          |
| 16         | 3            | 212        | CLA         | ND          |
| 16         | 3            | 213        | CLA         | ND          |
| 16         | 3            | 214        | CLA         | ND          |
| 16         | A            | 802        | CLA         | ND          |
| 16         | A            | 803        | CLA         | ND          |
| 16         | A            | 804        | CLA         | ND          |
| 16         | A            | 805        | CLA         | ND          |
| 16         | A            | 806        | CLA         | ND          |
| 16         | A            | 807        | CLA         | ND          |
| 16         | A            | 808        | CLA         | ND          |
| 16         | A            | 809        | CLA         | ND          |
| 16         | A            | 810        | CLA         | ND          |
| 16         | A            | 811        | CLA         | ND          |
| 16         | A            | 812        | CLA         | ND          |
| 16         | A            | 813        | CLA         | ND          |
| 16         | A            | 814        | CLA         | ND          |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atom</b> |
|------------|--------------|------------|-------------|-------------|
| 16         | A            | 815        | CLA         | ND          |
| 16         | A            | 816        | CLA         | ND          |
| 16         | A            | 817        | CLA         | ND          |
| 16         | A            | 818        | CLA         | ND          |
| 16         | A            | 819        | CLA         | ND          |
| 16         | A            | 820        | CLA         | ND          |
| 16         | A            | 821        | CLA         | ND          |
| 16         | A            | 822        | CLA         | ND          |
| 16         | A            | 823        | CLA         | ND          |
| 16         | A            | 824        | CLA         | ND          |
| 16         | A            | 825        | CLA         | ND          |
| 16         | A            | 826        | CLA         | ND          |
| 16         | A            | 827        | CLA         | ND          |
| 16         | A            | 828        | CLA         | ND          |
| 16         | A            | 829        | CLA         | ND          |
| 16         | A            | 830        | CLA         | ND          |
| 16         | A            | 831        | CLA         | ND          |
| 16         | A            | 832        | CLA         | ND          |
| 16         | A            | 833        | CLA         | ND          |
| 16         | A            | 834        | CLA         | ND          |
| 16         | A            | 835        | CLA         | ND          |
| 16         | A            | 836        | CLA         | ND          |
| 16         | A            | 837        | CLA         | ND          |
| 16         | A            | 838        | CLA         | ND          |
| 16         | A            | 839        | CLA         | ND          |
| 16         | A            | 854        | CLA         | ND          |
| 16         | A            | 855        | CLA         | ND          |
| 16         | A            | 856        | CLA         | ND          |
| 16         | B            | 801        | CLA         | ND          |
| 16         | B            | 802        | CLA         | ND          |
| 16         | B            | 803        | CLA         | ND          |
| 16         | B            | 804        | CLA         | ND          |
| 16         | B            | 805        | CLA         | ND          |
| 16         | B            | 806        | CLA         | ND          |
| 16         | B            | 807        | CLA         | ND          |
| 16         | B            | 808        | CLA         | ND          |
| 16         | B            | 809        | CLA         | ND          |
| 16         | B            | 810        | CLA         | ND          |
| 16         | B            | 811        | CLA         | ND          |
| 16         | B            | 812        | CLA         | ND          |
| 16         | B            | 813        | CLA         | ND          |
| 16         | B            | 814        | CLA         | ND          |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atom</b> |
|------------|--------------|------------|-------------|-------------|
| 16         | B            | 815        | CLA         | ND          |
| 16         | B            | 816        | CLA         | ND          |
| 16         | B            | 817        | CLA         | ND          |
| 16         | B            | 818        | CLA         | ND          |
| 16         | B            | 819        | CLA         | ND          |
| 16         | B            | 820        | CLA         | ND          |
| 16         | B            | 821        | CLA         | ND          |
| 16         | B            | 821        | CLA         | C3A         |
| 16         | B            | 822        | CLA         | ND          |
| 16         | B            | 823        | CLA         | ND          |
| 16         | B            | 824        | CLA         | ND          |
| 16         | B            | 825        | CLA         | ND          |
| 16         | B            | 826        | CLA         | ND          |
| 16         | B            | 827        | CLA         | ND          |
| 16         | B            | 828        | CLA         | ND          |
| 16         | B            | 829        | CLA         | ND          |
| 16         | B            | 830        | CLA         | ND          |
| 16         | B            | 831        | CLA         | ND          |
| 16         | B            | 832        | CLA         | ND          |
| 16         | B            | 833        | CLA         | ND          |
| 16         | B            | 834        | CLA         | ND          |
| 16         | B            | 835        | CLA         | ND          |
| 16         | B            | 836        | CLA         | ND          |
| 16         | B            | 837        | CLA         | ND          |
| 16         | B            | 838        | CLA         | ND          |
| 16         | F            | 201        | CLA         | ND          |
| 16         | F            | 202        | CLA         | ND          |
| 16         | F            | 202        | CLA         | C3A         |
| 16         | F            | 204        | CLA         | ND          |
| 16         | F            | 205        | CLA         | ND          |
| 16         | I            | 101        | CLA         | ND          |
| 16         | I            | 102        | CLA         | ND          |
| 16         | J            | 102        | CLA         | ND          |
| 16         | J            | 102        | CLA         | C3A         |
| 16         | K            | 101        | CLA         | ND          |
| 16         | K            | 102        | CLA         | ND          |
| 16         | L            | 201        | CLA         | ND          |
| 16         | L            | 203        | CLA         | ND          |
| 16         | L            | 204        | CLA         | ND          |
| 16         | L            | 205        | CLA         | ND          |
| 16         | O            | 201        | CLA         | ND          |
| 16         | O            | 202        | CLA         | ND          |

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| <b>Mol</b> | <b>Chain</b> | <b>Res</b> | <b>Type</b> | <b>Atom</b> |
|------------|--------------|------------|-------------|-------------|
| 16         | O            | 203        | CLA         | ND          |
| 16         | O            | 204        | CLA         | ND          |
| 17         | 1            | 612        | C7Z         | C3          |
| 17         | 1            | 614        | C7Z         | C3          |
| 17         | 1            | 615        | C7Z         | C3          |
| 17         | 1            | 616        | C7Z         | C3          |
| 17         | 2            | 614        | C7Z         | C3          |
| 17         | 2            | 615        | C7Z         | C3          |
| 17         | 3            | 201        | C7Z         | C3          |
| 17         | 3            | 215        | C7Z         | C3          |
| 17         | 3            | 216        | C7Z         | C3          |
| 17         | 3            | 217        | C7Z         | C3          |
| 17         | 3            | 218        | C7Z         | C3          |
| 17         | A            | 843        | C7Z         | C3          |
| 17         | J            | 104        | C7Z         | C3          |
| 18         | 1            | 613        | RRX         | C28         |
| 18         | 2            | 616        | RRX         | C28         |
| 18         | A            | 847        | RRX         | C28         |
| 18         | J            | 103        | RRX         | C28         |
| 18         | K            | 103        | RRX         | C28         |
| 20         | 1            | 618        | ERG         | C13         |
| 20         | 1            | 618        | ERG         | C10         |
| 20         | 1            | 618        | ERG         | C24         |
| 20         | 1            | 618        | ERG         | C14         |
| 20         | 1            | 618        | ERG         | C20         |
| 20         | 1            | 618        | ERG         | C9          |
| 20         | 2            | 618        | ERG         | C24         |
| 20         | 2            | 618        | ERG         | C9          |
| 20         | 2            | 618        | ERG         | C14         |
| 20         | 2            | 618        | ERG         | C20         |
| 20         | 2            | 621        | ERG         | C10         |
| 20         | 2            | 621        | ERG         | C24         |
| 20         | 2            | 621        | ERG         | C14         |
| 20         | 2            | 621        | ERG         | C20         |
| 20         | 2            | 621        | ERG         | C9          |
| 22         | 2            | 619        | PGT         | C5          |
| 22         | B            | 848        | PGT         | C5          |
| 26         | A            | 801        | CL0         | NC          |
| 26         | A            | 801        | CL0         | ND          |
| 26         | A            | 801        | CL0         | NA          |

All (2730) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 1     | 601 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 1     | 601 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 1     | 601 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 604 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 1     | 604 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 1     | 605 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 606 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 1     | 606 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 1     | 606 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 1     | 606 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 607 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 609 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 610 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 1     | 610 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 611 | CLA  | C2-C1-O2A-CGA   |
| 16  | 1     | 611 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 601 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 601 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 605 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 2     | 605 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 607 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 607 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 608 | CLA  | C2C-C3C-CAC-CBC |
| 16  | 2     | 608 | CLA  | C4C-C3C-CAC-CBC |
| 16  | 2     | 609 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 2     | 609 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 609 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 610 | CLA  | C2-C1-O2A-CGA   |
| 16  | 2     | 610 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 610 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 610 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 611 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 2     | 611 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 2     | 611 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 611 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 611 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 613 | CLA  | C2-C1-O2A-CGA   |
| 16  | 2     | 613 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 205 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 3     | 205 | CLA  | C2-C1-O2A-CGA   |
| 16  | 3     | 207 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 210 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 3     | 210 | CLA  | C3A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 3     | 211 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 3     | 211 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 3     | 211 | CLA  | C2-C1-O2A-CGA   |
| 16  | 3     | 212 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 3     | 212 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 3     | 212 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 802 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 802 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 802 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 802 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 803 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 803 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 803 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 803 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 804 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 804 | CLA  | CAD-CBD-CGD-O1D |
| 16  | A     | 804 | CLA  | CAD-CBD-CGD-O2D |
| 16  | A     | 804 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 806 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 807 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 808 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 809 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 809 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 810 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 811 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 814 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 814 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 814 | CLA  | CAD-CBD-CGD-O1D |
| 16  | A     | 815 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 815 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 816 | CLA  | C2-C3-C5-C6     |
| 16  | A     | 816 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 817 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 817 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 817 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 818 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 818 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 819 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 819 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 820 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 820 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 820 | CLA  | CHA-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 821 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 821 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 821 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 822 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 822 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 823 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 823 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 824 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 824 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 826 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 827 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 827 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 828 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 830 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 831 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 832 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 832 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 832 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 833 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 834 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 834 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 837 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 837 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 837 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 839 | CLA  | O2A-C1-C2-C3    |
| 16  | A     | 854 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 854 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 855 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 855 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 856 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 801 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 801 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 801 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 802 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 804 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 806 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 807 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 808 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 808 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 809 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 813 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 813 | CLA  | C2-C3-C5-C6     |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 813 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 814 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 814 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 815 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 817 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 817 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 817 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 818 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 818 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 819 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 819 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 819 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 821 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 821 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 821 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 826 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 826 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 826 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 826 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 827 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 827 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 830 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 830 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 832 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 832 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 832 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 834 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 834 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 834 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 835 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 835 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 836 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 837 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 837 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 837 | CLA  | CBD-CGD-O2D-CED |
| 16  | F     | 202 | CLA  | C1A-C2A-CAA-CBA |
| 16  | F     | 204 | CLA  | CBD-CGD-O2D-CED |
| 16  | J     | 102 | CLA  | C1A-C2A-CAA-CBA |
| 16  | J     | 102 | CLA  | C3A-C2A-CAA-CBA |
| 16  | J     | 102 | CLA  | CHA-CBD-CGD-O1D |
| 16  | J     | 102 | CLA  | CHA-CBD-CGD-O2D |
| 16  | K     | 101 | CLA  | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | K     | 102 | CLA  | C1A-C2A-CAA-CBA |
| 16  | K     | 102 | CLA  | C3A-C2A-CAA-CBA |
| 16  | L     | 204 | CLA  | C2-C1-O2A-CGA   |
| 16  | L     | 204 | CLA  | CBD-CGD-O2D-CED |
| 16  | L     | 205 | CLA  | C1A-C2A-CAA-CBA |
| 16  | L     | 205 | CLA  | CBD-CGD-O2D-CED |
| 16  | O     | 202 | CLA  | CHA-CBD-CGD-O1D |
| 16  | O     | 202 | CLA  | CHA-CBD-CGD-O2D |
| 16  | O     | 203 | CLA  | CBD-CGD-O2D-CED |
| 16  | O     | 204 | CLA  | C3A-C2A-CAA-CBA |
| 16  | O     | 204 | CLA  | CHA-CBD-CGD-O1D |
| 16  | O     | 204 | CLA  | CHA-CBD-CGD-O2D |
| 16  | O     | 204 | CLA  | CBD-CGD-O2D-CED |
| 17  | 1     | 612 | C7Z  | C7-C8-C9-C19    |
| 17  | 1     | 612 | C7Z  | C7-C8-C9-C10    |
| 17  | 1     | 612 | C7Z  | C31-C32-C33-C34 |
| 17  | 1     | 612 | C7Z  | C31-C32-C33-C40 |
| 17  | 1     | 612 | C7Z  | C27-C28-C29-C30 |
| 17  | 1     | 614 | C7Z  | C21-C26-C27-C28 |
| 17  | 1     | 614 | C7Z  | C25-C26-C27-C28 |
| 17  | 1     | 614 | C7Z  | C7-C8-C9-C19    |
| 17  | 1     | 614 | C7Z  | C9-C10-C11-C12  |
| 17  | 1     | 614 | C7Z  | C31-C32-C33-C34 |
| 17  | 1     | 614 | C7Z  | C31-C32-C33-C40 |
| 17  | 1     | 614 | C7Z  | C27-C28-C29-C30 |
| 17  | 1     | 614 | C7Z  | C27-C28-C29-C39 |
| 17  | 1     | 615 | C7Z  | C7-C8-C9-C19    |
| 17  | 1     | 615 | C7Z  | C7-C8-C9-C10    |
| 17  | 1     | 615 | C7Z  | C27-C28-C29-C30 |
| 17  | 1     | 615 | C7Z  | C27-C28-C29-C39 |
| 17  | 2     | 614 | C7Z  | C7-C8-C9-C19    |
| 17  | 2     | 614 | C7Z  | C7-C8-C9-C10    |
| 17  | 2     | 614 | C7Z  | C31-C32-C33-C34 |
| 17  | 2     | 614 | C7Z  | C31-C32-C33-C40 |
| 17  | 2     | 615 | C7Z  | C21-C26-C27-C28 |
| 17  | 2     | 615 | C7Z  | C25-C26-C27-C28 |
| 17  | 2     | 615 | C7Z  | C7-C8-C9-C19    |
| 17  | 3     | 215 | C7Z  | C11-C12-C13-C20 |
| 17  | 3     | 215 | C7Z  | C11-C12-C13-C14 |
| 17  | 3     | 216 | C7Z  | C25-C26-C27-C28 |
| 17  | 3     | 216 | C7Z  | C7-C8-C9-C19    |
| 17  | 3     | 216 | C7Z  | C7-C8-C9-C10    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 17  | 3     | 217 | C7Z  | C25-C26-C27-C28 |
| 17  | 3     | 217 | C7Z  | C9-C10-C11-C12  |
| 17  | 3     | 218 | C7Z  | C7-C8-C9-C19    |
| 17  | 3     | 218 | C7Z  | C7-C8-C9-C10    |
| 17  | A     | 843 | C7Z  | C1-C6-C7-C8     |
| 17  | A     | 843 | C7Z  | C5-C6-C7-C8     |
| 17  | A     | 843 | C7Z  | C21-C26-C27-C28 |
| 17  | A     | 843 | C7Z  | C7-C8-C9-C19    |
| 17  | A     | 843 | C7Z  | C7-C8-C9-C10    |
| 17  | A     | 843 | C7Z  | C9-C10-C11-C12  |
| 17  | A     | 843 | C7Z  | C13-C14-C15-C35 |
| 17  | J     | 104 | C7Z  | C9-C10-C11-C12  |
| 17  | J     | 104 | C7Z  | C27-C28-C29-C30 |
| 17  | J     | 104 | C7Z  | C27-C28-C29-C39 |
| 18  | 1     | 613 | RRX  | C36-C18-C19-C20 |
| 18  | 1     | 613 | RRX  | C17-C18-C19-C20 |
| 18  | 1     | 613 | RRX  | C7-C8-C9-C10    |
| 18  | 1     | 613 | RRX  | C7-C8-C9-C34    |
| 18  | 1     | 613 | RRX  | C1-C6-C7-C8     |
| 18  | 1     | 613 | RRX  | C5-C6-C7-C8     |
| 18  | 2     | 616 | RRX  | C36-C18-C19-C20 |
| 18  | 2     | 616 | RRX  | C17-C18-C19-C20 |
| 18  | A     | 847 | RRX  | C37-C22-C23-C24 |
| 18  | A     | 847 | RRX  | C21-C22-C23-C24 |
| 18  | J     | 103 | RRX  | C37-C22-C23-C24 |
| 18  | J     | 103 | RRX  | C21-C22-C23-C24 |
| 18  | J     | 103 | RRX  | C19-C20-C21-C22 |
| 18  | J     | 103 | RRX  | C36-C18-C19-C20 |
| 18  | J     | 103 | RRX  | C15-C16-C17-C18 |
| 18  | J     | 103 | RRX  | C11-C12-C13-C14 |
| 18  | J     | 103 | RRX  | C11-C12-C13-C35 |
| 18  | J     | 103 | RRX  | C7-C8-C9-C10    |
| 18  | J     | 103 | RRX  | C7-C8-C9-C34    |
| 18  | J     | 103 | RRX  | C1-C6-C7-C8     |
| 18  | K     | 103 | RRX  | C9-C10-C11-C12  |
| 19  | 1     | 617 | LHG  | O1-C1-C2-C3     |
| 19  | 1     | 617 | LHG  | C1-C2-C3-O3     |
| 19  | 1     | 617 | LHG  | O2-C2-C3-O3     |
| 19  | 1     | 617 | LHG  | C3-O3-P-O4      |
| 19  | 1     | 617 | LHG  | C3-O3-P-O5      |
| 19  | 1     | 617 | LHG  | C8-C7-O7-C5     |
| 19  | 2     | 622 | LHG  | C1-C2-C3-O3     |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | 2     | 622 | LHG  | C3-O3-P-O5      |
| 19  | 3     | 219 | LHG  | C3-O3-P-O4      |
| 19  | 3     | 219 | LHG  | C3-O3-P-O5      |
| 19  | 3     | 219 | LHG  | C3-O3-P-O6      |
| 19  | 3     | 219 | LHG  | O7-C5-C6-O8     |
| 19  | 3     | 219 | LHG  | C8-C7-O7-C5     |
| 19  | A     | 841 | LHG  | O2-C2-C3-O3     |
| 19  | A     | 841 | LHG  | C4-O6-P-O5      |
| 19  | A     | 842 | LHG  | O1-C1-C2-C3     |
| 19  | A     | 842 | LHG  | C1-C2-C3-O3     |
| 19  | A     | 842 | LHG  | C3-O3-P-O6      |
| 19  | B     | 851 | LHG  | O1-C1-C2-C3     |
| 19  | B     | 851 | LHG  | C4-O6-P-O3      |
| 19  | B     | 851 | LHG  | O7-C5-C6-O8     |
| 19  | B     | 851 | LHG  | C8-C7-O7-C5     |
| 20  | 2     | 618 | ERG  | C16-C17-C20-C21 |
| 20  | 2     | 618 | ERG  | C23-C24-C25-C26 |
| 20  | 2     | 618 | ERG  | C28-C24-C25-C27 |
| 20  | 2     | 621 | ERG  | C13-C17-C20-C22 |
| 21  | 2     | 617 | BCR  | C1-C6-C7-C8     |
| 21  | 2     | 617 | BCR  | C5-C6-C7-C8     |
| 21  | A     | 845 | BCR  | C5-C6-C7-C8     |
| 21  | A     | 845 | BCR  | C9-C10-C11-C12  |
| 21  | A     | 845 | BCR  | C10-C11-C12-C13 |
| 21  | A     | 845 | BCR  | C11-C12-C13-C14 |
| 21  | A     | 845 | BCR  | C11-C12-C13-C35 |
| 21  | A     | 846 | BCR  | C11-C10-C9-C8   |
| 21  | A     | 846 | BCR  | C11-C10-C9-C34  |
| 21  | A     | 850 | BCR  | C1-C6-C7-C8     |
| 21  | A     | 850 | BCR  | C5-C6-C7-C8     |
| 21  | A     | 850 | BCR  | C11-C10-C9-C8   |
| 21  | A     | 850 | BCR  | C11-C10-C9-C34  |
| 21  | A     | 850 | BCR  | C9-C10-C11-C12  |
| 21  | A     | 850 | BCR  | C10-C11-C12-C13 |
| 21  | A     | 857 | BCR  | C1-C6-C7-C8     |
| 21  | A     | 857 | BCR  | C5-C6-C7-C8     |
| 21  | A     | 857 | BCR  | C11-C10-C9-C8   |
| 21  | A     | 857 | BCR  | C11-C10-C9-C34  |
| 21  | A     | 857 | BCR  | C10-C11-C12-C13 |
| 21  | A     | 857 | BCR  | C11-C12-C13-C14 |
| 21  | A     | 857 | BCR  | C11-C12-C13-C35 |
| 21  | B     | 840 | BCR  | C11-C10-C9-C8   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | B     | 840 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 840 | BCR  | C9-C10-C11-C12  |
| 21  | B     | 840 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 840 | BCR  | C11-C12-C13-C14 |
| 21  | B     | 840 | BCR  | C11-C12-C13-C35 |
| 21  | B     | 840 | BCR  | C23-C24-C25-C26 |
| 21  | B     | 841 | BCR  | C1-C6-C7-C8     |
| 21  | B     | 841 | BCR  | C5-C6-C7-C8     |
| 21  | B     | 841 | BCR  | C11-C10-C9-C8   |
| 21  | B     | 841 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 841 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 841 | BCR  | C11-C12-C13-C14 |
| 21  | B     | 841 | BCR  | C11-C12-C13-C35 |
| 21  | B     | 841 | BCR  | C23-C24-C25-C26 |
| 21  | B     | 842 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 843 | BCR  | C11-C10-C9-C8   |
| 21  | B     | 843 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 843 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 844 | BCR  | C11-C10-C9-C8   |
| 21  | B     | 844 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 844 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 845 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 847 | BCR  | C1-C6-C7-C8     |
| 21  | B     | 847 | BCR  | C5-C6-C7-C8     |
| 21  | B     | 847 | BCR  | C11-C10-C9-C8   |
| 21  | B     | 847 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 847 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 847 | BCR  | C11-C12-C13-C14 |
| 21  | B     | 847 | BCR  | C11-C12-C13-C35 |
| 21  | B     | 855 | BCR  | C11-C10-C9-C8   |
| 21  | B     | 855 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 855 | BCR  | C9-C10-C11-C12  |
| 21  | B     | 855 | BCR  | C10-C11-C12-C13 |
| 21  | B     | 855 | BCR  | C11-C12-C13-C14 |
| 21  | B     | 855 | BCR  | C11-C12-C13-C35 |
| 21  | F     | 203 | BCR  | C10-C11-C12-C13 |
| 21  | F     | 203 | BCR  | C21-C22-C23-C24 |
| 21  | F     | 206 | BCR  | C7-C8-C9-C10    |
| 21  | F     | 206 | BCR  | C10-C11-C12-C13 |
| 21  | F     | 206 | BCR  | C21-C22-C23-C24 |
| 21  | I     | 103 | BCR  | C5-C6-C7-C8     |
| 21  | I     | 103 | BCR  | C11-C10-C9-C8   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | I     | 103 | BCR  | C11-C10-C9-C34  |
| 21  | I     | 103 | BCR  | C10-C11-C12-C13 |
| 21  | I     | 103 | BCR  | C17-C18-C19-C20 |
| 21  | I     | 103 | BCR  | C36-C18-C19-C20 |
| 21  | K     | 104 | BCR  | C11-C10-C9-C8   |
| 21  | K     | 104 | BCR  | C11-C10-C9-C34  |
| 21  | K     | 104 | BCR  | C10-C11-C12-C13 |
| 21  | K     | 104 | BCR  | C23-C24-C25-C26 |
| 21  | K     | 104 | BCR  | C23-C24-C25-C30 |
| 21  | L     | 202 | BCR  | C11-C10-C9-C8   |
| 21  | L     | 202 | BCR  | C11-C10-C9-C34  |
| 21  | L     | 202 | BCR  | C21-C22-C23-C24 |
| 21  | L     | 202 | BCR  | C37-C22-C23-C24 |
| 21  | L     | 206 | BCR  | C11-C10-C9-C8   |
| 21  | L     | 206 | BCR  | C11-C10-C9-C34  |
| 21  | L     | 206 | BCR  | C10-C11-C12-C13 |
| 21  | L     | 206 | BCR  | C11-C12-C13-C14 |
| 21  | L     | 206 | BCR  | C11-C12-C13-C35 |
| 21  | L     | 207 | BCR  | C11-C10-C9-C8   |
| 21  | L     | 207 | BCR  | C11-C10-C9-C34  |
| 21  | L     | 207 | BCR  | C10-C11-C12-C13 |
| 21  | O     | 205 | BCR  | C11-C10-C9-C8   |
| 21  | O     | 205 | BCR  | C11-C10-C9-C34  |
| 21  | O     | 205 | BCR  | C10-C11-C12-C13 |
| 22  | 2     | 619 | PGT  | C4-O4P-P-O2P    |
| 22  | 2     | 619 | PGT  | C4-C5-C6-O6     |
| 22  | B     | 848 | PGT  | C1-O3P-P-O2P    |
| 22  | B     | 848 | PGT  | C4-O4P-P-O1P    |
| 23  | 2     | 620 | DGA  | OB1-CB1-OG2-CG2 |
| 23  | 2     | 620 | DGA  | OG2-CG2-CG3-OXT |
| 23  | J     | 101 | DGA  | CB2-CB1-OG2-CG2 |
| 24  | 3     | 202 | LMU  | O5'-C1'-O1'-C1  |
| 24  | A     | 853 | LMU  | C2'-C1'-O1'-C1  |
| 24  | A     | 853 | LMU  | O5'-C1'-O1'-C1  |
| 25  | 3     | 220 | PTY  | N1-C2-C3-O11    |
| 25  | 3     | 220 | PTY  | C5-O14-P1-O13   |
| 25  | A     | 852 | PTY  | C11-C8-O7-C6    |
| 25  | L     | 208 | PTY  | C5-O14-P1-O12   |
| 29  | A     | 849 | 3PH  | C1-O11-P-O13    |
| 29  | A     | 849 | 3PH  | C1-O11-P-O14    |
| 30  | A     | 851 | T7X  | C7-O13-P1-O12   |
| 30  | A     | 851 | T7X  | C12-C10-O16-C8  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 31  | B     | 849 | DGD  | C2B-C1B-O2G-C2G |
| 31  | B     | 849 | DGD  | O1B-C1B-O2G-C2G |
| 31  | B     | 849 | DGD  | O6D-C1D-O3G-C3G |
| 31  | B     | 850 | DGD  | O1B-C1B-O2G-C2G |
| 31  | B     | 850 | DGD  | C2D-C1D-O3G-C3G |
| 31  | B     | 850 | DGD  | O6D-C1D-O3G-C3G |
| 16  | 1     | 601 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 605 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 609 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 610 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 607 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 609 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 611 | CLA  | O1D-CGD-O2D-CED |
| 16  | 3     | 208 | CLA  | O1D-CGD-O2D-CED |
| 16  | 3     | 212 | CLA  | O1D-CGD-O2D-CED |
| 16  | F     | 201 | CLA  | O1D-CGD-O2D-CED |
| 16  | L     | 203 | CLA  | O1D-CGD-O2D-CED |
| 16  | O     | 201 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 804 | CLA  | C5-C6-C7-C8     |
| 16  | 1     | 603 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 607 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 611 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 605 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 606 | CLA  | O1D-CGD-O2D-CED |
| 16  | 3     | 207 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 826 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 833 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 856 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 801 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 804 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 831 | CLA  | O1D-CGD-O2D-CED |
| 16  | O     | 204 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 603 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 603 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 606 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 607 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 204 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 208 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 211 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 213 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 214 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 803 | CLA  | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 806 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 812 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 820 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 821 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 829 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 836 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 807 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 809 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 818 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 820 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 824 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 826 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 828 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 831 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 838 | CLA  | CBD-CGD-O2D-CED |
| 16  | F     | 201 | CLA  | CBD-CGD-O2D-CED |
| 16  | J     | 102 | CLA  | CBD-CGD-O2D-CED |
| 16  | L     | 203 | CLA  | CBD-CGD-O2D-CED |
| 16  | O     | 201 | CLA  | CBD-CGD-O2D-CED |
| 16  | O     | 202 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 603 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 1     | 608 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 610 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 203 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 208 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 211 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 833 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 805 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 811 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 818 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 820 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 832 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 836 | CLA  | O1A-CGA-O2A-C1  |
| 16  | O     | 204 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 204 | CLA  | O1D-CGD-O2D-CED |
| 16  | 3     | 213 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 809 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 821 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 829 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 807 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 826 | CLA  | O1D-CGD-O2D-CED |
| 16  | K     | 101 | CLA  | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 24  | 3     | 202 | LMU  | O5B-C1B-O1B-C4' |
| 16  | 1     | 606 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 613 | CLA  | O1D-CGD-O2D-CED |
| 16  | 3     | 211 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 808 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 817 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 822 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 827 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 832 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 802 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 813 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 815 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 818 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 820 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 821 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 835 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 837 | CLA  | O1D-CGD-O2D-CED |
| 16  | F     | 204 | CLA  | O1D-CGD-O2D-CED |
| 16  | L     | 204 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 603 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 1     | 608 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 203 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 208 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 211 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 833 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 811 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 818 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 820 | CLA  | CBA-CGA-O2A-C1  |
| 23  | J     | 101 | DGA  | CA2-CA1-OG1-CG1 |
| 25  | 3     | 220 | PTY  | C31-C30-O4-C1   |
| 16  | 1     | 608 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 601 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 608 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 802 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 805 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 814 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 818 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 819 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 825 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 834 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 838 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 854 | CLA  | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 808 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 810 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 822 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 836 | CLA  | CBD-CGD-O2D-CED |
| 16  | F     | 202 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 607 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 1     | 611 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 611 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 210 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 805 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 809 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 811 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 819 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 820 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 821 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 807 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 809 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 813 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 814 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 815 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 816 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 821 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 831 | CLA  | O1A-CGA-O2A-C1  |
| 16  | F     | 201 | CLA  | O1A-CGA-O2A-C1  |
| 16  | F     | 204 | CLA  | O1A-CGA-O2A-C1  |
| 16  | I     | 102 | CLA  | O1A-CGA-O2A-C1  |
| 16  | L     | 201 | CLA  | O1A-CGA-O2A-C1  |
| 16  | L     | 204 | CLA  | O1A-CGA-O2A-C1  |
| 16  | L     | 205 | CLA  | O1A-CGA-O2A-C1  |
| 16  | O     | 202 | CLA  | O1A-CGA-O2A-C1  |
| 23  | J     | 101 | DGA  | OA1-CA1-OG1-CG1 |
| 25  | 3     | 220 | PTY  | O30-C30-O4-C1   |
| 25  | L     | 208 | PTY  | O30-C30-O4-C1   |
| 16  | 2     | 610 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 831 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 855 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 814 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 834 | CLA  | O1D-CGD-O2D-CED |
| 16  | L     | 205 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 804 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 811 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 832 | CLA  | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | O     | 203 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 824 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 805 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 812 | CLA  | CBD-CGD-O2D-CED |
| 16  | 1     | 603 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 825 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 803 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 815 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 828 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 838 | CLA  | O1D-CGD-O2D-CED |
| 19  | 1     | 617 | LHG  | O9-C7-O7-C5     |
| 19  | 3     | 219 | LHG  | O9-C7-O7-C5     |
| 19  | B     | 851 | LHG  | O9-C7-O7-C5     |
| 23  | J     | 101 | DGA  | OB1-CB1-OG2-CG2 |
| 25  | 3     | 221 | PTY  | O10-C8-O7-C6    |
| 25  | A     | 852 | PTY  | O10-C8-O7-C6    |
| 30  | A     | 851 | T7X  | O17-C10-O16-C8  |
| 16  | O     | 201 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 213 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 1     | 603 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 604 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 607 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 611 | CLA  | C3-C5-C6-C7     |
| 16  | 2     | 605 | CLA  | C3-C5-C6-C7     |
| 16  | 2     | 606 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 808 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 812 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 813 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 814 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 819 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 830 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 834 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 835 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 838 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 839 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 855 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 808 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 812 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 821 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 823 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 829 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 835 | CLA  | C3-C5-C6-C7     |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 836 | CLA  | C3-C5-C6-C7     |
| 16  | L     | 204 | CLA  | C3-C5-C6-C7     |
| 16  | L     | 205 | CLA  | C3-C5-C6-C7     |
| 16  | O     | 203 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 607 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 2     | 610 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 2     | 611 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 2     | 612 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 811 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 820 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 821 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 827 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 828 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 805 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 813 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 814 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 815 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 816 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 821 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 832 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 836 | CLA  | CBA-CGA-O2A-C1  |
| 16  | I     | 101 | CLA  | CBA-CGA-O2A-C1  |
| 16  | I     | 102 | CLA  | CBA-CGA-O2A-C1  |
| 16  | L     | 201 | CLA  | CBA-CGA-O2A-C1  |
| 16  | L     | 204 | CLA  | CBA-CGA-O2A-C1  |
| 16  | L     | 205 | CLA  | CBA-CGA-O2A-C1  |
| 16  | O     | 202 | CLA  | CBA-CGA-O2A-C1  |
| 16  | O     | 204 | CLA  | CBA-CGA-O2A-C1  |
| 25  | L     | 208 | PTY  | C31-C30-O4-C1   |
| 23  | 2     | 620 | DGA  | CB2-CB1-OG2-CG2 |
| 25  | 3     | 221 | PTY  | C11-C8-O7-C6    |
| 31  | B     | 850 | DGD  | C2B-C1B-O2G-C2G |
| 16  | 3     | 214 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 803 | CLA  | O1A-CGA-O2A-C1  |
| 22  | 2     | 619 | PGT  | O11-C11-O3-C3   |
| 16  | 3     | 213 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 814 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 833 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 817 | CLA  | C2-C3-C5-C6     |
| 16  | B     | 833 | CLA  | C2-C3-C5-C6     |
| 16  | 2     | 612 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 203 | CLA  | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 3     | 210 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 212 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 802 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 834 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 809 | CLA  | C2A-CAA-CBA-CGA |
| 16  | F     | 202 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 802 | CLA  | O1A-CGA-O2A-C1  |
| 31  | B     | 846 | DGD  | CBA-CCA-CDA-CEA |
| 31  | B     | 846 | DGD  | CEA-CFA-CGA-CHA |
| 31  | B     | 846 | DGD  | CBB-CCB-CDB-CEB |
| 31  | B     | 850 | DGD  | CBA-CCA-CDA-CEA |
| 31  | B     | 850 | DGD  | CEA-CFA-CGA-CHA |
| 31  | B     | 850 | DGD  | CBB-CCB-CDB-CEB |
| 16  | 1     | 606 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 610 | CLA  | C3-C5-C6-C7     |
| 16  | 2     | 609 | CLA  | C3-C5-C6-C7     |
| 16  | 3     | 209 | CLA  | C3-C5-C6-C7     |
| 16  | 3     | 211 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 807 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 828 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 803 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 818 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 819 | CLA  | C3-C5-C6-C7     |
| 16  | I     | 102 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 609 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 1     | 611 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 2     | 607 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 2     | 613 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 210 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 804 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 805 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 809 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 813 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 819 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 825 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 802 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 804 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 807 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 809 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 828 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 831 | CLA  | CBA-CGA-O2A-C1  |
| 16  | F     | 201 | CLA  | CBA-CGA-O2A-C1  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | F     | 204 | CLA  | CBA-CGA-O2A-C1  |
| 16  | K     | 102 | CLA  | CBA-CGA-O2A-C1  |
| 16  | J     | 102 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 807 | CLA  | CBD-CGD-O2D-CED |
| 16  | F     | 205 | CLA  | CBD-CGD-O2D-CED |
| 16  | A     | 806 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 836 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 824 | CLA  | O1D-CGD-O2D-CED |
| 19  | 2     | 622 | LHG  | O9-C7-O7-C5     |
| 16  | 1     | 609 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 607 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 609 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 612 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 613 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 813 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 825 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 804 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 819 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 824 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 828 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 829 | CLA  | O1A-CGA-O2A-C1  |
| 16  | K     | 102 | CLA  | O1A-CGA-O2A-C1  |
| 29  | B     | 854 | 3PH  | O32-C31-O31-C3  |
| 22  | 2     | 619 | PGT  | C12-C11-O3-C3   |
| 16  | O     | 202 | CLA  | O1D-CGD-O2D-CED |
| 17  | 1     | 615 | C7Z  | C33-C34-C35-C15 |
| 18  | 1     | 613 | RRX  | C15-C16-C17-C18 |
| 18  | J     | 103 | RRX  | C9-C10-C11-C12  |
| 21  | A     | 857 | BCR  | C9-C10-C11-C12  |
| 21  | B     | 841 | BCR  | C9-C10-C11-C12  |
| 21  | B     | 844 | BCR  | C9-C10-C11-C12  |
| 21  | B     | 847 | BCR  | C9-C10-C11-C12  |
| 21  | L     | 207 | BCR  | C19-C20-C21-C22 |
| 21  | O     | 205 | BCR  | C9-C10-C11-C12  |
| 24  | 3     | 202 | LMU  | O5B-C5B-C6B-O6B |
| 16  | A     | 810 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 816 | CLA  | CBD-CGD-O2D-CED |
| 19  | 2     | 622 | LHG  | O2-C2-C3-O3     |
| 19  | A     | 842 | LHG  | O2-C2-C3-O3     |
| 16  | B     | 813 | CLA  | C3-C5-C6-C7     |
| 16  | K     | 101 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 604 | CLA  | CBA-CGA-O2A-C1  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 2     | 609 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 803 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 824 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 810 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 824 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 829 | CLA  | CBA-CGA-O2A-C1  |
| 16  | O     | 201 | CLA  | CBA-CGA-O2A-C1  |
| 16  | O     | 203 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 1     | 617 | LHG  | C24-C23-O8-C6   |
| 29  | B     | 854 | 3PH  | C32-C31-O31-C3  |
| 16  | 1     | 601 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 1     | 604 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 827 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 830 | CLA  | O1A-CGA-O2A-C1  |
| 16  | I     | 101 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 603 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 809 | CLA  | O1D-CGD-O2D-CED |
| 19  | 2     | 622 | LHG  | C8-C7-O7-C5     |
| 16  | B     | 823 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 830 | CLA  | CBD-CGD-O2D-CED |
| 19  | 2     | 622 | LHG  | C11-C12-C13-C14 |
| 19  | A     | 842 | LHG  | C11-C10-C9-C8   |
| 16  | B     | 809 | CLA  | C3-C5-C6-C7     |
| 16  | L     | 201 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 601 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 830 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 819 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 805 | CLA  | O1D-CGD-O2D-CED |
| 24  | 3     | 202 | LMU  | C4B-C5B-C6B-O6B |
| 19  | 2     | 622 | LHG  | C2-C3-O3-P      |
| 16  | A     | 804 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 824 | CLA  | O1A-CGA-O2A-C1  |
| 16  | J     | 102 | CLA  | C13-C15-C16-C17 |
| 16  | 3     | 207 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 821 | CLA  | C4-C3-C5-C6     |
| 27  | A     | 840 | PQN  | C14-C13-C15-C16 |
| 16  | 3     | 207 | CLA  | C2-C3-C5-C6     |
| 16  | A     | 821 | CLA  | C2-C3-C5-C6     |
| 27  | A     | 840 | PQN  | C12-C13-C15-C16 |
| 16  | 2     | 601 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 811 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 835 | CLA  | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 810 | CLA  | O1A-CGA-O2A-C1  |
| 16  | O     | 203 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 820 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 604 | CLA  | C2C-C3C-CAC-CBC |
| 16  | B     | 806 | CLA  | CBA-CGA-O2A-C1  |
| 22  | B     | 848 | PGT  | C34-C35-C36-C37 |
| 19  | A     | 841 | LHG  | C31-C32-C33-C34 |
| 16  | 1     | 608 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 812 | CLA  | O1D-CGD-O2D-CED |
| 19  | A     | 841 | LHG  | C8-C7-O7-C5     |
| 22  | 2     | 619 | PGT  | C32-C31-O2-C2   |
| 16  | A     | 834 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 611 | CLA  | C2C-C3C-CAC-CBC |
| 16  | A     | 819 | CLA  | O1D-CGD-O2D-CED |
| 19  | A     | 841 | LHG  | C1-C2-C3-O3     |
| 22  | B     | 848 | PGT  | O4P-C4-C5-C6    |
| 19  | 1     | 617 | LHG  | O10-C23-O8-C6   |
| 16  | A     | 802 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 854 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 814 | CLA  | O1D-CGD-O2D-CED |
| 16  | F     | 202 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 603 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 204 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 207 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 212 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 806 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 807 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 812 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 815 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 818 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 834 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 838 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 839 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 837 | CLA  | CBA-CGA-O2A-C1  |
| 16  | K     | 101 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 2     | 622 | LHG  | C24-C23-O8-C6   |
| 16  | A     | 804 | CLA  | C5-C6-C7-C8     |
| 16  | 2     | 602 | CLA  | CBD-CGD-O2D-CED |
| 16  | B     | 810 | CLA  | O1D-CGD-O2D-CED |
| 17  | J     | 104 | C7Z  | C29-C30-C31-C32 |
| 21  | L     | 207 | BCR  | C9-C10-C11-C12  |
| 16  | A     | 820 | CLA  | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 1     | 604 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 807 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 837 | CLA  | C15-C16-C17-C18 |
| 19  | B     | 851 | LHG  | C7-C8-C9-C10    |
| 24  | 3     | 202 | LMU  | C2'-C1'-O1'-C1  |
| 31  | B     | 849 | DGD  | C2D-C1D-O3G-C3G |
| 19  | A     | 842 | LHG  | O7-C5-C6-O8     |
| 16  | A     | 812 | CLA  | O1A-CGA-O2A-C1  |
| 16  | K     | 101 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 607 | CLA  | C4-C3-C5-C6     |
| 16  | 2     | 607 | CLA  | C2-C3-C5-C6     |
| 16  | A     | 814 | CLA  | C2-C3-C5-C6     |
| 16  | 1     | 602 | CLA  | C6-C7-C8-C9     |
| 16  | 1     | 604 | CLA  | C6-C7-C8-C9     |
| 16  | 1     | 606 | CLA  | C14-C13-C15-C16 |
| 16  | 1     | 611 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 601 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 604 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 606 | CLA  | C11-C12-C13-C14 |
| 16  | 2     | 610 | CLA  | C11-C10-C8-C9   |
| 16  | 3     | 203 | CLA  | C14-C13-C15-C16 |
| 16  | 3     | 208 | CLA  | C11-C10-C8-C9   |
| 16  | 3     | 211 | CLA  | C6-C7-C8-C9     |
| 16  | 3     | 214 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 807 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 809 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 809 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 813 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 814 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 837 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 802 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 803 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 808 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 821 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 832 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 836 | CLA  | C6-C7-C8-C9     |
| 16  | F     | 201 | CLA  | C6-C7-C8-C9     |
| 16  | F     | 205 | CLA  | C6-C7-C8-C9     |
| 16  | K     | 101 | CLA  | C11-C12-C13-C14 |
| 16  | K     | 102 | CLA  | C11-C12-C13-C14 |
| 26  | A     | 801 | CL0  | C11-C12-C13-C14 |
| 16  | A     | 838 | CLA  | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 854 | CLA  | O1D-CGD-O2D-CED |
| 17  | 1     | 612 | C7Z  | C27-C28-C29-C39 |
| 17  | 1     | 614 | C7Z  | C11-C12-C13-C20 |
| 17  | 1     | 615 | C7Z  | C31-C32-C33-C40 |
| 17  | 1     | 616 | C7Z  | C27-C28-C29-C39 |
| 17  | 2     | 614 | C7Z  | C27-C28-C29-C39 |
| 17  | 2     | 615 | C7Z  | C27-C28-C29-C39 |
| 17  | 3     | 215 | C7Z  | C7-C8-C9-C19    |
| 17  | 3     | 215 | C7Z  | C27-C28-C29-C39 |
| 17  | 3     | 216 | C7Z  | C11-C12-C13-C20 |
| 17  | 3     | 217 | C7Z  | C11-C12-C13-C20 |
| 17  | 3     | 217 | C7Z  | C27-C28-C29-C39 |
| 17  | 3     | 218 | C7Z  | C27-C28-C29-C39 |
| 17  | A     | 843 | C7Z  | C11-C12-C13-C20 |
| 17  | A     | 843 | C7Z  | C27-C28-C29-C39 |
| 18  | 2     | 616 | RRX  | C11-C12-C13-C35 |
| 18  | A     | 847 | RRX  | C7-C8-C9-C34    |
| 18  | K     | 103 | RRX  | C11-C12-C13-C35 |
| 18  | K     | 103 | RRX  | C7-C8-C9-C34    |
| 21  | A     | 844 | BCR  | C11-C12-C13-C35 |
| 21  | A     | 846 | BCR  | C7-C8-C9-C34    |
| 21  | A     | 850 | BCR  | C7-C8-C9-C34    |
| 21  | B     | 844 | BCR  | C37-C22-C23-C24 |
| 21  | B     | 847 | BCR  | C7-C8-C9-C34    |
| 21  | F     | 203 | BCR  | C37-C22-C23-C24 |
| 21  | F     | 206 | BCR  | C7-C8-C9-C34    |
| 21  | F     | 206 | BCR  | C37-C22-C23-C24 |
| 17  | 1     | 614 | C7Z  | C11-C12-C13-C14 |
| 17  | 1     | 615 | C7Z  | C31-C32-C33-C34 |
| 17  | 2     | 614 | C7Z  | C27-C28-C29-C30 |
| 17  | 2     | 615 | C7Z  | C27-C28-C29-C30 |
| 17  | 3     | 215 | C7Z  | C27-C28-C29-C30 |
| 17  | 3     | 216 | C7Z  | C11-C12-C13-C14 |
| 17  | 3     | 217 | C7Z  | C11-C12-C13-C14 |
| 17  | 3     | 217 | C7Z  | C27-C28-C29-C30 |
| 17  | 3     | 218 | C7Z  | C27-C28-C29-C30 |
| 17  | A     | 843 | C7Z  | C11-C12-C13-C14 |
| 18  | 2     | 616 | RRX  | C11-C12-C13-C14 |
| 18  | A     | 847 | RRX  | C7-C8-C9-C10    |
| 18  | K     | 103 | RRX  | C7-C8-C9-C10    |
| 21  | A     | 844 | BCR  | C11-C12-C13-C14 |
| 21  | A     | 846 | BCR  | C7-C8-C9-C10    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | A     | 850 | BCR  | C7-C8-C9-C10    |
| 21  | B     | 844 | BCR  | C21-C22-C23-C24 |
| 21  | B     | 847 | BCR  | C7-C8-C9-C10    |
| 19  | A     | 842 | LHG  | C8-C7-O7-C5     |
| 16  | 3     | 214 | CLA  | C2C-C3C-CAC-CBC |
| 16  | 3     | 204 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 3     | 207 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 838 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 1     | 608 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 806 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 813 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 820 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 836 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 833 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 837 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 830 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 2     | 607 | CLA  | C13-C15-C16-C17 |
| 16  | 3     | 206 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 802 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 821 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 823 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 810 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 820 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 825 | CLA  | C5-C6-C7-C8     |
| 16  | J     | 102 | CLA  | C8-C10-C11-C12  |
| 19  | 2     | 622 | LHG  | C7-C8-C9-C10    |
| 19  | A     | 841 | LHG  | C23-C24-C25-C26 |
| 23  | 2     | 620 | DGA  | CA1-CA2-CA3-CA4 |
| 16  | A     | 802 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 822 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 603 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 814 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 816 | CLA  | C10-C11-C12-C13 |
| 16  | A     | 833 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 816 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 835 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 838 | CLA  | C15-C16-C17-C18 |
| 16  | F     | 201 | CLA  | C10-C11-C12-C13 |
| 16  | I     | 101 | CLA  | C8-C10-C11-C12  |
| 16  | K     | 102 | CLA  | C13-C15-C16-C17 |
| 16  | L     | 203 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 825 | CLA  | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | A     | 842 | LHG  | O1-C1-C2-O2     |
| 16  | 2     | 603 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 807 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 818 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 834 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 839 | CLA  | O1A-CGA-O2A-C1  |
| 19  | 3     | 219 | LHG  | C23-C24-C25-C26 |
| 19  | B     | 851 | LHG  | C23-C24-C25-C26 |
| 23  | 2     | 620 | DGA  | CB1-CB2-CB3-CB4 |
| 23  | J     | 101 | DGA  | CB1-CB2-CB3-CB4 |
| 22  | B     | 848 | PGT  | C36-C37-C38-C39 |
| 24  | A     | 853 | LMU  | C4'-C5'-C6'-O6' |
| 16  | 1     | 606 | CLA  | C8-C10-C11-C12  |
| 16  | 3     | 209 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 815 | CLA  | C3-C5-C6-C7     |
| 16  | 3     | 214 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 829 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 816 | CLA  | C2C-C3C-CAC-CBC |
| 16  | 2     | 601 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 608 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 818 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 605 | CLA  | C2-C1-O2A-CGA   |
| 16  | 2     | 609 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 824 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 827 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 814 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 821 | CLA  | C2-C1-O2A-CGA   |
| 16  | F     | 205 | CLA  | C2-C1-O2A-CGA   |
| 16  | O     | 203 | CLA  | C2-C1-O2A-CGA   |
| 16  | 2     | 613 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 836 | CLA  | C10-C11-C12-C13 |
| 29  | A     | 849 | 3PH  | C31-C32-C33-C34 |
| 16  | 3     | 210 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 820 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 824 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 605 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 809 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 815 | CLA  | C11-C10-C8-C7   |
| 16  | L     | 204 | CLA  | C6-C7-C8-C10    |
| 16  | O     | 203 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 809 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 833 | CLA  | C3-C5-C6-C7     |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 806 | CLA  | O1A-CGA-O2A-C1  |
| 19  | 2     | 622 | LHG  | O10-C23-O8-C6   |
| 17  | 1     | 615 | C7Z  | C29-C30-C31-C32 |
| 17  | 3     | 201 | C7Z  | C9-C10-C11-C12  |
| 17  | 3     | 216 | C7Z  | C9-C10-C11-C12  |
| 17  | 3     | 218 | C7Z  | C29-C30-C31-C32 |
| 21  | I     | 103 | BCR  | C9-C10-C11-C12  |
| 21  | L     | 206 | BCR  | C9-C10-C11-C12  |
| 16  | 1     | 603 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 815 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 818 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 805 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 808 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 601 | CLA  | C8-C10-C11-C12  |
| 16  | 2     | 603 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 806 | CLA  | O1A-CGA-O2A-C1  |
| 31  | B     | 849 | DGD  | O6E-C1E-O5D-C6D |
| 16  | 3     | 203 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 825 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 837 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 818 | CLA  | C8-C10-C11-C12  |
| 16  | F     | 204 | CLA  | C8-C10-C11-C12  |
| 21  | 2     | 617 | BCR  | C10-C11-C12-C13 |
| 21  | A     | 844 | BCR  | C10-C11-C12-C13 |
| 21  | A     | 846 | BCR  | C10-C11-C12-C13 |
| 19  | A     | 841 | LHG  | O9-C7-O7-C5     |
| 22  | 2     | 619 | PGT  | O31-C31-O2-C2   |
| 16  | 3     | 206 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 831 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 611 | CLA  | C15-C16-C17-C18 |
| 16  | 3     | 209 | CLA  | C13-C15-C16-C17 |
| 16  | 3     | 212 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 806 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 812 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 831 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 801 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 803 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 810 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 819 | CLA  | C15-C16-C17-C18 |
| 16  | I     | 101 | CLA  | C5-C6-C7-C8     |
| 30  | A     | 851 | T7X  | C31-C11-O18-C9  |
| 16  | 3     | 212 | CLA  | O1A-CGA-O2A-C1  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 815 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 837 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 1     | 603 | CLA  | C5-C6-C7-C8     |
| 16  | 1     | 607 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 810 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 821 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 822 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 838 | CLA  | C13-C15-C16-C17 |
| 16  | L     | 204 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 829 | CLA  | O1A-CGA-O2A-C1  |
| 25  | 3     | 220 | PTY  | C11-C8-O7-C6    |
| 16  | 1     | 606 | CLA  | C5-C6-C7-C8     |
| 16  | 1     | 608 | CLA  | C8-C10-C11-C12  |
| 16  | 2     | 601 | CLA  | C13-C15-C16-C17 |
| 16  | 2     | 604 | CLA  | C10-C11-C12-C13 |
| 16  | A     | 827 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 839 | CLA  | C8-C10-C11-C12  |
| 16  | O     | 201 | CLA  | C13-C15-C16-C17 |
| 19  | 1     | 617 | LHG  | C3-O3-P-O6      |
| 19  | 2     | 622 | LHG  | C3-O3-P-O6      |
| 19  | 2     | 622 | LHG  | C4-O6-P-O3      |
| 19  | A     | 841 | LHG  | C4-O6-P-O3      |
| 25  | A     | 852 | PTY  | C3-O11-P1-O14   |
| 25  | L     | 208 | PTY  | C5-O14-P1-O11   |
| 30  | A     | 851 | T7X  | C7-O13-P1-O1    |
| 16  | A     | 806 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 817 | CLA  | C3-C5-C6-C7     |
| 26  | A     | 801 | CL0  | C3-C5-C6-C7     |
| 20  | 2     | 618 | ERG  | C28-C24-C25-C26 |
| 16  | 1     | 610 | CLA  | CBA-CGA-O2A-C1  |
| 31  | B     | 850 | DGD  | C2A-C1A-O1G-C1G |
| 16  | 2     | 612 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 812 | CLA  | O1D-CGD-O2D-CED |
| 16  | I     | 102 | CLA  | CBD-CGD-O2D-CED |
| 16  | 3     | 208 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 816 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 825 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 837 | CLA  | O1A-CGA-O2A-C1  |
| 16  | B     | 830 | CLA  | O1A-CGA-O2A-C1  |
| 24  | A     | 853 | LMU  | C4B-C5B-C6B-O6B |
| 31  | B     | 850 | DGD  | O6D-C5D-C6D-O5D |
| 19  | A     | 841 | LHG  | C7-C8-C9-C10    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 3     | 203 | CLA  | O1D-CGD-O2D-CED |
| 19  | A     | 842 | LHG  | O9-C7-O7-C5     |
| 25  | 3     | 220 | PTY  | O10-C8-O7-C6    |
| 16  | A     | 805 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 816 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 816 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 827 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 832 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 837 | CLA  | C2A-CAA-CBA-CGA |
| 16  | I     | 101 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 3     | 203 | CLA  | C16-C17-C18-C20 |
| 16  | A     | 816 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 827 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 814 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 823 | CLA  | CBA-CGA-O2A-C1  |
| 19  | B     | 851 | LHG  | C24-C23-O8-C6   |
| 31  | B     | 846 | DGD  | C2A-C1A-O1G-C1G |
| 16  | 2     | 610 | CLA  | C8-C10-C11-C12  |
| 23  | J     | 101 | DGA  | CB9-CAB-CBB-CCB |
| 17  | 2     | 614 | C7Z  | C29-C30-C31-C32 |
| 19  | 2     | 622 | LHG  | C23-C24-C25-C26 |
| 19  | 2     | 622 | LHG  | C13-C14-C15-C16 |
| 23  | J     | 101 | DGA  | CB7-CB8-CB9-CAB |
| 16  | 3     | 210 | CLA  | O1D-CGD-O2D-CED |
| 29  | B     | 854 | 3PH  | C22-C21-O21-C2  |
| 16  | 1     | 610 | CLA  | C8-C10-C11-C12  |
| 21  | A     | 845 | BCR  | C11-C10-C9-C34  |
| 21  | B     | 845 | BCR  | C11-C10-C9-C34  |
| 16  | B     | 802 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 824 | CLA  | C3-C5-C6-C7     |
| 16  | O     | 201 | CLA  | C3-C5-C6-C7     |
| 23  | 2     | 620 | DGA  | CA4-CA5-CA6-CA7 |
| 23  | 2     | 620 | DGA  | CA5-CA6-CA7-CA8 |
| 24  | A     | 853 | LMU  | O1'-C1-C2-C3    |
| 29  | J     | 105 | 3PH  | C29-C2A-C2B-C2C |
| 30  | A     | 851 | T7X  | C35-C36-C37-C38 |
| 16  | A     | 826 | CLA  | C16-C17-C18-C19 |
| 16  | B     | 815 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 836 | CLA  | C16-C17-C18-C20 |
| 16  | 2     | 601 | CLA  | CBA-CGA-O2A-C1  |
| 16  | J     | 102 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 2     | 622 | LHG  | C28-C29-C30-C31 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | A     | 841 | LHG  | C9-C10-C11-C12  |
| 24  | 3     | 202 | LMU  | C6-C7-C8-C9     |
| 25  | A     | 852 | PTY  | C33-C34-C35-C36 |
| 30  | A     | 851 | T7X  | C7-C8-O16-C10   |
| 16  | A     | 807 | CLA  | O1D-CGD-O2D-CED |
| 29  | B     | 854 | 3PH  | O22-C21-O21-C2  |
| 16  | 2     | 608 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 831 | CLA  | C5-C6-C7-C8     |
| 23  | 2     | 620 | DGA  | CAA-CBA-CCA-CDA |
| 31  | B     | 850 | DGD  | C2A-C3A-C4A-C5A |
| 16  | 3     | 214 | CLA  | O1A-CGA-O2A-C1  |
| 19  | A     | 842 | LHG  | C25-C26-C27-C28 |
| 25  | 3     | 220 | PTY  | C35-C36-C37-C38 |
| 29  | A     | 849 | 3PH  | C29-C2A-C2B-C2C |
| 16  | F     | 205 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 611 | CLA  | C13-C15-C16-C17 |
| 22  | B     | 848 | PGT  | O4P-C4-C5-O5    |
| 19  | 3     | 219 | LHG  | C28-C29-C30-C31 |
| 19  | 1     | 617 | LHG  | C7-C8-C9-C10    |
| 21  | A     | 845 | BCR  | C11-C10-C9-C8   |
| 21  | B     | 845 | BCR  | C11-C10-C9-C8   |
| 31  | B     | 849 | DGD  | C2E-C1E-O5D-C6D |
| 16  | A     | 808 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 822 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 835 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 2     | 622 | LHG  | C25-C26-C27-C28 |
| 19  | A     | 842 | LHG  | C26-C27-C28-C29 |
| 22  | 2     | 619 | PGT  | C40-C41-C42-C43 |
| 22  | B     | 848 | PGT  | C38-C39-C40-C41 |
| 16  | A     | 823 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 606 | CLA  | C16-C17-C18-C20 |
| 16  | 3     | 208 | CLA  | C16-C17-C18-C19 |
| 16  | A     | 815 | CLA  | C16-C17-C18-C20 |
| 16  | B     | 834 | CLA  | C16-C17-C18-C20 |
| 16  | L     | 205 | CLA  | C16-C17-C18-C20 |
| 27  | B     | 839 | PQN  | C26-C27-C28-C30 |
| 16  | B     | 816 | CLA  | O1D-CGD-O2D-CED |
| 19  | A     | 841 | LHG  | C16-C17-C18-C19 |
| 19  | B     | 851 | LHG  | C33-C34-C35-C36 |
| 22  | B     | 848 | PGT  | C32-C33-C34-C35 |
| 16  | 2     | 613 | CLA  | C11-C12-C13-C14 |
| 16  | 3     | 204 | CLA  | C11-C10-C8-C9   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 3     | 212 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 809 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 815 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 839 | CLA  | C6-C7-C8-C9     |
| 16  | F     | 204 | CLA  | C11-C12-C13-C14 |
| 16  | O     | 203 | CLA  | C6-C7-C8-C9     |
| 19  | 1     | 617 | LHG  | C28-C29-C30-C31 |
| 19  | A     | 841 | LHG  | C11-C12-C13-C14 |
| 22  | 2     | 619 | PGT  | C42-C43-C44-C45 |
| 22  | 2     | 619 | PGT  | C39-C40-C41-C42 |
| 25  | 3     | 221 | PTY  | C18-C19-C20-C21 |
| 31  | B     | 846 | DGD  | C3A-C4A-C5A-C6A |
| 16  | A     | 855 | CLA  | C8-C10-C11-C12  |
| 16  | 3     | 209 | CLA  | C2A-CAA-CBA-CGA |
| 30  | A     | 851 | T7X  | O19-C11-O18-C9  |
| 17  | 1     | 616 | C7Z  | C7-C8-C9-C19    |
| 17  | 3     | 201 | C7Z  | C7-C8-C9-C19    |
| 17  | 3     | 217 | C7Z  | C7-C8-C9-C19    |
| 21  | A     | 850 | BCR  | C11-C12-C13-C35 |
| 21  | F     | 203 | BCR  | C11-C12-C13-C35 |
| 21  | L     | 202 | BCR  | C11-C12-C13-C35 |
| 21  | L     | 207 | BCR  | C11-C12-C13-C35 |
| 17  | 1     | 614 | C7Z  | C7-C8-C9-C10    |
| 17  | 1     | 616 | C7Z  | C7-C8-C9-C10    |
| 17  | 2     | 615 | C7Z  | C7-C8-C9-C10    |
| 17  | 3     | 201 | C7Z  | C7-C8-C9-C10    |
| 17  | 3     | 215 | C7Z  | C7-C8-C9-C10    |
| 17  | 3     | 217 | C7Z  | C7-C8-C9-C10    |
| 18  | J     | 103 | RRX  | C17-C18-C19-C20 |
| 21  | A     | 850 | BCR  | C11-C12-C13-C14 |
| 21  | F     | 203 | BCR  | C11-C12-C13-C14 |
| 16  | 2     | 601 | CLA  | C3-C5-C6-C7     |
| 16  | 2     | 604 | CLA  | C3-C5-C6-C7     |
| 23  | 2     | 620 | DGA  | CB5-CB6-CB7-CB8 |
| 23  | J     | 101 | DGA  | CCA-CDA-CEA-CFA |
| 23  | J     | 101 | DGA  | CCB-CDB-CEB-CFB |
| 19  | A     | 842 | LHG  | C23-C24-C25-C26 |
| 22  | 2     | 619 | PGT  | C37-C38-C39-C40 |
| 23  | 2     | 620 | DGA  | CA2-CA3-CA4-CA5 |
| 23  | 2     | 620 | DGA  | CA6-CA7-CA8-CA9 |
| 25  | 3     | 220 | PTY  | C37-C38-C39-C40 |
| 16  | 1     | 610 | CLA  | C16-C17-C18-C19 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 2     | 606 | CLA  | C16-C17-C18-C19 |
| 16  | A     | 826 | CLA  | C16-C17-C18-C20 |
| 16  | L     | 204 | CLA  | C16-C17-C18-C19 |
| 27  | B     | 839 | PQN  | C26-C27-C28-C29 |
| 16  | A     | 812 | CLA  | C13-C15-C16-C17 |
| 29  | B     | 854 | 3PH  | C3B-C3C-C3D-C3E |
| 31  | B     | 850 | DGD  | C4D-C5D-C6D-O5D |
| 20  | 2     | 618 | ERG  | C16-C17-C20-C22 |
| 16  | 1     | 604 | CLA  | C4C-C3C-CAC-CBC |
| 16  | 2     | 611 | CLA  | C4C-C3C-CAC-CBC |
| 19  | A     | 842 | LHG  | C34-C35-C36-C37 |
| 25  | 3     | 220 | PTY  | C11-C12-C13-C14 |
| 25  | 3     | 220 | PTY  | C22-C23-C24-C25 |
| 16  | 2     | 603 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 832 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 834 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 837 | CLA  | C10-C11-C12-C13 |
| 16  | B     | 838 | CLA  | C5-C6-C7-C8     |
| 16  | 1     | 610 | CLA  | O1A-CGA-O2A-C1  |
| 19  | A     | 842 | LHG  | C13-C14-C15-C16 |
| 19  | A     | 842 | LHG  | C28-C29-C30-C31 |
| 25  | L     | 208 | PTY  | C22-C23-C24-C25 |
| 29  | B     | 854 | 3PH  | C29-C2A-C2B-C2C |
| 16  | 1     | 609 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 2     | 603 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 3     | 214 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 802 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 805 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 808 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 815 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 831 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 835 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 802 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 823 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 833 | CLA  | C3A-C2A-CAA-CBA |
| 16  | L     | 205 | CLA  | C3A-C2A-CAA-CBA |
| 16  | O     | 201 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 3     | 210 | CLA  | C13-C15-C16-C17 |
| 24  | 3     | 202 | LMU  | C2-C1-O1'-C1'   |
| 19  | A     | 841 | LHG  | C26-C27-C28-C29 |
| 19  | B     | 851 | LHG  | C24-C25-C26-C27 |
| 16  | A     | 810 | CLA  | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 31  | B     | 850 | DGD  | O1A-C1A-O1G-C1G |
| 16  | A     | 815 | CLA  | C16-C17-C18-C19 |
| 16  | B     | 834 | CLA  | C16-C17-C18-C19 |
| 16  | L     | 204 | CLA  | C16-C17-C18-C20 |
| 29  | A     | 849 | 3PH  | C24-C25-C26-C27 |
| 16  | 2     | 602 | CLA  | C3-C5-C6-C7     |
| 16  | 2     | 610 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 823 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 832 | CLA  | C3-C5-C6-C7     |
| 19  | 2     | 622 | LHG  | C33-C34-C35-C36 |
| 16  | B     | 837 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 820 | CLA  | C2-C3-C5-C6     |
| 16  | A     | 827 | CLA  | C2-C3-C5-C6     |
| 16  | B     | 837 | CLA  | C2-C3-C5-C6     |
| 29  | A     | 849 | 3PH  | C22-C21-O21-C2  |
| 22  | B     | 848 | PGT  | C12-C11-O3-C3   |
| 20  | 2     | 621 | ERG  | C22-C23-C24-C28 |
| 16  | 1     | 605 | CLA  | C2A-CAA-CBA-CGA |
| 19  | 1     | 617 | LHG  | O1-C1-C2-O2     |
| 16  | A     | 834 | CLA  | C8-C10-C11-C12  |
| 30  | A     | 851 | T7X  | C41-C42-C43-C44 |
| 16  | J     | 102 | CLA  | O1A-CGA-O2A-C1  |
| 19  | B     | 851 | LHG  | O10-C23-O8-C6   |
| 16  | 1     | 610 | CLA  | C16-C17-C18-C20 |
| 16  | B     | 831 | CLA  | C16-C17-C18-C19 |
| 16  | B     | 836 | CLA  | C16-C17-C18-C19 |
| 23  | 2     | 620 | DGA  | CB7-CB8-CB9-CAB |
| 23  | J     | 101 | DGA  | CA4-CA5-CA6-CA7 |
| 16  | 1     | 602 | CLA  | C3-C5-C6-C7     |
| 16  | 2     | 613 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 814 | CLA  | O1A-CGA-O2A-C1  |
| 31  | B     | 846 | DGD  | O1A-C1A-O1G-C1G |
| 16  | A     | 802 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 805 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 817 | CLA  | C10-C11-C12-C13 |
| 29  | A     | 849 | 3PH  | O22-C21-O21-C2  |
| 16  | 2     | 604 | CLA  | C2-C1-O2A-CGA   |
| 16  | 3     | 209 | CLA  | C2-C1-O2A-CGA   |
| 16  | 3     | 212 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 808 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 855 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 818 | CLA  | C2-C1-O2A-CGA   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 825 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 833 | CLA  | C2-C1-O2A-CGA   |
| 16  | F     | 202 | CLA  | C2-C1-O2A-CGA   |
| 23  | 2     | 620 | DGA  | CEA-CFA-CGA-CHA |
| 16  | A     | 856 | CLA  | C5-C6-C7-C8     |
| 16  | 2     | 601 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 808 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 822 | CLA  | O1A-CGA-O2A-C1  |
| 19  | A     | 842 | LHG  | C11-C12-C13-C14 |
| 16  | A     | 822 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 815 | CLA  | C3-C5-C6-C7     |
| 17  | 1     | 612 | C7Z  | C21-C26-C27-C28 |
| 17  | 1     | 612 | C7Z  | C25-C26-C27-C28 |
| 17  | 1     | 614 | C7Z  | C5-C6-C7-C8     |
| 17  | 1     | 615 | C7Z  | C5-C6-C7-C8     |
| 17  | 1     | 616 | C7Z  | C25-C26-C27-C28 |
| 17  | 2     | 614 | C7Z  | C21-C26-C27-C28 |
| 17  | 2     | 614 | C7Z  | C25-C26-C27-C28 |
| 17  | 3     | 201 | C7Z  | C25-C26-C27-C28 |
| 17  | 3     | 215 | C7Z  | C1-C6-C7-C8     |
| 17  | 3     | 215 | C7Z  | C25-C26-C27-C28 |
| 17  | 3     | 217 | C7Z  | C5-C6-C7-C8     |
| 17  | 3     | 217 | C7Z  | C21-C26-C27-C28 |
| 17  | 3     | 218 | C7Z  | C21-C26-C27-C28 |
| 17  | A     | 843 | C7Z  | C25-C26-C27-C28 |
| 17  | J     | 104 | C7Z  | C5-C6-C7-C8     |
| 17  | J     | 104 | C7Z  | C25-C26-C27-C28 |
| 18  | 1     | 613 | RRX  | C23-C24-C25-C26 |
| 18  | 2     | 616 | RRX  | C23-C24-C25-C26 |
| 18  | A     | 847 | RRX  | C5-C6-C7-C8     |
| 18  | J     | 103 | RRX  | C23-C24-C25-C26 |
| 18  | J     | 103 | RRX  | C5-C6-C7-C8     |
| 18  | K     | 103 | RRX  | C23-C24-C25-C26 |
| 18  | K     | 103 | RRX  | C1-C6-C7-C8     |
| 21  | A     | 844 | BCR  | C23-C24-C25-C26 |
| 21  | A     | 845 | BCR  | C1-C6-C7-C8     |
| 21  | A     | 845 | BCR  | C23-C24-C25-C26 |
| 21  | B     | 840 | BCR  | C23-C24-C25-C30 |
| 21  | B     | 841 | BCR  | C23-C24-C25-C30 |
| 21  | B     | 842 | BCR  | C23-C24-C25-C26 |
| 21  | B     | 843 | BCR  | C23-C24-C25-C26 |
| 21  | B     | 843 | BCR  | C23-C24-C25-C30 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | B     | 845 | BCR  | C1-C6-C7-C8     |
| 21  | B     | 845 | BCR  | C5-C6-C7-C8     |
| 21  | B     | 845 | BCR  | C23-C24-C25-C26 |
| 21  | B     | 845 | BCR  | C23-C24-C25-C30 |
| 21  | F     | 203 | BCR  | C1-C6-C7-C8     |
| 21  | F     | 203 | BCR  | C5-C6-C7-C8     |
| 21  | I     | 103 | BCR  | C1-C6-C7-C8     |
| 21  | I     | 103 | BCR  | C23-C24-C25-C26 |
| 21  | I     | 103 | BCR  | C23-C24-C25-C30 |
| 21  | K     | 104 | BCR  | C5-C6-C7-C8     |
| 21  | L     | 206 | BCR  | C1-C6-C7-C8     |
| 21  | L     | 206 | BCR  | C5-C6-C7-C8     |
| 21  | O     | 205 | BCR  | C1-C6-C7-C8     |
| 21  | O     | 205 | BCR  | C5-C6-C7-C8     |
| 21  | O     | 205 | BCR  | C23-C24-C25-C26 |
| 21  | O     | 205 | BCR  | C23-C24-C25-C30 |
| 19  | A     | 841 | LHG  | C25-C26-C27-C28 |
| 16  | A     | 831 | CLA  | CBA-CGA-O2A-C1  |
| 31  | B     | 849 | DGD  | C2A-C1A-O1G-C1G |
| 16  | 1     | 601 | CLA  | C15-C16-C17-C18 |
| 16  | 3     | 211 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 809 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 812 | CLA  | C8-C10-C11-C12  |
| 16  | L     | 201 | CLA  | C8-C10-C11-C12  |
| 16  | L     | 205 | CLA  | C10-C11-C12-C13 |
| 16  | O     | 201 | CLA  | C8-C10-C11-C12  |
| 23  | 2     | 620 | DGA  | CA8-CA9-CAA-CBA |
| 23  | J     | 101 | DGA  | CAA-CBA-CCA-CDA |
| 25  | 3     | 220 | PTY  | C31-C32-C33-C34 |
| 25  | L     | 208 | PTY  | C11-C12-C13-C14 |
| 16  | B     | 835 | CLA  | O1A-CGA-O2A-C1  |
| 16  | K     | 102 | CLA  | CBD-CGD-O2D-CED |
| 23  | J     | 101 | DGA  | CB5-CB6-CB7-CB8 |
| 16  | B     | 827 | CLA  | C15-C16-C17-C18 |
| 19  | 3     | 219 | LHG  | C32-C33-C34-C35 |
| 16  | A     | 827 | CLA  | C4-C3-C5-C6     |
| 16  | 1     | 602 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 613 | CLA  | C11-C12-C13-C15 |
| 16  | 3     | 204 | CLA  | C11-C10-C8-C7   |
| 16  | 3     | 207 | CLA  | C11-C10-C8-C7   |
| 16  | 3     | 214 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 807 | CLA  | C11-C12-C13-C15 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 820 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 822 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 833 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 806 | CLA  | C6-C7-C8-C10    |
| 16  | K     | 101 | CLA  | C11-C12-C13-C15 |
| 26  | A     | 801 | CL0  | C11-C12-C13-C15 |
| 27  | A     | 840 | PQN  | C21-C22-C23-C25 |
| 16  | A     | 811 | CLA  | C3-C5-C6-C7     |
| 16  | F     | 205 | CLA  | C3-C5-C6-C7     |
| 31  | B     | 849 | DGD  | O1A-C1A-O1G-C1G |
| 16  | 3     | 208 | CLA  | C16-C17-C18-C20 |
| 16  | B     | 815 | CLA  | C6-C7-C8-C10    |
| 16  | L     | 205 | CLA  | C16-C17-C18-C19 |
| 16  | 1     | 605 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 209 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 810 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 826 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 2     | 622 | LHG  | C29-C30-C31-C32 |
| 16  | B     | 801 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 2     | 607 | CLA  | C10-C11-C12-C13 |
| 16  | L     | 204 | CLA  | C13-C15-C16-C17 |
| 29  | B     | 854 | 3PH  | C3D-C3E-C3F-C3G |
| 16  | 2     | 612 | CLA  | C2C-C3C-CAC-CBC |
| 25  | A     | 852 | PTY  | C38-C39-C40-C41 |
| 29  | J     | 105 | 3PH  | C3D-C3E-C3F-C3G |
| 31  | B     | 846 | DGD  | C6A-C7A-C8A-C9A |
| 31  | B     | 846 | DGD  | C2G-C1G-O1G-C1A |
| 16  | 3     | 214 | CLA  | C4C-C3C-CAC-CBC |
| 19  | 1     | 617 | LHG  | C13-C14-C15-C16 |
| 16  | B     | 809 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 823 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 830 | CLA  | O1D-CGD-O2D-CED |
| 29  | B     | 854 | 3PH  | C27-C28-C29-C2A |
| 21  | A     | 850 | BCR  | C18-C19-C20-C21 |
| 21  | L     | 207 | BCR  | C18-C19-C20-C21 |
| 22  | B     | 848 | PGT  | C42-C43-C44-C45 |
| 23  | J     | 101 | DGA  | CB3-CB4-CB5-CB6 |
| 16  | A     | 839 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 813 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 817 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 830 | CLA  | C5-C6-C7-C8     |
| 24  | A     | 853 | LMU  | O5B-C5B-C6B-O6B |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 24  | A     | 853 | LMU  | O5'-C5'-C6'-O6' |
| 25  | L     | 208 | PTY  | O10-C8-O7-C6    |
| 29  | J     | 105 | 3PH  | O21-C2-C3-O31   |
| 19  | A     | 842 | LHG  | C29-C30-C31-C32 |
| 16  | A     | 820 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 856 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 856 | CLA  | C2-C3-C5-C6     |
| 16  | L     | 204 | CLA  | C2-C3-C5-C6     |
| 16  | A     | 816 | CLA  | C4C-C3C-CAC-CBC |
| 25  | 3     | 221 | PTY  | C16-C17-C18-C19 |
| 16  | 1     | 601 | CLA  | C6-C7-C8-C9     |
| 16  | 1     | 605 | CLA  | C11-C12-C13-C14 |
| 16  | 3     | 207 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 816 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 818 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 828 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 833 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 836 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 806 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 816 | CLA  | C6-C7-C8-C9     |
| 16  | I     | 102 | CLA  | C11-C10-C8-C9   |
| 16  | L     | 204 | CLA  | C6-C7-C8-C9     |
| 27  | A     | 840 | PQN  | C21-C22-C23-C24 |
| 16  | A     | 833 | CLA  | C10-C11-C12-C13 |
| 16  | J     | 102 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 812 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 823 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 815 | CLA  | C2A-CAA-CBA-CGA |
| 18  | 1     | 613 | RRX  | C37-C22-C23-C24 |
| 16  | A     | 815 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 810 | CLA  | C10-C11-C12-C13 |
| 16  | F     | 202 | CLA  | C2C-C3C-CAC-CBC |
| 17  | 1     | 616 | C7Z  | C27-C28-C29-C30 |
| 16  | 1     | 602 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 1     | 606 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 1     | 608 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 1     | 609 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 2     | 603 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 2     | 608 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 2     | 609 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 2     | 610 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 3     | 209 | CLA  | C1A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 3     | 213 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 3     | 214 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 802 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 805 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 807 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 808 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 809 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 814 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 817 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 819 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 822 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 831 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 835 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 802 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 806 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 809 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 810 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 820 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 823 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 829 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 830 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 832 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 833 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 835 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 838 | CLA  | C1A-C2A-CAA-CBA |
| 16  | K     | 101 | CLA  | C1A-C2A-CAA-CBA |
| 16  | L     | 201 | CLA  | C1A-C2A-CAA-CBA |
| 16  | O     | 201 | CLA  | C1A-C2A-CAA-CBA |
| 16  | O     | 202 | CLA  | C1A-C2A-CAA-CBA |
| 16  | O     | 204 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 831 | CLA  | C16-C17-C18-C20 |
| 25  | L     | 208 | PTY  | C11-C8-O7-C6    |
| 22  | B     | 848 | PGT  | C39-C40-C41-C42 |
| 23  | 2     | 620 | DGA  | CB9-CAB-CBB-CCB |
| 21  | A     | 846 | BCR  | C9-C10-C11-C12  |
| 16  | 1     | 601 | CLA  | C10-C11-C12-C13 |
| 16  | B     | 826 | CLA  | C5-C6-C7-C8     |
| 16  | O     | 203 | CLA  | C13-C15-C16-C17 |
| 27  | A     | 840 | PQN  | C15-C16-C17-C18 |
| 22  | 2     | 619 | PGT  | C4-O4P-P-O3P    |
| 22  | B     | 848 | PGT  | C1-O3P-P-O4P    |
| 22  | B     | 848 | PGT  | C4-O4P-P-O3P    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 831 | CLA  | O1A-CGA-O2A-C1  |
| 20  | 2     | 618 | ERG  | C23-C24-C25-C27 |
| 16  | B     | 830 | CLA  | C13-C15-C16-C17 |
| 16  | L     | 205 | CLA  | C8-C10-C11-C12  |
| 16  | 2     | 606 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 1     | 617 | LHG  | O6-C4-C5-C6     |
| 19  | 3     | 219 | LHG  | O6-C4-C5-C6     |
| 22  | B     | 848 | PGT  | O3P-C1-C2-C3    |
| 16  | 2     | 602 | CLA  | O1D-CGD-O2D-CED |
| 19  | 3     | 219 | LHG  | C11-C12-C13-C14 |
| 29  | A     | 849 | 3PH  | C23-C24-C25-C26 |
| 16  | 3     | 203 | CLA  | C16-C17-C18-C19 |
| 26  | A     | 801 | CL0  | C16-C17-C18-C19 |
| 19  | A     | 842 | LHG  | C30-C31-C32-C33 |
| 25  | 3     | 221 | PTY  | C22-C23-C24-C25 |
| 16  | 1     | 608 | CLA  | C13-C15-C16-C17 |
| 29  | B     | 854 | 3PH  | C37-C38-C39-C3A |
| 31  | B     | 849 | DGD  | O6E-C5E-C6E-O5E |
| 16  | L     | 204 | CLA  | C4-C3-C5-C6     |
| 16  | O     | 203 | CLA  | C4-C3-C5-C6     |
| 19  | A     | 841 | LHG  | C30-C31-C32-C33 |
| 31  | B     | 849 | DGD  | C6A-C7A-C8A-C9A |
| 16  | A     | 803 | CLA  | C13-C15-C16-C17 |
| 19  | 3     | 219 | LHG  | C11-C10-C9-C8   |
| 23  | J     | 101 | DGA  | CA6-CA7-CA8-CA9 |
| 16  | 1     | 605 | CLA  | O1A-CGA-O2A-C1  |
| 19  | B     | 851 | LHG  | C28-C29-C30-C31 |
| 16  | 1     | 608 | CLA  | C3-C5-C6-C7     |
| 19  | 3     | 219 | LHG  | C4-C5-C6-O8     |
| 19  | A     | 842 | LHG  | C4-C5-C6-O8     |
| 29  | J     | 105 | 3PH  | C1-C2-C3-O31    |
| 31  | B     | 846 | DGD  | O1G-C1G-C2G-C3G |
| 31  | B     | 849 | DGD  | C1G-C2G-C3G-O3G |
| 16  | 3     | 210 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 829 | CLA  | C5-C6-C7-C8     |
| 19  | 2     | 622 | LHG  | C18-C19-C20-C21 |
| 20  | 1     | 618 | ERG  | C17-C20-C22-C23 |
| 20  | 2     | 621 | ERG  | C17-C20-C22-C23 |
| 20  | 2     | 621 | ERG  | C22-C23-C24-C25 |
| 31  | B     | 849 | DGD  | C2G-C3G-O3G-C1D |
| 29  | J     | 105 | 3PH  | C3F-C3G-C3H-C3I |
| 16  | A     | 810 | CLA  | O1A-CGA-O2A-C1  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 1     | 601 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 804 | CLA  | C15-C16-C17-C18 |
| 22  | B     | 848 | PGT  | C43-C44-C45-C46 |
| 29  | J     | 105 | 3PH  | C25-C26-C27-C28 |
| 31  | B     | 846 | DGD  | C2B-C3B-C4B-C5B |
| 19  | B     | 851 | LHG  | O1-C1-C2-O2     |
| 22  | 2     | 619 | PGT  | O5-C5-C6-O6     |
| 19  | A     | 841 | LHG  | C28-C29-C30-C31 |
| 25  | 3     | 220 | PTY  | C24-C25-C26-C27 |
| 16  | B     | 826 | CLA  | O1A-CGA-O2A-C1  |
| 22  | 2     | 619 | PGT  | C31-C32-C33-C34 |
| 31  | B     | 850 | DGD  | O6E-C5E-C6E-O5E |
| 23  | 2     | 620 | DGA  | CDB-CEB-CFB-CGB |
| 16  | A     | 804 | CLA  | C16-C17-C18-C19 |
| 16  | 1     | 602 | CLA  | CBA-CGA-O2A-C1  |
| 16  | O     | 201 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 837 | CLA  | C8-C10-C11-C12  |
| 16  | F     | 204 | CLA  | C13-C15-C16-C17 |
| 16  | O     | 202 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 801 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 819 | CLA  | C2-C1-O2A-CGA   |
| 29  | B     | 854 | 3PH  | C34-C35-C36-C37 |
| 27  | A     | 840 | PQN  | C13-C15-C16-C17 |
| 16  | 2     | 606 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 806 | CLA  | C15-C16-C17-C18 |
| 25  | A     | 852 | PTY  | C31-C30-O4-C1   |
| 16  | 3     | 209 | CLA  | O1A-CGA-O2A-C1  |
| 30  | A     | 851 | T7X  | C40-C41-C42-C43 |
| 16  | 3     | 211 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 834 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 819 | CLA  | C8-C10-C11-C12  |
| 29  | J     | 105 | 3PH  | C3B-C3C-C3D-C3E |
| 31  | B     | 849 | DGD  | C3B-C4B-C5B-C6B |
| 30  | A     | 851 | T7X  | C12-C13-C14-C15 |
| 27  | B     | 839 | PQN  | C13-C15-C16-C17 |
| 16  | 3     | 205 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 835 | CLA  | C13-C15-C16-C17 |
| 19  | 3     | 219 | LHG  | C13-C14-C15-C16 |
| 19  | 3     | 219 | LHG  | C31-C32-C33-C34 |
| 16  | 2     | 613 | CLA  | C15-C16-C17-C18 |
| 24  | 3     | 202 | LMU  | C1-C2-C3-C4     |
| 16  | A     | 813 | CLA  | C13-C15-C16-C17 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 824 | CLA  | C8-C10-C11-C12  |
| 16  | 1     | 601 | CLA  | C6-C7-C8-C10    |
| 16  | 1     | 609 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 602 | CLA  | C11-C10-C8-C7   |
| 16  | 2     | 605 | CLA  | C11-C10-C8-C7   |
| 16  | 2     | 609 | CLA  | C6-C7-C8-C10    |
| 16  | 3     | 203 | CLA  | C12-C13-C15-C16 |
| 16  | A     | 802 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 803 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 805 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 813 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 814 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 816 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 818 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 818 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 819 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 821 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 823 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 827 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 828 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 829 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 834 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 855 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 802 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 805 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 807 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 808 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 814 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 816 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 820 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 823 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 830 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 837 | CLA  | C11-C10-C8-C7   |
| 16  | F     | 201 | CLA  | C6-C7-C8-C10    |
| 16  | F     | 201 | CLA  | C11-C10-C8-C7   |
| 16  | I     | 102 | CLA  | C11-C10-C8-C7   |
| 16  | I     | 102 | CLA  | C12-C13-C15-C16 |
| 16  | O     | 203 | CLA  | C2-C3-C5-C6     |
| 26  | A     | 801 | CL0  | C6-C7-C8-C10    |
| 26  | A     | 801 | CL0  | C11-C10-C8-C7   |
| 27  | B     | 839 | PQN  | C16-C17-C18-C20 |
| 31  | B     | 846 | DGD  | CAA-CBA-CCA-CDA |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 1     | 601 | CLA  | C11-C10-C8-C9   |
| 16  | 2     | 605 | CLA  | C11-C10-C8-C9   |
| 16  | 2     | 608 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 609 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 802 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 802 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 803 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 804 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 814 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 818 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 819 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 823 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 825 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 827 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 831 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 807 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 823 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 823 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 830 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 837 | CLA  | C11-C10-C8-C9   |
| 16  | F     | 201 | CLA  | C11-C10-C8-C9   |
| 16  | I     | 102 | CLA  | C14-C13-C15-C16 |
| 26  | A     | 801 | CL0  | C6-C7-C8-C9     |
| 26  | A     | 801 | CL0  | C11-C10-C8-C9   |
| 27  | A     | 840 | PQN  | C19-C18-C20-C21 |
| 27  | B     | 839 | PQN  | C16-C17-C18-C19 |
| 27  | B     | 839 | PQN  | C19-C18-C20-C21 |
| 19  | 1     | 617 | LHG  | C31-C32-C33-C34 |
| 16  | 1     | 606 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 836 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 3     | 219 | LHG  | C24-C23-O8-C6   |
| 16  | A     | 836 | CLA  | C15-C16-C17-C18 |
| 16  | 1     | 606 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 3     | 204 | CLA  | C2A-CAA-CBA-CGA |
| 23  | J     | 101 | DGA  | CEB-CFB-CGB-CHB |
| 16  | 2     | 606 | CLA  | O1A-CGA-O2A-C1  |
| 18  | 2     | 616 | RRX  | C37-C22-C23-C24 |
| 21  | B     | 843 | BCR  | C11-C12-C13-C35 |
| 20  | 2     | 618 | ERG  | C21-C20-C22-C23 |
| 18  | 2     | 616 | RRX  | C21-C22-C23-C24 |
| 18  | 2     | 616 | RRX  | C7-C8-C9-C10    |
| 16  | B     | 818 | CLA  | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | 1     | 617 | LHG  | C9-C10-C11-C12  |
| 16  | A     | 817 | CLA  | CBA-CGA-O2A-C1  |
| 16  | B     | 822 | CLA  | CBA-CGA-O2A-C1  |
| 26  | A     | 801 | CL0  | CBA-CGA-O2A-C1  |
| 16  | 2     | 613 | CLA  | C10-C11-C12-C13 |
| 16  | B     | 812 | CLA  | C15-C16-C17-C18 |
| 26  | A     | 801 | CL0  | C8-C10-C11-C12  |
| 29  | J     | 105 | 3PH  | C22-C23-C24-C25 |
| 16  | B     | 820 | CLA  | C16-C17-C18-C19 |
| 22  | B     | 848 | PGT  | O11-C11-O3-C3   |
| 16  | A     | 854 | CLA  | C13-C15-C16-C17 |
| 22  | 2     | 619 | PGT  | O3P-C1-C2-C3    |
| 25  | L     | 208 | PTY  | C12-C13-C14-C15 |
| 16  | B     | 826 | CLA  | CAA-CBA-CGA-O2A |
| 29  | B     | 854 | 3PH  | C2C-C2D-C2E-C2F |
| 29  | B     | 854 | 3PH  | C3E-C3F-C3G-C3H |
| 16  | K     | 102 | CLA  | O1D-CGD-O2D-CED |
| 16  | 2     | 610 | CLA  | C5-C6-C7-C8     |
| 16  | 1     | 602 | CLA  | O1A-CGA-O2A-C1  |
| 16  | I     | 102 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 833 | CLA  | C16-C17-C18-C19 |
| 26  | A     | 801 | CL0  | C16-C17-C18-C20 |
| 25  | A     | 852 | PTY  | C11-C12-C13-C14 |
| 19  | 1     | 617 | LHG  | C2-C3-O3-P      |
| 16  | 2     | 605 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 3     | 209 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 812 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 830 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 814 | CLA  | C3A-C2A-CAA-CBA |
| 16  | F     | 202 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 856 | CLA  | C8-C10-C11-C12  |
| 19  | A     | 842 | LHG  | C18-C19-C20-C21 |
| 16  | B     | 812 | CLA  | CBA-CGA-O2A-C1  |
| 16  | F     | 205 | CLA  | CBA-CGA-O2A-C1  |
| 19  | 1     | 617 | LHG  | C18-C19-C20-C21 |
| 16  | 2     | 602 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 803 | CLA  | C10-C11-C12-C13 |
| 16  | L     | 203 | CLA  | C13-C15-C16-C17 |
| 19  | B     | 851 | LHG  | C4-C5-C6-O8     |
| 23  | 2     | 620 | DGA  | CA9-CAA-CBA-CCA |
| 19  | 1     | 617 | LHG  | C23-C24-C25-C26 |
| 16  | 1     | 607 | CLA  | O2A-C1-C2-C3    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 1     | 609 | CLA  | C2C-C3C-CAC-CBC |
| 16  | B     | 820 | CLA  | C3-C5-C6-C7     |
| 27  | B     | 839 | PQN  | C20-C21-C22-C23 |
| 16  | A     | 833 | CLA  | C16-C17-C18-C20 |
| 16  | 2     | 612 | CLA  | C4C-C3C-CAC-CBC |
| 16  | A     | 830 | CLA  | C15-C16-C17-C18 |
| 16  | I     | 102 | CLA  | C8-C10-C11-C12  |
| 30  | A     | 851 | T7X  | C16-C17-C18-C19 |
| 16  | B     | 822 | CLA  | O1A-CGA-O2A-C1  |
| 25  | A     | 852 | PTY  | O30-C30-O4-C1   |
| 16  | A     | 826 | CLA  | C3-C5-C6-C7     |
| 16  | K     | 102 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 804 | CLA  | C2A-CAA-CBA-CGA |
| 16  | I     | 102 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 854 | CLA  | C5-C6-C7-C8     |
| 19  | 1     | 617 | LHG  | O6-C4-C5-O7     |
| 22  | 2     | 619 | PGT  | O3P-C1-C2-O2    |
| 16  | 1     | 606 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 804 | CLA  | C16-C17-C18-C20 |
| 16  | B     | 812 | CLA  | CAA-CBA-CGA-O2A |
| 19  | A     | 842 | LHG  | C33-C34-C35-C36 |
| 16  | A     | 836 | CLA  | O1A-CGA-O2A-C1  |
| 19  | 1     | 617 | LHG  | O7-C5-C6-O8     |
| 19  | A     | 841 | LHG  | O7-C5-C6-O8     |
| 31  | B     | 849 | DGD  | O2G-C2G-C3G-O3G |
| 16  | A     | 815 | CLA  | CAA-CBA-CGA-O2A |
| 19  | 2     | 622 | LHG  | C35-C36-C37-C38 |
| 19  | B     | 851 | LHG  | C29-C30-C31-C32 |
| 17  | 1     | 612 | C7Z  | C29-C30-C31-C32 |
| 16  | F     | 202 | CLA  | C16-C17-C18-C20 |
| 16  | 2     | 604 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 811 | CLA  | C5-C6-C7-C8     |
| 16  | 1     | 601 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 812 | CLA  | C2-C1-O2A-CGA   |
| 16  | 1     | 605 | CLA  | C11-C10-C8-C9   |
| 16  | 1     | 610 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 611 | CLA  | C11-C10-C8-C9   |
| 16  | 2     | 612 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 810 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 813 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 832 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 805 | CLA  | C11-C12-C13-C14 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 820 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 820 | CLA  | C11-C12-C13-C14 |
| 16  | I     | 101 | CLA  | C11-C12-C13-C14 |
| 16  | J     | 102 | CLA  | C6-C7-C8-C9     |
| 16  | K     | 101 | CLA  | C11-C10-C8-C9   |
| 16  | K     | 102 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 833 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 607 | CLA  | C8-C10-C11-C12  |
| 16  | 3     | 203 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 833 | CLA  | C13-C15-C16-C17 |
| 25  | L     | 208 | PTY  | C6-C5-O14-P1    |
| 26  | A     | 801 | CL0  | O1A-CGA-O2A-C1  |
| 16  | A     | 855 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 3     | 207 | CLA  | C8-C10-C11-C12  |
| 19  | A     | 841 | LHG  | C19-C20-C21-C22 |
| 16  | B     | 834 | CLA  | CAA-CBA-CGA-O2A |
| 18  | 2     | 616 | RRX  | C7-C8-C9-C34    |
| 29  | J     | 105 | 3PH  | C36-C37-C38-C39 |
| 17  | A     | 843 | C7Z  | C27-C28-C29-C30 |
| 18  | K     | 103 | RRX  | C11-C12-C13-C14 |
| 21  | L     | 202 | BCR  | C11-C12-C13-C14 |
| 25  | 3     | 220 | PTY  | C41-C42-C43-C44 |
| 24  | 3     | 202 | LMU  | C9-C10-C11-C12  |
| 25  | L     | 208 | PTY  | C39-C40-C41-C42 |
| 16  | A     | 817 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 819 | CLA  | C16-C17-C18-C20 |
| 16  | A     | 813 | CLA  | CBD-CGD-O2D-CED |
| 27  | A     | 840 | PQN  | C18-C20-C21-C22 |
| 25  | 3     | 221 | PTY  | C36-C37-C38-C39 |
| 19  | 2     | 622 | LHG  | O6-C4-C5-C6     |
| 25  | 3     | 221 | PTY  | O14-C5-C6-C1    |
| 29  | B     | 854 | 3PH  | O11-C1-C2-C3    |
| 29  | J     | 105 | 3PH  | O11-C1-C2-C3    |
| 16  | 3     | 205 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 1     | 601 | CLA  | C11-C10-C8-C7   |
| 16  | 1     | 604 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 601 | CLA  | C11-C12-C13-C15 |
| 16  | 2     | 605 | CLA  | C12-C13-C15-C16 |
| 16  | 2     | 606 | CLA  | C11-C12-C13-C15 |
| 16  | 2     | 610 | CLA  | C11-C10-C8-C7   |
| 16  | 2     | 611 | CLA  | C11-C10-C8-C7   |
| 16  | 3     | 208 | CLA  | C11-C10-C8-C7   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 808 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 813 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 814 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 817 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 817 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 824 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 825 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 825 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 831 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 835 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 839 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 856 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 801 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 803 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 809 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 812 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 819 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 821 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 829 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 836 | CLA  | C6-C7-C8-C10    |
| 16  | F     | 204 | CLA  | C6-C7-C8-C10    |
| 16  | I     | 101 | CLA  | C11-C12-C13-C15 |
| 16  | J     | 102 | CLA  | C6-C7-C8-C10    |
| 16  | K     | 102 | CLA  | C11-C10-C8-C7   |
| 16  | K     | 102 | CLA  | C11-C12-C13-C15 |
| 16  | L     | 201 | CLA  | C12-C13-C15-C16 |
| 16  | L     | 204 | CLA  | C11-C12-C13-C15 |
| 27  | A     | 840 | PQN  | C17-C18-C20-C21 |
| 27  | B     | 839 | PQN  | C17-C18-C20-C21 |
| 23  | J     | 101 | DGA  | CA9-CAA-CBA-CCA |
| 16  | B     | 832 | CLA  | C5-C6-C7-C8     |
| 18  | 1     | 613 | RRX  | C9-C10-C11-C12  |
| 21  | K     | 104 | BCR  | C15-C16-C17-C18 |
| 21  | L     | 202 | BCR  | C9-C10-C11-C12  |
| 16  | B     | 820 | CLA  | C16-C17-C18-C20 |
| 19  | 2     | 622 | LHG  | C26-C27-C28-C29 |
| 21  | F     | 206 | BCR  | C11-C10-C9-C34  |
| 31  | B     | 850 | DGD  | C3B-C4B-C5B-C6B |
| 16  | 3     | 203 | CLA  | C2C-C3C-CAC-CBC |
| 16  | 1     | 606 | CLA  | C10-C11-C12-C13 |
| 16  | B     | 811 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 825 | CLA  | C8-C10-C11-C12  |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 2     | 602 | CLA  | CAD-CBD-CGD-O2D |
| 16  | 2     | 613 | CLA  | CAD-CBD-CGD-O2D |
| 16  | 3     | 203 | CLA  | CAD-CBD-CGD-O2D |
| 16  | 3     | 213 | CLA  | CAD-CBD-CGD-O2D |
| 16  | B     | 820 | CLA  | CAD-CBD-CGD-O2D |
| 16  | B     | 838 | CLA  | CAD-CBD-CGD-O2D |
| 16  | K     | 101 | CLA  | CAD-CBD-CGD-O2D |
| 16  | K     | 102 | CLA  | CAD-CBD-CGD-O2D |
| 16  | L     | 205 | CLA  | CAD-CBD-CGD-O2D |
| 16  | A     | 819 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 831 | CLA  | C4-C3-C5-C6     |
| 19  | B     | 851 | LHG  | C31-C32-C33-C34 |
| 22  | 2     | 619 | PGT  | C35-C36-C37-C38 |
| 19  | 1     | 617 | LHG  | C35-C36-C37-C38 |
| 19  | A     | 841 | LHG  | C4-C5-C6-O8     |
| 22  | B     | 848 | PGT  | C5-C4-O4P-P     |
| 25  | A     | 852 | PTY  | C6-C5-O14-P1    |
| 16  | F     | 205 | CLA  | O1A-CGA-O2A-C1  |
| 19  | A     | 841 | LHG  | O6-C4-C5-O7     |
| 19  | B     | 851 | LHG  | O6-C4-C5-O7     |
| 22  | B     | 848 | PGT  | O3P-C1-C2-O2    |
| 16  | B     | 832 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 828 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 814 | CLA  | C10-C11-C12-C13 |
| 16  | F     | 202 | CLA  | C16-C17-C18-C19 |
| 31  | B     | 849 | DGD  | C2A-C3A-C4A-C5A |
| 16  | 2     | 604 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 608 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 608 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 612 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 2     | 612 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 3     | 206 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 3     | 206 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 3     | 214 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 807 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 807 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 809 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 810 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 810 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 812 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 812 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 826 | CLA  | CHA-CBD-CGD-O1D |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 826 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 827 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 830 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 839 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 856 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 804 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 804 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 805 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 805 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 812 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 812 | CLA  | CHA-CBD-CGD-O2D |
| 16  | L     | 203 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 802 | CLA  | C8-C10-C11-C12  |
| 16  | 2     | 603 | CLA  | C3-C5-C6-C7     |
| 16  | A     | 804 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 812 | CLA  | O1A-CGA-O2A-C1  |
| 19  | 3     | 219 | LHG  | O10-C23-O8-C6   |
| 25  | 3     | 221 | PTY  | C39-C40-C41-C42 |
| 19  | 3     | 219 | LHG  | C10-C11-C12-C13 |
| 25  | L     | 208 | PTY  | O4-C1-C6-O7     |
| 31  | B     | 846 | DGD  | O2G-C2G-C3G-O3G |
| 19  | 2     | 622 | LHG  | C15-C16-C17-C18 |
| 29  | A     | 849 | 3PH  | C39-C3A-C3B-C3C |
| 19  | 3     | 219 | LHG  | O1-C1-C2-O2     |
| 16  | B     | 831 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 827 | CLA  | C4-C3-C5-C6     |
| 25  | L     | 208 | PTY  | C24-C25-C26-C27 |
| 16  | 1     | 601 | CLA  | C8-C10-C11-C12  |
| 16  | 2     | 601 | CLA  | C11-C12-C13-C14 |
| 16  | 2     | 608 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 817 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 824 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 826 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 801 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 803 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 812 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 812 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 814 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 816 | CLA  | C11-C10-C8-C9   |
| 16  | L     | 204 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 813 | CLA  | O1D-CGD-O2D-CED |
| 16  | 1     | 602 | CLA  | C11-C12-C13-C14 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 26  | A     | 801 | CL0  | CBD-CGD-O2D-CED |
| 17  | 3     | 201 | C7Z  | C11-C12-C13-C20 |
| 21  | A     | 844 | BCR  | C36-C18-C19-C20 |
| 24  | 3     | 202 | LMU  | C5'-C4'-O1B-C1B |
| 25  | L     | 208 | PTY  | C32-C33-C34-C35 |
| 19  | 2     | 622 | LHG  | C12-C13-C14-C15 |
| 25  | L     | 208 | PTY  | C14-C15-C16-C17 |
| 17  | 3     | 201 | C7Z  | C11-C12-C13-C14 |
| 25  | A     | 852 | PTY  | C39-C40-C41-C42 |
| 16  | 2     | 602 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 3     | 208 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 812 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 832 | CLA  | C1A-C2A-CAA-CBA |
| 16  | O     | 203 | CLA  | C1A-C2A-CAA-CBA |
| 29  | B     | 854 | 3PH  | C21-C22-C23-C24 |
| 16  | A     | 805 | CLA  | C16-C17-C18-C19 |
| 16  | 2     | 606 | CLA  | C15-C16-C17-C18 |
| 16  | F     | 205 | CLA  | C8-C10-C11-C12  |
| 16  | 2     | 608 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 830 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 809 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 831 | CLA  | C2-C1-O2A-CGA   |
| 18  | A     | 847 | RRX  | C9-C10-C11-C12  |
| 16  | O     | 202 | CLA  | C13-C15-C16-C17 |
| 25  | 3     | 220 | PTY  | C5-O14-P1-O11   |
| 19  | B     | 851 | LHG  | C26-C27-C28-C29 |
| 16  | B     | 831 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 810 | CLA  | C3-C5-C6-C7     |
| 19  | 3     | 219 | LHG  | C2-C3-O3-P      |
| 19  | A     | 842 | LHG  | C5-C4-O6-P      |
| 26  | A     | 801 | CL0  | O1D-CGD-O2D-CED |
| 24  | 3     | 202 | LMU  | C3'-C4'-O1B-C1B |
| 19  | 2     | 622 | LHG  | C3-O3-P-O4      |
| 19  | 2     | 622 | LHG  | C4-O6-P-O4      |
| 19  | A     | 841 | LHG  | C4-O6-P-O4      |
| 19  | A     | 842 | LHG  | C3-O3-P-O5      |
| 19  | B     | 851 | LHG  | C4-O6-P-O4      |
| 22  | 2     | 619 | PGT  | C4-O4P-P-O1P    |
| 22  | B     | 848 | PGT  | C1-O3P-P-O1P    |
| 22  | B     | 848 | PGT  | C4-O4P-P-O2P    |
| 25  | A     | 852 | PTY  | C3-O11-P1-O13   |
| 25  | L     | 208 | PTY  | C5-O14-P1-O13   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 30  | A     | 851 | T7X  | C7-O13-P1-O11   |
| 16  | A     | 825 | CLA  | C16-C17-C18-C19 |
| 16  | A     | 829 | CLA  | C16-C17-C18-C20 |
| 19  | 2     | 622 | LHG  | C9-C10-C11-C12  |
| 19  | A     | 841 | LHG  | O6-C4-C5-C6     |
| 19  | 1     | 617 | LHG  | C26-C27-C28-C29 |
| 16  | A     | 817 | CLA  | C15-C16-C17-C18 |
| 31  | B     | 849 | DGD  | C1A-C2A-C3A-C4A |
| 16  | A     | 839 | CLA  | C2A-CAA-CBA-CGA |
| 16  | B     | 807 | CLA  | C3-C5-C6-C7     |
| 20  | 1     | 618 | ERG  | C16-C17-C20-C21 |
| 16  | A     | 812 | CLA  | CAD-CBD-CGD-O1D |
| 16  | B     | 812 | CLA  | CAD-CBD-CGD-O1D |
| 25  | A     | 852 | PTY  | C2-C3-O11-P1    |
| 16  | 1     | 609 | CLA  | C4C-C3C-CAC-CBC |
| 19  | A     | 841 | LHG  | C27-C28-C29-C30 |
| 29  | B     | 854 | 3PH  | C25-C26-C27-C28 |
| 16  | 2     | 602 | CLA  | C16-C17-C18-C20 |
| 16  | 1     | 608 | CLA  | C11-C10-C8-C7   |
| 16  | 2     | 602 | CLA  | C11-C12-C13-C15 |
| 16  | 2     | 608 | CLA  | C11-C12-C13-C15 |
| 16  | 3     | 211 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 806 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 808 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 817 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 826 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 830 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 835 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 837 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 837 | CLA  | C12-C13-C15-C16 |
| 16  | A     | 854 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 801 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 806 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 810 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 814 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 816 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 818 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 819 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 825 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 830 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 832 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 838 | CLA  | C6-C7-C8-C10    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | F     | 201 | CLA  | C11-C12-C13-C15 |
| 16  | F     | 205 | CLA  | C6-C7-C8-C10    |
| 19  | 2     | 622 | LHG  | O6-C4-C5-O7     |
| 25  | 3     | 221 | PTY  | O14-C5-C6-O7    |
| 29  | J     | 105 | 3PH  | O11-C1-C2-O21   |
| 31  | B     | 846 | DGD  | O6E-C5E-C6E-O5E |
| 29  | B     | 854 | 3PH  | C32-C33-C34-C35 |
| 31  | B     | 846 | DGD  | C7A-C8A-C9A-CAA |
| 29  | J     | 105 | 3PH  | C3A-C3B-C3C-C3D |
| 22  | 2     | 619 | PGT  | O2-C2-C3-O3     |
| 19  | 3     | 219 | LHG  | C24-C25-C26-C27 |
| 29  | B     | 854 | 3PH  | C2B-C2C-C2D-C2E |
| 20  | 2     | 618 | ERG  | C17-C20-C22-C23 |
| 16  | A     | 835 | CLA  | C5-C6-C7-C8     |
| 19  | 3     | 219 | LHG  | C35-C36-C37-C38 |
| 16  | 3     | 210 | CLA  | C10-C11-C12-C13 |
| 16  | 1     | 607 | CLA  | C11-C10-C8-C9   |
| 16  | 2     | 605 | CLA  | C14-C13-C15-C16 |
| 16  | 2     | 606 | CLA  | C6-C7-C8-C9     |
| 16  | 3     | 206 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 814 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 824 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 825 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 835 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 856 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 819 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 827 | CLA  | C6-C7-C8-C9     |
| 16  | F     | 204 | CLA  | C6-C7-C8-C9     |
| 16  | K     | 101 | CLA  | C6-C7-C8-C9     |
| 16  | L     | 201 | CLA  | C14-C13-C15-C16 |
| 16  | A     | 805 | CLA  | C16-C17-C18-C20 |
| 16  | A     | 819 | CLA  | C16-C17-C18-C19 |
| 16  | A     | 834 | CLA  | C16-C17-C18-C19 |
| 29  | B     | 854 | 3PH  | C22-C23-C24-C25 |
| 29  | J     | 105 | 3PH  | C26-C27-C28-C29 |
| 18  | 1     | 613 | RRX  | C18-C19-C20-C21 |
| 18  | 1     | 613 | RRX  | C10-C11-C12-C13 |
| 18  | A     | 847 | RRX  | C18-C19-C20-C21 |
| 18  | A     | 847 | RRX  | C10-C11-C12-C13 |
| 18  | K     | 103 | RRX  | C18-C19-C20-C21 |
| 18  | K     | 103 | RRX  | C10-C11-C12-C13 |
| 21  | 2     | 617 | BCR  | C18-C19-C20-C21 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | A     | 857 | BCR  | C18-C19-C20-C21 |
| 21  | B     | 847 | BCR  | C18-C19-C20-C21 |
| 21  | B     | 855 | BCR  | C18-C19-C20-C21 |
| 21  | K     | 104 | BCR  | C18-C19-C20-C21 |
| 16  | 2     | 602 | CLA  | C8-C10-C11-C12  |
| 16  | 3     | 208 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 806 | CLA  | C13-C15-C16-C17 |
| 19  | A     | 842 | LHG  | C15-C16-C17-C18 |
| 19  | 3     | 219 | LHG  | O2-C2-C3-O3     |
| 16  | A     | 831 | CLA  | C2-C3-C5-C6     |
| 16  | B     | 827 | CLA  | C2-C3-C5-C6     |
| 16  | 3     | 207 | CLA  | C3-C5-C6-C7     |
| 25  | 3     | 220 | PTY  | C12-C11-C8-O7   |
| 25  | 3     | 221 | PTY  | C37-C38-C39-C40 |
| 16  | B     | 826 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 1     | 610 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 818 | CLA  | C2-C1-O2A-CGA   |
| 16  | A     | 832 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 813 | CLA  | C2-C1-O2A-CGA   |
| 16  | F     | 204 | CLA  | C2-C1-O2A-CGA   |
| 16  | K     | 101 | CLA  | C2-C1-O2A-CGA   |
| 16  | K     | 102 | CLA  | C2-C1-O2A-CGA   |
| 19  | 1     | 617 | LHG  | C19-C20-C21-C22 |
| 19  | A     | 842 | LHG  | C35-C36-C37-C38 |
| 29  | J     | 105 | 3PH  | C1-O11-P-O12    |
| 29  | B     | 854 | 3PH  | C2D-C2E-C2F-C2G |
| 19  | 3     | 219 | LHG  | O6-C4-C5-O7     |
| 29  | B     | 854 | 3PH  | O11-C1-C2-O21   |
| 16  | A     | 855 | CLA  | C16-C17-C18-C20 |
| 16  | 2     | 611 | CLA  | C8-C10-C11-C12  |
| 20  | 1     | 618 | ERG  | C20-C22-C23-C24 |
| 17  | 3     | 216 | C7Z  | C21-C26-C27-C28 |
| 16  | B     | 831 | CLA  | C2-C3-C5-C6     |
| 19  | 3     | 219 | LHG  | C34-C35-C36-C37 |
| 16  | A     | 829 | CLA  | C15-C16-C17-C18 |
| 16  | L     | 204 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 834 | CLA  | C10-C11-C12-C13 |
| 16  | B     | 811 | CLA  | C2A-CAA-CBA-CGA |
| 21  | 2     | 617 | BCR  | C16-C17-C18-C19 |
| 21  | F     | 206 | BCR  | C11-C10-C9-C8   |
| 25  | 3     | 220 | PTY  | C20-C21-C22-C23 |
| 19  | 3     | 219 | LHG  | C4-O6-P-O3      |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | A     | 841 | LHG  | C3-O3-P-O6      |
| 19  | B     | 851 | LHG  | C3-O3-P-O6      |
| 25  | A     | 852 | PTY  | C5-O14-P1-O11   |
| 25  | L     | 208 | PTY  | C3-O11-P1-O14   |
| 25  | A     | 852 | PTY  | C34-C35-C36-C37 |
| 22  | 2     | 619 | PGT  | C1-C2-C3-O3     |
| 19  | 3     | 219 | LHG  | C26-C27-C28-C29 |
| 16  | 1     | 611 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 608 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 612 | CLA  | C11-C12-C13-C15 |
| 16  | 3     | 206 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 809 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 812 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 812 | CLA  | C12-C13-C15-C16 |
| 16  | K     | 101 | CLA  | C11-C10-C8-C7   |
| 19  | 3     | 219 | LHG  | C30-C31-C32-C33 |
| 22  | B     | 848 | PGT  | O2-C31-C32-C33  |
| 16  | 1     | 609 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 602 | CLA  | C11-C10-C8-C9   |
| 16  | 2     | 602 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 805 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 829 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 834 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 801 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 804 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 806 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 814 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 824 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 825 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 829 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 830 | CLA  | C11-C12-C13-C14 |
| 21  | B     | 845 | BCR  | C9-C10-C11-C12  |
| 21  | K     | 104 | BCR  | C9-C10-C11-C12  |
| 16  | A     | 825 | CLA  | C16-C17-C18-C20 |
| 16  | A     | 832 | CLA  | C16-C17-C18-C19 |
| 16  | B     | 833 | CLA  | O1D-CGD-O2D-CED |
| 16  | B     | 838 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 829 | CLA  | C16-C17-C18-C19 |
| 16  | B     | 807 | CLA  | C16-C17-C18-C20 |
| 16  | O     | 203 | CLA  | C16-C17-C18-C20 |
| 29  | B     | 854 | 3PH  | C28-C29-C2A-C2B |
| 19  | A     | 841 | LHG  | C2-C3-O3-P      |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | A     | 842 | LHG  | C2-C3-O3-P      |
| 16  | 1     | 603 | CLA  | C10-C11-C12-C13 |
| 21  | K     | 104 | BCR  | C7-C8-C9-C10    |
| 19  | A     | 841 | LHG  | C13-C14-C15-C16 |
| 16  | B     | 834 | CLA  | O1A-CGA-O2A-C1  |
| 16  | A     | 822 | CLA  | C16-C17-C18-C19 |
| 16  | B     | 834 | CLA  | CBA-CGA-O2A-C1  |
| 16  | A     | 809 | CLA  | C2C-C3C-CAC-CBC |
| 19  | 1     | 617 | LHG  | C11-C12-C13-C14 |
| 19  | A     | 841 | LHG  | C10-C11-C12-C13 |
| 16  | B     | 834 | CLA  | C15-C16-C17-C18 |
| 16  | 2     | 605 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 605 | CLA  | CBA-CGA-O2A-C1  |
| 16  | 3     | 205 | CLA  | C2A-CAA-CBA-CGA |
| 17  | 3     | 215 | C7Z  | C29-C30-C31-C32 |
| 18  | 2     | 616 | RRX  | C19-C20-C21-C22 |
| 18  | A     | 847 | RRX  | C13-C14-C15-C16 |
| 19  | 2     | 622 | LHG  | C17-C18-C19-C20 |
| 16  | B     | 827 | CLA  | C8-C10-C11-C12  |
| 21  | L     | 202 | BCR  | C10-C11-C12-C13 |
| 20  | 2     | 618 | ERG  | C13-C17-C20-C21 |
| 20  | 2     | 618 | ERG  | C13-C17-C20-C22 |
| 22  | 2     | 619 | PGT  | C33-C34-C35-C36 |
| 16  | B     | 824 | CLA  | C16-C17-C18-C20 |
| 16  | B     | 805 | CLA  | C3-C5-C6-C7     |
| 29  | A     | 849 | 3PH  | C2D-C2E-C2F-C2G |
| 16  | F     | 202 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 816 | CLA  | CBD-CGD-O2D-CED |
| 30  | A     | 851 | T7X  | C43-C44-C45-C46 |
| 16  | A     | 818 | CLA  | C2-C3-C5-C6     |
| 16  | B     | 814 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 828 | CLA  | C8-C10-C11-C12  |
| 16  | O     | 204 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 804 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 1     | 605 | CLA  | C2-C1-O2A-CGA   |
| 16  | 3     | 204 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 805 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 824 | CLA  | C2-C1-O2A-CGA   |
| 16  | 2     | 602 | CLA  | C16-C17-C18-C19 |
| 16  | K     | 102 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 807 | CLA  | C2A-CAA-CBA-CGA |
| 29  | A     | 849 | 3PH  | O21-C2-C3-O31   |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 31  | B     | 846 | DGD  | O1G-C1G-C2G-O2G |
| 24  | 3     | 202 | LMU  | C3-C4-C5-C6     |
| 16  | 3     | 205 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 812 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 3     | 205 | CLA  | C11-C12-C13-C14 |
| 16  | 3     | 214 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 816 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 819 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 839 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 802 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 832 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 835 | CLA  | C11-C12-C13-C14 |
| 16  | O     | 204 | CLA  | C6-C7-C8-C9     |
| 17  | 1     | 612 | C7Z  | C40-C33-C34-C35 |
| 17  | 1     | 615 | C7Z  | C11-C10-C9-C19  |
| 17  | 1     | 616 | C7Z  | C40-C33-C34-C35 |
| 17  | 2     | 615 | C7Z  | C20-C13-C14-C15 |
| 17  | 3     | 201 | C7Z  | C20-C13-C14-C15 |
| 17  | 3     | 216 | C7Z  | C20-C13-C14-C15 |
| 18  | 1     | 613 | RRX  | C20-C21-C22-C37 |
| 18  | 1     | 613 | RRX  | C16-C17-C18-C36 |
| 18  | 1     | 613 | RRX  | C35-C13-C14-C15 |
| 18  | 2     | 616 | RRX  | C16-C17-C18-C36 |
| 18  | A     | 847 | RRX  | C20-C21-C22-C37 |
| 18  | A     | 847 | RRX  | C35-C13-C14-C15 |
| 18  | J     | 103 | RRX  | C35-C13-C14-C15 |
| 18  | K     | 103 | RRX  | C20-C21-C22-C37 |
| 18  | K     | 103 | RRX  | C35-C13-C14-C15 |
| 18  | K     | 103 | RRX  | C11-C10-C9-C34  |
| 19  | 1     | 617 | LHG  | C4-C5-C6-O8     |
| 21  | 2     | 617 | BCR  | C16-C17-C18-C36 |
| 21  | 2     | 617 | BCR  | C20-C21-C22-C37 |
| 21  | A     | 850 | BCR  | C16-C17-C18-C36 |
| 21  | B     | 842 | BCR  | C35-C13-C14-C15 |
| 21  | B     | 842 | BCR  | C20-C21-C22-C37 |
| 21  | B     | 843 | BCR  | C16-C17-C18-C36 |
| 21  | B     | 845 | BCR  | C35-C13-C14-C15 |
| 21  | B     | 845 | BCR  | C16-C17-C18-C36 |
| 21  | B     | 847 | BCR  | C35-C13-C14-C15 |
| 21  | B     | 847 | BCR  | C16-C17-C18-C36 |
| 21  | B     | 855 | BCR  | C16-C17-C18-C36 |
| 21  | F     | 206 | BCR  | C35-C13-C14-C15 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | K     | 104 | BCR  | C35-C13-C14-C15 |
| 21  | O     | 205 | BCR  | C16-C17-C18-C36 |
| 16  | K     | 101 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 817 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 834 | CLA  | C16-C17-C18-C20 |
| 16  | A     | 815 | CLA  | O2A-C1-C2-C3    |
| 21  | K     | 104 | BCR  | C36-C18-C19-C20 |
| 25  | L     | 208 | PTY  | C19-C20-C21-C22 |
| 30  | A     | 851 | T7X  | C34-C35-C36-C37 |
| 25  | 3     | 221 | PTY  | C1-C6-O7-C8     |
| 16  | 1     | 609 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 805 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 818 | CLA  | C4-C3-C5-C6     |
| 16  | 2     | 605 | CLA  | C1A-C2A-CAA-CBA |
| 16  | 2     | 613 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 811 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 812 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 825 | CLA  | C1A-C2A-CAA-CBA |
| 16  | F     | 205 | CLA  | C1A-C2A-CAA-CBA |
| 19  | 3     | 219 | LHG  | C19-C20-C21-C22 |
| 16  | 1     | 603 | CLA  | C6-C7-C8-C10    |
| 16  | 1     | 606 | CLA  | C12-C13-C15-C16 |
| 16  | 2     | 609 | CLA  | C11-C12-C13-C15 |
| 16  | 3     | 209 | CLA  | C11-C12-C13-C15 |
| 16  | 3     | 210 | CLA  | C11-C10-C8-C7   |
| 16  | 3     | 211 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 804 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 811 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 826 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 835 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 837 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 804 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 807 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 819 | CLA  | C6-C7-C8-C10    |
| 16  | B     | 822 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 823 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 823 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 824 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 826 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 831 | CLA  | C11-C10-C8-C7   |
| 16  | F     | 205 | CLA  | C11-C12-C13-C15 |
| 16  | J     | 102 | CLA  | C11-C12-C13-C15 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 1     | 611 | CLA  | C10-C11-C12-C13 |
| 16  | B     | 824 | CLA  | C13-C15-C16-C17 |
| 18  | 1     | 613 | RRX  | C13-C14-C15-C16 |
| 30  | A     | 851 | T7X  | C18-C19-C20-C21 |
| 29  | J     | 105 | 3PH  | C2B-C2C-C2D-C2E |
| 16  | 1     | 604 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 1     | 609 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 837 | CLA  | C2A-CAA-CBA-CGA |
| 16  | F     | 201 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 804 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 832 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 809 | CLA  | C10-C11-C12-C13 |
| 16  | A     | 813 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 838 | CLA  | CBA-CGA-O2A-C1  |
| 25  | 3     | 220 | PTY  | C33-C34-C35-C36 |
| 24  | 3     | 202 | LMU  | C2B-C1B-O1B-C4' |
| 16  | A     | 830 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 828 | CLA  | C5-C6-C7-C8     |
| 17  | 1     | 612 | C7Z  | C32-C33-C34-C35 |
| 17  | 1     | 615 | C7Z  | C11-C10-C9-C8   |
| 17  | 1     | 616 | C7Z  | C32-C33-C34-C35 |
| 17  | 2     | 615 | C7Z  | C12-C13-C14-C15 |
| 17  | 3     | 201 | C7Z  | C12-C13-C14-C15 |
| 17  | 3     | 216 | C7Z  | C12-C13-C14-C15 |
| 18  | 1     | 613 | RRX  | C20-C21-C22-C23 |
| 18  | 1     | 613 | RRX  | C16-C17-C18-C19 |
| 18  | 1     | 613 | RRX  | C12-C13-C14-C15 |
| 18  | 2     | 616 | RRX  | C16-C17-C18-C19 |
| 18  | A     | 847 | RRX  | C20-C21-C22-C23 |
| 18  | A     | 847 | RRX  | C12-C13-C14-C15 |
| 18  | J     | 103 | RRX  | C12-C13-C14-C15 |
| 18  | K     | 103 | RRX  | C20-C21-C22-C23 |
| 18  | K     | 103 | RRX  | C12-C13-C14-C15 |
| 18  | K     | 103 | RRX  | C11-C10-C9-C8   |
| 21  | 2     | 617 | BCR  | C20-C21-C22-C23 |
| 21  | A     | 850 | BCR  | C16-C17-C18-C19 |
| 21  | B     | 842 | BCR  | C12-C13-C14-C15 |
| 21  | B     | 842 | BCR  | C20-C21-C22-C23 |
| 21  | B     | 843 | BCR  | C16-C17-C18-C19 |
| 21  | B     | 845 | BCR  | C12-C13-C14-C15 |
| 21  | B     | 845 | BCR  | C16-C17-C18-C19 |
| 21  | B     | 847 | BCR  | C12-C13-C14-C15 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | B     | 847 | BCR  | C16-C17-C18-C19 |
| 21  | F     | 206 | BCR  | C12-C13-C14-C15 |
| 21  | K     | 104 | BCR  | C12-C13-C14-C15 |
| 21  | O     | 205 | BCR  | C16-C17-C18-C19 |
| 16  | 2     | 605 | CLA  | C13-C15-C16-C17 |
| 17  | 2     | 614 | C7Z  | C9-C10-C11-C12  |
| 17  | 3     | 217 | C7Z  | C13-C14-C15-C35 |
| 17  | 3     | 218 | C7Z  | C9-C10-C11-C12  |
| 18  | 2     | 616 | RRX  | C9-C10-C11-C12  |
| 19  | 2     | 622 | LHG  | C34-C35-C36-C37 |
| 23  | 2     | 620 | DGA  | CAB-CBB-CCB-CDB |
| 16  | A     | 814 | CLA  | C5-C6-C7-C8     |
| 29  | B     | 854 | 3PH  | C33-C34-C35-C36 |
| 16  | B     | 829 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 816 | CLA  | O1D-CGD-O2D-CED |
| 16  | A     | 819 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 807 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 808 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 824 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 829 | CLA  | C2-C1-O2A-CGA   |
| 16  | B     | 838 | CLA  | C2-C1-O2A-CGA   |
| 16  | I     | 101 | CLA  | C2-C1-O2A-CGA   |
| 16  | L     | 201 | CLA  | C2-C1-O2A-CGA   |
| 26  | A     | 801 | CL0  | CAA-CBA-CGA-O2A |
| 16  | 2     | 608 | CLA  | C14-C13-C15-C16 |
| 16  | 3     | 210 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 801 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 805 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 825 | CLA  | C6-C7-C8-C9     |
| 16  | L     | 203 | CLA  | C6-C7-C8-C9     |
| 31  | B     | 846 | DGD  | O6D-C5D-C6D-O5D |
| 16  | F     | 202 | CLA  | C4C-C3C-CAC-CBC |
| 16  | A     | 809 | CLA  | C4C-C3C-CAC-CBC |
| 25  | A     | 852 | PTY  | C17-C18-C19-C20 |
| 16  | A     | 830 | CLA  | C2A-CAA-CBA-CGA |
| 16  | A     | 803 | CLA  | C16-C17-C18-C19 |
| 17  | 3     | 201 | C7Z  | C21-C26-C27-C28 |
| 17  | 3     | 218 | C7Z  | C1-C6-C7-C8     |
| 21  | A     | 845 | BCR  | C23-C24-C25-C30 |
| 21  | B     | 844 | BCR  | C23-C24-C25-C26 |
| 16  | 2     | 605 | CLA  | C15-C16-C17-C18 |
| 25  | L     | 208 | PTY  | C31-C32-C33-C34 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 25  | L     | 208 | PTY  | C12-C11-C8-O7   |
| 31  | B     | 846 | DGD  | C1G-C2G-C3G-O3G |
| 16  | B     | 835 | CLA  | C5-C6-C7-C8     |
| 19  | 3     | 219 | LHG  | O1-C1-C2-C3     |
| 17  | 3     | 201 | C7Z  | C29-C30-C31-C32 |
| 18  | K     | 103 | RRX  | C13-C14-C15-C16 |
| 21  | F     | 203 | BCR  | C9-C10-C11-C12  |
| 16  | A     | 826 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 805 | CLA  | C4-C3-C5-C6     |
| 16  | J     | 102 | CLA  | C4-C3-C5-C6     |
| 16  | 3     | 214 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 825 | CLA  | C10-C11-C12-C13 |
| 16  | F     | 205 | CLA  | C5-C6-C7-C8     |
| 19  | 1     | 617 | LHG  | C16-C17-C18-C19 |
| 16  | B     | 821 | CLA  | C16-C17-C18-C20 |
| 16  | B     | 834 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 815 | CLA  | C5-C6-C7-C8     |
| 16  | O     | 203 | CLA  | C8-C10-C11-C12  |
| 29  | A     | 849 | 3PH  | O11-C1-C2-O21   |
| 16  | 2     | 604 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 808 | CLA  | C8-C10-C11-C12  |
| 16  | 3     | 206 | CLA  | C15-C16-C17-C18 |
| 19  | B     | 851 | LHG  | O6-C4-C5-C6     |
| 29  | A     | 849 | 3PH  | O11-C1-C2-C3    |
| 16  | A     | 813 | CLA  | C4-C3-C5-C6     |
| 16  | O     | 201 | CLA  | C4-C3-C5-C6     |
| 16  | 2     | 601 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 608 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 824 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 825 | CLA  | C6-C7-C8-C10    |
| 17  | 1     | 614 | C7Z  | C13-C14-C15-C35 |
| 31  | B     | 850 | DGD  | C5A-C6A-C7A-C8A |
| 25  | A     | 852 | PTY  | C35-C36-C37-C38 |
| 16  | B     | 826 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 2     | 608 | CLA  | C3-C5-C6-C7     |
| 16  | B     | 827 | CLA  | CAA-CBA-CGA-O2A |
| 16  | J     | 102 | CLA  | CAA-CBA-CGA-O2A |
| 19  | A     | 841 | LHG  | C33-C34-C35-C36 |
| 16  | B     | 833 | CLA  | C2A-CAA-CBA-CGA |
| 16  | F     | 205 | CLA  | C10-C11-C12-C13 |
| 16  | A     | 822 | CLA  | C16-C17-C18-C20 |
| 16  | 3     | 214 | CLA  | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 828 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 823 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 829 | CLA  | CBD-CGD-O2D-CED |
| 16  | 2     | 601 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 805 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 815 | CLA  | C4-C3-C5-C6     |
| 16  | A     | 833 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 812 | CLA  | C4-C3-C5-C6     |
| 16  | 2     | 601 | CLA  | C10-C11-C12-C13 |
| 16  | A     | 837 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 836 | CLA  | C8-C10-C11-C12  |
| 25  | 3     | 221 | PTY  | C40-C41-C42-C43 |
| 16  | B     | 824 | CLA  | C16-C17-C18-C19 |
| 19  | A     | 841 | LHG  | O7-C7-C8-C9     |
| 19  | A     | 841 | LHG  | O8-C23-C24-C25  |
| 16  | 1     | 602 | CLA  | C11-C10-C8-C9   |
| 16  | 1     | 608 | CLA  | C11-C10-C8-C9   |
| 16  | 2     | 608 | CLA  | C11-C12-C13-C14 |
| 16  | 3     | 203 | CLA  | C6-C7-C8-C9     |
| 16  | 3     | 209 | CLA  | C11-C12-C13-C14 |
| 16  | 3     | 211 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 806 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 808 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 817 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 826 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 830 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 831 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 835 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 837 | CLA  | C14-C13-C15-C16 |
| 16  | A     | 854 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 855 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 809 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 810 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 818 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 823 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 824 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 829 | CLA  | C6-C7-C8-C9     |
| 16  | B     | 838 | CLA  | C6-C7-C8-C9     |
| 16  | F     | 201 | CLA  | C11-C12-C13-C14 |
| 16  | J     | 102 | CLA  | C11-C12-C13-C14 |
| 27  | A     | 840 | PQN  | C24-C23-C25-C26 |
| 16  | A     | 805 | CLA  | C3-C5-C6-C7     |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | B     | 851 | LHG  | C15-C16-C17-C18 |
| 16  | 2     | 601 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 811 | CLA  | C3A-C2A-CAA-CBA |
| 16  | B     | 825 | CLA  | C3A-C2A-CAA-CBA |
| 16  | F     | 205 | CLA  | C3A-C2A-CAA-CBA |
| 16  | 2     | 612 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 2     | 613 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 3     | 208 | CLA  | CAA-CBA-CGA-O2A |
| 29  | A     | 849 | 3PH  | O21-C21-C22-C23 |
| 29  | B     | 854 | 3PH  | C38-C39-C3A-C3B |
| 16  | 2     | 604 | CLA  | CAD-CBD-CGD-O2D |
| 16  | 2     | 608 | CLA  | CAD-CBD-CGD-O2D |
| 16  | 3     | 214 | CLA  | CAD-CBD-CGD-O2D |
| 16  | A     | 805 | CLA  | CAD-CBD-CGD-O2D |
| 16  | A     | 856 | CLA  | CAD-CBD-CGD-O2D |
| 16  | B     | 802 | CLA  | CAD-CBD-CGD-O2D |
| 16  | B     | 813 | CLA  | CAD-CBD-CGD-O2D |
| 16  | B     | 817 | CLA  | CAD-CBD-CGD-O2D |
| 16  | I     | 102 | CLA  | CAD-CBD-CGD-O2D |
| 16  | L     | 204 | CLA  | CAD-CBD-CGD-O2D |
| 16  | A     | 818 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 829 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 816 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 811 | CLA  | C2-C1-O2A-CGA   |
| 16  | 2     | 606 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 833 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 811 | CLA  | CAA-CBA-CGA-O2A |
| 16  | K     | 101 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 812 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 1     | 607 | CLA  | C4-C3-C5-C6     |
| 16  | B     | 826 | CLA  | C4-C3-C5-C6     |
| 25  | A     | 852 | PTY  | C30-C31-C32-C33 |
| 16  | B     | 826 | CLA  | C13-C15-C16-C17 |
| 16  | A     | 819 | CLA  | C2-C3-C5-C6     |
| 16  | B     | 808 | CLA  | C2-C3-C5-C6     |
| 16  | 1     | 607 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 2     | 601 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 808 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 822 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 803 | CLA  | CAA-CBA-CGA-O2A |
| 25  | 3     | 221 | PTY  | O4-C30-C31-C32  |
| 21  | A     | 844 | BCR  | C17-C18-C19-C20 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 21  | A     | 845 | BCR  | C21-C22-C23-C24 |
| 21  | K     | 104 | BCR  | C17-C18-C19-C20 |
| 21  | L     | 207 | BCR  | C11-C12-C13-C14 |
| 25  | L     | 208 | PTY  | C37-C38-C39-C40 |
| 16  | A     | 837 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 810 | CLA  | C13-C15-C16-C17 |
| 16  | 2     | 609 | CLA  | CAA-CBA-CGA-O2A |
| 16  | I     | 101 | CLA  | CAA-CBA-CGA-O2A |
| 19  | 3     | 219 | LHG  | O7-C7-C8-C9     |
| 19  | B     | 851 | LHG  | O8-C23-C24-C25  |
| 16  | 2     | 609 | CLA  | O2A-C1-C2-C3    |
| 16  | 2     | 613 | CLA  | O2A-C1-C2-C3    |
| 16  | 3     | 211 | CLA  | O2A-C1-C2-C3    |
| 16  | A     | 827 | CLA  | O2A-C1-C2-C3    |
| 16  | B     | 821 | CLA  | O2A-C1-C2-C3    |
| 23  | 2     | 620 | DGA  | CFA-CGA-CHA-CIA |
| 23  | 2     | 620 | DGA  | CFB-CGB-CHB-CIB |
| 16  | 1     | 601 | CLA  | C13-C15-C16-C17 |
| 16  | 3     | 206 | CLA  | CAA-CBA-CGA-O2A |
| 16  | L     | 203 | CLA  | CAA-CBA-CGA-O2A |
| 29  | J     | 105 | 3PH  | O21-C21-C22-C23 |
| 16  | B     | 834 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 1     | 605 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 1     | 605 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 1     | 608 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 1     | 608 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 604 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 2     | 609 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 3     | 207 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 3     | 207 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 3     | 209 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 3     | 209 | CLA  | CHA-CBD-CGD-O2D |
| 16  | 3     | 210 | CLA  | CHA-CBD-CGD-O1D |
| 16  | 3     | 210 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 813 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 815 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 815 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 819 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 824 | CLA  | CHA-CBD-CGD-O1D |
| 16  | A     | 824 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 830 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 836 | CLA  | CHA-CBD-CGD-O1D |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | A     | 836 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 839 | CLA  | CHA-CBD-CGD-O2D |
| 16  | A     | 856 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 806 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 809 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 823 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 823 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 825 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 833 | CLA  | CHA-CBD-CGD-O1D |
| 16  | B     | 833 | CLA  | CHA-CBD-CGD-O2D |
| 16  | F     | 201 | CLA  | CHA-CBD-CGD-O1D |
| 16  | F     | 201 | CLA  | CHA-CBD-CGD-O2D |
| 16  | F     | 205 | CLA  | CHA-CBD-CGD-O1D |
| 16  | F     | 205 | CLA  | CHA-CBD-CGD-O2D |
| 16  | I     | 101 | CLA  | CHA-CBD-CGD-O2D |
| 16  | L     | 203 | CLA  | CHA-CBD-CGD-O2D |
| 16  | O     | 203 | CLA  | CHA-CBD-CGD-O1D |
| 16  | O     | 203 | CLA  | CHA-CBD-CGD-O2D |
| 16  | B     | 835 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 826 | CLA  | C2-C3-C5-C6     |
| 16  | J     | 102 | CLA  | C2-C3-C5-C6     |
| 16  | O     | 201 | CLA  | C2-C3-C5-C6     |
| 31  | B     | 846 | DGD  | CDA-CEA-CFA-CGA |
| 21  | B     | 855 | BCR  | C16-C17-C18-C19 |
| 19  | A     | 841 | LHG  | C11-C10-C9-C8   |
| 25  | A     | 852 | PTY  | C36-C37-C38-C39 |
| 16  | 3     | 209 | CLA  | C16-C17-C18-C20 |
| 16  | 3     | 211 | CLA  | C16-C17-C18-C19 |
| 29  | B     | 854 | 3PH  | O31-C31-C32-C33 |
| 16  | 2     | 612 | CLA  | C5-C6-C7-C8     |
| 16  | A     | 815 | CLA  | C15-C16-C17-C18 |
| 16  | F     | 204 | CLA  | C5-C6-C7-C8     |
| 19  | A     | 841 | LHG  | C34-C35-C36-C37 |
| 19  | 1     | 617 | LHG  | O8-C23-C24-C25  |
| 19  | A     | 842 | LHG  | O8-C23-C24-C25  |
| 16  | 3     | 205 | CLA  | C16-C17-C18-C20 |
| 16  | F     | 201 | CLA  | C8-C10-C11-C12  |
| 23  | 2     | 620 | DGA  | CBB-CAB-CB9-CB8 |
| 16  | 1     | 605 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 809 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 1     | 607 | CLA  | C2-C3-C5-C6     |
| 16  | 2     | 608 | CLA  | C12-C13-C15-C16 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 2     | 612 | CLA  | C11-C10-C8-C7   |
| 16  | 2     | 613 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 814 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 813 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 829 | CLA  | C11-C10-C8-C7   |
| 16  | L     | 203 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 833 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 1     | 611 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 805 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 808 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 826 | CLA  | C11-C12-C13-C14 |
| 16  | A     | 835 | CLA  | C6-C7-C8-C9     |
| 16  | A     | 856 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 813 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 818 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 822 | CLA  | C14-C13-C15-C16 |
| 16  | B     | 825 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 827 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 831 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 838 | CLA  | C14-C13-C15-C16 |
| 16  | F     | 205 | CLA  | C11-C12-C13-C14 |
| 16  | O     | 202 | CLA  | C11-C12-C13-C14 |
| 29  | B     | 854 | 3PH  | C2A-C2B-C2C-C2D |
| 25  | A     | 852 | PTY  | C16-C17-C18-C19 |
| 25  | 3     | 221 | PTY  | C31-C30-O4-C1   |
| 25  | 3     | 221 | PTY  | O30-C30-O4-C1   |
| 16  | 3     | 209 | CLA  | C10-C11-C12-C13 |
| 16  | A     | 809 | CLA  | C8-C10-C11-C12  |
| 16  | A     | 805 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 3     | 207 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 3     | 209 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 828 | CLA  | CAA-CBA-CGA-O1A |
| 16  | B     | 823 | CLA  | CAA-CBA-CGA-O1A |
| 16  | I     | 101 | CLA  | CAA-CBA-CGA-O1A |
| 19  | A     | 841 | LHG  | O9-C7-C8-C9     |
| 16  | A     | 854 | CLA  | C16-C17-C18-C20 |
| 16  | A     | 837 | CLA  | C2-C3-C5-C6     |
| 16  | 3     | 213 | CLA  | CAA-CBA-CGA-O2A |
| 18  | 1     | 613 | RRX  | C21-C22-C23-C24 |
| 21  | B     | 843 | BCR  | C11-C12-C13-C14 |
| 29  | A     | 849 | 3PH  | C32-C31-O31-C3  |
| 16  | 2     | 601 | CLA  | C1A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | 3     | 203 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 813 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 837 | CLA  | C1A-C2A-CAA-CBA |
| 16  | B     | 803 | CLA  | C1A-C2A-CAA-CBA |
| 16  | A     | 811 | CLA  | C16-C17-C18-C19 |
| 16  | A     | 836 | CLA  | C16-C17-C18-C19 |
| 19  | A     | 841 | LHG  | O10-C23-C24-C25 |
| 29  | A     | 849 | 3PH  | O22-C21-C22-C23 |
| 16  | 1     | 608 | CLA  | C2-C1-O2A-CGA   |
| 29  | A     | 849 | 3PH  | C2C-C2D-C2E-C2F |
| 16  | 2     | 606 | CLA  | C10-C11-C12-C13 |
| 16  | 2     | 610 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 821 | CLA  | C8-C10-C11-C12  |
| 16  | 1     | 607 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 2     | 601 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 3     | 208 | CLA  | CAA-CBA-CGA-O1A |
| 19  | B     | 851 | LHG  | O10-C23-C24-C25 |
| 23  | J     | 101 | DGA  | OG1-CG1-CG2-CG3 |
| 25  | L     | 208 | PTY  | O4-C1-C6-C5     |
| 16  | A     | 825 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 829 | CLA  | C2A-CAA-CBA-CGA |
| 29  | J     | 105 | 3PH  | C32-C33-C34-C35 |
| 16  | A     | 803 | CLA  | C16-C17-C18-C20 |
| 16  | 2     | 612 | CLA  | CAA-CBA-CGA-O1A |
| 16  | A     | 808 | CLA  | CAA-CBA-CGA-O1A |
| 16  | A     | 833 | CLA  | CAA-CBA-CGA-O1A |
| 16  | B     | 811 | CLA  | CAA-CBA-CGA-O1A |
| 16  | K     | 101 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 1     | 609 | CLA  | C10-C11-C12-C13 |
| 16  | 3     | 205 | CLA  | C10-C11-C12-C13 |
| 16  | 3     | 211 | CLA  | C10-C11-C12-C13 |
| 16  | F     | 202 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 801 | CLA  | C3-C5-C6-C7     |
| 16  | 1     | 605 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 3     | 207 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 3     | 209 | CLA  | CAA-CBA-CGA-O1A |
| 16  | B     | 835 | CLA  | CAA-CBA-CGA-O1A |
| 25  | 3     | 220 | PTY  | C19-C20-C21-C22 |
| 19  | A     | 841 | LHG  | C3-O3-P-O5      |
| 25  | 3     | 221 | PTY  | C5-O14-P1-O13   |
| 16  | 3     | 206 | CLA  | CAA-CBA-CGA-O1A |
| 16  | A     | 822 | CLA  | CAA-CBA-CGA-O1A |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 19  | 3     | 219 | LHG  | O9-C7-C8-C9     |
| 29  | B     | 854 | 3PH  | O32-C31-C32-C33 |
| 16  | 2     | 608 | CLA  | CAA-CBA-CGA-O2A |
| 25  | L     | 208 | PTY  | C36-C37-C38-C39 |
| 21  | A     | 850 | BCR  | C23-C24-C25-C26 |
| 21  | F     | 206 | BCR  | C23-C24-C25-C26 |
| 16  | L     | 203 | CLA  | CAA-CBA-CGA-O1A |
| 19  | A     | 842 | LHG  | O10-C23-C24-C25 |
| 29  | J     | 105 | 3PH  | O22-C21-C22-C23 |
| 31  | B     | 846 | DGD  | CFB-CGB-CHB-CIB |
| 16  | A     | 823 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 854 | CLA  | CAA-CBA-CGA-O2A |
| 25  | A     | 852 | PTY  | C18-C19-C20-C21 |
| 16  | A     | 809 | CLA  | C2A-CAA-CBA-CGA |
| 16  | 2     | 606 | CLA  | CAA-CBA-CGA-O1A |
| 16  | A     | 815 | CLA  | CAA-CBA-CGA-O1A |
| 25  | 3     | 221 | PTY  | O30-C30-C31-C32 |
| 16  | 2     | 605 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 2     | 609 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 3     | 205 | CLA  | CAA-CBA-CGA-O1A |
| 16  | A     | 833 | CLA  | C2-C3-C5-C6     |
| 29  | J     | 105 | 3PH  | C27-C28-C29-C2A |
| 31  | B     | 846 | DGD  | CDB-CEB-CFB-CGB |
| 16  | 3     | 213 | CLA  | CAD-CBD-CGD-O1D |
| 16  | A     | 813 | CLA  | CAD-CBD-CGD-O1D |
| 16  | B     | 803 | CLA  | CAD-CBD-CGD-O1D |
| 16  | B     | 835 | CLA  | CAD-CBD-CGD-O1D |
| 16  | I     | 101 | CLA  | CAD-CBD-CGD-O1D |
| 25  | 3     | 220 | PTY  | C2-C3-O11-P1    |
| 16  | B     | 801 | CLA  | O1A-CGA-O2A-C1  |
| 16  | 2     | 613 | CLA  | CAA-CBA-CGA-O1A |
| 16  | L     | 204 | CLA  | C10-C11-C12-C13 |
| 16  | 1     | 606 | CLA  | C6-C7-C8-C9     |
| 16  | 2     | 609 | CLA  | C11-C12-C13-C14 |
| 16  | 3     | 206 | CLA  | C11-C10-C8-C9   |
| 16  | 3     | 208 | CLA  | C6-C7-C8-C9     |
| 16  | 3     | 210 | CLA  | C11-C10-C8-C9   |
| 16  | A     | 823 | CLA  | C11-C10-C8-C9   |
| 16  | B     | 826 | CLA  | C11-C12-C13-C14 |
| 16  | B     | 829 | CLA  | C11-C10-C8-C9   |
| 16  | F     | 202 | CLA  | C6-C7-C8-C9     |
| 16  | L     | 203 | CLA  | C14-C13-C15-C16 |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | B     | 830 | CLA  | C15-C16-C17-C18 |
| 16  | F     | 202 | CLA  | C10-C11-C12-C13 |
| 29  | A     | 849 | 3PH  | O32-C31-O31-C3  |
| 16  | 2     | 611 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 801 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 808 | CLA  | CAA-CBA-CGA-O2A |
| 16  | B     | 831 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 815 | CLA  | C8-C10-C11-C12  |
| 16  | B     | 837 | CLA  | C2C-C3C-CAC-CBC |
| 16  | A     | 802 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 805 | CLA  | CAA-CBA-CGA-O2A |
| 16  | L     | 204 | CLA  | CAA-CBA-CGA-O2A |
| 30  | A     | 851 | T7X  | O16-C10-C12-C13 |
| 31  | B     | 850 | DGD  | O1G-C1A-C2A-C3A |
| 16  | 3     | 205 | CLA  | C4-C3-C5-C6     |
| 30  | A     | 851 | T7X  | C44-C45-C46-C47 |
| 16  | 1     | 605 | CLA  | C11-C10-C8-C7   |
| 16  | 1     | 606 | CLA  | C6-C7-C8-C10    |
| 16  | 1     | 611 | CLA  | C11-C12-C13-C15 |
| 16  | 2     | 604 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 607 | CLA  | C6-C7-C8-C10    |
| 16  | 2     | 613 | CLA  | C12-C13-C15-C16 |
| 16  | 3     | 206 | CLA  | C11-C10-C8-C7   |
| 16  | 3     | 214 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 805 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 807 | CLA  | C6-C7-C8-C10    |
| 16  | A     | 810 | CLA  | C3A-C2A-CAA-CBA |
| 16  | A     | 820 | CLA  | C11-C10-C8-C7   |
| 16  | A     | 827 | CLA  | C11-C12-C13-C15 |
| 16  | A     | 829 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 806 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 818 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 824 | CLA  | C2-C3-C5-C6     |
| 16  | B     | 824 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 825 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 827 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 832 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 833 | CLA  | C11-C10-C8-C7   |
| 16  | B     | 835 | CLA  | C11-C12-C13-C15 |
| 16  | B     | 837 | CLA  | C12-C13-C15-C16 |
| 16  | B     | 838 | CLA  | C12-C13-C15-C16 |
| 16  | L     | 203 | CLA  | C6-C7-C8-C10    |

