



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 23, 2024 – 09:33 PM EDT

PDB ID : 4V82
Title : Crystal structure of cyanobacterial Photosystem II in complex with terbutryn
Authors : Gabdulkhakov, A.; Broser, M.; Guskov, A.; Kern, J.; Glockner, C.; Muh, F.;
Saenger, W.; Zouni, A.
Deposited on : 2010-11-30
Resolution : 3.20 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.37.1
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.37.1

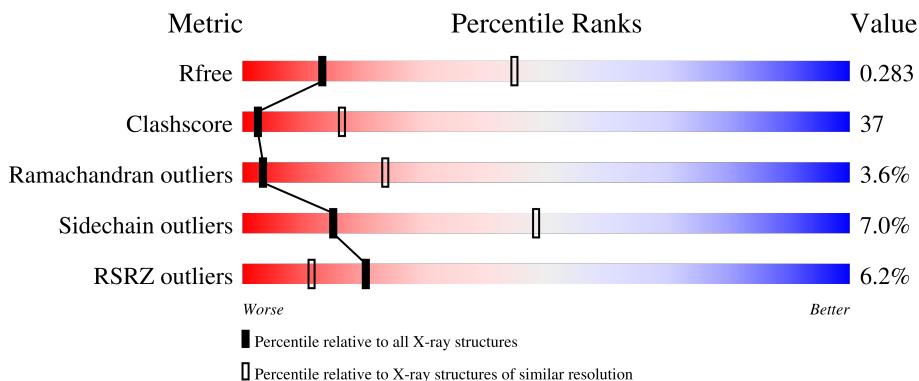
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.20 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) | Similar resolution (#Entries, resolution range(Å)) |
|-----------------------|-----------------------------|---|
| R_{free} | 130704 | 1133 (3.20-3.20) |
| Clashscore | 141614 | 1253 (3.20-3.20) |
| Ramachandran outliers | 138981 | 1234 (3.20-3.20) |
| Sidechain outliers | 138945 | 1233 (3.20-3.20) |
| RSRZ outliers | 127900 | 1095 (3.20-3.20) |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|-------------------|
| 1 | AA | 344 | 2% 40% 53% 5% |
| 1 | BA | 344 | 4% 39% 53% 5% |
| 2 | AB | 510 | 2% 46% 45% 5% |
| 2 | BB | 510 | 4% 46% 45% 5% |
| 3 | AC | 461 | 5% 40% 51% 5% |

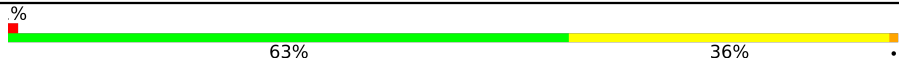

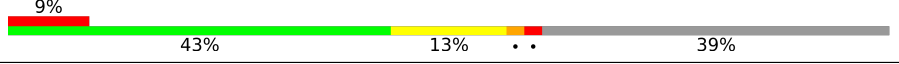
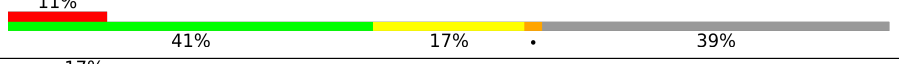
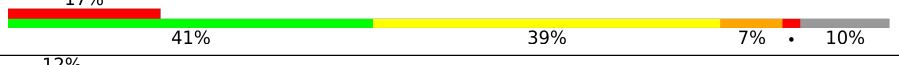
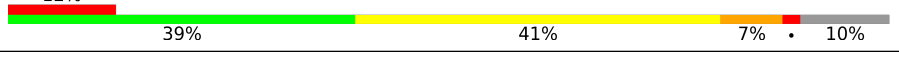
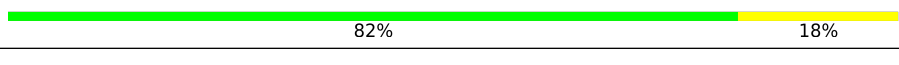

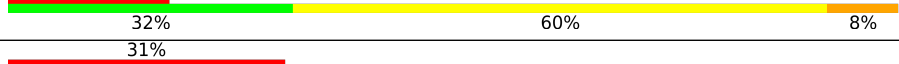
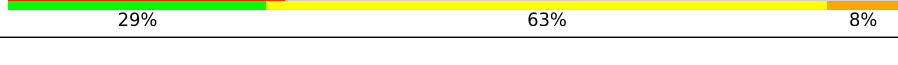
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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|------------------|
| 3 | BC | 461 | |
| 4 | AD | 352 | |
| 4 | BD | 352 | |
| 5 | AE | 84 | |
| 5 | BE | 84 | |
| 6 | AF | 45 | |
| 6 | BF | 45 | |
| 7 | AH | 66 | |
| 7 | BH | 66 | |
| 8 | AI | 38 | |
| 8 | BI | 38 | |
| 9 | AJ | 40 | |
| 9 | BJ | 40 | |
| 10 | AK | 37 | |
| 10 | BK | 37 | |
| 11 | AL | 37 | |
| 11 | BL | 37 | |
| 12 | AM | 36 | |
| 12 | BM | 36 | |
| 13 | AO | 247 | |
| 13 | BO | 247 | |
| 14 | AT | 32 | |
| 14 | BT | 32 | |
| 15 | AU | 104 | |
| 15 | BU | 104 | |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 16 | AV | 137 |  |
| 16 | BV | 137 |  |
| 17 | Ay | 46 |  |
| 17 | By | 46 |  |
| 18 | AX | 41 |  |
| 18 | BX | 41 |  |
| 19 | AY | 28 |  |
| 19 | BY | 28 |  |
| 20 | AZ | 62 |  |
| 20 | BZ | 62 |  |

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 |
|-----|------|-------|-----|-----------|----------|---------|------------------|
| 24 | CLA | AA | 404 | X | - | - | - |
| 24 | CLA | AA | 405 | X | - | - | - |
| 24 | CLA | AA | 406 | X | - | - | - |
| 24 | CLA | AA | 407 | X | - | - | - |
| 24 | CLA | AB | 601 | X | - | - | X |
| 24 | CLA | AB | 602 | X | - | - | - |
| 24 | CLA | AB | 603 | X | - | - | - |
| 24 | CLA | AB | 604 | X | - | - | - |
| 24 | CLA | AB | 605 | X | - | - | - |
| 24 | CLA | AB | 606 | X | - | - | - |
| 24 | CLA | AB | 607 | X | - | - | - |
| 24 | CLA | AB | 608 | X | - | - | - |
| 24 | CLA | AB | 609 | X | - | - | - |
| 24 | CLA | AB | 610 | X | - | - | - |
| 24 | CLA | AB | 611 | X | - | - | - |
| 24 | CLA | AB | 612 | X | - | - | - |
| 24 | CLA | AB | 613 | X | - | - | - |
| 24 | CLA | AB | 614 | X | - | - | - |
| 24 | CLA | AB | 615 | X | - | - | - |
| 24 | CLA | AB | 616 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 24 | CLA | AC | 501 | X | - | - | - |
| 24 | CLA | AC | 502 | X | - | - | - |
| 24 | CLA | AC | 503 | X | - | - | - |
| 24 | CLA | AC | 504 | X | - | - | - |
| 24 | CLA | AC | 505 | X | - | - | - |
| 24 | CLA | AC | 506 | X | - | - | - |
| 24 | CLA | AC | 507 | X | - | - | - |
| 24 | CLA | AC | 508 | X | - | - | - |
| 24 | CLA | AC | 509 | X | - | - | - |
| 24 | CLA | AC | 510 | X | - | - | - |
| 24 | CLA | AC | 511 | X | - | X | - |
| 24 | CLA | AC | 512 | X | - | - | X |
| 24 | CLA | AC | 513 | X | - | - | X |
| 24 | CLA | AD | 401 | X | - | - | - |
| 24 | CLA | AD | 404 | X | - | - | - |
| 24 | CLA | BA | 5405 | X | - | - | - |
| 24 | CLA | BA | 5406 | X | - | X | - |
| 24 | CLA | BA | 5407 | X | - | - | - |
| 24 | CLA | BA | 5408 | X | - | - | - |
| 24 | CLA | BB | 5605 | X | - | - | X |
| 24 | CLA | BB | 5606 | X | - | - | - |
| 24 | CLA | BB | 5607 | X | - | - | - |
| 24 | CLA | BB | 5608 | X | - | - | - |
| 24 | CLA | BB | 5609 | X | - | - | - |
| 24 | CLA | BB | 5610 | X | - | - | - |
| 24 | CLA | BB | 5611 | X | - | - | - |
| 24 | CLA | BB | 5612 | X | - | - | - |
| 24 | CLA | BB | 5613 | X | - | - | - |
| 24 | CLA | BB | 5614 | X | - | - | - |
| 24 | CLA | BB | 5615 | X | - | - | - |
| 24 | CLA | BB | 5616 | X | - | - | - |
| 24 | CLA | BB | 5617 | X | - | - | - |
| 24 | CLA | BB | 5618 | X | - | - | - |
| 24 | CLA | BB | 5619 | X | - | - | - |
| 24 | CLA | BB | 5620 | X | - | - | - |
| 24 | CLA | BC | 5501 | X | - | - | - |
| 24 | CLA | BC | 5502 | X | - | - | - |
| 24 | CLA | BC | 5503 | X | - | - | - |
| 24 | CLA | BC | 5504 | X | - | - | - |
| 24 | CLA | BC | 5505 | X | - | - | - |
| 24 | CLA | BC | 5506 | X | - | - | - |
| 24 | CLA | BC | 5507 | X | - | - | - |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 24 | CLA | BC | 5508 | X | - | - | - |
| 24 | CLA | BC | 5509 | X | - | - | - |
| 24 | CLA | BC | 5510 | X | - | - | - |
| 24 | CLA | BC | 5511 | X | - | X | - |
| 24 | CLA | BC | 5512 | X | - | - | - |
| 24 | CLA | BC | 5513 | X | - | - | X |
| 24 | CLA | BD | 5402 | X | - | - | - |
| 24 | CLA | BD | 5405 | X | - | - | - |
| 25 | MST | AA | 408 | - | - | X | - |
| 25 | MST | BA | 5409 | - | - | X | - |
| 27 | BCR | AC | 515 | - | - | - | X |
| 27 | BCR | AC | 516 | - | - | - | X |
| 27 | BCR | AJ | 101 | - | - | - | X |
| 27 | BCR | AX | 101 | - | - | - | X |
| 27 | BCR | BC | 5515 | - | - | - | X |
| 27 | BCR | BC | 5516 | - | - | - | X |
| 27 | BCR | BJ | 5101 | - | - | - | X |
| 27 | BCR | BX | 5101 | - | - | - | X |
| 28 | DGD | AA | 411 | - | - | - | X |
| 28 | DGD | AB | 628 | - | - | - | X |
| 28 | DGD | AC | 518 | X | - | - | X |
| 28 | DGD | AC | 519 | X | - | X | - |
| 28 | DGD | AE | 101 | - | - | - | X |
| 28 | DGD | BA | 5412 | - | - | - | X |
| 28 | DGD | BB | 5602 | - | - | - | X |
| 28 | DGD | BC | 5518 | X | - | - | X |
| 28 | DGD | BC | 5519 | X | - | X | - |
| 28 | DGD | BE | 5102 | - | - | - | X |
| 29 | LHG | BA | 5415 | - | - | - | X |
| 30 | SQD | AB | 622 | - | - | - | X |
| 30 | SQD | AF | 102 | - | - | - | X |
| 30 | SQD | BA | 5401 | - | - | - | X |
| 30 | SQD | BB | 5625 | - | - | - | X |
| 30 | SQD | BF | 5102 | - | - | - | X |
| 31 | LMG | AA | 414 | - | - | - | X |
| 31 | LMG | AA | 417 | - | - | - | X |
| 31 | LMG | AB | 620 | - | - | - | X |
| 31 | LMG | AB | 621 | - | - | - | X |
| 31 | LMG | AC | 520 | - | - | - | X |
| 31 | LMG | AC | 521 | - | - | - | X |
| 31 | LMG | AD | 407 | - | - | - | X |
| 31 | LMG | AD | 408 | - | - | - | X |

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| Mol | Type | Chain | Res | Chirality | Geometry | Clashes | Electron density |
|-----|------|-------|------|-----------|----------|---------|------------------|
| 31 | LMG | AI | 101 | - | - | - | X |
| 31 | LMG | AJ | 102 | - | - | - | X |
| 31 | LMG | AM | 101 | - | - | - | X |
| 31 | LMG | BA | 5402 | - | - | - | X |
| 31 | LMG | BC | 5520 | - | - | - | X |
| 31 | LMG | BC | 5521 | - | - | - | X |
| 31 | LMG | BD | 5408 | - | - | - | X |
| 31 | LMG | BD | 5409 | - | - | - | X |
| 31 | LMG | BD | 5410 | - | - | - | X |
| 31 | LMG | BE | 5101 | - | - | - | X |
| 31 | LMG | BI | 5101 | - | - | - | X |
| 31 | LMG | BL | 5101 | - | - | - | X |
| 31 | LMG | BM | 5102 | - | - | - | X |
| 32 | LMT | AB | 623 | - | - | - | X |
| 32 | LMT | AB | 624 | - | - | - | X |
| 32 | LMT | AB | 629 | - | - | - | X |
| 32 | LMT | AB | 630 | - | - | - | X |
| 32 | LMT | AD | 409 | - | - | - | X |
| 32 | LMT | AI | 102 | - | - | - | X |
| 32 | LMT | AI | 103 | - | - | - | X |
| 32 | LMT | AM | 102 | - | - | - | X |
| 32 | LMT | BB | 5603 | - | - | - | X |
| 32 | LMT | BB | 5604 | - | - | - | X |
| 32 | LMT | BB | 5626 | - | - | - | X |
| 32 | LMT | BB | 5627 | - | - | - | X |
| 32 | LMT | BC | 5522 | - | - | - | X |
| 32 | LMT | BD | 5411 | - | - | - | X |
| 32 | LMT | BI | 5102 | - | - | - | X |
| 34 | PHO | AD | 402 | X | - | - | - |
| 34 | PHO | AD | 403 | X | - | - | - |
| 34 | PHO | BD | 5403 | X | - | - | - |
| 34 | PHO | BD | 5404 | X | - | - | - |

2 Entry composition [i](#)

There are 37 unique types of molecules in this entry. The entry contains 50266 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 Q(B) protein 1.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 1 | AA | 335 | Total 2628 | C 1720 | N 432 | O 461 | S 15 | 0 | 0 | 0 |
| 1 | BA | 335 | Total 2628 | C 1720 | N 432 | O 461 | S 15 | 0 | 0 | 0 |

- Molecule 2 is a protein called Photosystem II core light harvesting protein.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 2 | AB | 490 | Total 3850 | C 2528 | N 641 | O 668 | S 13 | 0 | 0 | 0 |
| 2 | BB | 490 | Total 3850 | C 2528 | N 641 | O 668 | S 13 | 0 | 0 | 0 |

- Molecule 3 is a protein called Photosystem II CP43 protein.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 3 | AC | 447 | Total 3444 | C 2256 | N 576 | O 599 | S 13 | 0 | 0 | 0 |
| 3 | BC | 447 | Total 3444 | C 2256 | N 576 | O 599 | S 13 | 0 | 0 | 0 |

- Molecule 4 is a protein called Photosystem II D2 protein.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|---------------|-----------|----------|----------|---------|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 4 | AD | 341 | Total 2711 | C 1797 | N 441 | O 461 | S 12 | 0 | 0 | 0 |
| 4 | BD | 341 | Total 2711 | C 1797 | N 441 | O 461 | S 12 | 0 | 0 | 0 |

- Molecule 5 is a protein called Cytochrome b559 subunit alpha.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---------|---------|-------|
| 5 | AE | 82 | Total | C | N | O | 0 | 0 | 0 |
| | | | 666 | 434 | 108 | 124 | | | |
| 5 | BE | 82 | Total | C | N | O | 0 | 0 | 0 |
| | | | 666 | 434 | 108 | 124 | | | |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 6 | AF | 35 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 282 | 192 | 46 | 43 | 1 | | | |
| 6 | BF | 35 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 282 | 192 | 46 | 43 | 1 | | | |

- Molecule 7 is a protein called Photosystem II reaction center protein H.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 7 | AH | 65 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 507 | 338 | 81 | 86 | 2 | | | |
| 7 | BH | 65 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 507 | 338 | 81 | 86 | 2 | | | |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 8 | AI | 35 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 286 | 195 | 45 | 45 | 1 | | | |
| 8 | BI | 35 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 286 | 195 | 45 | 45 | 1 | | | |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 9 | AJ | 38 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 271 | 182 | 42 | 46 | 1 | | | |
| 9 | BJ | 38 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 271 | 182 | 42 | 46 | 1 | | | |

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

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 10 | AK | 37 | Total | C | N | O | 0 | 0 | 0 |
| | | | 293 | 204 | 43 | 46 | | | |

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| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| | | | Total | C | N | O | | | |
| 10 | BK | 37 | 293 | 204 | 43 | 46 | 0 | 0 | 0 |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 11 | AL | 37 | 304 | 202 | 48 | 53 | 1 | 0 | 0 | 0 |
| 11 | BL | 37 | 304 | 202 | 48 | 53 | 1 | 0 | 0 | 0 |

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

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 12 | AM | 34 | 267 | 178 | 40 | 48 | 1 | 0 | 0 | 0 |
| 12 | BM | 34 | 267 | 178 | 40 | 48 | 1 | 0 | 0 | 0 |

- Molecule 13 is a protein called Photosystem II manganese-stabilizing polypeptide.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 13 | AO | 243 | 1845 | 1154 | 308 | 379 | 4 | 0 | 0 | 0 |
| 13 | BO | 243 | 1845 | 1154 | 308 | 379 | 4 | 0 | 0 | 0 |

- Molecule 14 is a protein called Photosystem II reaction center protein T.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| | | | Total | C | N | O | S | | | |
| 14 | AT | 32 | 275 | 192 | 40 | 41 | 2 | 0 | 0 | 0 |
| 14 | BT | 32 | 275 | 192 | 40 | 41 | 2 | 0 | 0 | 0 |

- Molecule 15 is a protein called Photosystem II 12 kDa extrinsic protein.

| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf | Trace | |
|-----|-------|----------|-------|-----|-----|---------|---------|-------|---|
| | | | Total | C | N | | | | O |
| 15 | AU | 97 | 774 | 491 | 129 | 154 | 0 | 0 | 0 |
| 15 | BU | 97 | 774 | 491 | 129 | 154 | 0 | 0 | 0 |

- Molecule 16 is a protein called Cytochrome c-550.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|-----|-----|---|---------|---------|-------|
| 16 | AV | 137 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1060 | 673 | 177 | 206 | 4 | | | |
| 16 | BV | 137 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 1060 | 673 | 177 | 206 | 4 | | | |

- Molecule 17 is a protein called Photosystem II reaction center protein ycf12.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 17 | Ay | 28 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 201 | 134 | 33 | 31 | 3 | | | |
| 17 | By | 28 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 201 | 134 | 33 | 31 | 3 | | | |

- Molecule 18 is a protein called Photosystem II reaction center X protein.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---------|---------|-------|
| 18 | AX | 37 | Total | C | N | O | 0 | 0 | 0 |
| | | | 270 | 182 | 41 | 47 | | | |
| 18 | BX | 37 | Total | C | N | O | 0 | 0 | 0 |
| | | | 270 | 182 | 41 | 47 | | | |

- Molecule 19 is a protein called PHOTOSYSTEM II PSBX PROTEIN.

