



Full wwPDB EM Validation Report ⓘ

Dec 21, 2022 – 02:15 PM JST

PDB ID : 7VZR
EMDB ID : EMD-32229
Title : Structure of the Acidobacteria homodimeric reaction center bound with cytochrome c (the smaller form)
Authors : Huang, G.Q.; Dong, S.S.; Qin, X.C.; Sui, S.F.
Deposited on : 2021-11-16
Resolution : 2.22 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

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>.

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

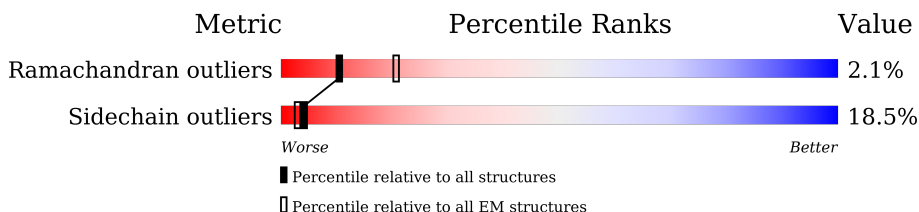
EMDB validation analysis : 0.0.1.dev43
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

1 Overall quality at a glance

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

The reported resolution of this entry is 2.22 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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 | A | 865 | 62% 31% 5% . |
| 1 | a | 865 | 66% 26% 7% . |
| 2 | C | 221 | 45% 34% 8% 13% |
| 3 | E | 35 | 66% 29% 6% |
| 3 | e | 35 | 71% 26% . |
| 4 | F | 35 | 6% 43% 57% |
| 4 | f | 35 | 6% 71% 23% 6% |
| 5 | G | 45 | 62% 13% 9% 16% |
| 5 | g | 45 | 62% 20% . 16% |

Continued on next page...

Continued from previous page...

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-----------------------|
| 6 | H | 19 | 11% 100% |
| 6 | h | 19 | 11% 100% |
| 7 | c | 145 | 55% 32% 12% |

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 |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 10 | CLA | A | 910 | X | - | - | - |
| 10 | CLA | A | 911 | X | - | - | - |
| 11 | LYC | c | 201 | - | X | - | - |

2 Entry composition [i](#)

There are 19 unique types of molecules in this entry. The entry contains 21354 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Photosynthetic reaction center subunit M.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|------|------|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 1 | A | 854 | Total | C | N | O | S | 0 | 0 |
| | | | 6960 | 4602 | 1155 | 1170 | 33 | | |
| 1 | a | 858 | Total | C | N | O | S | 0 | 0 |
| | | | 6984 | 4616 | 1160 | 1175 | 33 | | |

- Molecule 2 is a protein called Cytochrome c, mono-and diheme variants.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 2 | C | 193 | Total | C | N | O | S | 0 | 0 |
| | | | 1474 | 900 | 277 | 288 | 9 | | |

- Molecule 3 is a protein called PscE.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 3 | E | 35 | Total | C | N | O | S | 0 | 0 |
| | | | 258 | 174 | 40 | 42 | 2 | | |
| 3 | e | 35 | Total | C | N | O | S | 0 | 0 |
| | | | 258 | 174 | 40 | 42 | 2 | | |

- Molecule 4 is a protein called PscF.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 4 | F | 35 | Total | C | N | O | S | 0 | 0 |
| | | | 273 | 185 | 43 | 43 | 2 | | |
| 4 | f | 35 | Total | C | N | O | S | 0 | 0 |
| | | | 273 | 185 | 43 | 43 | 2 | | |

- Molecule 5 is a protein called PscG.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 5 | G | 38 | Total | C | N | O | S | 0 | 0 |
| | | | 302 | 210 | 45 | 44 | 3 | | |

Continued on next page...

Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 5 | g | 38 | Total | C | N | O | S | 0 | 0 |
| | | | 302 | 210 | 45 | 44 | 3 | | |

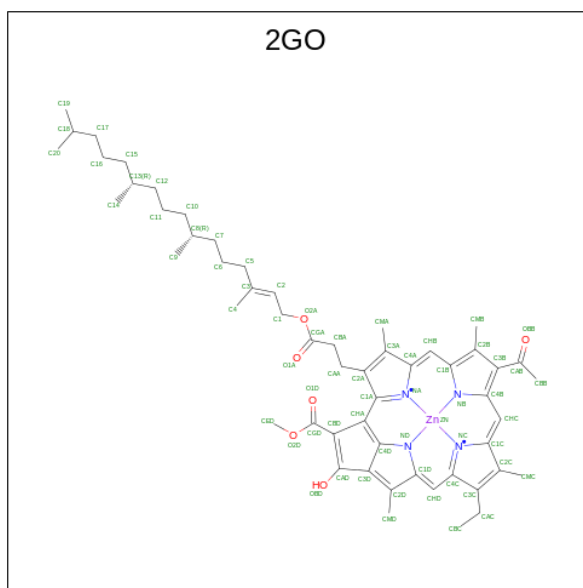
- Molecule 6 is a protein called undefined polypeptide.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|-------|----|----|----|---------|-------|
| 6 | H | 19 | Total | C | N | O | 0 | 0 |
| | | | 95 | 57 | 19 | 19 | | |
| 6 | h | 19 | Total | C | N | O | 0 | 0 |
| | | | 95 | 57 | 19 | 19 | | |

- Molecule 7 is a protein called Cytochrome c domain-containing protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 7 | c | 145 | Total | C | N | O | S | 0 | 0 |
| | | | 1096 | 679 | 200 | 210 | 7 | | |

- Molecule 8 is [methyl 9-acetyl-14-ethyl-20-hydroxy-4,8,13,18-tetramethyl-3-{3-oxo-3-[(3,7,11,15-tetramethylhexadec-2-en-1-yl)oxy]propyl}-3,4,20,21-tetradehydrophorbine-21-carboxylato(2-)-kappa 4 N 23 ,N 24 ,N 25 ,N 26]zinc (three-letter code: 2GO) (formula: C₅₅H₇₀N₄O₆Zn) (labeled as "Ligand of Interest" by depositor).



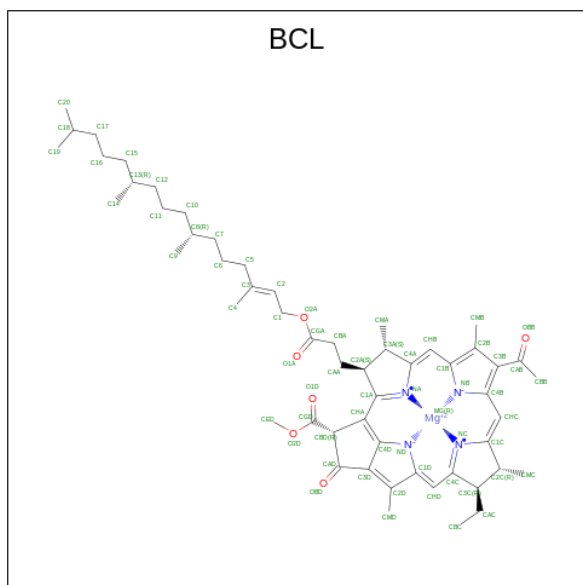
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|---|----|---------|
| 8 | A | 1 | Total | C | N | O | Zn | 0 |
| | | | 66 | 55 | 4 | 6 | 1 | |

Continued on next page...

Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|---|----|---------|
| | | | Total | C | N | O | Zn | |
| 8 | a | 1 | 66 | 55 | 4 | 6 | 1 | 0 |

- Molecule 9 is BACTERIOCHLOROPHYLL A (three-letter code: BCL) (formula: $C_{55}H_{74}MgN_4O_6$) (labeled as "Ligand of Interest" by depositor).



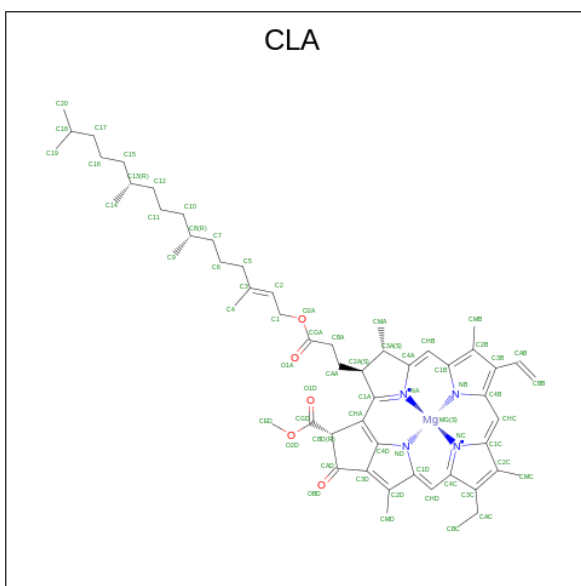
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|-----|----|----|----|---------|
| | | | Total | C | Mg | N | O | |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | A | 1 | 489 | 401 | 8 | 32 | 48 | 0 |
| 9 | a | 1 | 508 | 420 | 8 | 32 | 48 | 0 |
| 9 | a | 1 | 508 | 420 | 8 | 32 | 48 | 0 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|-----|----|----|----|---------|
| | | | Total | C | Mg | N | O | |
| 9 | a | 1 | Total | C | Mg | N | O | 0 |
| | | | 508 | 420 | 8 | 32 | 48 | |
| 9 | a | 1 | Total | C | Mg | N | O | 0 |
| | | | 508 | 420 | 8 | 32 | 48 | |
| 9 | a | 1 | Total | C | Mg | N | O | 0 |
| | | | 508 | 420 | 8 | 32 | 48 | |
| 9 | a | 1 | Total | C | Mg | N | O | 0 |
| | | | 508 | 420 | 8 | 32 | 48 | |
| 9 | a | 1 | Total | C | Mg | N | O | 0 |
| | | | 508 | 420 | 8 | 32 | 48 | |

- Molecule 10 is CHLOROPHYLL A (three-letter code: CLA) (formula: $C_{55}H_{72}MgN_4O_5$) (labeled as "Ligand of Interest" by depositor).



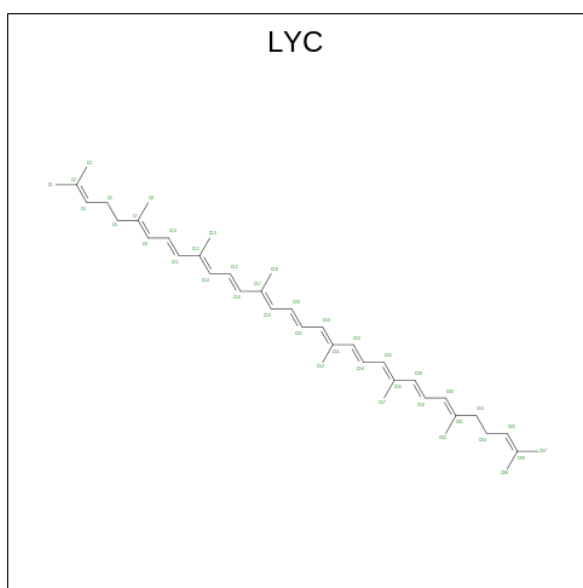
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|-----|----|----|----|---------|
| | | | Total | C | Mg | N | O | |
| 10 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 292 | 242 | 5 | 20 | 25 | |
| 10 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 292 | 242 | 5 | 20 | 25 | |
| 10 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 292 | 242 | 5 | 20 | 25 | |
| 10 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 292 | 242 | 5 | 20 | 25 | |
| 10 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 292 | 242 | 5 | 20 | 25 | |

Continued on next page...

Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|-----|----|----|----|---------|
| | | | Total | C | Mg | N | O | |
| 10 | a | 1 | 292 | 242 | 5 | 20 | 25 | 0 |
| 10 | a | 1 | 292 | 242 | 5 | 20 | 25 | 0 |
| 10 | a | 1 | 292 | 242 | 5 | 20 | 25 | 0 |
| 10 | a | 1 | 292 | 242 | 5 | 20 | 25 | 0 |
| 10 | a | 1 | 292 | 242 | 5 | 20 | 25 | 0 |

- Molecule 11 is LYCOPENE (three-letter code: LYC) (formula: C₄₀H₅₆).

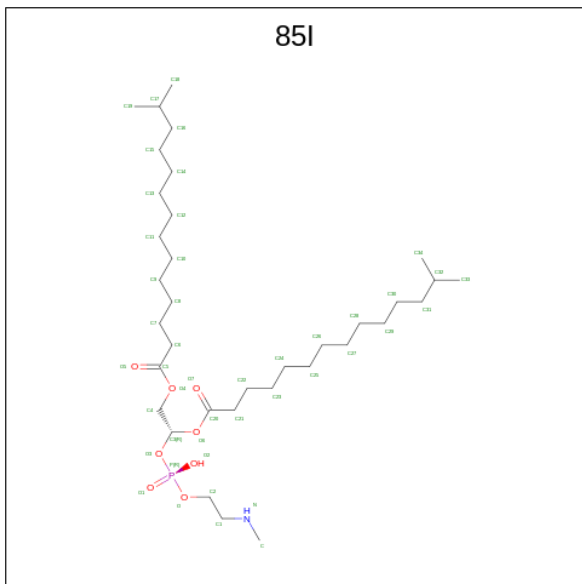


| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | C | |
| 11 | A | 1 | 40 | 40 | 0 |
| 11 | c | 1 | 40 | 40 | 0 |

- Molecule 12 is CALCIUM ION (three-letter code: CA) (formula: Ca).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Ca | |
| 12 | A | 1 | 1 | 1 | 0 |
| 12 | a | 1 | 1 | 1 | 0 |

- Molecule 13 is [(2 {R})-2-[2-(methylamino)ethoxy-oxidanyl-phosphoryl]oxy-2-(13-methyltetradecanoyloxy)ethyl] 13-methyltetradecanoate (three-letter code: 85I) (formula: $C_{35}H_{70}NO_8P$) (labeled as "Ligand of Interest" by depositor).



| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|-----|---|----|---|---------|
| | | | Total | C | N | O | P | |
| 13 | A | 1 | Total | C | N | O | P | 0 |
| | | | 135 | 105 | 3 | 24 | 3 | |
| 13 | A | 1 | Total | C | N | O | P | 0 |
| | | | 135 | 105 | 3 | 24 | 3 | |
| 13 | A | 1 | Total | C | N | O | P | 0 |
| | | | 135 | 105 | 3 | 24 | 3 | |
| 13 | a | 1 | Total | C | N | O | P | 0 |
| | | | 135 | 105 | 3 | 24 | 3 | |
| 13 | a | 1 | Total | C | N | O | P | 0 |
| | | | 135 | 105 | 3 | 24 | 3 | |
| 13 | a | 1 | Total | C | N | O | P | 0 |
| | | | 135 | 105 | 3 | 24 | 3 | |

- Molecule 14 is UNKNOWN LIGAND (three-letter code: UNL) (formula:) (labeled as "Ligand of Interest" by depositor).

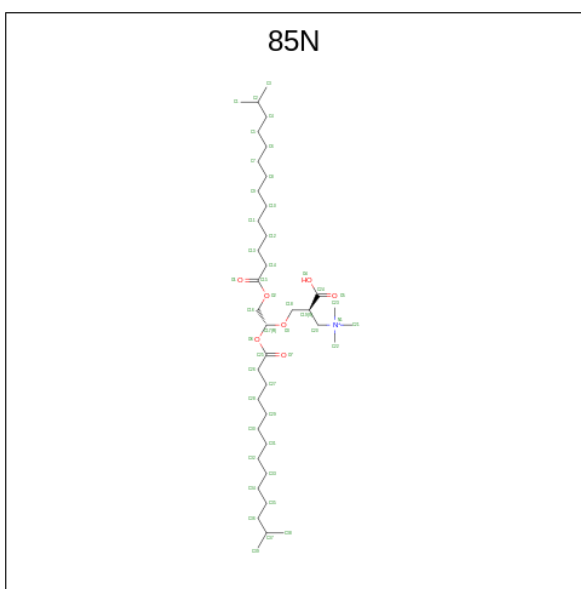
| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|-----|---------|
| 14 | A | 13 | Total | C | 0 |
| | | | 240 | 240 | |
| 14 | C | 1 | Total | C | 0 |
| | | | 18 | 18 | |
| 14 | E | 2 | Total | C | 0 |
| | | | 26 | 26 | |

Continued on next page...

Continued from previous page...

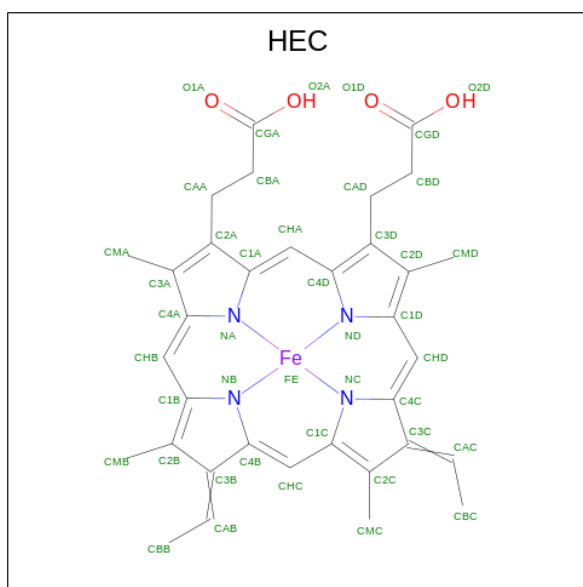
| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|--------------------|---------|
| 14 | a | 13 | Total C 243 243 | 0 |
| 14 | c | 1 | Total C 8 8 | 0 |
| 14 | e | 2 | Total C 26 26 | 0 |

- Molecule 15 is [(2 {S})-2-[[[(1 {R})-1,2-bis(13-methyltetradecanoyloxy)ethoxy]methyl]-3-oxidanyl-3-oxidanylidene-propyl]-trimethyl-azanium (three-letter code: 85N) (formula: C₃₉H₇₆NO₇) (labeled as "Ligand of Interest" by depositor).



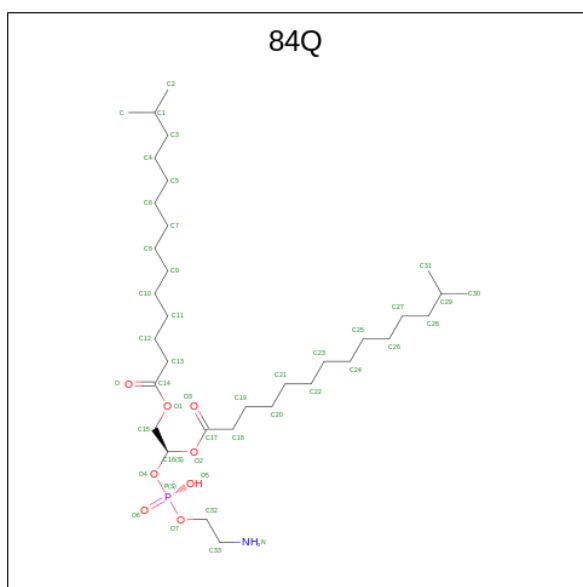
| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|--------------------------|---------|
| 15 | A | 1 | Total C N O 47 39 1 7 | 0 |
| 15 | G | 1 | Total C N O 38 30 1 7 | 0 |
| 15 | a | 1 | Total C N O 47 39 1 7 | 0 |
| 15 | g | 1 | Total C N O 38 30 1 7 | 0 |

- Molecule 16 is HEME C (three-letter code: HEC) (formula: C₃₄H₃₄FeN₄O₄) (labeled as "Ligand of Interest" by depositor).



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

- Molecule 17 is [(2S)-2-[2-azanylethoxy(oxidanyl)phosphoryl]oxy-2-(13-methyltetradecanoyloxy)ethyl] 13-methyltetradecanoate (three-letter code: 84Q) (formula: C₃₄H₆₈NO₈P) (labeled as "Ligand of Interest" by depositor).



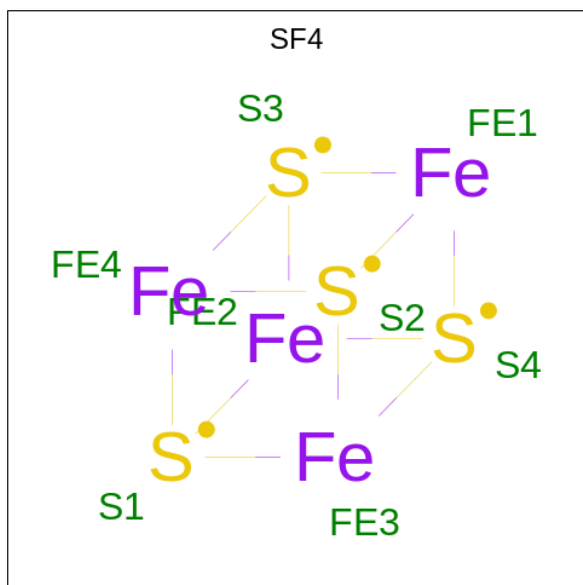
| Mol | Chain | Residues | Atoms | | | | AltConf | |
|-----|-------|----------|-------|----|---|---|---------|---|
| | | | Total | C | N | O | | P |
| 17 | E | 1 | 44 | 34 | 1 | 8 | 1 | 0 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---|---------|
| | | | Total | C | N | O | P | |
| 17 | a | 1 | 44 | 34 | 1 | 8 | 1 | 0 |

- Molecule 18 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe_4S_4) (labeled as "Ligand of Interest" by depositor).



| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| | | | Total | Fe | S | |
| 18 | a | 1 | 8 | 4 | 4 | 0 |

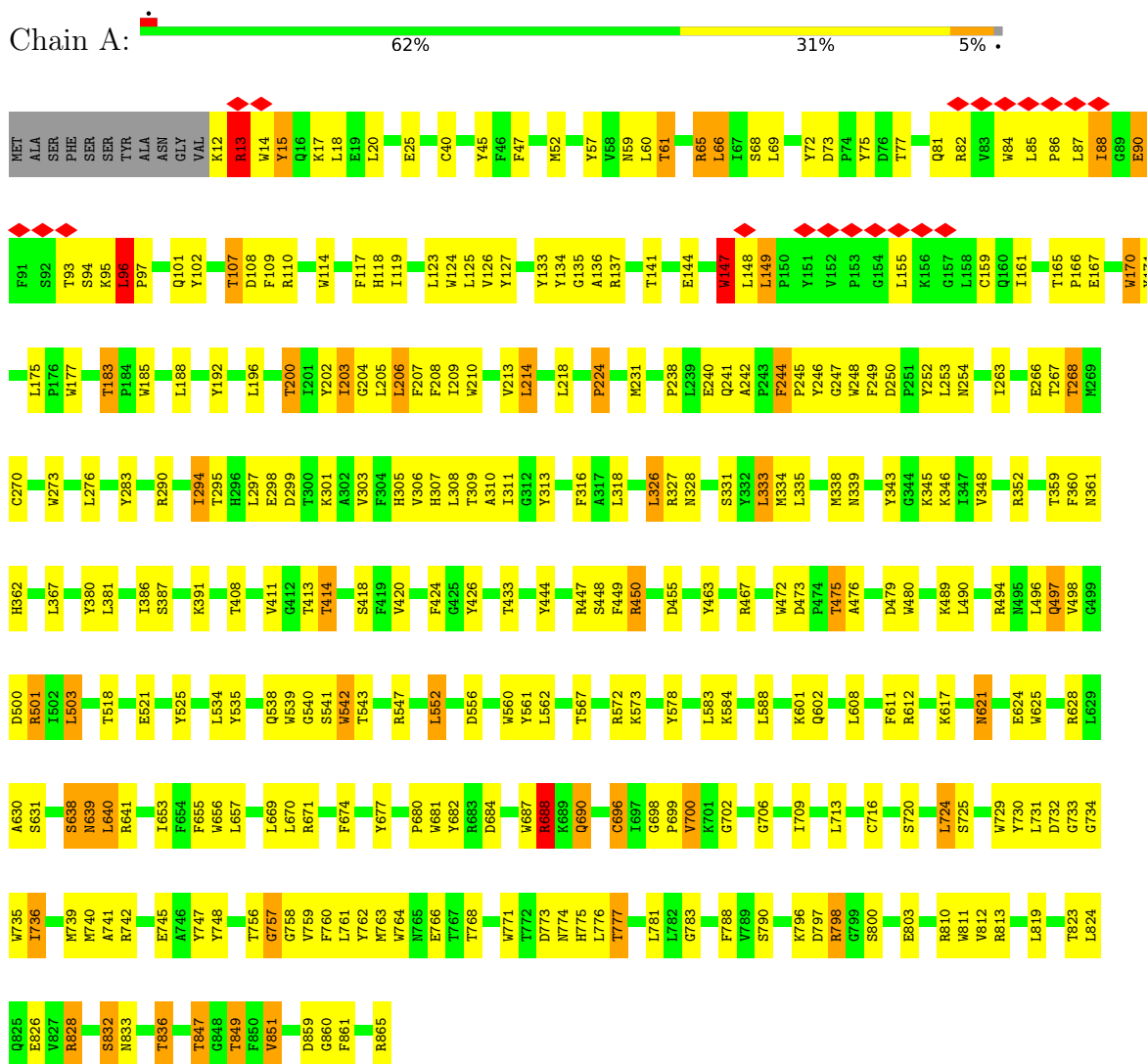
- Molecule 19 is water.

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|---|---------|
| | | | Total | O | |
| 19 | A | 3 | 3 | 3 | 0 |
| 19 | a | 3 | 3 | 3 | 0 |

3 Residue-property plots

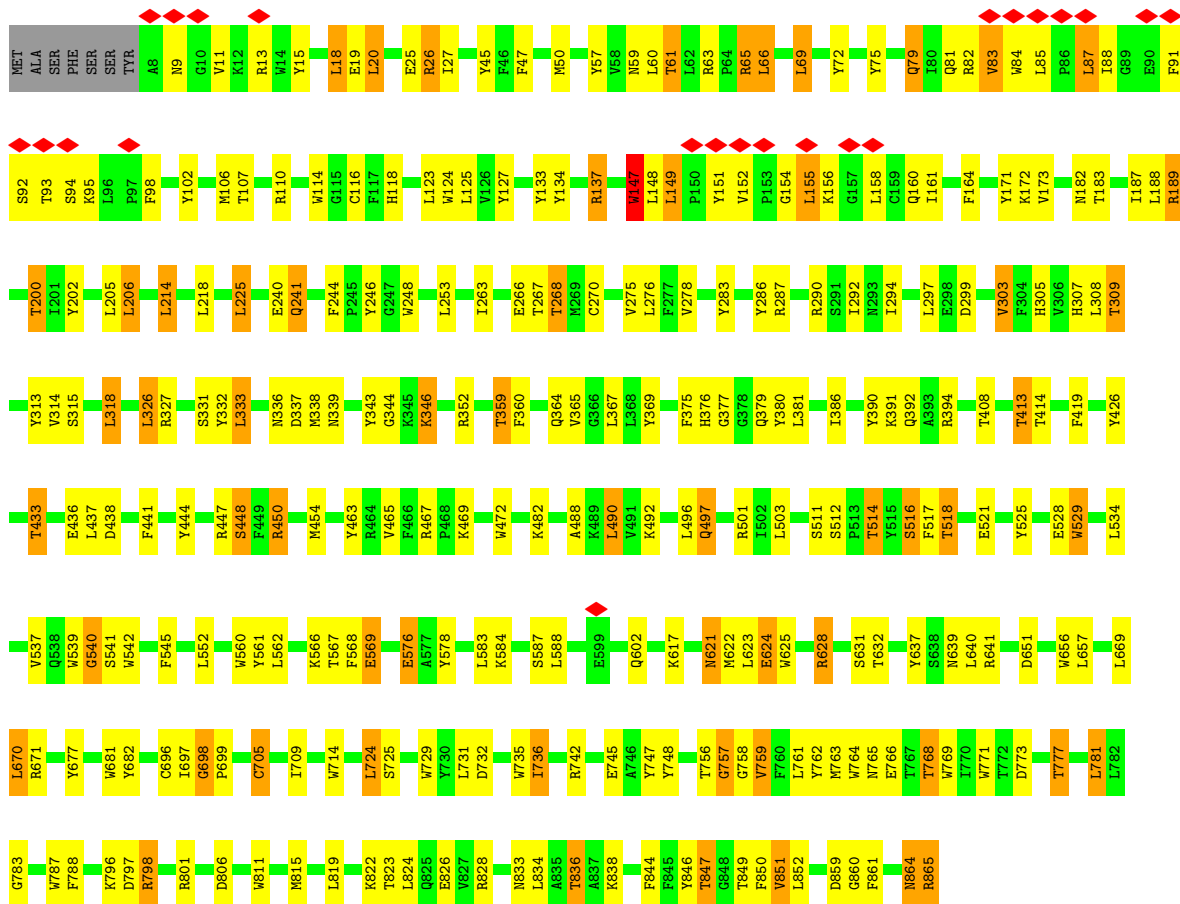
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Photosynthetic reaction center subunit M

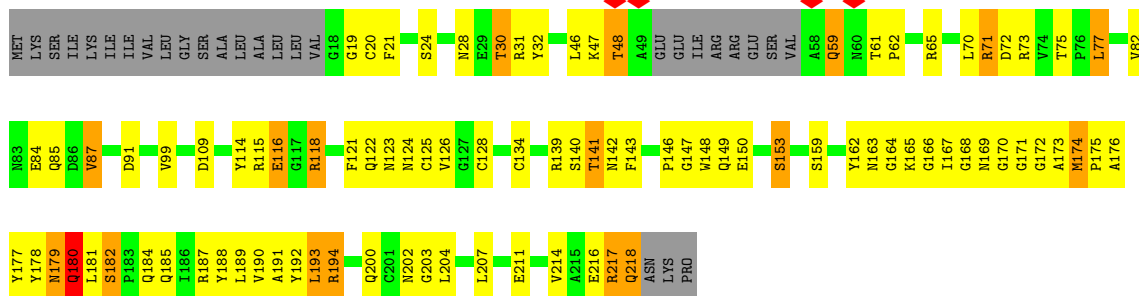


- Molecule 1: Photosynthetic reaction center subunit M





• Molecule 2: Cytochrome c, mono- and diheme variants

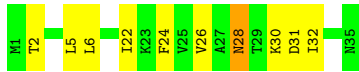


• Molecule 3: PscE

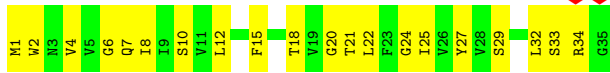


• Molecule 3: PscE





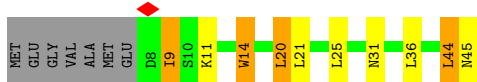
• Molecule 4: PscF



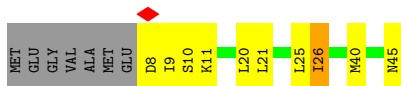
• Molecule 4: PscF



• Molecule 5: PscG



• Molecule 5: PscG



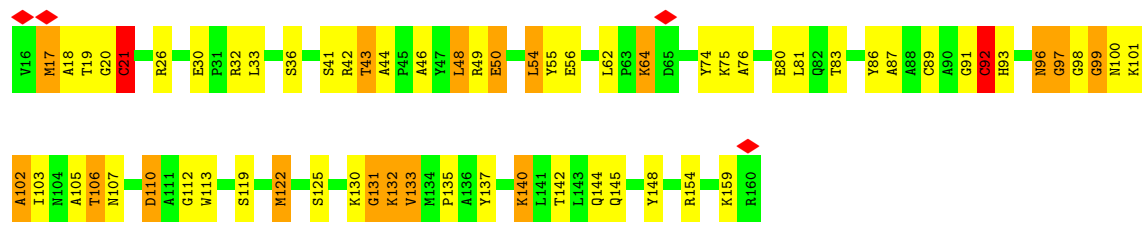
• Molecule 6: undefined polypeptide



• Molecule 6: undefined polypeptide



• Molecule 7: Cytochrome c domain-containing protein



4 Experimental information

| Property | Value | Source |
|--------------------------------------|------------------------|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 490075 | 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 ($e^-/\text{\AA}^2$) | 50 | Depositor |
| Minimum defocus (nm) | 500 | Depositor |
| Maximum defocus (nm) | 2000 | Depositor |
| Magnification | Not provided | |
| Image detector | GATAN K3 (6k x 4k) | Depositor |
| Maximum map value | 5.661 | Depositor |
| Minimum map value | -2.809 | Depositor |
| Average map value | 0.009 | Depositor |
| Map value standard deviation | 0.164 | Depositor |
| Recommended contour level | 0.48 | Depositor |
| Map size (\AA) | 238.15, 238.15, 238.15 | wwPDB |
| Map dimensions | 220, 220, 220 | wwPDB |
| Map angles ($^\circ$) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (\AA) | 1.0825, 1.0825, 1.0825 | 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: CLA, 85N, 85I, BCL, LYC, SF4, UNL, 84Q, HEC, 2GO, 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 | A | 1.97 | 233/7209 (3.2%) | 1.33 | 86/9827 (0.9%) |
| 1 | a | 1.85 | 196/7233 (2.7%) | 1.28 | 91/9860 (0.9%) |
| 2 | C | 2.35 | 98/1503 (6.5%) | 1.67 | 35/2037 (1.7%) |
| 3 | E | 2.16 | 9/262 (3.4%) | 1.43 | 4/356 (1.1%) |
| 3 | e | 1.50 | 2/262 (0.8%) | 1.14 | 1/356 (0.3%) |
| 4 | F | 2.28 | 15/279 (5.4%) | 1.21 | 0/379 |
| 4 | f | 1.98 | 6/279 (2.2%) | 1.28 | 1/379 (0.3%) |
| 5 | G | 1.49 | 4/311 (1.3%) | 1.60 | 6/421 (1.4%) |
| 5 | g | 1.25 | 0/311 | 1.16 | 2/421 (0.5%) |
| 7 | c | 2.54 | 75/1115 (6.7%) | 1.79 | 36/1506 (2.4%) |
| All | All | 1.98 | 638/18764 (3.4%) | 1.37 | 262/25542 (1.0%) |

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

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1 | A | 0 | 1 |
| 1 | a | 0 | 4 |
| 2 | C | 0 | 2 |
| 7 | c | 0 | 1 |
| All | All | 0 | 8 |