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| Mol | Chain | Res | Type | Atoms           |
|-----|-------|-----|------|-----------------|
| 16  | O     | 202 | CLA  | C11-C12-C13-C15 |
| 31  | B     | 850 | DGD  | C1B-C2B-C3B-C4B |
| 31  | B     | 850 | DGD  | O1A-C1A-C2A-C3A |
| 16  | 2     | 610 | CLA  | CAA-CBA-CGA-O2A |
| 16  | 3     | 212 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 835 | CLA  | CAA-CBA-CGA-O2A |
| 16  | I     | 102 | CLA  | CAA-CBA-CGA-O2A |
| 25  | A     | 852 | PTY  | C32-C33-C34-C35 |
| 29  | A     | 849 | 3PH  | C35-C36-C37-C38 |
| 29  | J     | 105 | 3PH  | C2C-C2D-C2E-C2F |
| 21  | O     | 205 | BCR  | C17-C18-C19-C20 |
| 16  | A     | 802 | CLA  | CAA-CBA-CGA-O1A |
| 16  | B     | 809 | CLA  | CAA-CBA-CGA-O1A |
| 16  | B     | 833 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 3     | 203 | CLA  | CAA-CBA-CGA-O2A |
| 16  | A     | 816 | CLA  | CAA-CBA-CGA-O2A |
| 25  | 3     | 221 | PTY  | C15-C16-C17-C18 |
| 16  | F     | 202 | CLA  | C5-C6-C7-C8     |
| 16  | 3     | 212 | CLA  | CAA-CBA-CGA-O1A |
| 16  | 3     | 213 | CLA  | CAA-CBA-CGA-O1A |
| 16  | B     | 801 | CLA  | CAA-CBA-CGA-O1A |
| 25  | A     | 852 | PTY  | C37-C38-C39-C40 |
| 16  | 1     | 611 | CLA  | C13-C15-C16-C17 |
| 16  | B     | 819 | CLA  | C5-C6-C7-C8     |
| 16  | L     | 205 | CLA  | C15-C16-C17-C18 |
| 16  | O     | 203 | CLA  | C5-C6-C7-C8     |
| 16  | B     | 836 | CLA  | CAA-CBA-CGA-O2A |
| 25  | A     | 852 | PTY  | C12-C11-C8-O7   |
| 16  | 2     | 610 | CLA  | CAA-CBA-CGA-O1A |
| 16  | A     | 827 | CLA  | C16-C17-C18-C20 |
| 16  | 2     | 608 | CLA  | C15-C16-C17-C18 |
| 16  | A     | 821 | CLA  | C15-C16-C17-C18 |
| 16  | B     | 804 | CLA  | C13-C15-C16-C17 |
| 27  | B     | 839 | PQN  | C25-C26-C27-C28 |
| 29  | B     | 854 | 3PH  | C31-C32-C33-C34 |
| 16  | B     | 831 | CLA  | CAA-CBA-CGA-O1A |
| 16  | I     | 102 | CLA  | CAA-CBA-CGA-O1A |
| 16  | L     | 204 | CLA  | CAA-CBA-CGA-O1A |
| 30  | A     | 851 | T7X  | O17-C10-C12-C13 |
| 16  | A     | 856 | CLA  | CAA-CBA-CGA-O2A |
| 29  | B     | 854 | 3PH  | O21-C21-C22-C23 |

There are no ring outliers.

181 monomers are involved in 586 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 16  | B     | 818 | CLA  | 3       | 0            |
| 16  | A     | 817 | CLA  | 4       | 0            |
| 16  | A     | 819 | CLA  | 6       | 0            |
| 16  | B     | 811 | CLA  | 4       | 0            |
| 18  | 2     | 616 | RRX  | 2       | 0            |
| 21  | I     | 103 | BCR  | 3       | 0            |
| 16  | 1     | 602 | CLA  | 6       | 0            |
| 16  | A     | 828 | CLA  | 7       | 0            |
| 19  | 3     | 219 | LHG  | 2       | 0            |
| 21  | O     | 205 | BCR  | 9       | 0            |
| 16  | F     | 204 | CLA  | 2       | 0            |
| 26  | A     | 801 | CL0  | 5       | 0            |
| 17  | 3     | 218 | C7Z  | 1       | 0            |
| 16  | B     | 817 | CLA  | 4       | 0            |
| 16  | B     | 834 | CLA  | 8       | 0            |
| 16  | O     | 201 | CLA  | 4       | 0            |
| 21  | 2     | 617 | BCR  | 10      | 0            |
| 17  | 3     | 215 | C7Z  | 3       | 0            |
| 16  | 2     | 602 | CLA  | 4       | 0            |
| 31  | B     | 850 | DGD  | 3       | 0            |
| 20  | 1     | 618 | ERG  | 4       | 0            |
| 21  | F     | 203 | BCR  | 4       | 0            |
| 16  | 1     | 601 | CLA  | 5       | 0            |
| 21  | B     | 845 | BCR  | 8       | 0            |
| 16  | A     | 838 | CLA  | 2       | 0            |
| 16  | A     | 825 | CLA  | 7       | 0            |
| 16  | B     | 829 | CLA  | 5       | 0            |
| 16  | 3     | 213 | CLA  | 9       | 0            |
| 16  | A     | 832 | CLA  | 5       | 0            |
| 16  | A     | 820 | CLA  | 3       | 0            |
| 16  | B     | 809 | CLA  | 4       | 0            |
| 16  | A     | 806 | CLA  | 2       | 0            |
| 16  | L     | 205 | CLA  | 2       | 0            |
| 17  | 1     | 616 | C7Z  | 1       | 0            |
| 21  | F     | 206 | BCR  | 5       | 0            |
| 17  | 1     | 614 | C7Z  | 3       | 0            |
| 16  | A     | 810 | CLA  | 3       | 0            |
| 21  | B     | 855 | BCR  | 10      | 0            |
| 16  | A     | 854 | CLA  | 10      | 0            |
| 31  | B     | 849 | DGD  | 2       | 0            |
| 20  | 2     | 621 | ERG  | 5       | 0            |
| 16  | 2     | 610 | CLA  | 2       | 0            |

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| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 16  | 2     | 605 | CLA  | 6       | 0            |
| 16  | A     | 837 | CLA  | 8       | 0            |
| 16  | A     | 816 | CLA  | 4       | 0            |
| 16  | B     | 812 | CLA  | 5       | 0            |
| 16  | L     | 204 | CLA  | 2       | 0            |
| 17  | 3     | 217 | C7Z  | 2       | 0            |
| 16  | A     | 814 | CLA  | 5       | 0            |
| 30  | A     | 851 | T7X  | 1       | 0            |
| 21  | B     | 841 | BCR  | 3       | 0            |
| 21  | A     | 844 | BCR  | 8       | 0            |
| 16  | A     | 804 | CLA  | 3       | 0            |
| 16  | B     | 828 | CLA  | 3       | 0            |
| 19  | 1     | 617 | LHG  | 1       | 0            |
| 27  | B     | 839 | PQN  | 4       | 0            |
| 16  | B     | 814 | CLA  | 2       | 0            |
| 16  | F     | 201 | CLA  | 4       | 0            |
| 16  | 2     | 607 | CLA  | 6       | 0            |
| 16  | A     | 824 | CLA  | 5       | 0            |
| 16  | I     | 102 | CLA  | 3       | 0            |
| 16  | O     | 203 | CLA  | 5       | 0            |
| 21  | B     | 844 | BCR  | 9       | 0            |
| 21  | L     | 207 | BCR  | 4       | 0            |
| 16  | A     | 855 | CLA  | 6       | 0            |
| 16  | 3     | 207 | CLA  | 8       | 0            |
| 16  | A     | 802 | CLA  | 2       | 0            |
| 16  | B     | 838 | CLA  | 4       | 0            |
| 16  | 2     | 603 | CLA  | 1       | 0            |
| 16  | B     | 815 | CLA  | 1       | 0            |
| 16  | A     | 827 | CLA  | 8       | 0            |
| 16  | A     | 835 | CLA  | 2       | 0            |
| 16  | 1     | 604 | CLA  | 2       | 0            |
| 16  | 3     | 209 | CLA  | 8       | 0            |
| 16  | A     | 809 | CLA  | 5       | 0            |
| 16  | A     | 834 | CLA  | 1       | 0            |
| 16  | F     | 202 | CLA  | 6       | 0            |
| 16  | 3     | 206 | CLA  | 1       | 0            |
| 16  | K     | 101 | CLA  | 3       | 0            |
| 21  | B     | 840 | BCR  | 5       | 0            |
| 16  | A     | 821 | CLA  | 6       | 0            |
| 16  | J     | 102 | CLA  | 3       | 0            |
| 16  | 2     | 611 | CLA  | 3       | 0            |
| 31  | B     | 846 | DGD  | 4       | 0            |

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| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 16  | 3     | 212 | CLA  | 3       | 0            |
| 16  | 3     | 203 | CLA  | 3       | 0            |
| 16  | A     | 807 | CLA  | 4       | 0            |
| 16  | B     | 837 | CLA  | 5       | 0            |
| 16  | B     | 810 | CLA  | 4       | 0            |
| 16  | 2     | 613 | CLA  | 3       | 0            |
| 16  | B     | 825 | CLA  | 5       | 0            |
| 16  | B     | 819 | CLA  | 4       | 0            |
| 16  | L     | 203 | CLA  | 3       | 0            |
| 21  | L     | 206 | BCR  | 6       | 0            |
| 16  | A     | 813 | CLA  | 1       | 0            |
| 16  | B     | 808 | CLA  | 7       | 0            |
| 16  | A     | 823 | CLA  | 5       | 0            |
| 16  | A     | 811 | CLA  | 3       | 0            |
| 16  | B     | 831 | CLA  | 5       | 0            |
| 16  | 1     | 603 | CLA  | 4       | 0            |
| 16  | 1     | 608 | CLA  | 3       | 0            |
| 21  | B     | 842 | BCR  | 3       | 0            |
| 17  | 1     | 615 | C7Z  | 1       | 0            |
| 16  | B     | 805 | CLA  | 2       | 0            |
| 16  | 2     | 601 | CLA  | 5       | 0            |
| 16  | B     | 802 | CLA  | 4       | 0            |
| 16  | 1     | 607 | CLA  | 5       | 0            |
| 16  | I     | 101 | CLA  | 6       | 0            |
| 16  | A     | 856 | CLA  | 3       | 0            |
| 23  | J     | 101 | DGA  | 1       | 0            |
| 16  | 3     | 210 | CLA  | 3       | 0            |
| 16  | 1     | 611 | CLA  | 2       | 0            |
| 16  | B     | 813 | CLA  | 2       | 0            |
| 16  | B     | 821 | CLA  | 6       | 0            |
| 16  | 2     | 606 | CLA  | 4       | 0            |
| 16  | A     | 818 | CLA  | 5       | 0            |
| 20  | 2     | 618 | ERG  | 4       | 0            |
| 16  | A     | 822 | CLA  | 4       | 0            |
| 16  | L     | 201 | CLA  | 7       | 0            |
| 17  | 3     | 216 | C7Z  | 3       | 0            |
| 16  | A     | 803 | CLA  | 1       | 0            |
| 16  | B     | 832 | CLA  | 4       | 0            |
| 16  | B     | 803 | CLA  | 7       | 0            |
| 21  | A     | 845 | BCR  | 9       | 0            |
| 16  | A     | 830 | CLA  | 7       | 0            |
| 18  | 1     | 613 | RRX  | 10      | 0            |

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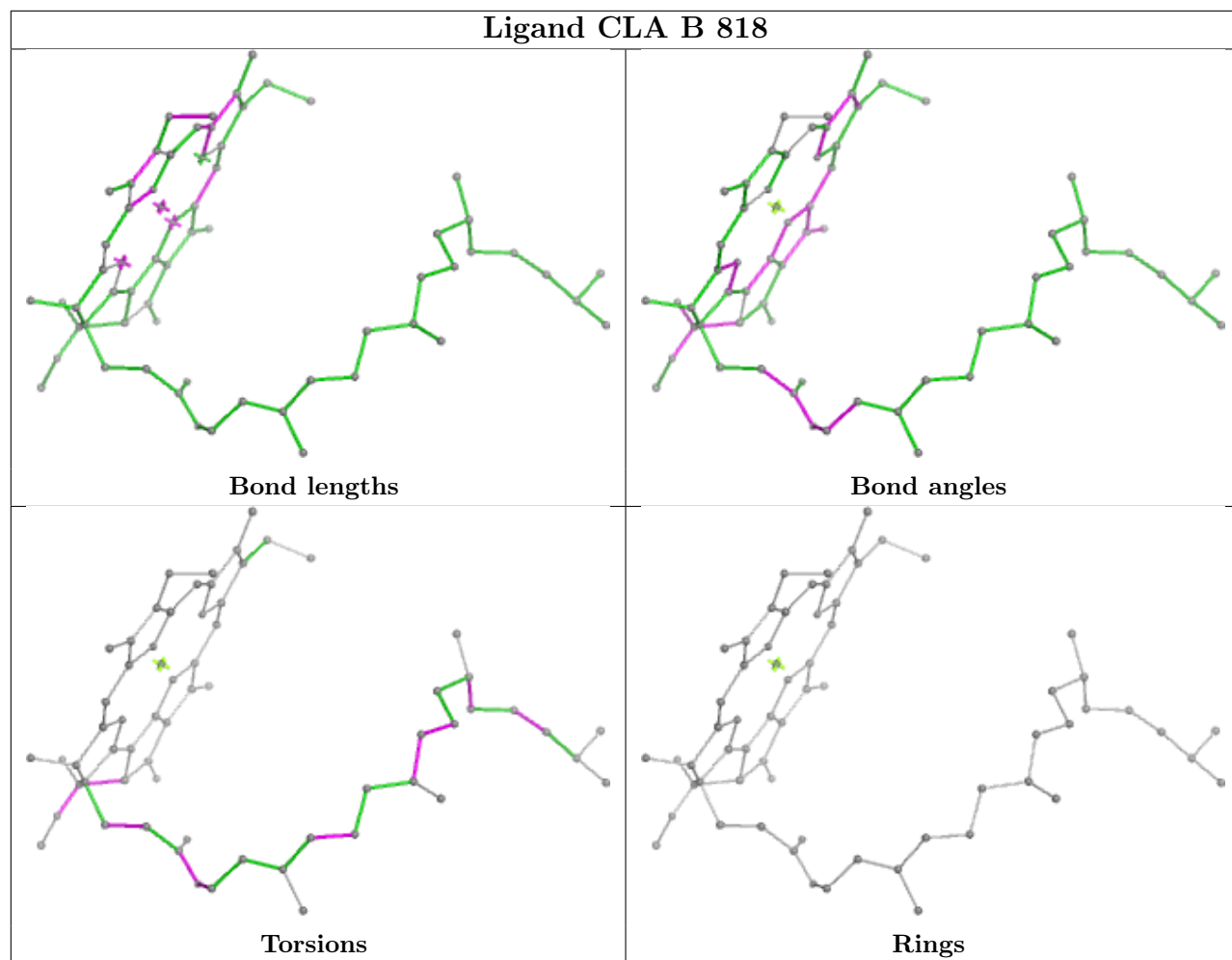
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 21  | A     | 857 | BCR  | 7       | 0            |
| 16  | A     | 833 | CLA  | 1       | 0            |
| 17  | 1     | 612 | C7Z  | 2       | 0            |
| 16  | 3     | 204 | CLA  | 4       | 0            |
| 16  | 3     | 211 | CLA  | 3       | 0            |
| 16  | B     | 826 | CLA  | 7       | 0            |
| 16  | B     | 827 | CLA  | 4       | 0            |
| 16  | B     | 822 | CLA  | 4       | 0            |
| 21  | K     | 104 | BCR  | 5       | 0            |
| 16  | O     | 202 | CLA  | 3       | 0            |
| 21  | A     | 850 | BCR  | 5       | 0            |
| 16  | B     | 824 | CLA  | 1       | 0            |
| 16  | 2     | 609 | CLA  | 3       | 0            |
| 21  | B     | 843 | BCR  | 5       | 0            |
| 16  | 1     | 610 | CLA  | 4       | 0            |
| 16  | 2     | 604 | CLA  | 1       | 0            |
| 16  | K     | 102 | CLA  | 3       | 0            |
| 16  | B     | 806 | CLA  | 4       | 0            |
| 16  | A     | 805 | CLA  | 4       | 0            |
| 21  | A     | 846 | BCR  | 14      | 0            |
| 21  | B     | 847 | BCR  | 4       | 0            |
| 16  | 1     | 606 | CLA  | 4       | 0            |
| 19  | 2     | 622 | LHG  | 1       | 0            |
| 16  | B     | 801 | CLA  | 7       | 0            |
| 16  | 1     | 605 | CLA  | 1       | 0            |
| 16  | B     | 804 | CLA  | 8       | 0            |
| 16  | B     | 816 | CLA  | 6       | 0            |
| 16  | B     | 835 | CLA  | 5       | 0            |
| 18  | J     | 103 | RRX  | 2       | 0            |
| 16  | 3     | 214 | CLA  | 3       | 0            |
| 18  | A     | 847 | RRX  | 2       | 0            |
| 16  | B     | 830 | CLA  | 5       | 0            |
| 25  | A     | 852 | PTY  | 3       | 0            |
| 16  | A     | 836 | CLA  | 3       | 0            |
| 16  | 3     | 205 | CLA  | 6       | 0            |
| 16  | B     | 823 | CLA  | 1       | 0            |
| 16  | A     | 815 | CLA  | 2       | 0            |
| 16  | A     | 812 | CLA  | 5       | 0            |
| 16  | A     | 829 | CLA  | 3       | 0            |
| 16  | A     | 826 | CLA  | 5       | 0            |
| 24  | 3     | 202 | LMU  | 1       | 0            |
| 17  | 3     | 201 | C7Z  | 2       | 0            |

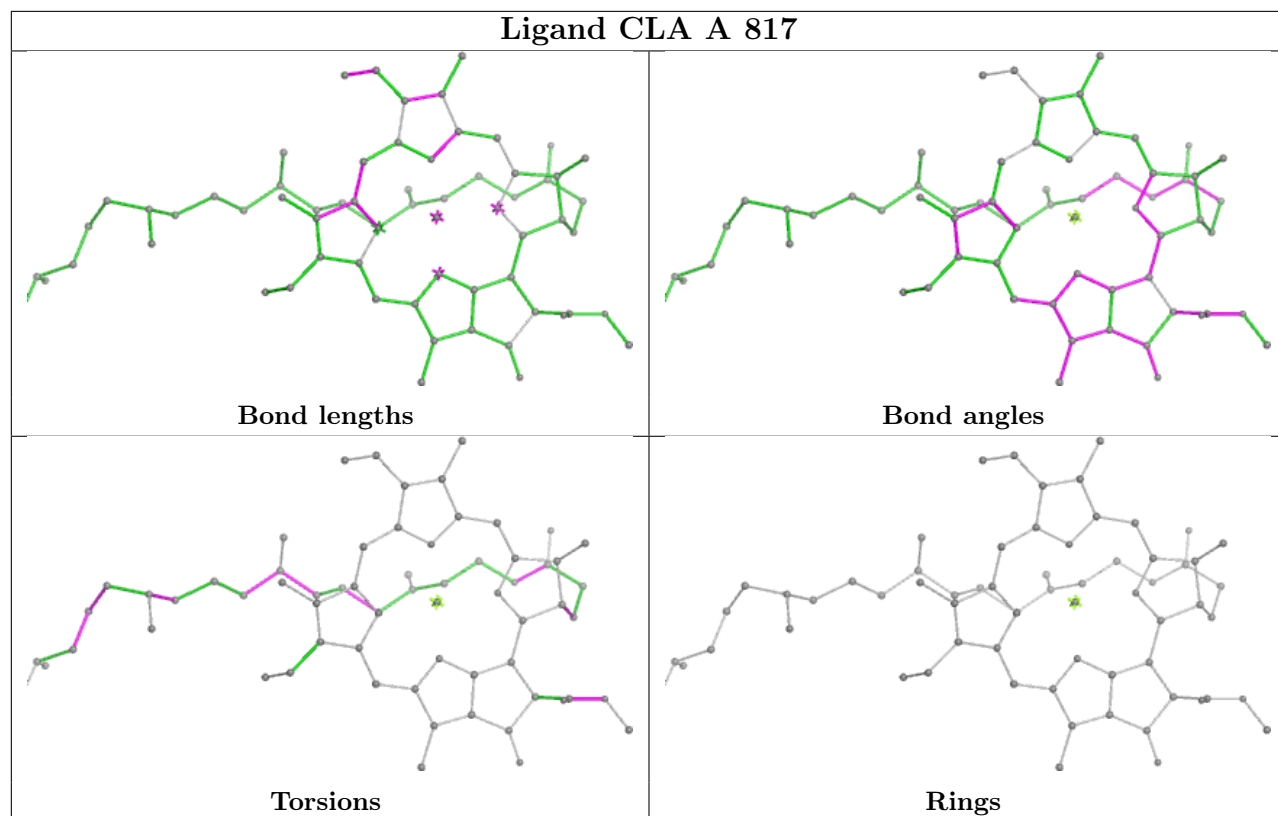
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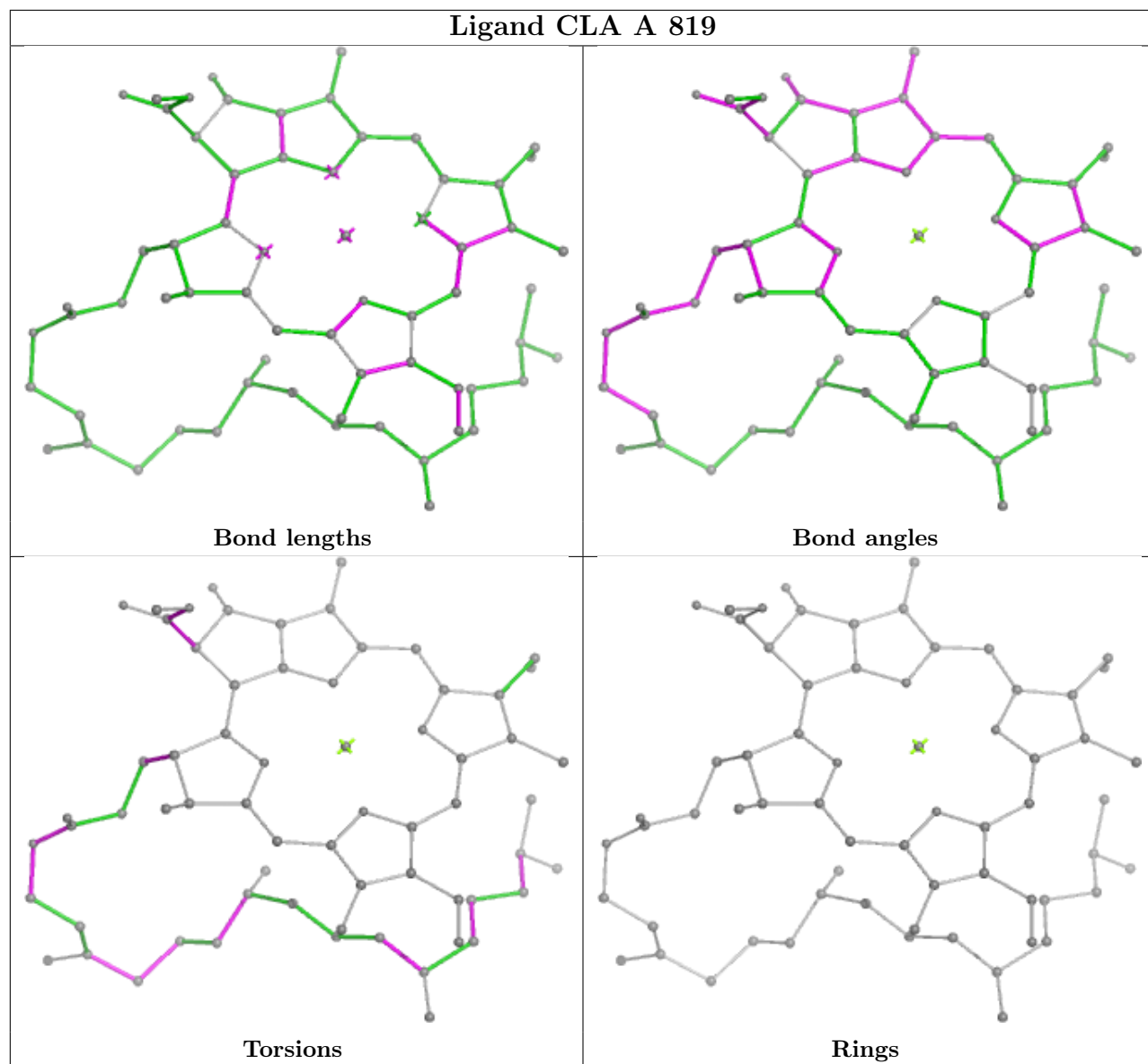
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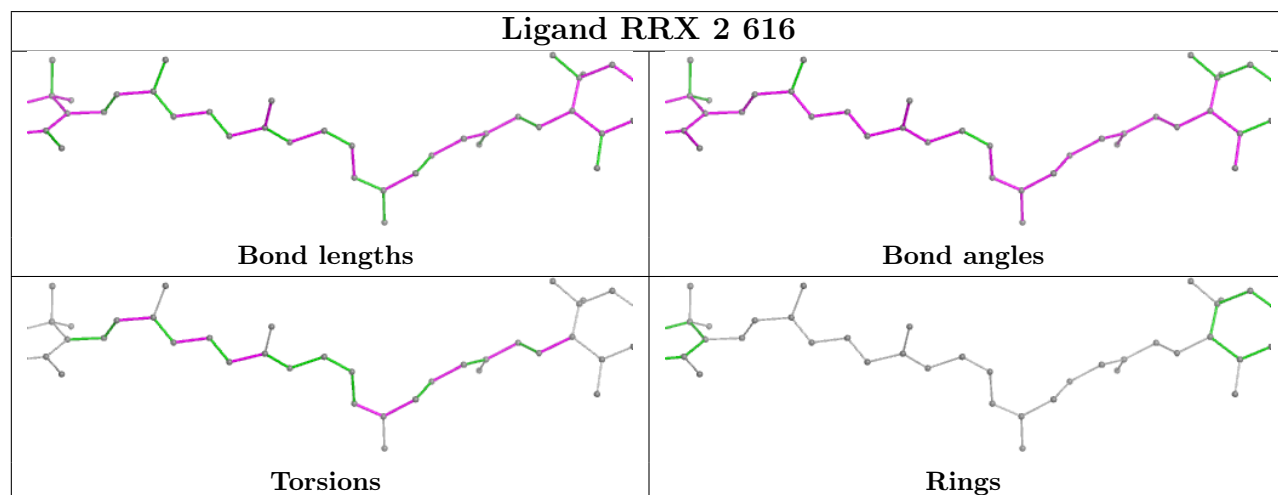
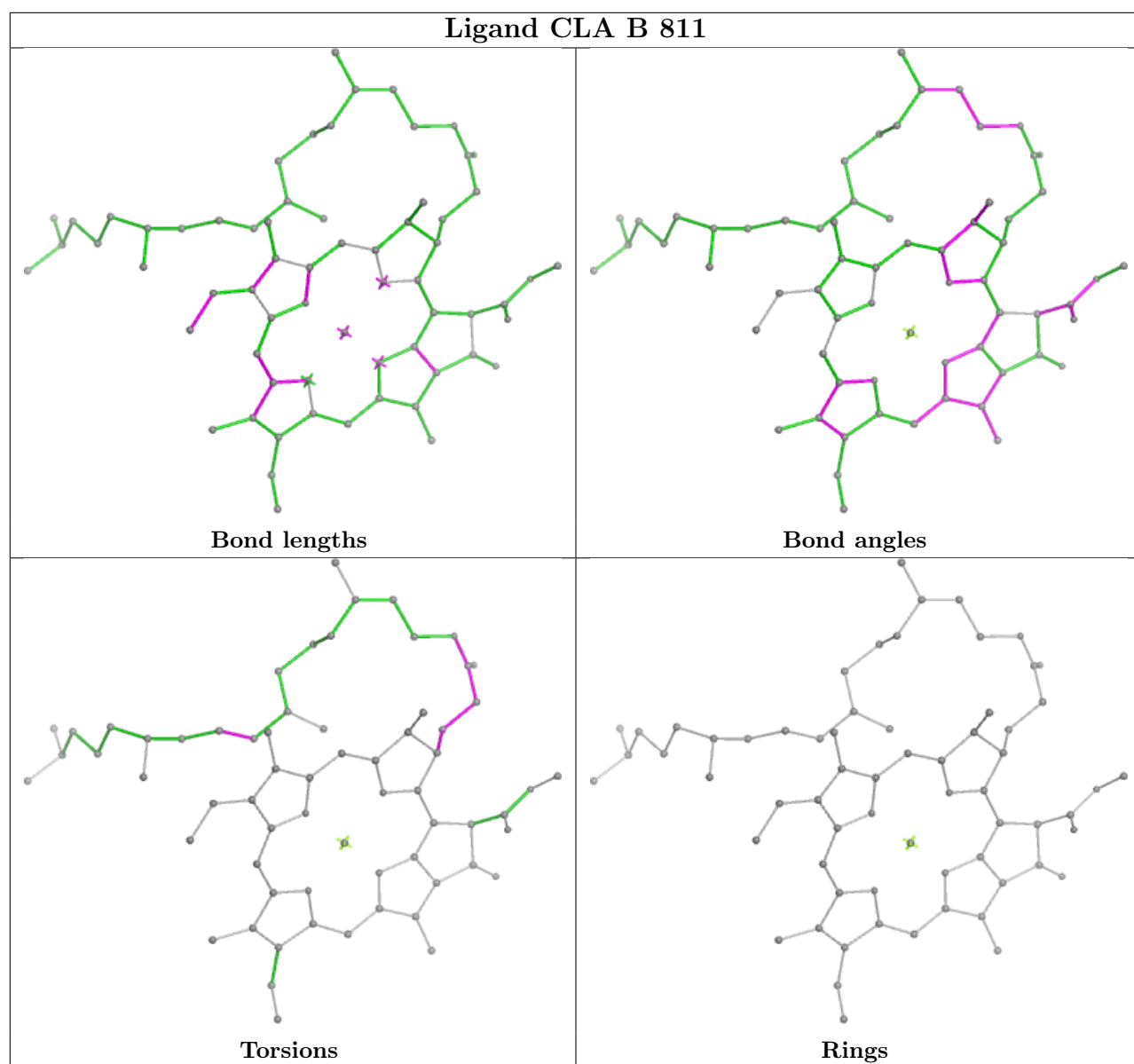
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|-----|------|---------|--------------|
| 16  | A     | 808 | CLA  | 3       | 0            |
| 16  | O     | 204 | CLA  | 1       | 0            |
| 16  | 3     | 208 | CLA  | 4       | 0            |
| 16  | 1     | 609 | CLA  | 5       | 0            |
| 16  | 2     | 612 | CLA  | 4       | 0            |
| 19  | A     | 842 | LHG  | 1       | 0            |
| 16  | B     | 836 | CLA  | 1       | 0            |
| 16  | 2     | 608 | CLA  | 4       | 0            |
| 18  | K     | 103 | RRX  | 4       | 0            |
| 16  | A     | 839 | CLA  | 4       | 0            |
| 16  | B     | 833 | CLA  | 4       | 0            |
| 16  | F     | 205 | CLA  | 1       | 0            |
| 21  | L     | 202 | BCR  | 10      | 0            |

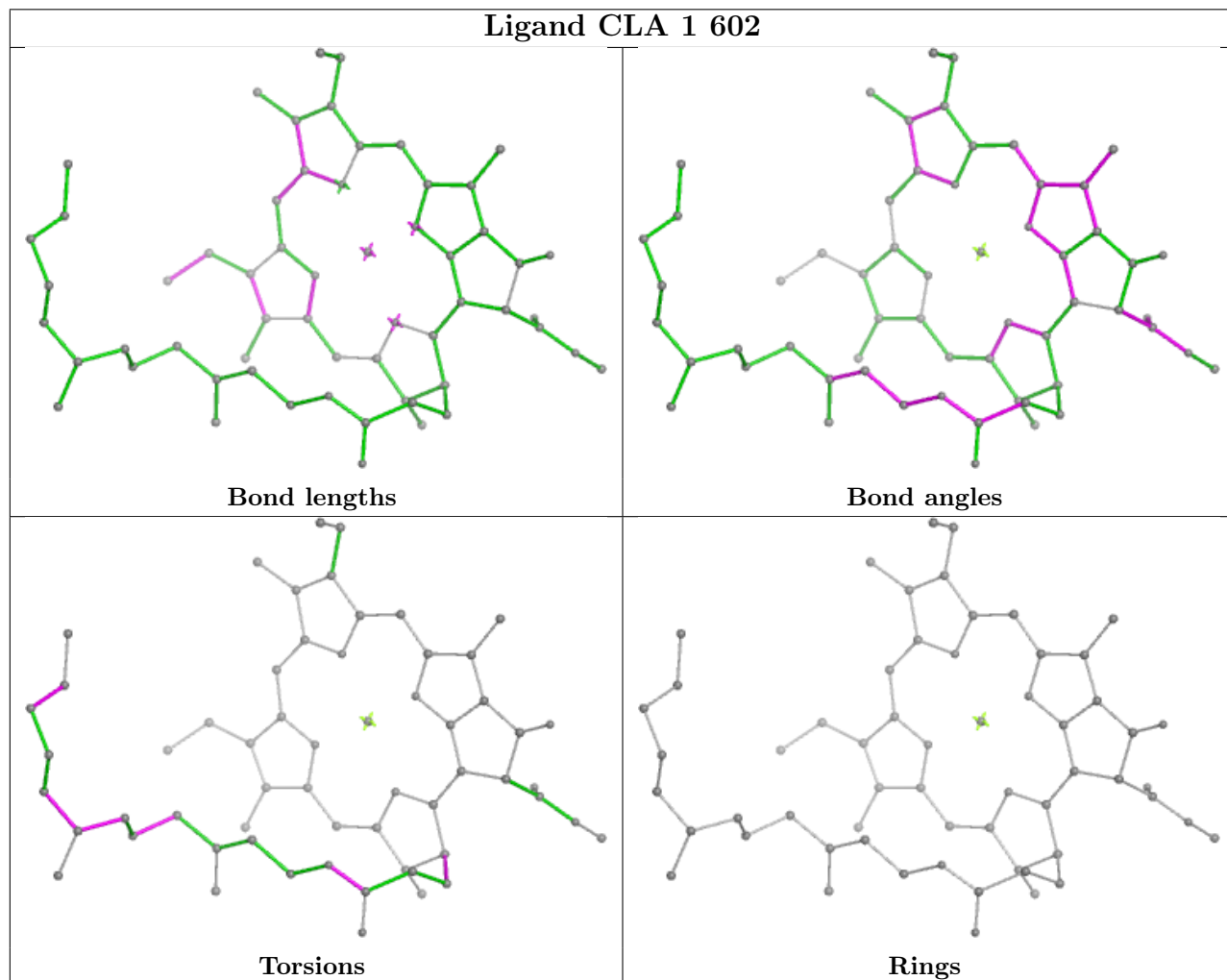
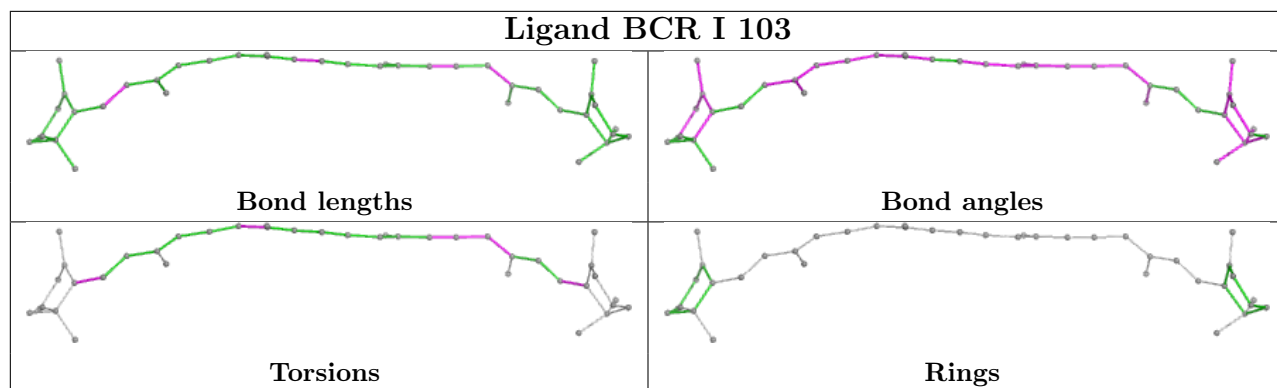
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

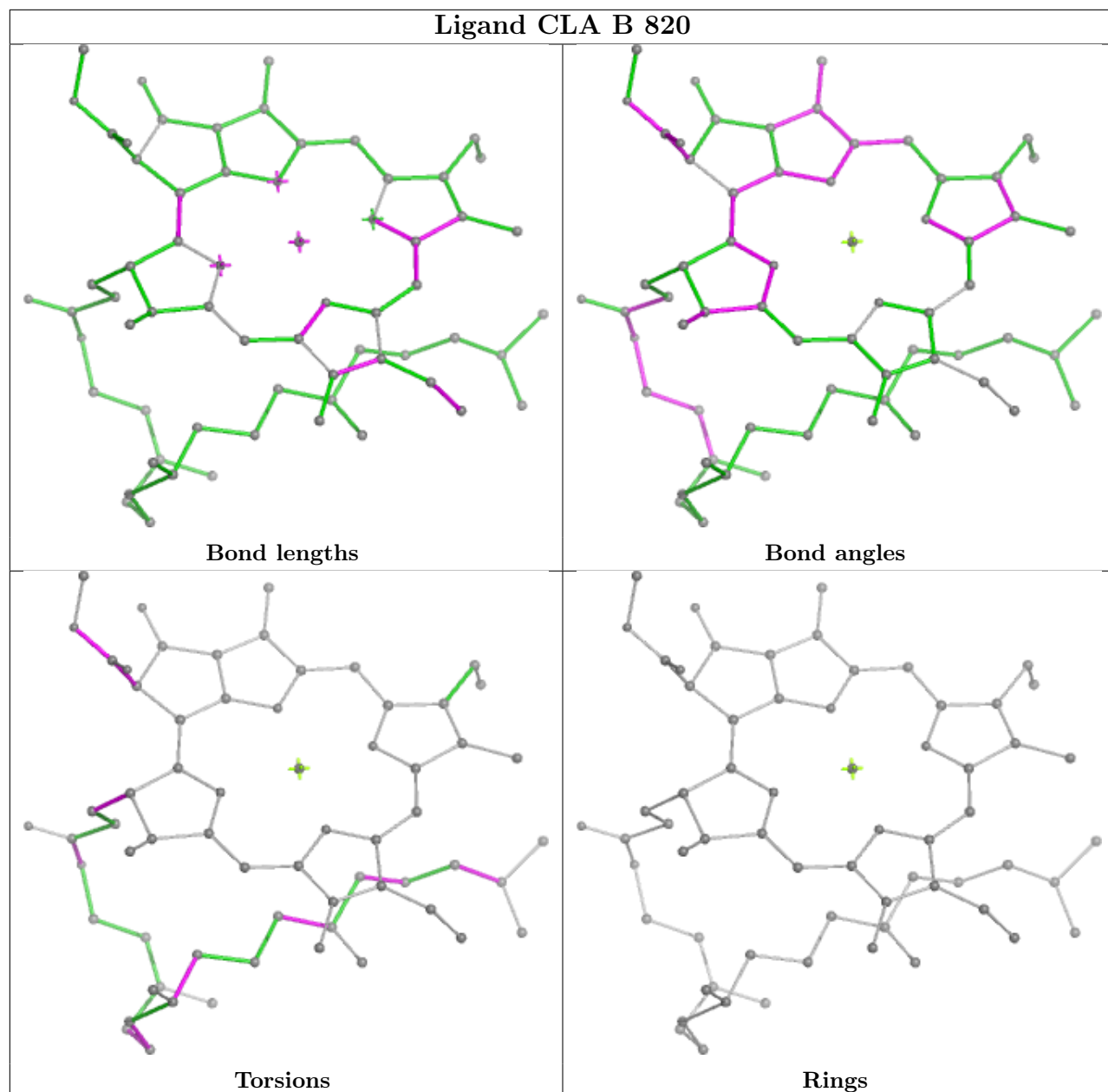




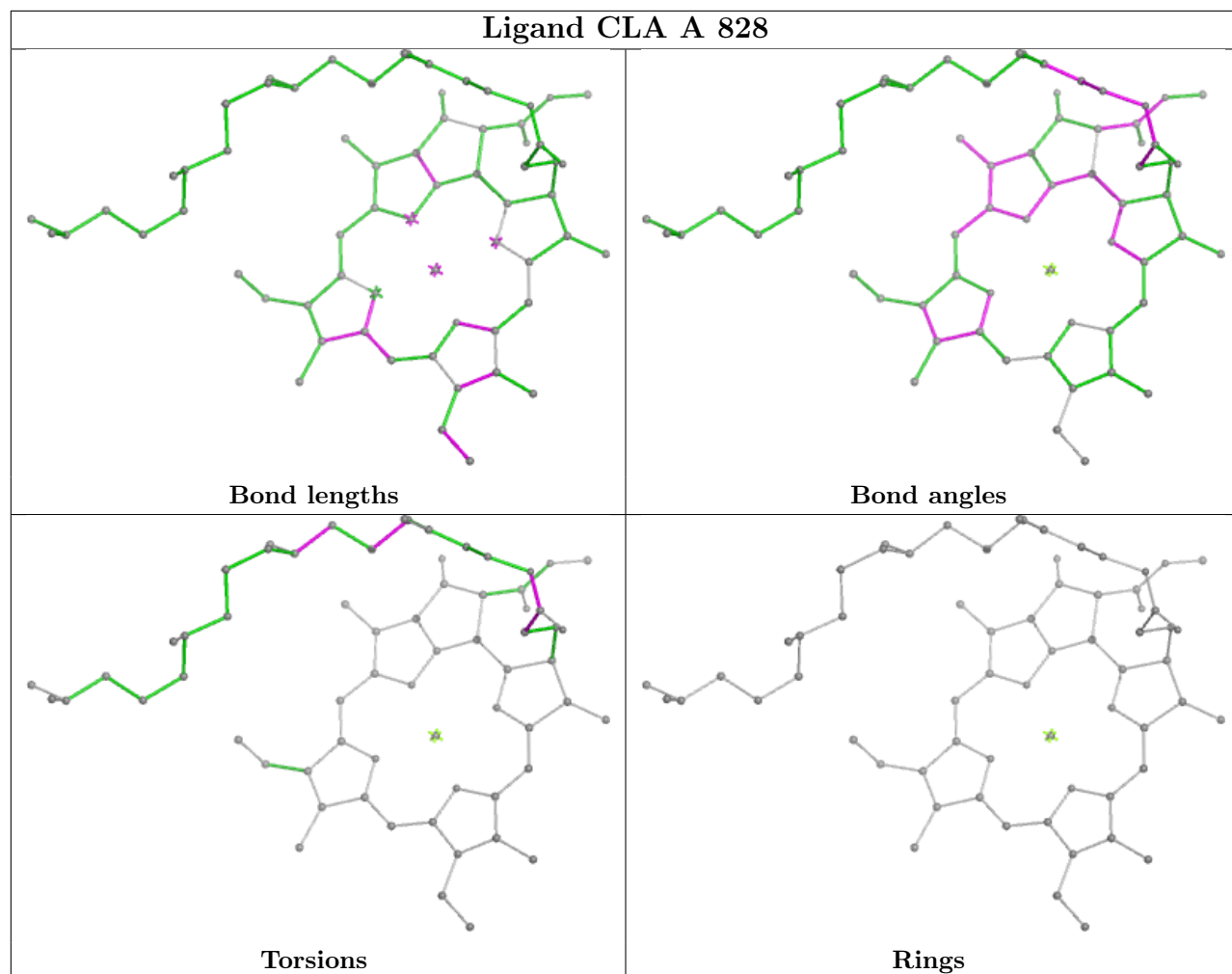


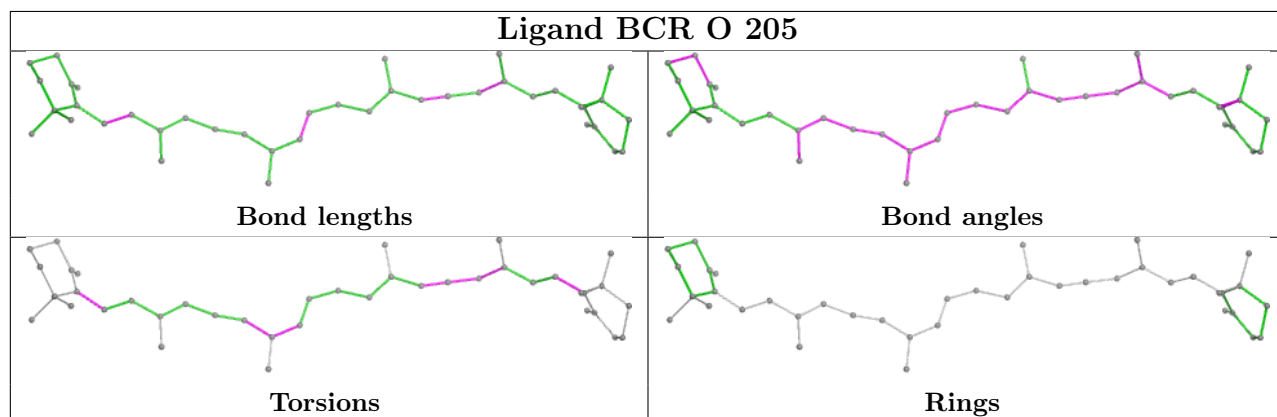
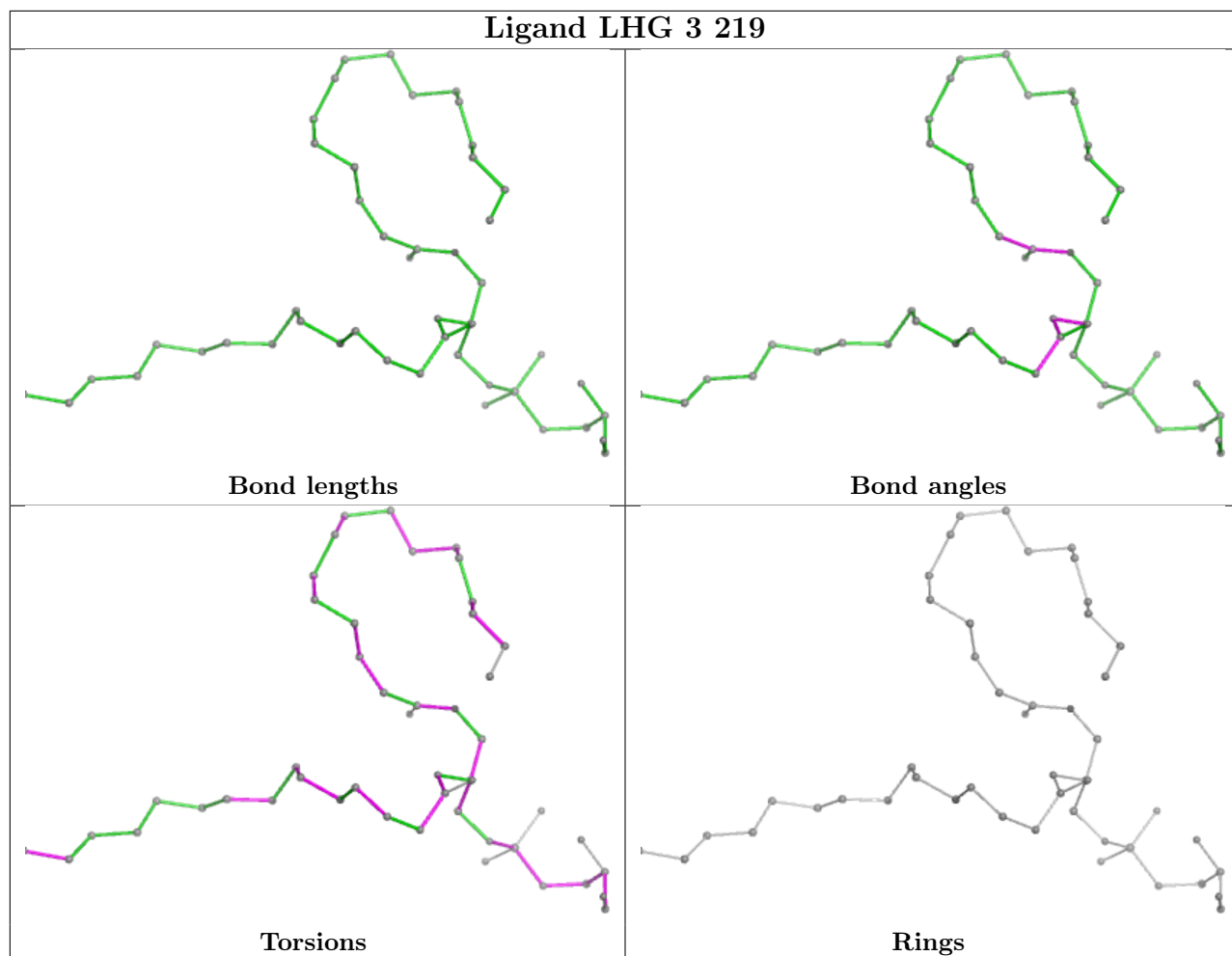


