



Full wwPDB EM Validation Report ⓘ

Jul 7, 2024 – 06:55 am BST

PDB ID : 7PI5
EMDB ID : EMD-13430
Title : Unstacked stretched Dunaliella PSII
Authors : Caspy, I.; Fadeeva, M.; Mazor, Y.; Nelson, N.
Deposited on : 2021-08-19
Resolution : 2.78 Å (reported)
Based on initial model : 6KAC

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:

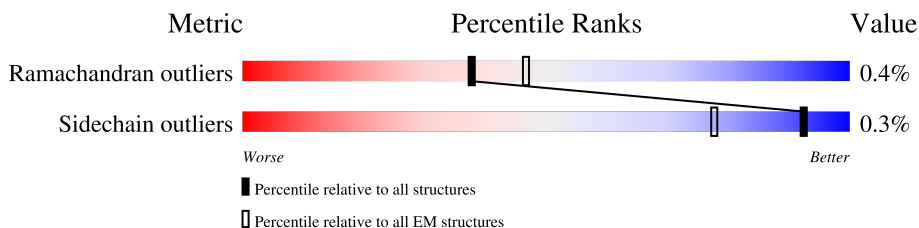
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

1 Overall quality at a glance

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

The reported resolution of this entry is 2.78 Å.

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



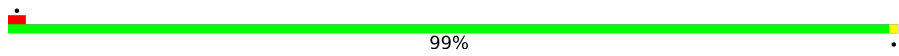
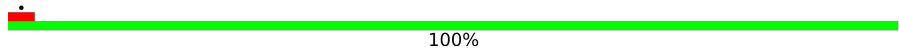
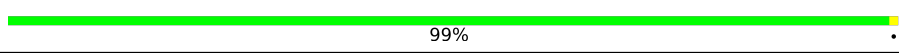
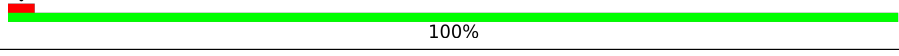
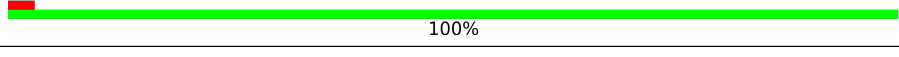
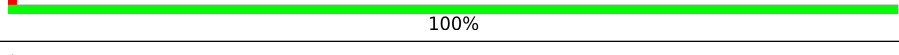
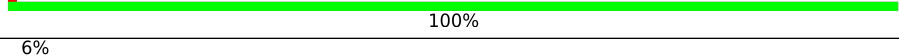
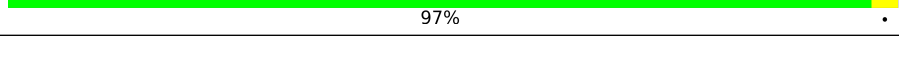
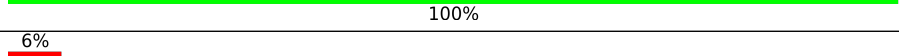
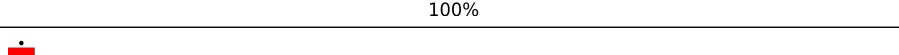
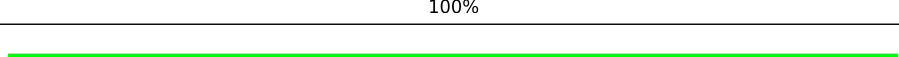
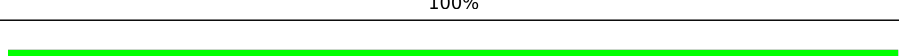
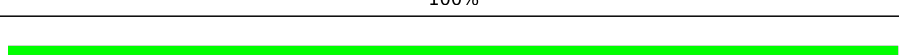
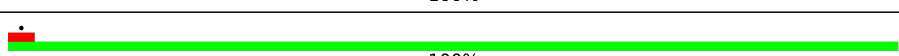
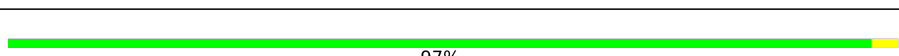
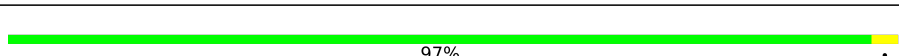
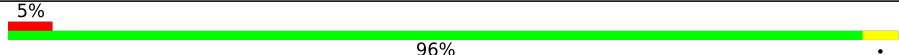
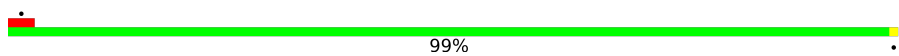
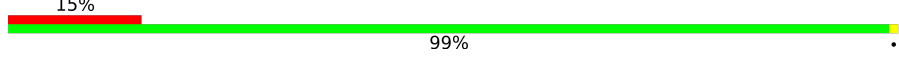

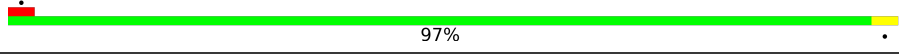
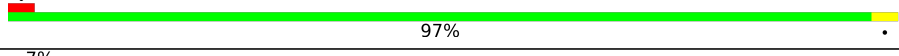
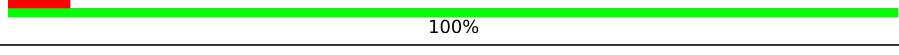
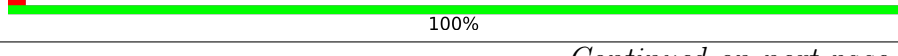

| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |

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 | 336 | 9% (red), 99% (green), . (grey) |
| 1 | a | 336 | 8% (red), 99% (green), . (grey) |
| 2 | B | 484 | . (red), 100% (green) |
| 2 | b | 484 | . (red), 100% (green) |
| 3 | V | 32 | 100% (green) |
| 3 | v | 32 | 100% (green) |
| 4 | C | 449 | 99% (green), . (grey) |
| 4 | c | 449 | 99% (green), . (grey) |
| 5 | D | 348 | . (red), 99% (green), . (grey) |

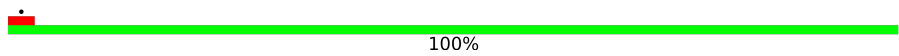
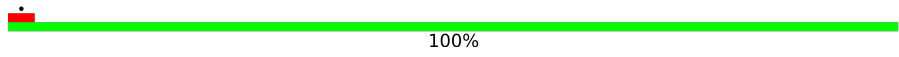
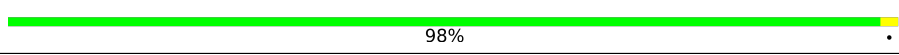
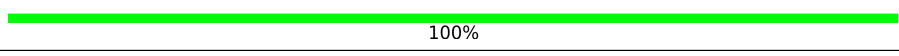
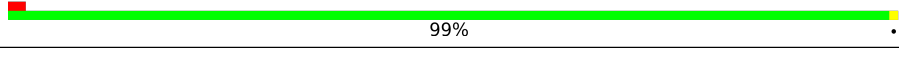
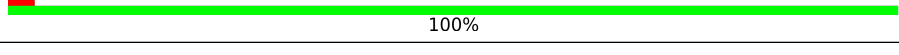
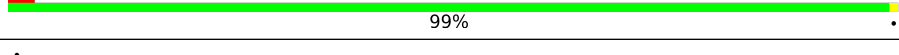
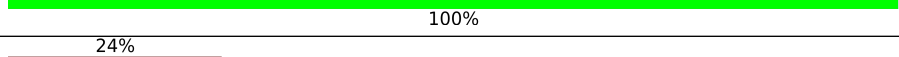
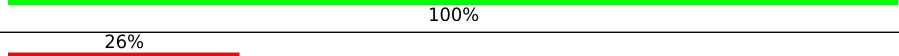
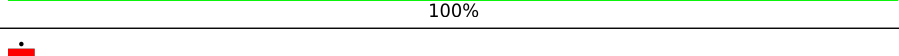
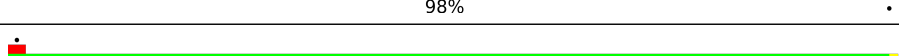
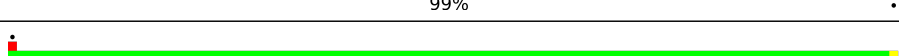
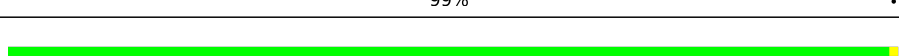
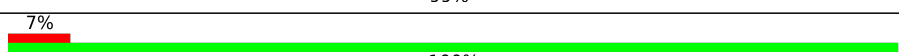
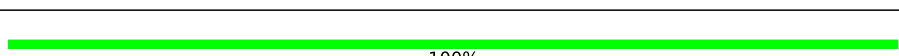

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 5 | d | 348 |  99% |
| 6 | E | 76 |  100% |
| 6 | e | 76 |  99% |
| 7 | F | 31 |  100% |
| 7 | f | 31 |  100% |
| 8 | H | 67 |  100% |
| 8 | h | 67 |  100% |
| 9 | I | 35 |  6% 97% |
| 9 | i | 35 |  100% |
| 10 | J | 36 |  6% 100% |
| 10 | j | 36 |  100% |
| 11 | K | 37 |  100% |
| 11 | k | 37 |  100% |
| 12 | L | 38 |  100% |
| 12 | l | 38 |  100% |
| 13 | M | 32 |  97% |
| 13 | m | 32 |  97% |
| 14 | O | 238 |  5% 96% |
| 14 | o | 238 |  99% |
| 15 | P | 187 |  15% 99% |
| 15 | p | 187 |  20% 100% |
| 16 | T | 30 |  97% |
| 16 | t | 30 |  97% |
| 17 | W | 44 |  7% 100% |
| 17 | w | 44 |  100% |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 18 | X | 30 |  100% |
| 18 | x | 30 |  100% |
| 19 | Z | 61 |  98% |
| 19 | z | 61 |  100% |
| 20 | N | 222 |  99% |
| 20 | n | 222 |  100% |
| 21 | G | 221 |  99% |
| 21 | g | 221 |  100% |
| 22 | R | 202 |  24% 100% |
| 22 | r | 202 |  26% 100% |
| 23 | S | 243 |  98% |
| 23 | s | 243 |  99% |
| 24 | Y | 222 |  99% |
| 24 | y | 222 |  99% |
| 25 | U | 27 |  7% 100% |
| 25 | u | 27 |  100% |

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 |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 29 | CLA | A | 405 | X | - | - | - |
| 29 | CLA | A | 406 | X | - | - | - |
| 29 | CLA | A | 407 | X | - | - | - |
| 29 | CLA | A | 410 | X | - | - | - |
| 29 | CLA | B | 602 | X | - | - | - |
| 29 | CLA | B | 603 | X | - | - | - |
| 29 | CLA | B | 604 | X | - | - | - |
| 29 | CLA | B | 605 | X | - | - | - |
| 29 | CLA | B | 606 | X | - | - | - |
| 29 | CLA | B | 607 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 29 | CLA | B | 608 | X | - | - | - |
| 29 | CLA | B | 609 | X | - | - | - |
| 29 | CLA | B | 610 | X | - | - | - |
| 29 | CLA | B | 611 | X | - | - | - |
| 29 | CLA | B | 612 | X | - | - | - |
| 29 | CLA | B | 613 | X | - | - | - |
| 29 | CLA | B | 614 | X | - | - | - |
| 29 | CLA | B | 615 | X | - | - | - |
| 29 | CLA | B | 616 | X | - | - | - |
| 29 | CLA | B | 617 | X | - | - | - |
| 29 | CLA | C | 501 | X | - | - | - |
| 29 | CLA | C | 502 | X | - | - | - |
| 29 | CLA | C | 503 | X | - | - | - |
| 29 | CLA | C | 504 | X | - | - | - |
| 29 | CLA | C | 505 | X | - | - | - |
| 29 | CLA | C | 506 | X | - | - | - |
| 29 | CLA | C | 507 | X | - | - | - |
| 29 | CLA | C | 508 | X | - | - | - |
| 29 | CLA | C | 509 | X | - | - | - |
| 29 | CLA | C | 510 | X | - | - | - |
| 29 | CLA | C | 511 | X | - | - | - |
| 29 | CLA | C | 512 | X | - | - | - |
| 29 | CLA | C | 513 | X | - | - | - |
| 29 | CLA | D | 402 | X | - | - | - |
| 29 | CLA | D | 403 | X | - | - | - |
| 29 | CLA | G | 602 | X | - | - | - |
| 29 | CLA | G | 603 | X | - | - | - |
| 29 | CLA | G | 604 | X | - | - | - |
| 29 | CLA | G | 610 | X | - | - | - |
| 29 | CLA | G | 611 | X | - | - | - |
| 29 | CLA | G | 612 | X | - | - | - |
| 29 | CLA | G | 613 | X | - | - | - |
| 29 | CLA | G | 614 | X | - | - | - |
| 29 | CLA | N | 602 | X | - | - | - |
| 29 | CLA | N | 603 | X | - | - | - |
| 29 | CLA | N | 604 | X | - | - | - |
| 29 | CLA | N | 610 | X | - | - | - |
| 29 | CLA | N | 611 | X | - | - | - |
| 29 | CLA | N | 612 | X | - | - | - |
| 29 | CLA | N | 613 | X | - | - | - |
| 29 | CLA | N | 614 | X | - | - | - |
| 29 | CLA | R | 602 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 29 | CLA | R | 603 | X | - | - | - |
| 29 | CLA | R | 604 | X | - | - | - |
| 29 | CLA | R | 608 | X | - | - | - |
| 29 | CLA | R | 609 | X | - | - | - |
| 29 | CLA | R | 610 | X | - | - | - |
| 29 | CLA | R | 611 | X | - | - | - |
| 29 | CLA | R | 612 | X | - | - | - |
| 29 | CLA | R | 613 | X | - | - | - |
| 29 | CLA | S | 602 | X | - | - | - |
| 29 | CLA | S | 603 | X | - | - | - |
| 29 | CLA | S | 604 | X | - | - | - |
| 29 | CLA | S | 605 | X | - | - | - |
| 29 | CLA | S | 609 | X | - | - | - |
| 29 | CLA | S | 610 | X | - | - | - |
| 29 | CLA | S | 611 | X | - | - | - |
| 29 | CLA | S | 612 | X | - | - | - |
| 29 | CLA | S | 613 | X | - | - | - |
| 29 | CLA | S | 614 | X | - | - | - |
| 29 | CLA | S | 617 | X | - | - | - |
| 29 | CLA | Y | 602 | X | - | - | - |
| 29 | CLA | Y | 603 | X | - | - | - |
| 29 | CLA | Y | 604 | X | - | - | - |
| 29 | CLA | Y | 608 | X | - | - | - |
| 29 | CLA | Y | 610 | X | - | - | - |
| 29 | CLA | Y | 611 | X | - | - | - |
| 29 | CLA | Y | 612 | X | - | - | - |
| 29 | CLA | Y | 613 | X | - | - | - |
| 29 | CLA | Y | 614 | X | - | - | - |
| 29 | CLA | a | 405 | X | - | - | - |
| 29 | CLA | a | 406 | X | - | - | - |
| 29 | CLA | a | 407 | X | - | - | - |
| 29 | CLA | a | 410 | X | - | - | - |
| 29 | CLA | b | 602 | X | - | - | - |
| 29 | CLA | b | 603 | X | - | - | - |
| 29 | CLA | b | 604 | X | - | - | - |
| 29 | CLA | b | 605 | X | - | - | - |
| 29 | CLA | b | 606 | X | - | - | - |
| 29 | CLA | b | 607 | X | - | - | - |
| 29 | CLA | b | 608 | X | - | - | - |
| 29 | CLA | b | 609 | X | - | - | - |
| 29 | CLA | b | 610 | X | - | - | - |
| 29 | CLA | b | 611 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 29 | CLA | b | 612 | X | - | - | - |
| 29 | CLA | b | 613 | X | - | - | - |
| 29 | CLA | b | 614 | X | - | - | - |
| 29 | CLA | b | 615 | X | - | - | - |
| 29 | CLA | b | 616 | X | - | - | - |
| 29 | CLA | b | 617 | X | - | - | - |
| 29 | CLA | c | 501 | X | - | - | - |
| 29 | CLA | c | 502 | X | - | - | - |
| 29 | CLA | c | 503 | X | - | - | - |
| 29 | CLA | c | 504 | X | - | - | - |
| 29 | CLA | c | 505 | X | - | - | - |
| 29 | CLA | c | 506 | X | - | - | - |
| 29 | CLA | c | 507 | X | - | - | - |
| 29 | CLA | c | 508 | X | - | - | - |
| 29 | CLA | c | 509 | X | - | - | - |
| 29 | CLA | c | 510 | X | - | - | - |
| 29 | CLA | c | 511 | X | - | - | - |
| 29 | CLA | c | 512 | X | - | - | - |
| 29 | CLA | c | 513 | X | - | - | - |
| 29 | CLA | d | 402 | X | - | - | - |
| 29 | CLA | d | 403 | X | - | - | - |
| 29 | CLA | g | 602 | X | - | - | - |
| 29 | CLA | g | 603 | X | - | - | - |
| 29 | CLA | g | 604 | X | - | - | - |
| 29 | CLA | g | 610 | X | - | - | - |
| 29 | CLA | g | 611 | X | - | - | - |
| 29 | CLA | g | 612 | X | - | - | - |
| 29 | CLA | g | 613 | X | - | - | - |
| 29 | CLA | g | 614 | X | - | - | - |
| 29 | CLA | n | 602 | X | - | - | - |
| 29 | CLA | n | 603 | X | - | - | - |
| 29 | CLA | n | 604 | X | - | - | - |
| 29 | CLA | n | 610 | X | - | - | - |
| 29 | CLA | n | 611 | X | - | - | - |
| 29 | CLA | n | 612 | X | - | - | - |
| 29 | CLA | n | 613 | X | - | - | - |
| 29 | CLA | n | 614 | X | - | - | - |
| 29 | CLA | r | 602 | X | - | - | - |
| 29 | CLA | r | 603 | X | - | - | - |
| 29 | CLA | r | 604 | X | - | - | - |
| 29 | CLA | r | 608 | X | - | - | - |
| 29 | CLA | r | 609 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 29 | CLA | r | 610 | X | - | - | - |
| 29 | CLA | r | 611 | X | - | - | - |
| 29 | CLA | r | 612 | X | - | - | - |
| 29 | CLA | r | 613 | X | - | - | - |
| 29 | CLA | s | 602 | X | - | - | - |
| 29 | CLA | s | 603 | X | - | - | - |
| 29 | CLA | s | 604 | X | - | - | - |
| 29 | CLA | s | 605 | X | - | - | - |
| 29 | CLA | s | 609 | X | - | - | - |
| 29 | CLA | s | 610 | X | - | - | - |
| 29 | CLA | s | 611 | X | - | - | - |
| 29 | CLA | s | 612 | X | - | - | - |
| 29 | CLA | s | 613 | X | - | - | - |
| 29 | CLA | s | 614 | X | - | - | - |
| 29 | CLA | s | 617 | X | - | - | - |
| 29 | CLA | y | 602 | X | - | - | - |
| 29 | CLA | y | 603 | X | - | - | - |
| 29 | CLA | y | 604 | X | - | - | - |
| 29 | CLA | y | 608 | X | - | - | - |
| 29 | CLA | y | 610 | X | - | - | - |
| 29 | CLA | y | 611 | X | - | - | - |
| 29 | CLA | y | 612 | X | - | - | - |
| 29 | CLA | y | 613 | X | - | - | - |
| 29 | CLA | y | 614 | X | - | - | - |
| 35 | C7Z | B | 620 | X | - | - | - |
| 35 | C7Z | b | 620 | X | - | - | - |
| 40 | LMK | C | 527 | X | - | - | - |
| 40 | LMK | c | 627 | X | - | - | - |
| 44 | RRX | H | 101 | X | - | - | - |
| 44 | RRX | h | 101 | X | - | - | - |
| 45 | CHL | G | 601 | X | - | - | - |
| 45 | CHL | G | 605 | X | - | - | - |
| 45 | CHL | G | 606 | X | - | - | - |
| 45 | CHL | G | 607 | X | - | - | - |
| 45 | CHL | G | 608 | X | - | - | - |
| 45 | CHL | G | 609 | X | - | - | - |
| 45 | CHL | N | 601 | X | - | - | - |
| 45 | CHL | N | 605 | X | - | - | - |
| 45 | CHL | N | 606 | X | - | - | - |
| 45 | CHL | N | 607 | X | - | - | - |
| 45 | CHL | N | 608 | X | - | - | - |
| 45 | CHL | N | 609 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 45 | CHL | R | 606 | X | - | - | - |
| 45 | CHL | R | 607 | X | - | - | - |
| 45 | CHL | S | 601 | X | - | - | - |
| 45 | CHL | S | 606 | X | - | - | - |
| 45 | CHL | S | 607 | X | - | - | - |
| 45 | CHL | S | 608 | X | - | - | - |
| 45 | CHL | Y | 601 | X | - | - | - |
| 45 | CHL | Y | 605 | X | - | - | - |
| 45 | CHL | Y | 606 | X | - | - | - |
| 45 | CHL | Y | 607 | X | - | - | - |
| 45 | CHL | Y | 609 | X | - | - | - |
| 45 | CHL | g | 601 | X | - | - | - |
| 45 | CHL | g | 605 | X | - | - | - |
| 45 | CHL | g | 606 | X | - | - | - |
| 45 | CHL | g | 607 | X | - | - | - |
| 45 | CHL | g | 608 | X | - | - | - |
| 45 | CHL | g | 609 | X | - | - | - |
| 45 | CHL | n | 601 | X | - | - | - |
| 45 | CHL | n | 605 | X | - | - | - |
| 45 | CHL | n | 606 | X | - | - | - |
| 45 | CHL | n | 607 | X | - | - | - |
| 45 | CHL | n | 608 | X | - | - | - |
| 45 | CHL | n | 609 | X | - | - | - |
| 45 | CHL | r | 606 | X | - | - | - |
| 45 | CHL | r | 607 | X | - | - | - |
| 45 | CHL | s | 601 | X | - | - | - |
| 45 | CHL | s | 606 | X | - | - | - |
| 45 | CHL | s | 607 | X | - | - | - |
| 45 | CHL | s | 608 | X | - | - | - |
| 45 | CHL | y | 601 | X | - | - | - |
| 45 | CHL | y | 605 | X | - | - | - |
| 45 | CHL | y | 606 | X | - | - | - |
| 45 | CHL | y | 607 | X | - | - | - |
| 45 | CHL | y | 609 | X | - | - | - |
| 46 | LUT | S | 620 | X | - | - | - |
| 46 | LUT | s | 620 | X | - | - | - |
| 47 | XAT | G | 622 | X | - | - | - |
| 47 | XAT | N | 622 | X | - | - | - |
| 47 | XAT | R | 621 | X | - | - | - |
| 47 | XAT | Y | 622 | X | - | - | - |
| 47 | XAT | g | 622 | X | - | - | - |
| 47 | XAT | n | 622 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|------------|-------------|--------------|------------|------------------|-----------------|----------------|-------------------------|
| 47 | XAT | r | 622 | X | - | - | - |
| 47 | XAT | y | 622 | X | - | - | - |

2 Entry composition [i](#)

There are 52 unique types of molecules in this entry. The entry contains 76287 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 Photosystem II protein D1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 1 | A | 336 | Total 2638 | C 1721 | N 432 | O 468 | S 17 | 1 | 0 |
| 1 | a | 336 | Total 2638 | C 1721 | N 432 | O 468 | S 17 | 1 | 0 |

- Molecule 2 is a protein called Photosystem II CP47 reaction center protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|-------|
| | | | Total | C | N | O | S | | |
| 2 | B | 484 | Total 3783 | C 2480 | N 630 | O 663 | S 10 | 0 | 0 |
| 2 | b | 484 | Total 3783 | C 2480 | N 630 | O 663 | S 10 | 0 | 0 |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|------------|
| B | 298 | VAL | LEU | variant | UNP D0FY05 |
| B | 415 | SER | LEU | variant | UNP D0FY05 |
| b | 298 | VAL | LEU | variant | UNP D0FY05 |
| b | 415 | SER | LEU | variant | UNP D0FY05 |

- Molecule 3 is a protein called Photosystem II reaction center protein Ycf12.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|--------------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | | |
| 3 | V | 32 | Total 227 | C 152 | N 37 | O 38 | 0 | 0 |
| 3 | v | 32 | Total 227 | C 152 | N 37 | O 38 | 0 | 0 |

- Molecule 4 is a protein called Photosystem II CP43 reaction center protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 4 | C | 449 | 3483 | 2282 | 581 | 607 | 13 | 0 | 0 |
| 4 | c | 449 | 3483 | 2282 | 581 | 607 | 13 | 0 | 0 |

- Molecule 5 is a protein called Photosystem II D2 protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| | | | Total | C | N | O | S | | |
| 5 | D | 348 | 2766 | 1824 | 454 | 477 | 11 | 0 | 0 |
| 5 | d | 348 | 2766 | 1824 | 454 | 477 | 11 | 0 | 0 |

- Molecule 6 is a protein called Cytochrome b559 subunit alpha.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|-------|
| | | | Total | C | N | O | | |
| 6 | E | 76 | 621 | 404 | 102 | 115 | 0 | 0 |
| 6 | e | 76 | 621 | 404 | 102 | 115 | 0 | 0 |

- Molecule 7 is a protein called Cytochrome b559 subunit beta.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 7 | F | 31 | 252 | 172 | 42 | 37 | 1 | 0 | 0 |
| 7 | f | 31 | 252 | 172 | 42 | 37 | 1 | 0 | 0 |

- Molecule 8 is a protein called Photosystem II reaction center protein H.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 8 | H | 67 | 503 | 334 | 76 | 92 | 1 | 0 | 0 |
| 8 | h | 67 | 503 | 334 | 76 | 92 | 1 | 0 | 0 |

- Molecule 9 is a protein called Photosystem II reaction center protein I.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 9 | I | 35 | 279 | 190 | 42 | 46 | 1 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 9 | i | 35 | Total | C | N | O | S | 0 | 0 |
| | | | 279 | 190 | 42 | 46 | 1 | | |

- Molecule 10 is a protein called Photosystem II reaction center protein J.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|-------|
| 10 | J | 36 | Total | C | N | O | 0 | 0 |
| | | | 266 | 183 | 40 | 43 | | |
| 10 | j | 36 | Total | C | N | O | 0 | 0 |
| | | | 266 | 183 | 40 | 43 | | |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| J | 7 | ILE | THR | conflict | UNP A0A1C8XRM8 |
| J | 42 | LEU | GLN | conflict | UNP A0A1C8XRM8 |
| j | 7 | ILE | THR | conflict | UNP A0A1C8XRM8 |
| j | 42 | LEU | GLN | conflict | UNP A0A1C8XRM8 |

- Molecule 11 is a protein called Photosystem II reaction center protein K.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|-------|
| 11 | K | 37 | Total | C | N | O | 0 | 0 |
| | | | 297 | 207 | 43 | 47 | | |
| 11 | k | 37 | Total | C | N | O | 0 | 0 |
| | | | 297 | 207 | 43 | 47 | | |

- Molecule 12 is a protein called Photosystem II reaction center protein L.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 12 | L | 38 | Total | C | N | O | S | 0 | 0 |
| | | | 313 | 209 | 51 | 52 | 1 | | |
| 12 | l | 38 | Total | C | N | O | S | 0 | 0 |
| | | | 313 | 209 | 51 | 52 | 1 | | |

- Molecule 13 is a protein called Photosystem II reaction center protein M.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|-------|
| 13 | M | 32 | Total | C | N | O | 0 | 0 |
| | | | 243 | 164 | 34 | 45 | | |
| 13 | m | 32 | Total | C | N | O | 0 | 0 |
| | | | 243 | 164 | 34 | 45 | | |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|------------|
| M | 9 | THR | ILE | variant | UNP D0FXZ3 |
| m | 9 | THR | ILE | variant | UNP D0FXZ3 |

- Molecule 14 is a protein called PsbO.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 14 | O | 238 | Total | C | N | O | S | 0 | 0 |
| | | | 1820 | 1149 | 295 | 370 | 6 | | |
| 14 | o | 238 | Total | C | N | O | S | 0 | 0 |
| | | | 1820 | 1149 | 295 | 370 | 6 | | |

- Molecule 15 is a protein called PsbP.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 15 | P | 187 | Total | C | N | O | S | 0 | 0 |
| | | | 1444 | 916 | 242 | 285 | 1 | | |
| 15 | p | 187 | Total | C | N | O | S | 0 | 0 |
| | | | 1444 | 916 | 242 | 285 | 1 | | |

- Molecule 16 is a protein called Photosystem II reaction center protein T.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 16 | T | 30 | Total | C | N | O | S | 0 | 0 |
| | | | 247 | 171 | 36 | 39 | 1 | | |
| 16 | t | 30 | Total | C | N | O | S | 0 | 0 |
| | | | 247 | 171 | 36 | 39 | 1 | | |

- Molecule 17 is a protein called PSII 6.1 kDa protein.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 17 | W | 44 | Total | C | N | O | S | 0 | 0 |
| | | | 332 | 215 | 53 | 63 | 1 | | |
| 17 | w | 44 | Total | C | N | O | S | 0 | 0 |
| | | | 332 | 215 | 53 | 63 | 1 | | |

There are 4 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| W | 65 | MET | LEU | conflict | UNP A0A7S3QU88 |
| W | 96 | TYR | PHE | conflict | UNP A0A7S3QU88 |
| w | 65 | MET | LEU | conflict | UNP A0A7S3QU88 |

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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| w | 96 | TYR | PHE | conflict | UNP A0A7S3QU88 |

- Molecule 18 is a protein called Hypothetical protein.

| Mol | Chain | Residues | Atoms | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|-------|
| 18 | X | 30 | Total | C | N | O | 0 | 0 |
| | | | 201 | 132 | 32 | 37 | | |
| 18 | x | 30 | Total | C | N | O | 0 | 0 |
| | | | 201 | 132 | 32 | 37 | | |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| X | 81 | VAL | THR | conflict | UNP A0A7S3VKF3 |
| x | 81 | VAL | THR | conflict | UNP A0A7S3VKF3 |

- Molecule 19 is a protein called Photosystem II reaction center protein Z.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| 19 | Z | 61 | Total | C | N | O | S | 0 | 0 |
| | | | 457 | 312 | 68 | 76 | 1 | | |
| 19 | z | 61 | Total | C | N | O | S | 0 | 0 |
| | | | 457 | 312 | 68 | 76 | 1 | | |

- Molecule 20 is a protein called LHCII M3.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 20 | N | 222 | Total | C | N | O | S | 0 | 0 |
| | | | 1703 | 1100 | 277 | 321 | 5 | | |
| 20 | n | 222 | Total | C | N | O | S | 0 | 0 |
| | | | 1703 | 1100 | 277 | 321 | 5 | | |

- Molecule 21 is a protein called Chlorophyll a-b binding protein, chloroplastic.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 21 | G | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1680 | 1085 | 271 | 321 | 3 | | |
| 21 | g | 221 | Total | C | N | O | S | 0 | 0 |
| | | | 1680 | 1085 | 271 | 321 | 3 | | |

There are 2 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|------------|
| G | 180 | ALA | PRO | conflict | UNP A1XKU7 |
| g | 180 | ALA | PRO | conflict | UNP A1XKU7 |

- Molecule 22 is a protein called CP29.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|-------|
| 22 | R | 202 | Total | C | N | O | S | 0 | 0 |
| | | | 1533 | 974 | 258 | 298 | 3 | | |
| 22 | r | 202 | Total | C | N | O | S | 0 | 0 |
| | | | 1533 | 974 | 258 | 298 | 3 | | |

- Molecule 23 is a protein called CP26.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 23 | S | 242 | Total | C | N | O | S | 0 | 0 |
| | | | 1849 | 1195 | 297 | 354 | 3 | | |
| 23 | s | 243 | Total | C | N | O | S | 0 | 0 |
| | | | 1856 | 1200 | 298 | 355 | 3 | | |

There are 14 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| S | 56 | ASP | GLU | conflict | UNP A0A7S3VRZ8 |
| S | 119 | ILE | LEU | conflict | UNP A0A7S3VRZ8 |
| S | 209 | LYS | GLN | conflict | UNP A0A7S3VRZ8 |
| S | 244 | ILE | VAL | conflict | UNP A0A7S3VRZ8 |
| S | 245 | ALA | GLY | conflict | UNP A0A7S3VRZ8 |
| S | 264 | ILE | PHE | conflict | UNP A0A7S3VRZ8 |
| S | 268 | LEU | ILE | conflict | UNP A0A7S3VRZ8 |
| s | 56 | ASP | GLU | conflict | UNP A0A7S3VRZ8 |
| s | 119 | ILE | LEU | conflict | UNP A0A7S3VRZ8 |
| s | 209 | LYS | GLN | conflict | UNP A0A7S3VRZ8 |
| s | 244 | ILE | VAL | conflict | UNP A0A7S3VRZ8 |
| s | 245 | ALA | GLY | conflict | UNP A0A7S3VRZ8 |
| s | 264 | ILE | PHE | conflict | UNP A0A7S3VRZ8 |
| s | 268 | LEU | ILE | conflict | UNP A0A7S3VRZ8 |

- Molecule 24 is a protein called LHCII M1.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| 24 | Y | 222 | Total | C | N | O | S | 0 | 0 |
| | | | 1667 | 1080 | 272 | 312 | 3 | | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 24 | y | 222 | 1667 | 1080 | 272 | 312 | 3 | 0 | 0 |

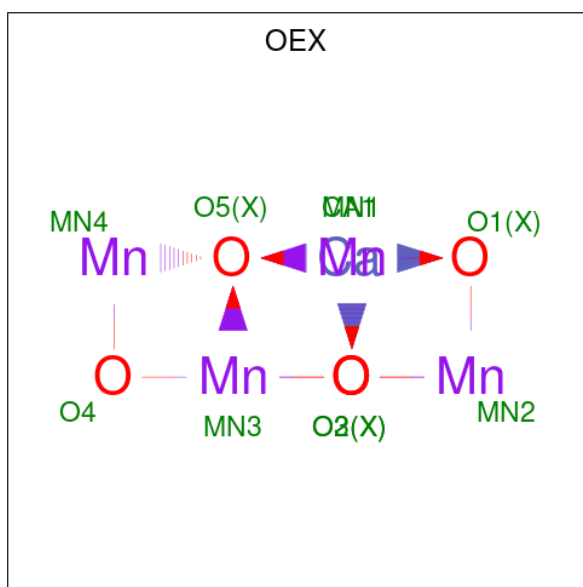
There are 16 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|----------|----------------|
| Y | 49 | PHE | TYR | conflict | UNP A0A6S8N9J6 |
| Y | 52 | SER | ALA | conflict | UNP A0A6S8N9J6 |
| Y | 73 | THR | SER | conflict | UNP A0A6S8N9J6 |
| Y | 81 | THR | ASN | conflict | UNP A0A6S8N9J6 |
| Y | 123 | ILE | VAL | conflict | UNP A0A6S8N9J6 |
| Y | 220 | LEU | PHE | conflict | UNP A0A6S8N9J6 |
| Y | 235 | GLN | THR | conflict | UNP A0A6S8N9J6 |
| Y | 259 | THR | SER | conflict | UNP A0A6S8N9J6 |
| y | 49 | PHE | TYR | conflict | UNP A0A6S8N9J6 |
| y | 52 | SER | ALA | conflict | UNP A0A6S8N9J6 |
| y | 73 | THR | SER | conflict | UNP A0A6S8N9J6 |
| y | 81 | THR | ASN | conflict | UNP A0A6S8N9J6 |
| y | 123 | ILE | VAL | conflict | UNP A0A6S8N9J6 |
| y | 220 | LEU | PHE | conflict | UNP A0A6S8N9J6 |
| y | 235 | GLN | THR | conflict | UNP A0A6S8N9J6 |
| y | 259 | THR | SER | conflict | UNP A0A6S8N9J6 |

- Molecule 25 is a protein called PsbU.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|-------|
| | | | Total | C | N | O | S | | |
| 25 | U | 27 | 224 | 134 | 42 | 47 | 1 | 0 | 0 |
| 25 | u | 27 | 224 | 134 | 42 | 47 | 1 | 0 | 0 |

- Molecule 26 is CA-MN4-O5 CLUSTER (three-letter code: OEX) (formula: CaMn_4O_5).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| | | | Total | Ca | Mn | O | |
| 26 | A | 1 | 10 | 1 | 4 | 5 | 0 |
| 26 | a | 1 | 10 | 1 | 4 | 5 | 0 |

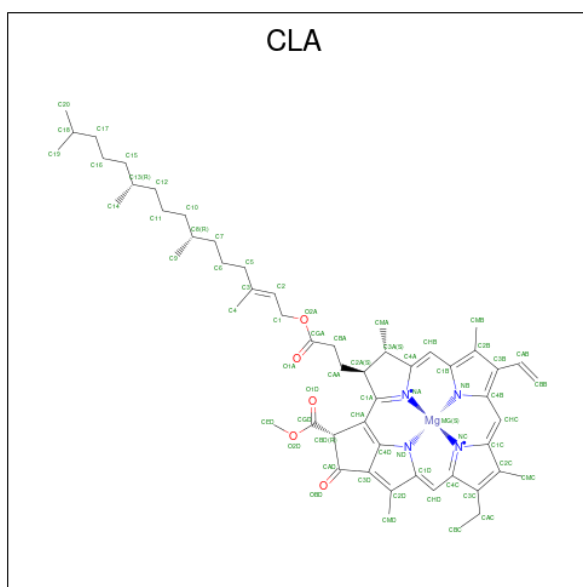
- Molecule 27 is FE (II) ION (three-letter code: FE2) (formula: Fe).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Fe | |
| 27 | A | 1 | 1 | 1 | 0 |
| 27 | a | 1 | 1 | 1 | 0 |

- Molecule 28 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------|----|---------|
| | | | Total | Cl | |
| 28 | A | 2 | 2 | 2 | 0 |
| 28 | a | 2 | 2 | 2 | 0 |

- Molecule 29 is CHLOROPHYLL A (three-letter code: CLA) (formula: C₅₅H₇₂MgN₄O₅).



| Mol | Chain | Residues | Atoms | | | | AltConf | |
|-----|-------|----------|-------|----|----|---|---------|---|
| 29 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 49 | 39 | 1 | 4 | 5 | |
| 29 | A | 1 | Total | C | Mg | N | O | 0 |
| | | | 60 | 50 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |
| 29 | B | 1 | Total | C | Mg | N | O | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | B | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | B | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | B | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | B | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | B | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | B | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | C | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | D | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | D | 1 | 65 | 55 | 1 | 4 | 5 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | N | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 45 | 35 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | N | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 45 | 35 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 43 | 35 | 1 | 4 | 3 | 0 |
| 29 | G | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | G | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 60 | 50 | 1 | 4 | 5 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | R | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 46 | 36 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | R | 1 | 46 | 36 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 55 | 45 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 50 | 40 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 45 | 35 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 55 | 45 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 55 | 45 | 1 | 4 | 5 | 0 |
| 29 | S | 1 | 50 | 40 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 50 | 40 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | Y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | a | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | a | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | a | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | a | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | b | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | c | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | d | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | d | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 65 | 55 | 1 | 4 | 5 | 0 |

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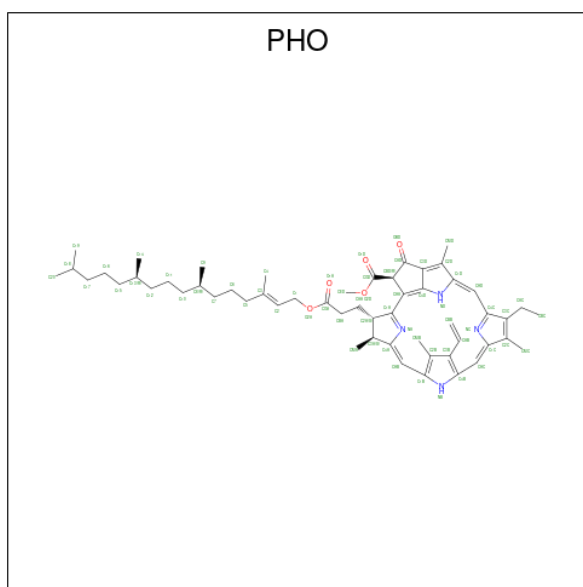
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | n | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 45 | 35 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | n | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 45 | 35 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 43 | 35 | 1 | 4 | 3 | 0 |
| 29 | g | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | g | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 49 | 39 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 46 | 36 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | r | 1 | 46 | 36 | 1 | 4 | 5 | 0 |

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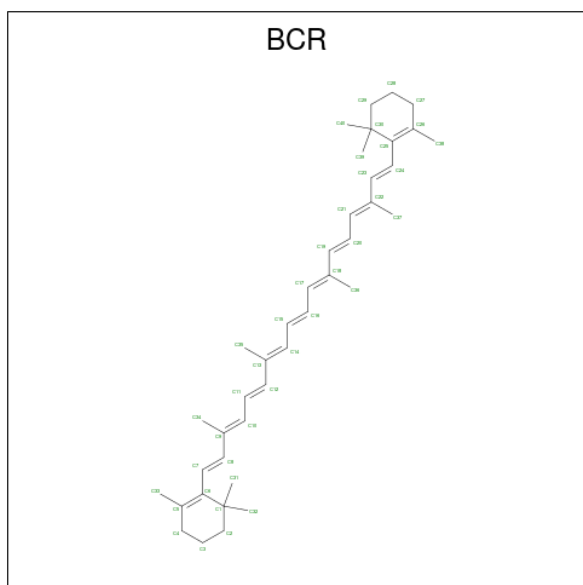
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 29 | s | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 55 | 45 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 50 | 40 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 60 | 50 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 45 | 35 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 55 | 45 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 55 | 45 | 1 | 4 | 5 | 0 |
| 29 | s | 1 | 50 | 40 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 50 | 40 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |
| 29 | y | 1 | 65 | 55 | 1 | 4 | 5 | 0 |

- Molecule 30 is PHEOPHYTIN A (three-letter code: PHO) (formula: $C_{55}H_{74}N_4O_5$).



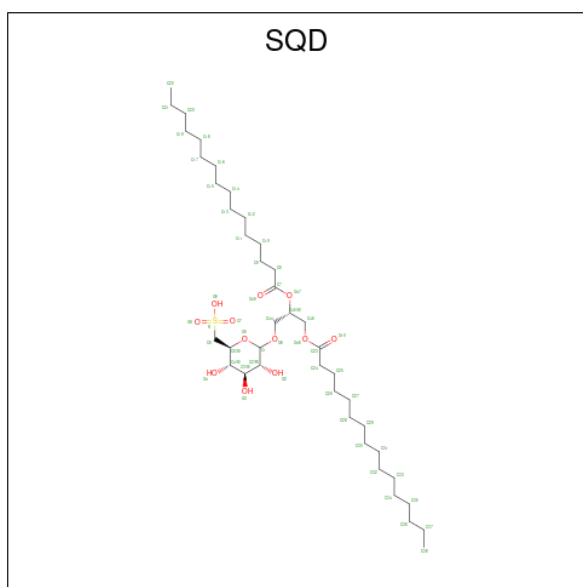
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---------|
| | | | Total | C | N | O | |
| 30 | A | 1 | Total | C | N | O | 0 |
| | | | 64 | 55 | 4 | 5 | |
| 30 | A | 1 | Total | C | N | O | 0 |
| | | | 64 | 55 | 4 | 5 | |
| 30 | a | 1 | Total | C | N | O | 0 |
| | | | 64 | 55 | 4 | 5 | |
| 30 | a | 1 | Total | C | N | O | 0 |
| | | | 64 | 55 | 4 | 5 | |

- Molecule 31 is BETA-CAROTENE (three-letter code: BCR) (formula: $C_{40}H_{56}$).



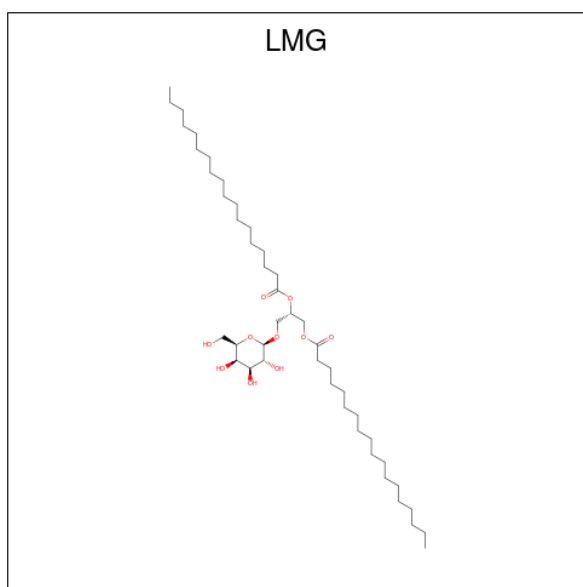
| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|------------------|---------|
| 31 | A | 1 | Total C 40 40 | 0 |
| 31 | B | 1 | Total C 40 40 | 0 |
| 31 | B | 1 | Total C 40 40 | 0 |
| 31 | C | 1 | Total C 40 40 | 0 |
| 31 | C | 1 | Total C 40 40 | 0 |
| 31 | C | 1 | Total C 40 40 | 0 |
| 31 | C | 1 | Total C 40 40 | 0 |
| 31 | D | 1 | Total C 40 40 | 0 |
| 31 | a | 1 | Total C 40 40 | 0 |
| 31 | b | 1 | Total C 40 40 | 0 |
| 31 | b | 1 | Total C 40 40 | 0 |
| 31 | c | 1 | Total C 40 40 | 0 |
| 31 | c | 1 | Total C 40 40 | 0 |
| 31 | c | 1 | Total C 40 40 | 0 |
| 31 | c | 1 | Total C 40 40 | 0 |
| 31 | d | 1 | Total C 40 40 | 0 |

- Molecule 32 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: C₄₁H₇₈O₁₂S).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| | | | Total | C | O | S | |
| 32 | A | 1 | 51 | 38 | 12 | 1 | 0 |
| 32 | B | 1 | 54 | 41 | 12 | 1 | 0 |
| 32 | C | 1 | 54 | 41 | 12 | 1 | 0 |
| 32 | a | 1 | 51 | 38 | 12 | 1 | 0 |
| 32 | b | 1 | 54 | 41 | 12 | 1 | 0 |
| 32 | c | 1 | 54 | 41 | 12 | 1 | 0 |

- Molecule 33 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: $C_{45}H_{86}O_{10}$).

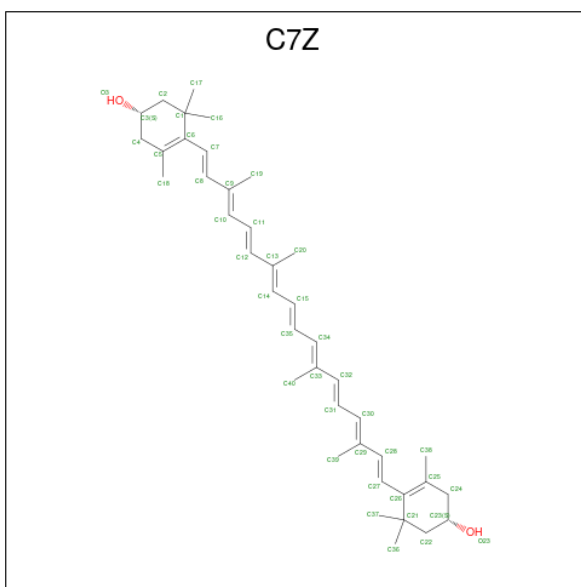


| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|----|---------|
| | | | Total | C | O | |
| 33 | A | 1 | 48 | 38 | 10 | 0 |
| 33 | B | 1 | 44 | 34 | 10 | 0 |
| 33 | C | 1 | 51 | 41 | 10 | 0 |
| 33 | D | 1 | 46 | 36 | 10 | 0 |
| 33 | H | 1 | 48 | 38 | 10 | 0 |
| 33 | J | 1 | 45 | 35 | 10 | 0 |
| 33 | a | 1 | 48 | 38 | 10 | 0 |
| 33 | b | 1 | 44 | 34 | 10 | 0 |
| 33 | c | 1 | 51 | 41 | 10 | 0 |
| 33 | d | 1 | 46 | 36 | 10 | 0 |
| 33 | h | 1 | 48 | 38 | 10 | 0 |
| 33 | j | 1 | 45 | 35 | 10 | 0 |

- Molecule 34 is SODIUM ION (three-letter code: NA) (formula: Na).

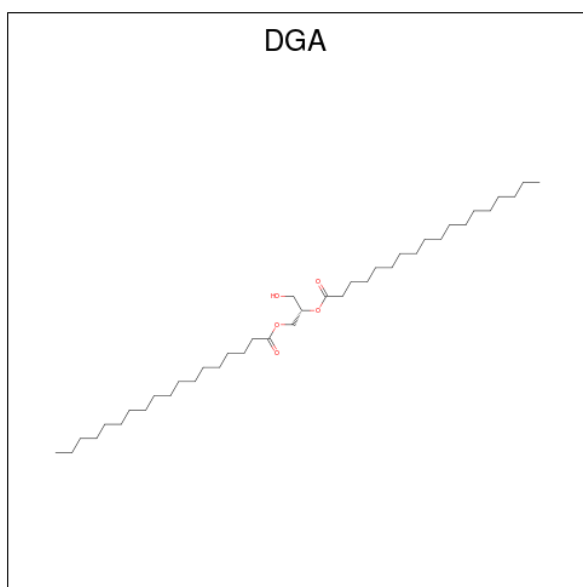
| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|-----------------|---------|
| 34 | A | 1 | Total Na 1 1 | 0 |
| 34 | a | 1 | Total Na 1 1 | 0 |

- Molecule 35 is (1 {S})-3,5,5-trimethyl-4-[(1 {E},3 {E},5 {E},7 {E},9 {E},11 {E},13 {E},15 {E},17 {E})-3,7,12,16-tetramethyl-18-[(4 {S})-2,6,6-trimethyl-4-oxidanyl-cyclohexen-1-yl]octadeca-1,3,5,7,9,11,13,15,17-nonaenyl]cyclohex-3-en-1-ol (three-letter code: C7Z) (formula: $C_{40}H_{56}O_2$).



| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|----------------------|---------|
| 35 | B | 1 | Total C O 42 40 2 | 0 |
| 35 | b | 1 | Total C O 42 40 2 | 0 |

- Molecule 36 is DIACYL GLYCEROL (three-letter code: DGA) (formula: $C_{39}H_{76}O_5$).



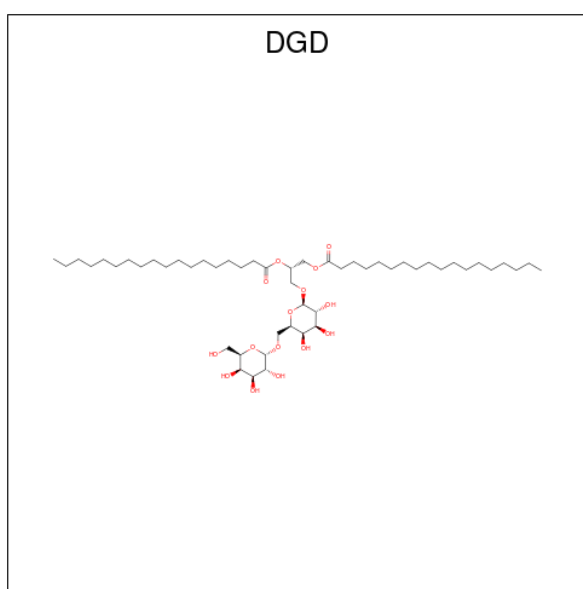
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| | | | Total | C | O | |
| 36 | B | 1 | 44 | 39 | 5 | 0 |
| 36 | C | 1 | 44 | 39 | 5 | 0 |
| 36 | b | 1 | 44 | 39 | 5 | 0 |
| 36 | c | 1 | 44 | 39 | 5 | 0 |

- Molecule 37 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|---|---|---------|
| 37 | B | 1 | Total | C | O | 0 |
| | | | 6 | 3 | 3 | |
| 37 | b | 1 | Total | C | O | 0 |
| | | | 6 | 3 | 3 | |
| 37 | b | 1 | Total | C | O | 0 |
| | | | 6 | 3 | 3 | |
| 37 | y | 1 | Total | C | O | 0 |
| | | | 6 | 3 | 3 | |

- Molecule 38 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



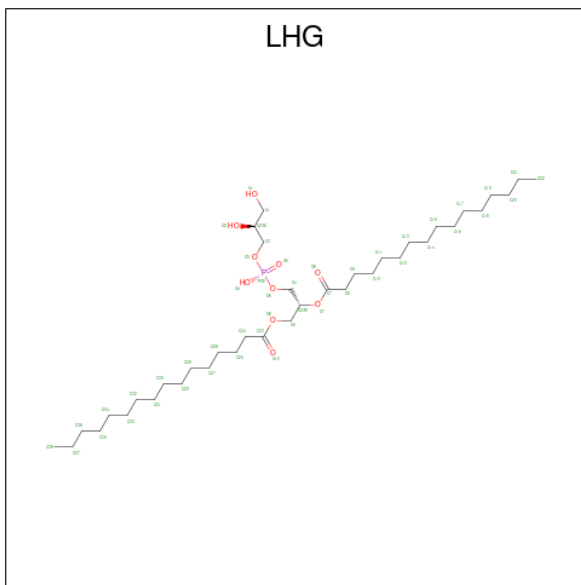
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|----|---------|
| 38 | C | 1 | Total | C | O | 0 |
| | | | 55 | 40 | 15 | |
| 38 | C | 1 | Total | C | O | 0 |
| | | | 62 | 47 | 15 | |
| 38 | C | 1 | Total | C | O | 0 |
| | | | 59 | 44 | 15 | |
| 38 | C | 1 | Total | C | O | 0 |
| | | | 66 | 51 | 15 | |
| 38 | c | 1 | Total | C | O | 0 |
| | | | 55 | 40 | 15 | |
| 38 | c | 1 | Total | C | O | 0 |
| | | | 62 | 47 | 15 | |
| 38 | c | 1 | Total | C | O | 0 |
| | | | 59 | 44 | 15 | |

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| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|----|---------|
| | | | Total | C | O | |
| 38 | c | 1 | 66 | 51 | 15 | 0 |

- Molecule 39 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: $C_{38}H_{75}O_{10}P$).



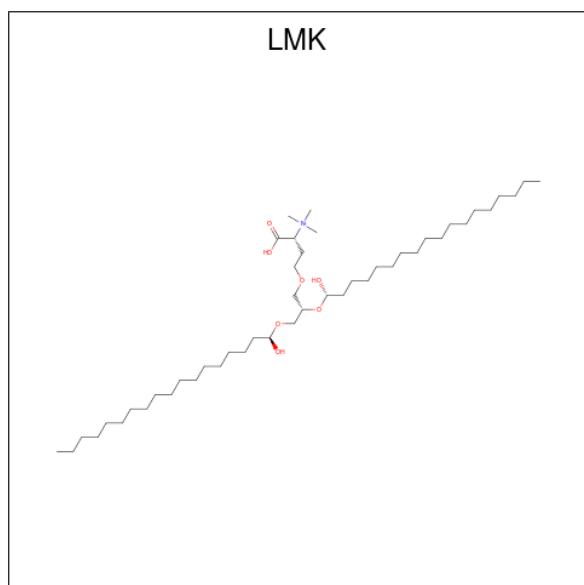
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---------|
| | | | Total | C | O | P | |
| 39 | C | 1 | 47 | 36 | 10 | 1 | 0 |
| 39 | D | 1 | 44 | 33 | 10 | 1 | 0 |
| 39 | D | 1 | 49 | 38 | 10 | 1 | 0 |
| 39 | D | 1 | 39 | 28 | 10 | 1 | 0 |
| 39 | L | 1 | 49 | 38 | 10 | 1 | 0 |
| 39 | N | 1 | 49 | 38 | 10 | 1 | 0 |
| 39 | G | 1 | 49 | 38 | 10 | 1 | 0 |
| 39 | S | 1 | 45 | 34 | 10 | 1 | 0 |
| 39 | Y | 1 | 49 | 38 | 10 | 1 | 0 |
| 39 | c | 1 | 47 | 36 | 10 | 1 | 0 |

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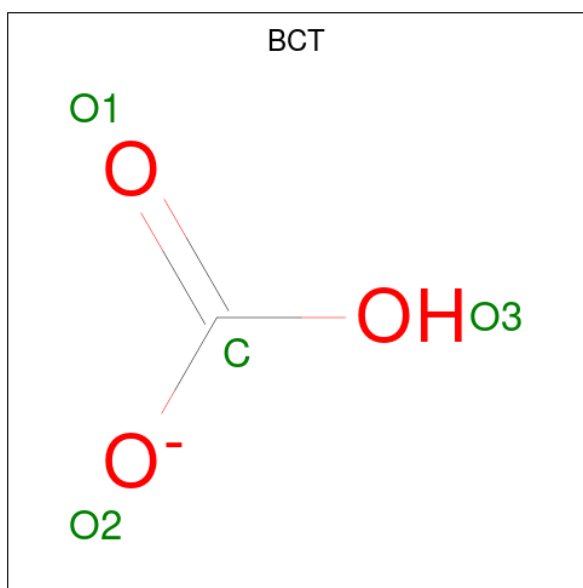
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------------|---------|---------|--------|---------|
| | | | Total | C | O | P | |
| 39 | d | 1 | Total 44 | C 33 | O 10 | P 1 | 0 |
| 39 | d | 1 | Total 49 | C 38 | O 10 | P 1 | 0 |
| 39 | d | 1 | Total 39 | C 28 | O 10 | P 1 | 0 |
| 39 | l | 1 | Total 49 | C 38 | O 10 | P 1 | 0 |
| 39 | n | 1 | Total 49 | C 38 | O 10 | P 1 | 0 |
| 39 | g | 1 | Total 49 | C 38 | O 10 | P 1 | 0 |
| 39 | s | 1 | Total 45 | C 34 | O 10 | P 1 | 0 |
| 39 | y | 1 | Total 49 | C 38 | O 10 | P 1 | 0 |

- Molecule 40 is trimethyl-[(2 {R})-1-oxidanyl-1-oxidanylidene-4-[(2 {S})-2-[(1 {S})-1-oxido-nyloctadecoxy]-3-[(1 {R})-1-oxidanyloctadecoxy]propoxy]butan-2-yl]azanium (three-letter code: LMK) (formula: C₄₆H₉₄NO₇).



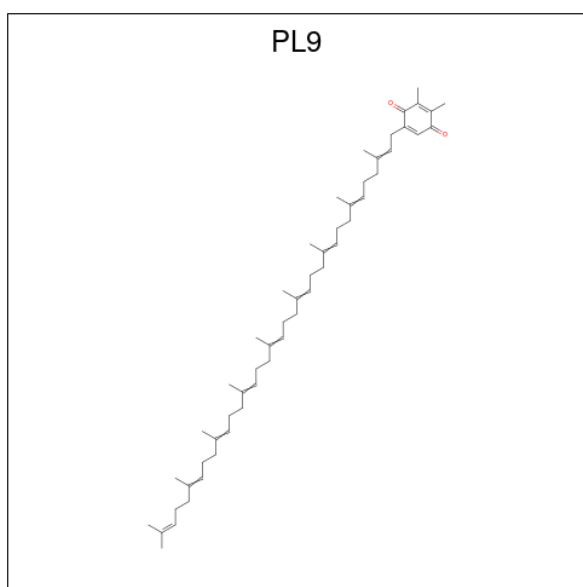
| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------------|---------|--------|--------|---------|
| | | | Total | C | N | O | |
| 40 | C | 1 | Total 40 | C 32 | N 1 | O 7 | 0 |
| 40 | c | 1 | Total 40 | C 32 | N 1 | O 7 | 0 |

- Molecule 41 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).



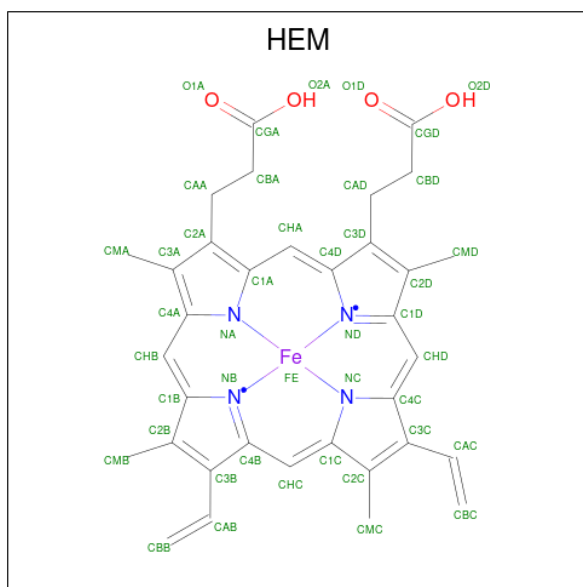
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|---|---|---------|
| 41 | D | 1 | Total | C | O | 0 |
| | | | 4 | 1 | 3 | |
| 41 | d | 1 | Total | C | O | 0 |
| | | | 4 | 1 | 3 | |

- Molecule 42 is 2,3-DIMETHYL-5-(3,7,11,15,19,23,27,31,35-NONAMETHYL-2,6,10,14,18,22,26,30,34-HEXATRIACONTANONAENYL-2,5-CYCLOHEXADIENE-1,4-DIONE-2,3-DIMETHYL-5-SOLANESYL-1,4-BENZOQUINONE (three-letter code: PL9) (formula: $\text{C}_{53}\text{H}_{80}\text{O}_2$).



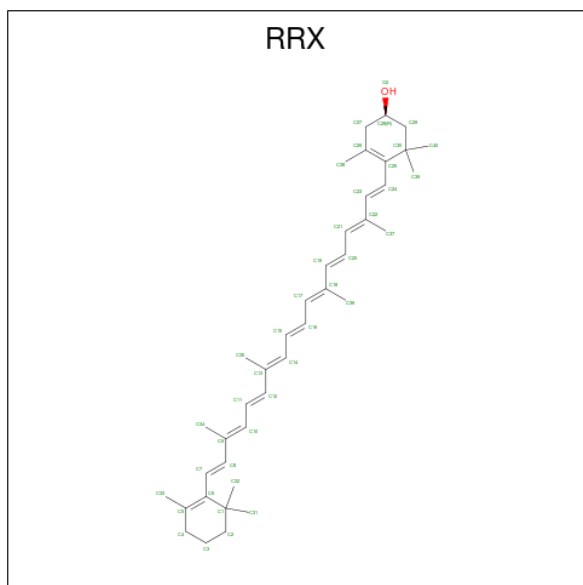
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 42 | D | 1 | Total | C | O | 0 |
| | | | 55 | 53 | 2 | |
| 42 | d | 1 | Total | C | O | 0 |
| | | | 55 | 53 | 2 | |

- Molecule 43 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $C_{34}H_{32}FeN_4O_4$).



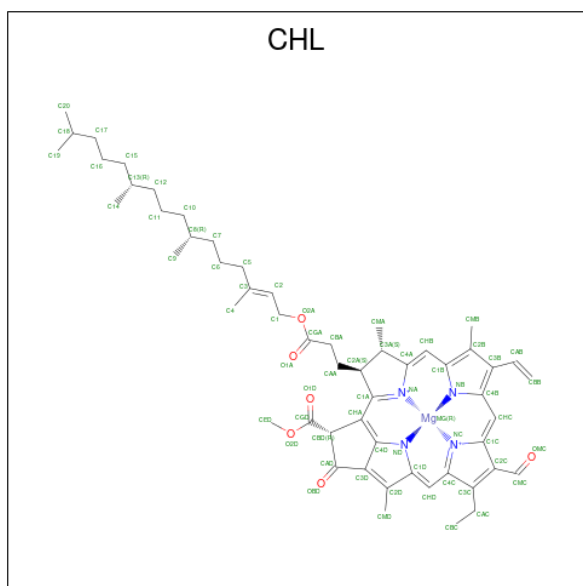
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| 43 | F | 1 | Total | C | Fe | N | O | 0 |
| | | | 43 | 34 | 1 | 4 | 4 | |
| 43 | f | 1 | Total | C | Fe | N | O | 0 |
| | | | 43 | 34 | 1 | 4 | 4 | |

- Molecule 44 is (3R)-beta,beta-caroten-3-ol (three-letter code: RRX) (formula: $C_{40}H_{56}O$).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|---|--|---------|
| 44 | H | 1 | Total | C | O | | 0 |
| | | | 41 | 40 | 1 | | |
| 44 | h | 1 | Total | C | O | | 0 |
| | | | 41 | 40 | 1 | | |

- Molecule 45 is CHLOROPHYLL B (three-letter code: CHL) (formula: $C_{55}H_{70}MgN_4O_6$).



| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| 45 | N | 1 | Total | C | Mg | N | O | 0 |
| | | | 66 | 55 | 1 | 4 | 6 | |
| 45 | N | 1 | Total | C | Mg | N | O | 0 |
| | | | 66 | 55 | 1 | 4 | 6 | |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 45 | N | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | N | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | N | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | N | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | G | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | G | 1 | 48 | 37 | 1 | 4 | 6 | 0 |
| 45 | G | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | G | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | G | 1 | 44 | 35 | 1 | 4 | 4 | 0 |
| 45 | G | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | R | 1 | 44 | 35 | 1 | 4 | 4 | 0 |
| 45 | R | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | S | 1 | 46 | 35 | 1 | 4 | 6 | 0 |
| 45 | S | 1 | 44 | 35 | 1 | 4 | 4 | 0 |
| 45 | S | 1 | 43 | 34 | 1 | 4 | 4 | 0 |
| 45 | S | 1 | 61 | 50 | 1 | 4 | 6 | 0 |
| 45 | Y | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | Y | 1 | 46 | 35 | 1 | 4 | 6 | 0 |
| 45 | Y | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | Y | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | Y | 1 | 66 | 55 | 1 | 4 | 6 | 0 |

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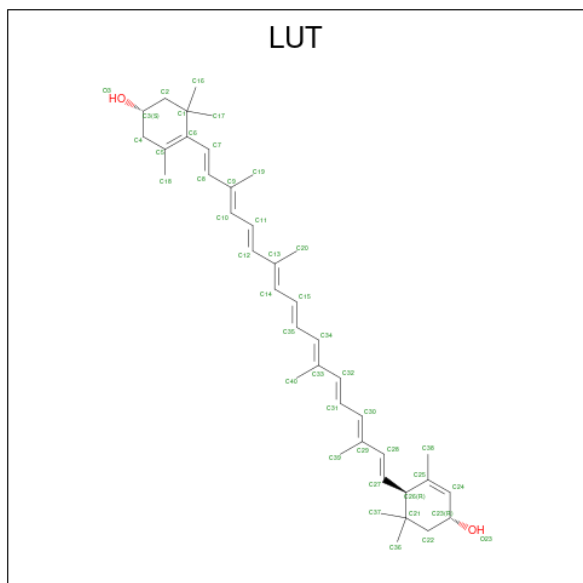
| Mol | Chain | Residues | Atoms | | | | AltConf | |
|-----|-------|----------|-------|----|----|---|---------|---|
| | | | Total | C | Mg | N | | O |
| 45 | n | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | n | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | n | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | n | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | n | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | n | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | g | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | g | 1 | 48 | 37 | 1 | 4 | 6 | 0 |
| 45 | g | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | g | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | g | 1 | 44 | 35 | 1 | 4 | 4 | 0 |
| 45 | g | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | r | 1 | 44 | 35 | 1 | 4 | 4 | 0 |
| 45 | r | 1 | 50 | 39 | 1 | 4 | 6 | 0 |
| 45 | s | 1 | 46 | 35 | 1 | 4 | 6 | 0 |
| 45 | s | 1 | 44 | 35 | 1 | 4 | 4 | 0 |
| 45 | s | 1 | 43 | 34 | 1 | 4 | 4 | 0 |
| 45 | s | 1 | 61 | 50 | 1 | 4 | 6 | 0 |
| 45 | y | 1 | 66 | 55 | 1 | 4 | 6 | 0 |
| 45 | y | 1 | 46 | 35 | 1 | 4 | 6 | 0 |
| 45 | y | 1 | 66 | 55 | 1 | 4 | 6 | 0 |

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| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|
| | | | Total | C | Mg | N | O | |
| 45 | y | 1 | Total | C | Mg | N | O | 0 |
| | | | 66 | 55 | 1 | 4 | 6 | |
| 45 | y | 1 | Total | C | Mg | N | O | 0 |
| | | | 66 | 55 | 1 | 4 | 6 | |

- Molecule 46 is (3R,3'R,6S)-4,5-DIDEHYDRO-5,6-DIHYDRO-BETA,BETA-CAROTENE-3,3'-DIOL (three-letter code: LUT) (formula: C₄₀H₅₆O₂).



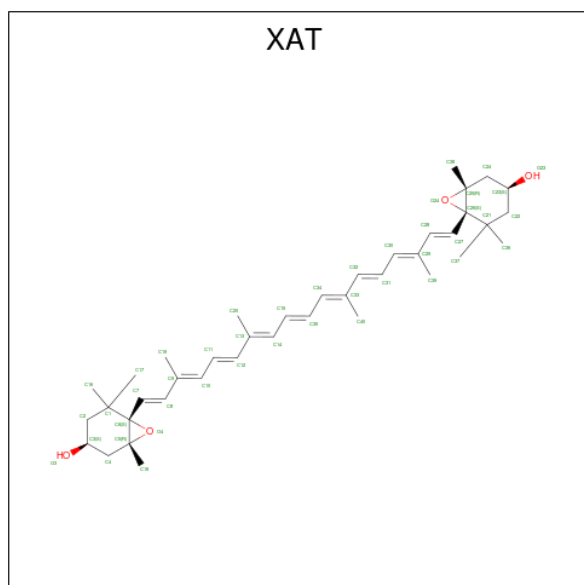
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| | | | Total | C | O | |
| 46 | N | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | N | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | G | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | G | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | R | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | S | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | S | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | Y | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |
| 46 | Y | 1 | Total | C | O | 0 |
| | | | 42 | 40 | 2 | |

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| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| | | | Total | C | O | |
| 46 | n | 1 | 42 | 40 | 2 | 0 |
| 46 | n | 1 | 42 | 40 | 2 | 0 |
| 46 | g | 1 | 42 | 40 | 2 | 0 |
| 46 | g | 1 | 42 | 40 | 2 | 0 |
| 46 | r | 1 | 42 | 40 | 2 | 0 |
| 46 | s | 1 | 42 | 40 | 2 | 0 |
| 46 | s | 1 | 42 | 40 | 2 | 0 |
| 46 | y | 1 | 42 | 40 | 2 | 0 |
| 46 | y | 1 | 42 | 40 | 2 | 0 |

- Molecule 47 is (3S,5R,6S,3'S,5'R,6'S)-5,6,5',6'-DIEPOXY-5,6,5',6'- TETRAHYDRO-BETA ,BETA-CAROTENE-3,3'-DIOL (three-letter code: XAT) (formula: C₄₀H₅₆O₄).



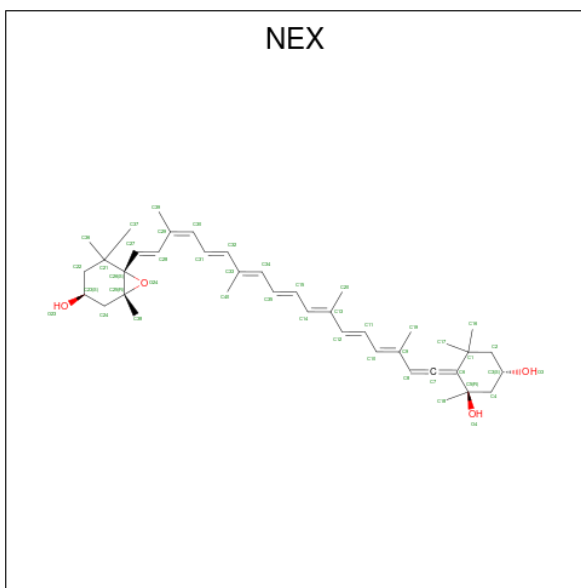
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| | | | Total | C | O | |
| 47 | N | 1 | 44 | 40 | 4 | 0 |
| 47 | G | 1 | 44 | 40 | 4 | 0 |

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| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 47 | R | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 47 | Y | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 47 | n | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 47 | g | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 47 | r | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 47 | y | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |

- Molecule 48 is (1R,3R)-6-[(3E,5E,7E,9E,11E,13E,15E,17E)-18-[(1S,4R,6R)-4-HYDROXY-2,2,6-TRIMETHYL-7-OXABICYCLO[4.1.0]HEPT-1-YL]-3,7,12,16-TETRAMETHYLOCTADEC-1,3,5,7,9,11,13,15,17-NONAENYLIDENE]-1,5,5-TRIMETHYLCYCLOHEXANE-1,3-DIOL (three-letter code: NEX) (formula: C₄₀H₅₆O₄).



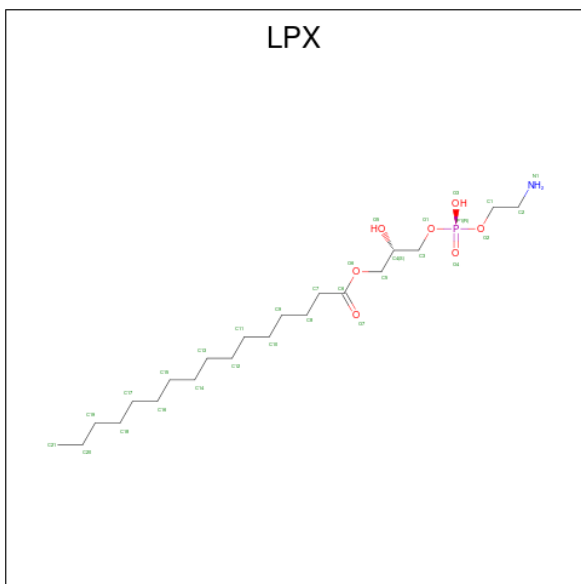
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 48 | N | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | G | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | R | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | S | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |

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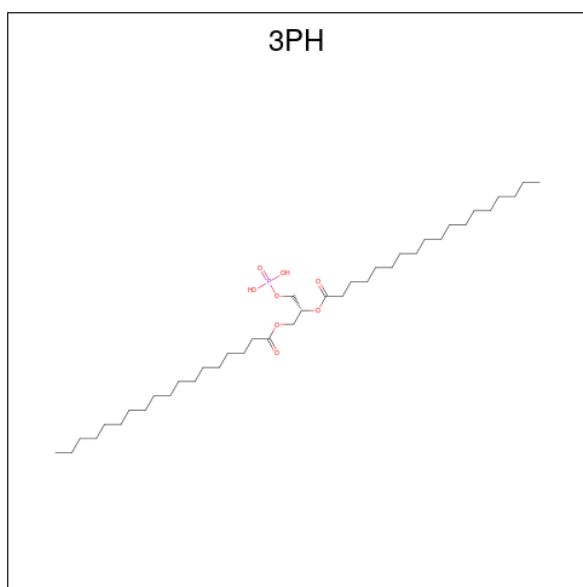
| Mol | Chain | Residues | Atoms | | | AltConf |
|-----|-------|----------|-------|----|---|---------|
| 48 | Y | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | n | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | g | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | r | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | s | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |
| 48 | y | 1 | Total | C | O | 0 |
| | | | 44 | 40 | 4 | |

- Molecule 49 is (2S)-3-[[[(R)-(2-aminoethoxy)(hydroxy)phosphoryl]oxy]-2-hydroxypropyl hexadecanoate (three-letter code: LPX) (formula: C₂₁H₄₄NO₇P).



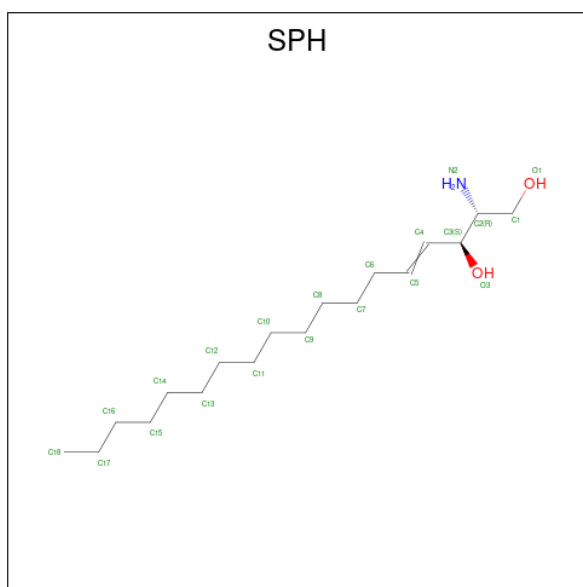
| Mol | Chain | Residues | Atoms | | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---|---------|
| 49 | S | 1 | Total | C | N | O | P | 0 |
| | | | 30 | 21 | 1 | 7 | 1 | |
| 49 | s | 1 | Total | C | N | O | P | 0 |
| | | | 30 | 21 | 1 | 7 | 1 | |

- Molecule 50 is 1,2-DIACYL-GLYCEROL-3-SN-PHOSPHATE (three-letter code: 3PH) (formula: C₃₉H₇₇O₈P).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---------|
| | | | Total | C | O | P | |
| 50 | S | 1 | 48 | 39 | 8 | 1 | 0 |
| 50 | i | 1 | 48 | 39 | 8 | 1 | 0 |
| 50 | s | 1 | 48 | 39 | 8 | 1 | 0 |

- Molecule 51 is SPHINGOSINE (three-letter code: SPH) (formula: $C_{18}H_{37}NO_2$).



| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---------|
| | | | Total | C | N | O | |
| 51 | Y | 1 | 21 | 18 | 1 | 2 | 0 |

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| Mol | Chain | Residues | Atoms | | | | AltConf |
|-----|-------|----------|-------|----|---|---|---------|
| | | | Total | C | N | O | |
| 51 | y | 1 | 21 | 18 | 1 | 2 | 0 |

- Molecule 52 is water.

| Mol | Chain | Residues | Atoms | | AltConf |
|-----|-------|----------|-------------|---------|---------|
| 52 | A | 43 | Total 43 | O 43 | 0 |
| 52 | B | 57 | Total 57 | O 57 | 0 |
| 52 | C | 55 | Total 55 | O 55 | 0 |
| 52 | D | 42 | Total 42 | O 42 | 0 |
| 52 | E | 7 | Total 7 | O 7 | 0 |
| 52 | H | 8 | Total 8 | O 8 | 0 |
| 52 | I | 4 | Total 4 | O 4 | 0 |
| 52 | J | 3 | Total 3 | O 3 | 0 |
| 52 | K | 2 | Total 2 | O 2 | 0 |
| 52 | L | 5 | Total 5 | O 5 | 0 |
| 52 | M | 4 | Total 4 | O 4 | 0 |
| 52 | O | 28 | Total 28 | O 28 | 0 |
| 52 | P | 10 | Total 10 | O 10 | 0 |
| 52 | T | 7 | Total 7 | O 7 | 0 |
| 52 | W | 5 | Total 5 | O 5 | 0 |
| 52 | X | 9 | Total 9 | O 9 | 0 |
| 52 | Z | 1 | Total 1 | O 1 | 0 |
| 52 | N | 5 | Total 5 | O 5 | 0 |

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| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|------------------|---------|
| 52 | G | 4 | Total O 4 4 | 0 |
| 52 | R | 10 | Total O 10 10 | 0 |
| 52 | S | 8 | Total O 8 8 | 0 |
| 52 | Y | 14 | Total O 14 14 | 0 |
| 52 | U | 1 | Total O 1 1 | 0 |
| 52 | a | 59 | Total O 59 59 | 0 |
| 52 | b | 70 | Total O 70 70 | 0 |
| 52 | v | 3 | Total O 3 3 | 0 |
| 52 | c | 50 | Total O 50 50 | 0 |
| 52 | d | 41 | Total O 41 41 | 0 |
| 52 | e | 7 | Total O 7 7 | 0 |
| 52 | f | 1 | Total O 1 1 | 0 |
| 52 | h | 9 | Total O 9 9 | 0 |
| 52 | i | 3 | Total O 3 3 | 0 |
| 52 | j | 2 | Total O 2 2 | 0 |
| 52 | k | 1 | Total O 1 1 | 0 |
| 52 | l | 8 | Total O 8 8 | 0 |
| 52 | m | 4 | Total O 4 4 | 0 |
| 52 | o | 20 | Total O 20 20 | 0 |
| 52 | p | 15 | Total O 15 15 | 0 |
| 52 | t | 5 | Total O 5 5 | 0 |

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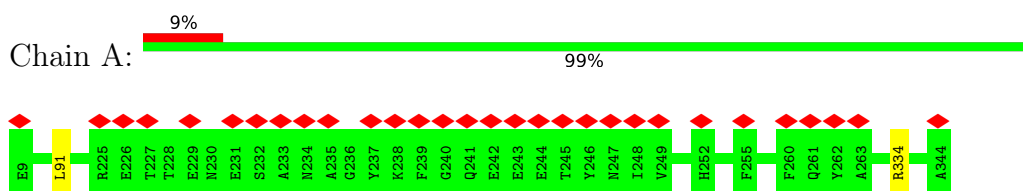
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| Mol | Chain | Residues | Atoms | AltConf |
|-----|-------|----------|------------------|---------|
| 52 | w | 3 | Total O 3 3 | 0 |
| 52 | x | 2 | Total O 2 2 | 0 |
| 52 | n | 13 | Total O 13 13 | 0 |
| 52 | g | 12 | Total O 12 12 | 0 |
| 52 | r | 15 | Total O 15 15 | 0 |
| 52 | s | 21 | Total O 21 21 | 0 |
| 52 | y | 22 | Total O 22 22 | 0 |

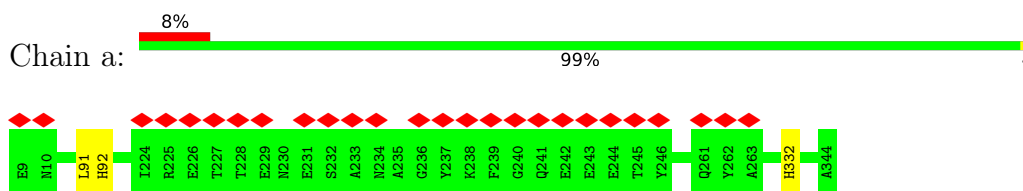
3 Residue-property plots [i](#)

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

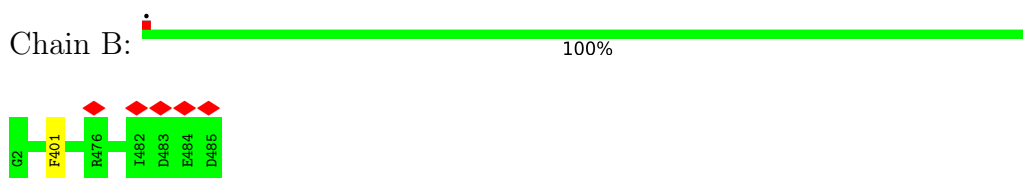
- Molecule 1: Photosystem II protein D1



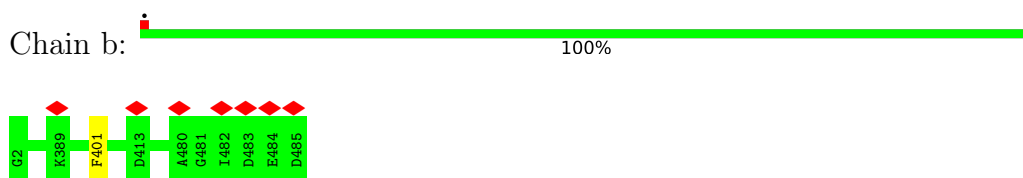
- Molecule 1: Photosystem II protein D1



- Molecule 2: Photosystem II CP47 reaction center protein



- Molecule 2: Photosystem II CP47 reaction center protein



- Molecule 3: Photosystem II reaction center protein Ycf12



There are no outlier residues recorded for this chain.

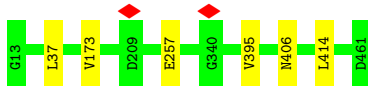
- Molecule 3: Photosystem II reaction center protein Ycf12

Chain v:  100%

There are no outlier residues recorded for this chain.

- Molecule 4: Photosystem II CP43 reaction center protein

Chain C:  99%



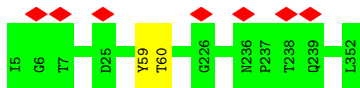
- Molecule 4: Photosystem II CP43 reaction center protein

Chain c:  99%



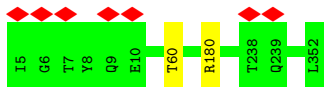
- Molecule 5: Photosystem II D2 protein

Chain D:  99%



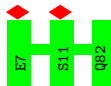
- Molecule 5: Photosystem II D2 protein

Chain d:  99%



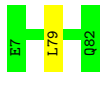
- Molecule 6: Cytochrome b559 subunit alpha

Chain E:  100%



- Molecule 6: Cytochrome b559 subunit alpha

Chain e:  99%



- Molecule 7: Cytochrome b559 subunit beta

Chain F:  100%



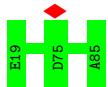
- Molecule 7: Cytochrome b559 subunit beta

Chain f:  100%



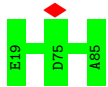
- Molecule 8: Photosystem II reaction center protein H

Chain H:  100%



- Molecule 8: Photosystem II reaction center protein H

Chain h:  100%



- Molecule 9: Photosystem II reaction center protein I

Chain I:  6% 97%



- Molecule 9: Photosystem II reaction center protein I

Chain i:  100%

There are no outlier residues recorded for this chain.

- Molecule 10: Photosystem II reaction center protein J

Chain J:  6% 100%



- Molecule 10: Photosystem II reaction center protein J

Chain j:  100%



- Molecule 11: Photosystem II reaction center protein K

Chain K:  100%

There are no outlier residues recorded for this chain.

- Molecule 11: Photosystem II reaction center protein K

Chain k:  100%

There are no outlier residues recorded for this chain.

- Molecule 12: Photosystem II reaction center protein L

Chain L:  100%

There are no outlier residues recorded for this chain.

- Molecule 12: Photosystem II reaction center protein L

Chain l:  100%



- Molecule 13: Photosystem II reaction center protein M

Chain M:  97%



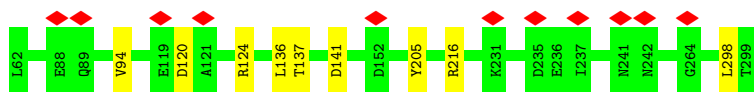
- Molecule 13: Photosystem II reaction center protein M

Chain m:  97%

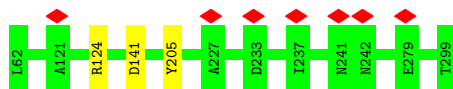


- Molecule 14: PsbO

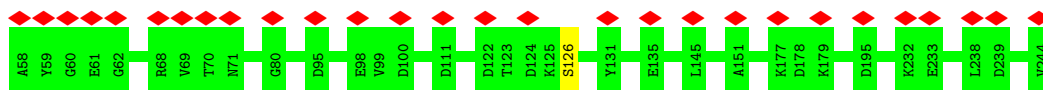
Chain O:  96%



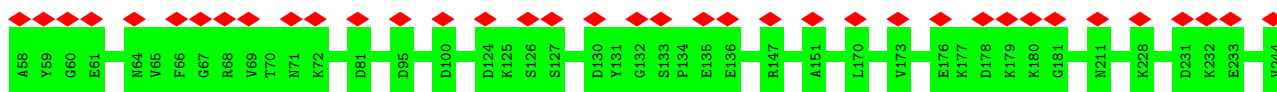
- Molecule 14: PsbO



- Molecule 15: PsbP



- Molecule 15: PsbP



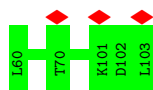
- Molecule 16: Photosystem II reaction center protein T



- Molecule 16: Photosystem II reaction center protein T

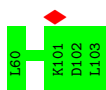


- Molecule 17: PSII 6.1 kDa protein



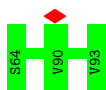
- Molecule 17: PSII 6.1 kDa protein

Chain w:  100%



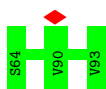
- Molecule 18: Hypothetical protein

Chain X:  100%



- Molecule 18: Hypothetical protein

Chain x:  100%

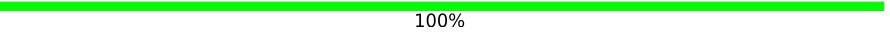


- Molecule 19: Photosystem II reaction center protein Z

Chain Z:  98%



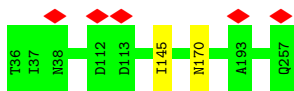
- Molecule 19: Photosystem II reaction center protein Z

Chain z:  100%

There are no outlier residues recorded for this chain.

- Molecule 20: LHCII M3

Chain N:  99%



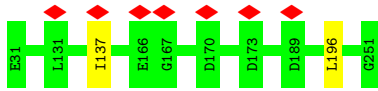
- Molecule 20: LHCII M3

Chain n:  100%



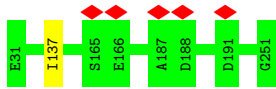
- Molecule 21: Chlorophyll a-b binding protein, chloroplastic

Chain G:  99%



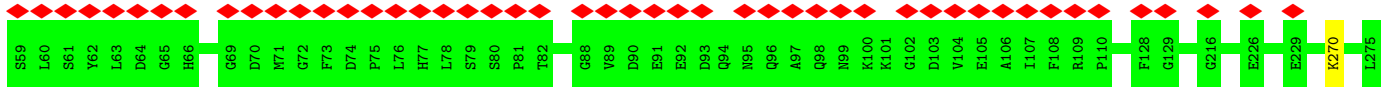
- Molecule 21: Chlorophyll a-b binding protein, chloroplastic

Chain g:  100%



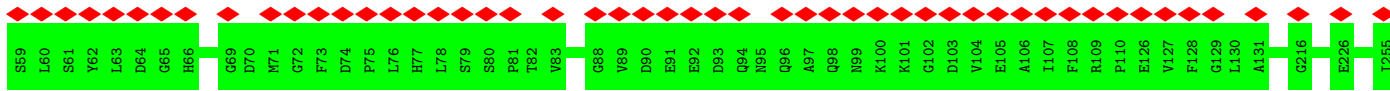
- Molecule 22: CP29

Chain R:  24%
100%



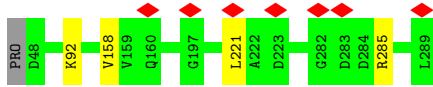
- Molecule 22: CP29

Chain r:  26%
100%



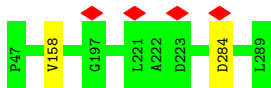
- Molecule 23: CP26

Chain S:  98%



- Molecule 23: CP26

Chain s:  99%



- Molecule 24: LHCII M1

Chain Y:  99%



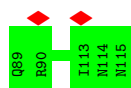
- Molecule 24: LHCII M1

Chain y: 99%



- Molecule 25: PsbU

Chain U: 7%
100%



- Molecule 25: PsbU

Chain u: 100%

There are no outlier residues recorded for this chain.

4 Experimental information

| Property | Value | Source |
|--------------------------------------|-------------------------------|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, Not provided | |
| Number of particles used | 23014 | 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 ($e^-/\text{\AA}^2$) | 51.81 | Depositor |
| Minimum defocus (nm) | Not provided | |
| Maximum defocus (nm) | Not provided | |
| Magnification | Not provided | |
| Image detector | GATAN K3 BIOQUANTUM (6k x 4k) | Depositor |
| Maximum map value | 40.024 | Depositor |
| Minimum map value | -28.419 | Depositor |
| Average map value | 0.000 | Depositor |
| Map value standard deviation | 1.000 | Depositor |
| Recommended contour level | 2.5 | Depositor |
| Map size (\AA) | 448.0, 448.0, 448.0 | wwPDB |
| Map dimensions | 500, 500, 500 | wwPDB |
| Map angles ($^\circ$) | 90.0, 90.0, 90.0 | wwPDB |
| Pixel spacing (\AA) | 0.896, 0.896, 0.896 | 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: DGD, PHO, OEX, FE2, NEX, SPH, C7Z, CLA, LHG, PL9, DGA, CHL, LMG, NA, RRX, SQD, BCT, HEM, LUT, CL, GOL, XAT, 3PH, LPX, BCR, LMK

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 | 0.29 | 0/2723 | 0.55 | 1/3715 (0.0%) |
| 1 | a | 0.32 | 0/2723 | 0.57 | 1/3715 (0.0%) |
| 2 | B | 0.30 | 0/3912 | 0.52 | 0/5327 |
| 2 | b | 0.30 | 0/3912 | 0.52 | 0/5327 |
| 3 | V | 0.25 | 0/228 | 0.57 | 0/311 |
| 3 | v | 0.24 | 0/228 | 0.61 | 0/311 |
| 4 | C | 0.29 | 0/3602 | 0.56 | 2/4913 (0.0%) |
| 4 | c | 0.30 | 0/3602 | 0.58 | 1/4913 (0.0%) |
| 5 | D | 0.30 | 0/2860 | 0.54 | 1/3899 (0.0%) |
| 5 | d | 0.30 | 0/2860 | 0.53 | 0/3899 |
| 6 | E | 0.27 | 0/639 | 0.54 | 0/870 |
| 6 | e | 0.27 | 0/639 | 0.61 | 1/870 (0.1%) |
| 7 | F | 0.27 | 0/259 | 0.54 | 0/351 |
| 7 | f | 0.26 | 0/259 | 0.49 | 0/351 |
| 8 | H | 0.27 | 0/513 | 0.53 | 0/703 |
| 8 | h | 0.29 | 0/513 | 0.52 | 0/703 |
| 9 | I | 0.30 | 0/287 | 0.50 | 0/386 |
| 9 | i | 0.29 | 0/287 | 0.51 | 0/386 |
| 10 | J | 0.25 | 0/272 | 0.46 | 0/369 |
| 10 | j | 0.25 | 0/272 | 0.55 | 0/369 |
| 11 | K | 0.32 | 0/308 | 0.52 | 0/423 |
| 11 | k | 0.34 | 0/308 | 0.58 | 0/423 |
| 12 | L | 0.27 | 0/321 | 0.45 | 0/435 |
| 12 | l | 0.27 | 0/321 | 0.47 | 0/435 |
| 13 | M | 0.26 | 0/246 | 0.48 | 0/335 |
| 13 | m | 0.25 | 0/246 | 0.46 | 0/335 |
| 14 | O | 0.31 | 0/1855 | 0.63 | 2/2505 (0.1%) |
| 14 | o | 0.29 | 0/1855 | 0.59 | 1/2505 (0.0%) |
| 15 | P | 0.28 | 0/1473 | 0.59 | 0/1988 |
| 15 | p | 0.27 | 0/1473 | 0.55 | 0/1988 |
| 16 | T | 0.29 | 0/254 | 0.50 | 0/342 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|---------|-------------|-----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 16 | t | 0.29 | 0/254 | 0.51 | 0/342 |
| 17 | W | 0.25 | 0/339 | 0.51 | 0/460 |
| 17 | w | 0.27 | 0/339 | 0.51 | 0/460 |
| 18 | X | 0.25 | 0/202 | 0.39 | 0/276 |
| 18 | x | 0.25 | 0/202 | 0.41 | 0/276 |
| 19 | Z | 0.27 | 0/469 | 0.44 | 0/641 |
| 19 | z | 0.26 | 0/469 | 0.47 | 0/641 |
| 20 | N | 0.27 | 0/1751 | 0.53 | 0/2386 |
| 20 | n | 0.27 | 0/1751 | 0.51 | 0/2386 |
| 21 | G | 0.28 | 0/1725 | 0.57 | 1/2348 (0.0%) |
| 21 | g | 0.27 | 0/1725 | 0.50 | 0/2348 |
| 22 | R | 0.28 | 0/1561 | 0.56 | 0/2110 |
| 22 | r | 0.27 | 0/1561 | 0.56 | 0/2110 |
| 23 | S | 0.27 | 0/1895 | 0.52 | 1/2579 (0.0%) |
| 23 | s | 0.27 | 0/1902 | 0.49 | 0/2587 |
| 24 | Y | 0.28 | 0/1715 | 0.57 | 1/2338 (0.0%) |
| 24 | y | 0.28 | 0/1715 | 0.53 | 0/2338 |
| 25 | U | 0.29 | 0/224 | 0.70 | 0/298 |
| 25 | u | 0.35 | 0/224 | 0.67 | 0/298 |
| All | All | 0.29 | 0/59273 | 0.54 | 13/80624 (0.0%) |

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 |
|-----|-------|---------------------|---------------------|
| 14 | O | 0 | 1 |

There are no bond length outliers.

All (13) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|----------|------|-------------|----------|
| 24 | Y | 98 | LEU | CA-CB-CG | 8.32 | 134.44 | 115.30 |
| 21 | G | 196 | LEU | CA-CB-CG | 7.56 | 132.68 | 115.30 |
| 6 | e | 79 | LEU | CA-CB-CG | 7.15 | 131.74 | 115.30 |
| 4 | C | 37 | LEU | CA-CB-CG | 5.88 | 128.84 | 115.30 |
| 14 | O | 298 | LEU | CA-CB-CG | 5.84 | 128.74 | 115.30 |
| 1 | a | 91 | LEU | CA-CB-CG | 5.84 | 128.73 | 115.30 |
| 4 | c | 414 | LEU | CA-CB-CG | 5.78 | 128.59 | 115.30 |
| 23 | S | 221 | LEU | CA-CB-CG | 5.62 | 128.22 | 115.30 |
| 1 | A | 91 | LEU | CA-CB-CG | 5.51 | 127.98 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|------|-------------|----------|
| 14 | o | 141 | ASP | CB-CG-OD2 | 5.21 | 122.99 | 118.30 |
| 14 | O | 141 | ASP | CB-CG-OD2 | 5.18 | 122.96 | 118.30 |
| 5 | D | 59 | TYR | C-N-CA | 5.07 | 134.38 | 121.70 |
| 4 | C | 414 | LEU | CA-CB-CG | 5.06 | 126.94 | 115.30 |

There are no chirality outliers.

All (1) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-----------|
| 14 | O | 136 | LEU | 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 [i](#)

5.3.1 Protein backbone [i](#)

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

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

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|----------------|-----------|---------|----------|-------------|-----|
| 1 | A | 335/336 (100%) | 309 (92%) | 26 (8%) | 0 | 100 | 100 |
| 1 | a | 335/336 (100%) | 310 (92%) | 25 (8%) | 0 | 100 | 100 |
| 2 | B | 482/484 (100%) | 465 (96%) | 16 (3%) | 1 (0%) | 47 | 76 |
| 2 | b | 482/484 (100%) | 463 (96%) | 18 (4%) | 1 (0%) | 47 | 76 |
| 3 | V | 30/32 (94%) | 28 (93%) | 2 (7%) | 0 | 100 | 100 |
| 3 | v | 30/32 (94%) | 28 (93%) | 2 (7%) | 0 | 100 | 100 |
| 4 | C | 447/449 (100%) | 419 (94%) | 25 (6%) | 3 (1%) | 22 | 50 |
| 4 | c | 447/449 (100%) | 414 (93%) | 29 (6%) | 4 (1%) | 17 | 44 |
| 5 | D | 346/348 (99%) | 332 (96%) | 13 (4%) | 1 (0%) | 41 | 70 |
| 5 | d | 346/348 (99%) | 335 (97%) | 10 (3%) | 1 (0%) | 41 | 70 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|-----|
| 6 | E | 74/76 (97%) | 71 (96%) | 3 (4%) | 0 | 100 | 100 |
| 6 | e | 74/76 (97%) | 70 (95%) | 4 (5%) | 0 | 100 | 100 |
| 7 | F | 29/31 (94%) | 29 (100%) | 0 | 0 | 100 | 100 |
| 7 | f | 29/31 (94%) | 29 (100%) | 0 | 0 | 100 | 100 |
| 8 | H | 65/67 (97%) | 65 (100%) | 0 | 0 | 100 | 100 |
| 8 | h | 65/67 (97%) | 64 (98%) | 1 (2%) | 0 | 100 | 100 |
| 9 | I | 33/35 (94%) | 33 (100%) | 0 | 0 | 100 | 100 |
| 9 | i | 33/35 (94%) | 33 (100%) | 0 | 0 | 100 | 100 |
| 10 | J | 34/36 (94%) | 34 (100%) | 0 | 0 | 100 | 100 |
| 10 | j | 34/36 (94%) | 34 (100%) | 0 | 0 | 100 | 100 |
| 11 | K | 35/37 (95%) | 35 (100%) | 0 | 0 | 100 | 100 |
| 11 | k | 35/37 (95%) | 35 (100%) | 0 | 0 | 100 | 100 |
| 12 | L | 36/38 (95%) | 35 (97%) | 1 (3%) | 0 | 100 | 100 |
| 12 | l | 36/38 (95%) | 35 (97%) | 1 (3%) | 0 | 100 | 100 |
| 13 | M | 30/32 (94%) | 29 (97%) | 0 | 1 (3%) | 4 | 11 |
| 13 | m | 30/32 (94%) | 29 (97%) | 0 | 1 (3%) | 4 | 11 |
| 14 | O | 236/238 (99%) | 208 (88%) | 25 (11%) | 3 (1%) | 12 | 33 |
| 14 | o | 236/238 (99%) | 214 (91%) | 21 (9%) | 1 (0%) | 34 | 64 |
| 15 | P | 185/187 (99%) | 169 (91%) | 15 (8%) | 1 (0%) | 29 | 58 |
| 15 | p | 185/187 (99%) | 172 (93%) | 13 (7%) | 0 | 100 | 100 |
| 16 | T | 28/30 (93%) | 26 (93%) | 1 (4%) | 1 (4%) | 3 | 10 |
| 16 | t | 28/30 (93%) | 26 (93%) | 1 (4%) | 1 (4%) | 3 | 10 |
| 17 | W | 42/44 (96%) | 41 (98%) | 1 (2%) | 0 | 100 | 100 |
| 17 | w | 42/44 (96%) | 41 (98%) | 1 (2%) | 0 | 100 | 100 |
| 18 | X | 28/30 (93%) | 27 (96%) | 1 (4%) | 0 | 100 | 100 |
| 18 | x | 28/30 (93%) | 28 (100%) | 0 | 0 | 100 | 100 |
| 19 | Z | 59/61 (97%) | 58 (98%) | 1 (2%) | 0 | 100 | 100 |
| 19 | z | 59/61 (97%) | 58 (98%) | 1 (2%) | 0 | 100 | 100 |
| 20 | N | 220/222 (99%) | 204 (93%) | 15 (7%) | 1 (0%) | 29 | 58 |
| 20 | n | 220/222 (99%) | 206 (94%) | 13 (6%) | 1 (0%) | 29 | 58 |
| 21 | G | 219/221 (99%) | 203 (93%) | 15 (7%) | 1 (0%) | 29 | 58 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|----------|----------|-------------|-----|
| 21 | g | 219/221 (99%) | 206 (94%) | 12 (6%) | 1 (0%) | 29 | 58 |
| 22 | R | 198/202 (98%) | 188 (95%) | 10 (5%) | 0 | 100 | 100 |
| 22 | r | 198/202 (98%) | 185 (93%) | 13 (7%) | 0 | 100 | 100 |
| 23 | S | 240/243 (99%) | 220 (92%) | 18 (8%) | 2 (1%) | 19 | 47 |
| 23 | s | 239/243 (98%) | 221 (92%) | 16 (7%) | 2 (1%) | 19 | 47 |
| 24 | Y | 220/222 (99%) | 210 (96%) | 9 (4%) | 1 (0%) | 29 | 58 |
| 24 | y | 220/222 (99%) | 211 (96%) | 8 (4%) | 1 (0%) | 29 | 58 |
| 25 | U | 25/27 (93%) | 25 (100%) | 0 | 0 | 100 | 100 |
| 25 | u | 25/27 (93%) | 24 (96%) | 1 (4%) | 0 | 100 | 100 |
| All | All | 7351/7456 (99%) | 6934 (94%) | 387 (5%) | 30 (0%) | 38 | 64 |

All (30) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 4 | C | 257 | GLU |
| 4 | C | 395 | VAL |
| 14 | O | 94 | VAL |
| 15 | P | 126 | SER |
| 16 | T | 29 | ILE |
| 4 | c | 257 | GLU |
| 4 | c | 395 | VAL |
| 16 | t | 29 | ILE |
| 4 | C | 173 | VAL |
| 5 | D | 60 | THR |
| 14 | O | 205 | TYR |
| 20 | N | 145 | ILE |
| 4 | c | 173 | VAL |
| 5 | d | 60 | THR |
| 14 | o | 205 | TYR |
| 20 | n | 145 | ILE |
| 21 | G | 137 | ILE |
| 23 | S | 92 | LYS |
| 24 | Y | 146 | ILE |
| 21 | g | 137 | ILE |
| 2 | B | 401 | PHE |
| 13 | M | 3 | VAL |
| 2 | b | 401 | PHE |
| 13 | m | 3 | VAL |
| 24 | y | 146 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 23 | S | 158 | VAL |
| 14 | O | 216 | ARG |
| 4 | c | 94 | LEU |
| 23 | s | 284 | ASP |
| 23 | s | 158 | VAL |

5.3.2 Protein sidechains [i](#)

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

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

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|----------------|------------|----------|-------------|-----|
| 1 | A | 276/275 (100%) | 275 (100%) | 1 (0%) | 91 | 96 |
| 1 | a | 276/275 (100%) | 274 (99%) | 2 (1%) | 84 | 94 |
| 2 | B | 388/388 (100%) | 388 (100%) | 0 | 100 | 100 |
| 2 | b | 388/388 (100%) | 388 (100%) | 0 | 100 | 100 |
| 3 | V | 25/25 (100%) | 25 (100%) | 0 | 100 | 100 |
| 3 | v | 25/25 (100%) | 25 (100%) | 0 | 100 | 100 |
| 4 | C | 350/350 (100%) | 349 (100%) | 1 (0%) | 92 | 97 |
| 4 | c | 350/350 (100%) | 349 (100%) | 1 (0%) | 92 | 97 |
| 5 | D | 279/279 (100%) | 279 (100%) | 0 | 100 | 100 |
| 5 | d | 279/279 (100%) | 278 (100%) | 1 (0%) | 91 | 96 |
| 6 | E | 68/68 (100%) | 68 (100%) | 0 | 100 | 100 |
| 6 | e | 68/68 (100%) | 68 (100%) | 0 | 100 | 100 |
| 7 | F | 25/25 (100%) | 25 (100%) | 0 | 100 | 100 |
| 7 | f | 25/25 (100%) | 25 (100%) | 0 | 100 | 100 |
| 8 | H | 56/56 (100%) | 56 (100%) | 0 | 100 | 100 |
| 8 | h | 56/56 (100%) | 56 (100%) | 0 | 100 | 100 |
| 9 | I | 31/31 (100%) | 30 (97%) | 1 (3%) | 39 | 70 |
| 9 | i | 31/31 (100%) | 31 (100%) | 0 | 100 | 100 |
| 10 | J | 27/27 (100%) | 27 (100%) | 0 | 100 | 100 |
| 10 | j | 27/27 (100%) | 27 (100%) | 0 | 100 | 100 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|------------------|-------------|----------|-------------|-----|
| 11 | K | 33/33 (100%) | 33 (100%) | 0 | 100 | 100 |
| 11 | k | 33/33 (100%) | 33 (100%) | 0 | 100 | 100 |
| 12 | L | 35/35 (100%) | 35 (100%) | 0 | 100 | 100 |
| 12 | l | 35/35 (100%) | 35 (100%) | 0 | 100 | 100 |
| 13 | M | 27/27 (100%) | 27 (100%) | 0 | 100 | 100 |
| 13 | m | 27/27 (100%) | 27 (100%) | 0 | 100 | 100 |
| 14 | O | 195/195 (100%) | 192 (98%) | 3 (2%) | 65 | 87 |
| 14 | o | 195/195 (100%) | 194 (100%) | 1 (0%) | 88 | 95 |
| 15 | P | 151/151 (100%) | 151 (100%) | 0 | 100 | 100 |
| 15 | p | 151/151 (100%) | 151 (100%) | 0 | 100 | 100 |
| 16 | T | 26/26 (100%) | 26 (100%) | 0 | 100 | 100 |
| 16 | t | 26/26 (100%) | 26 (100%) | 0 | 100 | 100 |
| 17 | W | 34/34 (100%) | 34 (100%) | 0 | 100 | 100 |
| 17 | w | 34/34 (100%) | 34 (100%) | 0 | 100 | 100 |
| 18 | X | 21/21 (100%) | 21 (100%) | 0 | 100 | 100 |
| 18 | x | 21/21 (100%) | 21 (100%) | 0 | 100 | 100 |
| 19 | Z | 50/50 (100%) | 49 (98%) | 1 (2%) | 55 | 82 |
| 19 | z | 50/50 (100%) | 50 (100%) | 0 | 100 | 100 |
| 20 | N | 171/171 (100%) | 170 (99%) | 1 (1%) | 86 | 95 |
| 20 | n | 171/171 (100%) | 171 (100%) | 0 | 100 | 100 |
| 21 | G | 168/168 (100%) | 168 (100%) | 0 | 100 | 100 |
| 21 | g | 168/168 (100%) | 168 (100%) | 0 | 100 | 100 |
| 22 | R | 158/158 (100%) | 157 (99%) | 1 (1%) | 86 | 95 |
| 22 | r | 158/158 (100%) | 158 (100%) | 0 | 100 | 100 |
| 23 | S | 189/190 (100%) | 188 (100%) | 1 (0%) | 88 | 95 |
| 23 | s | 190/190 (100%) | 190 (100%) | 0 | 100 | 100 |
| 24 | Y | 167/167 (100%) | 166 (99%) | 1 (1%) | 86 | 95 |
| 24 | y | 167/167 (100%) | 165 (99%) | 2 (1%) | 71 | 90 |
| 25 | U | 26/26 (100%) | 26 (100%) | 0 | 100 | 100 |
| 25 | u | 26/26 (100%) | 26 (100%) | 0 | 100 | 100 |
| All | All | 5953/5952 (100%) | 5935 (100%) | 18 (0%) | 92 | 97 |

All (18) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 334 | ARG |
| 4 | C | 406 | ASN |
| 9 | I | 34 | LYS |
| 14 | O | 120 | ASP |
| 14 | O | 124 | ARG |
| 14 | O | 137 | THR |
| 19 | Z | 58 | ASN |
| 20 | N | 170 | ASN |
| 22 | R | 270 | LYS |
| 23 | S | 285 | ARG |
| 24 | Y | 46 | ARG |
| 1 | a | 92 | HIS |
| 1 | a | 332 | HIS |
| 4 | c | 406 | ASN |
| 5 | d | 180 | ARG |
| 14 | o | 124 | ARG |
| 24 | y | 76 | LEU |
| 24 | y | 149 | GLN |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (16) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 187 | GLN |
| 1 | A | 303 | ASN |
| 2 | B | 26 | HIS |
| 4 | C | 16 | GLN |
| 4 | C | 406 | ASN |
| 8 | H | 69 | ASN |
| 24 | Y | 247 | ASN |
| 1 | a | 92 | HIS |
| 1 | a | 181 | ASN |
| 1 | a | 198 | HIS |
| 1 | a | 230 | ASN |
| 3 | v | 32 | ASN |
| 8 | h | 69 | ASN |
| 15 | p | 109 | ASN |
| 20 | n | 170 | ASN |
| 24 | y | 149 | GLN |

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 343 ligands modelled in this entry, 8 are monoatomic - leaving 335 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 |
| 29 | CLA | d | 403 | - | 65,73,73 | 1.38 | 8 (12%) | 76,113,113 | 1.96 | 16 (21%) |
| 29 | CLA | a | 405 | - | 65,73,73 | 1.33 | 6 (9%) | 76,113,113 | 2.01 | 19 (25%) |
| 32 | SQD | c | 626 | - | 53,54,54 | 0.79 | 0 | 62,65,65 | 0.90 | 2 (3%) |
| 29 | CLA | R | 612 | - | 60,68,73 | 1.42 | 8 (13%) | 70,107,113 | 2.07 | 16 (22%) |
| 29 | CLA | D | 403 | - | 65,73,73 | 1.38 | 8 (12%) | 76,113,113 | 1.96 | 16 (21%) |
| 45 | CHL | S | 608 | - | 61,69,74 | 0.87 | 3 (4%) | 67,108,114 | 1.26 | 10 (14%) |
| 45 | CHL | N | 606 | - | 66,74,74 | 0.87 | 4 (6%) | 73,114,114 | 1.17 | 9 (12%) |
| 29 | CLA | C | 508 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 1.99 | 16 (21%) |
| 44 | RRX | h | 101 | - | 42,42,42 | 4.87 | 24 (57%) | 57,58,58 | 2.03 | 19 (33%) |
| 48 | NEX | R | 622 | - | 38,46,46 | 3.42 | 10 (26%) | 50,70,70 | 1.69 | 11 (22%) |
| 39 | LHG | y | 624 | - | 48,48,48 | 0.38 | 0 | 51,54,54 | 1.02 | 3 (5%) |
| 29 | CLA | Y | 613 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.03 | 20 (26%) |
| 45 | CHL | N | 608 | - | 50,58,74 | 0.89 | 2 (4%) | 52,94,114 | 1.41 | 11 (21%) |
| 33 | LMG | A | 413 | - | 48,48,55 | 0.99 | 5 (10%) | 56,56,63 | 1.17 | 4 (7%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 48 | NEX | n | 623 | - | 38,46,46 | 3.37 | 10 (26%) | 50,70,70 | 1.71 | 12 (24%) |
| 29 | CLA | c | 501 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.08 | 18 (23%) |
| 29 | CLA | B | 608 | - | 65,73,73 | 1.33 | 7 (10%) | 76,113,113 | 2.04 | 16 (21%) |
| 29 | CLA | S | 605 | - | 50,58,73 | 1.58 | 9 (18%) | 58,95,113 | 2.44 | 18 (31%) |
| 29 | CLA | S | 614 | - | 55,63,73 | 1.47 | 8 (14%) | 64,101,113 | 2.12 | 15 (23%) |
| 29 | CLA | N | 610 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.01 | 18 (23%) |
| 38 | DGD | c | 519 | - | 63,63,67 | 1.12 | 5 (7%) | 77,77,81 | 1.03 | 3 (3%) |
| 29 | CLA | y | 604 | - | 65,73,73 | 1.34 | 6 (9%) | 76,113,113 | 1.95 | 18 (23%) |
| 29 | CLA | n | 612 | - | 45,53,73 | 1.63 | 8 (17%) | 52,89,113 | 2.11 | 14 (26%) |
| 45 | CHL | R | 607 | - | 50,58,74 | 0.96 | 3 (6%) | 52,94,114 | 1.38 | 8 (15%) |
| 29 | CLA | g | 614 | - | 49,57,73 | 1.56 | 9 (18%) | 55,93,113 | 2.26 | 15 (27%) |
| 29 | CLA | N | 614 | - | 49,57,73 | 1.55 | 8 (16%) | 55,93,113 | 2.26 | 16 (29%) |
| 29 | CLA | a | 406 | - | 65,73,73 | 1.33 | 6 (9%) | 76,113,113 | 2.06 | 17 (22%) |
| 48 | NEX | G | 623 | - | 38,46,46 | 3.31 | 10 (26%) | 50,70,70 | 1.77 | 11 (22%) |
| 51 | SPH | Y | 625 | - | 19,20,20 | 0.63 | 0 | 18,21,21 | 1.10 | 1 (5%) |
| 48 | NEX | g | 623 | - | 38,46,46 | 3.33 | 9 (23%) | 50,70,70 | 1.81 | 13 (26%) |
| 29 | CLA | s | 605 | - | 50,58,73 | 1.57 | 9 (18%) | 58,95,113 | 2.40 | 18 (31%) |
| 39 | LHG | D | 410 | - | 38,38,48 | 0.43 | 0 | 41,44,54 | 1.07 | 2 (4%) |
| 39 | LHG | n | 624 | - | 48,48,48 | 0.38 | 0 | 51,54,54 | 1.11 | 4 (7%) |
| 29 | CLA | c | 502 | - | 65,73,73 | 1.36 | 7 (10%) | 76,113,113 | 2.13 | 16 (21%) |
| 29 | CLA | Y | 611 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.89 | 13 (17%) |
| 46 | LUT | N | 621 | - | 42,43,43 | 2.36 | 1 (2%) | 51,60,60 | 1.92 | 13 (25%) |
| 45 | CHL | s | 607 | - | 43,51,74 | 1.02 | 3 (6%) | 45,86,114 | 1.44 | 7 (15%) |
| 29 | CLA | s | 609 | - | 60,68,73 | 1.42 | 9 (15%) | 70,107,113 | 2.00 | 16 (22%) |
| 46 | LUT | s | 621 | - | 42,43,43 | 2.32 | 1 (2%) | 51,60,60 | 1.99 | 14 (27%) |
| 29 | CLA | S | 612 | - | 45,53,73 | 1.63 | 8 (17%) | 52,89,113 | 2.14 | 12 (23%) |
| 29 | CLA | S | 617 | - | 50,58,73 | 1.55 | 9 (18%) | 58,95,113 | 2.25 | 16 (27%) |
| 39 | LHG | g | 624 | - | 48,48,48 | 0.39 | 0 | 51,54,54 | 1.04 | 3 (5%) |
| 29 | CLA | B | 611 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.95 | 15 (19%) |
| 48 | NEX | y | 623 | - | 38,46,46 | 3.37 | 10 (26%) | 50,70,70 | 1.71 | 13 (26%) |
| 46 | LUT | R | 620 | - | 42,43,43 | 2.35 | 1 (2%) | 51,60,60 | 2.16 | 14 (27%) |
| 29 | CLA | s | 614 | - | 55,63,73 | 1.46 | 7 (12%) | 64,101,113 | 2.17 | 15 (23%) |
| 29 | CLA | b | 613 | - | 65,73,73 | 1.32 | 8 (12%) | 76,113,113 | 1.96 | 17 (22%) |
| 29 | CLA | G | 611 | - | 45,53,73 | 1.62 | 8 (17%) | 52,89,113 | 2.19 | 15 (28%) |
| 39 | LHG | l | 101 | - | 48,48,48 | 0.40 | 0 | 51,54,54 | 0.92 | 2 (3%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 29 | CLA | s | 610 | - | 65,73,73 | 1.37 | 9 (13%) | 76,113,113 | 1.97 | 19 (25%) |
| 29 | CLA | A | 407 | - | 49,57,73 | 1.56 | 7 (14%) | 55,93,113 | 2.25 | 16 (29%) |
| 33 | LMG | c | 521 | - | 51,51,55 | 1.07 | 6 (11%) | 59,59,63 | 1.10 | 3 (5%) |
| 32 | SQD | b | 621 | - | 53,54,54 | 0.79 | 0 | 62,65,65 | 0.90 | 2 (3%) |
| 45 | CHL | N | 601 | - | 66,74,74 | 0.82 | 3 (4%) | 73,114,114 | 1.17 | 8 (10%) |
| 29 | CLA | C | 511 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.11 | 19 (25%) |
| 29 | CLA | g | 603 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 2.00 | 18 (23%) |
| 29 | CLA | B | 617 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 4.31 | 17 (22%) |
| 29 | CLA | C | 509 | - | 65,73,73 | 1.33 | 6 (9%) | 76,113,113 | 2.04 | 19 (25%) |
| 31 | BCR | b | 619 | - | 41,41,41 | 1.83 | 4 (9%) | 56,56,56 | 4.38 | 17 (30%) |
| 29 | CLA | g | 610 | - | 65,73,73 | 1.35 | 7 (10%) | 76,113,113 | 2.01 | 18 (23%) |
| 29 | CLA | N | 602 | - | 65,73,73 | 1.36 | 7 (10%) | 76,113,113 | 1.99 | 20 (26%) |
| 42 | PL9 | d | 405 | - | 55,55,55 | 1.21 | 4 (7%) | 68,69,69 | 1.49 | 12 (17%) |
| 29 | CLA | n | 604 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.05 | 20 (26%) |
| 45 | CHL | G | 606 | - | 50,58,74 | 0.99 | 4 (8%) | 52,94,114 | 1.38 | 8 (15%) |
| 45 | CHL | g | 605 | 21 | 48,56,74 | 0.95 | 3 (6%) | 51,92,114 | 1.41 | 10 (19%) |
| 29 | CLA | B | 607 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.00 | 18 (23%) |
| 47 | XAT | y | 622 | - | 39,47,47 | 0.68 | 1 (2%) | 54,74,74 | 3.73 | 19 (35%) |
| 29 | CLA | A | 410 | - | 60,68,73 | 1.41 | 9 (15%) | 70,107,113 | 2.10 | 16 (22%) |
| 39 | LHG | c | 625 | - | 46,46,48 | 0.41 | 0 | 49,52,54 | 1.00 | 2 (4%) |
| 36 | DGA | b | 623 | - | 43,43,43 | 1.13 | 2 (4%) | 45,45,45 | 1.51 | 3 (6%) |
| 45 | CHL | N | 605 | 20 | 66,74,74 | 0.83 | 3 (4%) | 73,114,114 | 1.20 | 10 (13%) |
| 45 | CHL | g | 608 | - | 44,52,74 | 0.99 | 3 (6%) | 46,87,114 | 1.42 | 9 (19%) |
| 29 | CLA | y | 614 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.95 | 16 (21%) |
| 33 | LMG | d | 411 | - | 46,46,55 | 0.92 | 3 (6%) | 54,54,63 | 1.10 | 2 (3%) |
| 31 | BCR | C | 515 | - | 41,41,41 | 1.84 | 4 (9%) | 56,56,56 | 4.22 | 13 (23%) |
| 29 | CLA | b | 608 | - | 65,73,73 | 1.34 | 6 (9%) | 76,113,113 | 2.05 | 17 (22%) |
| 29 | CLA | c | 504 | - | 65,73,73 | 1.32 | 7 (10%) | 76,113,113 | 2.05 | 19 (25%) |
| 29 | CLA | N | 603 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.04 | 21 (27%) |
| 29 | CLA | C | 510 | - | 65,73,73 | 1.33 | 7 (10%) | 76,113,113 | 2.06 | 16 (21%) |
| 29 | CLA | y | 608 | - | 50,58,73 | 1.55 | 8 (16%) | 58,95,113 | 2.22 | 18 (31%) |
| 29 | CLA | b | 602 | - | 65,73,73 | 1.37 | 9 (13%) | 76,113,113 | 1.98 | 17 (22%) |
| 33 | LMG | B | 622 | - | 44,44,55 | 0.85 | 2 (4%) | 52,52,63 | 1.06 | 3 (5%) |
| 29 | CLA | c | 511 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.08 | 20 (26%) |
| 37 | GOL | b | 624 | - | 5,5,5 | 0.59 | 0 | 5,5,5 | 0.22 | 0 |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 29 | CLA | c | 509 | - | 65,73,73 | 1.32 | 7 (10%) | 76,113,113 | 2.01 | 17 (22%) |
| 45 | CHL | g | 601 | 21 | 66,74,74 | 0.82 | 3 (4%) | 73,114,114 | 1.24 | 10 (13%) |
| 47 | XAT | G | 622 | - | 39,47,47 | 0.69 | 1 (2%) | 54,74,74 | 1.90 | 13 (24%) |
| 29 | CLA | c | 510 | - | 65,73,73 | 1.33 | 8 (12%) | 76,113,113 | 2.03 | 16 (21%) |
| 33 | LMG | H | 102 | - | 48,48,55 | 1.00 | 5 (10%) | 56,56,63 | 1.07 | 2 (3%) |
| 47 | XAT | R | 621 | - | 39,47,47 | 0.69 | 1 (2%) | 54,74,74 | 2.22 | 17 (31%) |
| 45 | CHL | g | 607 | - | 50,58,74 | 0.88 | 2 (4%) | 52,94,114 | 1.41 | 10 (19%) |
| 45 | CHL | N | 609 | - | 66,74,74 | 0.78 | 2 (3%) | 73,114,114 | 1.25 | 11 (15%) |
| 29 | CLA | G | 614 | - | 49,57,73 | 1.57 | 9 (18%) | 55,93,113 | 2.28 | 16 (29%) |
| 29 | CLA | n | 603 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.07 | 19 (25%) |
| 29 | CLA | R | 604 | - | 49,57,73 | 1.52 | 8 (16%) | 55,93,113 | 2.33 | 18 (32%) |
| 39 | LHG | D | 409 | - | 48,48,48 | 0.39 | 0 | 51,54,54 | 1.04 | 3 (5%) |
| 29 | CLA | y | 610 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.97 | 17 (22%) |
| 29 | CLA | b | 603 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.03 | 18 (23%) |
| 31 | BCR | c | 515 | - | 41,41,41 | 1.82 | 4 (9%) | 56,56,56 | 4.22 | 13 (23%) |
| 30 | PHO | a | 409 | - | 51,69,69 | 0.98 | 3 (5%) | 47,99,99 | 1.24 | 5 (10%) |
| 45 | CHL | y | 606 | - | 66,74,74 | 0.85 | 3 (4%) | 73,114,114 | 1.22 | 10 (13%) |
| 45 | CHL | G | 609 | - | 66,74,74 | 0.86 | 3 (4%) | 73,114,114 | 1.19 | 10 (13%) |
| 45 | CHL | n | 606 | - | 66,74,74 | 0.89 | 4 (6%) | 73,114,114 | 1.17 | 9 (12%) |
| 38 | DGD | c | 523 | - | 67,67,67 | 1.18 | 7 (10%) | 81,81,81 | 0.98 | 2 (2%) |
| 39 | LHG | G | 630 | - | 48,48,48 | 0.39 | 0 | 51,54,54 | 1.05 | 3 (5%) |
| 31 | BCR | C | 516 | - | 41,41,41 | 1.85 | 4 (9%) | 56,56,56 | 4.37 | 16 (28%) |
| 39 | LHG | S | 624 | - | 44,44,48 | 0.41 | 0 | 47,50,54 | 1.10 | 3 (6%) |
| 29 | CLA | s | 603 | - | 65,73,73 | 1.38 | 10 (15%) | 76,113,113 | 1.89 | 14 (18%) |
| 29 | CLA | y | 612 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.94 | 15 (19%) |
| 29 | CLA | y | 602 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.94 | 21 (27%) |
| 45 | CHL | y | 601 | 24 | 66,74,74 | 0.79 | 2 (3%) | 73,114,114 | 1.20 | 8 (10%) |
| 29 | CLA | R | 609 | - | 60,68,73 | 1.42 | 7 (11%) | 70,107,113 | 2.02 | 15 (21%) |
| 29 | CLA | r | 609 | - | 60,68,73 | 1.41 | 8 (13%) | 70,107,113 | 2.02 | 14 (20%) |
| 49 | LPX | s | 625 | - | 29,29,29 | 0.98 | 2 (6%) | 31,33,33 | 0.98 | 1 (3%) |
| 29 | CLA | g | 612 | - | 43,51,73 | 1.67 | 8 (18%) | 49,86,113 | 2.19 | 13 (26%) |
| 32 | SQD | A | 412 | - | 50,51,54 | 0.84 | 0 | 59,62,65 | 0.94 | 3 (5%) |
| 39 | LHG | Y | 624 | - | 48,48,48 | 0.38 | 0 | 51,54,54 | 1.03 | 3 (5%) |
| 45 | CHL | y | 605 | 24 | 46,54,74 | 1.00 | 2 (4%) | 49,90,114 | 1.38 | 8 (16%) |
| 48 | NEX | N | 623 | - | 38,46,46 | 3.33 | 9 (23%) | 50,70,70 | 1.76 | 14 (28%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 29 | CLA | N | 613 | - | 65,73,73 | 1.37 | 10 (15%) | 76,113,113 | 1.99 | 16 (21%) |
| 37 | GOL | B | 627 | - | 5,5,5 | 0.58 | 0 | 5,5,5 | 0.21 | 0 |
| 33 | LMG | h | 102 | - | 48,48,55 | 1.00 | 4 (8%) | 56,56,63 | 1.09 | 2 (3%) |
| 33 | LMG | a | 413 | - | 48,48,55 | 0.99 | 5 (10%) | 56,56,63 | 1.12 | 3 (5%) |
| 46 | LUT | N | 620 | - | 42,43,43 | 2.35 | 1 (2%) | 51,60,60 | 1.92 | 13 (25%) |
| 29 | CLA | R | 610 | - | 60,68,73 | 1.42 | 9 (15%) | 70,107,113 | 2.07 | 20 (28%) |
| 36 | DGA | C | 524 | - | 43,43,43 | 1.13 | 3 (6%) | 45,45,45 | 1.52 | 3 (6%) |
| 29 | CLA | r | 610 | - | 60,68,73 | 1.40 | 10 (16%) | 70,107,113 | 2.15 | 20 (28%) |
| 31 | BCR | d | 404 | - | 41,41,41 | 1.84 | 4 (9%) | 56,56,56 | 4.11 | 17 (30%) |
| 26 | OEX | A | 401 | 1,52 | 0,15,15 | - | - | - | - | - |
| 29 | CLA | c | 505 | - | 65,73,73 | 1.36 | 7 (10%) | 76,113,113 | 2.02 | 15 (19%) |
| 50 | 3PH | i | 101 | - | 47,47,47 | 0.86 | 4 (8%) | 51,52,52 | 1.13 | 2 (3%) |
| 49 | LPX | S | 625 | - | 29,29,29 | 0.99 | 2 (6%) | 31,33,33 | 0.98 | 1 (3%) |
| 45 | CHL | r | 606 | - | 44,52,74 | 1.02 | 3 (6%) | 46,87,114 | 1.36 | 9 (19%) |
| 50 | 3PH | S | 626 | - | 47,47,47 | 0.86 | 4 (8%) | 51,52,52 | 1.13 | 2 (3%) |
| 29 | CLA | B | 604 | - | 65,73,73 | 1.36 | 9 (13%) | 76,113,113 | 1.92 | 17 (22%) |
| 29 | CLA | s | 612 | - | 45,53,73 | 1.61 | 8 (17%) | 52,89,113 | 2.16 | 15 (28%) |
| 39 | LHG | D | 408 | - | 43,43,48 | 0.41 | 0 | 46,49,54 | 1.14 | 3 (6%) |
| 39 | LHG | s | 624 | - | 44,44,48 | 0.42 | 0 | 47,50,54 | 1.11 | 3 (6%) |
| 38 | DGD | c | 520 | - | 60,60,67 | 1.06 | 6 (10%) | 74,74,81 | 0.98 | 2 (2%) |
| 45 | CHL | G | 601 | 21 | 66,74,74 | 0.81 | 3 (4%) | 73,114,114 | 1.24 | 11 (15%) |
| 29 | CLA | b | 605 | - | 65,73,73 | 1.38 | 8 (12%) | 76,113,113 | 2.08 | 16 (21%) |
| 41 | BCT | D | 401 | 27 | 2,3,3 | 1.27 | 0 | 2,3,3 | 2.64 | 2 (100%) |
| 29 | CLA | S | 604 | - | 55,63,73 | 1.45 | 7 (12%) | 64,101,113 | 2.18 | 17 (26%) |
| 29 | CLA | n | 614 | - | 49,57,73 | 1.55 | 10 (20%) | 55,93,113 | 2.30 | 18 (32%) |
| 29 | CLA | r | 613 | - | 46,54,73 | 1.60 | 9 (19%) | 53,90,113 | 2.19 | 15 (28%) |
| 51 | SPH | y | 625 | - | 19,20,20 | 0.64 | 0 | 18,21,21 | 1.10 | 1 (5%) |
| 47 | XAT | n | 622 | - | 39,47,47 | 0.70 | 1 (2%) | 54,74,74 | 1.97 | 12 (22%) |
| 39 | LHG | C | 525 | - | 46,46,48 | 0.39 | 0 | 49,52,54 | 1.03 | 2 (4%) |
| 29 | CLA | N | 611 | - | 49,57,73 | 1.57 | 10 (20%) | 55,93,113 | 2.22 | 15 (27%) |
| 33 | LMG | J | 101 | - | 45,45,55 | 0.90 | 3 (6%) | 53,53,63 | 1.00 | 2 (3%) |
| 29 | CLA | G | 604 | - | 49,57,73 | 1.56 | 8 (16%) | 55,93,113 | 2.30 | 17 (30%) |
| 29 | CLA | b | 612 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.05 | 17 (22%) |
| 29 | CLA | c | 512 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 1.96 | 19 (25%) |
| 29 | CLA | R | 608 | - | 60,68,73 | 1.43 | 9 (15%) | 70,107,113 | 2.01 | 16 (22%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 29 | CLA | C | 505 | - | 65,73,73 | 1.36 | 9 (13%) | 76,113,113 | 2.03 | 16 (21%) |
| 39 | LHG | d | 408 | - | 43,43,48 | 0.41 | 0 | 46,49,54 | 1.14 | 3 (6%) |
| 36 | DGA | c | 524 | - | 43,43,43 | 1.13 | 3 (6%) | 45,45,45 | 1.52 | 3 (6%) |
| 29 | CLA | Y | 604 | - | 65,73,73 | 1.35 | 9 (13%) | 76,113,113 | 1.93 | 18 (23%) |
| 29 | CLA | b | 610 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.00 | 15 (19%) |
| 31 | BCR | C | 517 | - | 41,41,41 | 1.83 | 4 (9%) | 56,56,56 | 4.23 | 14 (25%) |
| 29 | CLA | a | 407 | - | 49,57,73 | 1.56 | 8 (16%) | 55,93,113 | 2.24 | 18 (32%) |
| 29 | CLA | d | 402 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.90 | 14 (18%) |
| 29 | CLA | y | 603 | - | 65,73,73 | 1.33 | 8 (12%) | 76,113,113 | 2.02 | 19 (25%) |
| 29 | CLA | D | 402 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.93 | 15 (19%) |
| 45 | CHL | S | 607 | - | 43,51,74 | 1.01 | 3 (6%) | 45,86,114 | 1.45 | 8 (17%) |
| 45 | CHL | s | 601 | 23 | 46,54,74 | 1.03 | 4 (8%) | 49,90,114 | 1.37 | 9 (18%) |
| 29 | CLA | b | 609 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.14 | 17 (22%) |
| 29 | CLA | R | 613 | - | 46,54,73 | 1.61 | 8 (17%) | 53,90,113 | 2.18 | 14 (26%) |
| 29 | CLA | R | 611 | - | 46,54,73 | 1.62 | 10 (21%) | 53,90,113 | 2.10 | 14 (26%) |
| 45 | CHL | y | 607 | - | 66,74,74 | 0.77 | 2 (3%) | 73,114,114 | 1.22 | 10 (13%) |
| 29 | CLA | N | 612 | - | 45,53,73 | 1.63 | 9 (20%) | 52,89,113 | 2.14 | 11 (21%) |
| 45 | CHL | n | 601 | - | 66,74,74 | 0.82 | 2 (3%) | 73,114,114 | 1.21 | 8 (10%) |
| 29 | CLA | b | 614 | - | 65,73,73 | 1.33 | 6 (9%) | 76,113,113 | 2.00 | 18 (23%) |
| 29 | CLA | C | 504 | - | 65,73,73 | 1.33 | 7 (10%) | 76,113,113 | 2.05 | 18 (23%) |
| 46 | LUT | S | 620 | - | 42,43,43 | 2.39 | 1 (2%) | 51,60,60 | 2.09 | 12 (23%) |
| 29 | CLA | R | 603 | - | 60,68,73 | 1.41 | 7 (11%) | 70,107,113 | 2.05 | 18 (25%) |
| 45 | CHL | Y | 606 | - | 66,74,74 | 0.87 | 4 (6%) | 73,114,114 | 1.16 | 9 (12%) |
| 29 | CLA | G | 612 | - | 43,51,73 | 1.67 | 8 (18%) | 49,86,113 | 2.18 | 12 (24%) |
| 29 | CLA | b | 616 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.97 | 16 (21%) |
| 29 | CLA | r | 602 | - | 60,68,73 | 1.41 | 9 (15%) | 70,107,113 | 2.03 | 17 (24%) |
| 37 | GOL | b | 625 | - | 5,5,5 | 0.58 | 0 | 5,5,5 | 0.28 | 0 |
| 32 | SQD | C | 526 | - | 53,54,54 | 0.79 | 0 | 62,65,65 | 0.89 | 2 (3%) |
| 47 | XAT | N | 622 | - | 39,47,47 | 0.69 | 1 (2%) | 54,74,74 | 1.96 | 13 (24%) |
| 31 | BCR | b | 618 | - | 41,41,41 | 1.82 | 4 (9%) | 56,56,56 | 4.30 | 15 (26%) |
| 29 | CLA | b | 604 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.91 | 18 (23%) |
| 46 | LUT | y | 621 | - | 42,43,43 | 2.35 | 1 (2%) | 51,60,60 | 2.03 | 12 (23%) |
| 45 | CHL | N | 607 | - | 66,74,74 | 0.76 | 2 (3%) | 73,114,114 | 1.27 | 10 (13%) |
| 47 | XAT | Y | 622 | - | 39,47,47 | 0.70 | 1 (2%) | 54,74,74 | 3.70 | 16 (29%) |
| 38 | DGD | C | 523 | - | 67,67,67 | 1.18 | 7 (10%) | 81,81,81 | 0.98 | 2 (2%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 46 | LUT | n | 621 | - | 42,43,43 | 2.33 | 1 (2%) | 51,60,60 | 1.85 | 11 (21%) |
| 45 | CHL | S | 606 | - | 44,52,74 | 1.02 | 3 (6%) | 46,87,114 | 1.40 | 9 (19%) |
| 50 | 3PH | s | 626 | - | 47,47,47 | 0.86 | 4 (8%) | 51,52,52 | 1.15 | 2 (3%) |
| 29 | CLA | B | 609 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 2.10 | 17 (22%) |
| 29 | CLA | B | 616 | - | 65,73,73 | 1.36 | 7 (10%) | 76,113,113 | 1.97 | 15 (19%) |
| 32 | SQD | B | 621 | - | 53,54,54 | 0.79 | 0 | 62,65,65 | 0.90 | 2 (3%) |
| 29 | CLA | y | 611 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.94 | 16 (21%) |
| 29 | CLA | G | 613 | - | 65,73,73 | 1.35 | 9 (13%) | 76,113,113 | 2.02 | 18 (23%) |
| 31 | BCR | c | 517 | - | 41,41,41 | 1.81 | 4 (9%) | 56,56,56 | 4.10 | 19 (33%) |
| 31 | BCR | B | 618 | - | 41,41,41 | 1.81 | 4 (9%) | 56,56,56 | 4.29 | 15 (26%) |
| 29 | CLA | C | 513 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.02 | 19 (25%) |
| 29 | CLA | S | 609 | - | 60,68,73 | 1.41 | 8 (13%) | 70,107,113 | 2.04 | 17 (24%) |
| 29 | CLA | g | 611 | - | 45,53,73 | 1.62 | 8 (17%) | 52,89,113 | 2.20 | 13 (25%) |
| 29 | CLA | C | 503 | - | 65,73,73 | 1.36 | 9 (13%) | 76,113,113 | 2.02 | 19 (25%) |
| 29 | CLA | b | 615 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.16 | 19 (25%) |
| 29 | CLA | b | 617 | - | 65,73,73 | 1.35 | 7 (10%) | 76,113,113 | 4.30 | 17 (22%) |
| 29 | CLA | g | 604 | - | 49,57,73 | 1.56 | 8 (16%) | 55,93,113 | 2.27 | 17 (30%) |
| 43 | HEM | f | 101 | 7,6 | 41,50,50 | 1.54 | 4 (9%) | 45,82,82 | 1.55 | 7 (15%) |
| 47 | XAT | r | 622 | - | 39,47,47 | 0.72 | 1 (2%) | 54,74,74 | 2.18 | 19 (35%) |
| 29 | CLA | B | 613 | - | 65,73,73 | 1.32 | 7 (10%) | 76,113,113 | 1.95 | 16 (21%) |
| 29 | CLA | S | 610 | - | 65,73,73 | 1.37 | 8 (12%) | 76,113,113 | 1.96 | 19 (25%) |
| 29 | CLA | Y | 602 | - | 65,73,73 | 1.36 | 9 (13%) | 76,113,113 | 1.92 | 19 (25%) |
| 31 | BCR | D | 404 | - | 41,41,41 | 1.85 | 4 (9%) | 56,56,56 | 4.04 | 17 (30%) |
| 46 | LUT | G | 620 | - | 42,43,43 | 2.35 | 1 (2%) | 51,60,60 | 1.96 | 12 (23%) |
| 46 | LUT | g | 621 | - | 42,43,43 | 2.36 | 1 (2%) | 51,60,60 | 2.02 | 12 (23%) |
| 45 | CHL | S | 601 | 23 | 46,54,74 | 1.02 | 4 (8%) | 49,90,114 | 1.35 | 9 (18%) |
| 39 | LHG | N | 624 | - | 48,48,48 | 0.38 | 0 | 51,54,54 | 1.11 | 2 (3%) |
| 32 | SQD | a | 412 | - | 50,51,54 | 0.81 | 0 | 59,62,65 | 0.91 | 2 (3%) |
| 46 | LUT | r | 620 | - | 42,43,43 | 2.35 | 1 (2%) | 51,60,60 | 2.20 | 15 (29%) |
| 48 | NEX | s | 623 | - | 38,46,46 | 3.34 | 10 (26%) | 50,70,70 | 1.72 | 11 (22%) |
| 45 | CHL | s | 606 | - | 44,52,74 | 1.01 | 3 (6%) | 46,87,114 | 1.43 | 10 (21%) |
| 42 | PL9 | D | 405 | - | 55,55,55 | 1.17 | 5 (9%) | 68,69,69 | 1.50 | 13 (19%) |
| 29 | CLA | C | 501 | - | 65,73,73 | 1.36 | 9 (13%) | 76,113,113 | 2.06 | 18 (23%) |
| 29 | CLA | B | 605 | - | 65,73,73 | 1.39 | 8 (12%) | 76,113,113 | 2.10 | 15 (19%) |
| 29 | CLA | b | 611 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.96 | 16 (21%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|--------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 31 | BCR | B | 619 | - | 41,41,41 | 1.84 | 4 (9%) | 56,56,56 | 4.36 | 18 (32%) |
| 35 | C7Z | B | 620 | - | 43,43,43 | 5.41 | 26 (60%) | 58,60,60 | 2.04 | 19 (32%) |
| 48 | NEX | r | 623 | - | 38,46,46 | 3.32 | 9 (23%) | 50,70,70 | 1.54 | 9 (18%) |
| 29 | CLA | c | 513 | - | 65,73,73 | 1.35 | 7 (10%) | 76,113,113 | 2.02 | 16 (21%) |
| 46 | LUT | s | 620 | - | 42,43,43 | 2.41 | 1 (2%) | 51,60,60 | 2.12 | 16 (31%) |
| 29 | CLA | b | 607 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.00 | 19 (25%) |
| 47 | XAT | g | 622 | - | 39,47,47 | 0.69 | 1 (2%) | 54,74,74 | 1.88 | 15 (27%) |
| 45 | CHL | n | 609 | - | 66,74,74 | 0.78 | 2 (3%) | 73,114,114 | 1.33 | 13 (17%) |
| 29 | CLA | S | 602 | - | 60,68,73 | 1.41 | 8 (13%) | 70,107,113 | 2.03 | 17 (24%) |
| 38 | DGD | C | 520 | - | 60,60,67 | 1.07 | 6 (10%) | 74,74,81 | 0.98 | 2 (2%) |
| 46 | LUT | n | 620 | - | 42,43,43 | 2.37 | 1 (2%) | 51,60,60 | 1.82 | 14 (27%) |
| 40 | LMK | C | 527 | - | 38,39,53 | 1.48 | 2 (5%) | 41,46,60 | 1.30 | 2 (4%) |
| 26 | OEX | a | 401 | 4,1,52 | 0,15,15 | - | - | - | - | - |
| 29 | CLA | Y | 603 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 1.98 | 19 (25%) |
| 38 | DGD | C | 518 | - | 56,56,67 | 0.99 | 4 (7%) | 70,70,81 | 1.04 | 3 (4%) |
| 44 | RRX | H | 101 | - | 42,42,42 | 4.87 | 24 (57%) | 57,58,58 | 2.04 | 18 (31%) |
| 29 | CLA | A | 406 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.03 | 16 (21%) |
| 29 | CLA | B | 603 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.00 | 18 (23%) |
| 45 | CHL | g | 609 | - | 66,74,74 | 0.86 | 3 (4%) | 73,114,114 | 1.23 | 10 (13%) |
| 45 | CHL | G | 608 | - | 44,52,74 | 1.00 | 3 (6%) | 46,87,114 | 1.41 | 9 (19%) |
| 29 | CLA | r | 611 | - | 46,54,73 | 1.61 | 10 (21%) | 53,90,113 | 2.12 | 14 (26%) |
| 29 | CLA | c | 507 | 52 | 65,73,73 | 1.37 | 9 (13%) | 76,113,113 | 1.97 | 19 (25%) |
| 45 | CHL | Y | 605 | 24 | 46,54,74 | 1.01 | 3 (6%) | 49,90,114 | 1.41 | 10 (20%) |
| 36 | DGA | B | 625 | - | 43,43,43 | 1.13 | 2 (4%) | 45,45,45 | 1.51 | 3 (6%) |
| 46 | LUT | g | 620 | - | 42,43,43 | 2.37 | 1 (2%) | 51,60,60 | 1.95 | 11 (21%) |
| 29 | CLA | G | 603 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 2.00 | 19 (25%) |
| 29 | CLA | n | 613 | - | 65,73,73 | 1.36 | 10 (15%) | 76,113,113 | 2.01 | 16 (21%) |
| 29 | CLA | s | 613 | - | 55,63,73 | 1.49 | 8 (14%) | 64,101,113 | 2.32 | 16 (25%) |
| 29 | CLA | B | 614 | - | 65,73,73 | 1.32 | 6 (9%) | 76,113,113 | 2.01 | 18 (23%) |
| 30 | PHO | A | 409 | - | 51,69,69 | 1.00 | 3 (5%) | 47,99,99 | 1.20 | 3 (6%) |
| 48 | NEX | Y | 623 | - | 38,46,46 | 3.32 | 9 (23%) | 50,70,70 | 1.80 | 11 (22%) |
| 45 | CHL | G | 605 | 21 | 48,56,74 | 0.96 | 2 (4%) | 51,92,114 | 1.38 | 10 (19%) |
| 29 | CLA | g | 602 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.99 | 19 (25%) |
| 39 | LHG | L | 101 | - | 48,48,48 | 0.40 | 0 | 51,54,54 | 0.92 | 2 (3%) |
| 29 | CLA | C | 512 | - | 65,73,73 | 1.35 | 7 (10%) | 76,113,113 | 1.93 | 17 (22%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 48 | NEX | S | 622 | - | 38,46,46 | 3.28 | 9 (23%) | 50,70,70 | 1.80 | 12 (24%) |
| 29 | CLA | B | 606 | - | 65,73,73 | 1.33 | 8 (12%) | 76,113,113 | 2.05 | 14 (18%) |
| 46 | LUT | y | 620 | - | 42,43,43 | 2.33 | 1 (2%) | 51,60,60 | 1.94 | 15 (29%) |
| 29 | CLA | n | 611 | - | 49,57,73 | 1.56 | 9 (18%) | 55,93,113 | 2.27 | 15 (27%) |
| 45 | CHL | Y | 601 | 24 | 66,74,74 | 0.80 | 2 (3%) | 73,114,114 | 1.20 | 9 (12%) |
| 29 | CLA | g | 613 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.02 | 18 (23%) |
| 29 | CLA | A | 405 | - | 65,73,73 | 1.32 | 6 (9%) | 76,113,113 | 2.03 | 18 (23%) |
| 43 | HEM | F | 101 | 7,6 | 41,50,50 | 1.55 | 3 (7%) | 45,82,82 | 1.51 | 6 (13%) |
| 39 | LHG | d | 410 | - | 38,38,48 | 0.41 | 0 | 41,44,54 | 1.15 | 3 (7%) |
| 45 | CHL | n | 607 | - | 66,74,74 | 0.76 | 2 (3%) | 73,114,114 | 1.28 | 10 (13%) |
| 30 | PHO | A | 408 | - | 51,69,69 | 0.99 | 4 (7%) | 47,99,99 | 1.15 | 4 (8%) |
| 29 | CLA | C | 506 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 2.03 | 19 (25%) |
| 31 | BCR | a | 411 | - | 41,41,41 | 1.83 | 4 (9%) | 56,56,56 | 4.23 | 13 (23%) |
| 30 | PHO | a | 408 | - | 51,69,69 | 1.00 | 4 (7%) | 47,99,99 | 1.15 | 6 (12%) |
| 29 | CLA | r | 608 | - | 60,68,73 | 1.43 | 8 (13%) | 70,107,113 | 2.03 | 15 (21%) |
| 29 | CLA | R | 602 | - | 60,68,73 | 1.42 | 9 (15%) | 70,107,113 | 2.10 | 18 (25%) |
| 33 | LMG | b | 622 | - | 44,44,55 | 0.85 | 3 (6%) | 52,52,63 | 1.07 | 3 (5%) |
| 29 | CLA | N | 604 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 2.05 | 20 (26%) |
| 29 | CLA | r | 604 | - | 49,57,73 | 1.54 | 8 (16%) | 55,93,113 | 2.28 | 17 (30%) |
| 29 | CLA | S | 603 | - | 65,73,73 | 1.39 | 10 (15%) | 76,113,113 | 1.91 | 14 (18%) |
| 29 | CLA | s | 611 | - | 65,73,73 | 1.36 | 7 (10%) | 76,113,113 | 1.96 | 16 (21%) |
| 29 | CLA | s | 602 | - | 60,68,73 | 1.38 | 8 (13%) | 70,107,113 | 2.05 | 17 (24%) |
| 38 | DGD | C | 519 | - | 63,63,67 | 1.12 | 6 (9%) | 77,77,81 | 1.06 | 4 (5%) |
| 37 | GOL | y | 626 | - | 5,5,5 | 0.57 | 0 | 5,5,5 | 0.25 | 0 |
| 29 | CLA | r | 612 | - | 60,68,73 | 1.43 | 9 (15%) | 70,107,113 | 2.03 | 17 (24%) |
| 29 | CLA | c | 506 | - | 65,73,73 | 1.37 | 8 (12%) | 76,113,113 | 2.05 | 19 (25%) |
| 45 | CHL | Y | 607 | - | 66,74,74 | 0.76 | 2 (3%) | 73,114,114 | 1.21 | 9 (12%) |
| 46 | LUT | Y | 621 | - | 42,43,43 | 2.34 | 1 (2%) | 51,60,60 | 1.95 | 14 (27%) |
| 29 | CLA | B | 612 | - | 65,73,73 | 1.33 | 8 (12%) | 76,113,113 | 1.99 | 17 (22%) |
| 29 | CLA | B | 602 | - | 65,73,73 | 1.37 | 9 (13%) | 76,113,113 | 1.99 | 17 (22%) |
| 38 | DGD | c | 518 | - | 56,56,67 | 0.99 | 4 (7%) | 70,70,81 | 1.05 | 3 (4%) |
| 29 | CLA | Y | 612 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.97 | 17 (22%) |
| 29 | CLA | a | 410 | - | 60,68,73 | 1.40 | 7 (11%) | 70,107,113 | 2.11 | 17 (24%) |
| 31 | BCR | C | 514 | - | 41,41,41 | 1.84 | 4 (9%) | 56,56,56 | 4.43 | 12 (21%) |
| 29 | CLA | C | 507 | 52 | 65,73,73 | 1.37 | 7 (10%) | 76,113,113 | 1.96 | 18 (23%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 29 | CLA | n | 602 | - | 65,73,73 | 1.36 | 8 (12%) | 76,113,113 | 1.97 | 22 (28%) |
| 40 | LMK | c | 627 | - | 38,39,53 | 1.48 | 2 (5%) | 41,46,60 | 1.33 | 2 (4%) |
| 31 | BCR | c | 514 | - | 41,41,41 | 1.84 | 4 (9%) | 56,56,56 | 4.38 | 14 (25%) |
| 29 | CLA | s | 617 | - | 50,58,73 | 1.53 | 9 (18%) | 58,95,113 | 2.27 | 19 (32%) |
| 29 | CLA | B | 615 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 2.17 | 20 (26%) |
| 29 | CLA | r | 603 | - | 60,68,73 | 1.42 | 9 (15%) | 70,107,113 | 2.03 | 17 (24%) |
| 45 | CHL | n | 605 | 20 | 66,74,74 | 0.84 | 3 (4%) | 73,114,114 | 1.18 | 10 (13%) |
| 45 | CHL | G | 607 | - | 50,58,74 | 0.87 | 2 (4%) | 52,94,114 | 1.42 | 11 (21%) |
| 29 | CLA | c | 503 | - | 65,73,73 | 1.37 | 9 (13%) | 76,113,113 | 2.01 | 18 (23%) |
| 45 | CHL | s | 608 | - | 61,69,74 | 0.86 | 3 (4%) | 67,108,114 | 1.24 | 9 (13%) |
| 45 | CHL | r | 607 | - | 50,58,74 | 0.94 | 3 (6%) | 52,94,114 | 1.37 | 9 (17%) |
| 29 | CLA | G | 602 | - | 65,73,73 | 1.35 | 9 (13%) | 76,113,113 | 1.97 | 18 (23%) |
| 29 | CLA | n | 610 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.03 | 17 (22%) |
| 45 | CHL | y | 609 | - | 66,74,74 | 0.83 | 3 (4%) | 73,114,114 | 1.23 | 12 (16%) |
| 29 | CLA | s | 604 | - | 55,63,73 | 1.48 | 7 (12%) | 64,101,113 | 2.07 | 14 (21%) |
| 41 | BCT | d | 401 | 27 | 2,3,3 | 1.26 | 0 | 2,3,3 | 2.67 | 2 (100%) |
| 31 | BCR | c | 516 | - | 41,41,41 | 1.86 | 4 (9%) | 56,56,56 | 4.30 | 15 (26%) |
| 33 | LMG | D | 411 | - | 46,46,55 | 0.92 | 4 (8%) | 54,54,63 | 1.11 | 2 (3%) |
| 33 | LMG | C | 521 | - | 51,51,55 | 1.06 | 6 (11%) | 59,59,63 | 1.09 | 3 (5%) |
| 29 | CLA | S | 613 | - | 55,63,73 | 1.48 | 8 (14%) | 64,101,113 | 2.33 | 16 (25%) |
| 31 | BCR | A | 411 | - | 41,41,41 | 1.84 | 4 (9%) | 56,56,56 | 4.21 | 15 (26%) |
| 45 | CHL | n | 608 | - | 50,58,74 | 0.90 | 2 (4%) | 52,94,114 | 1.41 | 11 (21%) |
| 29 | CLA | Y | 610 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 1.98 | 17 (22%) |
| 33 | LMG | j | 101 | - | 45,45,55 | 0.89 | 3 (6%) | 53,53,63 | 1.04 | 2 (3%) |
| 35 | C7Z | b | 620 | - | 43,43,43 | 5.40 | 26 (60%) | 58,60,60 | 2.05 | 17 (29%) |
| 29 | CLA | S | 611 | - | 65,73,73 | 1.37 | 8 (12%) | 76,113,113 | 1.95 | 15 (19%) |
| 29 | CLA | Y | 614 | - | 65,73,73 | 1.35 | 9 (13%) | 76,113,113 | 1.97 | 17 (22%) |
| 46 | LUT | G | 621 | - | 42,43,43 | 2.37 | 1 (2%) | 51,60,60 | 1.99 | 13 (25%) |
| 39 | LHG | d | 409 | - | 48,48,48 | 0.39 | 0 | 51,54,54 | 1.03 | 3 (5%) |
| 46 | LUT | S | 621 | - | 42,43,43 | 2.31 | 1 (2%) | 51,60,60 | 1.97 | 15 (29%) |
| 29 | CLA | c | 508 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.00 | 18 (23%) |
| 29 | CLA | b | 606 | - | 65,73,73 | 1.33 | 8 (12%) | 76,113,113 | 2.05 | 14 (18%) |
| 29 | CLA | y | 613 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.03 | 19 (25%) |
| 45 | CHL | Y | 609 | - | 66,74,74 | 0.81 | 3 (4%) | 73,114,114 | 1.23 | 12 (16%) |
| 29 | CLA | B | 610 | - | 65,73,73 | 1.34 | 8 (12%) | 76,113,113 | 1.99 | 16 (21%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|-----|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 46 | LUT | Y | 620 | - | 42,43,43 | 2.36 | 1 (2%) | 51,60,60 | 2.00 | 13 (25%) |
| 29 | CLA | Y | 608 | - | 50,58,73 | 1.55 | 8 (16%) | 58,95,113 | 2.22 | 19 (32%) |
| 29 | CLA | C | 502 | - | 65,73,73 | 1.34 | 7 (10%) | 76,113,113 | 2.04 | 16 (21%) |
| 29 | CLA | G | 610 | - | 65,73,73 | 1.35 | 8 (12%) | 76,113,113 | 2.02 | 18 (23%) |
| 45 | CHL | R | 606 | - | 44,52,74 | 1.02 | 3 (6%) | 46,87,114 | 1.33 | 8 (17%) |
| 45 | CHL | g | 606 | - | 50,58,74 | 0.89 | 2 (4%) | 52,94,114 | 1.39 | 9 (17%) |

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 |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | d | 403 | - | 1/1/15/20 | 13/37/115/115 | - |
| 29 | CLA | a | 405 | - | 1/1/15/20 | 14/37/115/115 | - |
| 32 | SQD | c | 626 | - | - | 16/49/69/69 | 0/1/1/1 |
| 29 | CLA | R | 612 | - | 1/1/14/20 | 13/31/109/115 | - |
| 29 | CLA | D | 403 | - | 1/1/15/20 | 12/37/115/115 | - |
| 45 | CHL | S | 608 | - | 4/4/19/26 | 2/33/131/137 | - |
| 45 | CHL | N | 606 | - | 4/4/20/26 | 4/39/137/137 | - |
| 29 | CLA | C | 508 | - | 1/1/15/20 | 12/37/115/115 | - |
| 44 | RRX | h | 101 | - | 1/1/11/25 | 10/29/65/65 | 0/2/2/2 |
| 48 | NEX | R | 622 | - | - | 8/27/83/83 | 0/3/3/3 |
| 39 | LHG | y | 624 | - | - | 30/53/53/53 | - |
| 29 | CLA | Y | 613 | - | 1/1/15/20 | 21/37/115/115 | - |
| 45 | CHL | N | 608 | - | 3/3/16/26 | 3/20/118/137 | - |
| 33 | LMG | A | 413 | - | - | 14/43/63/70 | 0/1/1/1 |
| 48 | NEX | n | 623 | - | - | 2/27/83/83 | 0/3/3/3 |
| 29 | CLA | c | 501 | - | 1/1/15/20 | 11/37/115/115 | - |
| 29 | CLA | B | 608 | - | 1/1/15/20 | 25/37/115/115 | - |
| 29 | CLA | S | 605 | - | 1/1/12/20 | 12/19/97/115 | - |
| 29 | CLA | S | 614 | - | 1/1/13/20 | 8/25/103/115 | - |
| 29 | CLA | N | 610 | - | 1/1/15/20 | 8/37/115/115 | - |
| 38 | DGD | c | 519 | - | - | 21/51/91/95 | 0/2/2/2 |
| 29 | CLA | y | 604 | - | 1/1/15/20 | 20/37/115/115 | - |
| 29 | CLA | n | 612 | - | 1/1/11/20 | 6/13/91/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | g | 614 | - | 1/1/11/20 | 9/18/96/115 | - |
| 45 | CHL | R | 607 | - | 3/3/16/26 | 5/20/118/137 | - |
| 29 | CLA | N | 614 | - | 1/1/11/20 | 7/18/96/115 | - |
| 29 | CLA | a | 406 | - | 1/1/15/20 | 13/37/115/115 | - |
| 48 | NEX | G | 623 | - | - | 3/27/83/83 | 0/3/3/3 |
| 51 | SPH | Y | 625 | - | - | 10/21/21/21 | - |
| 48 | NEX | g | 623 | - | - | 3/27/83/83 | 0/3/3/3 |
| 29 | CLA | s | 605 | - | 1/1/12/20 | 8/19/97/115 | - |
| 39 | LHG | D | 410 | - | - | 26/43/43/53 | - |
| 39 | LHG | n | 624 | - | - | 27/53/53/53 | - |
| 29 | CLA | c | 502 | - | 1/1/15/20 | 20/37/115/115 | - |
| 29 | CLA | Y | 611 | - | 1/1/15/20 | 17/37/115/115 | - |
| 46 | LUT | N | 621 | - | - | 2/29/67/67 | 0/2/2/2 |
| 45 | CHL | s | 607 | - | 4/4/15/26 | 1/12/110/137 | - |
| 29 | CLA | s | 609 | - | 1/1/14/20 | 14/31/109/115 | - |
| 46 | LUT | s | 621 | - | - | 1/29/67/67 | 0/2/2/2 |
| 29 | CLA | S | 612 | - | 1/1/11/20 | 5/13/91/115 | - |
| 29 | CLA | S | 617 | - | 1/1/12/20 | 10/19/97/115 | - |
| 39 | LHG | g | 624 | - | - | 28/53/53/53 | - |
| 29 | CLA | B | 611 | - | 1/1/15/20 | 9/37/115/115 | - |
| 48 | NEX | y | 623 | - | - | 3/27/83/83 | 0/3/3/3 |
| 46 | LUT | R | 620 | - | - | 8/29/67/67 | 0/2/2/2 |
| 29 | CLA | s | 614 | - | 1/1/13/20 | 8/25/103/115 | - |
| 29 | CLA | b | 613 | - | 1/1/15/20 | 17/37/115/115 | - |
| 29 | CLA | G | 611 | - | 1/1/11/20 | 5/13/91/115 | - |
| 39 | LHG | l | 101 | - | - | 29/53/53/53 | - |
| 29 | CLA | s | 610 | - | 1/1/15/20 | 20/37/115/115 | - |
| 29 | CLA | A | 407 | - | 1/1/11/20 | 4/18/96/115 | - |
| 33 | LMG | c | 521 | - | - | 18/46/66/70 | 0/1/1/1 |
| 45 | CHL | N | 601 | - | 4/4/20/26 | 5/39/137/137 | - |
| 32 | SQD | b | 621 | - | - | 19/49/69/69 | 0/1/1/1 |
| 29 | CLA | C | 511 | - | 1/1/15/20 | 15/37/115/115 | - |
| 29 | CLA | g | 603 | - | 1/1/15/20 | 17/37/115/115 | - |
| 29 | CLA | B | 617 | - | 1/1/15/20 | 17/37/115/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | C | 509 | - | 1/1/15/20 | 10/37/115/115 | - |
| 31 | BCR | b | 619 | - | - | 8/29/63/63 | 0/2/2/2 |
| 29 | CLA | g | 610 | - | 1/1/15/20 | 11/37/115/115 | - |
| 29 | CLA | N | 602 | - | 1/1/15/20 | 17/37/115/115 | - |
| 42 | PL9 | d | 405 | - | - | 10/53/73/73 | 0/1/1/1 |
| 29 | CLA | n | 604 | - | 1/1/15/20 | 16/37/115/115 | - |
| 45 | CHL | G | 606 | - | 4/4/16/26 | 5/20/118/137 | - |
| 45 | CHL | g | 605 | 21 | 3/3/16/26 | 4/18/116/137 | - |
| 29 | CLA | B | 607 | - | 1/1/15/20 | 12/37/115/115 | - |
| 47 | XAT | y | 622 | - | 1/1/12/26 | 1/31/93/93 | 0/4/4/4 |
| 29 | CLA | A | 410 | - | 1/1/14/20 | 10/31/109/115 | - |
| 45 | CHL | N | 605 | 20 | 4/4/20/26 | 10/39/137/137 | - |
| 36 | DGA | b | 623 | - | - | 26/45/45/45 | - |
| 39 | LHG | c | 625 | - | - | 27/51/51/53 | - |
| 45 | CHL | g | 608 | - | 3/3/15/26 | 1/13/111/137 | - |
| 29 | CLA | y | 614 | - | 1/1/15/20 | 15/37/115/115 | - |
| 33 | LMG | d | 411 | - | - | 12/41/61/70 | 0/1/1/1 |
| 31 | BCR | C | 515 | - | - | 11/29/63/63 | 0/2/2/2 |
| 29 | CLA | b | 608 | - | 1/1/15/20 | 25/37/115/115 | - |
| 29 | CLA | c | 504 | - | 1/1/15/20 | 17/37/115/115 | - |
| 29 | CLA | N | 603 | - | 1/1/15/20 | 14/37/115/115 | - |
| 29 | CLA | C | 510 | - | 1/1/15/20 | 14/37/115/115 | - |
| 29 | CLA | y | 608 | - | 1/1/12/20 | 8/19/97/115 | - |
| 29 | CLA | b | 602 | - | 1/1/15/20 | 21/37/115/115 | - |
| 33 | LMG | B | 622 | - | - | 11/39/59/70 | 0/1/1/1 |
| 29 | CLA | c | 511 | - | 1/1/15/20 | 13/37/115/115 | - |
| 37 | GOL | b | 624 | - | - | 0/4/4/4 | - |
| 29 | CLA | c | 509 | - | 1/1/15/20 | 11/37/115/115 | - |
| 45 | CHL | g | 601 | 21 | 4/4/20/26 | 12/39/137/137 | - |
| 47 | XAT | G | 622 | - | 2/2/12/26 | 1/31/93/93 | 0/4/4/4 |
| 29 | CLA | c | 510 | - | 1/1/15/20 | 12/37/115/115 | - |
| 47 | XAT | R | 621 | - | 1/1/12/26 | 11/31/93/93 | 0/4/4/4 |
| 33 | LMG | H | 102 | - | - | 12/43/63/70 | 0/1/1/1 |
| 45 | CHL | g | 607 | - | 3/3/16/26 | 3/20/118/137 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 45 | CHL | N | 609 | - | 4/4/20/26 | 7/39/137/137 | - |
| 29 | CLA | G | 614 | - | 1/1/11/20 | 10/18/96/115 | - |
| 29 | CLA | n | 603 | - | 1/1/15/20 | 22/37/115/115 | - |
| 29 | CLA | R | 604 | - | 1/1/11/20 | 12/18/96/115 | - |
| 39 | LHG | D | 409 | - | - | 30/53/53/53 | - |
| 29 | CLA | y | 610 | - | 1/1/15/20 | 24/37/115/115 | - |
| 29 | CLA | b | 603 | - | 1/1/15/20 | 16/37/115/115 | - |
| 31 | BCR | c | 515 | - | - | 11/29/63/63 | 0/2/2/2 |
| 30 | PHO | a | 409 | - | - | 9/37/103/103 | 0/5/6/6 |
| 45 | CHL | y | 606 | - | 4/4/20/26 | 8/39/137/137 | - |
| 45 | CHL | G | 609 | - | 4/4/20/26 | 9/39/137/137 | - |
| 45 | CHL | n | 606 | - | 4/4/20/26 | 5/39/137/137 | - |
| 38 | DGD | c | 523 | - | - | 18/55/95/95 | 0/2/2/2 |
| 39 | LHG | G | 630 | - | - | 31/53/53/53 | - |
| 31 | BCR | C | 516 | - | - | 15/29/63/63 | 0/2/2/2 |
| 39 | LHG | S | 624 | - | - | 28/49/49/53 | - |
| 29 | CLA | s | 603 | - | 1/1/15/20 | 15/37/115/115 | - |
| 29 | CLA | y | 612 | - | 1/1/15/20 | 11/37/115/115 | - |
| 29 | CLA | y | 602 | - | 1/1/15/20 | 15/37/115/115 | - |
| 45 | CHL | y | 601 | 24 | 4/4/20/26 | 7/39/137/137 | - |
| 29 | CLA | R | 609 | - | 1/1/14/20 | 15/31/109/115 | - |
| 29 | CLA | r | 609 | - | 1/1/14/20 | 18/31/109/115 | - |
| 49 | LPX | s | 625 | - | - | 10/31/31/31 | - |
| 29 | CLA | g | 612 | - | 1/1/10/20 | 4/11/89/115 | - |
| 32 | SQD | A | 412 | - | - | 12/46/66/69 | 0/1/1/1 |
| 39 | LHG | Y | 624 | - | - | 31/53/53/53 | - |
| 45 | CHL | y | 605 | 24 | 3/3/16/26 | 3/15/113/137 | - |
| 48 | NEX | N | 623 | - | - | 2/27/83/83 | 0/3/3/3 |
| 29 | CLA | N | 613 | - | 1/1/15/20 | 19/37/115/115 | - |
| 37 | GOL | B | 627 | - | - | 0/4/4/4 | - |
| 33 | LMG | h | 102 | - | - | 14/43/63/70 | 0/1/1/1 |
| 33 | LMG | a | 413 | - | - | 13/43/63/70 | 0/1/1/1 |
| 46 | LUT | N | 620 | - | - | 3/29/67/67 | 0/2/2/2 |
| 29 | CLA | R | 610 | - | 1/1/14/20 | 10/31/109/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 36 | DGA | C | 524 | - | - | 18/45/45/45 | - |
| 29 | CLA | r | 610 | - | 1/1/14/20 | 11/31/109/115 | - |
| 31 | BCR | d | 404 | - | - | 12/29/63/63 | 0/2/2/2 |
| 29 | CLA | c | 505 | - | 1/1/15/20 | 15/37/115/115 | - |
| 50 | 3PH | i | 101 | - | - | 20/49/49/49 | - |
| 49 | LPX | S | 625 | - | - | 10/31/31/31 | - |
| 45 | CHL | r | 606 | - | 3/3/15/26 | 1/13/111/137 | - |
| 50 | 3PH | S | 626 | - | - | 19/49/49/49 | - |
| 29 | CLA | B | 604 | - | 1/1/15/20 | 17/37/115/115 | - |
| 29 | CLA | s | 612 | - | 1/1/11/20 | 6/13/91/115 | - |
| 39 | LHG | D | 408 | - | - | 30/48/48/53 | - |
| 39 | LHG | s | 624 | - | - | 31/49/49/53 | - |
| 38 | DGD | c | 520 | - | - | 12/48/88/95 | 0/2/2/2 |
| 45 | CHL | G | 601 | 21 | 4/4/20/26 | 8/39/137/137 | - |
| 29 | CLA | b | 605 | - | 1/1/15/20 | 20/37/115/115 | - |
| 29 | CLA | S | 604 | - | 1/1/13/20 | 9/25/103/115 | - |
| 29 | CLA | n | 614 | - | 1/1/11/20 | 5/18/96/115 | - |
| 29 | CLA | r | 613 | - | 1/1/11/20 | 9/15/93/115 | - |
| 51 | SPH | y | 625 | - | - | 11/21/21/21 | - |
| 47 | XAT | n | 622 | - | 1/1/12/26 | 0/31/93/93 | 0/4/4/4 |
| 39 | LHG | C | 525 | - | - | 28/51/51/53 | - |
| 29 | CLA | N | 611 | - | 1/1/11/20 | 10/18/96/115 | - |
| 33 | LMG | J | 101 | - | - | 12/40/60/70 | 0/1/1/1 |
| 29 | CLA | G | 604 | - | 1/1/11/20 | 8/18/96/115 | - |
| 29 | CLA | b | 612 | - | 1/1/15/20 | 19/37/115/115 | - |
| 29 | CLA | c | 512 | - | 1/1/15/20 | 19/37/115/115 | - |
| 29 | CLA | R | 608 | - | 1/1/14/20 | 16/31/109/115 | - |
| 29 | CLA | C | 505 | - | 1/1/15/20 | 12/37/115/115 | - |
| 39 | LHG | d | 408 | - | - | 29/48/48/53 | - |
| 36 | DGA | c | 524 | - | - | 19/45/45/45 | - |
| 29 | CLA | Y | 604 | - | 1/1/15/20 | 18/37/115/115 | - |
| 29 | CLA | b | 610 | - | 1/1/15/20 | 15/37/115/115 | - |
| 31 | BCR | C | 517 | - | - | 8/29/63/63 | 0/2/2/2 |
| 29 | CLA | a | 407 | - | 1/1/11/20 | 4/18/96/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | d | 402 | - | 1/1/15/20 | 13/37/115/115 | - |
| 29 | CLA | y | 603 | - | 1/1/15/20 | 13/37/115/115 | - |
| 29 | CLA | D | 402 | - | 1/1/15/20 | 11/37/115/115 | - |
| 45 | CHL | S | 607 | - | 4/4/15/26 | 1/12/110/137 | - |
| 45 | CHL | s | 601 | 23 | 3/3/16/26 | 7/15/113/137 | - |
| 29 | CLA | b | 609 | - | 1/1/15/20 | 15/37/115/115 | - |
| 29 | CLA | R | 613 | - | 1/1/11/20 | 8/15/93/115 | - |
| 29 | CLA | R | 611 | - | 1/1/11/20 | 5/15/93/115 | - |
| 45 | CHL | y | 607 | - | 4/4/20/26 | 5/39/137/137 | - |
| 29 | CLA | N | 612 | - | 1/1/11/20 | 5/13/91/115 | - |
| 45 | CHL | n | 601 | - | 4/4/20/26 | 10/39/137/137 | - |
| 29 | CLA | b | 614 | - | 1/1/15/20 | 10/37/115/115 | - |
| 29 | CLA | C | 504 | - | 1/1/15/20 | 14/37/115/115 | - |
| 46 | LUT | S | 620 | - | 1/1/12/27 | 4/29/67/67 | 0/2/2/2 |
| 29 | CLA | R | 603 | - | 1/1/14/20 | 16/31/109/115 | - |
| 45 | CHL | Y | 606 | - | 4/4/20/26 | 6/39/137/137 | - |
| 29 | CLA | G | 612 | - | 1/1/10/20 | 4/11/89/115 | - |
| 29 | CLA | b | 616 | - | 1/1/15/20 | 10/37/115/115 | - |
| 29 | CLA | r | 602 | - | 1/1/14/20 | 9/31/109/115 | - |
| 37 | GOL | b | 625 | - | - | 1/4/4/4 | - |
| 47 | XAT | N | 622 | - | 1/1/12/26 | 1/31/93/93 | 0/4/4/4 |
| 32 | SQD | C | 526 | - | - | 19/49/69/69 | 0/1/1/1 |
| 31 | BCR | b | 618 | - | - | 13/29/63/63 | 0/2/2/2 |
| 29 | CLA | b | 604 | - | 1/1/15/20 | 14/37/115/115 | - |
| 46 | LUT | y | 621 | - | - | 2/29/67/67 | 0/2/2/2 |
| 45 | CHL | N | 607 | - | 4/4/20/26 | 7/39/137/137 | - |
| 47 | XAT | Y | 622 | - | 1/1/12/26 | 3/31/93/93 | 0/4/4/4 |
| 38 | DGD | C | 523 | - | - | 17/55/95/95 | 0/2/2/2 |
| 46 | LUT | n | 621 | - | - | 4/29/67/67 | 0/2/2/2 |
| 45 | CHL | S | 606 | - | 3/3/15/26 | 0/13/111/137 | - |
| 50 | 3PH | s | 626 | - | - | 27/49/49/49 | - |
| 29 | CLA | B | 609 | - | 1/1/15/20 | 14/37/115/115 | - |
| 29 | CLA | B | 616 | - | 1/1/15/20 | 10/37/115/115 | - |
| 32 | SQD | B | 621 | - | - | 19/49/69/69 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | y | 611 | - | 1/1/15/20 | 15/37/115/115 | - |
| 29 | CLA | G | 613 | - | 1/1/15/20 | 20/37/115/115 | - |
| 31 | BCR | c | 517 | - | - | 10/29/63/63 | 0/2/2/2 |
| 31 | BCR | B | 618 | - | - | 13/29/63/63 | 0/2/2/2 |
| 29 | CLA | C | 513 | - | 1/1/15/20 | 19/37/115/115 | - |
| 29 | CLA | S | 609 | - | 1/1/14/20 | 8/31/109/115 | - |
| 29 | CLA | g | 611 | - | 1/1/11/20 | 4/13/91/115 | - |
| 29 | CLA | C | 503 | - | 1/1/15/20 | 19/37/115/115 | - |
| 29 | CLA | b | 615 | - | 1/1/15/20 | 12/37/115/115 | - |
| 29 | CLA | b | 617 | - | 1/1/15/20 | 16/37/115/115 | - |
| 29 | CLA | g | 604 | - | 1/1/11/20 | 12/18/96/115 | - |
| 43 | HEM | f | 101 | 7,6 | - | 2/12/54/54 | - |
| 47 | XAT | r | 622 | - | 1/1/12/26 | 11/31/93/93 | 0/4/4/4 |
| 29 | CLA | B | 613 | - | 1/1/15/20 | 15/37/115/115 | - |
| 29 | CLA | S | 610 | - | 1/1/15/20 | 11/37/115/115 | - |
| 29 | CLA | Y | 602 | - | 1/1/15/20 | 15/37/115/115 | - |
| 31 | BCR | D | 404 | - | - | 11/29/63/63 | 0/2/2/2 |
| 46 | LUT | G | 620 | - | - | 6/29/67/67 | 0/2/2/2 |
| 46 | LUT | g | 621 | - | - | 2/29/67/67 | 0/2/2/2 |
| 45 | CHL | S | 601 | 23 | 3/3/16/26 | 3/15/113/137 | - |
| 39 | LHG | N | 624 | - | - | 30/53/53/53 | - |
| 32 | SQD | a | 412 | - | - | 13/46/66/69 | 0/1/1/1 |
| 46 | LUT | r | 620 | - | - | 9/29/67/67 | 0/2/2/2 |
| 48 | NEX | s | 623 | - | - | 13/27/83/83 | 0/3/3/3 |
| 42 | PL9 | D | 405 | - | - | 12/53/73/73 | 0/1/1/1 |
| 45 | CHL | s | 606 | - | 3/3/15/26 | 1/13/111/137 | - |
| 29 | CLA | C | 501 | - | 1/1/15/20 | 18/37/115/115 | - |
| 29 | CLA | B | 605 | - | 1/1/15/20 | 18/37/115/115 | - |
| 29 | CLA | b | 611 | - | 1/1/15/20 | 9/37/115/115 | - |
| 31 | BCR | B | 619 | - | - | 11/29/63/63 | 0/2/2/2 |
| 35 | C7Z | B | 620 | - | 1/1/12/26 | 9/29/67/67 | 0/2/2/2 |
| 48 | NEX | r | 623 | - | - | 7/27/83/83 | 0/3/3/3 |
| 29 | CLA | c | 513 | - | 1/1/15/20 | 18/37/115/115 | - |
| 46 | LUT | s | 620 | - | 1/1/12/27 | 3/29/67/67 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | b | 607 | - | 1/1/15/20 | 14/37/115/115 | - |
| 47 | XAT | g | 622 | - | 2/2/12/26 | 0/31/93/93 | 0/4/4/4 |
| 45 | CHL | n | 609 | - | 4/4/20/26 | 7/39/137/137 | - |
| 29 | CLA | S | 602 | - | 1/1/14/20 | 12/31/109/115 | - |
| 38 | DGD | C | 520 | - | - | 12/48/88/95 | 0/2/2/2 |
| 46 | LUT | n | 620 | - | - | 6/29/67/67 | 0/2/2/2 |
| 40 | LMK | C | 527 | - | 1/1/6/6 | 10/46/46/60 | - |
| 29 | CLA | Y | 603 | - | 1/1/15/20 | 15/37/115/115 | - |
| 38 | DGD | C | 518 | - | - | 8/44/84/95 | 0/2/2/2 |
| 44 | RRX | H | 101 | - | 1/1/11/25 | 9/29/65/65 | 0/2/2/2 |
| 29 | CLA | A | 406 | - | 1/1/15/20 | 13/37/115/115 | - |
| 29 | CLA | B | 603 | - | 1/1/15/20 | 16/37/115/115 | - |
| 45 | CHL | g | 609 | - | 4/4/20/26 | 6/39/137/137 | - |
| 45 | CHL | G | 608 | - | 3/3/15/26 | 0/13/111/137 | - |
| 29 | CLA | r | 611 | - | 1/1/11/20 | 5/15/93/115 | - |
| 29 | CLA | c | 507 | 52 | 1/1/15/20 | 19/37/115/115 | - |
| 45 | CHL | Y | 605 | 24 | 3/3/16/26 | 1/15/113/137 | - |
| 36 | DGA | B | 625 | - | - | 24/45/45/45 | - |
| 46 | LUT | g | 620 | - | - | 3/29/67/67 | 0/2/2/2 |
| 29 | CLA | G | 603 | - | 1/1/15/20 | 18/37/115/115 | - |
| 29 | CLA | n | 613 | - | 1/1/15/20 | 14/37/115/115 | - |
| 29 | CLA | s | 613 | - | 1/1/13/20 | 10/25/103/115 | - |
| 29 | CLA | B | 614 | - | 1/1/15/20 | 12/37/115/115 | - |
| 30 | PHO | A | 409 | - | - | 10/37/103/103 | 0/5/6/6 |
| 48 | NEX | Y | 623 | - | - | 2/27/83/83 | 0/3/3/3 |
| 45 | CHL | G | 605 | 21 | 3/3/16/26 | 1/18/116/137 | - |
| 29 | CLA | g | 602 | - | 1/1/15/20 | 18/37/115/115 | - |
| 39 | LHG | L | 101 | - | - | 30/53/53/53 | - |
| 29 | CLA | C | 512 | - | 1/1/15/20 | 17/37/115/115 | - |
| 48 | NEX | S | 622 | - | - | 11/27/83/83 | 0/3/3/3 |
| 29 | CLA | B | 606 | - | 1/1/15/20 | 12/37/115/115 | - |
| 46 | LUT | y | 620 | - | - | 4/29/67/67 | 0/2/2/2 |
| 29 | CLA | n | 611 | - | 1/1/11/20 | 10/18/96/115 | - |
| 45 | CHL | Y | 601 | 24 | 4/4/20/26 | 8/39/137/137 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | g | 613 | - | 1/1/15/20 | 21/37/115/115 | - |
| 29 | CLA | A | 405 | - | 1/1/15/20 | 16/37/115/115 | - |
| 43 | HEM | F | 101 | 7,6 | - | 2/12/54/54 | - |
| 39 | LHG | d | 410 | - | - | 33/43/43/53 | - |
| 45 | CHL | n | 607 | - | 4/4/20/26 | 10/39/137/137 | - |
| 30 | PHO | A | 408 | - | - | 8/37/103/103 | 0/5/6/6 |
| 29 | CLA | C | 506 | - | 1/1/15/20 | 21/37/115/115 | - |
| 31 | BCR | a | 411 | - | - | 11/29/63/63 | 0/2/2/2 |
| 30 | PHO | a | 408 | - | - | 7/37/103/103 | 0/5/6/6 |
| 29 | CLA | r | 608 | - | 1/1/14/20 | 13/31/109/115 | - |
| 29 | CLA | R | 602 | - | 1/1/14/20 | 13/31/109/115 | - |
| 33 | LMG | b | 622 | - | - | 11/39/59/70 | 0/1/1/1 |
| 29 | CLA | N | 604 | - | 1/1/15/20 | 19/37/115/115 | - |
| 29 | CLA | r | 604 | - | 1/1/11/20 | 12/18/96/115 | - |
| 29 | CLA | S | 603 | - | 1/1/15/20 | 15/37/115/115 | - |
| 29 | CLA | s | 611 | - | 1/1/15/20 | 11/37/115/115 | - |
| 29 | CLA | s | 602 | - | 1/1/14/20 | 10/31/109/115 | - |
| 38 | DGD | C | 519 | - | - | 19/51/91/95 | 0/2/2/2 |
| 37 | GOL | y | 626 | - | - | 0/4/4/4 | - |
| 29 | CLA | r | 612 | - | 1/1/14/20 | 12/31/109/115 | - |
| 29 | CLA | c | 506 | - | 1/1/15/20 | 22/37/115/115 | - |
| 45 | CHL | Y | 607 | - | 4/4/20/26 | 4/39/137/137 | - |
| 46 | LUT | Y | 621 | - | - | 2/29/67/67 | 0/2/2/2 |
| 29 | CLA | B | 612 | - | 1/1/15/20 | 21/37/115/115 | - |
| 29 | CLA | B | 602 | - | 1/1/15/20 | 21/37/115/115 | - |
| 38 | DGD | c | 518 | - | - | 11/44/84/95 | 0/2/2/2 |
| 29 | CLA | Y | 612 | - | 1/1/15/20 | 10/37/115/115 | - |
| 29 | CLA | a | 410 | - | 1/1/14/20 | 9/31/109/115 | - |
| 31 | BCR | C | 514 | - | - | 11/29/63/63 | 0/2/2/2 |
| 29 | CLA | C | 507 | 52 | 1/1/15/20 | 17/37/115/115 | - |
| 29 | CLA | n | 602 | - | 1/1/15/20 | 16/37/115/115 | - |
| 40 | LMK | c | 627 | - | 1/1/6/6 | 9/46/46/60 | - |
| 31 | BCR | c | 514 | - | - | 12/29/63/63 | 0/2/2/2 |
| 29 | CLA | s | 617 | - | 1/1/12/20 | 9/19/97/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|---------------|---------|
| 29 | CLA | B | 615 | - | 1/1/15/20 | 8/37/115/115 | - |
| 29 | CLA | r | 603 | - | 1/1/14/20 | 17/31/109/115 | - |
| 45 | CHL | n | 605 | 20 | 4/4/20/26 | 8/39/137/137 | - |
| 45 | CHL | G | 607 | - | 3/3/16/26 | 3/20/118/137 | - |
| 29 | CLA | c | 503 | - | 1/1/15/20 | 20/37/115/115 | - |
| 45 | CHL | s | 608 | - | 4/4/19/26 | 1/33/131/137 | - |
| 45 | CHL | r | 607 | - | 3/3/16/26 | 8/20/118/137 | - |
| 29 | CLA | G | 602 | - | 1/1/15/20 | 21/37/115/115 | - |
| 29 | CLA | n | 610 | - | 1/1/15/20 | 12/37/115/115 | - |
| 45 | CHL | y | 609 | - | 4/4/20/26 | 7/39/137/137 | - |
| 29 | CLA | s | 604 | - | 1/1/13/20 | 12/25/103/115 | - |
| 31 | BCR | c | 516 | - | - | 13/29/63/63 | 0/2/2/2 |
| 33 | LMG | D | 411 | - | - | 8/41/61/70 | 0/1/1/1 |
| 33 | LMG | C | 521 | - | - | 18/46/66/70 | 0/1/1/1 |
| 29 | CLA | S | 613 | - | 1/1/13/20 | 10/25/103/115 | - |
| 31 | BCR | A | 411 | - | - | 11/29/63/63 | 0/2/2/2 |
| 45 | CHL | n | 608 | - | 3/3/16/26 | 3/20/118/137 | - |
| 29 | CLA | Y | 610 | - | 1/1/15/20 | 22/37/115/115 | - |
| 33 | LMG | j | 101 | - | - | 12/40/60/70 | 0/1/1/1 |
| 35 | C7Z | b | 620 | - | 1/1/12/26 | 9/29/67/67 | 0/2/2/2 |
| 29 | CLA | S | 611 | - | 1/1/15/20 | 12/37/115/115 | - |
| 29 | CLA | Y | 614 | - | 1/1/15/20 | 13/37/115/115 | - |
| 46 | LUT | G | 621 | - | - | 2/29/67/67 | 0/2/2/2 |
| 39 | LHG | d | 409 | - | - | 29/53/53/53 | - |
| 46 | LUT | S | 621 | - | - | 4/29/67/67 | 0/2/2/2 |
| 29 | CLA | c | 508 | - | 1/1/15/20 | 12/37/115/115 | - |
| 29 | CLA | b | 606 | - | 1/1/15/20 | 12/37/115/115 | - |
| 29 | CLA | y | 613 | - | 1/1/15/20 | 19/37/115/115 | - |
| 45 | CHL | Y | 609 | - | 4/4/20/26 | 7/39/137/137 | - |
| 29 | CLA | B | 610 | - | 1/1/15/20 | 15/37/115/115 | - |
| 46 | LUT | Y | 620 | - | - | 4/29/67/67 | 0/2/2/2 |
| 29 | CLA | Y | 608 | - | 1/1/12/20 | 6/19/97/115 | - |
| 29 | CLA | C | 502 | - | 1/1/15/20 | 14/37/115/115 | - |
| 29 | CLA | G | 610 | - | 1/1/15/20 | 13/37/115/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|-----|------|-----------|--------------|-------|
| 45 | CHL | R | 606 | - | 3/3/15/26 | 4/13/111/137 | - |
| 45 | CHL | g | 606 | - | 3/3/16/26 | 5/20/118/137 | - |