All (638) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | a | 539 | TRP | C-O | -15.07 | 0.94 | 1.23 |
| 7 | c | 55 | TYR | CD1-CE1 | -13.98 | 1.18 | 1.39 |
| 7 | c | 55 | TYR | CD2-CE2 | -13.28 | 1.19 | 1.39 |
| 1 | A | 309 | THR | CB-CG2 | -13.10 | 1.09 | 1.52 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 1 | A | 758 | GLY | C-O | -12.33 | 1.03 | 1.23 |
| 1 | a | 266 | GLU | CD-OE2 | -12.24 | 1.12 | 1.25 |
| 7 | c | 106 | THR | CB-CG2 | -12.04 | 1.12 | 1.52 |
| 1 | A | 745 | GLU | CB-CG | -11.46 | 1.30 | 1.52 |
| 2 | C | 141 | THR | C-O | -11.41 | 1.01 | 1.23 |
| 3 | E | 13 | GLY | C-O | -11.34 | 1.05 | 1.23 |
| 1 | a | 529 | TRP | CB-CG | -11.05 | 1.30 | 1.50 |
| 1 | a | 705 | CYS | CB-SG | 10.68 | 2.00 | 1.82 |
| 1 | a | 783 | GLY | C-O | -10.64 | 1.06 | 1.23 |
| 1 | A | 541 | SER | CB-OG | -10.54 | 1.28 | 1.42 |
| 1 | a | 860 | GLY | C-O | -10.53 | 1.06 | 1.23 |
| 1 | A | 266 | GLU | CD-OE2 | -10.47 | 1.14 | 1.25 |
| 1 | a | 758 | GLY | C-O | -10.37 | 1.07 | 1.23 |
| 2 | C | 179 | ASN | C-O | -10.18 | 1.04 | 1.23 |
| 7 | c | 20 | GLY | C-O | -10.17 | 1.07 | 1.23 |
| 1 | A | 766 | GLU | CD-OE2 | -10.04 | 1.14 | 1.25 |
| 1 | a | 852 | LEU | C-O | -9.97 | 1.04 | 1.23 |
| 2 | C | 140 | SER | C-O | -9.89 | 1.04 | 1.23 |
| 1 | a | 757 | GLY | C-O | -9.89 | 1.07 | 1.23 |
| 1 | a | 376 | HIS | C-O | -9.83 | 1.04 | 1.23 |
| 7 | c | 106 | THR | C-O | -9.62 | 1.05 | 1.23 |
| 1 | a | 305 | HIS | C-O | -9.55 | 1.05 | 1.23 |
| 7 | c | 43 | THR | CB-CG2 | -9.52 | 1.21 | 1.52 |
| 1 | A | 638 | SER | CB-OG | -9.46 | 1.29 | 1.42 |
| 7 | c | 112 | GLY | C-O | -9.44 | 1.08 | 1.23 |
| 1 | A | 638 | SER | C-O | -9.30 | 1.05 | 1.23 |
| 2 | C | 147 | GLY | C-O | -9.29 | 1.08 | 1.23 |
| 1 | a | 541 | SER | CB-OG | -9.27 | 1.30 | 1.42 |
| 1 | a | 732 | ASP | CB-CG | -9.24 | 1.32 | 1.51 |
| 7 | c | 98 | GLY | CA-C | -9.22 | 1.37 | 1.51 |
| 2 | C | 176 | ALA | C-O | -9.11 | 1.06 | 1.23 |
| 1 | a | 759 | VAL | C-O | -9.11 | 1.06 | 1.23 |
| 4 | f | 10 | SER | CB-OG | -9.09 | 1.30 | 1.42 |
| 2 | C | 178 | TYR | C-O | -9.05 | 1.06 | 1.23 |
| 1 | a | 748 | TYR | CD2-CE2 | -9.05 | 1.25 | 1.39 |
| 1 | A | 306 | VAL | C-O | -9.03 | 1.06 | 1.23 |
| 1 | A | 313 | TYR | CD1-CE1 | -9.01 | 1.25 | 1.39 |
| 1 | a | 346 | LYS | C-O | -9.01 | 1.06 | 1.23 |
| 1 | A | 731 | LEU | C-O | -9.00 | 1.06 | 1.23 |
| 1 | a | 270 | CYS | CB-SG | -8.98 | 1.67 | 1.82 |
| 2 | C | 182 | SER | CB-OG | -8.98 | 1.30 | 1.42 |
| 2 | C | 19 | GLY | C-O | -8.93 | 1.09 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 25 | GLU | CD-OE1 | -8.89 | 1.15 | 1.25 |
| 7 | c | 26 | ARG | CZ-NH1 | -8.86 | 1.21 | 1.33 |
| 4 | F | 4 | VAL | C-O | -8.78 | 1.06 | 1.23 |
| 1 | a | 380 | TYR | CD1-CE1 | -8.78 | 1.26 | 1.39 |
| 1 | A | 125 | LEU | C-O | -8.77 | 1.06 | 1.23 |
| 7 | c | 96 | ASN | C-O | -8.74 | 1.06 | 1.23 |
| 1 | a | 369 | TYR | CD1-CE1 | -8.74 | 1.26 | 1.39 |
| 7 | c | 91 | GLY | C-O | -8.72 | 1.09 | 1.23 |
| 1 | a | 796 | LYS | C-O | -8.68 | 1.06 | 1.23 |
| 1 | A | 709 | ILE | C-O | -8.66 | 1.06 | 1.23 |
| 1 | a | 561 | TYR | CD2-CE2 | -8.64 | 1.26 | 1.39 |
| 2 | C | 179 | ASN | CG-OD1 | -8.59 | 1.05 | 1.24 |
| 1 | A | 733 | GLY | C-O | -8.57 | 1.09 | 1.23 |
| 1 | A | 61 | THR | CB-CG2 | -8.54 | 1.24 | 1.52 |
| 1 | a | 777 | THR | CB-CG2 | -8.48 | 1.24 | 1.52 |
| 7 | c | 56 | GLU | CD-OE1 | -8.38 | 1.16 | 1.25 |
| 1 | A | 266 | GLU | CD-OE1 | -8.35 | 1.16 | 1.25 |
| 2 | C | 30 | THR | C-O | -8.33 | 1.07 | 1.23 |
| 1 | A | 541 | SER | C-O | -8.27 | 1.07 | 1.23 |
| 1 | A | 538 | GLN | CD-NE2 | -8.24 | 1.12 | 1.32 |
| 1 | A | 542 | TRP | C-O | -8.22 | 1.07 | 1.23 |
| 1 | A | 313 | TYR | CD2-CE2 | -8.22 | 1.27 | 1.39 |
| 2 | C | 142 | ASN | CG-ND2 | -8.21 | 1.12 | 1.32 |
| 1 | a | 426 | TYR | CD2-CE2 | -8.20 | 1.27 | 1.39 |
| 1 | A | 860 | GLY | C-O | -8.18 | 1.10 | 1.23 |
| 4 | F | 10 | SER | CB-OG | -8.16 | 1.31 | 1.42 |
| 1 | a | 61 | THR | CB-CG2 | -8.15 | 1.25 | 1.52 |
| 1 | A | 631 | SER | CB-OG | -8.13 | 1.31 | 1.42 |
| 2 | C | 126 | VAL | C-O | -8.06 | 1.08 | 1.23 |
| 1 | A | 811 | TRP | CE3-CZ3 | -8.05 | 1.24 | 1.38 |
| 1 | a | 133 | TYR | CD1-CE1 | -8.02 | 1.27 | 1.39 |
| 1 | A | 748 | TYR | CD1-CE1 | -7.98 | 1.27 | 1.39 |
| 1 | a | 332 | TYR | CD2-CE2 | -7.97 | 1.27 | 1.39 |
| 2 | C | 162 | TYR | CZ-OH | -7.97 | 1.24 | 1.37 |
| 1 | a | 315 | SER | CB-OG | -7.95 | 1.31 | 1.42 |
| 2 | C | 148 | TRP | CG-CD1 | -7.94 | 1.25 | 1.36 |
| 1 | a | 26 | ARG | C-O | -7.93 | 1.08 | 1.23 |
| 1 | A | 57 | TYR | CD1-CE1 | -7.92 | 1.27 | 1.39 |
| 1 | A | 849 | THR | CB-CG2 | -7.90 | 1.26 | 1.52 |
| 1 | A | 448 | SER | CB-OG | -7.88 | 1.32 | 1.42 |
| 7 | c | 86 | TYR | CE2-CZ | -7.88 | 1.28 | 1.38 |
| 1 | A | 297 | LEU | C-O | -7.87 | 1.08 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | a | 561 | TYR | CD1-CE1 | -7.86 | 1.27 | 1.39 |
| 1 | A | 543 | THR | C-O | -7.86 | 1.08 | 1.23 |
| 1 | A | 640 | LEU | C-O | -7.86 | 1.08 | 1.23 |
| 7 | c | 41 | SER | CB-OG | -7.84 | 1.32 | 1.42 |
| 2 | C | 143 | PHE | C-O | -7.83 | 1.08 | 1.23 |
| 1 | A | 270 | CYS | CB-SG | -7.83 | 1.69 | 1.82 |
| 2 | C | 123 | ASN | C-O | -7.81 | 1.08 | 1.23 |
| 2 | C | 153 | SER | CB-OG | -7.80 | 1.32 | 1.42 |
| 1 | A | 734 | GLY | C-O | -7.80 | 1.11 | 1.23 |
| 1 | a | 283 | TYR | CD2-CE2 | -7.79 | 1.27 | 1.39 |
| 1 | A | 682 | TYR | CE1-CZ | -7.78 | 1.28 | 1.38 |
| 4 | F | 6 | GLY | C-O | -7.77 | 1.11 | 1.23 |
| 1 | a | 811 | TRP | C-O | -7.76 | 1.08 | 1.23 |
| 7 | c | 56 | GLU | C-O | -7.74 | 1.08 | 1.23 |
| 2 | C | 116 | GLU | CD-OE2 | -7.74 | 1.17 | 1.25 |
| 2 | C | 185 | GLN | CD-NE2 | -7.73 | 1.13 | 1.32 |
| 7 | c | 130 | LYS | C-O | -7.71 | 1.08 | 1.23 |
| 1 | a | 364 | GLN | CD-NE2 | -7.70 | 1.13 | 1.32 |
| 1 | A | 742 | ARG | CZ-NH1 | -7.70 | 1.23 | 1.33 |
| 7 | c | 55 | TYR | CZ-OH | -7.68 | 1.24 | 1.37 |
| 1 | A | 362 | HIS | C-O | -7.66 | 1.08 | 1.23 |
| 1 | A | 747 | TYR | CD1-CE1 | -7.65 | 1.27 | 1.39 |
| 1 | a | 521 | GLU | CD-OE1 | -7.63 | 1.17 | 1.25 |
| 1 | a | 639 | ASN | CB-CG | -7.63 | 1.33 | 1.51 |
| 2 | C | 188 | TYR | C-O | -7.62 | 1.08 | 1.23 |
| 2 | C | 190 | VAL | C-O | -7.62 | 1.08 | 1.23 |
| 1 | A | 202 | TYR | CE2-CZ | -7.62 | 1.28 | 1.38 |
| 2 | C | 178 | TYR | CZ-OH | -7.60 | 1.25 | 1.37 |
| 1 | a | 764 | TRP | CZ3-CH2 | -7.60 | 1.27 | 1.40 |
| 1 | A | 560 | TRP | C-O | -7.59 | 1.08 | 1.23 |
| 2 | C | 164 | GLY | C-O | -7.59 | 1.11 | 1.23 |
| 1 | a | 542 | TRP | CE3-CZ3 | -7.59 | 1.25 | 1.38 |
| 7 | c | 26 | ARG | C-O | -7.58 | 1.08 | 1.23 |
| 2 | C | 182 | SER | C-O | -7.54 | 1.09 | 1.23 |
| 1 | A | 764 | TRP | C-O | -7.54 | 1.09 | 1.23 |
| 2 | C | 166 | GLY | C-O | -7.54 | 1.11 | 1.23 |
| 2 | C | 188 | TYR | CB-CG | -7.51 | 1.40 | 1.51 |
| 1 | A | 655 | PHE | C-O | -7.50 | 1.09 | 1.23 |
| 1 | A | 294 | ILE | C-O | -7.49 | 1.09 | 1.23 |
| 7 | c | 42 | ARG | C-O | -7.47 | 1.09 | 1.23 |
| 1 | A | 639 | ASN | CG-OD1 | -7.46 | 1.07 | 1.24 |
| 2 | C | 121 | PHE | C-O | -7.43 | 1.09 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | a | 433 | THR | CB-CG2 | -7.42 | 1.27 | 1.52 |
| 2 | C | 173 | ALA | C-O | -7.41 | 1.09 | 1.23 |
| 1 | a | 731 | LEU | C-O | -7.38 | 1.09 | 1.23 |
| 1 | A | 725 | SER | CB-OG | -7.38 | 1.32 | 1.42 |
| 1 | A | 699 | PRO | C-O | -7.38 | 1.08 | 1.23 |
| 1 | a | 134 | TYR | CB-CG | -7.38 | 1.40 | 1.51 |
| 1 | A | 774 | ASN | CG-ND2 | -7.36 | 1.14 | 1.32 |
| 1 | a | 745 | GLU | CB-CG | -7.35 | 1.38 | 1.52 |
| 2 | C | 142 | ASN | N-CA | 7.34 | 1.61 | 1.46 |
| 7 | c | 93 | HIS | C-O | -7.31 | 1.09 | 1.23 |
| 2 | C | 180 | GLN | C-O | -7.31 | 1.09 | 1.23 |
| 1 | a | 57 | TYR | CD2-CE2 | -7.31 | 1.28 | 1.39 |
| 2 | C | 214 | VAL | C-O | -7.30 | 1.09 | 1.23 |
| 1 | A | 776 | LEU | C-O | -7.29 | 1.09 | 1.23 |
| 1 | a | 25 | GLU | CD-OE1 | -7.28 | 1.17 | 1.25 |
| 2 | C | 175 | PRO | C-O | -7.27 | 1.08 | 1.23 |
| 1 | A | 656 | TRP | C-O | -7.27 | 1.09 | 1.23 |
| 2 | C | 169 | ASN | CG-OD1 | -7.27 | 1.07 | 1.24 |
| 2 | C | 163 | ASN | C-O | -7.26 | 1.09 | 1.23 |
| 7 | c | 99 | GLY | C-O | -7.26 | 1.12 | 1.23 |
| 1 | a | 631 | SER | C-O | -7.25 | 1.09 | 1.23 |
| 1 | A | 124 | TRP | C-O | -7.25 | 1.09 | 1.23 |
| 2 | C | 128 | CYS | C-O | -7.23 | 1.09 | 1.23 |
| 1 | A | 766 | GLU | CD-OE1 | -7.23 | 1.17 | 1.25 |
| 1 | A | 810 | ARG | CZ-NH1 | -7.21 | 1.23 | 1.33 |
| 1 | a | 365 | VAL | CB-CG2 | -7.21 | 1.37 | 1.52 |
| 1 | A | 539 | TRP | C-O | -7.20 | 1.09 | 1.23 |
| 1 | A | 756 | THR | C-O | -7.19 | 1.09 | 1.23 |
| 1 | A | 248 | TRP | C-O | -7.19 | 1.09 | 1.23 |
| 1 | a | 414 | THR | CB-CG2 | -7.19 | 1.28 | 1.52 |
| 1 | A | 740 | MET | C-O | -7.18 | 1.09 | 1.23 |
| 1 | a | 364 | GLN | CD-OE1 | -7.17 | 1.08 | 1.24 |
| 1 | A | 245 | PRO | C-O | -7.17 | 1.08 | 1.23 |
| 2 | C | 72 | ASP | C-O | -7.16 | 1.09 | 1.23 |
| 2 | C | 167 | ILE | C-O | -7.14 | 1.09 | 1.23 |
| 4 | F | 25 | ILE | C-O | -7.14 | 1.09 | 1.23 |
| 1 | a | 25 | GLU | CD-OE2 | -7.13 | 1.17 | 1.25 |
| 2 | C | 87 | VAL | CB-CG2 | -7.12 | 1.37 | 1.52 |
| 2 | C | 181 | LEU | C-O | -7.12 | 1.09 | 1.23 |
| 1 | A | 411 | VAL | CB-CG2 | -7.11 | 1.38 | 1.52 |
| 1 | A | 741 | ALA | C-O | -7.10 | 1.09 | 1.23 |
| 1 | a | 656 | TRP | CB-CG | -7.08 | 1.37 | 1.50 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 788 | PHE | CD2-CE2 | -7.08 | 1.25 | 1.39 |
| 4 | f | 20 | GLY | C-O | -7.07 | 1.12 | 1.23 |
| 4 | F | 10 | SER | C-O | -7.07 | 1.09 | 1.23 |
| 1 | A | 628 | ARG | CB-CG | -7.06 | 1.33 | 1.52 |
| 1 | A | 796 | LYS | C-O | -7.05 | 1.09 | 1.23 |
| 1 | a | 763 | MET | C-O | -7.04 | 1.09 | 1.23 |
| 1 | A | 210 | TRP | C-O | -7.03 | 1.10 | 1.23 |
| 1 | a | 765 | ASN | C-O | -7.03 | 1.10 | 1.23 |
| 1 | a | 699 | PRO | C-O | -7.01 | 1.09 | 1.23 |
| 1 | a | 765 | ASN | CG-OD1 | -7.01 | 1.08 | 1.24 |
| 7 | c | 46 | ALA | C-O | -7.01 | 1.10 | 1.23 |
| 2 | C | 146 | PRO | C-O | -7.00 | 1.09 | 1.23 |
| 1 | a | 514 | THR | CB-CG2 | -7.00 | 1.29 | 1.52 |
| 1 | a | 748 | TYR | CD1-CE1 | -7.00 | 1.28 | 1.39 |
| 1 | A | 311 | ILE | C-O | -7.00 | 1.10 | 1.23 |
| 1 | a | 847 | THR | CB-CG2 | -6.98 | 1.29 | 1.52 |
| 1 | a | 202 | TYR | CD1-CE1 | -6.96 | 1.28 | 1.39 |
| 1 | a | 518 | THR | CB-CG2 | -6.95 | 1.29 | 1.52 |
| 1 | A | 762 | TYR | CD1-CE1 | -6.94 | 1.28 | 1.39 |
| 1 | A | 209 | ILE | C-O | -6.93 | 1.10 | 1.23 |
| 1 | A | 540 | GLY | C-O | -6.93 | 1.12 | 1.23 |
| 1 | a | 57 | TYR | CD1-CE1 | -6.92 | 1.28 | 1.39 |
| 1 | A | 836 | THR | CB-CG2 | -6.91 | 1.29 | 1.52 |
| 1 | A | 283 | TYR | CD2-CE2 | -6.91 | 1.28 | 1.39 |
| 1 | a | 742 | ARG | CZ-NH1 | -6.91 | 1.24 | 1.33 |
| 4 | f | 17 | LEU | C-O | -6.90 | 1.10 | 1.23 |
| 1 | a | 528 | GLU | CD-OE1 | -6.90 | 1.18 | 1.25 |
| 1 | A | 252 | TYR | CD2-CE2 | -6.90 | 1.29 | 1.39 |
| 1 | a | 757 | GLY | CA-C | -6.89 | 1.40 | 1.51 |
| 7 | c | 43 | THR | C-O | -6.89 | 1.10 | 1.23 |
| 1 | a | 173 | VAL | CB-CG1 | -6.88 | 1.38 | 1.52 |
| 2 | C | 148 | TRP | C-O | -6.86 | 1.10 | 1.23 |
| 1 | a | 764 | TRP | C-O | -6.86 | 1.10 | 1.23 |
| 2 | C | 188 | TYR | CE2-CZ | -6.85 | 1.29 | 1.38 |
| 1 | A | 832 | SER | CB-OG | -6.85 | 1.33 | 1.42 |
| 1 | A | 203 | ILE | C-O | -6.83 | 1.10 | 1.23 |
| 3 | e | 28 | ASN | C-O | -6.83 | 1.10 | 1.23 |
| 2 | C | 170 | GLY | C-O | -6.81 | 1.12 | 1.23 |
| 1 | a | 413 | THR | CB-CG2 | -6.80 | 1.29 | 1.52 |
| 7 | c | 26 | ARG | CZ-NH2 | -6.80 | 1.24 | 1.33 |
| 1 | A | 861 | PHE | C-O | -6.77 | 1.10 | 1.23 |
| 2 | C | 189 | LEU | C-O | -6.77 | 1.10 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | a | 102 | TYR | CD1-CE1 | -6.76 | 1.29 | 1.39 |
| 2 | C | 123 | ASN | CG-ND2 | -6.75 | 1.16 | 1.32 |
| 1 | a | 624 | GLU | CB-CG | -6.75 | 1.39 | 1.52 |
| 1 | A | 480 | TRP | C-O | -6.73 | 1.10 | 1.23 |
| 7 | c | 99 | GLY | CA-C | -6.71 | 1.41 | 1.51 |
| 1 | a | 314 | VAL | CB-CG2 | -6.69 | 1.38 | 1.52 |
| 1 | A | 126 | VAL | C-O | -6.69 | 1.10 | 1.23 |
| 1 | A | 742 | ARG | C-O | -6.68 | 1.10 | 1.23 |
| 2 | C | 177 | TYR | C-O | -6.68 | 1.10 | 1.23 |
| 1 | a | 497 | GLN | CB-CG | -6.67 | 1.34 | 1.52 |
| 1 | a | 569 | GLU | CB-CG | -6.66 | 1.39 | 1.52 |
| 1 | A | 497 | GLN | CB-CG | -6.66 | 1.34 | 1.52 |
| 1 | a | 72 | TYR | CD2-CE2 | -6.64 | 1.29 | 1.39 |
| 1 | A | 348 | VAL | CB-CG2 | -6.63 | 1.39 | 1.52 |
| 2 | C | 124 | ASN | C-O | -6.62 | 1.10 | 1.23 |
| 7 | c | 55 | TYR | CE1-CZ | -6.61 | 1.29 | 1.38 |
| 1 | A | 75 | TYR | CD1-CE1 | -6.60 | 1.29 | 1.39 |
| 7 | c | 113 | TRP | CE3-CZ3 | -6.60 | 1.27 | 1.38 |
| 1 | A | 283 | TYR | CD1-CE1 | -6.59 | 1.29 | 1.39 |
| 1 | a | 542 | TRP | CD1-NE1 | -6.59 | 1.26 | 1.38 |
| 1 | A | 307 | HIS | C-O | -6.59 | 1.10 | 1.23 |
| 1 | a | 465 | VAL | CB-CG2 | -6.59 | 1.39 | 1.52 |
| 2 | C | 32 | TYR | CD1-CE1 | -6.58 | 1.29 | 1.39 |
| 3 | E | 2 | THR | C-O | -6.58 | 1.10 | 1.23 |
| 1 | a | 313 | TYR | CD2-CE2 | -6.57 | 1.29 | 1.39 |
| 7 | c | 125 | SER | CB-OG | -6.57 | 1.33 | 1.42 |
| 1 | A | 535 | TYR | CD1-CE1 | -6.57 | 1.29 | 1.39 |
| 1 | a | 756 | THR | C-O | -6.55 | 1.10 | 1.23 |
| 1 | A | 202 | TYR | CZ-OH | -6.55 | 1.26 | 1.37 |
| 1 | A | 343 | TYR | CD2-CE2 | -6.51 | 1.29 | 1.39 |
| 1 | a | 677 | TYR | CD2-CE2 | -6.50 | 1.29 | 1.39 |
| 2 | C | 31 | ARG | C-O | -6.50 | 1.10 | 1.23 |
| 1 | a | 448 | SER | CB-OG | -6.50 | 1.33 | 1.42 |
| 1 | a | 697 | ILE | C-O | -6.50 | 1.11 | 1.23 |
| 2 | C | 31 | ARG | CZ-NH1 | -6.48 | 1.24 | 1.33 |
| 1 | a | 72 | TYR | CD1-CE1 | -6.48 | 1.29 | 1.39 |
| 7 | c | 105 | ALA | C-O | -6.47 | 1.11 | 1.23 |
| 1 | A | 268 | THR | CB-CG2 | -6.47 | 1.31 | 1.52 |
| 1 | A | 118 | HIS | C-O | -6.46 | 1.11 | 1.23 |
| 1 | A | 224 | PRO | C-O | -6.46 | 1.10 | 1.23 |
| 1 | A | 246 | TYR | CE1-CZ | -6.46 | 1.30 | 1.38 |
| 2 | C | 192 | TYR | CD1-CE1 | -6.43 | 1.29 | 1.39 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 748 | TYR | CD2-CE2 | -6.43 | 1.29 | 1.39 |
| 1 | a | 375 | PHE | C-O | -6.43 | 1.11 | 1.23 |
| 7 | c | 21 | CYS | C-O | -6.43 | 1.11 | 1.23 |
| 1 | a | 438 | ASP | CB-CG | -6.43 | 1.38 | 1.51 |
| 2 | C | 178 | TYR | CD1-CE1 | -6.42 | 1.29 | 1.39 |
| 1 | a | 537 | VAL | C-O | -6.42 | 1.11 | 1.23 |
| 7 | c | 113 | TRP | C-O | -6.42 | 1.11 | 1.23 |
| 1 | A | 739 | MET | C-O | -6.42 | 1.11 | 1.23 |
| 1 | A | 420 | VAL | CB-CG1 | -6.40 | 1.39 | 1.52 |
| 2 | C | 20 | CYS | C-O | -6.40 | 1.11 | 1.23 |
| 1 | A | 102 | TYR | CD2-CE2 | -6.40 | 1.29 | 1.39 |
| 1 | a | 116 | CYS | C-O | -6.40 | 1.11 | 1.23 |
| 7 | c | 148 | TYR | CD1-CE1 | -6.39 | 1.29 | 1.39 |
| 1 | a | 541 | SER | C-O | -6.39 | 1.11 | 1.23 |
| 1 | a | 576 | GLU | CB-CG | -6.38 | 1.40 | 1.52 |
| 2 | C | 21 | PHE | C-O | -6.37 | 1.11 | 1.23 |
| 1 | A | 192 | TYR | CD1-CE1 | -6.37 | 1.29 | 1.39 |
| 1 | A | 631 | SER | C-O | -6.37 | 1.11 | 1.23 |
| 1 | A | 119 | ILE | C-O | -6.36 | 1.11 | 1.23 |
| 7 | c | 20 | GLY | N-CA | -6.34 | 1.36 | 1.46 |
| 2 | C | 114 | TYR | CE1-CZ | -6.33 | 1.30 | 1.38 |
| 1 | A | 677 | TYR | CD1-CE1 | -6.33 | 1.29 | 1.39 |
| 1 | a | 787 | TRP | CG-CD1 | -6.33 | 1.27 | 1.36 |
| 1 | A | 630 | ALA | C-O | -6.32 | 1.11 | 1.23 |
| 1 | a | 512 | SER | CB-OG | -6.32 | 1.34 | 1.42 |
| 1 | A | 207 | PHE | C-O | -6.30 | 1.11 | 1.23 |
| 1 | A | 210 | TRP | CG-CD1 | -6.30 | 1.27 | 1.36 |
| 1 | A | 213 | VAL | CB-CG1 | -6.29 | 1.39 | 1.52 |
| 5 | G | 14 | TRP | CB-CG | -6.28 | 1.39 | 1.50 |
| 1 | a | 698 | GLY | CA-C | -6.28 | 1.41 | 1.51 |
| 4 | F | 20 | GLY | C-O | -6.27 | 1.13 | 1.23 |
| 7 | c | 142 | THR | CB-CG2 | -6.27 | 1.31 | 1.52 |
| 1 | a | 765 | ASN | CG-ND2 | -6.27 | 1.17 | 1.32 |
| 1 | A | 774 | ASN | C-O | -6.26 | 1.11 | 1.23 |
| 1 | A | 328 | ASN | CG-OD1 | -6.26 | 1.10 | 1.24 |
| 1 | a | 677 | TYR | CD1-CE1 | -6.26 | 1.29 | 1.39 |
| 1 | A | 578 | TYR | CD1-CE1 | -6.25 | 1.29 | 1.39 |
| 1 | a | 529 | TRP | CG-CD1 | -6.25 | 1.28 | 1.36 |
| 1 | a | 332 | TYR | CD1-CE1 | -6.22 | 1.30 | 1.39 |
| 1 | A | 238 | PRO | C-O | -6.20 | 1.10 | 1.23 |
| 1 | a | 134 | TYR | C-O | -6.20 | 1.11 | 1.23 |
| 2 | C | 71 | ARG | CZ-NH1 | -6.20 | 1.25 | 1.33 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 7 | c | 55 | TYR | CB-CG | -6.20 | 1.42 | 1.51 |
| 1 | a | 725 | SER | CB-OG | -6.20 | 1.34 | 1.42 |
| 1 | A | 639 | ASN | CG-ND2 | -6.18 | 1.17 | 1.32 |
| 1 | a | 768 | THR | CB-CG2 | -6.18 | 1.31 | 1.52 |
| 1 | A | 308 | LEU | C-O | -6.17 | 1.11 | 1.23 |
| 1 | A | 656 | TRP | CG-CD1 | -6.17 | 1.28 | 1.36 |
| 1 | A | 625 | TRP | CB-CG | -6.17 | 1.39 | 1.50 |
| 1 | A | 732 | ASP | CG-OD2 | -6.16 | 1.11 | 1.25 |
| 2 | C | 165 | LYS | C-O | -6.16 | 1.11 | 1.23 |
| 1 | a | 444 | TYR | CD2-CE2 | -6.15 | 1.30 | 1.39 |
| 7 | c | 154 | ARG | CZ-NH1 | -6.15 | 1.25 | 1.33 |
| 1 | a | 75 | TYR | CD1-CE1 | -6.15 | 1.30 | 1.39 |
| 1 | a | 309 | THR | CB-CG2 | -6.15 | 1.32 | 1.52 |
| 1 | a | 102 | TYR | CD2-CE2 | -6.14 | 1.30 | 1.39 |
| 2 | C | 31 | ARG | CZ-NH2 | -6.14 | 1.25 | 1.33 |
| 1 | A | 639 | ASN | CB-CG | -6.13 | 1.36 | 1.51 |
| 1 | A | 561 | TYR | CD2-CE2 | -6.13 | 1.30 | 1.39 |
| 2 | C | 134 | CYS | CB-SG | -6.13 | 1.71 | 1.82 |
| 1 | a | 45 | TYR | CD1-CE1 | -6.12 | 1.30 | 1.39 |
| 1 | A | 273 | TRP | CB-CG | -6.11 | 1.39 | 1.50 |
| 1 | a | 18 | LEU | C-O | -6.11 | 1.11 | 1.23 |
| 1 | A | 682 | TYR | C-O | -6.11 | 1.11 | 1.23 |
| 1 | A | 247 | GLY | C-O | -6.10 | 1.13 | 1.23 |
| 1 | A | 137 | ARG | C-O | -6.10 | 1.11 | 1.23 |
| 1 | a | 268 | THR | CB-CG2 | -6.09 | 1.32 | 1.52 |
| 1 | A | 775 | HIS | C-O | -6.09 | 1.11 | 1.23 |
| 1 | A | 762 | TYR | CZ-OH | -6.07 | 1.27 | 1.37 |
| 2 | C | 114 | TYR | CZ-OH | -6.06 | 1.27 | 1.37 |
| 7 | c | 74 | TYR | CB-CG | -6.05 | 1.42 | 1.51 |
| 1 | A | 246 | TYR | CZ-OH | -6.05 | 1.27 | 1.37 |
| 1 | a | 377 | GLY | C-O | -6.05 | 1.14 | 1.23 |
| 1 | a | 202 | TYR | CD2-CE2 | -6.05 | 1.30 | 1.39 |
| 7 | c | 140 | LYS | C-O | -6.05 | 1.11 | 1.23 |
| 1 | A | 127 | TYR | CD2-CE2 | -6.04 | 1.30 | 1.39 |
| 7 | c | 41 | SER | C-O | -6.04 | 1.11 | 1.23 |
| 1 | a | 134 | TYR | CG-CD1 | -6.02 | 1.31 | 1.39 |
| 1 | A | 316 | PHE | CD2-CE2 | -6.02 | 1.27 | 1.39 |
| 1 | A | 25 | GLU | CD-OE2 | -6.02 | 1.19 | 1.25 |
| 1 | a | 134 | TYR | CE1-CZ | -6.01 | 1.30 | 1.38 |
| 1 | a | 246 | TYR | CD1-CE1 | -6.01 | 1.30 | 1.39 |
| 1 | A | 361 | ASN | C-O | -6.01 | 1.11 | 1.23 |
| 1 | A | 45 | TYR | CD1-CE1 | -6.00 | 1.30 | 1.39 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 2 | C | 142 | ASN | CG-OD1 | -6.00 | 1.10 | 1.24 |
| 1 | a | 369 | TYR | CD2-CE2 | -5.99 | 1.30 | 1.39 |
| 2 | C | 177 | TYR | CD1-CE1 | -5.99 | 1.30 | 1.39 |
| 1 | A | 133 | TYR | CD1-CE1 | -5.98 | 1.30 | 1.39 |
| 2 | C | 116 | GLU | CG-CD | -5.97 | 1.43 | 1.51 |
| 7 | c | 154 | ARG | CZ-NH2 | -5.96 | 1.25 | 1.33 |
| 1 | A | 299 | ASP | C-O | -5.96 | 1.12 | 1.23 |
| 7 | c | 110 | ASP | CG-OD2 | -5.96 | 1.11 | 1.25 |
| 1 | A | 208 | PHE | C-O | -5.95 | 1.12 | 1.23 |
| 2 | C | 174 | MET | C-O | -5.95 | 1.12 | 1.23 |
| 7 | c | 18 | ALA | CA-C | -5.94 | 1.37 | 1.52 |
| 1 | a | 426 | TYR | CD1-CE1 | -5.94 | 1.30 | 1.39 |
| 1 | A | 677 | TYR | CD2-CE2 | -5.93 | 1.30 | 1.39 |
| 1 | a | 525 | TYR | CD2-CE2 | -5.93 | 1.30 | 1.39 |
| 1 | A | 295 | THR | CB-CG2 | -5.93 | 1.32 | 1.52 |
| 2 | C | 165 | LYS | CA-C | -5.93 | 1.37 | 1.52 |
| 1 | A | 45 | TYR | CD2-CE2 | -5.92 | 1.30 | 1.39 |
| 1 | A | 117 | PHE | C-O | -5.92 | 1.12 | 1.23 |
| 4 | F | 24 | GLY | C-O | -5.92 | 1.14 | 1.23 |
| 1 | A | 134 | TYR | CD1-CE1 | -5.91 | 1.30 | 1.39 |
| 7 | c | 107 | ASN | CG-ND2 | -5.91 | 1.18 | 1.32 |
| 2 | C | 172 | GLY | C-O | -5.91 | 1.14 | 1.23 |
| 2 | C | 124 | ASN | CG-OD1 | -5.90 | 1.10 | 1.24 |
| 1 | a | 696 | CYS | C-O | -5.90 | 1.12 | 1.23 |
| 1 | a | 769 | TRP | CD1-NE1 | -5.89 | 1.27 | 1.38 |
| 2 | C | 188 | TYR | CZ-OH | -5.89 | 1.27 | 1.37 |
| 2 | C | 163 | ASN | CG-OD1 | -5.89 | 1.10 | 1.24 |
| 1 | a | 307 | HIS | C-O | -5.88 | 1.12 | 1.23 |
| 1 | a | 771 | TRP | CE3-CZ3 | -5.88 | 1.28 | 1.38 |
| 3 | E | 25 | VAL | C-O | -5.87 | 1.12 | 1.23 |
| 1 | a | 225 | LEU | C-O | -5.87 | 1.12 | 1.23 |
| 1 | A | 681 | TRP | CE3-CZ3 | -5.87 | 1.28 | 1.38 |
| 1 | a | 512 | SER | C-O | -5.86 | 1.12 | 1.23 |
| 1 | a | 27 | ILE | C-O | -5.86 | 1.12 | 1.23 |
| 1 | A | 246 | TYR | C-O | -5.86 | 1.12 | 1.23 |
| 3 | E | 15 | TYR | C-O | -5.85 | 1.12 | 1.23 |
| 1 | A | 249 | PHE | C-O | -5.85 | 1.12 | 1.23 |
| 1 | A | 47 | PHE | CD1-CE1 | -5.84 | 1.27 | 1.39 |
| 1 | A | 183 | THR | CB-CG2 | -5.84 | 1.33 | 1.52 |
| 1 | a | 850 | PHE | CD2-CE2 | -5.83 | 1.27 | 1.39 |
| 1 | a | 742 | ARG | C-O | -5.83 | 1.12 | 1.23 |
| 1 | A | 108 | ASP | C-O | -5.83 | 1.12 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | a | 578 | TYR | CD1-CE1 | -5.82 | 1.30 | 1.39 |
| 1 | a | 844 | PHE | CD1-CE1 | -5.82 | 1.27 | 1.39 |
| 1 | A | 560 | TRP | CB-CG | -5.82 | 1.39 | 1.50 |
| 1 | a | 200 | THR | CB-CG2 | -5.81 | 1.33 | 1.52 |
| 2 | C | 177 | TYR | CZ-OH | -5.81 | 1.27 | 1.37 |
| 7 | c | 55 | TYR | CE2-CZ | -5.81 | 1.30 | 1.38 |
| 7 | c | 107 | ASN | CG-OD1 | -5.81 | 1.11 | 1.24 |
| 7 | c | 137 | TYR | CD2-CE2 | -5.80 | 1.30 | 1.39 |
| 1 | a | 539 | TRP | CB-CG | -5.79 | 1.39 | 1.50 |
| 2 | C | 184 | GLN | CB-CG | -5.79 | 1.36 | 1.52 |
| 4 | F | 15 | PHE | C-O | -5.79 | 1.12 | 1.23 |
| 1 | A | 15 | TYR | CE1-CZ | -5.78 | 1.31 | 1.38 |
| 1 | a | 681 | TRP | CG-CD1 | -5.78 | 1.28 | 1.36 |
| 1 | A | 501 | ARG | C-O | -5.78 | 1.12 | 1.23 |
| 1 | A | 777 | THR | CB-CG2 | -5.77 | 1.33 | 1.52 |
| 1 | a | 283 | TYR | CD1-CE1 | -5.76 | 1.30 | 1.39 |
| 1 | a | 352 | ARG | CZ-NH2 | -5.76 | 1.25 | 1.33 |
| 7 | c | 133 | VAL | CB-CG1 | -5.76 | 1.40 | 1.52 |
| 1 | a | 338 | MET | C-O | -5.76 | 1.12 | 1.23 |
| 1 | A | 305 | HIS | C-O | -5.75 | 1.12 | 1.23 |
| 3 | E | 10 | PHE | C-O | -5.75 | 1.12 | 1.23 |
| 1 | A | 639 | ASN | C-O | -5.74 | 1.12 | 1.23 |
| 1 | A | 783 | GLY | C-O | -5.74 | 1.14 | 1.23 |
| 1 | A | 109 | PHE | C-O | -5.74 | 1.12 | 1.23 |
| 1 | a | 517 | PHE | CD1-CE1 | -5.74 | 1.27 | 1.39 |
| 1 | a | 838 | LYS | CB-CG | -5.73 | 1.37 | 1.52 |
| 1 | A | 525 | TYR | CD1-CE1 | -5.73 | 1.30 | 1.39 |
| 1 | A | 561 | TYR | C-O | -5.72 | 1.12 | 1.23 |
| 1 | A | 671 | ARG | CZ-NH2 | -5.72 | 1.25 | 1.33 |
| 1 | a | 516 | SER | CB-OG | -5.70 | 1.34 | 1.42 |
| 1 | a | 836 | THR | CB-CG2 | -5.70 | 1.33 | 1.52 |
| 1 | A | 414 | THR | CB-CG2 | -5.69 | 1.33 | 1.52 |
| 1 | a | 628 | ARG | CB-CG | -5.69 | 1.37 | 1.52 |
| 1 | a | 757 | GLY | N-CA | -5.69 | 1.37 | 1.46 |
| 1 | a | 621 | ASN | CB-CG | -5.69 | 1.38 | 1.51 |
| 1 | a | 748 | TYR | CZ-OH | -5.68 | 1.28 | 1.37 |
| 1 | A | 72 | TYR | CD1-CE1 | -5.68 | 1.30 | 1.39 |
| 1 | A | 252 | TYR | CD1-CE1 | -5.66 | 1.30 | 1.39 |
| 2 | C | 185 | GLN | C-O | -5.66 | 1.12 | 1.23 |
| 1 | a | 15 | TYR | CE1-CZ | -5.66 | 1.31 | 1.38 |
| 1 | A | 204 | GLY | C-O | -5.66 | 1.14 | 1.23 |
| 1 | a | 379 | GLN | CG-CD | -5.66 | 1.38 | 1.51 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 338 | MET | C-N | -5.66 | 1.21 | 1.34 |
| 1 | a | 540 | GLY | N-CA | 5.65 | 1.54 | 1.46 |
| 1 | A | 107 | THR | CB-CG2 | -5.65 | 1.33 | 1.52 |
| 1 | A | 735 | TRP | CD1-NE1 | -5.65 | 1.28 | 1.38 |
| 2 | C | 114 | TYR | C-O | -5.64 | 1.12 | 1.23 |
| 1 | A | 424 | PHE | CD1-CE1 | -5.64 | 1.27 | 1.39 |
| 1 | a | 114 | TRP | CE3-CZ3 | -5.63 | 1.28 | 1.38 |
| 1 | A | 231 | MET | C-O | -5.62 | 1.12 | 1.23 |
| 1 | A | 747 | TYR | CD2-CE2 | -5.62 | 1.30 | 1.39 |
| 1 | a | 560 | TRP | C-O | -5.62 | 1.12 | 1.23 |
| 1 | A | 310 | ALA | C-O | -5.62 | 1.12 | 1.23 |
| 1 | a | 747 | TYR | CD2-CE2 | -5.61 | 1.30 | 1.39 |
| 1 | A | 102 | TYR | CD1-CE1 | -5.61 | 1.30 | 1.39 |
| 2 | C | 211 | GLU | CB-CG | -5.61 | 1.41 | 1.52 |
| 1 | a | 625 | TRP | CB-CG | -5.60 | 1.40 | 1.50 |
| 2 | C | 32 | TYR | CD2-CE2 | -5.59 | 1.30 | 1.39 |
| 7 | c | 154 | ARG | C-O | -5.59 | 1.12 | 1.23 |
| 1 | A | 165 | THR | C-O | -5.58 | 1.12 | 1.23 |
| 1 | a | 20 | LEU | C-O | -5.58 | 1.12 | 1.23 |
| 1 | a | 241 | GLN | CB-CG | -5.58 | 1.37 | 1.52 |
| 3 | e | 26 | VAL | C-O | -5.57 | 1.12 | 1.23 |
| 1 | A | 847 | THR | CB-CG2 | -5.57 | 1.33 | 1.52 |
| 4 | f | 15 | PHE | C-O | -5.57 | 1.12 | 1.23 |
| 7 | c | 119 | SER | CB-OG | -5.57 | 1.35 | 1.42 |
| 1 | a | 380 | TYR | CD2-CE2 | -5.57 | 1.30 | 1.39 |
| 2 | C | 114 | TYR | CB-CG | -5.56 | 1.43 | 1.51 |
| 7 | c | 97 | GLY | N-CA | 5.56 | 1.54 | 1.46 |
| 1 | a | 463 | TYR | CD2-CE2 | -5.56 | 1.31 | 1.39 |
| 1 | A | 57 | TYR | CD2-CE2 | -5.55 | 1.31 | 1.39 |
| 2 | C | 159 | SER | CB-OG | -5.55 | 1.35 | 1.42 |
| 2 | C | 192 | TYR | C-O | -5.53 | 1.12 | 1.23 |
| 1 | A | 688 | ARG | C-O | -5.53 | 1.12 | 1.23 |
| 1 | a | 846 | TYR | CD1-CE1 | -5.53 | 1.31 | 1.39 |
| 1 | A | 463 | TYR | CD1-CE1 | -5.51 | 1.31 | 1.39 |
| 1 | a | 248 | TRP | CB-CG | -5.51 | 1.40 | 1.50 |
| 1 | A | 729 | TRP | CE3-CZ3 | -5.51 | 1.29 | 1.38 |
| 1 | A | 764 | TRP | CD1-NE1 | -5.50 | 1.28 | 1.38 |
| 7 | c | 21 | CYS | CB-SG | -5.50 | 1.72 | 1.81 |
| 1 | A | 682 | TYR | CG-CD1 | -5.49 | 1.32 | 1.39 |
| 7 | c | 49 | ARG | C-O | -5.49 | 1.12 | 1.23 |
| 1 | a | 339 | ASN | C-O | -5.49 | 1.12 | 1.23 |
| 1 | a | 118 | HIS | C-O | -5.48 | 1.12 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 3 | E | 17 | ALA | C-O | -5.47 | 1.12 | 1.23 |
| 1 | A | 20 | LEU | C-O | -5.47 | 1.12 | 1.23 |
| 1 | A | 539 | TRP | CG-CD1 | -5.47 | 1.29 | 1.36 |
| 1 | A | 759 | VAL | C-O | -5.47 | 1.12 | 1.23 |
| 1 | a | 171 | TYR | CD2-CE2 | -5.45 | 1.31 | 1.39 |
| 1 | A | 542 | TRP | CE3-CZ3 | -5.45 | 1.29 | 1.38 |
| 1 | A | 656 | TRP | CD1-NE1 | -5.45 | 1.28 | 1.38 |
| 7 | c | 74 | TYR | CZ-OH | -5.45 | 1.28 | 1.37 |
| 2 | C | 148 | TRP | CD1-NE1 | -5.45 | 1.28 | 1.38 |
| 1 | a | 632 | THR | C-O | -5.45 | 1.12 | 1.23 |
| 1 | A | 521 | GLU | CB-CG | -5.45 | 1.41 | 1.52 |
| 1 | a | 19 | GLU | C-O | -5.44 | 1.13 | 1.23 |
| 2 | C | 116 | GLU | CB-CG | -5.43 | 1.41 | 1.52 |
| 1 | a | 419 | PHE | CD1-CE1 | -5.43 | 1.28 | 1.39 |
| 4 | F | 18 | THR | C-O | -5.42 | 1.13 | 1.23 |
| 1 | a | 771 | TRP | CG-CD1 | -5.42 | 1.29 | 1.36 |
| 1 | a | 331 | SER | CB-OG | -5.41 | 1.35 | 1.42 |
| 4 | F | 22 | LEU | C-O | -5.41 | 1.13 | 1.23 |
| 1 | a | 864 | ASN | C-O | -5.39 | 1.13 | 1.23 |
| 1 | A | 810 | ARG | C-O | -5.39 | 1.13 | 1.23 |
| 1 | A | 327 | ARG | CZ-NH1 | -5.39 | 1.26 | 1.33 |
| 1 | a | 79 | GLN | C-O | -5.39 | 1.13 | 1.23 |
| 1 | A | 123 | LEU | C-O | -5.38 | 1.13 | 1.23 |
| 1 | A | 418 | SER | CB-OG | -5.38 | 1.35 | 1.42 |
| 2 | C | 171 | GLY | C-O | -5.38 | 1.15 | 1.23 |
| 2 | C | 125 | CYS | C-O | -5.38 | 1.13 | 1.23 |
| 1 | A | 343 | TYR | CD1-CE1 | -5.38 | 1.31 | 1.39 |
| 1 | a | 766 | GLU | CD-OE1 | -5.37 | 1.19 | 1.25 |
| 1 | A | 472 | TRP | CB-CG | -5.37 | 1.40 | 1.50 |
| 2 | C | 70 | LEU | C-O | -5.37 | 1.13 | 1.23 |
| 2 | C | 149 | GLN | CD-NE2 | -5.36 | 1.19 | 1.32 |
| 1 | a | 164 | PHE | CE1-CZ | -5.36 | 1.27 | 1.37 |
| 7 | c | 41 | SER | CA-CB | -5.35 | 1.45 | 1.52 |
| 1 | A | 828 | ARG | C-O | -5.35 | 1.13 | 1.23 |
| 1 | a | 359 | THR | CB-CG2 | -5.35 | 1.34 | 1.52 |
| 7 | c | 145 | GLN | C-O | -5.35 | 1.13 | 1.23 |
| 1 | a | 127 | TYR | CD2-CE2 | -5.34 | 1.31 | 1.39 |
| 1 | A | 47 | PHE | CE1-CZ | -5.34 | 1.27 | 1.37 |
| 1 | A | 535 | TYR | CD2-CE2 | -5.33 | 1.31 | 1.39 |
| 2 | C | 168 | GLY | C-O | -5.33 | 1.15 | 1.23 |
| 4 | F | 8 | ILE | C-O | -5.33 | 1.13 | 1.23 |
| 1 | a | 47 | PHE | CE1-CZ | -5.33 | 1.27 | 1.37 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 7 | c | 131 | GLY | C-O | -5.33 | 1.15 | 1.23 |
| 5 | G | 31 | ASN | CG-OD1 | -5.32 | 1.12 | 1.24 |
| 1 | A | 560 | TRP | CD1-NE1 | -5.32 | 1.28 | 1.38 |
| 1 | A | 360 | PHE | CD1-CE1 | -5.31 | 1.28 | 1.39 |
| 1 | A | 444 | TYR | CD1-CE1 | -5.31 | 1.31 | 1.39 |
| 1 | A | 611 | PHE | C-O | -5.30 | 1.13 | 1.23 |
| 2 | C | 148 | TRP | CD2-CE2 | -5.30 | 1.34 | 1.41 |
| 1 | a | 364 | GLN | CB-CG | -5.30 | 1.38 | 1.52 |
| 1 | a | 286 | TYR | CD2-CE2 | -5.30 | 1.31 | 1.39 |
| 1 | A | 655 | PHE | CB-CG | -5.30 | 1.42 | 1.51 |
| 1 | a | 764 | TRP | CE3-CZ3 | -5.30 | 1.29 | 1.38 |
| 1 | A | 177 | TRP | CB-CG | -5.29 | 1.40 | 1.50 |
| 1 | a | 762 | TYR | CD2-CE2 | -5.28 | 1.31 | 1.39 |
| 4 | F | 7 | GLN | CD-OE1 | -5.27 | 1.12 | 1.24 |
| 1 | A | 732 | ASP | CG-OD1 | -5.27 | 1.13 | 1.25 |
| 4 | F | 29 | SER | C-O | -5.27 | 1.13 | 1.23 |
| 7 | c | 86 | TYR | CZ-OH | -5.26 | 1.28 | 1.37 |
| 1 | A | 241 | GLN | C-O | -5.25 | 1.13 | 1.23 |
| 1 | A | 812 | VAL | C-O | -5.25 | 1.13 | 1.23 |
| 1 | A | 135 | GLY | C-O | -5.25 | 1.15 | 1.23 |
| 5 | G | 44 | LEU | CA-CB | -5.25 | 1.41 | 1.53 |
| 3 | E | 12 | LEU | C-O | -5.25 | 1.13 | 1.23 |
| 1 | A | 498 | VAL | CB-CG2 | -5.25 | 1.41 | 1.52 |
| 1 | a | 568 | PHE | CD2-CE2 | -5.24 | 1.28 | 1.39 |
| 2 | C | 84 | GLU | CD-OE2 | -5.24 | 1.19 | 1.25 |
| 2 | C | 188 | TYR | CG-CD1 | -5.24 | 1.32 | 1.39 |
| 7 | c | 74 | TYR | C-O | -5.24 | 1.13 | 1.23 |
| 1 | A | 681 | TRP | C-O | -5.23 | 1.13 | 1.23 |
| 1 | a | 173 | VAL | CB-CG2 | -5.23 | 1.41 | 1.52 |
| 1 | a | 390 | TYR | CD1-CE1 | -5.23 | 1.31 | 1.39 |
| 1 | a | 766 | GLU | CD-OE2 | -5.22 | 1.20 | 1.25 |
| 1 | A | 309 | THR | C-O | -5.22 | 1.13 | 1.23 |
| 1 | A | 380 | TYR | CE1-CZ | -5.22 | 1.31 | 1.38 |
| 1 | A | 547 | ARG | CZ-NH1 | -5.22 | 1.26 | 1.33 |
| 1 | A | 242 | ALA | C-O | -5.22 | 1.13 | 1.23 |
| 7 | c | 36 | SER | CB-OG | -5.22 | 1.35 | 1.42 |
| 1 | A | 674 | PHE | CD1-CE1 | -5.22 | 1.28 | 1.39 |
| 2 | C | 192 | TYR | CE1-CZ | -5.21 | 1.31 | 1.38 |
| 1 | A | 110 | ARG | C-O | -5.21 | 1.13 | 1.23 |
| 1 | A | 449 | PHE | CD1-CE1 | -5.21 | 1.28 | 1.39 |
| 7 | c | 96 | ASN | CG-OD1 | -5.20 | 1.12 | 1.24 |
| 1 | A | 380 | TYR | CD2-CE2 | -5.20 | 1.31 | 1.39 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 2 | C | 162 | TYR | CE1-CZ | -5.19 | 1.31 | 1.38 |
| 1 | a | 764 | TRP | CD2-CE2 | -5.19 | 1.35 | 1.41 |
| 1 | a | 339 | ASN | CG-ND2 | -5.19 | 1.19 | 1.32 |
| 1 | A | 200 | THR | CB-CG2 | -5.18 | 1.35 | 1.52 |
| 1 | a | 133 | TYR | CD2-CE2 | -5.18 | 1.31 | 1.39 |
| 2 | C | 122 | GLN | C-O | -5.18 | 1.13 | 1.23 |
| 2 | C | 191 | ALA | C-O | -5.18 | 1.13 | 1.23 |
| 1 | A | 774 | ASN | CG-OD1 | -5.18 | 1.12 | 1.24 |
| 7 | c | 50 | GLU | CB-CG | -5.18 | 1.42 | 1.52 |
| 1 | A | 472 | TRP | CE3-CZ3 | -5.17 | 1.29 | 1.38 |
| 1 | a | 682 | TYR | CD1-CE1 | -5.17 | 1.31 | 1.39 |
| 2 | C | 116 | GLU | CD-OE1 | -5.17 | 1.20 | 1.25 |
| 1 | A | 851 | VAL | CB-CG2 | -5.17 | 1.42 | 1.52 |
| 2 | C | 115 | ARG | CD-NE | -5.16 | 1.37 | 1.46 |
| 1 | a | 189 | ARG | CG-CD | -5.16 | 1.39 | 1.51 |
| 1 | A | 573 | LYS | CB-CG | -5.16 | 1.38 | 1.52 |
| 1 | A | 730 | TYR | CD1-CE1 | -5.16 | 1.31 | 1.39 |
| 1 | A | 656 | TRP | CE3-CZ3 | -5.16 | 1.29 | 1.38 |
| 1 | a | 732 | ASP | CG-OD2 | -5.16 | 1.13 | 1.25 |
| 7 | c | 148 | TYR | CD2-CE2 | -5.16 | 1.31 | 1.39 |
| 1 | a | 735 | TRP | CE3-CZ3 | -5.16 | 1.29 | 1.38 |
| 1 | A | 578 | TYR | CD2-CE2 | -5.15 | 1.31 | 1.39 |
| 2 | C | 162 | TYR | CD1-CE1 | -5.15 | 1.31 | 1.39 |
| 1 | a | 542 | TRP | C-O | -5.15 | 1.13 | 1.23 |
| 4 | f | 12 | LEU | C-O | -5.15 | 1.13 | 1.23 |
| 1 | A | 584 | LYS | CB-CG | -5.15 | 1.38 | 1.52 |
| 1 | a | 806 | ASP | CB-CG | -5.14 | 1.41 | 1.51 |
| 1 | a | 864 | ASN | CA-C | -5.14 | 1.39 | 1.52 |
| 4 | F | 21 | THR | C-O | -5.14 | 1.13 | 1.23 |
| 1 | a | 275 | VAL | CB-CG1 | -5.14 | 1.42 | 1.52 |
| 1 | A | 45 | TYR | CZ-OH | -5.13 | 1.29 | 1.37 |
| 1 | A | 690 | GLN | C-O | -5.13 | 1.13 | 1.23 |
| 1 | A | 171 | TYR | CE2-CZ | -5.13 | 1.31 | 1.38 |
| 1 | A | 298 | GLU | CD-OE2 | -5.13 | 1.20 | 1.25 |
| 1 | A | 702 | GLY | C-O | -5.13 | 1.15 | 1.23 |
| 1 | a | 681 | TRP | CE3-CZ3 | -5.12 | 1.29 | 1.38 |
| 1 | A | 426 | TYR | CE1-CZ | -5.12 | 1.31 | 1.38 |
| 1 | a | 436 | GLU | CD-OE2 | -5.12 | 1.20 | 1.25 |
| 1 | A | 538 | GLN | C-O | -5.12 | 1.13 | 1.23 |
| 7 | c | 87 | ALA | C-O | -5.12 | 1.13 | 1.23 |
| 1 | A | 109 | PHE | CB-CG | -5.12 | 1.42 | 1.51 |
| 1 | a | 511 | SER | C-O | -5.11 | 1.13 | 1.23 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 185 | TRP | CB-CG | -5.10 | 1.41 | 1.50 |
| 1 | a | 278 | VAL | CB-CG1 | -5.10 | 1.42 | 1.52 |
| 7 | c | 113 | TRP | CD1-NE1 | -5.10 | 1.29 | 1.38 |
| 2 | C | 114 | TYR | CD1-CE1 | -5.10 | 1.31 | 1.39 |
| 1 | a | 714 | TRP | CE3-CZ3 | -5.10 | 1.29 | 1.38 |
| 4 | f | 14 | PHE | C-O | -5.10 | 1.13 | 1.23 |
| 5 | G | 20 | LEU | C-O | -5.09 | 1.13 | 1.23 |
| 1 | A | 680 | PRO | C-O | -5.09 | 1.13 | 1.23 |
| 1 | a | 528 | GLU | C-O | -5.09 | 1.13 | 1.23 |
| 2 | C | 216 | GLU | CA-CB | -5.08 | 1.42 | 1.53 |
| 1 | A | 68 | SER | CB-OG | -5.08 | 1.35 | 1.42 |
| 1 | A | 720 | SER | CB-OG | -5.08 | 1.35 | 1.42 |
| 7 | c | 80 | GLU | C-O | -5.08 | 1.13 | 1.23 |
| 1 | A | 114 | TRP | CE3-CZ3 | -5.07 | 1.29 | 1.38 |
| 1 | a | 545 | PHE | CD1-CE1 | -5.07 | 1.29 | 1.39 |
| 7 | c | 83 | THR | C-O | -5.06 | 1.13 | 1.23 |
| 7 | c | 89 | CYS | C-O | -5.06 | 1.13 | 1.23 |
| 3 | E | 18 | LEU | C-O | -5.06 | 1.13 | 1.23 |
| 1 | a | 346 | LYS | N-CA | 5.06 | 1.56 | 1.46 |
| 7 | c | 76 | ALA | C-O | -5.05 | 1.13 | 1.23 |
| 1 | A | 735 | TRP | C-O | -5.05 | 1.13 | 1.23 |
| 1 | A | 732 | ASP | CB-CG | -5.05 | 1.41 | 1.51 |
| 1 | a | 343 | TYR | CD2-CE2 | -5.04 | 1.31 | 1.39 |
| 1 | A | 202 | TYR | C-O | -5.04 | 1.13 | 1.23 |
| 7 | c | 44 | ALA | C-O | -5.04 | 1.13 | 1.23 |
| 1 | A | 75 | TYR | CD2-CE2 | -5.04 | 1.31 | 1.39 |
| 1 | A | 266 | GLU | C-O | -5.04 | 1.13 | 1.23 |
| 1 | a | 25 | GLU | C-O | -5.04 | 1.13 | 1.23 |
| 7 | c | 75 | LYS | C-O | -5.04 | 1.13 | 1.23 |
| 1 | a | 488 | ALA | C-O | -5.04 | 1.13 | 1.23 |
| 7 | c | 137 | TYR | CD1-CE1 | -5.04 | 1.31 | 1.39 |
| 1 | a | 732 | ASP | C-O | -5.03 | 1.13 | 1.23 |
| 7 | c | 19 | THR | CB-CG2 | -5.03 | 1.35 | 1.52 |
| 1 | A | 621 | ASN | CB-CG | -5.03 | 1.39 | 1.51 |
| 7 | c | 135 | PRO | C-O | -5.03 | 1.13 | 1.23 |
| 2 | C | 187 | ARG | CZ-NH2 | -5.03 | 1.26 | 1.33 |
| 3 | E | 9 | LEU | C-O | -5.03 | 1.13 | 1.23 |
| 7 | c | 98 | GLY | C-O | -5.02 | 1.15 | 1.23 |
| 1 | A | 803 | GLU | CB-CG | -5.02 | 1.42 | 1.52 |
| 4 | F | 27 | TYR | CB-CG | -5.02 | 1.44 | 1.51 |
| 1 | A | 742 | ARG | CZ-NH2 | -5.02 | 1.26 | 1.33 |
| 1 | a | 441 | PHE | CD1-CE1 | -5.01 | 1.29 | 1.39 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 7 | c | 142 | THR | C-O | -5.01 | 1.13 | 1.23 |
| 1 | A | 40 | CYS | CB-SG | -5.01 | 1.73 | 1.81 |
| 1 | a | 637 | TYR | CD1-CE1 | -5.01 | 1.31 | 1.39 |
| 1 | a | 116 | CYS | CB-SG | -5.01 | 1.73 | 1.81 |

All (262) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | A | 65 | ARG | NE-CZ-NH1 | 14.58 | 127.59 | 120.30 |
| 1 | A | 96 | LEU | C-N-CD | -14.30 | 89.13 | 120.60 |
| 1 | A | 501 | ARG | NE-CZ-NH2 | 12.88 | 126.74 | 120.30 |
| 1 | a | 18 | LEU | CA-CB-CG | 12.50 | 144.06 | 115.30 |
| 1 | a | 18 | LEU | CB-CG-CD1 | -12.46 | 89.83 | 111.00 |
| 7 | c | 26 | ARG | NE-CZ-NH1 | 12.45 | 126.52 | 120.30 |
| 1 | a | 801 | ARG | NE-CZ-NH1 | 12.30 | 126.45 | 120.30 |
| 7 | c | 26 | ARG | NE-CZ-NH2 | -12.25 | 114.18 | 120.30 |
| 1 | a | 801 | ARG | NE-CZ-NH2 | -12.21 | 114.20 | 120.30 |
| 1 | A | 641 | ARG | NE-CZ-NH2 | -11.99 | 114.31 | 120.30 |
| 2 | C | 194 | ARG | NE-CZ-NH2 | -11.66 | 114.47 | 120.30 |
| 2 | C | 194 | ARG | NE-CZ-NH1 | 10.93 | 125.77 | 120.30 |
| 1 | A | 798 | ARG | NE-CZ-NH2 | -10.73 | 114.94 | 120.30 |
| 1 | A | 757 | GLY | N-CA-C | 10.68 | 139.80 | 113.10 |
| 7 | c | 110 | ASP | CB-CG-OD1 | 10.28 | 127.56 | 118.30 |
| 7 | c | 48 | LEU | CB-CG-CD2 | -10.13 | 93.78 | 111.00 |
| 1 | A | 641 | ARG | NE-CZ-NH1 | 10.02 | 125.31 | 120.30 |
| 2 | C | 141 | THR | CA-C-N | 9.76 | 138.68 | 117.20 |
| 5 | G | 44 | LEU | CB-CG-CD1 | 9.76 | 127.58 | 111.00 |
| 1 | A | 501 | ARG | NE-CZ-NH1 | -9.73 | 115.43 | 120.30 |
| 2 | C | 179 | ASN | O-C-N | -9.63 | 107.29 | 122.70 |
| 7 | c | 48 | LEU | CA-CB-CG | 9.61 | 137.41 | 115.30 |
| 1 | a | 539 | TRP | CA-C-N | 9.59 | 135.37 | 116.20 |
| 7 | c | 97 | GLY | CA-C-N | -9.54 | 97.13 | 116.20 |
| 1 | a | 798 | ARG | NE-CZ-NH1 | 9.34 | 124.97 | 120.30 |
| 1 | a | 447 | ARG | NE-CZ-NH1 | 9.25 | 124.92 | 120.30 |
| 1 | A | 797 | ASP | CB-CG-OD1 | 9.17 | 126.55 | 118.30 |
| 2 | C | 91 | ASP | CB-CG-OD1 | 9.15 | 126.54 | 118.30 |
| 1 | a | 346 | LYS | N-CA-CB | 9.14 | 127.05 | 110.60 |
| 1 | a | 65 | ARG | NE-CZ-NH1 | 9.08 | 124.84 | 120.30 |
| 7 | c | 48 | LEU | CB-CG-CD1 | -9.00 | 95.70 | 111.00 |
| 1 | a | 859 | ASP | CB-CG-OD1 | 8.98 | 126.39 | 118.30 |
| 1 | A | 500 | ASP | CB-CG-OD1 | 8.97 | 126.37 | 118.30 |
| 1 | A | 450 | ARG | NE-CZ-NH1 | 8.89 | 124.74 | 120.30 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 4 | f | 12 | LEU | CB-CG-CD2 | -8.80 | 96.05 | 111.00 |
| 1 | A | 639 | ASN | CB-CA-C | -8.74 | 92.92 | 110.40 |
| 7 | c | 81 | LEU | CA-CB-CG | 8.63 | 135.14 | 115.30 |
| 2 | C | 71 | ARG | NE-CZ-NH1 | 8.55 | 124.58 | 120.30 |
| 1 | a | 450 | ARG | NE-CZ-NH1 | 8.52 | 124.56 | 120.30 |
| 1 | A | 65 | ARG | NE-CZ-NH2 | -8.48 | 116.06 | 120.30 |
| 1 | a | 757 | GLY | N-CA-C | 8.39 | 134.08 | 113.10 |
| 1 | a | 188 | LEU | CA-CB-CG | 8.26 | 134.29 | 115.30 |
| 2 | C | 118 | ARG | NE-CZ-NH2 | -8.16 | 116.22 | 120.30 |
| 3 | E | 18 | LEU | CB-CG-CD2 | 8.15 | 124.85 | 111.00 |
| 1 | A | 739 | MET | CA-CB-CG | 8.11 | 127.08 | 113.30 |
| 1 | a | 539 | TRP | O-C-N | -8.09 | 109.44 | 123.20 |
| 1 | A | 724 | LEU | CA-CB-CG | 7.96 | 133.60 | 115.30 |
| 7 | c | 106 | THR | O-C-N | -7.92 | 110.02 | 122.70 |
| 2 | C | 142 | ASN | N-CA-CB | 7.91 | 124.83 | 110.60 |
| 1 | a | 65 | ARG | NE-CZ-NH2 | -7.83 | 116.38 | 120.30 |
| 1 | A | 135 | GLY | N-CA-C | -7.80 | 93.61 | 113.10 |
| 7 | c | 21 | CYS | N-CA-CB | 7.69 | 124.44 | 110.60 |
| 1 | a | 333 | LEU | CB-CG-CD2 | 7.69 | 124.07 | 111.00 |
| 1 | a | 367 | LEU | CA-CB-CG | -7.68 | 97.63 | 115.30 |
| 1 | A | 108 | ASP | CB-CG-OD1 | 7.65 | 125.18 | 118.30 |
| 2 | C | 202 | ASN | CB-CA-C | 7.63 | 125.66 | 110.40 |
| 7 | c | 26 | ARG | CG-CD-NE | -7.62 | 95.80 | 111.80 |
| 1 | A | 214 | LEU | CA-CB-CG | 7.59 | 132.75 | 115.30 |
| 2 | C | 174 | MET | CG-SD-CE | 7.54 | 112.27 | 100.20 |
| 1 | a | 326 | LEU | CA-CB-CG | 7.53 | 132.61 | 115.30 |
| 3 | E | 31 | ASP | CB-CG-OD1 | 7.52 | 125.07 | 118.30 |
| 2 | C | 193 | LEU | CA-CB-CG | 7.52 | 132.59 | 115.30 |
| 1 | A | 547 | ARG | NE-CZ-NH1 | 7.50 | 124.05 | 120.30 |
| 1 | A | 450 | ARG | NE-CZ-NH2 | -7.43 | 116.58 | 120.30 |
| 2 | C | 141 | THR | CA-C-O | -7.40 | 104.56 | 120.10 |
| 7 | c | 131 | GLY | N-CA-C | 7.40 | 131.60 | 113.10 |
| 1 | A | 13 | ARG | N-CA-C | 7.39 | 130.94 | 111.00 |
| 1 | A | 700 | VAL | CB-CA-C | -7.34 | 97.45 | 111.40 |
| 1 | A | 501 | ARG | CD-NE-CZ | 7.32 | 133.85 | 123.60 |
| 1 | A | 266 | GLU | OE1-CD-OE2 | -7.31 | 114.52 | 123.30 |
| 7 | c | 56 | GLU | OE1-CD-OE2 | -7.31 | 114.52 | 123.30 |
| 1 | a | 364 | GLN | N-CA-CB | -7.23 | 97.58 | 110.60 |
| 1 | a | 333 | LEU | CA-CB-CG | 7.17 | 131.80 | 115.30 |
| 1 | a | 69 | LEU | CA-CB-CG | 7.17 | 131.79 | 115.30 |
| 7 | c | 91 | GLY | C-N-CA | 7.15 | 139.58 | 121.70 |
| 1 | a | 670 | LEU | CA-CB-CG | 7.14 | 131.73 | 115.30 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 638 | SER | CB-CA-C | -7.07 | 96.66 | 110.10 |
| 1 | A | 761 | LEU | CB-CG-CD2 | 7.05 | 122.99 | 111.00 |
| 1 | A | 724 | LEU | CB-CG-CD1 | 7.04 | 122.97 | 111.00 |
| 5 | G | 9 | ILE | CG1-CB-CG2 | -7.02 | 95.96 | 111.40 |
| 7 | c | 102 | ALA | N-CA-CB | 7.01 | 119.92 | 110.10 |
| 1 | a | 266 | GLU | OE1-CD-OE2 | -7.00 | 114.89 | 123.30 |
| 2 | C | 179 | ASN | CA-C-N | 6.97 | 132.54 | 117.20 |
| 7 | c | 106 | THR | CA-C-O | 6.96 | 134.72 | 120.10 |
| 1 | a | 450 | ARG | NE-CZ-NH2 | -6.96 | 116.82 | 120.30 |
| 1 | a | 724 | LEU | CA-CB-CG | 6.93 | 131.25 | 115.30 |
| 1 | a | 742 | ARG | NE-CZ-NH2 | 6.93 | 123.77 | 120.30 |
| 1 | a | 861 | PHE | CB-CA-C | 6.89 | 124.19 | 110.40 |
| 1 | a | 773 | ASP | CB-CG-OD1 | 6.88 | 124.49 | 118.30 |
| 1 | a | 865 | ARG | NE-CZ-NH1 | 6.86 | 123.73 | 120.30 |
| 7 | c | 98 | GLY | C-N-CA | 6.84 | 136.67 | 122.30 |
| 1 | a | 110 | ARG | NE-CZ-NH1 | 6.83 | 123.72 | 120.30 |
| 1 | A | 475 | THR | N-CA-CB | 6.82 | 123.27 | 110.30 |
| 1 | a | 154 | GLY | N-CA-C | -6.82 | 96.06 | 113.10 |
| 1 | A | 167 | GLU | N-CA-CB | -6.79 | 98.38 | 110.60 |
| 1 | a | 26 | ARG | NE-CZ-NH1 | -6.78 | 116.91 | 120.30 |
| 2 | C | 207 | LEU | CB-CG-CD1 | 6.77 | 122.50 | 111.00 |
| 1 | a | 824 | LEU | CB-CG-CD2 | -6.77 | 99.50 | 111.00 |
| 1 | a | 851 | VAL | CA-CB-CG2 | 6.77 | 121.05 | 110.90 |
| 1 | A | 88 | ILE | N-CA-C | 6.68 | 129.04 | 111.00 |
| 1 | A | 798 | ARG | NE-CZ-NH1 | 6.68 | 123.64 | 120.30 |
| 1 | a | 188 | LEU | CB-CG-CD2 | -6.67 | 99.66 | 111.00 |
| 1 | A | 859 | ASP | CB-CG-OD2 | 6.67 | 124.30 | 118.30 |
| 5 | G | 25 | LEU | CB-CG-CD1 | -6.66 | 99.67 | 111.00 |
| 7 | c | 26 | ARG | CD-NE-CZ | 6.64 | 132.90 | 123.60 |
| 3 | E | 34 | ALA | N-CA-CB | 6.63 | 119.39 | 110.10 |
| 2 | C | 141 | THR | N-CA-C | 6.60 | 128.82 | 111.00 |
| 1 | A | 367 | LEU | CB-CG-CD1 | 6.59 | 122.20 | 111.00 |
| 1 | A | 196 | LEU | CB-CG-CD1 | 6.58 | 122.19 | 111.00 |
| 2 | C | 178 | TYR | CB-CG-CD1 | -6.56 | 117.07 | 121.00 |
| 7 | c | 92 | CYS | N-CA-C | -6.55 | 93.31 | 111.00 |
| 2 | C | 71 | ARG | CG-CD-NE | -6.49 | 98.17 | 111.80 |
| 1 | a | 528 | GLU | OE1-CD-OE2 | -6.48 | 115.52 | 123.30 |
| 1 | A | 773 | ASP | CB-CG-OD1 | 6.44 | 124.10 | 118.30 |
| 1 | a | 318 | LEU | CA-CB-CG | 6.42 | 130.06 | 115.30 |
| 1 | A | 740 | MET | CG-SD-CE | 6.41 | 110.45 | 100.20 |
| 7 | c | 20 | GLY | N-CA-C | -6.40 | 97.10 | 113.10 |
| 2 | C | 178 | TYR | CZ-CE2-CD2 | -6.39 | 114.05 | 119.80 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | a | 437 | LEU | CA-CB-CG | 6.38 | 129.97 | 115.30 |
| 1 | a | 303 | VAL | CG1-CB-CG2 | 6.35 | 121.06 | 110.90 |
| 1 | a | 757 | GLY | CA-C-N | 6.35 | 128.89 | 116.20 |
| 1 | A | 333 | LEU | CA-CB-CG | 6.34 | 129.89 | 115.30 |
| 1 | A | 455 | ASP | CB-CG-OD1 | 6.34 | 124.00 | 118.30 |
| 1 | a | 732 | ASP | CB-CG-OD1 | 6.33 | 124.00 | 118.30 |
| 7 | c | 92 | CYS | N-CA-CB | 6.32 | 121.97 | 110.60 |
| 7 | c | 132 | LYS | N-CA-CB | 6.30 | 121.94 | 110.60 |
| 7 | c | 154 | ARG | NE-CZ-NH1 | 6.28 | 123.44 | 120.30 |
| 1 | A | 696 | CYS | CA-CB-SG | 6.23 | 125.22 | 114.00 |
| 1 | A | 851 | VAL | CA-CB-CG1 | 6.20 | 120.20 | 110.90 |
| 7 | c | 54 | LEU | CA-CB-CG | 6.15 | 129.44 | 115.30 |
| 1 | a | 824 | LEU | CA-CB-CG | 6.14 | 129.42 | 115.30 |
| 1 | A | 760 | PHE | CB-CG-CD1 | 6.13 | 125.09 | 120.80 |
| 5 | G | 36 | LEU | CA-CB-CG | 6.12 | 129.38 | 115.30 |
| 2 | C | 218 | GLN | N-CA-CB | -6.11 | 99.60 | 110.60 |
| 7 | c | 106 | THR | N-CA-CB | 6.11 | 121.91 | 110.30 |
| 1 | a | 865 | ARG | NE-CZ-NH2 | -6.11 | 117.25 | 120.30 |
| 1 | A | 206 | LEU | CB-CG-CD1 | 6.10 | 121.37 | 111.00 |
| 1 | A | 96 | LEU | C-N-CA | 6.09 | 147.59 | 122.00 |
| 2 | C | 218 | GLN | N-CA-C | 6.05 | 127.33 | 111.00 |
| 1 | a | 834 | LEU | CA-CB-CG | 6.03 | 129.16 | 115.30 |
| 1 | A | 250 | ASP | CB-CG-OD1 | 6.02 | 123.72 | 118.30 |
| 1 | a | 182 | ASN | C-N-CA | -5.94 | 106.85 | 121.70 |
| 7 | c | 98 | GLY | O-C-N | 5.93 | 133.28 | 123.20 |
| 1 | a | 50 | MET | CG-SD-CE | -5.93 | 90.72 | 100.20 |
| 1 | A | 739 | MET | CG-SD-CE | 5.91 | 109.66 | 100.20 |
| 5 | g | 26 | ILE | N-CA-C | -5.91 | 95.03 | 111.00 |
| 1 | A | 763 | MET | CB-CG-SD | -5.88 | 94.75 | 112.40 |
| 1 | A | 706 | GLY | N-CA-C | 5.88 | 127.79 | 113.10 |
| 1 | a | 339 | ASN | CB-CA-C | 5.87 | 122.14 | 110.40 |
| 1 | A | 688 | ARG | CB-CG-CD | -5.86 | 96.35 | 111.60 |
| 2 | C | 109 | ASP | CB-CG-OD1 | 5.86 | 123.57 | 118.30 |
| 1 | A | 501 | ARG | CG-CD-NE | -5.84 | 99.53 | 111.80 |
| 1 | a | 394 | ARG | CB-CA-C | -5.83 | 98.74 | 110.40 |
| 5 | G | 25 | LEU | CA-CB-CG | 5.83 | 128.70 | 115.30 |
| 1 | a | 299 | ASP | CB-CG-OD1 | 5.79 | 123.51 | 118.30 |
| 1 | a | 798 | ARG | NE-CZ-NH2 | -5.78 | 117.41 | 120.30 |
| 1 | a | 214 | LEU | CA-CB-CG | 5.76 | 128.56 | 115.30 |
| 1 | a | 137 | ARG | CB-CG-CD | -5.76 | 96.64 | 111.60 |
| 1 | A | 333 | LEU | CB-CG-CD2 | 5.75 | 120.78 | 111.00 |
| 1 | a | 367 | LEU | CB-CG-CD2 | 5.75 | 120.77 | 111.00 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 5 | g | 21 | LEU | CA-CB-CG | -5.74 | 102.09 | 115.30 |
| 1 | a | 736 | ILE | CG1-CB-CG2 | 5.73 | 124.01 | 111.40 |
| 1 | A | 758 | GLY | CA-C-N | 5.73 | 129.80 | 117.20 |
| 1 | A | 367 | LEU | CA-CB-CG | -5.73 | 102.13 | 115.30 |
| 1 | a | 326 | LEU | CB-CG-CD1 | 5.72 | 120.73 | 111.00 |
| 1 | A | 167 | GLU | CB-CA-C | -5.71 | 98.97 | 110.40 |
| 1 | A | 813 | ARG | NE-CZ-NH1 | 5.71 | 123.16 | 120.30 |
| 7 | c | 110 | ASP | OD1-CG-OD2 | -5.67 | 112.52 | 123.30 |
| 1 | a | 852 | LEU | CA-CB-CG | 5.67 | 128.34 | 115.30 |
| 1 | a | 797 | ASP | CB-CG-OD1 | 5.65 | 123.38 | 118.30 |
| 1 | A | 196 | LEU | C-N-CA | -5.64 | 107.60 | 121.70 |
| 1 | A | 447 | ARG | NE-CZ-NH1 | 5.64 | 123.12 | 120.30 |
| 5 | G | 44 | LEU | N-CA-CB | -5.63 | 99.14 | 110.40 |
| 1 | a | 851 | VAL | CA-CB-CG1 | 5.62 | 119.32 | 110.90 |
| 1 | A | 66 | LEU | CA-CB-CG | 5.61 | 128.19 | 115.30 |
| 2 | C | 180 | GLN | N-CA-C | 5.59 | 126.11 | 111.00 |
| 7 | c | 122 | MET | CG-SD-CE | -5.57 | 91.28 | 100.20 |
| 1 | a | 364 | GLN | CB-CA-C | 5.56 | 121.52 | 110.40 |
| 1 | a | 337 | ASP | CB-CG-OD1 | 5.55 | 123.30 | 118.30 |
| 1 | A | 65 | ARG | CG-CD-NE | 5.55 | 123.45 | 111.80 |
| 1 | A | 729 | TRP | CA-CB-CG | 5.55 | 124.24 | 113.70 |
| 1 | a | 757 | GLY | CA-C-O | -5.53 | 110.64 | 120.60 |
| 1 | a | 537 | VAL | CB-CA-C | -5.53 | 100.89 | 111.40 |
| 2 | C | 207 | LEU | CA-CB-CG | 5.53 | 128.01 | 115.30 |
| 1 | A | 214 | LEU | CB-CG-CD1 | 5.52 | 120.38 | 111.00 |
| 1 | A | 736 | ILE | CA-CB-CG2 | 5.52 | 121.94 | 110.90 |
| 7 | c | 96 | ASN | CA-C-N | 5.52 | 127.23 | 116.20 |
| 1 | a | 206 | LEU | CA-CB-CG | 5.51 | 127.97 | 115.30 |
| 7 | c | 32 | ARG | NE-CZ-NH1 | -5.51 | 117.54 | 120.30 |
| 1 | a | 336 | ASN | O-C-N | -5.50 | 113.90 | 122.70 |
| 2 | C | 87 | VAL | CA-CB-CG1 | 5.49 | 119.14 | 110.90 |
| 2 | C | 165 | LYS | CB-CA-C | 5.49 | 121.37 | 110.40 |
| 1 | A | 761 | LEU | CB-CG-CD1 | 5.48 | 120.31 | 111.00 |
| 1 | a | 327 | ARG | C-N-CA | -5.46 | 108.06 | 121.70 |
| 1 | A | 326 | LEU | CA-CB-CG | 5.43 | 127.80 | 115.30 |
| 1 | a | 308 | LEU | CB-CG-CD1 | 5.43 | 120.23 | 111.00 |
| 1 | a | 63 | ARG | NE-CZ-NH1 | 5.43 | 123.01 | 120.30 |
| 1 | A | 742 | ARG | NE-CZ-NH2 | 5.42 | 123.01 | 120.30 |
| 1 | a | 454 | MET | CG-SD-CE | 5.42 | 108.87 | 100.20 |
| 1 | a | 801 | ARG | CD-NE-CZ | 5.41 | 131.18 | 123.60 |
| 1 | A | 776 | LEU | CB-CG-CD2 | 5.40 | 120.18 | 111.00 |
| 7 | c | 133 | VAL | CG1-CB-CG2 | -5.38 | 102.28 | 110.90 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | a | 65 | ARG | CG-CD-NE | 5.38 | 123.10 | 111.80 |
| 2 | C | 216 | GLU | CB-CA-C | -5.36 | 99.67 | 110.40 |
| 1 | A | 73 | ASP | CB-CG-OD1 | 5.36 | 123.12 | 118.30 |
| 1 | A | 503 | LEU | CA-CB-CG | 5.35 | 127.61 | 115.30 |
| 1 | A | 309 | THR | OG1-CB-CG2 | -5.35 | 97.69 | 110.00 |
| 1 | A | 732 | ASP | CB-CG-OD2 | 5.34 | 123.11 | 118.30 |
| 1 | A | 687 | TRP | N-CA-C | 5.34 | 125.42 | 111.00 |
| 1 | A | 244 | PHE | N-CA-CB | 5.32 | 120.18 | 110.60 |
| 1 | a | 732 | ASP | CB-CG-OD2 | -5.32 | 113.51 | 118.30 |
| 1 | a | 732 | ASP | N-CA-CB | -5.31 | 101.05 | 110.60 |
| 1 | A | 108 | ASP | CB-CG-OD2 | -5.30 | 113.53 | 118.30 |
| 1 | a | 671 | ARG | NE-CZ-NH1 | 5.30 | 122.95 | 120.30 |
| 1 | a | 781 | LEU | CA-CB-CG | 5.29 | 127.47 | 115.30 |
| 1 | A | 327 | ARG | NE-CZ-NH2 | -5.29 | 117.66 | 120.30 |
| 2 | C | 128 | CYS | CA-CB-SG | 5.29 | 123.51 | 114.00 |
| 1 | A | 698 | GLY | N-CA-C | 5.27 | 126.27 | 113.10 |
| 1 | A | 299 | ASP | CB-CG-OD1 | 5.26 | 123.03 | 118.30 |
| 1 | a | 266 | GLU | CG-CD-OE1 | 5.26 | 128.82 | 118.30 |
| 1 | A | 865 | ARG | NE-CZ-NH2 | 5.26 | 122.93 | 120.30 |
| 1 | A | 147 | TRP | N-CA-C | 5.26 | 125.19 | 111.00 |
| 1 | A | 253 | LEU | CA-CB-CG | 5.26 | 127.39 | 115.30 |
| 1 | A | 447 | ARG | NE-CZ-NH2 | -5.24 | 117.68 | 120.30 |
| 1 | a | 798 | ARG | CG-CD-NE | -5.24 | 100.81 | 111.80 |
| 1 | a | 333 | LEU | CB-CG-CD1 | -5.23 | 102.10 | 111.00 |
| 1 | a | 763 | MET | CA-CB-CG | 5.23 | 122.19 | 113.30 |
| 2 | C | 141 | THR | N-CA-CB | 5.22 | 120.22 | 110.30 |
| 7 | c | 43 | THR | OG1-CB-CG2 | -5.22 | 97.99 | 110.00 |
| 2 | C | 73 | ARG | CB-CA-C | -5.22 | 99.97 | 110.40 |
| 2 | C | 179 | ASN | CB-CA-C | 5.22 | 120.83 | 110.40 |
| 3 | E | 32 | ILE | N-CA-C | -5.21 | 96.92 | 111.00 |
| 3 | e | 24 | PHE | N-CA-C | -5.20 | 96.95 | 111.00 |
| 1 | A | 552 | LEU | CA-CB-CG | 5.20 | 127.27 | 115.30 |
| 7 | c | 19 | THR | N-CA-C | -5.19 | 96.98 | 111.00 |
| 2 | C | 20 | CYS | N-CA-CB | 5.19 | 119.94 | 110.60 |
| 1 | a | 63 | ARG | NE-CZ-NH2 | -5.17 | 117.71 | 120.30 |
| 1 | a | 447 | ARG | NE-CZ-NH2 | -5.16 | 117.72 | 120.30 |
| 1 | a | 698 | GLY | C-N-CD | -5.16 | 109.26 | 120.60 |
| 1 | a | 671 | ARG | NE-CZ-NH2 | -5.14 | 117.73 | 120.30 |
| 1 | a | 490 | LEU | CA-CB-CG | 5.12 | 127.07 | 115.30 |
| 1 | A | 713 | LEU | CB-CG-CD2 | 5.11 | 119.69 | 111.00 |
| 2 | C | 48 | THR | N-CA-C | 5.11 | 124.79 | 111.00 |
| 1 | A | 638 | SER | C-N-CA | 5.11 | 134.46 | 121.70 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | a | 137 | ARG | NE-CZ-NH1 | -5.10 | 117.75 | 120.30 |
| 1 | A | 166 | PRO | C-N-CA | 5.09 | 134.43 | 121.70 |
| 7 | c | 101 | LYS | N-CA-C | -5.09 | 97.25 | 111.00 |
| 1 | a | 759 | VAL | N-CA-C | 5.07 | 124.69 | 111.00 |
| 1 | a | 344 | GLY | C-N-CA | -5.07 | 109.03 | 121.70 |
| 1 | a | 66 | LEU | CA-CB-CG | 5.06 | 126.95 | 115.30 |
| 1 | A | 170 | TRP | N-CA-C | 5.06 | 124.67 | 111.00 |
| 1 | a | 731 | LEU | CB-CG-CD1 | 5.06 | 119.61 | 111.00 |
| 2 | C | 179 | ASN | N-CA-C | -5.06 | 97.34 | 111.00 |
| 7 | c | 98 | GLY | CA-C-N | -5.06 | 106.09 | 116.20 |
| 2 | C | 77 | LEU | CA-CB-CG | 5.05 | 126.91 | 115.30 |
| 1 | A | 90 | GLU | O-C-N | -5.04 | 114.63 | 122.70 |
| 2 | C | 59 | GLN | CB-CA-C | -5.04 | 100.33 | 110.40 |
| 1 | a | 147 | TRP | N-CA-C | 5.03 | 124.58 | 111.00 |
| 1 | a | 651 | ASP | CB-CG-OD2 | 5.03 | 122.82 | 118.30 |
| 7 | c | 131 | GLY | CA-C-O | -5.03 | 111.55 | 120.60 |
| 1 | a | 152 | VAL | N-CA-C | -5.02 | 97.44 | 111.00 |
| 1 | A | 327 | ARG | CD-NE-CZ | 5.01 | 130.61 | 123.60 |

There are no chirality outliers.

All (8) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-----------|
| 1 | A | 639 | ASN | Mainchain |
| 2 | C | 141 | THR | Mainchain |
| 2 | C | 179 | ASN | Mainchain |
| 1 | a | 360 | PHE | Mainchain |
| 1 | a | 698 | GLY | Peptide |
| 1 | a | 92 | SER | Peptide |
| 1 | a | 93 | THR | Peptide |
| 7 | c | 97 | GLY | Mainchain |

5.2 Too-close contacts [i](#)

Due to software issues we are unable to calculate clashes - this section is therefore empty.