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|----|----|----|---------|---------|-------|
| 19 | AY | 28 | Total | C | N | O | 0 | 0 | 0 |
| | | | 140 | 84 | 28 | 28 | | | |
| 19 | BY | 28 | Total | C | N | O | 0 | 0 | 0 |
| | | | 140 | 84 | 28 | 28 | | | |

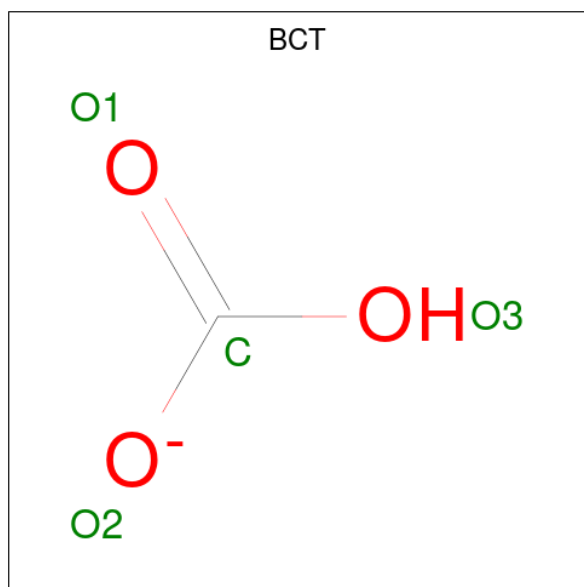
- Molecule 20 is a protein called Photosystem II reaction center protein Z.

| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf | Trace |
|-----|-------|----------|-------|-----|----|----|---|---------|---------|-------|
| 20 | AZ | 62 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 479 | 328 | 72 | 77 | 2 | | | |
| 20 | BZ | 62 | Total | C | N | O | S | 0 | 0 | 0 |
| | | | 479 | 328 | 72 | 77 | 2 | | | |

- Molecule 21 is FE (II) ION (three-letter code: FE2) (formula: Fe).

| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 21 | AA | 1 | Total Fe 1 1 | 0 | 0 |
| 21 | BD | 1 | Total Fe 1 1 | 0 | 0 |

- Molecule 22 is BICARBONATE ION (three-letter code: BCT) (formula: CHO_3).

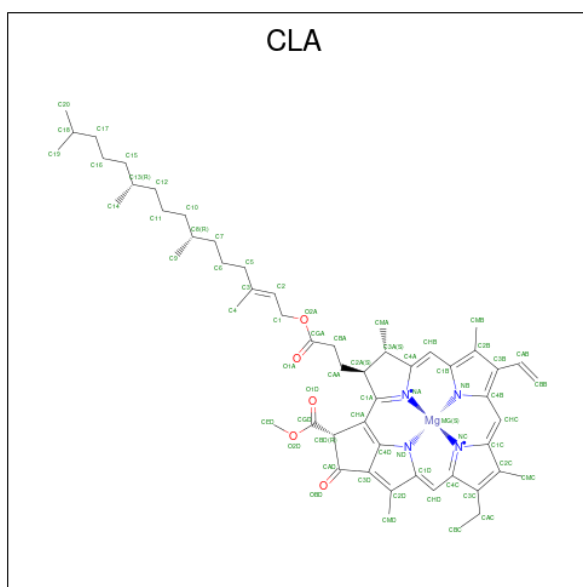


| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|--------------------|---------|---------|
| 22 | AA | 1 | Total C O 4 1 3 | 0 | 0 |
| 22 | BA | 1 | Total C O 4 1 3 | 0 | 0 |

- Molecule 23 is CHLORIDE ION (three-letter code: CL) (formula: Cl).

| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-----------------|---------|---------|
| 23 | AA | 1 | Total Cl 2 2 | 0 | 1 |
| 23 | BA | 1 | Total Cl 2 2 | 0 | 1 |

- Molecule 24 is CHLOROPHYLL A (three-letter code: CLA) (formula: $\text{C}_{55}\text{H}_{72}\text{MgN}_4\text{O}_5$).



| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | |
|-----|-------|----------|-------|----|----|---|---------|---------|---|
| 24 | AA | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AA | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AA | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AA | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |

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| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AB | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AD | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | AD | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |

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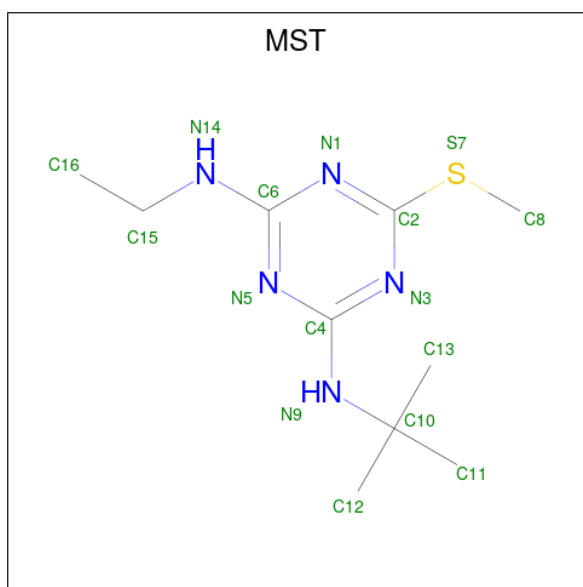
| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| | | | Total | C | Mg | N | O | | |
| 24 | BA | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BA | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BA | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BA | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BB | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |
| 24 | BC | 1 | 65 | 55 | 1 | 4 | 5 | 0 | 0 |

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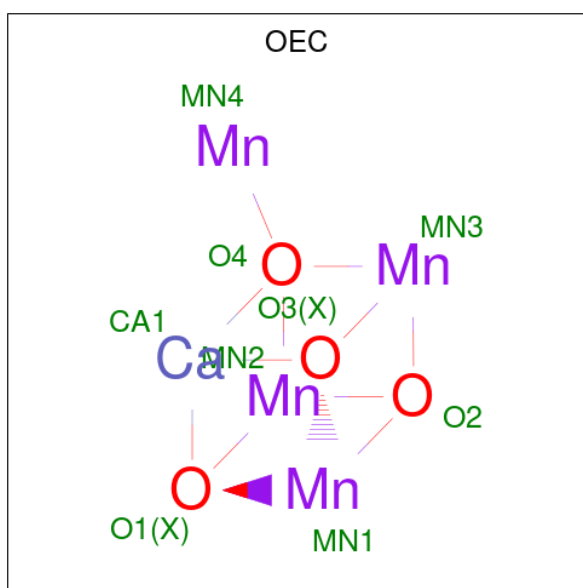
| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BC | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BD | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |
| 24 | BD | 1 | Total | C | Mg | N | O | 0 | 0 |
| | | | 65 | 55 | 1 | 4 | 5 | | |

- Molecule 25 is 2-T-BUTYLAMINO-4-ETHYLAMINO-6-METHYLTHIO-S-TRIAZINE (three-letter code: MST) (formula: C₁₀H₁₉N₅S).



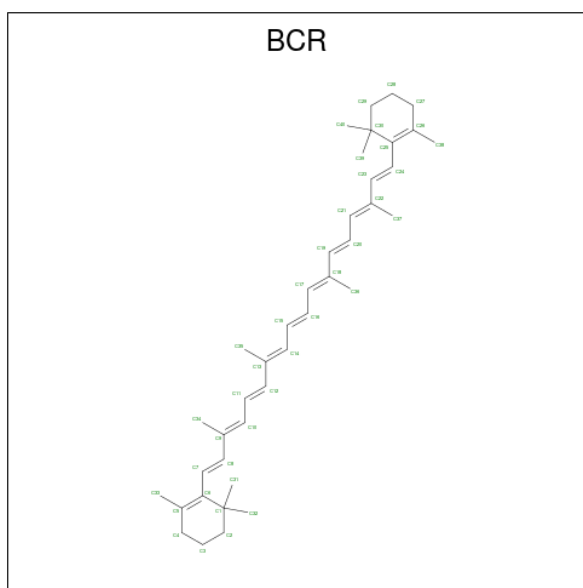
| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf | |
|-----|-------|----------|-------|----|---|---------|---------|---|
| 25 | AA | 1 | Total | C | N | S | 0 | 0 |
| | | | 16 | 10 | 5 | 1 | | |
| 25 | BA | 1 | Total | C | N | S | 0 | 0 |
| | | | 16 | 10 | 5 | 1 | | |

- Molecule 26 is OXYGEN EVOLVING SYSTEM (three-letter code: OEC) (formula: CaMn_4O_4).



| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf | |
|-----|-------|----------|-------|----|----|---------|---------|---|
| 26 | AA | 1 | Total | Ca | Mn | | 0 | 0 |
| | | | 5 | 1 | 4 | | | |
| 26 | BA | 1 | Total | Ca | Mn | | 0 | 0 |
| | | | 5 | 1 | 4 | | | |

- Molecule 27 is BETA-CAROTENE (three-letter code: BCR) (formula: C₄₀H₅₆).



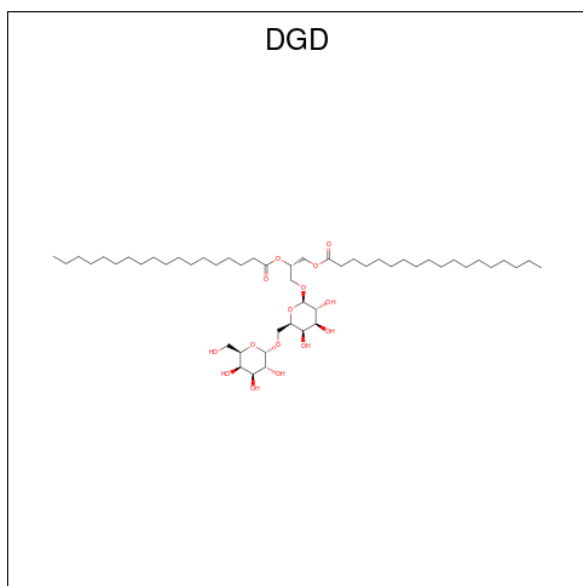
| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|------------------|---------|---------|
| 27 | AA | 1 | Total C 40 40 | 0 | 0 |
| 27 | AB | 1 | Total C 40 40 | 0 | 0 |
| 27 | AB | 1 | Total C 40 40 | 0 | 0 |
| 27 | AB | 1 | Total C 40 40 | 0 | 0 |
| 27 | AC | 1 | Total C 40 40 | 0 | 0 |
| 27 | AC | 1 | Total C 40 40 | 0 | 0 |
| 27 | AC | 1 | Total C 40 40 | 0 | 0 |
| 27 | AD | 1 | Total C 40 40 | 0 | 0 |
| 27 | AJ | 1 | Total C 40 40 | 0 | 0 |
| 27 | AK | 1 | Total C 40 40 | 0 | 0 |
| 27 | AT | 1 | Total C 40 40 | 0 | 0 |
| 27 | AX | 1 | Total C 40 40 | 0 | 0 |
| 27 | BA | 1 | Total C 40 40 | 0 | 0 |

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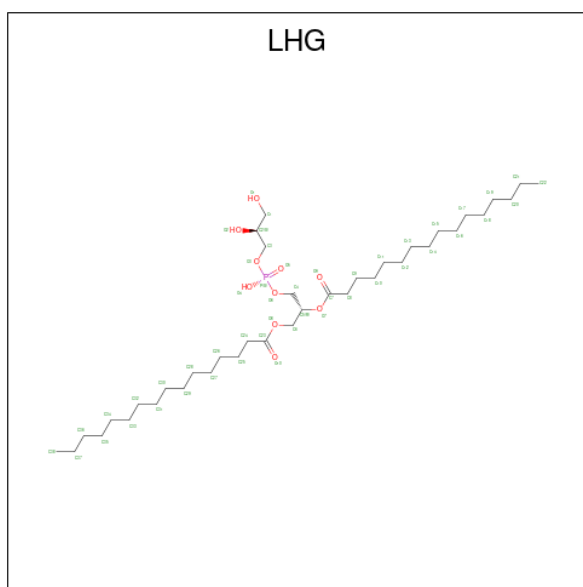
| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|------------------|---------|---------|
| 27 | BB | 1 | Total C 40 40 | 0 | 0 |
| 27 | BB | 1 | Total C 40 40 | 0 | 0 |
| 27 | BB | 1 | Total C 40 40 | 0 | 0 |
| 27 | BC | 1 | Total C 40 40 | 0 | 0 |
| 27 | BC | 1 | Total C 40 40 | 0 | 0 |
| 27 | BC | 1 | Total C 40 40 | 0 | 0 |
| 27 | BD | 1 | Total C 40 40 | 0 | 0 |
| 27 | BJ | 1 | Total C 40 40 | 0 | 0 |
| 27 | BK | 1 | Total C 40 40 | 0 | 0 |
| 27 | BT | 1 | Total C 40 40 | 0 | 0 |
| 27 | BX | 1 | Total C 40 40 | 0 | 0 |

- Molecule 28 is DIGALACTOSYL DIACYL GLYCEROL (DGDG) (three-letter code: DGD) (formula: $C_{51}H_{96}O_{15}$).



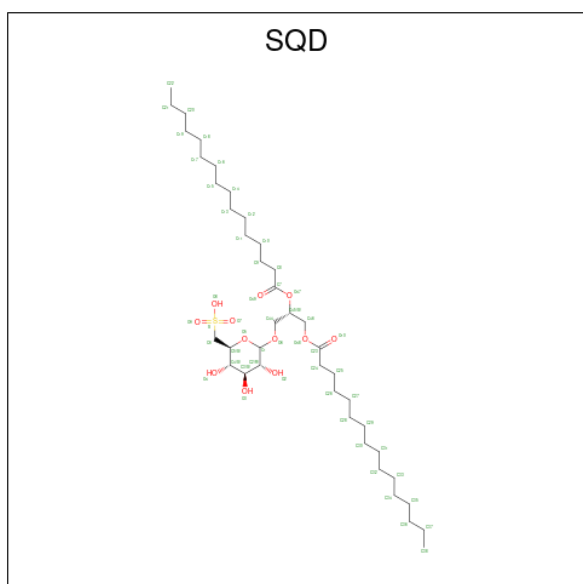
| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 28 | AA | 1 | Total | C | O | 0 | 0 |
| | | | 56 | 41 | 15 | | |
| 28 | AB | 1 | Total | C | O | 0 | 0 |
| | | | 52 | 37 | 15 | | |
| 28 | AC | 1 | Total | C | O | 0 | 0 |
| | | | 53 | 38 | 15 | | |
| 28 | AC | 1 | Total | C | O | 0 | 0 |
| | | | 62 | 47 | 15 | | |
| 28 | AC | 1 | Total | C | O | 0 | 0 |
| | | | 66 | 51 | 15 | | |
| 28 | AE | 1 | Total | C | O | 0 | 0 |
| | | | 63 | 48 | 15 | | |
| 28 | AH | 1 | Total | C | O | 0 | 0 |
| | | | 58 | 43 | 15 | | |
| 28 | BA | 1 | Total | C | O | 0 | 0 |
| | | | 56 | 41 | 15 | | |
| 28 | BB | 1 | Total | C | O | 0 | 0 |
| | | | 52 | 37 | 15 | | |
| 28 | BC | 1 | Total | C | O | 0 | 0 |
| | | | 53 | 38 | 15 | | |
| 28 | BC | 1 | Total | C | O | 0 | 0 |
| | | | 62 | 47 | 15 | | |
| 28 | BC | 1 | Total | C | O | 0 | 0 |
| | | | 66 | 51 | 15 | | |
| 28 | BE | 1 | Total | C | O | 0 | 0 |
| | | | 63 | 48 | 15 | | |
| 28 | BH | 1 | Total | C | O | 0 | 0 |
| | | | 58 | 43 | 15 | | |

- Molecule 29 is 1,2-DIPALMITOYL-PHOSPHATIDYL-GLYCEROLE (three-letter code: LHG) (formula: C₃₈H₇₅O₁₀P).



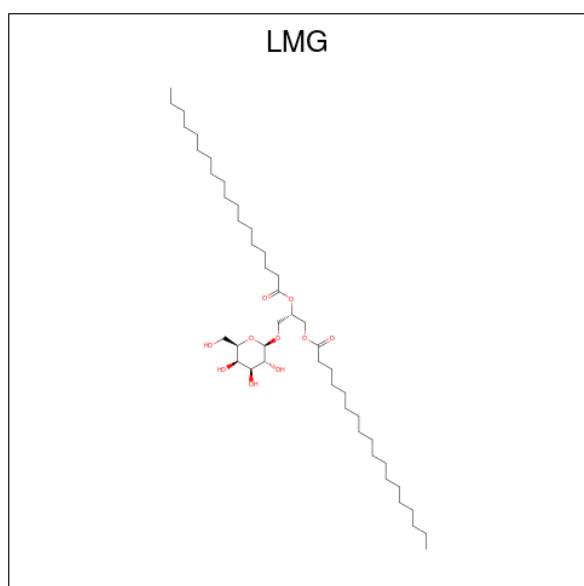
| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf | |
|-----|-------|----------|-------|----|----|---------|---------|---|
| | | | Total | C | O | | | P |
| 29 | AA | 1 | 39 | 28 | 10 | 1 | 0 | 0 |
| 29 | AA | 1 | 37 | 26 | 10 | 1 | 0 | 0 |
| 29 | BA | 1 | 39 | 28 | 10 | 1 | 0 | 0 |
| 29 | BA | 1 | 37 | 26 | 10 | 1 | 0 | 0 |

- Molecule 30 is 1,2-DI-O-ACYL-3-O-[6-DEOXY-6-SULFO-ALPHA-D-GLUCOPYRANOSYL]-SN-GLYCEROL (three-letter code: SQD) (formula: $C_{41}H_{78}O_{12}S$).



| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---------|---------|
| 30 | AA | 1 | Total | C | O | S | 0 | 0 |
| | | | 51 | 38 | 12 | 1 | | |
| 30 | AA | 1 | Total | C | O | S | 0 | 0 |
| | | | 54 | 41 | 12 | 1 | | |
| 30 | AB | 1 | Total | C | O | S | 0 | 0 |
| | | | 43 | 30 | 12 | 1 | | |
| 30 | AB | 1 | Total | C | O | S | 0 | 0 |
| | | | 47 | 34 | 12 | 1 | | |
| 30 | AF | 1 | Total | C | O | S | 0 | 0 |
| | | | 45 | 32 | 12 | 1 | | |
| 30 | BA | 1 | Total | C | O | S | 0 | 0 |
| | | | 54 | 41 | 12 | 1 | | |
| 30 | BA | 1 | Total | C | O | S | 0 | 0 |
| | | | 51 | 38 | 12 | 1 | | |
| 30 | BB | 1 | Total | C | O | S | 0 | 0 |
| | | | 47 | 34 | 12 | 1 | | |
| 30 | BB | 1 | Total | C | O | S | 0 | 0 |
| | | | 43 | 30 | 12 | 1 | | |
| 30 | BF | 1 | Total | C | O | S | 0 | 0 |
| | | | 45 | 32 | 12 | 1 | | |

- Molecule 31 is 1,2-DISTEAROYL-MONOGALACTOSYL-DIGLYCERIDE (three-letter code: LMG) (formula: C₄₅H₈₆O₁₀).