All (1846) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|--------|-------------|----------|
| 35 | B | 620 | C7Z | C25-C26 | 16.16 | 1.62 | 1.34 |
| 35 | b | 620 | C7Z | C25-C26 | 16.13 | 1.62 | 1.34 |
| 44 | h | 101 | RRX | C26-C25 | 15.49 | 1.61 | 1.34 |
| 44 | H | 101 | RRX | C26-C25 | 15.48 | 1.61 | 1.34 |
| 35 | b | 620 | C7Z | C5-C6 | 15.32 | 1.61 | 1.34 |
| 35 | B | 620 | C7Z | C5-C6 | 15.20 | 1.60 | 1.34 |
| 46 | s | 620 | LUT | C24-C25 | 14.79 | 1.51 | 1.33 |
| 44 | h | 101 | RRX | C5-C6 | 14.75 | 1.60 | 1.34 |
| 44 | H | 101 | RRX | C5-C6 | 14.75 | 1.60 | 1.34 |
| 46 | n | 620 | LUT | C24-C25 | 14.61 | 1.51 | 1.33 |
| 46 | S | 620 | LUT | C24-C25 | 14.60 | 1.51 | 1.33 |
| 46 | G | 621 | LUT | C24-C25 | 14.56 | 1.51 | 1.33 |
| 46 | g | 621 | LUT | C24-C25 | 14.53 | 1.51 | 1.33 |
| 46 | N | 621 | LUT | C24-C25 | 14.51 | 1.51 | 1.33 |
| 46 | g | 620 | LUT | C24-C25 | 14.50 | 1.51 | 1.33 |
| 46 | y | 621 | LUT | C24-C25 | 14.44 | 1.51 | 1.33 |
| 46 | Y | 620 | LUT | C24-C25 | 14.43 | 1.51 | 1.33 |
| 46 | R | 620 | LUT | C24-C25 | 14.42 | 1.51 | 1.33 |
| 46 | N | 620 | LUT | C24-C25 | 14.41 | 1.51 | 1.33 |
| 46 | r | 620 | LUT | C24-C25 | 14.39 | 1.51 | 1.33 |
| 46 | G | 620 | LUT | C24-C25 | 14.37 | 1.51 | 1.33 |
| 46 | y | 620 | LUT | C24-C25 | 14.32 | 1.51 | 1.33 |
| 46 | Y | 621 | LUT | C24-C25 | 14.32 | 1.51 | 1.33 |
| 46 | n | 621 | LUT | C24-C25 | 14.28 | 1.50 | 1.33 |
| 46 | s | 621 | LUT | C24-C25 | 14.21 | 1.50 | 1.33 |
| 46 | S | 621 | LUT | C24-C25 | 14.17 | 1.50 | 1.33 |
| 35 | B | 620 | C7Z | C24-C23 | 11.64 | 1.72 | 1.52 |
| 35 | b | 620 | C7Z | C24-C23 | 11.61 | 1.72 | 1.52 |
| 35 | B | 620 | C7Z | C22-C23 | -10.94 | 1.36 | 1.52 |
| 35 | b | 620 | C7Z | C22-C23 | -10.87 | 1.36 | 1.52 |
| 35 | B | 620 | C7Z | C2-C3 | -10.53 | 1.37 | 1.52 |
| 35 | b | 620 | C7Z | C2-C3 | -10.31 | 1.37 | 1.52 |
| 44 | h | 101 | RRX | C29-C28 | -10.10 | 1.37 | 1.52 |
| 44 | H | 101 | RRX | C29-C28 | -10.03 | 1.37 | 1.52 |
| 35 | b | 620 | C7Z | C4-C3 | 8.49 | 1.67 | 1.52 |
| 35 | B | 620 | C7Z | C4-C3 | 8.37 | 1.66 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 44 | h | 101 | RRX | C27-C28 | 8.11 | 1.66 | 1.52 |
| 44 | H | 101 | RRX | C27-C28 | 8.11 | 1.66 | 1.52 |
| 48 | R | 622 | NEX | C10-C9 | -8.03 | 1.25 | 1.35 |
| 48 | R | 622 | NEX | C30-C29 | -7.66 | 1.25 | 1.35 |
| 48 | R | 622 | NEX | C14-C13 | -7.62 | 1.25 | 1.35 |
| 48 | y | 623 | NEX | C30-C29 | -7.59 | 1.25 | 1.35 |
| 48 | y | 623 | NEX | C10-C9 | -7.55 | 1.25 | 1.35 |
| 48 | n | 623 | NEX | C10-C9 | -7.55 | 1.25 | 1.35 |
| 48 | g | 623 | NEX | C34-C33 | -7.54 | 1.25 | 1.35 |
| 48 | g | 623 | NEX | C14-C13 | -7.54 | 1.25 | 1.35 |
| 48 | n | 623 | NEX | C14-C13 | -7.53 | 1.25 | 1.35 |
| 48 | n | 623 | NEX | C34-C33 | -7.52 | 1.25 | 1.35 |
| 48 | y | 623 | NEX | C14-C13 | -7.51 | 1.25 | 1.35 |
| 48 | R | 622 | NEX | C34-C33 | -7.49 | 1.25 | 1.35 |
| 48 | y | 623 | NEX | C34-C33 | -7.48 | 1.25 | 1.35 |
| 48 | Y | 623 | NEX | C30-C29 | -7.48 | 1.25 | 1.35 |
| 48 | s | 623 | NEX | C10-C9 | -7.48 | 1.25 | 1.35 |
| 48 | r | 623 | NEX | C14-C13 | -7.47 | 1.25 | 1.35 |
| 48 | r | 623 | NEX | C30-C29 | -7.47 | 1.25 | 1.35 |
| 48 | Y | 623 | NEX | C14-C13 | -7.47 | 1.25 | 1.35 |
| 48 | N | 623 | NEX | C34-C33 | -7.46 | 1.25 | 1.35 |
| 48 | N | 623 | NEX | C10-C9 | -7.45 | 1.25 | 1.35 |
| 48 | Y | 623 | NEX | C34-C33 | -7.45 | 1.25 | 1.35 |
| 48 | G | 623 | NEX | C34-C33 | -7.44 | 1.25 | 1.35 |
| 48 | S | 622 | NEX | C10-C9 | -7.43 | 1.25 | 1.35 |
| 48 | g | 623 | NEX | C30-C29 | -7.42 | 1.25 | 1.35 |
| 48 | G | 623 | NEX | C30-C29 | -7.42 | 1.25 | 1.35 |
| 48 | N | 623 | NEX | C30-C29 | -7.42 | 1.25 | 1.35 |
| 48 | n | 623 | NEX | C30-C29 | -7.41 | 1.26 | 1.35 |
| 48 | N | 623 | NEX | C14-C13 | -7.41 | 1.26 | 1.35 |
| 48 | r | 623 | NEX | C34-C33 | -7.40 | 1.26 | 1.35 |
| 48 | g | 623 | NEX | C10-C9 | -7.39 | 1.26 | 1.35 |
| 48 | G | 623 | NEX | C14-C13 | -7.38 | 1.26 | 1.35 |
| 48 | s | 623 | NEX | C14-C13 | -7.38 | 1.26 | 1.35 |
| 48 | s | 623 | NEX | C30-C29 | -7.35 | 1.26 | 1.35 |
| 48 | Y | 623 | NEX | C10-C9 | -7.35 | 1.26 | 1.35 |
| 31 | c | 516 | BCR | C10-C9 | 7.34 | 1.45 | 1.35 |
| 48 | S | 622 | NEX | C14-C13 | -7.31 | 1.26 | 1.35 |
| 48 | s | 623 | NEX | C34-C33 | -7.28 | 1.26 | 1.35 |
| 31 | C | 516 | BCR | C10-C9 | 7.27 | 1.45 | 1.35 |
| 31 | D | 404 | BCR | C10-C9 | 7.26 | 1.45 | 1.35 |
| 48 | S | 622 | NEX | C34-C33 | -7.25 | 1.26 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 48 | S | 622 | NEX | C30-C29 | -7.24 | 1.26 | 1.35 |
| 48 | r | 623 | NEX | C10-C9 | -7.23 | 1.26 | 1.35 |
| 48 | G | 623 | NEX | C10-C9 | -7.16 | 1.26 | 1.35 |
| 31 | C | 514 | BCR | C10-C9 | 7.13 | 1.45 | 1.35 |
| 31 | d | 404 | BCR | C10-C9 | 7.11 | 1.45 | 1.35 |
| 40 | C | 527 | LMK | O3-C4 | 7.09 | 1.43 | 1.22 |
| 40 | c | 627 | LMK | O3-C4 | 7.07 | 1.43 | 1.22 |
| 31 | c | 514 | BCR | C10-C9 | 7.05 | 1.45 | 1.35 |
| 31 | C | 515 | BCR | C10-C9 | 6.99 | 1.45 | 1.35 |
| 31 | B | 619 | BCR | C10-C9 | 6.91 | 1.44 | 1.35 |
| 31 | b | 618 | BCR | C10-C9 | 6.89 | 1.44 | 1.35 |
| 31 | C | 517 | BCR | C10-C9 | 6.84 | 1.44 | 1.35 |
| 48 | y | 623 | NEX | C35-C15 | -6.81 | 1.18 | 1.36 |
| 31 | c | 515 | BCR | C10-C9 | 6.81 | 1.44 | 1.35 |
| 31 | A | 411 | BCR | C10-C9 | 6.81 | 1.44 | 1.35 |
| 48 | R | 622 | NEX | C35-C15 | -6.80 | 1.18 | 1.36 |
| 48 | n | 623 | NEX | C35-C15 | -6.80 | 1.18 | 1.36 |
| 31 | b | 619 | BCR | C10-C9 | 6.80 | 1.44 | 1.35 |
| 31 | B | 618 | BCR | C10-C9 | 6.79 | 1.44 | 1.35 |
| 48 | g | 623 | NEX | C35-C15 | -6.79 | 1.18 | 1.36 |
| 31 | a | 411 | BCR | C10-C9 | 6.78 | 1.44 | 1.35 |
| 48 | N | 623 | NEX | C35-C15 | -6.75 | 1.18 | 1.36 |
| 48 | Y | 623 | NEX | C35-C15 | -6.75 | 1.18 | 1.36 |
| 48 | r | 623 | NEX | C35-C15 | -6.72 | 1.18 | 1.36 |
| 48 | G | 623 | NEX | C35-C15 | -6.72 | 1.18 | 1.36 |
| 48 | s | 623 | NEX | C35-C15 | -6.68 | 1.18 | 1.36 |
| 48 | S | 622 | NEX | C35-C15 | -6.67 | 1.18 | 1.36 |
| 31 | c | 517 | BCR | C10-C9 | 6.53 | 1.44 | 1.35 |
| 29 | B | 616 | CLA | MG-NA | 6.47 | 2.21 | 2.06 |
| 29 | S | 605 | CLA | MG-NA | 6.46 | 2.21 | 2.06 |
| 29 | s | 605 | CLA | MG-NA | 6.46 | 2.21 | 2.06 |
| 29 | s | 603 | CLA | MG-NA | 6.45 | 2.21 | 2.06 |
| 29 | r | 612 | CLA | MG-NA | 6.45 | 2.21 | 2.06 |
| 29 | b | 616 | CLA | MG-NA | 6.44 | 2.21 | 2.06 |
| 44 | h | 101 | RRX | C2-C3 | -6.43 | 1.36 | 1.52 |
| 44 | H | 101 | RRX | C2-C3 | -6.43 | 1.36 | 1.52 |
| 29 | r | 611 | CLA | MG-NA | 6.42 | 2.21 | 2.06 |
| 29 | N | 613 | CLA | MG-NA | 6.42 | 2.21 | 2.06 |
| 29 | B | 605 | CLA | MG-NA | 6.41 | 2.21 | 2.06 |
| 29 | G | 612 | CLA | MG-NA | 6.41 | 2.21 | 2.06 |
| 29 | s | 609 | CLA | MG-NA | 6.41 | 2.21 | 2.06 |
| 29 | n | 611 | CLA | MG-NA | 6.41 | 2.21 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|------|-------------|----------|
| 29 | R | 611 | CLA | MG-NA | 6.40 | 2.21 | 2.06 |
| 29 | R | 603 | CLA | MG-NA | 6.40 | 2.21 | 2.06 |
| 29 | b | 602 | CLA | MG-NA | 6.40 | 2.21 | 2.06 |
| 29 | R | 612 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | b | 605 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | S | 603 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | Y | 608 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | G | 613 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | C | 503 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | C | 512 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | g | 611 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | r | 603 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | B | 611 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | n | 614 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | n | 612 | CLA | MG-NA | 6.39 | 2.21 | 2.06 |
| 29 | g | 612 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | c | 503 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | S | 612 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | Y | 612 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | s | 613 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | S | 611 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | n | 613 | CLA | MG-NA | 6.38 | 2.21 | 2.06 |
| 29 | r | 608 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | b | 611 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | C | 501 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | s | 612 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | S | 617 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | G | 611 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | d | 403 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | R | 610 | CLA | MG-NA | 6.37 | 2.21 | 2.06 |
| 29 | R | 602 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | B | 602 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | R | 613 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | S | 609 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | g | 613 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | N | 611 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | C | 513 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | N | 612 | CLA | MG-NA | 6.36 | 2.21 | 2.06 |
| 29 | c | 507 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |
| 29 | c | 501 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |
| 29 | D | 403 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |
| 29 | G | 604 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | r | 602 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |
| 29 | g | 614 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |
| 29 | y | 611 | CLA | MG-NA | 6.35 | 2.21 | 2.06 |
| 29 | y | 612 | CLA | MG-NA | 6.34 | 2.21 | 2.06 |
| 29 | c | 511 | CLA | MG-NA | 6.34 | 2.21 | 2.06 |
| 29 | y | 613 | CLA | MG-NA | 6.34 | 2.21 | 2.06 |
| 29 | c | 502 | CLA | MG-NA | 6.34 | 2.21 | 2.06 |
| 29 | g | 604 | CLA | MG-NA | 6.34 | 2.21 | 2.06 |
| 29 | C | 511 | CLA | MG-NA | 6.34 | 2.21 | 2.06 |
| 29 | Y | 614 | CLA | MG-NA | 6.33 | 2.21 | 2.06 |
| 29 | C | 507 | CLA | MG-NA | 6.33 | 2.21 | 2.06 |
| 29 | N | 614 | CLA | MG-NA | 6.33 | 2.21 | 2.06 |
| 29 | c | 512 | CLA | MG-NA | 6.33 | 2.21 | 2.06 |
| 29 | s | 617 | CLA | MG-NA | 6.33 | 2.21 | 2.06 |
| 29 | B | 609 | CLA | MG-NA | 6.32 | 2.21 | 2.06 |
| 29 | S | 613 | CLA | MG-NA | 6.32 | 2.21 | 2.06 |
| 29 | G | 614 | CLA | MG-NA | 6.32 | 2.21 | 2.06 |
| 29 | S | 610 | CLA | MG-NA | 6.32 | 2.21 | 2.06 |
| 29 | A | 407 | CLA | MG-NA | 6.32 | 2.21 | 2.06 |
| 29 | r | 610 | CLA | MG-NA | 6.31 | 2.21 | 2.06 |
| 48 | Y | 623 | NEX | C31-C32 | -6.31 | 1.18 | 1.34 |
| 29 | R | 608 | CLA | MG-NA | 6.31 | 2.21 | 2.06 |
| 48 | G | 623 | NEX | C11-C12 | -6.31 | 1.18 | 1.34 |
| 29 | s | 610 | CLA | MG-NA | 6.31 | 2.21 | 2.06 |
| 29 | Y | 611 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | n | 602 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | b | 604 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | Y | 613 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | c | 506 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | g | 602 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | s | 611 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | y | 614 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | y | 602 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 48 | s | 623 | NEX | C11-C12 | -6.30 | 1.18 | 1.34 |
| 29 | b | 603 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | g | 603 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | y | 608 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | N | 603 | CLA | MG-NA | 6.30 | 2.21 | 2.06 |
| 29 | B | 604 | CLA | MG-NA | 6.29 | 2.21 | 2.06 |
| 48 | n | 623 | NEX | C11-C12 | -6.29 | 1.18 | 1.34 |
| 29 | Y | 603 | CLA | MG-NA | 6.29 | 2.21 | 2.06 |
| 29 | y | 603 | CLA | MG-NA | 6.28 | 2.21 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | n | 604 | CLA | MG-NA | 6.28 | 2.21 | 2.06 |
| 48 | Y | 623 | NEX | C11-C12 | -6.28 | 1.18 | 1.34 |
| 29 | S | 602 | CLA | MG-NA | 6.28 | 2.21 | 2.06 |
| 29 | b | 609 | CLA | MG-NA | 6.28 | 2.21 | 2.06 |
| 29 | C | 506 | CLA | MG-NA | 6.28 | 2.21 | 2.06 |
| 29 | N | 610 | CLA | MG-NA | 6.28 | 2.21 | 2.06 |
| 29 | a | 407 | CLA | MG-NA | 6.27 | 2.21 | 2.06 |
| 29 | G | 603 | CLA | MG-NA | 6.27 | 2.21 | 2.06 |
| 29 | G | 602 | CLA | MG-NA | 6.27 | 2.21 | 2.06 |
| 48 | y | 623 | NEX | C11-C12 | -6.27 | 1.18 | 1.34 |
| 29 | N | 604 | CLA | MG-NA | 6.26 | 2.21 | 2.06 |
| 29 | N | 602 | CLA | MG-NA | 6.26 | 2.21 | 2.06 |
| 48 | y | 623 | NEX | C31-C32 | -6.26 | 1.18 | 1.34 |
| 29 | C | 502 | CLA | MG-NA | 6.26 | 2.21 | 2.06 |
| 48 | n | 623 | NEX | C31-C32 | -6.26 | 1.18 | 1.34 |
| 29 | c | 513 | CLA | MG-NA | 6.25 | 2.21 | 2.06 |
| 29 | r | 613 | CLA | MG-NA | 6.25 | 2.21 | 2.06 |
| 48 | s | 623 | NEX | C31-C32 | -6.25 | 1.18 | 1.34 |
| 48 | r | 623 | NEX | C31-C32 | -6.25 | 1.18 | 1.34 |
| 29 | B | 603 | CLA | MG-NA | 6.25 | 2.21 | 2.06 |
| 29 | C | 509 | CLA | MG-NA | 6.25 | 2.21 | 2.06 |
| 29 | B | 607 | CLA | MG-NA | 6.25 | 2.21 | 2.06 |
| 29 | g | 610 | CLA | MG-NA | 6.24 | 2.21 | 2.06 |
| 48 | N | 623 | NEX | C31-C32 | -6.24 | 1.18 | 1.34 |
| 48 | R | 622 | NEX | C31-C32 | -6.24 | 1.18 | 1.34 |
| 29 | r | 604 | CLA | MG-NA | 6.24 | 2.21 | 2.06 |
| 29 | s | 604 | CLA | MG-NA | 6.24 | 2.21 | 2.06 |
| 29 | Y | 602 | CLA | MG-NA | 6.24 | 2.21 | 2.06 |
| 29 | Y | 604 | CLA | MG-NA | 6.23 | 2.21 | 2.06 |
| 29 | S | 614 | CLA | MG-NA | 6.23 | 2.21 | 2.06 |
| 29 | C | 505 | CLA | MG-NA | 6.23 | 2.21 | 2.06 |
| 48 | g | 623 | NEX | C31-C32 | -6.23 | 1.18 | 1.34 |
| 29 | B | 614 | CLA | MG-NA | 6.22 | 2.21 | 2.06 |
| 48 | N | 623 | NEX | C11-C12 | -6.22 | 1.18 | 1.34 |
| 29 | A | 406 | CLA | MG-NA | 6.22 | 2.21 | 2.06 |
| 48 | G | 623 | NEX | C31-C32 | -6.22 | 1.18 | 1.34 |
| 48 | g | 623 | NEX | C11-C12 | -6.22 | 1.18 | 1.34 |
| 29 | n | 603 | CLA | MG-NA | 6.21 | 2.21 | 2.06 |
| 48 | S | 622 | NEX | C11-C12 | -6.21 | 1.18 | 1.34 |
| 29 | R | 609 | CLA | MG-NA | 6.21 | 2.21 | 2.06 |
| 29 | b | 607 | CLA | MG-NA | 6.21 | 2.21 | 2.06 |
| 29 | B | 608 | CLA | MG-NA | 6.21 | 2.21 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | d | 402 | CLA | MG-NA | 6.20 | 2.21 | 2.06 |
| 29 | n | 610 | CLA | MG-NA | 6.20 | 2.21 | 2.06 |
| 29 | y | 604 | CLA | MG-NA | 6.20 | 2.21 | 2.06 |
| 29 | b | 614 | CLA | MG-NA | 6.20 | 2.21 | 2.06 |
| 29 | b | 608 | CLA | MG-NA | 6.20 | 2.21 | 2.06 |
| 48 | r | 623 | NEX | C11-C12 | -6.20 | 1.18 | 1.34 |
| 29 | Y | 610 | CLA | MG-NA | 6.20 | 2.21 | 2.06 |
| 29 | y | 610 | CLA | MG-NA | 6.19 | 2.21 | 2.06 |
| 29 | c | 505 | CLA | MG-NA | 6.19 | 2.21 | 2.06 |
| 29 | A | 410 | CLA | MG-NA | 6.19 | 2.21 | 2.06 |
| 29 | s | 614 | CLA | MG-NA | 6.18 | 2.21 | 2.06 |
| 29 | D | 402 | CLA | MG-NA | 6.18 | 2.21 | 2.06 |
| 29 | C | 508 | CLA | MG-NA | 6.18 | 2.21 | 2.06 |
| 29 | r | 609 | CLA | MG-NA | 6.18 | 2.21 | 2.06 |
| 29 | s | 602 | CLA | MG-NA | 6.18 | 2.20 | 2.06 |
| 29 | b | 612 | CLA | MG-NA | 6.17 | 2.20 | 2.06 |
| 29 | R | 604 | CLA | MG-NA | 6.17 | 2.20 | 2.06 |
| 29 | a | 406 | CLA | MG-NA | 6.17 | 2.20 | 2.06 |
| 48 | S | 622 | NEX | C31-C32 | -6.17 | 1.18 | 1.34 |
| 29 | b | 615 | CLA | MG-NA | 6.16 | 2.20 | 2.06 |
| 29 | C | 510 | CLA | MG-NA | 6.16 | 2.20 | 2.06 |
| 29 | c | 509 | CLA | MG-NA | 6.16 | 2.20 | 2.06 |
| 29 | a | 410 | CLA | MG-NA | 6.15 | 2.20 | 2.06 |
| 29 | S | 604 | CLA | MG-NA | 6.15 | 2.20 | 2.06 |
| 29 | B | 612 | CLA | MG-NA | 6.14 | 2.20 | 2.06 |
| 29 | c | 510 | CLA | MG-NA | 6.13 | 2.20 | 2.06 |
| 29 | B | 610 | CLA | MG-NA | 6.13 | 2.20 | 2.06 |
| 29 | B | 615 | CLA | MG-NA | 6.13 | 2.20 | 2.06 |
| 29 | c | 508 | CLA | MG-NA | 6.08 | 2.20 | 2.06 |
| 29 | b | 617 | CLA | MG-NA | 6.08 | 2.20 | 2.06 |
| 29 | B | 617 | CLA | MG-NA | 6.06 | 2.20 | 2.06 |
| 29 | C | 504 | CLA | MG-NA | 6.06 | 2.20 | 2.06 |
| 29 | b | 610 | CLA | MG-NA | 6.06 | 2.20 | 2.06 |
| 29 | a | 405 | CLA | MG-NA | 6.05 | 2.20 | 2.06 |
| 29 | b | 613 | CLA | MG-NA | 6.05 | 2.20 | 2.06 |
| 29 | A | 405 | CLA | MG-NA | 6.04 | 2.20 | 2.06 |
| 29 | G | 610 | CLA | MG-NA | 6.04 | 2.20 | 2.06 |
| 29 | c | 504 | CLA | MG-NA | 6.03 | 2.20 | 2.06 |
| 48 | R | 622 | NEX | C11-C12 | -6.03 | 1.19 | 1.34 |
| 29 | B | 613 | CLA | MG-NA | 6.02 | 2.20 | 2.06 |
| 29 | b | 606 | CLA | MG-NA | 6.00 | 2.20 | 2.06 |
| 29 | B | 606 | CLA | MG-NA | 5.98 | 2.20 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 44 | h | 101 | RRX | C1-C6 | -5.88 | 1.45 | 1.53 |
| 48 | R | 622 | NEX | C7-C8 | 5.83 | 1.41 | 1.32 |
| 31 | D | 404 | BCR | C24-C23 | 5.79 | 1.50 | 1.33 |
| 31 | d | 404 | BCR | C24-C23 | 5.78 | 1.50 | 1.33 |
| 44 | H | 101 | RRX | C1-C6 | -5.76 | 1.45 | 1.53 |
| 31 | c | 516 | BCR | C24-C23 | 5.75 | 1.50 | 1.33 |
| 31 | B | 619 | BCR | C24-C23 | 5.73 | 1.50 | 1.33 |
| 31 | C | 516 | BCR | C24-C23 | 5.70 | 1.50 | 1.33 |
| 35 | b | 620 | C7Z | C12-C13 | 5.70 | 1.58 | 1.45 |
| 31 | c | 517 | BCR | C24-C23 | 5.66 | 1.50 | 1.33 |
| 31 | C | 517 | BCR | C24-C23 | 5.65 | 1.50 | 1.33 |
| 35 | B | 620 | C7Z | C12-C13 | 5.65 | 1.58 | 1.45 |
| 31 | A | 411 | BCR | C24-C23 | 5.65 | 1.50 | 1.33 |
| 31 | b | 619 | BCR | C24-C23 | 5.61 | 1.50 | 1.33 |
| 31 | C | 514 | BCR | C24-C23 | 5.60 | 1.50 | 1.33 |
| 31 | a | 411 | BCR | C24-C23 | 5.60 | 1.50 | 1.33 |
| 44 | h | 101 | RRX | C30-C25 | -5.58 | 1.46 | 1.53 |
| 31 | C | 515 | BCR | C24-C23 | 5.58 | 1.49 | 1.33 |
| 44 | H | 101 | RRX | C30-C25 | -5.57 | 1.46 | 1.53 |
| 31 | c | 514 | BCR | C24-C23 | 5.56 | 1.49 | 1.33 |
| 48 | s | 623 | NEX | C7-C8 | 5.56 | 1.41 | 1.32 |
| 31 | b | 618 | BCR | C24-C23 | 5.53 | 1.49 | 1.33 |
| 31 | c | 515 | BCR | C24-C23 | 5.52 | 1.49 | 1.33 |
| 48 | n | 623 | NEX | C7-C8 | 5.51 | 1.41 | 1.32 |
| 48 | r | 623 | NEX | C7-C8 | 5.49 | 1.41 | 1.32 |
| 31 | B | 618 | BCR | C24-C23 | 5.45 | 1.49 | 1.33 |
| 48 | y | 623 | NEX | C7-C8 | 5.44 | 1.41 | 1.32 |
| 48 | R | 622 | NEX | C28-C29 | -5.32 | 1.34 | 1.45 |
| 31 | c | 517 | BCR | C11-C12 | -5.31 | 1.20 | 1.34 |
| 48 | r | 623 | NEX | C28-C29 | -5.30 | 1.34 | 1.45 |
| 31 | C | 517 | BCR | C11-C12 | -5.30 | 1.20 | 1.34 |
| 31 | A | 411 | BCR | C11-C12 | -5.29 | 1.20 | 1.34 |
| 48 | N | 623 | NEX | C7-C8 | 5.29 | 1.40 | 1.32 |
| 31 | B | 618 | BCR | C11-C12 | -5.29 | 1.21 | 1.34 |
| 31 | a | 411 | BCR | C11-C12 | -5.28 | 1.21 | 1.34 |
| 31 | b | 619 | BCR | C11-C12 | -5.28 | 1.21 | 1.34 |
| 31 | B | 619 | BCR | C11-C12 | -5.27 | 1.21 | 1.34 |
| 31 | b | 618 | BCR | C11-C12 | -5.27 | 1.21 | 1.34 |
| 48 | s | 623 | NEX | C28-C29 | -5.27 | 1.34 | 1.45 |
| 31 | c | 515 | BCR | C11-C12 | -5.25 | 1.21 | 1.34 |
| 48 | n | 623 | NEX | C28-C29 | -5.25 | 1.34 | 1.45 |
| 48 | N | 623 | NEX | C28-C29 | -5.24 | 1.34 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 48 | G | 623 | NEX | C7-C8 | 5.23 | 1.40 | 1.32 |
| 48 | g | 623 | NEX | C7-C8 | 5.23 | 1.40 | 1.32 |
| 31 | c | 514 | BCR | C11-C12 | -5.22 | 1.21 | 1.34 |
| 48 | Y | 623 | NEX | C28-C29 | -5.22 | 1.34 | 1.45 |
| 48 | y | 623 | NEX | C28-C29 | -5.22 | 1.34 | 1.45 |
| 31 | C | 515 | BCR | C11-C12 | -5.21 | 1.21 | 1.34 |
| 48 | g | 623 | NEX | C28-C29 | -5.20 | 1.34 | 1.45 |
| 48 | G | 623 | NEX | C28-C29 | -5.19 | 1.34 | 1.45 |
| 48 | S | 622 | NEX | C28-C29 | -5.16 | 1.34 | 1.45 |
| 48 | S | 622 | NEX | C7-C8 | 5.16 | 1.40 | 1.32 |
| 35 | B | 620 | C7Z | C1-C6 | -5.16 | 1.46 | 1.53 |
| 31 | C | 514 | BCR | C11-C12 | -5.15 | 1.21 | 1.34 |
| 31 | d | 404 | BCR | C11-C12 | -5.13 | 1.21 | 1.34 |
| 44 | H | 101 | RRX | C2-C1 | 5.12 | 1.65 | 1.54 |
| 31 | C | 516 | BCR | C11-C12 | -5.09 | 1.21 | 1.34 |
| 44 | h | 101 | RRX | C2-C1 | 5.09 | 1.65 | 1.54 |
| 31 | c | 516 | BCR | C11-C12 | -5.08 | 1.21 | 1.34 |
| 31 | D | 404 | BCR | C11-C12 | -5.00 | 1.21 | 1.34 |
| 35 | b | 620 | C7Z | C28-C29 | 4.97 | 1.56 | 1.45 |
| 35 | B | 620 | C7Z | C28-C29 | 4.96 | 1.56 | 1.45 |
| 35 | b | 620 | C7Z | C1-C6 | -4.94 | 1.47 | 1.53 |
| 48 | Y | 623 | NEX | C7-C8 | 4.91 | 1.40 | 1.32 |
| 44 | H | 101 | RRX | C19-C18 | 4.90 | 1.56 | 1.45 |
| 44 | h | 101 | RRX | C19-C18 | 4.89 | 1.56 | 1.45 |
| 44 | H | 101 | RRX | C8-C9 | 4.82 | 1.56 | 1.45 |
| 43 | f | 101 | HEM | C3C-C2C | -4.74 | 1.33 | 1.40 |
| 44 | h | 101 | RRX | C8-C9 | 4.73 | 1.56 | 1.45 |
| 43 | F | 101 | HEM | C3C-C2C | -4.72 | 1.33 | 1.40 |
| 35 | B | 620 | C7Z | C24-C25 | -4.69 | 1.43 | 1.51 |
| 35 | b | 620 | C7Z | C24-C25 | -4.63 | 1.43 | 1.51 |
| 35 | B | 620 | C7Z | C32-C33 | 4.61 | 1.55 | 1.45 |
| 35 | b | 620 | C7Z | C32-C33 | 4.61 | 1.55 | 1.45 |
| 31 | A | 411 | BCR | C16-C17 | -4.46 | 1.29 | 1.43 |
| 31 | a | 411 | BCR | C16-C17 | -4.45 | 1.29 | 1.43 |
| 44 | h | 101 | RRX | C27-C26 | -4.43 | 1.44 | 1.51 |
| 31 | c | 517 | BCR | C16-C17 | -4.42 | 1.29 | 1.43 |
| 35 | b | 620 | C7Z | C8-C9 | 4.41 | 1.55 | 1.45 |
| 44 | H | 101 | RRX | C27-C26 | -4.40 | 1.44 | 1.51 |
| 35 | b | 620 | C7Z | C31-C30 | 4.39 | 1.57 | 1.43 |
| 31 | c | 515 | BCR | C16-C17 | -4.39 | 1.29 | 1.43 |
| 31 | C | 517 | BCR | C16-C17 | -4.38 | 1.29 | 1.43 |
| 35 | B | 620 | C7Z | C8-C9 | 4.37 | 1.55 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 35 | B | 620 | C7Z | C31-C30 | 4.37 | 1.57 | 1.43 |
| 35 | B | 620 | C7Z | C4-C5 | -4.36 | 1.44 | 1.51 |
| 31 | B | 618 | BCR | C16-C17 | -4.34 | 1.30 | 1.43 |
| 38 | c | 518 | DGD | O1G-C1A | 4.33 | 1.46 | 1.33 |
| 38 | C | 523 | DGD | O1G-C1A | 4.33 | 1.46 | 1.33 |
| 31 | b | 618 | BCR | C16-C17 | -4.33 | 1.30 | 1.43 |
| 38 | c | 523 | DGD | O1G-C1A | 4.33 | 1.46 | 1.33 |
| 31 | C | 515 | BCR | C16-C17 | -4.32 | 1.30 | 1.43 |
| 31 | b | 619 | BCR | C16-C17 | -4.31 | 1.30 | 1.43 |
| 38 | C | 518 | DGD | O1G-C1A | 4.30 | 1.45 | 1.33 |
| 31 | c | 514 | BCR | C16-C17 | -4.30 | 1.30 | 1.43 |
| 44 | H | 101 | RRX | C12-C13 | 4.29 | 1.55 | 1.45 |
| 35 | b | 620 | C7Z | C4-C5 | -4.29 | 1.44 | 1.51 |
| 31 | C | 514 | BCR | C16-C17 | -4.27 | 1.30 | 1.43 |
| 31 | B | 619 | BCR | C16-C17 | -4.26 | 1.30 | 1.43 |
| 44 | h | 101 | RRX | C3-C4 | 4.25 | 1.65 | 1.52 |
| 42 | d | 405 | PL9 | C7-C3 | -4.25 | 1.47 | 1.51 |
| 44 | H | 101 | RRX | C3-C4 | 4.23 | 1.65 | 1.52 |
| 38 | C | 520 | DGD | O1G-C1A | 4.22 | 1.45 | 1.33 |
| 31 | d | 404 | BCR | C16-C17 | -4.21 | 1.30 | 1.43 |
| 31 | C | 516 | BCR | C16-C17 | -4.20 | 1.30 | 1.43 |
| 31 | c | 516 | BCR | C16-C17 | -4.20 | 1.30 | 1.43 |
| 35 | B | 620 | C7Z | C11-C10 | 4.19 | 1.56 | 1.43 |
| 38 | C | 519 | DGD | O1G-C1A | 4.19 | 1.45 | 1.33 |
| 44 | h | 101 | RRX | C12-C13 | 4.18 | 1.54 | 1.45 |
| 31 | D | 404 | BCR | C16-C17 | -4.17 | 1.30 | 1.43 |
| 38 | c | 520 | DGD | O1G-C1A | 4.17 | 1.45 | 1.33 |
| 38 | c | 519 | DGD | O1G-C1A | 4.16 | 1.45 | 1.33 |
| 35 | b | 620 | C7Z | C11-C10 | 4.15 | 1.56 | 1.43 |
| 29 | c | 506 | CLA | MG-ND | -4.12 | 1.97 | 2.05 |
| 29 | b | 609 | CLA | MG-ND | -4.10 | 1.97 | 2.05 |
| 29 | b | 612 | CLA | MG-ND | -4.10 | 1.97 | 2.05 |
| 29 | b | 604 | CLA | MG-ND | -4.09 | 1.97 | 2.05 |
| 29 | C | 506 | CLA | MG-ND | -4.07 | 1.97 | 2.05 |
| 29 | B | 609 | CLA | MG-ND | -4.05 | 1.97 | 2.05 |
| 29 | S | 603 | CLA | MG-ND | -4.02 | 1.97 | 2.05 |
| 42 | D | 405 | PL9 | C7-C3 | -4.02 | 1.47 | 1.51 |
| 29 | B | 604 | CLA | MG-ND | -4.02 | 1.97 | 2.05 |
| 40 | C | 527 | LMK | O2-C4 | 4.01 | 1.43 | 1.30 |
| 29 | B | 612 | CLA | MG-ND | -3.99 | 1.97 | 2.05 |
| 29 | c | 507 | CLA | MG-ND | -3.98 | 1.97 | 2.05 |
| 29 | C | 508 | CLA | MG-ND | -3.98 | 1.97 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | B | 615 | CLA | MG-ND | -3.96 | 1.97 | 2.05 |
| 29 | s | 603 | CLA | MG-ND | -3.95 | 1.98 | 2.05 |
| 29 | C | 505 | CLA | MG-ND | -3.95 | 1.98 | 2.05 |
| 29 | b | 617 | CLA | MG-ND | -3.95 | 1.98 | 2.05 |
| 29 | C | 507 | CLA | MG-ND | -3.94 | 1.98 | 2.05 |
| 40 | c | 627 | LMK | O2-C4 | 3.94 | 1.43 | 1.30 |
| 29 | c | 505 | CLA | MG-ND | -3.94 | 1.98 | 2.05 |
| 29 | B | 607 | CLA | MG-ND | -3.93 | 1.98 | 2.05 |
| 29 | B | 617 | CLA | MG-ND | -3.93 | 1.98 | 2.05 |
| 29 | b | 615 | CLA | MG-ND | -3.92 | 1.98 | 2.05 |
| 29 | c | 508 | CLA | MG-ND | -3.92 | 1.98 | 2.05 |
| 44 | h | 101 | RRX | C20-C21 | 3.92 | 1.55 | 1.43 |
| 29 | S | 605 | CLA | MG-ND | -3.91 | 1.98 | 2.05 |
| 29 | Y | 611 | CLA | MG-ND | -3.90 | 1.98 | 2.05 |
| 29 | A | 410 | CLA | MG-ND | -3.90 | 1.98 | 2.05 |
| 29 | B | 613 | CLA | MG-ND | -3.90 | 1.98 | 2.05 |
| 29 | B | 605 | CLA | MG-ND | -3.90 | 1.98 | 2.05 |
| 29 | B | 603 | CLA | MG-ND | -3.90 | 1.98 | 2.05 |
| 29 | s | 611 | CLA | MG-ND | -3.88 | 1.98 | 2.05 |
| 43 | f | 101 | HEM | C3C-CAC | 3.88 | 1.55 | 1.47 |
| 29 | y | 608 | CLA | MG-ND | -3.88 | 1.98 | 2.05 |
| 44 | H | 101 | RRX | C20-C21 | 3.87 | 1.55 | 1.43 |
| 29 | C | 502 | CLA | MG-ND | -3.87 | 1.98 | 2.05 |
| 44 | H | 101 | RRX | C23-C22 | 3.87 | 1.54 | 1.45 |
| 29 | D | 402 | CLA | MG-ND | -3.87 | 1.98 | 2.05 |
| 29 | N | 612 | CLA | MG-ND | -3.87 | 1.98 | 2.05 |
| 29 | b | 613 | CLA | MG-ND | -3.87 | 1.98 | 2.05 |
| 29 | b | 603 | CLA | MG-ND | -3.87 | 1.98 | 2.05 |
| 29 | a | 410 | CLA | MG-ND | -3.86 | 1.98 | 2.05 |
| 29 | b | 607 | CLA | MG-ND | -3.86 | 1.98 | 2.05 |
| 29 | Y | 612 | CLA | MG-ND | -3.86 | 1.98 | 2.05 |
| 29 | S | 611 | CLA | MG-ND | -3.86 | 1.98 | 2.05 |
| 29 | a | 405 | CLA | MG-ND | -3.86 | 1.98 | 2.05 |
| 44 | h | 101 | RRX | C23-C22 | 3.85 | 1.54 | 1.45 |
| 29 | g | 604 | CLA | MG-ND | -3.85 | 1.98 | 2.05 |
| 29 | b | 605 | CLA | MG-ND | -3.85 | 1.98 | 2.05 |
| 29 | d | 403 | CLA | MG-ND | -3.85 | 1.98 | 2.05 |
| 29 | c | 513 | CLA | MG-ND | -3.85 | 1.98 | 2.05 |
| 43 | F | 101 | HEM | C3C-CAC | 3.85 | 1.55 | 1.47 |
| 29 | N | 604 | CLA | MG-ND | -3.85 | 1.98 | 2.05 |
| 29 | r | 609 | CLA | MG-ND | -3.85 | 1.98 | 2.05 |
| 29 | R | 604 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|-------|-------|-------------|----------|
| 29 | r | 604 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | s | 605 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | D | 403 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | c | 502 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | d | 402 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | B | 606 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | b | 606 | CLA | MG-ND | -3.84 | 1.98 | 2.05 |
| 29 | s | 610 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | y | 614 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | c | 509 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | y | 612 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | c | 501 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | S | 613 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | R | 603 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | b | 611 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | C | 509 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | n | 613 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | S | 610 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | b | 608 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | C | 512 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | A | 407 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | C | 513 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | c | 512 | CLA | MG-ND | -3.83 | 1.98 | 2.05 |
| 29 | G | 612 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | A | 405 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | r | 612 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | Y | 608 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | A | 406 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | b | 614 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | R | 609 | CLA | MG-ND | -3.82 | 1.98 | 2.05 |
| 29 | N | 613 | CLA | MG-ND | -3.81 | 1.98 | 2.05 |
| 29 | n | 602 | CLA | MG-ND | -3.81 | 1.98 | 2.05 |
| 29 | N | 610 | CLA | MG-ND | -3.81 | 1.98 | 2.05 |
| 29 | N | 602 | CLA | MG-ND | -3.81 | 1.98 | 2.05 |
| 29 | S | 614 | CLA | MG-ND | -3.81 | 1.98 | 2.05 |
| 29 | g | 612 | CLA | MG-ND | -3.81 | 1.98 | 2.05 |
| 29 | G | 604 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | Y | 602 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | Y | 610 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | s | 614 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | S | 612 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | r | 608 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | a | 406 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | n | 604 | CLA | MG-ND | -3.80 | 1.98 | 2.05 |
| 29 | B | 611 | CLA | MG-ND | -3.79 | 1.98 | 2.05 |
| 29 | C | 501 | CLA | MG-ND | -3.79 | 1.98 | 2.05 |
| 29 | s | 612 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | a | 407 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | b | 610 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | B | 610 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | S | 604 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | C | 504 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | s | 613 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 35 | B | 620 | C7Z | C27-C26 | 3.78 | 1.58 | 1.45 |
| 29 | y | 604 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | n | 612 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | B | 608 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | S | 617 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | r | 603 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | C | 503 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | R | 613 | CLA | MG-ND | -3.78 | 1.98 | 2.05 |
| 29 | c | 504 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | R | 611 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | y | 611 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | c | 510 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 44 | h | 101 | RRX | C15-C14 | 3.77 | 1.55 | 1.43 |
| 29 | S | 602 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | y | 610 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | g | 602 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | N | 614 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | r | 611 | CLA | MG-ND | -3.77 | 1.98 | 2.05 |
| 29 | c | 503 | CLA | MG-ND | -3.76 | 1.98 | 2.05 |
| 35 | b | 620 | C7Z | C15-C14 | 3.76 | 1.55 | 1.43 |
| 29 | G | 613 | CLA | MG-ND | -3.76 | 1.98 | 2.05 |
| 29 | n | 614 | CLA | MG-ND | -3.76 | 1.98 | 2.05 |
| 29 | g | 610 | CLA | MG-ND | -3.76 | 1.98 | 2.05 |
| 29 | C | 511 | CLA | MG-ND | -3.76 | 1.98 | 2.05 |
| 29 | R | 608 | CLA | MG-ND | -3.76 | 1.98 | 2.05 |
| 35 | b | 620 | C7Z | C22-C21 | 3.76 | 1.66 | 1.54 |
| 29 | R | 612 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 29 | N | 611 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 29 | Y | 604 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 29 | r | 602 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 29 | B | 614 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | N | 603 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 29 | g | 611 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 29 | r | 613 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 35 | b | 620 | C7Z | C27-C26 | 3.75 | 1.58 | 1.45 |
| 35 | B | 620 | C7Z | C22-C21 | 3.75 | 1.66 | 1.54 |
| 29 | g | 613 | CLA | MG-ND | -3.75 | 1.98 | 2.05 |
| 44 | H | 101 | RRX | C15-C14 | 3.74 | 1.55 | 1.43 |
| 29 | R | 610 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | G | 611 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | y | 602 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | c | 508 | CLA | C1C-NC | -3.74 | 1.32 | 1.37 |
| 29 | r | 610 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | s | 604 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | n | 611 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | s | 617 | CLA | MG-ND | -3.74 | 1.98 | 2.05 |
| 29 | n | 603 | CLA | MG-ND | -3.73 | 1.98 | 2.05 |
| 29 | Y | 614 | CLA | MG-ND | -3.73 | 1.98 | 2.05 |
| 29 | Y | 613 | CLA | MG-ND | -3.73 | 1.98 | 2.05 |
| 29 | G | 602 | CLA | MG-ND | -3.73 | 1.98 | 2.05 |
| 29 | G | 610 | CLA | MG-ND | -3.73 | 1.98 | 2.05 |
| 29 | B | 602 | CLA | MG-ND | -3.73 | 1.98 | 2.05 |
| 29 | B | 616 | CLA | MG-ND | -3.72 | 1.98 | 2.05 |
| 29 | s | 609 | CLA | MG-ND | -3.72 | 1.98 | 2.05 |
| 29 | y | 613 | CLA | MG-ND | -3.72 | 1.98 | 2.05 |
| 29 | R | 602 | CLA | MG-ND | -3.72 | 1.98 | 2.05 |
| 29 | S | 609 | CLA | MG-ND | -3.72 | 1.98 | 2.05 |
| 35 | B | 620 | C7Z | C15-C14 | 3.72 | 1.55 | 1.43 |
| 29 | C | 508 | CLA | C1C-NC | -3.72 | 1.32 | 1.37 |
| 29 | g | 614 | CLA | MG-ND | -3.71 | 1.98 | 2.05 |
| 29 | G | 614 | CLA | MG-ND | -3.71 | 1.98 | 2.05 |
| 29 | s | 602 | CLA | MG-ND | -3.71 | 1.98 | 2.05 |
| 29 | b | 602 | CLA | MG-ND | -3.70 | 1.98 | 2.05 |
| 29 | b | 617 | CLA | C1C-NC | -3.70 | 1.32 | 1.37 |
| 29 | G | 603 | CLA | MG-ND | -3.70 | 1.98 | 2.05 |
| 29 | n | 610 | CLA | MG-ND | -3.68 | 1.98 | 2.05 |
| 29 | c | 511 | CLA | MG-ND | -3.68 | 1.98 | 2.05 |
| 29 | B | 617 | CLA | C1C-NC | -3.67 | 1.32 | 1.37 |
| 29 | b | 616 | CLA | MG-ND | -3.65 | 1.98 | 2.05 |
| 29 | g | 603 | CLA | MG-ND | -3.65 | 1.98 | 2.05 |
| 36 | b | 623 | DGA | OG2-CB1 | 3.64 | 1.44 | 1.34 |
| 36 | B | 625 | DGA | OG2-CB1 | 3.63 | 1.44 | 1.34 |
| 29 | Y | 603 | CLA | MG-ND | -3.63 | 1.98 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | c | 502 | CLA | C1C-NC | -3.62 | 1.32 | 1.37 |
| 29 | b | 612 | CLA | C1C-NC | -3.61 | 1.32 | 1.37 |
| 35 | B | 620 | C7Z | C2-C1 | 3.60 | 1.66 | 1.54 |
| 29 | b | 610 | CLA | C1C-NC | -3.60 | 1.32 | 1.37 |
| 29 | G | 610 | CLA | C1C-NC | -3.60 | 1.32 | 1.37 |
| 29 | B | 605 | CLA | C1C-NC | -3.59 | 1.32 | 1.37 |
| 35 | b | 620 | C7Z | C2-C1 | 3.59 | 1.66 | 1.54 |
| 29 | A | 406 | CLA | C1C-NC | -3.58 | 1.32 | 1.37 |
| 29 | b | 611 | CLA | C1C-NC | -3.58 | 1.32 | 1.37 |
| 35 | B | 620 | C7Z | C35-C34 | 3.57 | 1.54 | 1.43 |
| 35 | b | 620 | C7Z | C35-C34 | 3.57 | 1.54 | 1.43 |
| 29 | y | 603 | CLA | MG-ND | -3.55 | 1.98 | 2.05 |
| 29 | C | 510 | CLA | MG-ND | -3.55 | 1.98 | 2.05 |
| 29 | B | 606 | CLA | C1C-NC | -3.54 | 1.32 | 1.37 |
| 35 | b | 620 | C7Z | C7-C6 | 3.54 | 1.57 | 1.45 |
| 29 | N | 602 | CLA | C1C-NC | -3.51 | 1.32 | 1.37 |
| 29 | c | 506 | CLA | C1C-NC | -3.50 | 1.32 | 1.37 |
| 29 | B | 611 | CLA | C1C-NC | -3.49 | 1.32 | 1.37 |
| 35 | B | 620 | C7Z | C7-C6 | 3.49 | 1.57 | 1.45 |
| 29 | c | 504 | CLA | C1C-NC | -3.48 | 1.32 | 1.37 |
| 29 | b | 606 | CLA | C1C-NC | -3.48 | 1.32 | 1.37 |
| 35 | B | 620 | C7Z | C38-C25 | 3.47 | 1.56 | 1.50 |
| 29 | b | 605 | CLA | C1C-NC | -3.47 | 1.32 | 1.37 |
| 42 | d | 405 | PL9 | C3-C4 | -3.46 | 1.43 | 1.49 |
| 29 | B | 612 | CLA | C1C-NC | -3.46 | 1.32 | 1.37 |
| 29 | a | 405 | CLA | C1C-NC | -3.46 | 1.32 | 1.37 |
| 29 | C | 506 | CLA | C1C-NC | -3.45 | 1.32 | 1.37 |
| 45 | N | 608 | CHL | CBB-CAB | 3.44 | 1.52 | 1.29 |
| 35 | b | 620 | C7Z | C38-C25 | 3.44 | 1.56 | 1.50 |
| 45 | Y | 601 | CHL | CBB-CAB | 3.43 | 1.52 | 1.29 |
| 45 | n | 608 | CHL | CBB-CAB | 3.42 | 1.52 | 1.29 |
| 45 | y | 601 | CHL | CBB-CAB | 3.42 | 1.52 | 1.29 |
| 29 | C | 504 | CLA | C1C-NC | -3.42 | 1.32 | 1.37 |
| 45 | n | 609 | CHL | CBB-CAB | 3.42 | 1.52 | 1.29 |
| 29 | a | 410 | CLA | C1C-NC | -3.42 | 1.32 | 1.37 |
| 29 | B | 610 | CLA | C1C-NC | -3.41 | 1.32 | 1.37 |
| 29 | a | 407 | CLA | C1C-NC | -3.41 | 1.32 | 1.37 |
| 36 | C | 524 | DGA | OG2-CB1 | 3.41 | 1.43 | 1.34 |
| 29 | C | 502 | CLA | C1C-NC | -3.41 | 1.32 | 1.37 |
| 29 | B | 614 | CLA | CBB-CAB | 3.40 | 1.51 | 1.29 |
| 29 | a | 406 | CLA | C1C-NC | -3.40 | 1.32 | 1.37 |
| 45 | N | 609 | CHL | CBB-CAB | 3.40 | 1.51 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 36 | c | 524 | DGA | OG2-CB1 | 3.40 | 1.43 | 1.34 |
| 29 | r | 608 | CLA | C1C-NC | -3.40 | 1.32 | 1.37 |
| 29 | b | 608 | CLA | C1C-NC | -3.40 | 1.32 | 1.37 |
| 29 | b | 614 | CLA | CBB-CAB | 3.39 | 1.51 | 1.29 |
| 45 | Y | 605 | CHL | CBB-CAB | 3.39 | 1.51 | 1.29 |
| 45 | y | 605 | CHL | CBB-CAB | 3.39 | 1.51 | 1.29 |
| 29 | c | 503 | CLA | C1C-NC | -3.38 | 1.32 | 1.37 |
| 45 | n | 601 | CHL | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 45 | N | 601 | CHL | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 29 | n | 602 | CLA | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 45 | G | 605 | CHL | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 45 | G | 609 | CHL | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 29 | R | 602 | CLA | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 29 | C | 509 | CLA | CBB-CAB | 3.38 | 1.51 | 1.29 |
| 45 | y | 609 | CHL | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | N | 610 | CLA | C1C-NC | -3.37 | 1.32 | 1.37 |
| 29 | R | 608 | CLA | C1C-NC | -3.37 | 1.32 | 1.37 |
| 29 | r | 610 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | N | 602 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | y | 602 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | r | 602 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | C | 507 | CLA | C1C-NC | -3.37 | 1.32 | 1.37 |
| 29 | g | 604 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | A | 405 | CLA | C1C-NC | -3.37 | 1.32 | 1.37 |
| 29 | A | 405 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 45 | G | 601 | CHL | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | n | 602 | CLA | C1C-NC | -3.37 | 1.32 | 1.37 |
| 29 | R | 613 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | y | 603 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | g | 610 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | B | 602 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | C | 508 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | b | 608 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | n | 610 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 29 | a | 405 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | B | 602 | CLA | C1C-NC | -3.36 | 1.32 | 1.37 |
| 29 | B | 604 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 45 | g | 608 | CHL | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | G | 603 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | N | 604 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | s | 605 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | s | 614 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | r | 613 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 44 | h | 101 | RRX | C11-C10 | 3.36 | 1.53 | 1.43 |
| 45 | G | 608 | CHL | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | s | 604 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | c | 509 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | r | 612 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | n | 612 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | R | 612 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 45 | g | 609 | CHL | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | R | 603 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | b | 610 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 45 | Y | 609 | CHL | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | B | 611 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | c | 508 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | S | 605 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | B | 615 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 44 | H | 101 | RRX | C11-C10 | 3.36 | 1.53 | 1.43 |
| 29 | B | 603 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | d | 403 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | R | 611 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | g | 613 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | G | 602 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | B | 608 | CLA | C1C-NC | -3.36 | 1.32 | 1.37 |
| 29 | Y | 611 | CLA | C1C-NC | -3.36 | 1.32 | 1.37 |
| 29 | s | 617 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | N | 614 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 45 | g | 605 | CHL | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | B | 612 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | G | 612 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | S | 614 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 29 | c | 509 | CLA | C1C-NC | -3.36 | 1.32 | 1.37 |
| 45 | n | 606 | CHL | C4B-NB | 3.36 | 1.38 | 1.35 |
| 29 | b | 604 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | c | 507 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | A | 410 | CLA | C1C-NC | -3.35 | 1.32 | 1.37 |
| 29 | n | 604 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | B | 613 | CLA | C1C-NC | -3.35 | 1.32 | 1.37 |
| 29 | y | 608 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 45 | n | 605 | CHL | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | c | 512 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | B | 608 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | N | 603 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | N | 610 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | G | 611 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | N | 612 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | b | 615 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | n | 614 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | S | 613 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | g | 602 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 36 | B | 625 | DGA | OG1-CA1 | 3.35 | 1.43 | 1.33 |
| 29 | c | 506 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | R | 610 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | B | 610 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | r | 611 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | Y | 604 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | A | 407 | CLA | C1C-NC | -3.35 | 1.32 | 1.37 |
| 29 | d | 402 | CLA | C1C-NC | -3.35 | 1.32 | 1.37 |
| 29 | C | 506 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | S | 617 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | c | 510 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | S | 609 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | Y | 602 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | Y | 614 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | Y | 603 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | g | 614 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | S | 604 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | S | 602 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | C | 510 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | g | 603 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 29 | b | 607 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | C | 512 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | R | 609 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | n | 611 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | g | 611 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | Y | 610 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | y | 604 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | C | 502 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | s | 609 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | r | 604 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | n | 610 | CLA | C1C-NC | -3.34 | 1.32 | 1.37 |
| 29 | b | 616 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | R | 608 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 45 | N | 605 | CHL | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | b | 612 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | r | 609 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | y | 614 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | Y | 602 | CLA | C1C-NC | -3.34 | 1.32 | 1.37 |
| 45 | S | 607 | CHL | C4B-NB | 3.34 | 1.38 | 1.35 |
| 29 | y | 613 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | G | 604 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | Y | 608 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | B | 616 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | n | 613 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | B | 607 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | y | 610 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | R | 604 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | g | 612 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | r | 603 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | b | 602 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | N | 613 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | C | 507 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | g | 610 | CLA | C1C-NC | -3.34 | 1.32 | 1.37 |
| 29 | D | 403 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | C | 504 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | s | 602 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 45 | G | 607 | CHL | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 45 | r | 606 | CHL | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | G | 614 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | s | 612 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 29 | b | 611 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | b | 603 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | b | 605 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | n | 612 | CLA | C1C-NC | -3.33 | 1.32 | 1.37 |
| 29 | c | 504 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 45 | N | 607 | CHL | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | r | 608 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 36 | b | 623 | DGA | OG1-CA1 | 3.33 | 1.43 | 1.33 |
| 29 | s | 613 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | c | 501 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | G | 610 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | y | 611 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | N | 611 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 45 | g | 601 | CHL | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | c | 511 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | c | 503 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | Y | 612 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | S | 610 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | Y | 613 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | C | 501 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | C | 511 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | b | 615 | CLA | C1C-NC | -3.33 | 1.32 | 1.37 |
| 29 | s | 603 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | y | 612 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 45 | S | 607 | CHL | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | S | 612 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | C | 509 | CLA | C1C-NC | -3.33 | 1.32 | 1.37 |
| 29 | S | 603 | CLA | CBB-CAB | 3.33 | 1.51 | 1.29 |
| 29 | s | 611 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | y | 603 | CLA | C1C-NC | -3.32 | 1.32 | 1.37 |
| 29 | y | 604 | CLA | C1C-NC | -3.32 | 1.32 | 1.37 |
| 29 | c | 502 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 45 | R | 606 | CHL | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | A | 407 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | Y | 610 | CLA | C1C-NC | -3.32 | 1.32 | 1.37 |
| 29 | G | 613 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | A | 406 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | s | 610 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | B | 613 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | a | 407 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | S | 611 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | n | 603 | CLA | C1C-NC | -3.32 | 1.32 | 1.37 |
| 29 | b | 613 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | D | 402 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | n | 603 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | b | 606 | CLA | CBB-CAB | 3.32 | 1.51 | 1.29 |
| 29 | C | 503 | CLA | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 29 | C | 513 | CLA | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 29 | c | 513 | CLA | C1C-NC | -3.31 | 1.32 | 1.37 |
| 45 | s | 606 | CHL | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 45 | s | 607 | CHL | C4B-NB | 3.31 | 1.38 | 1.35 |
| 29 | y | 610 | CLA | C1C-NC | -3.31 | 1.32 | 1.37 |
| 29 | c | 507 | CLA | C1C-NC | -3.31 | 1.32 | 1.37 |
| 29 | b | 613 | CLA | C1C-NC | -3.31 | 1.32 | 1.37 |
| 29 | B | 609 | CLA | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 45 | s | 607 | CHL | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 29 | C | 510 | CLA | C1C-NC | -3.31 | 1.32 | 1.37 |
| 29 | a | 406 | CLA | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 45 | g | 607 | CHL | CBB-CAB | 3.31 | 1.51 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | D | 402 | CLA | C1C-NC | -3.31 | 1.32 | 1.37 |
| 45 | N | 606 | CHL | C4B-NB | 3.30 | 1.38 | 1.35 |
| 29 | c | 505 | CLA | C1C-NC | -3.30 | 1.32 | 1.37 |
| 29 | s | 604 | CLA | C1C-NC | -3.30 | 1.32 | 1.37 |
| 29 | y | 602 | CLA | C1C-NC | -3.30 | 1.32 | 1.37 |
| 36 | C | 524 | DGA | OG1-CA1 | 3.30 | 1.43 | 1.33 |
| 45 | s | 608 | CHL | CBB-CAB | 3.30 | 1.51 | 1.29 |
| 29 | B | 605 | CLA | CBB-CAB | 3.30 | 1.51 | 1.29 |
| 29 | S | 604 | CLA | C1C-NC | -3.30 | 1.32 | 1.37 |
| 29 | B | 604 | CLA | C1C-NC | -3.30 | 1.32 | 1.37 |
| 29 | C | 505 | CLA | C1C-NC | -3.30 | 1.32 | 1.37 |
| 45 | S | 606 | CHL | CBB-CAB | 3.30 | 1.51 | 1.29 |
| 29 | G | 602 | CLA | C1C-NC | -3.29 | 1.32 | 1.37 |
| 29 | B | 606 | CLA | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 29 | c | 513 | CLA | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 45 | r | 607 | CHL | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 29 | c | 505 | CLA | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 45 | S | 608 | CHL | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 29 | b | 617 | CLA | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 29 | Y | 611 | CLA | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 29 | B | 615 | CLA | C1C-NC | -3.29 | 1.32 | 1.37 |
| 29 | r | 609 | CLA | C1C-NC | -3.29 | 1.32 | 1.37 |
| 45 | G | 606 | CHL | C4B-NB | 3.29 | 1.38 | 1.35 |
| 36 | c | 524 | DGA | OG1-CA1 | 3.29 | 1.42 | 1.33 |
| 45 | Y | 607 | CHL | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 29 | g | 602 | CLA | C1C-NC | -3.28 | 1.32 | 1.37 |
| 29 | d | 402 | CLA | CBB-CAB | 3.28 | 1.51 | 1.29 |
| 45 | R | 607 | CHL | CBB-CAB | 3.28 | 1.51 | 1.29 |
| 29 | g | 612 | CLA | C1C-NC | -3.28 | 1.32 | 1.37 |
| 29 | b | 609 | CLA | CBB-CAB | 3.28 | 1.51 | 1.29 |
| 29 | C | 503 | CLA | C1C-NC | -3.28 | 1.32 | 1.37 |
| 29 | C | 505 | CLA | CBB-CAB | 3.28 | 1.51 | 1.29 |
| 45 | S | 601 | CHL | C4B-NB | 3.28 | 1.38 | 1.35 |
| 29 | c | 501 | CLA | C1C-NC | -3.28 | 1.32 | 1.37 |
| 29 | n | 604 | CLA | C1C-NC | -3.28 | 1.32 | 1.37 |
| 29 | b | 604 | CLA | C1C-NC | -3.28 | 1.32 | 1.37 |
| 45 | G | 605 | CHL | C4B-NB | 3.27 | 1.38 | 1.35 |
| 38 | c | 519 | DGD | CDB-CCB | -3.27 | 1.33 | 1.51 |
| 45 | s | 601 | CHL | C4B-NB | 3.27 | 1.38 | 1.35 |
| 45 | G | 606 | CHL | CBB-CAB | 3.27 | 1.51 | 1.29 |
| 29 | B | 617 | CLA | CBB-CAB | 3.27 | 1.51 | 1.29 |
| 29 | S | 603 | CLA | C1C-NC | -3.27 | 1.32 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 45 | g | 606 | CHL | CBB-CAB | 3.27 | 1.51 | 1.29 |
| 44 | H | 101 | RRX | C24-C25 | 3.27 | 1.56 | 1.45 |
| 29 | C | 513 | CLA | C1C-NC | -3.27 | 1.32 | 1.37 |
| 29 | s | 603 | CLA | C1C-NC | -3.27 | 1.32 | 1.37 |
| 29 | b | 602 | CLA | C1C-NC | -3.27 | 1.32 | 1.37 |
| 29 | r | 610 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 45 | R | 607 | CHL | C4B-NB | 3.26 | 1.38 | 1.35 |
| 29 | B | 607 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 42 | D | 405 | PL9 | C3-C4 | -3.26 | 1.44 | 1.49 |
| 29 | N | 603 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 29 | r | 613 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 29 | C | 511 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 29 | G | 603 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 38 | c | 518 | DGD | CDB-CCB | -3.26 | 1.33 | 1.51 |
| 29 | R | 613 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 29 | b | 614 | CLA | C1C-NC | -3.26 | 1.32 | 1.37 |
| 33 | b | 622 | LMG | C22-C21 | -3.26 | 1.33 | 1.51 |
| 45 | n | 607 | CHL | CBB-CAB | 3.26 | 1.50 | 1.29 |
| 38 | C | 523 | DGD | CAA-C9A | -3.25 | 1.33 | 1.51 |
| 29 | y | 608 | CLA | C1C-NC | -3.25 | 1.32 | 1.37 |
| 45 | y | 606 | CHL | CBB-CAB | 3.25 | 1.50 | 1.29 |
| 45 | S | 601 | CHL | CBB-CAB | 3.25 | 1.50 | 1.29 |
| 38 | C | 519 | DGD | CDB-CCB | -3.25 | 1.33 | 1.51 |
| 29 | D | 403 | CLA | C1C-NC | -3.25 | 1.33 | 1.37 |
| 38 | c | 520 | DGD | CAA-C9A | -3.25 | 1.33 | 1.51 |
| 38 | C | 523 | DGD | CGA-CFA | -3.25 | 1.33 | 1.51 |
| 33 | h | 102 | LMG | C37-C36 | -3.25 | 1.33 | 1.51 |
| 38 | C | 520 | DGD | CAB-C9B | -3.25 | 1.33 | 1.51 |
| 29 | R | 609 | CLA | C1C-NC | -3.25 | 1.33 | 1.37 |
| 38 | c | 523 | DGD | CAA-C9A | -3.25 | 1.33 | 1.51 |
| 33 | B | 622 | LMG | C22-C21 | -3.25 | 1.33 | 1.51 |
| 29 | N | 612 | CLA | C1C-NC | -3.25 | 1.33 | 1.37 |
| 29 | Y | 612 | CLA | C1C-NC | -3.25 | 1.33 | 1.37 |
| 38 | c | 523 | DGD | CDB-CCB | -3.25 | 1.33 | 1.51 |
| 44 | h | 101 | RRX | C24-C25 | 3.25 | 1.56 | 1.45 |
| 45 | y | 605 | CHL | C4B-NB | 3.25 | 1.38 | 1.35 |
| 38 | C | 520 | DGD | CAA-C9A | -3.25 | 1.33 | 1.51 |
| 33 | H | 102 | LMG | C19-C18 | -3.24 | 1.33 | 1.51 |
| 45 | Y | 606 | CHL | C4B-NB | 3.24 | 1.38 | 1.35 |
| 38 | c | 520 | DGD | CAB-C9B | -3.24 | 1.33 | 1.51 |
| 29 | y | 611 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 33 | c | 521 | LMG | C22-C21 | -3.24 | 1.33 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 33 | c | 521 | LMG | C40-C39 | -3.24 | 1.33 | 1.51 |
| 29 | s | 609 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 45 | y | 607 | CHL | CBB-CAB | 3.24 | 1.50 | 1.29 |
| 38 | c | 523 | DGD | CGA-CFA | -3.24 | 1.33 | 1.51 |
| 29 | b | 616 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 38 | C | 519 | DGD | CDA-CCA | -3.24 | 1.33 | 1.51 |
| 29 | b | 609 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 29 | S | 602 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 29 | Y | 604 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 45 | y | 606 | CHL | C4B-NB | 3.24 | 1.38 | 1.35 |
| 33 | h | 102 | LMG | C19-C18 | -3.24 | 1.33 | 1.51 |
| 29 | d | 403 | CLA | C1C-NC | -3.24 | 1.33 | 1.37 |
| 38 | c | 519 | DGD | CDA-CCA | -3.23 | 1.33 | 1.51 |
| 45 | S | 608 | CHL | C4B-NB | 3.23 | 1.38 | 1.35 |
| 29 | b | 607 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 33 | C | 521 | LMG | C22-C21 | -3.23 | 1.33 | 1.51 |
| 29 | s | 611 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 29 | G | 604 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 33 | C | 521 | LMG | C40-C39 | -3.23 | 1.33 | 1.51 |
| 33 | H | 102 | LMG | C40-C39 | -3.23 | 1.33 | 1.51 |
| 38 | C | 518 | DGD | CDB-CCB | -3.23 | 1.33 | 1.51 |
| 38 | C | 523 | DGD | CDB-CCB | -3.23 | 1.33 | 1.51 |
| 45 | g | 605 | CHL | C4B-NB | 3.23 | 1.38 | 1.35 |
| 29 | g | 611 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 29 | g | 613 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 29 | g | 603 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 29 | s | 610 | CLA | C1C-NC | -3.23 | 1.33 | 1.37 |
| 33 | b | 622 | LMG | C19-C18 | -3.22 | 1.33 | 1.51 |
| 29 | a | 410 | CLA | CBB-CAB | 3.22 | 1.50 | 1.29 |
| 29 | C | 512 | CLA | C1C-NC | -3.22 | 1.33 | 1.37 |
| 45 | Y | 606 | CHL | CBB-CAB | 3.22 | 1.50 | 1.29 |
| 29 | N | 613 | CLA | C1C-NC | -3.22 | 1.33 | 1.37 |
| 44 | h | 101 | RRX | C16-C17 | 3.22 | 1.53 | 1.43 |
| 38 | c | 523 | DGD | CAB-C9B | -3.22 | 1.33 | 1.51 |
| 29 | r | 603 | CLA | C1C-NC | -3.22 | 1.33 | 1.37 |
| 38 | c | 519 | DGD | CAB-C9B | -3.22 | 1.33 | 1.51 |
| 29 | G | 612 | CLA | C1C-NC | -3.22 | 1.33 | 1.37 |
| 33 | B | 622 | LMG | C19-C18 | -3.21 | 1.33 | 1.51 |
| 29 | c | 512 | CLA | C1C-NC | -3.21 | 1.33 | 1.37 |
| 33 | H | 102 | LMG | C37-C36 | -3.21 | 1.33 | 1.51 |
| 29 | Y | 603 | CLA | C1C-NC | -3.21 | 1.33 | 1.37 |
| 38 | C | 518 | DGD | CAB-C9B | -3.21 | 1.33 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 38 | c | 518 | DGD | CAB-C9B | -3.21 | 1.33 | 1.51 |
| 45 | G | 608 | CHL | C4B-NB | 3.21 | 1.38 | 1.35 |
| 33 | J | 101 | LMG | C19-C18 | -3.21 | 1.33 | 1.51 |
| 38 | C | 523 | DGD | CDA-CCA | -3.21 | 1.33 | 1.51 |
| 38 | C | 523 | DGD | CAB-C9B | -3.21 | 1.33 | 1.51 |
| 29 | y | 613 | CLA | C1C-NC | -3.21 | 1.33 | 1.37 |
| 29 | s | 613 | CLA | C1C-NC | -3.21 | 1.33 | 1.37 |
| 29 | B | 616 | CLA | C1C-NC | -3.21 | 1.33 | 1.37 |
| 38 | C | 523 | DGD | CGB-CFB | -3.21 | 1.33 | 1.51 |
| 33 | h | 102 | LMG | C40-C39 | -3.21 | 1.33 | 1.51 |
| 38 | C | 519 | DGD | CAB-C9B | -3.21 | 1.33 | 1.51 |
| 33 | d | 411 | LMG | C19-C18 | -3.21 | 1.33 | 1.51 |
| 33 | c | 521 | LMG | C19-C18 | -3.20 | 1.33 | 1.51 |
| 33 | A | 413 | LMG | C40-C39 | -3.20 | 1.33 | 1.51 |
| 33 | J | 101 | LMG | C22-C21 | -3.20 | 1.33 | 1.51 |
| 33 | c | 521 | LMG | C37-C36 | -3.20 | 1.33 | 1.51 |
| 29 | S | 610 | CLA | C1C-NC | -3.20 | 1.33 | 1.37 |
| 29 | S | 614 | CLA | C1C-NC | -3.20 | 1.33 | 1.37 |
| 45 | S | 606 | CHL | C4B-NB | 3.20 | 1.38 | 1.35 |
| 29 | A | 410 | CLA | CBB-CAB | 3.20 | 1.50 | 1.29 |
| 33 | j | 101 | LMG | C19-C18 | -3.20 | 1.33 | 1.51 |
| 29 | N | 604 | CLA | C1C-NC | -3.20 | 1.33 | 1.37 |
| 45 | N | 606 | CHL | CBB-CAB | 3.20 | 1.50 | 1.29 |
| 29 | g | 604 | CLA | C1C-NC | -3.20 | 1.33 | 1.37 |
| 33 | D | 411 | LMG | C19-C18 | -3.20 | 1.33 | 1.51 |
| 33 | d | 411 | LMG | C22-C21 | -3.20 | 1.33 | 1.51 |
| 44 | H | 101 | RRX | C16-C17 | 3.20 | 1.53 | 1.43 |
| 33 | D | 411 | LMG | C22-C21 | -3.20 | 1.33 | 1.51 |
| 33 | a | 413 | LMG | C37-C36 | -3.20 | 1.33 | 1.51 |
| 33 | A | 413 | LMG | C37-C36 | -3.20 | 1.33 | 1.51 |
| 44 | h | 101 | RRX | C29-C30 | 3.20 | 1.64 | 1.54 |
| 29 | Y | 613 | CLA | C1C-NC | -3.20 | 1.33 | 1.37 |
| 33 | j | 101 | LMG | C22-C21 | -3.20 | 1.33 | 1.51 |
| 33 | C | 521 | LMG | C37-C36 | -3.20 | 1.33 | 1.51 |
| 29 | S | 613 | CLA | C1C-NC | -3.20 | 1.33 | 1.37 |
| 33 | C | 521 | LMG | C19-C18 | -3.20 | 1.33 | 1.51 |
| 38 | c | 523 | DGD | CDA-CCA | -3.20 | 1.33 | 1.51 |
| 38 | c | 523 | DGD | CGB-CFB | -3.20 | 1.33 | 1.51 |
| 29 | r | 604 | CLA | C1C-NC | -3.19 | 1.33 | 1.37 |
| 29 | R | 602 | CLA | C1C-NC | -3.19 | 1.33 | 1.37 |
| 45 | s | 601 | CHL | CBB-CAB | 3.19 | 1.50 | 1.29 |
| 29 | c | 510 | CLA | C1C-NC | -3.19 | 1.33 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 45 | g | 601 | CHL | C4B-NB | 3.19 | 1.38 | 1.35 |
| 38 | c | 519 | DGD | CAA-C9A | -3.19 | 1.33 | 1.51 |
| 29 | R | 610 | CLA | C1C-NC | -3.19 | 1.33 | 1.37 |
| 33 | a | 413 | LMG | C40-C39 | -3.19 | 1.33 | 1.51 |
| 29 | R | 604 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | S | 605 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | s | 605 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 45 | n | 601 | CHL | C4B-NB | 3.18 | 1.38 | 1.35 |
| 44 | H | 101 | RRX | C4-C5 | -3.18 | 1.44 | 1.51 |
| 29 | g | 614 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | c | 511 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | S | 611 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 45 | G | 609 | CHL | C4B-NB | 3.18 | 1.38 | 1.35 |
| 45 | y | 609 | CHL | C4B-NB | 3.18 | 1.38 | 1.35 |
| 29 | b | 603 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | B | 603 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | R | 612 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 45 | Y | 605 | CHL | C4B-NB | 3.18 | 1.38 | 1.35 |
| 29 | G | 613 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | s | 617 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 29 | B | 609 | CLA | C1C-NC | -3.18 | 1.33 | 1.37 |
| 33 | A | 413 | LMG | C19-C18 | -3.18 | 1.33 | 1.51 |
| 45 | r | 607 | CHL | C4B-NB | 3.17 | 1.38 | 1.35 |
| 29 | y | 614 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 44 | h | 101 | RRX | C4-C5 | -3.17 | 1.44 | 1.51 |
| 29 | C | 501 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 29 | G | 611 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 29 | n | 614 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 38 | C | 519 | DGD | CAA-C9A | -3.17 | 1.33 | 1.51 |
| 29 | R | 603 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 45 | g | 608 | CHL | C4B-NB | 3.17 | 1.38 | 1.35 |
| 44 | H | 101 | RRX | C29-C30 | 3.17 | 1.64 | 1.54 |
| 29 | G | 614 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 29 | r | 602 | CLA | C1C-NC | -3.17 | 1.33 | 1.37 |
| 29 | n | 613 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 29 | y | 612 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 33 | a | 413 | LMG | C19-C18 | -3.16 | 1.33 | 1.51 |
| 45 | s | 606 | CHL | C4B-NB | 3.16 | 1.38 | 1.35 |
| 38 | c | 520 | DGD | CDB-CCB | -3.16 | 1.33 | 1.51 |
| 29 | S | 612 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 29 | s | 612 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 45 | N | 605 | CHL | C4B-NB | 3.16 | 1.38 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | S | 609 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 29 | S | 617 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 29 | r | 612 | CLA | C1C-NC | -3.16 | 1.33 | 1.37 |
| 45 | s | 608 | CHL | C4B-NB | 3.16 | 1.38 | 1.35 |
| 38 | C | 520 | DGD | CDB-CCB | -3.15 | 1.33 | 1.51 |
| 45 | G | 601 | CHL | C4B-NB | 3.15 | 1.38 | 1.35 |
| 29 | B | 614 | CLA | C1C-NC | -3.15 | 1.33 | 1.37 |
| 45 | g | 609 | CHL | C4B-NB | 3.15 | 1.38 | 1.35 |
| 29 | Y | 614 | CLA | C1C-NC | -3.14 | 1.33 | 1.37 |
| 29 | N | 611 | CLA | C1C-NC | -3.14 | 1.33 | 1.37 |
| 45 | N | 601 | CHL | C4B-NB | 3.13 | 1.38 | 1.35 |
| 29 | s | 602 | CLA | C1C-NC | -3.13 | 1.33 | 1.37 |
| 29 | r | 611 | CLA | C1C-NC | -3.13 | 1.33 | 1.37 |
| 45 | R | 606 | CHL | C4B-NB | 3.13 | 1.38 | 1.35 |
| 29 | N | 614 | CLA | C1C-NC | -3.12 | 1.33 | 1.37 |
| 29 | Y | 608 | CLA | C1C-NC | -3.12 | 1.33 | 1.37 |
| 45 | r | 606 | CHL | C4B-NB | 3.12 | 1.38 | 1.35 |
| 29 | n | 611 | CLA | C1C-NC | -3.12 | 1.33 | 1.37 |
| 29 | s | 614 | CLA | C1C-NC | -3.11 | 1.33 | 1.37 |
| 45 | n | 606 | CHL | CBB-CAB | 3.11 | 1.49 | 1.29 |
| 45 | n | 605 | CHL | C4B-NB | 3.10 | 1.38 | 1.35 |
| 29 | R | 611 | CLA | C1C-NC | -3.10 | 1.33 | 1.37 |
| 45 | Y | 609 | CHL | C4B-NB | 3.08 | 1.38 | 1.35 |
| 44 | H | 101 | RRX | C7-C6 | 3.03 | 1.55 | 1.45 |
| 44 | h | 101 | RRX | C7-C6 | 3.00 | 1.55 | 1.45 |
| 45 | y | 607 | CHL | C4B-NB | 2.99 | 1.37 | 1.35 |
| 45 | n | 608 | CHL | C4B-NB | 2.99 | 1.37 | 1.35 |
| 29 | B | 605 | CLA | C3B-C2B | -2.97 | 1.36 | 1.40 |
| 43 | f | 101 | HEM | CAB-C3B | 2.97 | 1.55 | 1.47 |
| 43 | F | 101 | HEM | CAB-C3B | 2.97 | 1.55 | 1.47 |
| 45 | N | 608 | CHL | C4B-NB | 2.94 | 1.37 | 1.35 |
| 45 | g | 606 | CHL | C4B-NB | 2.85 | 1.37 | 1.35 |
| 45 | N | 609 | CHL | C4B-NB | 2.83 | 1.37 | 1.35 |
| 45 | y | 601 | CHL | C4B-NB | 2.82 | 1.37 | 1.35 |
| 45 | N | 607 | CHL | C4B-NB | 2.82 | 1.37 | 1.35 |
| 29 | d | 402 | CLA | CHC-C1C | 2.81 | 1.42 | 1.35 |
| 49 | S | 625 | LPX | P1-O1 | 2.81 | 1.70 | 1.59 |
| 45 | n | 609 | CHL | C4B-NB | 2.81 | 1.37 | 1.35 |
| 45 | g | 607 | CHL | C4B-NB | 2.80 | 1.37 | 1.35 |
| 29 | R | 610 | CLA | CHC-C1C | 2.80 | 1.42 | 1.35 |
| 45 | Y | 601 | CHL | C4B-NB | 2.79 | 1.37 | 1.35 |
| 45 | G | 607 | CHL | C4B-NB | 2.79 | 1.37 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | D | 402 | CLA | CHC-C1C | 2.79 | 1.42 | 1.35 |
| 29 | R | 609 | CLA | C3B-C2B | -2.78 | 1.36 | 1.40 |
| 29 | R | 602 | CLA | CHC-C1C | 2.76 | 1.42 | 1.35 |
| 29 | S | 613 | CLA | C3B-C2B | -2.76 | 1.36 | 1.40 |
| 29 | y | 602 | CLA | CHC-C1C | 2.76 | 1.42 | 1.35 |
| 49 | s | 625 | LPX | P1-O1 | 2.75 | 1.70 | 1.59 |
| 29 | S | 610 | CLA | CHC-C1C | 2.75 | 1.42 | 1.35 |
| 45 | n | 606 | CHL | C3B-C2B | -2.74 | 1.36 | 1.40 |
| 45 | Y | 607 | CHL | C4B-NB | 2.73 | 1.37 | 1.35 |
| 29 | C | 513 | CLA | CHC-C1C | 2.73 | 1.42 | 1.35 |
| 45 | n | 607 | CHL | C4B-NB | 2.72 | 1.37 | 1.35 |
| 29 | g | 602 | CLA | CHC-C1C | 2.71 | 1.41 | 1.35 |
| 29 | C | 512 | CLA | CHC-C1C | 2.71 | 1.41 | 1.35 |
| 29 | y | 613 | CLA | CHC-C1C | 2.71 | 1.41 | 1.35 |
| 44 | H | 101 | RRX | C32-C1 | 2.71 | 1.59 | 1.53 |
| 29 | r | 610 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 45 | Y | 606 | CHL | C3B-C2B | -2.70 | 1.36 | 1.40 |
| 29 | s | 610 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 29 | G | 614 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 29 | R | 609 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 29 | D | 403 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 29 | Y | 602 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 29 | G | 602 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 44 | h | 101 | RRX | C32-C1 | 2.70 | 1.59 | 1.53 |
| 29 | C | 501 | CLA | CHC-C1C | 2.69 | 1.41 | 1.35 |
| 29 | r | 613 | CLA | CHC-C1C | 2.69 | 1.41 | 1.35 |
| 29 | n | 614 | CLA | CHC-C1C | 2.69 | 1.41 | 1.35 |
| 29 | r | 609 | CLA | CHC-C1C | 2.68 | 1.41 | 1.35 |
| 29 | Y | 610 | CLA | CHC-C1C | 2.68 | 1.41 | 1.35 |
| 29 | Y | 608 | CLA | CHC-C1C | 2.67 | 1.41 | 1.35 |
| 29 | c | 512 | CLA | CHC-C1C | 2.67 | 1.41 | 1.35 |
| 29 | d | 403 | CLA | CHC-C1C | 2.67 | 1.41 | 1.35 |
| 29 | R | 611 | CLA | CHC-C1C | 2.67 | 1.41 | 1.35 |
| 29 | g | 604 | CLA | CHC-C1C | 2.67 | 1.41 | 1.35 |
| 29 | s | 611 | CLA | C3B-C2B | -2.67 | 1.36 | 1.40 |
| 29 | G | 611 | CLA | CHC-C1C | 2.66 | 1.41 | 1.35 |
| 29 | y | 612 | CLA | CHC-C1C | 2.66 | 1.41 | 1.35 |
| 29 | c | 513 | CLA | CHC-C1C | 2.66 | 1.41 | 1.35 |
| 29 | r | 608 | CLA | C3B-C2B | -2.66 | 1.36 | 1.40 |
| 29 | S | 611 | CLA | C3B-C2B | -2.66 | 1.36 | 1.40 |
| 29 | R | 603 | CLA | CHC-C1C | 2.66 | 1.41 | 1.35 |
| 29 | S | 617 | CLA | CHC-C1C | 2.66 | 1.41 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 30 | A | 408 | PHO | CAC-C3C | -2.66 | 1.47 | 1.52 |
| 29 | g | 610 | CLA | CHC-C1C | 2.66 | 1.41 | 1.35 |
| 29 | n | 610 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | c | 501 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | s | 612 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | S | 602 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | N | 604 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | y | 610 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | r | 603 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | b | 602 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | r | 611 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 29 | y | 604 | CLA | CHC-C1C | 2.65 | 1.41 | 1.35 |
| 30 | A | 409 | PHO | CAC-C3C | -2.65 | 1.47 | 1.52 |
| 29 | Y | 613 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | r | 604 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | S | 614 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | N | 610 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | n | 611 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | g | 614 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | n | 602 | CLA | CHC-C1C | 2.64 | 1.41 | 1.35 |
| 29 | B | 613 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | N | 613 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | g | 613 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | R | 608 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | s | 613 | CLA | C3B-C2B | -2.63 | 1.36 | 1.40 |
| 29 | s | 602 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | Y | 604 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | S | 609 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | Y | 612 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 29 | N | 611 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | g | 611 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | a | 407 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | S | 612 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | N | 614 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | r | 602 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | R | 613 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 29 | g | 603 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | A | 405 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | A | 407 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | G | 612 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | y | 608 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 30 | a | 408 | PHO | CAC-C3C | -2.61 | 1.47 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | B | 611 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | C | 511 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | Y | 603 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | B | 607 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | c | 503 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | s | 617 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | b | 607 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | a | 405 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | y | 611 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 42 | d | 405 | PL9 | C6-C1 | -2.61 | 1.43 | 1.48 |
| 29 | n | 613 | CLA | CHC-C1C | 2.61 | 1.41 | 1.35 |
| 29 | s | 613 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | s | 609 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | c | 511 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | s | 605 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | R | 604 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | G | 604 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | g | 612 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | S | 605 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | N | 612 | CLA | CHC-C1C | 2.60 | 1.41 | 1.35 |
| 29 | c | 503 | CLA | C3B-C2B | -2.60 | 1.36 | 1.40 |
| 33 | J | 101 | LMG | C37-C36 | -2.60 | 1.33 | 1.51 |
| 45 | s | 601 | CHL | C3B-C2B | -2.60 | 1.36 | 1.40 |
| 29 | B | 603 | CLA | CHC-C1C | 2.59 | 1.41 | 1.35 |
| 29 | B | 604 | CLA | CHC-C1C | 2.59 | 1.41 | 1.35 |
| 45 | N | 606 | CHL | C3B-C2B | -2.59 | 1.36 | 1.40 |
| 29 | b | 603 | CLA | CHC-C1C | 2.59 | 1.41 | 1.35 |
| 29 | n | 604 | CLA | CHC-C1C | 2.59 | 1.41 | 1.35 |
| 29 | d | 403 | CLA | C3B-C2B | -2.59 | 1.36 | 1.40 |
| 29 | n | 603 | CLA | C3B-C2B | -2.59 | 1.36 | 1.40 |
| 33 | j | 101 | LMG | C37-C36 | -2.59 | 1.33 | 1.51 |
| 29 | r | 608 | CLA | CHC-C1C | 2.59 | 1.41 | 1.35 |
| 29 | R | 612 | CLA | CHC-C1C | 2.59 | 1.41 | 1.35 |
| 29 | N | 603 | CLA | C3B-C2B | -2.59 | 1.36 | 1.40 |
| 29 | r | 612 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | R | 608 | CLA | C3B-C2B | -2.58 | 1.36 | 1.40 |
| 29 | s | 603 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | n | 612 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | y | 614 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | S | 603 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | G | 613 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | c | 507 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | G | 610 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | C | 503 | CLA | CHC-C1C | 2.58 | 1.41 | 1.35 |
| 29 | Y | 611 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 29 | B | 615 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 42 | D | 405 | PL9 | C6-C1 | -2.57 | 1.44 | 1.48 |
| 29 | S | 611 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 29 | s | 614 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 29 | c | 505 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 29 | b | 604 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 29 | s | 604 | CLA | C3B-C2B | -2.56 | 1.36 | 1.40 |
| 30 | a | 409 | PHO | CAC-C3C | -2.56 | 1.47 | 1.52 |
| 29 | B | 602 | CLA | CHC-C1C | 2.56 | 1.41 | 1.35 |
| 29 | B | 610 | CLA | CHC-C1C | 2.56 | 1.41 | 1.35 |
| 45 | y | 606 | CHL | C3B-C2B | -2.56 | 1.36 | 1.40 |
| 29 | b | 610 | CLA | CHC-C1C | 2.56 | 1.41 | 1.35 |
| 29 | C | 510 | CLA | CHC-C1C | 2.56 | 1.41 | 1.35 |
| 29 | b | 616 | CLA | CHC-C1C | 2.55 | 1.41 | 1.35 |
| 29 | b | 611 | CLA | CHC-C1C | 2.55 | 1.41 | 1.35 |
| 48 | s | 623 | NEX | C1-C6 | -2.55 | 1.50 | 1.54 |
| 33 | d | 411 | LMG | C37-C36 | -2.55 | 1.33 | 1.51 |
| 29 | C | 503 | CLA | C3B-C2B | -2.55 | 1.36 | 1.40 |
| 29 | b | 613 | CLA | CHC-C1C | 2.55 | 1.41 | 1.35 |
| 29 | b | 615 | CLA | CHC-C1C | 2.55 | 1.41 | 1.35 |
| 29 | G | 614 | CLA | C3B-C2B | -2.55 | 1.36 | 1.40 |
| 29 | s | 610 | CLA | C3B-C2B | -2.55 | 1.36 | 1.40 |
| 29 | b | 605 | CLA | C3B-C2B | -2.55 | 1.36 | 1.40 |
| 29 | n | 603 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 29 | B | 614 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 29 | C | 504 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 29 | n | 611 | CLA | C3B-C2B | -2.54 | 1.36 | 1.40 |
| 29 | D | 403 | CLA | C3B-C2B | -2.54 | 1.36 | 1.40 |
| 35 | b | 620 | C7Z | C18-C5 | 2.54 | 1.55 | 1.50 |
| 29 | S | 603 | CLA | C3B-C2B | -2.54 | 1.36 | 1.40 |
| 29 | G | 603 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 29 | Y | 614 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 29 | C | 505 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 29 | s | 609 | CLA | C3B-C2B | -2.53 | 1.36 | 1.40 |
| 29 | A | 410 | CLA | CHC-C1C | 2.53 | 1.41 | 1.35 |
| 29 | S | 605 | CLA | C3B-C2B | -2.53 | 1.36 | 1.40 |
| 33 | D | 411 | LMG | C37-C36 | -2.53 | 1.33 | 1.51 |
| 50 | s | 626 | 3PH | O21-C2 | -2.53 | 1.40 | 1.46 |
| 29 | B | 616 | CLA | CHC-C1C | 2.53 | 1.41 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | g | 614 | CLA | C3B-C2B | -2.52 | 1.36 | 1.40 |
| 29 | y | 603 | CLA | CHC-C1C | 2.52 | 1.41 | 1.35 |
| 29 | b | 608 | CLA | CHC-C1C | 2.52 | 1.41 | 1.35 |
| 29 | N | 603 | CLA | CHC-C1C | 2.52 | 1.41 | 1.35 |
| 29 | c | 510 | CLA | CHC-C1C | 2.52 | 1.41 | 1.35 |
| 29 | n | 612 | CLA | C3B-C2B | -2.52 | 1.36 | 1.40 |
| 29 | g | 612 | CLA | C3B-C2B | -2.51 | 1.36 | 1.40 |
| 29 | s | 604 | CLA | CHC-C1C | 2.51 | 1.41 | 1.35 |
| 29 | S | 604 | CLA | CHC-C1C | 2.51 | 1.41 | 1.35 |
| 29 | S | 613 | CLA | CHC-C1C | 2.51 | 1.41 | 1.35 |
| 35 | B | 620 | C7Z | C18-C5 | 2.51 | 1.55 | 1.50 |
| 29 | a | 410 | CLA | CHC-C1C | 2.51 | 1.41 | 1.35 |
| 29 | d | 402 | CLA | C3B-C2B | -2.51 | 1.36 | 1.40 |
| 29 | s | 603 | CLA | C3B-C2B | -2.51 | 1.36 | 1.40 |
| 50 | S | 626 | 3PH | O21-C2 | -2.51 | 1.40 | 1.46 |
| 29 | Y | 603 | CLA | C3B-C2B | -2.50 | 1.36 | 1.40 |
| 29 | C | 507 | CLA | CHC-C1C | 2.50 | 1.41 | 1.35 |
| 29 | B | 608 | CLA | CHC-C1C | 2.50 | 1.41 | 1.35 |
| 29 | C | 501 | CLA | C3B-C2B | -2.50 | 1.36 | 1.40 |
| 29 | b | 602 | CLA | C3B-C2B | -2.50 | 1.36 | 1.40 |
| 29 | r | 609 | CLA | C3B-C2B | -2.50 | 1.36 | 1.40 |
| 29 | y | 603 | CLA | C3B-C2B | -2.50 | 1.36 | 1.40 |
| 29 | b | 614 | CLA | CHC-C1C | 2.49 | 1.41 | 1.35 |
| 29 | G | 603 | CLA | C3B-C2B | -2.49 | 1.36 | 1.40 |
| 29 | G | 612 | CLA | C3B-C2B | -2.49 | 1.36 | 1.40 |
| 29 | c | 504 | CLA | CHC-C1C | 2.49 | 1.41 | 1.35 |
| 35 | b | 620 | C7Z | C21-C26 | -2.49 | 1.50 | 1.53 |
| 29 | b | 617 | CLA | CHC-C1C | 2.49 | 1.41 | 1.35 |
| 29 | B | 617 | CLA | C3B-C2B | -2.49 | 1.36 | 1.40 |
| 35 | B | 620 | C7Z | C21-C26 | -2.49 | 1.50 | 1.53 |
| 29 | s | 611 | CLA | CHC-C1C | 2.48 | 1.41 | 1.35 |
| 29 | N | 602 | CLA | CHC-C1C | 2.48 | 1.41 | 1.35 |
| 29 | B | 612 | CLA | CHC-C1C | 2.47 | 1.41 | 1.35 |
| 29 | N | 612 | CLA | C3B-C2B | -2.47 | 1.36 | 1.40 |
| 29 | B | 602 | CLA | C3B-C2B | -2.47 | 1.36 | 1.40 |
| 29 | B | 609 | CLA | CHC-C1C | 2.46 | 1.41 | 1.35 |
| 29 | S | 610 | CLA | C3B-C2B | -2.46 | 1.37 | 1.40 |
| 50 | i | 101 | 3PH | O21-C2 | -2.46 | 1.40 | 1.46 |
| 29 | g | 603 | CLA | C3B-C2B | -2.46 | 1.37 | 1.40 |
| 50 | S | 626 | 3PH | O31-C31 | 2.45 | 1.40 | 1.33 |
| 29 | c | 506 | CLA | C3B-C2B | -2.45 | 1.37 | 1.40 |
| 29 | N | 611 | CLA | C3B-C2B | -2.45 | 1.37 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | R | 611 | CLA | C3B-C2B | -2.45 | 1.37 | 1.40 |
| 29 | Y | 614 | CLA | C3B-C2B | -2.44 | 1.37 | 1.40 |
| 29 | c | 501 | CLA | C3B-C2B | -2.44 | 1.37 | 1.40 |
| 29 | C | 506 | CLA | CHC-C1C | 2.44 | 1.41 | 1.35 |
| 29 | r | 611 | CLA | C3B-C2B | -2.44 | 1.37 | 1.40 |
| 29 | D | 402 | CLA | C3B-C2B | -2.44 | 1.37 | 1.40 |
| 29 | r | 612 | CLA | C3B-C2B | -2.44 | 1.37 | 1.40 |
| 44 | h | 101 | RRX | C35-C13 | 2.44 | 1.55 | 1.50 |
| 47 | r | 622 | XAT | O24-C25 | -2.43 | 1.42 | 1.46 |
| 29 | G | 610 | CLA | C3B-C2B | -2.43 | 1.37 | 1.40 |
| 29 | B | 617 | CLA | CHC-C1C | 2.43 | 1.41 | 1.35 |
| 29 | b | 609 | CLA | CHC-C1C | 2.43 | 1.41 | 1.35 |
| 29 | R | 612 | CLA | C3B-C2B | -2.43 | 1.37 | 1.40 |
| 29 | C | 510 | CLA | C3B-C2B | -2.43 | 1.37 | 1.40 |
| 29 | c | 508 | CLA | CHC-C1C | 2.43 | 1.41 | 1.35 |
| 44 | H | 101 | RRX | C35-C13 | 2.43 | 1.55 | 1.50 |
| 29 | c | 509 | CLA | CHC-C1C | 2.42 | 1.41 | 1.35 |
| 50 | i | 101 | 3PH | O31-C31 | 2.42 | 1.40 | 1.33 |
| 29 | b | 611 | CLA | C3B-C2B | -2.42 | 1.37 | 1.40 |
| 47 | g | 622 | XAT | O24-C25 | -2.41 | 1.42 | 1.46 |
| 29 | r | 613 | CLA | C3B-C2B | -2.41 | 1.37 | 1.40 |
| 35 | B | 620 | C7Z | C20-C13 | 2.41 | 1.55 | 1.50 |
| 35 | b | 620 | C7Z | C20-C13 | 2.41 | 1.55 | 1.50 |
| 45 | S | 601 | CHL | C3B-C2B | -2.41 | 1.37 | 1.40 |
| 29 | C | 502 | CLA | CHC-C1C | 2.41 | 1.41 | 1.35 |
| 29 | C | 508 | CLA | CHC-C1C | 2.40 | 1.41 | 1.35 |
| 29 | s | 614 | CLA | C3B-C2B | -2.40 | 1.37 | 1.40 |
| 45 | s | 606 | CHL | C3B-C2B | -2.40 | 1.37 | 1.40 |
| 29 | y | 614 | CLA | C3B-C2B | -2.40 | 1.37 | 1.40 |
| 50 | s | 626 | 3PH | O31-C31 | 2.39 | 1.40 | 1.33 |
| 29 | Y | 602 | CLA | C3B-C2B | -2.39 | 1.37 | 1.40 |
| 29 | G | 604 | CLA | C3B-C2B | -2.39 | 1.37 | 1.40 |
| 29 | S | 613 | CLA | C1A-CHA | 2.39 | 1.53 | 1.43 |
| 29 | c | 506 | CLA | CHC-C1C | 2.38 | 1.41 | 1.35 |
| 29 | y | 608 | CLA | C3B-C2B | -2.38 | 1.37 | 1.40 |
| 29 | C | 509 | CLA | CHC-C1C | 2.38 | 1.41 | 1.35 |
| 29 | s | 613 | CLA | C1A-CHA | 2.38 | 1.53 | 1.43 |
| 29 | Y | 608 | CLA | C3B-C2B | -2.38 | 1.37 | 1.40 |
| 29 | b | 612 | CLA | CHC-C1C | 2.38 | 1.41 | 1.35 |
| 29 | a | 406 | CLA | CHC-C1C | 2.37 | 1.41 | 1.35 |
| 29 | B | 611 | CLA | C3B-C2B | -2.37 | 1.37 | 1.40 |
| 29 | S | 605 | CLA | C1A-CHA | 2.36 | 1.52 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | c | 502 | CLA | CHC-C1C | 2.36 | 1.41 | 1.35 |
| 29 | B | 606 | CLA | CHC-C1C | 2.36 | 1.41 | 1.35 |
| 29 | g | 604 | CLA | C3B-C2B | -2.36 | 1.37 | 1.40 |
| 29 | b | 606 | CLA | CHC-C1C | 2.36 | 1.41 | 1.35 |
| 29 | c | 507 | CLA | C3B-C2B | -2.36 | 1.37 | 1.40 |
| 29 | b | 609 | CLA | C1A-CHA | 2.36 | 1.52 | 1.43 |
| 29 | Y | 610 | CLA | C3B-C2B | -2.35 | 1.37 | 1.40 |
| 29 | c | 505 | CLA | C3B-C2B | -2.35 | 1.37 | 1.40 |
| 29 | R | 610 | CLA | C1C-C2C | 2.35 | 1.49 | 1.44 |
| 45 | S | 606 | CHL | C3B-C2B | -2.35 | 1.37 | 1.40 |
| 29 | C | 506 | CLA | C3B-C2B | -2.35 | 1.37 | 1.40 |
| 29 | C | 507 | CLA | C3B-C2B | -2.35 | 1.37 | 1.40 |
| 29 | A | 407 | CLA | C3B-C2B | -2.35 | 1.37 | 1.40 |
| 29 | y | 612 | CLA | C3B-C2B | -2.34 | 1.37 | 1.40 |
| 47 | G | 622 | XAT | O24-C25 | -2.34 | 1.42 | 1.46 |
| 29 | A | 410 | CLA | C3B-C2B | -2.33 | 1.37 | 1.40 |
| 29 | b | 604 | CLA | C3B-C2B | -2.33 | 1.37 | 1.40 |
| 29 | g | 611 | CLA | C3B-C2B | -2.33 | 1.37 | 1.40 |
| 29 | R | 610 | CLA | C3B-C2B | -2.33 | 1.37 | 1.40 |
| 29 | s | 605 | CLA | C1A-CHA | 2.33 | 1.52 | 1.43 |
| 29 | S | 612 | CLA | C3B-C2B | -2.32 | 1.37 | 1.40 |
| 29 | A | 406 | CLA | CHC-C1C | 2.32 | 1.40 | 1.35 |
| 29 | d | 403 | CLA | C1C-C2C | 2.32 | 1.49 | 1.44 |
| 29 | b | 605 | CLA | CHC-C1C | 2.32 | 1.40 | 1.35 |
| 29 | B | 609 | CLA | C1A-CHA | 2.32 | 1.52 | 1.43 |
| 29 | B | 616 | CLA | C1A-CHA | 2.32 | 1.52 | 1.43 |
| 29 | a | 407 | CLA | C3B-C2B | -2.32 | 1.37 | 1.40 |
| 29 | B | 608 | CLA | C1A-CHA | 2.30 | 1.52 | 1.43 |
| 29 | b | 605 | CLA | C1A-CHA | 2.30 | 1.52 | 1.43 |
| 47 | Y | 622 | XAT | O24-C25 | -2.30 | 1.42 | 1.46 |
| 29 | G | 611 | CLA | C3B-C2B | -2.30 | 1.37 | 1.40 |
| 29 | S | 617 | CLA | C3B-C2B | -2.29 | 1.37 | 1.40 |
| 29 | n | 602 | CLA | C3B-C2B | -2.29 | 1.37 | 1.40 |
| 48 | n | 623 | NEX | C1-C6 | -2.29 | 1.50 | 1.54 |
| 30 | A | 409 | PHO | CMD-C2D | -2.29 | 1.46 | 1.51 |
| 29 | c | 505 | CLA | C1A-CHA | 2.29 | 1.52 | 1.43 |
| 29 | S | 604 | CLA | C3B-C2B | -2.29 | 1.37 | 1.40 |
| 29 | B | 605 | CLA | CHC-C1C | 2.29 | 1.40 | 1.35 |
| 29 | s | 605 | CLA | C3B-C2B | -2.29 | 1.37 | 1.40 |
| 49 | S | 625 | LPX | P1-O2 | 2.28 | 1.68 | 1.59 |
| 29 | C | 505 | CLA | C1A-CHA | 2.28 | 1.52 | 1.43 |
| 29 | B | 605 | CLA | C1A-CHA | 2.28 | 1.52 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 45 | y | 609 | CHL | C3B-C2B | -2.28 | 1.37 | 1.40 |
| 29 | b | 615 | CLA | C1A-CHA | 2.28 | 1.52 | 1.43 |
| 47 | R | 621 | XAT | O24-C25 | -2.28 | 1.43 | 1.46 |
| 29 | c | 512 | CLA | C1C-C2C | 2.28 | 1.49 | 1.44 |
| 49 | s | 625 | LPX | P1-O2 | 2.27 | 1.68 | 1.59 |
| 29 | b | 616 | CLA | C1A-CHA | 2.27 | 1.52 | 1.43 |
| 29 | C | 505 | CLA | C3B-C2B | -2.27 | 1.37 | 1.40 |
| 29 | S | 614 | CLA | C3B-C2B | -2.27 | 1.37 | 1.40 |
| 29 | Y | 611 | CLA | C3B-C2B | -2.27 | 1.37 | 1.40 |
| 29 | b | 608 | CLA | C1A-CHA | 2.26 | 1.52 | 1.43 |
| 29 | b | 612 | CLA | C1A-CHA | 2.25 | 1.52 | 1.43 |
| 29 | n | 613 | CLA | C1C-C2C | 2.25 | 1.48 | 1.44 |
| 29 | y | 610 | CLA | C3B-C2B | -2.25 | 1.37 | 1.40 |
| 29 | S | 602 | CLA | C3B-C2B | -2.25 | 1.37 | 1.40 |
| 29 | c | 501 | CLA | C1A-CHA | 2.24 | 1.52 | 1.43 |
| 29 | R | 603 | CLA | C1C-C2C | 2.24 | 1.48 | 1.44 |
| 29 | C | 512 | CLA | C1C-C2C | 2.24 | 1.48 | 1.44 |
| 29 | a | 407 | CLA | C1A-CHA | 2.24 | 1.52 | 1.43 |
| 29 | R | 613 | CLA | C3B-C2B | -2.24 | 1.37 | 1.40 |
| 29 | r | 608 | CLA | C1A-CHA | 2.24 | 1.52 | 1.43 |
| 29 | C | 501 | CLA | C1A-CHA | 2.24 | 1.52 | 1.43 |
| 29 | S | 602 | CLA | C1C-C2C | 2.24 | 1.48 | 1.44 |
| 29 | D | 403 | CLA | C1C-C2C | 2.23 | 1.48 | 1.44 |
| 29 | B | 604 | CLA | C3B-C2B | -2.23 | 1.37 | 1.40 |
| 29 | r | 603 | CLA | C1C-C2C | 2.23 | 1.48 | 1.44 |
| 29 | r | 610 | CLA | C3B-C2B | -2.23 | 1.37 | 1.40 |
| 29 | N | 604 | CLA | C1C-C2C | 2.23 | 1.48 | 1.44 |
| 29 | C | 507 | CLA | C1A-CHA | 2.23 | 1.52 | 1.43 |
| 29 | b | 617 | CLA | C3B-C2B | -2.23 | 1.37 | 1.40 |
| 47 | N | 622 | XAT | O24-C25 | -2.22 | 1.43 | 1.46 |
| 29 | n | 604 | CLA | C3B-C2B | -2.22 | 1.37 | 1.40 |
| 29 | R | 608 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | n | 611 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | r | 610 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | y | 611 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | N | 613 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | n | 614 | CLA | C1C-C2C | 2.22 | 1.48 | 1.44 |
| 29 | N | 602 | CLA | C3B-C2B | -2.22 | 1.37 | 1.40 |
| 29 | B | 615 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | B | 614 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | Y | 612 | CLA | C3B-C2B | -2.22 | 1.37 | 1.40 |
| 29 | y | 611 | CLA | C3B-C2B | -2.22 | 1.37 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | y | 613 | CLA | C1C-C2C | 2.22 | 1.48 | 1.44 |
| 29 | R | 613 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 29 | c | 512 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 45 | G | 609 | CHL | C3B-C2B | -2.22 | 1.37 | 1.40 |
| 29 | R | 612 | CLA | C1A-CHA | 2.22 | 1.52 | 1.43 |
| 45 | s | 601 | CHL | CHC-C1C | 2.22 | 1.40 | 1.35 |
| 29 | A | 406 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | C | 512 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | s | 609 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | n | 610 | CLA | C3B-C2B | -2.21 | 1.37 | 1.40 |
| 29 | A | 407 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | N | 604 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | c | 510 | CLA | C3B-C2B | -2.21 | 1.37 | 1.40 |
| 29 | y | 613 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | N | 613 | CLA | C3B-C2B | -2.21 | 1.37 | 1.40 |
| 29 | s | 603 | CLA | C1B-NB | 2.21 | 1.37 | 1.35 |
| 47 | n | 622 | XAT | O24-C25 | -2.21 | 1.43 | 1.46 |
| 29 | g | 611 | CLA | C1A-CHA | 2.21 | 1.52 | 1.43 |
| 29 | G | 613 | CLA | C3B-C2B | -2.21 | 1.37 | 1.40 |
| 29 | G | 614 | CLA | C1C-C2C | 2.20 | 1.48 | 1.44 |
| 29 | Y | 612 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | G | 611 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | n | 613 | CLA | C3B-C2B | -2.20 | 1.37 | 1.40 |
| 29 | S | 609 | CLA | C3B-C2B | -2.20 | 1.37 | 1.40 |
| 29 | Y | 613 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | S | 611 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 42 | d | 405 | PL9 | C53-C6 | -2.20 | 1.46 | 1.50 |
| 29 | y | 612 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | R | 602 | CLA | C1C-C2C | 2.20 | 1.48 | 1.44 |
| 29 | N | 614 | CLA | C3B-C2B | -2.20 | 1.37 | 1.40 |
| 29 | Y | 611 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | g | 610 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | N | 614 | CLA | C1C-C2C | 2.20 | 1.48 | 1.44 |
| 29 | n | 604 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | b | 603 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 29 | G | 613 | CLA | C1A-CHA | 2.20 | 1.52 | 1.43 |
| 47 | y | 622 | XAT | O24-C25 | -2.19 | 1.43 | 1.46 |
| 29 | C | 504 | CLA | C3B-C2B | -2.19 | 1.37 | 1.40 |
| 29 | d | 402 | CLA | C1C-C2C | 2.19 | 1.48 | 1.44 |
| 29 | S | 603 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | b | 614 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | S | 603 | CLA | C1C-C2C | 2.19 | 1.48 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | Y | 603 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | r | 612 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | C | 502 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | n | 614 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | C | 513 | CLA | C1C-C2C | 2.19 | 1.48 | 1.44 |
| 29 | c | 502 | CLA | C1A-CHA | 2.19 | 1.52 | 1.43 |
| 29 | S | 617 | CLA | C1C-C2C | 2.19 | 1.48 | 1.44 |
| 29 | s | 610 | CLA | C1C-C2C | 2.19 | 1.48 | 1.44 |
| 29 | b | 612 | CLA | C3B-C2B | -2.18 | 1.37 | 1.40 |
| 29 | s | 605 | CLA | C1C-C2C | 2.18 | 1.48 | 1.44 |
| 29 | b | 603 | CLA | C3B-C2B | -2.18 | 1.37 | 1.40 |
| 29 | y | 603 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | C | 501 | CLA | C1C-C2C | 2.18 | 1.48 | 1.44 |
| 29 | N | 611 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | B | 612 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | s | 611 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | N | 612 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | N | 614 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | g | 613 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | R | 611 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | b | 602 | CLA | C1C-C2C | 2.18 | 1.48 | 1.44 |
| 29 | S | 612 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | a | 406 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | s | 617 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 30 | a | 409 | PHO | CMC-C2C | -2.18 | 1.46 | 1.51 |
| 29 | R | 611 | CLA | C1C-C2C | 2.18 | 1.48 | 1.44 |
| 29 | y | 602 | CLA | C1C-C2C | 2.18 | 1.48 | 1.44 |
| 29 | S | 609 | CLA | C1A-CHA | 2.18 | 1.52 | 1.43 |
| 29 | b | 606 | CLA | C3B-C2B | -2.18 | 1.37 | 1.40 |
| 29 | b | 607 | CLA | C3B-C2B | -2.18 | 1.37 | 1.40 |
| 29 | C | 502 | CLA | C3B-C2B | -2.18 | 1.37 | 1.40 |
| 29 | n | 613 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | G | 604 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 45 | n | 606 | CHL | CHC-C1C | 2.17 | 1.40 | 1.35 |
| 29 | g | 614 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | b | 604 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | r | 603 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | r | 611 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | R | 611 | CLA | C1B-NB | 2.17 | 1.37 | 1.35 |
| 29 | r | 613 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | s | 612 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | R | 602 | CLA | C3B-C2B | -2.17 | 1.37 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 45 | S | 607 | CHL | C3B-C2B | -2.17 | 1.37 | 1.40 |
| 29 | N | 613 | CLA | C1C-C2C | 2.17 | 1.48 | 1.44 |
| 29 | Y | 602 | CLA | C1C-C2C | 2.17 | 1.48 | 1.44 |
| 29 | s | 604 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | g | 602 | CLA | C3B-C2B | -2.17 | 1.37 | 1.40 |
| 29 | g | 610 | CLA | C3B-C2B | -2.17 | 1.37 | 1.40 |
| 29 | B | 611 | CLA | C1C-C2C | 2.17 | 1.48 | 1.44 |
| 42 | D | 405 | PL9 | C53-C6 | -2.17 | 1.46 | 1.50 |
| 29 | g | 613 | CLA | C3B-C2B | -2.17 | 1.37 | 1.40 |
| 29 | n | 610 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | b | 610 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | y | 612 | CLA | C1C-C2C | 2.17 | 1.48 | 1.44 |
| 29 | C | 509 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | y | 614 | CLA | C1A-CHA | 2.17 | 1.52 | 1.43 |
| 29 | b | 609 | CLA | C3B-C2B | -2.17 | 1.37 | 1.40 |
| 29 | c | 507 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 29 | B | 610 | CLA | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 45 | s | 607 | CHL | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 29 | y | 608 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 45 | R | 606 | CHL | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 45 | R | 607 | CHL | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 50 | s | 626 | 3PH | O21-C21 | 2.16 | 1.40 | 1.34 |
| 29 | r | 602 | CLA | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 29 | g | 612 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 29 | G | 612 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 29 | D | 402 | CLA | C1C-C2C | 2.16 | 1.48 | 1.44 |
| 29 | N | 611 | CLA | C1C-C2C | 2.16 | 1.48 | 1.44 |
| 29 | G | 614 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 29 | R | 603 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 50 | i | 101 | 3PH | O21-C21 | 2.16 | 1.40 | 1.34 |
| 29 | b | 616 | CLA | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 29 | C | 513 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 29 | B | 607 | CLA | C3B-C2B | -2.16 | 1.37 | 1.40 |
| 29 | a | 410 | CLA | C1A-CHA | 2.16 | 1.52 | 1.43 |
| 29 | Y | 604 | CLA | C3B-C2B | -2.15 | 1.37 | 1.40 |
| 29 | S | 617 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 36 | c | 524 | DGA | OG2-CG2 | -2.15 | 1.41 | 1.46 |
| 29 | s | 603 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 45 | S | 608 | CHL | C3B-C2B | -2.15 | 1.37 | 1.40 |
| 29 | s | 602 | CLA | C3B-C2B | -2.15 | 1.37 | 1.40 |
| 36 | C | 524 | DGA | OG2-CG2 | -2.15 | 1.41 | 1.46 |
| 29 | y | 602 | CLA | C3B-C2B | -2.15 | 1.37 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | C | 503 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | n | 602 | CLA | C1C-C2C | 2.15 | 1.48 | 1.44 |
| 29 | B | 606 | CLA | C3B-C2B | -2.15 | 1.37 | 1.40 |
| 29 | A | 410 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | G | 614 | CLA | C1B-NB | 2.15 | 1.37 | 1.35 |
| 29 | B | 616 | CLA | C3B-C2B | -2.15 | 1.37 | 1.40 |
| 29 | S | 602 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | g | 604 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | C | 508 | CLA | C3B-C2B | -2.15 | 1.37 | 1.40 |
| 29 | Y | 608 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | Y | 610 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | C | 511 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | R | 610 | CLA | C1A-CHA | 2.15 | 1.52 | 1.43 |
| 29 | B | 610 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | n | 612 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | s | 617 | CLA | C3B-C2B | -2.14 | 1.37 | 1.40 |
| 29 | r | 611 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | B | 602 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | Y | 614 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | S | 610 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | Y | 608 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | B | 607 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | b | 610 | CLA | C3B-C2B | -2.14 | 1.37 | 1.40 |
| 29 | c | 501 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | c | 513 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | s | 603 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | G | 612 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | S | 610 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | c | 511 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 29 | N | 611 | CLA | C1B-NB | 2.14 | 1.37 | 1.35 |
| 29 | c | 513 | CLA | C1C-C2C | 2.14 | 1.48 | 1.44 |
| 29 | y | 610 | CLA | C1A-CHA | 2.14 | 1.52 | 1.43 |
| 50 | S | 626 | 3PH | O21-C21 | 2.13 | 1.40 | 1.34 |
| 29 | N | 603 | CLA | C1A-CHA | 2.13 | 1.52 | 1.43 |
| 29 | b | 611 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | d | 403 | CLA | C1A-CHA | 2.13 | 1.52 | 1.43 |
| 29 | r | 602 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | s | 613 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | G | 602 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | g | 603 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | g | 612 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | b | 602 | CLA | C1A-CHA | 2.13 | 1.52 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | G | 603 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | c | 508 | CLA | C3B-C2B | -2.13 | 1.37 | 1.40 |
| 29 | N | 612 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | D | 402 | CLA | C3D-C4D | -2.13 | 1.39 | 1.44 |
| 29 | s | 614 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | B | 603 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | B | 611 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | b | 603 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 50 | s | 626 | 3PH | O31-C3 | -2.13 | 1.40 | 1.45 |
| 29 | a | 410 | CLA | C3B-C2B | -2.13 | 1.37 | 1.40 |
| 29 | s | 602 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | s | 617 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | y | 603 | CLA | C1C-C2C | 2.13 | 1.48 | 1.44 |
| 29 | D | 403 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | b | 607 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | R | 609 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | s | 610 | CLA | C1A-CHA | 2.13 | 1.51 | 1.43 |
| 29 | c | 503 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | B | 604 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | N | 610 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | r | 604 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | R | 602 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 30 | A | 409 | PHO | CMC-C2C | -2.12 | 1.46 | 1.51 |
| 30 | a | 408 | PHO | CMC-C2C | -2.12 | 1.46 | 1.51 |
| 30 | a | 409 | PHO | CMD-C2D | -2.12 | 1.46 | 1.51 |
| 29 | r | 612 | CLA | C1C-C2C | 2.12 | 1.48 | 1.44 |
| 29 | r | 602 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | g | 604 | CLA | C1C-C2C | 2.12 | 1.48 | 1.44 |
| 29 | r | 603 | CLA | C3B-C2B | -2.12 | 1.37 | 1.40 |
| 29 | S | 603 | CLA | C1B-NB | 2.12 | 1.37 | 1.35 |
| 29 | Y | 604 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | g | 602 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | C | 504 | CLA | C1A-CHA | 2.12 | 1.51 | 1.43 |
| 29 | A | 410 | CLA | C1B-NB | 2.12 | 1.37 | 1.35 |
| 29 | S | 605 | CLA | C1C-C2C | 2.12 | 1.48 | 1.44 |
| 29 | B | 604 | CLA | C3D-C4D | -2.11 | 1.39 | 1.44 |
| 29 | y | 604 | CLA | C1A-CHA | 2.11 | 1.51 | 1.43 |
| 35 | b | 620 | C7Z | C40-C33 | 2.11 | 1.55 | 1.50 |
| 29 | G | 611 | CLA | C1C-C2C | 2.11 | 1.48 | 1.44 |
| 48 | G | 623 | NEX | C1-C6 | -2.11 | 1.51 | 1.54 |
| 29 | c | 504 | CLA | C1A-CHA | 2.11 | 1.51 | 1.43 |
| 29 | r | 604 | CLA | C1C-C2C | 2.11 | 1.48 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | R | 604 | CLA | C1A-CHA | 2.11 | 1.51 | 1.43 |
| 29 | G | 613 | CLA | C1C-C2C | 2.11 | 1.48 | 1.44 |
| 29 | N | 610 | CLA | C1C-C2C | 2.11 | 1.48 | 1.44 |
| 29 | R | 608 | CLA | C1C-C2C | 2.11 | 1.48 | 1.44 |
| 29 | G | 610 | CLA | C1A-CHA | 2.10 | 1.51 | 1.43 |
| 29 | n | 603 | CLA | C1C-C2C | 2.10 | 1.48 | 1.44 |
| 35 | B | 620 | C7Z | C40-C33 | 2.10 | 1.55 | 1.50 |
| 29 | b | 611 | CLA | C1A-CHA | 2.10 | 1.51 | 1.43 |
| 50 | S | 626 | 3PH | O31-C3 | -2.10 | 1.40 | 1.45 |
| 29 | g | 614 | CLA | C1B-NB | 2.10 | 1.37 | 1.35 |
| 29 | S | 604 | CLA | C1A-CHA | 2.10 | 1.51 | 1.43 |
| 29 | b | 617 | CLA | C3D-C4D | -2.10 | 1.39 | 1.44 |
| 29 | Y | 613 | CLA | C1C-C2C | 2.10 | 1.48 | 1.44 |
| 29 | r | 603 | CLA | C1B-NB | 2.10 | 1.37 | 1.35 |
| 29 | A | 410 | CLA | C1C-C2C | 2.10 | 1.48 | 1.44 |
| 30 | A | 408 | PHO | CMD-C2D | -2.10 | 1.46 | 1.51 |
| 29 | g | 613 | CLA | C1C-C2C | 2.10 | 1.48 | 1.44 |
| 29 | B | 606 | CLA | C3D-C4D | -2.09 | 1.39 | 1.44 |
| 29 | s | 609 | CLA | C1B-NB | 2.09 | 1.37 | 1.35 |
| 45 | N | 605 | CHL | C3B-C2B | -2.09 | 1.37 | 1.40 |
| 45 | g | 609 | CHL | C3B-C2B | -2.09 | 1.37 | 1.40 |
| 45 | r | 606 | CHL | C3B-C2B | -2.09 | 1.37 | 1.40 |
| 43 | f | 101 | HEM | FE-ND | 2.09 | 2.07 | 1.96 |
| 29 | r | 609 | CLA | C1A-CHA | 2.09 | 1.51 | 1.43 |
| 29 | G | 602 | CLA | C3B-C2B | -2.09 | 1.37 | 1.40 |
| 29 | n | 603 | CLA | C1A-CHA | 2.09 | 1.51 | 1.43 |
| 29 | g | 603 | CLA | C1A-CHA | 2.09 | 1.51 | 1.43 |
| 29 | s | 602 | CLA | C1A-CHA | 2.09 | 1.51 | 1.43 |
| 29 | S | 609 | CLA | C1C-C2C | 2.09 | 1.48 | 1.44 |
| 29 | n | 611 | CLA | C1C-C2C | 2.09 | 1.48 | 1.44 |
| 29 | c | 508 | CLA | C1A-CHA | 2.09 | 1.51 | 1.43 |
| 29 | N | 602 | CLA | C1A-CHA | 2.09 | 1.51 | 1.43 |
| 29 | Y | 603 | CLA | C1C-C2C | 2.09 | 1.48 | 1.44 |
| 45 | N | 601 | CHL | C3B-C2B | -2.09 | 1.37 | 1.40 |
| 29 | N | 603 | CLA | C1C-C2C | 2.09 | 1.48 | 1.44 |
| 29 | G | 603 | CLA | C1A-CHA | 2.08 | 1.51 | 1.43 |
| 29 | N | 604 | CLA | C3B-C2B | -2.08 | 1.37 | 1.40 |
| 29 | R | 612 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | g | 614 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | S | 612 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | c | 504 | CLA | C3B-C2B | -2.08 | 1.37 | 1.40 |
| 29 | s | 609 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 30 | a | 408 | PHO | CMD-C2D | -2.08 | 1.46 | 1.51 |
| 29 | Y | 612 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | r | 610 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | n | 602 | CLA | C1A-CHA | 2.08 | 1.51 | 1.43 |
| 29 | S | 614 | CLA | C1A-CHA | 2.08 | 1.51 | 1.43 |
| 29 | c | 502 | CLA | C3B-C2B | -2.08 | 1.37 | 1.40 |
| 29 | C | 506 | CLA | C1A-CHA | 2.08 | 1.51 | 1.43 |
| 29 | Y | 604 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | c | 503 | CLA | C1B-NB | 2.08 | 1.37 | 1.35 |
| 29 | B | 602 | CLA | C1C-C2C | 2.08 | 1.48 | 1.44 |
| 29 | y | 610 | CLA | C1C-C2C | 2.07 | 1.48 | 1.44 |
| 45 | s | 608 | CHL | C3B-C2B | -2.07 | 1.37 | 1.40 |
| 29 | r | 612 | CLA | C1B-NB | 2.07 | 1.37 | 1.35 |
| 29 | G | 604 | CLA | C1C-C2C | 2.07 | 1.48 | 1.44 |
| 29 | B | 606 | CLA | C1A-CHA | 2.07 | 1.51 | 1.43 |
| 30 | A | 408 | PHO | CMC-C2C | -2.07 | 1.46 | 1.51 |
| 29 | B | 603 | CLA | C1C-C2C | 2.07 | 1.48 | 1.44 |
| 29 | c | 506 | CLA | C1A-CHA | 2.07 | 1.51 | 1.43 |
| 29 | b | 604 | CLA | C3D-C4D | -2.07 | 1.39 | 1.44 |
| 29 | s | 612 | CLA | C3B-C2B | -2.07 | 1.37 | 1.40 |
| 29 | S | 611 | CLA | C1C-C2C | 2.07 | 1.48 | 1.44 |
| 29 | g | 611 | CLA | C1C-C2C | 2.07 | 1.48 | 1.44 |
| 29 | C | 503 | CLA | C1B-NB | 2.07 | 1.37 | 1.35 |
| 29 | C | 508 | CLA | C1A-CHA | 2.07 | 1.51 | 1.43 |
| 29 | g | 602 | CLA | C1C-C2C | 2.07 | 1.48 | 1.44 |
| 29 | b | 606 | CLA | C1A-CHA | 2.07 | 1.51 | 1.43 |
| 29 | R | 602 | CLA | C1B-NB | 2.07 | 1.37 | 1.35 |
| 45 | Y | 609 | CHL | C3B-C2B | -2.07 | 1.37 | 1.40 |
| 29 | c | 509 | CLA | C1A-CHA | 2.06 | 1.51 | 1.43 |
| 45 | S | 601 | CHL | CHC-C1C | 2.06 | 1.40 | 1.35 |
| 29 | R | 610 | CLA | C1B-NB | 2.06 | 1.37 | 1.35 |
| 29 | b | 613 | CLA | C1A-CHA | 2.06 | 1.51 | 1.43 |
| 29 | n | 613 | CLA | C1B-NB | 2.06 | 1.37 | 1.35 |
| 29 | y | 608 | CLA | C1C-C2C | 2.06 | 1.48 | 1.44 |
| 29 | S | 614 | CLA | C1C-C2C | 2.06 | 1.48 | 1.44 |
| 29 | n | 612 | CLA | C1C-C2C | 2.06 | 1.48 | 1.44 |
| 29 | A | 405 | CLA | C1A-CHA | 2.06 | 1.51 | 1.43 |
| 42 | D | 405 | PL9 | C52-C5 | -2.06 | 1.46 | 1.50 |
| 29 | B | 617 | CLA | C1A-CHA | 2.06 | 1.51 | 1.43 |
| 45 | G | 601 | CHL | C3B-C2B | -2.06 | 1.37 | 1.40 |
| 29 | C | 510 | CLA | C1A-CHA | 2.06 | 1.51 | 1.43 |
| 29 | r | 613 | CLA | C1C-C2C | 2.06 | 1.48 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | S | 603 | CLA | MG-NC | 2.06 | 2.11 | 2.06 |
| 29 | b | 606 | CLA | C3D-C4D | -2.05 | 1.39 | 1.44 |
| 29 | a | 405 | CLA | C1A-CHA | 2.05 | 1.51 | 1.43 |
| 29 | G | 613 | CLA | C1B-NB | 2.05 | 1.37 | 1.35 |
| 29 | n | 610 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | c | 510 | CLA | C3D-C4D | -2.05 | 1.39 | 1.44 |
| 45 | G | 608 | CHL | C3B-C2B | -2.05 | 1.37 | 1.40 |
| 29 | c | 511 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | C | 503 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | B | 612 | CLA | C3D-C4D | -2.05 | 1.39 | 1.44 |
| 45 | r | 607 | CHL | C3B-C2B | -2.05 | 1.37 | 1.40 |
| 29 | n | 604 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | r | 608 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | b | 616 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | r | 604 | CLA | C3B-C2B | -2.05 | 1.37 | 1.40 |
| 29 | y | 614 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | N | 610 | CLA | C3B-C2B | -2.05 | 1.37 | 1.40 |
| 29 | B | 607 | CLA | C3D-C4D | -2.05 | 1.39 | 1.44 |
| 29 | s | 605 | CLA | MG-NC | 2.05 | 2.11 | 2.06 |
| 29 | R | 613 | CLA | C1C-C2C | 2.05 | 1.48 | 1.44 |
| 29 | b | 602 | CLA | C3D-C4D | -2.05 | 1.39 | 1.44 |
| 29 | b | 613 | CLA | C3D-C4D | -2.05 | 1.39 | 1.44 |
| 29 | b | 605 | CLA | MG-NC | 2.05 | 2.11 | 2.06 |
| 50 | i | 101 | 3PH | O31-C3 | -2.05 | 1.40 | 1.45 |
| 29 | b | 613 | CLA | C3B-C2B | -2.05 | 1.37 | 1.40 |
| 45 | g | 601 | CHL | C3B-C2B | -2.04 | 1.37 | 1.40 |
| 29 | S | 605 | CLA | MG-NC | 2.04 | 2.11 | 2.06 |
| 29 | r | 609 | CLA | C3D-C4D | -2.04 | 1.39 | 1.44 |
| 45 | n | 605 | CHL | C3B-C2B | -2.04 | 1.37 | 1.40 |
| 29 | B | 615 | CLA | C1C-C2C | 2.04 | 1.48 | 1.44 |
| 29 | R | 604 | CLA | C1C-C2C | 2.04 | 1.48 | 1.44 |
| 29 | Y | 604 | CLA | C3D-C4D | -2.04 | 1.39 | 1.44 |
| 29 | B | 604 | CLA | C1C-C2C | 2.04 | 1.48 | 1.44 |
| 29 | Y | 614 | CLA | C1C-C2C | 2.04 | 1.48 | 1.44 |
| 45 | G | 606 | CHL | C3B-C2B | -2.04 | 1.37 | 1.40 |
| 48 | y | 623 | NEX | C1-C6 | -2.04 | 1.51 | 1.54 |
| 29 | N | 613 | CLA | C1B-NB | 2.04 | 1.37 | 1.35 |
| 29 | G | 610 | CLA | C1B-NB | 2.04 | 1.37 | 1.35 |
| 29 | n | 613 | CLA | MG-NC | 2.04 | 2.11 | 2.06 |
| 29 | c | 503 | CLA | C1C-C2C | 2.04 | 1.48 | 1.44 |
| 29 | B | 609 | CLA | C3B-C2B | -2.04 | 1.37 | 1.40 |
| 33 | H | 102 | LMG | C22-C21 | -2.04 | 1.33 | 1.49 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | B | 602 | CLA | C3D-C4D | -2.03 | 1.39 | 1.44 |
| 29 | r | 602 | CLA | C1B-NB | 2.03 | 1.37 | 1.35 |
| 29 | B | 609 | CLA | C1C-C2C | 2.03 | 1.48 | 1.44 |
| 45 | g | 605 | CHL | C3B-C2B | -2.03 | 1.37 | 1.40 |
| 29 | y | 613 | CLA | C1B-NB | 2.03 | 1.37 | 1.35 |
| 29 | b | 607 | CLA | C3D-C4D | -2.03 | 1.39 | 1.44 |
| 29 | s | 612 | CLA | C1C-C2C | 2.03 | 1.48 | 1.44 |
| 29 | B | 615 | CLA | C3D-C4D | -2.03 | 1.39 | 1.44 |
| 33 | h | 102 | LMG | C22-C21 | -2.03 | 1.33 | 1.49 |
| 29 | R | 611 | CLA | MG-NC | 2.03 | 2.11 | 2.06 |
| 29 | B | 613 | CLA | C1A-CHA | 2.03 | 1.51 | 1.43 |
| 29 | R | 604 | CLA | C3B-C2B | -2.03 | 1.37 | 1.40 |
| 29 | n | 611 | CLA | MG-NC | 2.03 | 2.11 | 2.06 |
| 29 | y | 611 | CLA | C1B-NB | 2.03 | 1.37 | 1.35 |
| 29 | B | 603 | CLA | CHD-C1D | 2.03 | 1.42 | 1.38 |
| 29 | s | 610 | CLA | C3D-C4D | -2.03 | 1.39 | 1.44 |
| 29 | C | 511 | CLA | C1C-C2C | 2.03 | 1.48 | 1.44 |
| 29 | C | 513 | CLA | C1B-NB | 2.03 | 1.37 | 1.35 |
| 29 | C | 505 | CLA | C3D-C4D | -2.03 | 1.39 | 1.44 |
| 29 | r | 610 | CLA | C3D-C4D | -2.03 | 1.39 | 1.44 |
| 29 | r | 610 | CLA | C1B-NB | 2.02 | 1.37 | 1.35 |
| 29 | c | 510 | CLA | C1A-CHA | 2.02 | 1.51 | 1.43 |
| 38 | c | 520 | DGD | CDA-CCA | -2.02 | 1.33 | 1.49 |
| 29 | C | 511 | CLA | C3B-C2B | -2.02 | 1.37 | 1.40 |
| 29 | C | 506 | CLA | C3D-C4D | -2.02 | 1.39 | 1.44 |
| 45 | G | 606 | CHL | CHC-C1C | 2.02 | 1.40 | 1.35 |
| 29 | S | 613 | CLA | C1C-C2C | 2.02 | 1.48 | 1.44 |
| 29 | G | 602 | CLA | C1A-CHA | 2.02 | 1.51 | 1.43 |
| 33 | A | 413 | LMG | C22-C21 | -2.02 | 1.33 | 1.49 |
| 29 | B | 605 | CLA | MG-NC | 2.02 | 2.11 | 2.06 |
| 29 | C | 505 | CLA | C1C-C2C | 2.02 | 1.48 | 1.44 |
| 45 | N | 606 | CHL | CHC-C1C | 2.02 | 1.40 | 1.35 |
| 38 | c | 518 | DGD | CGB-CFB | -2.02 | 1.33 | 1.49 |
| 29 | d | 402 | CLA | C3D-C4D | -2.02 | 1.39 | 1.44 |
| 29 | S | 617 | CLA | MG-NC | 2.02 | 2.11 | 2.06 |
| 29 | G | 602 | CLA | C3D-C4D | -2.02 | 1.39 | 1.44 |
| 29 | r | 611 | CLA | C1B-NB | 2.02 | 1.37 | 1.35 |
| 29 | c | 507 | CLA | C1C-C2C | 2.02 | 1.48 | 1.44 |
| 29 | Y | 602 | CLA | C1A-CHA | 2.02 | 1.51 | 1.43 |
| 29 | N | 611 | CLA | MG-NC | 2.02 | 2.11 | 2.06 |
| 29 | A | 406 | CLA | CHD-C1D | 2.02 | 1.42 | 1.38 |
| 29 | C | 501 | CLA | C3D-C4D | -2.01 | 1.39 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | c | 507 | CLA | C3D-C4D | -2.01 | 1.39 | 1.44 |
| 33 | a | 413 | LMG | C22-C21 | -2.01 | 1.33 | 1.49 |
| 29 | R | 608 | CLA | C1B-NB | 2.01 | 1.37 | 1.35 |
| 29 | b | 615 | CLA | C1C-C2C | 2.01 | 1.48 | 1.44 |
| 38 | C | 520 | DGD | CDA-CCA | -2.01 | 1.33 | 1.49 |
| 29 | B | 610 | CLA | C1B-NB | 2.01 | 1.37 | 1.35 |
| 38 | C | 518 | DGD | CGB-CFB | -2.01 | 1.33 | 1.49 |
| 29 | n | 614 | CLA | C3B-C2B | -2.01 | 1.37 | 1.40 |
| 29 | r | 613 | CLA | C1B-NB | 2.01 | 1.37 | 1.35 |
| 38 | C | 520 | DGD | CGB-CFB | -2.01 | 1.33 | 1.49 |
| 29 | Y | 614 | CLA | C3D-C4D | -2.01 | 1.39 | 1.44 |
| 29 | n | 614 | CLA | C1B-NB | 2.01 | 1.37 | 1.35 |
| 30 | A | 408 | PHO | CMB-C2B | -2.01 | 1.46 | 1.51 |
| 33 | H | 102 | LMG | C43-C42 | -2.01 | 1.33 | 1.49 |
| 33 | c | 521 | LMG | C25-C24 | -2.01 | 1.33 | 1.49 |
| 38 | c | 520 | DGD | CGB-CFB | -2.01 | 1.33 | 1.49 |
| 29 | Y | 611 | CLA | C1C-C2C | 2.01 | 1.48 | 1.44 |
| 33 | c | 521 | LMG | C43-C42 | -2.01 | 1.33 | 1.49 |
| 33 | A | 413 | LMG | C43-C42 | -2.01 | 1.33 | 1.49 |
| 33 | C | 521 | LMG | C43-C42 | -2.01 | 1.33 | 1.49 |
| 29 | y | 602 | CLA | C1A-CHA | 2.01 | 1.51 | 1.43 |
| 29 | Y | 610 | CLA | C1C-C2C | 2.01 | 1.48 | 1.44 |
| 29 | B | 608 | CLA | C3B-C2B | -2.01 | 1.37 | 1.40 |
| 45 | g | 608 | CHL | C3B-C2B | -2.01 | 1.37 | 1.40 |
| 29 | s | 617 | CLA | C1B-NB | 2.01 | 1.37 | 1.35 |
| 48 | R | 622 | NEX | O24-C25 | -2.01 | 1.43 | 1.46 |
| 33 | D | 411 | LMG | C25-C24 | -2.01 | 1.33 | 1.49 |
| 29 | n | 614 | CLA | MG-NC | 2.01 | 2.11 | 2.06 |
| 30 | a | 408 | PHO | CMB-C2B | -2.00 | 1.46 | 1.51 |
| 38 | C | 519 | DGD | CGB-CFB | -2.00 | 1.33 | 1.49 |
| 29 | B | 617 | CLA | C3D-C4D | -2.00 | 1.39 | 1.44 |
| 29 | B | 613 | CLA | C3D-C4D | -2.00 | 1.39 | 1.44 |
| 29 | N | 612 | CLA | MG-NC | 2.00 | 2.11 | 2.06 |
| 29 | B | 612 | CLA | C3B-C2B | -2.00 | 1.37 | 1.40 |
| 29 | c | 509 | CLA | C3D-C4D | -2.00 | 1.39 | 1.44 |
| 45 | Y | 606 | CHL | CHC-C1C | 2.00 | 1.40 | 1.35 |
| 29 | N | 613 | CLA | MG-NC | 2.00 | 2.11 | 2.06 |
| 33 | a | 413 | LMG | C43-C42 | -2.00 | 1.33 | 1.49 |
| 33 | C | 521 | LMG | C25-C24 | -2.00 | 1.33 | 1.49 |
| 29 | Y | 602 | CLA | C3D-C4D | -2.00 | 1.39 | 1.44 |
| 29 | c | 506 | CLA | C3D-C4D | -2.00 | 1.39 | 1.44 |
| 29 | a | 407 | CLA | C1C-C2C | 2.00 | 1.48 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 29 | r | 611 | CLA | MG-NC | 2.00 | 2.11 | 2.06 |
| 29 | s | 603 | CLA | MG-NC | 2.00 | 2.11 | 2.06 |
| 33 | b | 622 | LMG | C25-C24 | -2.00 | 1.33 | 1.49 |
| 45 | Y | 605 | CHL | C3B-C2B | -2.00 | 1.37 | 1.40 |