5.3 Torsion angles

5.3.1 Protein backbone

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 | A | 852/865 (98%) | 793 (93%) | 41 (5%) | 18 (2%) | 7 | 3 |
| 1 | a | 856/865 (99%) | 798 (93%) | 46 (5%) | 12 (1%) | 11 | 8 |
| 2 | C | 189/221 (86%) | 174 (92%) | 9 (5%) | 6 (3%) | 4 | 1 |
| 3 | E | 33/35 (94%) | 31 (94%) | 2 (6%) | 0 | 100 | 100 |
| 3 | e | 33/35 (94%) | 32 (97%) | 0 | 1 (3%) | 4 | 2 |
| 4 | F | 33/35 (94%) | 31 (94%) | 2 (6%) | 0 | 100 | 100 |
| 4 | f | 33/35 (94%) | 30 (91%) | 2 (6%) | 1 (3%) | 4 | 2 |
| 5 | G | 36/45 (80%) | 32 (89%) | 3 (8%) | 1 (3%) | 5 | 2 |
| 5 | g | 36/45 (80%) | 32 (89%) | 4 (11%) | 0 | 100 | 100 |
| 7 | c | 143/145 (99%) | 127 (89%) | 8 (6%) | 8 (6%) | 2 | 0 |
| All | All | 2244/2326 (96%) | 2080 (93%) | 117 (5%) | 47 (2%) | 10 | 3 |

All (47) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 86 | PRO |
| 1 | A | 97 | PRO |
| 1 | A | 147 | TRP |
| 1 | A | 170 | TRP |
| 1 | A | 346 | LYS |
| 2 | C | 48 | THR |
| 2 | C | 62 | PRO |
| 2 | C | 180 | GLN |
| 2 | C | 203 | GLY |
| 1 | a | 83 | VAL |
| 1 | a | 759 | VAL |
| 7 | c | 99 | GLY |
| 7 | c | 102 | ALA |
| 7 | c | 132 | LYS |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 87 | LEU |
| 1 | A | 136 | ALA |
| 1 | a | 137 | ARG |
| 1 | a | 155 | LEU |
| 1 | a | 346 | LYS |
| 7 | c | 17 | MET |
| 7 | c | 21 | CYS |
| 7 | c | 131 | GLY |
| 1 | A | 688 | ARG |
| 1 | a | 9 | ASN |
| 1 | a | 87 | LEU |
| 7 | c | 92 | CYS |
| 1 | A | 94 | SER |
| 1 | A | 155 | LEU |
| 1 | A | 244 | PHE |
| 1 | A | 476 | ALA |
| 1 | A | 542 | TRP |
| 5 | G | 9 | ILE |
| 1 | a | 147 | TRP |
| 4 | f | 34 | ARG |
| 1 | A | 13 | ARG |
| 1 | A | 96 | LEU |
| 1 | A | 757 | GLY |
| 2 | C | 59 | GLN |
| 2 | C | 217 | ARG |
| 7 | c | 64 | LYS |
| 1 | A | 149 | LEU |
| 1 | A | 696 | CYS |
| 1 | a | 529 | TRP |
| 1 | a | 540 | GLY |
| 1 | a | 757 | GLY |
| 1 | a | 149 | LEU |
| 3 | e | 22 | ILE |

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 | A | 718/726 (99%) | 589 (82%) | 129 (18%) | 1 | 1 |
| 1 | a | 720/726 (99%) | 585 (81%) | 135 (19%) | 1 | 1 |
| 2 | C | 155/180 (86%) | 127 (82%) | 28 (18%) | 1 | 1 |
| 3 | E | 25/25 (100%) | 23 (92%) | 2 (8%) | 12 | 11 |
| 3 | e | 25/25 (100%) | 18 (72%) | 7 (28%) | 0 | 0 |
| 4 | F | 31/31 (100%) | 25 (81%) | 6 (19%) | 1 | 1 |
| 4 | f | 31/31 (100%) | 26 (84%) | 5 (16%) | 2 | 1 |
| 5 | G | 31/36 (86%) | 25 (81%) | 6 (19%) | 1 | 1 |
| 5 | g | 31/36 (86%) | 22 (71%) | 9 (29%) | 0 | 0 |
| 7 | c | 112/112 (100%) | 91 (81%) | 21 (19%) | 1 | 1 |
| All | All | 1879/1928 (98%) | 1531 (82%) | 348 (18%) | 4 | 1 |

All (348) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 12 | LYS |
| 1 | A | 13 | ARG |
| 1 | A | 14 | TRP |
| 1 | A | 15 | TYR |
| 1 | A | 17 | LYS |
| 1 | A | 18 | LEU |
| 1 | A | 52 | MET |
| 1 | A | 59 | ASN |
| 1 | A | 60 | LEU |
| 1 | A | 61 | THR |
| 1 | A | 65 | ARG |
| 1 | A | 66 | LEU |
| 1 | A | 69 | LEU |
| 1 | A | 77 | THR |
| 1 | A | 81 | GLN |
| 1 | A | 82 | ARG |
| 1 | A | 84 | TRP |
| 1 | A | 85 | LEU |
| 1 | A | 88 | ILE |
| 1 | A | 90 | GLU |
| 1 | A | 93 | THR |
| 1 | A | 95 | LYS |
| 1 | A | 96 | LEU |
| 1 | A | 101 | GLN |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 107 | THR |
| 1 | A | 141 | THR |
| 1 | A | 144 | GLU |
| 1 | A | 147 | TRP |
| 1 | A | 148 | LEU |
| 1 | A | 149 | LEU |
| 1 | A | 159 | CYS |
| 1 | A | 161 | ILE |
| 1 | A | 175 | LEU |
| 1 | A | 183 | THR |
| 1 | A | 188 | LEU |
| 1 | A | 200 | THR |
| 1 | A | 203 | ILE |
| 1 | A | 205 | LEU |
| 1 | A | 206 | LEU |
| 1 | A | 214 | LEU |
| 1 | A | 218 | LEU |
| 1 | A | 224 | PRO |
| 1 | A | 240 | GLU |
| 1 | A | 254 | ASN |
| 1 | A | 263 | ILE |
| 1 | A | 267 | THR |
| 1 | A | 268 | THR |
| 1 | A | 276 | LEU |
| 1 | A | 290 | ARG |
| 1 | A | 294 | ILE |
| 1 | A | 301 | LYS |
| 1 | A | 303 | VAL |
| 1 | A | 318 | LEU |
| 1 | A | 326 | LEU |
| 1 | A | 331 | SER |
| 1 | A | 333 | LEU |
| 1 | A | 334 | MET |
| 1 | A | 335 | LEU |
| 1 | A | 339 | ASN |
| 1 | A | 345 | LYS |
| 1 | A | 352 | ARG |
| 1 | A | 359 | THR |
| 1 | A | 381 | LEU |
| 1 | A | 386 | ILE |
| 1 | A | 387 | SER |
| 1 | A | 391 | LYS |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 408 | THR |
| 1 | A | 413 | THR |
| 1 | A | 414 | THR |
| 1 | A | 433 | THR |
| 1 | A | 450 | ARG |
| 1 | A | 467 | ARG |
| 1 | A | 473 | ASP |
| 1 | A | 475 | THR |
| 1 | A | 479 | ASP |
| 1 | A | 489 | LYS |
| 1 | A | 490 | LEU |
| 1 | A | 494 | ARG |
| 1 | A | 496 | LEU |
| 1 | A | 497 | GLN |
| 1 | A | 501 | ARG |
| 1 | A | 503 | LEU |
| 1 | A | 518 | THR |
| 1 | A | 534 | LEU |
| 1 | A | 552 | LEU |
| 1 | A | 556 | ASP |
| 1 | A | 562 | LEU |
| 1 | A | 567 | THR |
| 1 | A | 572 | ARG |
| 1 | A | 583 | LEU |
| 1 | A | 588 | LEU |
| 1 | A | 601 | LYS |
| 1 | A | 602 | GLN |
| 1 | A | 608 | LEU |
| 1 | A | 612 | ARG |
| 1 | A | 617 | LYS |
| 1 | A | 621 | ASN |
| 1 | A | 624 | GLU |
| 1 | A | 638 | SER |
| 1 | A | 640 | LEU |
| 1 | A | 653 | ILE |
| 1 | A | 657 | LEU |
| 1 | A | 669 | LEU |
| 1 | A | 670 | LEU |
| 1 | A | 684 | ASP |
| 1 | A | 688 | ARG |
| 1 | A | 690 | GLN |
| 1 | A | 700 | VAL |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 716 | CYS |
| 1 | A | 724 | LEU |
| 1 | A | 736 | ILE |
| 1 | A | 768 | THR |
| 1 | A | 771 | TRP |
| 1 | A | 777 | THR |
| 1 | A | 781 | LEU |
| 1 | A | 790 | SER |
| 1 | A | 798 | ARG |
| 1 | A | 800 | SER |
| 1 | A | 819 | LEU |
| 1 | A | 823 | THR |
| 1 | A | 824 | LEU |
| 1 | A | 826 | GLU |
| 1 | A | 828 | ARG |
| 1 | A | 832 | SER |
| 1 | A | 833 | ASN |
| 1 | A | 836 | THR |
| 1 | A | 847 | THR |
| 1 | A | 849 | THR |
| 1 | A | 851 | VAL |
| 2 | C | 24 | SER |
| 2 | C | 28 | ASN |
| 2 | C | 30 | THR |
| 2 | C | 46 | LEU |
| 2 | C | 47 | LYS |
| 2 | C | 61 | THR |
| 2 | C | 65 | ARG |
| 2 | C | 71 | ARG |
| 2 | C | 75 | THR |
| 2 | C | 77 | LEU |
| 2 | C | 82 | VAL |
| 2 | C | 85 | GLN |
| 2 | C | 87 | VAL |
| 2 | C | 99 | VAL |
| 2 | C | 116 | GLU |
| 2 | C | 118 | ARG |
| 2 | C | 139 | ARG |
| 2 | C | 150 | GLU |
| 2 | C | 153 | SER |
| 2 | C | 174 | MET |
| 2 | C | 180 | GLN |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | C | 182 | SER |
| 2 | C | 193 | LEU |
| 2 | C | 194 | ARG |
| 2 | C | 200 | GLN |
| 2 | C | 204 | LEU |
| 2 | C | 217 | ARG |
| 2 | C | 218 | GLN |
| 3 | E | 18 | LEU |
| 3 | E | 31 | ASP |
| 4 | F | 1 | MET |
| 4 | F | 2 | TRP |
| 4 | F | 12 | LEU |
| 4 | F | 32 | LEU |
| 4 | F | 33 | SER |
| 4 | F | 34 | ARG |
| 5 | G | 11 | LYS |
| 5 | G | 14 | TRP |
| 5 | G | 20 | LEU |
| 5 | G | 21 | LEU |
| 5 | G | 44 | LEU |
| 5 | G | 45 | ASN |
| 1 | a | 11 | VAL |
| 1 | a | 13 | ARG |
| 1 | a | 18 | LEU |
| 1 | a | 20 | LEU |
| 1 | a | 26 | ARG |
| 1 | a | 59 | ASN |
| 1 | a | 60 | LEU |
| 1 | a | 61 | THR |
| 1 | a | 65 | ARG |
| 1 | a | 66 | LEU |
| 1 | a | 69 | LEU |
| 1 | a | 79 | GLN |
| 1 | a | 81 | GLN |
| 1 | a | 82 | ARG |
| 1 | a | 83 | VAL |
| 1 | a | 84 | TRP |
| 1 | a | 85 | LEU |
| 1 | a | 87 | LEU |
| 1 | a | 88 | ILE |
| 1 | a | 91 | PHE |
| 1 | a | 94 | SER |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | a | 95 | LYS |
| 1 | a | 98 | PHE |
| 1 | a | 106 | MET |
| 1 | a | 107 | THR |
| 1 | a | 123 | LEU |
| 1 | a | 124 | TRP |
| 1 | a | 125 | LEU |
| 1 | a | 147 | TRP |
| 1 | a | 148 | LEU |
| 1 | a | 149 | LEU |
| 1 | a | 151 | TYR |
| 1 | a | 155 | LEU |
| 1 | a | 156 | LYS |
| 1 | a | 158 | LEU |
| 1 | a | 160 | GLN |
| 1 | a | 161 | ILE |
| 1 | a | 172 | LYS |
| 1 | a | 183 | THR |
| 1 | a | 187 | ILE |
| 1 | a | 189 | ARG |
| 1 | a | 200 | THR |
| 1 | a | 205 | LEU |
| 1 | a | 206 | LEU |
| 1 | a | 214 | LEU |
| 1 | a | 218 | LEU |
| 1 | a | 225 | LEU |
| 1 | a | 240 | GLU |
| 1 | a | 241 | GLN |
| 1 | a | 244 | PHE |
| 1 | a | 253 | LEU |
| 1 | a | 263 | ILE |
| 1 | a | 267 | THR |
| 1 | a | 268 | THR |
| 1 | a | 276 | LEU |
| 1 | a | 287 | ARG |
| 1 | a | 290 | ARG |
| 1 | a | 292 | ILE |
| 1 | a | 294 | ILE |
| 1 | a | 297 | LEU |
| 1 | a | 303 | VAL |
| 1 | a | 309 | THR |
| 1 | a | 318 | LEU |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | a | 326 | LEU |
| 1 | a | 333 | LEU |
| 1 | a | 359 | THR |
| 1 | a | 381 | LEU |
| 1 | a | 386 | ILE |
| 1 | a | 391 | LYS |
| 1 | a | 392 | GLN |
| 1 | a | 408 | THR |
| 1 | a | 413 | THR |
| 1 | a | 433 | THR |
| 1 | a | 448 | SER |
| 1 | a | 450 | ARG |
| 1 | a | 467 | ARG |
| 1 | a | 469 | LYS |
| 1 | a | 472 | TRP |
| 1 | a | 482 | LYS |
| 1 | a | 490 | LEU |
| 1 | a | 492 | LYS |
| 1 | a | 496 | LEU |
| 1 | a | 497 | GLN |
| 1 | a | 501 | ARG |
| 1 | a | 503 | LEU |
| 1 | a | 514 | THR |
| 1 | a | 516 | SER |
| 1 | a | 518 | THR |
| 1 | a | 534 | LEU |
| 1 | a | 552 | LEU |
| 1 | a | 562 | LEU |
| 1 | a | 566 | LYS |
| 1 | a | 567 | THR |
| 1 | a | 569 | GLU |
| 1 | a | 576 | GLU |
| 1 | a | 583 | LEU |
| 1 | a | 584 | LYS |
| 1 | a | 587 | SER |
| 1 | a | 588 | LEU |
| 1 | a | 602 | GLN |
| 1 | a | 617 | LYS |
| 1 | a | 621 | ASN |
| 1 | a | 622 | MET |
| 1 | a | 623 | LEU |
| 1 | a | 624 | GLU |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | a | 628 | ARG |
| 1 | a | 640 | LEU |
| 1 | a | 641 | ARG |
| 1 | a | 657 | LEU |
| 1 | a | 669 | LEU |
| 1 | a | 670 | LEU |
| 1 | a | 705 | CYS |
| 1 | a | 709 | ILE |
| 1 | a | 724 | LEU |
| 1 | a | 729 | TRP |
| 1 | a | 736 | ILE |
| 1 | a | 761 | LEU |
| 1 | a | 768 | THR |
| 1 | a | 777 | THR |
| 1 | a | 781 | LEU |
| 1 | a | 788 | PHE |
| 1 | a | 798 | ARG |
| 1 | a | 815 | MET |
| 1 | a | 819 | LEU |
| 1 | a | 822 | LYS |
| 1 | a | 823 | THR |
| 1 | a | 826 | GLU |
| 1 | a | 828 | ARG |
| 1 | a | 833 | ASN |
| 1 | a | 836 | THR |
| 1 | a | 847 | THR |
| 1 | a | 849 | THR |
| 1 | a | 851 | VAL |
| 1 | a | 864 | ASN |
| 1 | a | 865 | ARG |
| 7 | c | 17 | MET |
| 7 | c | 21 | CYS |
| 7 | c | 30 | GLU |
| 7 | c | 33 | LEU |
| 7 | c | 43 | THR |
| 7 | c | 48 | LEU |
| 7 | c | 50 | GLU |
| 7 | c | 54 | LEU |
| 7 | c | 62 | LEU |
| 7 | c | 64 | LYS |
| 7 | c | 92 | CYS |
| 7 | c | 96 | ASN |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 7 | c | 100 | ASN |
| 7 | c | 103 | ILE |
| 7 | c | 106 | THR |
| 7 | c | 110 | ASP |
| 7 | c | 122 | MET |
| 7 | c | 133 | VAL |
| 7 | c | 140 | LYS |
| 7 | c | 144 | GLN |
| 7 | c | 159 | LYS |
| 3 | e | 2 | THR |
| 3 | e | 5 | LEU |
| 3 | e | 6 | LEU |
| 3 | e | 28 | ASN |
| 3 | e | 30 | LYS |
| 3 | e | 31 | ASP |
| 3 | e | 32 | ILE |
| 4 | f | 1 | MET |
| 4 | f | 10 | SER |
| 4 | f | 28 | VAL |
| 4 | f | 30 | HIS |
| 4 | f | 34 | ARG |
| 5 | g | 8 | ASP |
| 5 | g | 9 | ILE |
| 5 | g | 10 | SER |
| 5 | g | 11 | LYS |
| 5 | g | 20 | LEU |
| 5 | g | 25 | LEU |
| 5 | g | 26 | ILE |
| 5 | g | 40 | MET |
| 5 | g | 45 | ASN |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (62) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 59 | ASN |
| 1 | A | 79 | GLN |
| 1 | A | 81 | GLN |
| 1 | A | 101 | GLN |
| 1 | A | 229 | GLN |
| 1 | A | 241 | GLN |
| 1 | A | 255 | GLN |
| 1 | A | 296 | HIS |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | A | 339 | ASN |
| 1 | A | 364 | GLN |
| 1 | A | 445 | GLN |
| 1 | A | 470 | ASN |
| 1 | A | 483 | ASN |
| 1 | A | 531 | GLN |
| 1 | A | 538 | GLN |
| 1 | A | 550 | ASN |
| 1 | A | 565 | GLN |
| 1 | A | 602 | GLN |
| 1 | A | 619 | HIS |
| 1 | A | 639 | ASN |
| 1 | A | 643 | GLN |
| 1 | A | 755 | HIS |
| 1 | A | 765 | ASN |
| 1 | A | 808 | GLN |
| 1 | A | 825 | GLN |
| 1 | A | 833 | ASN |
| 2 | C | 40 | GLN |
| 2 | C | 59 | GLN |
| 2 | C | 85 | GLN |
| 2 | C | 136 | ASN |
| 2 | C | 149 | GLN |
| 2 | C | 169 | ASN |
| 2 | C | 185 | GLN |
| 2 | C | 200 | GLN |
| 3 | E | 35 | ASN |
| 1 | a | 16 | GLN |
| 1 | a | 59 | ASN |
| 1 | a | 81 | GLN |
| 1 | a | 382 | HIS |
| 1 | a | 445 | GLN |
| 1 | a | 531 | GLN |
| 1 | a | 538 | GLN |
| 1 | a | 550 | ASN |
| 1 | a | 602 | GLN |
| 1 | a | 619 | HIS |
| 1 | a | 621 | ASN |
| 1 | a | 626 | ASN |
| 1 | a | 643 | GLN |
| 1 | a | 744 | ASN |
| 1 | a | 755 | HIS |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | a | 765 | ASN |
| 1 | a | 825 | GLN |
| 1 | a | 833 | ASN |
| 1 | a | 864 | ASN |
| 7 | c | 52 | GLN |
| 7 | c | 82 | GLN |
| 7 | c | 96 | ASN |
| 7 | c | 100 | ASN |
| 7 | c | 109 | GLN |
| 7 | c | 144 | GLN |
| 7 | c | 145 | GLN |
| 4 | f | 30 | 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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 79 ligands modelled in this entry, 2 are monoatomic and 32 are unknown - leaving 45 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 | $\# Z > 2$ |
| 11 | LYC | c | 201 | - | 39,39,39 | 1.65 | 9 (23%) | 44,46,46 | 5.75 | 28 (63%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 9 | BCL | a | 905 | - | 58,74,74 | 2.38 | 14 (24%) | 69,115,115 | 3.54 | 27 (39%) |
| 9 | BCL | a | 911 | - | 58,74,74 | 2.51 | 16 (27%) | 69,115,115 | 3.04 | 30 (43%) |
| 10 | CLA | a | 915 | - | 51,59,73 | 2.93 | 17 (33%) | 59,96,113 | 3.55 | 34 (57%) |
| 10 | CLA | A | 911 | - | 65,73,73 | 2.62 | 21 (32%) | 76,113,113 | 3.33 | 29 (38%) |
| 9 | BCL | a | 910 | - | 58,74,74 | 3.12 | 15 (25%) | 69,115,115 | 4.29 | 33 (47%) |
| 10 | CLA | a | 912 | 19 | 65,73,73 | 2.79 | 17 (26%) | 76,113,113 | 3.24 | 38 (50%) |
| 9 | BCL | A | 909 | - | 58,74,74 | 2.96 | 22 (37%) | 69,115,115 | 4.47 | 34 (49%) |
| 10 | CLA | A | 910 | - | 65,73,73 | 2.53 | 19 (29%) | 76,113,113 | 3.59 | 36 (47%) |
| 13 | 85I | a | 918 | - | 43,44,44 | 1.06 | 2 (4%) | 47,51,51 | 1.69 | 4 (8%) |
| 15 | 85N | g | 101 | - | 36,37,46 | 0.79 | 1 (2%) | 40,45,55 | 0.58 | 0 |
| 9 | BCL | a | 908 | 1 | 58,74,74 | 2.44 | 20 (34%) | 69,115,115 | 4.44 | 31 (44%) |
| 10 | CLA | A | 931 | - | 65,73,73 | 3.13 | 25 (38%) | 76,113,113 | 4.31 | 38 (50%) |
| 8 | 2GO | A | 901 | 1 | 65,74,74 | 3.56 | 18 (27%) | 76,115,115 | 3.49 | 29 (38%) |
| 9 | BCL | a | 909 | - | 58,74,74 | 2.20 | 19 (32%) | 69,115,115 | 3.75 | 21 (30%) |
| 10 | CLA | A | 912 | - | 46,54,73 | 2.75 | 15 (32%) | 53,90,113 | 4.13 | 29 (54%) |
| 9 | BCL | a | 907 | - | 58,74,74 | 1.94 | 18 (31%) | 69,115,115 | 3.75 | 24 (34%) |
| 9 | BCL | A | 908 | - | 58,74,74 | 2.33 | 23 (39%) | 69,115,115 | 2.64 | 24 (34%) |
| 9 | BCL | a | 904 | - | 58,74,74 | 2.22 | 14 (24%) | 69,115,115 | 3.26 | 21 (30%) |
| 10 | CLA | A | 933 | - | 51,59,73 | 2.87 | 18 (35%) | 59,96,113 | 3.90 | 32 (54%) |
| 10 | CLA | a | 913 | - | 65,73,73 | 2.61 | 20 (30%) | 76,113,113 | 4.02 | 34 (44%) |
| 9 | BCL | A | 907 | - | 53,69,74 | 3.09 | 23 (43%) | 63,109,115 | 4.62 | 34 (53%) |
| 10 | CLA | a | 914 | - | 46,54,73 | 2.87 | 19 (41%) | 53,90,113 | 3.60 | 27 (50%) |
| 13 | 85I | A | 915 | - | 43,44,44 | 2.29 | 10 (23%) | 47,51,51 | 2.44 | 7 (14%) |
| 16 | HEC | C | 301 | 2 | 32,50,50 | 2.95 | 17 (53%) | 24,82,82 | 3.50 | 12 (50%) |
| 9 | BCL | A | 902 | - | 58,74,74 | 2.34 | 18 (31%) | 69,115,115 | 3.27 | 29 (42%) |
| 13 | 85I | A | 916 | - | 43,44,44 | 2.22 | 3 (6%) | 47,51,51 | 1.93 | 6 (12%) |
| 8 | 2GO | a | 903 | 1 | 65,74,74 | 3.45 | 20 (30%) | 76,115,115 | 3.40 | 28 (36%) |
| 15 | 85N | a | 902 | - | 45,46,46 | 0.59 | 0 | 50,55,55 | 0.42 | 0 |
| 9 | BCL | A | 906 | 1 | 44,60,74 | 2.27 | 9 (20%) | 52,98,115 | 4.24 | 19 (36%) |
| 10 | CLA | a | 901 | 19 | 65,73,73 | 2.67 | 21 (32%) | 76,113,113 | 3.57 | 32 (42%) |
| 13 | 85I | a | 920 | - | 43,44,44 | 2.21 | 2 (4%) | 47,51,51 | 2.04 | 3 (6%) |
| 11 | LYC | A | 913 | - | 39,39,39 | 2.05 | 11 (28%) | 44,46,46 | 2.49 | 18 (40%) |
| 9 | BCL | A | 904 | - | 38,54,74 | 2.32 | 16 (42%) | 45,91,115 | 2.92 | 22 (48%) |
| 16 | HEC | c | 202 | 7 | 32,50,50 | 2.84 | 14 (43%) | 24,82,82 | 3.87 | 11 (45%) |
| 9 | BCL | A | 903 | - | 58,74,74 | 2.60 | 18 (31%) | 69,115,115 | 3.70 | 25 (36%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 18 | SF4 | a | 917 | 1 | 0,12,12 | - | - | - | | |
| 9 | BCL | a | 906 | - | 38,54,74 | 2.51 | 15 (39%) | 45,91,115 | 2.77 | 21 (46%) |
| 17 | 84Q | E | 101 | - | 42,43,43 | 2.09 | 10 (23%) | 47,50,50 | 1.90 | 8 (17%) |
| 13 | 85I | a | 919 | - | 43,44,44 | 1.41 | 2 (4%) | 47,51,51 | 1.66 | 3 (6%) |
| 13 | 85I | A | 917 | - | 43,44,44 | 1.57 | 2 (4%) | 47,51,51 | 2.42 | 3 (6%) |
| 15 | 85N | A | 932 | - | 45,46,46 | 1.04 | 1 (2%) | 50,55,55 | 1.82 | 4 (8%) |
| 15 | 85N | G | 101 | - | 36,37,46 | 0.72 | 0 | 40,45,55 | 0.77 | 2 (5%) |
| 17 | 84Q | a | 921 | - | 42,43,43 | 1.35 | 2 (4%) | 47,50,50 | 1.04 | 2 (4%) |
| 9 | BCL | A | 905 | - | 58,74,74 | 2.41 | 17 (29%) | 69,115,115 | 3.43 | 26 (37%) |

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 |
|-----|------|-------|-----|------|-----------|---------------|-------|
| 11 | LYC | c | 201 | - | - | 16/43/43/43 | - |
| 9 | BCL | a | 905 | - | - | 17/37/137/137 | - |
| 9 | BCL | a | 911 | - | - | 5/37/137/137 | - |
| 10 | CLA | a | 915 | - | - | 7/21/99/115 | - |
| 10 | CLA | A | 911 | - | 1/1/15/20 | 11/37/115/115 | - |
| 9 | BCL | a | 910 | - | - | 11/37/137/137 | - |
| 10 | CLA | a | 912 | 19 | - | 12/37/115/115 | - |
| 9 | BCL | A | 909 | - | - | 12/37/137/137 | - |
| 10 | CLA | A | 910 | - | 1/1/15/20 | 9/37/115/115 | - |
| 13 | 85I | a | 918 | - | - | 21/47/48/48 | - |
| 15 | 85N | g | 101 | - | - | 19/42/42/51 | - |
| 9 | BCL | a | 908 | 1 | - | 20/37/137/137 | - |
| 10 | CLA | A | 931 | - | - | 18/37/115/115 | - |
| 8 | 2GO | A | 901 | 1 | - | 4/37/97/97 | - |
| 9 | BCL | a | 909 | - | - | 13/37/137/137 | - |
| 10 | CLA | A | 912 | - | - | 2/15/93/115 | - |
| 9 | BCL | a | 907 | - | - | 12/37/137/137 | - |
| 9 | BCL | A | 908 | - | - | 14/37/137/137 | - |
| 9 | BCL | a | 904 | - | - | 12/37/137/137 | - |
| 10 | CLA | A | 933 | - | - | 4/21/99/115 | - |

Continued on next page...

Continued from previous page...

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|---------|---------------|---------|
| 10 | CLA | a | 913 | - | - | 11/37/115/115 | - |
| 9 | BCL | A | 907 | - | - | 16/31/131/137 | - |
| 10 | CLA | a | 914 | - | - | 4/15/93/115 | - |
| 13 | 85I | A | 915 | - | - | 19/47/48/48 | - |
| 16 | HEC | C | 301 | 2 | - | 3/10/54/54 | - |
| 9 | BCL | A | 902 | - | - | 16/37/137/137 | - |
| 13 | 85I | A | 916 | - | - | 27/47/48/48 | - |
| 8 | 2GO | a | 903 | 1 | - | 9/37/97/97 | - |
| 15 | 85N | a | 902 | - | - | 25/51/51/51 | - |
| 9 | BCL | A | 906 | 1 | - | 6/21/121/137 | - |
| 10 | CLA | a | 901 | 19 | - | 24/37/115/115 | - |
| 13 | 85I | a | 920 | - | - | 30/47/48/48 | - |
| 11 | LYC | A | 913 | - | - | 1/43/43/43 | - |
| 9 | BCL | A | 904 | - | - | 6/13/113/137 | - |
| 16 | HEC | c | 202 | 7 | - | 3/10/54/54 | - |
| 9 | BCL | A | 903 | - | - | 21/37/137/137 | - |
| 18 | SF4 | a | 917 | 1 | - | - | 0/6/5/5 |
| 9 | BCL | a | 906 | - | - | 6/13/113/137 | - |
| 17 | 84Q | E | 101 | - | - | 27/46/47/47 | - |
| 13 | 85I | a | 919 | - | - | 36/47/48/48 | - |
| 13 | 85I | A | 917 | - | - | 29/47/48/48 | - |
| 15 | 85N | A | 932 | - | - | 18/51/51/51 | - |
| 15 | 85N | G | 101 | - | - | 18/42/42/51 | - |
| 17 | 84Q | a | 921 | - | - | 32/46/47/47 | - |
| 9 | BCL | A | 905 | - | - | 16/37/137/137 | - |

All (593) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 9 | a | 910 | BCL | C4B-NB | -15.63 | 1.21 | 1.35 |
| 8 | A | 901 | 2GO | C4D-ND | -14.69 | 1.18 | 1.37 |
| 8 | A | 901 | 2GO | C2A-C3A | 14.62 | 1.67 | 1.36 |
| 13 | a | 920 | 85I | O6-C3 | -14.01 | 1.20 | 1.44 |
| 8 | a | 903 | 2GO | C3C-C2C | 11.91 | 1.62 | 1.36 |
| 10 | A | 931 | CLA | C4B-NB | -11.70 | 1.24 | 1.35 |
| 9 | A | 909 | BCL | C4B-NB | -10.85 | 1.25 | 1.35 |
| 9 | A | 903 | BCL | C4B-NB | -10.35 | 1.26 | 1.35 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 10 | a | 912 | CLA | C3D-C4D | -10.25 | 1.21 | 1.44 |
| 13 | A | 915 | 85I | C4-C3 | -9.76 | 1.29 | 1.51 |
| 9 | A | 907 | BCL | C1B-NB | -9.46 | 1.26 | 1.35 |
| 13 | A | 916 | 85I | P-O3 | 9.38 | 1.85 | 1.60 |
| 10 | A | 912 | CLA | C4B-NB | -9.38 | 1.26 | 1.35 |
| 10 | A | 933 | CLA | C4B-NB | -9.35 | 1.26 | 1.35 |
| 9 | a | 910 | BCL | C1B-NB | -9.31 | 1.26 | 1.35 |
| 8 | a | 903 | 2GO | C1D-ND | -9.20 | 1.25 | 1.37 |
| 10 | a | 913 | CLA | C4B-NB | -9.19 | 1.27 | 1.35 |
| 8 | a | 903 | 2GO | C4D-ND | -9.11 | 1.25 | 1.37 |
| 10 | a | 914 | CLA | C3D-C4D | -8.99 | 1.23 | 1.44 |
| 10 | A | 931 | CLA | C3D-C4D | -8.88 | 1.24 | 1.44 |
| 10 | a | 915 | CLA | C1B-NB | -8.86 | 1.27 | 1.35 |
| 8 | a | 903 | 2GO | C4B-NB | 8.82 | 1.48 | 1.35 |
| 10 | A | 911 | CLA | C1D-ND | 8.78 | 1.48 | 1.37 |
| 9 | A | 907 | BCL | O2A-CGA | 8.61 | 1.58 | 1.33 |
| 10 | A | 910 | CLA | C3D-C4D | -8.60 | 1.24 | 1.44 |
| 10 | A | 910 | CLA | C1B-NB | -8.60 | 1.27 | 1.35 |
| 17 | E | 101 | 84Q | P-O4 | 8.60 | 1.83 | 1.60 |
| 8 | a | 903 | 2GO | OBD-CAD | -8.51 | 1.09 | 1.33 |
| 13 | A | 916 | 85I | C4-C3 | 8.49 | 1.71 | 1.51 |
| 8 | A | 901 | 2GO | C3C-C2C | 8.42 | 1.54 | 1.36 |
| 9 | a | 905 | BCL | C4B-NB | -8.42 | 1.27 | 1.35 |
| 10 | A | 912 | CLA | C3D-C4D | -8.42 | 1.25 | 1.44 |
| 10 | A | 933 | CLA | C3D-C4D | -8.34 | 1.25 | 1.44 |
| 10 | A | 933 | CLA | C4D-ND | -8.22 | 1.26 | 1.37 |
| 10 | a | 901 | CLA | C1C-NC | -8.21 | 1.25 | 1.37 |
| 9 | a | 911 | BCL | C4B-NB | -8.20 | 1.27 | 1.35 |
| 10 | A | 931 | CLA | O1D-CGD | -8.18 | 1.00 | 1.21 |
| 8 | a | 903 | 2GO | C2A-C3A | 8.03 | 1.53 | 1.36 |
| 9 | A | 905 | BCL | CAA-C2A | -8.02 | 1.39 | 1.54 |
| 9 | a | 911 | BCL | C1B-NB | -7.99 | 1.28 | 1.35 |
| 10 | A | 910 | CLA | C4B-NB | -7.98 | 1.28 | 1.35 |
| 9 | A | 907 | BCL | C4B-NB | -7.93 | 1.28 | 1.35 |
| 10 | a | 913 | CLA | C1B-NB | -7.91 | 1.28 | 1.35 |
| 17 | a | 921 | 84Q | O2-C16 | -7.91 | 1.31 | 1.44 |
| 9 | A | 909 | BCL | C1B-NB | -7.90 | 1.28 | 1.35 |
| 13 | a | 919 | 85I | O6-C3 | 7.86 | 1.58 | 1.44 |
| 9 | A | 908 | BCL | C4B-NB | -7.84 | 1.28 | 1.35 |
| 10 | a | 915 | CLA | C3D-C4D | -7.83 | 1.26 | 1.44 |
| 8 | A | 901 | 2GO | OBD-CAD | -7.79 | 1.11 | 1.33 |
| 10 | a | 901 | CLA | C1B-NB | -7.75 | 1.28 | 1.35 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 10 | a | 901 | CLA | C3D-C4D | -7.69 | 1.26 | 1.44 |
| 8 | A | 901 | 2GO | C1A-NA | -7.63 | 1.22 | 1.38 |
| 10 | a | 914 | CLA | C1B-NB | -7.57 | 1.28 | 1.35 |
| 10 | A | 911 | CLA | C1C-NC | -7.54 | 1.26 | 1.37 |
| 10 | a | 914 | CLA | C4B-NB | -7.51 | 1.28 | 1.35 |
| 9 | a | 904 | BCL | C3C-C4C | -7.35 | 1.42 | 1.51 |
| 10 | a | 901 | CLA | C4B-NB | -7.32 | 1.28 | 1.35 |
| 8 | a | 903 | 2GO | C1A-NA | -7.29 | 1.23 | 1.38 |
| 9 | a | 908 | BCL | CAA-C2A | -7.26 | 1.40 | 1.54 |
| 9 | A | 902 | BCL | C1B-NB | -7.15 | 1.28 | 1.35 |
| 13 | A | 917 | 85I | C4-C3 | 7.10 | 1.68 | 1.51 |
| 10 | a | 915 | CLA | CHC-C1C | 7.10 | 1.53 | 1.35 |
| 10 | a | 912 | CLA | C1C-NC | -7.05 | 1.27 | 1.37 |
| 9 | A | 902 | BCL | C4B-NB | -7.00 | 1.29 | 1.35 |
| 10 | a | 912 | CLA | C9-C8 | -6.98 | 1.30 | 1.52 |
| 13 | A | 917 | 85I | O6-C3 | -6.87 | 1.32 | 1.44 |
| 10 | A | 911 | CLA | C3D-C4D | -6.81 | 1.28 | 1.44 |
| 16 | c | 202 | HEC | O2A-CGA | -6.79 | 1.07 | 1.30 |
| 9 | a | 910 | BCL | C3C-C4C | -6.75 | 1.43 | 1.51 |
| 11 | A | 913 | LYC | C14-C12 | -6.69 | 1.26 | 1.35 |
| 10 | a | 913 | CLA | C3D-C4D | -6.68 | 1.29 | 1.44 |
| 10 | A | 931 | CLA | C1D-ND | 6.61 | 1.45 | 1.37 |
| 9 | A | 909 | BCL | O1A-CGA | -6.61 | 1.02 | 1.22 |
| 9 | A | 907 | BCL | O1D-CGD | -6.50 | 1.04 | 1.21 |
| 10 | a | 915 | CLA | C4B-NB | -6.33 | 1.29 | 1.35 |
| 10 | a | 912 | CLA | C4B-NB | -6.31 | 1.29 | 1.35 |
| 9 | a | 906 | BCL | C4B-NB | -6.31 | 1.29 | 1.35 |
| 9 | a | 908 | BCL | C2A-C1A | -6.27 | 1.38 | 1.52 |
| 10 | a | 913 | CLA | C1D-ND | 6.23 | 1.45 | 1.37 |
| 10 | A | 931 | CLA | C4D-ND | -6.17 | 1.29 | 1.37 |
| 10 | A | 933 | CLA | O1D-CGD | -6.15 | 1.05 | 1.21 |
| 9 | A | 909 | BCL | OBB-CAB | -6.11 | 1.03 | 1.22 |
| 10 | a | 913 | CLA | C1C-NC | -6.11 | 1.28 | 1.37 |
| 9 | A | 909 | BCL | C3C-C4C | -6.10 | 1.43 | 1.51 |
| 9 | a | 904 | BCL | C1B-NB | -6.10 | 1.29 | 1.35 |
| 9 | A | 903 | BCL | OBB-CAB | -6.09 | 1.03 | 1.22 |
| 8 | a | 903 | 2GO | OBB-CAB | -6.03 | 1.04 | 1.22 |
| 9 | A | 909 | BCL | OBD-CAD | -6.03 | 1.13 | 1.22 |
| 9 | A | 905 | BCL | C2A-C1A | -6.01 | 1.38 | 1.52 |
| 10 | A | 911 | CLA | C4D-ND | -6.00 | 1.29 | 1.37 |
| 9 | A | 906 | BCL | C4B-NB | -5.99 | 1.29 | 1.35 |
| 10 | a | 912 | CLA | OBD-CAD | -5.99 | 1.12 | 1.22 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | a | 908 | BCL | C4B-NB | -5.95 | 1.29 | 1.35 |
| 9 | a | 910 | BCL | OBB-CAB | -5.92 | 1.04 | 1.22 |
| 9 | A | 905 | BCL | C4B-NB | -5.90 | 1.29 | 1.35 |
| 9 | A | 904 | BCL | C4B-NB | -5.83 | 1.30 | 1.35 |
| 13 | a | 918 | 85I | O6-C3 | -5.82 | 1.34 | 1.44 |
| 10 | a | 912 | CLA | C1B-NB | -5.78 | 1.30 | 1.35 |
| 9 | a | 909 | BCL | O1D-CGD | -5.78 | 1.06 | 1.21 |
| 9 | A | 906 | BCL | O2D-CED | -5.76 | 1.31 | 1.45 |
| 15 | A | 932 | 85N | O3-C17 | -5.73 | 1.21 | 1.40 |
| 9 | a | 905 | BCL | C3C-C4C | -5.70 | 1.44 | 1.51 |
| 10 | A | 931 | CLA | O2D-CED | -5.64 | 1.32 | 1.45 |
| 9 | a | 911 | BCL | C3C-C4C | -5.61 | 1.44 | 1.51 |
| 9 | a | 909 | BCL | C4B-NB | -5.56 | 1.30 | 1.35 |
| 16 | C | 301 | HEC | O2A-CGA | -5.56 | 1.12 | 1.30 |
| 8 | A | 901 | 2GO | C1D-ND | -5.55 | 1.30 | 1.37 |
| 10 | a | 915 | CLA | C4D-ND | -5.53 | 1.30 | 1.37 |
| 10 | a | 912 | CLA | CHC-C1C | 5.47 | 1.49 | 1.35 |
| 9 | A | 908 | BCL | C3C-C4C | -5.42 | 1.44 | 1.51 |
| 9 | A | 906 | BCL | C1B-NB | -5.39 | 1.30 | 1.35 |
| 10 | A | 911 | CLA | C4B-NB | -5.39 | 1.30 | 1.35 |
| 17 | E | 101 | 84Q | C15-C16 | 5.38 | 1.64 | 1.51 |
| 9 | A | 903 | BCL | C3C-C4C | -5.31 | 1.44 | 1.51 |
| 9 | A | 903 | BCL | C1B-NB | -5.31 | 1.30 | 1.35 |
| 9 | a | 911 | BCL | OBD-CAD | -5.30 | 1.14 | 1.22 |
| 10 | a | 912 | CLA | C1D-ND | 5.29 | 1.44 | 1.37 |
| 9 | a | 909 | BCL | C1B-NB | -5.28 | 1.30 | 1.35 |
| 10 | a | 914 | CLA | C1C-NC | -5.26 | 1.30 | 1.37 |
| 8 | A | 901 | 2GO | C3D-C2D | -5.25 | 1.30 | 1.39 |
| 9 | A | 907 | BCL | OBD-CAD | -5.20 | 1.15 | 1.22 |
| 9 | A | 903 | BCL | O1A-CGA | -5.13 | 1.07 | 1.22 |
| 9 | A | 907 | BCL | C5-C3 | 5.10 | 1.61 | 1.51 |
| 9 | a | 909 | BCL | O2D-CED | -5.09 | 1.33 | 1.45 |
| 9 | A | 902 | BCL | C2A-C1A | -5.08 | 1.40 | 1.52 |
| 9 | a | 908 | BCL | C1B-NB | -5.07 | 1.30 | 1.35 |
| 9 | a | 905 | BCL | O1D-CGD | -5.05 | 1.08 | 1.21 |
| 9 | A | 907 | BCL | C2-C3 | 5.02 | 1.45 | 1.33 |
| 10 | A | 911 | CLA | MG-NC | 5.00 | 2.18 | 2.06 |
| 8 | A | 901 | 2GO | C2D-C1D | -4.99 | 1.31 | 1.42 |
| 16 | c | 202 | HEC | CAD-C3D | -4.99 | 1.44 | 1.52 |
| 10 | A | 931 | CLA | O2D-CGD | 4.98 | 1.45 | 1.33 |
| 9 | a | 911 | BCL | OBB-CAB | -4.96 | 1.07 | 1.22 |
| 16 | c | 202 | HEC | C4B-C3B | -4.93 | 1.34 | 1.43 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 16 | C | 301 | HEC | CBB-CAB | -4.92 | 1.31 | 1.49 |
| 9 | a | 906 | BCL | CAA-C2A | -4.92 | 1.45 | 1.54 |
| 10 | A | 912 | CLA | C1B-NB | -4.89 | 1.30 | 1.35 |
| 13 | A | 916 | 85I | O6-C3 | 4.86 | 1.52 | 1.44 |
| 10 | A | 910 | CLA | C4D-ND | -4.84 | 1.31 | 1.37 |
| 10 | A | 911 | CLA | C1B-NB | -4.81 | 1.30 | 1.35 |
| 9 | a | 906 | BCL | C1B-NB | -4.79 | 1.30 | 1.35 |
| 16 | C | 301 | HEC | O2D-CGD | -4.79 | 1.14 | 1.30 |
| 9 | a | 904 | BCL | C4B-NB | -4.78 | 1.30 | 1.35 |
| 8 | a | 903 | 2GO | C4C-C3C | 4.77 | 1.53 | 1.45 |
| 9 | A | 906 | BCL | O1D-CGD | -4.74 | 1.09 | 1.21 |
| 9 | A | 905 | BCL | C3C-C4C | -4.74 | 1.45 | 1.51 |
| 16 | C | 301 | HEC | C1B-NB | -4.74 | 1.26 | 1.36 |
| 10 | a | 915 | CLA | C1C-NC | -4.71 | 1.30 | 1.37 |
| 16 | C | 301 | HEC | CBC-CAC | -4.70 | 1.31 | 1.49 |
| 9 | a | 904 | BCL | O1A-CGA | -4.68 | 1.08 | 1.22 |
| 9 | a | 909 | BCL | C3C-C4C | -4.67 | 1.45 | 1.51 |
| 9 | a | 906 | BCL | C3C-C4C | -4.65 | 1.45 | 1.51 |
| 9 | A | 902 | BCL | C3C-C4C | -4.65 | 1.45 | 1.51 |
| 9 | a | 907 | BCL | C2A-C1A | -4.64 | 1.41 | 1.52 |
| 9 | A | 903 | BCL | O1D-CGD | -4.59 | 1.09 | 1.21 |
| 9 | a | 905 | BCL | O2A-CGA | 4.57 | 1.46 | 1.33 |
| 10 | a | 912 | CLA | O2D-CED | -4.57 | 1.34 | 1.45 |
| 9 | A | 904 | BCL | O2A-CGA | 4.57 | 1.46 | 1.30 |
| 10 | A | 931 | CLA | O2A-CGA | 4.55 | 1.46 | 1.33 |
| 9 | a | 905 | BCL | OBD-CAD | -4.55 | 1.15 | 1.22 |
| 9 | a | 908 | BCL | CBB-CAB | -4.55 | 1.36 | 1.49 |
| 9 | A | 906 | BCL | CBB-CAB | -4.55 | 1.36 | 1.49 |
| 9 | a | 910 | BCL | O1D-CGD | -4.53 | 1.09 | 1.21 |
| 9 | A | 906 | BCL | O1A-CGA | -4.53 | 1.09 | 1.22 |
| 16 | C | 301 | HEC | C3A-C4A | 4.52 | 1.52 | 1.42 |
| 9 | A | 908 | BCL | C1B-NB | -4.52 | 1.31 | 1.35 |
| 10 | A | 912 | CLA | C1C-NC | -4.52 | 1.31 | 1.37 |
| 13 | A | 915 | 85I | P-O3 | 4.50 | 1.72 | 1.60 |
| 10 | A | 931 | CLA | O1A-CGA | -4.49 | 1.09 | 1.22 |
| 9 | a | 907 | BCL | C4B-NB | -4.47 | 1.31 | 1.35 |
| 10 | a | 915 | CLA | C1D-ND | 4.45 | 1.43 | 1.37 |
| 9 | a | 905 | BCL | OBB-CAB | -4.44 | 1.09 | 1.22 |
| 10 | A | 910 | CLA | O2D-CED | -4.40 | 1.35 | 1.45 |
| 9 | A | 902 | BCL | O2D-CED | -4.40 | 1.35 | 1.45 |
| 9 | A | 909 | BCL | MG-NA | 4.39 | 2.16 | 2.06 |
| 16 | c | 202 | HEC | O2D-CGD | -4.38 | 1.16 | 1.30 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | A | 905 | BCL | C1B-NB | -4.38 | 1.31 | 1.35 |
| 16 | C | 301 | HEC | C4B-C3B | -4.37 | 1.35 | 1.43 |
| 10 | a | 914 | CLA | O1D-CGD | -4.37 | 1.10 | 1.21 |
| 10 | A | 912 | CLA | MG-NC | 4.34 | 2.16 | 2.06 |
| 10 | a | 913 | CLA | CHC-C1C | 4.34 | 1.46 | 1.35 |
| 9 | a | 911 | BCL | O2D-CED | -4.33 | 1.35 | 1.45 |
| 10 | A | 912 | CLA | O1D-CGD | -4.33 | 1.10 | 1.21 |
| 10 | a | 901 | CLA | O2A-CGA | 4.30 | 1.45 | 1.33 |
| 16 | c | 202 | HEC | O1A-CGA | -4.30 | 1.07 | 1.22 |
| 10 | a | 901 | CLA | CHC-C1C | 4.28 | 1.45 | 1.35 |
| 9 | a | 904 | BCL | O2A-CGA | 4.27 | 1.45 | 1.33 |
| 9 | A | 903 | BCL | C2A-C1A | -4.26 | 1.42 | 1.52 |
| 9 | A | 907 | BCL | O2D-CED | -4.25 | 1.35 | 1.45 |
| 10 | A | 910 | CLA | C1C-NC | -4.24 | 1.31 | 1.37 |
| 10 | a | 912 | CLA | O1D-CGD | -4.21 | 1.10 | 1.21 |
| 16 | c | 202 | HEC | C4D-ND | -4.16 | 1.27 | 1.36 |
| 10 | A | 910 | CLA | O1D-CGD | -4.16 | 1.10 | 1.21 |
| 8 | A | 901 | 2GO | OBB-CAB | -4.15 | 1.09 | 1.22 |
| 10 | A | 933 | CLA | C1C-NC | -4.15 | 1.31 | 1.37 |
| 9 | A | 905 | BCL | OBB-CAB | -4.13 | 1.10 | 1.22 |
| 9 | a | 910 | BCL | O1A-CGA | -4.10 | 1.10 | 1.22 |
| 9 | A | 905 | BCL | O2D-CED | -4.10 | 1.35 | 1.45 |
| 9 | a | 906 | BCL | C3B-C2B | 4.09 | 1.46 | 1.39 |
| 9 | a | 904 | BCL | O2D-CED | -4.06 | 1.35 | 1.45 |
| 10 | A | 911 | CLA | CHC-C1C | 4.05 | 1.45 | 1.35 |
| 9 | a | 904 | BCL | O1D-CGD | -4.03 | 1.11 | 1.21 |
| 9 | A | 905 | BCL | C3A-C2A | -4.01 | 1.43 | 1.54 |
| 9 | a | 911 | BCL | C3D-C2D | 4.00 | 1.46 | 1.39 |
| 13 | a | 919 | 85I | C4-C3 | -4.00 | 1.42 | 1.51 |
| 8 | a | 903 | 2GO | C2D-C1D | -4.00 | 1.33 | 1.42 |
| 9 | a | 908 | BCL | O2D-CED | -3.99 | 1.35 | 1.45 |
| 8 | A | 901 | 2GO | ZN-NC | 3.99 | 2.25 | 2.01 |
| 9 | a | 911 | BCL | O2A-C1 | -3.98 | 1.34 | 1.46 |
| 16 | C | 301 | HEC | C3C-C4C | -3.98 | 1.35 | 1.43 |
| 13 | A | 915 | 85I | O4-C5 | -3.97 | 1.21 | 1.33 |
| 9 | a | 908 | BCL | O1D-CGD | -3.97 | 1.11 | 1.21 |
| 9 | a | 909 | BCL | O1A-CGA | -3.94 | 1.10 | 1.22 |
| 16 | c | 202 | HEC | C1B-NB | -3.94 | 1.28 | 1.36 |
| 9 | A | 908 | BCL | O1D-CGD | -3.94 | 1.11 | 1.21 |
| 9 | A | 904 | BCL | CAA-C2A | -3.92 | 1.46 | 1.54 |
| 8 | A | 901 | 2GO | ZN-NA | 3.92 | 2.24 | 2.01 |
| 11 | A | 913 | LYC | C55-C56 | -3.90 | 1.30 | 1.35 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | a | 907 | BCL | OBB-CAB | -3.90 | 1.10 | 1.22 |
| 10 | a | 915 | CLA | C3C-C2C | 3.89 | 1.45 | 1.36 |
| 10 | A | 933 | CLA | O2A-C1 | -3.89 | 1.35 | 1.46 |
| 10 | a | 901 | CLA | O2D-CED | -3.87 | 1.36 | 1.45 |
| 9 | a | 911 | BCL | O1A-CGA | -3.86 | 1.11 | 1.22 |
| 9 | A | 904 | BCL | C2A-C1A | -3.86 | 1.43 | 1.52 |
| 9 | A | 902 | BCL | CAA-C2A | -3.84 | 1.47 | 1.54 |
| 9 | A | 905 | BCL | O1D-CGD | -3.83 | 1.11 | 1.21 |
| 9 | A | 909 | BCL | C4B-CHC | 3.83 | 1.51 | 1.41 |
| 11 | c | 201 | LYC | C14-C12 | -3.82 | 1.30 | 1.35 |
| 10 | A | 931 | CLA | OBD-CAD | -3.82 | 1.15 | 1.22 |
| 9 | a | 910 | BCL | O2D-CGD | 3.80 | 1.42 | 1.33 |
| 10 | a | 913 | CLA | C3B-C2B | 3.79 | 1.45 | 1.40 |
| 10 | a | 914 | CLA | O2A-CGA | 3.79 | 1.45 | 1.33 |
| 9 | A | 902 | BCL | O2D-CGD | 3.77 | 1.42 | 1.33 |
| 10 | A | 912 | CLA | CHC-C1C | 3.76 | 1.44 | 1.35 |
| 9 | a | 905 | BCL | O2D-CED | -3.76 | 1.36 | 1.45 |
| 9 | a | 910 | BCL | O2D-CED | -3.75 | 1.36 | 1.45 |
| 10 | a | 912 | CLA | MG-NC | 3.75 | 2.15 | 2.06 |
| 10 | a | 915 | CLA | MG-NC | 3.74 | 2.15 | 2.06 |
| 9 | A | 907 | BCL | C6-C5 | 3.73 | 1.65 | 1.52 |
| 9 | a | 909 | BCL | C3B-C2B | 3.73 | 1.46 | 1.39 |
| 10 | a | 901 | CLA | O1D-CGD | -3.72 | 1.11 | 1.21 |
| 11 | A | 913 | LYC | C9-C7 | -3.72 | 1.30 | 1.34 |
| 8 | a | 903 | 2GO | C1C-C2C | 3.70 | 1.51 | 1.44 |
| 10 | a | 913 | CLA | C4D-ND | -3.70 | 1.32 | 1.37 |
| 13 | A | 915 | 85I | P-O | -3.70 | 1.44 | 1.59 |
| 9 | A | 908 | BCL | C3A-C2A | -3.68 | 1.44 | 1.54 |
| 10 | a | 901 | CLA | MG-NC | 3.68 | 2.15 | 2.06 |
| 10 | A | 912 | CLA | C4D-ND | -3.68 | 1.32 | 1.37 |
| 10 | a | 901 | CLA | CHD-C4C | 3.67 | 1.47 | 1.39 |
| 16 | C | 301 | HEC | C1D-ND | -3.67 | 1.28 | 1.36 |
| 9 | A | 907 | BCL | OBB-CAB | -3.67 | 1.11 | 1.22 |
| 9 | a | 908 | BCL | CAA-CBA | -3.66 | 1.41 | 1.52 |
| 16 | C | 301 | HEC | C3D-C2D | 3.66 | 1.48 | 1.37 |
| 9 | a | 906 | BCL | C2A-C1A | -3.66 | 1.44 | 1.52 |
| 9 | A | 909 | BCL | C2-C3 | 3.64 | 1.41 | 1.33 |
| 9 | A | 902 | BCL | O1A-CGA | -3.63 | 1.11 | 1.22 |
| 9 | a | 908 | BCL | C3D-C2D | 3.62 | 1.45 | 1.39 |
| 9 | A | 909 | BCL | C3A-C2A | -3.62 | 1.44 | 1.54 |
| 10 | a | 913 | CLA | CAA-C2A | 3.61 | 1.60 | 1.54 |
| 10 | a | 914 | CLA | MG-NC | 3.61 | 2.14 | 2.06 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | A | 909 | BCL | O1D-CGD | -3.61 | 1.12 | 1.21 |
| 10 | A | 910 | CLA | CHC-C1C | 3.60 | 1.44 | 1.35 |
| 10 | a | 915 | CLA | O1A-CGA | -3.59 | 1.11 | 1.22 |
| 11 | c | 201 | LYC | C19-C17 | -3.59 | 1.31 | 1.35 |
| 9 | a | 907 | BCL | O2A-CGA | 3.58 | 1.43 | 1.33 |
| 9 | A | 903 | BCL | C3A-C2A | -3.58 | 1.44 | 1.54 |
| 10 | a | 912 | CLA | O2A-CGA | 3.57 | 1.43 | 1.33 |
| 9 | a | 906 | BCL | O2A-CGA | 3.56 | 1.42 | 1.30 |
| 10 | A | 911 | CLA | C10-C8 | -3.56 | 1.33 | 1.52 |
| 8 | a | 903 | 2GO | ZN-NC | 3.55 | 2.22 | 2.01 |
| 13 | A | 915 | 85I | P-O1 | -3.54 | 1.38 | 1.50 |
| 9 | A | 909 | BCL | CAA-CBA | -3.54 | 1.41 | 1.52 |
| 9 | A | 904 | BCL | C3B-C2B | 3.51 | 1.45 | 1.39 |
| 9 | a | 908 | BCL | C3B-C2B | 3.51 | 1.45 | 1.39 |
| 10 | A | 933 | CLA | CAA-C2A | -3.48 | 1.47 | 1.54 |
| 9 | A | 908 | BCL | C3D-C2D | 3.48 | 1.45 | 1.39 |
| 9 | A | 904 | BCL | C4B-CHC | 3.48 | 1.50 | 1.41 |
| 10 | a | 915 | CLA | O1D-CGD | -3.47 | 1.12 | 1.21 |
| 16 | C | 301 | HEC | CAD-C3D | -3.46 | 1.47 | 1.52 |
| 9 | a | 906 | BCL | C3D-C2D | 3.45 | 1.45 | 1.39 |
| 10 | A | 933 | CLA | CHC-C1C | 3.45 | 1.43 | 1.35 |
| 9 | a | 905 | BCL | O1A-CGA | -3.44 | 1.12 | 1.22 |
| 9 | a | 905 | BCL | CBB-CAB | -3.43 | 1.39 | 1.49 |
| 10 | A | 933 | CLA | O1A-CGA | -3.42 | 1.12 | 1.22 |
| 9 | A | 903 | BCL | O2A-CGA | 3.42 | 1.43 | 1.33 |
| 9 | A | 909 | BCL | CBD-CGD | -3.41 | 1.41 | 1.52 |
| 9 | a | 907 | BCL | O2A-C1 | -3.41 | 1.36 | 1.46 |
| 9 | a | 905 | BCL | C3D-C2D | 3.40 | 1.45 | 1.39 |
| 10 | A | 911 | CLA | O1A-CGA | -3.40 | 1.12 | 1.22 |
| 10 | a | 901 | CLA | C1D-C2D | 3.40 | 1.52 | 1.45 |
| 9 | A | 903 | BCL | CBB-CAB | -3.40 | 1.39 | 1.49 |
| 11 | A | 913 | LYC | C13-C12 | -3.39 | 1.43 | 1.50 |
| 10 | A | 911 | CLA | O2D-CED | -3.39 | 1.37 | 1.45 |
| 11 | c | 201 | LYC | C13-C12 | -3.39 | 1.43 | 1.50 |
| 16 | c | 202 | HEC | C2B-C3B | 3.38 | 1.44 | 1.40 |
| 9 | a | 904 | BCL | C3B-C2B | 3.37 | 1.45 | 1.39 |
| 9 | a | 907 | BCL | CAA-C2A | -3.36 | 1.47 | 1.54 |
| 8 | a | 903 | 2GO | C1B-NB | 3.36 | 1.40 | 1.35 |
| 9 | A | 903 | BCL | O2D-CGD | 3.35 | 1.41 | 1.33 |
| 9 | a | 906 | BCL | OBB-CAB | -3.34 | 1.12 | 1.22 |
| 9 | A | 905 | BCL | CBA-CGA | -3.34 | 1.40 | 1.50 |
| 10 | A | 912 | CLA | O2A-CGA | 3.33 | 1.43 | 1.33 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 10 | A | 931 | CLA | C4D-CHA | 3.31 | 1.50 | 1.38 |
| 10 | A | 931 | CLA | CHC-C1C | 3.31 | 1.43 | 1.35 |
| 10 | A | 911 | CLA | O2A-C1 | -3.30 | 1.36 | 1.46 |
| 10 | a | 901 | CLA | C7-C8 | -3.30 | 1.35 | 1.52 |
| 16 | c | 202 | HEC | CBA-CGA | -3.30 | 1.42 | 1.50 |
| 10 | a | 914 | CLA | C3C-C2C | 3.29 | 1.43 | 1.36 |
| 9 | a | 908 | BCL | CBA-CGA | -3.29 | 1.41 | 1.50 |
| 9 | a | 905 | BCL | CAC-C3C | -3.29 | 1.47 | 1.54 |
| 8 | a | 903 | 2GO | O1D-CGD | -3.27 | 1.14 | 1.21 |
| 9 | A | 902 | BCL | C3B-C2B | 3.24 | 1.45 | 1.39 |
| 9 | a | 908 | BCL | C5-C3 | -3.23 | 1.44 | 1.51 |
| 9 | A | 908 | BCL | CAA-C2A | -3.21 | 1.48 | 1.54 |
| 9 | a | 907 | BCL | O1D-CGD | -3.21 | 1.13 | 1.21 |
| 10 | a | 914 | CLA | CHC-C1C | 3.20 | 1.43 | 1.35 |
| 9 | a | 907 | BCL | MG-NA | -3.19 | 1.98 | 2.06 |
| 10 | A | 910 | CLA | CHD-C1D | 3.18 | 1.44 | 1.38 |
| 16 | c | 202 | HEC | CAA-C2A | -3.18 | 1.46 | 1.52 |
| 9 | a | 910 | BCL | CMB-C2B | -3.18 | 1.45 | 1.51 |
| 10 | a | 913 | CLA | O1A-CGA | -3.18 | 1.13 | 1.22 |
| 9 | A | 908 | BCL | CMA-C3A | -3.18 | 1.46 | 1.53 |
| 9 | A | 908 | BCL | MG-NC | -3.18 | 1.98 | 2.06 |
| 9 | A | 907 | BCL | CMD-C2D | -3.17 | 1.44 | 1.51 |
| 11 | A | 913 | LYC | C19-C17 | -3.16 | 1.31 | 1.35 |
| 9 | A | 908 | BCL | O2A-CGA | 3.16 | 1.42 | 1.33 |
| 11 | A | 913 | LYC | C10-C11 | -3.15 | 1.26 | 1.34 |
| 9 | A | 902 | BCL | O2A-CGA | 3.15 | 1.42 | 1.33 |
| 9 | A | 907 | BCL | CBB-CAB | -3.12 | 1.40 | 1.49 |
| 9 | a | 910 | BCL | O2A-CGA | 3.11 | 1.42 | 1.33 |
| 9 | A | 908 | BCL | C3B-CAB | -3.11 | 1.40 | 1.49 |
| 9 | A | 902 | BCL | C1B-CHB | 3.11 | 1.49 | 1.41 |
| 16 | c | 202 | HEC | CBC-CAC | -3.10 | 1.37 | 1.49 |
| 9 | A | 907 | BCL | C2C-C3C | -3.09 | 1.45 | 1.54 |
| 10 | A | 910 | CLA | CHD-C4C | 3.08 | 1.46 | 1.39 |
| 10 | a | 915 | CLA | O2D-CED | -3.07 | 1.38 | 1.45 |
| 10 | A | 931 | CLA | C10-C8 | -3.07 | 1.36 | 1.52 |
| 17 | E | 101 | 84Q | C3-C1 | -3.07 | 1.30 | 1.51 |
| 9 | a | 909 | BCL | C3A-C2A | -3.06 | 1.45 | 1.54 |
| 9 | a | 910 | BCL | MG-NA | 3.06 | 2.13 | 2.06 |
| 10 | A | 910 | CLA | MG-NC | 3.06 | 2.13 | 2.06 |
| 10 | a | 901 | CLA | O2D-CGD | 3.05 | 1.40 | 1.33 |
| 9 | a | 907 | BCL | C2C-C3C | -3.03 | 1.46 | 1.54 |
| 10 | A | 931 | CLA | C1D-C2D | -3.03 | 1.39 | 1.45 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 10 | A | 931 | CLA | C3D-C2D | 3.02 | 1.47 | 1.39 |
| 8 | A | 901 | 2GO | CHA-C1A | 3.02 | 1.51 | 1.41 |
| 9 | a | 904 | BCL | OBB-CAB | -3.01 | 1.13 | 1.22 |
| 10 | A | 911 | CLA | C3B-C2B | 3.00 | 1.44 | 1.40 |
| 10 | a | 914 | CLA | C2A-C1A | -3.00 | 1.45 | 1.52 |
| 16 | C | 301 | HEC | C1C-NC | -2.99 | 1.30 | 1.36 |
| 10 | a | 913 | CLA | O1D-CGD | -2.99 | 1.13 | 1.21 |
| 8 | a | 903 | 2GO | C3D-C2D | -2.99 | 1.34 | 1.39 |
| 9 | a | 911 | BCL | C3A-C2A | -2.99 | 1.46 | 1.54 |
| 9 | A | 909 | BCL | CBB-CAB | -2.99 | 1.40 | 1.49 |
| 9 | a | 908 | BCL | OBB-CAB | -2.98 | 1.13 | 1.22 |
| 9 | A | 902 | BCL | CMB-C2B | -2.98 | 1.45 | 1.51 |
| 16 | c | 202 | HEC | CMD-C2D | -2.97 | 1.45 | 1.51 |
| 9 | A | 902 | BCL | O1D-CGD | -2.97 | 1.13 | 1.21 |
| 10 | A | 911 | CLA | O1D-CGD | -2.96 | 1.13 | 1.21 |
| 9 | A | 903 | BCL | O2D-CED | -2.95 | 1.38 | 1.45 |
| 9 | A | 905 | BCL | CAA-CBA | -2.94 | 1.43 | 1.52 |
| 9 | a | 908 | BCL | O2D-CGD | 2.93 | 1.40 | 1.33 |
| 10 | a | 913 | CLA | C10-C8 | 2.93 | 1.68 | 1.52 |
| 10 | A | 931 | CLA | CHD-C1D | 2.93 | 1.44 | 1.38 |
| 9 | A | 904 | BCL | C3D-C2D | 2.93 | 1.44 | 1.39 |
| 10 | A | 931 | CLA | CMA-C3A | -2.91 | 1.46 | 1.53 |
| 9 | A | 902 | BCL | C3A-C2A | -2.90 | 1.46 | 1.54 |
| 9 | A | 904 | BCL | O2D-CGD | 2.90 | 1.40 | 1.33 |
| 9 | a | 905 | BCL | O2D-CGD | 2.90 | 1.40 | 1.33 |
| 10 | A | 931 | CLA | C1C-C2C | -2.88 | 1.39 | 1.44 |
| 9 | A | 903 | BCL | C3B-CAB | -2.88 | 1.41 | 1.49 |
| 10 | a | 913 | CLA | MG-NC | 2.87 | 2.13 | 2.06 |
| 9 | A | 904 | BCL | CMB-C2B | -2.87 | 1.45 | 1.51 |
| 9 | A | 908 | BCL | O2D-CGD | 2.87 | 1.40 | 1.33 |
| 9 | A | 908 | BCL | C2C-C3C | -2.87 | 1.46 | 1.54 |
| 9 | a | 909 | BCL | C2C-C3C | -2.87 | 1.46 | 1.54 |
| 9 | a | 905 | BCL | C2C-C3C | -2.86 | 1.46 | 1.54 |
| 10 | a | 914 | CLA | C3A-C2A | -2.86 | 1.46 | 1.54 |
| 10 | A | 933 | CLA | C3A-C2A | -2.85 | 1.46 | 1.54 |
| 11 | A | 913 | LYC | C59-C58 | -2.85 | 1.27 | 1.34 |
| 9 | a | 904 | BCL | C2C-C3C | -2.85 | 1.46 | 1.54 |
| 9 | A | 902 | BCL | OBB-CAB | -2.84 | 1.14 | 1.22 |
| 10 | a | 901 | CLA | CAA-C2A | -2.83 | 1.48 | 1.54 |
| 9 | a | 907 | BCL | O1A-CGA | -2.83 | 1.14 | 1.22 |
| 8 | A | 901 | 2GO | CBC-CAC | -2.83 | 1.38 | 1.51 |
| 17 | E | 101 | 84Q | C7-C6 | -2.80 | 1.35 | 1.51 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | A | 904 | BCL | OBB-CAB | -2.80 | 1.14 | 1.22 |
| 9 | a | 910 | BCL | C4B-CHC | 2.80 | 1.48 | 1.41 |
| 9 | A | 903 | BCL | CMD-C2D | -2.80 | 1.44 | 1.51 |
| 9 | a | 908 | BCL | O1A-CGA | -2.79 | 1.14 | 1.22 |
| 10 | a | 901 | CLA | C3C-C2C | 2.79 | 1.42 | 1.36 |
| 10 | A | 912 | CLA | C1D-C2D | -2.77 | 1.39 | 1.45 |
| 9 | a | 907 | BCL | C3C-C4C | -2.75 | 1.48 | 1.51 |
| 8 | A | 901 | 2GO | C4B-NB | 2.74 | 1.39 | 1.35 |
| 10 | A | 912 | CLA | C3B-C2B | 2.74 | 1.44 | 1.40 |
| 10 | A | 910 | CLA | C1B-CHB | 2.74 | 1.48 | 1.41 |
| 10 | A | 933 | CLA | O2D-CED | -2.73 | 1.38 | 1.45 |
| 9 | A | 908 | BCL | MG-NA | -2.73 | 1.99 | 2.06 |
| 10 | a | 915 | CLA | O2D-CGD | 2.73 | 1.39 | 1.33 |
| 13 | A | 915 | 85I | O5-C5 | -2.72 | 1.14 | 1.22 |
| 9 | A | 906 | BCL | OBB-CAB | -2.72 | 1.14 | 1.22 |
| 10 | A | 931 | CLA | C1B-NB | 2.72 | 1.37 | 1.35 |
| 13 | A | 915 | 85I | O6-C3 | -2.71 | 1.40 | 1.44 |
| 9 | A | 902 | BCL | C2C-C3C | -2.70 | 1.46 | 1.54 |
| 10 | A | 911 | CLA | CHD-C1D | 2.70 | 1.43 | 1.38 |
| 10 | A | 912 | CLA | C3C-C2C | 2.70 | 1.42 | 1.36 |
| 17 | E | 101 | 84Q | C9-C8 | -2.69 | 1.36 | 1.51 |
| 8 | a | 903 | 2GO | CHA-C1A | 2.69 | 1.50 | 1.41 |
| 10 | A | 912 | CLA | C2A-C1A | -2.69 | 1.46 | 1.52 |
| 9 | A | 907 | BCL | C3A-C2A | -2.68 | 1.47 | 1.54 |
| 10 | A | 910 | CLA | O2A-CGA | 2.68 | 1.41 | 1.33 |
| 16 | C | 301 | HEC | O1A-CGA | -2.68 | 1.13 | 1.22 |
| 9 | A | 907 | BCL | C1B-CHB | 2.68 | 1.48 | 1.41 |
| 10 | A | 933 | CLA | CBA-CGA | -2.68 | 1.42 | 1.50 |
| 9 | a | 906 | BCL | O1D-CGD | -2.68 | 1.14 | 1.21 |
| 9 | A | 907 | BCL | O2A-C1 | 2.68 | 1.53 | 1.46 |
| 16 | C | 301 | HEC | CAA-C2A | -2.67 | 1.47 | 1.52 |
| 13 | A | 915 | 85I | P-O2 | -2.67 | 1.42 | 1.55 |
| 9 | A | 908 | BCL | O1A-CGA | -2.67 | 1.14 | 1.22 |
| 9 | a | 909 | BCL | CMD-C2D | -2.66 | 1.45 | 1.51 |
| 10 | A | 911 | CLA | CMC-C2C | -2.65 | 1.45 | 1.50 |
| 9 | a | 909 | BCL | C5-C3 | -2.65 | 1.45 | 1.51 |
| 16 | C | 301 | HEC | CBA-CGA | -2.64 | 1.44 | 1.50 |
| 10 | A | 931 | CLA | MG-NC | 2.64 | 2.12 | 2.06 |
| 10 | a | 901 | CLA | O1A-CGA | -2.63 | 1.14 | 1.22 |
| 13 | A | 915 | 85I | C33-C32 | -2.63 | 1.37 | 1.51 |
| 9 | A | 907 | BCL | C2A-C1A | -2.63 | 1.46 | 1.52 |
| 17 | E | 101 | 84Q | C9-C10 | -2.62 | 1.36 | 1.51 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | a | 909 | BCL | O2D-CGD | 2.62 | 1.39 | 1.33 |
| 10 | a | 914 | CLA | O1A-CGA | -2.61 | 1.14 | 1.22 |
| 9 | A | 908 | BCL | CBD-CGD | -2.60 | 1.44 | 1.52 |
| 9 | A | 907 | BCL | C3C-C4C | -2.60 | 1.48 | 1.51 |
| 10 | A | 931 | CLA | MG-NA | 2.59 | 2.12 | 2.06 |
| 9 | A | 905 | BCL | O2A-CGA | 2.59 | 1.40 | 1.33 |
| 10 | a | 901 | CLA | C5-C3 | -2.58 | 1.45 | 1.51 |
| 9 | a | 909 | BCL | CBB-CAB | -2.57 | 1.42 | 1.49 |
| 10 | A | 912 | CLA | C1B-CHB | 2.57 | 1.48 | 1.41 |
| 9 | A | 902 | BCL | CBB-CAB | -2.57 | 1.42 | 1.49 |
| 10 | A | 910 | CLA | C1D-C2D | -2.56 | 1.40 | 1.45 |
| 10 | A | 933 | CLA | MG-ND | 2.56 | 2.10 | 2.05 |
| 17 | a | 921 | 84Q | P-O4 | 2.56 | 1.67 | 1.60 |
| 8 | A | 901 | 2GO | C4C-C3C | -2.56 | 1.40 | 1.45 |
| 9 | a | 907 | BCL | O2D-CED | -2.55 | 1.39 | 1.45 |
| 9 | A | 905 | BCL | O2A-C1 | -2.54 | 1.39 | 1.46 |
| 10 | A | 931 | CLA | C3A-C4A | -2.54 | 1.43 | 1.51 |
| 10 | a | 901 | CLA | C2-C3 | -2.54 | 1.26 | 1.33 |
| 11 | c | 201 | LYC | C1-C2 | -2.53 | 1.43 | 1.50 |
| 11 | A | 913 | LYC | C11-C12 | -2.53 | 1.40 | 1.45 |
| 16 | c | 202 | HEC | C2A-C3A | 2.52 | 1.45 | 1.37 |
| 10 | A | 910 | CLA | C1D-ND | 2.52 | 1.40 | 1.37 |
| 11 | c | 201 | LYC | C15-C16 | -2.52 | 1.28 | 1.34 |
| 16 | C | 301 | HEC | CMB-C2B | -2.52 | 1.45 | 1.51 |
| 9 | A | 906 | BCL | C2A-C1A | -2.51 | 1.46 | 1.52 |
| 9 | a | 910 | BCL | C3A-C2A | -2.51 | 1.47 | 1.54 |
| 10 | a | 912 | CLA | CHD-C4C | 2.51 | 1.45 | 1.39 |
| 8 | a | 903 | 2GO | O1A-CGA | -2.50 | 1.15 | 1.22 |
| 13 | a | 920 | 85I | C4-C3 | -2.50 | 1.46 | 1.51 |
| 9 | a | 907 | BCL | C3B-CAB | -2.50 | 1.42 | 1.49 |
| 9 | a | 911 | BCL | CBA-CGA | -2.49 | 1.43 | 1.50 |
| 8 | A | 901 | 2GO | C3B-C2B | -2.48 | 1.35 | 1.39 |
| 9 | A | 905 | BCL | C2C-C3C | -2.48 | 1.47 | 1.54 |
| 9 | a | 907 | BCL | C1B-CHB | 2.48 | 1.47 | 1.41 |
| 17 | E | 101 | 84Q | C6-C5 | -2.48 | 1.37 | 1.51 |
| 9 | a | 909 | BCL | C3A-C4A | -2.47 | 1.43 | 1.51 |
| 9 | A | 902 | BCL | OBD-CAD | -2.46 | 1.18 | 1.22 |
| 13 | a | 918 | 85I | C4-C3 | 2.46 | 1.57 | 1.51 |
| 10 | A | 911 | CLA | C3B-CAB | -2.46 | 1.42 | 1.47 |
| 9 | a | 910 | BCL | CBB-CAB | -2.46 | 1.42 | 1.49 |
| 17 | E | 101 | 84Q | C8-C7 | -2.46 | 1.37 | 1.51 |
| 10 | a | 913 | CLA | C5-C3 | -2.45 | 1.46 | 1.51 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | A | 905 | BCL | CMB-C2B | -2.43 | 1.46 | 1.51 |
| 8 | a | 903 | 2GO | C3B-C2B | -2.43 | 1.35 | 1.39 |
| 9 | A | 907 | BCL | O1A-CGA | -2.42 | 1.15 | 1.22 |
| 8 | A | 901 | 2GO | O1D-CGD | -2.41 | 1.16 | 1.21 |
| 10 | a | 914 | CLA | C4D-CHA | 2.41 | 1.47 | 1.38 |
| 9 | A | 904 | BCL | C3A-C2A | -2.41 | 1.47 | 1.54 |
| 9 | a | 909 | BCL | C2C-C1C | -2.40 | 1.44 | 1.51 |
| 9 | A | 903 | BCL | C1B-CHB | 2.40 | 1.47 | 1.41 |
| 9 | a | 911 | BCL | MG-NA | 2.39 | 2.12 | 2.06 |
| 17 | E | 101 | 84Q | C5-C4 | -2.39 | 1.38 | 1.51 |
| 15 | g | 101 | 85N | O4-C24 | -2.39 | 1.22 | 1.30 |
| 9 | a | 906 | BCL | CAA-CBA | -2.39 | 1.45 | 1.52 |
| 10 | a | 901 | CLA | CMC-C2C | -2.38 | 1.45 | 1.50 |
| 10 | A | 933 | CLA | C2A-C1A | -2.38 | 1.46 | 1.52 |
| 10 | a | 913 | CLA | C2A-C1A | -2.37 | 1.46 | 1.52 |
| 11 | c | 201 | LYC | C62-C61 | -2.37 | 1.44 | 1.50 |
| 9 | a | 911 | BCL | C2C-C3C | -2.37 | 1.47 | 1.54 |
| 9 | A | 904 | BCL | CMA-C3A | -2.36 | 1.48 | 1.53 |
| 9 | a | 906 | BCL | C3A-C4A | -2.35 | 1.44 | 1.51 |
| 9 | a | 911 | BCL | O1D-CGD | -2.35 | 1.15 | 1.21 |
| 10 | A | 931 | CLA | C4C-C3C | -2.35 | 1.41 | 1.45 |
| 17 | E | 101 | 84Q | O-C14 | -2.35 | 1.15 | 1.22 |
| 9 | a | 904 | BCL | CAA-CBA | -2.35 | 1.45 | 1.52 |
| 9 | A | 905 | BCL | C4B-CHC | 2.35 | 1.47 | 1.41 |
| 8 | a | 903 | 2GO | C1A-C2A | 2.34 | 1.50 | 1.45 |
| 11 | A | 913 | LYC | C52-C51 | -2.34 | 1.46 | 1.50 |
| 9 | A | 908 | BCL | C3A-C4A | -2.34 | 1.44 | 1.51 |
| 10 | a | 913 | CLA | C3A-C2A | -2.34 | 1.47 | 1.54 |
| 10 | a | 913 | CLA | O2A-CGA | 2.33 | 1.40 | 1.33 |
| 9 | A | 908 | BCL | CAC-C3C | -2.32 | 1.49 | 1.54 |
| 9 | a | 904 | BCL | C2A-C1A | -2.31 | 1.47 | 1.52 |
| 10 | a | 914 | CLA | C4C-C3C | -2.31 | 1.41 | 1.45 |
| 16 | C | 301 | HEC | C4D-ND | -2.31 | 1.31 | 1.36 |
| 10 | A | 911 | CLA | O2A-CGA | 2.30 | 1.40 | 1.33 |
| 10 | a | 914 | CLA | C3D-C2D | 2.30 | 1.45 | 1.39 |
| 9 | A | 908 | BCL | O2D-CED | -2.30 | 1.39 | 1.45 |
| 13 | A | 915 | 85I | O7-C20 | -2.30 | 1.15 | 1.22 |
| 10 | A | 931 | CLA | CBD-CGD | 2.30 | 1.59 | 1.52 |
| 9 | A | 909 | BCL | CMD-C2D | -2.30 | 1.46 | 1.51 |
| 9 | A | 904 | BCL | C2D-C1D | 2.29 | 1.47 | 1.42 |
| 9 | A | 903 | BCL | C4B-CHC | 2.28 | 1.47 | 1.41 |
| 10 | A | 931 | CLA | O2A-C1 | -2.28 | 1.39 | 1.46 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 9 | a | 908 | BCL | C4-C3 | -2.28 | 1.44 | 1.50 |
| 10 | a | 915 | CLA | O2A-CGA | 2.28 | 1.40 | 1.33 |
| 10 | a | 913 | CLA | O2A-C1 | -2.27 | 1.39 | 1.46 |
| 9 | a | 911 | BCL | C2A-C1A | -2.27 | 1.47 | 1.52 |
| 10 | a | 914 | CLA | C3B-CAB | 2.26 | 1.52 | 1.47 |
| 9 | a | 909 | BCL | C4-C3 | -2.26 | 1.44 | 1.50 |
| 9 | A | 904 | BCL | C1B-CHB | 2.26 | 1.47 | 1.41 |
| 9 | a | 904 | BCL | CMA-C3A | -2.25 | 1.48 | 1.53 |
| 9 | a | 906 | BCL | CBD-CGD | -2.25 | 1.45 | 1.52 |
| 9 | a | 907 | BCL | C3A-C4A | -2.24 | 1.44 | 1.51 |
| 9 | A | 907 | BCL | C3D-CAD | -2.24 | 1.40 | 1.46 |
| 9 | a | 907 | BCL | CBA-CGA | -2.24 | 1.44 | 1.50 |
| 9 | A | 908 | BCL | OBB-CAB | -2.24 | 1.15 | 1.22 |
| 9 | A | 904 | BCL | CAA-CBA | -2.23 | 1.45 | 1.52 |
| 9 | A | 909 | BCL | C2A-C1A | -2.23 | 1.47 | 1.52 |
| 11 | A | 913 | LYC | C18-C17 | -2.23 | 1.46 | 1.50 |
| 9 | A | 909 | BCL | C9-C8 | -2.22 | 1.45 | 1.52 |
| 10 | a | 913 | CLA | C3C-C2C | 2.21 | 1.41 | 1.36 |
| 11 | c | 201 | LYC | C21-C20 | -2.21 | 1.30 | 1.36 |
| 9 | a | 908 | BCL | O2A-CGA | 2.20 | 1.39 | 1.33 |
| 9 | a | 909 | BCL | CMA-C3A | -2.19 | 1.48 | 1.53 |
| 10 | A | 910 | CLA | C1C-C2C | -2.19 | 1.40 | 1.44 |
| 8 | a | 903 | 2GO | ZN-NA | 2.19 | 2.14 | 2.01 |
| 11 | c | 201 | LYC | C18-C17 | -2.18 | 1.46 | 1.50 |
| 9 | a | 910 | BCL | OBD-CAD | 2.18 | 1.25 | 1.22 |
| 9 | A | 908 | BCL | CMC-C2C | -2.17 | 1.48 | 1.53 |
| 10 | a | 912 | CLA | C2A-C1A | -2.17 | 1.47 | 1.52 |
| 9 | a | 905 | BCL | C3A-C2A | -2.17 | 1.48 | 1.54 |
| 10 | a | 915 | CLA | C3A-C2A | -2.17 | 1.48 | 1.54 |
| 10 | a | 901 | CLA | C1D-ND | 2.17 | 1.40 | 1.37 |
| 10 | A | 910 | CLA | C3D-C2D | 2.17 | 1.45 | 1.39 |
| 8 | A | 901 | 2GO | C1C-NC | -2.17 | 1.34 | 1.38 |
| 10 | a | 914 | CLA | CBD-CGD | -2.16 | 1.45 | 1.52 |
| 9 | a | 906 | BCL | C3A-C2A | -2.16 | 1.48 | 1.54 |
| 10 | a | 913 | CLA | C4B-CHC | 2.16 | 1.47 | 1.41 |
| 9 | A | 909 | BCL | O2D-CED | 2.16 | 1.50 | 1.45 |
| 10 | a | 915 | CLA | C4B-CHC | 2.16 | 1.47 | 1.41 |
| 10 | a | 912 | CLA | C3D-C2D | 2.16 | 1.45 | 1.39 |
| 10 | A | 910 | CLA | C3B-C2B | 2.16 | 1.43 | 1.40 |
| 9 | A | 908 | BCL | CMB-C2B | -2.15 | 1.47 | 1.51 |
| 9 | a | 908 | BCL | C4B-CHC | 2.15 | 1.47 | 1.41 |
| 9 | A | 909 | BCL | CBA-CGA | -2.14 | 1.44 | 1.50 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 10 | A | 933 | CLA | C1B-NB | -2.14 | 1.33 | 1.35 |
| 10 | a | 912 | CLA | C4C-C3C | -2.13 | 1.41 | 1.45 |
| 9 | a | 907 | BCL | CAA-CBA | -2.13 | 1.46 | 1.52 |
| 10 | A | 933 | CLA | MG-NC | 2.13 | 2.11 | 2.06 |
| 9 | A | 903 | BCL | C2C-C3C | -2.13 | 1.48 | 1.54 |
| 10 | A | 912 | CLA | CHD-C1D | 2.13 | 1.42 | 1.38 |
| 9 | A | 906 | BCL | O2A-C1 | -2.11 | 1.40 | 1.46 |
| 9 | A | 905 | BCL | C3B-CAB | -2.11 | 1.43 | 1.49 |
| 9 | a | 907 | BCL | CMD-C2D | -2.11 | 1.46 | 1.51 |
| 10 | A | 933 | CLA | C3D-C2D | 2.11 | 1.44 | 1.39 |
| 9 | a | 906 | BCL | C4B-CHC | 2.11 | 1.46 | 1.41 |
| 10 | A | 910 | CLA | O2D-CGD | 2.10 | 1.38 | 1.33 |
| 11 | A | 913 | LYC | C5-C4 | -2.10 | 1.43 | 1.50 |
| 10 | A | 911 | CLA | C9-C8 | 2.10 | 1.59 | 1.52 |
| 9 | a | 909 | BCL | C2-C3 | -2.09 | 1.28 | 1.33 |
| 10 | a | 912 | CLA | O1A-CGA | -2.09 | 1.16 | 1.22 |
| 9 | A | 909 | BCL | O2A-CGA | 2.09 | 1.39 | 1.33 |
| 9 | A | 903 | BCL | CAA-CBA | -2.09 | 1.46 | 1.52 |
| 9 | A | 909 | BCL | CMB-C2B | -2.08 | 1.47 | 1.51 |
| 9 | A | 908 | BCL | C5-C3 | -2.08 | 1.47 | 1.51 |
| 10 | a | 914 | CLA | CHD-C1D | 2.08 | 1.42 | 1.38 |
| 10 | A | 911 | CLA | CHD-C4C | 2.07 | 1.44 | 1.39 |
| 10 | A | 933 | CLA | C2-C3 | -2.07 | 1.28 | 1.33 |
| 10 | a | 915 | CLA | CHD-C1D | 2.07 | 1.42 | 1.38 |
| 9 | A | 907 | BCL | C1-C2 | 2.06 | 1.55 | 1.49 |
| 16 | c | 202 | HEC | CAA-CBA | -2.06 | 1.42 | 1.52 |
| 9 | A | 909 | BCL | C2C-C3C | -2.06 | 1.48 | 1.54 |
| 9 | a | 904 | BCL | C1B-CHB | 2.05 | 1.46 | 1.41 |
| 9 | A | 904 | BCL | CBA-CGA | -2.05 | 1.45 | 1.50 |
| 9 | a | 911 | BCL | CAC-C3C | -2.05 | 1.49 | 1.54 |
| 11 | c | 201 | LYC | C63-C64 | -2.05 | 1.46 | 1.53 |
| 10 | A | 911 | CLA | C2A-C1A | -2.04 | 1.47 | 1.52 |
| 9 | a | 908 | BCL | C3C-C4C | -2.04 | 1.49 | 1.51 |
| 10 | a | 914 | CLA | O2D-CED | -2.04 | 1.40 | 1.45 |
| 10 | a | 901 | CLA | O2A-C1 | -2.03 | 1.40 | 1.46 |
| 9 | a | 909 | BCL | C2A-C1A | -2.03 | 1.47 | 1.52 |
| 9 | A | 907 | BCL | C6-C7 | 2.02 | 1.60 | 1.52 |
| 9 | A | 907 | BCL | C3A-C4A | -2.02 | 1.45 | 1.51 |
| 9 | a | 908 | BCL | CMC-C2C | -2.01 | 1.48 | 1.53 |