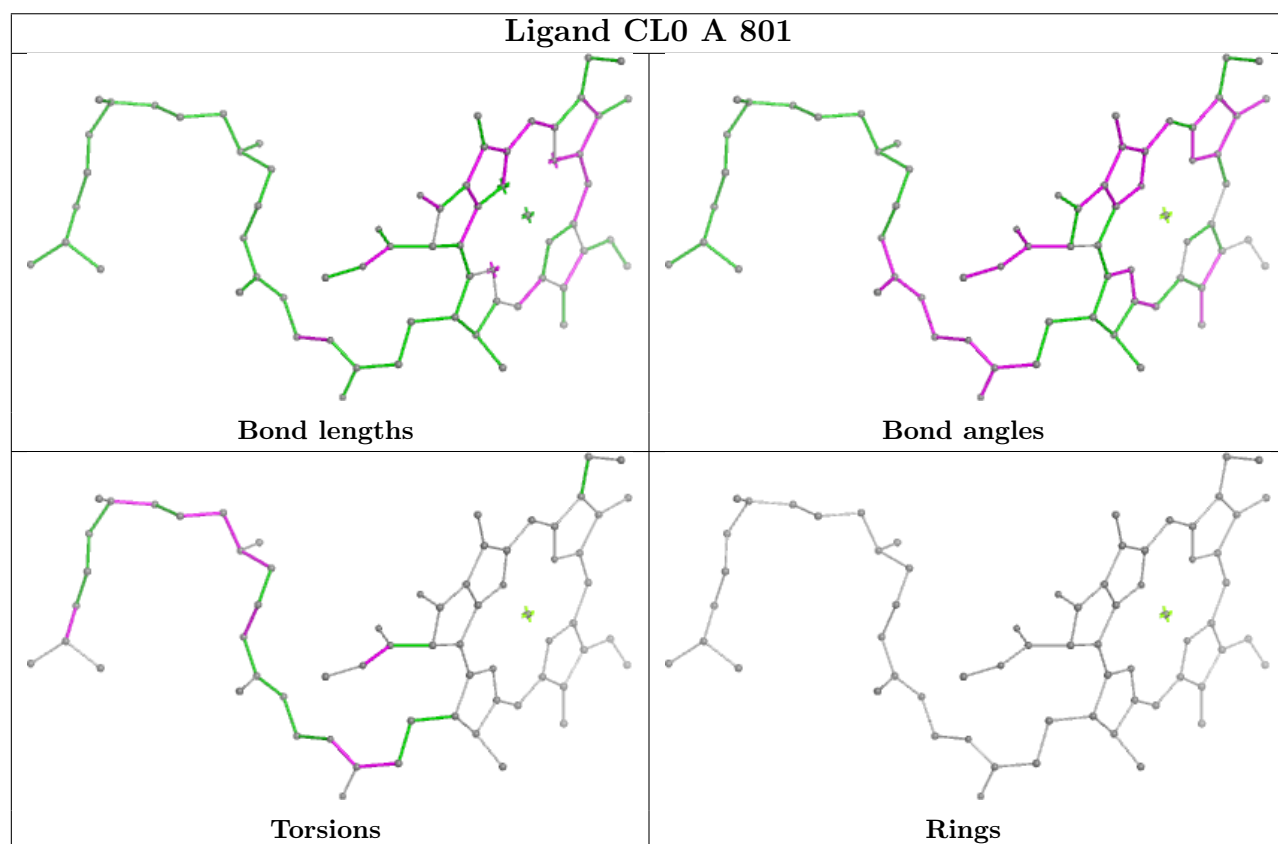
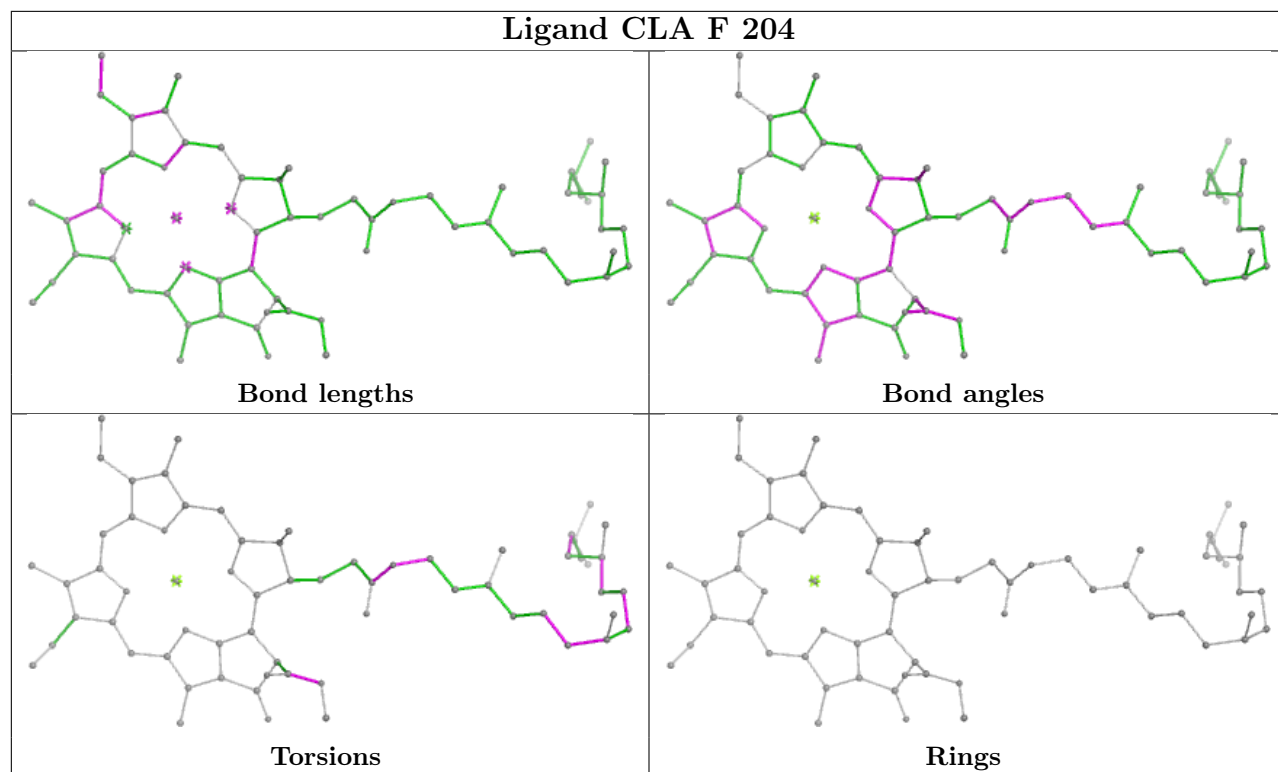


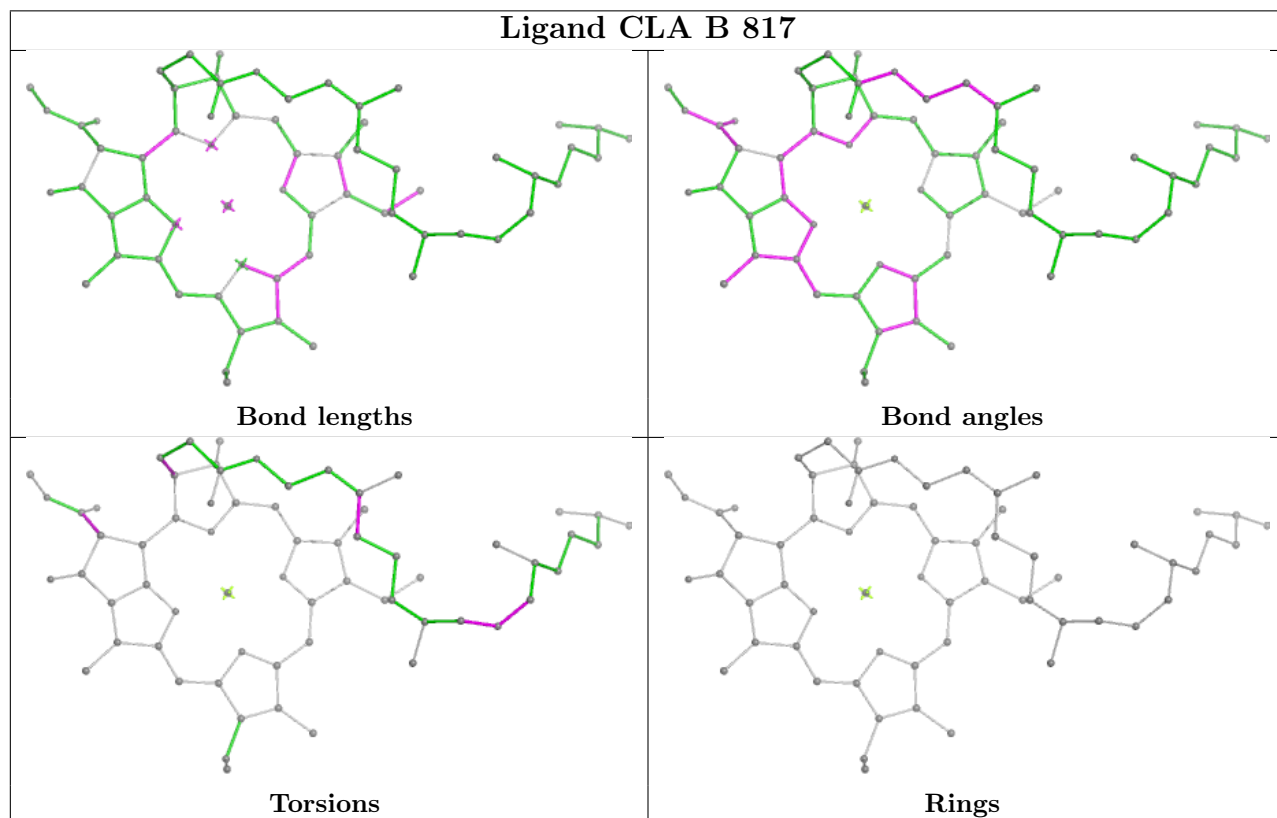
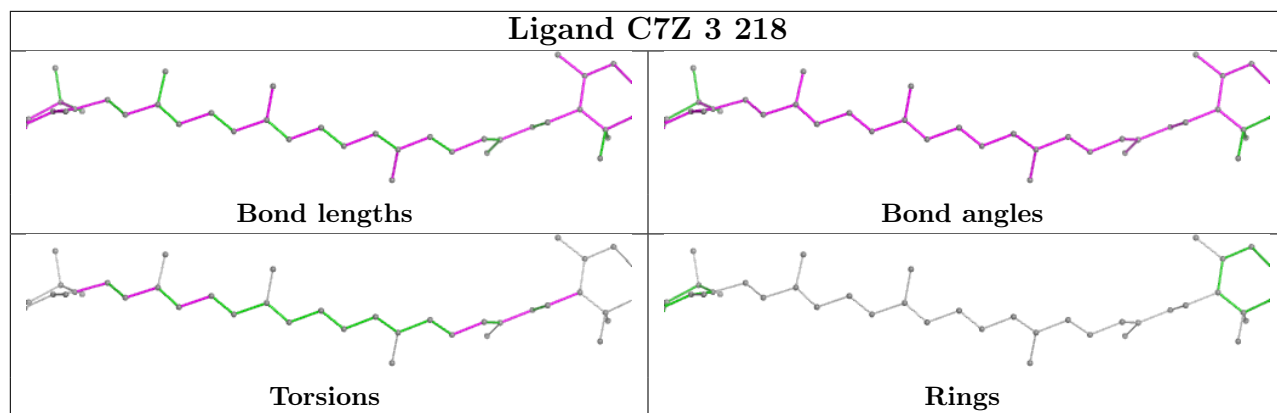


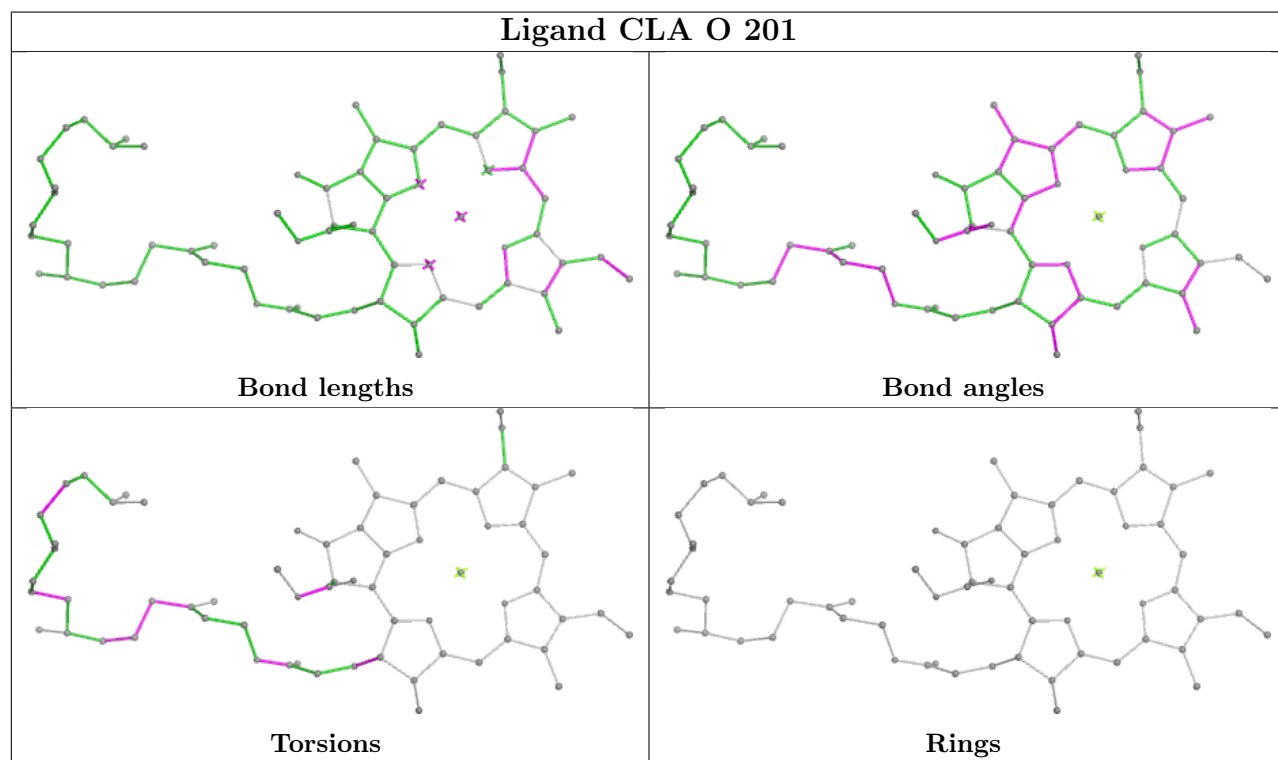
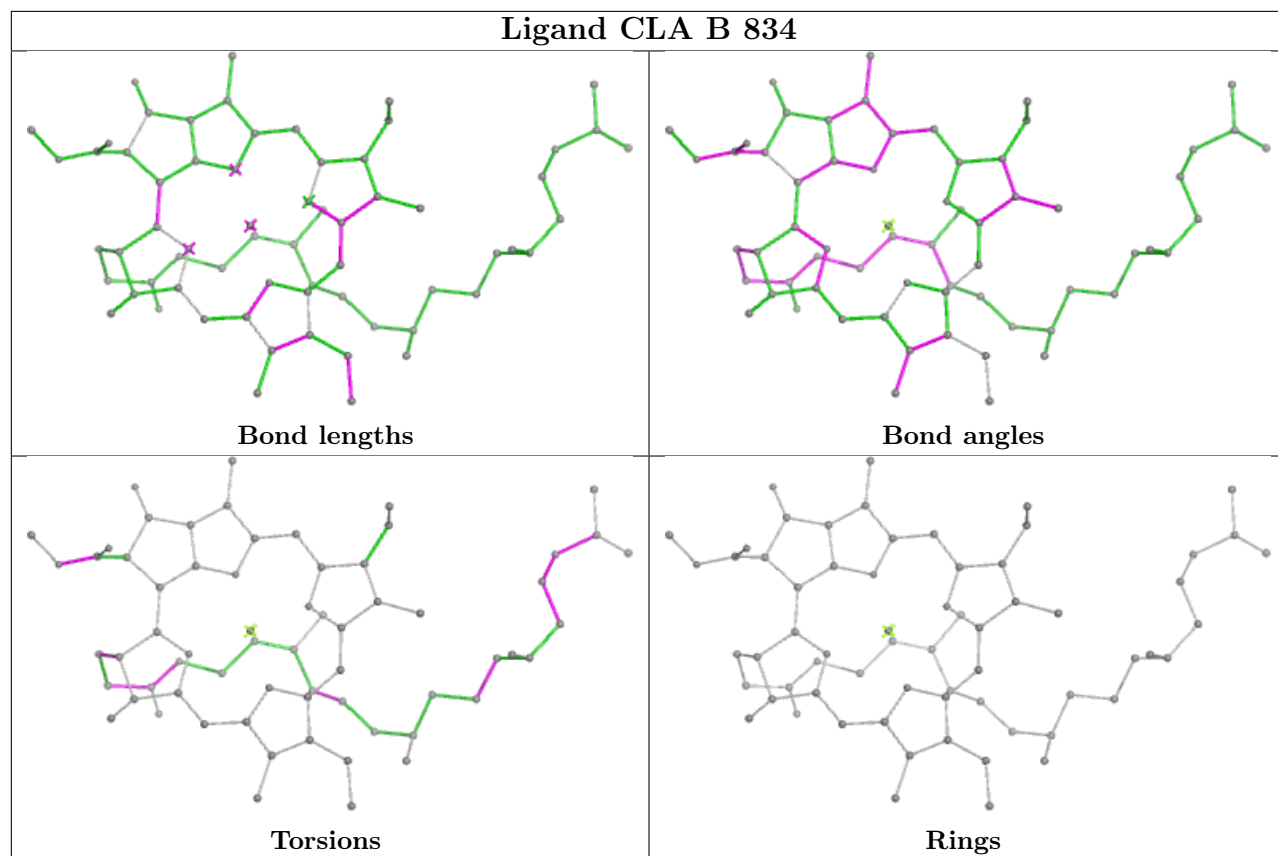


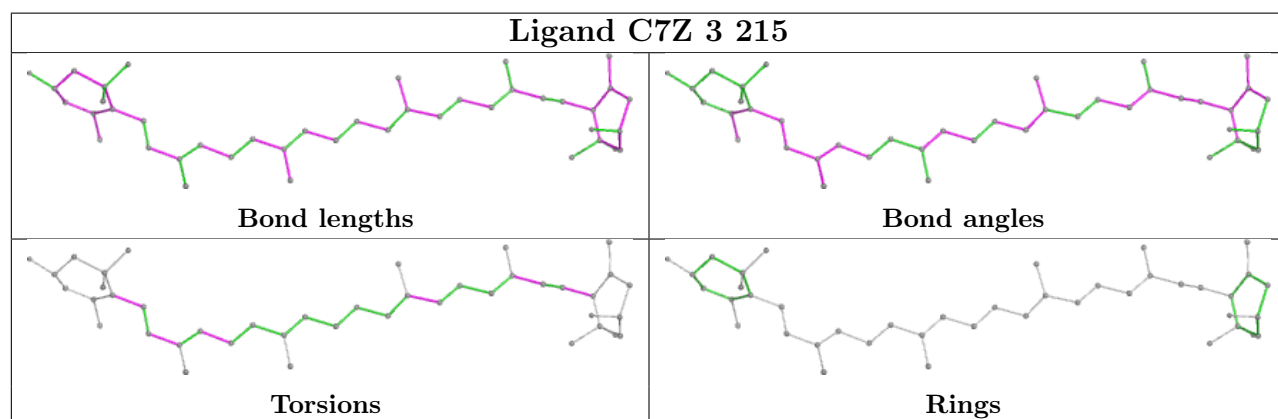
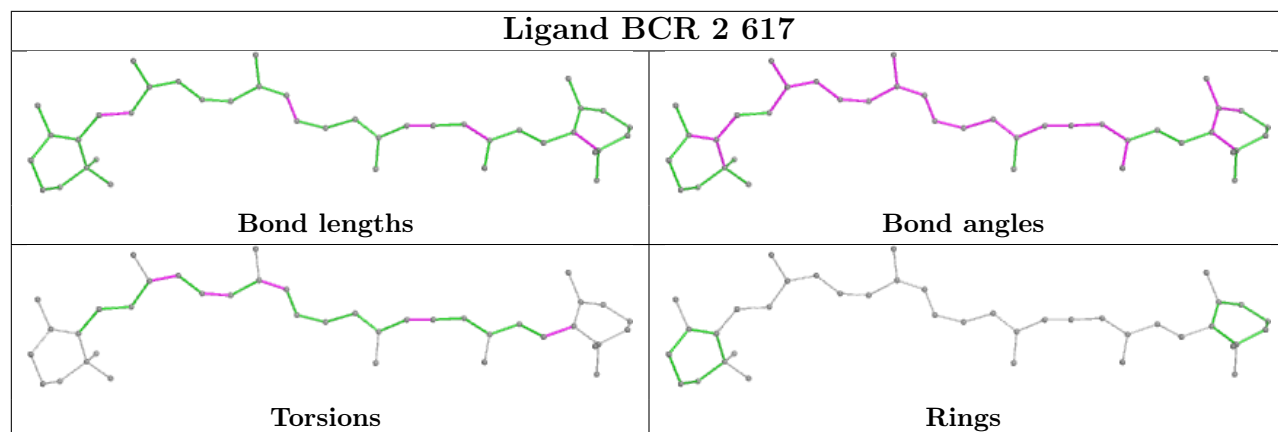


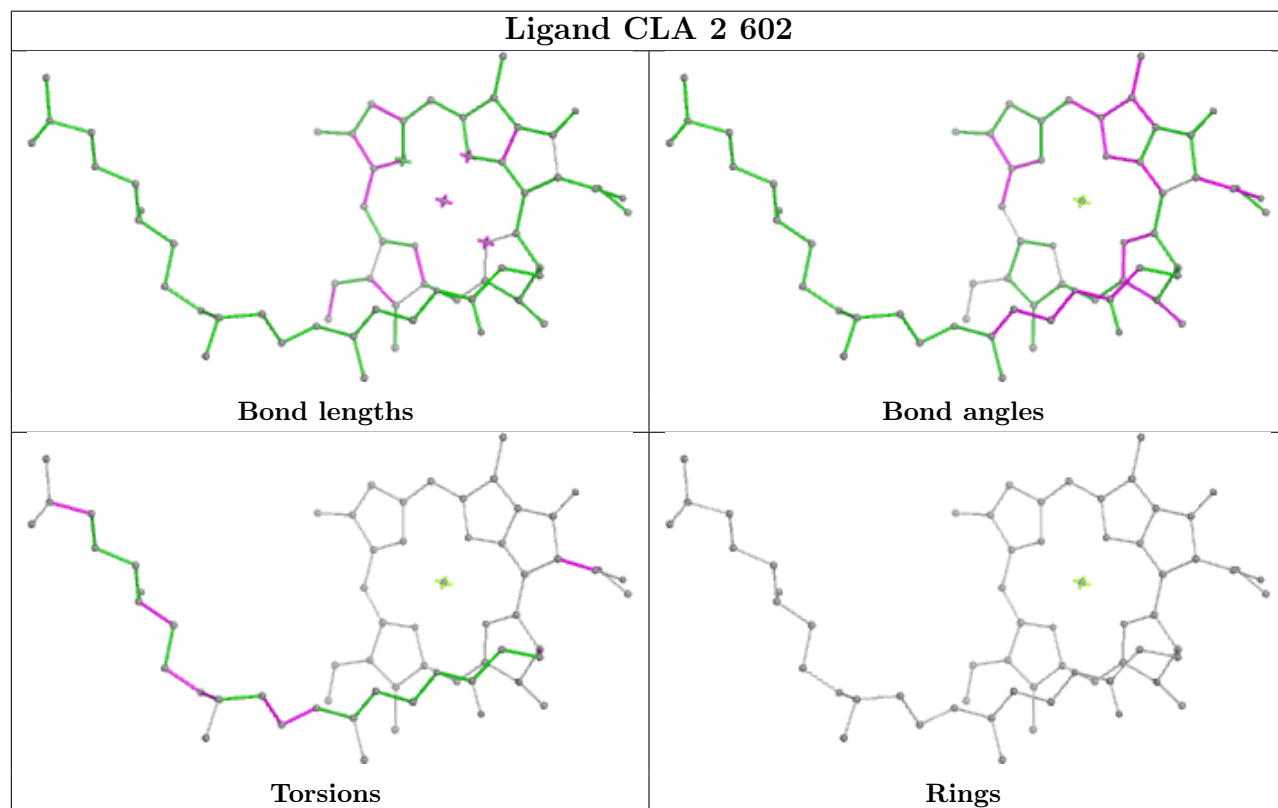
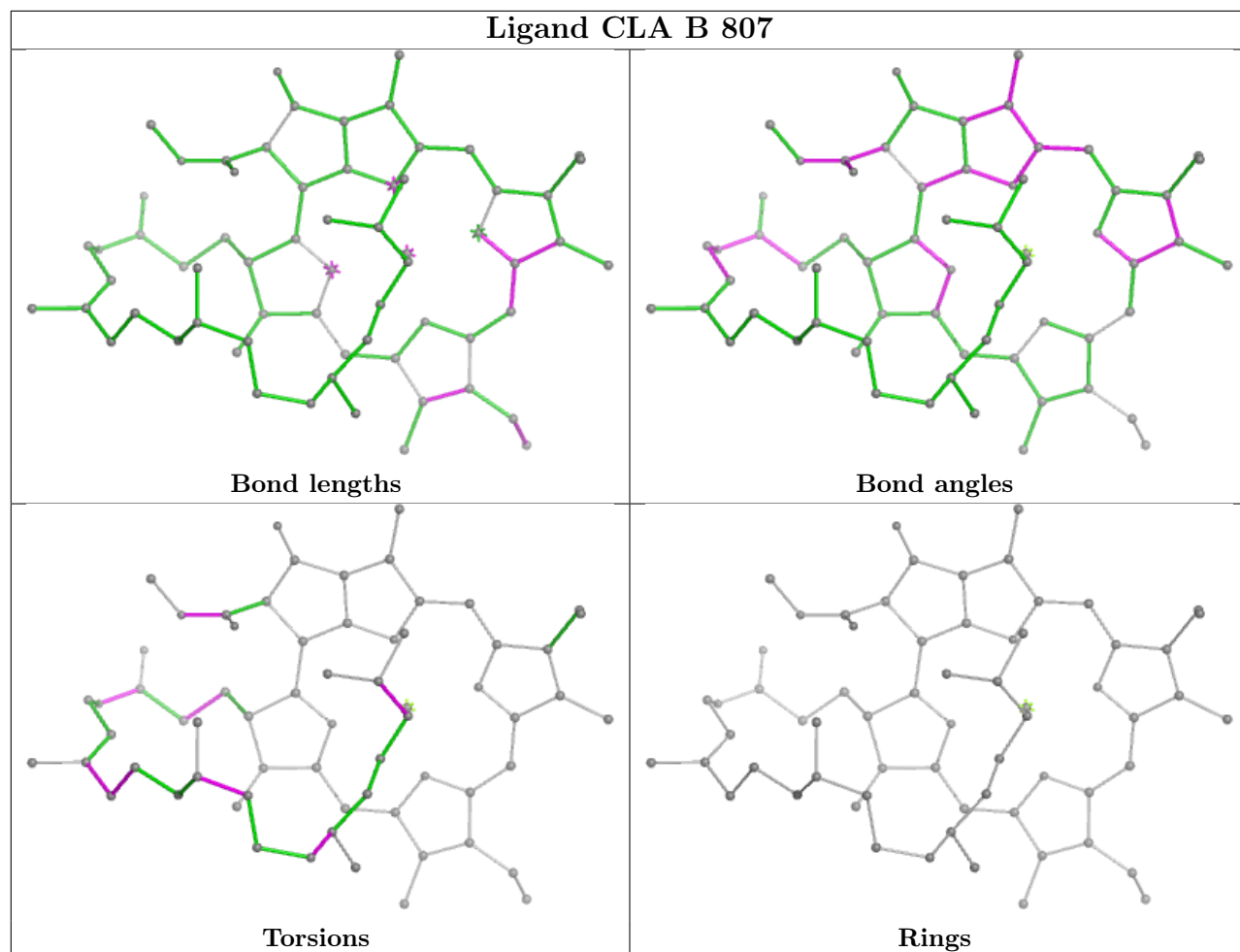


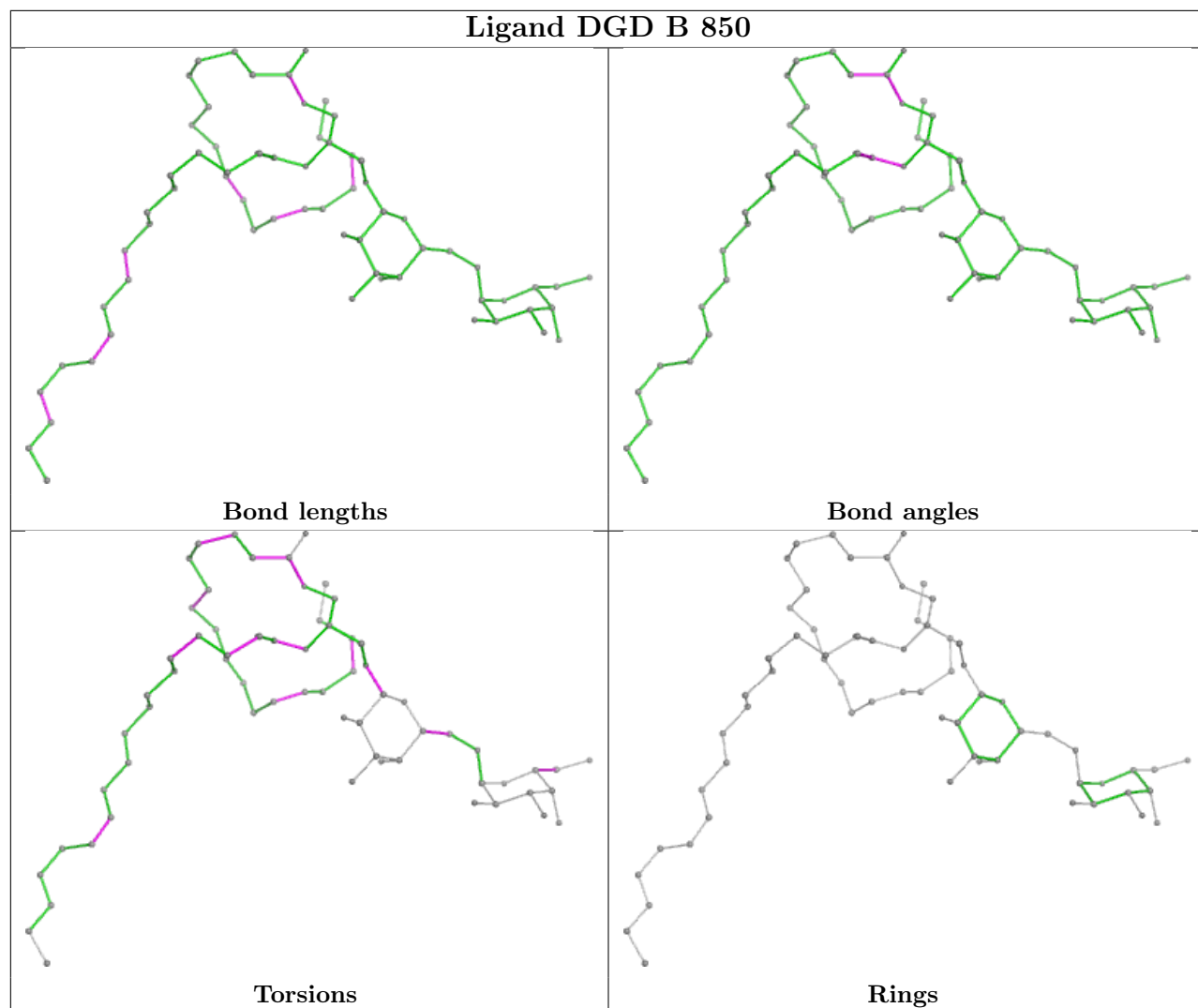




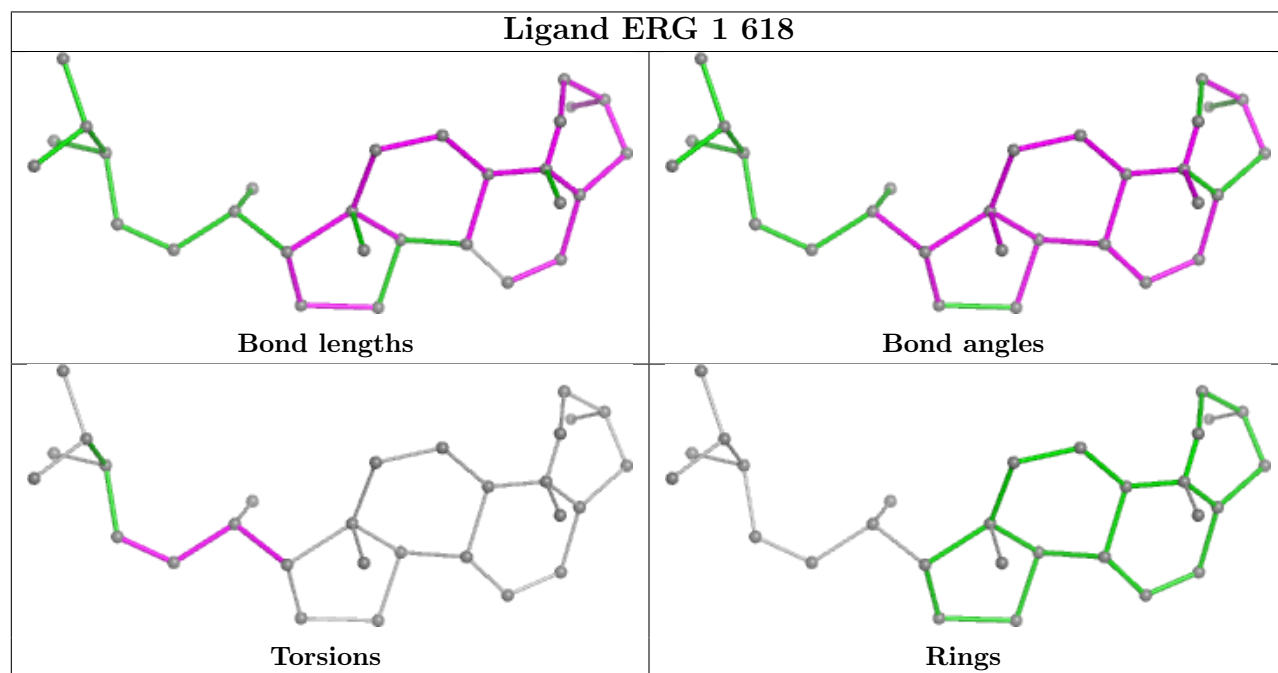
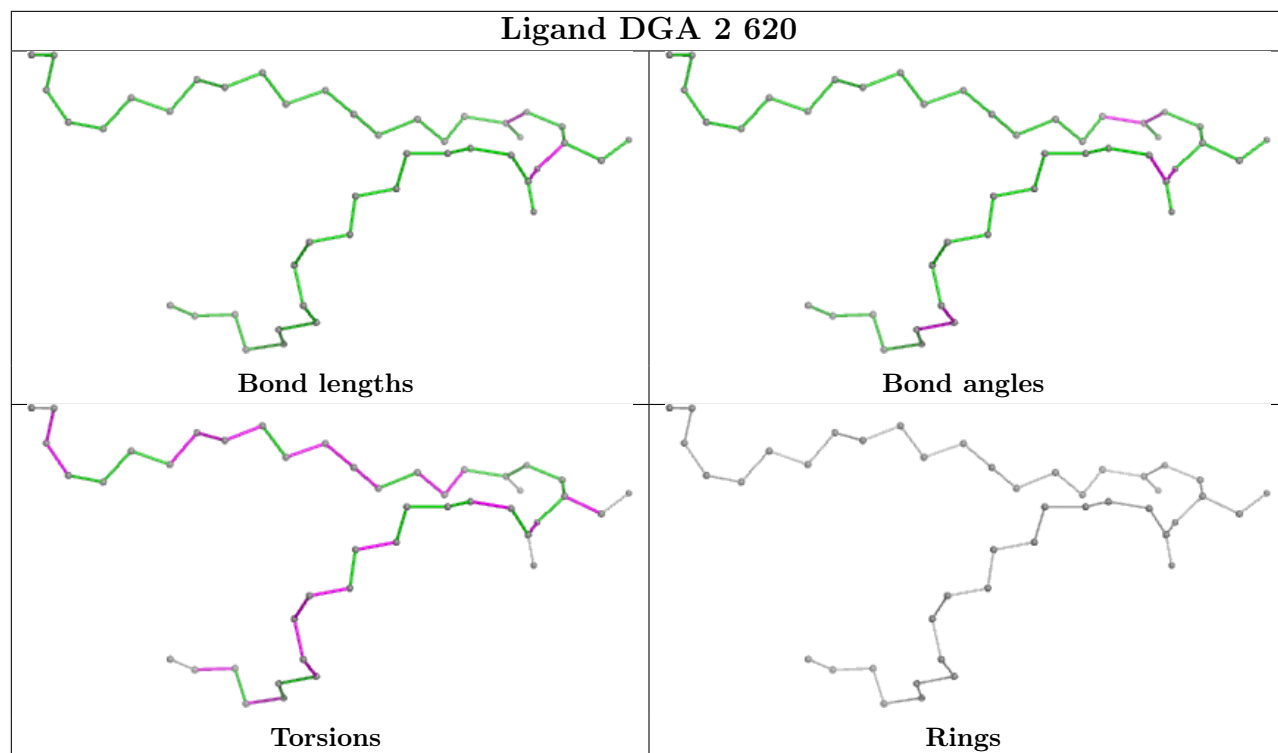


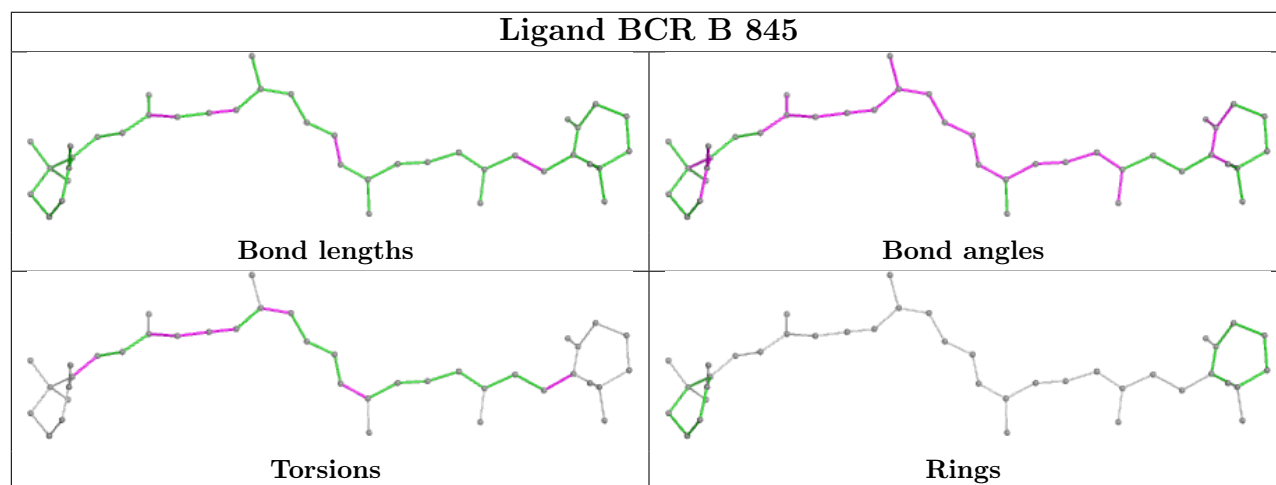
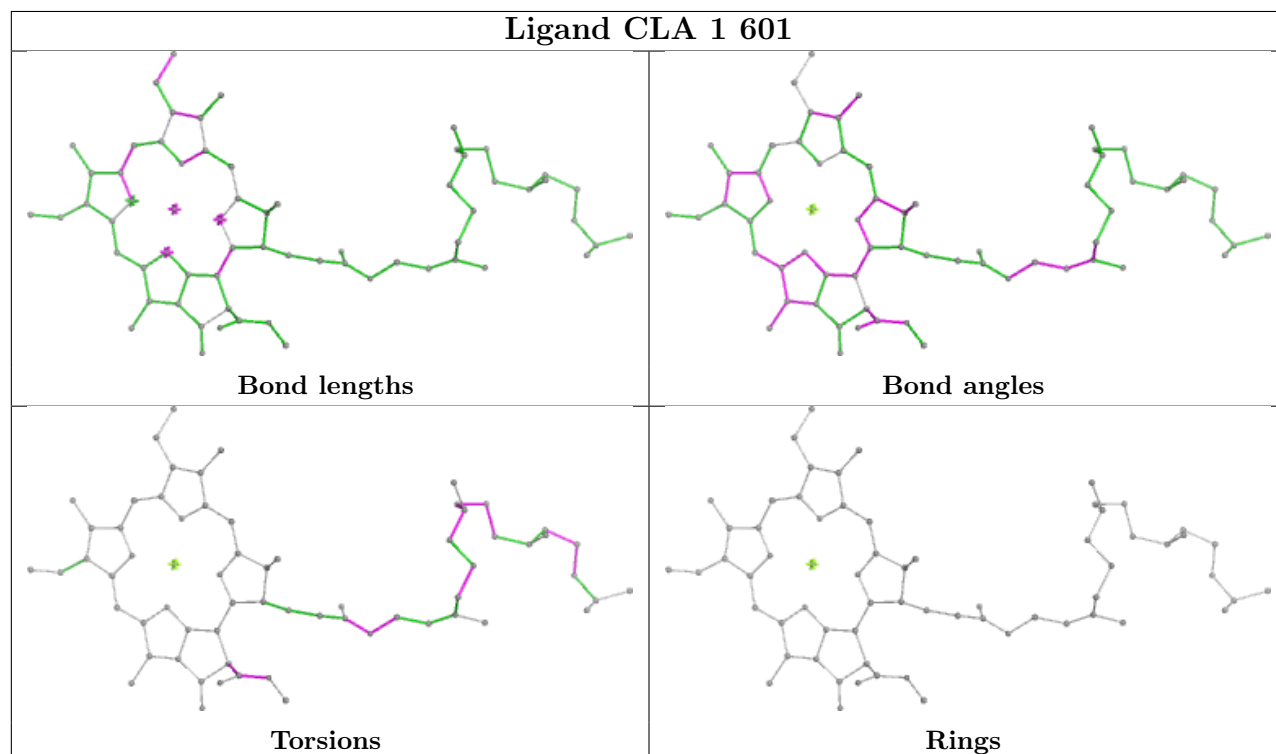
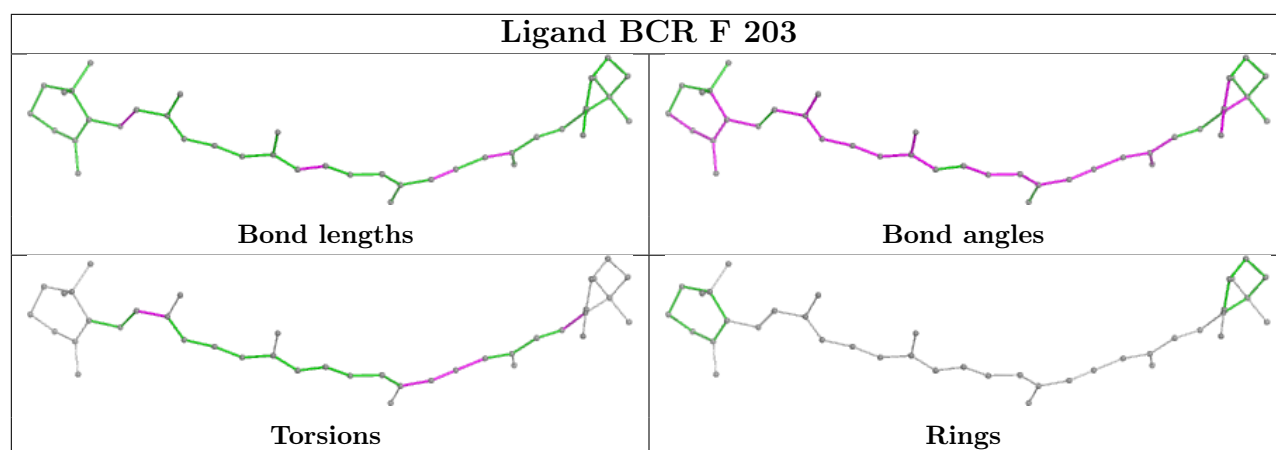


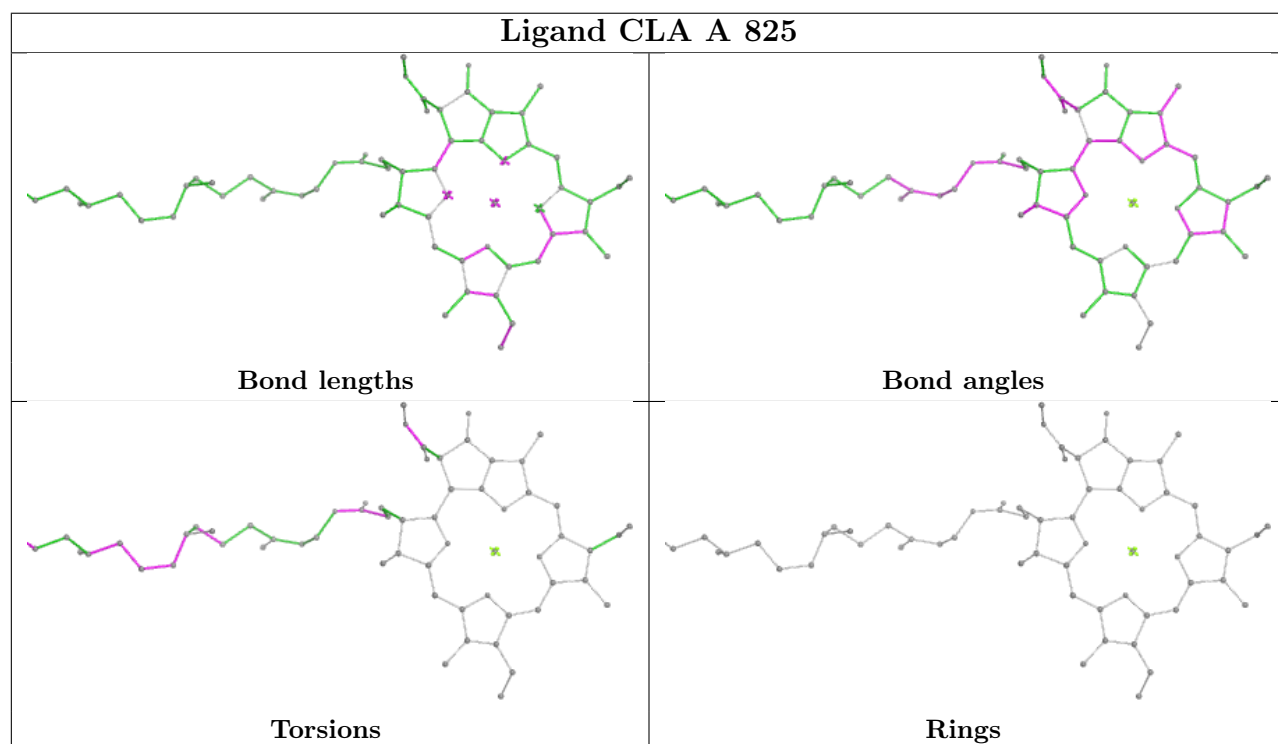
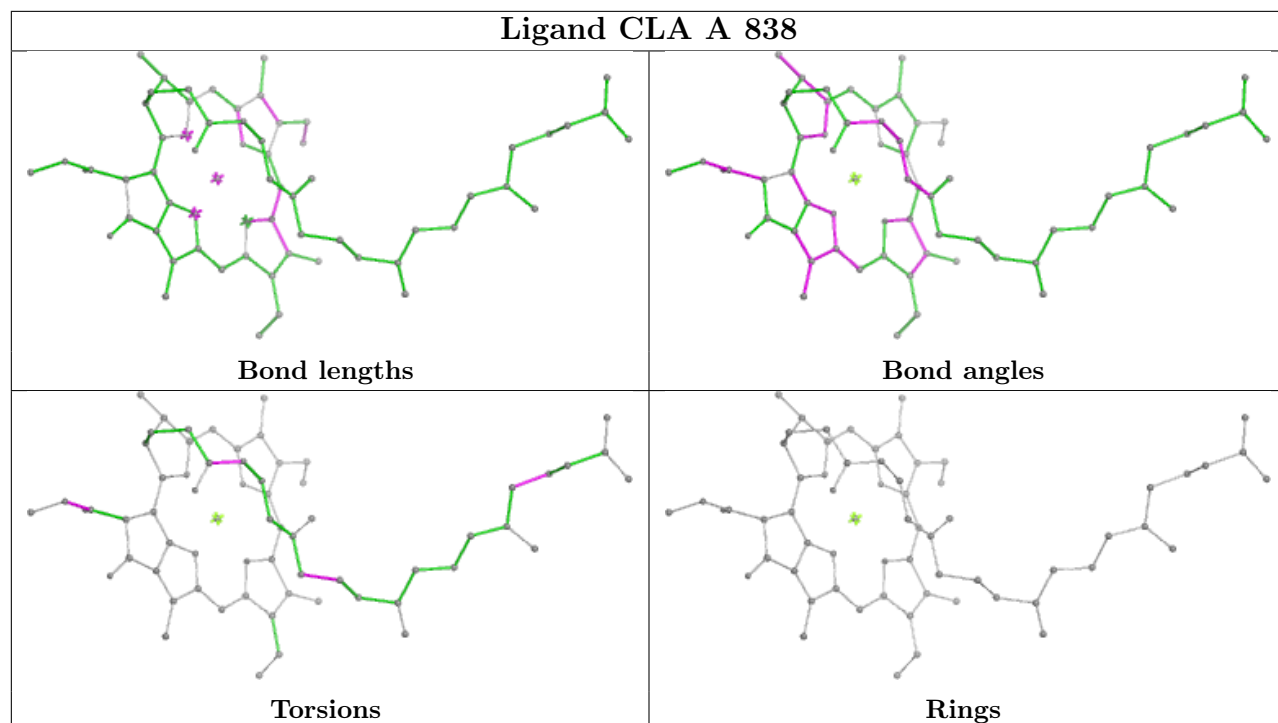


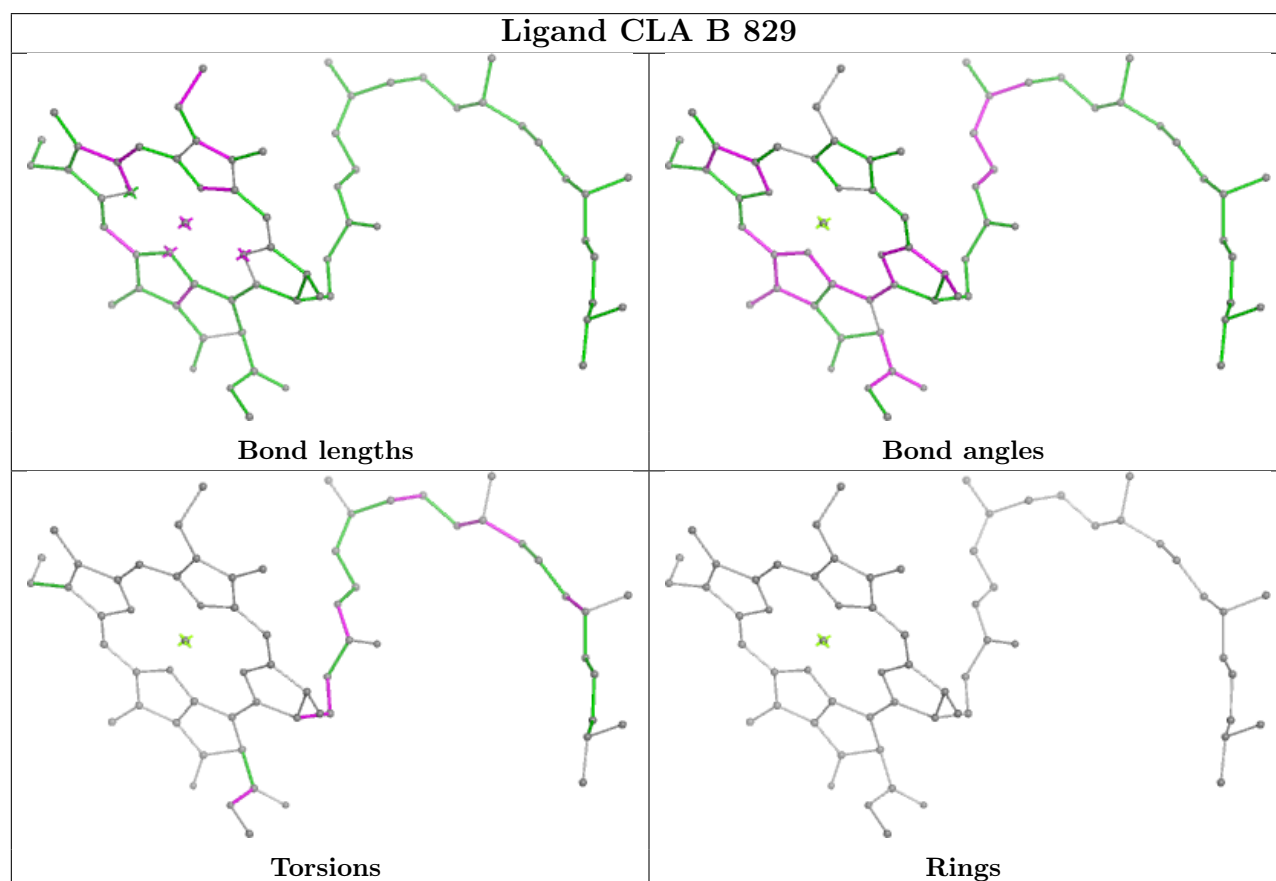
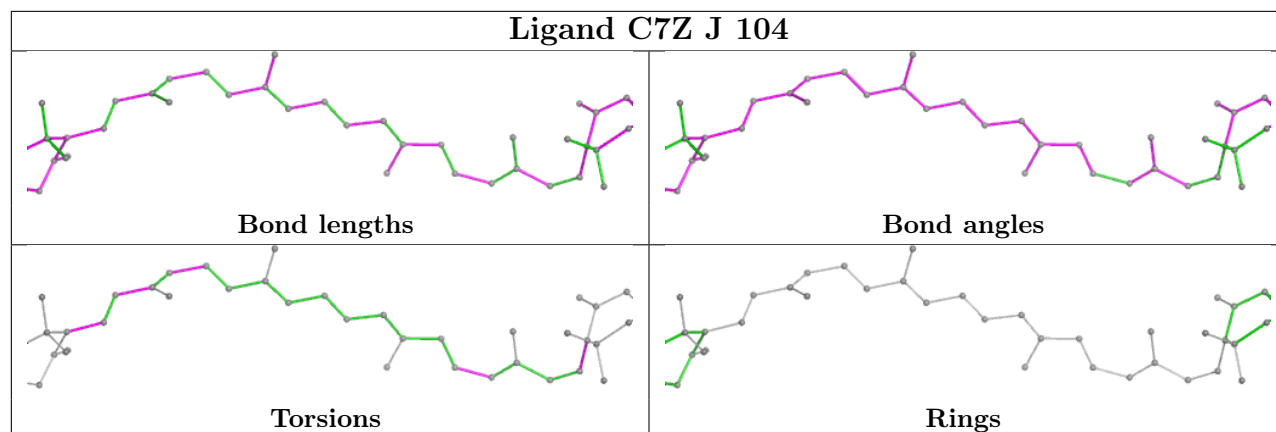


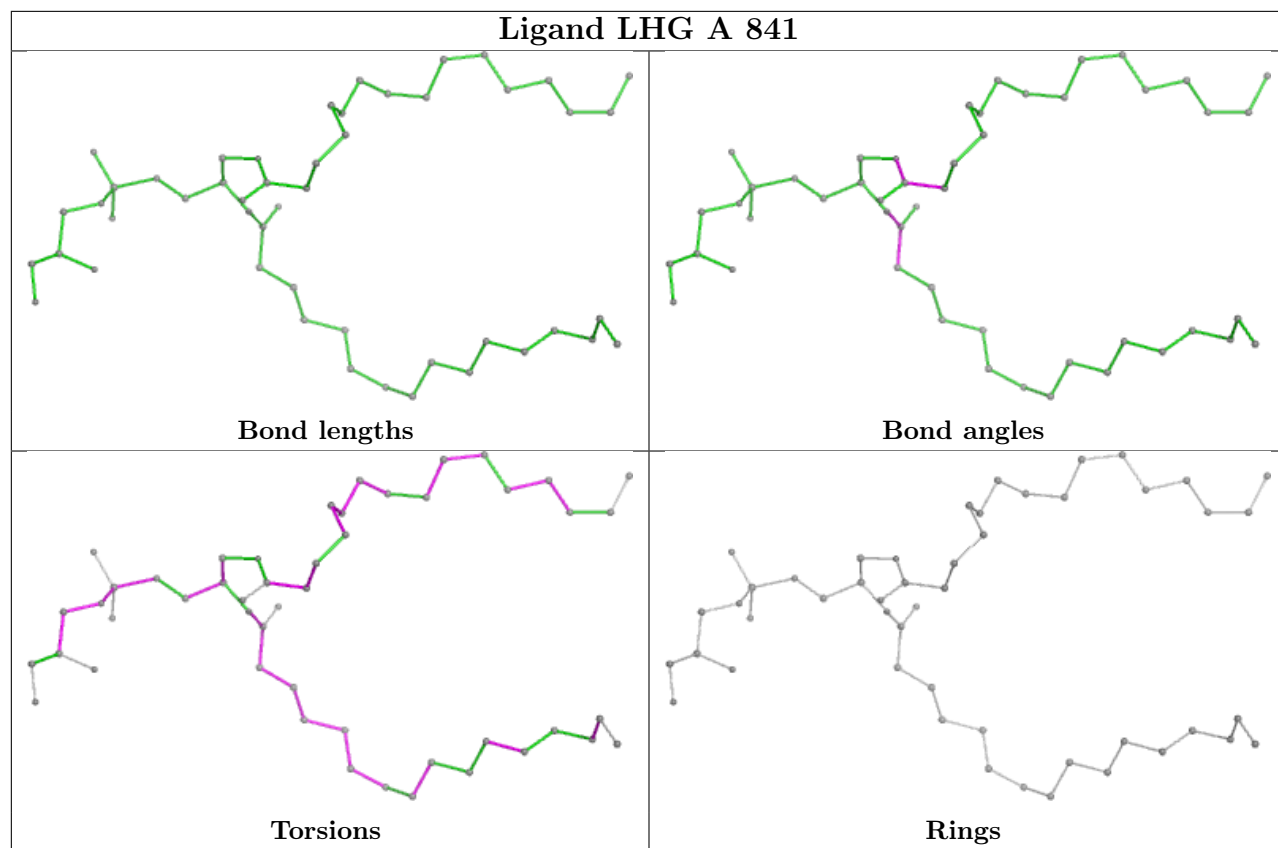


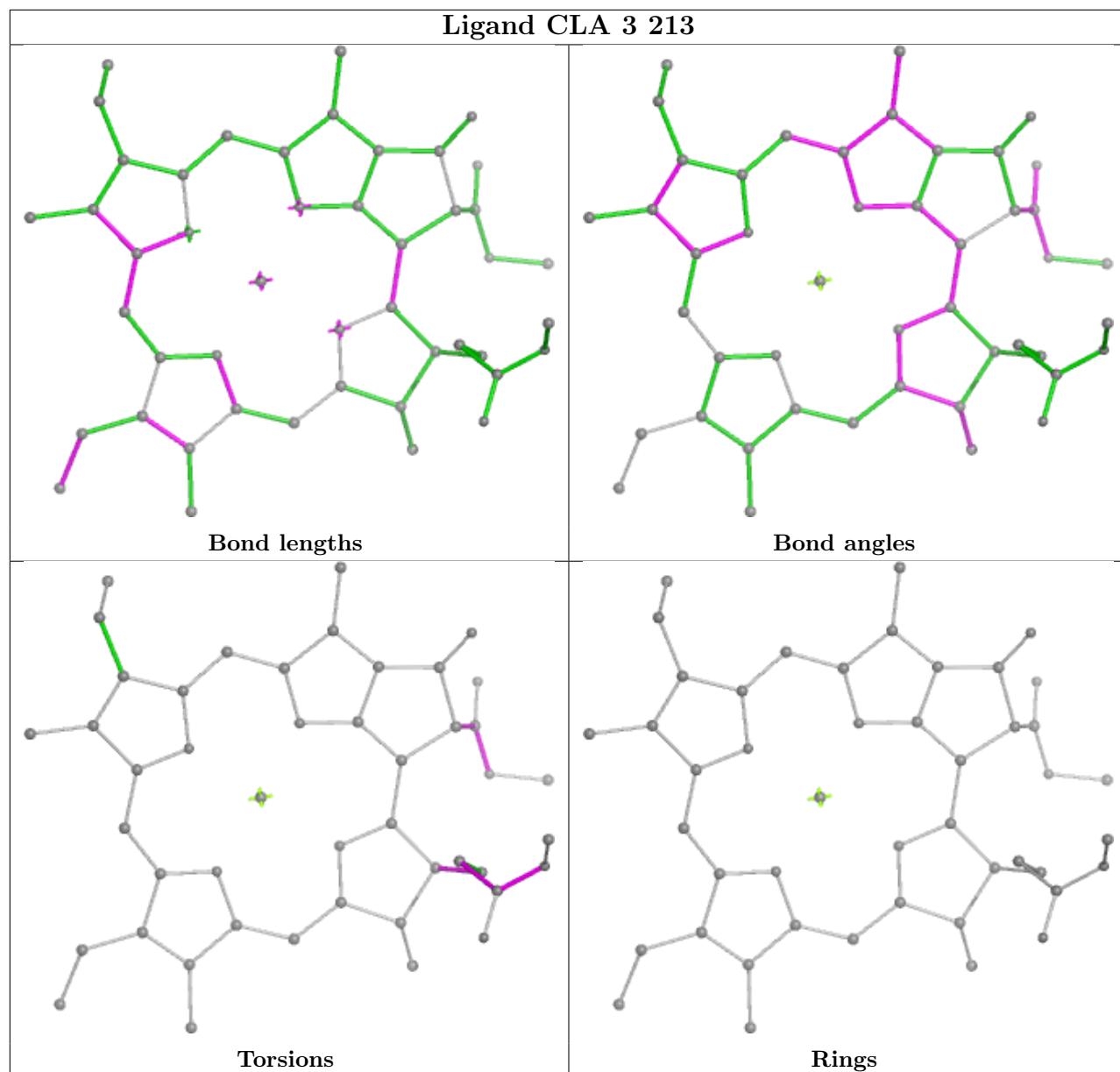


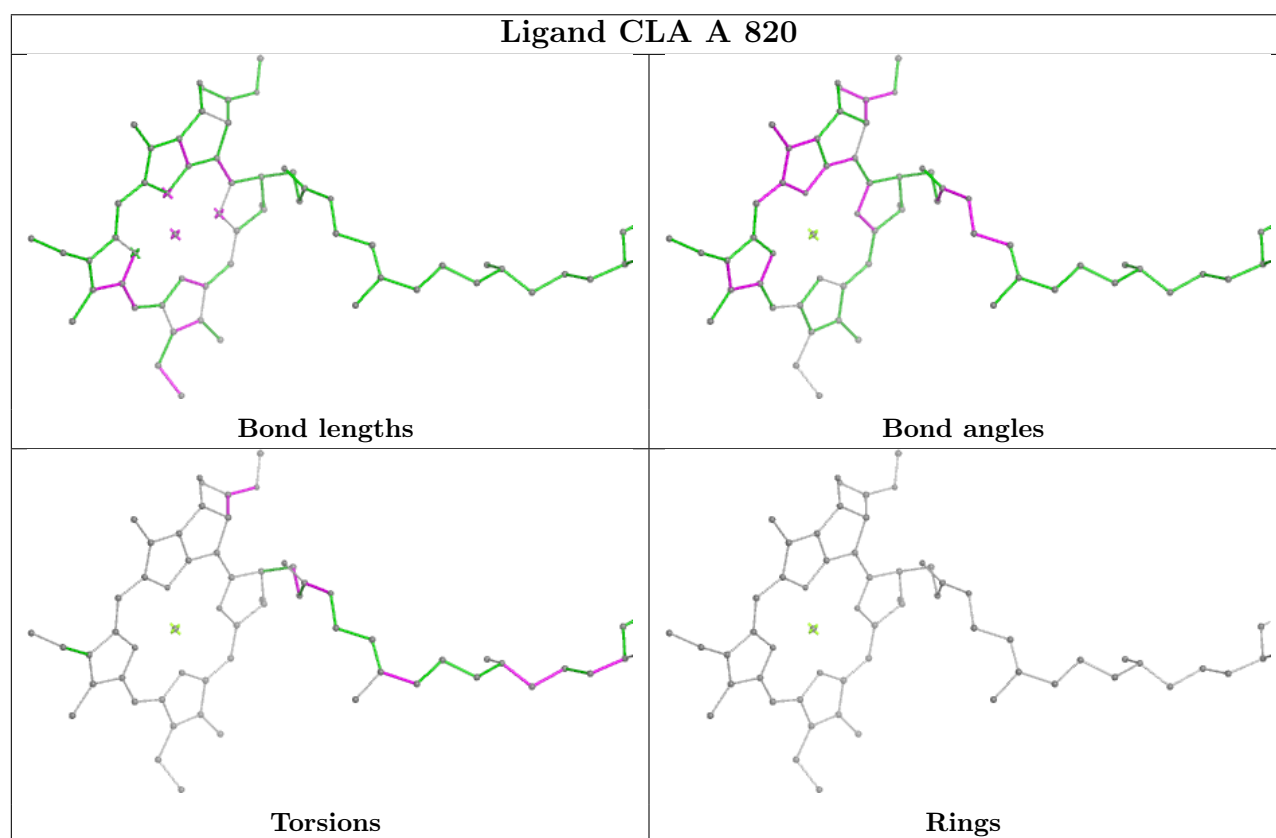
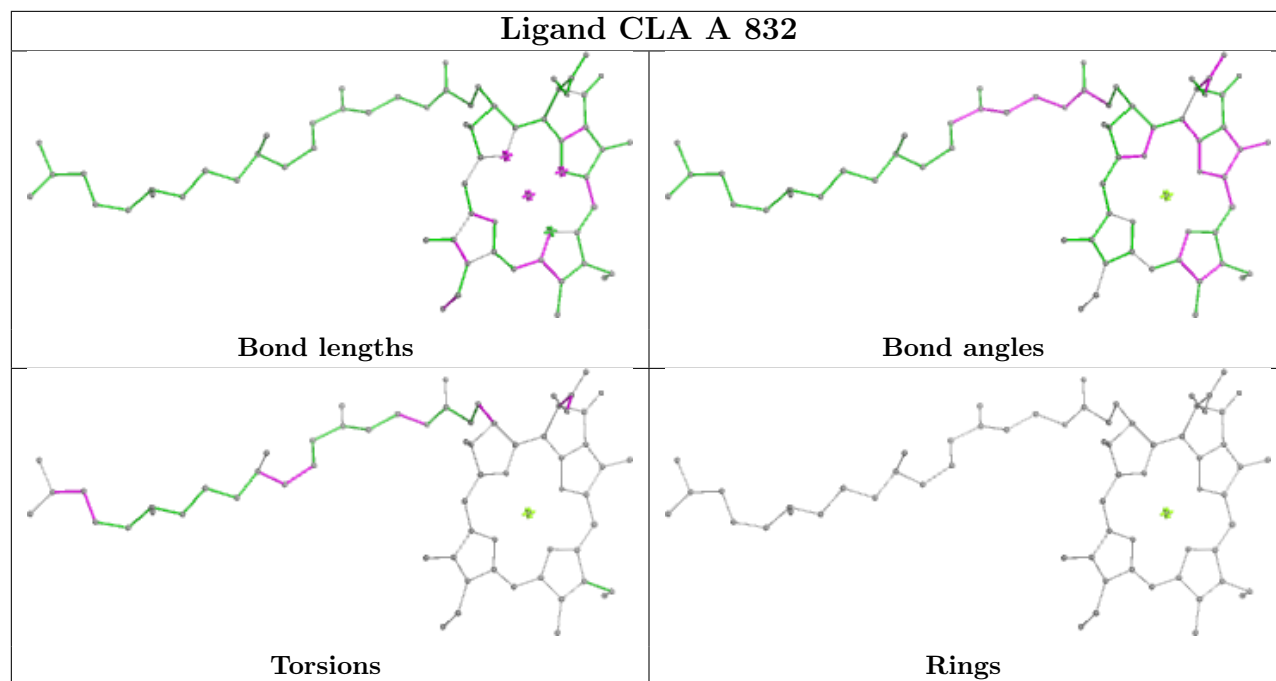


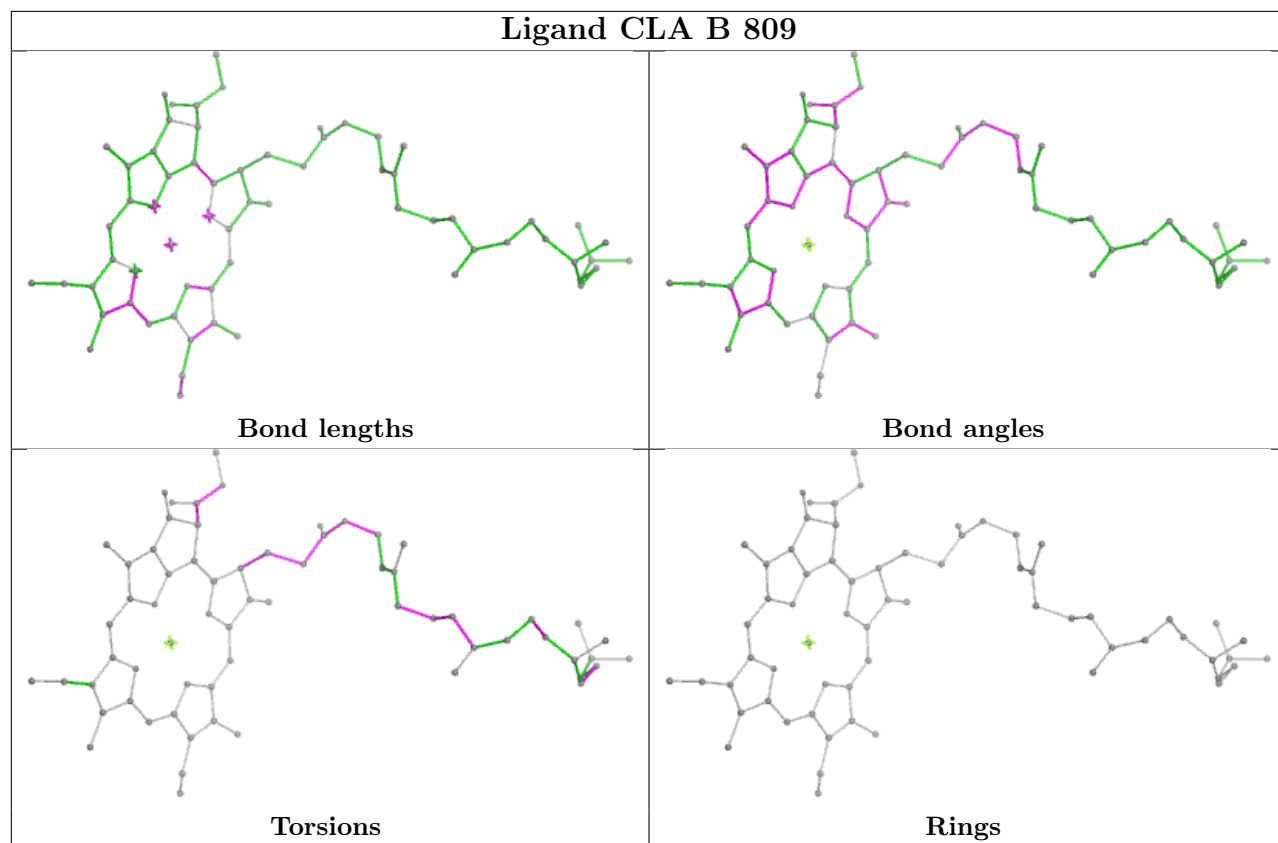




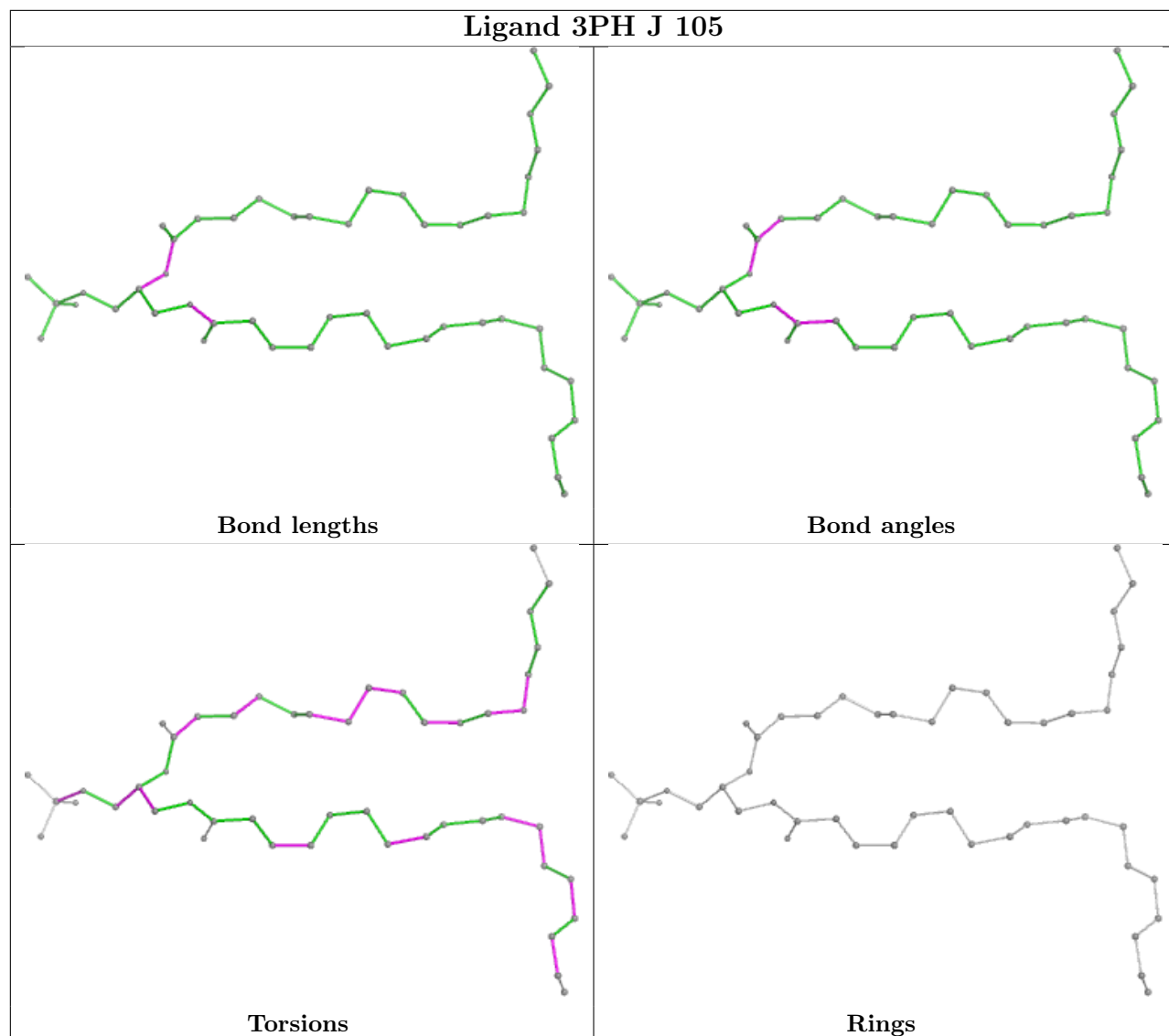


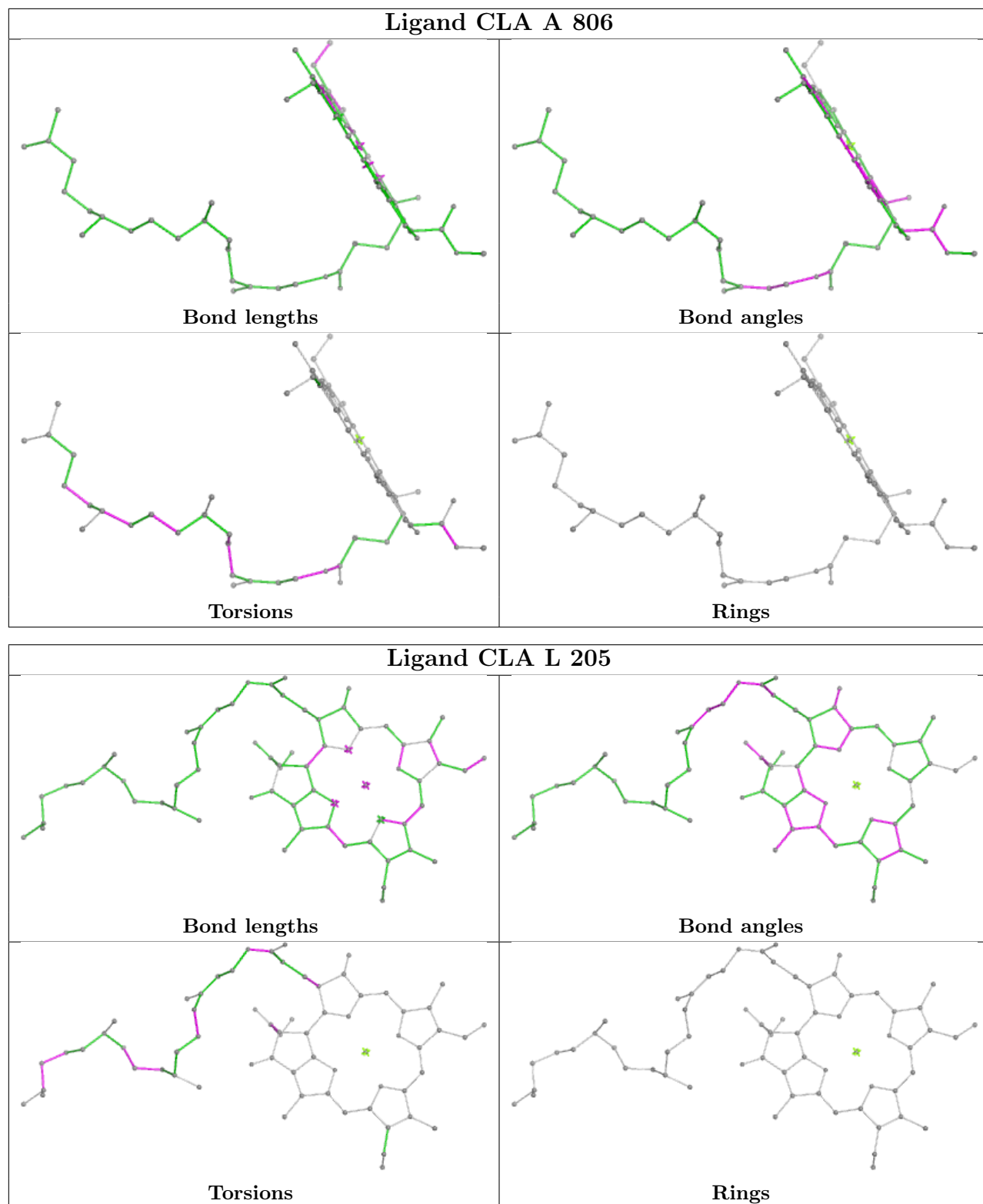


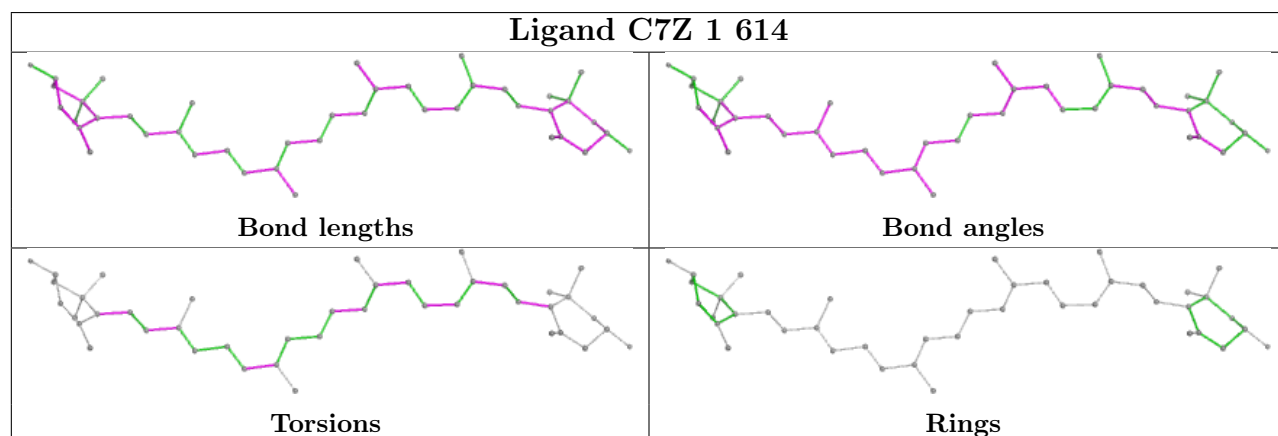
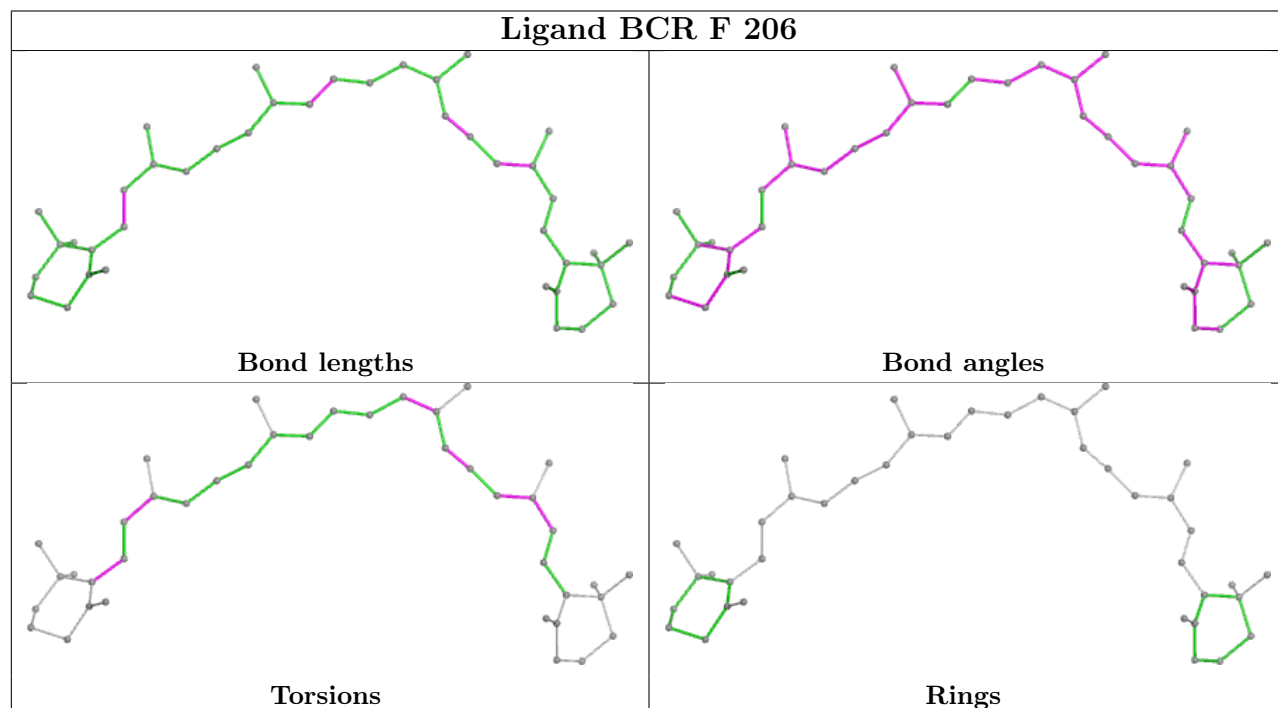
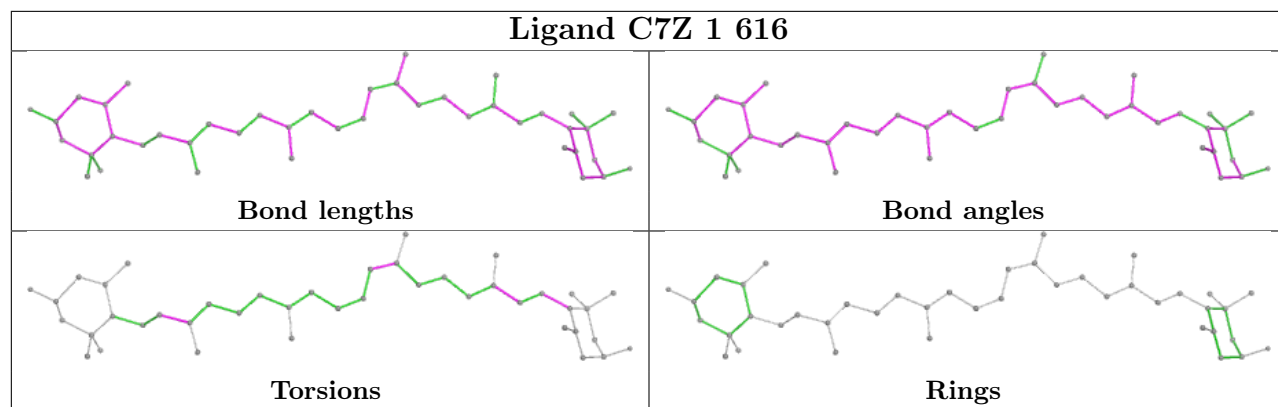