All (4140) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 29 | B | 617 | CLA | C4-C3-C5 | -22.25 | 77.84 | 115.27 |
| 29 | b | 617 | CLA | C4-C3-C5 | -22.23 | 77.87 | 115.27 |
| 29 | b | 617 | CLA | C5-C3-C2 | 18.79 | 159.15 | 121.12 |
| 29 | B | 617 | CLA | C5-C3-C2 | 18.73 | 159.01 | 121.12 |
| 31 | C | 517 | BCR | C10-C11-C12 | 17.71 | 178.49 | 123.22 |
| 31 | c | 516 | BCR | C10-C11-C12 | 17.71 | 178.47 | 123.22 |
| 31 | C | 516 | BCR | C10-C11-C12 | 17.55 | 177.99 | 123.22 |
| 31 | c | 515 | BCR | C10-C11-C12 | 17.52 | 177.89 | 123.22 |
| 31 | d | 404 | BCR | C10-C11-C12 | 17.51 | 177.87 | 123.22 |
| 31 | B | 619 | BCR | C10-C11-C12 | 17.49 | 177.80 | 123.22 |
| 31 | b | 618 | BCR | C10-C11-C12 | 17.48 | 177.75 | 123.22 |
| 31 | B | 618 | BCR | C10-C11-C12 | 17.47 | 177.73 | 123.22 |
| 31 | b | 619 | BCR | C10-C11-C12 | 17.41 | 177.54 | 123.22 |
| 31 | C | 514 | BCR | C10-C11-C12 | 17.25 | 177.05 | 123.22 |
| 31 | c | 514 | BCR | C10-C11-C12 | 17.20 | 176.90 | 123.22 |
| 31 | A | 411 | BCR | C10-C11-C12 | 17.15 | 176.75 | 123.22 |
| 31 | a | 411 | BCR | C10-C11-C12 | 17.07 | 176.49 | 123.22 |
| 47 | y | 622 | XAT | C37-C21-C36 | -16.87 | 82.48 | 107.37 |
| 31 | D | 404 | BCR | C10-C11-C12 | 16.82 | 175.70 | 123.22 |
| 31 | c | 517 | BCR | C10-C11-C12 | 16.59 | 174.99 | 123.22 |
| 47 | Y | 622 | XAT | C37-C21-C36 | -16.58 | 82.91 | 107.37 |
| 29 | B | 617 | CLA | C4-C3-C2 | -16.55 | 81.23 | 123.68 |
| 29 | b | 617 | CLA | C4-C3-C2 | -16.50 | 81.35 | 123.68 |
| 31 | C | 515 | BCR | C10-C11-C12 | 16.43 | 174.48 | 123.22 |
| 31 | C | 514 | BCR | C16-C15-C14 | 14.95 | 154.10 | 123.47 |
| 31 | C | 515 | BCR | C16-C15-C14 | 14.26 | 152.69 | 123.47 |
| 31 | c | 514 | BCR | C16-C15-C14 | 14.21 | 152.59 | 123.47 |
| 31 | c | 514 | BCR | C11-C10-C9 | 13.76 | 146.95 | 127.31 |
| 31 | C | 516 | BCR | C11-C10-C9 | 13.63 | 146.76 | 127.31 |
| 31 | C | 514 | BCR | C11-C10-C9 | 13.60 | 146.72 | 127.31 |
| 31 | b | 619 | BCR | C16-C15-C14 | 13.44 | 151.00 | 123.47 |
| 31 | c | 516 | BCR | C11-C10-C9 | 13.21 | 146.16 | 127.31 |
| 31 | c | 515 | BCR | C16-C15-C14 | 13.06 | 150.23 | 123.47 |
| 31 | b | 618 | BCR | C11-C10-C9 | 13.02 | 145.90 | 127.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|--------|-------------|----------|
| 31 | B | 618 | BCR | C11-C10-C9 | 12.97 | 145.82 | 127.31 |
| 31 | B | 619 | BCR | C16-C15-C14 | 12.93 | 149.96 | 123.47 |
| 31 | b | 618 | BCR | C16-C15-C14 | 12.90 | 149.90 | 123.47 |
| 31 | B | 618 | BCR | C16-C15-C14 | 12.82 | 149.73 | 123.47 |
| 31 | b | 619 | BCR | C21-C20-C19 | 12.80 | 163.15 | 123.22 |
| 31 | C | 516 | BCR | C16-C15-C14 | 12.77 | 149.64 | 123.47 |
| 31 | a | 411 | BCR | C11-C10-C9 | 12.73 | 145.48 | 127.31 |
| 31 | B | 619 | BCR | C21-C20-C19 | 12.65 | 162.68 | 123.22 |
| 31 | A | 411 | BCR | C11-C10-C9 | 12.64 | 145.35 | 127.31 |
| 47 | Y | 622 | XAT | C37-C21-C22 | -12.62 | 87.06 | 108.98 |
| 47 | y | 622 | XAT | C37-C21-C22 | -12.60 | 87.09 | 108.98 |
| 31 | c | 517 | BCR | C21-C20-C19 | 12.54 | 162.35 | 123.22 |
| 31 | a | 411 | BCR | C21-C20-C19 | 12.41 | 161.95 | 123.22 |
| 31 | c | 517 | BCR | C16-C15-C14 | 12.33 | 148.73 | 123.47 |
| 31 | A | 411 | BCR | C21-C20-C19 | 12.31 | 161.62 | 123.22 |
| 31 | B | 619 | BCR | C11-C10-C9 | 12.18 | 144.70 | 127.31 |
| 31 | C | 517 | BCR | C21-C20-C19 | 12.09 | 160.96 | 123.22 |
| 31 | b | 619 | BCR | C11-C10-C9 | 12.03 | 144.47 | 127.31 |
| 31 | c | 516 | BCR | C16-C15-C14 | 12.02 | 148.10 | 123.47 |
| 31 | C | 517 | BCR | C16-C15-C14 | 11.97 | 147.99 | 123.47 |
| 31 | d | 404 | BCR | C11-C10-C9 | 11.72 | 144.04 | 127.31 |
| 31 | a | 411 | BCR | C16-C15-C14 | 11.66 | 147.36 | 123.47 |
| 31 | C | 515 | BCR | C21-C20-C19 | 11.61 | 159.45 | 123.22 |
| 31 | c | 514 | BCR | C21-C20-C19 | 11.59 | 159.38 | 123.22 |
| 31 | A | 411 | BCR | C16-C15-C14 | 11.53 | 147.08 | 123.47 |
| 31 | D | 404 | BCR | C16-C15-C14 | 11.49 | 147.02 | 123.47 |
| 31 | c | 515 | BCR | C11-C10-C9 | 11.40 | 143.59 | 127.31 |
| 31 | d | 404 | BCR | C16-C15-C14 | 11.38 | 146.78 | 123.47 |
| 31 | D | 404 | BCR | C11-C10-C9 | 11.38 | 143.55 | 127.31 |
| 31 | C | 514 | BCR | C21-C20-C19 | 11.37 | 158.69 | 123.22 |
| 31 | C | 517 | BCR | C11-C10-C9 | 11.36 | 143.52 | 127.31 |
| 31 | b | 618 | BCR | C21-C20-C19 | 11.11 | 157.89 | 123.22 |
| 31 | c | 516 | BCR | C21-C20-C19 | 11.02 | 157.60 | 123.22 |
| 31 | D | 404 | BCR | C11-C12-C13 | 10.97 | 157.24 | 126.42 |
| 31 | B | 618 | BCR | C21-C20-C19 | 10.97 | 157.45 | 123.22 |
| 31 | c | 515 | BCR | C21-C20-C19 | 10.78 | 156.86 | 123.22 |
| 31 | a | 411 | BCR | C11-C12-C13 | 10.75 | 156.61 | 126.42 |
| 31 | d | 404 | BCR | C11-C12-C13 | 10.74 | 156.60 | 126.42 |
| 31 | C | 515 | BCR | C11-C10-C9 | 10.73 | 142.62 | 127.31 |
| 29 | b | 609 | CLA | C4A-NA-C1A | 10.65 | 111.49 | 106.71 |
| 31 | c | 515 | BCR | C11-C12-C13 | 10.58 | 156.15 | 126.42 |
| 31 | C | 517 | BCR | C11-C12-C13 | 10.51 | 155.95 | 126.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 31 | A | 411 | BCR | C11-C12-C13 | 10.49 | 155.89 | 126.42 |
| 31 | c | 517 | BCR | C11-C10-C9 | 10.39 | 142.14 | 127.31 |
| 31 | C | 516 | BCR | C11-C12-C13 | 10.32 | 155.41 | 126.42 |
| 31 | b | 619 | BCR | C11-C12-C13 | 10.25 | 155.20 | 126.42 |
| 31 | C | 515 | BCR | C11-C12-C13 | 10.21 | 155.10 | 126.42 |
| 31 | c | 516 | BCR | C11-C12-C13 | 10.20 | 155.06 | 126.42 |
| 31 | C | 516 | BCR | C21-C20-C19 | 10.15 | 154.91 | 123.22 |
| 31 | b | 618 | BCR | C11-C12-C13 | 10.12 | 154.85 | 126.42 |
| 31 | B | 619 | BCR | C11-C12-C13 | 10.10 | 154.78 | 126.42 |
| 31 | B | 618 | BCR | C11-C12-C13 | 9.92 | 154.29 | 126.42 |
| 29 | S | 613 | CLA | C4A-NA-C1A | 9.87 | 111.14 | 106.71 |
| 29 | B | 609 | CLA | C4A-NA-C1A | 9.86 | 111.14 | 106.71 |
| 29 | B | 608 | CLA | C4A-NA-C1A | 9.85 | 111.13 | 106.71 |
| 29 | b | 608 | CLA | C4A-NA-C1A | 9.82 | 111.12 | 106.71 |
| 29 | b | 605 | CLA | C4A-NA-C1A | 9.76 | 111.10 | 106.71 |
| 29 | b | 615 | CLA | C4A-NA-C1A | 9.75 | 111.09 | 106.71 |
| 29 | b | 610 | CLA | C4A-NA-C1A | 9.69 | 111.06 | 106.71 |
| 29 | B | 605 | CLA | C4A-NA-C1A | 9.69 | 111.06 | 106.71 |
| 29 | c | 505 | CLA | C4A-NA-C1A | 9.68 | 111.06 | 106.71 |
| 29 | s | 613 | CLA | C4A-NA-C1A | 9.68 | 111.06 | 106.71 |
| 31 | c | 517 | BCR | C11-C12-C13 | 9.67 | 153.58 | 126.42 |
| 31 | d | 404 | BCR | C21-C20-C19 | 9.65 | 153.34 | 123.22 |
| 29 | B | 617 | CLA | C4A-NA-C1A | 9.62 | 111.03 | 106.71 |
| 31 | c | 514 | BCR | C11-C12-C13 | 9.62 | 153.45 | 126.42 |
| 29 | b | 613 | CLA | C4A-NA-C1A | 9.62 | 111.03 | 106.71 |
| 31 | C | 514 | BCR | C11-C12-C13 | 9.61 | 153.42 | 126.42 |
| 29 | C | 505 | CLA | C4A-NA-C1A | 9.58 | 111.01 | 106.71 |
| 29 | B | 613 | CLA | C4A-NA-C1A | 9.54 | 111.00 | 106.71 |
| 29 | c | 502 | CLA | C4A-NA-C1A | 9.54 | 110.99 | 106.71 |
| 29 | a | 406 | CLA | C4A-NA-C1A | 9.53 | 110.99 | 106.71 |
| 29 | b | 606 | CLA | C4A-NA-C1A | 9.53 | 110.99 | 106.71 |
| 29 | A | 406 | CLA | C4A-NA-C1A | 9.52 | 110.99 | 106.71 |
| 29 | B | 610 | CLA | C4A-NA-C1A | 9.51 | 110.98 | 106.71 |
| 29 | B | 614 | CLA | C4A-NA-C1A | 9.49 | 110.97 | 106.71 |
| 29 | b | 612 | CLA | C4A-NA-C1A | 9.46 | 110.96 | 106.71 |
| 29 | C | 509 | CLA | C4A-NA-C1A | 9.45 | 110.95 | 106.71 |
| 29 | C | 502 | CLA | C4A-NA-C1A | 9.45 | 110.95 | 106.71 |
| 29 | B | 606 | CLA | C4A-NA-C1A | 9.44 | 110.95 | 106.71 |
| 29 | s | 605 | CLA | C4A-NA-C1A | 9.43 | 110.95 | 106.71 |
| 31 | D | 404 | BCR | C21-C20-C19 | 9.42 | 152.62 | 123.22 |
| 29 | R | 604 | CLA | C4A-NA-C1A | 9.40 | 110.93 | 106.71 |
| 29 | c | 513 | CLA | C4A-NA-C1A | 9.38 | 110.92 | 106.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|------|-------------|----------|
| 29 | G | 610 | CLA | C4A-NA-C1A | 9.37 | 110.92 | 106.71 |
| 29 | c | 504 | CLA | C4A-NA-C1A | 9.37 | 110.92 | 106.71 |
| 29 | c | 509 | CLA | C4A-NA-C1A | 9.37 | 110.92 | 106.71 |
| 29 | n | 604 | CLA | C4A-NA-C1A | 9.34 | 110.90 | 106.71 |
| 29 | y | 613 | CLA | C4A-NA-C1A | 9.34 | 110.90 | 106.71 |
| 29 | b | 614 | CLA | C4A-NA-C1A | 9.33 | 110.90 | 106.71 |
| 29 | B | 615 | CLA | C4A-NA-C1A | 9.32 | 110.90 | 106.71 |
| 29 | S | 605 | CLA | C4A-NA-C1A | 9.32 | 110.89 | 106.71 |
| 29 | y | 603 | CLA | C4A-NA-C1A | 9.29 | 110.88 | 106.71 |
| 31 | C | 516 | BCR | C20-C19-C18 | 9.28 | 152.47 | 126.42 |
| 29 | n | 613 | CLA | C4A-NA-C1A | 9.28 | 110.88 | 106.71 |
| 29 | c | 511 | CLA | C4A-NA-C1A | 9.25 | 110.86 | 106.71 |
| 29 | N | 604 | CLA | C4A-NA-C1A | 9.24 | 110.86 | 106.71 |
| 29 | Y | 613 | CLA | C4A-NA-C1A | 9.24 | 110.86 | 106.71 |
| 29 | c | 501 | CLA | C4A-NA-C1A | 9.22 | 110.85 | 106.71 |
| 29 | N | 613 | CLA | C4A-NA-C1A | 9.22 | 110.85 | 106.71 |
| 29 | n | 610 | CLA | C4A-NA-C1A | 9.22 | 110.85 | 106.71 |
| 29 | a | 410 | CLA | C4A-NA-C1A | 9.22 | 110.85 | 106.71 |
| 29 | S | 604 | CLA | C4A-NA-C1A | 9.20 | 110.84 | 106.71 |
| 29 | r | 604 | CLA | C4A-NA-C1A | 9.20 | 110.84 | 106.71 |
| 29 | C | 511 | CLA | C4A-NA-C1A | 9.19 | 110.84 | 106.71 |
| 29 | r | 610 | CLA | C4A-NA-C1A | 9.16 | 110.83 | 106.71 |
| 29 | N | 603 | CLA | C4A-NA-C1A | 9.16 | 110.82 | 106.71 |
| 29 | A | 410 | CLA | C4A-NA-C1A | 9.15 | 110.82 | 106.71 |
| 29 | n | 603 | CLA | C4A-NA-C1A | 9.14 | 110.81 | 106.71 |
| 29 | N | 612 | CLA | C4A-NA-C1A | 9.13 | 110.81 | 106.71 |
| 29 | s | 602 | CLA | C4A-NA-C1A | 9.12 | 110.81 | 106.71 |
| 29 | a | 405 | CLA | C4A-NA-C1A | 9.12 | 110.81 | 106.71 |
| 29 | n | 614 | CLA | C4A-NA-C1A | 9.12 | 110.80 | 106.71 |
| 29 | B | 616 | CLA | C4A-NA-C1A | 9.11 | 110.80 | 106.71 |
| 29 | G | 613 | CLA | C4A-NA-C1A | 9.10 | 110.80 | 106.71 |
| 29 | C | 510 | CLA | C4A-NA-C1A | 9.10 | 110.80 | 106.71 |
| 29 | S | 617 | CLA | C4A-NA-C1A | 9.10 | 110.80 | 106.71 |
| 29 | Y | 603 | CLA | C4A-NA-C1A | 9.08 | 110.79 | 106.71 |
| 29 | C | 501 | CLA | C4A-NA-C1A | 9.08 | 110.79 | 106.71 |
| 29 | R | 603 | CLA | C4A-NA-C1A | 9.07 | 110.78 | 106.71 |
| 29 | C | 504 | CLA | C4A-NA-C1A | 9.06 | 110.78 | 106.71 |
| 29 | g | 610 | CLA | C4A-NA-C1A | 9.06 | 110.78 | 106.71 |
| 29 | A | 407 | CLA | C4A-NA-C1A | 9.06 | 110.78 | 106.71 |
| 29 | Y | 611 | CLA | C4A-NA-C1A | 9.06 | 110.78 | 106.71 |
| 29 | g | 611 | CLA | C4A-NA-C1A | 9.05 | 110.78 | 106.71 |
| 29 | G | 614 | CLA | C4A-NA-C1A | 9.05 | 110.78 | 106.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|------|-------------|----------|
| 29 | g | 613 | CLA | C4A-NA-C1A | 9.04 | 110.77 | 106.71 |
| 29 | C | 507 | CLA | C4A-NA-C1A | 9.02 | 110.76 | 106.71 |
| 29 | Y | 610 | CLA | C4A-NA-C1A | 9.01 | 110.75 | 106.71 |
| 29 | Y | 612 | CLA | C4A-NA-C1A | 9.01 | 110.75 | 106.71 |
| 29 | N | 614 | CLA | C4A-NA-C1A | 9.00 | 110.75 | 106.71 |
| 29 | A | 405 | CLA | C4A-NA-C1A | 9.00 | 110.75 | 106.71 |
| 29 | G | 604 | CLA | C4A-NA-C1A | 8.99 | 110.75 | 106.71 |
| 29 | b | 603 | CLA | C4A-NA-C1A | 8.99 | 110.75 | 106.71 |
| 29 | b | 616 | CLA | C4A-NA-C1A | 8.99 | 110.75 | 106.71 |
| 29 | s | 617 | CLA | C4A-NA-C1A | 8.99 | 110.75 | 106.71 |
| 29 | r | 608 | CLA | C4A-NA-C1A | 8.98 | 110.74 | 106.71 |
| 29 | B | 612 | CLA | C4A-NA-C1A | 8.98 | 110.74 | 106.71 |
| 29 | G | 603 | CLA | C4A-NA-C1A | 8.97 | 110.74 | 106.71 |
| 29 | c | 512 | CLA | C4A-NA-C1A | 8.96 | 110.73 | 106.71 |
| 29 | g | 603 | CLA | C4A-NA-C1A | 8.95 | 110.73 | 106.71 |
| 29 | c | 507 | CLA | C4A-NA-C1A | 8.94 | 110.73 | 106.71 |
| 29 | S | 612 | CLA | C4A-NA-C1A | 8.93 | 110.72 | 106.71 |
| 29 | c | 508 | CLA | C4A-NA-C1A | 8.93 | 110.72 | 106.71 |
| 29 | R | 613 | CLA | C4A-NA-C1A | 8.92 | 110.72 | 106.71 |
| 29 | n | 611 | CLA | C4A-NA-C1A | 8.91 | 110.71 | 106.71 |
| 29 | y | 611 | CLA | C4A-NA-C1A | 8.91 | 110.71 | 106.71 |
| 29 | G | 611 | CLA | C4A-NA-C1A | 8.90 | 110.71 | 106.71 |
| 29 | B | 604 | CLA | C4A-NA-C1A | 8.89 | 110.70 | 106.71 |
| 29 | R | 608 | CLA | C4A-NA-C1A | 8.89 | 110.70 | 106.71 |
| 29 | r | 613 | CLA | C4A-NA-C1A | 8.89 | 110.70 | 106.71 |
| 29 | y | 610 | CLA | C4A-NA-C1A | 8.89 | 110.70 | 106.71 |
| 29 | N | 610 | CLA | C4A-NA-C1A | 8.88 | 110.70 | 106.71 |
| 29 | c | 510 | CLA | C4A-NA-C1A | 8.86 | 110.69 | 106.71 |
| 29 | S | 602 | CLA | C4A-NA-C1A | 8.86 | 110.69 | 106.71 |
| 29 | r | 603 | CLA | C4A-NA-C1A | 8.85 | 110.69 | 106.71 |
| 29 | g | 614 | CLA | C4A-NA-C1A | 8.84 | 110.68 | 106.71 |
| 29 | C | 508 | CLA | C4A-NA-C1A | 8.84 | 110.68 | 106.71 |
| 29 | a | 407 | CLA | C4A-NA-C1A | 8.82 | 110.67 | 106.71 |
| 29 | g | 612 | CLA | C4A-NA-C1A | 8.82 | 110.67 | 106.71 |
| 29 | Y | 614 | CLA | C4A-NA-C1A | 8.81 | 110.67 | 106.71 |
| 29 | R | 602 | CLA | C4A-NA-C1A | 8.80 | 110.66 | 106.71 |
| 29 | B | 602 | CLA | C4A-NA-C1A | 8.80 | 110.66 | 106.71 |
| 29 | r | 611 | CLA | C4A-NA-C1A | 8.79 | 110.66 | 106.71 |
| 29 | s | 609 | CLA | C4A-NA-C1A | 8.78 | 110.65 | 106.71 |
| 29 | r | 602 | CLA | C4A-NA-C1A | 8.78 | 110.65 | 106.71 |
| 29 | y | 608 | CLA | C4A-NA-C1A | 8.78 | 110.65 | 106.71 |
| 29 | S | 609 | CLA | C4A-NA-C1A | 8.77 | 110.65 | 106.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|------|-------------|----------|
| 29 | s | 604 | CLA | C4A-NA-C1A | 8.77 | 110.65 | 106.71 |
| 29 | C | 513 | CLA | C4A-NA-C1A | 8.77 | 110.65 | 106.71 |
| 29 | g | 602 | CLA | C4A-NA-C1A | 8.75 | 110.64 | 106.71 |
| 29 | S | 611 | CLA | C4A-NA-C1A | 8.74 | 110.64 | 106.71 |
| 29 | s | 612 | CLA | C4A-NA-C1A | 8.74 | 110.64 | 106.71 |
| 29 | S | 603 | CLA | C4A-NA-C1A | 8.73 | 110.63 | 106.71 |
| 29 | y | 614 | CLA | C4A-NA-C1A | 8.73 | 110.63 | 106.71 |
| 29 | y | 604 | CLA | C4A-NA-C1A | 8.73 | 110.63 | 106.71 |
| 29 | c | 506 | CLA | C4A-NA-C1A | 8.71 | 110.62 | 106.71 |
| 29 | b | 602 | CLA | C4A-NA-C1A | 8.71 | 110.62 | 106.71 |
| 29 | Y | 604 | CLA | C4A-NA-C1A | 8.71 | 110.62 | 106.71 |
| 29 | C | 503 | CLA | C4A-NA-C1A | 8.69 | 110.61 | 106.71 |
| 29 | y | 612 | CLA | C4A-NA-C1A | 8.69 | 110.61 | 106.71 |
| 29 | R | 612 | CLA | C4A-NA-C1A | 8.68 | 110.61 | 106.71 |
| 29 | G | 612 | CLA | C4A-NA-C1A | 8.68 | 110.61 | 106.71 |
| 29 | B | 603 | CLA | C4A-NA-C1A | 8.67 | 110.61 | 106.71 |
| 29 | R | 611 | CLA | C4A-NA-C1A | 8.64 | 110.59 | 106.71 |
| 29 | C | 512 | CLA | C4A-NA-C1A | 8.63 | 110.59 | 106.71 |
| 29 | s | 611 | CLA | C4A-NA-C1A | 8.63 | 110.59 | 106.71 |
| 29 | Y | 608 | CLA | C4A-NA-C1A | 8.61 | 110.58 | 106.71 |
| 29 | b | 607 | CLA | C4A-NA-C1A | 8.61 | 110.58 | 106.71 |
| 31 | b | 618 | BCR | C20-C19-C18 | 8.60 | 150.58 | 126.42 |
| 29 | R | 609 | CLA | C4A-NA-C1A | 8.60 | 110.57 | 106.71 |
| 29 | s | 614 | CLA | C4A-NA-C1A | 8.60 | 110.57 | 106.71 |
| 29 | b | 617 | CLA | C4A-NA-C1A | 8.59 | 110.57 | 106.71 |
| 29 | C | 506 | CLA | C4A-NA-C1A | 8.59 | 110.57 | 106.71 |
| 29 | g | 604 | CLA | C4A-NA-C1A | 8.58 | 110.56 | 106.71 |
| 31 | B | 618 | BCR | C20-C19-C18 | 8.58 | 150.52 | 126.42 |
| 29 | b | 604 | CLA | C4A-NA-C1A | 8.55 | 110.55 | 106.71 |
| 31 | c | 515 | BCR | C20-C19-C18 | 8.55 | 150.44 | 126.42 |
| 29 | B | 607 | CLA | C4A-NA-C1A | 8.53 | 110.54 | 106.71 |
| 29 | N | 602 | CLA | C4A-NA-C1A | 8.53 | 110.54 | 106.71 |
| 29 | S | 614 | CLA | C4A-NA-C1A | 8.52 | 110.54 | 106.71 |
| 29 | r | 612 | CLA | C4A-NA-C1A | 8.51 | 110.53 | 106.71 |
| 29 | N | 611 | CLA | C4A-NA-C1A | 8.51 | 110.53 | 106.71 |
| 31 | c | 516 | BCR | C20-C19-C18 | 8.50 | 150.28 | 126.42 |
| 29 | S | 610 | CLA | C4A-NA-C1A | 8.46 | 110.51 | 106.71 |
| 29 | n | 612 | CLA | C4A-NA-C1A | 8.45 | 110.50 | 106.71 |
| 29 | c | 503 | CLA | C4A-NA-C1A | 8.44 | 110.50 | 106.71 |
| 29 | d | 403 | CLA | C4A-NA-C1A | 8.44 | 110.50 | 106.71 |
| 29 | G | 602 | CLA | C4A-NA-C1A | 8.44 | 110.50 | 106.71 |
| 29 | r | 609 | CLA | C4A-NA-C1A | 8.42 | 110.49 | 106.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | s | 603 | CLA | C4A-NA-C1A | 8.41 | 110.49 | 106.71 |
| 31 | C | 514 | BCR | C20-C19-C18 | 8.35 | 149.89 | 126.42 |
| 29 | D | 402 | CLA | C4A-NA-C1A | 8.35 | 110.46 | 106.71 |
| 29 | D | 403 | CLA | C4A-NA-C1A | 8.28 | 110.43 | 106.71 |
| 29 | s | 610 | CLA | C4A-NA-C1A | 8.27 | 110.43 | 106.71 |
| 31 | C | 515 | BCR | C20-C19-C18 | 8.26 | 149.62 | 126.42 |
| 29 | d | 402 | CLA | C4A-NA-C1A | 8.16 | 110.37 | 106.71 |
| 29 | R | 610 | CLA | C4A-NA-C1A | 8.13 | 110.36 | 106.71 |
| 29 | b | 611 | CLA | C4A-NA-C1A | 8.12 | 110.36 | 106.71 |
| 29 | n | 602 | CLA | C4A-NA-C1A | 8.10 | 110.35 | 106.71 |
| 29 | y | 602 | CLA | C4A-NA-C1A | 8.05 | 110.33 | 106.71 |
| 29 | Y | 602 | CLA | C4A-NA-C1A | 7.99 | 110.30 | 106.71 |
| 29 | B | 611 | CLA | C4A-NA-C1A | 7.98 | 110.29 | 106.71 |
| 31 | c | 514 | BCR | C20-C19-C18 | 7.97 | 148.80 | 126.42 |
| 31 | C | 517 | BCR | C20-C19-C18 | 7.65 | 147.92 | 126.42 |
| 31 | B | 619 | BCR | C20-C19-C18 | 7.34 | 147.04 | 126.42 |
| 29 | s | 613 | CLA | O2D-CGD-CBD | 7.34 | 124.31 | 111.27 |
| 47 | y | 622 | XAT | C36-C21-C22 | 7.34 | 121.73 | 108.98 |
| 29 | S | 613 | CLA | O2D-CGD-CBD | 7.28 | 124.20 | 111.27 |
| 31 | b | 619 | BCR | C20-C19-C18 | 7.26 | 146.82 | 126.42 |
| 31 | A | 411 | BCR | C20-C19-C18 | 7.18 | 146.58 | 126.42 |
| 29 | c | 502 | CLA | O2A-C1-C2 | 7.17 | 127.49 | 108.64 |
| 47 | Y | 622 | XAT | C36-C21-C22 | 7.13 | 121.38 | 108.98 |
| 31 | c | 517 | BCR | C20-C19-C18 | 7.09 | 146.33 | 126.42 |
| 31 | a | 411 | BCR | C20-C19-C18 | 7.09 | 146.32 | 126.42 |
| 47 | y | 622 | XAT | C37-C21-C26 | -7.05 | 91.02 | 110.05 |
| 47 | Y | 622 | XAT | C37-C21-C26 | -7.04 | 91.04 | 110.05 |
| 47 | R | 621 | XAT | C15-C14-C13 | -6.91 | 117.45 | 127.31 |
| 36 | B | 625 | DGA | CDB-CCB-CBB | -6.76 | 80.12 | 114.42 |
| 29 | s | 605 | CLA | O2D-CGD-CBD | 6.75 | 123.27 | 111.27 |
| 36 | b | 623 | DGA | CDB-CCB-CBB | -6.73 | 80.25 | 114.42 |
| 29 | S | 605 | CLA | O2D-CGD-CBD | 6.72 | 123.20 | 111.27 |
| 36 | c | 524 | DGA | CDB-CCB-CBB | -6.67 | 80.55 | 114.42 |
| 36 | C | 524 | DGA | CDB-CCB-CBB | -6.66 | 80.64 | 114.42 |
| 47 | r | 622 | XAT | C15-C14-C13 | -6.60 | 117.89 | 127.31 |
| 40 | c | 627 | LMK | O2-C4-O3 | -6.60 | 109.11 | 124.09 |
| 40 | C | 527 | LMK | O2-C4-O3 | -6.54 | 109.23 | 124.09 |
| 29 | S | 605 | CLA | O2A-C1-C2 | 6.36 | 125.34 | 108.64 |
| 29 | B | 609 | CLA | O2D-CGD-CBD | 6.24 | 122.36 | 111.27 |
| 29 | C | 506 | CLA | O2D-CGD-CBD | 6.24 | 122.35 | 111.27 |
| 29 | c | 506 | CLA | O2D-CGD-CBD | 6.21 | 122.31 | 111.27 |
| 29 | c | 501 | CLA | O2D-CGD-CBD | 6.20 | 122.28 | 111.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | b | 609 | CLA | O2D-CGD-CBD | 6.13 | 122.16 | 111.27 |
| 29 | R | 602 | CLA | O2D-CGD-CBD | 6.06 | 122.03 | 111.27 |
| 29 | C | 501 | CLA | O2D-CGD-CBD | 6.05 | 122.03 | 111.27 |
| 29 | C | 504 | CLA | O2A-C1-C2 | 5.99 | 124.37 | 108.64 |
| 29 | B | 605 | CLA | O2A-C1-C2 | 5.97 | 124.32 | 108.64 |
| 47 | n | 622 | XAT | C31-C30-C29 | -5.96 | 118.81 | 127.31 |
| 29 | R | 604 | CLA | O2A-C1-C2 | 5.93 | 122.84 | 108.97 |
| 29 | c | 504 | CLA | O2A-C1-C2 | 5.93 | 124.22 | 108.64 |
| 29 | G | 604 | CLA | O2A-C1-C2 | 5.91 | 122.80 | 108.97 |
| 29 | B | 602 | CLA | CMD-C2D-C1D | 5.90 | 135.12 | 124.71 |
| 29 | b | 606 | CLA | CMD-C2D-C1D | 5.90 | 135.11 | 124.71 |
| 31 | d | 404 | BCR | C20-C19-C18 | 5.90 | 142.98 | 126.42 |
| 29 | A | 405 | CLA | O2A-C1-C2 | 5.89 | 124.12 | 108.64 |
| 29 | s | 614 | CLA | O2A-C1-C2 | 5.89 | 124.11 | 108.64 |
| 29 | c | 503 | CLA | CMD-C2D-C1D | 5.88 | 135.07 | 124.71 |
| 29 | C | 513 | CLA | O2A-C1-C2 | 5.87 | 124.06 | 108.64 |
| 29 | b | 602 | CLA | CMD-C2D-C1D | 5.87 | 135.05 | 124.71 |
| 29 | C | 511 | CLA | CMD-C2D-C1D | 5.87 | 135.05 | 124.71 |
| 29 | s | 610 | CLA | O2A-C1-C2 | 5.86 | 124.05 | 108.64 |
| 29 | B | 606 | CLA | CMD-C2D-C1D | 5.85 | 135.03 | 124.71 |
| 29 | c | 510 | CLA | CMD-C2D-C1D | 5.85 | 135.02 | 124.71 |
| 29 | c | 513 | CLA | O2A-C1-C2 | 5.83 | 123.95 | 108.64 |
| 29 | n | 613 | CLA | O2A-C1-C2 | 5.82 | 123.94 | 108.64 |
| 47 | r | 622 | XAT | C7-C8-C9 | -5.81 | 116.52 | 125.53 |
| 29 | c | 511 | CLA | CMD-C2D-C1D | 5.80 | 134.94 | 124.71 |
| 29 | C | 501 | CLA | CMD-C2D-C1D | 5.80 | 134.93 | 124.71 |
| 29 | b | 605 | CLA | O2A-C1-C2 | 5.78 | 123.83 | 108.64 |
| 29 | C | 510 | CLA | CMD-C2D-C1D | 5.76 | 134.87 | 124.71 |
| 29 | S | 614 | CLA | CMD-C2D-C1D | 5.76 | 134.86 | 124.71 |
| 29 | G | 614 | CLA | CMD-C2D-C1D | 5.76 | 134.86 | 124.71 |
| 29 | r | 613 | CLA | O2D-CGD-CBD | 5.76 | 121.50 | 111.27 |
| 29 | C | 503 | CLA | CMD-C2D-C1D | 5.75 | 134.84 | 124.71 |
| 46 | y | 620 | LUT | C21-C26-C25 | 5.74 | 121.71 | 111.42 |
| 29 | y | 603 | CLA | O2D-CGD-CBD | 5.73 | 121.45 | 111.27 |
| 31 | D | 404 | BCR | C20-C19-C18 | 5.73 | 142.50 | 126.42 |
| 46 | s | 620 | LUT | C21-C26-C27 | 5.73 | 119.94 | 112.70 |
| 29 | r | 604 | CLA | O2A-C1-C2 | 5.73 | 122.36 | 108.97 |
| 29 | R | 609 | CLA | CMD-C2D-C1D | 5.72 | 134.79 | 124.71 |
| 44 | H | 101 | RRX | C15-C14-C13 | -5.72 | 119.15 | 127.31 |
| 29 | g | 604 | CLA | O2D-CGD-CBD | 5.72 | 121.43 | 111.27 |
| 29 | n | 611 | CLA | O2A-C1-C2 | 5.72 | 122.34 | 108.97 |
| 29 | r | 608 | CLA | CMD-C2D-C1D | 5.70 | 134.76 | 124.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | N | 611 | CLA | O2D-CGD-CBD | 5.69 | 121.38 | 111.27 |
| 29 | B | 603 | CLA | CMD-C2D-C1D | 5.69 | 134.73 | 124.71 |
| 29 | n | 604 | CLA | CMD-C2D-C1D | 5.68 | 134.72 | 124.71 |
| 29 | b | 617 | CLA | O2A-C1-C2 | 5.68 | 123.56 | 108.64 |
| 29 | a | 405 | CLA | O2A-C1-C2 | 5.68 | 123.55 | 108.64 |
| 46 | Y | 620 | LUT | C21-C26-C25 | 5.67 | 121.58 | 111.42 |
| 35 | B | 620 | C7Z | C11-C10-C9 | -5.67 | 119.22 | 127.31 |
| 47 | y | 622 | XAT | C31-C30-C29 | -5.67 | 119.22 | 127.31 |
| 29 | R | 612 | CLA | CMD-C2D-C1D | 5.67 | 134.71 | 124.71 |
| 29 | r | 609 | CLA | CMD-C2D-C1D | 5.67 | 134.70 | 124.71 |
| 47 | R | 621 | XAT | C7-C8-C9 | -5.66 | 116.74 | 125.53 |
| 29 | s | 604 | CLA | CMD-C2D-C1D | 5.66 | 134.69 | 124.71 |
| 29 | S | 604 | CLA | CMD-C2D-C1D | 5.66 | 134.69 | 124.71 |
| 29 | g | 613 | CLA | CMD-C2D-C1D | 5.64 | 134.66 | 124.71 |
| 29 | s | 614 | CLA | CMD-C2D-C1D | 5.64 | 134.66 | 124.71 |
| 29 | B | 613 | CLA | O2D-CGD-CBD | 5.64 | 121.29 | 111.27 |
| 29 | n | 611 | CLA | O2D-CGD-CBD | 5.64 | 121.29 | 111.27 |
| 29 | c | 503 | CLA | O2D-CGD-CBD | 5.64 | 121.28 | 111.27 |
| 46 | G | 621 | LUT | C21-C26-C25 | 5.64 | 121.51 | 111.42 |
| 29 | g | 614 | CLA | CMD-C2D-C1D | 5.63 | 134.64 | 124.71 |
| 29 | c | 501 | CLA | CMD-C2D-C1D | 5.62 | 134.63 | 124.71 |
| 29 | C | 502 | CLA | O2A-C1-C2 | 5.62 | 123.41 | 108.64 |
| 29 | r | 613 | CLA | CMD-C2D-C1D | 5.61 | 134.61 | 124.71 |
| 29 | R | 608 | CLA | CMD-C2D-C1D | 5.61 | 134.59 | 124.71 |
| 29 | n | 614 | CLA | O2A-C1-C2 | 5.60 | 122.08 | 108.97 |
| 29 | A | 407 | CLA | O2A-C1-C2 | 5.60 | 122.07 | 108.97 |
| 29 | Y | 603 | CLA | O2D-CGD-CBD | 5.60 | 121.22 | 111.27 |
| 29 | b | 608 | CLA | O2A-C1-C2 | 5.60 | 123.35 | 108.64 |
| 29 | s | 610 | CLA | CMD-C2D-C1D | 5.60 | 134.58 | 124.71 |
| 29 | g | 604 | CLA | CMD-C2D-C1D | 5.59 | 134.57 | 124.71 |
| 29 | N | 604 | CLA | O2D-CGD-CBD | 5.59 | 121.21 | 111.27 |
| 29 | r | 610 | CLA | CMD-C2D-C1D | 5.59 | 134.57 | 124.71 |
| 29 | R | 603 | CLA | CMD-C2D-C1D | 5.58 | 134.56 | 124.71 |
| 29 | B | 607 | CLA | O2D-CGD-CBD | 5.58 | 121.19 | 111.27 |
| 29 | g | 603 | CLA | CMD-C2D-C1D | 5.58 | 134.55 | 124.71 |
| 29 | G | 604 | CLA | CMD-C2D-C1D | 5.58 | 134.54 | 124.71 |
| 29 | a | 406 | CLA | CMD-C2D-C1D | 5.57 | 134.54 | 124.71 |
| 29 | G | 613 | CLA | CMD-C2D-C1D | 5.57 | 134.53 | 124.71 |
| 47 | N | 622 | XAT | C31-C30-C29 | -5.57 | 119.36 | 127.31 |
| 29 | C | 509 | CLA | CMD-C2D-C1D | 5.57 | 134.53 | 124.71 |
| 29 | R | 602 | CLA | CMD-C2D-C1D | 5.57 | 134.53 | 124.71 |
| 29 | b | 613 | CLA | O2D-CGD-CBD | 5.57 | 121.16 | 111.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | Y | 608 | CLA | CMD-C2D-C1D | 5.56 | 134.52 | 124.71 |
| 29 | R | 613 | CLA | O2D-CGD-CBD | 5.56 | 121.15 | 111.27 |
| 29 | c | 502 | CLA | CMD-C2D-C1D | 5.56 | 134.50 | 124.71 |
| 46 | y | 621 | LUT | C21-C26-C25 | 5.55 | 121.37 | 111.42 |
| 29 | r | 603 | CLA | CMD-C2D-C1D | 5.55 | 134.50 | 124.71 |
| 29 | B | 608 | CLA | O2A-C1-C2 | 5.55 | 123.23 | 108.64 |
| 29 | y | 604 | CLA | CMD-C2D-C1D | 5.55 | 134.49 | 124.71 |
| 29 | c | 509 | CLA | O2D-CGD-CBD | 5.55 | 121.13 | 111.27 |
| 29 | R | 604 | CLA | CMD-C2D-C1D | 5.54 | 134.48 | 124.71 |
| 29 | B | 605 | CLA | CMD-C2D-C1D | 5.54 | 134.48 | 124.71 |
| 29 | B | 607 | CLA | CMD-C2D-C1D | 5.54 | 134.48 | 124.71 |
| 29 | C | 513 | CLA | CMD-C2D-C1D | 5.54 | 134.48 | 124.71 |
| 29 | G | 604 | CLA | O2D-CGD-CBD | 5.53 | 121.10 | 111.27 |
| 46 | g | 621 | LUT | C21-C26-C25 | 5.53 | 121.33 | 111.42 |
| 29 | b | 603 | CLA | CMD-C2D-C1D | 5.53 | 134.46 | 124.71 |
| 46 | s | 621 | LUT | C21-C26-C25 | 5.53 | 121.33 | 111.42 |
| 29 | Y | 604 | CLA | CMD-C2D-C1D | 5.53 | 134.46 | 124.71 |
| 29 | g | 610 | CLA | CMD-C2D-C1D | 5.53 | 134.45 | 124.71 |
| 29 | N | 604 | CLA | CMD-C2D-C1D | 5.52 | 134.45 | 124.71 |
| 29 | b | 607 | CLA | O2D-CGD-CBD | 5.52 | 121.08 | 111.27 |
| 29 | R | 613 | CLA | CMD-C2D-C1D | 5.52 | 134.45 | 124.71 |
| 29 | c | 509 | CLA | CMD-C2D-C1D | 5.52 | 134.44 | 124.71 |
| 29 | Y | 614 | CLA | CMD-C2D-C1D | 5.52 | 134.44 | 124.71 |
| 29 | S | 610 | CLA | CMD-C2D-C1D | 5.52 | 134.44 | 124.71 |
| 29 | r | 612 | CLA | CMD-C2D-C1D | 5.52 | 134.44 | 124.71 |
| 29 | a | 407 | CLA | O2A-C1-C2 | 5.52 | 121.88 | 108.97 |
| 29 | n | 604 | CLA | O2D-CGD-CBD | 5.52 | 121.07 | 111.27 |
| 44 | h | 101 | RRX | C15-C14-C13 | -5.52 | 119.44 | 127.31 |
| 29 | r | 602 | CLA | CMD-C2D-C1D | 5.51 | 134.43 | 124.71 |
| 29 | A | 406 | CLA | CMD-C2D-C1D | 5.51 | 134.43 | 124.71 |
| 29 | y | 608 | CLA | CMD-C2D-C1D | 5.51 | 134.42 | 124.71 |
| 29 | r | 611 | CLA | CMD-C2D-C1D | 5.51 | 134.42 | 124.71 |
| 29 | c | 507 | CLA | CMD-C2D-C1D | 5.51 | 134.42 | 124.71 |
| 29 | b | 615 | CLA | O2A-C1-C2 | 5.50 | 123.10 | 108.64 |
| 29 | g | 602 | CLA | O2A-C1-C2 | 5.50 | 123.09 | 108.64 |
| 29 | A | 405 | CLA | CMD-C2D-C1D | 5.50 | 134.40 | 124.71 |
| 29 | g | 602 | CLA | O2D-CGD-CBD | 5.50 | 121.03 | 111.27 |
| 29 | d | 403 | CLA | O2D-CGD-CBD | 5.49 | 121.03 | 111.27 |
| 29 | C | 506 | CLA | CMD-C2D-C1D | 5.49 | 134.39 | 124.71 |
| 29 | r | 609 | CLA | O2A-C1-C2 | 5.49 | 123.07 | 108.64 |
| 29 | N | 604 | CLA | O2A-C1-C2 | 5.49 | 123.06 | 108.64 |
| 29 | B | 615 | CLA | O2A-C1-C2 | 5.48 | 123.04 | 108.64 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | D | 402 | CLA | O2A-C1-C2 | 5.47 | 123.02 | 108.64 |
| 29 | n | 603 | CLA | O2A-C1-C2 | 5.47 | 123.02 | 108.64 |
| 29 | G | 610 | CLA | CMD-C2D-C1D | 5.47 | 134.35 | 124.71 |
| 29 | G | 602 | CLA | O2A-C1-C2 | 5.47 | 123.01 | 108.64 |
| 29 | G | 602 | CLA | CMD-C2D-C1D | 5.47 | 134.35 | 124.71 |
| 46 | n | 621 | LUT | C21-C26-C25 | 5.47 | 121.21 | 111.42 |
| 47 | Y | 622 | XAT | C15-C14-C13 | -5.47 | 119.51 | 127.31 |
| 46 | Y | 621 | LUT | C21-C26-C25 | 5.46 | 121.20 | 111.42 |
| 29 | B | 617 | CLA | O2A-C1-C2 | 5.46 | 122.98 | 108.64 |
| 29 | b | 607 | CLA | CMD-C2D-C1D | 5.46 | 134.33 | 124.71 |
| 29 | C | 503 | CLA | O2D-CGD-CBD | 5.46 | 120.97 | 111.27 |
| 35 | b | 620 | C7Z | C11-C10-C9 | -5.46 | 119.52 | 127.31 |
| 29 | y | 614 | CLA | CMD-C2D-C1D | 5.46 | 134.33 | 124.71 |
| 29 | n | 612 | CLA | CMD-C2D-C1D | 5.46 | 134.33 | 124.71 |
| 29 | S | 609 | CLA | CMD-C2D-C1D | 5.46 | 134.33 | 124.71 |
| 29 | Y | 613 | CLA | CMD-C2D-C1D | 5.45 | 134.33 | 124.71 |
| 29 | n | 604 | CLA | O2A-C1-C2 | 5.45 | 122.97 | 108.64 |
| 29 | R | 610 | CLA | CMD-C2D-C1D | 5.45 | 134.32 | 124.71 |
| 29 | S | 613 | CLA | CMD-C2D-C1D | 5.45 | 134.31 | 124.71 |
| 29 | G | 603 | CLA | CMD-C2D-C1D | 5.45 | 134.31 | 124.71 |
| 29 | c | 506 | CLA | CMD-C2D-C1D | 5.45 | 134.31 | 124.71 |
| 29 | s | 613 | CLA | CMD-C2D-C1D | 5.45 | 134.31 | 124.71 |
| 29 | C | 507 | CLA | CMD-C2D-C1D | 5.44 | 134.30 | 124.71 |
| 29 | R | 604 | CLA | O2D-CGD-CBD | 5.44 | 120.94 | 111.27 |
| 29 | y | 613 | CLA | CMD-C2D-C1D | 5.44 | 134.30 | 124.71 |
| 29 | C | 509 | CLA | O2D-CGD-CBD | 5.44 | 120.93 | 111.27 |
| 29 | G | 611 | CLA | O2D-CGD-CBD | 5.43 | 120.92 | 111.27 |
| 29 | b | 603 | CLA | O2A-C1-C2 | 5.43 | 122.91 | 108.64 |
| 29 | G | 610 | CLA | O2A-C1-C2 | 5.43 | 122.90 | 108.64 |
| 29 | A | 410 | CLA | O2D-CGD-CBD | 5.43 | 120.91 | 111.27 |
| 29 | N | 603 | CLA | O2D-CGD-CBD | 5.43 | 120.91 | 111.27 |
| 29 | n | 603 | CLA | O2D-CGD-CBD | 5.43 | 120.91 | 111.27 |
| 29 | R | 609 | CLA | O2A-C1-C2 | 5.42 | 122.89 | 108.64 |
| 29 | B | 614 | CLA | CMD-C2D-C1D | 5.42 | 134.27 | 124.71 |
| 29 | B | 603 | CLA | O2A-C1-C2 | 5.42 | 122.89 | 108.64 |
| 29 | Y | 612 | CLA | O2D-CGD-CBD | 5.42 | 120.90 | 111.27 |
| 29 | d | 402 | CLA | O2A-C1-C2 | 5.42 | 122.88 | 108.64 |
| 29 | s | 617 | CLA | CMD-C2D-C1D | 5.42 | 134.26 | 124.71 |
| 29 | b | 605 | CLA | CMD-C2D-C1D | 5.41 | 134.26 | 124.71 |
| 29 | a | 410 | CLA | O2D-CGD-CBD | 5.41 | 120.89 | 111.27 |
| 29 | C | 504 | CLA | CMD-C2D-C1D | 5.41 | 134.25 | 124.71 |
| 29 | a | 405 | CLA | CMD-C2D-C1D | 5.41 | 134.24 | 124.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | b | 616 | CLA | CMD-C2D-C1D | 5.41 | 134.24 | 124.71 |
| 29 | y | 603 | CLA | CMD-C2D-C1D | 5.41 | 134.24 | 124.71 |
| 29 | Y | 603 | CLA | CMD-C2D-C1D | 5.41 | 134.24 | 124.71 |
| 29 | g | 610 | CLA | O2A-C1-C2 | 5.40 | 122.84 | 108.64 |
| 46 | r | 620 | LUT | C15-C14-C13 | -5.40 | 119.60 | 127.31 |
| 29 | g | 604 | CLA | O2A-C1-C2 | 5.40 | 121.59 | 108.97 |
| 29 | y | 602 | CLA | O2D-CGD-CBD | 5.39 | 120.85 | 111.27 |
| 29 | b | 614 | CLA | CMD-C2D-C1D | 5.39 | 134.22 | 124.71 |
| 29 | r | 604 | CLA | CMD-C2D-C1D | 5.39 | 134.22 | 124.71 |
| 29 | G | 611 | CLA | CMD-C2D-C1D | 5.39 | 134.21 | 124.71 |
| 46 | r | 620 | LUT | C21-C26-C27 | 5.39 | 119.51 | 112.70 |
| 29 | g | 614 | CLA | O2A-C1-C2 | 5.38 | 121.56 | 108.97 |
| 29 | B | 616 | CLA | CMD-C2D-C1D | 5.38 | 134.19 | 124.71 |
| 29 | n | 602 | CLA | CMD-C2D-C1D | 5.38 | 134.19 | 124.71 |
| 29 | b | 611 | CLA | O2D-CGD-CBD | 5.38 | 120.82 | 111.27 |
| 29 | C | 505 | CLA | O2A-C1-C2 | 5.38 | 122.77 | 108.64 |
| 29 | C | 504 | CLA | O2D-CGD-CBD | 5.38 | 120.82 | 111.27 |
| 46 | r | 620 | LUT | C35-C34-C33 | -5.37 | 119.64 | 127.31 |
| 29 | y | 610 | CLA | CMD-C2D-C1D | 5.37 | 134.18 | 124.71 |
| 29 | C | 513 | CLA | O2D-CGD-CBD | 5.37 | 120.81 | 111.27 |
| 29 | D | 402 | CLA | CMD-C2D-C1D | 5.37 | 134.18 | 124.71 |
| 46 | N | 621 | LUT | C21-C26-C25 | 5.37 | 121.04 | 111.42 |
| 29 | N | 603 | CLA | CMD-C2D-C1D | 5.37 | 134.17 | 124.71 |
| 46 | S | 620 | LUT | C21-C26-C27 | 5.37 | 119.48 | 112.70 |
| 29 | N | 610 | CLA | CMD-C2D-C1D | 5.37 | 134.17 | 124.71 |
| 29 | C | 510 | CLA | O2D-CGD-CBD | 5.37 | 120.80 | 111.27 |
| 29 | g | 611 | CLA | O2D-CGD-CBD | 5.36 | 120.80 | 111.27 |
| 47 | g | 622 | XAT | C31-C30-C29 | -5.36 | 119.66 | 127.31 |
| 29 | y | 612 | CLA | O2D-CGD-CBD | 5.36 | 120.80 | 111.27 |
| 46 | R | 620 | LUT | C15-C14-C13 | -5.36 | 119.66 | 127.31 |
| 29 | b | 611 | CLA | CMD-C2D-C1D | 5.36 | 134.16 | 124.71 |
| 29 | R | 612 | CLA | O2D-CGD-CBD | 5.36 | 120.78 | 111.27 |
| 29 | B | 615 | CLA | CMD-C2D-C1D | 5.35 | 134.15 | 124.71 |
| 29 | N | 614 | CLA | CMD-C2D-C1D | 5.35 | 134.14 | 124.71 |
| 29 | n | 614 | CLA | CMD-C2D-C1D | 5.35 | 134.14 | 124.71 |
| 29 | D | 403 | CLA | O2A-C1-C2 | 5.35 | 122.69 | 108.64 |
| 29 | s | 602 | CLA | O2A-C1-C2 | 5.35 | 122.69 | 108.64 |
| 29 | s | 605 | CLA | O2A-C1-C2 | 5.35 | 122.69 | 108.64 |
| 29 | C | 505 | CLA | O2D-CGD-CBD | 5.35 | 120.77 | 111.27 |
| 29 | R | 610 | CLA | O2A-C1-C2 | 5.35 | 122.69 | 108.64 |
| 29 | a | 407 | CLA | CMD-C2D-C1D | 5.35 | 134.13 | 124.71 |
| 29 | g | 611 | CLA | CMD-C2D-C1D | 5.35 | 134.13 | 124.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | y | 602 | CLA | CMD-C2D-C1D | 5.34 | 134.13 | 124.71 |
| 29 | Y | 608 | CLA | O2A-C1-C2 | 5.34 | 122.68 | 108.64 |
| 29 | b | 610 | CLA | CMD-C2D-C1D | 5.34 | 134.12 | 124.71 |
| 29 | b | 608 | CLA | CMD-C2D-C1D | 5.34 | 134.12 | 124.71 |
| 29 | n | 610 | CLA | CMD-C2D-C1D | 5.34 | 134.12 | 124.71 |
| 29 | n | 611 | CLA | CMD-C2D-C1D | 5.34 | 134.12 | 124.71 |
| 47 | N | 622 | XAT | C15-C14-C13 | -5.34 | 119.70 | 127.31 |
| 29 | C | 510 | CLA | O2A-C1-C2 | 5.33 | 122.65 | 108.64 |
| 29 | g | 612 | CLA | O2D-CGD-CBD | 5.33 | 120.75 | 111.27 |
| 29 | y | 611 | CLA | O2D-CGD-CBD | 5.33 | 120.74 | 111.27 |
| 29 | D | 403 | CLA | O2D-CGD-CBD | 5.32 | 120.73 | 111.27 |
| 29 | c | 510 | CLA | O2D-CGD-CBD | 5.32 | 120.73 | 111.27 |
| 29 | b | 606 | CLA | O2D-CGD-CBD | 5.32 | 120.73 | 111.27 |
| 29 | s | 605 | CLA | CMD-C2D-C1D | 5.32 | 134.09 | 124.71 |
| 29 | Y | 602 | CLA | O2D-CGD-CBD | 5.32 | 120.72 | 111.27 |
| 29 | n | 610 | CLA | O2A-C1-C2 | 5.32 | 122.62 | 108.64 |
| 29 | G | 614 | CLA | O2A-C1-C2 | 5.31 | 121.40 | 108.97 |
| 46 | g | 620 | LUT | C21-C26-C25 | 5.31 | 120.94 | 111.42 |
| 29 | g | 603 | CLA | O2D-CGD-CBD | 5.31 | 120.71 | 111.27 |
| 29 | c | 513 | CLA | O2D-CGD-CBD | 5.31 | 120.70 | 111.27 |
| 29 | R | 611 | CLA | CMD-C2D-C1D | 5.31 | 134.06 | 124.71 |
| 29 | S | 611 | CLA | CMD-C2D-C1D | 5.31 | 134.06 | 124.71 |
| 29 | C | 511 | CLA | O2D-CGD-CBD | 5.30 | 120.69 | 111.27 |
| 29 | G | 602 | CLA | O2D-CGD-CBD | 5.30 | 120.69 | 111.27 |
| 29 | N | 602 | CLA | O2D-CGD-CBD | 5.30 | 120.68 | 111.27 |
| 29 | B | 606 | CLA | O2D-CGD-CBD | 5.30 | 120.68 | 111.27 |
| 47 | n | 622 | XAT | C15-C14-C13 | -5.30 | 119.75 | 127.31 |
| 29 | B | 610 | CLA | CMD-C2D-C1D | 5.30 | 134.04 | 124.71 |
| 29 | c | 507 | CLA | O2D-CGD-CBD | 5.29 | 120.68 | 111.27 |
| 29 | C | 511 | CLA | O2A-C1-C2 | 5.29 | 122.55 | 108.64 |
| 29 | B | 611 | CLA | O2D-CGD-CBD | 5.29 | 120.67 | 111.27 |
| 29 | c | 504 | CLA | CMD-C2D-C1D | 5.29 | 134.04 | 124.71 |
| 29 | n | 603 | CLA | CMD-C2D-C1D | 5.29 | 134.03 | 124.71 |
| 29 | N | 614 | CLA | O2D-CGD-CBD | 5.29 | 120.67 | 111.27 |
| 29 | N | 613 | CLA | CMD-C2D-C1D | 5.28 | 134.03 | 124.71 |
| 29 | d | 402 | CLA | CMD-C2D-C1D | 5.28 | 134.03 | 124.71 |
| 29 | b | 610 | CLA | O2D-CGD-CBD | 5.28 | 120.66 | 111.27 |
| 29 | r | 604 | CLA | O2D-CGD-CBD | 5.28 | 120.66 | 111.27 |
| 29 | a | 410 | CLA | CMD-C2D-C1D | 5.28 | 134.01 | 124.71 |
| 29 | b | 615 | CLA | CMD-C2D-C1D | 5.28 | 134.01 | 124.71 |
| 29 | N | 613 | CLA | O2A-C1-C2 | 5.27 | 122.49 | 108.64 |
| 29 | B | 608 | CLA | CMD-C2D-C1D | 5.27 | 134.00 | 124.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 511 | CLA | O2A-C1-C2 | 5.27 | 122.48 | 108.64 |
| 29 | S | 610 | CLA | O2A-C1-C2 | 5.27 | 122.48 | 108.64 |
| 29 | B | 611 | CLA | CMD-C2D-C1D | 5.27 | 134.00 | 124.71 |
| 46 | N | 620 | LUT | C21-C26-C25 | 5.27 | 120.85 | 111.42 |
| 29 | s | 614 | CLA | O2D-CGD-CBD | 5.26 | 120.62 | 111.27 |
| 29 | y | 608 | CLA | O2A-C1-C2 | 5.26 | 122.47 | 108.64 |
| 47 | G | 622 | XAT | C31-C30-C29 | -5.26 | 119.80 | 127.31 |
| 29 | B | 613 | CLA | CMD-C2D-C1D | 5.25 | 133.97 | 124.71 |
| 29 | n | 613 | CLA | CMD-C2D-C1D | 5.25 | 133.97 | 124.71 |
| 29 | s | 612 | CLA | CMD-C2D-C1D | 5.25 | 133.97 | 124.71 |
| 29 | n | 612 | CLA | O2D-CGD-CBD | 5.25 | 120.60 | 111.27 |
| 46 | s | 620 | LUT | C21-C26-C25 | 5.25 | 120.82 | 111.42 |
| 29 | r | 610 | CLA | O2A-C1-C2 | 5.25 | 122.43 | 108.64 |
| 29 | N | 611 | CLA | CMD-C2D-C1D | 5.25 | 133.96 | 124.71 |
| 29 | B | 602 | CLA | O2D-CGD-CBD | 5.25 | 120.59 | 111.27 |
| 29 | Y | 610 | CLA | CMD-C2D-C1D | 5.25 | 133.96 | 124.71 |
| 29 | b | 611 | CLA | O2A-C1-C2 | 5.25 | 122.42 | 108.64 |
| 29 | b | 610 | CLA | O2A-C1-C2 | 5.24 | 122.42 | 108.64 |
| 29 | g | 602 | CLA | CMD-C2D-C1D | 5.24 | 133.95 | 124.71 |
| 29 | n | 614 | CLA | O2D-CGD-CBD | 5.24 | 120.58 | 111.27 |
| 29 | c | 513 | CLA | CMD-C2D-C1D | 5.23 | 133.94 | 124.71 |
| 29 | g | 612 | CLA | CMD-C2D-C1D | 5.23 | 133.94 | 124.71 |
| 29 | C | 512 | CLA | O2A-C1-C2 | 5.23 | 122.39 | 108.64 |
| 29 | Y | 610 | CLA | O2D-CGD-CBD | 5.23 | 120.57 | 111.27 |
| 29 | G | 612 | CLA | O2D-CGD-CBD | 5.23 | 120.56 | 111.27 |
| 29 | n | 602 | CLA | O2D-CGD-CBD | 5.23 | 120.56 | 111.27 |
| 29 | b | 602 | CLA | O2D-CGD-CBD | 5.23 | 120.56 | 111.27 |
| 29 | s | 609 | CLA | CMD-C2D-C1D | 5.23 | 133.93 | 124.71 |
| 29 | c | 501 | CLA | O2A-C1-C2 | 5.23 | 122.38 | 108.64 |
| 29 | s | 612 | CLA | O2D-CGD-CBD | 5.23 | 120.55 | 111.27 |
| 29 | b | 613 | CLA | CMD-C2D-C1D | 5.22 | 133.91 | 124.71 |
| 29 | B | 610 | CLA | O2A-C1-C2 | 5.22 | 122.35 | 108.64 |
| 29 | s | 602 | CLA | CMD-C2D-C1D | 5.22 | 133.91 | 124.71 |
| 29 | c | 510 | CLA | O2A-C1-C2 | 5.22 | 122.35 | 108.64 |
| 29 | G | 603 | CLA | O2D-CGD-CBD | 5.22 | 120.54 | 111.27 |
| 29 | b | 612 | CLA | O2A-C1-C2 | 5.21 | 122.34 | 108.64 |
| 29 | d | 403 | CLA | O2A-C1-C2 | 5.21 | 122.34 | 108.64 |
| 29 | s | 611 | CLA | CMD-C2D-C1D | 5.21 | 133.90 | 124.71 |
| 29 | r | 612 | CLA | O2D-CGD-CBD | 5.21 | 120.52 | 111.27 |
| 29 | b | 608 | CLA | O2D-CGD-CBD | 5.21 | 120.52 | 111.27 |
| 29 | R | 610 | CLA | O2D-CGD-CBD | 5.21 | 120.52 | 111.27 |
| 29 | N | 602 | CLA | CMD-C2D-C1D | 5.20 | 133.89 | 124.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|------|-------------|----------|
| 29 | C | 501 | CLA | O2A-C1-C2 | 5.20 | 122.31 | 108.64 |
| 29 | B | 608 | CLA | O2D-CGD-CBD | 5.20 | 120.51 | 111.27 |
| 29 | b | 604 | CLA | CMD-C2D-C1D | 5.20 | 133.88 | 124.71 |
| 29 | r | 608 | CLA | O2A-C1-C2 | 5.20 | 122.31 | 108.64 |
| 29 | R | 602 | CLA | O2A-C1-C2 | 5.20 | 122.30 | 108.64 |
| 29 | r | 602 | CLA | O2D-CGD-CBD | 5.20 | 120.50 | 111.27 |
| 29 | B | 610 | CLA | O2D-CGD-CBD | 5.20 | 120.50 | 111.27 |
| 29 | C | 507 | CLA | O2D-CGD-CBD | 5.20 | 120.50 | 111.27 |
| 29 | c | 508 | CLA | CMD-C2D-C1D | 5.20 | 133.87 | 124.71 |
| 29 | R | 603 | CLA | O2D-CGD-CBD | 5.19 | 120.49 | 111.27 |
| 29 | b | 603 | CLA | O2D-CGD-CBD | 5.19 | 120.49 | 111.27 |
| 29 | c | 505 | CLA | O2D-CGD-CBD | 5.18 | 120.48 | 111.27 |
| 29 | y | 611 | CLA | CMD-C2D-C1D | 5.18 | 133.85 | 124.71 |
| 29 | c | 504 | CLA | O2D-CGD-CBD | 5.18 | 120.48 | 111.27 |
| 29 | c | 511 | CLA | O2D-CGD-CBD | 5.18 | 120.48 | 111.27 |
| 29 | S | 602 | CLA | O2A-C1-C2 | 5.18 | 122.25 | 108.64 |
| 29 | S | 617 | CLA | CMD-C2D-C1D | 5.18 | 133.84 | 124.71 |
| 29 | c | 512 | CLA | O2A-C1-C2 | 5.18 | 122.25 | 108.64 |
| 46 | N | 621 | LUT | C21-C26-C27 | 5.18 | 119.25 | 112.70 |
| 29 | Y | 614 | CLA | O2D-CGD-CBD | 5.18 | 120.47 | 111.27 |
| 29 | N | 614 | CLA | O2A-C1-C2 | 5.17 | 121.07 | 108.97 |
| 29 | B | 605 | CLA | O2D-CGD-CBD | 5.17 | 120.45 | 111.27 |
| 29 | g | 613 | CLA | O2A-C1-C2 | 5.17 | 122.22 | 108.64 |
| 29 | B | 614 | CLA | O2A-C1-C2 | 5.17 | 122.22 | 108.64 |
| 29 | S | 602 | CLA | CMD-C2D-C1D | 5.16 | 133.81 | 124.71 |
| 29 | C | 502 | CLA | CMD-C2D-C1D | 5.16 | 133.81 | 124.71 |
| 29 | c | 505 | CLA | O2A-C1-C2 | 5.16 | 122.19 | 108.64 |
| 29 | y | 614 | CLA | O2D-CGD-CBD | 5.16 | 120.43 | 111.27 |
| 29 | A | 410 | CLA | CMD-C2D-C1D | 5.16 | 133.80 | 124.71 |
| 29 | S | 617 | CLA | O2D-CGD-CBD | 5.15 | 120.43 | 111.27 |
| 29 | D | 403 | CLA | CMD-C2D-C1D | 5.15 | 133.79 | 124.71 |
| 29 | c | 503 | CLA | O2A-C1-C2 | 5.15 | 122.17 | 108.64 |
| 29 | G | 612 | CLA | CMD-C2D-C1D | 5.14 | 133.78 | 124.71 |
| 29 | B | 604 | CLA | CMD-C2D-C1D | 5.14 | 133.78 | 124.71 |
| 29 | G | 610 | CLA | O2D-CGD-CBD | 5.14 | 120.41 | 111.27 |
| 29 | c | 508 | CLA | O2A-C1-C2 | 5.14 | 122.14 | 108.64 |
| 29 | B | 616 | CLA | O2D-CGD-CBD | 5.14 | 120.39 | 111.27 |
| 29 | B | 611 | CLA | O2A-C1-C2 | 5.13 | 122.13 | 108.64 |
| 29 | y | 612 | CLA | CMD-C2D-C1D | 5.13 | 133.76 | 124.71 |
| 29 | S | 609 | CLA | O2D-CGD-CBD | 5.13 | 120.39 | 111.27 |
| 29 | G | 613 | CLA | O2A-C1-C2 | 5.13 | 122.11 | 108.64 |
| 29 | S | 604 | CLA | O2D-CGD-CBD | 5.13 | 120.38 | 111.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | Y | 610 | CLA | O2A-C1-C2 | 5.12 | 122.10 | 108.64 |
| 29 | C | 505 | CLA | CMD-C2D-C1D | 5.12 | 133.74 | 124.71 |
| 29 | R | 608 | CLA | O2A-C1-C2 | 5.12 | 122.08 | 108.64 |
| 29 | g | 614 | CLA | O2D-CGD-CBD | 5.12 | 120.36 | 111.27 |
| 29 | Y | 602 | CLA | CMD-C2D-C1D | 5.12 | 133.73 | 124.71 |
| 29 | C | 508 | CLA | O2A-C1-C2 | 5.12 | 122.08 | 108.64 |
| 29 | a | 410 | CLA | O2A-C1-C2 | 5.11 | 122.07 | 108.64 |
| 47 | g | 622 | XAT | C15-C14-C13 | -5.11 | 120.02 | 127.31 |
| 29 | S | 617 | CLA | O2A-C1-C2 | 5.11 | 122.06 | 108.64 |
| 29 | A | 410 | CLA | O2A-C1-C2 | 5.11 | 122.06 | 108.64 |
| 29 | S | 613 | CLA | O2A-C1-C2 | 5.11 | 122.06 | 108.64 |
| 29 | r | 612 | CLA | O2A-C1-C2 | 5.11 | 122.06 | 108.64 |
| 29 | Y | 612 | CLA | CMD-C2D-C1D | 5.11 | 133.71 | 124.71 |
| 46 | r | 620 | LUT | C31-C30-C29 | -5.11 | 120.02 | 127.31 |
| 29 | B | 617 | CLA | O2D-CGD-CBD | 5.10 | 120.33 | 111.27 |
| 29 | b | 605 | CLA | O2D-CGD-CBD | 5.10 | 120.33 | 111.27 |
| 46 | S | 621 | LUT | C21-C26-C25 | 5.10 | 120.55 | 111.42 |
| 29 | y | 610 | CLA | O2A-C1-C2 | 5.10 | 122.04 | 108.64 |
| 29 | b | 606 | CLA | O2A-C1-C2 | 5.10 | 122.03 | 108.64 |
| 29 | C | 508 | CLA | CMD-C2D-C1D | 5.09 | 133.69 | 124.71 |
| 29 | S | 604 | CLA | O2A-C1-C2 | 5.09 | 122.02 | 108.64 |
| 29 | b | 614 | CLA | O2A-C1-C2 | 5.09 | 122.01 | 108.64 |
| 29 | b | 616 | CLA | O2D-CGD-CBD | 5.09 | 120.31 | 111.27 |
| 29 | N | 602 | CLA | O2A-C1-C2 | 5.09 | 122.01 | 108.64 |
| 29 | s | 611 | CLA | O2D-CGD-CBD | 5.09 | 120.31 | 111.27 |
| 29 | B | 609 | CLA | CMD-C2D-C1D | 5.09 | 133.68 | 124.71 |
| 29 | S | 605 | CLA | CMD-C2D-C1D | 5.08 | 133.67 | 124.71 |
| 29 | S | 612 | CLA | CMD-C2D-C1D | 5.08 | 133.67 | 124.71 |
| 29 | c | 505 | CLA | CMD-C2D-C1D | 5.08 | 133.67 | 124.71 |
| 46 | G | 621 | LUT | C21-C26-C27 | 5.08 | 119.12 | 112.70 |
| 29 | A | 407 | CLA | CMD-C2D-C1D | 5.08 | 133.66 | 124.71 |
| 29 | S | 614 | CLA | O2D-CGD-CBD | 5.07 | 120.29 | 111.27 |
| 29 | Y | 613 | CLA | O2A-C1-C2 | 5.07 | 121.96 | 108.64 |
| 46 | R | 620 | LUT | C35-C34-C33 | -5.07 | 120.08 | 127.31 |
| 29 | B | 606 | CLA | O2A-C1-C2 | 5.06 | 121.94 | 108.64 |
| 46 | g | 621 | LUT | C21-C26-C27 | 5.06 | 119.10 | 112.70 |
| 29 | n | 602 | CLA | O2A-C1-C2 | 5.06 | 121.93 | 108.64 |
| 29 | s | 617 | CLA | O2D-CGD-CBD | 5.06 | 120.26 | 111.27 |
| 29 | N | 611 | CLA | O2A-C1-C2 | 5.05 | 120.79 | 108.97 |
| 47 | G | 622 | XAT | C15-C14-C13 | -5.05 | 120.10 | 127.31 |
| 29 | S | 614 | CLA | O2A-C1-C2 | 5.05 | 121.92 | 108.64 |
| 29 | a | 406 | CLA | O2A-C1-C2 | 5.04 | 121.89 | 108.64 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 615 | CLA | O2D-CGD-CBD | 5.04 | 120.22 | 111.27 |
| 29 | s | 613 | CLA | O2A-C1-C2 | 5.04 | 121.87 | 108.64 |
| 29 | S | 611 | CLA | O2D-CGD-CBD | 5.03 | 120.21 | 111.27 |
| 29 | S | 602 | CLA | O2D-CGD-CBD | 5.03 | 120.21 | 111.27 |
| 29 | R | 612 | CLA | O2A-C1-C2 | 5.02 | 121.84 | 108.64 |
| 29 | b | 616 | CLA | O2A-C1-C2 | 5.02 | 121.82 | 108.64 |
| 29 | s | 617 | CLA | O2A-C1-C2 | 5.01 | 121.81 | 108.64 |
| 29 | d | 403 | CLA | CMD-C2D-C1D | 5.01 | 133.54 | 124.71 |
| 29 | N | 612 | CLA | CMD-C2D-C1D | 5.01 | 133.53 | 124.71 |
| 29 | y | 613 | CLA | O2A-C1-C2 | 4.99 | 121.76 | 108.64 |
| 29 | s | 610 | CLA | O2D-CGD-CBD | 4.99 | 120.14 | 111.27 |
| 29 | N | 603 | CLA | O2A-C1-C2 | 4.99 | 121.75 | 108.64 |
| 29 | S | 610 | CLA | O2D-CGD-CBD | 4.99 | 120.14 | 111.27 |
| 29 | S | 612 | CLA | O2D-CGD-CBD | 4.99 | 120.14 | 111.27 |
| 29 | s | 609 | CLA | O2D-CGD-CBD | 4.98 | 120.11 | 111.27 |
| 29 | B | 612 | CLA | CMD-C2D-C1D | 4.98 | 133.49 | 124.71 |
| 29 | c | 507 | CLA | O2A-C1-C2 | 4.98 | 121.72 | 108.64 |
| 29 | C | 502 | CLA | O2D-CGD-CBD | 4.98 | 120.11 | 111.27 |
| 29 | A | 406 | CLA | O2A-C1-C2 | 4.97 | 121.71 | 108.64 |
| 47 | Y | 622 | XAT | C31-C30-C29 | -4.97 | 120.22 | 127.31 |
| 29 | N | 610 | CLA | O2D-CGD-CBD | 4.97 | 120.09 | 111.27 |
| 29 | y | 610 | CLA | O2D-CGD-CBD | 4.96 | 120.09 | 111.27 |
| 35 | b | 620 | C7Z | C15-C14-C13 | -4.96 | 120.24 | 127.31 |
| 46 | G | 620 | LUT | C21-C26-C25 | 4.95 | 120.29 | 111.42 |
| 29 | G | 614 | CLA | O2D-CGD-CBD | 4.95 | 120.06 | 111.27 |
| 29 | R | 609 | CLA | O2D-CGD-CBD | 4.94 | 120.05 | 111.27 |
| 29 | r | 603 | CLA | O2D-CGD-CBD | 4.94 | 120.05 | 111.27 |
| 29 | r | 609 | CLA | O2D-CGD-CBD | 4.94 | 120.05 | 111.27 |
| 29 | b | 604 | CLA | O2D-CGD-CBD | 4.94 | 120.05 | 111.27 |
| 29 | Y | 612 | CLA | O2A-C1-C2 | 4.94 | 121.61 | 108.64 |
| 29 | b | 602 | CLA | O2A-C1-C2 | 4.93 | 121.60 | 108.64 |
| 29 | b | 609 | CLA | CMD-C2D-C1D | 4.93 | 133.40 | 124.71 |
| 29 | s | 603 | CLA | O2D-CGD-CBD | 4.93 | 120.03 | 111.27 |
| 29 | c | 506 | CLA | O2A-C1-C2 | 4.93 | 121.58 | 108.64 |
| 29 | S | 603 | CLA | CMD-C2D-C1D | 4.92 | 133.39 | 124.71 |
| 29 | B | 604 | CLA | O2D-CGD-CBD | 4.92 | 120.01 | 111.27 |
| 29 | C | 507 | CLA | O2A-C1-C2 | 4.92 | 121.56 | 108.64 |
| 29 | Y | 608 | CLA | O2D-CGD-CBD | 4.92 | 120.01 | 111.27 |
| 29 | b | 617 | CLA | O2D-CGD-CBD | 4.91 | 120.00 | 111.27 |
| 29 | D | 402 | CLA | O2D-CGD-CBD | 4.91 | 120.00 | 111.27 |
| 29 | c | 512 | CLA | O2D-CGD-CBD | 4.91 | 120.00 | 111.27 |
| 29 | b | 615 | CLA | O2D-CGD-CBD | 4.91 | 120.00 | 111.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 616 | CLA | O2A-C1-C2 | 4.91 | 121.54 | 108.64 |
| 29 | n | 610 | CLA | O2D-CGD-CBD | 4.91 | 119.99 | 111.27 |
| 29 | d | 402 | CLA | O2D-CGD-CBD | 4.91 | 119.98 | 111.27 |
| 29 | N | 612 | CLA | O2D-CGD-CBD | 4.90 | 119.98 | 111.27 |
| 29 | B | 603 | CLA | O2D-CGD-CBD | 4.90 | 119.98 | 111.27 |
| 29 | b | 612 | CLA | CMD-C2D-C1D | 4.90 | 133.35 | 124.71 |
| 48 | R | 622 | NEX | C38-C25-C24 | 4.90 | 119.79 | 114.28 |
| 29 | B | 609 | CLA | O2A-C1-C2 | 4.89 | 121.50 | 108.64 |
| 29 | G | 613 | CLA | O2D-CGD-CBD | 4.89 | 119.96 | 111.27 |
| 29 | A | 407 | CLA | O2D-CGD-CBD | 4.89 | 119.96 | 111.27 |
| 29 | r | 610 | CLA | O2D-CGD-CBD | 4.89 | 119.96 | 111.27 |
| 29 | s | 602 | CLA | O2D-CGD-CBD | 4.88 | 119.94 | 111.27 |
| 29 | b | 607 | CLA | O2A-C1-C2 | 4.88 | 121.46 | 108.64 |
| 29 | y | 612 | CLA | O2A-C1-C2 | 4.88 | 121.45 | 108.64 |
| 29 | S | 603 | CLA | O2A-C1-C2 | 4.88 | 121.45 | 108.64 |
| 29 | y | 608 | CLA | O2D-CGD-CBD | 4.87 | 119.92 | 111.27 |
| 29 | Y | 604 | CLA | O2D-CGD-CBD | 4.87 | 119.92 | 111.27 |
| 29 | y | 613 | CLA | O2D-CGD-CBD | 4.87 | 119.92 | 111.27 |
| 29 | B | 612 | CLA | O2A-C1-C2 | 4.87 | 121.43 | 108.64 |
| 48 | r | 623 | NEX | C38-C25-C24 | 4.86 | 119.75 | 114.28 |
| 46 | R | 620 | LUT | C11-C10-C9 | -4.86 | 120.37 | 127.31 |
| 29 | s | 603 | CLA | CMD-C2D-C1D | 4.86 | 133.28 | 124.71 |
| 46 | n | 620 | LUT | C21-C26-C25 | 4.86 | 120.12 | 111.42 |
| 29 | B | 612 | CLA | O2D-CGD-CBD | 4.85 | 119.89 | 111.27 |
| 29 | a | 406 | CLA | O2D-CGD-CBD | 4.85 | 119.88 | 111.27 |
| 29 | Y | 604 | CLA | O2A-C1-C2 | 4.85 | 121.37 | 108.64 |
| 29 | r | 602 | CLA | O2A-C1-C2 | 4.85 | 121.37 | 108.64 |
| 47 | y | 622 | XAT | C15-C14-C13 | -4.85 | 120.39 | 127.31 |
| 29 | R | 611 | CLA | O2D-CGD-CBD | 4.84 | 119.87 | 111.27 |
| 29 | s | 603 | CLA | O2A-C1-C2 | 4.84 | 121.35 | 108.64 |
| 29 | b | 612 | CLA | O2D-CGD-CBD | 4.83 | 119.85 | 111.27 |
| 29 | Y | 613 | CLA | O2D-CGD-CBD | 4.83 | 119.85 | 111.27 |
| 39 | n | 624 | LHG | O7-C7-C8 | 4.83 | 121.91 | 111.50 |
| 29 | S | 609 | CLA | O2A-C1-C2 | 4.83 | 121.32 | 108.64 |
| 29 | c | 502 | CLA | C1-C2-C3 | -4.83 | 117.70 | 126.04 |
| 29 | s | 609 | CLA | O2A-C1-C2 | 4.82 | 121.31 | 108.64 |
| 29 | y | 604 | CLA | O2A-C1-C2 | 4.82 | 121.30 | 108.64 |
| 46 | R | 620 | LUT | C21-C26-C27 | 4.82 | 118.79 | 112.70 |
| 29 | N | 613 | CLA | O2D-CGD-CBD | 4.81 | 119.82 | 111.27 |
| 29 | y | 602 | CLA | O2A-C1-C2 | 4.81 | 121.28 | 108.64 |
| 29 | B | 607 | CLA | O2A-C1-C2 | 4.81 | 121.28 | 108.64 |
| 46 | S | 620 | LUT | C21-C26-C25 | 4.81 | 120.03 | 111.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | Y | 611 | CLA | O2A-C1-C2 | 4.81 | 121.26 | 108.64 |
| 29 | S | 611 | CLA | O2A-C1-C2 | 4.80 | 121.26 | 108.64 |
| 29 | r | 608 | CLA | O2D-CGD-CBD | 4.80 | 119.80 | 111.27 |
| 29 | N | 610 | CLA | O2A-C1-C2 | 4.80 | 121.25 | 108.64 |
| 35 | B | 620 | C7Z | C18-C5-C6 | -4.80 | 119.14 | 124.53 |
| 29 | c | 508 | CLA | O2D-CGD-CBD | 4.80 | 119.79 | 111.27 |
| 29 | R | 608 | CLA | O2D-CGD-CBD | 4.79 | 119.79 | 111.27 |
| 29 | b | 614 | CLA | O2D-CGD-CBD | 4.78 | 119.77 | 111.27 |
| 29 | C | 503 | CLA | O2A-C1-C2 | 4.78 | 121.20 | 108.64 |
| 29 | g | 613 | CLA | O2D-CGD-CBD | 4.78 | 119.76 | 111.27 |
| 29 | Y | 611 | CLA | O2D-CGD-CBD | 4.77 | 119.75 | 111.27 |
| 29 | s | 604 | CLA | O2D-CGD-CBD | 4.77 | 119.75 | 111.27 |
| 29 | B | 602 | CLA | O2A-C1-C2 | 4.77 | 121.17 | 108.64 |
| 39 | N | 624 | LHG | O7-C7-C8 | 4.77 | 121.78 | 111.50 |
| 29 | g | 610 | CLA | O2D-CGD-CBD | 4.76 | 119.73 | 111.27 |
| 46 | r | 620 | LUT | C11-C10-C9 | -4.76 | 120.52 | 127.31 |
| 29 | n | 613 | CLA | O2D-CGD-CBD | 4.75 | 119.71 | 111.27 |
| 29 | C | 512 | CLA | O2D-CGD-CBD | 4.75 | 119.71 | 111.27 |
| 29 | a | 407 | CLA | O2D-CGD-CBD | 4.75 | 119.71 | 111.27 |
| 35 | B | 620 | C7Z | C15-C14-C13 | -4.75 | 120.53 | 127.31 |
| 48 | N | 623 | NEX | C17-C1-C6 | -4.75 | 106.22 | 110.47 |
| 29 | s | 611 | CLA | O2A-C1-C2 | 4.75 | 121.11 | 108.64 |
| 29 | b | 613 | CLA | O2A-C1-C2 | 4.74 | 121.09 | 108.64 |
| 42 | D | 405 | PL9 | C7-C3-C4 | 4.73 | 120.72 | 116.88 |
| 46 | S | 621 | LUT | C35-C34-C33 | -4.73 | 120.56 | 127.31 |
| 29 | Y | 614 | CLA | O2A-C1-C2 | 4.73 | 121.07 | 108.64 |
| 29 | C | 508 | CLA | O2D-CGD-CBD | 4.72 | 119.66 | 111.27 |
| 48 | N | 623 | NEX | C2-C1-C6 | 4.71 | 113.79 | 109.21 |
| 29 | Y | 611 | CLA | CMD-C2D-C1D | 4.71 | 133.01 | 124.71 |
| 29 | C | 506 | CLA | O2A-C1-C2 | 4.70 | 120.99 | 108.64 |
| 29 | r | 611 | CLA | O2D-CGD-CBD | 4.69 | 119.60 | 111.27 |
| 48 | s | 623 | NEX | C38-C25-C24 | 4.69 | 119.56 | 114.28 |
| 29 | Y | 602 | CLA | O2A-C1-C2 | 4.69 | 120.95 | 108.64 |
| 29 | b | 617 | CLA | CMD-C2D-C1D | 4.68 | 132.96 | 124.71 |
| 48 | S | 622 | NEX | C38-C25-C24 | 4.68 | 119.54 | 114.28 |
| 48 | g | 623 | NEX | C38-C25-C24 | 4.67 | 119.54 | 114.28 |
| 29 | y | 604 | CLA | O2D-CGD-CBD | 4.67 | 119.57 | 111.27 |
| 29 | C | 509 | CLA | O2A-C1-C2 | 4.67 | 120.91 | 108.64 |
| 29 | y | 611 | CLA | O2A-C1-C2 | 4.66 | 120.89 | 108.64 |
| 47 | N | 622 | XAT | C18-C5-C4 | 4.66 | 119.53 | 114.28 |
| 29 | S | 603 | CLA | O2D-CGD-CBD | 4.66 | 119.55 | 111.27 |
| 48 | s | 623 | NEX | C2-C1-C6 | 4.66 | 113.74 | 109.21 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 48 | n | 623 | NEX | C2-C1-C6 | 4.66 | 113.74 | 109.21 |
| 47 | R | 621 | XAT | C38-C25-C24 | 4.65 | 119.51 | 114.28 |
| 29 | B | 617 | CLA | CMD-C2D-C1D | 4.65 | 132.90 | 124.71 |
| 29 | B | 614 | CLA | O2D-CGD-CBD | 4.64 | 119.51 | 111.27 |
| 48 | Y | 623 | NEX | C2-C1-C6 | 4.63 | 113.71 | 109.21 |
| 29 | b | 609 | CLA | O2A-C1-C2 | 4.63 | 120.80 | 108.64 |
| 47 | N | 622 | XAT | C38-C25-C24 | 4.62 | 119.48 | 114.28 |
| 29 | y | 614 | CLA | O2A-C1-C2 | 4.61 | 120.74 | 108.64 |
| 47 | n | 622 | XAT | C38-C25-C24 | 4.60 | 119.46 | 114.28 |
| 29 | C | 512 | CLA | CMD-C2D-C1D | 4.60 | 132.82 | 124.71 |
| 29 | c | 512 | CLA | CMD-C2D-C1D | 4.59 | 132.80 | 124.71 |
| 47 | n | 622 | XAT | C18-C5-C4 | 4.58 | 119.43 | 114.28 |
| 48 | N | 623 | NEX | C38-C25-C24 | 4.58 | 119.43 | 114.28 |
| 46 | Y | 621 | LUT | C21-C26-C27 | 4.58 | 118.48 | 112.70 |
| 48 | S | 622 | NEX | C17-C1-C6 | -4.57 | 106.38 | 110.47 |
| 47 | G | 622 | XAT | C18-C5-C4 | 4.57 | 119.42 | 114.28 |
| 48 | G | 623 | NEX | C38-C25-C24 | 4.57 | 119.42 | 114.28 |
| 29 | r | 603 | CLA | O2A-C1-C2 | 4.55 | 120.60 | 108.64 |
| 29 | A | 406 | CLA | O2D-CGD-CBD | 4.55 | 119.35 | 111.27 |
| 46 | S | 621 | LUT | C21-C26-C27 | 4.54 | 118.44 | 112.70 |
| 48 | S | 622 | NEX | C2-C1-C6 | 4.54 | 113.62 | 109.21 |
| 29 | B | 604 | CLA | O2A-C1-C2 | 4.53 | 120.54 | 108.64 |
| 46 | s | 621 | LUT | C35-C34-C33 | -4.53 | 120.85 | 127.31 |
| 48 | G | 623 | NEX | C2-C1-C6 | 4.52 | 113.61 | 109.21 |
| 29 | g | 603 | CLA | O2A-C1-C2 | 4.52 | 120.52 | 108.64 |
| 46 | R | 620 | LUT | C31-C30-C29 | -4.52 | 120.86 | 127.31 |
| 46 | y | 621 | LUT | C35-C34-C33 | -4.52 | 120.86 | 127.31 |
| 29 | a | 405 | CLA | O2D-CGD-CBD | 4.51 | 119.29 | 111.27 |
| 29 | G | 603 | CLA | O2A-C1-C2 | 4.51 | 120.50 | 108.64 |
| 46 | G | 620 | LUT | C21-C26-C27 | 4.51 | 118.40 | 112.70 |
| 46 | Y | 620 | LUT | C21-C26-C27 | 4.50 | 118.39 | 112.70 |
| 48 | Y | 623 | NEX | C38-C25-C24 | 4.49 | 119.33 | 114.28 |
| 29 | b | 604 | CLA | O2A-C1-C2 | 4.48 | 120.42 | 108.64 |
| 42 | d | 405 | PL9 | C7-C3-C4 | 4.48 | 120.52 | 116.88 |
| 29 | A | 405 | CLA | O2D-CGD-CBD | 4.47 | 119.21 | 111.27 |
| 47 | y | 622 | XAT | C18-C5-C4 | 4.46 | 119.30 | 114.28 |
| 48 | y | 623 | NEX | C38-C25-C24 | 4.45 | 119.29 | 114.28 |
| 31 | c | 516 | BCR | C33-C5-C6 | -4.43 | 119.56 | 124.53 |
| 29 | B | 613 | CLA | O2A-C1-C2 | 4.42 | 120.26 | 108.64 |
| 31 | C | 516 | BCR | C33-C5-C6 | -4.42 | 119.56 | 124.53 |
| 38 | C | 519 | DGD | O2G-C1B-C2B | 4.42 | 121.03 | 111.50 |
| 48 | n | 623 | NEX | C38-C25-C24 | 4.42 | 119.25 | 114.28 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 46 | S | 620 | LUT | C35-C34-C33 | -4.41 | 121.02 | 127.31 |
| 48 | g | 623 | NEX | C2-C1-C6 | 4.41 | 113.50 | 109.21 |
| 46 | R | 620 | LUT | C7-C8-C9 | -4.39 | 119.59 | 126.23 |
| 39 | D | 408 | LHG | O7-C7-C8 | 4.38 | 120.94 | 111.50 |
| 46 | n | 621 | LUT | C21-C26-C27 | 4.37 | 118.23 | 112.70 |
| 29 | s | 604 | CLA | O2A-C1-C2 | 4.37 | 120.13 | 108.64 |
| 47 | Y | 622 | XAT | C18-C5-C4 | 4.37 | 119.19 | 114.28 |
| 29 | c | 509 | CLA | O2A-C1-C2 | 4.35 | 120.06 | 108.64 |
| 29 | B | 615 | CLA | CAA-C2A-C3A | -4.33 | 100.91 | 112.78 |
| 47 | y | 622 | XAT | C38-C25-C24 | 4.33 | 119.15 | 114.28 |
| 46 | N | 620 | LUT | C21-C26-C27 | 4.33 | 118.17 | 112.70 |
| 39 | d | 408 | LHG | O7-C7-C8 | 4.32 | 120.82 | 111.50 |
| 39 | S | 624 | LHG | O7-C7-C8 | 4.32 | 120.81 | 111.50 |
| 29 | Y | 603 | CLA | O2A-C1-C2 | 4.32 | 119.98 | 108.64 |
| 35 | b | 620 | C7Z | C18-C5-C6 | -4.31 | 119.68 | 124.53 |
| 29 | R | 603 | CLA | O2A-C1-C2 | 4.30 | 119.94 | 108.64 |
| 46 | g | 620 | LUT | C7-C8-C9 | -4.29 | 119.75 | 126.23 |
| 46 | N | 621 | LUT | C22-C23-C24 | -4.29 | 106.86 | 111.74 |
| 46 | y | 620 | LUT | C21-C26-C27 | 4.29 | 118.12 | 112.70 |
| 31 | C | 515 | BCR | C15-C14-C13 | -4.27 | 121.22 | 127.31 |
| 46 | r | 620 | LUT | C7-C8-C9 | -4.27 | 119.78 | 126.23 |
| 47 | g | 622 | XAT | C18-C5-C4 | 4.27 | 119.08 | 114.28 |
| 39 | G | 630 | LHG | O7-C7-C8 | 4.26 | 120.69 | 111.50 |
| 47 | r | 622 | XAT | C38-C25-C24 | 4.26 | 119.08 | 114.28 |
| 46 | g | 621 | LUT | C22-C23-C24 | -4.25 | 106.90 | 111.74 |
| 46 | s | 620 | LUT | C22-C23-C24 | -4.25 | 106.91 | 111.74 |
| 45 | g | 609 | CHL | CHD-C1D-ND | -4.24 | 120.56 | 124.45 |
| 38 | C | 520 | DGD | O2G-C1B-C2B | 4.23 | 120.61 | 111.50 |
| 39 | s | 624 | LHG | O7-C7-C8 | 4.23 | 120.61 | 111.50 |
| 47 | Y | 622 | XAT | C38-C25-C24 | 4.22 | 119.03 | 114.28 |
| 29 | b | 612 | CLA | CAA-C2A-C3A | -4.22 | 101.22 | 112.78 |
| 33 | a | 413 | LMG | O7-C10-C11 | 4.22 | 120.59 | 111.50 |
| 46 | R | 620 | LUT | C21-C26-C25 | 4.22 | 118.97 | 111.42 |
| 38 | c | 519 | DGD | O2G-C1B-C2B | 4.21 | 120.58 | 111.50 |
| 48 | Y | 623 | NEX | C17-C1-C6 | -4.20 | 106.71 | 110.47 |
| 33 | A | 413 | LMG | O7-C10-C11 | 4.20 | 120.55 | 111.50 |
| 38 | C | 523 | DGD | O2G-C1B-C2B | 4.18 | 120.51 | 111.50 |
| 29 | b | 615 | CLA | CAA-C2A-C3A | -4.17 | 101.35 | 112.78 |
| 46 | Y | 620 | LUT | C15-C14-C13 | -4.17 | 121.36 | 127.31 |
| 44 | H | 101 | RRX | C11-C10-C9 | -4.17 | 121.36 | 127.31 |
| 47 | G | 622 | XAT | C38-C25-C24 | 4.16 | 118.96 | 114.28 |
| 38 | c | 520 | DGD | O2G-C1B-C2B | 4.16 | 120.47 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 46 | n | 620 | LUT | C21-C26-C27 | 4.14 | 117.94 | 112.70 |
| 46 | y | 621 | LUT | C7-C8-C9 | -4.14 | 119.97 | 126.23 |
| 47 | n | 622 | XAT | C7-C8-C9 | -4.13 | 119.11 | 125.53 |
| 46 | y | 621 | LUT | C21-C26-C27 | 4.13 | 117.92 | 112.70 |
| 47 | R | 621 | XAT | C18-C5-C4 | 4.13 | 118.92 | 114.28 |
| 48 | y | 623 | NEX | C2-C1-C6 | 4.13 | 113.22 | 109.21 |
| 46 | G | 620 | LUT | C7-C8-C9 | -4.12 | 120.00 | 126.23 |
| 48 | s | 623 | NEX | C17-C1-C6 | -4.12 | 106.78 | 110.47 |
| 33 | h | 102 | LMG | O7-C10-C11 | 4.12 | 120.38 | 111.50 |
| 29 | y | 603 | CLA | O2A-C1-C2 | 4.12 | 119.46 | 108.64 |
| 48 | R | 622 | NEX | C2-C1-C6 | 4.11 | 113.21 | 109.21 |
| 46 | y | 621 | LUT | C22-C23-C24 | -4.11 | 107.06 | 111.74 |
| 47 | g | 622 | XAT | C38-C25-C24 | 4.11 | 118.90 | 114.28 |
| 46 | s | 620 | LUT | C35-C34-C33 | -4.11 | 121.45 | 127.31 |
| 39 | g | 624 | LHG | O7-C7-C8 | 4.10 | 120.34 | 111.50 |
| 46 | Y | 620 | LUT | C22-C23-C24 | -4.10 | 107.08 | 111.74 |
| 50 | i | 101 | 3PH | O21-C21-C22 | 4.09 | 120.33 | 111.50 |
| 35 | b | 620 | C7Z | C38-C25-C26 | -4.09 | 119.93 | 124.53 |
| 46 | Y | 621 | LUT | C7-C8-C9 | -4.09 | 120.05 | 126.23 |
| 33 | C | 521 | LMG | O7-C10-C11 | 4.09 | 120.31 | 111.50 |
| 47 | Y | 622 | XAT | C36-C21-C26 | 4.08 | 121.06 | 110.05 |
| 38 | c | 523 | DGD | O2G-C1B-C2B | 4.08 | 120.30 | 111.50 |
| 39 | d | 410 | LHG | O7-C7-C8 | 4.07 | 120.28 | 111.50 |
| 45 | N | 609 | CHL | CHD-C1D-ND | -4.07 | 120.71 | 124.45 |
| 33 | H | 102 | LMG | O7-C10-C11 | 4.07 | 120.26 | 111.50 |
| 29 | c | 502 | CLA | O2D-CGD-CBD | 4.06 | 118.48 | 111.27 |
| 33 | c | 521 | LMG | O7-C10-C11 | 4.05 | 120.22 | 111.50 |
| 31 | D | 404 | BCR | C19-C18-C17 | 4.03 | 125.13 | 118.94 |
| 44 | h | 101 | RRX | C11-C10-C9 | -4.01 | 121.58 | 127.31 |
| 50 | S | 626 | 3PH | O21-C21-C22 | 4.01 | 120.15 | 111.50 |
| 32 | A | 412 | SQD | O7-S-C6 | -4.00 | 102.18 | 106.94 |
| 46 | Y | 621 | LUT | C22-C23-C24 | -3.98 | 107.21 | 111.74 |
| 50 | s | 626 | 3PH | O21-C21-C22 | 3.98 | 120.08 | 111.50 |
| 36 | C | 524 | DGA | OG2-CB1-CB2 | 3.98 | 120.07 | 111.50 |
| 31 | d | 404 | BCR | C19-C18-C17 | 3.97 | 125.04 | 118.94 |
| 48 | g | 623 | NEX | C27-C28-C29 | -3.97 | 119.36 | 125.53 |
| 46 | G | 621 | LUT | C22-C23-C24 | -3.97 | 107.23 | 111.74 |
| 39 | C | 525 | LHG | O7-C7-C8 | 3.96 | 120.05 | 111.50 |
| 36 | b | 623 | DGA | OG2-CB1-CB2 | 3.96 | 120.03 | 111.50 |
| 45 | g | 601 | CHL | CHD-C1D-ND | -3.96 | 120.82 | 124.45 |
| 46 | g | 621 | LUT | C7-C8-C9 | -3.96 | 120.26 | 126.23 |
| 46 | S | 620 | LUT | C7-C8-C9 | -3.95 | 120.27 | 126.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 46 | G | 620 | LUT | C15-C14-C13 | -3.95 | 121.68 | 127.31 |
| 47 | y | 622 | XAT | C36-C21-C26 | 3.94 | 120.68 | 110.05 |
| 36 | c | 524 | DGA | OG2-CB1-CB2 | 3.94 | 119.99 | 111.50 |
| 38 | c | 518 | DGD | O2G-C1B-C2B | 3.94 | 119.98 | 111.50 |
| 46 | N | 620 | LUT | C35-C34-C33 | -3.92 | 121.71 | 127.31 |
| 29 | B | 605 | CLA | C2C-C1C-NC | 3.91 | 113.63 | 109.97 |
| 39 | c | 625 | LHG | O7-C7-C8 | 3.90 | 119.91 | 111.50 |
| 30 | a | 409 | PHO | CMB-C2B-C3B | 3.90 | 131.97 | 124.68 |
| 46 | n | 621 | LUT | C35-C34-C33 | -3.90 | 121.75 | 127.31 |
| 46 | r | 620 | LUT | C21-C26-C25 | 3.90 | 118.40 | 111.42 |
| 45 | y | 601 | CHL | CHD-C1D-ND | -3.90 | 120.87 | 124.45 |
| 45 | Y | 605 | CHL | CHD-C1D-ND | -3.89 | 120.88 | 124.45 |
| 46 | g | 621 | LUT | C35-C34-C33 | -3.89 | 121.77 | 127.31 |
| 29 | C | 502 | CLA | C1-C2-C3 | -3.88 | 119.33 | 126.04 |
| 29 | B | 606 | CLA | CHD-C1D-ND | -3.87 | 120.90 | 124.45 |
| 46 | y | 620 | LUT | C22-C23-C24 | -3.87 | 107.34 | 111.74 |
| 29 | b | 605 | CLA | C2C-C1C-NC | 3.87 | 113.60 | 109.97 |
| 36 | B | 625 | DGA | OG2-CB1-CB2 | 3.86 | 119.81 | 111.50 |
| 35 | B | 620 | C7Z | C38-C25-C26 | -3.86 | 120.20 | 124.53 |
| 33 | B | 622 | LMG | O7-C10-C11 | 3.85 | 119.79 | 111.50 |
| 33 | j | 101 | LMG | O7-C10-C11 | 3.85 | 119.79 | 111.50 |
| 46 | g | 620 | LUT | C21-C26-C27 | 3.84 | 117.55 | 112.70 |
| 45 | n | 605 | CHL | CHD-C1D-ND | -3.83 | 120.93 | 124.45 |
| 45 | N | 605 | CHL | CHD-C1D-ND | -3.82 | 120.94 | 124.45 |
| 39 | D | 409 | LHG | O7-C7-C8 | 3.82 | 119.74 | 111.50 |
| 46 | N | 620 | LUT | C15-C14-C13 | -3.82 | 121.85 | 127.31 |
| 46 | G | 621 | LUT | C7-C8-C9 | -3.82 | 120.47 | 126.23 |
| 48 | Y | 623 | NEX | C27-C28-C29 | -3.81 | 119.61 | 125.53 |
| 39 | Y | 624 | LHG | O7-C7-C8 | 3.81 | 119.72 | 111.50 |
| 29 | S | 617 | CLA | C1-C2-C3 | -3.81 | 120.59 | 126.75 |
| 43 | f | 101 | HEM | C4B-CHC-C1C | 3.81 | 127.59 | 122.56 |
| 46 | S | 620 | LUT | C22-C23-C24 | -3.80 | 107.41 | 111.74 |
| 45 | Y | 601 | CHL | CHD-C1D-ND | -3.80 | 120.96 | 124.45 |
| 46 | G | 621 | LUT | C35-C34-C33 | -3.80 | 121.89 | 127.31 |
| 45 | y | 605 | CHL | CHD-C1D-ND | -3.80 | 120.96 | 124.45 |
| 46 | s | 621 | LUT | C21-C26-C27 | 3.79 | 117.50 | 112.70 |
| 33 | b | 622 | LMG | O7-C10-C11 | 3.79 | 119.67 | 111.50 |
| 30 | A | 409 | PHO | CMB-C2B-C3B | 3.79 | 131.76 | 124.68 |
| 39 | d | 409 | LHG | O7-C7-C8 | 3.78 | 119.65 | 111.50 |
| 44 | H | 101 | RRX | C7-C8-C9 | -3.78 | 120.53 | 126.23 |
| 33 | d | 411 | LMG | O7-C10-C11 | 3.78 | 119.64 | 111.50 |
| 29 | C | 509 | CLA | C2C-C1C-NC | 3.77 | 113.50 | 109.97 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 35 | b | 620 | C7Z | C1-C6-C5 | -3.77 | 117.31 | 122.61 |
| 47 | r | 622 | XAT | C18-C5-C4 | 3.77 | 118.52 | 114.28 |
| 29 | S | 613 | CLA | O2D-CGD-O1D | -3.77 | 116.47 | 123.84 |
| 33 | D | 411 | LMG | O7-C10-C11 | 3.77 | 119.62 | 111.50 |
| 29 | s | 617 | CLA | C1-C2-C3 | -3.76 | 120.66 | 126.75 |
| 29 | A | 406 | CLA | C2C-C1C-NC | 3.76 | 113.50 | 109.97 |
| 39 | D | 410 | LHG | O7-C7-C8 | 3.76 | 119.60 | 111.50 |
| 46 | N | 621 | LUT | C35-C34-C33 | -3.75 | 121.96 | 127.31 |
| 29 | s | 613 | CLA | C1-C2-C3 | -3.74 | 119.57 | 126.04 |
| 33 | J | 101 | LMG | O7-C10-C11 | 3.74 | 119.57 | 111.50 |
| 48 | n | 623 | NEX | C27-C28-C29 | -3.74 | 119.72 | 125.53 |
| 47 | N | 622 | XAT | C7-C8-C9 | -3.74 | 119.73 | 125.53 |
| 46 | g | 620 | LUT | C35-C34-C33 | -3.73 | 121.98 | 127.31 |
| 29 | B | 605 | CLA | C1-C2-C3 | -3.73 | 119.59 | 126.04 |
| 32 | a | 412 | SQD | O7-S-C6 | -3.72 | 102.51 | 106.94 |
| 29 | b | 606 | CLA | CHD-C1D-ND | -3.72 | 121.03 | 124.45 |
| 45 | S | 608 | CHL | CHD-C1D-ND | -3.72 | 121.04 | 124.45 |
| 46 | g | 621 | LUT | C15-C14-C13 | -3.72 | 122.01 | 127.31 |
| 46 | n | 621 | LUT | C22-C23-C24 | -3.71 | 107.52 | 111.74 |
| 45 | G | 601 | CHL | CHD-C1D-ND | -3.71 | 121.04 | 124.45 |
| 40 | c | 627 | LMK | O3-C4-C3 | -3.71 | 110.25 | 122.98 |
| 45 | s | 608 | CHL | CHD-C1D-ND | -3.70 | 121.05 | 124.45 |
| 29 | s | 613 | CLA | O2D-CGD-O1D | -3.70 | 116.60 | 123.84 |
| 32 | B | 621 | SQD | O7-S-C6 | -3.70 | 102.54 | 106.94 |
| 32 | b | 621 | SQD | O7-S-C6 | -3.70 | 102.55 | 106.94 |
| 45 | R | 607 | CHL | CHD-C1D-ND | -3.70 | 121.06 | 124.45 |
| 46 | n | 621 | LUT | C15-C14-C13 | -3.69 | 122.04 | 127.31 |
| 31 | d | 404 | BCR | C36-C18-C17 | -3.69 | 117.75 | 122.92 |
| 47 | R | 621 | XAT | C19-C9-C10 | -3.69 | 117.75 | 122.92 |
| 35 | B | 620 | C7Z | C35-C34-C33 | -3.69 | 122.05 | 127.31 |
| 29 | S | 613 | CLA | C1-C2-C3 | -3.69 | 119.67 | 126.04 |
| 46 | N | 620 | LUT | C22-C23-C24 | -3.69 | 107.55 | 111.74 |
| 46 | s | 621 | LUT | C15-C14-C13 | -3.68 | 122.05 | 127.31 |
| 46 | y | 621 | LUT | C11-C10-C9 | -3.68 | 122.05 | 127.31 |
| 45 | r | 606 | CHL | CHD-C1D-ND | -3.68 | 121.07 | 124.45 |
| 45 | y | 609 | CHL | CHD-C1D-ND | -3.68 | 121.07 | 124.45 |
| 31 | B | 619 | BCR | C37-C22-C21 | -3.67 | 117.78 | 122.92 |
| 45 | G | 609 | CHL | CHD-C1D-ND | -3.67 | 121.08 | 124.45 |
| 45 | g | 605 | CHL | CHD-C1D-ND | -3.67 | 121.08 | 124.45 |
| 39 | y | 624 | LHG | O7-C7-C8 | 3.67 | 119.41 | 111.50 |
| 46 | S | 620 | LUT | C18-C5-C6 | -3.66 | 120.41 | 124.53 |
| 45 | n | 608 | CHL | CHD-C1D-ND | -3.66 | 121.09 | 124.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 48 | G | 623 | NEX | C27-C28-C29 | -3.66 | 119.86 | 125.53 |
| 45 | n | 606 | CHL | CHD-C1D-ND | -3.65 | 121.10 | 124.45 |
| 44 | h | 101 | RRX | C33-C5-C4 | 3.64 | 120.61 | 113.62 |
| 46 | g | 621 | LUT | C11-C10-C9 | -3.64 | 122.12 | 127.31 |
| 38 | C | 518 | DGD | O2G-C1B-C2B | 3.64 | 119.34 | 111.50 |
| 46 | s | 621 | LUT | C7-C8-C9 | -3.63 | 120.75 | 126.23 |
| 45 | s | 607 | CHL | CHD-C1D-ND | -3.62 | 121.12 | 124.45 |
| 46 | S | 620 | LUT | C15-C14-C13 | -3.62 | 122.14 | 127.31 |
| 47 | R | 621 | XAT | C26-C27-C28 | -3.62 | 118.35 | 125.99 |
| 47 | r | 622 | XAT | C38-C25-C26 | -3.61 | 116.20 | 122.26 |
| 45 | Y | 609 | CHL | CHD-C1D-ND | -3.61 | 121.14 | 124.45 |
| 48 | S | 622 | NEX | C27-C28-C29 | -3.61 | 119.93 | 125.53 |
| 32 | c | 626 | SQD | O7-S-C6 | -3.61 | 102.65 | 106.94 |
| 46 | Y | 620 | LUT | C7-C8-C9 | -3.60 | 120.79 | 126.23 |
| 45 | G | 605 | CHL | CHD-C1D-ND | -3.60 | 121.14 | 124.45 |
| 46 | g | 620 | LUT | C15-C14-C13 | -3.60 | 122.17 | 127.31 |
| 29 | B | 603 | CLA | CHD-C1D-ND | -3.60 | 121.14 | 124.45 |
| 45 | n | 601 | CHL | CHD-C1D-ND | -3.60 | 121.14 | 124.45 |
| 48 | y | 623 | NEX | C27-C28-C29 | -3.58 | 119.98 | 125.53 |
| 31 | D | 404 | BCR | C36-C18-C17 | -3.58 | 117.91 | 122.92 |
| 31 | b | 619 | BCR | C33-C5-C4 | 3.57 | 120.47 | 113.62 |
| 40 | C | 527 | LMK | O3-C4-C3 | -3.57 | 110.73 | 122.98 |
| 31 | c | 517 | BCR | C28-C27-C26 | -3.57 | 107.70 | 114.08 |
| 48 | g | 623 | NEX | C17-C1-C6 | -3.57 | 107.28 | 110.47 |
| 31 | D | 404 | BCR | C37-C22-C21 | -3.57 | 117.93 | 122.92 |
| 32 | C | 526 | SQD | O7-S-C6 | -3.57 | 102.70 | 106.94 |
| 45 | s | 601 | CHL | CHD-C1D-ND | -3.56 | 121.18 | 124.45 |
| 46 | s | 620 | LUT | C35-C15-C14 | -3.56 | 116.18 | 123.47 |
| 45 | g | 608 | CHL | CHD-C1D-ND | -3.56 | 121.18 | 124.45 |
| 31 | A | 411 | BCR | C33-C5-C6 | -3.55 | 120.54 | 124.53 |
| 48 | s | 623 | NEX | C27-C28-C29 | -3.55 | 120.02 | 125.53 |
| 47 | N | 622 | XAT | O24-C25-C24 | 3.55 | 116.05 | 113.38 |
| 45 | N | 608 | CHL | CHD-C1D-ND | -3.55 | 121.19 | 124.45 |
| 31 | B | 619 | BCR | C33-C5-C4 | 3.54 | 120.43 | 113.62 |
| 29 | B | 605 | CLA | CMA-C3A-C4A | 3.54 | 121.30 | 111.77 |
| 29 | g | 613 | CLA | CMA-C3A-C4A | 3.54 | 121.30 | 111.77 |
| 35 | b | 620 | C7Z | C35-C34-C33 | -3.54 | 122.25 | 127.31 |
| 45 | y | 606 | CHL | C2C-C3C-C4C | 3.54 | 109.01 | 106.49 |
| 46 | g | 620 | LUT | C22-C23-C24 | -3.54 | 107.71 | 111.74 |
| 44 | H | 101 | RRX | C33-C5-C4 | 3.54 | 120.41 | 113.62 |
| 29 | N | 610 | CLA | CAA-C2A-C3A | -3.54 | 103.09 | 112.78 |
| 29 | S | 604 | CLA | CHD-C1D-ND | -3.54 | 121.20 | 124.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 46 | G | 620 | LUT | C11-C10-C9 | -3.53 | 122.27 | 127.31 |
| 29 | c | 506 | CLA | CHD-C1D-ND | -3.53 | 121.21 | 124.45 |
| 29 | c | 506 | CLA | C2C-C1C-NC | 3.53 | 113.28 | 109.97 |
| 45 | G | 608 | CHL | CHD-C1D-ND | -3.53 | 121.21 | 124.45 |
| 29 | C | 508 | CLA | C1-C2-C3 | -3.52 | 119.95 | 126.04 |
| 46 | s | 620 | LUT | C7-C8-C9 | -3.52 | 120.91 | 126.23 |
| 29 | c | 512 | CLA | C2D-C1D-ND | 3.52 | 112.70 | 110.10 |
| 31 | a | 411 | BCR | C33-C5-C6 | -3.51 | 120.58 | 124.53 |
| 45 | S | 607 | CHL | CHD-C1D-ND | -3.51 | 121.22 | 124.45 |
| 29 | C | 510 | CLA | CHD-C1D-ND | -3.51 | 121.23 | 124.45 |
| 46 | N | 621 | LUT | C15-C14-C13 | -3.51 | 122.30 | 127.31 |
| 29 | B | 610 | CLA | C1-C2-C3 | -3.50 | 119.99 | 126.04 |
| 47 | y | 622 | XAT | C7-C8-C9 | -3.50 | 120.10 | 125.53 |
| 46 | y | 620 | LUT | C35-C34-C33 | -3.50 | 122.32 | 127.31 |
| 47 | G | 622 | XAT | C7-C8-C9 | -3.49 | 120.11 | 125.53 |
| 35 | B | 620 | C7Z | C1-C6-C5 | -3.49 | 117.69 | 122.61 |
| 44 | h | 101 | RRX | C30-C25-C26 | -3.49 | 117.69 | 122.61 |
| 47 | R | 621 | XAT | C11-C10-C9 | -3.49 | 122.33 | 127.31 |
| 29 | G | 613 | CLA | CMA-C3A-C4A | 3.49 | 121.16 | 111.77 |
| 29 | C | 505 | CLA | O2D-CGD-O1D | -3.49 | 117.02 | 123.84 |
| 44 | H | 101 | RRX | C30-C25-C26 | -3.49 | 117.70 | 122.61 |
| 29 | n | 604 | CLA | C1-C2-C3 | -3.49 | 120.01 | 126.04 |
| 47 | r | 622 | XAT | C19-C9-C10 | -3.49 | 118.04 | 122.92 |
| 29 | s | 614 | CLA | CHD-C1D-ND | -3.48 | 121.25 | 124.45 |
| 29 | C | 506 | CLA | C2C-C1C-NC | 3.48 | 113.23 | 109.97 |
| 29 | r | 610 | CLA | CMA-C3A-C4A | 3.48 | 121.12 | 111.77 |
| 46 | y | 620 | LUT | C15-C14-C13 | -3.47 | 122.35 | 127.31 |
| 29 | c | 502 | CLA | C2C-C1C-NC | 3.47 | 113.22 | 109.97 |
| 48 | N | 623 | NEX | C27-C28-C29 | -3.47 | 120.14 | 125.53 |
| 29 | C | 511 | CLA | CHD-C1D-ND | -3.47 | 121.27 | 124.45 |
| 29 | C | 504 | CLA | C1-C2-C3 | -3.47 | 120.05 | 126.04 |
| 29 | a | 406 | CLA | C2C-C1C-NC | 3.46 | 113.22 | 109.97 |
| 46 | S | 621 | LUT | C35-C15-C14 | -3.46 | 116.38 | 123.47 |
| 47 | r | 622 | XAT | C20-C13-C14 | -3.46 | 118.07 | 122.92 |
| 29 | N | 603 | CLA | C1-C2-C3 | -3.46 | 120.05 | 126.04 |
| 45 | s | 606 | CHL | CHD-C1D-ND | -3.46 | 121.27 | 124.45 |
| 29 | N | 604 | CLA | C1-C2-C3 | -3.45 | 120.07 | 126.04 |
| 29 | B | 602 | CLA | C2C-C1C-NC | 3.45 | 113.21 | 109.97 |
| 31 | C | 514 | BCR | C15-C14-C13 | -3.45 | 122.38 | 127.31 |
| 31 | d | 404 | BCR | C37-C22-C21 | -3.45 | 118.09 | 122.92 |
| 31 | D | 404 | BCR | C23-C22-C21 | 3.45 | 124.24 | 118.94 |
| 45 | S | 606 | CHL | CHD-C1D-ND | -3.45 | 121.28 | 124.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | C | 511 | CLA | C1-C2-C3 | -3.44 | 120.09 | 126.04 |
| 29 | c | 508 | CLA | C1-C2-C3 | -3.44 | 120.09 | 126.04 |
| 44 | h | 101 | RRX | C7-C8-C9 | -3.44 | 121.03 | 126.23 |
| 29 | s | 605 | CLA | C1-C2-C3 | -3.44 | 121.19 | 126.75 |
| 29 | c | 503 | CLA | CHD-C1D-ND | -3.44 | 121.30 | 124.45 |
| 29 | b | 605 | CLA | CMA-C3A-C4A | 3.44 | 121.01 | 111.77 |
| 46 | G | 620 | LUT | C35-C34-C33 | -3.43 | 122.41 | 127.31 |
| 29 | C | 510 | CLA | C1C-C2C-C3C | -3.43 | 103.35 | 106.96 |
| 47 | R | 621 | XAT | C38-C25-C26 | -3.43 | 116.51 | 122.26 |
| 29 | g | 610 | CLA | C1-C2-C3 | -3.43 | 120.11 | 126.04 |
| 29 | B | 615 | CLA | CMB-C2B-C3B | 3.43 | 131.09 | 124.68 |
| 46 | S | 620 | LUT | C11-C10-C9 | -3.43 | 122.42 | 127.31 |
| 29 | S | 614 | CLA | CHD-C1D-ND | -3.43 | 121.31 | 124.45 |
| 29 | b | 610 | CLA | C1-C2-C3 | -3.43 | 120.12 | 126.04 |
| 29 | a | 406 | CLA | CHD-C1D-ND | -3.42 | 121.31 | 124.45 |
| 29 | c | 511 | CLA | CHD-C1D-ND | -3.42 | 121.31 | 124.45 |
| 29 | c | 510 | CLA | C1-C2-C3 | -3.42 | 120.12 | 126.04 |
| 29 | c | 501 | CLA | C1-C2-C3 | -3.42 | 120.12 | 126.04 |
| 29 | C | 507 | CLA | C2C-C1C-NC | 3.42 | 113.18 | 109.97 |
| 29 | d | 402 | CLA | C2D-C1D-ND | 3.42 | 112.62 | 110.10 |
| 29 | B | 612 | CLA | CMB-C2B-C1B | -3.42 | 123.21 | 128.46 |
| 29 | C | 503 | CLA | CHD-C1D-ND | -3.42 | 121.31 | 124.45 |
| 29 | B | 603 | CLA | C1-C2-C3 | -3.41 | 120.14 | 126.04 |
| 29 | c | 510 | CLA | C1C-C2C-C3C | -3.41 | 103.37 | 106.96 |
| 29 | s | 611 | CLA | C2C-C1C-NC | 3.41 | 113.17 | 109.97 |
| 29 | R | 610 | CLA | CMA-C3A-C4A | 3.41 | 120.95 | 111.77 |
| 29 | N | 613 | CLA | CMA-C3A-C4A | 3.41 | 120.95 | 111.77 |
| 29 | b | 617 | CLA | C1-C2-C3 | -3.41 | 120.14 | 126.04 |
| 29 | Y | 613 | CLA | C1-C2-C3 | -3.41 | 120.14 | 126.04 |
| 48 | G | 623 | NEX | C17-C1-C6 | -3.41 | 107.42 | 110.47 |
| 46 | S | 621 | LUT | C22-C23-C24 | -3.41 | 107.86 | 111.74 |
| 29 | c | 505 | CLA | O2D-CGD-O1D | -3.41 | 117.17 | 123.84 |
| 29 | G | 610 | CLA | C1-C2-C3 | -3.41 | 120.15 | 126.04 |
| 46 | r | 620 | LUT | C31-C32-C33 | -3.41 | 116.85 | 126.42 |
| 31 | b | 619 | BCR | C37-C22-C21 | -3.41 | 118.15 | 122.92 |
| 46 | s | 621 | LUT | C18-C5-C6 | -3.40 | 120.71 | 124.53 |
| 29 | c | 505 | CLA | C1-C2-C3 | -3.40 | 120.16 | 126.04 |
| 29 | c | 510 | CLA | CHD-C1D-ND | -3.40 | 121.33 | 124.45 |
| 29 | s | 604 | CLA | CHD-C1D-ND | -3.40 | 121.33 | 124.45 |
| 46 | n | 620 | LUT | C22-C23-C24 | -3.40 | 107.88 | 111.74 |
| 29 | C | 513 | CLA | CHD-C1D-ND | -3.40 | 121.33 | 124.45 |
| 47 | n | 622 | XAT | O24-C25-C24 | 3.40 | 115.93 | 113.38 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | C | 510 | CLA | C1-C2-C3 | -3.39 | 120.18 | 126.04 |
| 29 | C | 506 | CLA | CHD-C1D-ND | -3.39 | 121.34 | 124.45 |
| 48 | Y | 623 | NEX | C39-C29-C30 | -3.39 | 118.17 | 122.92 |
| 46 | g | 620 | LUT | C11-C10-C9 | -3.39 | 122.47 | 127.31 |
| 29 | N | 612 | CLA | CMA-C3A-C4A | 3.39 | 120.89 | 111.77 |
| 29 | c | 509 | CLA | C2C-C1C-NC | 3.39 | 113.15 | 109.97 |
| 29 | b | 603 | CLA | C1-C2-C3 | -3.39 | 120.18 | 126.04 |
| 46 | n | 620 | LUT | C15-C14-C13 | -3.39 | 122.48 | 127.31 |
| 47 | r | 622 | XAT | O24-C25-C24 | 3.38 | 115.92 | 113.38 |
| 29 | n | 613 | CLA | CMA-C3A-C4A | 3.38 | 120.86 | 111.77 |
| 29 | b | 606 | CLA | C1-C2-C3 | -3.38 | 120.20 | 126.04 |
| 46 | Y | 621 | LUT | C11-C10-C9 | -3.38 | 122.49 | 127.31 |
| 29 | b | 616 | CLA | C2C-C1C-NC | 3.38 | 113.14 | 109.97 |
| 29 | c | 504 | CLA | CHD-C1D-ND | -3.38 | 121.35 | 124.45 |
| 29 | S | 605 | CLA | C2C-C1C-NC | 3.38 | 113.13 | 109.97 |
| 29 | C | 512 | CLA | C2D-C1D-ND | 3.37 | 112.59 | 110.10 |
| 45 | y | 606 | CHL | CHD-C1D-ND | -3.37 | 121.35 | 124.45 |
| 29 | B | 606 | CLA | C2C-C1C-NC | 3.37 | 113.13 | 109.97 |
| 29 | B | 609 | CLA | C2C-C1C-NC | 3.37 | 113.13 | 109.97 |
| 45 | G | 601 | CHL | C2C-C3C-C4C | 3.37 | 108.89 | 106.49 |
| 45 | Y | 606 | CHL | CHD-C1D-ND | -3.37 | 121.36 | 124.45 |
| 47 | r | 622 | XAT | C27-C28-C29 | 3.37 | 130.76 | 125.53 |
| 46 | y | 621 | LUT | C15-C14-C13 | -3.37 | 122.50 | 127.31 |
| 45 | g | 601 | CHL | C3C-C4C-NC | -3.37 | 106.80 | 110.57 |
| 47 | r | 622 | XAT | C26-C27-C28 | -3.37 | 118.88 | 125.99 |
| 29 | b | 603 | CLA | CHD-C1D-ND | -3.36 | 121.36 | 124.45 |
| 29 | b | 609 | CLA | C2C-C1C-NC | 3.36 | 113.12 | 109.97 |
| 45 | S | 601 | CHL | CHD-C1D-ND | -3.36 | 121.36 | 124.45 |
| 29 | C | 504 | CLA | CHD-C1D-ND | -3.36 | 121.37 | 124.45 |
| 45 | y | 606 | CHL | C3C-C4C-NC | -3.36 | 106.81 | 110.57 |
| 29 | b | 605 | CLA | C1-C2-C3 | -3.36 | 120.24 | 126.04 |
| 45 | G | 607 | CHL | CHD-C1D-ND | -3.35 | 121.37 | 124.45 |
| 29 | r | 610 | CLA | C2D-C1D-ND | 3.35 | 112.58 | 110.10 |
| 29 | n | 603 | CLA | CHD-C1D-ND | -3.35 | 121.38 | 124.45 |
| 29 | A | 407 | CLA | C2C-C1C-NC | 3.35 | 113.11 | 109.97 |
| 29 | y | 613 | CLA | CMA-C3A-C4A | 3.35 | 120.76 | 111.77 |
| 47 | y | 622 | XAT | O4-C5-C4 | -3.34 | 110.87 | 113.38 |
| 29 | r | 608 | CLA | C2C-C1C-NC | 3.34 | 113.10 | 109.97 |
| 29 | B | 615 | CLA | CBA-CAA-C2A | 3.34 | 123.72 | 113.86 |
| 48 | r | 623 | NEX | C2-C1-C6 | 3.34 | 112.45 | 109.21 |
| 29 | y | 603 | CLA | C2D-C1D-ND | 3.34 | 112.56 | 110.10 |
| 45 | y | 607 | CHL | CHD-C1D-ND | -3.33 | 121.39 | 124.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | G | 601 | CHL | C3C-C4C-NC | -3.33 | 106.83 | 110.57 |
| 29 | g | 610 | CLA | CHD-C1D-ND | -3.33 | 121.39 | 124.45 |
| 31 | B | 618 | BCR | C23-C24-C25 | -3.33 | 117.85 | 127.20 |
| 29 | s | 605 | CLA | O2D-CGD-O1D | -3.33 | 117.33 | 123.84 |
| 44 | h | 101 | RRX | C1-C6-C5 | -3.33 | 117.93 | 122.61 |
| 29 | b | 609 | CLA | CMA-C3A-C4A | 3.33 | 120.71 | 111.77 |
| 29 | R | 610 | CLA | C1-C2-C3 | -3.32 | 120.30 | 126.04 |
| 29 | A | 405 | CLA | CHD-C1D-ND | -3.32 | 121.40 | 124.45 |
| 29 | c | 505 | CLA | C2C-C1C-NC | 3.32 | 113.08 | 109.97 |
| 46 | G | 620 | LUT | C31-C30-C29 | -3.32 | 122.58 | 127.31 |
| 29 | D | 403 | CLA | C1-C2-C3 | -3.31 | 120.31 | 126.04 |
| 29 | b | 607 | CLA | CHD-C1D-ND | -3.31 | 121.41 | 124.45 |
| 29 | S | 605 | CLA | O2D-CGD-O1D | -3.31 | 117.36 | 123.84 |
| 45 | s | 607 | CHL | C2C-C3C-C4C | 3.31 | 108.85 | 106.49 |
| 47 | R | 621 | XAT | C27-C28-C29 | 3.31 | 130.67 | 125.53 |
| 29 | a | 407 | CLA | C2C-C1C-NC | 3.31 | 113.07 | 109.97 |
| 29 | B | 612 | CLA | CHD-C1D-ND | -3.31 | 121.41 | 124.45 |
| 29 | G | 612 | CLA | C2C-C1C-NC | 3.31 | 113.07 | 109.97 |
| 29 | B | 616 | CLA | C2C-C1C-NC | 3.31 | 113.07 | 109.97 |
| 29 | c | 503 | CLA | CMA-C3A-C4A | 3.31 | 120.66 | 111.77 |
| 29 | C | 502 | CLA | C2C-C1C-NC | 3.30 | 113.07 | 109.97 |
| 45 | N | 606 | CHL | CHD-C1D-ND | -3.30 | 121.42 | 124.45 |
| 45 | g | 607 | CHL | CHD-C1D-ND | -3.30 | 121.42 | 124.45 |
| 47 | G | 622 | XAT | C38-C25-C26 | -3.30 | 116.72 | 122.26 |
| 29 | B | 606 | CLA | C1-C2-C3 | -3.30 | 120.33 | 126.04 |
| 29 | S | 603 | CLA | C2C-C1C-NC | 3.30 | 113.06 | 109.97 |
| 29 | s | 602 | CLA | CHD-C1D-ND | -3.30 | 121.42 | 124.45 |
| 44 | H | 101 | RRX | C16-C17-C18 | -3.30 | 122.60 | 127.31 |
| 29 | g | 603 | CLA | C1-C2-C3 | -3.30 | 120.33 | 126.04 |
| 45 | G | 606 | CHL | CHD-C1D-ND | -3.30 | 121.42 | 124.45 |
| 29 | S | 605 | CLA | C1-O2A-CGA | 3.30 | 125.10 | 116.44 |
| 45 | g | 601 | CHL | C2C-C3C-C4C | 3.30 | 108.84 | 106.49 |
| 44 | h | 101 | RRX | C20-C21-C22 | -3.30 | 122.61 | 127.31 |
| 29 | S | 613 | CLA | C2C-C1C-NC | 3.29 | 113.06 | 109.97 |
| 45 | s | 607 | CHL | CMA-C3A-C4A | 3.29 | 120.62 | 111.77 |
| 45 | y | 605 | CHL | C3C-C4C-NC | -3.29 | 106.88 | 110.57 |
| 29 | a | 406 | CLA | C1-C2-C3 | -3.29 | 120.35 | 126.04 |
| 29 | y | 608 | CLA | C1-C2-C3 | -3.29 | 121.44 | 126.75 |
| 45 | Y | 605 | CHL | C3C-C4C-NC | -3.28 | 106.89 | 110.57 |
| 29 | B | 607 | CLA | CHD-C1D-ND | -3.28 | 121.44 | 124.45 |
| 29 | n | 612 | CLA | C2C-C1C-NC | 3.28 | 113.05 | 109.97 |
| 29 | G | 610 | CLA | CHD-C1D-ND | -3.28 | 121.44 | 124.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | N | 602 | CLA | C2C-C1C-NC | 3.28 | 113.04 | 109.97 |
| 29 | r | 612 | CLA | C2C-C1C-NC | 3.27 | 113.04 | 109.97 |
| 45 | G | 606 | CHL | CMA-C3A-C4A | 3.27 | 120.57 | 111.77 |
| 45 | g | 606 | CHL | C2C-C3C-C4C | 3.27 | 108.82 | 106.49 |
| 45 | r | 607 | CHL | C2C-C3C-C4C | 3.27 | 108.82 | 106.49 |
| 29 | C | 505 | CLA | C2C-C1C-NC | 3.27 | 113.03 | 109.97 |
| 29 | G | 603 | CLA | C2C-C1C-NC | 3.27 | 113.03 | 109.97 |
| 45 | N | 609 | CHL | C3C-C4C-NC | -3.27 | 106.91 | 110.57 |
| 47 | Y | 622 | XAT | C6-C7-C8 | -3.27 | 119.08 | 125.99 |
| 45 | R | 607 | CHL | C3C-C4C-NC | -3.27 | 106.91 | 110.57 |
| 29 | C | 501 | CLA | C1-C2-C3 | -3.27 | 120.39 | 126.04 |
| 46 | s | 621 | LUT | C22-C23-C24 | -3.26 | 108.03 | 111.74 |
| 29 | r | 613 | CLA | CHD-C1D-ND | -3.26 | 121.45 | 124.45 |
| 29 | y | 610 | CLA | C1-C2-C3 | -3.26 | 120.40 | 126.04 |
| 29 | s | 604 | CLA | C2C-C1C-NC | 3.26 | 113.03 | 109.97 |
| 29 | c | 506 | CLA | O2D-CGD-O1D | -3.26 | 117.46 | 123.84 |
| 45 | N | 601 | CHL | CHD-C1D-ND | -3.26 | 121.46 | 124.45 |
| 29 | s | 602 | CLA | C2D-C1D-ND | 3.26 | 112.51 | 110.10 |
| 45 | S | 607 | CHL | C2C-C3C-C4C | 3.26 | 108.81 | 106.49 |
| 29 | Y | 611 | CLA | C2C-C1C-NC | 3.26 | 113.02 | 109.97 |
| 31 | C | 516 | BCR | C34-C9-C10 | -3.26 | 118.36 | 122.92 |
| 45 | S | 607 | CHL | CMA-C3A-C4A | 3.25 | 120.52 | 111.77 |
| 35 | b | 620 | C7Z | C2-C3-C4 | 3.25 | 114.76 | 110.30 |
| 29 | G | 611 | CLA | C2C-C1C-NC | 3.25 | 113.02 | 109.97 |
| 29 | b | 606 | CLA | C2C-C1C-NC | 3.25 | 113.02 | 109.97 |
| 29 | b | 609 | CLA | C2D-C1D-ND | 3.25 | 112.50 | 110.10 |
| 29 | R | 612 | CLA | C2C-C1C-NC | 3.25 | 113.02 | 109.97 |
| 29 | G | 614 | CLA | CHD-C1D-ND | -3.25 | 121.47 | 124.45 |
| 29 | c | 507 | CLA | C2C-C1C-NC | 3.25 | 113.01 | 109.97 |
| 45 | n | 609 | CHL | CHD-C1D-ND | -3.25 | 121.47 | 124.45 |
| 29 | y | 604 | CLA | CHD-C1D-ND | -3.25 | 121.47 | 124.45 |
| 46 | G | 621 | LUT | C18-C5-C6 | -3.25 | 120.88 | 124.53 |
| 45 | n | 601 | CHL | C2C-C3C-C4C | 3.24 | 108.80 | 106.49 |
| 29 | R | 610 | CLA | CHD-C1D-ND | -3.24 | 121.47 | 124.45 |
| 29 | A | 405 | CLA | CMB-C2B-C3B | 3.24 | 130.75 | 124.68 |
| 29 | s | 617 | CLA | CHD-C1D-ND | -3.24 | 121.47 | 124.45 |
| 29 | g | 611 | CLA | C2C-C1C-NC | 3.24 | 113.01 | 109.97 |
| 29 | y | 610 | CLA | CHD-C1D-ND | -3.24 | 121.47 | 124.45 |
| 46 | s | 620 | LUT | C15-C14-C13 | -3.24 | 122.69 | 127.31 |
| 45 | r | 607 | CHL | C3C-C4C-NC | -3.24 | 106.94 | 110.57 |
| 30 | A | 408 | PHO | CMB-C2B-C3B | 3.24 | 130.74 | 124.68 |
| 29 | S | 612 | CLA | C2C-C1C-NC | 3.24 | 113.00 | 109.97 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | b | 615 | CLA | CMB-C2B-C3B | 3.23 | 130.73 | 124.68 |
| 29 | C | 503 | CLA | CMA-C3A-C4A | 3.23 | 120.47 | 111.77 |
| 29 | b | 615 | CLA | C1-C2-C3 | -3.23 | 120.45 | 126.04 |
| 31 | C | 514 | BCR | C33-C5-C6 | -3.23 | 120.90 | 124.53 |
| 46 | G | 620 | LUT | C18-C5-C6 | -3.23 | 120.90 | 124.53 |
| 45 | R | 607 | CHL | C2C-C3C-C4C | 3.23 | 108.79 | 106.49 |
| 29 | B | 611 | CLA | C2C-C1C-NC | 3.23 | 113.00 | 109.97 |
| 29 | D | 402 | CLA | C2D-C1D-ND | 3.23 | 112.48 | 110.10 |
| 47 | g | 622 | XAT | C7-C8-C9 | -3.23 | 120.52 | 125.53 |
| 29 | a | 405 | CLA | CHD-C1D-ND | -3.23 | 121.49 | 124.45 |
| 29 | b | 611 | CLA | C2C-C1C-NC | 3.23 | 112.99 | 109.97 |
| 29 | a | 410 | CLA | CHD-C1D-ND | -3.22 | 121.49 | 124.45 |
| 29 | b | 614 | CLA | C2C-C1C-NC | 3.22 | 112.99 | 109.97 |
| 29 | s | 610 | CLA | CHD-C1D-ND | -3.22 | 121.49 | 124.45 |
| 29 | S | 611 | CLA | C2C-C1C-NC | 3.22 | 112.99 | 109.97 |
| 29 | g | 613 | CLA | CHD-C1D-ND | -3.22 | 121.50 | 124.45 |
| 31 | c | 514 | BCR | C15-C14-C13 | -3.22 | 122.72 | 127.31 |
| 29 | c | 511 | CLA | C1-C2-C3 | -3.22 | 120.48 | 126.04 |
| 29 | S | 604 | CLA | C1-C2-C3 | -3.22 | 120.48 | 126.04 |
| 29 | s | 612 | CLA | C2C-C1C-NC | 3.22 | 112.98 | 109.97 |
| 45 | N | 607 | CHL | CHD-C1D-ND | -3.22 | 121.50 | 124.45 |
| 43 | f | 101 | HEM | C1B-NB-C4B | 3.22 | 108.39 | 105.07 |
| 29 | R | 608 | CLA | C2C-C1C-NC | 3.22 | 112.98 | 109.97 |
| 29 | N | 603 | CLA | CHD-C1D-ND | -3.21 | 121.50 | 124.45 |
| 45 | g | 606 | CHL | CHD-C1D-ND | -3.21 | 121.50 | 124.45 |
| 29 | n | 603 | CLA | C2D-C1D-ND | 3.21 | 112.47 | 110.10 |
| 29 | n | 610 | CLA | CHD-C1D-ND | -3.21 | 121.50 | 124.45 |
| 29 | Y | 608 | CLA | C1-C2-C3 | -3.21 | 121.56 | 126.75 |
| 29 | B | 609 | CLA | O2D-CGD-O1D | -3.21 | 117.56 | 123.84 |
| 29 | c | 508 | CLA | CMB-C2B-C1B | -3.21 | 123.53 | 128.46 |
| 29 | B | 612 | CLA | CMB-C2B-C3B | 3.21 | 130.68 | 124.68 |
| 29 | a | 405 | CLA | CMB-C2B-C3B | 3.21 | 130.68 | 124.68 |
| 29 | b | 609 | CLA | C1-C2-C3 | -3.21 | 120.50 | 126.04 |
| 29 | S | 617 | CLA | CMA-C3A-C4A | 3.21 | 120.39 | 111.77 |
| 29 | c | 501 | CLA | CHD-C1D-ND | -3.21 | 121.51 | 124.45 |
| 29 | c | 508 | CLA | CHD-C1D-ND | -3.20 | 121.51 | 124.45 |
| 29 | g | 614 | CLA | CHD-C1D-ND | -3.20 | 121.51 | 124.45 |
| 29 | B | 614 | CLA | C2D-C1D-ND | 3.20 | 112.46 | 110.10 |
| 45 | n | 609 | CHL | C1-O2A-CGA | 3.20 | 124.85 | 116.44 |
| 45 | n | 601 | CHL | C3C-C4C-NC | -3.20 | 106.98 | 110.57 |
| 48 | G | 623 | NEX | C39-C29-C30 | -3.20 | 118.44 | 122.92 |
| 29 | A | 406 | CLA | C1-C2-C3 | -3.20 | 120.51 | 126.04 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 614 | CLA | C2C-C1C-NC | 3.20 | 112.97 | 109.97 |
| 45 | n | 607 | CHL | CHB-C4A-NA | 3.20 | 128.93 | 124.51 |
| 29 | c | 504 | CLA | C1-C2-C3 | -3.20 | 120.51 | 126.04 |
| 42 | D | 405 | PL9 | C7-C3-C2 | -3.20 | 119.10 | 123.30 |
| 47 | g | 622 | XAT | C38-C25-C26 | -3.20 | 116.90 | 122.26 |
| 46 | R | 620 | LUT | C31-C32-C33 | -3.19 | 117.44 | 126.42 |
| 29 | Y | 614 | CLA | C2C-C1C-NC | 3.19 | 112.96 | 109.97 |
| 29 | n | 610 | CLA | C1-C2-C3 | -3.19 | 120.53 | 126.04 |
| 29 | s | 605 | CLA | C2C-C1C-NC | 3.19 | 112.96 | 109.97 |
| 29 | B | 615 | CLA | CHD-C1D-ND | -3.19 | 121.52 | 124.45 |
| 29 | Y | 614 | CLA | CHD-C1D-ND | -3.19 | 121.52 | 124.45 |
| 29 | y | 603 | CLA | CHD-C1D-ND | -3.19 | 121.52 | 124.45 |
| 45 | Y | 609 | CHL | CMA-C3A-C4A | 3.19 | 120.34 | 111.77 |
| 29 | b | 602 | CLA | C2C-C1C-NC | 3.19 | 112.96 | 109.97 |
| 29 | g | 614 | CLA | C2C-C1C-NC | 3.19 | 112.96 | 109.97 |
| 29 | Y | 604 | CLA | CHD-C1D-ND | -3.19 | 121.53 | 124.45 |
| 29 | b | 609 | CLA | O2D-CGD-O1D | -3.18 | 117.61 | 123.84 |
| 48 | R | 622 | NEX | C17-C1-C6 | -3.18 | 107.62 | 110.47 |
| 46 | s | 620 | LUT | C18-C5-C6 | -3.18 | 120.95 | 124.53 |
| 46 | n | 620 | LUT | C35-C34-C33 | -3.18 | 122.77 | 127.31 |
| 29 | g | 603 | CLA | CHD-C1D-ND | -3.18 | 121.53 | 124.45 |
| 29 | y | 613 | CLA | CHD-C1D-ND | -3.18 | 121.53 | 124.45 |
| 45 | G | 607 | CHL | C3C-C4C-NC | -3.18 | 107.01 | 110.57 |
| 29 | n | 614 | CLA | CHD-C1D-ND | -3.18 | 121.53 | 124.45 |
| 48 | G | 623 | NEX | C31-C30-C29 | 3.18 | 131.84 | 127.31 |
| 45 | y | 607 | CHL | C2C-C3C-C4C | 3.18 | 108.75 | 106.49 |
| 44 | h | 101 | RRX | C4-C5-C6 | -3.18 | 118.12 | 122.73 |
| 45 | g | 605 | CHL | C2C-C3C-C4C | 3.17 | 108.75 | 106.49 |
| 29 | y | 614 | CLA | C2C-C1C-NC | 3.17 | 112.95 | 109.97 |
| 29 | r | 611 | CLA | C2C-C1C-NC | 3.17 | 112.94 | 109.97 |
| 45 | Y | 609 | CHL | C3C-C4C-NC | -3.17 | 107.01 | 110.57 |
| 29 | B | 615 | CLA | C1-C2-C3 | -3.17 | 120.56 | 126.04 |
| 29 | y | 602 | CLA | CHD-C1D-ND | -3.17 | 121.54 | 124.45 |
| 43 | F | 101 | HEM | C4B-CHC-C1C | 3.17 | 126.74 | 122.56 |
| 29 | N | 603 | CLA | C2C-C1C-NC | 3.17 | 112.94 | 109.97 |
| 29 | b | 611 | CLA | C1-C2-C3 | -3.17 | 120.56 | 126.04 |
| 45 | N | 606 | CHL | C2C-C3C-C4C | 3.17 | 108.75 | 106.49 |
| 29 | R | 604 | CLA | CHD-C1D-ND | -3.17 | 121.54 | 124.45 |
| 29 | C | 506 | CLA | O2D-CGD-O1D | -3.17 | 117.64 | 123.84 |
| 45 | G | 606 | CHL | C3C-C4C-NC | -3.17 | 107.02 | 110.57 |
| 31 | C | 516 | BCR | C23-C24-C25 | -3.17 | 118.31 | 127.20 |
| 46 | g | 621 | LUT | C18-C5-C6 | -3.17 | 120.97 | 124.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | b | 602 | CLA | CHD-C1D-ND | -3.17 | 121.55 | 124.45 |
| 29 | s | 613 | CLA | C2C-C1C-NC | 3.16 | 112.94 | 109.97 |
| 29 | y | 611 | CLA | C2C-C1C-NC | 3.16 | 112.94 | 109.97 |
| 29 | r | 603 | CLA | CMA-C3A-C4A | 3.16 | 120.28 | 111.77 |
| 29 | A | 410 | CLA | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 29 | C | 501 | CLA | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 29 | R | 613 | CLA | C2C-C1C-NC | 3.16 | 112.94 | 109.97 |
| 31 | a | 411 | BCR | C23-C24-C25 | -3.16 | 118.32 | 127.20 |
| 31 | c | 514 | BCR | C33-C5-C6 | -3.16 | 120.98 | 124.53 |
| 29 | s | 617 | CLA | C2C-C1C-NC | 3.16 | 112.93 | 109.97 |
| 41 | d | 401 | BCT | O2-C-O1 | -3.16 | 111.34 | 119.55 |
| 45 | s | 607 | CHL | C3C-C4C-NC | -3.16 | 107.03 | 110.57 |
| 29 | Y | 610 | CLA | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 44 | H | 101 | RRX | C4-C5-C6 | -3.16 | 118.14 | 122.73 |
| 45 | s | 608 | CHL | C2C-C3C-C4C | 3.16 | 108.74 | 106.49 |
| 45 | N | 608 | CHL | CMA-C3A-C4A | 3.16 | 120.26 | 111.77 |
| 45 | N | 609 | CHL | CMA-C3A-C4A | 3.16 | 120.26 | 111.77 |
| 29 | c | 501 | CLA | O2D-CGD-O1D | -3.16 | 117.66 | 123.84 |
| 29 | C | 510 | CLA | C2D-C1D-ND | 3.16 | 112.43 | 110.10 |
| 29 | n | 611 | CLA | C2C-C1C-NC | 3.16 | 112.93 | 109.97 |
| 29 | N | 614 | CLA | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 29 | y | 614 | CLA | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 44 | H | 101 | RRX | C20-C21-C22 | -3.16 | 122.81 | 127.31 |
| 47 | Y | 622 | XAT | O4-C5-C4 | -3.16 | 111.01 | 113.38 |
| 29 | n | 602 | CLA | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 45 | r | 607 | CHL | CHD-C1D-ND | -3.16 | 121.55 | 124.45 |
| 46 | G | 621 | LUT | C15-C14-C13 | -3.16 | 122.81 | 127.31 |
| 29 | S | 609 | CLA | CHD-C1D-ND | -3.15 | 121.56 | 124.45 |
| 47 | n | 622 | XAT | C38-C25-C26 | -3.15 | 116.98 | 122.26 |
| 29 | g | 602 | CLA | C1-C2-C3 | -3.15 | 120.59 | 126.04 |
| 29 | C | 511 | CLA | C2C-C1C-NC | 3.15 | 112.92 | 109.97 |
| 29 | G | 613 | CLA | CHD-C1D-ND | -3.15 | 121.56 | 124.45 |
| 47 | N | 622 | XAT | C38-C25-C26 | -3.15 | 116.98 | 122.26 |
| 29 | S | 617 | CLA | C2C-C1C-NC | 3.15 | 112.92 | 109.97 |
| 45 | G | 608 | CHL | C2C-C3C-C4C | 3.15 | 108.73 | 106.49 |
| 29 | g | 612 | CLA | C2C-C1C-NC | 3.15 | 112.92 | 109.97 |
| 45 | g | 605 | CHL | C3C-C4C-NC | -3.15 | 107.04 | 110.57 |
| 29 | S | 610 | CLA | CHD-C1D-ND | -3.15 | 121.56 | 124.45 |
| 29 | C | 503 | CLA | C2C-C1C-NC | 3.15 | 112.92 | 109.97 |
| 48 | y | 623 | NEX | C39-C29-C30 | -3.15 | 118.52 | 122.92 |
| 31 | B | 619 | BCR | C33-C5-C6 | -3.15 | 121.00 | 124.53 |
| 29 | c | 510 | CLA | C2C-C1C-NC | 3.14 | 112.92 | 109.97 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | S | 604 | CLA | C2C-C1C-NC | 3.14 | 112.92 | 109.97 |
| 29 | S | 605 | CLA | C1-C2-C3 | -3.14 | 121.67 | 126.75 |
| 29 | s | 603 | CLA | C2C-C1C-NC | 3.14 | 112.92 | 109.97 |
| 29 | R | 603 | CLA | CMA-C3A-C4A | 3.14 | 120.22 | 111.77 |
| 29 | N | 610 | CLA | CHD-C1D-ND | -3.14 | 121.57 | 124.45 |
| 29 | R | 603 | CLA | CHD-C1D-ND | -3.14 | 121.57 | 124.45 |
| 29 | r | 602 | CLA | CHD-C1D-ND | -3.14 | 121.57 | 124.45 |
| 45 | y | 609 | CHL | CMA-C3A-C4A | 3.14 | 120.22 | 111.77 |
| 29 | N | 614 | CLA | C2C-C1C-NC | 3.14 | 112.91 | 109.97 |
| 29 | B | 611 | CLA | CHD-C1D-ND | -3.14 | 121.57 | 124.45 |
| 29 | c | 502 | CLA | C1-O2A-CGA | 3.14 | 124.67 | 116.44 |
| 29 | r | 609 | CLA | C1-C2-C3 | -3.14 | 120.62 | 126.04 |
| 29 | G | 602 | CLA | CHD-C1D-ND | -3.14 | 121.57 | 124.45 |
| 48 | g | 623 | NEX | C39-C29-C30 | -3.14 | 118.53 | 122.92 |
| 41 | D | 401 | BCT | O2-C-O1 | -3.13 | 111.42 | 119.55 |
| 29 | r | 603 | CLA | C2C-C1C-NC | 3.13 | 112.91 | 109.97 |
| 29 | c | 508 | CLA | CMB-C2B-C3B | 3.13 | 130.54 | 124.68 |
| 29 | b | 615 | CLA | CBA-CAA-C2A | 3.13 | 123.11 | 113.86 |
| 29 | Y | 608 | CLA | CHD-C1D-ND | -3.13 | 121.58 | 124.45 |
| 29 | n | 603 | CLA | C1-C2-C3 | -3.13 | 120.63 | 126.04 |
| 29 | C | 509 | CLA | C1-C2-C3 | -3.13 | 120.63 | 126.04 |
| 29 | R | 609 | CLA | CHD-C1D-ND | -3.13 | 121.58 | 124.45 |
| 29 | b | 614 | CLA | C2D-C1D-ND | 3.13 | 112.41 | 110.10 |
| 29 | r | 602 | CLA | C2C-C1C-NC | 3.13 | 112.90 | 109.97 |
| 45 | n | 605 | CHL | C3C-C4C-NC | -3.13 | 107.06 | 110.57 |
| 44 | h | 101 | RRX | C16-C17-C18 | -3.13 | 122.85 | 127.31 |
| 29 | C | 509 | CLA | CHD-C1D-ND | -3.13 | 121.58 | 124.45 |
| 29 | n | 604 | CLA | CHD-C1D-ND | -3.13 | 121.58 | 124.45 |
| 29 | C | 502 | CLA | C2D-C1D-ND | 3.13 | 112.41 | 110.10 |
| 46 | S | 620 | LUT | C35-C15-C14 | -3.12 | 117.07 | 123.47 |
| 29 | a | 410 | CLA | C2C-C1C-NC | 3.12 | 112.90 | 109.97 |
| 29 | B | 611 | CLA | C1-C2-C3 | -3.12 | 120.64 | 126.04 |
| 29 | b | 604 | CLA | C2C-C1C-NC | 3.12 | 112.90 | 109.97 |
| 48 | S | 622 | NEX | C39-C29-C30 | -3.12 | 118.55 | 122.92 |
| 29 | N | 611 | CLA | C2C-C1C-NC | 3.12 | 112.90 | 109.97 |
| 45 | g | 606 | CHL | CMA-C3A-C4A | 3.12 | 120.16 | 111.77 |
| 45 | g | 607 | CHL | C3C-C4C-NC | -3.12 | 107.07 | 110.57 |
| 29 | y | 612 | CLA | C2C-C1C-NC | 3.12 | 112.89 | 109.97 |
| 45 | G | 607 | CHL | CHB-C4A-NA | 3.12 | 128.82 | 124.51 |
| 45 | y | 605 | CHL | C2C-C3C-C4C | 3.12 | 108.71 | 106.49 |
| 45 | y | 609 | CHL | C3C-C4C-NC | -3.12 | 107.07 | 110.57 |
| 43 | F | 101 | HEM | C3B-C2B-C1B | 3.12 | 108.80 | 106.49 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | A | 406 | CLA | CHD-C1D-ND | -3.12 | 121.59 | 124.45 |
| 29 | R | 613 | CLA | CHD-C1D-ND | -3.12 | 121.59 | 124.45 |
| 45 | s | 601 | CHL | C3C-C4C-NC | -3.12 | 107.08 | 110.57 |
| 29 | Y | 613 | CLA | CMA-C3A-C4A | 3.12 | 120.15 | 111.77 |
| 46 | y | 621 | LUT | C35-C15-C14 | -3.12 | 117.09 | 123.47 |
| 29 | R | 611 | CLA | C2C-C1C-NC | 3.12 | 112.89 | 109.97 |
| 45 | g | 608 | CHL | C2C-C3C-C4C | 3.12 | 108.71 | 106.49 |
| 29 | b | 611 | CLA | CHD-C1D-ND | -3.12 | 121.59 | 124.45 |
| 29 | b | 610 | CLA | C2D-C1D-ND | 3.11 | 112.40 | 110.10 |
| 31 | C | 515 | BCR | C33-C5-C6 | -3.11 | 121.03 | 124.53 |
| 45 | N | 605 | CHL | C3C-C4C-NC | -3.11 | 107.08 | 110.57 |
| 46 | Y | 621 | LUT | C18-C5-C6 | -3.11 | 121.03 | 124.53 |
| 29 | b | 603 | CLA | C2C-C1C-NC | 3.11 | 112.89 | 109.97 |
| 29 | n | 603 | CLA | C1C-C2C-C3C | -3.11 | 103.69 | 106.96 |
| 29 | Y | 612 | CLA | C2C-C1C-NC | 3.11 | 112.89 | 109.97 |
| 29 | A | 410 | CLA | C1-C2-C3 | -3.11 | 120.66 | 126.04 |
| 31 | C | 517 | BCR | C28-C27-C26 | -3.11 | 108.52 | 114.08 |
| 45 | n | 608 | CHL | CMA-C3A-C4A | 3.11 | 120.13 | 111.77 |
| 29 | r | 603 | CLA | CHD-C1D-ND | -3.11 | 121.60 | 124.45 |
| 43 | f | 101 | HEM | C3B-C2B-C1B | 3.11 | 108.79 | 106.49 |
| 29 | G | 604 | CLA | C2C-C1C-NC | 3.11 | 112.89 | 109.97 |
| 29 | R | 602 | CLA | CHD-C1D-ND | -3.11 | 121.60 | 124.45 |
| 29 | g | 603 | CLA | C2C-C1C-NC | 3.11 | 112.88 | 109.97 |
| 29 | Y | 613 | CLA | CHD-C1D-ND | -3.11 | 121.60 | 124.45 |
| 31 | b | 619 | BCR | C33-C5-C6 | -3.11 | 121.04 | 124.53 |
| 29 | C | 508 | CLA | CMB-C2B-C1B | -3.10 | 123.69 | 128.46 |
| 29 | r | 610 | CLA | CHD-C1D-ND | -3.10 | 121.60 | 124.45 |
| 29 | N | 613 | CLA | C2C-C1C-NC | 3.10 | 112.88 | 109.97 |
| 29 | b | 614 | CLA | CHD-C1D-ND | -3.10 | 121.60 | 124.45 |
| 45 | Y | 606 | CHL | C2C-C3C-C4C | 3.10 | 108.70 | 106.49 |
| 29 | c | 503 | CLA | C2C-C1C-NC | 3.10 | 112.88 | 109.97 |
| 29 | B | 614 | CLA | CHD-C1D-ND | -3.10 | 121.61 | 124.45 |
| 45 | S | 608 | CHL | C2C-C3C-C4C | 3.10 | 108.70 | 106.49 |
| 29 | Y | 603 | CLA | CHD-C1D-ND | -3.10 | 121.61 | 124.45 |
| 46 | S | 621 | LUT | C7-C8-C9 | -3.10 | 121.55 | 126.23 |
| 45 | n | 609 | CHL | C3C-C4C-NC | -3.10 | 107.10 | 110.57 |
| 29 | S | 609 | CLA | C2C-C1C-NC | 3.10 | 112.87 | 109.97 |
| 29 | C | 510 | CLA | C2C-C1C-NC | 3.09 | 112.87 | 109.97 |
| 46 | s | 620 | LUT | C38-C25-C24 | -3.09 | 116.94 | 123.56 |
| 29 | G | 603 | CLA | CHD-C1D-ND | -3.09 | 121.61 | 124.45 |
| 29 | b | 615 | CLA | C2C-C1C-NC | 3.09 | 112.87 | 109.97 |
| 45 | s | 608 | CHL | C3C-C4C-NC | -3.09 | 107.10 | 110.57 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | d | 403 | CLA | C1-C2-C3 | -3.09 | 120.69 | 126.04 |
| 45 | S | 607 | CHL | C3C-C4C-NC | -3.09 | 107.10 | 110.57 |
| 45 | g | 605 | CHL | CMA-C3A-C4A | 3.09 | 120.08 | 111.77 |
| 29 | R | 612 | CLA | CHD-C1D-ND | -3.09 | 121.61 | 124.45 |
| 45 | N | 601 | CHL | C2C-C3C-C4C | 3.09 | 108.69 | 106.49 |
| 45 | Y | 607 | CHL | CHB-C4A-NA | 3.09 | 128.78 | 124.51 |
| 45 | R | 606 | CHL | CMA-C3A-C4A | 3.09 | 120.07 | 111.77 |
| 45 | N | 608 | CHL | C3C-C4C-NC | -3.09 | 107.11 | 110.57 |
| 39 | L | 101 | LHG | O7-C7-C8 | 3.09 | 118.15 | 111.50 |
| 29 | b | 610 | CLA | CHD-C1D-ND | -3.08 | 121.62 | 124.45 |
| 29 | Y | 603 | CLA | C2D-C1D-ND | 3.08 | 112.38 | 110.10 |
| 29 | B | 609 | CLA | C1-C2-C3 | -3.08 | 120.71 | 126.04 |
| 29 | G | 613 | CLA | C2C-C1C-NC | 3.08 | 112.86 | 109.97 |
| 29 | N | 612 | CLA | C2C-C1C-NC | 3.08 | 112.86 | 109.97 |
| 29 | y | 608 | CLA | CHD-C1D-ND | -3.08 | 121.62 | 124.45 |
| 45 | S | 608 | CHL | C3C-C4C-NC | -3.08 | 107.12 | 110.57 |
| 45 | n | 608 | CHL | C3C-C4C-NC | -3.08 | 107.12 | 110.57 |
| 29 | Y | 602 | CLA | CHD-C1D-ND | -3.08 | 121.62 | 124.45 |
| 29 | r | 604 | CLA | CHD-C1D-ND | -3.08 | 121.62 | 124.45 |
| 45 | G | 608 | CHL | C3C-C4C-NC | -3.08 | 107.12 | 110.57 |
| 29 | b | 614 | CLA | C1-C2-C3 | -3.08 | 120.72 | 126.04 |
| 29 | B | 609 | CLA | CMA-C3A-C4A | 3.08 | 120.04 | 111.77 |
| 45 | G | 605 | CHL | CMA-C3A-C4A | 3.08 | 120.04 | 111.77 |
| 29 | s | 617 | CLA | CMA-C3A-C4A | 3.07 | 120.04 | 111.77 |
| 29 | N | 610 | CLA | O2A-CGA-CBA | 3.07 | 121.55 | 111.91 |
| 46 | g | 620 | LUT | C18-C5-C6 | -3.07 | 121.08 | 124.53 |
| 29 | B | 615 | CLA | O2D-CGD-O1D | -3.07 | 117.83 | 123.84 |
| 29 | C | 501 | CLA | CMA-C3A-C4A | 3.07 | 120.03 | 111.77 |
| 29 | n | 614 | CLA | C2C-C1C-NC | 3.07 | 112.85 | 109.97 |
| 44 | h | 101 | RRX | C23-C24-C25 | -3.07 | 118.58 | 127.20 |
| 39 | l | 101 | LHG | O7-C7-C8 | 3.07 | 118.12 | 111.50 |
| 29 | B | 610 | CLA | CHD-C1D-ND | -3.07 | 121.63 | 124.45 |
| 29 | d | 402 | CLA | CHD-C1D-ND | -3.07 | 121.63 | 124.45 |
| 29 | S | 603 | CLA | C1-C2-C3 | -3.07 | 120.73 | 126.04 |
| 29 | B | 617 | CLA | C2C-C1C-NC | 3.07 | 112.85 | 109.97 |
| 29 | A | 407 | CLA | CMA-C3A-C4A | 3.07 | 120.02 | 111.77 |
| 29 | C | 508 | CLA | C2C-C1C-NC | 3.07 | 112.85 | 109.97 |
| 45 | Y | 609 | CHL | C2C-C3C-C4C | 3.07 | 108.67 | 106.49 |
| 29 | S | 602 | CLA | C1-C2-C3 | -3.07 | 120.74 | 126.04 |
| 45 | n | 607 | CHL | C1-C2-C3 | -3.07 | 120.74 | 126.04 |
| 29 | G | 602 | CLA | CMA-C3A-C4A | 3.07 | 120.01 | 111.77 |
| 45 | g | 609 | CHL | C4D-CHA-C1A | 3.06 | 124.98 | 121.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | n | 607 | CHL | C1-O2A-CGA | 3.06 | 124.48 | 116.44 |
| 29 | g | 613 | CLA | C2C-C1C-NC | 3.06 | 112.84 | 109.97 |
| 45 | N | 607 | CHL | CHB-C4A-NA | 3.06 | 128.75 | 124.51 |
| 29 | n | 603 | CLA | C2C-C1C-NC | 3.06 | 112.84 | 109.97 |
| 29 | B | 614 | CLA | C1-C2-C3 | -3.06 | 120.75 | 126.04 |
| 45 | G | 605 | CHL | C2C-C3C-C4C | 3.06 | 108.67 | 106.49 |
| 47 | Y | 622 | XAT | C7-C8-C9 | -3.06 | 120.78 | 125.53 |
| 42 | d | 405 | PL9 | C7-C3-C2 | -3.06 | 119.28 | 123.30 |
| 29 | s | 602 | CLA | C1-C2-C3 | -3.06 | 120.75 | 126.04 |
| 29 | b | 615 | CLA | CHD-C1D-ND | -3.06 | 121.64 | 124.45 |
| 29 | g | 613 | CLA | C1-C2-C3 | -3.06 | 120.76 | 126.04 |
| 29 | G | 613 | CLA | C1-C2-C3 | -3.06 | 120.76 | 126.04 |
| 29 | c | 503 | CLA | C1-C2-C3 | -3.06 | 120.76 | 126.04 |
| 31 | c | 515 | BCR | C33-C5-C6 | -3.05 | 121.10 | 124.53 |
| 29 | B | 615 | CLA | C2C-C1C-NC | 3.05 | 112.83 | 109.97 |
| 29 | B | 615 | CLA | CMB-C2B-C1B | -3.05 | 123.77 | 128.46 |
| 29 | G | 614 | CLA | C2C-C1C-NC | 3.05 | 112.83 | 109.97 |
| 29 | b | 615 | CLA | O2D-CGD-O1D | -3.05 | 117.87 | 123.84 |
| 29 | b | 608 | CLA | C2C-C1C-NC | 3.05 | 112.83 | 109.97 |
| 29 | R | 612 | CLA | C1-C2-C3 | -3.05 | 120.77 | 126.04 |
| 29 | n | 604 | CLA | C2C-C1C-NC | 3.05 | 112.83 | 109.97 |
| 45 | S | 601 | CHL | C3C-C4C-NC | -3.05 | 107.15 | 110.57 |
| 29 | S | 610 | CLA | C1-C2-C3 | -3.05 | 120.77 | 126.04 |
| 29 | c | 507 | CLA | CHD-C1D-ND | -3.05 | 121.65 | 124.45 |
| 45 | Y | 606 | CHL | C3C-C4C-NC | -3.05 | 107.15 | 110.57 |
| 45 | G | 606 | CHL | C2C-C3C-C4C | 3.05 | 108.66 | 106.49 |
| 42 | d | 405 | PL9 | C7-C8-C9 | -3.05 | 121.72 | 126.79 |
| 29 | C | 508 | CLA | CHD-C1D-ND | -3.05 | 121.65 | 124.45 |
| 29 | c | 509 | CLA | C1-C2-C3 | -3.05 | 120.77 | 126.04 |
| 45 | g | 608 | CHL | CMA-C3A-C4A | 3.05 | 119.96 | 111.77 |
| 29 | N | 614 | CLA | CMA-C3A-C4A | 3.04 | 119.95 | 111.77 |
| 46 | Y | 620 | LUT | C18-C5-C6 | -3.04 | 121.11 | 124.53 |
| 29 | b | 612 | CLA | CMB-C2B-C1B | -3.04 | 123.79 | 128.46 |
| 29 | G | 614 | CLA | CMA-C3A-C4A | 3.04 | 119.95 | 111.77 |
| 45 | g | 608 | CHL | C3C-C4C-NC | -3.04 | 107.16 | 110.57 |
| 29 | a | 407 | CLA | CMA-C3A-C4A | 3.04 | 119.95 | 111.77 |
| 29 | D | 403 | CLA | CHD-C1D-ND | -3.04 | 121.66 | 124.45 |
| 29 | c | 513 | CLA | CHD-C1D-ND | -3.04 | 121.66 | 124.45 |
| 29 | G | 602 | CLA | C1-C2-C3 | -3.04 | 120.78 | 126.04 |
| 29 | N | 604 | CLA | C2D-C1D-ND | 3.04 | 112.34 | 110.10 |
| 29 | Y | 610 | CLA | C1-C2-C3 | -3.04 | 120.79 | 126.04 |
| 45 | G | 607 | CHL | C2C-C3C-C4C | 3.04 | 108.66 | 106.49 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | b | 607 | CLA | CAA-C2A-C3A | -3.04 | 104.46 | 112.78 |
| 29 | G | 603 | CLA | C2D-C1D-ND | 3.04 | 112.34 | 110.10 |
| 29 | A | 410 | CLA | CMA-C3A-C4A | 3.04 | 119.94 | 111.77 |
| 47 | R | 621 | XAT | O4-C5-C4 | -3.04 | 111.10 | 113.38 |
| 46 | G | 620 | LUT | C22-C23-C24 | -3.04 | 108.28 | 111.74 |
| 45 | N | 609 | CHL | C2C-C3C-C4C | 3.04 | 108.65 | 106.49 |
| 29 | N | 604 | CLA | CHD-C1D-ND | -3.04 | 121.66 | 124.45 |
| 45 | N | 601 | CHL | C3C-C4C-NC | -3.04 | 107.17 | 110.57 |
| 29 | r | 611 | CLA | CMA-C3A-C4A | 3.04 | 119.93 | 111.77 |
| 29 | s | 610 | CLA | C1-O2A-CGA | 3.04 | 124.41 | 116.44 |
| 29 | R | 603 | CLA | C2C-C1C-NC | 3.03 | 112.81 | 109.97 |
| 29 | Y | 613 | CLA | C2C-C1C-NC | 3.03 | 112.81 | 109.97 |
| 29 | c | 511 | CLA | C2C-C1C-NC | 3.03 | 112.81 | 109.97 |
| 45 | N | 605 | CHL | C2C-C3C-C4C | 3.03 | 108.65 | 106.49 |
| 29 | a | 405 | CLA | C2D-C1D-ND | 3.03 | 112.34 | 110.10 |
| 29 | a | 407 | CLA | CHD-C1D-ND | -3.03 | 121.67 | 124.45 |
| 29 | A | 406 | CLA | C1C-C2C-C3C | -3.03 | 103.77 | 106.96 |
| 45 | G | 601 | CHL | CMA-C3A-C4A | 3.03 | 119.92 | 111.77 |
| 29 | c | 509 | CLA | CHD-C1D-ND | -3.03 | 121.67 | 124.45 |
| 45 | y | 605 | CHL | CMA-C3A-C4A | 3.03 | 119.92 | 111.77 |
| 29 | r | 608 | CLA | CHD-C1D-ND | -3.03 | 121.67 | 124.45 |
| 29 | g | 604 | CLA | C2C-C1C-NC | 3.03 | 112.81 | 109.97 |
| 45 | y | 607 | CHL | C3C-C4C-NC | -3.03 | 107.17 | 110.57 |
| 45 | Y | 605 | CHL | CMA-C3A-C4A | 3.03 | 119.92 | 111.77 |
| 29 | C | 509 | CLA | C1C-C2C-C3C | -3.03 | 103.77 | 106.96 |
| 29 | y | 613 | CLA | C2D-C1D-ND | 3.03 | 112.34 | 110.10 |
| 29 | R | 608 | CLA | CHD-C1D-ND | -3.03 | 121.67 | 124.45 |
| 29 | C | 508 | CLA | CMB-C2B-C3B | 3.03 | 130.34 | 124.68 |
| 29 | A | 410 | CLA | C2C-C1C-NC | 3.03 | 112.81 | 109.97 |
| 43 | F | 101 | HEM | C1B-NB-C4B | 3.03 | 108.20 | 105.07 |
| 33 | d | 411 | LMG | O8-C28-C29 | 3.02 | 121.40 | 111.91 |
| 29 | y | 613 | CLA | C1-C2-C3 | -3.02 | 120.81 | 126.04 |
| 45 | n | 609 | CHL | CMA-C3A-C4A | 3.02 | 119.90 | 111.77 |
| 29 | B | 608 | CLA | C2C-C1C-NC | 3.02 | 112.81 | 109.97 |
| 29 | s | 614 | CLA | C2C-C1C-NC | 3.02 | 112.81 | 109.97 |
| 46 | s | 621 | LUT | C35-C15-C14 | -3.02 | 117.28 | 123.47 |
| 45 | S | 608 | CHL | CMA-C3A-C4A | 3.02 | 119.89 | 111.77 |
| 45 | N | 607 | CHL | C3C-C4C-NC | -3.02 | 107.18 | 110.57 |
| 29 | g | 604 | CLA | CHD-C1D-ND | -3.02 | 121.68 | 124.45 |
| 30 | a | 409 | PHO | O2D-CGD-O1D | -3.02 | 117.94 | 123.84 |
| 29 | S | 604 | CLA | C1C-C2C-C3C | -3.02 | 103.79 | 106.96 |
| 45 | g | 609 | CHL | C1B-CHB-C4A | -3.02 | 124.14 | 130.12 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | G | 611 | CLA | CHD-C1D-ND | -3.02 | 121.68 | 124.45 |
| 45 | R | 607 | CHL | CMA-C3A-C4A | 3.01 | 119.88 | 111.77 |
| 48 | y | 623 | NEX | C17-C1-C6 | -3.01 | 107.77 | 110.47 |
| 29 | r | 612 | CLA | CHD-C1D-ND | -3.01 | 121.69 | 124.45 |
| 29 | r | 610 | CLA | C1-C2-C3 | -3.01 | 120.83 | 126.04 |
| 31 | d | 404 | BCR | C23-C22-C21 | 3.01 | 123.56 | 118.94 |
| 29 | B | 607 | CLA | CMA-C3A-C4A | 3.01 | 119.87 | 111.77 |
| 45 | N | 605 | CHL | CMA-C3A-C4A | 3.01 | 119.87 | 111.77 |
| 29 | S | 614 | CLA | C2C-C1C-NC | 3.01 | 112.79 | 109.97 |
| 29 | R | 602 | CLA | C2D-C1D-ND | 3.01 | 112.32 | 110.10 |
| 29 | y | 603 | CLA | C1C-C2C-C3C | -3.01 | 103.79 | 106.96 |
| 29 | S | 611 | CLA | CHD-C1D-ND | -3.01 | 121.69 | 124.45 |
| 29 | a | 406 | CLA | C1C-C2C-C3C | -3.01 | 103.79 | 106.96 |
| 29 | b | 614 | CLA | C1C-C2C-C3C | -3.01 | 103.79 | 106.96 |
| 29 | c | 504 | CLA | C2D-C1D-ND | 3.01 | 112.32 | 110.10 |
| 29 | G | 603 | CLA | C1C-C2C-C3C | -3.01 | 103.79 | 106.96 |
| 45 | n | 607 | CHL | C3C-C4C-NC | -3.01 | 107.20 | 110.57 |
| 47 | y | 622 | XAT | C6-C7-C8 | -3.01 | 119.63 | 125.99 |
| 29 | n | 614 | CLA | CMA-C3A-C4A | 3.01 | 119.86 | 111.77 |
| 47 | Y | 622 | XAT | C38-C25-C26 | -3.01 | 117.22 | 122.26 |
| 44 | H | 101 | RRX | C1-C6-C5 | -3.01 | 118.38 | 122.61 |
| 44 | H | 101 | RRX | C23-C24-C25 | -3.01 | 118.76 | 127.20 |
| 29 | B | 607 | CLA | CAA-C2A-C3A | -3.01 | 104.55 | 112.78 |
| 45 | n | 609 | CHL | C2C-C3C-C4C | 3.00 | 108.63 | 106.49 |
| 48 | g | 623 | NEX | C20-C13-C14 | -3.00 | 118.71 | 122.92 |
| 29 | Y | 610 | CLA | C2D-C1D-ND | 3.00 | 112.32 | 110.10 |
| 29 | B | 604 | CLA | C2C-C1C-NC | 3.00 | 112.79 | 109.97 |
| 29 | Y | 603 | CLA | C2C-C1C-NC | 3.00 | 112.79 | 109.97 |
| 45 | r | 606 | CHL | CMA-C3A-C4A | 3.00 | 119.84 | 111.77 |
| 29 | s | 613 | CLA | C2D-C1D-ND | 3.00 | 112.32 | 110.10 |
| 29 | b | 612 | CLA | C2C-C1C-NC | 3.00 | 112.78 | 109.97 |
| 29 | s | 609 | CLA | C2C-C1C-NC | 3.00 | 112.78 | 109.97 |
| 45 | N | 608 | CHL | C2C-C3C-C4C | 3.00 | 108.63 | 106.49 |
| 29 | b | 607 | CLA | O2A-CGA-CBA | 3.00 | 121.32 | 111.91 |
| 29 | c | 502 | CLA | CHD-C1D-ND | -3.00 | 121.70 | 124.45 |
| 29 | B | 607 | CLA | O2A-CGA-CBA | 3.00 | 121.32 | 111.91 |
| 45 | s | 601 | CHL | C2C-C3C-C4C | 3.00 | 108.63 | 106.49 |
| 45 | n | 607 | CHL | CHD-C1D-ND | -3.00 | 121.70 | 124.45 |
| 29 | D | 403 | CLA | C2C-C1C-NC | 3.00 | 112.78 | 109.97 |
| 44 | h | 101 | RRX | C33-C5-C6 | -3.00 | 121.16 | 124.53 |
| 29 | B | 610 | CLA | C2D-C1D-ND | 3.00 | 112.31 | 110.10 |
| 45 | n | 606 | CHL | C3C-C4C-NC | -3.00 | 107.21 | 110.57 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | N | 602 | CLA | CHD-C1D-ND | -2.99 | 121.70 | 124.45 |
| 45 | g | 607 | CHL | C2C-C3C-C4C | 2.99 | 108.62 | 106.49 |
| 29 | s | 611 | CLA | CHD-C1D-ND | -2.99 | 121.70 | 124.45 |
| 29 | R | 604 | CLA | C2D-C1D-ND | 2.99 | 112.31 | 110.10 |
| 29 | R | 610 | CLA | CAA-C2A-C3A | -2.99 | 104.59 | 112.78 |
| 44 | H | 101 | RRX | C38-C26-C27 | 2.99 | 119.90 | 114.36 |
| 29 | C | 512 | CLA | C2C-C1C-NC | 2.99 | 112.77 | 109.97 |
| 29 | N | 611 | CLA | CMA-C3A-C4A | 2.99 | 119.81 | 111.77 |
| 29 | B | 614 | CLA | C1C-C2C-C3C | -2.99 | 103.81 | 106.96 |
| 47 | r | 622 | XAT | C11-C10-C9 | -2.99 | 123.05 | 127.31 |
| 29 | S | 617 | CLA | CHD-C1D-ND | -2.99 | 121.71 | 124.45 |
| 44 | H | 101 | RRX | C21-C20-C19 | -2.99 | 113.90 | 123.22 |
| 29 | N | 613 | CLA | O2A-CGA-CBA | 2.98 | 121.28 | 111.91 |
| 45 | g | 606 | CHL | C3C-C4C-NC | -2.98 | 107.22 | 110.57 |
| 29 | g | 610 | CLA | C2C-C1C-NC | 2.98 | 112.77 | 109.97 |
| 45 | s | 608 | CHL | CMA-C3A-C4A | 2.98 | 119.79 | 111.77 |
| 29 | r | 604 | CLA | C2D-C1D-ND | 2.98 | 112.30 | 110.10 |
| 29 | c | 501 | CLA | CMA-C3A-C4A | 2.98 | 119.78 | 111.77 |
| 29 | G | 604 | CLA | CHD-C1D-ND | -2.98 | 121.72 | 124.45 |
| 45 | N | 607 | CHL | CMA-C3A-C4A | 2.98 | 119.78 | 111.77 |
| 45 | G | 605 | CHL | C3C-C4C-NC | -2.98 | 107.23 | 110.57 |
| 29 | n | 611 | CLA | CMA-C3A-C4A | 2.98 | 119.78 | 111.77 |
| 29 | s | 612 | CLA | CHD-C1D-ND | -2.98 | 121.72 | 124.45 |
| 29 | S | 614 | CLA | C1-C2-C3 | -2.98 | 120.89 | 126.04 |
| 45 | S | 606 | CHL | CMA-C3A-C4A | 2.98 | 119.78 | 111.77 |
| 29 | n | 612 | CLA | CHD-C1D-ND | -2.98 | 121.72 | 124.45 |
| 48 | n | 623 | NEX | C39-C29-C30 | -2.98 | 118.75 | 122.92 |
| 29 | y | 608 | CLA | C2C-C1C-NC | 2.98 | 112.76 | 109.97 |
| 29 | s | 609 | CLA | CMA-C3A-C4A | 2.98 | 119.77 | 111.77 |
| 29 | R | 611 | CLA | CMA-C3A-C4A | 2.97 | 119.77 | 111.77 |
| 46 | y | 620 | LUT | C10-C11-C12 | -2.97 | 113.94 | 123.22 |
| 48 | R | 622 | NEX | C27-C28-C29 | -2.97 | 120.92 | 125.53 |
| 45 | y | 606 | CHL | CMA-C3A-C4A | 2.97 | 119.75 | 111.77 |
| 29 | s | 612 | CLA | C2D-C1D-ND | 2.97 | 112.29 | 110.10 |
| 45 | N | 607 | CHL | C2C-C3C-C4C | 2.97 | 108.61 | 106.49 |
| 29 | y | 604 | CLA | C2C-C1C-NC | 2.97 | 112.75 | 109.97 |
| 29 | N | 610 | CLA | CMA-C3A-C4A | 2.97 | 119.75 | 111.77 |
| 29 | B | 613 | CLA | CHD-C1D-ND | -2.97 | 121.73 | 124.45 |
| 29 | A | 410 | CLA | C2D-C1D-ND | 2.96 | 112.29 | 110.10 |
| 29 | C | 502 | CLA | CMA-C3A-C4A | 2.96 | 119.74 | 111.77 |
| 29 | y | 602 | CLA | C2D-C1D-ND | 2.96 | 112.29 | 110.10 |
| 29 | C | 507 | CLA | CHD-C1D-ND | -2.96 | 121.73 | 124.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | g | 609 | CHL | C1-O2A-CGA | 2.96 | 124.21 | 116.44 |
| 29 | n | 613 | CLA | C2C-C1C-NC | 2.96 | 112.75 | 109.97 |
| 30 | a | 408 | PHO | CMB-C2B-C3B | 2.96 | 130.22 | 124.68 |
| 29 | G | 610 | CLA | C2D-C1D-ND | 2.96 | 112.29 | 110.10 |
| 29 | S | 612 | CLA | C2D-C1D-ND | 2.96 | 112.29 | 110.10 |
| 45 | N | 606 | CHL | C3C-C4C-NC | -2.96 | 107.25 | 110.57 |
| 29 | B | 609 | CLA | C1C-C2C-C3C | -2.96 | 103.84 | 106.96 |
| 45 | n | 607 | CHL | C2C-C3C-C4C | 2.96 | 108.60 | 106.49 |
| 45 | G | 608 | CHL | CMA-C3A-C4A | 2.96 | 119.73 | 111.77 |
| 29 | r | 609 | CLA | C2C-C1C-NC | 2.96 | 112.74 | 109.97 |
| 45 | Y | 601 | CHL | CMA-C3A-C4A | 2.96 | 119.72 | 111.77 |
| 48 | r | 623 | NEX | C27-C28-C29 | -2.96 | 120.94 | 125.53 |
| 45 | s | 606 | CHL | C3C-C4C-NC | -2.96 | 107.25 | 110.57 |
| 29 | d | 403 | CLA | CHD-C1D-ND | -2.96 | 121.74 | 124.45 |
| 29 | s | 609 | CLA | CHD-C1D-ND | -2.96 | 121.74 | 124.45 |
| 45 | g | 607 | CHL | CHB-C4A-NA | 2.96 | 128.60 | 124.51 |
| 43 | F | 101 | HEM | C4C-CHD-C1D | 2.95 | 126.45 | 122.56 |
| 29 | r | 609 | CLA | CHD-C1D-ND | -2.95 | 121.74 | 124.45 |
| 29 | N | 603 | CLA | C1C-C2C-C3C | -2.95 | 103.85 | 106.96 |
| 29 | n | 602 | CLA | CMA-C3A-C4A | 2.95 | 119.70 | 111.77 |
| 29 | a | 410 | CLA | C1-C2-C3 | -2.95 | 120.94 | 126.04 |
| 45 | n | 606 | CHL | C2C-C3C-C4C | 2.95 | 108.59 | 106.49 |
| 29 | d | 403 | CLA | C2C-C1C-NC | 2.95 | 112.73 | 109.97 |
| 29 | y | 602 | CLA | C1-C2-C3 | -2.95 | 120.94 | 126.04 |
| 45 | R | 606 | CHL | CHD-C1D-ND | -2.95 | 121.75 | 124.45 |
| 29 | R | 602 | CLA | O2D-CGD-O1D | -2.95 | 118.08 | 123.84 |
| 29 | R | 611 | CLA | CHD-C1D-ND | -2.95 | 121.75 | 124.45 |
| 29 | B | 608 | CLA | O2D-CGD-O1D | -2.95 | 118.08 | 123.84 |
| 46 | y | 620 | LUT | C7-C8-C9 | -2.94 | 121.78 | 126.23 |
| 29 | S | 605 | CLA | O2A-CGA-CBA | 2.94 | 121.15 | 111.91 |
| 29 | S | 613 | CLA | C2D-C1D-ND | 2.94 | 112.27 | 110.10 |
| 45 | n | 608 | CHL | C2C-C3C-C4C | 2.94 | 108.59 | 106.49 |
| 29 | S | 605 | CLA | CMA-C3A-C4A | 2.94 | 119.69 | 111.77 |
| 48 | S | 622 | NEX | C31-C30-C29 | 2.94 | 131.51 | 127.31 |
| 31 | A | 411 | BCR | C23-C24-C25 | -2.94 | 118.94 | 127.20 |
| 39 | d | 408 | LHG | O8-C23-C24 | 2.94 | 121.14 | 111.91 |
| 29 | B | 603 | CLA | C2C-C1C-NC | 2.94 | 112.73 | 109.97 |
| 29 | y | 603 | CLA | C2C-C1C-NC | 2.94 | 112.73 | 109.97 |
| 45 | r | 607 | CHL | CMA-C3A-C4A | 2.94 | 119.68 | 111.77 |
| 29 | a | 410 | CLA | CMA-C3A-C4A | 2.94 | 119.67 | 111.77 |
| 45 | n | 601 | CHL | CMA-C3A-C4A | 2.94 | 119.67 | 111.77 |
| 45 | n | 605 | CHL | C2C-C3C-C4C | 2.94 | 108.58 | 106.49 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 48 | R | 622 | NEX | C26-C27-C28 | -2.94 | 119.78 | 125.99 |
| 48 | r | 623 | NEX | C26-C27-C28 | -2.94 | 119.78 | 125.99 |
| 45 | g | 601 | CHL | CMA-C3A-C4A | 2.94 | 119.67 | 111.77 |
| 47 | g | 622 | XAT | O4-C5-C4 | -2.94 | 111.17 | 113.38 |
| 29 | c | 504 | CLA | C2C-C1C-NC | 2.94 | 112.72 | 109.97 |
| 29 | s | 603 | CLA | C1-C2-C3 | -2.94 | 120.97 | 126.04 |
| 29 | Y | 604 | CLA | C2C-C1C-NC | 2.94 | 112.72 | 109.97 |
| 29 | c | 512 | CLA | C2C-C1C-NC | 2.94 | 112.72 | 109.97 |
| 29 | c | 502 | CLA | CMA-C3A-C4A | 2.93 | 119.66 | 111.77 |
| 46 | r | 620 | LUT | C2-C3-C4 | -2.93 | 106.29 | 110.30 |
| 29 | s | 605 | CLA | CMA-C3A-C4A | 2.93 | 119.65 | 111.77 |
| 29 | r | 611 | CLA | CHD-C1D-ND | -2.93 | 121.76 | 124.45 |
| 45 | n | 606 | CHL | CMA-C3A-C4A | 2.93 | 119.65 | 111.77 |
| 44 | h | 101 | RRX | C21-C20-C19 | -2.93 | 114.07 | 123.22 |
| 29 | n | 614 | CLA | C2D-C1D-ND | 2.93 | 112.26 | 110.10 |
| 29 | g | 603 | CLA | C2D-C1D-ND | 2.93 | 112.26 | 110.10 |
| 29 | N | 611 | CLA | CHD-C1D-ND | -2.93 | 121.76 | 124.45 |
| 29 | S | 609 | CLA | CMA-C3A-C4A | 2.93 | 119.64 | 111.77 |
| 29 | n | 611 | CLA | CHD-C1D-ND | -2.93 | 121.76 | 124.45 |
| 29 | A | 407 | CLA | CHD-C1D-ND | -2.93 | 121.76 | 124.45 |
| 29 | g | 614 | CLA | CMA-C3A-C4A | 2.93 | 119.64 | 111.77 |
| 31 | b | 619 | BCR | C4-C5-C6 | -2.92 | 118.48 | 122.73 |
| 29 | S | 613 | CLA | CMA-C3A-C4A | 2.92 | 119.63 | 111.77 |
| 35 | b | 620 | C7Z | C8-C7-C6 | -2.92 | 118.99 | 127.20 |
| 29 | g | 611 | CLA | C2D-C1D-ND | 2.92 | 112.26 | 110.10 |
| 46 | Y | 621 | LUT | C15-C14-C13 | -2.92 | 123.14 | 127.31 |
| 45 | N | 606 | CHL | CMA-C3A-C4A | 2.92 | 119.63 | 111.77 |
| 29 | B | 602 | CLA | CHD-C1D-ND | -2.92 | 121.77 | 124.45 |
| 29 | n | 610 | CLA | C2D-C1D-ND | 2.92 | 112.26 | 110.10 |
| 29 | n | 612 | CLA | C2D-C1D-ND | 2.92 | 112.26 | 110.10 |
| 29 | D | 403 | CLA | CMA-C3A-C4A | 2.92 | 119.62 | 111.77 |
| 29 | c | 501 | CLA | C2C-C1C-NC | 2.92 | 112.71 | 109.97 |
| 29 | b | 612 | CLA | CMB-C2B-C3B | 2.92 | 130.14 | 124.68 |
| 45 | g | 609 | CHL | CMA-C3A-C4A | 2.92 | 119.62 | 111.77 |
| 29 | g | 602 | CLA | CHD-C1D-ND | -2.92 | 121.77 | 124.45 |
| 29 | R | 602 | CLA | C2C-C1C-NC | 2.92 | 112.71 | 109.97 |
| 46 | S | 620 | LUT | C38-C25-C24 | -2.92 | 117.31 | 123.56 |
| 29 | A | 407 | CLA | C2D-C1D-ND | 2.92 | 112.25 | 110.10 |
| 29 | B | 610 | CLA | C2C-C1C-NC | 2.92 | 112.70 | 109.97 |
| 29 | R | 610 | CLA | C2D-C1D-ND | 2.92 | 112.25 | 110.10 |
| 29 | b | 613 | CLA | CHD-C1D-ND | -2.92 | 121.78 | 124.45 |
| 29 | C | 504 | CLA | C2D-C1D-ND | 2.91 | 112.25 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | C | 501 | CLA | O2D-CGD-O1D | -2.91 | 118.14 | 123.84 |
| 29 | G | 610 | CLA | C2C-C1C-NC | 2.91 | 112.70 | 109.97 |
| 29 | B | 608 | CLA | CHD-C1D-ND | -2.91 | 121.78 | 124.45 |
| 45 | g | 607 | CHL | CMA-C3A-C4A | 2.91 | 119.60 | 111.77 |
| 29 | Y | 608 | CLA | CMA-C3A-C4A | 2.91 | 119.60 | 111.77 |
| 29 | s | 613 | CLA | CMA-C3A-C4A | 2.91 | 119.60 | 111.77 |
| 29 | Y | 612 | CLA | C2D-C1D-ND | 2.91 | 112.25 | 110.10 |
| 29 | S | 602 | CLA | C2C-C1C-NC | 2.91 | 112.70 | 109.97 |
| 29 | Y | 603 | CLA | C1C-C2C-C3C | -2.91 | 103.89 | 106.96 |
| 29 | g | 603 | CLA | CMA-C3A-C4A | 2.91 | 119.60 | 111.77 |
| 45 | n | 609 | CHL | CHB-C4A-NA | 2.91 | 128.54 | 124.51 |
| 29 | s | 610 | CLA | CAA-C2A-C3A | -2.91 | 104.81 | 112.78 |
| 29 | s | 602 | CLA | C1C-C2C-C3C | -2.91 | 103.90 | 106.96 |
| 29 | y | 613 | CLA | C2C-C1C-NC | 2.91 | 112.70 | 109.97 |
| 29 | G | 610 | CLA | CAA-C2A-C3A | -2.91 | 104.81 | 112.78 |
| 31 | d | 404 | BCR | C34-C9-C10 | -2.91 | 118.85 | 122.92 |
| 29 | y | 611 | CLA | C1-C2-C3 | -2.91 | 121.02 | 126.04 |
| 29 | G | 612 | CLA | CMA-C3A-C4A | 2.91 | 119.58 | 111.77 |
| 47 | R | 621 | XAT | C20-C13-C14 | -2.91 | 118.85 | 122.92 |
| 29 | C | 501 | CLA | C2C-C1C-NC | 2.90 | 112.69 | 109.97 |
| 29 | N | 602 | CLA | C1-C2-C3 | -2.90 | 121.02 | 126.04 |
| 29 | S | 602 | CLA | C2D-C1D-ND | 2.90 | 112.24 | 110.10 |
| 29 | y | 610 | CLA | C2D-C1D-ND | 2.90 | 112.24 | 110.10 |
| 29 | N | 610 | CLA | C2C-C1C-NC | 2.90 | 112.69 | 109.97 |
| 29 | Y | 608 | CLA | C2C-C1C-NC | 2.90 | 112.69 | 109.97 |
| 29 | C | 503 | CLA | C1-C2-C3 | -2.90 | 121.02 | 126.04 |
| 29 | S | 617 | CLA | C2D-C1D-ND | 2.90 | 112.24 | 110.10 |
| 39 | D | 408 | LHG | O8-C23-C24 | 2.90 | 121.00 | 111.91 |
| 29 | C | 503 | CLA | C2D-C1D-ND | 2.90 | 112.24 | 110.10 |
| 48 | n | 623 | NEX | C17-C1-C6 | -2.90 | 107.88 | 110.47 |
| 29 | G | 611 | CLA | C2D-C1D-ND | 2.90 | 112.24 | 110.10 |
| 29 | c | 513 | CLA | C2D-C1D-ND | 2.90 | 112.24 | 110.10 |
| 29 | G | 611 | CLA | CMA-C3A-C4A | 2.90 | 119.56 | 111.77 |
| 29 | S | 612 | CLA | CHD-C1D-ND | -2.90 | 121.79 | 124.45 |
| 29 | s | 602 | CLA | C2C-C1C-NC | 2.90 | 112.69 | 109.97 |
| 29 | b | 602 | CLA | C1-C2-C3 | -2.89 | 121.04 | 126.04 |
| 29 | b | 608 | CLA | O2D-CGD-O1D | -2.89 | 118.18 | 123.84 |
| 45 | S | 606 | CHL | C3C-C4C-NC | -2.89 | 107.33 | 110.57 |
| 29 | B | 612 | CLA | CAA-C2A-C3A | -2.89 | 104.86 | 112.78 |
| 29 | R | 609 | CLA | C2C-C1C-NC | 2.89 | 112.68 | 109.97 |
| 29 | n | 610 | CLA | C2C-C1C-NC | 2.89 | 112.68 | 109.97 |
| 29 | B | 616 | CLA | C2D-C1D-ND | 2.89 | 112.23 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | D | 402 | CLA | CHD-C1D-ND | -2.89 | 121.80 | 124.45 |
| 29 | b | 608 | CLA | CHD-C1D-ND | -2.89 | 121.80 | 124.45 |
| 29 | a | 407 | CLA | C2D-C1D-ND | 2.89 | 112.23 | 110.10 |
| 29 | s | 617 | CLA | C2D-C1D-ND | 2.89 | 112.23 | 110.10 |
| 29 | A | 405 | CLA | CMB-C2B-C1B | -2.89 | 124.02 | 128.46 |
| 48 | Y | 623 | NEX | C31-C30-C29 | 2.89 | 131.43 | 127.31 |
| 29 | y | 614 | CLA | CMA-C3A-C4A | 2.89 | 119.53 | 111.77 |
| 45 | n | 607 | CHL | CMA-C3A-C4A | 2.89 | 119.53 | 111.77 |
| 29 | Y | 614 | CLA | CMA-C3A-C4A | 2.88 | 119.52 | 111.77 |
| 45 | Y | 607 | CHL | C3C-C4C-NC | -2.88 | 107.34 | 110.57 |
| 29 | N | 602 | CLA | CMA-C3A-C4A | 2.88 | 119.52 | 111.77 |
| 29 | C | 502 | CLA | CHD-C1D-ND | -2.88 | 121.81 | 124.45 |
| 29 | N | 604 | CLA | C2C-C1C-NC | 2.88 | 112.67 | 109.97 |
| 35 | b | 620 | C7Z | C22-C23-C24 | 2.88 | 114.25 | 110.30 |
| 29 | n | 611 | CLA | O2D-CGD-O1D | -2.88 | 118.21 | 123.84 |
| 47 | G | 622 | XAT | C26-C27-C28 | -2.88 | 119.91 | 125.99 |
| 29 | C | 504 | CLA | C2C-C1C-NC | 2.88 | 112.67 | 109.97 |
| 29 | n | 603 | CLA | O2D-CGD-O1D | -2.88 | 118.21 | 123.84 |
| 29 | b | 607 | CLA | CMA-C3A-C4A | 2.88 | 119.50 | 111.77 |
| 29 | s | 609 | CLA | C2D-C1D-ND | 2.88 | 112.22 | 110.10 |
| 29 | d | 403 | CLA | CMA-C3A-C4A | 2.88 | 119.50 | 111.77 |
| 45 | S | 601 | CHL | CMA-C3A-C4A | 2.88 | 119.50 | 111.77 |
| 45 | y | 601 | CHL | CMA-C3A-C4A | 2.88 | 119.50 | 111.77 |
| 45 | y | 607 | CHL | CMA-C3A-C4A | 2.87 | 119.50 | 111.77 |
| 29 | S | 602 | CLA | CHD-C1D-ND | -2.87 | 121.81 | 124.45 |
| 29 | g | 611 | CLA | CHD-C1D-ND | -2.87 | 121.81 | 124.45 |
| 29 | C | 507 | CLA | C1C-C2C-C3C | -2.87 | 103.93 | 106.96 |
| 29 | c | 508 | CLA | C2C-C1C-NC | 2.87 | 112.67 | 109.97 |
| 29 | N | 603 | CLA | C2D-C1D-ND | 2.87 | 112.22 | 110.10 |
| 29 | N | 613 | CLA | C2D-C1D-ND | 2.87 | 112.22 | 110.10 |
| 33 | D | 411 | LMG | O8-C28-C29 | 2.87 | 120.92 | 111.91 |
| 29 | C | 510 | CLA | C1D-ND-C4D | -2.87 | 104.30 | 106.33 |
| 29 | s | 611 | CLA | C1C-C2C-C3C | -2.87 | 103.94 | 106.96 |
| 29 | B | 602 | CLA | C1-C2-C3 | -2.87 | 121.08 | 126.04 |
| 29 | a | 410 | CLA | C2D-C1D-ND | 2.87 | 112.22 | 110.10 |
| 45 | N | 607 | CHL | C1-O2A-CGA | 2.87 | 123.97 | 116.44 |
| 29 | B | 617 | CLA | C1-C2-C3 | -2.87 | 121.08 | 126.04 |
| 29 | B | 612 | CLA | C2C-C1C-NC | 2.87 | 112.66 | 109.97 |
| 38 | C | 523 | DGD | O1G-C1A-C2A | 2.87 | 120.91 | 111.91 |
| 29 | G | 603 | CLA | C1-C2-C3 | -2.87 | 121.08 | 126.04 |
| 46 | Y | 621 | LUT | C35-C15-C14 | -2.87 | 117.60 | 123.47 |
| 45 | Y | 607 | CHL | C2C-C3C-C4C | 2.87 | 108.53 | 106.49 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | r | 613 | CLA | C2C-C1C-NC | 2.87 | 112.66 | 109.97 |
| 29 | N | 603 | CLA | CMA-C3A-C4A | 2.87 | 119.48 | 111.77 |
| 29 | n | 602 | CLA | C1-C2-C3 | -2.87 | 121.08 | 126.04 |
| 29 | n | 602 | CLA | C2C-C1C-NC | 2.87 | 112.66 | 109.97 |
| 29 | G | 612 | CLA | C2D-C1D-ND | 2.87 | 112.22 | 110.10 |
| 29 | C | 513 | CLA | C1-C2-C3 | -2.86 | 121.09 | 126.04 |
| 29 | B | 611 | CLA | C2D-C1D-ND | 2.86 | 112.22 | 110.10 |
| 33 | A | 413 | LMG | C8-O7-C10 | -2.86 | 110.74 | 117.79 |
| 29 | b | 616 | CLA | CHD-C1D-ND | -2.86 | 121.82 | 124.45 |
| 29 | a | 405 | CLA | CMB-C2B-C1B | -2.86 | 124.06 | 128.46 |
| 38 | c | 518 | DGD | O1G-C1A-C2A | 2.86 | 120.89 | 111.91 |
| 29 | n | 603 | CLA | CAA-C2A-C3A | -2.86 | 104.94 | 112.78 |
| 46 | S | 621 | LUT | C18-C5-C6 | -2.86 | 121.31 | 124.53 |
| 31 | B | 619 | BCR | C4-C5-C6 | -2.86 | 118.58 | 122.73 |
| 29 | r | 610 | CLA | C1D-ND-C4D | -2.86 | 104.30 | 106.33 |
| 35 | b | 620 | C7Z | C31-C30-C29 | -2.86 | 123.23 | 127.31 |
| 29 | C | 512 | CLA | CMB-C2B-C3B | 2.86 | 130.03 | 124.68 |
| 29 | s | 603 | CLA | C2D-C1D-ND | 2.86 | 112.21 | 110.10 |
| 47 | g | 622 | XAT | C6-C7-C8 | -2.86 | 119.95 | 125.99 |
| 29 | R | 609 | CLA | C1-C2-C3 | -2.86 | 121.10 | 126.04 |
| 29 | g | 602 | CLA | C2D-C1D-ND | 2.86 | 112.21 | 110.10 |
| 45 | y | 601 | CHL | CHB-C4A-NA | 2.86 | 128.46 | 124.51 |
| 29 | r | 608 | CLA | C1-C2-C3 | -2.86 | 121.11 | 126.04 |
| 29 | a | 405 | CLA | CAA-C2A-C3A | -2.85 | 104.96 | 112.78 |
| 31 | B | 619 | BCR | C36-C18-C17 | -2.85 | 118.92 | 122.92 |
| 47 | N | 622 | XAT | C6-C7-C8 | -2.85 | 119.96 | 125.99 |
| 30 | A | 409 | PHO | O1D-CGD-CBD | 2.85 | 129.48 | 124.74 |
| 29 | y | 612 | CLA | C2D-C1D-ND | 2.85 | 112.20 | 110.10 |
| 29 | a | 407 | CLA | C1C-C2C-C3C | -2.85 | 103.96 | 106.96 |
| 29 | B | 607 | CLA | C2C-C1C-NC | 2.85 | 112.64 | 109.97 |
| 42 | D | 405 | PL9 | C7-C8-C9 | -2.85 | 122.05 | 126.79 |
| 45 | Y | 605 | CHL | C2C-C3C-C4C | 2.85 | 108.52 | 106.49 |
| 29 | y | 610 | CLA | C2C-C1C-NC | 2.85 | 112.64 | 109.97 |
| 29 | c | 509 | CLA | C1C-C2C-C3C | -2.85 | 103.97 | 106.96 |
| 29 | b | 609 | CLA | C1C-C2C-C3C | -2.84 | 103.97 | 106.96 |
| 29 | g | 603 | CLA | C1C-C2C-C3C | -2.84 | 103.97 | 106.96 |
| 29 | B | 608 | CLA | C2D-C1D-ND | 2.84 | 112.20 | 110.10 |
| 29 | Y | 602 | CLA | CMA-C3A-C4A | 2.84 | 119.40 | 111.77 |
| 29 | b | 608 | CLA | C2D-C1D-ND | 2.84 | 112.19 | 110.10 |
| 29 | S | 610 | CLA | C2D-C1D-ND | 2.84 | 112.19 | 110.10 |
| 29 | d | 402 | CLA | C1D-ND-C4D | -2.83 | 104.32 | 106.33 |
| 31 | c | 515 | BCR | C23-C24-C25 | -2.83 | 119.25 | 127.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | S | 609 | CLA | C2D-C1D-ND | 2.83 | 112.19 | 110.10 |
| 29 | A | 407 | CLA | C1C-C2C-C3C | -2.83 | 103.98 | 106.96 |
| 29 | b | 605 | CLA | C1C-C2C-C3C | -2.83 | 103.98 | 106.96 |
| 29 | c | 507 | CLA | C1C-C2C-C3C | -2.83 | 103.98 | 106.96 |
| 29 | G | 603 | CLA | CMA-C3A-C4A | 2.83 | 119.38 | 111.77 |
| 38 | c | 523 | DGD | O1G-C1A-C2A | 2.83 | 120.79 | 111.91 |
| 29 | G | 614 | CLA | C2D-C1D-ND | 2.83 | 112.19 | 110.10 |
| 47 | y | 622 | XAT | C38-C25-C26 | -2.83 | 117.52 | 122.26 |
| 29 | r | 610 | CLA | OBD-CAD-C3D | -2.83 | 121.72 | 128.52 |
| 29 | N | 613 | CLA | C1-C2-C3 | -2.83 | 121.15 | 126.04 |
| 29 | Y | 614 | CLA | C1-C2-C3 | -2.83 | 121.16 | 126.04 |
| 44 | h | 101 | RRX | C15-C16-C17 | -2.83 | 117.69 | 123.47 |
| 29 | g | 611 | CLA | CMA-C3A-C4A | 2.82 | 119.36 | 111.77 |
| 29 | B | 606 | CLA | C1C-C2C-C3C | -2.82 | 103.99 | 106.96 |
| 29 | b | 602 | CLA | CMA-C3A-C4A | 2.82 | 119.36 | 111.77 |
| 46 | y | 621 | LUT | C38-C25-C24 | -2.82 | 117.52 | 123.56 |
| 29 | N | 614 | CLA | C2D-C1D-ND | 2.82 | 112.18 | 110.10 |
| 29 | B | 615 | CLA | C1-O2A-CGA | 2.82 | 123.85 | 116.44 |
| 48 | N | 623 | NEX | C39-C29-C30 | -2.82 | 118.97 | 122.92 |
| 29 | n | 604 | CLA | C2D-C1D-ND | 2.82 | 112.18 | 110.10 |
| 31 | b | 618 | BCR | C23-C24-C25 | -2.82 | 119.28 | 127.20 |
| 29 | B | 602 | CLA | CMA-C3A-C4A | 2.82 | 119.35 | 111.77 |
| 29 | r | 602 | CLA | C2D-C1D-ND | 2.82 | 112.18 | 110.10 |
| 29 | c | 512 | CLA | CMB-C2B-C3B | 2.82 | 129.95 | 124.68 |
| 44 | H | 101 | RRX | C15-C16-C17 | -2.82 | 117.70 | 123.47 |
| 38 | C | 518 | DGD | O1G-C1A-C2A | 2.82 | 120.75 | 111.91 |
| 30 | A | 409 | PHO | O2D-CGD-O1D | -2.82 | 118.33 | 123.84 |
| 29 | b | 607 | CLA | C2C-C1C-NC | 2.82 | 112.61 | 109.97 |
| 29 | S | 603 | CLA | C2D-C1D-ND | 2.82 | 112.18 | 110.10 |
| 46 | G | 621 | LUT | C11-C10-C9 | -2.82 | 123.29 | 127.31 |
| 29 | d | 403 | CLA | C2D-C1D-ND | 2.81 | 112.18 | 110.10 |
| 29 | C | 513 | CLA | C2D-C1D-ND | 2.81 | 112.18 | 110.10 |
| 48 | G | 623 | NEX | C38-C25-C26 | -2.81 | 117.55 | 122.26 |
| 29 | n | 602 | CLA | C2D-C1D-ND | 2.81 | 112.18 | 110.10 |
| 29 | g | 612 | CLA | C2D-C1D-ND | 2.81 | 112.18 | 110.10 |
| 29 | b | 612 | CLA | C1-C2-C3 | -2.81 | 121.18 | 126.04 |
| 29 | r | 608 | CLA | CMA-C3A-C4A | 2.81 | 119.33 | 111.77 |
| 46 | y | 620 | LUT | C38-C25-C24 | -2.81 | 117.55 | 123.56 |
| 45 | s | 601 | CHL | CMA-C3A-C4A | 2.81 | 119.32 | 111.77 |
| 47 | R | 621 | XAT | C31-C30-C29 | -2.81 | 123.30 | 127.31 |
| 46 | g | 620 | LUT | C31-C30-C29 | -2.81 | 123.31 | 127.31 |
| 29 | Y | 602 | CLA | C2D-C1D-ND | 2.81 | 112.17 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | r | 604 | CLA | C2C-C1C-NC | 2.81 | 112.60 | 109.97 |
| 43 | f | 101 | HEM | C4C-CHD-C1D | 2.81 | 126.26 | 122.56 |
| 45 | y | 601 | CHL | C1-C2-C3 | -2.80 | 121.19 | 126.04 |
| 29 | G | 612 | CLA | CHD-C1D-ND | -2.80 | 121.88 | 124.45 |
| 48 | s | 623 | NEX | C39-C29-C30 | -2.80 | 119.00 | 122.92 |
| 29 | r | 610 | CLA | CAA-C2A-C3A | -2.80 | 105.10 | 112.78 |
| 35 | B | 620 | C7Z | C22-C23-C24 | 2.80 | 114.14 | 110.30 |
| 45 | N | 601 | CHL | CMA-C3A-C4A | 2.80 | 119.31 | 111.77 |
| 29 | n | 613 | CLA | CHD-C1D-ND | -2.80 | 121.88 | 124.45 |
| 45 | s | 606 | CHL | CMA-C3A-C4A | 2.80 | 119.30 | 111.77 |
| 29 | D | 402 | CLA | C1D-ND-C4D | -2.80 | 104.34 | 106.33 |
| 29 | b | 612 | CLA | CHD-C1D-ND | -2.80 | 121.88 | 124.45 |
| 30 | A | 408 | PHO | O2D-CGD-O1D | -2.80 | 118.36 | 123.84 |
| 29 | n | 610 | CLA | CAA-C2A-C3A | -2.80 | 105.11 | 112.78 |
| 29 | C | 501 | CLA | C2D-C1D-ND | 2.80 | 112.17 | 110.10 |
| 29 | D | 403 | CLA | C2D-C1D-ND | 2.80 | 112.17 | 110.10 |
| 29 | B | 612 | CLA | C1-C2-C3 | -2.80 | 121.20 | 126.04 |
| 31 | D | 404 | BCR | C34-C9-C10 | -2.80 | 119.00 | 122.92 |
| 29 | b | 606 | CLA | C1C-C2C-C3C | -2.80 | 104.02 | 106.96 |
| 29 | N | 610 | CLA | C2D-C1D-ND | 2.80 | 112.17 | 110.10 |
| 29 | Y | 613 | CLA | C2D-C1D-ND | 2.80 | 112.17 | 110.10 |
| 45 | Y | 607 | CHL | C1-O2A-CGA | 2.80 | 123.78 | 116.44 |
| 29 | y | 611 | CLA | CHD-C1D-ND | -2.80 | 121.89 | 124.45 |
| 45 | S | 601 | CHL | C2C-C3C-C4C | 2.79 | 108.48 | 106.49 |
| 29 | C | 504 | CLA | O2D-CGD-O1D | -2.79 | 118.38 | 123.84 |
| 35 | B | 620 | C7Z | C8-C7-C6 | -2.79 | 119.36 | 127.20 |
| 29 | C | 511 | CLA | O2A-CGA-CBA | 2.79 | 120.67 | 111.91 |
| 29 | R | 604 | CLA | C2C-C1C-NC | 2.79 | 112.59 | 109.97 |
| 45 | Y | 606 | CHL | CMA-C3A-C4A | 2.79 | 119.28 | 111.77 |
| 29 | R | 602 | CLA | C1-C2-C3 | -2.79 | 121.22 | 126.04 |
| 29 | s | 610 | CLA | C2D-C1D-ND | 2.79 | 112.16 | 110.10 |
| 46 | Y | 620 | LUT | C38-C25-C24 | -2.79 | 117.59 | 123.56 |
| 29 | G | 613 | CLA | C2D-C1D-ND | 2.79 | 112.16 | 110.10 |
| 29 | R | 611 | CLA | C2D-C1D-ND | 2.79 | 112.16 | 110.10 |
| 29 | s | 614 | CLA | C1C-C2C-C3C | -2.79 | 104.02 | 106.96 |
| 29 | b | 604 | CLA | CHD-C1D-ND | -2.79 | 121.89 | 124.45 |
| 29 | r | 613 | CLA | C2D-C1D-ND | 2.79 | 112.16 | 110.10 |
| 47 | g | 622 | XAT | C26-C27-C28 | -2.79 | 120.10 | 125.99 |
| 29 | b | 617 | CLA | C2C-C1C-NC | 2.79 | 112.58 | 109.97 |
| 29 | S | 614 | CLA | C1C-C2C-C3C | -2.79 | 104.03 | 106.96 |
| 33 | c | 521 | LMG | O8-C28-C29 | 2.79 | 120.65 | 111.91 |
| 46 | g | 621 | LUT | C31-C30-C29 | -2.79 | 123.33 | 127.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | G | 609 | CHL | C1-O2A-CGA | 2.79 | 123.75 | 116.44 |
| 45 | g | 606 | CHL | C1-O2A-CGA | 2.78 | 123.75 | 116.44 |
| 29 | c | 509 | CLA | O2D-CGD-O1D | -2.78 | 118.39 | 123.84 |
| 29 | C | 513 | CLA | CMA-C3A-C4A | 2.78 | 119.25 | 111.77 |
| 29 | B | 617 | CLA | O2A-CGA-CBA | 2.78 | 120.64 | 111.91 |
| 29 | A | 405 | CLA | C2D-C1D-ND | 2.78 | 112.16 | 110.10 |
| 29 | N | 613 | CLA | CHD-C1D-ND | -2.78 | 121.90 | 124.45 |
| 29 | c | 504 | CLA | O2D-CGD-O1D | -2.78 | 118.40 | 123.84 |
| 29 | y | 604 | CLA | C1-C2-C3 | -2.78 | 121.23 | 126.04 |
| 29 | B | 617 | CLA | C2D-C1D-ND | 2.78 | 112.15 | 110.10 |
| 29 | c | 511 | CLA | O2A-CGA-CBA | 2.78 | 120.63 | 111.91 |
| 29 | y | 608 | CLA | CMA-C3A-C4A | 2.78 | 119.24 | 111.77 |
| 29 | g | 613 | CLA | C2D-C1D-ND | 2.78 | 112.15 | 110.10 |
| 31 | B | 619 | BCR | C23-C22-C21 | 2.78 | 123.20 | 118.94 |
| 29 | r | 602 | CLA | C1-C2-C3 | -2.78 | 121.24 | 126.04 |
| 31 | c | 514 | BCR | C23-C24-C25 | -2.78 | 119.40 | 127.20 |
| 45 | y | 609 | CHL | C2C-C3C-C4C | 2.78 | 108.47 | 106.49 |
| 29 | a | 410 | CLA | C1C-C2C-C3C | -2.78 | 104.04 | 106.96 |
| 47 | G | 622 | XAT | C6-C7-C8 | -2.77 | 120.13 | 125.99 |
| 47 | G | 622 | XAT | O24-C25-C24 | 2.77 | 115.47 | 113.38 |
| 45 | G | 609 | CHL | C1B-CHB-C4A | -2.77 | 124.62 | 130.12 |
| 29 | g | 612 | CLA | CMA-C3A-C4A | 2.77 | 119.23 | 111.77 |
| 39 | D | 409 | LHG | O8-C23-C24 | 2.77 | 120.61 | 111.91 |
| 29 | G | 604 | CLA | C2D-C1D-ND | 2.77 | 112.15 | 110.10 |
| 29 | Y | 611 | CLA | C1-C2-C3 | -2.77 | 121.25 | 126.04 |
| 29 | n | 613 | CLA | O2A-CGA-CBA | 2.77 | 120.61 | 111.91 |
| 49 | s | 625 | LPX | O3-P1-O4 | 2.77 | 125.95 | 112.24 |
| 29 | r | 603 | CLA | C1-C2-C3 | -2.77 | 121.25 | 126.04 |
| 29 | b | 616 | CLA | C2D-C1D-ND | 2.77 | 112.15 | 110.10 |
| 45 | y | 601 | CHL | C3C-C4C-NC | -2.77 | 107.47 | 110.57 |
| 31 | c | 515 | BCR | C33-C5-C4 | 2.77 | 118.94 | 113.62 |
| 29 | a | 406 | CLA | CMB-C2B-C3B | 2.77 | 129.86 | 124.68 |
| 45 | R | 606 | CHL | CHB-C4A-NA | 2.77 | 128.34 | 124.51 |
| 29 | B | 605 | CLA | C1C-C2C-C3C | -2.77 | 104.05 | 106.96 |
| 29 | s | 604 | CLA | C1C-C2C-C3C | -2.77 | 104.05 | 106.96 |
| 49 | S | 625 | LPX | O3-P1-O4 | 2.77 | 125.92 | 112.24 |
| 38 | C | 519 | DGD | O1G-C1A-C2A | 2.77 | 120.59 | 111.91 |
| 29 | G | 602 | CLA | C2D-C1D-ND | 2.77 | 112.14 | 110.10 |
| 29 | c | 507 | CLA | O2D-CGD-O1D | -2.77 | 118.43 | 123.84 |
| 29 | g | 612 | CLA | CHD-C1D-ND | -2.77 | 121.91 | 124.45 |
| 29 | Y | 611 | CLA | C2D-C1D-ND | 2.77 | 112.14 | 110.10 |
| 45 | Y | 607 | CHL | CMA-C3A-C4A | 2.77 | 119.20 | 111.77 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | R | 602 | CLA | CMA-C3A-C4A | 2.76 | 119.20 | 111.77 |
| 31 | c | 516 | BCR | C34-C9-C10 | -2.76 | 119.05 | 122.92 |
| 29 | s | 611 | CLA | C1-C2-C3 | -2.76 | 121.27 | 126.04 |
| 39 | d | 410 | LHG | O8-C23-C24 | 2.76 | 120.57 | 111.91 |
| 29 | n | 613 | CLA | C2D-C1D-ND | 2.76 | 112.14 | 110.10 |
| 29 | y | 608 | CLA | C2D-C1D-ND | 2.76 | 112.14 | 110.10 |
| 29 | b | 616 | CLA | C1-C2-C3 | -2.76 | 121.27 | 126.04 |
| 29 | c | 511 | CLA | CMA-C3A-C4A | 2.76 | 119.19 | 111.77 |
| 29 | S | 610 | CLA | C2C-C1C-NC | 2.76 | 112.56 | 109.97 |
| 29 | s | 617 | CLA | C1C-C2C-C3C | -2.76 | 104.06 | 106.96 |
| 29 | B | 615 | CLA | C1C-C2C-C3C | -2.75 | 104.06 | 106.96 |
| 29 | C | 512 | CLA | CHD-C1D-ND | -2.75 | 121.92 | 124.45 |
| 29 | y | 612 | CLA | CHD-C1D-ND | -2.75 | 121.92 | 124.45 |
| 29 | B | 613 | CLA | O2D-CGD-O1D | -2.75 | 118.45 | 123.84 |
| 31 | b | 619 | BCR | C28-C27-C26 | -2.75 | 109.16 | 114.08 |
| 29 | b | 616 | CLA | C1C-C2C-C3C | -2.75 | 104.06 | 106.96 |
| 29 | Y | 608 | CLA | C2D-C1D-ND | 2.75 | 112.13 | 110.10 |
| 29 | b | 611 | CLA | C2D-C1D-ND | 2.75 | 112.13 | 110.10 |
| 29 | n | 603 | CLA | CMA-C3A-C4A | 2.75 | 119.17 | 111.77 |
| 29 | a | 410 | CLA | CAA-C2A-C3A | -2.75 | 105.24 | 112.78 |
| 29 | b | 603 | CLA | C1C-C2C-C3C | -2.75 | 104.06 | 106.96 |
| 45 | S | 606 | CHL | C2C-C3C-C4C | 2.75 | 108.45 | 106.49 |
| 29 | c | 501 | CLA | C2D-C1D-ND | 2.75 | 112.13 | 110.10 |
| 46 | n | 620 | LUT | C10-C11-C12 | -2.75 | 114.64 | 123.22 |
| 29 | c | 512 | CLA | C1-C2-C3 | -2.75 | 121.29 | 126.04 |
| 29 | s | 614 | CLA | C1-O2A-CGA | 2.75 | 123.66 | 116.44 |
| 29 | s | 610 | CLA | C2C-C1C-NC | 2.75 | 112.55 | 109.97 |
| 29 | B | 602 | CLA | C1C-C2C-C3C | -2.75 | 104.07 | 106.96 |
| 44 | H | 101 | RRX | C33-C5-C6 | -2.75 | 121.44 | 124.53 |
| 45 | N | 607 | CHL | C1-C2-C3 | -2.75 | 121.29 | 126.04 |
| 29 | c | 505 | CLA | CHD-C1D-ND | -2.75 | 121.93 | 124.45 |
| 29 | g | 604 | CLA | C2D-C1D-ND | 2.75 | 112.13 | 110.10 |
| 46 | Y | 621 | LUT | C38-C25-C24 | -2.75 | 117.68 | 123.56 |
| 31 | C | 515 | BCR | C33-C5-C4 | 2.75 | 118.89 | 113.62 |
| 42 | d | 405 | PL9 | C40-C39-C41 | 2.74 | 119.89 | 115.27 |
| 29 | d | 403 | CLA | O2D-CGD-O1D | -2.74 | 118.47 | 123.84 |
| 29 | b | 615 | CLA | C1-O2A-CGA | 2.74 | 123.64 | 116.44 |
| 45 | r | 607 | CHL | CHB-C4A-NA | 2.74 | 128.31 | 124.51 |
| 45 | y | 607 | CHL | CHB-C4A-NA | 2.74 | 128.31 | 124.51 |
| 29 | Y | 614 | CLA | C1C-C2C-C3C | -2.74 | 104.07 | 106.96 |
| 29 | c | 513 | CLA | C2C-C1C-NC | 2.74 | 112.54 | 109.97 |
| 46 | Y | 620 | LUT | C15-C35-C34 | -2.74 | 117.86 | 123.47 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 46 | y | 621 | LUT | C18-C5-C6 | -2.74 | 121.45 | 124.53 |
| 46 | Y | 620 | LUT | C11-C10-C9 | -2.74 | 123.40 | 127.31 |
| 29 | g | 602 | CLA | CMA-C3A-C4A | 2.74 | 119.14 | 111.77 |
| 35 | B | 620 | C7Z | C31-C30-C29 | -2.74 | 123.40 | 127.31 |
| 46 | N | 621 | LUT | C11-C10-C9 | -2.74 | 123.40 | 127.31 |
| 29 | s | 603 | CLA | CMA-C3A-C4A | 2.74 | 119.14 | 111.77 |
| 29 | y | 612 | CLA | C1-C2-C3 | -2.74 | 121.30 | 126.04 |
| 31 | A | 411 | BCR | C38-C26-C25 | -2.74 | 121.45 | 124.53 |
| 45 | G | 601 | CHL | CHB-C4A-NA | 2.74 | 128.30 | 124.51 |
| 29 | R | 613 | CLA | C2D-C1D-ND | 2.74 | 112.12 | 110.10 |
| 45 | N | 607 | CHL | C4A-NA-C1A | 2.74 | 107.94 | 106.71 |
| 29 | A | 406 | CLA | CMA-C3A-C4A | 2.74 | 119.13 | 111.77 |
| 29 | c | 513 | CLA | C1-C2-C3 | -2.74 | 121.31 | 126.04 |
| 29 | N | 602 | CLA | O2A-CGA-CBA | 2.74 | 120.49 | 111.91 |
| 46 | Y | 620 | LUT | C10-C11-C12 | -2.73 | 114.68 | 123.22 |
| 29 | n | 610 | CLA | O2A-CGA-CBA | 2.73 | 120.49 | 111.91 |
| 33 | C | 521 | LMG | O8-C28-C29 | 2.73 | 120.49 | 111.91 |
| 46 | Y | 621 | LUT | C31-C30-C29 | -2.73 | 123.41 | 127.31 |
| 45 | Y | 601 | CHL | CHB-C4A-NA | 2.73 | 128.29 | 124.51 |
| 29 | b | 613 | CLA | O2D-CGD-O1D | -2.73 | 118.50 | 123.84 |
| 29 | a | 410 | CLA | O2D-CGD-O1D | -2.73 | 118.50 | 123.84 |
| 47 | n | 622 | XAT | C6-C7-C8 | -2.73 | 120.22 | 125.99 |
| 29 | g | 604 | CLA | O2D-CGD-O1D | -2.73 | 118.50 | 123.84 |
| 29 | R | 608 | CLA | C2D-C1D-ND | 2.73 | 112.11 | 110.10 |
| 29 | S | 611 | CLA | CMA-C3A-C4A | 2.73 | 119.11 | 111.77 |
| 29 | S | 610 | CLA | O2A-CGA-CBA | 2.73 | 120.47 | 111.91 |
| 29 | y | 614 | CLA | C2D-C1D-ND | 2.73 | 112.11 | 110.10 |
| 45 | Y | 601 | CHL | C1-C2-C3 | -2.73 | 121.33 | 126.04 |
| 39 | D | 410 | LHG | O8-C23-C24 | 2.73 | 120.46 | 111.91 |
| 29 | N | 611 | CLA | C2D-C1D-ND | 2.73 | 112.11 | 110.10 |
| 38 | C | 520 | DGD | O1G-C1A-C2A | 2.73 | 120.46 | 111.91 |
| 29 | c | 505 | CLA | C1C-C2C-C3C | -2.73 | 104.09 | 106.96 |
| 29 | S | 605 | CLA | C2D-C1D-ND | 2.72 | 112.11 | 110.10 |
| 29 | N | 611 | CLA | O2D-CGD-O1D | -2.72 | 118.51 | 123.84 |
| 29 | B | 609 | CLA | C2D-C1D-ND | 2.72 | 112.11 | 110.10 |
| 46 | R | 620 | LUT | C2-C3-C4 | -2.72 | 106.58 | 110.30 |
| 29 | r | 609 | CLA | O2A-CGA-CBA | 2.72 | 120.45 | 111.91 |
| 29 | r | 612 | CLA | C2D-C1D-ND | 2.72 | 112.11 | 110.10 |
| 29 | B | 604 | CLA | CHD-C1D-ND | -2.72 | 121.95 | 124.45 |
| 31 | A | 411 | BCR | C33-C5-C4 | 2.72 | 118.84 | 113.62 |
| 29 | g | 610 | CLA | CMA-C3A-C4A | 2.72 | 119.08 | 111.77 |
| 29 | C | 507 | CLA | O2D-CGD-O1D | -2.72 | 118.52 | 123.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 31 | b | 619 | BCR | C27-C26-C25 | -2.72 | 118.78 | 122.73 |
| 45 | Y | 609 | CHL | C1-O2A-CGA | 2.72 | 123.57 | 116.44 |
| 45 | s | 606 | CHL | C2C-C3C-C4C | 2.72 | 108.43 | 106.49 |
| 29 | A | 410 | CLA | CAA-C2A-C3A | -2.72 | 105.34 | 112.78 |
| 48 | g | 623 | NEX | C31-C30-C29 | 2.72 | 131.19 | 127.31 |
| 29 | B | 616 | CLA | CHD-C1D-ND | -2.72 | 121.96 | 124.45 |
| 48 | s | 623 | NEX | C38-C25-C26 | -2.72 | 117.71 | 122.26 |
| 29 | b | 615 | CLA | CMB-C2B-C1B | -2.72 | 124.29 | 128.46 |
| 30 | a | 408 | PHO | O2D-CGD-O1D | -2.71 | 118.53 | 123.84 |
| 29 | C | 506 | CLA | C1C-C2C-C3C | -2.71 | 104.10 | 106.96 |
| 29 | R | 608 | CLA | C1C-C2C-C3C | -2.71 | 104.10 | 106.96 |
| 29 | A | 410 | CLA | O2D-CGD-O1D | -2.71 | 118.53 | 123.84 |
| 48 | g | 623 | NEX | C38-C25-C26 | -2.71 | 117.71 | 122.26 |
| 39 | L | 101 | LHG | O8-C23-C24 | 2.71 | 120.41 | 111.91 |
| 29 | N | 604 | CLA | C1C-C2C-C3C | -2.71 | 104.11 | 106.96 |
| 29 | c | 501 | CLA | C1C-C2C-C3C | -2.71 | 104.11 | 106.96 |
| 46 | s | 621 | LUT | C38-C25-C24 | -2.71 | 117.76 | 123.56 |
| 31 | B | 618 | BCR | C15-C14-C13 | -2.71 | 123.44 | 127.31 |
| 29 | g | 610 | CLA | C2D-C1D-ND | 2.71 | 112.10 | 110.10 |
| 29 | N | 614 | CLA | C1C-C2C-C3C | -2.71 | 104.11 | 106.96 |
| 29 | c | 506 | CLA | C1C-C2C-C3C | -2.71 | 104.11 | 106.96 |
| 31 | b | 619 | BCR | C36-C18-C17 | -2.71 | 119.13 | 122.92 |
| 29 | s | 614 | CLA | O2A-CGA-CBA | 2.71 | 120.40 | 111.91 |
| 29 | y | 614 | CLA | C1C-C2C-C3C | -2.71 | 104.11 | 106.96 |
| 29 | B | 616 | CLA | O2D-CGD-O1D | -2.70 | 118.55 | 123.84 |
| 29 | r | 610 | CLA | O2A-CGA-CBA | 2.70 | 120.39 | 111.91 |
| 29 | C | 513 | CLA | C2C-C1C-NC | 2.70 | 112.50 | 109.97 |
| 29 | b | 615 | CLA | C1C-C2C-C3C | -2.70 | 104.11 | 106.96 |
| 33 | j | 101 | LMG | O8-C28-C29 | 2.70 | 120.39 | 111.91 |
| 29 | y | 611 | CLA | O2D-CGD-O1D | -2.70 | 118.55 | 123.84 |
| 45 | G | 609 | CHL | CMA-C3A-C4A | 2.70 | 119.04 | 111.77 |
| 29 | C | 505 | CLA | C1-C2-C3 | -2.70 | 121.37 | 126.04 |
| 29 | g | 602 | CLA | C2C-C1C-NC | 2.70 | 112.50 | 109.97 |
| 29 | N | 602 | CLA | C1C-C2C-C3C | -2.70 | 104.12 | 106.96 |
| 29 | c | 503 | CLA | C2D-C1D-ND | 2.70 | 112.09 | 110.10 |
| 29 | B | 615 | CLA | OBD-CAD-C3D | -2.70 | 122.02 | 128.52 |
| 31 | c | 514 | BCR | C36-C18-C17 | -2.70 | 119.14 | 122.92 |
| 29 | n | 614 | CLA | C1C-C2C-C3C | -2.70 | 104.12 | 106.96 |
| 39 | S | 624 | LHG | O8-C23-C24 | 2.70 | 120.38 | 111.91 |
| 29 | n | 611 | CLA | C2D-C1D-ND | 2.70 | 112.09 | 110.10 |
| 29 | b | 602 | CLA | C1C-C2C-C3C | -2.70 | 104.12 | 106.96 |
| 29 | A | 406 | CLA | CMB-C2B-C3B | 2.70 | 129.73 | 124.68 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | Y | 602 | CLA | C2C-C1C-NC | 2.70 | 112.50 | 109.97 |
| 38 | c | 519 | DGD | O1G-C1A-C2A | 2.70 | 120.38 | 111.91 |
| 46 | N | 620 | LUT | C7-C8-C9 | -2.70 | 122.16 | 126.23 |
| 29 | b | 610 | CLA | O2D-CGD-O1D | -2.70 | 118.57 | 123.84 |
| 29 | C | 511 | CLA | C2D-C1D-ND | 2.70 | 112.09 | 110.10 |
| 29 | S | 611 | CLA | C1C-C2C-C3C | -2.70 | 104.12 | 106.96 |
| 29 | b | 605 | CLA | O2D-CGD-O1D | -2.69 | 118.57 | 123.84 |
| 46 | n | 621 | LUT | C38-C25-C24 | -2.69 | 117.80 | 123.56 |
| 29 | a | 406 | CLA | C2D-C1D-ND | 2.69 | 112.09 | 110.10 |
| 46 | N | 620 | LUT | C31-C30-C29 | -2.69 | 123.47 | 127.31 |
| 29 | D | 403 | CLA | O2D-CGD-O1D | -2.69 | 118.58 | 123.84 |
| 46 | N | 620 | LUT | C10-C11-C12 | -2.69 | 114.82 | 123.22 |
| 29 | r | 603 | CLA | C2D-C1D-ND | 2.69 | 112.09 | 110.10 |
| 29 | S | 604 | CLA | C2D-C1D-ND | 2.69 | 112.09 | 110.10 |
| 29 | y | 602 | CLA | CMA-C3A-C4A | 2.69 | 119.00 | 111.77 |
| 39 | l | 101 | LHG | O8-C23-C24 | 2.69 | 120.35 | 111.91 |
| 29 | G | 602 | CLA | C2C-C1C-NC | 2.69 | 112.49 | 109.97 |
| 29 | g | 614 | CLA | C2D-C1D-ND | 2.69 | 112.08 | 110.10 |
| 45 | G | 609 | CHL | C3C-C4C-NC | -2.68 | 107.56 | 110.57 |
| 29 | R | 603 | CLA | C1C-C2C-C3C | -2.68 | 104.13 | 106.96 |
| 29 | A | 410 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 29 | y | 614 | CLA | C1-C2-C3 | -2.68 | 121.40 | 126.04 |
| 29 | S | 611 | CLA | C2D-C1D-ND | 2.68 | 112.08 | 110.10 |
| 29 | g | 614 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 48 | n | 623 | NEX | C16-C1-C6 | -2.68 | 108.07 | 110.47 |
| 44 | h | 101 | RRX | C38-C26-C27 | 2.68 | 119.32 | 114.36 |
| 33 | a | 413 | LMG | C8-O7-C10 | -2.68 | 111.19 | 117.79 |
| 29 | R | 612 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 29 | n | 612 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 46 | N | 620 | LUT | C11-C10-C9 | -2.68 | 123.49 | 127.31 |
| 29 | G | 612 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 29 | s | 611 | CLA | CMA-C3A-C4A | 2.68 | 118.97 | 111.77 |
| 29 | S | 613 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 31 | B | 619 | BCR | C28-C27-C26 | -2.68 | 109.30 | 114.08 |
| 29 | S | 617 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 38 | C | 519 | DGD | C2G-O2G-C1B | -2.68 | 111.20 | 117.79 |
| 29 | C | 511 | CLA | C1C-C2C-C3C | -2.68 | 104.14 | 106.96 |
| 29 | n | 602 | CLA | O2A-CGA-CBA | 2.67 | 120.30 | 111.91 |
| 30 | a | 408 | PHO | O1D-CGD-CBD | 2.67 | 129.19 | 124.74 |
| 29 | G | 613 | CLA | C1C-C2C-C3C | -2.67 | 104.14 | 106.96 |
| 29 | b | 602 | CLA | O2D-CGD-O1D | -2.67 | 118.61 | 123.84 |
| 29 | b | 617 | CLA | O2A-CGA-CBA | 2.67 | 120.30 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 605 | CLA | CHA-C4D-ND | 2.67 | 138.09 | 132.50 |
| 29 | G | 611 | CLA | C1C-C2C-C3C | -2.67 | 104.15 | 106.96 |
| 45 | g | 601 | CHL | CHB-C4A-NA | 2.67 | 128.21 | 124.51 |
| 31 | B | 618 | BCR | C3-C4-C5 | -2.67 | 109.31 | 114.08 |
| 45 | Y | 601 | CHL | C3C-C4C-NC | -2.67 | 107.58 | 110.57 |
| 29 | c | 511 | CLA | C2D-C1D-ND | 2.67 | 112.07 | 110.10 |
| 29 | R | 613 | CLA | CMA-C3A-C4A | 2.67 | 118.95 | 111.77 |
| 29 | B | 616 | CLA | C1-C2-C3 | -2.67 | 121.43 | 126.04 |
| 29 | r | 603 | CLA | C1C-C2C-C3C | -2.67 | 104.15 | 106.96 |
| 47 | G | 622 | XAT | O4-C5-C4 | -2.67 | 111.38 | 113.38 |
| 29 | G | 614 | CLA | C1C-C2C-C3C | -2.67 | 104.15 | 106.96 |
| 29 | C | 511 | CLA | CMA-C3A-C4A | 2.67 | 118.94 | 111.77 |
| 29 | C | 513 | CLA | O2D-CGD-O1D | -2.67 | 118.62 | 123.84 |
| 29 | r | 613 | CLA | O2D-CGD-O1D | -2.67 | 118.62 | 123.84 |
| 45 | n | 607 | CHL | C4A-NA-C1A | 2.67 | 107.91 | 106.71 |
| 29 | B | 613 | CLA | C2D-C1D-ND | 2.67 | 112.07 | 110.10 |
| 29 | g | 611 | CLA | C1C-C2C-C3C | -2.67 | 104.15 | 106.96 |
| 29 | Y | 603 | CLA | CMA-C3A-C4A | 2.67 | 118.94 | 111.77 |
| 29 | Y | 602 | CLA | O2A-CGA-CBA | 2.67 | 120.27 | 111.91 |
| 29 | R | 612 | CLA | C2D-C1D-ND | 2.67 | 112.07 | 110.10 |
| 45 | N | 601 | CHL | CHB-C4A-NA | 2.66 | 128.20 | 124.51 |
| 29 | b | 611 | CLA | O2D-CGD-O1D | -2.66 | 118.63 | 123.84 |
| 29 | B | 616 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 29 | S | 602 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 29 | r | 612 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 29 | Y | 613 | CLA | CMB-C2B-C3B | 2.66 | 129.66 | 124.68 |
| 31 | b | 619 | BCR | C23-C22-C21 | 2.66 | 123.03 | 118.94 |
| 29 | B | 611 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 38 | c | 518 | DGD | O6D-C5D-C6D | 2.66 | 112.04 | 106.67 |
| 39 | s | 624 | LHG | C5-O7-C7 | -2.66 | 111.24 | 117.79 |
| 29 | b | 603 | CLA | CMA-C3A-C4A | 2.66 | 118.93 | 111.77 |
| 31 | a | 411 | BCR | C35-C13-C12 | 2.66 | 122.27 | 118.08 |
| 39 | c | 625 | LHG | O8-C23-C24 | 2.66 | 120.26 | 111.91 |
| 39 | s | 624 | LHG | O8-C23-C24 | 2.66 | 120.26 | 111.91 |
| 29 | C | 505 | CLA | CHD-C1D-ND | -2.66 | 122.01 | 124.45 |
| 29 | S | 612 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 29 | S | 603 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 29 | c | 511 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 48 | Y | 623 | NEX | C38-C25-C26 | -2.66 | 117.81 | 122.26 |
| 29 | S | 609 | CLA | C1C-C2C-C3C | -2.66 | 104.16 | 106.96 |
| 29 | G | 610 | CLA | CMA-C3A-C4A | 2.66 | 118.91 | 111.77 |
| 43 | F | 101 | HEM | C4D-ND-C1D | 2.66 | 107.82 | 105.07 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 35 | b | 620 | C7Z | C27-C28-C29 | -2.66 | 122.22 | 126.23 |
| 45 | Y | 607 | CHL | CHD-C1D-ND | -2.66 | 122.01 | 124.45 |
| 31 | c | 517 | BCR | C36-C18-C17 | -2.65 | 119.20 | 122.92 |
| 36 | C | 524 | DGA | OG1-CA1-CA2 | 2.65 | 120.24 | 111.91 |
| 29 | C | 513 | CLA | CMB-C2B-C3B | 2.65 | 129.65 | 124.68 |
| 31 | C | 517 | BCR | C31-C1-C6 | -2.65 | 105.99 | 110.30 |
| 47 | R | 621 | XAT | C8-C9-C10 | 2.65 | 123.01 | 118.94 |
| 29 | c | 512 | CLA | C1C-C2C-C3C | -2.65 | 104.17 | 106.96 |
| 29 | s | 605 | CLA | O2A-CGA-CBA | 2.65 | 120.22 | 111.91 |
| 29 | s | 613 | CLA | O1D-CGD-CBD | -2.65 | 119.06 | 124.48 |
| 36 | c | 524 | DGA | OG1-CA1-CA2 | 2.65 | 120.22 | 111.91 |
| 45 | G | 607 | CHL | CMA-C3A-C4A | 2.65 | 118.89 | 111.77 |
| 31 | b | 619 | BCR | C1-C6-C5 | -2.65 | 118.88 | 122.61 |
| 29 | g | 603 | CLA | CAA-C2A-C3A | -2.65 | 105.53 | 112.78 |
| 45 | s | 606 | CHL | C4D-CHA-C1A | 2.65 | 124.47 | 121.25 |
| 35 | b | 620 | C7Z | C28-C27-C26 | -2.65 | 119.77 | 127.20 |
| 31 | a | 411 | BCR | C38-C26-C25 | -2.65 | 121.56 | 124.53 |
| 48 | S | 622 | NEX | C38-C25-C26 | -2.65 | 117.83 | 122.26 |
| 29 | C | 503 | CLA | C1C-C2C-C3C | -2.65 | 104.17 | 106.96 |
| 29 | Y | 612 | CLA | CHD-C1D-ND | -2.65 | 122.02 | 124.45 |
| 29 | b | 607 | CLA | O2D-CGD-O1D | -2.65 | 118.67 | 123.84 |
| 29 | b | 614 | CLA | O2D-CGD-O1D | -2.64 | 118.67 | 123.84 |
| 29 | c | 512 | CLA | CHD-C1D-ND | -2.64 | 122.02 | 124.45 |
| 29 | N | 612 | CLA | C2D-C1D-ND | 2.64 | 112.05 | 110.10 |
| 29 | R | 609 | CLA | O2A-CGA-CBA | 2.64 | 120.20 | 111.91 |
| 31 | C | 517 | BCR | C23-C24-C25 | -2.64 | 119.78 | 127.20 |
| 29 | B | 602 | CLA | CMD-C2D-C3D | -2.64 | 121.54 | 127.61 |
| 29 | b | 607 | CLA | CMB-C2B-C3B | 2.64 | 129.62 | 124.68 |
| 29 | b | 610 | CLA | C2C-C1C-NC | 2.64 | 112.45 | 109.97 |
| 29 | y | 602 | CLA | O2A-CGA-CBA | 2.64 | 120.20 | 111.91 |
| 29 | B | 602 | CLA | O2D-CGD-O1D | -2.64 | 118.67 | 123.84 |
| 29 | b | 602 | CLA | CMD-C2D-C3D | -2.64 | 121.54 | 127.61 |
| 29 | g | 613 | CLA | C1C-C2C-C3C | -2.64 | 104.18 | 106.96 |
| 29 | r | 608 | CLA | C1C-C2C-C3C | -2.64 | 104.18 | 106.96 |
| 29 | r | 608 | CLA | C2D-C1D-ND | 2.64 | 112.05 | 110.10 |
| 31 | c | 516 | BCR | C37-C22-C23 | 2.64 | 122.23 | 118.08 |
| 48 | y | 623 | NEX | C38-C25-C26 | -2.64 | 117.84 | 122.26 |
| 46 | n | 620 | LUT | C31-C30-C29 | -2.64 | 123.55 | 127.31 |
| 29 | B | 610 | CLA | O2D-CGD-O1D | -2.64 | 118.68 | 123.84 |
| 29 | R | 608 | CLA | CMA-C3A-C4A | 2.64 | 118.86 | 111.77 |
| 29 | C | 509 | CLA | O2D-CGD-O1D | -2.64 | 118.68 | 123.84 |
| 29 | s | 611 | CLA | O2D-CGD-O1D | -2.64 | 118.68 | 123.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 38 | c | 520 | DGD | O1G-C1A-C2A | 2.64 | 120.18 | 111.91 |
| 45 | N | 601 | CHL | C1-O2A-CGA | 2.64 | 123.36 | 116.44 |
| 29 | Y | 604 | CLA | C1-C2-C3 | -2.64 | 121.48 | 126.04 |
| 45 | y | 609 | CHL | C1-O2A-CGA | 2.64 | 123.36 | 116.44 |
| 29 | Y | 613 | CLA | C1C-C2C-C3C | -2.63 | 104.19 | 106.96 |
| 29 | s | 605 | CLA | C2D-C1D-ND | 2.63 | 112.05 | 110.10 |
| 29 | G | 603 | CLA | CAA-C2A-C3A | -2.63 | 105.57 | 112.78 |
| 29 | s | 605 | CLA | CHA-C4D-ND | 2.63 | 138.01 | 132.50 |
| 29 | c | 506 | CLA | CMA-C3A-C4A | 2.63 | 118.85 | 111.77 |
| 46 | S | 621 | LUT | C38-C25-C24 | -2.63 | 117.93 | 123.56 |
| 45 | y | 607 | CHL | C1-O2A-CGA | 2.63 | 123.35 | 116.44 |
| 29 | B | 613 | CLA | C2C-C1C-NC | 2.63 | 112.44 | 109.97 |
| 39 | d | 409 | LHG | O8-C23-C24 | 2.63 | 120.17 | 111.91 |
| 29 | C | 505 | CLA | C1C-C2C-C3C | -2.63 | 104.19 | 106.96 |
| 29 | S | 611 | CLA | C1-C2-C3 | -2.63 | 121.50 | 126.04 |
| 29 | s | 614 | CLA | C1-C2-C3 | -2.63 | 121.50 | 126.04 |
| 29 | n | 610 | CLA | CMA-C3A-C4A | 2.63 | 118.84 | 111.77 |
| 29 | b | 611 | CLA | C1C-C2C-C3C | -2.63 | 104.19 | 106.96 |
| 31 | b | 618 | BCR | C15-C14-C13 | -2.63 | 123.56 | 127.31 |
| 47 | N | 622 | XAT | C18-C5-C6 | -2.63 | 117.86 | 122.26 |
| 29 | d | 403 | CLA | C1C-C2C-C3C | -2.63 | 104.19 | 106.96 |
| 29 | r | 609 | CLA | C1C-C2C-C3C | -2.63 | 104.19 | 106.96 |
| 50 | s | 626 | 3PH | O31-C31-C32 | 2.63 | 120.15 | 111.91 |
| 29 | Y | 604 | CLA | C2D-C1D-ND | 2.63 | 112.04 | 110.10 |
| 29 | Y | 614 | CLA | C2D-C1D-ND | 2.63 | 112.04 | 110.10 |
| 39 | S | 624 | LHG | C5-O7-C7 | -2.62 | 111.33 | 117.79 |
| 48 | n | 623 | NEX | C1-C2-C3 | 2.62 | 119.57 | 113.64 |
| 29 | S | 602 | CLA | CMA-C3A-C4A | 2.62 | 118.82 | 111.77 |
| 47 | n | 622 | XAT | C18-C5-C6 | -2.62 | 117.86 | 122.26 |
| 29 | s | 612 | CLA | C1C-C2C-C3C | -2.62 | 104.20 | 106.96 |
| 29 | s | 603 | CLA | CHD-C1D-ND | -2.62 | 122.04 | 124.45 |
| 29 | S | 613 | CLA | CHA-C4D-ND | 2.62 | 137.98 | 132.50 |
| 29 | C | 501 | CLA | C1C-C2C-C3C | -2.62 | 104.20 | 106.96 |
| 29 | r | 611 | CLA | C2D-C1D-ND | 2.62 | 112.04 | 110.10 |
| 38 | C | 518 | DGD | O6D-C5D-C6D | 2.62 | 111.96 | 106.67 |
| 29 | C | 505 | CLA | C1-O2A-CGA | 2.62 | 123.32 | 116.44 |
| 29 | c | 513 | CLA | CMA-C3A-C4A | 2.62 | 118.82 | 111.77 |
| 29 | c | 510 | CLA | CMD-C2D-C3D | -2.62 | 121.59 | 127.61 |
| 29 | Y | 612 | CLA | O2D-CGD-O1D | -2.62 | 118.72 | 123.84 |
| 48 | Y | 623 | NEX | C4-C3-C2 | 2.62 | 115.83 | 110.77 |
| 29 | y | 612 | CLA | C1C-C2C-C3C | -2.62 | 104.20 | 106.96 |
| 29 | C | 505 | CLA | O2A-CGA-CBA | 2.62 | 120.13 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | A | 405 | CLA | C6-C5-C3 | -2.62 | 106.59 | 113.45 |
| 29 | C | 512 | CLA | C1C-C2C-C3C | -2.62 | 104.20 | 106.96 |
| 29 | y | 613 | CLA | C1C-C2C-C3C | -2.62 | 104.20 | 106.96 |
| 46 | N | 621 | LUT | C38-C25-C24 | -2.62 | 117.96 | 123.56 |
| 29 | Y | 610 | CLA | C2C-C1C-NC | 2.62 | 112.42 | 109.97 |
| 29 | N | 614 | CLA | O2D-CGD-O1D | -2.62 | 118.72 | 123.84 |
| 45 | Y | 607 | CHL | C4A-NA-C1A | 2.62 | 107.88 | 106.71 |
| 29 | B | 605 | CLA | O2D-CGD-O1D | -2.62 | 118.72 | 123.84 |
| 29 | c | 507 | CLA | C2D-C1D-ND | 2.62 | 112.03 | 110.10 |
| 42 | D | 405 | PL9 | C40-C39-C41 | 2.62 | 119.67 | 115.27 |
| 29 | B | 609 | CLA | CHA-C4D-ND | 2.62 | 137.97 | 132.50 |
| 29 | B | 607 | CLA | CMB-C2B-C3B | 2.62 | 129.57 | 124.68 |
| 31 | a | 411 | BCR | C33-C5-C4 | 2.62 | 118.64 | 113.62 |
| 48 | G | 623 | NEX | C1-C2-C3 | 2.62 | 119.55 | 113.64 |
| 29 | b | 613 | CLA | C2C-C1C-NC | 2.62 | 112.42 | 109.97 |
| 31 | C | 514 | BCR | C36-C18-C17 | -2.61 | 119.26 | 122.92 |
| 29 | g | 602 | CLA | O2D-CGD-O1D | -2.61 | 118.73 | 123.84 |
| 29 | b | 616 | CLA | O2D-CGD-O1D | -2.61 | 118.73 | 123.84 |
| 29 | y | 614 | CLA | O2D-CGD-O1D | -2.61 | 118.73 | 123.84 |
| 29 | y | 613 | CLA | O2A-CGA-CBA | 2.61 | 120.11 | 111.91 |
| 29 | c | 513 | CLA | O2A-CGA-CBA | 2.61 | 120.11 | 111.91 |
| 35 | B | 620 | C7Z | C28-C27-C26 | -2.61 | 119.87 | 127.20 |
| 42 | D | 405 | PL9 | C22-C23-C24 | -2.61 | 121.37 | 127.66 |
| 50 | i | 101 | 3PH | O31-C31-C32 | 2.61 | 120.10 | 111.91 |
| 31 | c | 514 | BCR | C38-C26-C25 | -2.61 | 121.60 | 124.53 |
| 29 | G | 604 | CLA | O2D-CGD-O1D | -2.61 | 118.74 | 123.84 |
| 29 | b | 604 | CLA | C1C-C2C-C3C | -2.61 | 104.21 | 106.96 |
| 29 | b | 604 | CLA | CMA-C3A-C4A | 2.61 | 118.78 | 111.77 |
| 29 | r | 602 | CLA | C1C-C2C-C3C | -2.61 | 104.22 | 106.96 |
| 31 | c | 515 | BCR | C34-C9-C10 | -2.61 | 119.27 | 122.92 |
| 29 | B | 606 | CLA | O2D-CGD-O1D | -2.61 | 118.74 | 123.84 |
| 29 | r | 609 | CLA | CHA-C4D-ND | 2.61 | 137.95 | 132.50 |
| 29 | s | 613 | CLA | CHA-C4D-ND | 2.61 | 137.95 | 132.50 |
| 29 | S | 604 | CLA | O2D-CGD-O1D | -2.60 | 118.75 | 123.84 |
| 29 | y | 603 | CLA | O2D-CGD-O1D | -2.60 | 118.75 | 123.84 |
| 48 | R | 622 | NEX | C20-C13-C14 | -2.60 | 119.28 | 122.92 |
| 29 | g | 604 | CLA | C1C-C2C-C3C | -2.60 | 104.22 | 106.96 |
| 45 | G | 608 | CHL | CHB-C4A-NA | 2.60 | 128.11 | 124.51 |
| 29 | S | 605 | CLA | C1C-C2C-C3C | -2.60 | 104.22 | 106.96 |
| 29 | b | 608 | CLA | CMA-C3A-C4A | 2.60 | 118.77 | 111.77 |
| 29 | b | 605 | CLA | CHA-C4D-ND | 2.60 | 137.94 | 132.50 |
| 29 | Y | 603 | CLA | O2D-CGD-O1D | -2.60 | 118.75 | 123.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 46 | S | 620 | LUT | C31-C30-C29 | -2.60 | 123.60 | 127.31 |
| 31 | A | 411 | BCR | C35-C13-C12 | 2.60 | 122.17 | 118.08 |
| 31 | B | 619 | BCR | C1-C6-C5 | -2.60 | 118.95 | 122.61 |
| 29 | S | 605 | CLA | CHA-C4D-ND | 2.60 | 137.94 | 132.50 |
| 29 | g | 611 | CLA | O2D-CGD-O1D | -2.60 | 118.75 | 123.84 |
| 45 | s | 601 | CHL | CHB-C4A-NA | 2.60 | 128.11 | 124.51 |
| 29 | a | 406 | CLA | CMA-C3A-C4A | 2.60 | 118.76 | 111.77 |
| 29 | B | 609 | CLA | CMB-C2B-C3B | 2.60 | 129.54 | 124.68 |
| 29 | R | 613 | CLA | O2D-CGD-O1D | -2.60 | 118.76 | 123.84 |
| 29 | C | 502 | CLA | O2D-CGD-O1D | -2.60 | 118.76 | 123.84 |
| 45 | y | 609 | CHL | C1B-CHB-C4A | -2.60 | 124.97 | 130.12 |
| 29 | y | 603 | CLA | CMA-C3A-C4A | 2.60 | 118.75 | 111.77 |
| 29 | Y | 602 | CLA | O2D-CGD-O1D | -2.60 | 118.76 | 123.84 |
| 29 | R | 610 | CLA | C2C-C1C-NC | 2.60 | 112.40 | 109.97 |
| 29 | B | 611 | CLA | O2D-CGD-O1D | -2.60 | 118.76 | 123.84 |
| 29 | r | 610 | CLA | C2C-C1C-NC | 2.59 | 112.40 | 109.97 |
| 29 | R | 608 | CLA | C1-C2-C3 | -2.59 | 121.56 | 126.04 |
| 29 | R | 603 | CLA | C2D-C1D-ND | 2.59 | 112.02 | 110.10 |
| 29 | b | 615 | CLA | C2D-C1D-ND | 2.59 | 112.02 | 110.10 |
| 29 | C | 505 | CLA | CHA-C4D-ND | 2.59 | 137.92 | 132.50 |
| 45 | G | 609 | CHL | CHC-C1C-NC | 2.59 | 128.13 | 124.20 |
| 29 | B | 607 | CLA | O2D-CGD-O1D | -2.59 | 118.77 | 123.84 |
| 33 | c | 521 | LMG | C8-O7-C10 | -2.59 | 111.41 | 117.79 |
| 46 | g | 620 | LUT | C38-C25-C24 | -2.59 | 118.02 | 123.56 |
| 45 | y | 601 | CHL | C1-O2A-CGA | 2.59 | 123.24 | 116.44 |
| 29 | B | 612 | CLA | C2D-C1D-ND | 2.59 | 112.01 | 110.10 |
| 29 | y | 612 | CLA | O2D-CGD-O1D | -2.59 | 118.78 | 123.84 |
| 29 | B | 603 | CLA | CMA-C3A-C4A | 2.59 | 118.73 | 111.77 |
| 29 | N | 610 | CLA | C1C-C2C-C3C | -2.59 | 104.24 | 106.96 |
| 29 | n | 602 | CLA | C1C-C2C-C3C | -2.59 | 104.24 | 106.96 |
| 29 | s | 613 | CLA | C1C-C2C-C3C | -2.59 | 104.24 | 106.96 |
| 31 | c | 517 | BCR | C23-C24-C25 | -2.59 | 119.94 | 127.20 |
| 29 | s | 611 | CLA | C2D-C1D-ND | 2.59 | 112.01 | 110.10 |
| 29 | R | 609 | CLA | CHA-C4D-ND | 2.59 | 137.91 | 132.50 |
| 29 | s | 605 | CLA | C1C-C2C-C3C | -2.59 | 104.24 | 106.96 |
| 46 | r | 620 | LUT | C3-C4-C5 | -2.59 | 106.70 | 111.85 |
| 46 | r | 620 | LUT | C11-C12-C13 | -2.59 | 119.15 | 126.42 |
| 31 | B | 619 | BCR | C19-C18-C17 | 2.58 | 122.91 | 118.94 |
| 29 | b | 603 | CLA | C2D-C1D-ND | 2.58 | 112.01 | 110.10 |
| 29 | G | 611 | CLA | O2D-CGD-O1D | -2.58 | 118.79 | 123.84 |
| 29 | S | 603 | CLA | CHD-C1D-ND | -2.58 | 122.08 | 124.45 |
| 33 | J | 101 | LMG | O8-C28-C29 | 2.58 | 120.00 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 505 | CLA | CHA-C4D-ND | 2.58 | 137.90 | 132.50 |
| 29 | D | 403 | CLA | C1C-C2C-C3C | -2.58 | 104.24 | 106.96 |
| 29 | G | 604 | CLA | C1C-C2C-C3C | -2.58 | 104.24 | 106.96 |
| 29 | B | 608 | CLA | CMA-C3A-C4A | 2.58 | 118.70 | 111.77 |
| 29 | b | 617 | CLA | CHD-C1D-ND | -2.58 | 122.08 | 124.45 |
| 29 | B | 604 | CLA | CMA-C3A-C4A | 2.58 | 118.70 | 111.77 |
| 29 | Y | 610 | CLA | O2A-CGA-CBA | 2.58 | 120.00 | 111.91 |
| 29 | y | 611 | CLA | C2D-C1D-ND | 2.58 | 112.00 | 110.10 |
| 31 | C | 514 | BCR | C23-C24-C25 | -2.58 | 119.97 | 127.20 |
| 29 | Y | 611 | CLA | CMA-C3A-C4A | 2.57 | 118.69 | 111.77 |
| 29 | B | 615 | CLA | CHA-C4D-ND | 2.57 | 137.88 | 132.50 |
| 31 | c | 515 | BCR | C15-C14-C13 | -2.57 | 123.64 | 127.31 |
| 45 | N | 609 | CHL | C1B-CHB-C4A | -2.57 | 125.02 | 130.12 |
| 29 | B | 602 | CLA | CHA-C4D-ND | 2.57 | 137.88 | 132.50 |
| 29 | b | 606 | CLA | CMD-C2D-C3D | -2.57 | 121.69 | 127.61 |
| 29 | C | 507 | CLA | C2D-C1D-ND | 2.57 | 112.00 | 110.10 |
| 29 | n | 612 | CLA | O2D-CGD-O1D | -2.57 | 118.81 | 123.84 |
| 33 | C | 521 | LMG | C8-O7-C10 | -2.57 | 111.46 | 117.79 |
| 47 | r | 622 | XAT | C8-C9-C10 | 2.57 | 122.89 | 118.94 |
| 29 | y | 604 | CLA | CMB-C2B-C3B | 2.57 | 129.49 | 124.68 |
| 29 | Y | 612 | CLA | C1-C2-C3 | -2.57 | 121.59 | 126.04 |
| 29 | b | 606 | CLA | O2D-CGD-O1D | -2.57 | 118.81 | 123.84 |
| 29 | s | 613 | CLA | CHD-C1D-ND | -2.57 | 122.09 | 124.45 |
| 29 | Y | 604 | CLA | C1C-C2C-C3C | -2.57 | 104.25 | 106.96 |
| 29 | g | 612 | CLA | C1C-C2C-C3C | -2.57 | 104.25 | 106.96 |
| 29 | C | 511 | CLA | O2D-CGD-O1D | -2.57 | 118.81 | 123.84 |
| 29 | y | 602 | CLA | O2D-CGD-O1D | -2.57 | 118.81 | 123.84 |
| 50 | S | 626 | 3PH | O31-C31-C32 | 2.57 | 119.97 | 111.91 |
| 29 | N | 602 | CLA | C2D-C1D-ND | 2.57 | 112.00 | 110.10 |
| 31 | B | 618 | BCR | C36-C18-C17 | -2.57 | 119.32 | 122.92 |
| 43 | F | 101 | HEM | CHC-C4B-C3B | 2.57 | 128.50 | 124.57 |
| 29 | C | 501 | CLA | CHA-C4D-ND | 2.57 | 137.87 | 132.50 |
| 29 | r | 609 | CLA | CMD-C2D-C3D | -2.57 | 121.71 | 127.61 |
| 29 | g | 612 | CLA | O2D-CGD-O1D | -2.57 | 118.82 | 123.84 |
| 29 | s | 609 | CLA | C1-C2-C3 | -2.56 | 121.61 | 126.04 |
| 29 | Y | 611 | CLA | C1C-C2C-C3C | -2.56 | 104.26 | 106.96 |
| 29 | g | 604 | CLA | CHA-C4D-ND | 2.56 | 137.86 | 132.50 |
| 29 | b | 613 | CLA | C2D-C1D-ND | 2.56 | 111.99 | 110.10 |
| 45 | g | 609 | CHL | C3C-C4C-NC | -2.56 | 107.70 | 110.57 |
| 46 | Y | 620 | LUT | C31-C30-C29 | -2.56 | 123.66 | 127.31 |
| 29 | B | 603 | CLA | C1C-C2C-C3C | -2.56 | 104.27 | 106.96 |
| 29 | c | 506 | CLA | C1-C2-C3 | -2.56 | 121.62 | 126.04 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 31 | C | 516 | BCR | C36-C18-C17 | -2.56 | 119.34 | 122.92 |
| 29 | c | 512 | CLA | C1D-ND-C4D | -2.56 | 104.52 | 106.33 |
| 29 | S | 609 | CLA | CAA-C2A-C3A | -2.56 | 105.77 | 112.78 |
| 29 | n | 604 | CLA | C1C-C2C-C3C | -2.56 | 104.27 | 106.96 |
| 29 | c | 501 | CLA | CHA-C4D-ND | 2.56 | 137.85 | 132.50 |
| 45 | R | 607 | CHL | C1-O2A-CGA | 2.56 | 123.15 | 116.44 |
| 31 | d | 404 | BCR | C33-C5-C4 | 2.56 | 118.53 | 113.62 |
| 45 | n | 608 | CHL | C1B-CHB-C4A | -2.56 | 125.06 | 130.12 |
| 29 | B | 603 | CLA | CMB-C2B-C3B | 2.56 | 129.46 | 124.68 |
| 39 | y | 624 | LHG | O8-C23-C24 | 2.55 | 119.92 | 111.91 |
| 29 | c | 513 | CLA | O2D-CGD-O1D | -2.55 | 118.84 | 123.84 |
| 29 | Y | 612 | CLA | C1C-C2C-C3C | -2.55 | 104.27 | 106.96 |
| 29 | b | 609 | CLA | CHA-C4D-ND | 2.55 | 137.84 | 132.50 |
| 31 | C | 515 | BCR | C23-C24-C25 | -2.55 | 120.03 | 127.20 |
| 29 | C | 506 | CLA | C1-C2-C3 | -2.55 | 121.63 | 126.04 |
| 29 | y | 604 | CLA | C2D-C1D-ND | 2.55 | 111.99 | 110.10 |
| 29 | B | 604 | CLA | CHA-C4D-ND | 2.55 | 137.84 | 132.50 |
| 29 | b | 604 | CLA | CHA-C4D-ND | 2.55 | 137.84 | 132.50 |
| 29 | C | 513 | CLA | O2A-CGA-CBA | 2.55 | 119.92 | 111.91 |
| 45 | Y | 605 | CHL | C1B-CHB-C4A | -2.55 | 125.06 | 130.12 |
| 29 | c | 502 | CLA | C2D-C1D-ND | 2.55 | 111.98 | 110.10 |
| 45 | S | 607 | CHL | CHB-C4A-NA | 2.55 | 128.04 | 124.51 |
| 29 | y | 611 | CLA | C1C-C2C-C3C | -2.55 | 104.28 | 106.96 |
| 29 | R | 612 | CLA | CHA-C4D-ND | 2.55 | 137.83 | 132.50 |
| 29 | B | 606 | CLA | CMD-C2D-C3D | -2.55 | 121.75 | 127.61 |
| 45 | R | 606 | CHL | C4A-NA-C1A | 2.55 | 107.85 | 106.71 |
| 31 | C | 517 | BCR | C36-C18-C17 | -2.55 | 119.35 | 122.92 |
| 31 | c | 517 | BCR | C31-C1-C6 | -2.55 | 106.17 | 110.30 |
| 29 | s | 602 | CLA | C1D-ND-C4D | -2.55 | 104.53 | 106.33 |
| 29 | y | 603 | CLA | C1D-ND-C4D | -2.55 | 104.53 | 106.33 |
| 45 | g | 609 | CHL | CHD-C4C-C3C | 2.55 | 128.59 | 124.84 |
| 29 | b | 603 | CLA | O2D-CGD-O1D | -2.55 | 118.86 | 123.84 |
| 44 | h | 101 | RRX | C8-C7-C6 | -2.55 | 120.05 | 127.20 |
| 45 | r | 607 | CHL | C1-O2A-CGA | 2.55 | 123.13 | 116.44 |
| 29 | R | 613 | CLA | C1C-C2C-C3C | -2.55 | 104.28 | 106.96 |
| 33 | a | 413 | LMG | O8-C28-C29 | 2.55 | 119.90 | 111.91 |
| 29 | D | 402 | CLA | CMC-C2C-C1C | 2.54 | 128.91 | 125.04 |
| 29 | N | 612 | CLA | CHD-C1D-ND | -2.54 | 122.12 | 124.45 |
| 29 | N | 604 | CLA | CHA-C4D-ND | 2.54 | 137.82 | 132.50 |
| 29 | N | 604 | CLA | O2D-CGD-O1D | -2.54 | 118.86 | 123.84 |
| 45 | r | 606 | CHL | C3C-C4C-NC | -2.54 | 107.72 | 110.57 |
| 29 | N | 612 | CLA | C1C-C2C-C3C | -2.54 | 104.28 | 106.96 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 47 | r | 622 | XAT | O4-C5-C4 | -2.54 | 111.47 | 113.38 |
| 29 | C | 508 | CLA | CMA-C3A-C4A | 2.54 | 118.61 | 111.77 |
| 45 | n | 605 | CHL | CHB-C4A-NA | 2.54 | 128.03 | 124.51 |
| 29 | r | 611 | CLA | C1C-C2C-C3C | -2.54 | 104.28 | 106.96 |
| 29 | c | 506 | CLA | CMB-C2B-C1B | -2.54 | 124.56 | 128.46 |
| 29 | n | 604 | CLA | O2D-CGD-O1D | -2.54 | 118.87 | 123.84 |
| 29 | n | 604 | CLA | CHA-C4D-ND | 2.54 | 137.81 | 132.50 |
| 29 | d | 403 | CLA | O2A-CGA-CBA | 2.54 | 119.88 | 111.91 |
| 29 | c | 507 | CLA | C1-C2-C3 | -2.54 | 121.65 | 126.04 |
| 29 | y | 613 | CLA | CMB-C2B-C3B | 2.54 | 129.43 | 124.68 |
| 29 | r | 612 | CLA | O2A-CGA-CBA | 2.54 | 119.88 | 111.91 |
| 29 | N | 613 | CLA | C1C-C2C-C3C | -2.54 | 104.29 | 106.96 |
| 29 | s | 610 | CLA | CHA-C4D-ND | 2.54 | 137.81 | 132.50 |
| 29 | b | 602 | CLA | CHA-C4D-ND | 2.54 | 137.81 | 132.50 |
| 31 | a | 411 | BCR | C36-C18-C17 | -2.54 | 119.37 | 122.92 |
| 44 | h | 101 | RRX | C24-C23-C22 | -2.54 | 122.40 | 126.23 |
| 29 | b | 608 | CLA | CMB-C2B-C3B | 2.54 | 129.42 | 124.68 |
| 29 | C | 507 | CLA | CHA-C4D-ND | 2.54 | 137.80 | 132.50 |
| 29 | y | 602 | CLA | C2C-C1C-NC | 2.54 | 112.35 | 109.97 |
| 29 | C | 506 | CLA | CMA-C3A-C4A | 2.53 | 118.59 | 111.77 |
| 45 | G | 606 | CHL | CHB-C4A-NA | 2.53 | 128.02 | 124.51 |
| 45 | S | 601 | CHL | CHB-C4A-NA | 2.53 | 128.02 | 124.51 |
| 29 | n | 614 | CLA | O2D-CGD-O1D | -2.53 | 118.88 | 123.84 |
| 29 | S | 613 | CLA | O1D-CGD-CBD | -2.53 | 119.30 | 124.48 |
| 29 | c | 511 | CLA | O2D-CGD-O1D | -2.53 | 118.89 | 123.84 |
| 29 | b | 615 | CLA | CHA-C4D-ND | 2.53 | 137.80 | 132.50 |
| 29 | Y | 614 | CLA | O2D-CGD-O1D | -2.53 | 118.89 | 123.84 |
| 45 | G | 606 | CHL | C1-O2A-CGA | 2.53 | 123.09 | 116.44 |
| 29 | y | 604 | CLA | C1C-C2C-C3C | -2.53 | 104.29 | 106.96 |
| 29 | Y | 612 | CLA | CHA-C4D-ND | 2.53 | 137.80 | 132.50 |
| 29 | S | 612 | CLA | CMA-C3A-C4A | 2.53 | 118.57 | 111.77 |
| 29 | R | 609 | CLA | C1C-C2C-C3C | -2.53 | 104.30 | 106.96 |
| 29 | d | 402 | CLA | O2A-CGA-CBA | 2.53 | 119.84 | 111.91 |
| 42 | d | 405 | PL9 | C22-C23-C24 | -2.53 | 121.57 | 127.66 |
| 29 | R | 611 | CLA | C1C-C2C-C3C | -2.53 | 104.30 | 106.96 |
| 29 | R | 612 | CLA | O2D-CGD-O1D | -2.53 | 118.90 | 123.84 |
| 29 | Y | 608 | CLA | C1C-C2C-C3C | -2.53 | 104.30 | 106.96 |
| 47 | R | 621 | XAT | C18-C5-C6 | -2.53 | 118.03 | 122.26 |
| 46 | s | 620 | LUT | C11-C10-C9 | -2.53 | 123.71 | 127.31 |
| 29 | C | 512 | CLA | C1-C2-C3 | -2.52 | 121.68 | 126.04 |
| 45 | G | 607 | CHL | C4A-NA-C1A | 2.52 | 107.84 | 106.71 |
| 29 | n | 612 | CLA | CMA-C3A-C4A | 2.52 | 118.56 | 111.77 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 48 | G | 623 | NEX | C16-C1-C6 | -2.52 | 108.21 | 110.47 |
| 29 | B | 603 | CLA | CHA-C4D-ND | 2.52 | 137.78 | 132.50 |
| 29 | s | 605 | CLA | CHD-C1D-ND | -2.52 | 122.14 | 124.45 |
| 29 | s | 604 | CLA | C1-C2-C3 | -2.52 | 121.68 | 126.04 |
| 29 | s | 614 | CLA | O2D-CGD-O1D | -2.52 | 118.91 | 123.84 |
| 29 | b | 606 | CLA | C2D-C1D-ND | 2.52 | 111.96 | 110.10 |
| 45 | g | 608 | CHL | CHB-C4A-NA | 2.52 | 128.00 | 124.51 |
| 45 | g | 605 | CHL | C4A-NA-C1A | 2.52 | 107.84 | 106.71 |
| 29 | N | 611 | CLA | C1C-C2C-C3C | -2.52 | 104.31 | 106.96 |
| 29 | b | 617 | CLA | C2D-C1D-ND | 2.52 | 111.96 | 110.10 |
| 29 | g | 603 | CLA | C1D-ND-C4D | -2.52 | 104.54 | 106.33 |
| 45 | G | 609 | CHL | CHD-C4C-C3C | 2.52 | 128.54 | 124.84 |
| 39 | G | 630 | LHG | O8-C23-C24 | 2.52 | 119.82 | 111.91 |
| 29 | N | 602 | CLA | CAA-C2A-C3A | -2.52 | 105.88 | 112.78 |
| 29 | Y | 608 | CLA | CHA-C4D-ND | 2.52 | 137.77 | 132.50 |
| 43 | f | 101 | HEM | CHC-C4B-C3B | 2.52 | 128.43 | 124.57 |
| 33 | A | 413 | LMG | O8-C28-C29 | 2.52 | 119.81 | 111.91 |
| 29 | n | 613 | CLA | C1-O2A-CGA | 2.52 | 123.05 | 116.44 |
| 48 | S | 622 | NEX | C1-C2-C3 | 2.52 | 119.33 | 113.64 |
| 29 | n | 611 | CLA | C1C-C2C-C3C | -2.52 | 104.31 | 106.96 |
| 29 | G | 604 | CLA | CMA-C3A-C4A | 2.52 | 118.53 | 111.77 |
| 29 | S | 603 | CLA | CMA-C3A-C4A | 2.51 | 118.53 | 111.77 |
| 29 | C | 509 | CLA | C2D-C1D-ND | 2.51 | 111.96 | 110.10 |
| 45 | n | 605 | CHL | C1-O2A-CGA | 2.51 | 123.04 | 116.44 |
| 29 | y | 608 | CLA | CHA-C4D-ND | 2.51 | 137.76 | 132.50 |
| 29 | S | 609 | CLA | C1-C2-C3 | -2.51 | 121.70 | 126.04 |
| 29 | S | 610 | CLA | CHA-C4D-ND | 2.51 | 137.76 | 132.50 |
| 29 | c | 513 | CLA | CMB-C2B-C3B | 2.51 | 129.38 | 124.68 |
| 29 | y | 610 | CLA | O2A-CGA-CBA | 2.51 | 119.79 | 111.91 |
| 29 | n | 610 | CLA | C1C-C2C-C3C | -2.51 | 104.32 | 106.96 |
| 29 | b | 617 | CLA | OBD-CAD-C3D | -2.51 | 122.48 | 128.52 |
| 45 | N | 609 | CHL | C1-O2A-CGA | 2.51 | 123.03 | 116.44 |
| 35 | B | 620 | C7Z | C21-C26-C25 | -2.51 | 119.08 | 122.61 |
| 31 | b | 619 | BCR | C8-C7-C6 | -2.51 | 120.16 | 127.20 |
| 29 | n | 613 | CLA | C1C-C2C-C3C | -2.51 | 104.32 | 106.96 |
| 29 | B | 613 | CLA | CHA-C4D-ND | 2.51 | 137.75 | 132.50 |
| 29 | n | 611 | CLA | CHA-C4D-ND | 2.51 | 137.75 | 132.50 |
| 29 | s | 611 | CLA | CHA-C4D-ND | 2.51 | 137.75 | 132.50 |
| 29 | B | 604 | CLA | O2D-CGD-O1D | -2.51 | 118.94 | 123.84 |
| 29 | N | 603 | CLA | O2D-CGD-O1D | -2.51 | 118.94 | 123.84 |
| 29 | y | 612 | CLA | CHA-C4D-ND | 2.51 | 137.74 | 132.50 |
| 29 | Y | 612 | CLA | O2A-CGA-CBA | 2.51 | 119.78 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | n | 601 | CHL | CHB-C4A-NA | 2.51 | 127.98 | 124.51 |
| 39 | g | 624 | LHG | O8-C23-C24 | 2.51 | 119.78 | 111.91 |
| 29 | R | 604 | CLA | CHA-C4D-ND | 2.51 | 137.74 | 132.50 |
| 45 | Y | 601 | CHL | C4A-NA-C1A | 2.51 | 107.83 | 106.71 |
| 29 | C | 503 | CLA | O1D-CGD-CBD | -2.51 | 119.36 | 124.48 |
| 46 | R | 620 | LUT | C22-C23-C24 | -2.51 | 108.89 | 111.74 |
| 29 | c | 510 | CLA | O2D-CGD-O1D | -2.51 | 118.94 | 123.84 |
| 29 | s | 612 | CLA | O2D-CGD-O1D | -2.50 | 118.94 | 123.84 |
| 46 | n | 620 | LUT | C18-C5-C6 | -2.50 | 121.72 | 124.53 |
| 29 | r | 602 | CLA | CMA-C3A-C4A | 2.50 | 118.50 | 111.77 |
| 29 | c | 510 | CLA | C2D-C1D-ND | 2.50 | 111.95 | 110.10 |
| 29 | B | 612 | CLA | O2D-CGD-O1D | -2.50 | 118.94 | 123.84 |
| 29 | Y | 611 | CLA | O2D-CGD-O1D | -2.50 | 118.95 | 123.84 |
| 29 | B | 607 | CLA | CHA-C4D-ND | 2.50 | 137.73 | 132.50 |
| 45 | S | 608 | CHL | C1-O2A-CGA | 2.50 | 123.00 | 116.44 |
| 29 | R | 613 | CLA | CHA-C4D-ND | 2.50 | 137.73 | 132.50 |
| 46 | G | 621 | LUT | C10-C11-C12 | -2.50 | 115.42 | 123.22 |
| 45 | S | 606 | CHL | C1B-CHB-C4A | -2.50 | 125.17 | 130.12 |
| 29 | c | 506 | CLA | CMB-C2B-C3B | 2.50 | 129.35 | 124.68 |
| 29 | r | 608 | CLA | CHA-C4D-ND | 2.50 | 137.73 | 132.50 |
| 29 | C | 501 | CLA | CMD-C2D-C3D | -2.50 | 121.87 | 127.61 |
| 29 | S | 614 | CLA | CHA-C4D-ND | 2.50 | 137.72 | 132.50 |
| 29 | c | 507 | CLA | CHA-C4D-ND | 2.50 | 137.72 | 132.50 |
| 46 | N | 620 | LUT | C38-C25-C24 | -2.50 | 118.21 | 123.56 |
| 29 | S | 612 | CLA | O2D-CGD-O1D | -2.50 | 118.95 | 123.84 |
| 45 | S | 607 | CHL | C4A-NA-C1A | 2.50 | 107.83 | 106.71 |
| 45 | s | 606 | CHL | C1B-CHB-C4A | -2.50 | 125.17 | 130.12 |
| 35 | B | 620 | C7Z | C27-C28-C29 | -2.50 | 122.46 | 126.23 |
| 29 | G | 602 | CLA | O2D-CGD-O1D | -2.50 | 118.96 | 123.84 |
| 29 | g | 603 | CLA | O2D-CGD-O1D | -2.50 | 118.96 | 123.84 |
| 29 | B | 617 | CLA | O2D-CGD-O1D | -2.50 | 118.96 | 123.84 |
| 29 | b | 611 | CLA | CHA-C4D-ND | 2.50 | 137.72 | 132.50 |
| 29 | c | 510 | CLA | CHA-C4D-ND | 2.50 | 137.72 | 132.50 |
| 29 | r | 612 | CLA | CHA-C4D-ND | 2.50 | 137.72 | 132.50 |
| 31 | b | 618 | BCR | C36-C18-C17 | -2.49 | 119.43 | 122.92 |
| 29 | R | 609 | CLA | CMD-C2D-C3D | -2.49 | 121.88 | 127.61 |
| 45 | y | 601 | CHL | C4A-NA-C1A | 2.49 | 107.83 | 106.71 |
| 29 | c | 504 | CLA | CMB-C2B-C3B | 2.49 | 129.34 | 124.68 |
| 29 | b | 606 | CLA | CHA-C4D-ND | 2.49 | 137.71 | 132.50 |
| 29 | G | 612 | CLA | O2D-CGD-O1D | -2.49 | 118.96 | 123.84 |
| 45 | N | 609 | CHL | CHD-C4C-C3C | 2.49 | 128.50 | 124.84 |
| 29 | c | 503 | CLA | C1C-C2C-C3C | -2.49 | 104.34 | 106.96 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | n | 605 | CHL | CMA-C3A-C4A | 2.49 | 118.47 | 111.77 |
| 29 | G | 604 | CLA | CHA-C4D-ND | 2.49 | 137.71 | 132.50 |
| 31 | B | 619 | BCR | C27-C26-C25 | -2.49 | 119.11 | 122.73 |
| 45 | g | 601 | CHL | C1-O2A-CGA | 2.49 | 122.98 | 116.44 |
| 29 | C | 504 | CLA | C1C-C2C-C3C | -2.49 | 104.34 | 106.96 |
| 29 | B | 613 | CLA | CMB-C2B-C3B | 2.49 | 129.34 | 124.68 |
| 43 | f | 101 | HEM | C4D-ND-C1D | 2.49 | 107.65 | 105.07 |
| 29 | b | 607 | CLA | CHA-C4D-ND | 2.49 | 137.71 | 132.50 |
| 29 | b | 608 | CLA | CHA-C4D-ND | 2.49 | 137.71 | 132.50 |
| 29 | b | 614 | CLA | CHA-C4D-ND | 2.49 | 137.71 | 132.50 |
| 29 | b | 613 | CLA | C1-C2-C3 | -2.49 | 121.74 | 126.04 |
| 29 | g | 613 | CLA | O2A-CGA-CBA | 2.49 | 119.72 | 111.91 |
| 29 | s | 605 | CLA | O1D-CGD-CBD | -2.49 | 119.39 | 124.48 |
| 29 | B | 604 | CLA | C1C-C2C-C3C | -2.49 | 104.34 | 106.96 |
| 31 | c | 516 | BCR | C23-C24-C25 | -2.49 | 120.21 | 127.20 |
| 29 | Y | 610 | CLA | CMA-C3A-C4A | 2.49 | 118.46 | 111.77 |
| 29 | S | 614 | CLA | CMD-C2D-C3D | -2.49 | 121.89 | 127.61 |
| 29 | c | 505 | CLA | CMA-C3A-C4A | 2.49 | 118.46 | 111.77 |
| 29 | C | 512 | CLA | CMB-C2B-C1B | -2.49 | 124.64 | 128.46 |
| 29 | Y | 603 | CLA | CHA-C4D-ND | 2.49 | 137.70 | 132.50 |
| 29 | R | 604 | CLA | O2D-CGD-O1D | -2.49 | 118.98 | 123.84 |
| 29 | c | 503 | CLA | CMD-C2D-C3D | -2.49 | 121.90 | 127.61 |
| 29 | b | 613 | CLA | CHA-C4D-ND | 2.48 | 137.70 | 132.50 |
| 29 | y | 608 | CLA | C1C-C2C-C3C | -2.48 | 104.34 | 106.96 |
| 31 | d | 404 | BCR | C38-C26-C27 | 2.48 | 118.39 | 113.62 |
| 48 | R | 622 | NEX | C19-C9-C10 | -2.48 | 119.44 | 122.92 |
| 44 | H | 101 | RRX | C24-C23-C22 | -2.48 | 122.48 | 126.23 |
| 45 | s | 607 | CHL | CHB-C4A-NA | 2.48 | 127.94 | 124.51 |
| 29 | c | 509 | CLA | CMB-C2B-C3B | 2.48 | 129.32 | 124.68 |
| 29 | c | 511 | CLA | CHA-C4D-ND | 2.48 | 137.69 | 132.50 |
| 29 | R | 602 | CLA | O2A-CGA-CBA | 2.48 | 119.69 | 111.91 |
| 45 | N | 608 | CHL | CHB-C4A-NA | 2.48 | 127.94 | 124.51 |
| 29 | C | 511 | CLA | CHA-C4D-ND | 2.48 | 137.69 | 132.50 |
| 45 | r | 606 | CHL | C4A-NA-C1A | 2.48 | 107.82 | 106.71 |
| 29 | D | 402 | CLA | CHA-C4D-ND | 2.48 | 137.69 | 132.50 |
| 29 | s | 614 | CLA | CHA-C4D-ND | 2.48 | 137.69 | 132.50 |
| 29 | R | 602 | CLA | CHA-C4D-ND | 2.48 | 137.68 | 132.50 |
| 29 | y | 610 | CLA | C1C-C2C-C3C | -2.48 | 104.35 | 106.96 |
| 29 | s | 612 | CLA | CMA-C3A-C4A | 2.48 | 118.43 | 111.77 |
| 29 | G | 602 | CLA | O2A-CGA-CBA | 2.48 | 119.68 | 111.91 |
| 29 | B | 614 | CLA | O2D-CGD-O1D | -2.48 | 119.00 | 123.84 |
| 46 | G | 621 | LUT | C35-C15-C14 | -2.48 | 118.40 | 123.47 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | S | 614 | CLA | C2D-C1D-ND | 2.48 | 111.93 | 110.10 |
| 45 | n | 601 | CHL | C1-C2-C3 | -2.48 | 121.76 | 126.04 |
| 29 | r | 604 | CLA | CHA-C4D-ND | 2.48 | 137.68 | 132.50 |
| 48 | G | 623 | NEX | C20-C13-C14 | -2.48 | 119.45 | 122.92 |
| 45 | Y | 609 | CHL | C1B-CHB-C4A | -2.48 | 125.21 | 130.12 |
| 45 | R | 606 | CHL | C3C-C4C-NC | -2.48 | 107.80 | 110.57 |
| 29 | C | 505 | CLA | CMA-C3A-C4A | 2.47 | 118.42 | 111.77 |
| 29 | b | 612 | CLA | C2A-C1A-CHA | 2.47 | 128.19 | 123.86 |
| 29 | N | 603 | CLA | CHA-C4D-ND | 2.47 | 137.68 | 132.50 |
| 29 | N | 612 | CLA | CHA-C4D-ND | 2.47 | 137.68 | 132.50 |
| 29 | S | 611 | CLA | CHA-C4D-ND | 2.47 | 137.68 | 132.50 |
| 31 | C | 515 | BCR | C34-C9-C10 | -2.47 | 119.46 | 122.92 |
| 29 | c | 503 | CLA | O1D-CGD-CBD | -2.47 | 119.42 | 124.48 |
| 29 | c | 509 | CLA | CHA-C4D-ND | 2.47 | 137.67 | 132.50 |
| 39 | D | 409 | LHG | C5-O7-C7 | -2.47 | 111.71 | 117.79 |
| 29 | S | 605 | CLA | O1D-CGD-CBD | -2.47 | 119.43 | 124.48 |
| 29 | g | 611 | CLA | CHA-C4D-ND | 2.47 | 137.66 | 132.50 |
| 29 | d | 402 | CLA | C1-C2-C3 | -2.47 | 121.77 | 126.04 |
| 39 | C | 525 | LHG | O8-C23-C24 | 2.47 | 119.65 | 111.91 |
| 31 | A | 411 | BCR | C36-C18-C17 | -2.47 | 119.47 | 122.92 |
| 48 | N | 623 | NEX | C38-C25-C26 | -2.47 | 118.12 | 122.26 |
| 29 | y | 608 | CLA | C1-O2A-CGA | 2.47 | 122.92 | 116.44 |
| 29 | b | 604 | CLA | CMB-C2B-C3B | 2.47 | 129.29 | 124.68 |
| 29 | c | 508 | CLA | C2D-C1D-ND | 2.47 | 111.92 | 110.10 |
| 29 | b | 607 | CLA | C1C-C2C-C3C | -2.47 | 104.36 | 106.96 |
| 29 | r | 611 | CLA | CHA-C4D-ND | 2.47 | 137.66 | 132.50 |
| 36 | B | 625 | DGA | OG1-CA1-CA2 | 2.47 | 119.64 | 111.91 |
| 46 | S | 621 | LUT | C10-C11-C12 | -2.47 | 115.52 | 123.22 |
| 29 | g | 613 | CLA | CHA-C4D-ND | 2.47 | 137.66 | 132.50 |
| 29 | Y | 613 | CLA | O2A-CGA-CBA | 2.47 | 119.64 | 111.91 |
| 45 | S | 606 | CHL | C4D-CHA-C1A | 2.47 | 124.25 | 121.25 |
| 29 | g | 610 | CLA | O2A-CGA-CBA | 2.46 | 119.64 | 111.91 |
| 29 | G | 613 | CLA | CHA-C4D-ND | 2.46 | 137.66 | 132.50 |
| 29 | B | 607 | CLA | C1C-C2C-C3C | -2.46 | 104.36 | 106.96 |
| 29 | b | 612 | CLA | CHA-C1A-NA | -2.46 | 120.75 | 126.40 |
| 46 | s | 620 | LUT | C10-C11-C12 | -2.46 | 115.53 | 123.22 |
| 29 | C | 510 | CLA | CMD-C2D-C3D | -2.46 | 121.94 | 127.61 |
| 29 | S | 603 | CLA | CHA-C4D-ND | 2.46 | 137.65 | 132.50 |
| 29 | B | 608 | CLA | CMB-C2B-C3B | 2.46 | 129.29 | 124.68 |
| 29 | G | 613 | CLA | O2A-CGA-CBA | 2.46 | 119.64 | 111.91 |
| 47 | r | 622 | XAT | C18-C5-C6 | -2.46 | 118.13 | 122.26 |
| 29 | B | 608 | CLA | CHA-C4D-ND | 2.46 | 137.65 | 132.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | b | 603 | CLA | O2A-CGA-CBA | 2.46 | 119.63 | 111.91 |
| 29 | C | 512 | CLA | C1D-ND-C4D | -2.46 | 104.59 | 106.33 |
| 29 | C | 510 | CLA | O2D-CGD-O1D | -2.46 | 119.03 | 123.84 |
| 29 | s | 617 | CLA | O2D-CGD-O1D | -2.46 | 119.03 | 123.84 |
| 45 | s | 606 | CHL | CHB-C4A-NA | 2.46 | 127.92 | 124.51 |
| 29 | c | 512 | CLA | CMB-C2B-C1B | -2.46 | 124.68 | 128.46 |
| 45 | N | 606 | CHL | C1-O2A-CGA | 2.46 | 122.90 | 116.44 |
| 29 | R | 608 | CLA | CHA-C4D-ND | 2.46 | 137.64 | 132.50 |
| 29 | y | 614 | CLA | CHA-C4D-ND | 2.46 | 137.64 | 132.50 |
| 29 | c | 509 | CLA | CBC-CAC-C3C | -2.46 | 105.65 | 112.43 |
| 39 | Y | 624 | LHG | O8-C23-C24 | 2.46 | 119.62 | 111.91 |
| 29 | R | 603 | CLA | C1-C2-C3 | -2.46 | 121.79 | 126.04 |
| 39 | N | 624 | LHG | O8-C23-C24 | 2.46 | 119.62 | 111.91 |
| 45 | Y | 601 | CHL | C1-O2A-CGA | 2.46 | 122.89 | 116.44 |
| 29 | s | 603 | CLA | C1C-C2C-C3C | -2.46 | 104.37 | 106.96 |
| 29 | b | 612 | CLA | O2D-CGD-O1D | -2.46 | 119.04 | 123.84 |
| 29 | D | 403 | CLA | O2A-CGA-CBA | 2.46 | 119.61 | 111.91 |
| 29 | B | 606 | CLA | CHA-C4D-ND | 2.46 | 137.64 | 132.50 |
| 29 | S | 612 | CLA | CHA-C4D-ND | 2.46 | 137.64 | 132.50 |
| 46 | N | 620 | LUT | C18-C5-C6 | -2.46 | 121.77 | 124.53 |
| 29 | S | 617 | CLA | O2D-CGD-O1D | -2.46 | 119.04 | 123.84 |
| 29 | s | 612 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 29 | c | 508 | CLA | CMA-C3A-C4A | 2.45 | 118.37 | 111.77 |
| 29 | C | 509 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 29 | C | 506 | CLA | C2D-C1D-ND | 2.45 | 111.91 | 110.10 |
| 29 | y | 611 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 29 | b | 613 | CLA | C1C-C2C-C3C | -2.45 | 104.38 | 106.96 |
| 29 | c | 504 | CLA | C1C-C2C-C3C | -2.45 | 104.38 | 106.96 |
| 29 | s | 605 | CLA | C1-O2A-CGA | 2.45 | 122.88 | 116.44 |
| 29 | B | 611 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 29 | R | 603 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 45 | n | 605 | CHL | C1-C2-C3 | -2.45 | 121.80 | 126.04 |
| 29 | S | 611 | CLA | O2D-CGD-O1D | -2.45 | 119.05 | 123.84 |
| 29 | g | 612 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 29 | s | 604 | CLA | CHA-C4D-ND | 2.45 | 137.63 | 132.50 |
| 29 | B | 603 | CLA | CMD-C2D-C3D | -2.45 | 121.98 | 127.61 |
| 29 | c | 511 | CLA | CMB-C2B-C3B | 2.45 | 129.26 | 124.68 |
| 29 | S | 613 | CLA | CHD-C1D-ND | -2.45 | 122.20 | 124.45 |
| 29 | C | 506 | CLA | CMB-C2B-C3B | 2.45 | 129.26 | 124.68 |
| 29 | N | 611 | CLA | CHA-C4D-ND | 2.45 | 137.62 | 132.50 |
| 29 | B | 614 | CLA | CHA-C4D-ND | 2.45 | 137.62 | 132.50 |
| 29 | y | 602 | CLA | CHA-C4D-ND | 2.45 | 137.62 | 132.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | r | 612 | CLA | O2D-CGD-O1D | -2.45 | 119.05 | 123.84 |
| 31 | c | 516 | BCR | C38-C26-C25 | -2.45 | 121.78 | 124.53 |
| 29 | R | 602 | CLA | C1C-C2C-C3C | -2.45 | 104.38 | 106.96 |
| 29 | G | 614 | CLA | CHA-C4D-ND | 2.45 | 137.62 | 132.50 |
| 31 | C | 517 | BCR | C33-C5-C6 | -2.45 | 121.78 | 124.53 |
| 29 | y | 603 | CLA | CHA-C4D-ND | 2.45 | 137.62 | 132.50 |
| 46 | G | 621 | LUT | C31-C30-C29 | -2.45 | 123.82 | 127.31 |
| 47 | N | 622 | XAT | O4-C5-C4 | -2.44 | 111.55 | 113.38 |
| 29 | n | 613 | CLA | CHA-C4D-ND | 2.44 | 137.61 | 132.50 |
| 48 | r | 623 | NEX | C39-C29-C30 | -2.44 | 119.50 | 122.92 |
| 33 | b | 622 | LMG | O8-C28-C29 | 2.44 | 119.58 | 111.91 |
| 29 | C | 511 | CLA | CMD-C2D-C3D | -2.44 | 121.99 | 127.61 |
| 47 | r | 622 | XAT | C31-C30-C29 | -2.44 | 123.82 | 127.31 |
| 29 | R | 612 | CLA | O2A-CGA-CBA | 2.44 | 119.57 | 111.91 |
| 45 | y | 609 | CHL | C4D-CHA-C1A | 2.44 | 124.22 | 121.25 |
| 31 | c | 514 | BCR | C34-C9-C10 | -2.44 | 119.50 | 122.92 |
| 29 | Y | 611 | CLA | CHA-C4D-ND | 2.44 | 137.61 | 132.50 |
| 29 | r | 612 | CLA | C1-C2-C3 | -2.44 | 121.82 | 126.04 |
| 46 | n | 621 | LUT | C10-C11-C12 | -2.44 | 115.60 | 123.22 |
| 29 | B | 604 | CLA | O2A-CGA-CBA | 2.44 | 119.57 | 111.91 |
| 46 | S | 621 | LUT | C3-C4-C5 | -2.44 | 106.99 | 111.85 |
| 46 | G | 621 | LUT | C38-C25-C24 | -2.44 | 118.34 | 123.56 |
| 33 | B | 622 | LMG | O8-C28-C29 | 2.44 | 119.56 | 111.91 |
| 29 | B | 616 | CLA | CHA-C4D-ND | 2.44 | 137.60 | 132.50 |
| 29 | G | 611 | CLA | CHA-C4D-ND | 2.44 | 137.60 | 132.50 |
| 48 | n | 623 | NEX | C31-C30-C29 | 2.44 | 130.79 | 127.31 |
| 29 | G | 612 | CLA | CHA-C4D-ND | 2.44 | 137.60 | 132.50 |
| 29 | S | 609 | CLA | CHA-C4D-ND | 2.44 | 137.60 | 132.50 |
| 29 | N | 602 | CLA | O2D-CGD-O1D | -2.44 | 119.07 | 123.84 |
| 29 | S | 614 | CLA | O2D-CGD-O1D | -2.44 | 119.07 | 123.84 |
| 29 | D | 402 | CLA | O2A-CGA-CBA | 2.44 | 119.56 | 111.91 |
| 29 | S | 609 | CLA | O2D-CGD-O1D | -2.44 | 119.07 | 123.84 |
| 29 | Y | 613 | CLA | CHA-C4D-ND | 2.44 | 137.60 | 132.50 |
| 29 | Y | 604 | CLA | CMA-C3A-C4A | 2.44 | 118.32 | 111.77 |
| 29 | R | 610 | CLA | CMC-C2C-C1C | 2.44 | 128.75 | 125.04 |
| 39 | d | 409 | LHG | C5-O7-C7 | -2.44 | 111.79 | 117.79 |
| 29 | B | 609 | CLA | CMB-C2B-C1B | -2.44 | 124.72 | 128.46 |
| 29 | b | 605 | CLA | CHD-C1D-ND | -2.44 | 122.22 | 124.45 |
| 29 | S | 610 | CLA | CMA-C3A-C4A | 2.44 | 118.32 | 111.77 |
| 29 | d | 403 | CLA | CHA-C4D-ND | 2.43 | 137.59 | 132.50 |
| 29 | r | 602 | CLA | O2D-CGD-O1D | -2.43 | 119.08 | 123.84 |
| 29 | s | 614 | CLA | CMD-C2D-C3D | -2.43 | 122.02 | 127.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 606 | CLA | O2A-CGA-CBA | 2.43 | 119.54 | 111.91 |
| 29 | C | 510 | CLA | CHA-C4D-ND | 2.43 | 137.59 | 132.50 |
| 29 | r | 613 | CLA | CHA-C4D-ND | 2.43 | 137.59 | 132.50 |
| 48 | R | 622 | NEX | C40-C33-C34 | -2.43 | 119.52 | 122.92 |
| 29 | R | 610 | CLA | C1C-C2C-C3C | -2.43 | 104.40 | 106.96 |
| 45 | N | 605 | CHL | CHB-C4A-NA | 2.43 | 127.87 | 124.51 |
| 29 | y | 612 | CLA | O2A-CGA-CBA | 2.43 | 119.54 | 111.91 |
| 44 | H | 101 | RRX | C8-C7-C6 | -2.43 | 120.38 | 127.20 |
| 48 | y | 623 | NEX | C4-C3-C2 | 2.43 | 115.47 | 110.77 |
| 29 | N | 603 | CLA | OBD-CAD-C3D | -2.43 | 122.67 | 128.52 |
| 31 | c | 516 | BCR | C38-C26-C27 | 2.43 | 118.28 | 113.62 |
| 29 | N | 613 | CLA | CHA-C4D-ND | 2.43 | 137.58 | 132.50 |
| 29 | c | 509 | CLA | C2D-C1D-ND | 2.43 | 111.89 | 110.10 |
| 46 | R | 620 | LUT | C3-C4-C5 | -2.43 | 107.01 | 111.85 |
| 29 | Y | 602 | CLA | C1C-C2C-C3C | -2.43 | 104.40 | 106.96 |
| 29 | r | 604 | CLA | O2D-CGD-O1D | -2.43 | 119.09 | 123.84 |
| 29 | s | 614 | CLA | C2D-C1D-ND | 2.43 | 111.89 | 110.10 |
| 29 | n | 603 | CLA | CHA-C4D-ND | 2.43 | 137.58 | 132.50 |
| 45 | Y | 609 | CHL | CHB-C4A-NA | 2.43 | 127.87 | 124.51 |
| 45 | g | 605 | CHL | C4D-CHA-C1A | 2.43 | 124.20 | 121.25 |
| 29 | r | 602 | CLA | CHA-C4D-ND | 2.43 | 137.58 | 132.50 |
| 29 | y | 613 | CLA | C1-O2A-CGA | 2.43 | 122.81 | 116.44 |
| 29 | S | 614 | CLA | O2A-CGA-CBA | 2.43 | 119.53 | 111.91 |
| 45 | G | 609 | CHL | C4D-CHA-C1A | 2.43 | 124.20 | 121.25 |
| 29 | S | 605 | CLA | CHD-C1D-ND | -2.43 | 122.22 | 124.45 |
| 29 | Y | 610 | CLA | O1D-CGD-CBD | -2.43 | 119.52 | 124.48 |
| 29 | s | 604 | CLA | CMD-C2D-C3D | -2.42 | 122.04 | 127.61 |
| 29 | r | 612 | CLA | CMA-C3A-C4A | 2.42 | 118.29 | 111.77 |
| 29 | b | 603 | CLA | CHA-C4D-ND | 2.42 | 137.57 | 132.50 |
| 29 | Y | 604 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 47 | g | 622 | XAT | C19-C9-C10 | -2.42 | 119.53 | 122.92 |
| 39 | Y | 624 | LHG | C6-C5-C4 | -2.42 | 106.06 | 111.79 |
| 29 | B | 605 | CLA | CMD-C2D-C3D | -2.42 | 122.04 | 127.61 |
| 29 | a | 410 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 33 | b | 622 | LMG | O1-C7-C8 | -2.42 | 105.06 | 110.90 |
| 29 | n | 602 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 29 | g | 603 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 29 | n | 614 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 29 | s | 610 | CLA | CMA-C3A-C4A | 2.42 | 118.28 | 111.77 |
| 45 | r | 606 | CHL | CHB-C4A-NA | 2.42 | 127.86 | 124.51 |
| 29 | r | 603 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 45 | n | 609 | CHL | CAA-C2A-C1A | 2.42 | 119.90 | 111.97 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 47 | G | 622 | XAT | C19-C9-C10 | -2.42 | 119.53 | 122.92 |
| 35 | b | 620 | C7Z | C21-C26-C25 | -2.42 | 119.21 | 122.61 |
| 29 | b | 604 | CLA | O2A-CGA-CBA | 2.42 | 119.50 | 111.91 |
| 29 | R | 611 | CLA | CHA-C4D-ND | 2.42 | 137.56 | 132.50 |
| 29 | r | 604 | CLA | C1C-C2C-C3C | -2.42 | 104.42 | 106.96 |
| 46 | n | 621 | LUT | C35-C15-C14 | -2.42 | 118.52 | 123.47 |
| 48 | R | 622 | NEX | C38-C25-C26 | -2.42 | 118.21 | 122.26 |
| 29 | c | 502 | CLA | CHA-C4D-ND | 2.42 | 137.55 | 132.50 |
| 29 | g | 614 | CLA | CHA-C4D-ND | 2.42 | 137.55 | 132.50 |
| 29 | G | 602 | CLA | CHA-C4D-ND | 2.41 | 137.55 | 132.50 |
| 29 | y | 610 | CLA | CHA-C4D-ND | 2.41 | 137.55 | 132.50 |
| 33 | h | 102 | LMG | O8-C28-C29 | 2.41 | 119.48 | 111.91 |
| 31 | D | 404 | BCR | C38-C26-C27 | 2.41 | 118.25 | 113.62 |
| 29 | c | 503 | CLA | CHA-C4D-ND | 2.41 | 137.55 | 132.50 |
| 29 | C | 513 | CLA | C1C-C2C-C3C | -2.41 | 104.42 | 106.96 |
| 29 | s | 609 | CLA | O2D-CGD-O1D | -2.41 | 119.12 | 123.84 |
| 29 | N | 614 | CLA | CHA-C4D-ND | 2.41 | 137.55 | 132.50 |
| 29 | S | 617 | CLA | CHA-C4D-ND | 2.41 | 137.54 | 132.50 |
| 29 | G | 603 | CLA | C1D-ND-C4D | -2.41 | 104.62 | 106.33 |
| 29 | g | 602 | CLA | CHA-C4D-ND | 2.41 | 137.54 | 132.50 |
| 29 | c | 509 | CLA | O2A-CGA-CBA | 2.41 | 119.47 | 111.91 |
| 29 | C | 508 | CLA | C2D-C1D-ND | 2.41 | 111.88 | 110.10 |
| 29 | y | 604 | CLA | O2D-CGD-O1D | -2.41 | 119.13 | 123.84 |
| 45 | n | 608 | CHL | CHB-C4A-NA | 2.41 | 127.84 | 124.51 |
| 29 | B | 605 | CLA | CHD-C1D-ND | -2.41 | 122.24 | 124.45 |
| 31 | C | 515 | BCR | C38-C26-C25 | -2.41 | 121.82 | 124.53 |
| 29 | a | 407 | CLA | CHA-C4D-ND | 2.41 | 137.53 | 132.50 |
| 29 | b | 604 | CLA | CMB-C2B-C1B | -2.41 | 124.76 | 128.46 |
| 29 | g | 610 | CLA | C1C-C2C-C3C | -2.41 | 104.43 | 106.96 |
| 46 | g | 621 | LUT | C35-C15-C14 | -2.41 | 118.54 | 123.47 |
| 29 | b | 604 | CLA | O2D-CGD-O1D | -2.41 | 119.13 | 123.84 |
| 29 | s | 603 | CLA | CHA-C4D-ND | 2.41 | 137.53 | 132.50 |
| 29 | D | 403 | CLA | CHA-C4D-ND | 2.41 | 137.53 | 132.50 |
| 29 | Y | 614 | CLA | CHA-C4D-ND | 2.41 | 137.53 | 132.50 |
| 29 | b | 616 | CLA | CHA-C4D-ND | 2.41 | 137.53 | 132.50 |
| 29 | b | 617 | CLA | O2D-CGD-O1D | -2.41 | 119.13 | 123.84 |
| 29 | s | 604 | CLA | O2D-CGD-O1D | -2.41 | 119.13 | 123.84 |
| 29 | B | 602 | CLA | C2D-C1D-ND | 2.41 | 111.88 | 110.10 |
| 48 | R | 622 | NEX | C39-C29-C30 | -2.41 | 119.55 | 122.92 |
| 29 | A | 406 | CLA | CHA-C4D-ND | 2.41 | 137.53 | 132.50 |
| 29 | c | 501 | CLA | CMD-C2D-C3D | -2.41 | 122.08 | 127.61 |
| 29 | r | 608 | CLA | CMD-C2D-C3D | -2.40 | 122.08 | 127.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | G | 601 | CHL | C1-O2A-CGA | 2.40 | 122.75 | 116.44 |
| 29 | c | 511 | CLA | CMD-C2D-C3D | -2.40 | 122.08 | 127.61 |
| 29 | y | 611 | CLA | CMA-C3A-C4A | 2.40 | 118.23 | 111.77 |
| 29 | s | 610 | CLA | C1C-C2C-C3C | -2.40 | 104.43 | 106.96 |
| 29 | a | 410 | CLA | O2A-CGA-CBA | 2.40 | 119.45 | 111.91 |
| 31 | C | 516 | BCR | C38-C26-C27 | 2.40 | 118.23 | 113.62 |
| 29 | N | 610 | CLA | CHA-C4D-ND | 2.40 | 137.53 | 132.50 |
| 29 | y | 604 | CLA | CHA-C4D-ND | 2.40 | 137.53 | 132.50 |
| 29 | A | 407 | CLA | CHA-C4D-ND | 2.40 | 137.53 | 132.50 |
| 29 | b | 608 | CLA | C1C-C2C-C3C | -2.40 | 104.43 | 106.96 |
| 29 | Y | 611 | CLA | CHD-C1D-ND | -2.40 | 122.25 | 124.45 |
| 29 | C | 506 | CLA | CHA-C4D-ND | 2.40 | 137.52 | 132.50 |
| 29 | N | 602 | CLA | CHA-C4D-ND | 2.40 | 137.52 | 132.50 |
| 29 | B | 603 | CLA | O2A-CGA-CBA | 2.40 | 119.44 | 111.91 |
| 46 | N | 621 | LUT | C18-C5-C6 | -2.40 | 121.83 | 124.53 |
| 45 | s | 608 | CHL | CHB-C4A-NA | 2.40 | 127.83 | 124.51 |
| 29 | B | 610 | CLA | CHA-C4D-ND | 2.40 | 137.52 | 132.50 |
| 29 | b | 606 | CLA | O2A-CGA-CBA | 2.40 | 119.44 | 111.91 |
| 45 | y | 606 | CHL | C1-O2A-CGA | 2.40 | 122.74 | 116.44 |
| 29 | C | 513 | CLA | CHA-C4D-ND | 2.40 | 137.52 | 132.50 |
| 29 | Y | 610 | CLA | CHA-C4D-ND | 2.40 | 137.52 | 132.50 |
| 29 | a | 406 | CLA | O2A-CGA-CBA | 2.40 | 119.43 | 111.91 |
| 45 | g | 606 | CHL | CHB-C4A-NA | 2.40 | 127.83 | 124.51 |
| 29 | g | 614 | CLA | O2D-CGD-O1D | -2.40 | 119.15 | 123.84 |
| 29 | B | 606 | CLA | C2D-C1D-ND | 2.40 | 111.87 | 110.10 |
| 31 | d | 404 | BCR | C4-C5-C6 | -2.40 | 119.25 | 122.73 |
| 29 | S | 602 | CLA | CHA-C4D-ND | 2.40 | 137.51 | 132.50 |
| 48 | S | 622 | NEX | C40-C33-C34 | -2.40 | 119.56 | 122.92 |
| 29 | C | 502 | CLA | C1C-C2C-C3C | -2.40 | 104.44 | 106.96 |
| 29 | c | 513 | CLA | CHA-C4D-ND | 2.40 | 137.51 | 132.50 |
| 45 | n | 608 | CHL | C1-O2A-CGA | 2.40 | 122.73 | 116.44 |
| 29 | c | 506 | CLA | CHA-C4D-ND | 2.40 | 137.51 | 132.50 |
| 29 | s | 609 | CLA | CHA-C4D-ND | 2.39 | 137.51 | 132.50 |
| 29 | s | 617 | CLA | O2A-CGA-CBA | 2.39 | 119.42 | 111.91 |
| 48 | Y | 623 | NEX | C16-C1-C6 | -2.39 | 108.33 | 110.47 |
| 29 | C | 503 | CLA | CHA-C4D-ND | 2.39 | 137.51 | 132.50 |
| 45 | G | 605 | CHL | CHB-C4A-NA | 2.39 | 127.82 | 124.51 |
| 29 | y | 602 | CLA | CMB-C2B-C3B | 2.39 | 129.16 | 124.68 |
| 29 | D | 402 | CLA | C1-C2-C3 | -2.39 | 121.90 | 126.04 |
| 29 | C | 512 | CLA | CMA-C3A-C4A | 2.39 | 118.20 | 111.77 |
| 29 | A | 407 | CLA | CAA-C2A-C3A | -2.39 | 106.23 | 112.78 |
| 29 | s | 602 | CLA | O2D-CGD-O1D | -2.39 | 119.16 | 123.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | G | 614 | CLA | CMD-C2D-C3D | -2.39 | 122.11 | 127.61 |
| 29 | C | 502 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 29 | n | 612 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 29 | s | 617 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 29 | a | 406 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 29 | r | 608 | CLA | O2D-CGD-O1D | -2.39 | 119.16 | 123.84 |
| 29 | y | 613 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 45 | y | 606 | CHL | CHB-C4A-NA | 2.39 | 127.82 | 124.51 |
| 29 | Y | 604 | CLA | O2D-CGD-O1D | -2.39 | 119.17 | 123.84 |
| 29 | S | 604 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 29 | G | 610 | CLA | C1D-ND-C4D | -2.39 | 104.64 | 106.33 |
| 29 | g | 610 | CLA | CHA-C4D-ND | 2.39 | 137.50 | 132.50 |
| 31 | C | 516 | BCR | C31-C1-C6 | -2.39 | 106.43 | 110.30 |
| 29 | B | 612 | CLA | CMA-C3A-C4A | 2.39 | 118.19 | 111.77 |
| 29 | b | 610 | CLA | CHA-C4D-ND | 2.38 | 137.49 | 132.50 |
| 29 | R | 604 | CLA | C1C-C2C-C3C | -2.38 | 104.45 | 106.96 |
| 29 | C | 511 | CLA | CHA-C1A-NA | -2.38 | 120.94 | 126.40 |
| 29 | Y | 603 | CLA | C1-C2-C3 | -2.38 | 121.92 | 126.04 |
| 29 | C | 503 | CLA | CMD-C2D-C3D | -2.38 | 122.13 | 127.61 |
| 46 | R | 620 | LUT | C11-C12-C13 | -2.38 | 119.72 | 126.42 |
| 31 | b | 618 | BCR | C33-C5-C6 | -2.38 | 121.85 | 124.53 |
| 29 | a | 405 | CLA | CHA-C4D-ND | 2.38 | 137.49 | 132.50 |
| 29 | d | 402 | CLA | CHA-C4D-ND | 2.38 | 137.49 | 132.50 |
| 31 | B | 619 | BCR | C8-C7-C6 | -2.38 | 120.51 | 127.20 |
| 45 | G | 609 | CHL | CHB-C4A-NA | 2.38 | 127.81 | 124.51 |
| 29 | g | 602 | CLA | O2A-CGA-CBA | 2.38 | 119.38 | 111.91 |
| 29 | y | 610 | CLA | CMA-C3A-C4A | 2.38 | 118.17 | 111.77 |
| 29 | R | 610 | CLA | C1D-ND-C4D | -2.38 | 104.64 | 106.33 |
| 29 | G | 603 | CLA | CHA-C4D-ND | 2.38 | 137.48 | 132.50 |
| 29 | C | 509 | CLA | CBC-CAC-C3C | -2.38 | 105.87 | 112.43 |
| 29 | Y | 602 | CLA | CAA-C2A-C3A | -2.38 | 106.26 | 112.78 |
| 31 | c | 517 | BCR | C3-C4-C5 | -2.38 | 109.83 | 114.08 |
| 36 | b | 623 | DGA | OG1-CA1-CA2 | 2.38 | 119.38 | 111.91 |
| 45 | N | 608 | CHL | C4A-NA-C1A | 2.38 | 107.78 | 106.71 |
| 29 | s | 609 | CLA | C1C-C2C-C3C | -2.38 | 104.45 | 106.96 |
| 45 | S | 608 | CHL | C1-C2-C3 | -2.38 | 121.93 | 126.04 |
| 31 | b | 618 | BCR | C3-C4-C5 | -2.38 | 109.83 | 114.08 |
| 31 | C | 514 | BCR | C33-C5-C4 | 2.38 | 118.19 | 113.62 |
| 29 | S | 610 | CLA | C1C-C2C-C3C | -2.38 | 104.46 | 106.96 |
| 46 | S | 621 | LUT | C15-C14-C13 | -2.38 | 123.92 | 127.31 |
| 29 | b | 608 | CLA | O2A-CGA-CBA | 2.38 | 119.37 | 111.91 |
| 45 | n | 606 | CHL | C1-O2A-CGA | 2.38 | 122.68 | 116.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | G | 607 | CHL | C1-O2A-CGA | 2.38 | 122.68 | 116.44 |
| 45 | S | 608 | CHL | C1B-CHB-C4A | -2.37 | 125.41 | 130.12 |
| 29 | B | 610 | CLA | O2A-CGA-CBA | 2.37 | 119.36 | 111.91 |
| 29 | Y | 608 | CLA | O2D-CGD-O1D | -2.37 | 119.20 | 123.84 |
| 29 | b | 612 | CLA | CHA-C4D-ND | 2.37 | 137.47 | 132.50 |
| 29 | b | 612 | CLA | C2D-C1D-ND | 2.37 | 111.85 | 110.10 |
| 42 | D | 405 | PL9 | C20-C19-C21 | 2.37 | 119.26 | 115.27 |
| 45 | n | 608 | CHL | C4D-CHA-C1A | 2.37 | 124.14 | 121.25 |
| 48 | y | 623 | NEX | C19-C9-C10 | -2.37 | 119.60 | 122.92 |
| 45 | S | 608 | CHL | CHB-C4A-NA | 2.37 | 127.79 | 124.51 |
| 29 | c | 513 | CLA | C1C-C2C-C3C | -2.37 | 104.46 | 106.96 |
| 29 | S | 604 | CLA | O2A-CGA-CBA | 2.37 | 119.35 | 111.91 |
| 45 | s | 608 | CHL | C1-O2A-CGA | 2.37 | 122.67 | 116.44 |
| 45 | Y | 606 | CHL | CHB-C4A-NA | 2.37 | 127.79 | 124.51 |
| 29 | A | 410 | CLA | CHA-C4D-ND | 2.37 | 137.46 | 132.50 |
| 29 | c | 506 | CLA | C2D-C1D-ND | 2.37 | 111.85 | 110.10 |
| 29 | s | 604 | CLA | C2D-C1D-ND | 2.37 | 111.85 | 110.10 |
| 45 | Y | 606 | CHL | C1-C2-C3 | -2.37 | 121.95 | 126.04 |
| 29 | C | 504 | CLA | CHA-C4D-ND | 2.37 | 137.45 | 132.50 |
| 29 | n | 610 | CLA | CHA-C4D-ND | 2.37 | 137.45 | 132.50 |
| 39 | d | 408 | LHG | C6-C5-C4 | -2.37 | 106.19 | 111.79 |
| 29 | S | 602 | CLA | O2D-CGD-O1D | -2.37 | 119.21 | 123.84 |
| 45 | n | 601 | CHL | C1-O2A-CGA | 2.37 | 122.65 | 116.44 |
| 45 | G | 606 | CHL | C1B-CHB-C4A | -2.36 | 125.44 | 130.12 |
| 46 | N | 621 | LUT | C2-C3-C4 | -2.36 | 107.07 | 110.30 |
| 29 | r | 610 | CLA | CHA-C4D-ND | 2.36 | 137.44 | 132.50 |
| 29 | R | 603 | CLA | O1D-CGD-CBD | -2.36 | 119.65 | 124.48 |
| 29 | G | 603 | CLA | O2D-CGD-O1D | -2.36 | 119.22 | 123.84 |
| 29 | C | 506 | CLA | CMB-C2B-C1B | -2.36 | 124.83 | 128.46 |
| 29 | N | 603 | CLA | CAA-C2A-C3A | -2.36 | 106.31 | 112.78 |
| 31 | d | 404 | BCR | C27-C26-C25 | -2.36 | 119.30 | 122.73 |
| 29 | R | 610 | CLA | CHA-C4D-ND | 2.36 | 137.44 | 132.50 |
| 46 | Y | 621 | LUT | C10-C11-C12 | -2.36 | 115.85 | 123.22 |
| 29 | a | 405 | CLA | C2C-C1C-NC | 2.36 | 112.18 | 109.97 |
| 29 | B | 613 | CLA | C1C-C2C-C3C | -2.36 | 104.47 | 106.96 |
| 29 | b | 617 | CLA | CHA-C4D-ND | 2.36 | 137.44 | 132.50 |
| 29 | R | 603 | CLA | CMB-C2B-C3B | 2.36 | 129.09 | 124.68 |
| 29 | y | 603 | CLA | CAA-C2A-C3A | -2.36 | 106.31 | 112.78 |
| 47 | n | 622 | XAT | C39-C29-C30 | -2.36 | 119.62 | 122.92 |
| 48 | n | 623 | NEX | C40-C33-C34 | -2.36 | 119.62 | 122.92 |
| 29 | B | 610 | CLA | C1C-C2C-C3C | -2.36 | 104.48 | 106.96 |
| 29 | A | 405 | CLA | CHA-C4D-ND | 2.36 | 137.43 | 132.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | R | 612 | CLA | CMD-C2D-C3D | -2.36 | 122.19 | 127.61 |
| 29 | c | 505 | CLA | O2A-CGA-CBA | 2.36 | 119.31 | 111.91 |
| 47 | r | 622 | XAT | C31-C32-C33 | 2.36 | 133.04 | 126.42 |
| 29 | Y | 603 | CLA | O2A-CGA-CBA | 2.36 | 119.31 | 111.91 |
| 29 | C | 501 | CLA | C1D-ND-C4D | -2.36 | 104.66 | 106.33 |
| 46 | S | 621 | LUT | C16-C1-C6 | -2.36 | 106.48 | 110.30 |
| 29 | s | 609 | CLA | CAA-C2A-C3A | -2.36 | 106.33 | 112.78 |
| 29 | R | 609 | CLA | C2D-C1D-ND | 2.36 | 111.84 | 110.10 |
| 45 | r | 607 | CHL | C4A-NA-C1A | 2.36 | 107.77 | 106.71 |
| 29 | S | 617 | CLA | O2A-CGA-CBA | 2.36 | 119.30 | 111.91 |
| 29 | Y | 613 | CLA | O2D-CGD-O1D | -2.35 | 119.23 | 123.84 |
| 29 | S | 604 | CLA | CMD-C2D-C3D | -2.35 | 122.20 | 127.61 |
| 29 | b | 602 | CLA | C2D-C1D-ND | 2.35 | 111.84 | 110.10 |
| 29 | r | 613 | CLA | C1C-C2C-C3C | -2.35 | 104.48 | 106.96 |
| 29 | Y | 602 | CLA | CHA-C4D-ND | 2.35 | 137.42 | 132.50 |
| 47 | r | 622 | XAT | C30-C31-C32 | -2.35 | 115.87 | 123.22 |
| 29 | b | 607 | CLA | CMB-C2B-C1B | -2.35 | 124.85 | 128.46 |
| 29 | G | 614 | CLA | O2D-CGD-O1D | -2.35 | 119.24 | 123.84 |
| 29 | g | 614 | CLA | CMD-C2D-C3D | -2.35 | 122.20 | 127.61 |
| 29 | c | 505 | CLA | C2D-C1D-ND | 2.35 | 111.84 | 110.10 |
| 29 | R | 610 | CLA | O1D-CGD-CBD | -2.35 | 119.67 | 124.48 |
| 29 | c | 504 | CLA | CHA-C4D-ND | 2.35 | 137.42 | 132.50 |
| 29 | b | 610 | CLA | O2A-CGA-CBA | 2.35 | 119.28 | 111.91 |
| 48 | N | 623 | NEX | C1-C2-C3 | 2.35 | 118.95 | 113.64 |
| 29 | G | 602 | CLA | C1C-C2C-C3C | -2.35 | 104.49 | 106.96 |
| 29 | B | 617 | CLA | CHA-C4D-ND | 2.35 | 137.41 | 132.50 |
| 29 | B | 617 | CLA | CHD-C1D-ND | -2.35 | 122.30 | 124.45 |
| 29 | y | 608 | CLA | O2D-CGD-O1D | -2.35 | 119.25 | 123.84 |
| 45 | Y | 609 | CHL | CHD-C4C-C3C | 2.35 | 128.29 | 124.84 |
| 45 | n | 609 | CHL | C4A-NA-C1A | 2.35 | 107.76 | 106.71 |
| 29 | y | 604 | CLA | CMD-C2D-C3D | -2.35 | 122.21 | 127.61 |
| 29 | n | 602 | CLA | O2D-CGD-O1D | -2.35 | 119.25 | 123.84 |
| 45 | N | 608 | CHL | C1B-CHB-C4A | -2.35 | 125.47 | 130.12 |
| 29 | c | 506 | CLA | CHA-C1A-NA | -2.35 | 121.02 | 126.40 |
| 43 | f | 101 | HEM | CBA-CAA-C2A | -2.35 | 108.61 | 112.62 |
| 29 | b | 603 | CLA | C1-O2A-CGA | 2.35 | 122.60 | 116.44 |
| 29 | G | 610 | CLA | O2A-CGA-CBA | 2.35 | 119.27 | 111.91 |
| 48 | y | 623 | NEX | C5-C4-C3 | 2.35 | 114.52 | 111.75 |
| 29 | C | 503 | CLA | O2A-CGA-CBA | 2.35 | 119.27 | 111.91 |
| 29 | b | 605 | CLA | CMD-C2D-C3D | -2.35 | 122.22 | 127.61 |
| 29 | R | 611 | CLA | O2D-CGD-O1D | -2.35 | 119.25 | 123.84 |
| 29 | B | 608 | CLA | O2A-CGA-CBA | 2.34 | 119.27 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | S | 606 | CHL | CHB-C4A-NA | 2.34 | 127.75 | 124.51 |
| 47 | y | 622 | XAT | C18-C5-C6 | -2.34 | 118.33 | 122.26 |
| 29 | A | 406 | CLA | C2D-C1D-ND | 2.34 | 111.83 | 110.10 |
| 46 | y | 621 | LUT | C10-C11-C12 | -2.34 | 115.91 | 123.22 |
| 45 | y | 609 | CHL | CHB-C4A-NA | 2.34 | 127.75 | 124.51 |
| 45 | g | 605 | CHL | CHB-C4A-NA | 2.34 | 127.75 | 124.51 |
| 29 | B | 611 | CLA | O2A-CGA-CBA | 2.34 | 119.26 | 111.91 |
| 29 | C | 506 | CLA | CHA-C1A-NA | -2.34 | 121.03 | 126.40 |
| 29 | B | 607 | CLA | CMD-C2D-C3D | -2.34 | 122.23 | 127.61 |
| 29 | B | 608 | CLA | C1C-C2C-C3C | -2.34 | 104.50 | 106.96 |
| 29 | s | 602 | CLA | CHA-C4D-ND | 2.34 | 137.40 | 132.50 |
| 45 | N | 606 | CHL | CHB-C4A-NA | 2.34 | 127.75 | 124.51 |
| 46 | n | 620 | LUT | C38-C25-C24 | -2.34 | 118.55 | 123.56 |
| 29 | R | 609 | CLA | CHA-C1A-NA | -2.34 | 121.04 | 126.40 |
| 29 | r | 609 | CLA | CHA-C1A-NA | -2.34 | 121.04 | 126.40 |
| 29 | c | 509 | CLA | CMD-C2D-C3D | -2.34 | 122.23 | 127.61 |
| 29 | g | 613 | CLA | CMD-C2D-C3D | -2.34 | 122.23 | 127.61 |
| 47 | N | 622 | XAT | C19-C9-C10 | -2.34 | 119.65 | 122.92 |
| 29 | B | 612 | CLA | O2A-CGA-CBA | 2.34 | 119.25 | 111.91 |
| 45 | N | 608 | CHL | C4D-CHA-C1A | 2.34 | 124.09 | 121.25 |
| 47 | y | 622 | XAT | O24-C25-C38 | -2.34 | 112.25 | 115.06 |
| 29 | a | 406 | CLA | CMB-C2B-C1B | -2.34 | 124.87 | 128.46 |
| 33 | B | 622 | LMG | O1-C7-C8 | -2.34 | 105.26 | 110.90 |
| 31 | B | 618 | BCR | C2-C1-C6 | 2.34 | 114.08 | 110.48 |
| 29 | a | 410 | CLA | CMB-C2B-C3B | 2.34 | 129.05 | 124.68 |
| 29 | C | 508 | CLA | CHA-C4D-ND | 2.34 | 137.39 | 132.50 |
| 29 | C | 501 | CLA | O2A-CGA-CBA | 2.34 | 119.24 | 111.91 |
| 29 | Y | 603 | CLA | C1D-ND-C4D | -2.34 | 104.68 | 106.33 |
| 29 | b | 614 | CLA | CMB-C2B-C3B | 2.33 | 129.05 | 124.68 |
| 29 | B | 612 | CLA | C1C-C2C-C3C | -2.33 | 104.50 | 106.96 |
| 46 | g | 620 | LUT | C10-C11-C12 | -2.33 | 115.93 | 123.22 |
| 46 | y | 620 | LUT | C30-C31-C32 | -2.33 | 115.93 | 123.22 |
| 46 | s | 620 | LUT | C31-C30-C29 | -2.33 | 123.98 | 127.31 |
| 30 | a | 409 | PHO | O1D-CGD-CBD | 2.33 | 128.62 | 124.74 |
| 29 | y | 612 | CLA | CMA-C3A-C4A | 2.33 | 118.04 | 111.77 |
| 33 | H | 102 | LMG | O8-C28-C29 | 2.33 | 119.23 | 111.91 |
| 29 | C | 507 | CLA | CHA-C1A-NA | -2.33 | 121.06 | 126.40 |
| 29 | a | 407 | CLA | CAA-C2A-C3A | -2.33 | 106.39 | 112.78 |
| 29 | c | 507 | CLA | CHA-C1A-NA | -2.33 | 121.06 | 126.40 |
| 29 | R | 603 | CLA | CMD-C2D-C3D | -2.33 | 122.26 | 127.61 |
| 29 | s | 603 | CLA | CHA-C1A-NA | -2.33 | 121.07 | 126.40 |
| 29 | y | 613 | CLA | O2D-CGD-O1D | -2.33 | 119.29 | 123.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 604 | CLA | C2D-C1D-ND | 2.33 | 111.82 | 110.10 |
| 29 | N | 604 | CLA | CMA-C3A-C4A | 2.33 | 118.02 | 111.77 |
| 29 | c | 503 | CLA | O2D-CGD-O1D | -2.33 | 119.29 | 123.84 |
| 29 | y | 602 | CLA | C1C-C2C-C3C | -2.32 | 104.51 | 106.96 |
| 45 | G | 607 | CHL | CMB-C2B-C1B | -2.32 | 124.89 | 128.46 |
| 29 | C | 511 | CLA | CMB-C2B-C3B | 2.32 | 129.03 | 124.68 |
| 46 | g | 621 | LUT | C38-C25-C24 | -2.32 | 118.59 | 123.56 |
| 45 | s | 606 | CHL | CHD-C4C-C3C | 2.32 | 128.26 | 124.84 |
| 31 | D | 404 | BCR | C1-C6-C5 | -2.32 | 119.34 | 122.61 |
| 29 | r | 609 | CLA | O2D-CGD-O1D | -2.32 | 119.30 | 123.84 |
| 48 | r | 623 | NEX | C38-C25-C26 | -2.32 | 118.37 | 122.26 |
| 47 | y | 622 | XAT | C40-C33-C34 | -2.32 | 119.67 | 122.92 |
| 29 | d | 402 | CLA | O2D-CGD-O1D | -2.32 | 119.30 | 123.84 |
| 29 | A | 410 | CLA | O2A-CGA-CBA | 2.32 | 119.19 | 111.91 |
| 45 | n | 608 | CHL | CMB-C2B-C1B | -2.32 | 124.90 | 128.46 |
| 29 | r | 604 | CLA | C1D-ND-C4D | -2.32 | 104.69 | 106.33 |
| 29 | c | 512 | CLA | CHA-C4D-ND | 2.32 | 137.35 | 132.50 |
| 31 | D | 404 | BCR | C33-C5-C4 | 2.32 | 118.07 | 113.62 |
| 29 | b | 607 | CLA | C2D-C1D-ND | 2.32 | 111.81 | 110.10 |
| 29 | s | 603 | CLA | O2D-CGD-O1D | -2.32 | 119.31 | 123.84 |
| 35 | B | 620 | C7Z | C30-C31-C32 | -2.32 | 115.99 | 123.22 |
| 29 | S | 611 | CLA | O2A-CGA-CBA | 2.32 | 119.17 | 111.91 |
| 31 | B | 618 | BCR | C33-C5-C6 | -2.31 | 121.93 | 124.53 |
| 29 | b | 613 | CLA | CMB-C2B-C3B | 2.31 | 129.01 | 124.68 |
| 45 | R | 607 | CHL | CHB-C4A-NA | 2.31 | 127.71 | 124.51 |
| 45 | G | 601 | CHL | C1-C2-C3 | -2.31 | 122.04 | 126.04 |
| 29 | r | 602 | CLA | O2A-CGA-CBA | 2.31 | 119.17 | 111.91 |
| 29 | c | 511 | CLA | CHA-C1A-NA | -2.31 | 121.10 | 126.40 |
| 46 | N | 621 | LUT | C35-C15-C14 | -2.31 | 118.73 | 123.47 |
| 46 | y | 620 | LUT | C39-C29-C28 | 2.31 | 121.72 | 118.08 |
| 29 | B | 611 | CLA | CHA-C1A-NA | -2.31 | 121.10 | 126.40 |
| 45 | g | 607 | CHL | CMB-C2B-C1B | -2.31 | 124.91 | 128.46 |
| 29 | b | 609 | CLA | CMB-C2B-C3B | 2.31 | 129.00 | 124.68 |
| 29 | Y | 604 | CLA | CMD-C2D-C3D | -2.31 | 122.30 | 127.61 |
| 31 | c | 514 | BCR | C33-C5-C4 | 2.31 | 118.06 | 113.62 |
| 29 | Y | 608 | CLA | O2A-CGA-CBA | 2.31 | 119.16 | 111.91 |
| 30 | A | 408 | PHO | O1D-CGD-CBD | 2.31 | 128.59 | 124.74 |
| 32 | C | 526 | SQD | O3-C3-C2 | -2.31 | 105.01 | 110.35 |
| 29 | c | 507 | CLA | CMA-C3A-C4A | 2.31 | 117.98 | 111.77 |
| 29 | r | 611 | CLA | CMD-C2D-C3D | -2.31 | 122.30 | 127.61 |
| 29 | B | 615 | CLA | C2D-C1D-ND | 2.31 | 111.81 | 110.10 |
| 29 | A | 406 | CLA | CMD-C2D-C3D | -2.31 | 122.30 | 127.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | C | 510 | CLA | O2A-CGA-CBA | 2.31 | 119.15 | 111.91 |
| 29 | r | 611 | CLA | O2D-CGD-O1D | -2.31 | 119.33 | 123.84 |
| 29 | G | 610 | CLA | O1D-CGD-CBD | -2.31 | 119.76 | 124.48 |
| 29 | c | 510 | CLA | O2A-CGA-CBA | 2.31 | 119.15 | 111.91 |
| 45 | n | 609 | CHL | CMB-C2B-C1B | -2.31 | 124.92 | 128.46 |
| 29 | c | 508 | CLA | CHA-C4D-ND | 2.31 | 137.32 | 132.50 |
| 48 | s | 623 | NEX | C26-C27-C28 | -2.31 | 121.12 | 125.99 |
| 45 | g | 606 | CHL | CMB-C2B-C1B | -2.31 | 124.92 | 128.46 |
| 29 | G | 610 | CLA | CHA-C4D-ND | 2.31 | 137.32 | 132.50 |
| 29 | g | 603 | CLA | CMD-C2D-C3D | -2.30 | 122.31 | 127.61 |
| 45 | s | 608 | CHL | C1-C2-C3 | -2.30 | 122.06 | 126.04 |
| 31 | b | 619 | BCR | C19-C18-C17 | 2.30 | 122.47 | 118.94 |
| 29 | R | 608 | CLA | CMD-C2D-C3D | -2.30 | 122.32 | 127.61 |
| 44 | h | 101 | RRX | C38-C26-C25 | -2.30 | 121.94 | 124.53 |
| 31 | C | 514 | BCR | C34-C9-C10 | -2.30 | 119.70 | 122.92 |
| 46 | s | 620 | LUT | C39-C29-C28 | 2.30 | 121.70 | 118.08 |
| 29 | g | 613 | CLA | O2D-CGD-O1D | -2.30 | 119.34 | 123.84 |
| 29 | R | 604 | CLA | C1D-ND-C4D | -2.30 | 104.70 | 106.33 |
| 42 | d | 405 | PL9 | C20-C19-C21 | 2.30 | 119.14 | 115.27 |
| 42 | d | 405 | PL9 | C27-C28-C29 | -2.30 | 122.12 | 127.66 |
| 29 | A | 405 | CLA | C2C-C1C-NC | 2.30 | 112.13 | 109.97 |
| 29 | n | 604 | CLA | CMD-C2D-C3D | -2.30 | 122.33 | 127.61 |
| 48 | N | 623 | NEX | C4-C3-C2 | 2.30 | 115.21 | 110.77 |
| 46 | s | 620 | LUT | C31-C32-C33 | -2.30 | 119.96 | 126.42 |
| 29 | a | 405 | CLA | CMA-C3A-C4A | 2.30 | 117.95 | 111.77 |
| 29 | S | 603 | CLA | CHA-C1A-NA | -2.30 | 121.14 | 126.40 |
| 45 | N | 607 | CHL | CMB-C2B-C1B | -2.30 | 124.94 | 128.46 |
| 45 | y | 601 | CHL | CMB-C2B-C1B | -2.30 | 124.94 | 128.46 |
| 29 | d | 402 | CLA | CAC-C3C-C4C | 2.30 | 127.79 | 124.81 |
| 29 | N | 604 | CLA | CMB-C2B-C3B | 2.30 | 128.97 | 124.68 |
| 32 | A | 412 | SQD | O3-C3-C2 | -2.29 | 105.05 | 110.35 |
| 29 | N | 610 | CLA | CMB-C2B-C3B | 2.29 | 128.97 | 124.68 |
| 29 | n | 602 | CLA | CMB-C2B-C3B | 2.29 | 128.97 | 124.68 |
| 45 | y | 607 | CHL | CMB-C2B-C1B | -2.29 | 124.94 | 128.46 |
| 46 | G | 620 | LUT | C38-C25-C24 | -2.29 | 118.66 | 123.56 |
| 29 | c | 502 | CLA | CMD-C2D-C3D | -2.29 | 122.35 | 127.61 |
| 45 | n | 607 | CHL | CMB-C2B-C1B | -2.29 | 124.95 | 128.46 |
| 45 | y | 605 | CHL | CHB-C4A-NA | 2.29 | 127.68 | 124.51 |
| 29 | r | 613 | CLA | CMD-C2D-C3D | -2.29 | 122.35 | 127.61 |
| 45 | Y | 607 | CHL | CMB-C2B-C1B | -2.29 | 124.95 | 128.46 |
| 45 | g | 606 | CHL | C4D-CHA-C1A | 2.29 | 124.03 | 121.25 |
| 46 | Y | 620 | LUT | C35-C34-C33 | -2.29 | 124.05 | 127.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | y | 603 | CLA | O1D-CGD-CBD | -2.29 | 119.81 | 124.48 |
| 29 | C | 512 | CLA | CHA-C4D-ND | 2.29 | 137.28 | 132.50 |
| 46 | y | 621 | LUT | C16-C1-C6 | -2.28 | 106.59 | 110.30 |
| 29 | n | 603 | CLA | C1D-ND-C4D | -2.28 | 104.71 | 106.33 |
| 31 | C | 517 | BCR | C34-C9-C10 | -2.28 | 119.72 | 122.92 |
| 29 | a | 406 | CLA | CMD-C2D-C3D | -2.28 | 122.36 | 127.61 |
| 32 | c | 626 | SQD | O3-C3-C2 | -2.28 | 105.07 | 110.35 |
| 45 | N | 609 | CHL | CMB-C2B-C1B | -2.28 | 124.95 | 128.46 |
| 29 | C | 509 | CLA | CMD-C2D-C3D | -2.28 | 122.36 | 127.61 |
| 45 | N | 608 | CHL | CMB-C2B-C1B | -2.28 | 124.95 | 128.46 |
| 45 | Y | 601 | CHL | CMB-C2B-C1B | -2.28 | 124.95 | 128.46 |
| 47 | g | 622 | XAT | O24-C25-C24 | 2.28 | 115.10 | 113.38 |
| 29 | N | 602 | CLA | CMB-C2B-C3B | 2.28 | 128.95 | 124.68 |
| 29 | d | 402 | CLA | C2C-C1C-NC | 2.28 | 112.11 | 109.97 |
| 29 | r | 613 | CLA | CMA-C3A-C4A | 2.28 | 117.91 | 111.77 |
| 29 | G | 602 | CLA | C1D-ND-C4D | -2.28 | 104.71 | 106.33 |
| 29 | B | 613 | CLA | C1-C2-C3 | -2.28 | 122.10 | 126.04 |
| 29 | A | 405 | CLA | C1-O2A-CGA | 2.28 | 122.43 | 116.44 |
| 29 | G | 610 | CLA | C1C-C2C-C3C | -2.28 | 104.56 | 106.96 |
| 29 | R | 604 | CLA | CMB-C2B-C3B | 2.28 | 128.94 | 124.68 |
| 29 | C | 503 | CLA | C1D-ND-C4D | -2.28 | 104.72 | 106.33 |
| 29 | c | 510 | CLA | C1D-ND-C4D | -2.28 | 104.72 | 106.33 |
| 45 | n | 609 | CHL | CHD-C4C-C3C | 2.28 | 128.19 | 124.84 |
| 29 | c | 503 | CLA | O2A-CGA-CBA | 2.28 | 119.06 | 111.91 |
| 45 | n | 606 | CHL | C4D-CHA-C1A | 2.28 | 124.02 | 121.25 |
| 29 | S | 603 | CLA | O2D-CGD-O1D | -2.28 | 119.38 | 123.84 |
| 29 | N | 613 | CLA | O2D-CGD-O1D | -2.28 | 119.38 | 123.84 |
| 29 | B | 616 | CLA | CHA-C1A-NA | -2.28 | 121.18 | 126.40 |
| 46 | S | 621 | LUT | C11-C10-C9 | -2.28 | 124.06 | 127.31 |
| 29 | n | 610 | CLA | C1D-ND-C4D | -2.28 | 104.72 | 106.33 |
| 29 | D | 402 | CLA | O2D-CGD-O1D | -2.28 | 119.39 | 123.84 |
| 45 | y | 606 | CHL | C1-C2-C3 | -2.28 | 122.11 | 126.04 |
| 29 | B | 614 | CLA | CMB-C2B-C3B | 2.28 | 128.94 | 124.68 |
| 29 | y | 602 | CLA | C1D-ND-C4D | -2.28 | 104.72 | 106.33 |
| 45 | Y | 606 | CHL | C1-O2A-CGA | 2.28 | 122.42 | 116.44 |
| 29 | r | 603 | CLA | CMD-C2D-C3D | -2.28 | 122.38 | 127.61 |
| 29 | B | 612 | CLA | CHA-C1A-NA | -2.28 | 121.19 | 126.40 |
| 45 | G | 605 | CHL | C4D-CHA-C1A | 2.28 | 124.02 | 121.25 |
| 48 | N | 623 | NEX | C19-C9-C10 | -2.28 | 119.74 | 122.92 |
| 29 | Y | 612 | CLA | CHA-C1A-NA | -2.27 | 121.19 | 126.40 |
| 31 | c | 516 | BCR | C31-C1-C6 | -2.27 | 106.61 | 110.30 |
| 29 | c | 510 | CLA | CAA-C2A-C3A | -2.27 | 106.55 | 112.78 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | N | 604 | CLA | O2A-CGA-CBA | 2.27 | 119.04 | 111.91 |
| 29 | B | 607 | CLA | CMB-C2B-C1B | -2.27 | 124.97 | 128.46 |
| 31 | b | 618 | BCR | C34-C9-C10 | -2.27 | 119.74 | 122.92 |
| 29 | C | 504 | CLA | O2A-CGA-CBA | 2.27 | 119.04 | 111.91 |
| 39 | n | 624 | LHG | O8-C23-C24 | 2.27 | 119.04 | 111.91 |
| 29 | n | 612 | CLA | CHA-C1A-NA | -2.27 | 121.19 | 126.40 |
| 35 | B | 620 | C7Z | C7-C8-C9 | -2.27 | 122.80 | 126.23 |
| 29 | C | 501 | CLA | O1D-CGD-CBD | -2.27 | 119.83 | 124.48 |
| 31 | C | 516 | BCR | C37-C22-C23 | 2.27 | 121.66 | 118.08 |
| 29 | s | 611 | CLA | O2A-CGA-CBA | 2.27 | 119.04 | 111.91 |
| 29 | C | 504 | CLA | CMB-C2B-C3B | 2.27 | 128.93 | 124.68 |
| 45 | n | 606 | CHL | C1B-CHB-C4A | -2.27 | 125.62 | 130.12 |
| 45 | N | 608 | CHL | C1-O2A-CGA | 2.27 | 122.40 | 116.44 |
| 29 | B | 614 | CLA | C1D-ND-C4D | -2.27 | 104.72 | 106.33 |
| 29 | b | 611 | CLA | CHA-C1A-NA | -2.27 | 121.20 | 126.40 |
| 29 | N | 604 | CLA | OBD-CAD-C3D | -2.27 | 123.06 | 128.52 |
| 29 | y | 613 | CLA | C1D-ND-C4D | -2.27 | 104.72 | 106.33 |
| 42 | d | 405 | PL9 | C31-C32-C33 | -2.27 | 104.42 | 111.88 |
| 29 | C | 507 | CLA | C1-C2-C3 | -2.27 | 122.12 | 126.04 |
| 29 | y | 614 | CLA | O2A-CGA-CBA | 2.27 | 119.03 | 111.91 |
| 29 | B | 611 | CLA | CMA-C3A-C4A | 2.27 | 117.87 | 111.77 |
| 29 | b | 616 | CLA | CHA-C1A-NA | -2.27 | 121.20 | 126.40 |
| 48 | N | 623 | NEX | C40-C33-C34 | -2.27 | 119.75 | 122.92 |
| 45 | N | 609 | CHL | CHB-C4A-NA | 2.27 | 127.65 | 124.51 |
| 29 | g | 614 | CLA | O2A-CGA-CBA | 2.27 | 119.02 | 111.91 |
| 29 | g | 610 | CLA | CMD-C2D-C3D | -2.27 | 122.40 | 127.61 |
| 45 | y | 609 | CHL | CHD-C4C-C3C | 2.27 | 128.17 | 124.84 |
| 29 | y | 604 | CLA | CMA-C3A-C4A | 2.27 | 117.86 | 111.77 |
| 31 | c | 517 | BCR | C2-C1-C6 | 2.27 | 113.97 | 110.48 |
| 29 | R | 603 | CLA | O2A-CGA-CBA | 2.27 | 119.02 | 111.91 |
| 42 | d | 405 | PL9 | O1-C4-C3 | -2.27 | 118.22 | 120.72 |
| 29 | b | 607 | CLA | CMD-C2D-C3D | -2.27 | 122.40 | 127.61 |
| 29 | R | 602 | CLA | C1D-ND-C4D | -2.26 | 104.73 | 106.33 |
| 29 | S | 602 | CLA | C1D-ND-C4D | -2.26 | 104.73 | 106.33 |
| 29 | Y | 602 | CLA | C1D-ND-C4D | -2.26 | 104.73 | 106.33 |
| 48 | g | 623 | NEX | C1-C2-C3 | 2.26 | 118.76 | 113.64 |
| 29 | c | 512 | CLA | O2A-CGA-CBA | 2.26 | 119.01 | 111.91 |
| 45 | g | 606 | CHL | C1B-CHB-C4A | -2.26 | 125.63 | 130.12 |
| 29 | y | 610 | CLA | O1D-CGD-CBD | -2.26 | 119.85 | 124.48 |
| 45 | g | 605 | CHL | C1B-CHB-C4A | -2.26 | 125.64 | 130.12 |
| 32 | B | 621 | SQD | O3-C3-C2 | -2.26 | 105.12 | 110.35 |
| 39 | d | 410 | LHG | C5-O7-C7 | -2.26 | 112.22 | 117.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | B | 603 | CLA | O2D-CGD-O1D | -2.26 | 119.42 | 123.84 |
| 29 | G | 604 | CLA | CMD-C2D-C3D | -2.26 | 122.42 | 127.61 |
| 29 | b | 604 | CLA | CMD-C2D-C3D | -2.26 | 122.42 | 127.61 |
| 29 | s | 617 | CLA | C1D-ND-C4D | -2.26 | 104.73 | 106.33 |
| 29 | g | 602 | CLA | C1C-C2C-C3C | -2.26 | 104.58 | 106.96 |
| 31 | c | 517 | BCR | C15-C14-C13 | -2.26 | 124.09 | 127.31 |
| 32 | a | 412 | SQD | O3-C3-C2 | -2.26 | 105.13 | 110.35 |
| 29 | Y | 610 | CLA | C1C-C2C-C3C | -2.26 | 104.58 | 106.96 |
| 29 | C | 510 | CLA | CAA-C2A-C3A | -2.26 | 106.60 | 112.78 |
| 29 | G | 613 | CLA | CMD-C2D-C3D | -2.26 | 122.42 | 127.61 |
| 29 | Y | 614 | CLA | CMD-C2D-C3D | -2.26 | 122.42 | 127.61 |
| 29 | c | 501 | CLA | C1D-ND-C4D | -2.26 | 104.73 | 106.33 |
| 47 | g | 622 | XAT | C18-C5-C6 | -2.26 | 118.48 | 122.26 |
| 29 | r | 610 | CLA | C3D-C2D-C1D | -2.26 | 102.75 | 105.83 |
| 29 | R | 604 | CLA | CMD-C2D-C3D | -2.26 | 122.42 | 127.61 |
| 29 | A | 406 | CLA | O2A-CGA-CBA | 2.25 | 118.98 | 111.91 |
| 29 | d | 403 | CLA | CAA-C2A-C3A | -2.25 | 106.61 | 112.78 |
| 29 | R | 609 | CLA | O2D-CGD-O1D | -2.25 | 119.43 | 123.84 |
| 29 | c | 512 | CLA | O2D-CGD-O1D | -2.25 | 119.43 | 123.84 |
| 45 | n | 606 | CHL | CHB-C4A-NA | 2.25 | 127.63 | 124.51 |
| 29 | B | 602 | CLA | O2A-CGA-CBA | 2.25 | 118.98 | 111.91 |
| 48 | Y | 623 | NEX | C1-C2-C3 | 2.25 | 118.73 | 113.64 |
| 29 | r | 612 | CLA | CHA-C1A-NA | -2.25 | 121.24 | 126.40 |
| 29 | B | 603 | CLA | C2D-C1D-ND | 2.25 | 111.76 | 110.10 |
| 29 | C | 507 | CLA | CMA-C3A-C4A | 2.25 | 117.83 | 111.77 |
| 29 | g | 604 | CLA | O2A-CGA-CBA | 2.25 | 118.97 | 111.91 |
| 45 | g | 601 | CHL | C1-C2-C3 | -2.25 | 122.15 | 126.04 |
| 48 | y | 623 | NEX | C31-C30-C29 | 2.25 | 130.52 | 127.31 |
| 29 | c | 503 | CLA | CHA-C1A-NA | -2.25 | 121.24 | 126.40 |
| 39 | D | 408 | LHG | C6-C5-C4 | -2.25 | 106.47 | 111.79 |
| 29 | C | 505 | CLA | C2D-C1D-ND | 2.25 | 111.76 | 110.10 |
| 29 | r | 603 | CLA | O2A-CGA-CBA | 2.25 | 118.97 | 111.91 |
| 45 | S | 608 | CHL | C4D-CHA-C1A | 2.25 | 123.99 | 121.25 |
| 48 | g | 623 | NEX | C16-C1-C6 | -2.25 | 108.46 | 110.47 |
| 29 | C | 507 | CLA | C1-O2A-CGA | 2.25 | 122.34 | 116.44 |
| 29 | r | 613 | CLA | O1D-CGD-CBD | -2.25 | 119.88 | 124.48 |
| 45 | G | 608 | CHL | C4A-NA-C1A | 2.25 | 107.72 | 106.71 |
| 45 | y | 605 | CHL | C1B-CHB-C4A | -2.25 | 125.66 | 130.12 |
| 45 | g | 607 | CHL | C4D-CHA-C1A | 2.25 | 123.98 | 121.25 |
| 29 | y | 603 | CLA | C1-C2-C3 | -2.25 | 122.16 | 126.04 |
| 30 | a | 408 | PHO | C1-C2-C3 | -2.25 | 122.16 | 126.04 |
| 42 | D | 405 | PL9 | C31-C32-C33 | -2.25 | 104.49 | 111.88 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 48 | y | 623 | NEX | C20-C13-C14 | -2.25 | 119.77 | 122.92 |
| 45 | g | 607 | CHL | C1-O2A-CGA | 2.25 | 122.34 | 116.44 |
| 46 | s | 621 | LUT | C10-C11-C12 | -2.25 | 116.20 | 123.22 |
| 46 | y | 620 | LUT | C11-C10-C9 | -2.25 | 124.10 | 127.31 |
| 29 | G | 614 | CLA | O2A-CGA-CBA | 2.25 | 118.96 | 111.91 |
| 29 | R | 608 | CLA | O2D-CGD-O1D | -2.25 | 119.45 | 123.84 |
| 46 | n | 621 | LUT | C8-C7-C6 | -2.25 | 120.89 | 127.20 |
| 29 | s | 612 | CLA | C1D-ND-C4D | -2.25 | 104.74 | 106.33 |
| 29 | C | 509 | CLA | O2A-CGA-CBA | 2.24 | 118.95 | 111.91 |
| 29 | b | 608 | CLA | C1-C2-C3 | -2.24 | 122.16 | 126.04 |
| 29 | s | 614 | CLA | CHA-C1A-NA | -2.24 | 121.26 | 126.40 |
| 29 | c | 501 | CLA | O2A-CGA-CBA | 2.24 | 118.95 | 111.91 |
| 29 | R | 602 | CLA | O1D-CGD-CBD | -2.24 | 119.89 | 124.48 |
| 46 | n | 620 | LUT | C7-C8-C9 | -2.24 | 122.84 | 126.23 |
| 45 | N | 609 | CHL | C4D-CHA-C1A | 2.24 | 123.98 | 121.25 |
| 45 | G | 605 | CHL | C4A-NA-C1A | 2.24 | 107.71 | 106.71 |
| 29 | n | 604 | CLA | O2A-CGA-CBA | 2.24 | 118.94 | 111.91 |
| 29 | c | 512 | CLA | CMA-C3A-C4A | 2.24 | 117.80 | 111.77 |
| 46 | s | 621 | LUT | C11-C10-C9 | -2.24 | 124.11 | 127.31 |
| 29 | c | 504 | CLA | O2A-CGA-CBA | 2.24 | 118.94 | 111.91 |
| 29 | Y | 614 | CLA | O2A-CGA-CBA | 2.24 | 118.94 | 111.91 |
| 29 | R | 603 | CLA | CHA-C1A-NA | -2.24 | 121.27 | 126.40 |
| 29 | g | 602 | CLA | CMB-C2B-C3B | 2.24 | 128.87 | 124.68 |
| 29 | N | 612 | CLA | O2D-CGD-O1D | -2.24 | 119.46 | 123.84 |
| 47 | n | 622 | XAT | C19-C9-C10 | -2.24 | 119.79 | 122.92 |
| 48 | r | 623 | NEX | C40-C33-C34 | -2.24 | 119.79 | 122.92 |
| 46 | Y | 621 | LUT | C35-C34-C33 | -2.24 | 124.12 | 127.31 |
| 29 | g | 613 | CLA | C1-O2A-CGA | 2.24 | 122.31 | 116.44 |
| 29 | b | 611 | CLA | O2A-CGA-CBA | 2.24 | 118.93 | 111.91 |
| 29 | g | 604 | CLA | CMD-C2D-C3D | -2.24 | 122.47 | 127.61 |
| 29 | b | 605 | CLA | O2A-CGA-CBA | 2.23 | 118.92 | 111.91 |
| 45 | n | 609 | CHL | C4D-CHA-C1A | 2.23 | 123.97 | 121.25 |
| 39 | y | 624 | LHG | C6-C5-C4 | -2.23 | 106.50 | 111.79 |
| 32 | b | 621 | SQD | O3-C3-C2 | -2.23 | 105.19 | 110.35 |
| 45 | Y | 605 | CHL | CHB-C4A-NA | 2.23 | 127.60 | 124.51 |
| 29 | B | 613 | CLA | O2A-CGA-CBA | 2.23 | 118.91 | 111.91 |
| 29 | n | 613 | CLA | O2D-CGD-O1D | -2.23 | 119.47 | 123.84 |
| 48 | n | 623 | NEX | C38-C25-C26 | -2.23 | 118.52 | 122.26 |
| 47 | N | 622 | XAT | C39-C29-C30 | -2.23 | 119.80 | 122.92 |
| 29 | n | 610 | CLA | O1D-CGD-CBD | -2.23 | 119.92 | 124.48 |
| 29 | R | 608 | CLA | CHA-C1A-NA | -2.23 | 121.29 | 126.40 |
| 31 | D | 404 | BCR | C27-C26-C25 | -2.23 | 119.49 | 122.73 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | n | 614 | CLA | CHA-C1A-NA | -2.23 | 121.29 | 126.40 |
| 29 | A | 405 | CLA | CMD-C2D-C3D | -2.23 | 122.48 | 127.61 |
| 29 | R | 613 | CLA | CHA-C1A-NA | -2.23 | 121.29 | 126.40 |
| 31 | B | 618 | BCR | C33-C5-C4 | 2.23 | 117.90 | 113.62 |
| 31 | b | 618 | BCR | C2-C1-C6 | 2.23 | 113.91 | 110.48 |
| 33 | A | 413 | LMG | C7-O1-C1 | -2.23 | 109.38 | 113.74 |
| 29 | s | 617 | CLA | CHA-C1A-NA | -2.23 | 121.29 | 126.40 |
| 29 | C | 509 | CLA | CMB-C2B-C3B | 2.23 | 128.85 | 124.68 |
| 29 | r | 612 | CLA | CMD-C2D-C3D | -2.23 | 122.49 | 127.61 |
| 29 | b | 615 | CLA | C2A-C1A-CHA | 2.23 | 127.75 | 123.86 |
| 29 | N | 604 | CLA | O1D-CGD-CBD | -2.23 | 119.93 | 124.48 |
| 29 | B | 604 | CLA | CMB-C2B-C3B | 2.23 | 128.84 | 124.68 |
| 35 | b | 620 | C7Z | C19-C9-C10 | -2.23 | 119.80 | 122.92 |
| 29 | b | 603 | CLA | CMD-C2D-C3D | -2.23 | 122.49 | 127.61 |
| 29 | D | 403 | CLA | CAA-C2A-C3A | -2.23 | 106.68 | 112.78 |
| 29 | r | 603 | CLA | CHA-C1A-NA | -2.23 | 121.30 | 126.40 |
| 45 | y | 609 | CHL | C1-C2-C3 | -2.23 | 122.19 | 126.04 |
| 35 | B | 620 | C7Z | C19-C9-C10 | -2.23 | 119.81 | 122.92 |
| 35 | b | 620 | C7Z | C30-C31-C32 | -2.23 | 116.27 | 123.22 |
| 29 | R | 613 | CLA | CMD-C2D-C3D | -2.23 | 122.49 | 127.61 |
| 29 | c | 504 | CLA | C1D-ND-C4D | -2.23 | 104.75 | 106.33 |
| 46 | y | 620 | LUT | C18-C5-C6 | -2.23 | 122.03 | 124.53 |
| 29 | C | 507 | CLA | O2A-CGA-CBA | 2.23 | 118.89 | 111.91 |
| 29 | b | 603 | CLA | CMB-C2B-C3B | 2.23 | 128.84 | 124.68 |
| 31 | c | 517 | BCR | C35-C13-C12 | 2.22 | 121.58 | 118.08 |
| 29 | Y | 612 | CLA | CMA-C3A-C4A | 2.22 | 117.75 | 111.77 |
| 29 | A | 407 | CLA | C1D-ND-C4D | -2.22 | 104.76 | 106.33 |
| 29 | c | 502 | CLA | CHA-C1A-NA | -2.22 | 121.31 | 126.40 |
| 29 | A | 406 | CLA | CMB-C2B-C1B | -2.22 | 125.05 | 128.46 |
| 31 | C | 517 | BCR | C33-C5-C4 | 2.22 | 117.88 | 113.62 |
| 29 | C | 504 | CLA | CAA-C2A-C3A | -2.22 | 106.69 | 112.78 |
| 42 | D | 405 | PL9 | C27-C28-C29 | -2.22 | 122.31 | 127.66 |
| 29 | Y | 613 | CLA | C1-O2A-CGA | 2.22 | 122.27 | 116.44 |
| 47 | g | 622 | XAT | C20-C13-C14 | -2.22 | 119.81 | 122.92 |
| 29 | B | 607 | CLA | C2D-C1D-ND | 2.22 | 111.74 | 110.10 |
| 29 | b | 613 | CLA | O2A-CGA-CBA | 2.22 | 118.87 | 111.91 |
| 29 | R | 612 | CLA | CMA-C3A-C4A | 2.22 | 117.74 | 111.77 |
| 29 | r | 604 | CLA | CMA-C3A-C4A | 2.22 | 117.74 | 111.77 |
| 29 | B | 604 | CLA | CMD-C2D-C3D | -2.22 | 122.51 | 127.61 |
| 29 | B | 613 | CLA | CMD-C2D-C3D | -2.22 | 122.51 | 127.61 |
| 29 | y | 612 | CLA | CHA-C1A-NA | -2.22 | 121.32 | 126.40 |
| 29 | B | 615 | CLA | CMD-C2D-C3D | -2.22 | 122.51 | 127.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | s | 610 | CLA | CMD-C2D-C3D | -2.22 | 122.51 | 127.61 |
| 29 | S | 610 | CLA | O1D-CGD-CBD | -2.22 | 119.95 | 124.48 |
| 47 | n | 622 | XAT | C40-C33-C34 | -2.22 | 119.82 | 122.92 |
| 29 | B | 613 | CLA | C1D-ND-C4D | -2.22 | 104.76 | 106.33 |
| 29 | R | 604 | CLA | O2A-CGA-CBA | 2.22 | 118.86 | 111.91 |
| 47 | r | 622 | XAT | C12-C13-C14 | 2.22 | 122.34 | 118.94 |
| 29 | Y | 608 | CLA | CMD-C2D-C3D | -2.22 | 122.51 | 127.61 |
| 29 | c | 507 | CLA | C3D-C2D-C1D | -2.22 | 102.81 | 105.83 |
| 29 | b | 614 | CLA | O2A-CGA-CBA | 2.22 | 118.86 | 111.91 |
| 29 | S | 605 | CLA | CHA-C1A-NA | -2.22 | 121.32 | 126.40 |
| 31 | c | 516 | BCR | C33-C5-C4 | 2.22 | 117.87 | 113.62 |
| 29 | b | 604 | CLA | C2D-C1D-ND | 2.22 | 111.74 | 110.10 |
| 47 | y | 622 | XAT | C19-C9-C10 | -2.22 | 119.82 | 122.92 |
| 29 | G | 613 | CLA | O2D-CGD-O1D | -2.21 | 119.51 | 123.84 |
| 29 | b | 610 | CLA | C1D-ND-C4D | -2.21 | 104.76 | 106.33 |
| 29 | n | 603 | CLA | OBD-CAD-C3D | -2.21 | 123.19 | 128.52 |
| 45 | r | 606 | CHL | C1B-CHB-C4A | -2.21 | 125.73 | 130.12 |
| 29 | B | 614 | CLA | C1-O2A-CGA | 2.21 | 122.25 | 116.44 |
| 29 | C | 512 | CLA | O2D-CGD-O1D | -2.21 | 119.51 | 123.84 |
| 45 | y | 606 | CHL | C4D-CHA-C1A | 2.21 | 123.94 | 121.25 |
| 31 | C | 517 | BCR | C35-C13-C12 | 2.21 | 121.56 | 118.08 |
| 29 | c | 501 | CLA | CAA-C2A-C3A | -2.21 | 106.72 | 112.78 |
| 29 | y | 603 | CLA | O2A-CGA-CBA | 2.21 | 118.85 | 111.91 |
| 29 | A | 407 | CLA | O2D-CGD-O1D | -2.21 | 119.51 | 123.84 |
| 45 | g | 609 | CHL | CHC-C1C-NC | 2.21 | 127.56 | 124.20 |
| 45 | g | 608 | CHL | C4A-NA-C1A | 2.21 | 107.70 | 106.71 |
| 47 | G | 622 | XAT | C18-C5-C6 | -2.21 | 118.56 | 122.26 |
| 29 | R | 604 | CLA | CMA-C3A-C4A | 2.21 | 117.71 | 111.77 |
| 30 | A | 408 | PHO | CMC-C2C-C3C | 2.21 | 129.11 | 124.94 |
| 29 | b | 611 | CLA | CMA-C3A-C4A | 2.21 | 117.71 | 111.77 |
| 29 | b | 602 | CLA | O2A-CGA-CBA | 2.21 | 118.84 | 111.91 |
| 29 | s | 612 | CLA | CHA-C1A-NA | -2.21 | 121.34 | 126.40 |
| 29 | B | 605 | CLA | O2A-CGA-CBA | 2.21 | 118.83 | 111.91 |
| 29 | N | 610 | CLA | C1D-ND-C4D | -2.21 | 104.77 | 106.33 |
| 29 | C | 513 | CLA | CMD-C2D-C3D | -2.21 | 122.54 | 127.61 |
| 29 | S | 605 | CLA | C2A-C1A-CHA | 2.21 | 127.72 | 123.86 |
| 29 | B | 612 | CLA | CHA-C4D-ND | 2.21 | 137.11 | 132.50 |
| 29 | R | 602 | CLA | CMD-C2D-C3D | -2.21 | 122.54 | 127.61 |
| 47 | y | 622 | XAT | C39-C29-C30 | -2.21 | 119.83 | 122.92 |
| 29 | C | 502 | CLA | C3D-C2D-C1D | -2.20 | 102.82 | 105.83 |
| 29 | Y | 610 | CLA | C1D-ND-C4D | -2.20 | 104.77 | 106.33 |
| 29 | y | 614 | CLA | CMD-C2D-C3D | -2.20 | 122.54 | 127.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | n | 608 | CHL | C4A-NA-C1A | 2.20 | 107.70 | 106.71 |
| 48 | s | 623 | NEX | C4-C3-C2 | 2.20 | 115.03 | 110.77 |
| 44 | H | 101 | RRX | C35-C13-C14 | -2.20 | 119.84 | 122.92 |
| 29 | G | 602 | CLA | CMD-C2D-C3D | -2.20 | 122.55 | 127.61 |
| 31 | C | 516 | BCR | C27-C26-C25 | -2.20 | 119.53 | 122.73 |
| 29 | a | 407 | CLA | C1D-ND-C4D | -2.20 | 104.77 | 106.33 |
| 29 | n | 603 | CLA | CBC-CAC-C3C | -2.20 | 106.36 | 112.43 |
| 42 | D | 405 | PL9 | O1-C4-C3 | -2.20 | 118.29 | 120.72 |
| 46 | Y | 620 | LUT | C30-C31-C32 | -2.20 | 116.34 | 123.22 |
| 29 | S | 614 | CLA | CHA-C1A-NA | -2.20 | 121.36 | 126.40 |
| 29 | N | 604 | CLA | C3D-C2D-C1D | -2.20 | 102.83 | 105.83 |
| 31 | b | 618 | BCR | C33-C5-C4 | 2.20 | 117.85 | 113.62 |
| 29 | c | 504 | CLA | CAA-C2A-C3A | -2.20 | 106.75 | 112.78 |
| 45 | y | 607 | CHL | C1-C2-C3 | -2.20 | 122.24 | 126.04 |
| 29 | b | 613 | CLA | CMD-C2D-C3D | -2.20 | 122.55 | 127.61 |
| 29 | S | 602 | CLA | O2A-CGA-CBA | 2.20 | 118.81 | 111.91 |
| 29 | r | 602 | CLA | CMD-C2D-C3D | -2.20 | 122.55 | 127.61 |
| 29 | B | 603 | CLA | CHA-C1A-NA | -2.20 | 121.36 | 126.40 |
| 29 | n | 611 | CLA | CHA-C1A-NA | -2.20 | 121.36 | 126.40 |
| 29 | g | 604 | CLA | CMA-C3A-C4A | 2.20 | 117.68 | 111.77 |
| 45 | G | 601 | CHL | C4A-NA-C1A | 2.20 | 107.69 | 106.71 |
| 29 | a | 405 | CLA | C3D-C2D-C1D | -2.20 | 102.83 | 105.83 |
| 29 | Y | 604 | CLA | CAA-C2A-C3A | -2.20 | 106.76 | 112.78 |
| 29 | R | 612 | CLA | CHA-C1A-NA | -2.20 | 121.37 | 126.40 |
| 29 | g | 604 | CLA | CHA-C1A-NA | -2.20 | 121.37 | 126.40 |
| 38 | c | 519 | DGD | C2G-O2G-C1B | -2.20 | 112.39 | 117.79 |
| 29 | r | 603 | CLA | O2D-CGD-O1D | -2.20 | 119.55 | 123.84 |
| 29 | R | 610 | CLA | CHA-C1A-NA | -2.20 | 121.37 | 126.40 |
| 29 | S | 609 | CLA | CHA-C1A-NA | -2.19 | 121.38 | 126.40 |
| 29 | C | 512 | CLA | O2A-CGA-CBA | 2.19 | 118.78 | 111.91 |
| 29 | r | 613 | CLA | C1D-ND-C4D | -2.19 | 104.78 | 106.33 |
| 31 | d | 404 | BCR | C1-C6-C5 | -2.19 | 119.53 | 122.61 |
| 29 | A | 405 | CLA | CAC-C3C-C4C | 2.19 | 127.65 | 124.81 |
| 46 | Y | 621 | LUT | C16-C1-C6 | -2.19 | 106.75 | 110.30 |
| 46 | s | 621 | LUT | C1-C6-C5 | -2.19 | 119.53 | 122.61 |
| 29 | C | 506 | CLA | O1D-CGD-CBD | -2.19 | 120.01 | 124.48 |
| 29 | r | 610 | CLA | O1D-CGD-CBD | -2.19 | 120.01 | 124.48 |
| 29 | S | 614 | CLA | CMB-C2B-C3B | 2.19 | 128.77 | 124.68 |
| 29 | n | 603 | CLA | C3D-C2D-C1D | -2.19 | 102.85 | 105.83 |
| 29 | B | 610 | CLA | C1D-ND-C4D | -2.19 | 104.78 | 106.33 |
| 45 | G | 606 | CHL | CMB-C2B-C1B | -2.19 | 125.10 | 128.46 |
| 29 | s | 609 | CLA | CHA-C1A-NA | -2.19 | 121.39 | 126.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 507 | CLA | C1-O2A-CGA | 2.19 | 122.18 | 116.44 |
| 46 | n | 621 | LUT | C19-C9-C8 | 2.19 | 121.52 | 118.08 |
| 29 | Y | 604 | CLA | CMB-C2B-C3B | 2.18 | 128.77 | 124.68 |
| 29 | c | 506 | CLA | CMD-C2D-C3D | -2.18 | 122.59 | 127.61 |
| 29 | b | 602 | CLA | C1D-ND-C4D | -2.18 | 104.78 | 106.33 |
| 29 | n | 614 | CLA | C1D-ND-C4D | -2.18 | 104.78 | 106.33 |
| 29 | g | 610 | CLA | C1D-ND-C4D | -2.18 | 104.78 | 106.33 |
| 29 | y | 608 | CLA | CAA-C2A-C3A | -2.18 | 106.80 | 112.78 |
| 29 | G | 612 | CLA | CHA-C1A-NA | -2.18 | 121.40 | 126.40 |
| 45 | g | 607 | CHL | C1B-CHB-C4A | -2.18 | 125.79 | 130.12 |
| 29 | N | 611 | CLA | CAA-C2A-C3A | -2.18 | 106.80 | 112.78 |
| 29 | b | 609 | CLA | C3D-C2D-C1D | -2.18 | 102.85 | 105.83 |
| 29 | B | 609 | CLA | CHD-C1D-ND | -2.18 | 122.45 | 124.45 |
| 29 | S | 611 | CLA | CHA-C1A-NA | -2.18 | 121.40 | 126.40 |
| 29 | r | 613 | CLA | CHA-C1A-NA | -2.18 | 121.40 | 126.40 |
| 45 | G | 605 | CHL | C1B-CHB-C4A | -2.18 | 125.80 | 130.12 |
| 29 | y | 608 | CLA | CMD-C2D-C3D | -2.18 | 122.60 | 127.61 |
| 29 | b | 612 | CLA | C1C-C2C-C3C | -2.18 | 104.66 | 106.96 |
| 31 | B | 618 | BCR | C34-C9-C10 | -2.18 | 119.87 | 122.92 |
| 29 | G | 614 | CLA | C1D-ND-C4D | -2.18 | 104.79 | 106.33 |
| 29 | y | 610 | CLA | C1D-ND-C4D | -2.18 | 104.79 | 106.33 |
| 29 | g | 610 | CLA | CAA-C2A-C3A | -2.18 | 106.81 | 112.78 |
| 29 | N | 611 | CLA | CHA-C1A-NA | -2.18 | 121.41 | 126.40 |
| 31 | b | 618 | BCR | C38-C26-C25 | -2.18 | 122.08 | 124.53 |
| 45 | s | 608 | CHL | C1B-CHB-C4A | -2.18 | 125.80 | 130.12 |
| 29 | s | 612 | CLA | CMB-C2B-C3B | 2.18 | 128.75 | 124.68 |
| 46 | G | 620 | LUT | C10-C11-C12 | -2.18 | 116.42 | 123.22 |
| 29 | b | 616 | CLA | CMD-C2D-C3D | -2.18 | 122.60 | 127.61 |
| 29 | B | 607 | CLA | O1D-CGD-CBD | -2.18 | 120.03 | 124.48 |
| 29 | B | 603 | CLA | C1-O2A-CGA | 2.18 | 122.16 | 116.44 |
| 29 | b | 614 | CLA | C1D-ND-C4D | -2.18 | 104.79 | 106.33 |
| 29 | c | 503 | CLA | C1D-ND-C4D | -2.18 | 104.79 | 106.33 |
| 29 | S | 610 | CLA | CHA-C1A-NA | -2.18 | 121.41 | 126.40 |
| 45 | n | 605 | CHL | C1B-CHB-C4A | -2.18 | 125.80 | 130.12 |
| 29 | r | 610 | CLA | C1C-C2C-C3C | -2.18 | 104.67 | 106.96 |
| 29 | Y | 603 | CLA | O1D-CGD-CBD | -2.18 | 120.03 | 124.48 |
| 29 | C | 506 | CLA | CMD-C2D-C3D | -2.18 | 122.61 | 127.61 |
| 45 | r | 607 | CHL | CHD-C4C-C3C | 2.18 | 128.04 | 124.84 |
| 48 | g | 623 | NEX | C19-C9-C10 | -2.18 | 119.88 | 122.92 |
| 29 | Y | 613 | CLA | CMD-C2D-C3D | -2.17 | 122.61 | 127.61 |
| 29 | c | 512 | CLA | C1-O2A-CGA | 2.17 | 122.15 | 116.44 |
| 29 | R | 611 | CLA | CHA-C1A-NA | -2.17 | 121.42 | 126.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | r | 608 | CLA | CHA-C1A-NA | -2.17 | 121.42 | 126.40 |
| 29 | S | 609 | CLA | CMD-C2D-C3D | -2.17 | 122.61 | 127.61 |
| 29 | S | 610 | CLA | CMD-C2D-C3D | -2.17 | 122.61 | 127.61 |
| 29 | R | 610 | CLA | O2A-CGA-CBA | 2.17 | 118.73 | 111.91 |
| 44 | H | 101 | RRX | C38-C26-C25 | -2.17 | 122.09 | 124.53 |
| 29 | N | 612 | CLA | CHA-C1A-NA | -2.17 | 121.42 | 126.40 |
| 29 | B | 614 | CLA | C3D-C2D-C1D | -2.17 | 102.87 | 105.83 |
| 30 | a | 408 | PHO | CMC-C2C-C3C | 2.17 | 129.04 | 124.94 |
| 29 | Y | 608 | CLA | C1-O2A-CGA | 2.17 | 122.14 | 116.44 |
| 29 | C | 502 | CLA | CHA-C1A-NA | -2.17 | 121.43 | 126.40 |
| 45 | N | 605 | CHL | C1B-CHB-C4A | -2.17 | 125.82 | 130.12 |
| 29 | A | 405 | CLA | C1D-ND-C4D | -2.17 | 104.79 | 106.33 |
| 29 | n | 612 | CLA | C1D-ND-C4D | -2.17 | 104.79 | 106.33 |
| 45 | s | 608 | CHL | CMB-C2B-C1B | -2.17 | 125.13 | 128.46 |
| 48 | g | 623 | NEX | C4-C3-C2 | 2.17 | 114.96 | 110.77 |
| 29 | c | 506 | CLA | O2A-CGA-CBA | 2.17 | 118.71 | 111.91 |
| 48 | N | 623 | NEX | C26-C27-C28 | -2.17 | 121.41 | 125.99 |
| 29 | C | 503 | CLA | CHA-C1A-NA | -2.17 | 121.43 | 126.40 |
| 29 | s | 610 | CLA | CHA-C1A-NA | -2.17 | 121.43 | 126.40 |
| 29 | c | 501 | CLA | O1D-CGD-CBD | -2.17 | 120.05 | 124.48 |
| 29 | y | 608 | CLA | CHA-C1A-NA | -2.17 | 121.44 | 126.40 |
| 48 | s | 623 | NEX | C31-C30-C29 | 2.17 | 130.40 | 127.31 |
| 29 | s | 617 | CLA | CAA-C2A-C3A | -2.17 | 106.84 | 112.78 |
| 29 | N | 613 | CLA | C1D-ND-C4D | -2.17 | 104.80 | 106.33 |
| 51 | Y | 625 | SPH | C3-C4-C5 | -2.17 | 119.96 | 124.79 |
| 46 | s | 620 | LUT | C20-C13-C12 | 2.17 | 121.49 | 118.08 |
| 29 | a | 407 | CLA | O2D-CGD-O1D | -2.17 | 119.60 | 123.84 |
| 45 | Y | 605 | CHL | C4D-CHA-C1A | 2.17 | 123.89 | 121.25 |
| 29 | s | 610 | CLA | C1-C2-C3 | -2.17 | 122.30 | 126.04 |
| 29 | y | 611 | CLA | CHA-C1A-NA | -2.17 | 121.44 | 126.40 |
| 29 | n | 604 | CLA | O1D-CGD-CBD | -2.17 | 120.05 | 124.48 |
| 29 | N | 614 | CLA | O2A-CGA-CBA | 2.16 | 118.70 | 111.91 |
| 29 | B | 608 | CLA | CMB-C2B-C1B | -2.16 | 125.14 | 128.46 |
| 29 | b | 603 | CLA | CHA-C1A-NA | -2.16 | 121.44 | 126.40 |
| 29 | C | 505 | CLA | CMD-C2D-C3D | -2.16 | 122.64 | 127.61 |
| 46 | N | 621 | LUT | C10-C11-C12 | -2.16 | 116.46 | 123.22 |
| 29 | y | 603 | CLA | C3D-C2D-C1D | -2.16 | 102.88 | 105.83 |
| 29 | Y | 602 | CLA | C1-C2-C3 | -2.16 | 122.30 | 126.04 |
| 29 | A | 405 | CLA | CAA-C2A-C3A | -2.16 | 106.86 | 112.78 |
| 45 | g | 608 | CHL | CMB-C2B-C1B | -2.16 | 125.14 | 128.46 |
| 29 | G | 610 | CLA | CMD-C2D-C3D | -2.16 | 122.64 | 127.61 |
| 29 | B | 609 | CLA | O1D-CGD-CBD | -2.16 | 120.06 | 124.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | G | 603 | CLA | CMD-C2D-C3D | -2.16 | 122.64 | 127.61 |
| 29 | c | 507 | CLA | CMB-C2B-C3B | 2.16 | 128.72 | 124.68 |
| 29 | b | 608 | CLA | CMB-C2B-C1B | -2.16 | 125.14 | 128.46 |
| 39 | n | 624 | LHG | C6-C5-C4 | -2.16 | 106.68 | 111.79 |
| 29 | r | 604 | CLA | CMD-C2D-C3D | -2.16 | 122.65 | 127.61 |
| 29 | g | 614 | CLA | C1D-ND-C4D | -2.16 | 104.80 | 106.33 |
| 29 | g | 610 | CLA | CHA-C1A-NA | -2.16 | 121.45 | 126.40 |
| 29 | D | 402 | CLA | CMD-C2D-C3D | -2.16 | 122.65 | 127.61 |
| 31 | c | 515 | BCR | C38-C26-C25 | -2.16 | 122.10 | 124.53 |
| 29 | C | 503 | CLA | CAA-C2A-C3A | -2.16 | 106.87 | 112.78 |
| 29 | C | 509 | CLA | CHA-C1A-NA | -2.16 | 121.45 | 126.40 |
| 29 | S | 612 | CLA | CHA-C1A-NA | -2.16 | 121.45 | 126.40 |
| 29 | s | 617 | CLA | CMD-C2D-C3D | -2.16 | 122.65 | 127.61 |
| 47 | N | 622 | XAT | C26-C27-C28 | -2.16 | 121.43 | 125.99 |
| 29 | G | 611 | CLA | CHA-C1A-NA | -2.16 | 121.46 | 126.40 |
| 29 | g | 604 | CLA | O1D-CGD-CBD | -2.16 | 120.07 | 124.48 |
| 45 | g | 607 | CHL | C4A-NA-C1A | 2.16 | 107.67 | 106.71 |
| 29 | r | 604 | CLA | CMB-C2B-C3B | 2.16 | 128.71 | 124.68 |
| 45 | s | 606 | CHL | CMB-C2B-C1B | -2.15 | 125.15 | 128.46 |
| 29 | y | 604 | CLA | C1D-ND-C4D | -2.15 | 104.81 | 106.33 |
| 46 | G | 620 | LUT | C31-C32-C33 | -2.15 | 120.37 | 126.42 |
| 29 | y | 604 | CLA | O2A-CGA-CBA | 2.15 | 118.67 | 111.91 |
| 29 | c | 509 | CLA | CMB-C2B-C1B | -2.15 | 125.15 | 128.46 |
| 29 | C | 512 | CLA | CHA-C1A-NA | -2.15 | 121.47 | 126.40 |
| 29 | Y | 604 | CLA | O2A-CGA-CBA | 2.15 | 118.66 | 111.91 |
| 29 | B | 611 | CLA | C3D-C2D-C1D | -2.15 | 102.89 | 105.83 |
| 29 | g | 611 | CLA | CHA-C1A-NA | -2.15 | 121.47 | 126.40 |
| 29 | r | 602 | CLA | CHA-C1A-NA | -2.15 | 121.47 | 126.40 |
| 29 | r | 602 | CLA | C1D-ND-C4D | -2.15 | 104.81 | 106.33 |
| 29 | G | 603 | CLA | CHA-C1A-NA | -2.15 | 121.47 | 126.40 |
| 29 | B | 607 | CLA | C1-C2-C3 | -2.15 | 122.32 | 126.04 |
| 45 | y | 607 | CHL | C1B-CHB-C4A | -2.15 | 125.86 | 130.12 |
| 29 | r | 604 | CLA | O2A-CGA-CBA | 2.15 | 118.66 | 111.91 |
| 29 | N | 610 | CLA | O1D-CGD-CBD | -2.15 | 120.08 | 124.48 |
| 29 | R | 604 | CLA | O1D-CGD-CBD | -2.15 | 120.08 | 124.48 |
| 29 | c | 502 | CLA | C1C-C2C-C3C | -2.15 | 104.70 | 106.96 |
| 29 | C | 504 | CLA | C1D-ND-C4D | -2.15 | 104.81 | 106.33 |
| 45 | y | 606 | CHL | CMB-C2B-C1B | -2.15 | 125.16 | 128.46 |
| 45 | Y | 601 | CHL | CHC-C1C-NC | 2.15 | 127.46 | 124.20 |
| 29 | Y | 603 | CLA | CHA-C1A-NA | -2.15 | 121.48 | 126.40 |
| 45 | Y | 606 | CHL | C4D-CHA-C1A | 2.15 | 123.86 | 121.25 |
| 51 | y | 625 | SPH | C3-C4-C5 | -2.15 | 120.00 | 124.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 509 | CLA | CHA-C1A-NA | -2.15 | 121.48 | 126.40 |
| 45 | S | 601 | CHL | C1B-CHB-C4A | -2.15 | 125.86 | 130.12 |
| 29 | S | 613 | CLA | C3D-C2D-C1D | -2.15 | 102.90 | 105.83 |
| 47 | Y | 622 | XAT | C18-C5-C6 | -2.15 | 118.66 | 122.26 |
| 45 | R | 606 | CHL | CMB-C2B-C1B | -2.15 | 125.17 | 128.46 |
| 31 | c | 517 | BCR | C33-C5-C6 | -2.15 | 122.12 | 124.53 |
| 29 | C | 508 | CLA | CHA-C1A-NA | -2.15 | 121.48 | 126.40 |
| 29 | r | 610 | CLA | CMD-C2D-C3D | -2.15 | 122.68 | 127.61 |
| 29 | s | 605 | CLA | CMD-C2D-C3D | -2.15 | 122.68 | 127.61 |
| 29 | R | 613 | CLA | O1D-CGD-CBD | -2.15 | 120.09 | 124.48 |
| 46 | n | 620 | LUT | C15-C35-C34 | -2.15 | 119.08 | 123.47 |
| 29 | b | 611 | CLA | C3D-C2D-C1D | -2.14 | 102.90 | 105.83 |
| 29 | R | 610 | CLA | CMD-C2D-C3D | -2.14 | 122.68 | 127.61 |
| 45 | R | 607 | CHL | CMB-C2B-C1B | -2.14 | 125.17 | 128.46 |
| 31 | D | 404 | BCR | C4-C5-C6 | -2.14 | 119.62 | 122.73 |
| 47 | g | 622 | XAT | C40-C33-C34 | -2.14 | 119.92 | 122.92 |
| 29 | S | 602 | CLA | CMC-C2C-C1C | 2.14 | 128.30 | 125.04 |
| 45 | G | 609 | CHL | CMB-C2B-C1B | -2.14 | 125.17 | 128.46 |
| 29 | S | 617 | CLA | CHA-C1A-NA | -2.14 | 121.49 | 126.40 |
| 45 | Y | 605 | CHL | C4A-NA-C1A | 2.14 | 107.67 | 106.71 |
| 45 | N | 605 | CHL | CMB-C2B-C1B | -2.14 | 125.17 | 128.46 |
| 45 | Y | 609 | CHL | C4D-CHA-C1A | 2.14 | 123.86 | 121.25 |
| 29 | S | 612 | CLA | C1D-ND-C4D | -2.14 | 104.81 | 106.33 |
| 47 | g | 622 | XAT | C39-C29-C30 | -2.14 | 119.92 | 122.92 |
| 29 | c | 505 | CLA | CMD-C2D-C3D | -2.14 | 122.69 | 127.61 |
| 45 | Y | 609 | CHL | CMB-C2B-C1B | -2.14 | 125.17 | 128.46 |
| 29 | C | 507 | CLA | C3D-C2D-C1D | -2.14 | 102.91 | 105.83 |
| 29 | s | 610 | CLA | C3D-C2D-C1D | -2.14 | 102.91 | 105.83 |
| 29 | r | 611 | CLA | CHA-C1A-NA | -2.14 | 121.50 | 126.40 |
| 29 | b | 604 | CLA | C1-C2-C3 | -2.14 | 122.34 | 126.04 |
| 29 | b | 610 | CLA | C3D-C2D-C1D | -2.14 | 102.91 | 105.83 |
| 29 | s | 613 | CLA | C3D-C2D-C1D | -2.14 | 102.91 | 105.83 |
| 29 | N | 603 | CLA | C1D-ND-C4D | -2.14 | 104.81 | 106.33 |
| 29 | N | 611 | CLA | O1D-CGD-CBD | -2.14 | 120.11 | 124.48 |
| 29 | a | 405 | CLA | C1D-ND-C4D | -2.14 | 104.82 | 106.33 |
| 29 | n | 604 | CLA | CMA-C3A-C4A | 2.14 | 117.52 | 111.77 |
| 29 | B | 614 | CLA | CHA-C1A-NA | -2.14 | 121.50 | 126.40 |
| 29 | B | 616 | CLA | CMD-C2D-C3D | -2.14 | 122.70 | 127.61 |
| 29 | S | 604 | CLA | CBC-CAC-C3C | -2.14 | 106.54 | 112.43 |
| 29 | Y | 603 | CLA | CMD-C2D-C3D | -2.14 | 122.70 | 127.61 |
| 45 | S | 608 | CHL | CMB-C2B-C1B | -2.14 | 125.18 | 128.46 |
| 29 | c | 505 | CLA | C1-O2A-CGA | 2.14 | 122.05 | 116.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | n | 613 | CLA | CMD-C2D-C3D | -2.14 | 122.70 | 127.61 |
| 29 | s | 605 | CLA | CHA-C1A-NA | -2.14 | 121.51 | 126.40 |
| 45 | n | 605 | CHL | CMB-C2B-C1B | -2.13 | 125.18 | 128.46 |
| 29 | y | 610 | CLA | CHA-C1A-NA | -2.13 | 121.51 | 126.40 |
| 29 | B | 602 | CLA | C1D-ND-C4D | -2.13 | 104.82 | 106.33 |
| 29 | c | 507 | CLA | O2A-CGA-CBA | 2.13 | 118.60 | 111.91 |
| 29 | B | 608 | CLA | C1-C2-C3 | -2.13 | 122.35 | 126.04 |
| 45 | y | 609 | CHL | CMB-C2B-C1B | -2.13 | 125.19 | 128.46 |
| 29 | n | 612 | CLA | CMD-C2D-C3D | -2.13 | 122.71 | 127.61 |
| 29 | Y | 608 | CLA | CHA-C1A-NA | -2.13 | 121.51 | 126.40 |
| 45 | N | 605 | CHL | C1-O2A-CGA | 2.13 | 122.04 | 116.44 |
| 29 | n | 602 | CLA | CAA-C2A-C3A | -2.13 | 106.94 | 112.78 |
| 45 | S | 606 | CHL | CMB-C2B-C1B | -2.13 | 125.19 | 128.46 |
| 45 | N | 609 | CHL | C1-C2-C3 | -2.13 | 122.36 | 126.04 |
| 31 | C | 516 | BCR | C33-C5-C4 | 2.13 | 117.71 | 113.62 |
| 47 | R | 621 | XAT | C30-C31-C32 | -2.13 | 116.57 | 123.22 |
| 46 | s | 620 | LUT | C36-C21-C26 | 2.13 | 112.77 | 109.55 |
| 45 | Y | 606 | CHL | CMB-C2B-C1B | -2.13 | 125.19 | 128.46 |
| 29 | D | 403 | CLA | CHA-C1A-NA | -2.13 | 121.52 | 126.40 |
| 29 | g | 602 | CLA | CHA-C1A-NA | -2.13 | 121.52 | 126.40 |
| 29 | b | 609 | CLA | O2A-CGA-CBA | 2.13 | 118.59 | 111.91 |
| 29 | C | 503 | CLA | O2D-CGD-O1D | -2.13 | 119.67 | 123.84 |
| 45 | s | 607 | CHL | CMB-C2B-C1B | -2.13 | 125.19 | 128.46 |
| 29 | Y | 604 | CLA | C1D-ND-C4D | -2.13 | 104.82 | 106.33 |
| 29 | g | 613 | CLA | C1D-ND-C4D | -2.13 | 104.82 | 106.33 |
| 45 | g | 609 | CHL | CHB-C4A-NA | 2.13 | 127.45 | 124.51 |
| 45 | Y | 605 | CHL | CMB-C2B-C1B | -2.13 | 125.19 | 128.46 |
| 46 | y | 620 | LUT | C20-C13-C12 | 2.13 | 121.43 | 118.08 |
| 29 | s | 604 | CLA | CHA-C1A-NA | -2.13 | 121.53 | 126.40 |
| 29 | y | 611 | CLA | CAA-C2A-C3A | -2.13 | 106.96 | 112.78 |
| 39 | g | 624 | LHG | C6-C5-C4 | -2.13 | 106.76 | 111.79 |
| 29 | N | 604 | CLA | CMD-C2D-C3D | -2.13 | 122.72 | 127.61 |
| 45 | s | 601 | CHL | CMB-C2B-C1B | -2.13 | 125.20 | 128.46 |
| 29 | Y | 612 | CLA | CMB-C2B-C3B | 2.13 | 128.65 | 124.68 |
| 45 | N | 606 | CHL | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 29 | s | 610 | CLA | O1D-CGD-CBD | -2.12 | 120.14 | 124.48 |
| 29 | s | 609 | CLA | C1D-ND-C4D | -2.12 | 104.83 | 106.33 |
| 45 | g | 608 | CHL | C4D-CHA-C1A | 2.12 | 123.83 | 121.25 |
| 45 | N | 606 | CHL | C1-C2-C3 | -2.12 | 122.37 | 126.04 |
| 29 | b | 609 | CLA | CHD-C1D-ND | -2.12 | 122.50 | 124.45 |
| 29 | b | 614 | CLA | CHA-C1A-NA | -2.12 | 121.54 | 126.40 |
| 29 | N | 610 | CLA | CMD-C2D-C3D | -2.12 | 122.73 | 127.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | y | 613 | CLA | CMD-C2D-C3D | -2.12 | 122.73 | 127.61 |
| 45 | n | 606 | CHL | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 29 | Y | 613 | CLA | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 45 | g | 601 | CHL | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 29 | R | 602 | CLA | C3D-C2D-C1D | -2.12 | 102.94 | 105.83 |
| 45 | r | 606 | CHL | CHC-C1C-NC | 2.12 | 127.42 | 124.20 |
| 29 | N | 603 | CLA | O1D-CGD-CBD | -2.12 | 120.14 | 124.48 |
| 45 | G | 605 | CHL | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 45 | r | 607 | CHL | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 29 | B | 616 | CLA | C2A-C1A-CHA | 2.12 | 127.57 | 123.86 |
| 29 | Y | 611 | CLA | CHA-C1A-NA | -2.12 | 121.54 | 126.40 |
| 45 | r | 606 | CHL | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 46 | n | 620 | LUT | C11-C10-C9 | -2.12 | 124.28 | 127.31 |
| 29 | s | 602 | CLA | O2A-CGA-CBA | 2.12 | 118.56 | 111.91 |
| 29 | s | 603 | CLA | O2A-CGA-CBA | 2.12 | 118.56 | 111.91 |
| 29 | B | 616 | CLA | C1D-ND-C4D | -2.12 | 104.83 | 106.33 |
| 29 | n | 613 | CLA | C1D-ND-C4D | -2.12 | 104.83 | 106.33 |
| 29 | b | 604 | CLA | CHA-C1A-NA | -2.12 | 121.54 | 126.40 |
| 29 | g | 612 | CLA | CHA-C1A-NA | -2.12 | 121.54 | 126.40 |
| 35 | B | 620 | C7Z | C35-C15-C14 | -2.12 | 119.13 | 123.47 |
| 29 | C | 504 | CLA | CMD-C2D-C3D | -2.12 | 122.74 | 127.61 |
| 29 | r | 609 | CLA | C2D-C1D-ND | 2.12 | 111.67 | 110.10 |
| 45 | N | 605 | CHL | C4D-CHA-C1A | 2.12 | 123.83 | 121.25 |
| 29 | S | 604 | CLA | C1D-ND-C4D | -2.12 | 104.83 | 106.33 |
| 45 | G | 608 | CHL | CMB-C2B-C1B | -2.12 | 125.21 | 128.46 |
| 29 | Y | 610 | CLA | CHA-C1A-NA | -2.12 | 121.55 | 126.40 |
| 29 | G | 604 | CLA | CHA-C1A-NA | -2.12 | 121.55 | 126.40 |
| 47 | r | 622 | XAT | C39-C29-C28 | 2.12 | 121.41 | 118.08 |
| 45 | N | 601 | CHL | CMB-C2B-C1B | -2.12 | 125.21 | 128.46 |
| 45 | G | 601 | CHL | CMB-C2B-C1B | -2.12 | 125.21 | 128.46 |
| 29 | n | 602 | CLA | CMD-C2D-C3D | -2.12 | 122.75 | 127.61 |
| 45 | n | 601 | CHL | CMB-C2B-C1B | -2.12 | 125.21 | 128.46 |
| 29 | d | 403 | CLA | CHA-C1A-NA | -2.12 | 121.55 | 126.40 |
| 29 | n | 614 | CLA | CAA-C2A-C3A | -2.12 | 106.98 | 112.78 |
| 29 | B | 610 | CLA | CHA-C1A-NA | -2.12 | 121.55 | 126.40 |
| 45 | S | 601 | CHL | CMB-C2B-C1B | -2.12 | 125.21 | 128.46 |
| 29 | G | 611 | CLA | CMD-C2D-C3D | -2.12 | 122.75 | 127.61 |
| 29 | C | 501 | CLA | CAA-C2A-C3A | -2.12 | 106.98 | 112.78 |
| 29 | n | 602 | CLA | CMB-C2B-C1B | -2.12 | 125.21 | 128.46 |
| 29 | B | 602 | CLA | CHA-C1A-NA | -2.12 | 121.55 | 126.40 |
| 29 | S | 610 | CLA | C3D-C2D-C1D | -2.11 | 102.94 | 105.83 |
| 29 | c | 504 | CLA | CMB-C2B-C1B | -2.11 | 125.21 | 128.46 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | C | 506 | CLA | O2A-CGA-CBA | 2.11 | 118.54 | 111.91 |
| 29 | a | 406 | CLA | O2D-CGD-O1D | -2.11 | 119.70 | 123.84 |
| 29 | Y | 602 | CLA | CMC-C2C-C1C | 2.11 | 128.26 | 125.04 |
| 29 | G | 602 | CLA | CMB-C2B-C3B | 2.11 | 128.63 | 124.68 |
| 29 | G | 604 | CLA | O1D-CGD-CBD | -2.11 | 120.16 | 124.48 |
| 29 | C | 508 | CLA | C1C-C2C-C3C | -2.11 | 104.73 | 106.96 |
| 45 | y | 609 | CHL | C4A-NA-C1A | 2.11 | 107.66 | 106.71 |
| 29 | y | 614 | CLA | CHA-C1A-NA | -2.11 | 121.56 | 126.40 |
| 29 | A | 410 | CLA | C1D-ND-C4D | -2.11 | 104.83 | 106.33 |
| 46 | n | 620 | LUT | C19-C9-C8 | 2.11 | 121.41 | 118.08 |
| 29 | y | 608 | CLA | O2A-CGA-CBA | 2.11 | 118.54 | 111.91 |
| 45 | g | 605 | CHL | CMB-C2B-C1B | -2.11 | 125.22 | 128.46 |
| 29 | b | 617 | CLA | CHA-C1A-NA | -2.11 | 121.56 | 126.40 |
| 29 | N | 603 | CLA | CHA-C1A-NA | -2.11 | 121.56 | 126.40 |
| 29 | N | 614 | CLA | CHA-C1A-NA | -2.11 | 121.56 | 126.40 |
| 29 | Y | 602 | CLA | C1-O2A-CGA | 2.11 | 121.98 | 116.44 |
| 45 | R | 607 | CHL | C1B-CHB-C4A | -2.11 | 125.93 | 130.12 |
| 48 | y | 623 | NEX | C26-C27-C28 | -2.11 | 121.53 | 125.99 |
| 45 | y | 605 | CHL | CMB-C2B-C1B | -2.11 | 125.22 | 128.46 |
| 29 | n | 604 | CLA | C3D-C2D-C1D | -2.11 | 102.95 | 105.83 |
| 29 | Y | 602 | CLA | CMB-C2B-C3B | 2.11 | 128.63 | 124.68 |
| 29 | s | 610 | CLA | O2D-CGD-O1D | -2.11 | 119.71 | 123.84 |
| 29 | s | 611 | CLA | CHA-C1A-NA | -2.11 | 121.57 | 126.40 |
| 29 | N | 603 | CLA | CMD-C2D-C3D | -2.11 | 122.76 | 127.61 |
| 29 | C | 513 | CLA | CMB-C2B-C1B | -2.11 | 125.22 | 128.46 |
| 46 | N | 621 | LUT | C16-C1-C6 | -2.11 | 106.88 | 110.30 |
| 29 | n | 604 | CLA | CMB-C2B-C3B | 2.11 | 128.62 | 124.68 |
| 46 | r | 620 | LUT | C35-C15-C14 | -2.11 | 119.15 | 123.47 |
| 29 | b | 605 | CLA | C2D-C1D-ND | 2.11 | 111.66 | 110.10 |
| 29 | C | 511 | CLA | CAA-CBA-CGA | -2.11 | 107.09 | 113.25 |
| 44 | h | 101 | RRX | C1-C6-C7 | 2.11 | 121.74 | 115.78 |
| 29 | r | 610 | CLA | CHA-C1A-NA | -2.11 | 121.57 | 126.40 |
| 29 | C | 511 | CLA | C3D-C2D-C1D | -2.11 | 102.95 | 105.83 |
| 29 | g | 604 | CLA | C3D-C2D-C1D | -2.11 | 102.95 | 105.83 |
| 29 | C | 510 | CLA | O1D-CGD-CBD | -2.11 | 120.17 | 124.48 |
| 47 | G | 622 | XAT | C39-C29-C30 | -2.11 | 119.97 | 122.92 |
| 29 | n | 602 | CLA | C1D-ND-C4D | -2.11 | 104.84 | 106.33 |
| 29 | g | 602 | CLA | C1D-ND-C4D | -2.11 | 104.84 | 106.33 |
| 31 | c | 517 | BCR | C27-C26-C25 | -2.11 | 119.67 | 122.73 |
| 29 | y | 602 | CLA | C3D-C2D-C1D | -2.11 | 102.96 | 105.83 |
| 29 | y | 603 | CLA | CHA-C1A-NA | -2.11 | 121.58 | 126.40 |
| 45 | S | 601 | CHL | C4A-NA-C1A | 2.10 | 107.65 | 106.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | N | 604 | CLA | CHA-C1A-NA | -2.10 | 121.58 | 126.40 |
| 29 | c | 507 | CLA | CMD-C2D-C3D | -2.10 | 122.78 | 127.61 |
| 29 | s | 611 | CLA | CAA-C2A-C3A | -2.10 | 107.02 | 112.78 |
| 29 | y | 610 | CLA | CMD-C2D-C3D | -2.10 | 122.78 | 127.61 |
| 45 | Y | 607 | CHL | C1-C2-C3 | -2.10 | 122.41 | 126.04 |
| 29 | B | 617 | CLA | C1C-C2C-C3C | -2.10 | 104.75 | 106.96 |
| 45 | G | 608 | CHL | C1B-CHB-C4A | -2.10 | 125.95 | 130.12 |
| 45 | Y | 605 | CHL | CHD-C4C-C3C | 2.10 | 127.93 | 124.84 |
| 29 | s | 613 | CLA | CMD-C2D-C3D | -2.10 | 122.78 | 127.61 |
| 29 | b | 606 | CLA | CMB-C2B-C3B | 2.10 | 128.61 | 124.68 |
| 45 | Y | 609 | CHL | C1-C2-C3 | -2.10 | 122.41 | 126.04 |
| 29 | a | 407 | CLA | CHA-C1A-NA | -2.10 | 121.59 | 126.40 |
| 29 | c | 508 | CLA | O2D-CGD-O1D | -2.10 | 119.73 | 123.84 |
| 29 | S | 603 | CLA | O2A-CGA-CBA | 2.10 | 118.50 | 111.91 |
| 29 | n | 612 | CLA | C3D-C2D-C1D | -2.10 | 102.96 | 105.83 |
| 29 | y | 604 | CLA | CMB-C2B-C1B | -2.10 | 125.23 | 128.46 |
| 29 | B | 605 | CLA | C2D-C1D-ND | 2.10 | 111.65 | 110.10 |
| 45 | G | 605 | CHL | C1-O2A-CGA | 2.10 | 122.83 | 116.73 |
| 29 | c | 511 | CLA | CAA-CBA-CGA | -2.10 | 107.12 | 113.25 |
| 29 | b | 615 | CLA | CMD-C2D-C3D | -2.10 | 122.78 | 127.61 |
| 29 | C | 507 | CLA | CMD-C2D-C3D | -2.10 | 122.78 | 127.61 |
| 29 | b | 613 | CLA | C1D-ND-C4D | -2.10 | 104.84 | 106.33 |
| 29 | r | 603 | CLA | C1D-ND-C4D | -2.10 | 104.84 | 106.33 |
| 29 | S | 613 | CLA | CMD-C2D-C3D | -2.10 | 122.79 | 127.61 |
| 29 | b | 614 | CLA | C3D-C2D-C1D | -2.10 | 102.97 | 105.83 |
| 29 | b | 605 | CLA | C1-O2A-CGA | 2.10 | 121.95 | 116.44 |
| 29 | c | 502 | CLA | O2A-CGA-CBA | 2.10 | 118.49 | 111.91 |
| 45 | G | 601 | CHL | C1B-CHB-C4A | -2.10 | 125.96 | 130.12 |
| 45 | y | 606 | CHL | C1B-CHB-C4A | -2.10 | 125.96 | 130.12 |
| 29 | n | 602 | CLA | O1D-CGD-CBD | -2.10 | 120.19 | 124.48 |
| 29 | C | 511 | CLA | C1D-ND-C4D | -2.10 | 104.84 | 106.33 |
| 29 | c | 513 | CLA | C1D-ND-C4D | -2.10 | 104.84 | 106.33 |
| 29 | y | 611 | CLA | CMB-C2B-C3B | 2.10 | 128.60 | 124.68 |
| 29 | c | 508 | CLA | C1C-C2C-C3C | -2.10 | 104.75 | 106.96 |
| 29 | Y | 608 | CLA | C3D-C2D-C1D | -2.10 | 102.97 | 105.83 |
| 29 | Y | 614 | CLA | CHA-C1A-NA | -2.10 | 121.60 | 126.40 |
| 29 | G | 612 | CLA | C1D-ND-C4D | -2.10 | 104.85 | 106.33 |
| 29 | B | 609 | CLA | C1-O2A-CGA | 2.10 | 121.94 | 116.44 |
| 29 | A | 410 | CLA | CMB-C2B-C3B | 2.10 | 128.60 | 124.68 |
| 29 | B | 617 | CLA | CHA-C1A-NA | -2.10 | 121.60 | 126.40 |
| 29 | R | 611 | CLA | CMD-C2D-C3D | -2.09 | 122.80 | 127.61 |
| 29 | a | 405 | CLA | CAC-C3C-C4C | 2.09 | 127.53 | 124.81 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 511 | CLA | C3D-C2D-C1D | -2.09 | 102.97 | 105.83 |
| 29 | y | 613 | CLA | C3D-C2D-C1D | -2.09 | 102.97 | 105.83 |
| 29 | S | 602 | CLA | CHA-C1A-NA | -2.09 | 121.60 | 126.40 |
| 29 | a | 407 | CLA | C3D-C2D-C1D | -2.09 | 102.97 | 105.83 |
| 29 | g | 611 | CLA | C3D-C2D-C1D | -2.09 | 102.97 | 105.83 |
| 45 | g | 601 | CHL | C1B-CHB-C4A | -2.09 | 125.97 | 130.12 |
| 29 | N | 614 | CLA | CMD-C2D-C3D | -2.09 | 122.80 | 127.61 |
| 31 | c | 515 | BCR | C35-C13-C12 | 2.09 | 121.37 | 118.08 |
| 48 | S | 622 | NEX | C4-C3-C2 | 2.09 | 114.81 | 110.77 |
| 29 | n | 602 | CLA | CHA-C1A-NA | -2.09 | 121.61 | 126.40 |
| 29 | g | 610 | CLA | O1D-CGD-CBD | -2.09 | 120.20 | 124.48 |
| 29 | Y | 603 | CLA | CAA-C2A-C3A | -2.09 | 107.05 | 112.78 |
| 31 | c | 516 | BCR | C30-C25-C24 | 2.09 | 121.70 | 115.78 |
| 45 | g | 609 | CHL | CMB-C2B-C1B | -2.09 | 125.25 | 128.46 |
| 29 | n | 611 | CLA | CMD-C2D-C3D | -2.09 | 122.80 | 127.61 |
| 29 | b | 602 | CLA | CHA-C1A-NA | -2.09 | 121.61 | 126.40 |
| 29 | g | 614 | CLA | CHA-C1A-NA | -2.09 | 121.61 | 126.40 |
| 29 | S | 609 | CLA | C1D-ND-C4D | -2.09 | 104.85 | 106.33 |
| 29 | n | 610 | CLA | CMD-C2D-C3D | -2.09 | 122.81 | 127.61 |
| 45 | G | 601 | CHL | CHD-C4C-C3C | 2.09 | 127.91 | 124.84 |
| 48 | N | 623 | NEX | O24-C25-C38 | -2.09 | 112.55 | 115.06 |
| 29 | r | 610 | CLA | C6-C7-C8 | -2.09 | 109.17 | 115.92 |
| 29 | B | 614 | CLA | O2A-CGA-CBA | 2.09 | 118.46 | 111.91 |
| 29 | S | 611 | CLA | CMD-C2D-C3D | -2.09 | 122.81 | 127.61 |
| 29 | r | 611 | CLA | C1D-ND-C4D | -2.09 | 104.85 | 106.33 |
| 29 | B | 603 | CLA | CMB-C2B-C1B | -2.09 | 125.25 | 128.46 |
| 29 | g | 603 | CLA | CHA-C1A-NA | -2.09 | 121.61 | 126.40 |
| 29 | y | 608 | CLA | C3D-C2D-C1D | -2.09 | 102.98 | 105.83 |
| 46 | N | 620 | LUT | C35-C15-C14 | -2.09 | 119.20 | 123.47 |
| 29 | b | 609 | CLA | O1D-CGD-CBD | -2.09 | 120.21 | 124.48 |
| 29 | C | 509 | CLA | CMA-C3A-C4A | 2.09 | 117.38 | 111.77 |
| 29 | c | 502 | CLA | O2D-CGD-O1D | -2.09 | 119.76 | 123.84 |
| 45 | n | 609 | CHL | C1B-CHB-C4A | -2.09 | 125.98 | 130.12 |
| 29 | a | 410 | CLA | C1D-ND-C4D | -2.09 | 104.85 | 106.33 |
| 29 | A | 407 | CLA | CHA-C1A-NA | -2.09 | 121.62 | 126.40 |
| 29 | b | 614 | CLA | CMD-C2D-C3D | -2.09 | 122.82 | 127.61 |
| 45 | S | 607 | CHL | CMB-C2B-C1B | -2.09 | 125.26 | 128.46 |
| 29 | C | 508 | CLA | O2A-CGA-CBA | 2.08 | 118.45 | 111.91 |
| 29 | g | 612 | CLA | C1D-ND-C4D | -2.08 | 104.85 | 106.33 |
| 29 | C | 513 | CLA | C3D-C2D-C1D | -2.08 | 102.99 | 105.83 |
| 45 | r | 606 | CHL | C4D-CHA-C1A | 2.08 | 123.79 | 121.25 |
| 29 | N | 613 | CLA | CHA-C1A-NA | -2.08 | 121.62 | 126.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | A | 407 | CLA | C1-O2A-CGA | 2.08 | 121.91 | 116.44 |
| 29 | s | 602 | CLA | CMB-C2B-C3B | 2.08 | 128.58 | 124.68 |
| 39 | G | 630 | LHG | C6-C5-C4 | -2.08 | 106.86 | 111.79 |
| 45 | R | 606 | CHL | C3A-C2A-C1A | 2.08 | 104.46 | 101.34 |
| 29 | s | 602 | CLA | C3D-C2D-C1D | -2.08 | 102.99 | 105.83 |
| 29 | s | 611 | CLA | CMD-C2D-C3D | -2.08 | 122.82 | 127.61 |
| 46 | R | 620 | LUT | C20-C13-C14 | -2.08 | 120.00 | 122.92 |
| 29 | G | 603 | CLA | O2A-CGA-CBA | 2.08 | 118.44 | 111.91 |
| 29 | n | 614 | CLA | C3D-C2D-C1D | -2.08 | 102.99 | 105.83 |
| 29 | c | 506 | CLA | O1D-CGD-CBD | -2.08 | 120.22 | 124.48 |
| 42 | D | 405 | PL9 | C12-C13-C14 | -2.08 | 122.65 | 127.66 |
| 29 | b | 612 | CLA | CMA-C3A-C4A | 2.08 | 117.37 | 111.77 |
| 48 | s | 623 | NEX | C40-C33-C34 | -2.08 | 120.01 | 122.92 |
| 29 | b | 609 | CLA | C1-O2A-CGA | 2.08 | 121.90 | 116.44 |
| 48 | N | 623 | NEX | C20-C13-C14 | -2.08 | 120.01 | 122.92 |
| 29 | B | 606 | CLA | CMB-C2B-C3B | 2.08 | 128.57 | 124.68 |
| 45 | y | 607 | CHL | C4D-CHA-C1A | 2.08 | 123.78 | 121.25 |
| 29 | c | 508 | CLA | CHA-C1A-NA | -2.08 | 121.64 | 126.40 |
| 29 | N | 602 | CLA | C6-C5-C3 | -2.08 | 108.00 | 113.45 |
| 29 | S | 610 | CLA | CAA-C2A-C3A | -2.08 | 107.09 | 112.78 |
| 29 | C | 513 | CLA | C1D-ND-C4D | -2.08 | 104.86 | 106.33 |
| 45 | n | 608 | CHL | CHD-C4C-C3C | 2.08 | 127.89 | 124.84 |
| 29 | y | 604 | CLA | CHA-C1A-NA | -2.08 | 121.64 | 126.40 |
| 29 | R | 610 | CLA | C3D-C2D-C1D | -2.08 | 103.00 | 105.83 |
| 29 | a | 405 | CLA | O2D-CGD-O1D | -2.08 | 119.78 | 123.84 |
| 29 | N | 602 | CLA | CMB-C2B-C1B | -2.08 | 125.27 | 128.46 |
| 29 | R | 611 | CLA | C1D-ND-C4D | -2.08 | 104.86 | 106.33 |
| 46 | R | 620 | LUT | C40-C33-C34 | -2.08 | 120.02 | 122.92 |
| 48 | N | 623 | NEX | C31-C30-C29 | 2.08 | 130.27 | 127.31 |
| 29 | n | 614 | CLA | C1-O2A-CGA | 2.08 | 121.89 | 116.44 |
| 29 | b | 608 | CLA | CMD-C2D-C3D | -2.08 | 122.84 | 127.61 |
| 46 | r | 620 | LUT | C22-C23-C24 | -2.08 | 109.38 | 111.74 |
| 29 | C | 502 | CLA | C1D-ND-C4D | -2.07 | 104.86 | 106.33 |
| 29 | G | 604 | CLA | C1D-ND-C4D | -2.07 | 104.86 | 106.33 |
| 29 | b | 607 | CLA | O1D-CGD-CBD | -2.07 | 120.24 | 124.48 |
| 29 | g | 602 | CLA | O1D-CGD-CBD | -2.07 | 120.24 | 124.48 |
| 29 | G | 603 | CLA | O1D-CGD-CBD | -2.07 | 120.24 | 124.48 |
| 29 | C | 506 | CLA | C3D-C2D-C1D | -2.07 | 103.00 | 105.83 |
| 46 | r | 620 | LUT | C20-C13-C14 | -2.07 | 120.02 | 122.92 |
| 29 | N | 613 | CLA | CMD-C2D-C3D | -2.07 | 122.84 | 127.61 |
| 45 | y | 605 | CHL | C4A-NA-C1A | 2.07 | 107.64 | 106.71 |
| 29 | s | 604 | CLA | CMA-C3A-C4A | 2.07 | 117.34 | 111.77 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 512 | CLA | CHA-C1A-NA | -2.07 | 121.65 | 126.40 |
| 29 | B | 610 | CLA | C3D-C2D-C1D | -2.07 | 103.00 | 105.83 |
| 29 | r | 611 | CLA | CAA-C2A-C3A | -2.07 | 107.11 | 112.78 |
| 29 | G | 610 | CLA | C3D-C2D-C1D | -2.07 | 103.00 | 105.83 |
| 29 | s | 605 | CLA | C2A-C1A-CHA | 2.07 | 127.48 | 123.86 |
| 29 | N | 602 | CLA | O1D-CGD-CBD | -2.07 | 120.25 | 124.48 |
| 45 | N | 601 | CHL | C1-C2-C3 | -2.07 | 122.46 | 126.04 |
| 42 | d | 405 | PL9 | C36-C34-C33 | -2.07 | 116.93 | 121.12 |
| 46 | s | 621 | LUT | C31-C32-C33 | -2.07 | 120.60 | 126.42 |
| 46 | Y | 621 | LUT | C2-C3-C4 | -2.07 | 107.47 | 110.30 |
| 29 | R | 603 | CLA | C1D-ND-C4D | -2.07 | 104.86 | 106.33 |
| 29 | a | 410 | CLA | CMD-C2D-C3D | -2.07 | 122.85 | 127.61 |
| 29 | A | 405 | CLA | O2D-CGD-O1D | -2.07 | 119.79 | 123.84 |
| 45 | G | 607 | CHL | C1B-CHB-C4A | -2.07 | 126.02 | 130.12 |
| 41 | d | 401 | BCT | O3-C-O1 | -2.07 | 114.18 | 119.55 |
| 29 | R | 610 | CLA | O2D-CGD-O1D | -2.07 | 119.79 | 123.84 |
| 46 | N | 621 | LUT | C7-C8-C9 | -2.07 | 123.11 | 126.23 |
| 29 | Y | 614 | CLA | CAA-C2A-C3A | -2.07 | 107.11 | 112.78 |
| 29 | C | 504 | CLA | C3D-C2D-C1D | -2.07 | 103.01 | 105.83 |
| 45 | g | 605 | CHL | C1-O2A-CGA | 2.07 | 122.74 | 116.73 |
| 29 | b | 607 | CLA | C11-C10-C8 | -2.07 | 109.23 | 115.92 |
| 29 | r | 604 | CLA | O1D-CGD-CBD | -2.07 | 120.25 | 124.48 |
| 29 | A | 406 | CLA | CHA-C1A-NA | -2.07 | 121.66 | 126.40 |
| 29 | n | 604 | CLA | CHA-C1A-NA | -2.07 | 121.66 | 126.40 |
| 45 | g | 608 | CHL | C1B-CHB-C4A | -2.07 | 126.02 | 130.12 |
| 29 | g | 613 | CLA | CHA-C1A-NA | -2.07 | 121.66 | 126.40 |
| 29 | N | 603 | CLA | O2A-CGA-CBA | 2.07 | 118.39 | 111.91 |
| 48 | S | 622 | NEX | C26-C27-C28 | -2.07 | 121.62 | 125.99 |
| 35 | b | 620 | C7Z | C18-C5-C4 | 2.07 | 118.18 | 114.36 |
| 29 | d | 402 | CLA | CMD-C2D-C3D | -2.07 | 122.86 | 127.61 |
| 29 | G | 613 | CLA | C1D-ND-C4D | -2.07 | 104.87 | 106.33 |
| 29 | B | 613 | CLA | O1D-CGD-CBD | -2.07 | 120.26 | 124.48 |
| 29 | B | 614 | CLA | CMD-C2D-C3D | -2.07 | 122.86 | 127.61 |
| 45 | N | 607 | CHL | C1B-CHB-C4A | -2.07 | 126.03 | 130.12 |
| 29 | c | 511 | CLA | C1-O2A-CGA | 2.07 | 121.86 | 116.44 |
| 29 | G | 613 | CLA | C1-O2A-CGA | 2.07 | 121.86 | 116.44 |
| 29 | B | 604 | CLA | CHA-C1A-NA | -2.06 | 121.67 | 126.40 |
| 29 | C | 508 | CLA | O2D-CGD-O1D | -2.06 | 119.80 | 123.84 |
| 29 | S | 604 | CLA | CMA-C3A-C4A | 2.06 | 117.32 | 111.77 |
| 45 | n | 605 | CHL | C4D-CHA-C1A | 2.06 | 123.76 | 121.25 |
| 47 | Y | 622 | XAT | C39-C29-C30 | -2.06 | 120.03 | 122.92 |
| 35 | B | 620 | C7Z | C2-C3-C4 | 2.06 | 113.13 | 110.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | a | 406 | CLA | C1D-ND-C4D | -2.06 | 104.87 | 106.33 |
| 29 | b | 616 | CLA | C1D-ND-C4D | -2.06 | 104.87 | 106.33 |
| 29 | r | 602 | CLA | C3D-C2D-C1D | -2.06 | 103.02 | 105.83 |
| 29 | n | 603 | CLA | O2A-CGA-CBA | 2.06 | 118.38 | 111.91 |
| 35 | b | 620 | C7Z | C10-C11-C12 | -2.06 | 116.78 | 123.22 |
| 45 | g | 601 | CHL | CHD-C4C-C3C | 2.06 | 127.87 | 124.84 |
| 29 | n | 614 | CLA | CMD-C2D-C3D | -2.06 | 122.87 | 127.61 |
| 47 | R | 621 | XAT | C39-C29-C28 | 2.06 | 121.33 | 118.08 |
| 29 | b | 610 | CLA | CHA-C1A-NA | -2.06 | 121.68 | 126.40 |
| 29 | g | 610 | CLA | CMB-C2B-C3B | 2.06 | 128.53 | 124.68 |
| 29 | Y | 610 | CLA | C3D-C2D-C1D | -2.06 | 103.02 | 105.83 |
| 42 | d | 405 | PL9 | C12-C13-C14 | -2.06 | 122.70 | 127.66 |
| 29 | c | 508 | CLA | CAA-C2A-C3A | -2.06 | 107.14 | 112.78 |
| 29 | R | 604 | CLA | CHA-C1A-NA | -2.06 | 121.68 | 126.40 |
| 29 | G | 602 | CLA | CHA-C1A-NA | -2.06 | 121.68 | 126.40 |
| 48 | r | 623 | NEX | C20-C13-C14 | -2.06 | 120.04 | 122.92 |
| 29 | b | 615 | CLA | CHA-C1A-NA | -2.06 | 121.68 | 126.40 |
| 29 | y | 611 | CLA | CMD-C2D-C3D | -2.06 | 122.88 | 127.61 |
| 29 | n | 602 | CLA | CMC-C2C-C1C | 2.06 | 128.17 | 125.04 |
| 29 | B | 615 | CLA | CHA-C1A-NA | -2.06 | 121.68 | 126.40 |
| 29 | y | 603 | CLA | CMD-C2D-C3D | -2.06 | 122.88 | 127.61 |
| 31 | c | 517 | BCR | C34-C9-C10 | -2.06 | 120.04 | 122.92 |
| 29 | s | 610 | CLA | C1D-ND-C4D | -2.06 | 104.87 | 106.33 |
| 29 | b | 607 | CLA | C1-C2-C3 | -2.06 | 122.48 | 126.04 |
| 48 | Y | 623 | NEX | C20-C13-C14 | -2.06 | 120.04 | 122.92 |
| 29 | s | 613 | CLA | O2A-CGA-CBA | 2.06 | 118.36 | 111.91 |
| 45 | G | 607 | CHL | CHD-C4C-C3C | 2.06 | 127.86 | 124.84 |
| 29 | N | 610 | CLA | O2D-CGD-O1D | -2.06 | 119.82 | 123.84 |
| 29 | R | 602 | CLA | CHA-C1A-NA | -2.06 | 121.69 | 126.40 |
| 29 | c | 508 | CLA | O2A-CGA-CBA | 2.06 | 118.36 | 111.91 |
| 46 | S | 621 | LUT | C20-C13-C12 | 2.06 | 121.32 | 118.08 |
| 46 | r | 620 | LUT | C40-C33-C34 | -2.06 | 120.04 | 122.92 |
| 48 | n | 623 | NEX | C20-C13-C14 | -2.06 | 120.04 | 122.92 |
| 29 | c | 501 | CLA | CHA-C1A-NA | -2.06 | 121.69 | 126.40 |
| 29 | b | 617 | CLA | CMB-C2B-C3B | 2.06 | 128.52 | 124.68 |
| 29 | C | 503 | CLA | C3D-C2D-C1D | -2.06 | 103.03 | 105.83 |
| 48 | R | 622 | NEX | O24-C25-C38 | -2.05 | 112.59 | 115.06 |
| 29 | G | 614 | CLA | C3D-C2D-C1D | -2.05 | 103.03 | 105.83 |
| 29 | S | 617 | CLA | C3D-C2D-C1D | -2.05 | 103.03 | 105.83 |
| 45 | S | 607 | CHL | C1B-CHB-C4A | -2.05 | 126.05 | 130.12 |
| 29 | S | 610 | CLA | C1D-ND-C4D | -2.05 | 104.88 | 106.33 |
| 31 | d | 404 | BCR | C33-C5-C6 | -2.05 | 122.22 | 124.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 45 | Y | 609 | CHL | C4A-NA-C1A | 2.05 | 107.63 | 106.71 |
| 29 | a | 407 | CLA | CMD-C2D-C3D | -2.05 | 122.89 | 127.61 |
| 29 | g | 611 | CLA | CMD-C2D-C3D | -2.05 | 122.89 | 127.61 |
| 29 | G | 611 | CLA | C1D-ND-C4D | -2.05 | 104.88 | 106.33 |
| 29 | b | 602 | CLA | CAA-C2A-C3A | -2.05 | 107.16 | 112.78 |
| 29 | B | 608 | CLA | CMD-C2D-C3D | -2.05 | 122.89 | 127.61 |
| 29 | a | 405 | CLA | C6-C5-C3 | -2.05 | 108.08 | 113.45 |
| 29 | G | 610 | CLA | O2D-CGD-O1D | -2.05 | 119.83 | 123.84 |
| 29 | S | 605 | CLA | CAA-C2A-C3A | -2.05 | 107.16 | 112.78 |
| 29 | G | 611 | CLA | O1D-CGD-CBD | -2.05 | 120.29 | 124.48 |
| 29 | c | 503 | CLA | C3D-C2D-C1D | -2.05 | 103.03 | 105.83 |
| 48 | y | 623 | NEX | C1-C2-C3 | 2.05 | 118.27 | 113.64 |
| 29 | G | 613 | CLA | CHA-C1A-NA | -2.05 | 121.70 | 126.40 |
| 29 | c | 511 | CLA | C1D-ND-C4D | -2.05 | 104.88 | 106.33 |
| 29 | b | 605 | CLA | CHA-C1A-NA | -2.05 | 121.71 | 126.40 |
| 47 | R | 621 | XAT | C12-C13-C14 | 2.05 | 122.08 | 118.94 |
| 29 | C | 501 | CLA | CHA-C1A-NA | -2.05 | 121.71 | 126.40 |
| 46 | S | 621 | LUT | C31-C30-C29 | -2.05 | 124.39 | 127.31 |
| 29 | S | 604 | CLA | CMB-C2B-C3B | 2.05 | 128.51 | 124.68 |
| 29 | S | 617 | CLA | C1D-ND-C4D | -2.05 | 104.88 | 106.33 |
| 29 | y | 610 | CLA | C3D-C2D-C1D | -2.05 | 103.04 | 105.83 |
| 29 | N | 602 | CLA | CMD-C2D-C3D | -2.05 | 122.91 | 127.61 |
| 46 | y | 620 | LUT | C15-C35-C34 | -2.05 | 119.28 | 123.47 |
| 29 | C | 504 | CLA | CMA-C3A-C4A | 2.05 | 117.27 | 111.77 |
| 29 | D | 402 | CLA | C2C-C1C-NC | 2.05 | 111.89 | 109.97 |
| 29 | b | 608 | CLA | C3D-C2D-C1D | -2.05 | 103.04 | 105.83 |
| 29 | y | 602 | CLA | CMD-C2D-C3D | -2.05 | 122.91 | 127.61 |
| 29 | c | 504 | CLA | CMD-C2D-C3D | -2.05 | 122.91 | 127.61 |
| 31 | C | 516 | BCR | C38-C26-C25 | -2.04 | 122.23 | 124.53 |
| 29 | N | 602 | CLA | CHA-C1A-NA | -2.04 | 121.72 | 126.40 |
| 29 | Y | 613 | CLA | CHA-C1A-NA | -2.04 | 121.72 | 126.40 |
| 45 | N | 605 | CHL | CHD-C4C-C3C | 2.04 | 127.84 | 124.84 |
| 29 | R | 608 | CLA | O2A-CGA-CBA | 2.04 | 118.32 | 111.91 |
| 45 | s | 607 | CHL | C4A-NA-C1A | 2.04 | 107.62 | 106.71 |
| 29 | s | 609 | CLA | CMD-C2D-C3D | -2.04 | 122.91 | 127.61 |
| 29 | B | 617 | CLA | C1D-ND-C4D | -2.04 | 104.88 | 106.33 |
| 29 | r | 613 | CLA | C3D-C2D-C1D | -2.04 | 103.04 | 105.83 |
| 29 | B | 605 | CLA | CHA-C1A-NA | -2.04 | 121.72 | 126.40 |
| 29 | g | 612 | CLA | CMD-C2D-C3D | -2.04 | 122.91 | 127.61 |
| 46 | y | 620 | LUT | C35-C15-C14 | -2.04 | 119.29 | 123.47 |
| 29 | G | 604 | CLA | C3D-C2D-C1D | -2.04 | 103.04 | 105.83 |
| 29 | Y | 613 | CLA | C1D-ND-C4D | -2.04 | 104.88 | 106.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 48 | g | 623 | NEX | C40-C33-C34 | -2.04 | 120.06 | 122.92 |
| 29 | r | 604 | CLA | CHA-C1A-NA | -2.04 | 121.72 | 126.40 |
| 31 | a | 411 | BCR | C19-C18-C17 | 2.04 | 122.07 | 118.94 |
| 29 | y | 613 | CLA | CMB-C2B-C1B | -2.04 | 125.33 | 128.46 |
| 29 | G | 603 | CLA | C3D-C2D-C1D | -2.04 | 103.05 | 105.83 |
| 29 | c | 513 | CLA | C3D-C2D-C1D | -2.04 | 103.05 | 105.83 |
| 29 | y | 602 | CLA | CAA-C2A-C3A | -2.04 | 107.19 | 112.78 |
| 46 | g | 621 | LUT | C10-C11-C12 | -2.04 | 116.85 | 123.22 |
| 45 | G | 607 | CHL | C4D-CHA-C1A | 2.04 | 123.73 | 121.25 |
| 29 | G | 611 | CLA | C3D-C2D-C1D | -2.04 | 103.05 | 105.83 |
| 29 | b | 603 | CLA | C3D-C2D-C1D | -2.04 | 103.05 | 105.83 |
| 45 | S | 601 | CHL | C4D-CHA-C1A | 2.04 | 123.73 | 121.25 |
| 29 | N | 611 | CLA | CMD-C2D-C3D | -2.04 | 122.92 | 127.61 |
| 29 | G | 613 | CLA | C3D-C2D-C1D | -2.04 | 103.05 | 105.83 |
| 29 | a | 405 | CLA | CMD-C2D-C3D | -2.04 | 122.92 | 127.61 |
| 29 | B | 604 | CLA | C1-C2-C3 | -2.04 | 122.52 | 126.04 |
| 29 | D | 403 | CLA | C1D-ND-C4D | -2.04 | 104.89 | 106.33 |
| 29 | N | 614 | CLA | C1D-ND-C4D | -2.04 | 104.89 | 106.33 |
| 29 | r | 603 | CLA | CMB-C2B-C3B | 2.04 | 128.49 | 124.68 |
| 29 | b | 604 | CLA | CAA-C2A-C3A | -2.04 | 107.20 | 112.78 |
| 29 | R | 612 | CLA | O1D-CGD-CBD | -2.04 | 120.32 | 124.48 |
| 45 | N | 606 | CHL | C4D-CHA-C1A | 2.04 | 123.73 | 121.25 |
| 29 | g | 604 | CLA | CMB-C2B-C3B | 2.04 | 128.49 | 124.68 |
| 29 | A | 405 | CLA | CAA-CBA-CGA | -2.04 | 107.30 | 113.25 |
| 29 | G | 604 | CLA | OBD-CAD-C3D | -2.04 | 123.62 | 128.52 |
| 29 | n | 611 | CLA | C1-O2A-CGA | 2.03 | 121.78 | 116.44 |
| 29 | B | 615 | CLA | C2A-C1A-CHA | 2.03 | 127.42 | 123.86 |
| 29 | n | 603 | CLA | CHA-C1A-NA | -2.03 | 121.74 | 126.40 |
| 29 | R | 603 | CLA | O2D-CGD-O1D | -2.03 | 119.86 | 123.84 |
| 29 | c | 504 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | c | 508 | CLA | CMD-C2D-C3D | -2.03 | 122.94 | 127.61 |
| 45 | S | 606 | CHL | CHD-C4C-C3C | 2.03 | 127.83 | 124.84 |
| 32 | A | 412 | SQD | O5-C1-O6 | -2.03 | 105.16 | 109.97 |
| 29 | R | 613 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | g | 602 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | s | 602 | CLA | CHA-C1A-NA | -2.03 | 121.74 | 126.40 |
| 29 | Y | 603 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | b | 611 | CLA | CMD-C2D-C3D | -2.03 | 122.94 | 127.61 |
| 29 | r | 608 | CLA | O2A-CGA-CBA | 2.03 | 118.28 | 111.91 |
| 48 | S | 622 | NEX | C16-C1-C6 | -2.03 | 108.65 | 110.47 |
| 29 | n | 604 | CLA | C1D-ND-C4D | -2.03 | 104.89 | 106.33 |
| 29 | S | 609 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | N | 603 | CLA | CBC-CAC-C3C | -2.03 | 106.83 | 112.43 |
| 45 | s | 601 | CHL | C4A-NA-C1A | 2.03 | 107.62 | 106.71 |
| 29 | g | 603 | CLA | O1D-CGD-CBD | -2.03 | 120.33 | 124.48 |
| 29 | s | 612 | CLA | CMD-C2D-C3D | -2.03 | 122.94 | 127.61 |
| 29 | S | 602 | CLA | CMD-C2D-C3D | -2.03 | 122.94 | 127.61 |
| 30 | a | 409 | PHO | C1-C2-C3 | -2.03 | 122.53 | 126.04 |
| 29 | s | 602 | CLA | CMA-C3A-C4A | 2.03 | 117.23 | 111.77 |
| 29 | y | 602 | CLA | CMB-C2B-C1B | -2.03 | 125.34 | 128.46 |
| 29 | N | 614 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | c | 512 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | a | 407 | CLA | O2A-CGA-CBA | 2.03 | 118.28 | 111.91 |
| 31 | c | 517 | BCR | C33-C5-C4 | 2.03 | 117.52 | 113.62 |
| 29 | n | 602 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | c | 510 | CLA | O1D-CGD-CBD | -2.03 | 120.33 | 124.48 |
| 29 | Y | 613 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 31 | B | 618 | BCR | C31-C1-C6 | -2.03 | 107.01 | 110.30 |
| 29 | N | 604 | CLA | C1D-ND-C4D | -2.03 | 104.89 | 106.33 |
| 29 | D | 402 | CLA | CAC-C3C-C4C | 2.03 | 127.44 | 124.81 |
| 29 | N | 603 | CLA | C3D-C2D-C1D | -2.03 | 103.06 | 105.83 |
| 29 | y | 602 | CLA | O1D-CGD-CBD | -2.03 | 120.34 | 124.48 |
| 29 | c | 504 | CLA | CMA-C3A-C4A | 2.03 | 117.22 | 111.77 |
| 29 | B | 610 | CLA | CMD-C2D-C3D | -2.03 | 122.95 | 127.61 |
| 29 | n | 613 | CLA | CHA-C1A-NA | -2.03 | 121.76 | 126.40 |
| 41 | D | 401 | BCT | O3-C-O1 | -2.03 | 114.29 | 119.55 |
| 29 | B | 604 | CLA | CAA-C2A-C3A | -2.03 | 107.23 | 112.78 |
| 29 | r | 612 | CLA | C1D-ND-C4D | -2.03 | 104.90 | 106.33 |
| 29 | a | 405 | CLA | CHA-C1A-NA | -2.03 | 121.76 | 126.40 |
| 31 | D | 404 | BCR | C38-C26-C25 | -2.03 | 122.25 | 124.53 |
| 48 | r | 623 | NEX | O24-C25-C38 | -2.02 | 112.63 | 115.06 |
| 29 | y | 612 | CLA | C1D-ND-C4D | -2.02 | 104.90 | 106.33 |
| 29 | G | 614 | CLA | CHA-C1A-NA | -2.02 | 121.76 | 126.40 |
| 29 | y | 602 | CLA | CHA-C1A-NA | -2.02 | 121.76 | 126.40 |
| 45 | R | 606 | CHL | CHC-C1C-NC | 2.02 | 127.27 | 124.20 |
| 29 | Y | 602 | CLA | CHA-C1A-NA | -2.02 | 121.76 | 126.40 |
| 46 | G | 621 | LUT | C20-C13-C12 | 2.02 | 121.27 | 118.08 |
| 35 | B | 620 | C7Z | C18-C5-C4 | 2.02 | 118.10 | 114.36 |
| 29 | d | 403 | CLA | C1D-ND-C4D | -2.02 | 104.90 | 106.33 |
| 42 | D | 405 | PL9 | O2-C1-C6 | 2.02 | 124.09 | 120.59 |
| 29 | B | 602 | CLA | CAA-C2A-C3A | -2.02 | 107.24 | 112.78 |
| 29 | b | 613 | CLA | O1D-CGD-CBD | -2.02 | 120.35 | 124.48 |
| 29 | r | 612 | CLA | C3D-C2D-C1D | -2.02 | 103.07 | 105.83 |
| 29 | b | 616 | CLA | CMA-C3A-C4A | 2.02 | 117.20 | 111.77 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | n | 610 | CLA | C3D-C2D-C1D | -2.02 | 103.07 | 105.83 |
| 45 | s | 606 | CHL | CHC-C1C-NC | 2.02 | 127.27 | 124.20 |
| 29 | b | 610 | CLA | CMD-C2D-C3D | -2.02 | 122.97 | 127.61 |
| 29 | B | 609 | CLA | CHA-C1A-NA | -2.02 | 121.77 | 126.40 |
| 29 | C | 513 | CLA | CHA-C1A-NA | -2.02 | 121.77 | 126.40 |
| 45 | N | 608 | CHL | CHD-C4C-C3C | 2.02 | 127.81 | 124.84 |
| 31 | A | 411 | BCR | C37-C22-C23 | 2.02 | 121.26 | 118.08 |
| 29 | n | 611 | CLA | C3D-C2D-C1D | -2.02 | 103.08 | 105.83 |
| 44 | h | 101 | RRX | C35-C13-C14 | -2.02 | 120.10 | 122.92 |
| 31 | c | 517 | BCR | C29-C30-C25 | 2.02 | 113.59 | 110.48 |
| 29 | Y | 614 | CLA | C1D-ND-C4D | -2.02 | 104.90 | 106.33 |
| 39 | n | 624 | LHG | O7-C7-O9 | -2.02 | 118.83 | 123.70 |
| 29 | G | 602 | CLA | O1D-CGD-CBD | -2.02 | 120.36 | 124.48 |
| 29 | C | 509 | CLA | CMB-C2B-C1B | -2.02 | 125.36 | 128.46 |
| 42 | d | 405 | PL9 | O2-C1-C2 | -2.02 | 117.16 | 121.78 |
| 29 | Y | 604 | CLA | CHA-C1A-NA | -2.02 | 121.78 | 126.40 |
| 48 | s | 623 | NEX | C1-C2-C3 | 2.02 | 118.19 | 113.64 |
| 29 | s | 617 | CLA | CMB-C2B-C3B | 2.01 | 128.45 | 124.68 |
| 29 | C | 505 | CLA | CMB-C2B-C3B | 2.01 | 128.44 | 124.68 |
| 46 | n | 620 | LUT | C8-C7-C6 | -2.01 | 121.55 | 127.20 |
| 29 | C | 507 | CLA | CMB-C2B-C3B | 2.01 | 128.44 | 124.68 |
| 46 | N | 620 | LUT | C39-C29-C28 | 2.01 | 121.25 | 118.08 |
| 45 | n | 607 | CHL | CHA-C1A-NA | -2.01 | 121.79 | 126.40 |
| 29 | C | 502 | CLA | CAC-C3C-C4C | 2.01 | 127.42 | 124.81 |
| 29 | y | 614 | CLA | C1D-ND-C4D | -2.01 | 104.91 | 106.33 |
| 29 | s | 612 | CLA | C3D-C2D-C1D | -2.01 | 103.09 | 105.83 |
| 46 | S | 620 | LUT | C10-C11-C12 | -2.01 | 116.94 | 123.22 |
| 30 | a | 408 | PHO | C1B-NB-C4B | 2.01 | 111.22 | 107.09 |
| 29 | R | 608 | CLA | C3D-C2D-C1D | -2.01 | 103.09 | 105.83 |
| 29 | n | 614 | CLA | CMB-C2B-C3B | 2.01 | 128.44 | 124.68 |
| 29 | Y | 608 | CLA | CAA-C2A-C3A | -2.01 | 107.27 | 112.78 |
| 29 | g | 602 | CLA | CMD-C2D-C3D | -2.01 | 122.99 | 127.61 |
| 35 | B | 620 | C7Z | C4-C5-C6 | -2.01 | 116.37 | 120.85 |
| 29 | Y | 608 | CLA | C1D-ND-C4D | -2.01 | 104.91 | 106.33 |
| 29 | S | 610 | CLA | O2D-CGD-O1D | -2.01 | 119.91 | 123.84 |
| 29 | Y | 610 | CLA | O2D-CGD-O1D | -2.01 | 119.91 | 123.84 |
| 29 | s | 617 | CLA | C3D-C2D-C1D | -2.01 | 103.09 | 105.83 |
| 29 | n | 604 | CLA | OBD-CAD-C3D | -2.01 | 123.68 | 128.52 |
| 29 | Y | 612 | CLA | C3D-C2D-C1D | -2.01 | 103.09 | 105.83 |
| 29 | g | 613 | CLA | CAA-C2A-C3A | -2.01 | 107.28 | 112.78 |
| 29 | A | 407 | CLA | C3D-C2D-C1D | -2.01 | 103.09 | 105.83 |
| 42 | D | 405 | PL9 | C36-C34-C33 | -2.01 | 117.05 | 121.12 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 29 | c | 506 | CLA | C1-O2A-CGA | 2.01 | 121.71 | 116.44 |
| 38 | C | 519 | DGD | O2G-C1B-O1B | -2.01 | 118.85 | 123.70 |
| 29 | b | 614 | CLA | CMB-C2B-C1B | -2.01 | 125.38 | 128.46 |
| 48 | G | 623 | NEX | C26-C27-C28 | -2.01 | 121.75 | 125.99 |
| 30 | a | 409 | PHO | C1B-NB-C4B | 2.01 | 111.21 | 107.09 |
| 45 | n | 609 | CHL | CHA-C1A-NA | -2.01 | 121.80 | 126.40 |
| 45 | s | 601 | CHL | C1B-CHB-C4A | -2.01 | 126.14 | 130.12 |
| 29 | Y | 612 | CLA | O1D-CGD-CBD | -2.01 | 120.38 | 124.48 |
| 29 | g | 603 | CLA | O2A-CGA-CBA | 2.01 | 118.20 | 111.91 |
| 31 | C | 515 | BCR | C3-C4-C5 | -2.01 | 110.50 | 114.08 |
| 42 | D | 405 | PL9 | O2-C1-C2 | -2.01 | 117.18 | 121.78 |
| 29 | S | 613 | CLA | C2A-C1A-CHA | 2.01 | 127.37 | 123.86 |
| 29 | c | 507 | CLA | C2A-C1A-CHA | 2.01 | 127.37 | 123.86 |
| 31 | c | 514 | BCR | C29-C28-C27 | 2.00 | 115.86 | 111.38 |
| 29 | R | 611 | CLA | CAA-C2A-C3A | -2.00 | 107.29 | 112.78 |
| 46 | n | 621 | LUT | C11-C10-C9 | -2.00 | 124.45 | 127.31 |
| 31 | A | 411 | BCR | C12-C13-C14 | -2.00 | 115.86 | 118.94 |
| 31 | A | 411 | BCR | C19-C18-C17 | 2.00 | 122.02 | 118.94 |
| 29 | a | 407 | CLA | C1-O2A-CGA | 2.00 | 121.70 | 116.44 |
| 29 | R | 604 | CLA | C3D-C2D-C1D | -2.00 | 103.10 | 105.83 |
| 45 | G | 608 | CHL | C4D-CHA-C1A | 2.00 | 123.69 | 121.25 |
| 31 | B | 619 | BCR | C30-C25-C26 | -2.00 | 119.79 | 122.61 |
| 47 | y | 622 | XAT | C26-C27-C28 | -2.00 | 121.76 | 125.99 |
| 29 | C | 509 | CLA | O1D-CGD-CBD | -2.00 | 120.39 | 124.48 |
| 29 | b | 616 | CLA | C2A-C1A-CHA | 2.00 | 127.36 | 123.86 |
| 29 | b | 613 | CLA | CHA-C1A-NA | -2.00 | 121.81 | 126.40 |
| 48 | n | 623 | NEX | O24-C25-C38 | -2.00 | 112.66 | 115.06 |
| 29 | N | 610 | CLA | C3D-C2D-C1D | -2.00 | 103.10 | 105.83 |
| 46 | s | 621 | LUT | C39-C29-C28 | 2.00 | 121.23 | 118.08 |
| 29 | R | 609 | CLA | CAA-C2A-C3A | -2.00 | 107.30 | 112.78 |
| 47 | Y | 622 | XAT | C40-C33-C34 | -2.00 | 120.12 | 122.92 |
| 45 | s | 601 | CHL | C4D-CHA-C1A | 2.00 | 123.68 | 121.25 |