All (918) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 9 | A | 909 | BCL | O2D-CGD-CBD | 20.86 | 148.33 | 111.27 |
| 9 | a | 908 | BCL | C4A-NA-C1A | 18.67 | 115.10 | 106.71 |
| 9 | A | 906 | BCL | O2D-CGD-CBD | 18.23 | 143.67 | 111.27 |
| 10 | A | 931 | CLA | O2D-CGD-CBD | 18.08 | 143.39 | 111.27 |
| 9 | a | 907 | BCL | C4A-NA-C1A | 16.53 | 114.14 | 106.71 |
| 10 | a | 913 | CLA | C1D-ND-C4D | -15.69 | 95.19 | 106.33 |
| 9 | A | 906 | BCL | O2D-CGD-O1D | -15.51 | 93.51 | 123.84 |
| 9 | a | 909 | BCL | O2D-CGD-CBD | 15.31 | 138.47 | 111.27 |
| 10 | A | 912 | CLA | C2C-C1C-NC | 15.09 | 124.11 | 109.97 |
| 9 | A | 905 | BCL | O2D-CGD-CBD | 14.78 | 137.52 | 111.27 |
| 11 | c | 201 | LYC | C21-C50-C51 | 14.71 | 148.31 | 127.31 |
| 9 | A | 907 | BCL | C4A-NA-C1A | 14.57 | 113.26 | 106.71 |
| 9 | A | 907 | BCL | O2D-CGD-CBD | 14.50 | 137.03 | 111.27 |
| 9 | A | 903 | BCL | O2D-CGD-CBD | 14.33 | 136.73 | 111.27 |
| 10 | a | 913 | CLA | O2D-CGD-CBD | 14.11 | 136.34 | 111.27 |
| 9 | a | 910 | BCL | O2D-CGD-CBD | 13.95 | 136.06 | 111.27 |
| 9 | a | 904 | BCL | O2D-CGD-CBD | 13.80 | 135.79 | 111.27 |
| 9 | a | 905 | BCL | O2D-CGD-CBD | 13.71 | 135.63 | 111.27 |
| 11 | c | 201 | LYC | C53-C51-C50 | 13.56 | 139.75 | 118.94 |
| 9 | a | 910 | BCL | C1C-NC-C4C | 13.25 | 112.67 | 106.71 |
| 10 | a | 913 | CLA | O2D-CGD-O1D | -13.14 | 98.15 | 123.84 |
| 9 | a | 908 | BCL | O2D-CGD-CBD | 12.95 | 134.28 | 111.27 |
| 10 | A | 910 | CLA | O2D-CGD-O1D | -12.76 | 98.89 | 123.84 |
| 13 | A | 917 | 85I | O4-C4-C3 | 12.74 | 142.25 | 109.54 |
| 8 | A | 901 | 2GO | CMA-C3A-C4A | -12.62 | 105.83 | 125.04 |
| 9 | A | 902 | BCL | O2D-CGD-CBD | 12.47 | 133.43 | 111.27 |
| 8 | a | 903 | 2GO | CMA-C3A-C4A | -12.44 | 106.09 | 125.04 |
| 9 | A | 903 | BCL | O2D-CGD-O1D | -12.40 | 99.59 | 123.84 |
| 10 | A | 910 | CLA | O2D-CGD-CBD | 11.97 | 132.54 | 111.27 |
| 10 | A | 931 | CLA | O2D-CGD-O1D | -11.90 | 100.56 | 123.84 |
| 11 | c | 201 | LYC | C15-C14-C12 | 11.82 | 144.19 | 127.31 |
| 9 | a | 907 | BCL | O2D-CGD-CBD | 11.81 | 132.26 | 111.27 |
| 10 | A | 911 | CLA | C1D-ND-C4D | -11.56 | 98.12 | 106.33 |
| 9 | A | 909 | BCL | O2A-C1-C2 | 11.47 | 138.78 | 108.64 |
| 9 | a | 908 | BCL | CBA-CAA-C2A | -11.23 | 80.73 | 113.86 |
| 8 | A | 901 | 2GO | C4A-C3A-C2A | -10.95 | 95.45 | 106.96 |
| 9 | a | 907 | BCL | C1C-NC-C4C | -10.88 | 101.81 | 106.71 |
| 9 | a | 909 | BCL | O2D-CGD-O1D | -10.83 | 102.67 | 123.84 |
| 9 | A | 909 | BCL | O2A-CGA-CBA | 10.82 | 145.86 | 111.91 |
| 8 | a | 903 | 2GO | CAD-C3D-C4D | -10.76 | 102.47 | 108.47 |
| 10 | A | 933 | CLA | O2D-CGD-CBD | 10.70 | 130.28 | 111.27 |
| 10 | A | 931 | CLA | C2D-C1D-ND | -10.69 | 102.22 | 110.10 |
| 9 | a | 910 | BCL | O2A-CGA-CBA | 10.58 | 145.11 | 111.91 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 10 | A | 933 | CLA | O2D-CGD-O1D | -10.54 | 103.23 | 123.84 |
| 9 | a | 905 | BCL | O2D-CGD-O1D | -10.51 | 103.29 | 123.84 |
| 11 | c | 201 | LYC | C21-C20-C19 | 10.48 | 144.93 | 123.47 |
| 10 | a | 901 | CLA | O2D-CGD-CBD | 10.45 | 129.83 | 111.27 |
| 10 | a | 915 | CLA | O2D-CGD-CBD | 10.31 | 129.58 | 111.27 |
| 11 | c | 201 | LYC | C20-C19-C17 | 10.30 | 142.00 | 127.31 |
| 9 | A | 907 | BCL | O2D-CGD-O1D | -10.19 | 103.91 | 123.84 |
| 13 | a | 920 | 85I | O4-C4-C3 | 10.17 | 135.66 | 109.54 |
| 15 | A | 932 | 85N | C18-O3-C17 | 10.17 | 133.50 | 113.80 |
| 9 | A | 909 | BCL | O1D-CGD-CBD | -10.14 | 103.74 | 124.48 |
| 13 | A | 917 | 85I | P-O3-C3 | 10.14 | 161.99 | 120.90 |
| 10 | A | 910 | CLA | CED-O2D-CGD | 10.13 | 138.85 | 115.94 |
| 9 | A | 908 | BCL | O2D-CGD-CBD | 10.08 | 129.19 | 111.27 |
| 10 | a | 914 | CLA | O2D-CGD-CBD | 10.06 | 129.14 | 111.27 |
| 9 | a | 909 | BCL | C4A-NA-C1A | 9.83 | 111.12 | 106.71 |
| 9 | a | 908 | BCL | O2D-CGD-O1D | -9.73 | 104.82 | 123.84 |
| 9 | a | 910 | BCL | O2A-CGA-O1A | -9.72 | 99.07 | 123.59 |
| 10 | A | 931 | CLA | CED-O2D-CGD | 9.66 | 137.79 | 115.94 |
| 9 | A | 906 | BCL | C4A-NA-C1A | 9.66 | 111.05 | 106.71 |
| 10 | A | 912 | CLA | C3C-C4C-NC | 9.59 | 121.32 | 110.57 |
| 9 | A | 907 | BCL | C6-C5-C3 | 9.59 | 138.59 | 113.45 |
| 13 | A | 916 | 85I | O4-C4-C3 | 9.56 | 134.07 | 109.54 |
| 13 | a | 918 | 85I | O4-C4-C3 | 9.53 | 134.00 | 109.54 |
| 16 | C | 301 | HEC | C1D-C2D-C3D | -9.51 | 100.38 | 107.00 |
| 9 | a | 904 | BCL | C4A-NA-C1A | 9.50 | 110.98 | 106.71 |
| 9 | A | 905 | BCL | O2D-CGD-O1D | -9.34 | 105.57 | 123.84 |
| 10 | A | 931 | CLA | C1D-ND-C4D | 9.32 | 112.95 | 106.33 |
| 9 | A | 907 | BCL | O2A-CGA-CBA | 9.32 | 141.15 | 111.91 |
| 9 | a | 904 | BCL | O2D-CGD-O1D | -9.27 | 105.71 | 123.84 |
| 10 | a | 914 | CLA | C3B-C4B-NB | 9.21 | 121.11 | 109.21 |
| 9 | a | 910 | BCL | O2A-C1-C2 | 9.13 | 132.64 | 108.64 |
| 8 | A | 901 | 2GO | CAC-C3C-C2C | -9.13 | 111.91 | 127.53 |
| 10 | A | 911 | CLA | C3C-C4C-NC | 9.06 | 120.74 | 110.57 |
| 11 | c | 201 | LYC | C13-C12-C14 | -9.03 | 110.27 | 122.92 |
| 9 | a | 908 | BCL | C1-C2-C3 | 9.02 | 141.64 | 126.04 |
| 10 | A | 933 | CLA | C4-C3-C5 | 9.02 | 126.29 | 115.98 |
| 10 | a | 912 | CLA | O2D-CGD-O1D | -9.00 | 106.25 | 123.84 |
| 9 | a | 909 | BCL | C1-C2-C3 | 8.90 | 141.43 | 126.04 |
| 10 | a | 901 | CLA | C3C-C4C-NC | 8.89 | 120.54 | 110.57 |
| 8 | A | 901 | 2GO | C1A-NA-C4A | 8.84 | 120.03 | 106.80 |
| 9 | A | 903 | BCL | O2A-CGA-CBA | 8.74 | 139.34 | 111.91 |
| 10 | A | 911 | CLA | C2C-C1C-NC | 8.69 | 118.11 | 109.97 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | a | 910 | BCL | C1-O2A-CGA | 8.53 | 138.83 | 116.44 |
| 9 | A | 902 | BCL | C1-O2A-CGA | 8.50 | 138.74 | 116.44 |
| 10 | a | 901 | CLA | C1D-ND-C4D | -8.45 | 100.33 | 106.33 |
| 13 | A | 915 | 85I | O6-C3-C4 | -8.41 | 75.45 | 107.08 |
| 16 | c | 202 | HEC | CMC-C2C-C3C | 8.40 | 135.69 | 125.82 |
| 9 | A | 907 | BCL | C1C-NC-C4C | -8.34 | 102.96 | 106.71 |
| 9 | A | 907 | BCL | C7-C6-C5 | 8.33 | 135.99 | 113.36 |
| 9 | A | 904 | BCL | C1C-NC-C4C | -8.28 | 102.98 | 106.71 |
| 9 | A | 909 | BCL | O2D-CGD-O1D | -8.27 | 107.67 | 123.84 |
| 10 | A | 933 | CLA | CED-O2D-CGD | 8.23 | 134.56 | 115.94 |
| 10 | a | 901 | CLA | O2A-CGA-CBA | 8.20 | 137.65 | 111.91 |
| 9 | a | 905 | BCL | O2A-CGA-CBA | 8.19 | 137.62 | 111.91 |
| 9 | a | 910 | BCL | O2D-CGD-O1D | -8.19 | 107.83 | 123.84 |
| 13 | A | 915 | 85I | P-O3-C3 | 8.16 | 153.97 | 120.90 |
| 9 | A | 903 | BCL | O2A-C1-C2 | 8.13 | 130.00 | 108.64 |
| 13 | A | 915 | 85I | O4-C4-C3 | 8.12 | 130.39 | 109.54 |
| 9 | a | 909 | BCL | O2A-C1-C2 | -8.11 | 87.32 | 108.64 |
| 13 | a | 919 | 85I | O3-C3-C4 | 8.08 | 137.46 | 107.08 |
| 8 | a | 903 | 2GO | C4C-C3C-C2C | -8.08 | 95.13 | 106.90 |
| 10 | A | 931 | CLA | CMC-C2C-C1C | 8.00 | 137.22 | 125.04 |
| 9 | a | 908 | BCL | OBB-CAB-CBB | -7.97 | 102.23 | 120.17 |
| 9 | a | 911 | BCL | O2A-C1-C2 | 7.96 | 129.56 | 108.64 |
| 10 | a | 901 | CLA | C6-C7-C8 | 7.96 | 141.65 | 115.92 |
| 9 | a | 911 | BCL | C1-C2-C3 | 7.94 | 139.77 | 126.04 |
| 10 | a | 913 | CLA | CMD-C2D-C1D | 7.87 | 138.59 | 124.71 |
| 10 | a | 915 | CLA | O2D-CGD-O1D | -7.83 | 108.53 | 123.84 |
| 10 | A | 931 | CLA | C4A-NA-C1A | 7.83 | 110.22 | 106.71 |
| 11 | c | 201 | LYC | C16-C17-C19 | 7.82 | 130.94 | 118.94 |
| 10 | a | 914 | CLA | O2D-CGD-O1D | -7.81 | 108.56 | 123.84 |
| 16 | c | 202 | HEC | C1D-C2D-C3D | -7.80 | 101.57 | 107.00 |
| 9 | a | 909 | BCL | O2A-CGA-O1A | -7.74 | 104.05 | 123.59 |
| 11 | c | 201 | LYC | C52-C51-C50 | -7.74 | 112.08 | 122.92 |
| 9 | a | 910 | BCL | C4A-NA-C1A | -7.72 | 103.24 | 106.71 |
| 10 | A | 910 | CLA | C2C-C1C-NC | 7.67 | 117.16 | 109.97 |
| 9 | a | 911 | BCL | C1-O2A-CGA | 7.67 | 136.56 | 116.44 |
| 13 | a | 920 | 85I | O6-C3-C4 | 7.61 | 135.72 | 107.08 |
| 10 | A | 911 | CLA | C4A-NA-C1A | 7.59 | 110.12 | 106.71 |
| 10 | A | 933 | CLA | C4A-NA-C1A | 7.59 | 110.12 | 106.71 |
| 9 | A | 909 | BCL | C4A-NA-C1A | -7.51 | 103.33 | 106.71 |
| 9 | a | 908 | BCL | C3A-C2A-C1A | 7.50 | 112.57 | 101.34 |
| 9 | a | 910 | BCL | CAD-C3D-C4D | 7.47 | 112.63 | 108.47 |
| 9 | A | 907 | BCL | C1-O2A-CGA | 7.42 | 135.92 | 116.44 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 16 | C | 301 | HEC | C4C-C3C-C2C | 7.42 | 114.36 | 106.35 |
| 8 | A | 901 | 2GO | C2A-C1A-NA | -7.42 | 105.20 | 109.01 |
| 10 | a | 912 | CLA | C1D-ND-C4D | -7.38 | 101.09 | 106.33 |
| 10 | a | 901 | CLA | C2C-C1C-NC | 7.36 | 116.87 | 109.97 |
| 9 | A | 905 | BCL | C4A-NA-C1A | 7.36 | 110.02 | 106.71 |
| 11 | c | 201 | LYC | C15-C16-C17 | 7.29 | 146.91 | 126.42 |
| 10 | a | 901 | CLA | C11-C10-C8 | -7.27 | 92.43 | 115.92 |
| 9 | A | 905 | BCL | CBA-CAA-C2A | -7.26 | 92.43 | 113.86 |
| 8 | a | 903 | 2GO | C4C-CHD-C1D | 7.22 | 132.09 | 122.56 |
| 9 | A | 907 | BCL | CED-O2D-CGD | 7.21 | 132.24 | 115.94 |
| 10 | A | 912 | CLA | C1C-C2C-C3C | -7.17 | 99.42 | 106.96 |
| 9 | a | 910 | BCL | C1-C2-C3 | -7.17 | 113.65 | 126.04 |
| 10 | a | 913 | CLA | C11-C10-C8 | -7.16 | 92.78 | 115.92 |
| 10 | a | 912 | CLA | O2D-CGD-CBD | 7.15 | 123.97 | 111.27 |
| 16 | c | 202 | HEC | O2A-CGA-O1A | -7.15 | 105.48 | 123.30 |
| 9 | a | 911 | BCL | O2A-CGA-CBA | 7.15 | 134.34 | 111.91 |
| 13 | a | 919 | 85I | P-O3-C3 | 7.13 | 149.82 | 120.90 |
| 10 | A | 912 | CLA | O2D-CGD-O1D | -7.12 | 109.92 | 123.84 |
| 9 | a | 907 | BCL | C1-C2-C3 | -7.12 | 113.74 | 126.04 |
| 9 | A | 907 | BCL | C1-C2-C3 | 7.08 | 138.29 | 126.04 |
| 10 | a | 912 | CLA | CMD-C2D-C1D | 7.07 | 137.18 | 124.71 |
| 10 | A | 912 | CLA | C1D-ND-C4D | -7.04 | 101.33 | 106.33 |
| 10 | A | 911 | CLA | CMD-C2D-C1D | 6.99 | 137.03 | 124.71 |
| 10 | A | 931 | CLA | C1-O2A-CGA | 6.97 | 134.72 | 116.44 |
| 17 | E | 101 | 84Q | O1-C15-C16 | 6.93 | 127.33 | 109.54 |
| 10 | a | 914 | CLA | C3C-C4C-NC | 6.89 | 118.30 | 110.57 |
| 9 | A | 903 | BCL | C1-O2A-CGA | 6.87 | 134.47 | 116.44 |
| 10 | a | 913 | CLA | C3D-C2D-C1D | -6.86 | 96.47 | 105.83 |
| 8 | A | 901 | 2GO | C1C-NC-C4C | 6.85 | 115.77 | 106.49 |
| 10 | A | 911 | CLA | CHD-C4C-C3C | -6.84 | 114.78 | 124.84 |
| 10 | a | 901 | CLA | CMD-C2D-C1D | 6.84 | 136.77 | 124.71 |
| 9 | A | 903 | BCL | O1A-CGA-CBA | -6.84 | 97.06 | 123.73 |
| 9 | A | 905 | BCL | C3A-C2A-C1A | 6.77 | 111.48 | 101.34 |
| 9 | A | 902 | BCL | O2D-CGD-O1D | -6.77 | 110.61 | 123.84 |
| 10 | A | 931 | CLA | CHD-C4C-C3C | -6.76 | 114.90 | 124.84 |
| 9 | a | 908 | BCL | OBB-CAB-C3B | 6.75 | 131.98 | 119.99 |
| 11 | c | 201 | LYC | C18-C17-C16 | -6.75 | 107.44 | 118.08 |
| 9 | a | 911 | BCL | CED-O2D-CGD | 6.74 | 131.18 | 115.94 |
| 9 | a | 904 | BCL | O2A-CGA-CBA | 6.73 | 133.03 | 111.91 |
| 10 | a | 915 | CLA | C4-C3-C5 | 6.68 | 123.62 | 115.98 |
| 9 | A | 909 | BCL | CAD-C3D-C4D | 6.64 | 112.17 | 108.47 |
| 10 | A | 912 | CLA | O2D-CGD-CBD | 6.54 | 122.90 | 111.27 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 8 | a | 903 | 2GO | CHA-CBD-CAD | -6.54 | 100.69 | 107.17 |
| 10 | A | 911 | CLA | C3D-C2D-C1D | -6.54 | 96.90 | 105.83 |
| 8 | a | 903 | 2GO | CAC-C3C-C4C | -6.51 | 116.37 | 124.81 |
| 8 | a | 903 | 2GO | C1A-NA-C4A | 6.49 | 116.52 | 106.80 |
| 10 | A | 912 | CLA | CAC-C3C-C4C | 6.47 | 133.21 | 124.81 |
| 9 | a | 907 | BCL | O2D-CGD-O1D | -6.47 | 111.19 | 123.84 |
| 10 | a | 914 | CLA | CHD-C4C-C3C | -6.46 | 115.34 | 124.84 |
| 9 | a | 907 | BCL | CBA-CAA-C2A | -6.45 | 94.82 | 113.86 |
| 9 | a | 904 | BCL | CED-O2D-CGD | 6.43 | 130.48 | 115.94 |
| 9 | A | 909 | BCL | C4-C3-C5 | -6.42 | 104.46 | 115.27 |
| 10 | A | 910 | CLA | CMD-C2D-C1D | 6.42 | 136.03 | 124.71 |
| 10 | a | 912 | CLA | C2C-C1C-NC | 6.42 | 115.98 | 109.97 |
| 9 | A | 902 | BCL | C4A-NA-C1A | 6.41 | 109.59 | 106.71 |
| 11 | A | 913 | LYC | C18-C17-C19 | -6.41 | 113.95 | 122.92 |
| 9 | A | 903 | BCL | C4A-NA-C1A | 6.40 | 109.58 | 106.71 |
| 8 | a | 903 | 2GO | C1A-C2A-C3A | -6.39 | 98.18 | 106.61 |
| 9 | a | 905 | BCL | C4A-NA-C1A | 6.39 | 109.58 | 106.71 |
| 9 | A | 906 | BCL | OBB-CAB-C3B | 6.37 | 131.29 | 119.99 |
| 11 | c | 201 | LYC | C11-C12-C14 | 6.36 | 128.71 | 118.94 |
| 9 | a | 905 | BCL | CHD-C4C-NC | 6.33 | 132.11 | 125.08 |
| 10 | a | 915 | CLA | C4A-NA-C1A | -6.32 | 103.87 | 106.71 |
| 10 | A | 912 | CLA | CMA-C3A-C4A | 6.31 | 128.73 | 111.77 |
| 8 | A | 901 | 2GO | CMC-C2C-C1C | -6.30 | 115.45 | 125.04 |
| 11 | c | 201 | LYC | C52-C51-C53 | -6.29 | 108.16 | 118.08 |
| 11 | c | 201 | LYC | C20-C21-C50 | -6.29 | 110.60 | 123.47 |
| 10 | A | 931 | CLA | C2C-C1C-NC | 6.29 | 115.86 | 109.97 |
| 10 | a | 912 | CLA | O2A-CGA-CBA | 6.26 | 131.54 | 111.91 |
| 10 | A | 910 | CLA | C1D-ND-C4D | -6.25 | 101.90 | 106.33 |
| 9 | a | 905 | BCL | C4-C3-C2 | -6.25 | 107.66 | 123.68 |
| 10 | A | 933 | CLA | C3D-C2D-C1D | -6.24 | 97.32 | 105.83 |
| 10 | a | 915 | CLA | CMD-C2D-C1D | 6.23 | 135.70 | 124.71 |
| 9 | A | 905 | BCL | CAA-C2A-C3A | -6.23 | 95.72 | 112.78 |
| 9 | A | 907 | BCL | O1A-CGA-CBA | -6.22 | 99.46 | 123.73 |
| 10 | a | 913 | CLA | CAC-C3C-C4C | 6.22 | 132.88 | 124.81 |
| 9 | a | 911 | BCL | O2D-CGD-CBD | 6.17 | 122.24 | 111.27 |
| 9 | a | 911 | BCL | C1C-NC-C4C | 6.17 | 109.48 | 106.71 |
| 10 | a | 915 | CLA | C3C-C4C-NC | 6.15 | 117.47 | 110.57 |
| 9 | a | 904 | BCL | CHD-C4C-NC | 6.15 | 131.90 | 125.08 |
| 16 | c | 202 | HEC | C4C-C3C-C2C | 6.14 | 112.98 | 106.35 |
| 9 | a | 907 | BCL | C16-C15-C13 | -6.13 | 96.12 | 115.92 |
| 10 | a | 901 | CLA | CHD-C4C-C3C | -6.10 | 115.87 | 124.84 |
| 10 | A | 911 | CLA | C4C-C3C-C2C | -6.10 | 98.01 | 106.90 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 8 | a | 903 | 2GO | CMC-C2C-C1C | -6.05 | 115.82 | 125.04 |
| 10 | A | 910 | CLA | C3C-C4C-NC | 6.05 | 117.35 | 110.57 |
| 8 | a | 903 | 2GO | C16-C15-C13 | 6.03 | 135.41 | 115.92 |
| 10 | a | 901 | CLA | O2D-CGD-O1D | -5.96 | 112.19 | 123.84 |
| 16 | c | 202 | HEC | CMB-C2B-C3B | 5.92 | 132.78 | 125.82 |
| 10 | A | 933 | CLA | CMB-C2B-C1B | 5.90 | 137.53 | 128.46 |
| 9 | a | 909 | BCL | C4-C3-C2 | -5.89 | 108.56 | 123.68 |
| 9 | A | 907 | BCL | C4-C3-C2 | -5.89 | 108.57 | 123.68 |
| 8 | A | 901 | 2GO | CAC-C3C-C4C | -5.89 | 117.17 | 124.81 |
| 10 | a | 901 | CLA | CHD-C1D-ND | -5.89 | 119.04 | 124.45 |
| 9 | a | 908 | BCL | C2A-C3A-C4A | -5.88 | 92.37 | 101.87 |
| 9 | A | 909 | BCL | C1C-NC-C4C | 5.86 | 109.34 | 106.71 |
| 9 | A | 906 | BCL | CED-O2D-CGD | 5.85 | 129.16 | 115.94 |
| 9 | A | 906 | BCL | O2A-CGA-O1A | -5.84 | 108.85 | 123.59 |
| 10 | A | 933 | CLA | O2A-C1-C2 | -5.82 | 93.34 | 108.64 |
| 9 | a | 909 | BCL | C1-O2A-CGA | 5.81 | 131.68 | 116.44 |
| 11 | A | 913 | LYC | C57-C56-C55 | 5.79 | 131.03 | 122.92 |
| 10 | a | 915 | CLA | O2A-CGA-O1A | -5.78 | 109.00 | 123.59 |
| 9 | a | 910 | BCL | CED-O2D-CGD | 5.78 | 129.01 | 115.94 |
| 9 | a | 906 | BCL | CAC-C3C-C4C | -5.78 | 99.76 | 112.58 |
| 10 | A | 931 | CLA | O2A-CGA-CBA | 5.78 | 130.03 | 111.91 |
| 9 | a | 904 | BCL | C3C-C4C-CHD | -5.77 | 111.06 | 123.39 |
| 9 | a | 908 | BCL | C5-C3-C2 | 5.76 | 132.77 | 121.12 |
| 9 | A | 909 | BCL | O2A-CGA-O1A | -5.72 | 109.16 | 123.59 |
| 10 | a | 912 | CLA | CED-O2D-CGD | 5.72 | 128.87 | 115.94 |
| 10 | a | 912 | CLA | C3B-C4B-NB | 5.71 | 116.60 | 109.21 |
| 9 | a | 905 | BCL | CED-O2D-CGD | 5.70 | 128.82 | 115.94 |
| 10 | a | 912 | CLA | C3C-C4C-NC | 5.67 | 116.93 | 110.57 |
| 10 | A | 933 | CLA | C3B-C4B-NB | 5.67 | 116.53 | 109.21 |
| 10 | a | 915 | CLA | C3D-C2D-C1D | -5.66 | 98.10 | 105.83 |
| 10 | A | 933 | CLA | C2C-C1C-NC | 5.65 | 115.27 | 109.97 |
| 16 | C | 301 | HEC | CMC-C2C-C3C | 5.61 | 132.41 | 125.82 |
| 11 | c | 201 | LYC | C1-C2-C4 | -5.58 | 106.53 | 122.65 |
| 9 | A | 902 | BCL | C3C-C4C-CHD | -5.56 | 111.51 | 123.39 |
| 10 | a | 901 | CLA | C4C-C3C-C2C | -5.55 | 98.81 | 106.90 |
| 10 | a | 914 | CLA | C2C-C1C-NC | 5.55 | 115.17 | 109.97 |
| 9 | A | 902 | BCL | CHD-C4C-NC | 5.53 | 131.22 | 125.08 |
| 10 | A | 912 | CLA | C4A-NA-C1A | 5.53 | 109.19 | 106.71 |
| 9 | A | 904 | BCL | C4A-NA-C1A | 5.52 | 109.19 | 106.71 |
| 10 | a | 914 | CLA | CED-O2D-CGD | 5.52 | 128.42 | 115.94 |
| 9 | a | 906 | BCL | C1C-NC-C4C | -5.51 | 104.23 | 106.71 |
| 10 | a | 915 | CLA | CMC-C2C-C1C | 5.51 | 133.43 | 125.04 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10 | a | 914 | CLA | CHD-C1D-ND | -5.50 | 119.40 | 124.45 |
| 9 | A | 909 | BCL | C9-C8-C10 | -5.49 | 91.41 | 111.29 |
| 9 | A | 905 | BCL | CAA-C2A-C1A | -5.46 | 94.08 | 111.97 |
| 9 | A | 905 | BCL | C1C-NC-C4C | 5.45 | 109.15 | 106.71 |
| 9 | a | 905 | BCL | C1-C2-C3 | 5.44 | 135.46 | 126.04 |
| 10 | A | 910 | CLA | C3D-C2D-C1D | -5.43 | 98.42 | 105.83 |
| 9 | a | 904 | BCL | C1-C2-C3 | -5.41 | 116.68 | 126.04 |
| 13 | a | 920 | 85I | P-O3-C3 | -5.41 | 98.98 | 120.90 |
| 10 | a | 913 | CLA | C2D-C1D-ND | 5.39 | 114.08 | 110.10 |
| 10 | A | 911 | CLA | O2D-CGD-O1D | -5.37 | 113.34 | 123.84 |
| 17 | E | 101 | 84Q | P-O4-C16 | 5.35 | 142.59 | 120.90 |
| 9 | a | 908 | BCL | CAA-C2A-C1A | -5.33 | 94.50 | 111.97 |
| 11 | c | 201 | LYC | C3-C2-C4 | 5.32 | 138.03 | 122.65 |
| 10 | a | 914 | CLA | CBA-CAA-C2A | -5.31 | 98.19 | 113.86 |
| 9 | A | 907 | BCL | CAD-C3D-C4D | -5.30 | 105.51 | 108.47 |
| 9 | a | 909 | BCL | CED-O2D-CGD | 5.30 | 127.92 | 115.94 |
| 9 | a | 906 | BCL | C3C-C4C-CHD | -5.28 | 112.12 | 123.39 |
| 16 | c | 202 | HEC | O2A-CGA-CBA | 5.26 | 130.95 | 114.03 |
| 9 | a | 908 | BCL | CED-O2D-CGD | 5.25 | 127.82 | 115.94 |
| 13 | A | 916 | 85I | P-O3-C3 | 5.24 | 142.14 | 120.90 |
| 9 | A | 904 | BCL | C3C-C4C-CHD | -5.23 | 112.23 | 123.39 |
| 9 | a | 910 | BCL | C5-C3-C2 | 5.22 | 131.68 | 121.12 |
| 10 | a | 913 | CLA | C3C-C4C-NC | 5.21 | 116.42 | 110.57 |
| 9 | A | 906 | BCL | C1-O2A-CGA | 5.21 | 130.12 | 116.44 |
| 11 | c | 201 | LYC | C8-C7-C9 | -5.19 | 109.19 | 122.59 |
| 9 | A | 903 | BCL | CBA-CAA-C2A | 5.19 | 129.19 | 113.86 |
| 10 | A | 911 | CLA | O2A-CGA-CBA | 5.19 | 128.19 | 111.91 |
| 9 | a | 905 | BCL | C5-C3-C2 | 5.19 | 131.61 | 121.12 |
| 10 | a | 915 | CLA | O2A-CGA-CBA | 5.17 | 128.14 | 111.91 |
| 9 | a | 909 | BCL | C5-C3-C2 | 5.14 | 131.52 | 121.12 |
| 9 | A | 905 | BCL | CMA-C3A-C4A | 5.14 | 125.59 | 111.77 |
| 10 | a | 901 | CLA | C3D-C4D-ND | 5.13 | 118.53 | 110.24 |
| 9 | A | 903 | BCL | C3C-C4C-CHD | -5.12 | 112.45 | 123.39 |
| 9 | a | 909 | BCL | O2A-CGA-CBA | 5.11 | 127.93 | 111.91 |
| 9 | a | 906 | BCL | O2D-CGD-O1D | -5.11 | 113.86 | 123.84 |
| 8 | A | 901 | 2GO | C1-O2A-CGA | 5.09 | 129.81 | 116.44 |
| 9 | A | 908 | BCL | CAA-C2A-C3A | -5.08 | 98.86 | 112.78 |
| 9 | A | 902 | BCL | O2A-CGA-CBA | 5.05 | 127.75 | 111.91 |
| 9 | a | 905 | BCL | C3C-C4C-CHD | -5.05 | 112.61 | 123.39 |
| 9 | a | 906 | BCL | C4A-NA-C1A | 5.04 | 108.97 | 106.71 |
| 10 | A | 911 | CLA | CAC-C3C-C4C | 5.00 | 131.30 | 124.81 |
| 11 | A | 913 | LYC | C13-C12-C11 | 4.99 | 125.94 | 118.08 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 11 | c | 201 | LYC | C14-C15-C16 | -4.99 | 107.65 | 123.22 |
| 10 | A | 931 | CLA | CHD-C4C-NC | 4.97 | 132.04 | 124.20 |
| 8 | a | 903 | 2GO | CAA-C2A-C3A | -4.97 | 118.62 | 127.88 |
| 10 | A | 910 | CLA | CHD-C1D-ND | -4.96 | 119.90 | 124.45 |
| 9 | A | 908 | BCL | CAD-C3D-C4D | -4.95 | 105.71 | 108.47 |
| 9 | a | 911 | BCL | C4A-NA-C1A | 4.91 | 108.91 | 106.71 |
| 9 | A | 902 | BCL | CED-O2D-CGD | 4.89 | 127.00 | 115.94 |
| 10 | A | 931 | CLA | C1C-C2C-C3C | -4.89 | 101.82 | 106.96 |
| 8 | A | 901 | 2GO | CHC-C1C-NC | 4.88 | 130.87 | 124.68 |
| 17 | a | 921 | 84Q | O1-C15-C16 | 4.87 | 122.05 | 109.54 |
| 10 | a | 913 | CLA | CHD-C4C-C3C | -4.86 | 117.70 | 124.84 |
| 11 | c | 201 | LYC | C5-C4-C2 | 4.85 | 144.34 | 127.75 |
| 10 | a | 913 | CLA | O2A-CGA-CBA | 4.85 | 127.14 | 111.91 |
| 10 | a | 915 | CLA | CAC-C3C-C4C | 4.85 | 131.10 | 124.81 |
| 8 | A | 901 | 2GO | C4C-CHD-C1D | 4.84 | 128.95 | 122.56 |
| 9 | a | 908 | BCL | CAA-C2A-C3A | -4.83 | 99.54 | 112.78 |
| 10 | A | 933 | CLA | CAC-C3C-C4C | 4.83 | 131.08 | 124.81 |
| 9 | A | 904 | BCL | O2D-CGD-CBD | 4.83 | 119.85 | 111.27 |
| 9 | a | 905 | BCL | CAD-C3D-C4D | -4.83 | 105.78 | 108.47 |
| 10 | a | 915 | CLA | C3B-C4B-NB | 4.82 | 115.45 | 109.21 |
| 9 | A | 909 | BCL | O1A-CGA-CBA | -4.82 | 104.94 | 123.73 |
| 9 | A | 904 | BCL | CED-O2D-CGD | 4.81 | 126.81 | 115.94 |
| 9 | a | 904 | BCL | C1-O2A-CGA | 4.81 | 129.06 | 116.44 |
| 9 | A | 903 | BCL | OBB-CAB-CBB | -4.81 | 109.36 | 120.17 |
| 10 | A | 933 | CLA | CMC-C2C-C1C | 4.80 | 132.36 | 125.04 |
| 10 | a | 914 | CLA | C4C-C3C-C2C | -4.80 | 99.90 | 106.90 |
| 10 | a | 901 | CLA | C3D-C2D-C1D | -4.79 | 99.30 | 105.83 |
| 11 | c | 201 | LYC | C57-C56-C55 | -4.77 | 116.25 | 122.92 |
| 16 | c | 202 | HEC | O2D-CGD-O1D | -4.75 | 111.45 | 123.30 |
| 9 | a | 907 | BCL | O2A-CGA-CBA | 4.75 | 126.82 | 111.91 |
| 10 | A | 912 | CLA | CHD-C4C-C3C | -4.75 | 117.86 | 124.84 |
| 15 | A | 932 | 85N | O3-C17-O6 | 4.75 | 124.05 | 110.72 |
| 17 | E | 101 | 84Q | O4-C16-C15 | 4.75 | 124.94 | 107.08 |
| 16 | C | 301 | HEC | C3C-C4C-NC | -4.75 | 101.98 | 110.94 |
| 11 | c | 201 | LYC | C10-C11-C12 | 4.74 | 139.73 | 126.42 |
| 9 | a | 905 | BCL | OBB-CAB-CBB | -4.73 | 109.52 | 120.17 |
| 10 | a | 913 | CLA | C3D-C4D-ND | 4.73 | 117.89 | 110.24 |
| 9 | A | 905 | BCL | C3C-C4C-CHD | -4.73 | 113.29 | 123.39 |
| 9 | a | 911 | BCL | OBB-CAB-C3B | -4.72 | 111.61 | 119.99 |
| 10 | a | 913 | CLA | CHD-C1D-ND | -4.72 | 120.11 | 124.45 |
| 10 | A | 910 | CLA | C9-C8-C7 | 4.72 | 128.37 | 111.29 |
| 9 | A | 908 | BCL | OBD-CAD-CBD | -4.70 | 119.18 | 125.89 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | a | 906 | BCL | OBD-CAD-C3D | -4.69 | 120.19 | 127.98 |
| 10 | A | 910 | CLA | C1-O2A-CGA | 4.69 | 128.75 | 116.44 |
| 10 | A | 933 | CLA | C1-O2A-CGA | 4.69 | 128.75 | 116.44 |
| 9 | A | 904 | BCL | CBC-CAC-C3C | 4.69 | 123.90 | 113.47 |
| 8 | a | 903 | 2GO | C3A-C4A-NA | -4.68 | 102.97 | 109.07 |
| 10 | a | 913 | CLA | C1-O2A-CGA | 4.67 | 128.71 | 116.44 |
| 9 | A | 902 | BCL | CBC-CAC-C3C | 4.66 | 123.84 | 113.47 |
| 10 | A | 912 | CLA | CMD-C2D-C1D | 4.64 | 132.89 | 124.71 |
| 9 | a | 907 | BCL | CED-O2D-CGD | 4.63 | 126.41 | 115.94 |
| 9 | a | 908 | BCL | CHD-C4C-NC | 4.63 | 130.22 | 125.08 |
| 9 | A | 908 | BCL | C1-C2-C3 | -4.62 | 118.06 | 126.04 |
| 17 | a | 921 | 84Q | O4-C16-C15 | 4.61 | 124.44 | 107.08 |
| 16 | C | 301 | HEC | O2A-CGA-O1A | -4.60 | 111.84 | 123.30 |
| 10 | A | 912 | CLA | CED-O2D-CGD | 4.60 | 126.33 | 115.94 |
| 9 | A | 907 | BCL | C4-C3-C5 | 4.58 | 122.97 | 115.27 |
| 9 | A | 908 | BCL | O2A-CGA-CBA | 4.58 | 126.27 | 111.91 |
| 10 | a | 912 | CLA | C1C-C2C-C3C | -4.57 | 102.16 | 106.96 |
| 9 | A | 909 | BCL | C1-O2A-CGA | 4.55 | 128.39 | 116.44 |
| 9 | A | 908 | BCL | CMB-C2B-C3B | 4.55 | 133.19 | 124.68 |
| 10 | a | 912 | CLA | O2A-CGA-O1A | -4.55 | 112.11 | 123.59 |
| 11 | A | 913 | LYC | C8-C7-C6 | 4.55 | 122.92 | 115.27 |
| 9 | A | 909 | BCL | OBB-CAB-C3B | -4.53 | 111.95 | 119.99 |
| 9 | A | 905 | BCL | CED-O2D-CGD | 4.53 | 126.19 | 115.94 |
| 10 | A | 931 | CLA | O1D-CGD-CBD | -4.53 | 115.21 | 124.48 |
| 9 | a | 905 | BCL | O1A-CGA-CBA | -4.53 | 106.06 | 123.73 |
| 10 | A | 933 | CLA | O2A-CGA-O1A | -4.52 | 112.19 | 123.59 |
| 9 | A | 902 | BCL | CAA-CBA-CGA | -4.51 | 100.07 | 113.25 |
| 9 | A | 908 | BCL | O1D-CGD-CBD | -4.50 | 115.28 | 124.48 |
| 10 | A | 911 | CLA | O2A-CGA-O1A | -4.49 | 112.25 | 123.59 |
| 13 | a | 918 | 85I | P-O3-C3 | 4.49 | 139.10 | 120.90 |
| 8 | a | 903 | 2GO | C4A-C3A-C2A | -4.48 | 102.24 | 106.96 |
| 8 | a | 903 | 2GO | CHB-C4A-NA | 4.48 | 130.36 | 124.68 |
| 9 | A | 904 | BCL | CAC-C3C-C2C | 4.46 | 125.40 | 114.26 |
| 10 | A | 931 | CLA | C3D-C2D-C1D | -4.45 | 99.75 | 105.83 |
| 10 | A | 931 | CLA | C3D-C4D-ND | -4.44 | 103.06 | 110.24 |
| 10 | a | 915 | CLA | CED-O2D-CGD | 4.43 | 125.97 | 115.94 |
| 9 | A | 903 | BCL | C1-C2-C3 | 4.43 | 133.70 | 126.04 |
| 8 | A | 901 | 2GO | CHB-C4A-NA | 4.43 | 130.29 | 124.68 |
| 9 | a | 906 | BCL | CAA-C2A-C1A | -4.41 | 97.51 | 111.97 |
| 10 | A | 910 | CLA | CMC-C2C-C1C | 4.41 | 131.76 | 125.04 |
| 10 | A | 933 | CLA | C1C-C2C-C3C | -4.41 | 102.32 | 106.96 |
| 11 | A | 913 | LYC | C13-C12-C14 | -4.40 | 116.76 | 122.92 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10 | a | 913 | CLA | C2A-C1A-CHA | -4.39 | 116.19 | 123.86 |
| 9 | a | 906 | BCL | OBB-CAB-CBB | -4.39 | 110.30 | 120.17 |
| 10 | A | 912 | CLA | C3D-C4D-ND | 4.37 | 117.31 | 110.24 |
| 8 | A | 901 | 2GO | C1A-C2A-C3A | -4.37 | 100.85 | 106.61 |
| 10 | a | 913 | CLA | C4C-C3C-C2C | -4.36 | 100.54 | 106.90 |
| 10 | a | 912 | CLA | C3D-C4D-ND | 4.36 | 117.30 | 110.24 |
| 9 | A | 909 | BCL | CAA-C2A-C1A | 4.36 | 126.27 | 111.97 |
| 9 | a | 911 | BCL | CMB-C2B-C3B | 4.36 | 132.84 | 124.68 |
| 10 | a | 914 | CLA | O2A-CGA-CBA | 4.36 | 129.47 | 112.23 |
| 8 | A | 901 | 2GO | CMC-C2C-C3C | -4.35 | 114.30 | 126.12 |
| 10 | A | 931 | CLA | C4D-C3D-CAD | -4.35 | 102.97 | 108.10 |
| 9 | A | 904 | BCL | C3D-CAD-CBD | 4.34 | 113.33 | 107.61 |
| 9 | a | 908 | BCL | CMB-C2B-C3B | 4.34 | 132.79 | 124.68 |
| 9 | A | 903 | BCL | CBB-CAB-C3B | 4.30 | 133.12 | 120.34 |
| 9 | a | 910 | BCL | OBB-CAB-CBB | -4.30 | 110.49 | 120.17 |
| 9 | A | 908 | BCL | O2D-CGD-O1D | -4.29 | 115.46 | 123.84 |
| 10 | A | 910 | CLA | O2A-CGA-O1A | -4.28 | 112.80 | 123.59 |
| 9 | a | 904 | BCL | O1A-CGA-CBA | -4.28 | 107.05 | 123.73 |
| 9 | a | 911 | BCL | CAD-C3D-C4D | -4.27 | 106.09 | 108.47 |
| 9 | A | 907 | BCL | O2A-C1-C2 | 4.27 | 119.85 | 108.64 |
| 10 | a | 915 | CLA | C4C-C3C-C2C | -4.26 | 100.68 | 106.90 |
| 10 | A | 931 | CLA | C4D-CHA-C1A | -4.25 | 116.08 | 121.25 |
| 10 | A | 912 | CLA | C4C-C3C-C2C | -4.25 | 100.70 | 106.90 |
| 10 | A | 911 | CLA | O2D-CGD-CBD | 4.24 | 118.80 | 111.27 |
| 9 | a | 908 | BCL | C3D-CAD-CBD | 4.22 | 113.16 | 107.61 |
| 9 | a | 906 | BCL | CAD-C3D-C4D | -4.22 | 106.12 | 108.47 |
| 9 | A | 902 | BCL | O1D-CGD-CBD | -4.22 | 115.85 | 124.48 |
| 9 | a | 910 | BCL | C2A-C1A-CHA | -4.22 | 116.49 | 123.86 |
| 10 | a | 914 | CLA | CMC-C2C-C1C | 4.21 | 131.45 | 125.04 |
| 10 | A | 910 | CLA | CBA-CAA-C2A | 4.21 | 126.29 | 113.86 |
| 10 | a | 915 | CLA | CMB-C2B-C1B | 4.20 | 134.91 | 128.46 |
| 9 | a | 910 | BCL | CHD-C4C-NC | 4.20 | 129.74 | 125.08 |
| 9 | A | 908 | BCL | C3D-CAD-CBD | 4.19 | 113.12 | 107.61 |
| 10 | A | 933 | CLA | CHD-C1D-ND | -4.19 | 120.61 | 124.45 |
| 10 | A | 911 | CLA | CHC-C1C-NC | -4.16 | 117.89 | 124.20 |
| 9 | A | 907 | BCL | OBB-CAB-C3B | 4.16 | 127.37 | 119.99 |
| 9 | A | 903 | BCL | CED-O2D-CGD | 4.14 | 125.31 | 115.94 |
| 10 | A | 910 | CLA | C4A-NA-C1A | 4.14 | 108.57 | 106.71 |
| 10 | a | 901 | CLA | C9-C8-C7 | 4.13 | 126.26 | 111.29 |
| 10 | a | 913 | CLA | C4-C3-C5 | 4.13 | 122.22 | 115.27 |
| 10 | A | 931 | CLA | C4-C3-C5 | 4.13 | 122.22 | 115.27 |
| 9 | A | 908 | BCL | C3C-C4C-CHD | -4.13 | 114.57 | 123.39 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10 | a | 912 | CLA | C6-C7-C8 | -4.13 | 102.58 | 115.92 |
| 9 | A | 906 | BCL | CMD-C2D-C3D | 4.12 | 132.39 | 124.68 |
| 10 | A | 912 | CLA | CMC-C2C-C1C | 4.12 | 131.31 | 125.04 |
| 10 | A | 910 | CLA | C1C-C2C-C3C | -4.12 | 102.63 | 106.96 |
| 11 | c | 201 | LYC | C9-C10-C11 | 4.11 | 136.06 | 123.22 |
| 10 | a | 914 | CLA | CMB-C2B-C3B | 4.10 | 132.36 | 124.68 |
| 10 | a | 915 | CLA | CHB-C4A-NA | 4.10 | 130.18 | 124.51 |
| 10 | a | 901 | CLA | O2A-CGA-O1A | -4.10 | 113.25 | 123.59 |
| 8 | A | 901 | 2GO | CAA-C2A-C3A | -4.09 | 120.25 | 127.88 |
| 9 | a | 905 | BCL | CMB-C2B-C1B | 4.09 | 134.76 | 128.46 |
| 9 | a | 910 | BCL | O1D-CGD-CBD | -4.09 | 116.11 | 124.48 |
| 10 | a | 913 | CLA | CMC-C2C-C1C | 4.09 | 131.26 | 125.04 |
| 10 | a | 913 | CLA | CED-O2D-CGD | 4.08 | 125.17 | 115.94 |
| 10 | a | 912 | CLA | C4-C3-C2 | -4.08 | 113.22 | 123.68 |
| 9 | a | 908 | BCL | OBD-CAD-C3D | -4.07 | 121.23 | 127.98 |
| 9 | A | 902 | BCL | OBD-CAD-CBD | -4.07 | 120.08 | 125.89 |
| 9 | A | 903 | BCL | CHD-C4C-NC | 4.06 | 129.59 | 125.08 |
| 9 | a | 907 | BCL | CMC-C2C-C1C | 4.06 | 122.67 | 111.77 |
| 9 | a | 904 | BCL | CMC-C2C-C1C | 4.05 | 122.66 | 111.77 |
| 9 | a | 911 | BCL | O2D-CGD-O1D | -4.04 | 115.94 | 123.84 |
| 9 | a | 905 | BCL | C3D-CAD-CBD | 4.04 | 112.92 | 107.61 |
| 13 | A | 915 | 85I | O3-P-O1 | 4.04 | 124.61 | 109.47 |
| 9 | a | 907 | BCL | C3C-C4C-CHD | -4.03 | 114.79 | 123.39 |
| 11 | c | 201 | LYC | C57-C56-C58 | 4.03 | 124.42 | 118.08 |
| 10 | A | 912 | CLA | CHC-C1C-C2C | -4.03 | 115.58 | 126.72 |
| 9 | A | 905 | BCL | CHD-C4C-NC | 4.02 | 129.54 | 125.08 |
| 9 | A | 906 | BCL | O2A-CGA-CBA | 4.01 | 124.48 | 111.91 |
| 9 | a | 907 | BCL | O1D-CGD-CBD | -4.01 | 116.29 | 124.48 |
| 16 | c | 202 | HEC | CBA-CAA-C2A | -4.00 | 105.86 | 112.60 |
| 9 | a | 906 | BCL | CED-O2D-CGD | 4.00 | 124.99 | 115.94 |
| 13 | A | 916 | 85I | O2-P-O | -4.00 | 89.18 | 107.75 |
| 10 | a | 912 | CLA | CMB-C2B-C1B | 3.99 | 134.60 | 128.46 |
| 9 | A | 905 | BCL | C1-O2A-CGA | 3.98 | 126.89 | 116.44 |
| 9 | A | 905 | BCL | O2A-C1-C2 | 3.98 | 119.09 | 108.64 |
| 9 | a | 907 | BCL | C4-C3-C5 | 3.98 | 121.97 | 115.27 |
| 10 | a | 912 | CLA | CAC-C3C-C4C | 3.96 | 129.95 | 124.81 |
| 9 | A | 902 | BCL | C9-C8-C10 | -3.96 | 96.96 | 111.29 |
| 9 | A | 902 | BCL | O2A-C1-C2 | 3.96 | 119.03 | 108.64 |