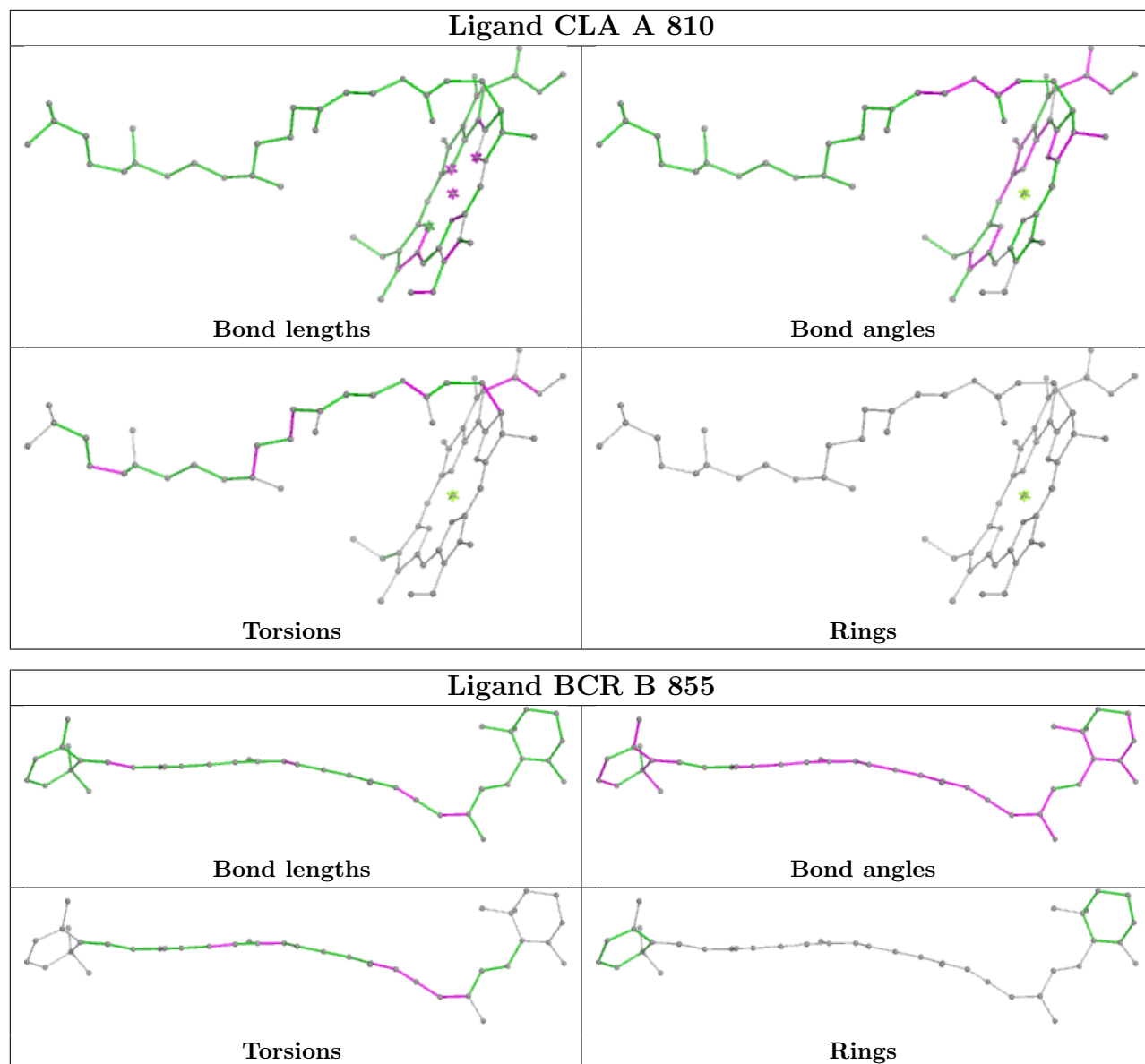


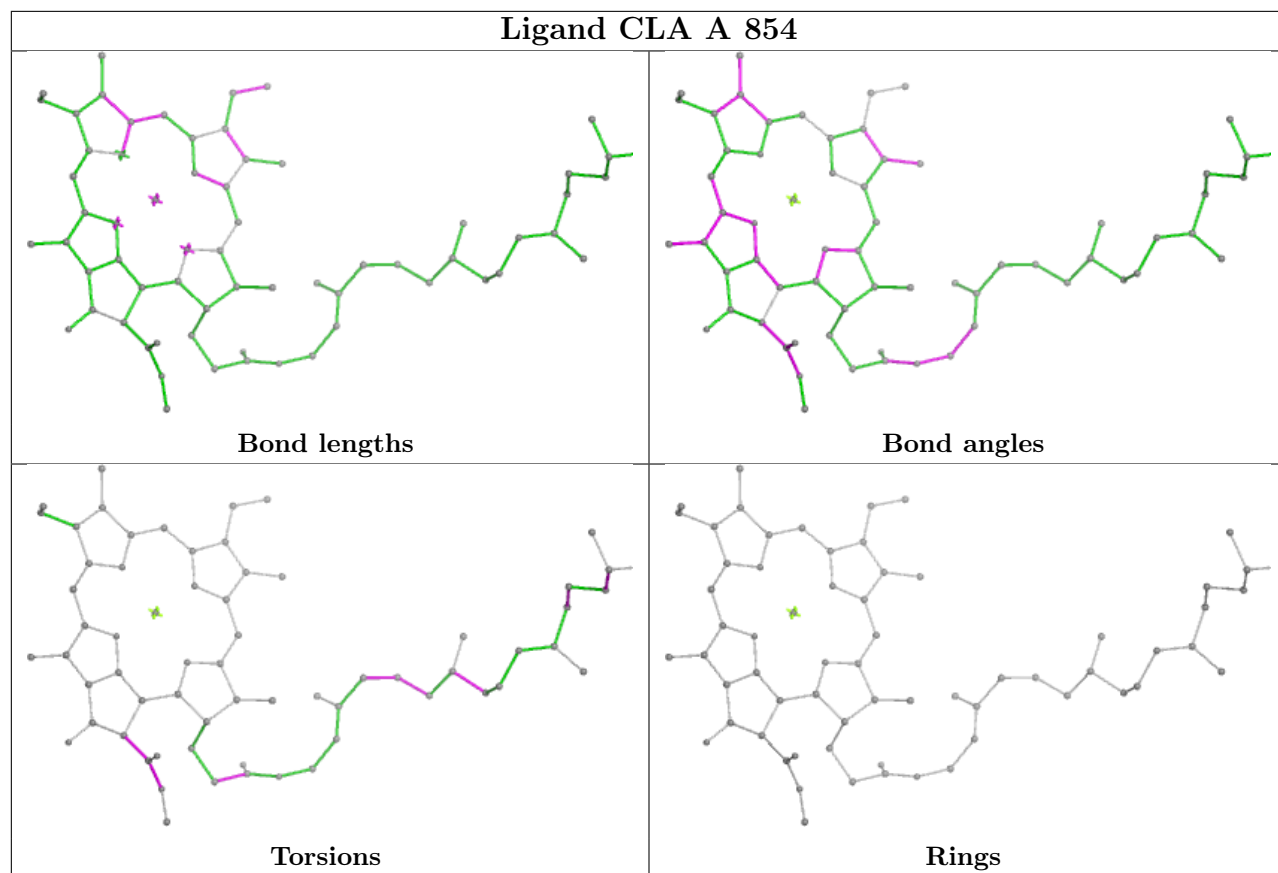


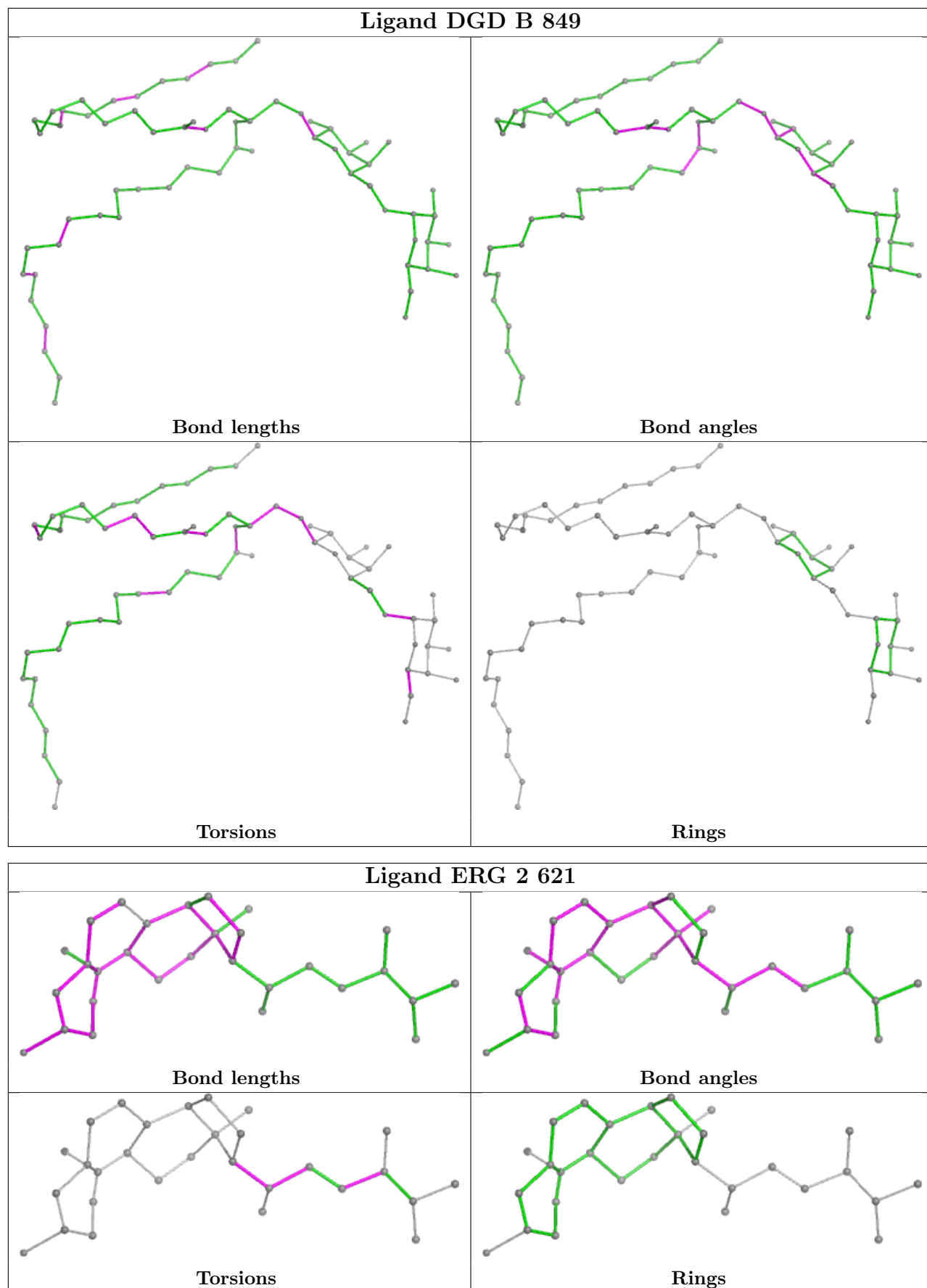


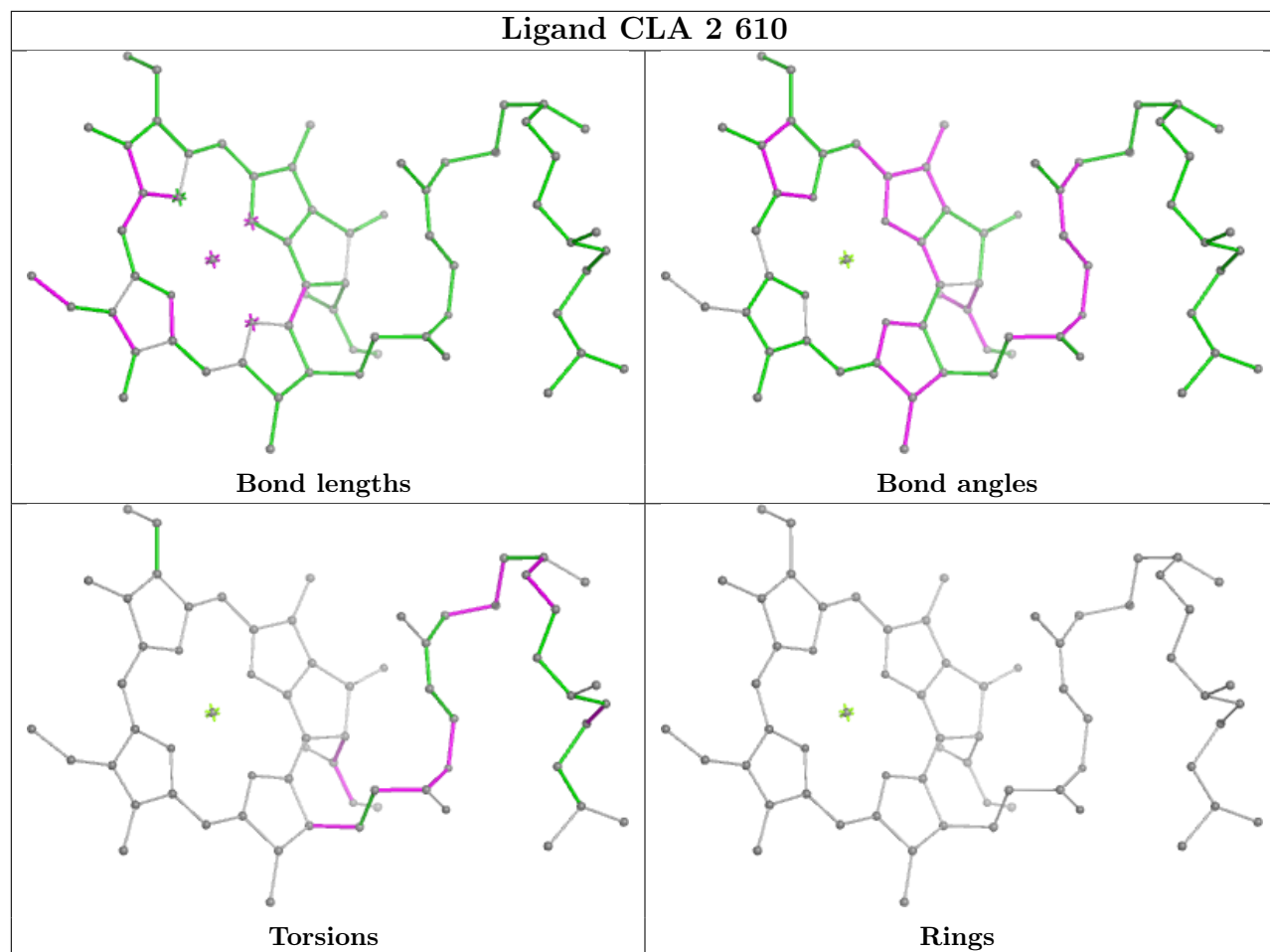


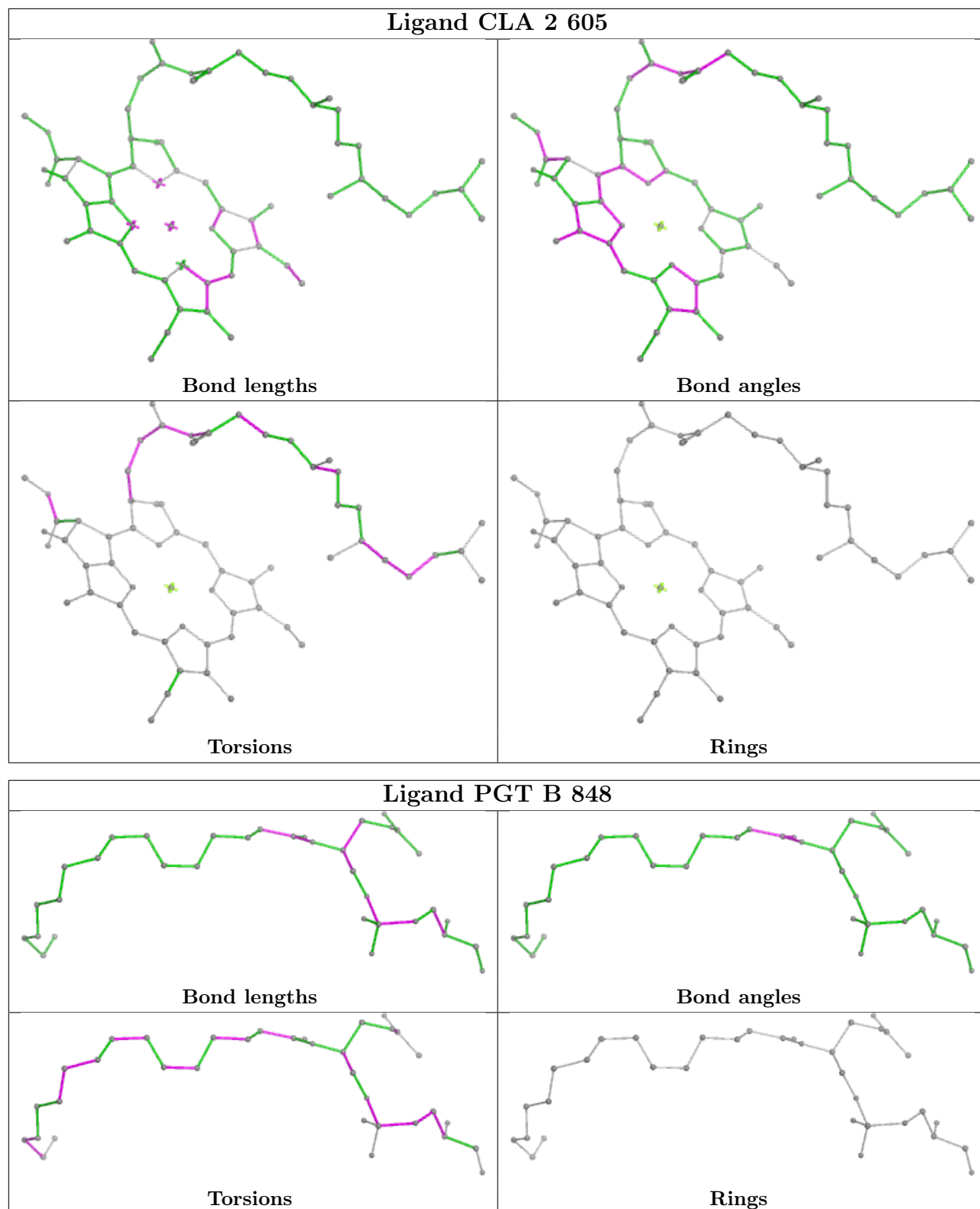




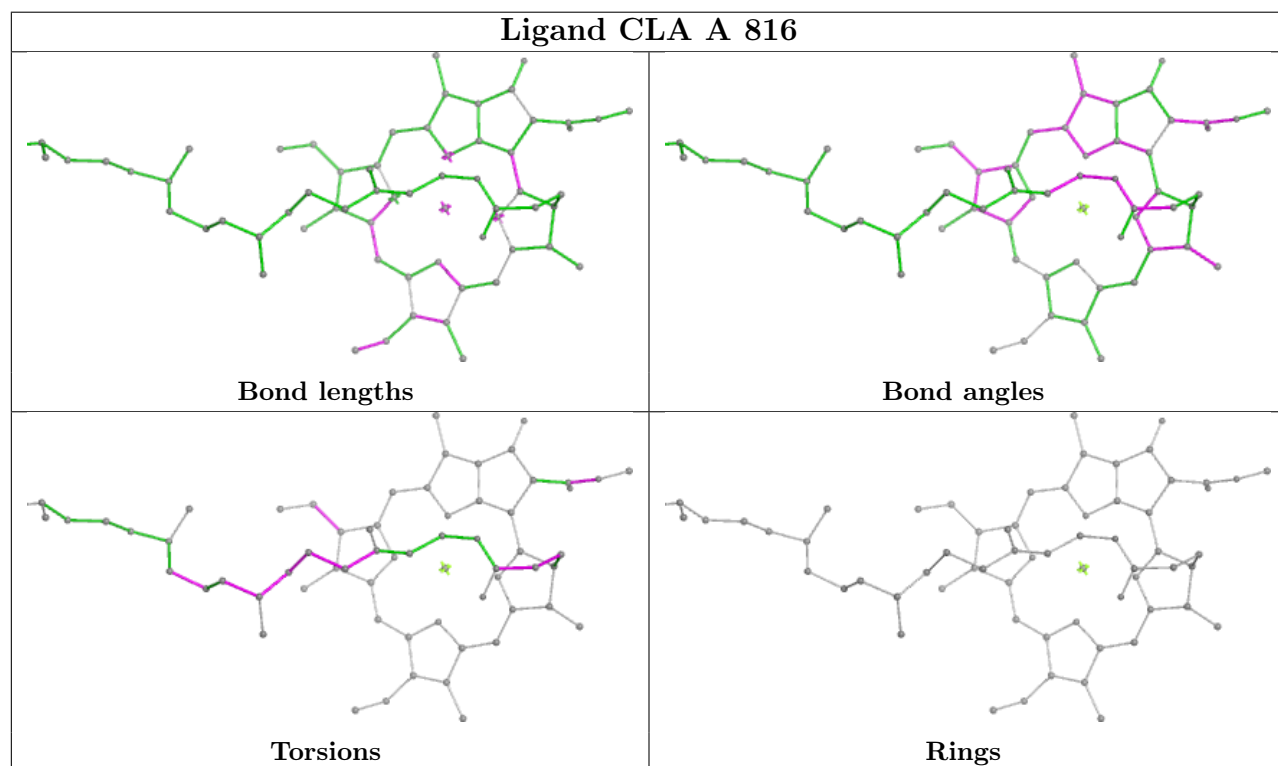
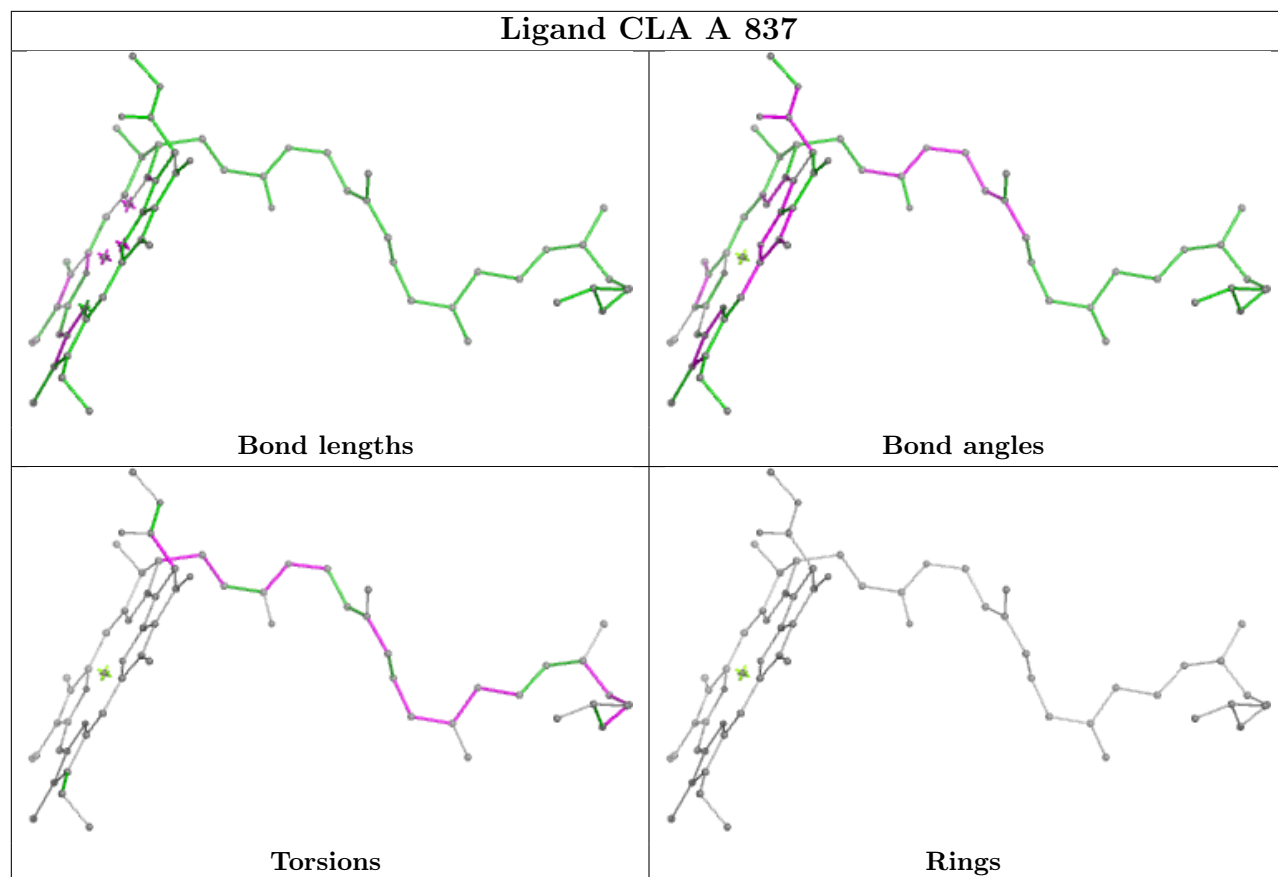


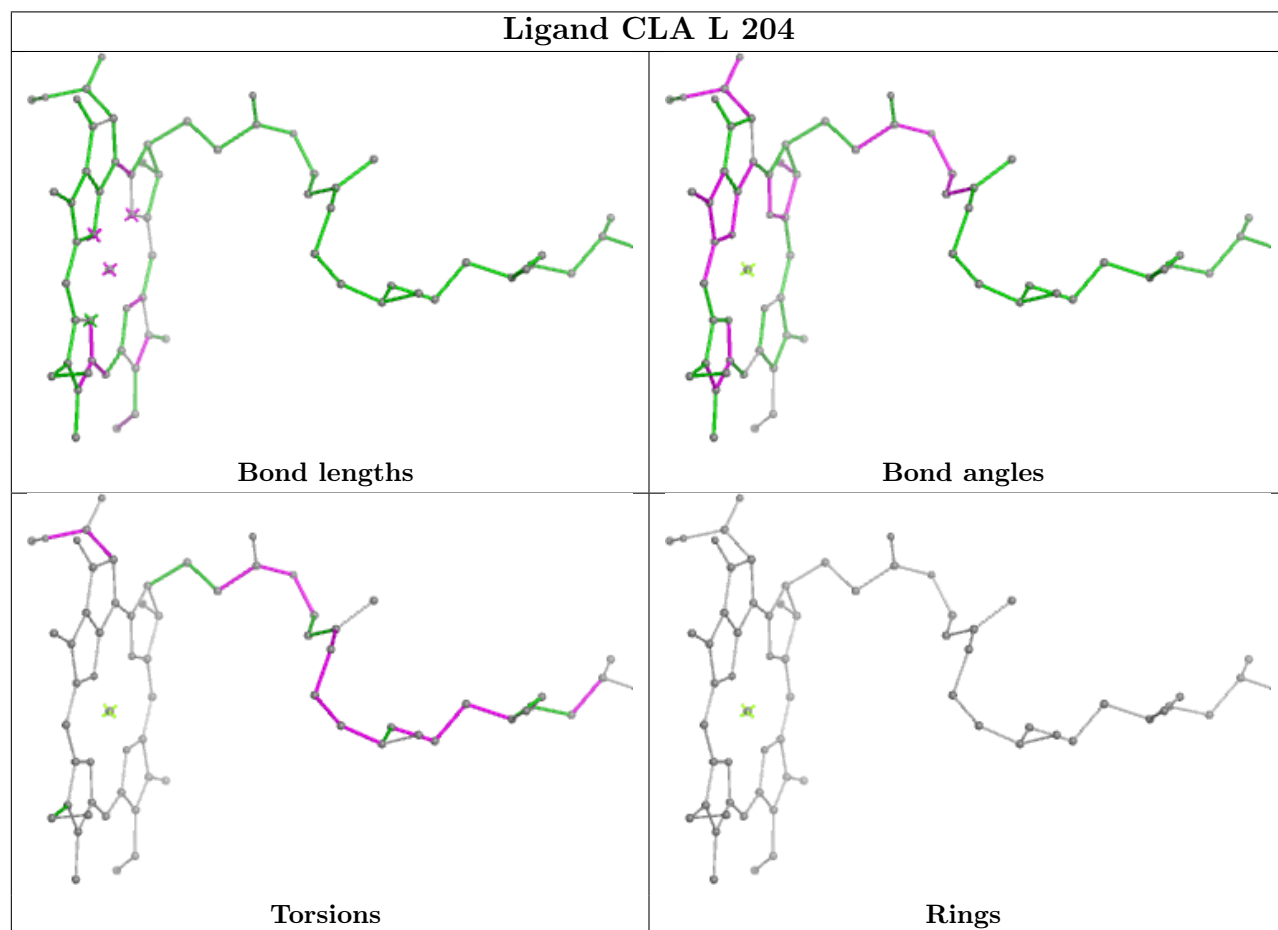
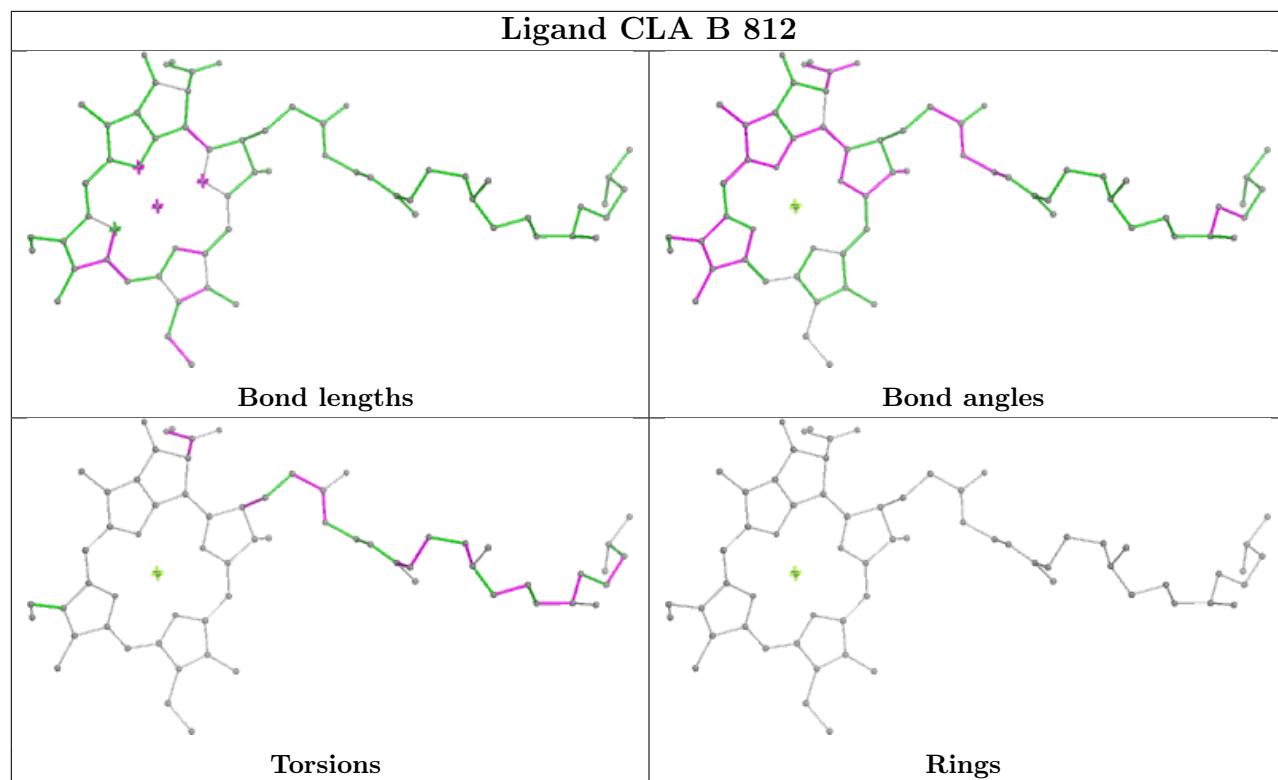


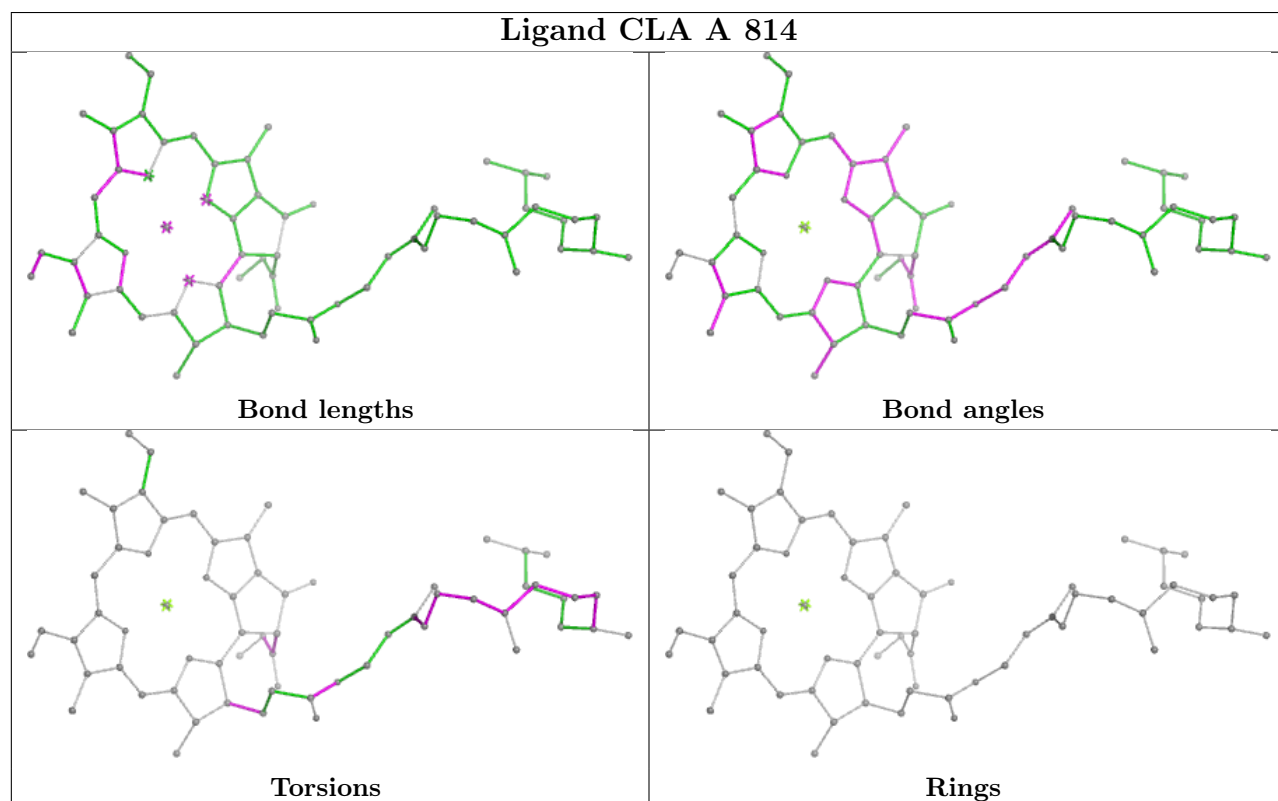
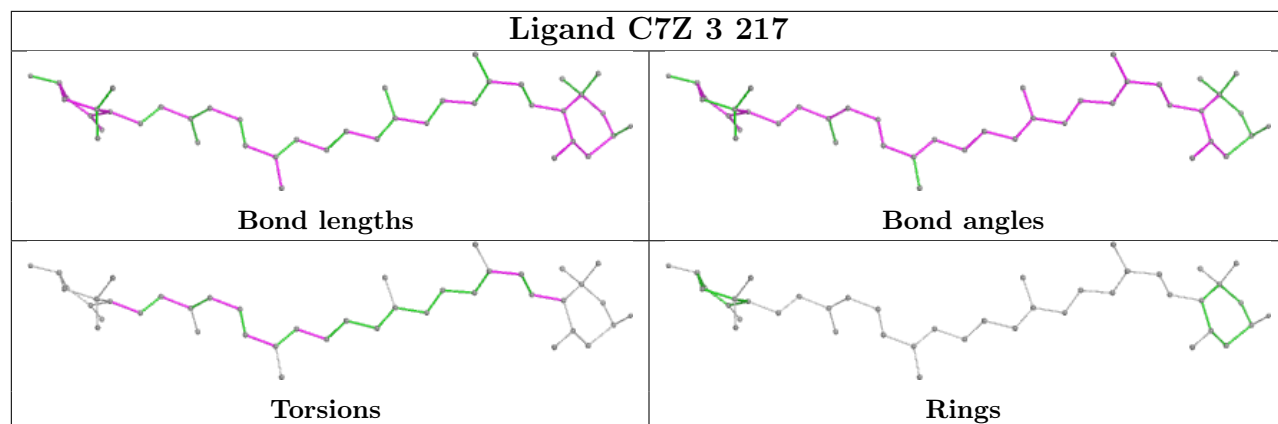


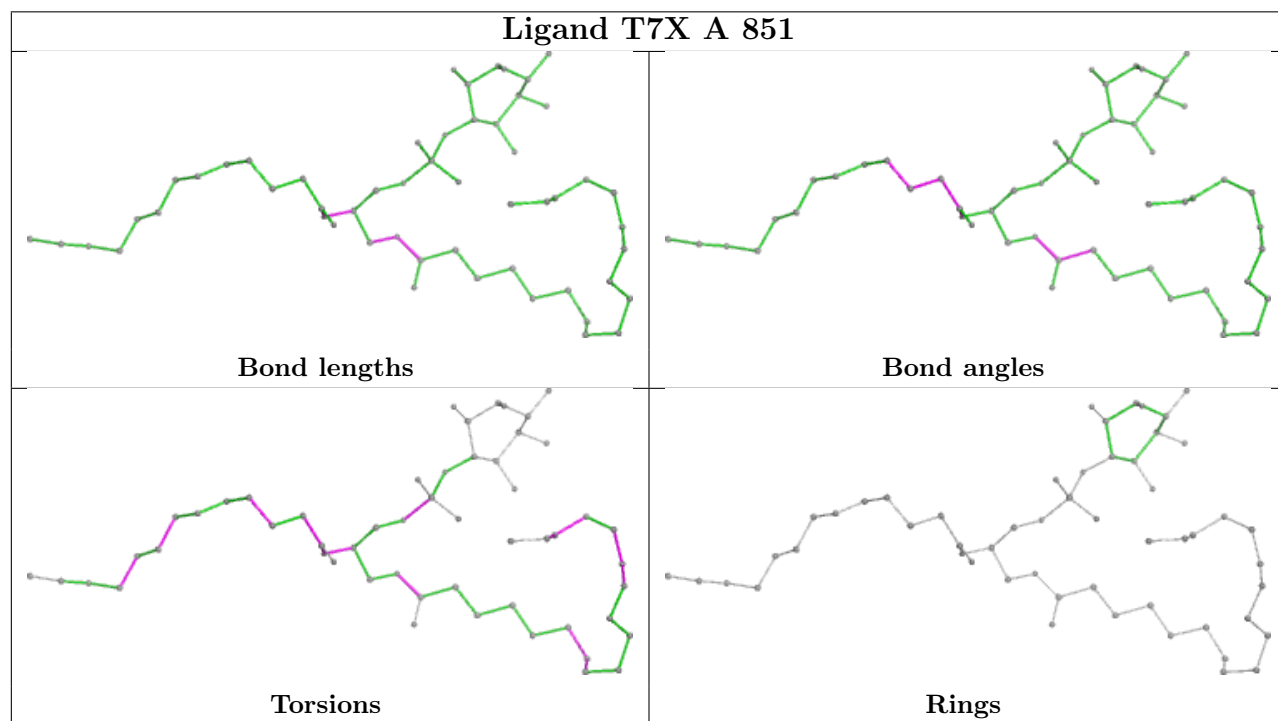
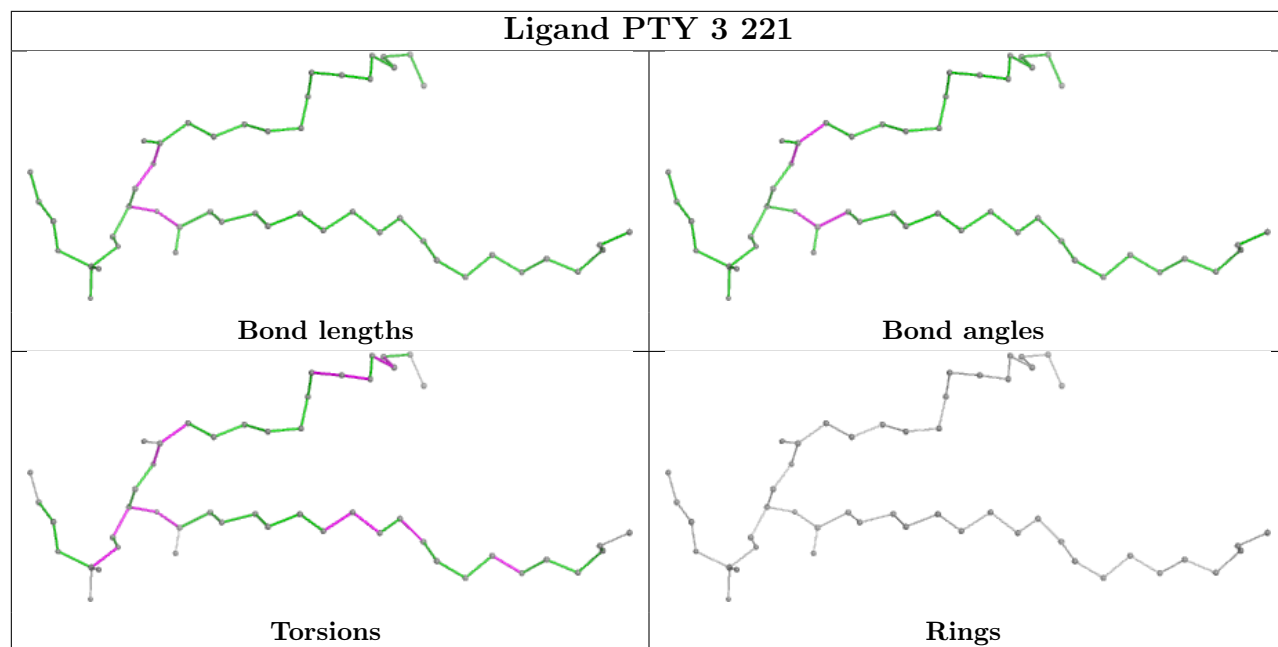


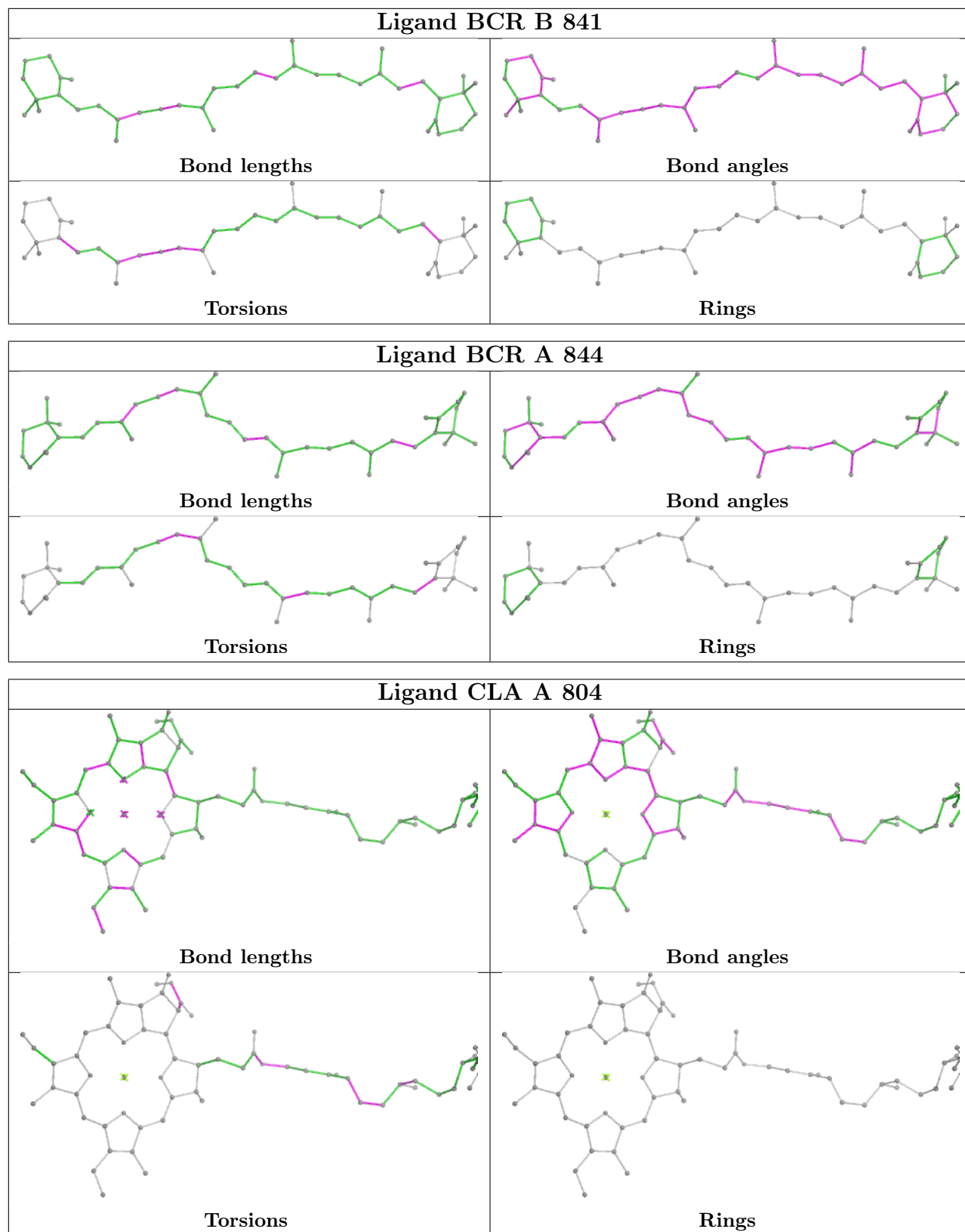


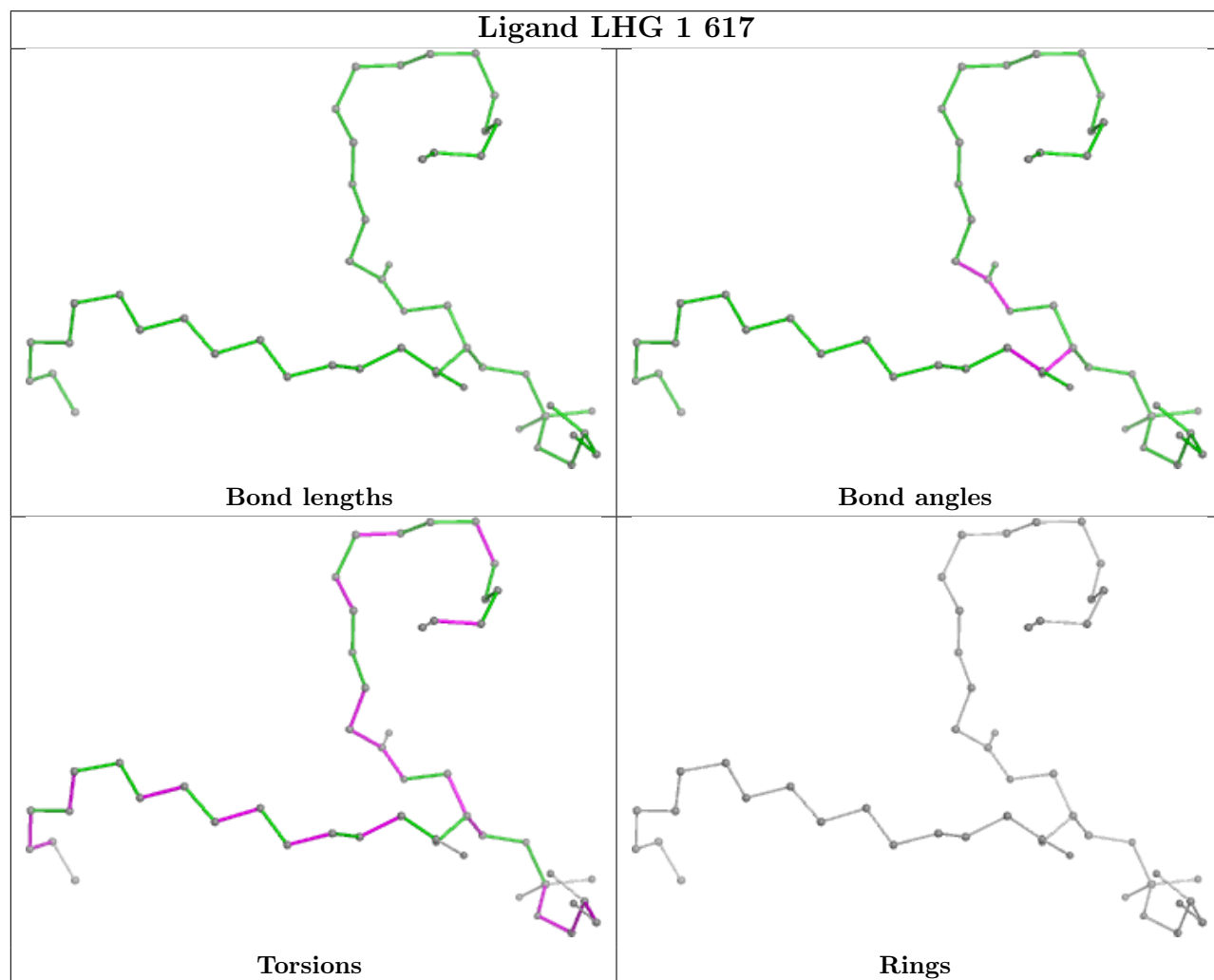
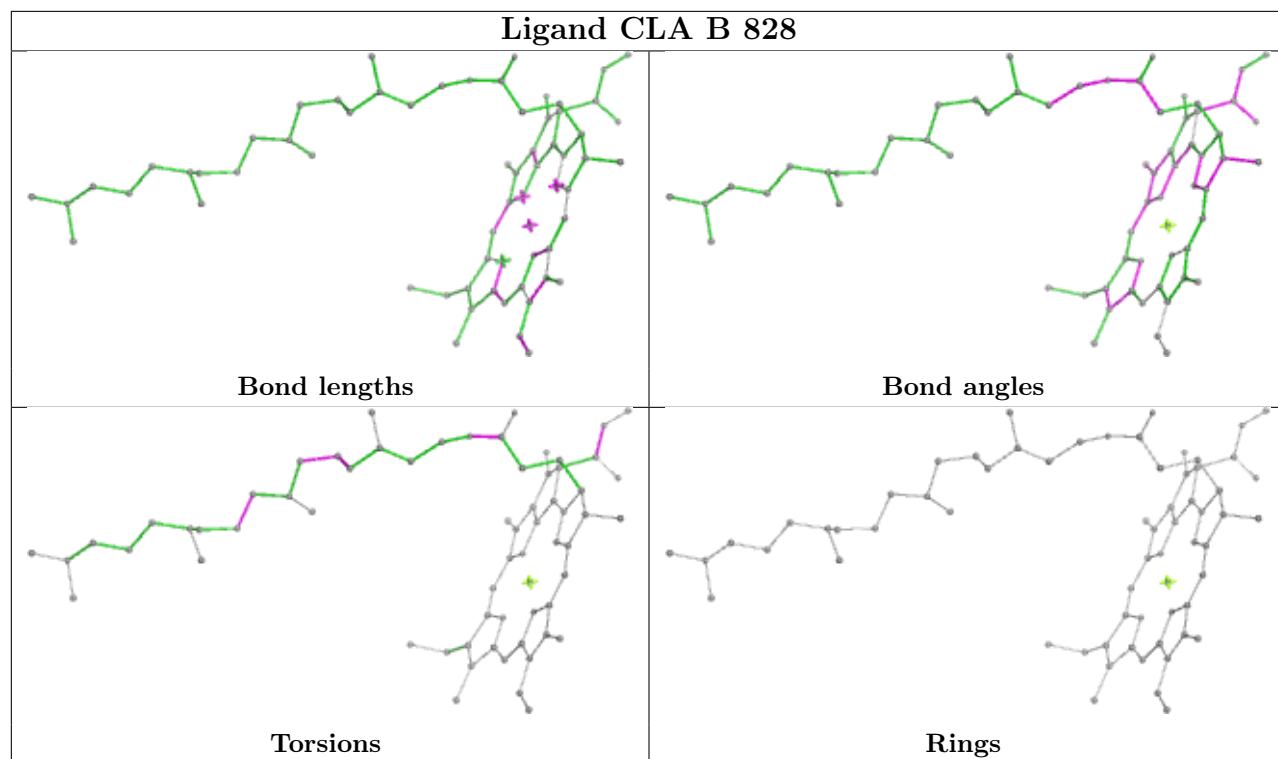


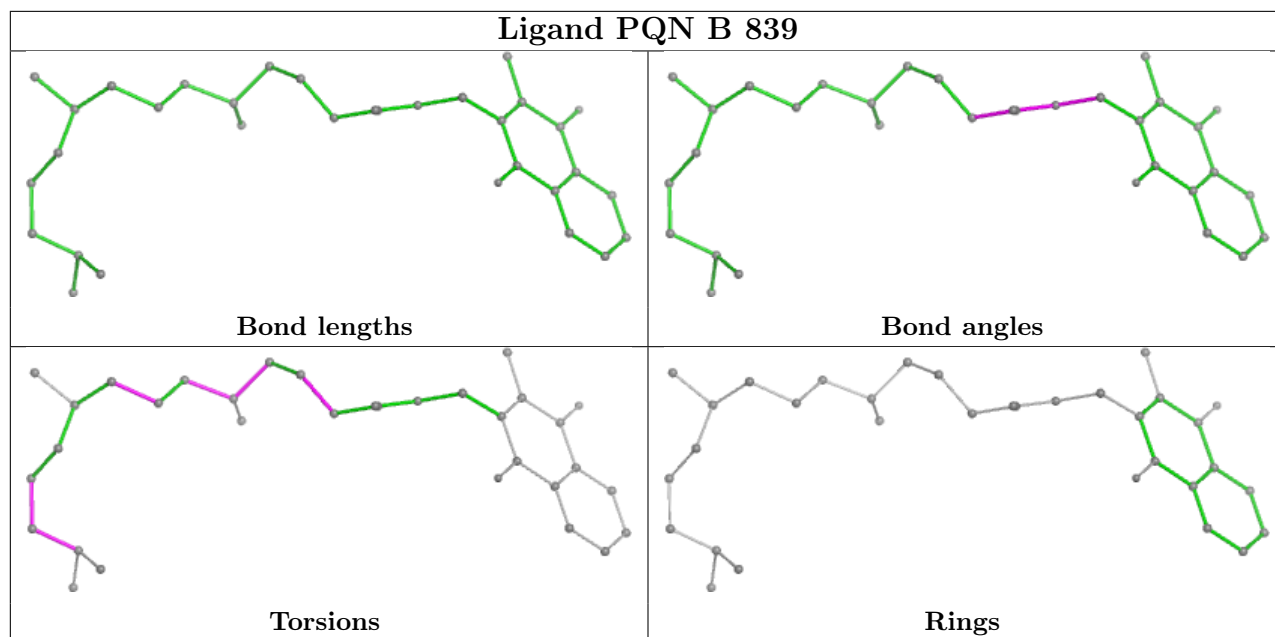


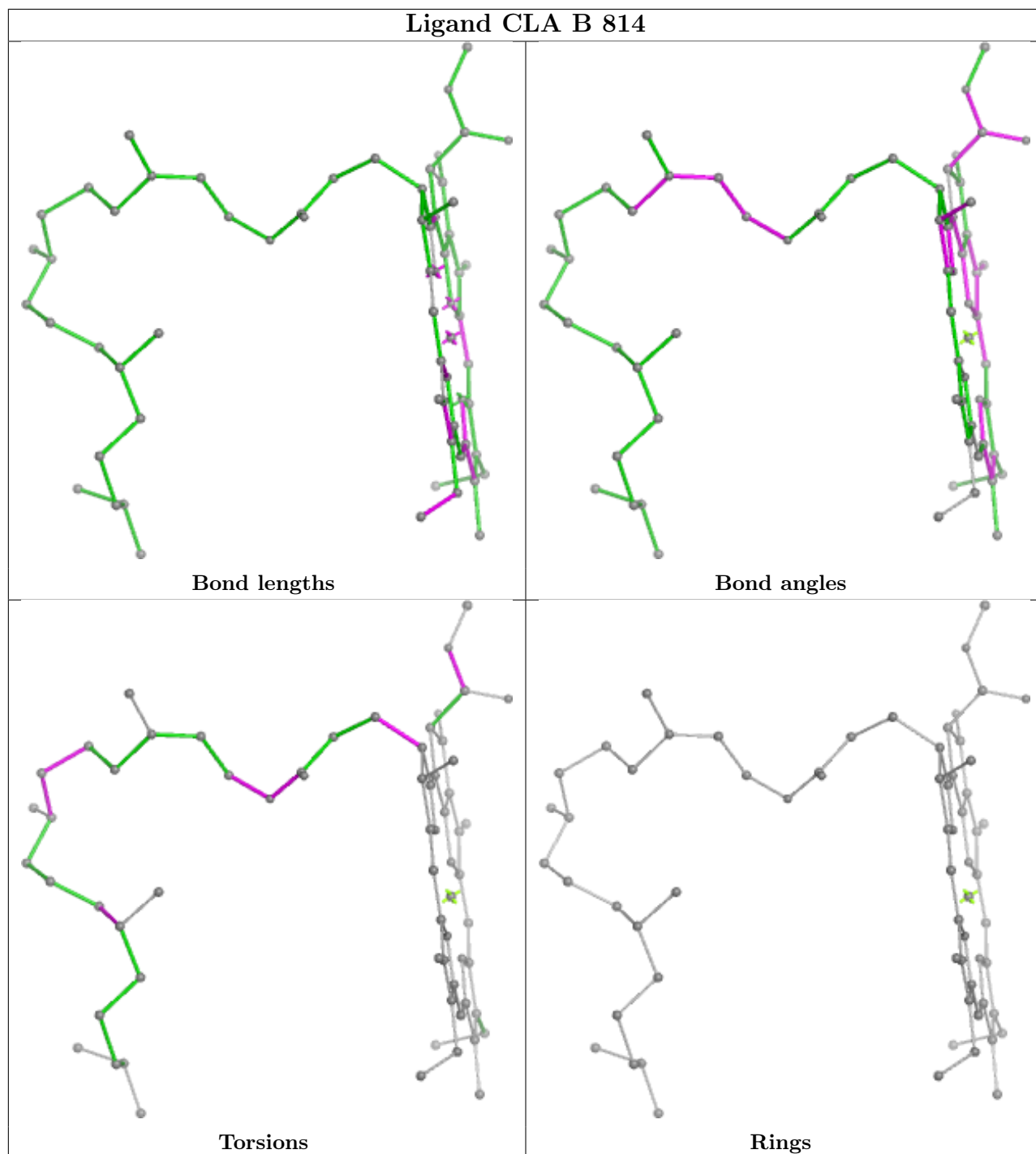




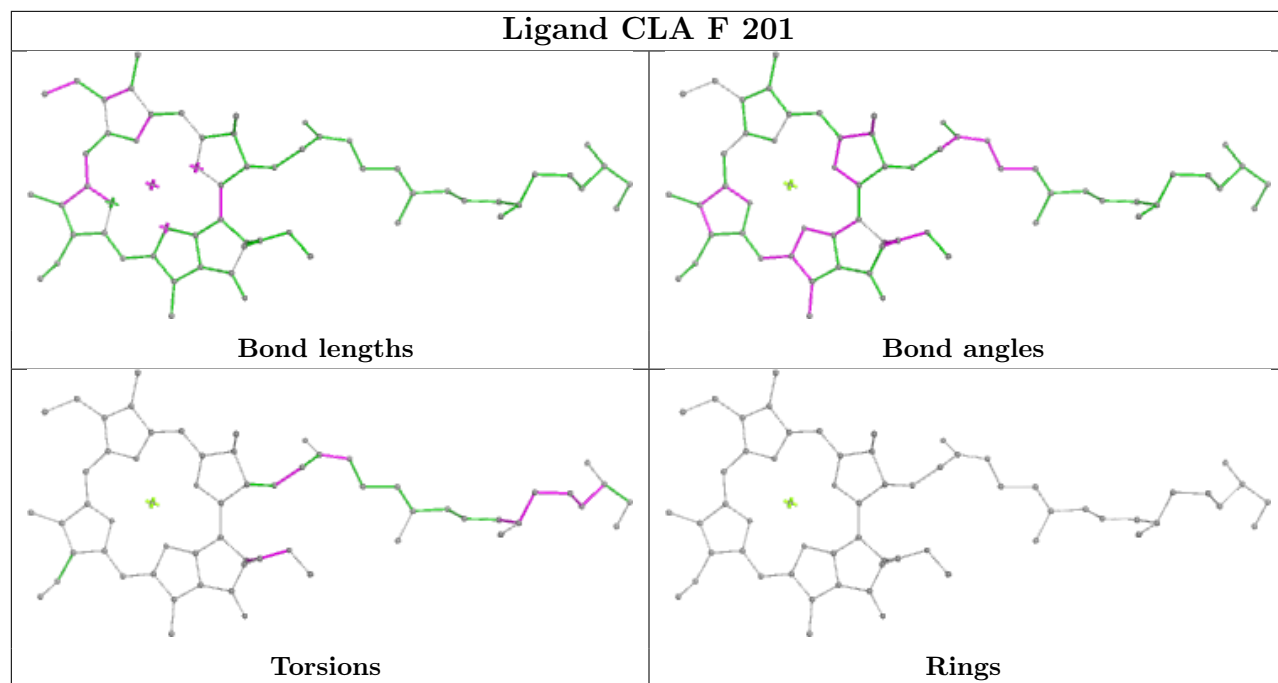


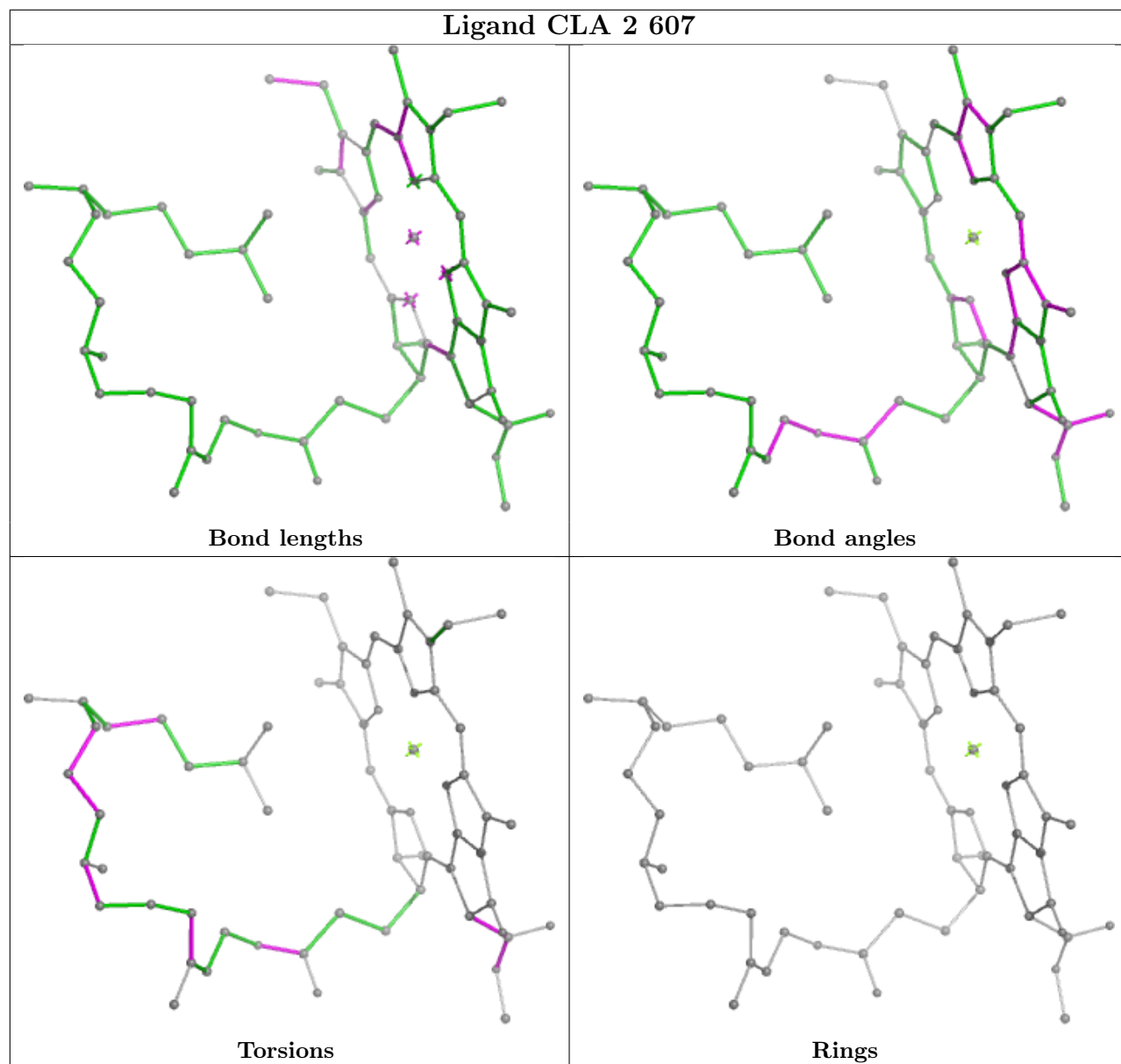


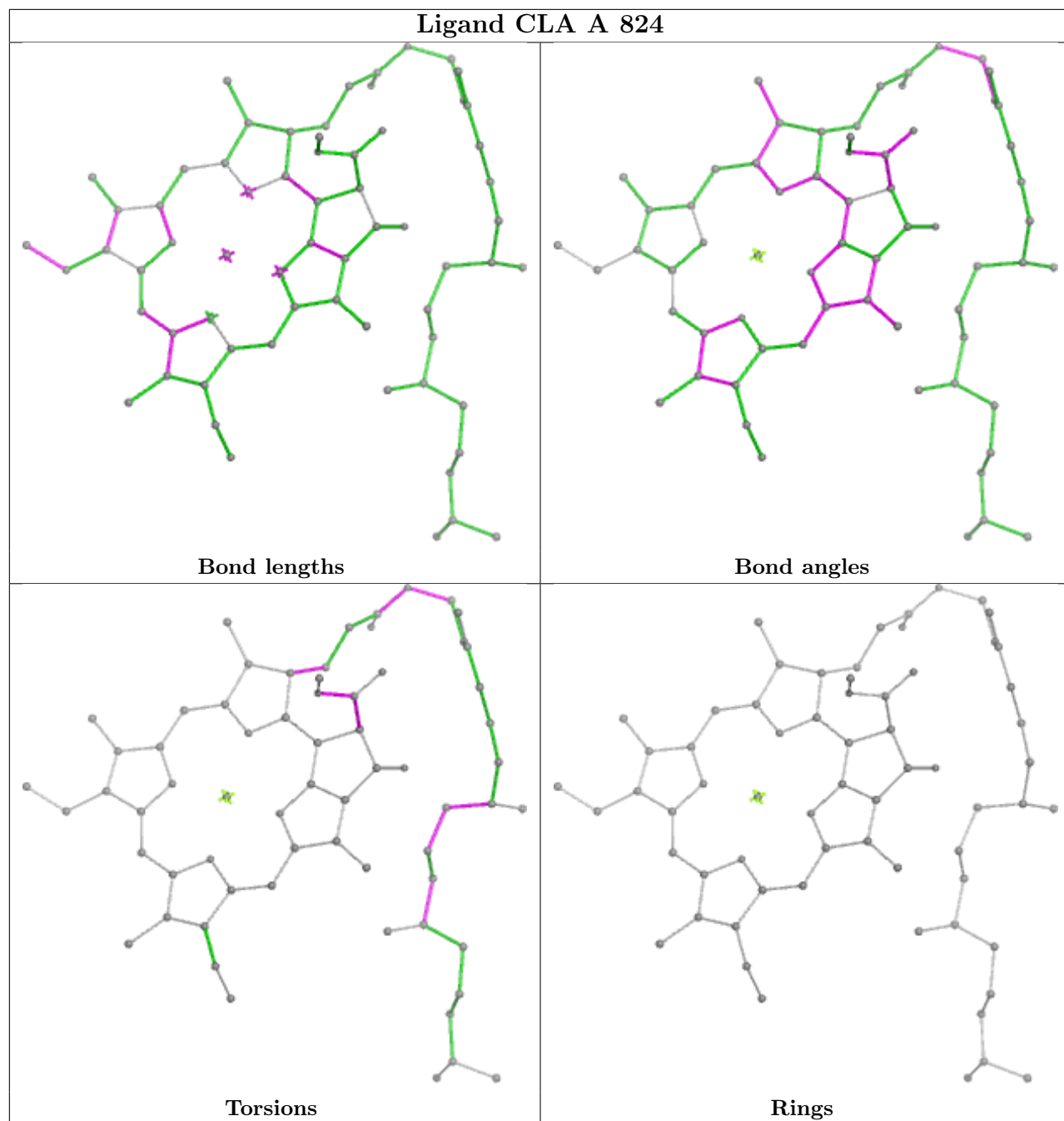


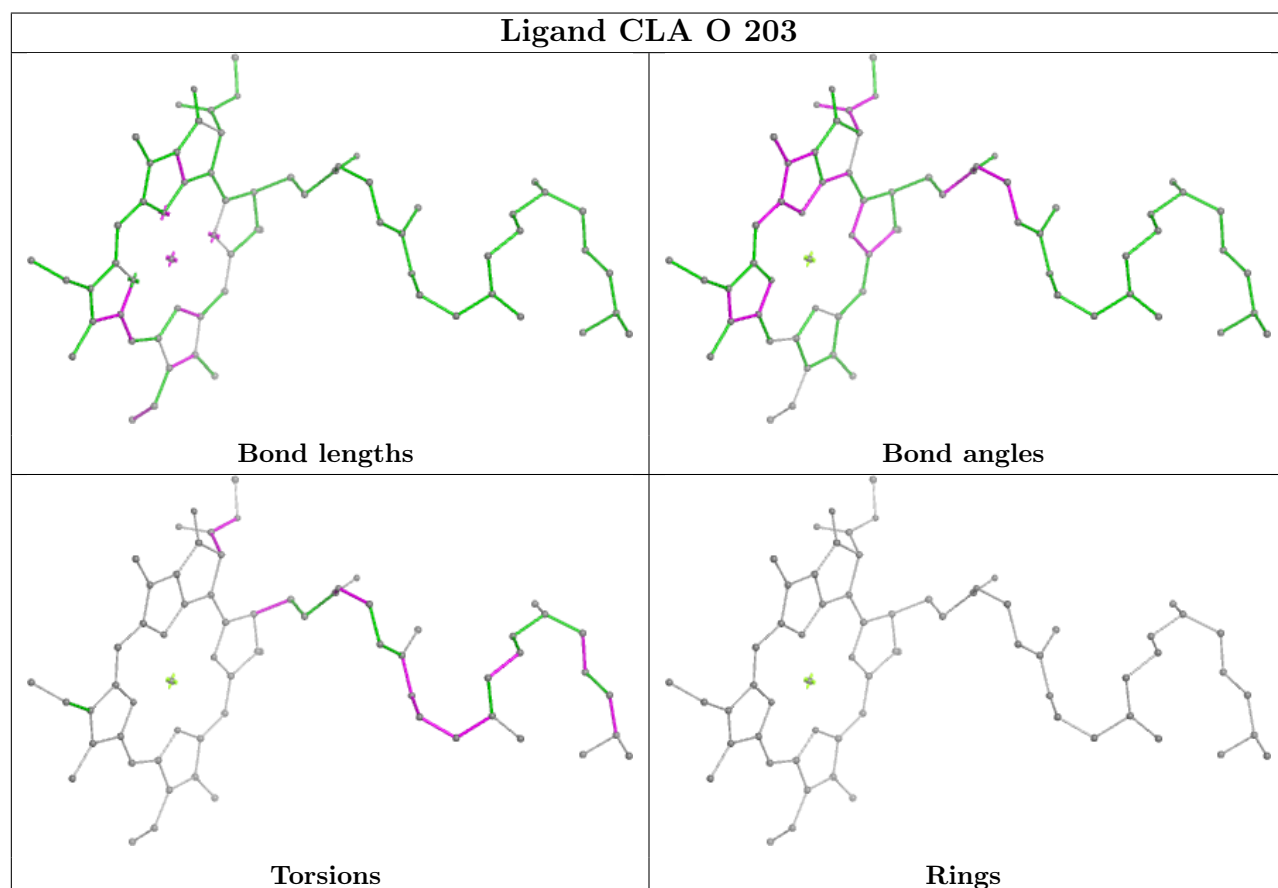
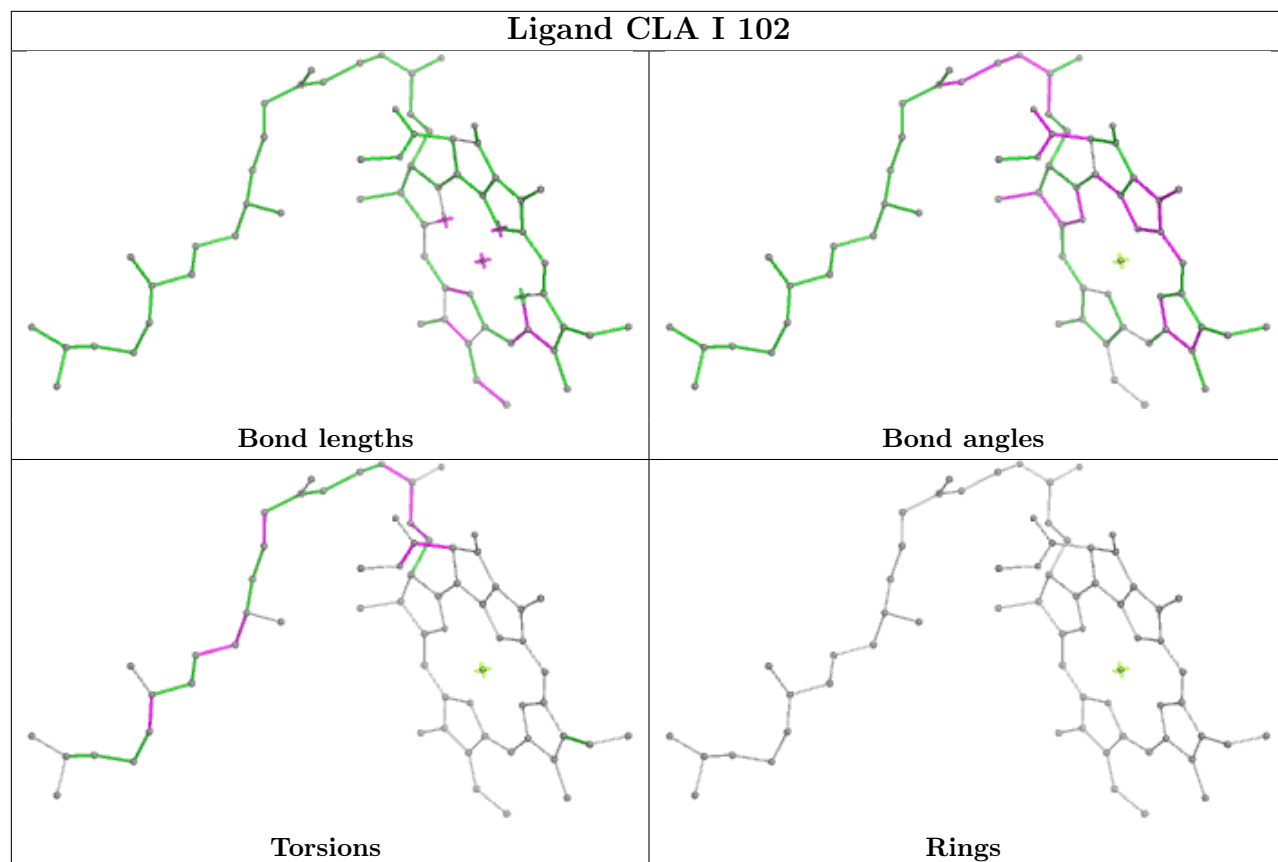


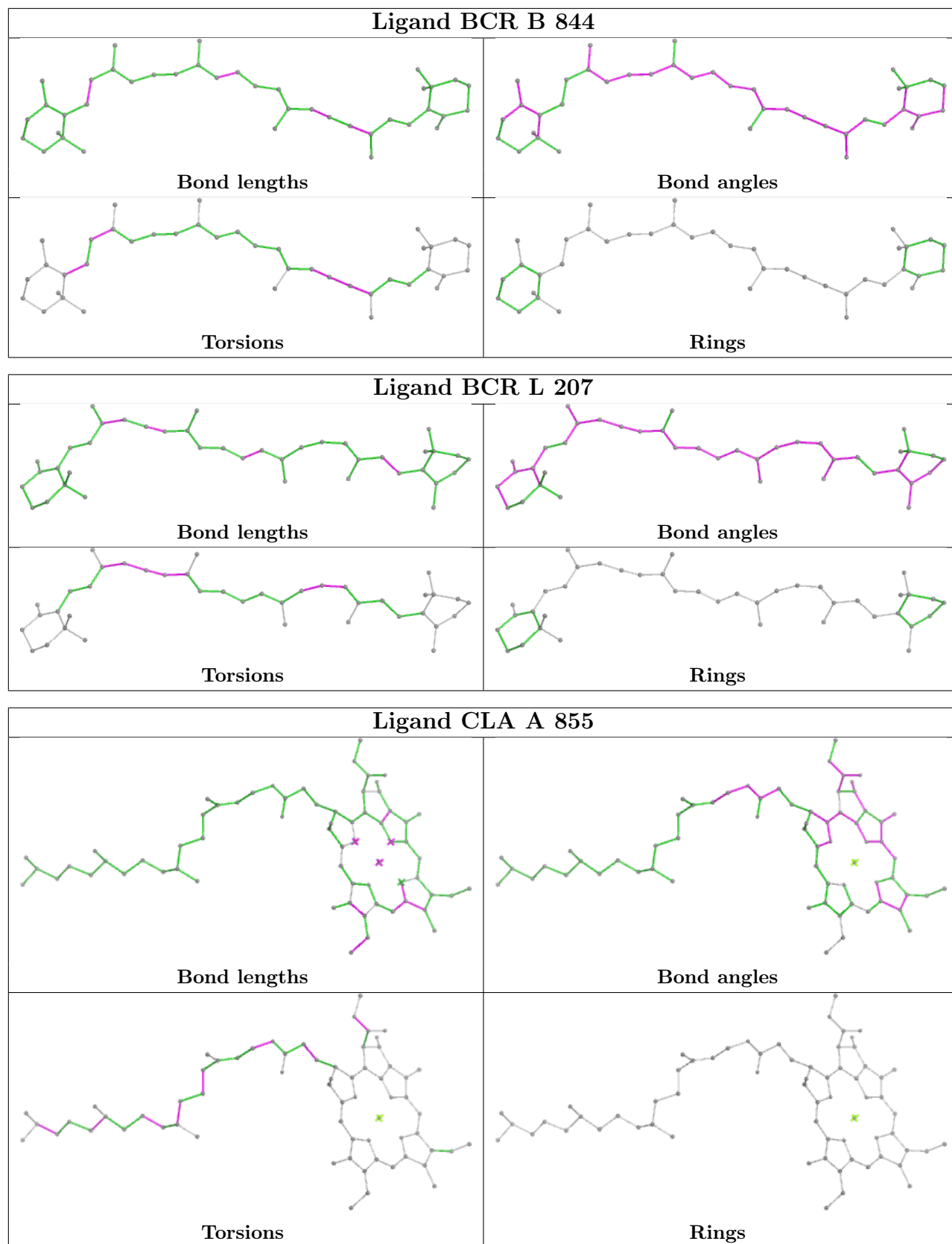


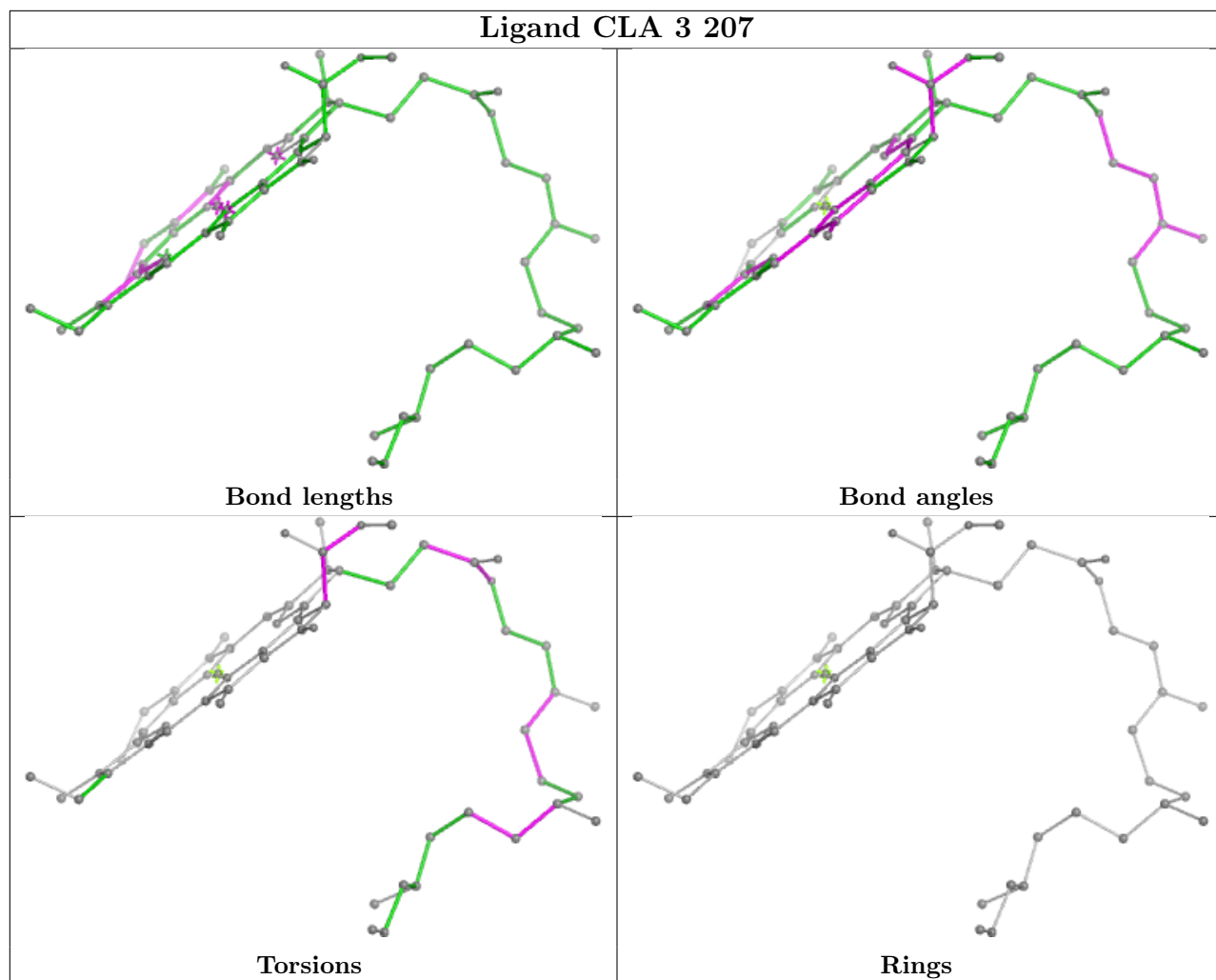


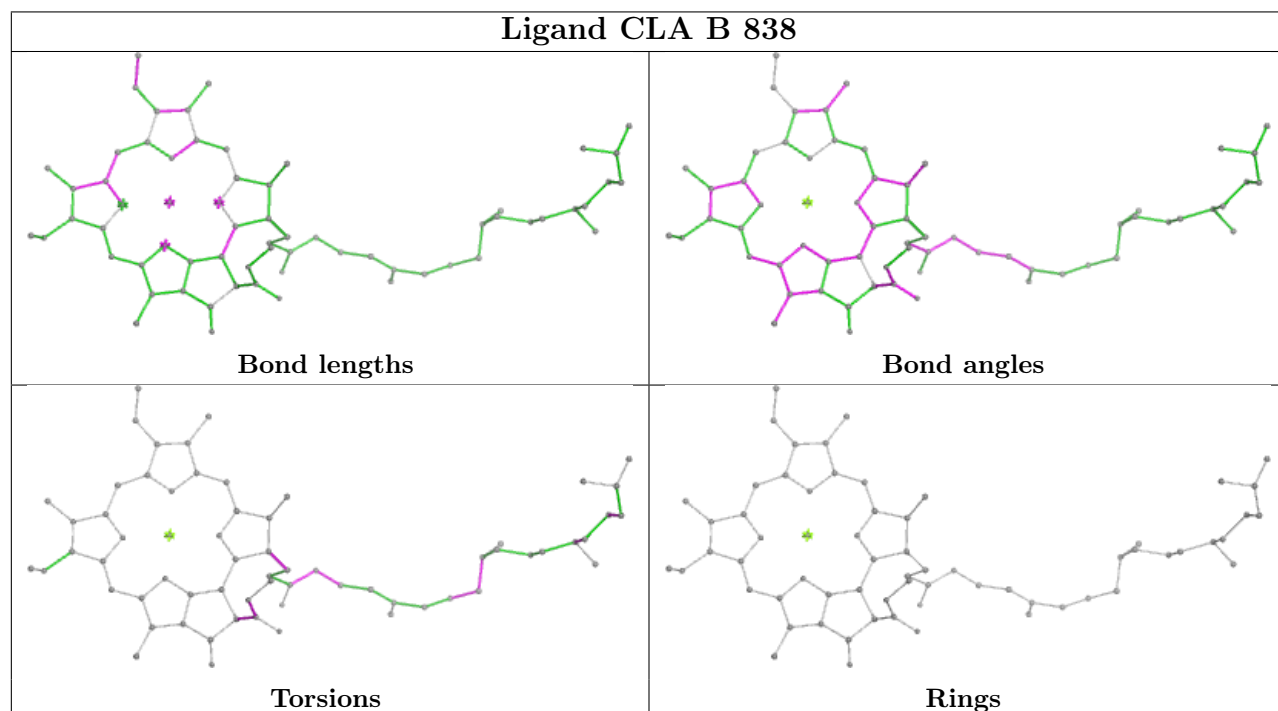
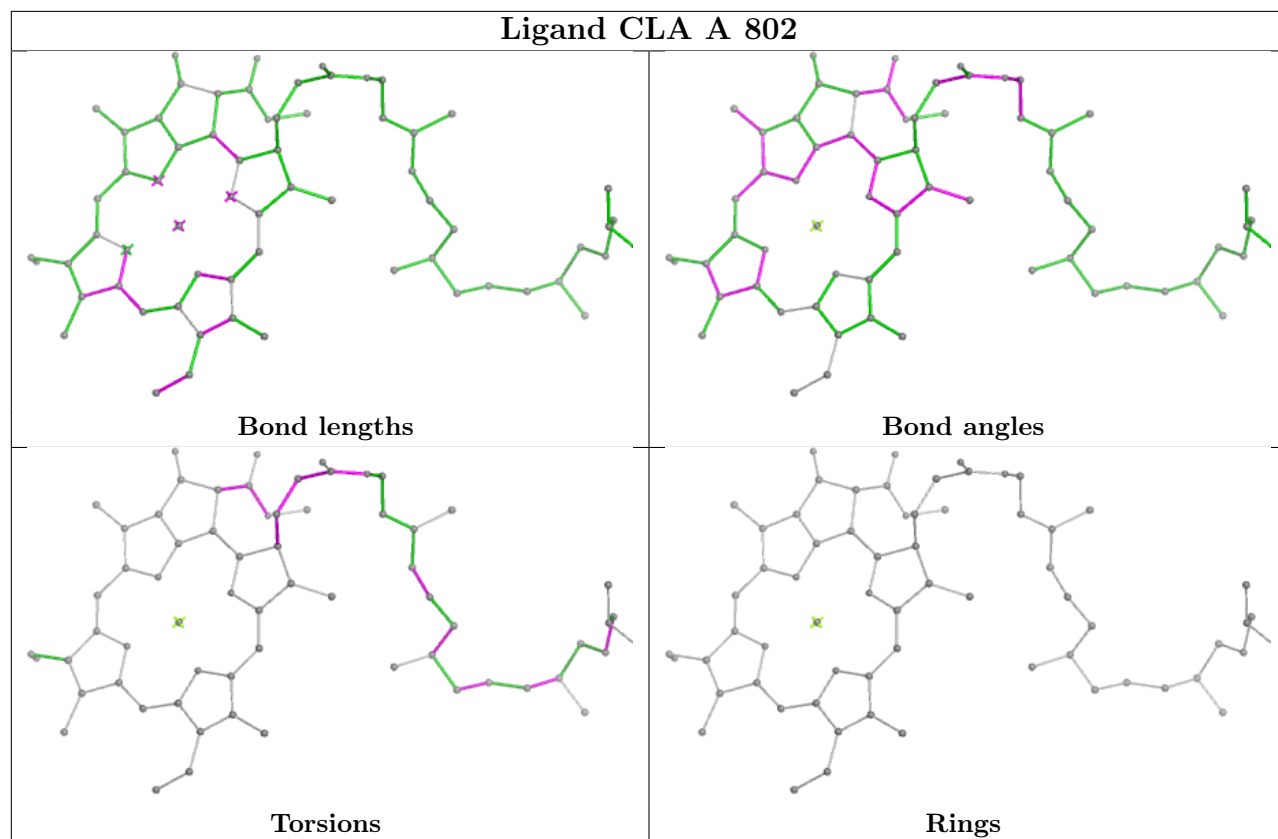


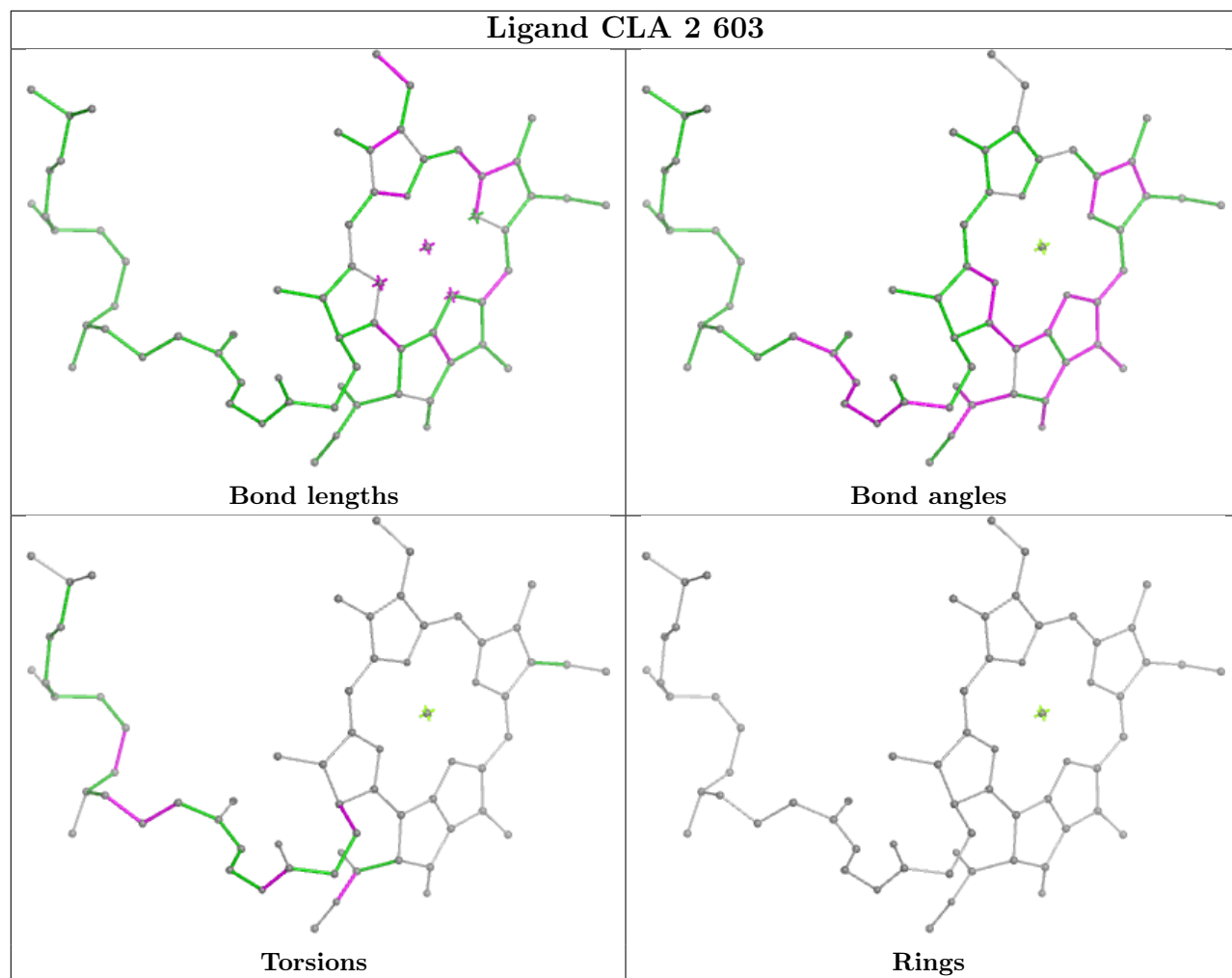




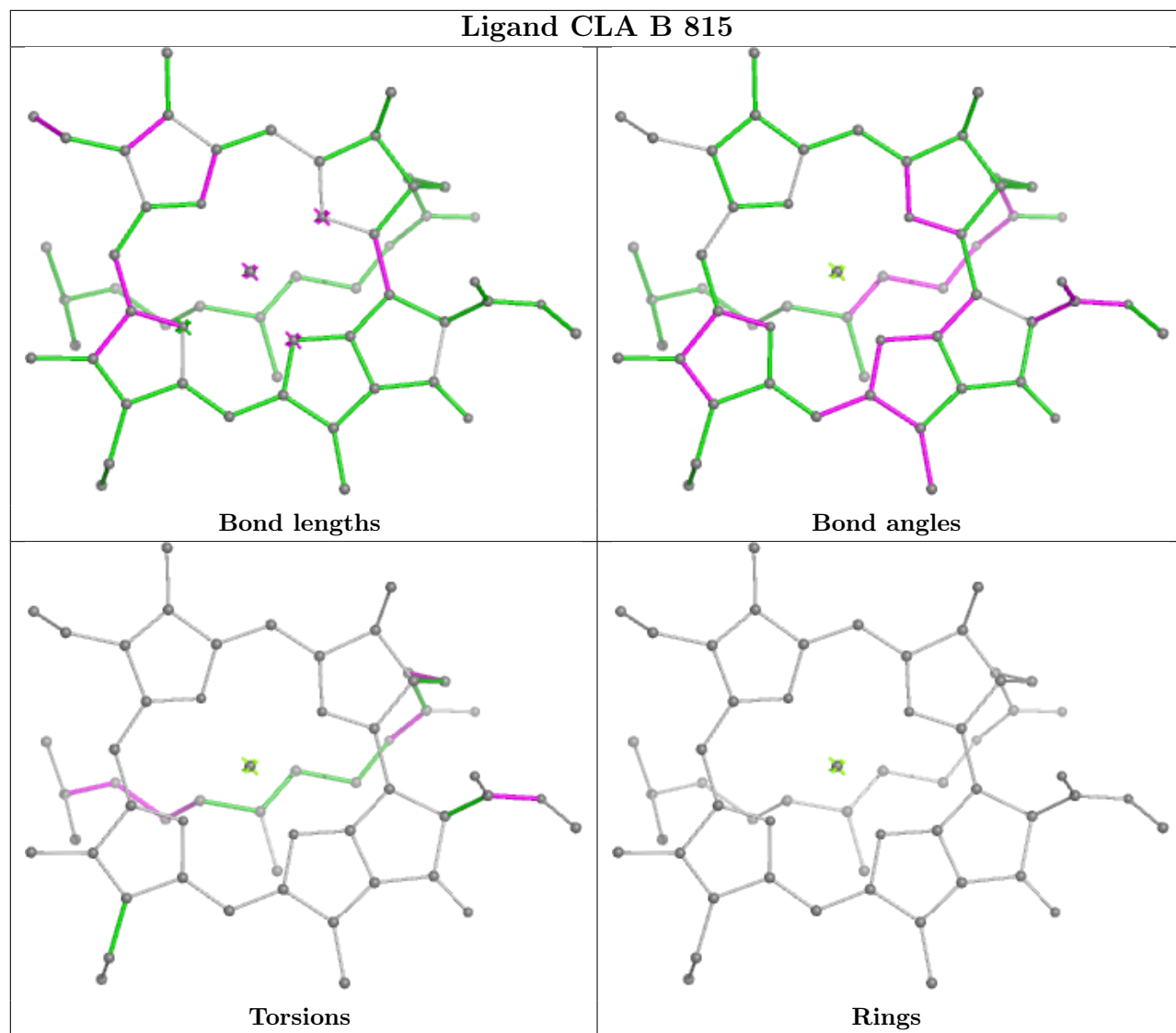


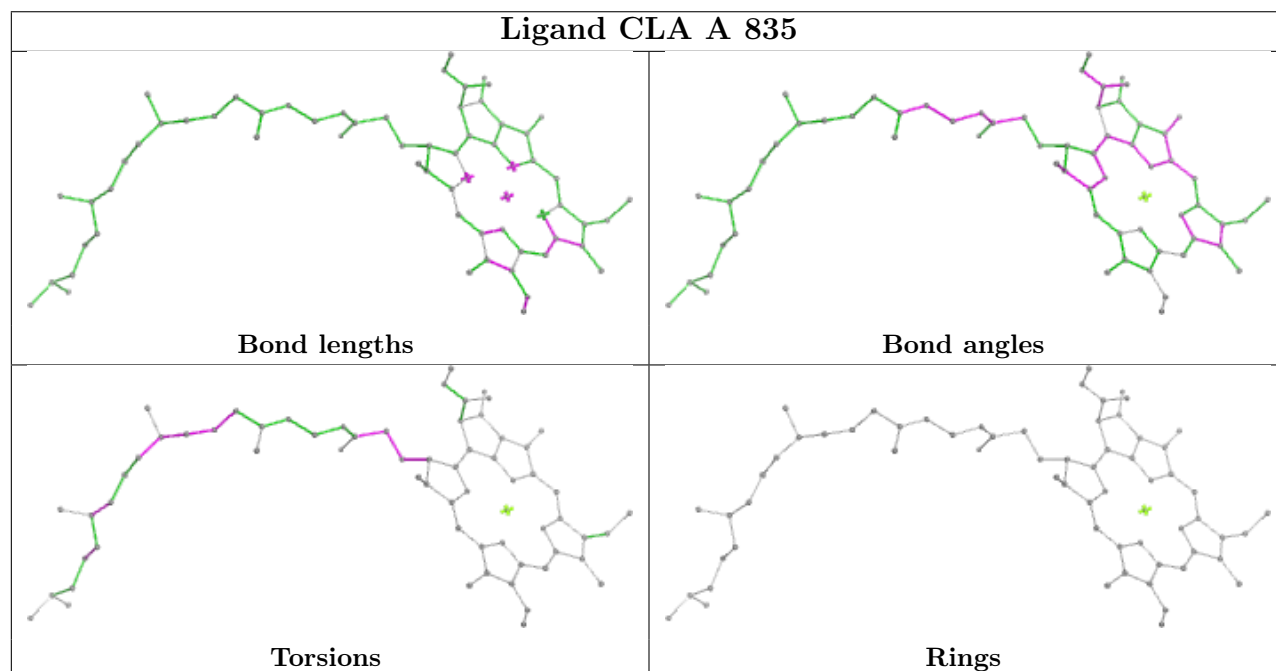
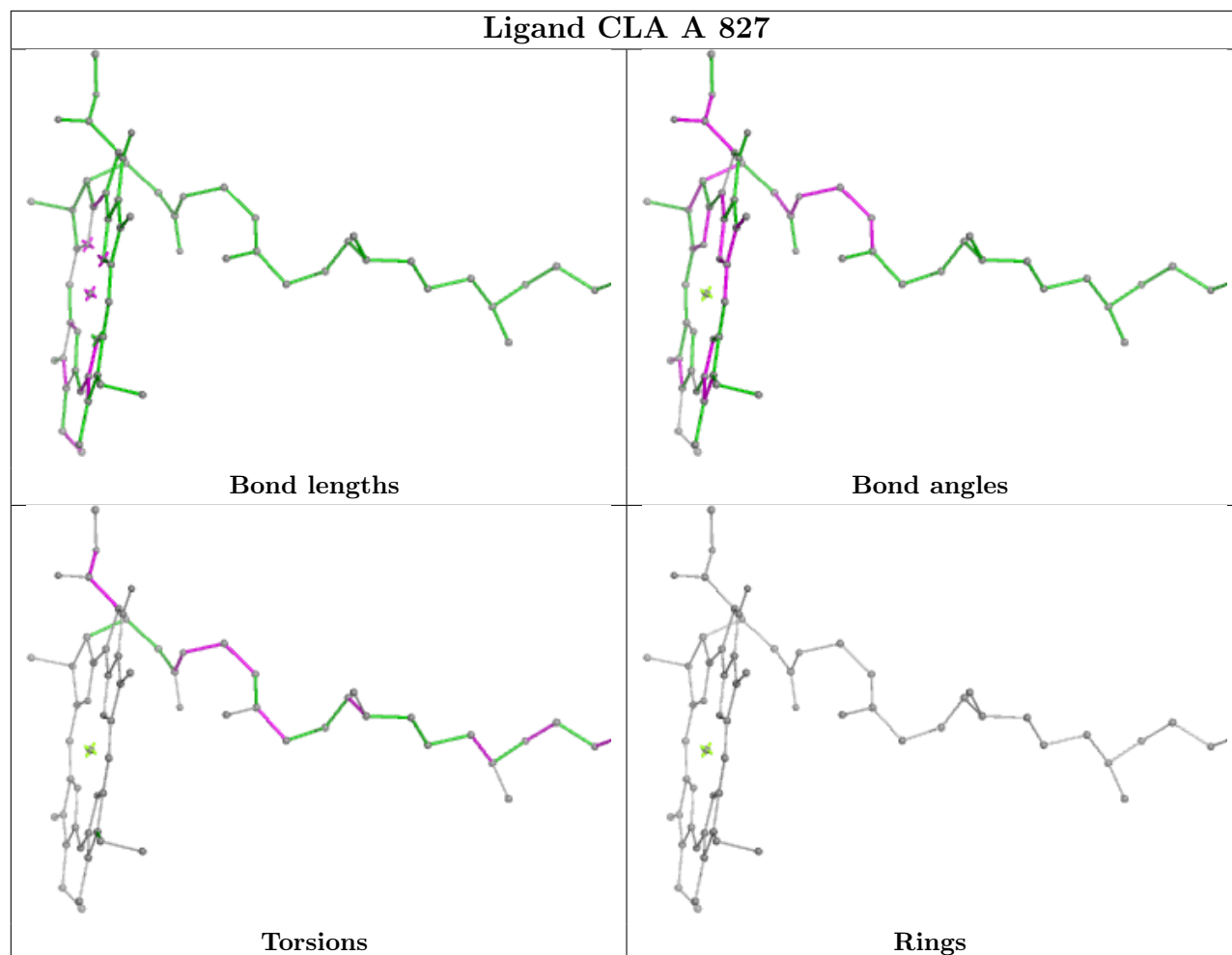