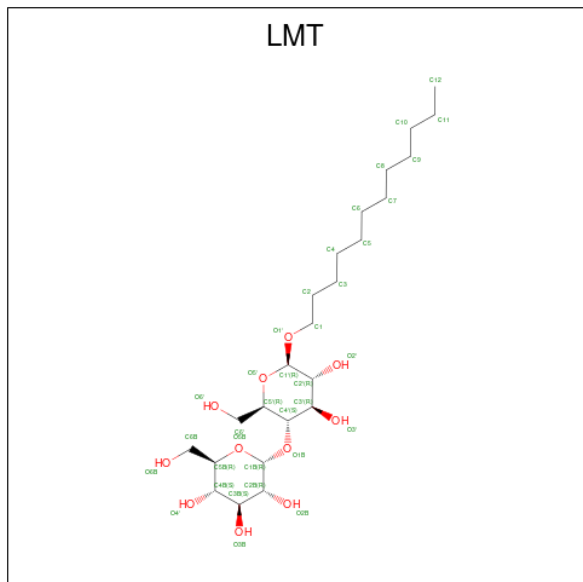
| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 31 | AA | 1 | Total | C | O | 0 | 0 |
| | | | 44 | 34 | 10 | | |

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| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 31 | AA | 1 | Total | C | O | 0 | 0 |
| | | | 42 | 32 | 10 | | |
| 31 | AB | 1 | Total | C | O | 0 | 0 |
| | | | 51 | 41 | 10 | | |
| 31 | AB | 1 | Total | C | O | 0 | 0 |
| | | | 49 | 39 | 10 | | |
| 31 | AC | 1 | Total | C | O | 0 | 0 |
| | | | 48 | 38 | 10 | | |
| 31 | AC | 1 | Total | C | O | 0 | 0 |
| | | | 45 | 35 | 10 | | |
| 31 | AD | 1 | Total | C | O | 0 | 0 |
| | | | 49 | 39 | 10 | | |
| 31 | AD | 1 | Total | C | O | 0 | 0 |
| | | | 48 | 38 | 10 | | |
| 31 | AI | 1 | Total | C | O | 0 | 0 |
| | | | 43 | 33 | 10 | | |
| 31 | AJ | 1 | Total | C | O | 0 | 0 |
| | | | 46 | 36 | 10 | | |
| 31 | AM | 1 | Total | C | O | 0 | 0 |
| | | | 42 | 32 | 10 | | |
| 31 | BA | 1 | Total | C | O | 0 | 0 |
| | | | 42 | 32 | 10 | | |
| 31 | BB | 1 | Total | C | O | 0 | 0 |
| | | | 49 | 39 | 10 | | |
| 31 | BC | 1 | Total | C | O | 0 | 0 |
| | | | 48 | 38 | 10 | | |
| 31 | BC | 1 | Total | C | O | 0 | 0 |
| | | | 45 | 35 | 10 | | |
| 31 | BD | 1 | Total | C | O | 0 | 0 |
| | | | 46 | 36 | 10 | | |
| 31 | BD | 1 | Total | C | O | 0 | 0 |
| | | | 49 | 39 | 10 | | |
| 31 | BD | 1 | Total | C | O | 0 | 0 |
| | | | 48 | 38 | 10 | | |
| 31 | BE | 1 | Total | C | O | 0 | 0 |
| | | | 44 | 34 | 10 | | |
| 31 | BI | 1 | Total | C | O | 0 | 0 |
| | | | 43 | 33 | 10 | | |
| 31 | BL | 1 | Total | C | O | 0 | 0 |
| | | | 51 | 41 | 10 | | |
| 31 | BM | 1 | Total | C | O | 0 | 0 |
| | | | 42 | 32 | 10 | | |

- Molecule 32 is DODECYL-BETA-D-MALTOSE (three-letter code: LMT) (formula: $C_{24}H_{46}O_{11}$).



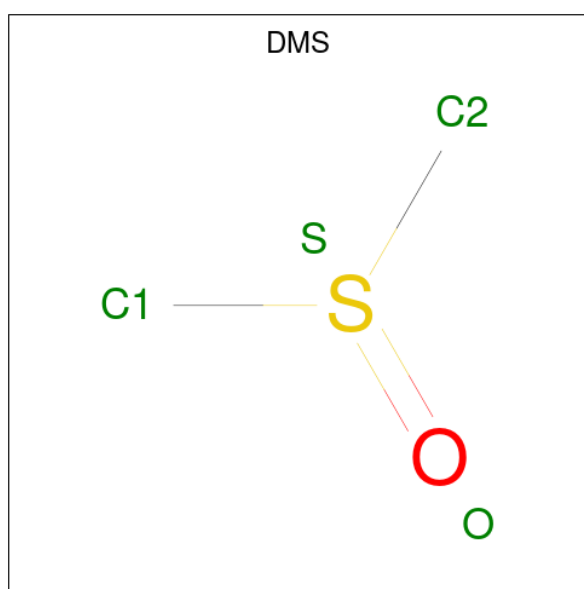
| Mol | Chain | Residues | Atoms | ZeroOcc | AltConf |
|-----|-------|----------|-----------------------|---------|---------|
| 32 | AB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | AB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | AB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | AB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | AD | 1 | Total C O 31 20 11 | 0 | 0 |
| 32 | AI | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | AI | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | AM | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | BB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | BB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | BB | 1 | Total C O 35 24 11 | 0 | 0 |
| 32 | BB | 1 | Total C O 35 24 11 | 0 | 0 |

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| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---------|---------|
| 32 | BC | 1 | Total | C | O | 0 | 0 |
| | | | 35 | 24 | 11 | | |
| 32 | BD | 1 | Total | C | O | 0 | 0 |
| | | | 31 | 20 | 11 | | |
| 32 | BI | 1 | Total | C | O | 0 | 0 |
| | | | 35 | 24 | 11 | | |
| 32 | BM | 1 | Total | C | O | 0 | 0 |
| | | | 35 | 24 | 11 | | |

- Molecule 33 is DIMETHYL SULFOXIDE (three-letter code: DMS) (formula: C₂H₆OS).



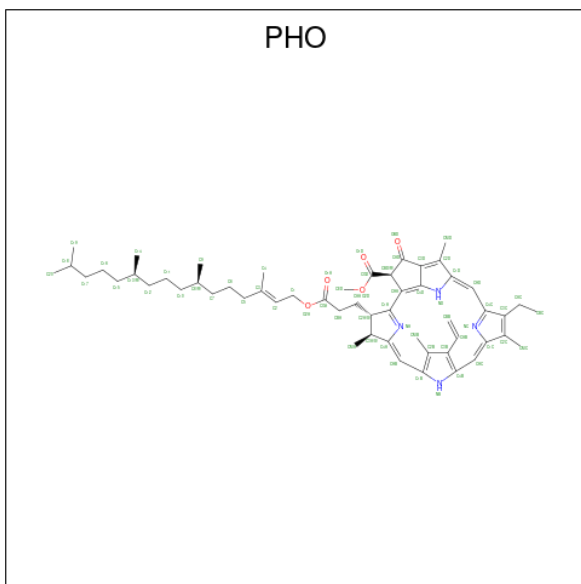
| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|---|---|---|---------|---------|
| 33 | AB | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |
| 33 | AB | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |
| 33 | AU | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |
| 33 | AV | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |
| 33 | BB | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |
| 33 | BB | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |
| 33 | BV | 1 | Total | C | O | S | 0 | 0 |
| | | | 4 | 2 | 1 | 1 | | |

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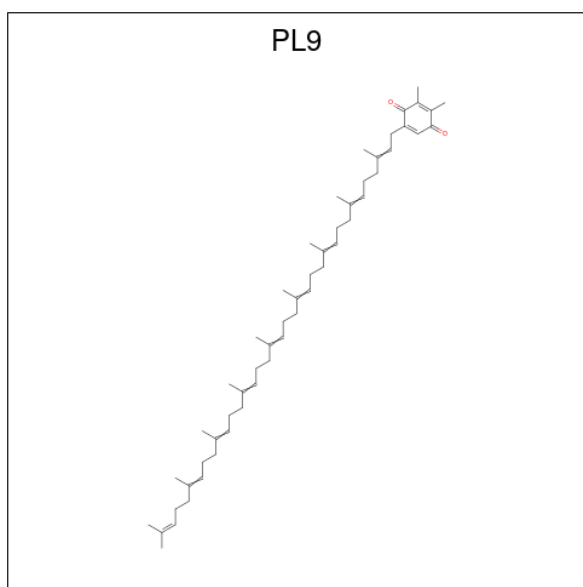
| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|---|---|---|---------|---------|
| | | | Total | C | O | S | | |
| 33 | BV | 1 | 4 | 2 | 1 | 1 | 0 | 0 |

- Molecule 34 is PHEOPHYTIN A (three-letter code: PHO) (formula: $C_{55}H_{74}N_4O_5$).



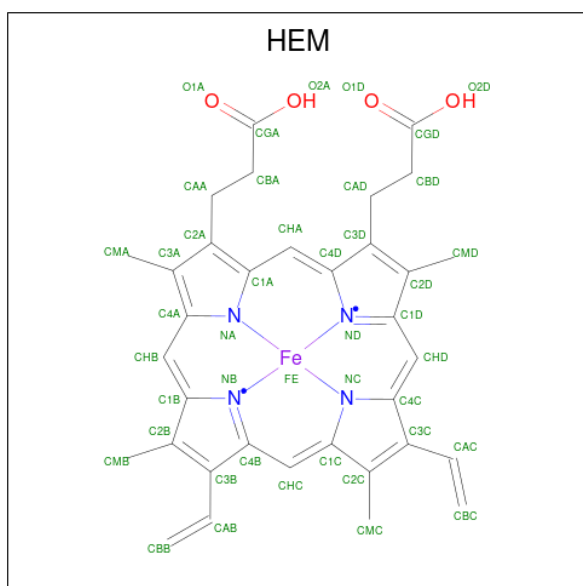
| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---|---|---------|---------|
| | | | Total | C | N | O | | |
| 34 | AD | 1 | 64 | 55 | 4 | 5 | 0 | 0 |
| 34 | AD | 1 | 64 | 55 | 4 | 5 | 0 | 0 |
| 34 | BD | 1 | 64 | 55 | 4 | 5 | 0 | 0 |
| 34 | BD | 1 | 64 | 55 | 4 | 5 | 0 | 0 |

- Molecule 35 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: $C_{53}H_{80}O_2$).



| Mol | Chain | Residues | Atoms | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---|---------|---------|
| 35 | AD | 1 | Total | C | O | 0 | 0 |
| | | | 55 | 53 | 2 | | |
| 35 | BD | 1 | Total | C | O | 0 | 0 |
| | | | 55 | 53 | 2 | | |

- Molecule 36 is PROTOPORPHYRIN IX CONTAINING FE (three-letter code: HEM) (formula: $C_{34}H_{32}FeN_4O_4$).



| Mol | Chain | Residues | Atoms | | | | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|----|---|---|---------|---------|
| 36 | AF | 1 | Total | C | Fe | N | O | 0 | 0 |
| | | | 43 | 34 | 1 | 4 | 4 | | |

Continued on next page...

Continued from previous page...

| Mol | Chain | Residues | Atoms | | | | ZeroOcc | AltConf | |
|-----|-------|----------|-------|----|----|---|---------|---------|---|
| 36 | AV | 1 | Total | C | Fe | N | O | 0 | 0 |
| | | | 43 | 34 | 1 | 4 | 4 | | |
| 36 | BF | 1 | Total | C | Fe | N | O | 0 | 0 |
| | | | 43 | 34 | 1 | 4 | 4 | | |
| 36 | BV | 1 | Total | C | Fe | N | O | 0 | 0 |
| | | | 43 | 34 | 1 | 4 | 4 | | |

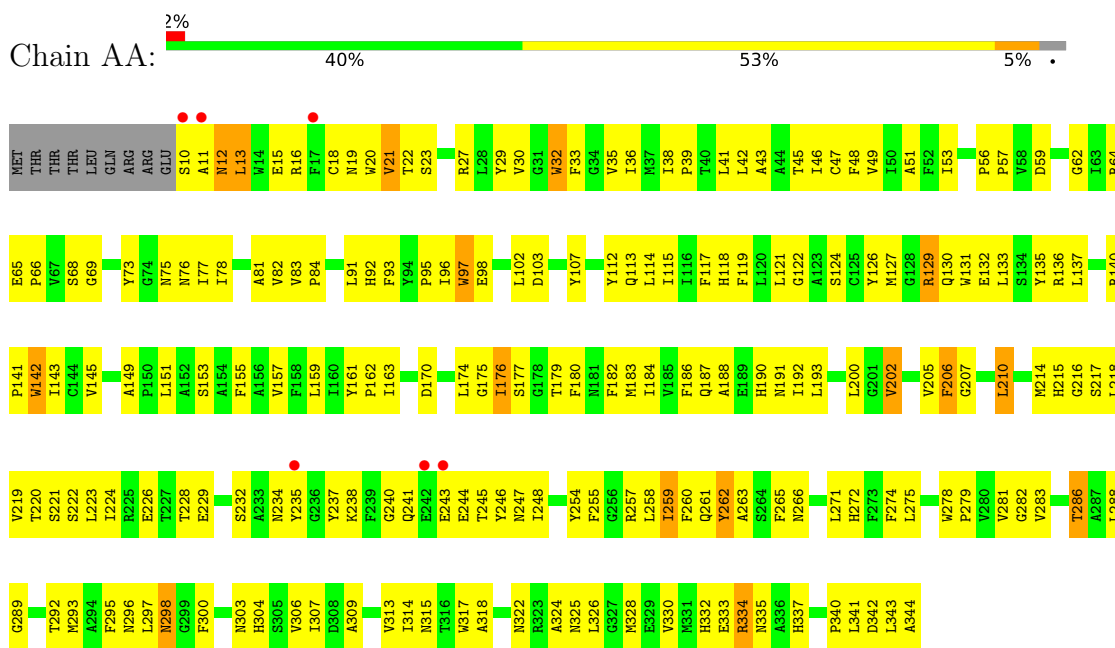
- Molecule 37 is CALCIUM ION (three-letter code: CA) (formula: Ca).

| Mol | Chain | Residues | Atoms | | ZeroOcc | AltConf |
|-----|-------|----------|-------|----|---------|---------|
| 37 | AF | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 37 | AK | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 37 | AO | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 37 | BF | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 37 | BK | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |
| 37 | BO | 1 | Total | Ca | 0 | 0 |
| | | | 1 | 1 | | |

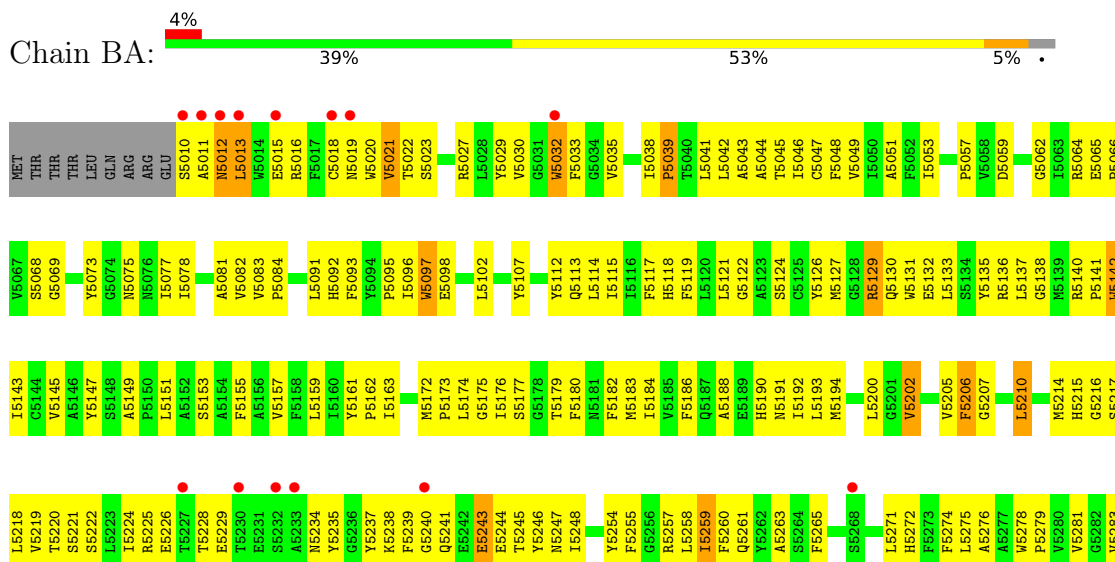
3 Residue-property plots

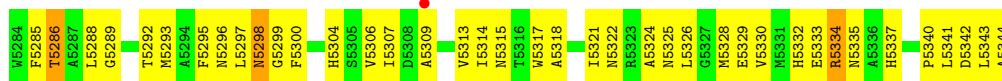
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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 Q(B) protein 1