| 10 | a | 914 | CLA | CAC-C3C-C4C | 3.95 | 129.94 | 124.81 |
| 10 | A | 911 | CLA | CHD-C1D-ND | -3.95 | 120.83 | 124.45 |
| 9 | A | 906 | BCL | C1-C2-C3 | -3.94 | 119.23 | 126.04 |
| 9 | A | 904 | BCL | CMB-C2B-C1B | 3.93 | 134.50 | 128.46 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | a | 909 | BCL | C6-C5-C3 | -3.93 | 103.16 | 113.45 |
| 17 | E | 101 | 84Q | O2-C16-C15 | -3.92 | 92.35 | 107.08 |
| 9 | a | 908 | BCL | C3C-C4C-CHD | -3.91 | 115.03 | 123.39 |
| 15 | A | 932 | 85N | O3-C17-C16 | 3.91 | 122.01 | 107.06 |
| 10 | A | 912 | CLA | CAA-CBA-CGA | 3.90 | 124.65 | 113.25 |
| 9 | A | 909 | BCL | CMB-C2B-C3B | 3.90 | 131.97 | 124.68 |
| 9 | a | 909 | BCL | CMB-C2B-C3B | 3.89 | 131.96 | 124.68 |
| 9 | A | 905 | BCL | O1D-CGD-CBD | -3.88 | 116.54 | 124.48 |
| 9 | A | 908 | BCL | CAA-CBA-CGA | -3.87 | 101.95 | 113.25 |
| 10 | a | 912 | CLA | C12-C11-C10 | -3.85 | 95.53 | 113.24 |
| 10 | A | 910 | CLA | CBC-CAC-C3C | -3.85 | 101.81 | 112.43 |
| 10 | A | 931 | CLA | CMB-C2B-C3B | 3.84 | 131.87 | 124.68 |
| 9 | A | 908 | BCL | CHD-C4C-NC | 3.84 | 129.34 | 125.08 |
| 8 | A | 901 | 2GO | C3D-C4D-ND | -3.84 | 104.60 | 116.21 |
| 10 | a | 912 | CLA | C1-C2-C3 | -3.83 | 119.41 | 126.04 |
| 10 | a | 901 | CLA | C1C-C2C-C3C | -3.83 | 102.93 | 106.96 |
| 9 | A | 907 | BCL | C3C-C4C-CHD | -3.83 | 115.22 | 123.39 |
| 9 | a | 907 | BCL | C1-O2A-CGA | 3.82 | 126.47 | 116.44 |
| 10 | a | 915 | CLA | C2D-C1D-ND | -3.82 | 107.29 | 110.10 |
| 10 | a | 912 | CLA | CHD-C1D-ND | -3.82 | 120.95 | 124.45 |
| 9 | a | 910 | BCL | CAA-C2A-C1A | 3.81 | 124.46 | 111.97 |
| 10 | a | 913 | CLA | C4D-CHA-C1A | -3.81 | 116.61 | 121.25 |
| 11 | c | 201 | LYC | C6-C7-C9 | 3.79 | 133.46 | 121.98 |
| 10 | a | 901 | CLA | O1A-CGA-CBA | -3.79 | 108.94 | 123.73 |
| 9 | a | 911 | BCL | O1A-CGA-CBA | -3.78 | 109.00 | 123.73 |
| 9 | A | 904 | BCL | O1A-CGA-CBA | -3.78 | 110.95 | 123.08 |
| 16 | C | 301 | HEC | O2A-CGA-CBA | 3.78 | 126.16 | 114.03 |
| 10 | a | 914 | CLA | C1D-ND-C4D | -3.77 | 103.65 | 106.33 |
| 9 | A | 902 | BCL | C11-C12-C13 | 3.77 | 128.10 | 115.92 |
| 10 | A | 933 | CLA | C1D-ND-C4D | -3.76 | 103.66 | 106.33 |
| 9 | a | 907 | BCL | CHB-C4A-NA | 3.76 | 129.71 | 124.51 |
| 9 | A | 902 | BCL | C14-C13-C12 | 3.75 | 124.89 | 111.29 |
| 10 | a | 912 | CLA | C3D-C2D-C1D | -3.75 | 100.72 | 105.83 |
| 9 | A | 908 | BCL | CAC-C3C-C4C | -3.74 | 104.28 | 112.58 |
| 9 | a | 906 | BCL | CAA-CBA-CGA | -3.71 | 102.67 | 112.51 |
| 10 | a | 913 | CLA | O2A-CGA-O1A | -3.71 | 114.24 | 123.59 |
| 10 | a | 915 | CLA | C1-O2A-CGA | 3.70 | 126.16 | 116.44 |
| 9 | A | 904 | BCL | O2A-CGA-CBA | 3.70 | 125.92 | 114.03 |
| 9 | A | 907 | BCL | CAA-CBA-CGA | 3.70 | 124.07 | 113.25 |
| 9 | a | 907 | BCL | CMB-C2B-C3B | 3.69 | 131.59 | 124.68 |
| 9 | A | 907 | BCL | C9-C8-C10 | -3.69 | 97.93 | 111.29 |
| 10 | A | 911 | CLA | CED-O2D-CGD | 3.69 | 124.27 | 115.94 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | a | 905 | BCL | O2A-C1-C2 | 3.68 | 118.31 | 108.64 |
| 10 | a | 901 | CLA | CAC-C3C-C2C | 3.67 | 133.81 | 127.53 |
| 9 | A | 902 | BCL | C2A-C1A-CHA | -3.67 | 117.44 | 123.86 |
| 8 | A | 901 | 2GO | C2C-C1C-NC | -3.67 | 104.30 | 109.07 |
| 13 | a | 918 | 85I | O3-C3-C4 | 3.66 | 120.84 | 107.08 |
| 9 | a | 908 | BCL | C16-C17-C18 | -3.66 | 98.75 | 115.98 |
| 10 | A | 911 | CLA | C6-C7-C8 | 3.66 | 127.74 | 115.92 |
| 9 | a | 904 | BCL | CMB-C2B-C3B | 3.65 | 131.51 | 124.68 |
| 10 | a | 914 | CLA | C3D-C4D-ND | 3.64 | 116.13 | 110.24 |
| 10 | a | 913 | CLA | C9-C8-C7 | 3.64 | 124.47 | 111.29 |
| 10 | A | 911 | CLA | C1-O2A-CGA | 3.63 | 125.98 | 116.44 |
| 9 | A | 903 | BCL | C3A-C2A-C1A | 3.62 | 106.77 | 101.34 |
| 10 | A | 910 | CLA | C11-C10-C8 | 3.61 | 127.59 | 115.92 |
| 9 | A | 902 | BCL | CMA-C3A-C2A | -3.61 | 99.27 | 113.83 |
| 9 | A | 903 | BCL | C6-C7-C8 | 3.61 | 127.58 | 115.92 |
| 10 | A | 911 | CLA | C2A-C1A-CHA | -3.61 | 117.55 | 123.86 |
| 9 | A | 907 | BCL | C5-C3-C2 | 3.61 | 128.41 | 121.12 |
| 8 | A | 901 | 2GO | OBB-CAB-CBB | -3.61 | 112.05 | 120.17 |
| 10 | a | 912 | CLA | CHD-C4C-C3C | -3.61 | 119.54 | 124.84 |
| 10 | A | 933 | CLA | C1-C2-C3 | -3.60 | 119.81 | 126.04 |
| 9 | a | 909 | BCL | C3C-C4C-CHD | -3.60 | 115.70 | 123.39 |
| 10 | A | 933 | CLA | C3C-C4C-NC | 3.60 | 114.61 | 110.57 |
| 10 | A | 933 | CLA | CHB-C4A-NA | 3.58 | 129.47 | 124.51 |
| 9 | a | 906 | BCL | C3D-CAD-CBD | 3.57 | 112.31 | 107.61 |
| 9 | A | 902 | BCL | C3A-C2A-C1A | 3.57 | 106.68 | 101.34 |
| 9 | a | 905 | BCL | CHB-C4A-NA | 3.56 | 129.43 | 124.51 |
| 10 | A | 910 | CLA | C4C-C3C-C2C | -3.56 | 101.71 | 106.90 |
| 9 | a | 905 | BCL | CBC-CAC-C3C | -3.55 | 105.57 | 113.47 |
| 9 | a | 909 | BCL | OBB-CAB-C3B | 3.54 | 126.28 | 119.99 |
| 9 | A | 903 | BCL | C6-C5-C3 | 3.54 | 122.75 | 113.45 |
| 9 | a | 911 | BCL | C3C-C4C-CHD | -3.53 | 115.84 | 123.39 |
| 10 | a | 901 | CLA | CED-O2D-CGD | 3.52 | 123.91 | 115.94 |
| 9 | A | 907 | BCL | C9-C8-C7 | 3.51 | 124.02 | 111.29 |
| 9 | a | 911 | BCL | C3D-CAD-CBD | 3.50 | 112.22 | 107.61 |
| 8 | a | 903 | 2GO | O2D-CGD-CBD | 3.50 | 118.15 | 111.80 |
| 9 | a | 905 | BCL | OBD-CAD-C3D | -3.49 | 122.19 | 127.98 |
| 10 | A | 933 | CLA | C6-C5-C3 | -3.49 | 96.56 | 113.58 |
| 10 | A | 912 | CLA | C2A-C1A-CHA | -3.48 | 117.78 | 123.86 |
| 10 | A | 933 | CLA | CBA-CAA-C2A | -3.47 | 103.61 | 113.86 |
| 10 | a | 912 | CLA | C4-C3-C5 | 3.47 | 121.11 | 115.27 |
| 9 | a | 910 | BCL | C4C-CHD-C1D | -3.47 | 120.77 | 125.88 |
| 10 | A | 910 | CLA | O2A-CGA-CBA | 3.46 | 122.75 | 111.91 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10 | a | 912 | CLA | C9-C8-C10 | -3.46 | 98.78 | 111.29 |
| 9 | A | 905 | BCL | CMB-C2B-C3B | 3.44 | 131.12 | 124.68 |
| 9 | A | 909 | BCL | CED-O2D-CGD | 3.44 | 123.71 | 115.94 |
| 10 | a | 901 | CLA | C4-C3-C5 | 3.43 | 121.05 | 115.27 |
| 9 | A | 904 | BCL | OBD-CAD-C3D | -3.42 | 122.30 | 127.98 |
| 11 | A | 913 | LYC | C64-C65-C66 | -3.41 | 116.08 | 127.75 |
| 9 | A | 905 | BCL | C2A-C3A-C4A | -3.41 | 96.36 | 101.87 |
| 10 | a | 912 | CLA | C4A-NA-C1A | -3.41 | 105.17 | 106.71 |
| 16 | C | 301 | HEC | CMA-C3A-C2A | 3.39 | 131.34 | 124.94 |
| 9 | a | 905 | BCL | OBB-CAB-C3B | 3.39 | 126.02 | 119.99 |
| 9 | a | 910 | BCL | C16-C15-C13 | 3.39 | 126.88 | 115.92 |
| 9 | A | 909 | BCL | C3D-CAD-CBD | -3.39 | 103.15 | 107.61 |
| 10 | A | 910 | CLA | CAC-C3C-C4C | 3.38 | 129.20 | 124.81 |
| 10 | A | 931 | CLA | CHA-C4D-ND | 3.38 | 139.56 | 132.50 |
| 9 | a | 909 | BCL | C1C-NC-C4C | -3.37 | 105.19 | 106.71 |
| 9 | a | 907 | BCL | C6-C7-C8 | -3.36 | 105.05 | 115.92 |
| 16 | C | 301 | HEC | CMD-C2D-C3D | 3.36 | 131.28 | 124.94 |
| 11 | A | 913 | LYC | C20-C21-C50 | 3.36 | 130.36 | 123.47 |
| 9 | A | 909 | BCL | CMA-C3A-C4A | 3.36 | 120.80 | 111.77 |
| 10 | A | 931 | CLA | O1A-CGA-CBA | -3.35 | 110.64 | 123.73 |
| 10 | a | 914 | CLA | CHB-C4A-NA | 3.35 | 129.15 | 124.51 |
| 9 | A | 903 | BCL | CAC-C3C-C2C | 3.35 | 122.62 | 114.26 |
| 9 | A | 902 | BCL | CAC-C3C-C4C | -3.35 | 105.16 | 112.58 |
| 9 | a | 911 | BCL | CHD-C4C-NC | 3.34 | 128.78 | 125.08 |
| 9 | a | 910 | BCL | C4B-CHC-C1C | 3.33 | 136.71 | 130.12 |
| 9 | a | 906 | BCL | O2D-CGD-CBD | 3.33 | 117.19 | 111.27 |
| 16 | c | 202 | HEC | O2D-CGD-CBD | 3.33 | 124.73 | 114.03 |
| 8 | a | 903 | 2GO | C3D-C4D-ND | -3.33 | 106.15 | 116.21 |
| 9 | a | 908 | BCL | C9-C8-C10 | -3.32 | 99.28 | 111.29 |
| 9 | A | 909 | BCL | CHA-C1A-NA | -3.31 | 118.81 | 126.40 |
| 10 | a | 912 | CLA | C4D-C3D-CAD | -3.31 | 104.19 | 108.10 |
| 10 | A | 931 | CLA | C3B-C4B-NB | 3.31 | 113.49 | 109.21 |
| 10 | A | 910 | CLA | CHC-C1C-NC | -3.30 | 119.19 | 124.20 |
| 10 | a | 912 | CLA | CHC-C1C-NC | -3.30 | 119.19 | 124.20 |
| 9 | a | 907 | BCL | C7-C6-C5 | -3.30 | 104.41 | 113.36 |
| 11 | A | 913 | LYC | C16-C17-C19 | 3.30 | 124.00 | 118.94 |
| 10 | A | 912 | CLA | C1D-CHD-C4C | -3.29 | 118.96 | 126.06 |
| 9 | a | 904 | BCL | O1D-CGD-CBD | -3.29 | 117.76 | 124.48 |
| 9 | A | 902 | BCL | C4C-CHD-C1D | -3.29 | 121.03 | 125.88 |
| 10 | a | 901 | CLA | O1D-CGD-CBD | -3.28 | 117.78 | 124.48 |
| 10 | A | 931 | CLA | C6-C7-C8 | 3.28 | 126.51 | 115.92 |
| 10 | A | 912 | CLA | O2A-CGA-O1A | -3.28 | 112.87 | 123.14 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10 | a | 915 | CLA | CMA-C3A-C4A | 3.28 | 120.58 | 111.77 |
| 9 | A | 902 | BCL | C4-C3-C2 | -3.27 | 115.29 | 123.68 |
| 9 | A | 905 | BCL | C16-C15-C13 | -3.25 | 105.42 | 115.92 |
| 10 | A | 910 | CLA | C4D-CHA-C1A | -3.25 | 117.30 | 121.25 |
| 11 | A | 913 | LYC | C58-C56-C55 | -3.24 | 113.96 | 118.94 |
| 10 | a | 915 | CLA | C2A-C1A-CHA | -3.24 | 118.19 | 123.86 |
| 10 | A | 911 | CLA | C2D-C1D-ND | 3.23 | 112.48 | 110.10 |
| 10 | A | 912 | CLA | C1-O2A-CGA | 3.23 | 126.75 | 116.11 |
| 16 | c | 202 | HEC | CBD-CAD-C3D | -3.22 | 107.13 | 112.62 |
| 8 | a | 903 | 2GO | OBB-CAB-CBB | -3.22 | 112.93 | 120.17 |
| 9 | A | 902 | BCL | C1-C2-C3 | -3.21 | 120.49 | 126.04 |
| 10 | A | 910 | CLA | CHB-C4A-NA | 3.21 | 128.95 | 124.51 |
| 16 | C | 301 | HEC | O2D-CGD-O1D | -3.19 | 115.35 | 123.30 |
| 10 | A | 931 | CLA | C11-C10-C8 | 3.18 | 126.21 | 115.92 |
| 10 | a | 912 | CLA | CAA-CBA-CGA | -3.18 | 103.95 | 113.25 |
| 9 | A | 905 | BCL | O2A-CGA-CBA | 3.17 | 121.87 | 111.91 |
| 9 | A | 909 | BCL | C3C-C4C-CHD | -3.17 | 116.62 | 123.39 |
| 10 | a | 912 | CLA | C4C-C3C-C2C | -3.16 | 102.29 | 106.90 |
| 9 | a | 909 | BCL | O1D-CGD-CBD | -3.16 | 118.02 | 124.48 |
| 11 | A | 913 | LYC | C1-C2-C4 | -3.16 | 113.53 | 122.65 |
| 10 | A | 933 | CLA | CMD-C2D-C1D | 3.15 | 130.27 | 124.71 |
| 9 | a | 905 | BCL | C4-C3-C5 | 3.15 | 120.57 | 115.27 |
| 10 | a | 914 | CLA | CMD-C2D-C1D | 3.15 | 130.26 | 124.71 |
| 9 | A | 906 | BCL | CMC-C2C-C1C | 3.14 | 120.22 | 111.77 |
| 9 | A | 909 | BCL | C10-C8-C7 | 3.14 | 128.65 | 112.13 |
| 9 | a | 907 | BCL | OBB-CAB-C3B | -3.14 | 114.42 | 119.99 |
| 9 | A | 903 | BCL | CMB-C2B-C3B | 3.14 | 130.55 | 124.68 |
| 10 | a | 915 | CLA | C4D-CHA-C1A | -3.13 | 117.44 | 121.25 |
| 10 | A | 931 | CLA | C1D-CHD-C4C | -3.12 | 119.32 | 126.06 |
| 9 | a | 910 | BCL | C11-C12-C13 | 3.12 | 126.01 | 115.92 |
| 10 | A | 931 | CLA | CHD-C1D-C2D | 3.12 | 132.02 | 125.48 |
| 10 | a | 901 | CLA | CMB-C2B-C1B | 3.11 | 133.25 | 128.46 |
| 9 | A | 904 | BCL | O2D-CGD-O1D | -3.10 | 117.77 | 123.84 |
| 9 | a | 907 | BCL | CAD-C3D-C4D | -3.10 | 106.74 | 108.47 |
| 10 | A | 912 | CLA | CMB-C2B-C3B | 3.09 | 130.47 | 124.68 |
| 9 | A | 902 | BCL | C3D-CAD-CBD | 3.08 | 111.66 | 107.61 |
| 9 | A | 902 | BCL | O1A-CGA-CBA | -3.04 | 111.86 | 123.73 |
| 10 | a | 901 | CLA | C7-C6-C5 | -3.03 | 105.12 | 113.36 |
| 10 | a | 915 | CLA | C1C-C2C-C3C | -3.03 | 103.77 | 106.96 |
| 11 | A | 913 | LYC | C59-C58-C56 | -3.03 | 117.90 | 126.42 |
| 9 | a | 909 | BCL | CHC-C1C-NC | 3.02 | 128.69 | 124.51 |
| 13 | A | 915 | 85I | O2-P-O | -3.02 | 93.70 | 107.75 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | a | 905 | BCL | C11-C12-C13 | 3.02 | 125.67 | 115.92 |
| 10 | a | 915 | CLA | CHC-C1C-NC | -3.00 | 119.64 | 124.20 |
| 10 | a | 912 | CLA | C17-C16-C15 | -3.00 | 99.44 | 113.24 |
| 10 | a | 913 | CLA | C4A-NA-C1A | -3.00 | 105.36 | 106.71 |
| 9 | a | 911 | BCL | CMD-C2D-C3D | 2.99 | 130.28 | 124.68 |
| 9 | A | 909 | BCL | OBD-CAD-C3D | 2.98 | 132.94 | 127.98 |
| 8 | a | 903 | 2GO | CHA-CBD-CGD | -2.98 | 115.53 | 125.12 |
| 9 | A | 909 | BCL | C5-C3-C2 | 2.98 | 127.15 | 121.12 |
| 9 | a | 908 | BCL | C4C-CHD-C1D | -2.98 | 121.49 | 125.88 |
| 9 | a | 904 | BCL | OBD-CAD-CBD | -2.97 | 121.66 | 125.89 |
| 11 | c | 201 | LYC | C54-C55-C56 | 2.95 | 131.53 | 127.31 |
| 9 | a | 904 | BCL | CAC-C3C-C2C | -2.95 | 106.88 | 114.26 |
| 10 | a | 914 | CLA | C3D-C2D-C1D | -2.95 | 101.80 | 105.83 |
| 9 | a | 904 | BCL | C4C-CHD-C1D | -2.95 | 121.53 | 125.88 |
| 8 | A | 901 | 2GO | C4C-C3C-C2C | -2.94 | 102.61 | 106.90 |
| 9 | A | 906 | BCL | OBB-CAB-CBB | -2.94 | 113.55 | 120.17 |
| 10 | a | 913 | CLA | CAA-CBA-CGA | 2.94 | 121.83 | 113.25 |
| 10 | A | 911 | CLA | C10-C8-C7 | 2.92 | 127.48 | 112.13 |
| 9 | A | 907 | BCL | O1D-CGD-CBD | -2.92 | 118.52 | 124.48 |
| 10 | A | 912 | CLA | CAA-C2A-C1A | 2.92 | 121.53 | 111.97 |
| 10 | a | 901 | CLA | C14-C13-C15 | -2.91 | 100.74 | 111.29 |
| 9 | A | 904 | BCL | CHD-C4C-NC | 2.91 | 128.31 | 125.08 |
| 9 | a | 905 | BCL | CMA-C3A-C4A | 2.91 | 119.59 | 111.77 |
| 8 | A | 901 | 2GO | O2A-C1-C2 | -2.90 | 101.02 | 108.64 |
| 13 | a | 919 | 85I | O4-C4-C3 | 2.89 | 116.96 | 109.54 |
| 9 | a | 911 | BCL | C3A-C2A-C1A | 2.89 | 105.67 | 101.34 |
| 8 | a | 903 | 2GO | C3C-C4C-NC | 2.89 | 115.93 | 110.14 |
| 9 | A | 904 | BCL | CMA-C3A-C2A | -2.89 | 102.19 | 113.83 |
| 9 | a | 905 | BCL | O2A-CGA-O1A | -2.88 | 116.32 | 123.59 |
| 10 | a | 912 | CLA | CMC-C2C-C1C | 2.87 | 129.40 | 125.04 |
| 17 | E | 101 | 84Q | O7-P-O6 | -2.86 | 97.89 | 109.07 |
| 8 | A | 901 | 2GO | CHA-C1A-C2A | 2.86 | 132.92 | 128.18 |
| 10 | a | 901 | CLA | C6-C5-C3 | 2.85 | 120.94 | 113.45 |
| 9 | a | 907 | BCL | O1A-CGA-CBA | -2.85 | 112.60 | 123.73 |
| 10 | a | 915 | CLA | CHD-C4C-C3C | -2.85 | 120.65 | 124.84 |
| 9 | a | 907 | BCL | CBB-CAB-C3B | 2.85 | 128.79 | 120.34 |
| 9 | A | 908 | BCL | OBB-CAB-C3B | -2.85 | 114.94 | 119.99 |
| 10 | A | 910 | CLA | CHD-C4C-C3C | -2.83 | 120.67 | 124.84 |
| 10 | A | 910 | CLA | C2A-C1A-CHA | -2.83 | 118.91 | 123.86 |
| 9 | a | 904 | BCL | CMC-C2C-C3C | -2.83 | 102.42 | 113.83 |
| 8 | A | 901 | 2GO | CBB-CAB-C3B | 2.82 | 128.72 | 120.34 |
| 9 | A | 908 | BCL | O2A-C1-C2 | 2.82 | 116.06 | 108.64 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | A | 903 | BCL | CMC-C2C-C1C | 2.82 | 119.36 | 111.77 |
| 9 | a | 908 | BCL | C4-C3-C5 | -2.82 | 110.53 | 115.27 |
| 9 | A | 907 | BCL | C6-C7-C8 | 2.81 | 125.01 | 115.92 |
| 8 | A | 901 | 2GO | CHA-CBD-CAD | -2.81 | 104.39 | 107.17 |
| 9 | a | 911 | BCL | CMA-C3A-C4A | 2.80 | 119.29 | 111.77 |
| 9 | a | 910 | BCL | C3A-C2A-C1A | -2.79 | 97.16 | 101.34 |
| 8 | a | 903 | 2GO | CMC-C2C-C3C | -2.78 | 118.57 | 126.12 |
| 8 | a | 903 | 2GO | O1D-CGD-CBD | -2.78 | 119.49 | 124.62 |
| 10 | A | 933 | CLA | C3D-C4D-ND | 2.78 | 114.73 | 110.24 |
| 10 | A | 912 | CLA | CHC-C1C-NC | -2.78 | 119.99 | 124.20 |
| 10 | a | 912 | CLA | C2A-C1A-CHA | -2.78 | 119.00 | 123.86 |
| 9 | A | 908 | BCL | CED-O2D-CGD | 2.77 | 122.19 | 115.94 |
| 9 | a | 911 | BCL | O2A-CGA-O1A | -2.76 | 116.62 | 123.59 |
| 10 | a | 915 | CLA | CBC-CAC-C3C | -2.76 | 104.82 | 112.43 |
| 9 | a | 905 | BCL | CMC-C2C-C1C | 2.75 | 119.17 | 111.77 |
| 9 | A | 903 | BCL | CAA-C2A-C3A | 2.75 | 120.30 | 112.78 |
| 9 | a | 910 | BCL | C4-C3-C2 | -2.74 | 116.65 | 123.68 |
| 17 | E | 101 | 84Q | O4-P-O6 | 2.74 | 119.73 | 109.47 |
| 10 | a | 912 | CLA | C9-C8-C7 | 2.74 | 121.20 | 111.29 |
| 10 | a | 901 | CLA | CAA-C2A-C3A | -2.73 | 105.30 | 112.78 |
| 10 | a | 913 | CLA | C2C-C1C-NC | 2.73 | 112.53 | 109.97 |
| 8 | A | 901 | 2GO | CAA-C2A-C1A | -2.73 | 120.54 | 128.29 |
| 9 | a | 911 | BCL | CAA-C2A-C1A | 2.73 | 120.91 | 111.97 |
| 10 | a | 913 | CLA | CHA-C4D-ND | -2.72 | 126.80 | 132.50 |
| 9 | a | 909 | BCL | CMA-C3A-C4A | 2.72 | 119.09 | 111.77 |
| 9 | a | 908 | BCL | C4-C3-C2 | -2.72 | 116.70 | 123.68 |
| 9 | A | 903 | BCL | C1C-NC-C4C | -2.71 | 105.49 | 106.71 |
| 9 | a | 907 | BCL | C3D-CAD-CBD | 2.71 | 111.18 | 107.61 |
| 10 | a | 914 | CLA | C1D-CHD-C4C | -2.71 | 120.21 | 126.06 |
| 10 | A | 931 | CLA | CMD-C2D-C1D | 2.71 | 129.48 | 124.71 |
| 10 | A | 910 | CLA | C6-C7-C8 | 2.70 | 124.65 | 115.92 |
| 10 | A | 910 | CLA | CMB-C2B-C3B | 2.69 | 129.72 | 124.68 |
| 10 | a | 914 | CLA | CHD-C1D-C2D | 2.69 | 131.13 | 125.48 |
| 11 | A | 913 | LYC | C5-C4-C2 | 2.69 | 136.94 | 127.75 |
| 9 | a | 911 | BCL | OBD-CAD-C3D | -2.68 | 123.52 | 127.98 |
| 8 | A | 901 | 2GO | C1-C2-C3 | 2.68 | 130.67 | 126.04 |
| 8 | a | 903 | 2GO | CMB-C2B-C1B | -2.68 | 124.35 | 128.46 |
| 9 | A | 902 | BCL | C4-C3-C5 | 2.68 | 119.77 | 115.27 |
| 9 | a | 911 | BCL | C6-C5-C3 | 2.66 | 120.44 | 113.45 |
| 8 | A | 901 | 2GO | C3A-C4A-NA | -2.66 | 105.60 | 109.07 |
| 9 | A | 908 | BCL | CHB-C4A-NA | 2.66 | 128.19 | 124.51 |
| 10 | a | 914 | CLA | CMA-C3A-C2A | -2.65 | 103.13 | 113.83 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 10 | A | 931 | CLA | C16-C15-C13 | -2.65 | 107.36 | 115.92 |
| 9 | a | 910 | BCL | CMB-C2B-C1B | 2.65 | 132.53 | 128.46 |
| 10 | A | 931 | CLA | CHB-C4A-NA | 2.64 | 128.16 | 124.51 |
| 10 | a | 913 | CLA | CMB-C2B-C3B | 2.64 | 129.61 | 124.68 |
| 10 | A | 931 | CLA | C11-C12-C13 | -2.64 | 107.39 | 115.92 |
| 10 | a | 901 | CLA | C1-C2-C3 | -2.63 | 121.49 | 126.04 |
| 10 | A | 933 | CLA | C4D-C3D-CAD | -2.62 | 105.01 | 108.10 |
| 9 | A | 903 | BCL | CBC-CAC-C3C | 2.62 | 119.30 | 113.47 |
| 9 | a | 908 | BCL | C4B-C3B-CAB | 2.62 | 132.19 | 127.13 |
| 9 | A | 905 | BCL | C1B-CHB-C4A | -2.62 | 124.94 | 130.12 |
| 10 | A | 933 | CLA | CHA-C4D-ND | -2.61 | 127.03 | 132.50 |
| 10 | A | 910 | CLA | CAA-C2A-C3A | 2.61 | 119.93 | 112.78 |
| 9 | A | 908 | BCL | CMA-C3A-C2A | -2.61 | 103.30 | 113.83 |
| 8 | A | 901 | 2GO | CHA-CBD-CGD | -2.60 | 116.76 | 125.12 |
| 9 | A | 907 | BCL | C2C-C3C-C4C | -2.60 | 97.45 | 101.34 |
| 9 | a | 908 | BCL | O2A-CGA-O1A | 2.60 | 130.15 | 123.59 |
| 9 | A | 906 | BCL | CBC-CAC-C3C | 2.59 | 119.24 | 113.47 |
| 13 | A | 915 | 85I | O-P-O1 | -2.59 | 98.96 | 109.07 |
| 10 | a | 915 | CLA | C2C-C1C-NC | 2.59 | 112.39 | 109.97 |
| 9 | A | 904 | BCL | C4C-CHD-C1D | -2.58 | 122.07 | 125.88 |
| 9 | A | 905 | BCL | C14-C13-C12 | 2.58 | 120.64 | 111.29 |
| 10 | a | 915 | CLA | C4D-C3D-CAD | -2.58 | 105.05 | 108.10 |
| 9 | A | 909 | BCL | CAC-C3C-C4C | -2.58 | 106.86 | 112.58 |
| 10 | A | 911 | CLA | CMB-C2B-C3B | 2.58 | 129.50 | 124.68 |
| 9 | A | 908 | BCL | OBB-CAB-CBB | 2.58 | 125.97 | 120.17 |
| 9 | A | 908 | BCL | C7-C6-C5 | -2.57 | 106.37 | 113.36 |
| 11 | c | 201 | LYC | C5-C6-C7 | 2.57 | 121.44 | 112.98 |
| 10 | a | 915 | CLA | OBD-CAD-C3D | -2.57 | 122.33 | 128.52 |
| 9 | A | 907 | BCL | C15-C13-C14 | -2.57 | 98.66 | 110.51 |
| 10 | A | 911 | CLA | C3D-C4D-ND | 2.57 | 114.39 | 110.24 |
| 9 | A | 909 | BCL | C15-C13-C12 | 2.56 | 125.60 | 112.13 |
| 9 | A | 907 | BCL | C3D-CAD-CBD | 2.56 | 110.98 | 107.61 |
| 10 | a | 912 | CLA | CMD-C2D-C3D | -2.56 | 121.73 | 127.61 |
| 9 | A | 903 | BCL | C2A-C1A-CHA | -2.56 | 119.39 | 123.86 |
| 10 | A | 912 | CLA | C3A-C2A-C1A | -2.54 | 97.53 | 101.34 |
| 9 | a | 910 | BCL | CBA-CAA-C2A | 2.54 | 121.37 | 113.86 |
| 9 | A | 907 | BCL | OBB-CAB-CBB | -2.54 | 114.45 | 120.17 |
| 10 | a | 912 | CLA | O1D-CGD-CBD | 2.54 | 129.68 | 124.48 |
| 9 | A | 902 | BCL | C9-C8-C7 | -2.53 | 102.12 | 111.29 |
| 10 | A | 910 | CLA | C3A-C2A-C1A | -2.53 | 97.55 | 101.34 |
| 9 | A | 908 | BCL | C4C-CHD-C1D | -2.53 | 122.15 | 125.88 |
| 9 | a | 904 | BCL | O2A-C1-C2 | 2.52 | 115.26 | 108.64 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | A | 906 | BCL | C4-C3-C5 | 2.52 | 118.86 | 115.98 |
| 9 | a | 909 | BCL | C4-C3-C5 | 2.52 | 119.51 | 115.27 |
| 9 | a | 908 | BCL | CAC-C3C-C2C | -2.51 | 107.98 | 114.26 |
| 11 | A | 913 | LYC | C18-C17-C16 | 2.51 | 122.04 | 118.08 |
| 9 | A | 906 | BCL | CBA-CAA-C2A | 2.51 | 121.28 | 113.86 |
| 10 | A | 910 | CLA | C3D-C4D-ND | 2.51 | 114.30 | 110.24 |
| 9 | A | 904 | BCL | CAA-C2A-C1A | -2.51 | 103.76 | 111.97 |
| 9 | a | 910 | BCL | C3C-C4C-CHD | -2.51 | 118.04 | 123.39 |
| 10 | A | 910 | CLA | C6-C5-C3 | 2.50 | 120.02 | 113.45 |
| 10 | A | 911 | CLA | C1-C2-C3 | -2.50 | 121.72 | 126.04 |
| 10 | a | 913 | CLA | C9-C8-C10 | -2.50 | 102.25 | 111.29 |
| 8 | a | 903 | 2GO | C15-C13-C12 | -2.49 | 99.04 | 112.13 |
| 16 | c | 202 | HEC | CMA-C3A-C2A | 2.49 | 129.63 | 124.94 |
| 9 | A | 906 | BCL | CHD-C4C-NC | 2.49 | 127.84 | 125.08 |
| 10 | A | 911 | CLA | C6-C5-C3 | 2.48 | 119.97 | 113.45 |
| 17 | E | 101 | 84Q | C19-C18-C17 | 2.48 | 122.63 | 113.62 |
| 9 | A | 907 | BCL | C11-C10-C8 | 2.47 | 123.91 | 115.92 |
| 10 | A | 911 | CLA | CHB-C4A-NA | 2.47 | 127.93 | 124.51 |
| 9 | A | 904 | BCL | CAD-C3D-C4D | -2.47 | 107.09 | 108.47 |
| 10 | A | 931 | CLA | OBD-CAD-C3D | -2.46 | 122.59 | 128.52 |
| 9 | a | 906 | BCL | CBC-CAC-C3C | 2.46 | 118.94 | 113.47 |
| 9 | a | 911 | BCL | C4-C3-C2 | 2.44 | 129.95 | 123.68 |
| 8 | a | 903 | 2GO | CAC-C3C-C2C | -2.44 | 123.36 | 127.53 |
| 10 | A | 912 | CLA | CHD-C4C-NC | -2.43 | 120.37 | 124.20 |
| 9 | a | 908 | BCL | C16-C15-C13 | -2.43 | 108.06 | 115.92 |
| 10 | A | 910 | CLA | C2D-C1D-ND | 2.43 | 111.89 | 110.10 |
| 11 | A | 913 | LYC | C20-C19-C17 | -2.43 | 123.85 | 127.31 |
| 9 | a | 911 | BCL | C16-C15-C13 | 2.42 | 123.75 | 115.92 |
| 9 | A | 906 | BCL | C3C-C4C-CHD | -2.42 | 118.22 | 123.39 |
| 16 | C | 301 | HEC | CBD-CAD-C3D | -2.42 | 108.49 | 112.62 |
| 10 | a | 915 | CLA | CAA-CBA-CGA | 2.42 | 120.33 | 113.25 |
| 10 | a | 913 | CLA | CMA-C3A-C4A | 2.42 | 118.27 | 111.77 |
| 9 | A | 908 | BCL | C1-O2A-CGA | 2.41 | 122.77 | 116.44 |
| 9 | a | 905 | BCL | C4C-CHD-C1D | -2.41 | 122.33 | 125.88 |
| 9 | A | 908 | BCL | O1A-CGA-CBA | -2.41 | 114.35 | 123.73 |
| 13 | A | 917 | 85I | O3-C3-C4 | 2.40 | 116.12 | 107.08 |
| 9 | A | 909 | BCL | CBA-CAA-C2A | 2.40 | 120.96 | 113.86 |
| 10 | A | 931 | CLA | C9-C8-C10 | 2.40 | 119.97 | 111.29 |
| 9 | a | 904 | BCL | C6-C5-C3 | 2.39 | 119.73 | 113.45 |
| 9 | a | 911 | BCL | C4-C3-C5 | -2.39 | 111.25 | 115.27 |
| 17 | E | 101 | 84Q | O5-P-O4 | -2.39 | 97.34 | 106.78 |
| 11 | c | 201 | LYC | C62-C61-C60 | -2.39 | 116.44 | 122.59 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | a | 910 | BCL | CAC-C3C-C2C | 2.38 | 120.20 | 114.26 |
| 10 | a | 913 | CLA | CHC-C1C-NC | -2.37 | 120.61 | 124.20 |
| 13 | A | 916 | 85I | O2-P-O3 | 2.36 | 116.09 | 106.78 |
| 9 | A | 904 | BCL | C2A-C1A-CHA | -2.35 | 119.74 | 123.86 |
| 10 | a | 901 | CLA | C3B-C4B-NB | 2.35 | 112.25 | 109.21 |
| 10 | a | 901 | CLA | CBA-CAA-C2A | 2.35 | 120.80 | 113.86 |
| 9 | A | 909 | BCL | C4B-C3B-CAB | -2.35 | 122.59 | 127.13 |
| 13 | A | 915 | 85I | O6-C20-C21 | 2.35 | 116.56 | 111.50 |
| 9 | A | 909 | BCL | CAC-C3C-C2C | 2.35 | 120.12 | 114.26 |
| 11 | c | 201 | LYC | C59-C58-C56 | -2.34 | 119.83 | 126.42 |
| 15 | A | 932 | 85N | O5-C24-C19 | -2.34 | 117.19 | 122.93 |
| 10 | A | 933 | CLA | C5-C3-C2 | -2.34 | 114.71 | 120.50 |
| 10 | A | 931 | CLA | CHD-C1D-ND | -2.34 | 122.30 | 124.45 |
| 10 | a | 914 | CLA | O1A-CGA-CBA | -2.33 | 114.63 | 123.73 |
| 11 | A | 913 | LYC | C55-C54-C53 | -2.33 | 115.95 | 123.22 |
| 9 | a | 910 | BCL | CAA-CBA-CGA | 2.33 | 120.06 | 113.25 |
| 9 | a | 910 | BCL | CMC-C2C-C1C | 2.33 | 118.02 | 111.77 |
| 9 | A | 909 | BCL | C11-C12-C13 | 2.32 | 123.43 | 115.92 |
| 10 | A | 931 | CLA | CAA-C2A-C3A | 2.32 | 119.13 | 112.78 |
| 10 | a | 914 | CLA | O2A-CGA-O1A | -2.32 | 115.88 | 123.14 |
| 9 | a | 908 | BCL | C11-C10-C8 | -2.31 | 108.44 | 115.92 |
| 10 | a | 901 | CLA | O2A-C1-C2 | -2.31 | 102.56 | 108.64 |
| 10 | A | 911 | CLA | CMA-C3A-C4A | 2.31 | 117.97 | 111.77 |
| 10 | a | 915 | CLA | CHD-C1D-ND | -2.30 | 122.34 | 124.45 |
| 10 | A | 910 | CLA | CAA-CBA-CGA | 2.30 | 119.98 | 113.25 |
| 8 | A | 901 | 2GO | C4B-C3B-CAB | -2.30 | 122.69 | 127.13 |
| 10 | a | 915 | CLA | CBA-CAA-C2A | -2.29 | 107.09 | 113.86 |
| 15 | G | 101 | 85N | O2-C16-C17 | -2.29 | 103.66 | 109.54 |
| 10 | a | 913 | CLA | C4-C3-C2 | -2.29 | 117.81 | 123.68 |
| 9 | a | 905 | BCL | C6-C5-C3 | 2.29 | 119.45 | 113.45 |
| 10 | a | 912 | CLA | C7-C6-C5 | 2.28 | 119.56 | 113.36 |
| 9 | a | 906 | BCL | CMC-C2C-C1C | 2.28 | 117.90 | 111.77 |
| 9 | A | 905 | BCL | CHB-C4A-NA | 2.28 | 127.66 | 124.51 |
| 13 | A | 916 | 85I | C7-C6-C5 | -2.27 | 105.37 | 113.62 |
| 9 | A | 907 | BCL | C11-C12-C13 | 2.26 | 126.64 | 115.98 |
| 9 | A | 905 | BCL | C9-C8-C10 | -2.26 | 103.12 | 111.29 |
| 10 | a | 915 | CLA | C1B-CHB-C4A | -2.26 | 125.65 | 130.12 |
| 9 | A | 902 | BCL | C1B-CHB-C4A | 2.24 | 134.55 | 130.12 |
| 9 | a | 911 | BCL | CBB-CAB-C3B | 2.24 | 126.98 | 120.34 |
| 9 | A | 906 | BCL | OBD-CAD-CBD | -2.23 | 122.71 | 125.89 |
| 9 | A | 904 | BCL | CAC-C3C-C4C | -2.23 | 107.63 | 112.58 |
| 10 | a | 912 | CLA | C5-C3-C2 | 2.23 | 125.63 | 121.12 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 9 | A | 907 | BCL | OBD-CAD-CBD | -2.23 | 122.71 | 125.89 |
| 10 | a | 913 | CLA | CBC-CAC-C3C | 2.22 | 118.54 | 112.43 |
| 10 | A | 931 | CLA | C3C-C4C-NC | 2.21 | 113.05 | 110.57 |
| 10 | a | 901 | CLA | CMD-C2D-C3D | -2.21 | 122.53 | 127.61 |
| 13 | a | 918 | 85I | O6-C3-C4 | 2.21 | 115.38 | 107.08 |
| 9 | a | 906 | BCL | O2A-CGA-CBA | 2.21 | 121.11 | 114.03 |
| 9 | a | 910 | BCL | O1A-CGA-CBA | -2.20 | 115.14 | 123.73 |
| 10 | a | 915 | CLA | C4-C3-C2 | -2.20 | 118.03 | 123.68 |
| 10 | a | 914 | CLA | C1C-C2C-C3C | -2.20 | 104.64 | 106.96 |
| 9 | A | 905 | BCL | O1A-CGA-CBA | -2.20 | 115.15 | 123.73 |
| 9 | a | 906 | BCL | OBB-CAB-C3B | 2.20 | 123.89 | 119.99 |
| 10 | A | 933 | CLA | O2A-CGA-CBA | 2.19 | 118.79 | 111.91 |
| 9 | A | 907 | BCL | CMA-C3A-C4A | 2.19 | 117.66 | 111.77 |
| 10 | A | 933 | CLA | CHD-C4C-C3C | -2.18 | 121.63 | 124.84 |
| 9 | a | 910 | BCL | C4-C3-C5 | -2.18 | 111.60 | 115.27 |
| 9 | A | 907 | BCL | CBA-CAA-C2A | 2.17 | 120.27 | 113.86 |
| 9 | a | 904 | BCL | C3D-CAD-CBD | 2.17 | 110.46 | 107.61 |
| 8 | a | 903 | 2GO | C1C-C2C-C3C | -2.17 | 104.68 | 106.96 |
| 9 | a | 909 | BCL | C9-C8-C7 | 2.17 | 119.14 | 111.29 |
| 10 | A | 912 | CLA | O2A-CGA-CBA | 2.16 | 120.77 | 112.23 |
| 10 | A | 912 | CLA | CMB-C2B-C1B | 2.16 | 131.78 | 128.46 |
| 15 | G | 101 | 85N | O3-C17-O6 | 2.16 | 116.77 | 110.72 |
| 11 | c | 201 | LYC | C63-C61-C60 | 2.15 | 128.49 | 121.98 |
| 10 | A | 933 | CLA | C4C-C3C-C2C | -2.15 | 103.76 | 106.90 |
| 10 | A | 931 | CLA | C5-C3-C2 | -2.15 | 116.76 | 121.12 |
| 9 | A | 904 | BCL | C1B-CHB-C4A | -2.15 | 125.86 | 130.12 |
| 9 | a | 908 | BCL | CHA-C1A-NA | 2.15 | 131.32 | 126.40 |
| 9 | a | 904 | BCL | C4-C3-C2 | -2.15 | 118.16 | 123.68 |
| 10 | a | 912 | CLA | C6-C5-C3 | 2.15 | 119.09 | 113.45 |
| 9 | A | 909 | BCL | CMD-C2D-C3D | 2.15 | 128.70 | 124.68 |
| 9 | a | 907 | BCL | O2A-C1-C2 | -2.14 | 103.00 | 108.64 |
| 9 | A | 906 | BCL | CAC-C3C-C4C | 2.12 | 117.29 | 112.58 |
| 10 | a | 914 | CLA | C4D-CHA-C1A | 2.12 | 123.83 | 121.25 |
| 9 | a | 906 | BCL | CMB-C2B-C3B | 2.11 | 128.62 | 124.68 |
| 9 | a | 910 | BCL | C14-C13-C15 | 2.10 | 118.91 | 111.29 |
| 10 | A | 910 | CLA | CHD-C4C-NC | -2.10 | 120.90 | 124.20 |
| 9 | A | 909 | BCL | OBD-CAD-CBD | -2.10 | 122.90 | 125.89 |
| 9 | a | 911 | BCL | C15-C13-C12 | -2.10 | 101.10 | 112.13 |
| 9 | A | 907 | BCL | C4B-C3B-CAB | 2.09 | 131.17 | 127.13 |
| 9 | a | 910 | BCL | C20-C18-C17 | 2.09 | 124.47 | 111.54 |
| 10 | A | 910 | CLA | C4-C3-C5 | 2.09 | 118.78 | 115.27 |
| 9 | A | 909 | BCL | CBB-CAB-C3B | 2.09 | 126.53 | 120.34 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 8 | a | 903 | 2GO | CMD-C2D-C3D | 2.09 | 128.58 | 124.68 |
| 10 | a | 913 | CLA | C2A-C3A-C4A | -2.08 | 98.50 | 101.87 |
| 10 | a | 912 | CLA | C2D-C1D-ND | -2.08 | 108.57 | 110.10 |
| 11 | A | 913 | LYC | C15-C14-C12 | -2.08 | 124.34 | 127.31 |
| 9 | a | 906 | BCL | CHD-C4C-NC | 2.07 | 127.38 | 125.08 |
| 8 | a | 903 | 2GO | C6-C7-C8 | 2.07 | 122.60 | 115.92 |
| 8 | A | 901 | 2GO | CAD-C3D-C4D | 2.06 | 109.62 | 108.47 |
| 9 | a | 906 | BCL | CAC-C3C-C2C | 2.06 | 119.41 | 114.26 |
| 10 | A | 911 | CLA | C9-C8-C10 | 2.06 | 118.74 | 111.29 |
| 16 | C | 301 | HEC | CAA-C2A-C3A | -2.06 | 121.34 | 127.25 |
| 10 | A | 933 | CLA | C2A-C1A-CHA | -2.05 | 120.27 | 123.86 |
| 16 | C | 301 | HEC | CAD-C3D-C2D | -2.05 | 121.35 | 127.25 |
| 9 | a | 908 | BCL | C1-O2A-CGA | -2.04 | 111.08 | 116.44 |
| 8 | a | 903 | 2GO | CAA-C2A-C1A | -2.03 | 122.53 | 128.29 |
| 9 | A | 909 | BCL | C12-C11-C10 | 2.03 | 122.55 | 113.24 |
| 9 | a | 906 | BCL | O1D-CGD-CBD | 2.03 | 128.63 | 124.48 |
| 10 | a | 913 | CLA | C1C-C2C-C3C | -2.02 | 104.83 | 106.96 |
| 10 | a | 915 | CLA | C1-C2-C3 | -2.02 | 122.54 | 126.04 |
| 10 | A | 931 | CLA | CMC-C2C-C3C | -2.02 | 120.62 | 126.12 |
| 9 | a | 908 | BCL | CAD-C3D-C4D | -2.02 | 107.34 | 108.47 |
| 9 | A | 902 | BCL | C6-C5-C3 | 2.02 | 118.74 | 113.45 |
| 10 | a | 914 | CLA | CMB-C2B-C1B | -2.02 | 125.37 | 128.46 |
| 9 | A | 903 | BCL | C12-C11-C10 | -2.01 | 103.99 | 113.24 |
| 9 | a | 911 | BCL | C4B-C3B-CAB | 2.01 | 131.01 | 127.13 |
| 10 | A | 911 | CLA | C15-C13-C12 | 2.01 | 122.71 | 112.13 |
| 10 | A | 912 | CLA | CBC-CAC-C3C | -2.01 | 106.89 | 112.43 |
| 9 | A | 907 | BCL | CAC-C3C-C4C | -2.01 | 108.12 | 112.58 |
| 13 | A | 916 | 85I | O6-C20-C21 | 2.01 | 115.83 | 111.50 |
| 9 | A | 905 | BCL | C12-C11-C10 | 2.01 | 122.47 | 113.24 |
| 9 | a | 911 | BCL | CAA-C2A-C3A | 2.01 | 118.28 | 112.78 |
| 11 | A | 913 | LYC | C3-C2-C1 | 2.01 | 119.04 | 114.60 |
| 10 | A | 933 | CLA | CMD-C2D-C3D | 2.01 | 132.23 | 127.61 |
| 11 | A | 913 | LYC | C57-C56-C58 | -2.01 | 114.92 | 118.08 |
| 9 | A | 904 | BCL | C2C-C3C-C4C | -2.00 | 98.34 | 101.34 |
| 9 | A | 905 | BCL | CMC-C2C-C3C | -2.00 | 105.76 | 113.83 |