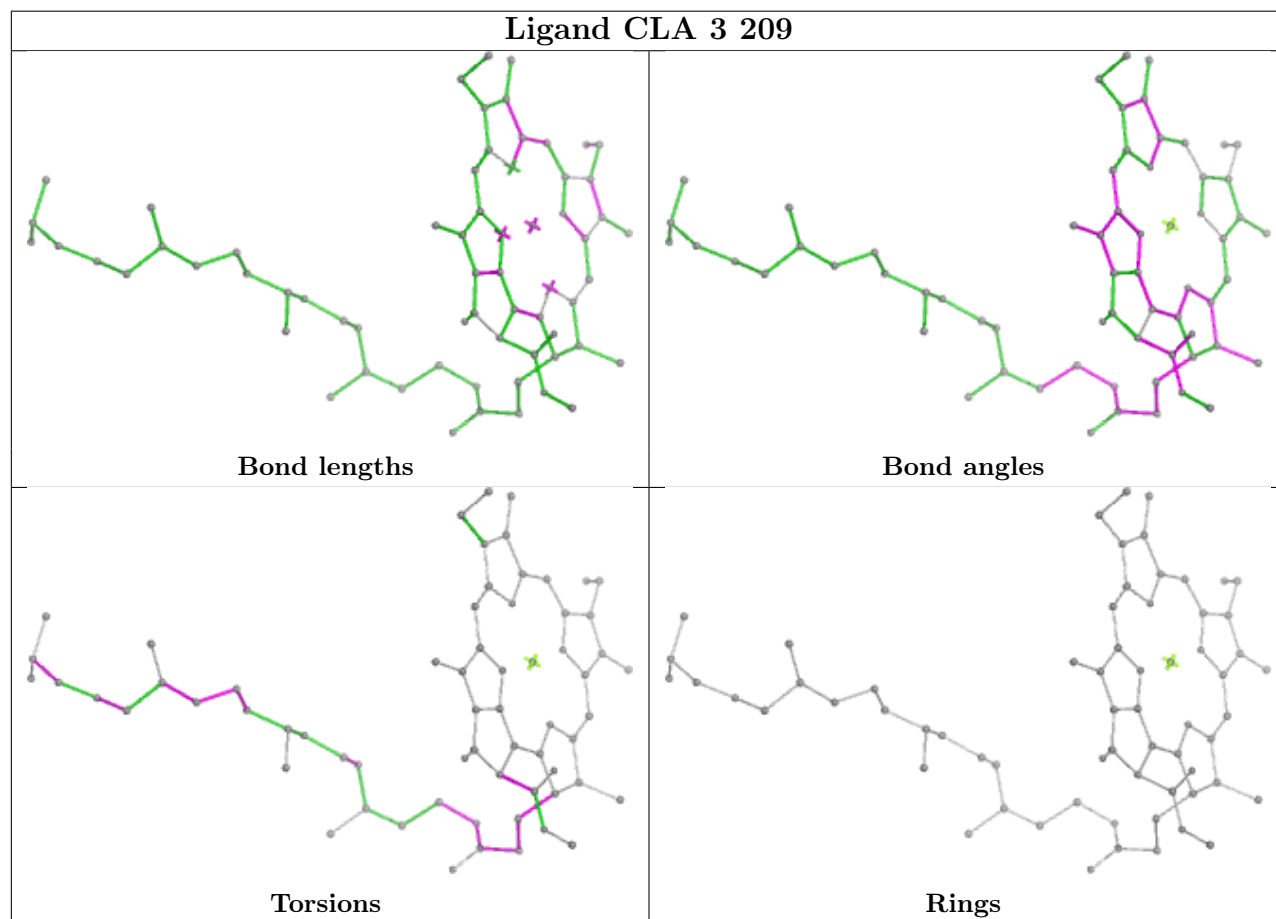
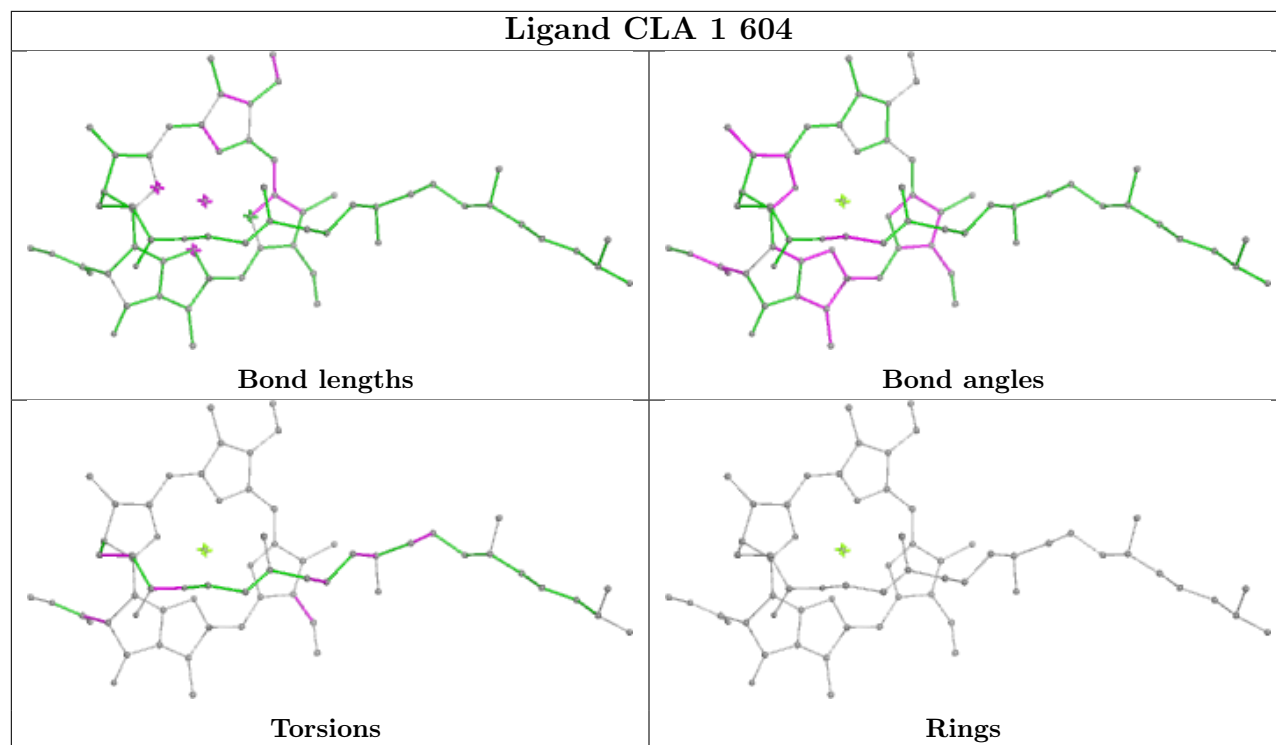


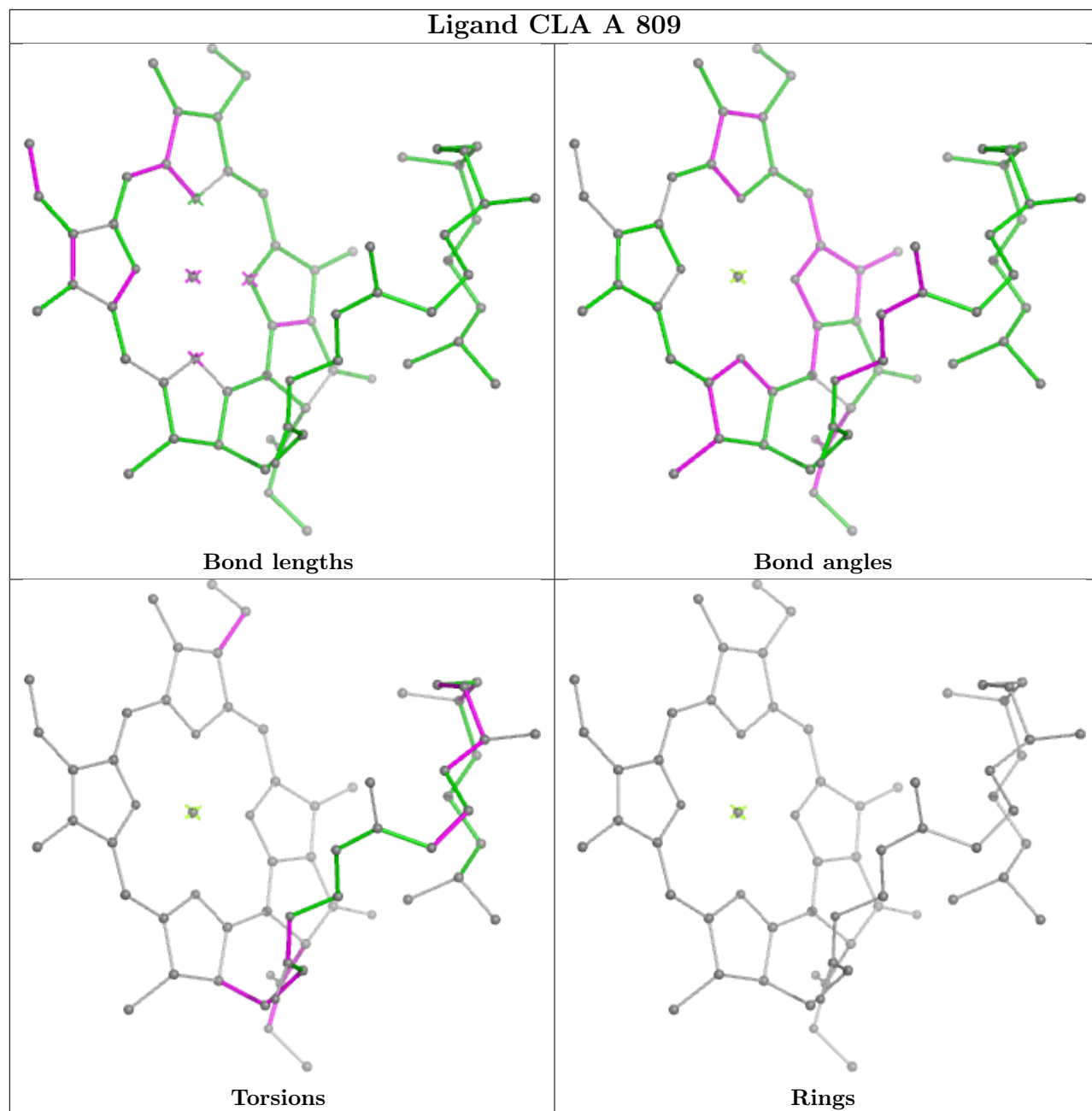


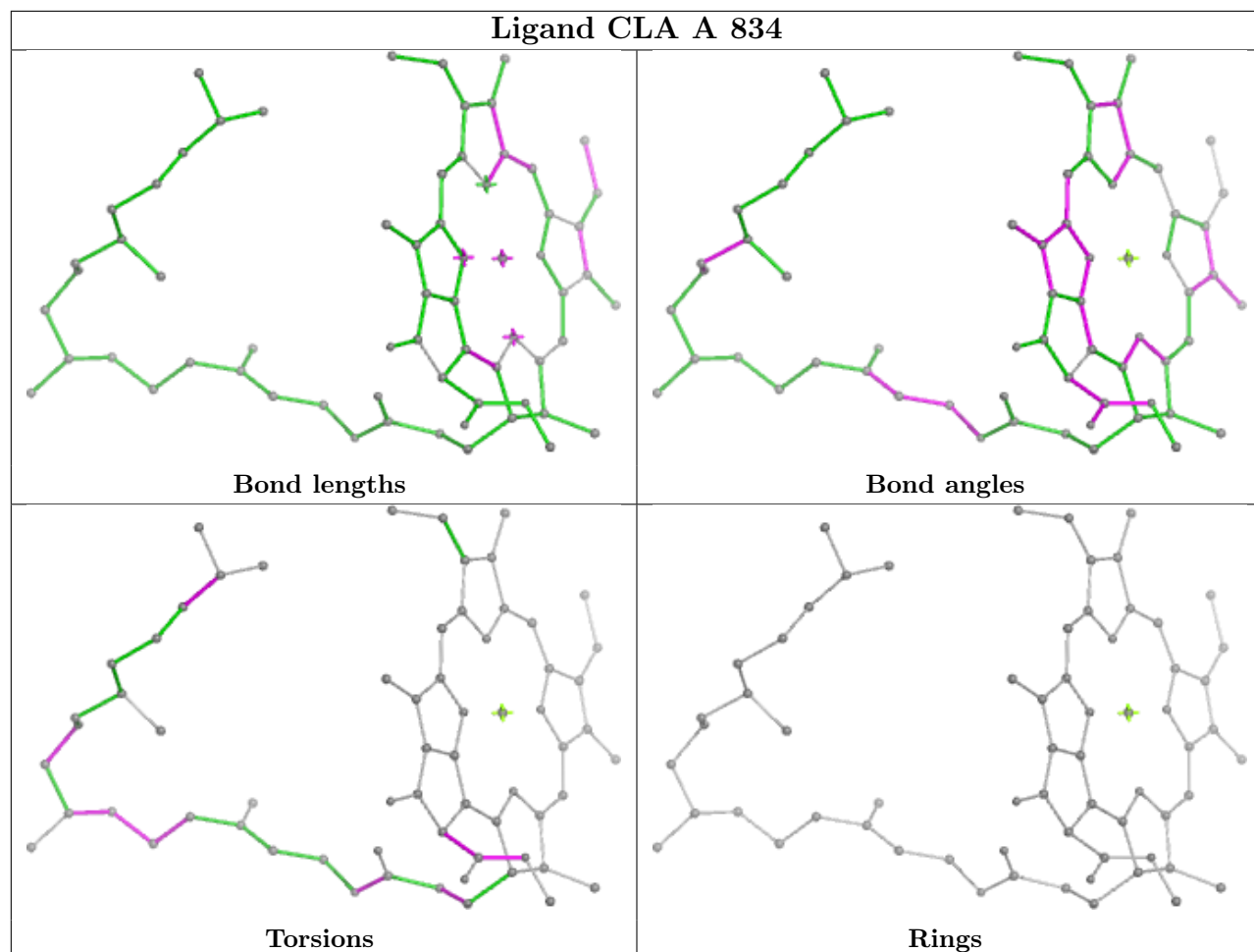


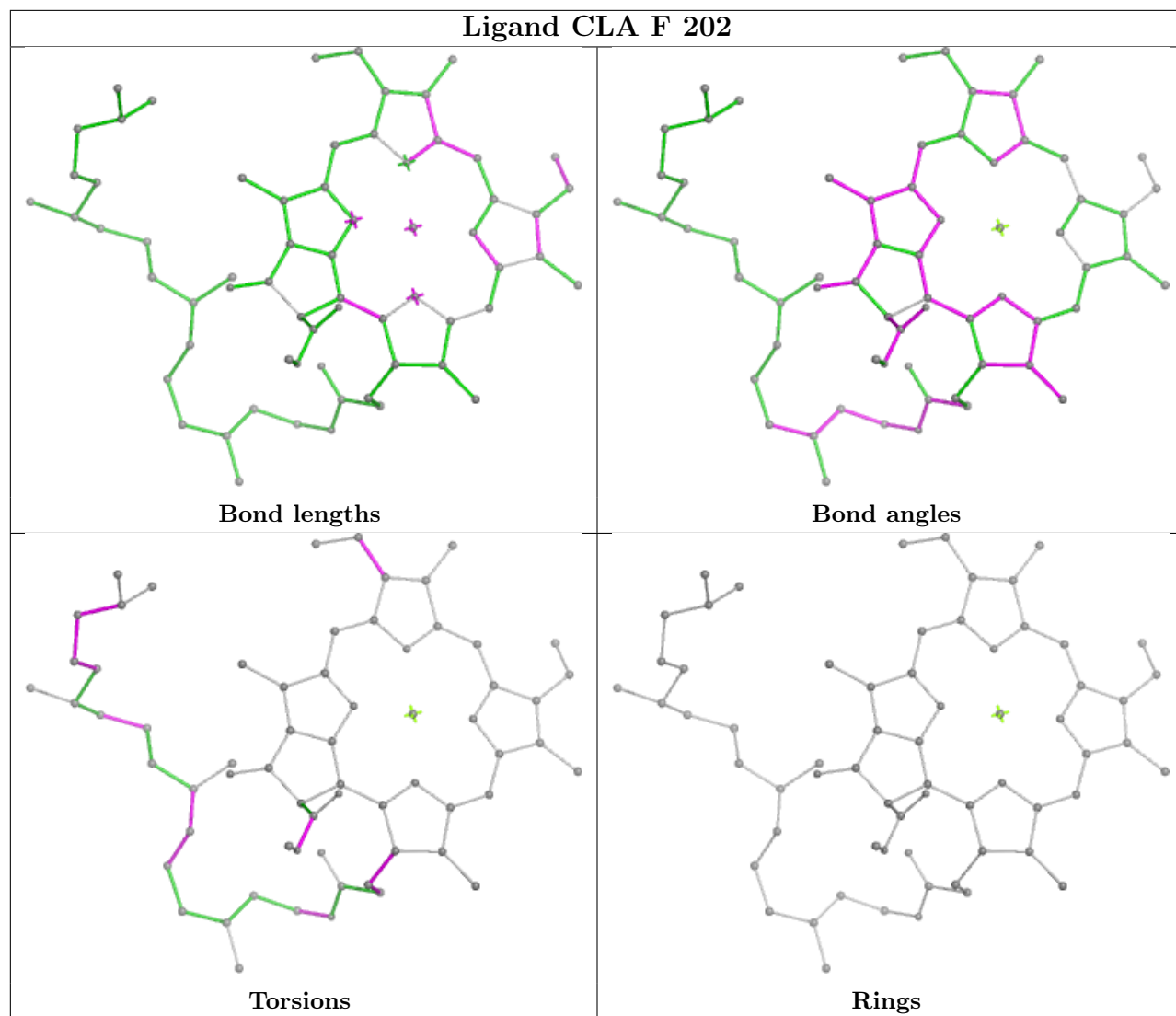


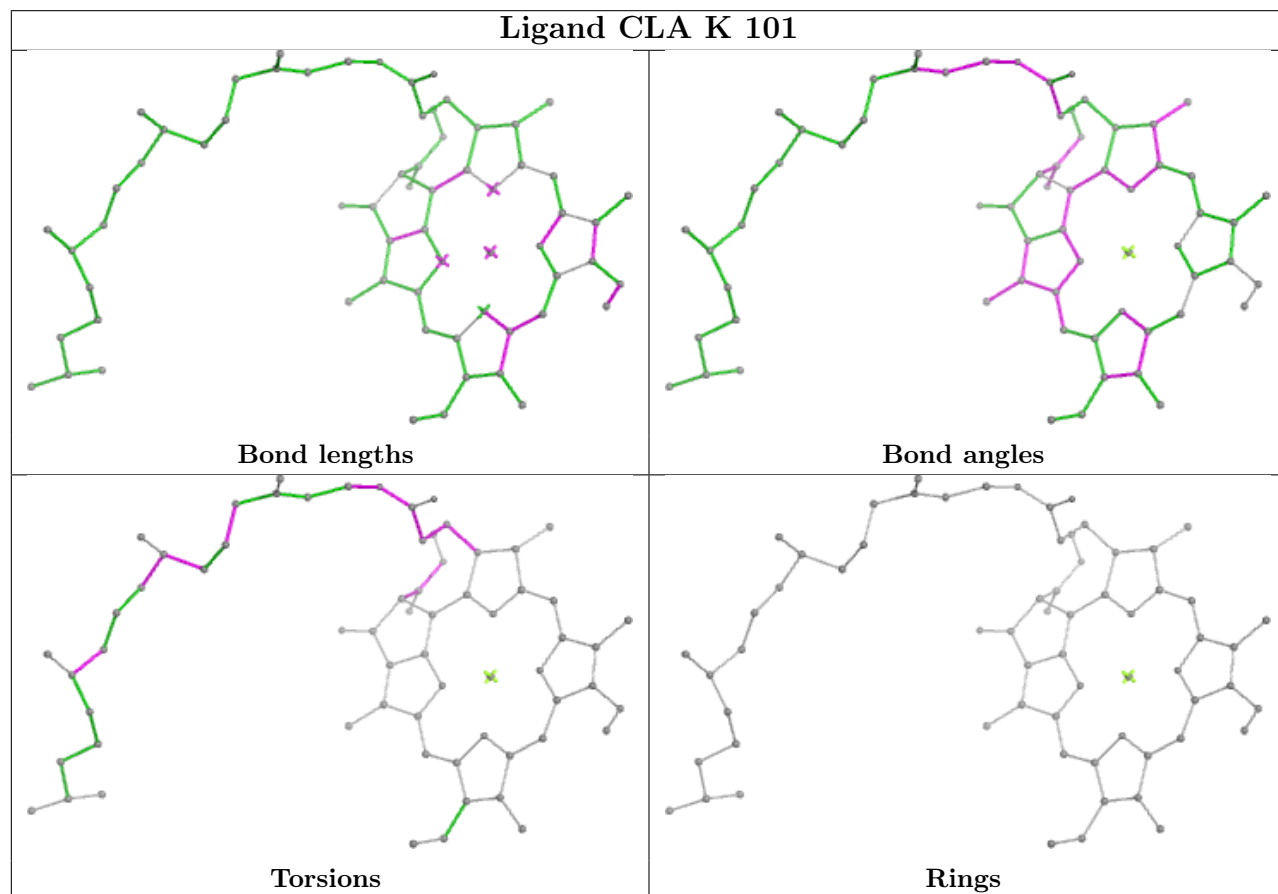
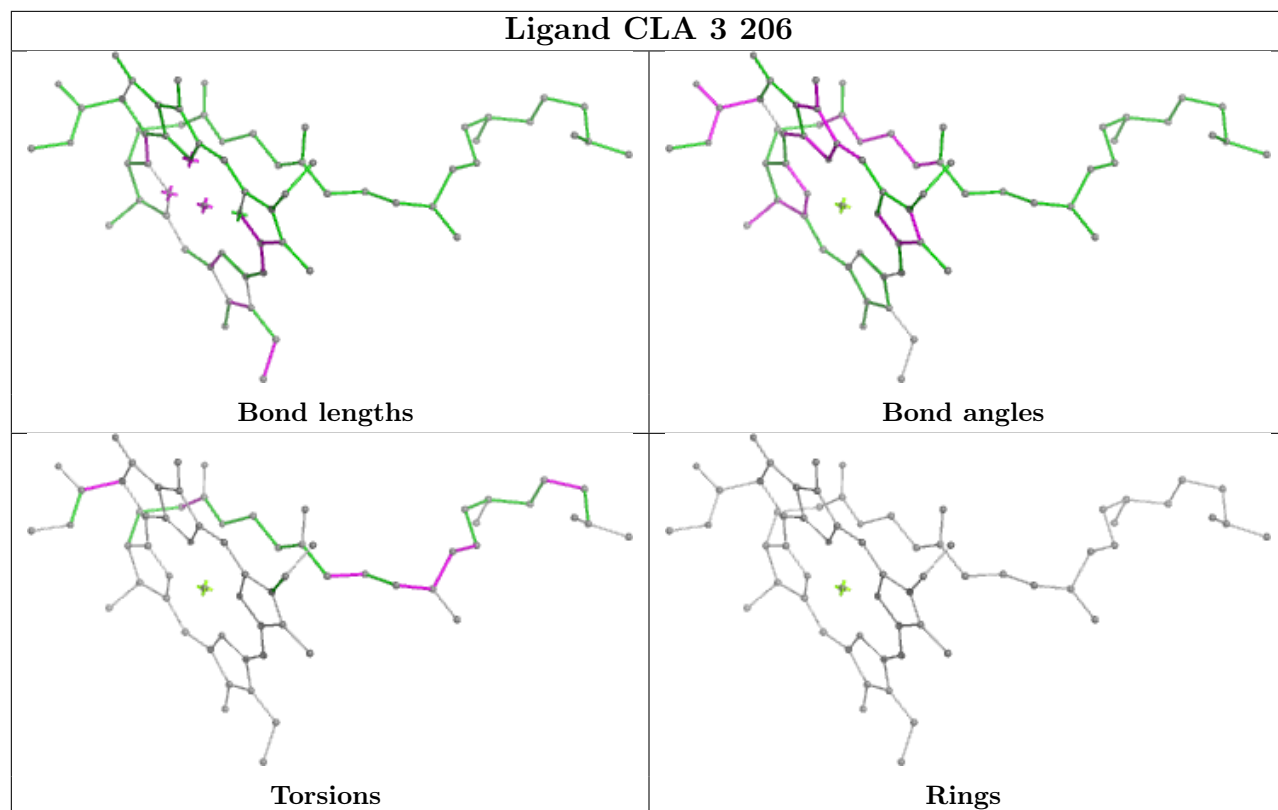


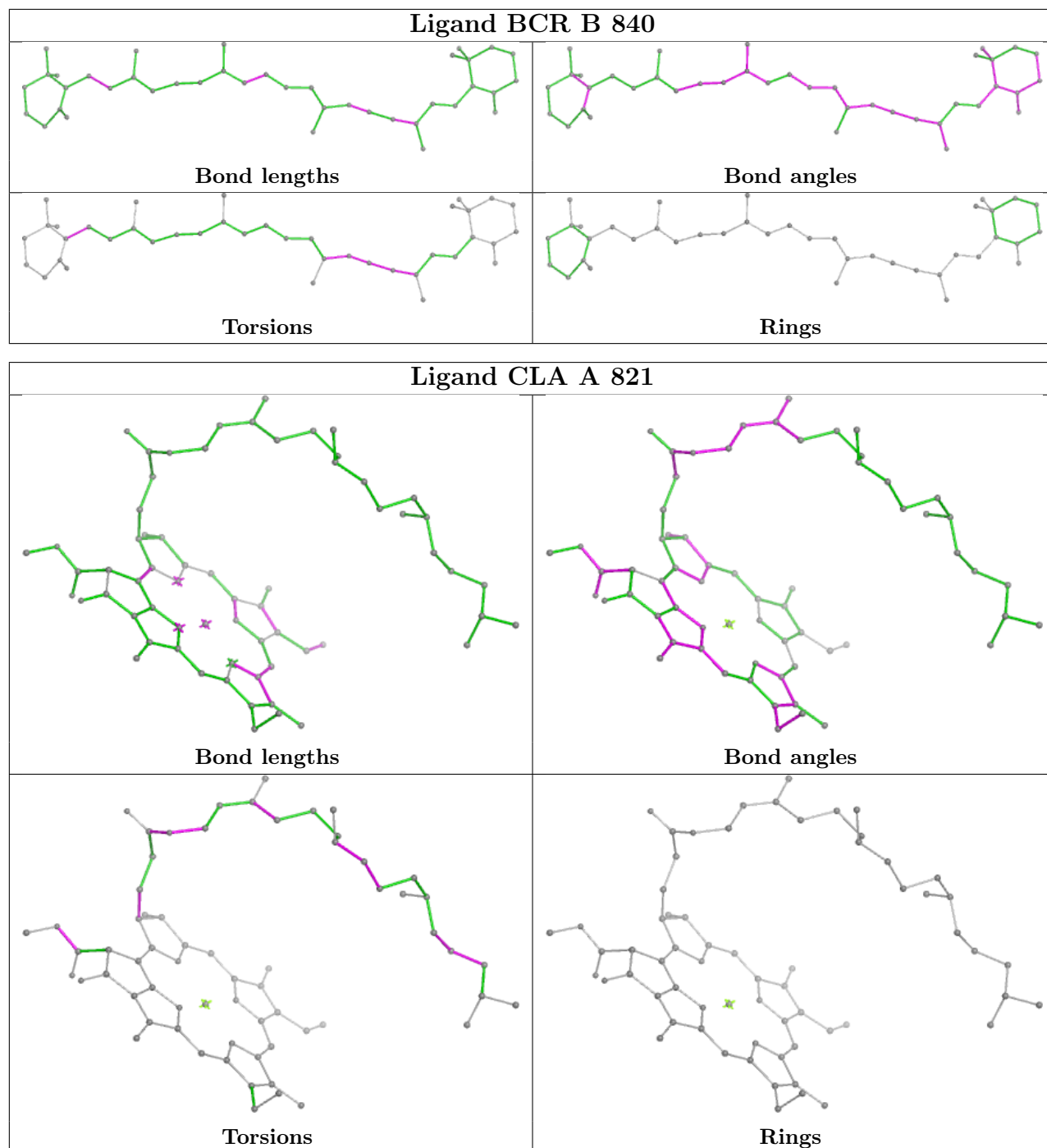




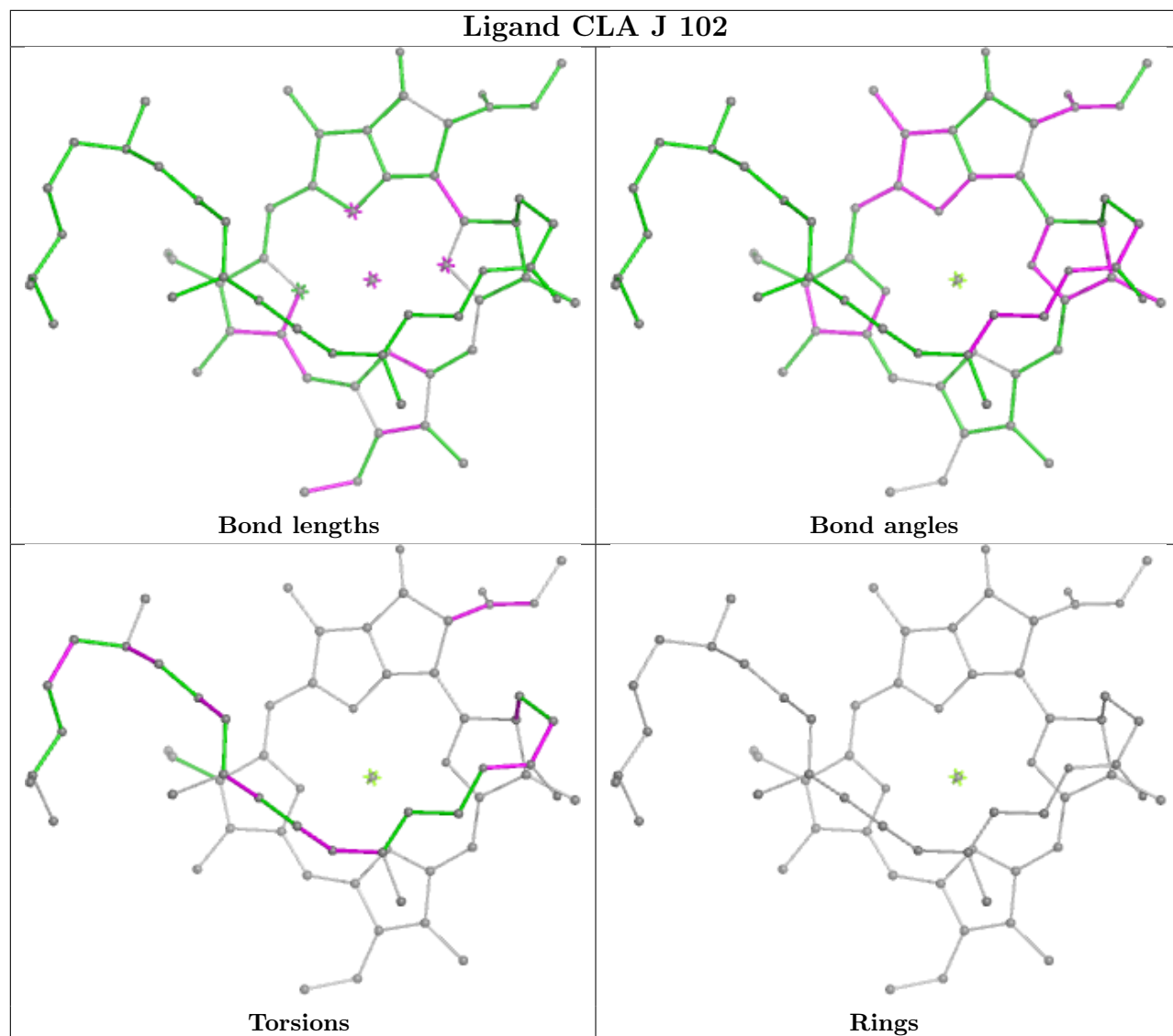


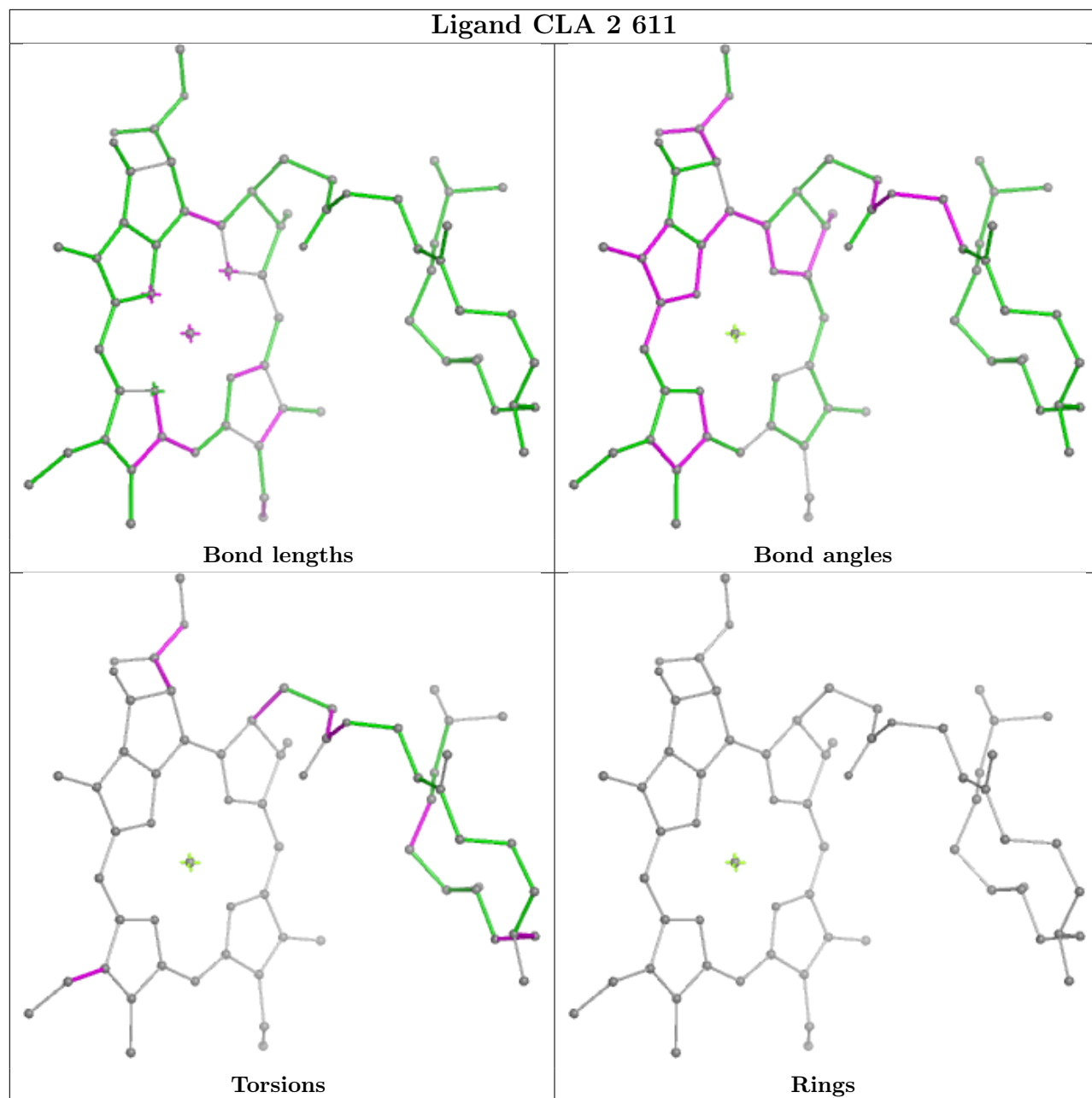


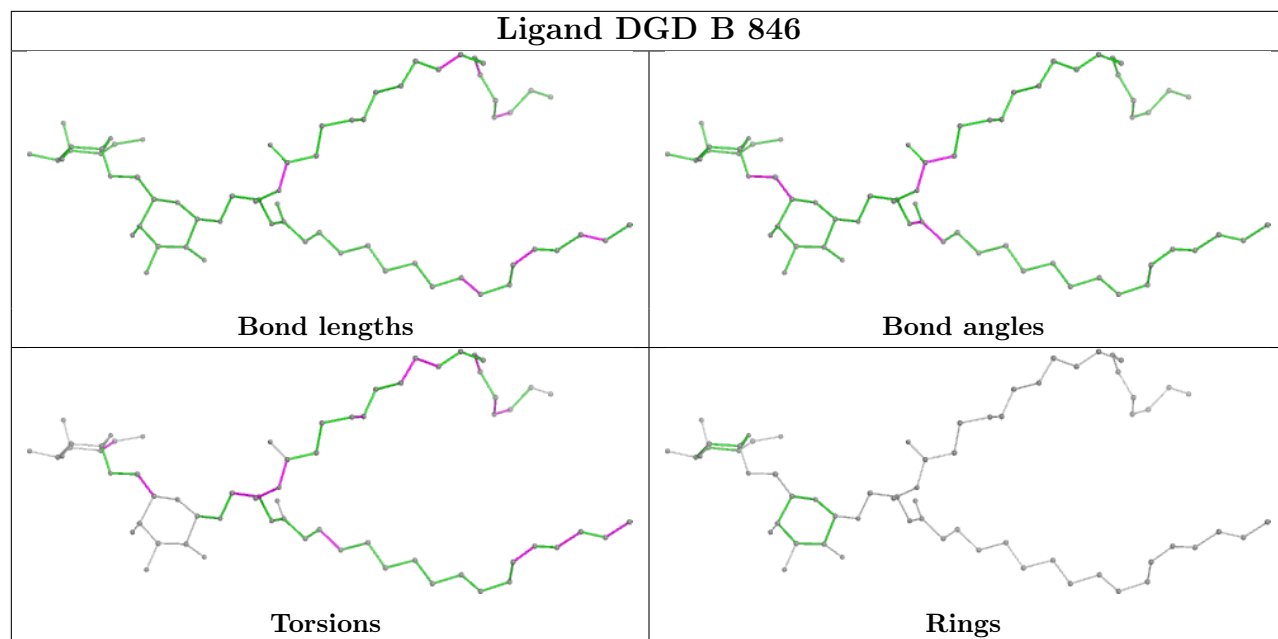


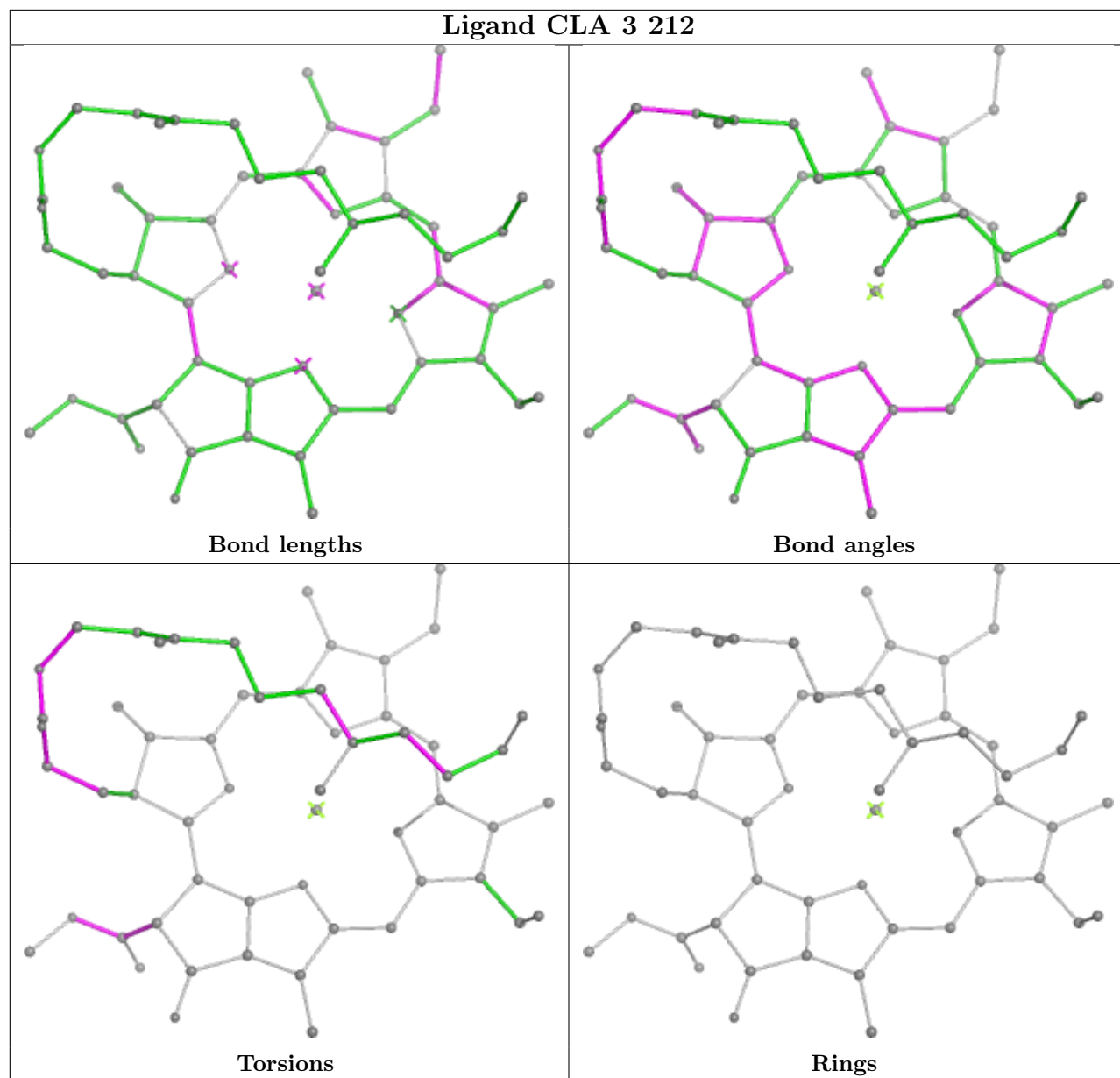


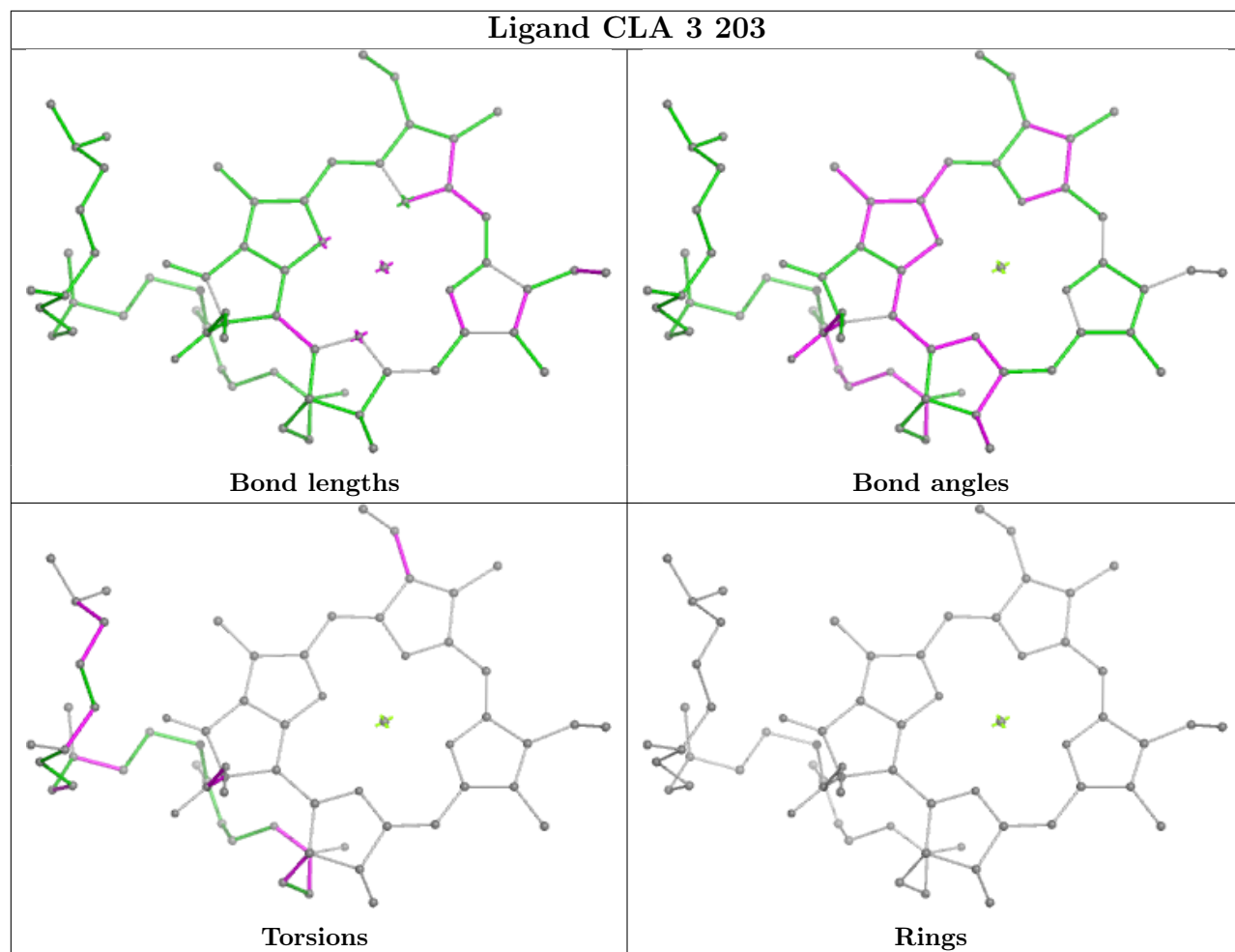


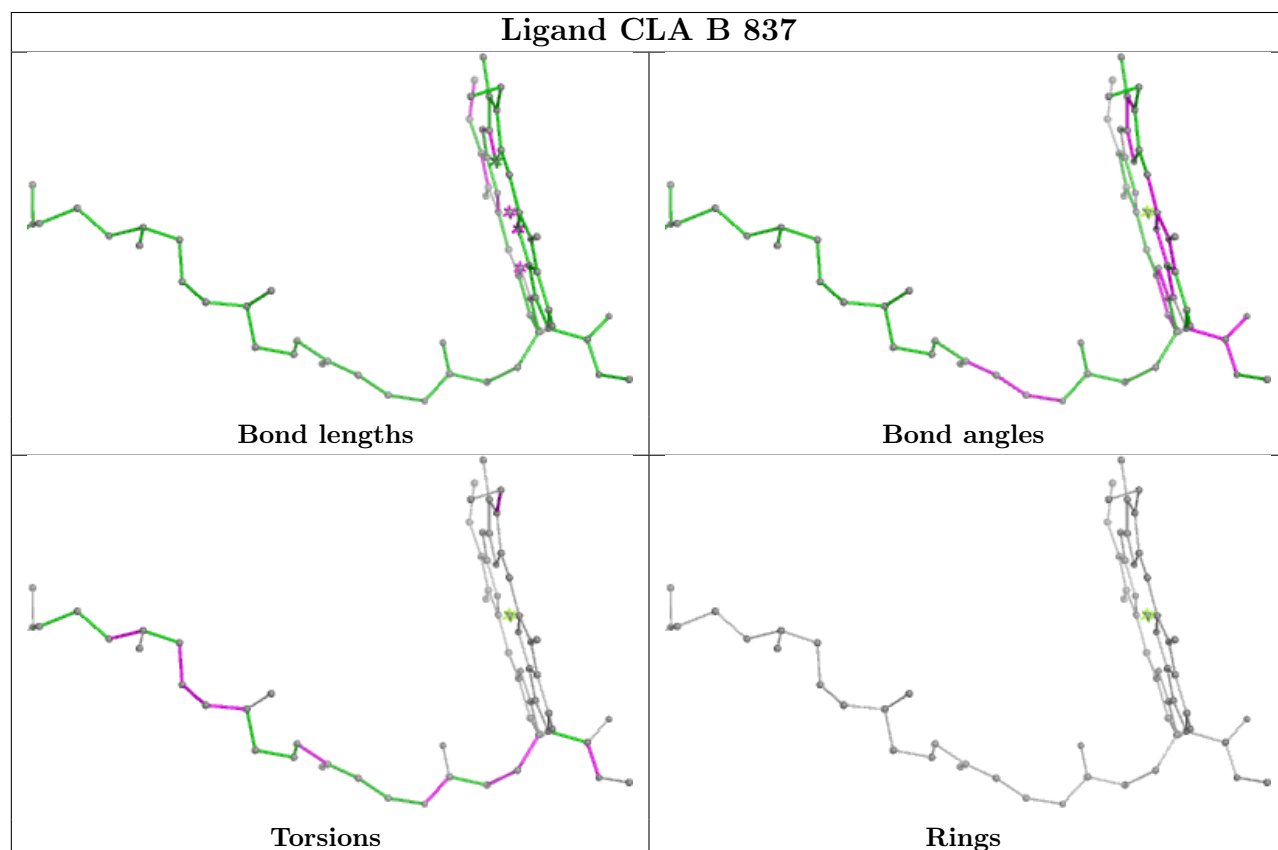
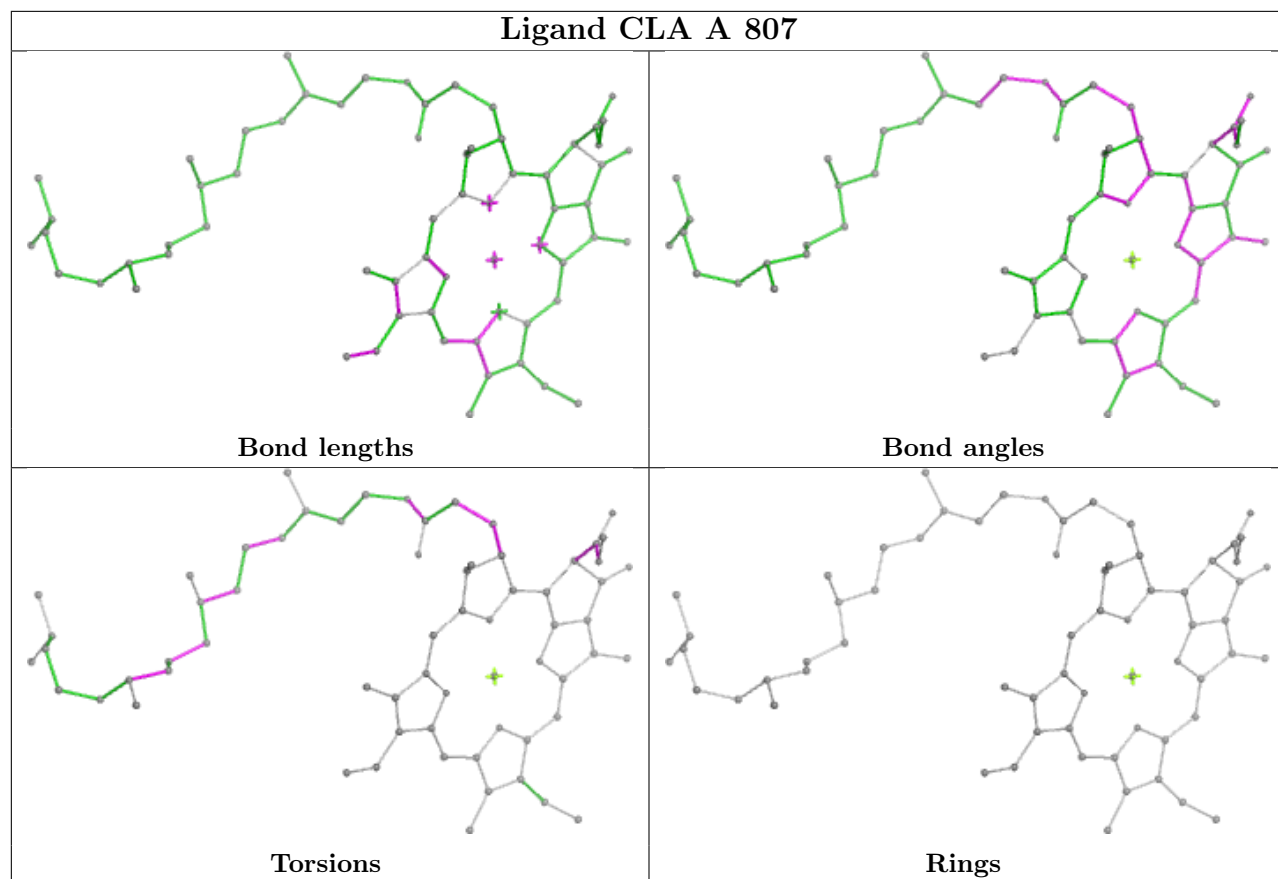


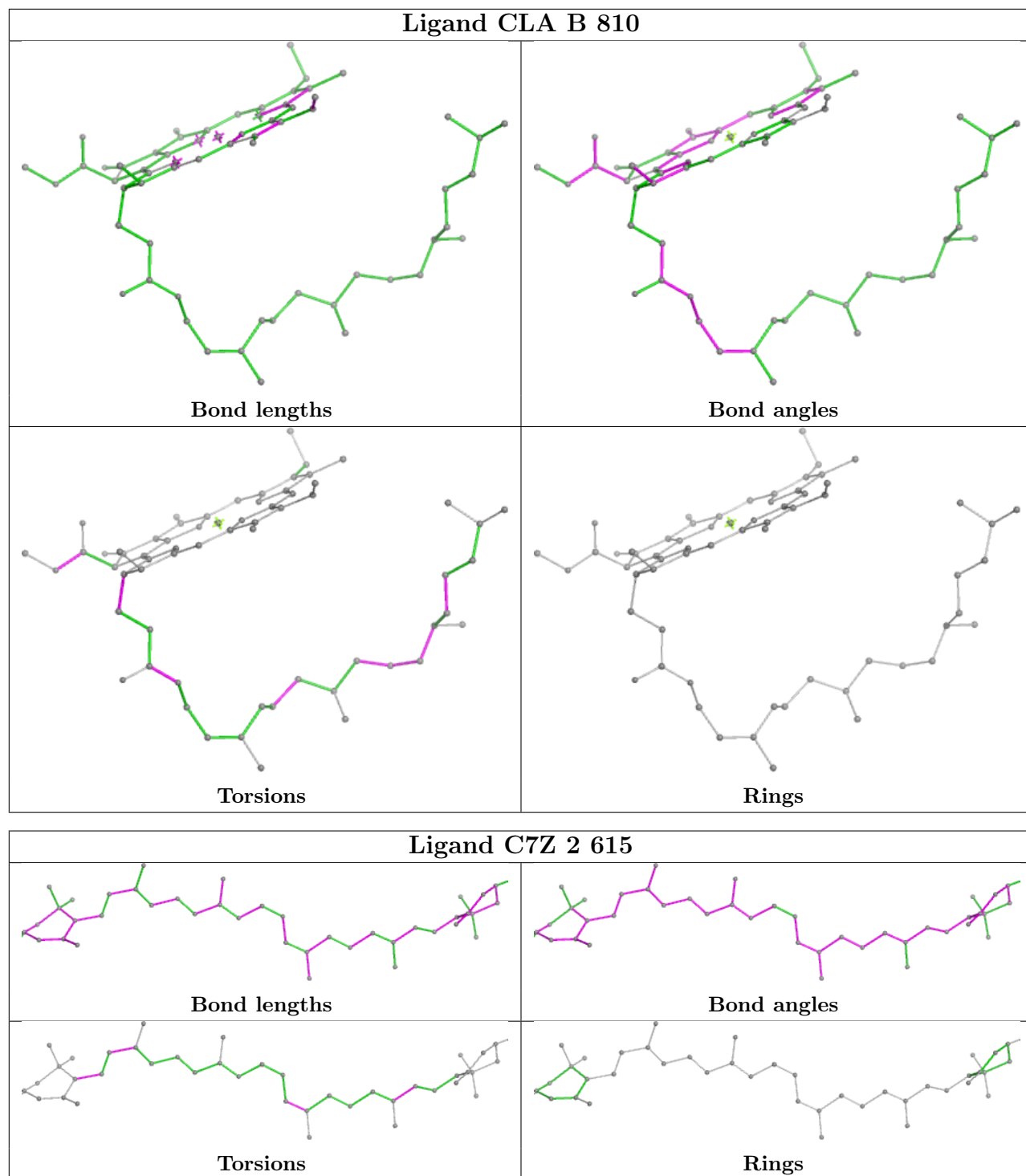


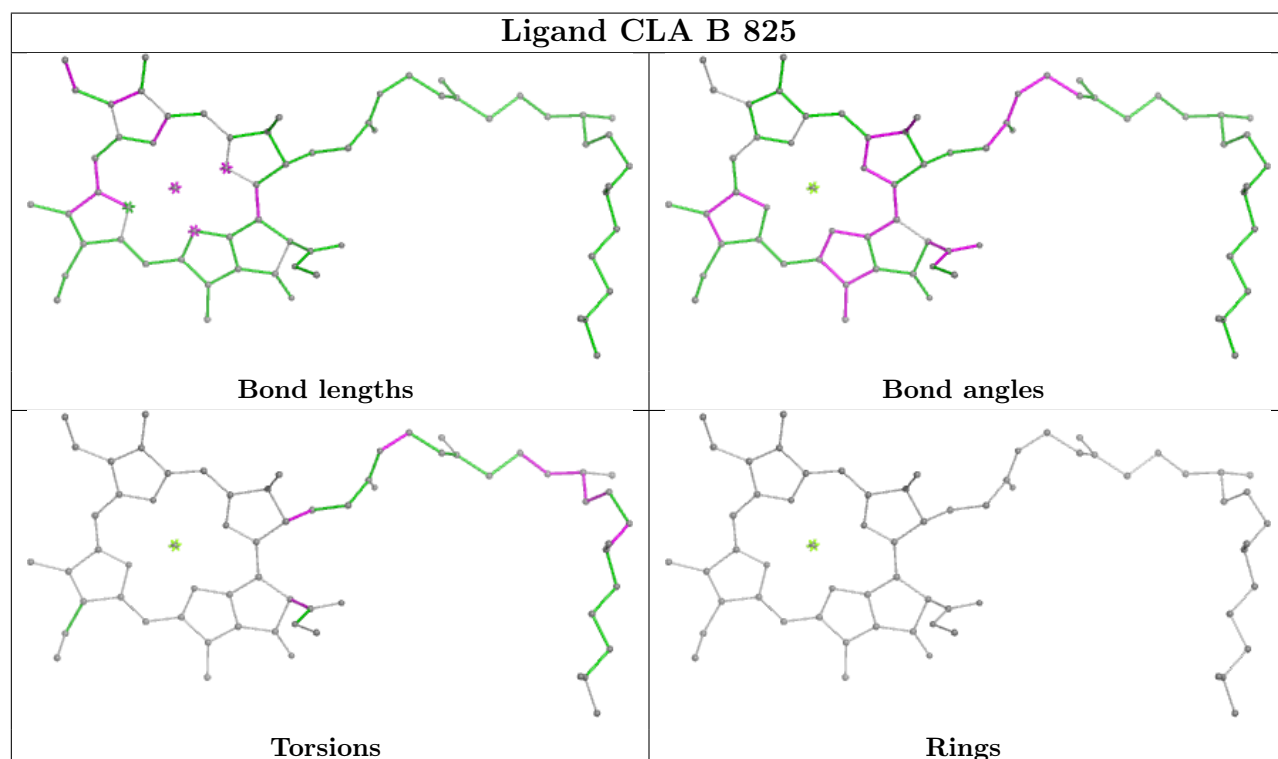
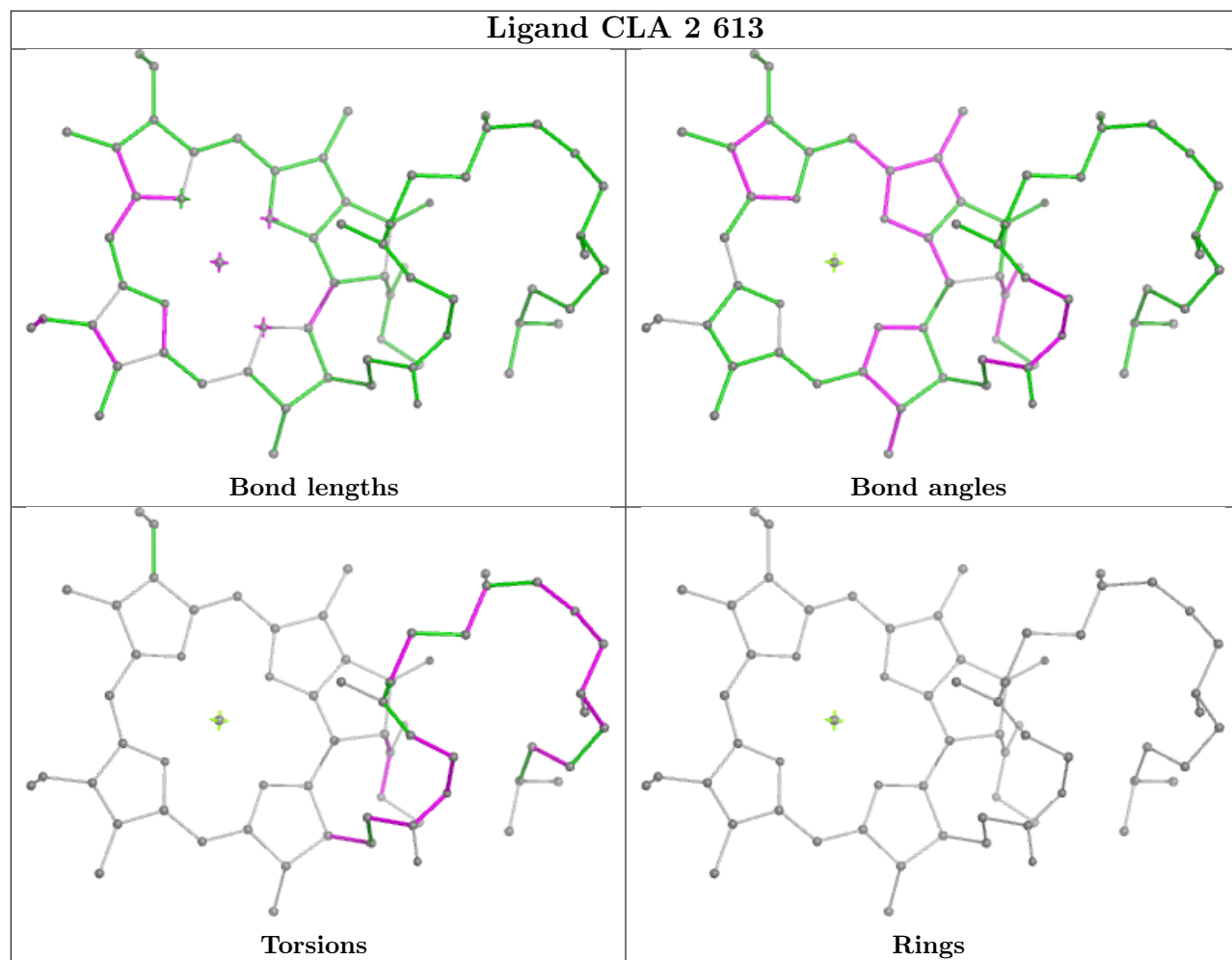




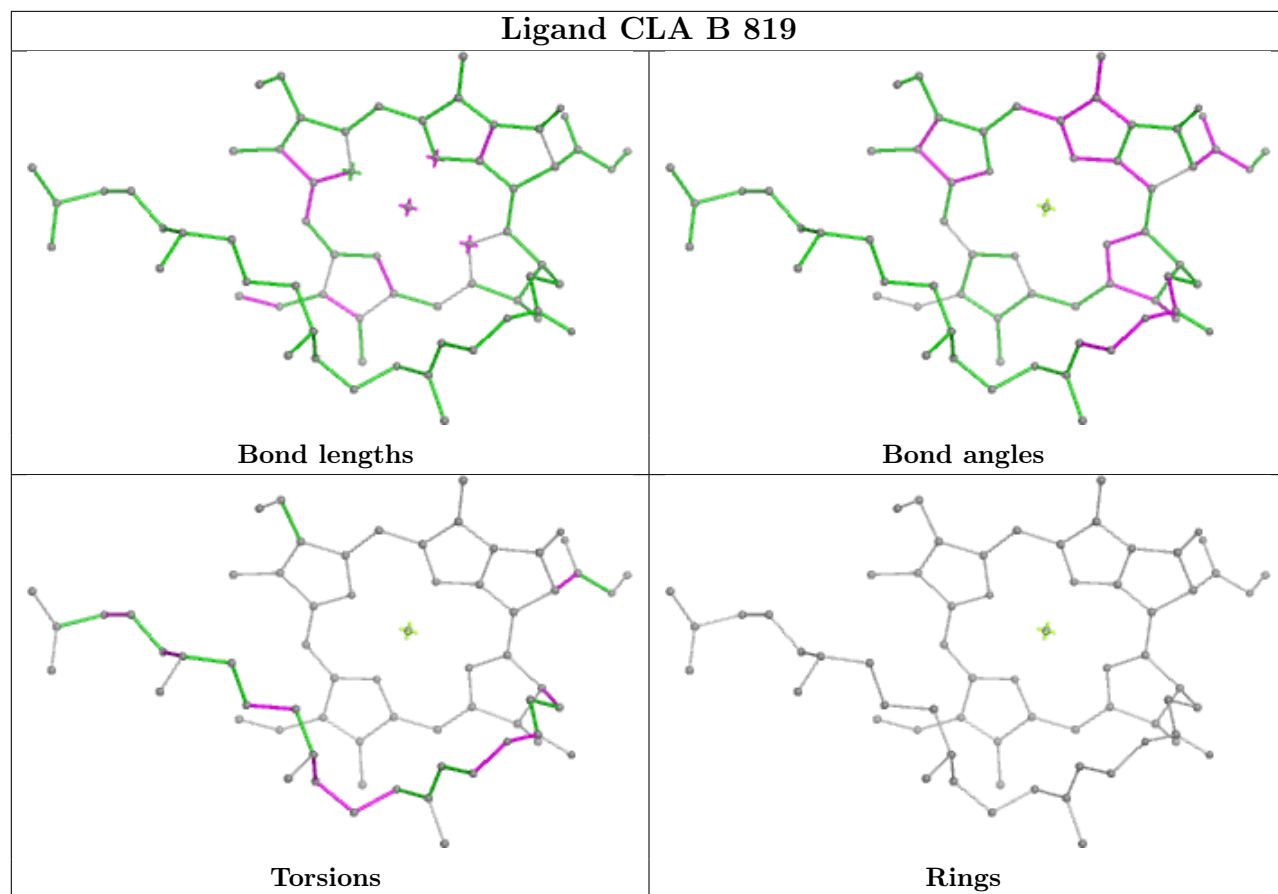


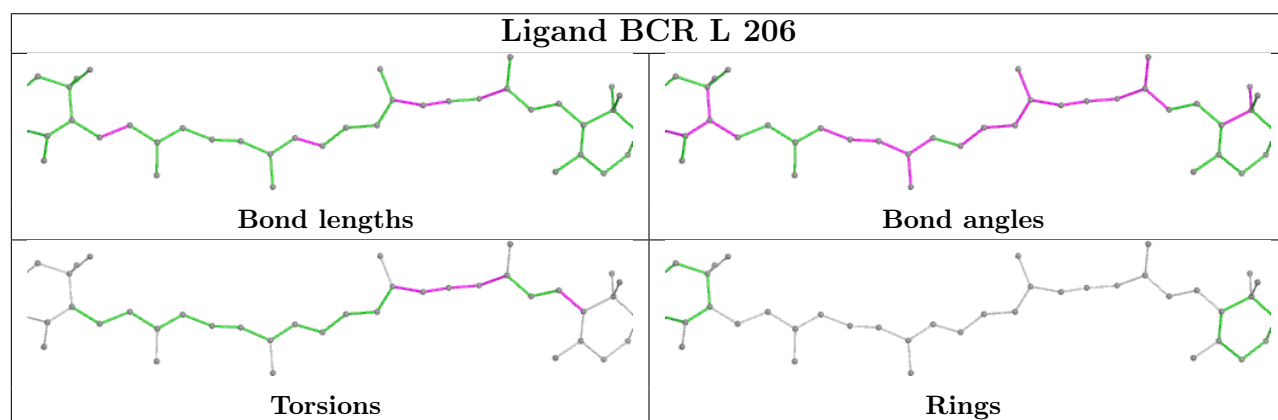
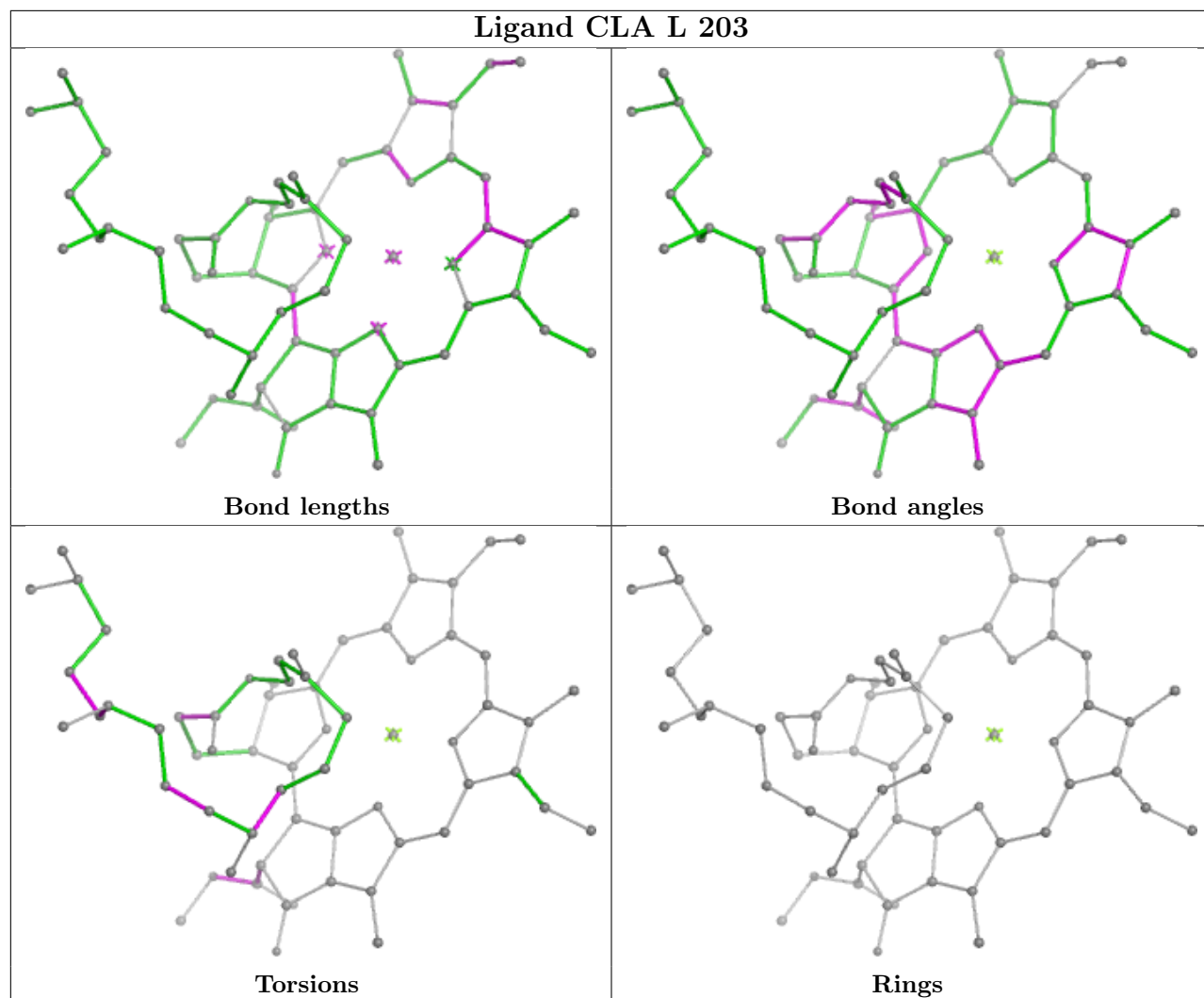


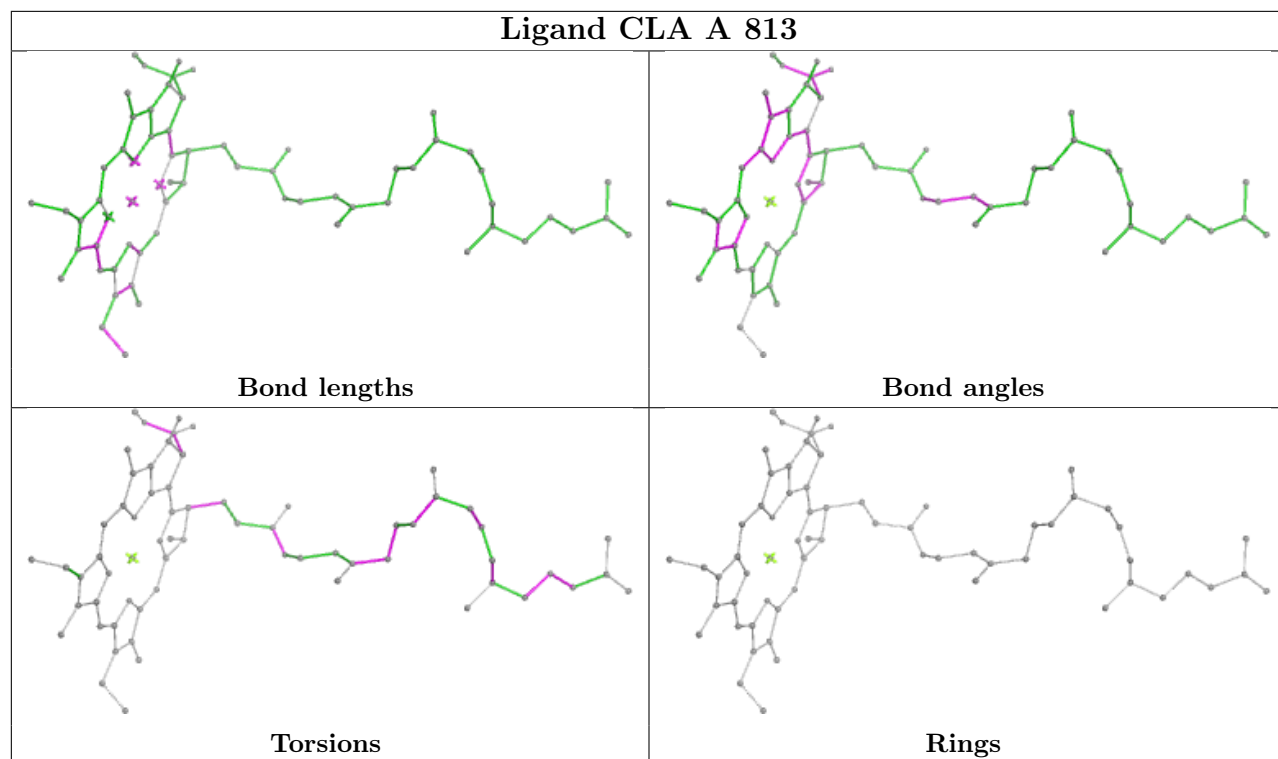


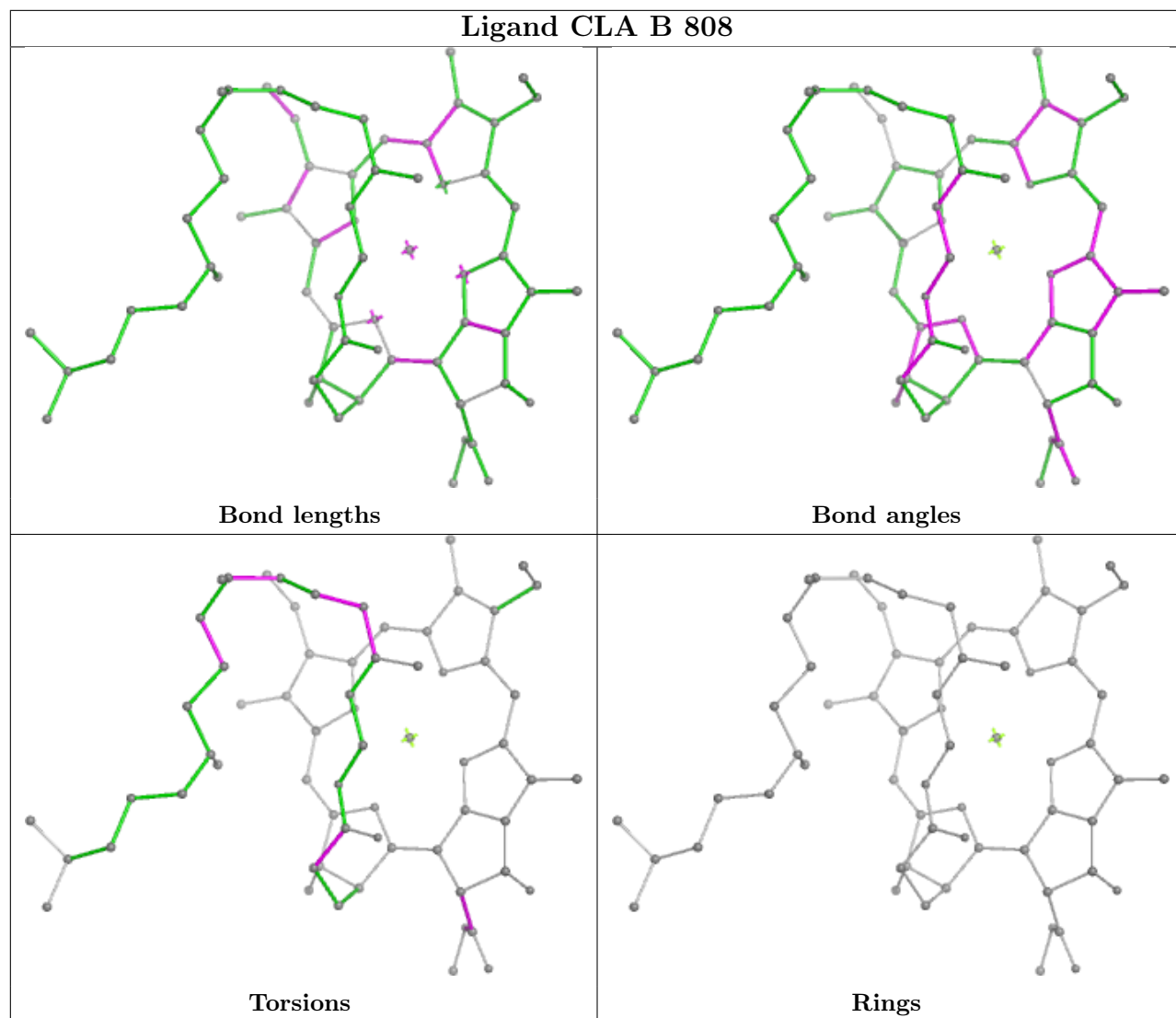


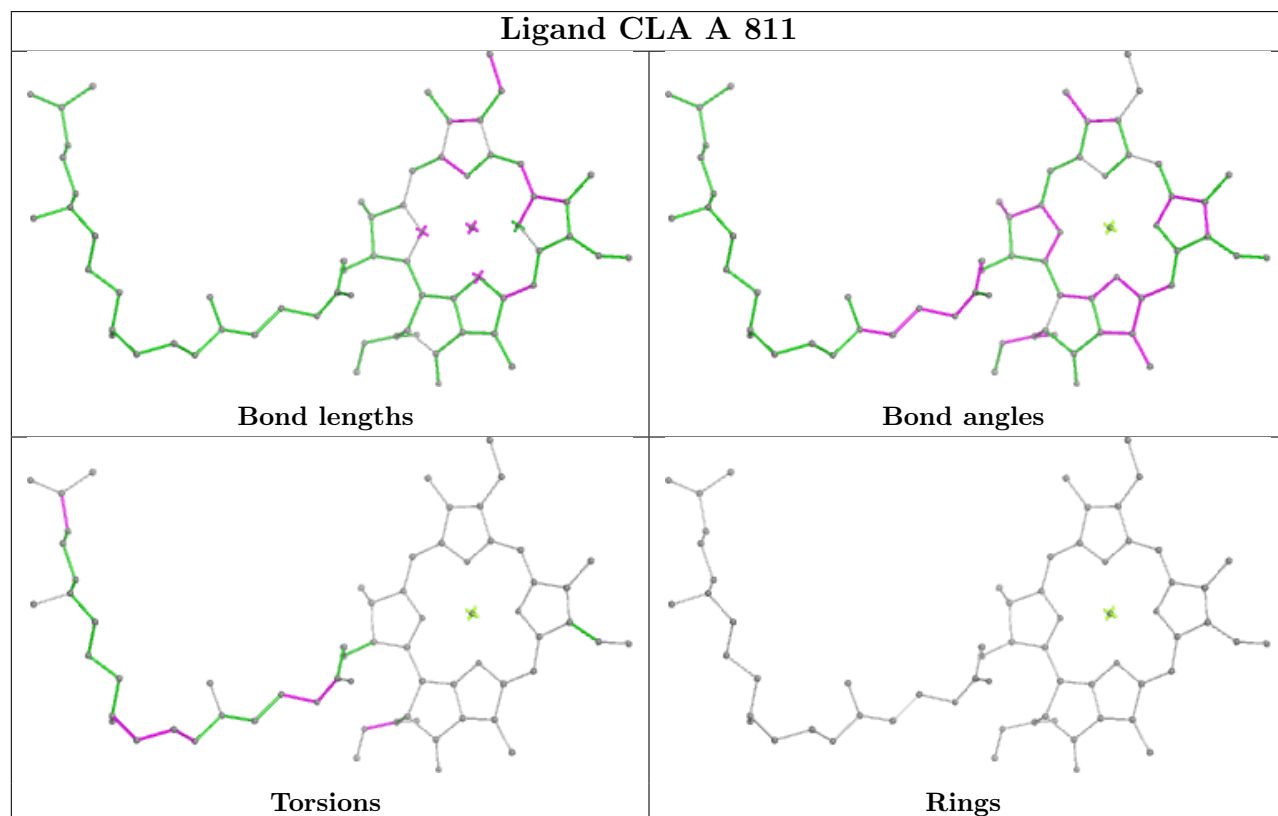
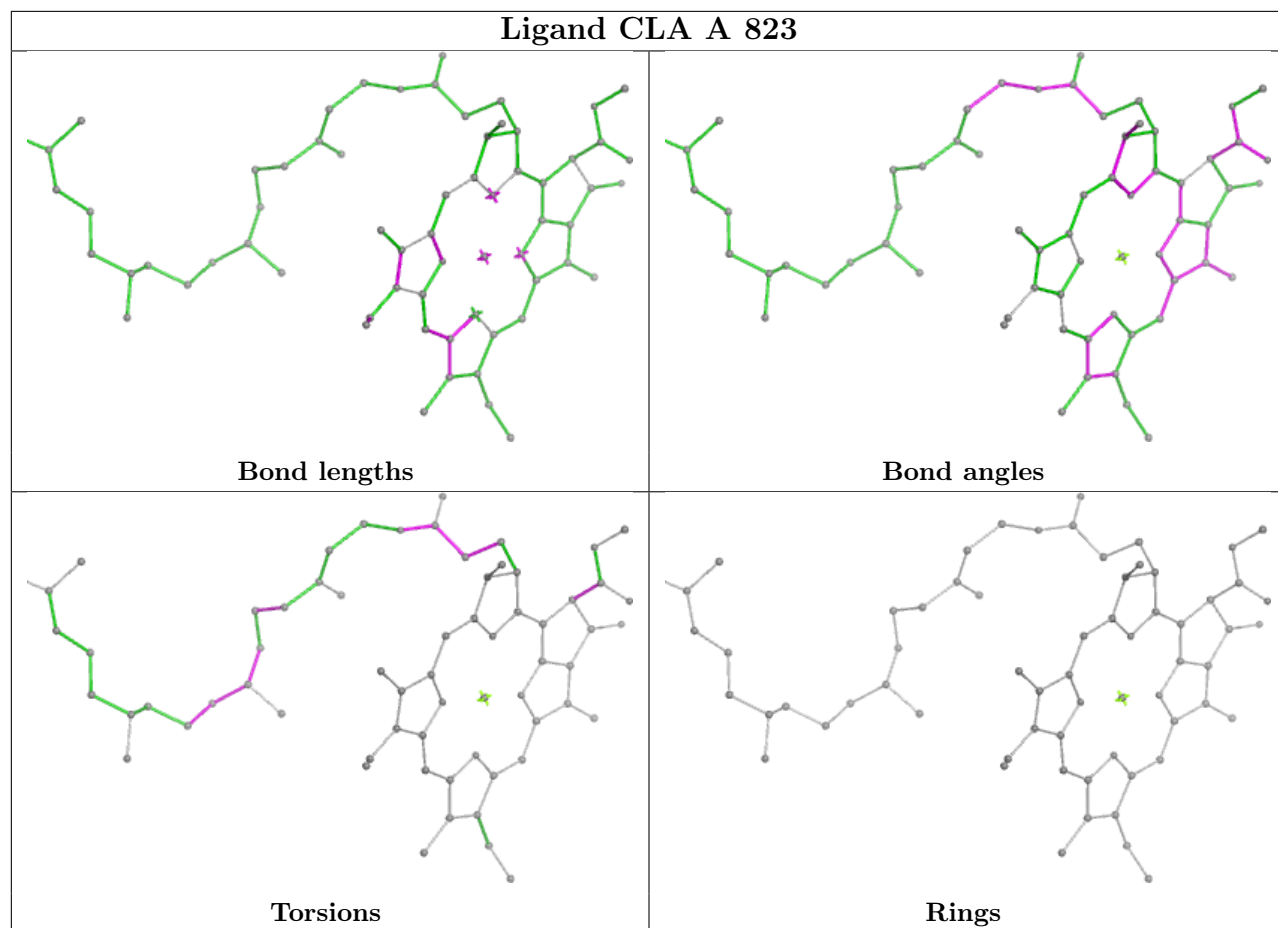


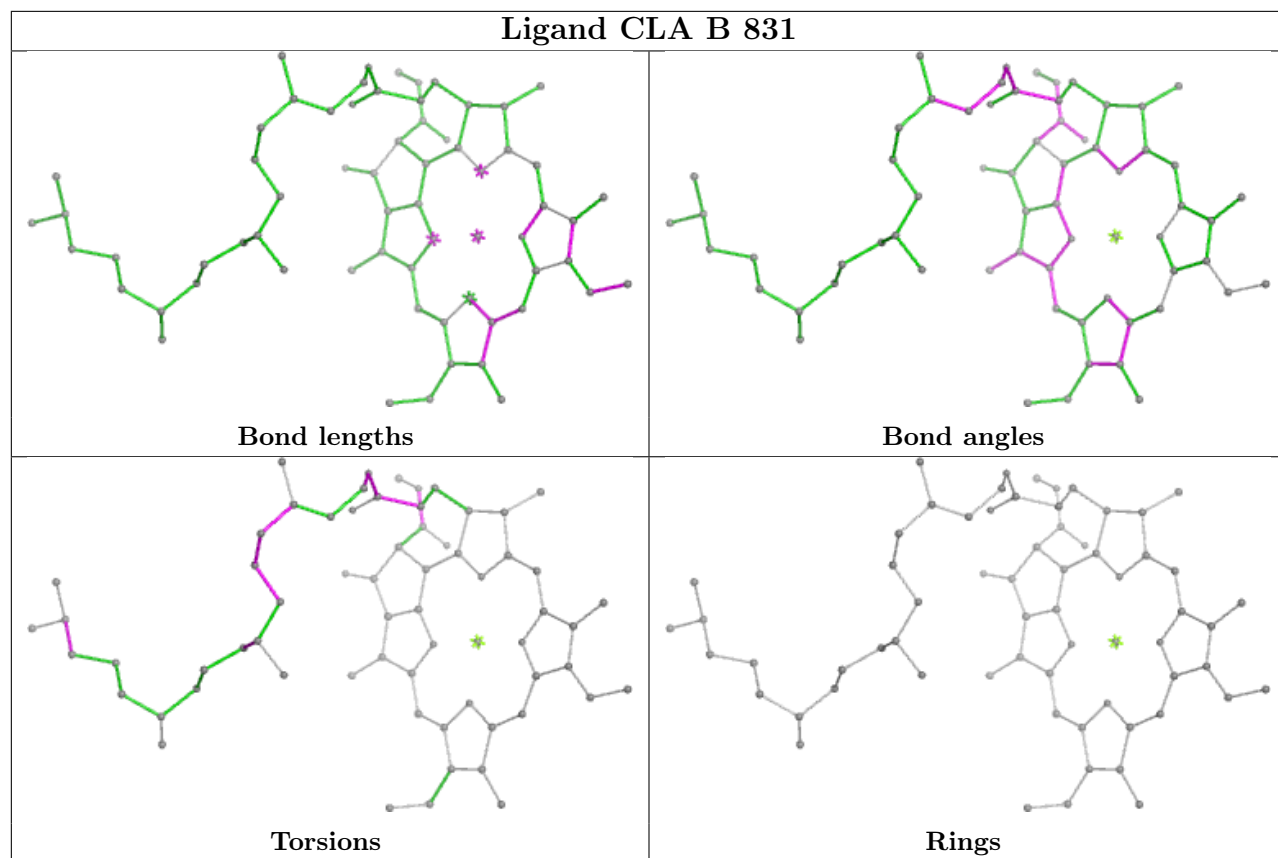


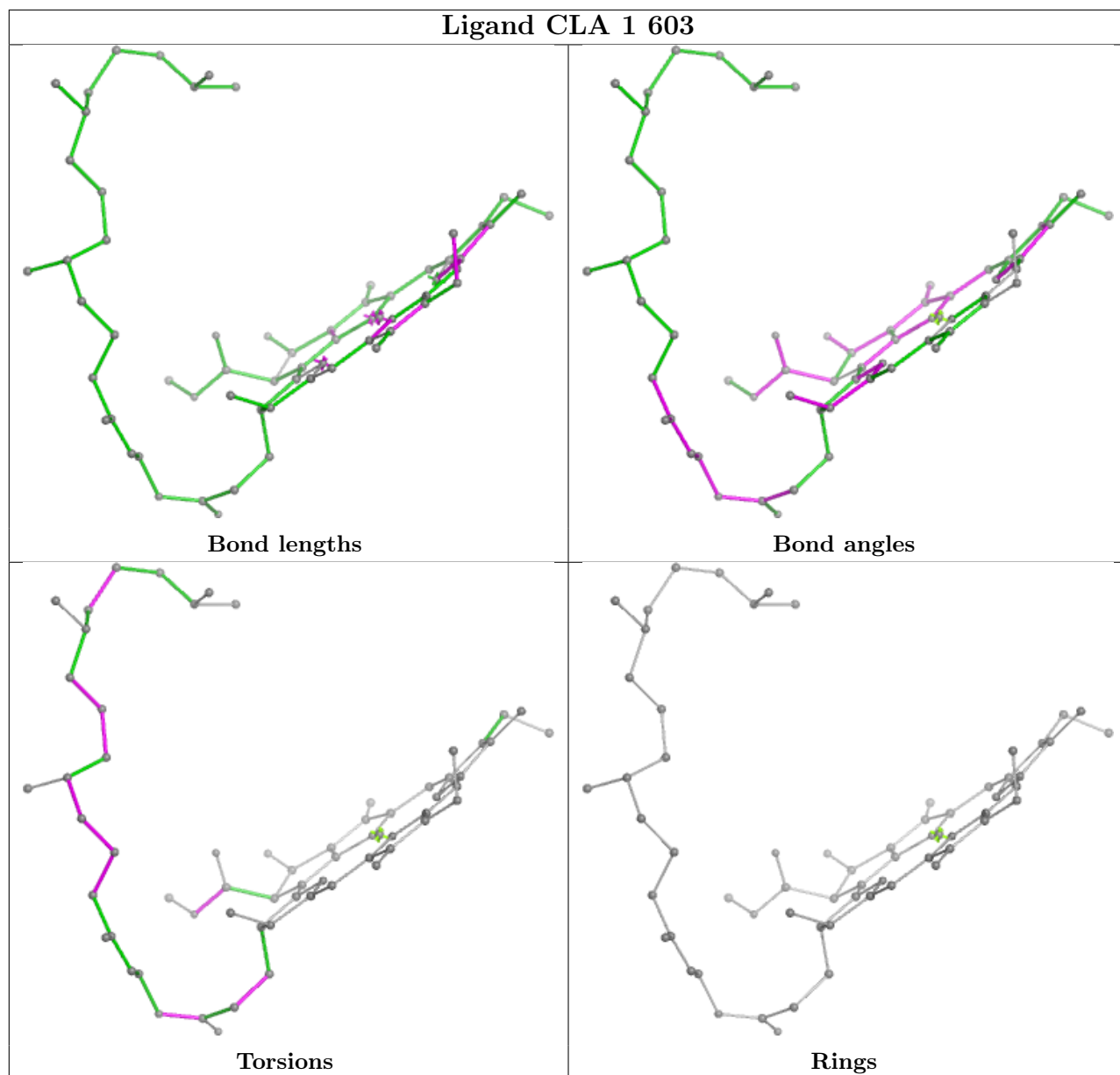


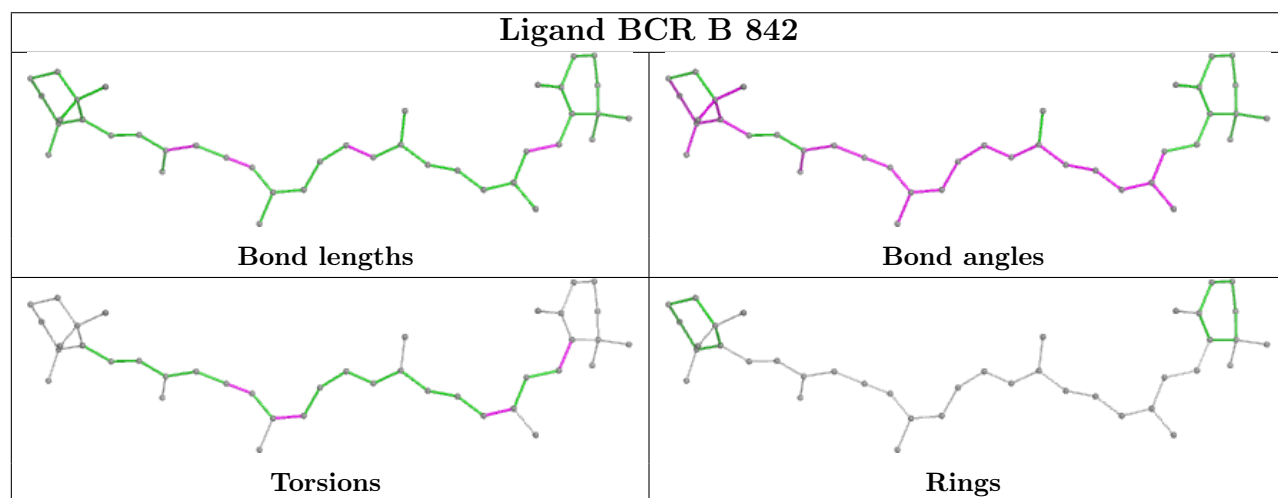
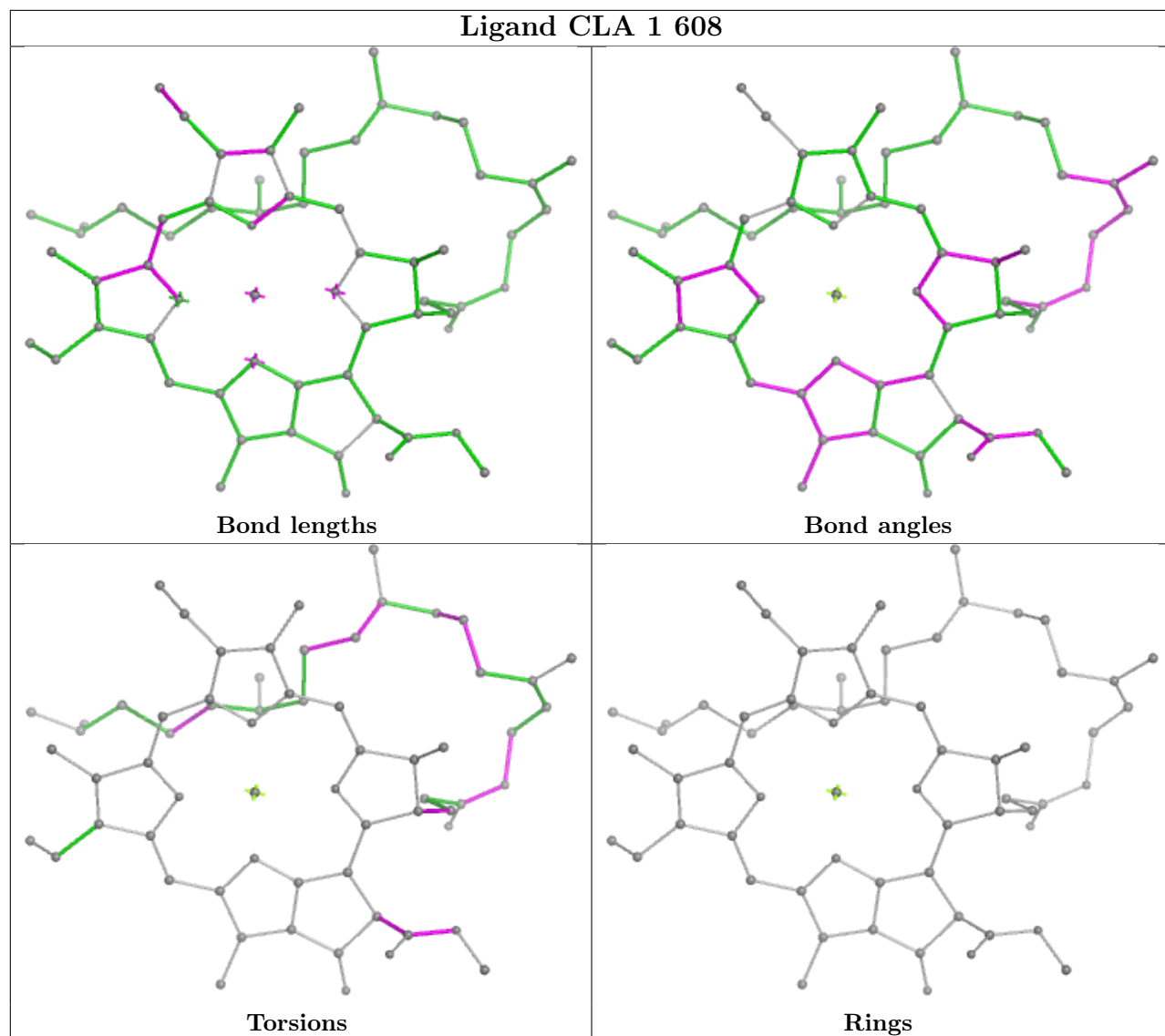