All (343) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 29 | A | 405 | CLA | ND |
| 29 | A | 406 | CLA | ND |
| 29 | A | 407 | CLA | ND |
| 29 | A | 410 | CLA | ND |
| 29 | B | 602 | CLA | ND |
| 29 | B | 603 | CLA | ND |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 29 | B | 604 | CLA | ND |
| 29 | B | 605 | CLA | ND |
| 29 | B | 606 | CLA | ND |
| 29 | B | 607 | CLA | ND |
| 29 | B | 608 | CLA | ND |
| 29 | B | 609 | CLA | ND |
| 29 | B | 610 | CLA | ND |
| 29 | B | 611 | CLA | ND |
| 29 | B | 612 | CLA | ND |
| 29 | B | 613 | CLA | ND |
| 29 | B | 614 | CLA | ND |
| 29 | B | 615 | CLA | ND |
| 29 | B | 616 | CLA | ND |
| 29 | B | 617 | CLA | ND |
| 29 | C | 501 | CLA | ND |
| 29 | C | 502 | CLA | ND |
| 29 | C | 503 | CLA | ND |
| 29 | C | 504 | CLA | ND |
| 29 | C | 505 | CLA | ND |
| 29 | C | 506 | CLA | ND |
| 29 | C | 507 | CLA | ND |
| 29 | C | 508 | CLA | ND |
| 29 | C | 509 | CLA | ND |
| 29 | C | 510 | CLA | ND |
| 29 | C | 511 | CLA | ND |
| 29 | C | 512 | CLA | ND |
| 29 | C | 513 | CLA | ND |
| 29 | D | 402 | CLA | ND |
| 29 | D | 403 | CLA | ND |
| 29 | N | 602 | CLA | ND |
| 29 | N | 603 | CLA | ND |
| 29 | N | 604 | CLA | ND |
| 29 | N | 610 | CLA | ND |
| 29 | N | 611 | CLA | ND |
| 29 | N | 612 | CLA | ND |
| 29 | N | 613 | CLA | ND |
| 29 | N | 614 | CLA | ND |
| 29 | G | 602 | CLA | ND |
| 29 | G | 603 | CLA | ND |
| 29 | G | 604 | CLA | ND |
| 29 | G | 610 | CLA | ND |
| 29 | G | 611 | CLA | ND |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 29 | G | 612 | CLA | ND |
| 29 | G | 613 | CLA | ND |
| 29 | G | 614 | CLA | ND |
| 29 | R | 602 | CLA | ND |
| 29 | R | 603 | CLA | ND |
| 29 | R | 604 | CLA | ND |
| 29 | R | 608 | CLA | ND |
| 29 | R | 609 | CLA | ND |
| 29 | R | 610 | CLA | ND |
| 29 | R | 611 | CLA | ND |
| 29 | R | 612 | CLA | ND |
| 29 | R | 613 | CLA | ND |
| 29 | S | 602 | CLA | ND |
| 29 | S | 603 | CLA | ND |
| 29 | S | 604 | CLA | ND |
| 29 | S | 605 | CLA | ND |
| 29 | S | 609 | CLA | ND |
| 29 | S | 610 | CLA | ND |
| 29 | S | 611 | CLA | ND |
| 29 | S | 612 | CLA | ND |
| 29 | S | 613 | CLA | ND |
| 29 | S | 614 | CLA | ND |
| 29 | S | 617 | CLA | ND |
| 29 | Y | 602 | CLA | ND |
| 29 | Y | 603 | CLA | ND |
| 29 | Y | 604 | CLA | ND |
| 29 | Y | 608 | CLA | ND |
| 29 | Y | 610 | CLA | ND |
| 29 | Y | 611 | CLA | ND |
| 29 | Y | 612 | CLA | ND |
| 29 | Y | 613 | CLA | ND |
| 29 | Y | 614 | CLA | ND |
| 29 | a | 405 | CLA | ND |
| 29 | a | 406 | CLA | ND |
| 29 | a | 407 | CLA | ND |
| 29 | a | 410 | CLA | ND |
| 29 | b | 602 | CLA | ND |
| 29 | b | 603 | CLA | ND |
| 29 | b | 604 | CLA | ND |
| 29 | b | 605 | CLA | ND |
| 29 | b | 606 | CLA | ND |
| 29 | b | 607 | CLA | ND |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 29 | b | 608 | CLA | ND |
| 29 | b | 609 | CLA | ND |
| 29 | b | 610 | CLA | ND |
| 29 | b | 611 | CLA | ND |
| 29 | b | 612 | CLA | ND |
| 29 | b | 613 | CLA | ND |
| 29 | b | 614 | CLA | ND |
| 29 | b | 615 | CLA | ND |
| 29 | b | 616 | CLA | ND |
| 29 | b | 617 | CLA | ND |
| 29 | c | 501 | CLA | ND |
| 29 | c | 502 | CLA | ND |
| 29 | c | 503 | CLA | ND |
| 29 | c | 504 | CLA | ND |
| 29 | c | 505 | CLA | ND |
| 29 | c | 506 | CLA | ND |
| 29 | c | 507 | CLA | ND |
| 29 | c | 508 | CLA | ND |
| 29 | c | 509 | CLA | ND |
| 29 | c | 510 | CLA | ND |
| 29 | c | 511 | CLA | ND |
| 29 | c | 512 | CLA | ND |
| 29 | c | 513 | CLA | ND |
| 29 | d | 402 | CLA | ND |
| 29 | d | 403 | CLA | ND |
| 29 | n | 602 | CLA | ND |
| 29 | n | 603 | CLA | ND |
| 29 | n | 604 | CLA | ND |
| 29 | n | 610 | CLA | ND |
| 29 | n | 611 | CLA | ND |
| 29 | n | 612 | CLA | ND |
| 29 | n | 613 | CLA | ND |
| 29 | n | 614 | CLA | ND |
| 29 | g | 602 | CLA | ND |
| 29 | g | 603 | CLA | ND |
| 29 | g | 604 | CLA | ND |
| 29 | g | 610 | CLA | ND |
| 29 | g | 611 | CLA | ND |
| 29 | g | 612 | CLA | ND |
| 29 | g | 613 | CLA | ND |
| 29 | g | 614 | CLA | ND |
| 29 | r | 602 | CLA | ND |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 29 | r | 603 | CLA | ND |
| 29 | r | 604 | CLA | ND |
| 29 | r | 608 | CLA | ND |
| 29 | r | 609 | CLA | ND |
| 29 | r | 610 | CLA | ND |
| 29 | r | 611 | CLA | ND |
| 29 | r | 612 | CLA | ND |
| 29 | r | 613 | CLA | ND |
| 29 | s | 602 | CLA | ND |
| 29 | s | 603 | CLA | ND |
| 29 | s | 604 | CLA | ND |
| 29 | s | 605 | CLA | ND |
| 29 | s | 609 | CLA | ND |
| 29 | s | 610 | CLA | ND |
| 29 | s | 611 | CLA | ND |
| 29 | s | 612 | CLA | ND |
| 29 | s | 613 | CLA | ND |
| 29 | s | 614 | CLA | ND |
| 29 | s | 617 | CLA | ND |
| 29 | y | 602 | CLA | ND |
| 29 | y | 603 | CLA | ND |
| 29 | y | 604 | CLA | ND |
| 29 | y | 608 | CLA | ND |
| 29 | y | 610 | CLA | ND |
| 29 | y | 611 | CLA | ND |
| 29 | y | 612 | CLA | ND |
| 29 | y | 613 | CLA | ND |
| 29 | y | 614 | CLA | ND |
| 35 | B | 620 | C7Z | C3 |
| 35 | b | 620 | C7Z | C3 |
| 40 | C | 527 | LMK | C3 |
| 40 | c | 627 | LMK | C3 |
| 44 | H | 101 | RRX | C28 |
| 44 | h | 101 | RRX | C28 |
| 45 | N | 601 | CHL | ND |
| 45 | N | 601 | CHL | NC |
| 45 | N | 601 | CHL | NA |
| 45 | N | 601 | CHL | C8 |
| 45 | N | 605 | CHL | ND |
| 45 | N | 605 | CHL | NC |
| 45 | N | 605 | CHL | NA |
| 45 | N | 605 | CHL | C8 |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 45 | N | 606 | CHL | ND |
| 45 | N | 606 | CHL | NC |
| 45 | N | 606 | CHL | NA |
| 45 | N | 606 | CHL | C8 |
| 45 | N | 607 | CHL | ND |
| 45 | N | 607 | CHL | NC |
| 45 | N | 607 | CHL | NA |
| 45 | N | 607 | CHL | C8 |
| 45 | N | 608 | CHL | ND |
| 45 | N | 608 | CHL | NC |
| 45 | N | 608 | CHL | NA |
| 45 | N | 609 | CHL | ND |
| 45 | N | 609 | CHL | NC |
| 45 | N | 609 | CHL | NA |
| 45 | N | 609 | CHL | C8 |
| 45 | G | 601 | CHL | ND |
| 45 | G | 601 | CHL | NC |
| 45 | G | 601 | CHL | NA |
| 45 | G | 601 | CHL | C8 |
| 45 | G | 605 | CHL | ND |
| 45 | G | 605 | CHL | NC |
| 45 | G | 605 | CHL | NA |
| 45 | G | 606 | CHL | ND |
| 45 | G | 606 | CHL | NC |
| 45 | G | 606 | CHL | NA |
| 45 | G | 606 | CHL | C3A |
| 45 | G | 607 | CHL | ND |
| 45 | G | 607 | CHL | NC |
| 45 | G | 607 | CHL | NA |
| 45 | G | 608 | CHL | ND |
| 45 | G | 608 | CHL | NC |
| 45 | G | 608 | CHL | NA |
| 45 | G | 609 | CHL | ND |
| 45 | G | 609 | CHL | NC |
| 45 | G | 609 | CHL | NA |
| 45 | G | 609 | CHL | C8 |
| 45 | R | 606 | CHL | ND |
| 45 | R | 606 | CHL | NC |
| 45 | R | 606 | CHL | NA |
| 45 | R | 607 | CHL | ND |
| 45 | R | 607 | CHL | NC |
| 45 | R | 607 | CHL | NA |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 45 | S | 601 | CHL | ND |
| 45 | S | 601 | CHL | NC |
| 45 | S | 601 | CHL | NA |
| 45 | S | 606 | CHL | ND |
| 45 | S | 606 | CHL | NC |
| 45 | S | 606 | CHL | NA |
| 45 | S | 607 | CHL | ND |
| 45 | S | 607 | CHL | NC |
| 45 | S | 607 | CHL | NA |
| 45 | S | 607 | CHL | C3A |
| 45 | S | 608 | CHL | ND |
| 45 | S | 608 | CHL | NC |
| 45 | S | 608 | CHL | NA |
| 45 | S | 608 | CHL | C8 |
| 45 | Y | 601 | CHL | ND |
| 45 | Y | 601 | CHL | NC |
| 45 | Y | 601 | CHL | NA |
| 45 | Y | 601 | CHL | C8 |
| 45 | Y | 605 | CHL | ND |
| 45 | Y | 605 | CHL | NC |
| 45 | Y | 605 | CHL | NA |
| 45 | Y | 606 | CHL | ND |
| 45 | Y | 606 | CHL | NC |
| 45 | Y | 606 | CHL | NA |
| 45 | Y | 606 | CHL | C8 |
| 45 | Y | 607 | CHL | ND |
| 45 | Y | 607 | CHL | NC |
| 45 | Y | 607 | CHL | NA |
| 45 | Y | 607 | CHL | C8 |
| 45 | Y | 609 | CHL | ND |
| 45 | Y | 609 | CHL | NC |
| 45 | Y | 609 | CHL | NA |
| 45 | Y | 609 | CHL | C8 |
| 45 | n | 601 | CHL | ND |
| 45 | n | 601 | CHL | NC |
| 45 | n | 601 | CHL | NA |
| 45 | n | 601 | CHL | C8 |
| 45 | n | 605 | CHL | ND |
| 45 | n | 605 | CHL | NC |
| 45 | n | 605 | CHL | NA |
| 45 | n | 605 | CHL | C8 |
| 45 | n | 606 | CHL | ND |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 45 | n | 606 | CHL | NC |
| 45 | n | 606 | CHL | NA |
| 45 | n | 606 | CHL | C8 |
| 45 | n | 607 | CHL | ND |
| 45 | n | 607 | CHL | NC |
| 45 | n | 607 | CHL | NA |
| 45 | n | 607 | CHL | C8 |
| 45 | n | 608 | CHL | ND |
| 45 | n | 608 | CHL | NC |
| 45 | n | 608 | CHL | NA |
| 45 | n | 609 | CHL | ND |
| 45 | n | 609 | CHL | NC |
| 45 | n | 609 | CHL | NA |
| 45 | n | 609 | CHL | C8 |
| 45 | g | 601 | CHL | ND |
| 45 | g | 601 | CHL | NC |
| 45 | g | 601 | CHL | NA |
| 45 | g | 601 | CHL | C8 |
| 45 | g | 605 | CHL | ND |
| 45 | g | 605 | CHL | NC |
| 45 | g | 605 | CHL | NA |
| 45 | g | 606 | CHL | ND |
| 45 | g | 606 | CHL | NC |
| 45 | g | 606 | CHL | NA |
| 45 | g | 607 | CHL | ND |
| 45 | g | 607 | CHL | NC |
| 45 | g | 607 | CHL | NA |
| 45 | g | 608 | CHL | ND |
| 45 | g | 608 | CHL | NC |
| 45 | g | 608 | CHL | NA |
| 45 | g | 609 | CHL | ND |
| 45 | g | 609 | CHL | NC |
| 45 | g | 609 | CHL | NA |
| 45 | g | 609 | CHL | C8 |
| 45 | r | 606 | CHL | ND |
| 45 | r | 606 | CHL | NC |
| 45 | r | 606 | CHL | NA |
| 45 | r | 607 | CHL | ND |
| 45 | r | 607 | CHL | NC |
| 45 | r | 607 | CHL | NA |
| 45 | s | 601 | CHL | ND |
| 45 | s | 601 | CHL | NC |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 45 | s | 601 | CHL | NA |
| 45 | s | 606 | CHL | ND |
| 45 | s | 606 | CHL | NC |
| 45 | s | 606 | CHL | NA |
| 45 | s | 607 | CHL | ND |
| 45 | s | 607 | CHL | NC |
| 45 | s | 607 | CHL | NA |
| 45 | s | 607 | CHL | C3A |
| 45 | s | 608 | CHL | ND |
| 45 | s | 608 | CHL | NC |
| 45 | s | 608 | CHL | NA |
| 45 | s | 608 | CHL | C8 |
| 45 | y | 601 | CHL | ND |
| 45 | y | 601 | CHL | NC |
| 45 | y | 601 | CHL | NA |
| 45 | y | 601 | CHL | C8 |
| 45 | y | 605 | CHL | ND |
| 45 | y | 605 | CHL | NC |
| 45 | y | 605 | CHL | NA |
| 45 | y | 606 | CHL | ND |
| 45 | y | 606 | CHL | NC |
| 45 | y | 606 | CHL | NA |
| 45 | y | 606 | CHL | C8 |
| 45 | y | 607 | CHL | ND |
| 45 | y | 607 | CHL | NC |
| 45 | y | 607 | CHL | NA |
| 45 | y | 607 | CHL | C8 |
| 45 | y | 609 | CHL | ND |
| 45 | y | 609 | CHL | NC |
| 45 | y | 609 | CHL | NA |
| 45 | y | 609 | CHL | C8 |
| 46 | S | 620 | LUT | C26 |
| 46 | s | 620 | LUT | C26 |
| 47 | N | 622 | XAT | C6 |
| 47 | G | 622 | XAT | C26 |
| 47 | G | 622 | XAT | C6 |
| 47 | R | 621 | XAT | C26 |
| 47 | Y | 622 | XAT | C6 |
| 47 | n | 622 | XAT | C6 |
| 47 | g | 622 | XAT | C26 |
| 47 | g | 622 | XAT | C6 |
| 47 | r | 622 | XAT | C26 |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 47 | y | 622 | XAT | C6 |

All (3918) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | A | 405 | CLA | CBD-CGD-O2D-CED |
| 29 | A | 406 | CLA | C1A-C2A-CAA-CBA |
| 29 | A | 406 | CLA | C3A-C2A-CAA-CBA |
| 29 | A | 406 | CLA | CHA-CBD-CGD-O1D |
| 29 | A | 406 | CLA | CHA-CBD-CGD-O2D |
| 29 | A | 407 | CLA | CHA-CBD-CGD-O1D |
| 29 | A | 407 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 603 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 604 | CLA | C2-C3-C5-C6 |
| 29 | B | 604 | CLA | C4-C3-C5-C6 |
| 29 | B | 605 | CLA | C2-C1-O2A-CGA |
| 29 | B | 605 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 605 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 605 | CLA | CAD-CBD-CGD-O1D |
| 29 | B | 605 | CLA | CAD-CBD-CGD-O2D |
| 29 | B | 605 | CLA | C2-C3-C5-C6 |
| 29 | B | 605 | CLA | C4-C3-C5-C6 |
| 29 | B | 606 | CLA | C2-C3-C5-C6 |
| 29 | B | 606 | CLA | C4-C3-C5-C6 |
| 29 | B | 607 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 607 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 607 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 608 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 608 | CLA | C3A-C2A-CAA-CBA |
| 29 | B | 608 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 608 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 608 | CLA | CAD-CBD-CGD-O1D |
| 29 | B | 608 | CLA | CAD-CBD-CGD-O2D |
| 29 | B | 608 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 608 | CLA | C2-C3-C5-C6 |
| 29 | B | 608 | CLA | C4-C3-C5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | B | 609 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 609 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 609 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 610 | CLA | C3A-C2A-CAA-CBA |
| 29 | B | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 610 | CLA | CAD-CBD-CGD-O1D |
| 29 | B | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 612 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | B | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 612 | CLA | C2-C3-C5-C6 |
| 29 | B | 612 | CLA | C4-C3-C5-C6 |
| 29 | B | 613 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 613 | CLA | C2-C1-O2A-CGA |
| 29 | B | 614 | CLA | C2-C1-O2A-CGA |
| 29 | B | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 615 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 615 | CLA | CAD-CBD-CGD-O1D |
| 29 | B | 615 | CLA | CAD-CBD-CGD-O2D |
| 29 | B | 617 | CLA | O1A-CGA-O2A-C1 |
| 29 | B | 617 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 501 | CLA | CHA-CBD-CGD-O1D |
| 29 | C | 501 | CLA | CHA-CBD-CGD-O2D |
| 29 | C | 501 | CLA | C2-C3-C5-C6 |
| 29 | C | 501 | CLA | C4-C3-C5-C6 |
| 29 | C | 502 | CLA | CHA-CBD-CGD-O1D |
| 29 | C | 502 | CLA | CHA-CBD-CGD-O2D |
| 29 | C | 502 | CLA | CAD-CBD-CGD-O1D |
| 29 | C | 503 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 503 | CLA | C2-C3-C5-C6 |
| 29 | C | 503 | CLA | C4-C3-C5-C6 |
| 29 | C | 504 | CLA | CHA-CBD-CGD-O1D |
| 29 | C | 504 | CLA | CHA-CBD-CGD-O2D |
| 29 | C | 504 | CLA | C2-C3-C5-C6 |
| 29 | C | 504 | CLA | C4-C3-C5-C6 |
| 29 | C | 505 | CLA | CAD-CBD-CGD-O1D |
| 29 | C | 505 | CLA | CAD-CBD-CGD-O2D |
| 29 | C | 506 | CLA | C1A-C2A-CAA-CBA |
| 29 | C | 507 | CLA | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | C | 508 | CLA | CHA-CBD-CGD-O1D |
| 29 | C | 508 | CLA | CHA-CBD-CGD-O2D |
| 29 | C | 509 | CLA | C2-C1-O2A-CGA |
| 29 | C | 511 | CLA | C1A-C2A-CAA-CBA |
| 29 | C | 511 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 512 | CLA | CHA-CBD-CGD-O1D |
| 29 | C | 512 | CLA | CHA-CBD-CGD-O2D |
| 29 | C | 513 | CLA | C1A-C2A-CAA-CBA |
| 29 | C | 513 | CLA | C2-C3-C5-C6 |
| 29 | C | 513 | CLA | C4-C3-C5-C6 |
| 29 | D | 403 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | N | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | N | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 611 | CLA | CHA-CBD-CGD-O1D |
| 29 | N | 611 | CLA | CHA-CBD-CGD-O2D |
| 29 | N | 612 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 612 | CLA | C3A-C2A-CAA-CBA |
| 29 | N | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | N | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | G | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | G | 602 | CLA | C3A-C2A-CAA-CBA |
| 29 | G | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | G | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 603 | CLA | C2-C1-O2A-CGA |
| 29 | R | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | R | 608 | CLA | C3A-C2A-CAA-CBA |
| 29 | R | 608 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 608 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 609 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | R | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 612 | CLA | C2-C1-O2A-CGA |
| 29 | R | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 613 | CLA | CHA-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | S | 602 | CLA | C3A-C2A-CAA-CBA |
| 29 | S | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 605 | CLA | C1A-C2A-CAA-CBA |
| 29 | S | 605 | CLA | C2-C1-O2A-CGA |
| 29 | S | 605 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 605 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 609 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 611 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 611 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 617 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 603 | CLA | C2-C1-O2A-CGA |
| 29 | Y | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 611 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 611 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | a | 405 | CLA | CBD-CGD-O2D-CED |
| 29 | a | 406 | CLA | C1A-C2A-CAA-CBA |
| 29 | a | 406 | CLA | C3A-C2A-CAA-CBA |
| 29 | a | 406 | CLA | CHA-CBD-CGD-O1D |
| 29 | a | 406 | CLA | CHA-CBD-CGD-O2D |
| 29 | a | 407 | CLA | CHA-CBD-CGD-O1D |
| 29 | a | 407 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 603 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 604 | CLA | C4-C3-C5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | b | 605 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 605 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 605 | CLA | CAD-CBD-CGD-O1D |
| 29 | b | 605 | CLA | CAD-CBD-CGD-O2D |
| 29 | b | 605 | CLA | C2-C3-C5-C6 |
| 29 | b | 605 | CLA | C4-C3-C5-C6 |
| 29 | b | 606 | CLA | C2-C3-C5-C6 |
| 29 | b | 606 | CLA | C4-C3-C5-C6 |
| 29 | b | 607 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 607 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 607 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 608 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 608 | CLA | C3A-C2A-CAA-CBA |
| 29 | b | 608 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 608 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 608 | CLA | CAD-CBD-CGD-O1D |
| 29 | b | 608 | CLA | CAD-CBD-CGD-O2D |
| 29 | b | 608 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 608 | CLA | C2-C3-C5-C6 |
| 29 | b | 608 | CLA | C4-C3-C5-C6 |
| 29 | b | 609 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 609 | CLA | C3A-C2A-CAA-CBA |
| 29 | b | 609 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 610 | CLA | C3A-C2A-CAA-CBA |
| 29 | b | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 610 | CLA | CAD-CBD-CGD-O1D |
| 29 | b | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 612 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 613 | CLA | C2-C1-O2A-CGA |
| 29 | b | 615 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 615 | CLA | CAD-CBD-CGD-O1D |
| 29 | b | 615 | CLA | CAD-CBD-CGD-O2D |
| 29 | b | 616 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 616 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 617 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 501 | CLA | C1A-C2A-CAA-CBA |
| 29 | c | 501 | CLA | CHA-CBD-CGD-O1D |
| 29 | c | 501 | CLA | CHA-CBD-CGD-O2D |
| 29 | c | 502 | CLA | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | c | 503 | CLA | C4-C3-C5-C6 |
| 29 | c | 504 | CLA | CHA-CBD-CGD-O1D |
| 29 | c | 504 | CLA | CHA-CBD-CGD-O2D |
| 29 | c | 504 | CLA | CAD-CBD-CGD-O1D |
| 29 | c | 504 | CLA | C2-C3-C5-C6 |
| 29 | c | 504 | CLA | C4-C3-C5-C6 |
| 29 | c | 505 | CLA | CAD-CBD-CGD-O1D |
| 29 | c | 505 | CLA | CAD-CBD-CGD-O2D |
| 29 | c | 506 | CLA | C1A-C2A-CAA-CBA |
| 29 | c | 508 | CLA | CHA-CBD-CGD-O1D |
| 29 | c | 508 | CLA | CHA-CBD-CGD-O2D |
| 29 | c | 509 | CLA | C2-C1-O2A-CGA |
| 29 | c | 511 | CLA | C1A-C2A-CAA-CBA |
| 29 | c | 511 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 512 | CLA | CHA-CBD-CGD-O1D |
| 29 | c | 513 | CLA | C1A-C2A-CAA-CBA |
| 29 | c | 513 | CLA | C2-C3-C5-C6 |
| 29 | c | 513 | CLA | C4-C3-C5-C6 |
| 29 | d | 403 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 603 | CLA | C3A-C2A-CAA-CBA |
| 29 | n | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | n | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | n | 603 | CLA | CHA-CBD-CGD-O1D |
| 29 | n | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | n | 603 | CLA | CAD-CBD-CGD-O1D |
| 29 | n | 603 | CLA | C2-C3-C5-C6 |
| 29 | n | 603 | CLA | C4-C3-C5-C6 |
| 29 | n | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | n | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | n | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 611 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 611 | CLA | C3A-C2A-CAA-CBA |
| 29 | n | 611 | CLA | CHA-CBD-CGD-O1D |
| 29 | n | 611 | CLA | CHA-CBD-CGD-O2D |
| 29 | n | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | n | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | n | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 614 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 614 | CLA | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | g | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | g | 602 | CLA | C3A-C2A-CAA-CBA |
| 29 | g | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | g | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | g | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | g | 614 | CLA | C2A-CAA-CBA-CGA |
| 29 | g | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 608 | CLA | C3A-C2A-CAA-CBA |
| 29 | r | 608 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 608 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 609 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 610 | CLA | C2-C3-C5-C6 |
| 29 | r | 610 | CLA | C4-C3-C5-C6 |
| 29 | r | 612 | CLA | C2-C1-O2A-CGA |
| 29 | r | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 602 | CLA | C3A-C2A-CAA-CBA |
| 29 | s | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 605 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 605 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 605 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 609 | CLA | C2-C3-C5-C6 |
| 29 | s | 609 | CLA | C4-C3-C5-C6 |
| 29 | s | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 611 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 611 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 614 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 617 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 603 | CLA | C3A-C2A-CAA-CBA |
| 29 | y | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | y | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | y | 610 | CLA | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | y | 614 | CLA | C2-C1-O2A-CGA |
| 30 | A | 409 | PHO | C3A-C2A-CAA-CBA |
| 31 | A | 411 | BCR | C11-C10-C9-C8 |
| 31 | A | 411 | BCR | C11-C10-C9-C34 |
| 31 | A | 411 | BCR | C10-C11-C12-C13 |
| 31 | A | 411 | BCR | C11-C12-C13-C35 |
| 31 | A | 411 | BCR | C17-C18-C19-C20 |
| 31 | A | 411 | BCR | C36-C18-C19-C20 |
| 31 | A | 411 | BCR | C23-C24-C25-C30 |
| 31 | B | 618 | BCR | C1-C6-C7-C8 |
| 31 | B | 618 | BCR | C7-C8-C9-C10 |
| 31 | B | 618 | BCR | C7-C8-C9-C34 |
| 31 | B | 618 | BCR | C11-C10-C9-C8 |
| 31 | B | 618 | BCR | C11-C10-C9-C34 |
| 31 | B | 618 | BCR | C10-C11-C12-C13 |
| 31 | B | 618 | BCR | C17-C18-C19-C20 |
| 31 | B | 618 | BCR | C36-C18-C19-C20 |
| 31 | B | 618 | BCR | C37-C22-C23-C24 |
| 31 | B | 619 | BCR | C11-C10-C9-C8 |
| 31 | B | 619 | BCR | C11-C10-C9-C34 |
| 31 | B | 619 | BCR | C10-C11-C12-C13 |
| 31 | B | 619 | BCR | C21-C22-C23-C24 |
| 31 | B | 619 | BCR | C37-C22-C23-C24 |
| 31 | C | 514 | BCR | C11-C10-C9-C8 |
| 31 | C | 514 | BCR | C11-C10-C9-C34 |
| 31 | C | 514 | BCR | C9-C10-C11-C12 |
| 31 | C | 514 | BCR | C10-C11-C12-C13 |
| 31 | C | 514 | BCR | C13-C14-C15-C16 |
| 31 | C | 514 | BCR | C17-C18-C19-C20 |
| 31 | C | 514 | BCR | C36-C18-C19-C20 |
| 31 | C | 515 | BCR | C7-C8-C9-C10 |
| 31 | C | 515 | BCR | C7-C8-C9-C34 |
| 31 | C | 515 | BCR | C11-C10-C9-C8 |
| 31 | C | 515 | BCR | C11-C10-C9-C34 |
| 31 | C | 515 | BCR | C17-C18-C19-C20 |
| 31 | C | 515 | BCR | C36-C18-C19-C20 |
| 31 | C | 515 | BCR | C23-C24-C25-C30 |
| 31 | C | 516 | BCR | C1-C6-C7-C8 |
| 31 | C | 516 | BCR | C5-C6-C7-C8 |
| 31 | C | 516 | BCR | C7-C8-C9-C10 |
| 31 | C | 516 | BCR | C7-C8-C9-C34 |
| 31 | C | 516 | BCR | C11-C10-C9-C8 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 31 | C | 516 | BCR | C11-C10-C9-C34 |
| 31 | C | 516 | BCR | C10-C11-C12-C13 |
| 31 | C | 516 | BCR | C17-C18-C19-C20 |
| 31 | C | 516 | BCR | C36-C18-C19-C20 |
| 31 | C | 516 | BCR | C21-C22-C23-C24 |
| 31 | C | 516 | BCR | C37-C22-C23-C24 |
| 31 | C | 517 | BCR | C11-C10-C9-C8 |
| 31 | C | 517 | BCR | C11-C10-C9-C34 |
| 31 | C | 517 | BCR | C10-C11-C12-C13 |
| 31 | C | 517 | BCR | C17-C18-C19-C20 |
| 31 | C | 517 | BCR | C36-C18-C19-C20 |
| 31 | D | 404 | BCR | C11-C10-C9-C8 |
| 31 | D | 404 | BCR | C11-C10-C9-C34 |
| 31 | D | 404 | BCR | C10-C11-C12-C13 |
| 31 | a | 411 | BCR | C11-C10-C9-C8 |
| 31 | a | 411 | BCR | C11-C10-C9-C34 |
| 31 | a | 411 | BCR | C10-C11-C12-C13 |
| 31 | a | 411 | BCR | C17-C18-C19-C20 |
| 31 | a | 411 | BCR | C36-C18-C19-C20 |
| 31 | a | 411 | BCR | C23-C24-C25-C30 |
| 31 | b | 618 | BCR | C7-C8-C9-C10 |
| 31 | b | 618 | BCR | C7-C8-C9-C34 |
| 31 | b | 618 | BCR | C11-C10-C9-C8 |
| 31 | b | 618 | BCR | C11-C10-C9-C34 |
| 31 | b | 618 | BCR | C10-C11-C12-C13 |
| 31 | b | 618 | BCR | C17-C18-C19-C20 |
| 31 | b | 618 | BCR | C36-C18-C19-C20 |
| 31 | b | 619 | BCR | C11-C10-C9-C8 |
| 31 | b | 619 | BCR | C11-C10-C9-C34 |
| 31 | b | 619 | BCR | C10-C11-C12-C13 |
| 31 | b | 619 | BCR | C21-C22-C23-C24 |
| 31 | b | 619 | BCR | C37-C22-C23-C24 |
| 31 | c | 514 | BCR | C11-C10-C9-C8 |
| 31 | c | 514 | BCR | C11-C10-C9-C34 |
| 31 | c | 514 | BCR | C9-C10-C11-C12 |
| 31 | c | 514 | BCR | C10-C11-C12-C13 |
| 31 | c | 514 | BCR | C17-C18-C19-C20 |
| 31 | c | 514 | BCR | C36-C18-C19-C20 |
| 31 | c | 515 | BCR | C7-C8-C9-C34 |
| 31 | c | 515 | BCR | C11-C10-C9-C8 |
| 31 | c | 515 | BCR | C11-C10-C9-C34 |
| 31 | c | 515 | BCR | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 31 | c | 515 | BCR | C17-C18-C19-C20 |
| 31 | c | 515 | BCR | C36-C18-C19-C20 |
| 31 | c | 516 | BCR | C1-C6-C7-C8 |
| 31 | c | 516 | BCR | C5-C6-C7-C8 |
| 31 | c | 516 | BCR | C7-C8-C9-C10 |
| 31 | c | 516 | BCR | C7-C8-C9-C34 |
| 31 | c | 516 | BCR | C11-C10-C9-C8 |
| 31 | c | 516 | BCR | C11-C10-C9-C34 |
| 31 | c | 516 | BCR | C10-C11-C12-C13 |
| 31 | c | 516 | BCR | C21-C22-C23-C24 |
| 31 | c | 516 | BCR | C37-C22-C23-C24 |
| 31 | c | 516 | BCR | C23-C24-C25-C30 |
| 31 | c | 517 | BCR | C11-C10-C9-C8 |
| 31 | c | 517 | BCR | C11-C10-C9-C34 |
| 31 | c | 517 | BCR | C17-C18-C19-C20 |
| 31 | c | 517 | BCR | C36-C18-C19-C20 |
| 31 | d | 404 | BCR | C11-C10-C9-C8 |
| 31 | d | 404 | BCR | C11-C10-C9-C34 |
| 31 | d | 404 | BCR | C10-C11-C12-C13 |
| 32 | A | 412 | SQD | C2-C1-O6-C44 |
| 32 | A | 412 | SQD | O5-C1-O6-C44 |
| 32 | A | 412 | SQD | O5-C5-C6-S |
| 32 | B | 621 | SQD | O5-C1-O6-C44 |
| 32 | B | 621 | SQD | C8-C7-O47-C45 |
| 32 | B | 621 | SQD | C5-C6-S-O7 |
| 32 | B | 621 | SQD | C5-C6-S-O8 |
| 32 | B | 621 | SQD | C5-C6-S-O9 |
| 32 | C | 526 | SQD | O5-C5-C6-S |
| 32 | C | 526 | SQD | C5-C6-S-O7 |
| 32 | C | 526 | SQD | C5-C6-S-O8 |
| 32 | C | 526 | SQD | C5-C6-S-O9 |
| 32 | a | 412 | SQD | O5-C1-O6-C44 |
| 32 | a | 412 | SQD | O5-C5-C6-S |
| 32 | b | 621 | SQD | O5-C1-O6-C44 |
| 32 | b | 621 | SQD | C8-C7-O47-C45 |
| 32 | b | 621 | SQD | C5-C6-S-O7 |
| 32 | b | 621 | SQD | C5-C6-S-O8 |
| 32 | b | 621 | SQD | C5-C6-S-O9 |
| 32 | c | 626 | SQD | O5-C5-C6-S |
| 32 | c | 626 | SQD | C5-C6-S-O7 |
| 32 | c | 626 | SQD | C5-C6-S-O8 |
| 32 | c | 626 | SQD | C5-C6-S-O9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 33 | A | 413 | LMG | O9-C10-O7-C8 |
| 33 | A | 413 | LMG | C11-C10-O7-C8 |
| 33 | B | 622 | LMG | C9-C8-O7-C10 |
| 33 | B | 622 | LMG | C11-C10-O7-C8 |
| 33 | C | 521 | LMG | C2-C1-O1-C7 |
| 33 | C | 521 | LMG | O6-C1-O1-C7 |
| 33 | C | 521 | LMG | C11-C10-O7-C8 |
| 33 | b | 622 | LMG | O9-C10-O7-C8 |
| 33 | c | 521 | LMG | C2-C1-O1-C7 |
| 33 | c | 521 | LMG | O6-C1-O1-C7 |
| 33 | c | 521 | LMG | C11-C10-O7-C8 |
| 33 | j | 101 | LMG | O7-C8-C9-O8 |
| 35 | B | 620 | C7Z | C7-C8-C9-C19 |
| 35 | B | 620 | C7Z | C7-C8-C9-C10 |
| 35 | B | 620 | C7Z | C11-C12-C13-C20 |
| 35 | B | 620 | C7Z | C11-C12-C13-C14 |
| 35 | B | 620 | C7Z | C27-C28-C29-C30 |
| 35 | B | 620 | C7Z | C27-C28-C29-C39 |
| 35 | b | 620 | C7Z | C7-C8-C9-C19 |
| 35 | b | 620 | C7Z | C7-C8-C9-C10 |
| 35 | b | 620 | C7Z | C11-C12-C13-C20 |
| 35 | b | 620 | C7Z | C11-C12-C13-C14 |
| 35 | b | 620 | C7Z | C27-C28-C29-C30 |
| 35 | b | 620 | C7Z | C27-C28-C29-C39 |
| 36 | B | 625 | DGA | OB1-CB1-OG2-CG2 |
| 36 | B | 625 | DGA | CG1-CG2-CG3-OXT |
| 36 | B | 625 | DGA | OG2-CG2-CG3-OXT |
| 36 | b | 623 | DGA | OB1-CB1-OG2-CG2 |
| 38 | C | 519 | DGD | C2E-C1E-O5D-C6D |
| 38 | C | 519 | DGD | O6E-C1E-O5D-C6D |
| 38 | C | 520 | DGD | C2B-C1B-O2G-C2G |
| 38 | C | 523 | DGD | C2A-C1A-O1G-C1G |
| 38 | C | 523 | DGD | O1A-C1A-O1G-C1G |
| 38 | C | 523 | DGD | O1B-C1B-O2G-C2G |
| 38 | C | 523 | DGD | C2E-C1E-O5D-C6D |
| 38 | C | 523 | DGD | O6E-C1E-O5D-C6D |
| 38 | c | 519 | DGD | C2E-C1E-O5D-C6D |
| 38 | c | 519 | DGD | O6E-C1E-O5D-C6D |
| 38 | c | 520 | DGD | C2B-C1B-O2G-C2G |
| 38 | c | 523 | DGD | C2E-C1E-O5D-C6D |
| 38 | c | 523 | DGD | O6E-C1E-O5D-C6D |
| 39 | C | 525 | LHG | C1-C2-C3-O3 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-------------|
| 39 | C | 525 | LHG | C3-O3-P-O4 |
| 39 | C | 525 | LHG | C4-O6-P-O4 |
| 39 | D | 408 | LHG | C1-C2-C3-O3 |
| 39 | D | 408 | LHG | C4-O6-P-O4 |
| 39 | D | 409 | LHG | O2-C2-C3-O3 |
| 39 | D | 409 | LHG | C3-O3-P-O5 |
| 39 | D | 409 | LHG | C3-O3-P-O6 |
| 39 | D | 409 | LHG | C4-O6-P-O5 |
| 39 | D | 410 | LHG | C1-C2-C3-O3 |
| 39 | D | 410 | LHG | C3-O3-P-O5 |
| 39 | D | 410 | LHG | C4-O6-P-O4 |
| 39 | L | 101 | LHG | O1-C1-C2-C3 |
| 39 | L | 101 | LHG | C1-C2-C3-O3 |
| 39 | L | 101 | LHG | C4-O6-P-O3 |
| 39 | L | 101 | LHG | C4-O6-P-O5 |
| 39 | N | 624 | LHG | O9-C7-O7-C5 |
| 39 | N | 624 | LHG | C8-C7-O7-C5 |
| 39 | G | 630 | LHG | O1-C1-C2-C3 |
| 39 | G | 630 | LHG | C1-C2-C3-O3 |
| 39 | G | 630 | LHG | C4-O6-P-O4 |
| 39 | S | 624 | LHG | C8-C7-O7-C5 |
| 39 | Y | 624 | LHG | C1-C2-C3-O3 |
| 39 | Y | 624 | LHG | O2-C2-C3-O3 |
| 39 | Y | 624 | LHG | C4-O6-P-O3 |
| 39 | Y | 624 | LHG | C4-O6-P-O4 |
| 39 | Y | 624 | LHG | C4-O6-P-O5 |
| 39 | c | 625 | LHG | C3-O3-P-O6 |
| 39 | c | 625 | LHG | C4-O6-P-O3 |
| 39 | c | 625 | LHG | C4-O6-P-O4 |
| 39 | c | 625 | LHG | C4-O6-P-O5 |
| 39 | d | 408 | LHG | O1-C1-C2-C3 |
| 39 | d | 408 | LHG | C4-O6-P-O4 |
| 39 | d | 408 | LHG | C4-O6-P-O5 |
| 39 | d | 409 | LHG | C1-C2-C3-O3 |
| 39 | d | 409 | LHG | C4-O6-P-O5 |
| 39 | d | 410 | LHG | O1-C1-C2-C3 |
| 39 | d | 410 | LHG | C3-O3-P-O4 |
| 39 | d | 410 | LHG | C3-O3-P-O5 |
| 39 | d | 410 | LHG | C4-O6-P-O5 |
| 39 | d | 410 | LHG | O7-C5-C6-O8 |
| 39 | l | 101 | LHG | O1-C1-C2-C3 |
| 39 | l | 101 | LHG | C1-C2-C3-O3 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | l | 101 | LHG | C4-O6-P-O3 |
| 39 | l | 101 | LHG | C4-O6-P-O5 |
| 39 | n | 624 | LHG | O9-C7-O7-C5 |
| 39 | n | 624 | LHG | C8-C7-O7-C5 |
| 39 | g | 624 | LHG | O1-C1-C2-C3 |
| 39 | g | 624 | LHG | C1-C2-C3-O3 |
| 39 | g | 624 | LHG | C4-O6-P-O4 |
| 39 | g | 624 | LHG | O7-C5-C6-O8 |
| 39 | s | 624 | LHG | O1-C1-C2-C3 |
| 39 | s | 624 | LHG | C8-C7-O7-C5 |
| 39 | y | 624 | LHG | C1-C2-C3-O3 |
| 39 | y | 624 | LHG | C4-O6-P-O4 |
| 39 | y | 624 | LHG | C4-O6-P-O5 |
| 40 | C | 527 | LMK | O9-C10-O7-C8 |
| 40 | C | 527 | LMK | O10-C28-O8-C9 |
| 40 | c | 627 | LMK | O9-C10-C11-C12 |
| 40 | c | 627 | LMK | O9-C10-O7-C8 |
| 42 | D | 405 | PL9 | C12-C13-C14-C15 |
| 42 | D | 405 | PL9 | C12-C13-C14-C16 |
| 42 | d | 405 | PL9 | C12-C13-C14-C15 |
| 44 | H | 101 | RRX | C37-C22-C23-C24 |
| 44 | H | 101 | RRX | C21-C22-C23-C24 |
| 44 | H | 101 | RRX | C7-C8-C9-C34 |
| 44 | h | 101 | RRX | C37-C22-C23-C24 |
| 44 | h | 101 | RRX | C21-C22-C23-C24 |
| 44 | h | 101 | RRX | C7-C8-C9-C10 |
| 44 | h | 101 | RRX | C7-C8-C9-C34 |
| 45 | G | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | G | 601 | CHL | CHA-CBD-CGD-O2D |
| 45 | G | 601 | CHL | C2-C3-C5-C6 |
| 45 | G | 601 | CHL | C4-C3-C5-C6 |
| 45 | G | 606 | CHL | C1A-C2A-CAA-CBA |
| 45 | G | 607 | CHL | C1A-C2A-CAA-CBA |
| 45 | R | 606 | CHL | CHA-CBD-CGD-O1D |
| 45 | R | 606 | CHL | CHA-CBD-CGD-O2D |
| 45 | R | 606 | CHL | CAD-CBD-CGD-O1D |
| 45 | R | 606 | CHL | CAD-CBD-CGD-O2D |
| 45 | R | 607 | CHL | CHA-CBD-CGD-O1D |
| 45 | R | 607 | CHL | CHA-CBD-CGD-O2D |
| 45 | S | 607 | CHL | C1A-C2A-CAA-CBA |
| 45 | Y | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | Y | 601 | CHL | CHA-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 45 | n | 609 | CHL | C1A-C2A-CAA-CBA |
| 45 | g | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | g | 601 | CHL | CHA-CBD-CGD-O2D |
| 45 | g | 601 | CHL | C2-C3-C5-C6 |
| 45 | g | 601 | CHL | C4-C3-C5-C6 |
| 45 | g | 605 | CHL | CHA-CBD-CGD-O1D |
| 45 | g | 606 | CHL | C1A-C2A-CAA-CBA |
| 45 | s | 607 | CHL | C1A-C2A-CAA-CBA |
| 45 | y | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | y | 601 | CHL | CHA-CBD-CGD-O2D |
| 45 | y | 601 | CHL | C2-C3-C5-C6 |
| 45 | y | 601 | CHL | C4-C3-C5-C6 |
| 46 | N | 621 | LUT | C21-C26-C27-C28 |
| 46 | G | 620 | LUT | C25-C26-C27-C28 |
| 46 | G | 621 | LUT | C21-C26-C27-C28 |
| 46 | R | 620 | LUT | C7-C8-C9-C10 |
| 46 | S | 620 | LUT | C21-C26-C27-C28 |
| 46 | S | 620 | LUT | C27-C28-C29-C30 |
| 46 | S | 620 | LUT | C27-C28-C29-C39 |
| 46 | S | 621 | LUT | C25-C26-C27-C28 |
| 46 | Y | 620 | LUT | C27-C28-C29-C39 |
| 46 | Y | 621 | LUT | C21-C26-C27-C28 |
| 46 | n | 620 | LUT | C1-C6-C7-C8 |
| 46 | n | 620 | LUT | C25-C26-C27-C28 |
| 46 | n | 621 | LUT | C21-C26-C27-C28 |
| 46 | g | 620 | LUT | C27-C28-C29-C30 |
| 46 | g | 620 | LUT | C27-C28-C29-C39 |
| 46 | g | 621 | LUT | C21-C26-C27-C28 |
| 46 | s | 620 | LUT | C21-C26-C27-C28 |
| 46 | s | 620 | LUT | C25-C26-C27-C28 |
| 47 | R | 621 | XAT | C9-C10-C11-C12 |
| 47 | R | 621 | XAT | C10-C11-C12-C13 |
| 47 | R | 621 | XAT | O24-C26-C27-C28 |
| 47 | R | 621 | XAT | C26-C27-C28-C29 |
| 47 | Y | 622 | XAT | C27-C28-C29-C30 |
| 47 | Y | 622 | XAT | C27-C28-C29-C39 |
| 47 | r | 622 | XAT | C7-C8-C9-C10 |
| 47 | r | 622 | XAT | C7-C8-C9-C19 |
| 47 | r | 622 | XAT | C9-C10-C11-C12 |
| 47 | r | 622 | XAT | C10-C11-C12-C13 |
| 47 | r | 622 | XAT | C20-C13-C14-C15 |
| 47 | r | 622 | XAT | O24-C26-C27-C28 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 47 | r | 622 | XAT | C26-C27-C28-C29 |
| 48 | R | 622 | NEX | C12-C13-C14-C15 |
| 48 | R | 622 | NEX | C20-C13-C14-C15 |
| 48 | R | 622 | NEX | C14-C15-C35-C34 |
| 48 | S | 622 | NEX | C11-C10-C9-C8 |
| 48 | S | 622 | NEX | C11-C10-C9-C19 |
| 48 | S | 622 | NEX | C10-C11-C12-C13 |
| 48 | S | 622 | NEX | C11-C12-C13-C14 |
| 48 | S | 622 | NEX | C11-C12-C13-C20 |
| 48 | r | 623 | NEX | C12-C13-C14-C15 |
| 48 | r | 623 | NEX | C20-C13-C14-C15 |
| 48 | r | 623 | NEX | C30-C31-C32-C33 |
| 48 | s | 623 | NEX | C10-C11-C12-C13 |
| 48 | s | 623 | NEX | C11-C12-C13-C14 |
| 48 | s | 623 | NEX | C11-C12-C13-C20 |
| 49 | S | 625 | LPX | C3-C4-C5-O6 |
| 49 | S | 625 | LPX | O1-C3-C4-C5 |
| 49 | s | 625 | LPX | O1-C3-C4-O5 |
| 50 | S | 626 | 3PH | C22-C21-O21-C2 |
| 50 | i | 101 | 3PH | C1-O11-P-O13 |
| 50 | i | 101 | 3PH | C1-O11-P-O14 |
| 50 | s | 626 | 3PH | C1-O11-P-O13 |
| 50 | s | 626 | 3PH | C1-O11-P-O14 |
| 50 | s | 626 | 3PH | C1-O11-P-O12 |
| 50 | s | 626 | 3PH | O21-C2-C3-O31 |
| 50 | s | 626 | 3PH | C22-C21-O21-C2 |
| 51 | Y | 625 | SPH | C1-C2-C3-O3 |
| 51 | Y | 625 | SPH | C1-C2-C3-C4 |
| 51 | Y | 625 | SPH | N2-C2-C3-O3 |
| 51 | Y | 625 | SPH | N2-C2-C3-C4 |
| 51 | y | 625 | SPH | O1-C1-C2-N2 |
| 51 | y | 625 | SPH | C1-C2-C3-O3 |
| 51 | y | 625 | SPH | C1-C2-C3-C4 |
| 51 | y | 625 | SPH | N2-C2-C3-O3 |
| 51 | y | 625 | SPH | N2-C2-C3-C4 |
| 29 | S | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 502 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | N | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | R | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | R | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 612 | CLA | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | g | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | A | 410 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 606 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 609 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | B | 616 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 502 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 504 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 509 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 513 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | G | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 608 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 605 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 608 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | a | 410 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 606 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 612 | CLA | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | b | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 501 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 503 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 504 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 507 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 509 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 510 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 513 | CLA | CBD-CGD-O2D-CED |
| 29 | d | 402 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | g | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 608 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | r | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 609 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 614 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 608 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 612 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 614 | CLA | CBD-CGD-O2D-CED |
| 30 | A | 409 | PHO | CBD-CGD-O2D-CED |
| 29 | A | 406 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 504 | CLA | O1A-CGA-O2A-C1 |
| 29 | G | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 605 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 617 | CLA | O1A-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | a | 406 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 617 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 504 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 605 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 603 | CLA | O1A-CGA-O2A-C1 |
| 33 | j | 101 | LMG | O10-C28-O8-C9 |
| 38 | c | 523 | DGD | O1A-C1A-O1G-C1G |
| 29 | R | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | r | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | r | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | A | 405 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 606 | CLA | O1D-CGD-O2D-CED |
| 29 | D | 403 | CLA | O1D-CGD-O2D-CED |
| 29 | N | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | N | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | R | 608 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 608 | CLA | O1D-CGD-O2D-CED |
| 29 | a | 405 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 606 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 617 | CLA | O1D-CGD-O2D-CED |
| 29 | d | 403 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 608 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 608 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 607 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 608 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 502 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 503 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 507 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 511 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | R | 609 | CLA | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | S | 609 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 607 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 511 | CLA | O1D-CGD-O2D-CED |
| 29 | n | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | n | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | n | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | A | 406 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 504 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 505 | CLA | CBA-CGA-O2A-C1 |
| 29 | G | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 605 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 617 | CLA | CBA-CGA-O2A-C1 |
| 29 | a | 406 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 617 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 504 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 605 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 603 | CLA | CBA-CGA-O2A-C1 |
| 38 | c | 523 | DGD | C2A-C1A-O1G-C1G |
| 29 | B | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 501 | CLA | CBD-CGD-O2D-CED |
| 29 | C | 510 | CLA | CBD-CGD-O2D-CED |
| 29 | D | 402 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | R | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | S | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 613 | CLA | CBD-CGD-O2D-CED |
| 29 | b | 616 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | n | 604 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 605 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | y | 602 | CLA | CBD-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | B | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 505 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 511 | CLA | O1A-CGA-O2A-C1 |
| 29 | N | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 505 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 511 | CLA | O1A-CGA-O2A-C1 |
| 29 | g | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | g | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 611 | CLA | O1A-CGA-O2A-C1 |
| 33 | J | 101 | LMG | O10-C28-O8-C9 |
| 50 | S | 626 | 3PH | O32-C31-O31-C3 |
| 50 | s | 626 | 3PH | O32-C31-O31-C3 |
| 29 | B | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 617 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 608 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 609 | CLA | O1D-CGD-O2D-CED |
| 29 | n | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 617 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 617 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 609 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 506 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 603 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 506 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 614 | CLA | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | R | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 609 | CLA | O1D-CGD-O2D-CED |
| 32 | B | 621 | SQD | O49-C7-O47-C45 |
| 32 | b | 621 | SQD | O49-C7-O47-C45 |
| 33 | B | 622 | LMG | O9-C10-O7-C8 |
| 33 | C | 521 | LMG | O9-C10-O7-C8 |
| 33 | c | 521 | LMG | O9-C10-O7-C8 |
| 38 | C | 520 | DGD | O1B-C1B-O2G-C2G |
| 38 | c | 520 | DGD | O1B-C1B-O2G-C2G |
| 38 | c | 523 | DGD | O1B-C1B-O2G-C2G |
| 39 | s | 624 | LHG | O9-C7-O7-C5 |
| 50 | S | 626 | 3PH | O22-C21-O21-C2 |
| 50 | s | 626 | 3PH | O22-C21-O21-C2 |
| 29 | A | 410 | CLA | C3-C5-C6-C7 |
| 29 | B | 605 | CLA | C3-C5-C6-C7 |
| 29 | B | 612 | CLA | C3-C5-C6-C7 |
| 29 | C | 504 | CLA | C3-C5-C6-C7 |
| 29 | C | 511 | CLA | C3-C5-C6-C7 |
| 29 | C | 512 | CLA | C3-C5-C6-C7 |
| 29 | D | 403 | CLA | C3-C5-C6-C7 |
| 29 | N | 603 | CLA | C3-C5-C6-C7 |
| 29 | N | 610 | CLA | C3-C5-C6-C7 |
| 29 | G | 603 | CLA | C3-C5-C6-C7 |
| 29 | S | 609 | CLA | C3-C5-C6-C7 |
| 29 | Y | 613 | CLA | C3-C5-C6-C7 |
| 29 | b | 602 | CLA | C3-C5-C6-C7 |
| 29 | b | 605 | CLA | C3-C5-C6-C7 |
| 29 | b | 608 | CLA | C3-C5-C6-C7 |
| 29 | b | 610 | CLA | C3-C5-C6-C7 |
| 29 | b | 612 | CLA | C3-C5-C6-C7 |
| 29 | c | 504 | CLA | C3-C5-C6-C7 |
| 29 | c | 512 | CLA | C3-C5-C6-C7 |
| 29 | n | 602 | CLA | C3-C5-C6-C7 |
| 29 | r | 609 | CLA | C3-C5-C6-C7 |
| 29 | s | 609 | CLA | C3-C5-C6-C7 |
| 29 | y | 611 | CLA | C3-C5-C6-C7 |
| 30 | a | 409 | PHO | C3-C5-C6-C7 |
| 29 | B | 617 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 511 | CLA | CBA-CGA-O2A-C1 |
| 29 | N | 603 | CLA | CBA-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | S | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 612 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 505 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 511 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 612 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 611 | CLA | CBA-CGA-O2A-C1 |
| 33 | J | 101 | LMG | C29-C28-O8-C9 |
| 33 | j | 101 | LMG | C29-C28-O8-C9 |
| 50 | S | 626 | 3PH | C32-C31-O31-C3 |
| 50 | s | 626 | 3PH | C32-C31-O31-C3 |
| 33 | b | 622 | LMG | C11-C10-O7-C8 |
| 36 | B | 625 | DGA | CB2-CB1-OG2-CG2 |
| 36 | b | 623 | DGA | CB2-CB1-OG2-CG2 |
| 38 | C | 523 | DGD | C2B-C1B-O2G-C2G |
| 38 | c | 523 | DGD | C2B-C1B-O2G-C2G |
| 29 | G | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 611 | CLA | CBD-CGD-O2D-CED |
| 29 | s | 617 | CLA | O1A-CGA-O2A-C1 |
| 50 | i | 101 | 3PH | O32-C31-O31-C3 |
| 29 | R | 602 | CLA | C4-C3-C5-C6 |
| 29 | R | 602 | CLA | C2-C3-C5-C6 |
| 29 | c | 503 | CLA | C2-C3-C5-C6 |
| 29 | r | 610 | CLA | CBD-CGD-O2D-CED |
| 29 | N | 612 | CLA | C2A-CAA-CBA-CGA |
| 29 | N | 614 | CLA | C2A-CAA-CBA-CGA |
| 29 | G | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | G | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | R | 609 | CLA | C2A-CAA-CBA-CGA |
| 29 | S | 617 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 612 | CLA | C2A-CAA-CBA-CGA |
| 29 | n | 603 | CLA | C2A-CAA-CBA-CGA |
| 29 | n | 611 | CLA | C2A-CAA-CBA-CGA |
| 29 | g | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 609 | CLA | C2A-CAA-CBA-CGA |
| 29 | s | 617 | CLA | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 45 | G | 605 | CHL | C2A-CAA-CBA-CGA |
| 45 | G | 606 | CHL | C2A-CAA-CBA-CGA |
| 45 | Y | 605 | CHL | C2A-CAA-CBA-CGA |
| 45 | n | 605 | CHL | C2A-CAA-CBA-CGA |
| 45 | y | 605 | CHL | C2A-CAA-CBA-CGA |
| 29 | C | 512 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 512 | CLA | O1A-CGA-O2A-C1 |
| 29 | g | 613 | CLA | O1A-CGA-O2A-C1 |
| 33 | A | 413 | LMG | C17-C18-C19-C20 |
| 33 | A | 413 | LMG | C35-C36-C37-C38 |
| 33 | A | 413 | LMG | C38-C39-C40-C41 |
| 33 | B | 622 | LMG | C17-C18-C19-C20 |
| 33 | C | 521 | LMG | C17-C18-C19-C20 |
| 33 | C | 521 | LMG | C35-C36-C37-C38 |
| 33 | D | 411 | LMG | C17-C18-C19-C20 |
| 33 | D | 411 | LMG | C20-C21-C22-C23 |
| 33 | H | 102 | LMG | C38-C39-C40-C41 |
| 33 | J | 101 | LMG | C17-C18-C19-C20 |
| 33 | J | 101 | LMG | C20-C21-C22-C23 |
| 33 | a | 413 | LMG | C17-C18-C19-C20 |
| 33 | a | 413 | LMG | C35-C36-C37-C38 |
| 33 | a | 413 | LMG | C38-C39-C40-C41 |
| 33 | b | 622 | LMG | C17-C18-C19-C20 |
| 33 | c | 521 | LMG | C17-C18-C19-C20 |
| 33 | c | 521 | LMG | C35-C36-C37-C38 |
| 33 | d | 411 | LMG | C17-C18-C19-C20 |
| 33 | d | 411 | LMG | C20-C21-C22-C23 |
| 33 | h | 102 | LMG | C38-C39-C40-C41 |
| 33 | j | 101 | LMG | C17-C18-C19-C20 |
| 33 | j | 101 | LMG | C20-C21-C22-C23 |
| 38 | C | 518 | DGD | C8B-C9B-CAB-CBB |
| 38 | C | 519 | DGD | C8A-C9A-CAA-CBA |
| 38 | C | 519 | DGD | C8B-C9B-CAB-CBB |
| 38 | C | 520 | DGD | CBB-CCB-CDB-CEB |
| 38 | C | 523 | DGD | CBA-CCA-CDA-CEA |
| 38 | C | 523 | DGD | CEB-CFB-CGB-CHB |
| 38 | c | 518 | DGD | C8B-C9B-CAB-CBB |
| 38 | c | 519 | DGD | C8A-C9A-CAA-CBA |
| 38 | c | 519 | DGD | C8B-C9B-CAB-CBB |
| 38 | c | 520 | DGD | CBB-CCB-CDB-CEB |
| 38 | c | 523 | DGD | CBA-CCA-CDA-CEA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 38 | c | 523 | DGD | CEB-CFB-CGB-CHB |
| 29 | B | 608 | CLA | C3-C5-C6-C7 |
| 29 | N | 602 | CLA | C3-C5-C6-C7 |
| 29 | Y | 610 | CLA | C3-C5-C6-C7 |
| 29 | c | 502 | CLA | C3-C5-C6-C7 |
| 29 | d | 403 | CLA | C3-C5-C6-C7 |
| 29 | y | 610 | CLA | C3-C5-C6-C7 |
| 30 | A | 409 | PHO | C3-C5-C6-C7 |
| 29 | B | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 605 | CLA | CBA-CGA-O2A-C1 |
| 29 | D | 403 | CLA | CBA-CGA-O2A-C1 |
| 29 | N | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 608 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 612 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | a | 405 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 605 | CLA | CBA-CGA-O2A-C1 |
| 29 | g | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | g | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 608 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 609 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 609 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 617 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 504 | CLA | O1D-CGD-O2D-CED |
| 29 | N | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 503 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 513 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 509 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | R | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 507 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 509 | CLA | O1D-CGD-O2D-CED |
| 29 | n | 602 | CLA | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | s | 614 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 612 | CLA | O1D-CGD-O2D-CED |
| 39 | S | 624 | LHG | O9-C7-O7-C5 |
| 29 | D | 403 | CLA | O1A-CGA-O2A-C1 |
| 29 | N | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | G | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 612 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 609 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 612 | CLA | O1A-CGA-O2A-C1 |
| 29 | a | 405 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 502 | CLA | O1A-CGA-O2A-C1 |
| 29 | d | 403 | CLA | O1A-CGA-O2A-C1 |
| 29 | r | 612 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 609 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 504 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 614 | CLA | O1D-CGD-O2D-CED |
| 47 | R | 621 | XAT | C13-C14-C15-C35 |
| 47 | r | 622 | XAT | C13-C14-C15-C35 |
| 30 | a | 409 | PHO | CBD-CGD-O2D-CED |
| 29 | B | 609 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 616 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 612 | CLA | O1D-CGD-O2D-CED |
| 39 | C | 525 | LHG | O2-C2-C3-O3 |
| 39 | D | 410 | LHG | O2-C2-C3-O3 |
| 39 | G | 630 | LHG | O2-C2-C3-O3 |
| 39 | c | 625 | LHG | O2-C2-C3-O3 |
| 39 | d | 409 | LHG | O2-C2-C3-O3 |
| 39 | g | 624 | LHG | O2-C2-C3-O3 |
| 39 | y | 624 | LHG | O2-C2-C3-O3 |
| 49 | S | 625 | LPX | O1-C3-C4-O5 |
| 29 | B | 610 | CLA | C3-C5-C6-C7 |
| 29 | C | 502 | CLA | C3-C5-C6-C7 |
| 29 | c | 508 | CLA | C3-C5-C6-C7 |
| 29 | c | 511 | CLA | C3-C5-C6-C7 |
| 29 | y | 613 | CLA | C3-C5-C6-C7 |
| 29 | B | 608 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 506 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 512 | CLA | CBA-CGA-O2A-C1 |
| 29 | G | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | G | 603 | CLA | CBA-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | G | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 609 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 608 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 502 | CLA | CBA-CGA-O2A-C1 |
| 29 | g | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 612 | CLA | CBA-CGA-O2A-C1 |
| 38 | c | 519 | DGD | C2A-C1A-O1G-C1G |
| 50 | i | 101 | 3PH | C32-C31-O31-C3 |
| 29 | B | 605 | CLA | O1A-CGA-O2A-C1 |
| 29 | G | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 608 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 605 | CLA | O1A-CGA-O2A-C1 |
| 29 | r | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | r | 608 | CLA | O1A-CGA-O2A-C1 |
| 29 | A | 410 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | d | 402 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 612 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 603 | CLA | O1D-CGD-O2D-CED |
| 30 | A | 409 | PHO | O1D-CGD-O2D-CED |
| 49 | S | 625 | LPX | O5-C4-C5-O6 |
| 38 | c | 519 | DGD | C2B-C1B-O2G-C2G |
| 29 | Y | 602 | CLA | O1D-CGD-O2D-CED |
| 48 | r | 623 | NEX | C14-C15-C35-C34 |
| 29 | C | 513 | CLA | O1D-CGD-O2D-CED |
| 29 | Y | 603 | CLA | O1D-CGD-O2D-CED |
| 39 | l | 101 | LHG | C11-C10-C9-C8 |
| 29 | S | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 512 | CLA | CBA-CGA-O2A-C1 |
| 29 | d | 403 | CLA | CBA-CGA-O2A-C1 |
| 29 | g | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | G | 603 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 608 | CLA | O1A-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | r | 609 | CLA | O1A-CGA-O2A-C1 |
| 39 | L | 101 | LHG | C11-C10-C9-C8 |
| 29 | b | 612 | CLA | C4-C3-C5-C6 |
| 29 | c | 501 | CLA | C4-C3-C5-C6 |
| 45 | Y | 601 | CHL | C4-C3-C5-C6 |
| 45 | n | 601 | CHL | C4-C3-C5-C6 |
| 29 | b | 604 | CLA | C2-C3-C5-C6 |
| 29 | b | 612 | CLA | C2-C3-C5-C6 |
| 45 | Y | 601 | CHL | C2-C3-C5-C6 |
| 45 | n | 601 | CHL | C2-C3-C5-C6 |
| 29 | R | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | g | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 603 | CLA | C2A-CAA-CBA-CGA |
| 45 | g | 605 | CHL | C2A-CAA-CBA-CGA |
| 29 | R | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | a | 410 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 506 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 510 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 609 | CLA | O1A-CGA-O2A-C1 |
| 29 | g | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 612 | CLA | O1A-CGA-O2A-C1 |
| 42 | d | 405 | PL9 | C34-C36-C37-C38 |
| 29 | A | 405 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 606 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 510 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 609 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 506 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 604 | CLA | CBA-CGA-O2A-C1 |
| 39 | d | 410 | LHG | C25-C26-C27-C28 |
| 29 | n | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | r | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | D | 402 | CLA | O1D-CGD-O2D-CED |
| 29 | G | 602 | CLA | O1D-CGD-O2D-CED |
| 29 | R | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 605 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 616 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 501 | CLA | O1D-CGD-O2D-CED |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | c | 510 | CLA | O1D-CGD-O2D-CED |
| 29 | g | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 608 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 613 | CLA | O1A-CGA-O2A-C1 |
| 38 | c | 519 | DGD | O1A-C1A-O1G-C1G |
| 29 | R | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | S | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 605 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 505 | CLA | CBD-CGD-O2D-CED |
| 29 | c | 505 | CLA | CBD-CGD-O2D-CED |
| 39 | D | 409 | LHG | C1-C2-C3-O3 |
| 38 | c | 519 | DGD | O1B-C1B-O2G-C2G |
| 29 | B | 606 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 606 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 506 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 604 | CLA | C3-C5-C6-C7 |
| 29 | n | 610 | CLA | C3-C5-C6-C7 |
| 29 | N | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | A | 410 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 509 | CLA | CBA-CGA-O2A-C1 |
| 29 | N | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 606 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | b | 613 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 503 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 509 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 510 | CLA | CBA-CGA-O2A-C1 |
| 29 | g | 603 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 613 | CLA | CBA-CGA-O2A-C1 |
| 38 | C | 519 | DGD | C2A-C1A-O1G-C1G |
| 39 | c | 625 | LHG | C24-C23-O8-C6 |
| 31 | B | 618 | BCR | C9-C10-C11-C12 |
| 35 | b | 620 | C7Z | C9-C10-C11-C12 |
| 29 | C | 502 | CLA | C5-C6-C7-C8 |
| 29 | b | 612 | CLA | C13-C15-C16-C17 |
| 29 | c | 509 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | g | 603 | CLA | O1A-CGA-O2A-C1 |
| 49 | s | 625 | LPX | C3-C4-C5-O6 |
| 29 | C | 510 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 602 | CLA | O1D-CGD-O2D-CED |
| 39 | S | 624 | LHG | O6-C4-C5-O7 |
| 29 | A | 410 | CLA | C10-C11-C12-C13 |
| 29 | N | 602 | CLA | C5-C6-C7-C8 |
| 29 | G | 602 | CLA | C13-C15-C16-C17 |
| 29 | c | 502 | CLA | C8-C10-C11-C12 |
| 29 | c | 506 | CLA | C8-C10-C11-C12 |
| 29 | r | 612 | CLA | C8-C10-C11-C12 |
| 39 | S | 624 | LHG | O2-C2-C3-O3 |
| 32 | b | 621 | SQD | C23-C24-C25-C26 |
| 36 | c | 524 | DGA | CB1-CB2-CB3-CB4 |
| 38 | c | 519 | DGD | C1B-C2B-C3B-C4B |
| 39 | C | 525 | LHG | C7-C8-C9-C10 |
| 32 | C | 526 | SQD | C2-C1-O6-C44 |
| 32 | a | 412 | SQD | C2-C1-O6-C44 |
| 32 | c | 626 | SQD | C2-C1-O6-C44 |
| 38 | C | 519 | DGD | C2D-C1D-O3G-C3G |
| 38 | c | 519 | DGD | C2D-C1D-O3G-C3G |
| 39 | G | 630 | LHG | O7-C5-C6-O8 |
| 29 | B | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 613 | CLA | O1A-CGA-O2A-C1 |
| 29 | g | 602 | CLA | C4-C3-C5-C6 |
| 29 | B | 603 | CLA | C14-C13-C15-C16 |
| 29 | C | 506 | CLA | C11-C12-C13-C14 |
| 29 | C | 507 | CLA | C11-C10-C8-C9 |
| 29 | C | 507 | CLA | C14-C13-C15-C16 |
| 29 | C | 513 | CLA | C11-C10-C8-C9 |
| 29 | G | 602 | CLA | C14-C13-C15-C16 |
| 29 | R | 603 | CLA | C11-C10-C8-C9 |
| 29 | b | 603 | CLA | C14-C13-C15-C16 |
| 29 | c | 502 | CLA | C6-C7-C8-C9 |
| 29 | c | 502 | CLA | C11-C12-C13-C14 |
| 29 | c | 506 | CLA | C11-C12-C13-C14 |
| 29 | c | 507 | CLA | C11-C10-C8-C9 |
| 29 | c | 507 | CLA | C14-C13-C15-C16 |
| 29 | c | 513 | CLA | C11-C10-C8-C9 |
| 29 | g | 602 | CLA | C14-C13-C15-C16 |
| 29 | r | 603 | CLA | C11-C10-C8-C9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 30 | A | 409 | PHO | C6-C7-C8-C9 |
| 30 | a | 409 | PHO | C6-C7-C8-C9 |
| 45 | Y | 601 | CHL | C11-C10-C8-C9 |
| 45 | Y | 607 | CHL | C11-C10-C8-C9 |
| 45 | n | 605 | CHL | C14-C13-C15-C16 |
| 45 | n | 607 | CHL | C14-C13-C15-C16 |
| 45 | y | 609 | CHL | C11-C12-C13-C14 |
| 29 | C | 501 | CLA | O1D-CGD-O2D-CED |
| 29 | b | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 507 | CLA | C5-C6-C7-C8 |
| 29 | C | 507 | CLA | C15-C16-C17-C18 |
| 29 | c | 504 | CLA | C15-C16-C17-C18 |
| 29 | g | 613 | CLA | C10-C11-C12-C13 |
| 29 | c | 505 | CLA | C2A-CAA-CBA-CGA |
| 45 | r | 607 | CHL | C2A-CAA-CBA-CGA |
| 44 | H | 101 | RRX | C36-C18-C19-C20 |
| 44 | h | 101 | RRX | C36-C18-C19-C20 |
| 46 | R | 620 | LUT | C7-C8-C9-C19 |
| 46 | r | 620 | LUT | C7-C8-C9-C19 |
| 46 | r | 620 | LUT | C31-C32-C33-C40 |
| 44 | H | 101 | RRX | C17-C18-C19-C20 |
| 44 | h | 101 | RRX | C17-C18-C19-C20 |
| 46 | r | 620 | LUT | C7-C8-C9-C10 |
| 49 | s | 625 | LPX | O5-C4-C5-O6 |
| 38 | C | 519 | DGD | C2B-C1B-O2G-C2G |
| 32 | B | 621 | SQD | C23-C24-C25-C26 |
| 36 | C | 524 | DGA | CB1-CB2-CB3-CB4 |
| 38 | c | 518 | DGD | C1A-C2A-C3A-C4A |
| 39 | D | 408 | LHG | C7-C8-C9-C10 |
| 39 | d | 408 | LHG | C7-C8-C9-C10 |
| 42 | D | 405 | PL9 | C47-C48-C49-C51 |
| 29 | B | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 510 | CLA | O1A-CGA-O2A-C1 |
| 38 | C | 519 | DGD | O1A-C1A-O1G-C1G |
| 29 | C | 501 | CLA | C8-C10-C11-C12 |
| 29 | Y | 611 | CLA | C10-C11-C12-C13 |
| 29 | a | 410 | CLA | C8-C10-C11-C12 |
| 29 | b | 610 | CLA | C15-C16-C17-C18 |
| 29 | n | 603 | CLA | C10-C11-C12-C13 |
| 29 | g | 610 | CLA | C8-C10-C11-C12 |
| 29 | r | 608 | CLA | C8-C10-C11-C12 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | Y | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | n | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | C | 508 | CLA | C3-C5-C6-C7 |
| 29 | R | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | Y | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | a | 410 | CLA | CBA-CGA-O2A-C1 |
| 29 | y | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 602 | CLA | C5-C6-C7-C8 |
| 29 | B | 611 | CLA | C15-C16-C17-C18 |
| 29 | B | 612 | CLA | C15-C16-C17-C18 |
| 29 | C | 502 | CLA | C8-C10-C11-C12 |
| 29 | C | 502 | CLA | C13-C15-C16-C17 |
| 29 | C | 503 | CLA | C10-C11-C12-C13 |
| 29 | C | 503 | CLA | C15-C16-C17-C18 |
| 29 | C | 508 | CLA | C10-C11-C12-C13 |
| 29 | N | 603 | CLA | C5-C6-C7-C8 |
| 29 | N | 603 | CLA | C13-C15-C16-C17 |
| 29 | N | 604 | CLA | C10-C11-C12-C13 |
| 29 | Y | 602 | CLA | C15-C16-C17-C18 |
| 29 | Y | 610 | CLA | C5-C6-C7-C8 |
| 29 | b | 606 | CLA | C15-C16-C17-C18 |
| 29 | b | 617 | CLA | C5-C6-C7-C8 |
| 29 | c | 507 | CLA | C5-C6-C7-C8 |
| 29 | c | 512 | CLA | C13-C15-C16-C17 |
| 29 | g | 602 | CLA | C13-C15-C16-C17 |
| 29 | y | 603 | CLA | C13-C15-C16-C17 |
| 29 | y | 604 | CLA | C15-C16-C17-C18 |
| 29 | y | 610 | CLA | C13-C15-C16-C17 |
| 29 | y | 613 | CLA | C15-C16-C17-C18 |
| 39 | Y | 624 | LHG | C33-C34-C35-C36 |
| 39 | D | 408 | LHG | C23-C24-C25-C26 |
| 39 | N | 624 | LHG | C7-C8-C9-C10 |
| 39 | d | 408 | LHG | C23-C24-C25-C26 |
| 29 | n | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | s | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | c | 509 | CLA | O1A-CGA-O2A-C1 |
| 29 | B | 605 | CLA | C8-C10-C11-C12 |
| 29 | B | 606 | CLA | C15-C16-C17-C18 |
| 29 | B | 607 | CLA | C8-C10-C11-C12 |
| 29 | B | 607 | CLA | C10-C11-C12-C13 |
| 29 | B | 617 | CLA | C5-C6-C7-C8 |
| 29 | D | 403 | CLA | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | N | 604 | CLA | C13-C15-C16-C17 |
| 29 | R | 612 | CLA | C10-C11-C12-C13 |
| 29 | S | 603 | CLA | C13-C15-C16-C17 |
| 29 | S | 613 | CLA | C5-C6-C7-C8 |
| 29 | Y | 604 | CLA | C15-C16-C17-C18 |
| 29 | Y | 611 | CLA | C5-C6-C7-C8 |
| 29 | Y | 613 | CLA | C15-C16-C17-C18 |
| 29 | b | 602 | CLA | C5-C6-C7-C8 |
| 29 | b | 602 | CLA | C15-C16-C17-C18 |
| 29 | b | 604 | CLA | C15-C16-C17-C18 |
| 29 | b | 607 | CLA | C13-C15-C16-C17 |
| 29 | b | 616 | CLA | C5-C6-C7-C8 |
| 29 | c | 505 | CLA | C13-C15-C16-C17 |
| 29 | c | 507 | CLA | C15-C16-C17-C18 |
| 29 | n | 602 | CLA | C5-C6-C7-C8 |
| 29 | s | 613 | CLA | C5-C6-C7-C8 |
| 29 | y | 603 | CLA | C15-C16-C17-C18 |
| 29 | y | 604 | CLA | C5-C6-C7-C8 |
| 29 | y | 610 | CLA | C5-C6-C7-C8 |
| 29 | y | 611 | CLA | C8-C10-C11-C12 |
| 29 | y | 613 | CLA | C8-C10-C11-C12 |
| 39 | Y | 624 | LHG | O1-C1-C2-O2 |
| 29 | A | 410 | CLA | O1A-CGA-O2A-C1 |
| 38 | c | 518 | DGD | C1B-C2B-C3B-C4B |
| 39 | C | 525 | LHG | C23-C24-C25-C26 |
| 39 | D | 410 | LHG | C7-C8-C9-C10 |
| 39 | c | 625 | LHG | C23-C24-C25-C26 |
| 39 | d | 410 | LHG | C7-C8-C9-C10 |
| 49 | s | 625 | LPX | C6-C7-C8-C9 |
| 29 | A | 410 | CLA | C8-C10-C11-C12 |
| 29 | B | 608 | CLA | C15-C16-C17-C18 |
| 29 | B | 616 | CLA | C5-C6-C7-C8 |
| 29 | B | 617 | CLA | C13-C15-C16-C17 |
| 29 | C | 501 | CLA | C13-C15-C16-C17 |
| 29 | R | 602 | CLA | C8-C10-C11-C12 |
| 29 | R | 612 | CLA | C8-C10-C11-C12 |
| 29 | Y | 603 | CLA | C5-C6-C7-C8 |
| 29 | Y | 610 | CLA | C13-C15-C16-C17 |
| 29 | Y | 614 | CLA | C8-C10-C11-C12 |
| 29 | b | 608 | CLA | C15-C16-C17-C18 |
| 29 | b | 613 | CLA | C15-C16-C17-C18 |
| 29 | c | 503 | CLA | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | c | 505 | CLA | C5-C6-C7-C8 |
| 29 | n | 604 | CLA | C10-C11-C12-C13 |
| 29 | r | 608 | CLA | C5-C6-C7-C8 |
| 29 | s | 603 | CLA | C5-C6-C7-C8 |
| 29 | s | 610 | CLA | C5-C6-C7-C8 |
| 29 | s | 610 | CLA | C15-C16-C17-C18 |
| 29 | C | 507 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 614 | CLA | CBA-CGA-O2A-C1 |
| 29 | B | 613 | CLA | O1D-CGD-O2D-CED |
| 29 | N | 603 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 602 | CLA | C2-C1-O2A-CGA |
| 29 | B | 608 | CLA | C2-C1-O2A-CGA |
| 29 | B | 612 | CLA | C2-C1-O2A-CGA |
| 29 | C | 512 | CLA | C2-C1-O2A-CGA |
| 29 | N | 614 | CLA | C2-C1-O2A-CGA |
| 29 | Y | 614 | CLA | C2-C1-O2A-CGA |
| 29 | b | 602 | CLA | C2-C1-O2A-CGA |
| 29 | b | 605 | CLA | C2-C1-O2A-CGA |
| 29 | b | 608 | CLA | C2-C1-O2A-CGA |
| 29 | b | 614 | CLA | C2-C1-O2A-CGA |
| 29 | c | 506 | CLA | C2-C1-O2A-CGA |
| 29 | c | 512 | CLA | C2-C1-O2A-CGA |
| 29 | n | 613 | CLA | C2-C1-O2A-CGA |
| 29 | g | 614 | CLA | C2-C1-O2A-CGA |
| 29 | r | 602 | CLA | C2-C1-O2A-CGA |
| 29 | r | 603 | CLA | C2-C1-O2A-CGA |
| 29 | s | 610 | CLA | C2-C1-O2A-CGA |
| 29 | s | 614 | CLA | C2-C1-O2A-CGA |
| 29 | s | 617 | CLA | C2-C1-O2A-CGA |
| 29 | y | 603 | CLA | C2-C1-O2A-CGA |
| 42 | D | 405 | PL9 | C42-C43-C44-C46 |
| 29 | B | 604 | CLA | C5-C6-C7-C8 |
| 29 | B | 613 | CLA | C5-C6-C7-C8 |
| 29 | B | 613 | CLA | C13-C15-C16-C17 |
| 29 | C | 504 | CLA | C13-C15-C16-C17 |
| 29 | C | 505 | CLA | C5-C6-C7-C8 |
| 29 | Y | 613 | CLA | C8-C10-C11-C12 |
| 29 | b | 612 | CLA | C15-C16-C17-C18 |
| 29 | b | 614 | CLA | C10-C11-C12-C13 |
| 29 | c | 503 | CLA | C5-C6-C7-C8 |
| 29 | d | 402 | CLA | C15-C16-C17-C18 |
| 29 | d | 403 | CLA | C8-C10-C11-C12 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | g | 613 | CLA | C15-C16-C17-C18 |
| 39 | D | 410 | LHG | C23-C24-C25-C26 |
| 39 | n | 624 | LHG | C7-C8-C9-C10 |
| 39 | s | 624 | LHG | C23-C24-C25-C26 |
| 43 | F | 101 | HEM | C3D-CAD-CBD-CGD |
| 29 | Y | 614 | CLA | C10-C11-C12-C13 |
| 29 | n | 603 | CLA | C8-C10-C11-C12 |
| 29 | n | 613 | CLA | C8-C10-C11-C12 |
| 29 | y | 612 | CLA | C13-C15-C16-C17 |
| 29 | y | 612 | CLA | C15-C16-C17-C18 |
| 45 | n | 601 | CHL | C8-C10-C11-C12 |
| 29 | r | 610 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 603 | CLA | C12-C13-C15-C16 |
| 29 | B | 604 | CLA | C6-C7-C8-C10 |
| 29 | c | 506 | CLA | C11-C12-C13-C15 |
| 29 | s | 609 | CLA | C11-C10-C8-C7 |
| 29 | A | 405 | CLA | O1A-CGA-O2A-C1 |
| 29 | N | 614 | CLA | O1A-CGA-O2A-C1 |
| 31 | b | 618 | BCR | C9-C10-C11-C12 |
| 31 | c | 517 | BCR | C9-C10-C11-C12 |
| 44 | H | 101 | RRX | C19-C20-C21-C22 |
| 44 | h | 101 | RRX | C19-C20-C21-C22 |
| 46 | G | 621 | LUT | C29-C30-C31-C32 |
| 46 | n | 621 | LUT | C29-C30-C31-C32 |
| 29 | B | 612 | CLA | C2A-CAA-CBA-CGA |
| 29 | R | 603 | CLA | C2A-CAA-CBA-CGA |
| 29 | S | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | S | 614 | CLA | C2A-CAA-CBA-CGA |
| 29 | Y | 610 | CLA | C2A-CAA-CBA-CGA |
| 29 | a | 405 | CLA | C2A-CAA-CBA-CGA |
| 29 | s | 610 | CLA | C2A-CAA-CBA-CGA |
| 29 | N | 604 | CLA | O1D-CGD-O2D-CED |
| 29 | y | 611 | CLA | O1D-CGD-O2D-CED |
| 29 | B | 607 | CLA | C13-C15-C16-C17 |
| 29 | B | 607 | CLA | C15-C16-C17-C18 |
| 29 | B | 614 | CLA | C10-C11-C12-C13 |
| 29 | C | 505 | CLA | C13-C15-C16-C17 |
| 29 | N | 613 | CLA | C5-C6-C7-C8 |
| 29 | N | 613 | CLA | C8-C10-C11-C12 |
| 29 | R | 609 | CLA | C5-C6-C7-C8 |
| 29 | S | 609 | CLA | C10-C11-C12-C13 |
| 29 | Y | 612 | CLA | C13-C15-C16-C17 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | b | 608 | CLA | C10-C11-C12-C13 |
| 29 | b | 614 | CLA | C5-C6-C7-C8 |
| 29 | c | 506 | CLA | C5-C6-C7-C8 |
| 29 | n | 602 | CLA | C15-C16-C17-C18 |
| 29 | r | 602 | CLA | C8-C10-C11-C12 |
| 29 | y | 611 | CLA | C5-C6-C7-C8 |
| 29 | y | 614 | CLA | C8-C10-C11-C12 |
| 29 | y | 614 | CLA | C13-C15-C16-C17 |
| 29 | C | 507 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 509 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 503 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 602 | CLA | CBD-CGD-O2D-CED |
| 33 | b | 622 | LMG | O6-C1-O1-C7 |
| 33 | j | 101 | LMG | O6-C1-O1-C7 |
| 38 | c | 519 | DGD | O6D-C1D-O3G-C3G |
| 29 | B | 603 | CLA | C10-C11-C12-C13 |
| 29 | B | 614 | CLA | C5-C6-C7-C8 |
| 29 | C | 506 | CLA | C5-C6-C7-C8 |
| 29 | C | 506 | CLA | C8-C10-C11-C12 |
| 29 | Y | 602 | CLA | C8-C10-C11-C12 |
| 31 | C | 515 | BCR | C10-C11-C12-C13 |
| 31 | c | 517 | BCR | C10-C11-C12-C13 |
| 48 | R | 622 | NEX | C30-C31-C32-C33 |
| 33 | D | 411 | LMG | C35-C36-C37-C38 |
| 33 | d | 411 | LMG | C35-C36-C37-C38 |
| 29 | c | 506 | CLA | O1D-CGD-O2D-CED |
| 39 | D | 408 | LHG | O2-C2-C3-O3 |
| 39 | L | 101 | LHG | O2-C2-C3-O3 |
| 39 | l | 101 | LHG | O2-C2-C3-O3 |
| 38 | C | 519 | DGD | O1B-C1B-O2G-C2G |
| 29 | n | 603 | CLA | C3-C5-C6-C7 |
| 29 | y | 614 | CLA | C3-C5-C6-C7 |
| 29 | B | 602 | CLA | C13-C15-C16-C17 |
| 29 | B | 610 | CLA | C13-C15-C16-C17 |
| 29 | B | 613 | CLA | C15-C16-C17-C18 |
| 29 | C | 502 | CLA | C15-C16-C17-C18 |
| 29 | G | 610 | CLA | C5-C6-C7-C8 |
| 29 | R | 602 | CLA | C5-C6-C7-C8 |
| 29 | S | 602 | CLA | C10-C11-C12-C13 |
| 29 | S | 610 | CLA | C8-C10-C11-C12 |
| 29 | b | 603 | CLA | C10-C11-C12-C13 |
| 29 | c | 508 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | g | 603 | CLA | C10-C11-C12-C13 |
| 29 | y | 611 | CLA | C10-C11-C12-C13 |
| 29 | y | 614 | CLA | C10-C11-C12-C13 |
| 45 | n | 607 | CHL | C8-C10-C11-C12 |
| 29 | B | 612 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | Y | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | a | 410 | CLA | O1A-CGA-O2A-C1 |
| 29 | b | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | r | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | y | 614 | CLA | O1A-CGA-O2A-C1 |
| 39 | c | 625 | LHG | O10-C23-O8-C6 |
| 39 | s | 624 | LHG | C7-C8-C9-C10 |
| 29 | B | 604 | CLA | C13-C15-C16-C17 |
| 29 | C | 505 | CLA | C10-C11-C12-C13 |
| 29 | C | 506 | CLA | C13-C15-C16-C17 |
| 29 | C | 507 | CLA | C8-C10-C11-C12 |
| 29 | C | 513 | CLA | C10-C11-C12-C13 |
| 29 | R | 608 | CLA | C5-C6-C7-C8 |
| 29 | Y | 610 | CLA | C15-C16-C17-C18 |
| 29 | Y | 613 | CLA | C13-C15-C16-C17 |
| 29 | b | 603 | CLA | C13-C15-C16-C17 |
| 29 | c | 507 | CLA | C8-C10-C11-C12 |
| 29 | c | 507 | CLA | C13-C15-C16-C17 |
| 29 | c | 513 | CLA | C10-C11-C12-C13 |
| 29 | g | 603 | CLA | C8-C10-C11-C12 |
| 45 | Y | 606 | CHL | C15-C16-C17-C18 |
| 33 | a | 413 | LMG | C11-C10-O7-C8 |
| 39 | G | 630 | LHG | C8-C7-O7-C5 |
| 38 | c | 518 | DGD | CAB-CBB-CCB-CDB |
| 29 | B | 604 | CLA | C8-C10-C11-C12 |
| 29 | C | 503 | CLA | C5-C6-C7-C8 |
| 29 | C | 506 | CLA | C15-C16-C17-C18 |
| 29 | b | 607 | CLA | C8-C10-C11-C12 |
| 29 | b | 607 | CLA | C10-C11-C12-C13 |
| 29 | b | 608 | CLA | C13-C15-C16-C17 |
| 29 | d | 403 | CLA | C15-C16-C17-C18 |
| 29 | g | 610 | CLA | C15-C16-C17-C18 |
| 29 | y | 604 | CLA | C8-C10-C11-C12 |
| 39 | C | 525 | LHG | C3-O3-P-O6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | C | 525 | LHG | C4-O6-P-O3 |
| 39 | D | 408 | LHG | C3-O3-P-O6 |
| 39 | D | 408 | LHG | C4-O6-P-O3 |
| 39 | D | 410 | LHG | C3-O3-P-O6 |
| 39 | D | 410 | LHG | C4-O6-P-O3 |
| 39 | L | 101 | LHG | C3-O3-P-O6 |
| 39 | N | 624 | LHG | C4-O6-P-O3 |
| 39 | G | 630 | LHG | C4-O6-P-O3 |
| 39 | S | 624 | LHG | C4-O6-P-O3 |
| 39 | d | 408 | LHG | C4-O6-P-O3 |
| 39 | d | 409 | LHG | C3-O3-P-O6 |
| 39 | d | 410 | LHG | C3-O3-P-O6 |
| 39 | l | 101 | LHG | C3-O3-P-O6 |
| 39 | n | 624 | LHG | C4-O6-P-O3 |
| 39 | g | 624 | LHG | C4-O6-P-O3 |
| 39 | s | 624 | LHG | C4-O6-P-O3 |
| 39 | y | 624 | LHG | C4-O6-P-O3 |
| 49 | S | 625 | LPX | C1-O2-P1-O1 |
| 49 | s | 625 | LPX | C1-O2-P1-O1 |
| 39 | G | 630 | LHG | C7-C8-C9-C10 |
| 29 | C | 510 | CLA | C3-C5-C6-C7 |
| 29 | B | 602 | CLA | CBA-CGA-O2A-C1 |
| 29 | n | 602 | CLA | CBA-CGA-O2A-C1 |
| 38 | c | 520 | DGD | C2A-C1A-O1G-C1G |
| 39 | d | 410 | LHG | C24-C23-O8-C6 |
| 29 | B | 610 | CLA | C15-C16-C17-C18 |
| 29 | C | 509 | CLA | C10-C11-C12-C13 |
| 29 | b | 611 | CLA | C15-C16-C17-C18 |
| 29 | c | 506 | CLA | C13-C15-C16-C17 |
| 29 | S | 614 | CLA | O1A-CGA-O2A-C1 |
| 29 | C | 506 | CLA | O1D-CGD-O2D-CED |
| 39 | c | 625 | LHG | C1-C2-C3-O3 |
| 33 | a | 413 | LMG | O9-C10-O7-C8 |
| 39 | G | 630 | LHG | O9-C7-O7-C5 |
| 29 | n | 613 | CLA | C4-C3-C5-C6 |
| 45 | y | 607 | CHL | C4-C3-C5-C6 |
| 29 | C | 505 | CLA | C2A-CAA-CBA-CGA |
| 29 | N | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | Y | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | Y | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | n | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | s | 613 | CLA | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | y | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | y | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | B | 612 | CLA | C16-C17-C18-C20 |
| 29 | c | 505 | CLA | C16-C17-C18-C19 |
| 29 | C | 503 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 507 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 604 | CLA | CBA-CGA-O2A-C1 |
| 38 | c | 518 | DGD | CCB-CDB-CEB-CFB |
| 46 | g | 621 | LUT | C29-C30-C31-C32 |
| 46 | y | 621 | LUT | C29-C30-C31-C32 |
| 48 | S | 622 | NEX | C13-C14-C15-C35 |
| 39 | L | 101 | LHG | C7-C8-C9-C10 |
| 39 | S | 624 | LHG | C23-C24-C25-C26 |
| 36 | b | 623 | DGA | CA6-CA7-CA8-CA9 |
| 36 | c | 524 | DGA | CB2-CB1-OG2-CG2 |
| 39 | g | 624 | LHG | C8-C7-O7-C5 |
| 39 | y | 624 | LHG | C8-C7-O7-C5 |
| 50 | i | 101 | 3PH | C22-C21-O21-C2 |
| 29 | c | 506 | CLA | C15-C16-C17-C18 |
| 29 | n | 610 | CLA | C5-C6-C7-C8 |
| 47 | R | 621 | XAT | C20-C13-C14-C15 |
| 47 | R | 621 | XAT | C40-C33-C34-C35 |
| 48 | N | 623 | NEX | C39-C29-C30-C31 |
| 48 | G | 623 | NEX | C39-C29-C30-C31 |
| 48 | R | 622 | NEX | C39-C29-C30-C31 |
| 48 | R | 622 | NEX | C40-C33-C34-C35 |
| 48 | S | 622 | NEX | C40-C33-C34-C35 |
| 48 | Y | 623 | NEX | C39-C29-C30-C31 |
| 48 | n | 623 | NEX | C39-C29-C30-C31 |
| 48 | g | 623 | NEX | C39-C29-C30-C31 |
| 48 | r | 623 | NEX | C39-C29-C30-C31 |
| 48 | s | 623 | NEX | C11-C10-C9-C19 |
| 48 | s | 623 | NEX | C40-C33-C34-C35 |
| 48 | y | 623 | NEX | C39-C29-C30-C31 |
| 32 | A | 412 | SQD | C30-C31-C32-C33 |
| 33 | B | 622 | LMG | C15-C16-C17-C18 |
| 39 | G | 630 | LHG | C31-C32-C33-C34 |
| 39 | S | 624 | LHG | C30-C31-C32-C33 |
| 39 | c | 625 | LHG | C24-C25-C26-C27 |
| 39 | d | 410 | LHG | C26-C27-C28-C29 |
| 39 | g | 624 | LHG | C13-C14-C15-C16 |
| 29 | G | 602 | CLA | C16-C17-C18-C19 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | R | 609 | CLA | C11-C12-C13-C15 |
| 29 | S | 602 | CLA | C11-C12-C13-C15 |
| 29 | S | 613 | CLA | C6-C7-C8-C9 |
| 29 | Y | 613 | CLA | C16-C17-C18-C20 |
| 29 | c | 513 | CLA | C16-C17-C18-C19 |
| 29 | n | 604 | CLA | C16-C17-C18-C19 |
| 29 | r | 609 | CLA | C11-C12-C13-C14 |
| 29 | r | 612 | CLA | C11-C12-C13-C15 |
| 29 | y | 604 | CLA | C16-C17-C18-C19 |
| 29 | y | 610 | CLA | C16-C17-C18-C20 |
| 32 | A | 412 | SQD | C14-C15-C16-C17 |
| 36 | c | 524 | DGA | CB5-CB6-CB7-CB8 |
| 39 | N | 624 | LHG | C15-C16-C17-C18 |
| 39 | G | 630 | LHG | C10-C11-C12-C13 |
| 39 | Y | 624 | LHG | C30-C31-C32-C33 |
| 39 | d | 408 | LHG | C13-C14-C15-C16 |
| 39 | d | 409 | LHG | C26-C27-C28-C29 |
| 39 | g | 624 | LHG | C31-C32-C33-C34 |
| 39 | s | 624 | LHG | C30-C31-C32-C33 |
| 50 | S | 626 | 3PH | C3E-C3F-C3G-C3H |
| 36 | c | 524 | DGA | OB1-CB1-OG2-CG2 |
| 39 | g | 624 | LHG | O9-C7-O7-C5 |
| 50 | i | 101 | 3PH | O22-C21-O21-C2 |
| 29 | B | 609 | CLA | C15-C16-C17-C18 |
| 39 | g | 624 | LHG | C7-C8-C9-C10 |
| 50 | s | 626 | 3PH | C21-C22-C23-C24 |
| 36 | B | 625 | DGA | CA6-CA7-CA8-CA9 |
| 36 | B | 625 | DGA | CDA-CEA-CFA-CGA |
| 36 | C | 524 | DGA | CDA-CEA-CFA-CGA |
| 39 | y | 624 | LHG | C11-C10-C9-C8 |
| 50 | s | 626 | 3PH | C3E-C3F-C3G-C3H |
| 51 | Y | 625 | SPH | C10-C11-C12-C13 |
| 39 | D | 408 | LHG | C13-C14-C15-C16 |
| 39 | N | 624 | LHG | C13-C14-C15-C16 |
| 39 | n | 624 | LHG | C13-C14-C15-C16 |
| 39 | N | 624 | LHG | O2-C2-C3-O3 |
| 36 | C | 524 | DGA | CB5-CB6-CB7-CB8 |
| 38 | C | 520 | DGD | C3B-C4B-C5B-C6B |
| 39 | D | 408 | LHG | C33-C34-C35-C36 |
| 39 | l | 101 | LHG | C33-C34-C35-C36 |
| 39 | n | 624 | LHG | C26-C27-C28-C29 |
| 29 | a | 405 | CLA | C3-C5-C6-C7 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | y | 624 | LHG | C7-C8-C9-C10 |
| 49 | S | 625 | LPX | C6-C7-C8-C9 |
| 47 | R | 621 | XAT | C12-C13-C14-C15 |
| 47 | R | 621 | XAT | C32-C33-C34-C35 |
| 47 | r | 622 | XAT | C12-C13-C14-C15 |
| 48 | N | 623 | NEX | C28-C29-C30-C31 |
| 48 | G | 623 | NEX | C28-C29-C30-C31 |
| 48 | R | 622 | NEX | C28-C29-C30-C31 |
| 48 | R | 622 | NEX | C32-C33-C34-C35 |
| 48 | S | 622 | NEX | C32-C33-C34-C35 |
| 48 | Y | 623 | NEX | C28-C29-C30-C31 |
| 48 | n | 623 | NEX | C28-C29-C30-C31 |
| 48 | g | 623 | NEX | C28-C29-C30-C31 |
| 48 | r | 623 | NEX | C28-C29-C30-C31 |
| 48 | s | 623 | NEX | C11-C10-C9-C8 |
| 48 | s | 623 | NEX | C32-C33-C34-C35 |
| 48 | y | 623 | NEX | C28-C29-C30-C31 |
| 29 | S | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 610 | CLA | CBA-CGA-O2A-C1 |
| 38 | C | 520 | DGD | C2A-C1A-O1G-C1G |
| 33 | c | 521 | LMG | C29-C30-C31-C32 |
| 36 | c | 524 | DGA | CDA-CEA-CFA-CGA |
| 36 | c | 524 | DGA | CB2-CB3-CB4-CB5 |
| 39 | N | 624 | LHG | C26-C27-C28-C29 |
| 39 | d | 408 | LHG | C28-C29-C30-C31 |
| 39 | d | 409 | LHG | C29-C30-C31-C32 |
| 51 | y | 625 | SPH | C7-C8-C9-C10 |
| 29 | G | 613 | CLA | C8-C10-C11-C12 |
| 29 | C | 503 | CLA | O1A-CGA-O2A-C1 |
| 29 | B | 617 | CLA | C16-C17-C18-C19 |
| 29 | C | 507 | CLA | C16-C17-C18-C19 |
| 29 | C | 507 | CLA | C16-C17-C18-C20 |
| 29 | G | 613 | CLA | C16-C17-C18-C19 |
| 29 | c | 507 | CLA | C16-C17-C18-C19 |
| 29 | s | 613 | CLA | C6-C7-C8-C10 |
| 29 | y | 611 | CLA | C16-C17-C18-C19 |
| 29 | y | 613 | CLA | C16-C17-C18-C19 |
| 29 | c | 510 | CLA | C4-C3-C5-C6 |
| 32 | a | 412 | SQD | C14-C15-C16-C17 |
| 36 | B | 625 | DGA | CB7-CB8-CB9-CAB |
| 39 | L | 101 | LHG | C33-C34-C35-C36 |
| 39 | c | 625 | LHG | C28-C29-C30-C31 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | c | 510 | CLA | C2-C3-C5-C6 |
| 45 | y | 607 | CHL | C2-C3-C5-C6 |
| 29 | A | 405 | CLA | C11-C12-C13-C14 |
| 29 | C | 511 | CLA | C11-C10-C8-C9 |
| 29 | Y | 610 | CLA | C11-C12-C13-C14 |
| 29 | Y | 613 | CLA | C6-C7-C8-C9 |
| 29 | Y | 613 | CLA | C11-C12-C13-C14 |
| 29 | b | 602 | CLA | C6-C7-C8-C9 |
| 29 | b | 616 | CLA | C11-C10-C8-C9 |
| 29 | c | 502 | CLA | C14-C13-C15-C16 |
| 29 | g | 603 | CLA | C14-C13-C15-C16 |
| 29 | y | 604 | CLA | C11-C12-C13-C14 |
| 29 | y | 610 | CLA | C11-C12-C13-C14 |
| 29 | y | 613 | CLA | C11-C12-C13-C14 |
| 45 | g | 609 | CHL | C11-C12-C13-C14 |
| 39 | l | 101 | LHG | C7-C8-C9-C10 |
| 32 | B | 621 | SQD | C30-C31-C32-C33 |
| 32 | B | 621 | SQD | C32-C33-C34-C35 |
| 32 | b | 621 | SQD | C32-C33-C34-C35 |
| 33 | C | 521 | LMG | C29-C30-C31-C32 |
| 33 | j | 101 | LMG | C31-C32-C33-C34 |
| 39 | D | 408 | LHG | C28-C29-C30-C31 |
| 39 | D | 409 | LHG | C26-C27-C28-C29 |
| 39 | d | 408 | LHG | C33-C34-C35-C36 |
| 29 | C | 512 | CLA | C8-C10-C11-C12 |
| 29 | N | 610 | CLA | C15-C16-C17-C18 |
| 29 | c | 512 | CLA | C15-C16-C17-C18 |
| 29 | r | 608 | CLA | C10-C11-C12-C13 |
| 29 | b | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | B | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | c | 507 | CLA | O1A-CGA-O2A-C1 |
| 39 | d | 410 | LHG | O10-C23-O8-C6 |
| 39 | C | 525 | LHG | O1-C1-C2-C3 |
| 39 | D | 408 | LHG | O1-C1-C2-C3 |
| 39 | D | 409 | LHG | O1-C1-C2-C3 |
| 39 | D | 410 | LHG | O1-C1-C2-C3 |
| 39 | N | 624 | LHG | O1-C1-C2-C3 |
| 39 | S | 624 | LHG | O1-C1-C2-C3 |
| 39 | Y | 624 | LHG | O1-C1-C2-C3 |
| 39 | d | 409 | LHG | O1-C1-C2-C3 |
| 39 | n | 624 | LHG | O1-C1-C2-C3 |
| 39 | y | 624 | LHG | O1-C1-C2-C3 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 31 | A | 411 | BCR | C11-C12-C13-C14 |
| 31 | c | 515 | BCR | C7-C8-C9-C10 |
| 44 | H | 101 | RRX | C7-C8-C9-C10 |
| 29 | Y | 614 | CLA | C3-C5-C6-C7 |
| 36 | C | 524 | DGA | OB1-CB1-OG2-CG2 |
| 39 | d | 408 | LHG | O9-C7-O7-C5 |
| 39 | y | 624 | LHG | O9-C7-O7-C5 |
| 29 | D | 403 | CLA | C13-C15-C16-C17 |
| 36 | C | 524 | DGA | CB2-CB1-OG2-CG2 |
| 39 | d | 408 | LHG | C8-C7-O7-C5 |
| 32 | c | 626 | SQD | C31-C32-C33-C34 |
| 36 | C | 524 | DGA | CA7-CA8-CA9-CAA |
| 38 | c | 520 | DGD | C3B-C4B-C5B-C6B |
| 39 | D | 409 | LHG | C29-C30-C31-C32 |
| 39 | D | 409 | LHG | C31-C32-C33-C34 |
| 39 | L | 101 | LHG | C13-C14-C15-C16 |
| 39 | Y | 624 | LHG | C28-C29-C30-C31 |
| 38 | C | 518 | DGD | C1B-C2B-C3B-C4B |
| 39 | G | 630 | LHG | C23-C24-C25-C26 |
| 39 | S | 624 | LHG | C7-C8-C9-C10 |
| 39 | d | 410 | LHG | C23-C24-C25-C26 |
| 33 | B | 622 | LMG | C18-C19-C20-C21 |
| 33 | c | 521 | LMG | C15-C16-C17-C18 |
| 33 | c | 521 | LMG | C16-C17-C18-C19 |
| 36 | B | 625 | DGA | CA4-CA5-CA6-CA7 |
| 36 | b | 623 | DGA | CDB-CEB-CFB-CGB |
| 38 | C | 523 | DGD | C9B-CAB-CBB-CCB |
| 39 | l | 101 | LHG | C13-C14-C15-C16 |
| 39 | y | 624 | LHG | C11-C12-C13-C14 |
| 50 | S | 626 | 3PH | C22-C23-C24-C25 |
| 50 | S | 626 | 3PH | C27-C28-C29-C2A |
| 29 | s | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | R | 608 | CLA | C11-C12-C13-C15 |
| 29 | R | 609 | CLA | C11-C12-C13-C14 |
| 29 | R | 612 | CLA | C11-C12-C13-C15 |
| 29 | S | 613 | CLA | C6-C7-C8-C10 |
| 29 | Y | 604 | CLA | C16-C17-C18-C19 |
| 29 | Y | 604 | CLA | C16-C17-C18-C20 |
| 29 | b | 605 | CLA | C16-C17-C18-C19 |
| 29 | b | 617 | CLA | C16-C17-C18-C19 |
| 29 | r | 609 | CLA | C11-C12-C13-C15 |
| 29 | y | 602 | CLA | C16-C17-C18-C19 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 32 | C | 526 | SQD | O5-C1-O6-C44 |
| 29 | C | 506 | CLA | C10-C11-C12-C13 |
| 32 | b | 621 | SQD | C26-C27-C28-C29 |
| 39 | D | 409 | LHG | C28-C29-C30-C31 |
| 39 | Y | 624 | LHG | C11-C10-C9-C8 |
| 39 | c | 625 | LHG | C11-C12-C13-C14 |
| 39 | y | 624 | LHG | C33-C34-C35-C36 |
| 36 | b | 623 | DGA | CEA-CFA-CGA-CHA |
| 36 | c | 524 | DGA | CB3-CB4-CB5-CB6 |
| 39 | Y | 624 | LHG | C11-C12-C13-C14 |
| 39 | y | 624 | LHG | C26-C27-C28-C29 |
| 39 | g | 624 | LHG | C23-C24-C25-C26 |
| 50 | i | 101 | 3PH | C31-C32-C33-C34 |
| 29 | B | 612 | CLA | C8-C10-C11-C12 |
| 29 | G | 610 | CLA | C8-C10-C11-C12 |
| 29 | G | 613 | CLA | C15-C16-C17-C18 |
| 29 | n | 610 | CLA | C13-C15-C16-C17 |
| 29 | n | 602 | CLA | O1A-CGA-O2A-C1 |
| 33 | b | 622 | LMG | C15-C16-C17-C18 |
| 36 | B | 625 | DGA | CB3-CB4-CB5-CB6 |
| 39 | C | 525 | LHG | C31-C32-C33-C34 |
| 39 | G | 630 | LHG | C11-C12-C13-C14 |
| 29 | b | 614 | CLA | C3-C5-C6-C7 |
| 29 | c | 507 | CLA | C3-C5-C6-C7 |
| 29 | N | 602 | CLA | CBA-CGA-O2A-C1 |
| 36 | b | 623 | DGA | CCA-CDA-CEA-CFA |
| 36 | b | 623 | DGA | CB7-CB8-CB9-CAB |
| 39 | S | 624 | LHG | C11-C12-C13-C14 |
| 29 | c | 505 | CLA | O1D-CGD-O2D-CED |
| 30 | a | 409 | PHO | O1D-CGD-O2D-CED |
| 29 | B | 609 | CLA | C3A-C2A-CAA-CBA |
| 29 | B | 612 | CLA | C3A-C2A-CAA-CBA |
| 29 | B | 615 | CLA | C3A-C2A-CAA-CBA |
| 29 | C | 513 | CLA | C3A-C2A-CAA-CBA |
| 29 | N | 603 | CLA | C3A-C2A-CAA-CBA |
| 29 | G | 603 | CLA | C3A-C2A-CAA-CBA |
| 29 | G | 611 | CLA | C3A-C2A-CAA-CBA |
| 29 | Y | 603 | CLA | C3A-C2A-CAA-CBA |
| 29 | a | 405 | CLA | C3A-C2A-CAA-CBA |
| 29 | b | 612 | CLA | C3A-C2A-CAA-CBA |
| 29 | b | 615 | CLA | C3A-C2A-CAA-CBA |
| 29 | c | 506 | CLA | C3A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | c | 513 | CLA | C3A-C2A-CAA-CBA |
| 29 | n | 604 | CLA | C3A-C2A-CAA-CBA |
| 29 | n | 614 | CLA | C3A-C2A-CAA-CBA |
| 29 | g | 603 | CLA | C3A-C2A-CAA-CBA |
| 29 | g | 611 | CLA | C3A-C2A-CAA-CBA |
| 45 | G | 607 | CHL | C3A-C2A-CAA-CBA |
| 45 | Y | 606 | CHL | C3A-C2A-CAA-CBA |
| 45 | n | 609 | CHL | C3A-C2A-CAA-CBA |
| 45 | g | 606 | CHL | C3A-C2A-CAA-CBA |
| 45 | y | 606 | CHL | C3A-C2A-CAA-CBA |
| 29 | b | 602 | CLA | C8-C10-C11-C12 |
| 29 | r | 603 | CLA | C8-C10-C11-C12 |
| 31 | c | 514 | BCR | C13-C14-C15-C16 |
| 32 | b | 621 | SQD | C30-C31-C32-C33 |
| 33 | C | 521 | LMG | C15-C16-C17-C18 |
| 36 | C | 524 | DGA | CA6-CA7-CA8-CA9 |
| 36 | C | 524 | DGA | CB2-CB3-CB4-CB5 |
| 36 | C | 524 | DGA | CB3-CB4-CB5-CB6 |
| 36 | b | 623 | DGA | CB3-CB4-CB5-CB6 |
| 39 | D | 408 | LHG | C29-C30-C31-C32 |
| 39 | L | 101 | LHG | C11-C12-C13-C14 |
| 39 | n | 624 | LHG | C15-C16-C17-C18 |
| 38 | c | 520 | DGD | O1A-C1A-O1G-C1G |
| 29 | G | 613 | CLA | C16-C17-C18-C20 |
| 29 | R | 608 | CLA | C11-C12-C13-C14 |
| 29 | R | 612 | CLA | C11-C12-C13-C14 |
| 29 | S | 602 | CLA | C11-C12-C13-C14 |
| 29 | n | 604 | CLA | C16-C17-C18-C20 |
| 29 | g | 602 | CLA | C16-C17-C18-C19 |
| 29 | g | 602 | CLA | C16-C17-C18-C20 |
| 29 | r | 612 | CLA | C11-C12-C13-C14 |
| 29 | s | 613 | CLA | C6-C7-C8-C9 |
| 29 | y | 604 | CLA | C16-C17-C18-C20 |
| 32 | C | 526 | SQD | C11-C12-C13-C14 |
| 33 | J | 101 | LMG | C31-C32-C33-C34 |
| 39 | S | 624 | LHG | C9-C10-C11-C12 |
| 39 | c | 625 | LHG | C31-C32-C33-C34 |
| 39 | d | 408 | LHG | C29-C30-C31-C32 |
| 39 | y | 624 | LHG | C16-C17-C18-C19 |
| 50 | S | 626 | 3PH | C23-C24-C25-C26 |
| 29 | C | 505 | CLA | O1D-CGD-O2D-CED |
| 39 | d | 408 | LHG | C4-C5-C6-O8 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | y | 624 | LHG | C31-C32-C33-C34 |
| 50 | i | 101 | 3PH | C23-C24-C25-C26 |
| 50 | s | 626 | 3PH | C25-C26-C27-C28 |
| 29 | A | 405 | CLA | O2A-C1-C2-C3 |
| 45 | n | 601 | CHL | C3-C5-C6-C7 |
| 39 | n | 624 | LHG | C28-C29-C30-C31 |
| 29 | B | 614 | CLA | C15-C16-C17-C18 |
| 29 | b | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | c | 501 | CLA | C2-C3-C5-C6 |
| 29 | n | 613 | CLA | C2-C3-C5-C6 |
| 45 | N | 601 | CHL | C2-C3-C5-C6 |
| 39 | D | 408 | LHG | C8-C7-O7-C5 |
| 36 | b | 623 | DGA | CA4-CA5-CA6-CA7 |
| 39 | D | 409 | LHG | C11-C12-C13-C14 |
| 39 | G | 630 | LHG | C28-C29-C30-C31 |
| 39 | d | 409 | LHG | C11-C12-C13-C14 |
| 50 | S | 626 | 3PH | C24-C25-C26-C27 |
| 39 | C | 525 | LHG | O1-C1-C2-O2 |
| 39 | D | 409 | LHG | O1-C1-C2-O2 |
| 39 | D | 410 | LHG | O1-C1-C2-O2 |
| 39 | L | 101 | LHG | O1-C1-C2-O2 |
| 39 | N | 624 | LHG | O1-C1-C2-O2 |
| 39 | S | 624 | LHG | O1-C1-C2-O2 |
| 39 | d | 408 | LHG | O1-C1-C2-O2 |
| 39 | d | 409 | LHG | O1-C1-C2-O2 |
| 39 | l | 101 | LHG | O1-C1-C2-O2 |
| 39 | n | 624 | LHG | O1-C1-C2-O2 |
| 39 | y | 624 | LHG | O1-C1-C2-O2 |
| 40 | C | 527 | LMK | O9-C10-C11-C12 |
| 29 | C | 502 | CLA | C10-C11-C12-C13 |
| 39 | D | 408 | LHG | C25-C26-C27-C28 |
| 39 | Y | 624 | LHG | C16-C17-C18-C19 |
| 39 | d | 409 | LHG | C28-C29-C30-C31 |
| 39 | l | 101 | LHG | C11-C12-C13-C14 |
| 39 | y | 624 | LHG | C13-C14-C15-C16 |
| 50 | s | 626 | 3PH | C26-C27-C28-C29 |
| 29 | B | 612 | CLA | O1A-CGA-O2A-C1 |
| 29 | G | 602 | CLA | C16-C17-C18-C20 |
| 29 | Y | 613 | CLA | C16-C17-C18-C19 |
| 29 | y | 602 | CLA | C16-C17-C18-C20 |
| 29 | y | 610 | CLA | C16-C17-C18-C19 |
| 39 | N | 624 | LHG | C11-C12-C13-C14 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | B | 603 | CLA | C13-C15-C16-C17 |
| 29 | c | 503 | CLA | C10-C11-C12-C13 |
| 29 | c | 505 | CLA | C10-C11-C12-C13 |
| 39 | c | 625 | LHG | C34-C35-C36-C37 |
| 39 | G | 630 | LHG | C13-C14-C15-C16 |
| 39 | l | 101 | LHG | C34-C35-C36-C37 |
| 29 | s | 603 | CLA | C15-C16-C17-C18 |
| 36 | c | 524 | DGA | CB9-CAB-CBB-CCB |
| 39 | D | 409 | LHG | C13-C14-C15-C16 |
| 39 | d | 408 | LHG | C11-C12-C13-C14 |
| 39 | d | 409 | LHG | C31-C32-C33-C34 |
| 39 | n | 624 | LHG | C11-C12-C13-C14 |
| 39 | D | 408 | LHG | O9-C7-O7-C5 |
| 29 | A | 406 | CLA | C2-C1-O2A-CGA |
| 29 | B | 607 | CLA | C2-C1-O2A-CGA |
| 29 | C | 502 | CLA | C2-C1-O2A-CGA |
| 29 | C | 503 | CLA | C2-C1-O2A-CGA |
| 29 | C | 506 | CLA | C2-C1-O2A-CGA |
| 29 | N | 603 | CLA | C2-C1-O2A-CGA |
| 29 | G | 602 | CLA | C2-C1-O2A-CGA |
| 29 | G | 603 | CLA | C2-C1-O2A-CGA |
| 29 | G | 614 | CLA | C2-C1-O2A-CGA |
| 29 | R | 604 | CLA | C2-C1-O2A-CGA |
| 29 | R | 609 | CLA | C2-C1-O2A-CGA |
| 29 | S | 611 | CLA | C2-C1-O2A-CGA |
| 29 | S | 617 | CLA | C2-C1-O2A-CGA |
| 29 | Y | 604 | CLA | C2-C1-O2A-CGA |
| 29 | Y | 608 | CLA | C2-C1-O2A-CGA |
| 29 | a | 405 | CLA | C2-C1-O2A-CGA |
| 29 | a | 406 | CLA | C2-C1-O2A-CGA |
| 29 | a | 407 | CLA | C2-C1-O2A-CGA |
| 29 | b | 612 | CLA | C2-C1-O2A-CGA |
| 29 | b | 616 | CLA | C2-C1-O2A-CGA |
| 29 | c | 502 | CLA | C2-C1-O2A-CGA |
| 29 | g | 604 | CLA | C2-C1-O2A-CGA |
| 29 | r | 604 | CLA | C2-C1-O2A-CGA |
| 29 | r | 609 | CLA | C2-C1-O2A-CGA |
| 29 | s | 603 | CLA | C2-C1-O2A-CGA |
| 29 | s | 611 | CLA | C2-C1-O2A-CGA |
| 29 | y | 604 | CLA | C2-C1-O2A-CGA |
| 29 | y | 608 | CLA | C2-C1-O2A-CGA |
| 39 | C | 525 | LHG | C13-C14-C15-C16 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | C | 507 | CLA | C13-C15-C16-C17 |
| 29 | N | 602 | CLA | C15-C16-C17-C18 |
| 29 | c | 506 | CLA | C10-C11-C12-C13 |
| 29 | N | 602 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 604 | CLA | O1A-CGA-O2A-C1 |
| 33 | J | 101 | LMG | C29-C30-C31-C32 |
| 39 | g | 624 | LHG | C25-C26-C27-C28 |
| 39 | g | 624 | LHG | C28-C29-C30-C31 |
| 39 | d | 409 | LHG | C23-C24-C25-C26 |
| 29 | Y | 611 | CLA | C3-C5-C6-C7 |
| 31 | A | 411 | BCR | C23-C24-C25-C26 |
| 31 | B | 618 | BCR | C5-C6-C7-C8 |
| 31 | C | 514 | BCR | C1-C6-C7-C8 |
| 31 | C | 514 | BCR | C5-C6-C7-C8 |
| 31 | C | 515 | BCR | C23-C24-C25-C26 |
| 31 | C | 517 | BCR | C23-C24-C25-C26 |
| 31 | C | 517 | BCR | C23-C24-C25-C30 |
| 31 | D | 404 | BCR | C1-C6-C7-C8 |
| 31 | D | 404 | BCR | C5-C6-C7-C8 |
| 31 | a | 411 | BCR | C23-C24-C25-C26 |
| 31 | b | 618 | BCR | C1-C6-C7-C8 |
| 31 | b | 618 | BCR | C5-C6-C7-C8 |
| 31 | c | 514 | BCR | C1-C6-C7-C8 |
| 31 | c | 514 | BCR | C5-C6-C7-C8 |
| 31 | c | 516 | BCR | C23-C24-C25-C26 |
| 31 | c | 517 | BCR | C23-C24-C25-C26 |
| 31 | c | 517 | BCR | C23-C24-C25-C30 |
| 31 | d | 404 | BCR | C1-C6-C7-C8 |
| 31 | d | 404 | BCR | C5-C6-C7-C8 |
| 31 | d | 404 | BCR | C23-C24-C25-C30 |
| 46 | n | 620 | LUT | C5-C6-C7-C8 |
| 39 | L | 101 | LHG | C34-C35-C36-C37 |
| 39 | G | 630 | LHG | C11-C10-C9-C8 |
| 50 | S | 626 | 3PH | C25-C26-C27-C28 |
| 29 | B | 614 | CLA | C8-C10-C11-C12 |
| 29 | b | 605 | CLA | C8-C10-C11-C12 |
| 29 | b | 609 | CLA | C8-C10-C11-C12 |
| 29 | d | 403 | CLA | C10-C11-C12-C13 |
| 29 | g | 603 | CLA | C15-C16-C17-C18 |
| 39 | d | 409 | LHG | C8-C7-O7-C5 |
| 36 | B | 625 | DGA | CAA-CBA-CCA-CDA |
| 36 | c | 524 | DGA | CA6-CA7-CA8-CA9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | D | 408 | LHG | C30-C31-C32-C33 |
| 39 | G | 630 | LHG | C25-C26-C27-C28 |
| 50 | S | 626 | 3PH | C35-C36-C37-C38 |
| 29 | S | 610 | CLA | O1A-CGA-O2A-C1 |
| 38 | C | 520 | DGD | O1A-C1A-O1G-C1G |
| 36 | C | 524 | DGA | CB4-CB5-CB6-CB7 |
| 39 | Y | 624 | LHG | C13-C14-C15-C16 |
| 29 | c | 502 | CLA | C4-C3-C5-C6 |
| 45 | N | 601 | CHL | C4-C3-C5-C6 |
| 45 | G | 609 | CHL | C4-C3-C5-C6 |
| 29 | A | 405 | CLA | C11-C12-C13-C15 |
| 29 | B | 602 | CLA | C6-C7-C8-C10 |
| 29 | B | 602 | CLA | C11-C10-C8-C7 |
| 29 | C | 501 | CLA | C12-C13-C15-C16 |
| 29 | C | 506 | CLA | C11-C12-C13-C15 |
| 29 | C | 507 | CLA | C11-C12-C13-C15 |
| 29 | C | 513 | CLA | C11-C10-C8-C7 |
| 29 | N | 613 | CLA | C2-C3-C5-C6 |
| 29 | R | 603 | CLA | C11-C10-C8-C7 |
| 29 | Y | 604 | CLA | C11-C10-C8-C7 |
| 29 | Y | 613 | CLA | C11-C12-C13-C15 |
| 29 | b | 602 | CLA | C6-C7-C8-C10 |
| 29 | b | 603 | CLA | C12-C13-C15-C16 |
| 29 | b | 604 | CLA | C6-C7-C8-C10 |
| 29 | b | 616 | CLA | C11-C10-C8-C7 |
| 29 | c | 502 | CLA | C12-C13-C15-C16 |
| 29 | c | 506 | CLA | C11-C10-C8-C7 |
| 29 | c | 507 | CLA | C11-C12-C13-C15 |
| 29 | c | 513 | CLA | C11-C10-C8-C7 |
| 29 | g | 603 | CLA | C12-C13-C15-C16 |
| 29 | s | 611 | CLA | C6-C7-C8-C10 |
| 29 | y | 604 | CLA | C11-C12-C13-C15 |
| 29 | y | 610 | CLA | C11-C12-C13-C15 |
| 29 | y | 613 | CLA | C11-C12-C13-C15 |
| 45 | Y | 601 | CHL | C11-C10-C8-C7 |
| 45 | Y | 607 | CHL | C11-C10-C8-C7 |
| 45 | Y | 609 | CHL | C11-C12-C13-C15 |
| 45 | n | 607 | CHL | C11-C12-C13-C15 |
| 29 | B | 614 | CLA | C3-C5-C6-C7 |
| 29 | b | 604 | CLA | O1A-CGA-O2A-C1 |
| 39 | D | 408 | LHG | C26-C27-C28-C29 |
| 29 | A | 406 | CLA | C5-C6-C7-C8 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | B | 610 | CLA | C5-C6-C7-C8 |
| 29 | a | 406 | CLA | C5-C6-C7-C8 |
| 29 | b | 608 | CLA | C5-C6-C7-C8 |
| 29 | b | 608 | CLA | C8-C10-C11-C12 |
| 29 | y | 612 | CLA | C8-C10-C11-C12 |
| 31 | c | 514 | BCR | C15-C16-C17-C18 |
| 35 | B | 620 | C7Z | C9-C10-C11-C12 |
| 46 | S | 621 | LUT | C29-C30-C31-C32 |
| 46 | s | 621 | LUT | C29-C30-C31-C32 |
| 29 | B | 609 | CLA | C16-C17-C18-C19 |
| 29 | Y | 610 | CLA | C16-C17-C18-C20 |
| 39 | D | 409 | LHG | O9-C7-O7-C5 |
| 39 | Y | 624 | LHG | O9-C7-O7-C5 |
| 39 | D | 409 | LHG | C23-C24-C25-C26 |
| 29 | B | 604 | CLA | CBA-CGA-O2A-C1 |
| 29 | C | 508 | CLA | CBA-CGA-O2A-C1 |
| 29 | S | 611 | CLA | CBA-CGA-O2A-C1 |
| 29 | r | 602 | CLA | CBA-CGA-O2A-C1 |
| 38 | C | 518 | DGD | C2A-C1A-O1G-C1G |
| 38 | c | 518 | DGD | C2A-C1A-O1G-C1G |
| 36 | c | 524 | DGA | CB7-CB8-CB9-CAB |
| 38 | c | 523 | DGD | C9B-CAB-CBB-CCB |
| 39 | D | 409 | LHG | C33-C34-C35-C36 |
| 29 | R | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | S | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 612 | CLA | C2A-CAA-CBA-CGA |
| 29 | y | 610 | CLA | C2A-CAA-CBA-CGA |
| 30 | A | 408 | PHO | C2A-CAA-CBA-CGA |
| 29 | B | 615 | CLA | C8-C10-C11-C12 |
| 29 | c | 512 | CLA | C8-C10-C11-C12 |
| 29 | s | 609 | CLA | C8-C10-C11-C12 |
| 33 | d | 411 | LMG | C11-C12-C13-C14 |
| 36 | b | 623 | DGA | CDA-CEA-CFA-CGA |
| 39 | n | 624 | LHG | C25-C26-C27-C28 |
| 50 | i | 101 | 3PH | C33-C34-C35-C36 |
| 50 | i | 101 | 3PH | C3E-C3F-C3G-C3H |
| 39 | c | 625 | LHG | C7-C8-C9-C10 |
| 29 | B | 608 | CLA | C10-C11-C12-C13 |
| 29 | B | 616 | CLA | C8-C10-C11-C12 |
| 29 | c | 502 | CLA | C5-C6-C7-C8 |
| 29 | g | 610 | CLA | C5-C6-C7-C8 |
| 32 | A | 412 | SQD | C11-C12-C13-C14 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | d | 409 | LHG | C13-C14-C15-C16 |
| 39 | y | 624 | LHG | C30-C31-C32-C33 |
| 32 | B | 621 | SQD | C25-C26-C27-C28 |
| 39 | L | 101 | LHG | C28-C29-C30-C31 |
| 39 | d | 408 | LHG | C30-C31-C32-C33 |
| 29 | c | 508 | CLA | CBA-CGA-O2A-C1 |
| 29 | R | 603 | CLA | C11-C12-C13-C15 |
| 29 | y | 611 | CLA | C16-C17-C18-C20 |
| 29 | C | 511 | CLA | C10-C11-C12-C13 |
| 29 | c | 501 | CLA | C5-C6-C7-C8 |
| 29 | s | 610 | CLA | C10-C11-C12-C13 |
| 36 | C | 524 | DGA | CA4-CA5-CA6-CA7 |
| 39 | D | 408 | LHG | C27-C28-C29-C30 |
| 39 | l | 101 | LHG | C9-C10-C11-C12 |
| 36 | B | 625 | DGA | CB1-CB2-CB3-CB4 |
| 32 | A | 412 | SQD | C8-C7-O47-C45 |
| 39 | D | 409 | LHG | C8-C7-O7-C5 |
| 39 | Y | 624 | LHG | C8-C7-O7-C5 |
| 39 | c | 625 | LHG | C8-C7-O7-C5 |
| 39 | d | 410 | LHG | C8-C7-O7-C5 |
| 39 | D | 410 | LHG | O6-C4-C5-O7 |
| 32 | b | 621 | SQD | C24-C25-C26-C27 |
| 39 | d | 408 | LHG | C34-C35-C36-C37 |
| 47 | r | 622 | XAT | C14-C15-C35-C34 |
| 29 | A | 405 | CLA | C8-C10-C11-C12 |
| 29 | N | 610 | CLA | C13-C15-C16-C17 |
| 29 | Y | 604 | CLA | C8-C10-C11-C12 |
| 29 | b | 614 | CLA | C15-C16-C17-C18 |
| 29 | y | 602 | CLA | C13-C15-C16-C17 |
| 29 | y | 603 | CLA | C8-C10-C11-C12 |
| 33 | C | 521 | LMG | C16-C17-C18-C19 |
| 39 | l | 101 | LHG | C28-C29-C30-C31 |
| 39 | c | 625 | LHG | O9-C7-O7-C5 |
| 29 | c | 513 | CLA | C3-C5-C6-C7 |
| 36 | B | 625 | DGA | CBB-CAB-CB9-CB8 |
| 50 | i | 101 | 3PH | C2D-C2E-C2F-C2G |
| 33 | J | 101 | LMG | O7-C8-C9-O8 |
| 33 | a | 413 | LMG | O1-C7-C8-O7 |
| 36 | C | 524 | DGA | CB7-CB8-CB9-CAB |
| 38 | c | 520 | DGD | CAB-CBB-CCB-CDB |
| 39 | N | 624 | LHG | C28-C29-C30-C31 |
| 39 | d | 408 | LHG | C26-C27-C28-C29 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | s | 624 | LHG | C9-C10-C11-C12 |
| 50 | i | 101 | 3PH | C22-C23-C24-C25 |
| 29 | B | 617 | CLA | C16-C17-C18-C20 |
| 29 | c | 507 | CLA | C16-C17-C18-C20 |
| 29 | y | 613 | CLA | C16-C17-C18-C20 |
| 33 | a | 413 | LMG | C16-C17-C18-C19 |
| 38 | C | 520 | DGD | CAB-CBB-CCB-CDB |
| 39 | c | 625 | LHG | C11-C10-C9-C8 |
| 39 | n | 624 | LHG | C34-C35-C36-C37 |
| 33 | C | 521 | LMG | O6-C5-C6-O5 |
| 29 | A | 410 | CLA | C5-C6-C7-C8 |
| 29 | Y | 612 | CLA | C8-C10-C11-C12 |
| 29 | N | 613 | CLA | C4-C3-C5-C6 |
| 29 | c | 502 | CLA | C2-C3-C5-C6 |
| 29 | g | 602 | CLA | C2-C3-C5-C6 |
| 42 | D | 405 | PL9 | C4-C3-C7-C8 |
| 42 | d | 405 | PL9 | C4-C3-C7-C8 |
| 32 | B | 621 | SQD | C26-C27-C28-C29 |
| 29 | B | 602 | CLA | C6-C7-C8-C9 |
| 29 | B | 602 | CLA | C11-C10-C8-C9 |
| 29 | B | 604 | CLA | C6-C7-C8-C9 |
| 29 | C | 501 | CLA | C14-C13-C15-C16 |
| 29 | C | 503 | CLA | C14-C13-C15-C16 |
| 29 | C | 506 | CLA | C11-C10-C8-C9 |
| 29 | C | 507 | CLA | C11-C12-C13-C14 |
| 29 | G | 603 | CLA | C14-C13-C15-C16 |
| 29 | b | 604 | CLA | C6-C7-C8-C9 |
| 29 | c | 507 | CLA | C11-C12-C13-C14 |
| 29 | c | 512 | CLA | C11-C12-C13-C14 |
| 29 | g | 603 | CLA | C11-C12-C13-C14 |
| 29 | g | 613 | CLA | C11-C10-C8-C9 |
| 29 | s | 609 | CLA | C6-C7-C8-C9 |
| 29 | s | 609 | CLA | C11-C10-C8-C9 |
| 29 | s | 611 | CLA | C6-C7-C8-C9 |
| 45 | N | 607 | CHL | C11-C12-C13-C14 |
| 39 | C | 525 | LHG | C11-C12-C13-C14 |
| 29 | A | 405 | CLA | C3-C5-C6-C7 |
| 29 | C | 506 | CLA | C3-C5-C6-C7 |
| 29 | B | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | R | 608 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 604 | CLA | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 45 | N | 606 | CHL | C2A-CAA-CBA-CGA |
| 45 | N | 608 | CHL | C2A-CAA-CBA-CGA |
| 45 | Y | 607 | CHL | C2A-CAA-CBA-CGA |
| 45 | y | 607 | CHL | C2A-CAA-CBA-CGA |
| 39 | S | 624 | LHG | C12-C13-C14-C15 |
| 39 | S | 624 | LHG | C28-C29-C30-C31 |
| 33 | H | 102 | LMG | O6-C5-C6-O5 |
| 46 | G | 620 | LUT | C27-C28-C29-C39 |
| 46 | R | 620 | LUT | C31-C32-C33-C40 |
| 29 | B | 608 | CLA | C5-C6-C7-C8 |
| 39 | D | 408 | LHG | C11-C12-C13-C14 |
| 39 | S | 624 | LHG | C11-C10-C9-C8 |
| 50 | s | 626 | 3PH | C32-C33-C34-C35 |
| 29 | B | 604 | CLA | O1A-CGA-O2A-C1 |
| 29 | S | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | A | 407 | CLA | C1A-C2A-CAA-CBA |
| 29 | A | 410 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | B | 607 | CLA | C1A-C2A-CAA-CBA |
| 29 | C | 501 | CLA | C1A-C2A-CAA-CBA |
| 29 | C | 503 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 611 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 613 | CLA | C1A-C2A-CAA-CBA |
| 29 | N | 614 | CLA | C1A-C2A-CAA-CBA |
| 29 | G | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | G | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | G | 611 | CLA | C1A-C2A-CAA-CBA |
| 29 | R | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | R | 608 | CLA | C1A-C2A-CAA-CBA |
| 29 | R | 609 | CLA | C1A-C2A-CAA-CBA |
| 29 | R | 613 | CLA | C1A-C2A-CAA-CBA |
| 29 | S | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | S | 609 | CLA | C1A-C2A-CAA-CBA |
| 29 | S | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 611 | CLA | C1A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | a | 405 | CLA | C1A-C2A-CAA-CBA |
| 29 | a | 407 | CLA | C1A-C2A-CAA-CBA |
| 29 | a | 410 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 607 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | c | 502 | CLA | C1A-C2A-CAA-CBA |
| 29 | c | 503 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 613 | CLA | C1A-C2A-CAA-CBA |
| 29 | g | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | g | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | g | 611 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 608 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 611 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 613 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 609 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | s | 617 | CLA | C1A-C2A-CAA-CBA |
| 29 | y | 603 | CLA | C1A-C2A-CAA-CBA |
| 29 | y | 608 | CLA | C1A-C2A-CAA-CBA |
| 29 | y | 610 | CLA | C1A-C2A-CAA-CBA |
| 29 | y | 611 | CLA | C1A-C2A-CAA-CBA |
| 45 | Y | 606 | CHL | C1A-C2A-CAA-CBA |
| 45 | y | 606 | CHL | C1A-C2A-CAA-CBA |
| 29 | R | 603 | CLA | C11-C12-C13-C14 |
| 29 | b | 605 | CLA | C16-C17-C18-C20 |
| 29 | b | 617 | CLA | C16-C17-C18-C20 |
| 32 | A | 412 | SQD | O49-C7-O47-C45 |
| 39 | d | 409 | LHG | O9-C7-O7-C5 |
| 39 | d | 410 | LHG | O9-C7-O7-C5 |
| 39 | L | 101 | LHG | C29-C30-C31-C32 |
| 31 | C | 517 | BCR | C9-C10-C11-C12 |
| 46 | N | 621 | LUT | C29-C30-C31-C32 |
| 46 | S | 620 | LUT | C29-C30-C31-C32 |
| 46 | s | 620 | LUT | C29-C30-C31-C32 |
| 29 | B | 609 | CLA | C8-C10-C11-C12 |
| 29 | R | 603 | CLA | C8-C10-C11-C12 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | Y | 602 | CLA | C5-C6-C7-C8 |
| 29 | Y | 604 | CLA | C13-C15-C16-C17 |
| 29 | b | 613 | CLA | C10-C11-C12-C13 |
| 29 | R | 610 | CLA | C3-C5-C6-C7 |
| 39 | C | 525 | LHG | C2-C3-O3-P |
| 29 | B | 607 | CLA | C5-C6-C7-C8 |
| 29 | B | 609 | CLA | C10-C11-C12-C13 |
| 29 | D | 403 | CLA | C8-C10-C11-C12 |
| 29 | b | 609 | CLA | C15-C16-C17-C18 |
| 39 | C | 525 | LHG | O6-C4-C5-C6 |
| 39 | D | 409 | LHG | O6-C4-C5-C6 |
| 39 | N | 624 | LHG | O6-C4-C5-C6 |
| 39 | G | 630 | LHG | O6-C4-C5-C6 |
| 39 | S | 624 | LHG | O6-C4-C5-C6 |
| 39 | d | 409 | LHG | O6-C4-C5-C6 |
| 39 | g | 624 | LHG | O6-C4-C5-C6 |
| 50 | S | 626 | 3PH | O11-C1-C2-C3 |
| 32 | C | 526 | SQD | C30-C31-C32-C33 |
| 38 | C | 519 | DGD | C2B-C3B-C4B-C5B |
| 39 | d | 408 | LHG | C25-C26-C27-C28 |
| 29 | B | 602 | CLA | C10-C11-C12-C13 |
| 29 | B | 608 | CLA | C13-C15-C16-C17 |
| 29 | c | 505 | CLA | C16-C17-C18-C20 |
| 29 | c | 513 | CLA | C16-C17-C18-C20 |
| 39 | d | 409 | LHG | C33-C34-C35-C36 |
| 39 | s | 624 | LHG | C11-C10-C9-C8 |
| 33 | j | 101 | LMG | O6-C5-C6-O5 |
| 33 | A | 413 | LMG | C18-C19-C20-C21 |
| 39 | y | 624 | LHG | C32-C33-C34-C35 |
| 29 | r | 610 | CLA | C3-C5-C6-C7 |
| 39 | L | 101 | LHG | C9-C10-C11-C12 |
| 33 | h | 102 | LMG | O6-C5-C6-O5 |
| 49 | s | 625 | LPX | O1-C3-C4-C5 |
| 29 | B | 602 | CLA | C4-C3-C5-C6 |
| 36 | b | 623 | DGA | CB9-CAB-CBB-CCB |
| 29 | C | 503 | CLA | C13-C15-C16-C17 |
| 29 | C | 509 | CLA | C8-C10-C11-C12 |
| 29 | b | 617 | CLA | C10-C11-C12-C13 |
| 29 | y | 604 | CLA | C10-C11-C12-C13 |
| 38 | C | 518 | DGD | O1A-C1A-O1G-C1G |
| 38 | c | 518 | DGD | O1A-C1A-O1G-C1G |
| 32 | c | 626 | SQD | C27-C28-C29-C30 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 33 | b | 622 | LMG | C18-C19-C20-C21 |
| 33 | j | 101 | LMG | C11-C12-C13-C14 |
| 39 | l | 101 | LHG | C29-C30-C31-C32 |
| 29 | N | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | R | 612 | CLA | C2A-CAA-CBA-CGA |
| 33 | C | 521 | LMG | O1-C7-C8-C9 |
| 33 | j | 101 | LMG | C7-C8-C9-O8 |
| 38 | c | 523 | DGD | O1G-C1G-C2G-C3G |
| 39 | N | 624 | LHG | C34-C35-C36-C37 |
| 39 | Y | 624 | LHG | C4-C5-C6-O8 |
| 39 | c | 625 | LHG | C4-C5-C6-O8 |
| 39 | s | 624 | LHG | C4-C5-C6-O8 |
| 40 | c | 627 | LMK | O1-C7-C8-C9 |
| 50 | s | 626 | 3PH | C1-C2-C3-O31 |
| 29 | B | 603 | CLA | C5-C6-C7-C8 |
| 29 | g | 602 | CLA | C5-C6-C7-C8 |
| 29 | s | 602 | CLA | C8-C10-C11-C12 |
| 29 | y | 613 | CLA | C13-C15-C16-C17 |
| 45 | n | 607 | CHL | C15-C16-C17-C18 |
| 36 | b | 623 | DGA | CB5-CB6-CB7-CB8 |
| 39 | C | 525 | LHG | C30-C31-C32-C33 |
| 29 | r | 602 | CLA | O1A-CGA-O2A-C1 |
| 32 | A | 412 | SQD | C45-C44-O6-C1 |
| 38 | c | 519 | DGD | C5D-C6D-O5D-C1E |
| 40 | C | 527 | LMK | C8-C9-O8-C28 |
| 29 | S | 602 | CLA | O1D-CGD-O2D-CED |
| 39 | D | 408 | LHG | C34-C35-C36-C37 |
| 29 | Y | 612 | CLA | C10-C11-C12-C13 |
| 29 | b | 614 | CLA | C8-C10-C11-C12 |
| 29 | c | 511 | CLA | C15-C16-C17-C18 |
| 39 | C | 525 | LHG | C34-C35-C36-C37 |
| 39 | c | 625 | LHG | C13-C14-C15-C16 |
| 39 | s | 624 | LHG | C29-C30-C31-C32 |
| 29 | C | 508 | CLA | O1A-CGA-O2A-C1 |
| 39 | s | 624 | LHG | C11-C12-C13-C14 |
| 39 | s | 624 | LHG | C28-C29-C30-C31 |
| 29 | C | 507 | CLA | C3-C5-C6-C7 |
| 29 | s | 610 | CLA | C3-C5-C6-C7 |
| 32 | c | 626 | SQD | O5-C1-O6-C44 |
| 33 | B | 622 | LMG | O6-C1-O1-C7 |
| 29 | b | 604 | CLA | C5-C6-C7-C8 |
| 29 | b | 612 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | n | 610 | CLA | C15-C16-C17-C18 |
| 42 | D | 405 | PL9 | C34-C36-C37-C38 |
| 51 | y | 625 | SPH | C10-C11-C12-C13 |
| 33 | D | 411 | LMG | O6-C5-C6-O5 |
| 33 | c | 521 | LMG | O6-C5-C6-O5 |
| 39 | G | 630 | LHG | O1-C1-C2-O2 |
| 39 | d | 410 | LHG | O1-C1-C2-O2 |
| 39 | g | 624 | LHG | O1-C1-C2-O2 |
| 39 | s | 624 | LHG | O1-C1-C2-O2 |
| 38 | c | 519 | DGD | C9A-CAA-CBA-CCA |
| 50 | S | 626 | 3PH | C37-C38-C39-C3A |
| 45 | S | 608 | CHL | C5-C6-C7-C8 |
| 45 | n | 607 | CHL | C10-C11-C12-C13 |
| 32 | C | 526 | SQD | C7-C8-C9-C10 |
| 33 | b | 622 | LMG | C28-C29-C30-C31 |
| 39 | n | 624 | LHG | C31-C32-C33-C34 |
| 38 | c | 520 | DGD | CCB-CDB-CEB-CFB |
| 50 | i | 101 | 3PH | C34-C35-C36-C37 |
| 29 | R | 610 | CLA | C5-C6-C7-C8 |
| 29 | c | 504 | CLA | C8-C10-C11-C12 |
| 29 | c | 513 | CLA | C15-C16-C17-C18 |
| 45 | n | 601 | CHL | C10-C11-C12-C13 |
| 45 | y | 606 | CHL | C15-C16-C17-C18 |
| 33 | d | 411 | LMG | O6-C5-C6-O5 |
| 29 | B | 605 | CLA | C16-C17-C18-C19 |
| 29 | c | 504 | CLA | C10-C11-C12-C13 |
| 45 | G | 601 | CHL | C10-C11-C12-C13 |
| 33 | b | 622 | LMG | C9-C8-O7-C10 |
| 36 | B | 625 | DGA | CG1-CG2-OG2-CB1 |
| 36 | b | 623 | DGA | CG1-CG2-OG2-CB1 |
| 29 | b | 616 | CLA | C13-C15-C16-C17 |
| 45 | s | 608 | CHL | C5-C6-C7-C8 |
| 29 | A | 405 | CLA | C2-C1-O2A-CGA |
| 29 | A | 407 | CLA | C2-C1-O2A-CGA |
| 29 | B | 603 | CLA | C2-C1-O2A-CGA |
| 29 | B | 611 | CLA | C2-C1-O2A-CGA |
| 29 | B | 615 | CLA | C2-C1-O2A-CGA |
| 29 | N | 613 | CLA | C2-C1-O2A-CGA |
| 29 | b | 607 | CLA | C2-C1-O2A-CGA |
| 45 | n | 607 | CHL | C2-C1-O2A-CGA |
| 39 | S | 624 | LHG | C26-C27-C28-C29 |
| 39 | s | 624 | LHG | C31-C32-C33-C34 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 38 | C | 519 | DGD | C9A-CAA-CBA-CCA |
| 29 | b | 607 | CLA | C5-C6-C7-C8 |
| 29 | y | 602 | CLA | C8-C10-C11-C12 |
| 36 | c | 524 | DGA | CA4-CA5-CA6-CA7 |
| 39 | N | 624 | LHG | C25-C26-C27-C28 |
| 39 | Y | 624 | LHG | C32-C33-C34-C35 |
| 39 | d | 410 | LHG | C28-C29-C30-C31 |
| 39 | s | 624 | LHG | C34-C35-C36-C37 |
| 29 | Y | 610 | CLA | CBA-CGA-O2A-C1 |
| 29 | s | 610 | CLA | CBA-CGA-O2A-C1 |
| 39 | C | 525 | LHG | C24-C23-O8-C6 |
| 29 | B | 609 | CLA | C16-C17-C18-C20 |
| 29 | Y | 610 | CLA | C16-C17-C18-C19 |
| 38 | C | 519 | DGD | C9B-CAB-CBB-CCB |
| 39 | S | 624 | LHG | C31-C32-C33-C34 |
| 38 | c | 518 | DGD | O6D-C5D-C6D-O5D |
| 29 | r | 609 | CLA | C10-C11-C12-C13 |
| 36 | C | 524 | DGA | CAB-CBB-CCB-CDB |
| 29 | c | 508 | CLA | O1A-CGA-O2A-C1 |
| 29 | s | 610 | CLA | O1A-CGA-O2A-C1 |
| 36 | c | 524 | DGA | CB4-CB5-CB6-CB7 |
| 39 | D | 410 | LHG | C30-C31-C32-C33 |
| 33 | B | 622 | LMG | C28-C29-C30-C31 |
| 29 | B | 606 | CLA | C5-C6-C7-C8 |
| 29 | B | 608 | CLA | C8-C10-C11-C12 |
| 29 | b | 609 | CLA | C13-C15-C16-C17 |
| 29 | b | 613 | CLA | C13-C15-C16-C17 |
| 29 | n | 604 | CLA | C13-C15-C16-C17 |
| 39 | N | 624 | LHG | C31-C32-C33-C34 |
| 29 | N | 613 | CLA | CAA-CBA-CGA-O2A |
| 33 | A | 413 | LMG | O1-C7-C8-O7 |
| 38 | C | 523 | DGD | O1G-C1G-C2G-O2G |
| 50 | i | 101 | 3PH | O21-C2-C3-O31 |
| 29 | C | 501 | CLA | C5-C6-C7-C8 |
| 39 | N | 624 | LHG | C23-C24-C25-C26 |
| 38 | C | 520 | DGD | CCB-CDB-CEB-CFB |
| 39 | D | 409 | LHG | C34-C35-C36-C37 |
| 29 | B | 602 | CLA | C2-C3-C5-C6 |
| 29 | B | 613 | CLA | C6-C7-C8-C10 |
| 29 | C | 501 | CLA | C11-C10-C8-C7 |
| 29 | C | 503 | CLA | C12-C13-C15-C16 |
| 29 | C | 506 | CLA | C11-C10-C8-C7 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | C | 506 | CLA | C12-C13-C15-C16 |
| 29 | C | 508 | CLA | C11-C10-C8-C7 |
| 29 | C | 508 | CLA | C12-C13-C15-C16 |
| 29 | C | 511 | CLA | C11-C10-C8-C7 |
| 29 | D | 402 | CLA | C11-C10-C8-C7 |
| 29 | D | 402 | CLA | C11-C12-C13-C15 |
| 29 | N | 613 | CLA | C12-C13-C15-C16 |
| 29 | G | 603 | CLA | C11-C12-C13-C15 |
| 29 | G | 603 | CLA | C12-C13-C15-C16 |
| 29 | G | 613 | CLA | C6-C7-C8-C10 |
| 29 | S | 603 | CLA | C6-C7-C8-C10 |
| 29 | Y | 610 | CLA | C11-C12-C13-C15 |
| 29 | Y | 611 | CLA | C11-C10-C8-C7 |
| 29 | Y | 613 | CLA | C6-C7-C8-C10 |
| 29 | b | 602 | CLA | C11-C10-C8-C7 |
| 29 | b | 602 | CLA | C11-C12-C13-C15 |
| 29 | c | 506 | CLA | C12-C13-C15-C16 |
| 29 | c | 510 | CLA | C6-C7-C8-C10 |
| 29 | c | 511 | CLA | C11-C12-C13-C15 |
| 29 | c | 512 | CLA | C11-C12-C13-C15 |
| 29 | c | 513 | CLA | C6-C7-C8-C10 |
| 29 | c | 513 | CLA | C11-C12-C13-C15 |
| 29 | g | 603 | CLA | C11-C12-C13-C15 |
| 29 | g | 613 | CLA | C11-C10-C8-C7 |
| 29 | r | 603 | CLA | C11-C10-C8-C7 |
| 29 | s | 610 | CLA | C6-C7-C8-C10 |
| 29 | s | 610 | CLA | C11-C10-C8-C7 |
| 29 | y | 602 | CLA | C6-C7-C8-C10 |
| 29 | y | 604 | CLA | C12-C13-C15-C16 |
| 29 | y | 611 | CLA | C11-C10-C8-C7 |
| 29 | y | 611 | CLA | C12-C13-C15-C16 |
| 29 | y | 612 | CLA | C11-C12-C13-C15 |
| 42 | D | 405 | PL9 | C43-C44-C46-C47 |
| 45 | N | 607 | CHL | C11-C10-C8-C7 |
| 45 | N | 609 | CHL | C11-C10-C8-C7 |
| 45 | G | 609 | CHL | C11-C12-C13-C15 |
| 45 | n | 605 | CHL | C12-C13-C15-C16 |
| 45 | n | 606 | CHL | C11-C10-C8-C7 |
| 45 | n | 607 | CHL | C12-C13-C15-C16 |
| 45 | g | 601 | CHL | C11-C12-C13-C15 |
| 45 | y | 606 | CHL | C11-C10-C8-C7 |
| 45 | y | 609 | CHL | C11-C12-C13-C15 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | B | 608 | CLA | C14-C13-C15-C16 |
| 29 | B | 617 | CLA | C11-C12-C13-C14 |
| 29 | C | 501 | CLA | C11-C10-C8-C9 |
| 29 | C | 508 | CLA | C11-C10-C8-C9 |
| 29 | C | 512 | CLA | C11-C10-C8-C9 |
| 29 | C | 513 | CLA | C11-C12-C13-C14 |
| 29 | D | 402 | CLA | C6-C7-C8-C9 |
| 29 | N | 602 | CLA | C14-C13-C15-C16 |
| 29 | N | 613 | CLA | C14-C13-C15-C16 |
| 29 | G | 602 | CLA | C6-C7-C8-C9 |
| 29 | G | 603 | CLA | C11-C12-C13-C14 |
| 29 | G | 613 | CLA | C6-C7-C8-C9 |
| 29 | S | 611 | CLA | C6-C7-C8-C9 |
| 29 | Y | 604 | CLA | C11-C12-C13-C14 |
| 29 | Y | 611 | CLA | C11-C10-C8-C9 |
| 29 | a | 405 | CLA | C11-C12-C13-C14 |
| 29 | b | 602 | CLA | C11-C10-C8-C9 |
| 29 | c | 506 | CLA | C11-C10-C8-C9 |
| 29 | c | 508 | CLA | C11-C10-C8-C9 |
| 29 | c | 508 | CLA | C14-C13-C15-C16 |
| 29 | c | 509 | CLA | C6-C7-C8-C9 |
| 29 | c | 510 | CLA | C6-C7-C8-C9 |
| 29 | c | 512 | CLA | C14-C13-C15-C16 |
| 29 | c | 513 | CLA | C11-C12-C13-C14 |
| 29 | n | 603 | CLA | C6-C7-C8-C9 |
| 29 | g | 613 | CLA | C6-C7-C8-C9 |
| 29 | g | 613 | CLA | C14-C13-C15-C16 |
| 29 | s | 610 | CLA | C11-C10-C8-C9 |
| 29 | y | 602 | CLA | C6-C7-C8-C9 |
| 29 | y | 604 | CLA | C14-C13-C15-C16 |
| 29 | y | 611 | CLA | C11-C10-C8-C9 |
| 45 | G | 609 | CHL | C11-C12-C13-C14 |
| 45 | Y | 609 | CHL | C14-C13-C15-C16 |
| 45 | n | 607 | CHL | C11-C12-C13-C14 |
| 45 | y | 606 | CHL | C11-C10-C8-C9 |
| 31 | A | 411 | BCR | C9-C10-C11-C12 |
| 31 | B | 619 | BCR | C9-C10-C11-C12 |
| 29 | d | 402 | CLA | C13-C15-C16-C17 |
| 29 | B | 605 | CLA | C2A-CAA-CBA-CGA |
| 30 | a | 408 | PHO | C2A-CAA-CBA-CGA |
| 45 | N | 605 | CHL | C2A-CAA-CBA-CGA |
| 45 | g | 606 | CHL | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | c | 625 | LHG | C35-C36-C37-C38 |
| 29 | n | 610 | CLA | C16-C17-C18-C20 |
| 46 | Y | 620 | LUT | C27-C28-C29-C30 |
| 36 | c | 524 | DGA | CA7-CA8-CA9-CAA |
| 29 | C | 513 | CLA | C3-C5-C6-C7 |
| 29 | b | 603 | CLA | C5-C6-C7-C8 |
| 39 | D | 410 | LHG | C26-C27-C28-C29 |
| 39 | L | 101 | LHG | C35-C36-C37-C38 |
| 42 | d | 405 | PL9 | C42-C43-C44-C46 |
| 29 | b | 610 | CLA | C13-C15-C16-C17 |
| 45 | n | 609 | CHL | C8-C10-C11-C12 |
| 39 | l | 101 | LHG | C25-C26-C27-C28 |
| 29 | s | 602 | CLA | CBD-CGD-O2D-CED |
| 29 | Y | 603 | CLA | C15-C16-C17-C18 |
| 39 | D | 410 | LHG | O6-C4-C5-C6 |
| 39 | d | 410 | LHG | O6-C4-C5-C6 |
| 39 | l | 101 | LHG | O6-C4-C5-C6 |
| 39 | n | 624 | LHG | O6-C4-C5-C6 |
| 39 | n | 624 | LHG | C23-C24-C25-C26 |
| 29 | y | 610 | CLA | CBA-CGA-O2A-C1 |
| 50 | s | 626 | 3PH | C39-C3A-C3B-C3C |
| 29 | G | 610 | CLA | C4-C3-C5-C6 |
| 45 | N | 609 | CHL | C4-C3-C5-C6 |
| 42 | d | 405 | PL9 | C13-C14-C16-C17 |
| 33 | H | 102 | LMG | C28-C29-C30-C31 |
| 50 | S | 626 | 3PH | C3D-C3E-C3F-C3G |
| 29 | B | 604 | CLA | C10-C11-C12-C13 |
| 29 | Y | 614 | CLA | C5-C6-C7-C8 |
| 32 | c | 626 | SQD | C32-C33-C34-C35 |
| 33 | D | 411 | LMG | C11-C12-C13-C14 |
| 39 | L | 101 | LHG | C25-C26-C27-C28 |
| 49 | s | 625 | LPX | C14-C15-C16-C17 |
| 29 | Y | 604 | CLA | C5-C6-C7-C8 |
| 29 | b | 613 | CLA | C8-C10-C11-C12 |
| 39 | s | 624 | LHG | C24-C23-O8-C6 |
| 39 | C | 525 | LHG | C10-C11-C12-C13 |
| 50 | s | 626 | 3PH | C3F-C3G-C3H-C3I |
| 29 | B | 613 | CLA | C3A-C2A-CAA-CBA |
| 29 | C | 506 | CLA | C3A-C2A-CAA-CBA |
| 29 | N | 604 | CLA | C3A-C2A-CAA-CBA |
| 29 | N | 613 | CLA | C3A-C2A-CAA-CBA |
| 29 | G | 604 | CLA | C3A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | R | 604 | CLA | C3A-C2A-CAA-CBA |
| 29 | b | 613 | CLA | C3A-C2A-CAA-CBA |
| 29 | n | 613 | CLA | C3A-C2A-CAA-CBA |
| 29 | r | 604 | CLA | C3A-C2A-CAA-CBA |
| 29 | r | 610 | CLA | C3A-C2A-CAA-CBA |
| 29 | s | 614 | CLA | C3A-C2A-CAA-CBA |
| 30 | a | 408 | PHO | C3A-C2A-CAA-CBA |
| 45 | Y | 601 | CHL | C3A-C2A-CAA-CBA |
| 36 | C | 524 | DGA | CB9-CAB-CBB-CCB |
| 39 | n | 624 | LHG | C35-C36-C37-C38 |
| 50 | S | 626 | 3PH | C3F-C3G-C3H-C3I |
| 31 | a | 411 | BCR | C9-C10-C11-C12 |
| 46 | Y | 621 | LUT | C33-C34-C35-C15 |
| 39 | C | 525 | LHG | C35-C36-C37-C38 |
| 39 | d | 410 | LHG | C33-C34-C35-C36 |
| 39 | l | 101 | LHG | C35-C36-C37-C38 |
| 29 | G | 610 | CLA | C13-C15-C16-C17 |
| 39 | d | 408 | LHG | C27-C28-C29-C30 |
| 29 | y | 608 | CLA | CBA-CGA-O2A-C1 |
| 36 | B | 625 | DGA | CA8-CA9-CAA-CBA |
| 38 | c | 519 | DGD | C9B-CAB-CBB-CCB |
| 32 | B | 621 | SQD | C44-C45-C46-O48 |
| 32 | b | 621 | SQD | C44-C45-C46-O48 |
| 33 | A | 413 | LMG | C7-C8-C9-O8 |
| 33 | J | 101 | LMG | C7-C8-C9-O8 |
| 33 | a | 413 | LMG | O1-C7-C8-C9 |
| 39 | D | 410 | LHG | C4-C5-C6-O8 |
| 39 | G | 630 | LHG | C4-C5-C6-O8 |
| 39 | d | 410 | LHG | C4-C5-C6-O8 |
| 39 | l | 101 | LHG | C4-C5-C6-O8 |
| 40 | C | 527 | LMK | O1-C7-C8-C9 |
| 46 | y | 621 | LUT | C21-C26-C27-C28 |
| 36 | B | 625 | DGA | CCB-CDB-CEB-CFB |
| 36 | b | 623 | DGA | CFB-CGB-CHB-CIB |
| 39 | y | 624 | LHG | C9-C10-C11-C12 |
| 36 | C | 524 | DGA | CA8-CA9-CAA-CBA |
| 51 | y | 625 | SPH | C6-C7-C8-C9 |
| 29 | C | 501 | CLA | C3-C5-C6-C7 |
| 29 | Y | 610 | CLA | O1A-CGA-O2A-C1 |
| 45 | N | 609 | CHL | C2-C3-C5-C6 |
| 39 | D | 410 | LHG | C33-C34-C35-C36 |
| 39 | S | 624 | LHG | C34-C35-C36-C37 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 50 | i | 101 | 3PH | C25-C26-C27-C28 |
| 29 | N | 602 | CLA | C13-C15-C16-C17 |
| 40 | C | 527 | LMK | C9-C8-O7-C10 |
| 40 | c | 627 | LMK | C9-C8-O7-C10 |
| 36 | b | 623 | DGA | CB1-CB2-CB3-CB4 |
| 39 | C | 525 | LHG | O10-C23-O8-C6 |
| 29 | G | 614 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 605 | CLA | C2A-CAA-CBA-CGA |
| 39 | D | 408 | LHG | O1-C1-C2-O2 |
| 39 | d | 409 | LHG | C25-C26-C27-C28 |
| 39 | D | 408 | LHG | O6-C4-C5-O7 |
| 39 | D | 409 | LHG | O6-C4-C5-O7 |
| 39 | d | 410 | LHG | O6-C4-C5-O7 |
| 39 | l | 101 | LHG | O6-C4-C5-O7 |
| 39 | n | 624 | LHG | O6-C4-C5-O7 |
| 39 | g | 624 | LHG | O6-C4-C5-O7 |
| 39 | s | 624 | LHG | O6-C4-C5-O7 |
| 38 | c | 518 | DGD | C4D-C5D-C6D-O5D |
| 39 | N | 624 | LHG | C24-C23-O8-C6 |
| 33 | h | 102 | LMG | C28-C29-C30-C31 |
| 29 | B | 612 | CLA | C16-C17-C18-C19 |
| 51 | y | 625 | SPH | C11-C10-C9-C8 |
| 39 | N | 624 | LHG | C35-C36-C37-C38 |
| 51 | Y | 625 | SPH | C11-C12-C13-C14 |
| 29 | G | 613 | CLA | C3-C5-C6-C7 |
| 32 | B | 621 | SQD | O47-C45-C46-O48 |
| 32 | b | 621 | SQD | O47-C45-C46-O48 |
| 33 | C | 521 | LMG | O1-C7-C8-O7 |
| 38 | C | 519 | DGD | O1G-C1G-C2G-O2G |
| 39 | Y | 624 | LHG | O7-C5-C6-O8 |
| 39 | c | 625 | LHG | O7-C5-C6-O8 |
| 39 | l | 101 | LHG | O7-C5-C6-O8 |
| 29 | C | 512 | CLA | C13-C15-C16-C17 |
| 29 | R | 602 | CLA | C10-C11-C12-C13 |
| 29 | y | 614 | CLA | C5-C6-C7-C8 |
| 29 | s | 602 | CLA | O1D-CGD-O2D-CED |
| 32 | B | 621 | SQD | C10-C11-C12-C13 |
| 32 | a | 412 | SQD | C28-C29-C30-C31 |
| 33 | J | 101 | LMG | O6-C1-O1-C7 |
| 38 | C | 519 | DGD | O6D-C1D-O3G-C3G |
| 29 | A | 405 | CLA | C13-C15-C16-C17 |
| 29 | C | 511 | CLA | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | b | 604 | CLA | C13-C15-C16-C17 |
| 36 | b | 623 | DGA | CG1-CG2-CG3-OXT |
| 29 | A | 410 | CLA | C2-C1-O2A-CGA |
| 29 | a | 410 | CLA | C2-C1-O2A-CGA |
| 29 | b | 617 | CLA | C2-C1-O2A-CGA |
| 30 | a | 409 | PHO | C2-C1-O2A-CGA |
| 36 | B | 625 | DGA | CB9-CAB-CBB-CCB |
| 39 | N | 624 | LHG | C16-C17-C18-C19 |
| 39 | n | 624 | LHG | C16-C17-C18-C19 |
| 39 | g | 624 | LHG | C11-C12-C13-C14 |
| 29 | c | 511 | CLA | C13-C15-C16-C17 |
| 29 | d | 403 | CLA | C13-C15-C16-C17 |
| 29 | y | 610 | CLA | C10-C11-C12-C13 |
| 29 | B | 606 | CLA | C6-C7-C8-C9 |
| 29 | B | 613 | CLA | C6-C7-C8-C9 |
| 29 | B | 616 | CLA | C14-C13-C15-C16 |
| 29 | C | 506 | CLA | C14-C13-C15-C16 |
| 29 | C | 508 | CLA | C14-C13-C15-C16 |
| 29 | C | 512 | CLA | C14-C13-C15-C16 |
| 29 | D | 402 | CLA | C11-C12-C13-C14 |
| 29 | N | 604 | CLA | C6-C7-C8-C9 |
| 29 | N | 604 | CLA | C14-C13-C15-C16 |
| 29 | b | 604 | CLA | C14-C13-C15-C16 |
| 29 | b | 605 | CLA | C11-C12-C13-C14 |
| 29 | c | 506 | CLA | C14-C13-C15-C16 |
| 29 | d | 402 | CLA | C6-C7-C8-C9 |
| 29 | g | 602 | CLA | C6-C7-C8-C9 |
| 29 | y | 602 | CLA | C11-C10-C8-C9 |
| 45 | N | 606 | CHL | C11-C12-C13-C14 |
| 45 | G | 609 | CHL | C14-C13-C15-C16 |
| 45 | g | 601 | CHL | C11-C12-C13-C14 |
| 39 | D | 410 | LHG | C28-C29-C30-C31 |
| 32 | B | 621 | SQD | C24-C25-C26-C27 |
| 50 | i | 101 | 3PH | C38-C39-C3A-C3B |
| 50 | s | 626 | 3PH | C38-C39-C3A-C3B |
| 29 | C | 503 | CLA | C8-C10-C11-C12 |
| 29 | s | 609 | CLA | C10-C11-C12-C13 |
| 30 | a | 408 | PHO | C1A-C2A-CAA-CBA |
| 39 | D | 409 | LHG | C2-C3-O3-P |
| 39 | d | 409 | LHG | C2-C3-O3-P |
| 29 | A | 406 | CLA | C2A-CAA-CBA-CGA |
| 29 | C | 506 | CLA | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | R | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | c | 506 | CLA | C2A-CAA-CBA-CGA |
| 45 | n | 607 | CHL | C2A-CAA-CBA-CGA |
| 29 | B | 605 | CLA | C16-C17-C18-C20 |
| 31 | C | 516 | BCR | C23-C24-C25-C26 |
| 31 | C | 516 | BCR | C23-C24-C25-C30 |
| 31 | D | 404 | BCR | C23-C24-C25-C26 |
| 31 | D | 404 | BCR | C23-C24-C25-C30 |
| 31 | c | 515 | BCR | C23-C24-C25-C26 |
| 31 | c | 515 | BCR | C23-C24-C25-C30 |
| 31 | d | 404 | BCR | C23-C24-C25-C26 |
| 35 | B | 620 | C7Z | C21-C26-C27-C28 |
| 35 | b | 620 | C7Z | C21-C26-C27-C28 |
| 44 | H | 101 | RRX | C23-C24-C25-C30 |
| 44 | h | 101 | RRX | C23-C24-C25-C30 |
| 46 | N | 620 | LUT | C1-C6-C7-C8 |
| 46 | R | 620 | LUT | C1-C6-C7-C8 |
| 46 | R | 620 | LUT | C5-C6-C7-C8 |
| 46 | n | 621 | LUT | C1-C6-C7-C8 |
| 46 | n | 621 | LUT | C5-C6-C7-C8 |
| 46 | r | 620 | LUT | C1-C6-C7-C8 |
| 46 | r | 620 | LUT | C5-C6-C7-C8 |
| 29 | C | 510 | CLA | C15-C16-C17-C18 |
| 32 | B | 621 | SQD | C18-C19-C20-C21 |
| 33 | a | 413 | LMG | C30-C31-C32-C33 |
| 33 | H | 102 | LMG | O7-C10-C11-C12 |
| 33 | h | 102 | LMG | O7-C10-C11-C12 |
| 42 | d | 405 | PL9 | C47-C48-C49-C51 |
| 36 | b | 623 | DGA | CBB-CAB-CB9-CB8 |
| 31 | B | 618 | BCR | C21-C22-C23-C24 |
| 46 | R | 620 | LUT | C31-C32-C33-C34 |
| 46 | r | 620 | LUT | C31-C32-C33-C34 |
| 29 | y | 614 | CLA | C15-C16-C17-C18 |
| 48 | s | 623 | NEX | C14-C15-C35-C34 |
| 39 | s | 624 | LHG | C13-C14-C15-C16 |
| 39 | D | 409 | LHG | C19-C20-C21-C22 |
| 29 | Y | 610 | CLA | C8-C10-C11-C12 |
| 29 | A | 405 | CLA | C10-C11-C12-C13 |
| 29 | C | 512 | CLA | C5-C6-C7-C8 |
| 29 | C | 512 | CLA | C15-C16-C17-C18 |
| 39 | D | 408 | LHG | O6-C4-C5-C6 |
| 39 | L | 101 | LHG | O6-C4-C5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 36 | B | 625 | DGA | CB5-CB6-CB7-CB8 |
| 39 | D | 409 | LHG | C24-C25-C26-C27 |
| 29 | B | 603 | CLA | C6-C7-C8-C10 |
| 29 | B | 605 | CLA | C11-C12-C13-C15 |
| 29 | B | 608 | CLA | C12-C13-C15-C16 |
| 29 | B | 616 | CLA | C12-C13-C15-C16 |
| 29 | C | 507 | CLA | C11-C10-C8-C7 |
| 29 | C | 512 | CLA | C11-C10-C8-C7 |
| 29 | C | 512 | CLA | C12-C13-C15-C16 |
| 29 | C | 513 | CLA | C6-C7-C8-C10 |
| 29 | C | 513 | CLA | C11-C12-C13-C15 |
| 29 | D | 403 | CLA | C11-C12-C13-C15 |
| 29 | N | 602 | CLA | C11-C10-C8-C7 |
| 29 | N | 604 | CLA | C6-C7-C8-C10 |
| 29 | N | 613 | CLA | C11-C12-C13-C15 |
| 29 | G | 602 | CLA | C6-C7-C8-C10 |
| 29 | S | 611 | CLA | C6-C7-C8-C10 |
| 29 | Y | 602 | CLA | C6-C7-C8-C10 |
| 29 | Y | 604 | CLA | C11-C12-C13-C15 |
| 29 | Y | 614 | CLA | C11-C10-C8-C7 |
| 29 | a | 405 | CLA | C11-C12-C13-C15 |
| 29 | b | 617 | CLA | C11-C12-C13-C15 |
| 29 | c | 504 | CLA | C6-C7-C8-C10 |
| 29 | c | 507 | CLA | C12-C13-C15-C16 |
| 29 | c | 508 | CLA | C11-C10-C8-C7 |
| 29 | c | 508 | CLA | C12-C13-C15-C16 |
| 29 | c | 512 | CLA | C12-C13-C15-C16 |
| 29 | n | 603 | CLA | C6-C7-C8-C10 |
| 29 | n | 604 | CLA | C6-C7-C8-C10 |
| 29 | n | 613 | CLA | C12-C13-C15-C16 |
| 29 | g | 602 | CLA | C6-C7-C8-C10 |
| 29 | g | 613 | CLA | C6-C7-C8-C10 |
| 29 | g | 613 | CLA | C12-C13-C15-C16 |
| 29 | s | 603 | CLA | C11-C12-C13-C15 |
| 45 | N | 605 | CHL | C11-C10-C8-C7 |
| 45 | N | 605 | CHL | C12-C13-C15-C16 |
| 45 | N | 606 | CHL | C11-C12-C13-C15 |
| 45 | Y | 609 | CHL | C12-C13-C15-C16 |
| 45 | G | 601 | CHL | C3-C5-C6-C7 |
| 33 | B | 622 | LMG | C14-C15-C16-C17 |
| 31 | C | 514 | BCR | C15-C16-C17-C18 |
| 31 | C | 516 | BCR | C9-C10-C11-C12 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 31 | C | 516 | BCR | C13-C14-C15-C16 |
| 31 | b | 619 | BCR | C9-C10-C11-C12 |
| 31 | b | 619 | BCR | C13-C14-C15-C16 |
| 31 | c | 515 | BCR | C19-C20-C21-C22 |
| 44 | H | 101 | RRX | C9-C10-C11-C12 |
| 44 | h | 101 | RRX | C9-C10-C11-C12 |
| 46 | g | 620 | LUT | C29-C30-C31-C32 |
| 48 | s | 623 | NEX | C13-C14-C15-C35 |
| 39 | d | 409 | LHG | C19-C20-C21-C22 |
| 29 | B | 612 | CLA | C10-C11-C12-C13 |
| 29 | R | 609 | CLA | C10-C11-C12-C13 |
| 29 | r | 609 | CLA | CAA-CBA-CGA-O2A |
| 29 | S | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | c | 512 | CLA | C2A-CAA-CBA-CGA |
| 29 | n | 604 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 608 | CLA | C2A-CAA-CBA-CGA |
| 29 | s | 614 | CLA | C2A-CAA-CBA-CGA |
| 40 | C | 527 | LMK | O1-C1-C2-C3 |
| 29 | C | 509 | CLA | C5-C6-C7-C8 |
| 48 | r | 623 | NEX | C40-C33-C34-C35 |
| 48 | s | 623 | NEX | C20-C13-C14-C15 |
| 50 | s | 626 | 3PH | C23-C24-C25-C26 |
| 38 | c | 523 | DGD | O6D-C5D-C6D-O5D |
| 45 | g | 609 | CHL | C3-C5-C6-C7 |
| 29 | n | 610 | CLA | C16-C17-C18-C19 |
| 42 | D | 405 | PL9 | C47-C48-C49-C50 |
| 36 | c | 524 | DGA | CA8-CA9-CAA-CBA |
| 39 | s | 624 | LHG | C12-C13-C14-C15 |
| 50 | S | 626 | 3PH | C38-C39-C3A-C3B |
| 50 | s | 626 | 3PH | C34-C35-C36-C37 |
| 29 | B | 613 | CLA | CAD-CBD-CGD-O2D |
| 29 | B | 616 | CLA | CAD-CBD-CGD-O2D |
| 29 | B | 617 | CLA | CAD-CBD-CGD-O2D |
| 29 | C | 502 | CLA | CAD-CBD-CGD-O2D |
| 29 | N | 602 | CLA | CAD-CBD-CGD-O2D |
| 29 | G | 603 | CLA | CAD-CBD-CGD-O2D |
| 29 | G | 614 | CLA | CAD-CBD-CGD-O2D |
| 29 | c | 509 | CLA | CAD-CBD-CGD-O2D |
| 29 | n | 602 | CLA | CAD-CBD-CGD-O2D |
| 38 | C | 523 | DGD | C1G-C2G-O2G-C1B |
| 38 | c | 523 | DGD | C1G-C2G-O2G-C1B |
| 45 | Y | 606 | CHL | CAD-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 48 | S | 622 | NEX | C7-C8-C9-C19 |
| 48 | s | 623 | NEX | C7-C8-C9-C19 |
| 32 | C | 526 | SQD | C32-C33-C34-C35 |
| 33 | A | 413 | LMG | C29-C30-C31-C32 |
| 29 | B | 609 | CLA | C5-C6-C7-C8 |
| 29 | N | 604 | CLA | C15-C16-C17-C18 |
| 29 | b | 615 | CLA | C8-C10-C11-C12 |
| 29 | g | 603 | CLA | C13-C15-C16-C17 |
| 39 | Y | 624 | LHG | C25-C26-C27-C28 |
| 29 | r | 603 | CLA | C4-C3-C5-C6 |
| 29 | r | 609 | CLA | C4-C3-C5-C6 |
| 33 | b | 622 | LMG | C14-C15-C16-C17 |
| 33 | a | 413 | LMG | O6-C1-O1-C7 |
| 29 | r | 609 | CLA | C2-C3-C5-C6 |
| 45 | n | 605 | CHL | C2-C3-C5-C6 |
| 33 | c | 521 | LMG | O1-C7-C8-C9 |
| 38 | c | 520 | DGD | O1G-C1G-C2G-C3G |
| 39 | D | 408 | LHG | C4-C5-C6-O8 |
| 39 | L | 101 | LHG | C4-C5-C6-O8 |
| 39 | S | 624 | LHG | C4-C5-C6-O8 |
| 39 | g | 624 | LHG | C4-C5-C6-O8 |
| 29 | y | 610 | CLA | O1A-CGA-O2A-C1 |
| 39 | L | 101 | LHG | O6-C4-C5-O7 |
| 39 | N | 624 | LHG | O6-C4-C5-O7 |
| 39 | c | 625 | LHG | O6-C4-C5-O7 |
| 29 | B | 602 | CLA | C8-C10-C11-C12 |
| 43 | F | 101 | HEM | C4B-C3B-CAB-CBB |
| 43 | f | 101 | HEM | C4B-C3B-CAB-CBB |
| 36 | b | 623 | DGA | CA8-CA9-CAA-CBA |
| 36 | b | 623 | DGA | CCB-CDB-CEB-CFB |
| 39 | y | 624 | LHG | C28-C29-C30-C31 |
| 39 | S | 624 | LHG | C1-C2-C3-O3 |
| 39 | d | 410 | LHG | C1-C2-C3-O3 |
| 29 | N | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | N | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | G | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | G | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 603 | CLA | CHA-CBD-CGD-O1D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | Y | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | c | 512 | CLA | CHA-CBD-CGD-O2D |
| 29 | g | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | g | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | g | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | y | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | y | 612 | CLA | CHA-CBD-CGD-O2D |
| 40 | C | 527 | LMK | C2-C3-C4-O2 |
| 40 | c | 627 | LMK | C2-C3-C4-O2 |
| 45 | N | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | n | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | g | 605 | CHL | CHA-CBD-CGD-O2D |
| 39 | D | 409 | LHG | C25-C26-C27-C28 |
| 29 | y | 608 | CLA | O1A-CGA-O2A-C1 |
| 32 | c | 626 | SQD | C28-C29-C30-C31 |
| 33 | A | 413 | LMG | O7-C8-C9-O8 |
| 33 | H | 102 | LMG | O7-C8-C9-O8 |
| 38 | c | 519 | DGD | O1G-C1G-C2G-O2G |
| 39 | S | 624 | LHG | O7-C5-C6-O8 |
| 40 | c | 627 | LMK | O1-C7-C8-O7 |
| 29 | B | 610 | CLA | CBA-CGA-O2A-C1 |
| 39 | d | 410 | LHG | C30-C31-C32-C33 |
| 29 | G | 613 | CLA | C5-C6-C7-C8 |
| 29 | b | 606 | CLA | C5-C6-C7-C8 |
| 38 | c | 523 | DGD | CCB-CDB-CEB-CFB |
| 39 | Y | 624 | LHG | C31-C32-C33-C34 |
| 29 | b | 608 | CLA | C16-C17-C18-C20 |
| 29 | C | 509 | CLA | C13-C15-C16-C17 |
| 45 | n | 605 | CHL | C4-C3-C5-C6 |
| 39 | s | 624 | LHG | O10-C23-O8-C6 |
| 39 | L | 101 | LHG | C17-C18-C19-C20 |
| 29 | B | 615 | CLA | C11-C12-C13-C14 |
| 29 | D | 403 | CLA | C11-C12-C13-C14 |
| 29 | N | 613 | CLA | C11-C12-C13-C14 |
| 29 | G | 613 | CLA | C11-C10-C8-C9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | b | 603 | CLA | C6-C7-C8-C9 |
| 29 | b | 606 | CLA | C6-C7-C8-C9 |
| 29 | c | 503 | CLA | C11-C12-C13-C14 |
| 45 | N | 605 | CHL | C11-C10-C8-C9 |
| 45 | N | 609 | CHL | C14-C13-C15-C16 |
| 45 | Y | 606 | CHL | C11-C10-C8-C9 |
| 45 | n | 601 | CHL | C11-C10-C8-C9 |
| 39 | D | 410 | LHG | C11-C10-C9-C8 |
| 39 | N | 624 | LHG | O10-C23-O8-C6 |
| 39 | Y | 624 | LHG | C9-C10-C11-C12 |
| 50 | i | 101 | 3PH | C3B-C3C-C3D-C3E |
| 32 | c | 626 | SQD | C4-C5-C6-S |
| 29 | n | 602 | CLA | C16-C17-C18-C19 |
| 29 | a | 406 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 617 | CLA | C2A-CAA-CBA-CGA |
| 45 | N | 607 | CHL | C2A-CAA-CBA-CGA |
| 39 | n | 624 | LHG | O8-C23-C24-C25 |
| 39 | g | 624 | LHG | C12-C13-C14-C15 |
| 46 | G | 620 | LUT | C27-C28-C29-C30 |
| 32 | c | 626 | SQD | C12-C13-C14-C15 |
| 33 | H | 102 | LMG | C15-C16-C17-C18 |
| 29 | R | 611 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 608 | CLA | C1A-C2A-CAA-CBA |
| 29 | b | 613 | CLA | C1A-C2A-CAA-CBA |
| 29 | n | 602 | CLA | C1A-C2A-CAA-CBA |
| 29 | y | 604 | CLA | C1A-C2A-CAA-CBA |
| 45 | R | 607 | CHL | C1A-C2A-CAA-CBA |
| 45 | y | 605 | CHL | C1A-C2A-CAA-CBA |
| 29 | n | 603 | CLA | C5-C6-C7-C8 |
| 29 | r | 603 | CLA | C10-C11-C12-C13 |
| 39 | l | 101 | LHG | C24-C25-C26-C27 |
| 29 | N | 611 | CLA | C2-C1-O2A-CGA |
| 29 | S | 603 | CLA | C2-C1-O2A-CGA |
| 29 | S | 614 | CLA | C2-C1-O2A-CGA |
| 29 | b | 611 | CLA | C2-C1-O2A-CGA |
| 29 | c | 503 | CLA | C2-C1-O2A-CGA |
| 29 | n | 614 | CLA | C2-C1-O2A-CGA |
| 29 | g | 603 | CLA | C2-C1-O2A-CGA |
| 39 | C | 525 | LHG | C28-C29-C30-C31 |
| 49 | S | 625 | LPX | C12-C13-C14-C15 |
| 31 | c | 515 | BCR | C9-C10-C11-C12 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 46 | R | 620 | LUT | C29-C30-C31-C32 |
| 39 | D | 409 | LHG | C4-O6-P-O3 |
| 39 | d | 410 | LHG | C4-O6-P-O3 |
| 49 | S | 625 | LPX | C3-O1-P1-O2 |
| 32 | C | 526 | SQD | C13-C14-C15-C16 |
| 39 | D | 410 | LHG | C2-C3-O3-P |
| 39 | d | 410 | LHG | C2-C3-O3-P |
| 50 | s | 626 | 3PH | C2-C1-O11-P |
| 45 | G | 609 | CHL | C2-C3-C5-C6 |
| 32 | b | 621 | SQD | C10-C11-C12-C13 |
| 39 | n | 624 | LHG | C11-C10-C9-C8 |
| 39 | s | 624 | LHG | C33-C34-C35-C36 |
| 29 | B | 610 | CLA | O1A-CGA-O2A-C1 |
| 39 | D | 408 | LHG | C3-O3-P-O5 |
| 39 | D | 410 | LHG | C3-O3-P-O4 |
| 39 | L | 101 | LHG | C3-O3-P-O5 |
| 39 | N | 624 | LHG | C4-O6-P-O4 |
| 39 | S | 624 | LHG | C4-O6-P-O5 |
| 39 | c | 625 | LHG | C3-O3-P-O4 |
| 39 | d | 409 | LHG | C3-O3-P-O5 |
| 39 | d | 410 | LHG | C4-O6-P-O4 |
| 39 | l | 101 | LHG | C3-O3-P-O5 |
| 39 | n | 624 | LHG | C4-O6-P-O4 |
| 39 | s | 624 | LHG | C4-O6-P-O5 |
| 49 | S | 625 | LPX | C1-O2-P1-O4 |
| 49 | s | 625 | LPX | C1-O2-P1-O4 |
| 29 | N | 604 | CLA | C16-C17-C18-C19 |
| 29 | b | 611 | CLA | C16-C17-C18-C20 |
| 29 | b | 615 | CLA | C16-C17-C18-C19 |
| 29 | r | 603 | CLA | C11-C12-C13-C15 |
| 38 | c | 523 | DGD | C7B-C8B-C9B-CAB |
| 30 | A | 408 | PHO | CBA-CGA-O2A-C1 |
| 39 | c | 625 | LHG | O6-C4-C5-C6 |
| 39 | G | 630 | LHG | C35-C36-C37-C38 |
| 33 | a | 413 | LMG | C28-C29-C30-C31 |
| 29 | r | 608 | CLA | C3-C5-C6-C7 |
| 33 | J | 101 | LMG | C11-C12-C13-C14 |
| 33 | A | 413 | LMG | C34-C35-C36-C37 |
| 29 | C | 504 | CLA | CAD-CBD-CGD-O1D |
| 29 | G | 604 | CLA | CAD-CBD-CGD-O1D |
| 29 | n | 612 | CLA | CAD-CBD-CGD-O1D |
| 29 | g | 604 | CLA | CAD-CBD-CGD-O1D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 45 | N | 601 | CHL | CAD-CBD-CGD-O1D |
| 45 | n | 601 | CHL | CAD-CBD-CGD-O1D |
| 45 | s | 601 | CHL | CAD-CBD-CGD-O1D |
| 49 | S | 625 | LPX | C2-C1-O2-P1 |
| 49 | s | 625 | LPX | C2-C1-O2-P1 |
| 38 | C | 518 | DGD | C2B-C3B-C4B-C5B |
| 45 | N | 605 | CHL | C3-C5-C6-C7 |
| 29 | R | 608 | CLA | C8-C10-C11-C12 |
| 39 | g | 624 | LHG | C35-C36-C37-C38 |
| 38 | c | 523 | DGD | C4D-C5D-C6D-O5D |
| 29 | B | 604 | CLA | C11-C12-C13-C15 |
| 29 | B | 615 | CLA | C11-C12-C13-C15 |
| 29 | B | 617 | CLA | C11-C10-C8-C7 |
| 29 | C | 510 | CLA | C6-C7-C8-C10 |
| 29 | C | 510 | CLA | C11-C10-C8-C7 |
| 29 | G | 602 | CLA | C12-C13-C15-C16 |
| 29 | G | 603 | CLA | C11-C10-C8-C7 |
| 29 | G | 613 | CLA | C11-C10-C8-C7 |
| 29 | R | 608 | CLA | C6-C7-C8-C10 |
| 29 | S | 603 | CLA | C11-C10-C8-C7 |
| 29 | Y | 611 | CLA | C12-C13-C15-C16 |
| 29 | a | 406 | CLA | C11-C10-C8-C7 |
| 29 | b | 603 | CLA | C6-C7-C8-C10 |
| 29 | b | 605 | CLA | C11-C12-C13-C15 |
| 29 | b | 613 | CLA | C11-C12-C13-C15 |
| 29 | b | 615 | CLA | C11-C12-C13-C15 |
| 29 | c | 502 | CLA | C6-C7-C8-C10 |
| 29 | c | 507 | CLA | C11-C10-C8-C7 |
| 29 | c | 512 | CLA | C6-C7-C8-C10 |
| 29 | c | 512 | CLA | C11-C10-C8-C7 |
| 29 | d | 402 | CLA | C11-C12-C13-C15 |
| 29 | d | 403 | CLA | C11-C12-C13-C15 |
| 29 | g | 602 | CLA | C12-C13-C15-C16 |
| 29 | s | 609 | CLA | C6-C7-C8-C10 |
| 29 | y | 610 | CLA | C11-C10-C8-C7 |
| 29 | y | 614 | CLA | C11-C10-C8-C7 |
| 30 | A | 409 | PHO | C6-C7-C8-C10 |
| 30 | a | 409 | PHO | C6-C7-C8-C10 |
| 39 | C | 525 | LHG | O6-C4-C5-O7 |
| 39 | G | 630 | LHG | O6-C4-C5-O7 |
| 45 | G | 601 | CHL | C11-C12-C13-C15 |
| 45 | Y | 606 | CHL | C11-C10-C8-C7 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 45 | n | 606 | CHL | C11-C12-C13-C15 |
| 46 | R | 620 | LUT | C25-C26-C27-C28 |
| 46 | r | 620 | LUT | C25-C26-C27-C28 |
| 50 | S | 626 | 3PH | O11-C1-C2-O21 |
| 50 | s | 626 | 3PH | O11-C1-C2-O21 |
| 36 | B | 625 | DGA | CA5-CA6-CA7-CA8 |
| 36 | B | 625 | DGA | CDB-CEB-CFB-CGB |
| 45 | g | 601 | CHL | C10-C11-C12-C13 |
| 36 | c | 524 | DGA | CAB-CBB-CCB-CDB |
| 38 | c | 519 | DGD | C5A-C6A-C7A-C8A |
| 29 | g | 613 | CLA | C8-C10-C11-C12 |
| 33 | d | 411 | LMG | C28-C29-C30-C31 |
| 39 | d | 410 | LHG | O2-C2-C3-O3 |
| 39 | c | 625 | LHG | C25-C26-C27-C28 |
| 29 | B | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | C | 501 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 607 | CLA | C2A-CAA-CBA-CGA |
| 45 | n | 607 | CHL | CAA-CBA-CGA-O2A |
| 32 | A | 412 | SQD | C44-C45-C46-O48 |
| 33 | A | 413 | LMG | O1-C7-C8-C9 |
| 39 | Y | 624 | LHG | C34-C35-C36-C37 |
| 32 | A | 412 | SQD | O47-C45-C46-O48 |
| 38 | c | 519 | DGD | O2G-C2G-C3G-O3G |
| 39 | D | 410 | LHG | O7-C5-C6-O8 |
| 39 | L | 101 | LHG | O7-C5-C6-O8 |
| 39 | d | 408 | LHG | O7-C5-C6-O8 |
| 39 | s | 624 | LHG | O7-C5-C6-O8 |
| 39 | y | 624 | LHG | O7-C5-C6-O8 |
| 40 | C | 527 | LMK | O1-C7-C8-O7 |
| 33 | h | 102 | LMG | C15-C16-C17-C18 |
| 40 | c | 627 | LMK | C8-C9-O8-C28 |
| 39 | g | 624 | LHG | O8-C23-C24-C25 |
| 29 | c | 513 | CLA | C8-C10-C11-C12 |
| 29 | G | 602 | CLA | C3-C5-C6-C7 |
| 29 | n | 602 | CLA | C8-C10-C11-C12 |
| 36 | b | 623 | DGA | CAA-CBA-CCA-CDA |
| 29 | Y | 602 | CLA | C10-C11-C12-C13 |
| 29 | s | 610 | CLA | C8-C10-C11-C12 |
| 29 | B | 603 | CLA | C6-C7-C8-C9 |
| 29 | B | 605 | CLA | C11-C12-C13-C14 |
| 29 | C | 501 | CLA | C11-C12-C13-C14 |
| 29 | C | 513 | CLA | C6-C7-C8-C9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | N | 602 | CLA | C11-C10-C8-C9 |
| 29 | N | 603 | CLA | C11-C12-C13-C14 |
| 29 | Y | 602 | CLA | C6-C7-C8-C9 |
| 29 | Y | 614 | CLA | C11-C10-C8-C9 |
| 29 | b | 606 | CLA | C11-C12-C13-C14 |
| 29 | b | 612 | CLA | C11-C12-C13-C14 |
| 29 | c | 504 | CLA | C6-C7-C8-C9 |
| 29 | c | 509 | CLA | C11-C12-C13-C14 |
| 29 | c | 512 | CLA | C11-C10-C8-C9 |
| 29 | d | 402 | CLA | C11-C12-C13-C14 |
| 29 | n | 604 | CLA | C6-C7-C8-C9 |
| 29 | n | 613 | CLA | C14-C13-C15-C16 |
| 29 | s | 603 | CLA | C11-C12-C13-C14 |
| 45 | N | 607 | CHL | C11-C10-C8-C9 |
| 45 | N | 609 | CHL | C11-C10-C8-C9 |
| 45 | Y | 609 | CHL | C11-C12-C13-C14 |
| 45 | n | 606 | CHL | C11-C10-C8-C9 |
| 45 | y | 601 | CHL | C11-C10-C8-C9 |
| 29 | G | 610 | CLA | C3-C5-C6-C7 |
| 29 | Y | 610 | CLA | C10-C11-C12-C13 |
| 42 | D | 405 | PL9 | C14-C16-C17-C18 |
| 42 | d | 405 | PL9 | C39-C41-C42-C43 |
| 30 | A | 408 | PHO | O1A-CGA-O2A-C1 |
| 39 | N | 624 | LHG | O8-C23-C24-C25 |
| 31 | D | 404 | BCR | C18-C19-C20-C21 |
| 31 | d | 404 | BCR | C18-C19-C20-C21 |
| 31 | B | 619 | BCR | C11-C12-C13-C35 |
| 46 | G | 620 | LUT | C31-C32-C33-C40 |
| 29 | c | 508 | CLA | C8-C10-C11-C12 |
| 50 | s | 626 | 3PH | C31-C32-C33-C34 |
| 36 | b | 623 | DGA | CA7-CA8-CA9-CAA |
| 39 | d | 409 | LHG | C34-C35-C36-C37 |
| 36 | B | 625 | DGA | CCA-CDA-CEA-CFA |
| 42 | D | 405 | PL9 | C45-C44-C46-C47 |
| 29 | B | 617 | CLA | C10-C11-C12-C13 |
| 29 | C | 504 | CLA | C10-C11-C12-C13 |
| 29 | Y | 611 | CLA | C8-C10-C11-C12 |
| 39 | d | 409 | LHG | C17-C18-C19-C20 |
| 29 | b | 617 | CLA | C15-C16-C17-C18 |
| 29 | N | 611 | CLA | C1-C2-C3-C4 |
| 29 | G | 604 | CLA | C1-C2-C3-C4 |
| 29 | G | 614 | CLA | C1-C2-C3-C4 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | n | 611 | CLA | C1-C2-C3-C4 |
| 29 | g | 604 | CLA | C1-C2-C3-C4 |
| 29 | g | 614 | CLA | C1-C2-C3-C4 |
| 45 | N | 608 | CHL | C1-C2-C3-C4 |
| 45 | G | 606 | CHL | C1-C2-C3-C4 |
| 45 | G | 607 | CHL | C1-C2-C3-C4 |
| 45 | n | 608 | CHL | C1-C2-C3-C4 |
| 45 | g | 606 | CHL | C1-C2-C3-C4 |
| 45 | g | 607 | CHL | C1-C2-C3-C4 |
| 45 | r | 607 | CHL | C1-C2-C3-C4 |
| 29 | C | 505 | CLA | C3-C5-C6-C7 |
| 38 | C | 518 | DGD | CAB-CBB-CCB-CDB |
| 39 | S | 624 | LHG | C13-C14-C15-C16 |
| 29 | A | 405 | CLA | C5-C6-C7-C8 |
| 39 | N | 624 | LHG | C6-C5-O7-C7 |
| 50 | s | 626 | 3PH | O11-C1-C2-C3 |
| 29 | B | 607 | CLA | C2A-CAA-CBA-CGA |
| 29 | N | 613 | CLA | C2A-CAA-CBA-CGA |
| 29 | S | 610 | CLA | C2A-CAA-CBA-CGA |
| 29 | c | 501 | CLA | C2A-CAA-CBA-CGA |
| 29 | y | 603 | CLA | C2A-CAA-CBA-CGA |
| 45 | n | 606 | CHL | C2A-CAA-CBA-CGA |
| 29 | b | 603 | CLA | C2-C1-O2A-CGA |
| 29 | d | 403 | CLA | C2-C1-O2A-CGA |
| 38 | C | 519 | DGD | C6B-C7B-C8B-C9B |
| 33 | C | 521 | LMG | C10-C11-C12-C13 |
| 29 | R | 609 | CLA | CAA-CBA-CGA-O2A |
| 29 | G | 603 | CLA | C15-C16-C17-C18 |
| 39 | d | 410 | LHG | C31-C32-C33-C34 |
| 39 | L | 101 | LHG | C2-C3-O3-P |
| 32 | b | 621 | SQD | C14-C15-C16-C17 |
| 44 | h | 101 | RRX | C15-C16-C17-C18 |
| 48 | g | 623 | NEX | C13-C14-C15-C35 |
| 29 | N | 604 | CLA | O1A-CGA-O2A-C1 |
| 39 | d | 409 | LHG | O6-C4-C5-O7 |
| 39 | L | 101 | LHG | C24-C25-C26-C27 |
| 30 | a | 408 | PHO | C16-C17-C18-C19 |
| 45 | R | 607 | CHL | O2A-C1-C2-C3 |
| 29 | R | 603 | CLA | C4-C3-C5-C6 |
| 29 | c | 506 | CLA | C4-C3-C5-C6 |
| 31 | c | 517 | BCR | C5-C6-C7-C8 |
| 35 | b | 620 | C7Z | C1-C6-C7-C8 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 46 | N | 620 | LUT | C5-C6-C7-C8 |
| 29 | G | 610 | CLA | C2-C3-C5-C6 |
| 45 | N | 607 | CHL | CAA-CBA-CGA-O2A |
| 29 | b | 610 | CLA | C5-C6-C7-C8 |
| 39 | D | 408 | LHG | C11-C10-C9-C8 |
| 29 | B | 608 | CLA | C16-C17-C18-C20 |
| 29 | b | 608 | CLA | C16-C17-C18-C19 |
| 29 | r | 603 | CLA | C11-C12-C13-C14 |
| 39 | l | 101 | LHG | C17-C18-C19-C20 |
| 29 | B | 617 | CLA | C2A-CAA-CBA-CGA |
| 33 | c | 521 | LMG | O1-C7-C8-O7 |
| 38 | c | 523 | DGD | O1G-C1G-C2G-O2G |
| 29 | Y | 613 | CLA | C10-C11-C12-C13 |
| 39 | d | 410 | LHG | C11-C10-C9-C8 |
| 29 | N | 604 | CLA | CBA-CGA-O2A-C1 |
| 39 | N | 624 | LHG | C3-O3-P-O6 |
| 39 | G | 630 | LHG | C3-O3-P-O6 |
| 39 | S | 624 | LHG | C3-O3-P-O6 |
| 39 | Y | 624 | LHG | C3-O3-P-O6 |
| 39 | d | 408 | LHG | C3-O3-P-O6 |
| 39 | d | 409 | LHG | C4-O6-P-O3 |
| 39 | n | 624 | LHG | C3-O3-P-O6 |
| 39 | g | 624 | LHG | C3-O3-P-O6 |
| 39 | s | 624 | LHG | C3-O3-P-O6 |
| 39 | y | 624 | LHG | C3-O3-P-O6 |
| 49 | s | 625 | LPX | C3-O1-P1-O2 |
| 32 | C | 526 | SQD | C12-C13-C14-C15 |
| 29 | Y | 613 | CLA | C5-C6-C7-C8 |
| 30 | a | 409 | PHO | CHA-CBD-CGD-O1D |
| 30 | a | 409 | PHO | CHA-CBD-CGD-O2D |
| 36 | B | 625 | DGA | CB4-CB5-CB6-CB7 |
| 33 | H | 102 | LMG | C7-C8-C9-O8 |
| 50 | i | 101 | 3PH | C1-C2-C3-O31 |
| 39 | C | 525 | LHG | C33-C34-C35-C36 |
| 39 | N | 624 | LHG | C11-C10-C9-C8 |
| 29 | B | 613 | CLA | C12-C13-C15-C16 |
| 29 | B | 617 | CLA | C11-C12-C13-C15 |
| 29 | N | 603 | CLA | C11-C12-C13-C15 |
| 29 | b | 606 | CLA | C11-C12-C13-C15 |
| 29 | r | 603 | CLA | C2-C3-C5-C6 |
| 29 | S | 614 | CLA | CAA-CBA-CGA-O2A |
| 32 | b | 621 | SQD | C25-C26-C27-C28 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | C | 510 | CLA | C6-C7-C8-C9 |
| 29 | D | 402 | CLA | C11-C10-C8-C9 |
| 29 | G | 603 | CLA | C11-C10-C8-C9 |
| 29 | S | 603 | CLA | C6-C7-C8-C9 |
| 29 | Y | 604 | CLA | C11-C10-C8-C9 |
| 29 | Y | 611 | CLA | C14-C13-C15-C16 |
| 29 | b | 602 | CLA | C11-C12-C13-C14 |
| 29 | b | 612 | CLA | C14-C13-C15-C16 |
| 29 | b | 615 | CLA | C11-C12-C13-C14 |
| 29 | b | 617 | CLA | C11-C12-C13-C14 |
| 29 | c | 511 | CLA | C11-C12-C13-C14 |
| 29 | c | 513 | CLA | C6-C7-C8-C9 |
| 29 | d | 403 | CLA | C11-C12-C13-C14 |
| 29 | s | 610 | CLA | C6-C7-C8-C9 |
| 29 | y | 611 | CLA | C14-C13-C15-C16 |
| 29 | y | 612 | CLA | C11-C12-C13-C14 |
| 45 | N | 605 | CHL | C14-C13-C15-C16 |
| 31 | C | 515 | BCR | C9-C10-C11-C12 |
| 31 | c | 516 | BCR | C9-C10-C11-C12 |
| 29 | C | 513 | CLA | C16-C17-C18-C19 |
| 29 | b | 613 | CLA | C16-C17-C18-C19 |
| 39 | n | 624 | LHG | C24-C23-O8-C6 |
| 29 | D | 403 | CLA | C10-C11-C12-C13 |
| 29 | C | 513 | CLA | C8-C10-C11-C12 |
| 33 | A | 413 | LMG | C30-C31-C32-C33 |
| 46 | n | 620 | LUT | C31-C32-C33-C40 |
| 29 | n | 602 | CLA | C16-C17-C18-C20 |
| 30 | a | 408 | PHO | C16-C17-C18-C20 |
| 39 | d | 409 | LHG | C24-C25-C26-C27 |
| 29 | b | 606 | CLA | C8-C10-C11-C12 |
| 33 | d | 411 | LMG | C12-C13-C14-C15 |
| 50 | s | 626 | 3PH | C3D-C3E-C3F-C3G |
| 39 | Y | 624 | LHG | C29-C30-C31-C32 |
| 39 | d | 408 | LHG | C11-C10-C9-C8 |
| 29 | N | 611 | CLA | O2A-C1-C2-C3 |
| 29 | s | 604 | CLA | C4-C3-C5-C6 |
| 33 | c | 521 | LMG | C28-C29-C30-C31 |
| 29 | n | 611 | CLA | O1A-CGA-O2A-C1 |
| 29 | N | 604 | CLA | C16-C17-C18-C20 |
| 29 | b | 611 | CLA | C16-C17-C18-C19 |
| 29 | n | 611 | CLA | CBA-CGA-O2A-C1 |
| 30 | a | 408 | PHO | CBA-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | y | 610 | CLA | C15-C16-C17-C18 |
| 50 | s | 626 | 3PH | C22-C23-C24-C25 |
| 29 | B | 611 | CLA | C2A-CAA-CBA-CGA |
| 29 | C | 510 | CLA | C2A-CAA-CBA-CGA |
| 31 | B | 619 | BCR | C13-C14-C15-C16 |
| 31 | d | 404 | BCR | C9-C10-C11-C12 |
| 46 | n | 620 | LUT | C29-C30-C31-C32 |
| 46 | r | 620 | LUT | C9-C10-C11-C12 |
| 46 | r | 620 | LUT | C29-C30-C31-C32 |
| 46 | y | 620 | LUT | C29-C30-C31-C32 |
| 39 | s | 624 | LHG | O6-C4-C5-C6 |
| 42 | D | 405 | PL9 | C39-C41-C42-C43 |
| 29 | y | 602 | CLA | C10-C11-C12-C13 |
| 39 | y | 624 | LHG | C34-C35-C36-C37 |
| 47 | R | 621 | XAT | C30-C31-C32-C33 |
| 48 | y | 623 | NEX | C30-C31-C32-C33 |
| 33 | C | 521 | LMG | C28-C29-C30-C31 |
| 29 | Y | 611 | CLA | C16-C17-C18-C19 |
| 29 | G | 602 | CLA | C4-C3-C5-C6 |
| 29 | b | 607 | CLA | C4-C3-C5-C6 |
| 29 | n | 602 | CLA | C13-C15-C16-C17 |
| 39 | n | 624 | LHG | C33-C34-C35-C36 |
| 39 | n | 624 | LHG | O10-C23-O8-C6 |
| 36 | b | 623 | DGA | CB2-CB3-CB4-CB5 |
| 29 | B | 606 | CLA | C8-C10-C11-C12 |
| 29 | C | 504 | CLA | C8-C10-C11-C12 |
| 29 | S | 610 | CLA | C2-C1-O2A-CGA |
| 29 | Y | 602 | CLA | C2-C1-O2A-CGA |
| 29 | y | 602 | CLA | C2-C1-O2A-CGA |
| 30 | A | 409 | PHO | C2-C1-O2A-CGA |
| 39 | l | 101 | LHG | C26-C27-C28-C29 |
| 38 | c | 520 | DGD | C4B-C5B-C6B-C7B |
| 29 | C | 502 | CLA | C2A-CAA-CBA-CGA |
| 29 | C | 512 | CLA | C2A-CAA-CBA-CGA |
| 29 | G | 610 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 611 | CLA | C2A-CAA-CBA-CGA |
| 29 | g | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | r | 613 | CLA | C2A-CAA-CBA-CGA |
| 33 | h | 102 | LMG | O7-C8-C9-O8 |
| 39 | S | 624 | LHG | C2-C3-O3-P |
| 39 | l | 101 | LHG | C2-C3-O3-P |
| 33 | D | 411 | LMG | C32-C33-C34-C35 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | C | 511 | CLA | C3A-C2A-CAA-CBA |
| 29 | S | 605 | CLA | C3A-C2A-CAA-CBA |
| 45 | y | 601 | CHL | C3A-C2A-CAA-CBA |
| 33 | h | 102 | LMG | C12-C13-C14-C15 |
| 39 | D | 409 | LHG | C17-C18-C19-C20 |
| 46 | Y | 620 | LUT | C33-C34-C35-C15 |
| 29 | C | 510 | CLA | C4-C3-C5-C6 |
| 39 | C | 525 | LHG | C9-C10-C11-C12 |
| 50 | i | 101 | 3PH | C27-C28-C29-C2A |
| 29 | c | 510 | CLA | C5-C6-C7-C8 |
| 29 | B | 616 | CLA | C6-C7-C8-C9 |
| 29 | C | 510 | CLA | C11-C10-C8-C9 |
| 29 | G | 602 | CLA | C11-C10-C8-C9 |
| 29 | b | 609 | CLA | C11-C12-C13-C14 |
| 29 | b | 617 | CLA | C6-C7-C8-C9 |
| 29 | c | 511 | CLA | C6-C7-C8-C9 |
| 29 | n | 603 | CLA | C11-C12-C13-C14 |
| 29 | y | 610 | CLA | C11-C10-C8-C9 |
| 29 | y | 614 | CLA | C11-C10-C8-C9 |
| 45 | N | 605 | CHL | C11-C12-C13-C14 |
| 45 | N | 606 | CHL | C14-C13-C15-C16 |
| 45 | n | 609 | CHL | C14-C13-C15-C16 |
| 45 | g | 601 | CHL | C11-C10-C8-C9 |
| 45 | y | 607 | CHL | C11-C12-C13-C14 |
| 29 | c | 503 | CLA | C16-C17-C18-C19 |
| 45 | s | 601 | CHL | CAA-CBA-CGA-O2A |
| 29 | c | 509 | CLA | C8-C10-C11-C12 |
| 39 | C | 525 | LHG | C25-C26-C27-C28 |
| 39 | d | 410 | LHG | C34-C35-C36-C37 |
| 31 | D | 404 | BCR | C20-C21-C22-C37 |
| 31 | d | 404 | BCR | C20-C21-C22-C37 |
| 38 | c | 519 | DGD | C1G-C2G-C3G-O3G |
| 39 | y | 624 | LHG | C4-C5-C6-O8 |
| 48 | S | 622 | NEX | C39-C29-C30-C31 |
| 48 | s | 623 | NEX | C39-C29-C30-C31 |
| 33 | h | 102 | LMG | O9-C10-O7-C8 |
| 32 | c | 626 | SQD | C9-C10-C11-C12 |
| 39 | C | 525 | LHG | C12-C13-C14-C15 |
| 45 | s | 606 | CHL | C2A-CAA-CBA-CGA |
| 29 | C | 511 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 615 | CLA | C16-C17-C18-C20 |
| 38 | C | 518 | DGD | O6E-C1E-O5D-C6D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | r | 609 | CLA | C8-C10-C11-C12 |
| 45 | S | 601 | CHL | CAA-CBA-CGA-O1A |
| 47 | G | 622 | XAT | C14-C15-C35-C34 |
| 45 | N | 607 | CHL | C8-C10-C11-C12 |
| 33 | H | 102 | LMG | C12-C13-C14-C15 |
| 51 | Y | 625 | SPH | C11-C10-C9-C8 |
| 39 | n | 624 | LHG | C6-C5-O7-C7 |
| 51 | Y | 625 | SPH | O3-C3-C4-C5 |
| 29 | b | 605 | CLA | C15-C16-C17-C18 |
| 45 | y | 609 | CHL | C4-C3-C5-C6 |
| 29 | D | 403 | CLA | C1A-C2A-CAA-CBA |
| 29 | Y | 614 | CLA | C1A-C2A-CAA-CBA |
| 29 | d | 403 | CLA | C1A-C2A-CAA-CBA |
| 29 | g | 614 | CLA | C1A-C2A-CAA-CBA |
| 29 | y | 602 | CLA | C1A-C2A-CAA-CBA |
| 45 | N | 609 | CHL | C1A-C2A-CAA-CBA |
| 45 | Y | 601 | CHL | C1A-C2A-CAA-CBA |
| 29 | A | 406 | CLA | C11-C10-C8-C7 |
| 29 | C | 510 | CLA | C2-C3-C5-C6 |
| 29 | R | 609 | CLA | C6-C7-C8-C10 |
| 29 | b | 608 | CLA | C12-C13-C15-C16 |
| 29 | c | 503 | CLA | C6-C7-C8-C10 |
| 29 | c | 510 | CLA | C11-C10-C8-C7 |
| 29 | d | 402 | CLA | C11-C10-C8-C7 |
| 29 | y | 604 | CLA | C11-C10-C8-C7 |
| 45 | N | 607 | CHL | C11-C12-C13-C15 |
| 29 | C | 508 | CLA | C8-C10-C11-C12 |
| 29 | G | 613 | CLA | C13-C15-C16-C17 |
| 29 | Y | 603 | CLA | C10-C11-C12-C13 |
| 29 | c | 501 | CLA | C3-C5-C6-C7 |
| 31 | C | 514 | BCR | C19-C20-C21-C22 |
| 31 | C | 515 | BCR | C19-C20-C21-C22 |
| 39 | L | 101 | LHG | C31-C32-C33-C34 |
| 30 | a | 408 | PHO | O1A-CGA-O2A-C1 |
| 29 | g | 603 | CLA | C3-C5-C6-C7 |
| 29 | A | 405 | CLA | C2A-CAA-CBA-CGA |
| 29 | G | 602 | CLA | C2A-CAA-CBA-CGA |
| 29 | g | 610 | CLA | C2A-CAA-CBA-CGA |
| 29 | c | 509 | CLA | C13-C15-C16-C17 |
| 29 | c | 512 | CLA | C5-C6-C7-C8 |
| 38 | C | 523 | DGD | C6A-C7A-C8A-C9A |
| 39 | D | 410 | LHG | C34-C35-C36-C37 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | G | 630 | LHG | C33-C34-C35-C36 |
| 45 | N | 608 | CHL | O2A-C1-C2-C3 |
| 45 | n | 608 | CHL | O2A-C1-C2-C3 |
| 29 | N | 613 | CLA | C10-C11-C12-C13 |
| 38 | c | 519 | DGD | C6A-C7A-C8A-C9A |
| 36 | b | 623 | DGA | CA5-CA6-CA7-CA8 |
| 39 | G | 630 | LHG | O8-C23-C24-C25 |
| 29 | n | 602 | CLA | C4-C3-C5-C6 |
| 33 | d | 411 | LMG | C32-C33-C34-C35 |
| 29 | s | 603 | CLA | C8-C10-C11-C12 |
| 38 | C | 520 | DGD | C1A-C2A-C3A-C4A |
| 32 | C | 526 | SQD | C31-C32-C33-C34 |
| 43 | f | 101 | HEM | C3D-CAD-CBD-CGD |
| 45 | s | 601 | CHL | CAA-CBA-CGA-O1A |
| 29 | g | 603 | CLA | C5-C6-C7-C8 |
| 39 | G | 630 | LHG | C9-C10-C11-C12 |
| 39 | l | 101 | LHG | C31-C32-C33-C34 |
| 29 | a | 406 | CLA | C3-C5-C6-C7 |
| 45 | g | 601 | CHL | C3-C5-C6-C7 |
| 31 | D | 404 | BCR | C20-C21-C22-C23 |
| 31 | d | 404 | BCR | C20-C21-C22-C23 |
| 48 | S | 622 | NEX | C28-C29-C30-C31 |
| 48 | s | 623 | NEX | C28-C29-C30-C31 |
| 29 | s | 602 | CLA | C10-C11-C12-C13 |
| 32 | a | 412 | SQD | C27-C28-C29-C30 |
| 38 | C | 519 | DGD | O2G-C2G-C3G-O3G |
| 39 | D | 408 | LHG | O7-C5-C6-O8 |
| 29 | D | 402 | CLA | CBA-CGA-O2A-C1 |
| 32 | a | 412 | SQD | C32-C33-C34-C35 |
| 39 | G | 630 | LHG | C16-C17-C18-C19 |
| 50 | s | 626 | 3PH | C33-C34-C35-C36 |
| 31 | a | 411 | BCR | C19-C20-C21-C22 |
| 31 | c | 514 | BCR | C19-C20-C21-C22 |
| 46 | Y | 620 | LUT | C29-C30-C31-C32 |
| 33 | h | 102 | LMG | C19-C20-C21-C22 |
| 29 | D | 402 | CLA | O1A-CGA-O2A-C1 |
| 33 | C | 521 | LMG | O10-C28-O8-C9 |
| 39 | N | 624 | LHG | C1-C2-C3-O3 |
| 29 | a | 406 | CLA | C15-C16-C17-C18 |
| 45 | N | 609 | CHL | C8-C10-C11-C12 |
| 29 | R | 602 | CLA | C3-C5-C6-C7 |
| 29 | C | 506 | CLA | C4-C3-C5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | N | 613 | CLA | CAA-CBA-CGA-O1A |
| 29 | N | 602 | CLA | C2-C1-O2A-CGA |
| 29 | b | 615 | CLA | C2-C1-O2A-CGA |
| 29 | c | 501 | CLA | C2-C1-O2A-CGA |
| 45 | G | 609 | CHL | C2-C1-O2A-CGA |
| 45 | g | 607 | CHL | C2-C1-O2A-CGA |
| 29 | c | 506 | CLA | C2-C3-C5-C6 |
| 29 | s | 604 | CLA | C2-C3-C5-C6 |
| 39 | D | 409 | LHG | C16-C17-C18-C19 |
| 39 | d | 409 | LHG | C18-C19-C20-C21 |
| 45 | S | 601 | CHL | CAA-CBA-CGA-O2A |
| 29 | C | 512 | CLA | C11-C12-C13-C14 |
| 29 | c | 504 | CLA | C14-C13-C15-C16 |
| 29 | r | 610 | CLA | C10-C11-C12-C13 |
| 45 | g | 608 | CHL | C2A-CAA-CBA-CGA |
| 33 | c | 521 | LMG | O10-C28-O8-C9 |
| 29 | A | 406 | CLA | C3-C5-C6-C7 |
| 29 | S | 614 | CLA | C5-C6-C7-C8 |
| 51 | y | 625 | SPH | O1-C1-C2-C3 |
| 29 | d | 402 | CLA | CAA-CBA-CGA-O2A |
| 33 | H | 102 | LMG | C19-C20-C21-C22 |
| 39 | N | 624 | LHG | C33-C34-C35-C36 |
| 45 | g | 605 | CHL | C2-C1-O2A-CGA |
| 29 | B | 602 | CLA | C16-C17-C18-C19 |
| 38 | c | 520 | DGD | C9B-CAB-CBB-CCB |
| 38 | c | 523 | DGD | CDA-CEA-CFA-CGA |
| 31 | B | 618 | BCR | C23-C24-C25-C30 |
| 31 | B | 619 | BCR | C23-C24-C25-C30 |
| 31 | b | 618 | BCR | C23-C24-C25-C30 |
| 31 | c | 514 | BCR | C23-C24-C25-C30 |
| 31 | c | 517 | BCR | C1-C6-C7-C8 |
| 35 | B | 620 | C7Z | C1-C6-C7-C8 |
| 46 | S | 621 | LUT | C1-C6-C7-C8 |
| 46 | y | 620 | LUT | C1-C6-C7-C8 |
| 46 | y | 620 | LUT | C5-C6-C7-C8 |
| 29 | Y | 612 | CLA | C5-C6-C7-C8 |
| 29 | s | 611 | CLA | CAA-CBA-CGA-O2A |
| 39 | C | 525 | LHG | O8-C23-C24-C25 |
| 32 | B | 621 | SQD | O6-C44-C45-C46 |
| 32 | b | 621 | SQD | O6-C44-C45-C46 |
| 33 | h | 102 | LMG | C7-C8-C9-O8 |
| 31 | b | 619 | BCR | C15-C16-C17-C18 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 46 | G | 620 | LUT | C29-C30-C31-C32 |
| 47 | r | 622 | XAT | C33-C34-C35-C15 |
| 47 | y | 622 | XAT | C29-C30-C31-C32 |
| 29 | B | 617 | CLA | C4-C3-C5-C6 |
| 29 | N | 602 | CLA | C4-C3-C5-C6 |
| 29 | c | 511 | CLA | C4-C3-C5-C6 |
| 29 | y | 610 | CLA | C4-C3-C5-C6 |
| 45 | n | 609 | CHL | C4-C3-C5-C6 |
| 31 | B | 619 | BCR | C11-C12-C13-C14 |
| 46 | G | 620 | LUT | C31-C32-C33-C34 |
| 38 | C | 519 | DGD | C5A-C6A-C7A-C8A |
| 29 | R | 603 | CLA | C2-C3-C5-C6 |
| 48 | G | 623 | NEX | C14-C15-C35-C34 |
| 39 | L | 101 | LHG | C26-C27-C28-C29 |
| 29 | D | 402 | CLA | C15-C16-C17-C18 |
| 29 | g | 613 | CLA | C5-C6-C7-C8 |
| 29 | b | 613 | CLA | C2A-CAA-CBA-CGA |
| 33 | C | 521 | LMG | C29-C28-O8-C9 |
| 29 | g | 610 | CLA | C3-C5-C6-C7 |
| 29 | n | 612 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 604 | CLA | C15-C16-C17-C18 |
| 29 | G | 610 | CLA | C15-C16-C17-C18 |
| 39 | D | 410 | LHG | C29-C30-C31-C32 |
| 29 | C | 512 | CLA | C11-C12-C13-C15 |
| 29 | n | 603 | CLA | C11-C12-C13-C15 |
| 45 | n | 605 | CHL | C11-C12-C13-C15 |
| 45 | g | 609 | CHL | C11-C12-C13-C15 |
| 45 | y | 609 | CHL | C2-C3-C5-C6 |
| 33 | c | 521 | LMG | C29-C28-O8-C9 |
| 33 | A | 413 | LMG | C33-C34-C35-C36 |
| 33 | h | 102 | LMG | C11-C12-C13-C14 |
| 36 | b | 623 | DGA | OG2-CG2-CG3-OXT |
| 36 | c | 524 | DGA | OG2-CG2-CG3-OXT |
| 31 | A | 411 | BCR | C19-C20-C21-C22 |
| 31 | D | 404 | BCR | C13-C14-C15-C16 |
| 46 | N | 620 | LUT | C29-C30-C31-C32 |
| 29 | D | 402 | CLA | CAA-CBA-CGA-O2A |
| 30 | A | 408 | PHO | C16-C17-C18-C19 |
| 32 | b | 621 | SQD | C18-C19-C20-C21 |
| 29 | S | 603 | CLA | C10-C11-C12-C13 |
| 38 | c | 520 | DGD | O1G-C1G-C2G-O2G |
| 39 | s | 624 | LHG | C35-C36-C37-C38 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | Y | 603 | CLA | C13-C15-C16-C17 |
| 45 | g | 606 | CHL | O2A-C1-C2-C3 |
| 45 | r | 607 | CHL | O2A-C1-C2-C3 |
| 29 | b | 605 | CLA | CAA-CBA-CGA-O2A |
| 29 | y | 613 | CLA | CAA-CBA-CGA-O2A |
| 39 | d | 410 | LHG | O8-C23-C24-C25 |
| 45 | r | 607 | CHL | CAA-CBA-CGA-O2A |
| 33 | d | 411 | LMG | C29-C30-C31-C32 |
| 39 | D | 408 | LHG | C31-C32-C33-C34 |
| 29 | y | 613 | CLA | C10-C11-C12-C13 |
| 29 | B | 608 | CLA | C16-C17-C18-C19 |
| 36 | c | 524 | DGA | CA2-CA1-OG1-CG1 |
| 38 | C | 520 | DGD | O6D-C5D-C6D-O5D |
| 29 | S | 604 | CLA | C4-C3-C5-C6 |
| 29 | b | 609 | CLA | C4-C3-C5-C6 |
| 29 | b | 617 | CLA | C4-C3-C5-C6 |
| 29 | c | 505 | CLA | C4-C3-C5-C6 |
| 29 | s | 611 | CLA | C4-C3-C5-C6 |
| 42 | d | 405 | PL9 | C20-C19-C21-C22 |
| 45 | Y | 609 | CHL | C4-C3-C5-C6 |
| 29 | A | 406 | CLA | C15-C16-C17-C18 |
| 38 | C | 520 | DGD | C9A-CAA-CBA-CCA |
| 29 | N | 602 | CLA | C2-C3-C5-C6 |
| 29 | n | 602 | CLA | C2-C3-C5-C6 |
| 30 | A | 408 | PHO | C2-C3-C5-C6 |
| 42 | d | 405 | PL9 | C18-C19-C21-C22 |
| 33 | b | 622 | LMG | O7-C10-C11-C12 |
| 39 | Y | 624 | LHG | C15-C16-C17-C18 |
| 29 | B | 604 | CLA | C11-C12-C13-C14 |
| 29 | R | 608 | CLA | C6-C7-C8-C9 |
| 29 | S | 603 | CLA | C11-C10-C8-C9 |
| 29 | a | 406 | CLA | C11-C10-C8-C9 |
| 29 | b | 613 | CLA | C11-C12-C13-C14 |
| 29 | c | 506 | CLA | C6-C7-C8-C9 |
| 29 | c | 512 | CLA | C6-C7-C8-C9 |
| 29 | n | 604 | CLA | C11-C10-C8-C9 |
| 45 | y | 609 | CHL | C11-C10-C8-C9 |
| 51 | Y | 625 | SPH | C2-C3-C4-C5 |
| 29 | R | 610 | CLA | C3A-C2A-CAA-CBA |
| 29 | n | 610 | CLA | C3A-C2A-CAA-CBA |
| 29 | g | 604 | CLA | C3A-C2A-CAA-CBA |
| 29 | s | 605 | CLA | C3A-C2A-CAA-CBA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 45 | R | 607 | CHL | C3A-C2A-CAA-CBA |
| 45 | g | 601 | CHL | C3A-C2A-CAA-CBA |
| 45 | s | 601 | CHL | C3A-C2A-CAA-CBA |
| 45 | y | 605 | CHL | C3A-C2A-CAA-CBA |
| 39 | d | 409 | LHG | C16-C17-C18-C19 |
| 39 | g | 624 | LHG | C16-C17-C18-C19 |
| 45 | Y | 607 | CHL | C10-C11-C12-C13 |
| 29 | b | 610 | CLA | O1A-CGA-O2A-C1 |
| 36 | c | 524 | DGA | OA1-CA1-OG1-CG1 |
| 29 | b | 609 | CLA | CAA-CBA-CGA-O2A |
| 32 | a | 412 | SQD | O47-C7-C8-C9 |
| 33 | B | 622 | LMG | O7-C10-C11-C12 |
| 39 | l | 101 | LHG | O7-C7-C8-C9 |
| 50 | s | 626 | 3PH | C36-C37-C38-C39 |
| 29 | S | 612 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 610 | CLA | CAD-CBD-CGD-O2D |
| 29 | C | 509 | CLA | CAD-CBD-CGD-O2D |
| 29 | C | 510 | CLA | CAD-CBD-CGD-O2D |
| 29 | N | 603 | CLA | CAD-CBD-CGD-O2D |
| 29 | G | 611 | CLA | CAD-CBD-CGD-O2D |
| 29 | S | 612 | CLA | CAD-CBD-CGD-O2D |
| 29 | b | 610 | CLA | CAD-CBD-CGD-O2D |
| 29 | b | 617 | CLA | CAD-CBD-CGD-O2D |
| 29 | c | 503 | CLA | CAD-CBD-CGD-O2D |
| 29 | c | 504 | CLA | CAD-CBD-CGD-O2D |
| 29 | n | 603 | CLA | CAD-CBD-CGD-O2D |
| 29 | y | 614 | CLA | CAD-CBD-CGD-O2D |
| 30 | A | 408 | PHO | CAD-CBD-CGD-O2D |
| 40 | c | 627 | LMK | C1-C2-C3-N4 |
| 45 | S | 601 | CHL | CAD-CBD-CGD-O2D |
| 45 | r | 606 | CHL | CAD-CBD-CGD-O2D |
| 45 | y | 606 | CHL | CAD-CBD-CGD-O2D |
| 29 | C | 513 | CLA | C16-C17-C18-C20 |
| 29 | y | 610 | CLA | C8-C10-C11-C12 |
| 29 | B | 617 | CLA | C2-C1-O2A-CGA |
| 38 | c | 519 | DGD | O6D-C5D-C6D-O5D |
| 39 | D | 410 | LHG | O8-C23-C24-C25 |
| 33 | d | 411 | LMG | C15-C16-C17-C18 |
| 39 | D | 410 | LHG | C31-C32-C33-C34 |
| 39 | G | 630 | LHG | C34-C35-C36-C37 |
| 42 | D | 405 | PL9 | C20-C19-C21-C22 |
| 29 | b | 609 | CLA | C16-C17-C18-C19 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | g | 624 | LHG | C33-C34-C35-C36 |
| 29 | b | 602 | CLA | C2-C3-C5-C6 |
| 29 | S | 617 | CLA | CAA-CBA-CGA-O2A |
| 29 | Y | 613 | CLA | CAA-CBA-CGA-O2A |
| 33 | c | 521 | LMG | O7-C10-C11-C12 |
| 32 | C | 526 | SQD | C27-C28-C29-C30 |
| 38 | C | 520 | DGD | C9B-CAB-CBB-CCB |
| 46 | n | 620 | LUT | C31-C32-C33-C34 |
| 38 | C | 519 | DGD | O1G-C1G-C2G-C3G |
| 38 | C | 523 | DGD | O1G-C1G-C2G-C3G |
| 39 | c | 625 | LHG | C5-C4-O6-P |
| 40 | C | 527 | LMK | C11-C10-O7-C8 |
| 47 | N | 622 | XAT | O24-C26-C27-C28 |
| 47 | Y | 622 | XAT | O24-C26-C27-C28 |
| 29 | n | 612 | CLA | CAA-CBA-CGA-O1A |
| 39 | Y | 624 | LHG | O6-C4-C5-O7 |
| 29 | C | 503 | CLA | CAA-CBA-CGA-O2A |
| 29 | G | 613 | CLA | CAA-CBA-CGA-O2A |
| 36 | B | 625 | DGA | OG2-CB1-CB2-CB3 |
| 29 | n | 613 | CLA | C16-C17-C18-C19 |
| 39 | S | 624 | LHG | C35-C36-C37-C38 |
| 36 | C | 524 | DGA | CA5-CA6-CA7-CA8 |
| 29 | S | 605 | CLA | C2A-CAA-CBA-CGA |
| 29 | b | 605 | CLA | C13-C15-C16-C17 |
| 39 | G | 630 | LHG | C32-C33-C34-C35 |
| 29 | a | 410 | CLA | C3-C5-C6-C7 |
| 39 | D | 409 | LHG | C27-C28-C29-C30 |
| 29 | B | 611 | CLA | CHA-CBD-CGD-O1D |
| 29 | B | 611 | CLA | CHA-CBD-CGD-O2D |
| 29 | C | 507 | CLA | CHA-CBD-CGD-O2D |
| 29 | G | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | G | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | G | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | G | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | G | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | G | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | G | 613 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 603 | CLA | CHA-CBD-CGD-O1D |
| 29 | R | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | R | 609 | CLA | CHA-CBD-CGD-O1D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | R | 609 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 603 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | S | 617 | CLA | CHA-CBD-CGD-O1D |
| 29 | S | 617 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 608 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 608 | CLA | CHA-CBD-CGD-O2D |
| 29 | Y | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | Y | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 609 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 609 | CLA | CHA-CBD-CGD-O2D |
| 29 | b | 615 | CLA | CHA-CBD-CGD-O1D |
| 29 | b | 615 | CLA | CHA-CBD-CGD-O2D |
| 29 | c | 502 | CLA | CHA-CBD-CGD-O1D |
| 29 | c | 502 | CLA | CHA-CBD-CGD-O2D |
| 29 | c | 507 | CLA | CHA-CBD-CGD-O1D |
| 29 | c | 507 | CLA | CHA-CBD-CGD-O2D |
| 29 | d | 402 | CLA | CHA-CBD-CGD-O2D |
| 29 | n | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | n | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | n | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | g | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | g | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | g | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 602 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 602 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 604 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 604 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 609 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 609 | CLA | CHA-CBD-CGD-O2D |
| 29 | r | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | r | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 603 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 612 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 612 | CLA | CHA-CBD-CGD-O2D |
| 29 | s | 617 | CLA | CHA-CBD-CGD-O1D |
| 29 | s | 617 | CLA | CHA-CBD-CGD-O2D |
| 29 | y | 603 | CLA | CHA-CBD-CGD-O1D |
| 29 | y | 603 | CLA | CHA-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | y | 608 | CLA | CHA-CBD-CGD-O1D |
| 29 | y | 608 | CLA | CHA-CBD-CGD-O2D |
| 29 | y | 610 | CLA | CHA-CBD-CGD-O1D |
| 29 | y | 610 | CLA | CHA-CBD-CGD-O2D |
| 29 | y | 613 | CLA | CHA-CBD-CGD-O1D |
| 29 | y | 613 | CLA | CHA-CBD-CGD-O2D |
| 31 | d | 404 | BCR | C13-C14-C15-C16 |
| 45 | N | 601 | CHL | CHA-CBD-CGD-O2D |
| 45 | G | 606 | CHL | CHA-CBD-CGD-O1D |
| 45 | G | 606 | CHL | CHA-CBD-CGD-O2D |
| 45 | G | 609 | CHL | CHA-CBD-CGD-O1D |
| 45 | G | 609 | CHL | CHA-CBD-CGD-O2D |
| 45 | Y | 609 | CHL | CHA-CBD-CGD-O2D |
| 45 | n | 601 | CHL | CHA-CBD-CGD-O2D |
| 45 | g | 609 | CHL | CHA-CBD-CGD-O1D |
| 45 | g | 609 | CHL | CHA-CBD-CGD-O2D |
| 45 | r | 607 | CHL | CHA-CBD-CGD-O1D |
| 45 | r | 607 | CHL | CHA-CBD-CGD-O2D |
| 45 | s | 601 | CHL | CHA-CBD-CGD-O1D |
| 45 | y | 609 | CHL | CHA-CBD-CGD-O1D |
| 45 | y | 609 | CHL | CHA-CBD-CGD-O2D |
| 29 | s | 612 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 608 | CLA | CAA-CBA-CGA-O2A |
| 29 | g | 613 | CLA | CAA-CBA-CGA-O2A |
| 29 | c | 505 | CLA | C2-C3-C5-C6 |
| 45 | n | 609 | CHL | C2-C3-C5-C6 |
| 29 | s | 604 | CLA | C3-C5-C6-C7 |
| 39 | Y | 624 | LHG | O6-C4-C5-C6 |
| 39 | d | 408 | LHG | O6-C4-C5-C6 |
| 29 | S | 612 | CLA | CAA-CBA-CGA-O1A |
| 39 | d | 408 | LHG | C31-C32-C33-C34 |
| 29 | s | 604 | CLA | C6-C7-C8-C9 |
| 42 | d | 405 | PL9 | C2-C3-C7-C8 |
| 29 | B | 605 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 612 | CLA | CAA-CBA-CGA-O2A |
| 29 | S | 611 | CLA | CAA-CBA-CGA-O2A |
| 29 | b | 608 | CLA | CAA-CBA-CGA-O2A |
| 29 | n | 604 | CLA | CAA-CBA-CGA-O2A |
| 32 | C | 526 | SQD | O47-C7-C8-C9 |
| 33 | C | 521 | LMG | O7-C10-C11-C12 |
| 33 | J | 101 | LMG | O7-C10-C11-C12 |
| 32 | a | 412 | SQD | O6-C44-C45-O47 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 40 | c | 627 | LMK | O7-C8-C9-O8 |
| 29 | n | 603 | CLA | C15-C16-C17-C18 |
| 29 | A | 405 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 603 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 609 | CLA | CAA-CBA-CGA-O2A |
| 29 | R | 604 | CLA | CAA-CBA-CGA-O2A |
| 36 | b | 623 | DGA | OG2-CB1-CB2-CB3 |
| 39 | D | 408 | LHG | O7-C7-C8-C9 |
| 45 | n | 605 | CHL | CAA-CBA-CGA-O2A |
| 30 | A | 409 | PHO | CHA-CBD-CGD-O1D |
| 30 | A | 409 | PHO | CHA-CBD-CGD-O2D |
| 29 | a | 405 | CLA | C8-C10-C11-C12 |
| 29 | a | 405 | CLA | C15-C16-C17-C18 |
| 29 | b | 610 | CLA | CBA-CGA-O2A-C1 |
| 32 | C | 526 | SQD | O48-C23-C24-C25 |
| 36 | C | 524 | DGA | OG1-CA1-CA2-CA3 |
| 32 | a | 412 | SQD | C11-C12-C13-C14 |
| 39 | g | 624 | LHG | C34-C35-C36-C37 |
| 39 | s | 624 | LHG | C25-C26-C27-C28 |
| 29 | r | 610 | CLA | C8-C10-C11-C12 |
| 29 | G | 602 | CLA | C2-C3-C5-C6 |
| 29 | S | 610 | CLA | C11-C12-C13-C15 |
| 29 | S | 611 | CLA | C11-C12-C13-C15 |
| 29 | Y | 603 | CLA | C11-C12-C13-C15 |
| 29 | b | 607 | CLA | C2-C3-C5-C6 |
| 29 | s | 603 | CLA | C12-C13-C15-C16 |
| 29 | y | 610 | CLA | C6-C7-C8-C10 |
| 45 | Y | 609 | CHL | C2-C3-C5-C6 |
| 29 | Y | 611 | CLA | C16-C17-C18-C20 |
| 38 | c | 523 | DGD | C6A-C7A-C8A-C9A |
| 29 | b | 603 | CLA | CAA-CBA-CGA-O2A |
| 32 | A | 412 | SQD | C10-C11-C12-C13 |
| 29 | A | 406 | CLA | C11-C10-C8-C9 |
| 29 | B | 606 | CLA | C11-C12-C13-C14 |
| 29 | B | 617 | CLA | C11-C10-C8-C9 |
| 29 | Y | 610 | CLA | C11-C10-C8-C9 |
| 29 | b | 608 | CLA | C14-C13-C15-C16 |
| 29 | c | 503 | CLA | C6-C7-C8-C9 |
| 31 | B | 619 | BCR | C19-C20-C21-C22 |
| 31 | b | 618 | BCR | C13-C14-C15-C16 |
| 31 | c | 516 | BCR | C19-C20-C21-C22 |
| 39 | D | 409 | LHG | C11-C10-C9-C8 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 50 | S | 626 | 3PH | C2E-C2F-C2G-C2H |
| 29 | R | 612 | CLA | CAA-CBA-CGA-O2A |
| 29 | S | 603 | CLA | CAA-CBA-CGA-O2A |
| 32 | a | 412 | SQD | C4-C5-C6-S |
| 39 | G | 630 | LHG | C19-C20-C21-C22 |
| 33 | h | 102 | LMG | C11-C10-O7-C8 |
| 29 | B | 610 | CLA | C2A-CAA-CBA-CGA |
| 29 | B | 614 | CLA | C2A-CAA-CBA-CGA |
| 29 | G | 613 | CLA | CAA-CBA-CGA-O1A |
| 29 | r | 609 | CLA | CAA-CBA-CGA-O1A |
| 45 | N | 605 | CHL | CAA-CBA-CGA-O2A |
| 39 | y | 624 | LHG | C14-C15-C16-C17 |
| 32 | C | 526 | SQD | C9-C10-C11-C12 |
| 29 | B | 602 | CLA | CAA-CBA-CGA-O2A |
| 39 | d | 408 | LHG | C10-C11-C12-C13 |
| 39 | d | 410 | LHG | C27-C28-C29-C30 |
| 31 | a | 411 | BCR | C7-C8-C9-C10 |
| 31 | a | 411 | BCR | C11-C12-C13-C14 |
| 47 | R | 621 | XAT | C7-C8-C9-C10 |
| 29 | g | 604 | CLA | C1A-C2A-CAA-CBA |
| 29 | r | 609 | CLA | C1A-C2A-CAA-CBA |
| 45 | N | 605 | CHL | C1A-C2A-CAA-CBA |
| 45 | G | 601 | CHL | C1A-C2A-CAA-CBA |
| 45 | g | 601 | CHL | C1A-C2A-CAA-CBA |
| 45 | g | 607 | CHL | C1A-C2A-CAA-CBA |
| 45 | r | 607 | CHL | C1A-C2A-CAA-CBA |
| 45 | s | 601 | CHL | C1A-C2A-CAA-CBA |
| 45 | y | 601 | CHL | C1A-C2A-CAA-CBA |
| 29 | b | 605 | CLA | CAA-CBA-CGA-O1A |
| 45 | r | 607 | CHL | CAA-CBA-CGA-O1A |
| 29 | c | 503 | CLA | CAA-CBA-CGA-O2A |
| 29 | S | 609 | CLA | C8-C10-C11-C12 |
| 33 | H | 102 | LMG | C29-C30-C31-C32 |
| 33 | d | 411 | LMG | C19-C20-C21-C22 |
| 29 | S | 617 | CLA | CAA-CBA-CGA-O1A |
| 33 | B | 622 | LMG | O9-C10-C11-C12 |
| 39 | d | 410 | LHG | O10-C23-C24-C25 |
| 45 | N | 605 | CHL | CAA-CBA-CGA-O1A |
| 32 | a | 412 | SQD | C12-C13-C14-C15 |
| 39 | d | 408 | LHG | C12-C13-C14-C15 |
| 38 | c | 519 | DGD | O1G-C1G-C2G-C3G |
| 29 | s | 610 | CLA | CAA-CBA-CGA-O2A |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 39 | y | 624 | LHG | O8-C23-C24-C25 |
| 29 | B | 603 | CLA | CAA-CBA-CGA-O1A |
| 29 | y | 613 | CLA | CAA-CBA-CGA-O1A |
| 32 | C | 526 | SQD | O49-C7-C8-C9 |
| 33 | a | 413 | LMG | C29-C30-C31-C32 |
| 30 | A | 408 | PHO | C4-C3-C5-C6 |
| 39 | g | 624 | LHG | C10-C11-C12-C13 |
| 51 | y | 625 | SPH | C12-C13-C14-C15 |
| 29 | B | 605 | CLA | CAA-CBA-CGA-O1A |
| 29 | B | 608 | CLA | CAA-CBA-CGA-O1A |
| 33 | C | 521 | LMG | O9-C10-C11-C12 |
| 33 | b | 622 | LMG | O9-C10-C11-C12 |
| 50 | S | 626 | 3PH | C29-C2A-C2B-C2C |
| 29 | C | 511 | CLA | C13-C15-C16-C17 |
| 29 | R | 608 | CLA | C10-C11-C12-C13 |
| 39 | N | 624 | LHG | C3-O3-P-O5 |
| 39 | G | 630 | LHG | C3-O3-P-O5 |
| 39 | Y | 624 | LHG | C3-O3-P-O5 |
| 39 | d | 408 | LHG | C3-O3-P-O5 |
| 39 | g | 624 | LHG | C3-O3-P-O5 |
| 39 | y | 624 | LHG | C3-O3-P-O5 |
| 29 | B | 609 | CLA | CAA-CBA-CGA-O1A |
| 29 | C | 503 | CLA | CAA-CBA-CGA-O1A |
| 29 | b | 603 | CLA | CAA-CBA-CGA-O1A |
| 29 | b | 609 | CLA | CAA-CBA-CGA-O1A |
| 36 | B | 625 | DGA | OB1-CB1-CB2-CB3 |
| 29 | C | 508 | CLA | CAA-CBA-CGA-O2A |
| 29 | s | 612 | CLA | CAA-CBA-CGA-O1A |
| 46 | S | 621 | LUT | C5-C6-C7-C8 |
| 33 | j | 101 | LMG | C30-C31-C32-C33 |
| 29 | B | 616 | CLA | C10-C11-C12-C13 |
| 29 | B | 612 | CLA | CAA-CBA-CGA-O1A |
| 29 | b | 608 | CLA | CAA-CBA-CGA-O1A |
| 33 | c | 521 | LMG | O9-C10-C11-C12 |
| 29 | c | 503 | CLA | C8-C10-C11-C12 |
| 39 | D | 409 | LHG | C18-C19-C20-C21 |
| 45 | s | 601 | CHL | C2A-CAA-CBA-CGA |
| 29 | g | 613 | CLA | CAA-CBA-CGA-O1A |
| 39 | D | 410 | LHG | O10-C23-C24-C25 |
| 39 | L | 101 | LHG | C19-C20-C21-C22 |
| 39 | Y | 624 | LHG | C23-C24-C25-C26 |
| 39 | y | 624 | LHG | C23-C24-C25-C26 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | Y | 613 | CLA | CAA-CBA-CGA-O1A |
| 33 | J | 101 | LMG | O9-C10-C11-C12 |
| 29 | b | 610 | CLA | C4-C3-C5-C6 |
| 30 | a | 409 | PHO | C4-C3-C5-C6 |
| 32 | a | 412 | SQD | C10-C11-C12-C13 |
| 29 | B | 614 | CLA | CAD-CBD-CGD-O1D |
| 29 | C | 511 | CLA | CAD-CBD-CGD-O1D |
| 29 | a | 410 | CLA | CAD-CBD-CGD-O1D |
| 29 | b | 613 | CLA | CAD-CBD-CGD-O1D |
| 29 | c | 502 | CLA | CAD-CBD-CGD-O1D |
| 29 | c | 510 | CLA | CAD-CBD-CGD-O1D |
| 29 | d | 402 | CLA | CAD-CBD-CGD-O1D |
| 29 | r | 603 | CLA | CAD-CBD-CGD-O1D |
| 29 | r | 613 | CLA | CAD-CBD-CGD-O1D |
| 29 | s | 603 | CLA | CAD-CBD-CGD-O1D |
| 29 | y | 610 | CLA | CAD-CBD-CGD-O1D |
| 32 | B | 621 | SQD | O5-C5-C6-S |
| 32 | b | 621 | SQD | O5-C5-C6-S |
| 45 | G | 609 | CHL | CAD-CBD-CGD-O1D |
| 29 | R | 604 | CLA | CAA-CBA-CGA-O1A |
| 29 | n | 604 | CLA | CAA-CBA-CGA-O1A |
| 36 | b | 623 | DGA | OB1-CB1-CB2-CB3 |
| 39 | D | 408 | LHG | O9-C7-C8-C9 |
| 29 | S | 605 | CLA | CAA-CBA-CGA-O2A |
| 29 | g | 614 | CLA | CAA-CBA-CGA-O2A |
| 29 | B | 612 | CLA | C11-C12-C13-C14 |
| 29 | C | 503 | CLA | C6-C7-C8-C9 |
| 29 | C | 504 | CLA | C6-C7-C8-C9 |
| 29 | S | 611 | CLA | C11-C12-C13-C14 |
| 29 | Y | 603 | CLA | C11-C12-C13-C14 |
| 29 | c | 510 | CLA | C11-C10-C8-C9 |
| 29 | d | 402 | CLA | C11-C10-C8-C9 |
| 29 | n | 613 | CLA | C11-C12-C13-C14 |
| 29 | y | 604 | CLA | C11-C10-C8-C9 |
| 29 | y | 610 | CLA | C6-C7-C8-C9 |
| 29 | y | 613 | CLA | C6-C7-C8-C9 |
| 45 | n | 606 | CHL | C11-C12-C13-C14 |
| 45 | n | 609 | CHL | C11-C10-C8-C9 |
| 45 | g | 609 | CHL | C14-C13-C15-C16 |
| 32 | B | 621 | SQD | C14-C15-C16-C17 |
| 37 | b | 625 | GOL | O2-C2-C3-O3 |
| 33 | a | 413 | LMG | C11-C12-C13-C14 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 33 | H | 102 | LMG | O9-C10-C11-C12 |
| 33 | h | 102 | LMG | O9-C10-C11-C12 |
| 36 | C | 524 | DGA | OA1-CA1-CA2-CA3 |
| 29 | C | 505 | CLA | CAA-CBA-CGA-O2A |
| 29 | R | 610 | CLA | CAA-CBA-CGA-O2A |
| 29 | r | 604 | CLA | CAA-CBA-CGA-O2A |
| 29 | s | 603 | CLA | CAA-CBA-CGA-O2A |
| 45 | y | 606 | CHL | CAA-CBA-CGA-O2A |
| 39 | s | 624 | LHG | C10-C11-C12-C13 |
| 29 | s | 610 | CLA | CAA-CBA-CGA-O1A |
| 45 | n | 605 | CHL | CAA-CBA-CGA-O1A |
| 29 | C | 513 | CLA | C15-C16-C17-C18 |
| 29 | Y | 602 | CLA | C13-C15-C16-C17 |
| 29 | N | 604 | CLA | CAA-CBA-CGA-O2A |
| 29 | G | 614 | CLA | CAA-CBA-CGA-O2A |
| 33 | D | 411 | LMG | O7-C10-C11-C12 |
| 33 | d | 411 | LMG | O7-C10-C11-C12 |
| 33 | j | 101 | LMG | O7-C10-C11-C12 |
| 38 | c | 518 | DGD | O1G-C1A-C2A-C3A |
| 29 | N | 603 | CLA | C10-C11-C12-C13 |
| 29 | b | 612 | CLA | C5-C6-C7-C8 |
| 29 | g | 613 | CLA | C3-C5-C6-C7 |
| 29 | A | 405 | CLA | CAA-CBA-CGA-O1A |
| 36 | B | 625 | DGA | CA7-CA8-CA9-CAA |
| 29 | R | 610 | CLA | C4-C3-C5-C6 |
| 29 | Y | 610 | CLA | C4-C3-C5-C6 |
| 29 | b | 602 | CLA | C4-C3-C5-C6 |
| 29 | b | 616 | CLA | C4-C3-C5-C6 |
| 29 | g | 610 | CLA | C4-C3-C5-C6 |
| 30 | A | 409 | PHO | C4-C3-C5-C6 |
| 29 | B | 616 | CLA | C15-C16-C17-C18 |
| 36 | c | 524 | DGA | CA2-CA3-CA4-CA5 |
| 29 | B | 606 | CLA | C11-C12-C13-C15 |
| 29 | C | 501 | CLA | C11-C12-C13-C15 |
| 29 | C | 503 | CLA | C6-C7-C8-C10 |
| 29 | Y | 610 | CLA | C6-C7-C8-C10 |
| 29 | Y | 610 | CLA | C11-C10-C8-C7 |
| 29 | b | 607 | CLA | C11-C12-C13-C15 |
| 29 | b | 609 | CLA | C11-C12-C13-C15 |
| 29 | b | 612 | CLA | C11-C12-C13-C15 |
| 29 | b | 612 | CLA | C12-C13-C15-C16 |
| 29 | b | 613 | CLA | C6-C7-C8-C10 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | c | 503 | CLA | C11-C10-C8-C7 |
| 29 | c | 511 | CLA | C3A-C2A-CAA-CBA |
| 29 | g | 613 | CLA | C11-C12-C13-C15 |
| 45 | S | 608 | CHL | C11-C10-C8-C7 |
| 45 | n | 601 | CHL | C11-C10-C8-C7 |
| 29 | S | 603 | CLA | CAA-CBA-CGA-O1A |
| 39 | y | 624 | LHG | O10-C23-C24-C25 |
| 38 | C | 523 | DGD | C4D-C5D-C6D-O5D |
| 38 | C | 523 | DGD | O6D-C5D-C6D-O5D |
| 29 | Y | 614 | CLA | CAA-CBA-CGA-O2A |
| 29 | c | 505 | CLA | CAA-CBA-CGA-O2A |
| 29 | y | 614 | CLA | CAA-CBA-CGA-O2A |
| 38 | C | 523 | DGD | O1G-C1A-C2A-C3A |
| 39 | Y | 624 | LHG | O8-C23-C24-C25 |
| 39 | d | 408 | LHG | O7-C7-C8-C9 |
| 39 | s | 624 | LHG | O8-C23-C24-C25 |
| 29 | C | 511 | CLA | C8-C10-C11-C12 |
| 51 | Y | 625 | SPH | C4-C5-C6-C7 |
| 33 | c | 521 | LMG | C30-C31-C32-C33 |
| 38 | C | 519 | DGD | C1B-C2B-C3B-C4B |
| 31 | b | 618 | BCR | C21-C22-C23-C24 |
| 46 | y | 620 | LUT | C27-C28-C29-C30 |
| 29 | c | 503 | CLA | CAA-CBA-CGA-O1A |
| 32 | c | 626 | SQD | O49-C7-C8-C9 |
| 45 | y | 606 | CHL | CAA-CBA-CGA-O1A |
| 29 | s | 604 | CLA | C6-C7-C8-C10 |
| 30 | A | 408 | PHO | C16-C17-C18-C20 |
| 29 | G | 603 | CLA | CAA-CBA-CGA-O2A |
| 39 | L | 101 | LHG | O7-C7-C8-C9 |
| 33 | H | 102 | LMG | C16-C17-C18-C19 |
| 38 | C | 518 | DGD | C6A-C7A-C8A-C9A |
| 29 | a | 405 | CLA | C13-C15-C16-C17 |
| 29 | B | 602 | CLA | CAA-CBA-CGA-O1A |
| 29 | N | 604 | CLA | CAA-CBA-CGA-O1A |
| 29 | G | 603 | CLA | CAA-CBA-CGA-O1A |
| 29 | G | 614 | CLA | CAA-CBA-CGA-O1A |
| 29 | S | 605 | CLA | CAA-CBA-CGA-O1A |
| 29 | s | 603 | CLA | CAA-CBA-CGA-O1A |
| 32 | C | 526 | SQD | O10-C23-C24-C25 |
| 33 | D | 411 | LMG | O9-C10-C11-C12 |
| 38 | C | 523 | DGD | O1A-C1A-C2A-C3A |
| 38 | c | 518 | DGD | O1A-C1A-C2A-C3A |