All (2) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 10 | A | 910 | CLA | C8 |
| 10 | A | 911 | CLA | C8 |

All (642) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 8 | a | 903 | 2GO | C1A-C2A-CAA-CBA |
| 9 | A | 902 | BCL | C1A-C2A-CAA-CBA |
| 9 | A | 902 | BCL | C3A-C2A-CAA-CBA |
| 9 | A | 902 | BCL | CBD-CGD-O2D-CED |
| 9 | A | 902 | BCL | C11-C12-C13-C14 |
| 9 | A | 903 | BCL | C1A-C2A-CAA-CBA |
| 9 | A | 903 | BCL | C2-C3-C5-C6 |
| 9 | A | 903 | BCL | C4-C3-C5-C6 |
| 9 | A | 904 | BCL | C1A-C2A-CAA-CBA |
| 9 | A | 904 | BCL | CHA-CBD-CGD-O1D |
| 9 | A | 905 | BCL | C1A-C2A-CAA-CBA |
| 9 | A | 905 | BCL | CBA-CGA-O2A-C1 |
| 9 | A | 905 | BCL | O1A-CGA-O2A-C1 |
| 9 | A | 905 | BCL | CBD-CGD-O2D-CED |
| 9 | A | 905 | BCL | C2-C3-C5-C6 |
| 9 | A | 905 | BCL | C4-C3-C5-C6 |
| 9 | A | 906 | BCL | CBD-CGD-O2D-CED |
| 9 | A | 906 | BCL | O1D-CGD-O2D-CED |
| 9 | A | 907 | BCL | C2C-C3C-CAC-CBC |
| 9 | A | 907 | BCL | C4C-C3C-CAC-CBC |
| 9 | A | 907 | BCL | CBD-CGD-O2D-CED |
| 9 | A | 907 | BCL | C2-C3-C5-C6 |
| 9 | A | 907 | BCL | C4-C3-C5-C6 |
| 9 | a | 904 | BCL | C4C-C3C-CAC-CBC |
| 9 | a | 904 | BCL | CBD-CGD-O2D-CED |
| 9 | a | 905 | BCL | C1A-C2A-CAA-CBA |
| 9 | a | 905 | BCL | C3A-C2A-CAA-CBA |
| 9 | a | 906 | BCL | C1A-C2A-CAA-CBA |
| 9 | a | 907 | BCL | C2A-CAA-CBA-CGA |
| 9 | a | 908 | BCL | C1A-C2A-CAA-CBA |
| 9 | a | 908 | BCL | CBD-CGD-O2D-CED |
| 9 | a | 908 | BCL | C2-C3-C5-C6 |
| 9 | a | 908 | BCL | C4-C3-C5-C6 |
| 9 | a | 911 | BCL | C1A-C2A-CAA-CBA |
| 9 | a | 911 | BCL | C3A-C2A-CAA-CBA |
| 10 | A | 933 | CLA | CHA-CBD-CGD-O2D |
| 10 | a | 912 | CLA | CBD-CGD-O2D-CED |
| 10 | a | 913 | CLA | CBD-CGD-O2D-CED |
| 10 | a | 913 | CLA | C6-C7-C8-C9 |
| 10 | a | 915 | CLA | C2-C3-C5-C6 |
| 10 | a | 915 | CLA | C4-C3-C5-C6 |
| 11 | c | 201 | LYC | C4-C5-C6-C7 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 11 | c | 201 | LYC | C5-C6-C7-C8 |
| 11 | c | 201 | LYC | C5-C6-C7-C9 |
| 11 | c | 201 | LYC | C57-C56-C58-C59 |
| 13 | A | 915 | 85I | C4-C3-O3-P |
| 13 | A | 915 | 85I | O7-C20-O6-C3 |
| 13 | A | 915 | 85I | C21-C20-O6-C3 |
| 13 | A | 916 | 85I | N-C1-C2-O |
| 13 | A | 916 | 85I | O3-C3-O6-C20 |
| 13 | A | 916 | 85I | C3-O3-P-O |
| 13 | A | 916 | 85I | O7-C20-O6-C3 |
| 13 | A | 917 | 85I | C4-C3-O6-C20 |
| 13 | A | 917 | 85I | C2-O-P-O3 |
| 13 | A | 917 | 85I | O7-C20-O6-C3 |
| 13 | a | 918 | 85I | O3-C3-C4-O4 |
| 13 | a | 918 | 85I | O6-C3-C4-O4 |
| 13 | a | 918 | 85I | C4-C3-O6-C20 |
| 13 | a | 918 | 85I | O7-C20-O6-C3 |
| 13 | a | 919 | 85I | O6-C3-C4-O4 |
| 13 | a | 919 | 85I | C4-C3-O3-P |
| 13 | a | 919 | 85I | O3-C3-O6-C20 |
| 13 | a | 919 | 85I | C6-C5-O4-C4 |
| 13 | a | 919 | 85I | C2-O-P-O1 |
| 13 | a | 920 | 85I | C2-C1-N-C |
| 13 | a | 920 | 85I | O3-C3-C4-O4 |
| 13 | a | 920 | 85I | O6-C3-C4-O4 |
| 13 | a | 920 | 85I | C4-C3-O6-C20 |
| 13 | a | 920 | 85I | C2-O-P-O1 |
| 13 | a | 920 | 85I | C2-O-P-O2 |
| 13 | a | 920 | 85I | C2-O-P-O3 |
| 13 | a | 920 | 85I | O7-C20-O6-C3 |
| 15 | A | 932 | 85N | O3-C17-O6-C25 |
| 15 | A | 932 | 85N | O2-C16-C17-O6 |
| 15 | A | 932 | 85N | C16-C17-O3-C18 |
| 15 | A | 932 | 85N | C20-C19-C24-O4 |
| 15 | A | 932 | 85N | C20-C19-C24-O5 |
| 15 | G | 101 | 85N | C19-C20-N1-C21 |
| 15 | G | 101 | 85N | C19-C20-N1-C22 |
| 15 | G | 101 | 85N | C19-C20-N1-C23 |
| 15 | G | 101 | 85N | O3-C18-C19-C20 |
| 15 | G | 101 | 85N | O3-C18-C19-C24 |
| 15 | G | 101 | 85N | C20-C19-C24-O4 |
| 15 | G | 101 | 85N | C20-C19-C24-O5 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 15 | a | 902 | 85N | O7-C25-O6-C17 |
| 15 | a | 902 | 85N | C26-C25-O6-C17 |
| 15 | a | 902 | 85N | O2-C16-C17-O3 |
| 15 | g | 101 | 85N | C16-C17-O6-C25 |
| 15 | g | 101 | 85N | O7-C25-O6-C17 |
| 15 | g | 101 | 85N | O2-C16-C17-O6 |
| 17 | E | 101 | 84Q | O3-C17-O2-C16 |
| 17 | E | 101 | 84Q | O7-C32-C33-N |
| 17 | E | 101 | 84Q | O1-C15-C16-O2 |
| 17 | E | 101 | 84Q | O1-C15-C16-O4 |
| 17 | a | 921 | 84Q | O4-C16-O2-C17 |
| 17 | a | 921 | 84Q | O3-C17-O2-C16 |
| 17 | a | 921 | 84Q | C32-O7-P-O6 |
| 17 | a | 921 | 84Q | C32-O7-P-O5 |
| 17 | a | 921 | 84Q | C32-O7-P-O4 |
| 17 | a | 921 | 84Q | C16-O4-P-O7 |
| 17 | a | 921 | 84Q | C15-C16-O4-P |
| 17 | a | 921 | 84Q | O1-C15-C16-O4 |
| 9 | a | 904 | BCL | O1D-CGD-O2D-CED |
| 9 | A | 902 | BCL | O1D-CGD-O2D-CED |
| 9 | A | 905 | BCL | O1D-CGD-O2D-CED |
| 9 | a | 909 | BCL | O1D-CGD-O2D-CED |
| 9 | A | 903 | BCL | CBD-CGD-O2D-CED |
| 9 | a | 905 | BCL | CBD-CGD-O2D-CED |
| 9 | a | 909 | BCL | CBD-CGD-O2D-CED |
| 9 | A | 907 | BCL | O1A-CGA-O2A-C1 |
| 9 | a | 907 | BCL | O1A-CGA-O2A-C1 |
| 9 | a | 911 | BCL | O1A-CGA-O2A-C1 |
| 13 | a | 919 | 85I | O5-C5-O4-C4 |
| 9 | A | 903 | BCL | O1D-CGD-O2D-CED |
| 9 | A | 907 | BCL | O1D-CGD-O2D-CED |
| 10 | a | 913 | CLA | O1D-CGD-O2D-CED |
| 10 | A | 911 | CLA | C3-C5-C6-C7 |
| 10 | a | 913 | CLA | C3-C5-C6-C7 |
| 9 | A | 907 | BCL | CBA-CGA-O2A-C1 |
| 9 | a | 907 | BCL | CBA-CGA-O2A-C1 |
| 8 | a | 903 | 2GO | C4C-C3C-CAC-CBC |
| 9 | a | 908 | BCL | O1A-CGA-O2A-C1 |
| 9 | a | 908 | BCL | O1D-CGD-O2D-CED |
| 10 | a | 901 | CLA | CBD-CGD-O2D-CED |
| 9 | a | 908 | BCL | CBA-CGA-O2A-C1 |
| 9 | a | 911 | BCL | CBA-CGA-O2A-C1 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 10 | A | 911 | CLA | CBD-CGD-O2D-CED |
| 9 | A | 903 | BCL | C2A-CAA-CBA-CGA |
| 9 | a | 910 | BCL | C2A-CAA-CBA-CGA |
| 10 | a | 912 | CLA | C2A-CAA-CBA-CGA |
| 9 | a | 905 | BCL | O1D-CGD-O2D-CED |
| 10 | a | 912 | CLA | O1D-CGD-O2D-CED |
| 9 | a | 909 | BCL | C3-C5-C6-C7 |
| 15 | g | 101 | 85N | C14-C15-O2-C16 |
| 8 | A | 901 | 2GO | C1A-C2A-CAA-CBA |
| 8 | A | 901 | 2GO | C4C-C3C-CAC-CBC |
| 13 | A | 917 | 85I | O5-C5-O4-C4 |
| 15 | G | 101 | 85N | O1-C15-O2-C16 |
| 15 | a | 902 | 85N | C11-C10-C9-C8 |
| 9 | A | 909 | BCL | CBD-CGD-O2D-CED |
| 10 | a | 914 | CLA | CBD-CGD-O2D-CED |
| 10 | a | 915 | CLA | CBD-CGD-O2D-CED |
| 15 | G | 101 | 85N | C14-C15-O2-C16 |
| 13 | a | 918 | 85I | C21-C20-O6-C3 |
| 10 | a | 914 | CLA | CBA-CGA-O2A-C1 |
| 13 | A | 915 | 85I | C12-C13-C14-C15 |
| 13 | A | 917 | 85I | C7-C8-C9-C10 |
| 13 | A | 917 | 85I | C25-C26-C27-C28 |
| 13 | A | 917 | 85I | C10-C11-C12-C13 |
| 13 | A | 917 | 85I | C6-C5-O4-C4 |
| 15 | g | 101 | 85N | O1-C15-O2-C16 |
| 9 | A | 902 | BCL | C4-C3-C5-C6 |
| 9 | A | 902 | BCL | C2-C3-C5-C6 |
| 10 | a | 901 | CLA | C2A-CAA-CBA-CGA |
| 9 | A | 902 | BCL | CBA-CGA-O2A-C1 |
| 13 | A | 916 | 85I | C21-C20-O6-C3 |
| 17 | E | 101 | 84Q | C13-C14-O1-C15 |
| 17 | a | 921 | 84Q | C13-C14-O1-C15 |
| 10 | a | 914 | CLA | O1A-CGA-O2A-C1 |
| 13 | A | 917 | 85I | C3-O3-P-O |
| 17 | E | 101 | 84Q | C16-O4-P-O7 |
| 10 | A | 910 | CLA | C13-C15-C16-C17 |
| 17 | a | 921 | 84Q | C1-C3-C4-C5 |
| 17 | a | 921 | 84Q | C11-C12-C13-C14 |
| 17 | E | 101 | 84Q | O-C14-O1-C15 |
| 17 | a | 921 | 84Q | O-C14-O1-C15 |
| 9 | A | 903 | BCL | C11-C10-C8-C9 |
| 9 | A | 903 | BCL | C14-C13-C15-C16 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 9 | A | 907 | BCL | C11-C10-C8-C9 |
| 9 | A | 908 | BCL | C11-C10-C8-C9 |
| 9 | a | 908 | BCL | C14-C13-C15-C16 |
| 9 | a | 910 | BCL | C14-C13-C15-C16 |
| 10 | A | 910 | CLA | C6-C7-C8-C9 |
| 10 | A | 911 | CLA | C6-C7-C8-C9 |
| 10 | A | 931 | CLA | C6-C7-C8-C9 |
| 10 | a | 901 | CLA | C6-C7-C8-C9 |
| 11 | c | 201 | LYC | C15-C16-C17-C19 |
| 11 | c | 201 | LYC | C55-C56-C58-C59 |
| 9 | a | 908 | BCL | C5-C6-C7-C8 |
| 10 | A | 910 | CLA | C5-C6-C7-C8 |
| 9 | a | 905 | BCL | C15-C16-C17-C18 |
| 9 | a | 909 | BCL | C15-C16-C17-C18 |
| 10 | a | 901 | CLA | C15-C16-C17-C18 |
| 13 | a | 919 | 85I | C14-C15-C16-C17 |
| 15 | A | 932 | 85N | C34-C35-C36-C37 |
| 15 | a | 902 | 85N | C25-C26-C27-C28 |
| 13 | a | 918 | 85I | C2-C1-N-C |
| 9 | A | 909 | BCL | C2-C1-O2A-CGA |
| 9 | a | 907 | BCL | C5-C6-C7-C8 |
| 9 | a | 909 | BCL | C10-C11-C12-C13 |
| 17 | E | 101 | 84Q | C18-C17-O2-C16 |
| 10 | A | 911 | CLA | C15-C16-C17-C18 |
| 9 | A | 909 | BCL | C6-C7-C8-C10 |
| 9 | a | 907 | BCL | C11-C12-C13-C15 |
| 10 | A | 910 | CLA | C11-C10-C8-C7 |
| 10 | A | 931 | CLA | C11-C12-C13-C15 |
| 9 | A | 909 | BCL | C3-C5-C6-C7 |
| 13 | A | 915 | 85I | O5-C5-O4-C4 |
| 9 | A | 905 | BCL | C2A-CAA-CBA-CGA |
| 13 | A | 917 | 85I | C29-C30-C31-C32 |
| 13 | a | 920 | 85I | C29-C30-C31-C32 |
| 11 | A | 913 | LYC | C4-C5-C6-C7 |
| 10 | A | 931 | CLA | O1D-CGD-O2D-CED |
| 9 | A | 902 | BCL | C13-C15-C16-C17 |
| 9 | a | 907 | BCL | C10-C11-C12-C13 |
| 9 | a | 909 | BCL | C5-C6-C7-C8 |
| 10 | a | 912 | CLA | C8-C10-C11-C12 |
| 10 | a | 901 | CLA | C5-C6-C7-C8 |
| 8 | a | 903 | 2GO | C15-C16-C17-C18 |
| 10 | A | 931 | CLA | C8-C10-C11-C12 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 10 | A | 931 | CLA | C13-C15-C16-C17 |
| 10 | a | 901 | CLA | C13-C15-C16-C17 |
| 13 | a | 920 | 85I | C14-C15-C16-C17 |
| 13 | a | 919 | 85I | C2-O-P-O3 |
| 13 | A | 915 | 85I | C6-C5-O4-C4 |
| 10 | A | 910 | CLA | O1D-CGD-O2D-CED |
| 8 | a | 903 | 2GO | C13-C15-C16-C17 |
| 9 | A | 905 | BCL | C10-C11-C12-C13 |
| 10 | A | 931 | CLA | C15-C16-C17-C18 |
| 9 | A | 908 | BCL | C2A-CAA-CBA-CGA |
| 10 | A | 931 | CLA | C2A-CAA-CBA-CGA |
| 13 | a | 919 | 85I | C15-C16-C17-C19 |
| 9 | a | 905 | BCL | C13-C15-C16-C17 |
| 13 | A | 917 | 85I | C11-C10-C9-C8 |
| 15 | A | 932 | 85N | C31-C32-C33-C34 |
| 17 | E | 101 | 84Q | C7-C8-C9-C10 |
| 17 | a | 921 | 84Q | C9-C10-C11-C12 |
| 10 | A | 931 | CLA | C16-C17-C18-C20 |
| 15 | a | 902 | 85N | C1-C2-C4-C5 |
| 13 | a | 919 | 85I | C6-C7-C8-C9 |
| 13 | a | 919 | 85I | C12-C13-C14-C15 |
| 13 | a | 920 | 85I | C11-C12-C13-C14 |
| 15 | A | 932 | 85N | C27-C28-C29-C30 |
| 17 | a | 921 | 84Q | C4-C5-C6-C7 |
| 13 | a | 919 | 85I | C21-C22-C23-C24 |
| 13 | A | 916 | 85I | C25-C26-C27-C28 |
| 13 | a | 920 | 85I | C9-C10-C11-C12 |
| 13 | A | 915 | 85I | C22-C23-C24-C25 |
| 13 | A | 916 | 85I | C22-C23-C24-C25 |
| 13 | a | 920 | 85I | C20-C21-C22-C23 |
| 17 | E | 101 | 84Q | C17-C18-C19-C20 |
| 9 | a | 909 | BCL | C1-C2-C3-C5 |
| 13 | a | 918 | 85I | C26-C27-C28-C29 |
| 13 | a | 919 | 85I | C9-C10-C11-C12 |
| 9 | A | 902 | BCL | O1A-CGA-O2A-C1 |
| 9 | A | 903 | BCL | C16-C17-C18-C20 |
| 10 | A | 910 | CLA | C16-C17-C18-C19 |
| 13 | A | 917 | 85I | C30-C31-C32-C34 |
| 13 | A | 915 | 85I | C10-C11-C12-C13 |
| 13 | a | 919 | 85I | C11-C10-C9-C8 |
| 15 | G | 101 | 85N | C10-C11-C12-C13 |
| 15 | a | 902 | 85N | C26-C27-C28-C29 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 9 | A | 909 | BCL | C11-C10-C8-C9 |
| 10 | A | 911 | CLA | O1D-CGD-O2D-CED |
| 13 | A | 915 | 85I | C26-C27-C28-C29 |
| 13 | A | 917 | 85I | C26-C27-C28-C29 |
| 15 | a | 902 | 85N | C7-C8-C9-C10 |
| 15 | g | 101 | 85N | C5-C6-C7-C8 |
| 17 | a | 921 | 84Q | C19-C20-C21-C22 |
| 11 | c | 201 | LYC | C15-C16-C17-C18 |
| 9 | a | 908 | BCL | C3-C5-C6-C7 |
| 13 | A | 916 | 85I | C27-C28-C29-C30 |
| 13 | a | 918 | 85I | C21-C22-C23-C24 |
| 13 | a | 919 | 85I | C22-C23-C24-C25 |
| 15 | a | 902 | 85N | C5-C6-C7-C8 |
| 13 | A | 916 | 85I | C7-C8-C9-C10 |
| 13 | a | 918 | 85I | C22-C23-C24-C25 |
| 13 | a | 920 | 85I | C7-C8-C9-C10 |
| 15 | G | 101 | 85N | C26-C27-C28-C29 |
| 15 | a | 902 | 85N | C11-C12-C13-C14 |
| 17 | E | 101 | 84Q | C10-C11-C12-C13 |
| 9 | a | 910 | BCL | C16-C17-C18-C19 |
| 10 | A | 931 | CLA | C16-C17-C18-C19 |
| 17 | E | 101 | 84Q | C-C1-C3-C4 |
| 10 | a | 913 | CLA | C15-C16-C17-C18 |
| 13 | A | 917 | 85I | C12-C13-C14-C15 |
| 13 | a | 919 | 85I | C25-C26-C27-C28 |
| 13 | a | 919 | 85I | C13-C14-C15-C16 |
| 15 | g | 101 | 85N | C11-C12-C13-C14 |
| 13 | A | 917 | 85I | C20-C21-C22-C23 |
| 10 | A | 931 | CLA | C5-C6-C7-C8 |
| 13 | a | 920 | 85I | C25-C26-C27-C28 |
| 15 | g | 101 | 85N | C27-C28-C29-C30 |
| 17 | E | 101 | 84Q | C19-C20-C21-C22 |
| 9 | a | 909 | BCL | CBA-CGA-O2A-C1 |
| 13 | a | 919 | 85I | C10-C11-C12-C13 |
| 9 | A | 904 | BCL | C3A-C2A-CAA-CBA |
| 9 | A | 905 | BCL | C3A-C2A-CAA-CBA |
| 9 | A | 909 | BCL | C3A-C2A-CAA-CBA |
| 9 | a | 906 | BCL | C3A-C2A-CAA-CBA |
| 9 | a | 908 | BCL | C3A-C2A-CAA-CBA |
| 10 | a | 901 | CLA | C3A-C2A-CAA-CBA |
| 9 | a | 910 | BCL | C10-C11-C12-C13 |
| 11 | c | 201 | LYC | C17-C19-C20-C21 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 13 | a | 919 | 85I | C7-C8-C9-C10 |
| 15 | a | 902 | 85N | C10-C11-C12-C13 |
| 9 | a | 910 | BCL | C16-C17-C18-C20 |
| 13 | A | 916 | 85I | C30-C31-C32-C33 |
| 13 | A | 917 | 85I | C15-C16-C17-C19 |
| 17 | E | 101 | 84Q | C2-C1-C3-C4 |
| 13 | A | 916 | 85I | C24-C25-C26-C27 |
| 13 | A | 916 | 85I | C13-C14-C15-C16 |
| 13 | a | 919 | 85I | C11-C12-C13-C14 |
| 17 | E | 101 | 84Q | C20-C21-C22-C23 |
| 13 | A | 916 | 85I | C20-C21-C22-C23 |
| 15 | a | 902 | 85N | C12-C13-C14-C15 |
| 10 | A | 931 | CLA | C4-C3-C5-C6 |
| 15 | g | 101 | 85N | C26-C27-C28-C29 |
| 10 | a | 901 | CLA | O1D-CGD-O2D-CED |
| 17 | a | 921 | 84Q | C3-C4-C5-C6 |
| 13 | a | 919 | 85I | C30-C31-C32-C34 |
| 13 | A | 916 | 85I | C11-C10-C9-C8 |
| 15 | a | 902 | 85N | C28-C29-C30-C31 |
| 13 | A | 917 | 85I | C22-C23-C24-C25 |
| 17 | a | 921 | 84Q | C6-C7-C8-C9 |
| 17 | a | 921 | 84Q | C25-C26-C27-C28 |
| 13 | A | 916 | 85I | C12-C13-C14-C15 |
| 13 | A | 917 | 85I | C28-C29-C30-C31 |
| 10 | a | 901 | CLA | C8-C10-C11-C12 |
| 13 | A | 916 | 85I | C5-C6-C7-C8 |
| 9 | A | 909 | BCL | C11-C10-C8-C7 |
| 10 | A | 911 | CLA | C11-C12-C13-C15 |
| 10 | A | 931 | CLA | C11-C10-C8-C7 |
| 13 | a | 920 | 85I | C26-C27-C28-C29 |
| 9 | A | 903 | BCL | C16-C17-C18-C19 |
| 13 | A | 917 | 85I | C30-C31-C32-C33 |
| 13 | a | 918 | 85I | C20-C21-C22-C23 |
| 9 | a | 904 | BCL | C2A-CAA-CBA-CGA |
| 9 | a | 908 | BCL | C13-C15-C16-C17 |
| 13 | A | 917 | 85I | C21-C22-C23-C24 |
| 15 | a | 902 | 85N | C17-C16-O2-C15 |
| 17 | E | 101 | 84Q | C11-C12-C13-C14 |
| 17 | a | 921 | 84Q | C5-C6-C7-C8 |
| 13 | a | 920 | 85I | C21-C20-O6-C3 |
| 15 | g | 101 | 85N | C26-C25-O6-C17 |
| 9 | a | 904 | BCL | CBA-CGA-O2A-C1 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 13 | A | 917 | 85I | C5-C6-C7-C8 |
| 13 | a | 918 | 85I | C5-C6-C7-C8 |
| 13 | A | 915 | 85I | C7-C8-C9-C10 |
| 13 | a | 920 | 85I | C21-C22-C23-C24 |
| 15 | a | 902 | 85N | C29-C30-C31-C32 |
| 17 | E | 101 | 84Q | C3-C4-C5-C6 |
| 15 | G | 101 | 85N | C1-C2-C4-C5 |
| 15 | a | 902 | 85N | C3-C2-C4-C5 |
| 9 | A | 903 | BCL | C10-C11-C12-C13 |
| 9 | A | 908 | BCL | C8-C10-C11-C12 |
| 9 | a | 907 | BCL | C11-C12-C13-C14 |
| 10 | A | 912 | CLA | CBD-CGD-O2D-CED |
| 17 | a | 921 | 84Q | C23-C24-C25-C26 |
| 15 | A | 932 | 85N | C29-C30-C31-C32 |
| 8 | a | 903 | 2GO | C2C-C3C-CAC-CBC |
| 9 | A | 908 | BCL | C1A-C2A-CAA-CBA |
| 9 | A | 909 | BCL | C1A-C2A-CAA-CBA |
| 9 | a | 910 | BCL | C1A-C2A-CAA-CBA |
| 10 | A | 910 | CLA | C16-C17-C18-C20 |
| 13 | a | 919 | 85I | C30-C31-C32-C33 |
| 13 | a | 920 | 85I | C30-C31-C32-C33 |
| 15 | a | 902 | 85N | C30-C31-C32-C33 |
| 10 | a | 914 | CLA | O1D-CGD-O2D-CED |
| 9 | A | 905 | BCL | C5-C6-C7-C8 |
| 9 | A | 909 | BCL | C15-C16-C17-C18 |
| 17 | E | 101 | 84Q | C16-C15-O1-C14 |
| 13 | A | 917 | 85I | C15-C16-C17-C18 |
| 9 | A | 908 | BCL | C3-C5-C6-C7 |
| 13 | A | 917 | 85I | C6-C7-C8-C9 |
| 10 | a | 901 | CLA | CBA-CGA-O2A-C1 |
| 9 | a | 904 | BCL | C2C-C3C-CAC-CBC |
| 15 | G | 101 | 85N | C7-C8-C9-C10 |
| 17 | a | 921 | 84Q | C10-C11-C12-C13 |
| 10 | a | 912 | CLA | C13-C15-C16-C17 |
| 13 | a | 919 | 85I | C23-C24-C25-C26 |
| 10 | a | 913 | CLA | C16-C17-C18-C19 |
| 13 | a | 918 | 85I | C30-C31-C32-C34 |
| 13 | A | 916 | 85I | C6-C7-C8-C9 |
| 10 | A | 933 | CLA | O1D-CGD-O2D-CED |
| 9 | A | 909 | BCL | C8-C10-C11-C12 |
| 9 | a | 909 | BCL | O1A-CGA-O2A-C1 |
| 17 | a | 921 | 84Q | C18-C17-O2-C16 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 13 | a | 919 | 85I | C28-C29-C30-C31 |
| 15 | G | 101 | 85N | C11-C12-C13-C14 |
| 17 | E | 101 | 84Q | C22-C23-C24-C25 |
| 10 | A | 912 | CLA | O1D-CGD-O2D-CED |
| 9 | a | 908 | BCL | C15-C16-C17-C18 |
| 13 | A | 916 | 85I | C14-C15-C16-C17 |
| 13 | A | 915 | 85I | C25-C26-C27-C28 |
| 15 | a | 902 | 85N | C18-C19-C24-O4 |
| 9 | a | 905 | BCL | CBA-CGA-O2A-C1 |
| 9 | A | 908 | BCL | C12-C13-C15-C16 |
| 9 | a | 908 | BCL | C12-C13-C15-C16 |
| 9 | a | 910 | BCL | C11-C12-C13-C15 |
| 9 | a | 910 | BCL | C12-C13-C15-C16 |
| 10 | a | 901 | CLA | C6-C7-C8-C10 |
| 10 | a | 913 | CLA | C11-C10-C8-C7 |
| 9 | A | 903 | BCL | C6-C7-C8-C9 |
| 9 | A | 905 | BCL | C11-C10-C8-C9 |
| 9 | a | 908 | BCL | C6-C7-C8-C9 |
| 10 | A | 931 | CLA | C11-C12-C13-C14 |
| 10 | a | 912 | CLA | C6-C7-C8-C9 |
| 10 | a | 915 | CLA | O1D-CGD-O2D-CED |
| 10 | a | 912 | CLA | CBA-CGA-O2A-C1 |
| 17 | E | 101 | 84Q | C16-O4-P-O5 |
| 9 | a | 905 | BCL | C10-C11-C12-C13 |
| 10 | a | 913 | CLA | C16-C17-C18-C20 |
| 15 | a | 902 | 85N | O2-C16-C17-O6 |
| 15 | g | 101 | 85N | O2-C16-C17-O3 |
| 17 | a | 921 | 84Q | O1-C15-C16-O2 |
| 15 | G | 101 | 85N | C6-C7-C8-C9 |
| 9 | A | 903 | BCL | C3A-C2A-CAA-CBA |
| 9 | A | 908 | BCL | C3A-C2A-CAA-CBA |
| 13 | a | 919 | 85I | C3-O3-P-O |
| 11 | c | 201 | LYC | C58-C59-C60-C61 |
| 15 | A | 932 | 85N | C28-C29-C30-C31 |
| 13 | A | 916 | 85I | C30-C31-C32-C34 |
| 9 | a | 904 | BCL | C8-C10-C11-C12 |
| 15 | G | 101 | 85N | C3-C2-C4-C5 |
| 17 | E | 101 | 84Q | C6-C7-C8-C9 |
| 13 | A | 915 | 85I | C2-O-P-O3 |
| 9 | a | 905 | BCL | O1A-CGA-O2A-C1 |
| 13 | A | 915 | 85I | C30-C31-C32-C33 |
| 13 | a | 919 | 85I | C15-C16-C17-C18 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 9 | a | 908 | BCL | C10-C11-C12-C13 |
| 15 | a | 902 | 85N | C2-C4-C5-C6 |
| 8 | a | 903 | 2GO | C3A-C2A-CAA-CBA |
| 13 | a | 920 | 85I | C30-C31-C32-C34 |
| 13 | a | 918 | 85I | C11-C12-C13-C14 |
| 13 | a | 918 | 85I | C12-C13-C14-C15 |
| 9 | A | 905 | BCL | C2-C1-O2A-CGA |
| 9 | a | 911 | BCL | C2-C1-O2A-CGA |
| 15 | A | 932 | 85N | C25-C26-C27-C28 |
| 9 | a | 905 | BCL | C11-C12-C13-C14 |
| 13 | A | 917 | 85I | C21-C20-O6-C3 |
| 13 | a | 918 | 85I | C30-C31-C32-C33 |
| 17 | a | 921 | 84Q | C2-C1-C3-C4 |
| 17 | E | 101 | 84Q | C1-C3-C4-C5 |
| 10 | A | 911 | CLA | C10-C11-C12-C13 |
| 13 | A | 915 | 85I | C24-C25-C26-C27 |
| 9 | a | 905 | BCL | C3-C5-C6-C7 |
| 8 | A | 901 | 2GO | C10-C11-C12-C13 |
| 13 | a | 919 | 85I | C29-C30-C31-C32 |
| 13 | A | 915 | 85I | C21-C22-C23-C24 |
| 13 | a | 920 | 85I | C27-C28-C29-C30 |
| 9 | A | 902 | BCL | C11-C12-C13-C15 |
| 9 | A | 902 | BCL | C12-C13-C15-C16 |
| 9 | A | 903 | BCL | C6-C7-C8-C10 |
| 9 | A | 903 | BCL | C11-C10-C8-C7 |
| 9 | A | 905 | BCL | C11-C10-C8-C7 |
| 9 | a | 905 | BCL | C11-C12-C13-C15 |
| 9 | a | 908 | BCL | C6-C7-C8-C10 |
| 10 | a | 901 | CLA | C11-C10-C8-C7 |
| 9 | a | 909 | BCL | C16-C17-C18-C19 |
| 10 | A | 911 | CLA | C16-C17-C18-C19 |
| 9 | A | 902 | BCL | C2A-CAA-CBA-CGA |
| 10 | a | 912 | CLA | C3-C5-C6-C7 |
| 9 | a | 909 | BCL | CAD-CBD-CGD-O2D |
| 10 | A | 931 | CLA | CAD-CBD-CGD-O2D |
| 10 | a | 912 | CLA | CAD-CBD-CGD-O2D |
| 13 | A | 916 | 85I | C23-C24-C25-C26 |
| 13 | a | 920 | 85I | C13-C14-C15-C16 |
| 15 | a | 902 | 85N | C33-C34-C35-C36 |
| 9 | A | 903 | BCL | C5-C6-C7-C8 |
| 17 | E | 101 | 84Q | C24-C25-C26-C27 |
| 9 | A | 906 | BCL | CHA-CBD-CGD-O2D |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 9 | a | 905 | BCL | CHA-CBD-CGD-O2D |
| 10 | A | 933 | CLA | CHA-CBD-CGD-O1D |
| 10 | a | 915 | CLA | CHA-CBD-CGD-O1D |
| 10 | a | 915 | CLA | CHA-CBD-CGD-O2D |
| 9 | a | 904 | BCL | O1A-CGA-O2A-C1 |
| 10 | a | 901 | CLA | O1A-CGA-O2A-C1 |
| 13 | a | 919 | 85I | O7-C20-O6-C3 |
| 9 | A | 908 | BCL | C14-C13-C15-C16 |
| 13 | A | 916 | 85I | C10-C11-C12-C13 |
| 13 | A | 917 | 85I | C3-O3-P-O1 |
| 17 | a | 921 | 84Q | C16-O4-P-O6 |
| 15 | A | 932 | 85N | C1-C2-C4-C5 |
| 13 | a | 919 | 85I | N-C1-C2-O |
| 17 | E | 101 | 84Q | C32-O7-P-O4 |
| 13 | a | 918 | 85I | C27-C28-C29-C30 |
| 13 | A | 915 | 85I | C2-O-P-O1 |
| 13 | A | 917 | 85I | C2-O-P-O2 |
| 13 | a | 919 | 85I | C2-O-P-O2 |
| 17 | E | 101 | 84Q | C27-C28-C29-C31 |
| 9 | a | 905 | BCL | C5-C6-C7-C8 |
| 9 | a | 908 | BCL | CAD-CBD-CGD-O1D |
| 13 | a | 920 | 85I | C1-C2-O-P |
| 17 | a | 921 | 84Q | C33-C32-O7-P |
| 13 | a | 919 | 85I | C20-C21-C22-C23 |
| 13 | a | 918 | 85I | C7-C8-C9-C10 |
| 9 | A | 907 | BCL | C8-C10-C11-C12 |
| 17 | a | 921 | 84Q | C-C1-C3-C4 |
| 9 | A | 905 | BCL | C12-C13-C15-C16 |
| 9 | A | 907 | BCL | C6-C7-C8-C10 |
| 9 | A | 907 | BCL | C11-C10-C8-C7 |
| 9 | A | 908 | BCL | C11-C10-C8-C7 |
| 9 | a | 907 | BCL | C11-C10-C8-C7 |
| 10 | A | 911 | CLA | C11-C10-C8-C7 |
| 15 | A | 932 | 85N | C19-C18-O3-C17 |
| 13 | a | 918 | 85I | C23-C24-C25-C26 |
| 9 | a | 909 | BCL | CAA-CBA-CGA-O2A |
| 17 | a | 921 | 84Q | C7-C8-C9-C10 |
| 9 | a | 904 | BCL | C10-C11-C12-C13 |
| 8 | a | 903 | 2GO | C14-C13-C15-C16 |
| 9 | A | 902 | BCL | C14-C13-C15-C16 |
| 9 | a | 907 | BCL | C6-C7-C8-C9 |
| 9 | a | 910 | BCL | C11-C12-C13-C14 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 10 | A | 911 | CLA | C11-C12-C13-C14 |
| 10 | a | 913 | CLA | C11-C10-C8-C9 |
| 15 | G | 101 | 85N | C25-C26-C27-C28 |
| 11 | c | 201 | LYC | C9-C10-C11-C12 |
| 13 | a | 920 | 85I | C6-C7-C8-C9 |
| 10 | a | 912 | CLA | O1A-CGA-O2A-C1 |
| 9 | A | 908 | BCL | C16-C17-C18-C19 |
| 15 | g | 101 | 85N | C1-C2-C4-C5 |
| 9 | A | 906 | BCL | O1A-CGA-O2A-C1 |
| 15 | A | 932 | 85N | C3-C2-C4-C5 |
| 9 | a | 904 | BCL | C2-C1-O2A-CGA |
| 15 | a | 902 | 85N | C18-C19-C24-O5 |
| 15 | g | 101 | 85N | C7-C8-C9-C10 |
| 9 | A | 902 | BCL | CAA-CBA-CGA-O2A |
| 13 | a | 919 | 85I | C21-C20-O6-C3 |
| 13 | a | 920 | 85I | C22-C23-C24-C25 |
| 13 | a | 920 | 85I | C10-C11-C12-C13 |
| 8 | a | 903 | 2GO | C11-C12-C13-C15 |
| 10 | a | 901 | CLA | C11-C12-C13-C14 |
| 11 | c | 201 | LYC | C52-C51-C53-C54 |
| 8 | a | 903 | 2GO | C8-C10-C11-C12 |
| 13 | A | 916 | 85I | C26-C27-C28-C29 |
| 13 | a | 919 | 85I | C24-C25-C26-C27 |
| 13 | A | 915 | 85I | C6-C7-C8-C9 |
| 16 | c | 202 | HEC | CAD-CBD-CGD-O2D |
| 10 | a | 901 | CLA | C16-C17-C18-C20 |
| 9 | a | 906 | BCL | CAA-CBA-CGA-O1A |
| 13 | A | 915 | 85I | O3-C3-C4-O4 |
| 13 | a | 918 | 85I | C9-C10-C11-C12 |
| 13 | a | 920 | 85I | C12-C13-C14-C15 |
| 10 | a | 901 | CLA | C14-C13-C15-C16 |
| 9 | a | 908 | BCL | C2A-CAA-CBA-CGA |
| 17 | E | 101 | 84Q | C23-C24-C25-C26 |
| 9 | A | 904 | BCL | CAA-CBA-CGA-O2A |
| 10 | a | 912 | CLA | C4-C3-C5-C6 |
| 10 | a | 901 | CLA | C1A-C2A-CAA-CBA |
| 9 | A | 903 | BCL | C12-C13-C15-C16 |
| 10 | A | 931 | CLA | C6-C7-C8-C10 |
| 10 | a | 901 | CLA | C12-C13-C15-C16 |
| 9 | a | 909 | BCL | C13-C15-C16-C17 |
| 16 | C | 301 | HEC | CAD-CBD-CGD-O2D |
| 13 | A | 916 | 85I | C15-C16-C17-C19 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 9 | A | 904 | BCL | CAA-CBA-CGA-O1A |
| 10 | A | 910 | CLA | C10-C11-C12-C13 |
| 10 | A | 911 | CLA | C5-C6-C7-C8 |
| 9 | a | 906 | BCL | CAA-CBA-CGA-O2A |
| 11 | c | 201 | LYC | C21-C50-C51-C53 |
| 10 | a | 901 | CLA | C2-C1-O2A-CGA |
| 13 | a | 918 | 85I | C28-C29-C30-C31 |
| 9 | A | 909 | BCL | O1D-CGD-O2D-CED |
| 9 | a | 904 | BCL | CAA-CBA-CGA-O2A |
| 16 | C | 301 | HEC | CAD-CBD-CGD-O1D |
| 15 | g | 101 | 85N | C3-C2-C4-C5 |
| 17 | a | 921 | 84Q | C27-C28-C29-C30 |
| 13 | A | 917 | 85I | C23-C24-C25-C26 |
| 10 | A | 931 | CLA | CBD-CGD-O2D-CED |
| 15 | g | 101 | 85N | C11-C10-C9-C8 |
| 10 | a | 901 | CLA | CAA-CBA-CGA-O2A |
| 8 | A | 901 | 2GO | C16-C17-C18-C20 |
| 11 | c | 201 | LYC | C13-C12-C14-C15 |
| 11 | c | 201 | LYC | C21-C50-C51-C52 |
| 13 | A | 915 | 85I | C5-C6-C7-C8 |
| 9 | A | 902 | BCL | C8-C10-C11-C12 |
| 10 | A | 931 | CLA | C2-C3-C5-C6 |
| 10 | a | 912 | CLA | C2-C3-C5-C6 |
| 9 | A | 907 | BCL | C6-C7-C8-C9 |
| 9 | A | 908 | BCL | C6-C7-C8-C9 |
| 9 | A | 909 | BCL | C11-C12-C13-C14 |
| 9 | a | 907 | BCL | C11-C10-C8-C9 |
| 10 | A | 910 | CLA | C11-C10-C8-C9 |
| 10 | a | 901 | CLA | C11-C10-C8-C9 |
| 9 | A | 903 | BCL | CAA-CBA-CGA-O2A |
| 9 | A | 903 | BCL | CAD-CBD-CGD-O2D |
| 9 | A | 907 | BCL | CAD-CBD-CGD-O2D |
| 10 | a | 901 | CLA | CAD-CBD-CGD-O2D |
| 13 | a | 918 | 85I | C24-C25-C26-C27 |
| 13 | a | 920 | 85I | C11-C10-C9-C8 |
| 13 | a | 919 | 85I | C26-C27-C28-C29 |
| 16 | c | 202 | HEC | CAD-CBD-CGD-O1D |
| 9 | A | 904 | BCL | CHA-CBD-CGD-O2D |
| 9 | A | 906 | BCL | CHA-CBD-CGD-O1D |
| 9 | a | 904 | BCL | CHA-CBD-CGD-O2D |
| 9 | a | 905 | BCL | CHA-CBD-CGD-O1D |
| 9 | a | 906 | BCL | CHA-CBD-CGD-O1D |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 9 | a | 908 | BCL | CHA-CBD-CGD-O2D |
| 10 | a | 913 | CLA | CHA-CBD-CGD-O2D |
| 11 | c | 201 | LYC | C11-C12-C14-C15 |
| 13 | a | 919 | 85I | O4-C5-C6-C7 |
| 15 | a | 902 | 85N | C13-C14-C15-O2 |
| 9 | a | 910 | BCL | CAA-CBA-CGA-O2A |
| 9 | a | 907 | BCL | C6-C7-C8-C10 |
| 9 | A | 907 | BCL | C11-C12-C13-C14 |
| 10 | a | 901 | CLA | C16-C17-C18-C19 |
| 13 | A | 916 | 85I | O4-C5-C6-C7 |
| 16 | C | 301 | HEC | CAA-CBA-CGA-O2A |
| 10 | a | 901 | CLA | CAA-CBA-CGA-O1A |
| 17 | a | 921 | 84Q | C22-C23-C24-C25 |
| 17 | a | 921 | 84Q | C27-C28-C29-C31 |
| 13 | A | 917 | 85I | N-C1-C2-O |
| 15 | g | 101 | 85N | C18-C19-C20-N1 |
| 15 | A | 932 | 85N | C4-C5-C6-C7 |
| 9 | a | 907 | BCL | C13-C15-C16-C17 |
| 13 | a | 919 | 85I | O5-C5-C6-C7 |
| 17 | a | 921 | 84Q | C11-C10-C9-C8 |
| 15 | A | 932 | 85N | C2-C4-C5-C6 |
| 9 | A | 903 | BCL | CAA-CBA-CGA-O1A |
| 15 | g | 101 | 85N | C13-C14-C15-O2 |
| 16 | c | 202 | HEC | CAA-CBA-CGA-O2A |
| 9 | a | 910 | BCL | CAA-CBA-CGA-O1A |
| 15 | a | 902 | 85N | C13-C14-C15-O1 |
| 9 | A | 906 | BCL | CAD-CBD-CGD-O1D |
| 9 | A | 908 | BCL | CAD-CBD-CGD-O1D |
| 9 | a | 906 | BCL | CAD-CBD-CGD-O1D |
| 10 | A | 933 | CLA | CAD-CBD-CGD-O1D |
| 10 | a | 915 | CLA | CAD-CBD-CGD-O1D |
| 17 | E | 101 | 84Q | C33-C32-O7-P |
| 15 | g | 101 | 85N | C13-C14-C15-O1 |
| 13 | a | 920 | 85I | O4-C5-C6-C7 |
| 15 | g | 101 | 85N | C2-C4-C5-C6 |
| 9 | A | 905 | BCL | C14-C13-C15-C16 |
| 9 | a | 905 | BCL | C6-C7-C8-C9 |
| 9 | A | 908 | BCL | CAA-CBA-CGA-O2A |
| 13 | A | 916 | 85I | O6-C20-C21-C22 |
| 13 | A | 916 | 85I | O5-C5-C6-C7 |
| 9 | A | 908 | BCL | C6-C7-C8-C10 |
| 9 | a | 905 | BCL | C6-C7-C8-C10 |

Continued on next page...

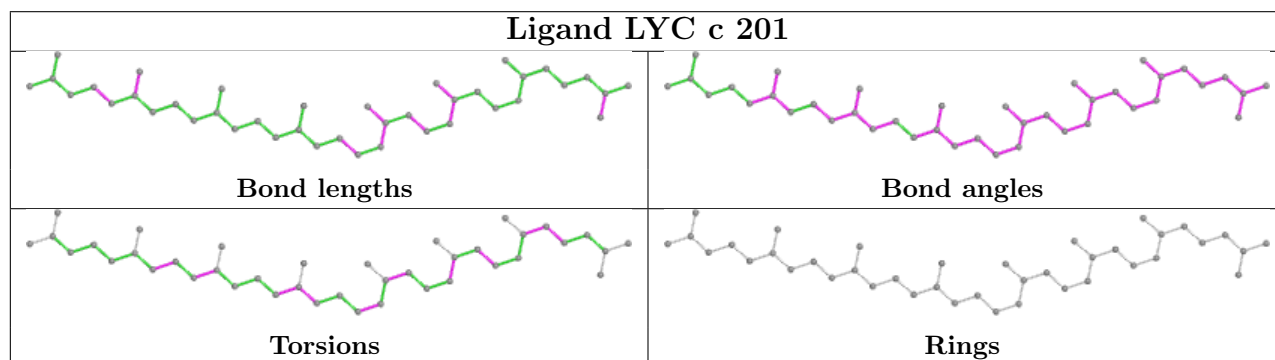
Continued from previous page...

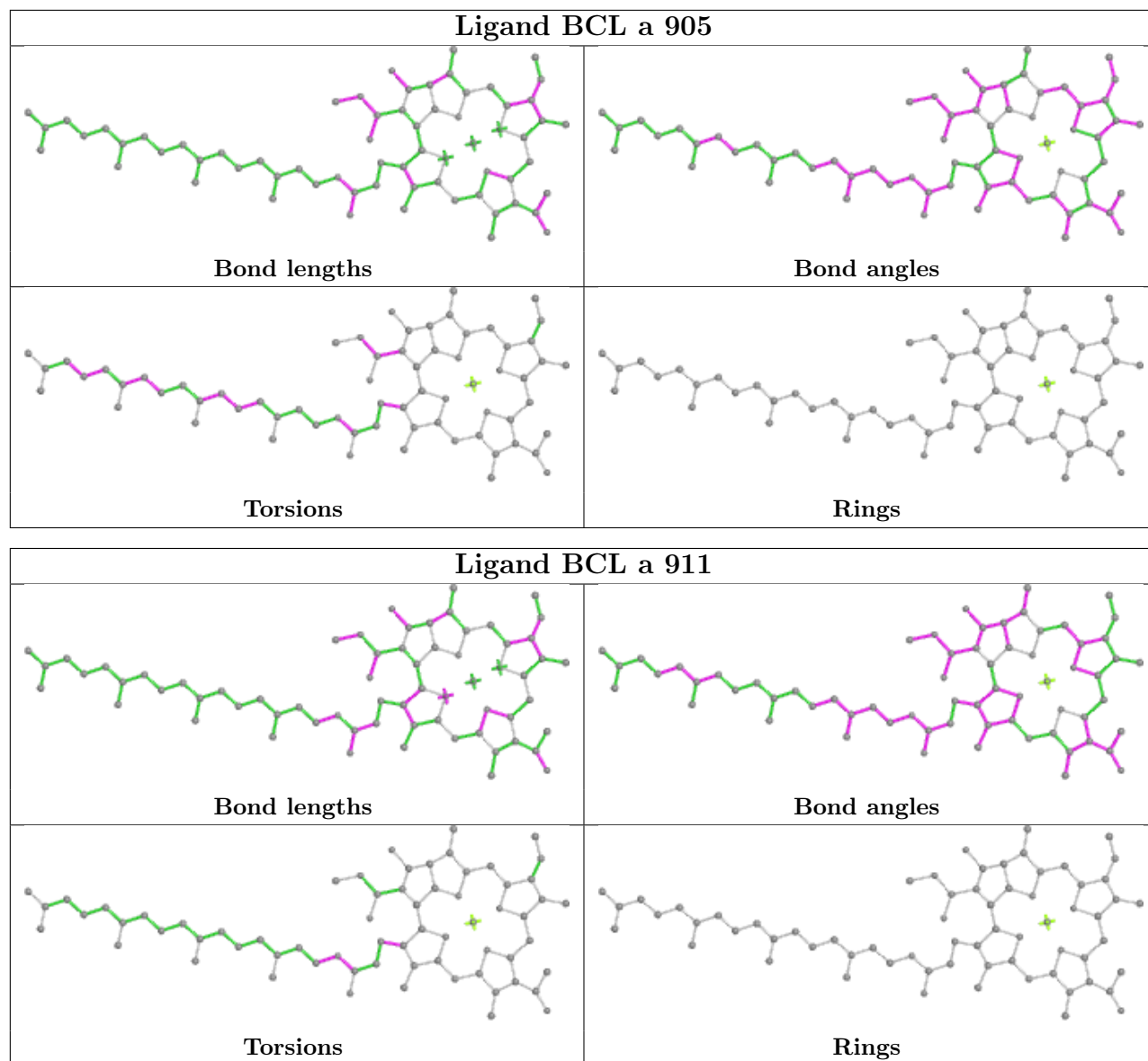
| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 10 | a | 913 | CLA | C6-C7-C8-C10 |
| 15 | A | 932 | 85N | O7-C25-C26-C27 |
| 10 | A | 931 | CLA | C3-C5-C6-C7 |
| 11 | c | 201 | LYC | C50-C51-C53-C54 |
| 9 | A | 907 | BCL | CAA-CBA-CGA-O2A |
| 15 | A | 932 | 85N | O6-C25-C26-C27 |
| 15 | G | 101 | 85N | C13-C14-C15-O2 |
| 13 | A | 917 | 85I | C14-C15-C16-C17 |
| 9 | A | 903 | BCL | O1A-CGA-O2A-C1 |
| 13 | A | 916 | 85I | O7-C20-C21-C22 |
| 13 | a | 920 | 85I | O5-C5-C6-C7 |
| 15 | a | 902 | 85N | C14-C15-O2-C16 |

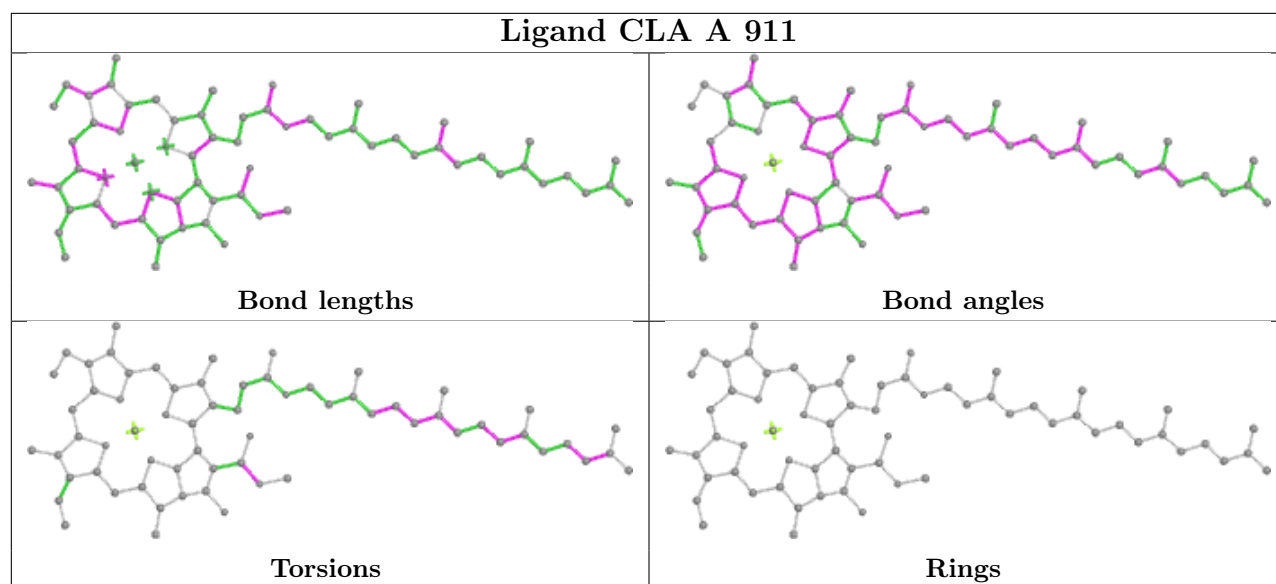
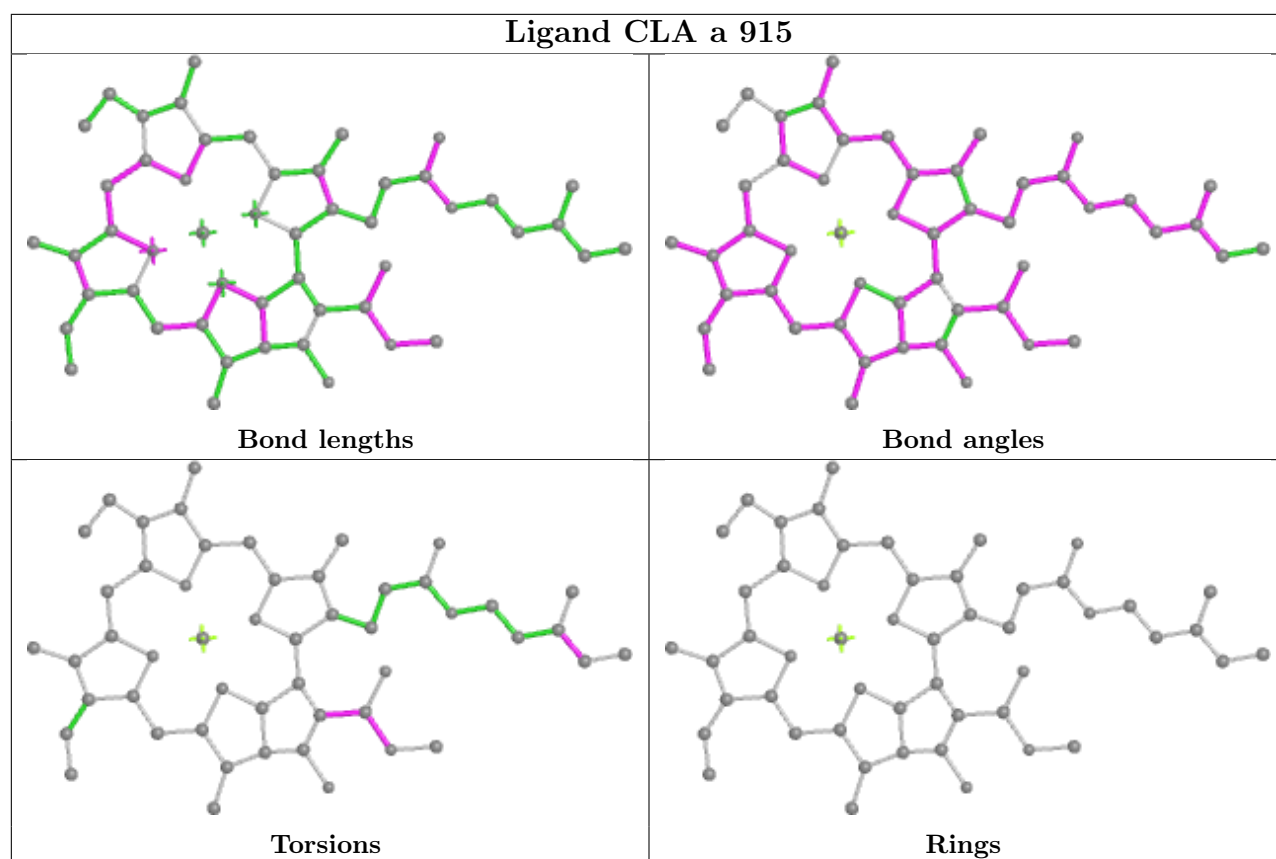
There are no ring outliers.

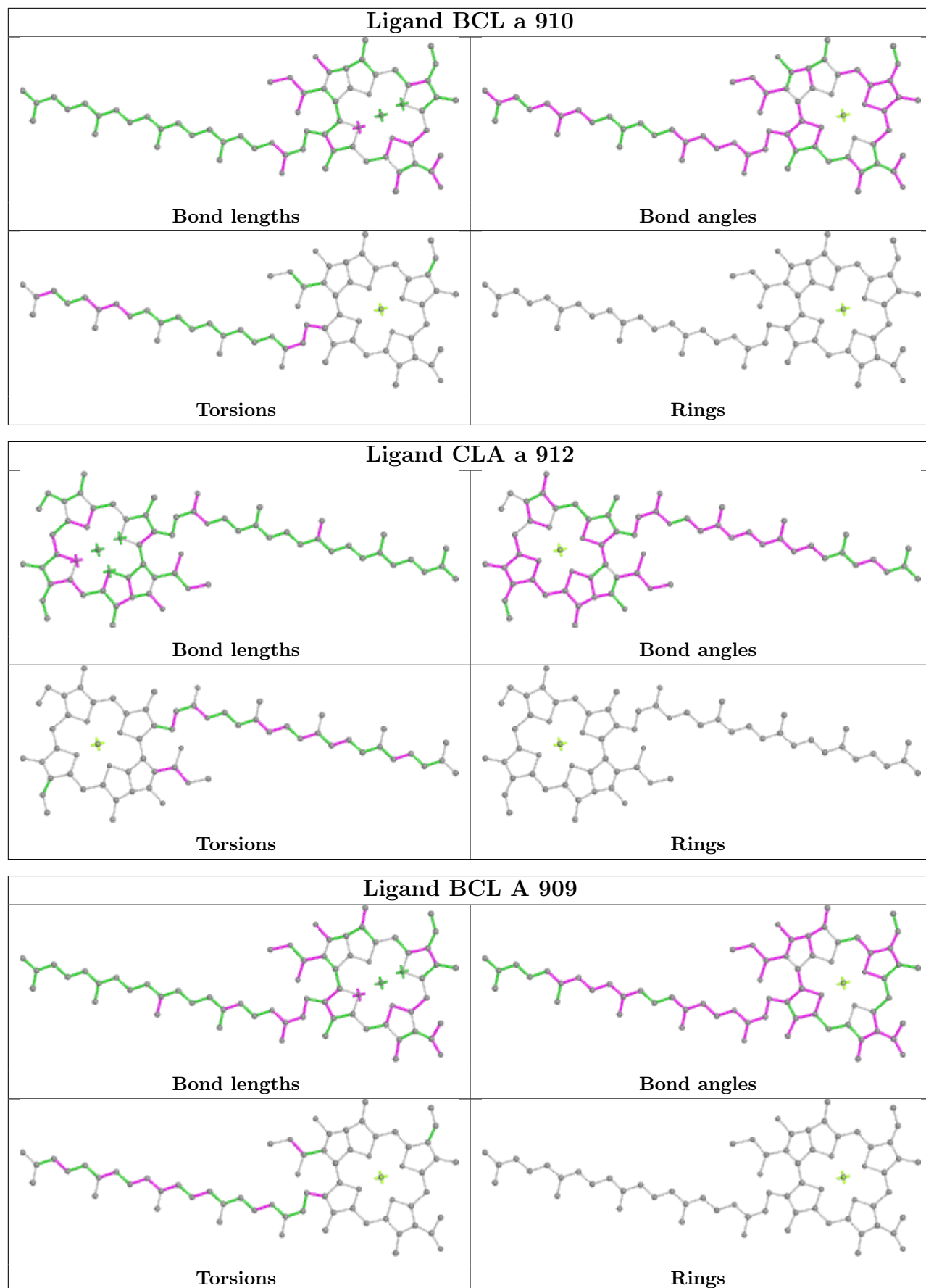
No monomer is involved in short contacts.