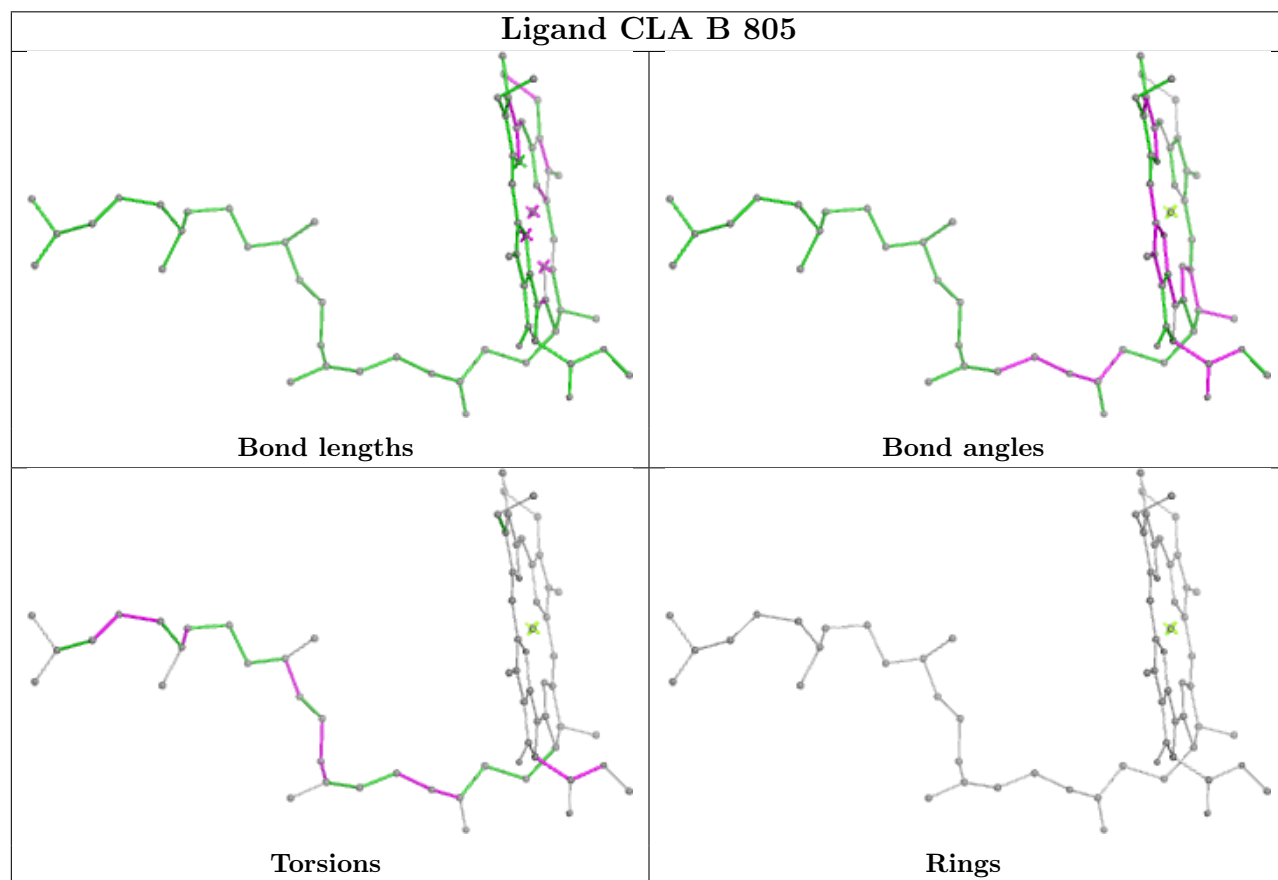
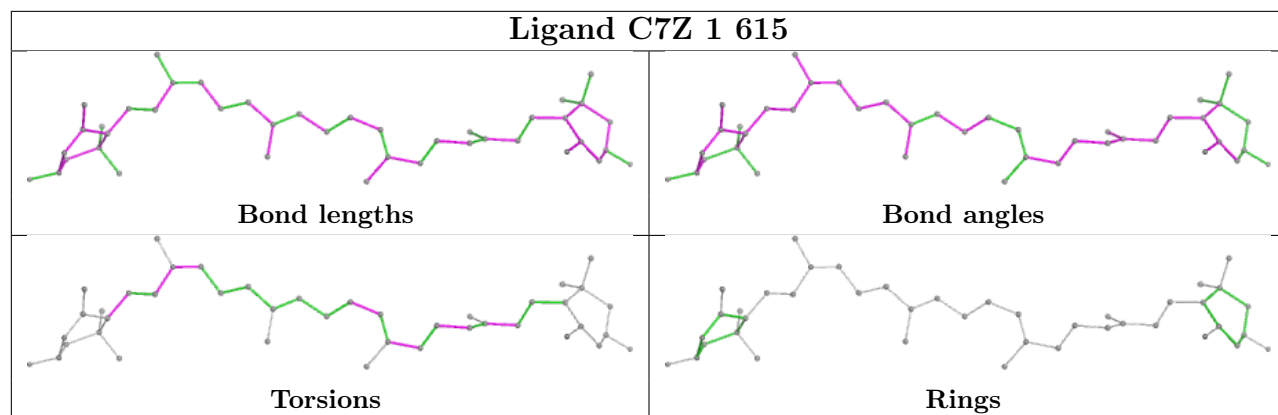


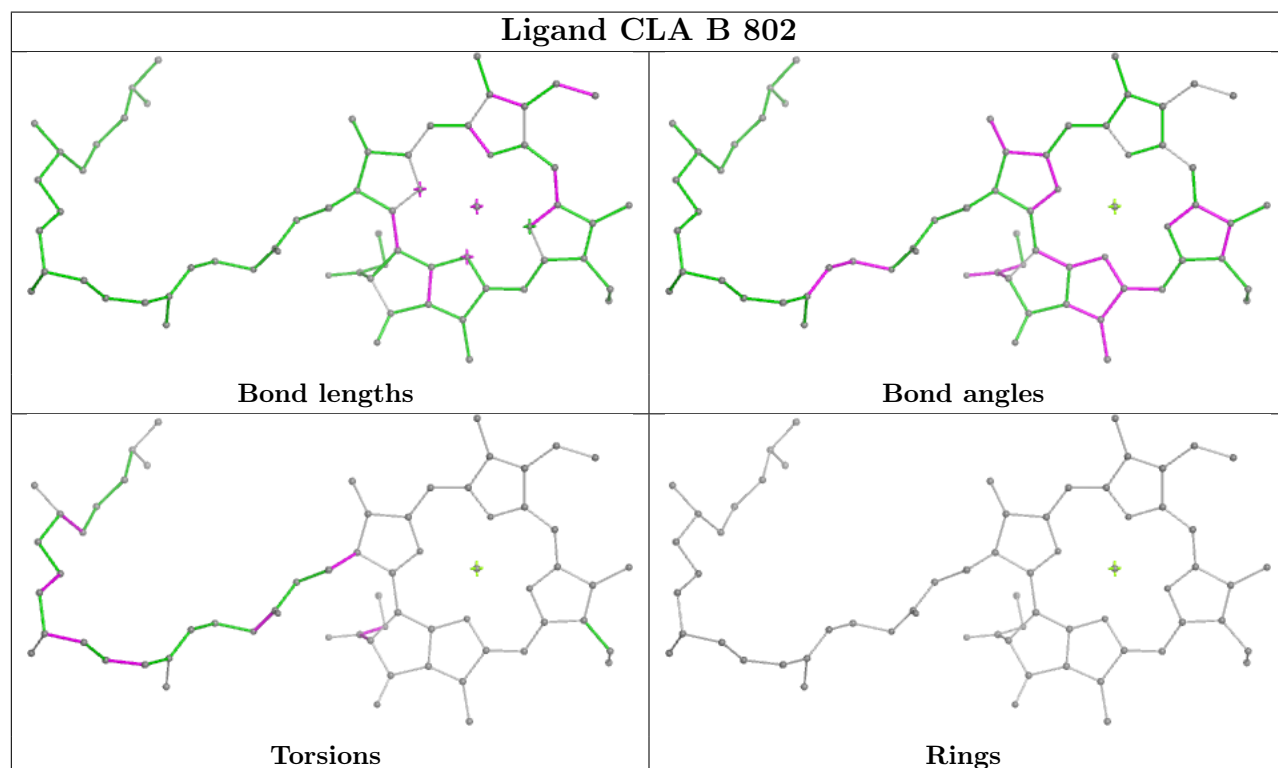
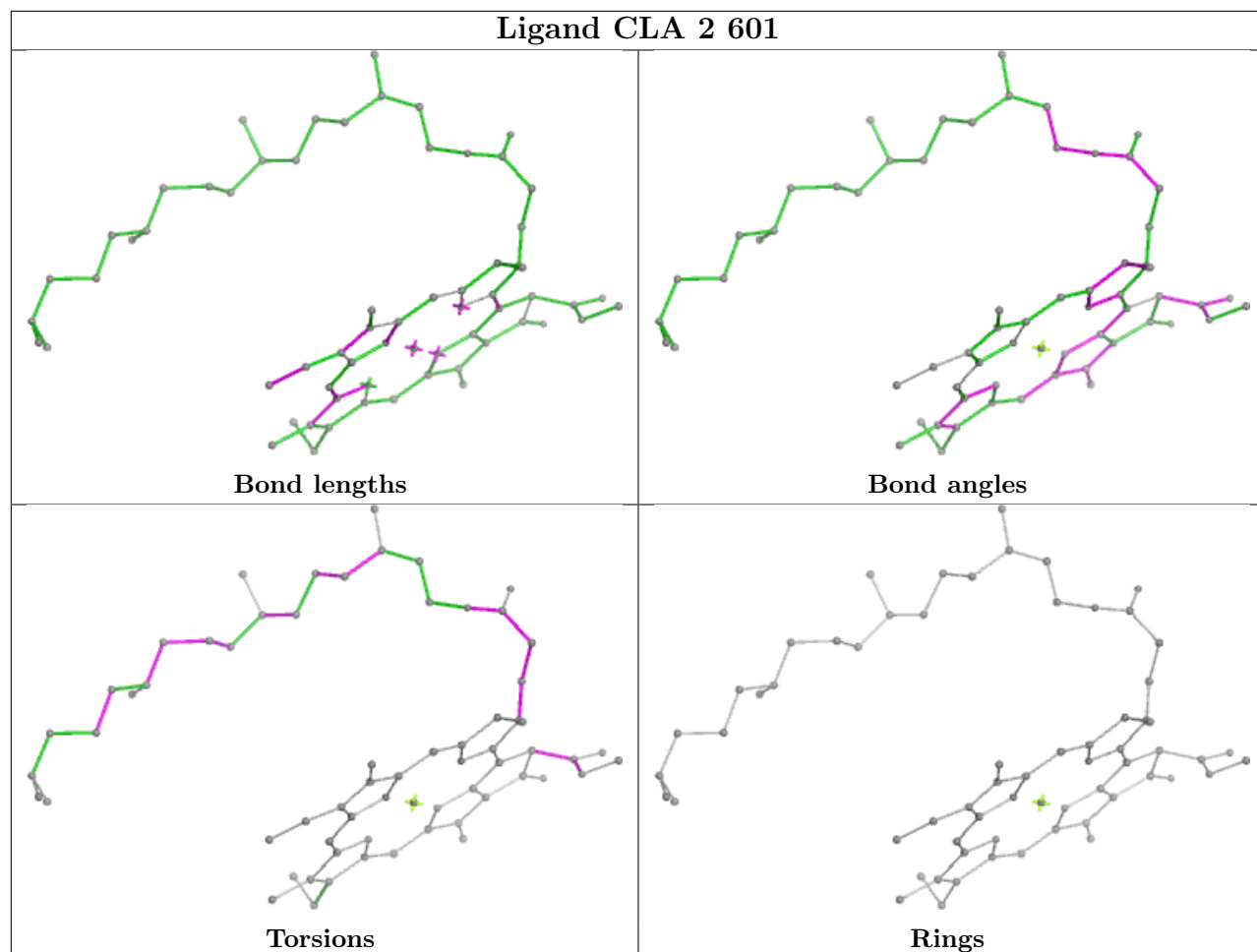


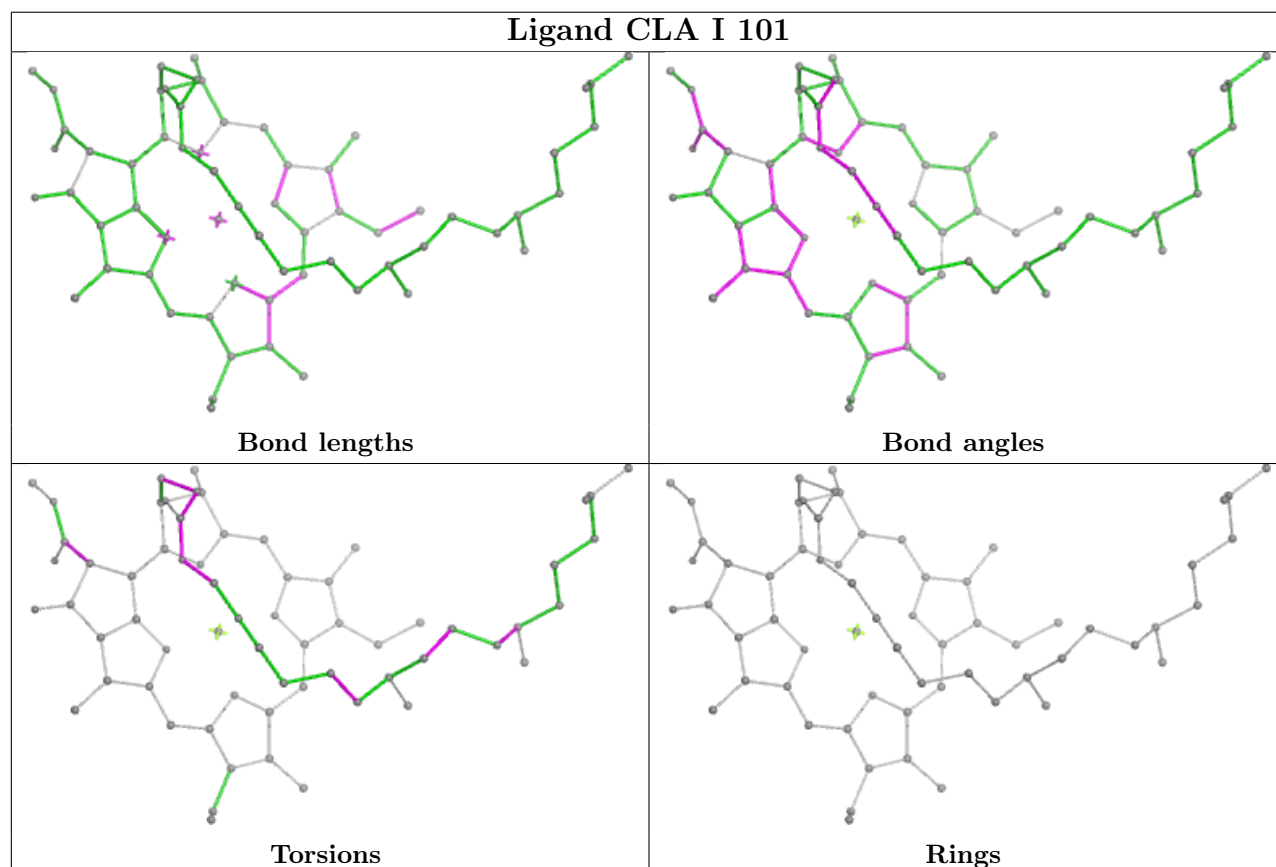
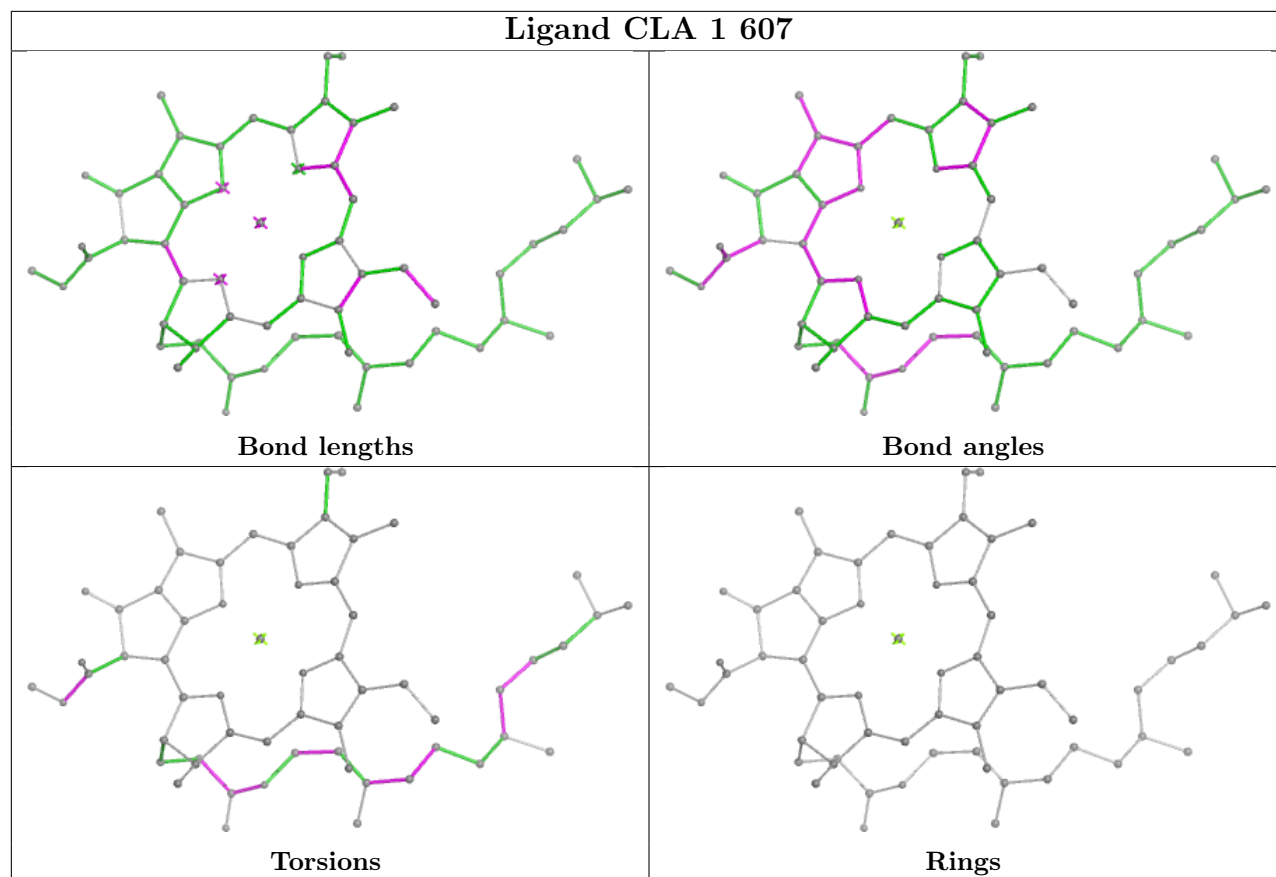


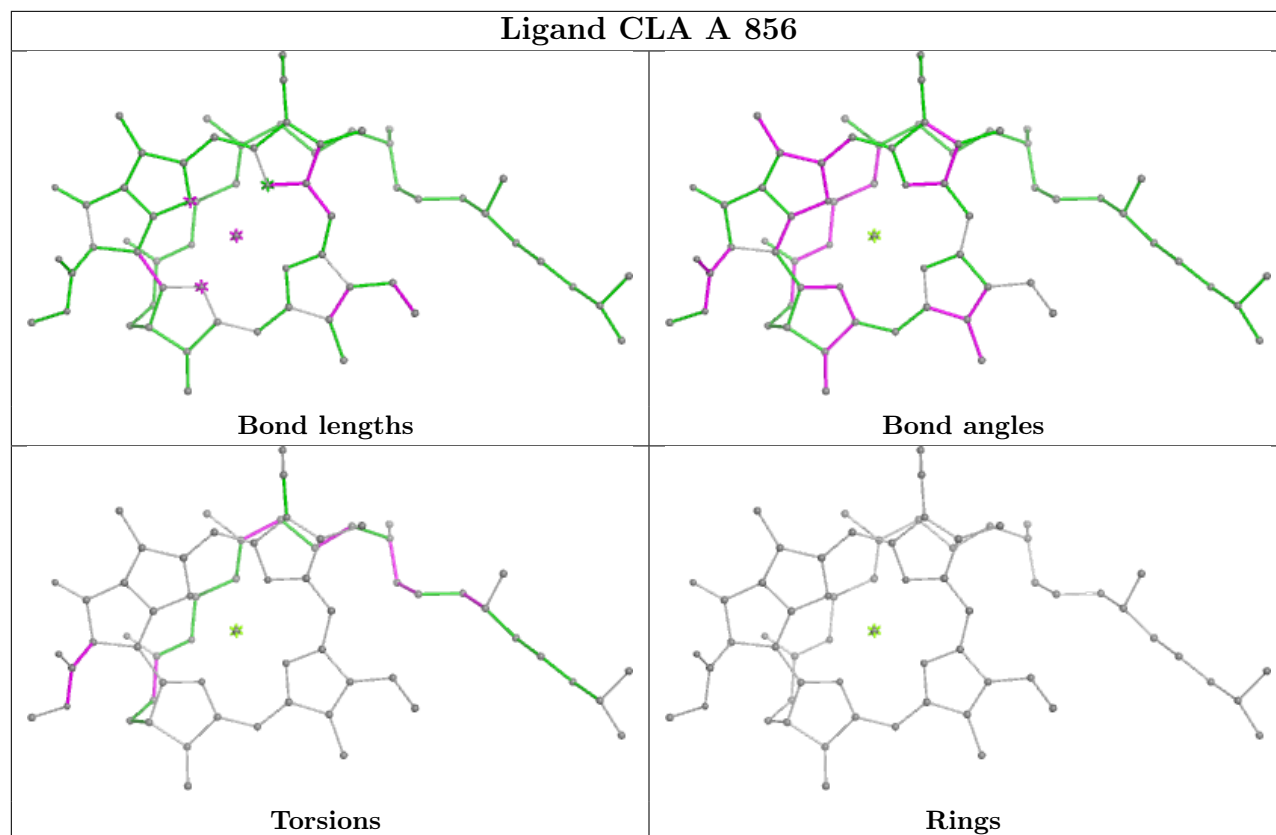


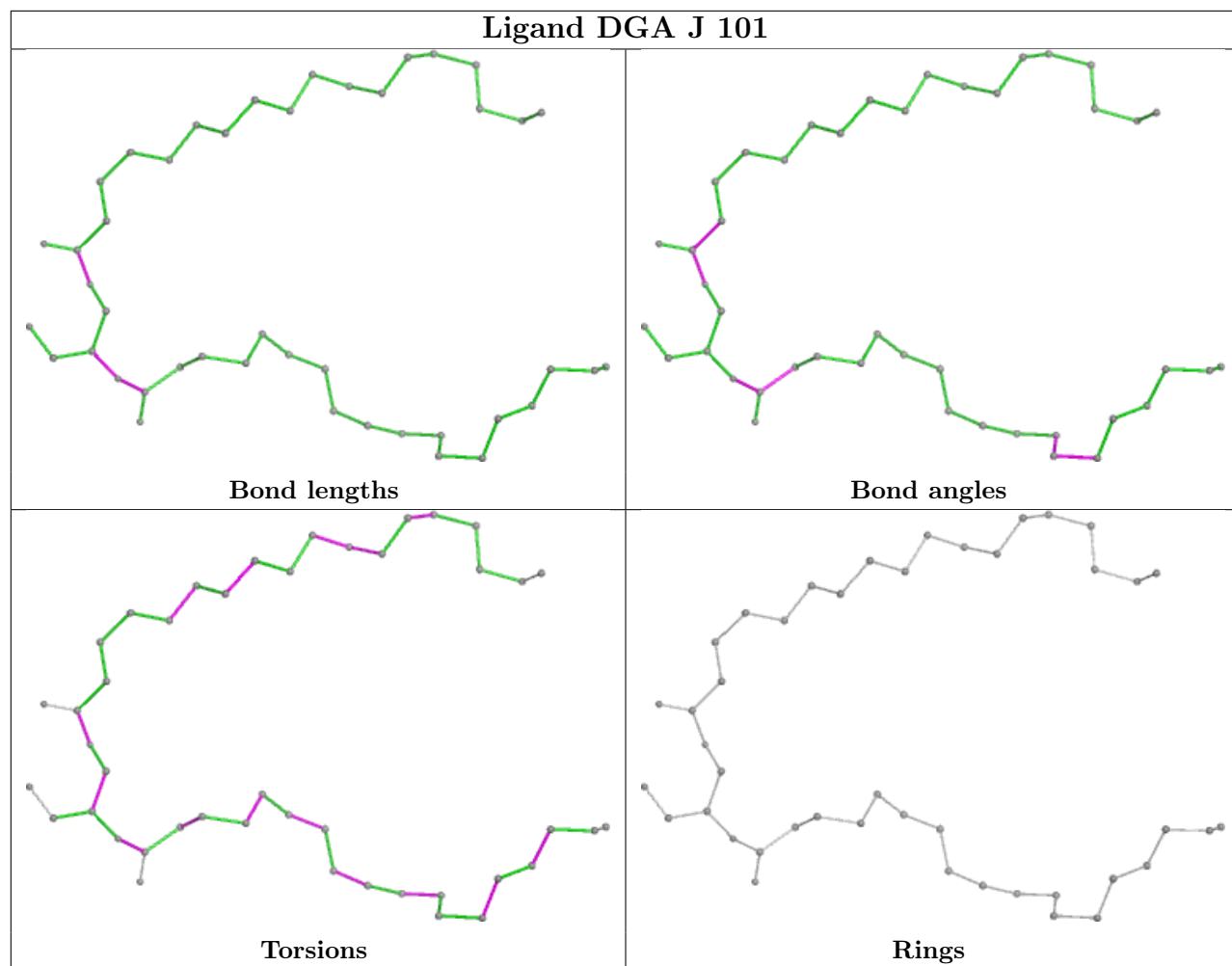


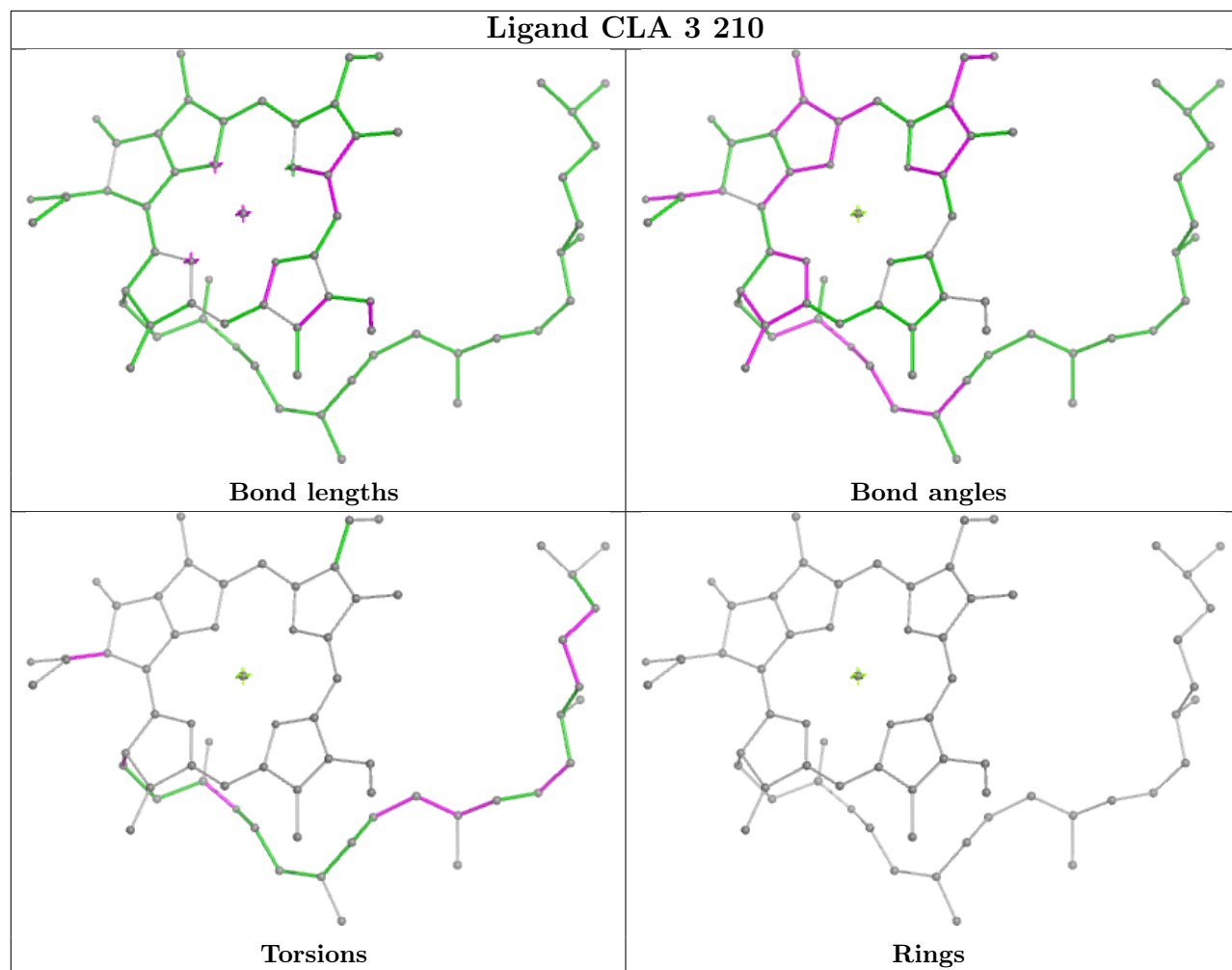


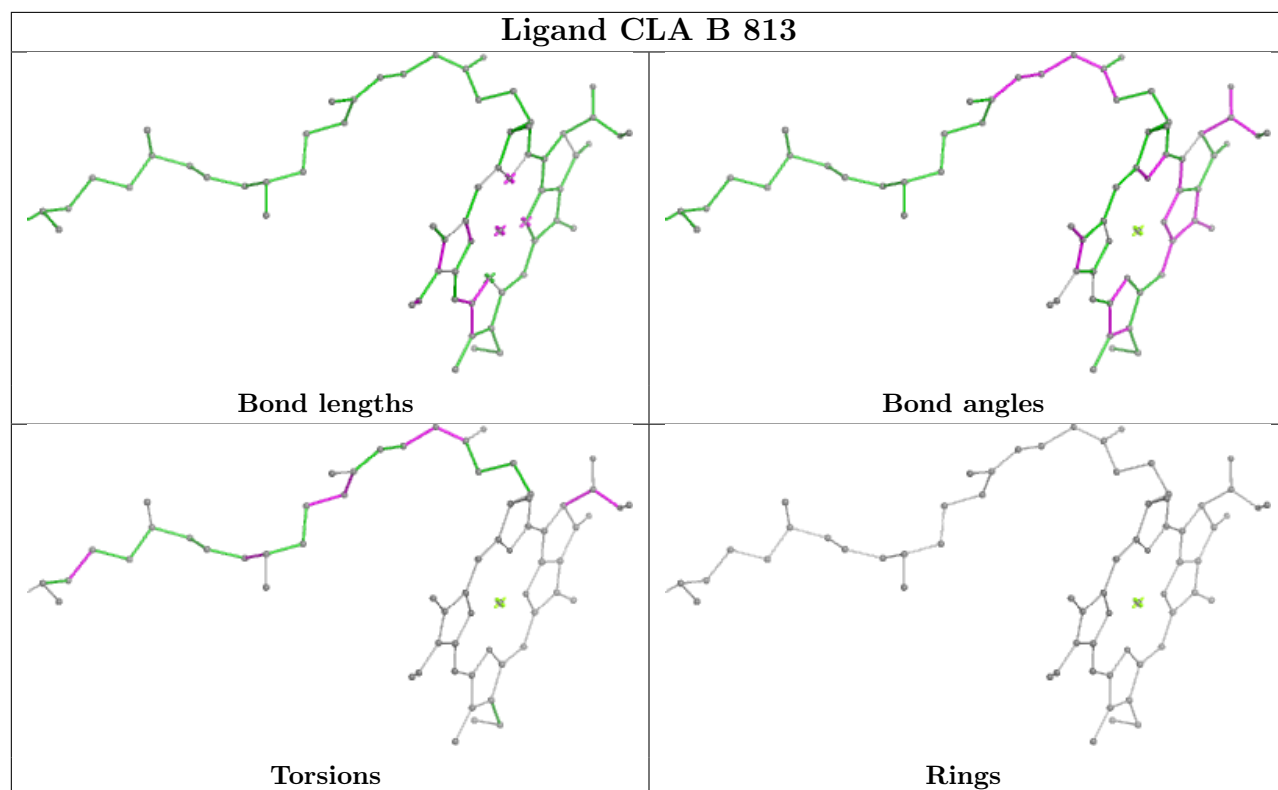
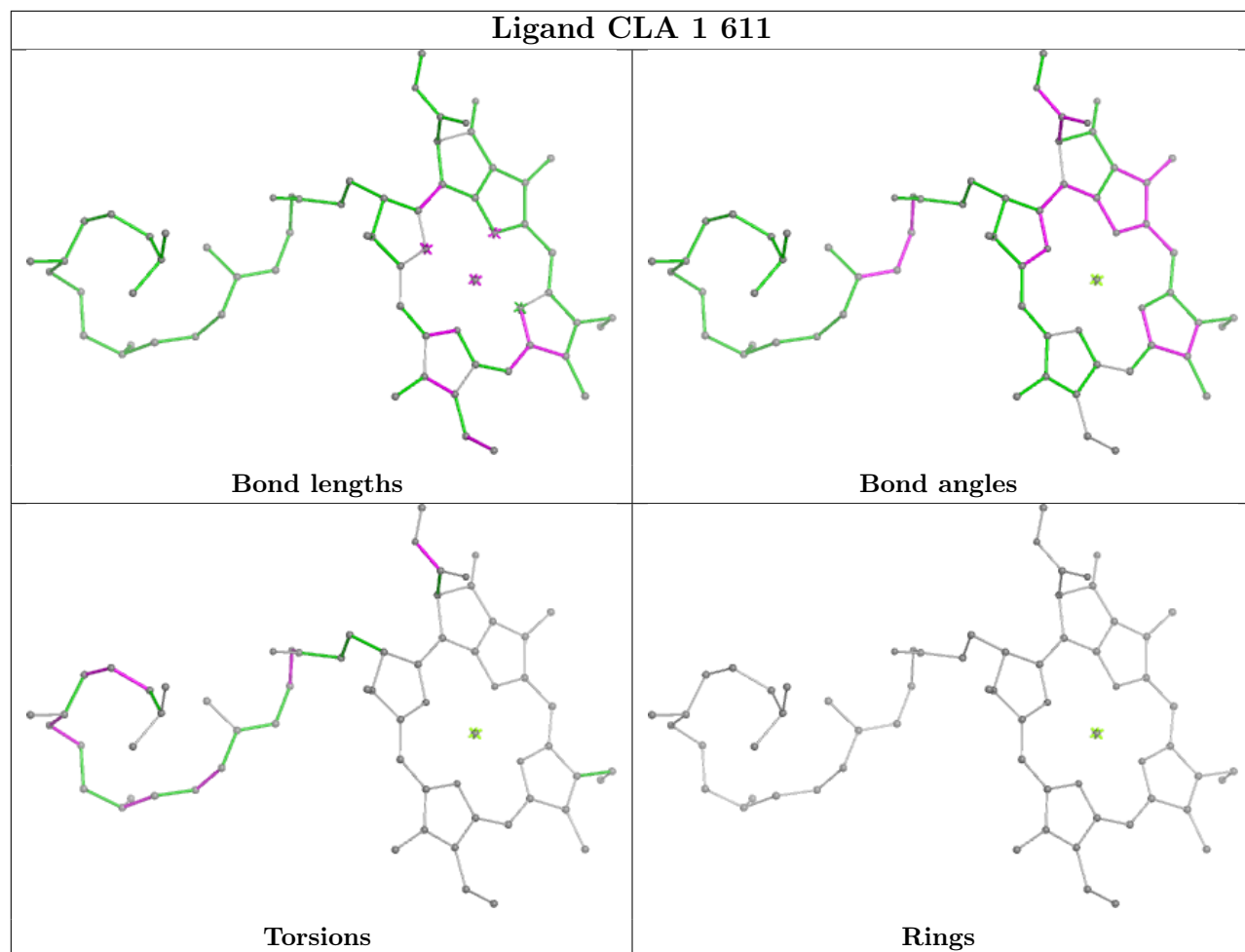


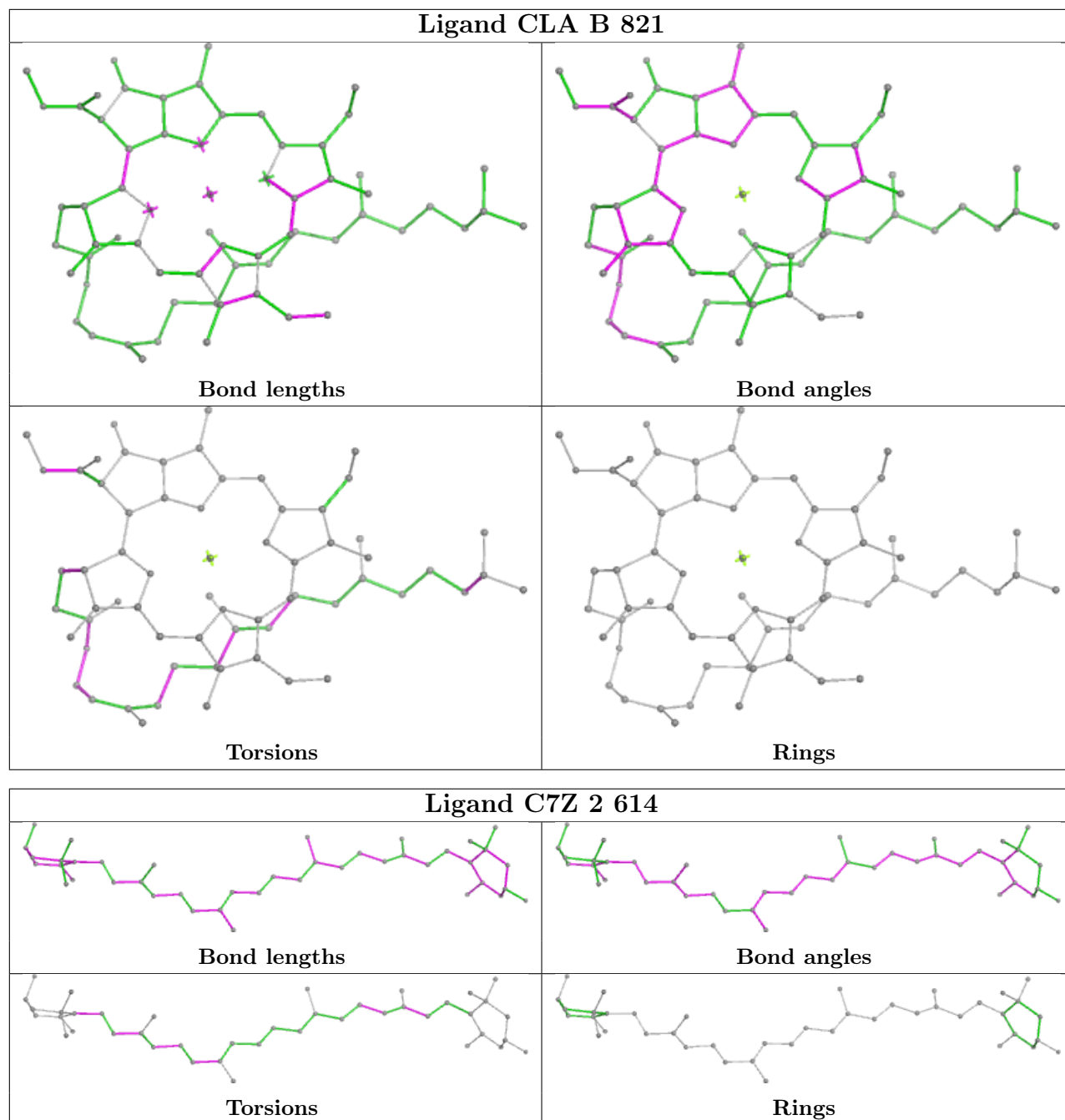




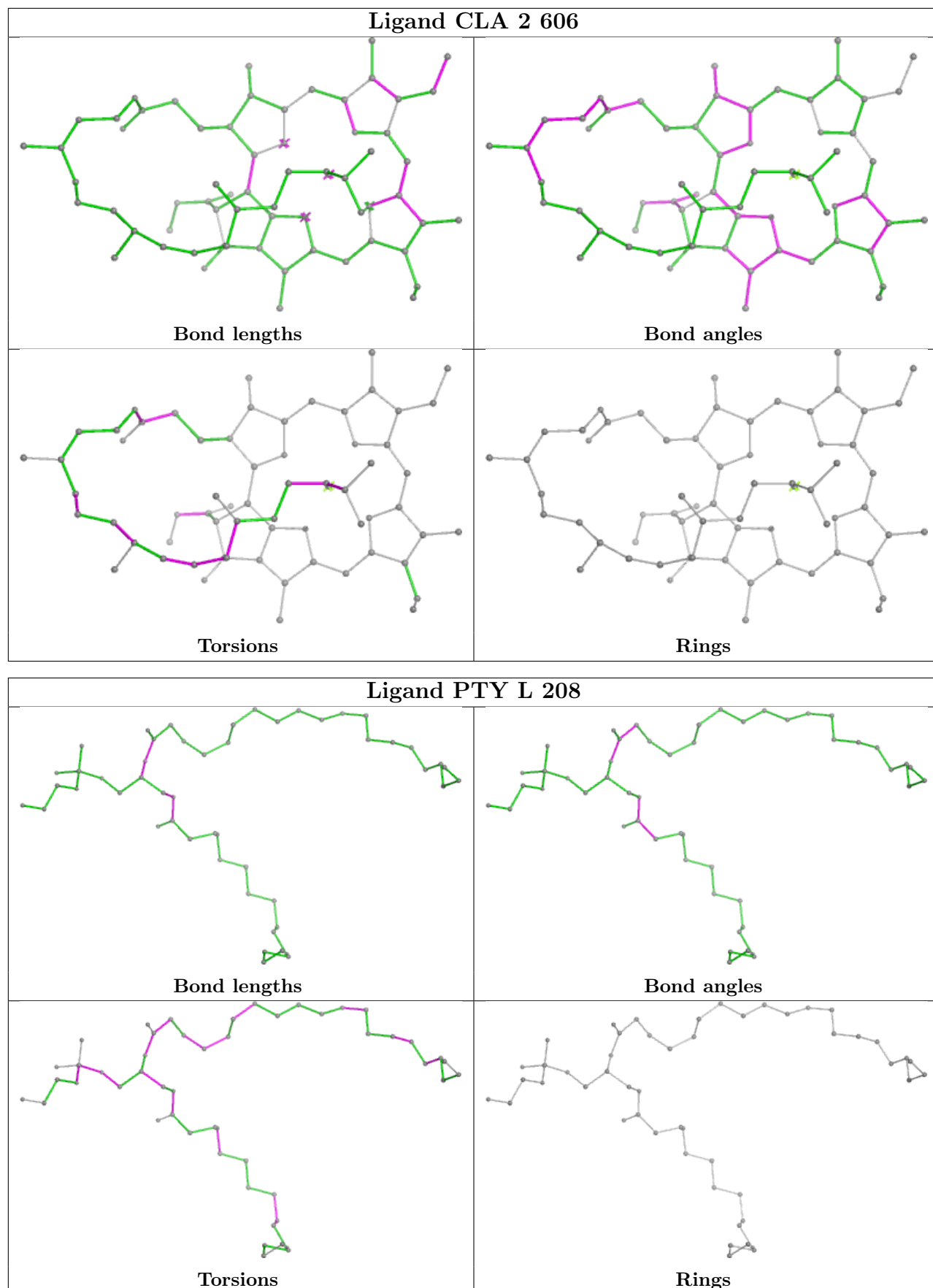


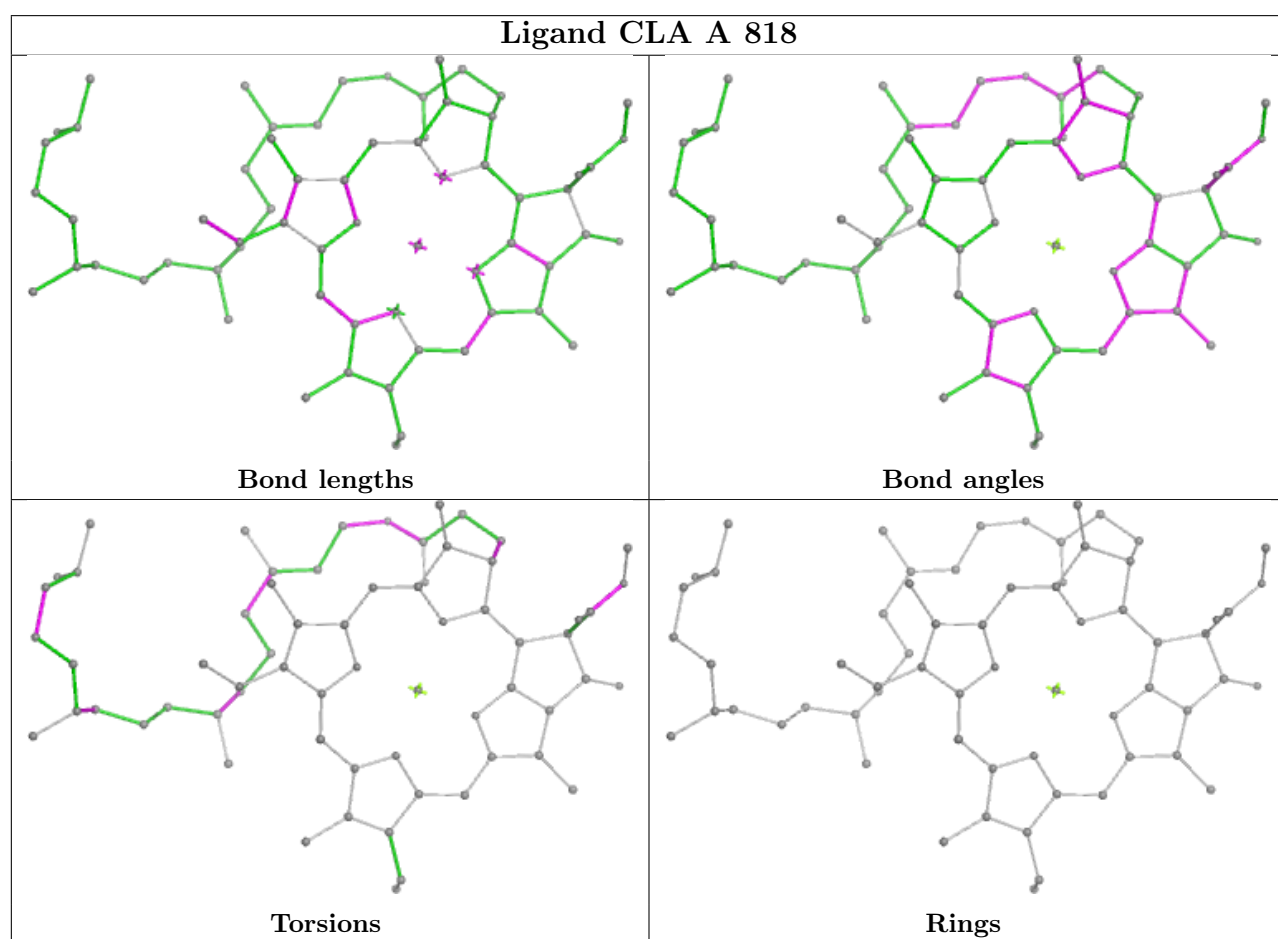
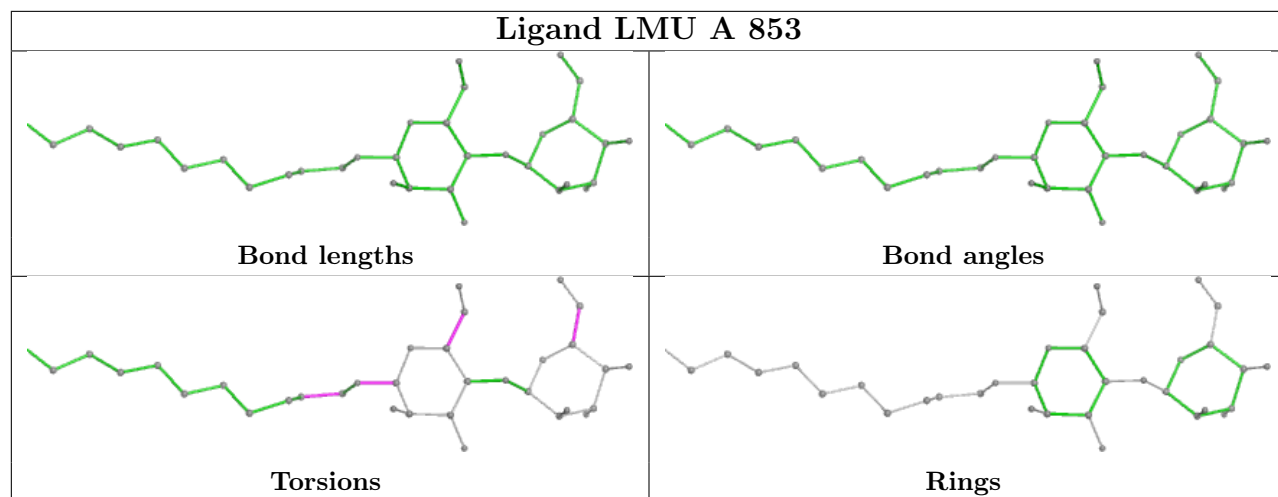


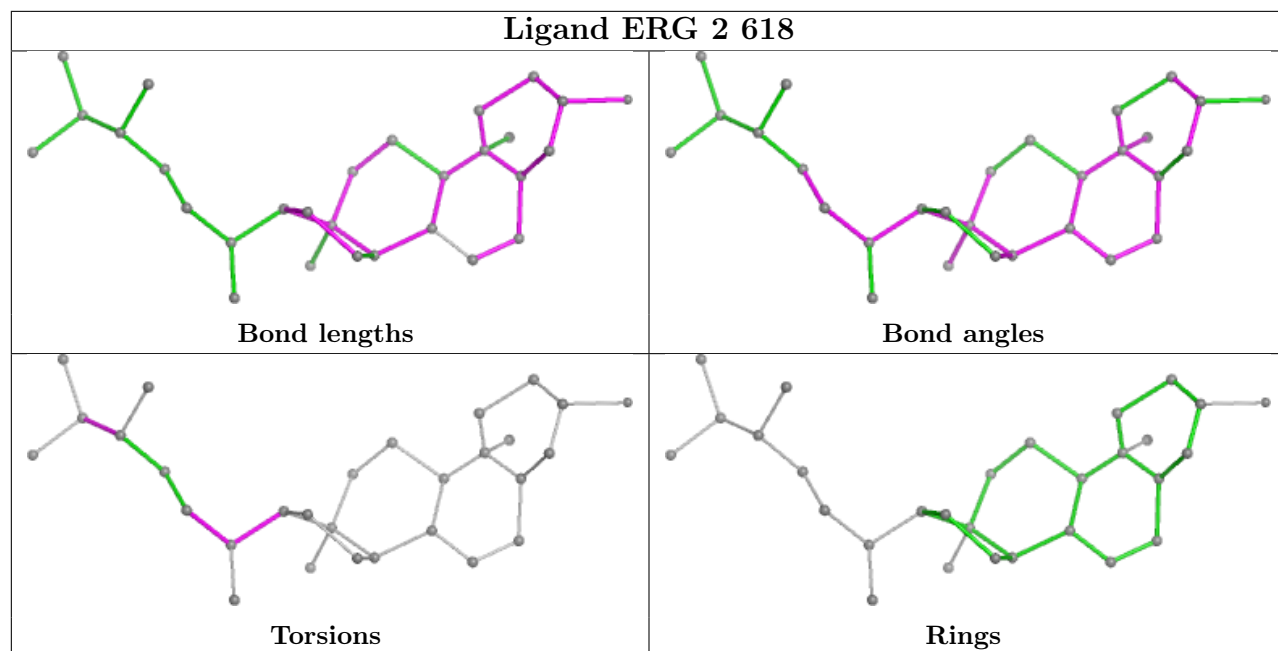


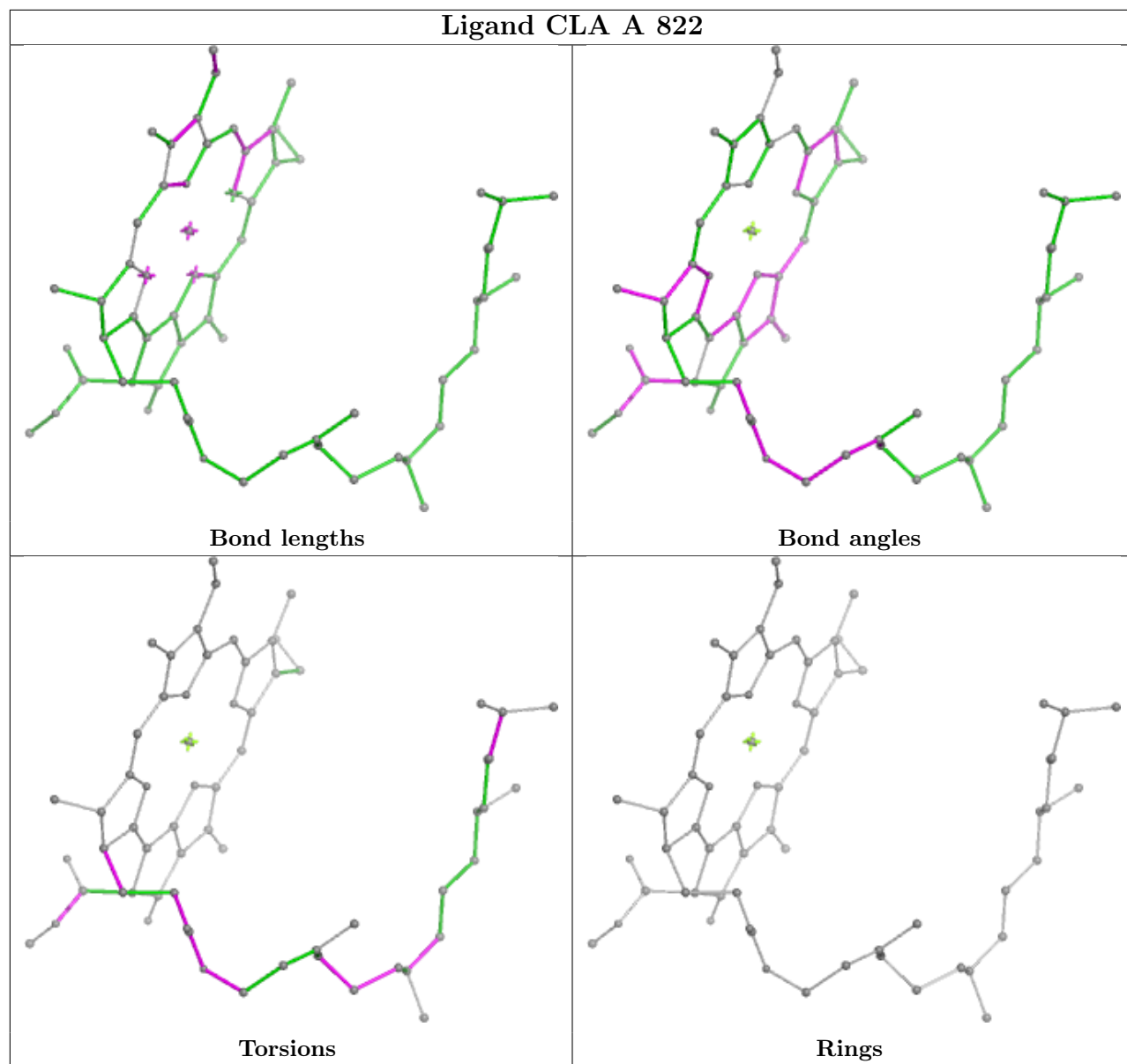


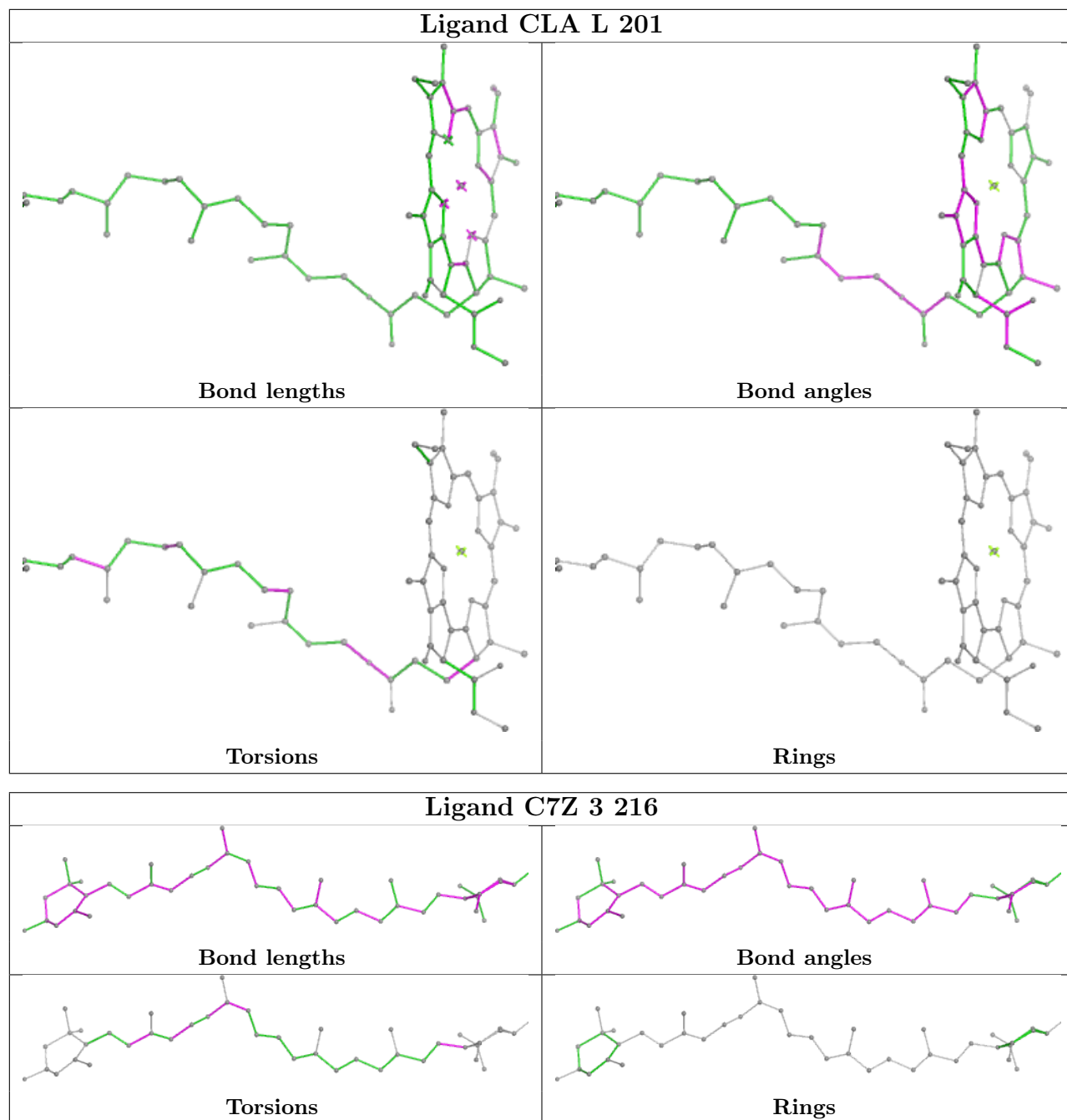


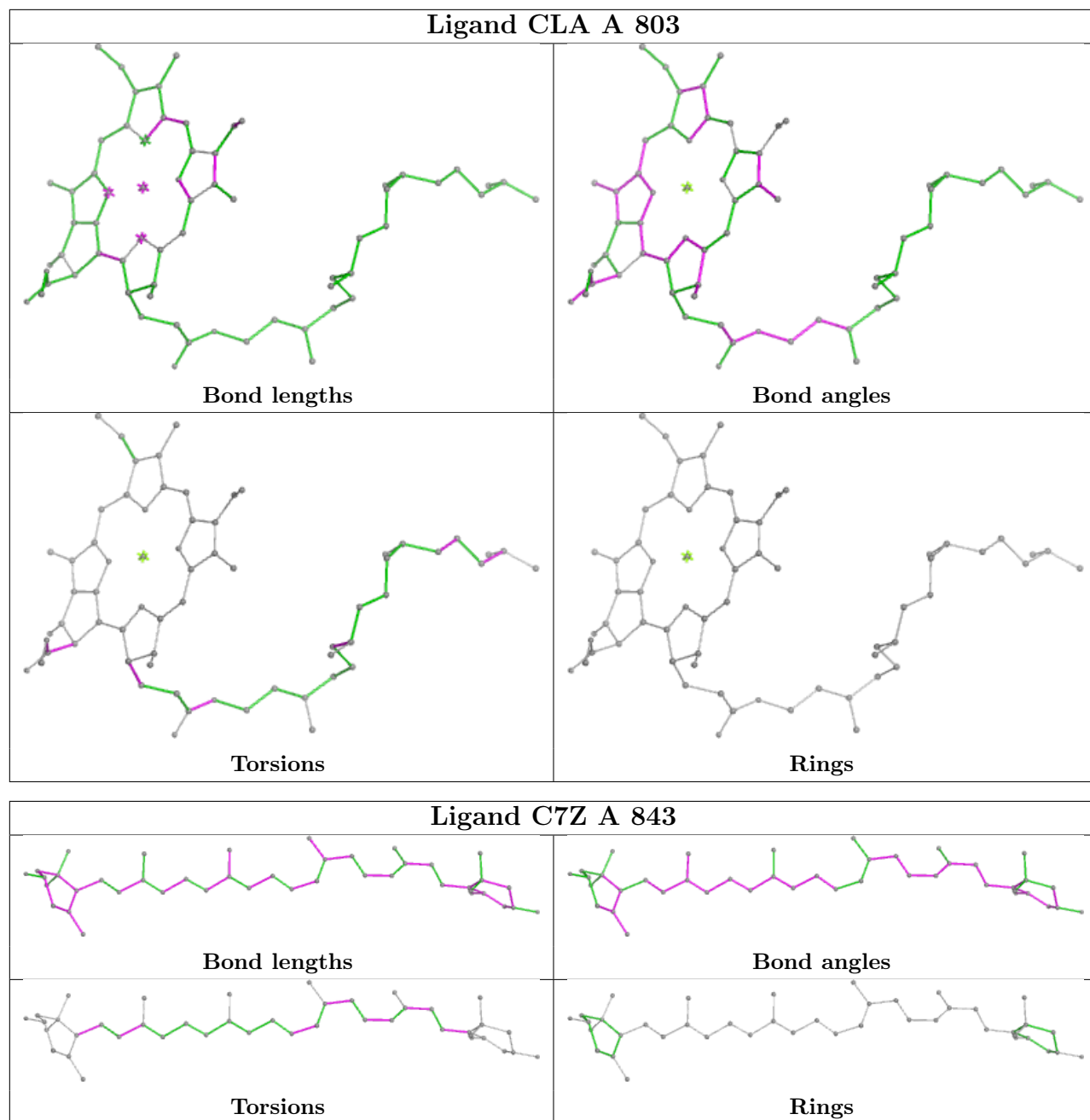


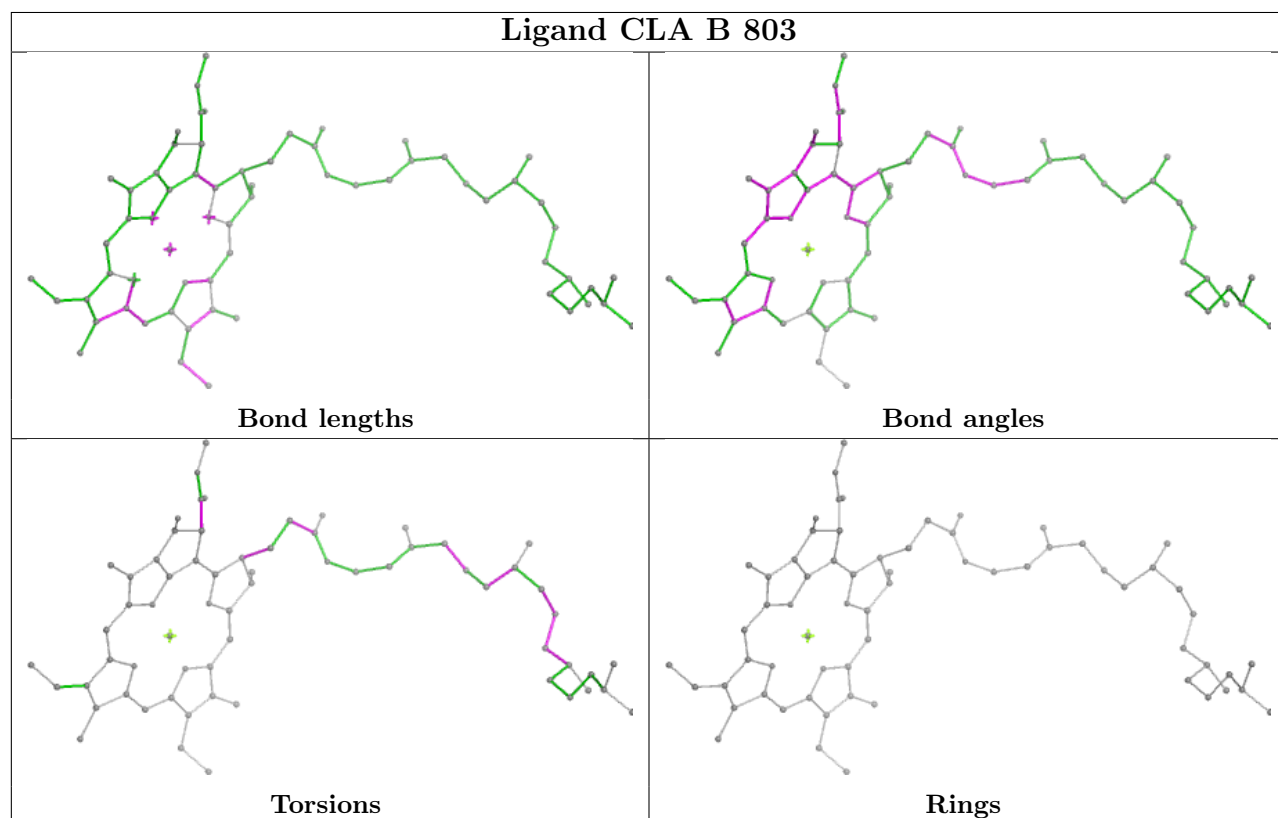
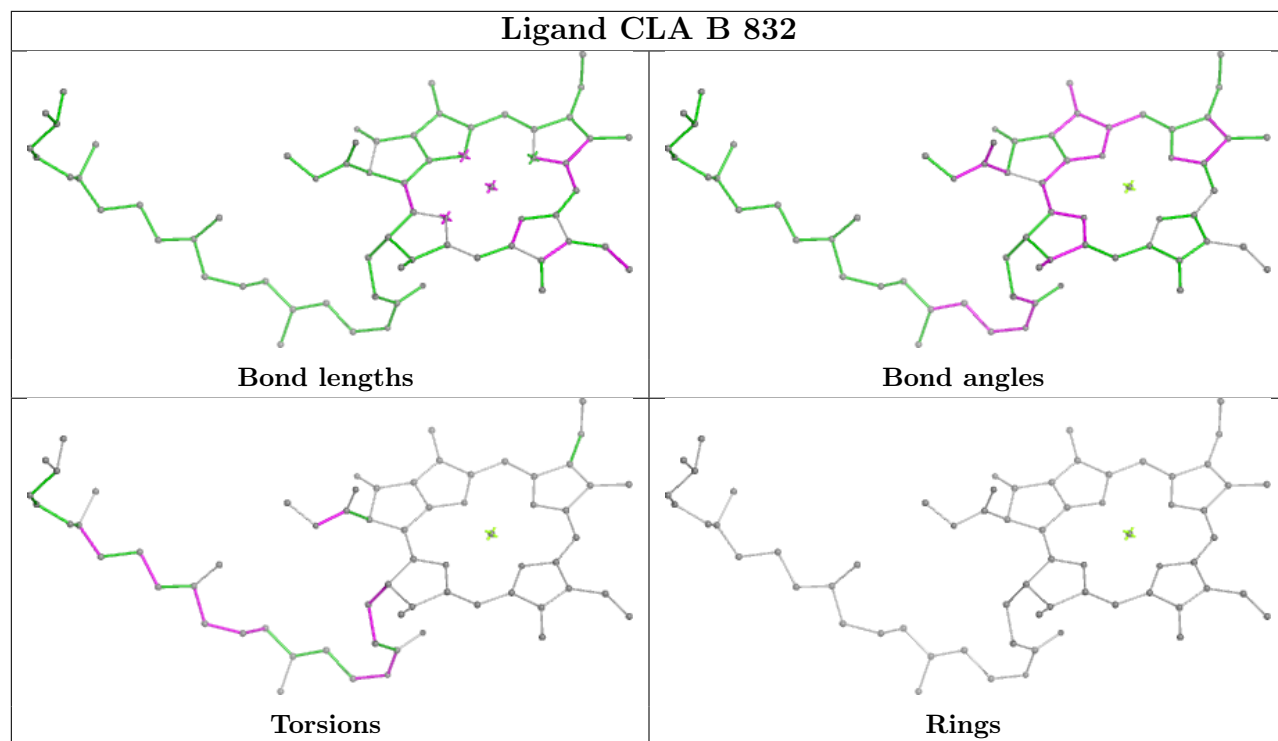


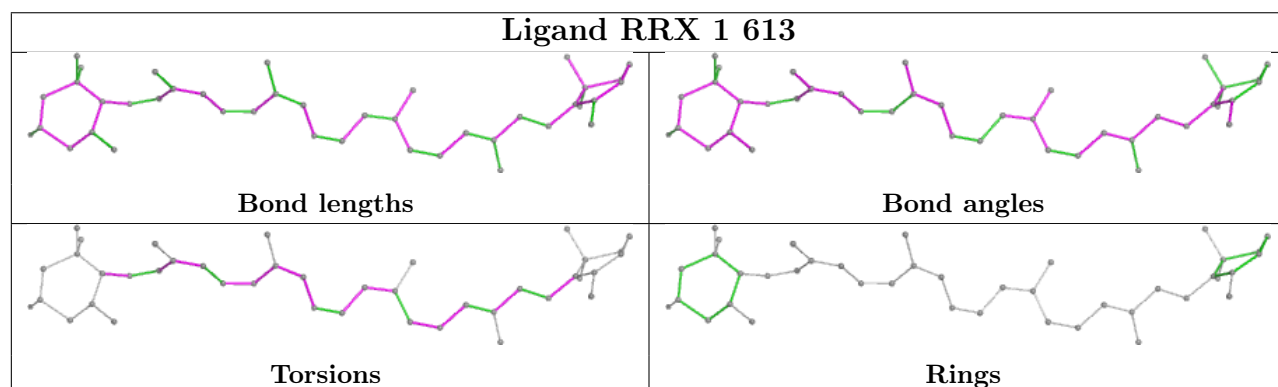
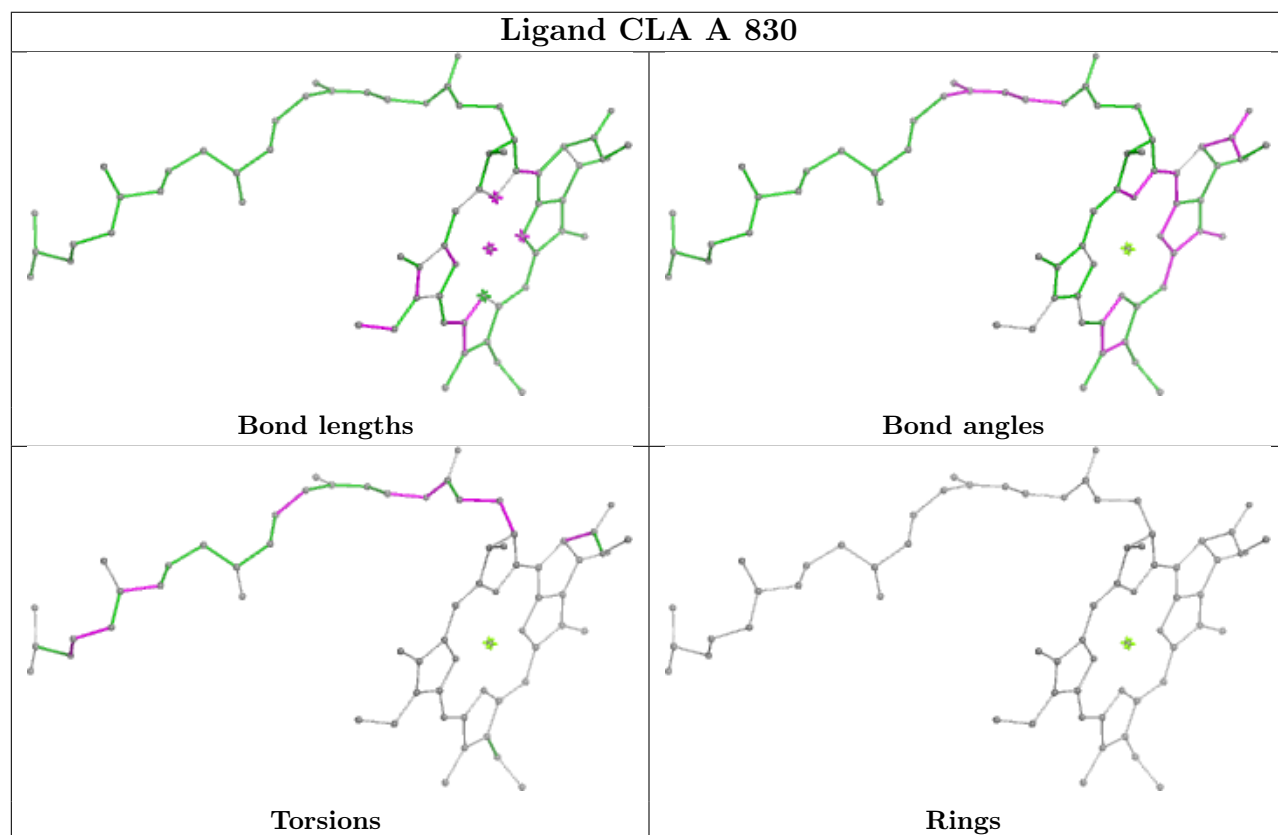
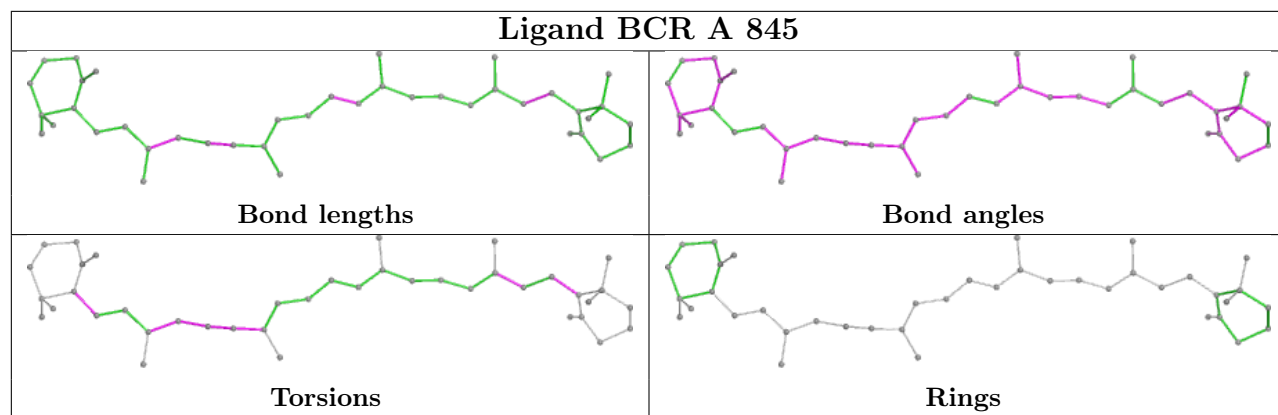




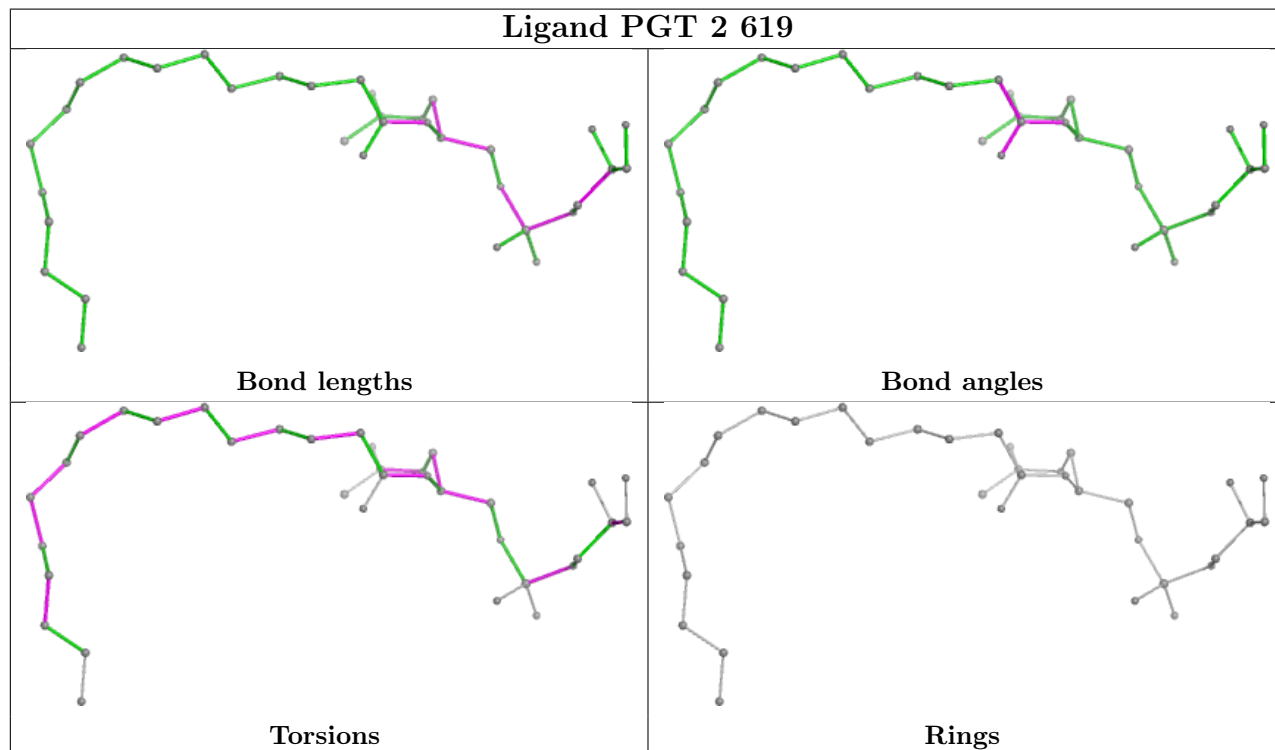
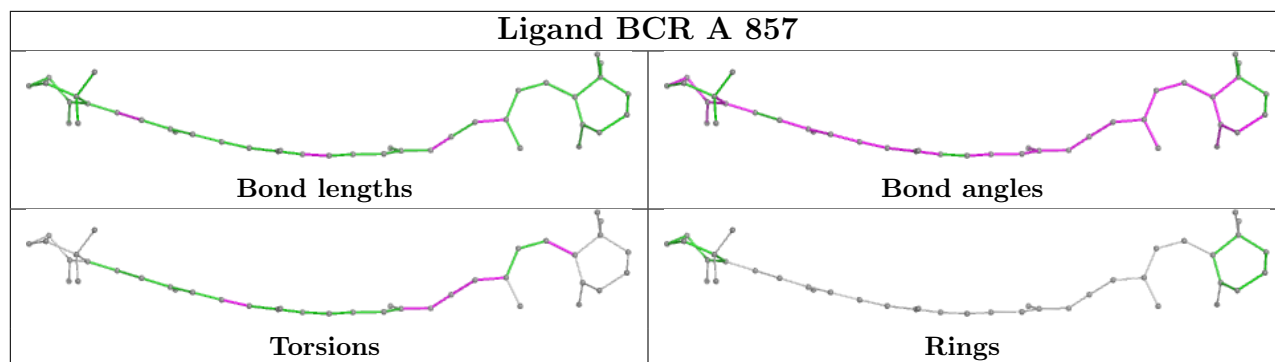


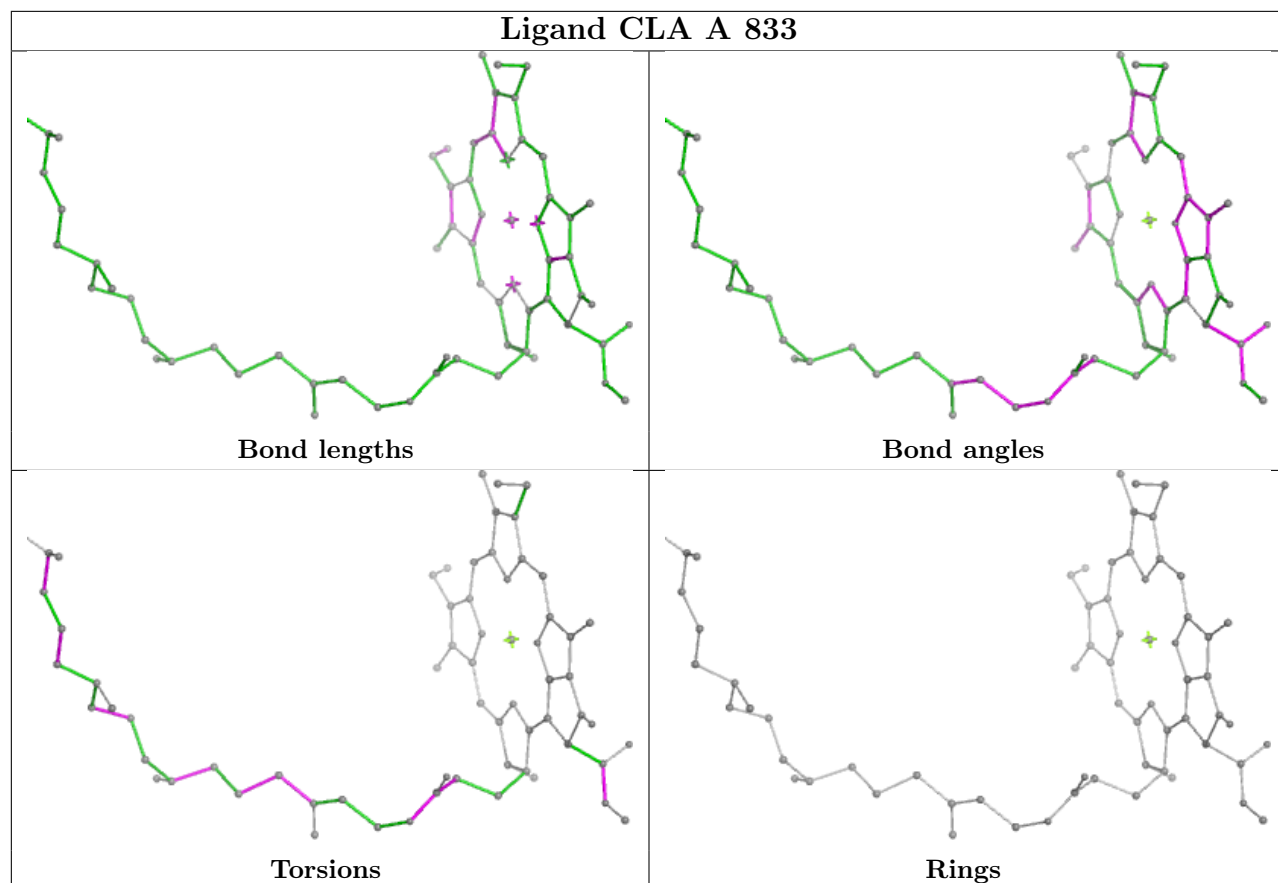


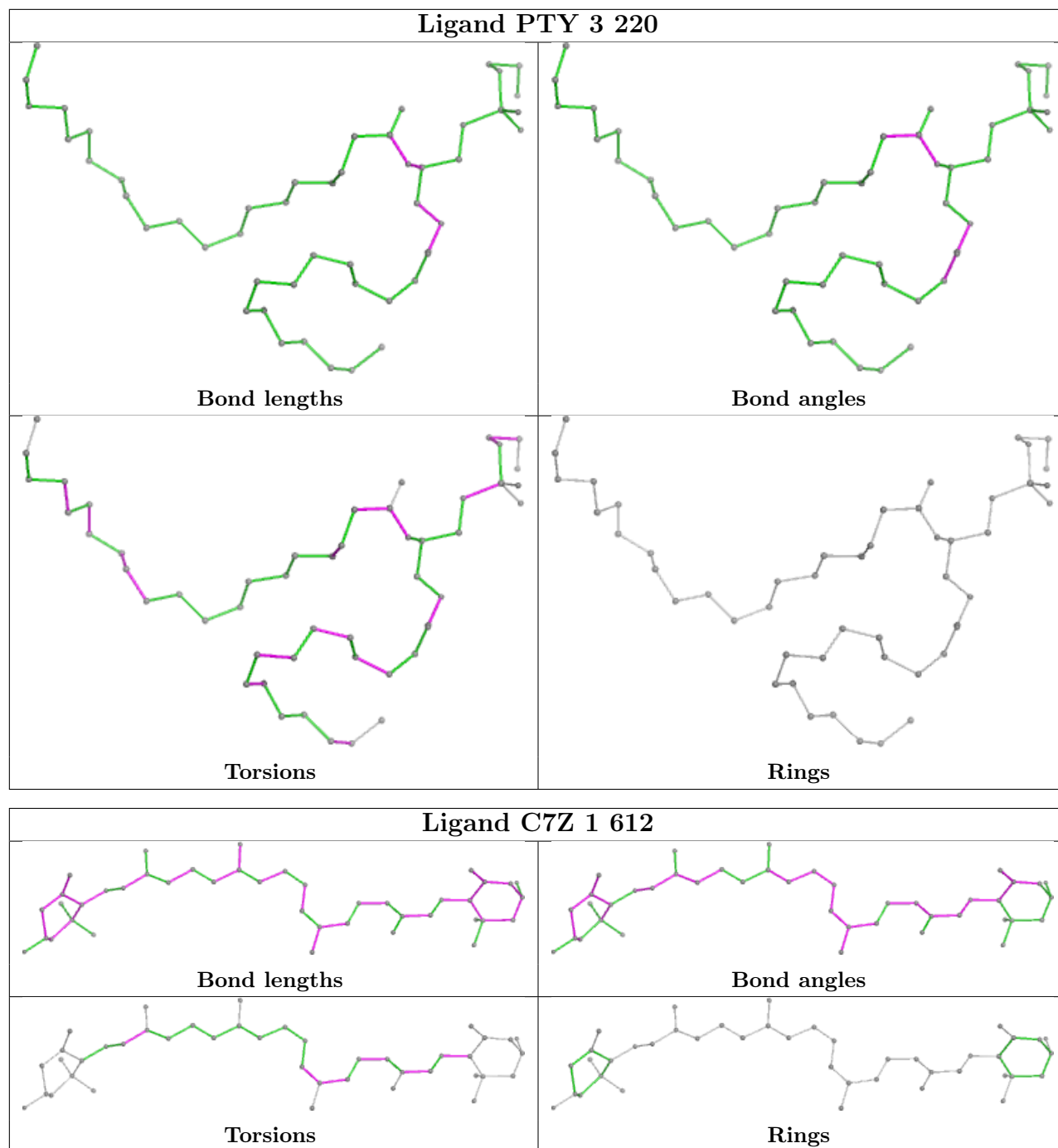


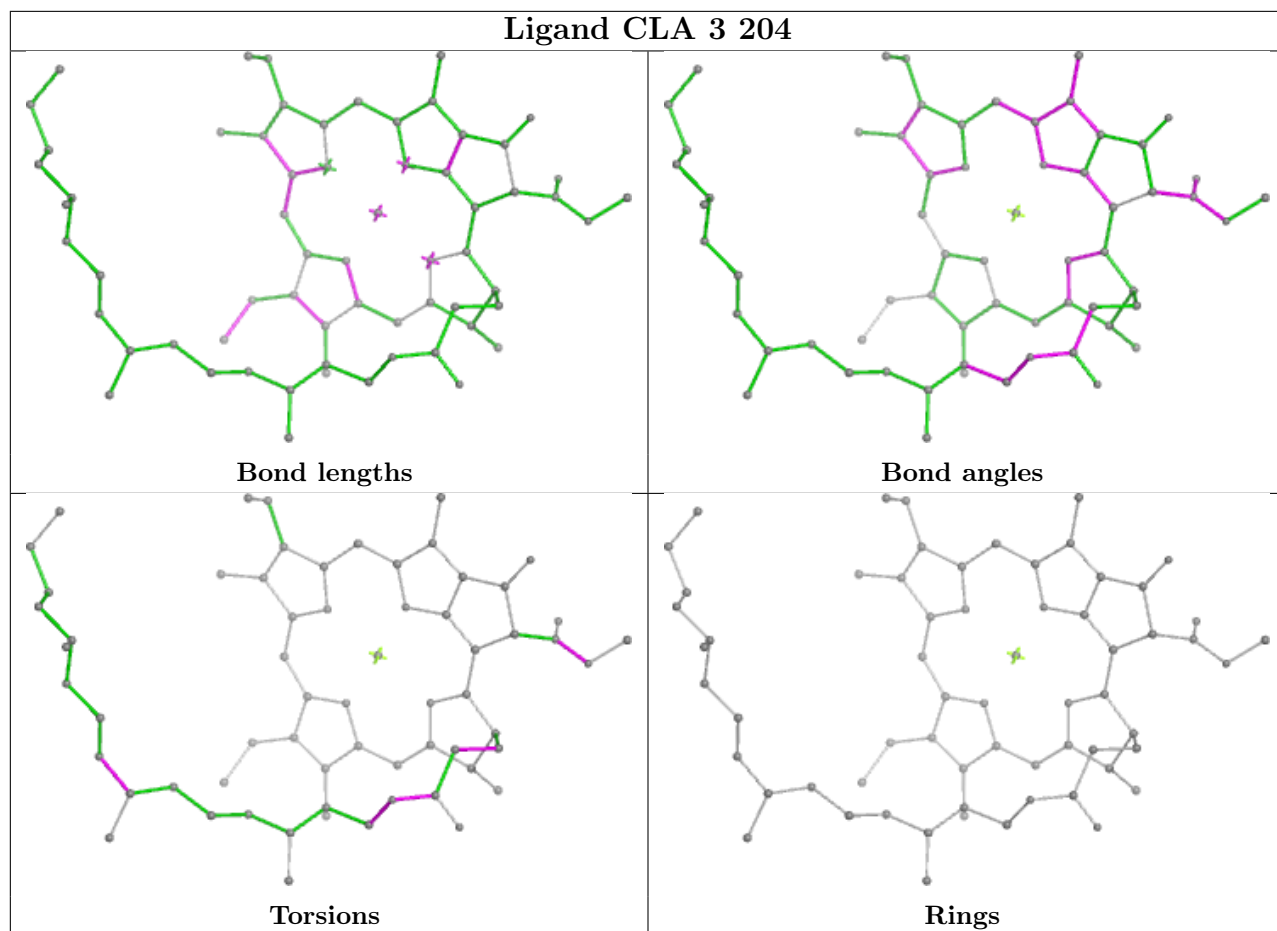


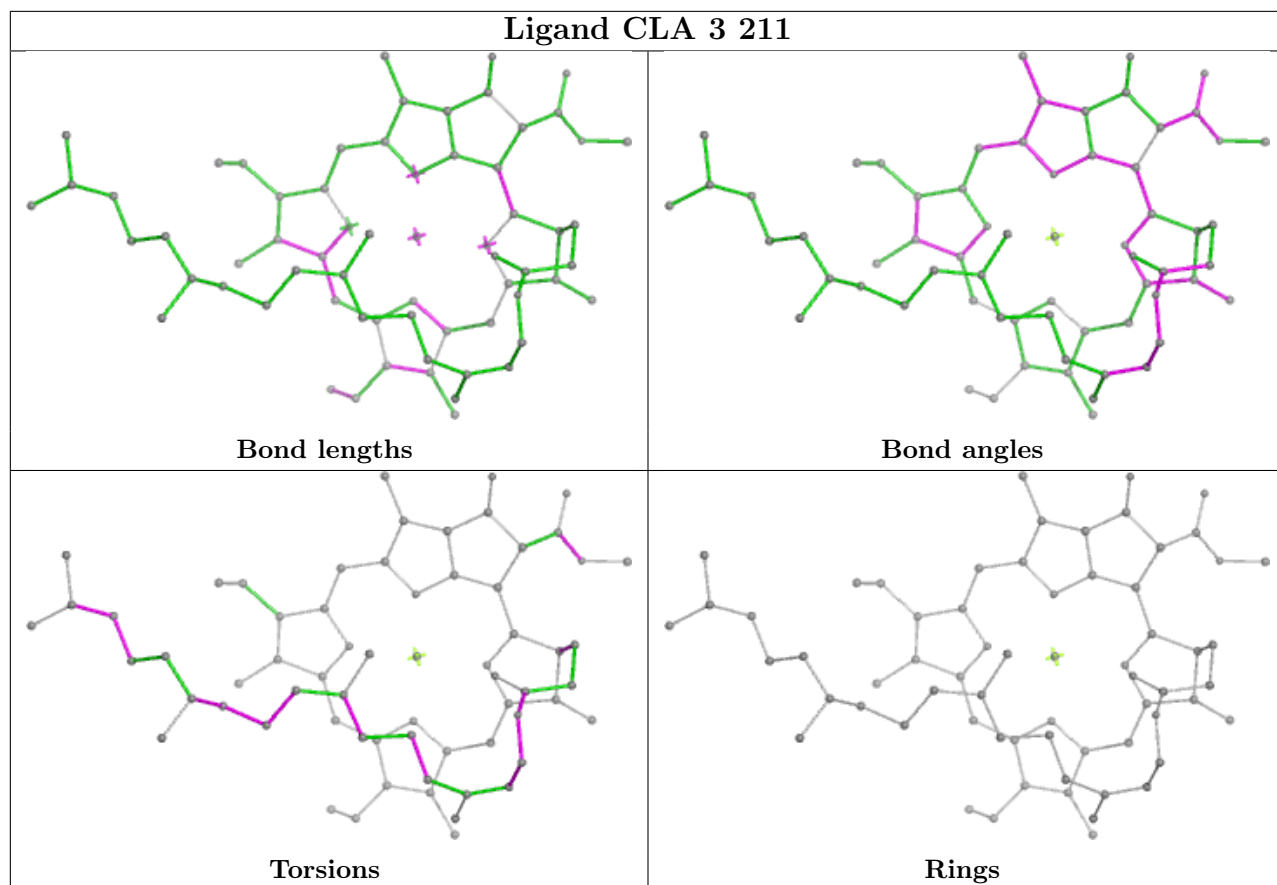


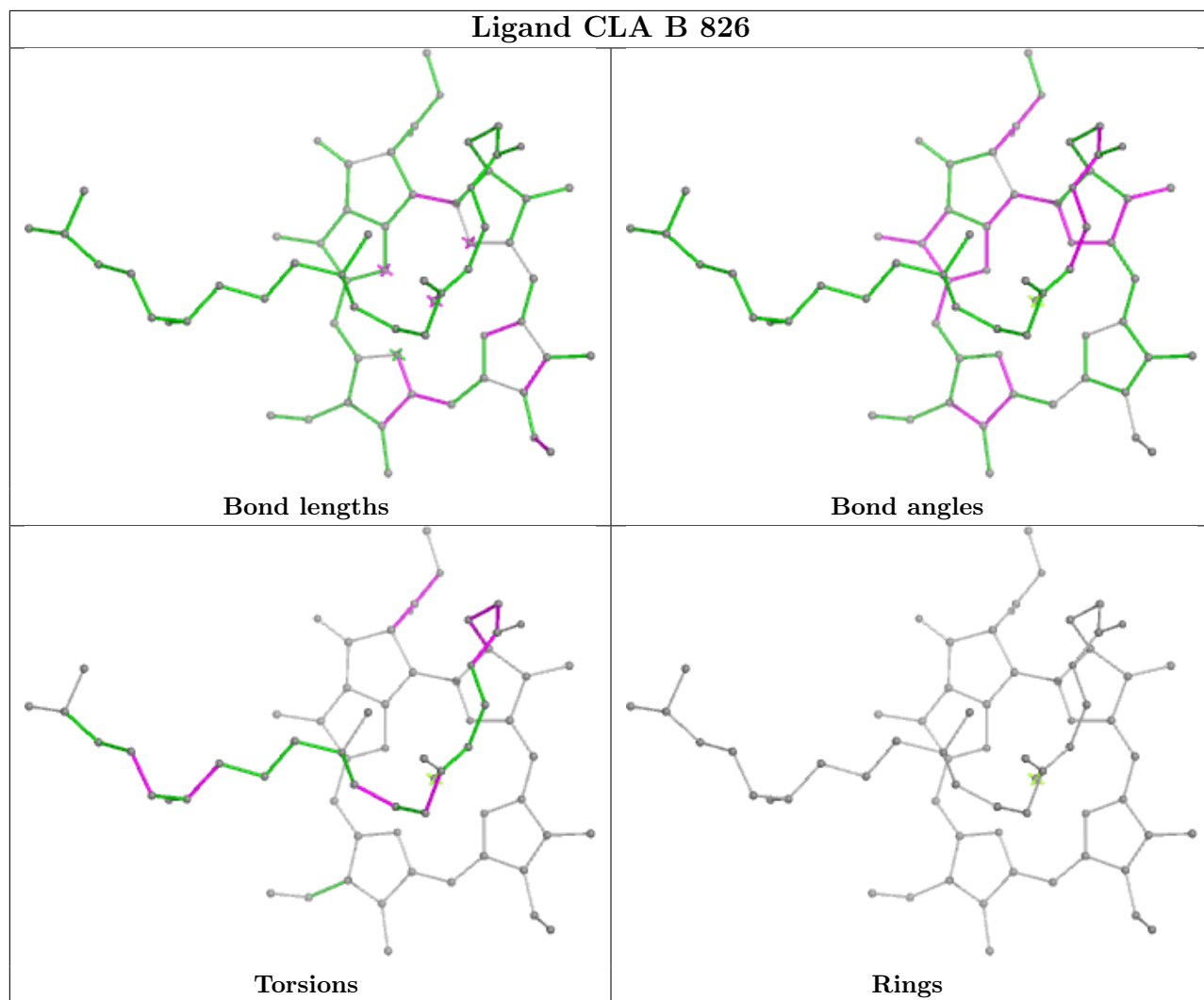


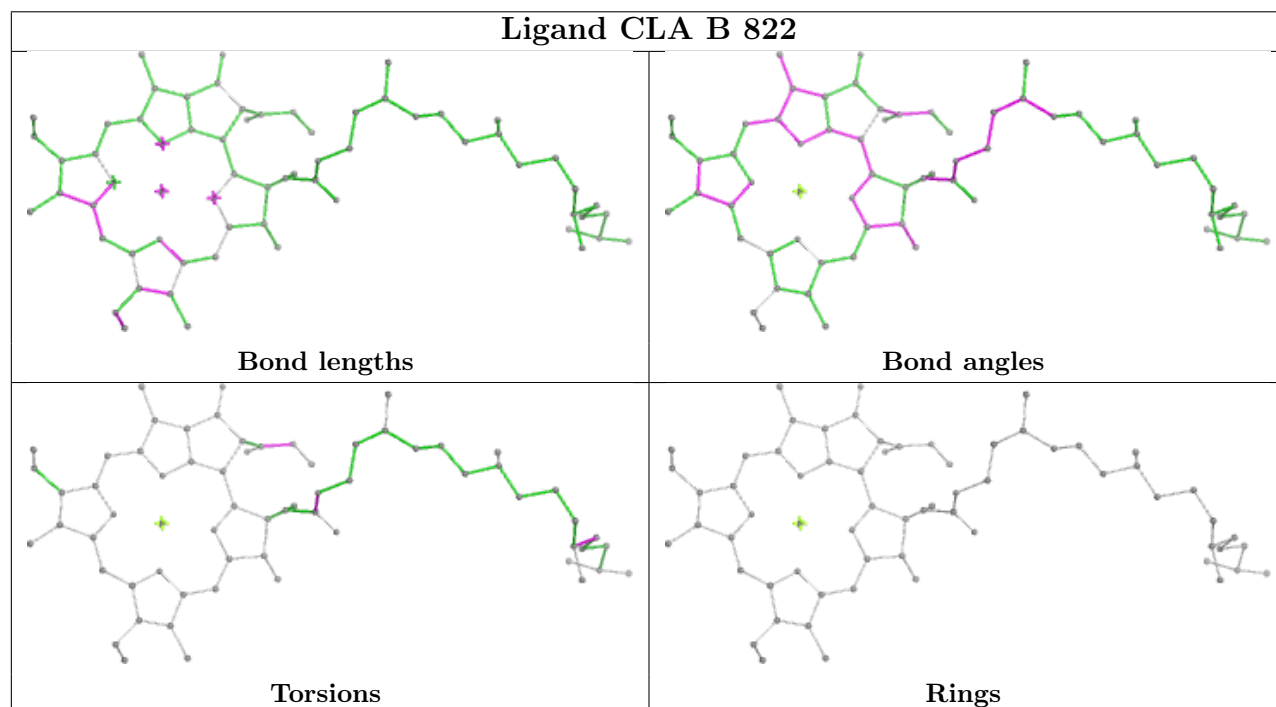
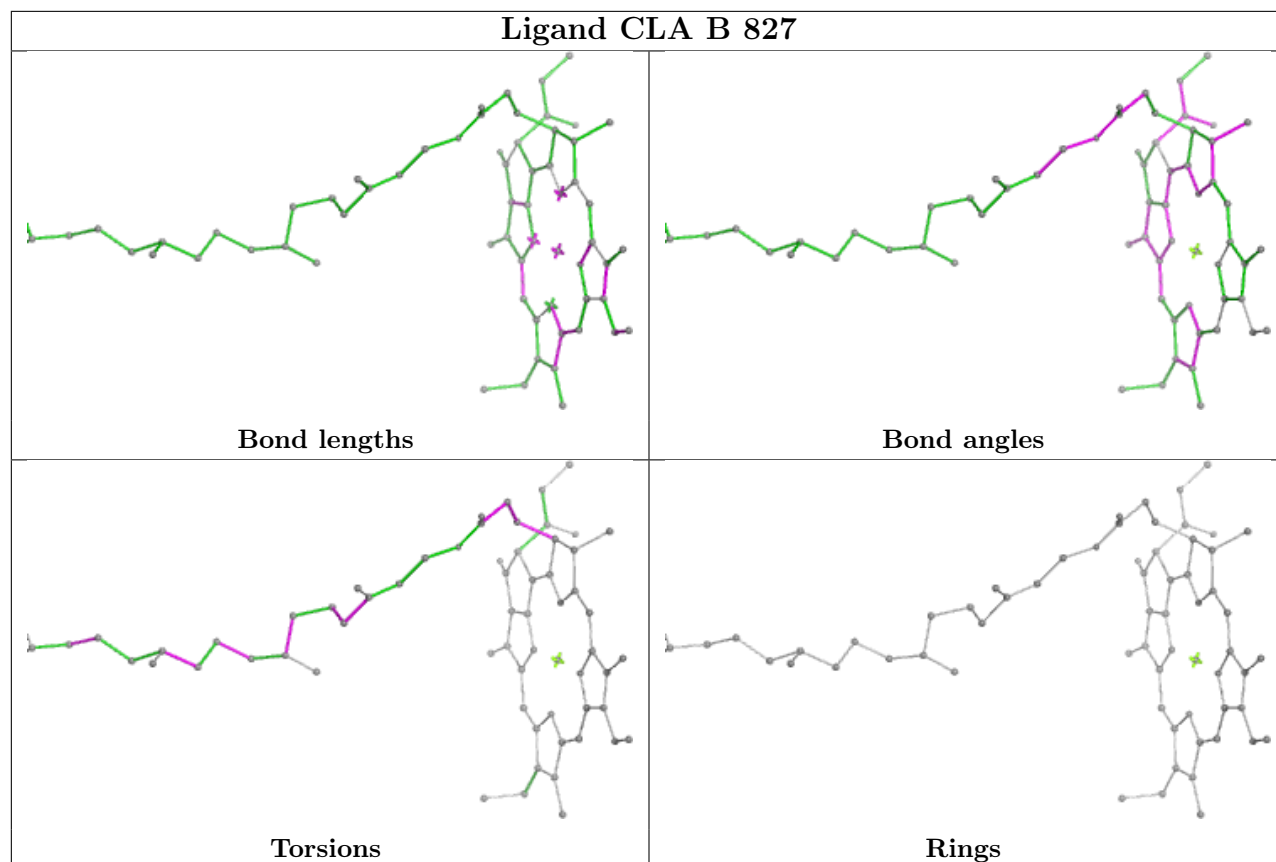