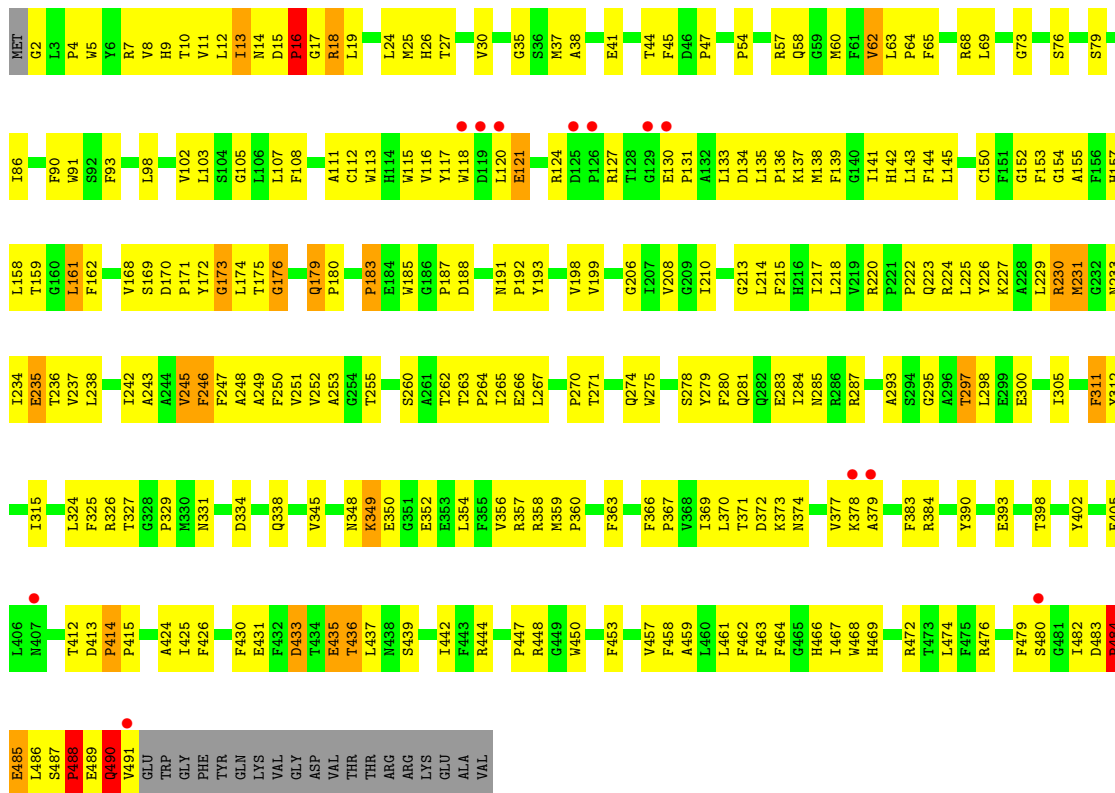


- Molecule 1: Photosystem Q(B) protein 1

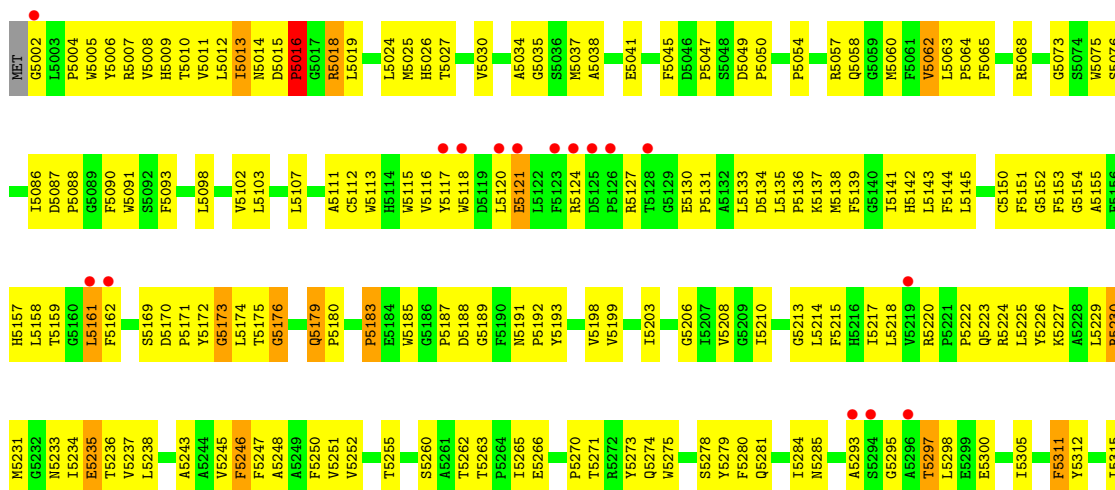


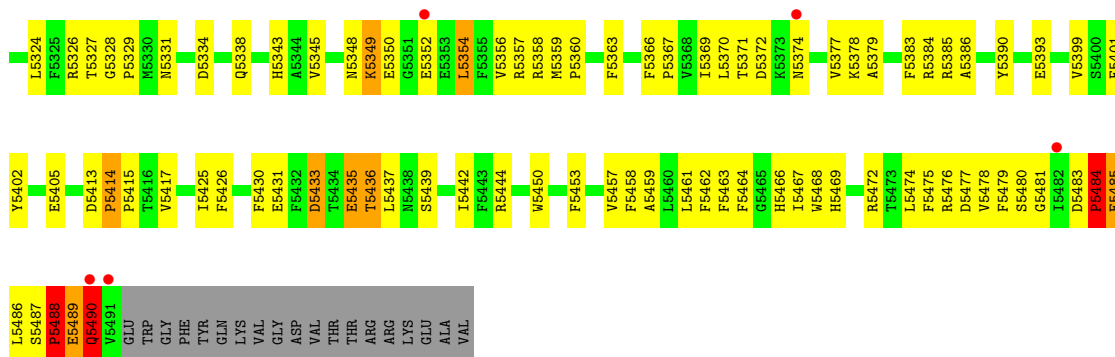


• Molecule 2: Photosystem II core light harvesting protein

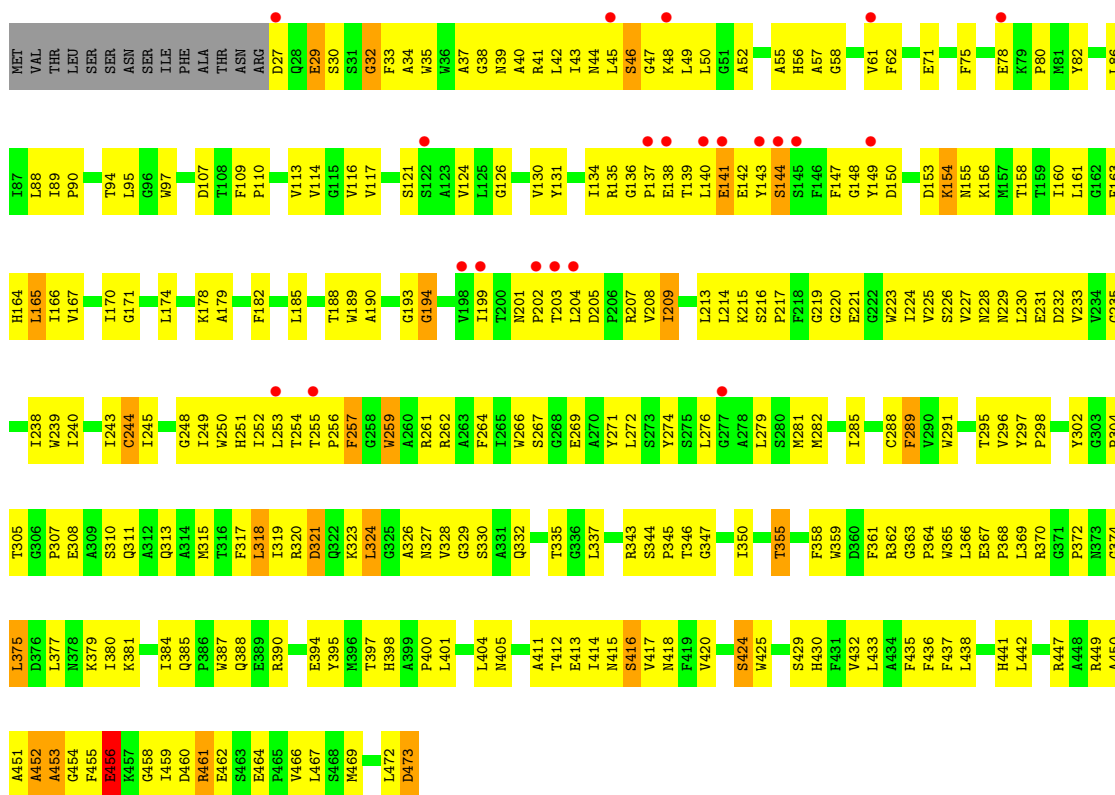


• Molecule 2: Photosystem II core light harvesting protein

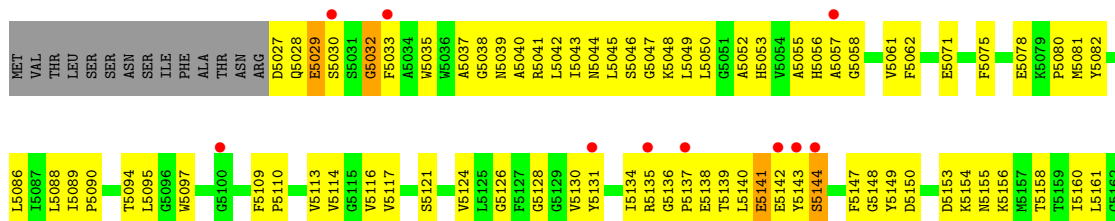


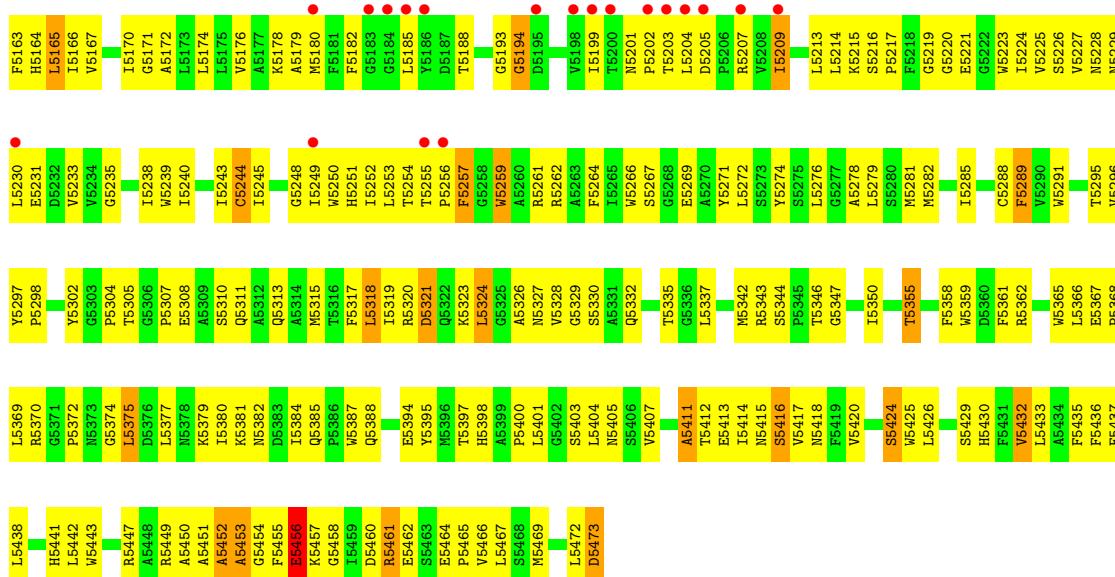


● Molecule 3: Photosystem II CP43 protein

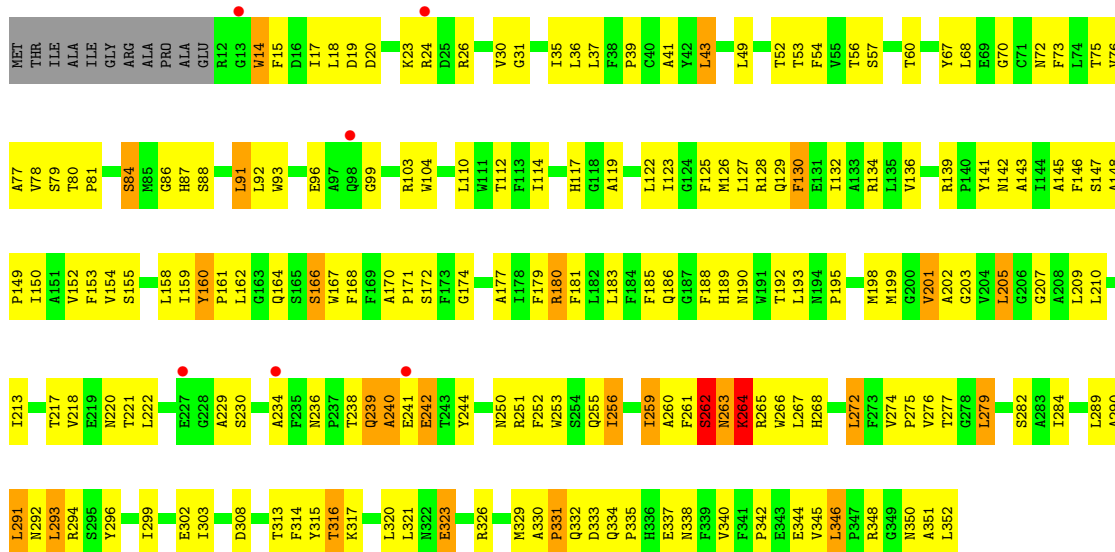
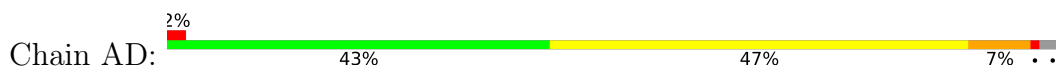


● Molecule 3: Photosystem II CP43 protein

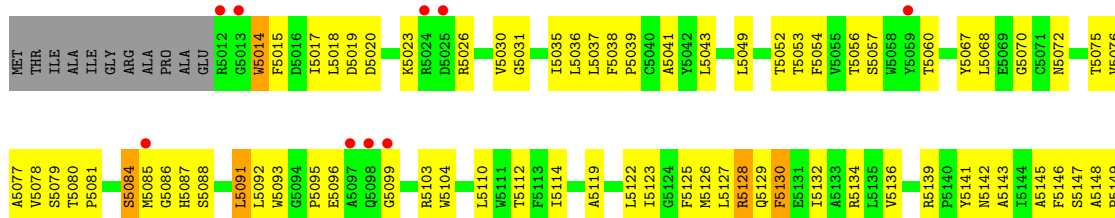
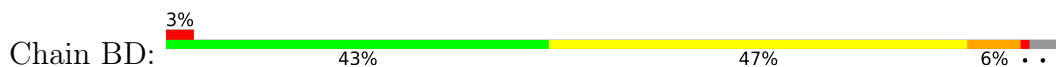


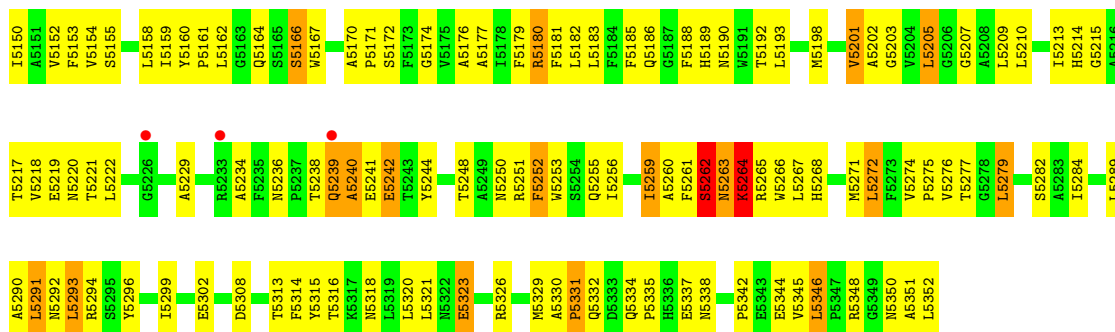


• Molecule 4: Photosystem II D2 protein

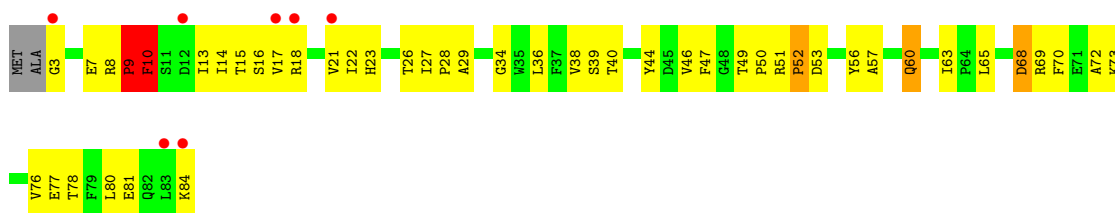
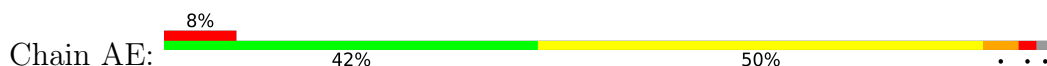


• Molecule 4: Photosystem II D2 protein

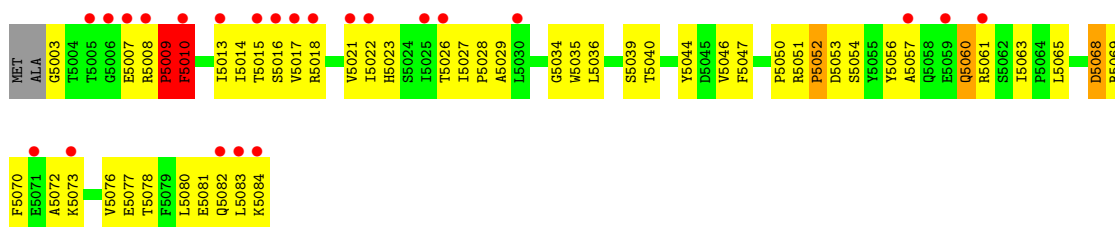




• Molecule 5: Cytochrome b559 subunit alpha



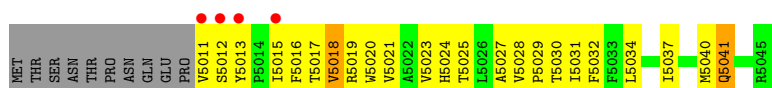
• Molecule 5: Cytochrome b559 subunit alpha



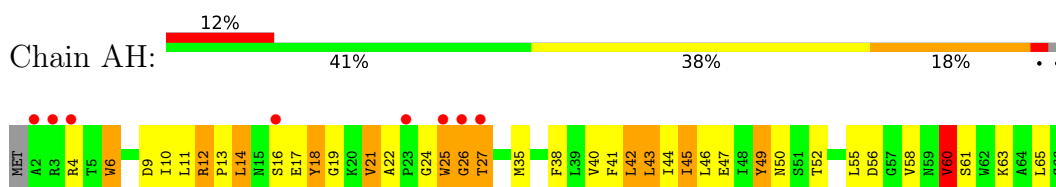
• Molecule 6: Cytochrome b559 subunit beta



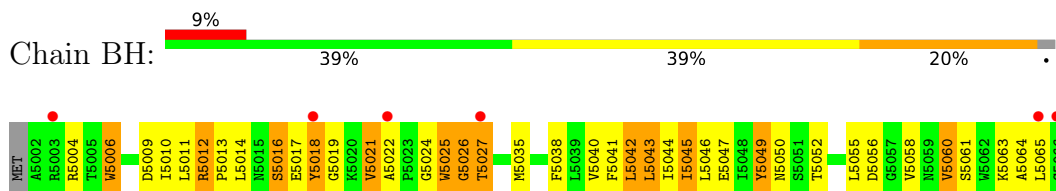
• Molecule 6: Cytochrome b559 subunit beta



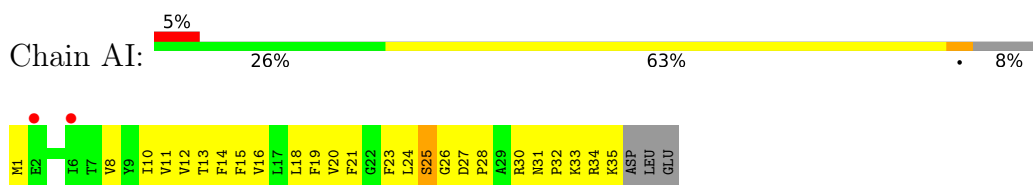
• Molecule 7: Photosystem II reaction center protein H



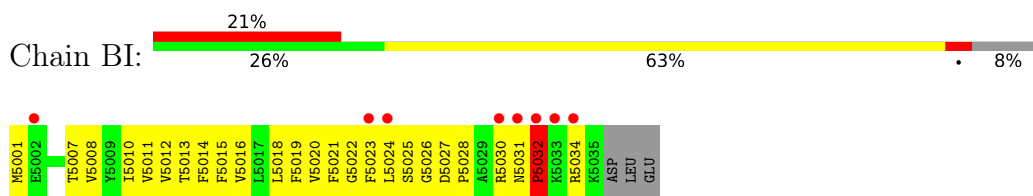
- Molecule 7: Photosystem II reaction center protein H



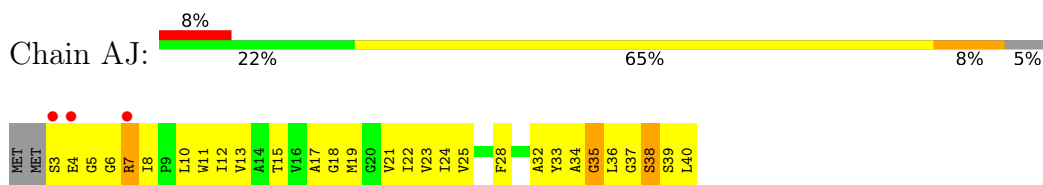
- Molecule 8: Photosystem II reaction center protein I