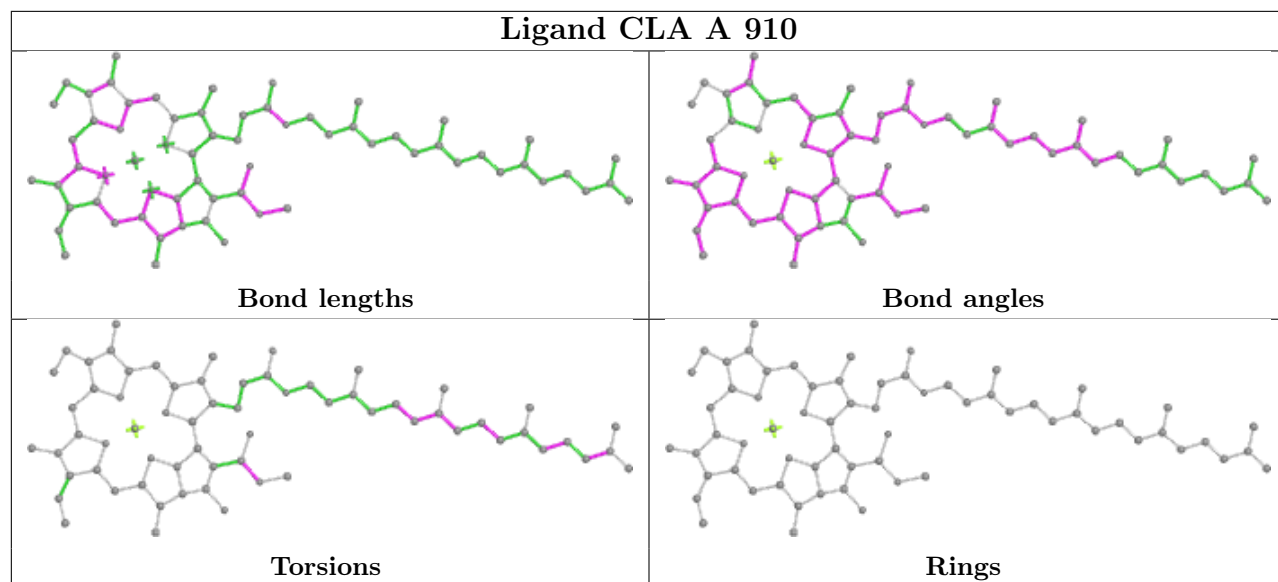
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

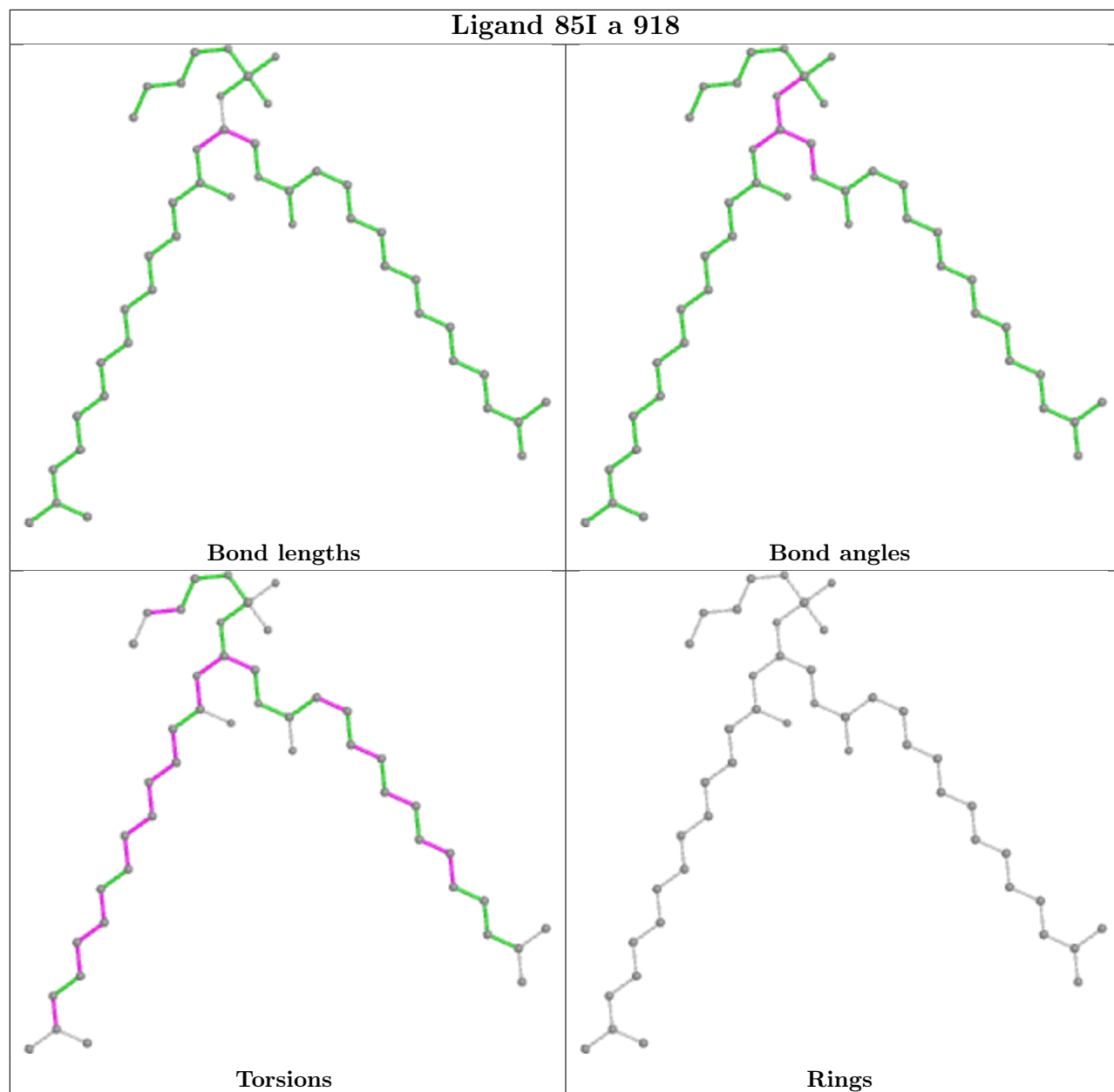


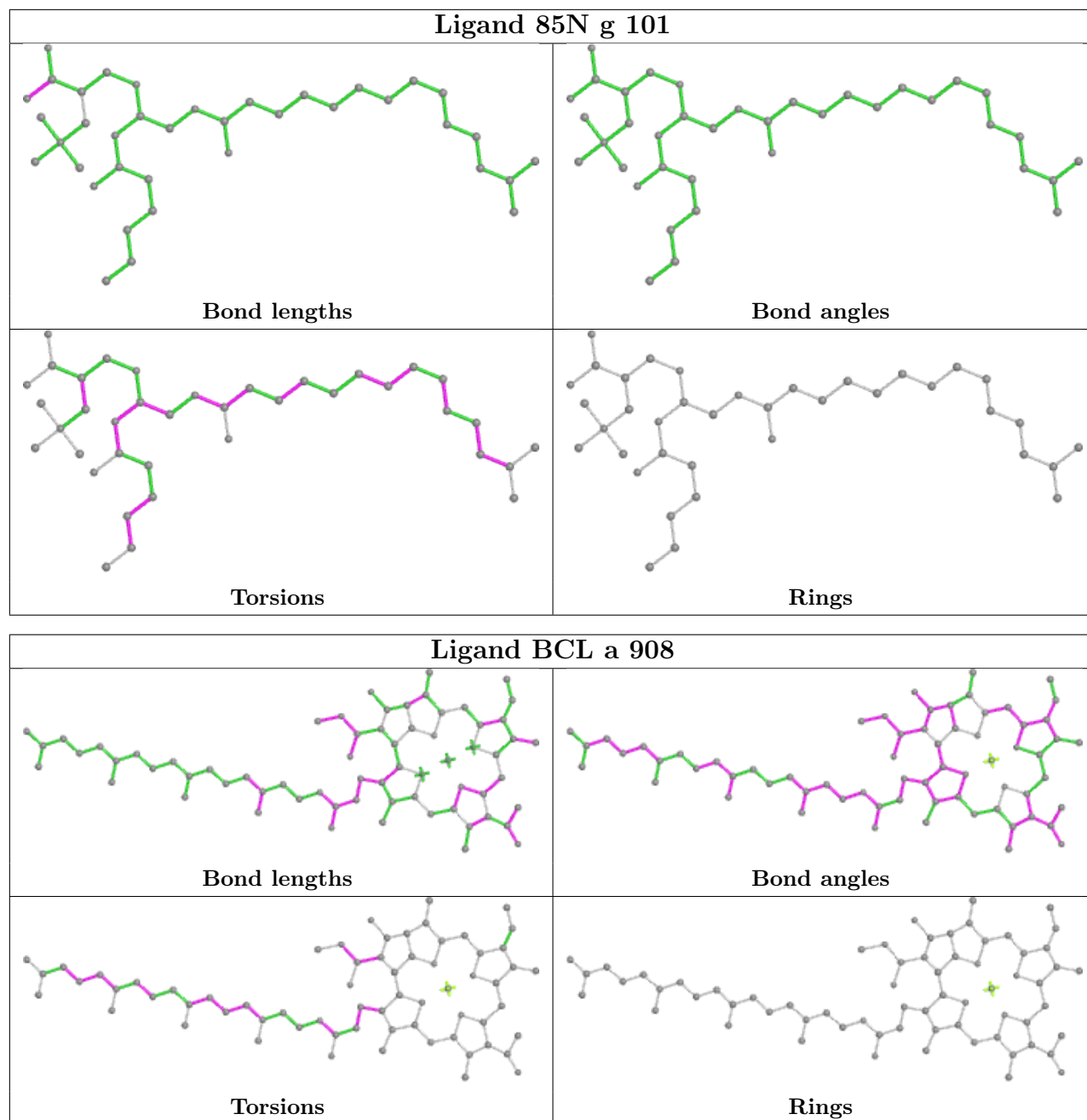


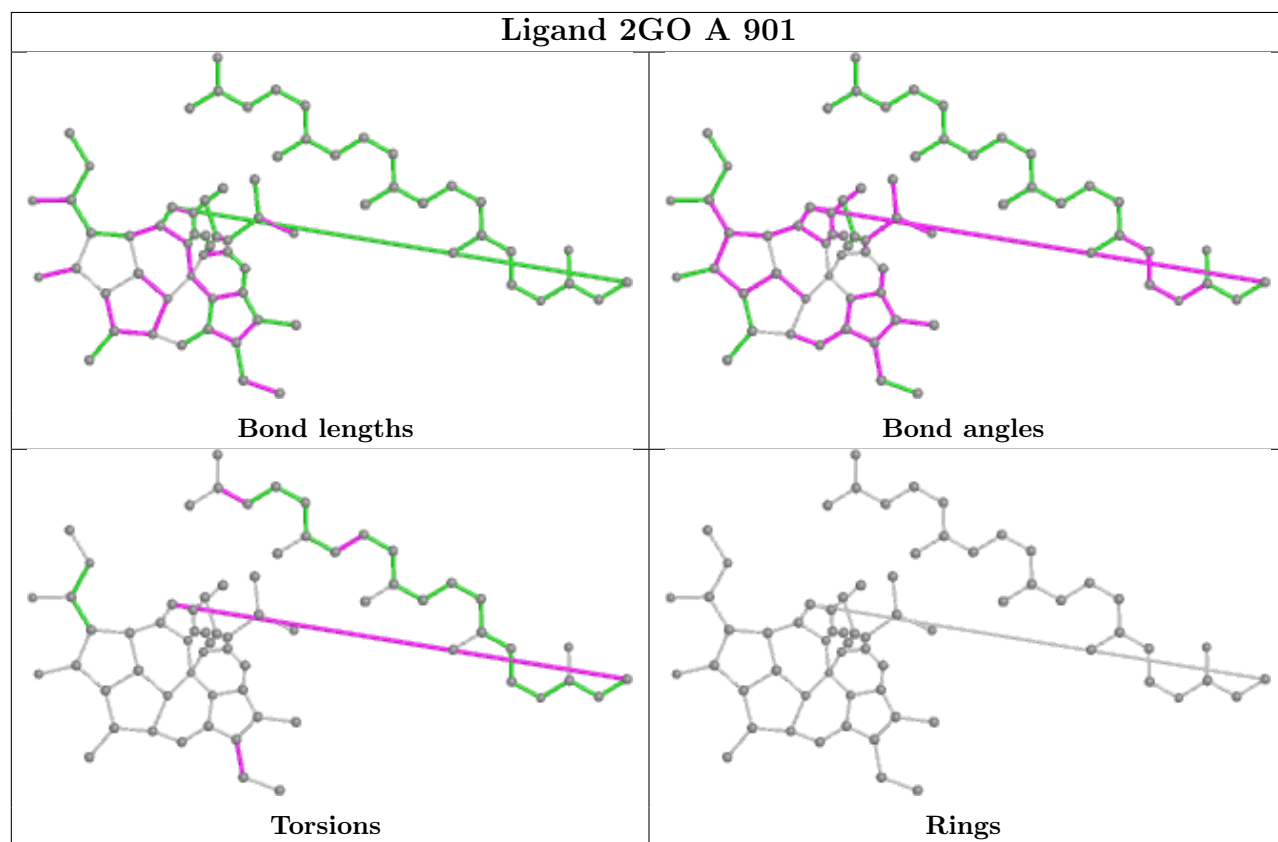
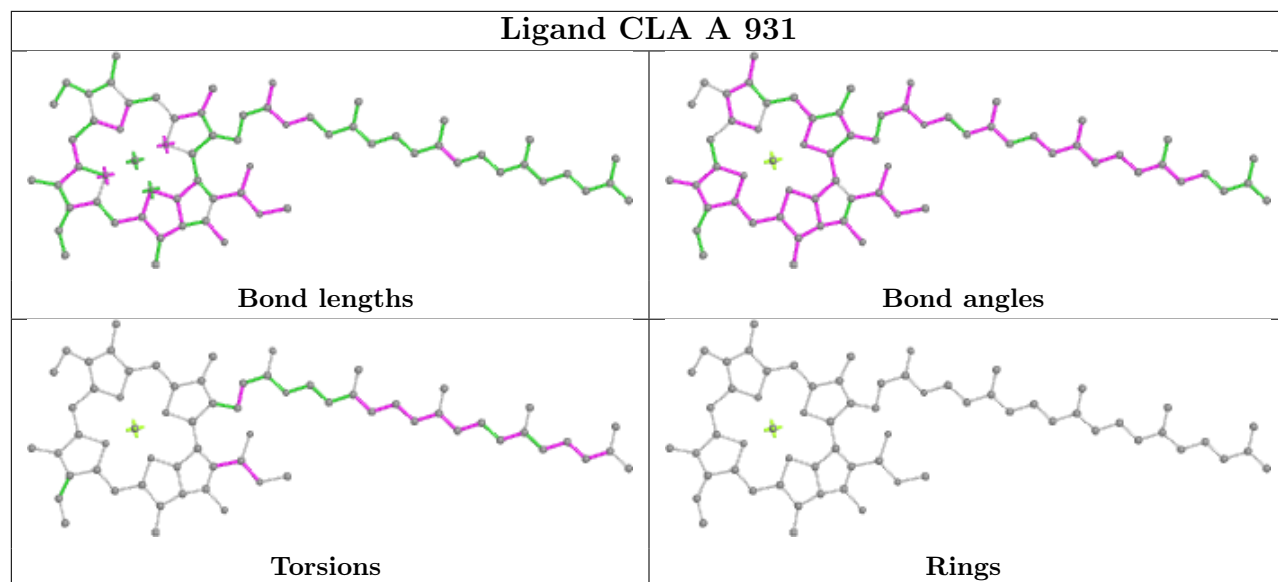


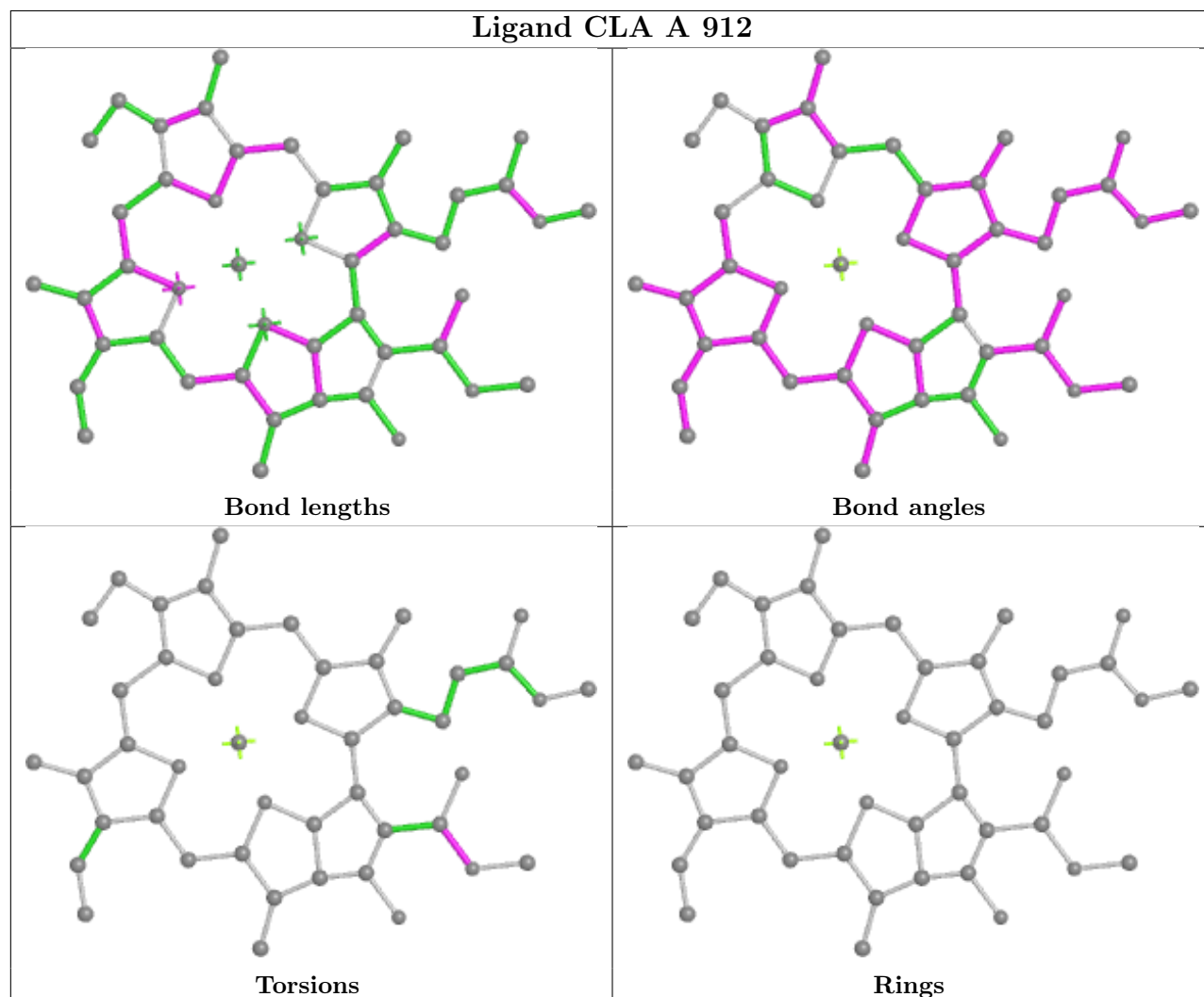
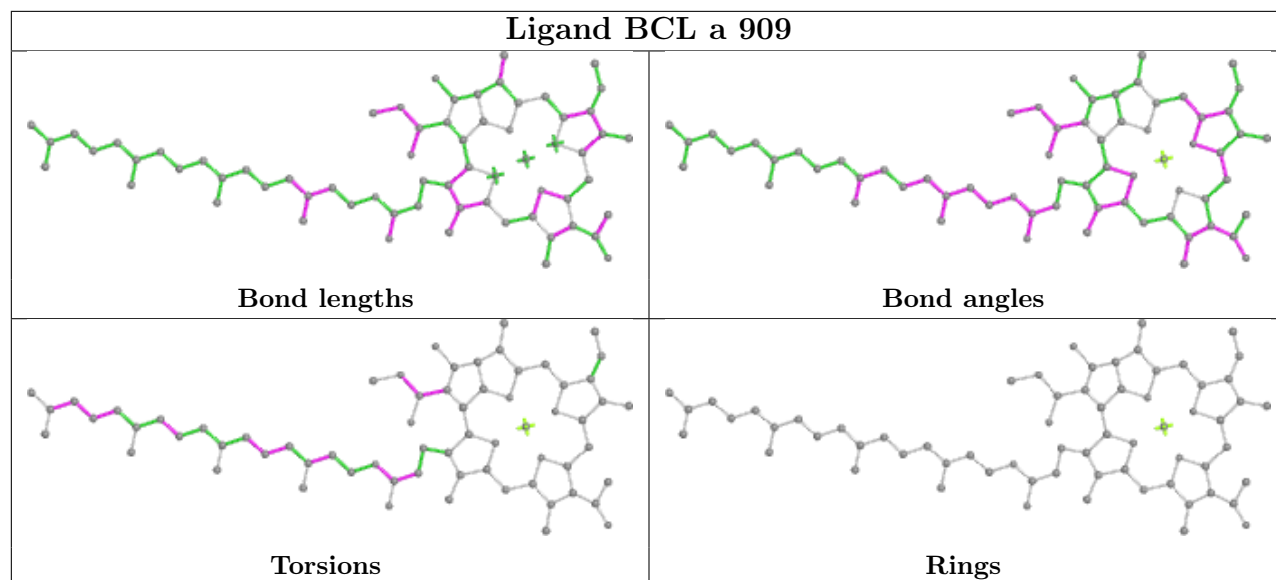


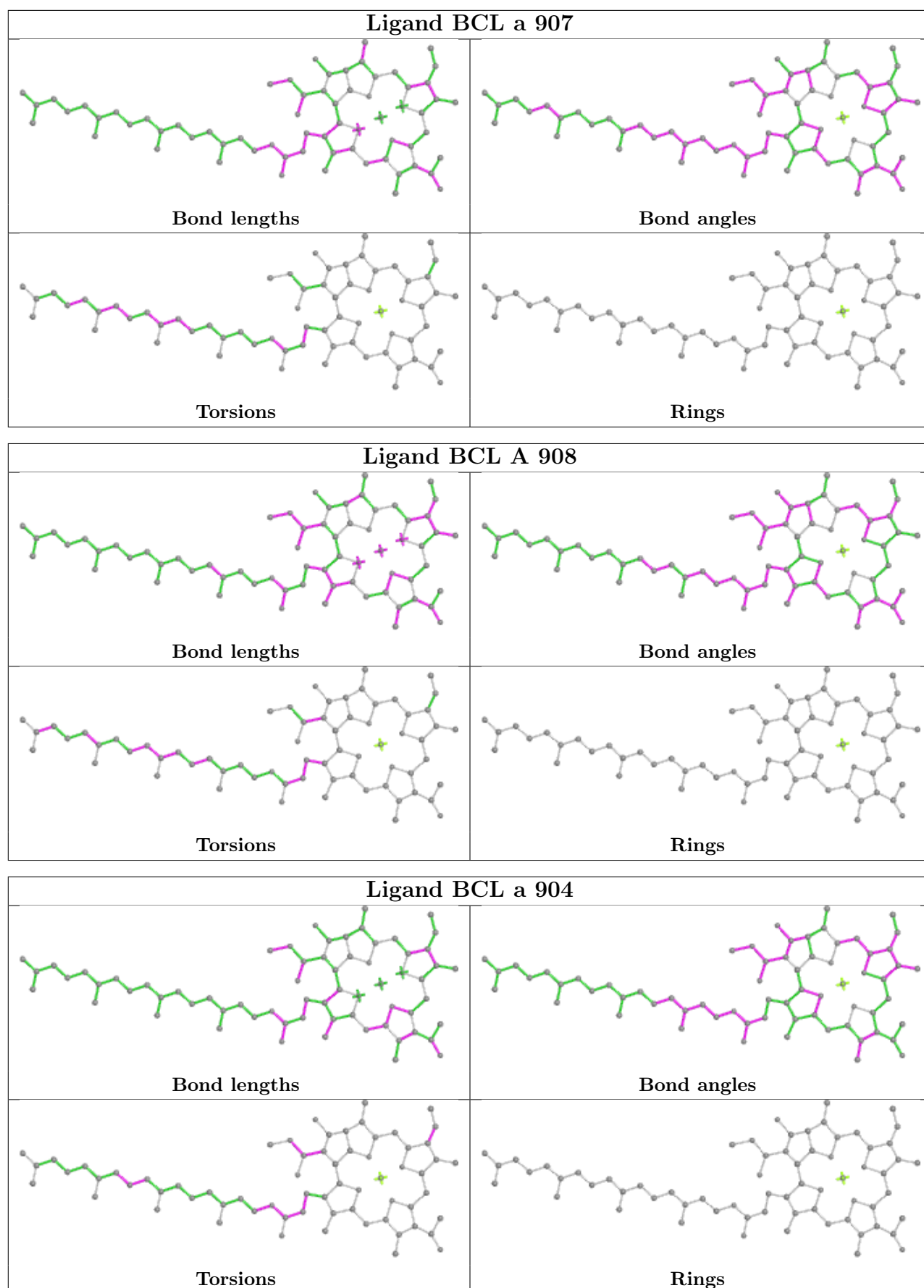


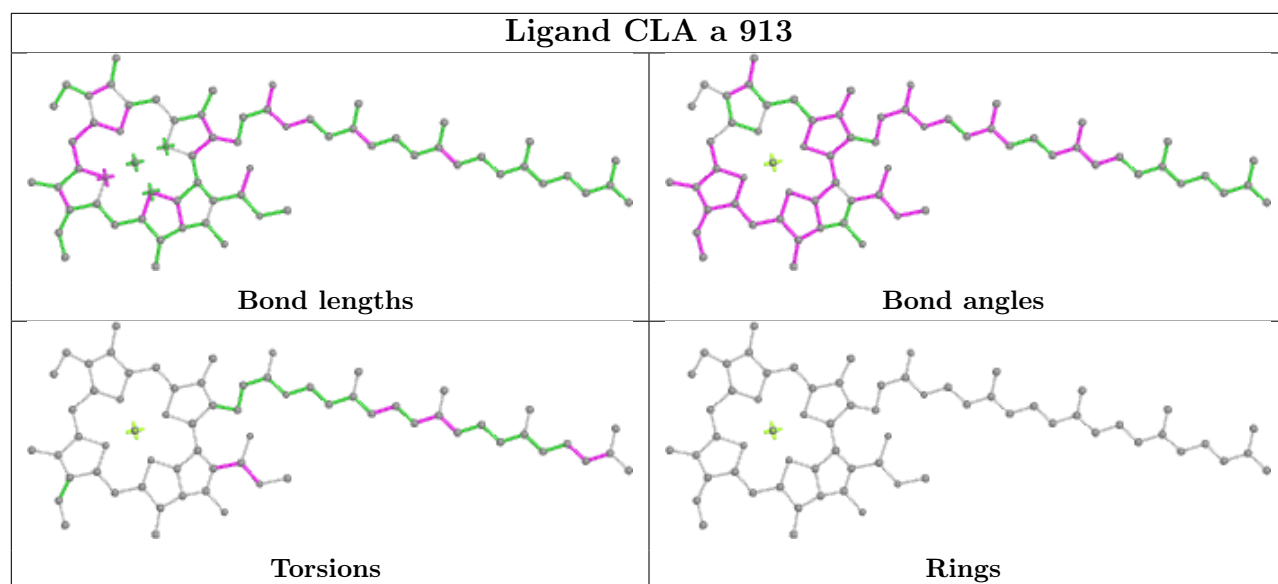
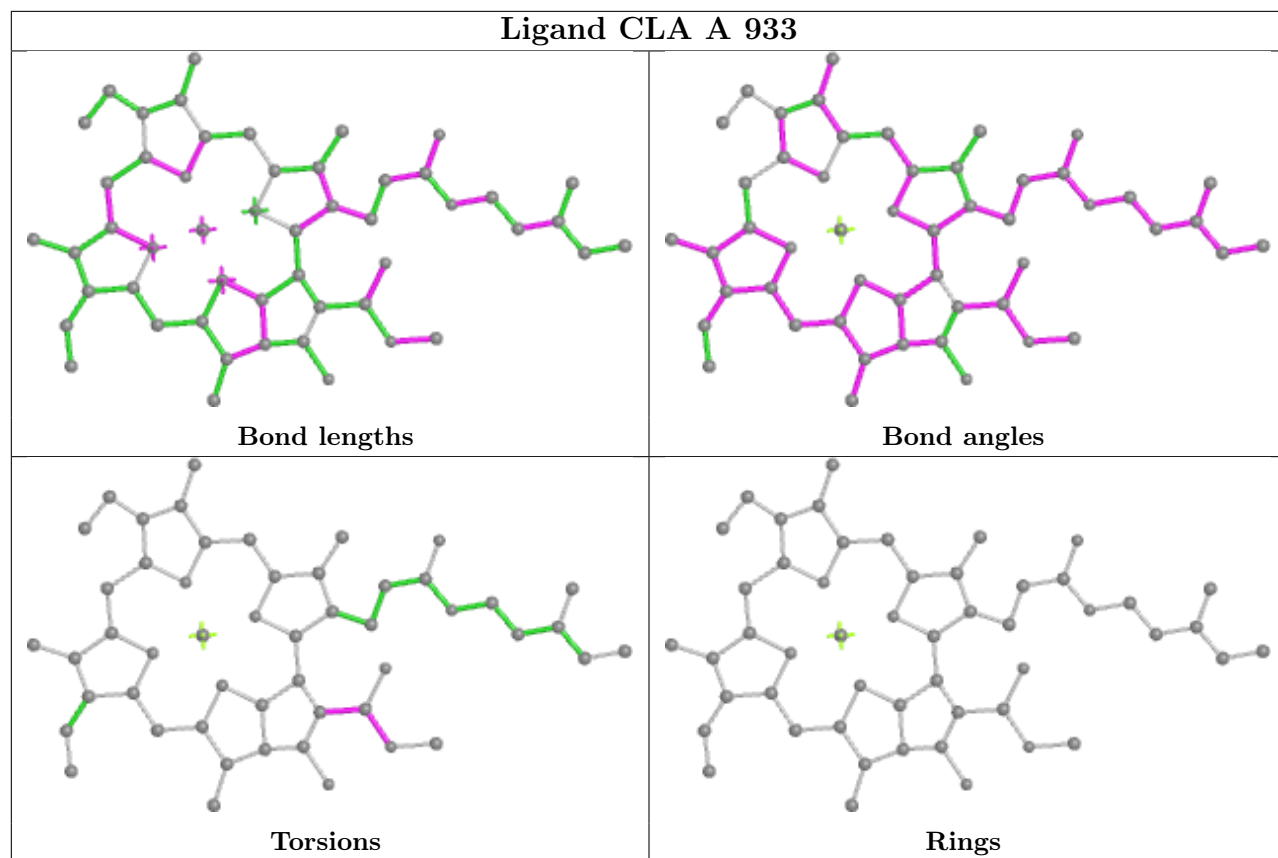


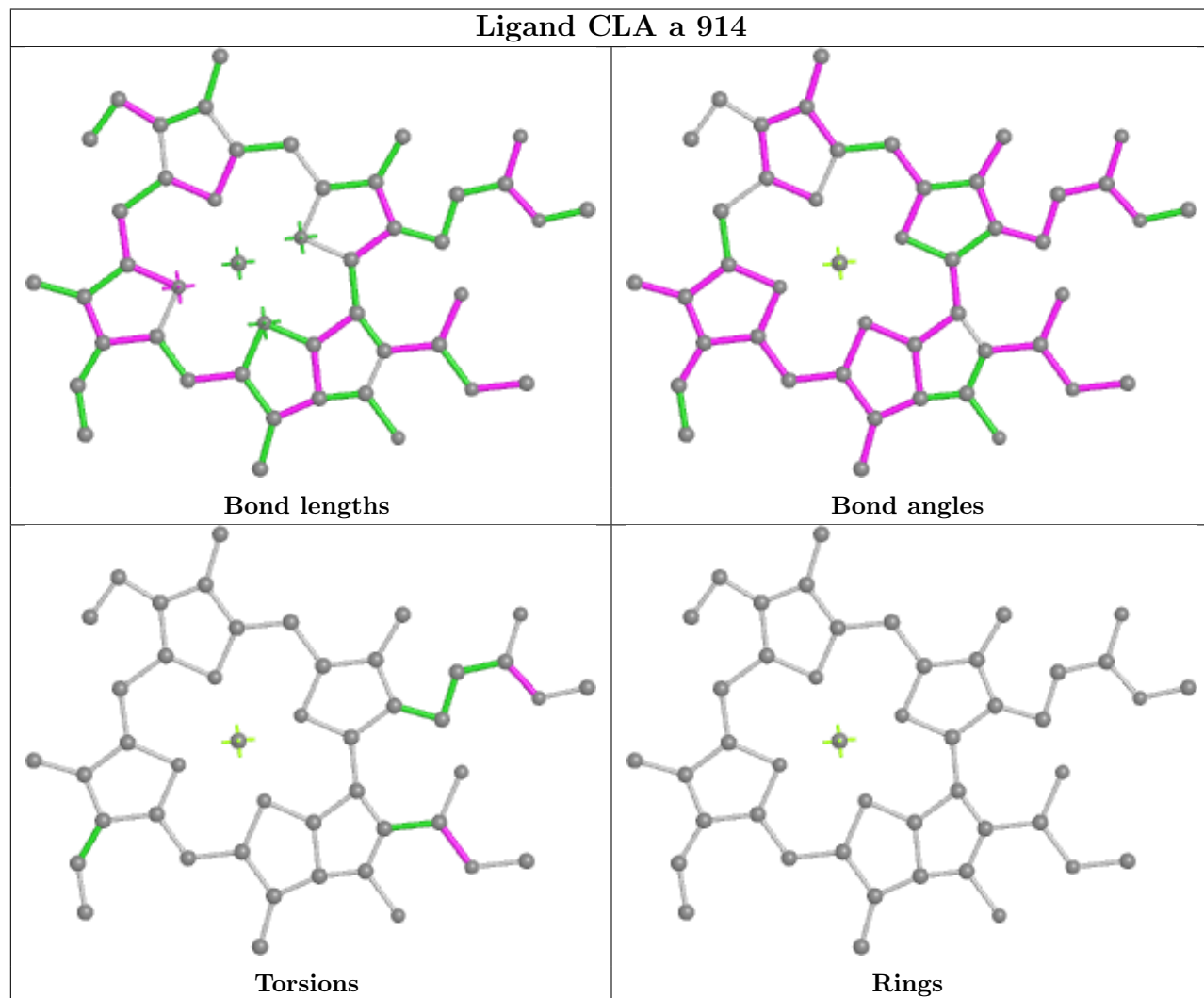
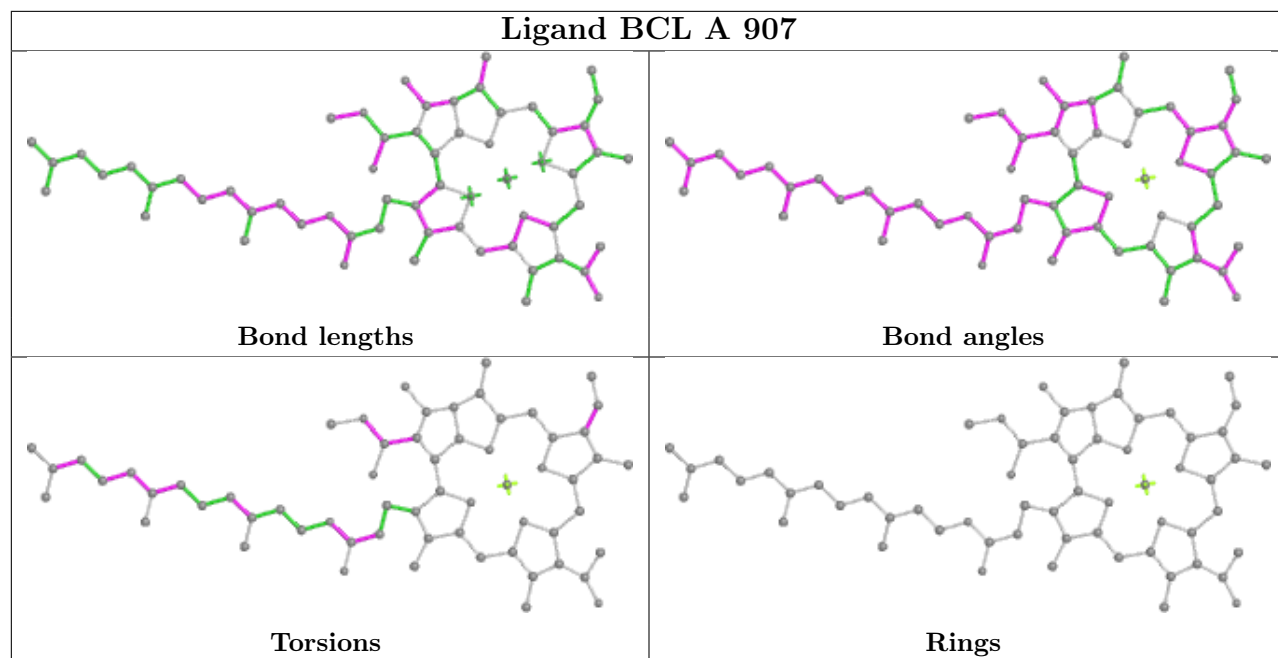


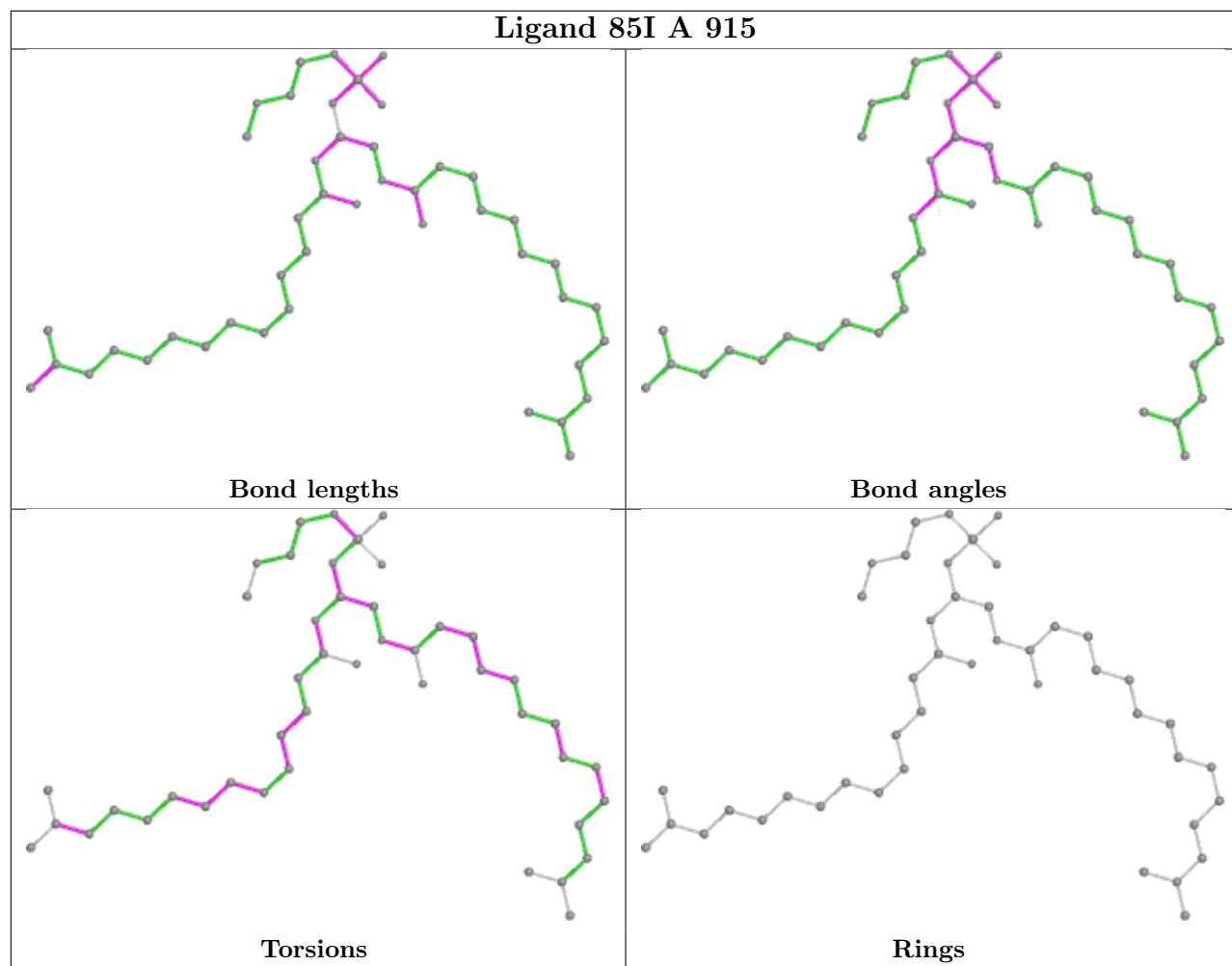


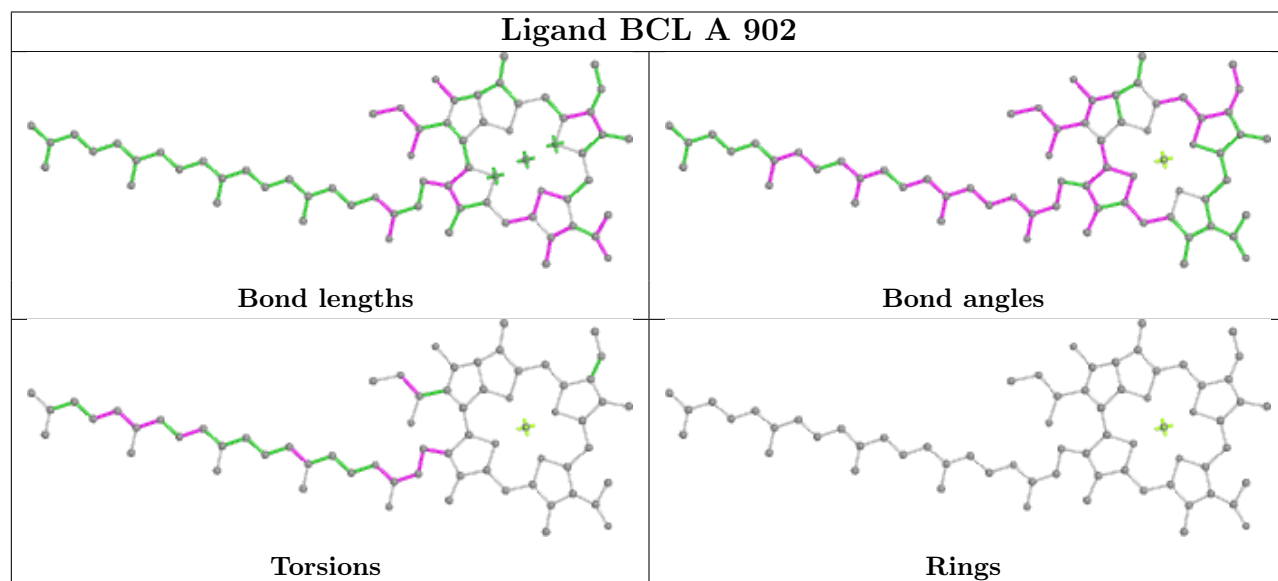
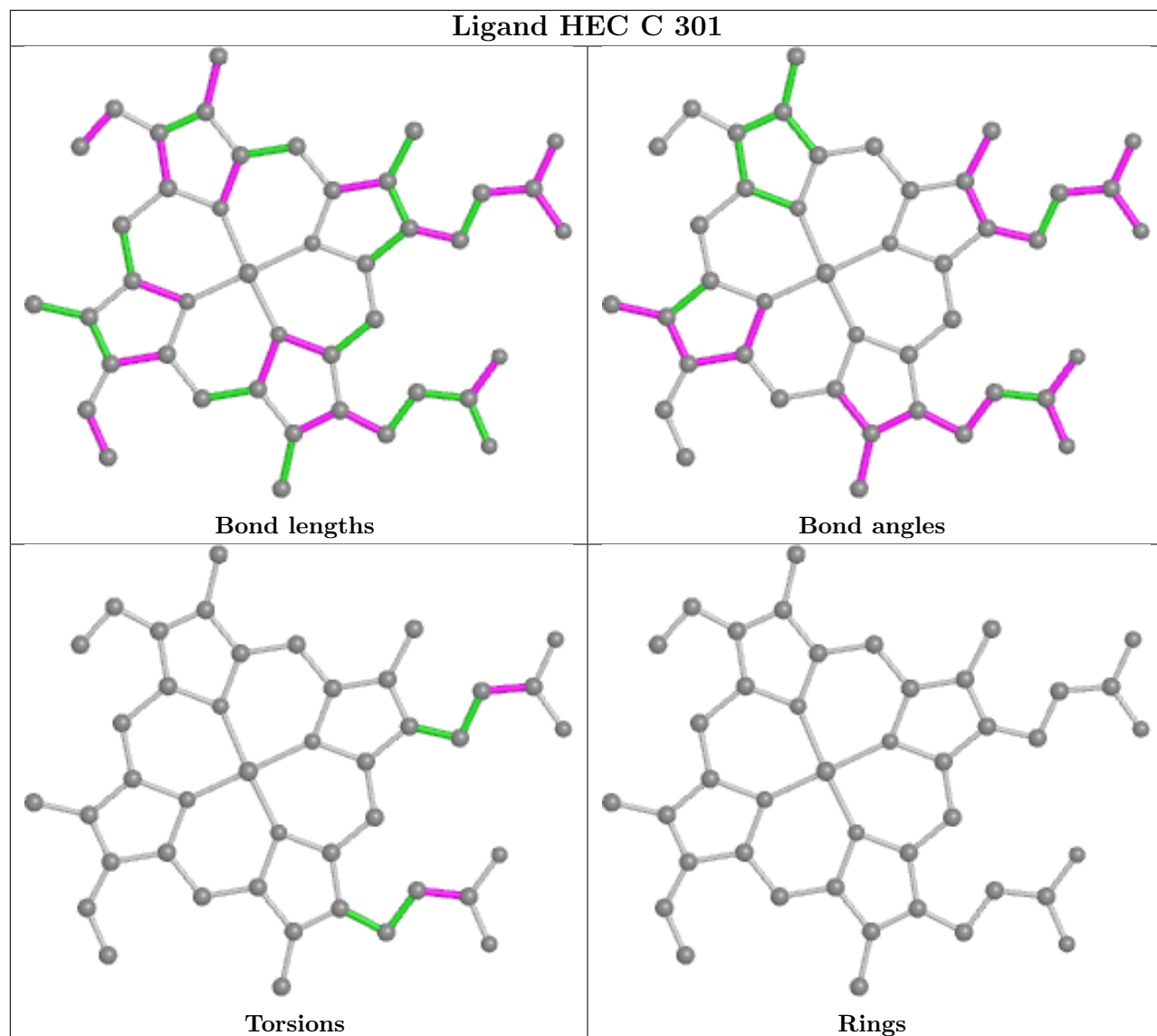


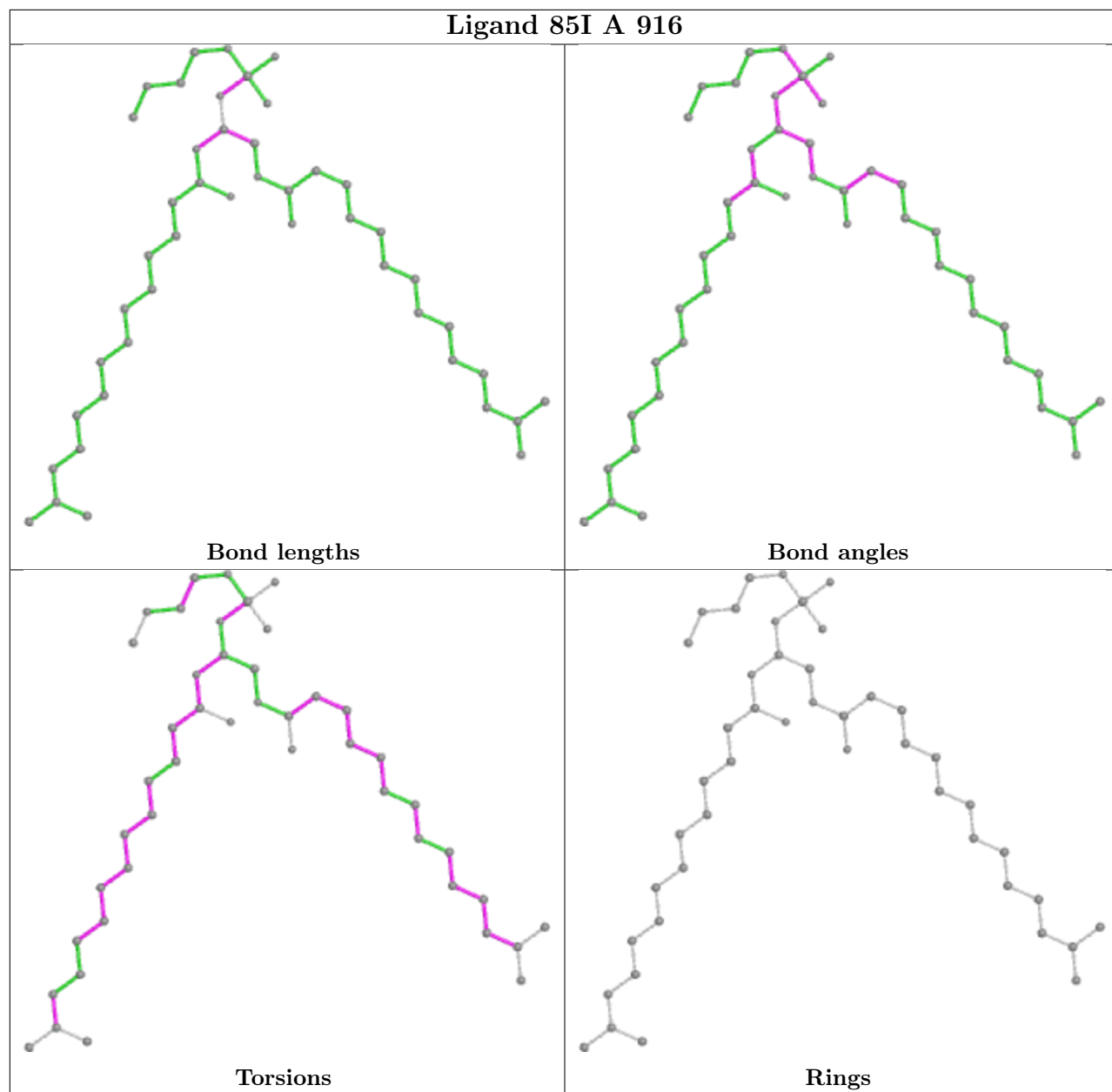


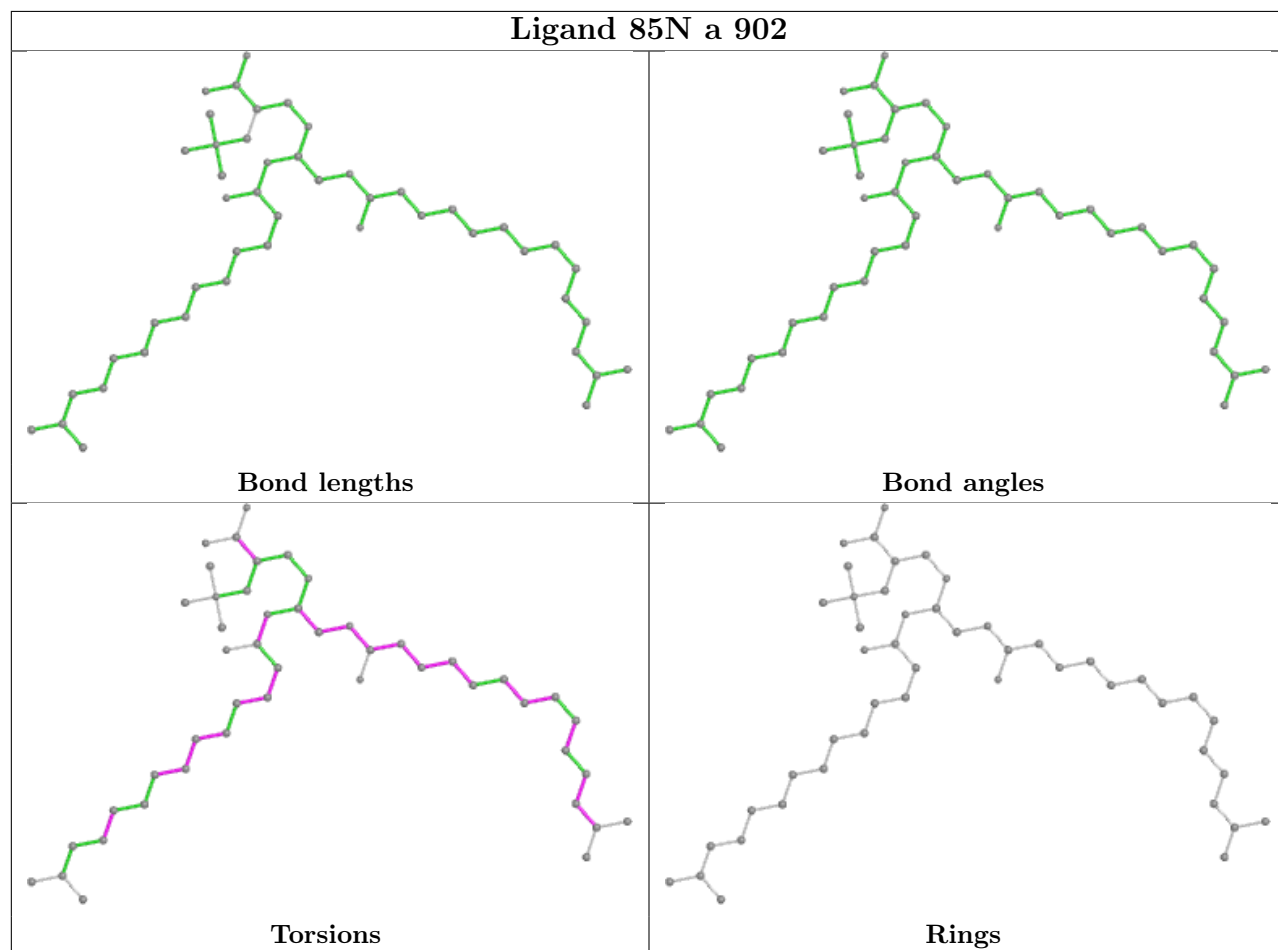
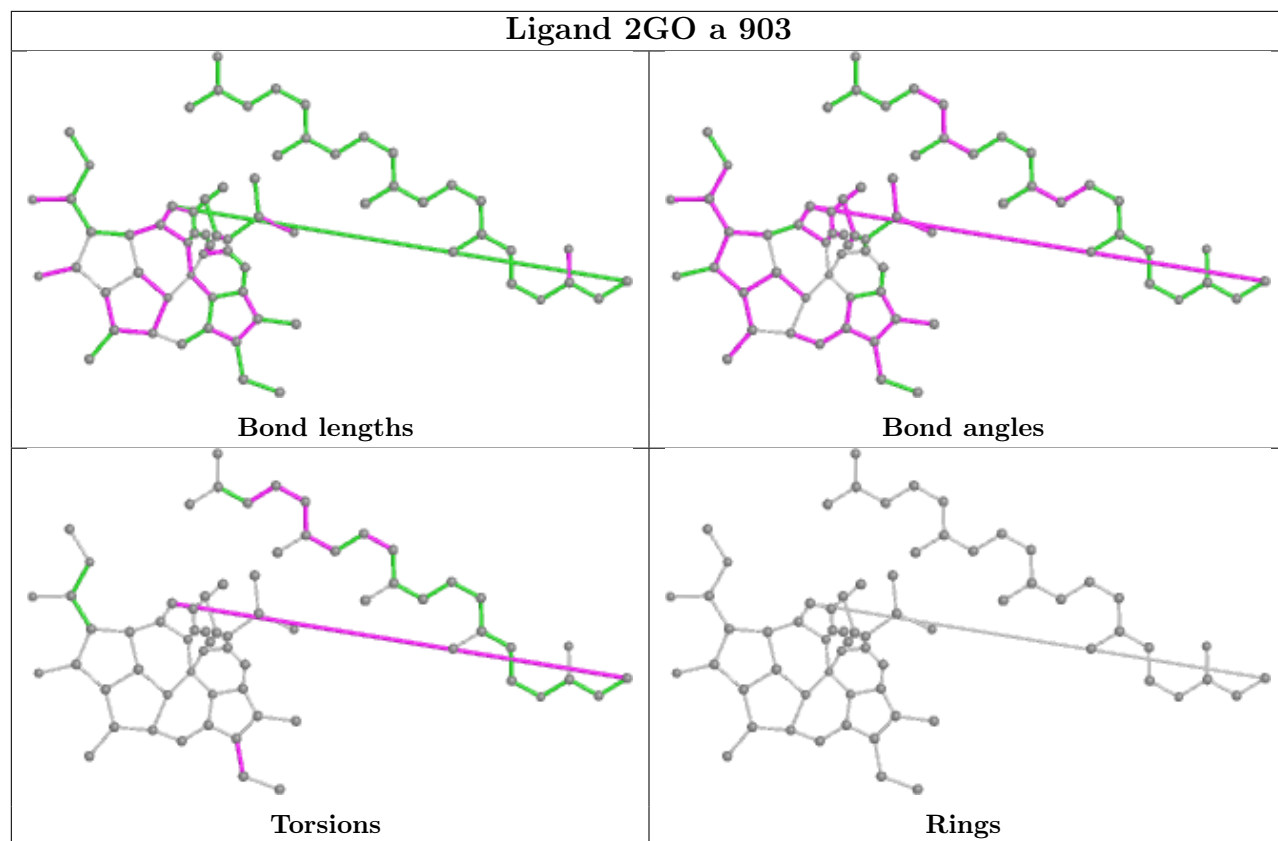


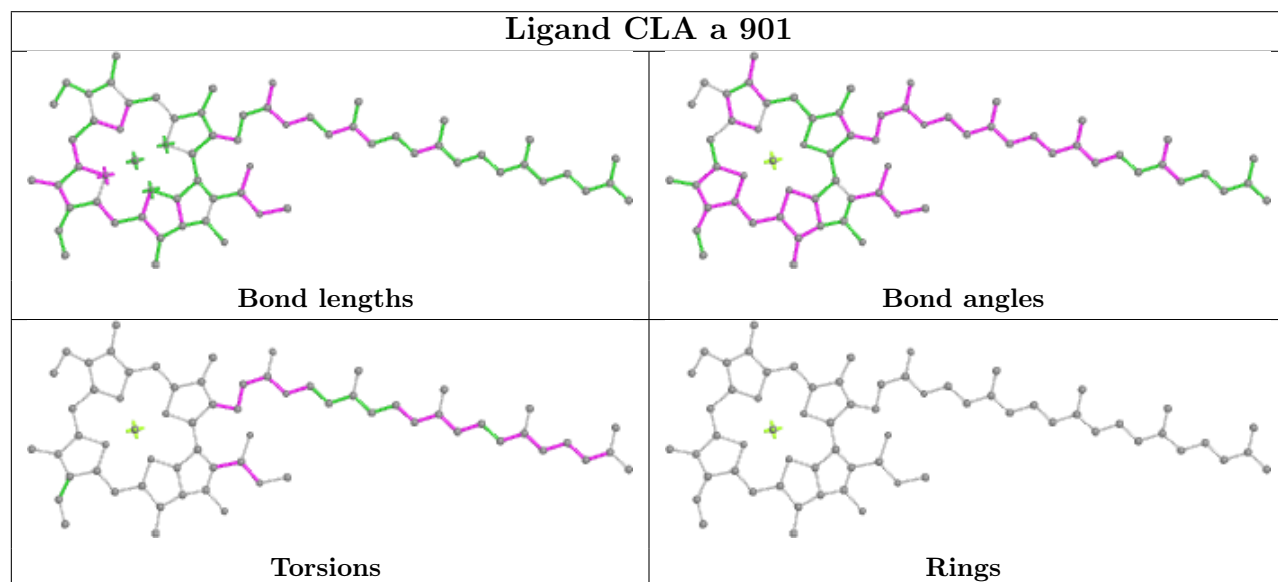
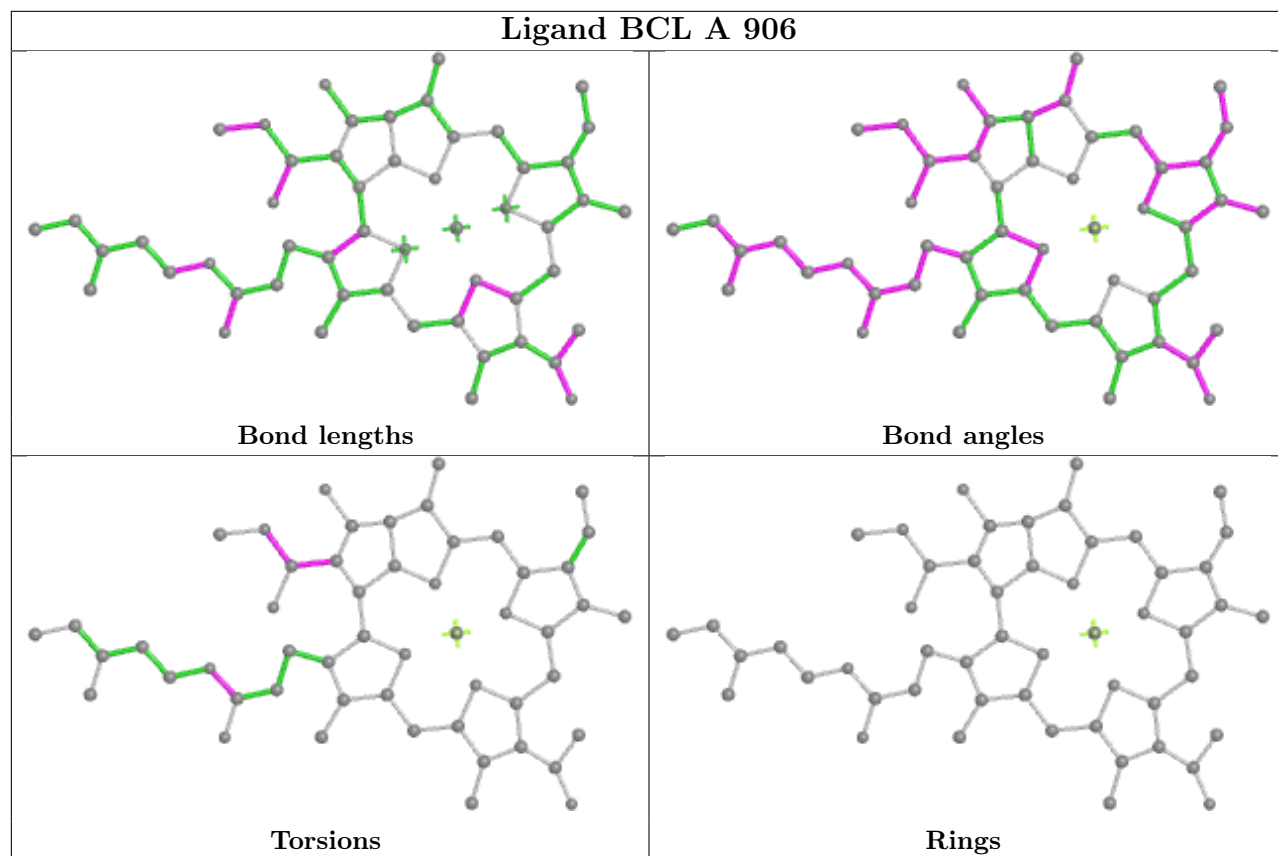


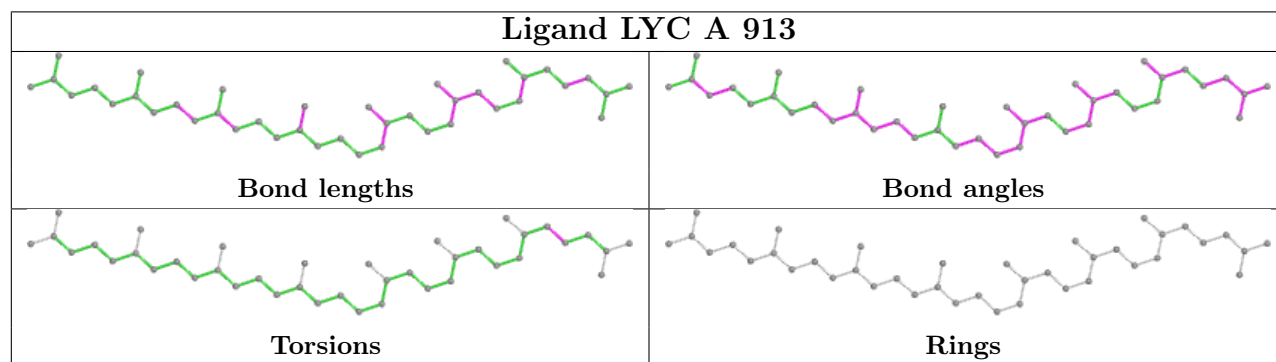
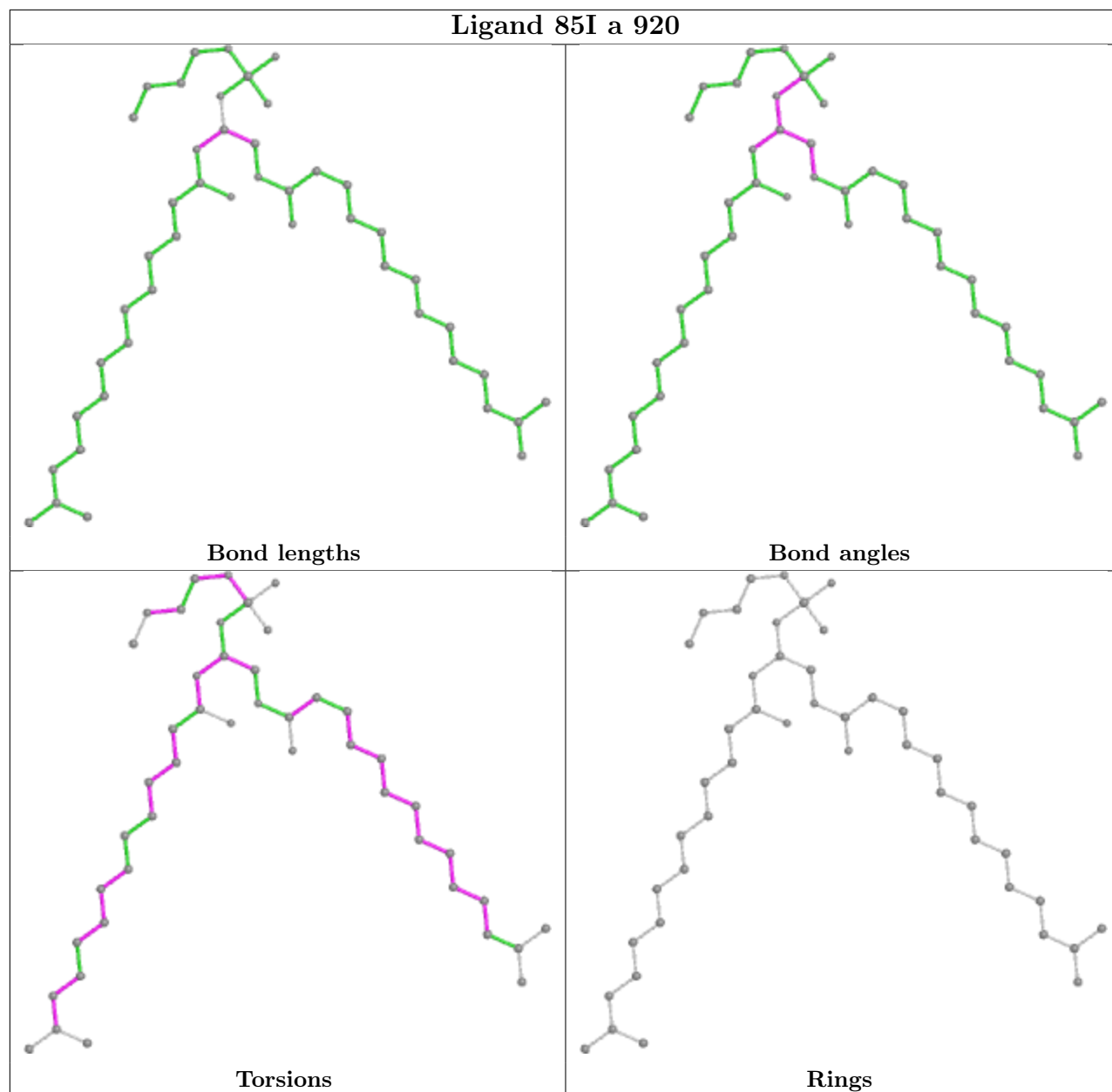