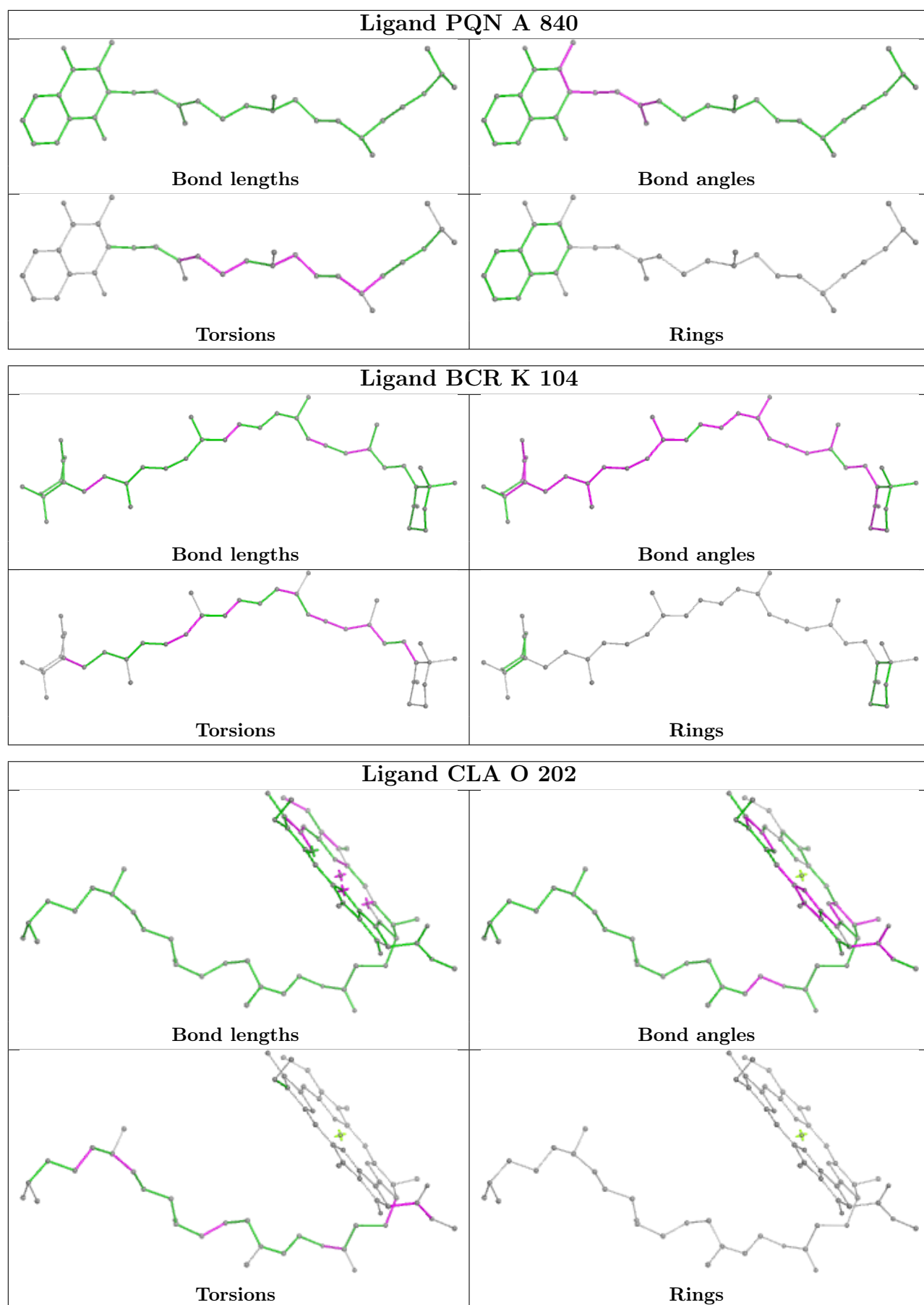




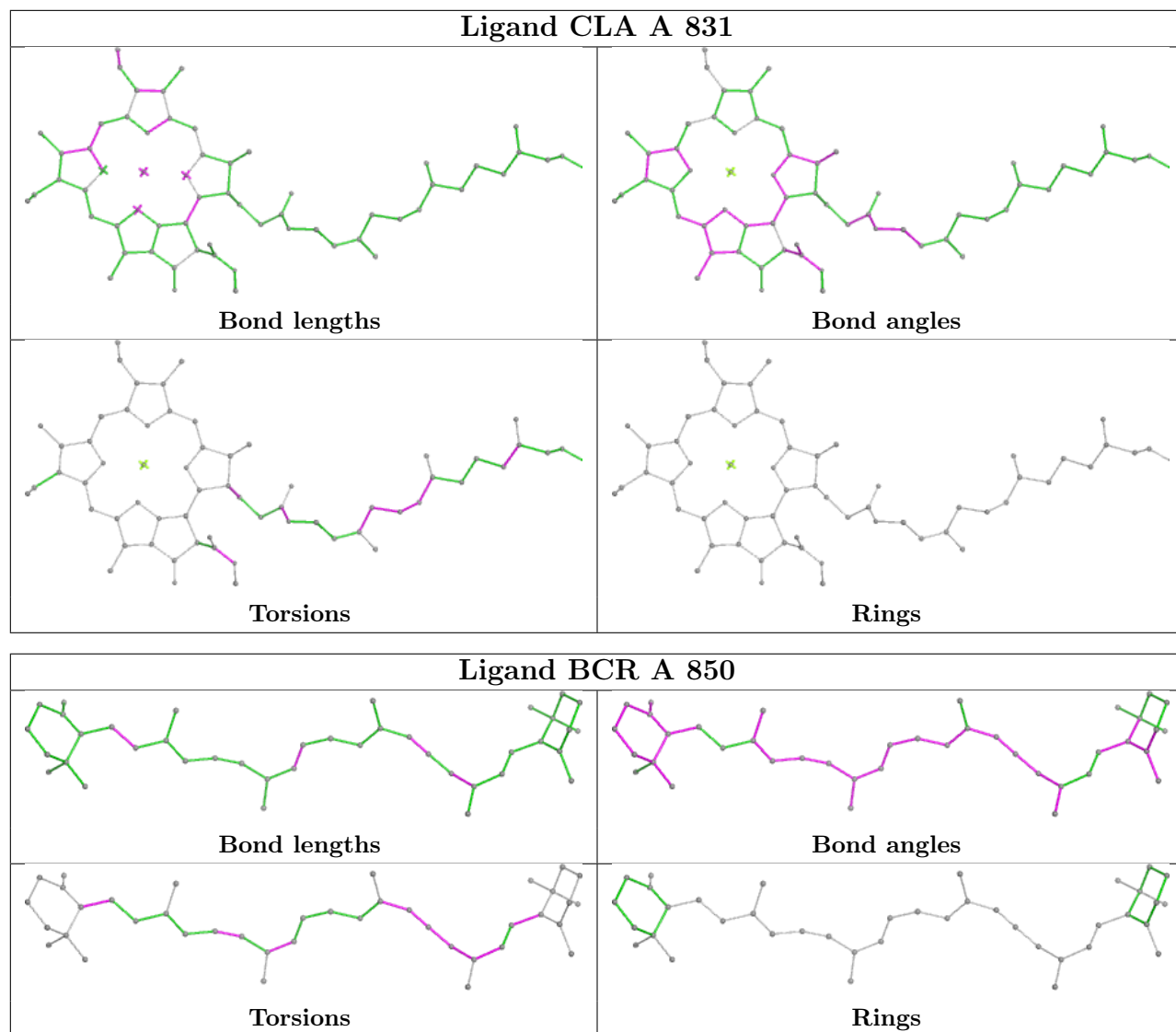


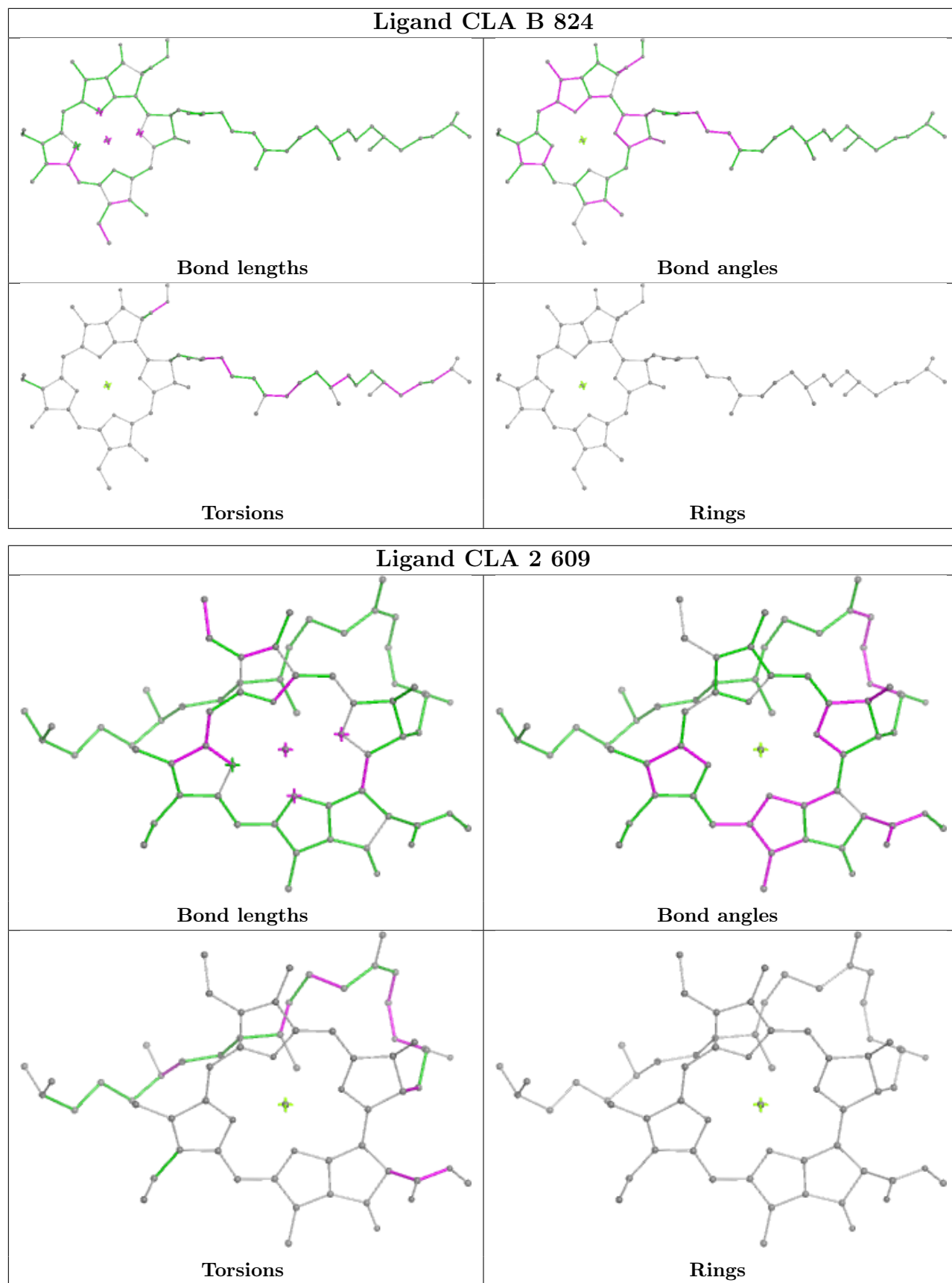


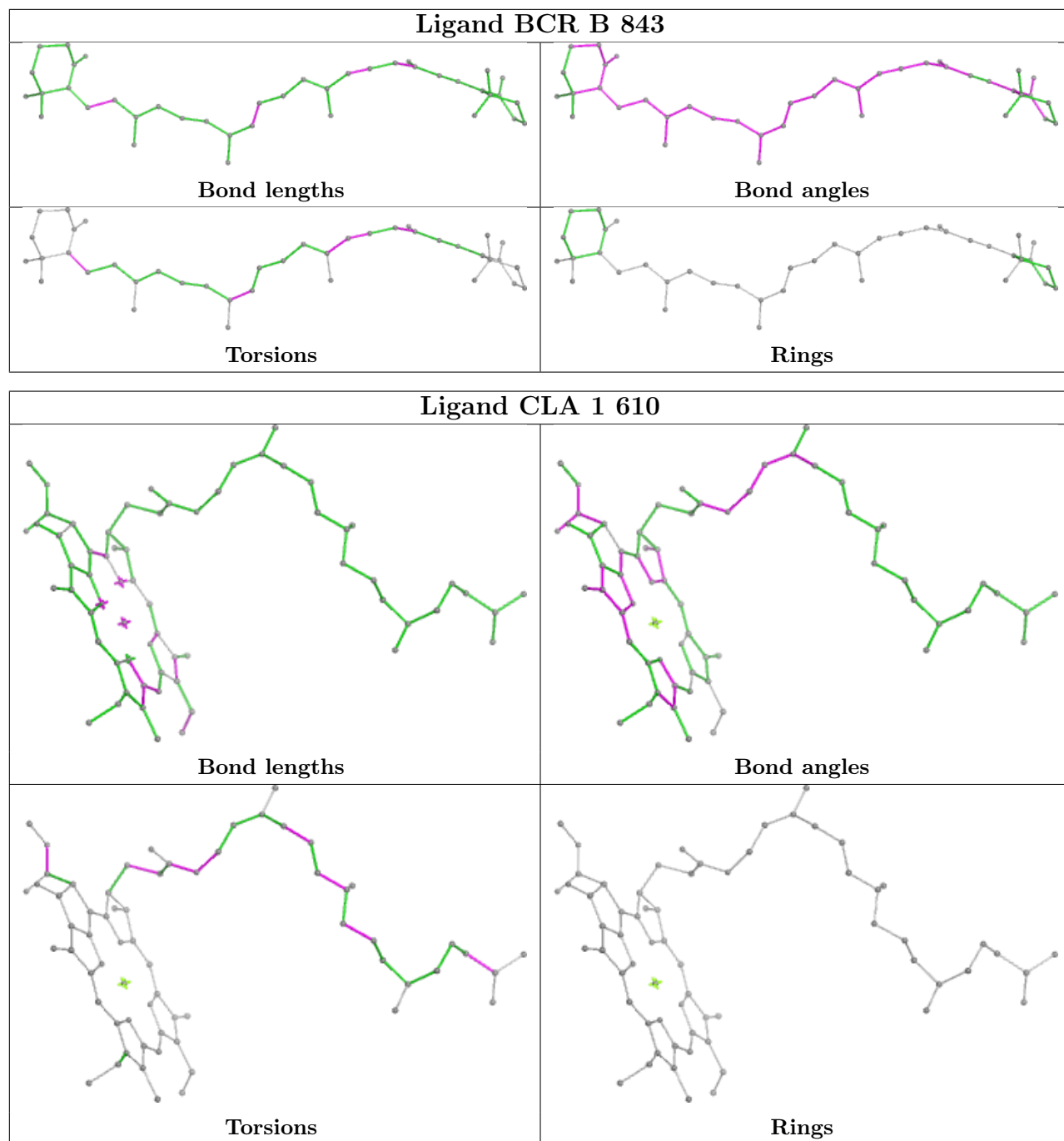


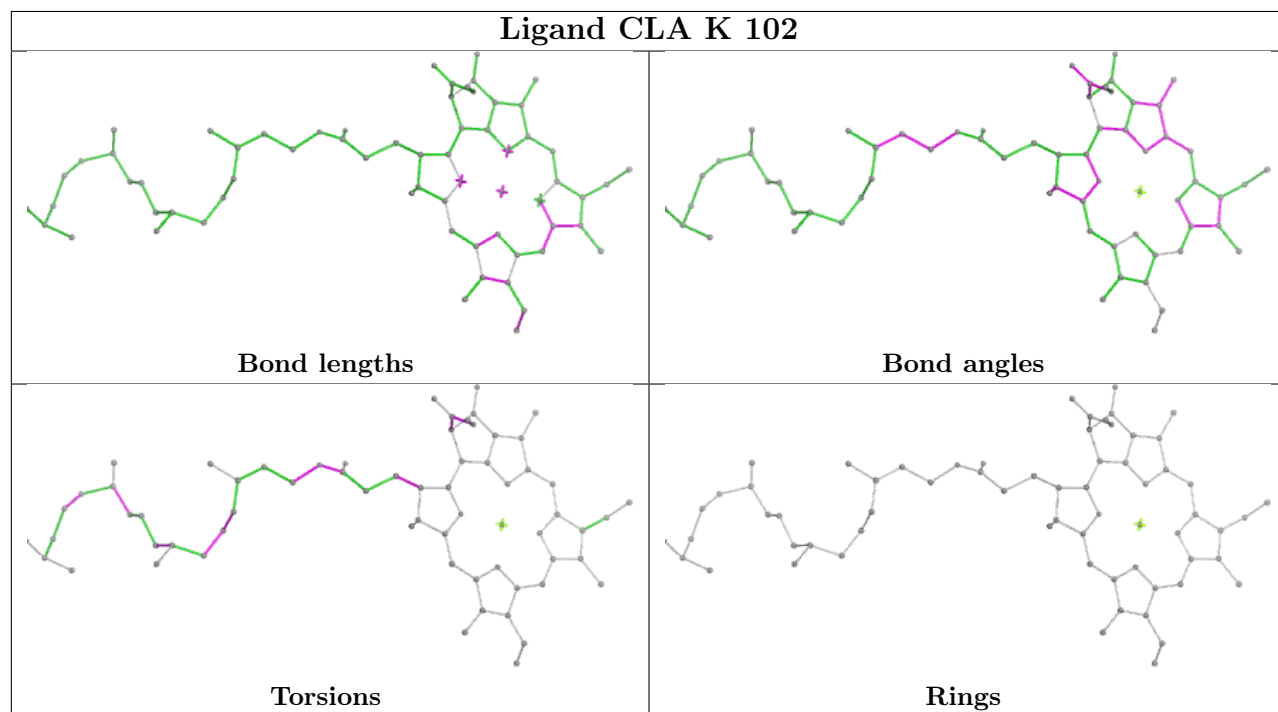
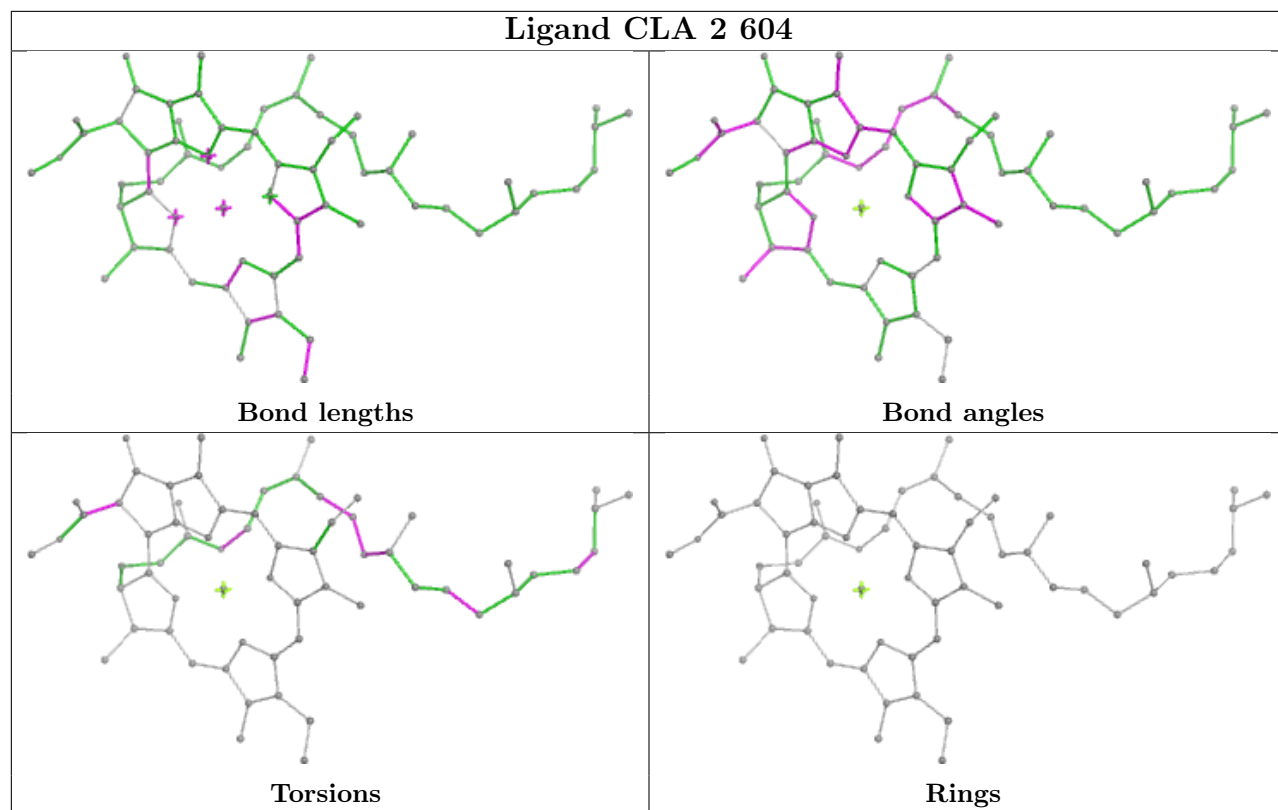


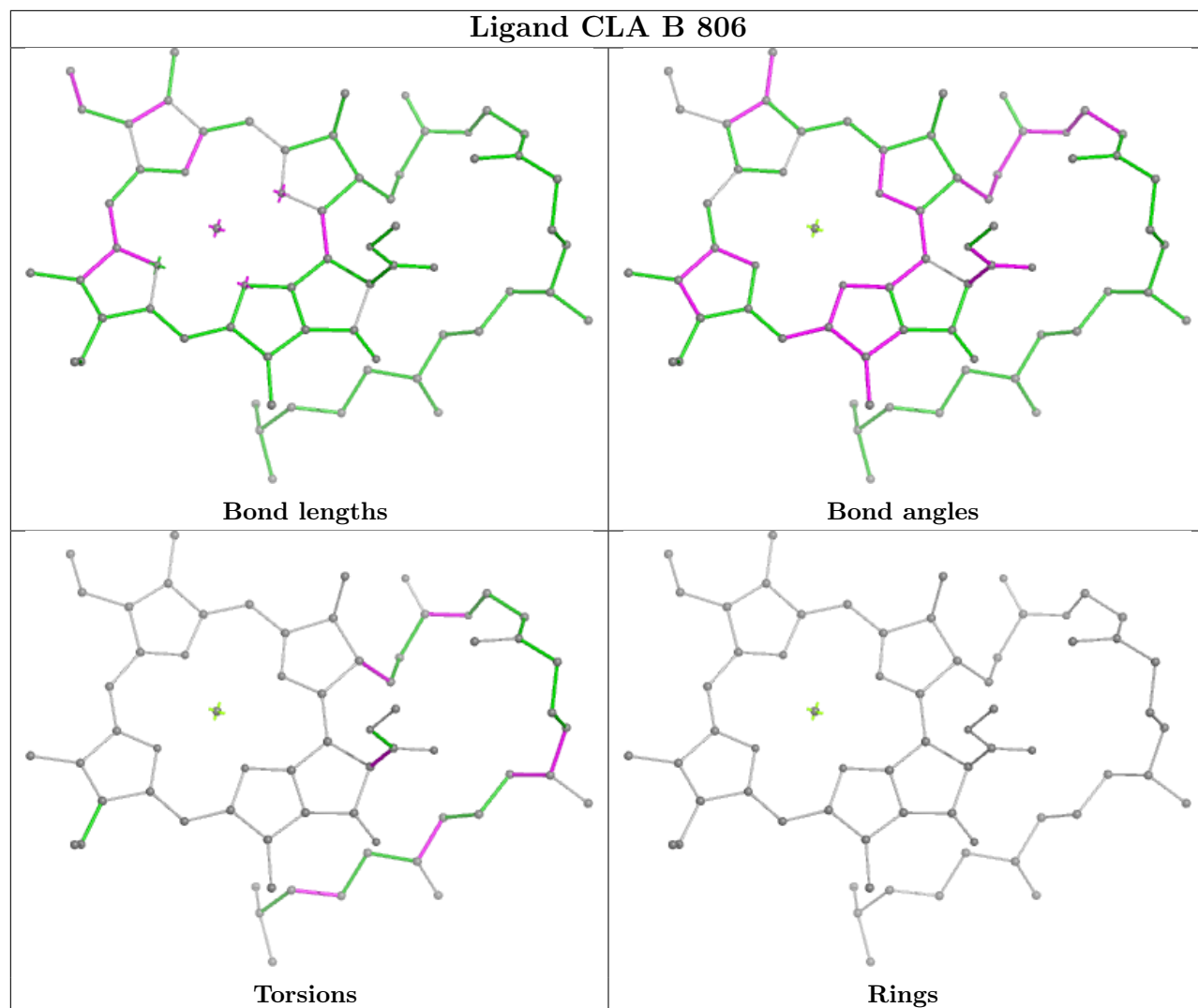


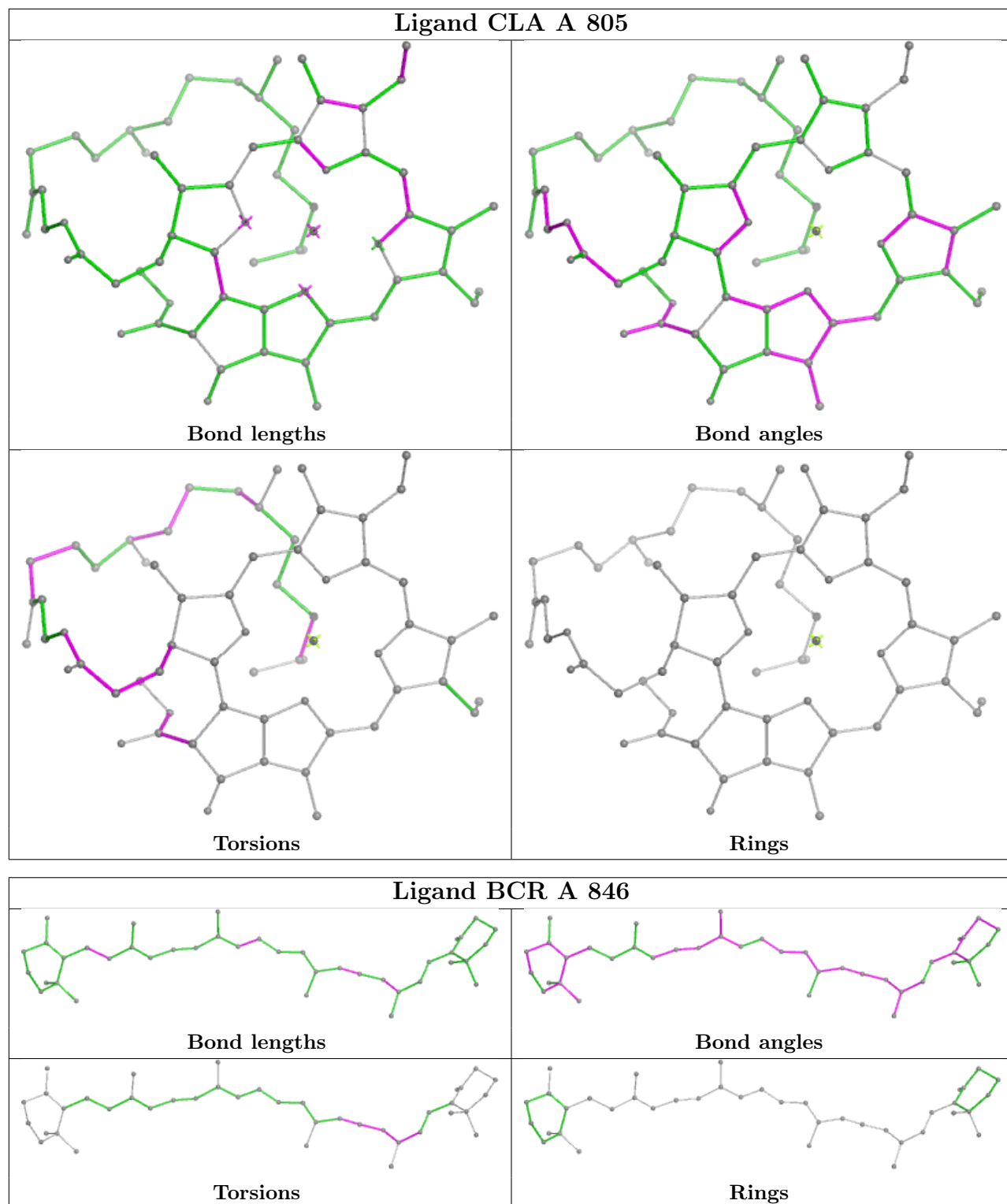


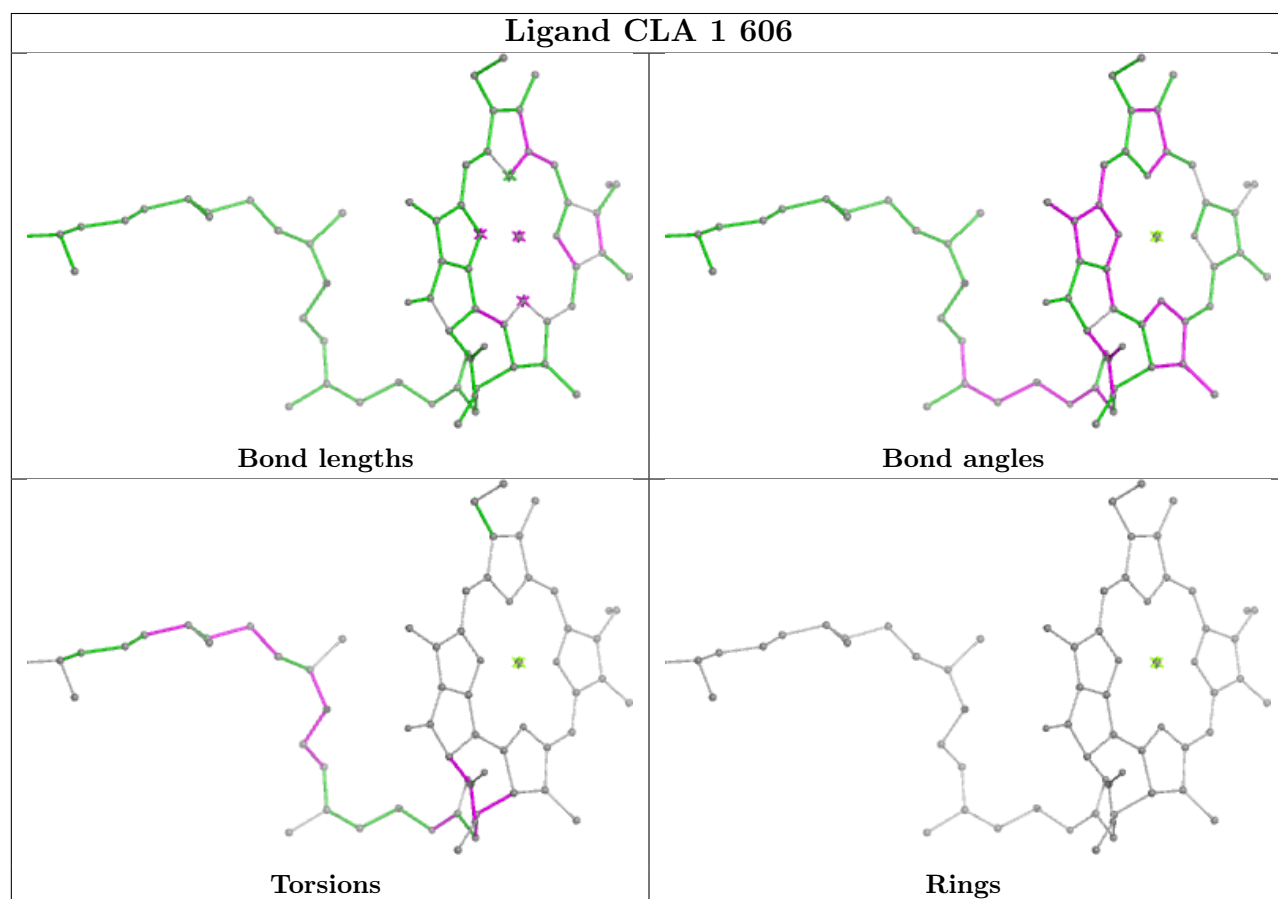
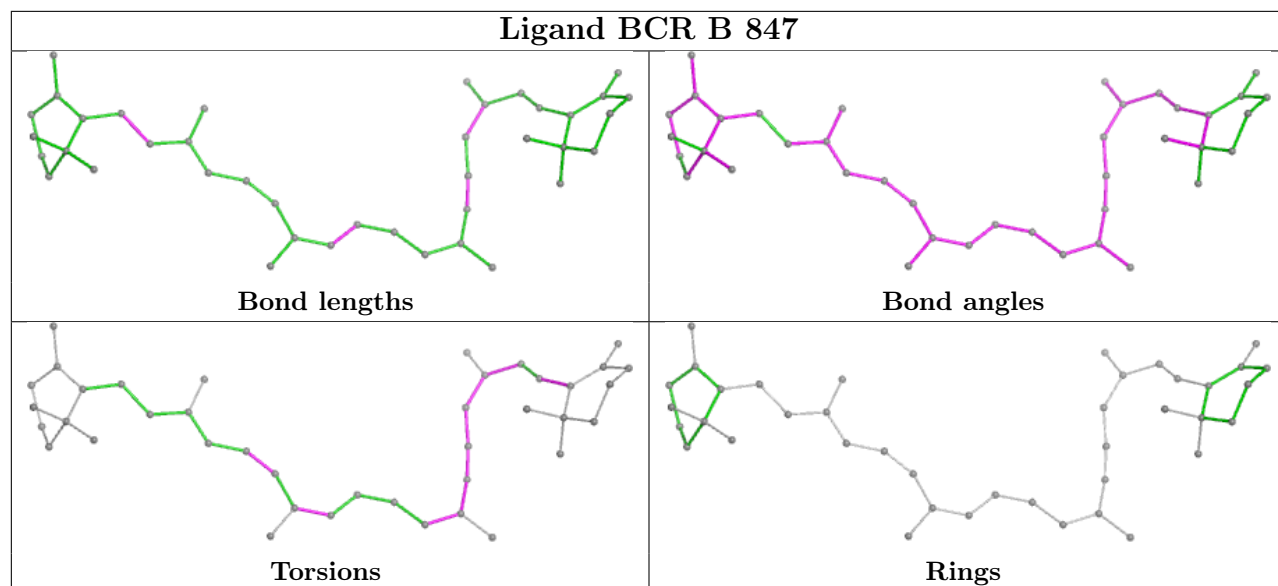


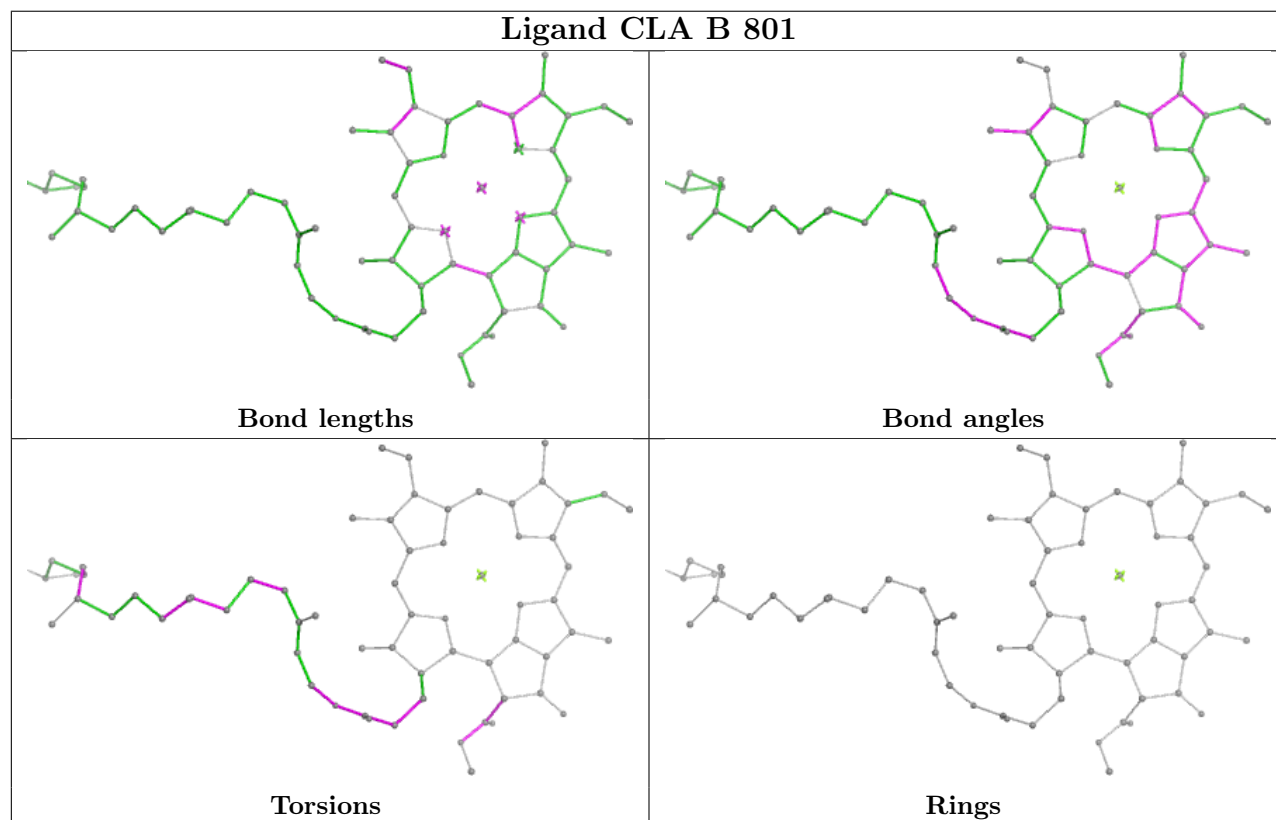
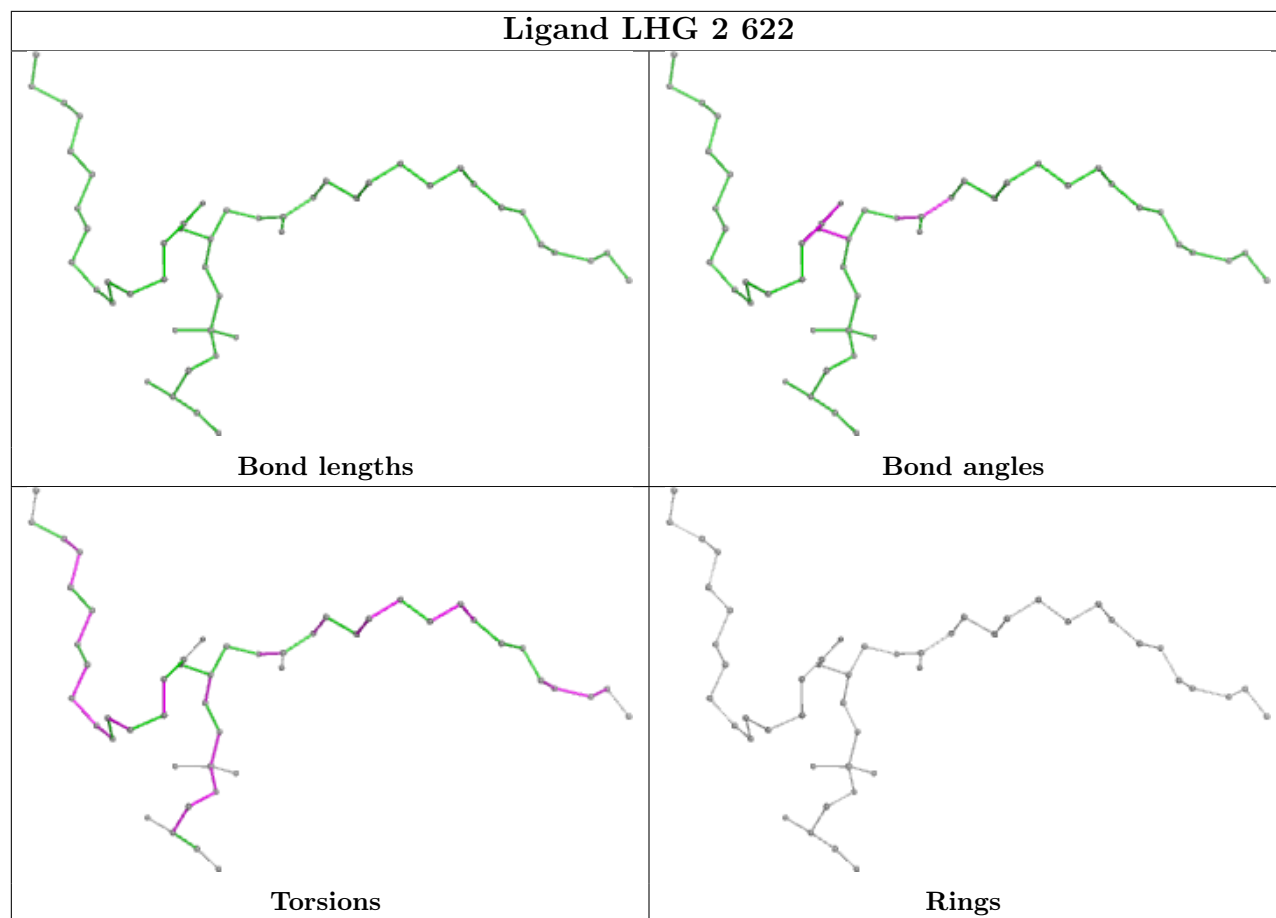




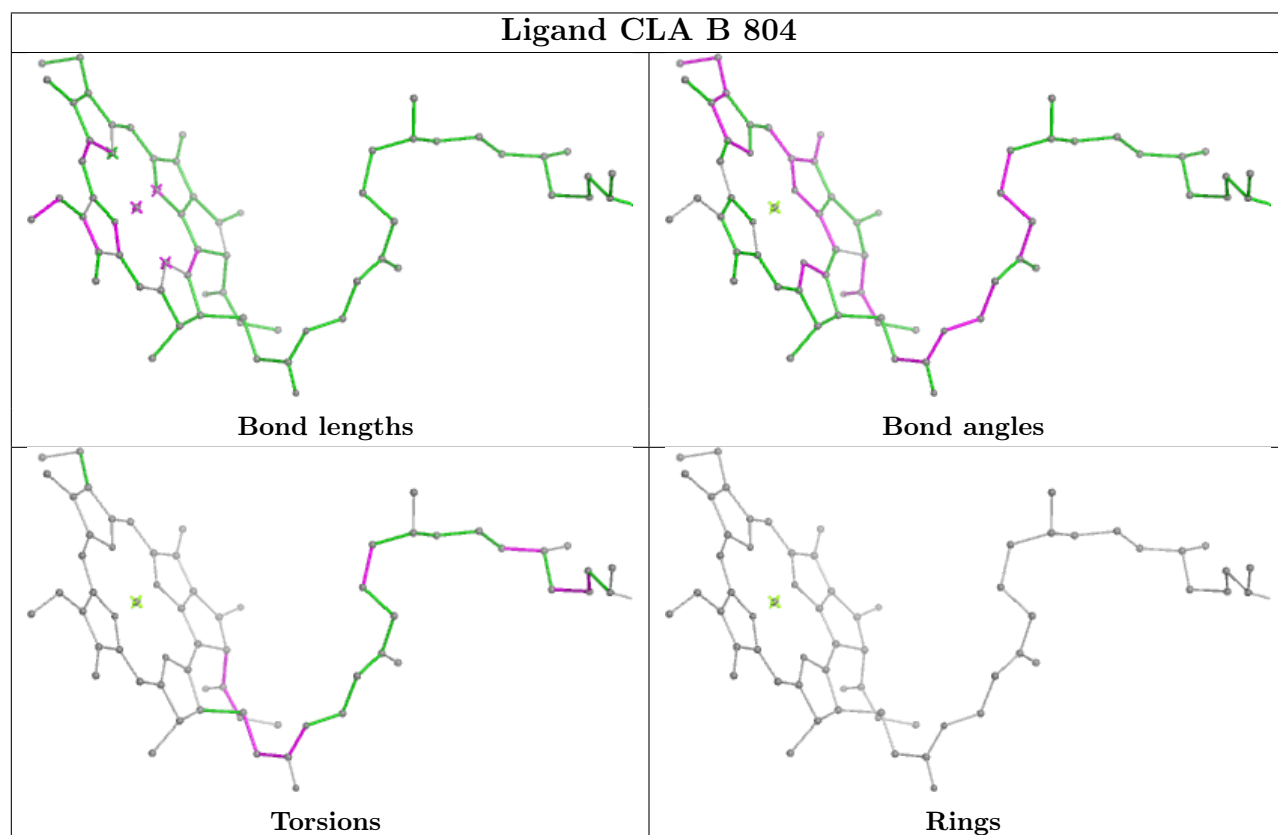
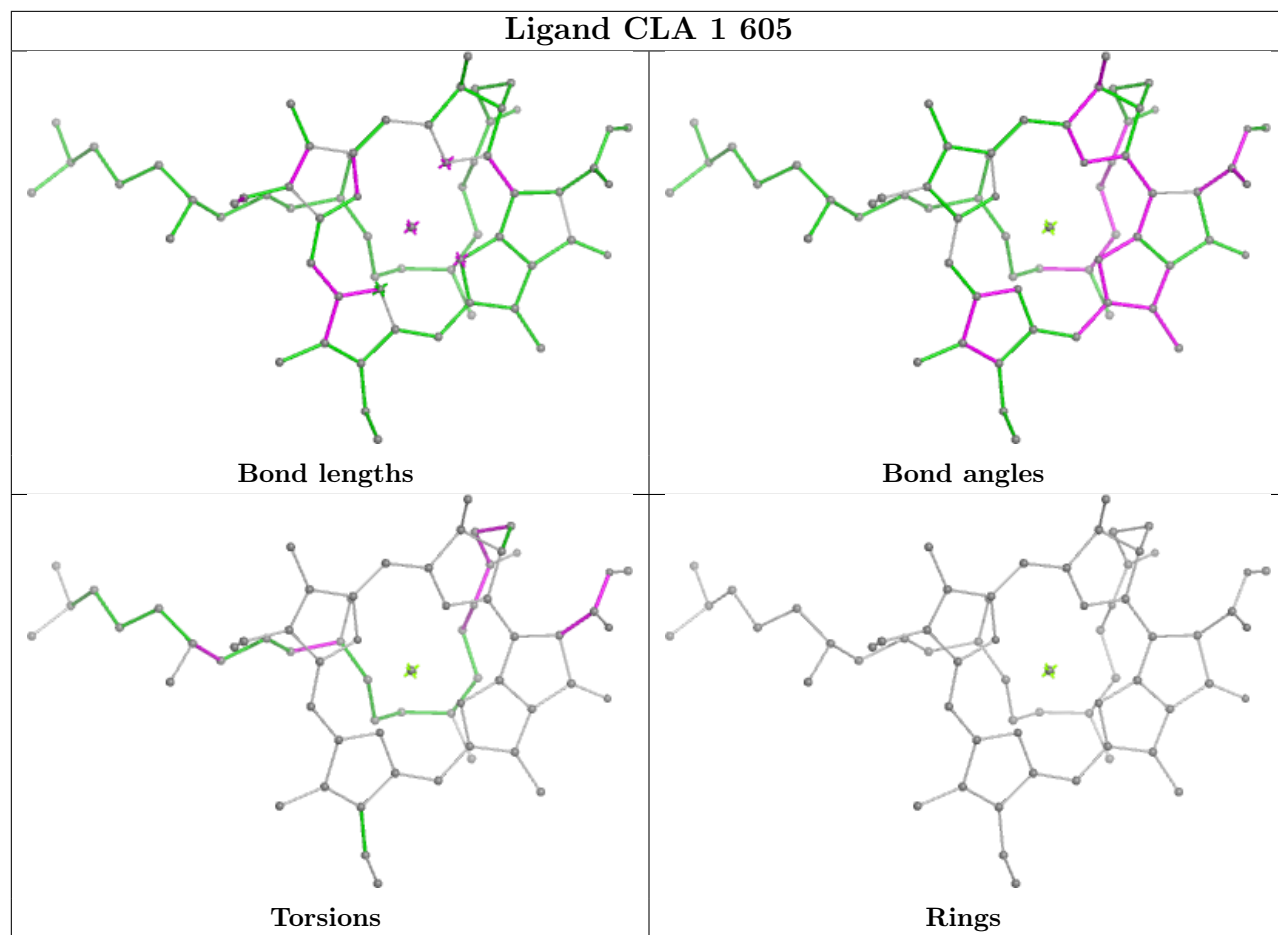


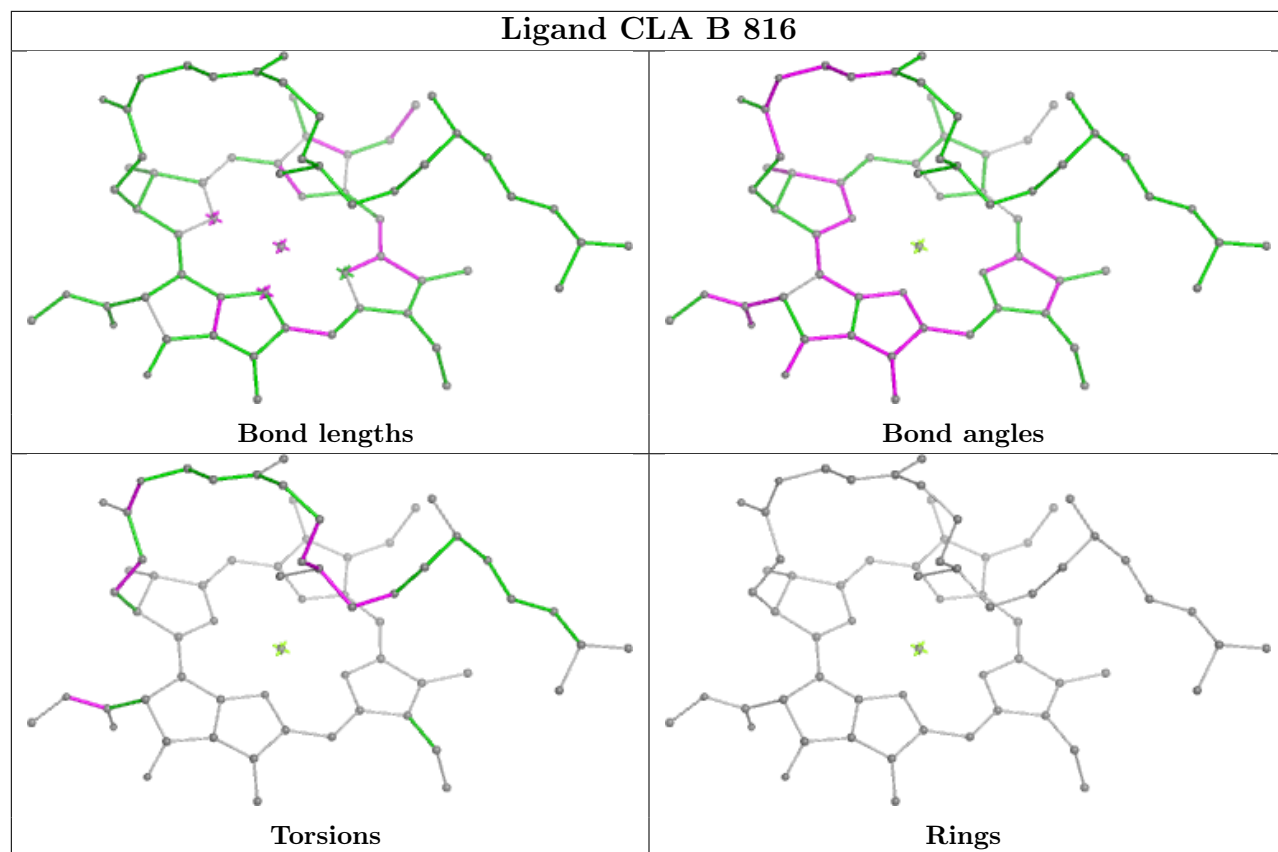


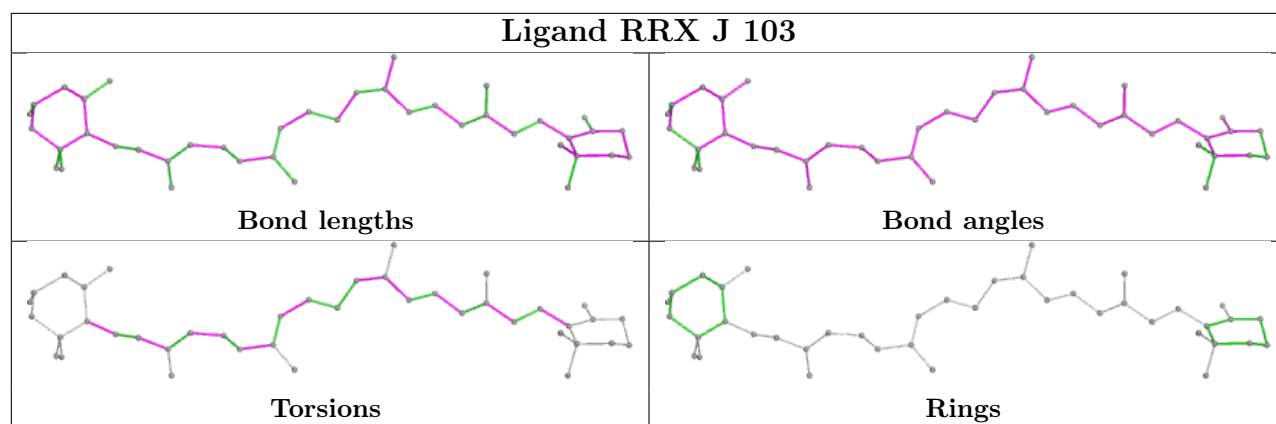
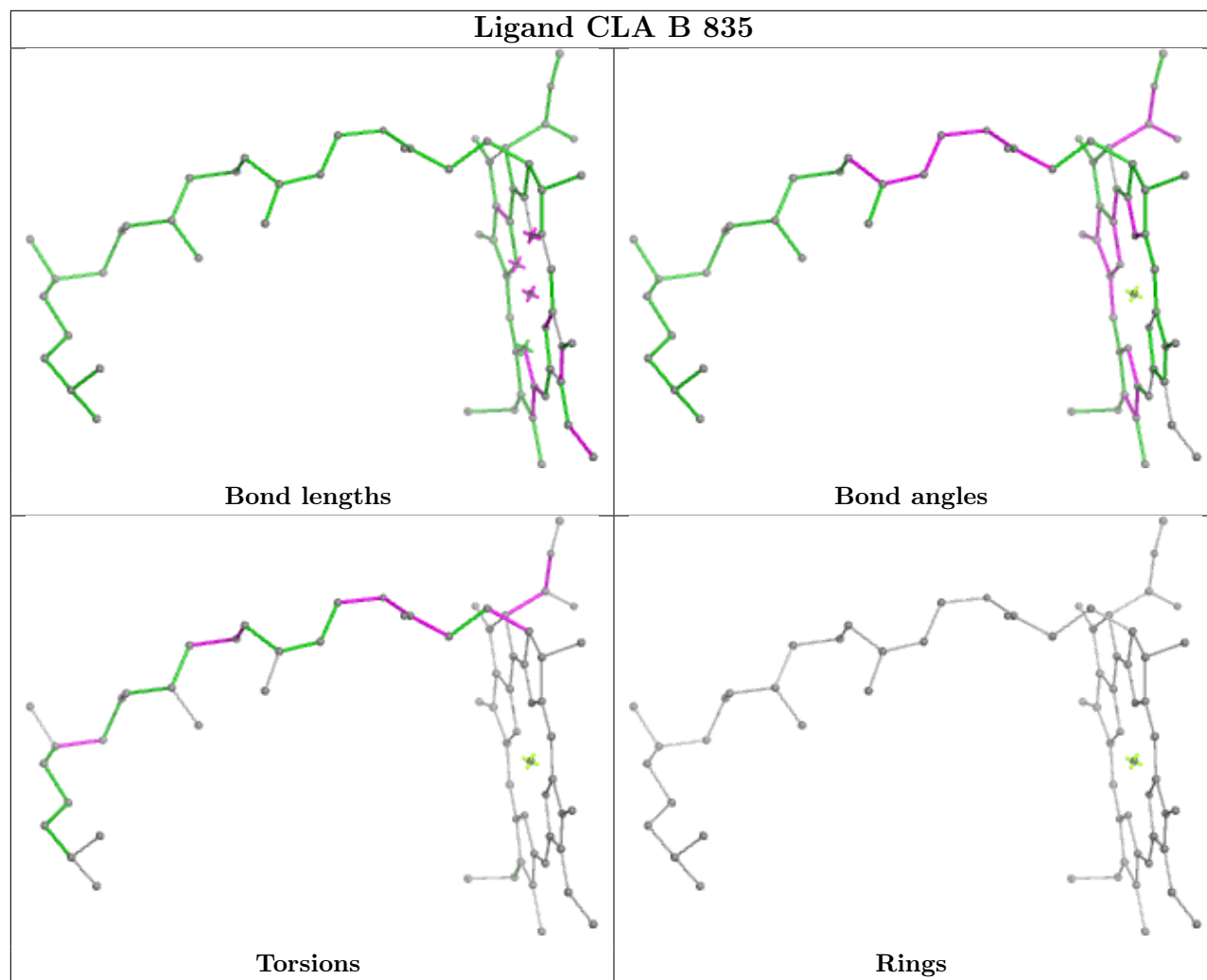


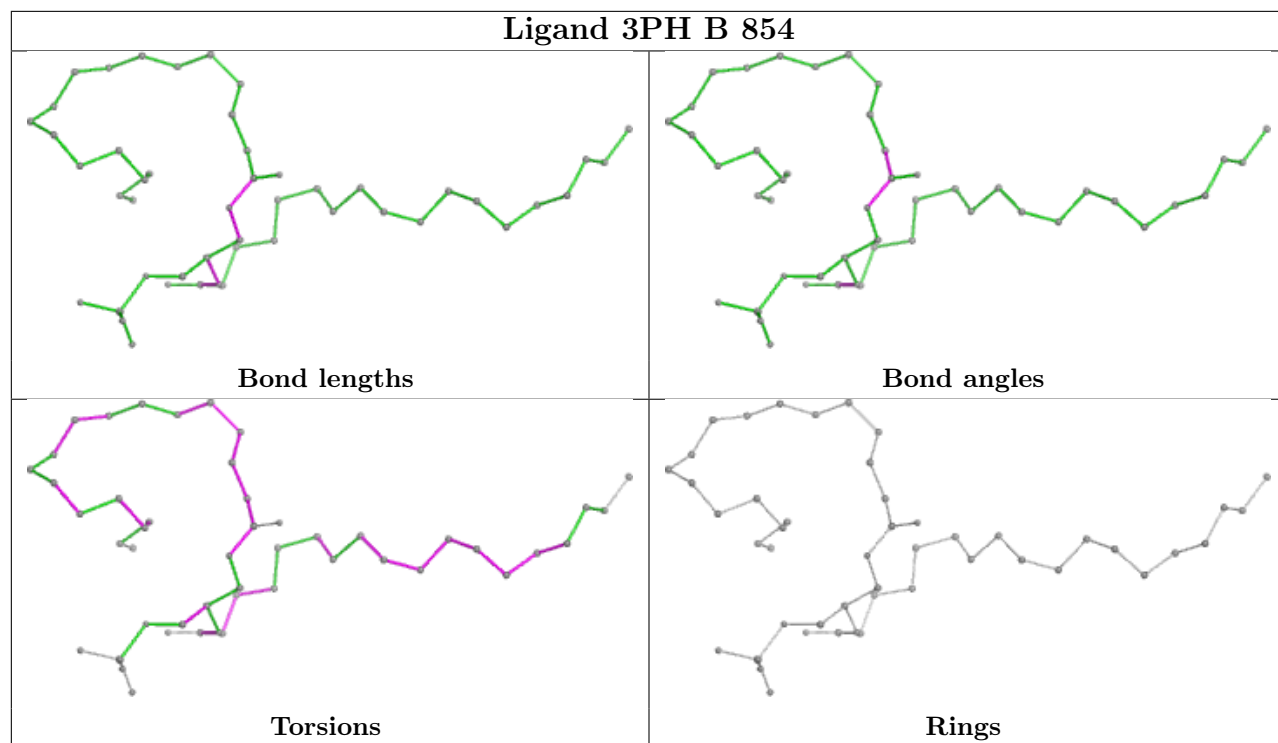


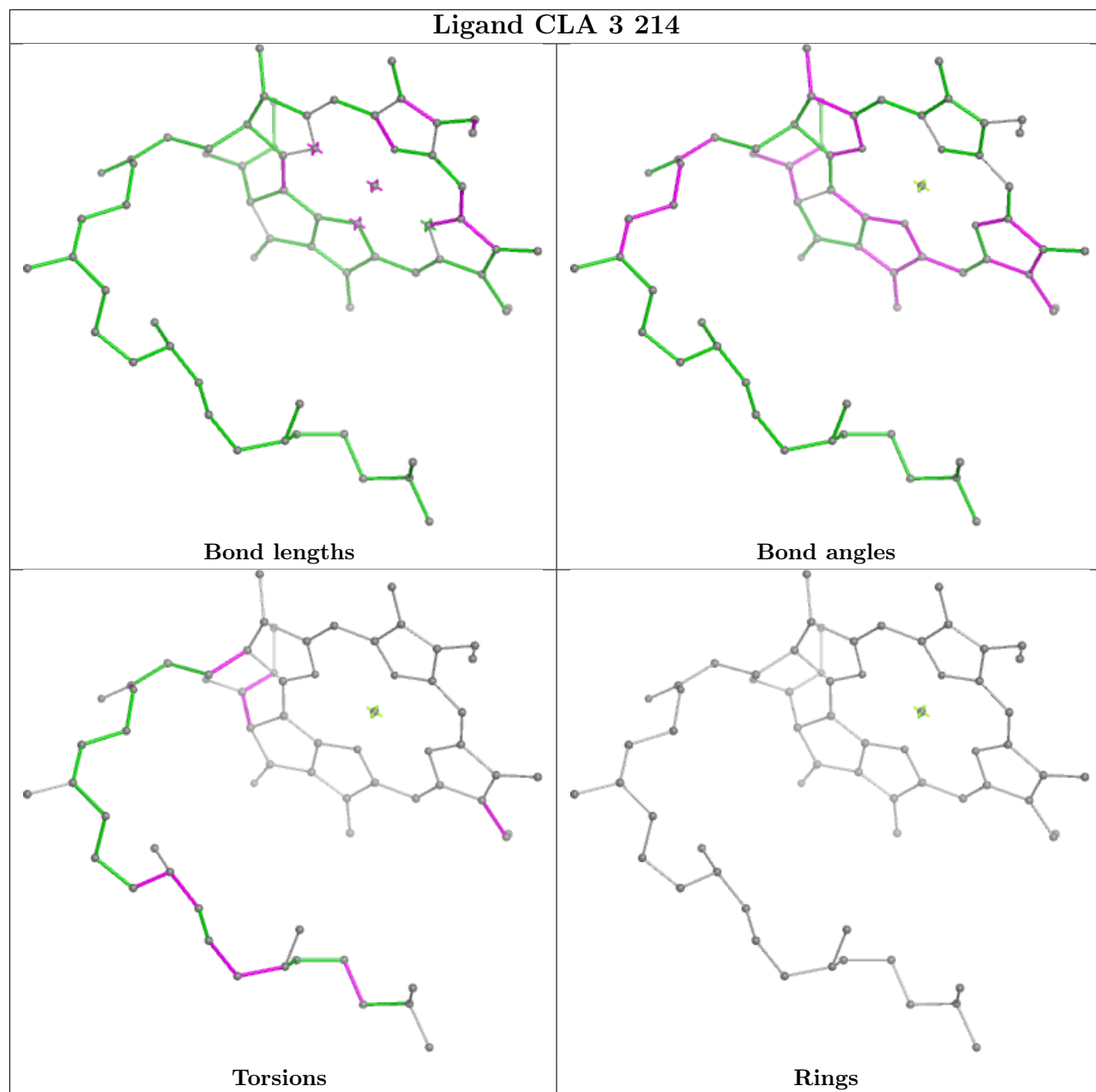


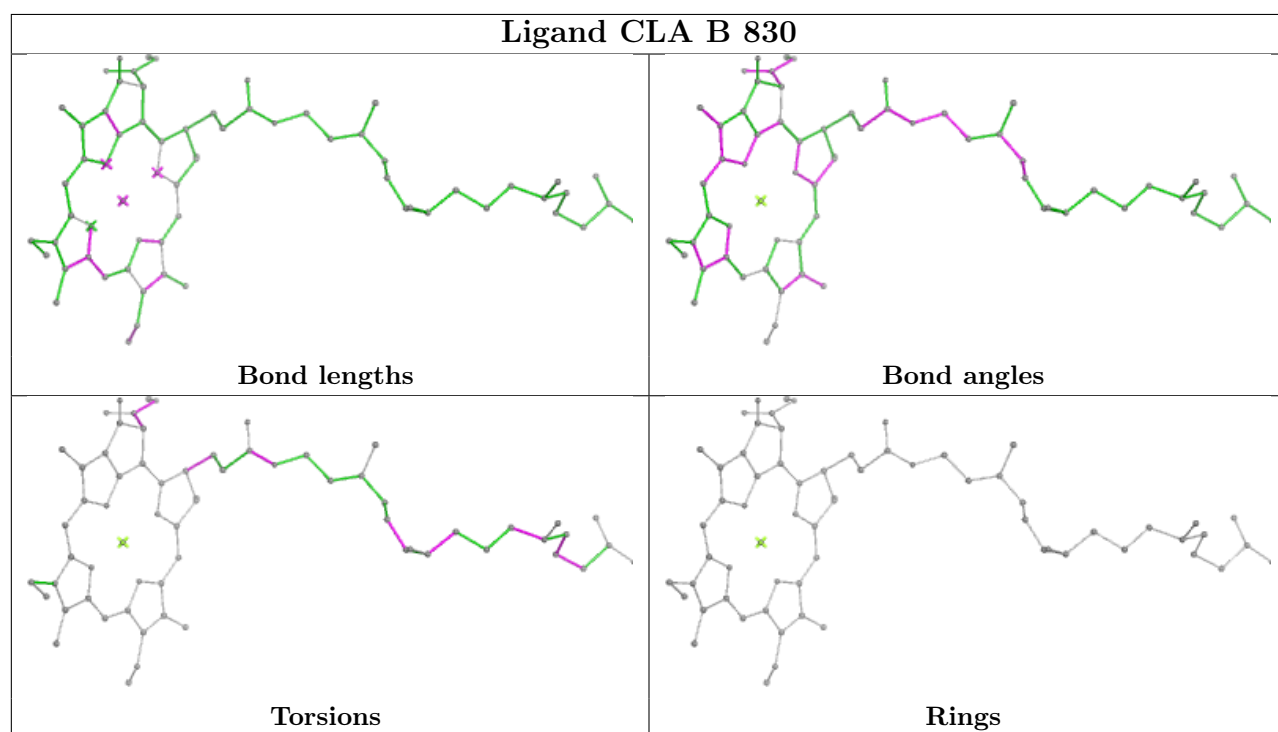
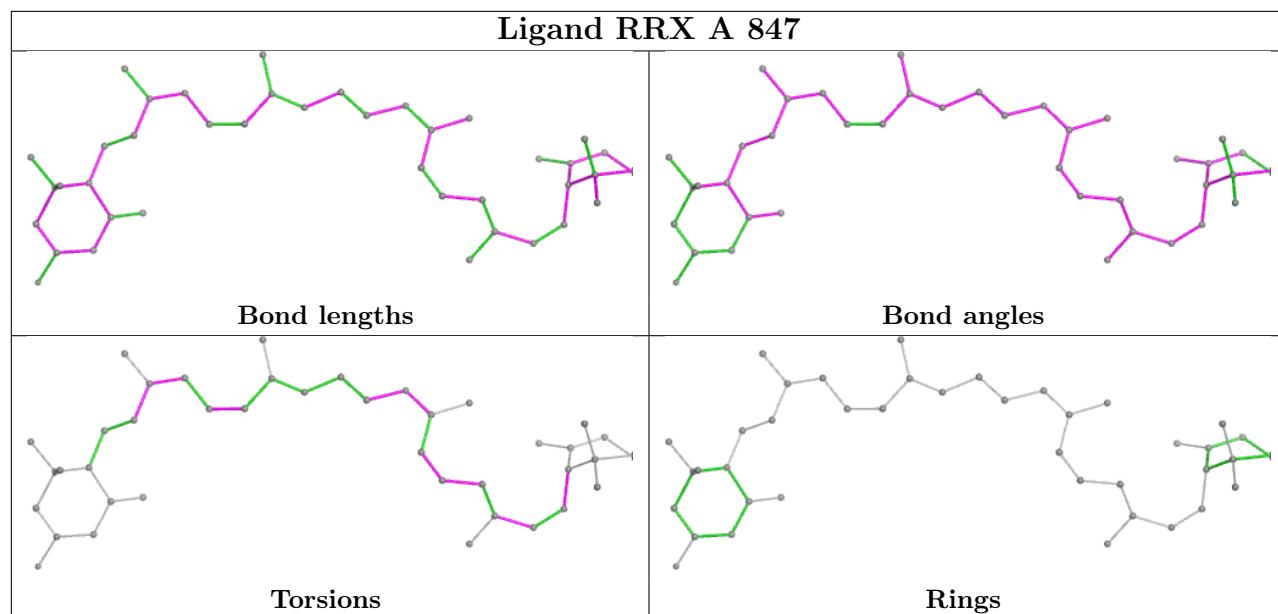


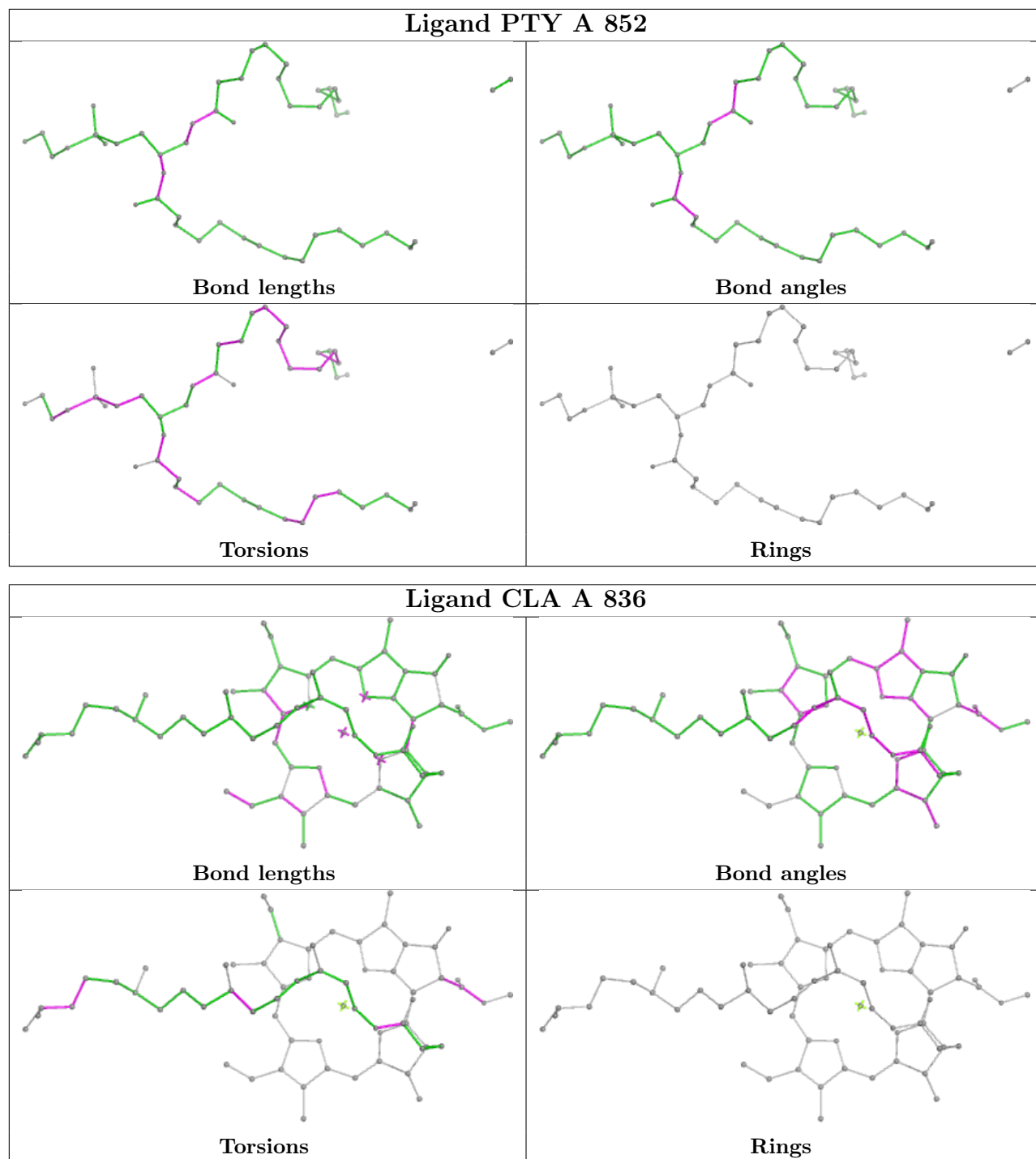


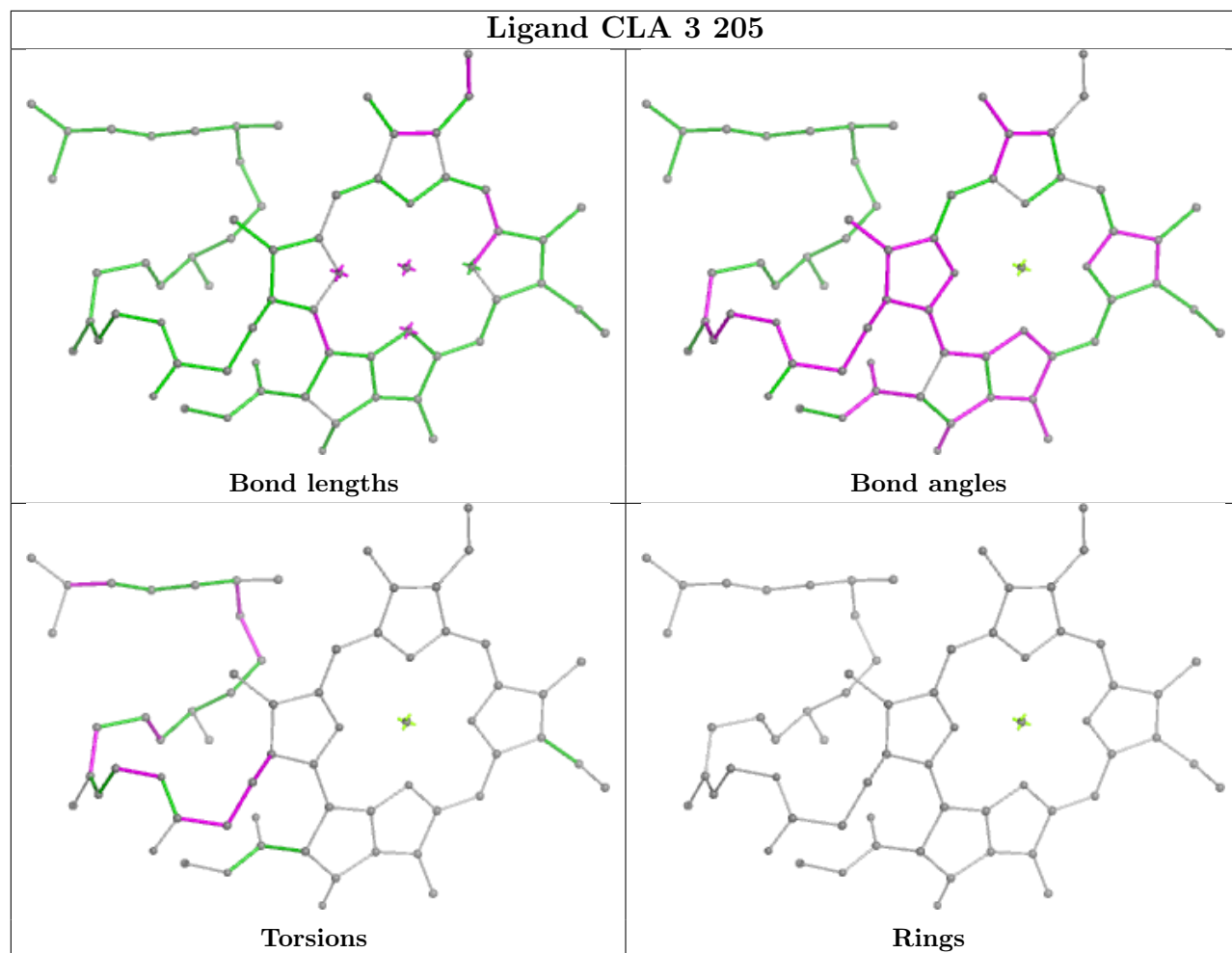




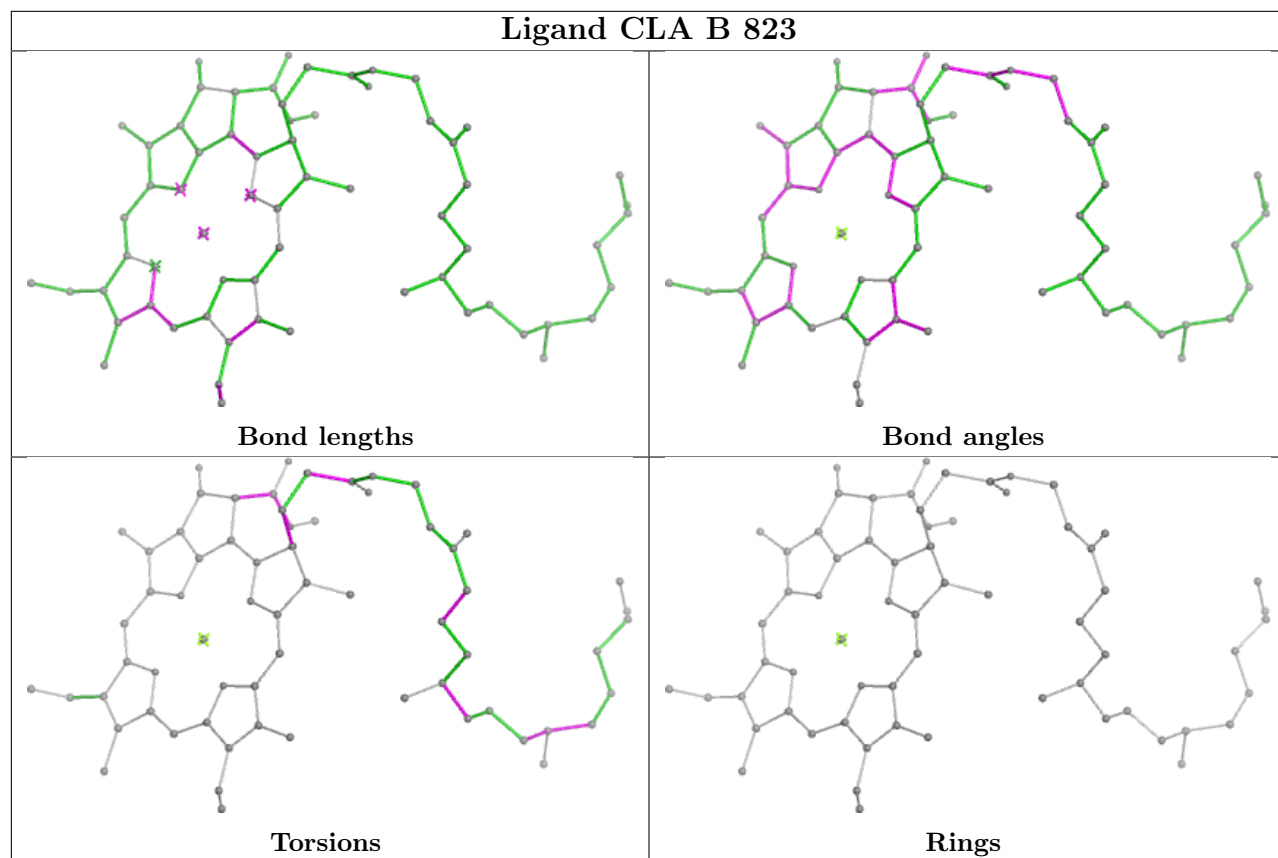


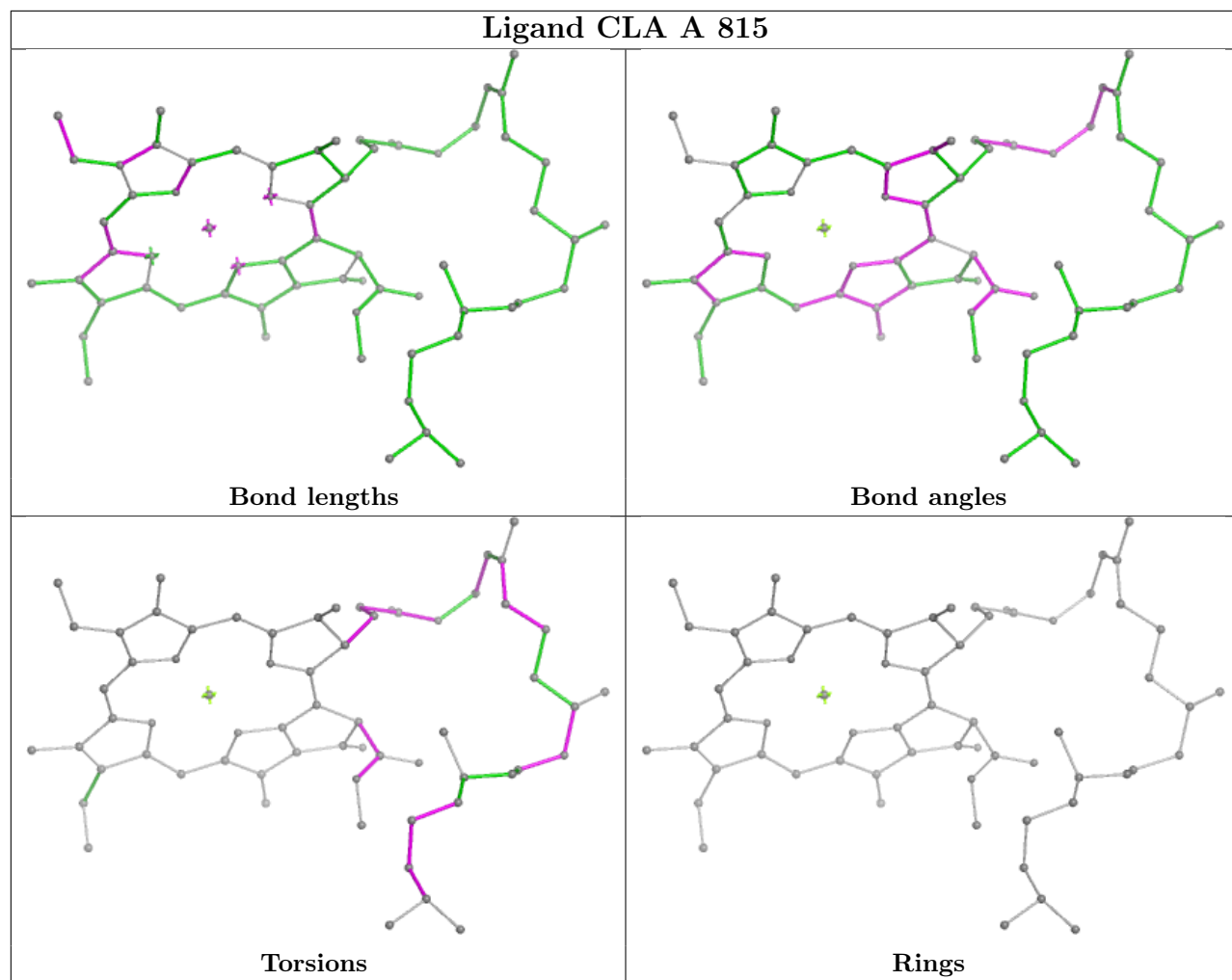


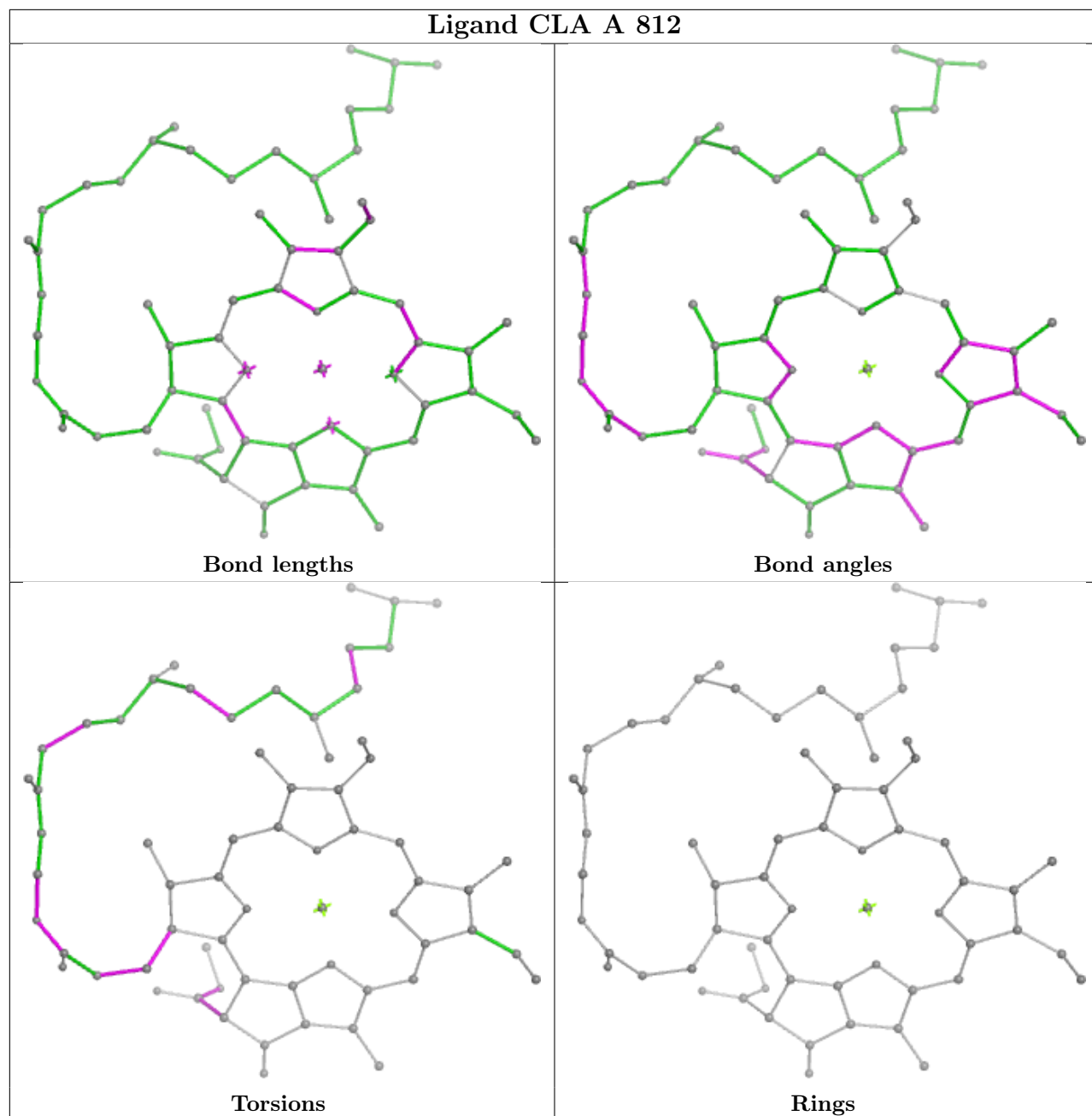


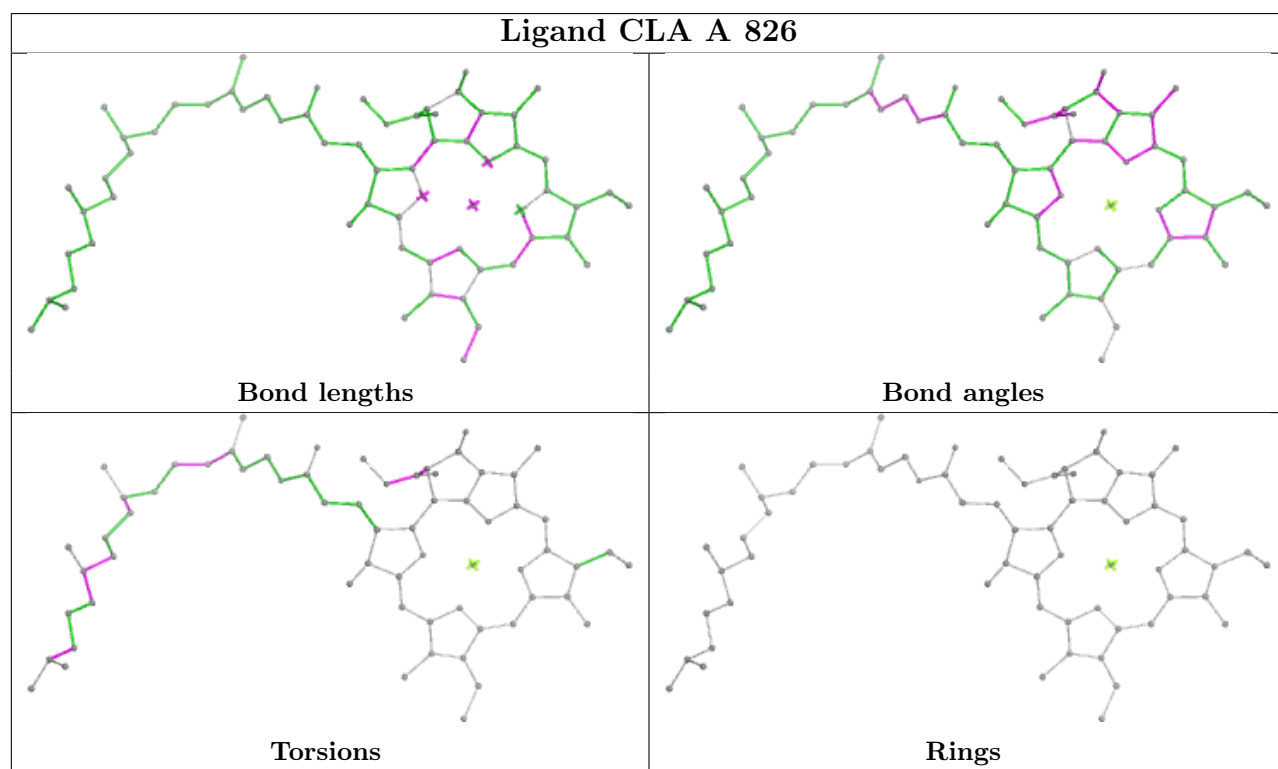
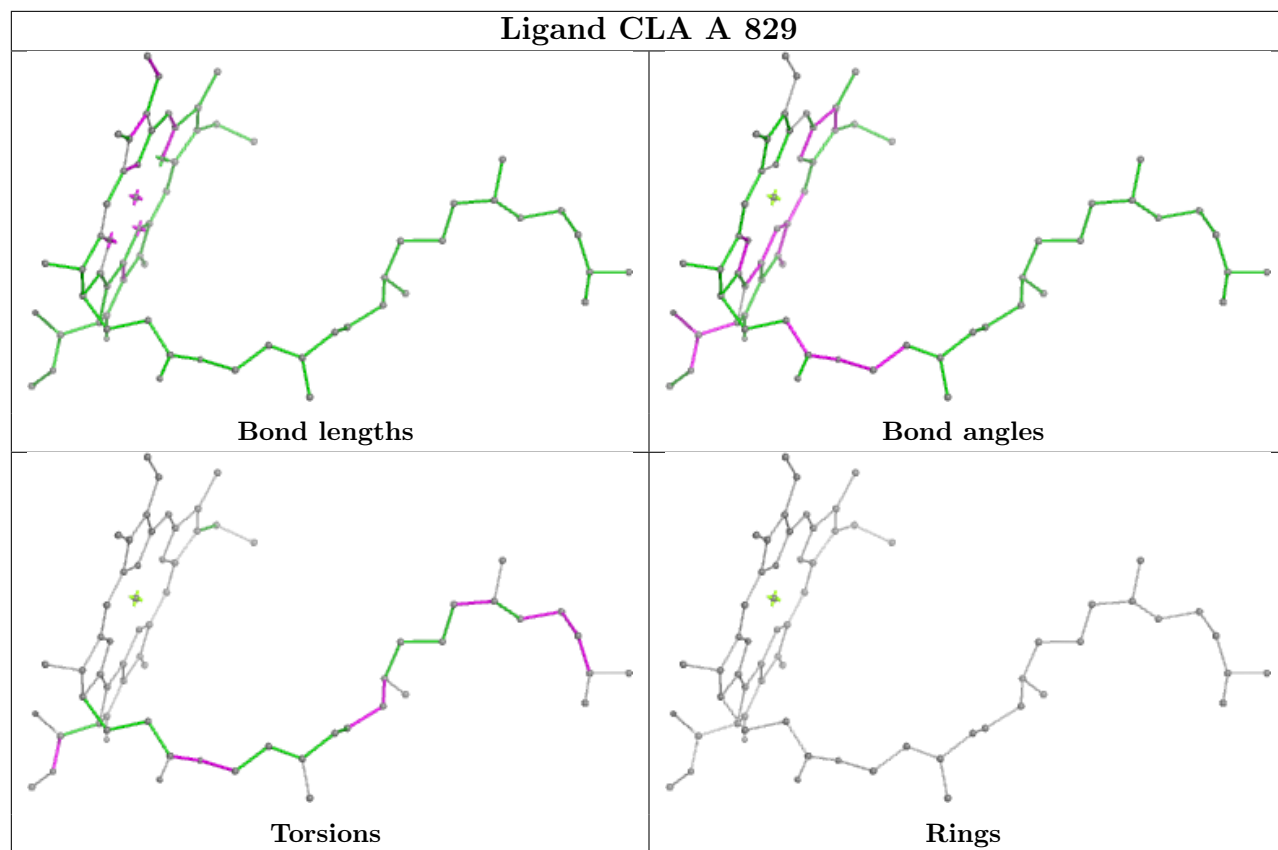