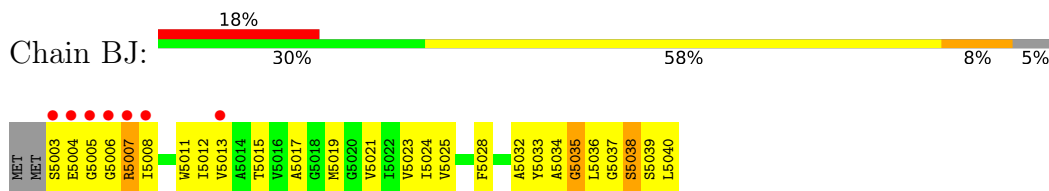
- Molecule 8: Photosystem II reaction center protein I



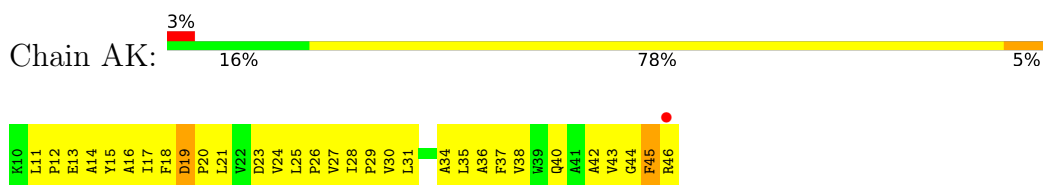
- Molecule 9: Photosystem II reaction center protein J



- Molecule 9: Photosystem II reaction center protein J



- Molecule 10: Photosystem II reaction center protein K



- Molecule 10: Photosystem II reaction center protein K



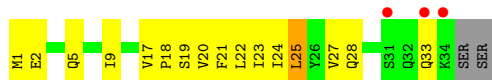
- Molecule 11: Photosystem II reaction center protein L



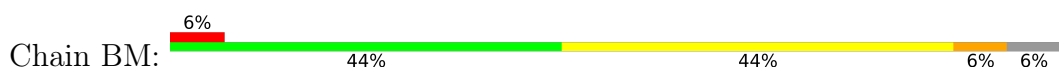
- Molecule 11: Photosystem II reaction center protein L



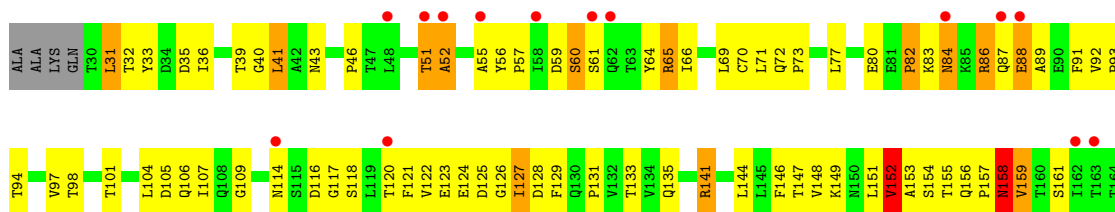
- Molecule 12: Photosystem II reaction center protein M

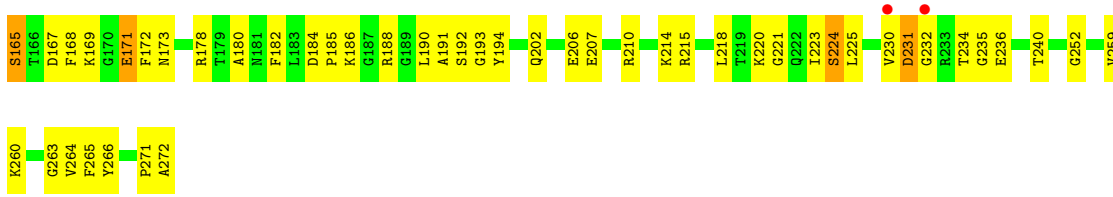


- Molecule 12: Photosystem II reaction center protein M

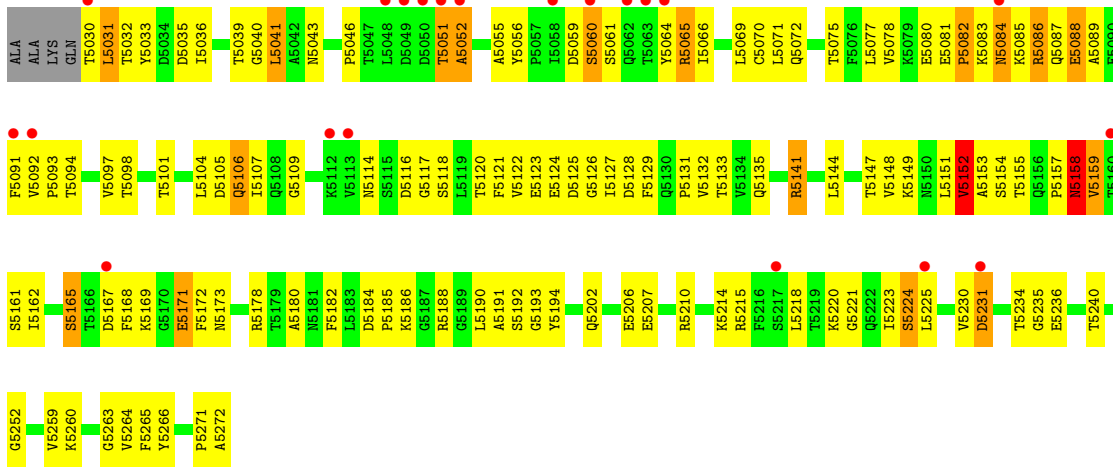


- Molecule 13: Photosystem II manganese-stabilizing polypeptide

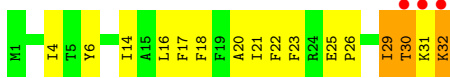




- Molecule 13: Photosystem II manganese-stabilizing polypeptide



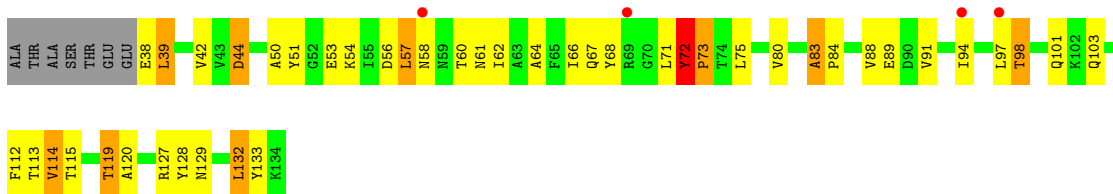
- Molecule 14: Photosystem II reaction center protein T



- Molecule 14: Photosystem II reaction center protein T

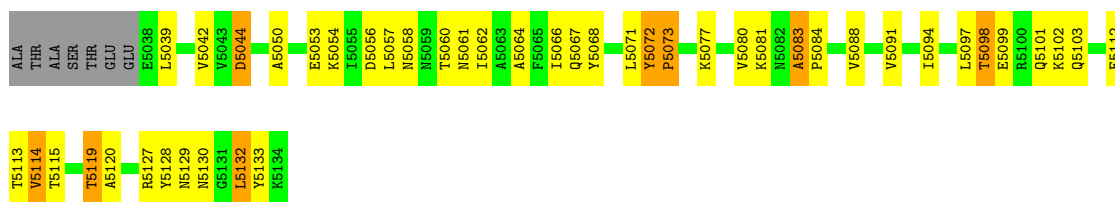


- Molecule 15: Photosystem II 12 kDa extrinsic protein



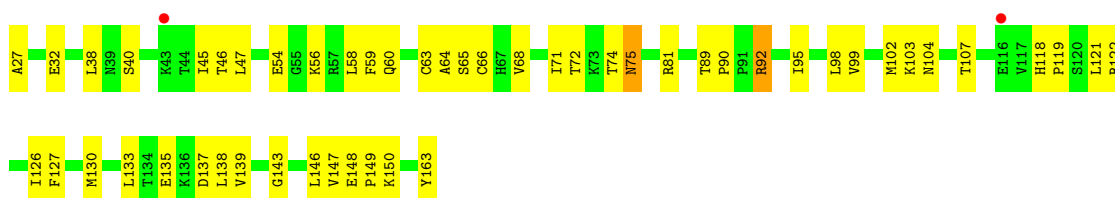
- Molecule 15: Photosystem II 12 kDa extrinsic protein

Chain BU:  50% 36% 8% 7%



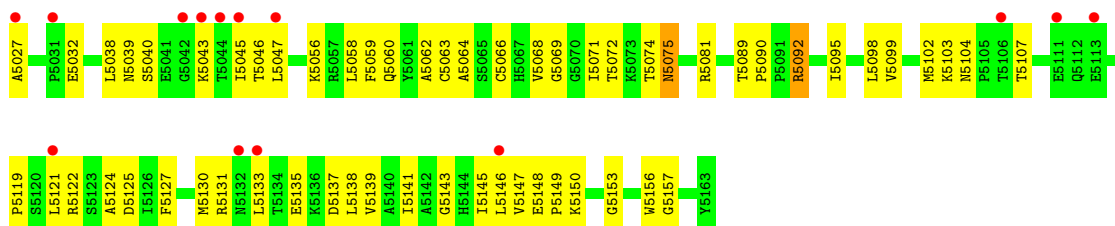
- Molecule 16: Cytochrome c-550

Chain AV:  63% 36%

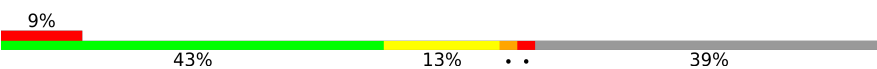


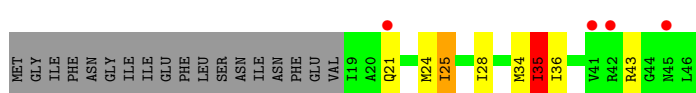
- Molecule 16: Cytochrome c-550

Chain BV:  10% 58% 41%

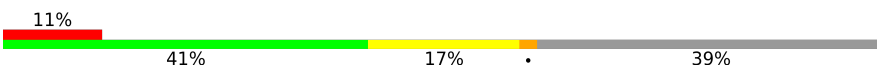


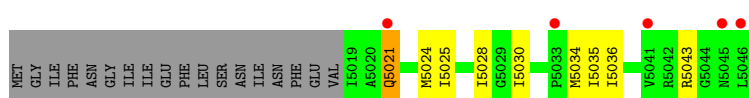
- Molecule 17: Photosystem II reaction center protein ycf12

Chain Ay:  9% 43% 13% 39%

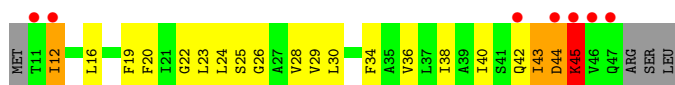
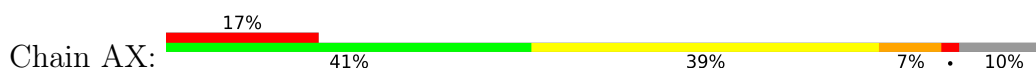


- Molecule 17: Photosystem II reaction center protein ycf12

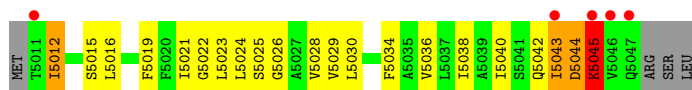
Chain By:  11% 41% 17% 39%



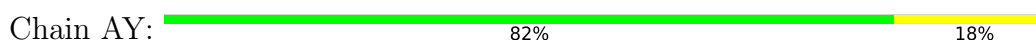
- Molecule 18: Photosystem II reaction center X protein



- Molecule 18: Photosystem II reaction center X protein



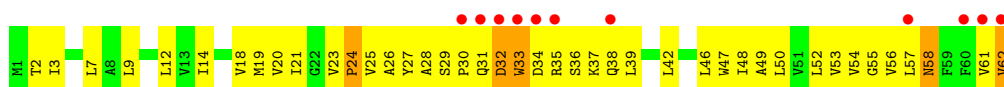
- Molecule 19: PHOTOSYSTEM II PSBX PROTEIN



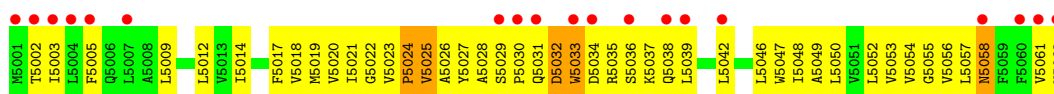
- Molecule 19: PHOTOSYSTEM II PSBX PROTEIN



- Molecule 20: Photosystem II reaction center protein Z



- Molecule 20: Photosystem II reaction center protein Z



4 Data and refinement statistics

| Property | Value | Source |
|---|---|------------------|
| Space group | P 21 21 21 | Depositor |
| Cell constants a, b, c, α , β , γ | 128.08Å 225.37Å 305.68Å 90.00° 90.00° 90.00° | Depositor |
| Resolution (Å) | 20.00 – 3.20 39.38 – 3.10 | Depositor EDS |
| % Data completeness (in resolution range) | 94.1 (20.00-3.20) 99.1 (39.38-3.10) | Depositor EDS |
| R_{merge} | 0.16 | Depositor |
| R_{sym} | 0.13 | Depositor |
| $\langle I/\sigma(I) \rangle$ ¹ | 1.88 (at 3.12Å) | Xtrriage |
| Refinement program | CNS 1.3 | Depositor |
| R, R_{free} | 0.269 , 0.299 0.262 , 0.283 | Depositor DCC |
| R_{free} test set | 3179 reflections (2.00%) | wwPDB-VP |
| Wilson B-factor (Å ²) | 95.5 | Xtrriage |
| Anisotropy | 0.412 | Xtrriage |
| Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²) | 0.30 , 78.3 | EDS |
| L-test for twinning ² | $\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$ | Xtrriage |
| Estimated twinning fraction | No twinning to report. | Xtrriage |
| F_o, F_c correlation | 0.91 | EDS |
| Total number of atoms | 50266 | wwPDB-VP |
| Average B, all atoms (Å ²) | 119.0 | wwPDB-VP |

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.84% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: PL9, CA, DGD, BCR, DMS, LHG, LMG, SQD, OEC, BCT, HEM, FE2, CL, CLA, LMT, PHO, MST

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 | AA | 0.50 | 0/2713 | 0.72 | 0/3700 |
| 1 | BA | 0.52 | 0/2713 | 0.72 | 0/3700 |
| 2 | AB | 0.51 | 0/3986 | 0.73 | 0/5433 |
| 2 | BB | 0.52 | 0/3986 | 0.73 | 3/5433 (0.1%) |
| 3 | AC | 0.46 | 0/3556 | 0.71 | 1/4842 (0.0%) |
| 3 | BC | 0.47 | 0/3556 | 0.71 | 1/4842 (0.0%) |
| 4 | AD | 0.53 | 0/2806 | 0.73 | 0/3825 |
| 4 | BD | 0.55 | 0/2806 | 0.73 | 0/3825 |
| 5 | AE | 0.51 | 0/685 | 0.76 | 0/933 |
| 5 | BE | 0.54 | 0/685 | 0.77 | 0/933 |
| 6 | AF | 0.75 | 0/291 | 0.78 | 0/397 |
| 6 | BF | 0.71 | 0/291 | 0.74 | 0/397 |
| 7 | AH | 0.47 | 0/520 | 0.78 | 0/709 |
| 7 | BH | 0.49 | 0/520 | 0.79 | 0/709 |
| 8 | AI | 0.58 | 0/293 | 0.77 | 0/395 |
| 8 | BI | 0.64 | 0/293 | 0.81 | 0/395 |
| 9 | AJ | 0.55 | 0/277 | 0.86 | 0/375 |
| 9 | BJ | 0.67 | 0/277 | 0.88 | 0/375 |
| 10 | AK | 0.54 | 0/303 | 0.73 | 0/416 |
| 10 | BK | 0.62 | 0/303 | 0.73 | 0/416 |
| 11 | AL | 0.58 | 0/311 | 0.78 | 1/422 (0.2%) |
| 11 | BL | 0.57 | 0/311 | 0.81 | 0/422 |
| 12 | AM | 0.65 | 0/270 | 0.87 | 0/367 |
| 12 | BM | 0.66 | 0/270 | 0.85 | 0/367 |
| 13 | AO | 0.49 | 0/1876 | 0.76 | 0/2548 |
| 13 | BO | 0.48 | 0/1876 | 0.76 | 1/2548 (0.0%) |
| 14 | AT | 0.80 | 1/284 (0.4%) | 0.82 | 0/381 |
| 14 | BT | 0.81 | 1/284 (0.4%) | 0.87 | 2/381 (0.5%) |
| 15 | AU | 0.54 | 0/785 | 0.84 | 2/1064 (0.2%) |
| 15 | BU | 0.52 | 0/785 | 0.83 | 0/1064 |
| 16 | AV | 0.46 | 0/1081 | 0.70 | 0/1468 |

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|----------------|-------------|-----------------|
| | | RMSZ | # Z >5 | RMSZ | # Z >5 |
| 16 | BV | 0.46 | 0/1081 | 0.70 | 0/1468 |
| 17 | Ay | 1.12 | 1/202 (0.5%) | 1.24 | 1/272 (0.4%) |
| 17 | By | 1.03 | 1/202 (0.5%) | 1.22 | 1/272 (0.4%) |
| 18 | AX | 0.57 | 0/273 | 0.76 | 0/370 |
| 18 | BX | 0.63 | 0/273 | 0.69 | 0/370 |
| 20 | AZ | 0.53 | 0/490 | 0.75 | 1/669 (0.1%) |
| 20 | BZ | 0.60 | 0/490 | 0.80 | 0/669 |
| All | All | 0.53 | 4/42004 (0.0%) | 0.75 | 14/57172 (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 |
|-----|-------|---------------------|---------------------|
| 1 | AA | 0 | 1 |
| 2 | BB | 0 | 1 |
| All | All | 0 | 2 |

All (4) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 17 | By | 5030 | ILE | CA-CB | -5.67 | 1.41 | 1.54 |
| 14 | BT | 5032 | LYS | C-OXT | 5.50 | 1.33 | 1.23 |
| 17 | Ay | 35 | ILE | CA-CB | -5.35 | 1.42 | 1.54 |
| 14 | AT | 32 | LYS | CA-CB | 5.19 | 1.65 | 1.53 |

All (14) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 13 | BO | 5030 | THR | N-CA-CB | -5.76 | 99.35 | 110.30 |
| 2 | BB | 5488 | PRO | N-CA-C | 5.72 | 126.97 | 112.10 |
| 2 | BB | 5489 | GLU | N-CA-C | 5.65 | 126.27 | 111.00 |
| 14 | BT | 5004 | ILE | CB-CA-C | -5.65 | 100.31 | 111.60 |
| 3 | AC | 32 | GLY | N-CA-C | -5.56 | 99.19 | 113.10 |
| 17 | By | 5021 | GLN | N-CA-CB | -5.41 | 100.87 | 110.60 |
| 14 | BT | 5032 | LYS | CB-CA-C | -5.38 | 99.64 | 110.40 |
| 17 | Ay | 25 | ILE | CB-CA-C | -5.38 | 100.84 | 111.60 |
| 11 | AL | 19 | LEU | CA-CB-CG | 5.35 | 127.61 | 115.30 |
| 15 | AU | 57 | LEU | CA-CB-CG | -5.30 | 103.11 | 115.30 |
| 3 | BC | 5032 | GLY | N-CA-C | -5.08 | 100.39 | 113.10 |
| 15 | AU | 72 | TYR | N-CA-C | 5.08 | 124.71 | 111.00 |

Continued on next page...