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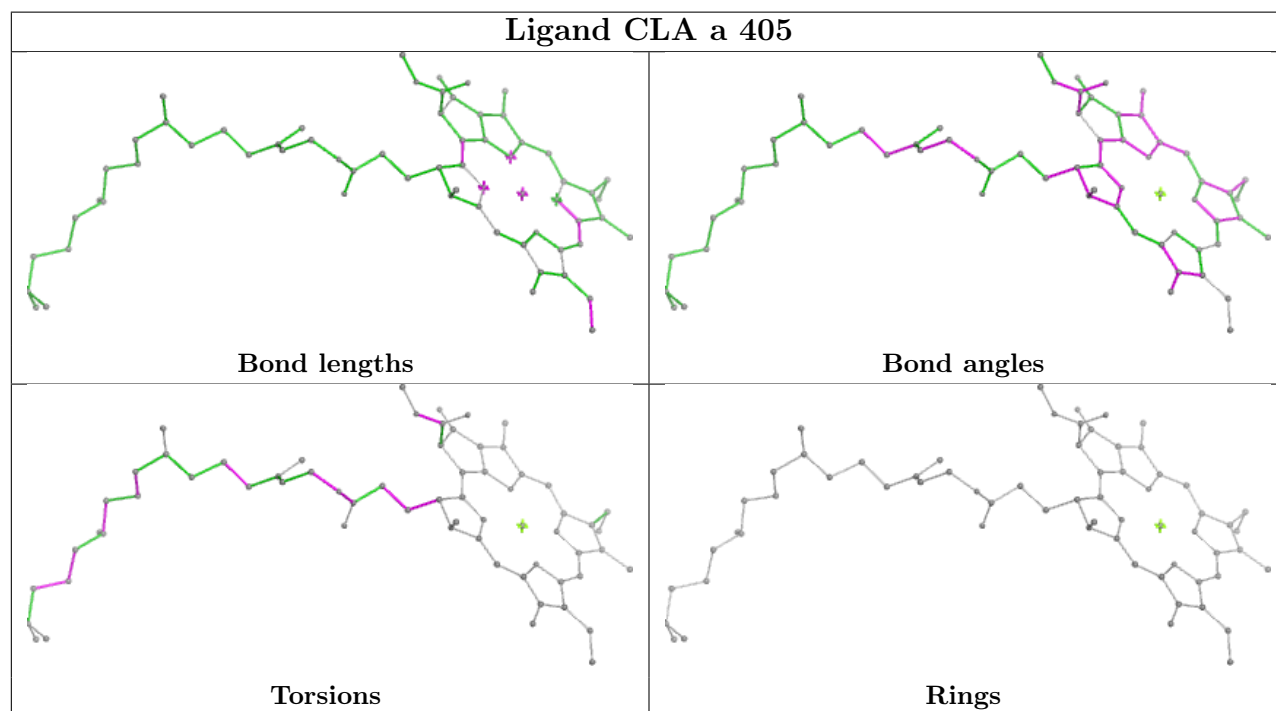
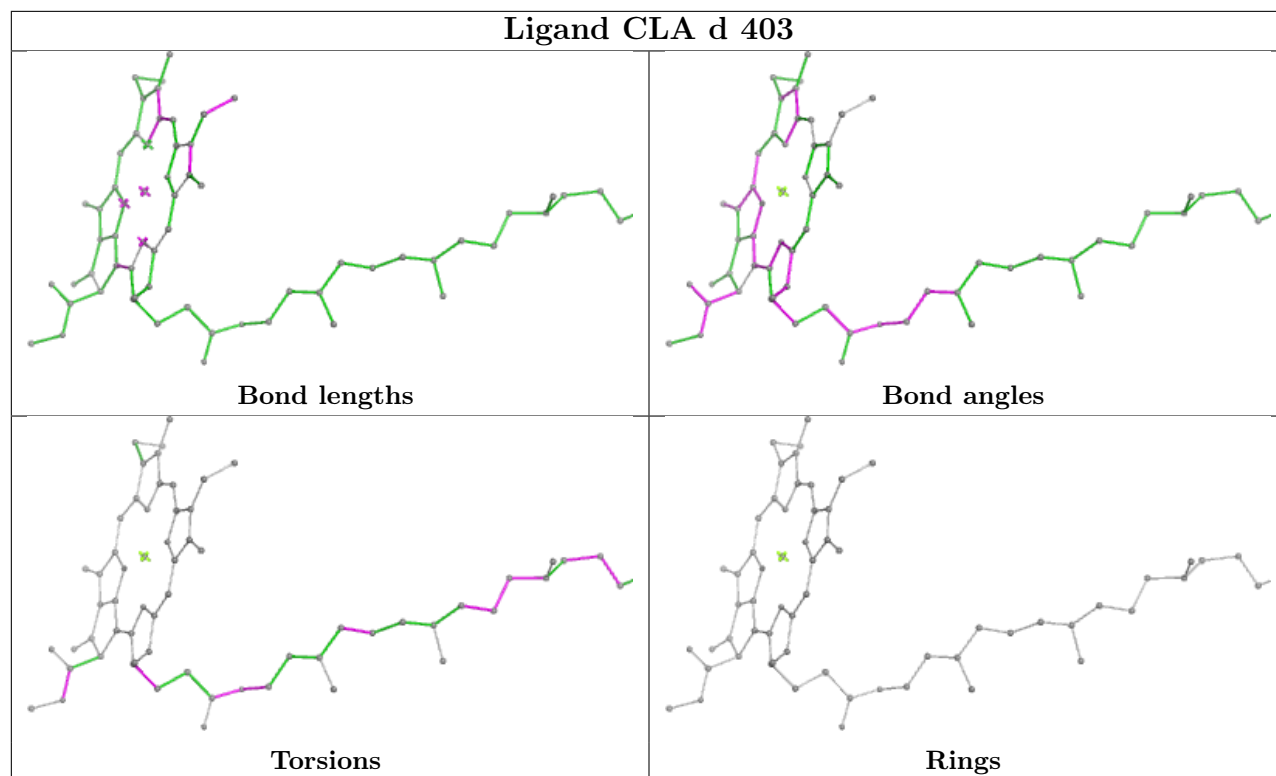
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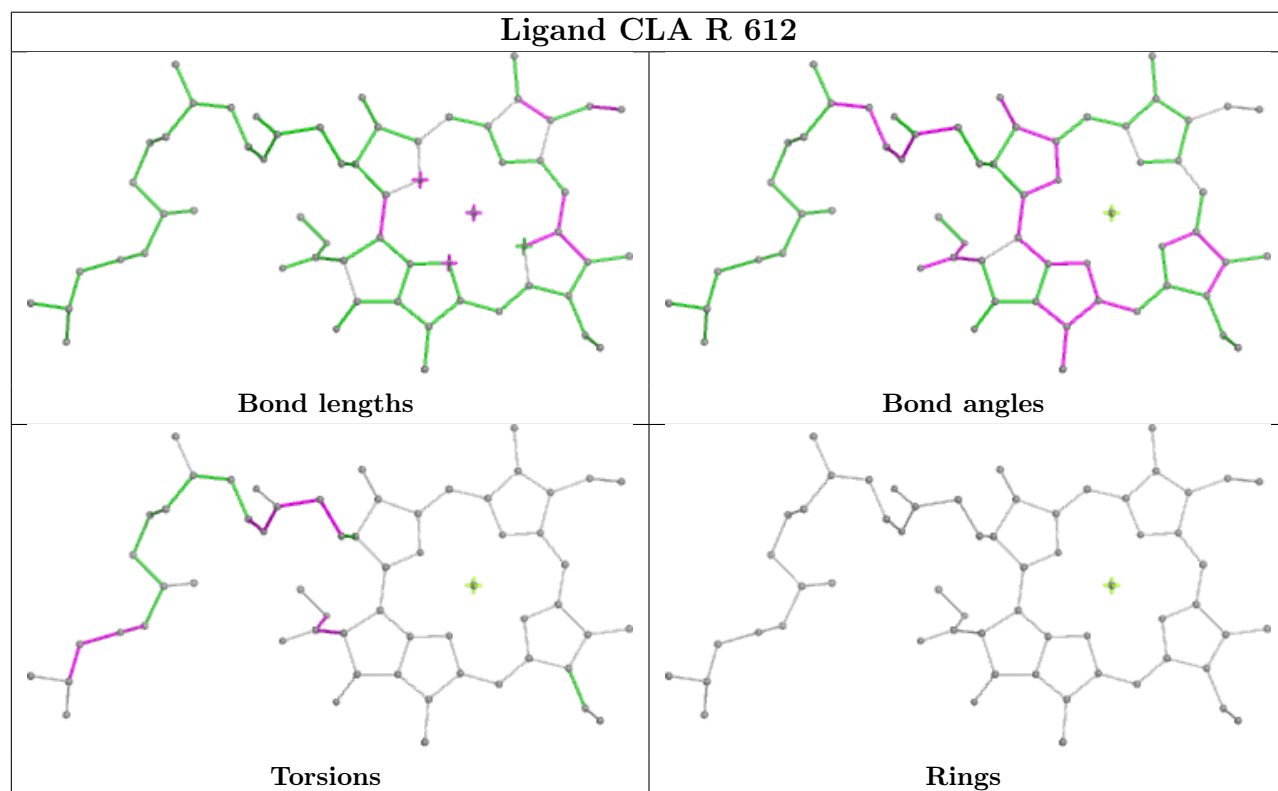
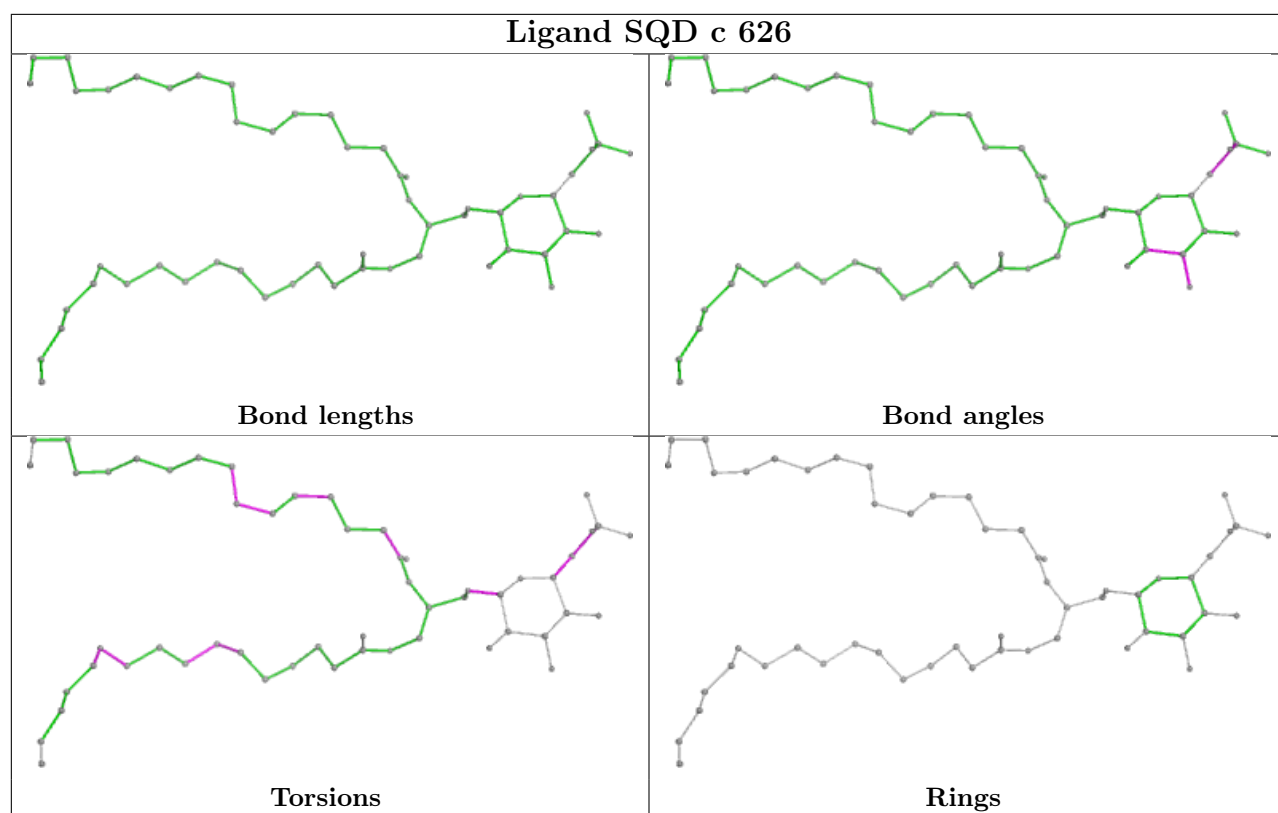
| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 29 | r | 612 | CLA | C5-C6-C7-C8 |
| 45 | g | 601 | CHL | C8-C10-C11-C12 |
| 45 | y | 607 | CHL | C10-C11-C12-C13 |
| 33 | h | 102 | LMG | C16-C17-C18-C19 |
| 50 | i | 101 | 3PH | C2C-C2D-C2E-C2F |
| 29 | c | 502 | CLA | CAA-CBA-CGA-O2A |
| 29 | c | 508 | CLA | CAA-CBA-CGA-O2A |
| 32 | c | 626 | SQD | O47-C7-C8-C9 |
| 39 | S | 624 | LHG | O8-C23-C24-C25 |
| 39 | d | 409 | LHG | C35-C36-C37-C38 |
| 29 | r | 604 | CLA | CAA-CBA-CGA-O1A |
| 45 | n | 608 | CHL | C2A-CAA-CBA-CGA |
| 29 | d | 402 | CLA | O1A-CGA-O2A-C1 |
| 32 | c | 626 | SQD | C11-C12-C13-C14 |
| 39 | s | 624 | LHG | O10-C23-C24-C25 |
| 39 | d | 410 | LHG | C10-C11-C12-C13 |
| 29 | C | 513 | CLA | CAA-CBA-CGA-O2A |

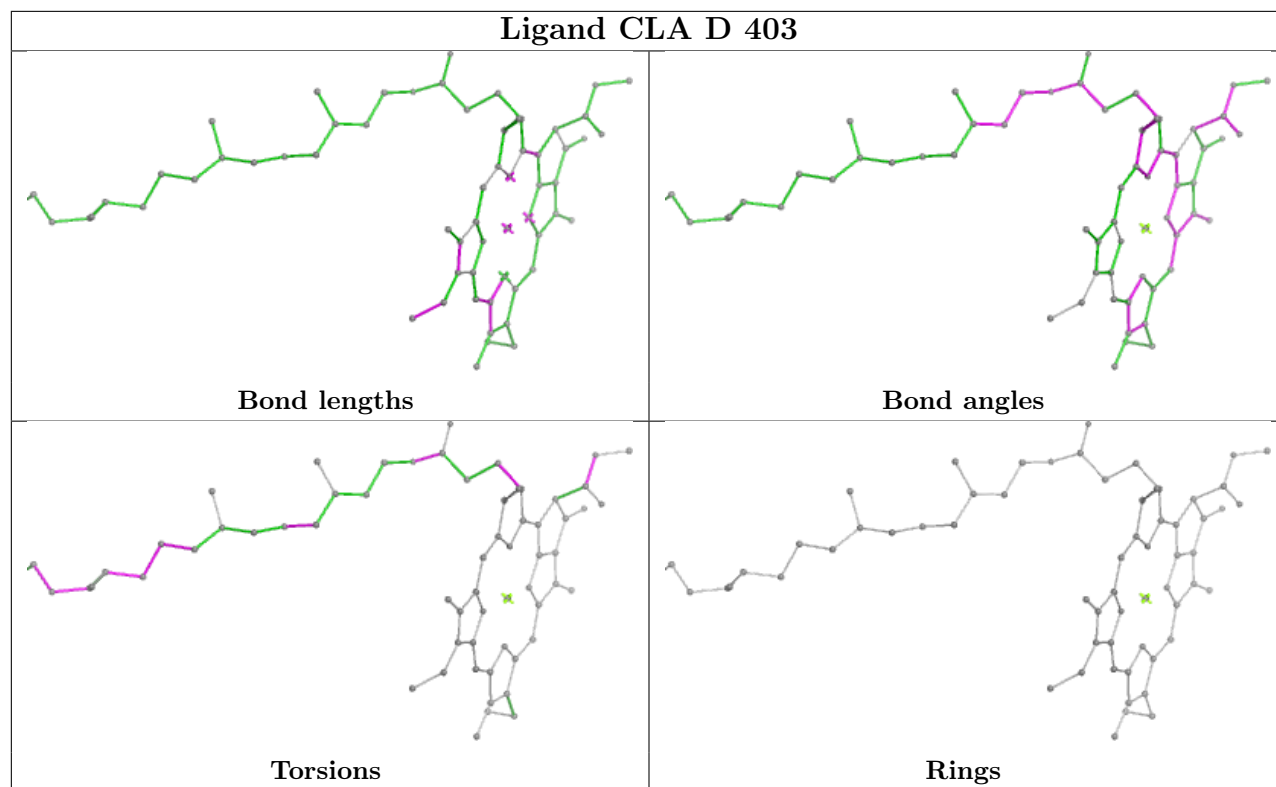
There are no ring outliers.

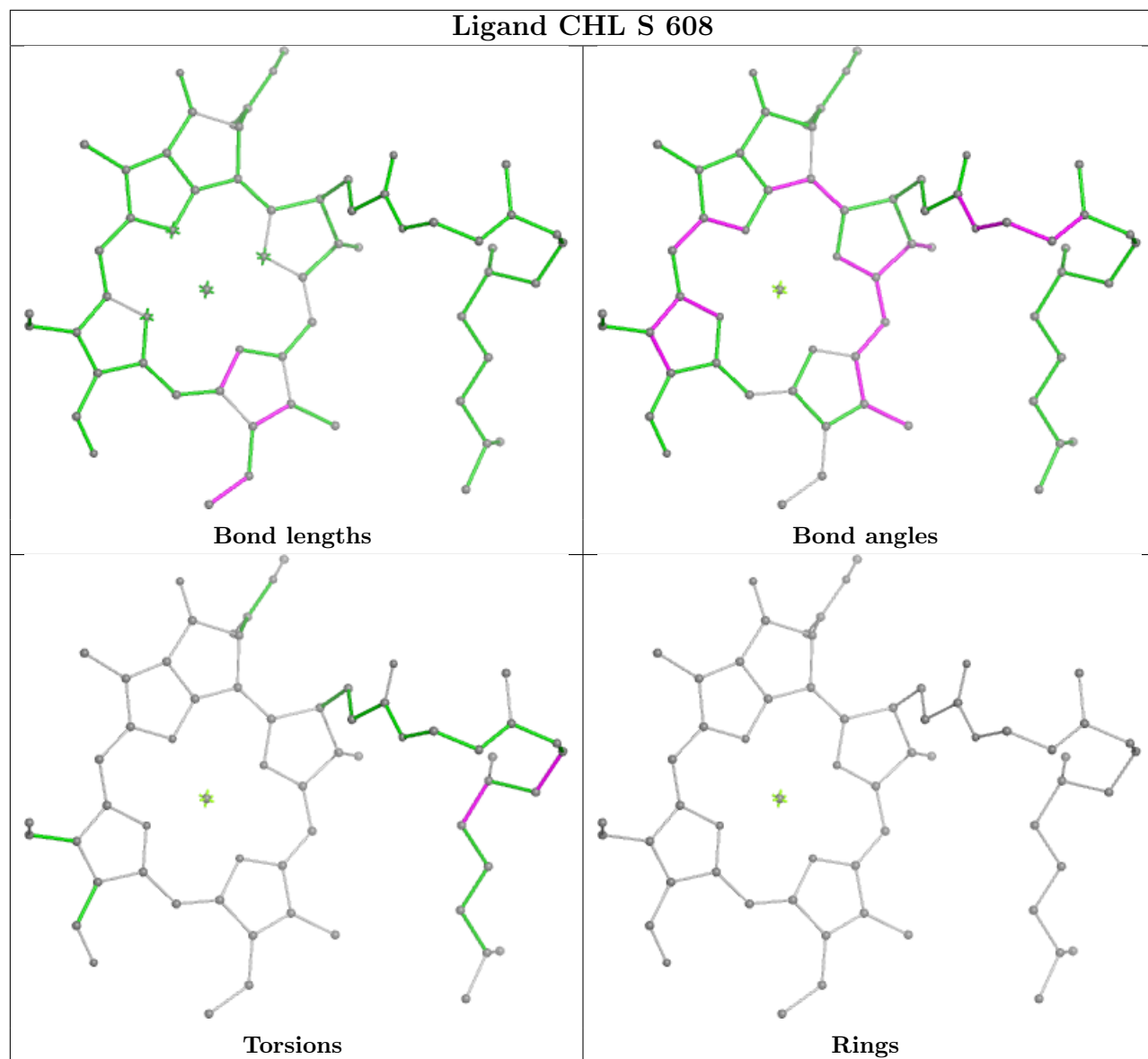
No monomer is involved in short contacts.

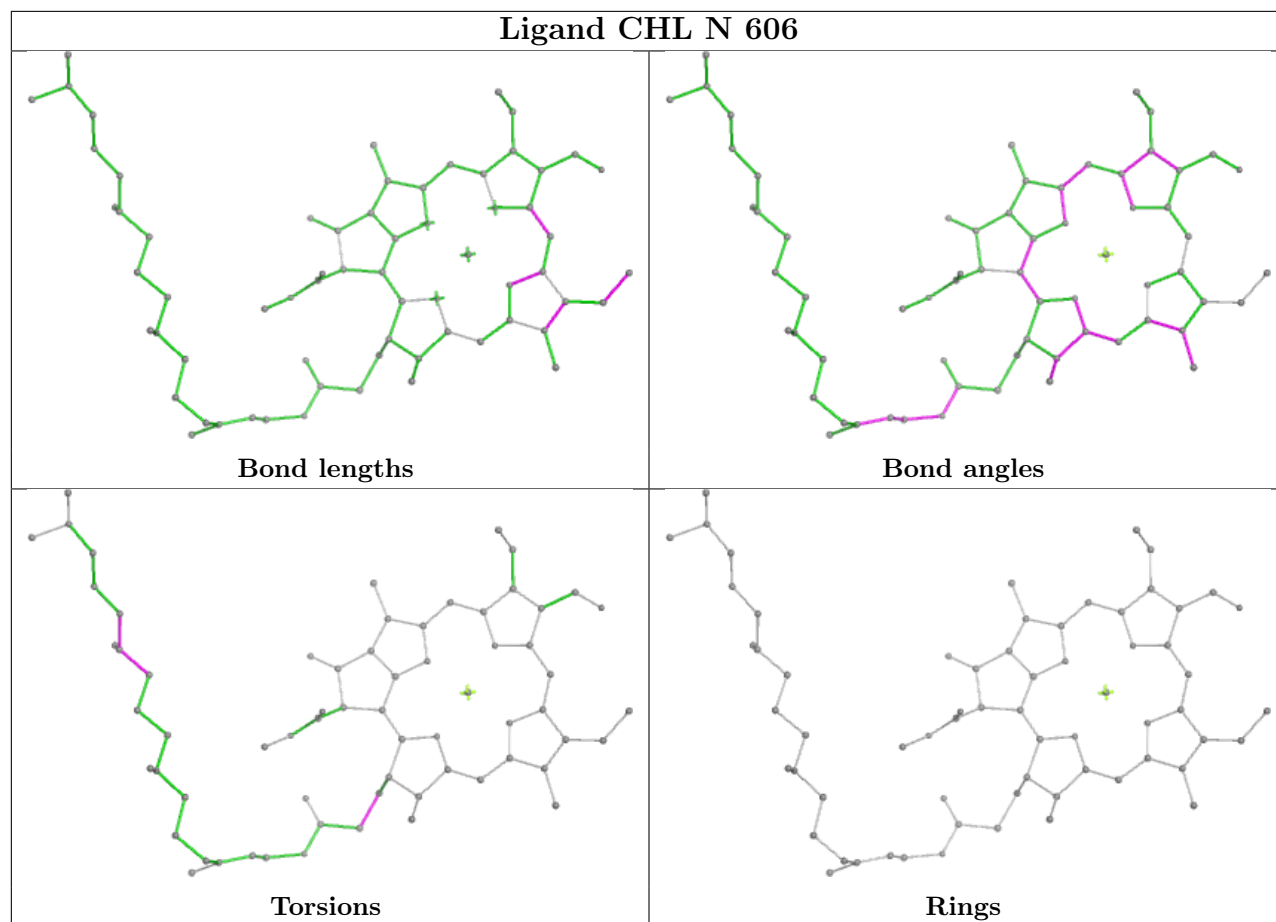
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

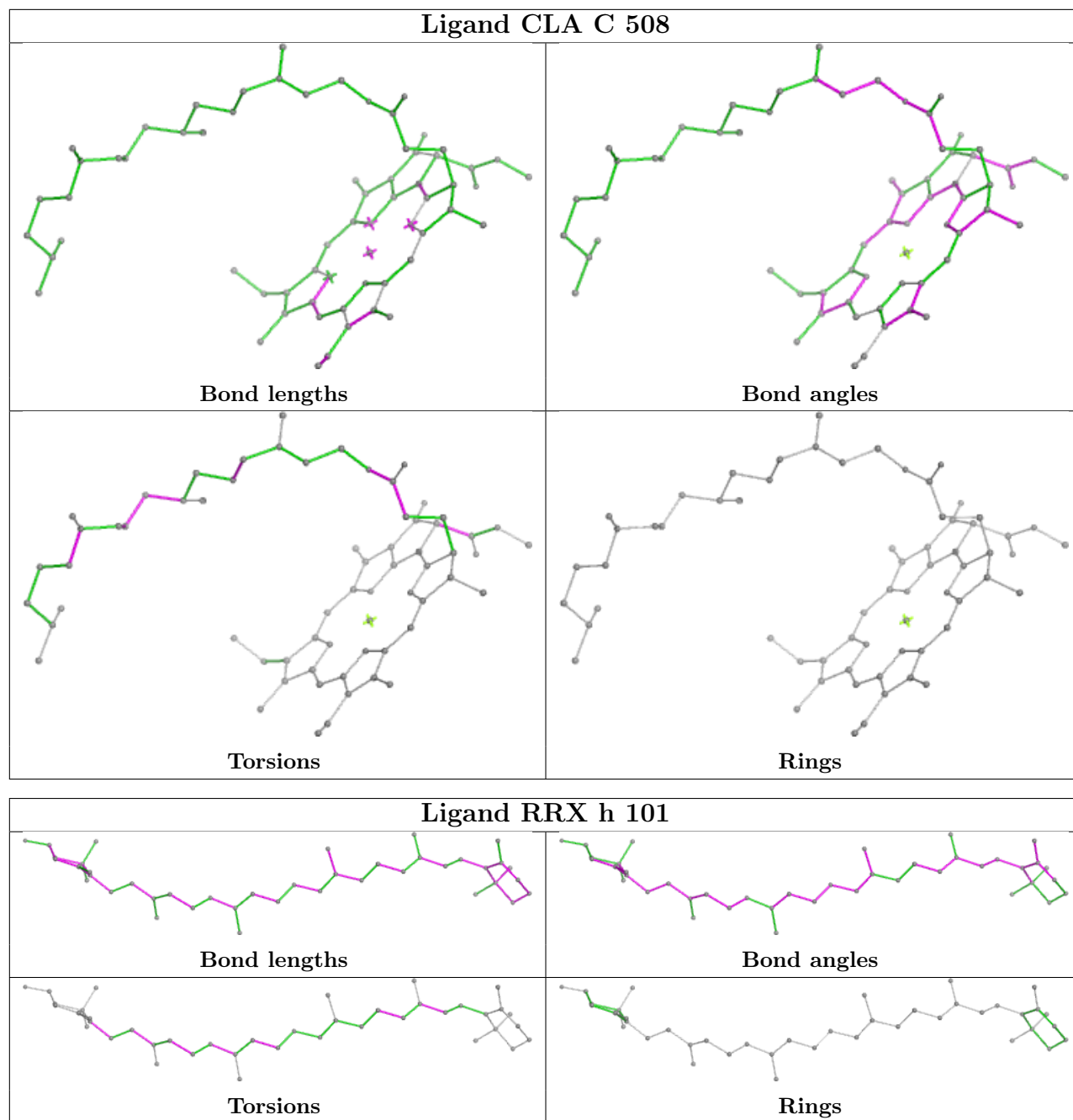


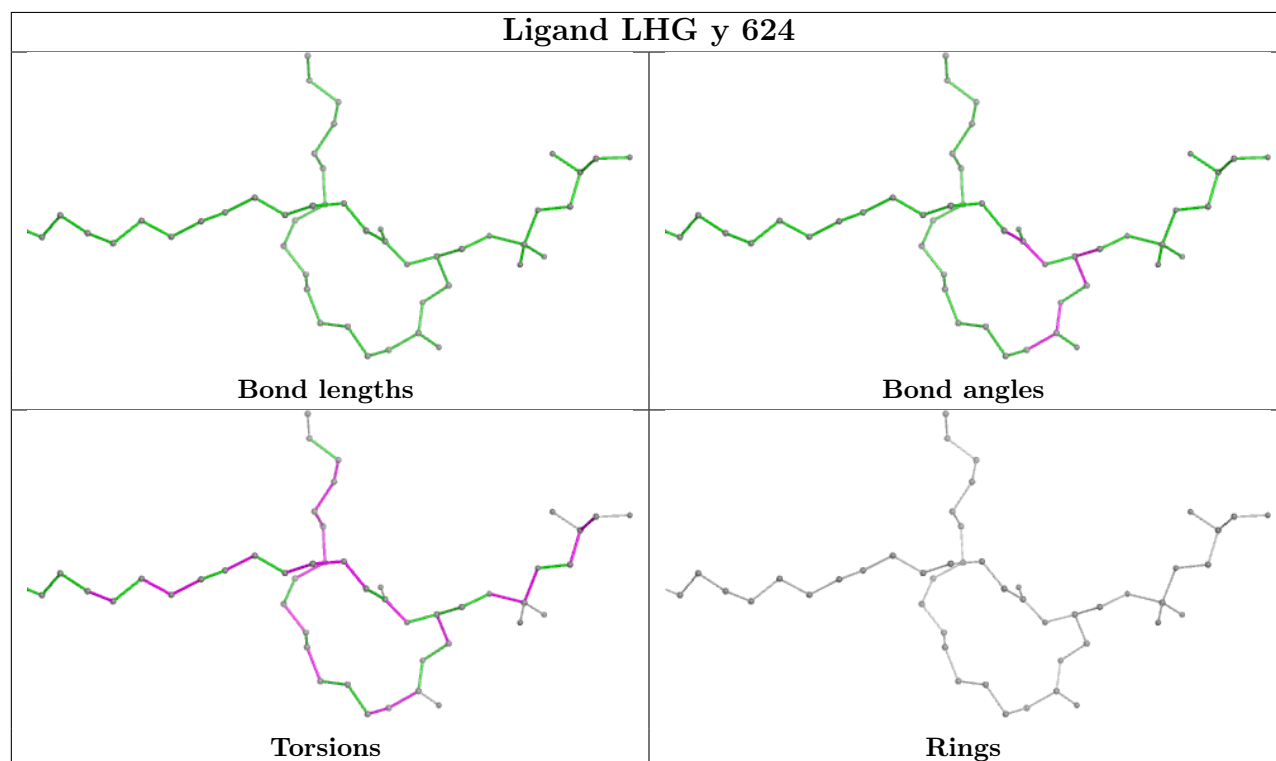
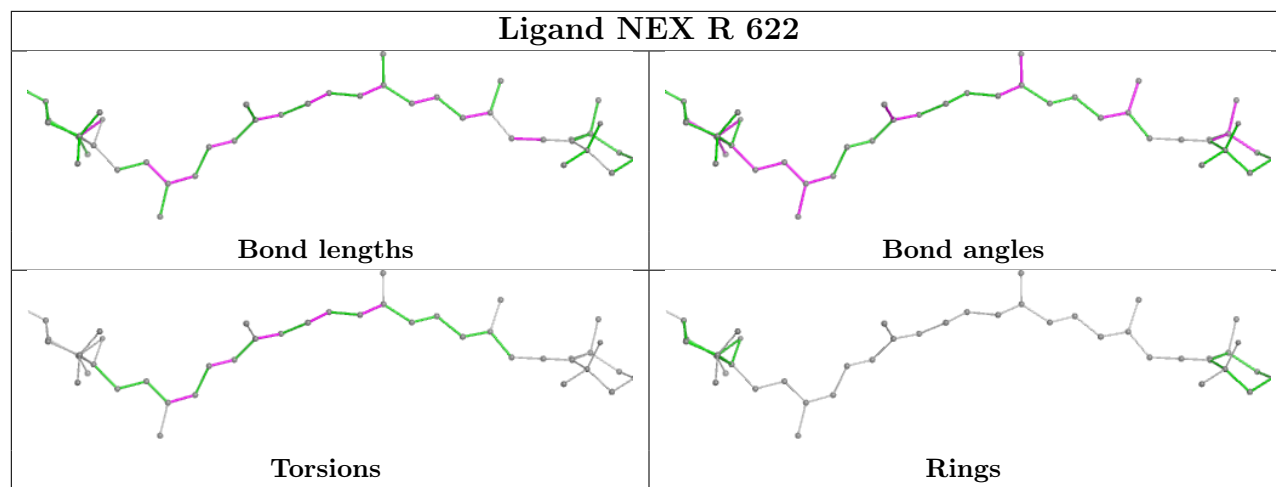


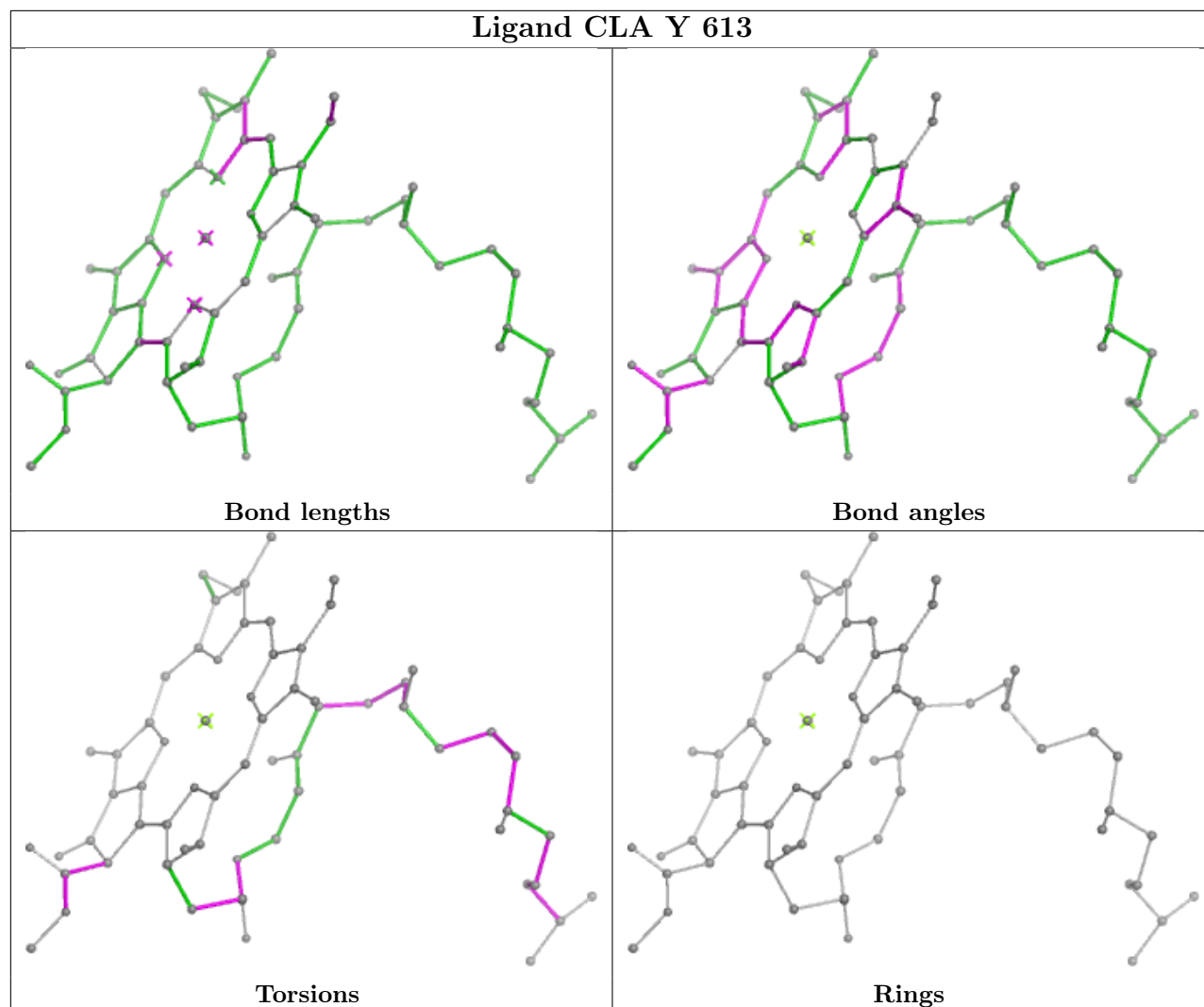


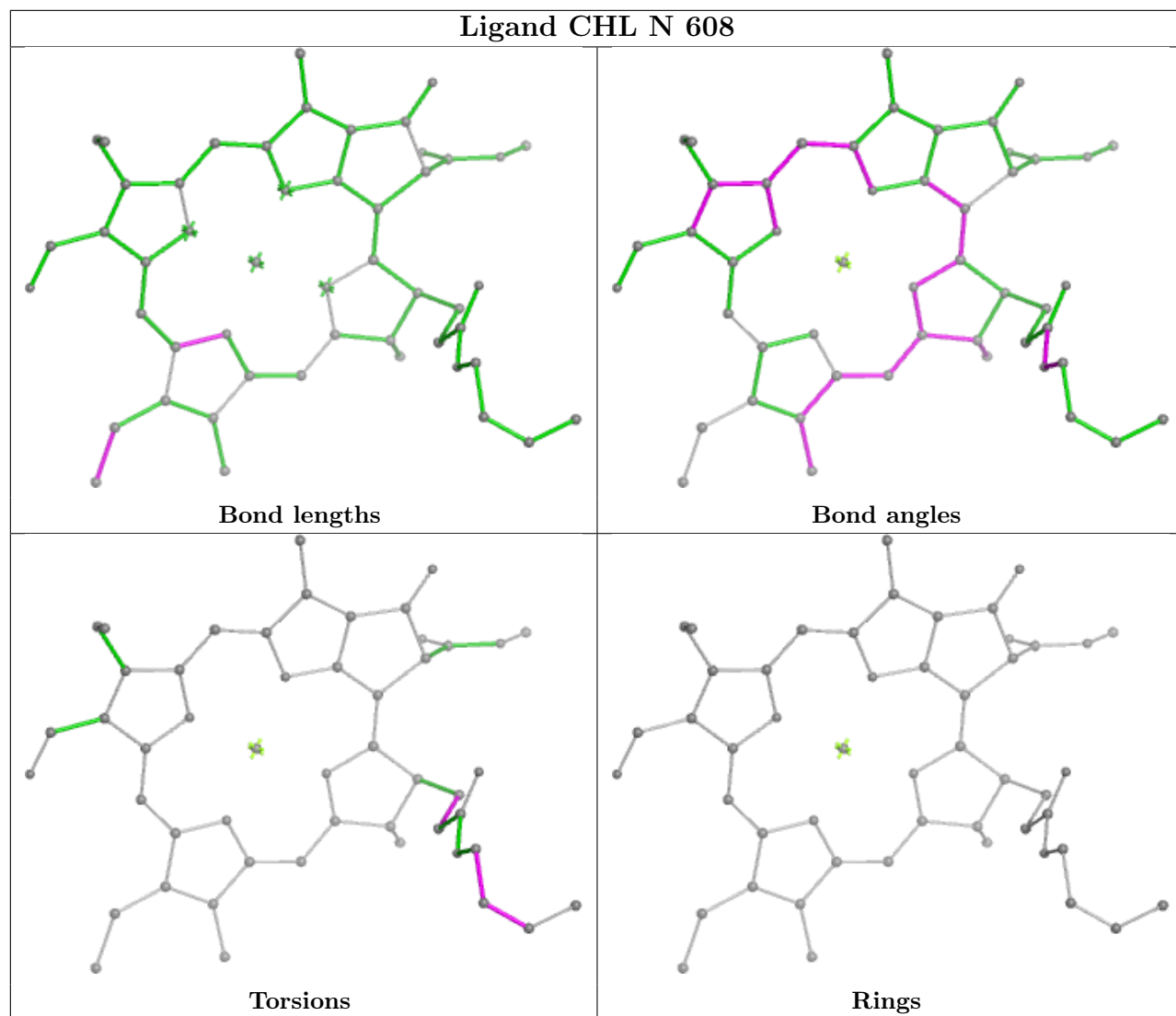


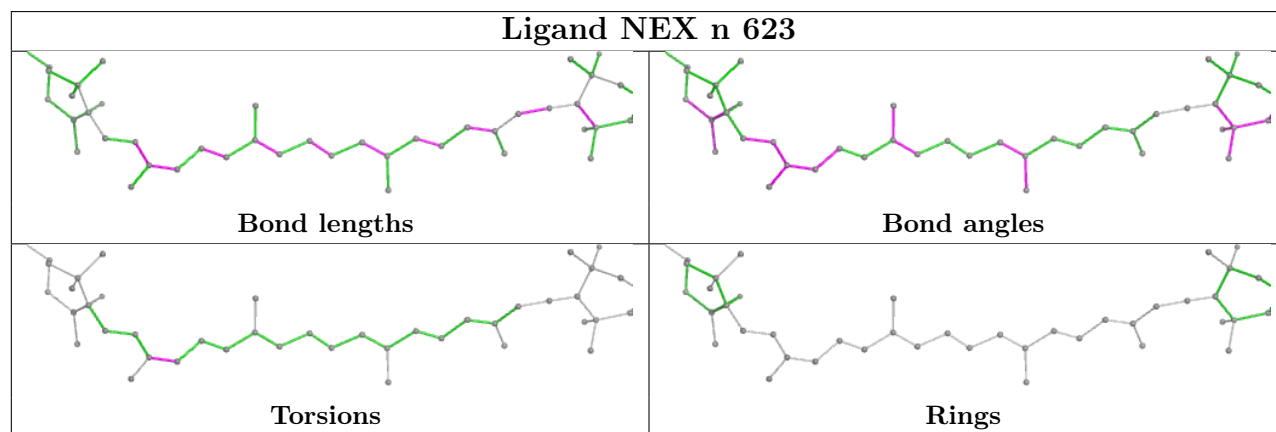
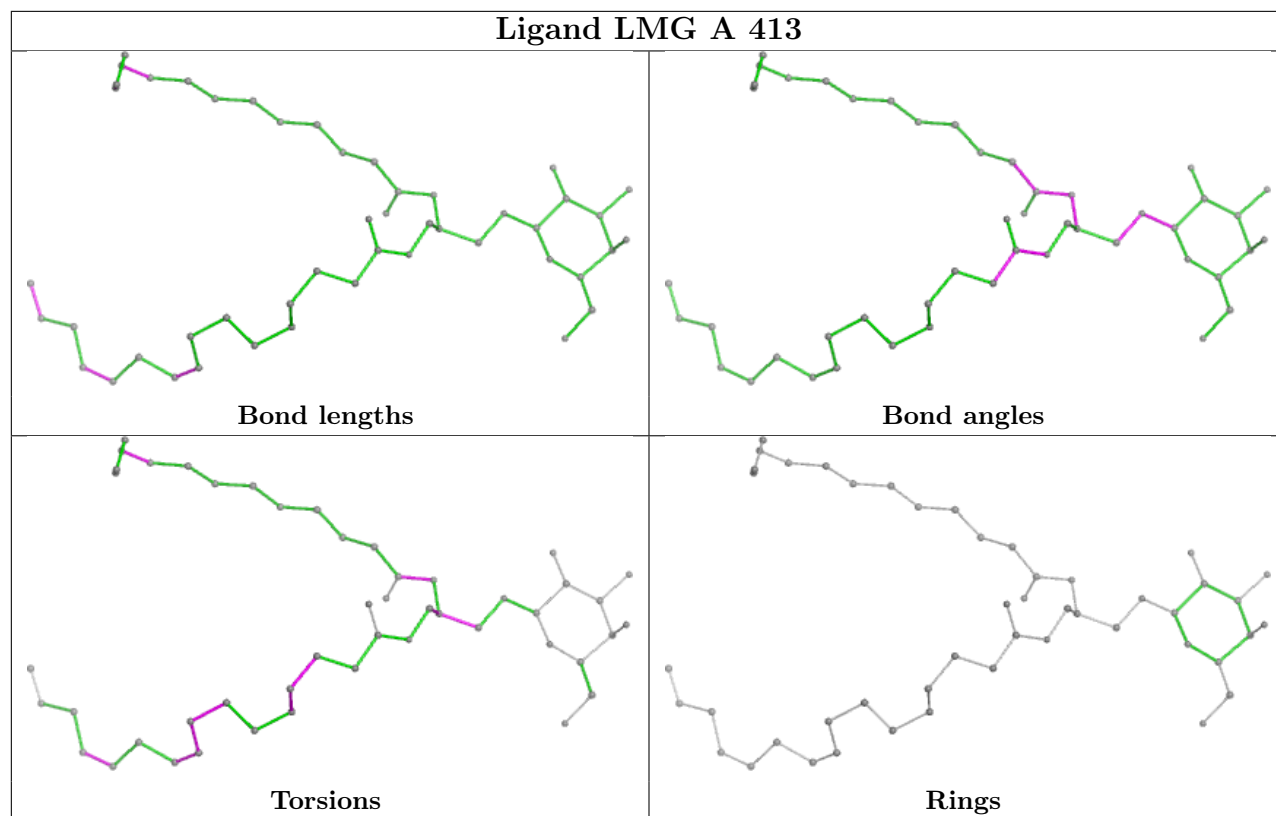


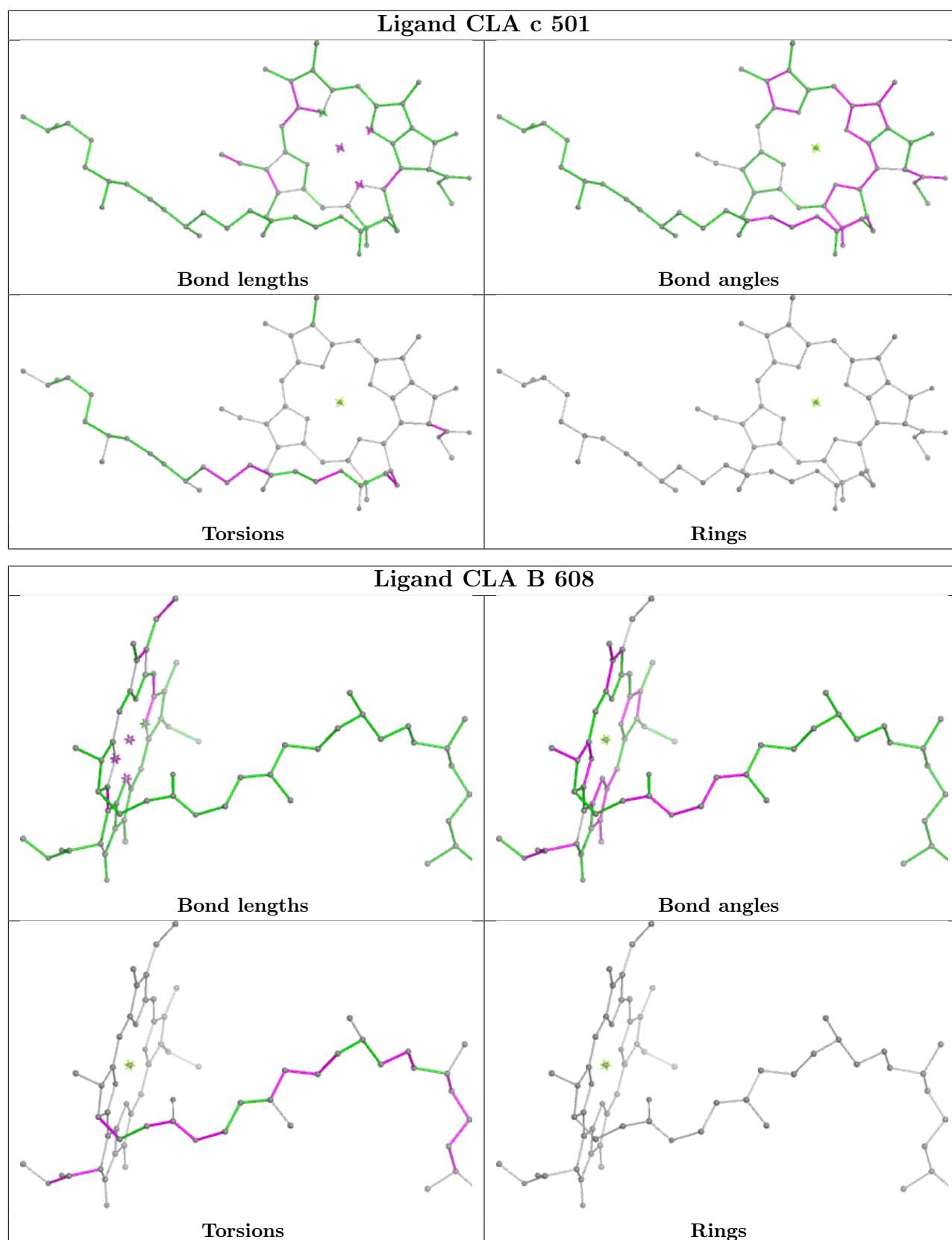


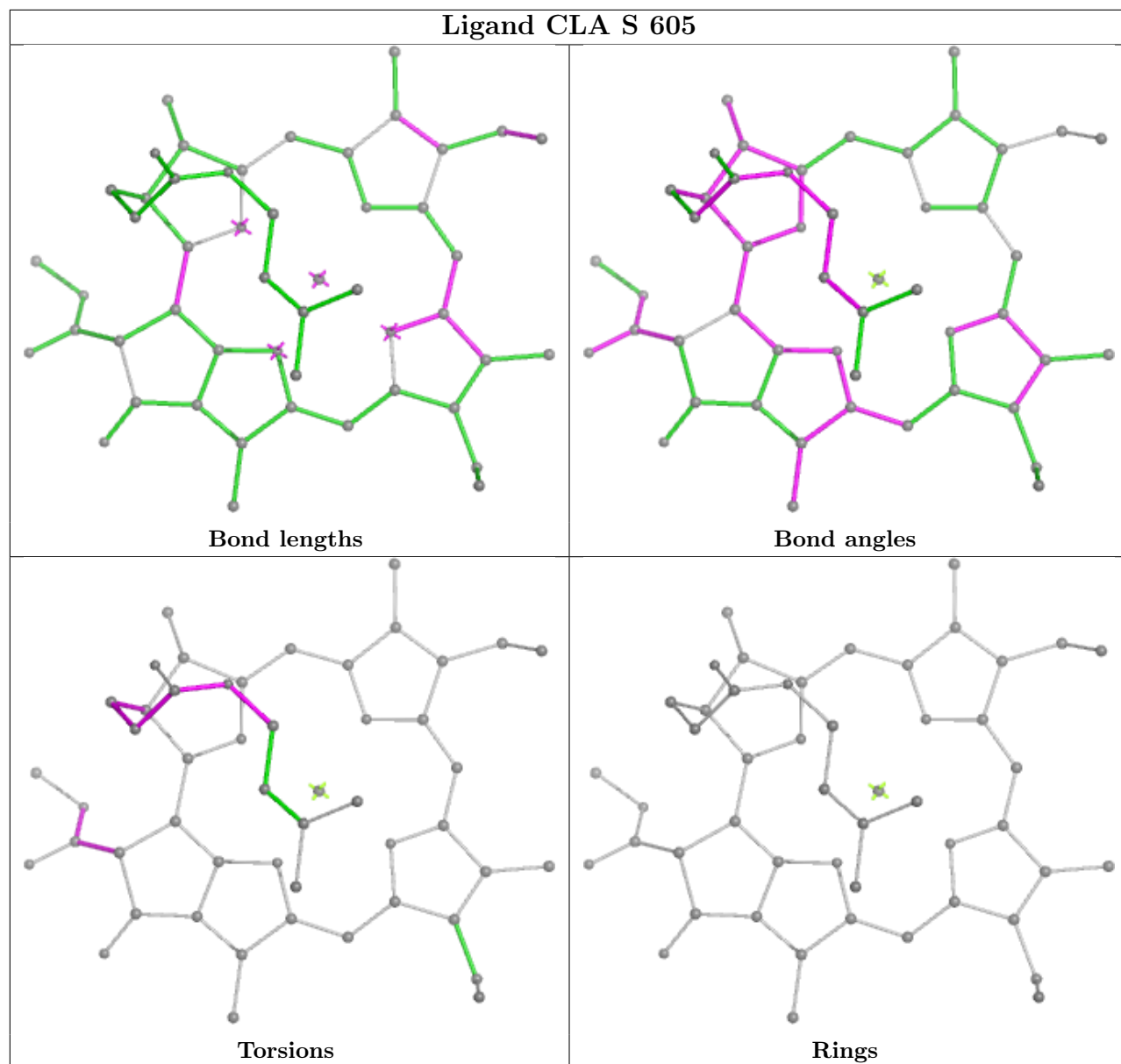


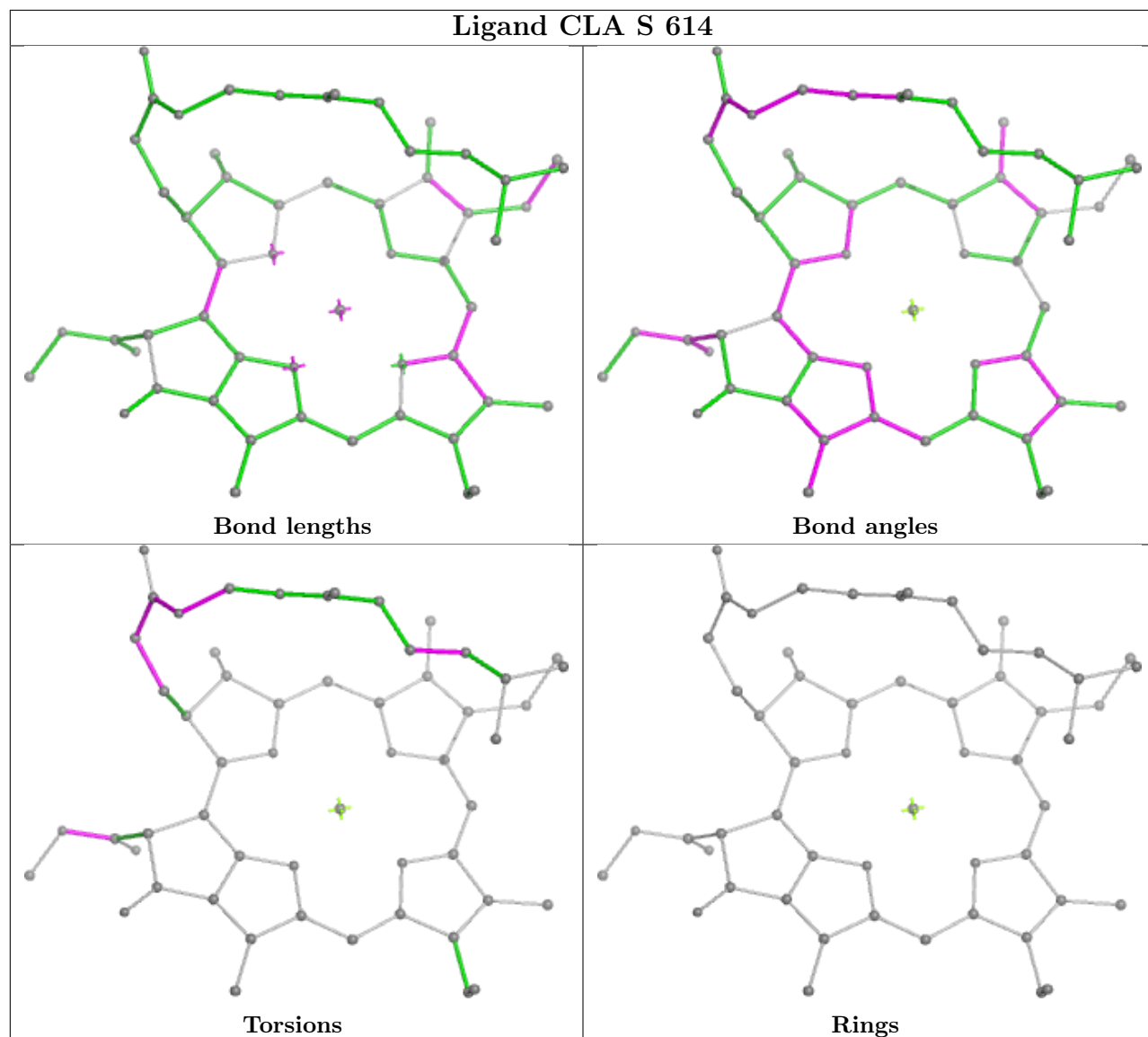


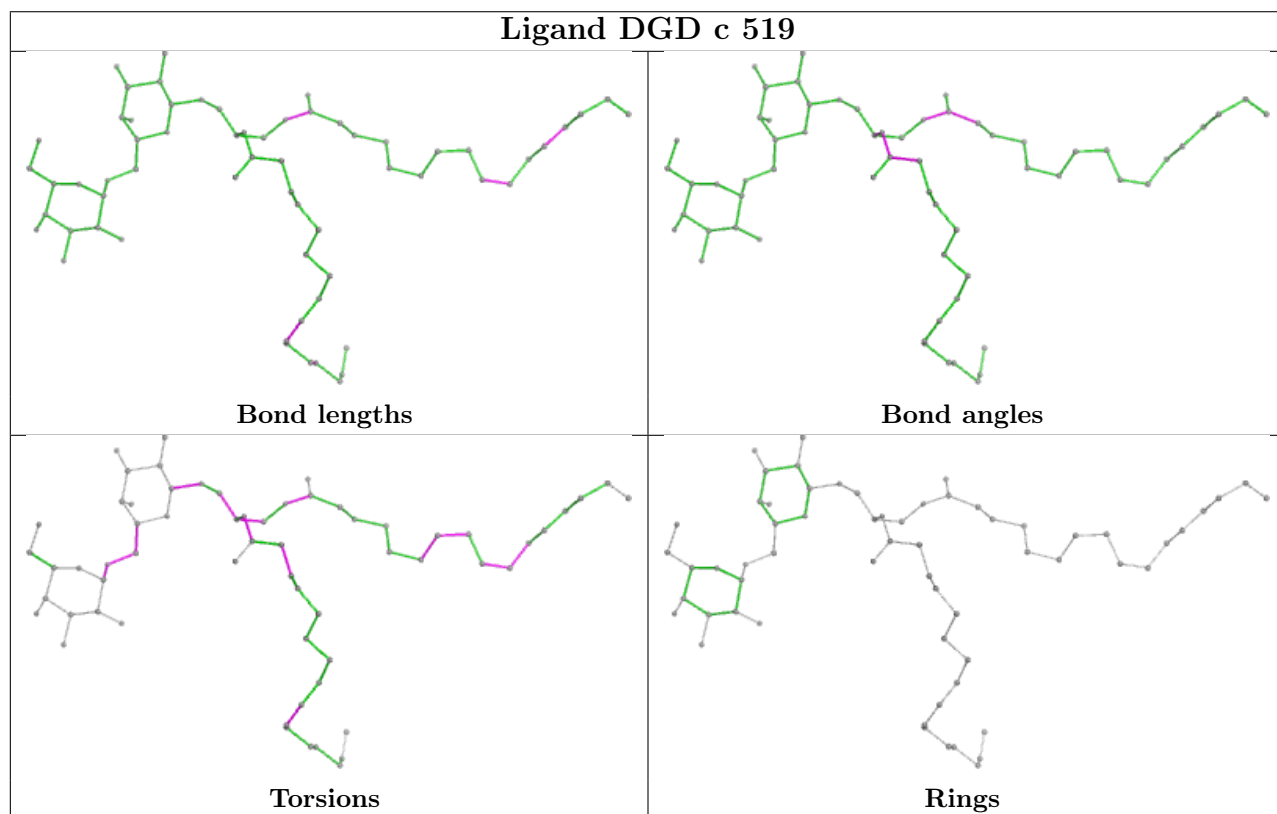
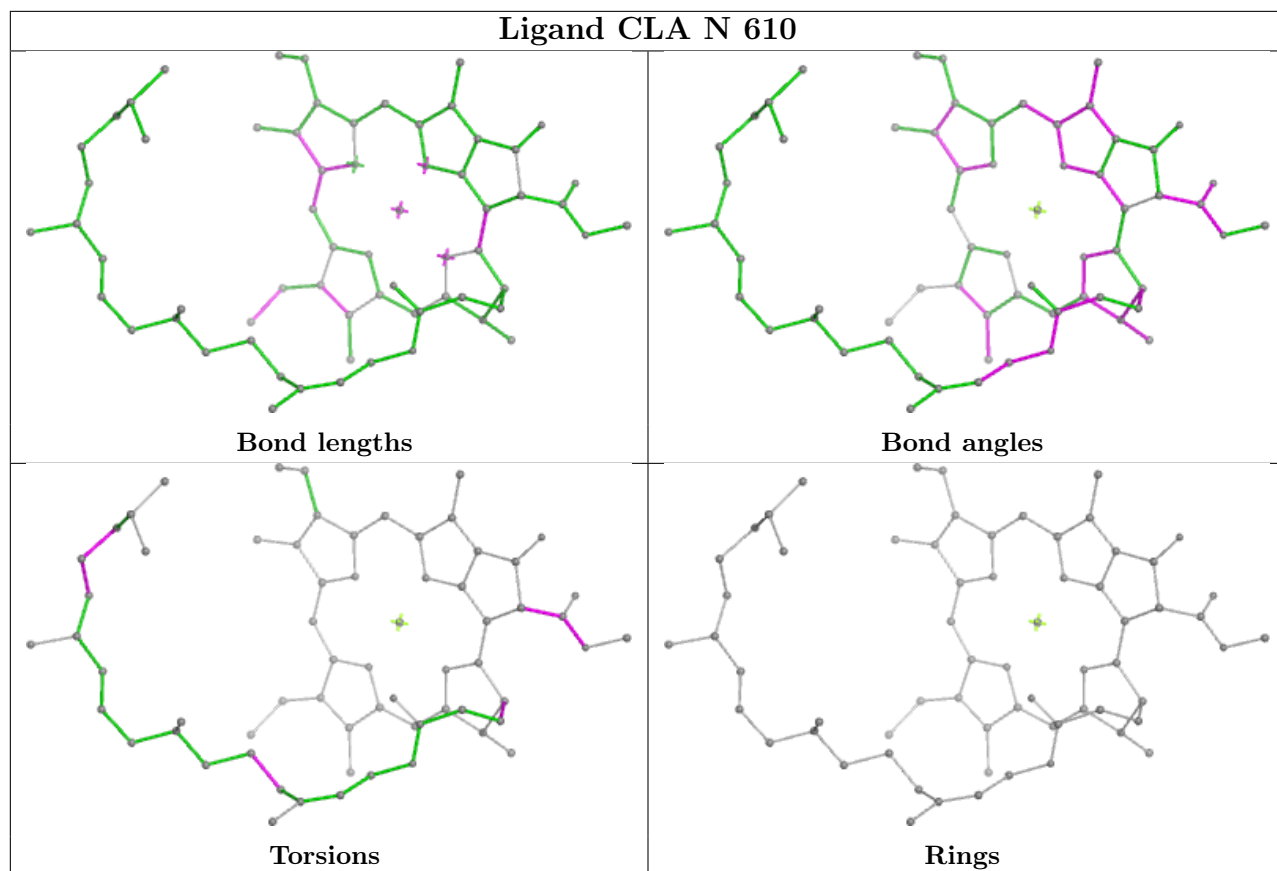


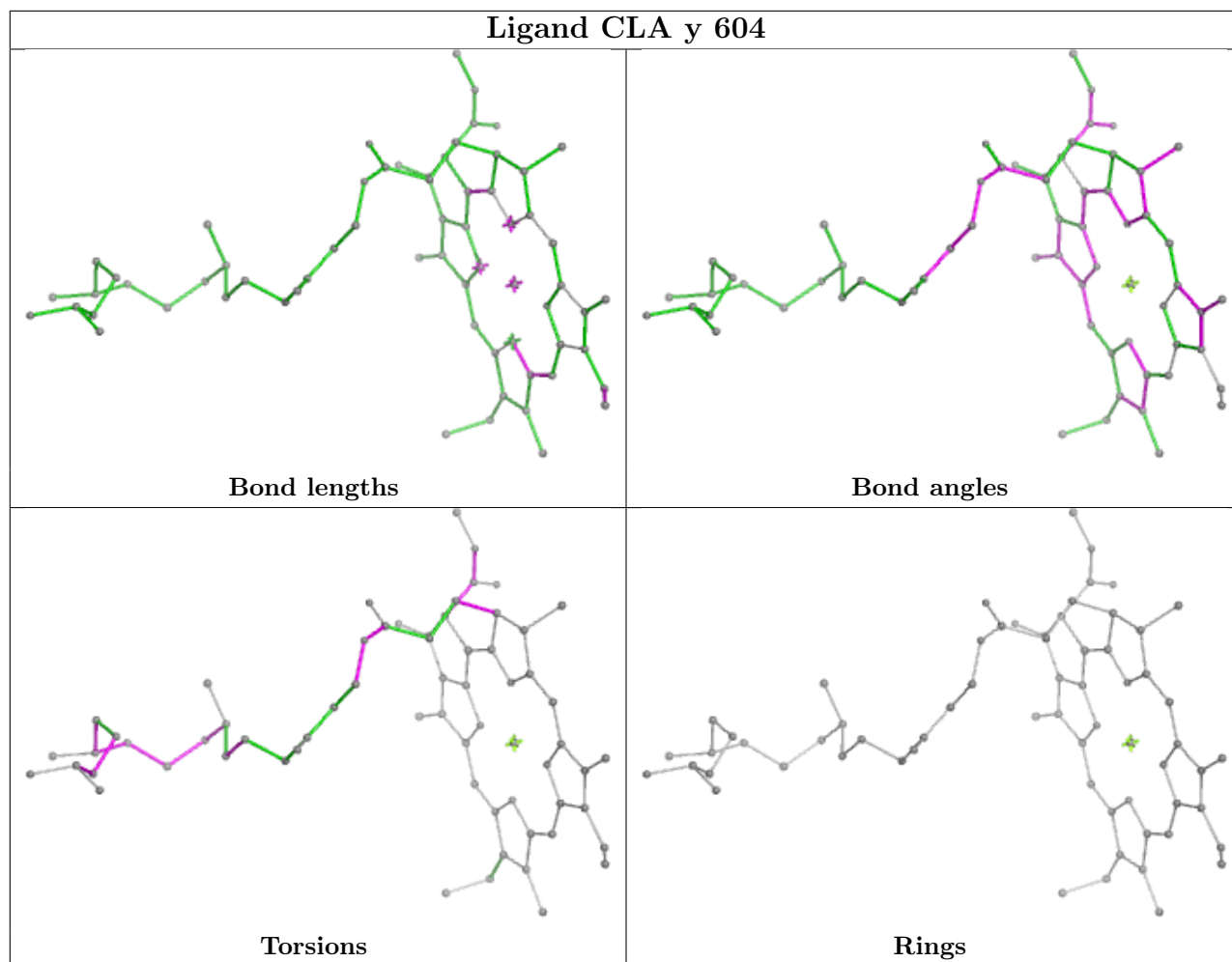


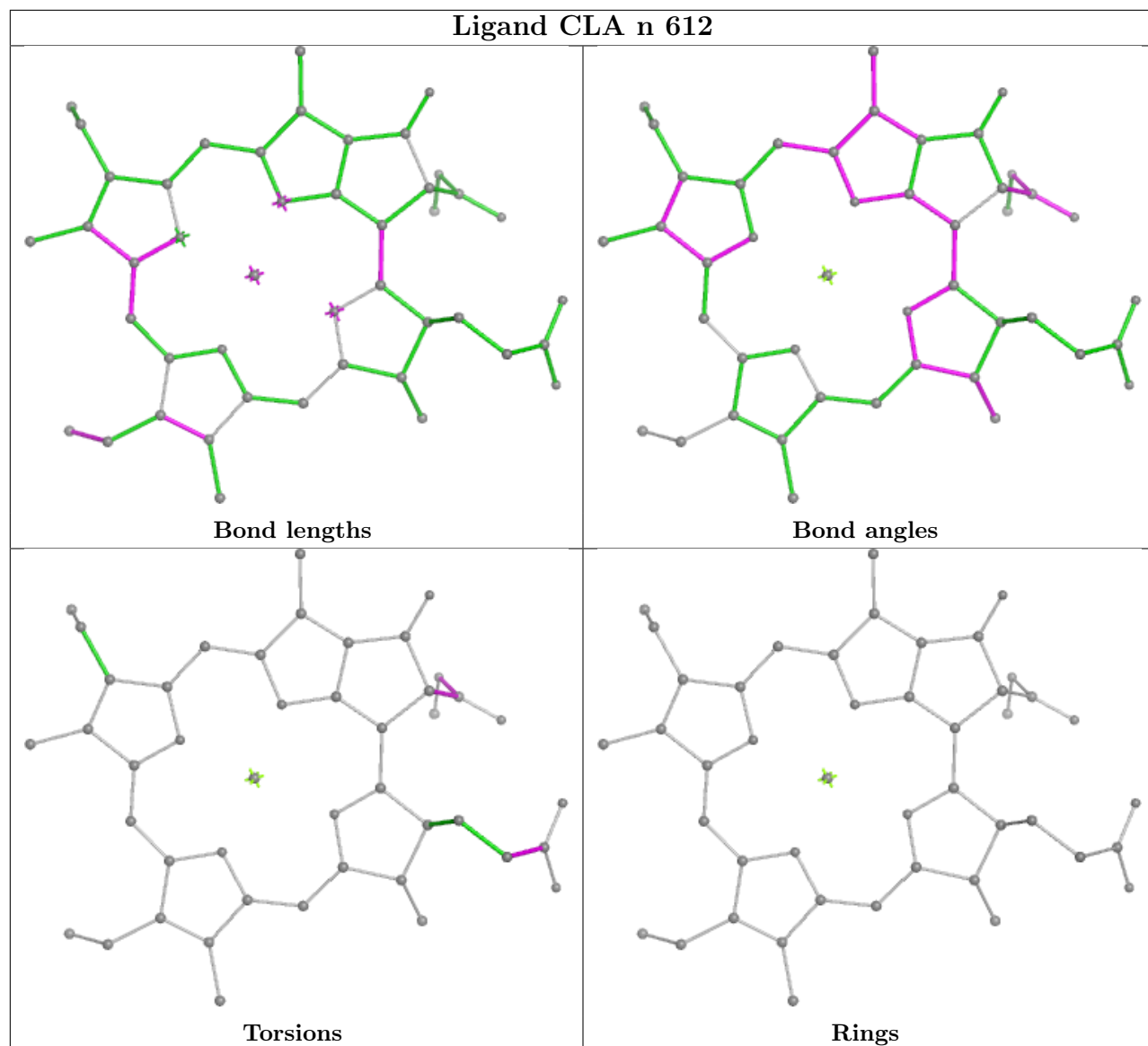


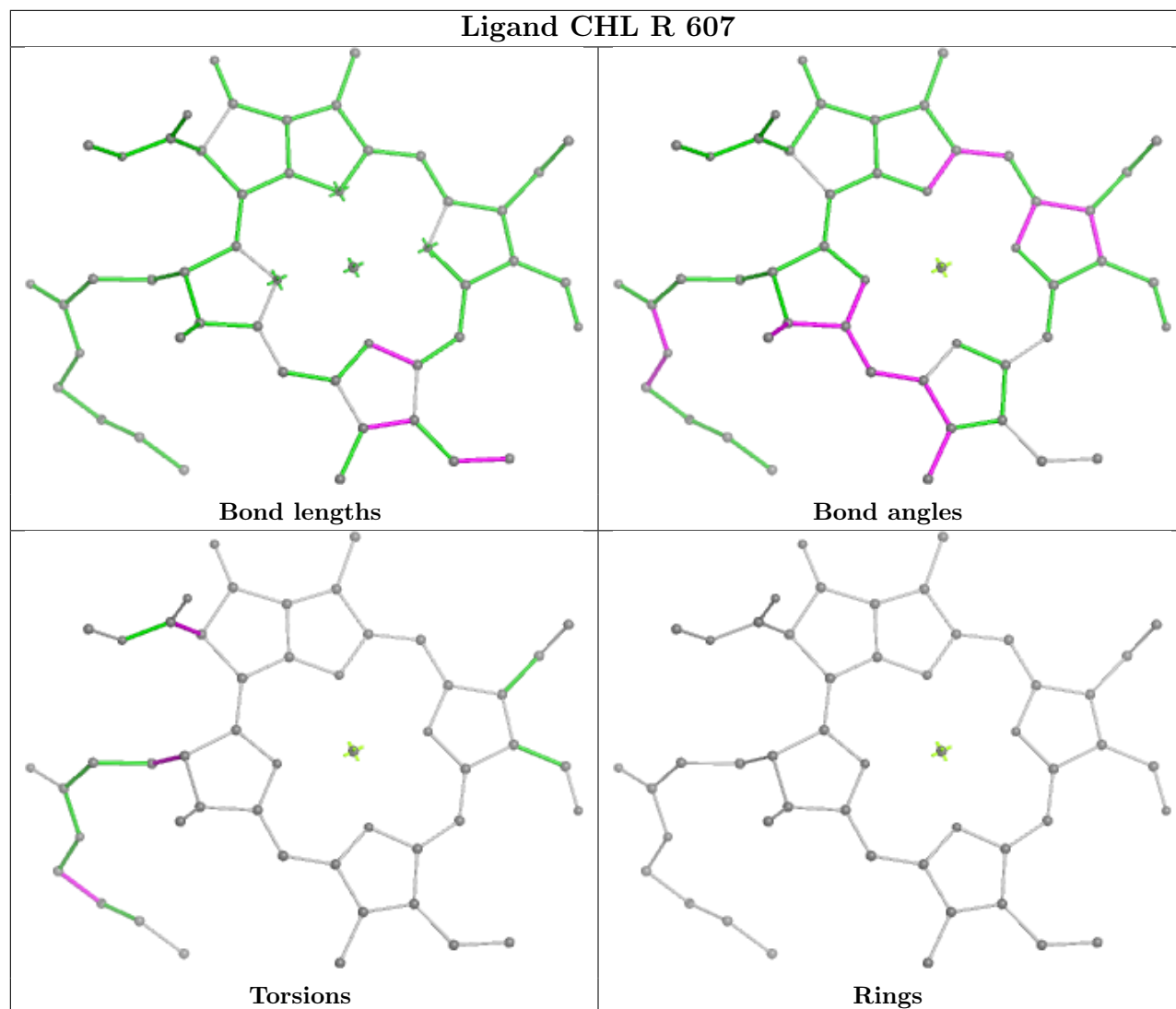


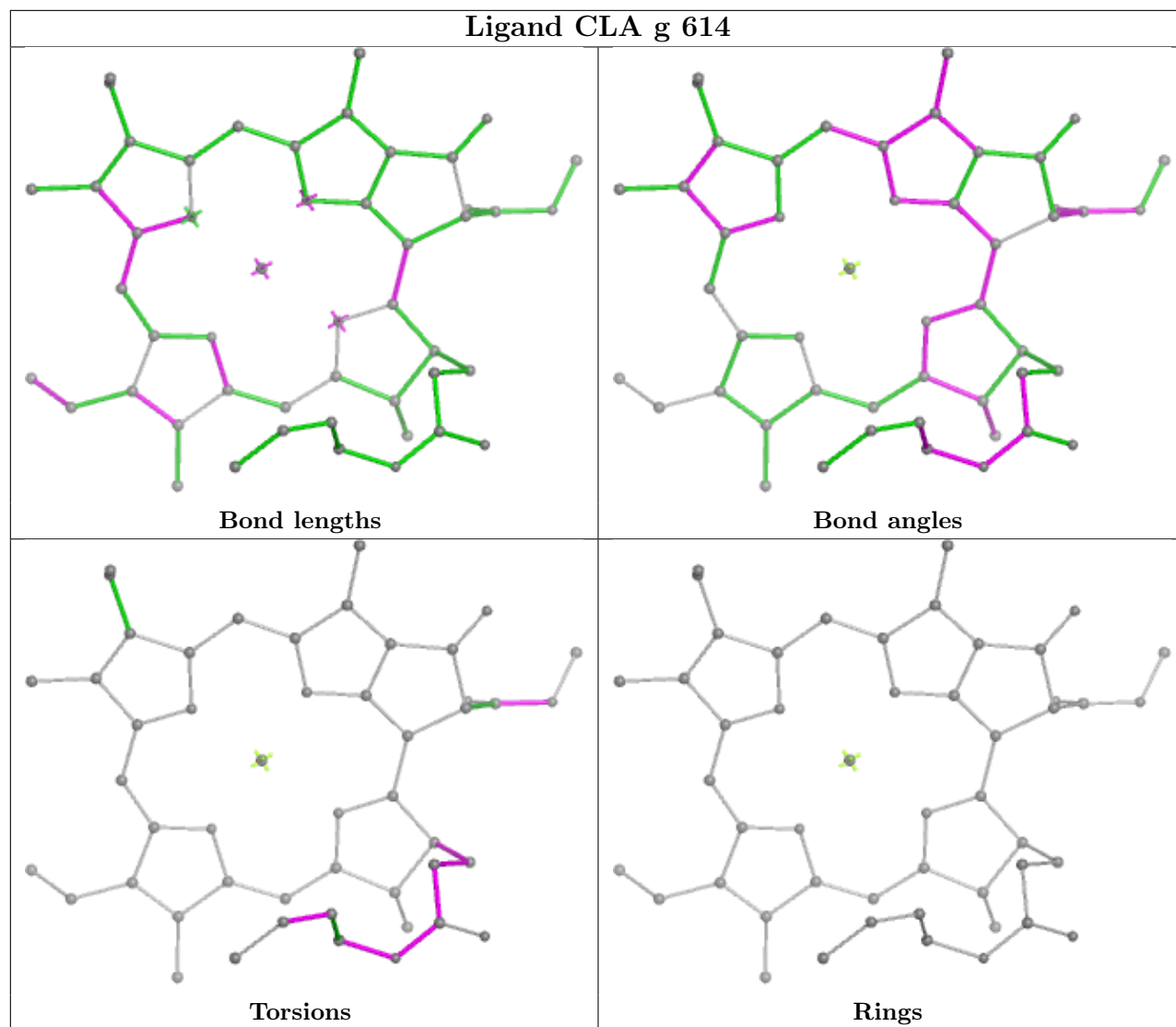


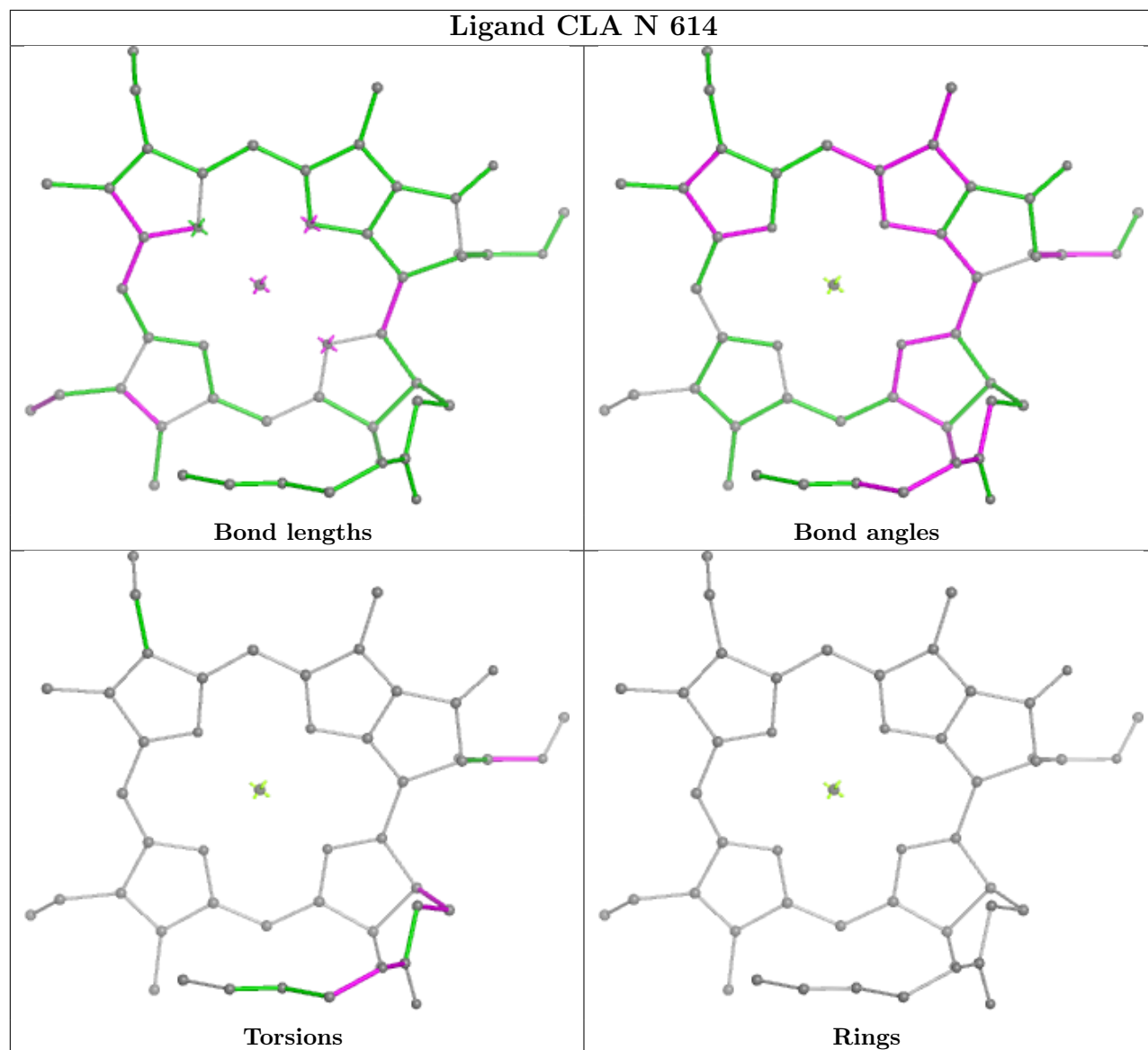


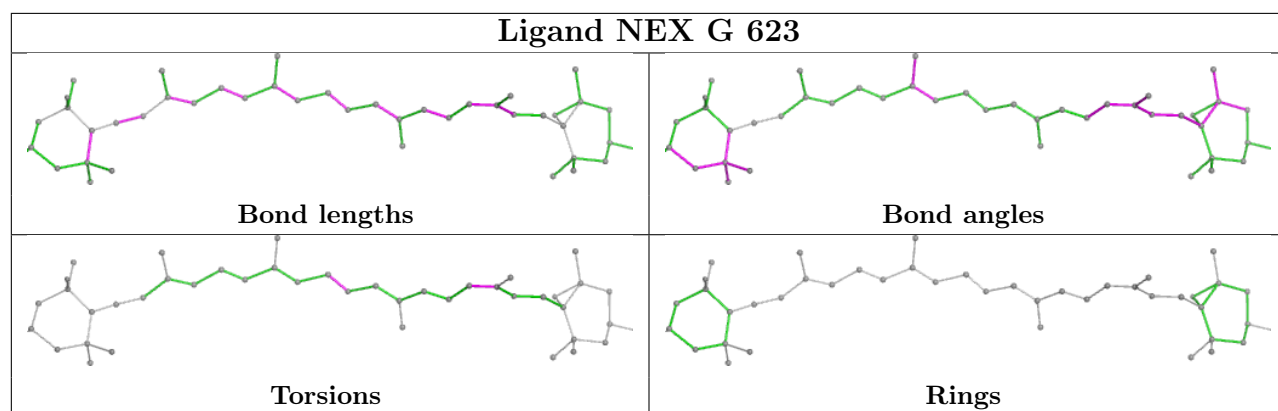
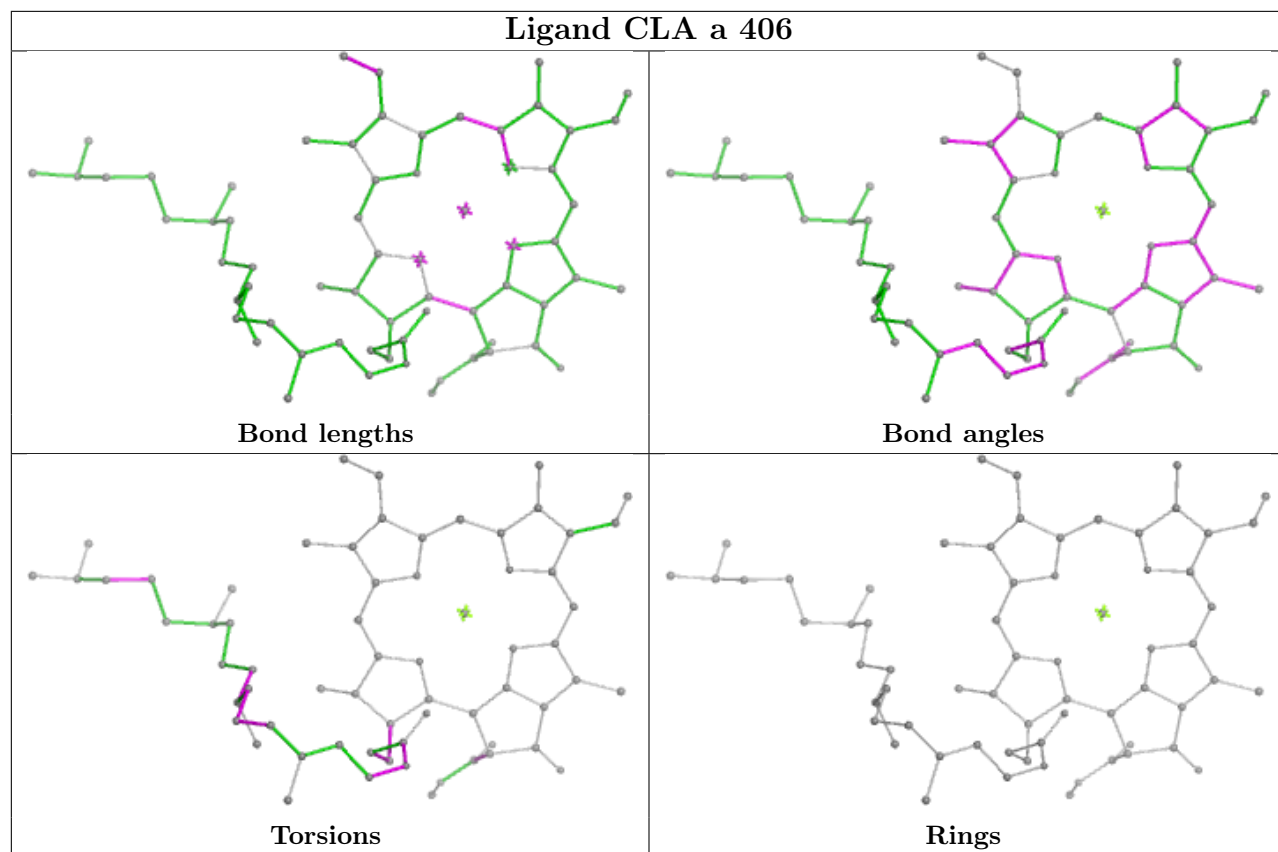


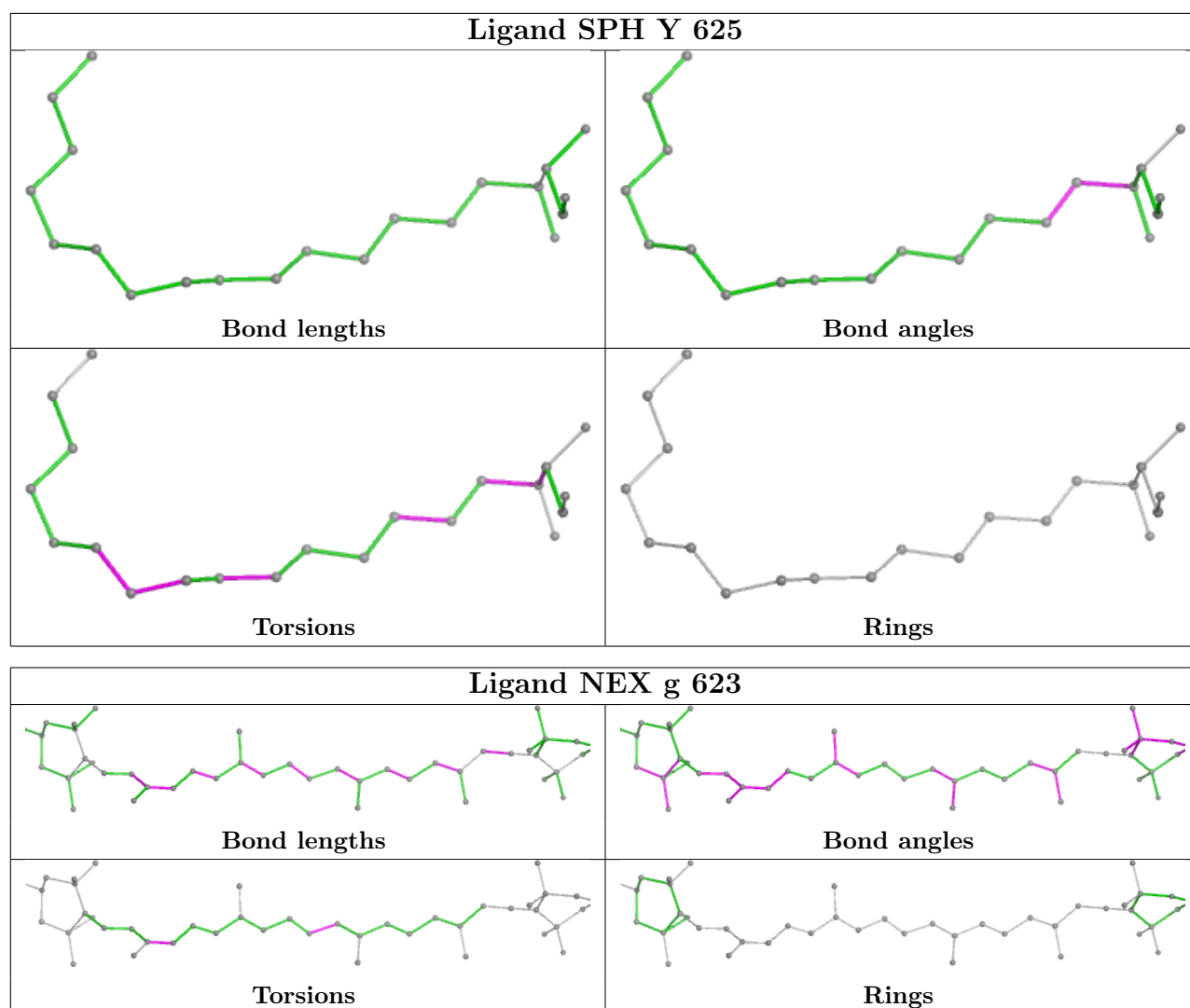


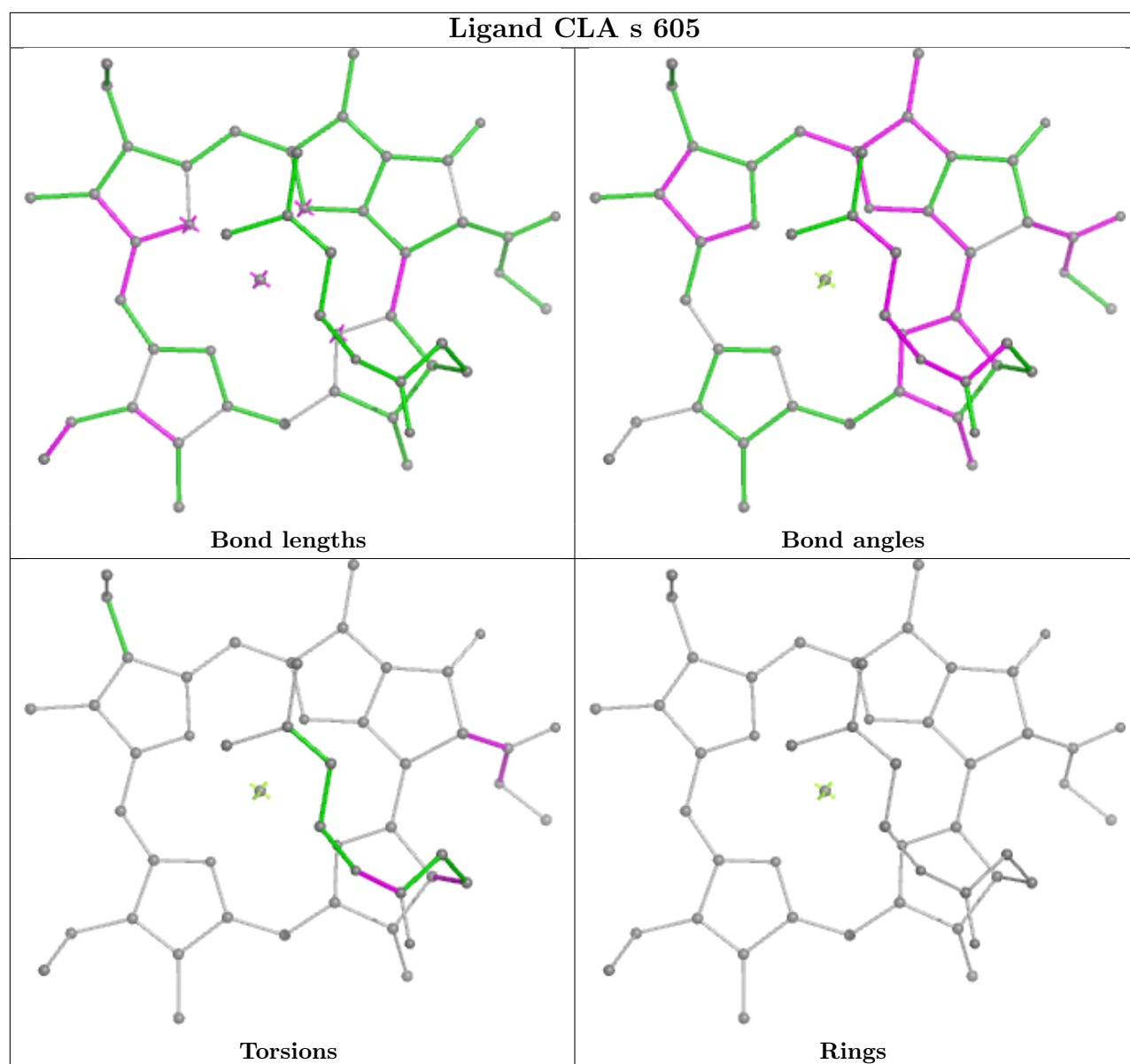


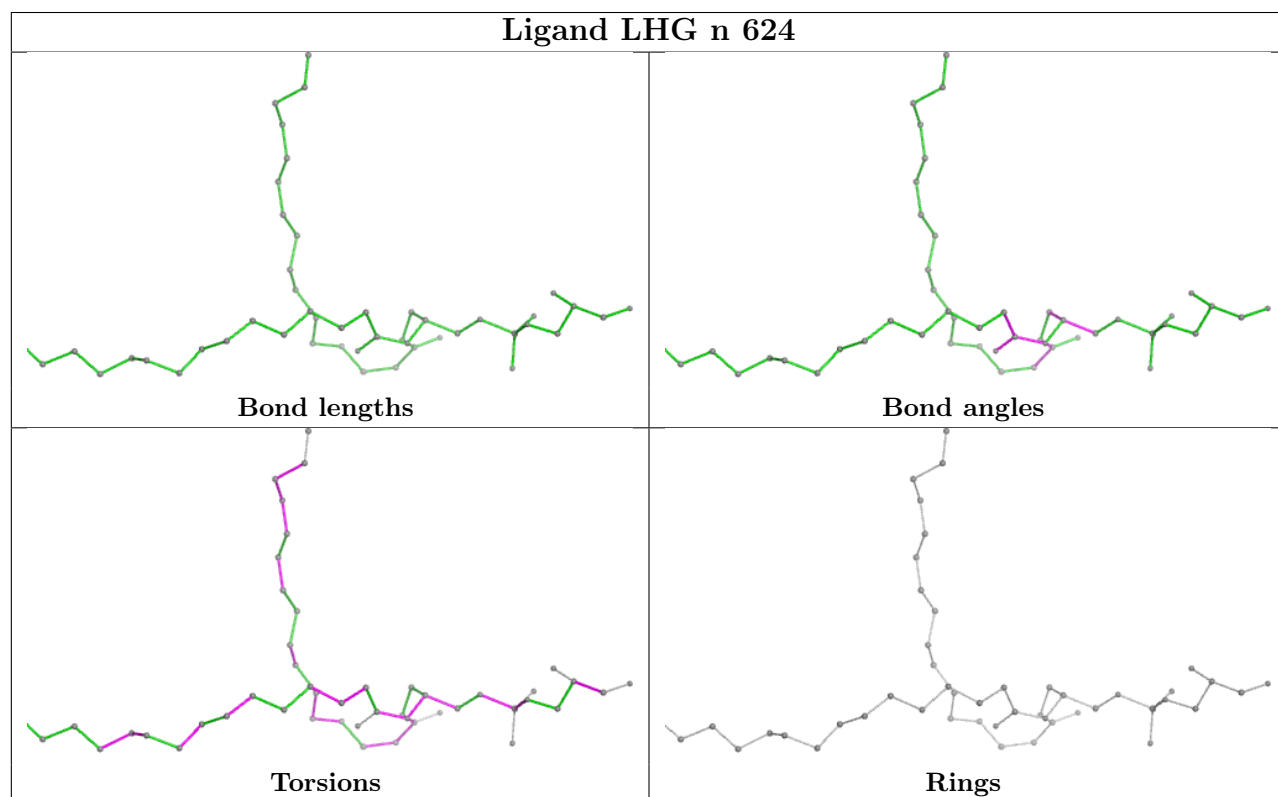
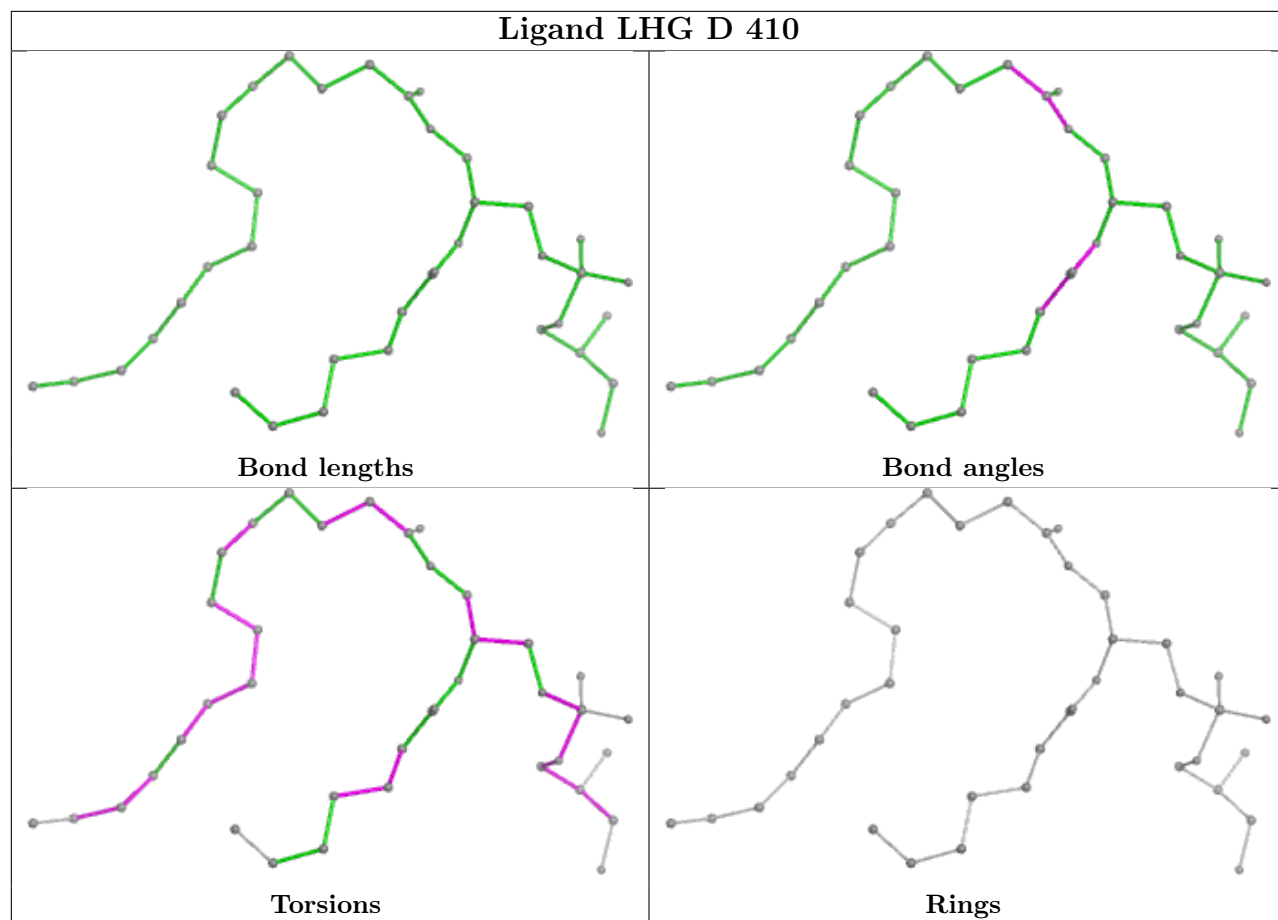


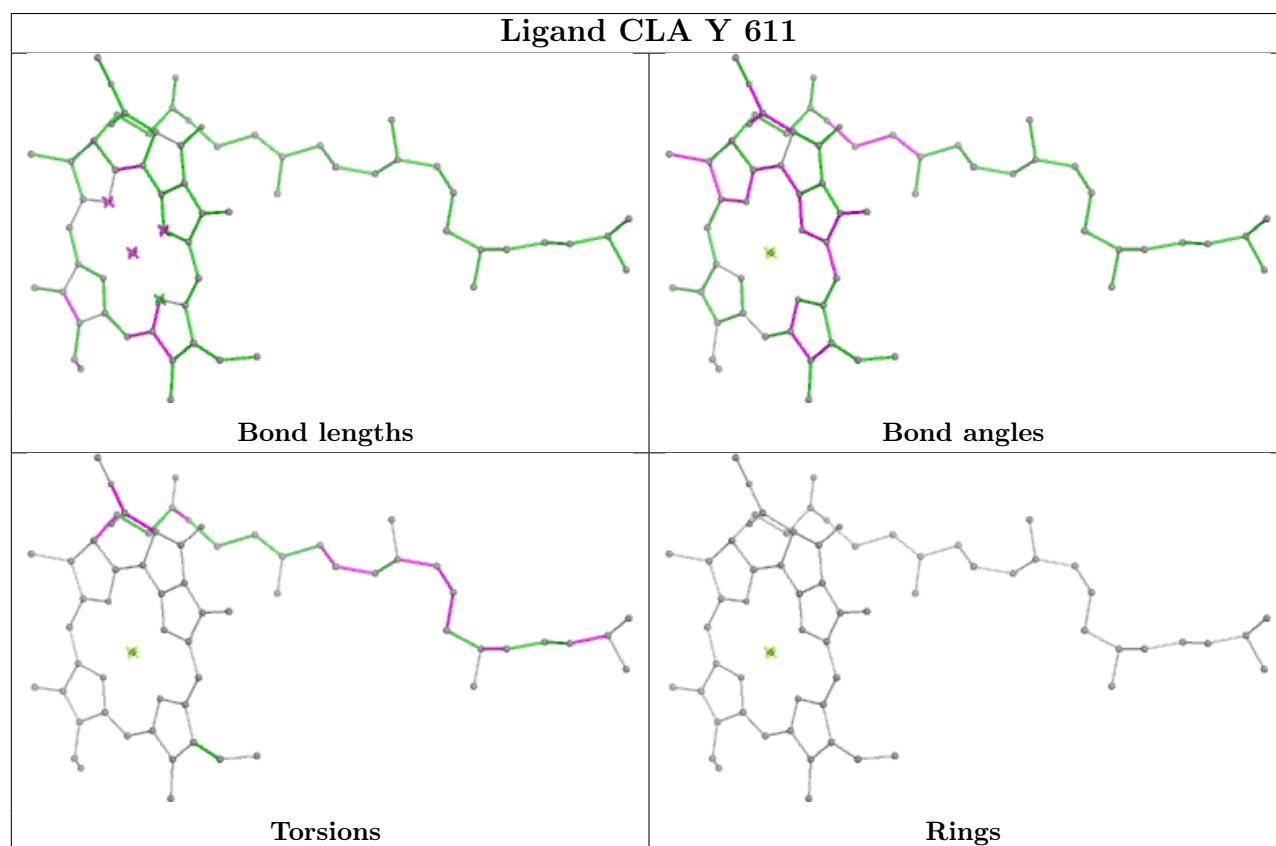
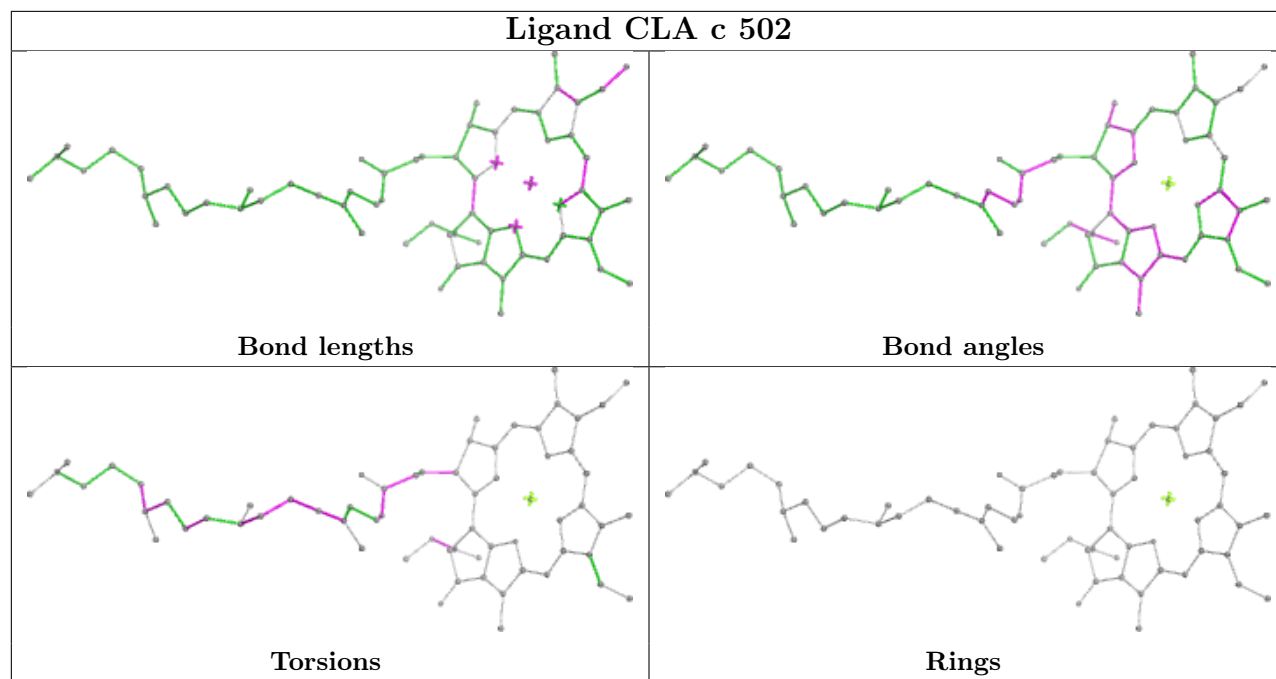


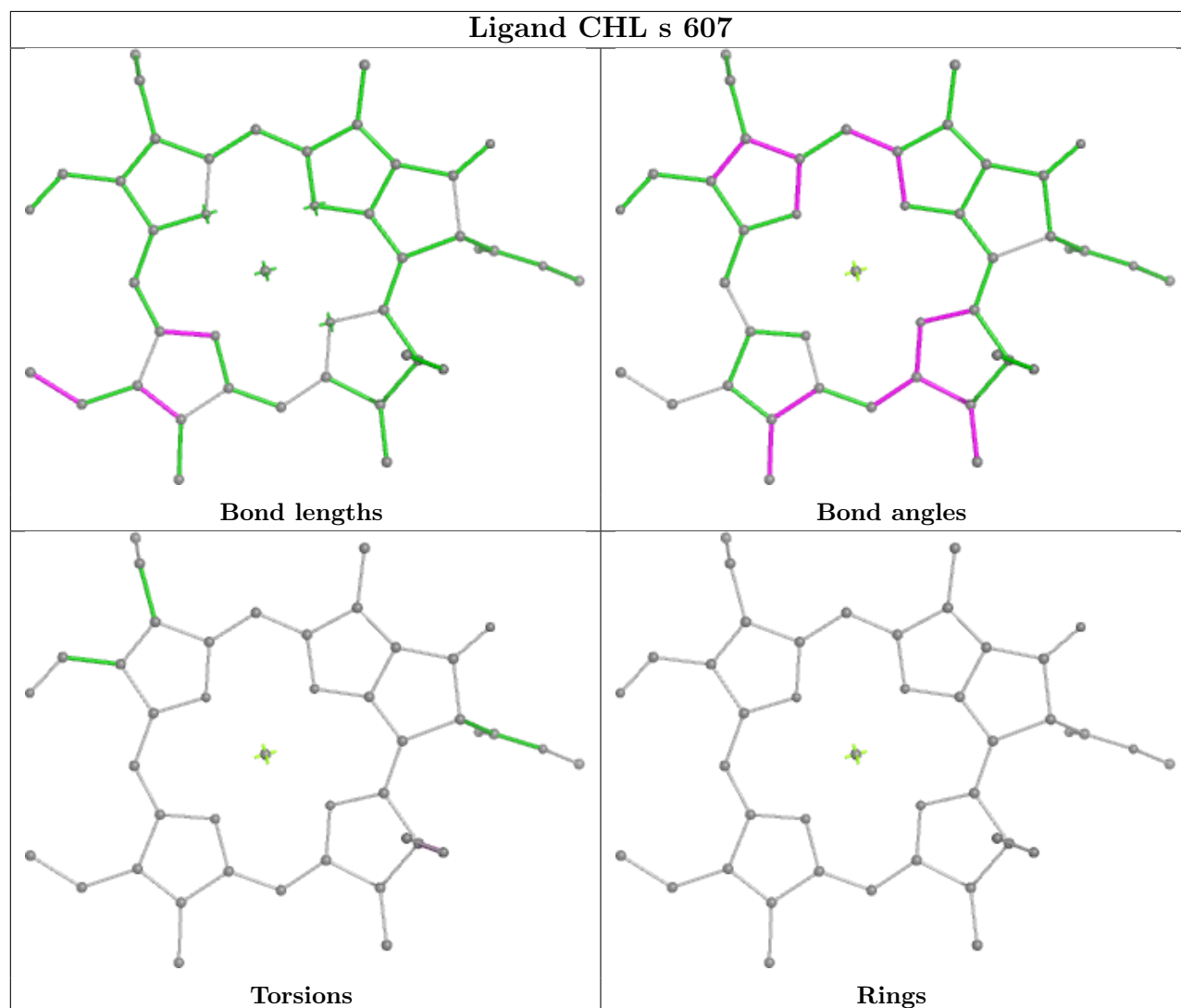
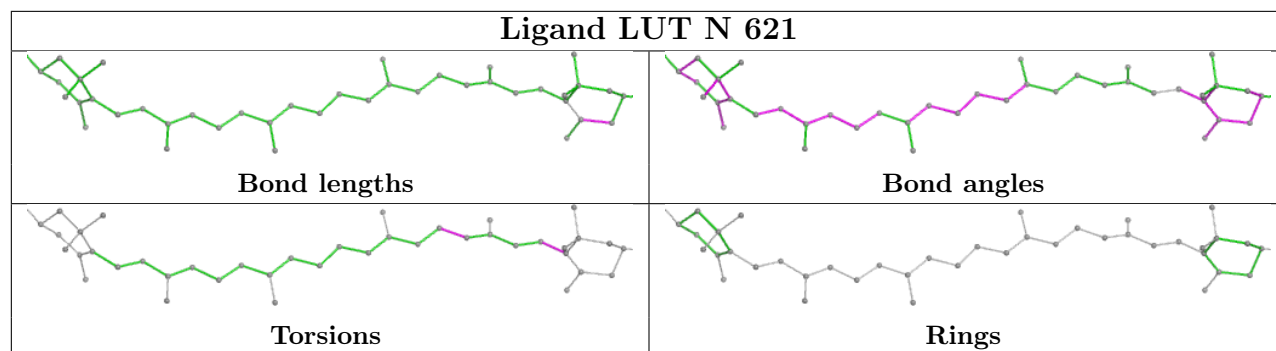


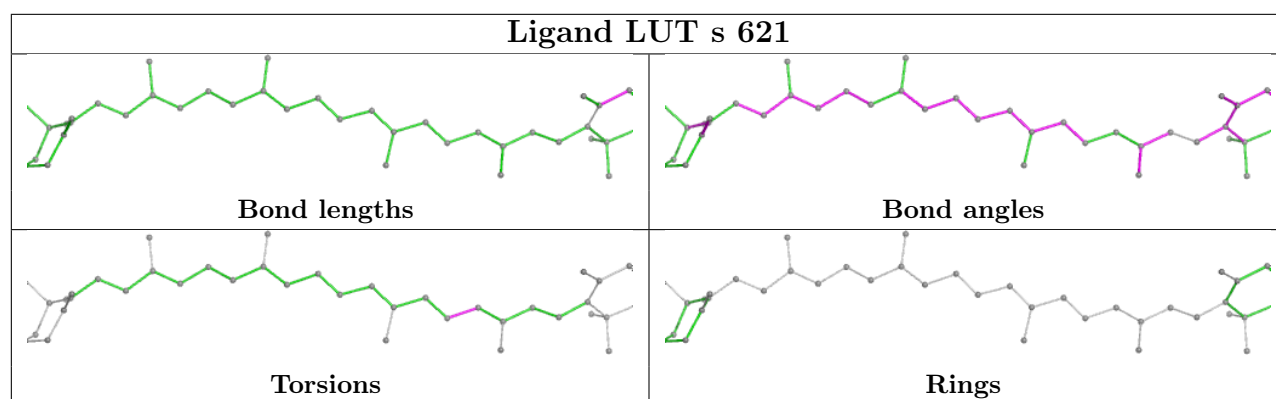
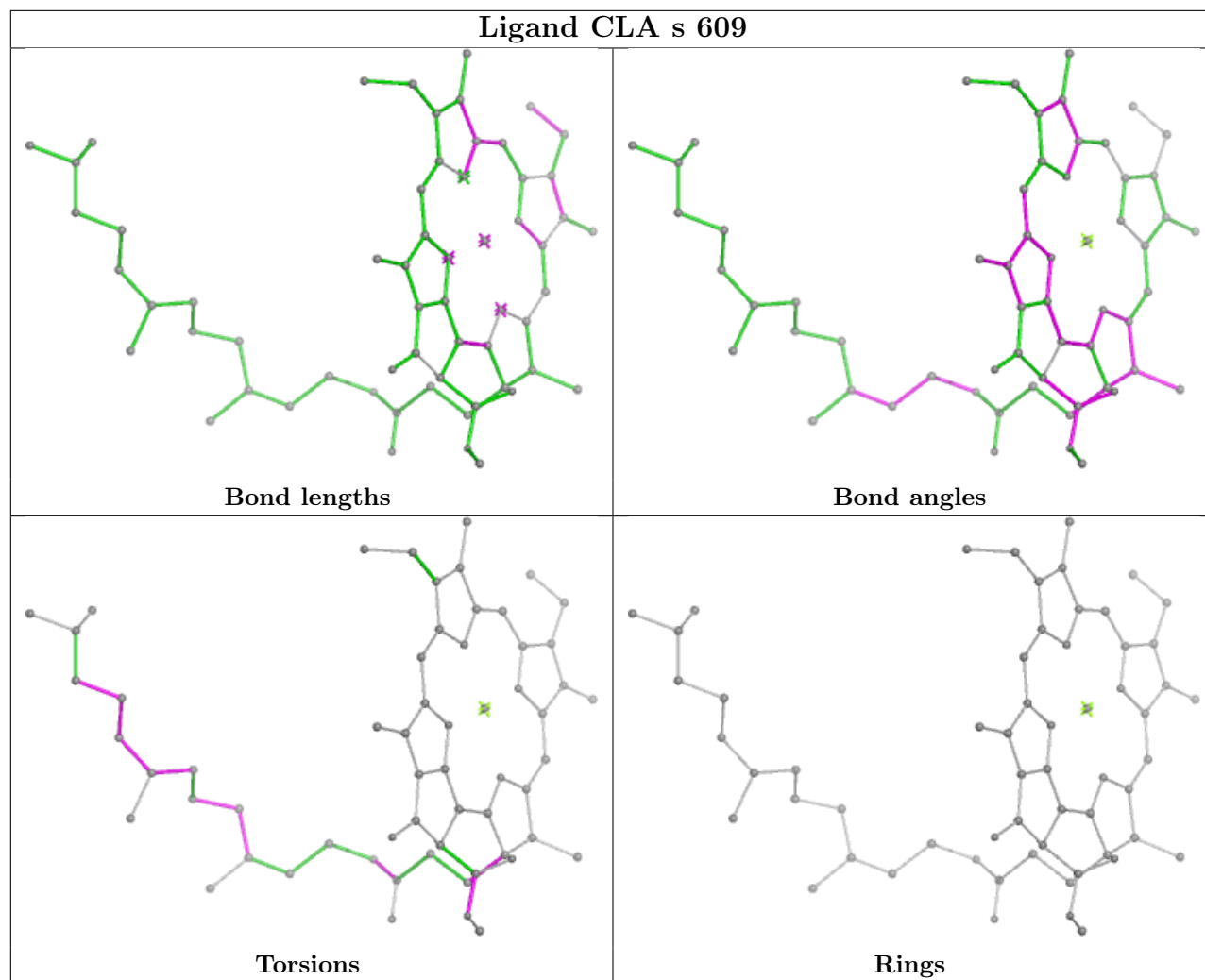


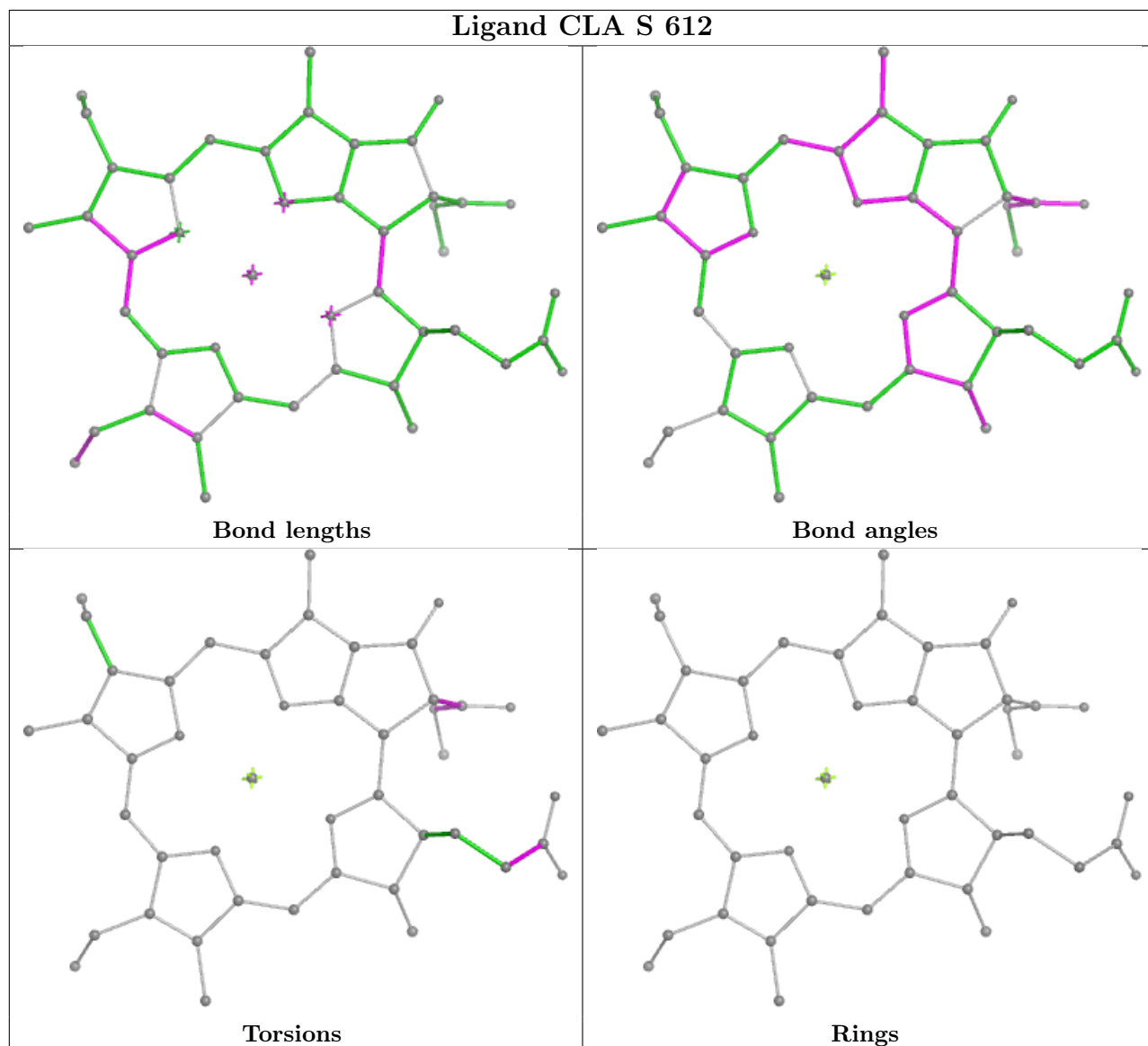


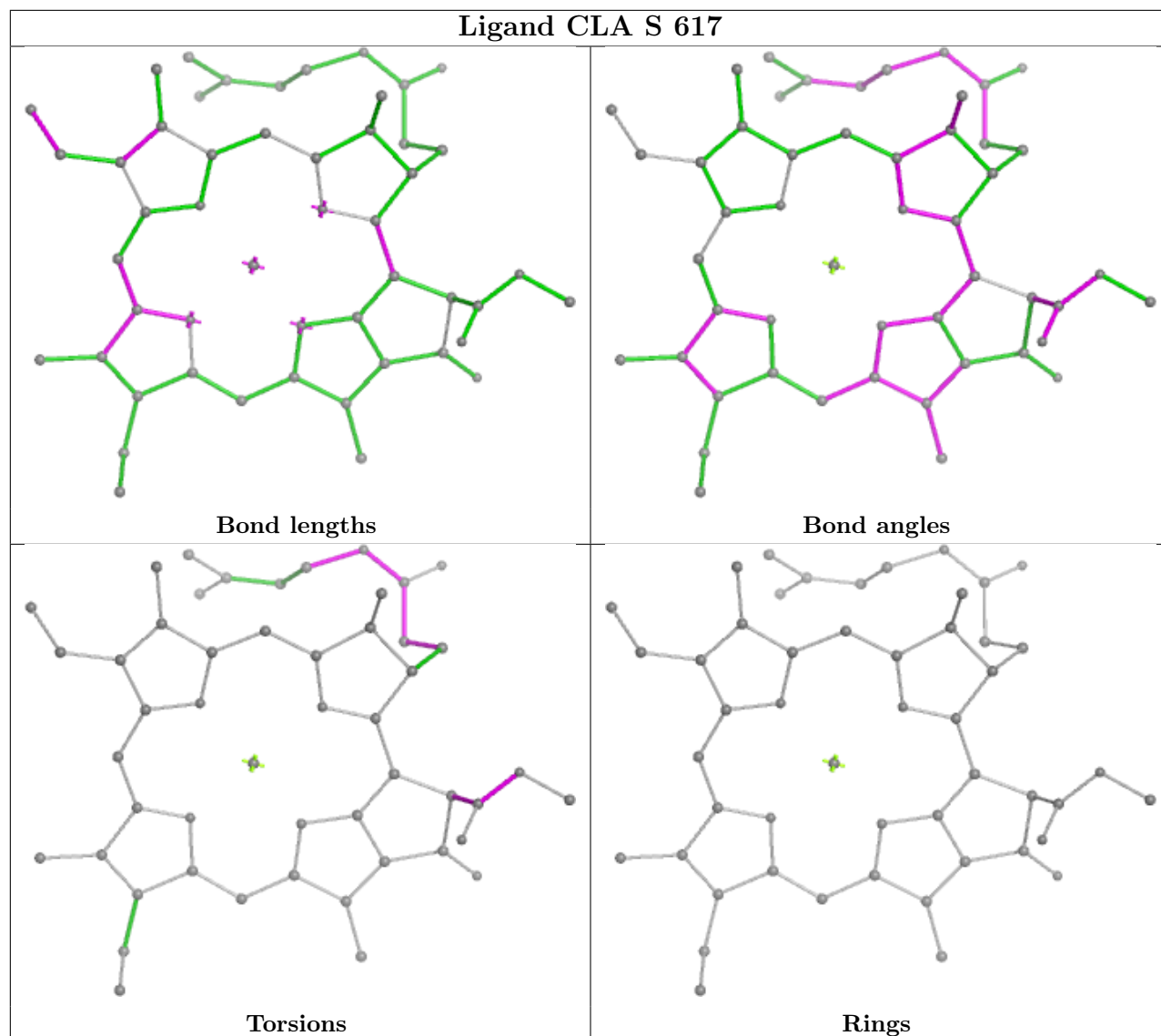


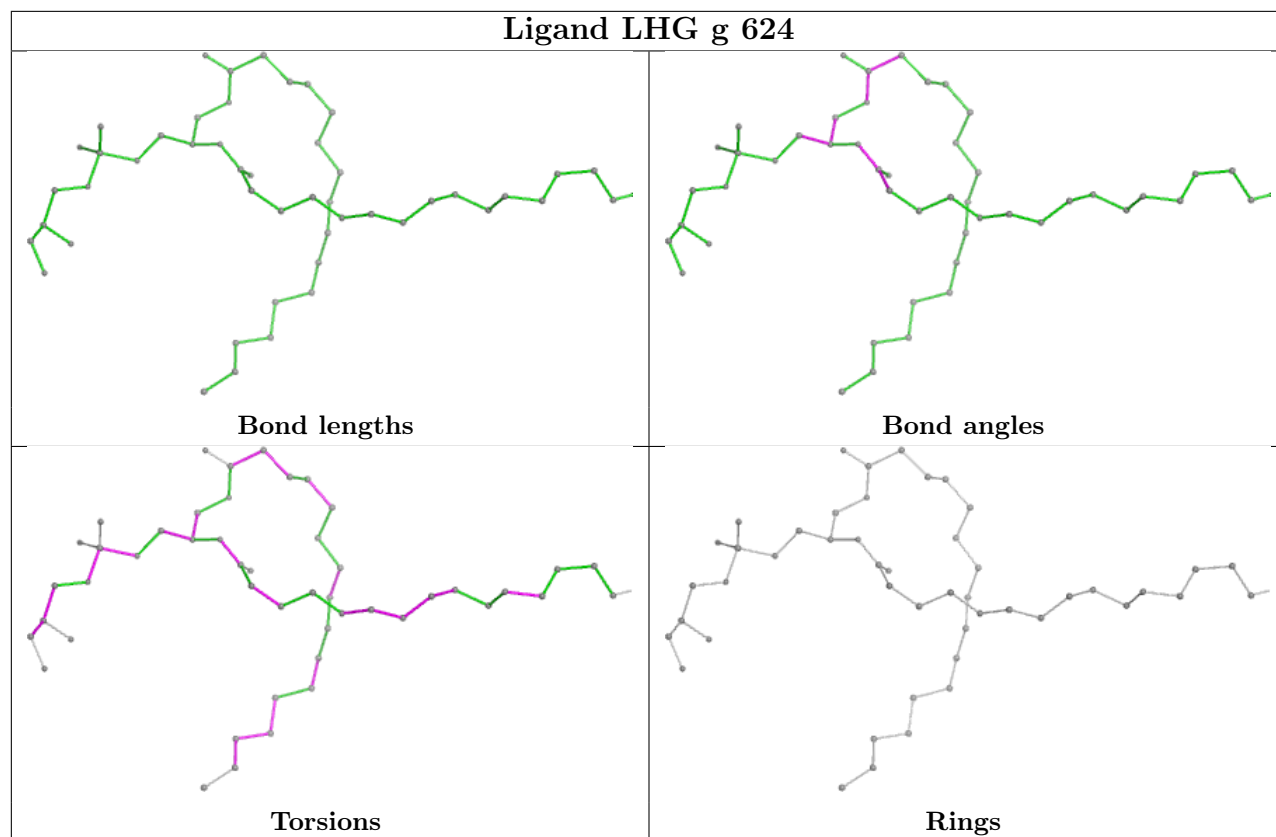


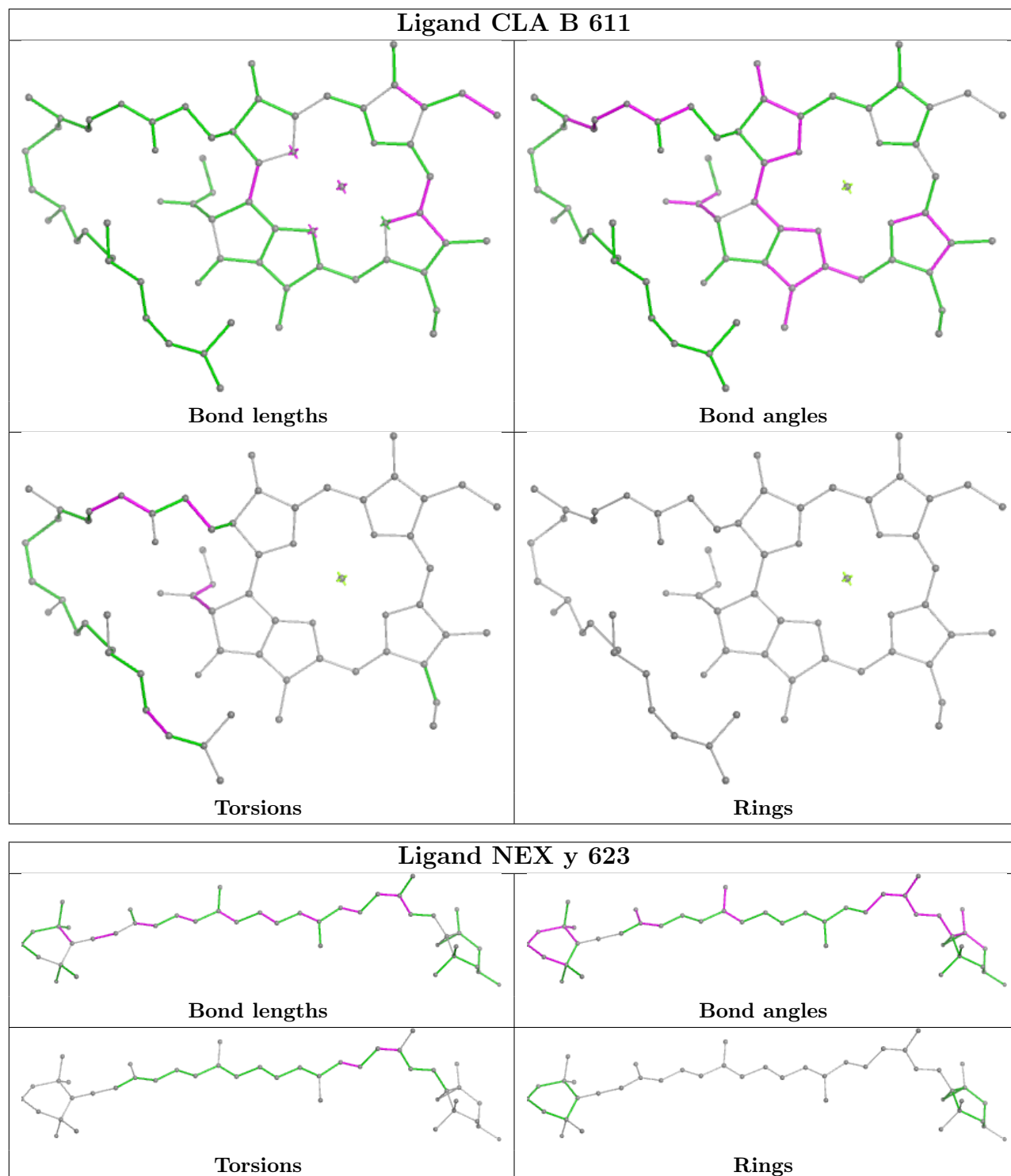


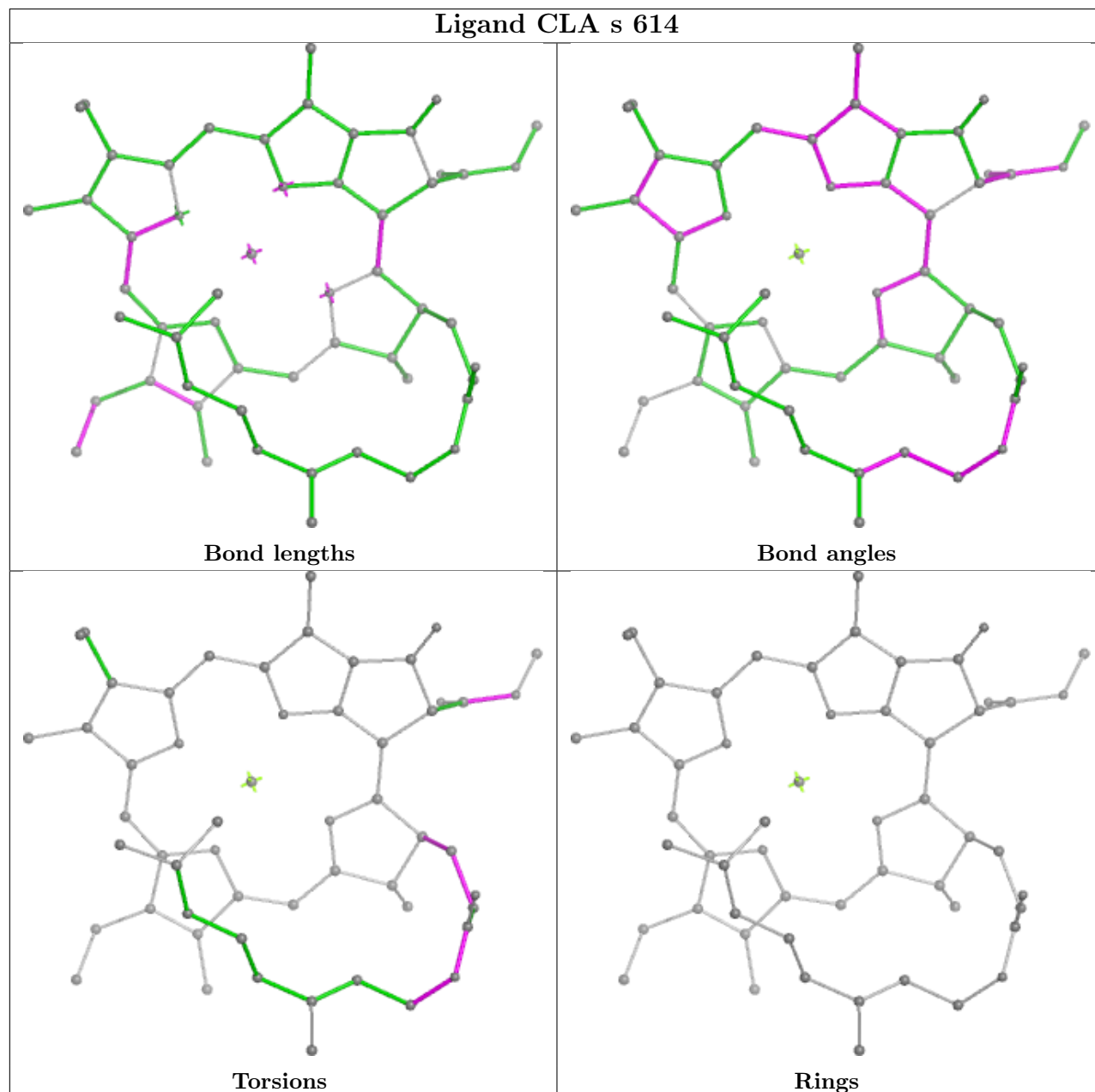
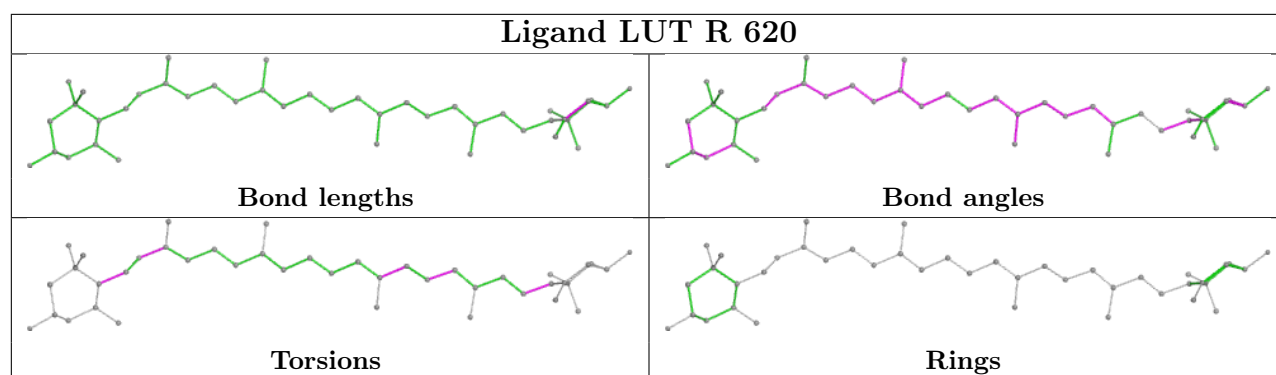


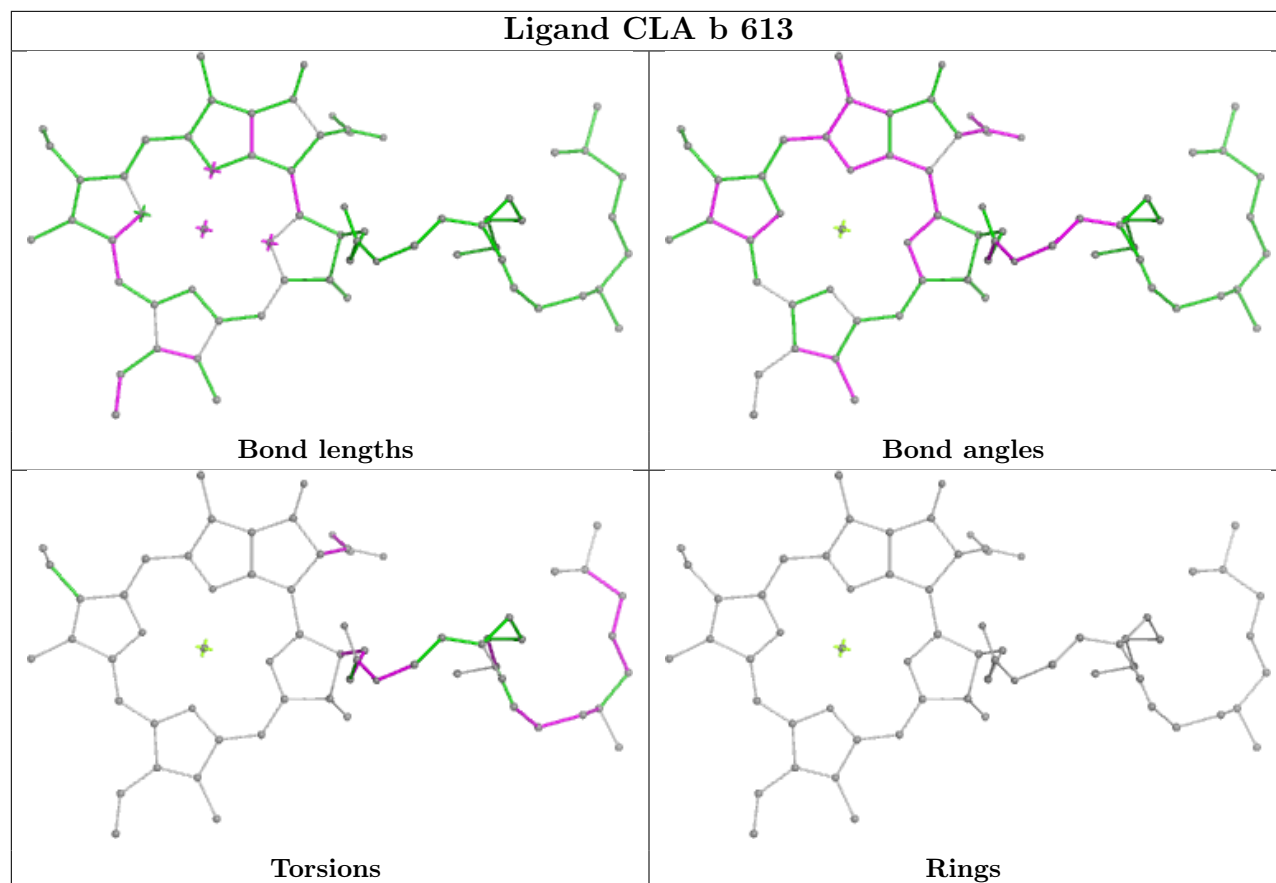


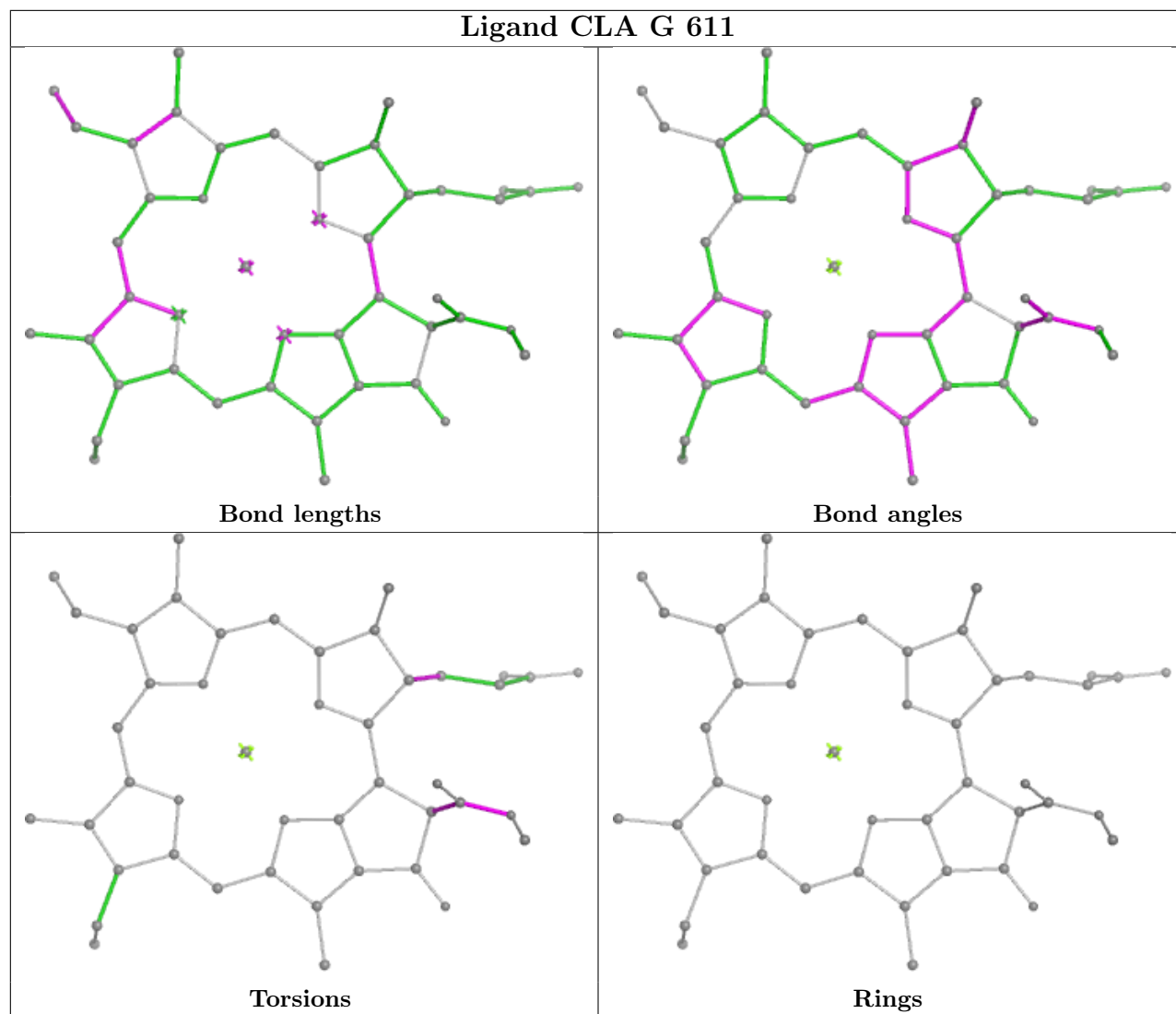


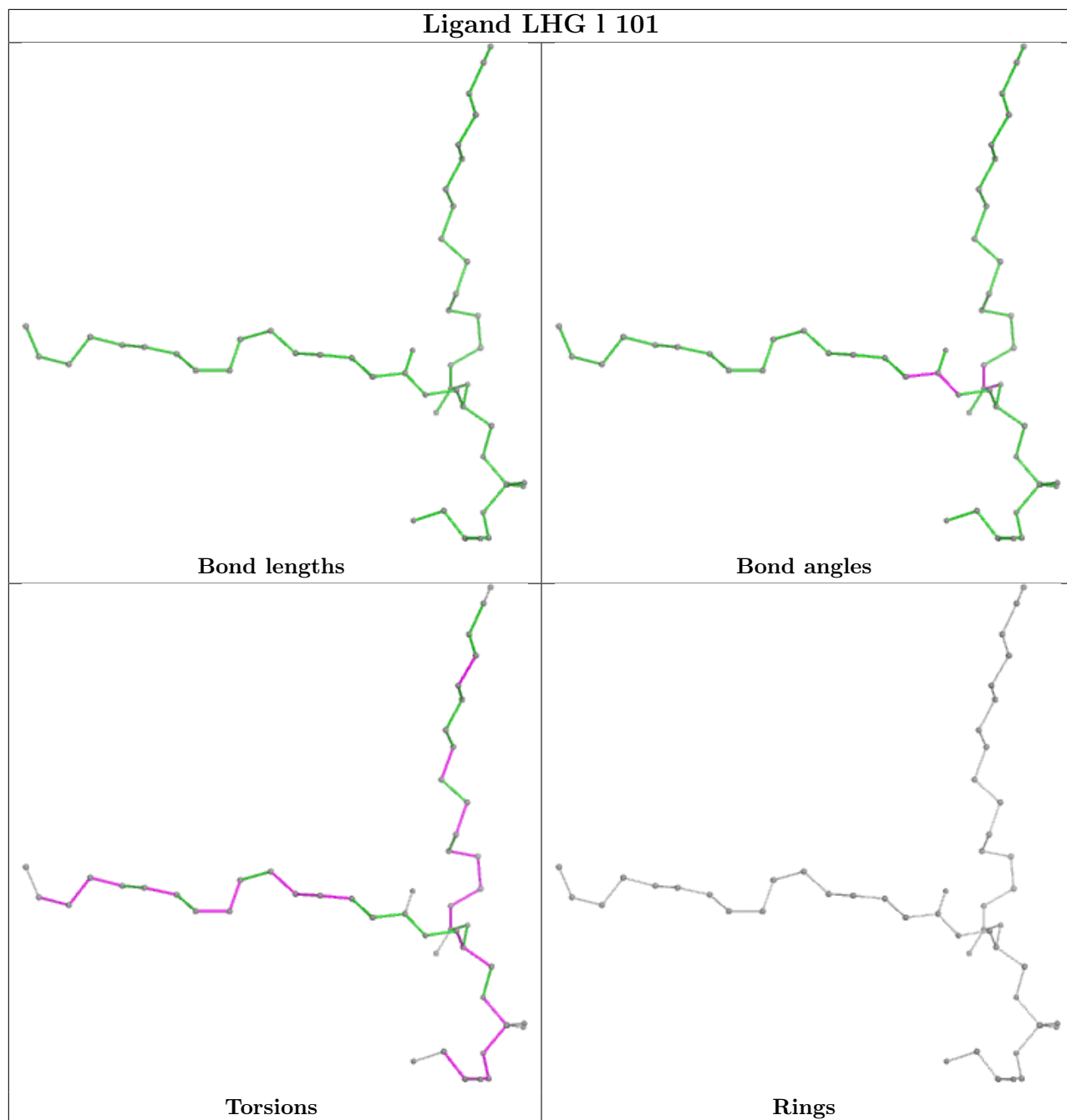


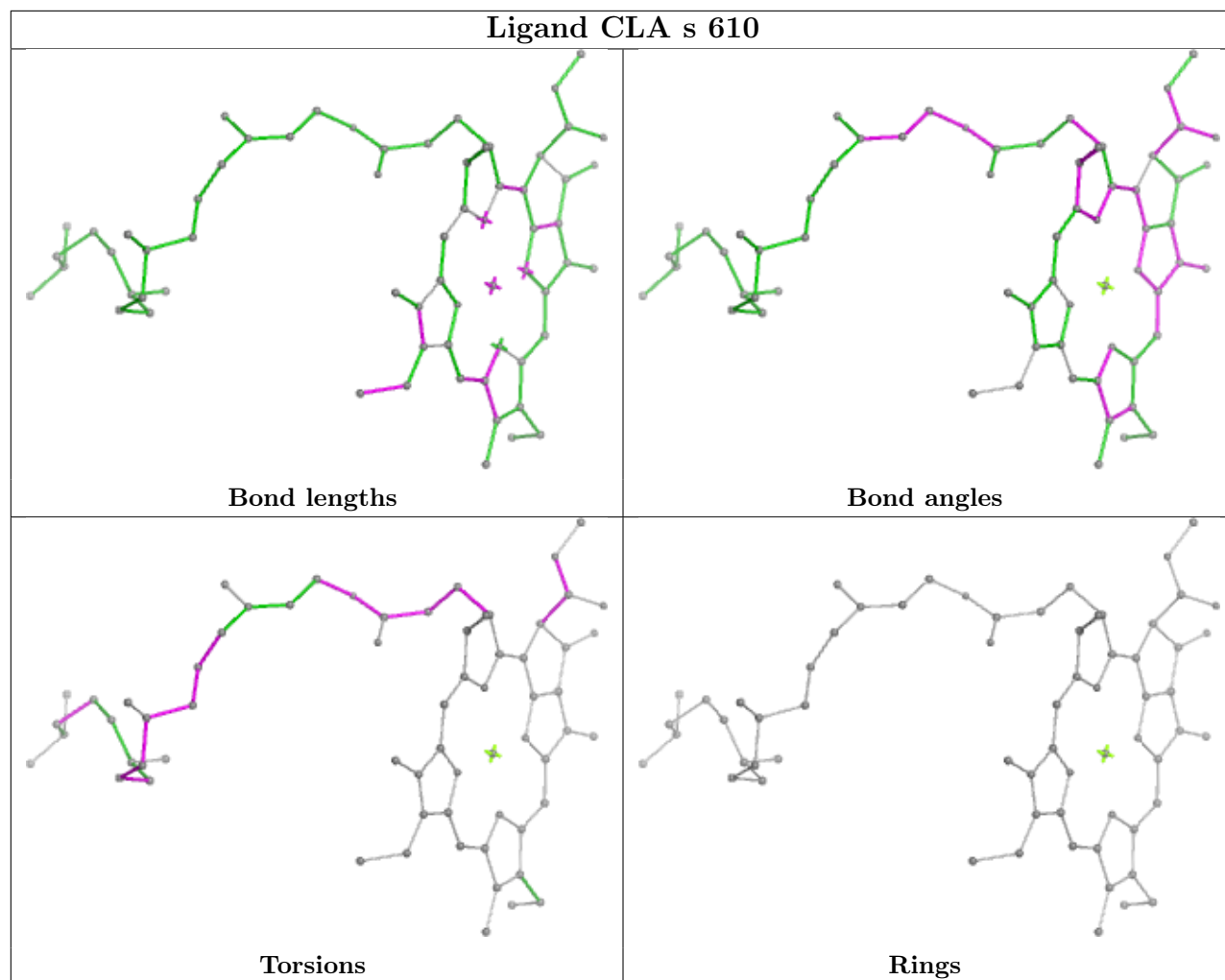


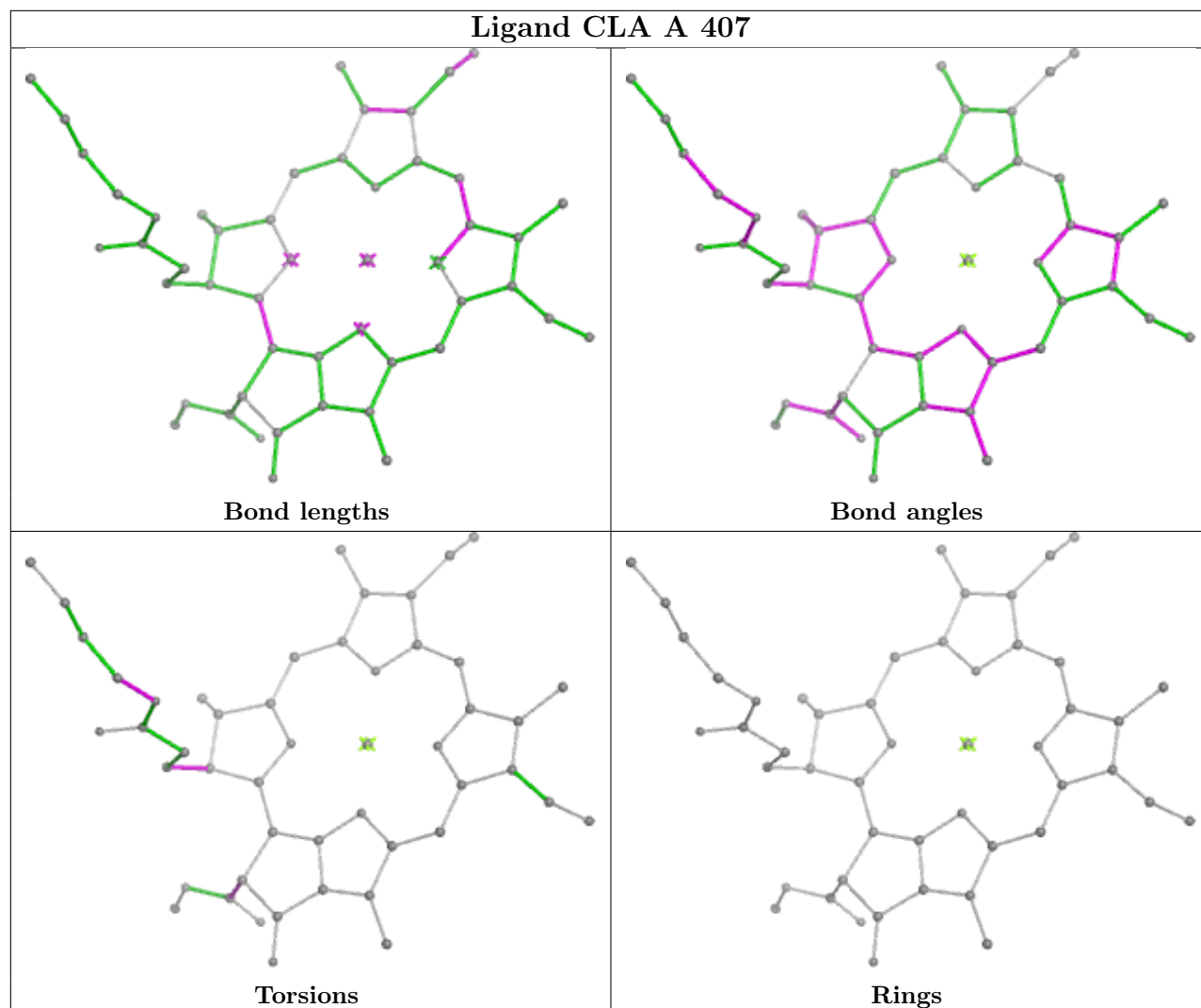


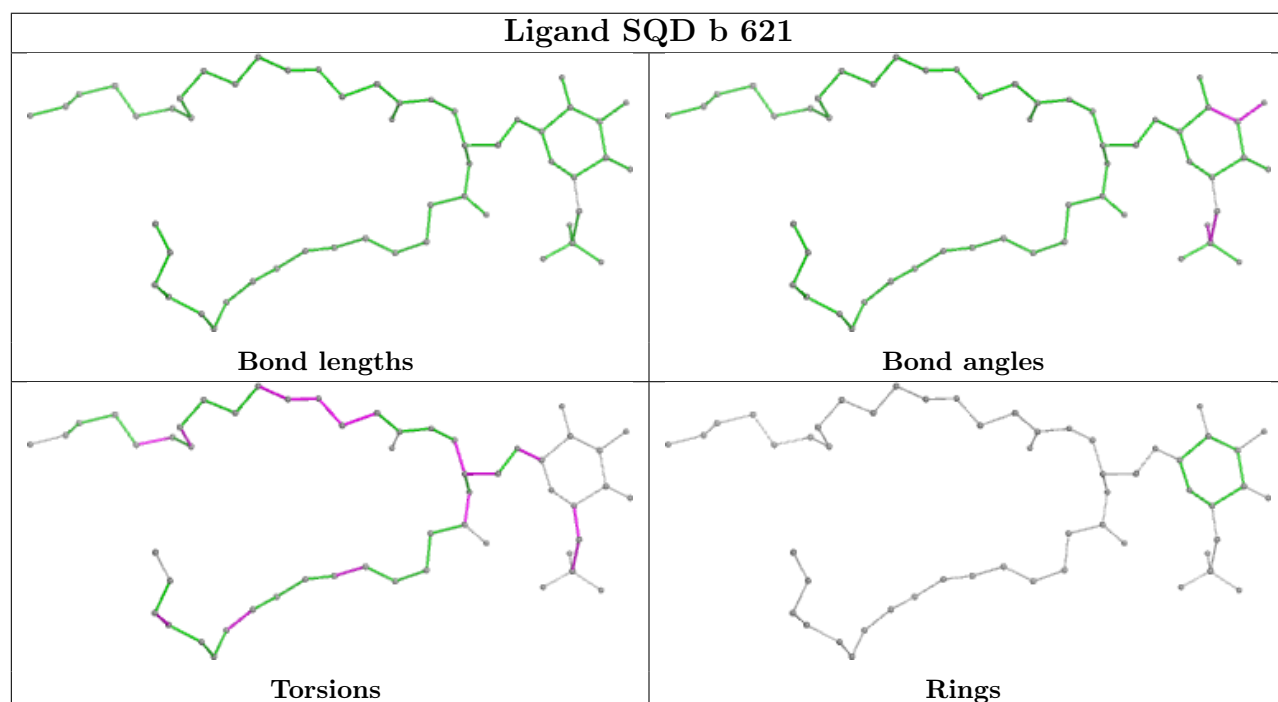
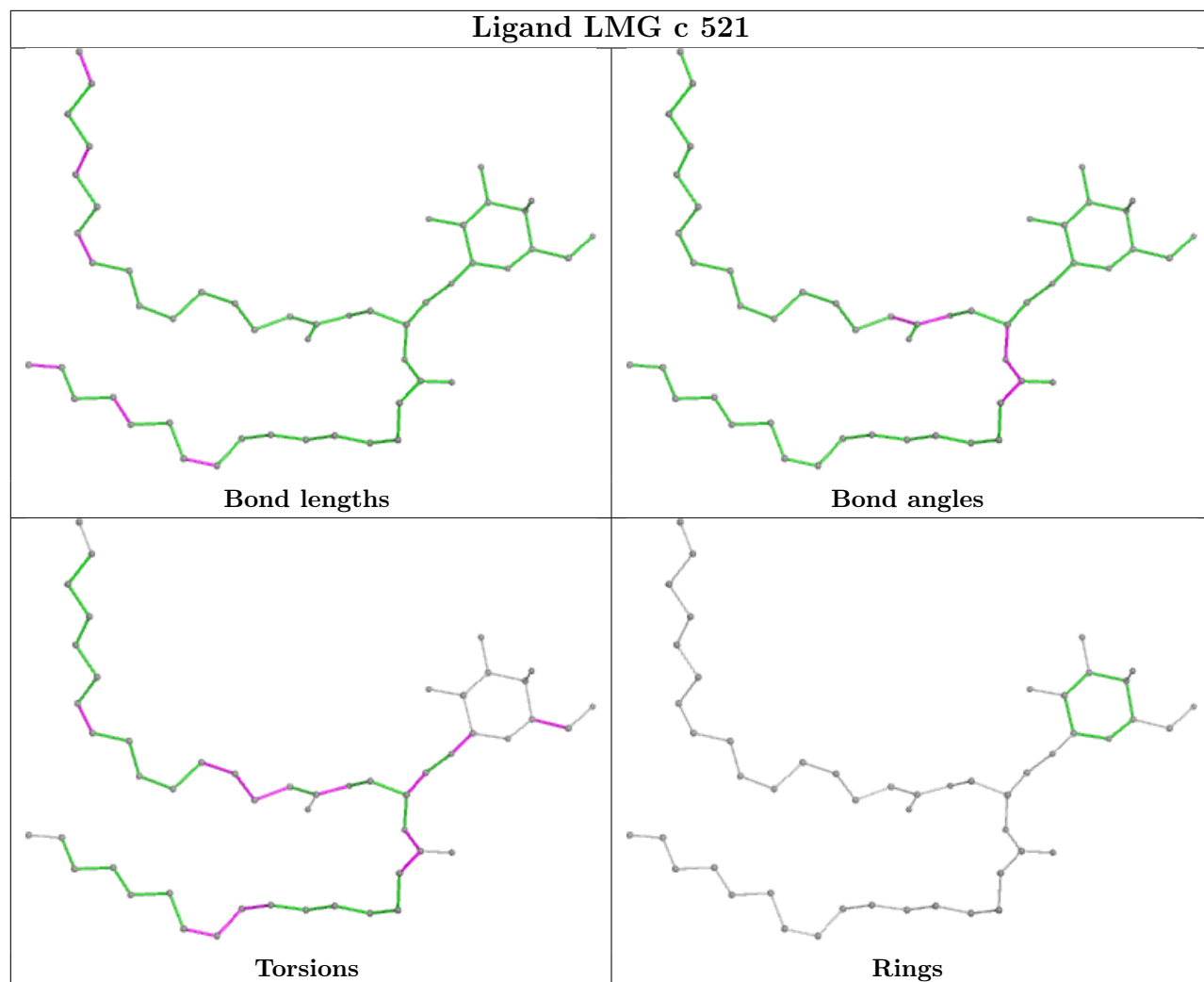


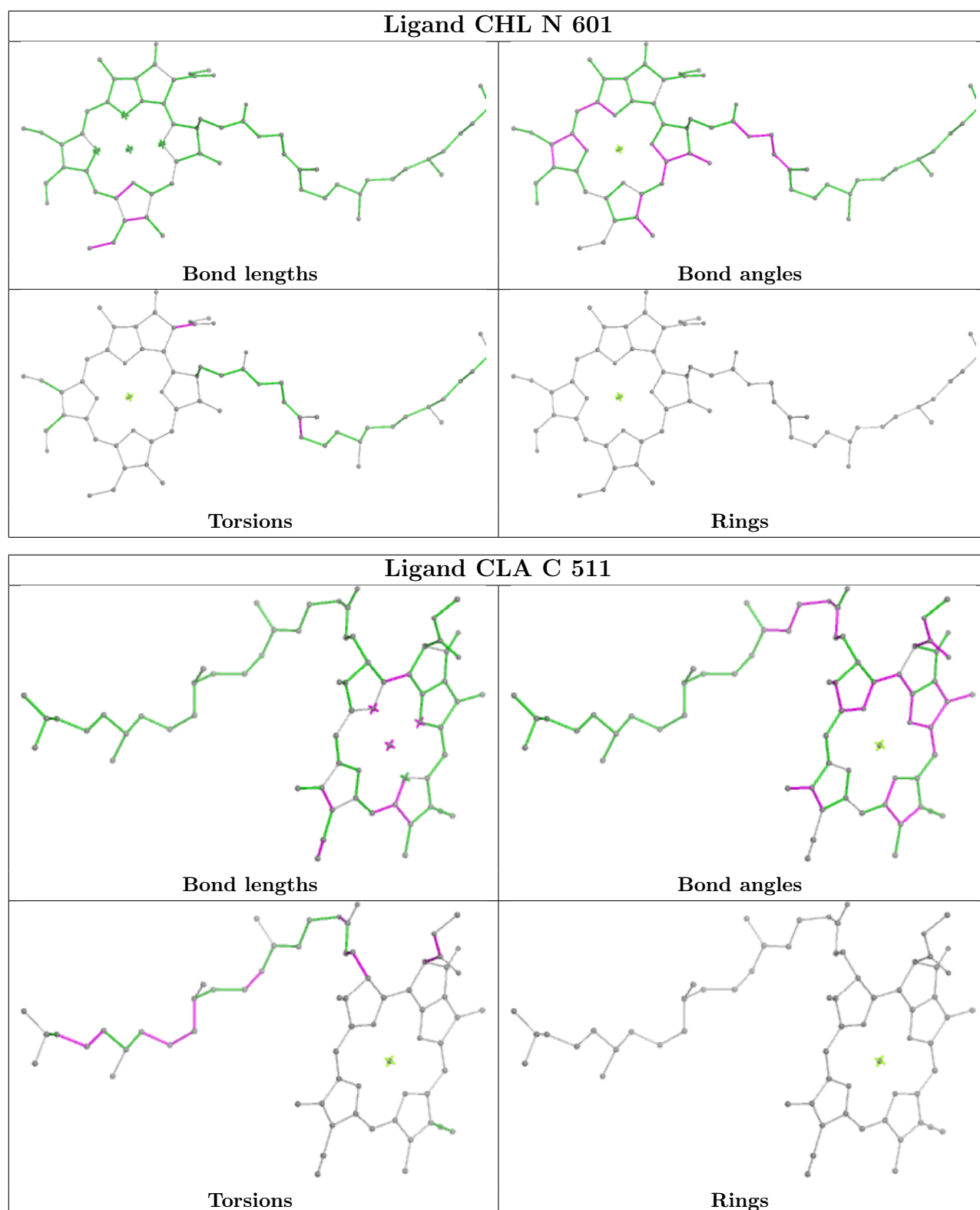


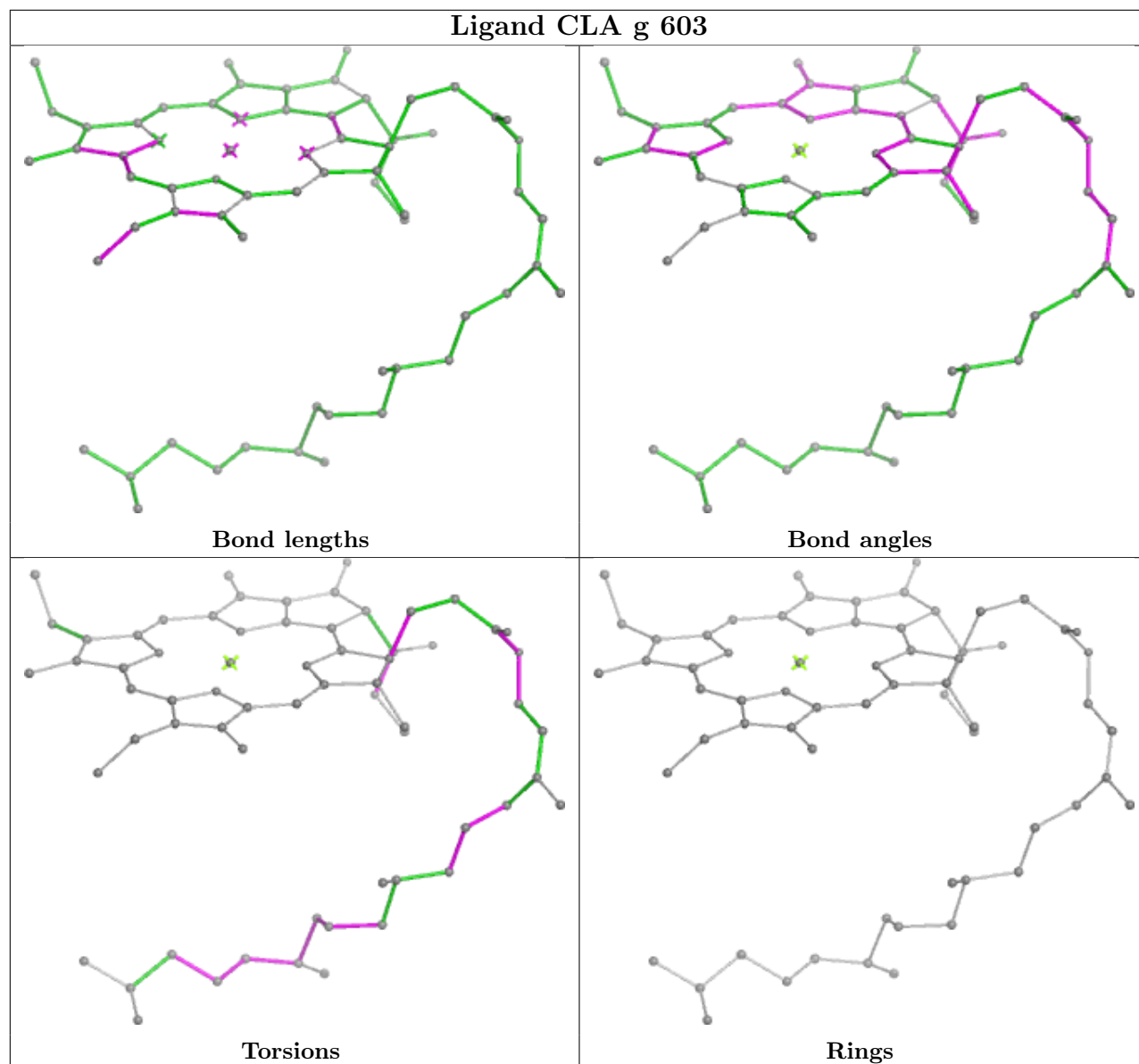


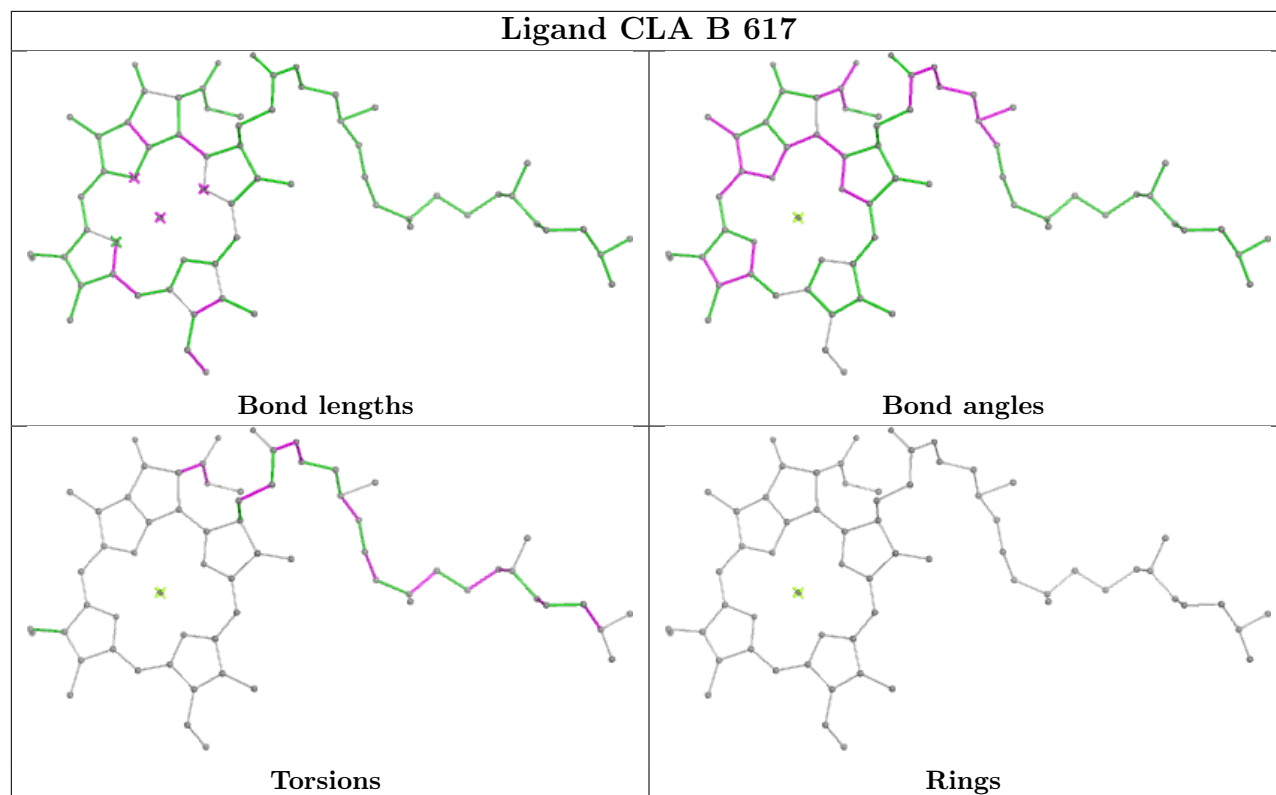


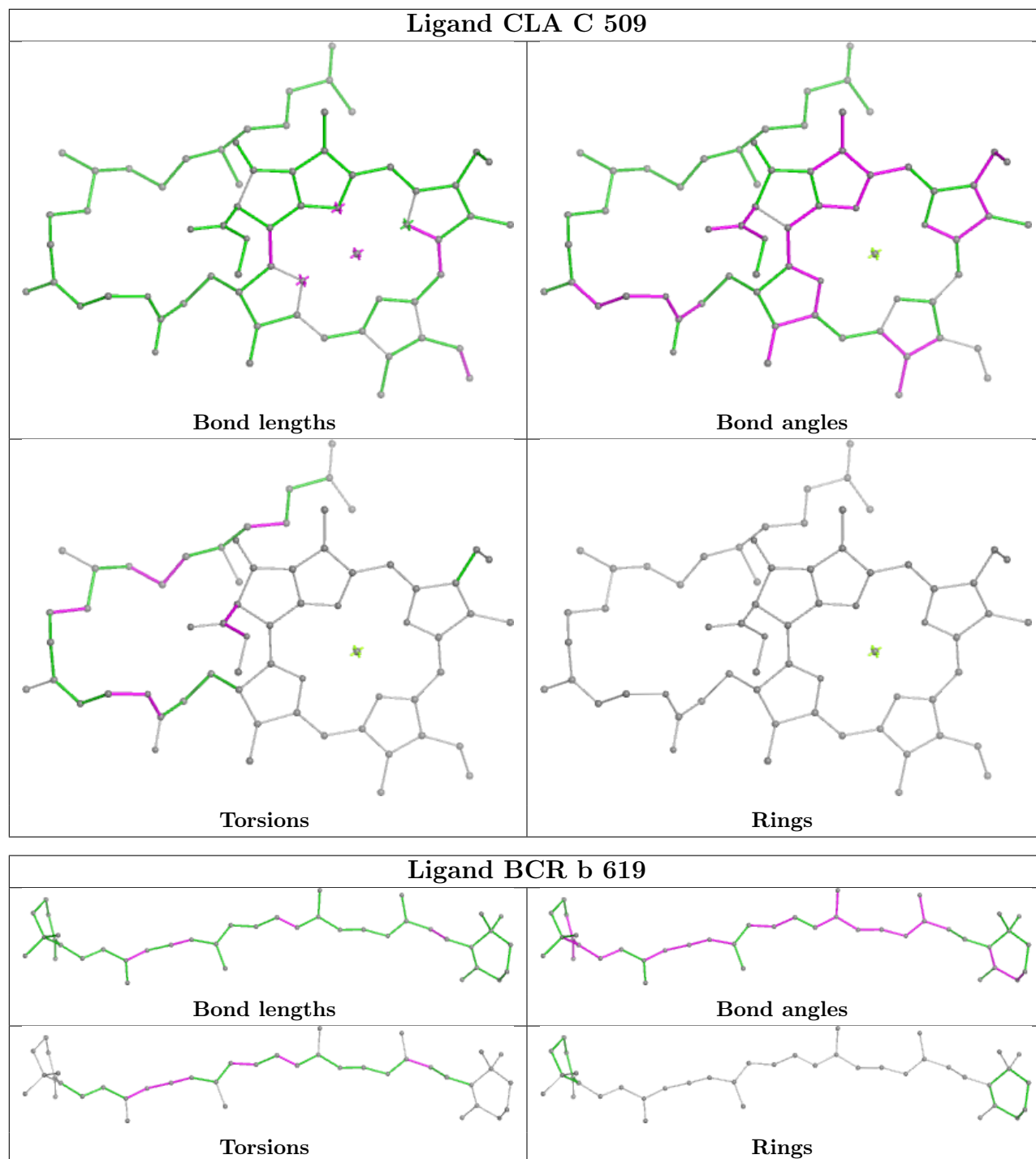


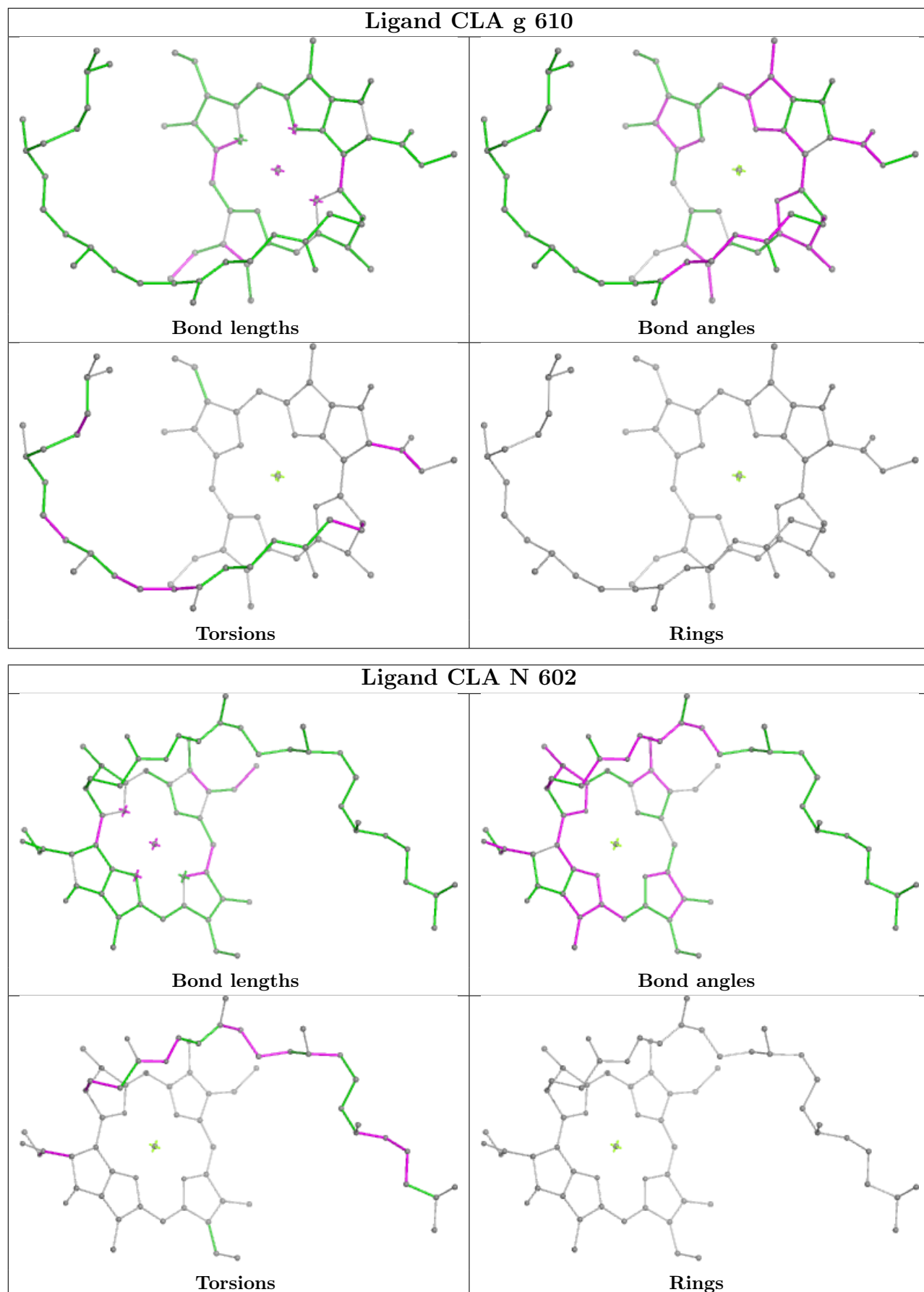


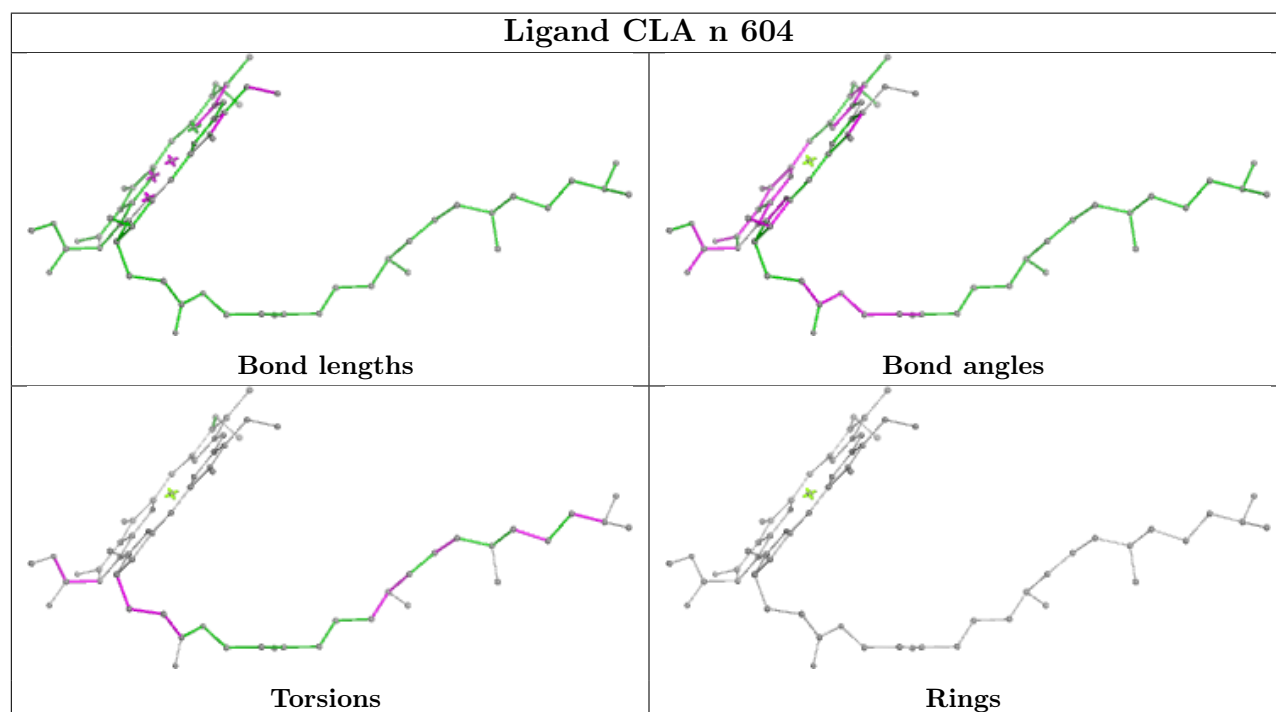
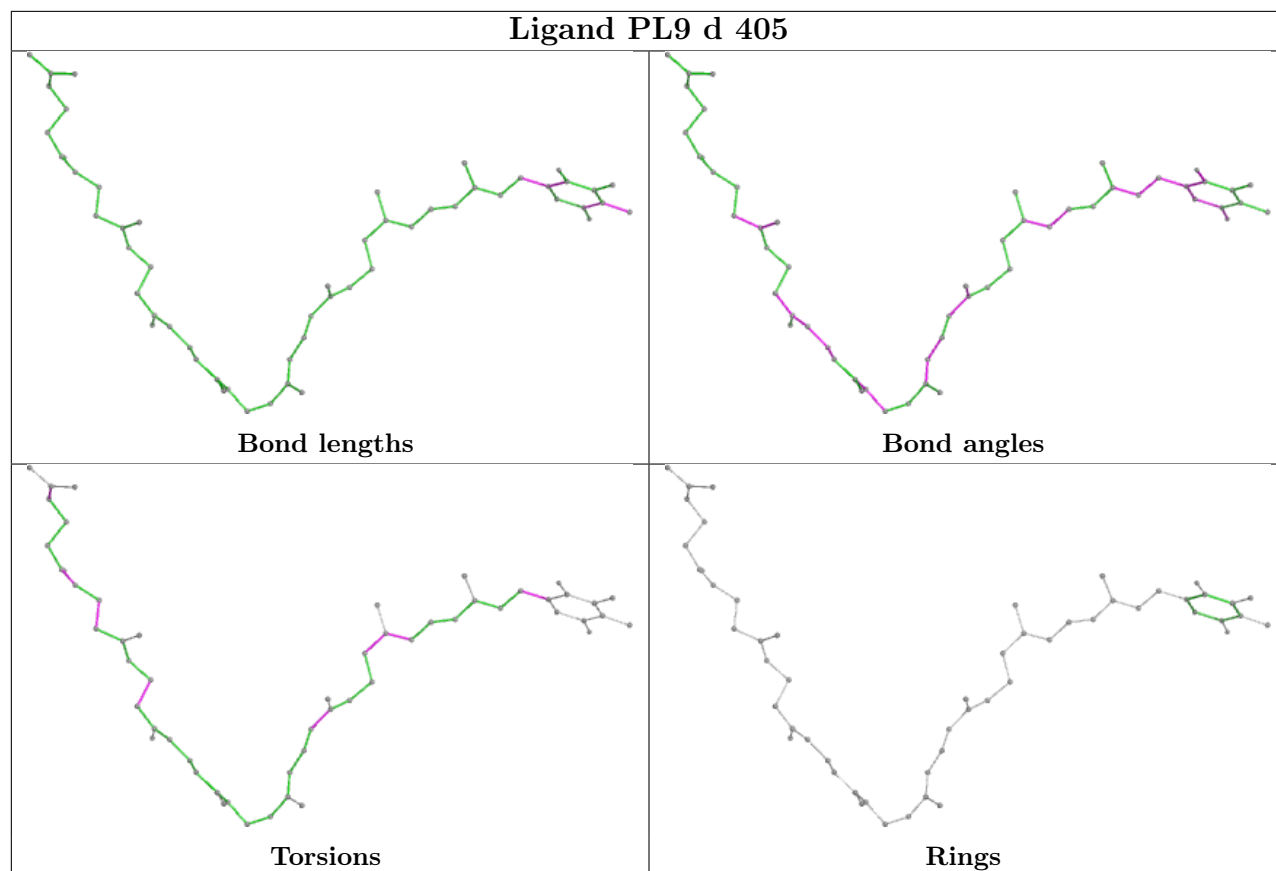


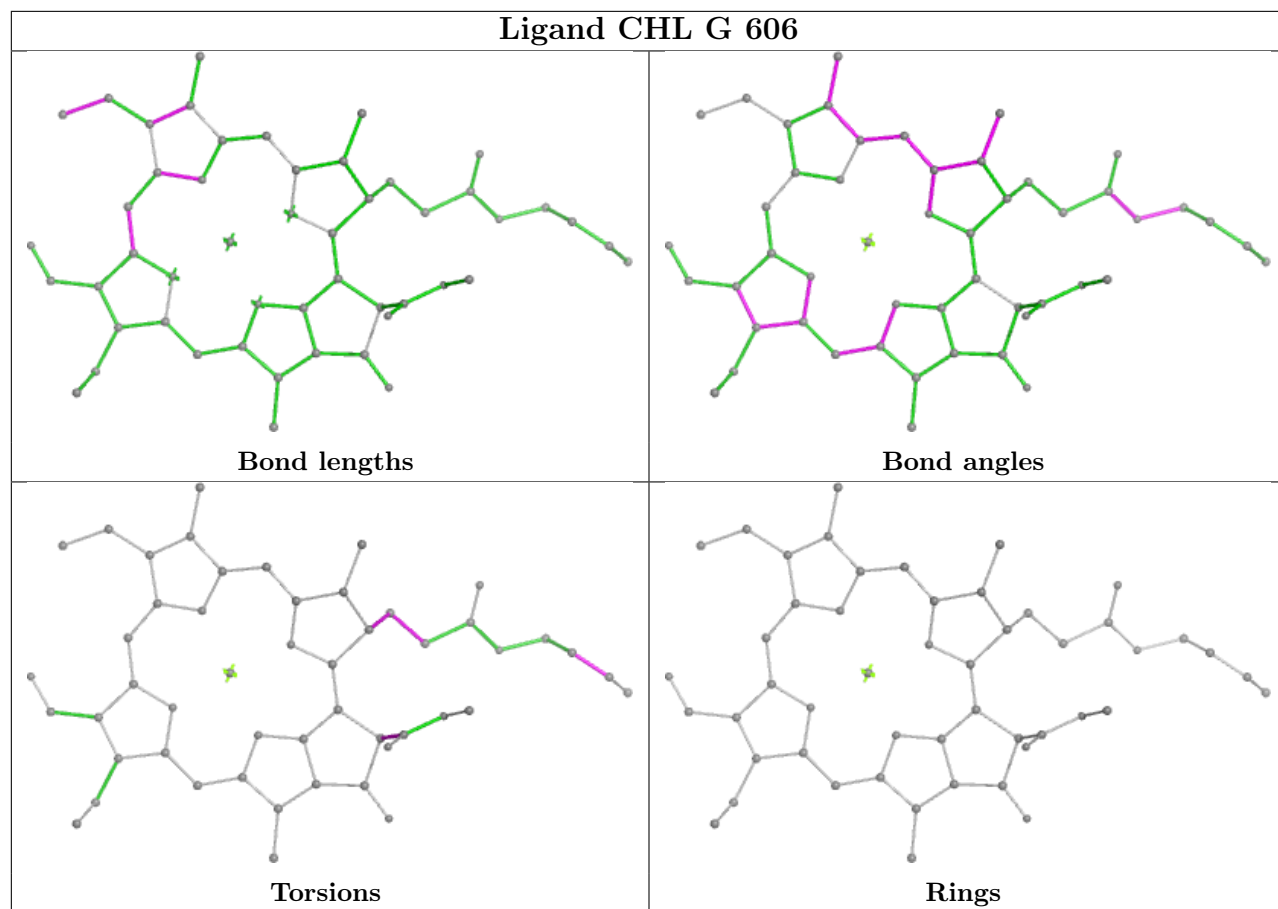


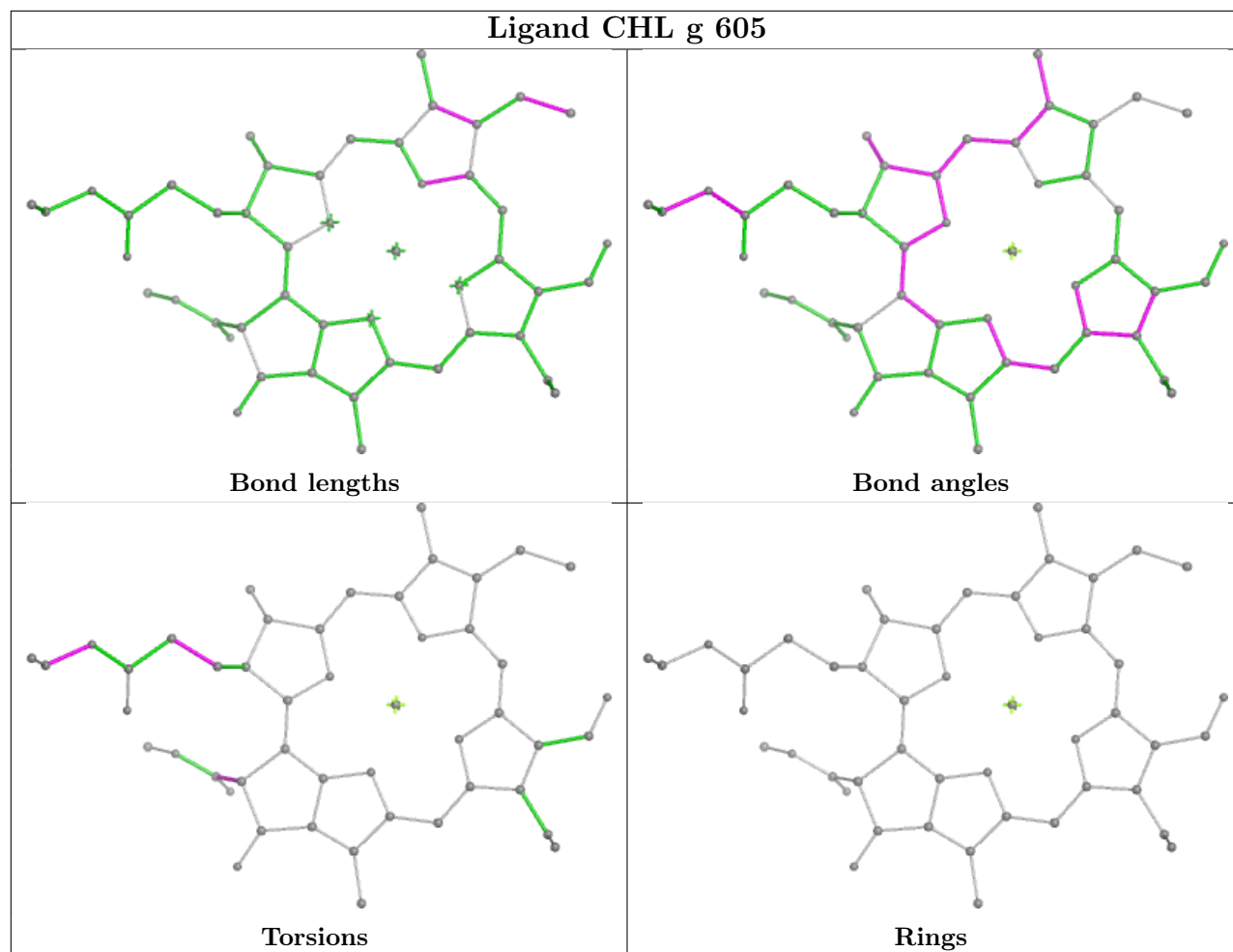


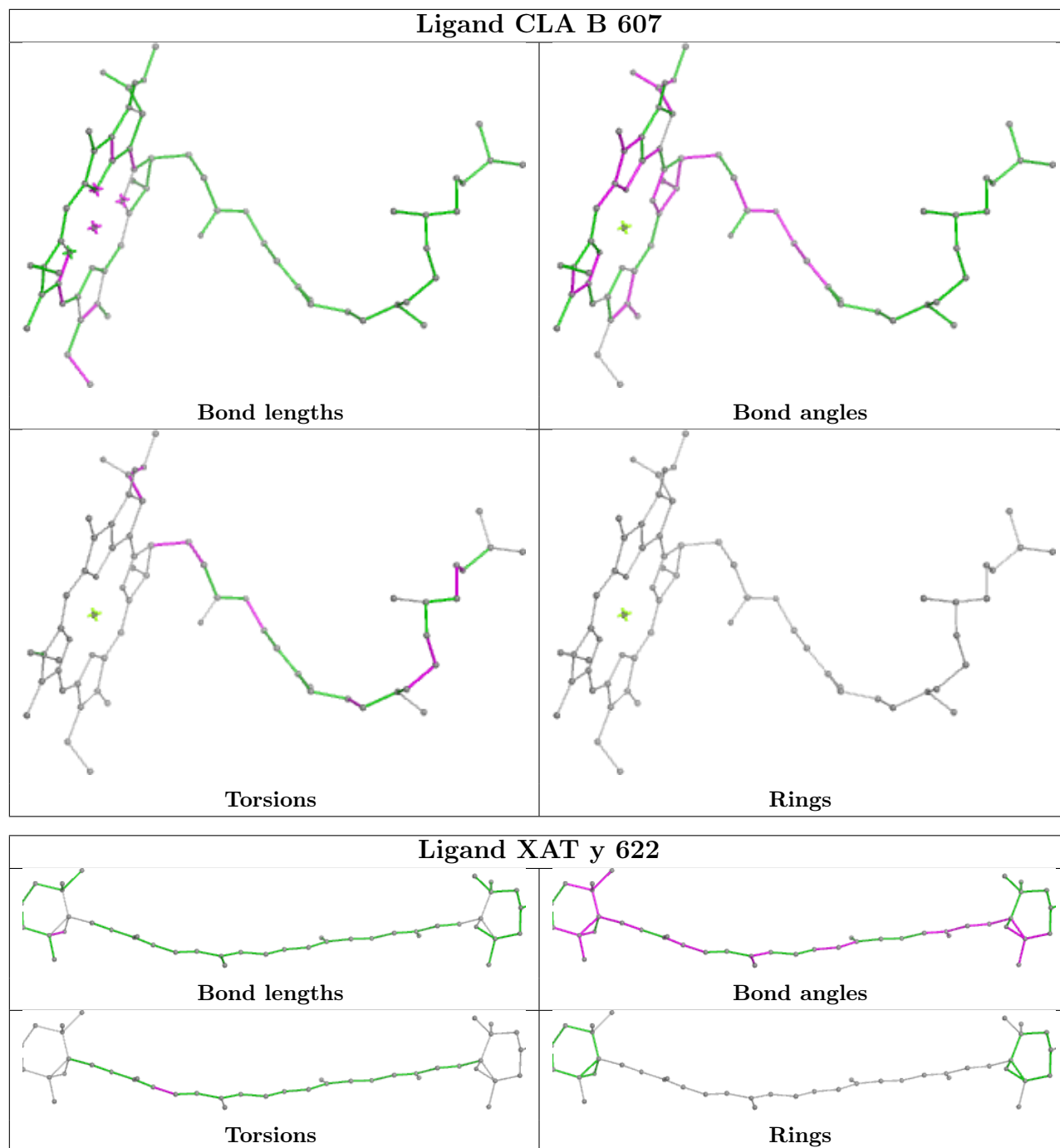


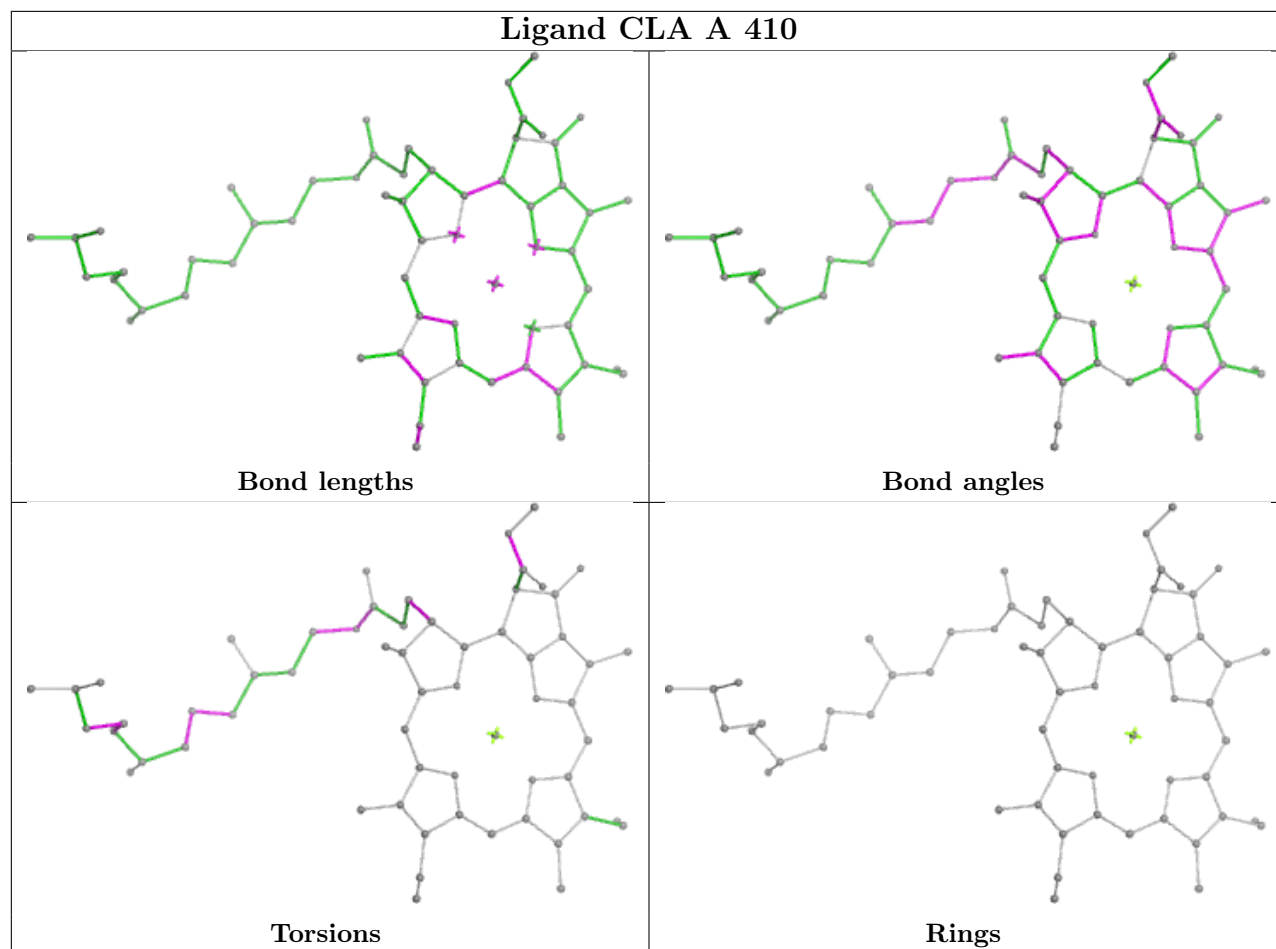


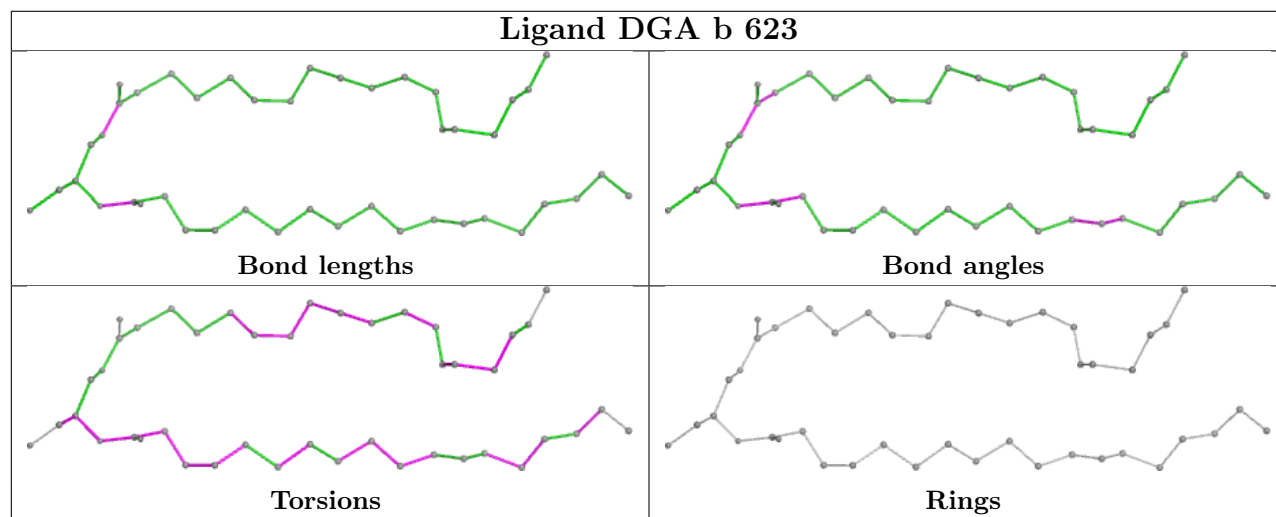
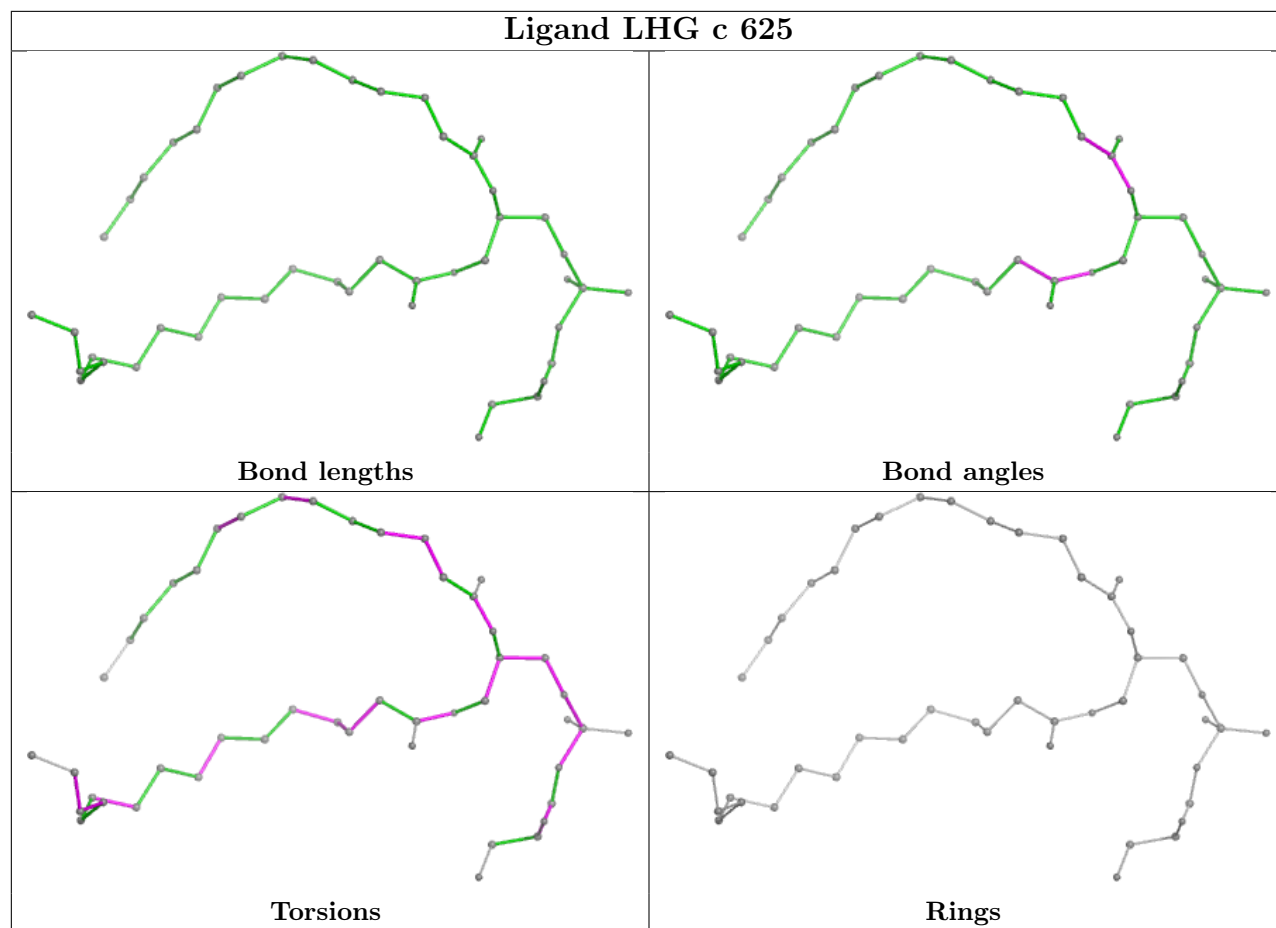


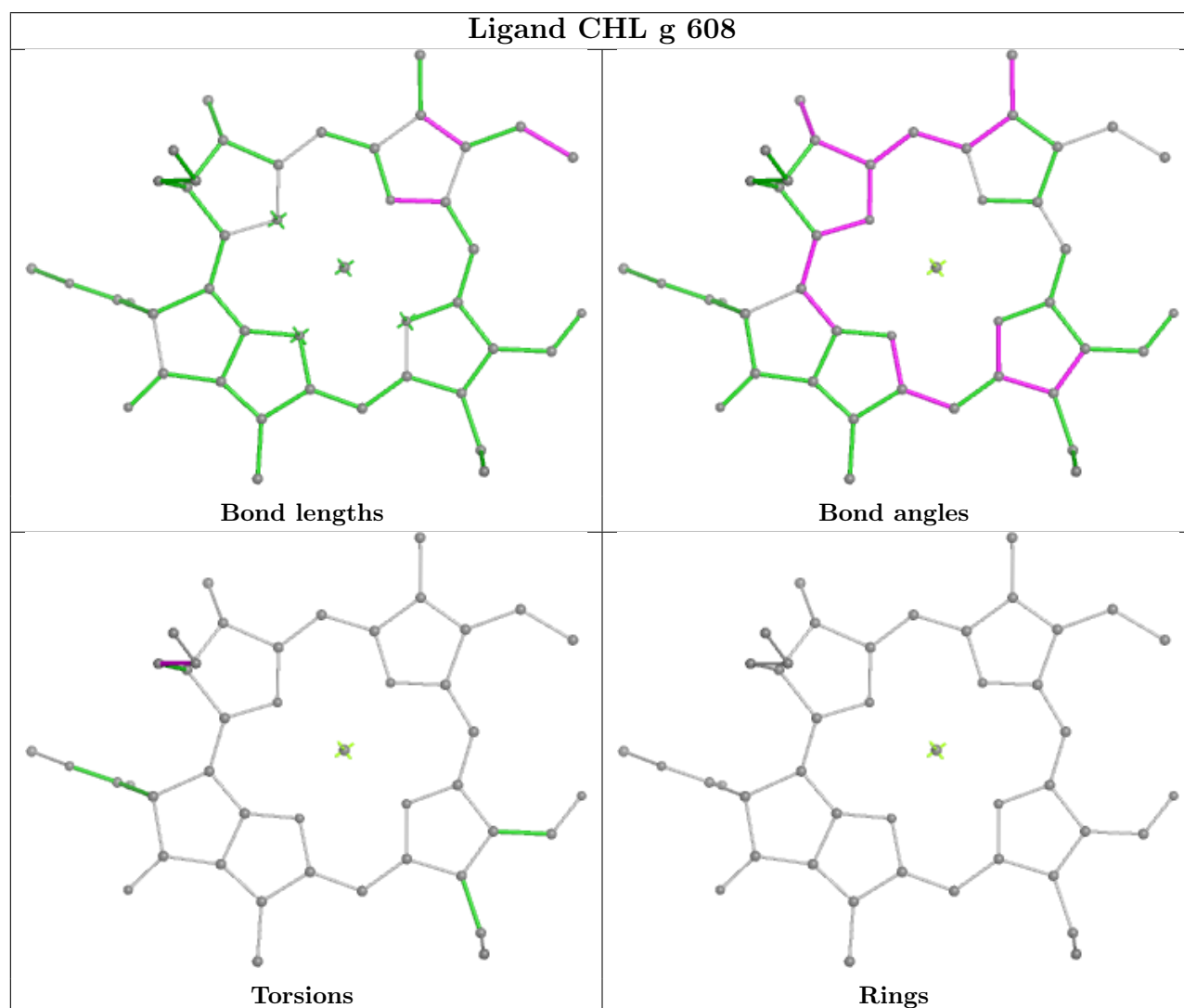
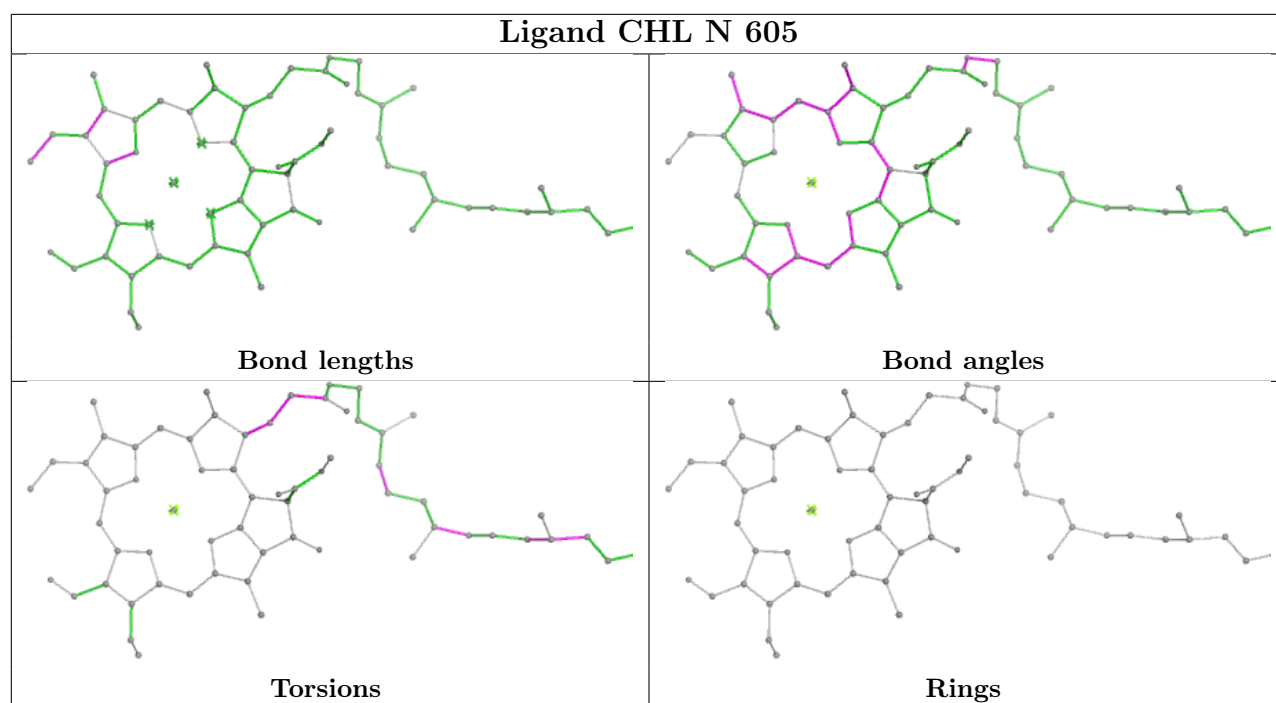


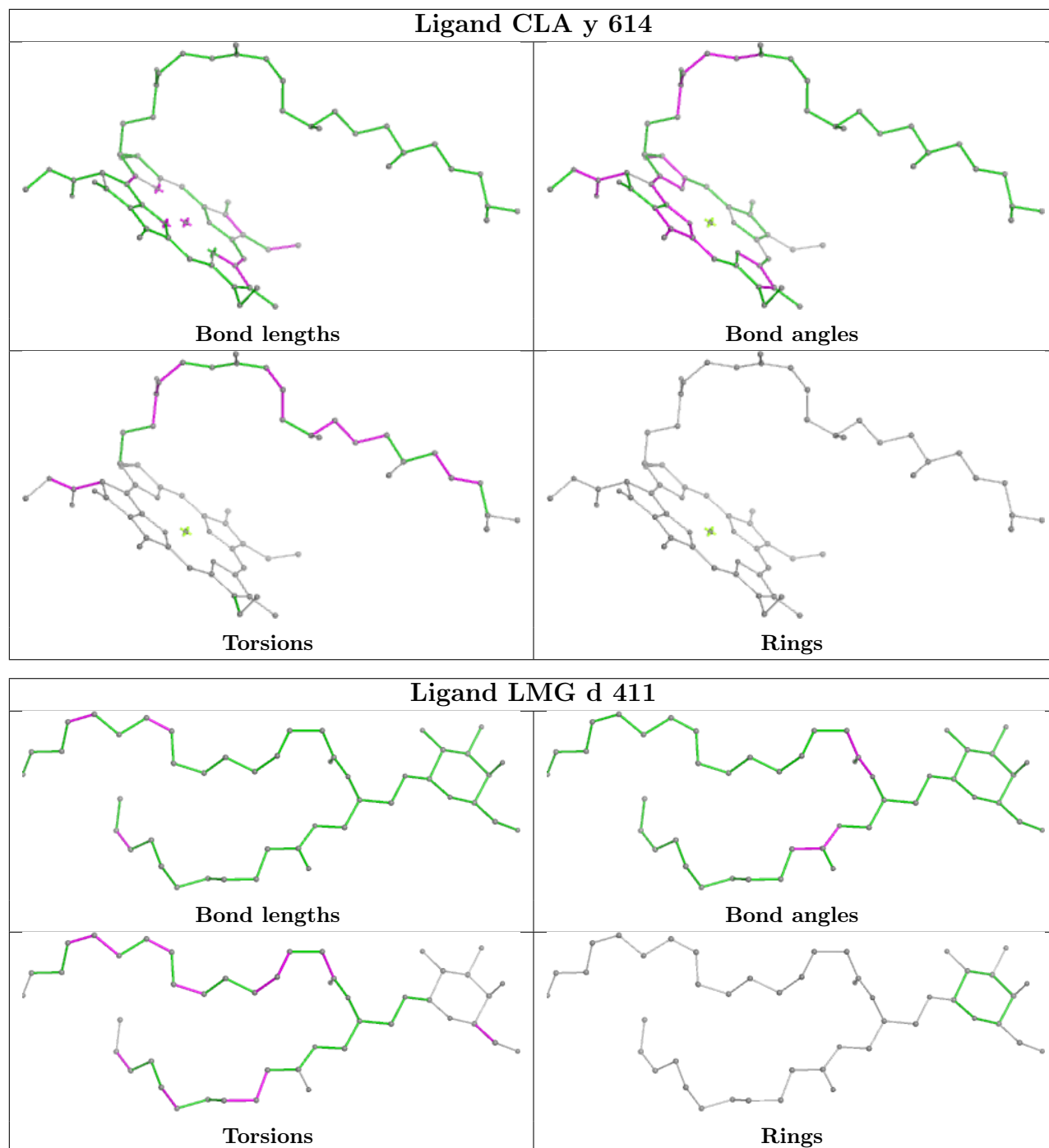


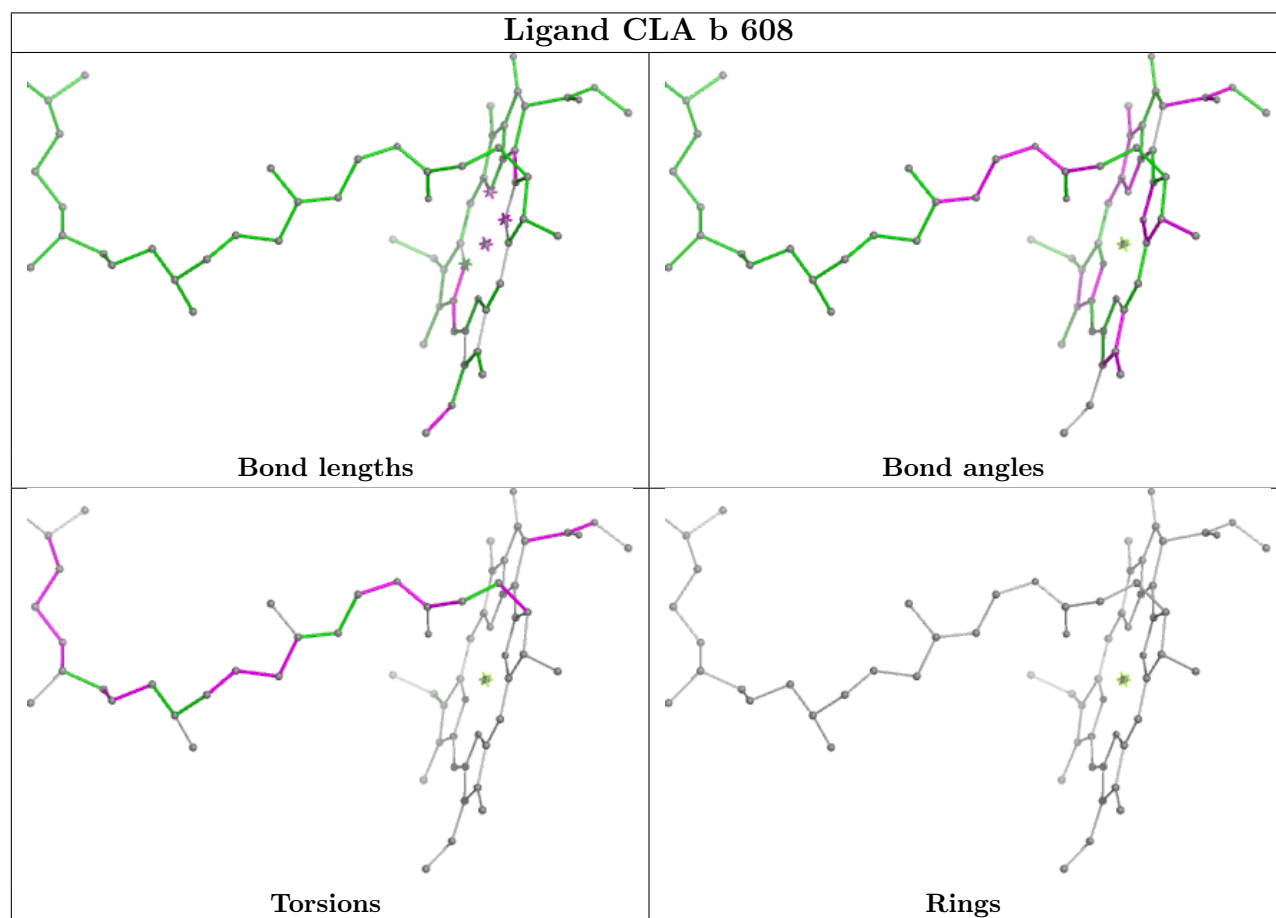
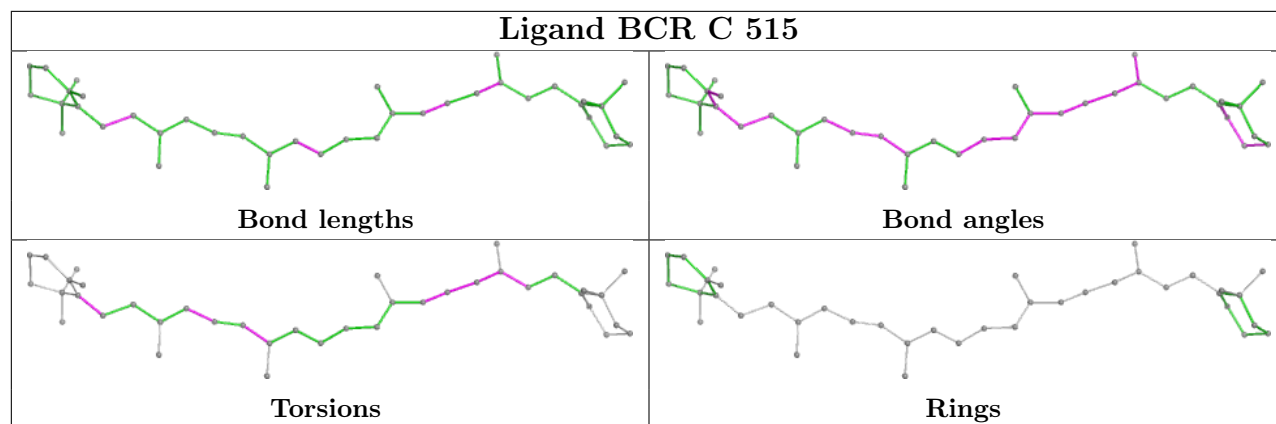