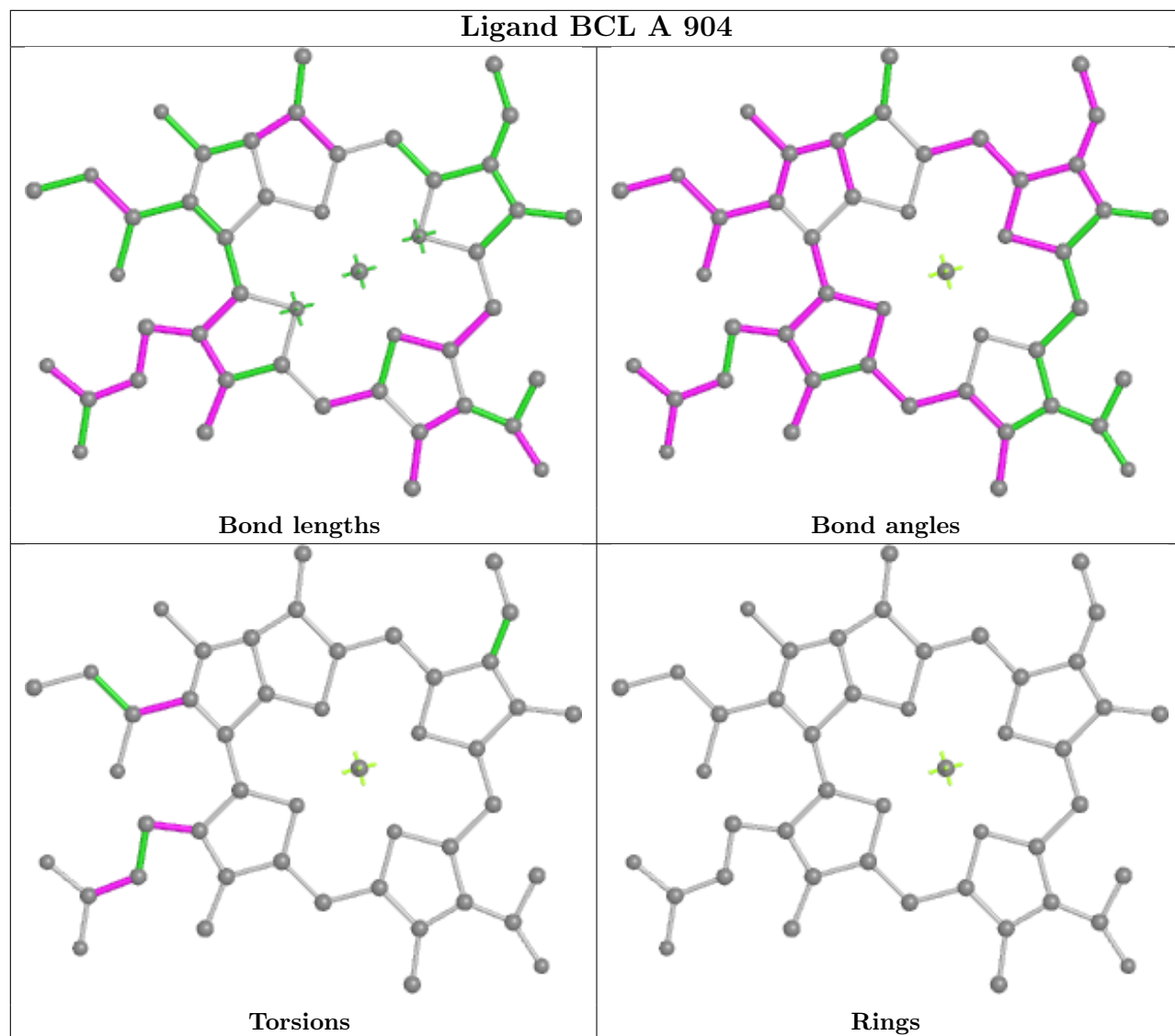


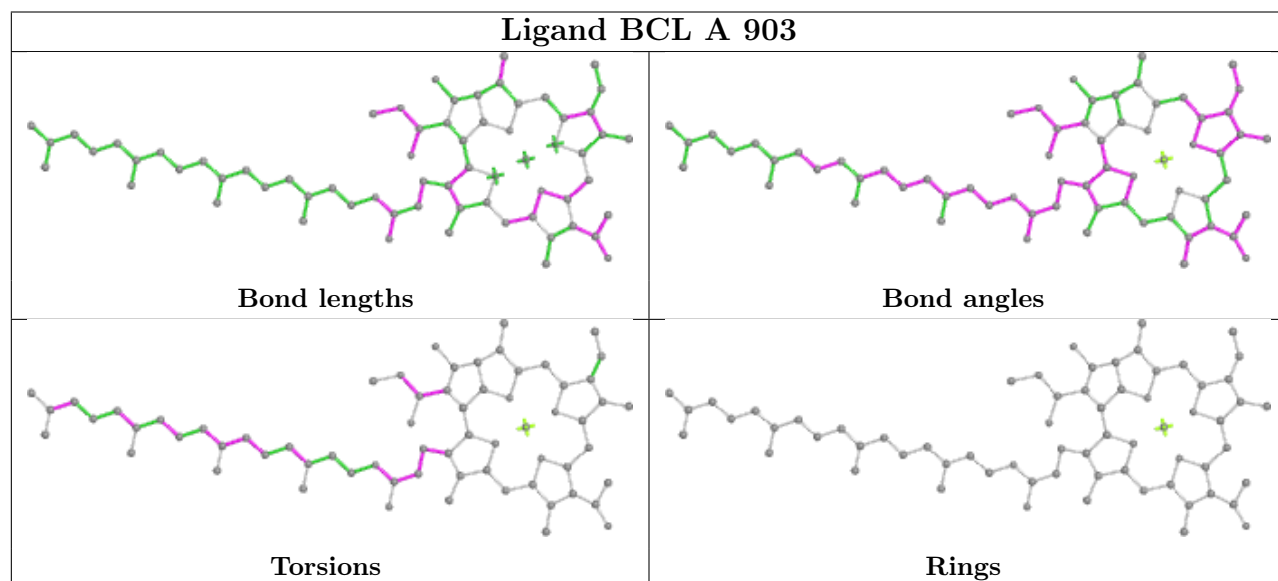
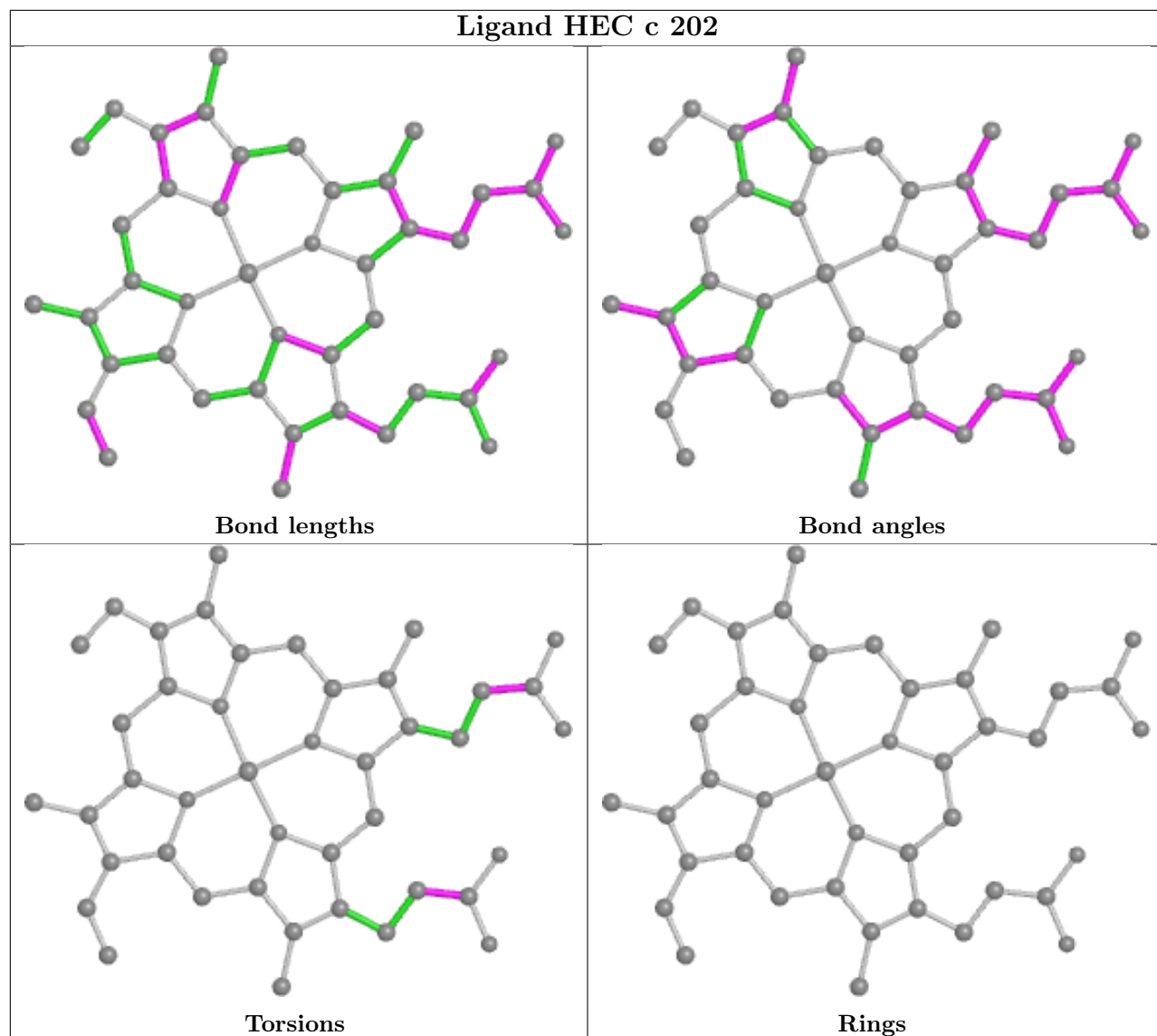


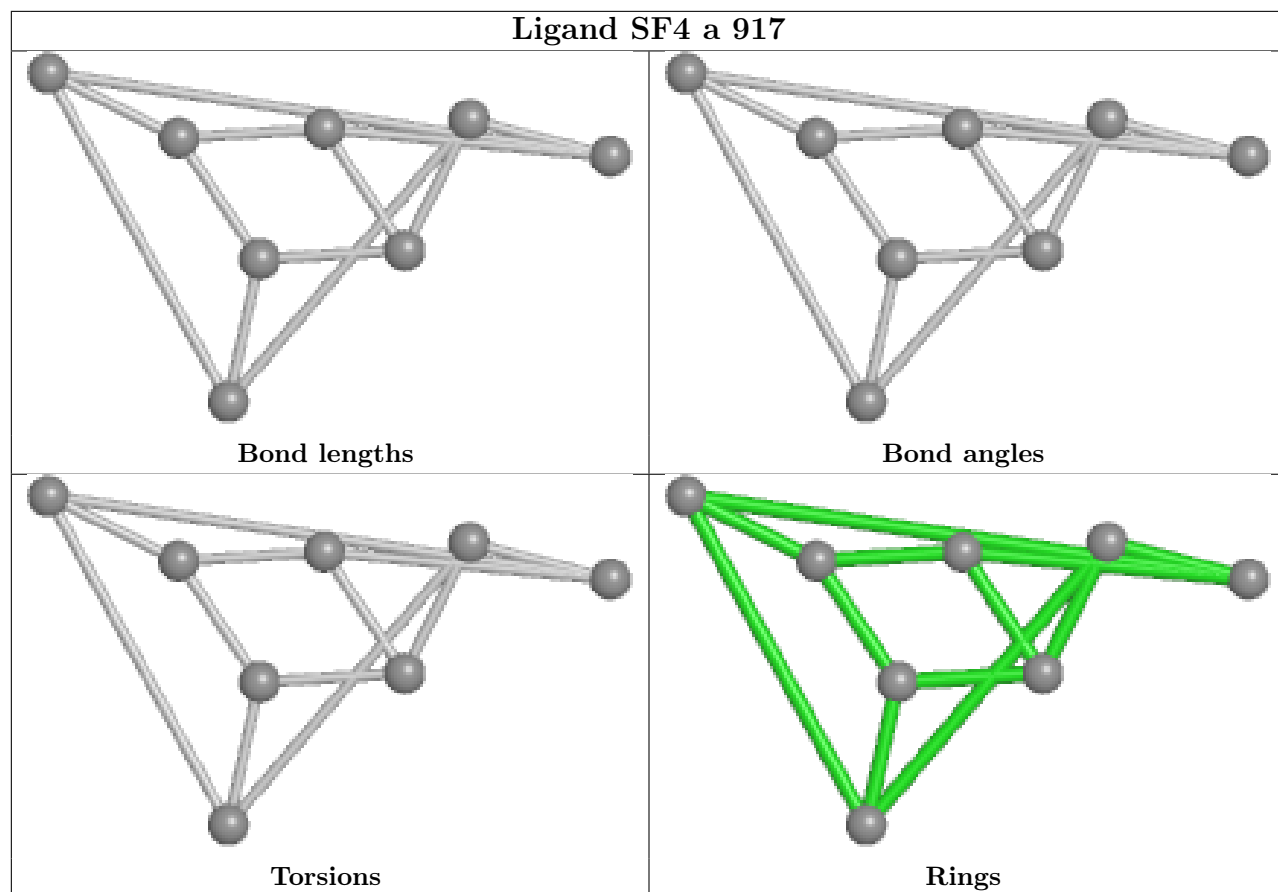


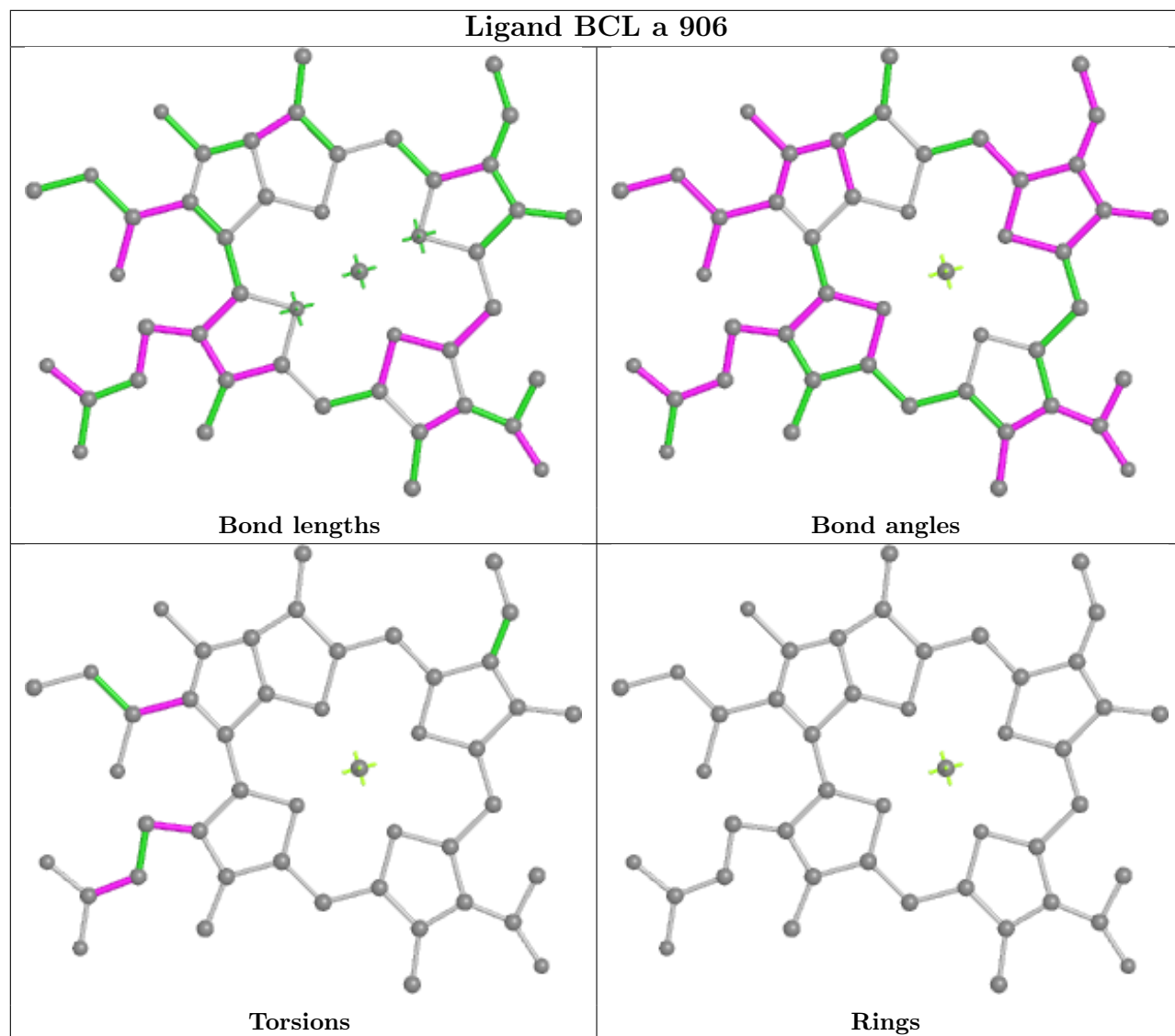


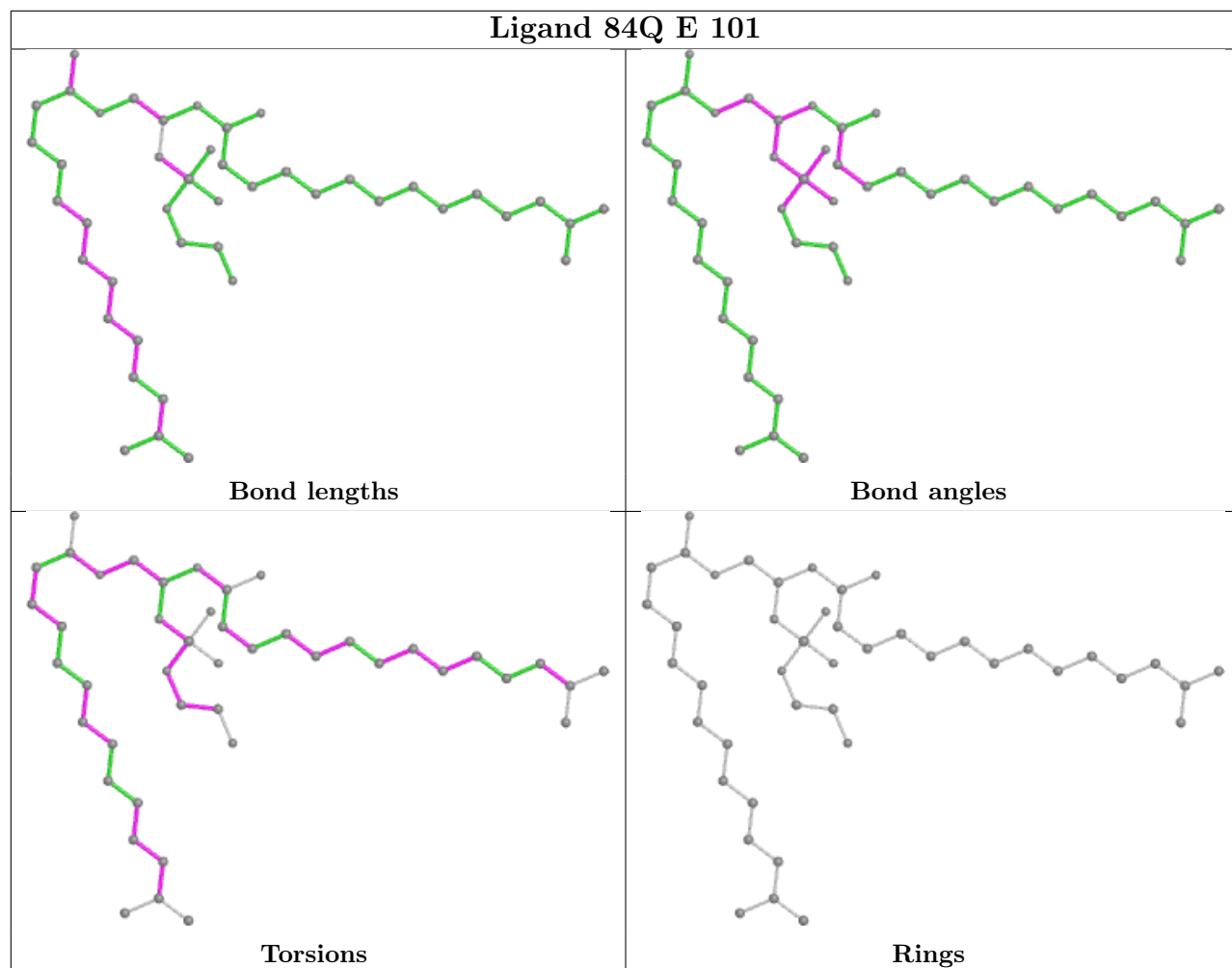


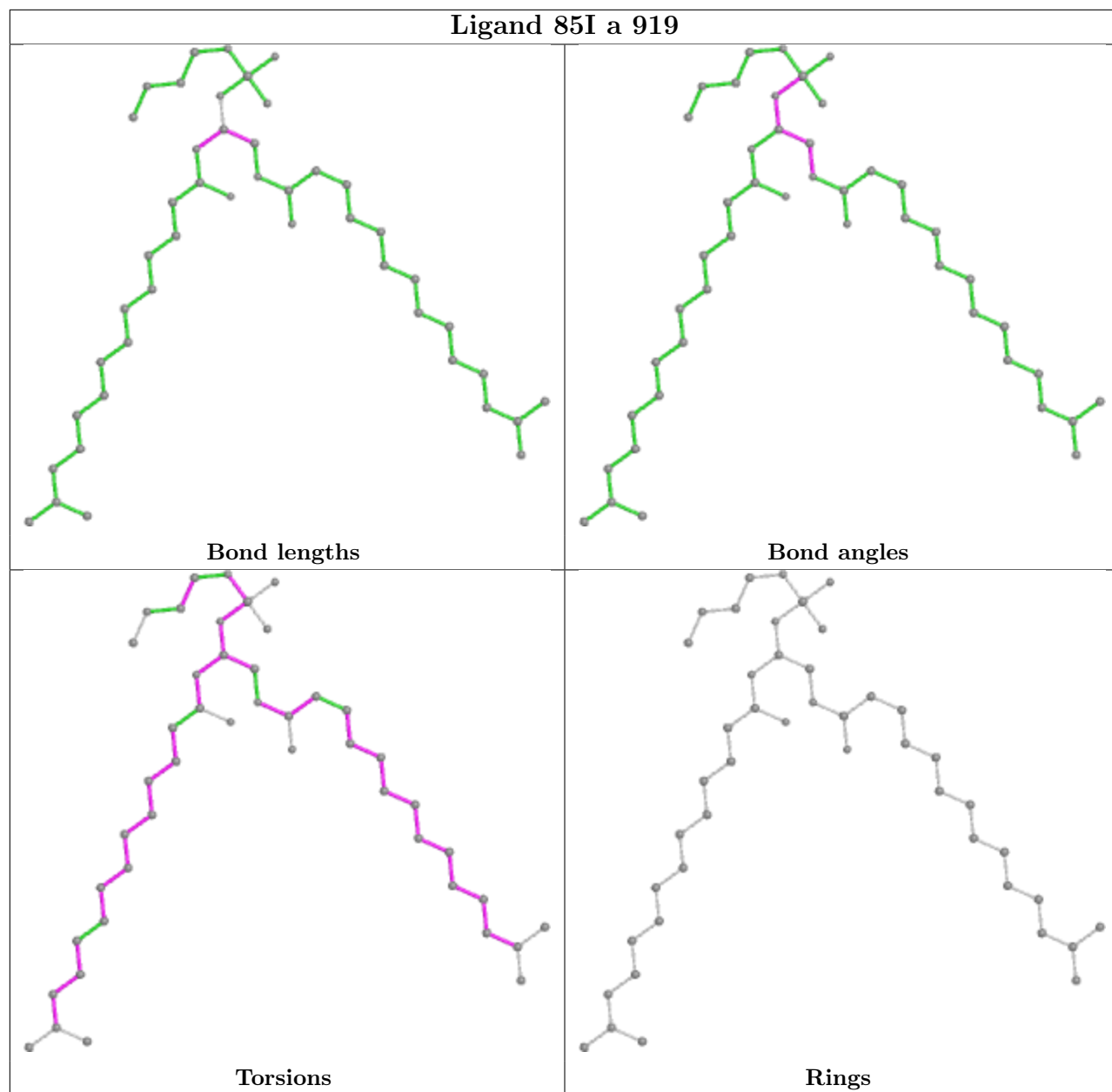


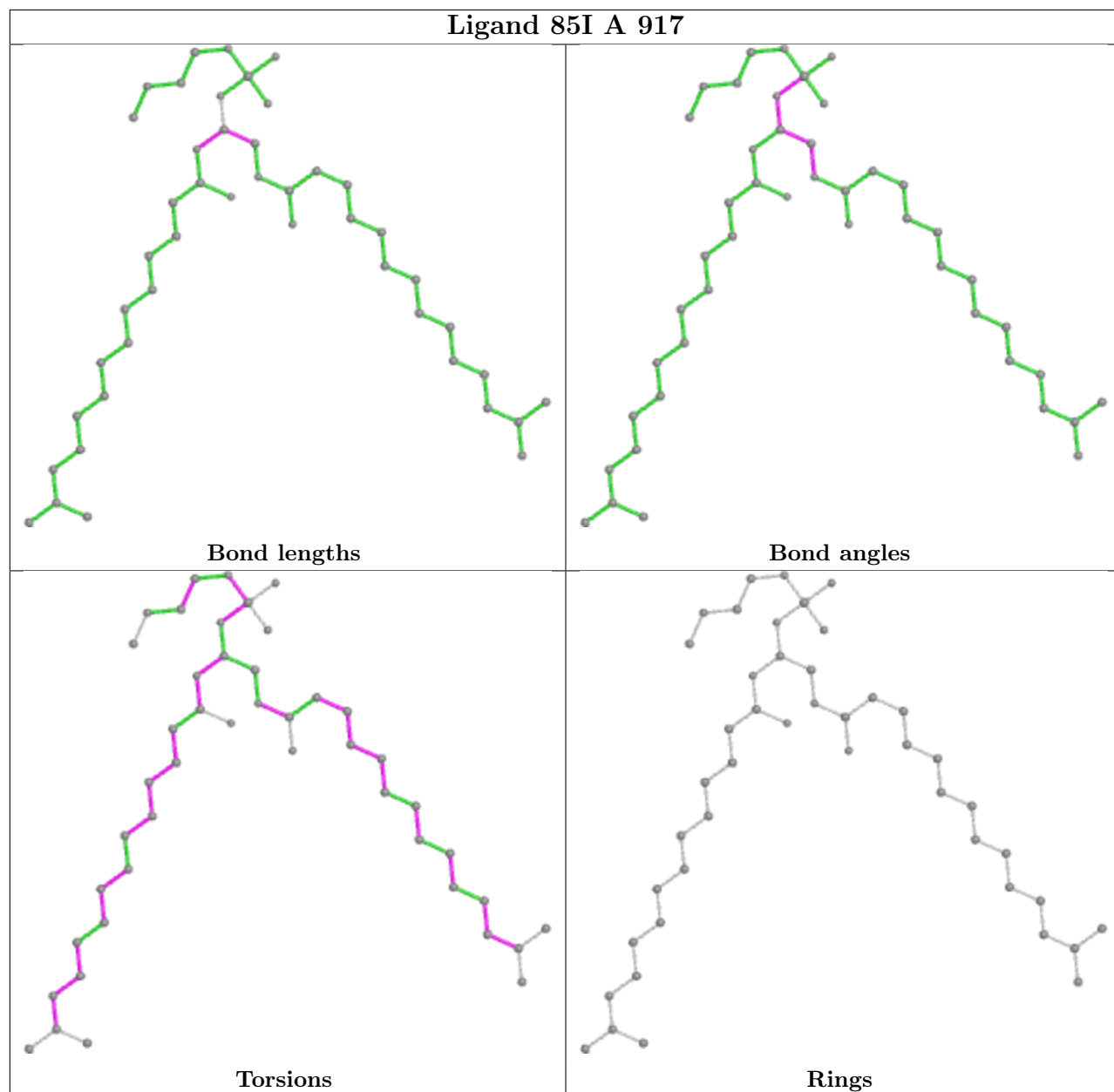


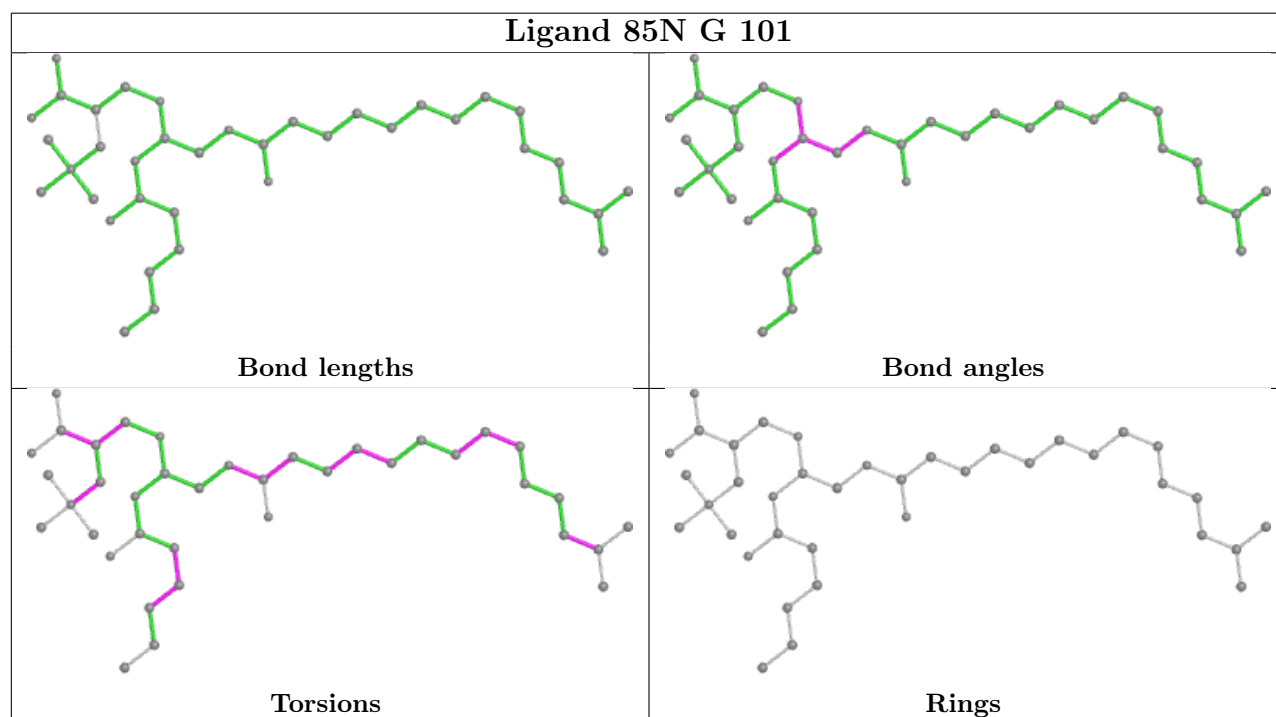
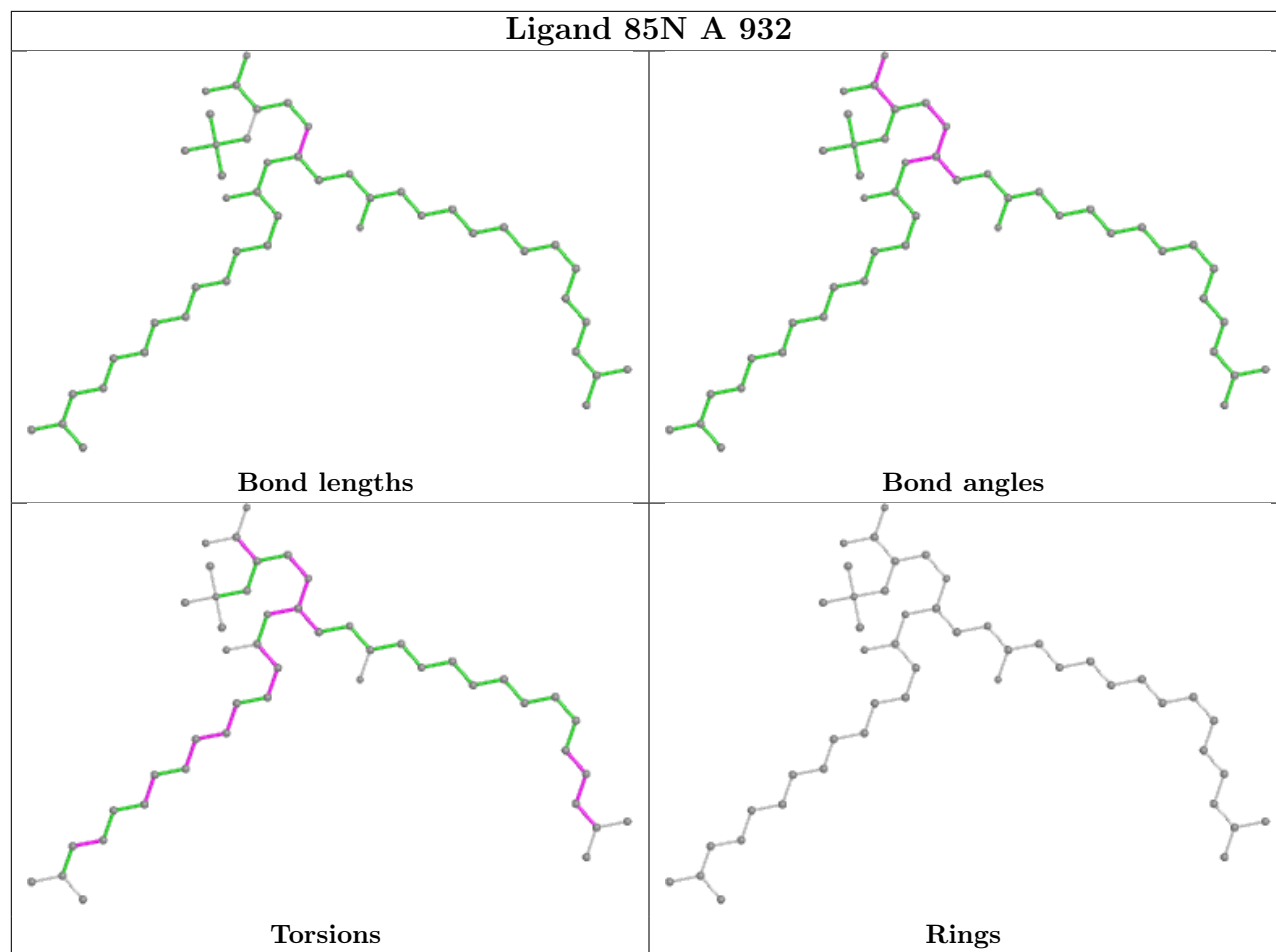


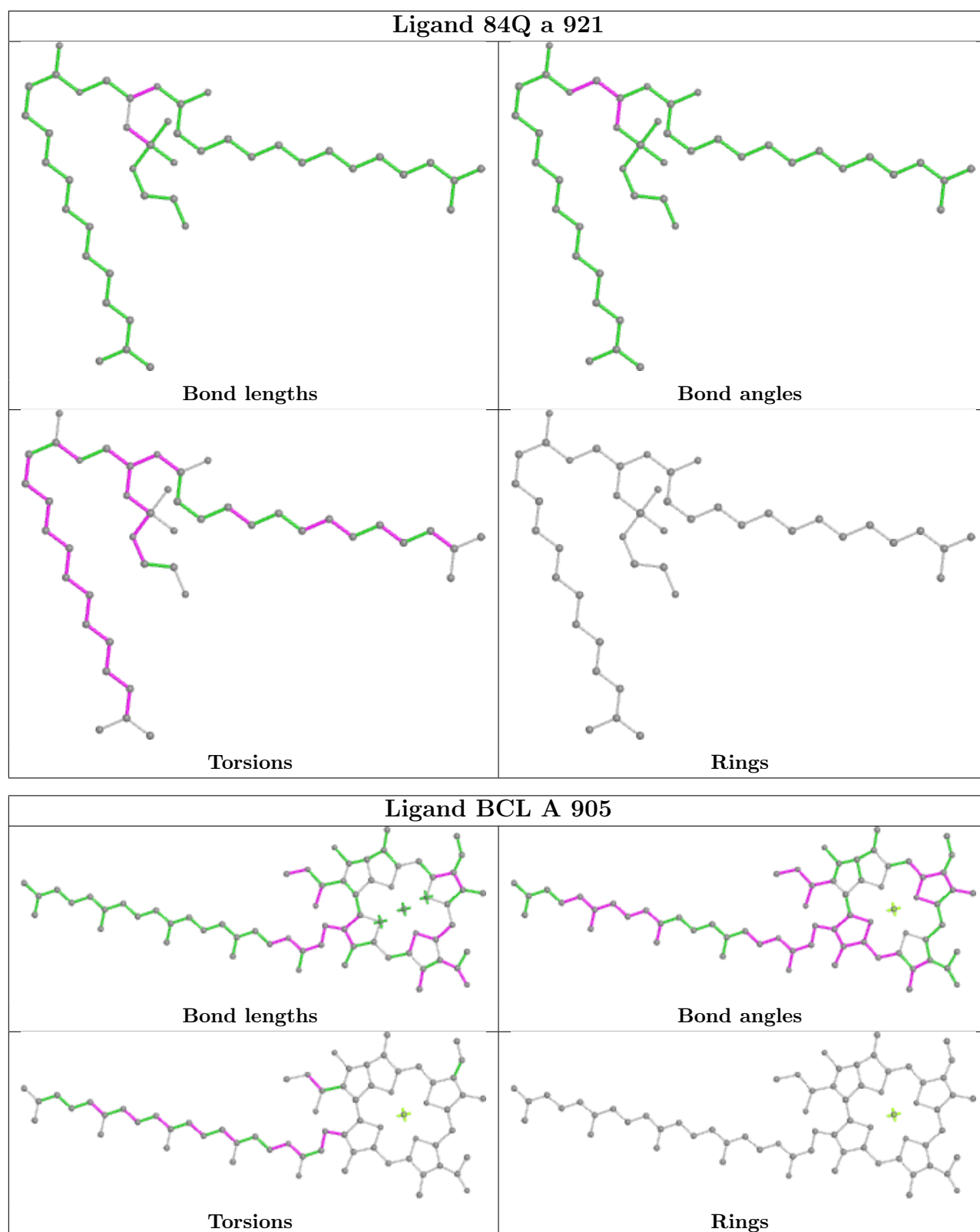












5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

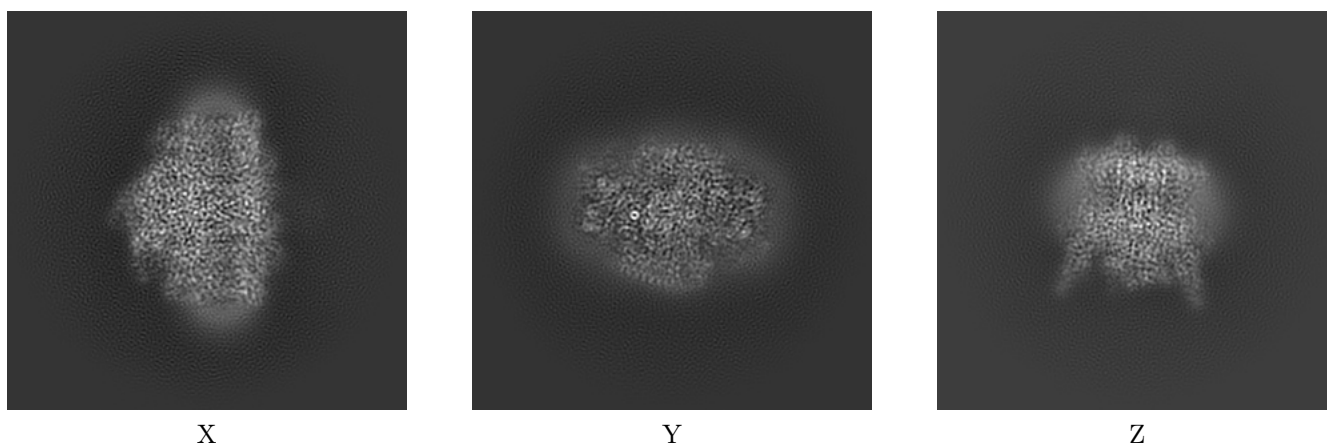
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-32229. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

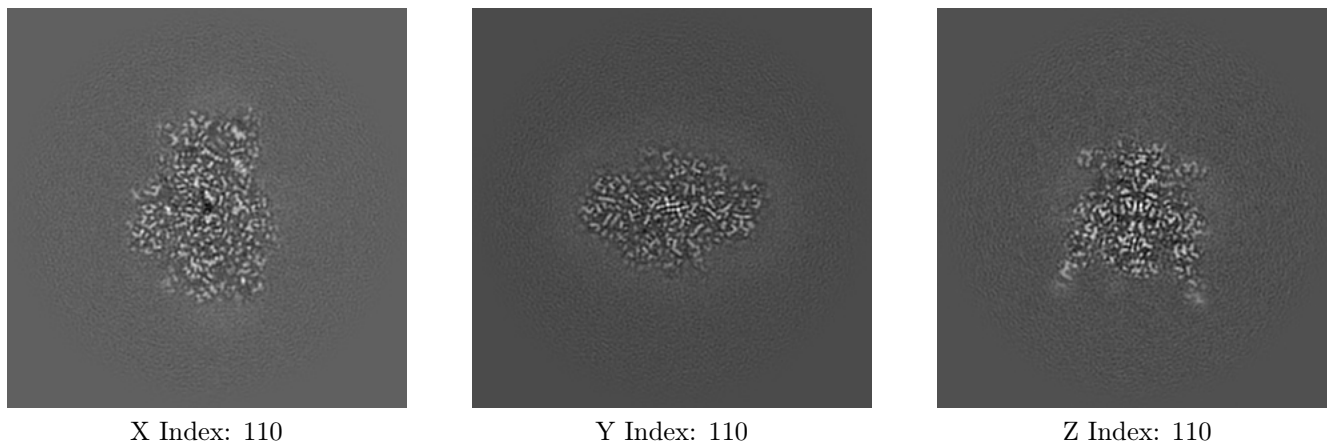
6.1.1 Primary map



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

6.2 Central slices [i](#)

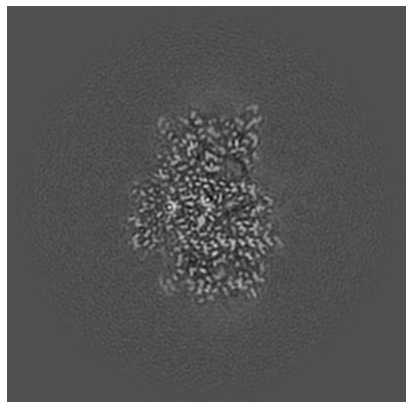
6.2.1 Primary map



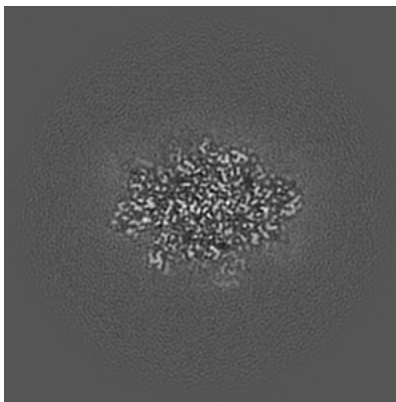
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

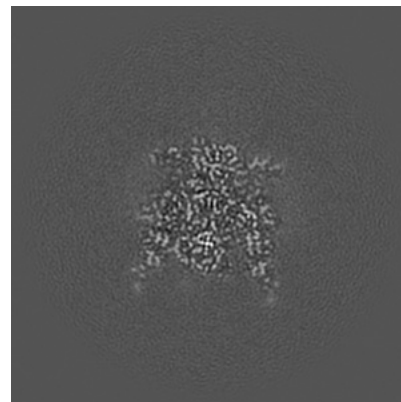
6.3.1 Primary map



X Index: 108



Y Index: 101

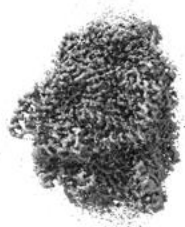


Z Index: 109

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

6.4 Orthogonal surface views [i](#)

6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.48. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

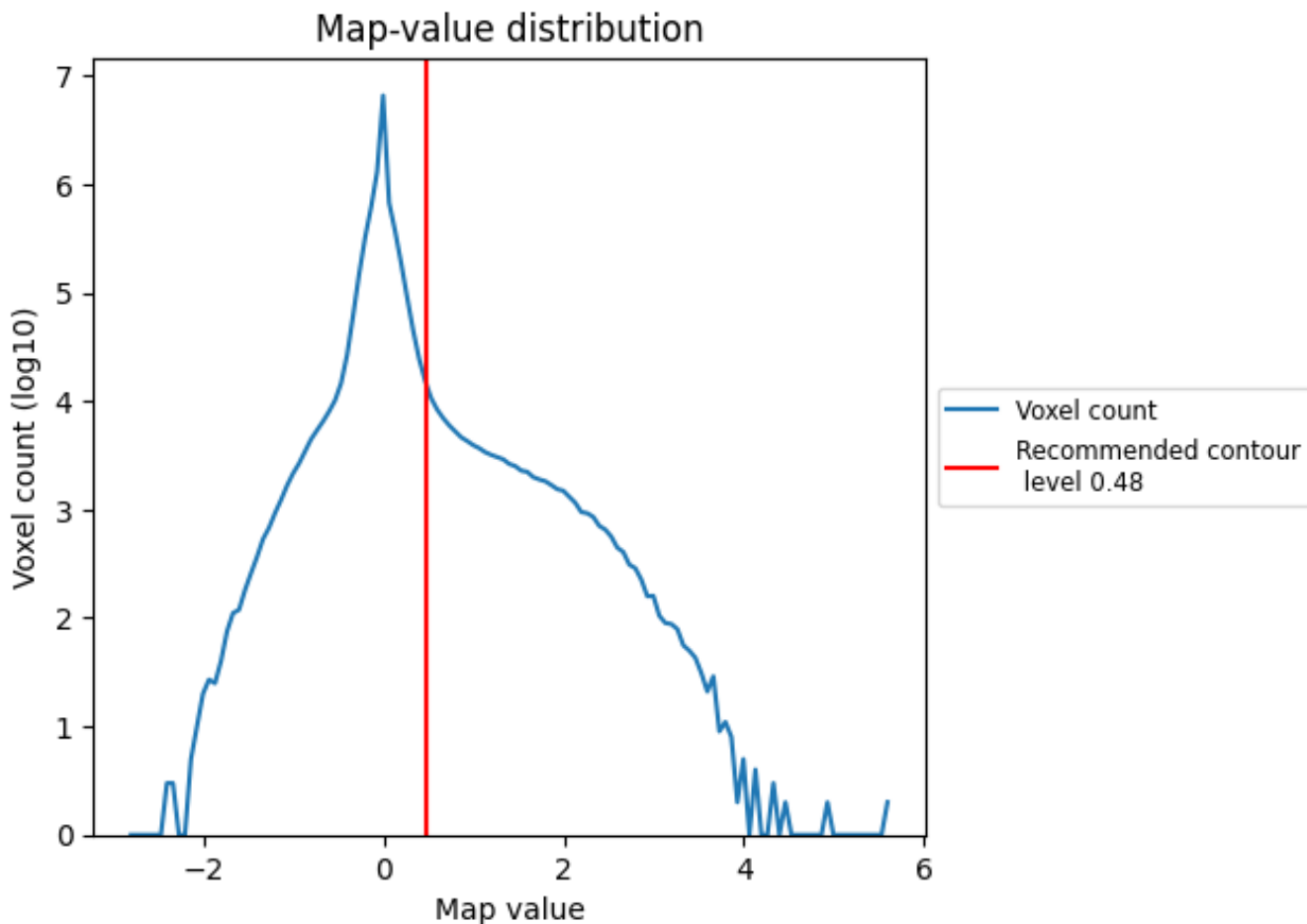
6.5 Mask visualisation

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

7 Map analysis [i](#)

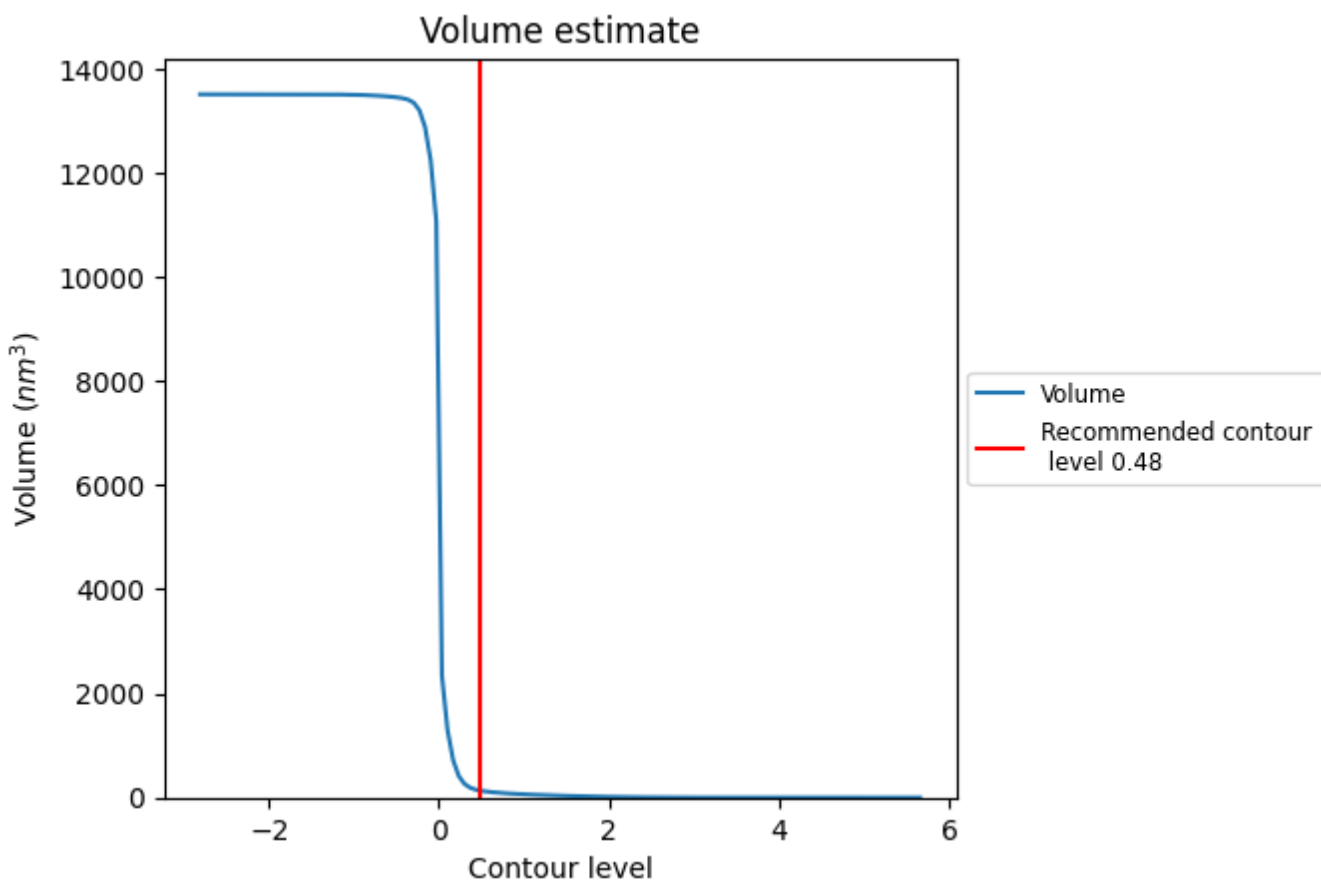
This section contains the results of statistical analysis of the map.

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.

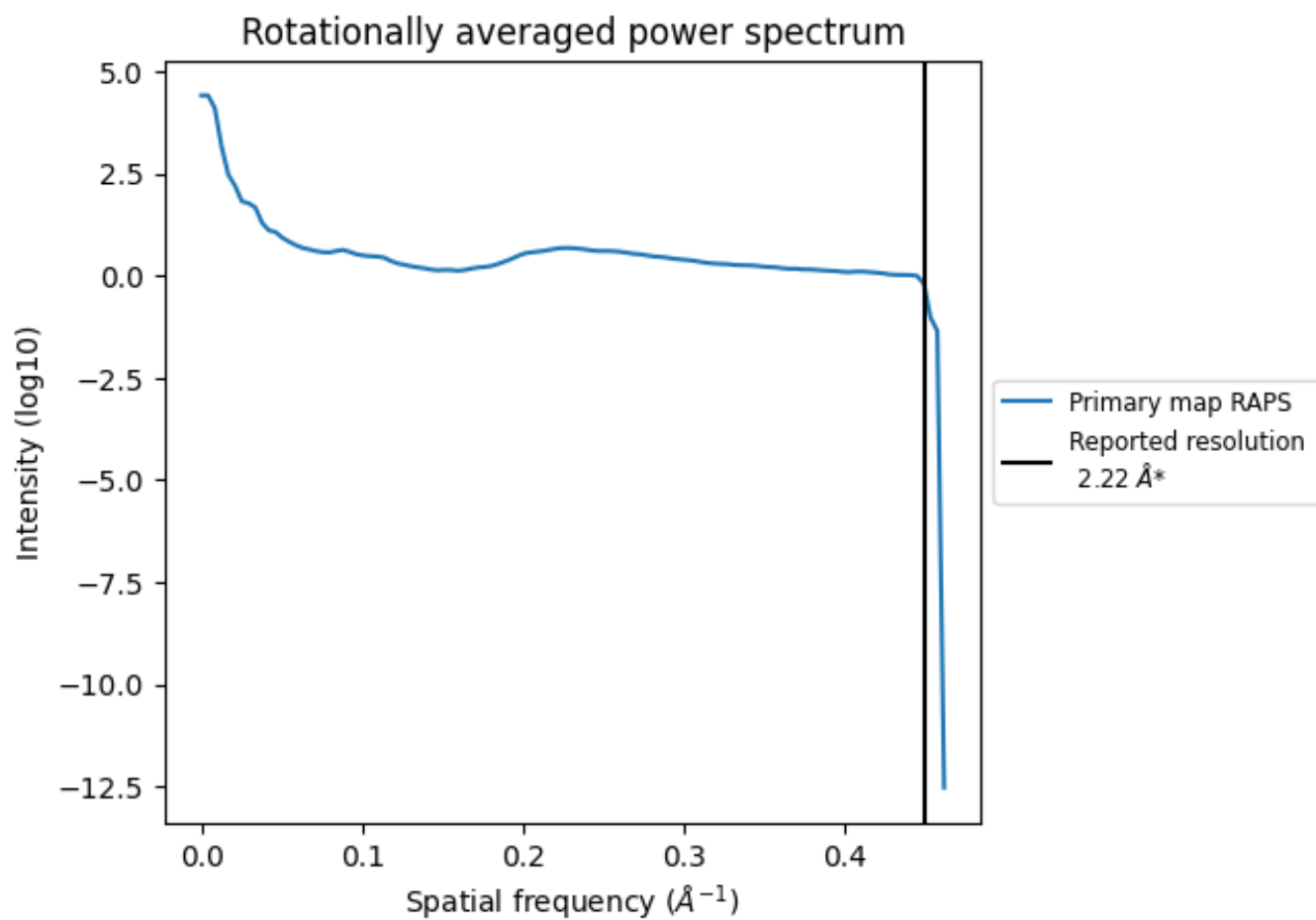
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 136 nm³; this corresponds to an approximate mass of 123 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 0.450 Å⁻¹

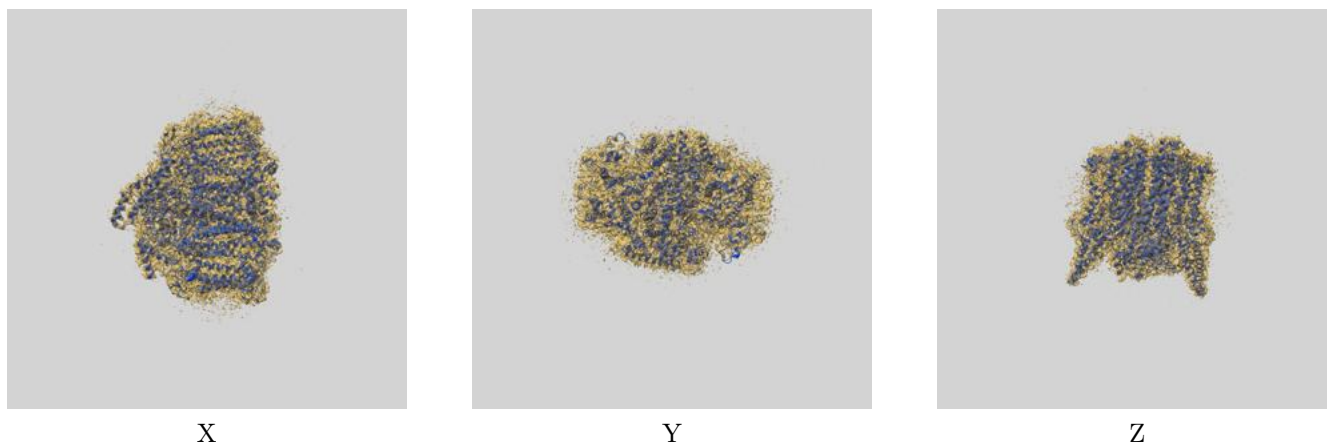
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

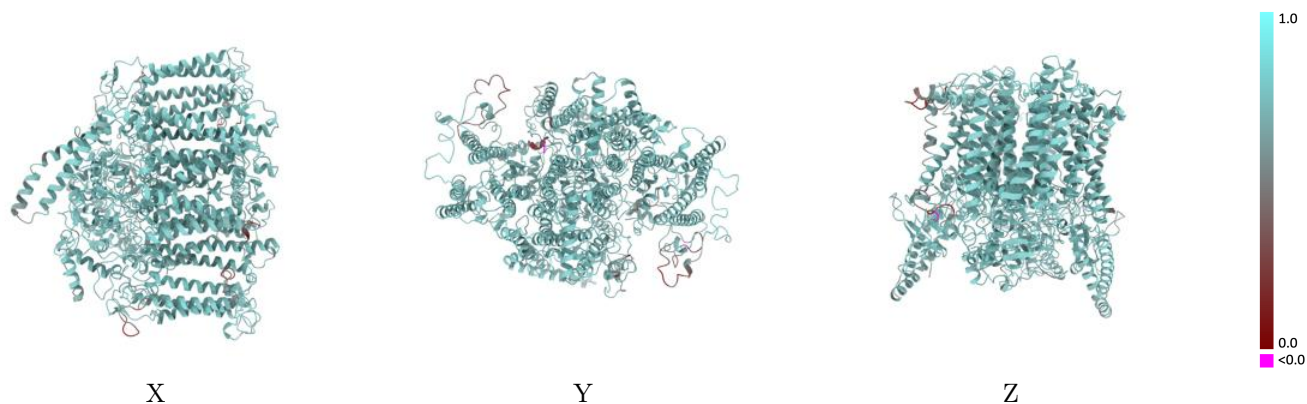
This section contains information regarding the fit between EMDB map EMD-32229 and PDB model 7VZR. Per-residue inclusion information can be found in section 3 on page 13.

9.1 Map-model overlay [i](#)



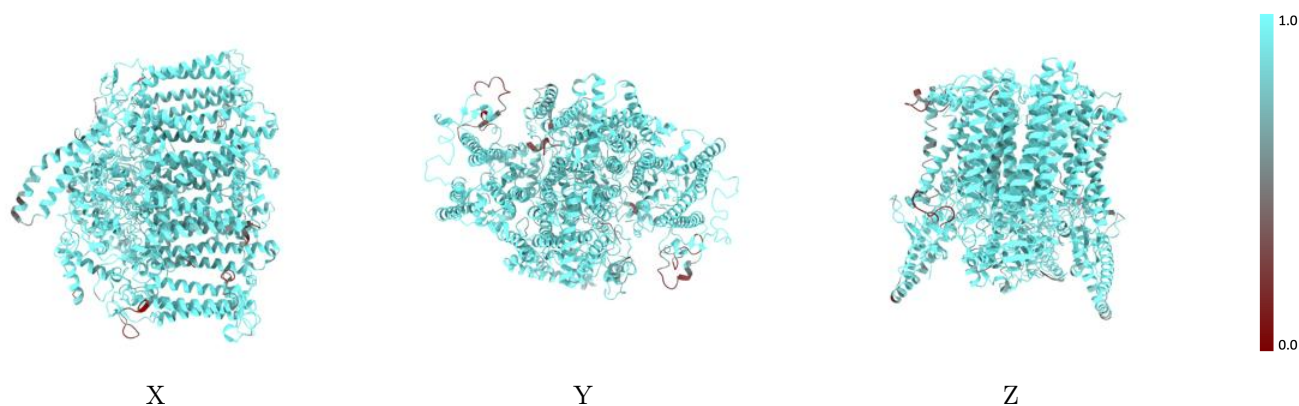
The images above show the 3D surface view of the map at the recommended contour level 0.48 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



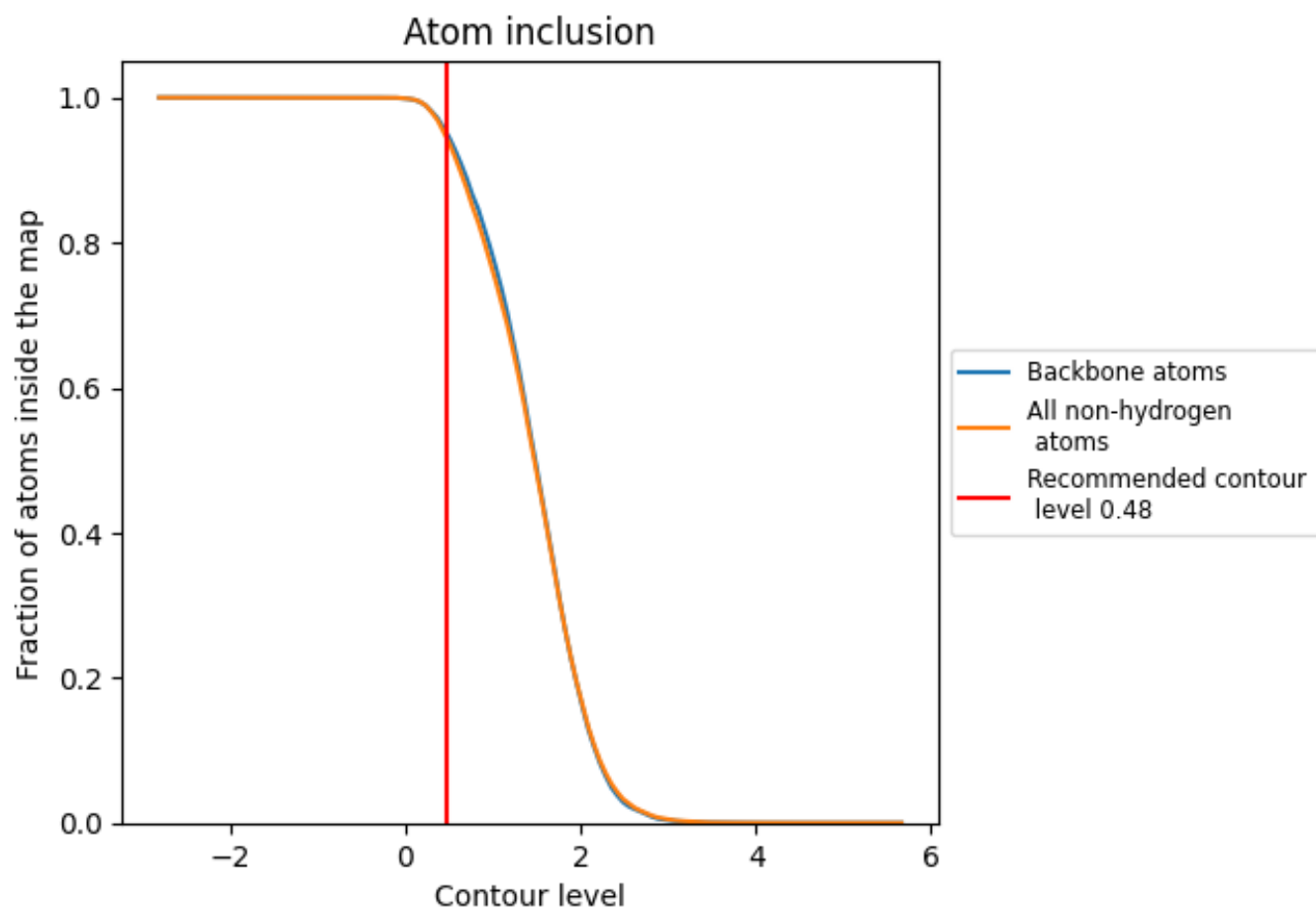
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.48).



























9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 94% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.48) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|-------|--|--|
| All |  0.9424 |  0.7050 |
| A |  0.9519 |  0.7100 |
| C |  0.9584 |  0.7210 |
| E |  0.9632 |  0.7140 |
| F |  0.9257 |  0.6700 |
| G |  0.7982 |  0.6490 |
| H |  0.8737 |  0.6670 |
| a |  0.9496 |  0.7060 |
| c |  0.9396 |  0.7060 |
| e |  0.9681 |  0.6970 |
| f |  0.9182 |  0.6770 |
| g |  0.7537 |  0.5870 |
| h |  0.8526 |  0.6610 |