Continued from previous page...

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|----------|-------|-------------|----------|
| 2 | BB | 5354 | LEU | CA-CB-CG | -5.07 | 103.64 | 115.30 |
| 20 | AZ | 7 | LEU | CA-CB-CG | 5.00 | 126.81 | 115.30 |

There are no chirality outliers.

All (2) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|------|------|-----------|
| 1 | AA | 262 | TYR | Sidechain |
| 2 | BB | 5273 | TYR | Sidechain |

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | AA | 2628 | 0 | 2524 | 300 | 0 |
| 1 | BA | 2628 | 0 | 2524 | 309 | 0 |
| 2 | AB | 3850 | 0 | 3718 | 344 | 0 |
| 2 | BB | 3850 | 0 | 3718 | 351 | 0 |
| 3 | AC | 3444 | 0 | 3365 | 350 | 0 |
| 3 | BC | 3444 | 0 | 3365 | 358 | 0 |
| 4 | AD | 2711 | 0 | 2610 | 245 | 0 |
| 4 | BD | 2711 | 0 | 2610 | 255 | 0 |
| 5 | AE | 666 | 0 | 651 | 68 | 0 |
| 5 | BE | 666 | 0 | 651 | 76 | 0 |
| 6 | AF | 282 | 0 | 291 | 36 | 0 |
| 6 | BF | 282 | 0 | 291 | 32 | 0 |
| 7 | AH | 507 | 0 | 521 | 65 | 0 |
| 7 | BH | 507 | 0 | 521 | 69 | 0 |
| 8 | AI | 286 | 0 | 308 | 34 | 0 |
| 8 | BI | 286 | 0 | 305 | 37 | 0 |
| 9 | AJ | 271 | 0 | 276 | 36 | 0 |
| 9 | BJ | 271 | 0 | 276 | 38 | 0 |
| 10 | AK | 293 | 0 | 305 | 48 | 0 |
| 10 | BK | 293 | 0 | 305 | 45 | 0 |
| 11 | AL | 304 | 0 | 316 | 34 | 0 |
| 11 | BL | 304 | 0 | 313 | 35 | 0 |
| 12 | AM | 267 | 0 | 289 | 26 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 12 | BM | 267 | 0 | 286 | 26 | 0 |
| 13 | AO | 1845 | 0 | 1801 | 137 | 0 |
| 13 | BO | 1845 | 0 | 1801 | 142 | 0 |
| 14 | AT | 275 | 0 | 288 | 28 | 0 |
| 14 | BT | 275 | 0 | 285 | 27 | 0 |
| 15 | AU | 774 | 0 | 773 | 52 | 0 |
| 15 | BU | 774 | 0 | 773 | 51 | 0 |
| 16 | AV | 1060 | 0 | 1068 | 48 | 0 |
| 16 | BV | 1060 | 0 | 1068 | 48 | 0 |
| 17 | Ay | 201 | 0 | 226 | 0 | 0 |
| 17 | By | 201 | 0 | 226 | 0 | 0 |
| 18 | AX | 270 | 0 | 299 | 33 | 0 |
| 18 | BX | 270 | 0 | 299 | 27 | 0 |
| 19 | AY | 140 | 0 | 32 | 3 | 0 |
| 19 | BY | 140 | 0 | 32 | 7 | 0 |
| 20 | AZ | 479 | 0 | 516 | 53 | 0 |
| 20 | BZ | 479 | 0 | 513 | 55 | 0 |
| 21 | AA | 1 | 0 | 0 | 0 | 0 |
| 21 | BD | 1 | 0 | 0 | 0 | 0 |
| 22 | AA | 4 | 0 | 0 | 0 | 0 |
| 22 | BA | 4 | 0 | 0 | 0 | 0 |
| 23 | AA | 2 | 0 | 0 | 1 | 0 |
| 23 | BA | 2 | 0 | 0 | 0 | 0 |
| 24 | AA | 260 | 0 | 288 | 41 | 0 |
| 24 | AB | 1040 | 0 | 1152 | 133 | 0 |
| 24 | AC | 845 | 0 | 936 | 91 | 0 |
| 24 | AD | 130 | 0 | 144 | 17 | 0 |
| 24 | BA | 260 | 0 | 288 | 44 | 0 |
| 24 | BB | 1040 | 0 | 1152 | 142 | 0 |
| 24 | BC | 845 | 0 | 936 | 94 | 0 |
| 24 | BD | 130 | 0 | 144 | 18 | 0 |
| 25 | AA | 16 | 0 | 19 | 9 | 0 |
| 25 | BA | 16 | 0 | 19 | 9 | 0 |
| 26 | AA | 5 | 0 | 0 | 0 | 0 |
| 26 | BA | 5 | 0 | 0 | 0 | 0 |
| 27 | AA | 40 | 0 | 56 | 4 | 0 |
| 27 | AB | 120 | 0 | 168 | 8 | 0 |
| 27 | AC | 120 | 0 | 168 | 24 | 0 |
| 27 | AD | 40 | 0 | 56 | 2 | 0 |
| 27 | AJ | 40 | 0 | 56 | 4 | 0 |
| 27 | AK | 40 | 0 | 56 | 5 | 0 |
| 27 | AT | 40 | 0 | 56 | 10 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 27 | AX | 40 | 0 | 56 | 8 | 0 |
| 27 | BA | 40 | 0 | 56 | 3 | 0 |
| 27 | BB | 120 | 0 | 168 | 8 | 0 |
| 27 | BC | 120 | 0 | 168 | 25 | 0 |
| 27 | BD | 40 | 0 | 56 | 2 | 0 |
| 27 | BJ | 40 | 0 | 56 | 3 | 0 |
| 27 | BK | 40 | 0 | 56 | 5 | 0 |
| 27 | BT | 40 | 0 | 56 | 6 | 0 |
| 27 | BX | 40 | 0 | 56 | 4 | 0 |
| 28 | AA | 56 | 0 | 70 | 9 | 0 |
| 28 | AB | 52 | 0 | 62 | 0 | 0 |
| 28 | AC | 181 | 0 | 243 | 63 | 0 |
| 28 | AE | 63 | 0 | 87 | 1 | 0 |
| 28 | AH | 58 | 0 | 74 | 9 | 0 |
| 28 | BA | 56 | 0 | 70 | 9 | 0 |
| 28 | BB | 52 | 0 | 62 | 5 | 0 |
| 28 | BC | 181 | 0 | 243 | 64 | 0 |
| 28 | BE | 63 | 0 | 87 | 1 | 0 |
| 28 | BH | 58 | 0 | 74 | 8 | 0 |
| 29 | AA | 76 | 0 | 95 | 7 | 0 |
| 29 | BA | 76 | 0 | 95 | 9 | 0 |
| 30 | AA | 105 | 0 | 145 | 2 | 0 |
| 30 | AB | 90 | 0 | 109 | 9 | 0 |
| 30 | AF | 45 | 0 | 53 | 1 | 0 |
| 30 | BA | 105 | 0 | 145 | 3 | 0 |
| 30 | BB | 90 | 0 | 109 | 11 | 0 |
| 30 | BF | 45 | 0 | 53 | 1 | 0 |
| 31 | AA | 86 | 0 | 111 | 17 | 0 |
| 31 | AB | 100 | 0 | 139 | 21 | 0 |
| 31 | AC | 93 | 0 | 125 | 11 | 0 |
| 31 | AD | 97 | 0 | 134 | 15 | 0 |
| 31 | AI | 43 | 0 | 56 | 3 | 0 |
| 31 | AJ | 46 | 0 | 61 | 2 | 0 |
| 31 | AM | 42 | 0 | 54 | 6 | 0 |
| 31 | BA | 42 | 0 | 53 | 3 | 0 |
| 31 | BB | 49 | 0 | 68 | 4 | 0 |
| 31 | BC | 93 | 0 | 125 | 10 | 0 |
| 31 | BD | 143 | 0 | 195 | 15 | 0 |
| 31 | BE | 44 | 0 | 58 | 4 | 0 |
| 31 | BI | 43 | 0 | 56 | 4 | 0 |
| 31 | BL | 51 | 0 | 71 | 18 | 0 |
| 31 | BM | 42 | 0 | 54 | 4 | 0 |

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| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 32 | AB | 140 | 0 | 184 | 15 | 0 |
| 32 | AD | 31 | 0 | 35 | 0 | 0 |
| 32 | AI | 70 | 0 | 92 | 9 | 0 |
| 32 | AM | 35 | 0 | 46 | 1 | 0 |
| 32 | BB | 140 | 0 | 184 | 16 | 0 |
| 32 | BC | 35 | 0 | 46 | 3 | 0 |
| 32 | BD | 31 | 0 | 35 | 1 | 0 |
| 32 | BI | 35 | 0 | 46 | 5 | 0 |
| 32 | BM | 35 | 0 | 46 | 2 | 0 |
| 33 | AB | 8 | 0 | 12 | 0 | 0 |
| 33 | AU | 4 | 0 | 6 | 0 | 0 |
| 33 | AV | 4 | 0 | 6 | 0 | 0 |
| 33 | BB | 8 | 0 | 12 | 0 | 0 |
| 33 | BV | 8 | 0 | 12 | 0 | 0 |
| 34 | AD | 128 | 0 | 148 | 14 | 0 |
| 34 | BD | 128 | 0 | 148 | 15 | 0 |
| 35 | AD | 55 | 0 | 80 | 15 | 0 |
| 35 | BD | 55 | 0 | 80 | 16 | 0 |
| 36 | AF | 43 | 0 | 30 | 8 | 0 |
| 36 | AV | 43 | 0 | 30 | 4 | 0 |
| 36 | BF | 43 | 0 | 30 | 7 | 0 |
| 36 | BV | 43 | 0 | 30 | 6 | 0 |
| 37 | AF | 1 | 0 | 0 | 0 | 0 |
| 37 | AK | 1 | 0 | 0 | 0 | 0 |
| 37 | AO | 1 | 0 | 0 | 0 | 0 |
| 37 | BF | 1 | 0 | 0 | 0 | 0 |
| 37 | BK | 1 | 0 | 0 | 0 | 0 |
| 37 | BO | 1 | 0 | 0 | 0 | 0 |
| All | All | 50266 | 0 | 51335 | 3700 | 0 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