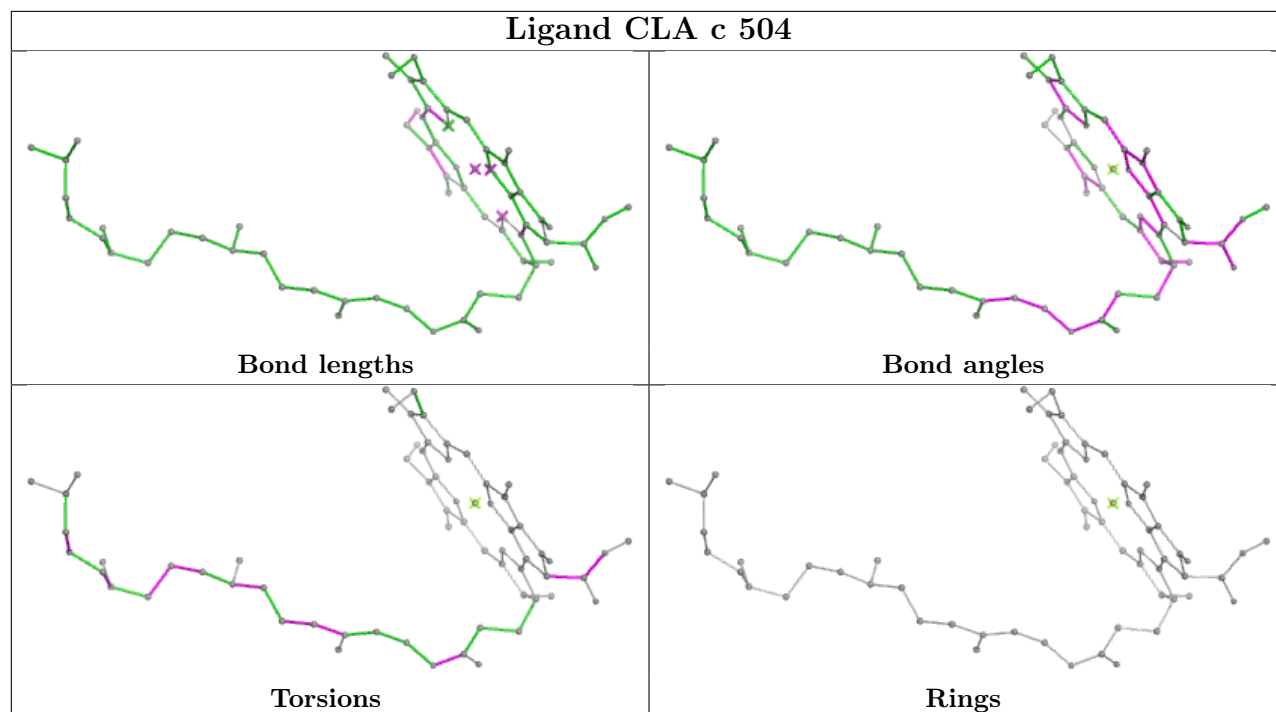


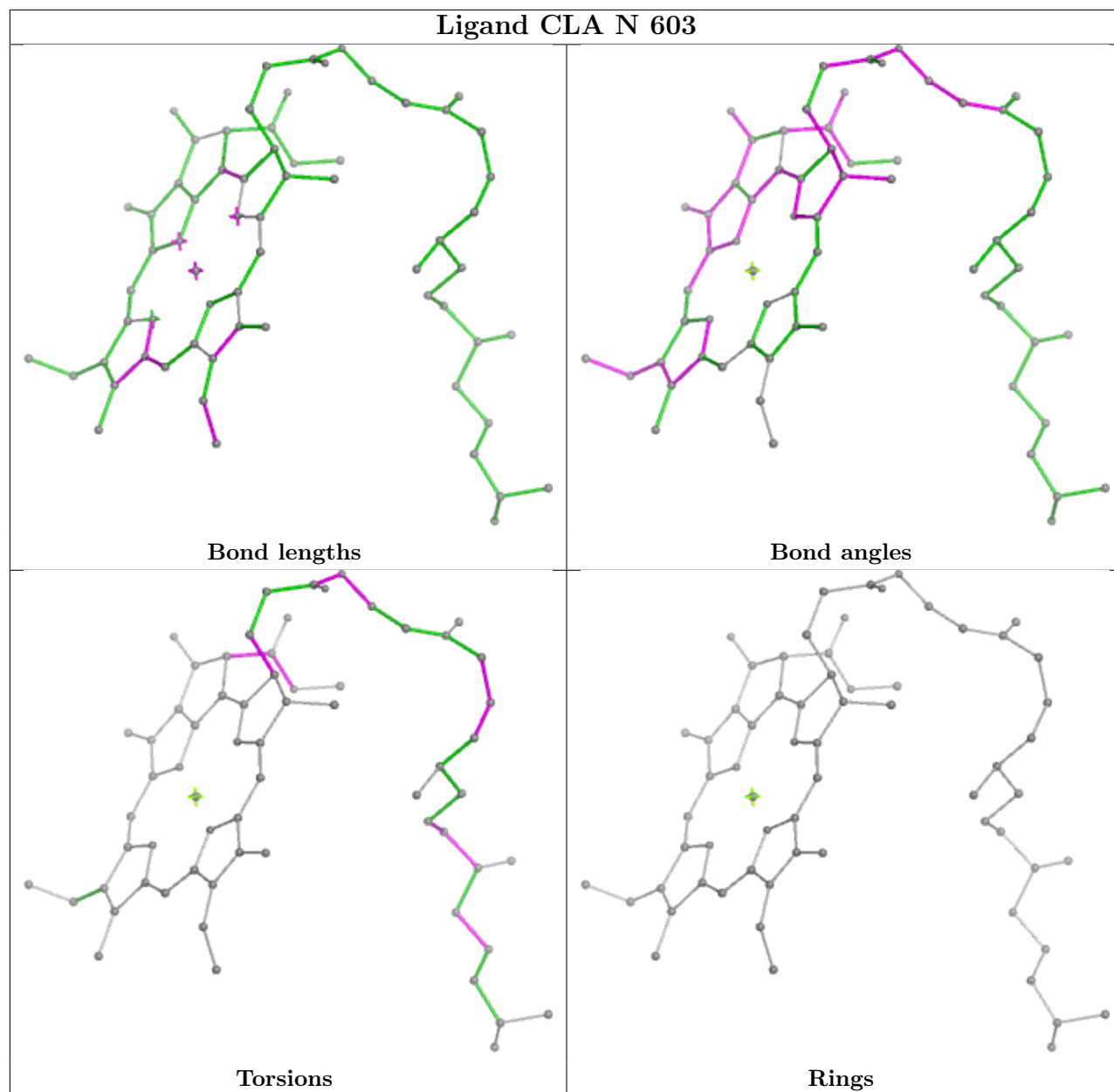


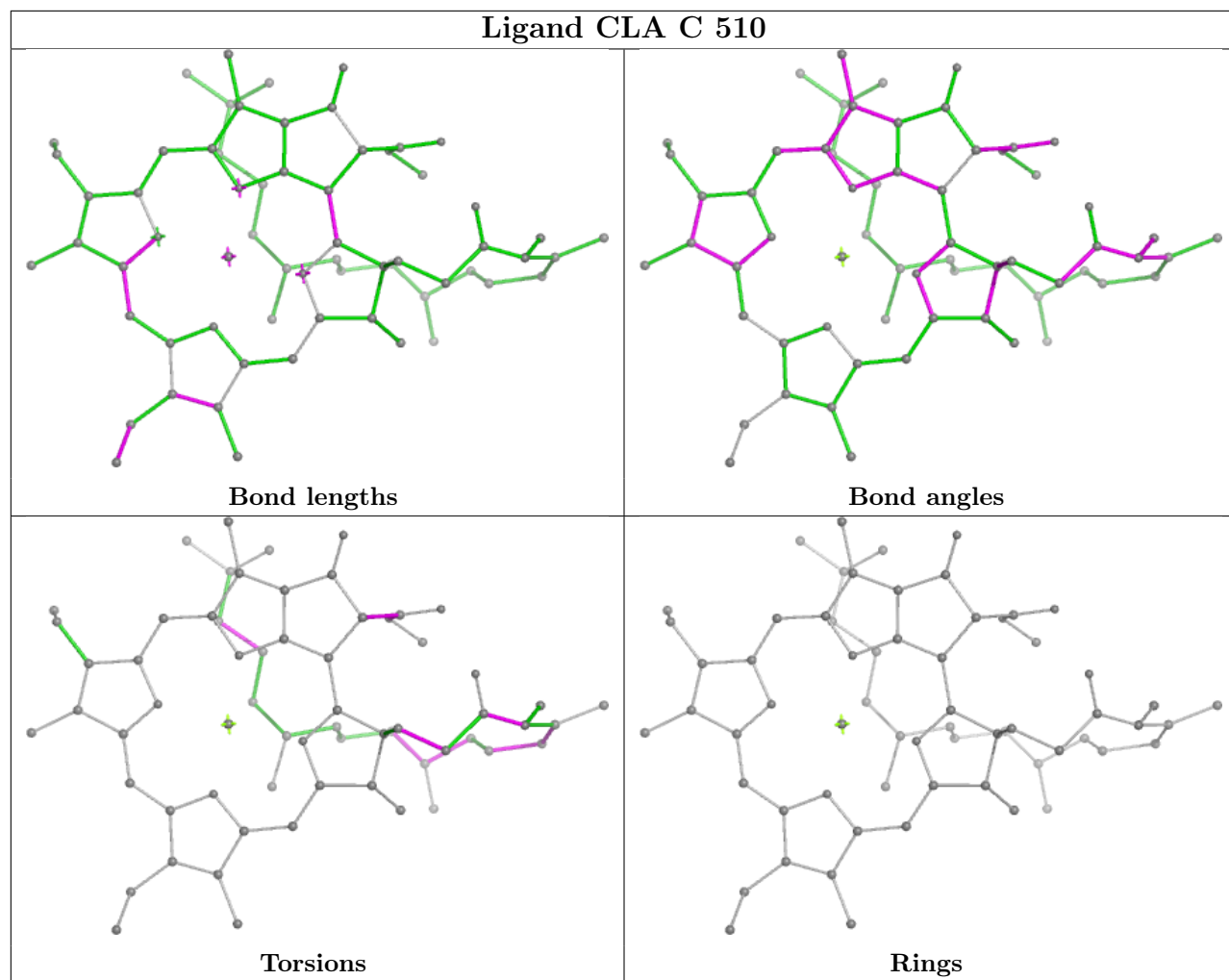


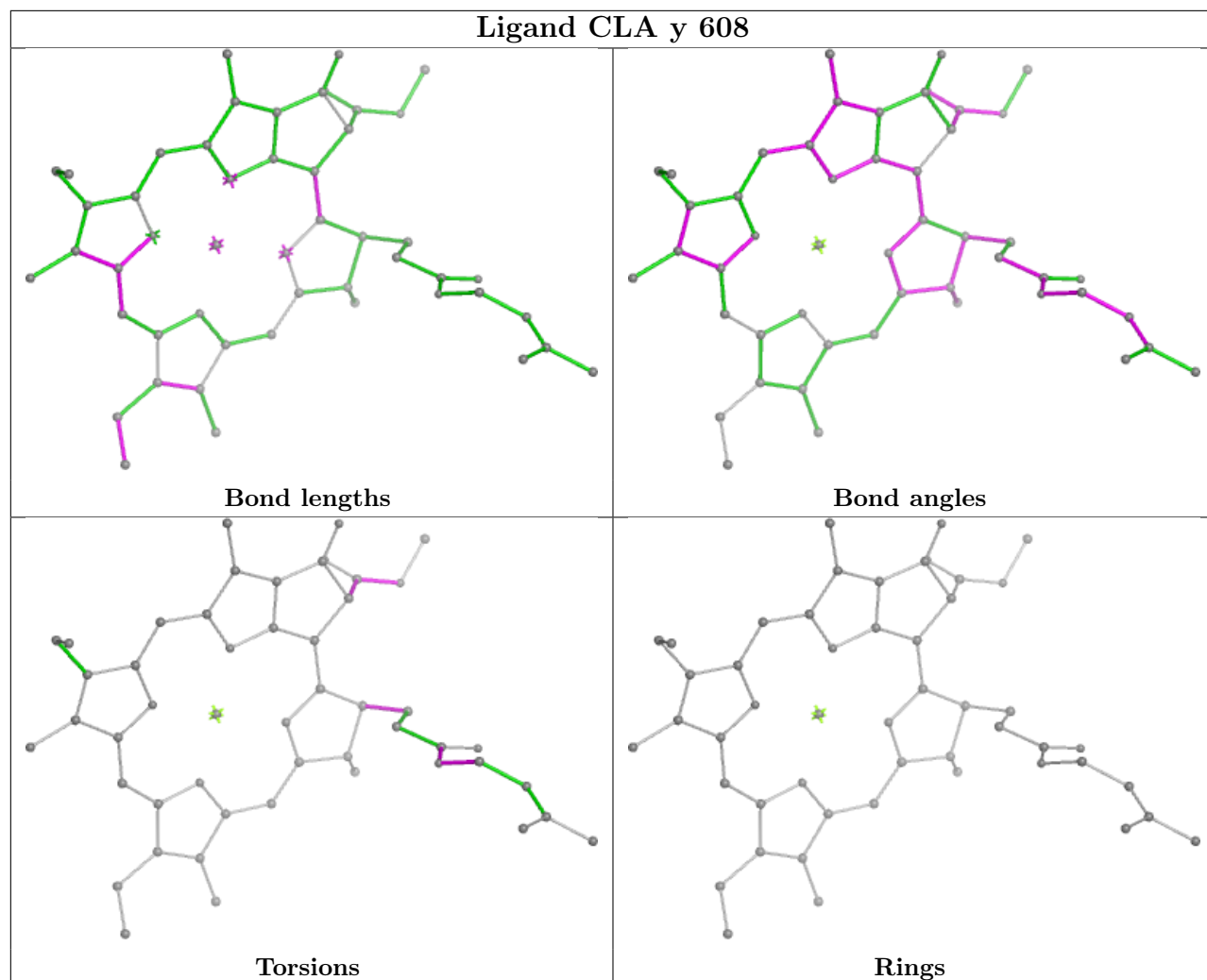


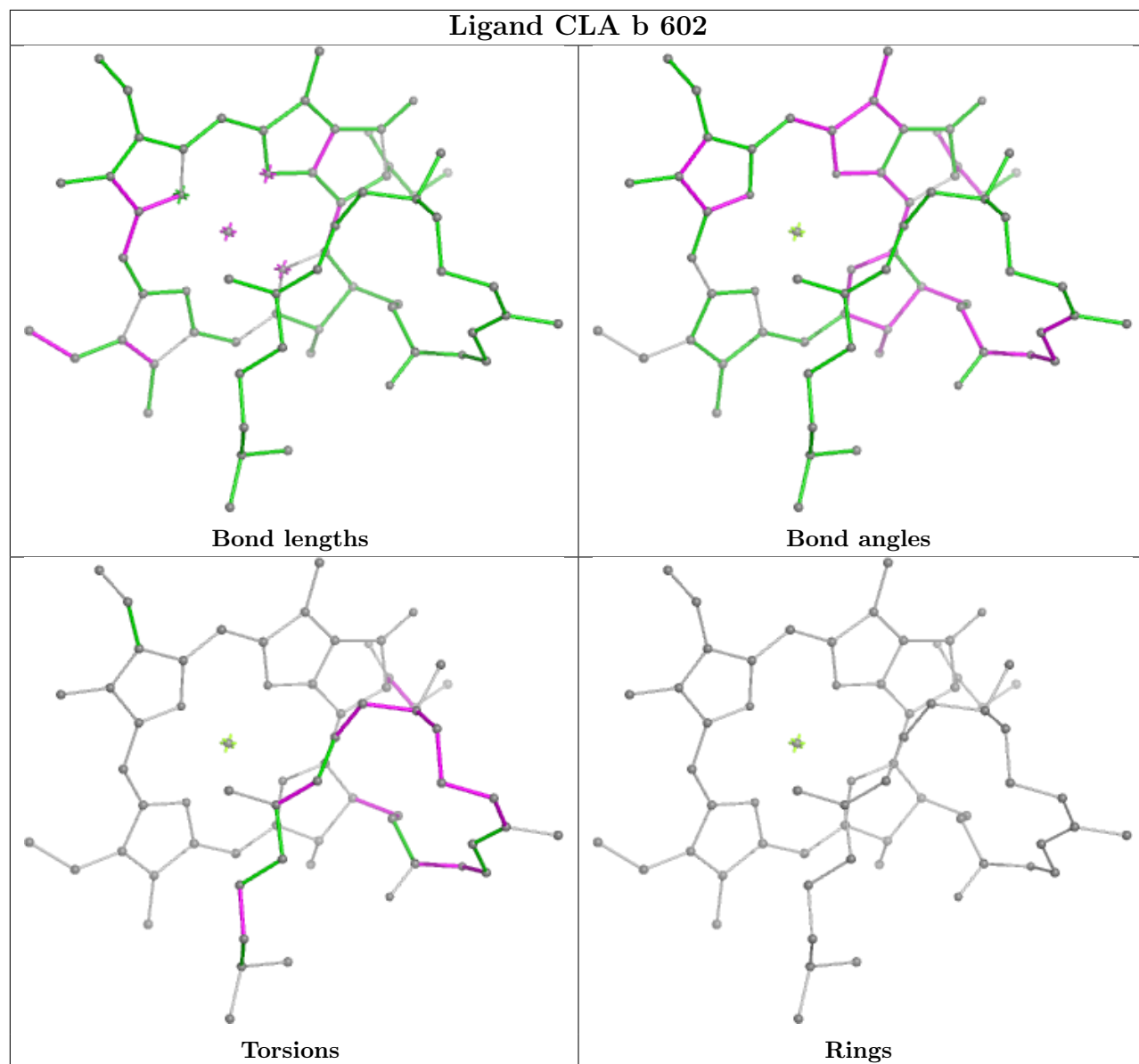


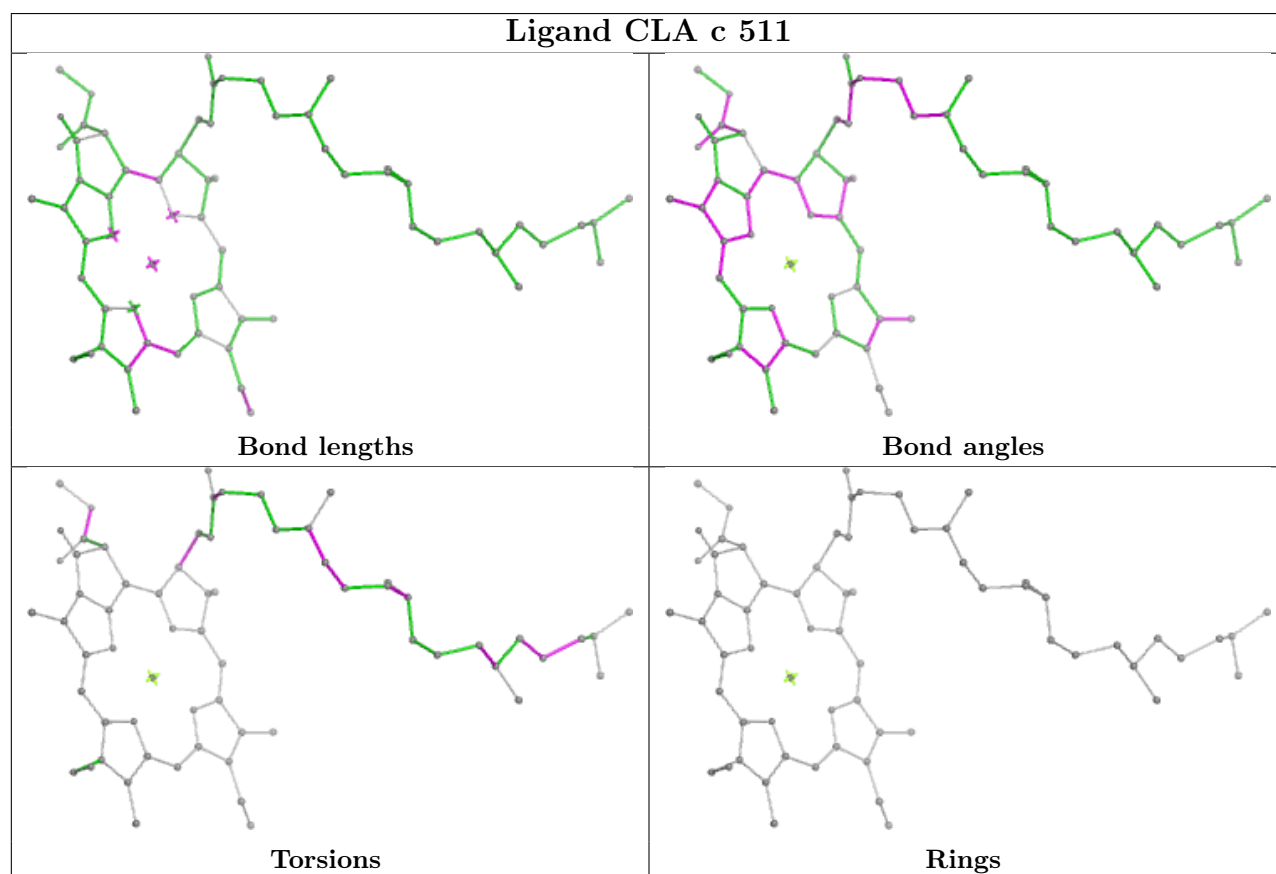
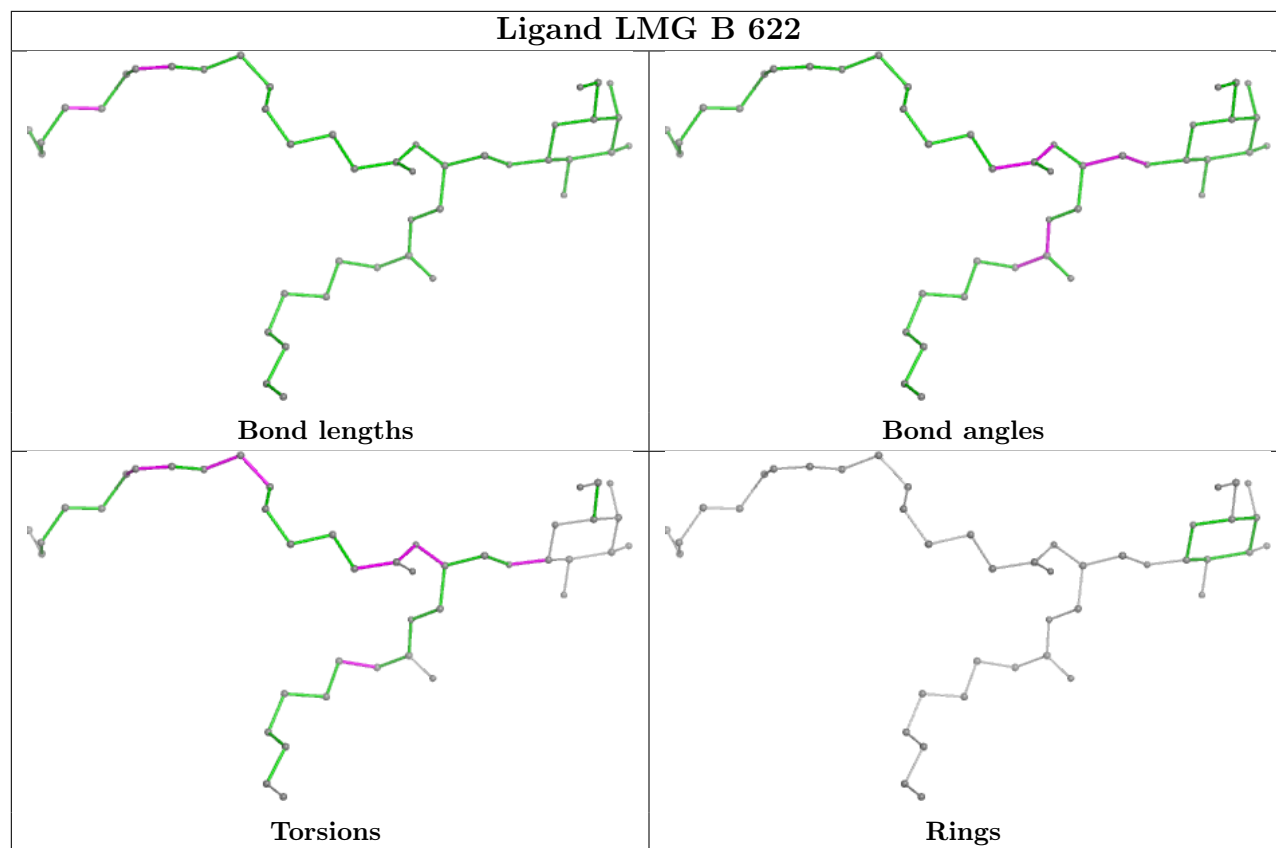


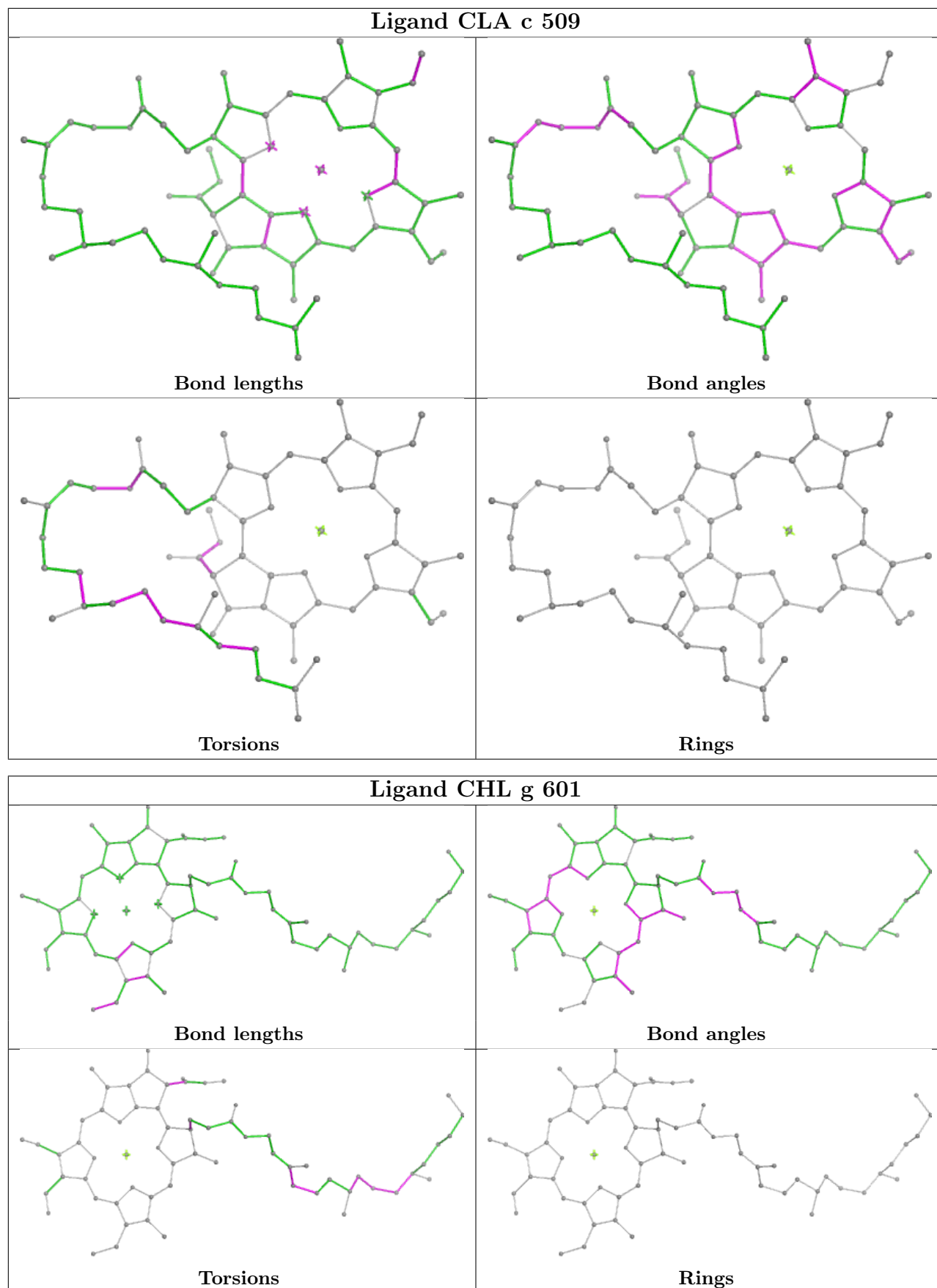


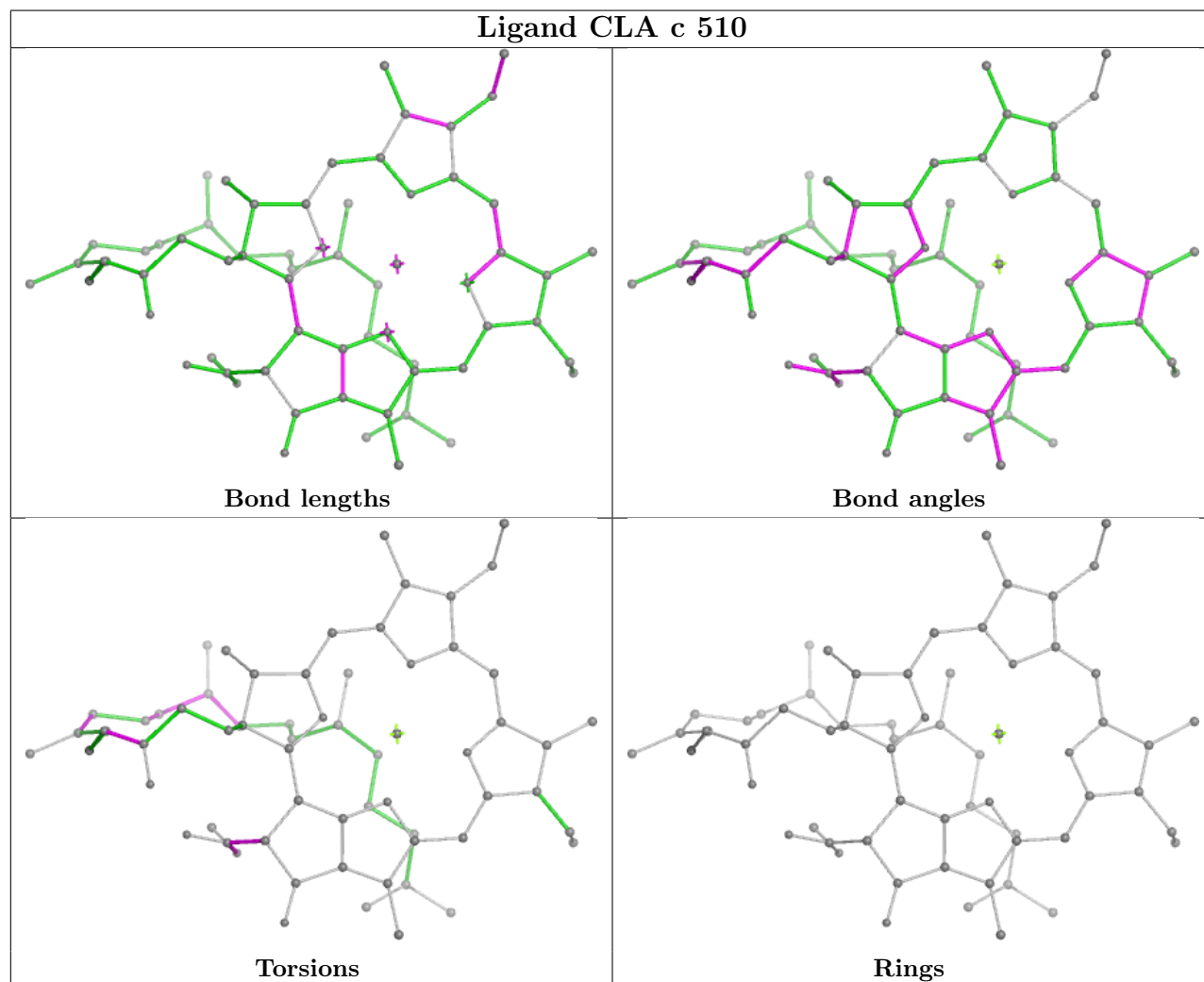
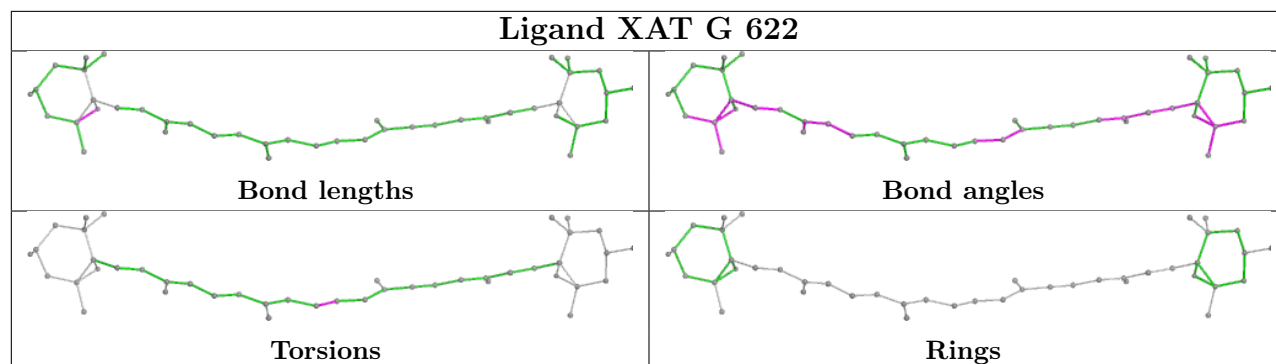


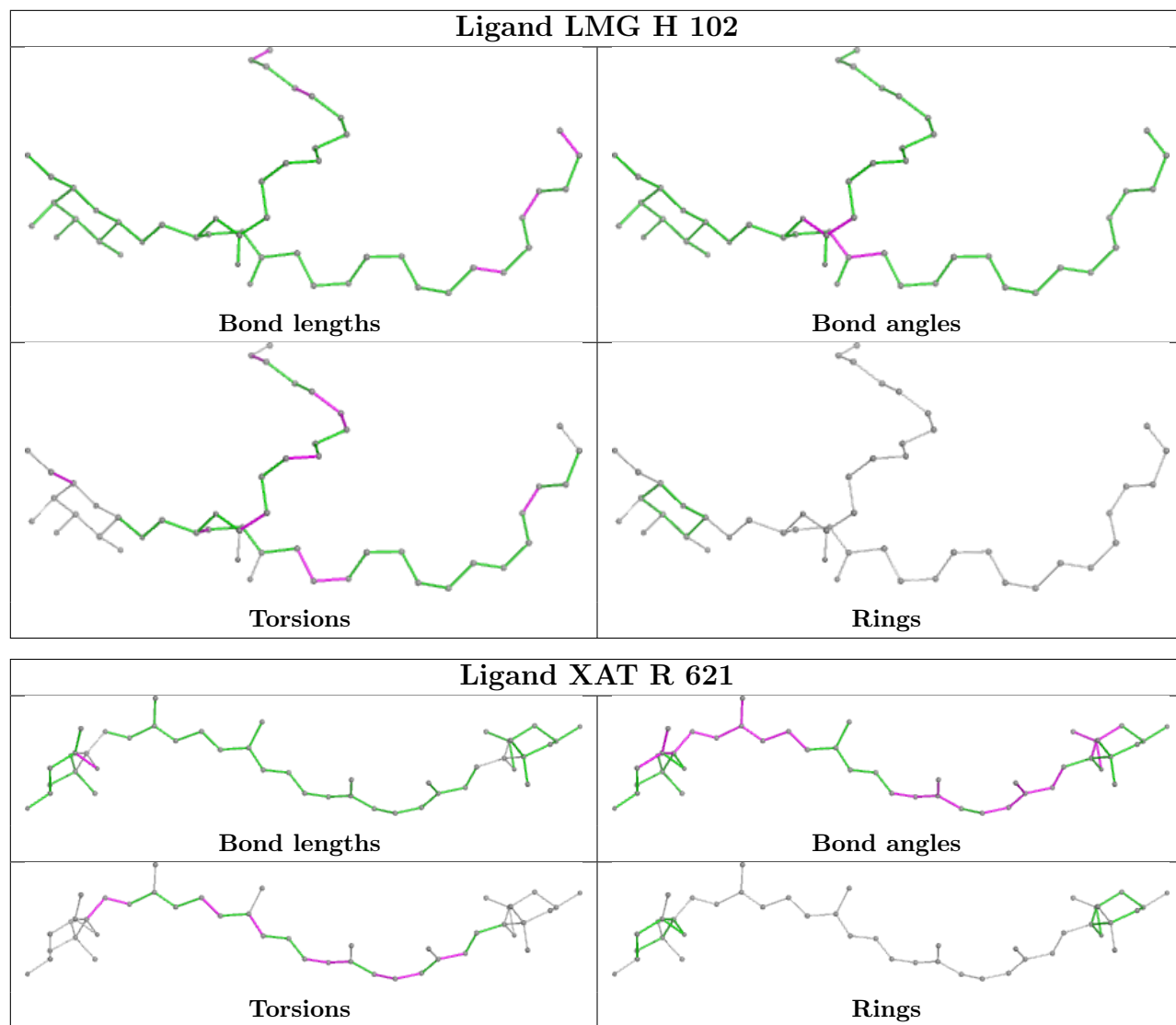


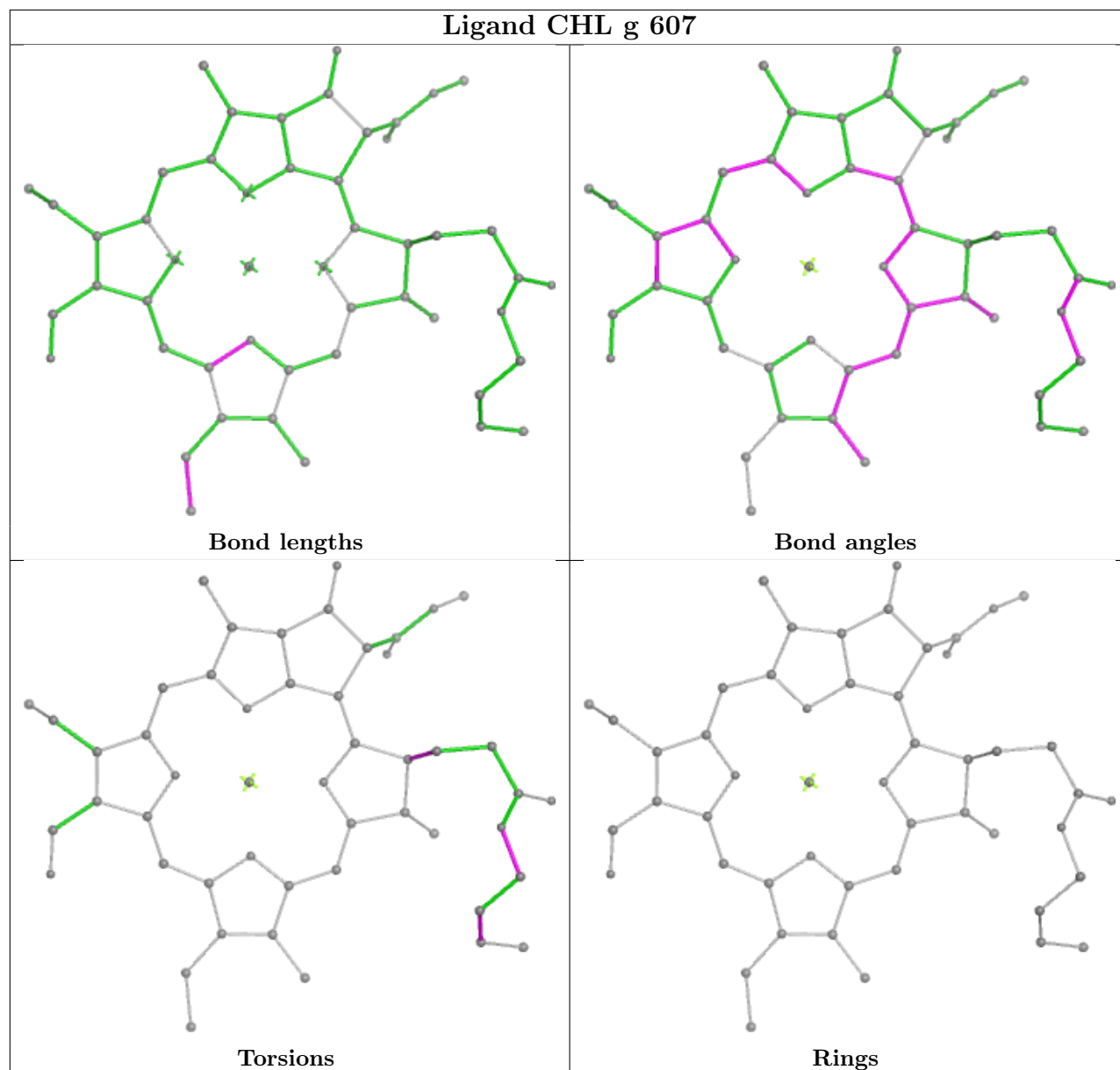


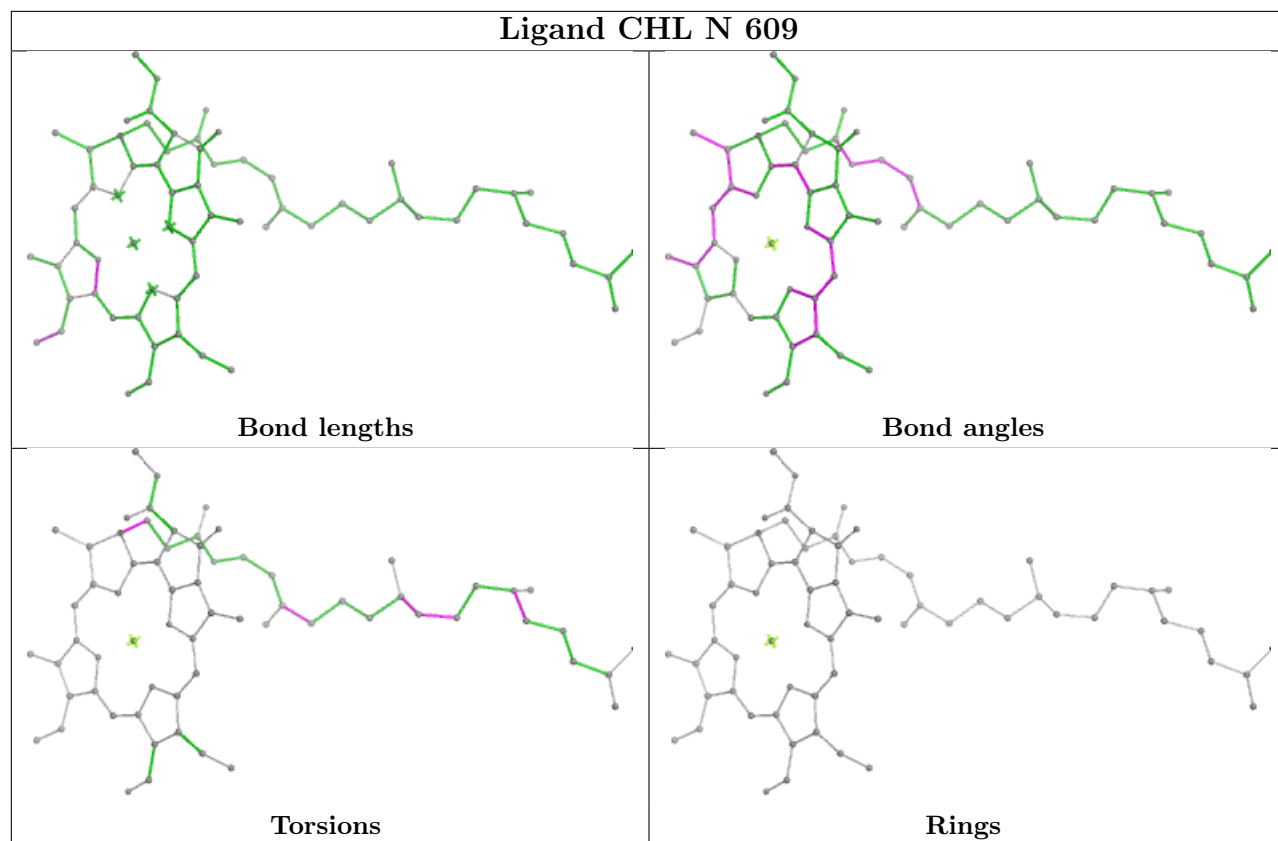


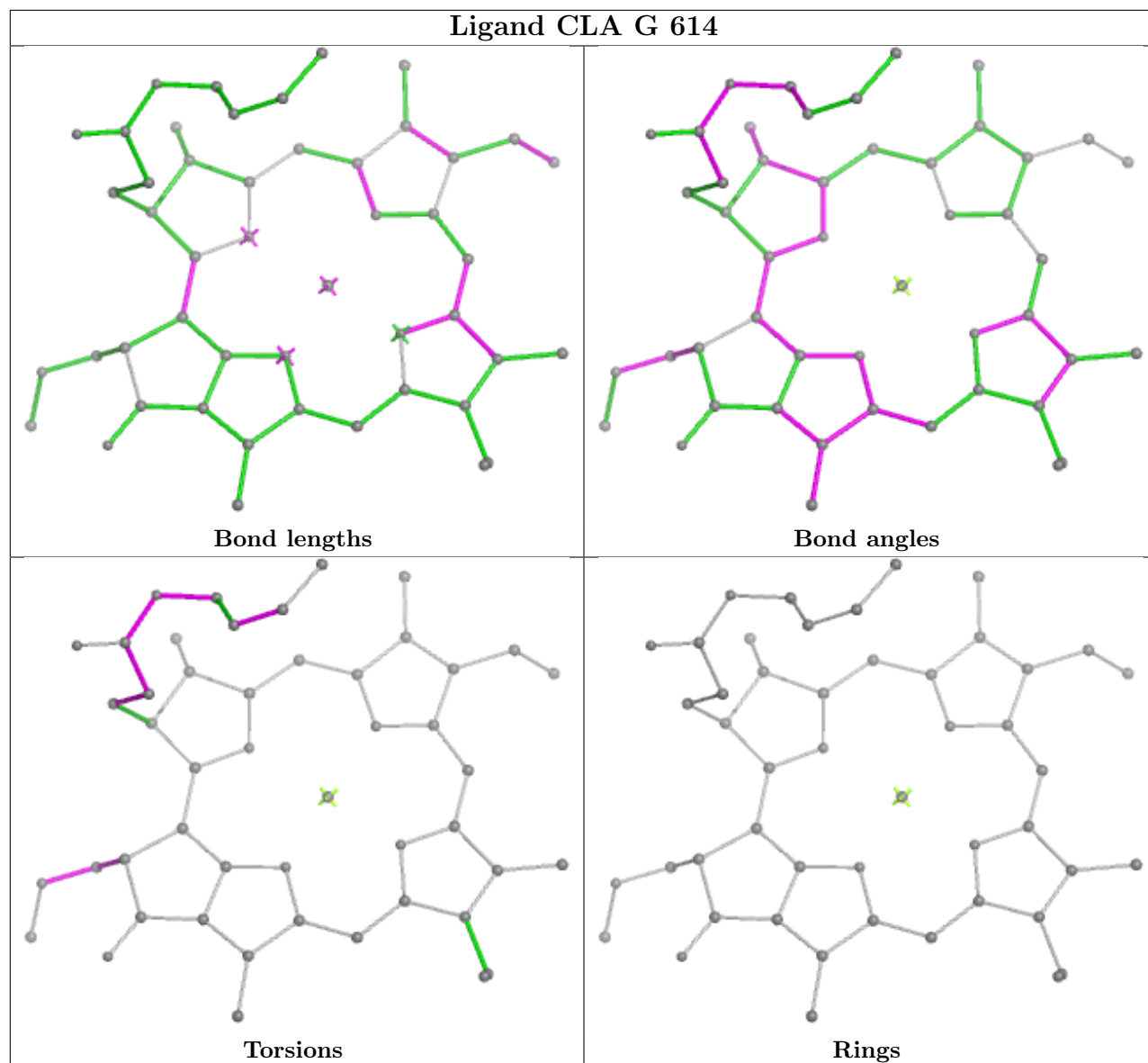


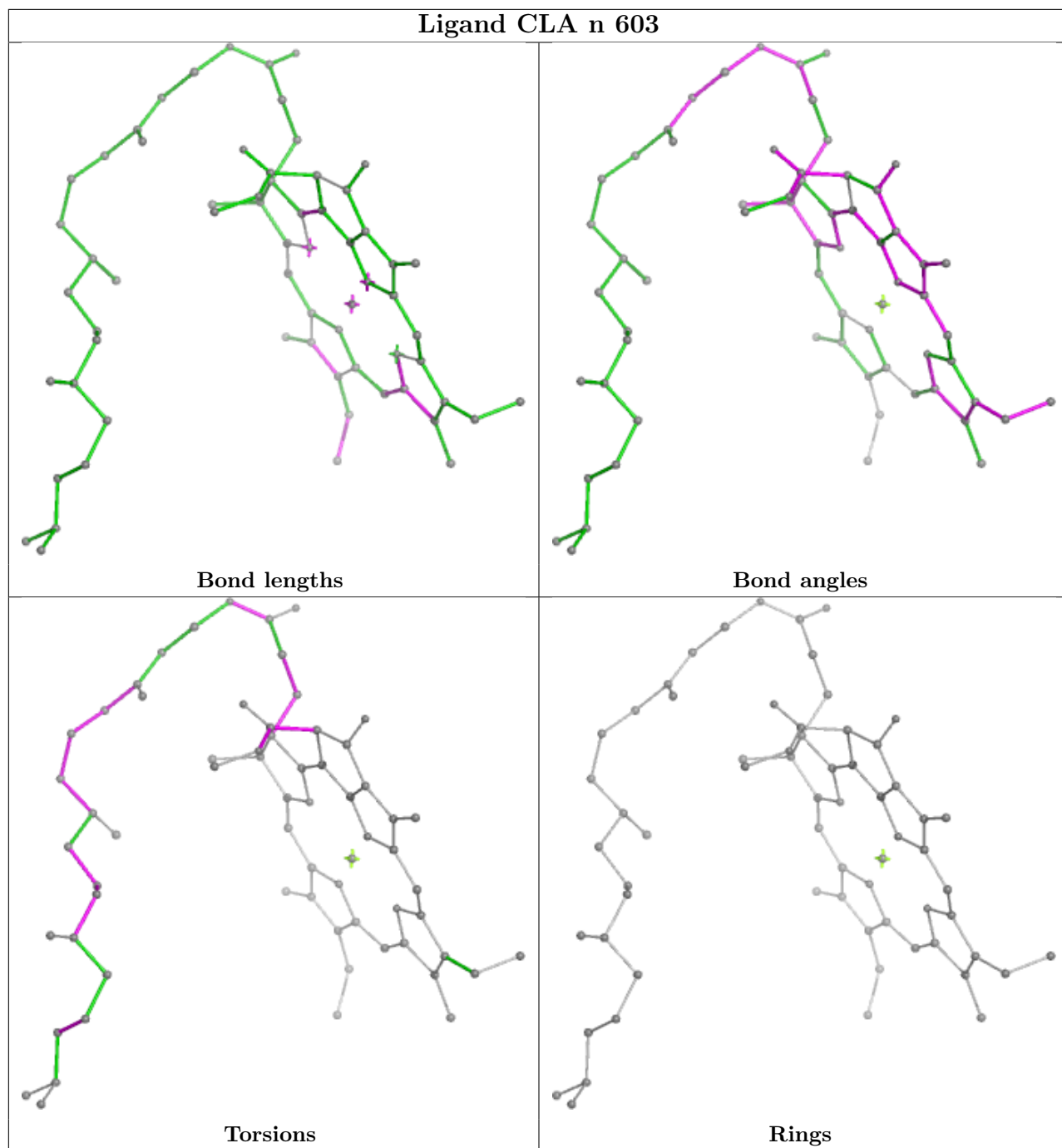


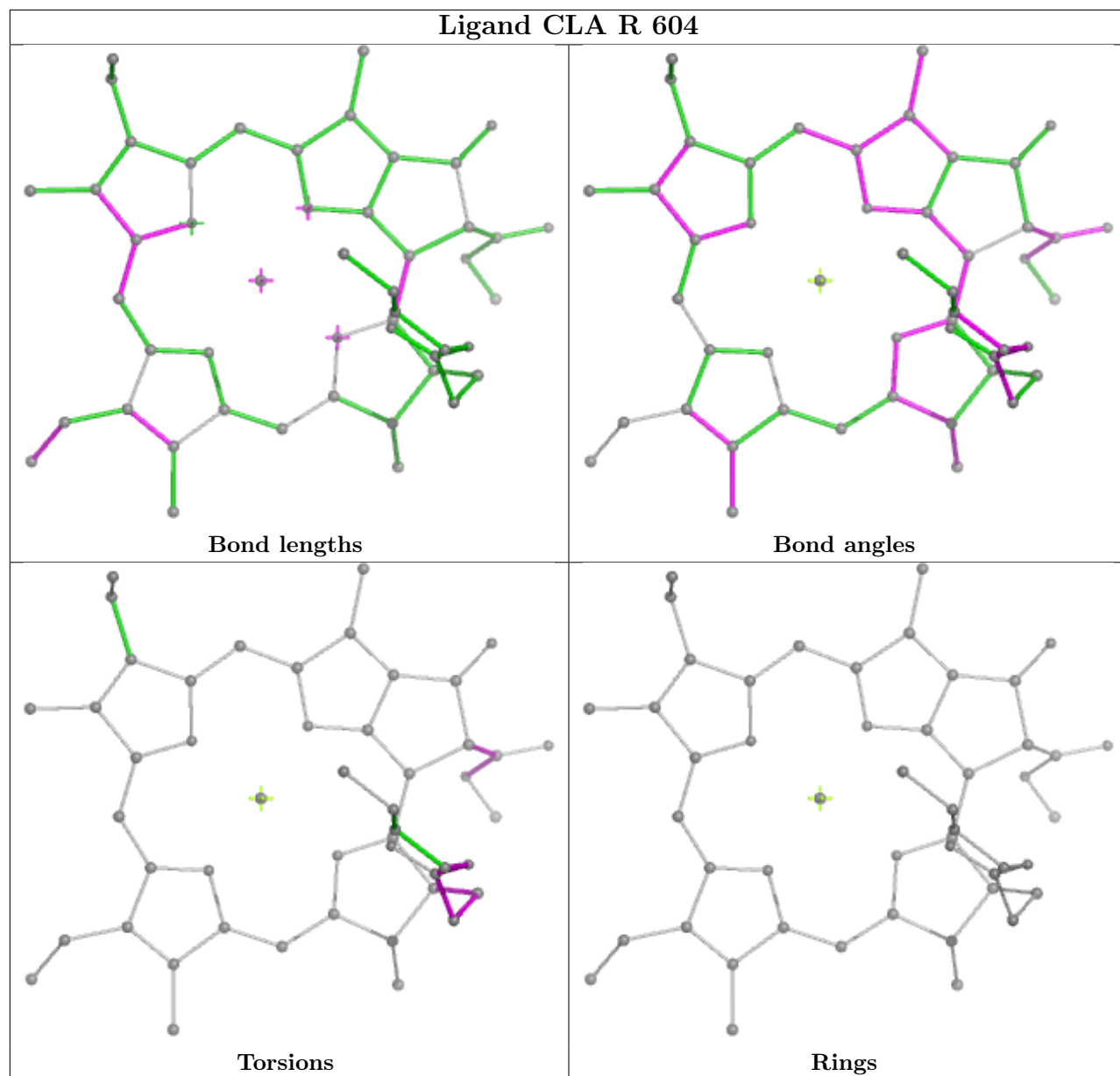


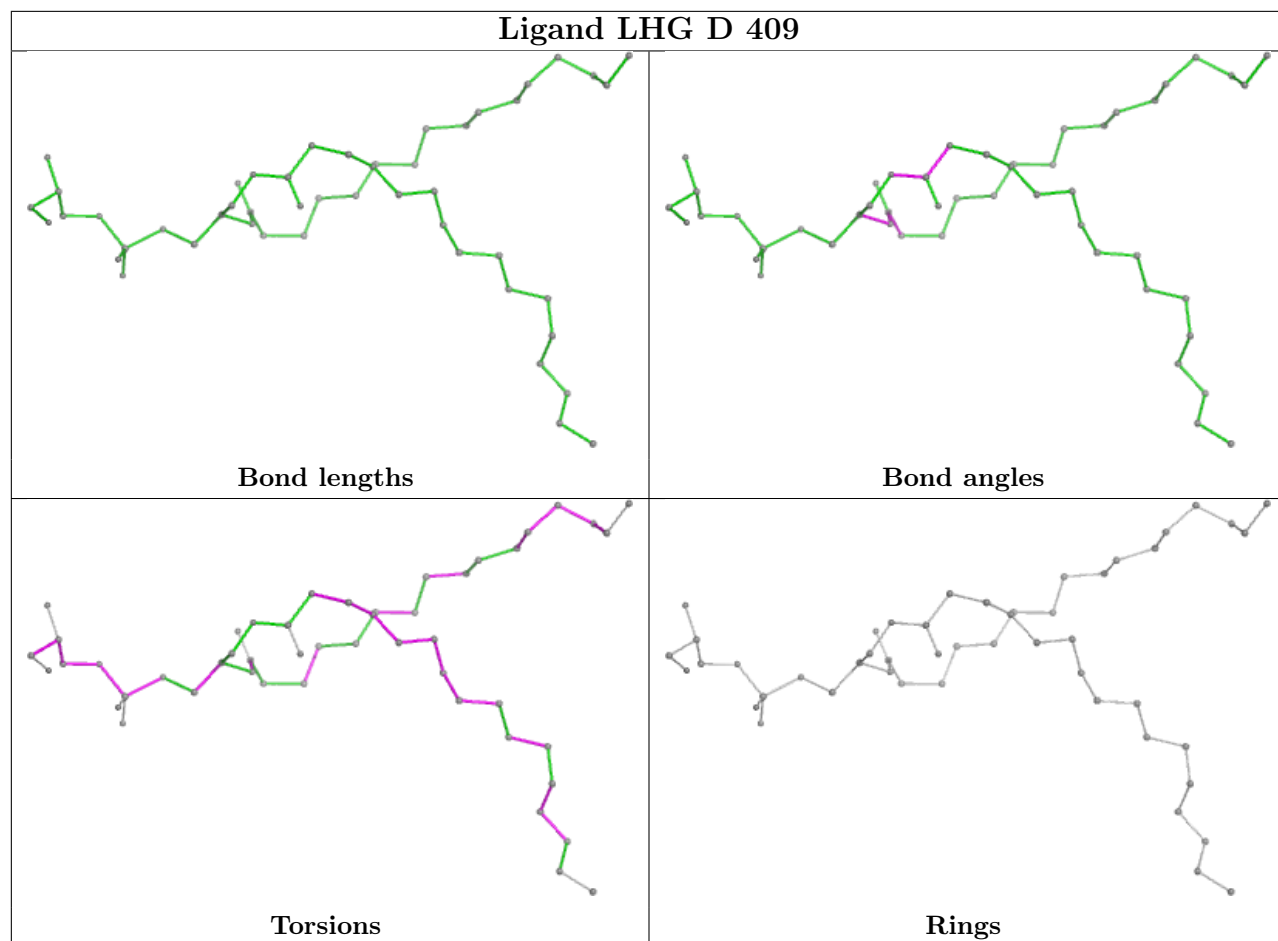


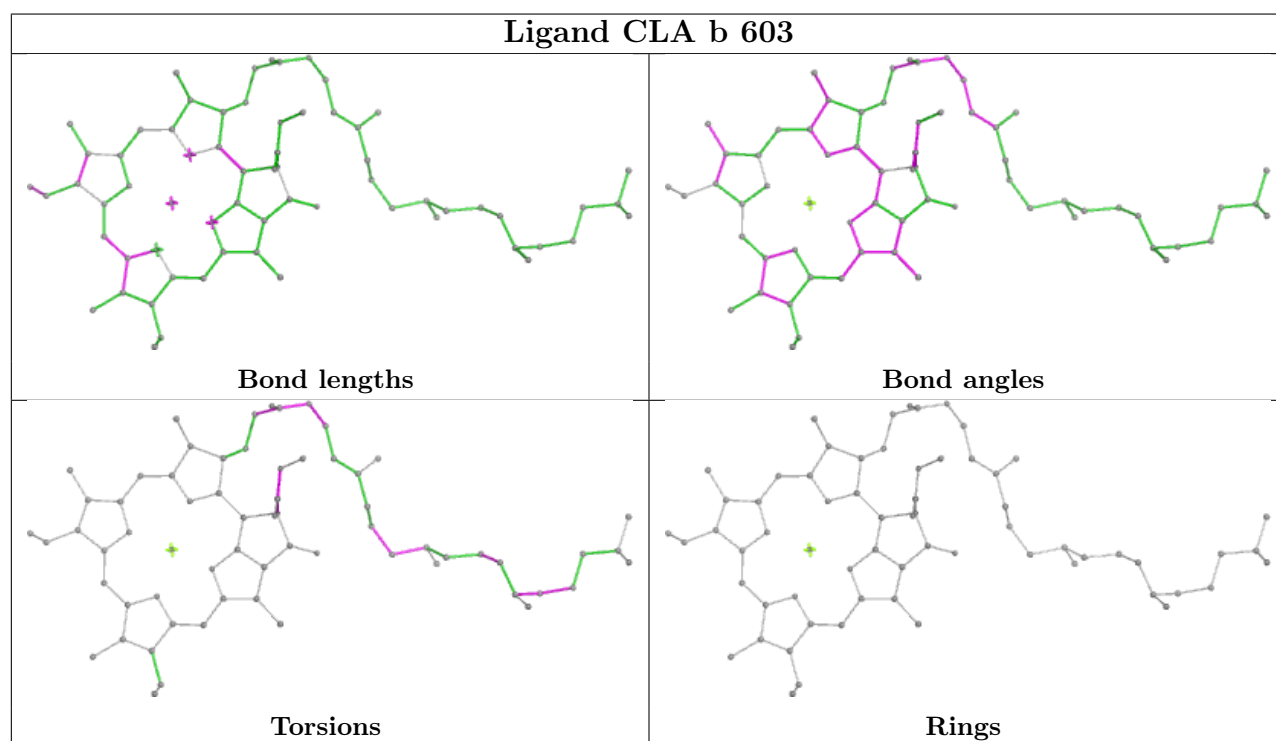
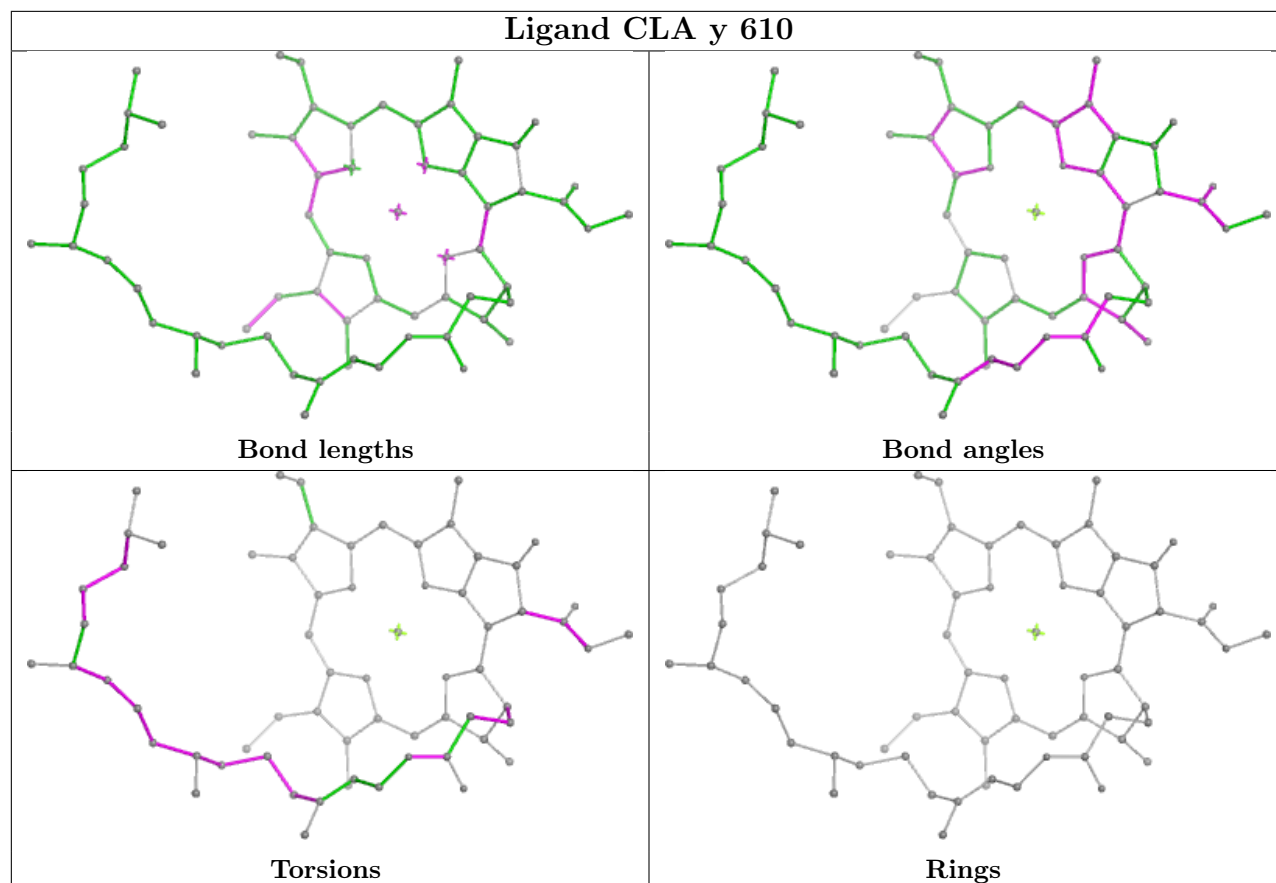


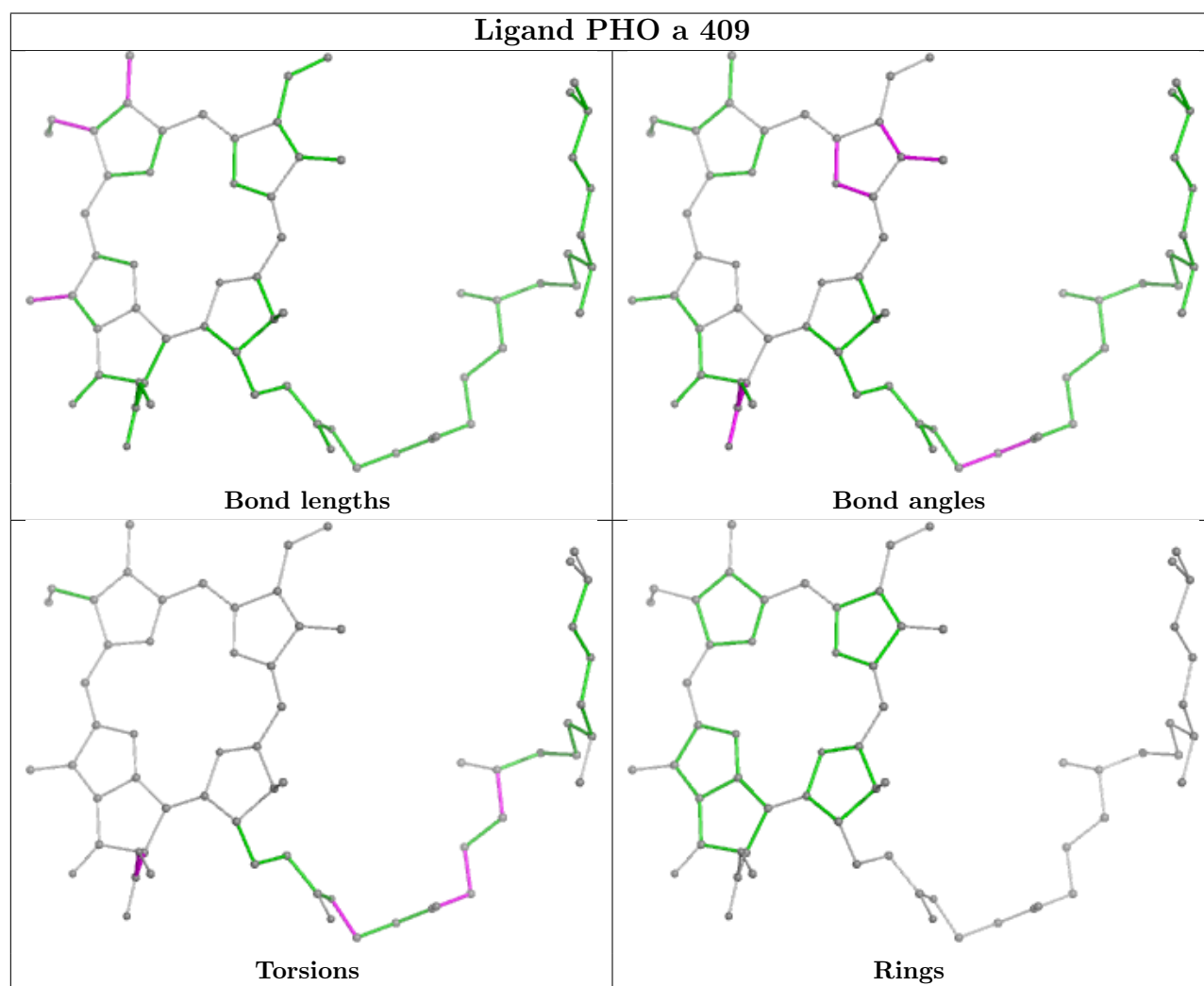
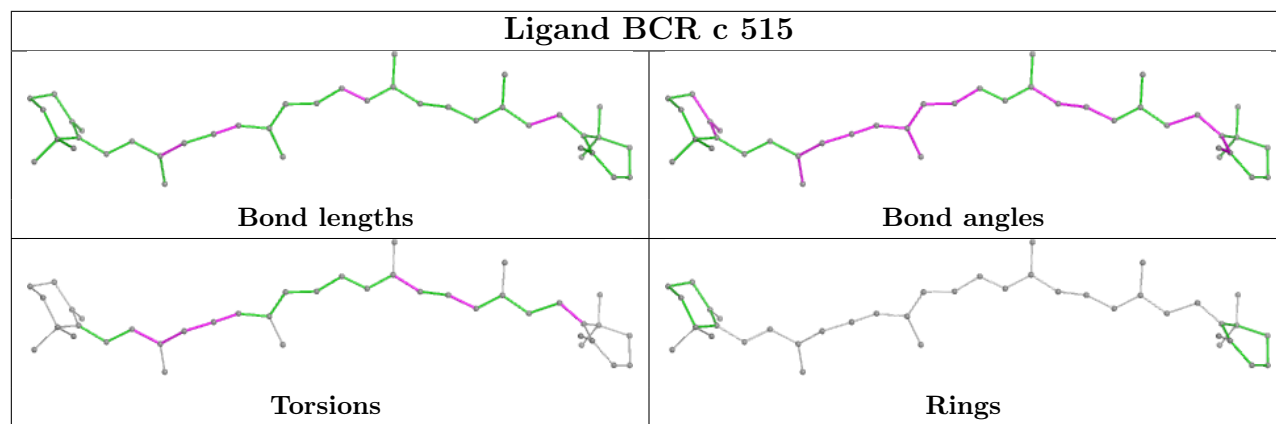


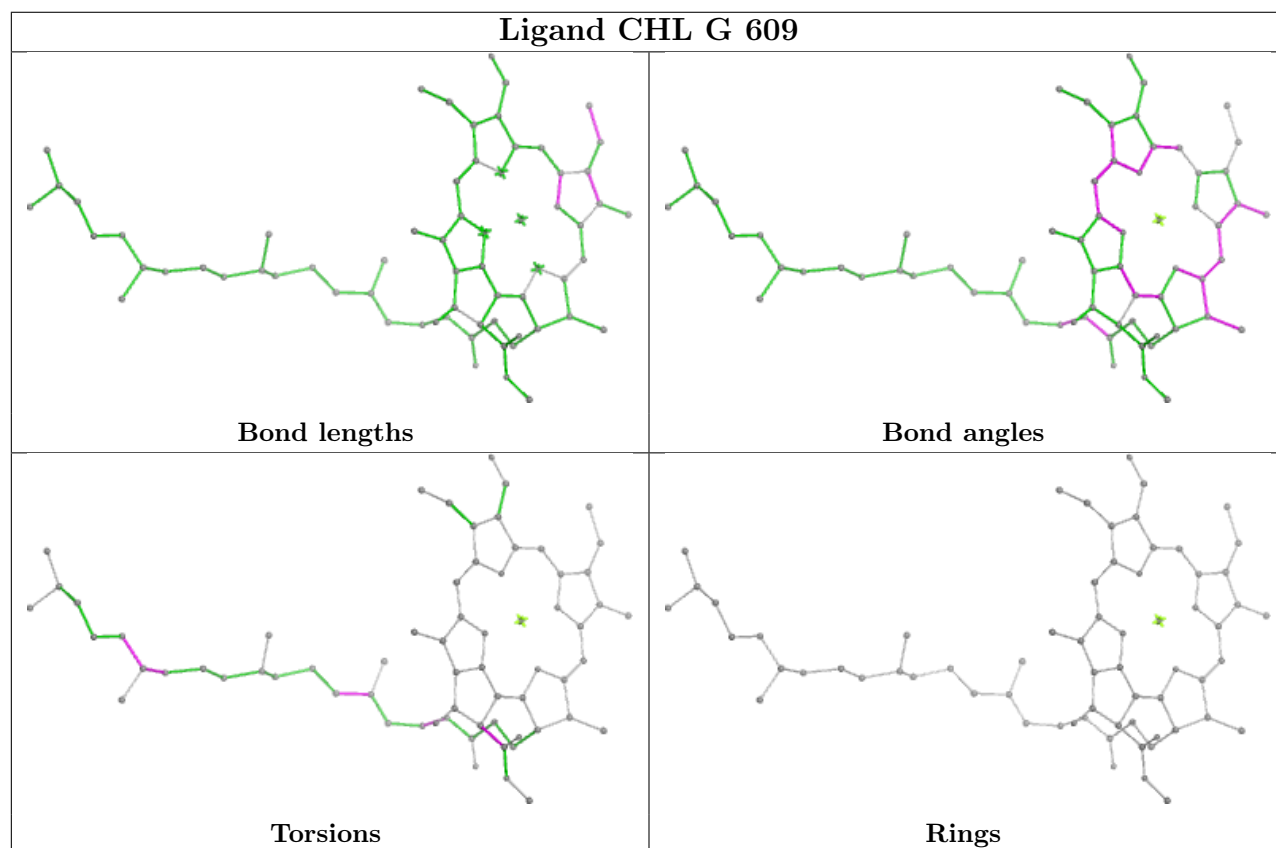
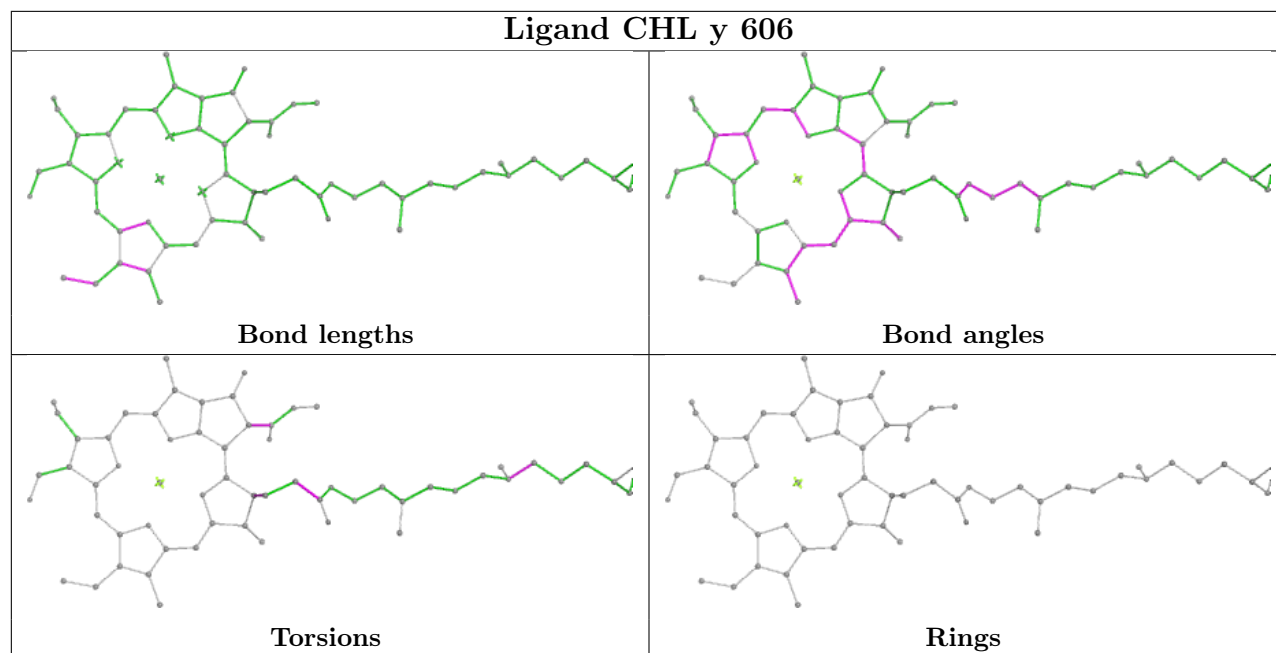


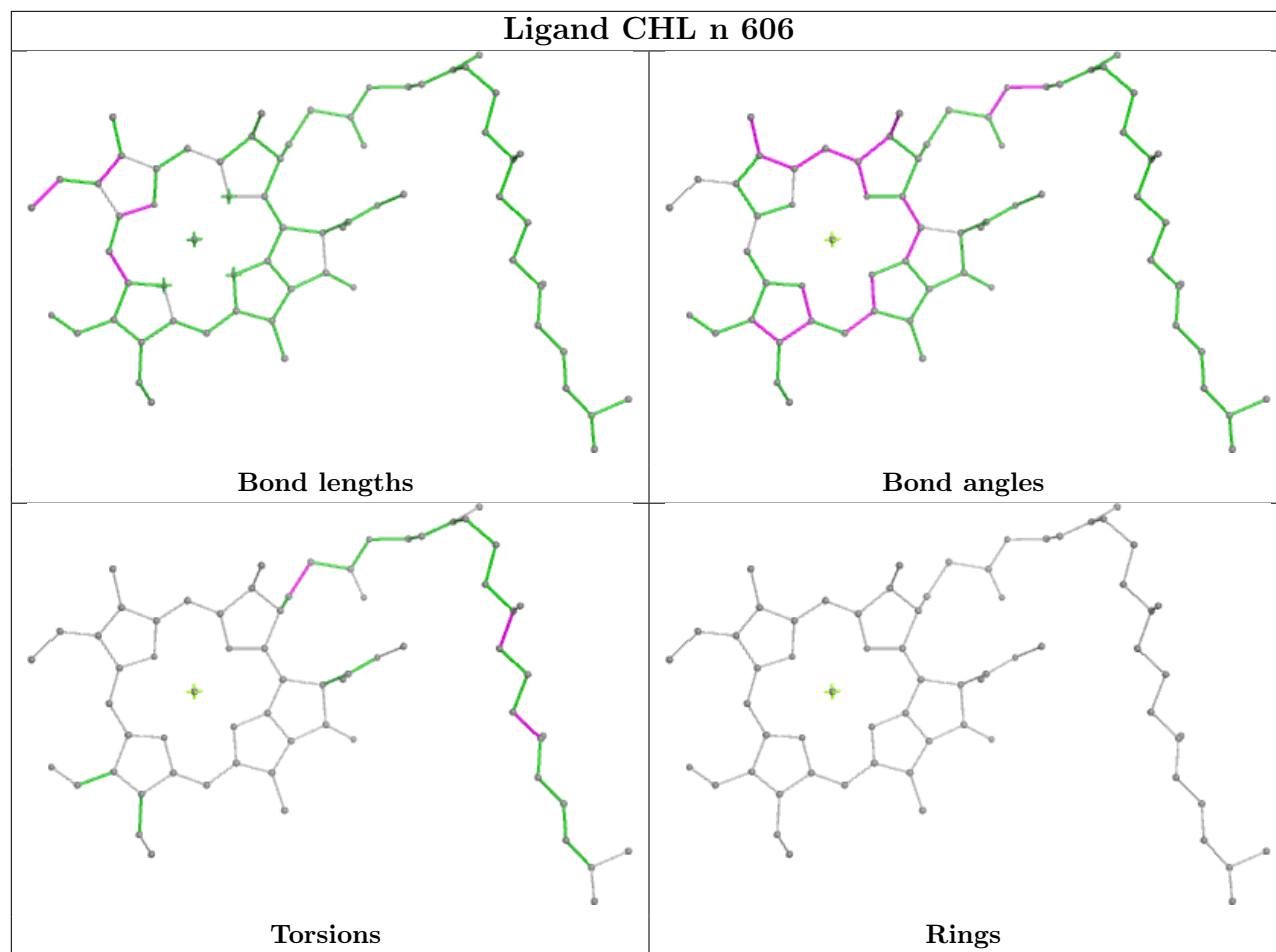


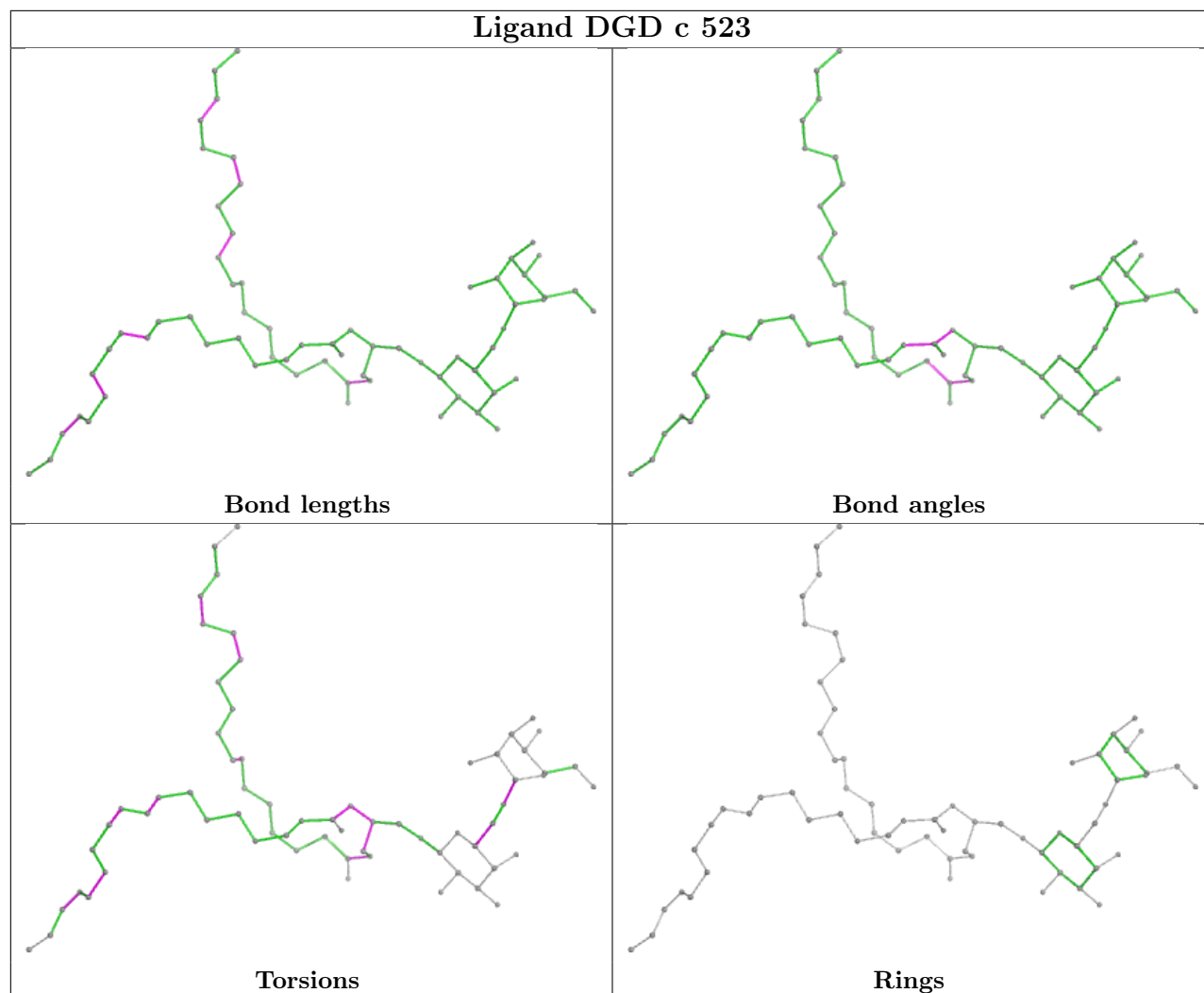


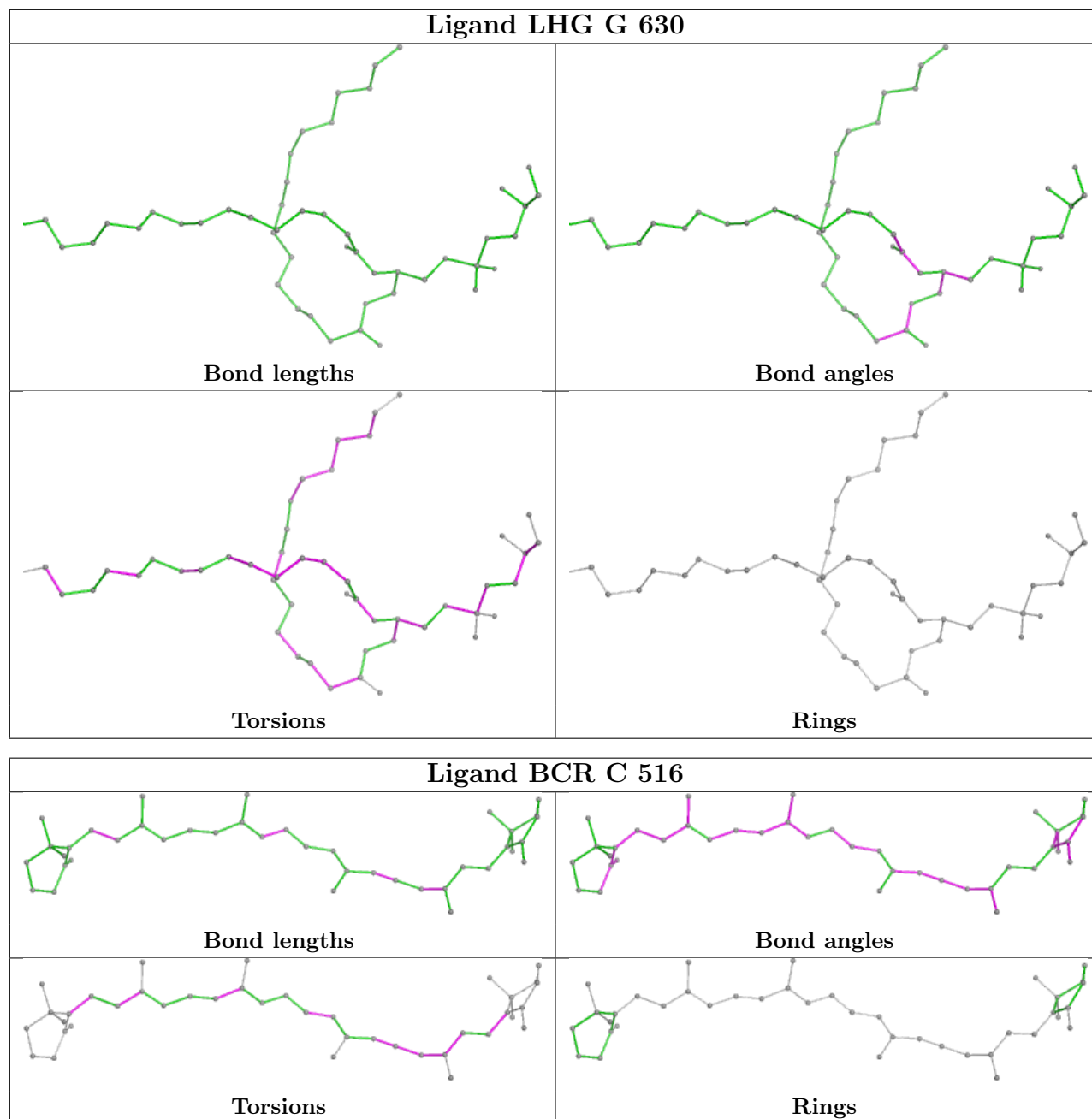


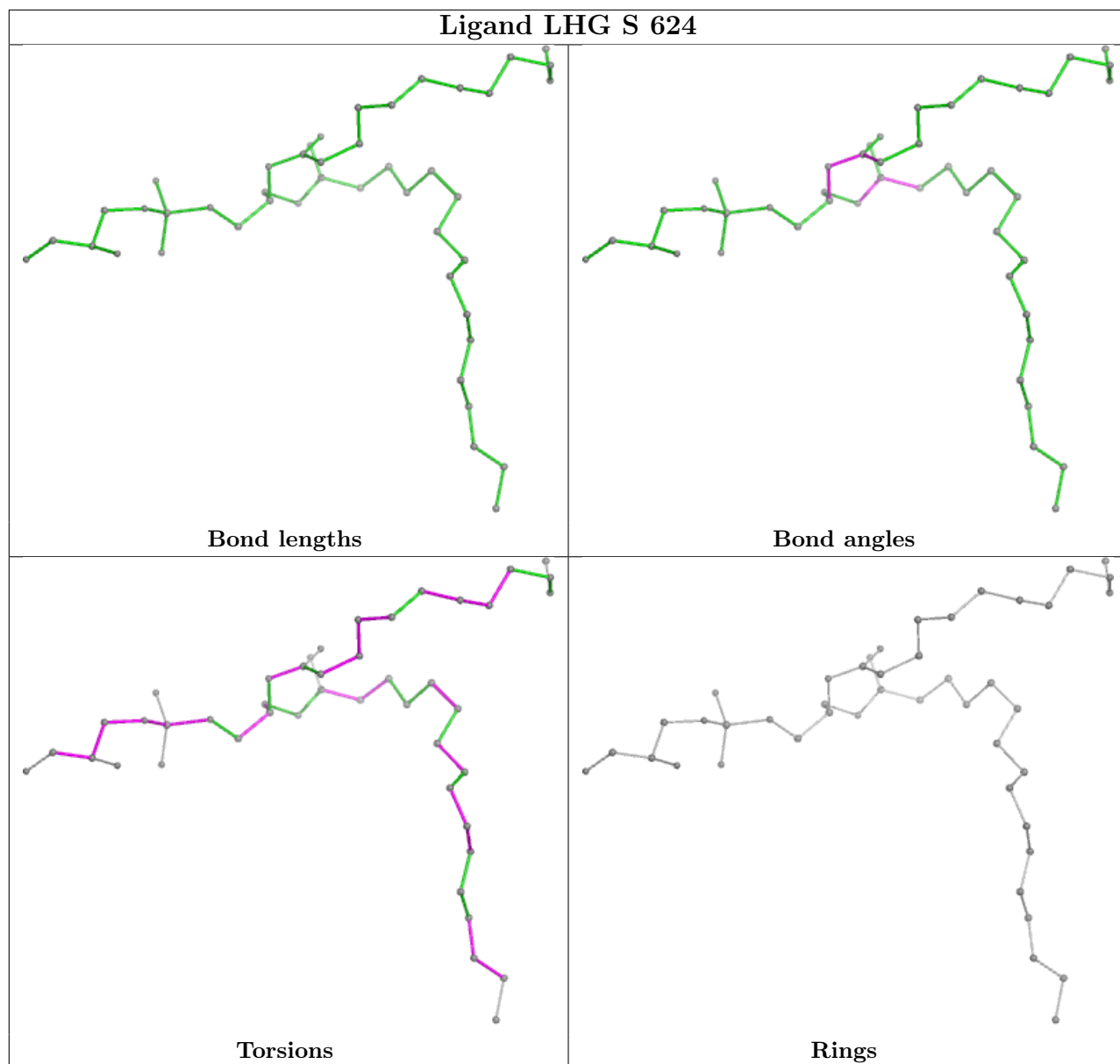


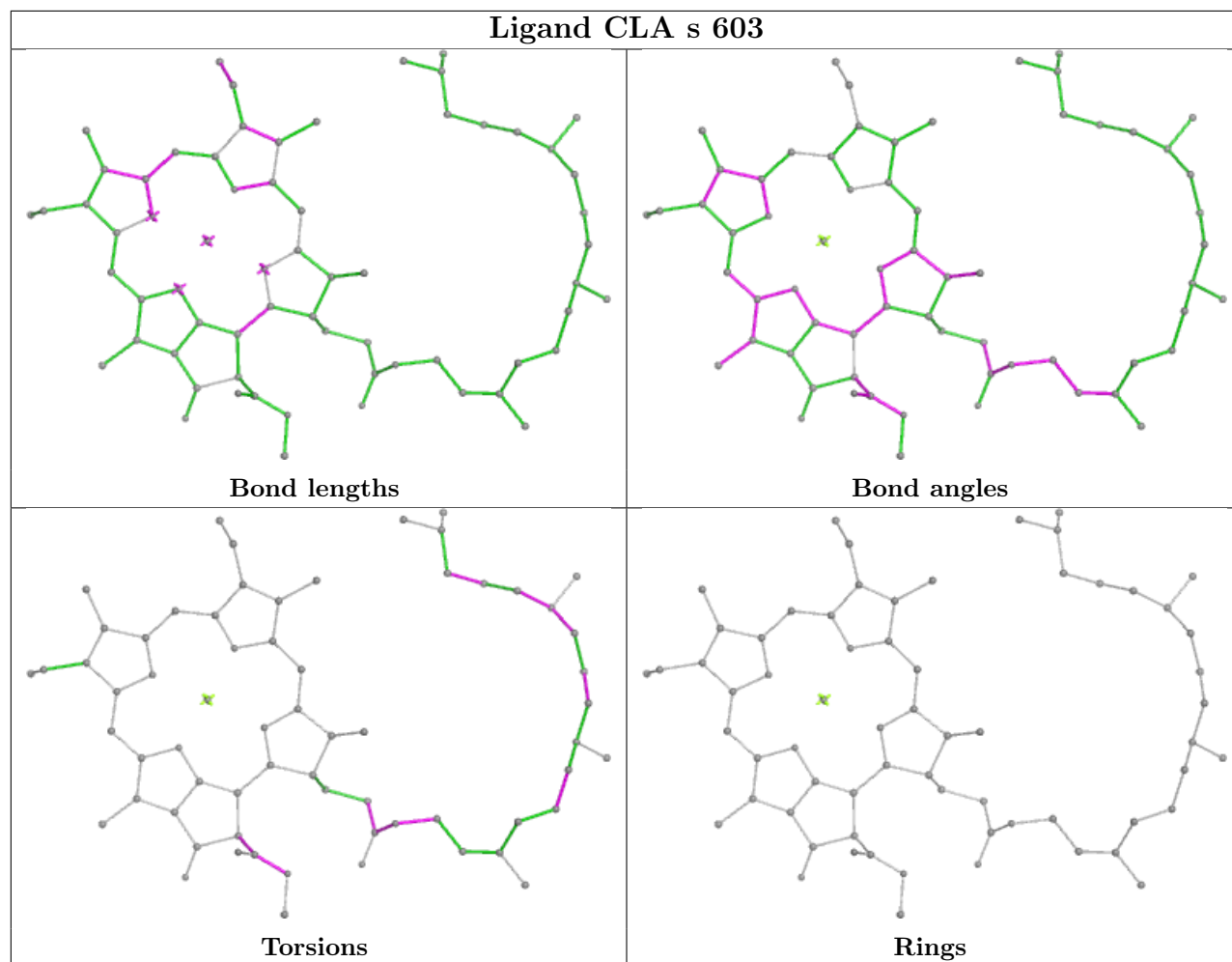


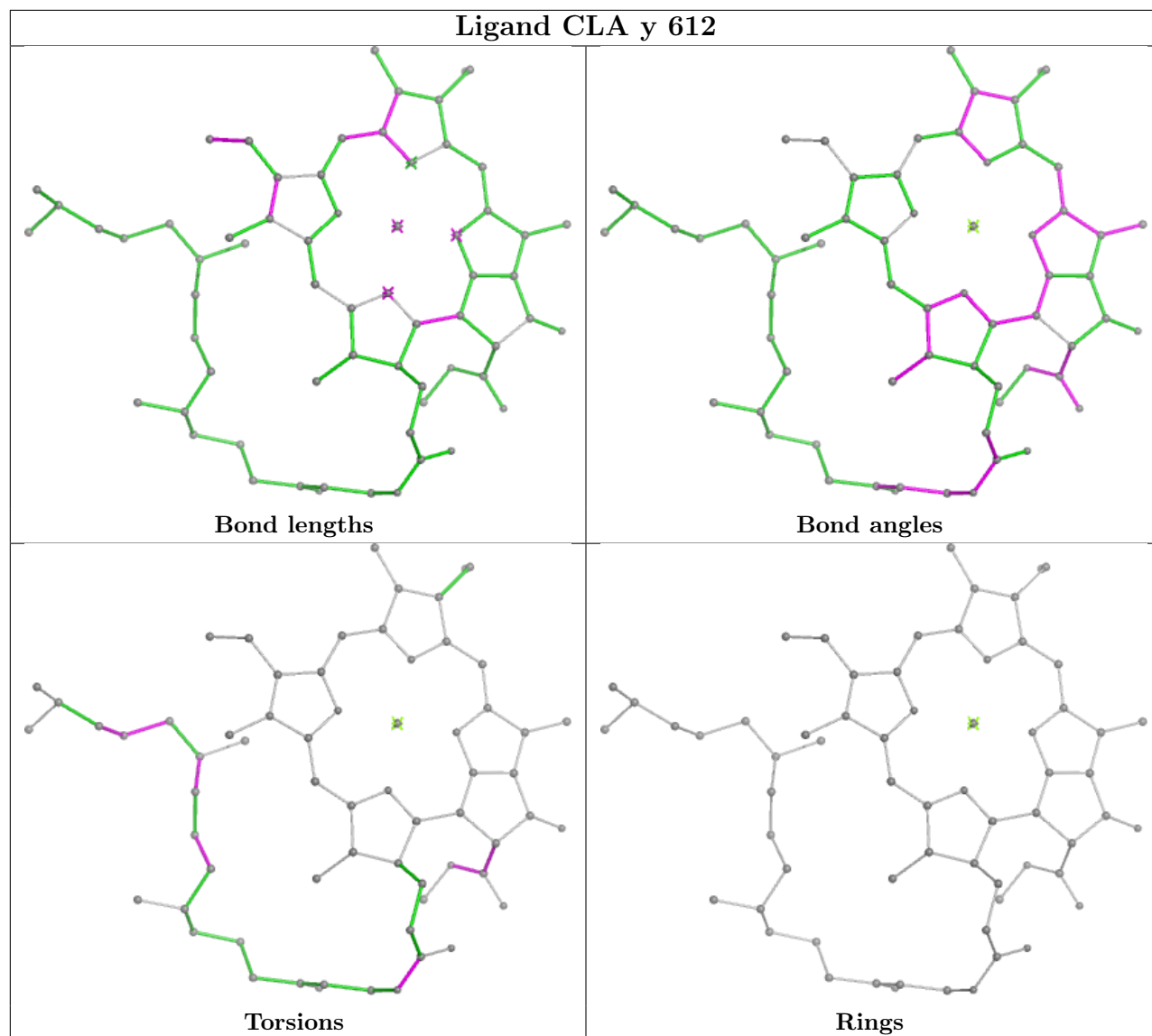


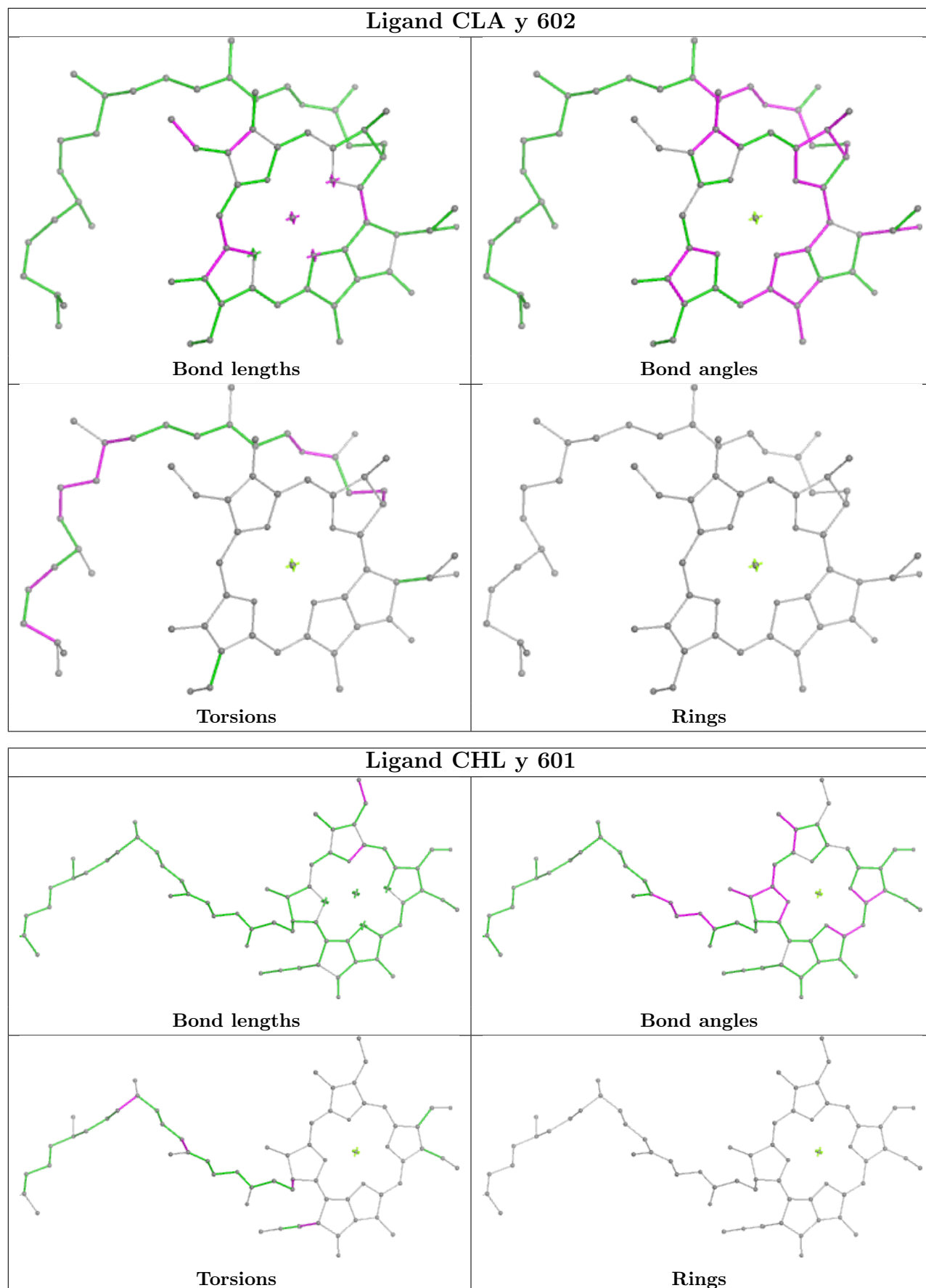


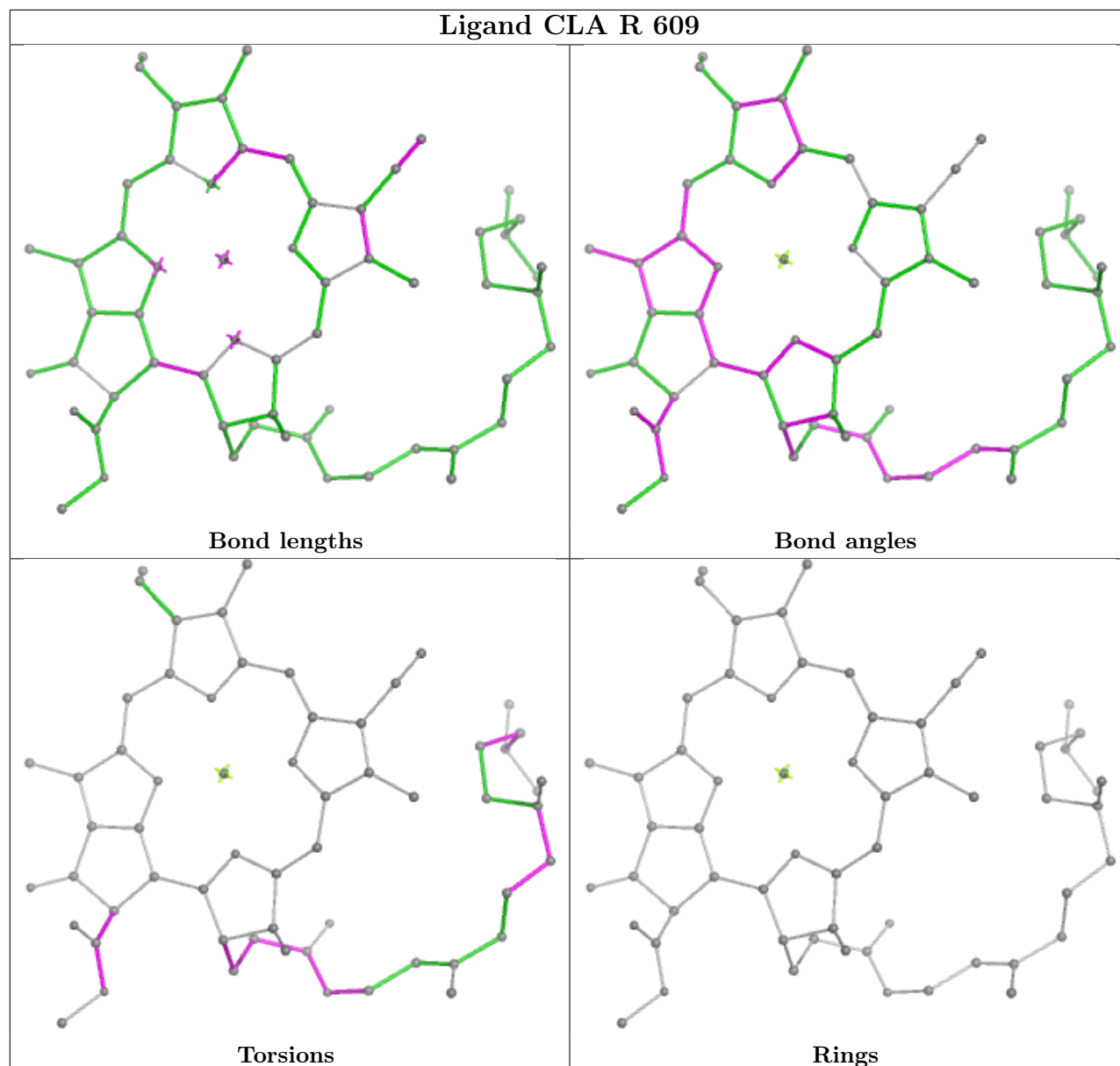


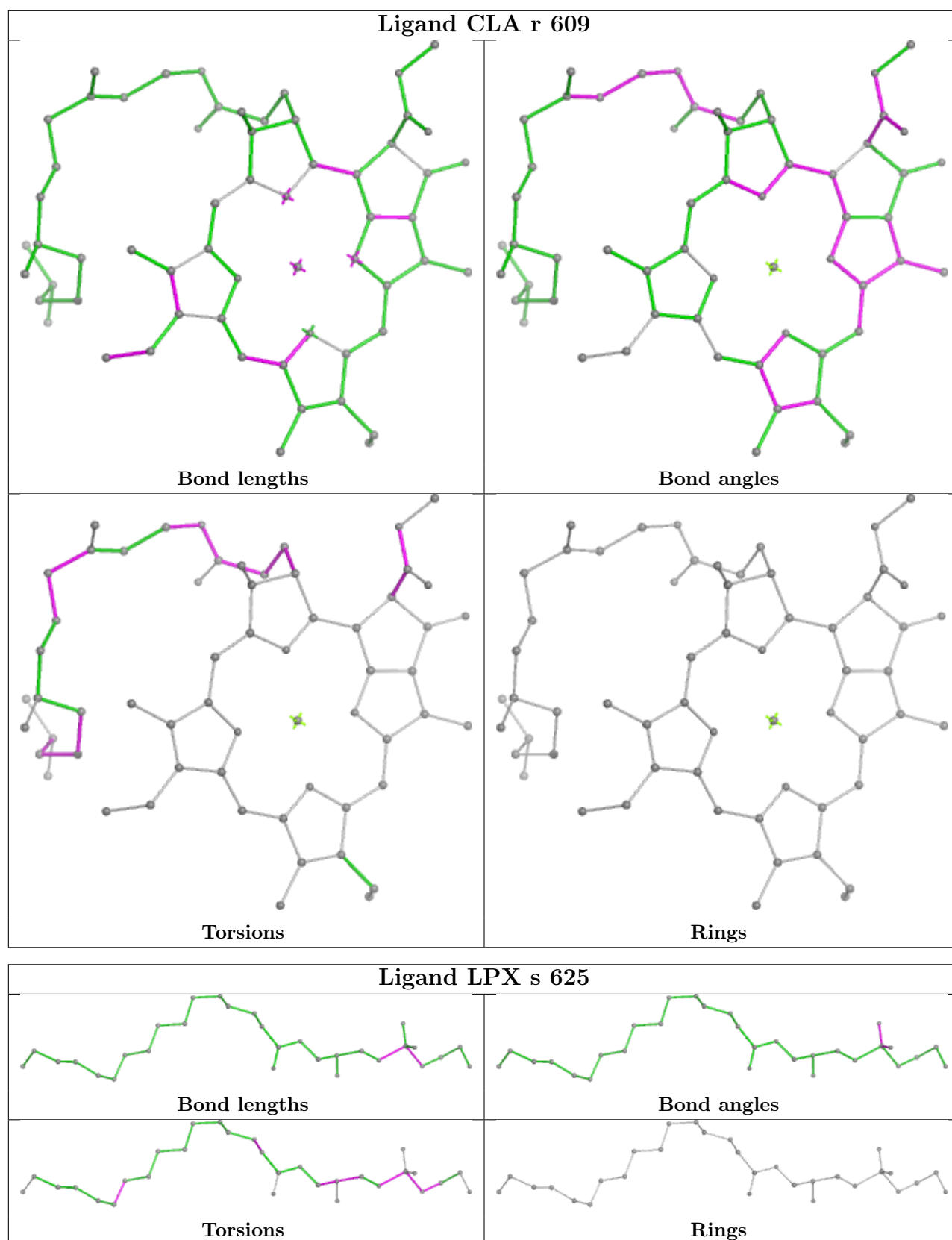


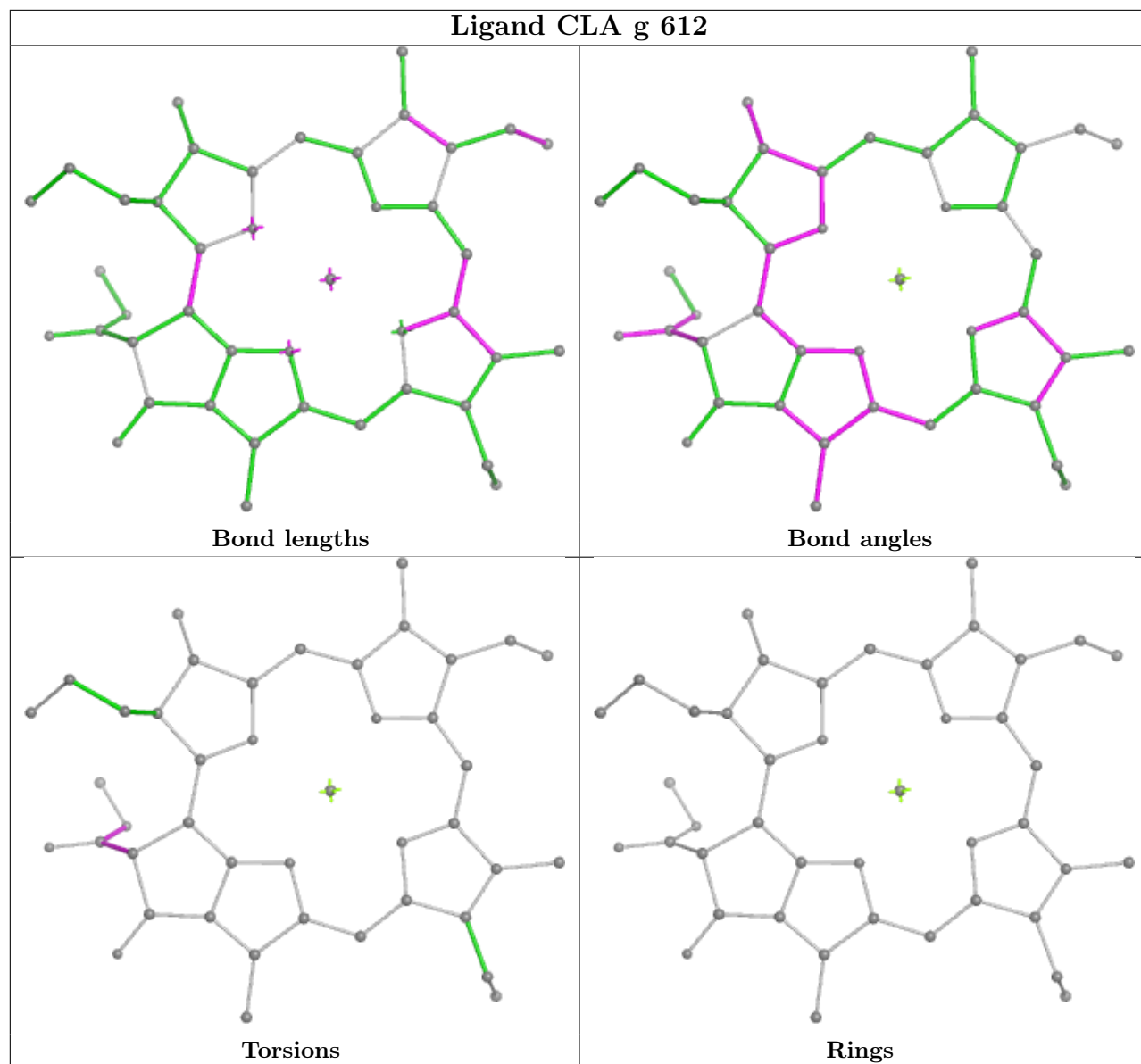


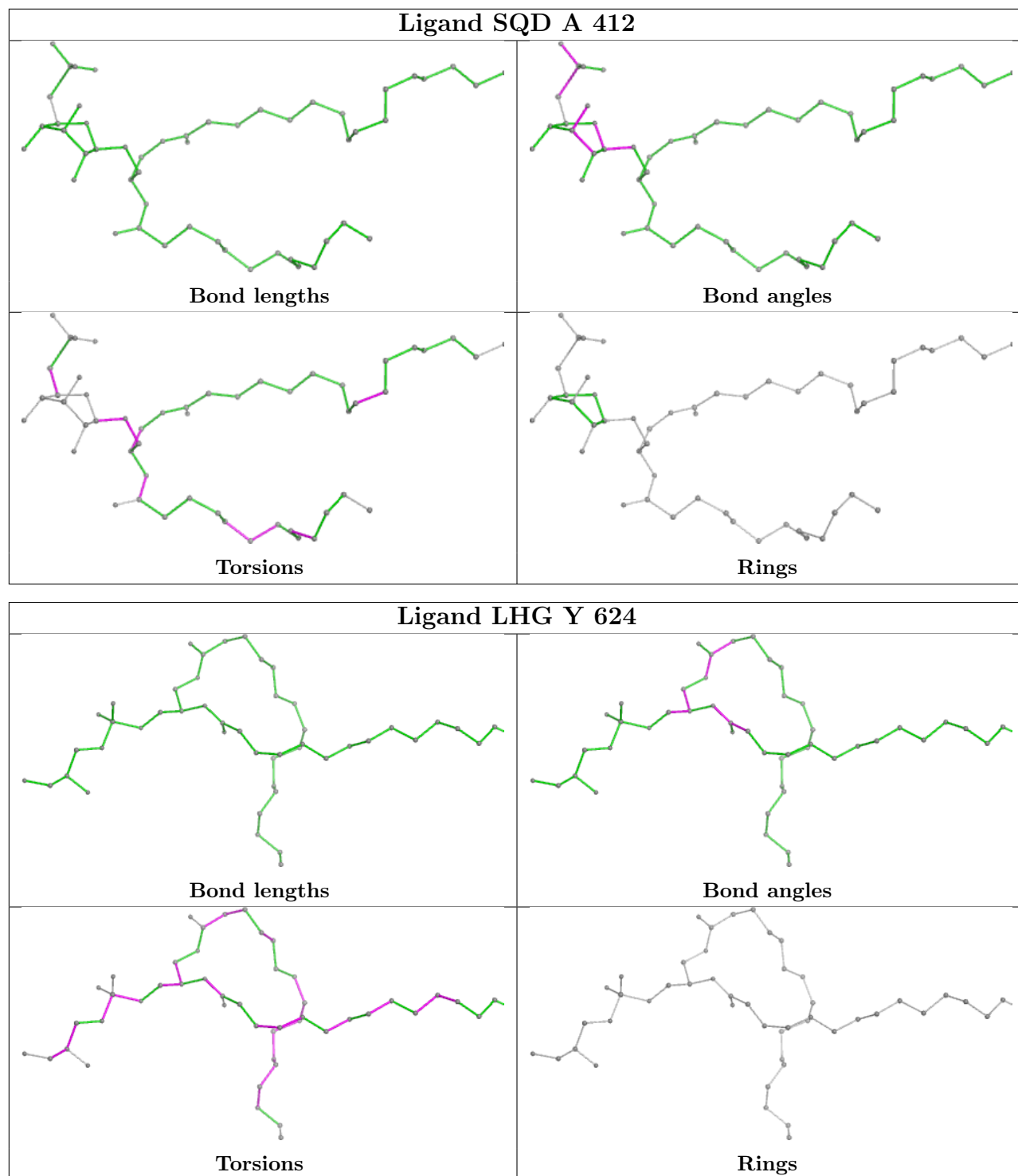


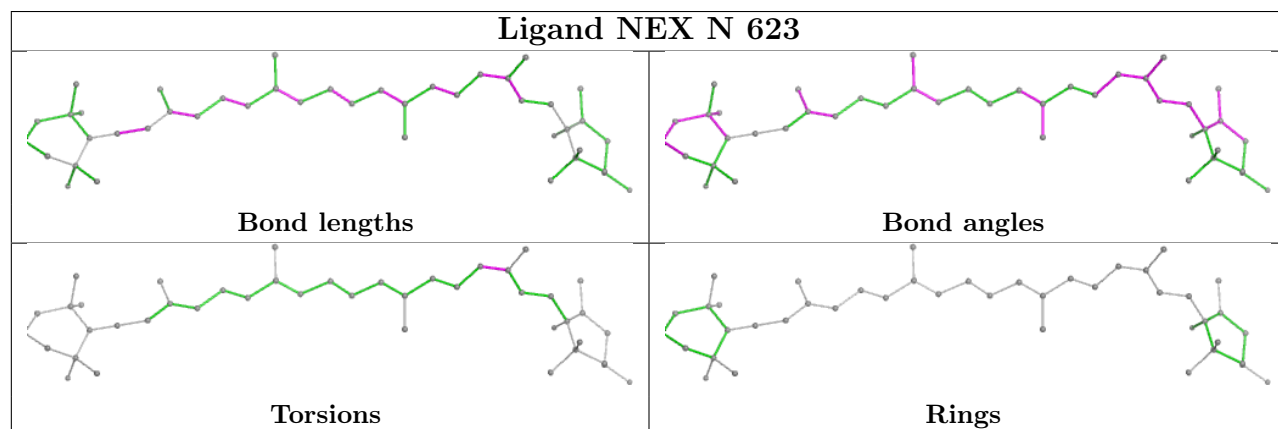
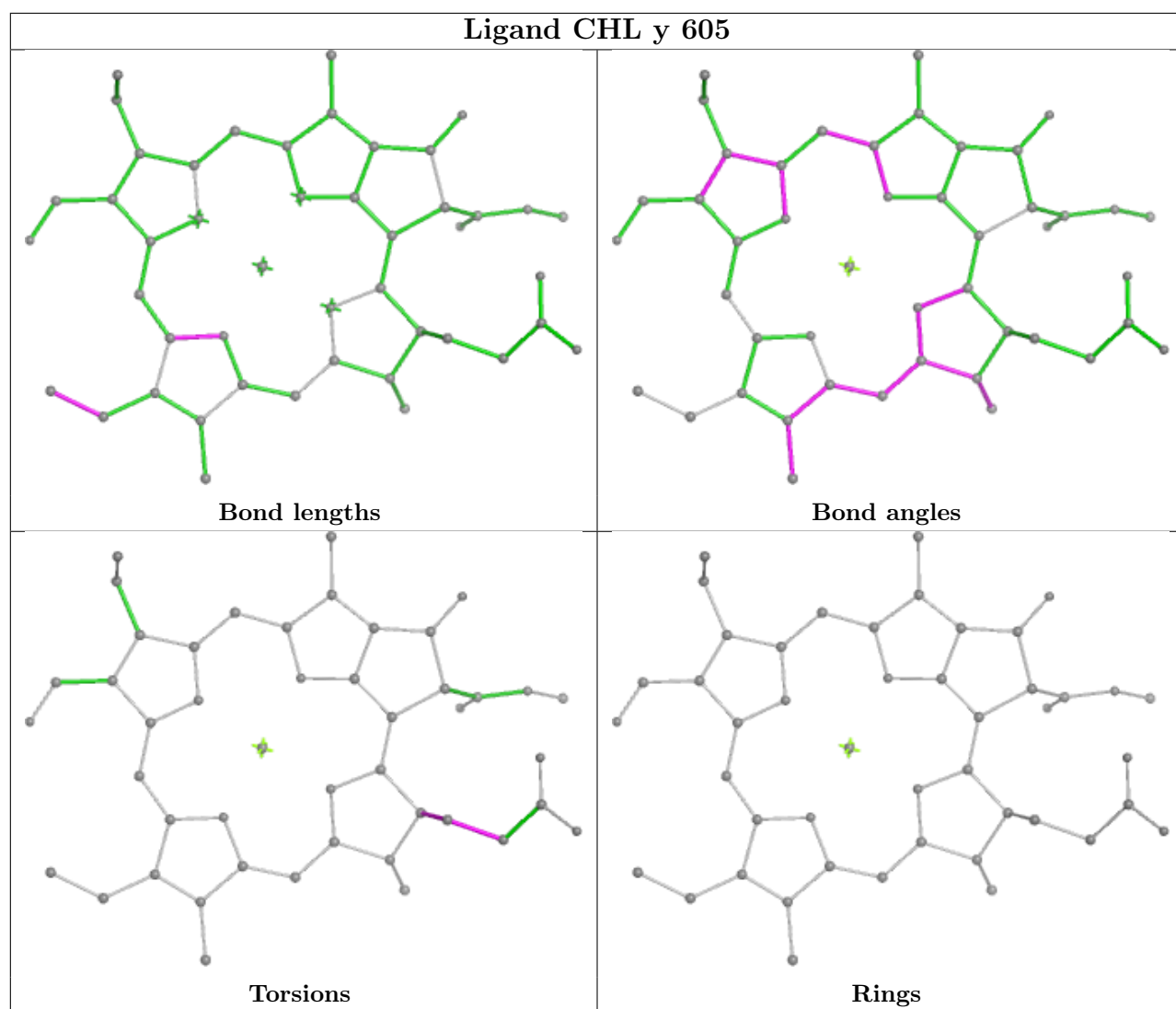


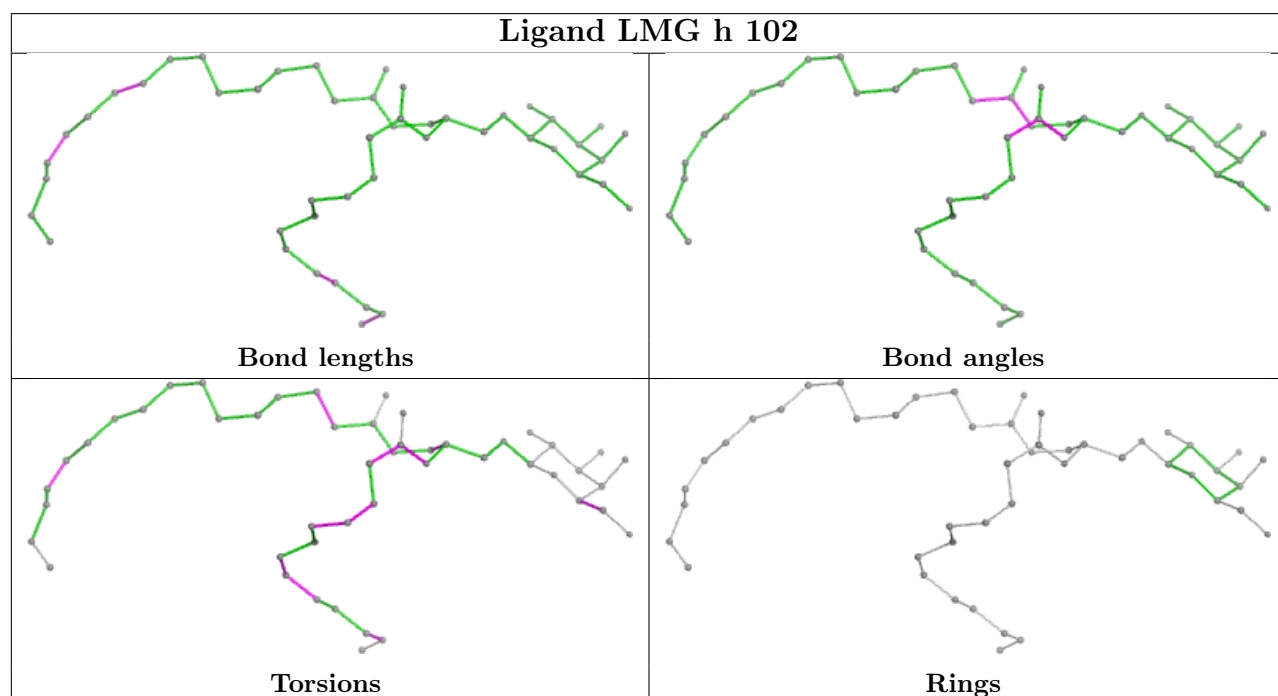
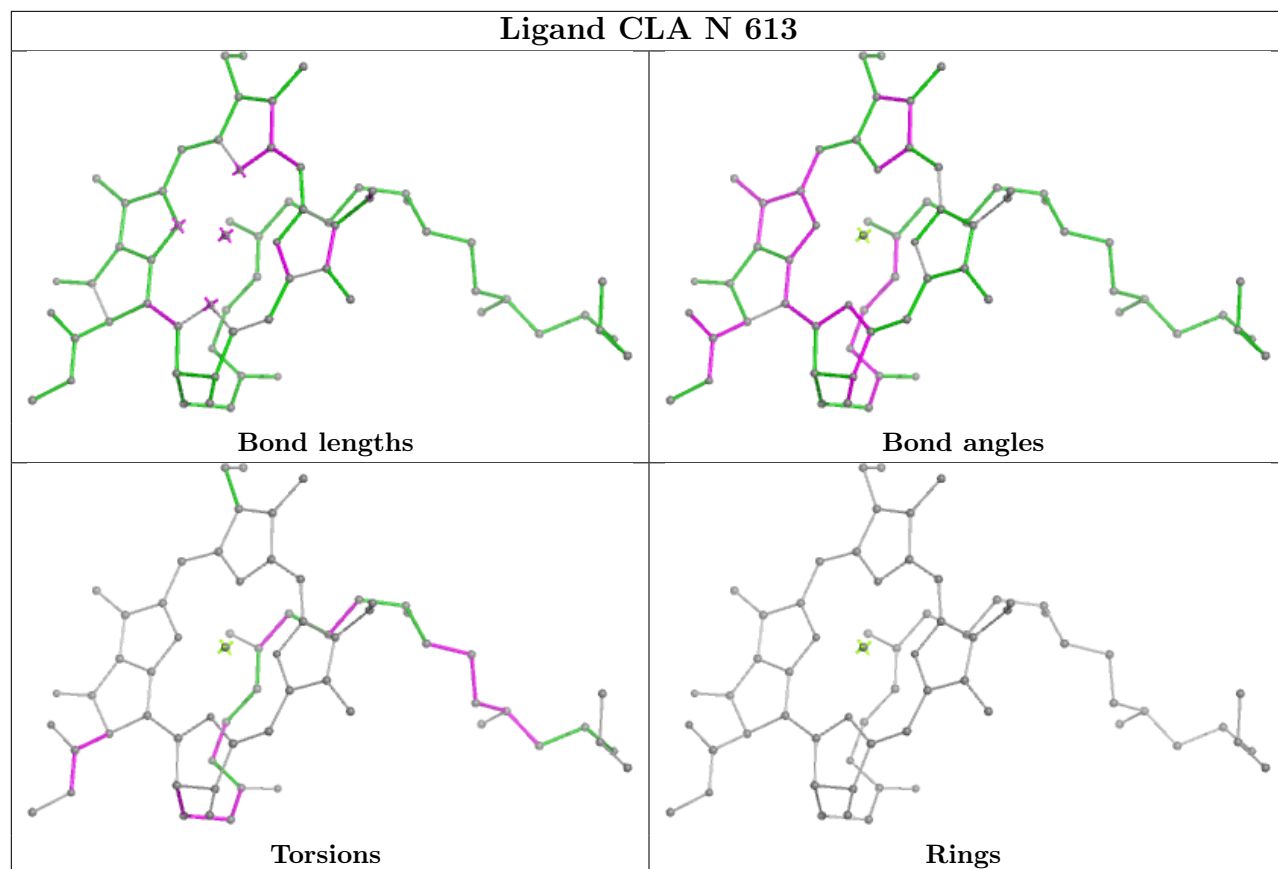


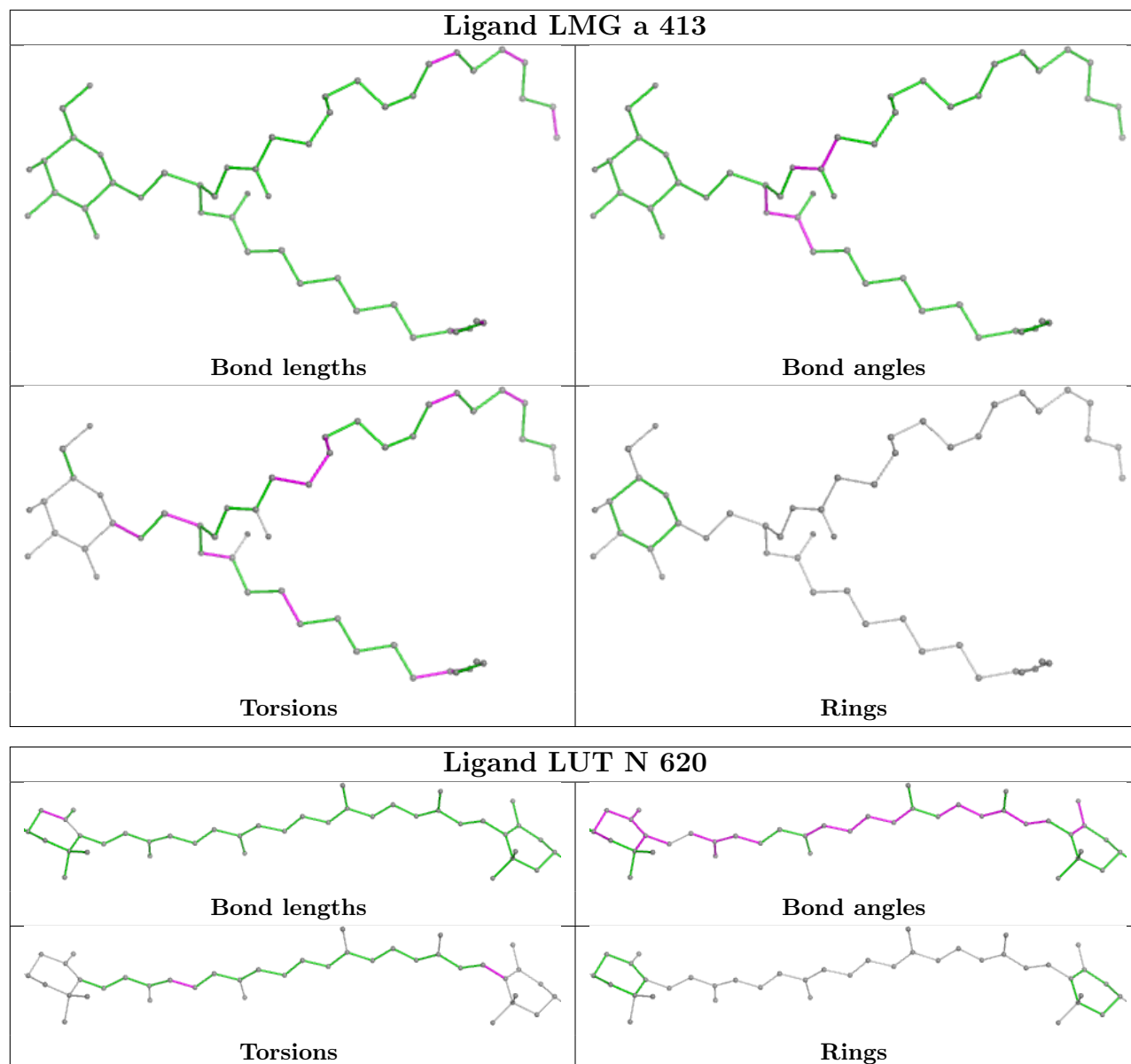


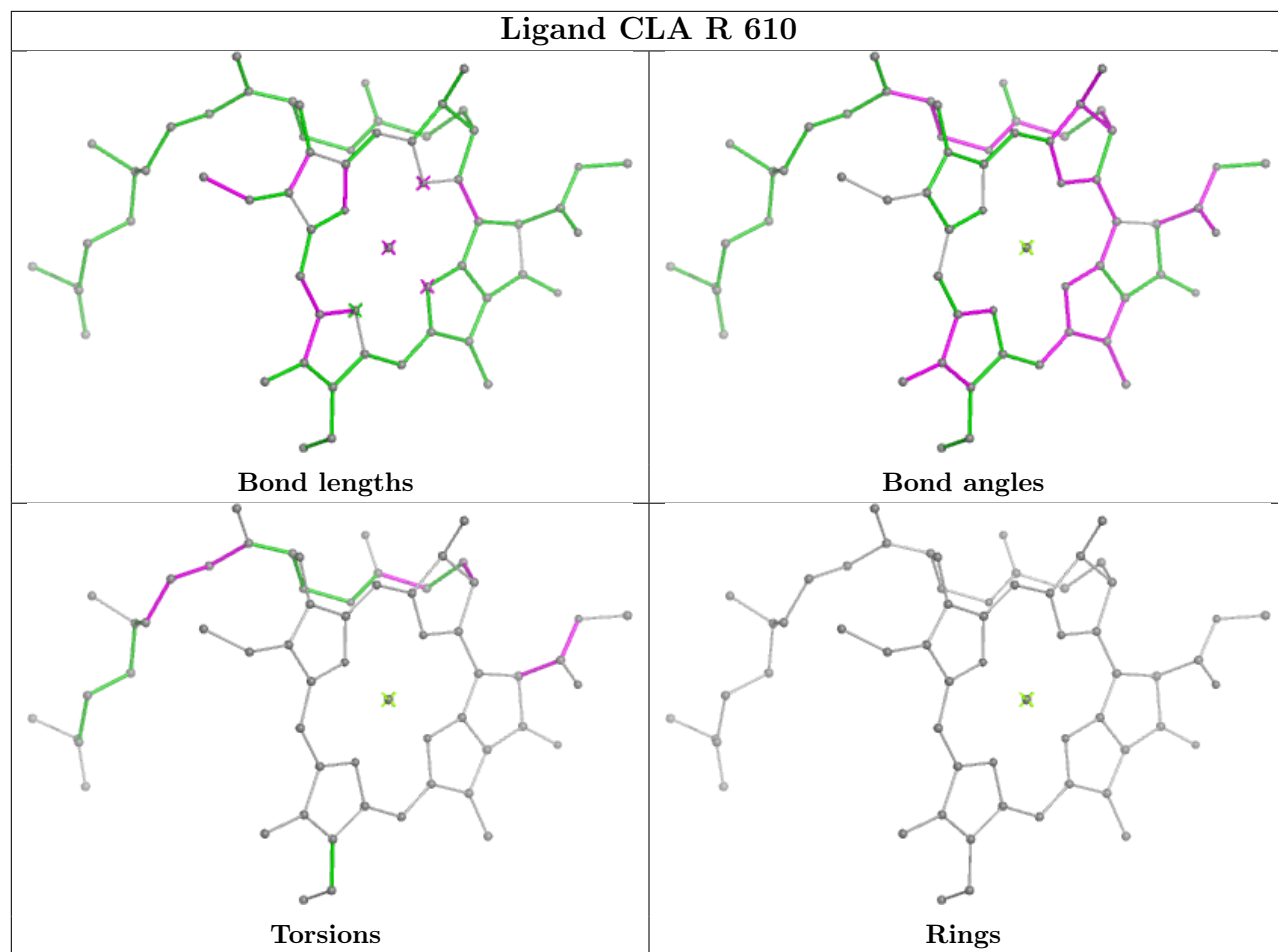


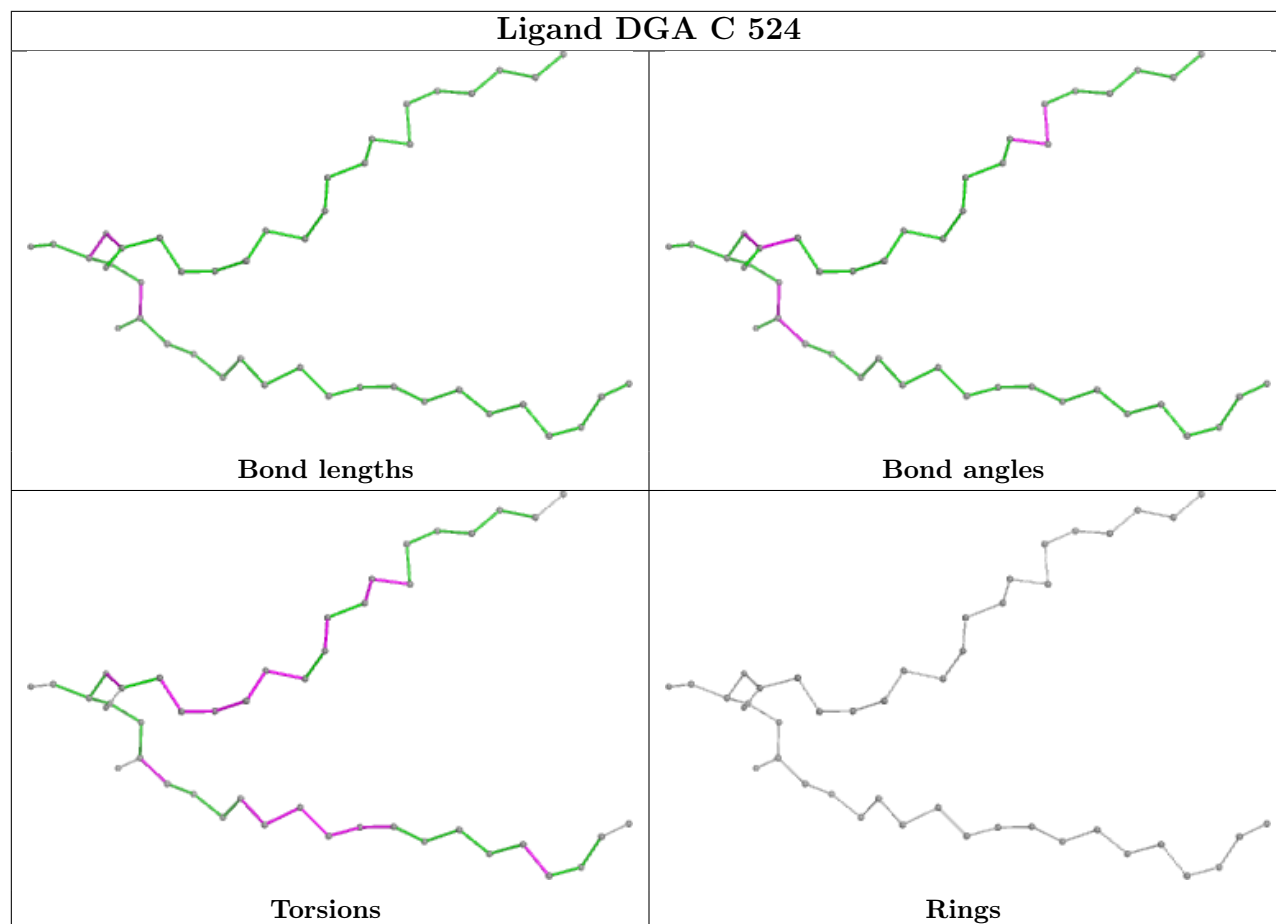


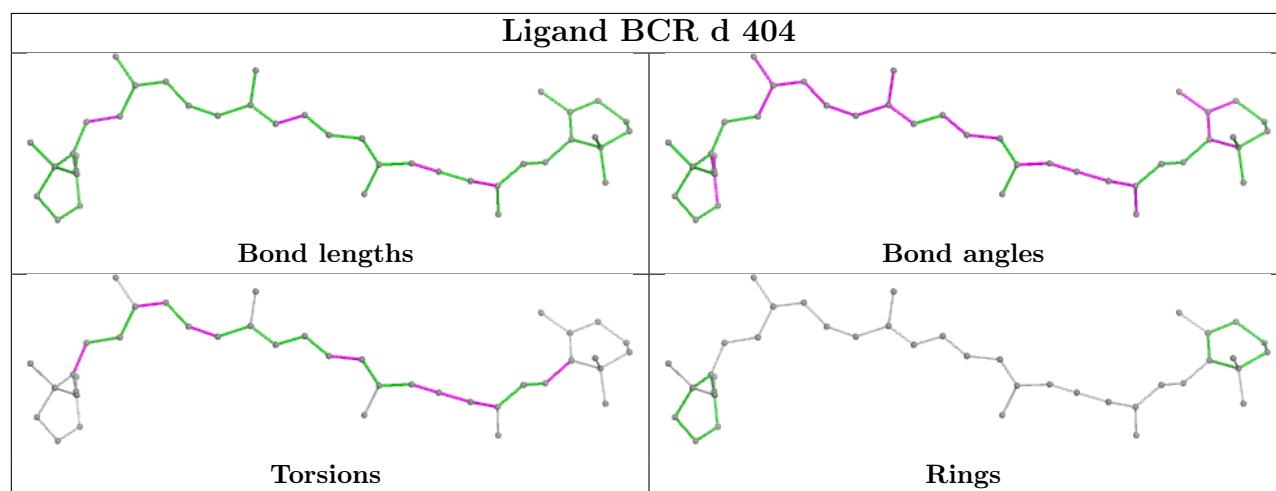
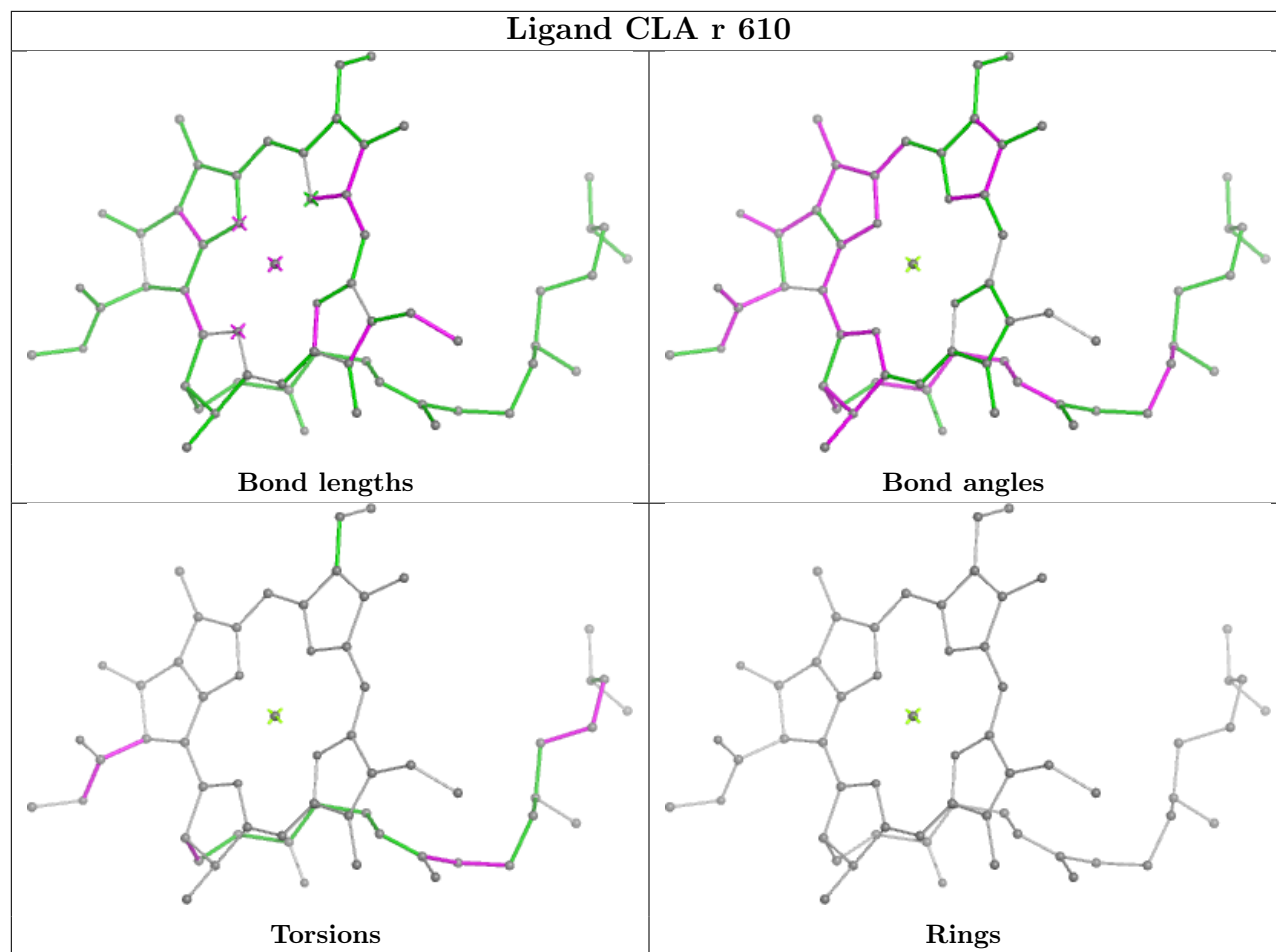


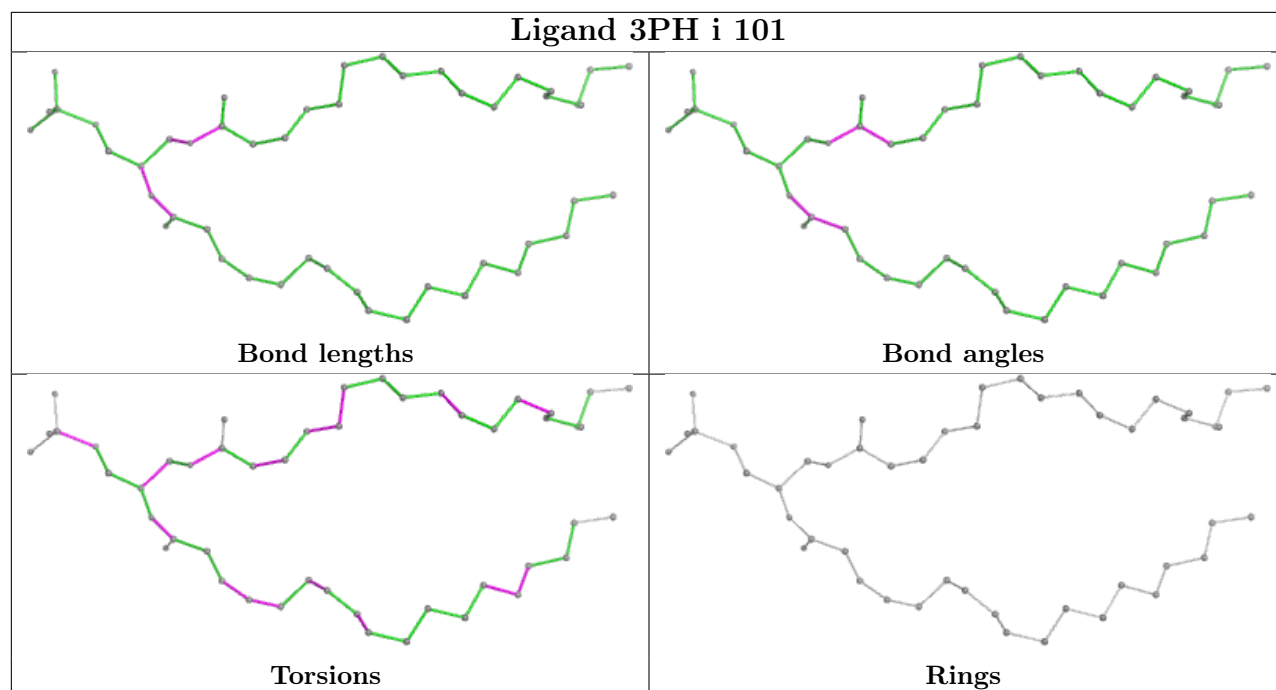
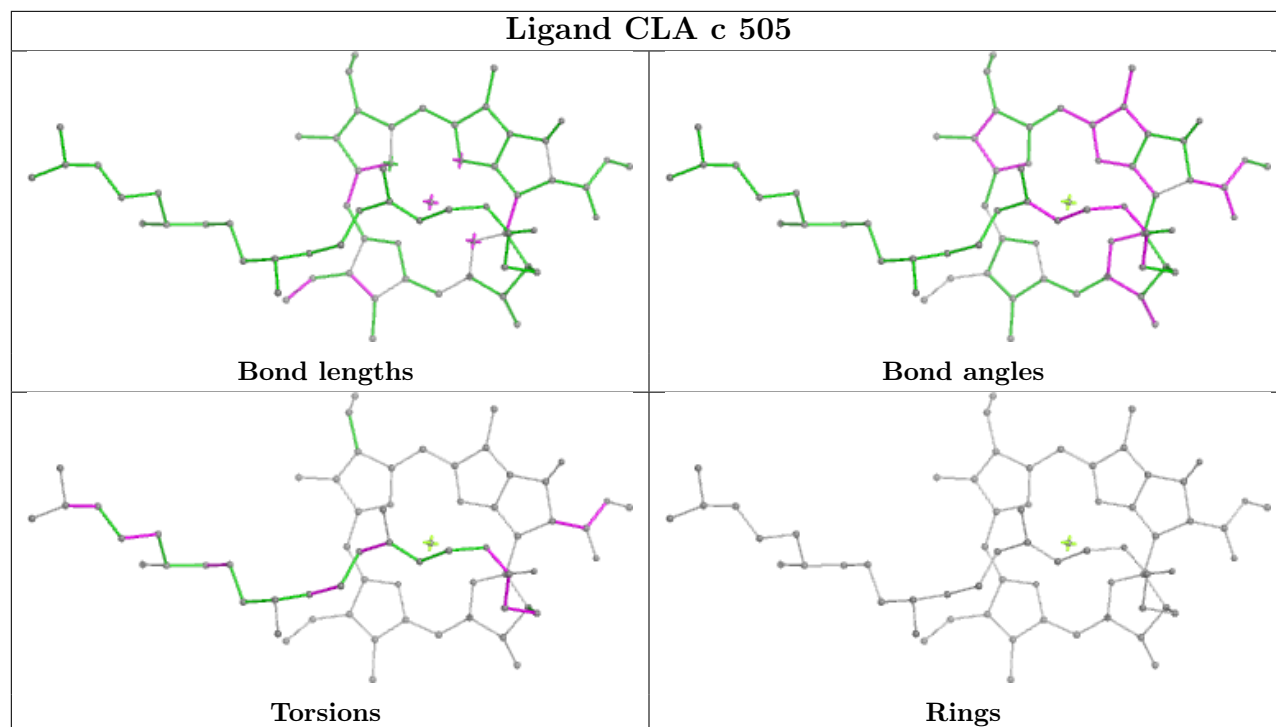


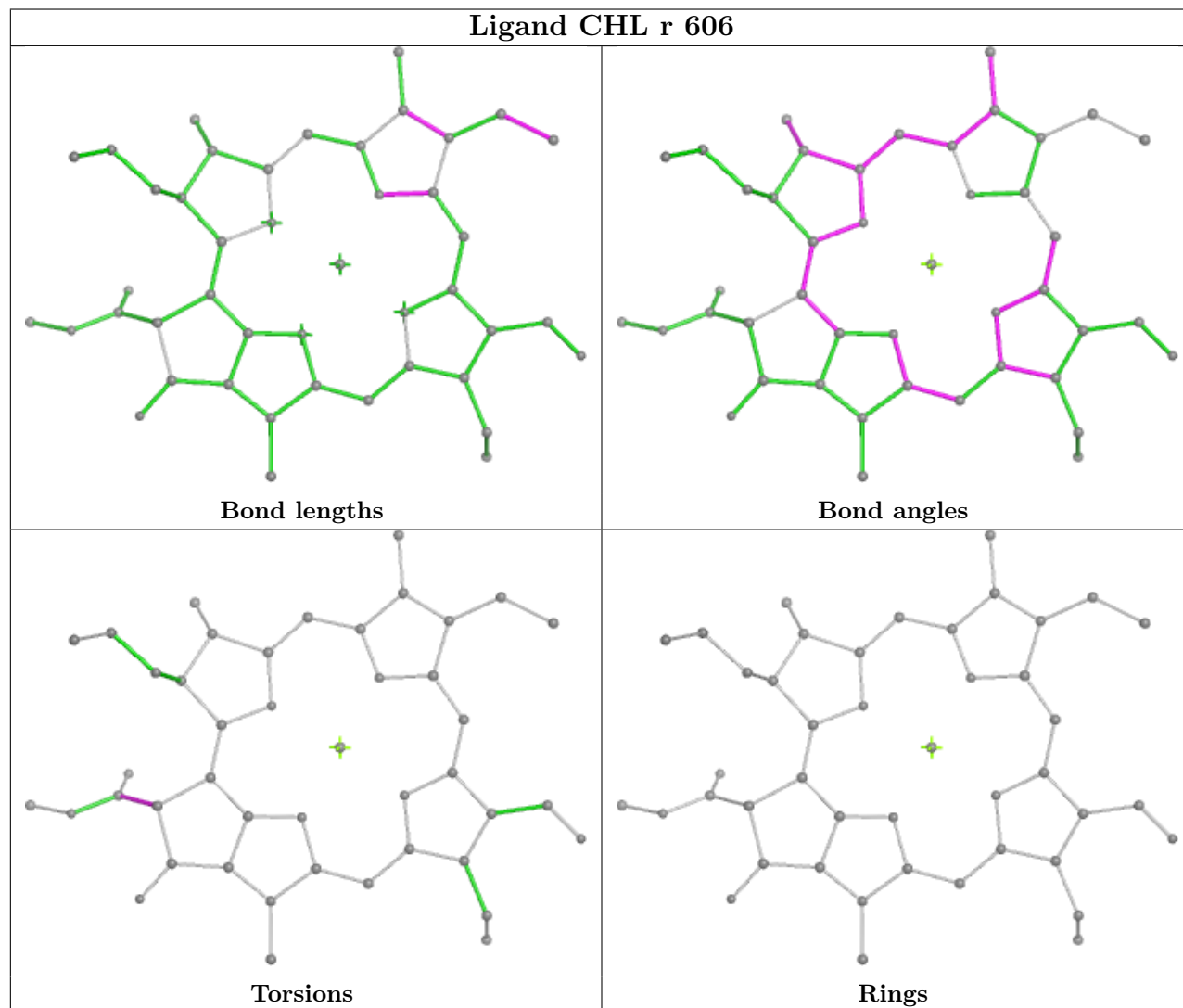
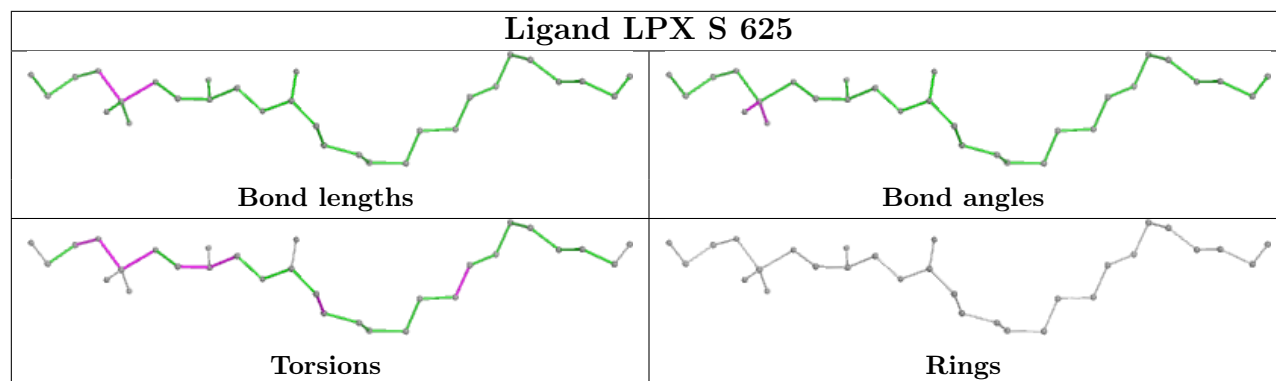


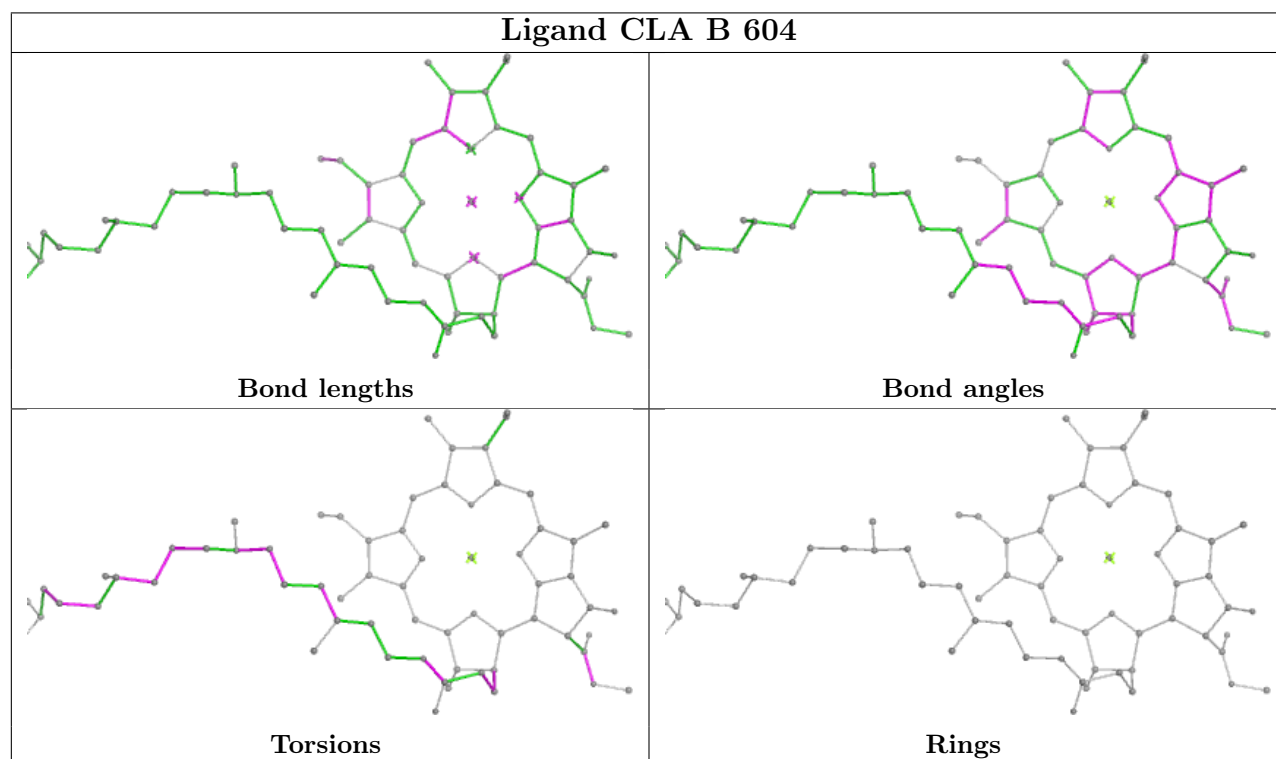
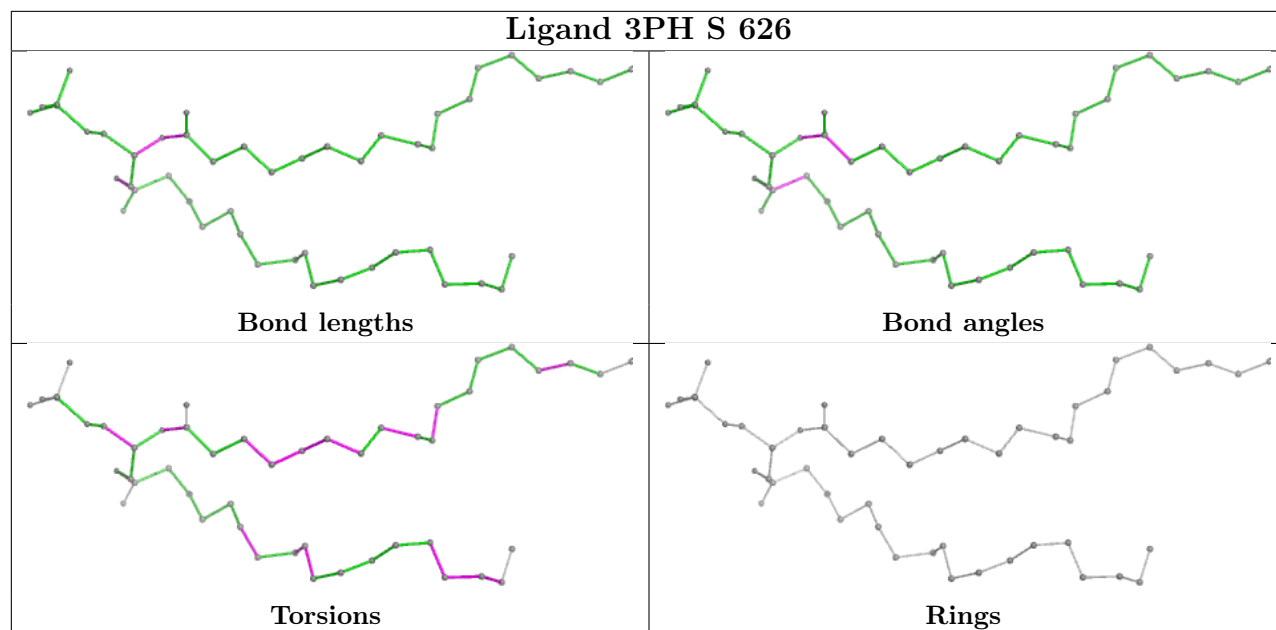


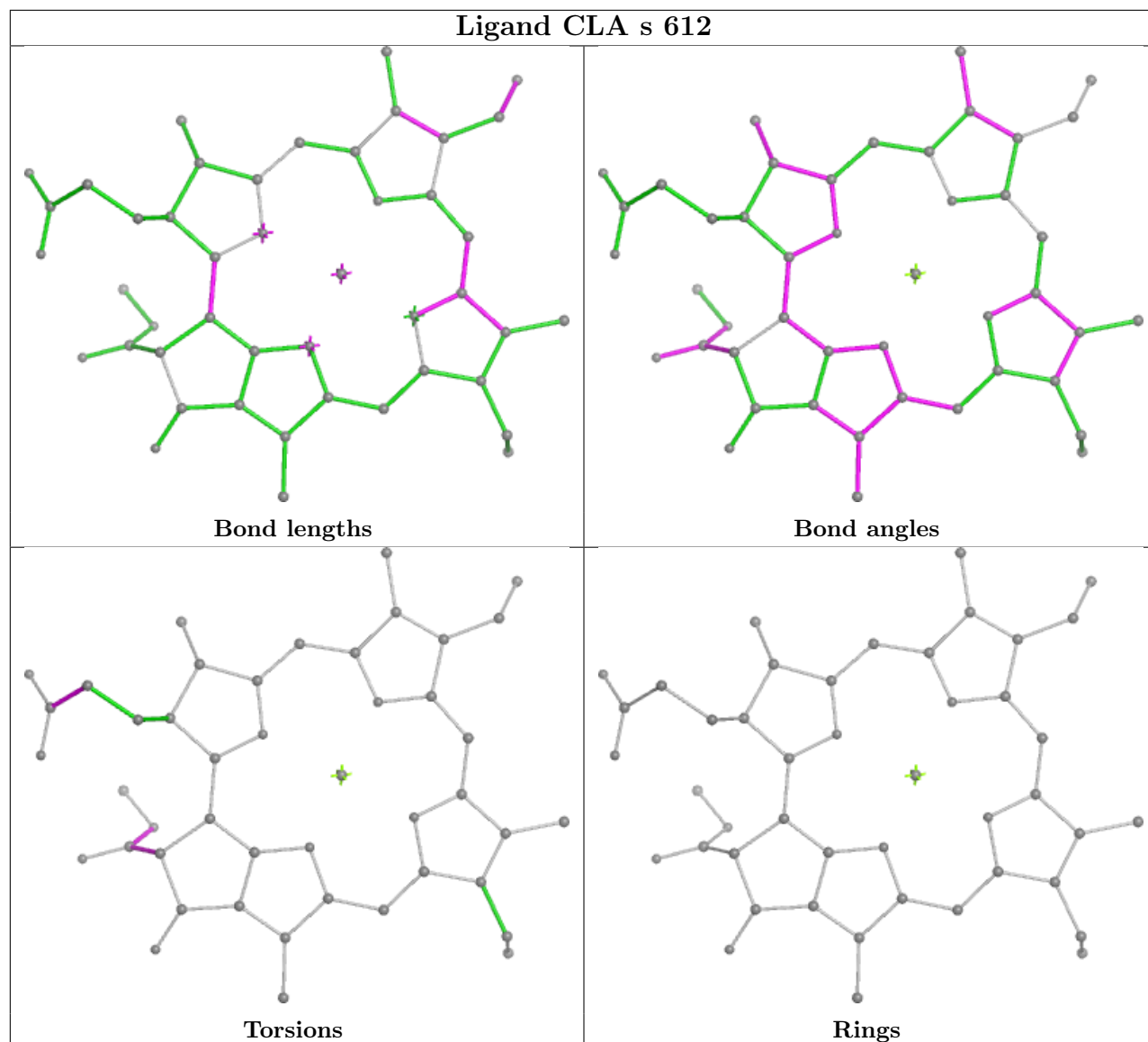


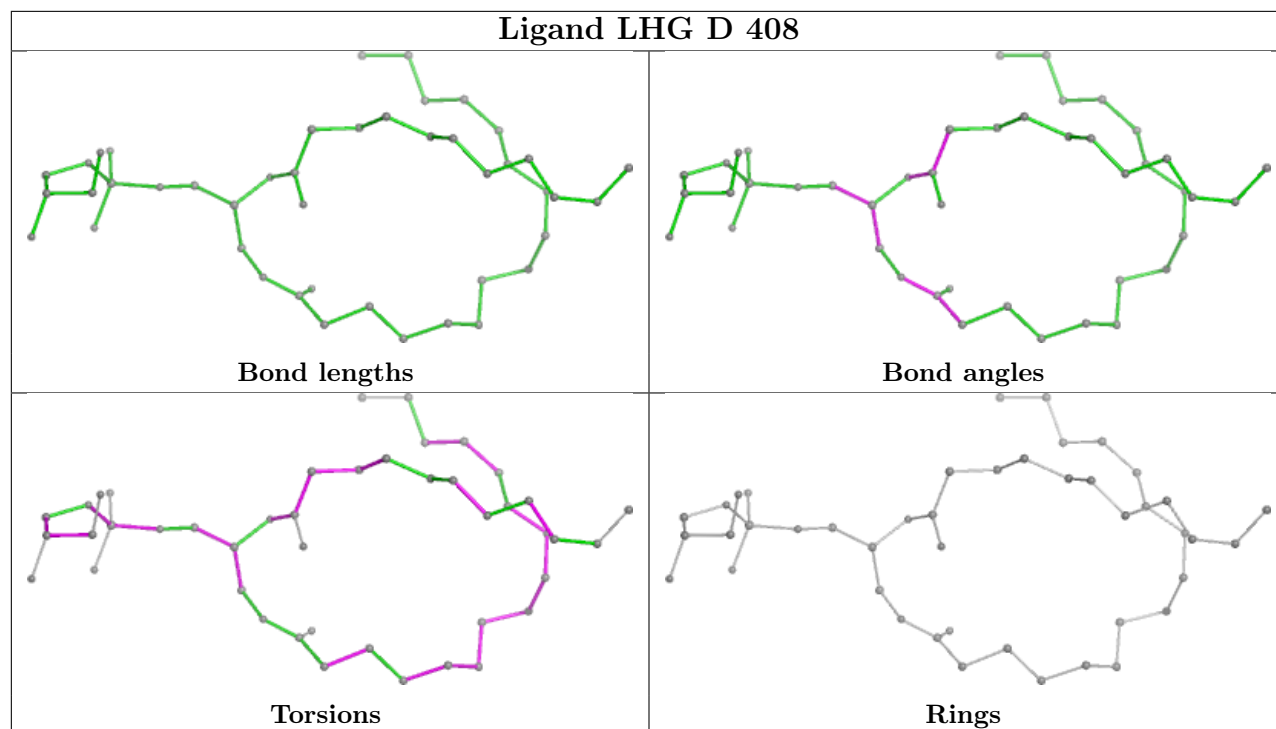


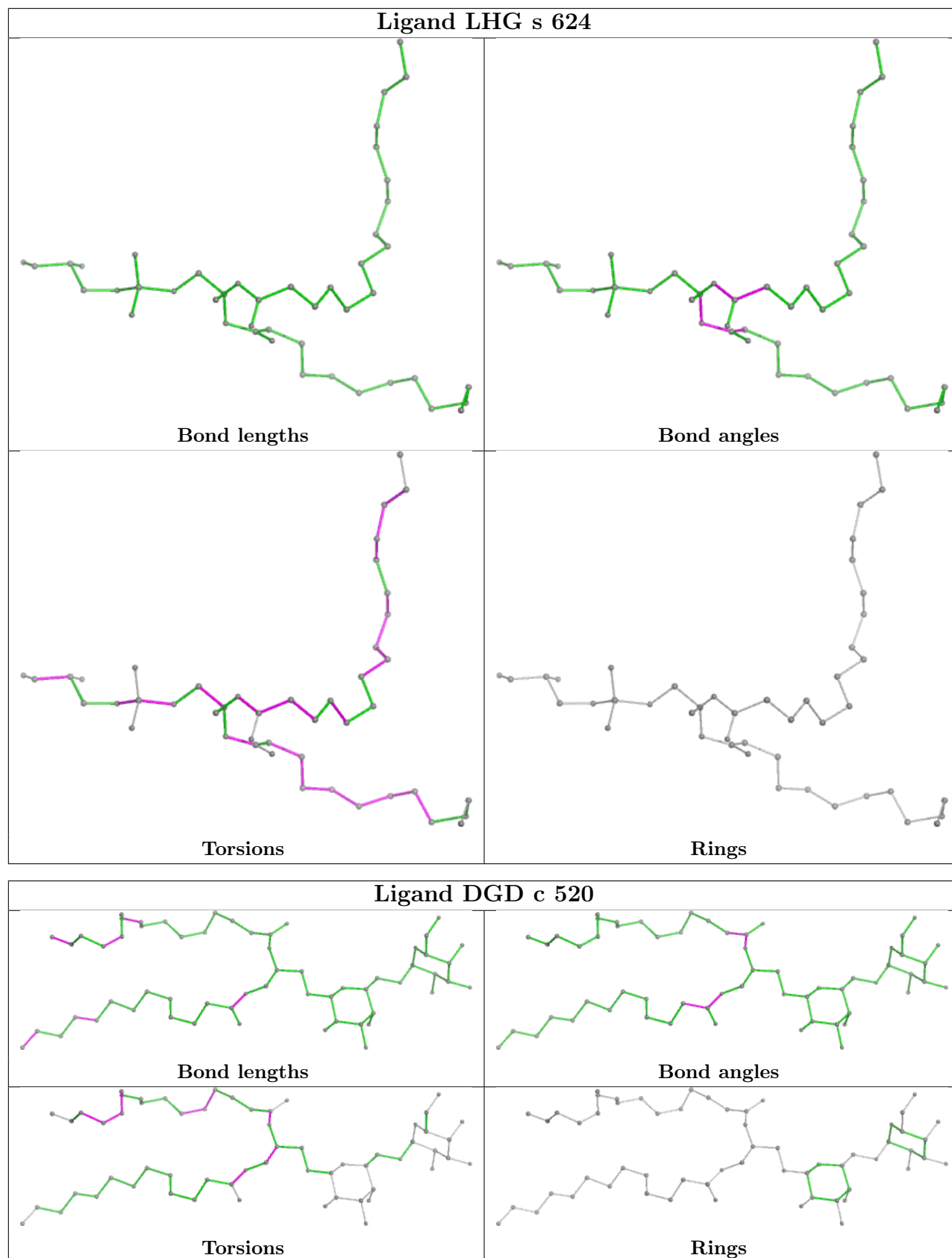


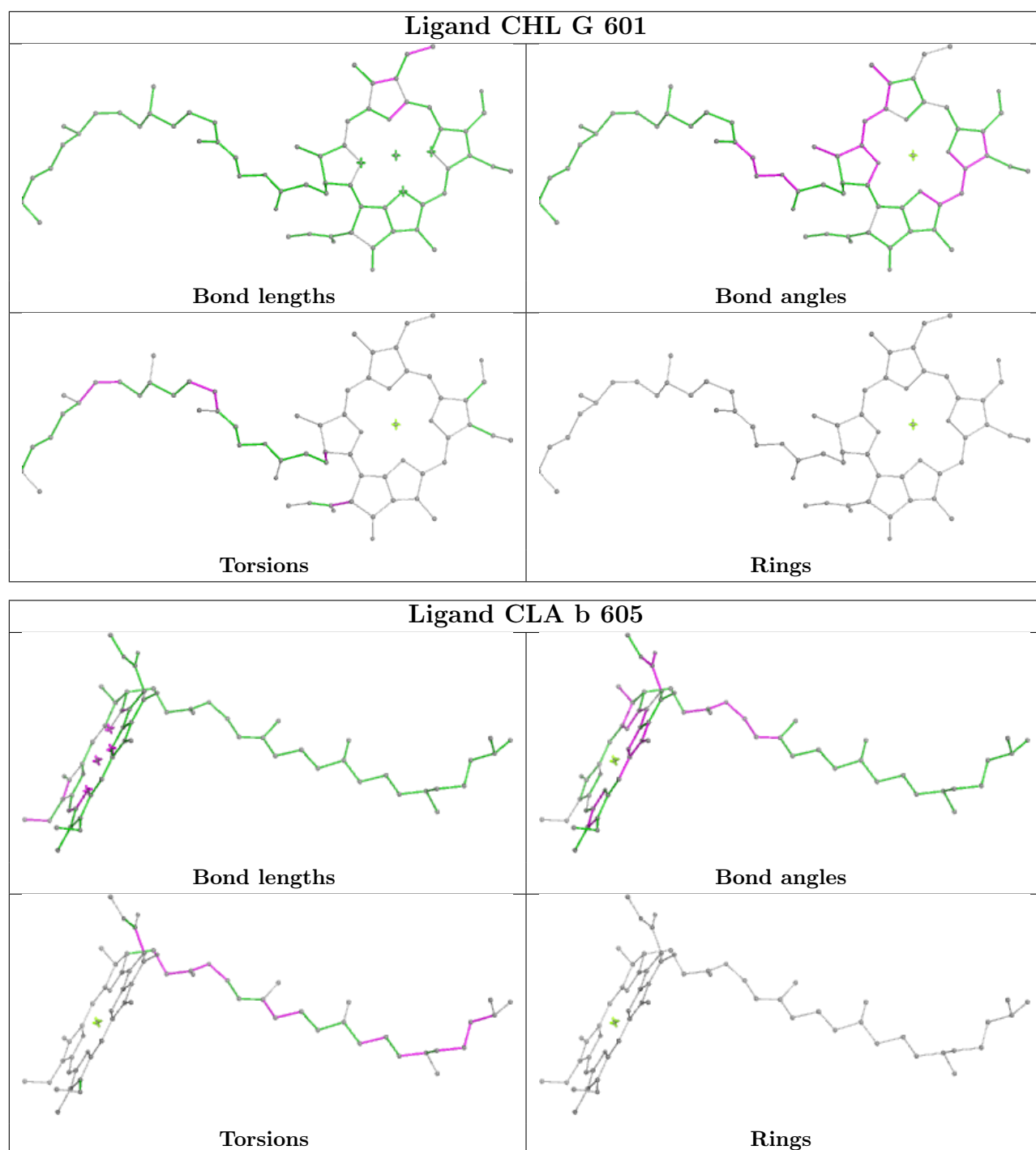


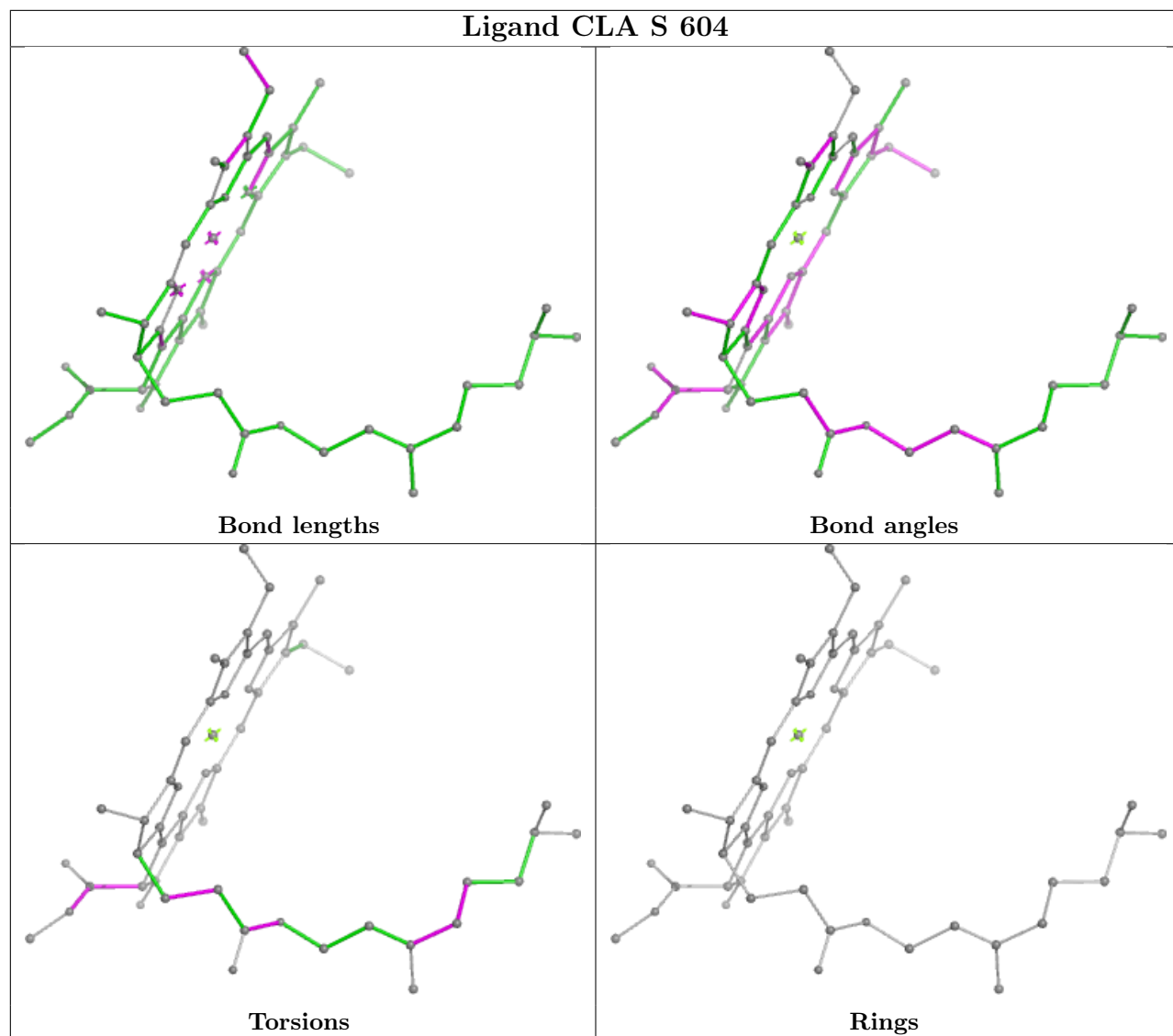


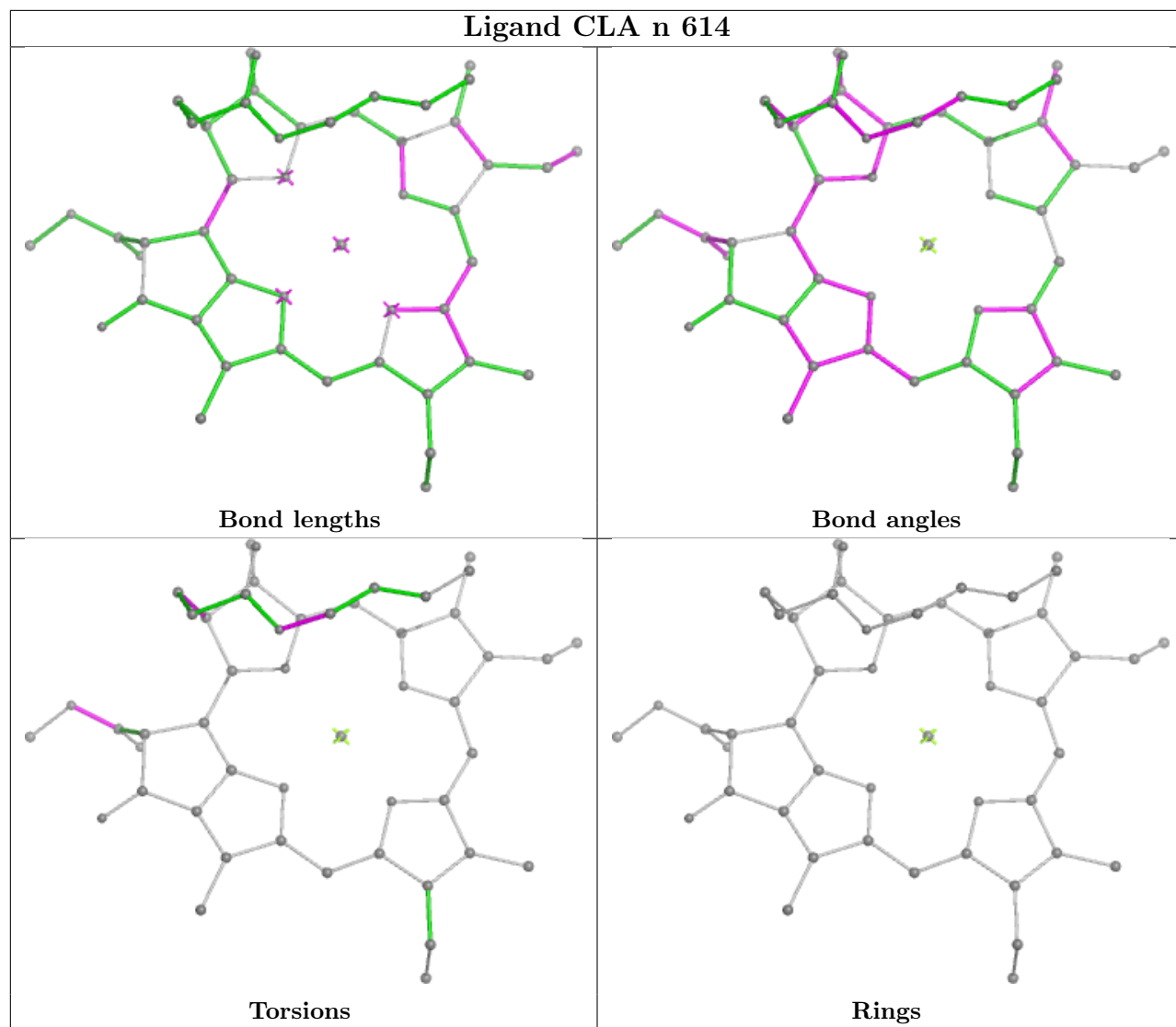


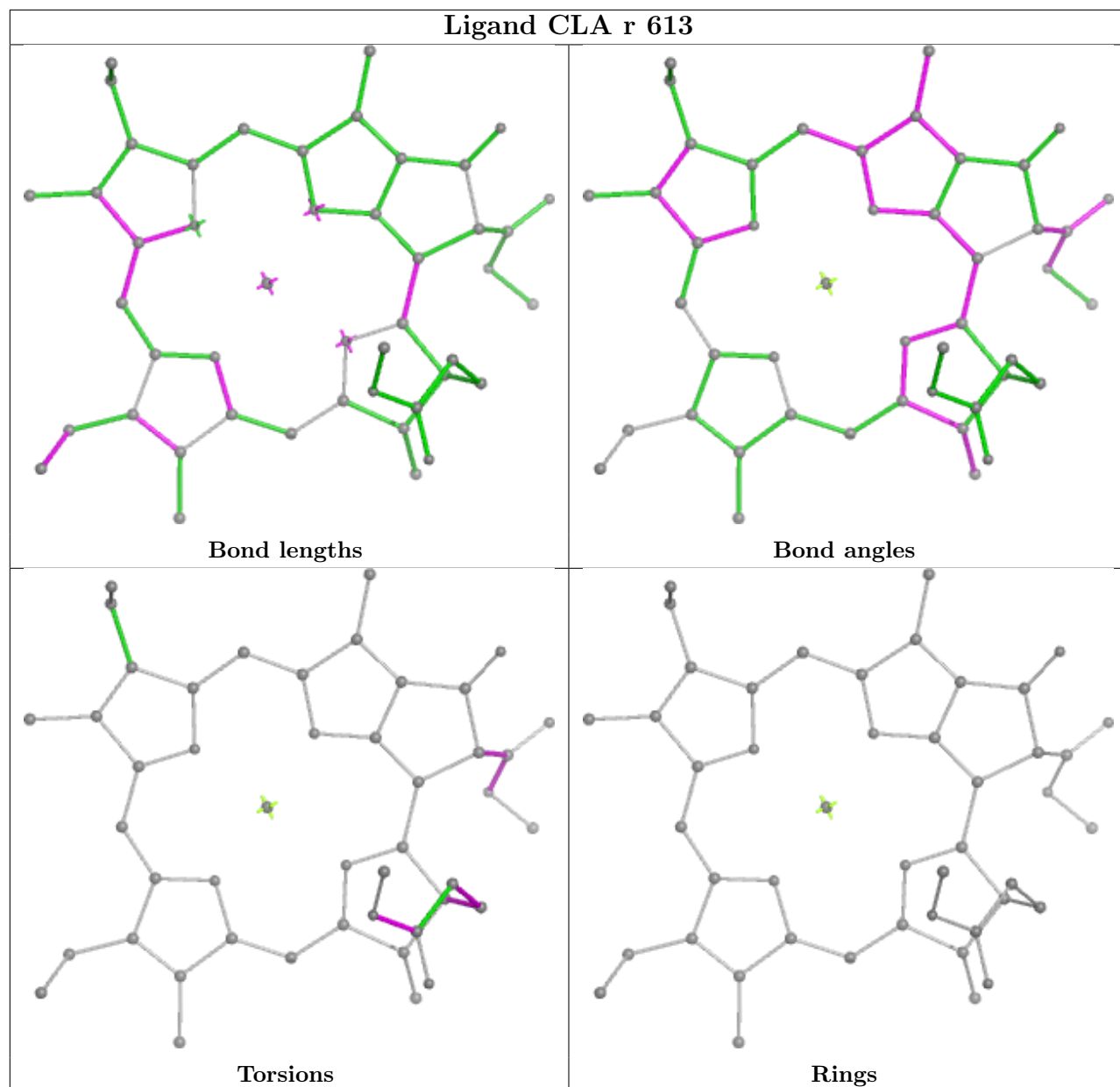


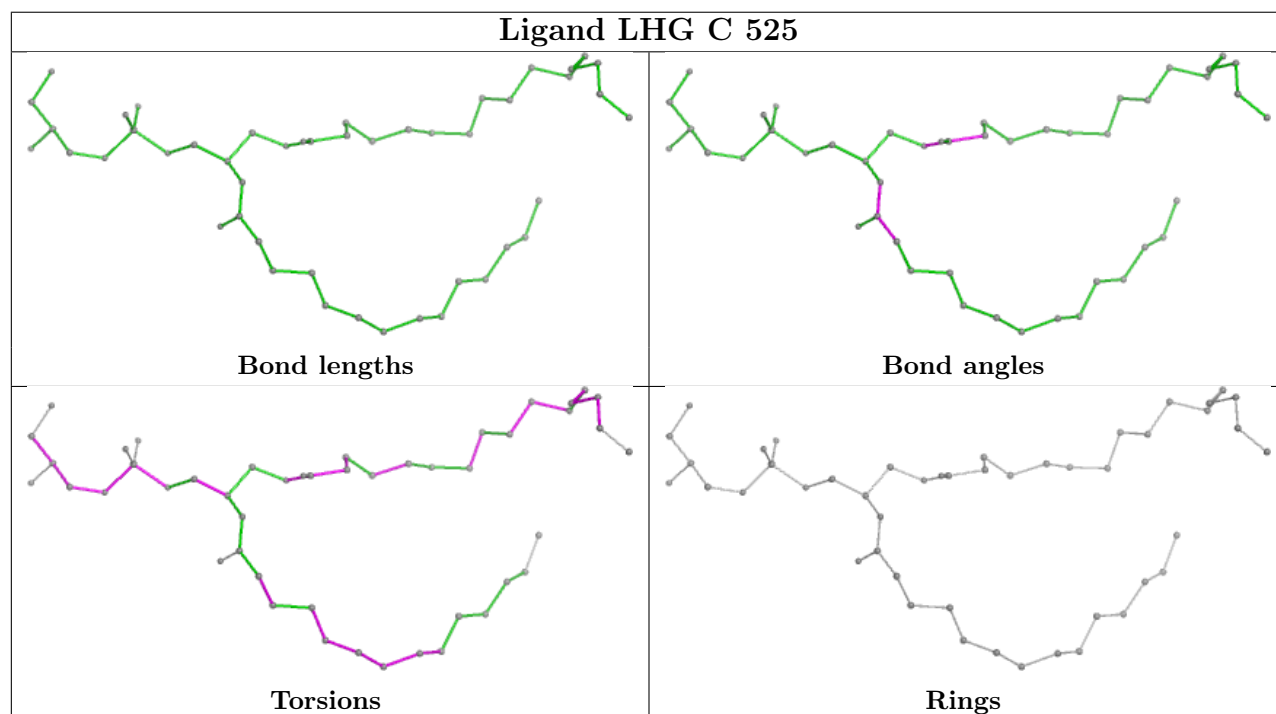
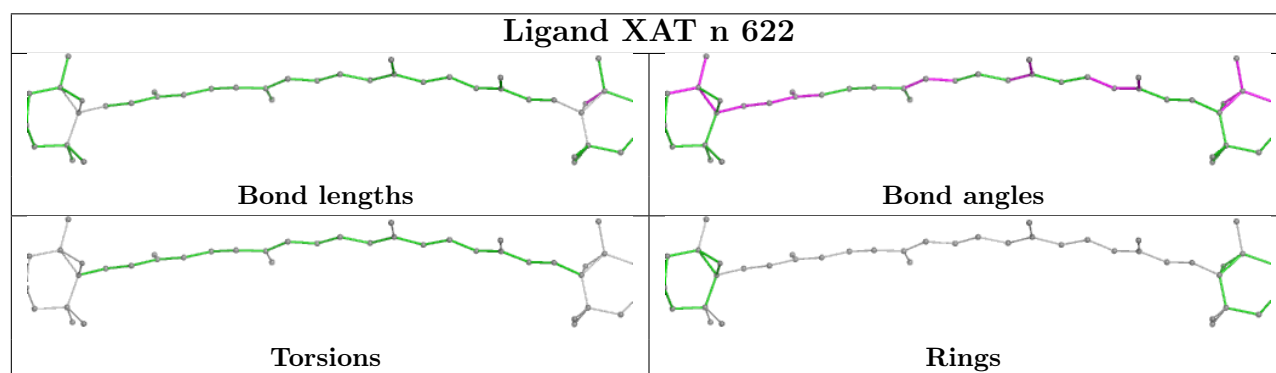
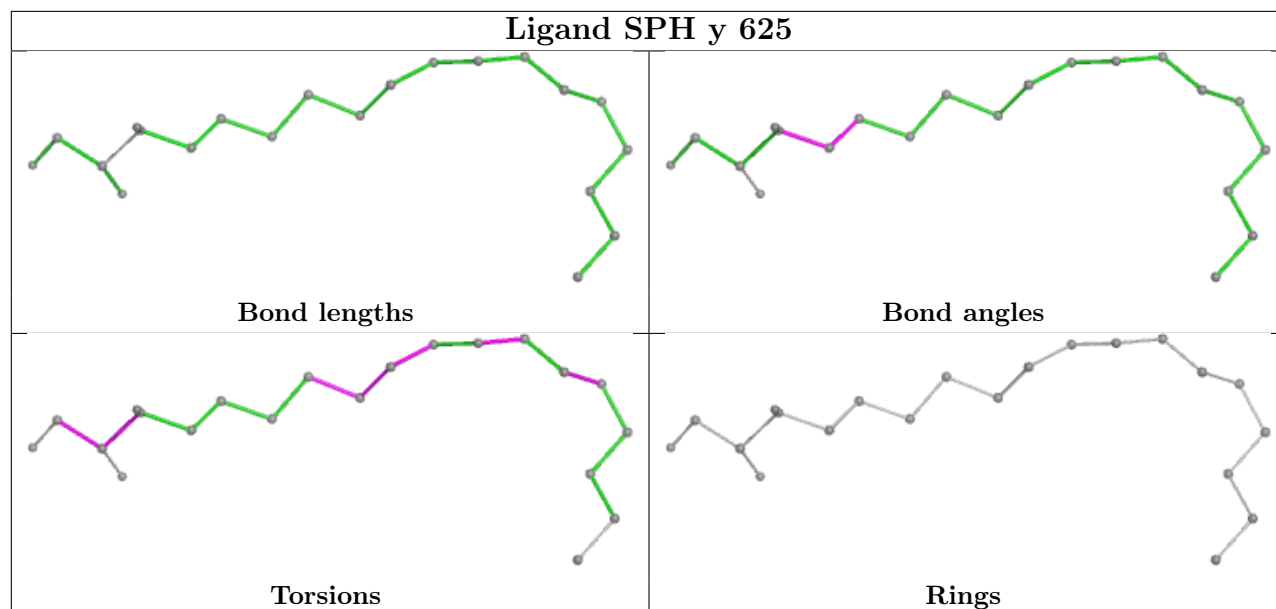


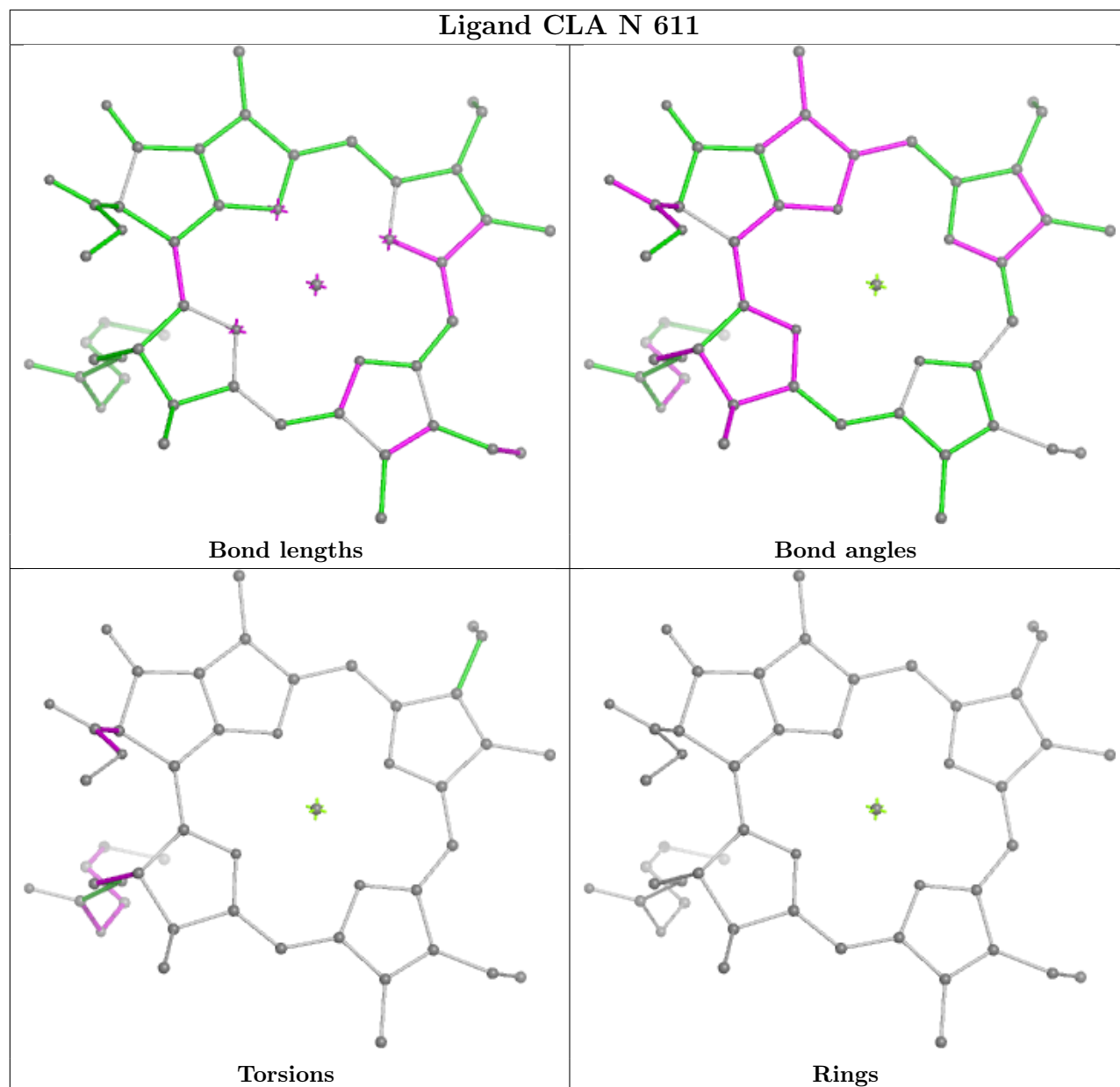


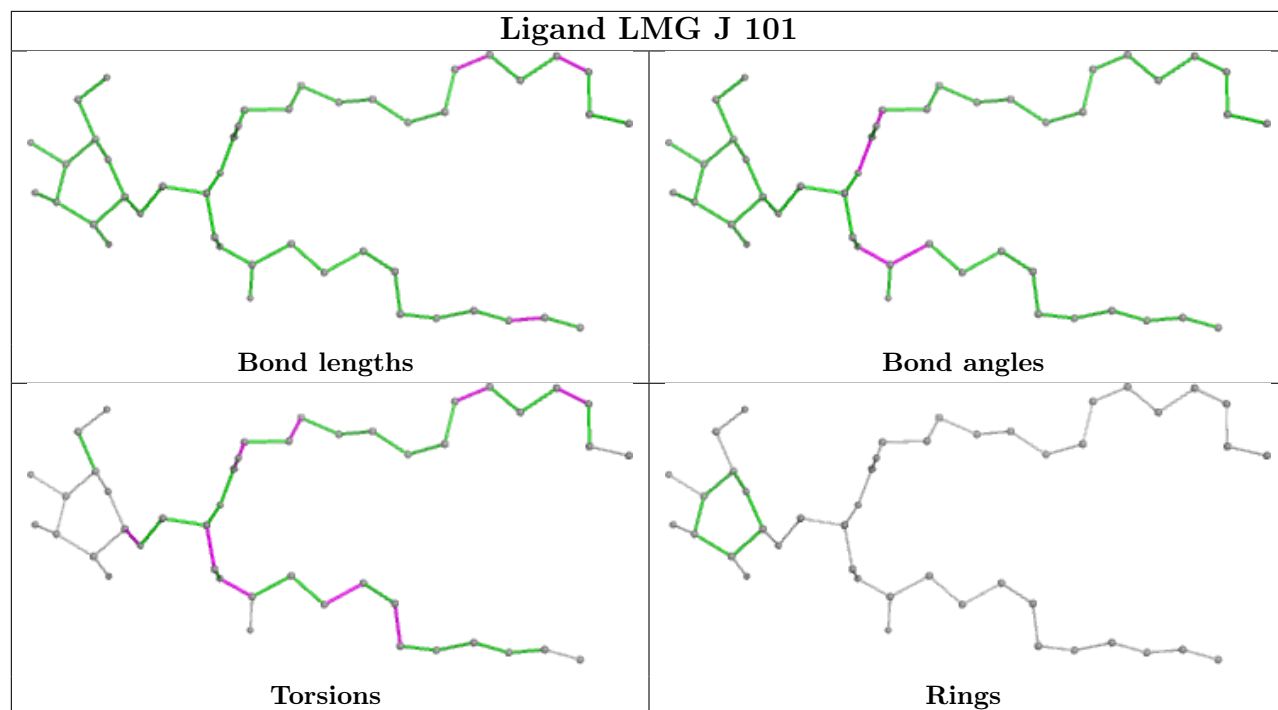


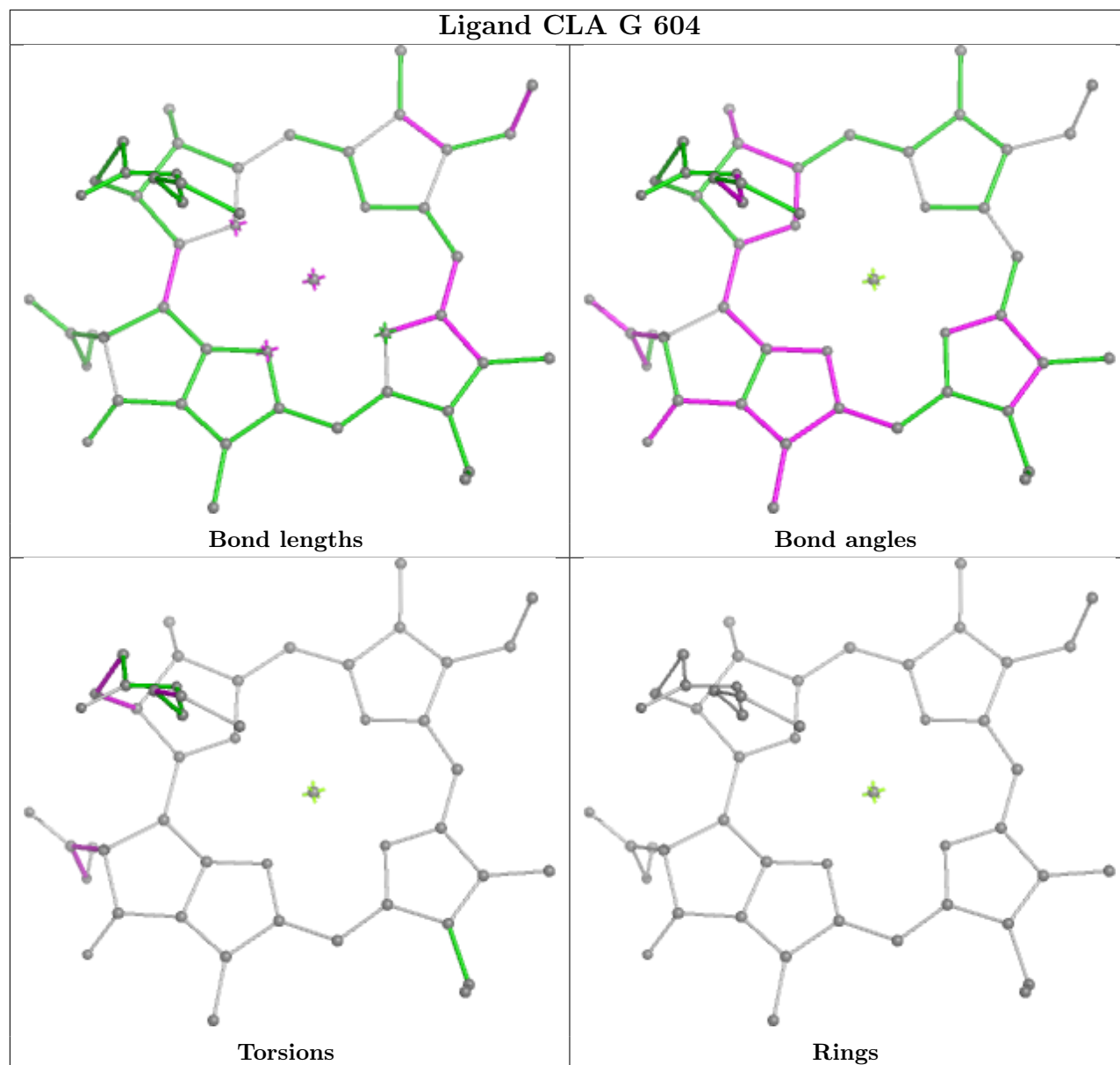


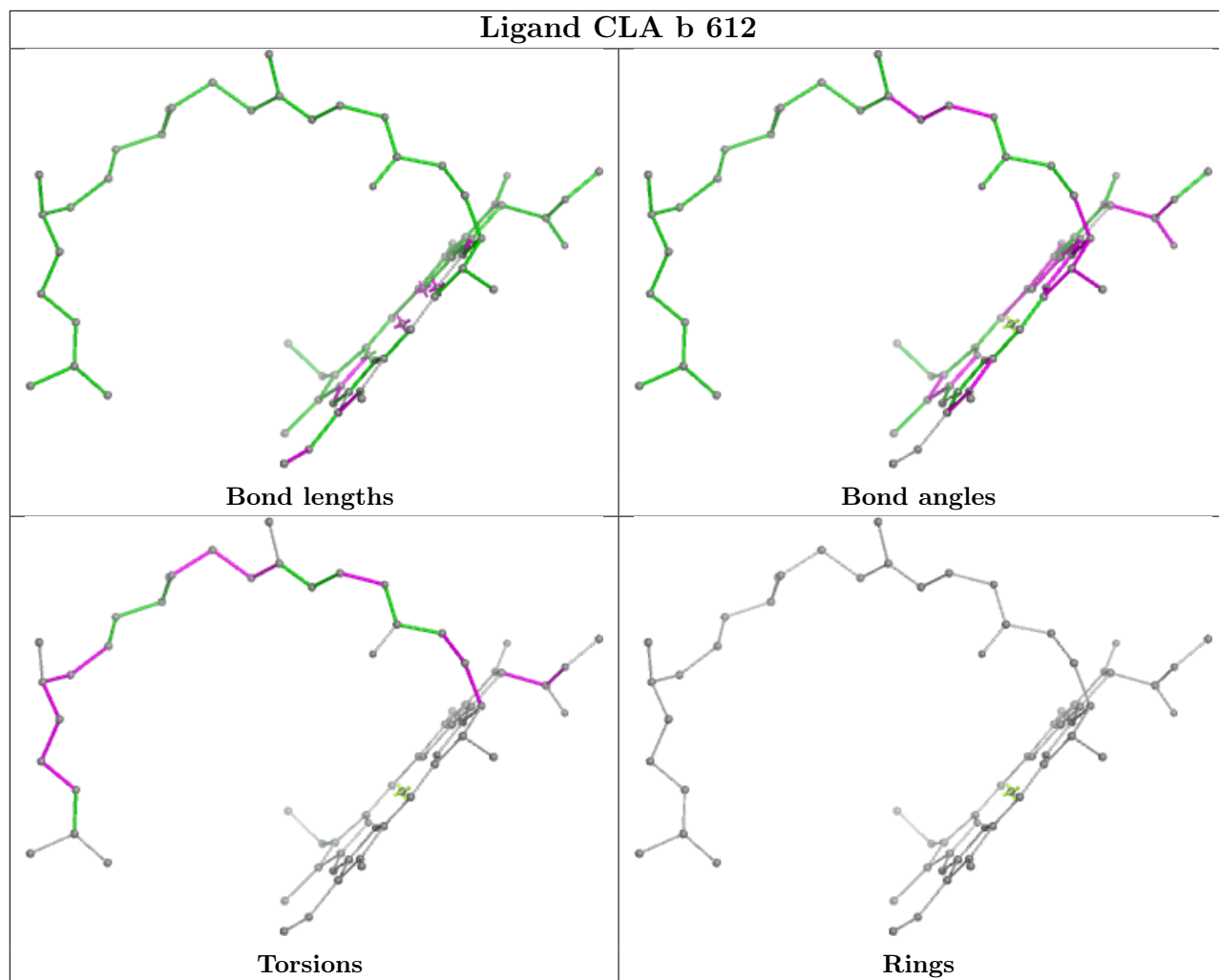


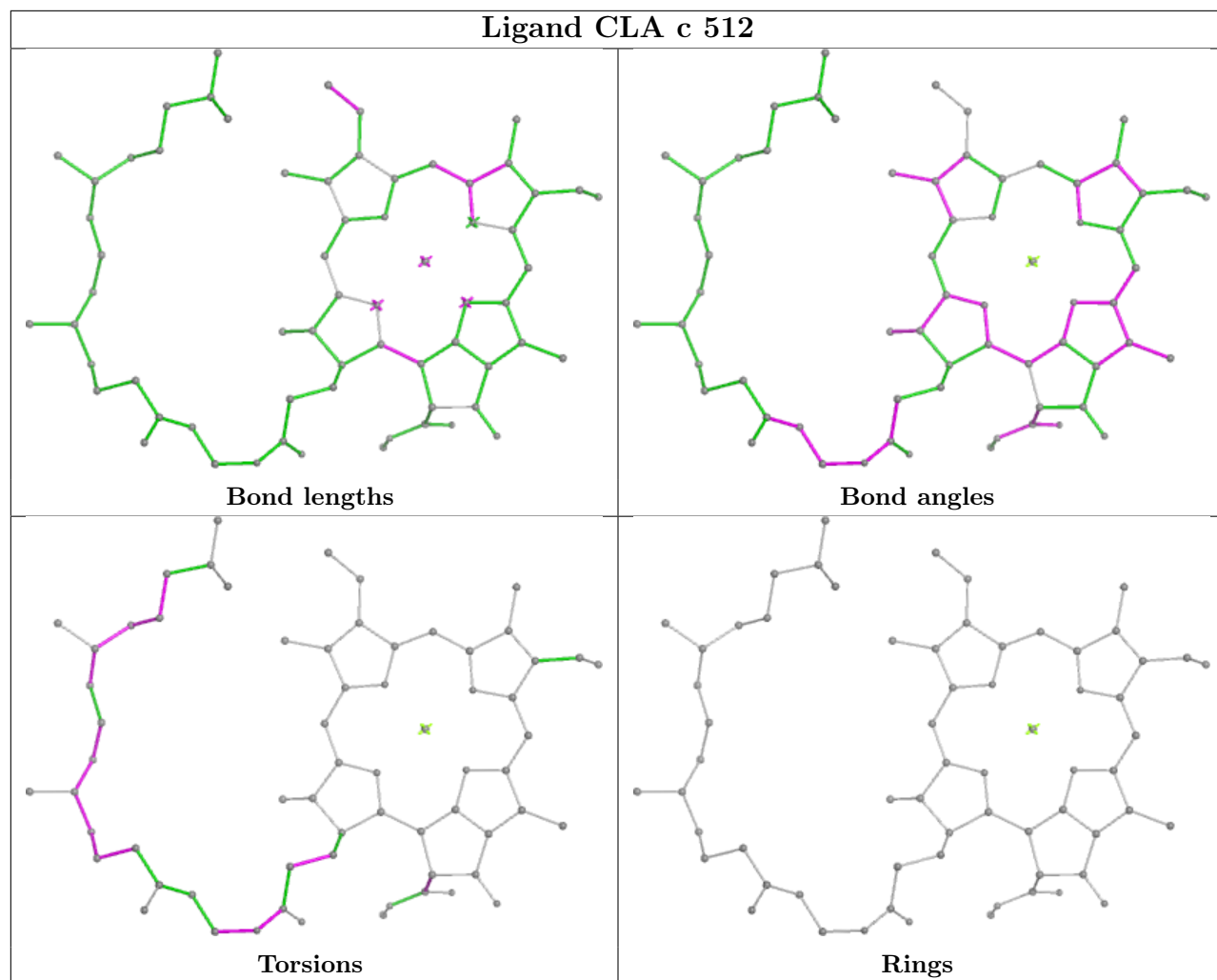


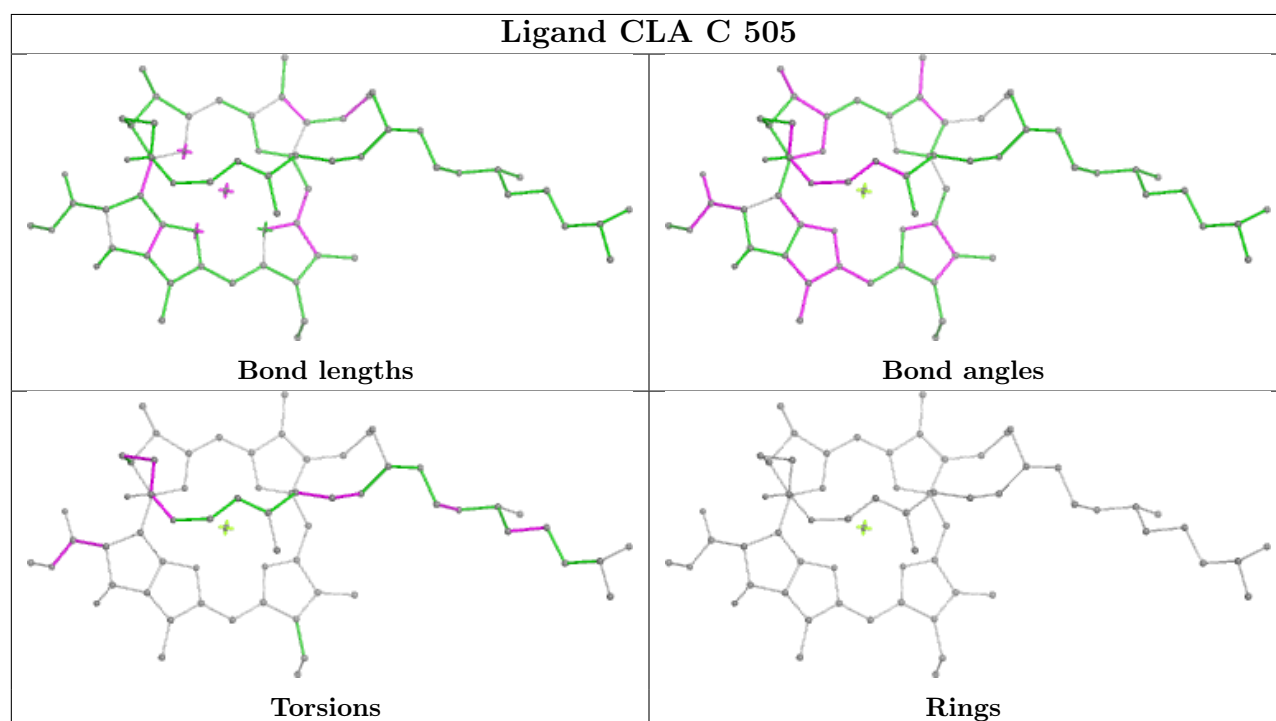
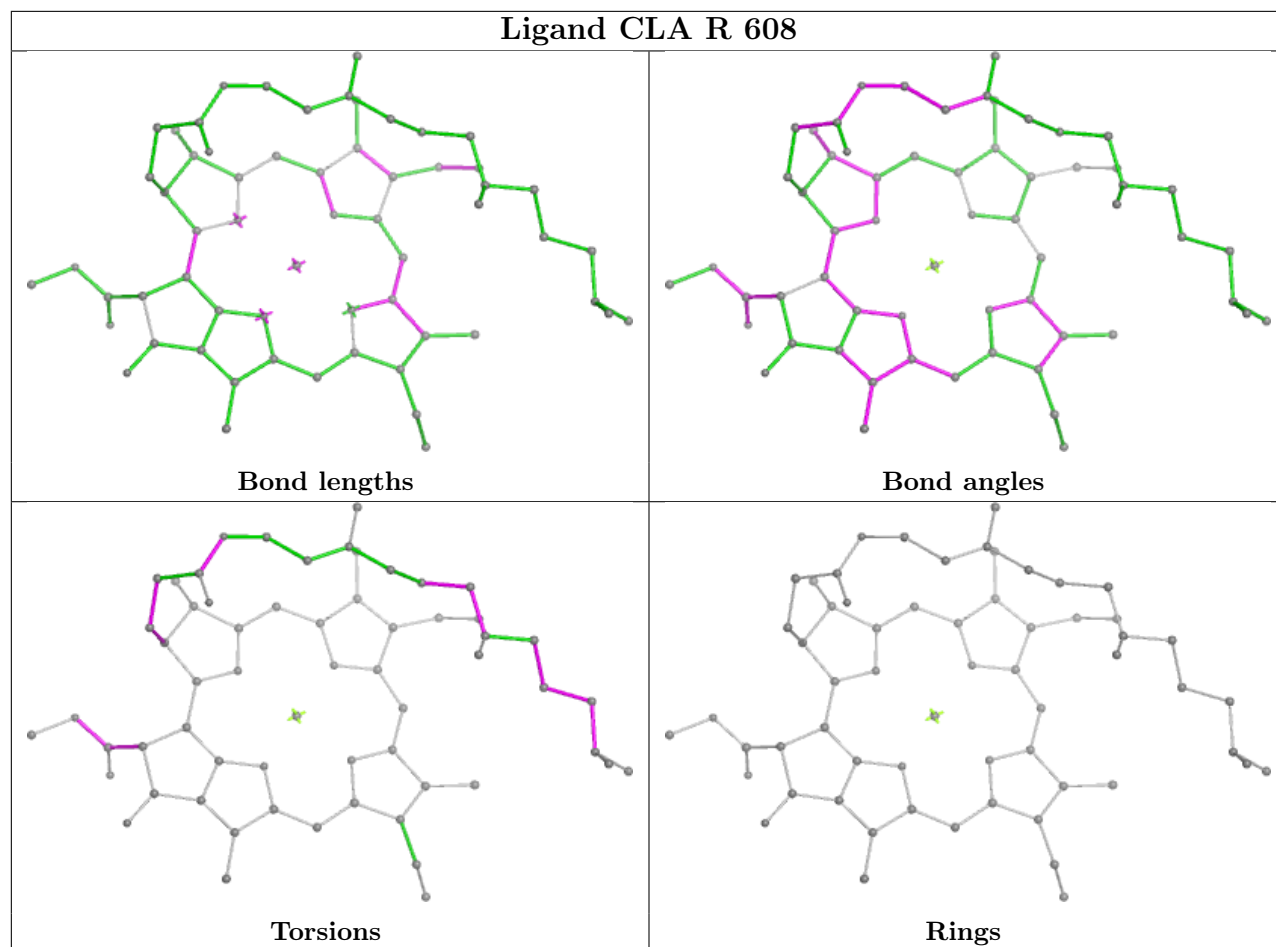


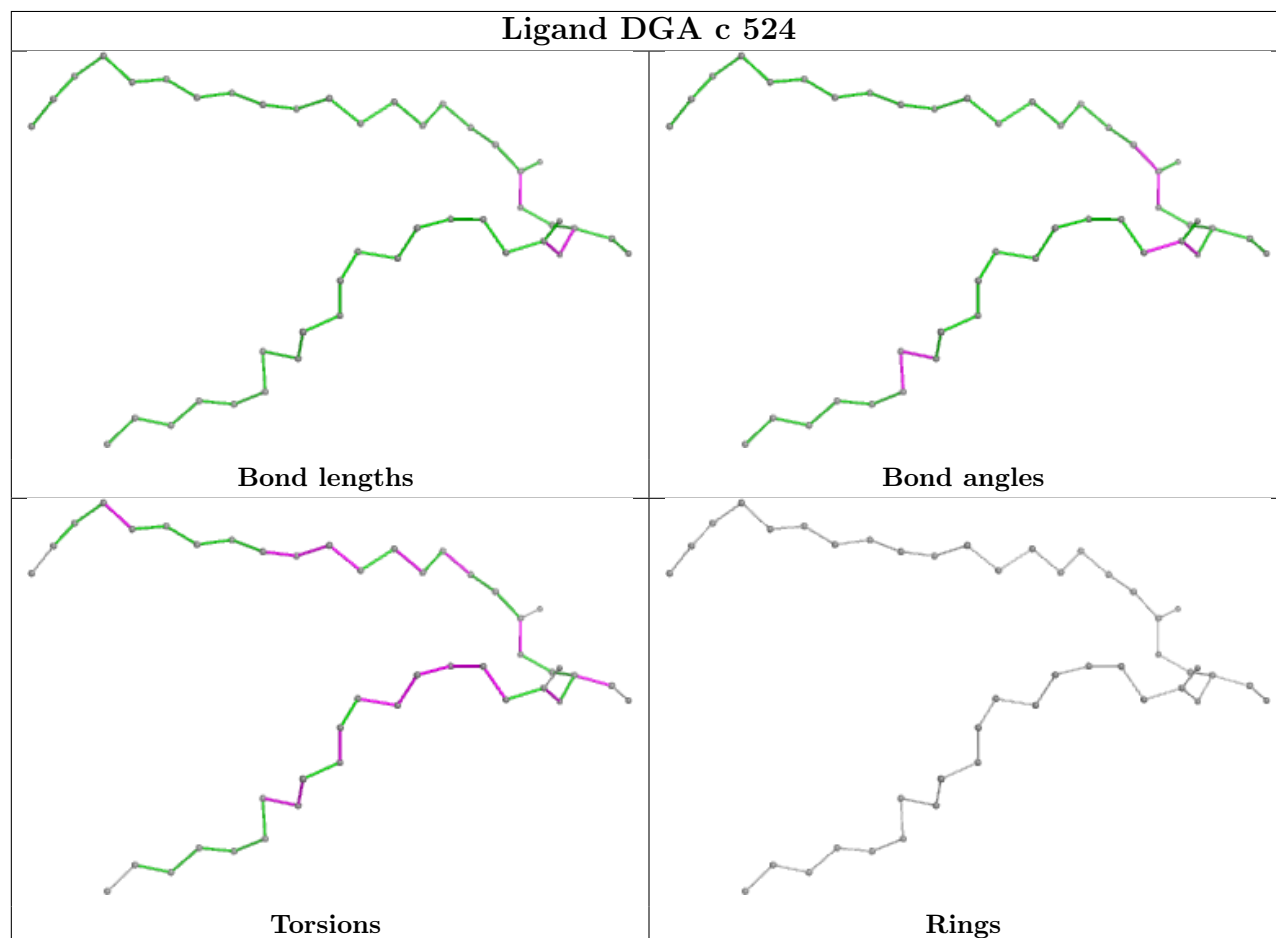
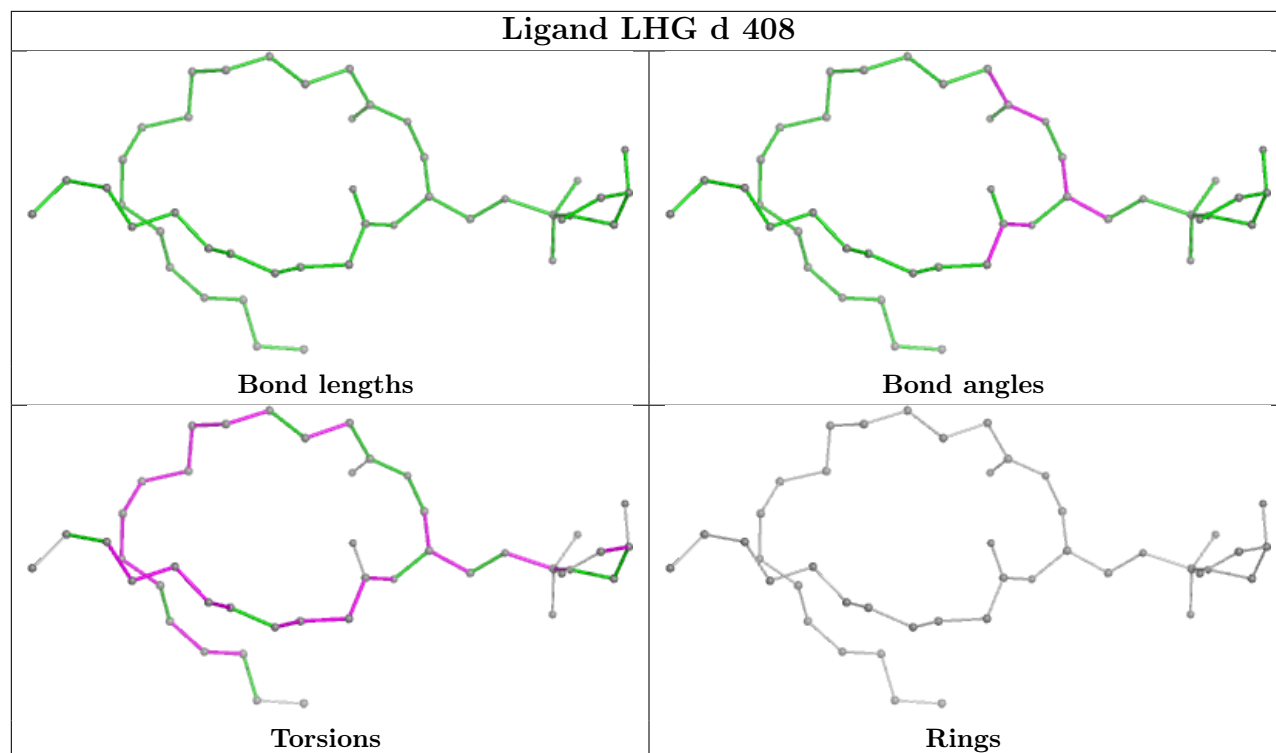


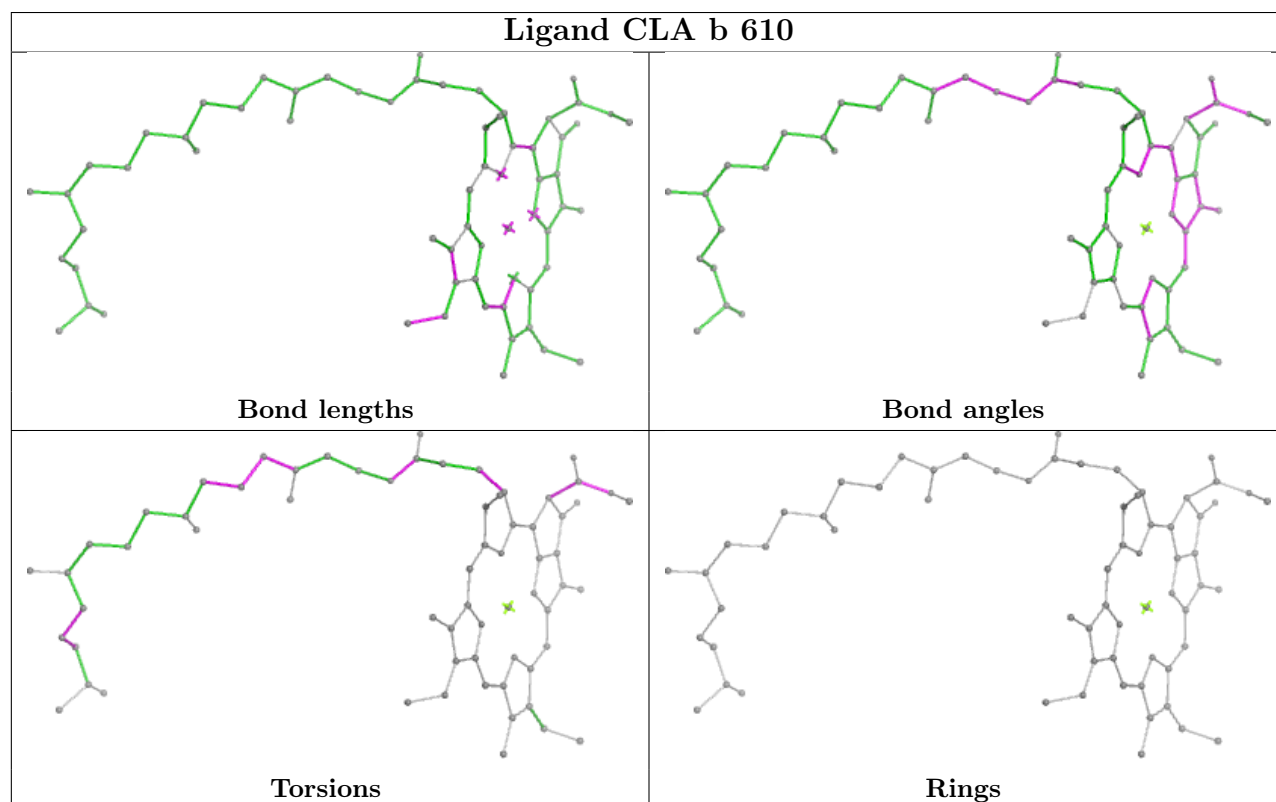
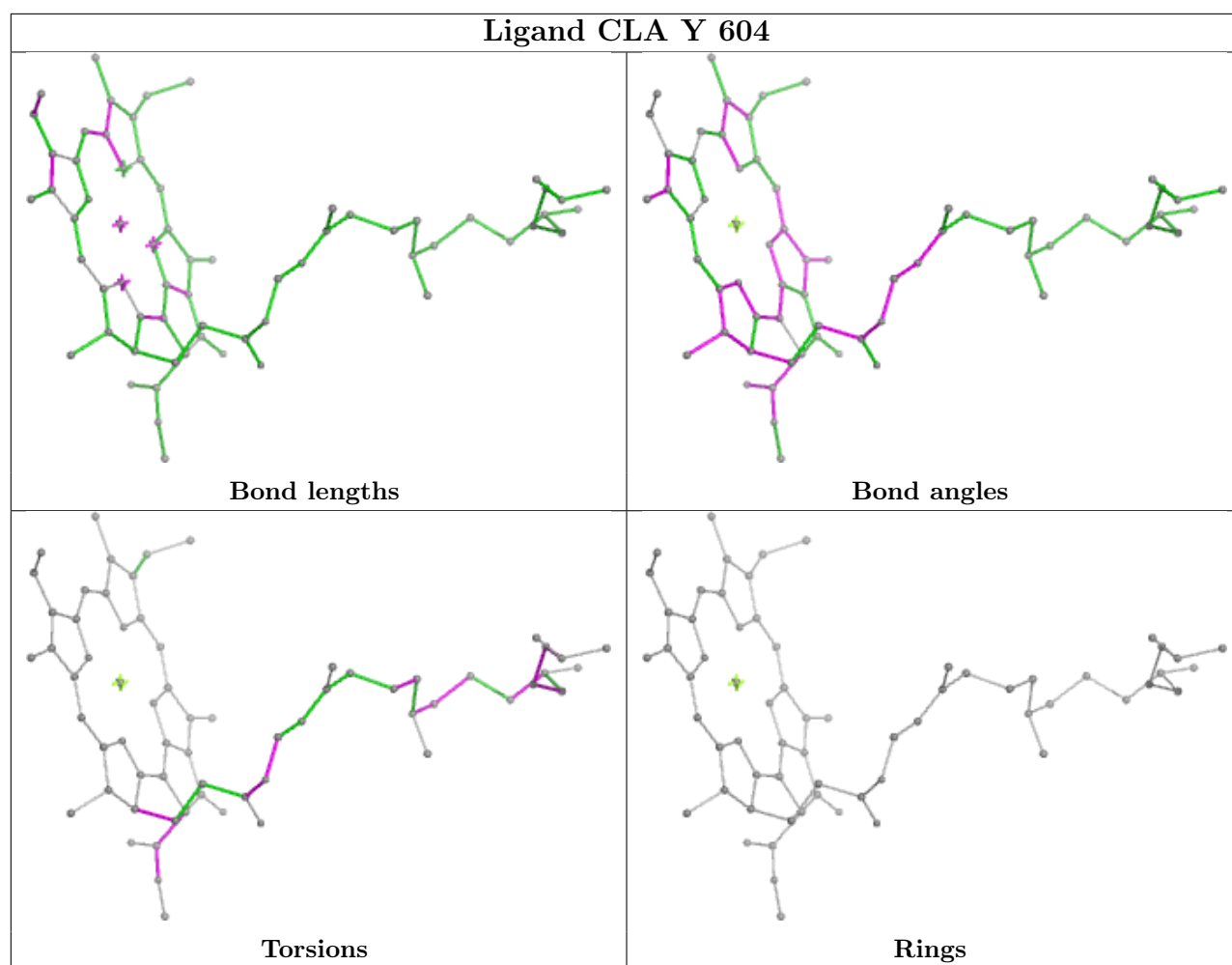


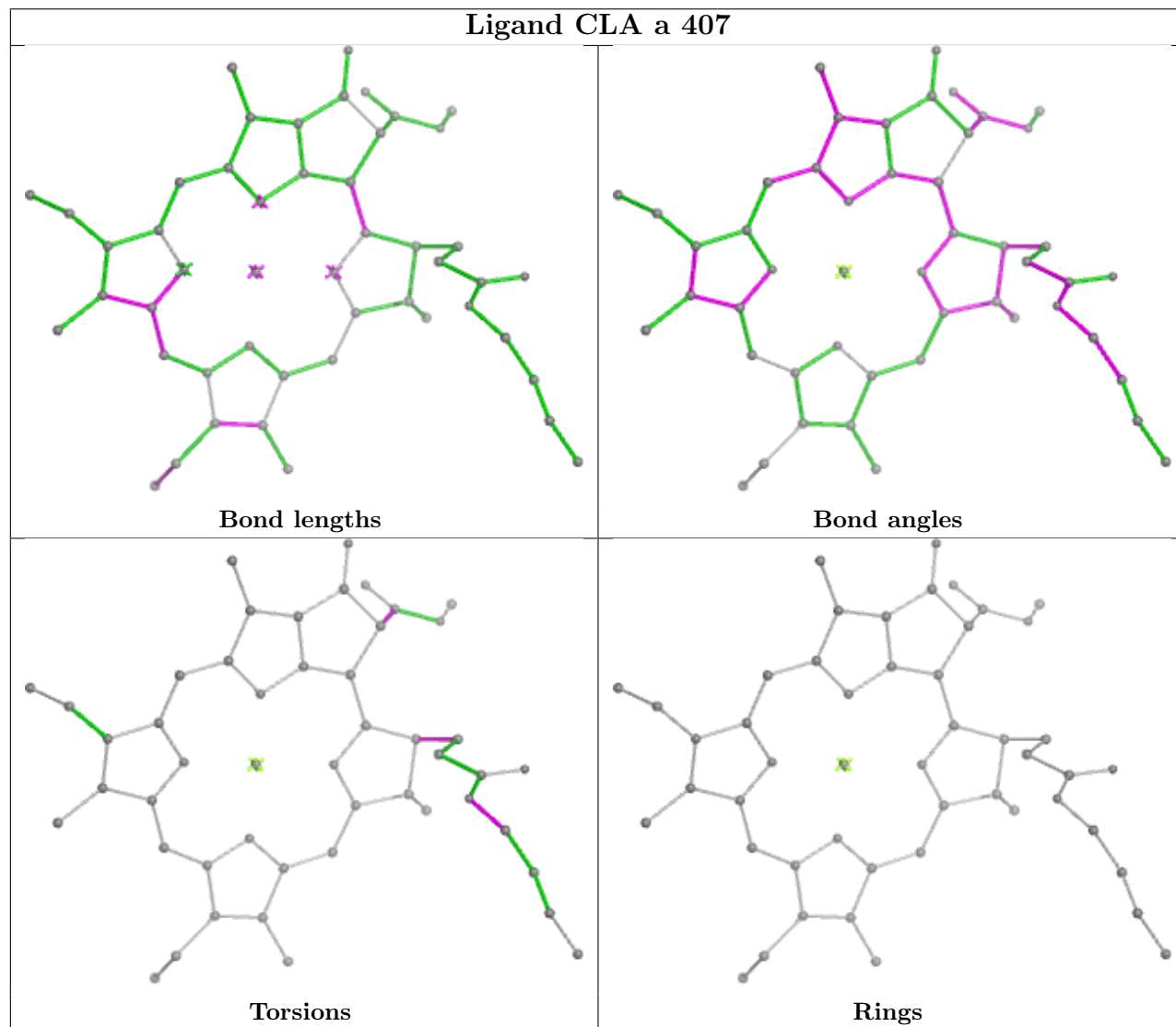
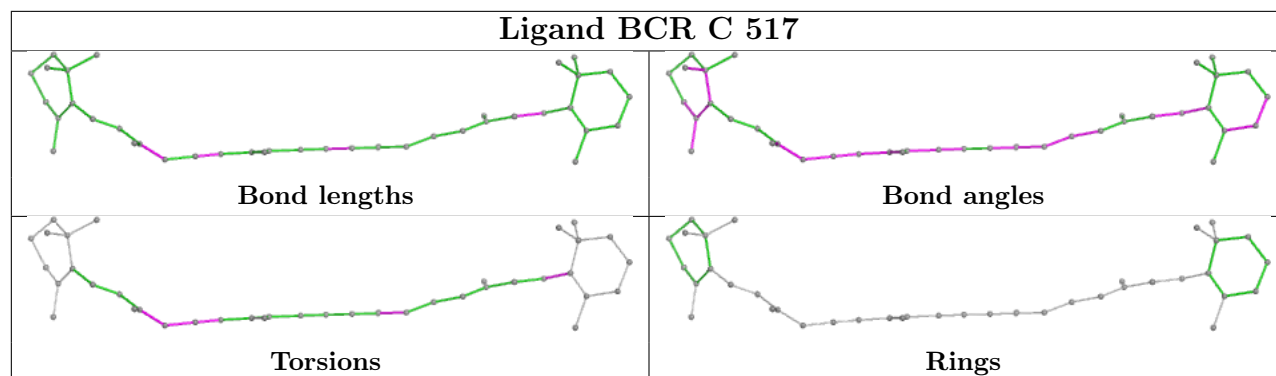