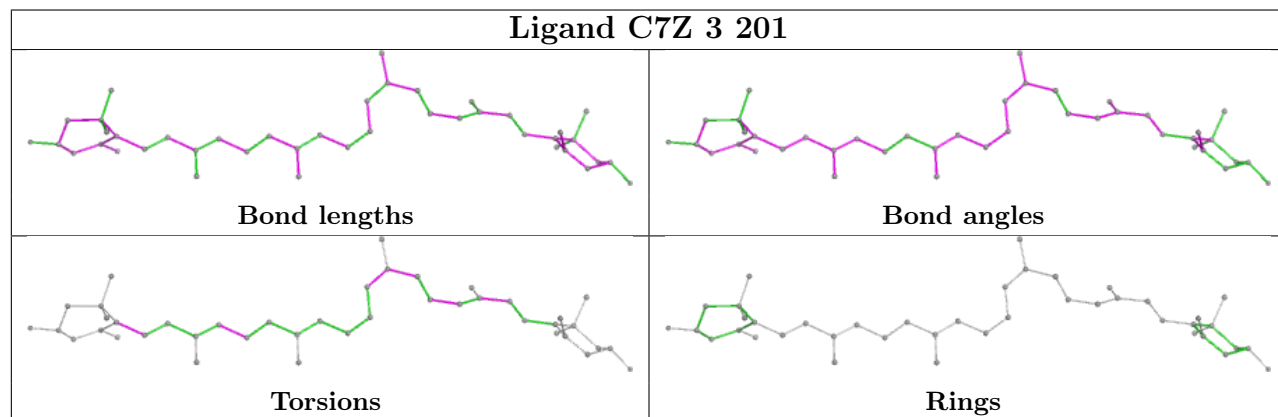
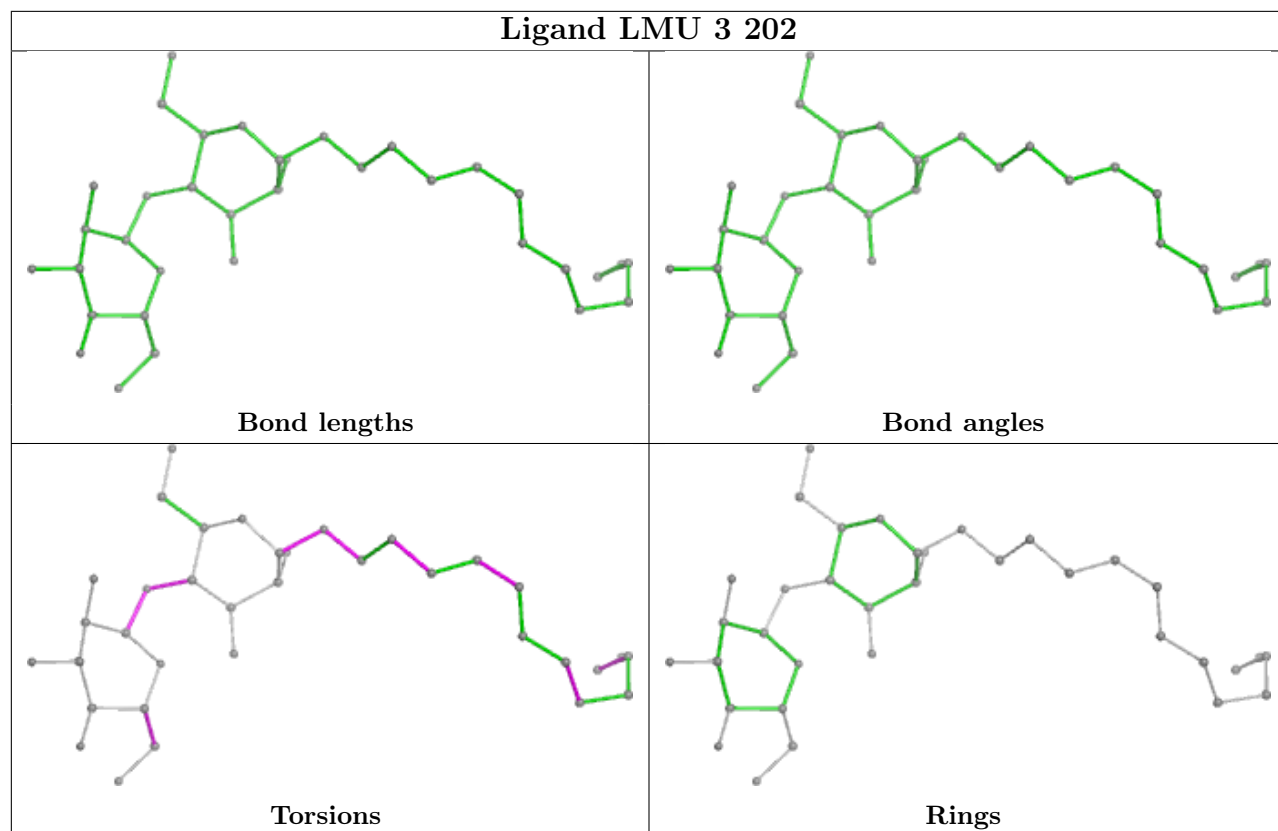


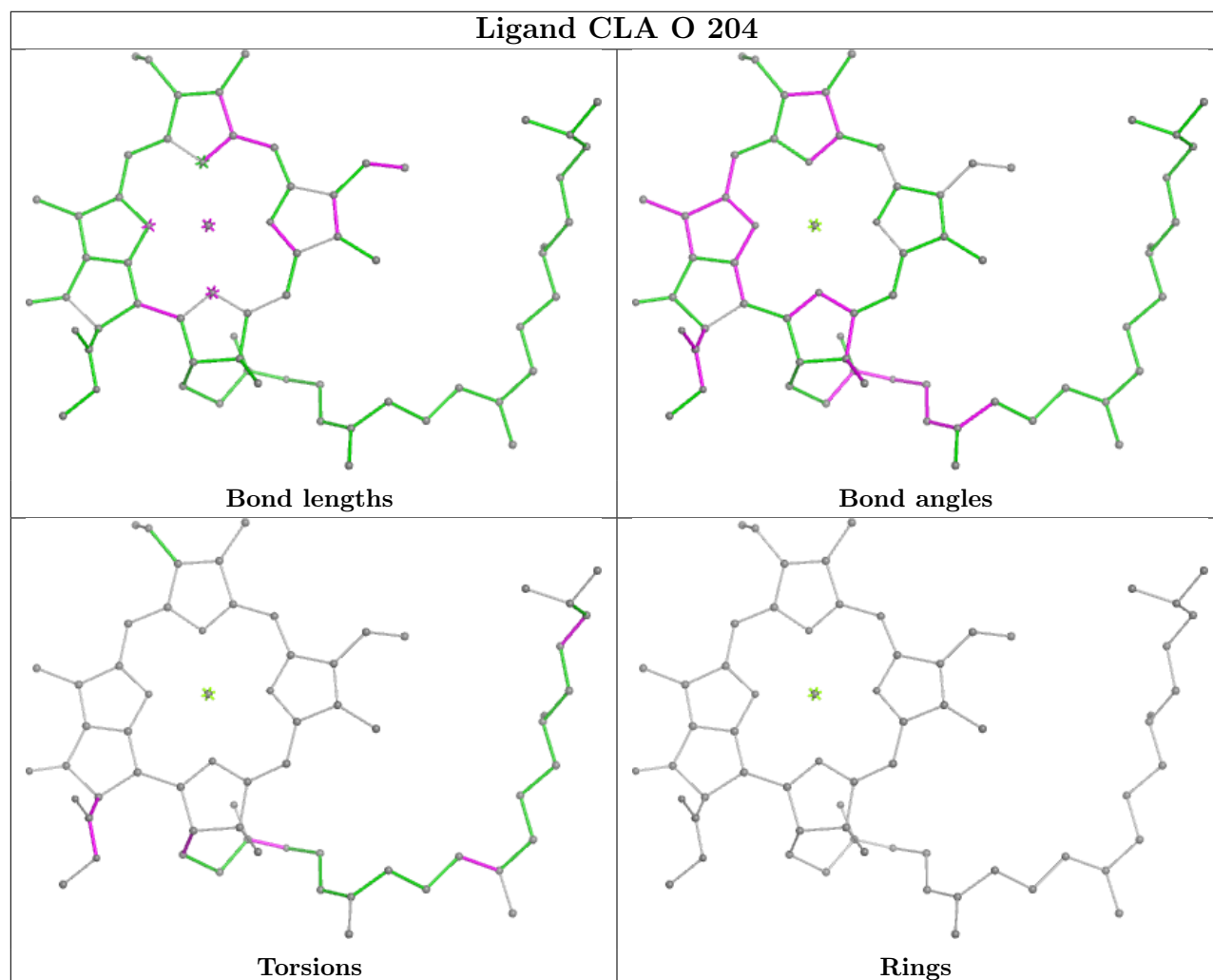
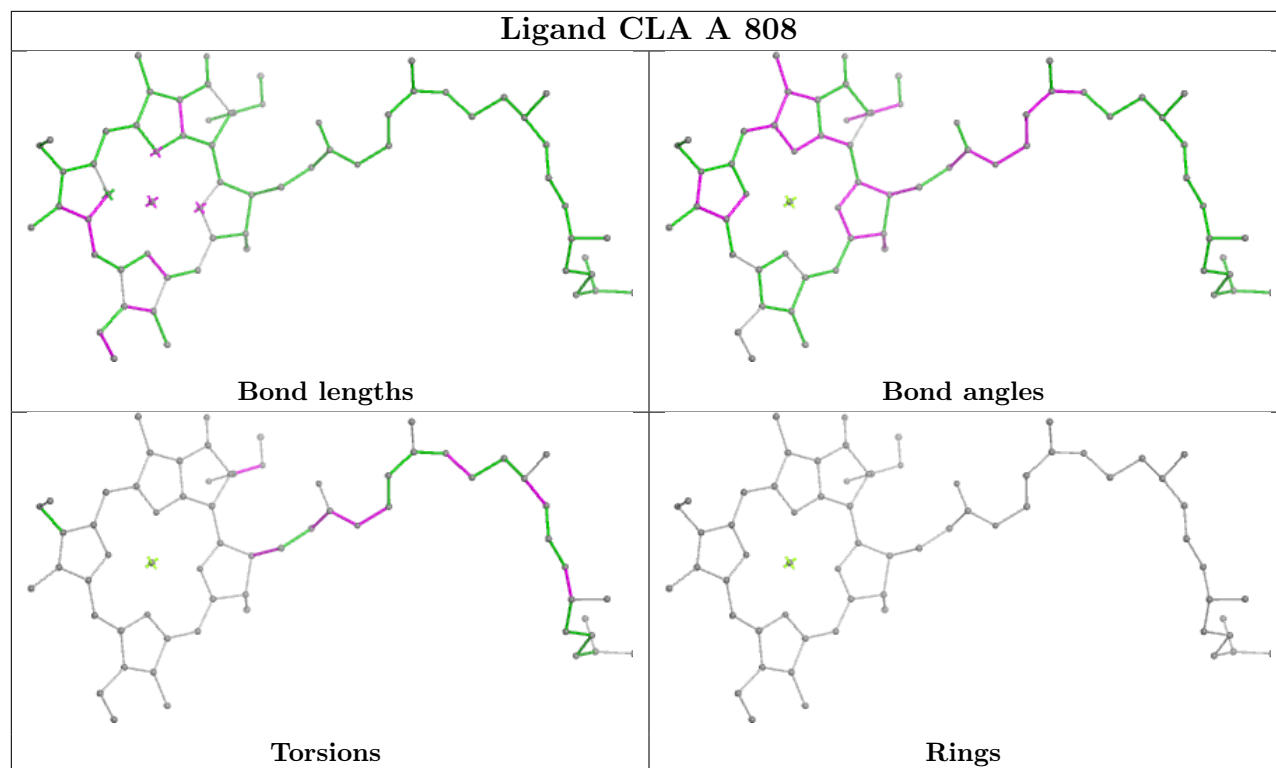


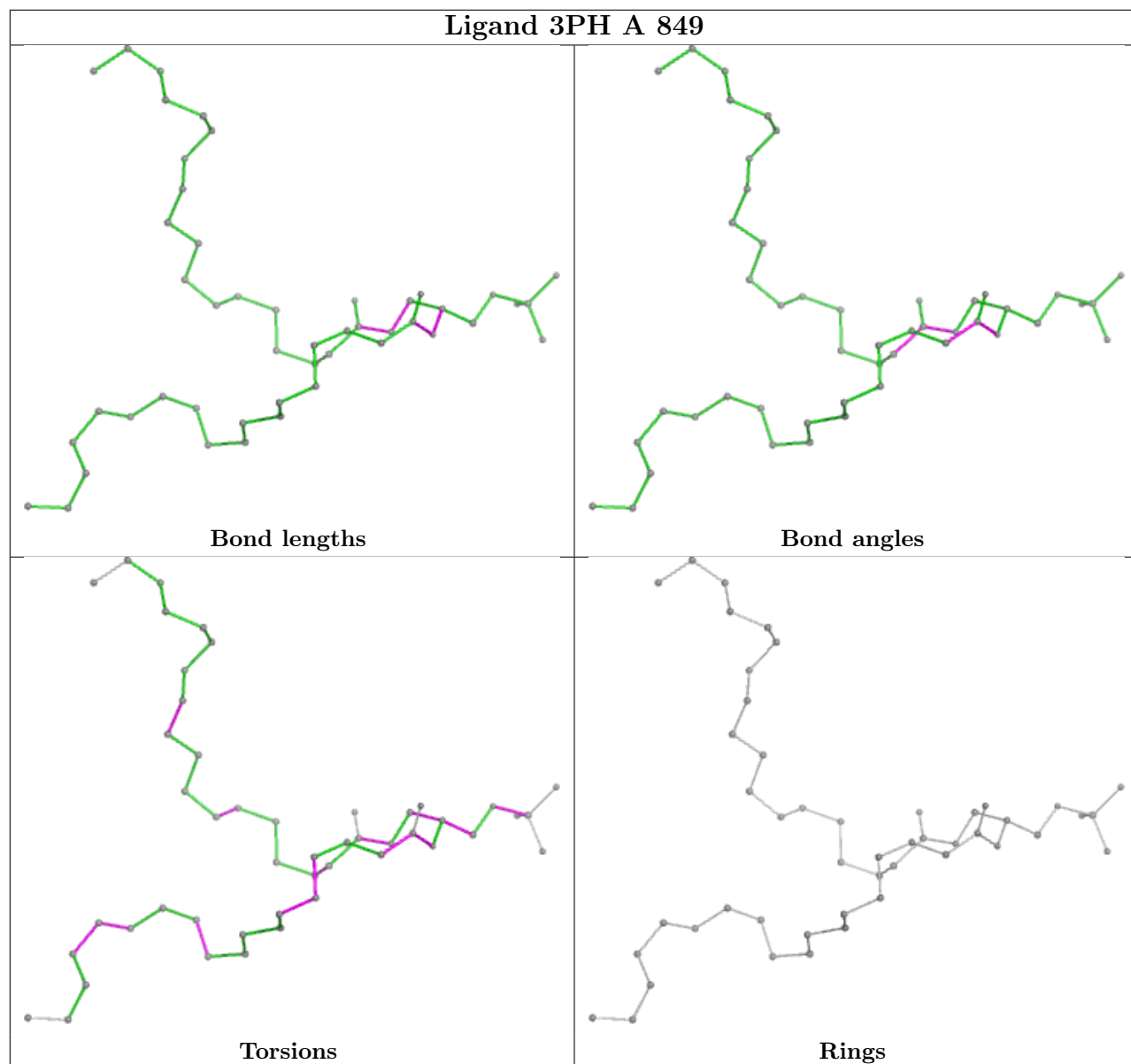


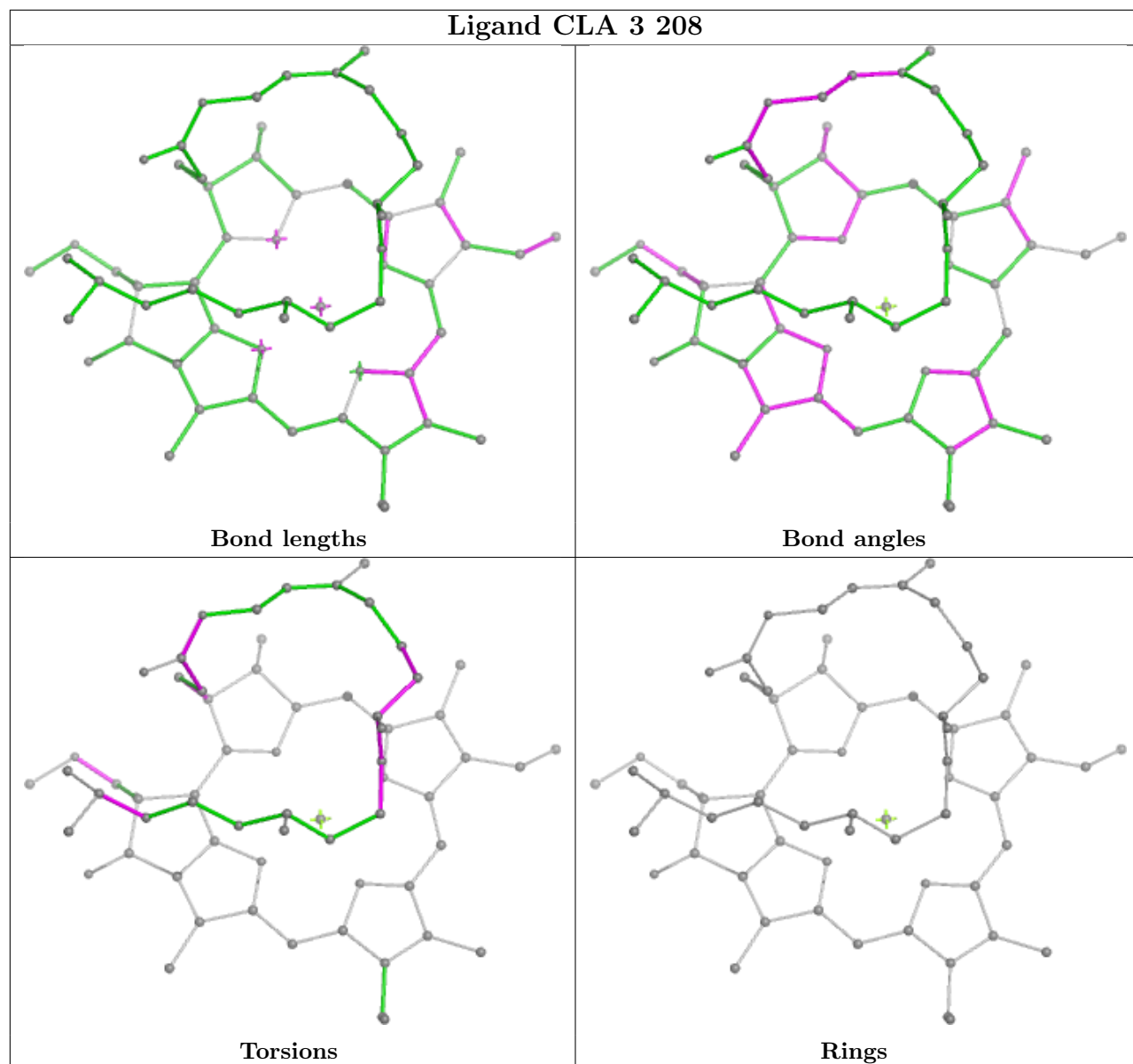




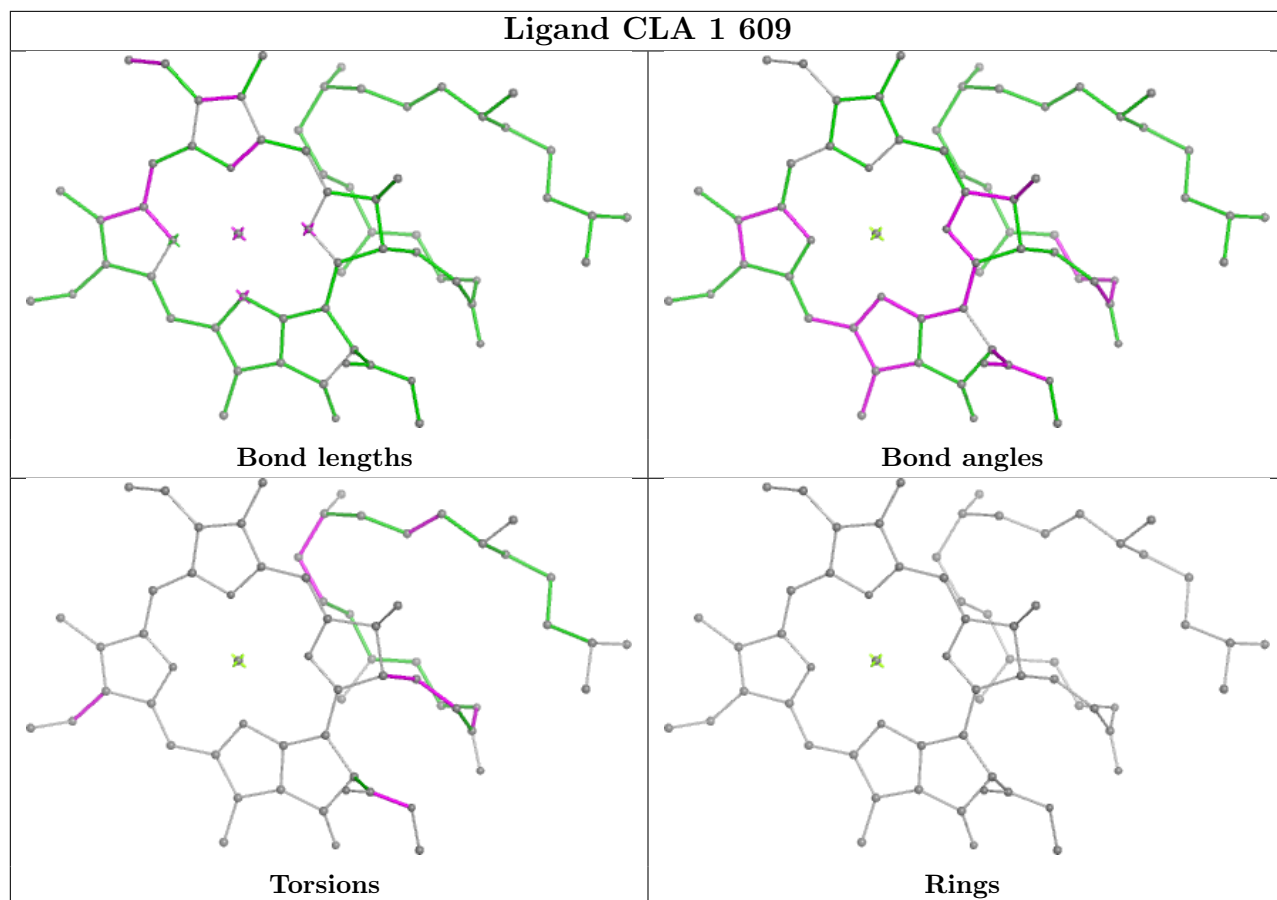


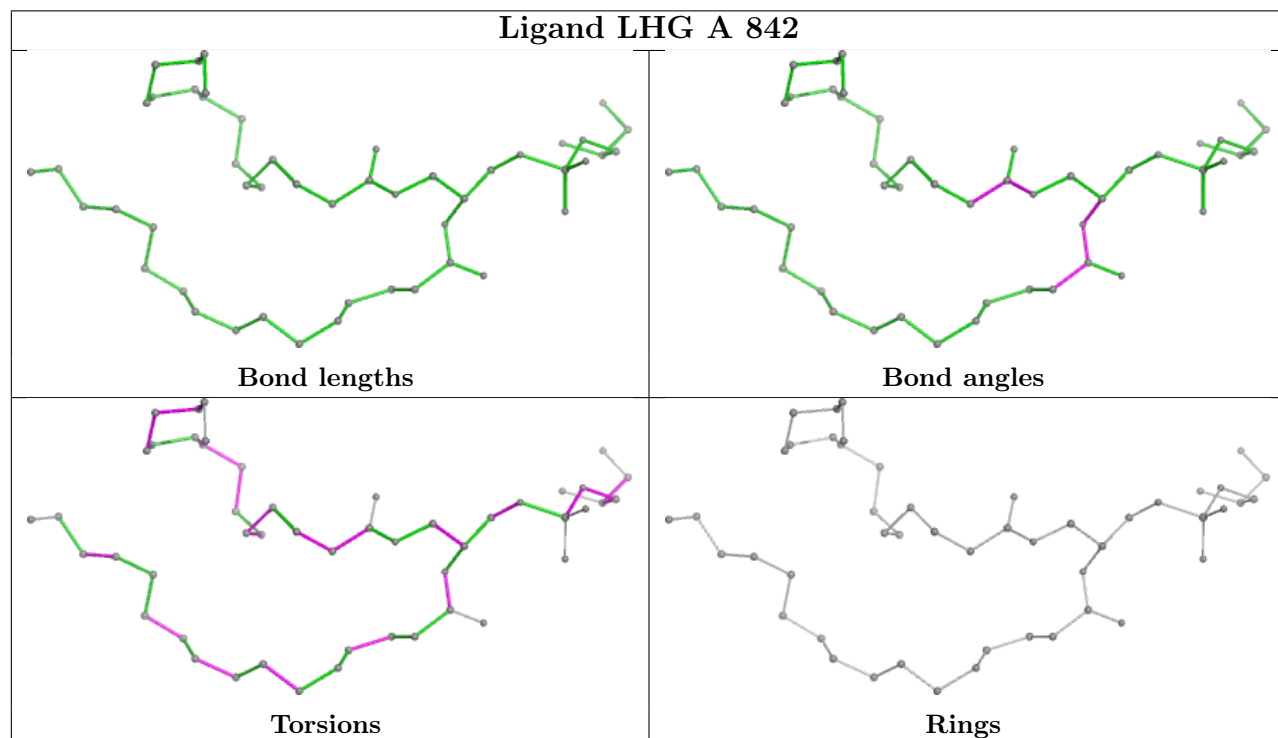
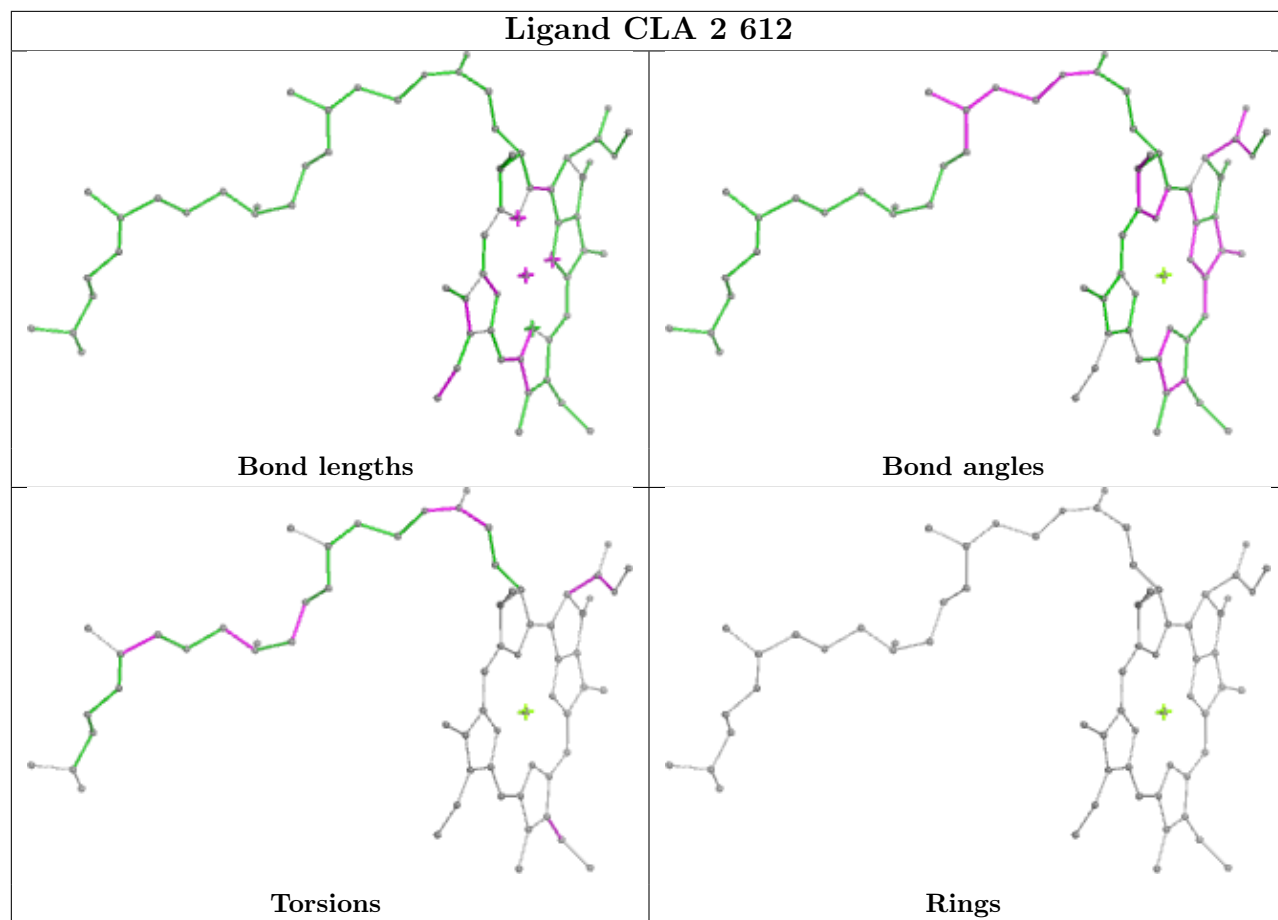


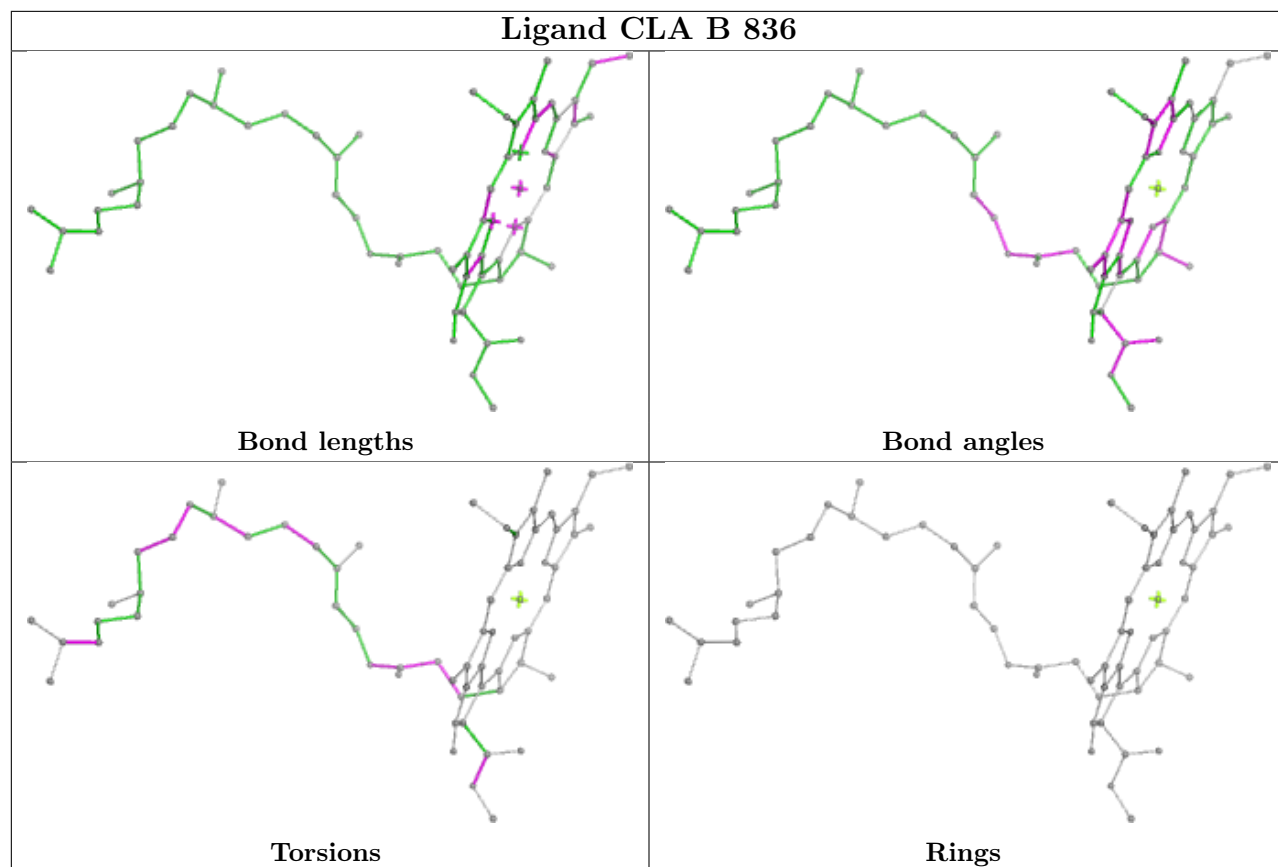


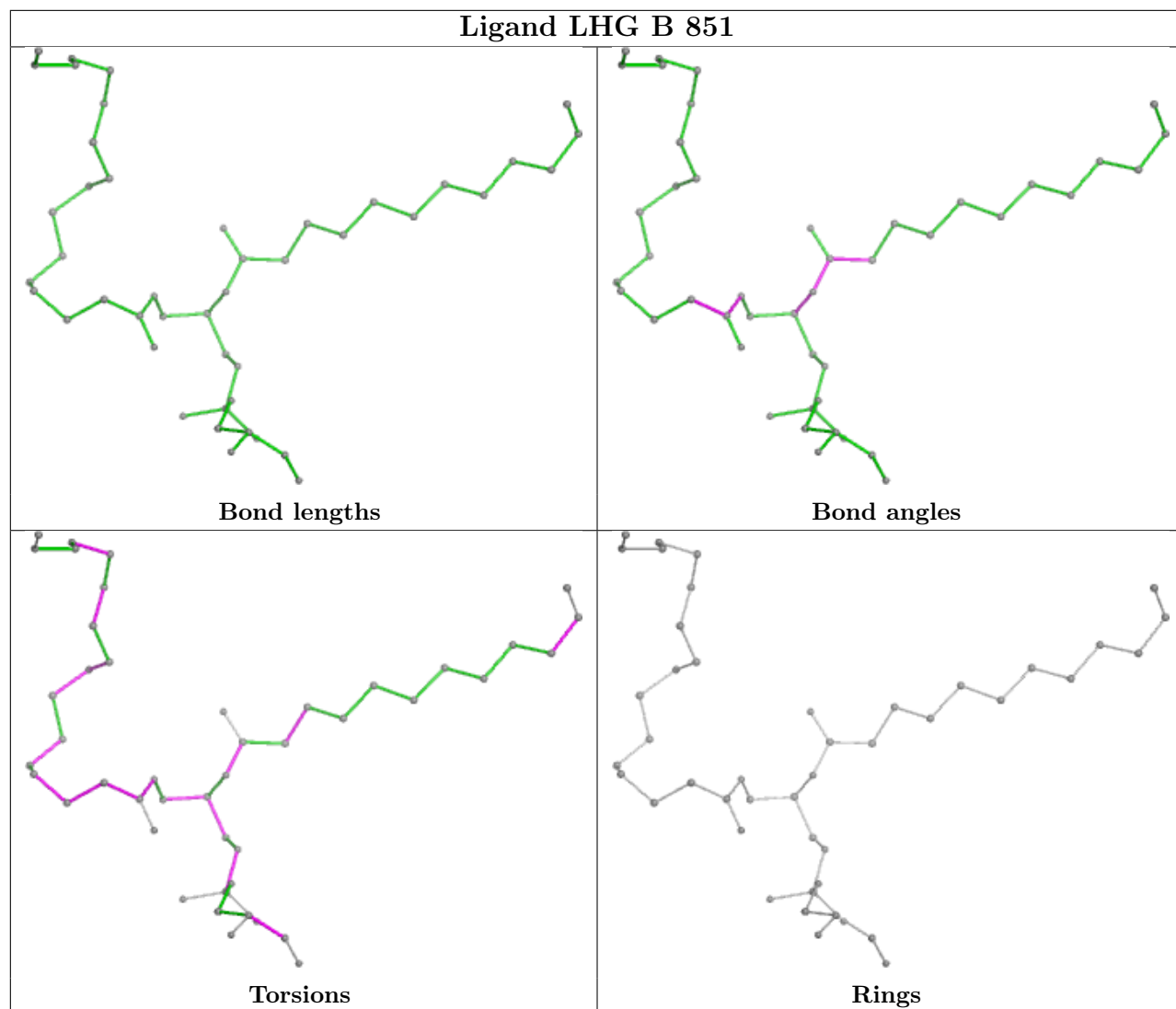


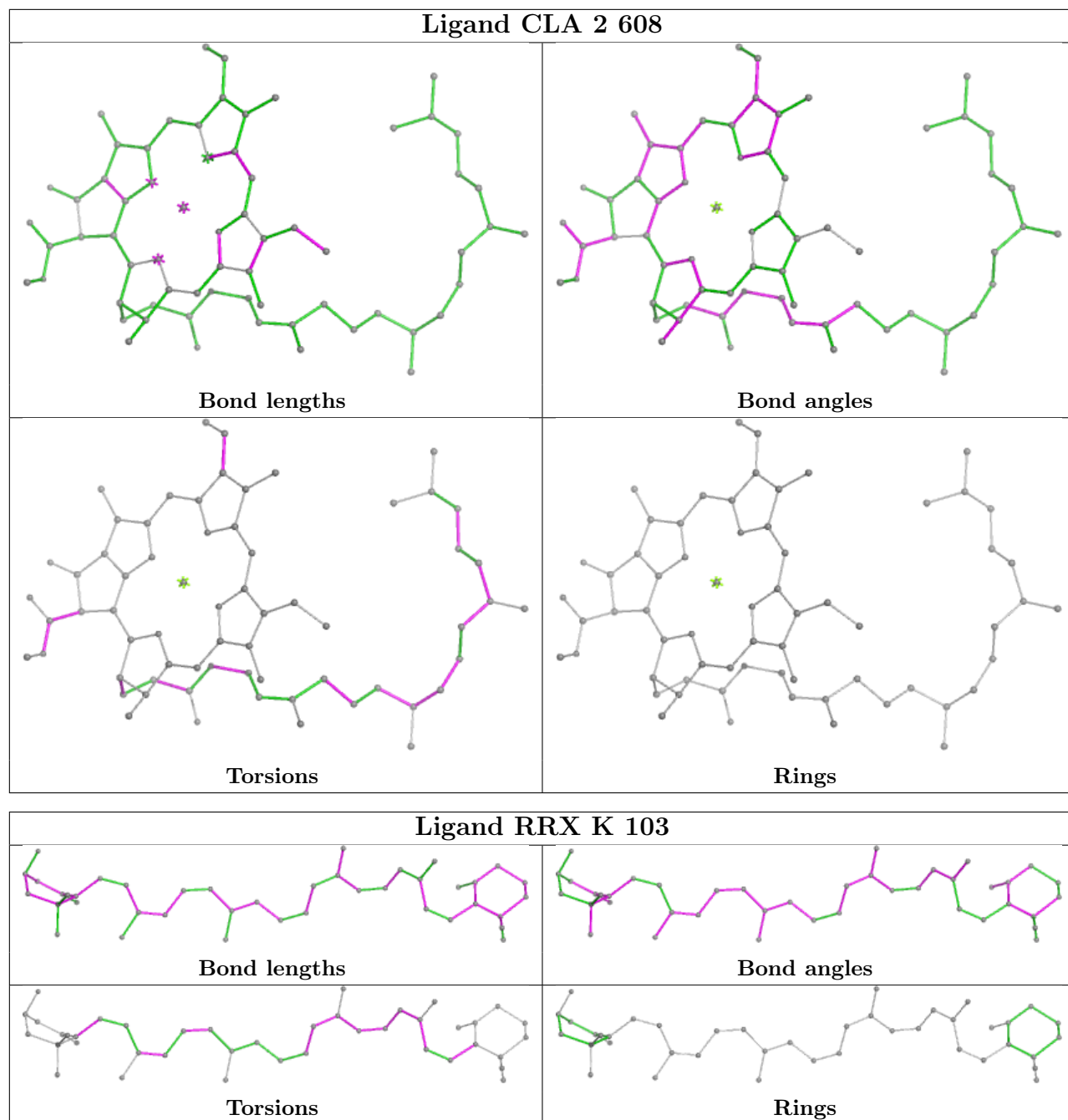


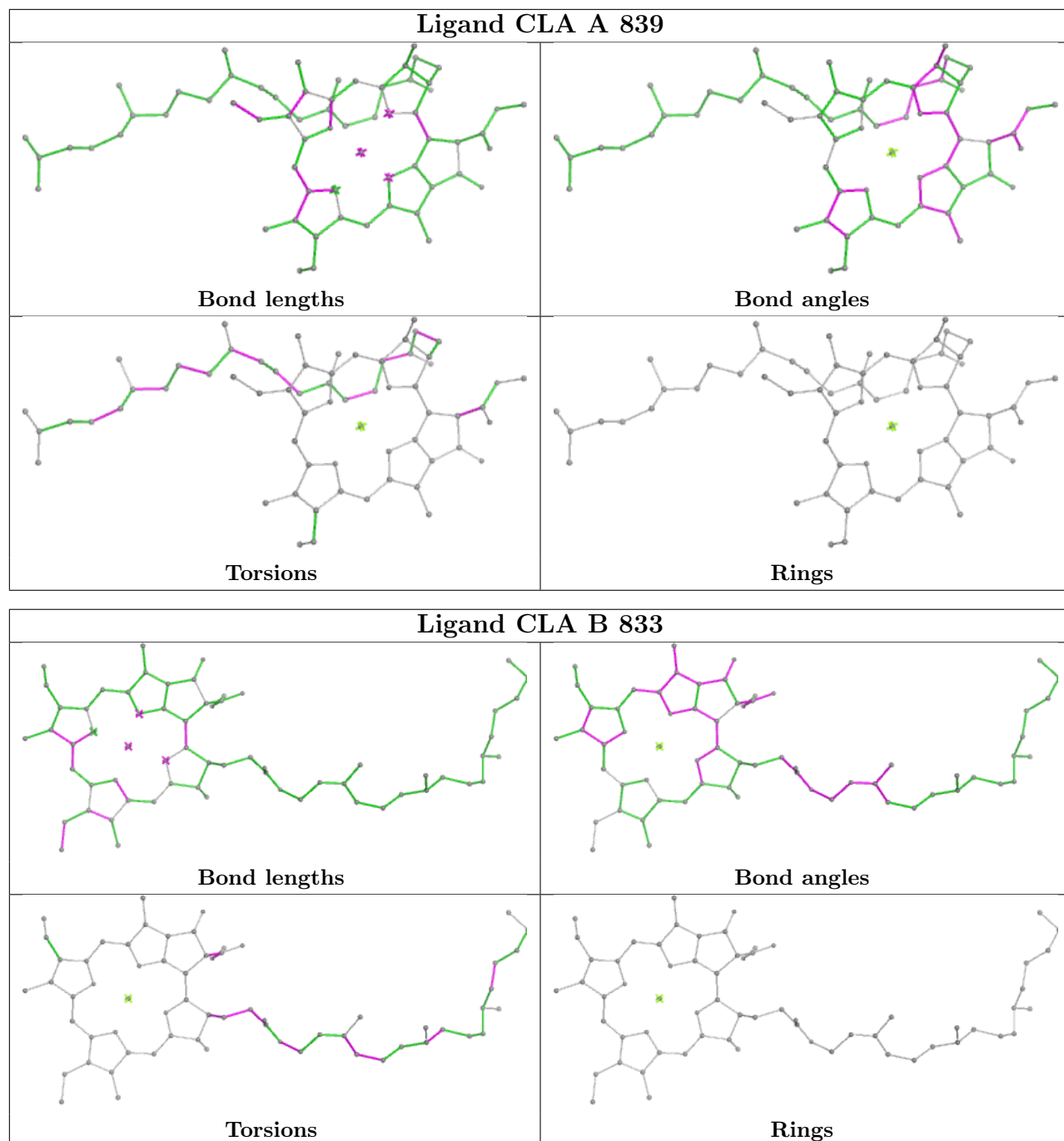


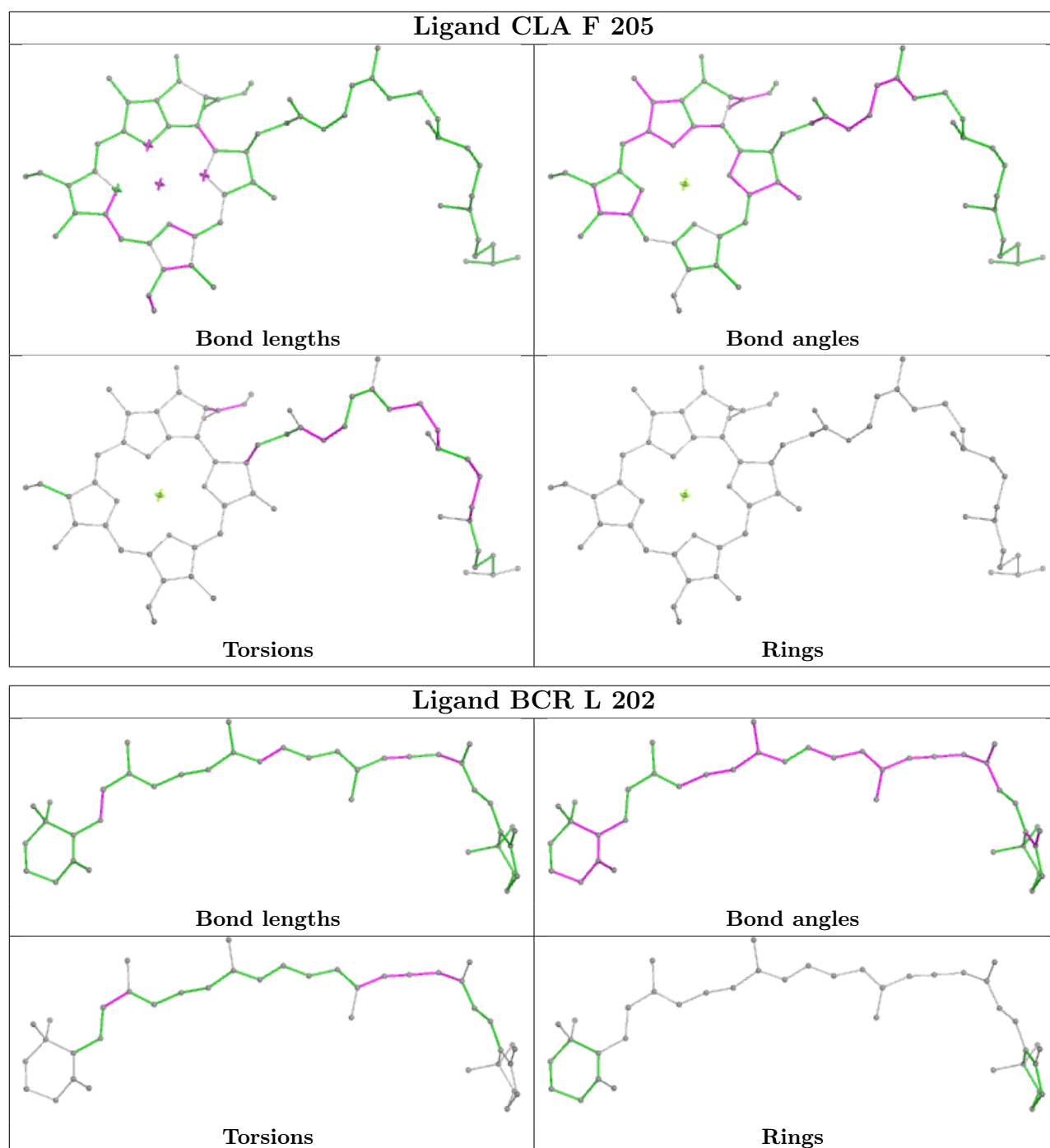












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

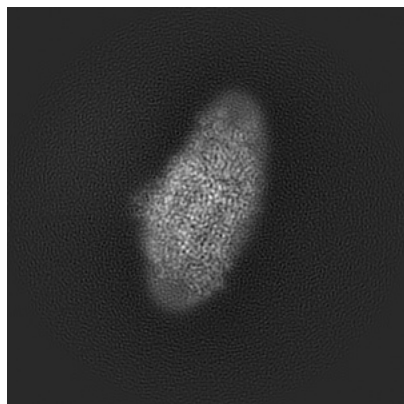
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-12228. These allow visual inspection of the internal detail of the map and identification of artifacts.

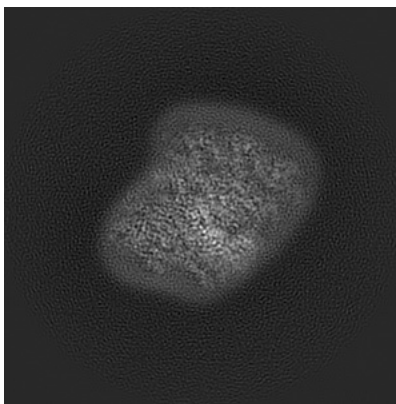
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

### 6.1 Orthogonal projections [i](#)

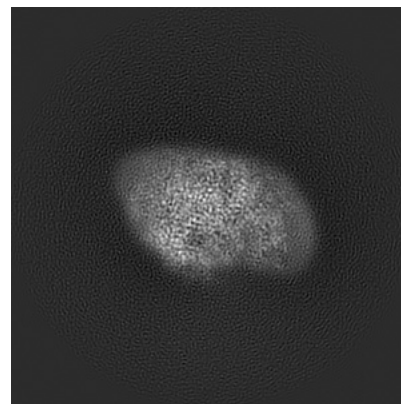
#### 6.1.1 Primary map



X

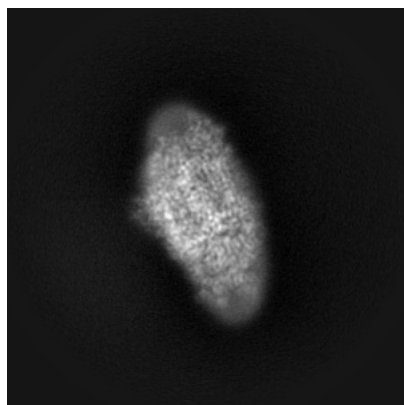


Y

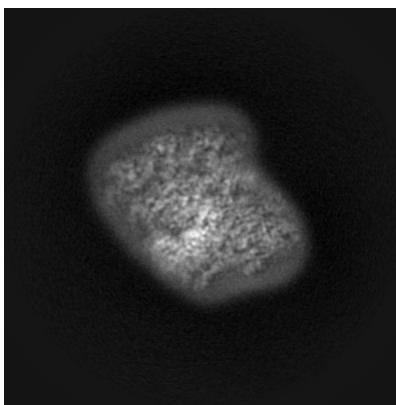


Z

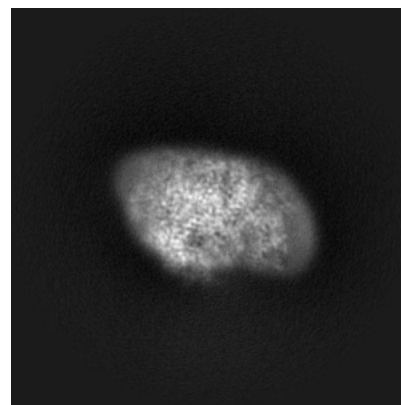
#### 6.1.2 Raw map



X



Y



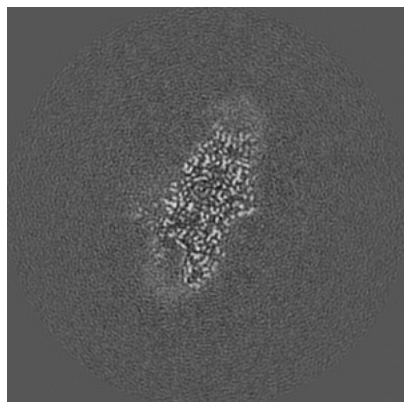
Z

The images above show the map projected in three orthogonal directions.

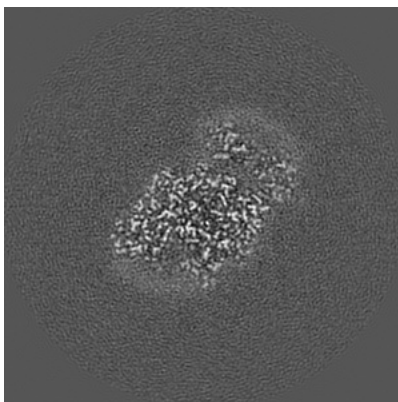


## 6.2 Central slices [i](#)

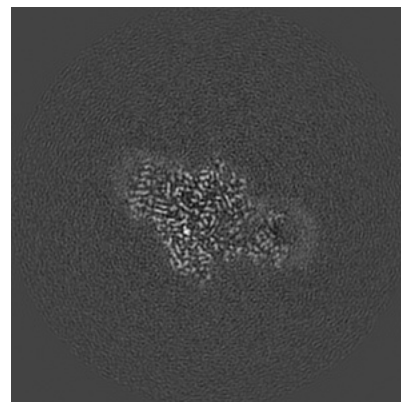
### 6.2.1 Primary map



X Index: 150

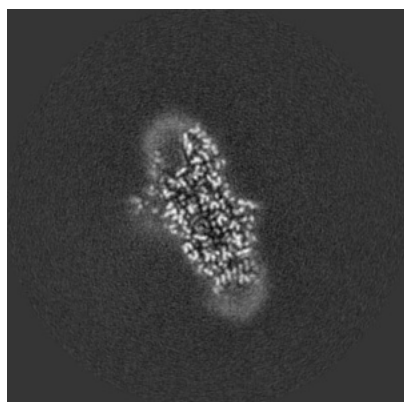


Y Index: 150

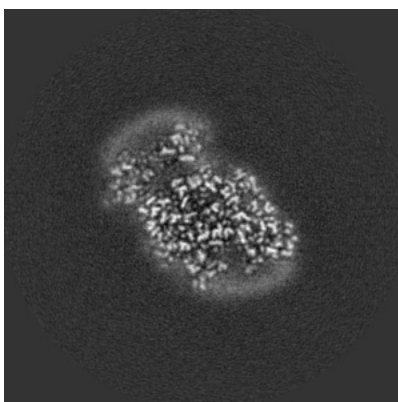


Z Index: 150

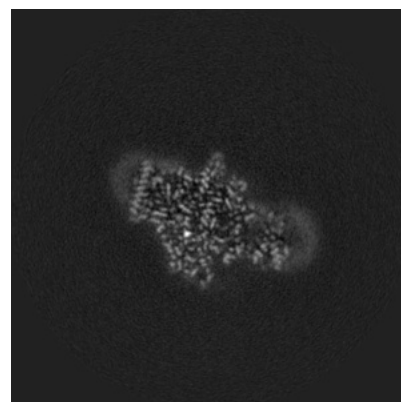
### 6.2.2 Raw map



X Index: 150



Y Index: 150

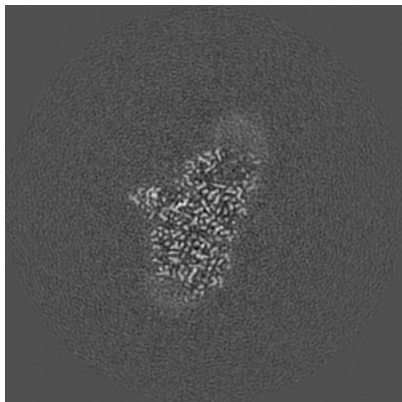


Z Index: 150

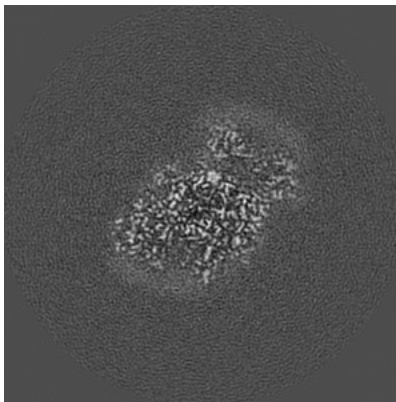
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

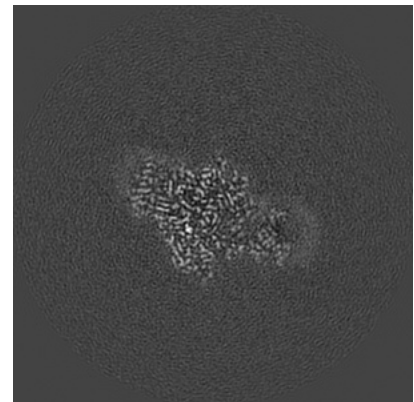
### 6.3.1 Primary map



X Index: 130

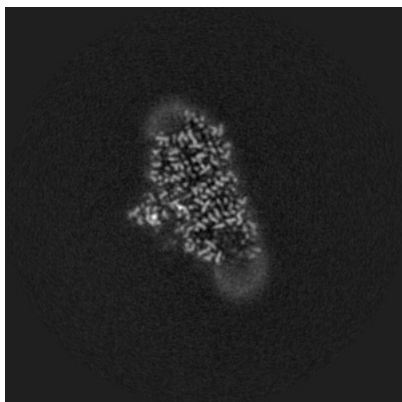


Y Index: 151

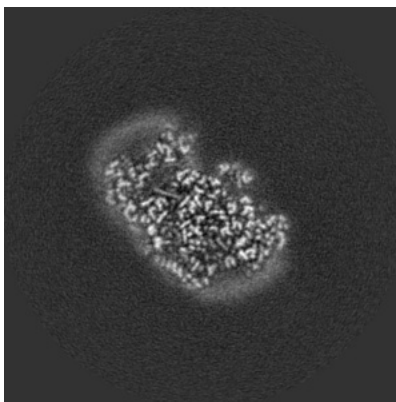


Z Index: 150

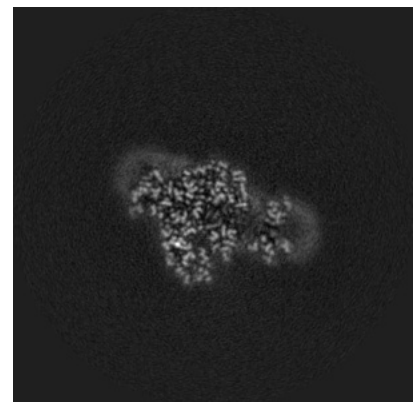
### 6.3.2 Raw map



X Index: 130



Y Index: 158

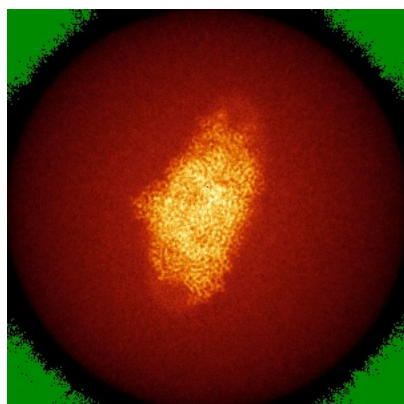


Z Index: 144

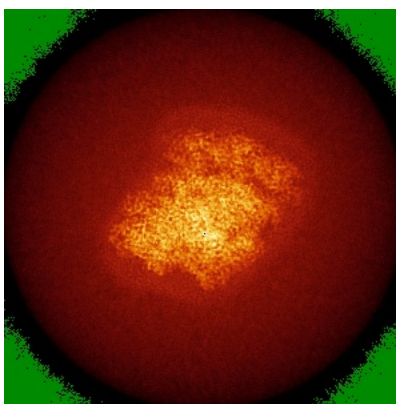
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal standard-deviation projections (False-color) [i](#)

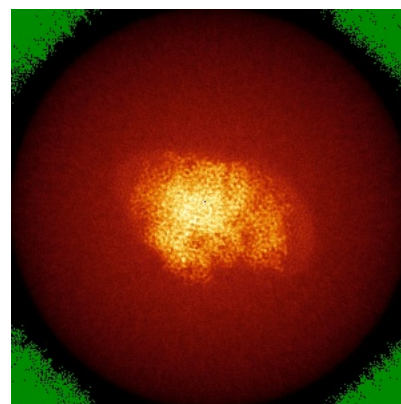
### 6.4.1 Primary map



X

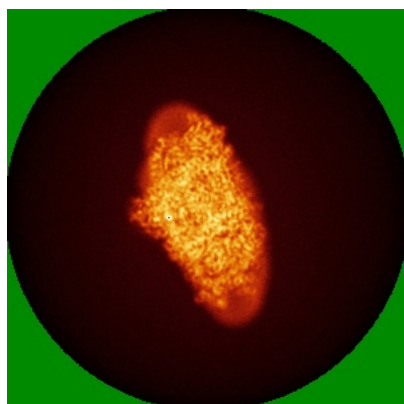


Y

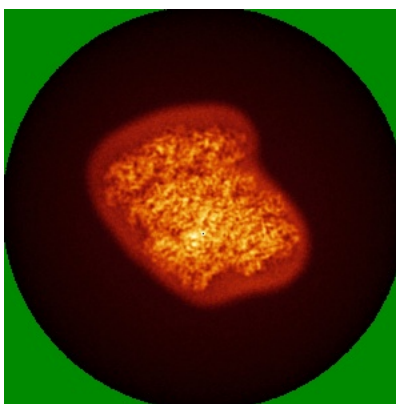


Z

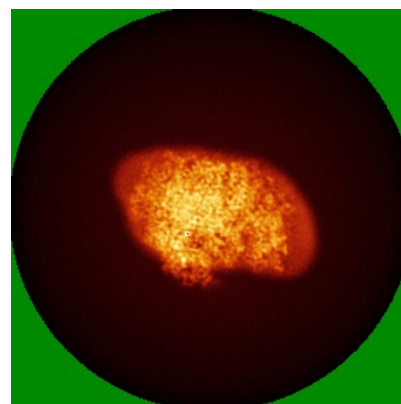
### 6.4.2 Raw map



X



Y

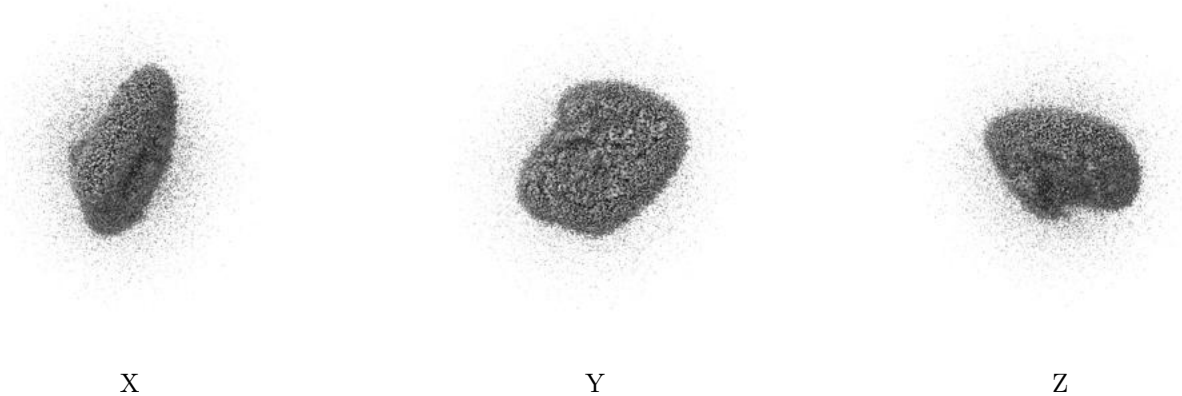


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

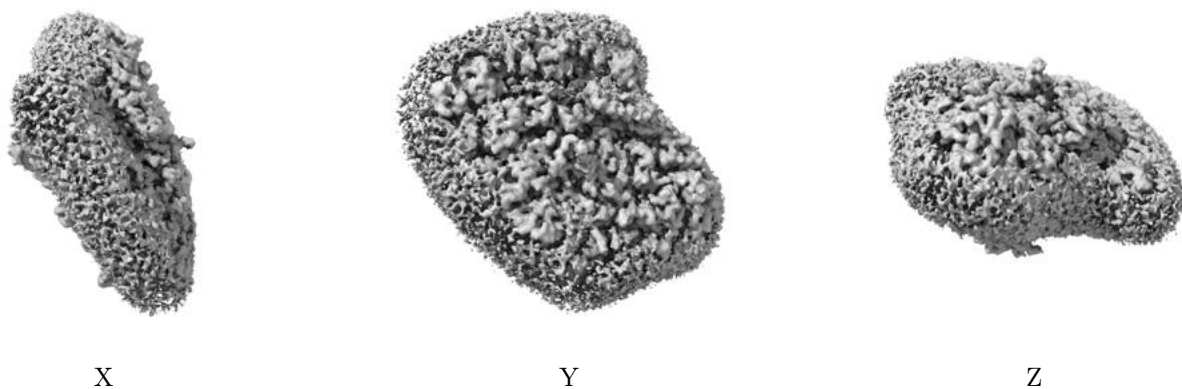
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0186. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

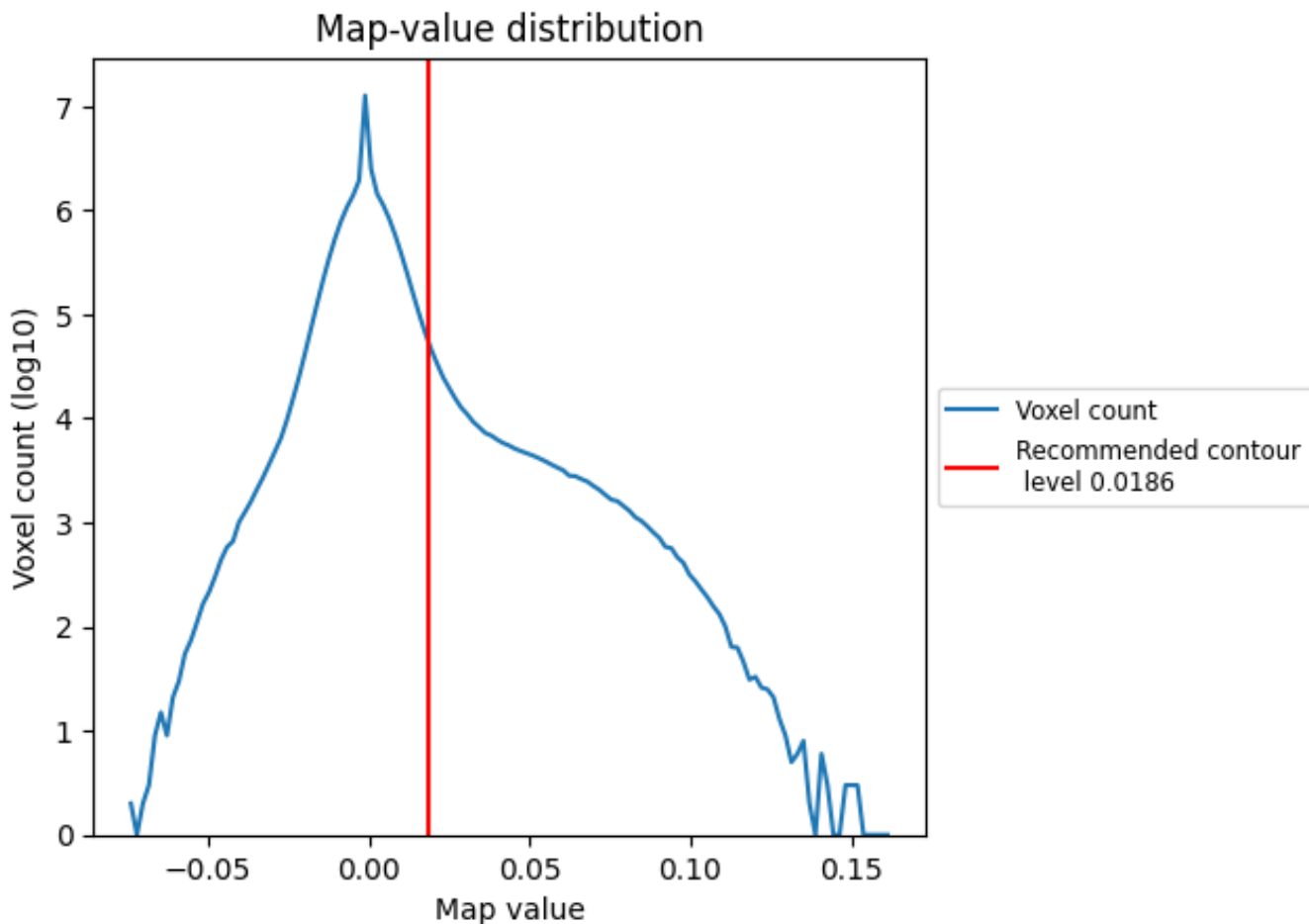
## 6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

## 7 Map analysis [i](#)

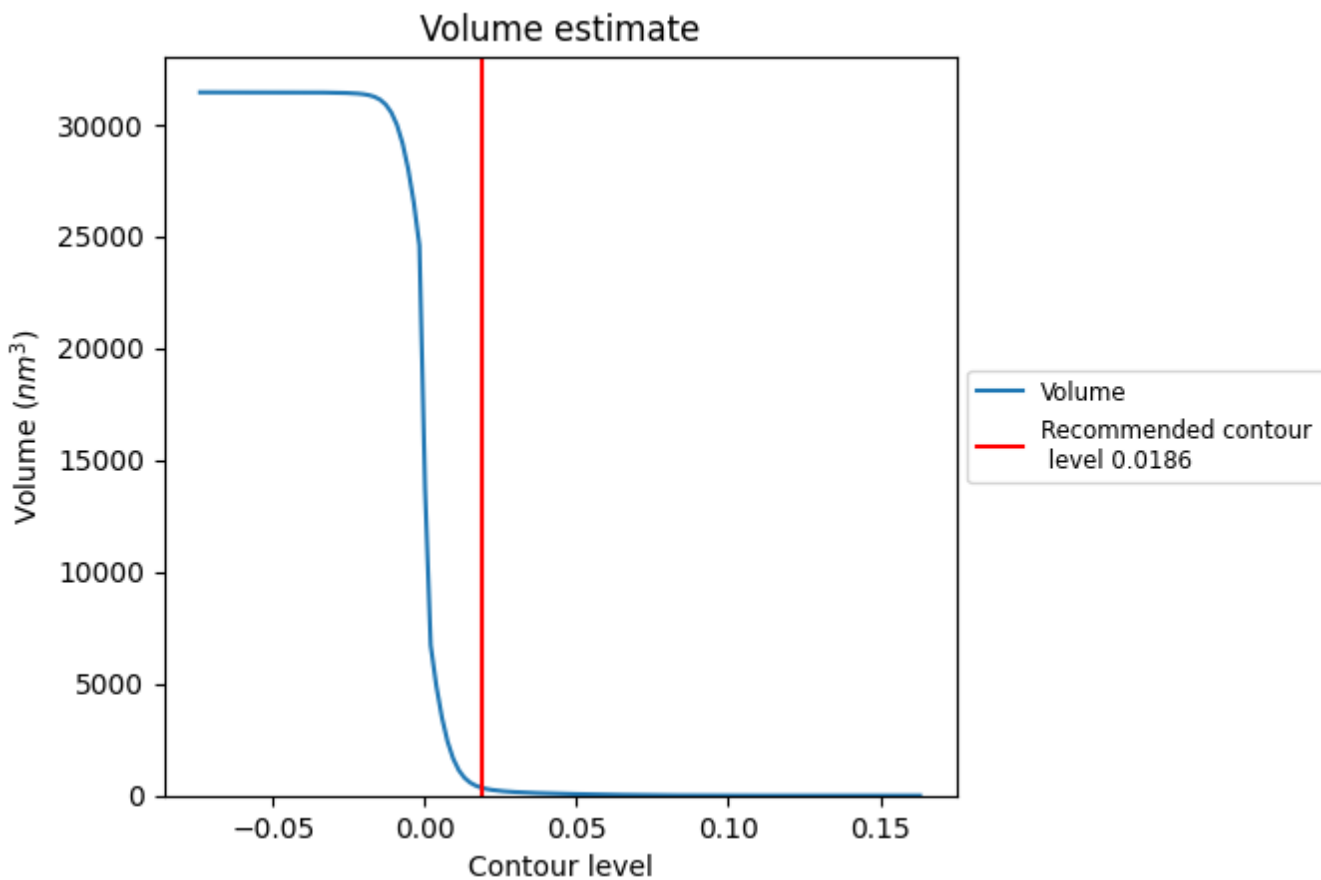
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

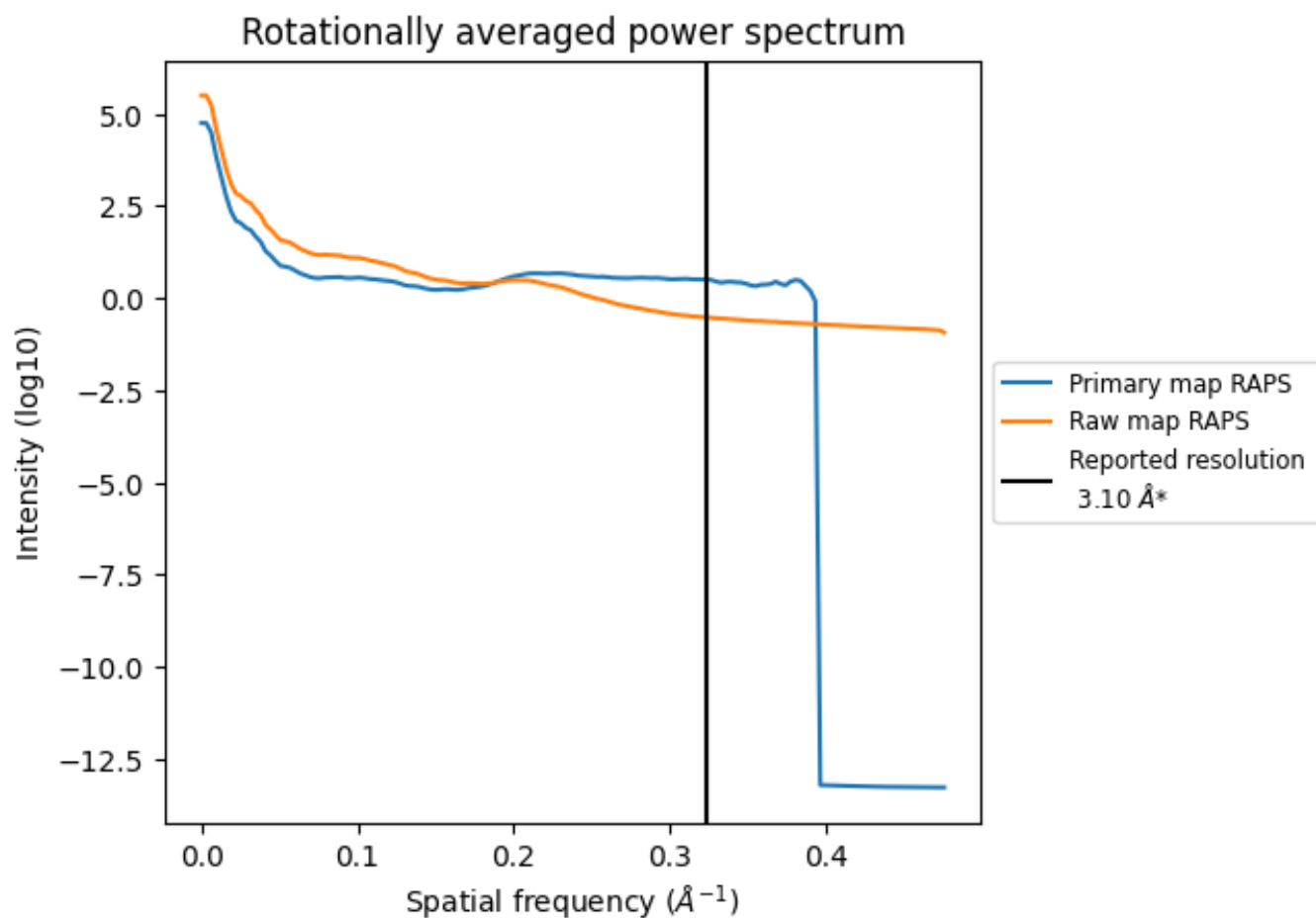
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 355  $\text{nm}^3$ ; this corresponds to an approximate mass of 321 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

### 7.3 Rotationally averaged power spectrum [i](#)

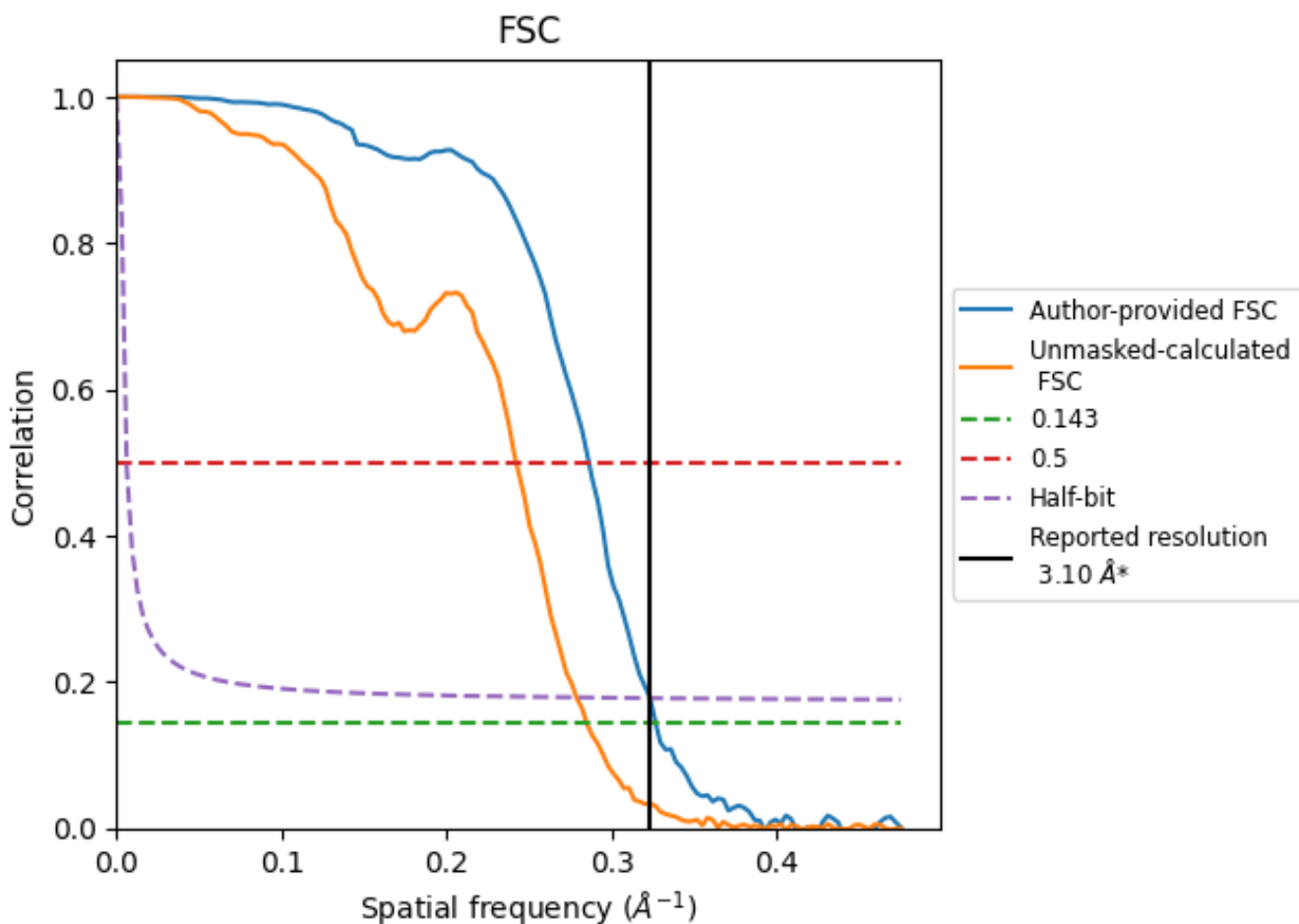


\*Reported resolution corresponds to spatial frequency of 0.323 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.323 Å<sup>-1</sup>



## 8.2 Resolution estimates [i](#)

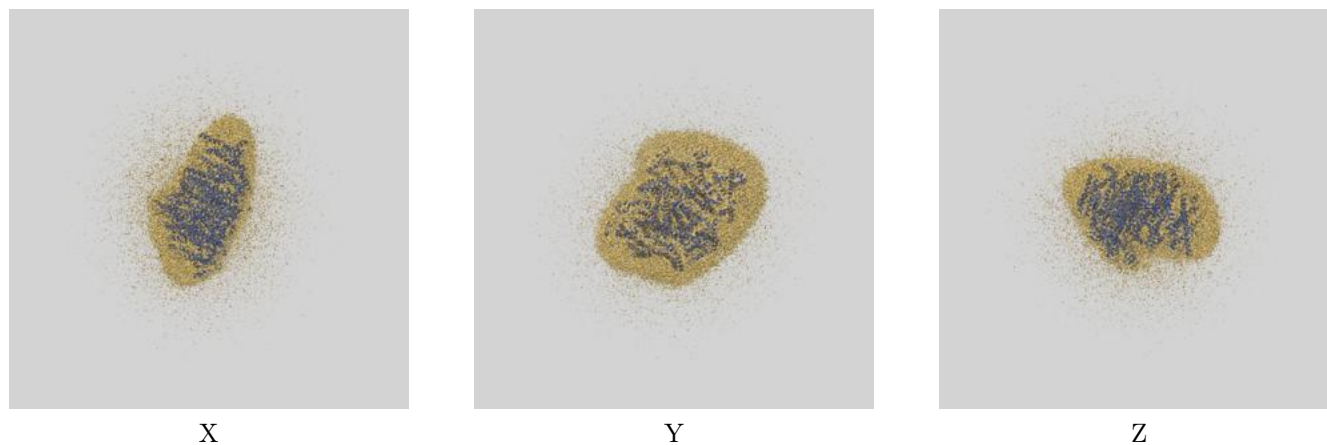
| Resolution estimate (Å)   | Estimation criterion (FSC cut-off) |      |          |
|---------------------------|------------------------------------|------|----------|
|                           | 0.143                              | 0.5  | Half-bit |
| Reported by author        | 3.10                               | -    | -        |
| Author-provided FSC curve | 3.06                               | 3.50 | 3.09     |
| Unmasked-calculated*      | 3.51                               | 4.13 | 3.59     |

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 3.51 differs from the reported value 3.1 by more than 10 %

## 9 Map-model fit [i](#)

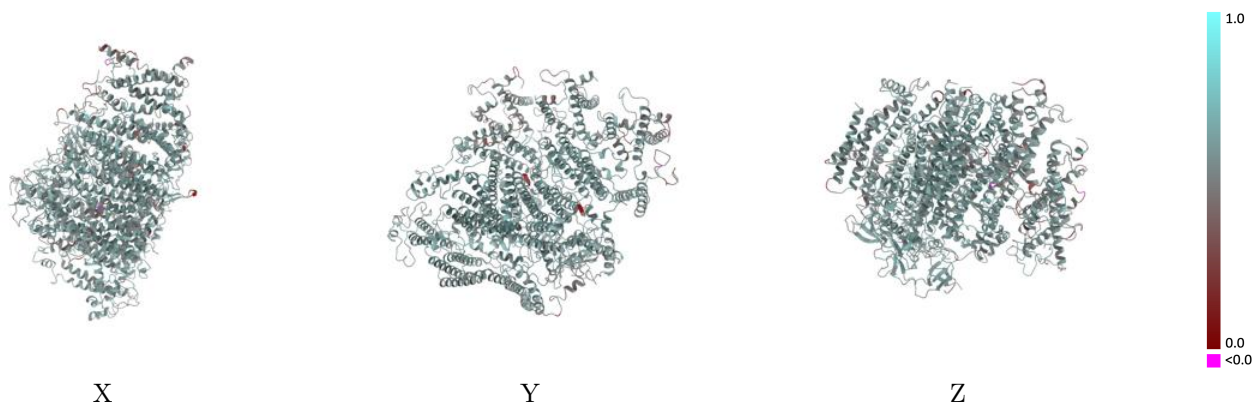
This section contains information regarding the fit between EMDB map EMD-12228 and PDB model 7BLZ. Per-residue inclusion information can be found in section 3 on page 29.

### 9.1 Map-model overlay [i](#)



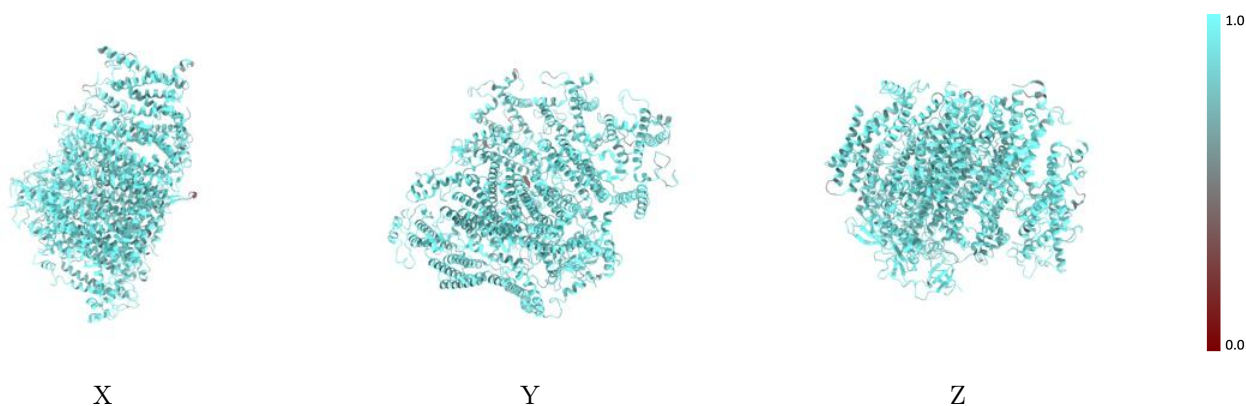
The images above show the 3D surface view of the map at the recommended contour level 0.0186 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



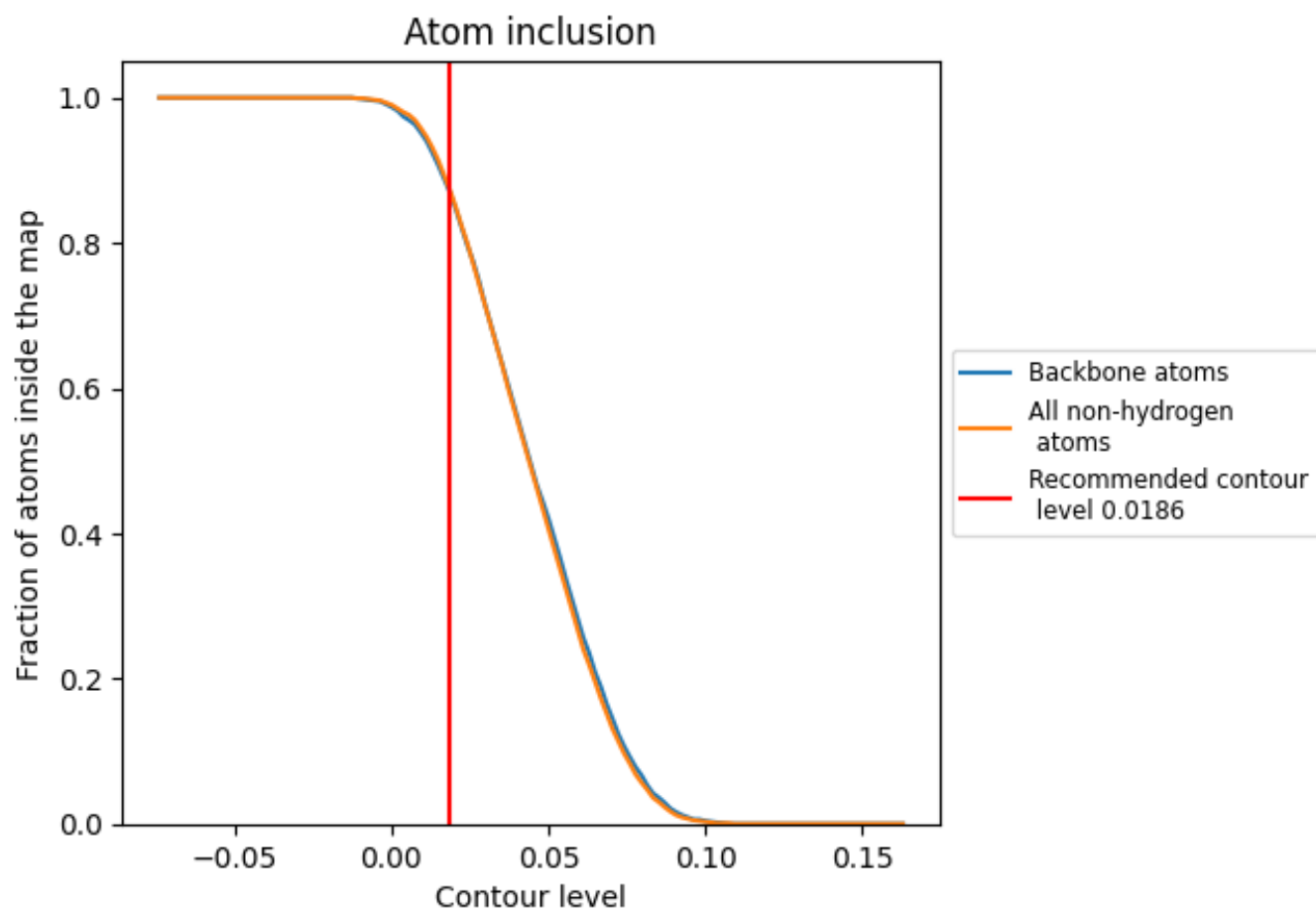
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

## 9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0186).

































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 87% of all backbone atoms, 87% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0186) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion   | Q-score  |
|-------|--|--|
| All   |  0.8740   |  0.5470   |
| 1     |  0.8140   |  0.4800   |
| 2     |  0.8130   |  0.4930   |
| 3     |  0.7950   |  0.4820   |
| A     |  0.9140   |  0.5800   |
| B     |  0.9070   |  0.5710   |
| C     |  0.9570   |  0.5860   |
| D     |  0.9220   |  0.5680   |
| E     |  0.9130   |  0.5640   |
| F     |  0.8730   |  0.5450   |
| I     |  0.8770   |  0.5500   |
| J     |  0.8240   |  0.5150   |
| K     |  0.8230   |  0.5260   |
| L     |  0.8480   |  0.5200   |
| M     |  0.8720  |  0.5430  |
| O     |  0.8450 |  0.5130 |