All (3700) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 1:AA:278:TRP:CE3 | 28:AC:519:DGD:HAG2 | 1.69 | 1.27 |
| 1:BA:5278:TRP:CE3 | 28:BC:5519:DGD:HAG2 | 1.78 | 1.17 |
| 15:AU:83:ALA:HB1 | 15:AU:84:PRO:HD2 | 1.25 | 1.15 |
| 24:AB:608:CLA:H42 | 4:AD:127:LEU:HD11 | 1.29 | 1.14 |
| 24:BB:5612:CLA:H42 | 4:BD:5127:LEU:HD11 | 1.29 | 1.14 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 15:BU:5083:ALA:HB1 | 15:BU:5084:PRO:HD2 | 1.29 | 1.09 |
| 10:AK:28:ILE:HA | 10:AK:31:LEU:HD12 | 1.35 | 1.09 |
| 1:BA:5325:ASN:HA | 1:BA:5328:MET:HE3 | 1.34 | 1.08 |
| 1:AA:102:LEU:HB2 | 31:AA:417:LMG:H351 | 1.10 | 1.08 |
| 10:BK:5028:ILE:HA | 10:BK:5031:LEU:HD12 | 1.35 | 1.08 |
| 2:BB:5027:THR:HG22 | 2:BB:5107:LEU:HD13 | 1.36 | 1.08 |
| 1:AA:278:TRP:CE3 | 28:AC:519:DGD:CIA | 2.38 | 1.07 |
| 13:BO:5087:GLN:O | 13:BO:5088:GLU:HG3 | 1.54 | 1.07 |
| 9:AJ:15:THR:HG21 | 10:AK:38:VAL:HG13 | 1.33 | 1.06 |
| 16:AV:63:CYS:SG | 36:AV:201:HEM:HAB | 1.96 | 1.06 |
| 1:BA:5200:LEU:HD11 | 28:BC:5519:DGD:HAW2 | 1.38 | 1.05 |
| 13:AO:82:PRO:HG3 | 13:AO:89:ALA:HB2 | 1.35 | 1.04 |
| 28:BA:5412:DGD:O2D | 3:BC:5216:SER:HB2 | 1.57 | 1.04 |
| 9:BJ:5015:THR:HG21 | 10:BK:5038:VAL:HG13 | 1.35 | 1.04 |
| 14:AT:29:ILE:HD12 | 14:AT:29:ILE:H | 1.22 | 1.04 |
| 13:BO:5082:PRO:HG3 | 13:BO:5089:ALA:HB2 | 1.34 | 1.04 |
| 1:AA:200:LEU:CD1 | 28:AC:519:DGD:HAW2 | 1.88 | 1.03 |
| 13:AO:87:GLN:O | 13:AO:88:GLU:HG3 | 1.56 | 1.03 |
| 3:AC:52:ALA:HA | 24:AC:511:CLA:HMB3 | 1.42 | 1.02 |
| 1:BA:5200:LEU:CD1 | 28:BC:5519:DGD:HAW2 | 1.89 | 1.01 |
| 2:BB:5260:SER:OG | 2:BB:5262:THR:HG22 | 1.61 | 1.00 |
| 3:BC:5254:THR:HG22 | 3:BC:5255:THR:H | 1.26 | 1.00 |
| 2:AB:27:THR:HG22 | 2:AB:107:LEU:HD13 | 1.40 | 1.00 |
| 28:AA:411:DGD:O2D | 3:AC:216:SER:HB2 | 1.61 | 1.00 |
| 1:AA:200:LEU:HD11 | 28:AC:519:DGD:HAW2 | 1.42 | 0.99 |
| 2:AB:260:SER:OG | 2:AB:262:THR:HG22 | 1.60 | 0.99 |
| 1:AA:325:ASN:HA | 1:AA:328:MET:HE3 | 1.41 | 0.99 |
| 3:BC:5052:ALA:HA | 24:BC:5511:CLA:HMB3 | 1.43 | 0.98 |
| 4:AD:14:TRP:HE1 | 7:AH:25:TRP:HH2 | 1.12 | 0.97 |
| 3:AC:254:THR:HG22 | 3:AC:255:THR:H | 1.26 | 0.97 |
| 3:AC:305:THR:HG22 | 3:AC:308:GLU:HB2 | 1.47 | 0.97 |
| 5:BE:5056:TYR:O | 16:BV:5027:ALA:HB2 | 1.64 | 0.96 |
| 1:BA:5278:TRP:CE3 | 28:BC:5519:DGD:CIA | 2.48 | 0.96 |
| 2:BB:5476:ARG:HB3 | 2:BB:5476:ARG:HH11 | 1.31 | 0.95 |
| 24:BC:5501:CLA:HMB3 | 27:BC:5516:BCR:H403 | 1.48 | 0.95 |
| 4:BD:5014:TRP:HE1 | 7:BH:5025:TRP:HH2 | 1.14 | 0.95 |
| 16:BV:5063:CYS:SG | 36:BV:5201:HEM:HAB | 2.07 | 0.94 |
| 2:AB:476:ARG:HB3 | 2:AB:476:ARG:HH11 | 1.32 | 0.94 |
| 13:BO:5069:LEU:HB3 | 13:BO:5107:ILE:HB | 1.48 | 0.94 |
| 3:AC:305:THR:HG22 | 3:AC:308:GLU:CB | 1.97 | 0.94 |
| 2:BB:5476:ARG:HB3 | 2:BB:5476:ARG:NH1 | 1.82 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:248:ALA:HA | 24:AB:603:CLA:H42 | 1.49 | 0.93 |
| 3:AC:29:GLU:HB3 | 10:AK:46:ARG:HH11 | 1.31 | 0.93 |
| 2:AB:16:PRO:HG3 | 2:AB:133:LEU:HD11 | 1.48 | 0.93 |
| 3:AC:461:ARG:HG3 | 3:AC:461:ARG:HH11 | 1.31 | 0.93 |
| 3:BC:5461:ARG:HH11 | 3:BC:5461:ARG:HG3 | 1.33 | 0.93 |
| 4:BD:5274:VAL:HA | 35:BD:5406:PL9:H253 | 1.51 | 0.93 |
| 1:BA:5341:LEU:HB2 | 3:BC:5313:GLN:HE22 | 1.30 | 0.92 |
| 13:AO:230:VAL:HG12 | 13:AO:231:ASP:H | 1.35 | 0.92 |
| 5:AE:15:THR:HG22 | 9:AJ:7:ARG:H | 1.34 | 0.92 |
| 2:AB:476:ARG:HB3 | 2:AB:476:ARG:NH1 | 1.84 | 0.92 |
| 18:BX:5026:GLY:O | 18:BX:5029:VAL:HG12 | 1.70 | 0.92 |
| 3:BC:5305:THR:HG22 | 3:BC:5308:GLU:CB | 2.00 | 0.92 |
| 3:BC:5239:TRP:HE3 | 3:BC:5243:ILE:HD11 | 1.34 | 0.91 |
| 1:BA:5102:LEU:HB2 | 31:BA:5402:LMG:H351 | 1.51 | 0.91 |
| 2:BB:5248:ALA:HA | 24:BB:5607:CLA:H42 | 1.52 | 0.91 |
| 3:BC:5305:THR:HG22 | 3:BC:5308:GLU:HB2 | 1.50 | 0.91 |
| 5:BE:5015:THR:HG22 | 9:BJ:5007:ARG:H | 1.35 | 0.91 |
| 4:BD:5103:ARG:HG3 | 5:BE:5073:LYS:HG3 | 1.52 | 0.91 |
| 24:BB:5607:CLA:HBB1 | 24:BB:5609:CLA:H171 | 1.52 | 0.91 |
| 24:AA:405:CLA:HED1 | 35:AD:405:PL9:H372 | 1.53 | 0.90 |
| 24:AC:501:CLA:HMB3 | 27:AC:516:BCR:H403 | 1.54 | 0.90 |
| 2:BB:5016:PRO:HG3 | 2:BB:5133:LEU:HD11 | 1.49 | 0.90 |
| 15:BU:5088:VAL:O | 15:BU:5091:VAL:HG12 | 1.72 | 0.90 |
| 24:AB:603:CLA:HBB1 | 24:AB:605:CLA:H171 | 1.52 | 0.90 |
| 13:AO:69:LEU:HB3 | 13:AO:107:ILE:HB | 1.51 | 0.90 |
| 1:AA:102:LEU:CB | 31:AA:417:LMG:H351 | 2.00 | 0.90 |
| 2:AB:12:LEU:HD13 | 2:AB:19:LEU:HA | 1.53 | 0.89 |
| 2:BB:5004:PRO:HG2 | 2:BB:5007:ARG:HD2 | 1.55 | 0.89 |
| 15:AU:83:ALA:HB1 | 15:AU:84:PRO:CD | 2.02 | 0.89 |
| 18:AX:26:GLY:O | 18:AX:29:VAL:HG12 | 1.72 | 0.89 |
| 4:AD:87:HIS:CD2 | 4:AD:166:SER:HA | 2.07 | 0.89 |
| 14:AT:18:PHE:HB2 | 27:AT:101:BCR:H10C | 1.54 | 0.89 |
| 4:BD:5087:HIS:CD2 | 4:BD:5166:SER:HA | 2.07 | 0.88 |
| 1:BA:5278:TRP:HH2 | 28:BC:5519:DGD:HBB1 | 1.38 | 0.88 |
| 24:BA:5406:CLA:HED1 | 35:BD:5406:PL9:H372 | 1.55 | 0.88 |
| 5:AE:46:VAL:HG13 | 28:AE:101:DGD:HG31 | 1.53 | 0.88 |
| 2:BB:5012:LEU:HD13 | 2:BB:5019:LEU:HA | 1.56 | 0.88 |
| 3:AC:239:TRP:HE3 | 3:AC:243:ILE:HD11 | 1.35 | 0.88 |
| 3:BC:5451:ALA:HA | 3:BC:5456:GLU:OE2 | 1.73 | 0.88 |
| 4:AD:103:ARG:HG3 | 5:AE:73:LYS:HG3 | 1.56 | 0.88 |
| 4:AD:88:SER:HB2 | 5:AE:69:ARG:NH2 | 1.88 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 7:BH:5061:SER:HA | 28:BH:5101:DGD:HE4 | 1.54 | 0.87 |
| 3:AC:451:ALA:HA | 3:AC:456:GLU:OE2 | 1.74 | 0.87 |
| 13:BO:5230:VAL:HG12 | 13:BO:5231:ASP:H | 1.39 | 0.87 |
| 15:AU:88:VAL:O | 15:AU:91:VAL:HG12 | 1.74 | 0.87 |
| 2:AB:414:PRO:HB2 | 2:AB:415:PRO:HD3 | 1.56 | 0.86 |
| 3:AC:29:GLU:HB3 | 10:AK:46:ARG:NH1 | 1.90 | 0.86 |
| 5:BE:5046:VAL:HG13 | 28:BE:5102:DGD:HG31 | 1.56 | 0.86 |
| 15:BU:5083:ALA:HB1 | 15:BU:5084:PRO:CD | 2.04 | 0.86 |
| 5:AE:15:THR:HG23 | 9:AJ:8:ILE:O | 1.75 | 0.85 |
| 2:BB:5179:GLN:HA | 2:BB:5179:GLN:HE21 | 1.41 | 0.85 |
| 3:BC:5380:ILE:HA | 3:BC:5384:ILE:HD11 | 1.55 | 0.85 |
| 3:BC:5117:VAL:HG11 | 31:BC:5521:LMG:H192 | 1.58 | 0.85 |
| 4:BD:5122:LEU:HD21 | 24:BD:5402:CLA:H92 | 1.58 | 0.85 |
| 3:AC:130:VAL:HG13 | 24:AC:511:CLA:H92 | 1.59 | 0.85 |
| 4:AD:148:ALA:HB2 | 4:AD:276:VAL:HG13 | 1.58 | 0.85 |
| 3:BC:5113:VAL:O | 3:BC:5117:VAL:HG23 | 1.75 | 0.85 |
| 1:AA:341:LEU:HB2 | 3:AC:313:GLN:HE22 | 1.40 | 0.85 |
| 3:AC:113:VAL:O | 3:AC:117:VAL:HG23 | 1.75 | 0.85 |
| 4:BD:5148:ALA:HB3 | 4:BD:5149:PRO:HD3 | 1.59 | 0.84 |
| 2:AB:179:GLN:HA | 2:AB:179:GLN:HE21 | 1.43 | 0.84 |
| 7:AH:61:SER:HA | 28:AH:101:DGD:HE4 | 1.59 | 0.84 |
| 3:AC:380:ILE:HA | 3:AC:384:ILE:HD11 | 1.58 | 0.84 |
| 4:AD:274:VAL:HA | 35:AD:405:PL9:H253 | 1.57 | 0.84 |
| 1:BA:5033:PHE:HE1 | 24:BC:5505:CLA:H92 | 1.41 | 0.84 |
| 1:AA:177:SER:HA | 1:AA:180:PHE:HD2 | 1.42 | 0.84 |
| 2:BB:5383:PHE:O | 13:BO:5192:SER:HA | 1.78 | 0.84 |
| 5:BE:5015:THR:HG22 | 9:BJ:5007:ARG:N | 1.93 | 0.84 |
| 5:BE:5015:THR:HG23 | 9:BJ:5008:ILE:O | 1.77 | 0.84 |
| 2:AB:223:GLN:HG3 | 2:AB:227:LYS:HE3 | 1.60 | 0.84 |
| 16:BV:5066:CYS:SG | 36:BV:5201:HEM:HAC | 2.18 | 0.84 |
| 24:BA:5406:CLA:H93 | 34:BD:5403:PHO:HMA1 | 1.60 | 0.83 |
| 5:AE:56:TYR:O | 16:AV:27:ALA:HB2 | 1.78 | 0.83 |
| 1:AA:278:TRP:CZ3 | 28:AC:519:DGD:HAG2 | 2.12 | 0.83 |
| 24:AA:405:CLA:H93 | 34:AD:402:PHO:HMA1 | 1.60 | 0.83 |
| 1:BA:5289:GLY:O | 1:BA:5292:THR:HG22 | 1.77 | 0.83 |
| 13:AO:32:THR:O | 13:AO:36:ILE:HD12 | 1.79 | 0.83 |
| 2:BB:5464:PHE:HD2 | 24:BB:5615:CLA:HAC2 | 1.43 | 0.83 |
| 13:BO:5032:THR:O | 13:BO:5036:ILE:HD12 | 1.77 | 0.83 |
| 5:AE:15:THR:HG22 | 9:AJ:7:ARG:N | 1.93 | 0.83 |
| 3:BC:5130:VAL:HG13 | 24:BC:5511:CLA:H92 | 1.60 | 0.83 |
| 4:BD:5148:ALA:HB2 | 4:BD:5276:VAL:HG13 | 1.58 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 13:BO:5031:LEU:H | 13:BO:5031:LEU:HD12 | 1.44 | 0.83 |
| 31:AD:408:LMG:HC8 | 11:AL:19:LEU:HD23 | 1.60 | 0.83 |
| 3:AC:307:PRO:HB3 | 3:AC:358:PHE:CD1 | 2.14 | 0.83 |
| 24:BC:5504:CLA:C15 | 28:BC:5519:DGD:HA91 | 2.08 | 0.82 |
| 7:AH:55:LEU:HD21 | 18:AX:16:LEU:HD23 | 1.59 | 0.82 |
| 1:BA:5278:TRP:CH2 | 28:BC:5519:DGD:HBG1 | 2.13 | 0.82 |
| 4:BD:5088:SER:HB2 | 5:BE:5069:ARG:NH2 | 1.94 | 0.82 |
| 16:AV:66:CYS:SG | 36:AV:201:HEM:HAC | 2.20 | 0.82 |
| 2:AB:464:PHE:HD2 | 24:AB:611:CLA:HAC2 | 1.45 | 0.82 |
| 32:AB:629:LMT:H51 | 14:BT:5004:ILE:HG13 | 1.60 | 0.82 |
| 35:BD:5406:PL9:H201 | 31:BL:5101:LMG:H182 | 1.61 | 0.82 |
| 1:AA:278:TRP:HH2 | 28:AC:519:DGD:HBG1 | 1.42 | 0.82 |
| 2:AB:155:ALA:O | 2:AB:161:LEU:HD22 | 1.79 | 0.82 |
| 3:BC:5116:VAL:HG21 | 27:BC:5515:BCR:H323 | 1.62 | 0.82 |
| 1:AA:192:ILE:HA | 1:AA:293:MET:HE3 | 1.62 | 0.81 |
| 2:AB:121:GLU:HG3 | 7:AH:4:ARG:HA | 1.60 | 0.81 |
| 2:BB:5357:ARG:HH11 | 2:BB:5357:ARG:HG3 | 1.45 | 0.81 |
| 3:AC:385:GLN:H | 3:AC:388:GLN:NE2 | 1.79 | 0.81 |
| 2:BB:5155:ALA:O | 2:BB:5161:LEU:HD22 | 1.80 | 0.81 |
| 1:BA:5214:MET:HA | 1:BA:5214:MET:CE | 2.10 | 0.81 |
| 4:AD:17:ILE:HG21 | 18:AX:42:GLN:HG2 | 1.63 | 0.81 |
| 10:AK:19:ASP:N | 10:AK:20:PRO:HD2 | 1.96 | 0.81 |
| 2:BB:5354:LEU:HD23 | 2:BB:5378:LYS:HB2 | 1.62 | 0.81 |
| 5:AE:36:LEU:O | 5:AE:40:THR:HG23 | 1.80 | 0.81 |
| 2:BB:5354:LEU:CD2 | 2:BB:5378:LYS:HB2 | 2.11 | 0.81 |
| 1:BA:5084:PRO:HA | 1:BA:5112:TYR:CD2 | 2.15 | 0.81 |
| 1:AA:214:MET:CE | 1:AA:214:MET:HA | 2.11 | 0.81 |
| 3:BC:5029:GLU:HB3 | 10:BK:5046:ARG:HH11 | 1.46 | 0.81 |
| 31:BD:5410:LMG:HC8 | 11:BL:5019:LEU:HD23 | 1.61 | 0.81 |
| 3:BC:5307:PRO:HB3 | 3:BC:5358:PHE:CD1 | 2.15 | 0.80 |
| 1:BA:5214:MET:HA | 1:BA:5214:MET:HE3 | 1.63 | 0.80 |
| 3:BC:5310:SER:OG | 3:BC:5355:THR:HG23 | 1.82 | 0.80 |
| 5:BE:5036:LEU:O | 5:BE:5040:THR:HG23 | 1.82 | 0.80 |
| 24:AB:603:CLA:HAC2 | 24:AB:606:CLA:HBB2 | 1.64 | 0.80 |
| 31:AB:620:LMG:H182 | 35:AD:405:PL9:H201 | 1.63 | 0.80 |
| 31:BI:5101:LMG:H152 | 32:BI:5102:LMT:H52 | 1.62 | 0.80 |
| 1:BA:5281:VAL:CG1 | 28:BC:5519:DGD:HAG3 | 2.11 | 0.80 |
| 1:AA:33:PHE:HE1 | 24:AC:505:CLA:H92 | 1.45 | 0.80 |
| 2:AB:354:LEU:CD2 | 2:AB:378:LYS:HB2 | 2.12 | 0.80 |
| 18:AX:34:PHE:O | 18:AX:38:ILE:HG12 | 1.82 | 0.80 |
| 14:AT:4:ILE:HG13 | 32:BB:5603:LMT:H51 | 1.64 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:BC:5464:GLU:HB3 | 3:BC:5467:LEU:HD12 | 1.64 | 0.80 |
| 31:AA:414:LMG:O3 | 5:AE:9:PRO:HB3 | 1.81 | 0.80 |
| 2:AB:297:THR:HG23 | 2:AB:300:GLU:H | 1.47 | 0.80 |
| 2:AB:357:ARG:HG3 | 2:AB:357:ARG:HH11 | 1.46 | 0.80 |
| 4:AD:122:LEU:HD21 | 24:AD:401:CLA:H92 | 1.64 | 0.80 |
| 4:BD:5221:THR:HG23 | 4:BD:5244:TYR:HB2 | 1.63 | 0.80 |
| 18:BX:5034:PHE:O | 18:BX:5038:ILE:HG12 | 1.82 | 0.79 |
| 2:BB:5135:LEU:HB2 | 2:BB:5136:PRO:HD3 | 1.62 | 0.79 |
| 2:AB:135:LEU:HB2 | 2:AB:136:PRO:HD3 | 1.63 | 0.79 |
| 2:AB:383:PHE:O | 13:AO:192:SER:HA | 1.82 | 0.79 |
| 24:BB:5607:CLA:HAC2 | 24:BB:5610:CLA:HBB2 | 1.65 | 0.79 |
| 3:BC:5155:ASN:HA | 3:BC:5158:THR:HG22 | 1.65 | 0.79 |
| 3:AC:116:VAL:HG21 | 27:AC:515:BCR:H323 | 1.63 | 0.79 |
| 31:AI:101:LMG:H152 | 32:AI:102:LMT:H52 | 1.64 | 0.79 |
| 1:BA:5143:ILE:HD11 | 4:BD:5217:THR:HA | 1.64 | 0.79 |
| 4:BD:5152:VAL:HG21 | 4:BD:5279:LEU:HD13 | 1.64 | 0.79 |
| 24:BD:5405:CLA:H41 | 18:BX:5023:LEU:HD12 | 1.64 | 0.79 |
| 5:BE:5009:PRO:HB3 | 31:BE:5101:LMG:O3 | 1.81 | 0.79 |
| 3:AC:372:PRO:O | 13:AO:36:ILE:HD13 | 1.82 | 0.79 |
| 1:BA:5177:SER:HA | 1:BA:5180:PHE:HD2 | 1.47 | 0.79 |
| 1:AA:84:PRO:HA | 1:AA:112:TYR:CD2 | 2.16 | 0.79 |
| 1:AA:278:TRP:CH2 | 28:AC:519:DGD:HBG1 | 2.18 | 0.79 |
| 24:AA:407:CLA:H43 | 24:AC:505:CLA:H201 | 1.64 | 0.79 |
| 16:AV:63:CYS:SG | 36:AV:201:HEM:CAB | 2.71 | 0.79 |
| 2:BB:5173:GLY:HA3 | 2:BB:5265:ILE:HD11 | 1.64 | 0.79 |
| 1:AA:258:LEU:HB3 | 1:AA:259:ILE:HD13 | 1.63 | 0.78 |
| 7:AH:21:VAL:HG23 | 7:AH:22:ALA:O | 1.83 | 0.78 |
| 1:BA:5258:LEU:HB3 | 1:BA:5259:ILE:HD13 | 1.65 | 0.78 |
| 2:AB:354:LEU:HD23 | 2:AB:378:LYS:HB2 | 1.63 | 0.78 |
| 20:AZ:19:MET:O | 20:AZ:23:VAL:HG23 | 1.83 | 0.78 |
| 2:BB:5224:ARG:HG3 | 7:BH:5025:TRP:HD1 | 1.46 | 0.78 |
| 20:BZ:5036:SER:HA | 20:BZ:5039:LEU:HG | 1.65 | 0.78 |
| 24:BC:5504:CLA:H151 | 28:BC:5519:DGD:HA91 | 1.64 | 0.78 |
| 1:BA:5192:ILE:HA | 1:BA:5293:MET:HE3 | 1.66 | 0.78 |
| 4:BD:5017:ILE:HG21 | 18:BX:5042:GLN:HG2 | 1.63 | 0.78 |
| 31:BC:5520:LMG:O8 | 31:BC:5520:LMG:O9 | 2.01 | 0.78 |
| 15:BU:5072:TYR:HB3 | 15:BU:5073:PRO:HD3 | 1.66 | 0.78 |