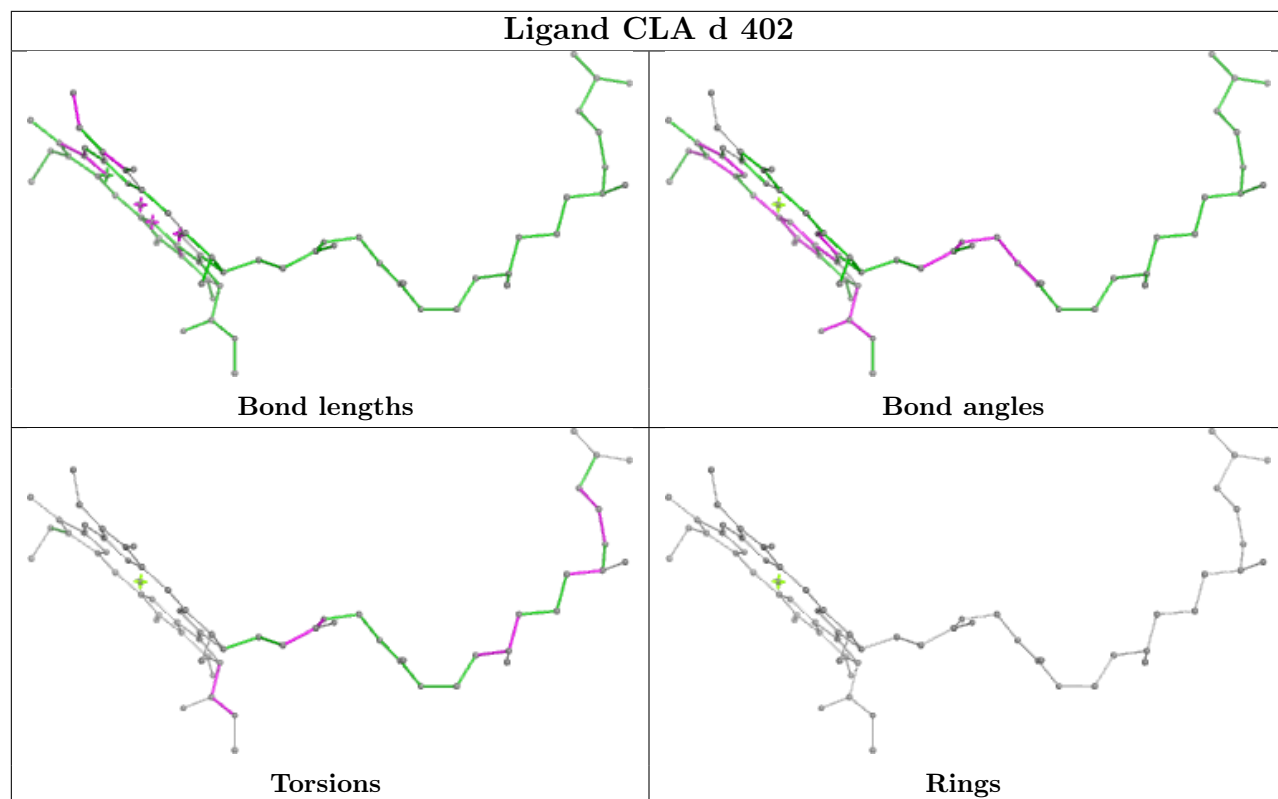


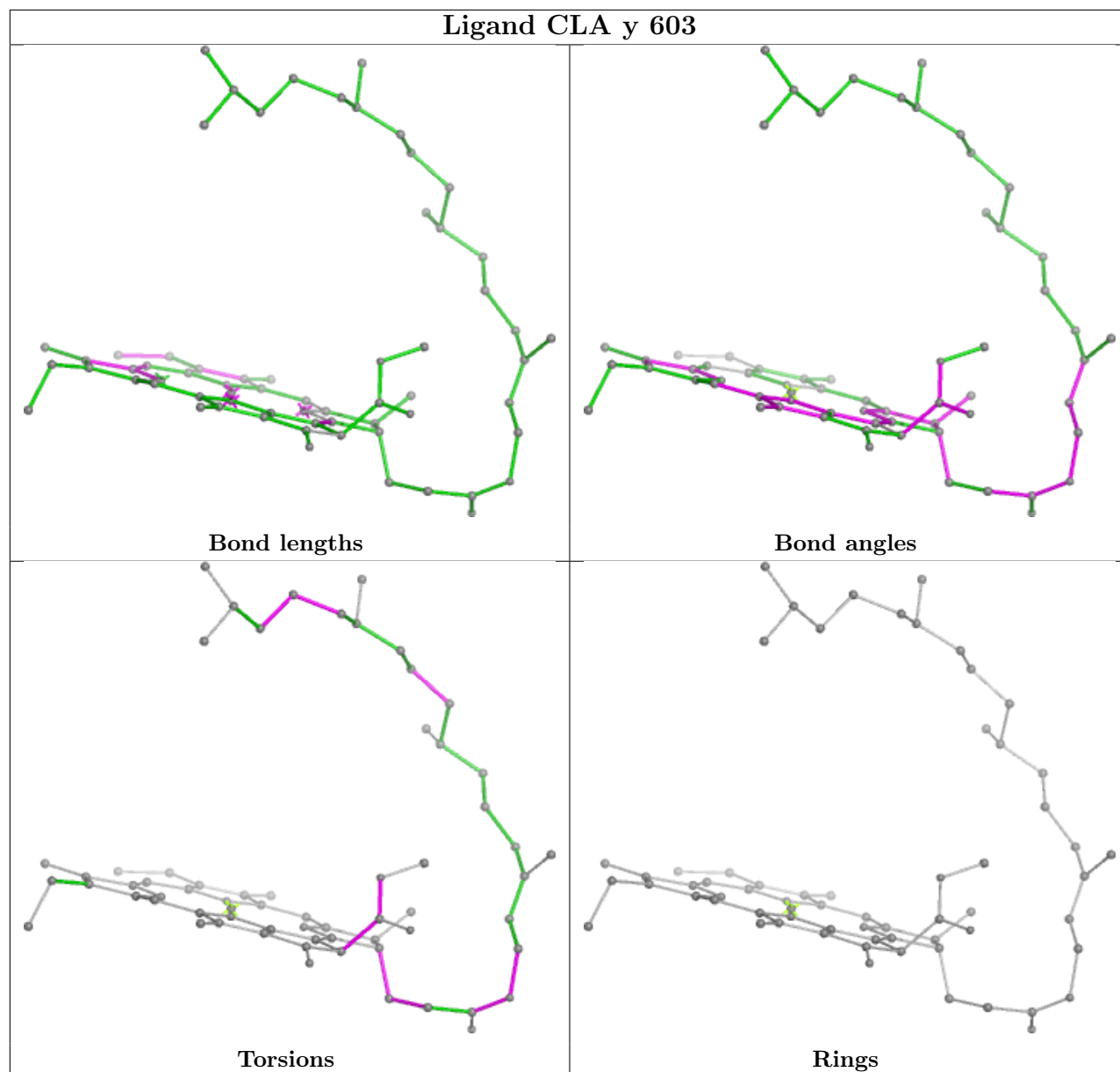


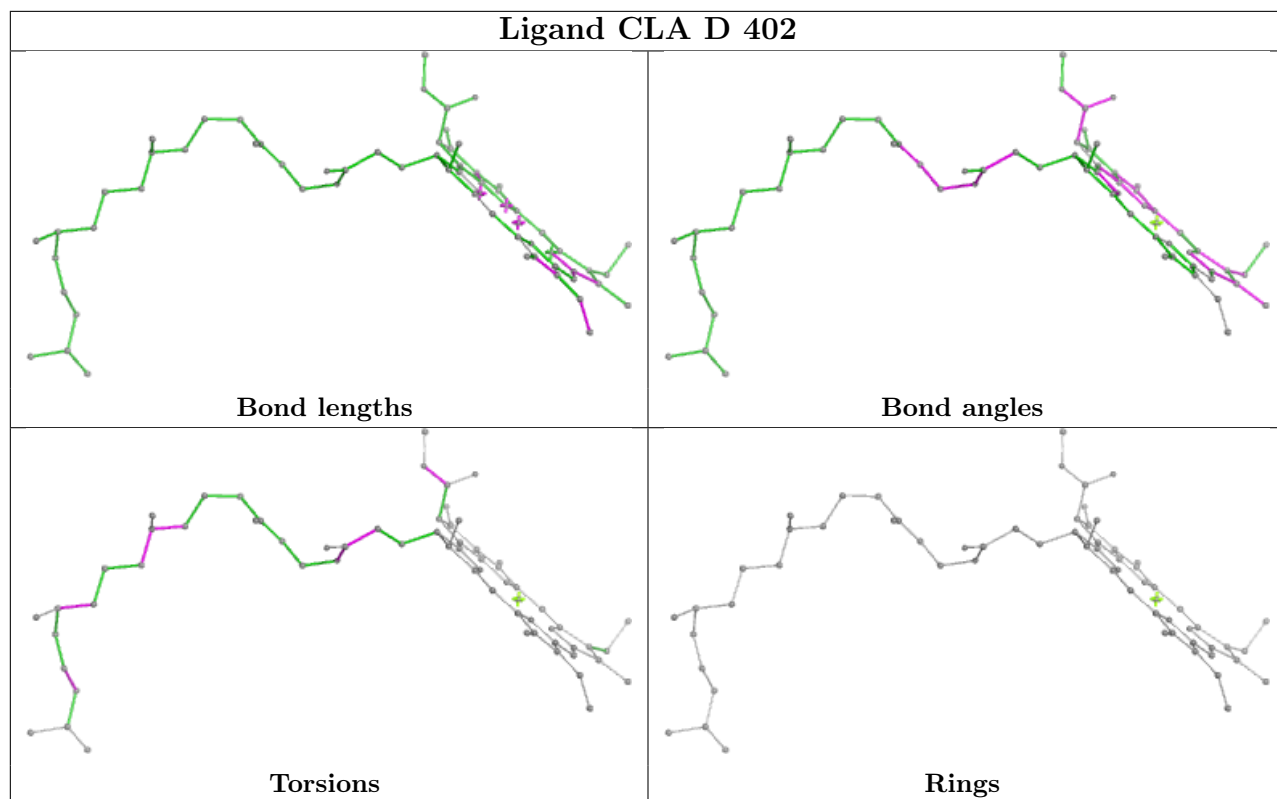


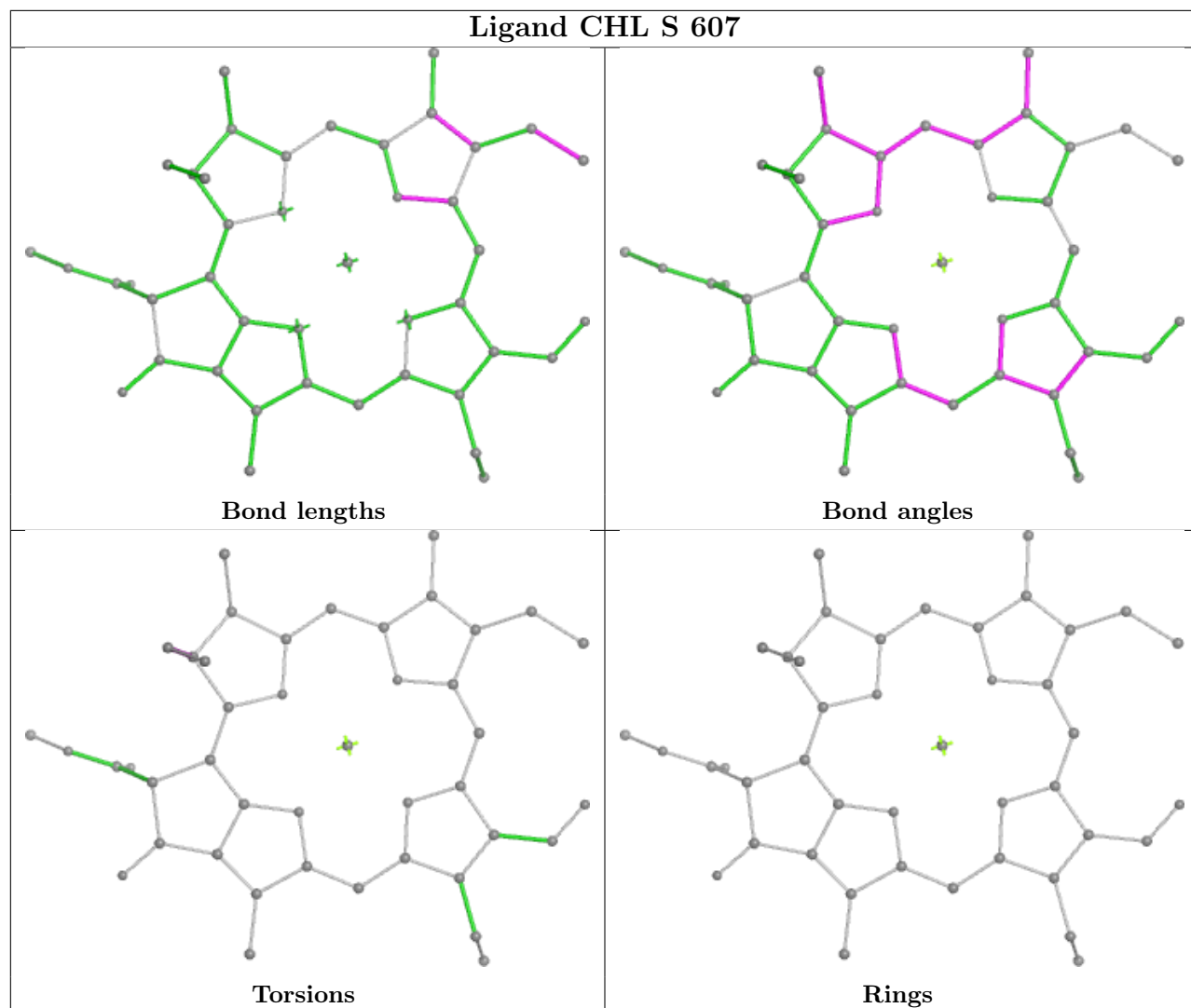


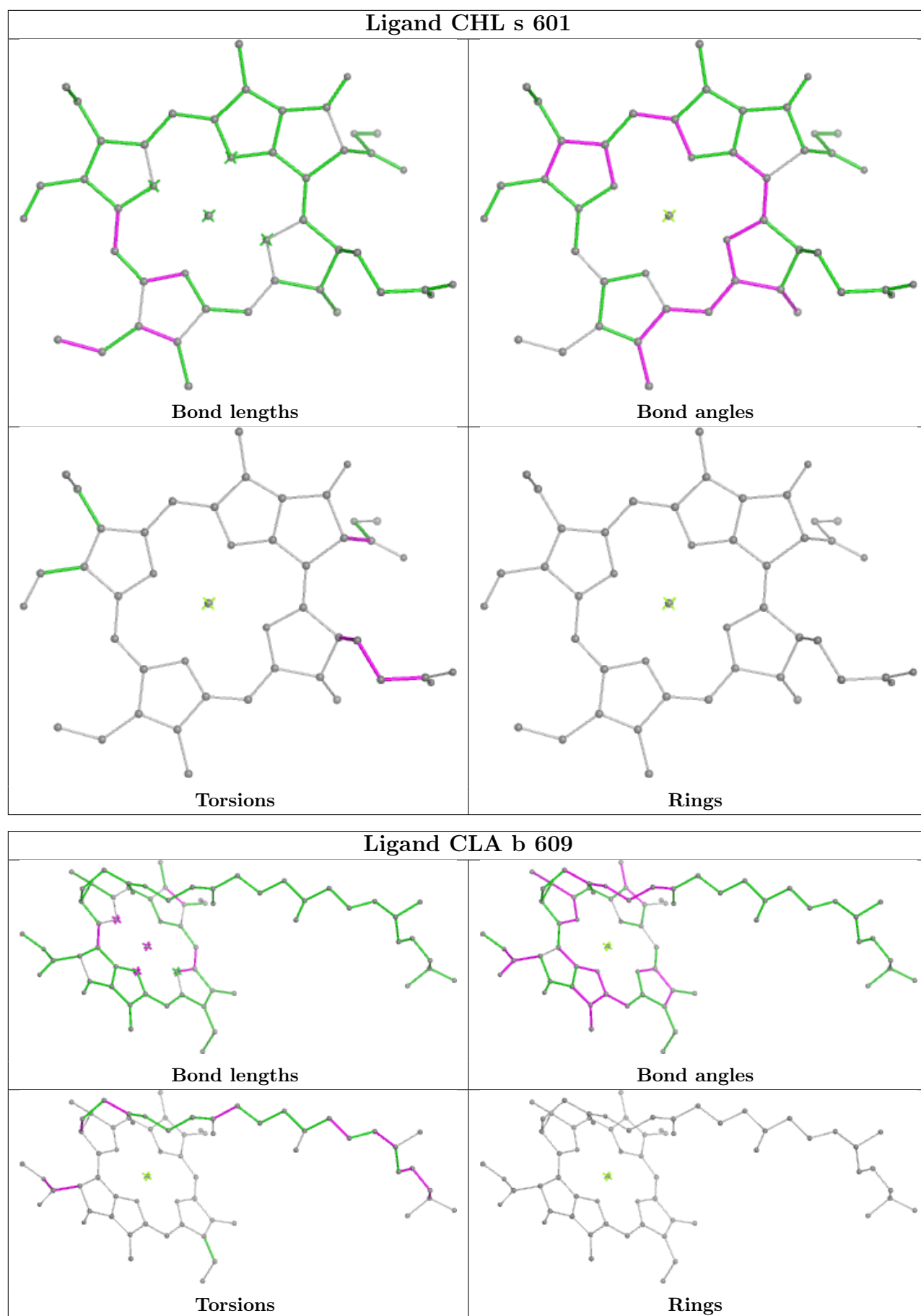


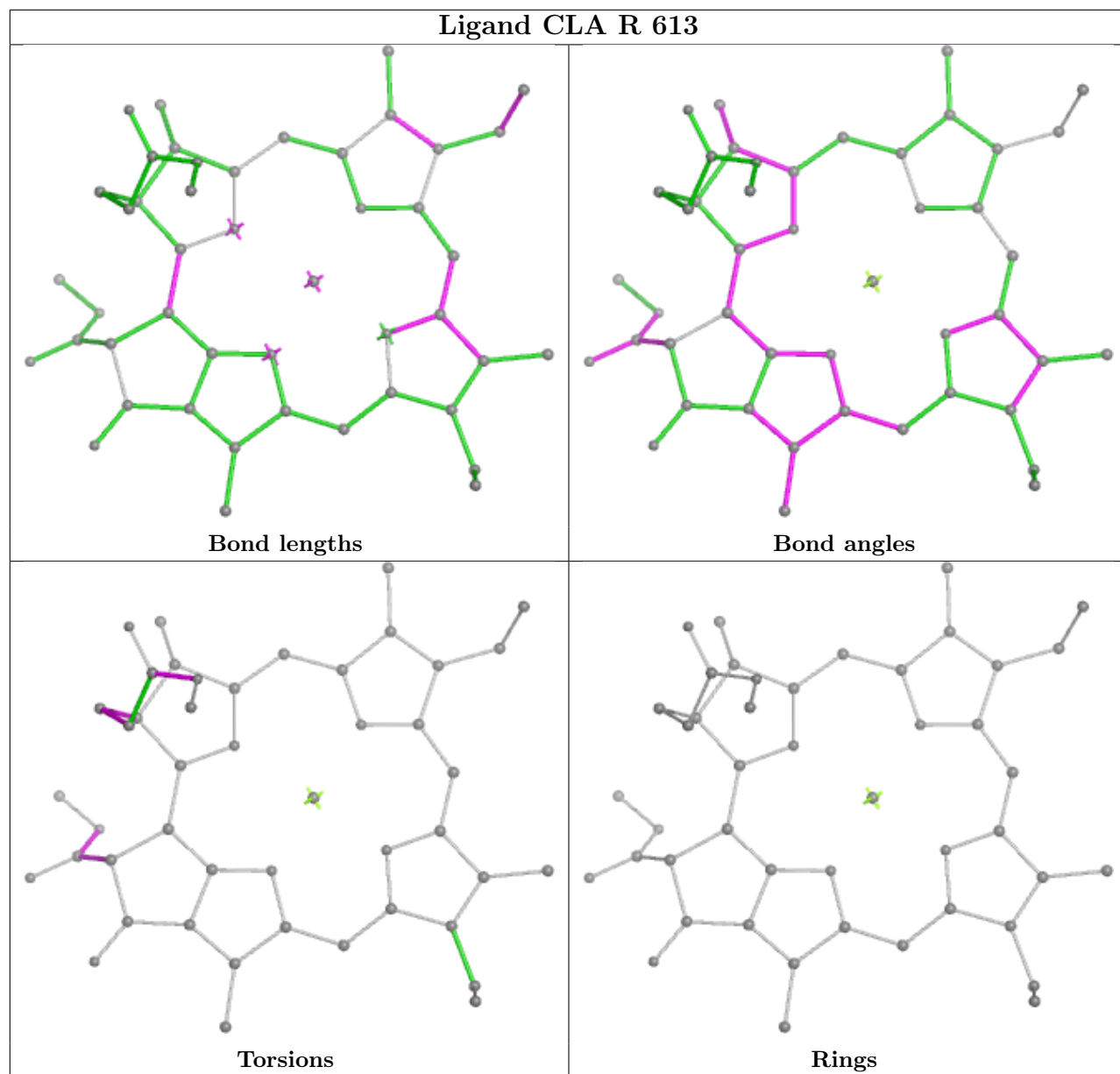


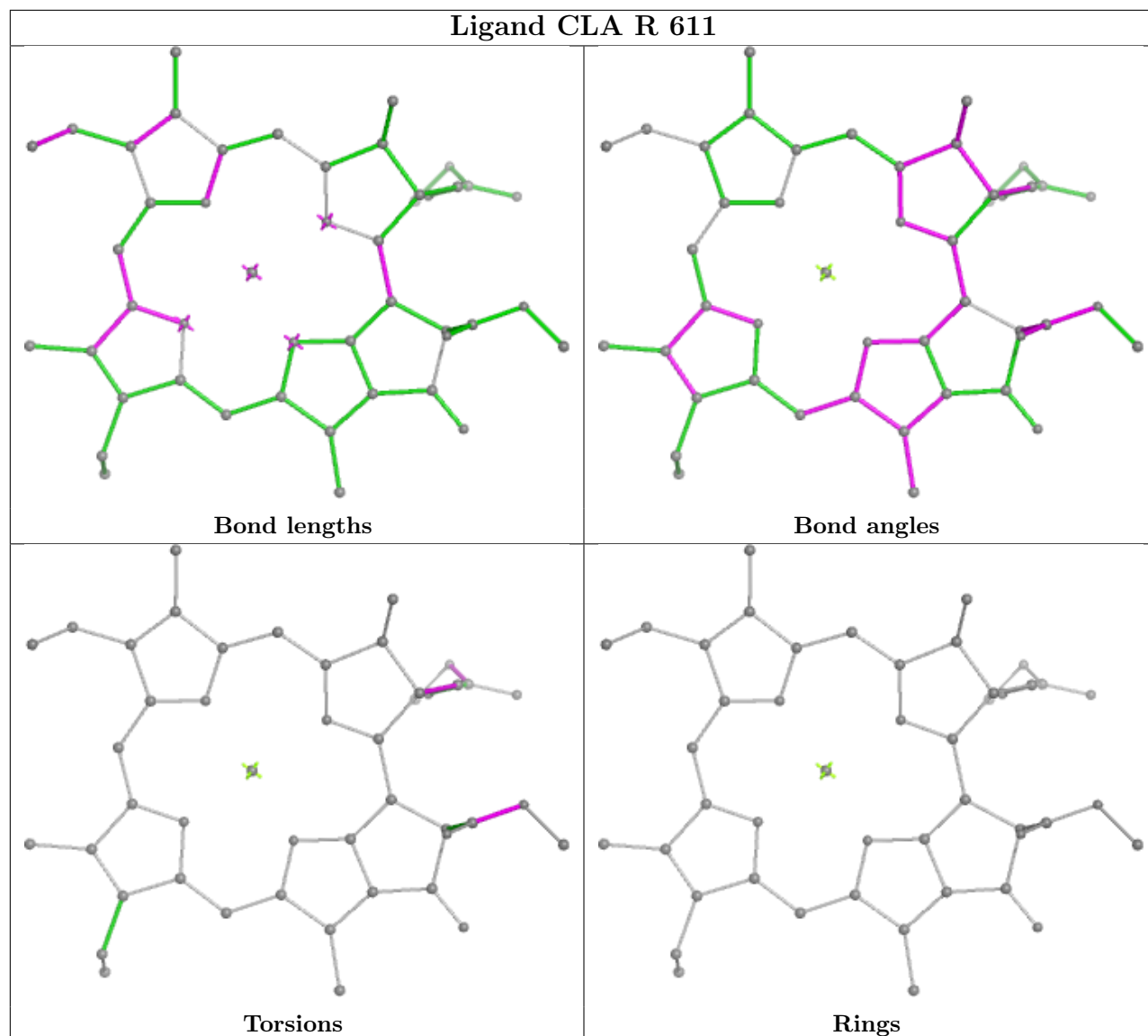


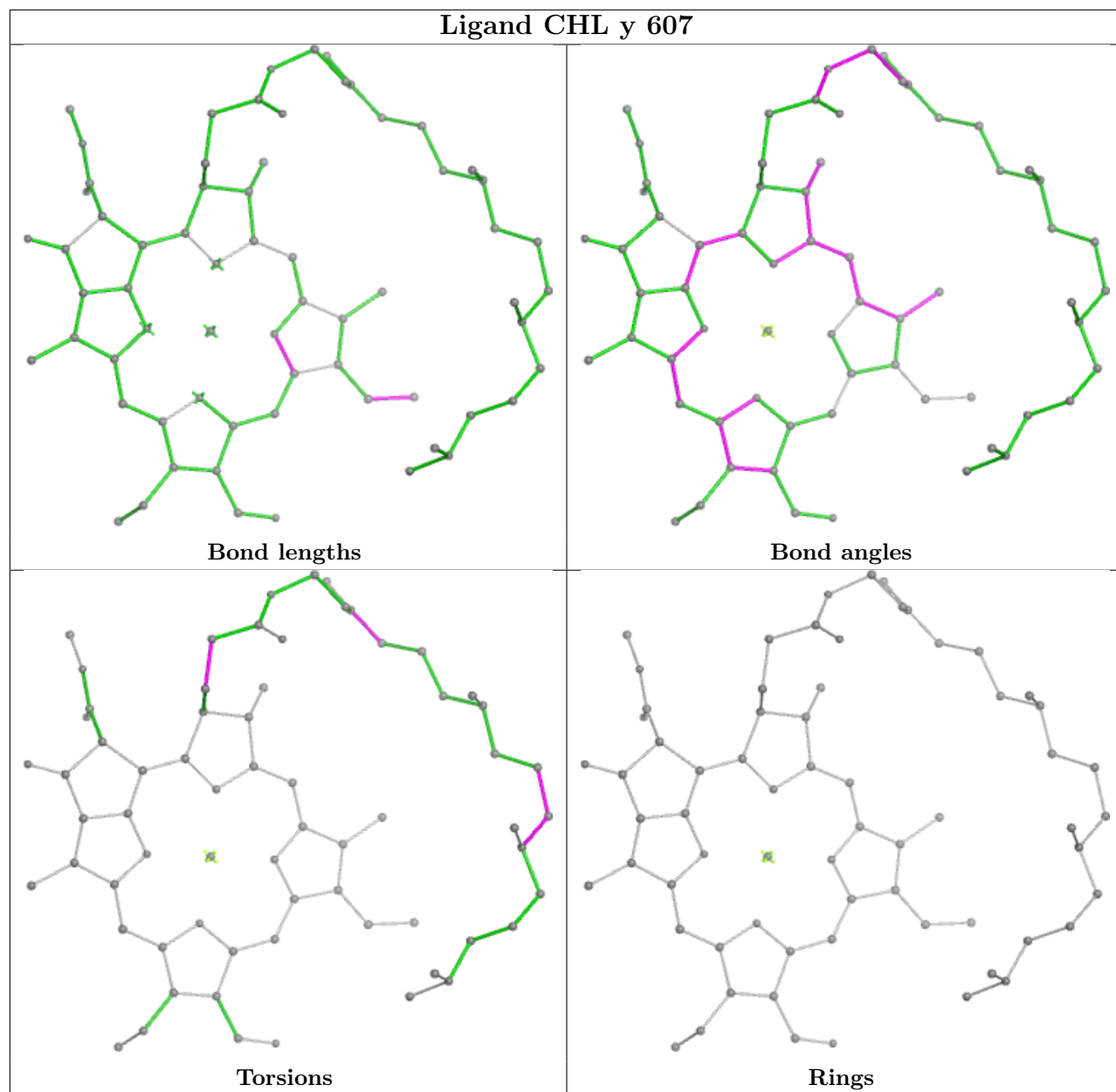


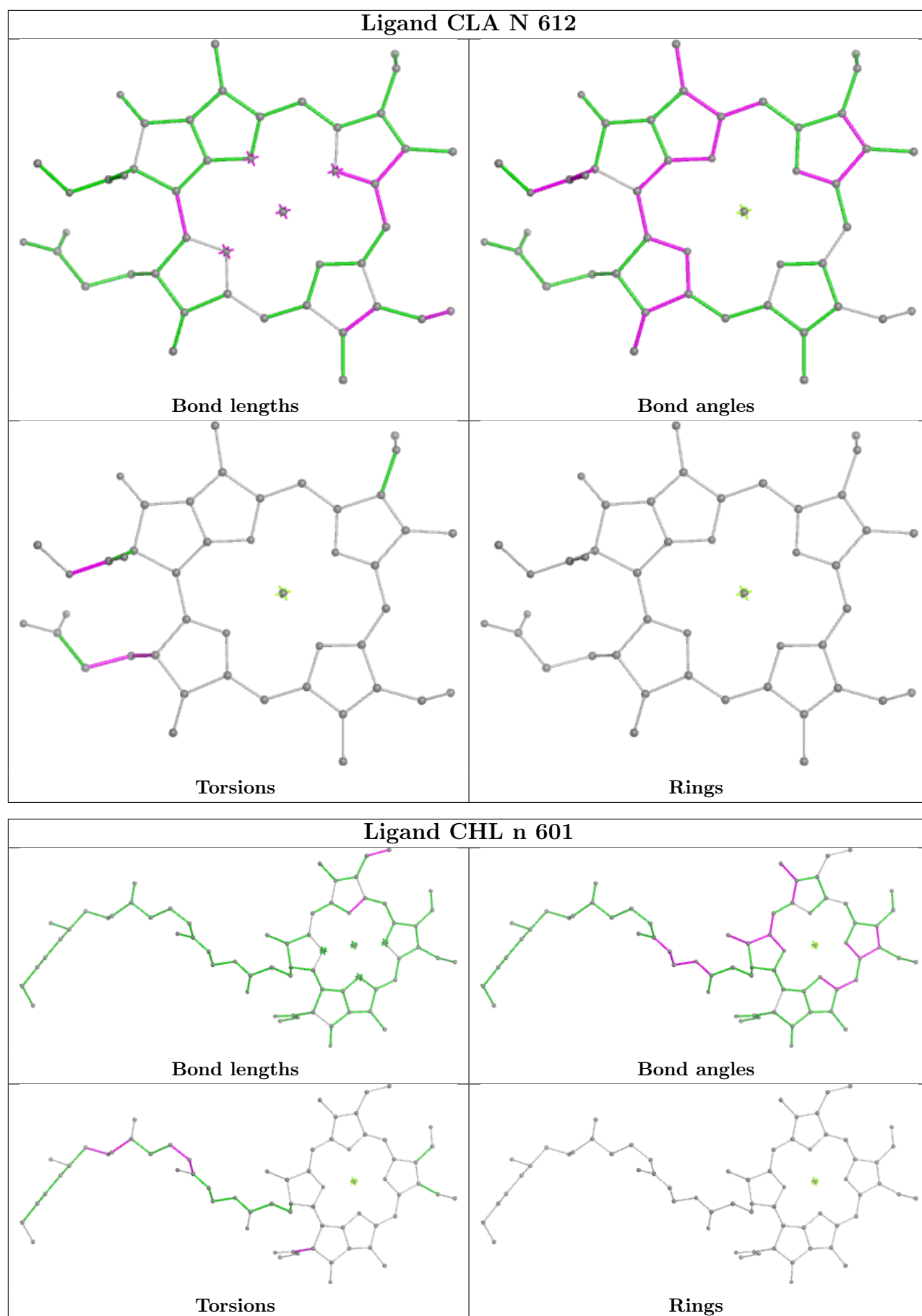


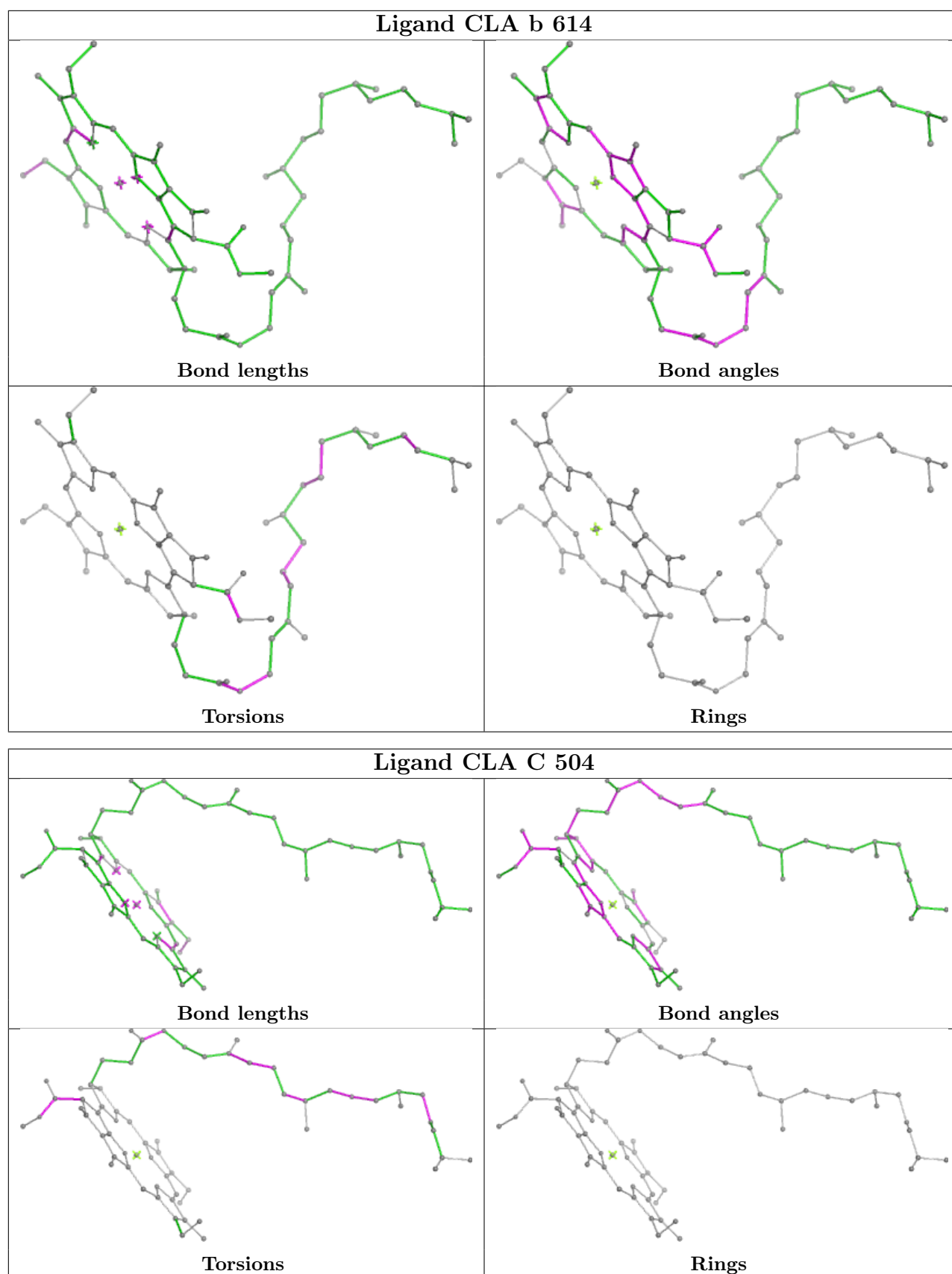


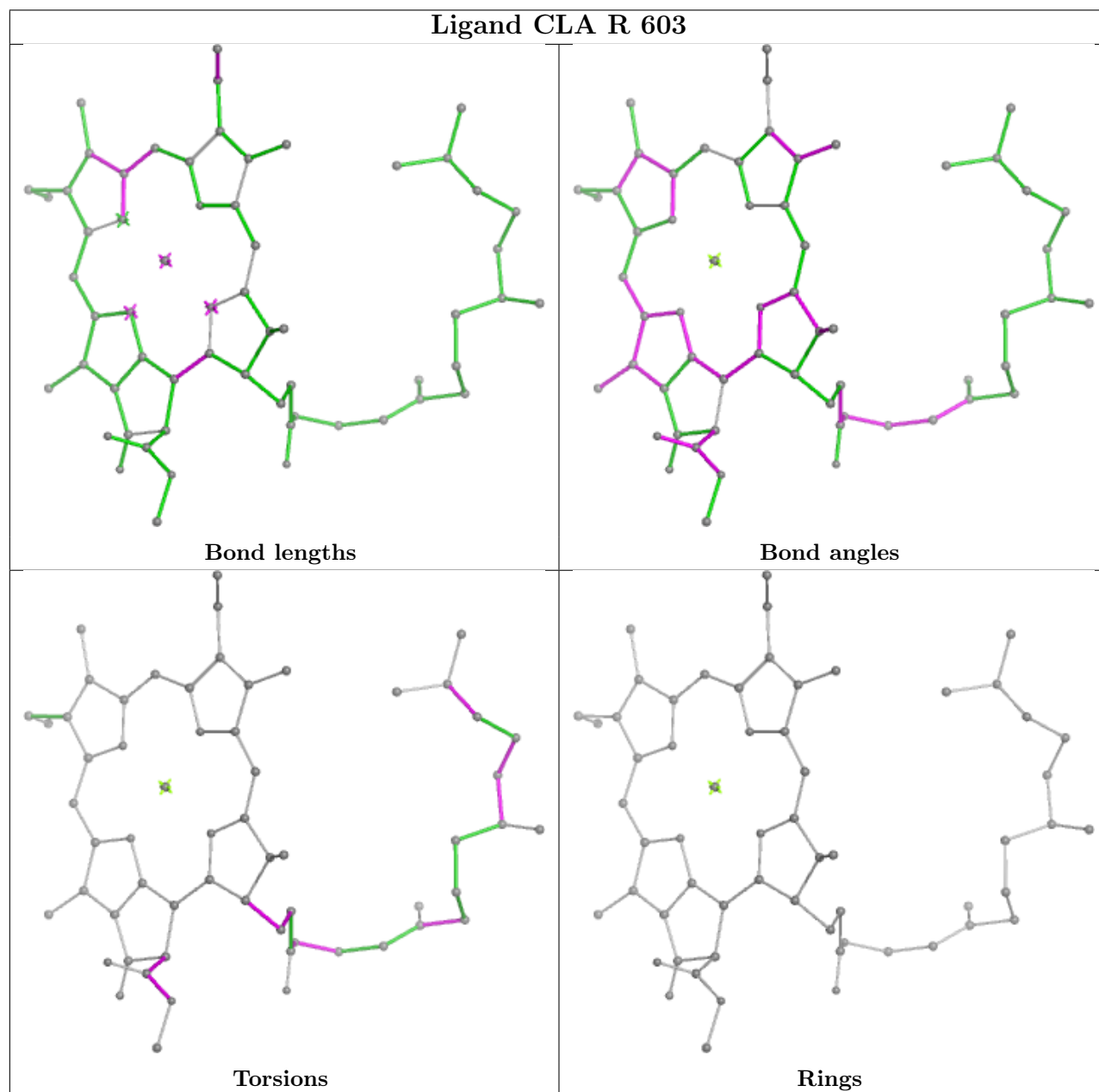
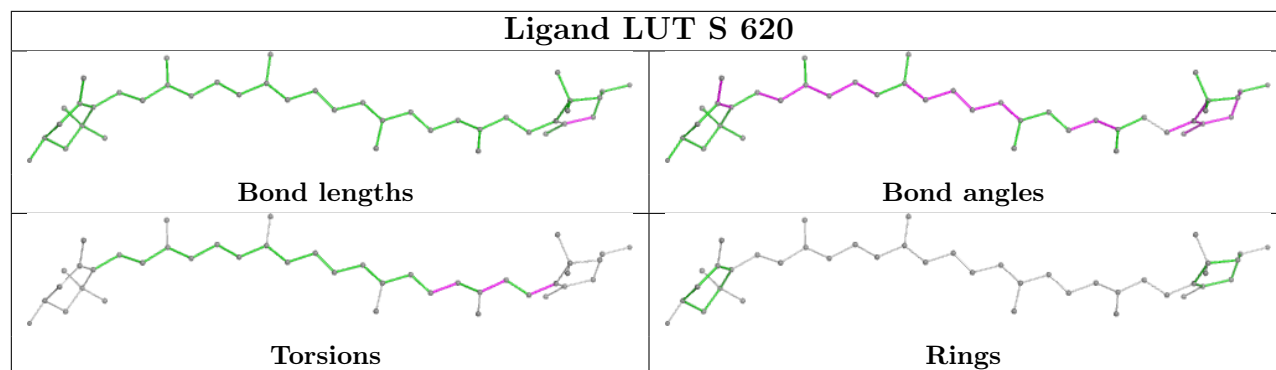


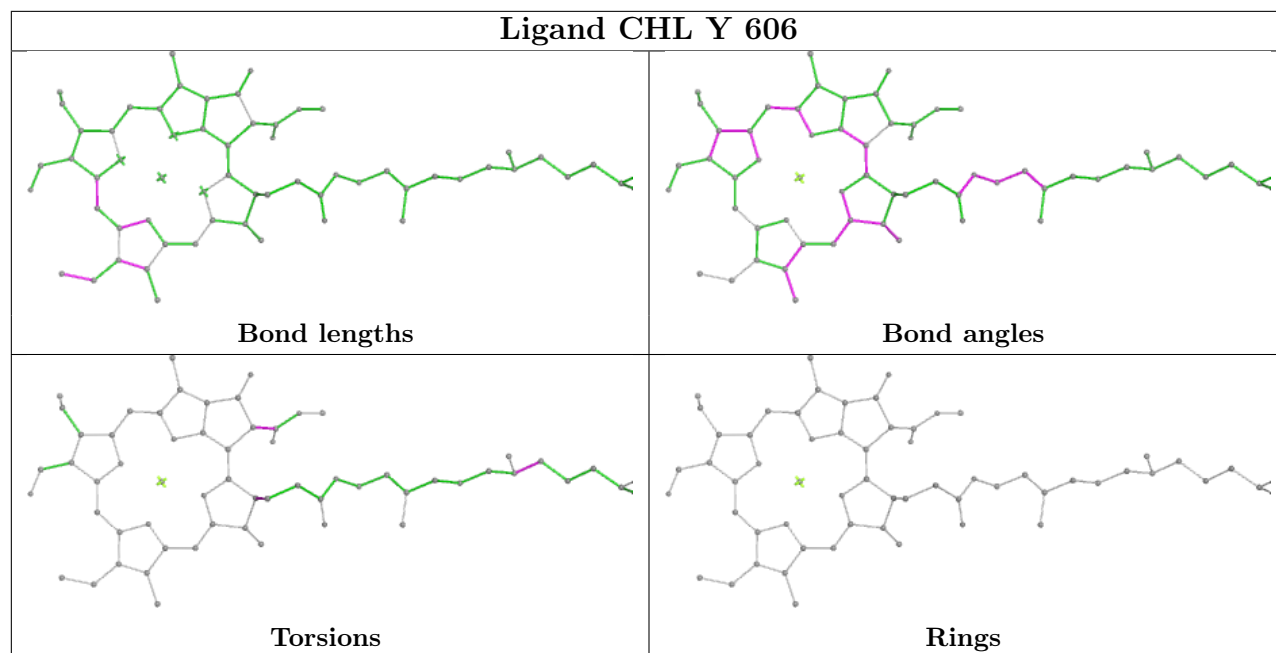


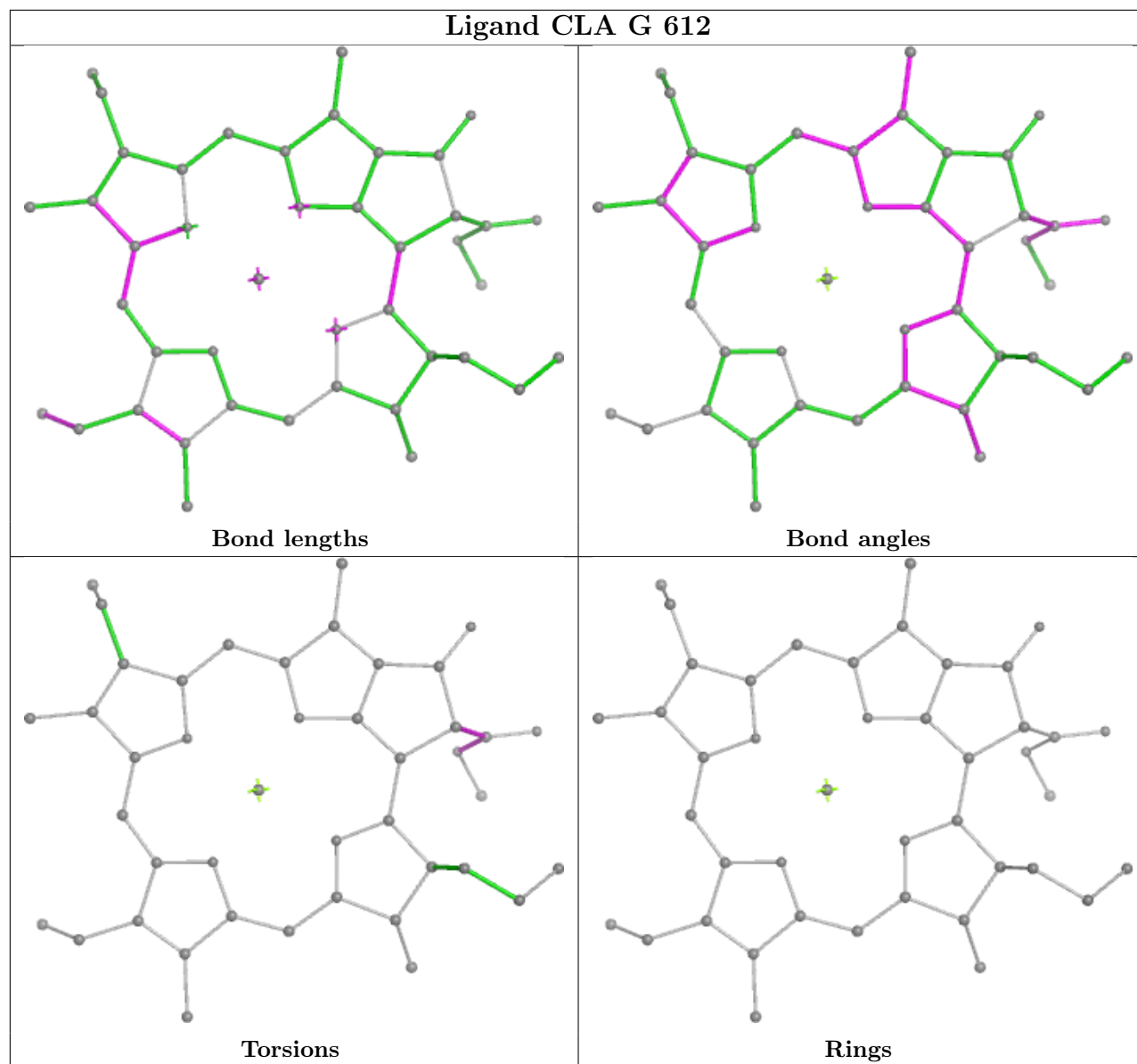


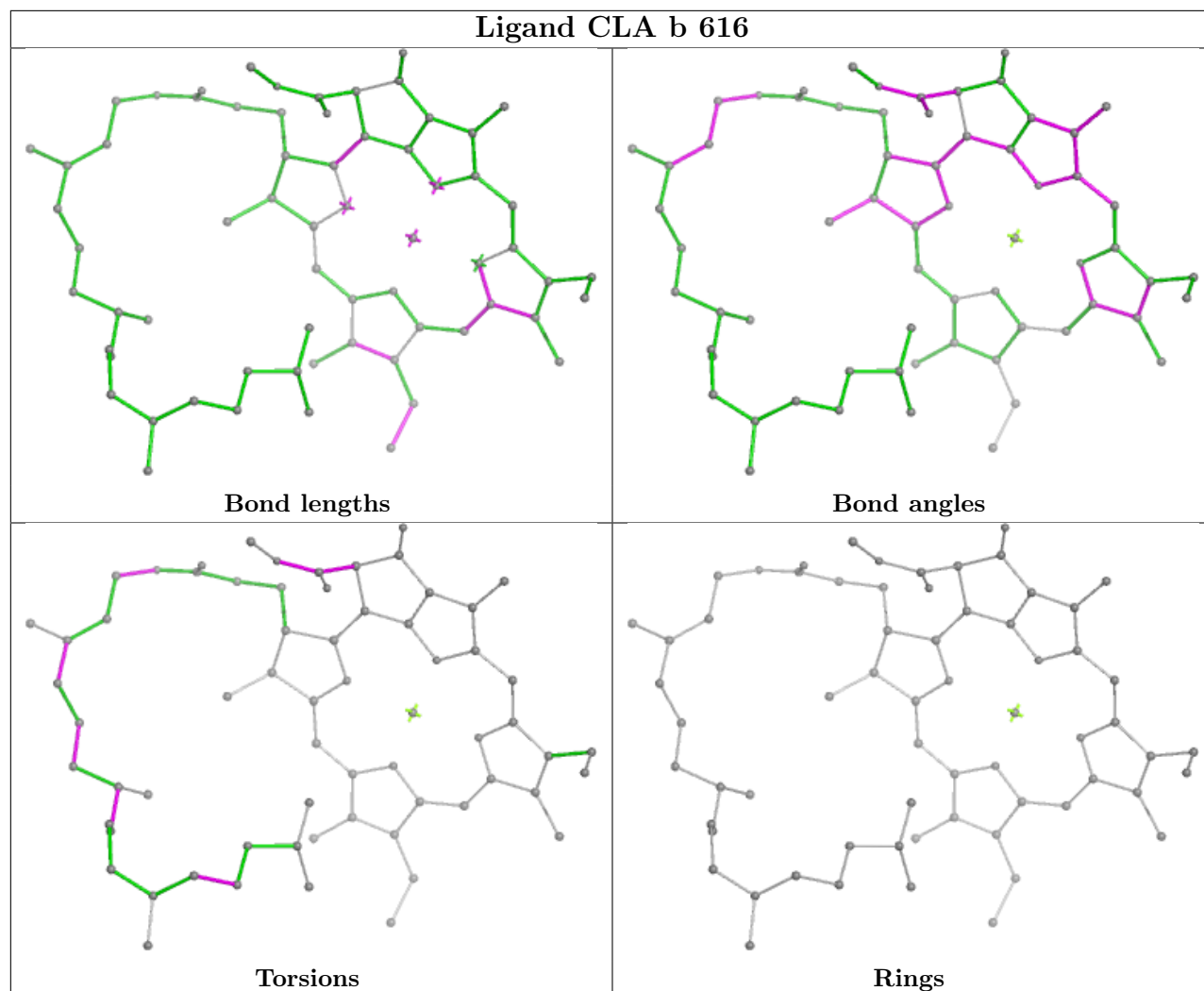


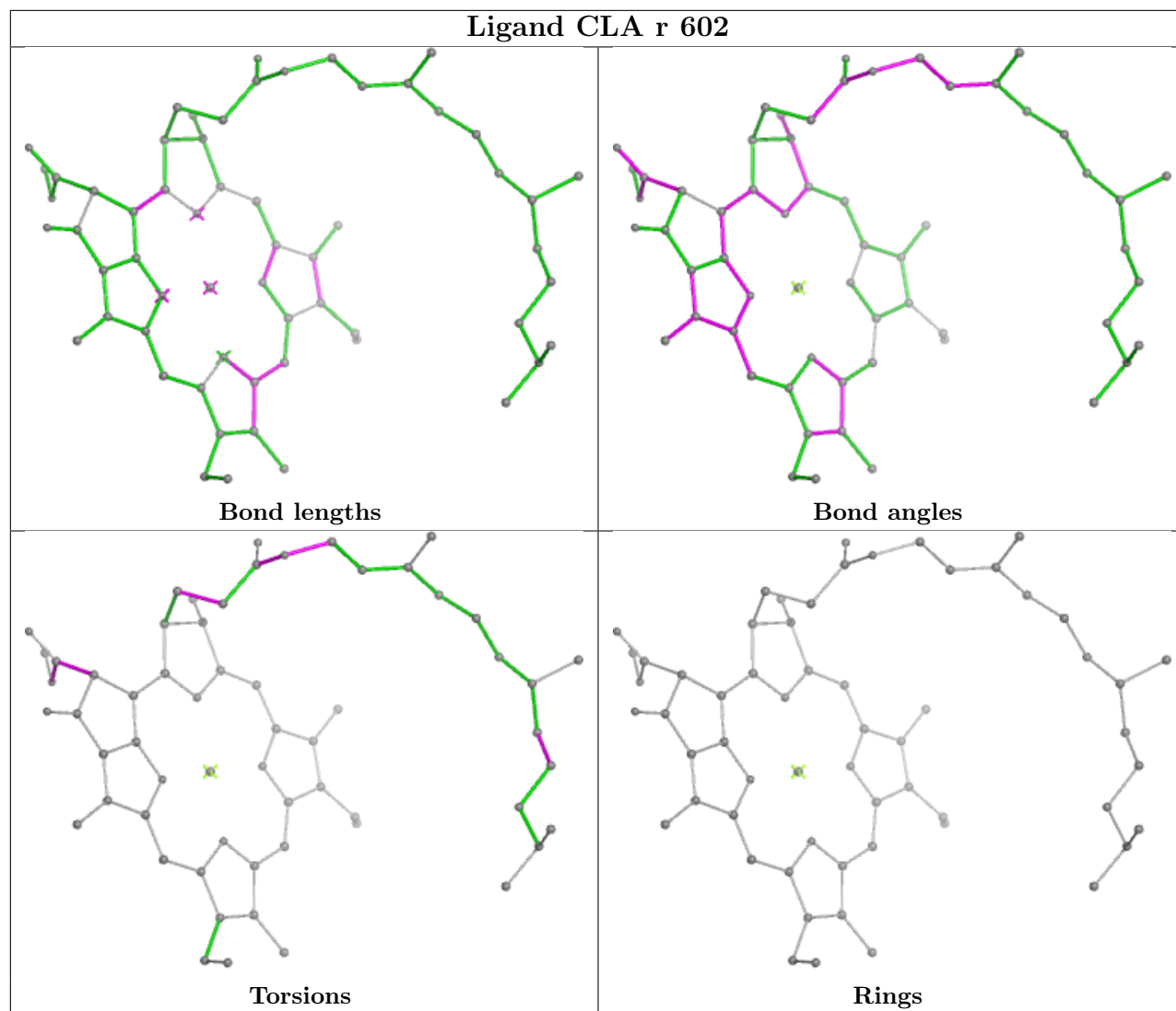


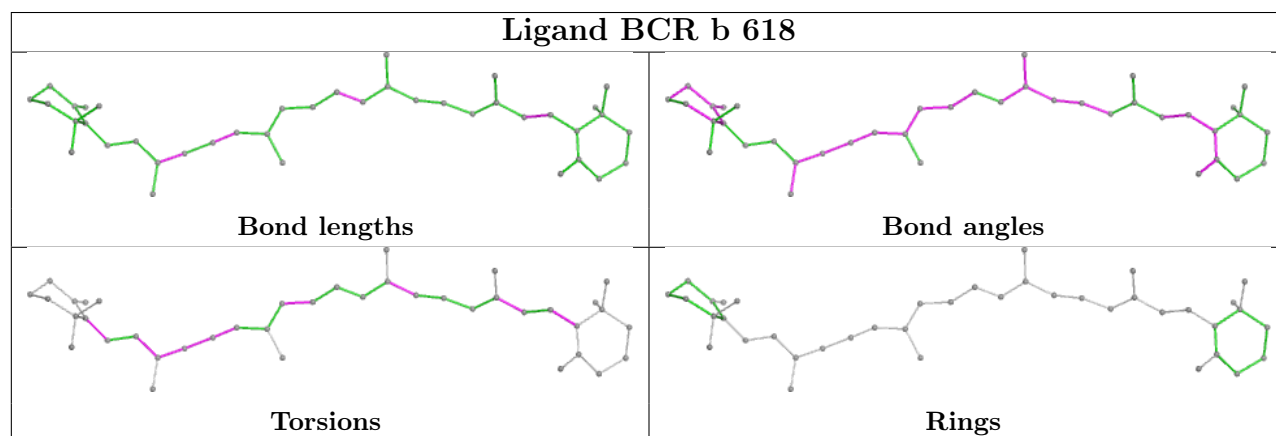
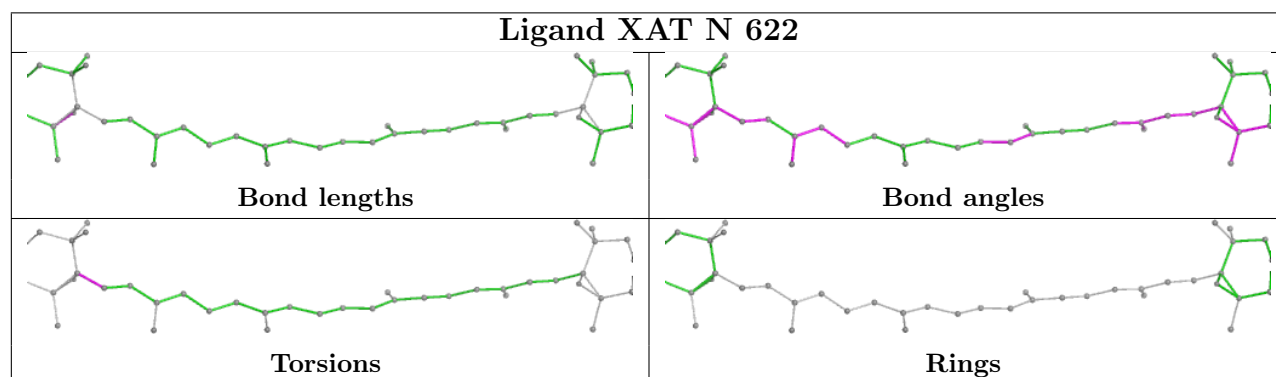
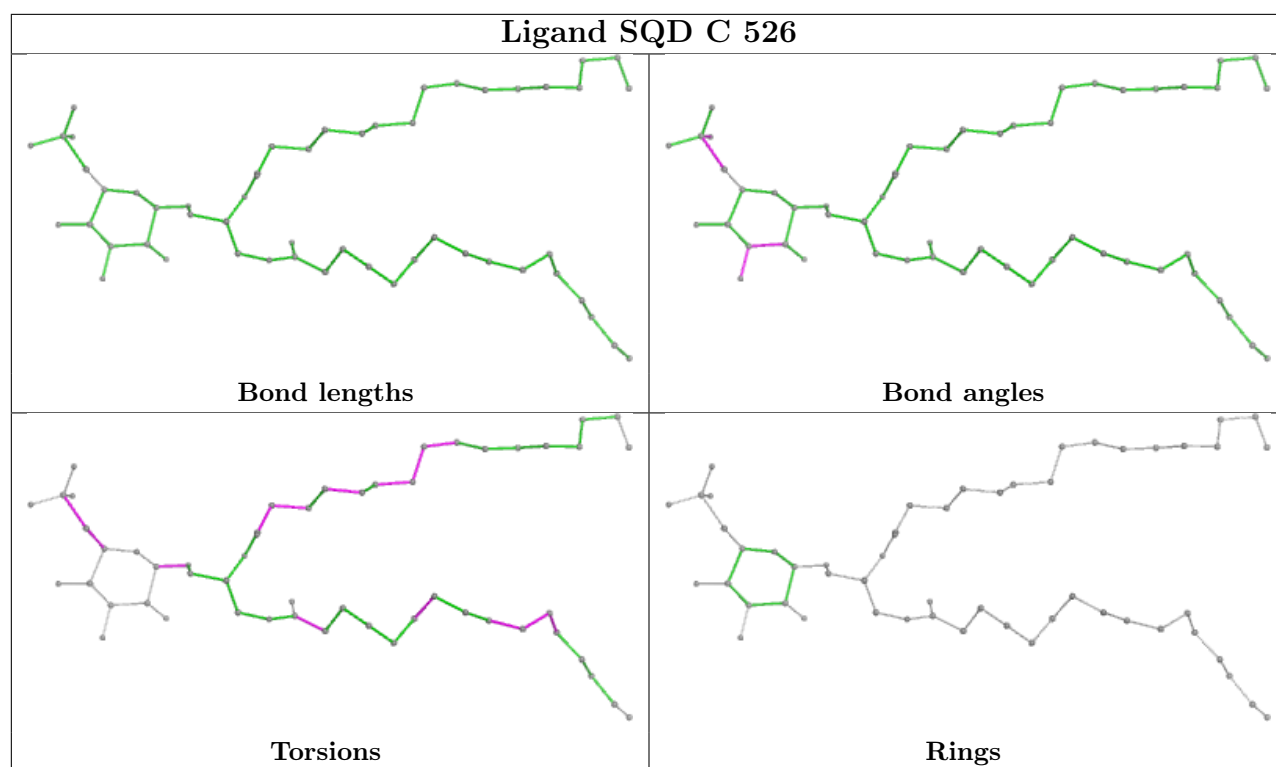


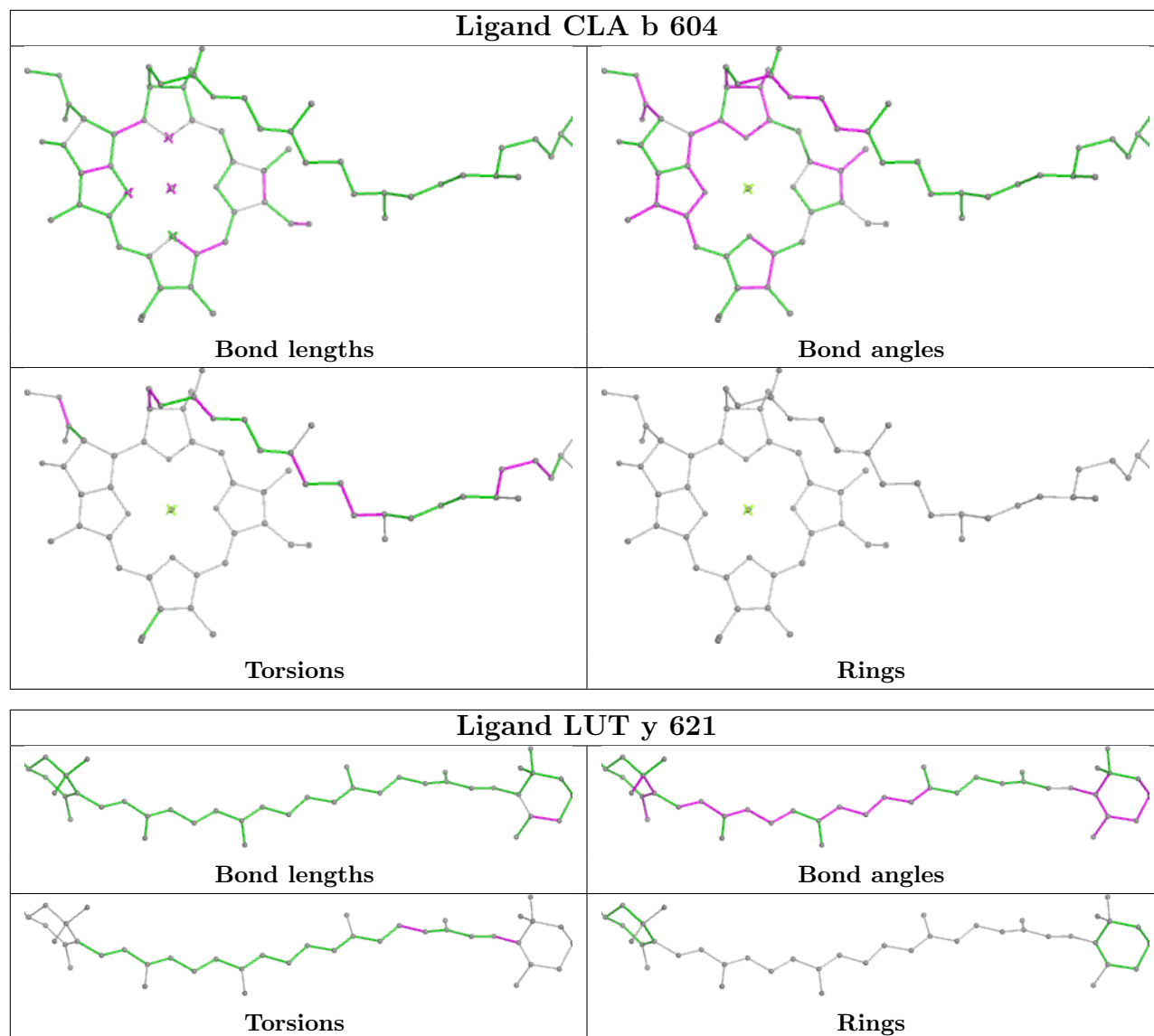


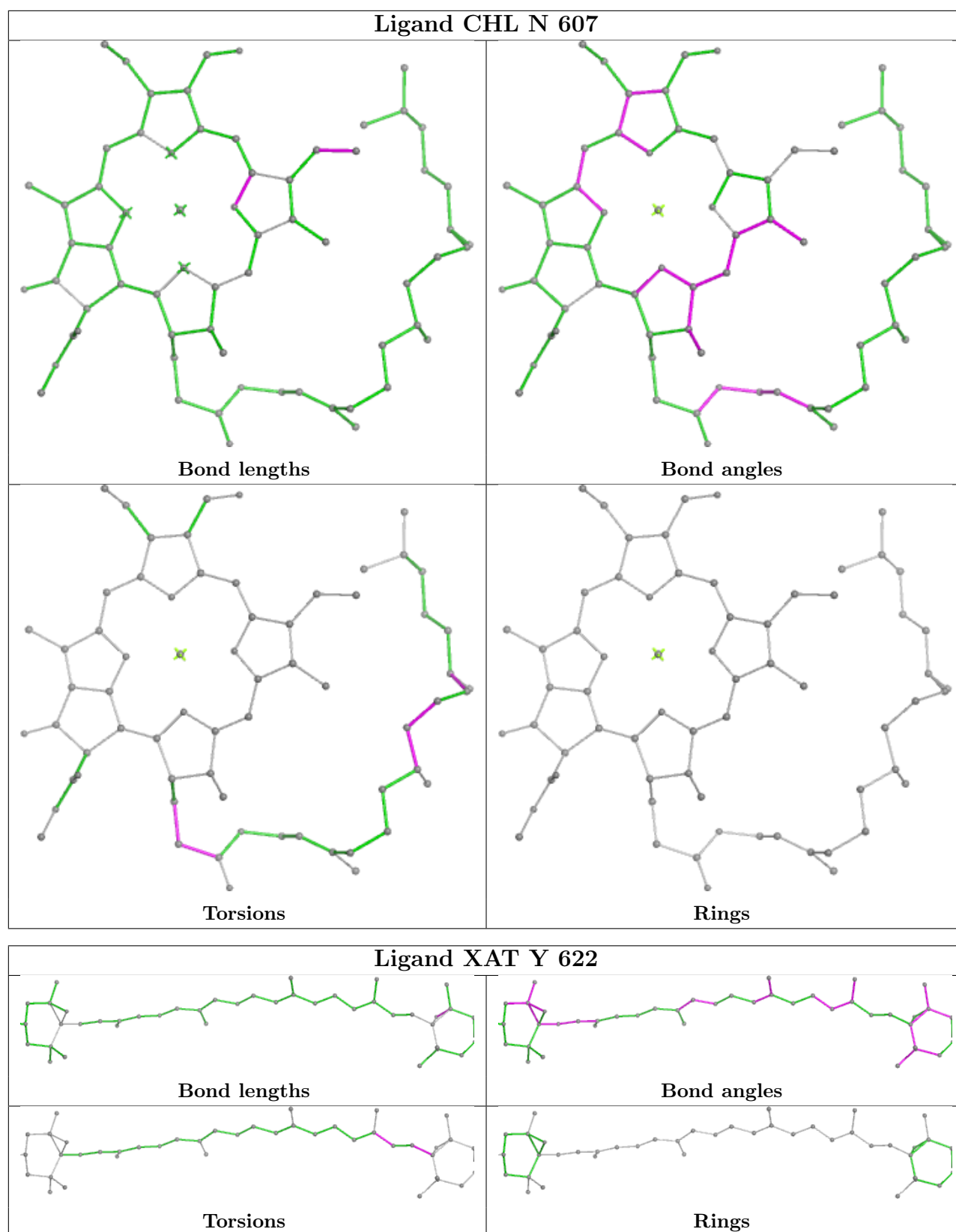


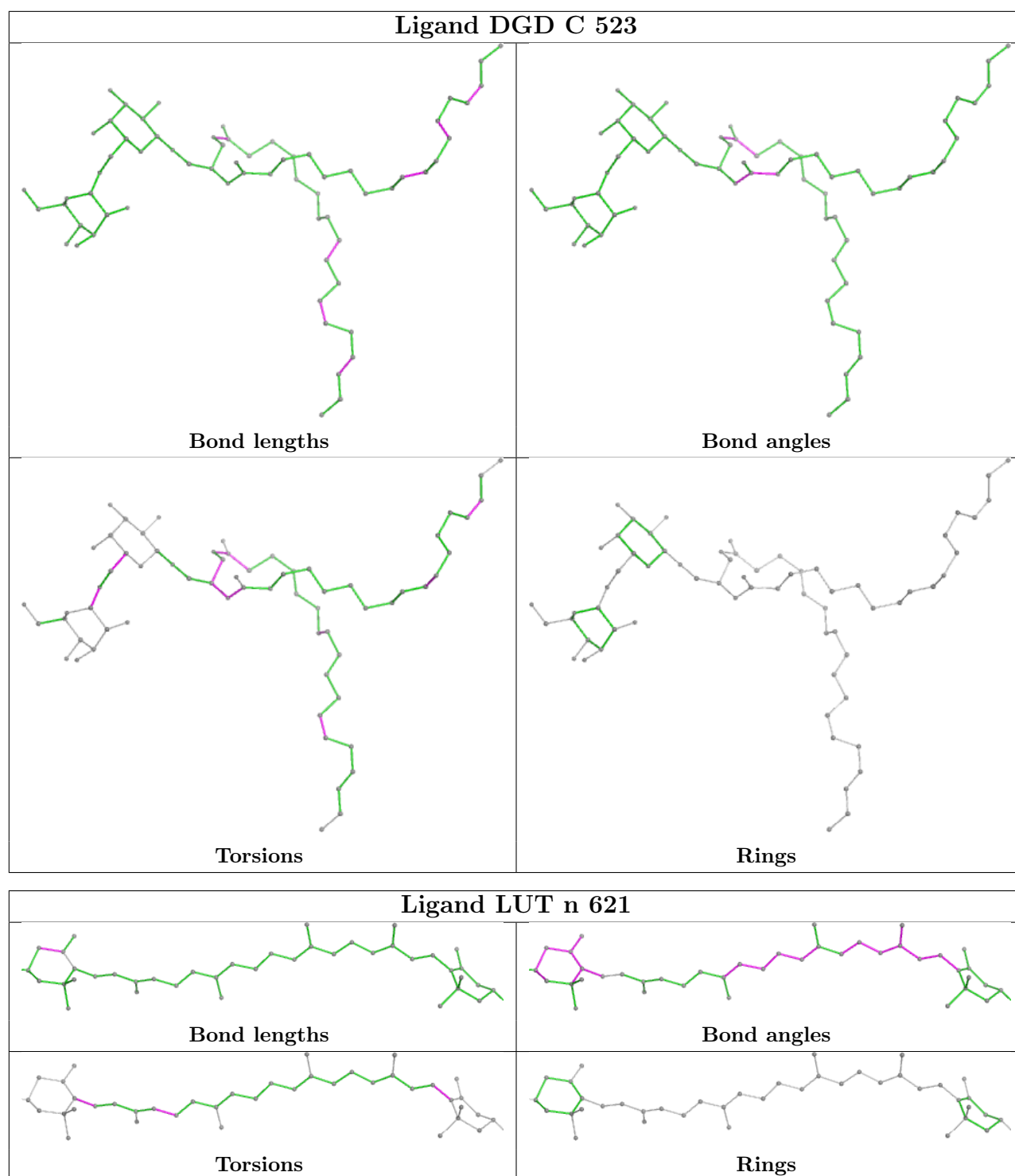


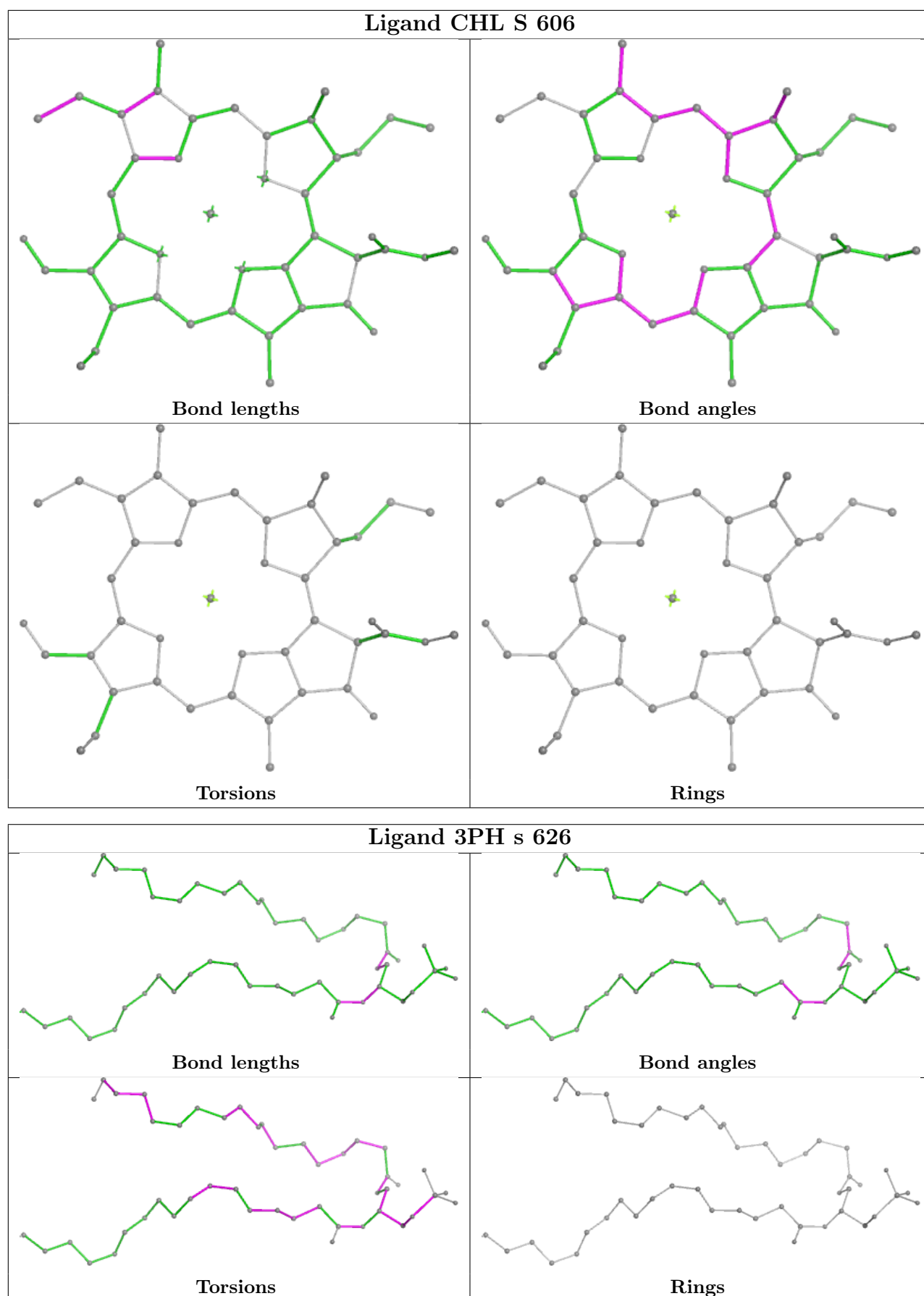


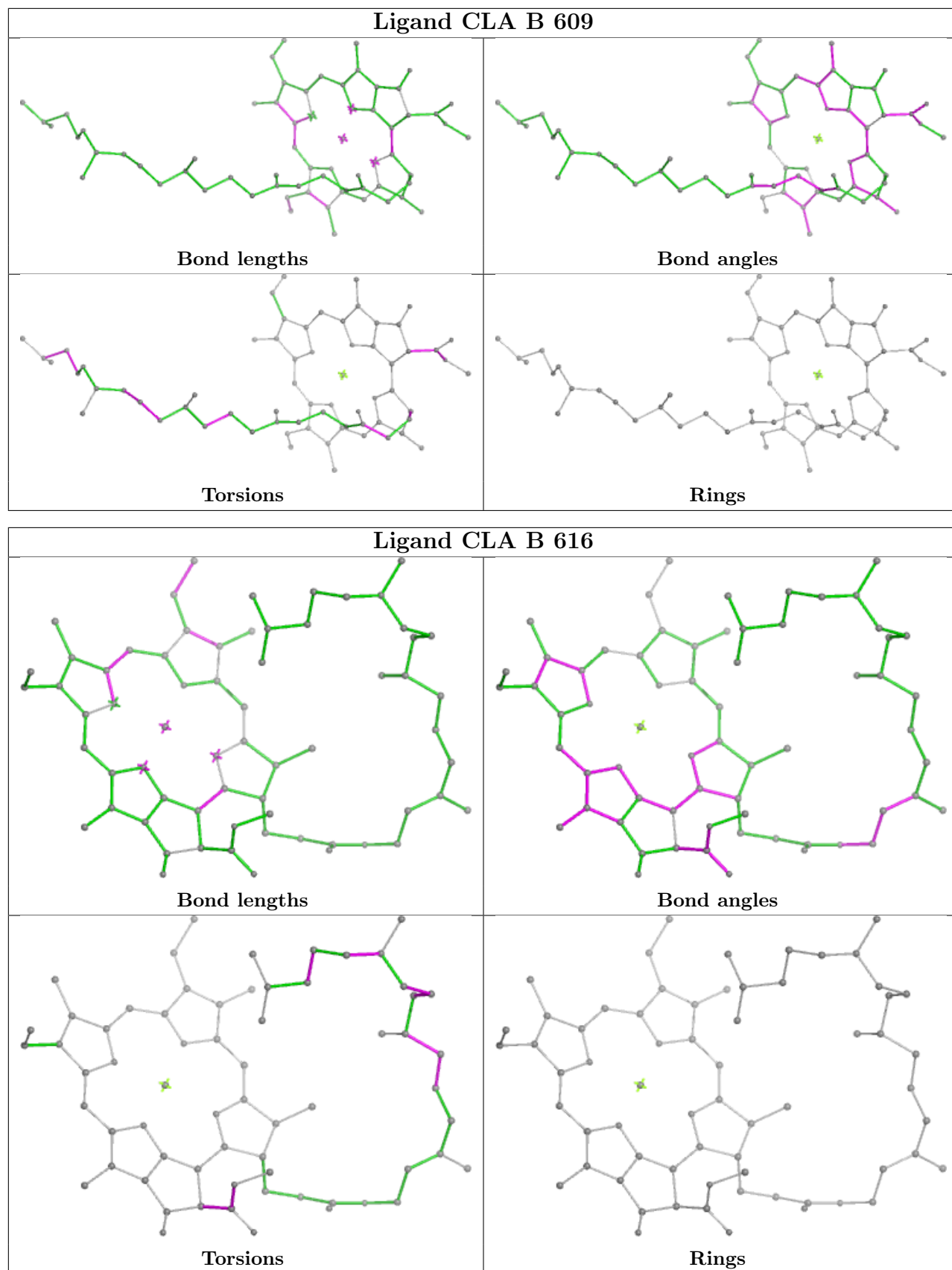


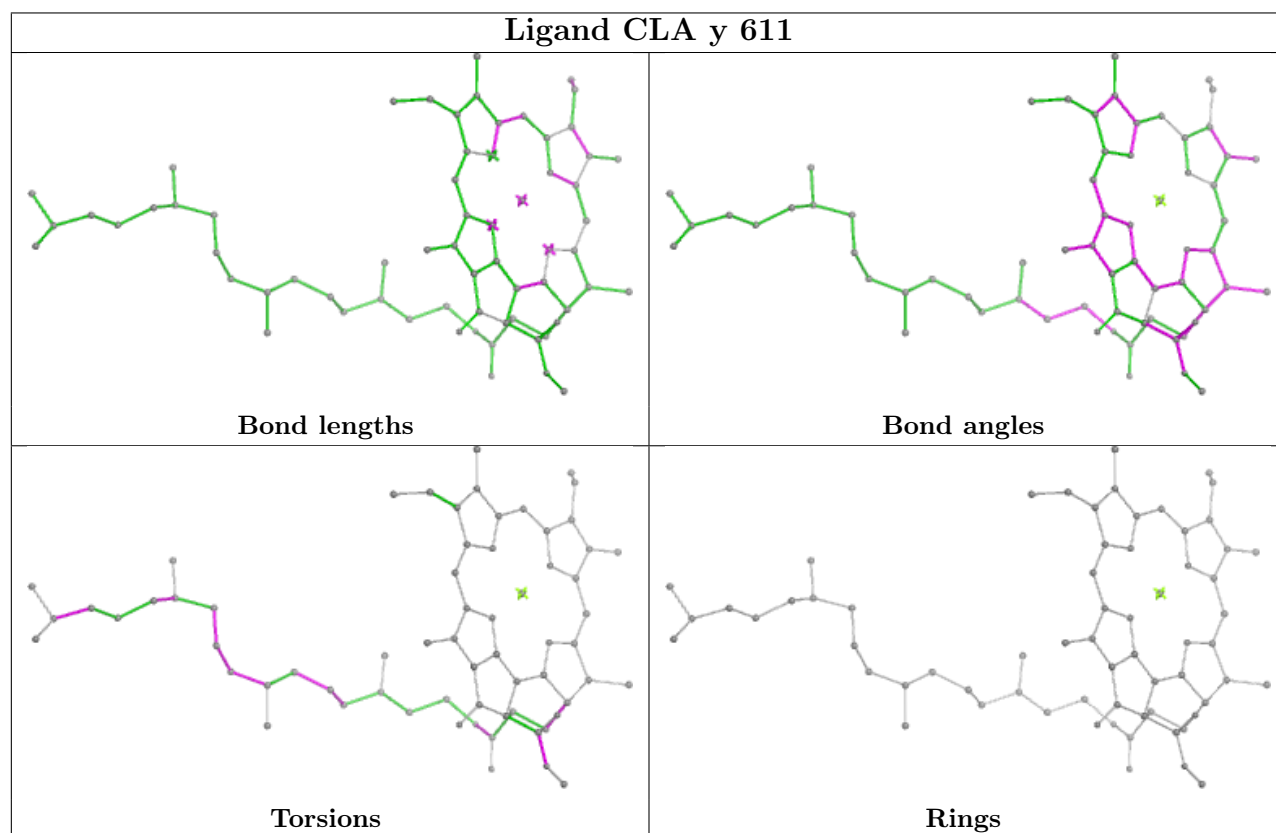
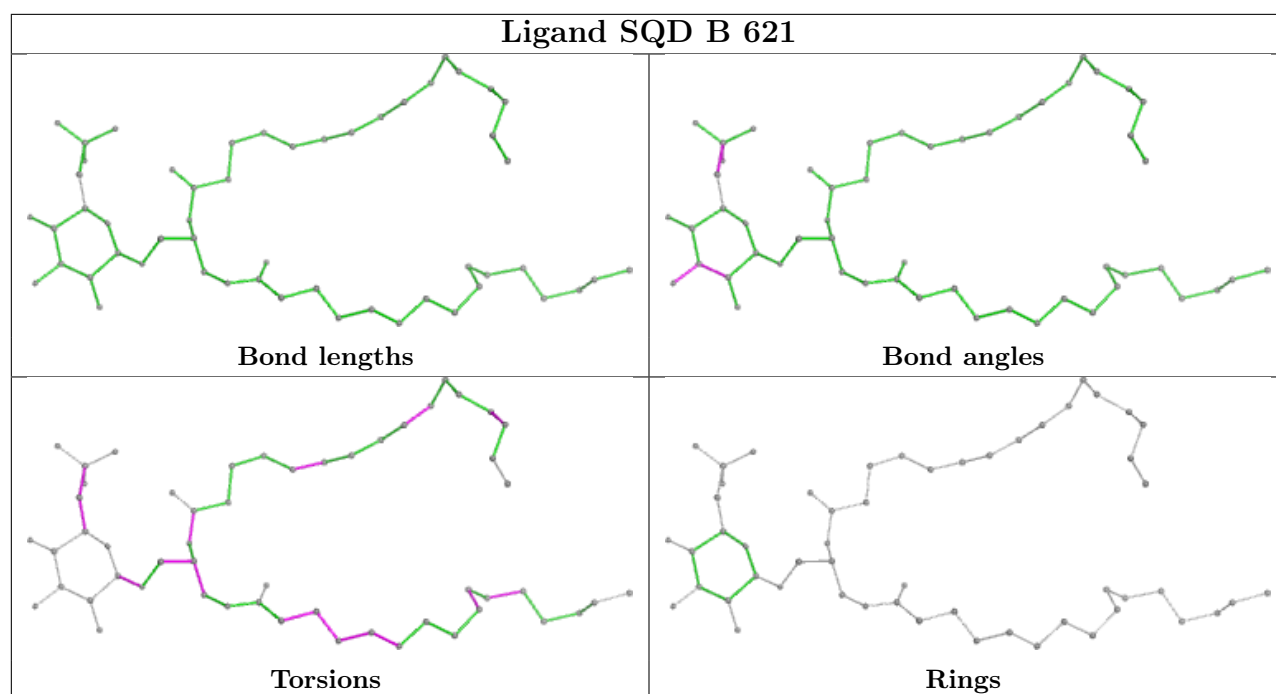


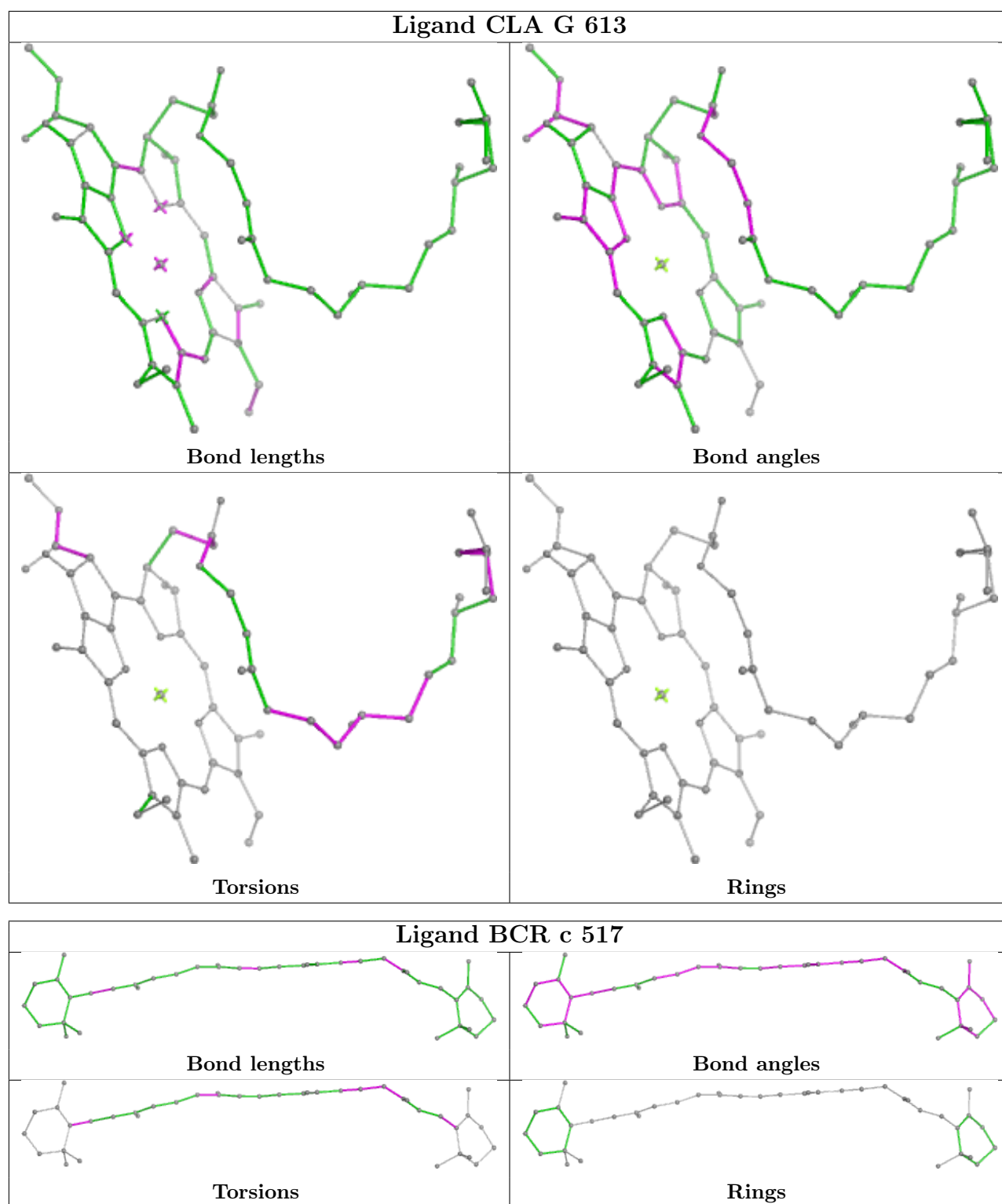


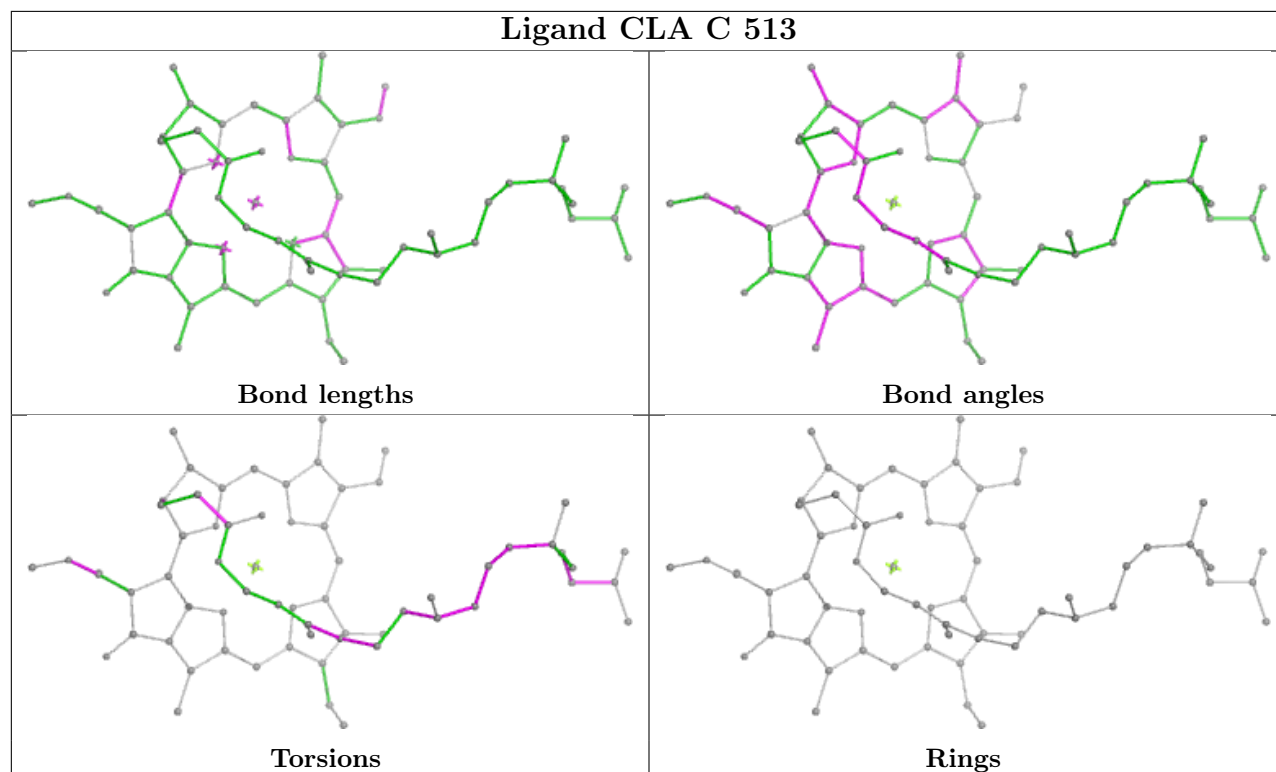
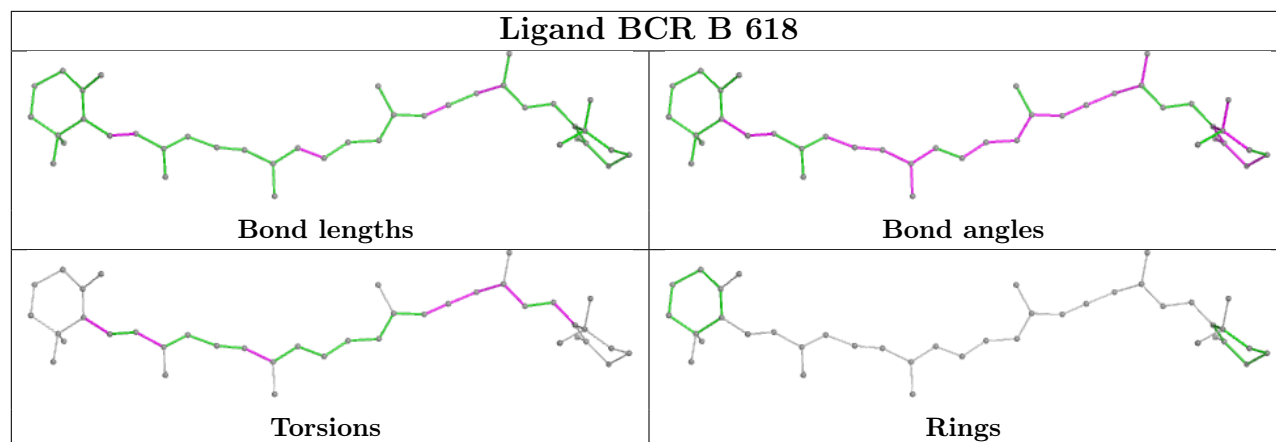


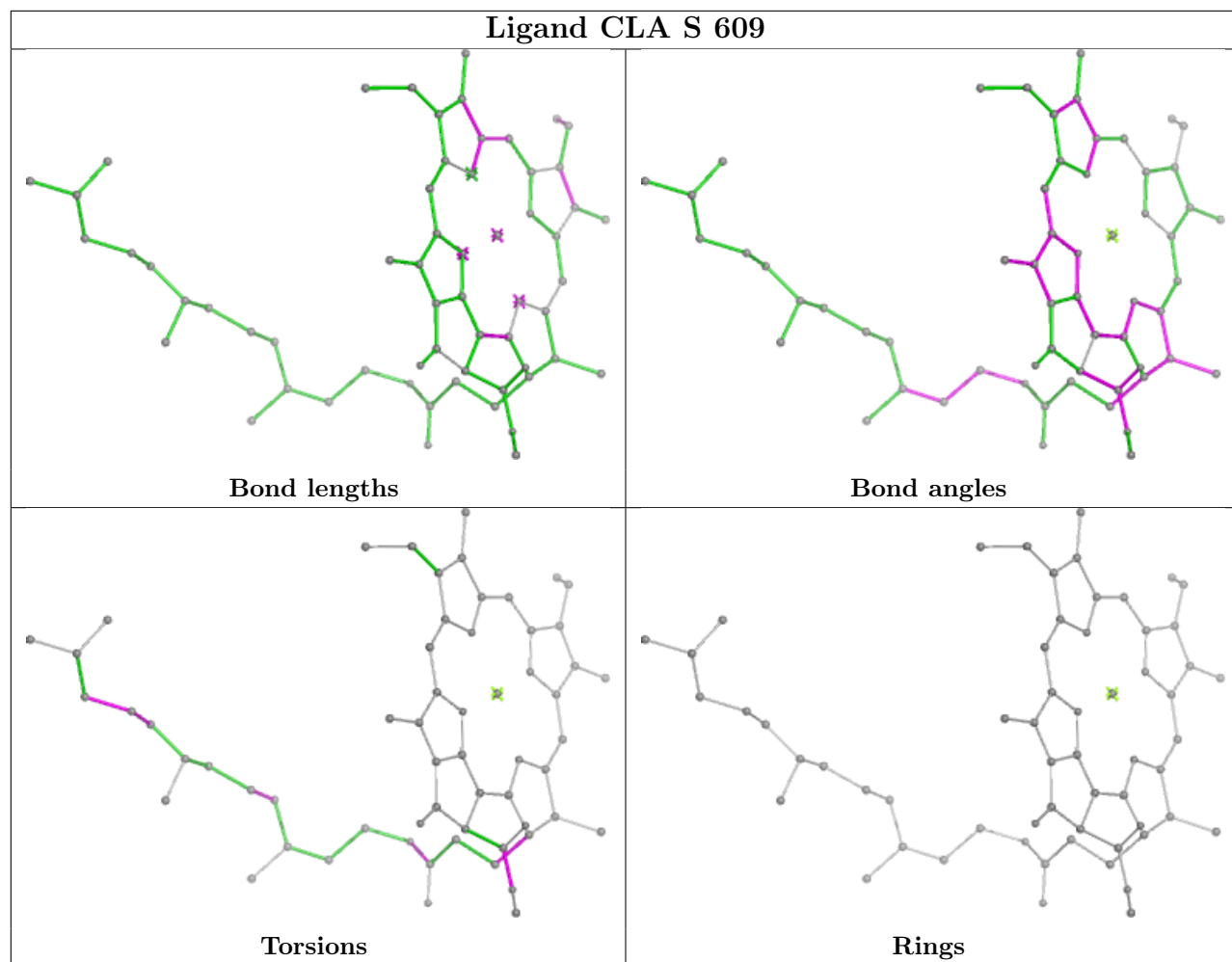


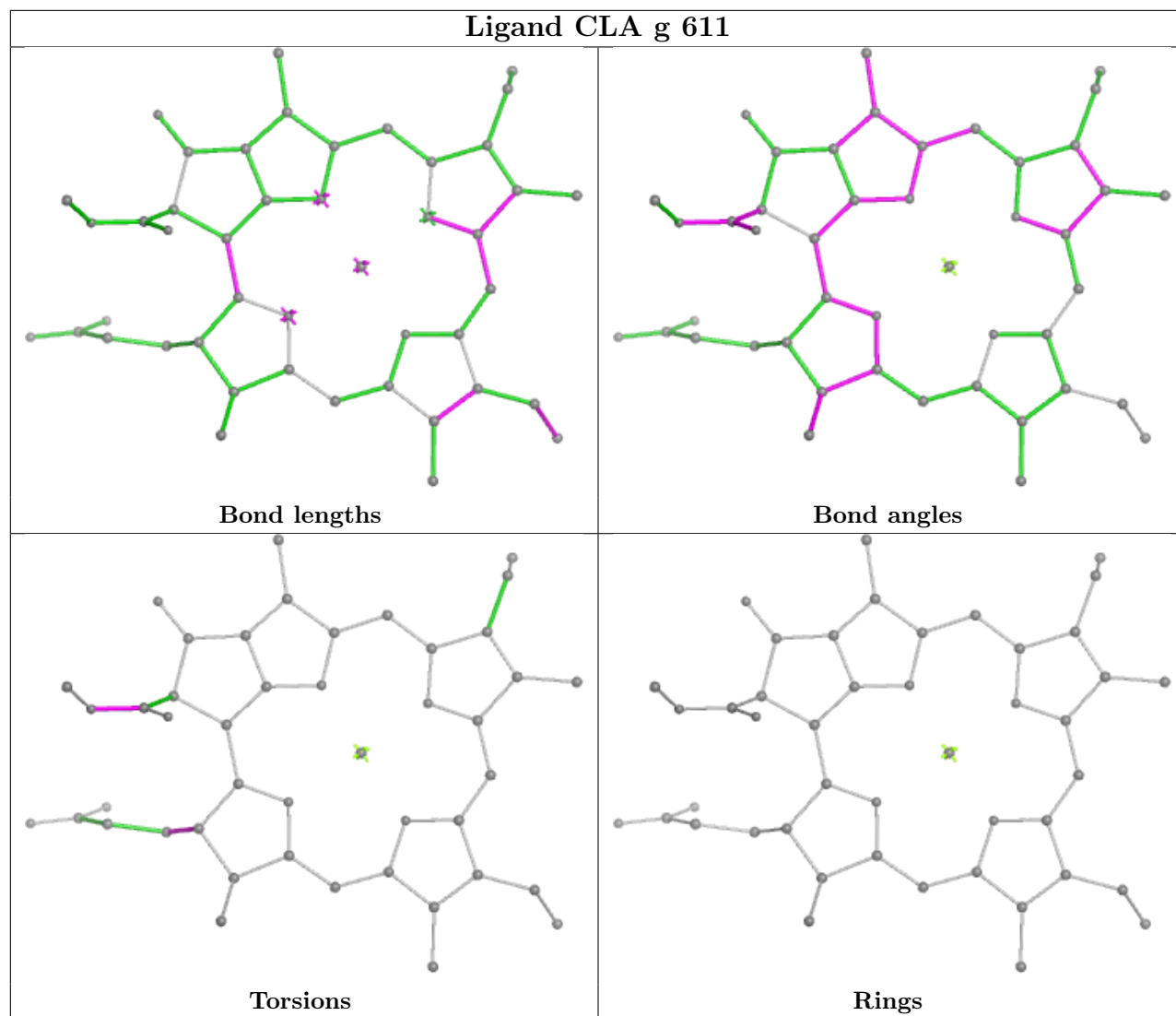


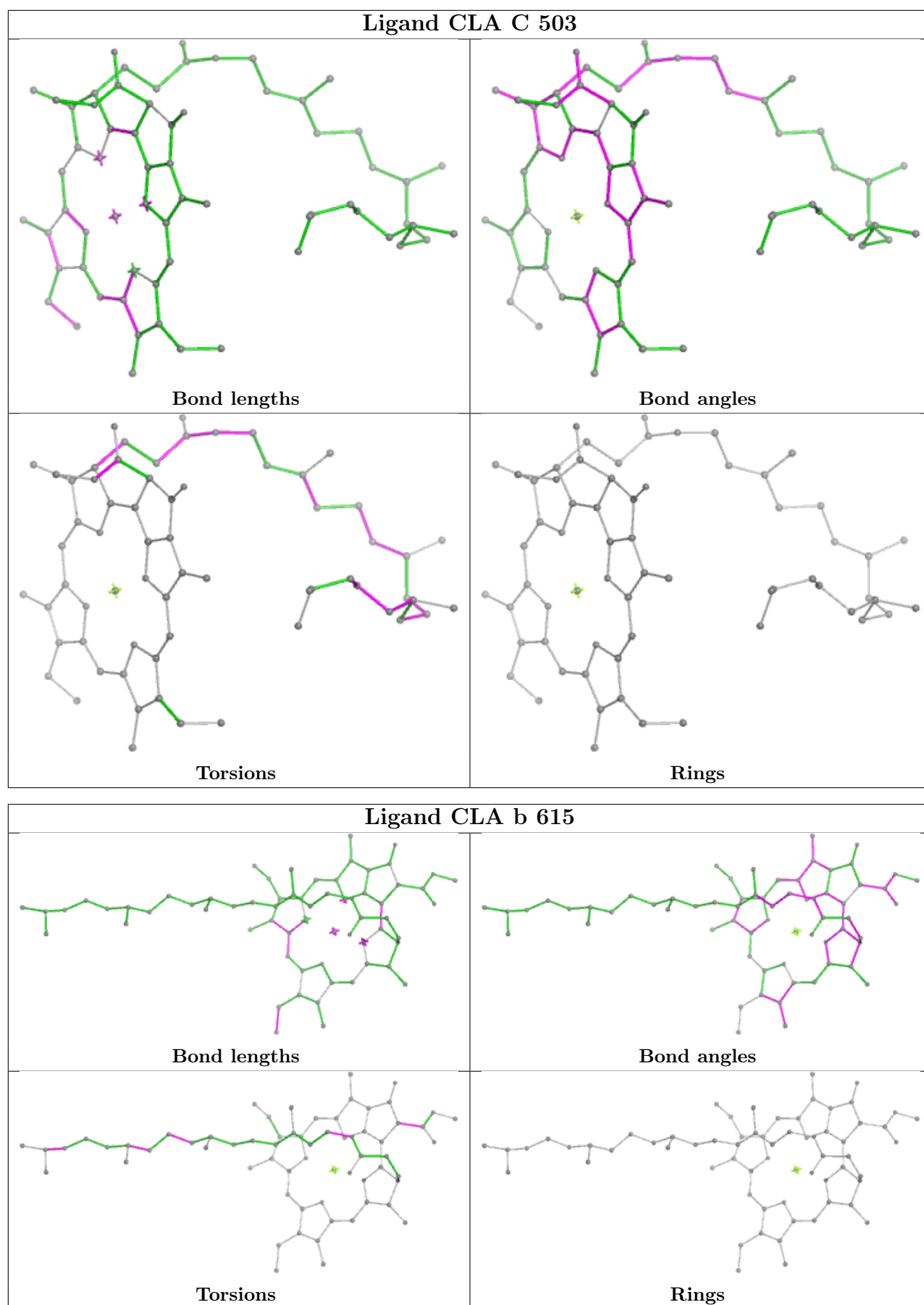


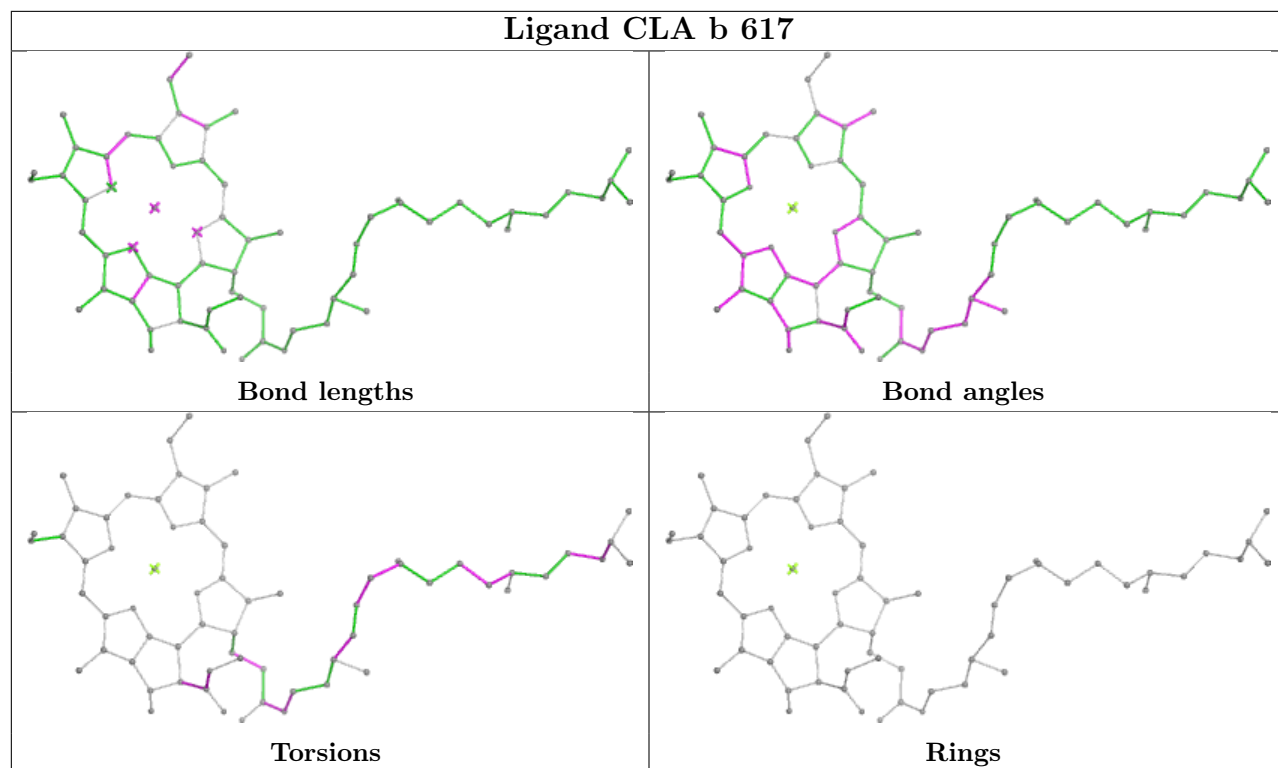


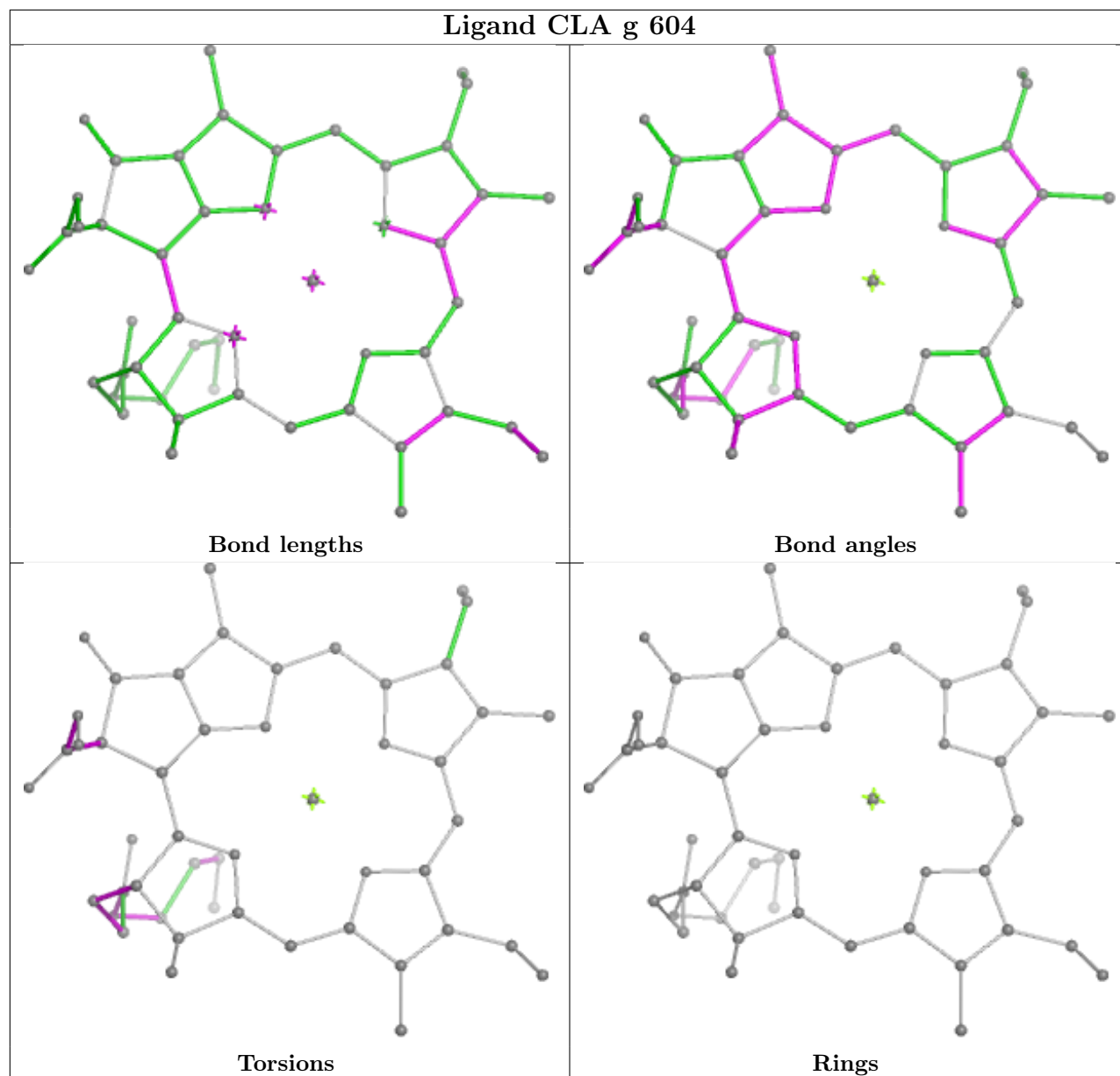


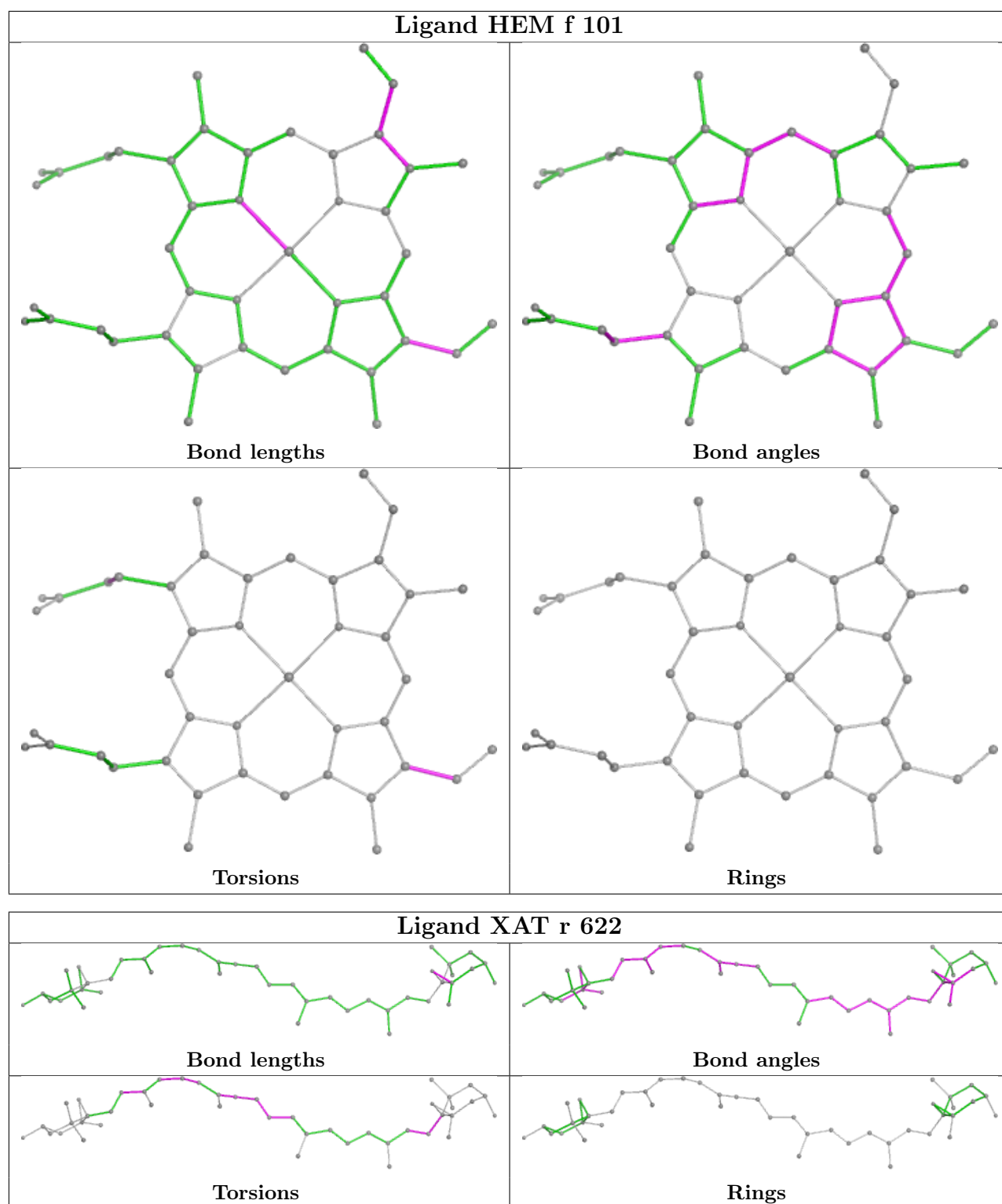


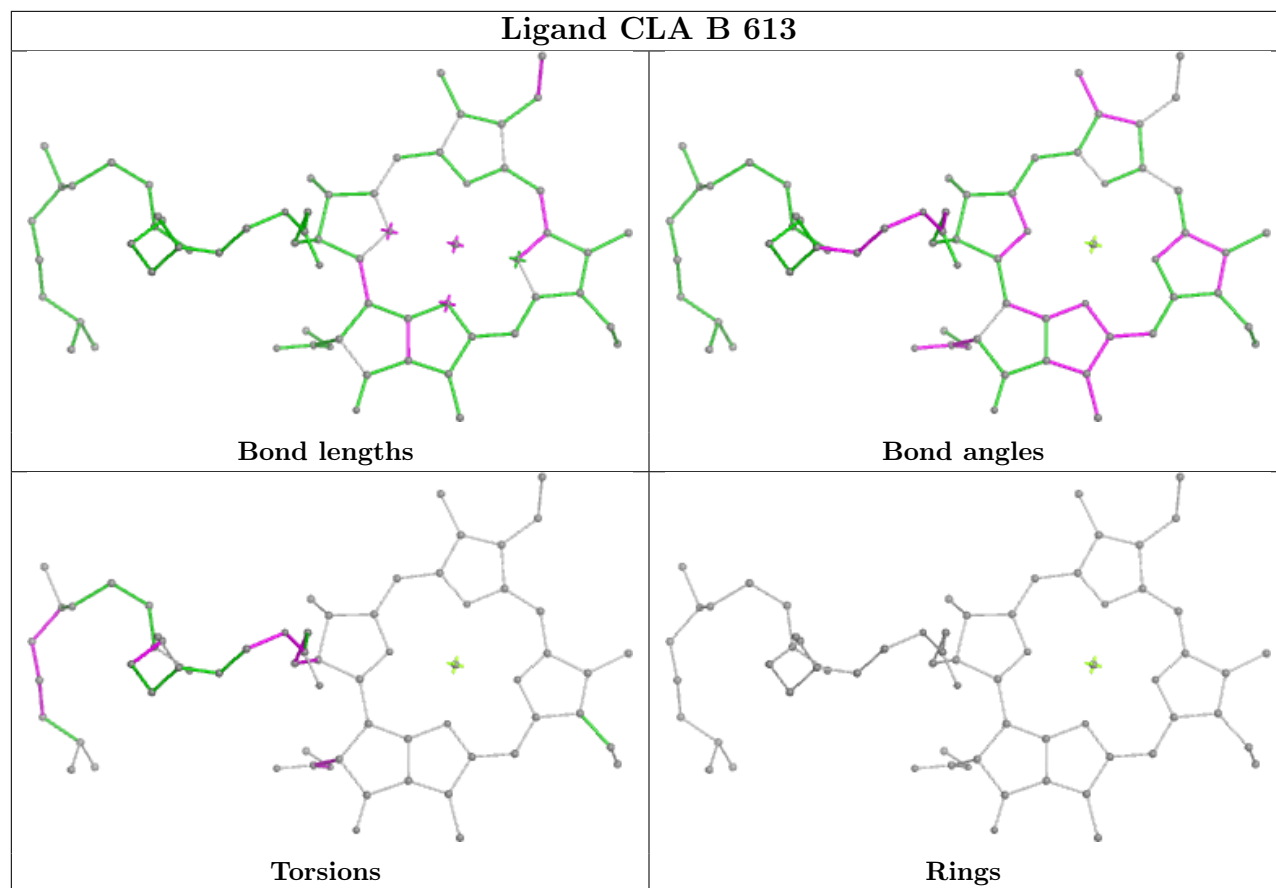


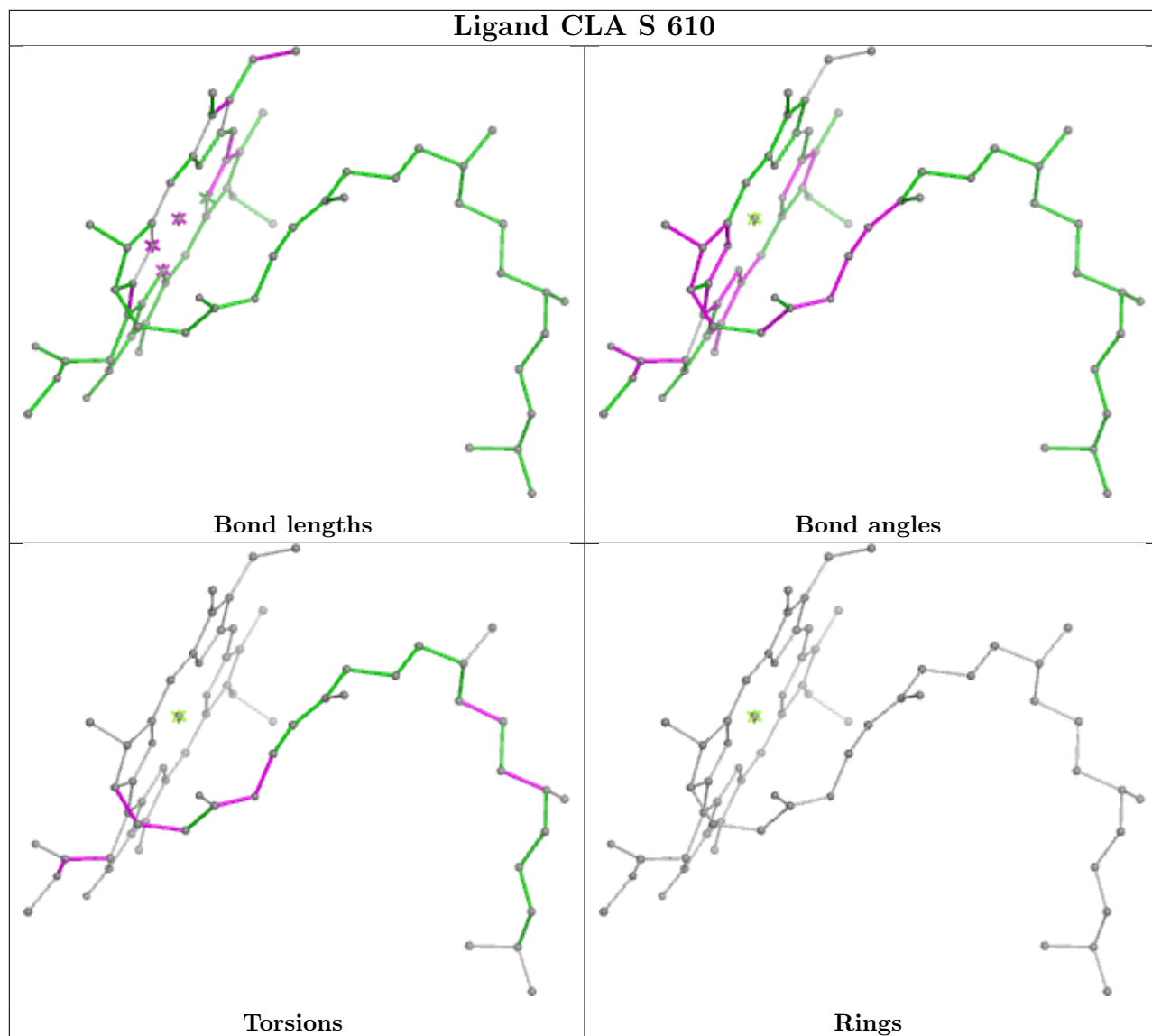


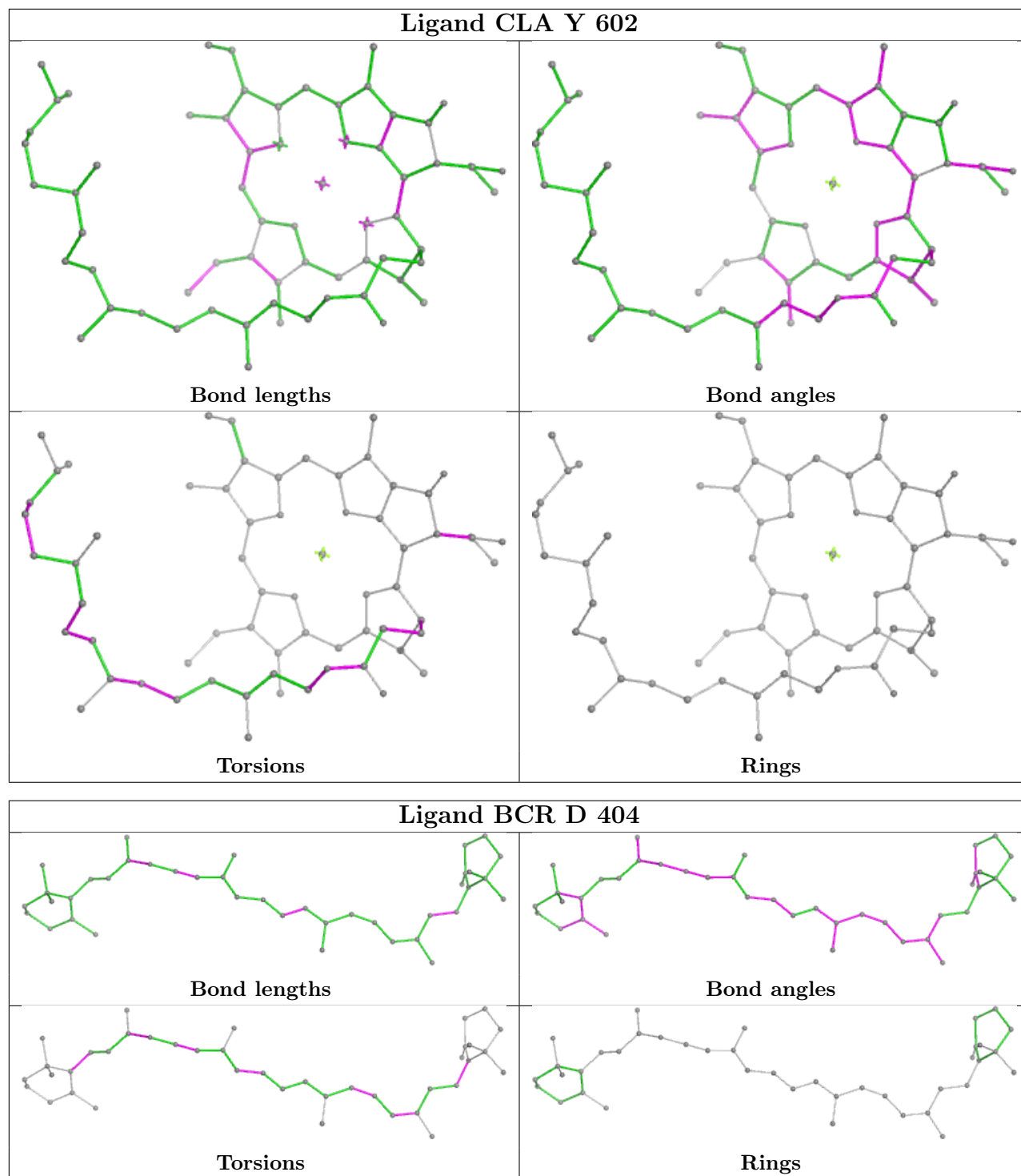


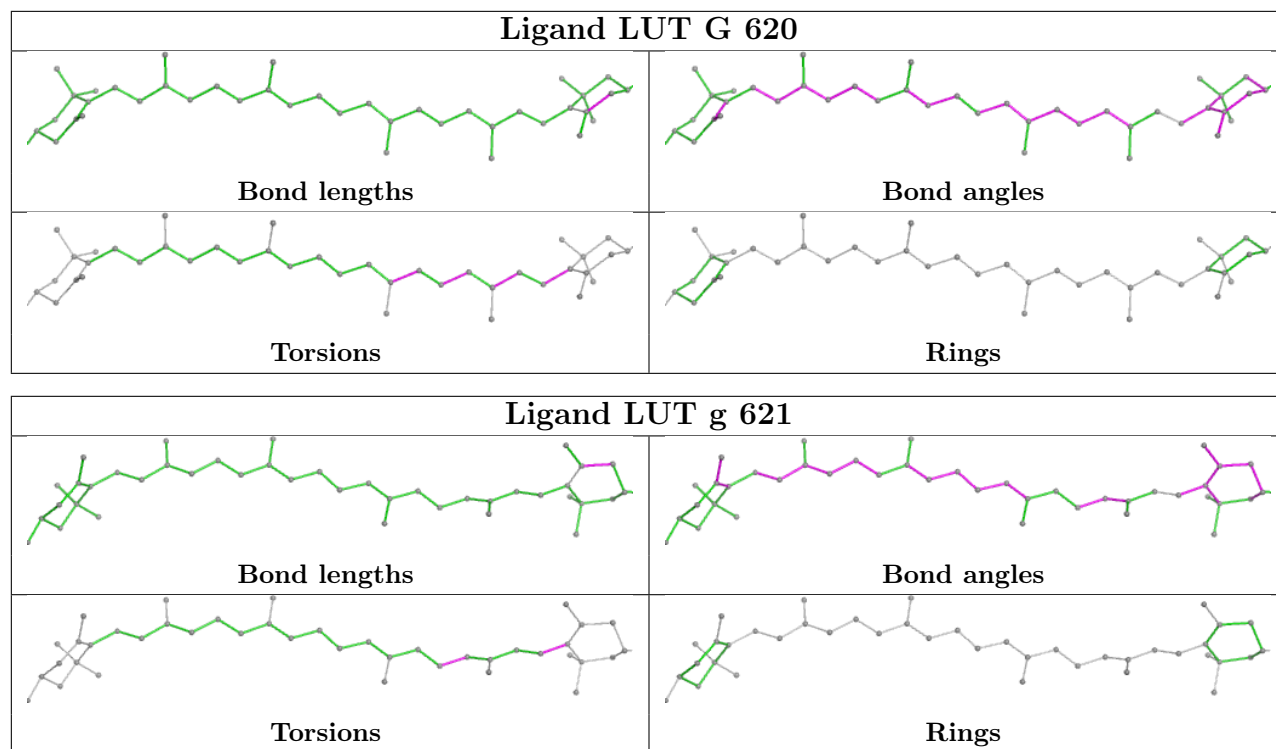


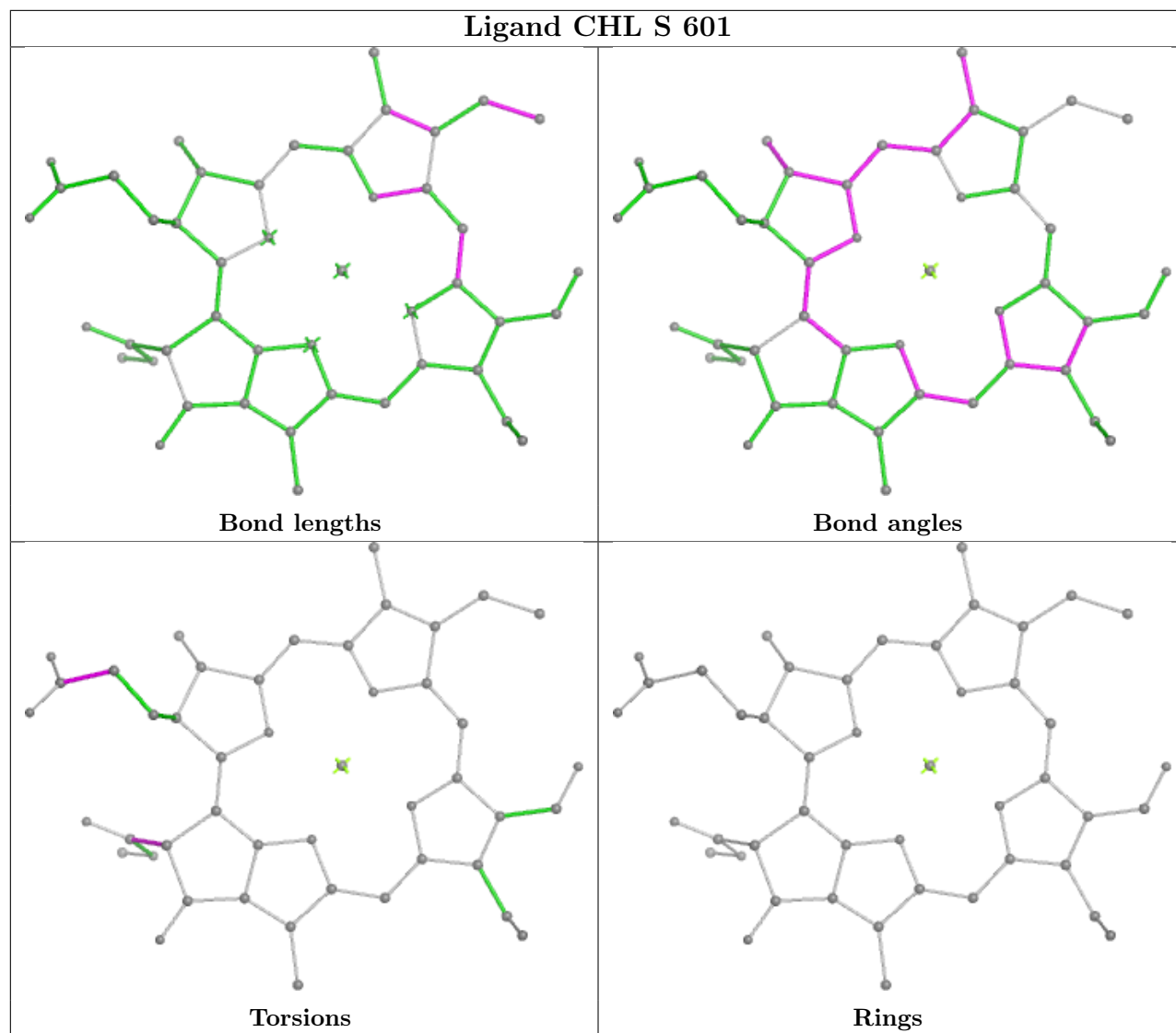


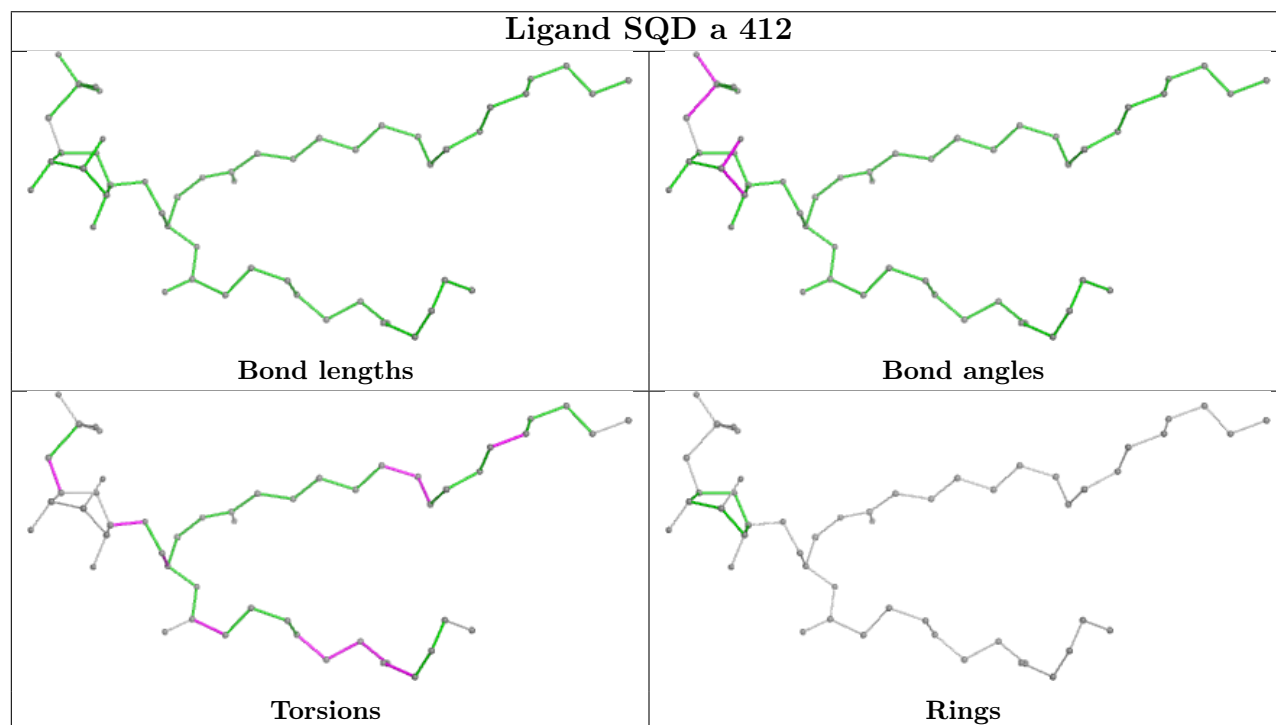
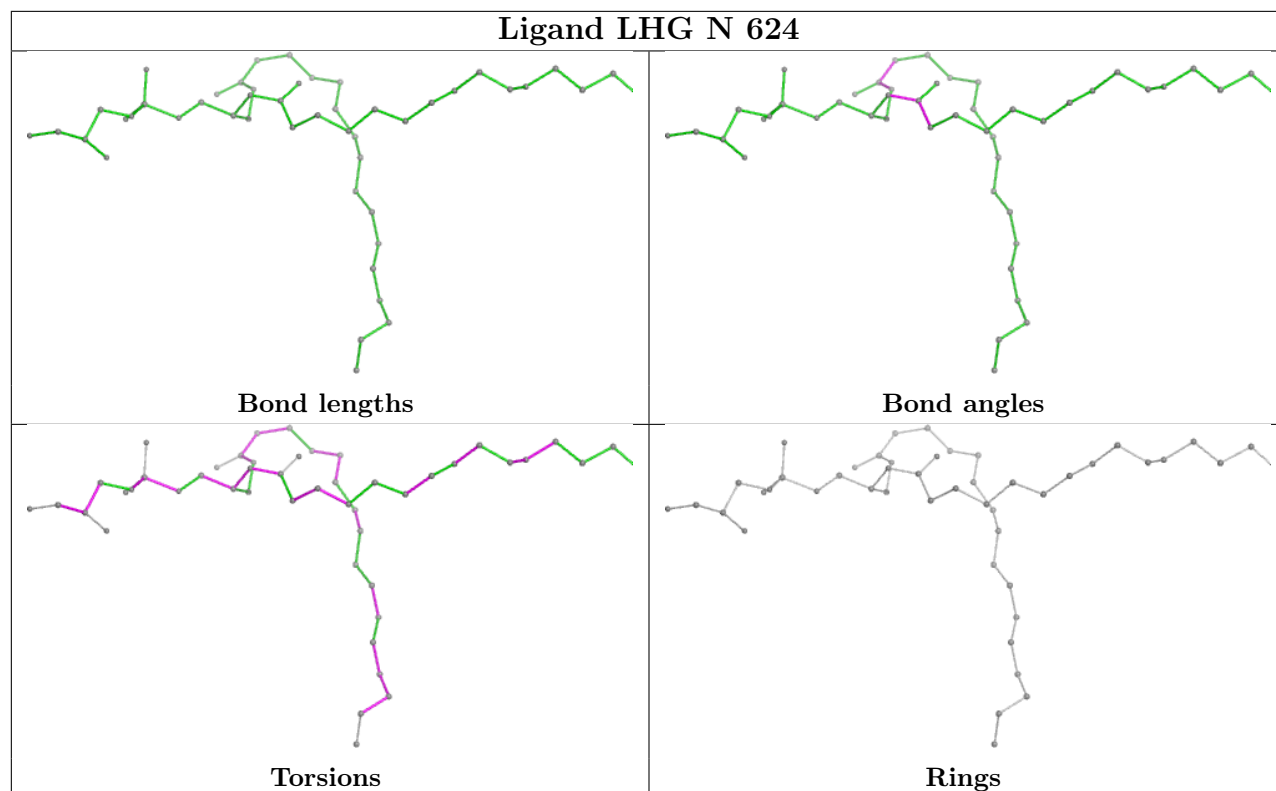


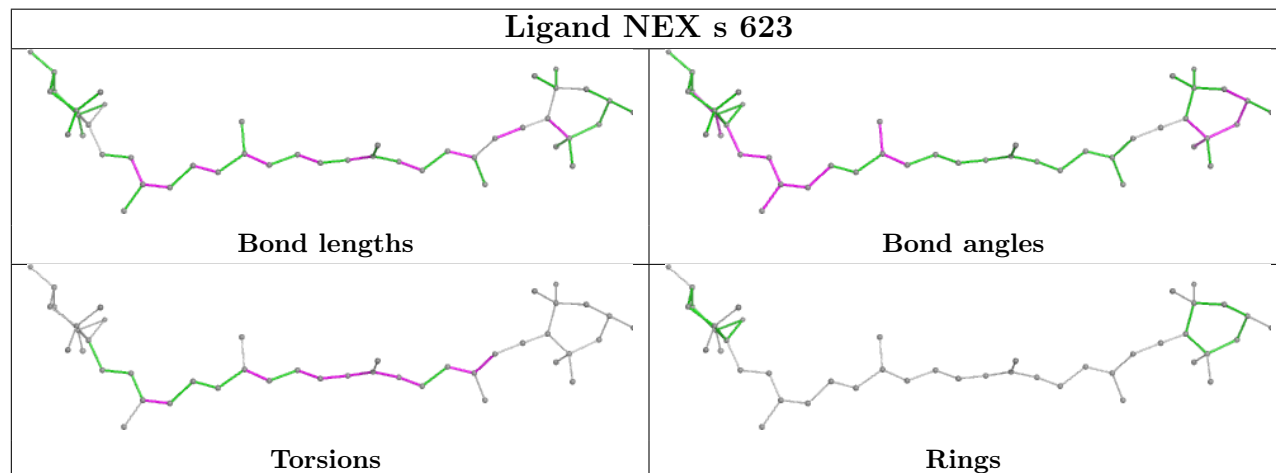
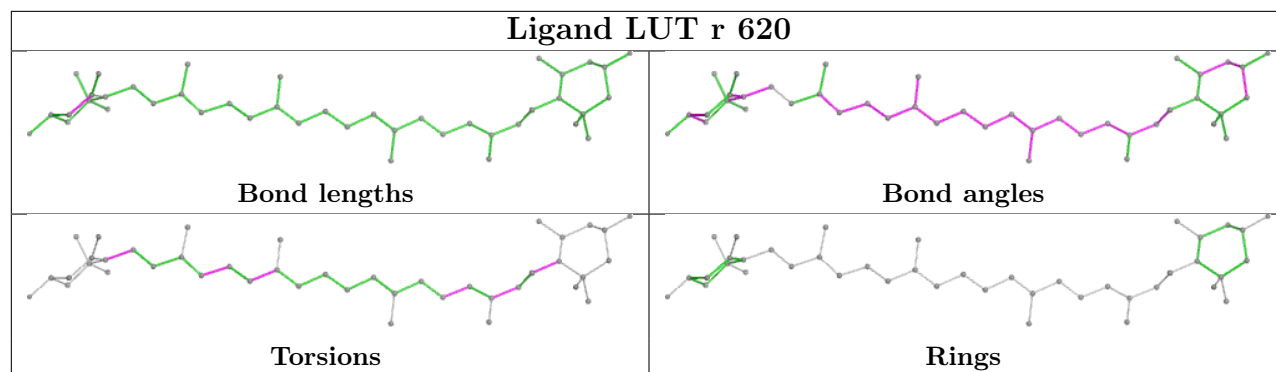


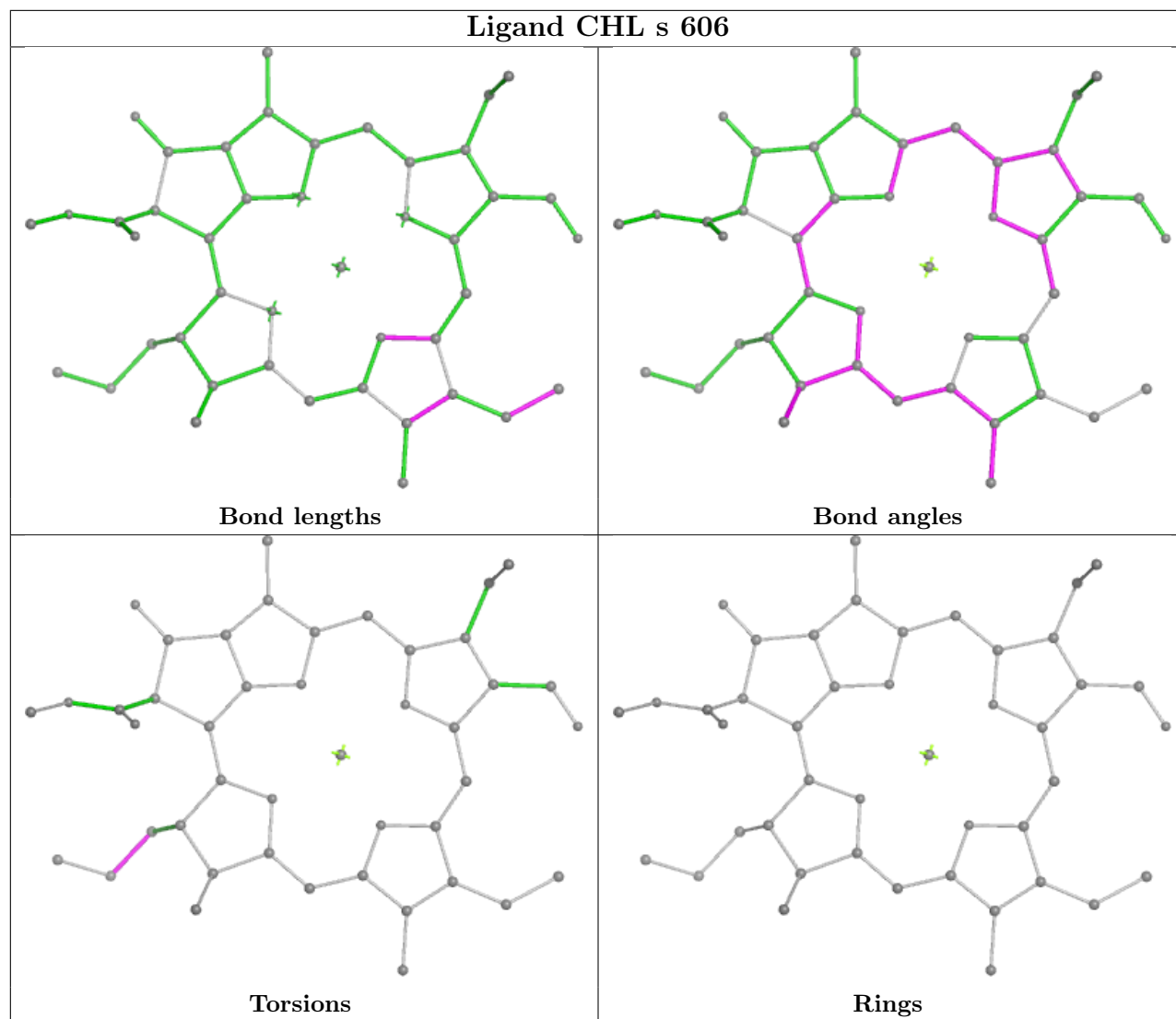


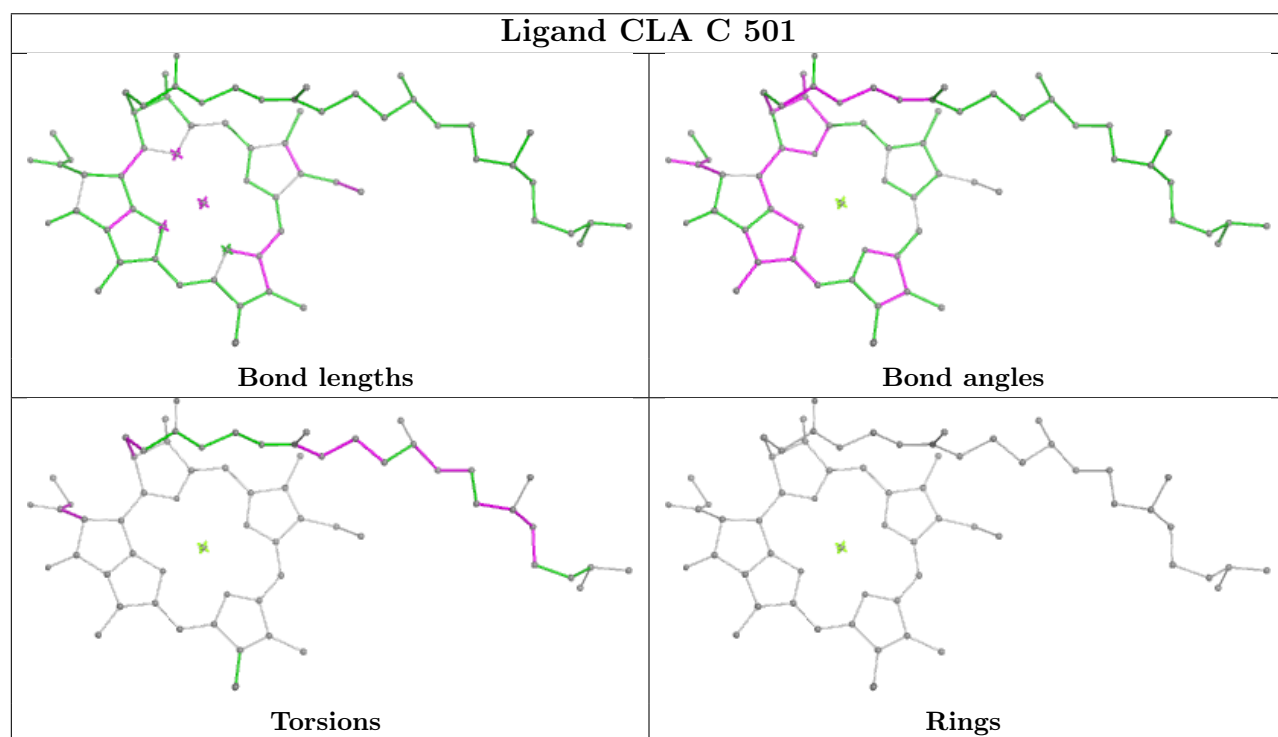
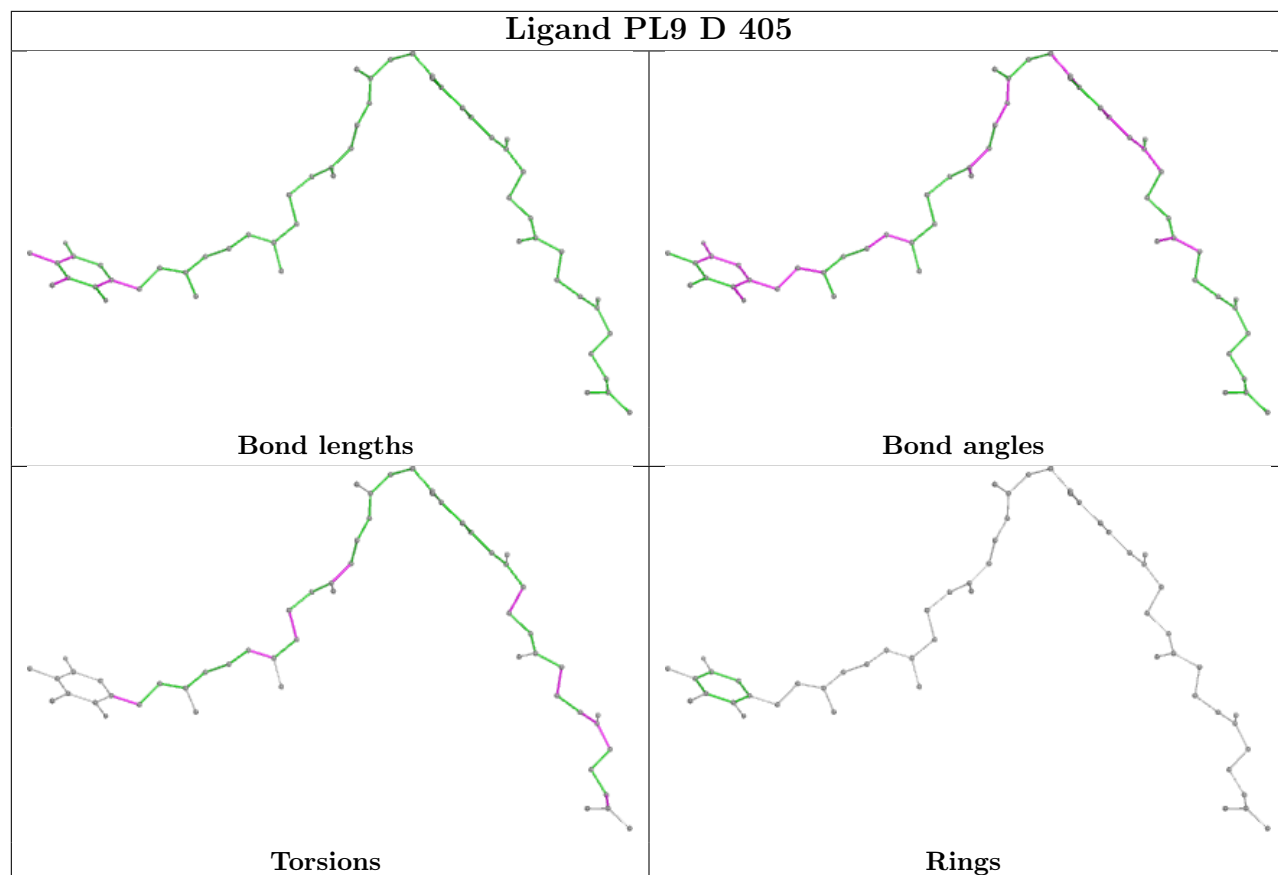


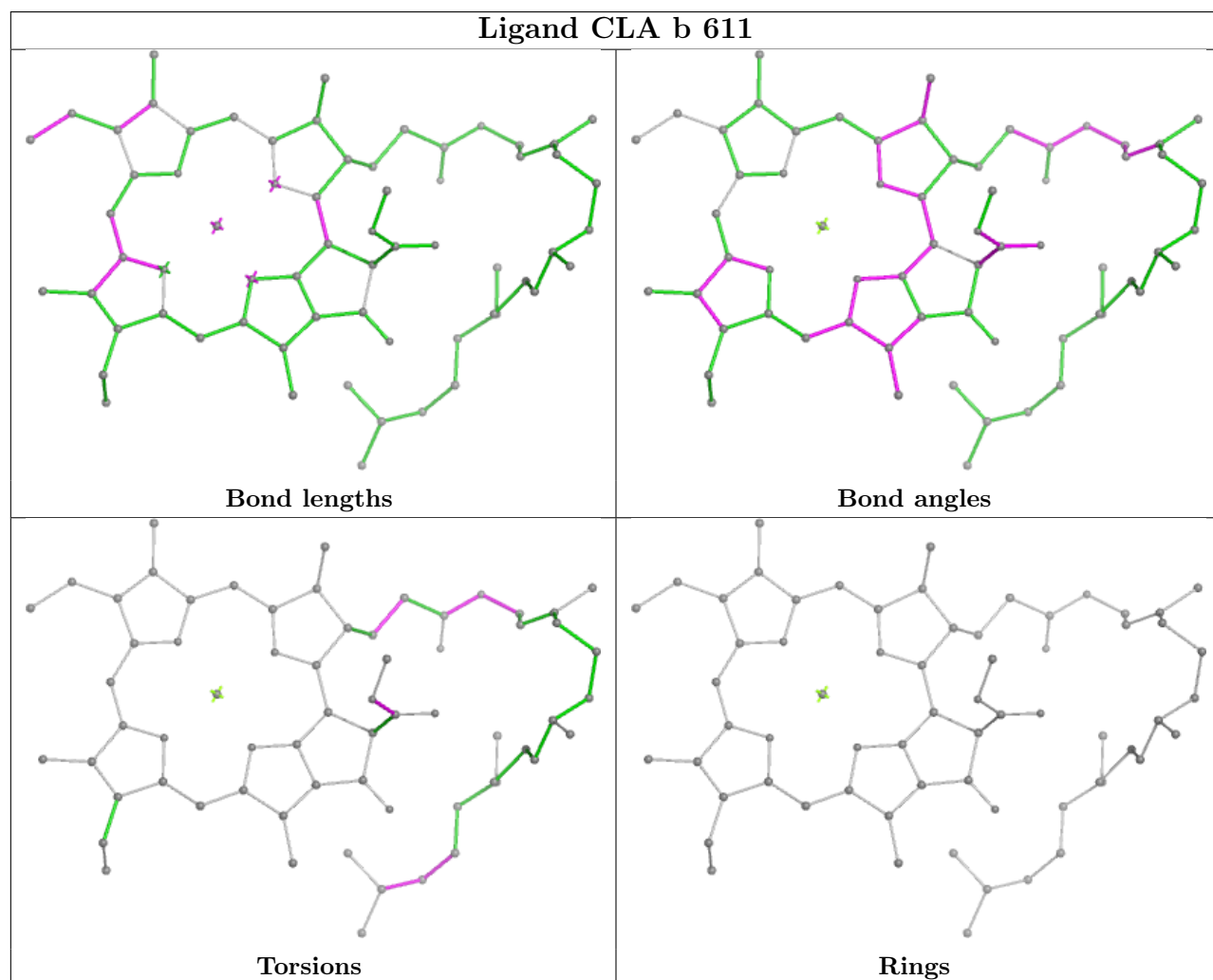
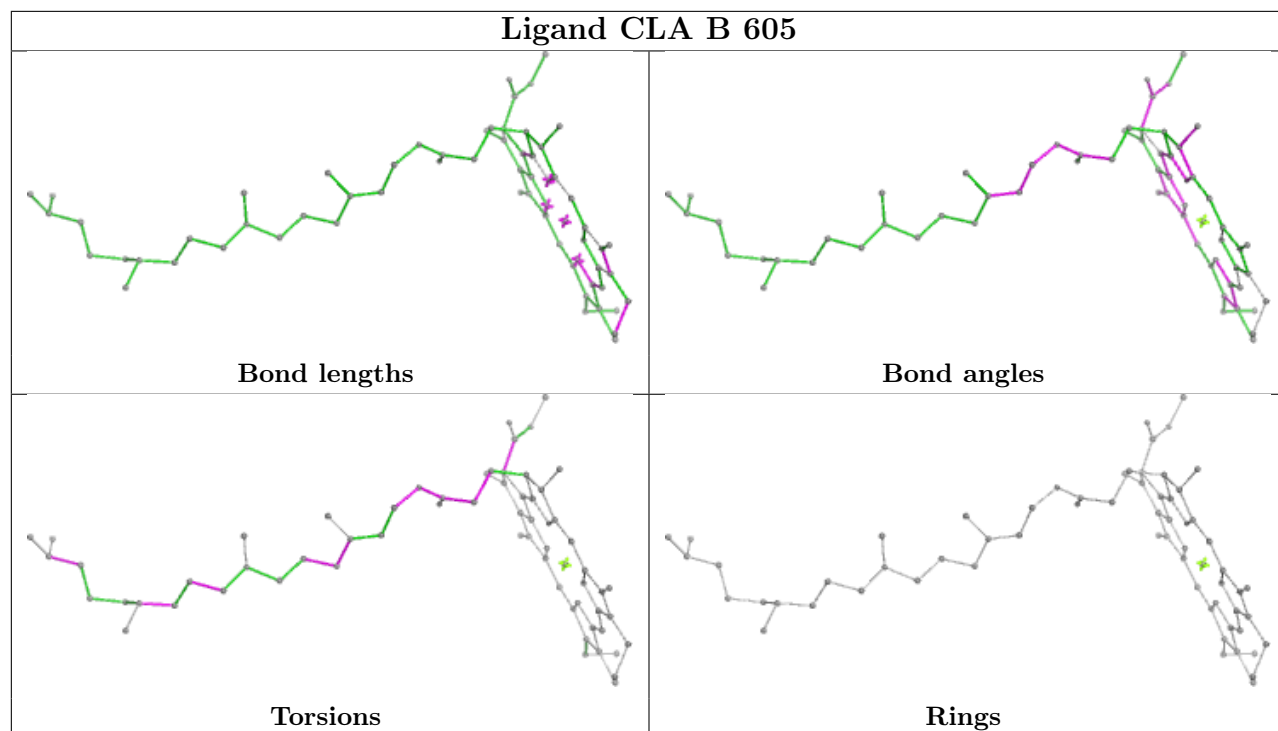


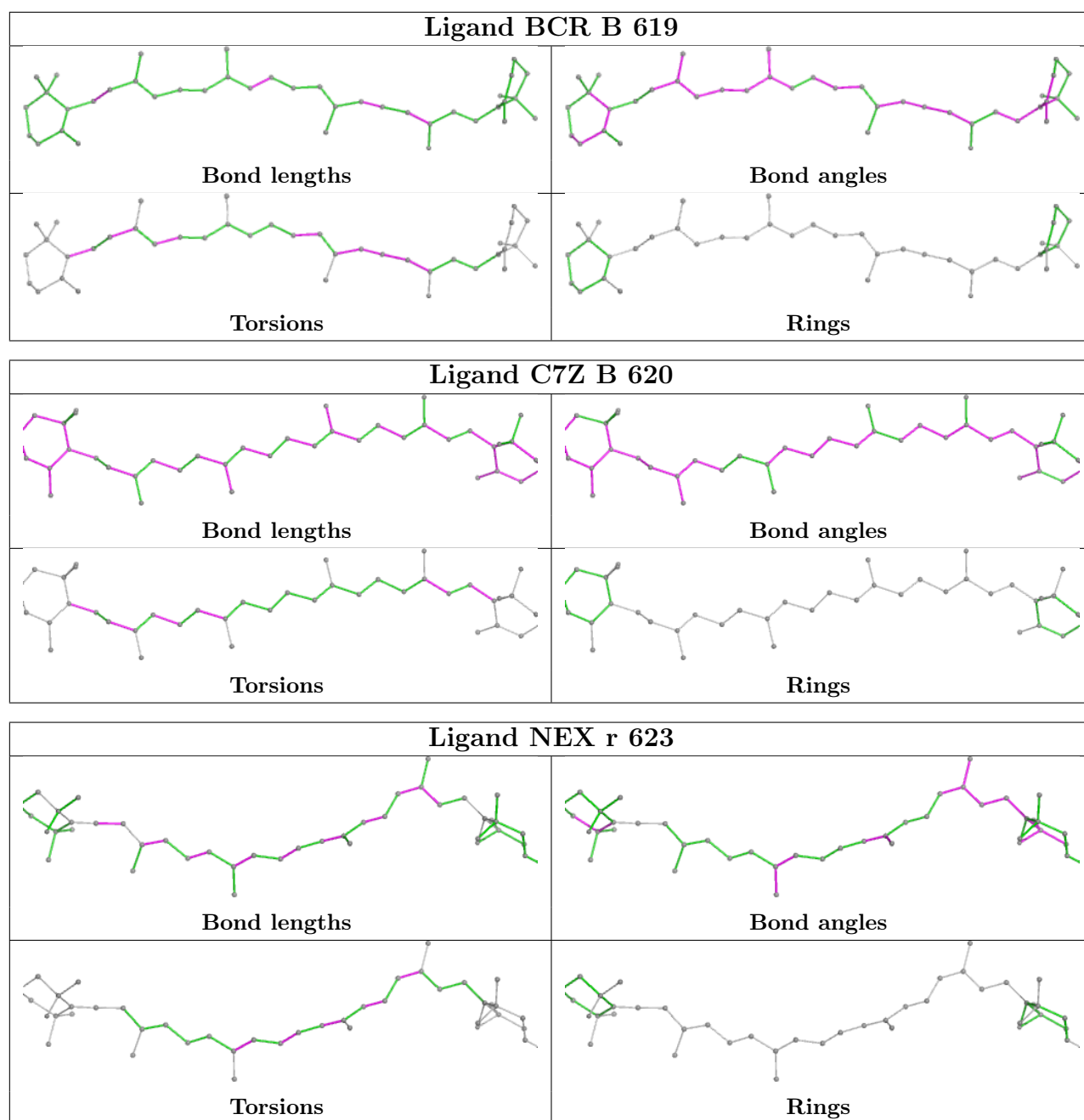


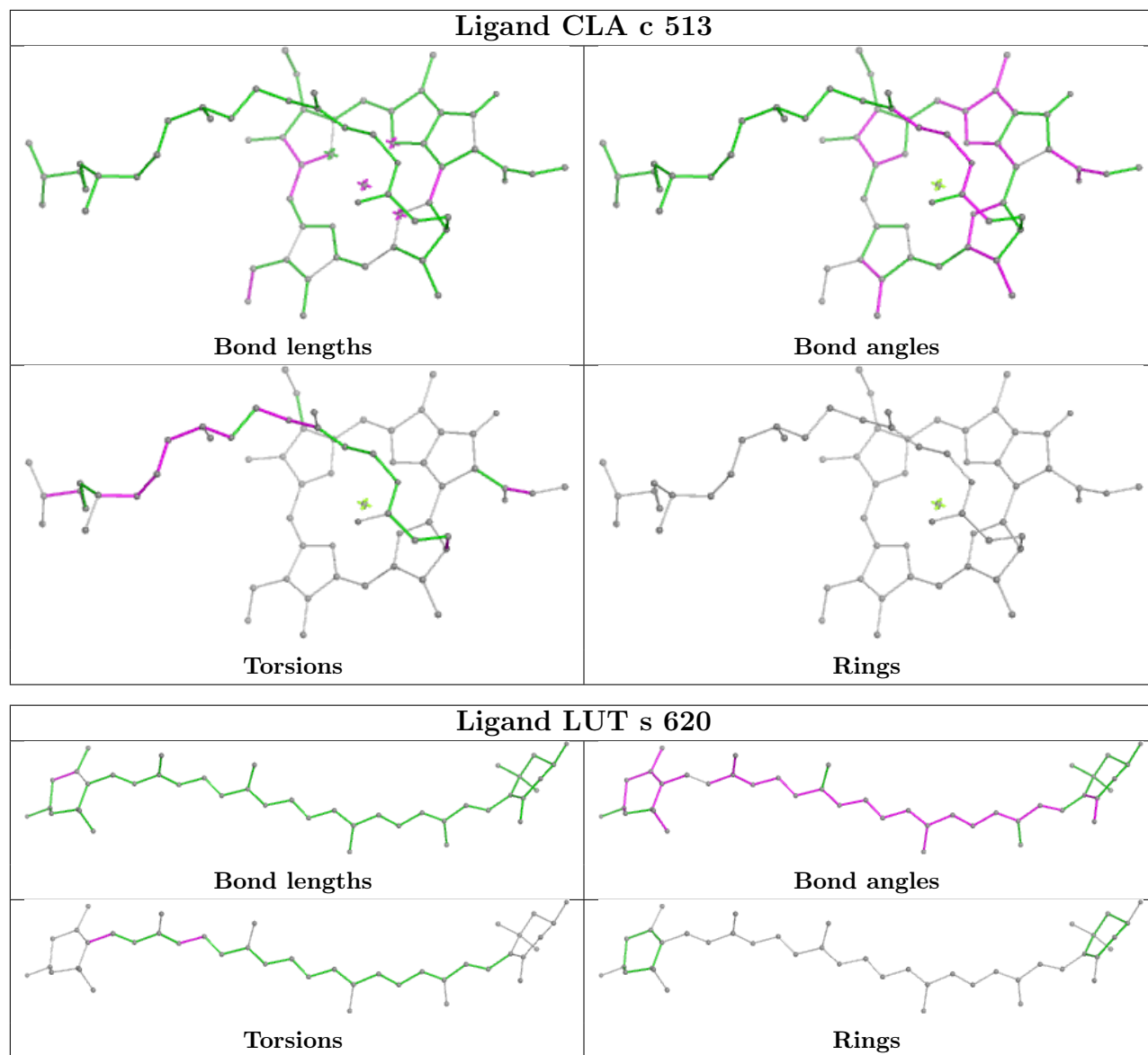


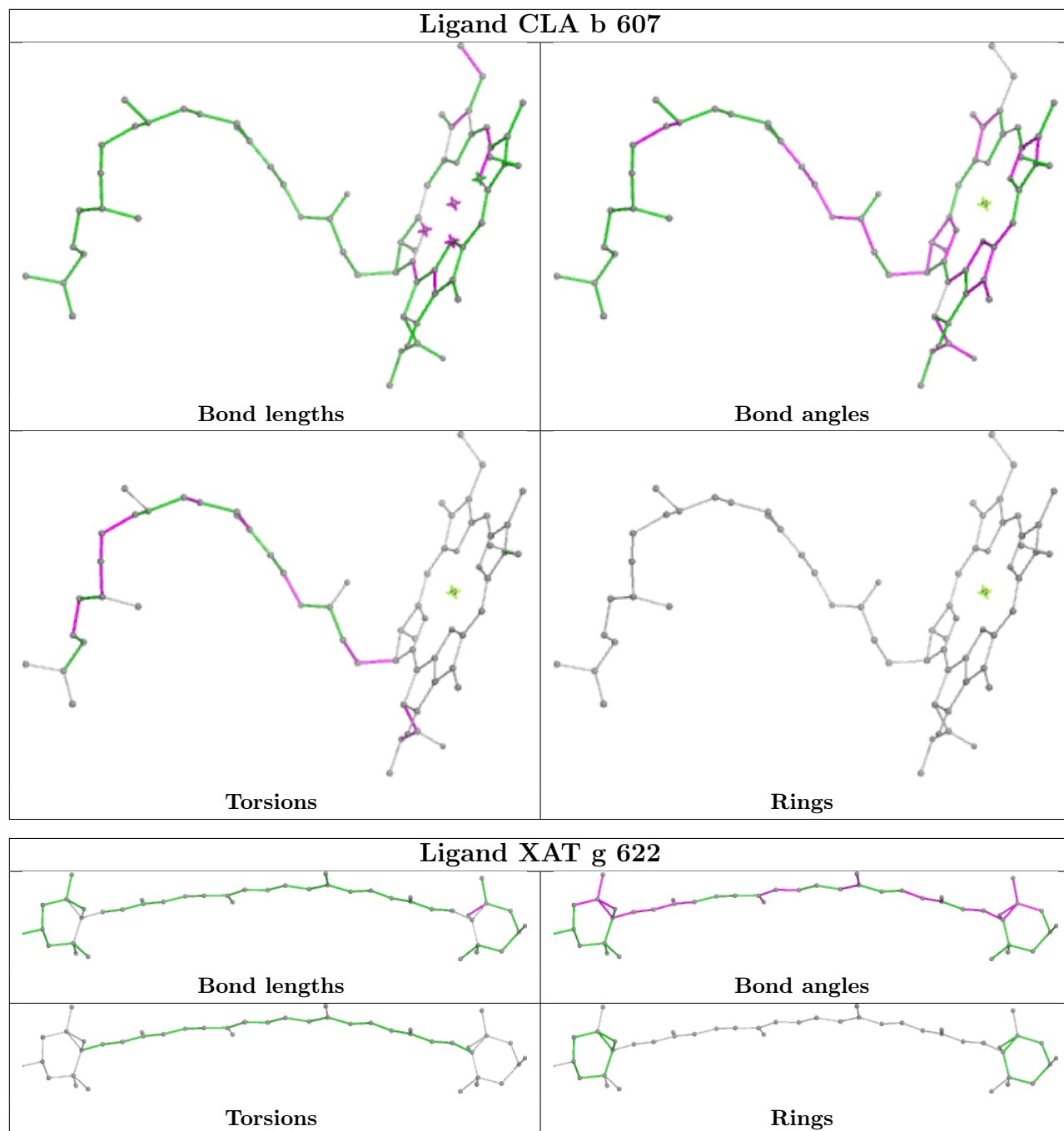


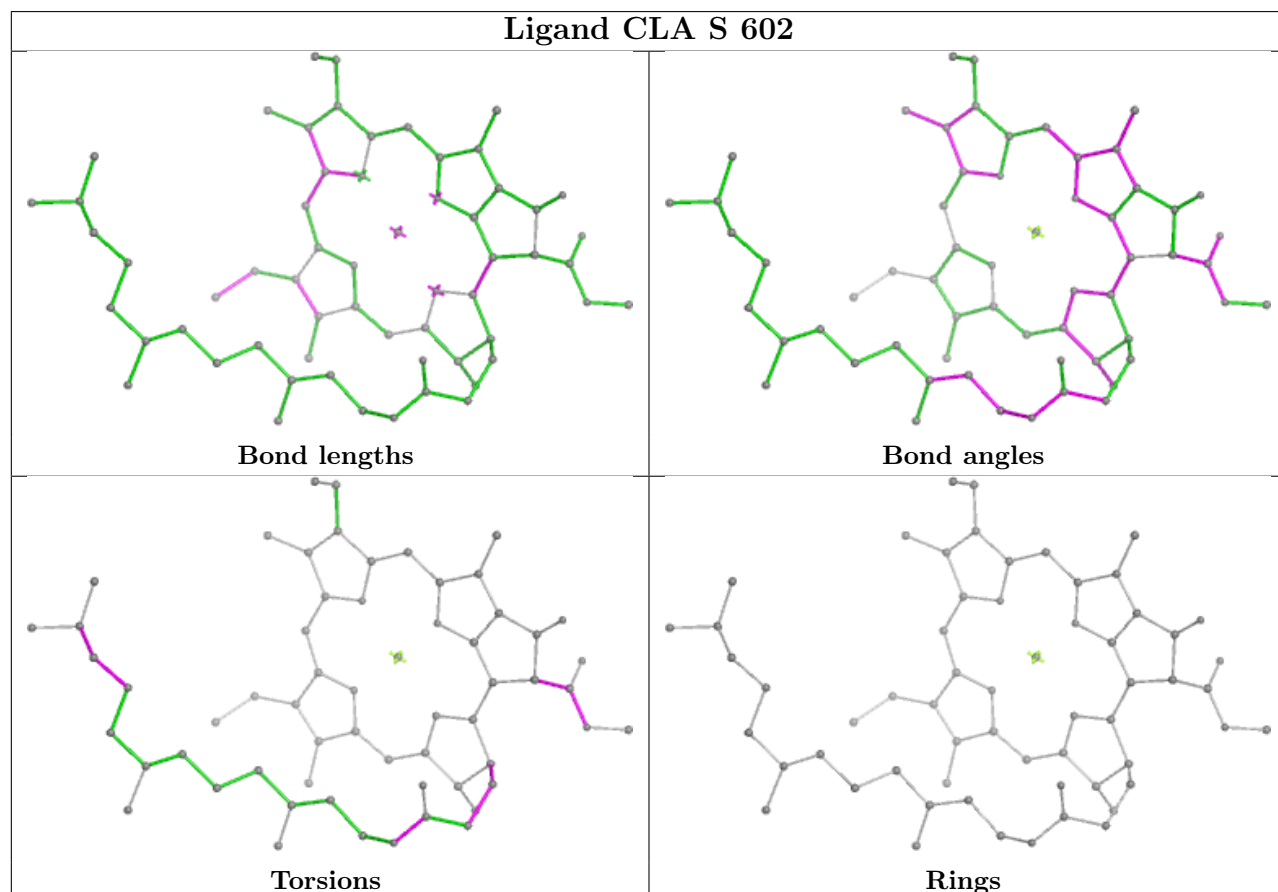
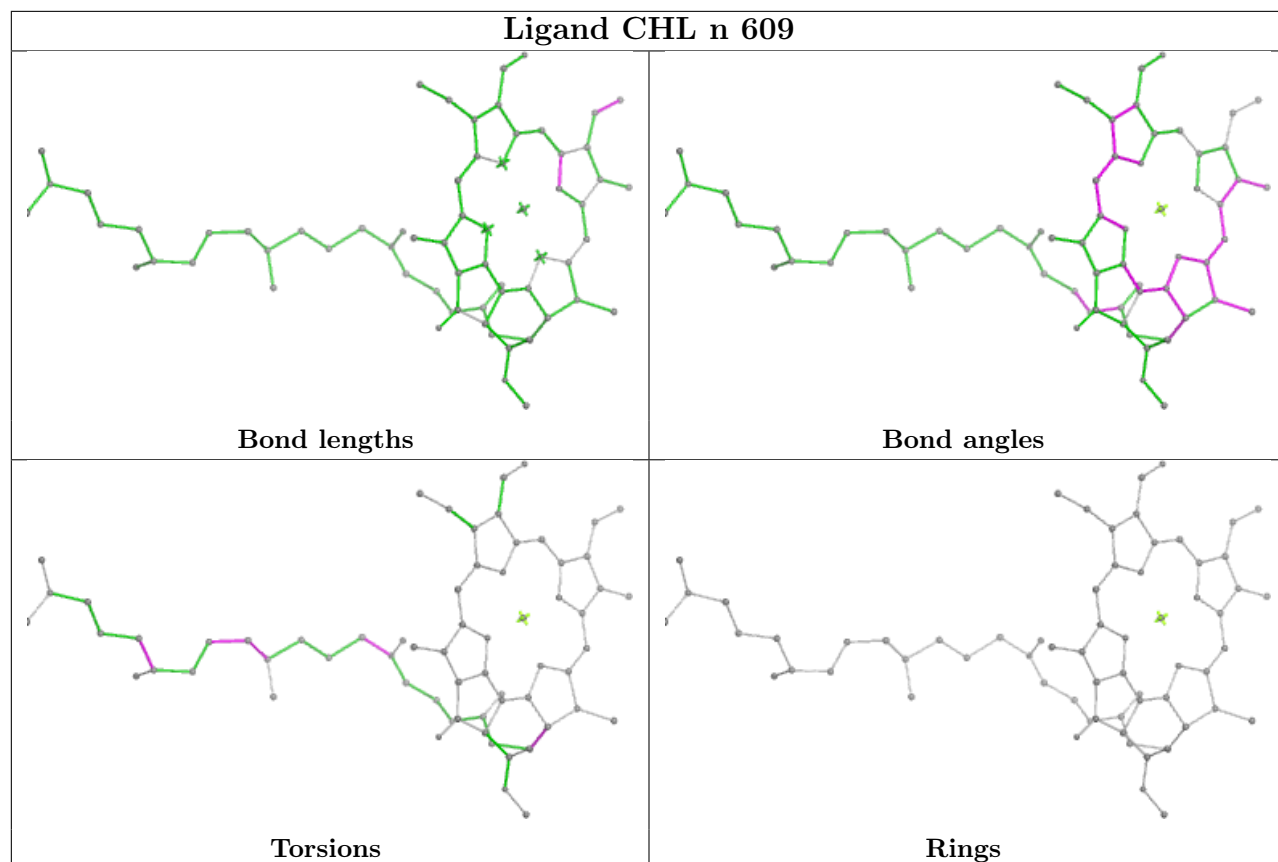


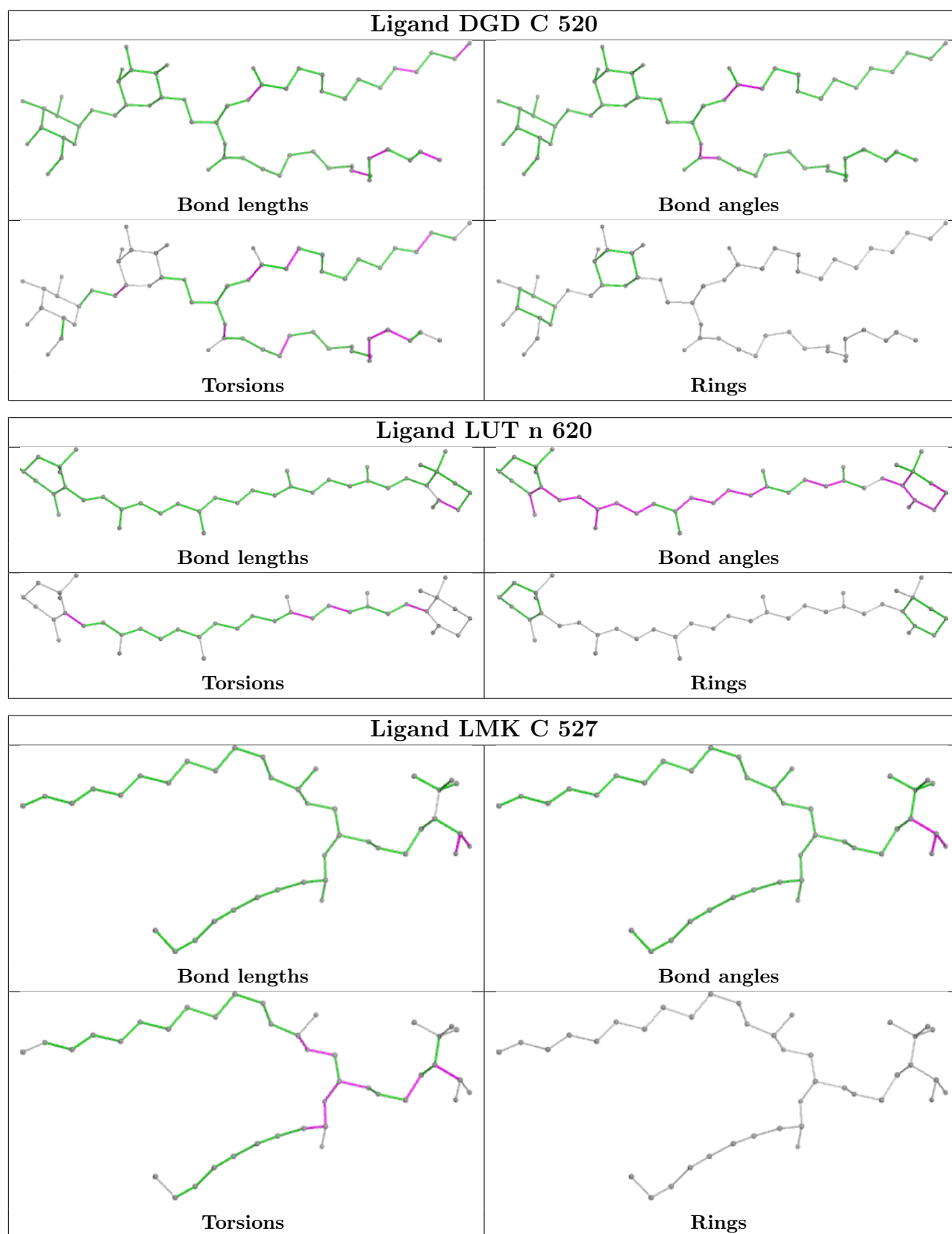


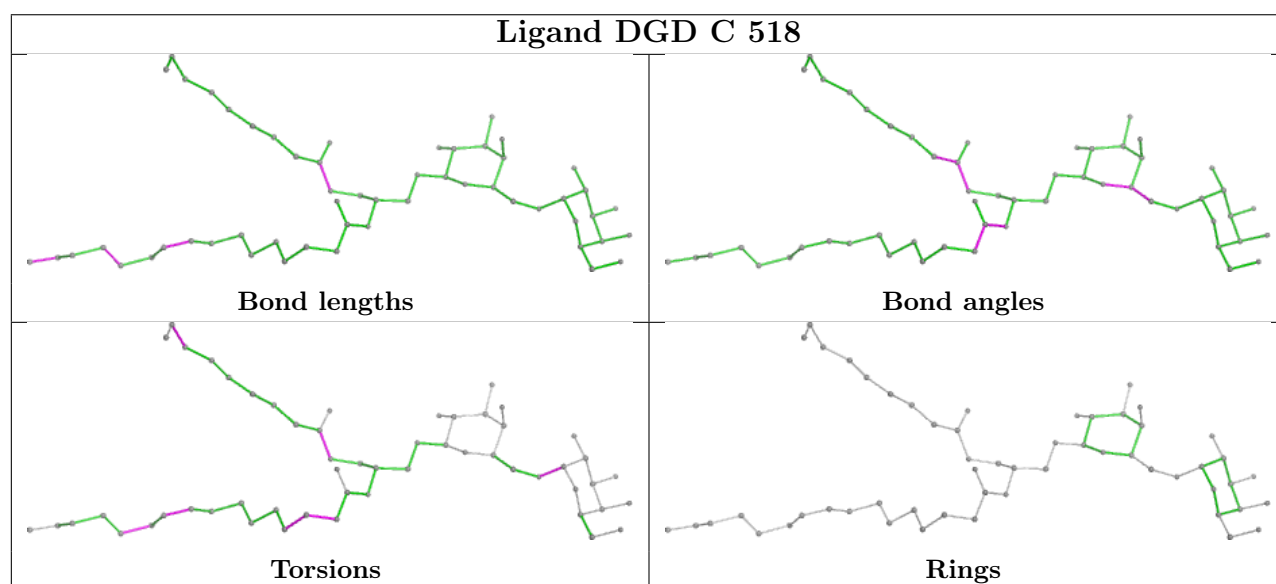
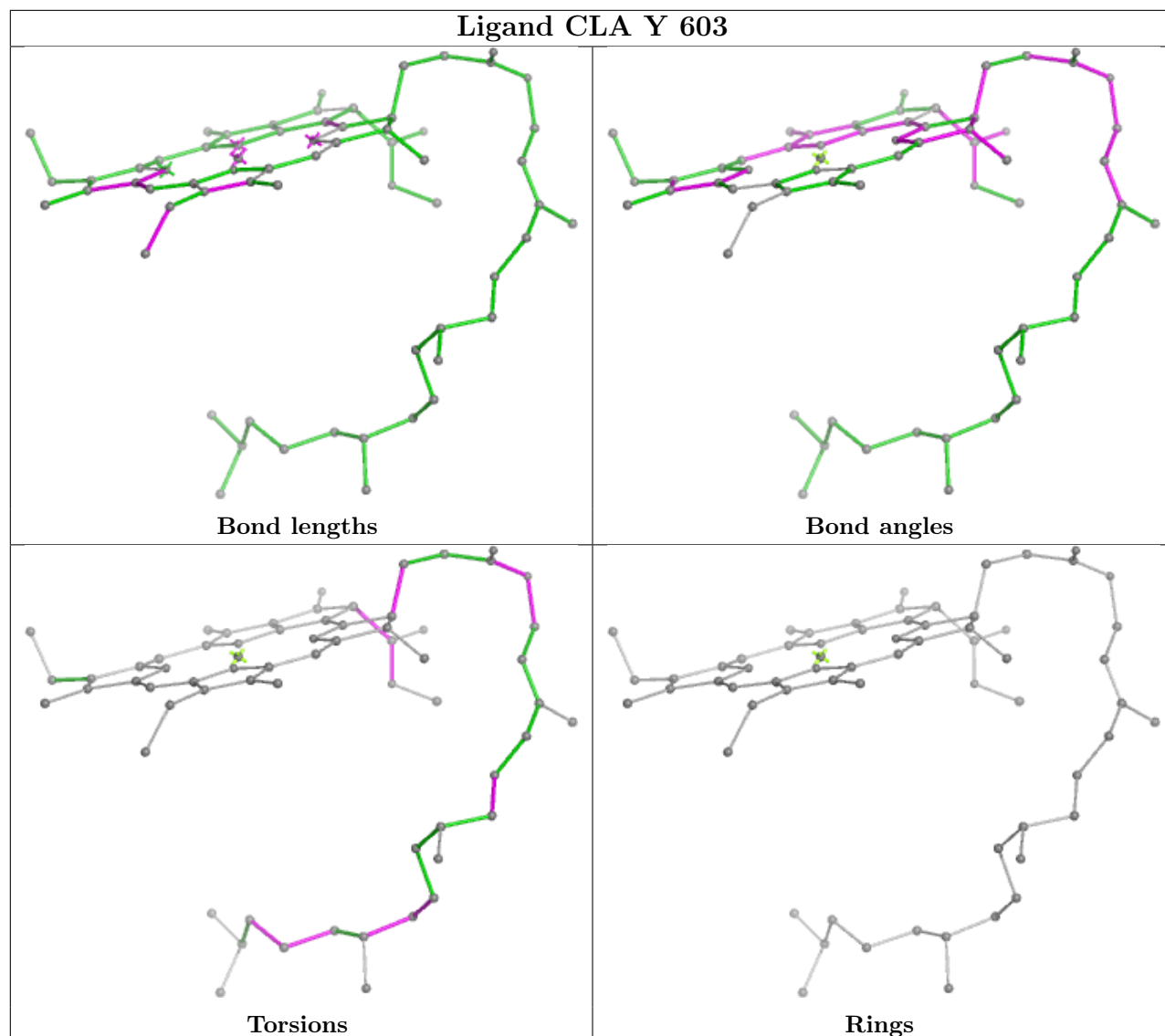


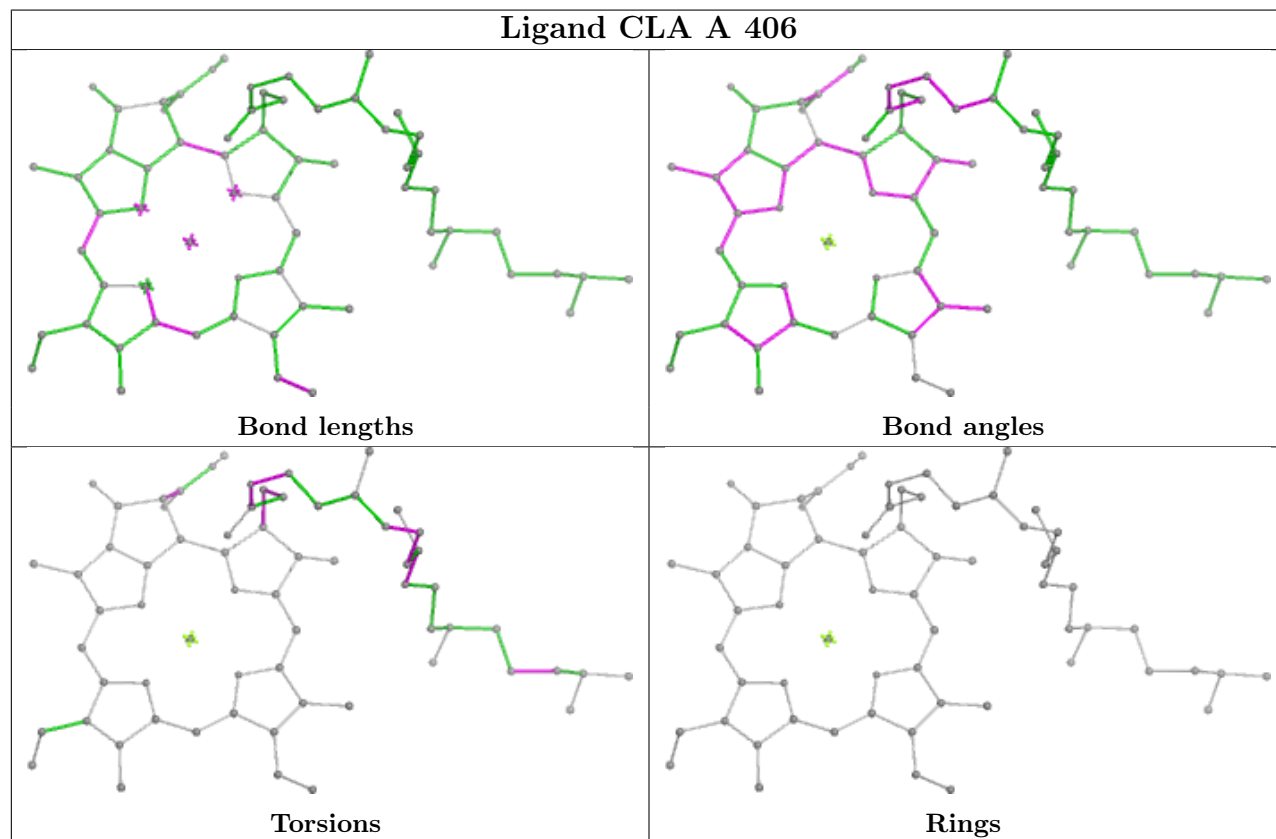
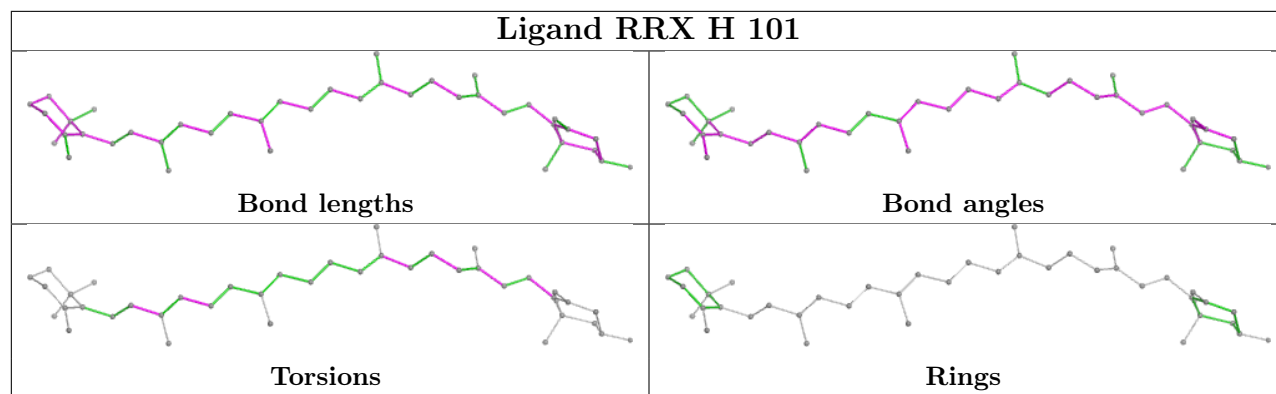


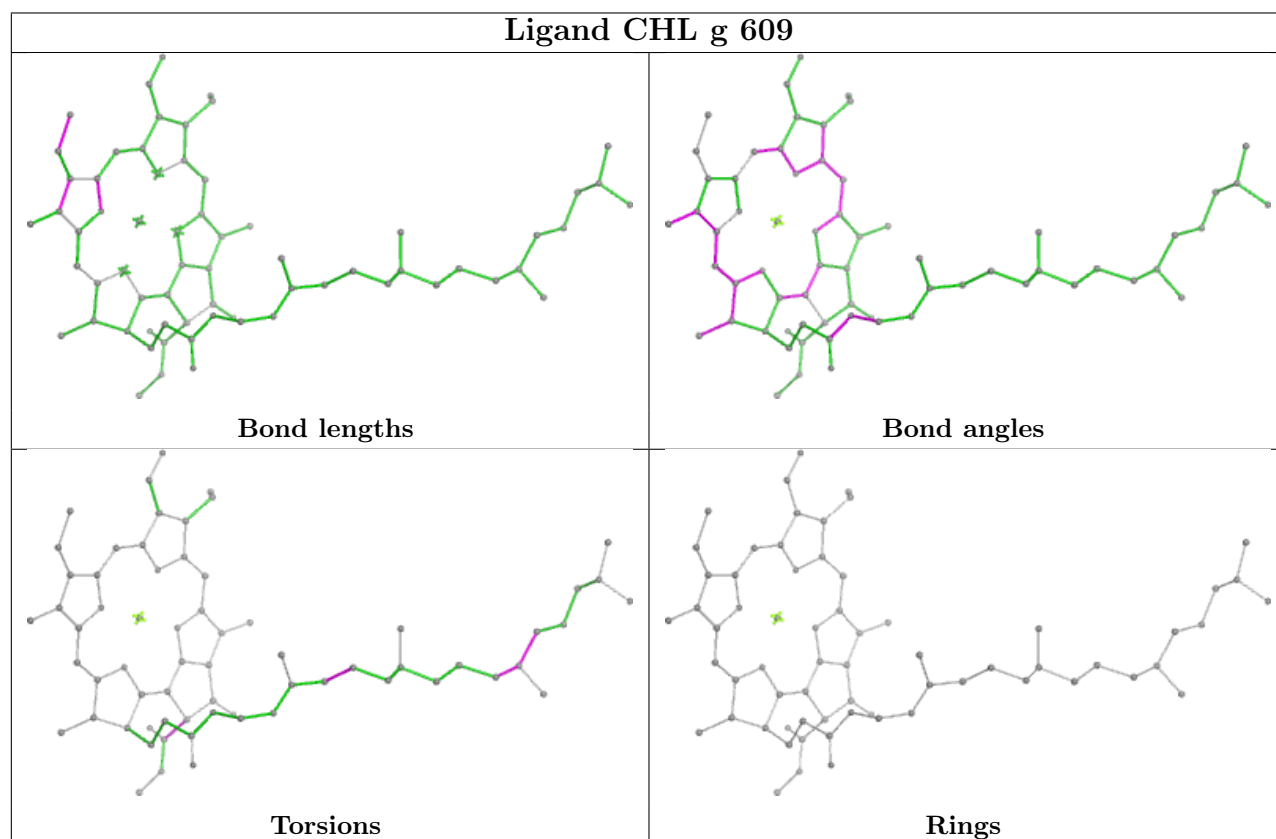
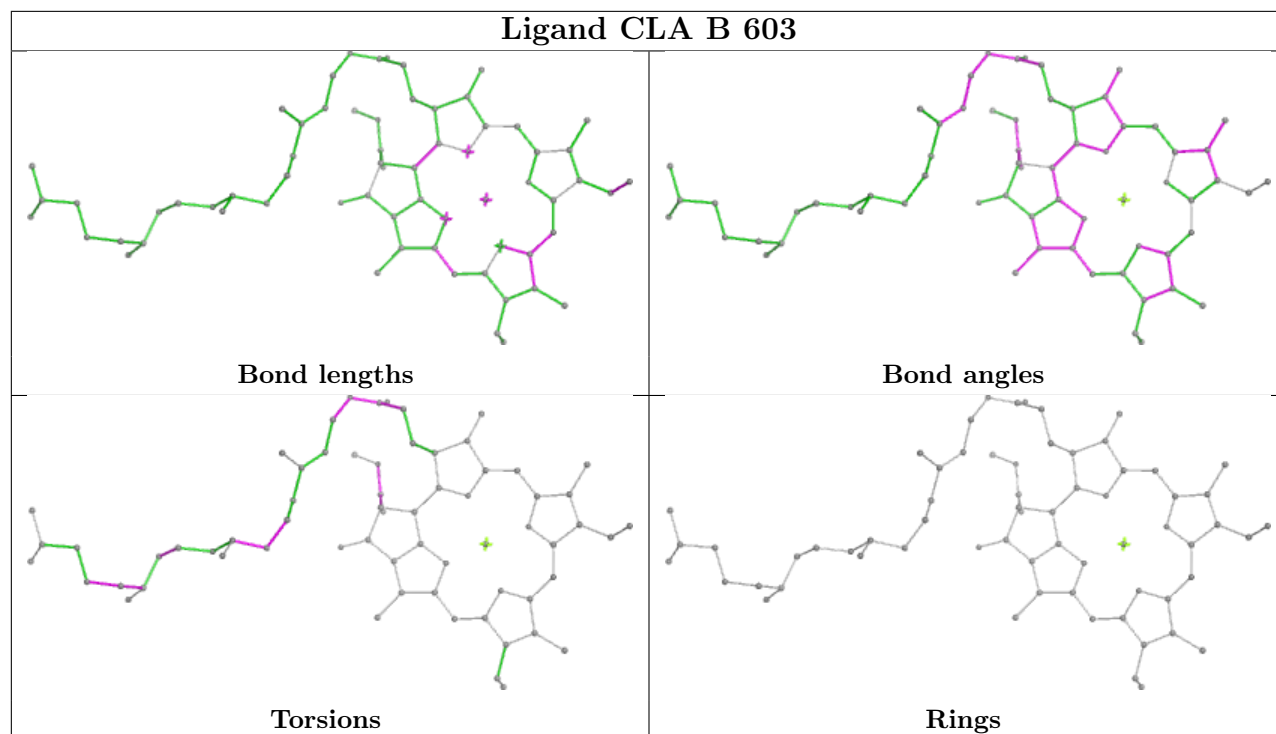


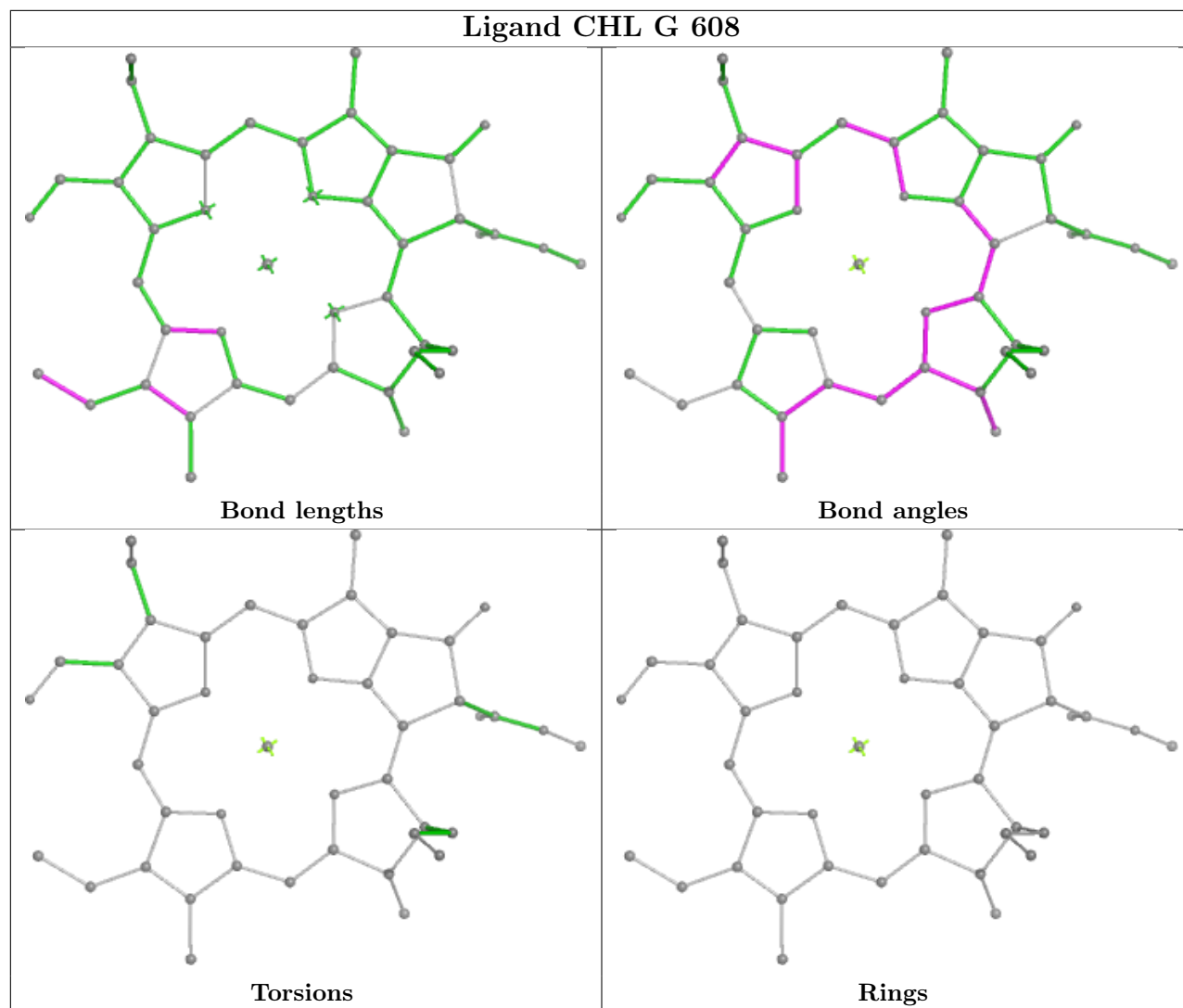


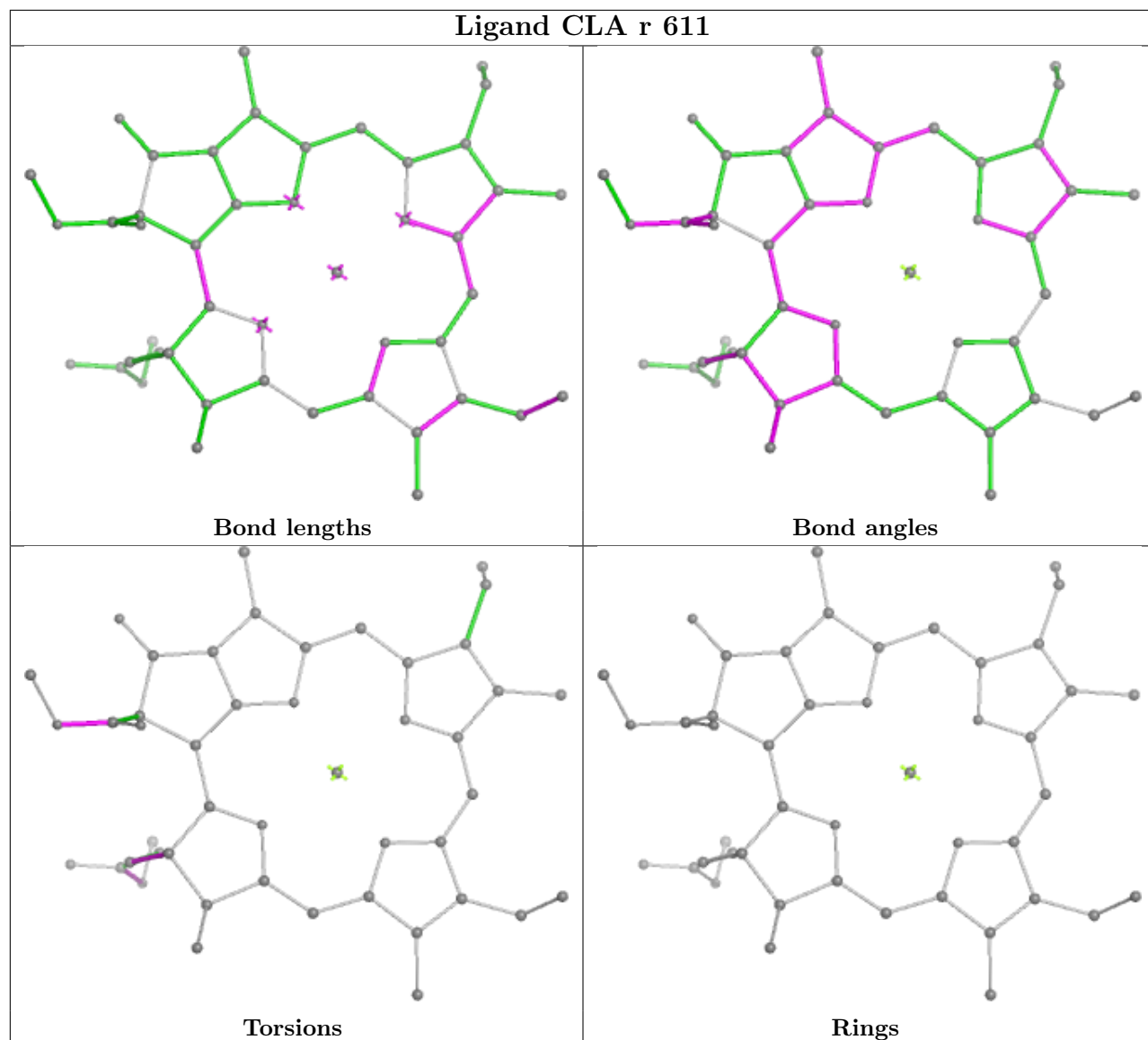


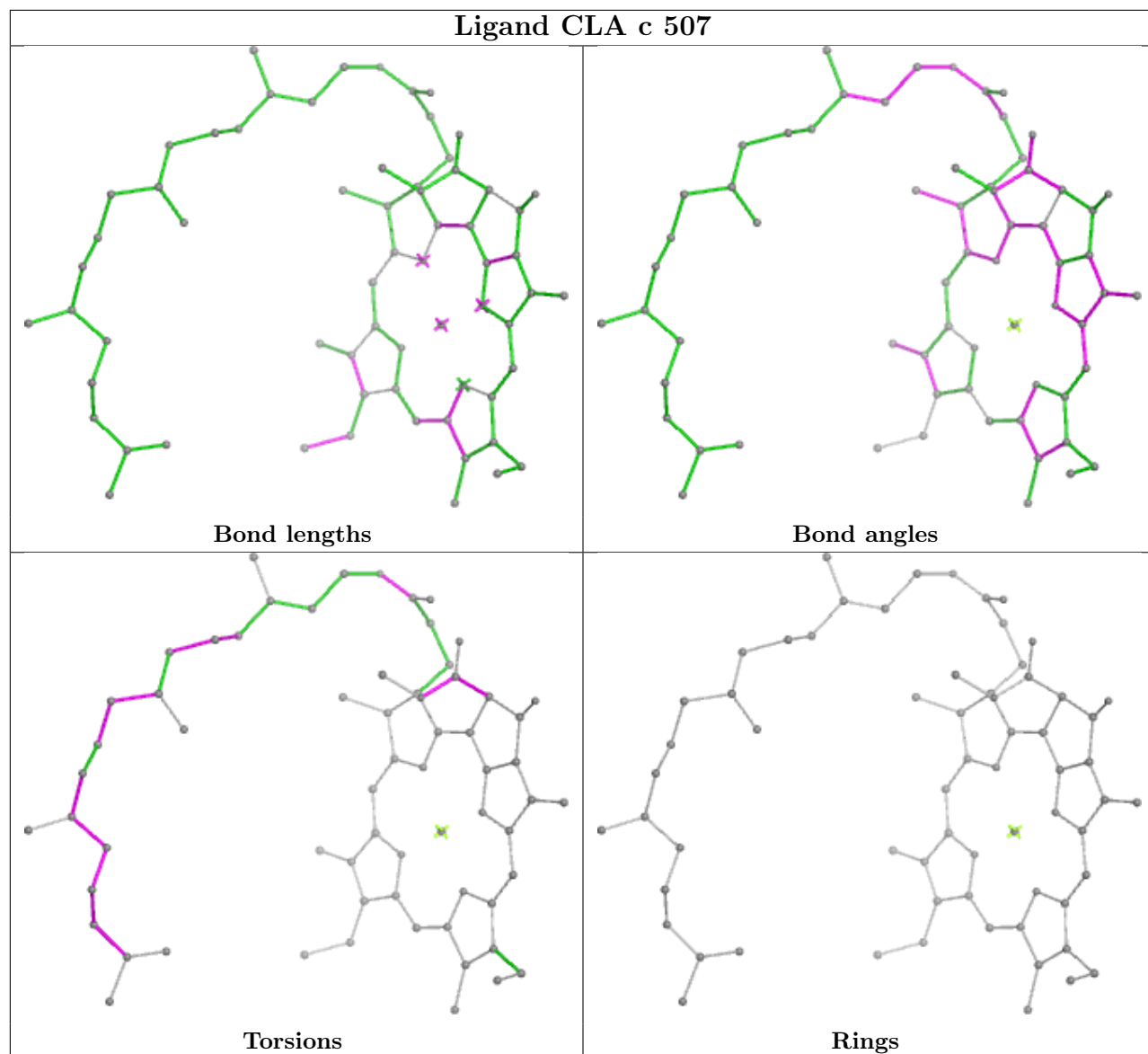


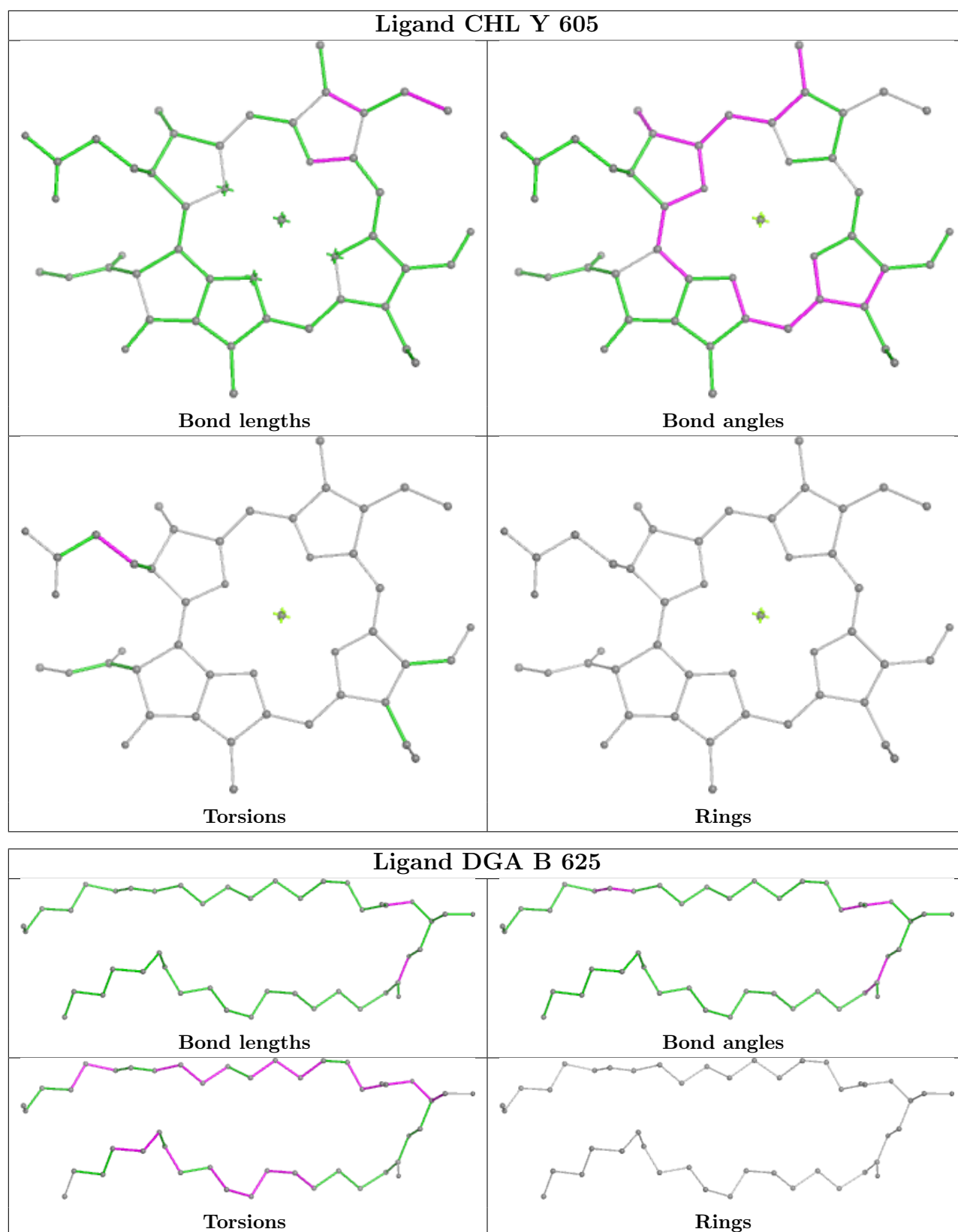


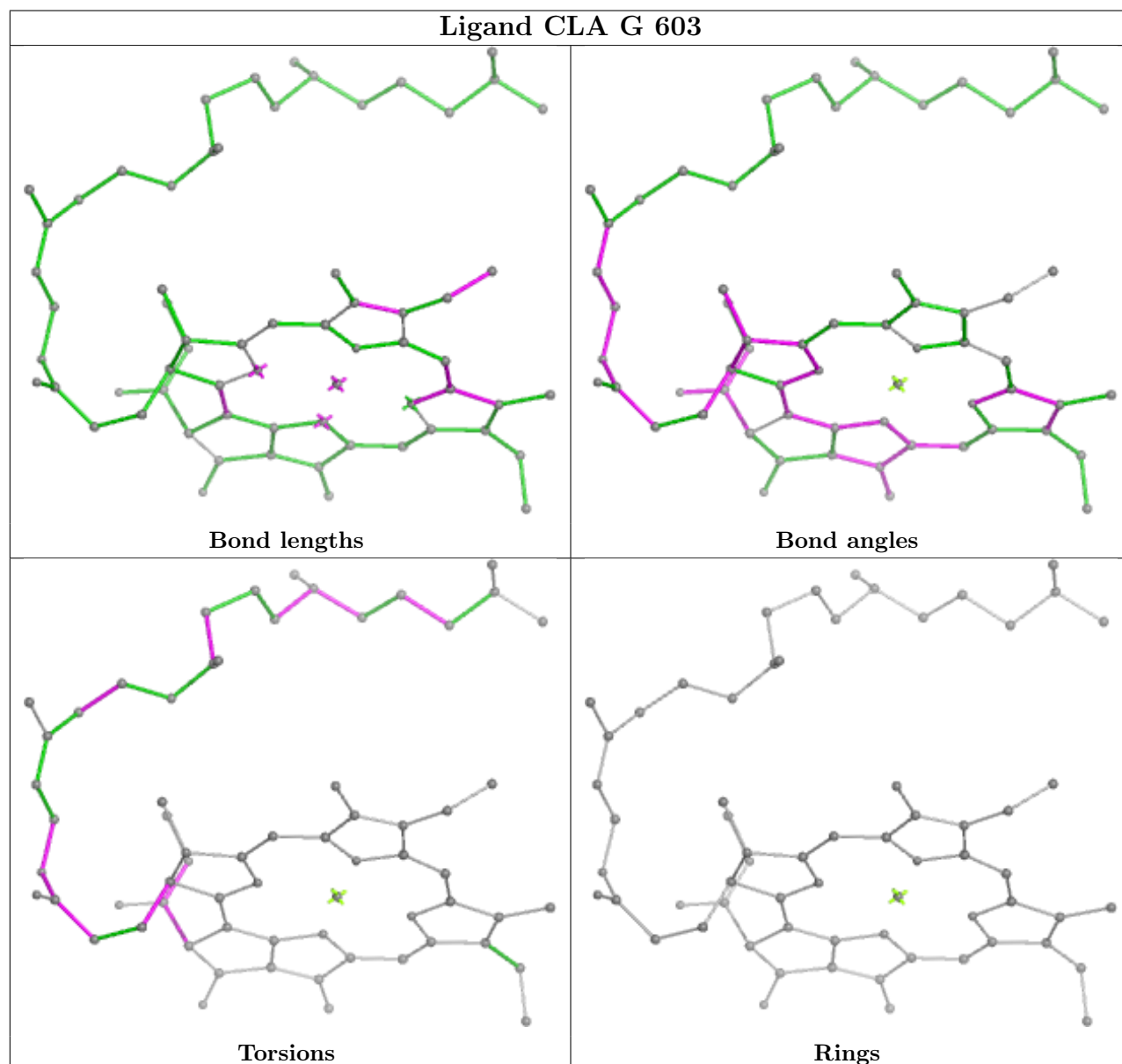
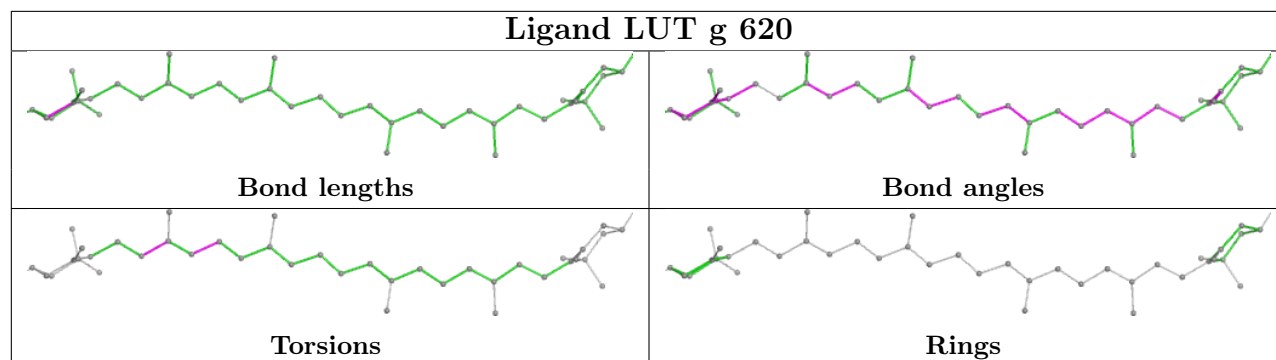


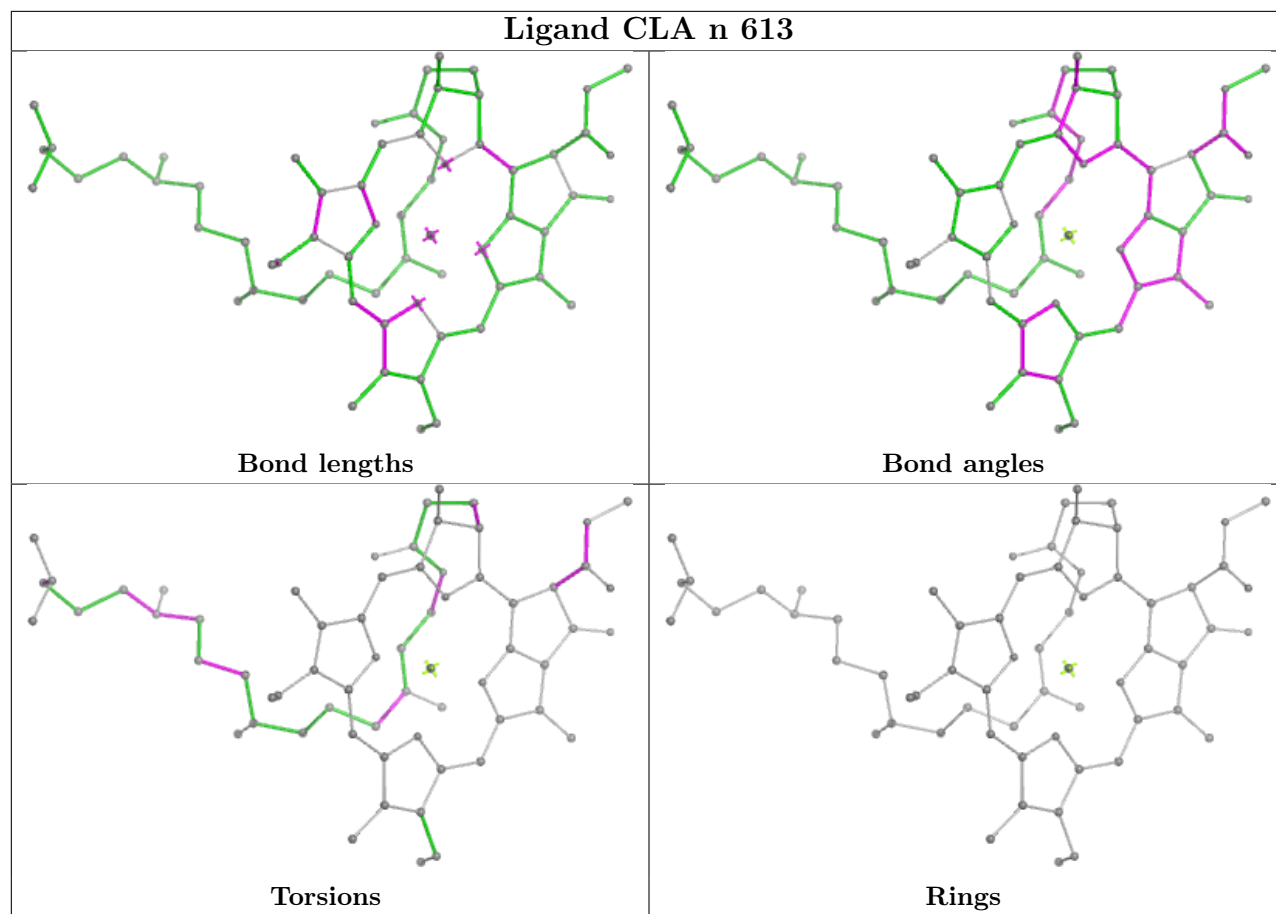


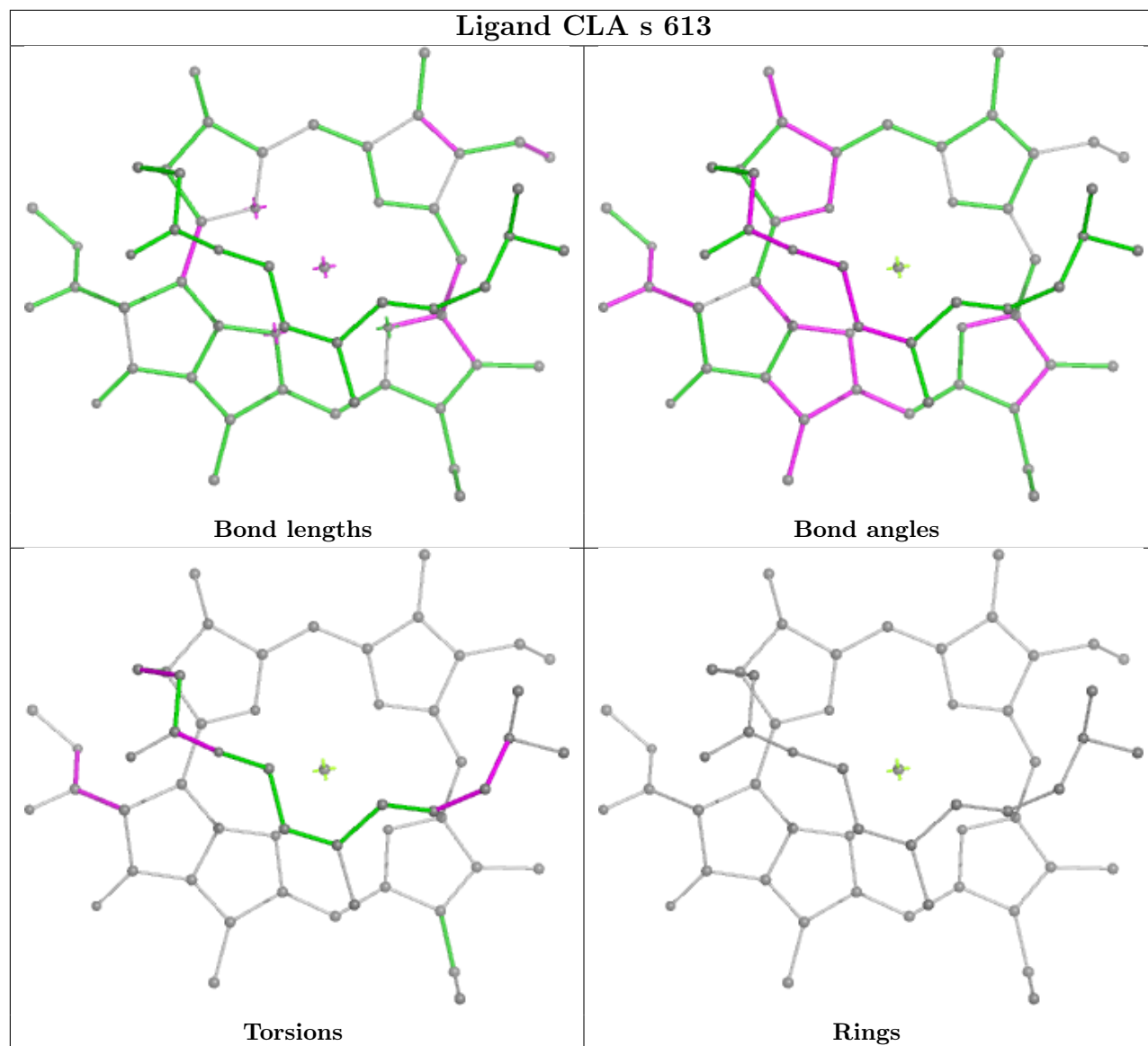


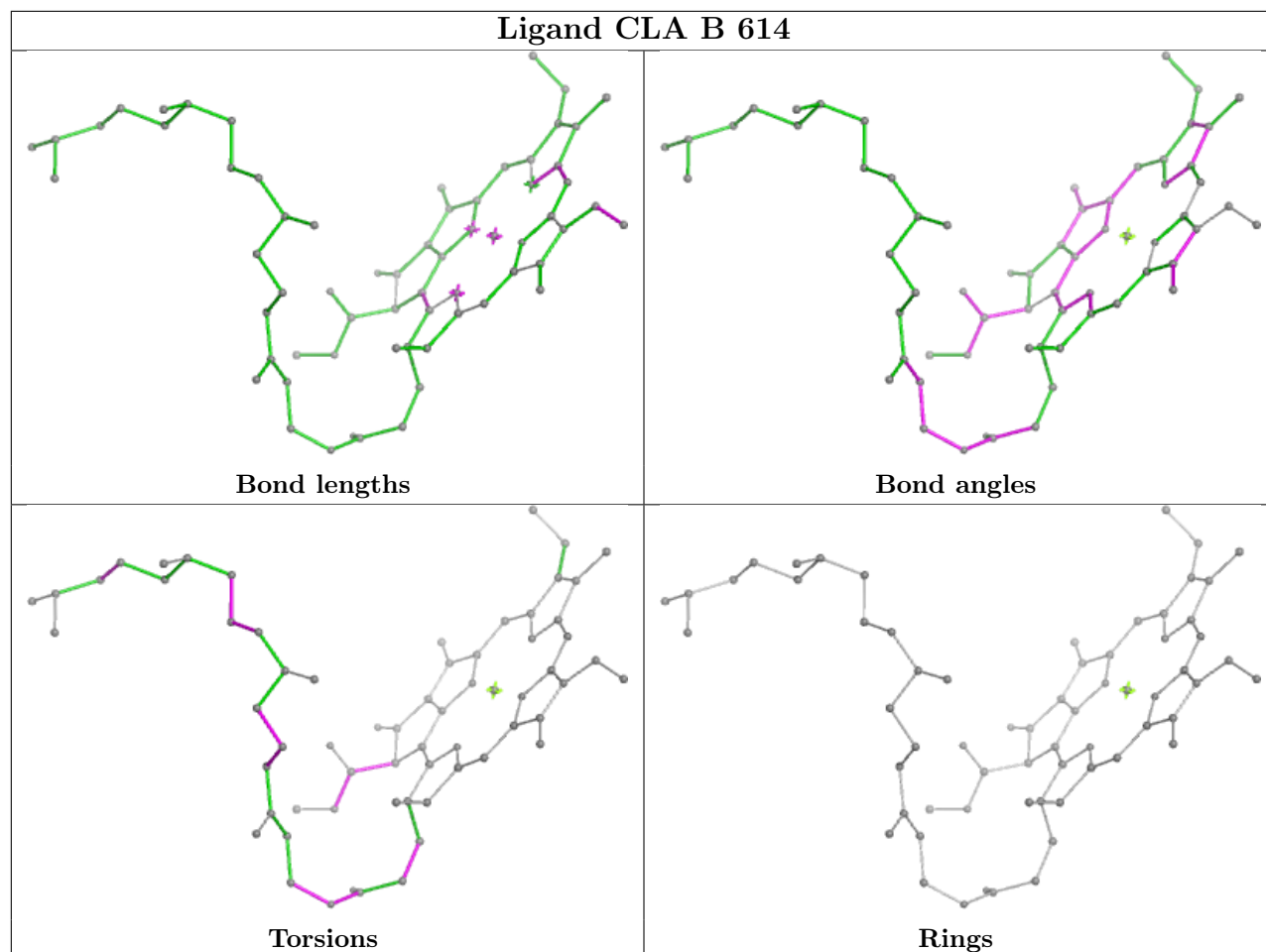


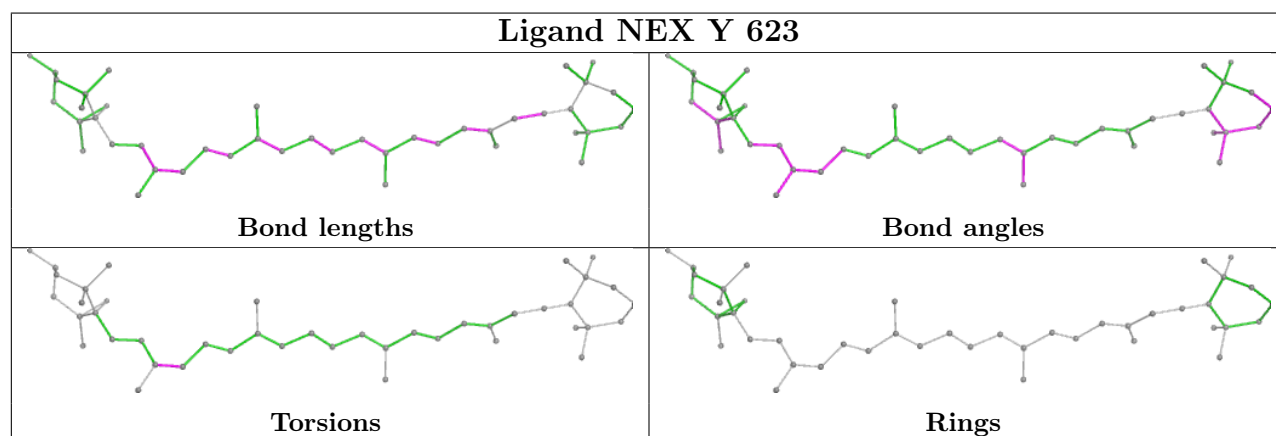
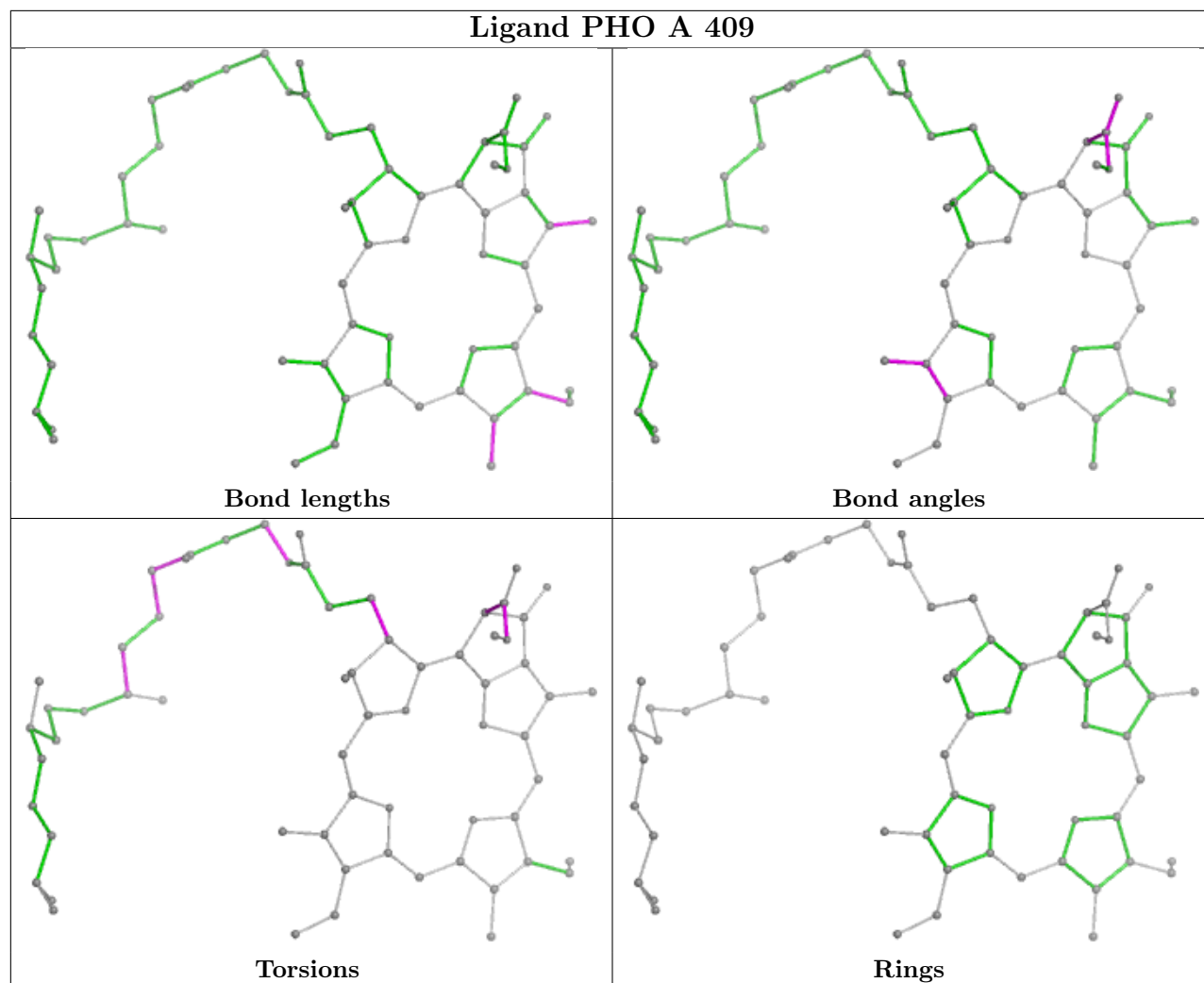


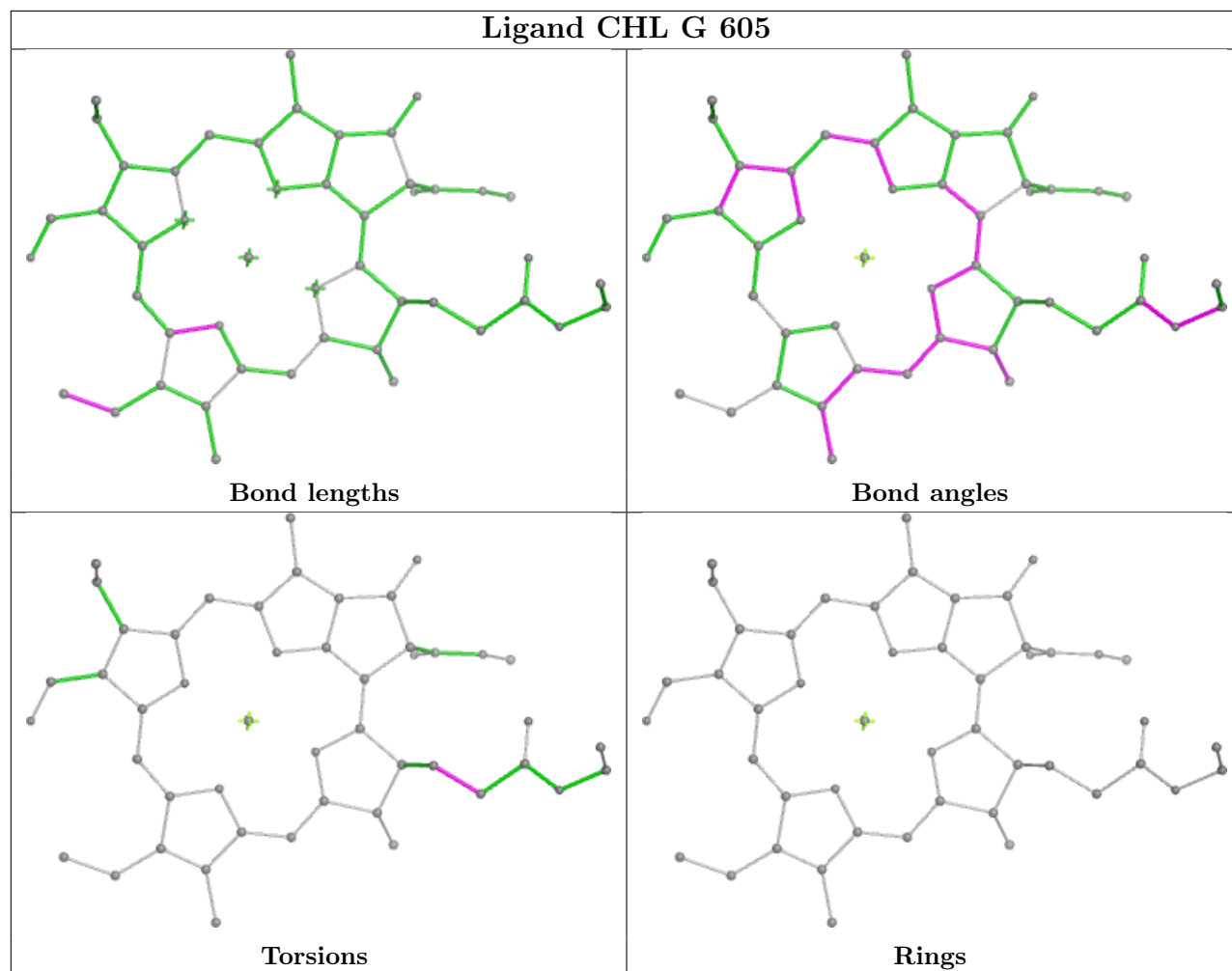


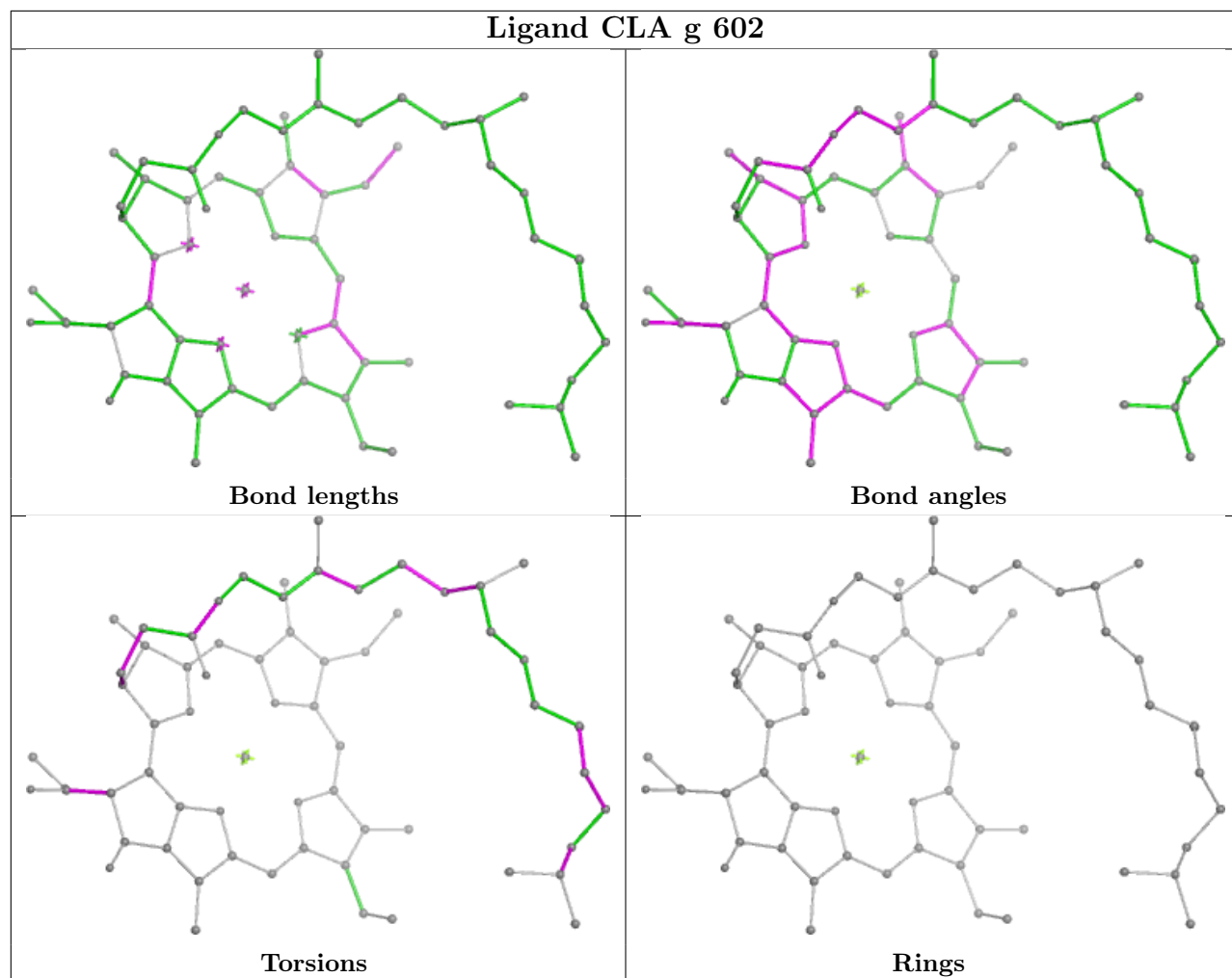


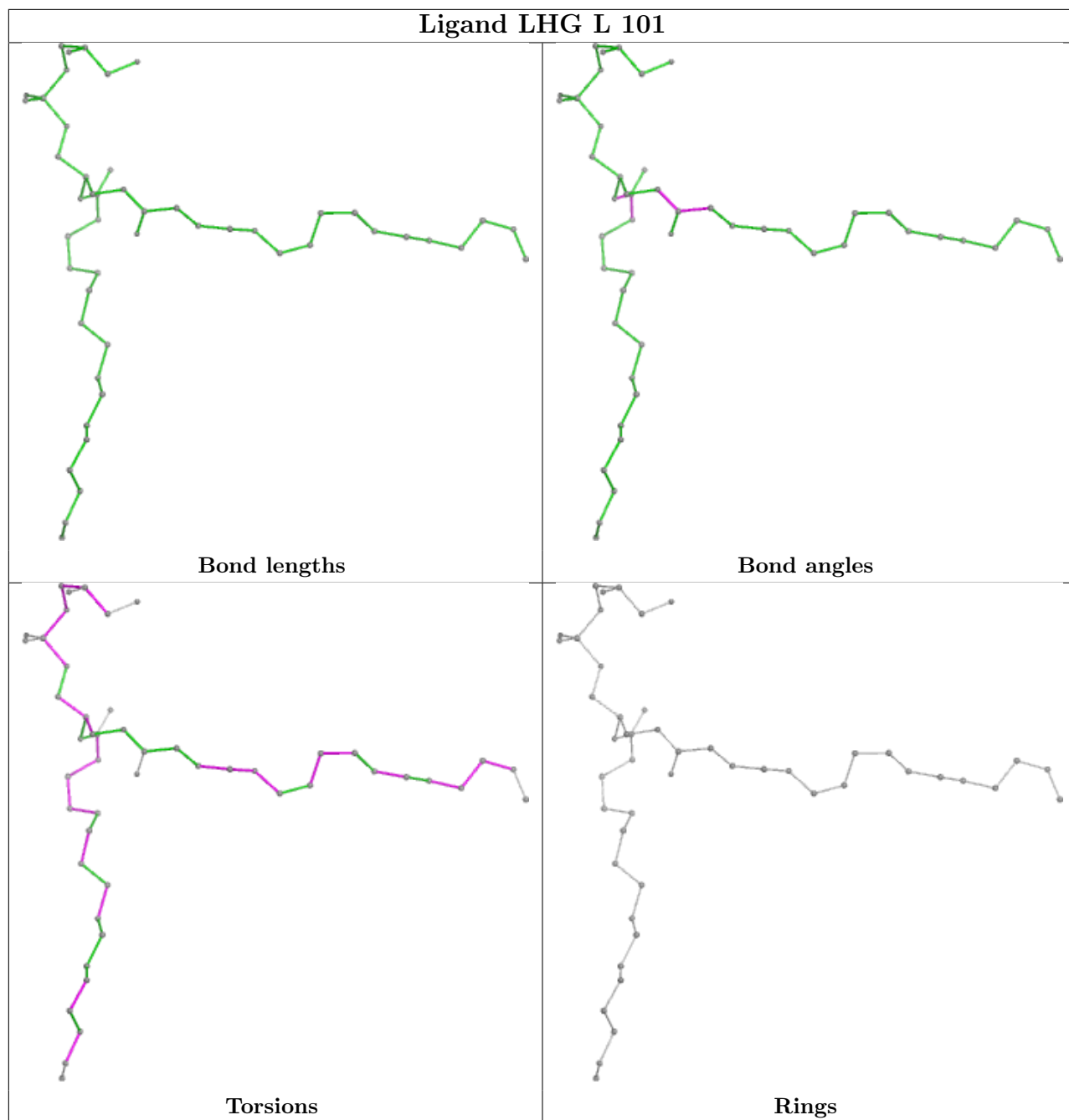


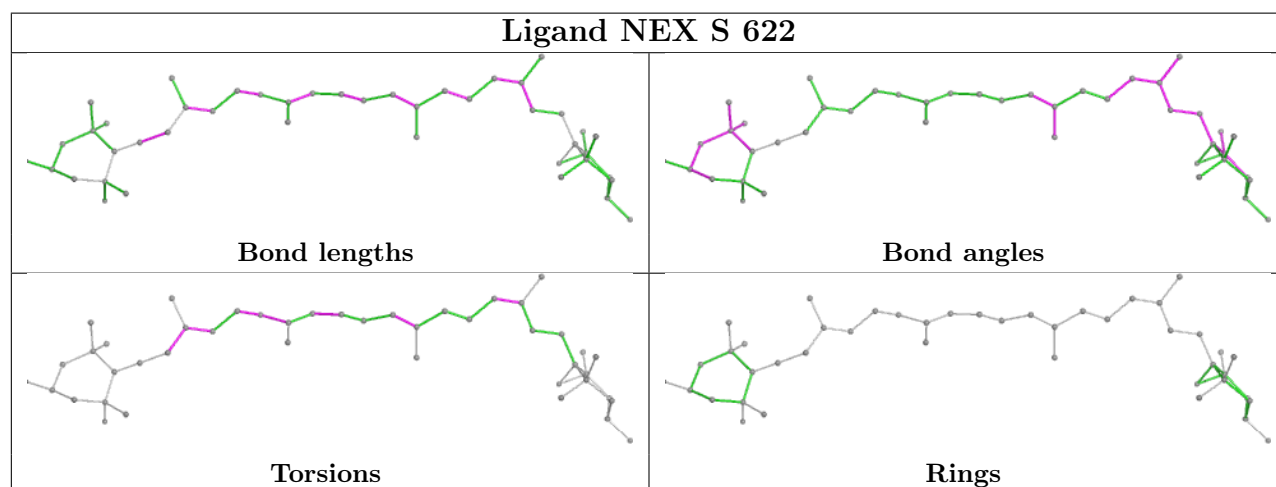
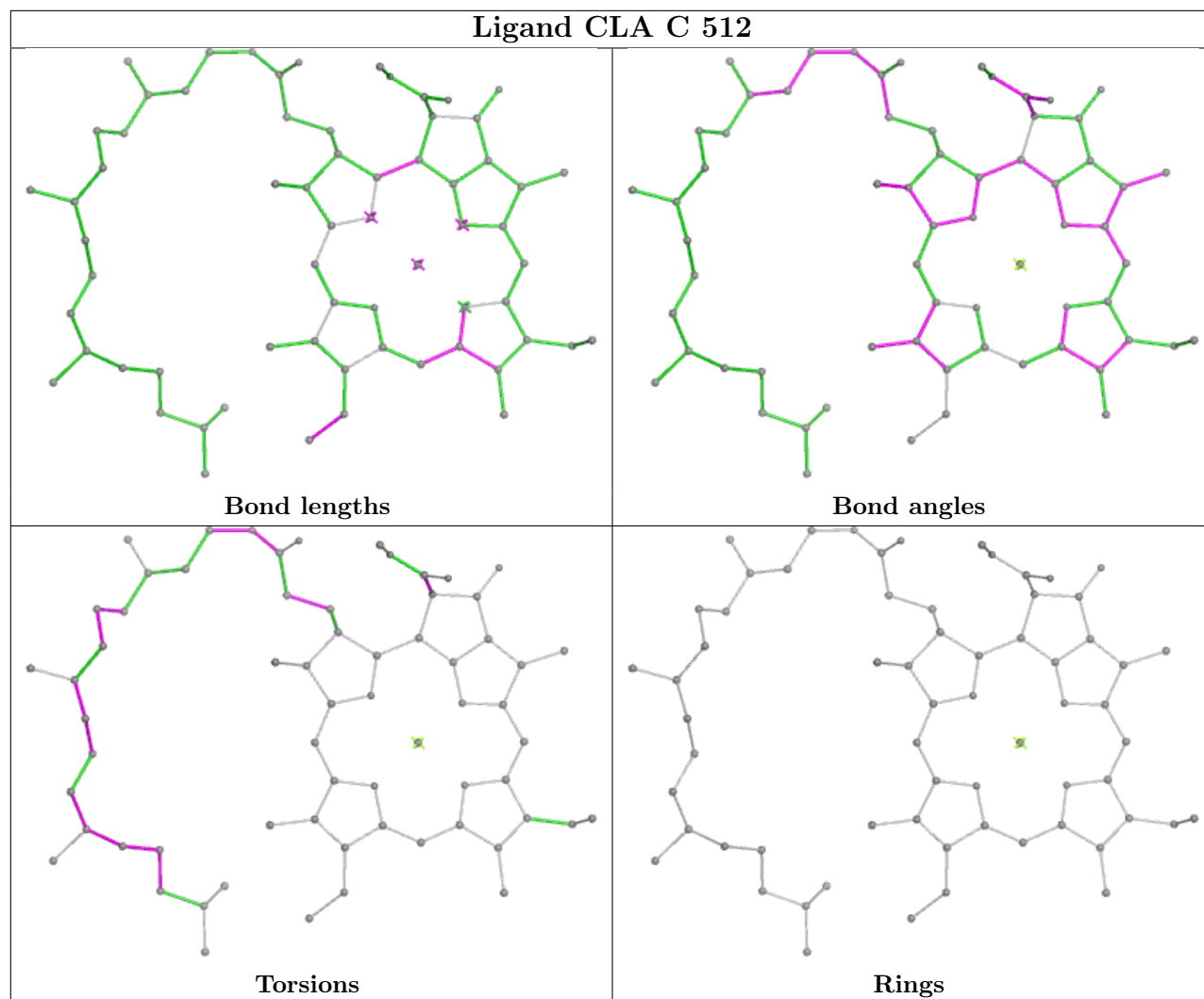


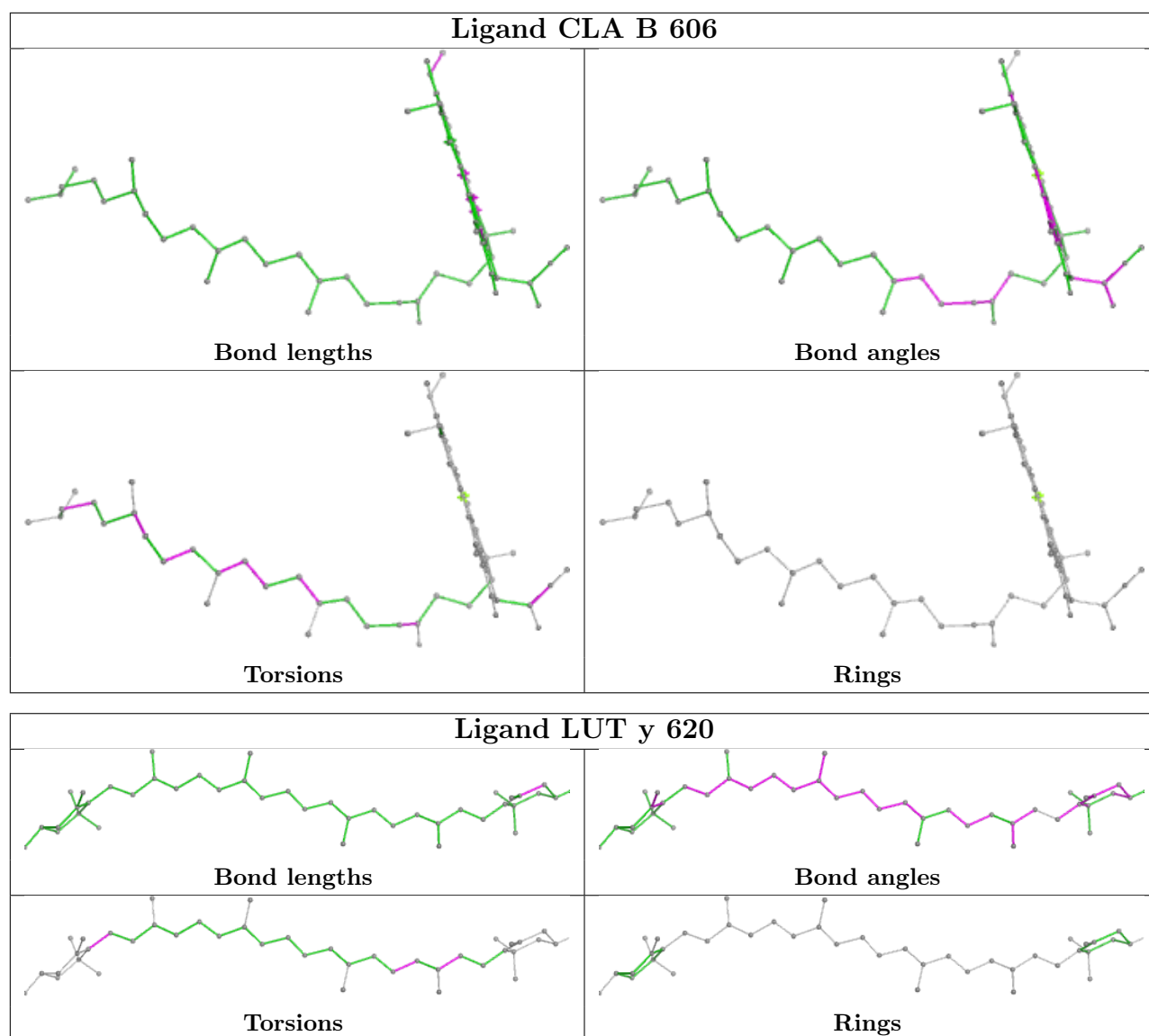


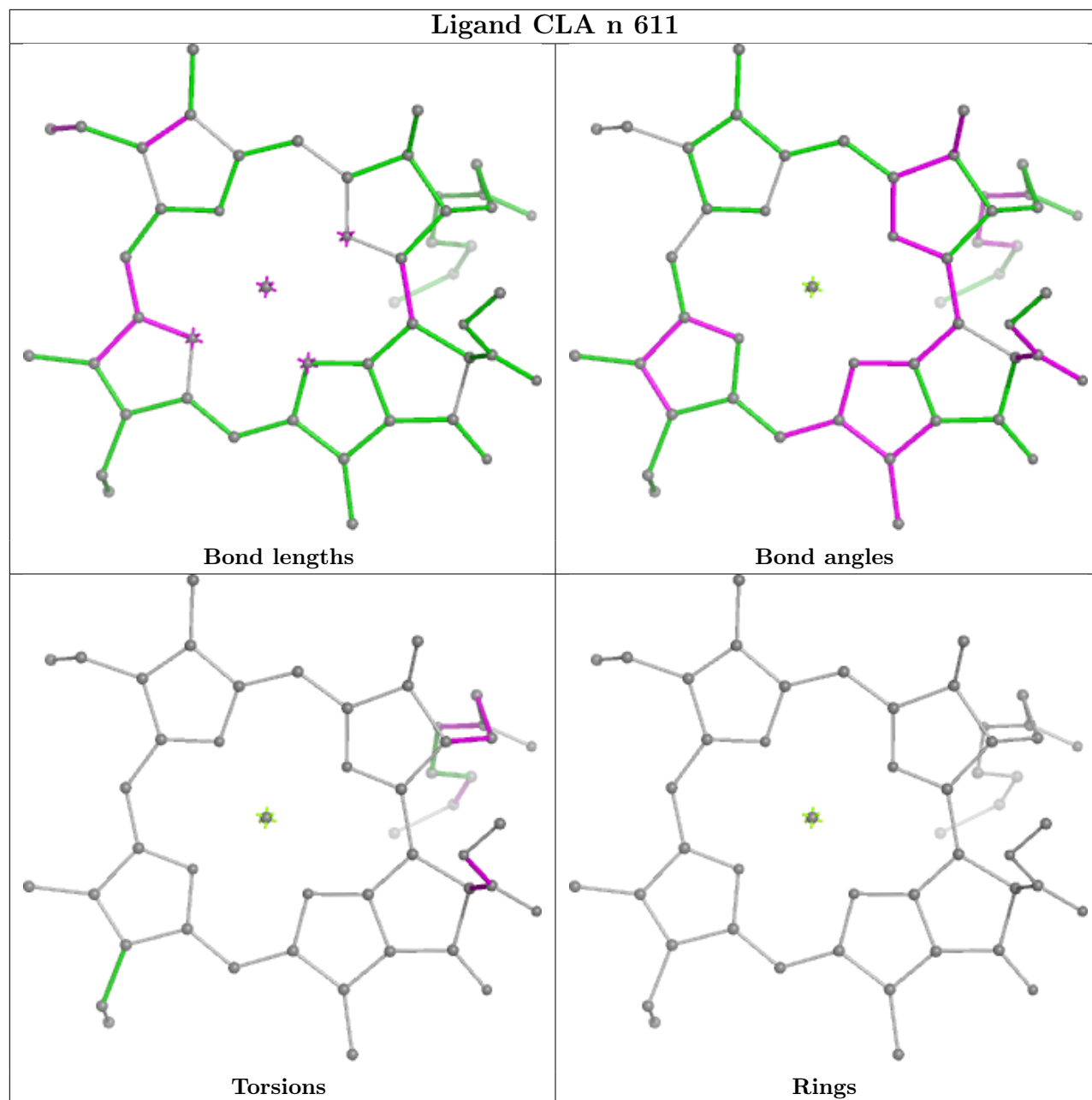


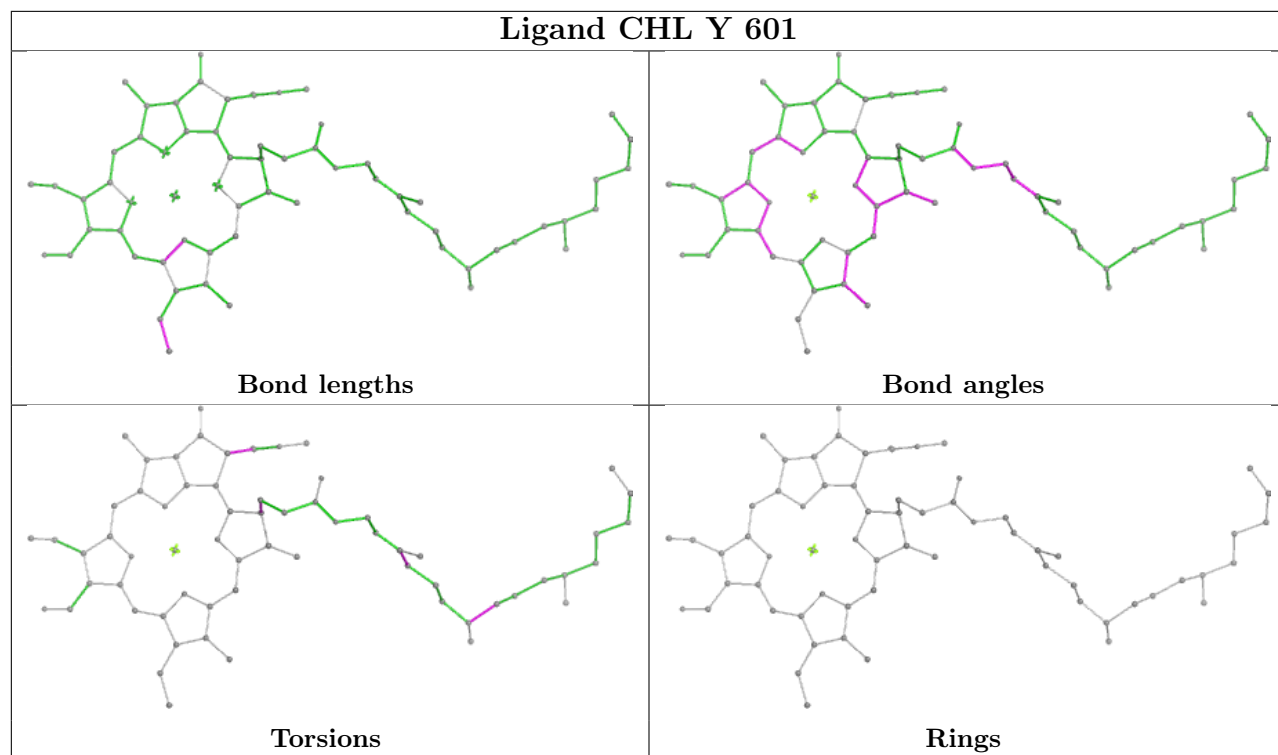


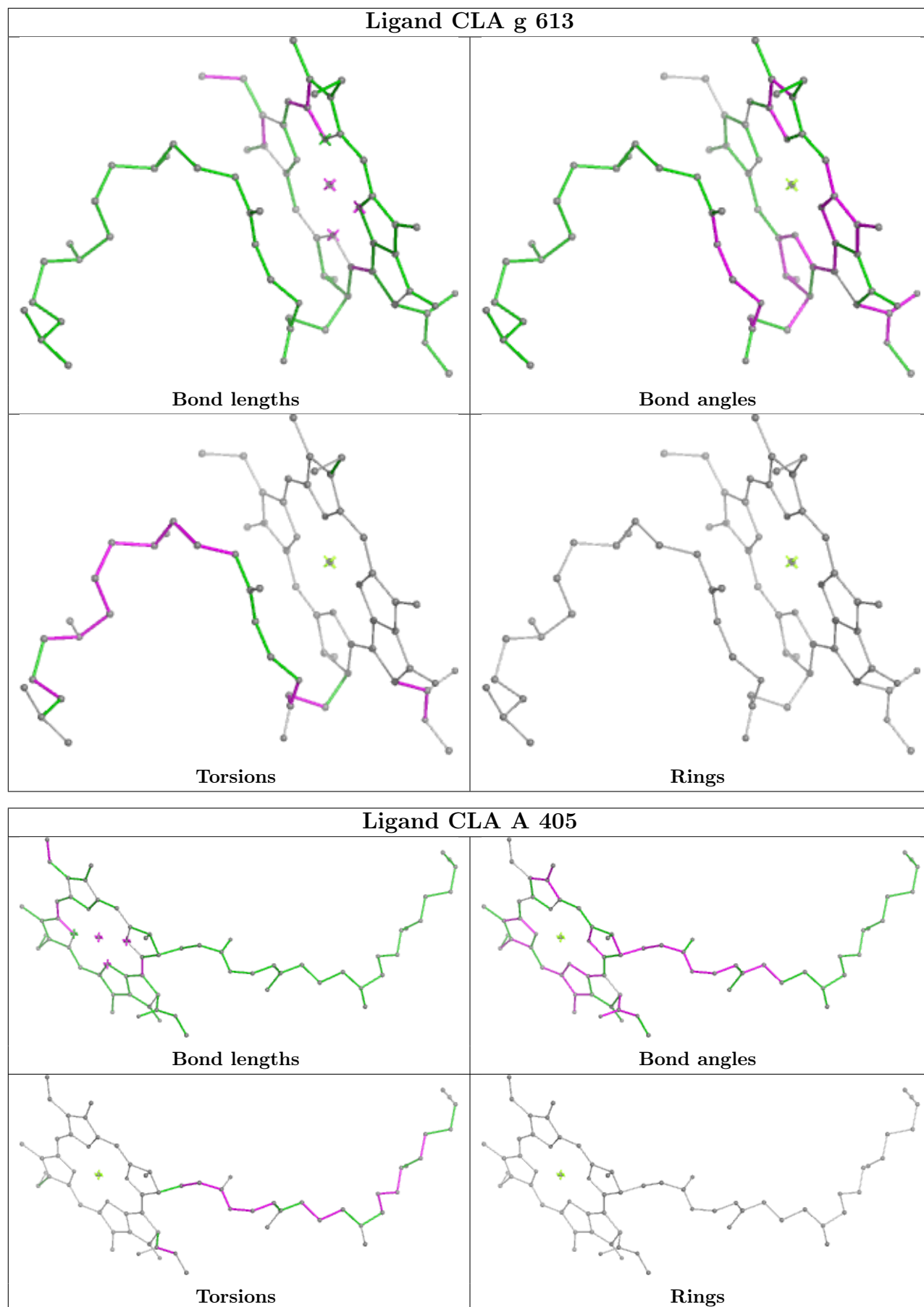


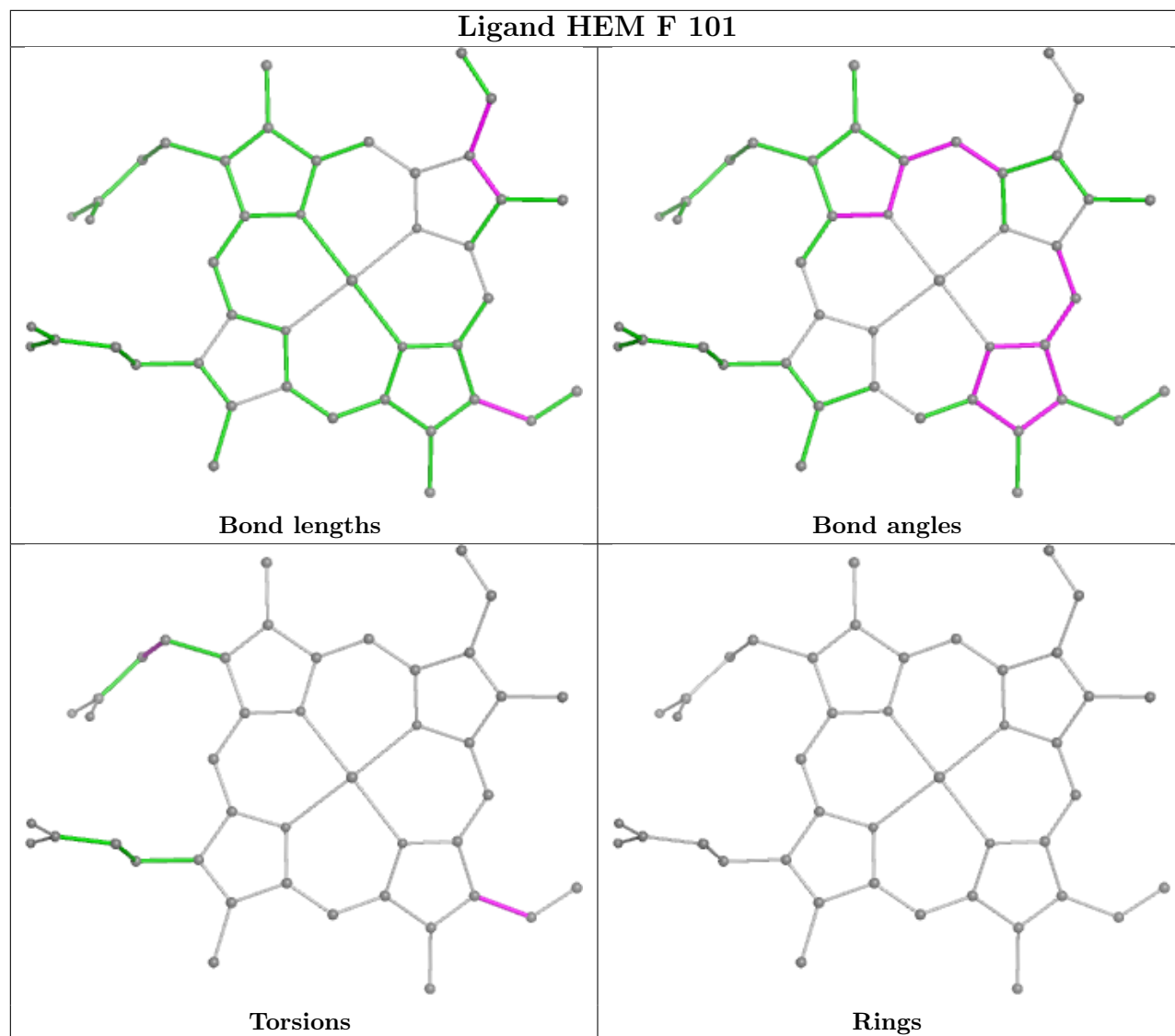


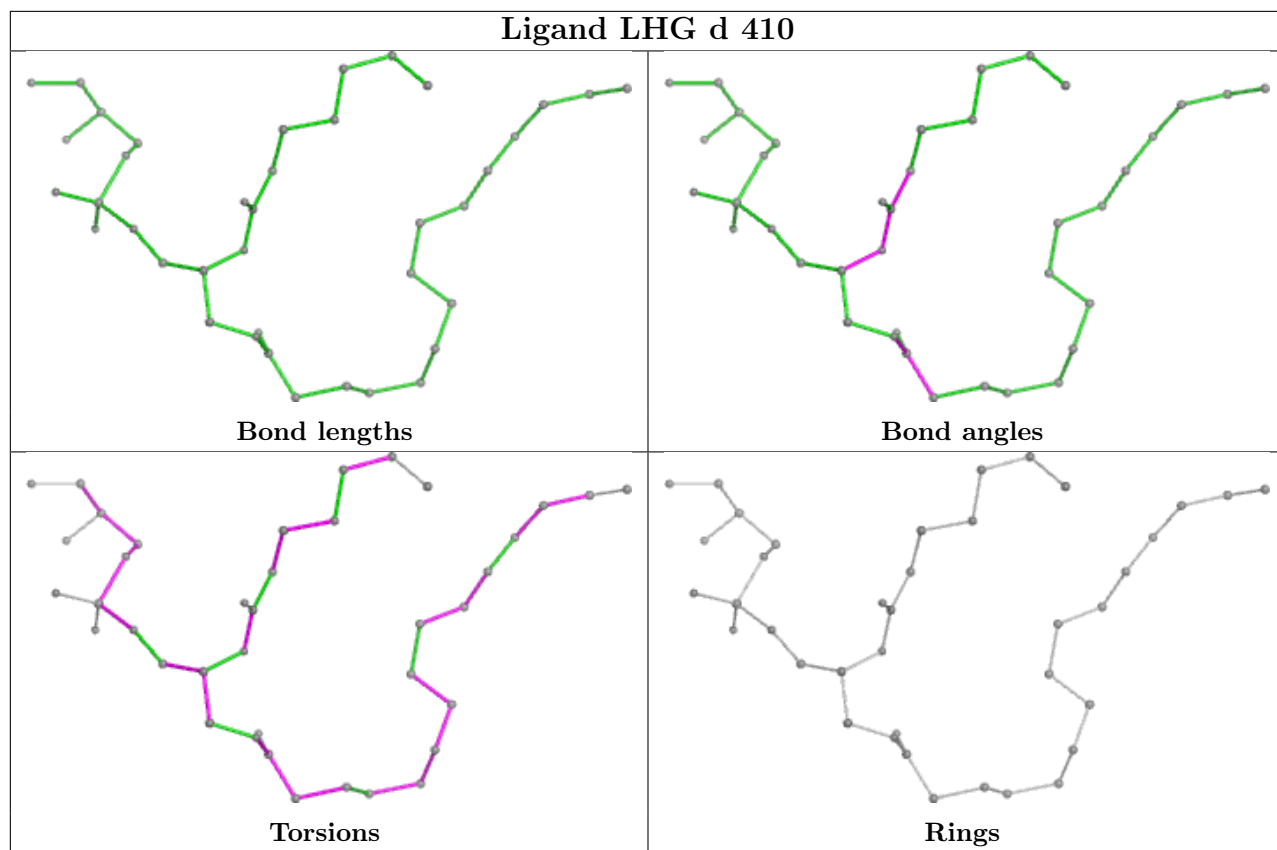


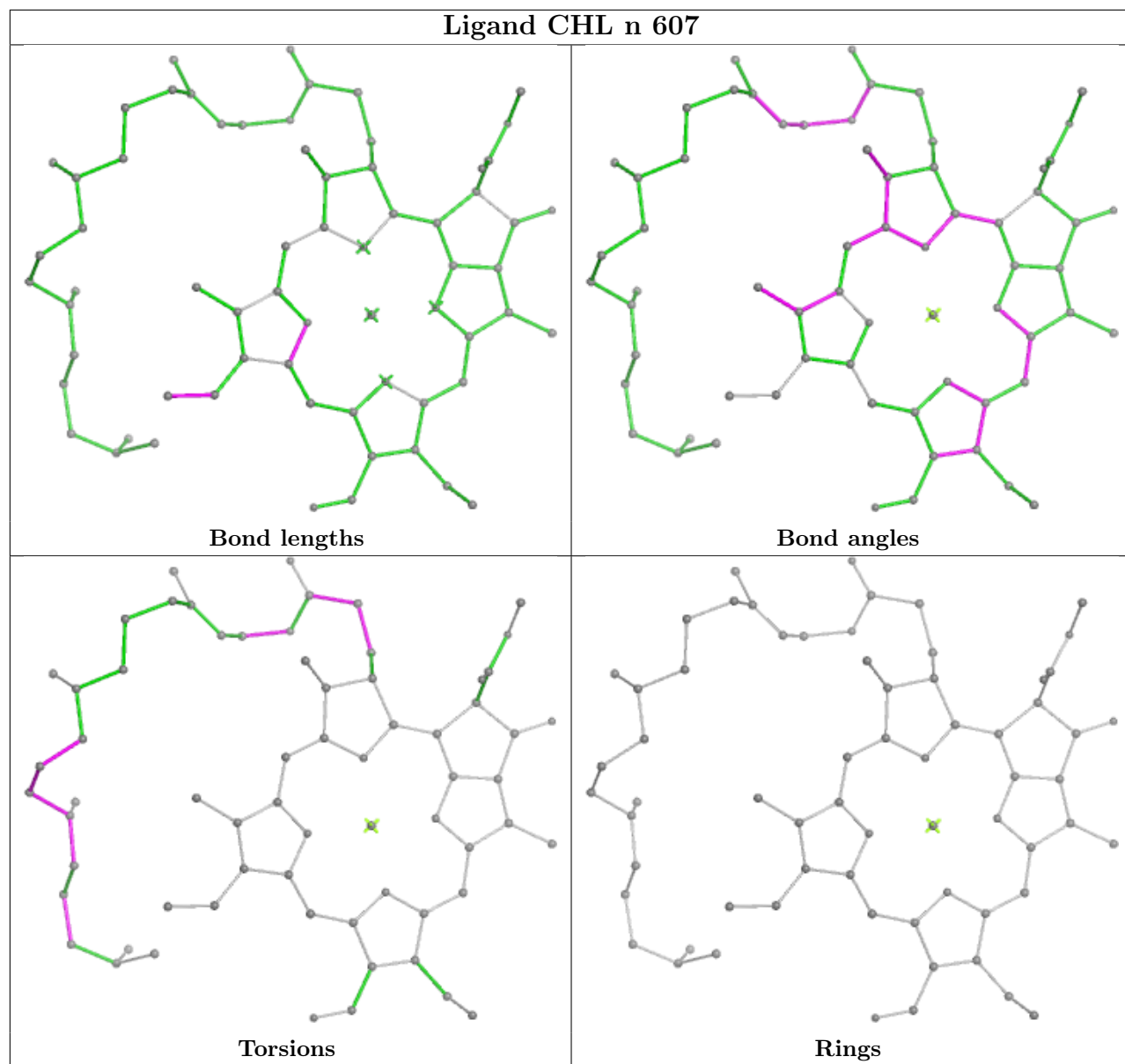


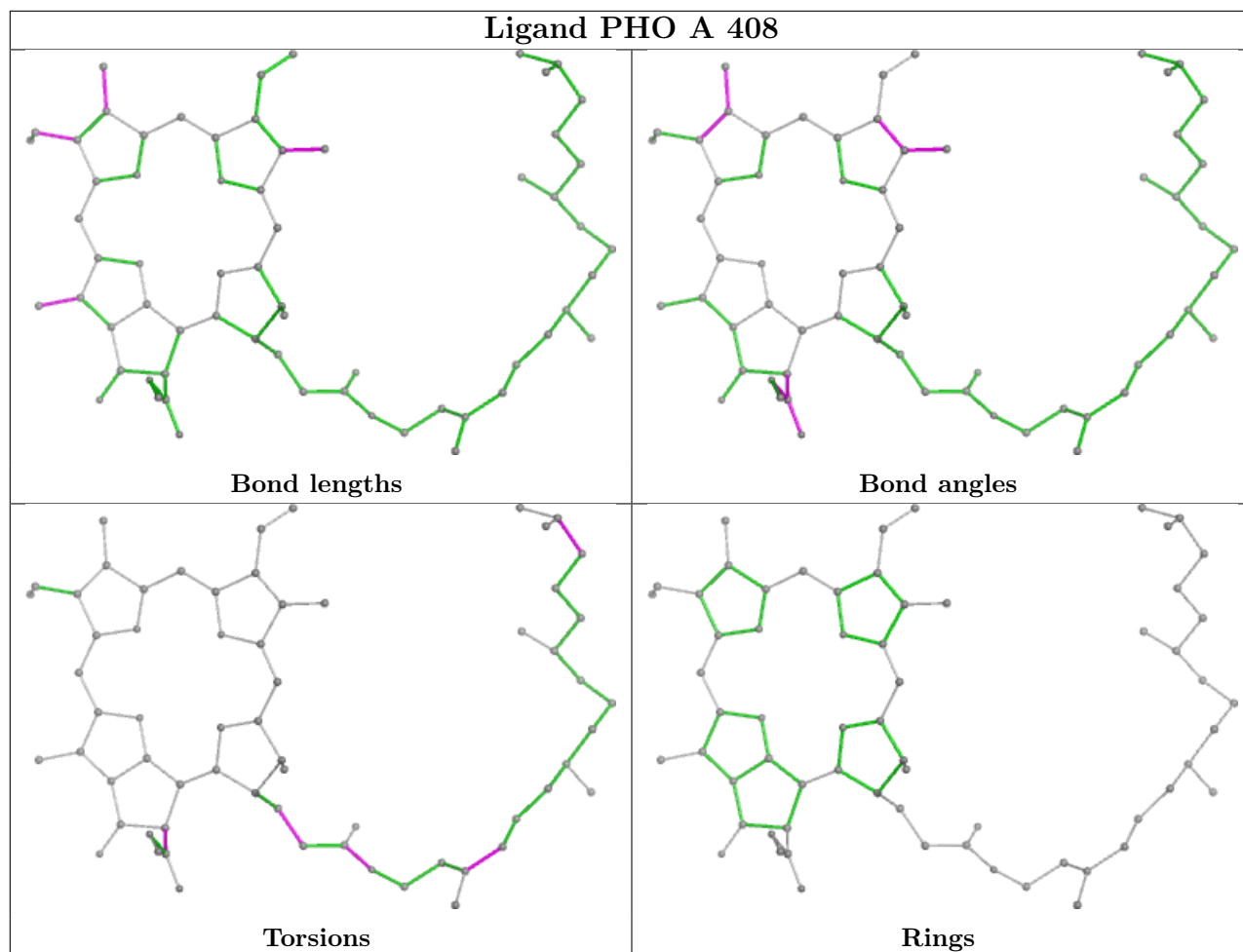


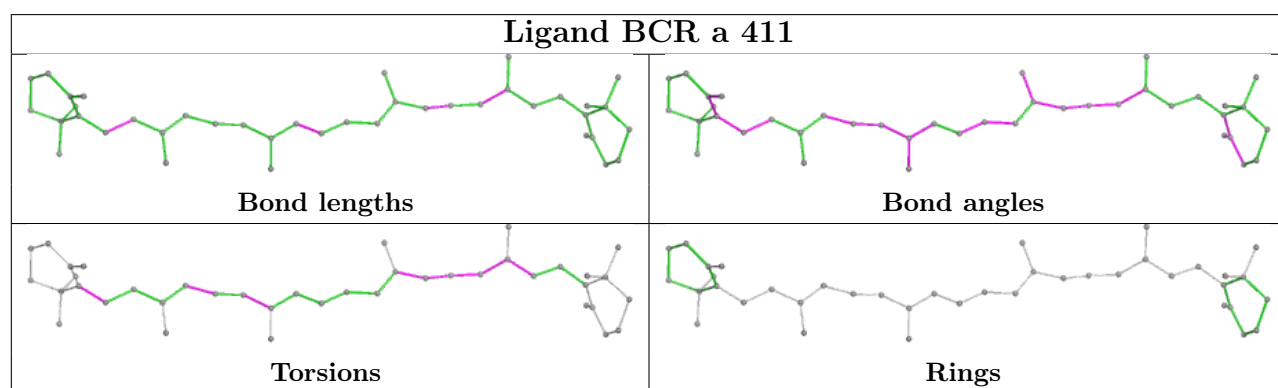
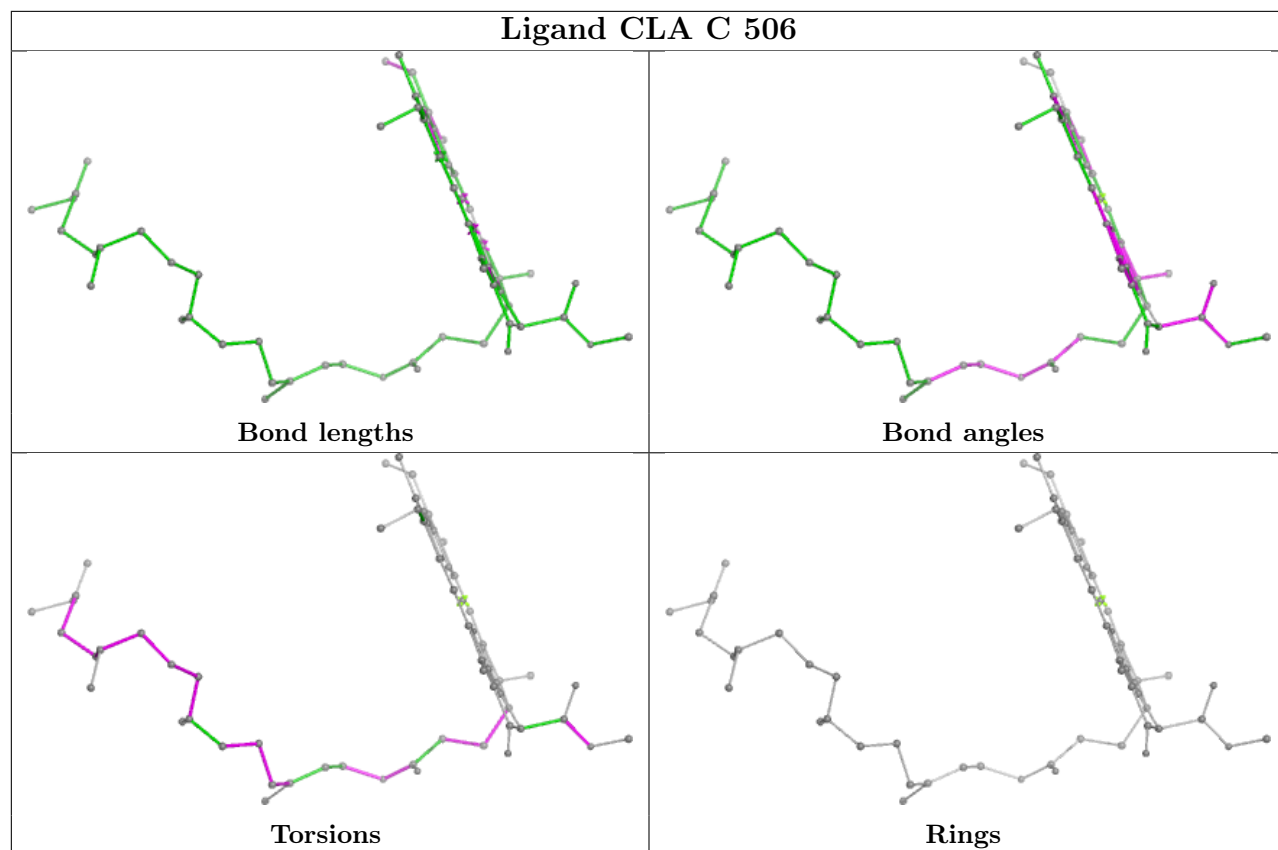


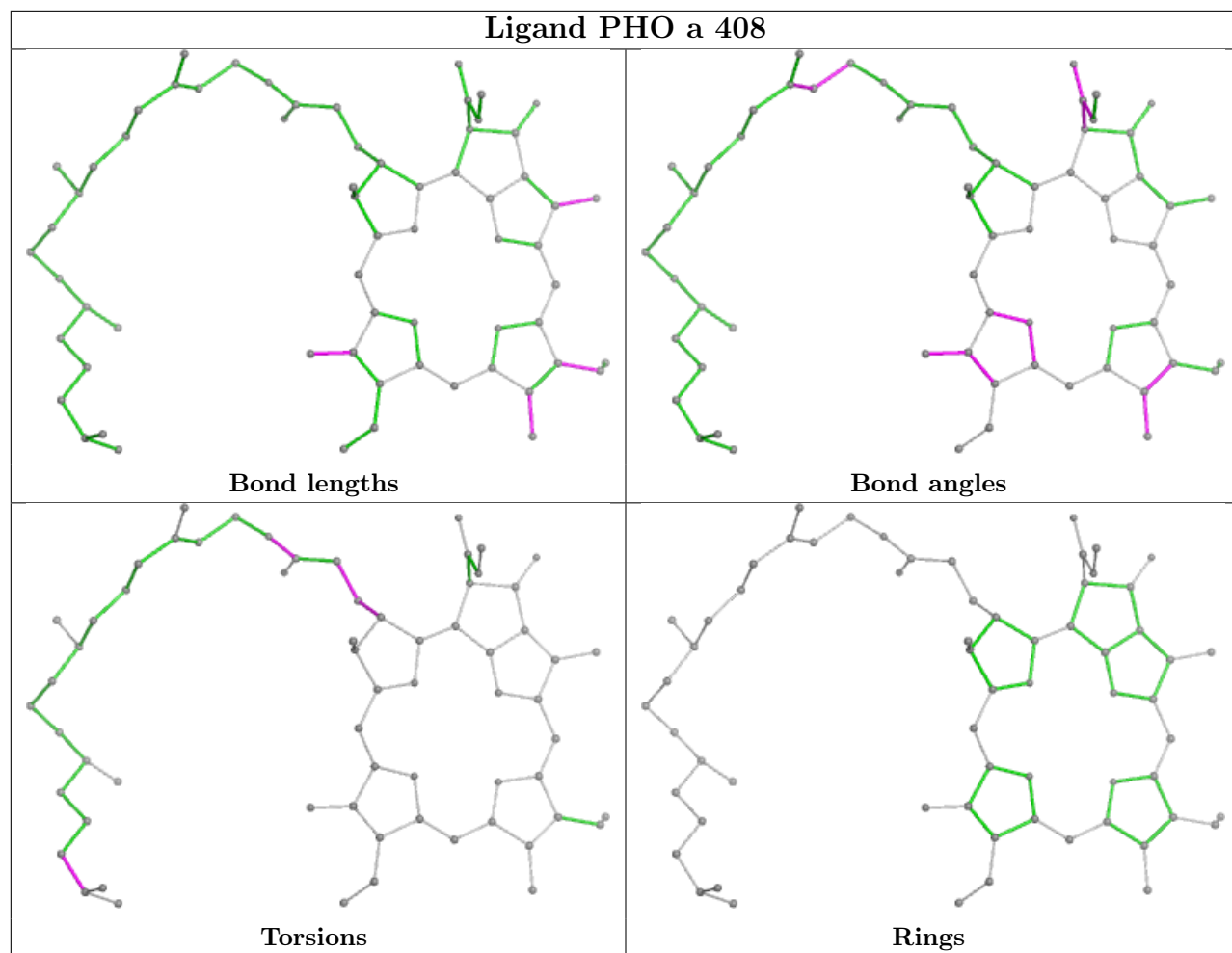


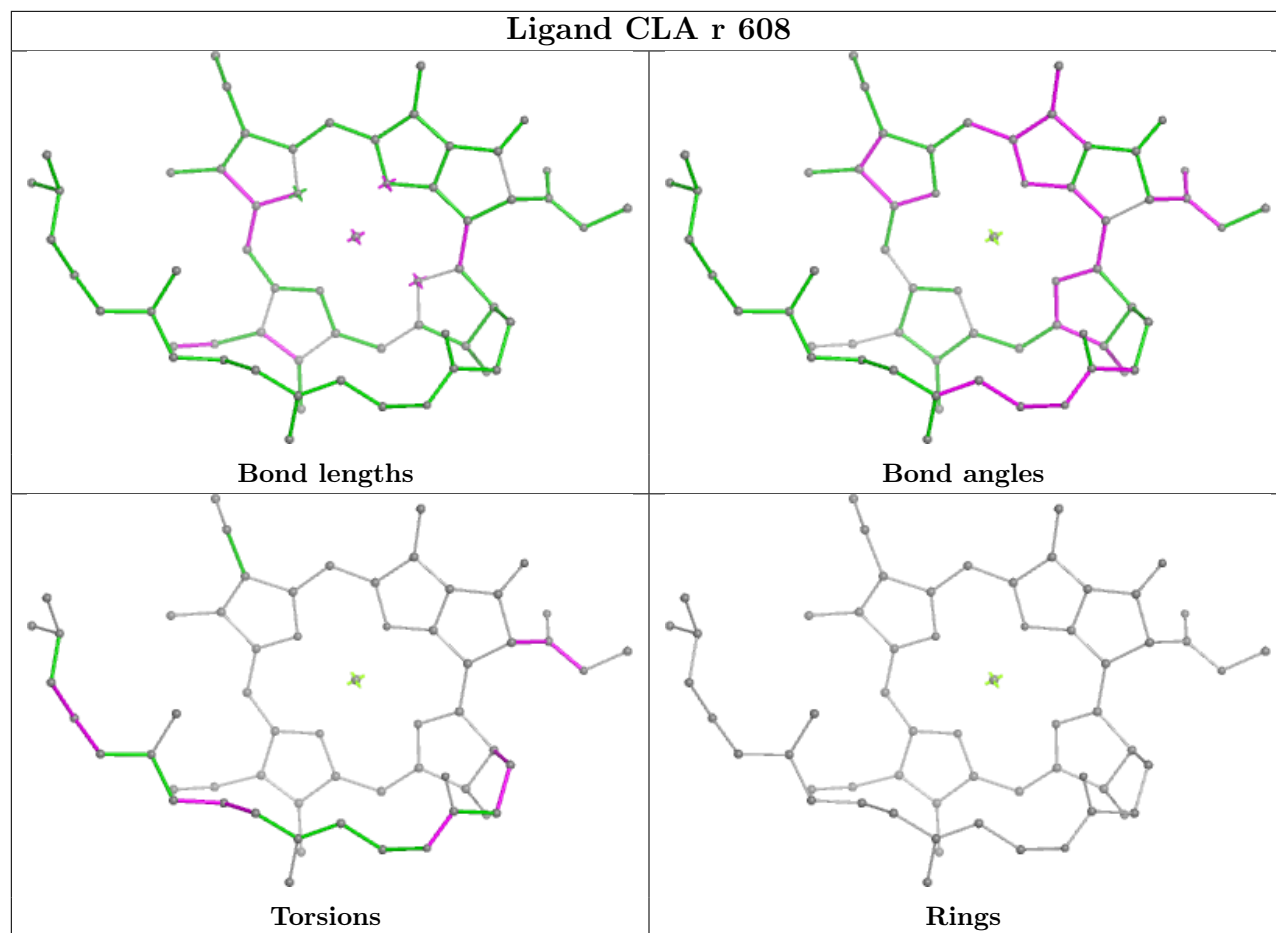


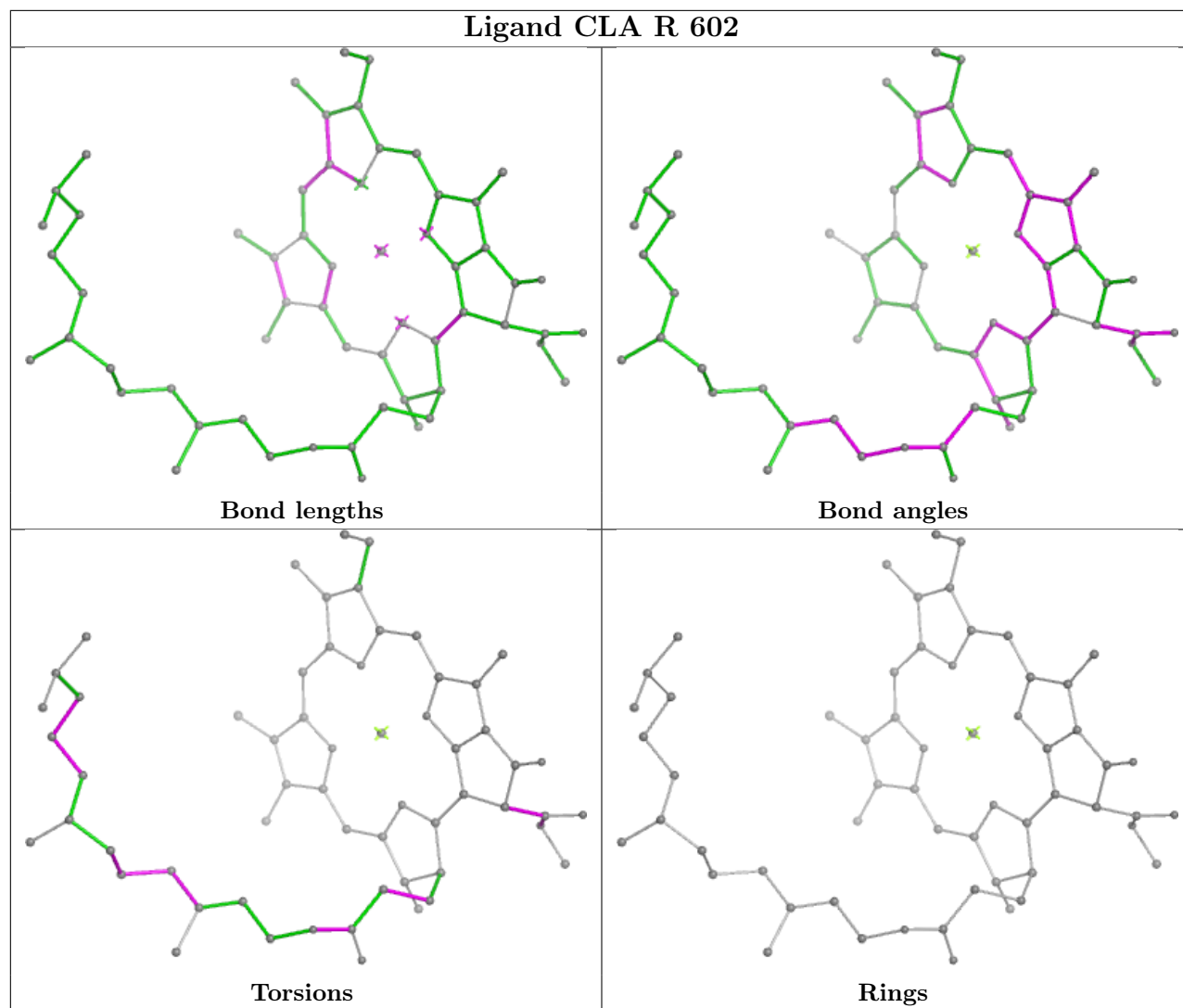


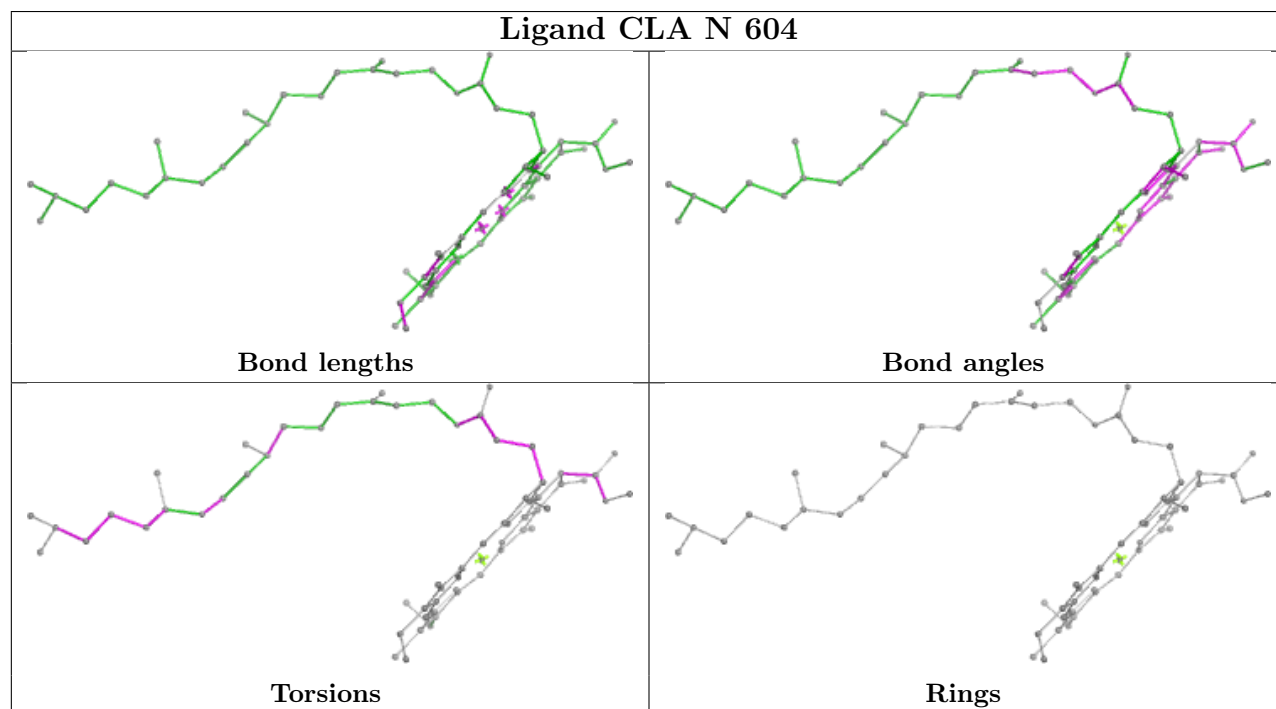
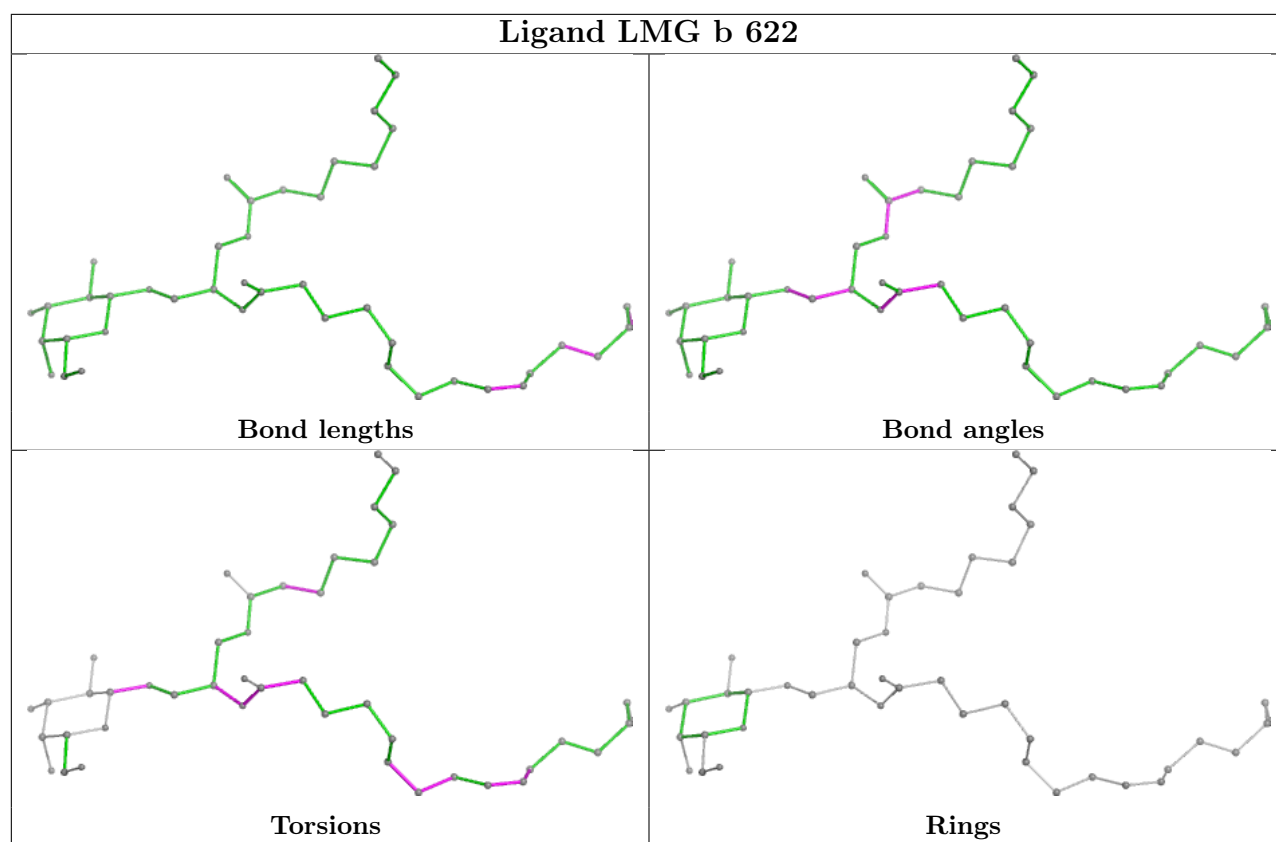


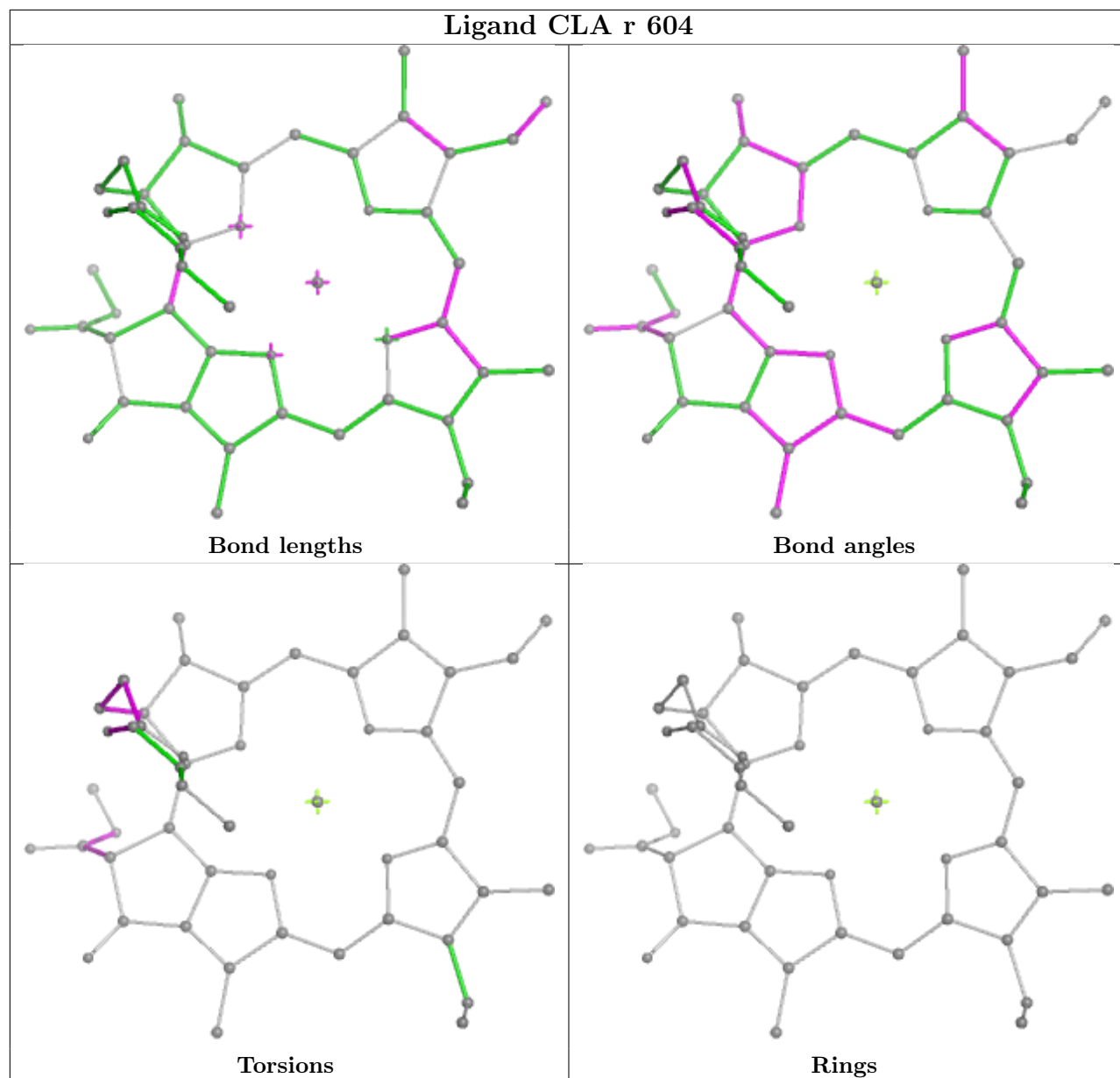


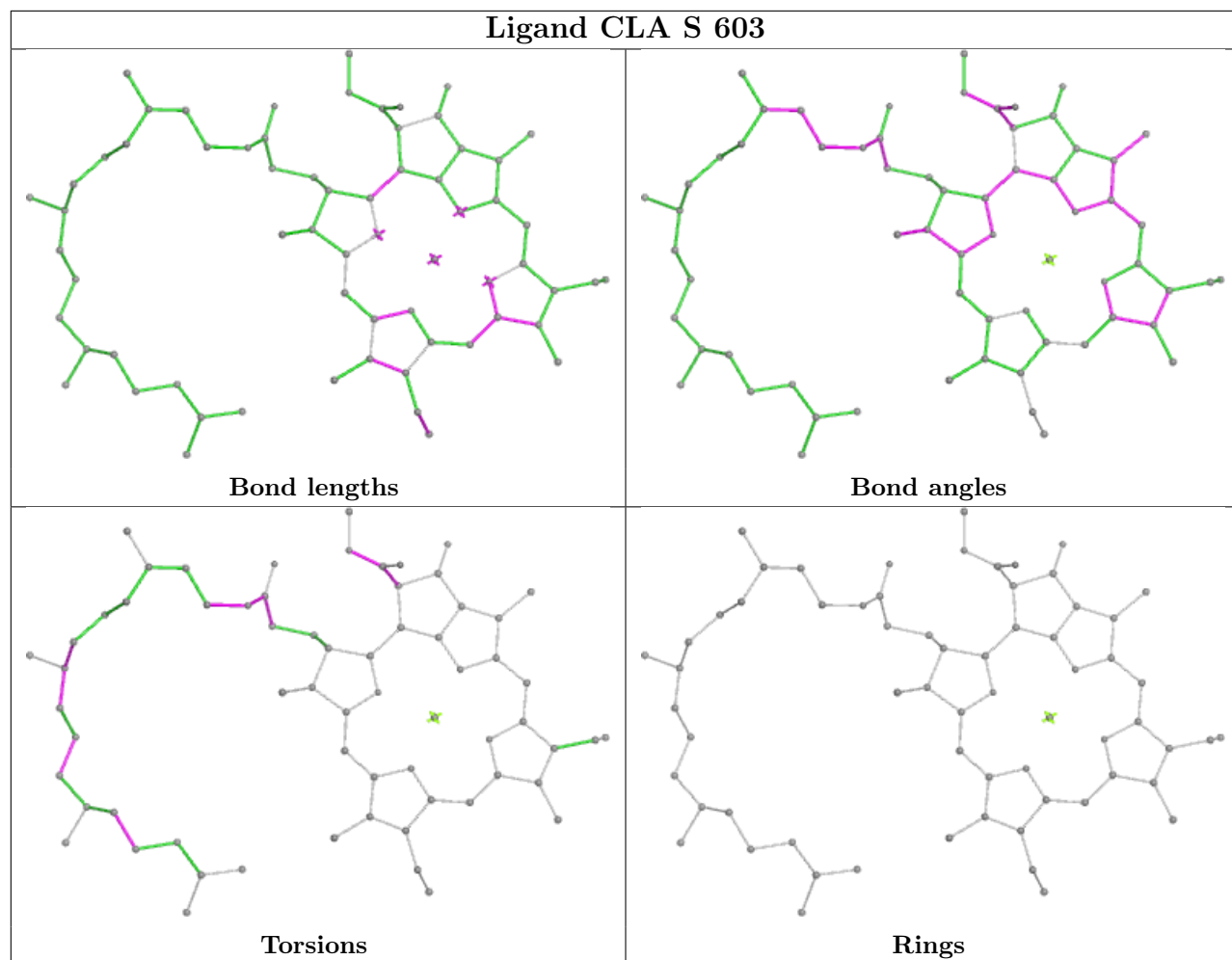


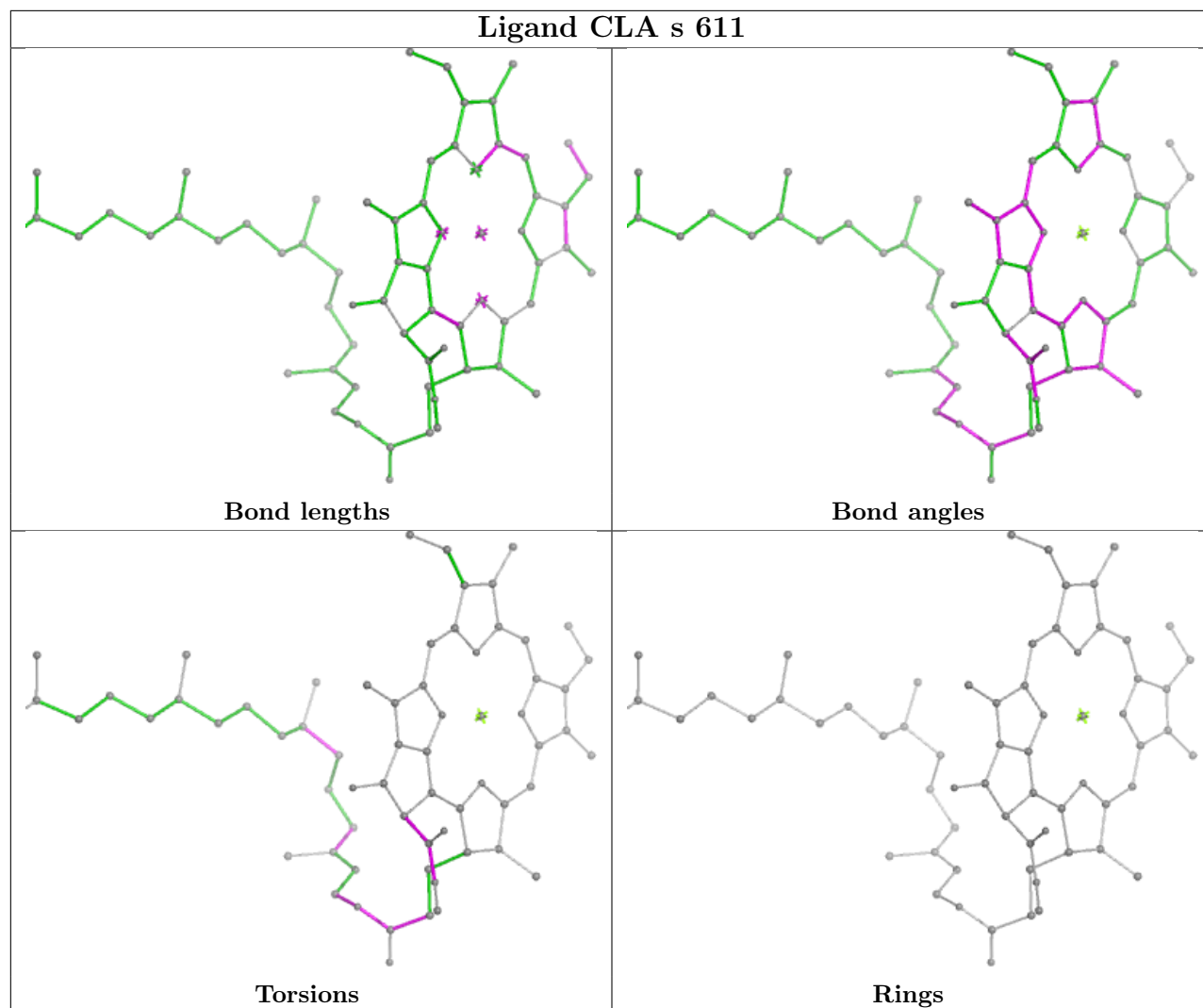


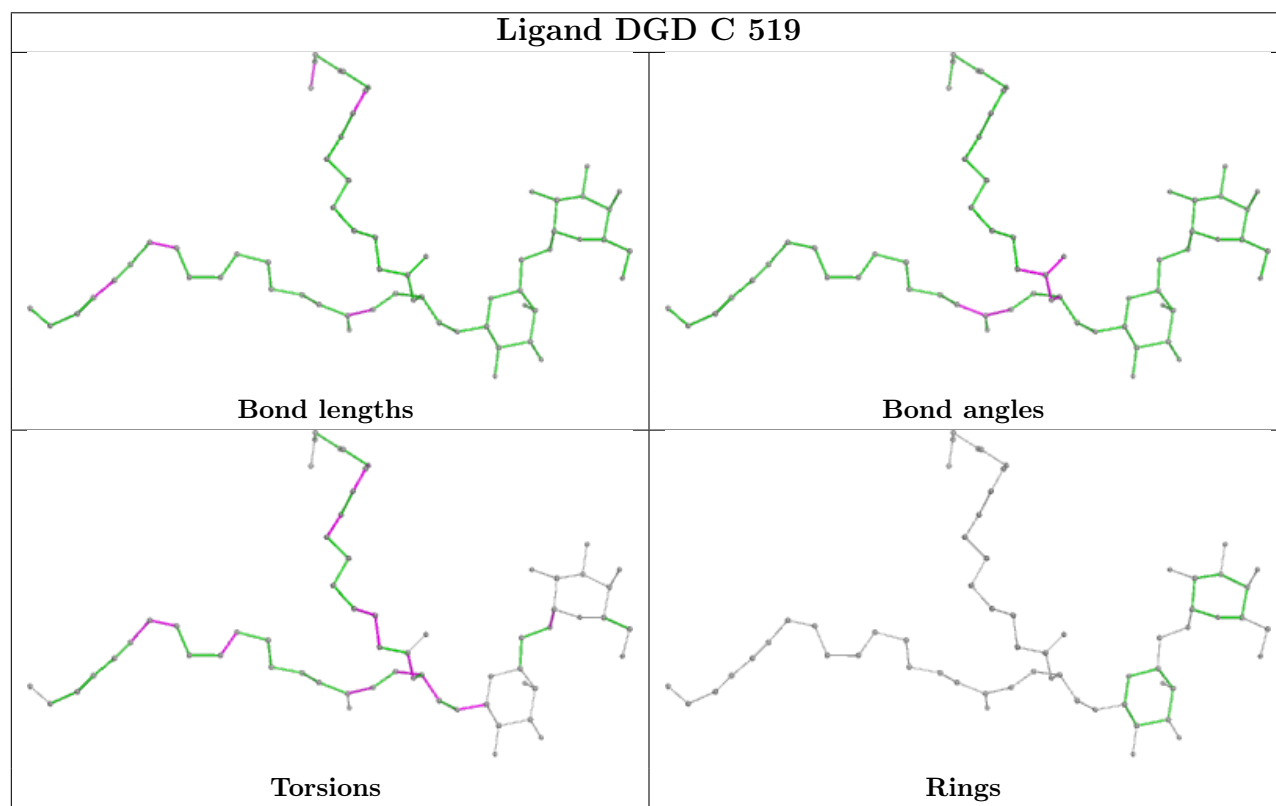
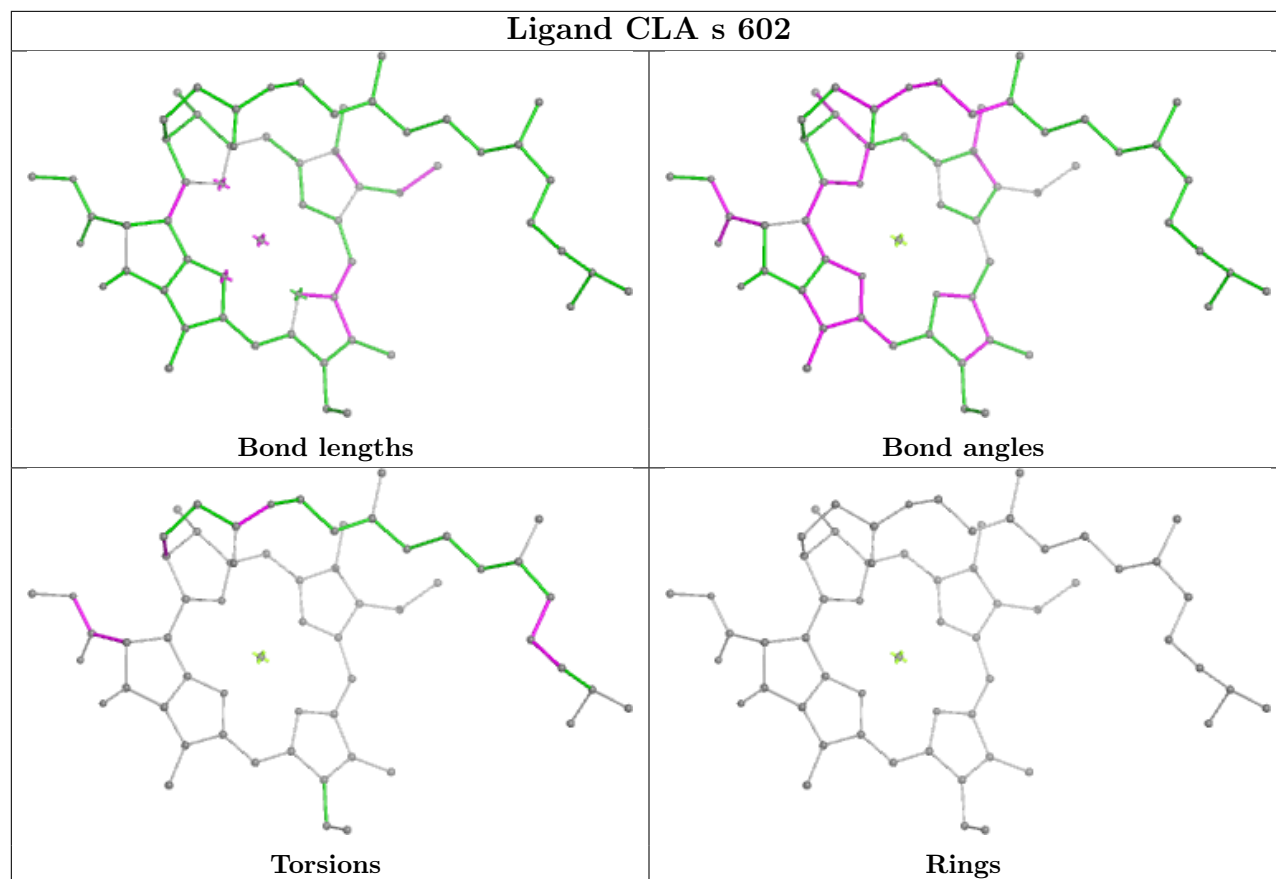


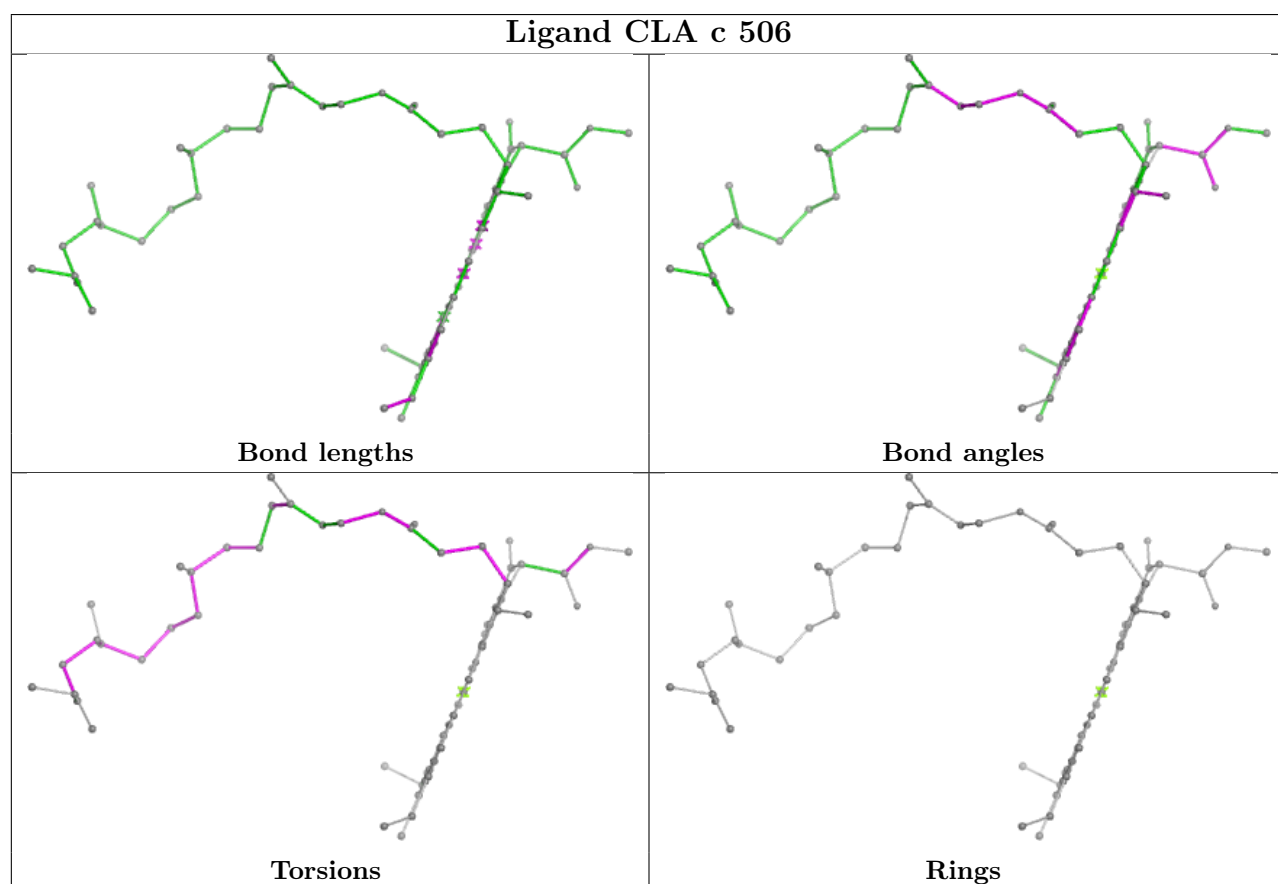
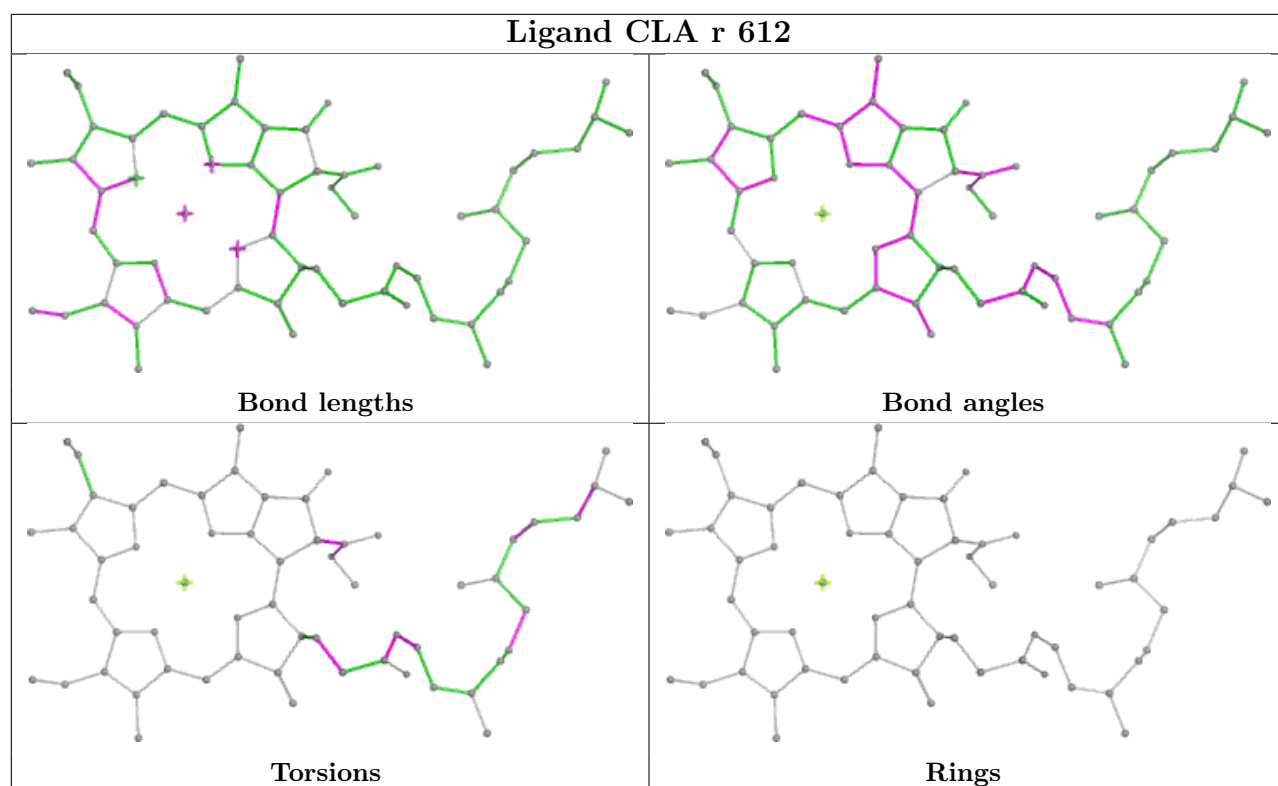


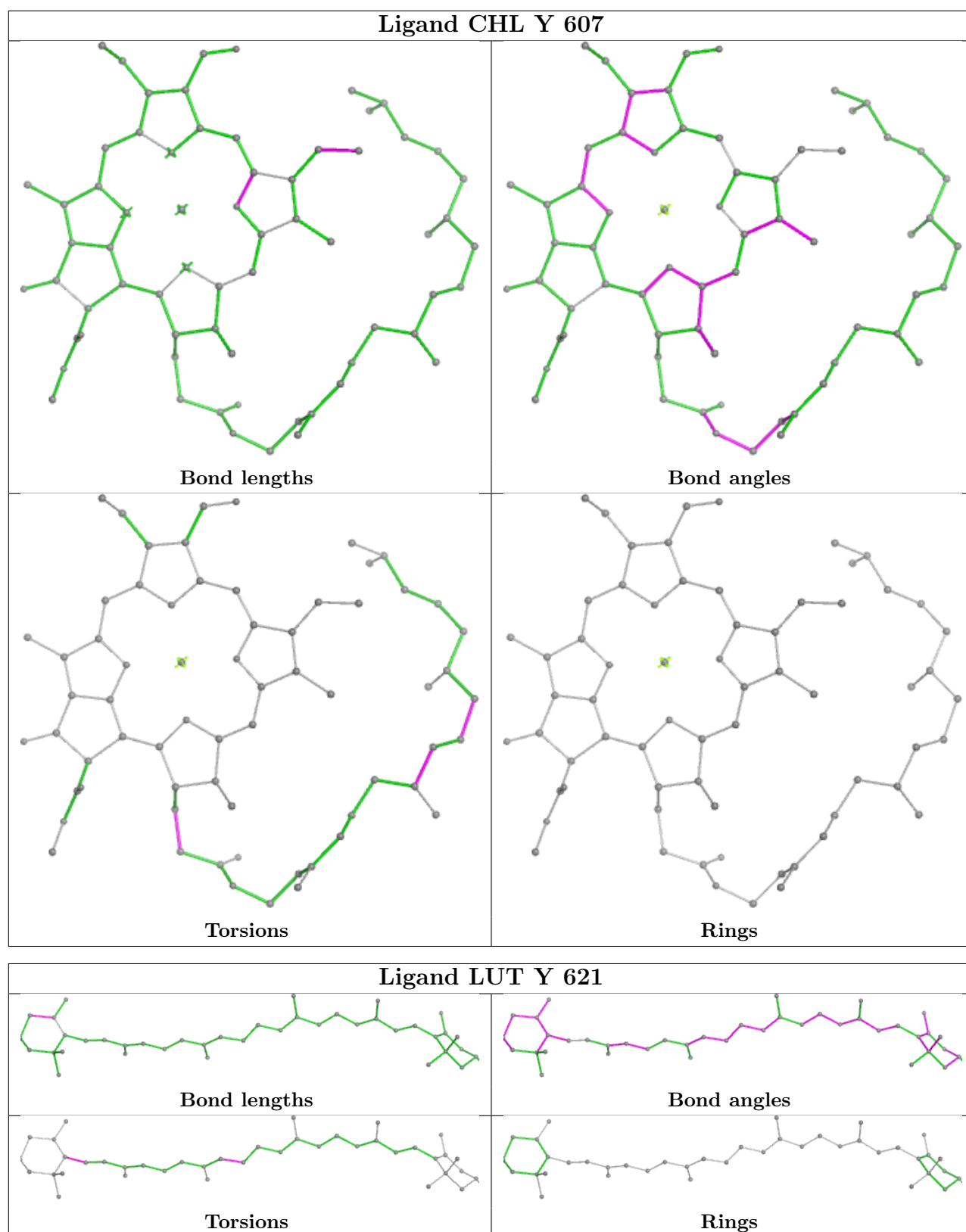


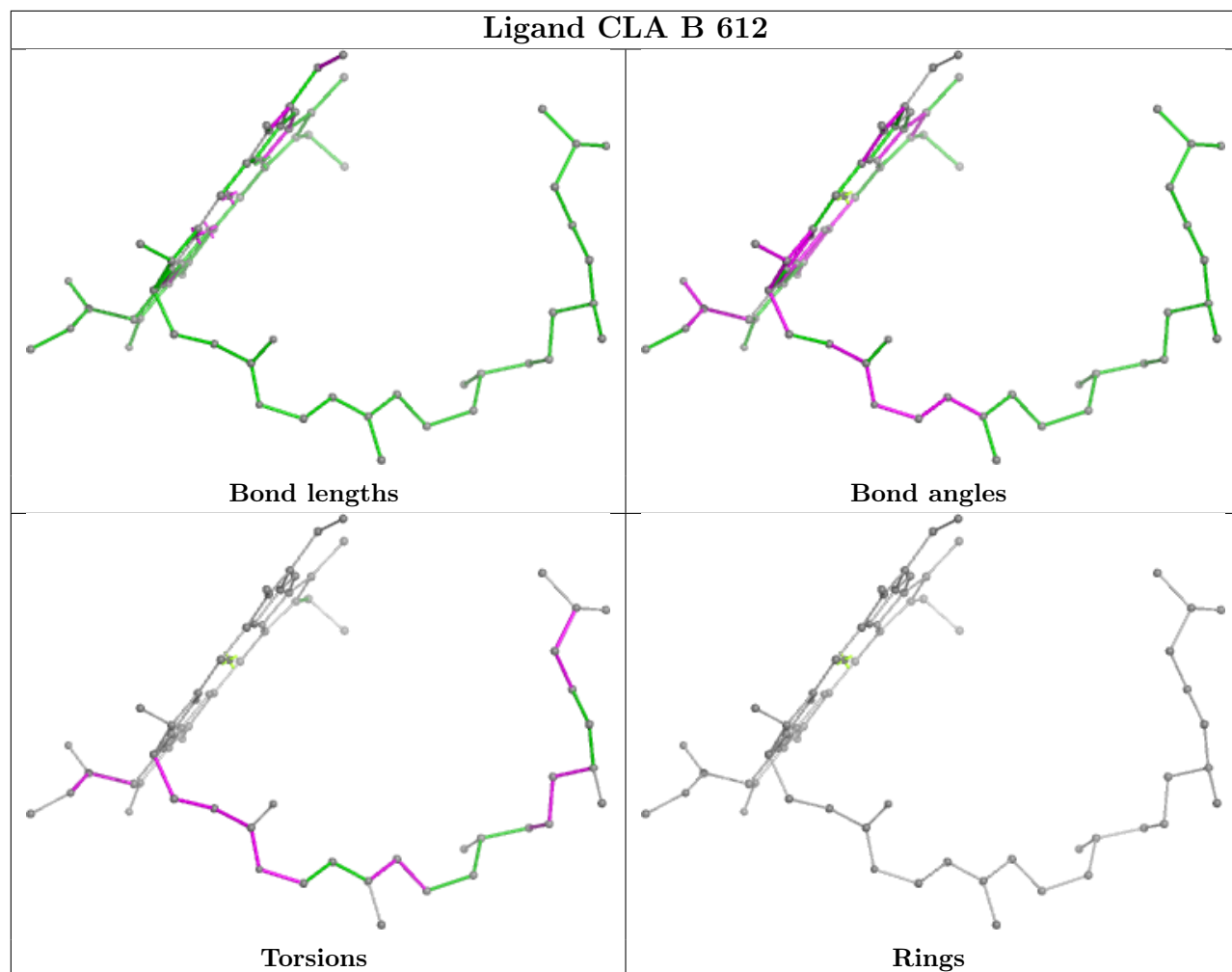


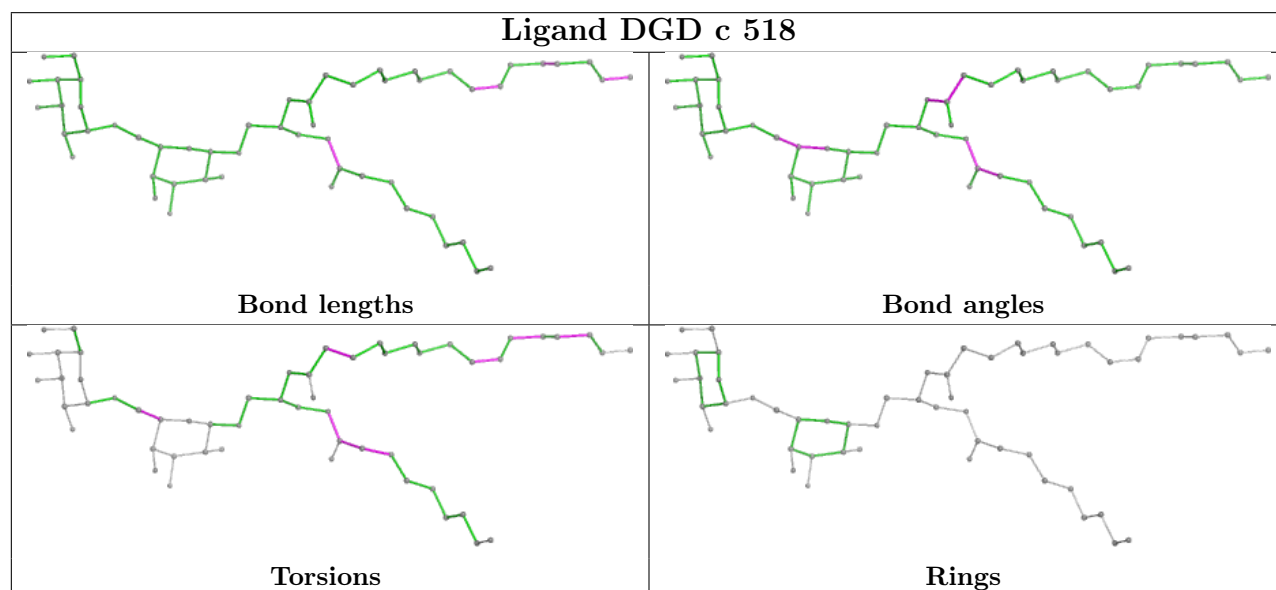
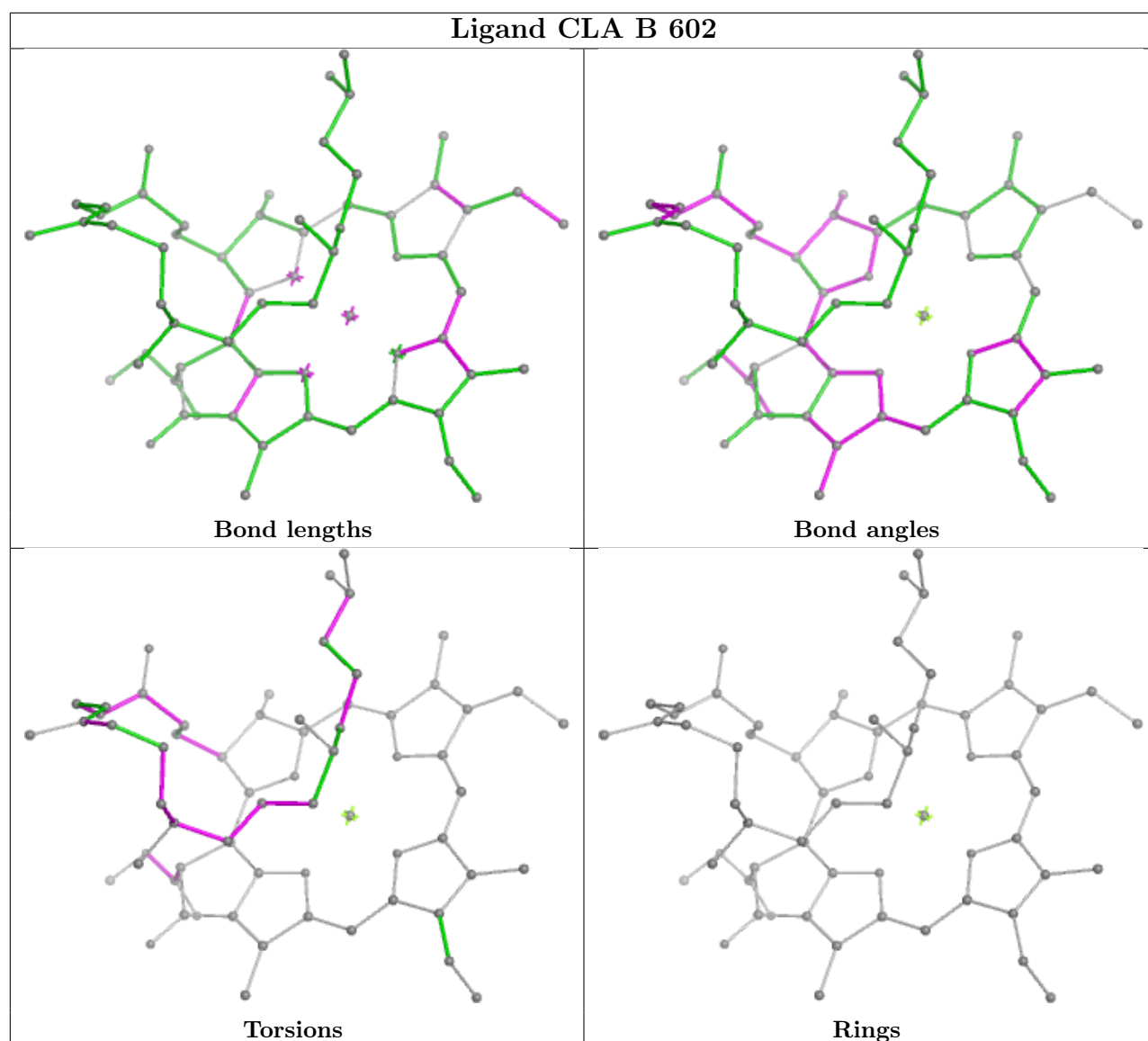


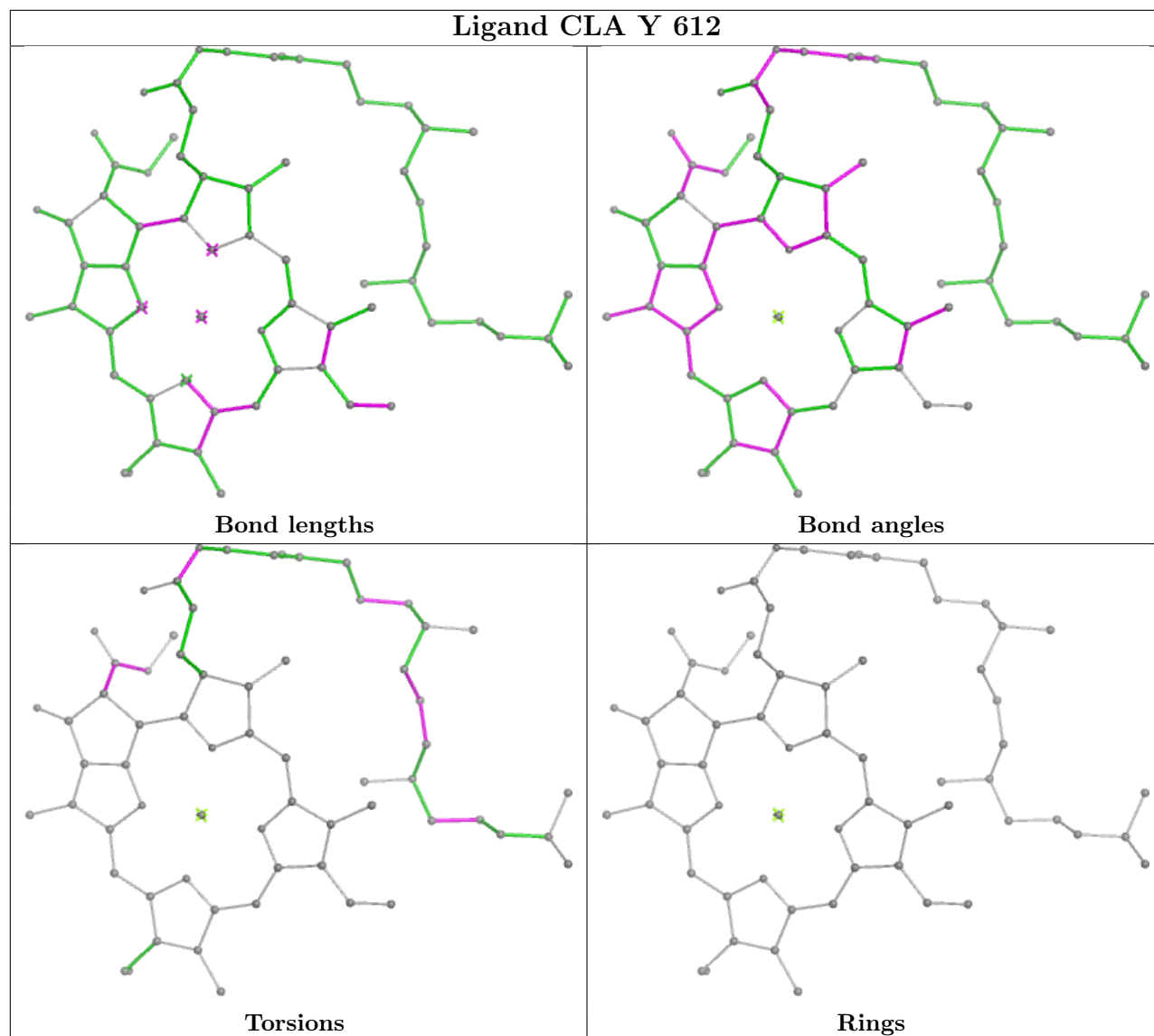


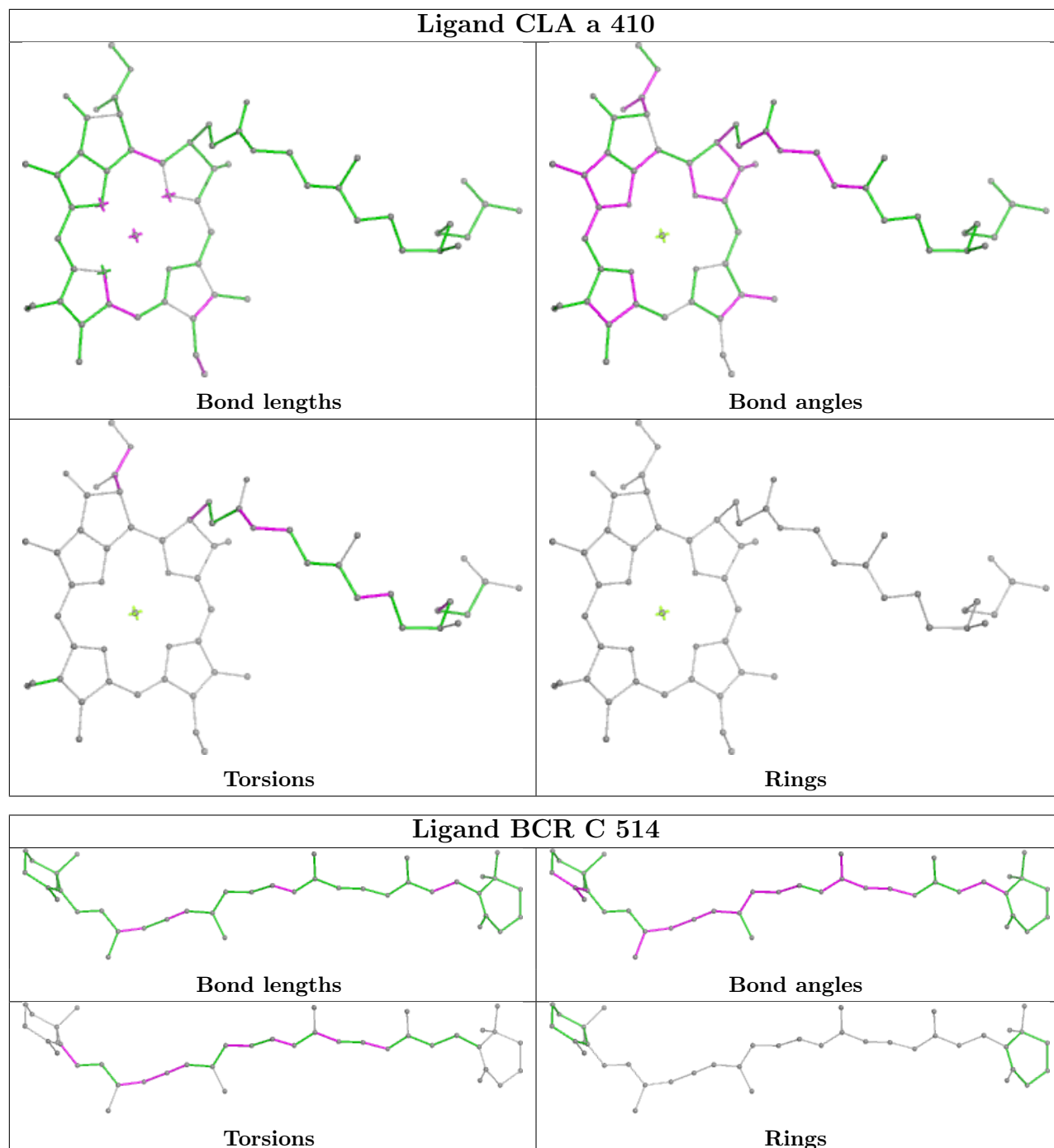


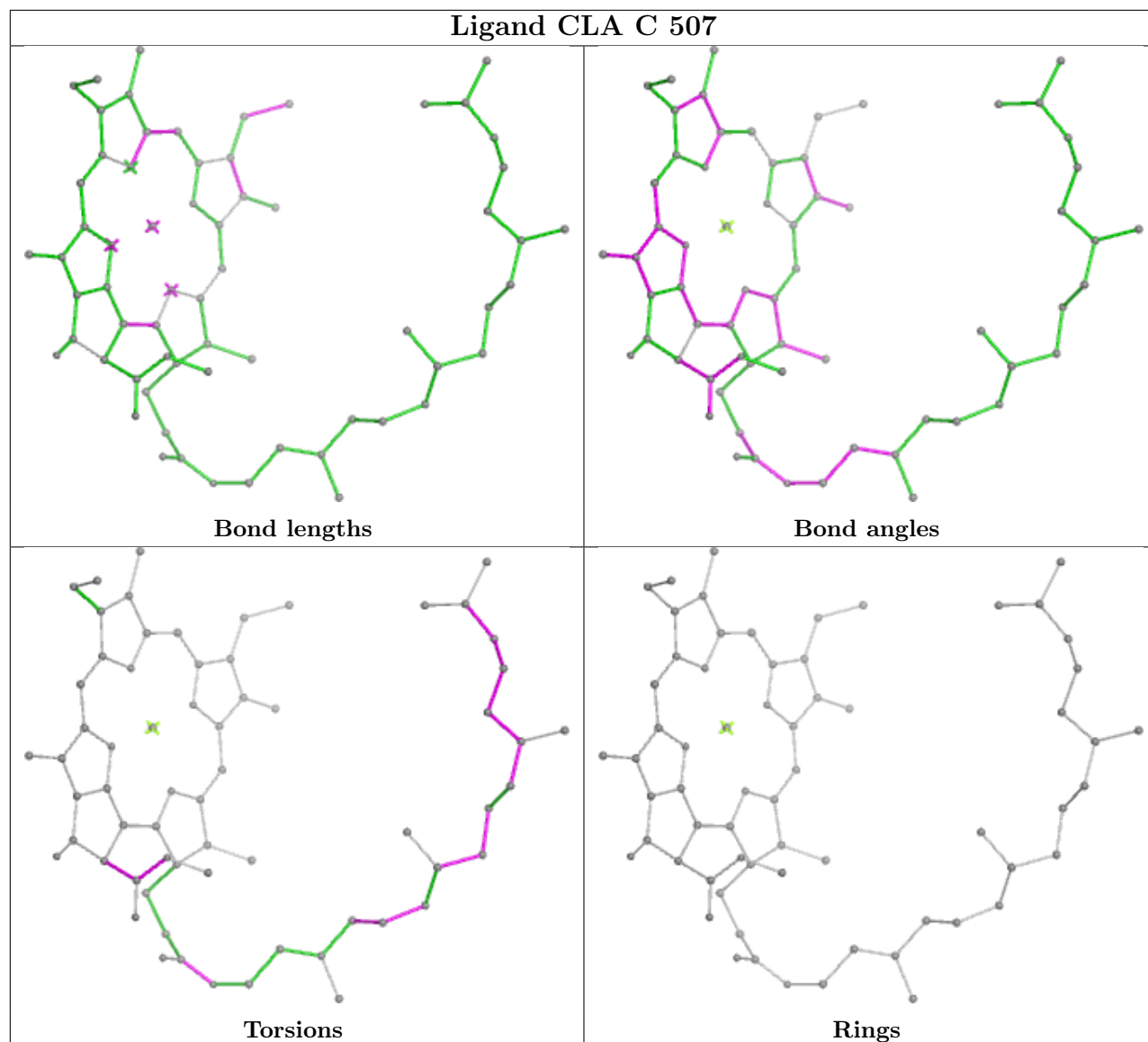


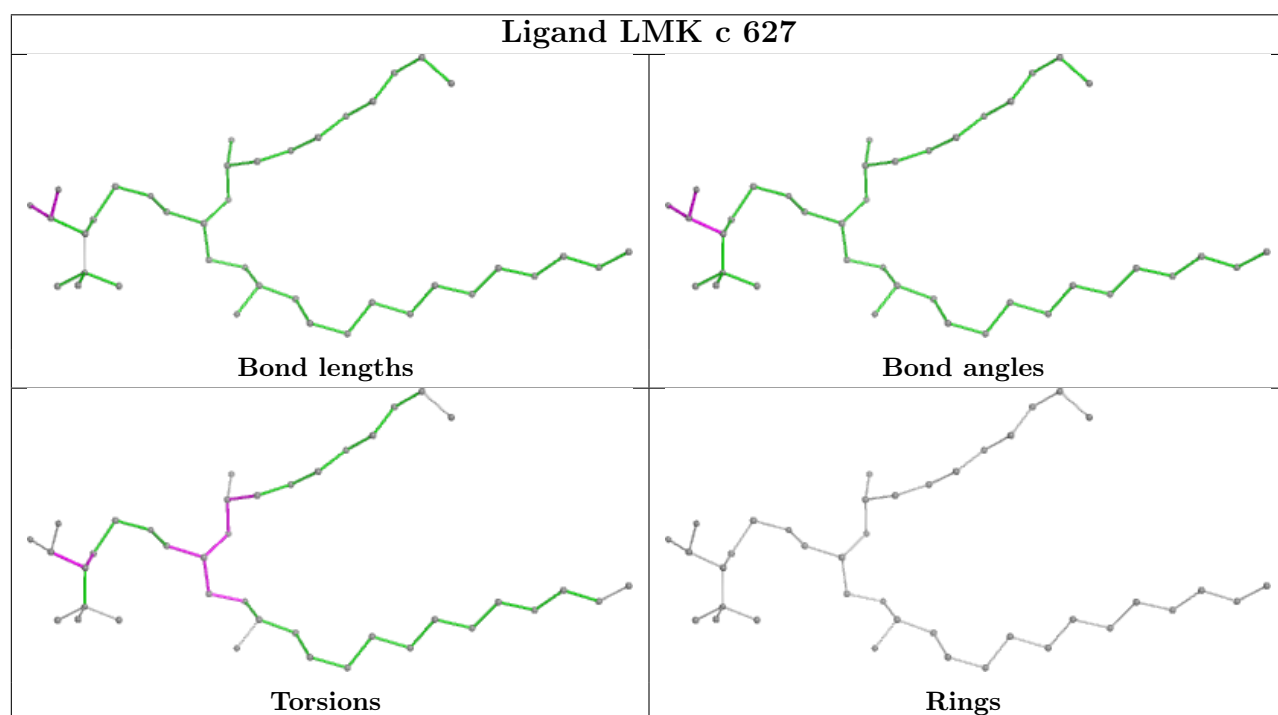
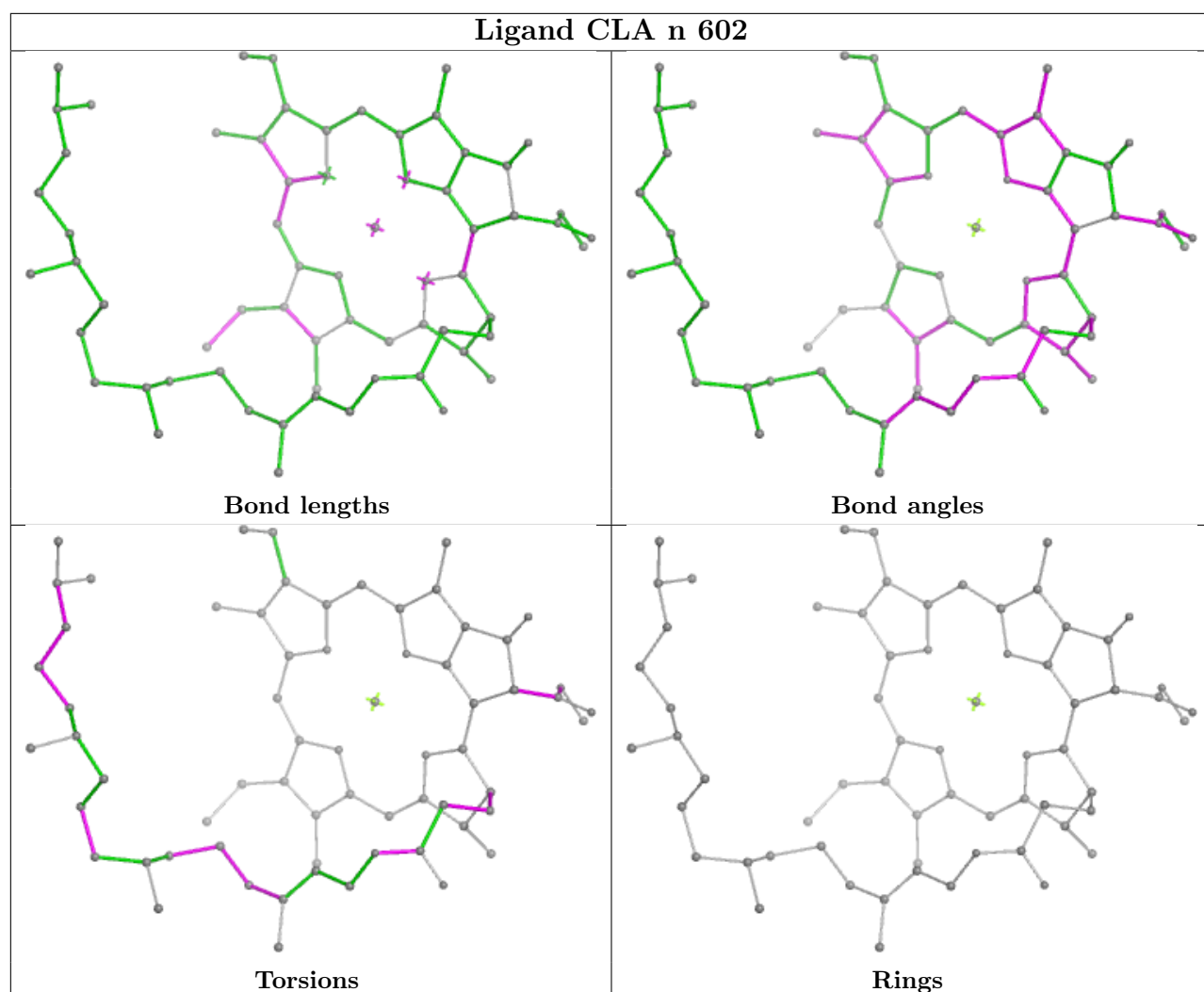


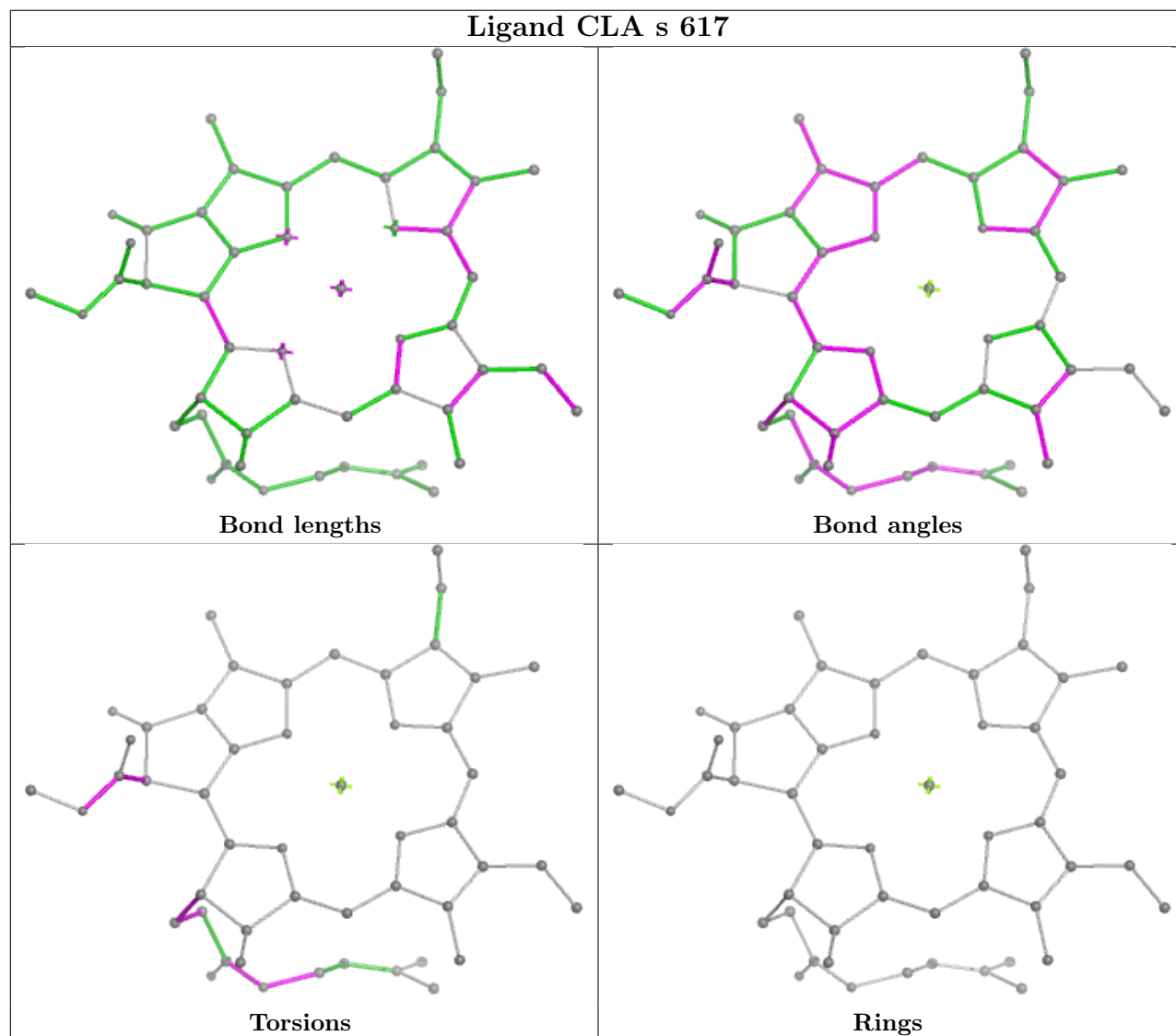
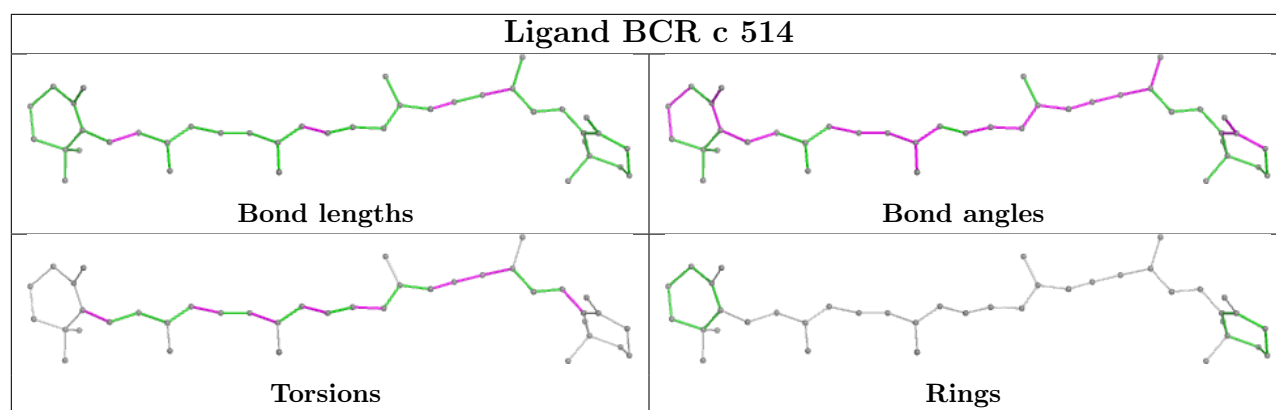


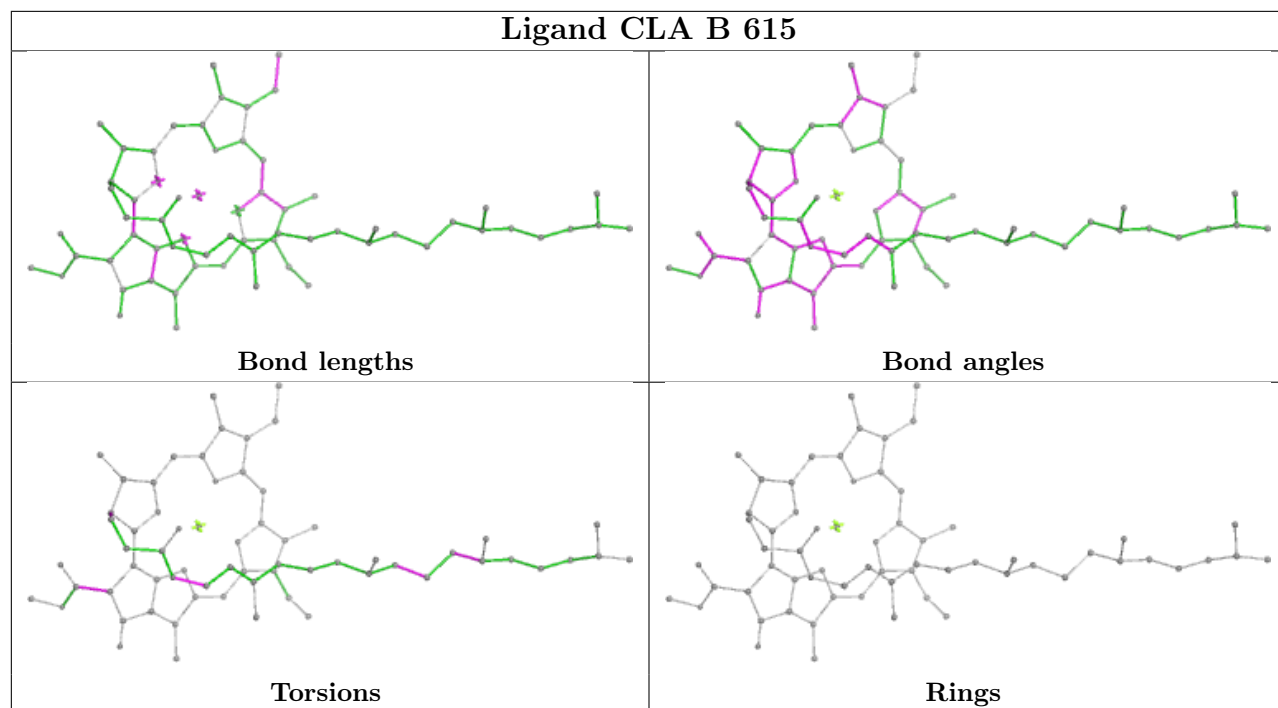


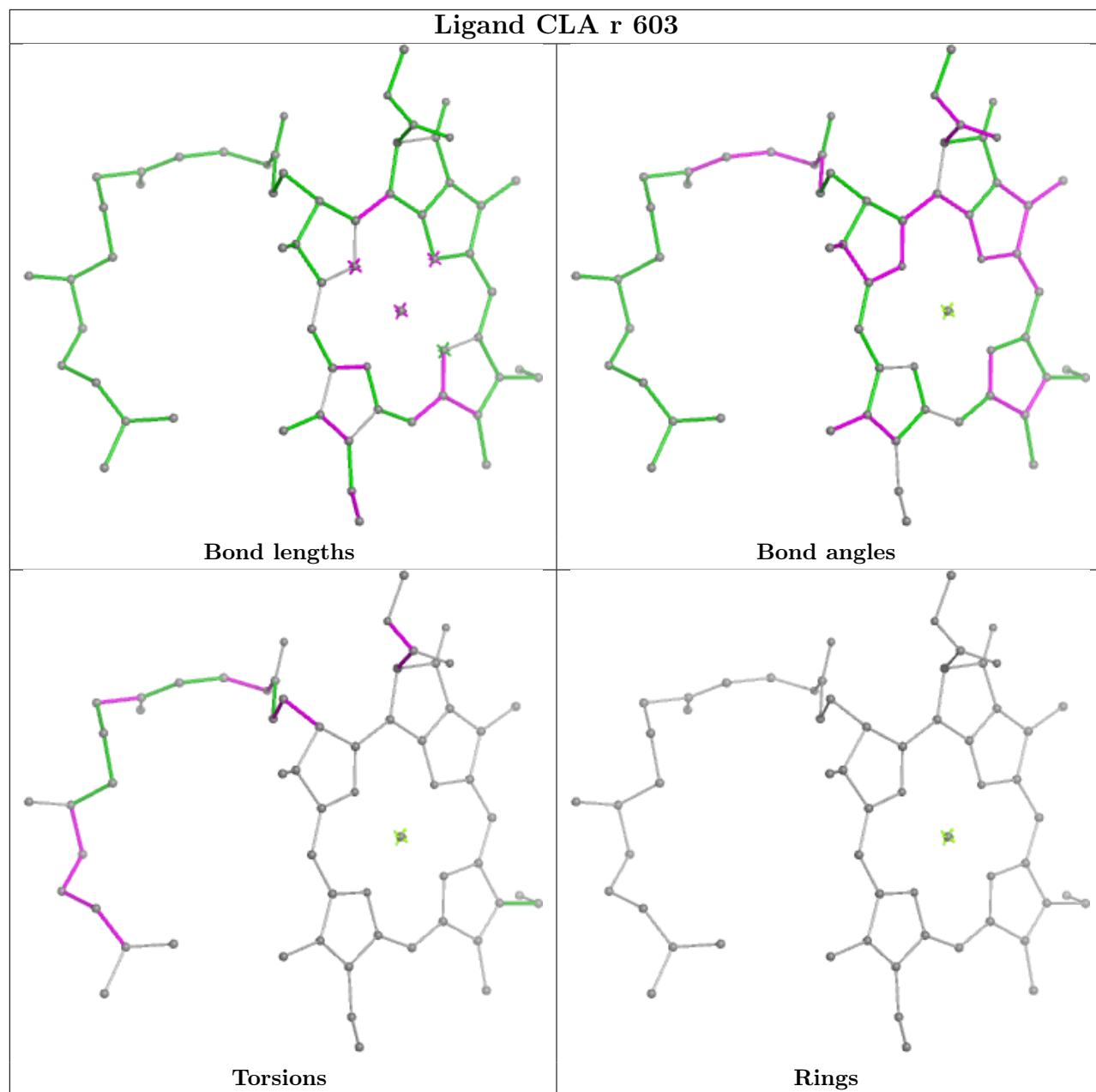


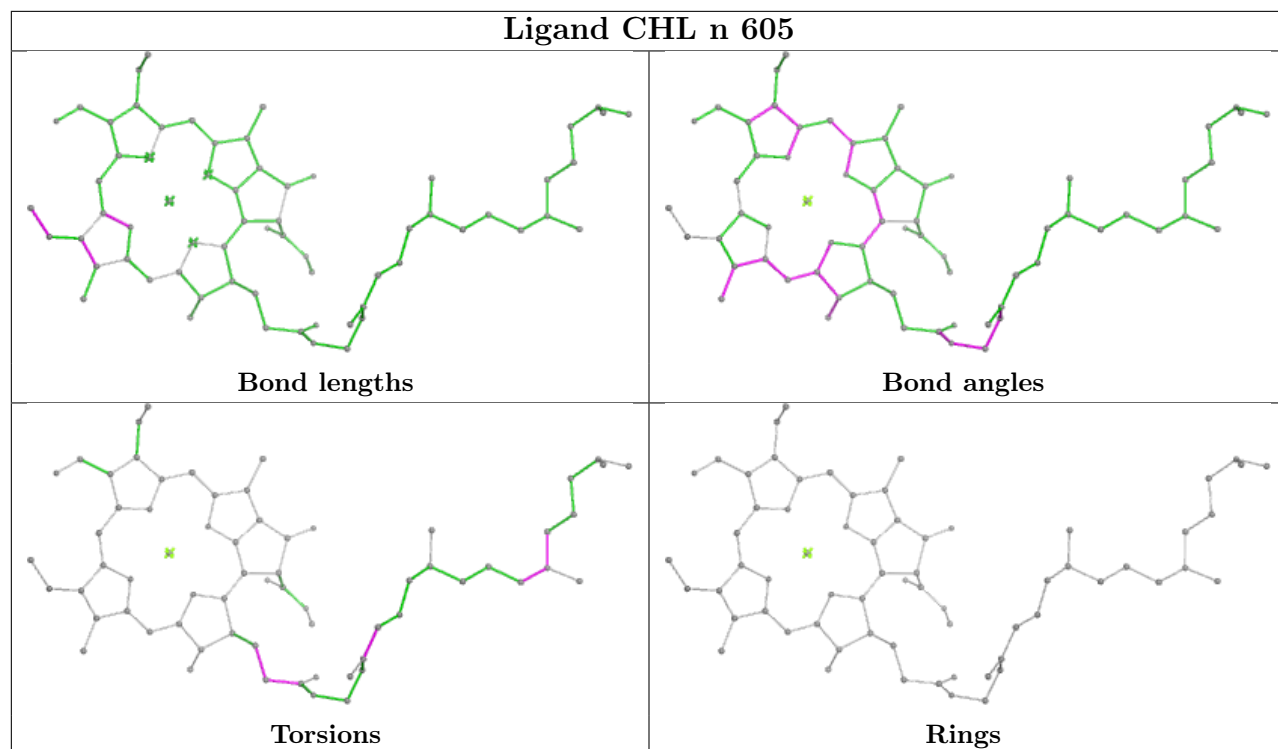


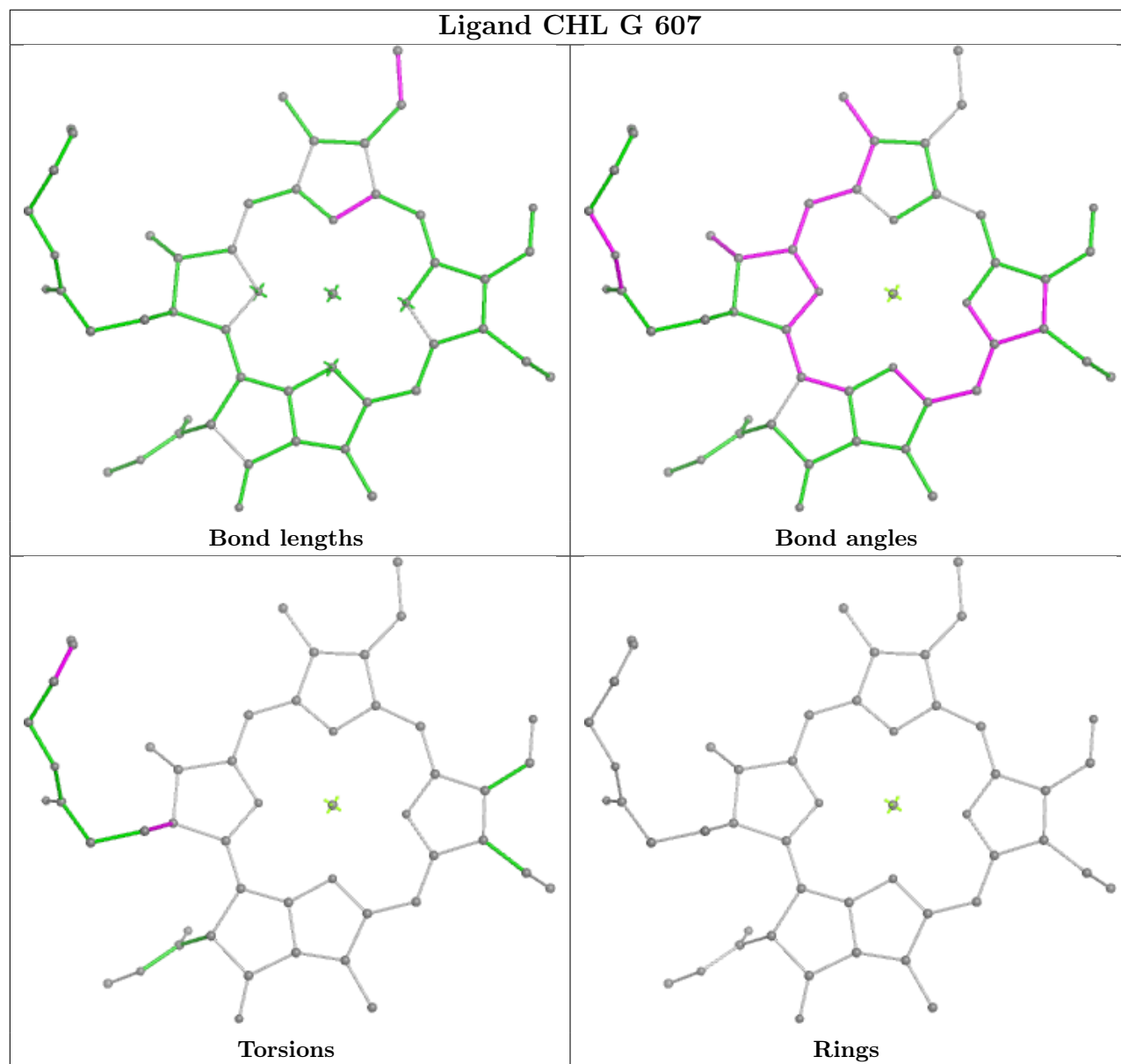


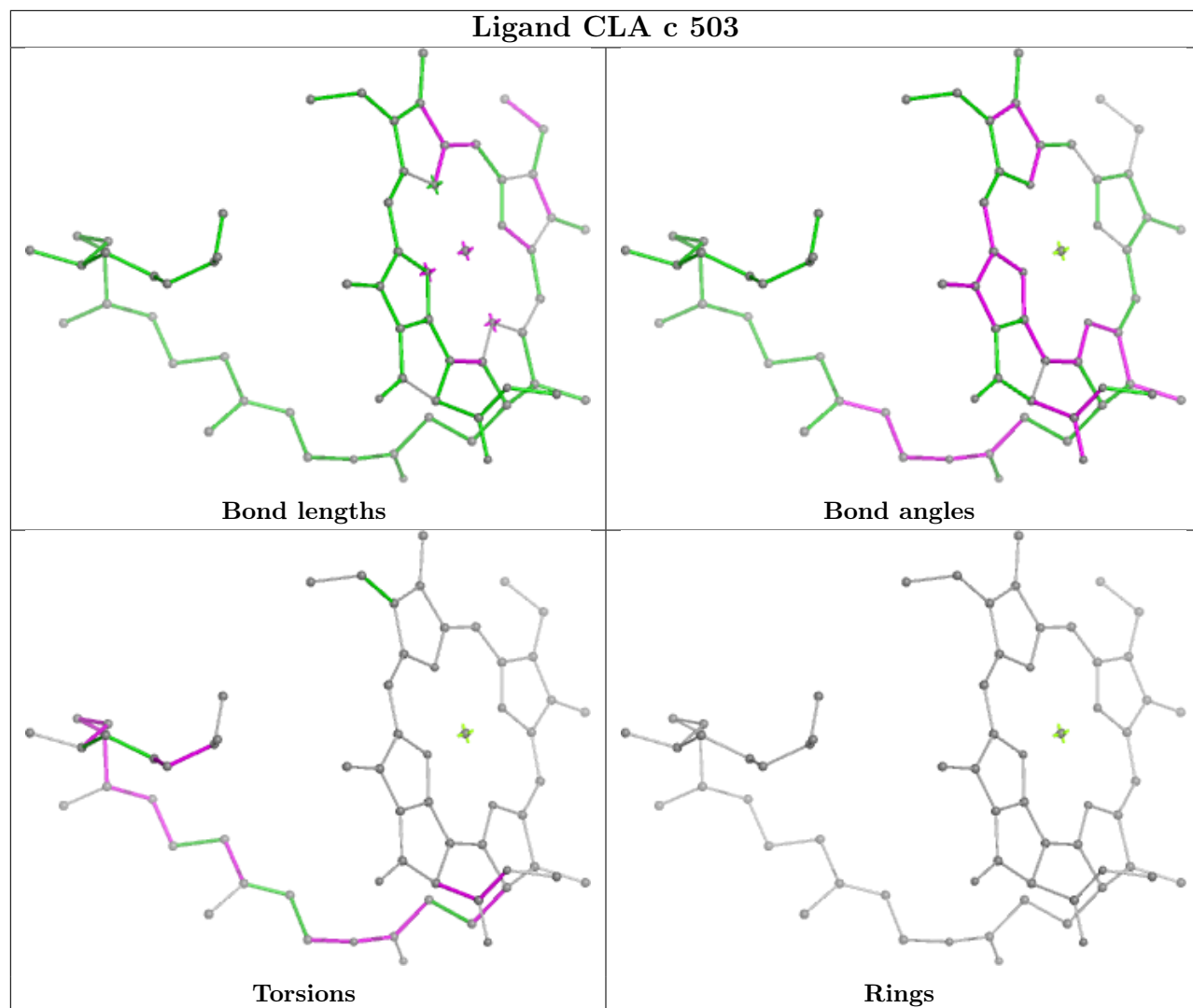


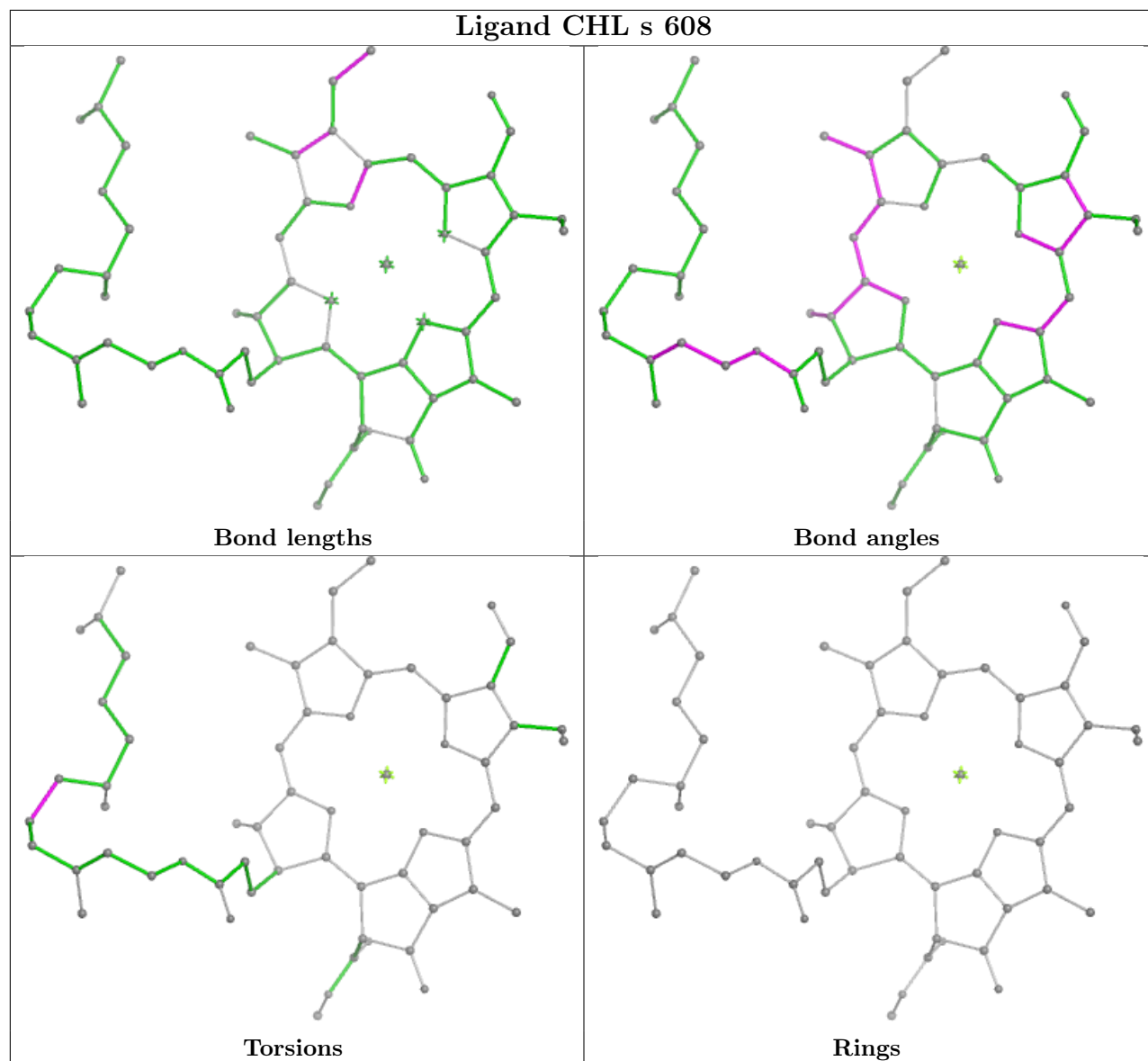


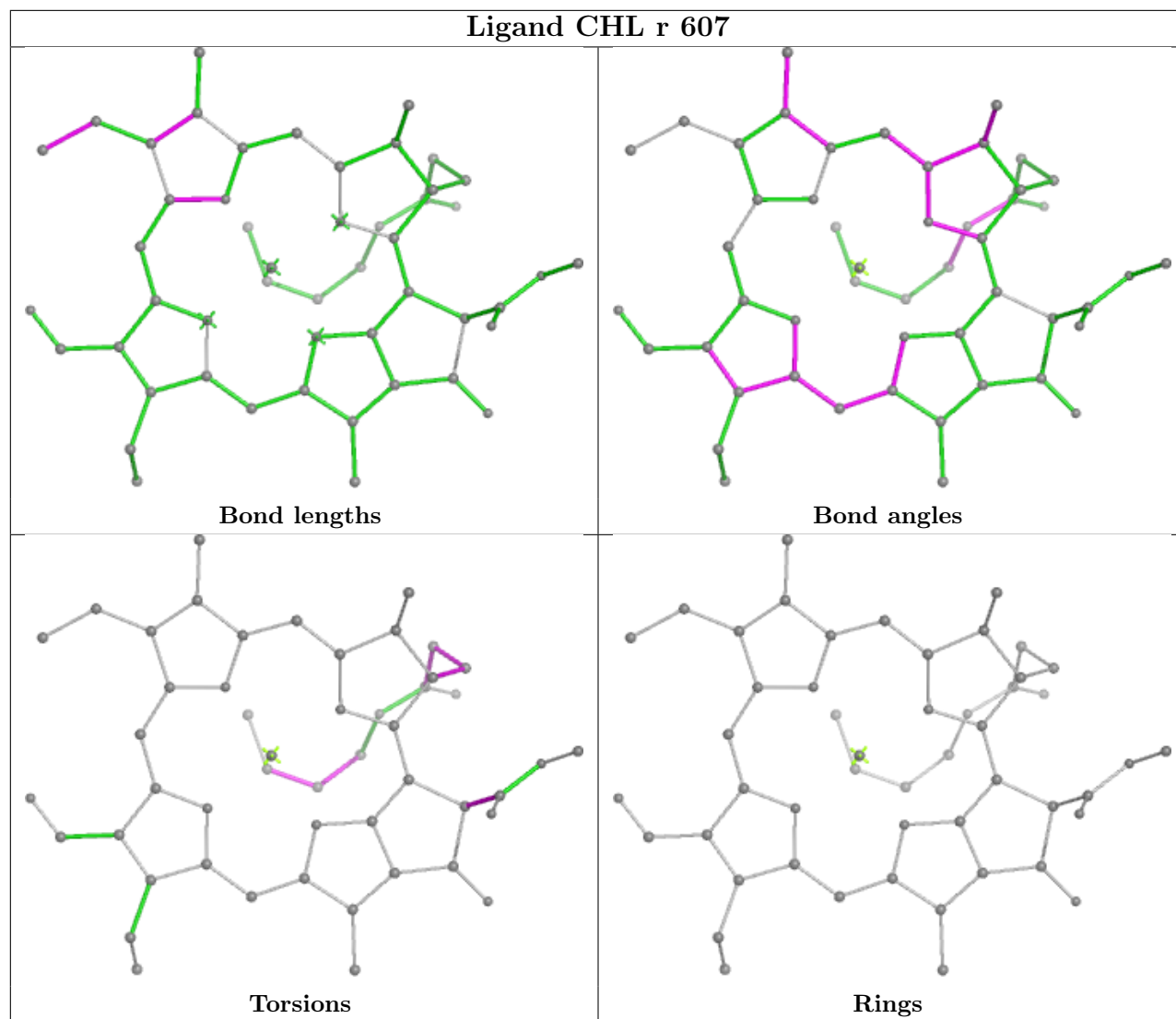


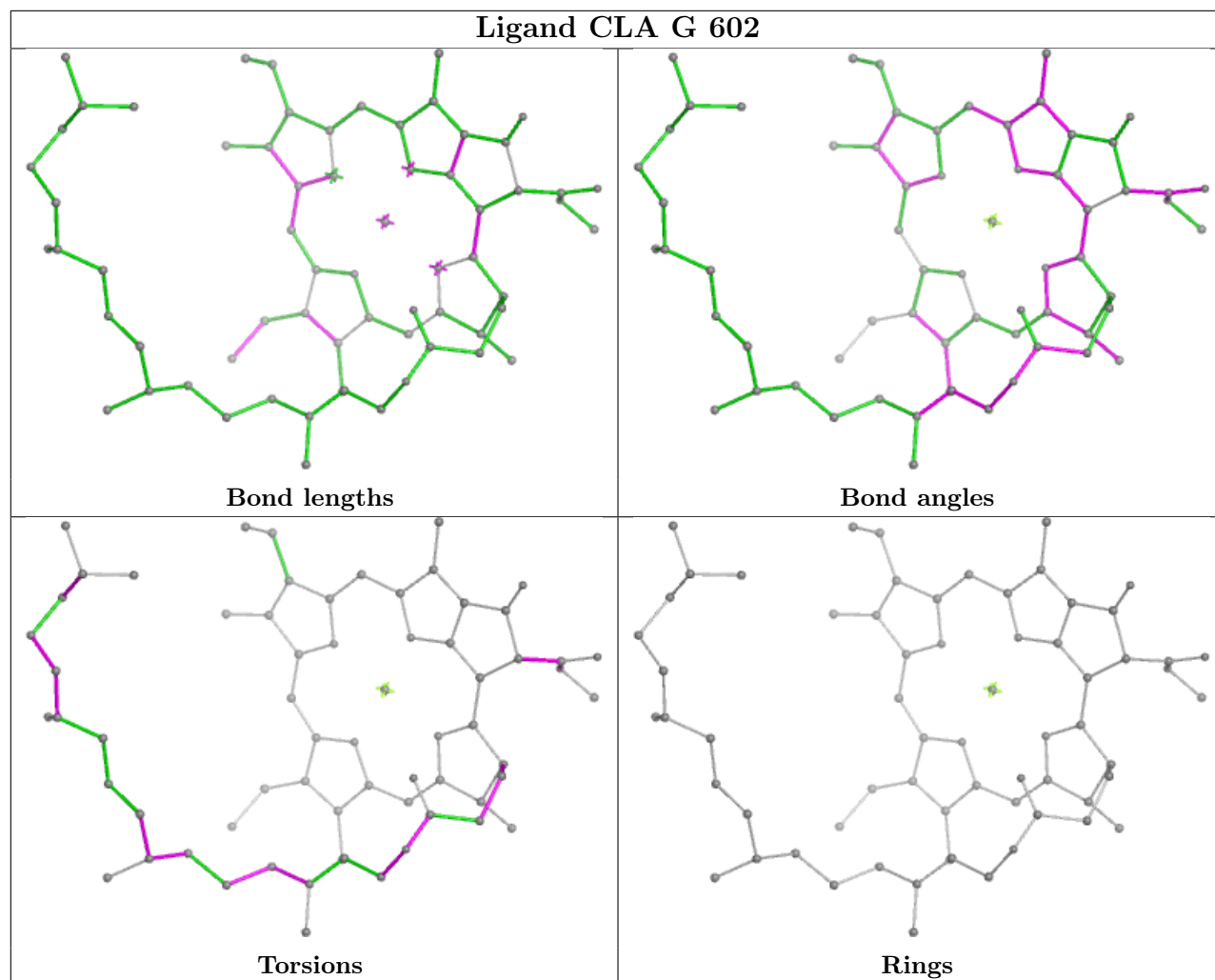


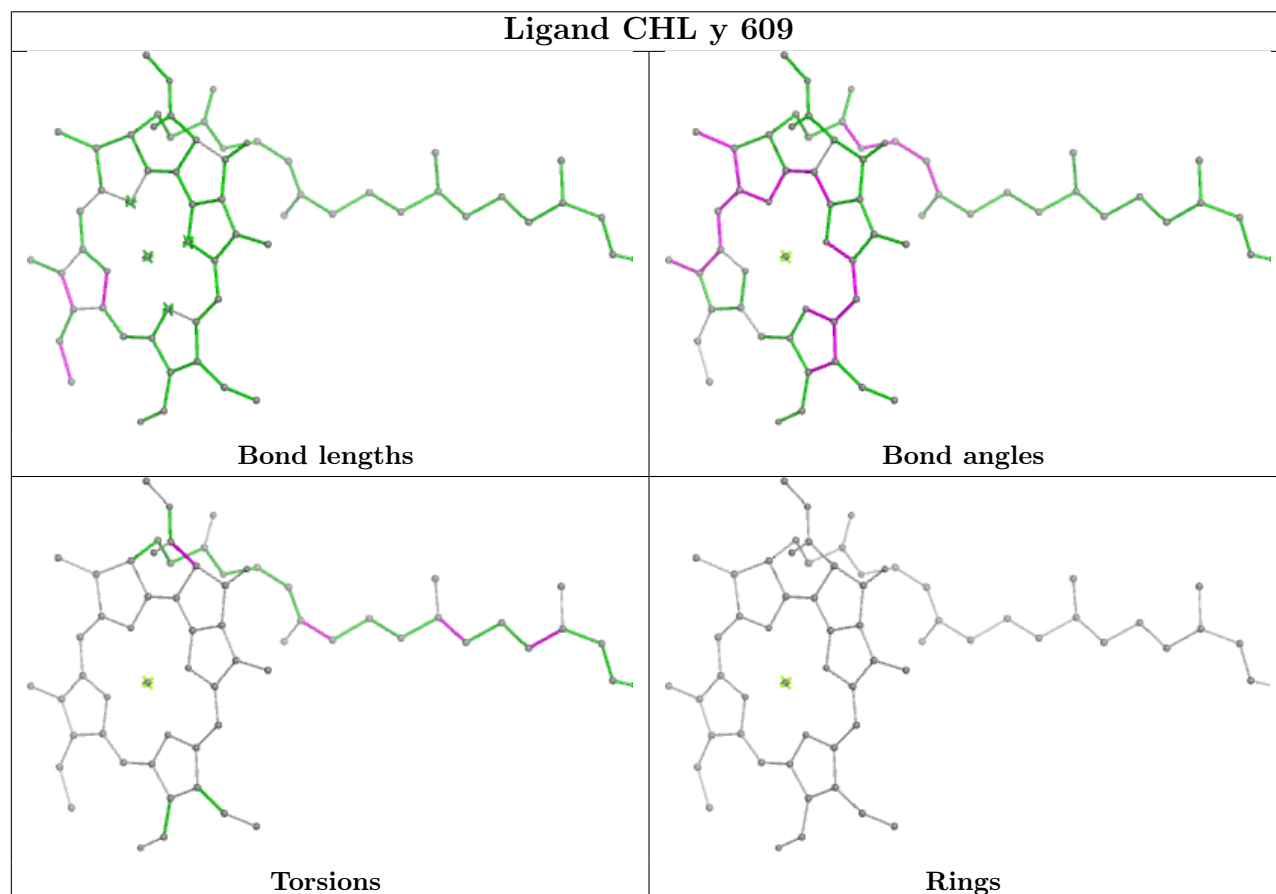
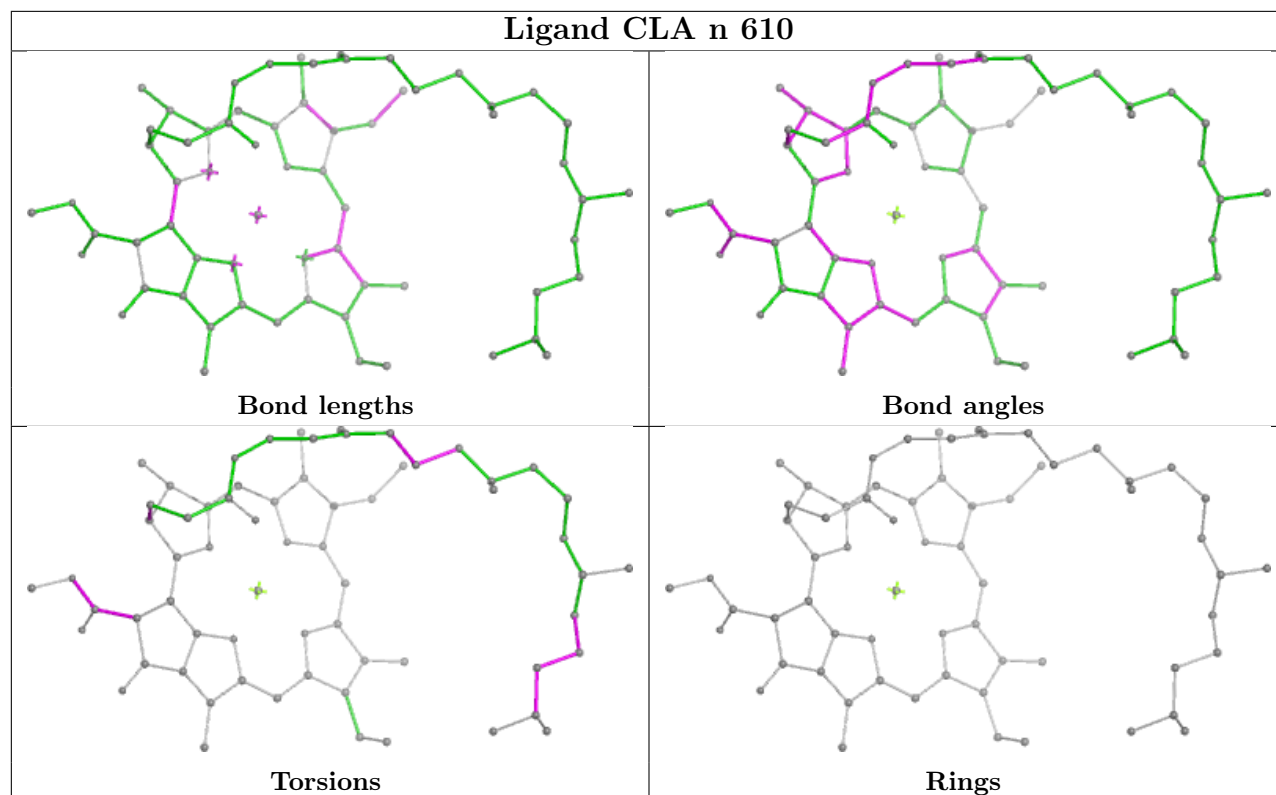


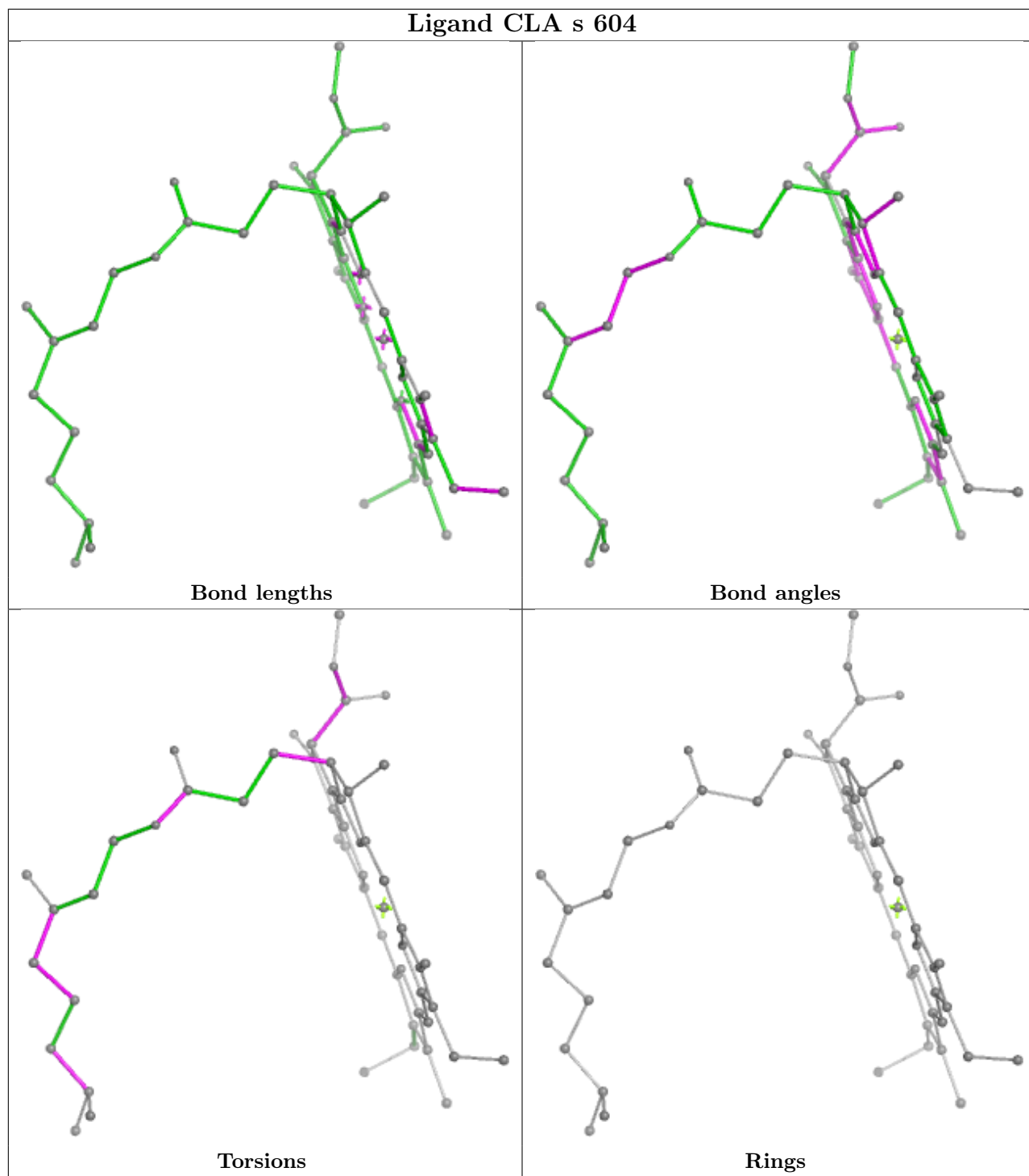


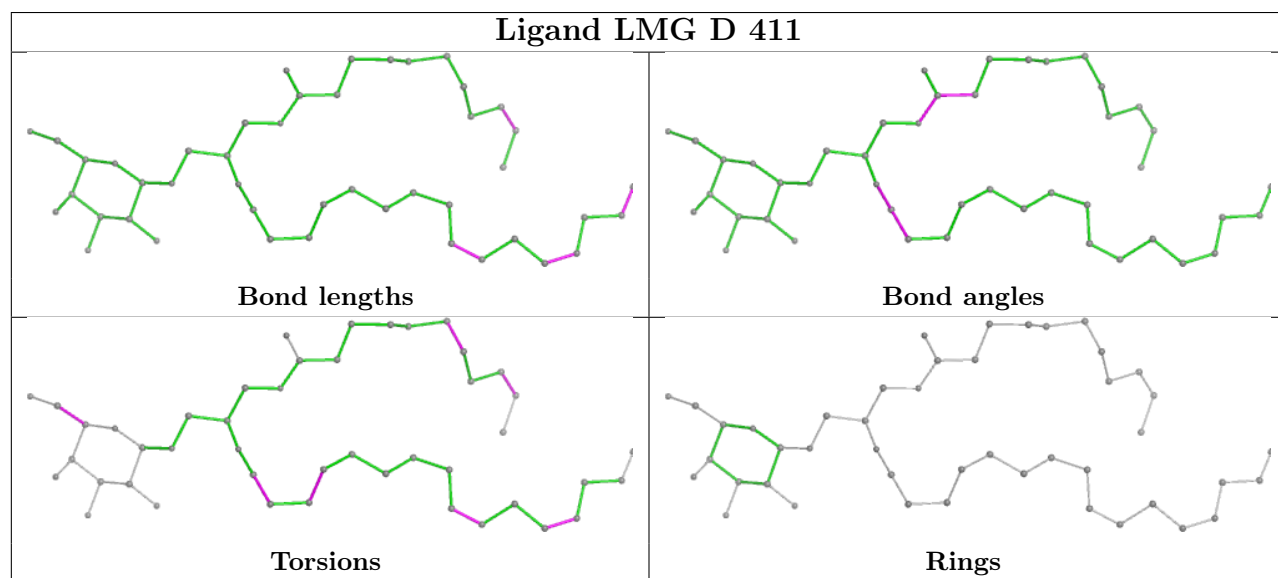
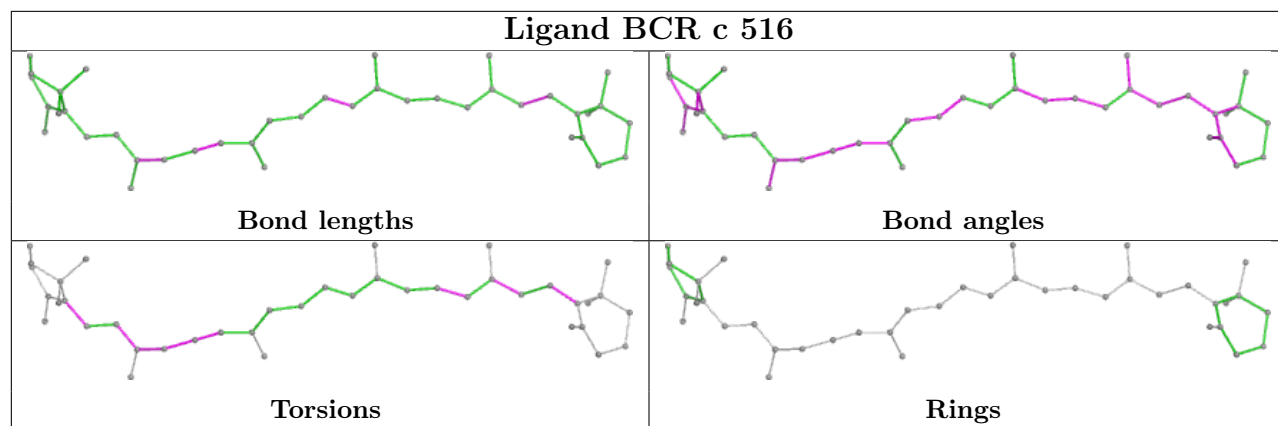


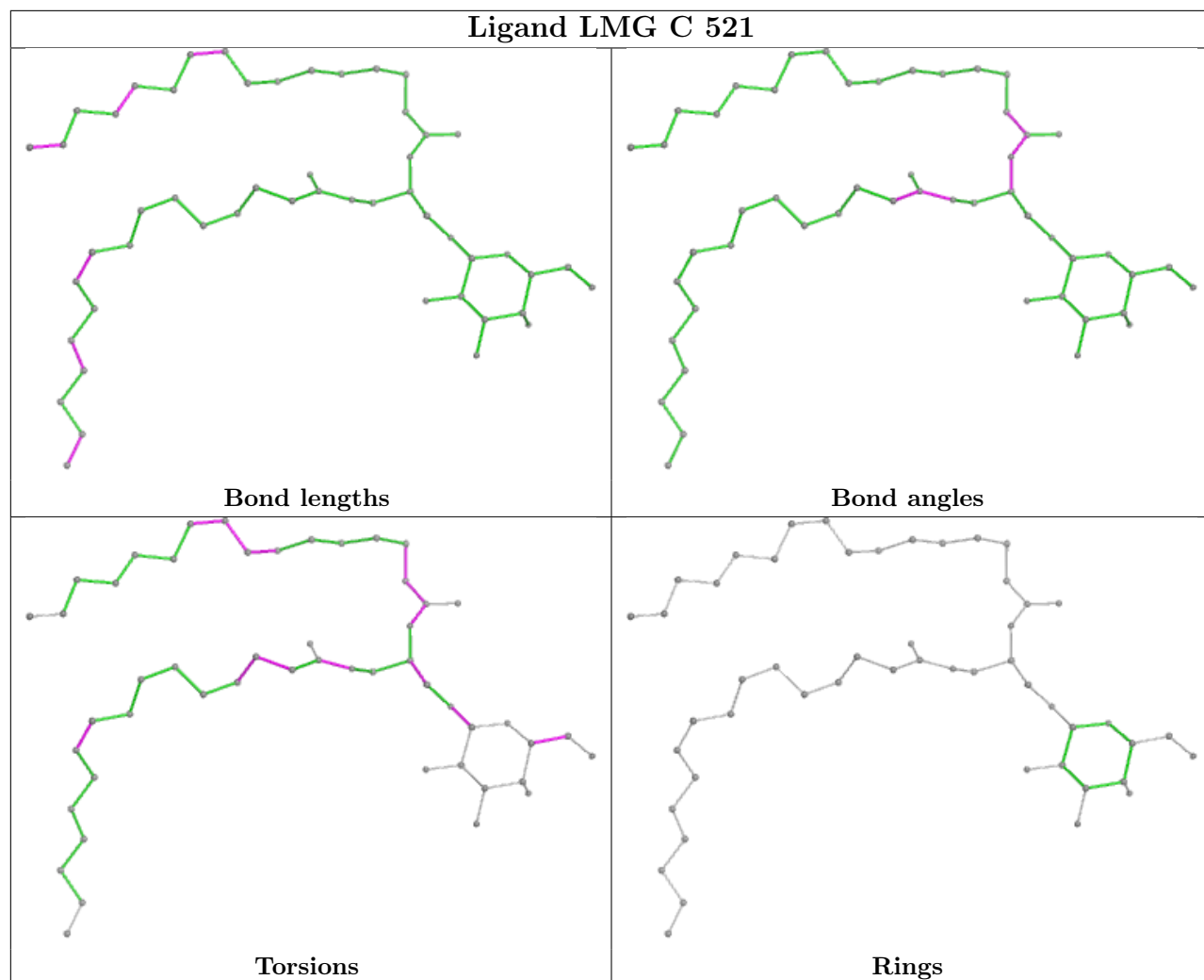


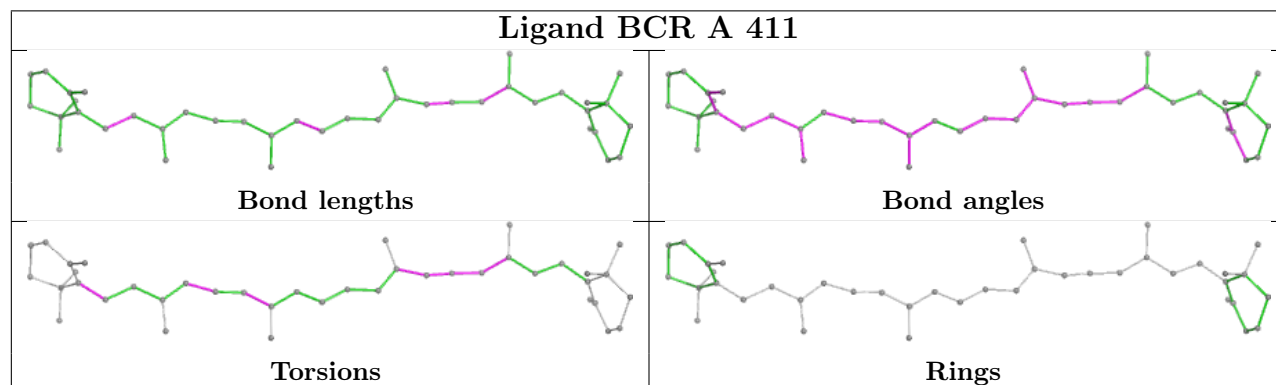
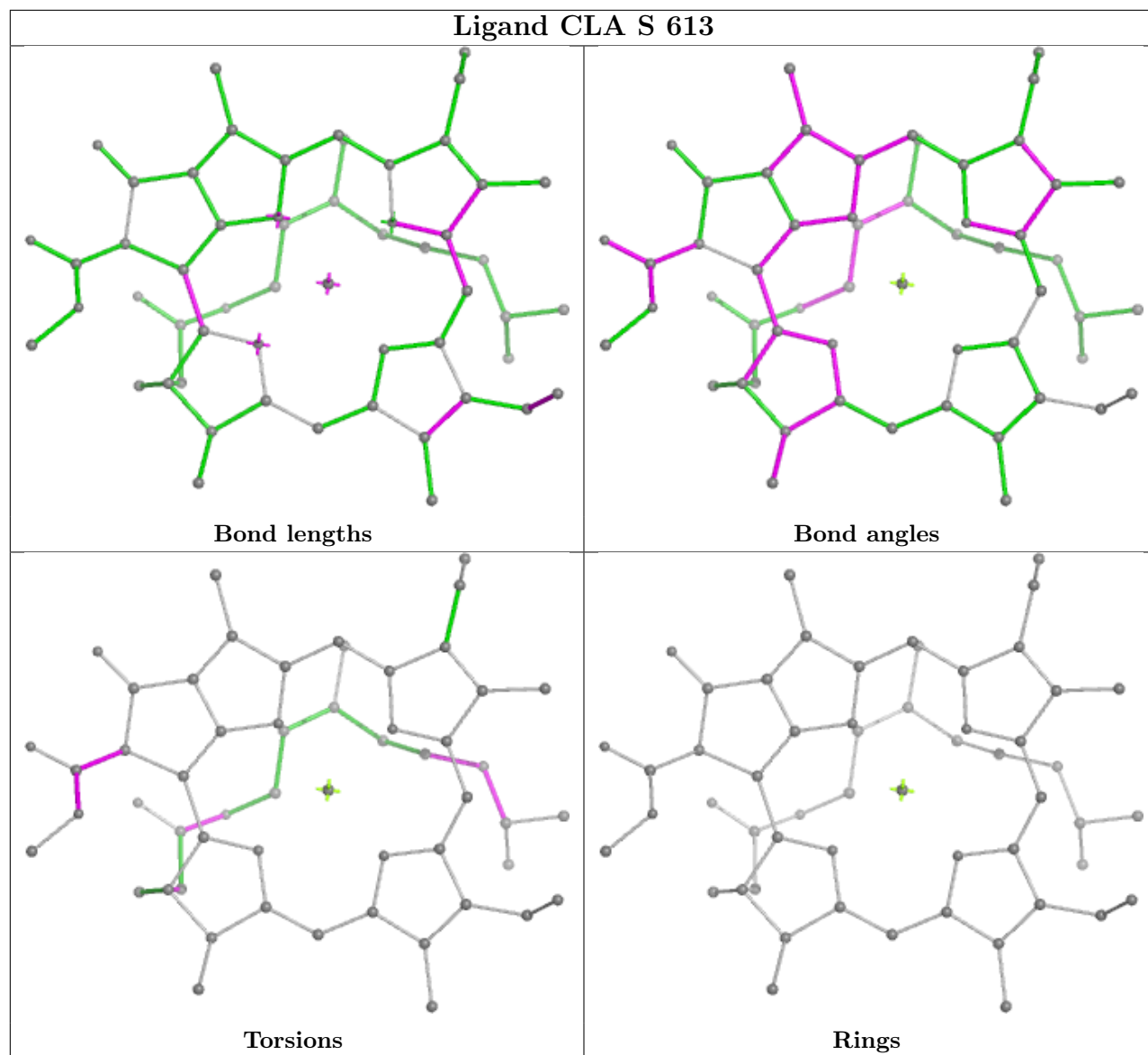


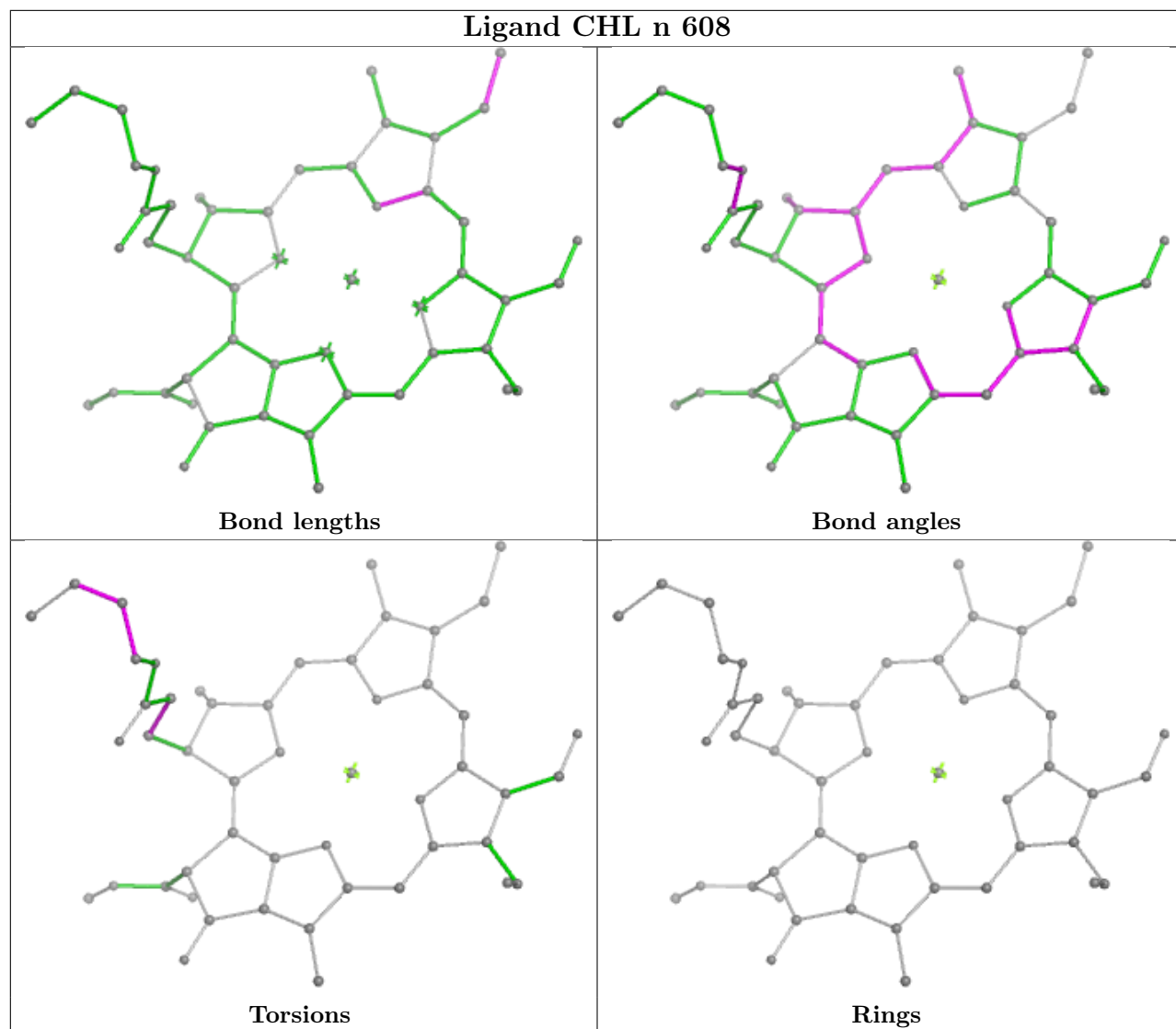


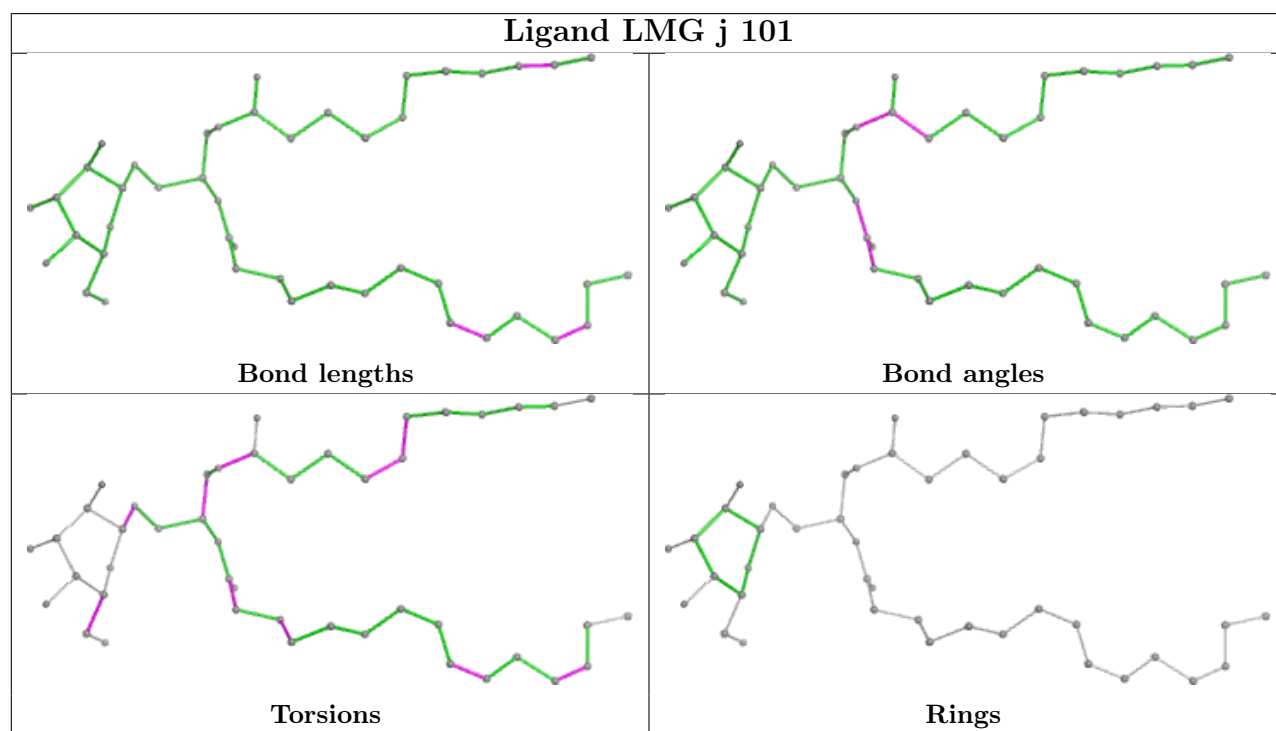
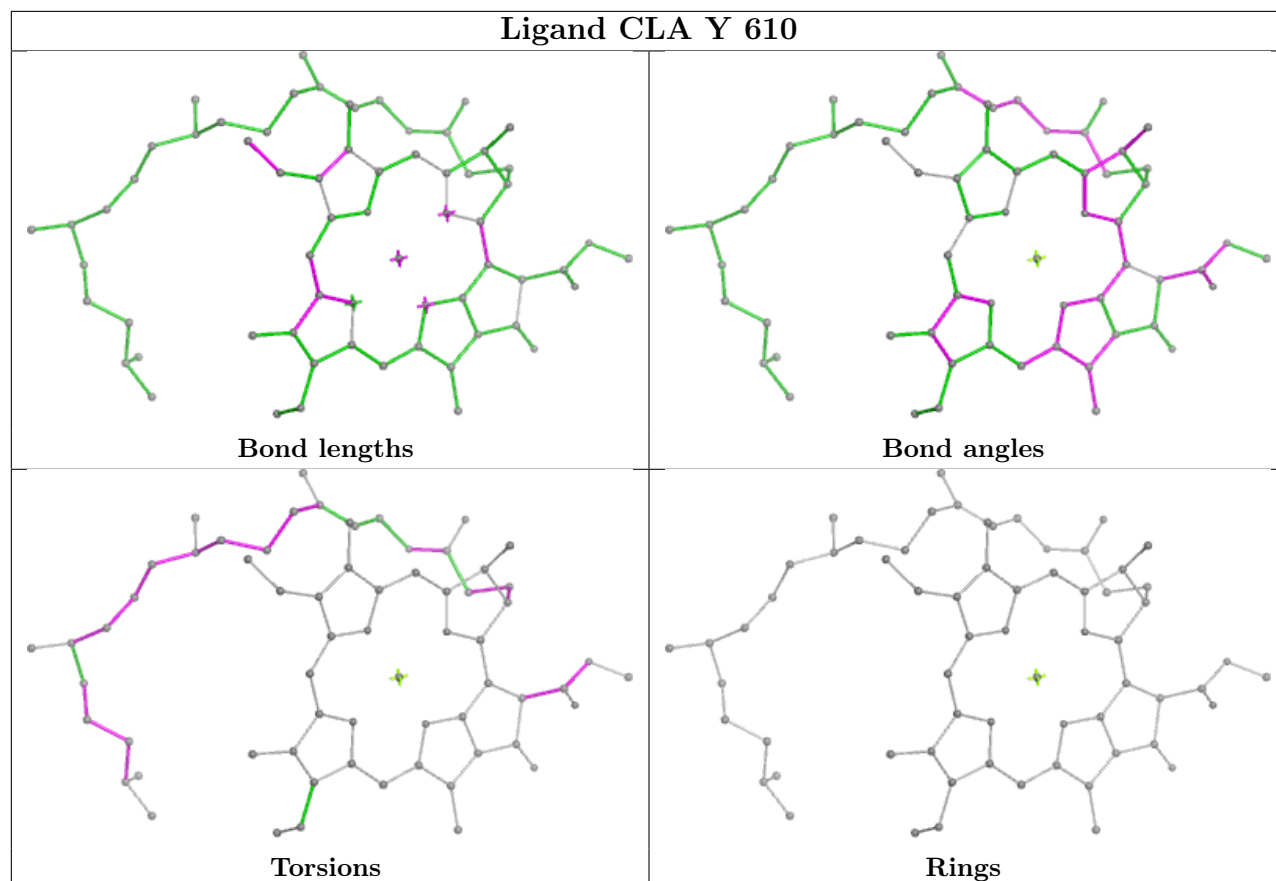


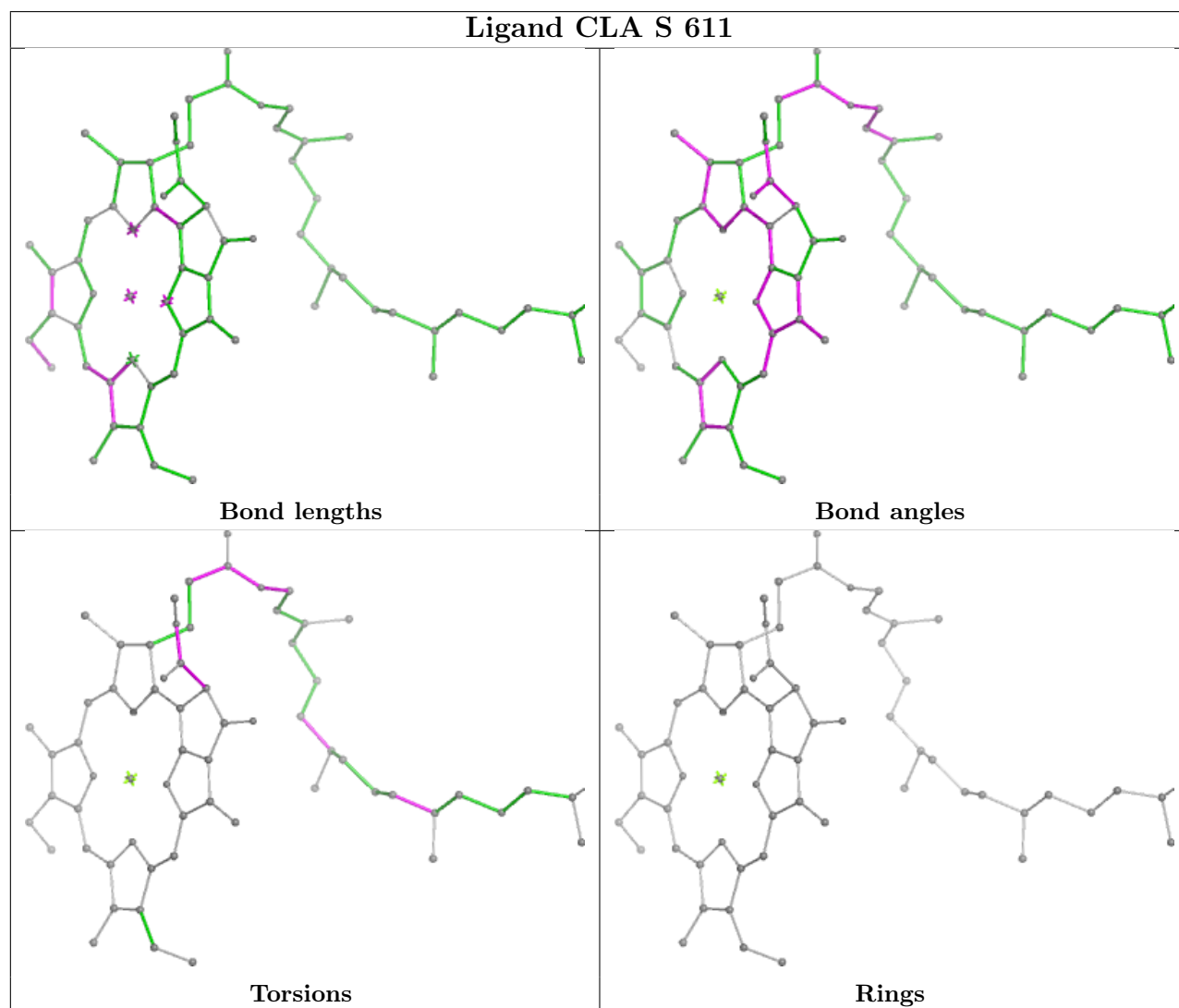
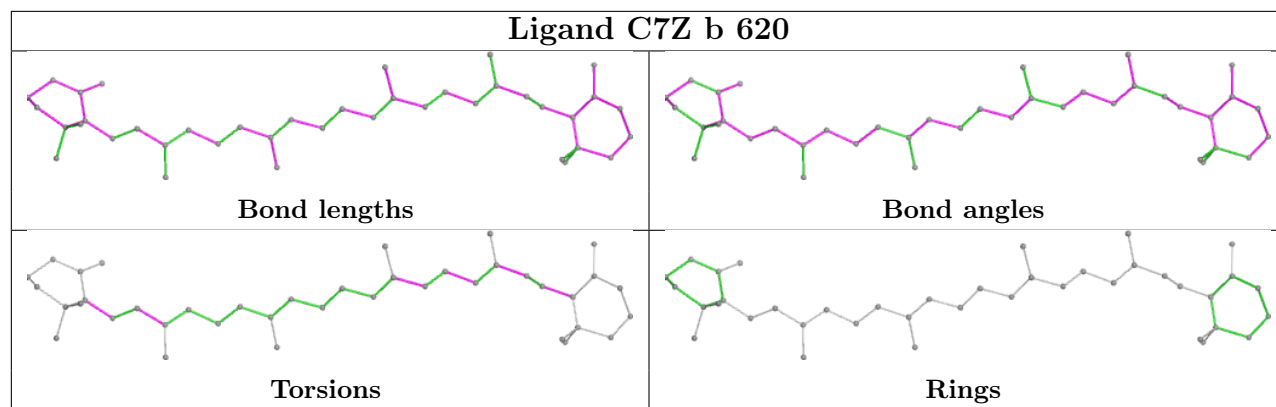


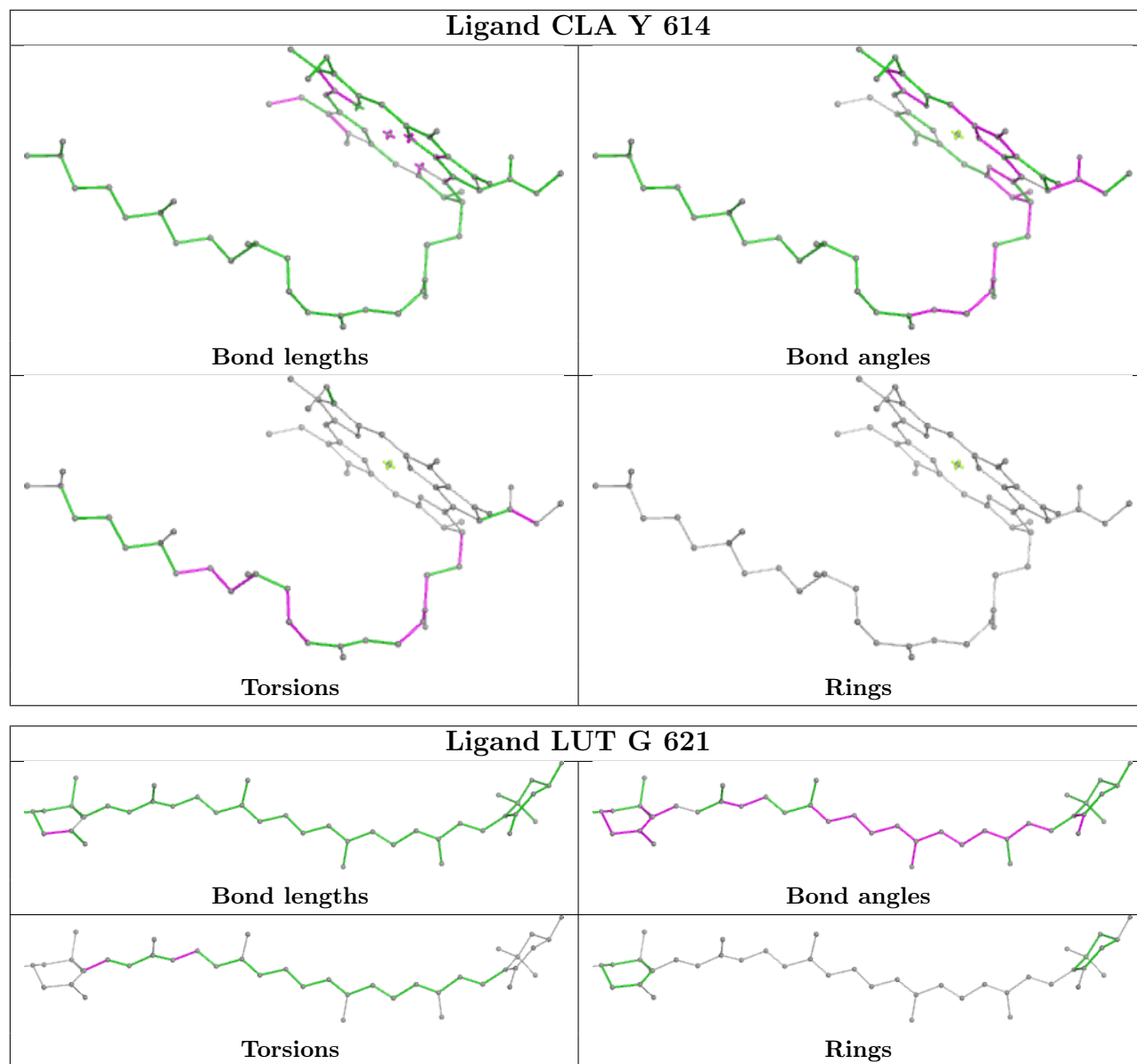


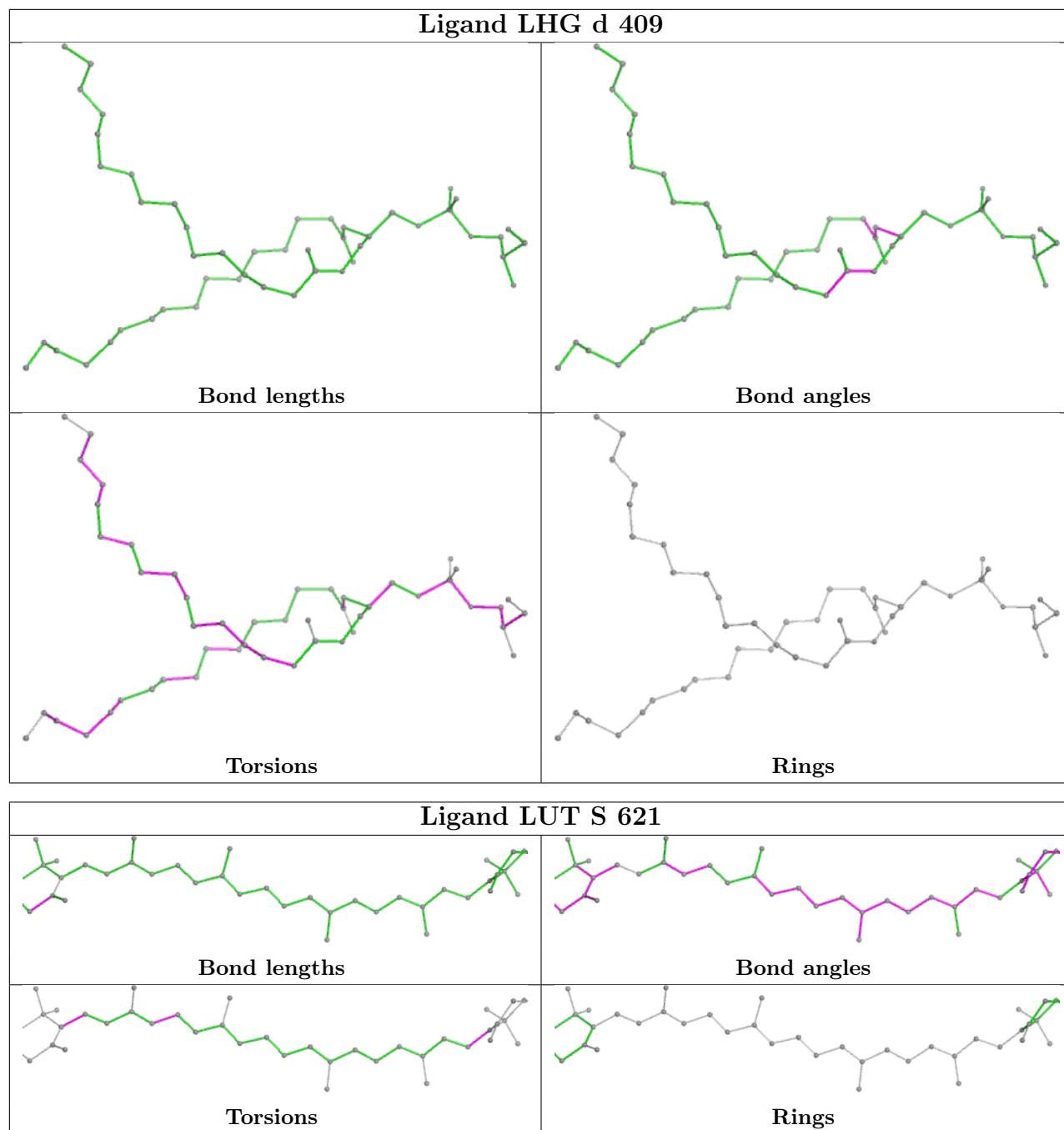


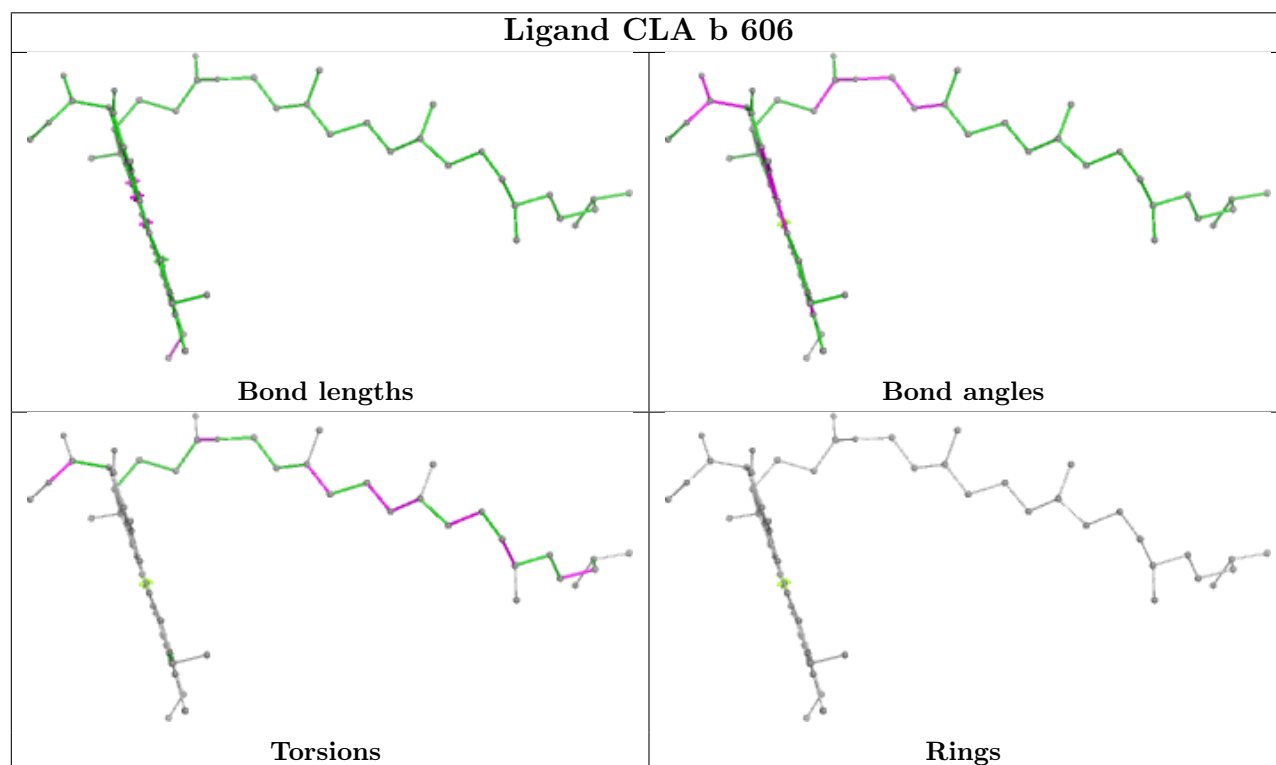
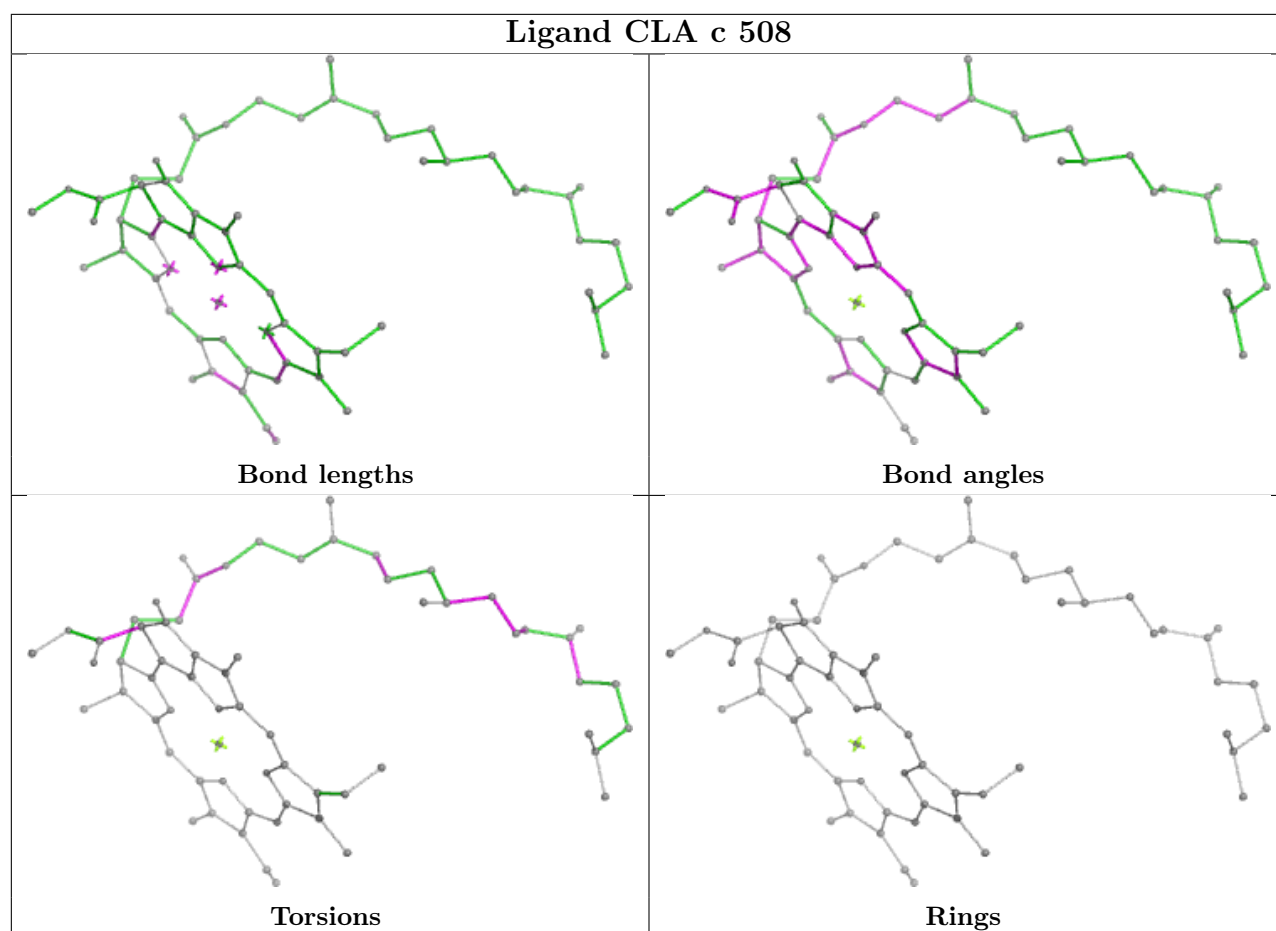


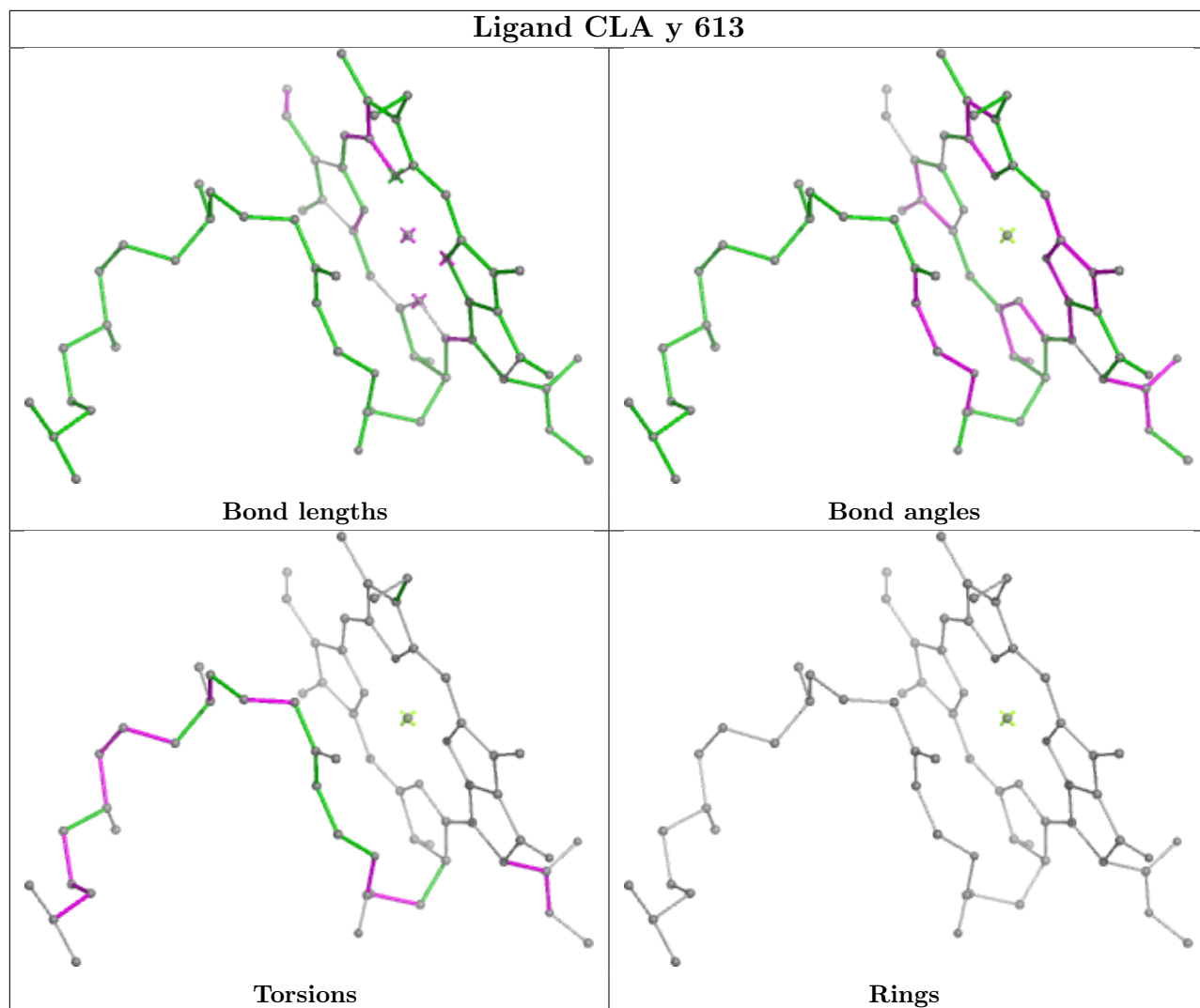


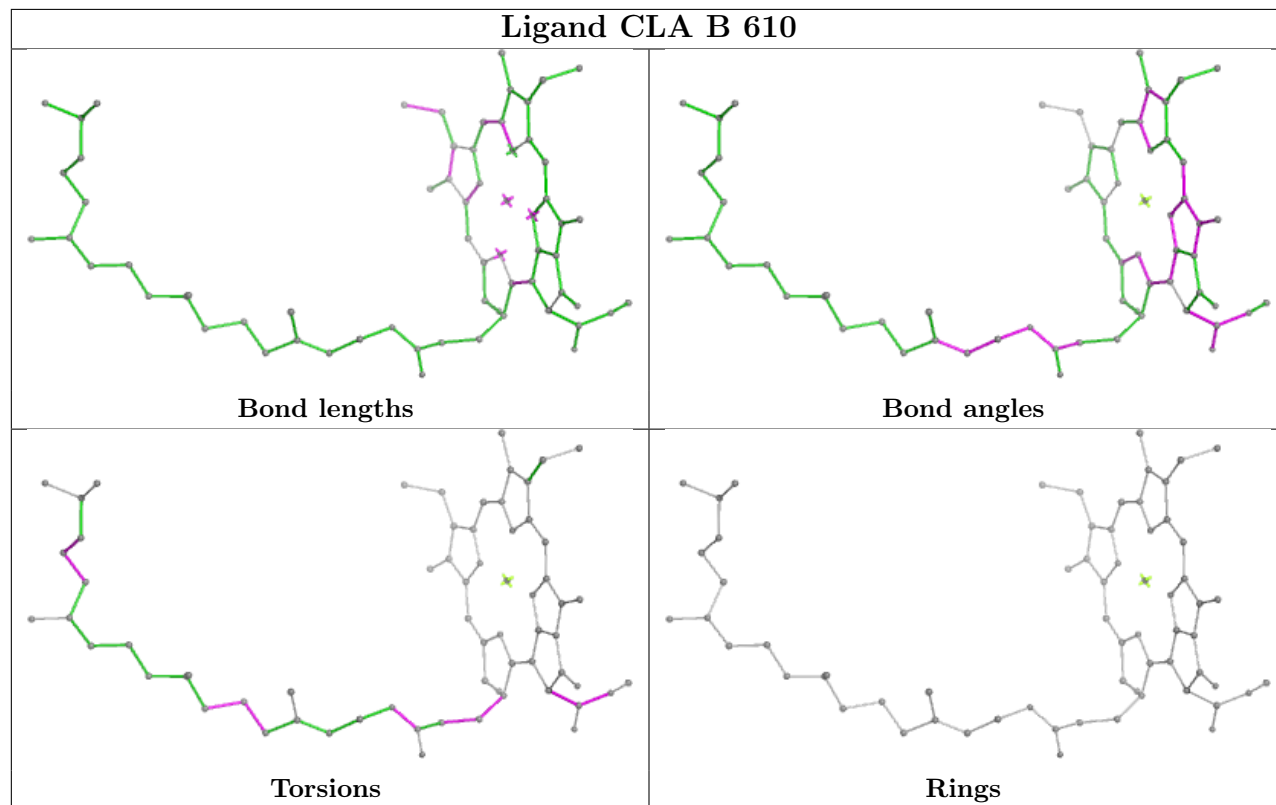
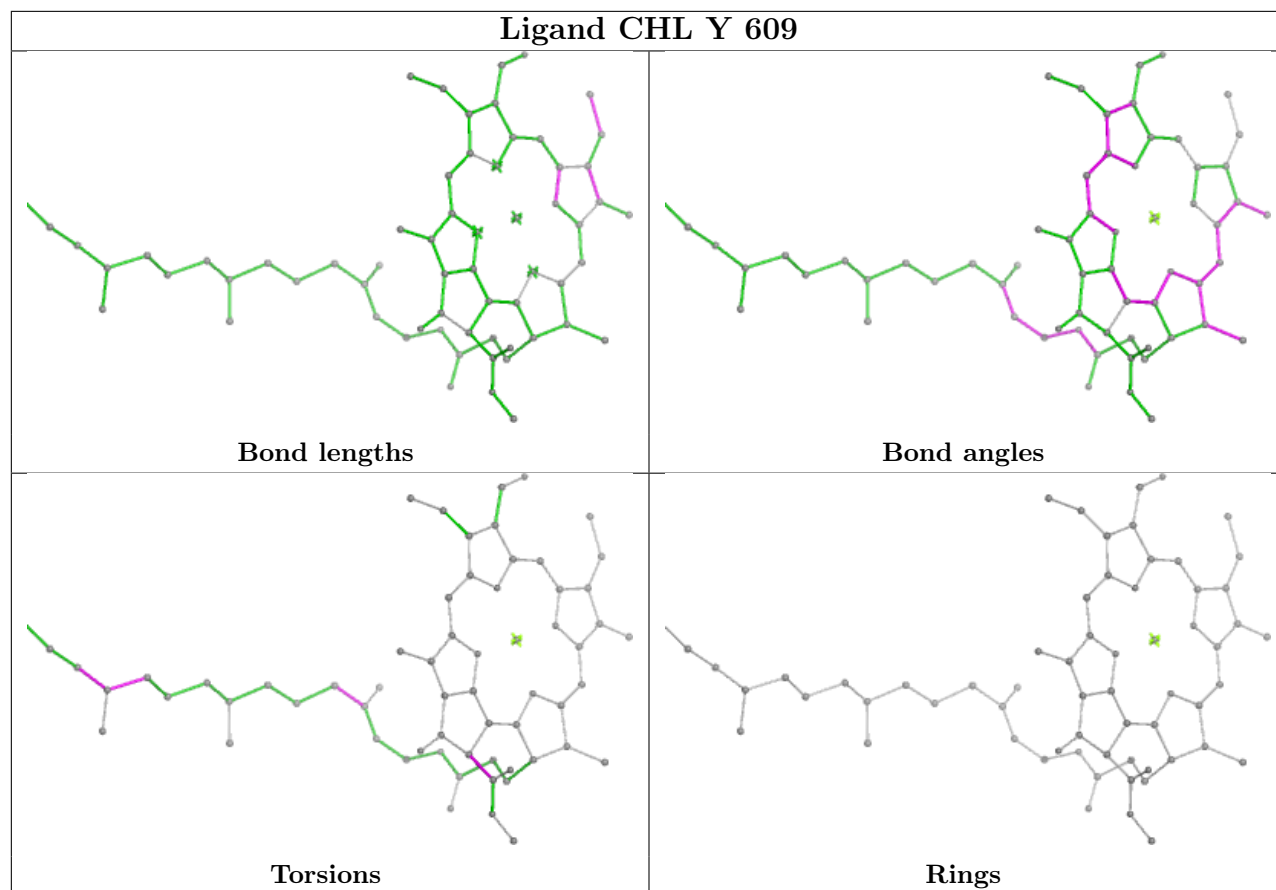


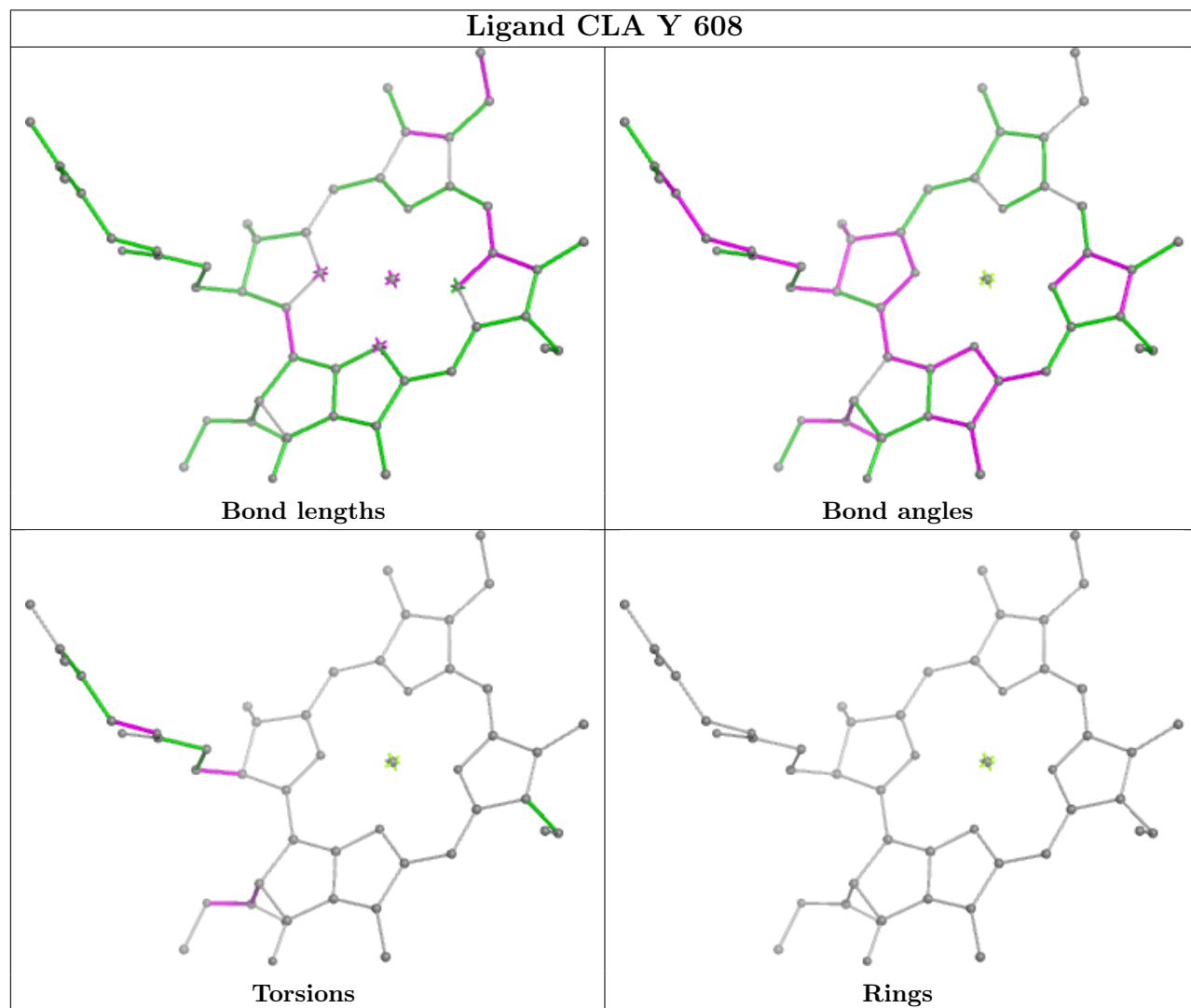
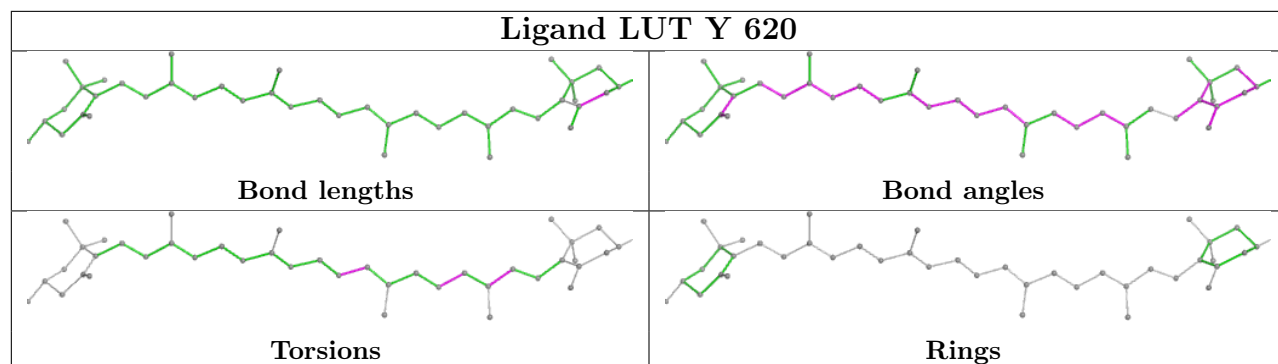


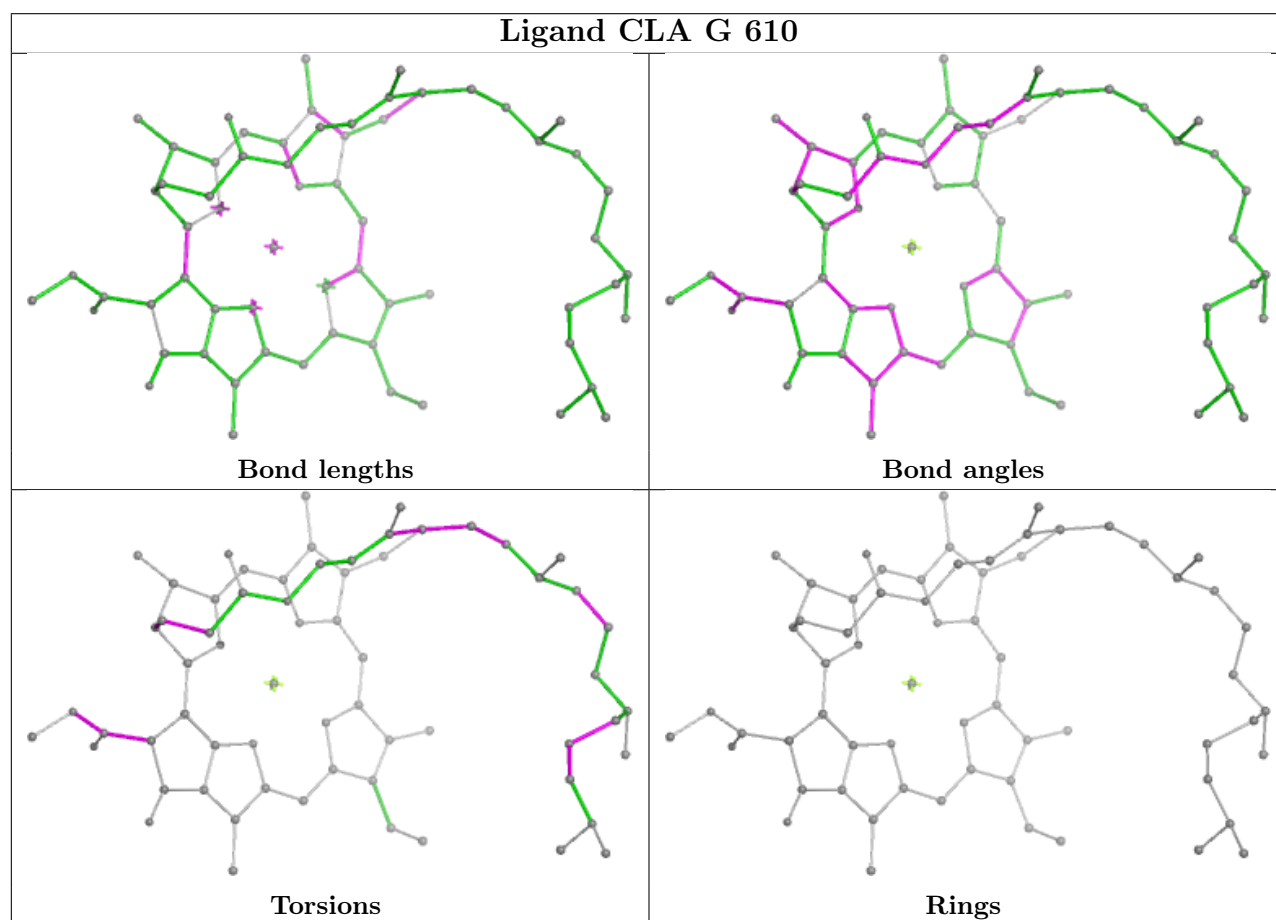
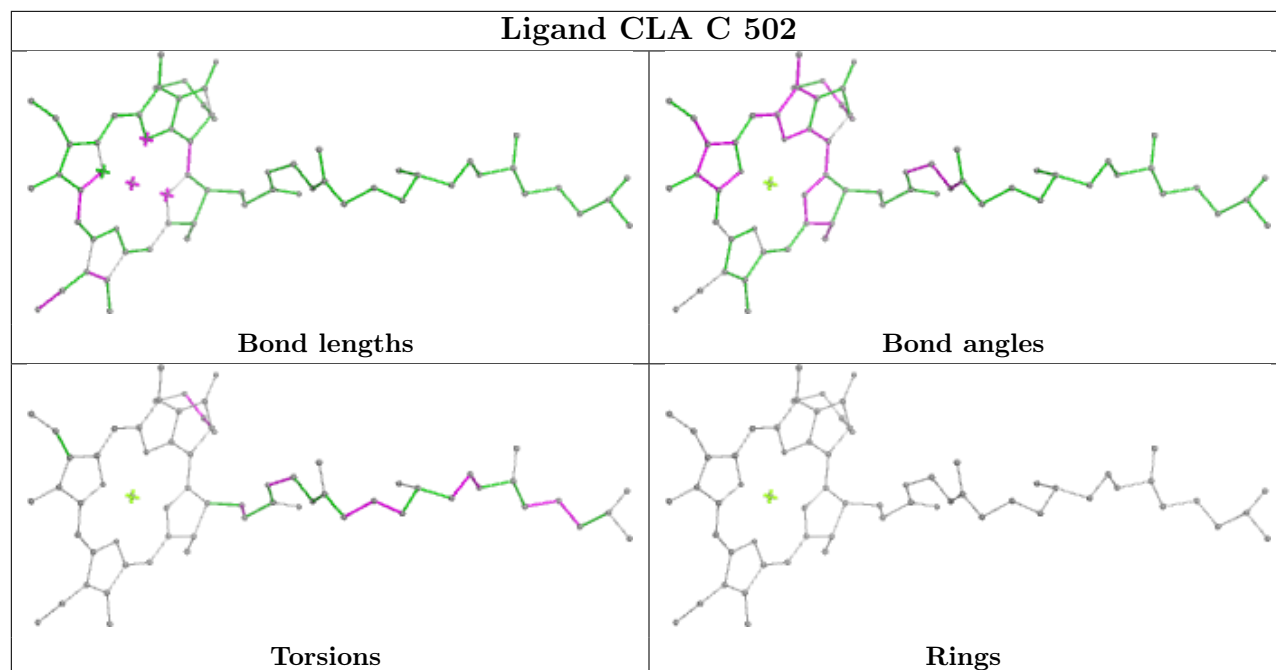


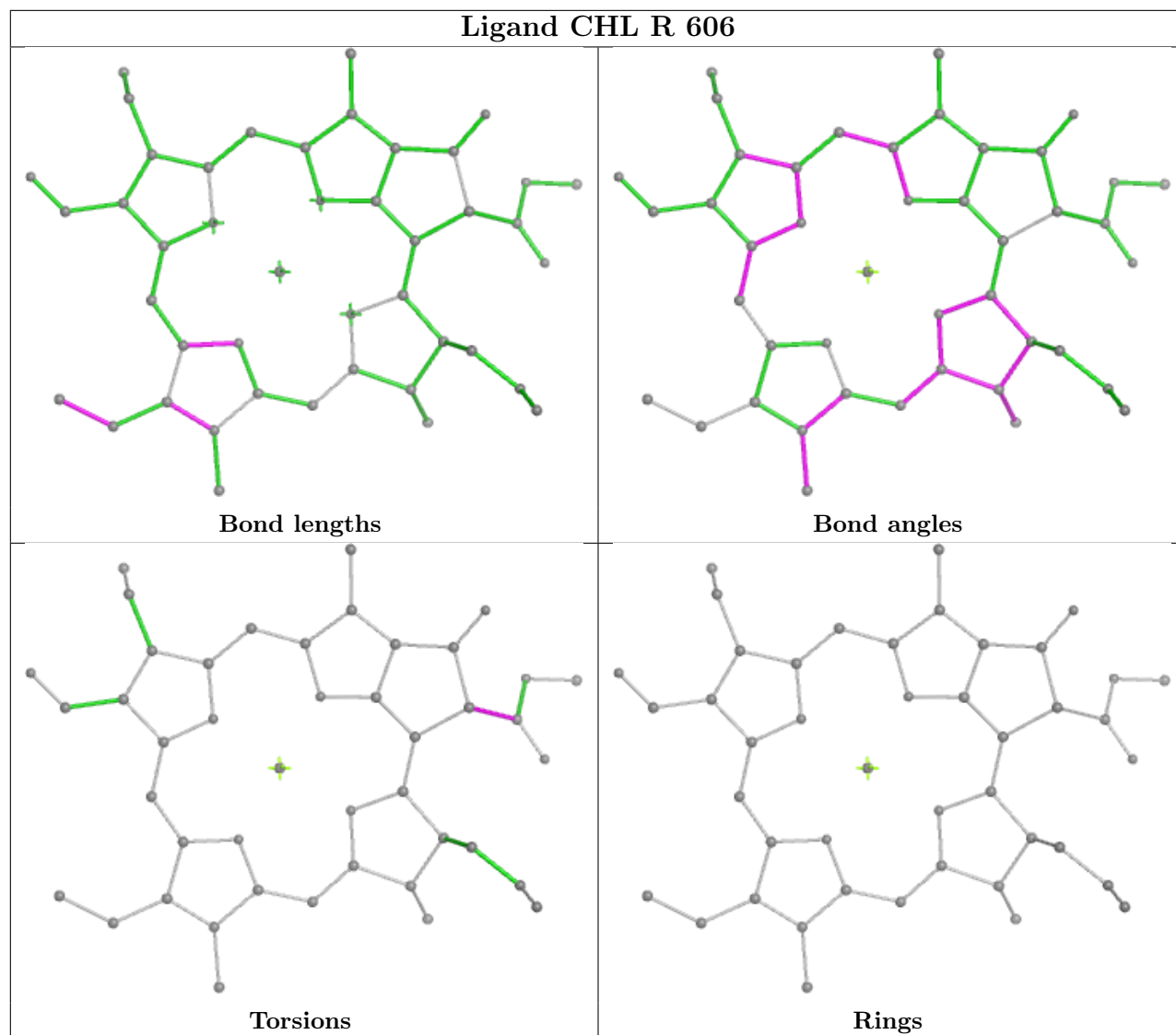


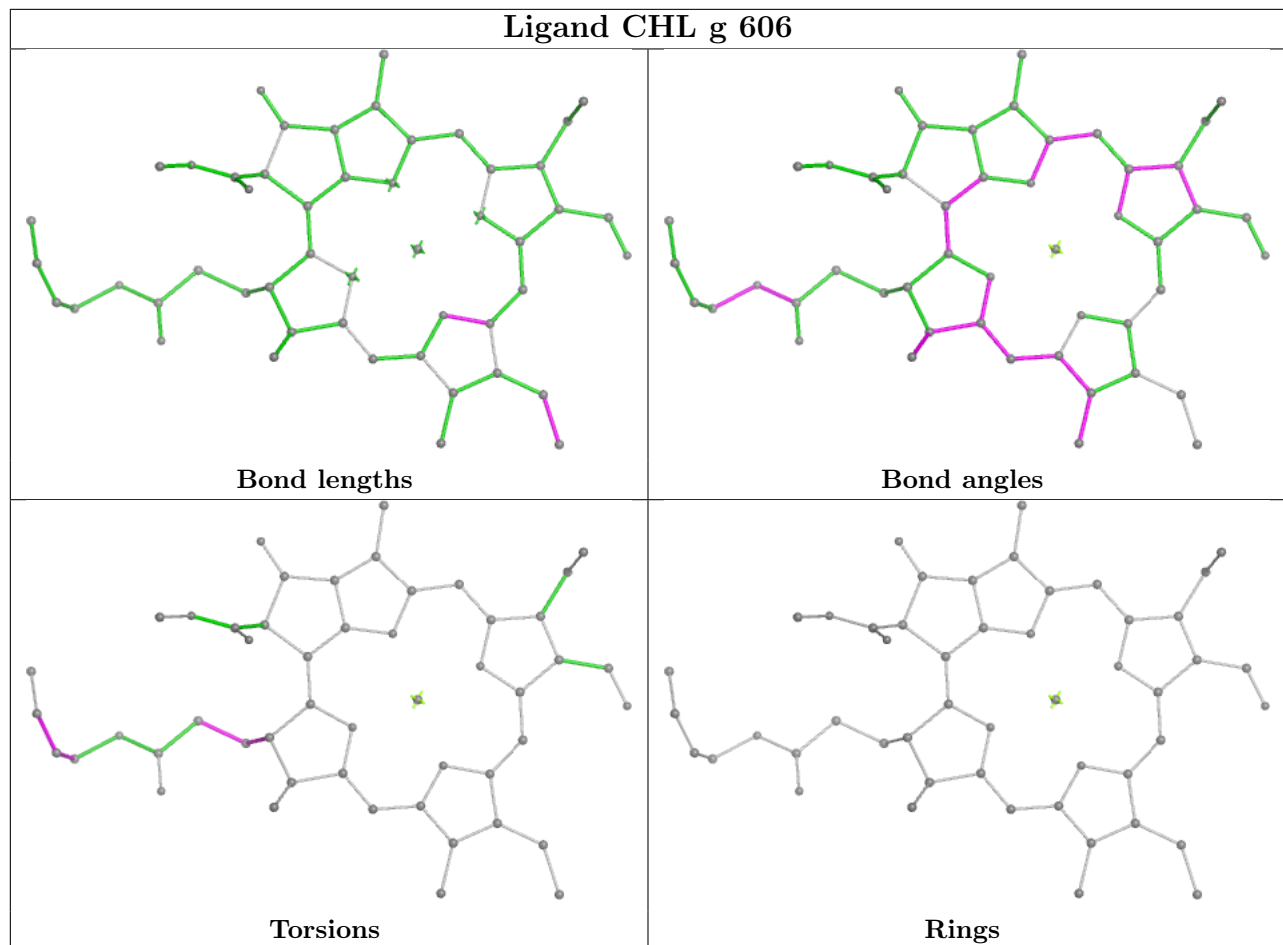












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

| Mol | Chain | Number of breaks |
|-----|-------|------------------|
| 22 | R | 1 |
| 22 | r | 1 |
| 23 | s | 1 |

All chain breaks are listed below:

| Model | Chain | Residue-1 | Atom-1 | Residue-2 | Atom-2 | Distance (Å) |
|-------|-------|-----------|--------|-----------|--------|--------------|
| 1 | R | 110:PRO | C | 126:GLU | N | 17.87 |
| 1 | r | 110:PRO | C | 126:GLU | N | 17.80 |
| 1 | s | 285:ARG | C | 286:VAL | N | 3.20 |

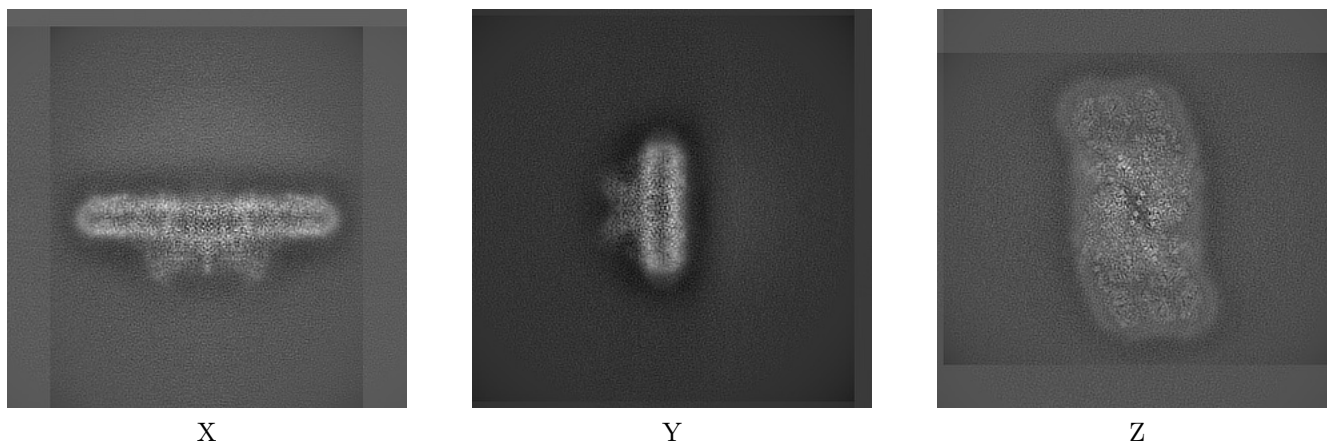
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-13430. 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](#)

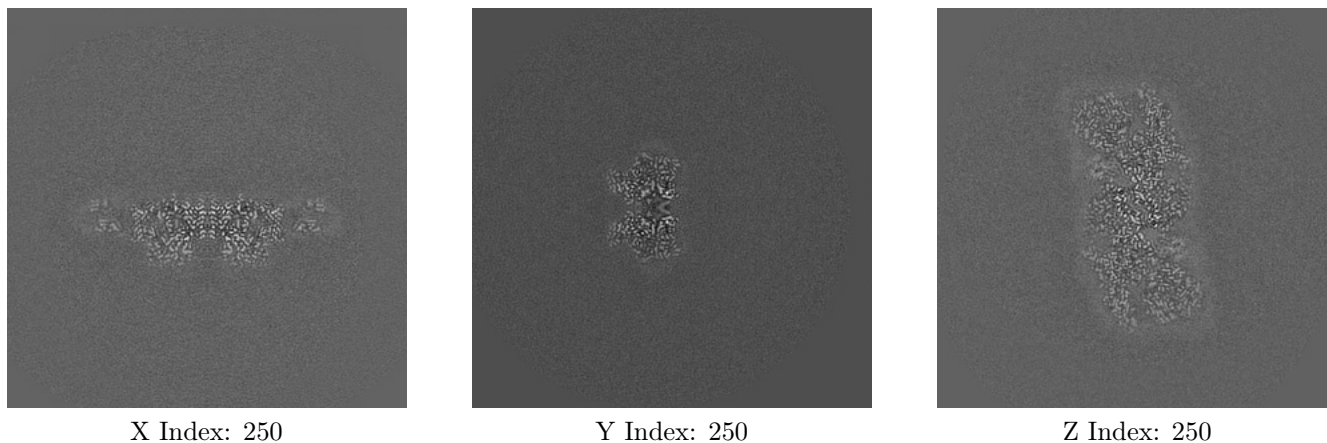
6.1.1 Primary map



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

6.2 Central slices [i](#)

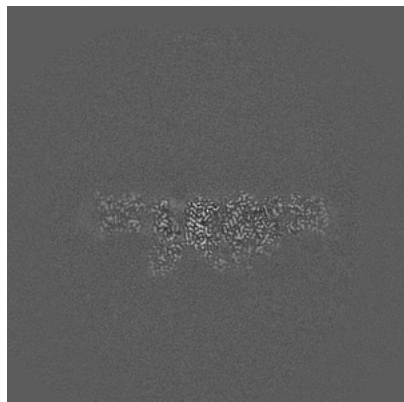
6.2.1 Primary map



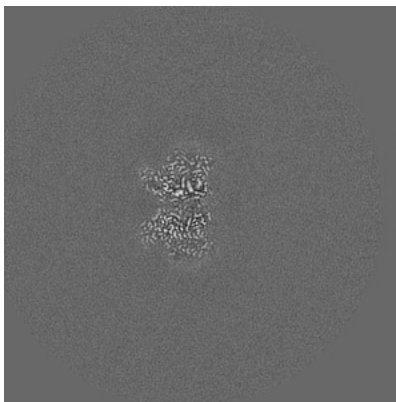
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

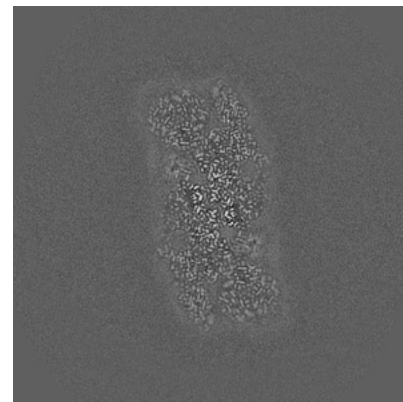
6.3.1 Primary map



X Index: 268



Y Index: 248

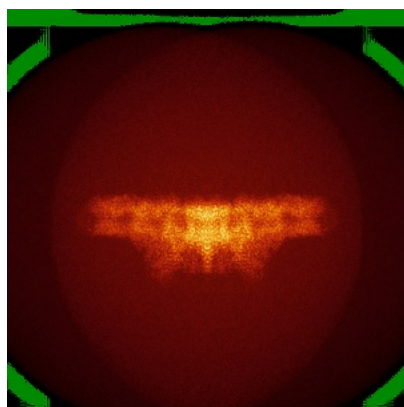


Z Index: 249

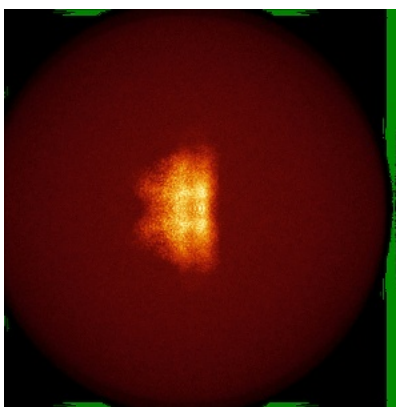
The images above show the largest variance slices of the map in three orthogonal directions.

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

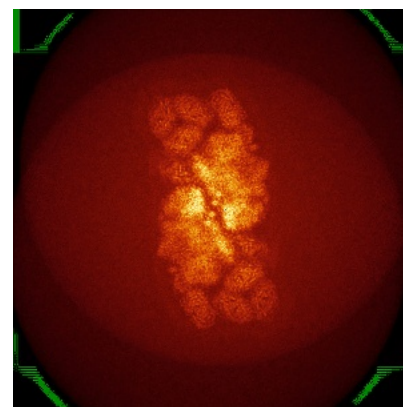
6.4.1 Primary map



X



Y

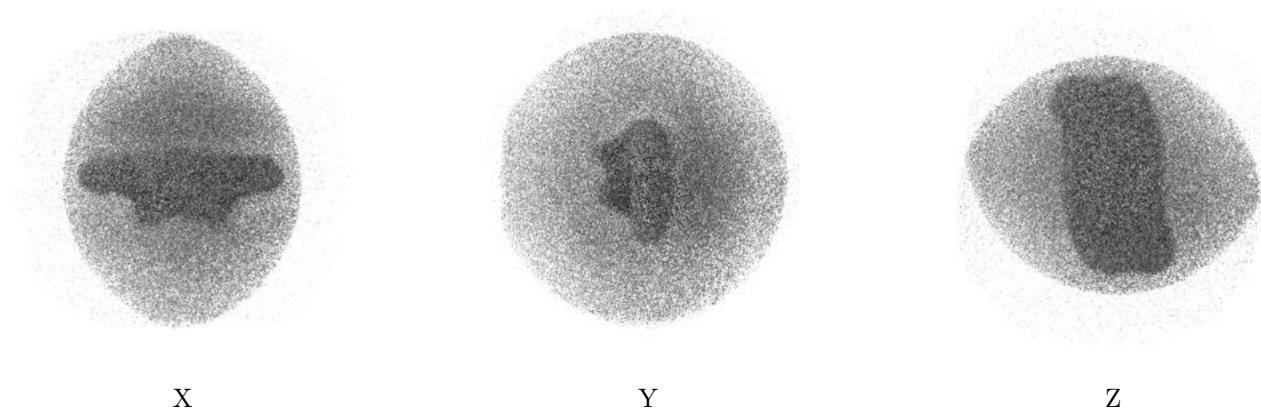


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 2.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

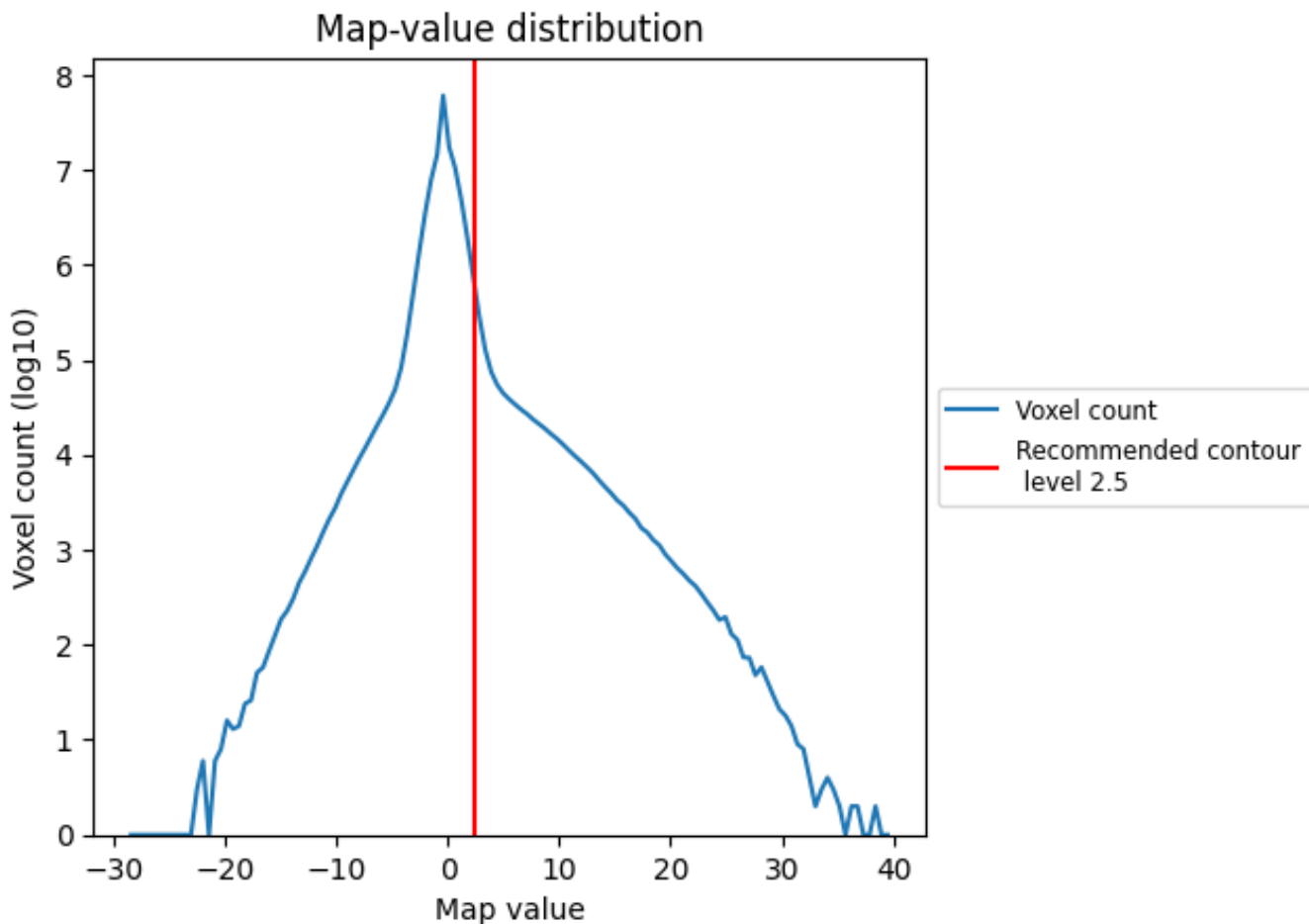
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

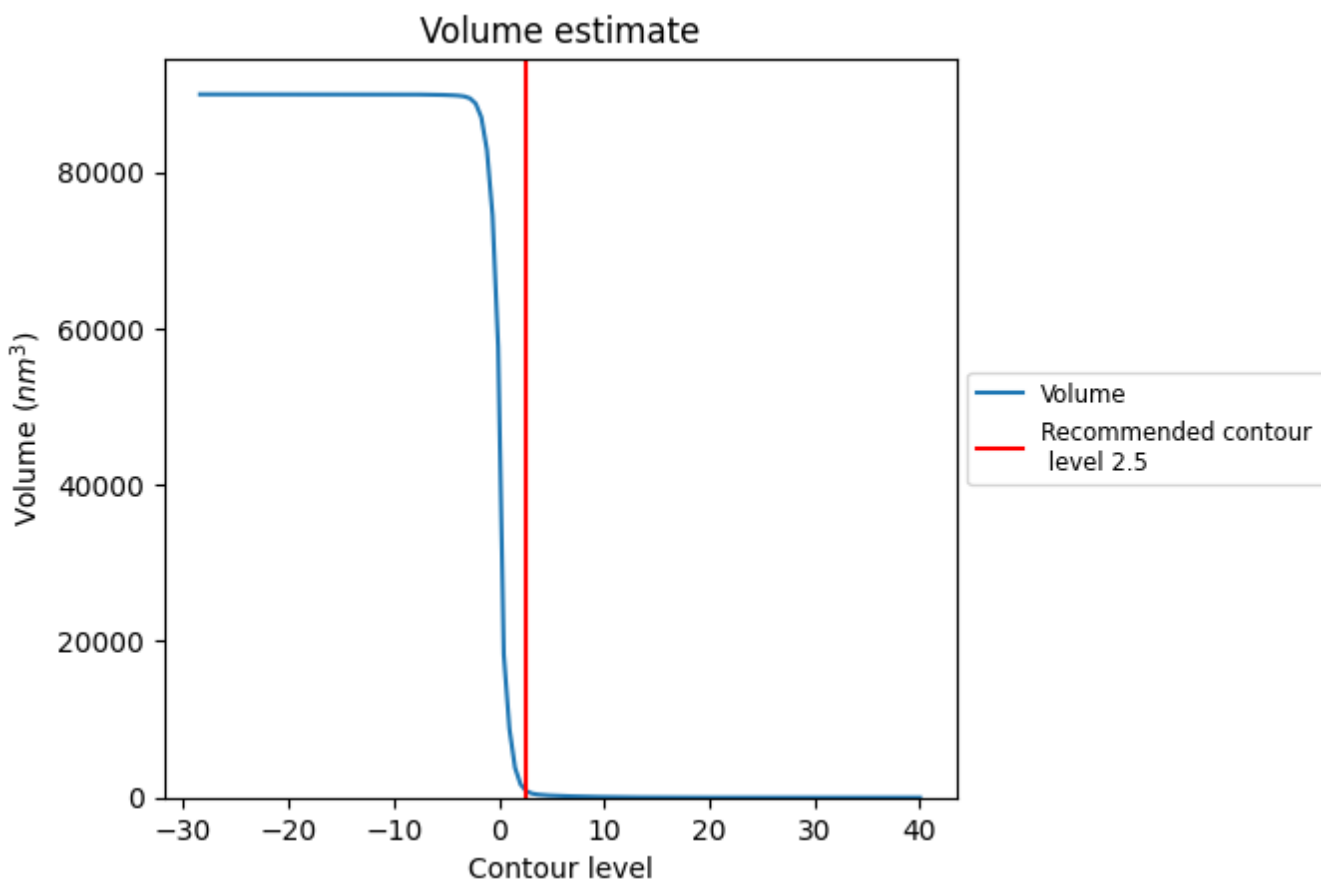
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

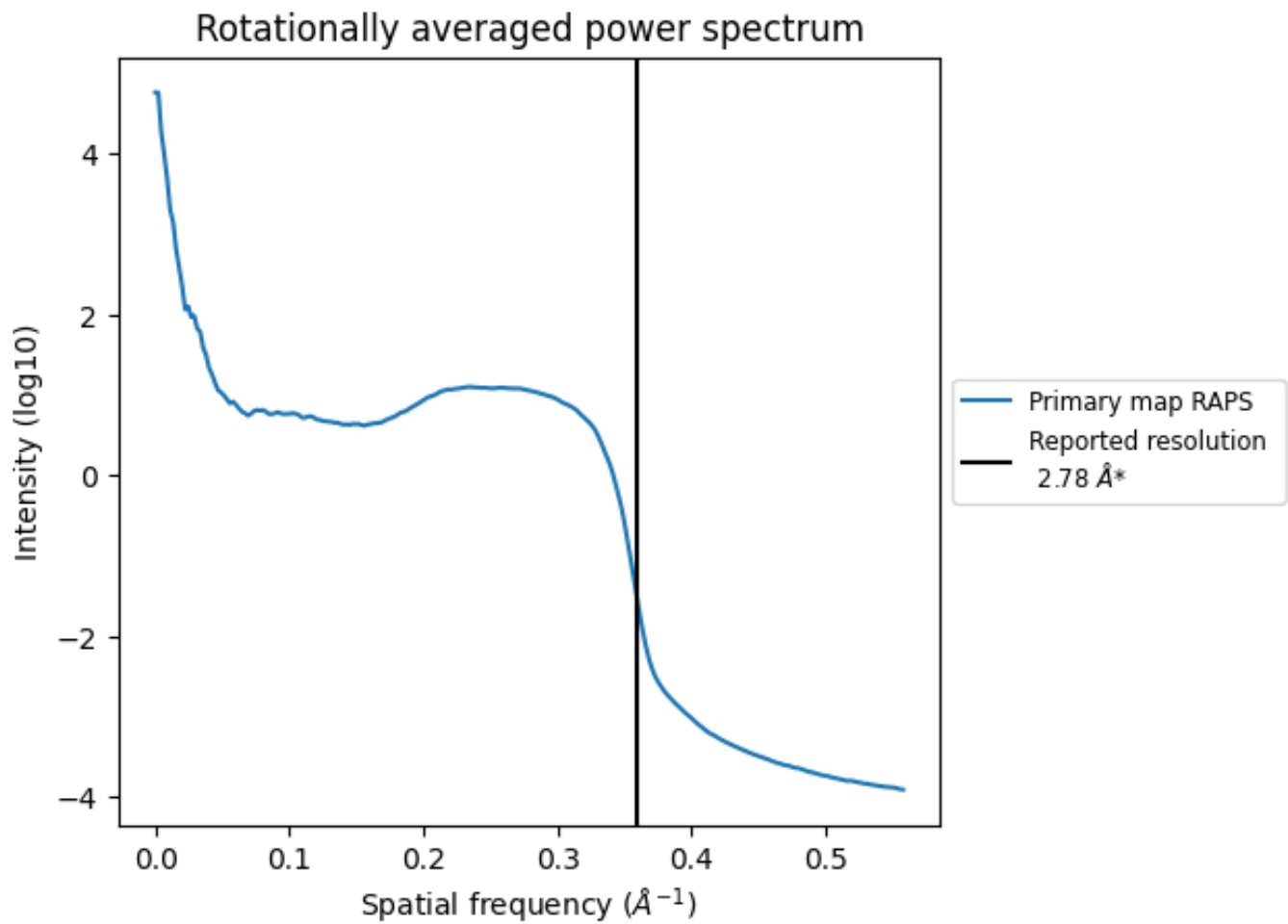
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 980 nm^3 ; this corresponds to an approximate mass of 885 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](#)

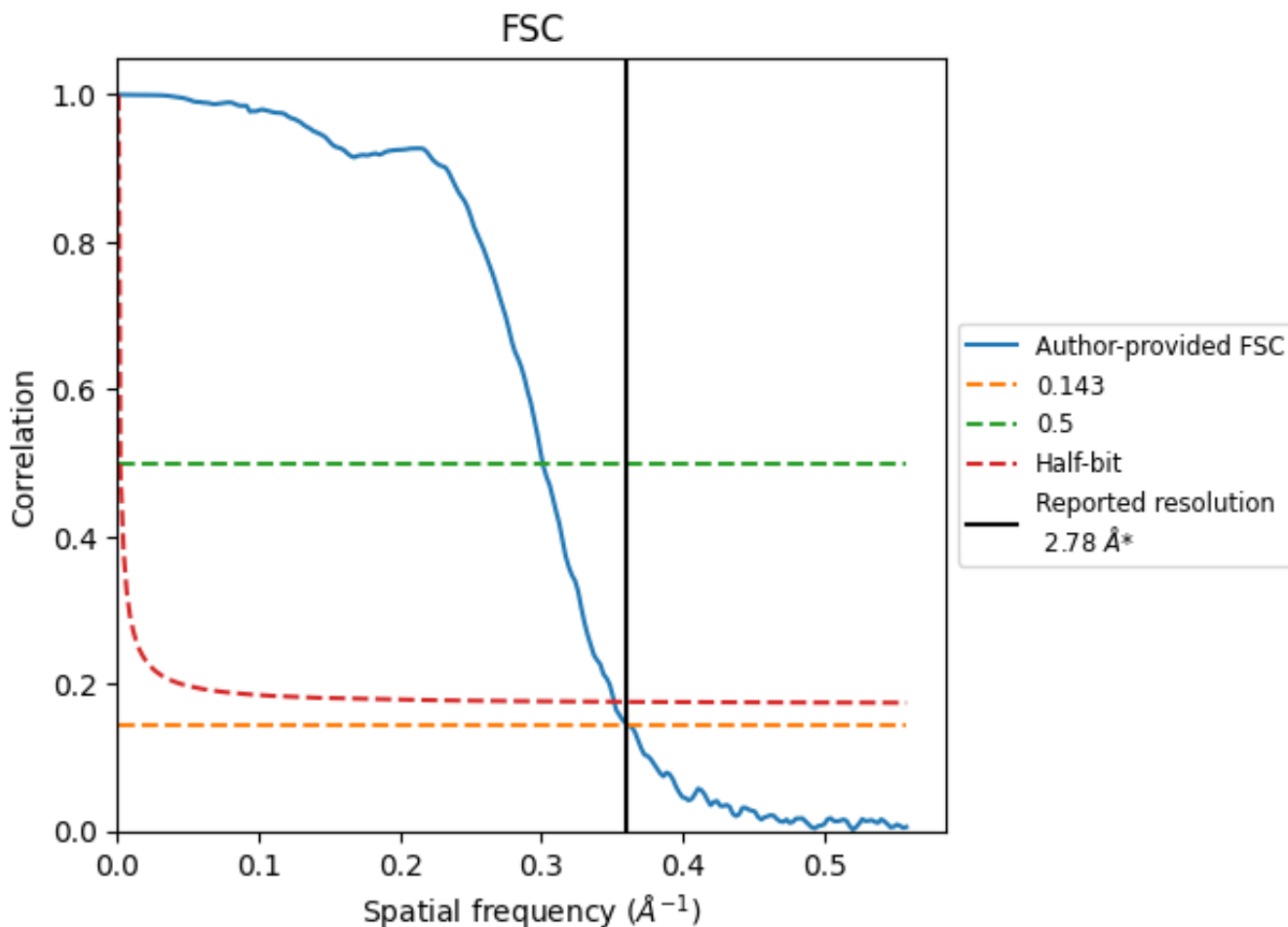


*Reported resolution corresponds to spatial frequency of 0.360\AA^{-1}

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

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

8.1 FSC [\(i\)](#)



*Reported resolution corresponds to spatial frequency of 0.360 Å⁻¹

8.2 Resolution estimates [i](#)

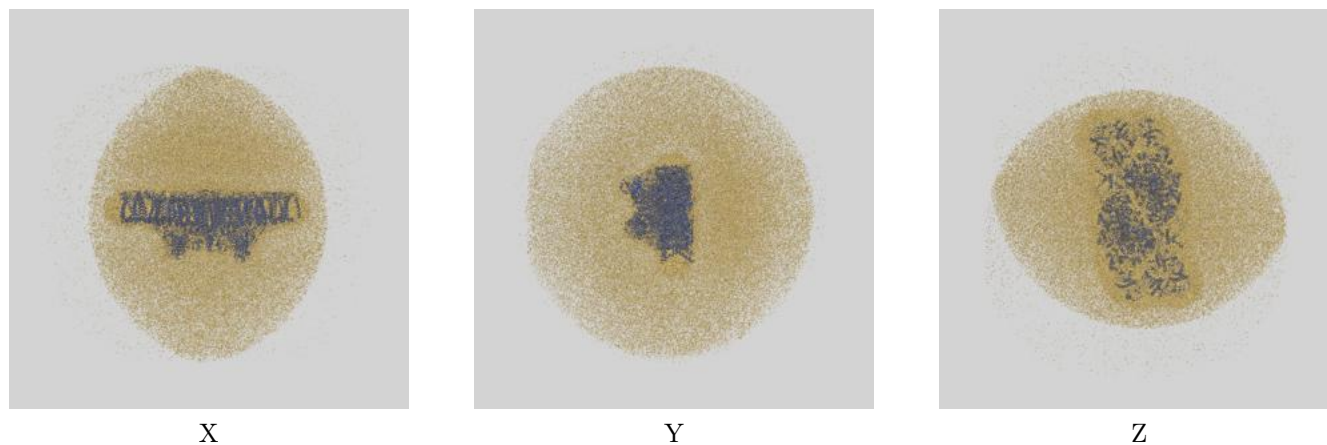
| Resolution estimate (Å) | Estimation criterion (FSC cut-off) | | |
|---------------------------|------------------------------------|------|----------|
| | 0.143 | 0.5 | Half-bit |
| Reported by author | 2.78 | - | - |
| Author-provided FSC curve | 2.77 | 3.32 | 2.85 |
| Unmasked-calculated* | - | - | - |

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

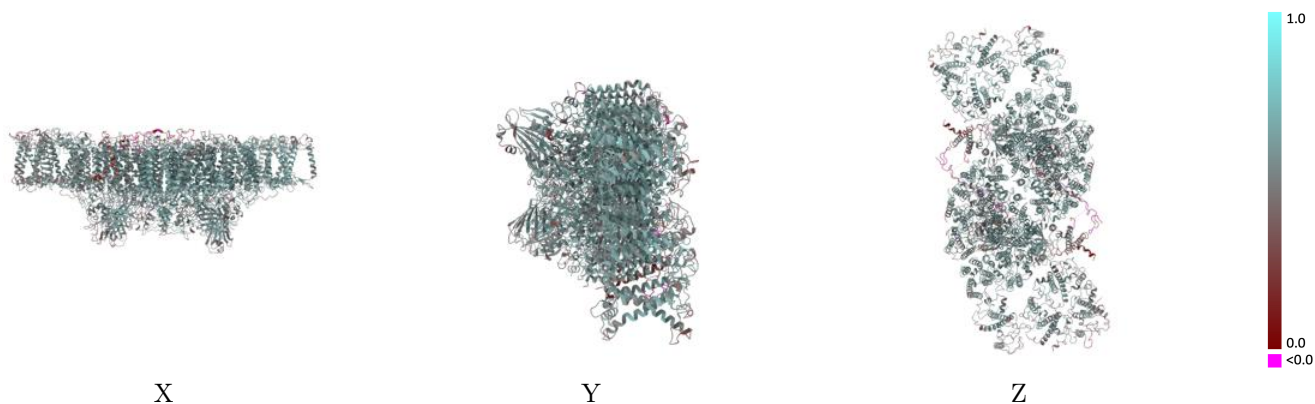
This section contains information regarding the fit between EMDB map EMD-13430 and PDB model 7PI5. Per-residue inclusion information can be found in section 3 on page 49.

9.1 Map-model overlay [i](#)



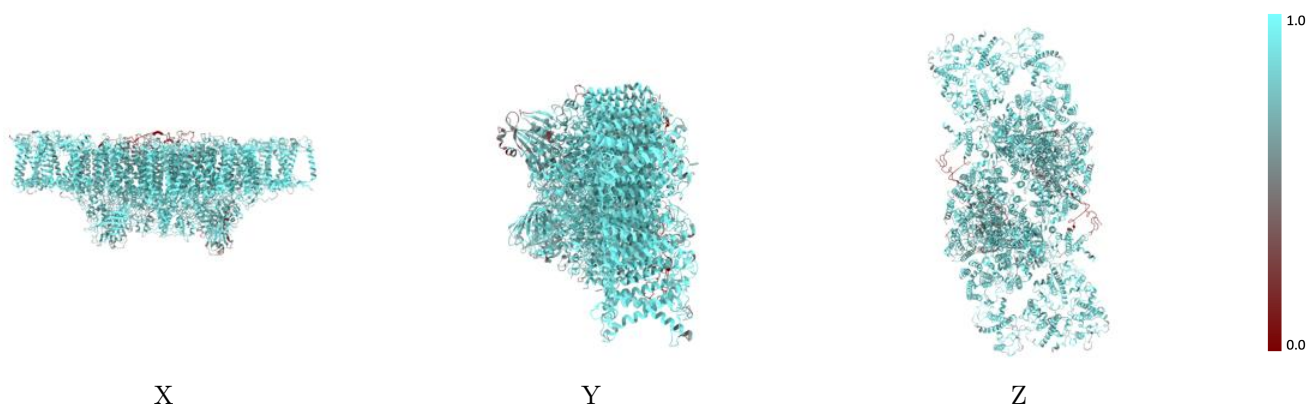
The images above show the 3D surface view of the map at the recommended contour level 2.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



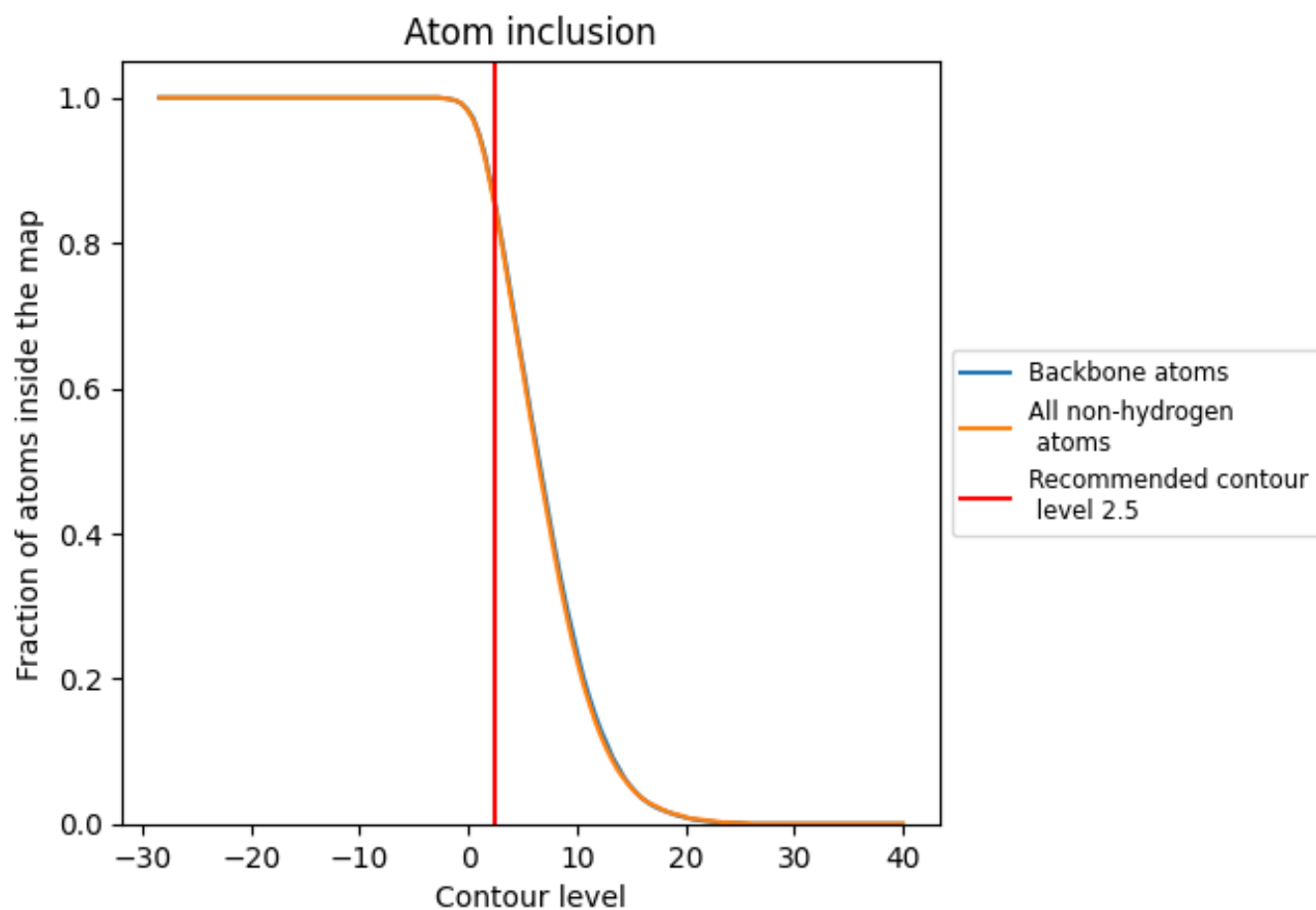
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (2.5).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 85% of all backbone atoms, 85% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

































The table lists the average atom inclusion at the recommended contour level (2.5) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|-------|--|--|
| All |  0.8490 |  0.5420 |
| A |  0.8520 |  0.5510 |
| B |  0.9210 |  0.5880 |
| C |  0.8770 |  0.5650 |
| D |  0.8960 |  0.5800 |
| E |  0.8730 |  0.5320 |
| F |  0.8500 |  0.5380 |
| G |  0.7990 |  0.4950 |
| H |  0.8770 |  0.5610 |
| I |  0.8800 |  0.5740 |
| J |  0.8170 |  0.5330 |
| K |  0.8700 |  0.5590 |
| L |  0.9350 |  0.5800 |
| M |  0.9130 |  0.5710 |
| N |  0.8080 |  0.5170 |
| O |  0.8090 |  0.4940 |
| P |  0.6310 |  0.4770 |
| R |  0.6810 |  0.3480 |
| S |  0.8070 |  0.5130 |
| T |  0.9300 |  0.5740 |
| U |  0.6610 |  0.4280 |
| V |  0.8400 |  0.5450 |
| W |  0.8200 |  0.5230 |
| X |  0.7860 |  0.5080 |
| Y |  0.8590 |  0.5380 |
| Z |  0.8700 |  0.5380 |
| a |  0.8720 |  0.5630 |
| b |  0.9230 |  0.5900 |
| c |  0.8990 |  0.5810 |
| d |  0.9150 |  0.5920 |
| e |  0.8760 |  0.5540 |
| f |  0.8990 |  0.5730 |
| g |  0.8360 |  0.5390 |
| h |  0.8910 |  0.5730 |
| i |  0.9470 |  0.5810 |



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| Chain | Atom inclusion | Q-score |
|-------|--|--|
| j |  0.8460 |  0.5670 |
| k |  0.8770 |  0.5850 |
| l |  0.9320 |  0.5910 |
| m |  0.9050 |  0.5660 |
| n |  0.8520 |  0.5550 |
| o |  0.8460 |  0.5340 |
| p |  0.6150 |  0.4980 |
| r |  0.6650 |  0.3580 |
| s |  0.8420 |  0.5460 |
| t |  0.9170 |  0.5760 |
| u |  0.7480 |  0.4740 |
| v |  0.8760 |  0.5630 |
| w |  0.8590 |  0.5380 |
| x |  0.8260 |  0.5260 |
| y |  0.8810 |  0.5690 |
| z |  0.9010 |  0.5730 |