| 1:BA:5278:TRP:HB3 | 1:BA:5279:PRO:HD3 | 1.64 | 0.78 |
| 7:BH:5042:LEU:HD12 | 7:BH:5045:ILE:HD11 | 1.64 | 0.78 |
| 1:AA:289:GLY:O | 1:AA:292:THR:HG22 | 1.82 | 0.78 |
| 31:AC:520:LMG:O9 | 31:AC:520:LMG:O8 | 2.01 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:AC:461:ARG:HH11 | 3:AC:461:ARG:CG | 1.96 | 0.78 |
| 1:BA:5083:VAL:HG22 | 4:BD:5314:PHE:HE2 | 1.49 | 0.78 |
| 24:BA:5408:CLA:H43 | 24:BC:5505:CLA:H201 | 1.66 | 0.78 |
| 13:BO:5032:THR:HG22 | 13:BO:5035:ASP:OD2 | 1.83 | 0.77 |
| 4:AD:148:ALA:HB3 | 4:AD:149:PRO:HD3 | 1.65 | 0.77 |
| 1:BA:5133:LEU:HD23 | 4:BD:5252:PHE:CD1 | 2.18 | 0.77 |
| 2:BB:5489:GLU:HB2 | 5:BE:5003:GLY:N | 1.98 | 0.77 |
| 20:BZ:5032:ASP:CG | 20:BZ:5033:TRP:H | 1.87 | 0.77 |
| 28:BA:5412:DGD:O2D | 3:BC:5216:SER:CB | 2.32 | 0.77 |
| 7:BH:5055:LEU:HD21 | 18:BX:5016:LEU:HD23 | 1.64 | 0.77 |
| 1:AA:127:MET:HE3 | 3:AC:442:LEU:HD21 | 1.67 | 0.77 |
| 3:AC:48:LYS:HE2 | 3:AC:138:GLU:HG3 | 1.67 | 0.77 |
| 10:AK:27:VAL:O | 10:AK:30:VAL:HG12 | 1.82 | 0.77 |
| 20:AZ:36:SER:HA | 20:AZ:39:LEU:HG | 1.65 | 0.77 |
| 3:AC:415:ASN:O | 3:AC:416:SER:HB3 | 1.85 | 0.77 |
| 3:AC:464:GLU:HB3 | 3:AC:467:LEU:HD12 | 1.65 | 0.77 |
| 4:AD:129:GLN:NE2 | 4:AD:143:ALA:HA | 2.00 | 0.77 |
| 3:BC:5219:GLY:HA2 | 28:BC:5517:DGD:O3D | 1.85 | 0.77 |
| 3:AC:117:VAL:HG11 | 31:AC:521:LMG:H192 | 1.67 | 0.77 |
| 24:AC:511:CLA:H202 | 20:AZ:20:VAL:HA | 1.66 | 0.77 |
| 2:AB:483:ASP:CB | 2:AB:484:PRO:HD2 | 2.14 | 0.77 |
| 2:BB:5068:ARG:HH22 | 24:BB:5608:CLA:HED1 | 1.49 | 0.77 |
| 2:BB:5223:GLN:HG3 | 2:BB:5227:LYS:HE3 | 1.66 | 0.76 |
| 3:AC:62:PHE:HE2 | 10:AK:29:PRO:HD3 | 1.51 | 0.76 |
| 13:AO:32:THR:HG22 | 13:AO:35:ASP:OD2 | 1.83 | 0.76 |
| 15:AU:72:TYR:HB3 | 15:AU:73:PRO:HD3 | 1.67 | 0.76 |
| 2:BB:5297:THR:HG23 | 2:BB:5300:GLU:H | 1.50 | 0.76 |
| 24:AC:504:CLA:C15 | 28:AC:519:DGD:HA91 | 2.14 | 0.76 |
| 4:AD:221:THR:HG23 | 4:AD:244:TYR:HB2 | 1.67 | 0.76 |
| 24:BA:5405:CLA:H13 | 24:BA:5406:CLA:H91 | 1.67 | 0.76 |
| 3:BC:5062:PHE:HE2 | 10:BK:5029:PRO:HD3 | 1.50 | 0.76 |
| 28:AA:411:DGD:O2D | 3:AC:216:SER:CB | 2.33 | 0.76 |
| 3:AC:155:ASN:HA | 3:AC:158:THR:HG22 | 1.66 | 0.76 |
| 24:AD:404:CLA:H41 | 18:AX:23:LEU:HD12 | 1.65 | 0.76 |
| 12:AM:33:GLN:HB3 | 12:BM:5033:GLN:HB3 | 1.65 | 0.76 |
| 2:BB:5461:LEU:HD11 | 31:BB:5624:LMG:H412 | 1.68 | 0.76 |
| 1:AA:262:TYR:CE1 | 31:AA:414:LMG:HC5 | 2.21 | 0.76 |
| 6:AF:11:VAL:HG12 | 6:AF:12:SER:H | 1.49 | 0.76 |
| 1:BA:5259:ILE:HD13 | 1:BA:5259:ILE:N | 2.01 | 0.76 |
| 2:AB:121:GLU:CG | 7:AH:4:ARG:HA | 2.16 | 0.76 |
| 2:AB:4:PRO:HG2 | 2:AB:7:ARG:HD2 | 1.66 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 27:BC:5514:BCR:H353 | 27:BK:5102:BCR:H321 | 1.68 | 0.76 |
| 3:BC:5461:ARG:HH11 | 3:BC:5461:ARG:CG | 1.97 | 0.76 |
| 5:BE:5078:THR:HA | 5:BE:5081:GLU:HG2 | 1.68 | 0.76 |
| 12:BM:5001:MET:HG2 | 12:BM:5002:GLU:H | 1.51 | 0.76 |
| 13:AO:128:ASP:OD2 | 13:AO:149:LYS:HG2 | 1.86 | 0.75 |
| 7:AH:42:LEU:HD12 | 7:AH:45:ILE:HD11 | 1.67 | 0.75 |
| 2:BB:5016:PRO:CG | 2:BB:5133:LEU:HD11 | 2.16 | 0.75 |
| 1:BA:5255:PHE:CE1 | 1:BA:5259:ILE:HD11 | 2.21 | 0.75 |
| 2:AB:468:TRP:HD1 | 2:AB:469:HIS:HD1 | 1.31 | 0.75 |
| 24:AB:604:CLA:H11 | 24:AB:612:CLA:H152 | 1.68 | 0.75 |
| 2:BB:5121:GLU:HG3 | 7:BH:5004:ARG:HA | 1.67 | 0.75 |
| 3:BC:5372:PRO:O | 13:BO:5036:ILE:HD13 | 1.86 | 0.75 |
| 24:AC:503:CLA:HMD2 | 24:AC:503:CLA:H191 | 1.67 | 0.75 |
| 27:AC:514:BCR:H353 | 27:AK:102:BCR:H321 | 1.68 | 0.75 |
| 4:AD:88:SER:HB2 | 5:AE:69:ARG:CZ | 2.17 | 0.75 |
| 2:BB:5414:PRO:HB2 | 2:BB:5415:PRO:HD3 | 1.68 | 0.75 |
| 1:BA:5049:VAL:O | 1:BA:5053:ILE:HG13 | 1.87 | 0.75 |
| 3:BC:5048:LYS:HE2 | 3:BC:5138:GLU:HG3 | 1.66 | 0.75 |
| 4:BD:5091:LEU:HD22 | 7:BH:5052:THR:HG21 | 1.69 | 0.75 |
| 2:BB:5462:PHE:HA | 24:BB:5615:CLA:HMC1 | 1.69 | 0.74 |
| 3:BC:5385:GLN:H | 3:BC:5388:GLN:NE2 | 1.85 | 0.74 |
| 4:BD:5103:ARG:NH1 | 5:BE:5077:GLU:HG3 | 2.02 | 0.74 |
| 10:BK:5027:VAL:O | 10:BK:5030:VAL:HG12 | 1.86 | 0.74 |
| 1:AA:330:VAL:HG11 | 4:AD:348:ARG:HG2 | 1.69 | 0.74 |
| 31:AA:417:LMG:H201 | 2:BB:5098:LEU:HD13 | 1.69 | 0.74 |
| 1:BA:5064:ARG:O | 13:BO:5178:ARG:NH2 | 2.21 | 0.74 |
| 1:BA:5315:ASN:HD21 | 4:BD:5332:GLN:HE22 | 1.35 | 0.74 |
| 4:AD:152:VAL:HG21 | 4:AD:279:LEU:HD13 | 1.67 | 0.74 |
| 2:BB:5121:GLU:CG | 7:BH:5004:ARG:HA | 2.18 | 0.74 |
| 3:AC:219:GLY:HA2 | 28:AC:517:DGD:O3D | 1.86 | 0.74 |
| 13:BO:5171:GLU:HG2 | 13:BO:5172:PHE:N | 2.02 | 0.74 |
| 1:AA:13:LEU:HA | 1:AA:16:ARG:HD3 | 1.69 | 0.74 |
| 13:AO:230:VAL:HG12 | 13:AO:231:ASP:N | 2.03 | 0.74 |
| 10:AK:18:PHE:HE1 | 20:AZ:9:LEU:HG | 1.51 | 0.74 |
| 13:AO:31:LEU:H | 13:AO:31:LEU:HD12 | 1.51 | 0.74 |
| 13:BO:5178:ARG:HG3 | 13:BO:5178:ARG:HH11 | 1.53 | 0.74 |
| 13:AO:178:ARG:HH11 | 13:AO:178:ARG:HG3 | 1.53 | 0.74 |
| 2:AB:474:LEU:HD13 | 30:AB:622:SQD:H81 | 1.69 | 0.74 |
| 1:BA:5272:HIS:CD2 | 4:BD:5218:VAL:HG21 | 2.23 | 0.74 |
| 3:BC:5453:ALA:O | 8:BI:5034:ARG:HB2 | 1.87 | 0.74 |
| 2:AB:222:PRO:HG3 | 7:AH:27:THR:H | 1.53 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 24:AB:608:CLA:H52 | 24:AB:609:CLA:H8 | 1.70 | 0.73 |
| 3:BC:5209:ILE:HG23 | 27:BC:5516:BCR:H382 | 1.70 | 0.73 |
| 13:BO:5031:LEU:HD12 | 13:BO:5031:LEU:N | 2.03 | 0.73 |
| 1:AA:64:ARG:O | 13:AO:178:ARG:NH2 | 2.21 | 0.73 |
| 2:AB:16:PRO:CG | 2:AB:133:LEU:HD11 | 2.17 | 0.73 |
| 13:AO:171:GLU:HG2 | 13:AO:172:PHE:N | 2.02 | 0.73 |
| 2:BB:5483:ASP:CB | 2:BB:5484:PRO:HD2 | 2.16 | 0.73 |
| 2:AB:371:THR:HG22 | 2:AB:377:VAL:HA | 1.70 | 0.73 |
| 5:AE:34:GLY:HA2 | 6:AF:32:PHE:CE1 | 2.22 | 0.73 |
| 2:AB:224:ARG:HG3 | 7:AH:25:TRP:HD1 | 1.51 | 0.73 |
| 4:AD:189:HIS:HA | 4:AD:294:ARG:HD2 | 1.69 | 0.73 |
| 24:BB:5608:CLA:H11 | 24:BB:5616:CLA:H152 | 1.71 | 0.73 |
| 10:BK:5018:PHE:HE1 | 20:BZ:5009:LEU:HG | 1.53 | 0.73 |
| 3:AC:397:THR:HG21 | 16:AV:66:CYS:SG | 2.27 | 0.73 |
| 24:AC:513:CLA:HMC2 | 27:AC:515:BCR:H372 | 1.70 | 0.73 |
| 2:BB:5474:LEU:HD13 | 30:BB:5625:SQD:H81 | 1.68 | 0.73 |
| 2:BB:5324:LEU:HA | 4:BD:5293:LEU:CD2 | 2.18 | 0.73 |
| 2:AB:248:ALA:HA | 24:AB:603:CLA:C4 | 2.19 | 0.73 |
| 3:AC:55:ALA:HB1 | 27:AC:514:BCR:H373 | 1.69 | 0.73 |
| 3:AC:248:GLY:O | 3:AC:252:ILE:HG12 | 1.89 | 0.73 |
| 24:BB:5612:CLA:H52 | 24:BB:5613:CLA:H8 | 1.71 | 0.73 |
| 1:AA:18:CYS:O | 1:AA:22:THR:HG22 | 1.89 | 0.73 |
| 1:AA:300:PHE:HE2 | 28:AC:519:DGD:O1A | 1.71 | 0.73 |
| 4:AD:103:ARG:NH1 | 5:AE:77:GLU:HG3 | 2.04 | 0.73 |
| 1:BA:5127:MET:HE3 | 3:BC:5442:LEU:HD21 | 1.71 | 0.73 |
| 5:BE:5018:ARG:O | 5:BE:5022:ILE:HG13 | 1.89 | 0.73 |
| 8:AI:16:VAL:O | 8:AI:20:VAL:HG23 | 1.87 | 0.72 |
| 14:AT:21:ILE:HD12 | 27:AT:101:BCR:H332 | 1.71 | 0.72 |
| 1:AA:259:ILE:HD13 | 1:AA:259:ILE:N | 2.03 | 0.72 |
| 3:BC:5055:ALA:HB1 | 27:BC:5514:BCR:H373 | 1.68 | 0.72 |
| 24:BC:5509:CLA:HBD | 24:BC:5509:CLA:H121 | 1.71 | 0.72 |
| 1:AA:278:TRP:HB3 | 1:AA:279:PRO:HD3 | 1.70 | 0.72 |
| 3:BC:5029:GLU:HB3 | 10:BK:5046:ARG:NH1 | 2.04 | 0.72 |
| 3:AC:429:SER:O | 3:AC:432:VAL:HG12 | 1.89 | 0.72 |
| 1:AA:260:PHE:CE1 | 1:AA:263:ALA:HB2 | 2.25 | 0.72 |
| 1:AA:315:ASN:HD21 | 4:AD:332:GLN:HE22 | 1.37 | 0.72 |
| 2:BB:5086:ILE:HD12 | 2:BB:5086:ILE:O | 1.89 | 0.72 |
| 2:BB:5371:THR:HG22 | 2:BB:5377:VAL:HA | 1.71 | 0.72 |
| 2:BB:5214:LEU:O | 2:BB:5218:LEU:HG | 1.89 | 0.72 |
| 3:BC:5117:VAL:CG1 | 31:BC:5521:LMG:H192 | 2.20 | 0.72 |
| 4:BD:5018:LEU:HD22 | 18:BX:5038:ILE:HD13 | 1.71 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 35:BD:5406:PL9:H23 | 35:BD:5406:PL9:H303 | 1.71 | 0.72 |
| 13:AO:120:THR:HG22 | 13:AO:154:SER:OG | 1.90 | 0.72 |
| 7:BH:5021:VAL:HG23 | 7:BH:5022:ALA:O | 1.88 | 0.72 |
| 8:BI:5016:VAL:O | 8:BI:5020:VAL:HG23 | 1.90 | 0.72 |
| 2:AB:86:ILE:O | 2:AB:86:ILE:HD12 | 1.90 | 0.72 |
| 1:BA:5013:LEU:HA | 1:BA:5016:ARG:HD3 | 1.69 | 0.72 |
| 1:BA:5334:ARG:HD3 | 4:BD:5320:LEU:CD1 | 2.20 | 0.72 |
| 2:BB:5324:LEU:HA | 4:BD:5293:LEU:HD23 | 1.72 | 0.72 |
| 3:BC:5254:THR:HG22 | 3:BC:5255:THR:N | 2.04 | 0.72 |
| 13:BO:5120:THR:HG22 | 13:BO:5154:SER:OG | 1.90 | 0.72 |
| 1:AA:83:VAL:HG22 | 4:AD:314:PHE:HE2 | 1.53 | 0.72 |
| 24:AC:504:CLA:H151 | 28:AC:519:DGD:HA91 | 1.69 | 0.72 |
| 3:BC:5318:LEU:HG | 3:BC:5328:VAL:HG11 | 1.69 | 0.71 |
| 4:AD:91:LEU:HD22 | 7:AH:52:THR:HG21 | 1.70 | 0.71 |
| 3:BC:5418:ASN:CB | 28:BC:5519:DGD:HE2 | 2.19 | 0.71 |
| 20:BZ:5002:THR:HG23 | 20:BZ:5003:ILE:N | 2.06 | 0.71 |
| 2:AB:137:LYS:O | 2:AB:141:ILE:HG13 | 1.90 | 0.71 |
| 35:AD:405:PL9:H303 | 35:AD:405:PL9:H23 | 1.70 | 0.71 |
| 2:BB:5425:ILE:HG22 | 2:BB:5426:PHE:CD2 | 2.25 | 0.71 |
| 4:BD:5053:THR:HG22 | 4:BD:5067:TYR:CE2 | 2.25 | 0.71 |
| 1:AA:57:PRO:HG3 | 1:AA:68:SER:HB3 | 1.72 | 0.71 |
| 1:AA:133:LEU:HD23 | 4:AD:252:PHE:CD1 | 2.26 | 0.71 |
| 13:AO:83:LYS:HG2 | 13:AO:84:ASN:H | 1.55 | 0.71 |
| 3:BC:5397:THR:HG21 | 16:BV:5066:CYS:SG | 2.30 | 0.71 |
| 1:AA:234:ASN:HD21 | 4:AD:266:TRP:HB2 | 1.56 | 0.71 |
| 3:AC:254:THR:HG22 | 3:AC:255:THR:N | 2.04 | 0.71 |
| 1:AA:255:PHE:CE1 | 1:AA:259:ILE:HD11 | 2.25 | 0.71 |
| 3:AC:344:SER:O | 13:AO:101:THR:HG22 | 1.90 | 0.71 |
| 4:AD:134:ARG:HA | 4:AD:134:ARG:HE | 1.56 | 0.71 |
| 12:AM:20:VAL:HG21 | 12:BM:5020:VAL:HG21 | 1.72 | 0.71 |
| 20:BZ:5019:MET:O | 20:BZ:5023:VAL:HG23 | 1.90 | 0.71 |
| 2:AB:425:ILE:HG22 | 2:AB:426:PHE:CD2 | 2.26 | 0.71 |
| 4:AD:274:VAL:HB | 4:AD:275:PRO:HD3 | 1.73 | 0.71 |
| 6:AF:28:VAL:HB | 6:AF:29:PRO:HD3 | 1.73 | 0.71 |
| 15:AU:94:ILE:O | 15:AU:97:LEU:HG | 1.91 | 0.71 |
| 24:AC:509:CLA:HBD | 24:AC:509:CLA:H121 | 1.71 | 0.71 |
| 7:AH:58:VAL:HG13 | 7:AH:58:VAL:O | 1.91 | 0.71 |
| 20:AZ:52:LEU:O | 20:AZ:56:VAL:HG23 | 1.91 | 0.71 |
| 11:BL:5013:ASN:HD21 | 11:BL:5015:THR:HG22 | 1.56 | 0.71 |
| 20:AZ:2:THR:HG23 | 20:AZ:3:ILE:N | 2.06 | 0.71 |
| 3:BC:5344:SER:O | 13:BO:5101:THR:HG22 | 1.91 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:235:GLU:HG2 | 2:AB:235:GLU:O | 1.91 | 0.70 |
| 3:AC:310:SER:OG | 3:AC:355:THR:HG23 | 1.91 | 0.70 |
| 5:AE:18:ARG:O | 5:AE:22:ILE:HG13 | 1.90 | 0.70 |
| 2:BB:5004:PRO:HD2 | 2:BB:5007:ARG:HB2 | 1.71 | 0.70 |
| 5:BE:5034:GLY:HA2 | 6:BF:5032:PHE:CE1 | 2.26 | 0.70 |
| 24:AA:404:CLA:H13 | 24:AA:405:CLA:H91 | 1.73 | 0.70 |
| 2:BB:5235:GLU:HG2 | 2:BB:5235:GLU:O | 1.91 | 0.70 |
| 3:BC:5337:LEU:HD12 | 13:BO:5131:PRO:HG3 | 1.73 | 0.70 |
| 3:AC:305:THR:HG23 | 3:AC:308:GLU:H | 1.55 | 0.70 |
| 2:BB:5130:GLU:HB2 | 2:BB:5131:PRO:HD2 | 1.73 | 0.70 |
| 10:BK:5028:ILE:HA | 10:BK:5031:LEU:CD1 | 2.18 | 0.70 |
| 2:AB:461:LEU:HD11 | 31:AB:621:LMG:H412 | 1.71 | 0.70 |
| 2:BB:5121:GLU:HG2 | 7:BH:5004:ARG:HD2 | 1.73 | 0.70 |
| 1:AA:39:PRO:HB2 | 24:AA:407:CLA:HBB1 | 1.74 | 0.70 |
| 2:AB:98:LEU:HD13 | 31:BA:5402:LMG:H201 | 1.73 | 0.70 |
| 2:AB:116:VAL:HG21 | 27:AB:619:BCR:H271 | 1.73 | 0.70 |
| 24:AB:610:CLA:H111 | 24:AB:615:CLA:HAA1 | 1.74 | 0.70 |
| 24:BB:5618:CLA:OBD | 11:BL:5010:VAL:HG21 | 1.90 | 0.70 |
| 1:AA:49:VAL:O | 1:AA:53:ILE:HG13 | 1.92 | 0.70 |
| 2:BB:5116:VAL:HG21 | 27:BB:5623:BCR:H271 | 1.71 | 0.70 |
| 3:BC:5429:SER:O | 3:BC:5432:VAL:HG12 | 1.90 | 0.70 |
| 2:AB:183:PRO:HG3 | 2:AB:199:VAL:CG1 | 2.21 | 0.70 |
| 3:AC:305:THR:CG2 | 3:AC:308:GLU:H | 2.04 | 0.70 |
| 16:BV:5066:CYS:SG | 36:BV:5201:HEM:CAC | 2.79 | 0.70 |
| 1:AA:288:LEU:HD13 | 3:AC:432:VAL:HG23 | 1.74 | 0.70 |
| 15:AU:58:ASN:OD1 | 15:AU:84:PRO:HA | 1.92 | 0.70 |
| 1:BA:5260:PHE:CE1 | 1:BA:5263:ALA:HB2 | 2.27 | 0.70 |
| 2:BB:5068:ARG:HH12 | 24:BB:5608:CLA:HED1 | 1.56 | 0.70 |
| 4:BD:5189:HIS:HA | 4:BD:5294:ARG:HD2 | 1.74 | 0.70 |
| 2:BB:5191:ASN:HB2 | 7:BH:5058:VAL:CG2 | 2.20 | 0.70 |
| 24:BC:5511:CLA:H202 | 20:BZ:5020:VAL:HA | 1.74 | 0.70 |
| 2:BB:5137:LYS:O | 2:BB:5141:ILE:HG13 | 1.92 | 0.69 |
| 24:BC:5503:CLA:HMD2 | 24:BC:5503:CLA:H191 | 1.72 | 0.69 |
| 4:BD:5088:SER:HB2 | 5:BE:5069:ARG:CZ | 2.22 | 0.69 |
| 16:BV:5135:GLU:O | 16:BV:5139:VAL:HG23 | 1.91 | 0.69 |
| 1:BA:5032:TRP:HA | 1:BA:5032:TRP:CE3 | 2.27 | 0.69 |
| 2:BB:5297:THR:HG22 | 2:BB:5300:GLU:OE1 | 1.92 | 0.69 |
| 7:BH:5058:VAL:O | 7:BH:5058:VAL:HG13 | 1.92 | 0.69 |
| 20:BZ:5052:LEU:O | 20:BZ:5056:VAL:HG23 | 1.93 | 0.69 |
| 3:AC:224:ILE:O | 3:AC:227:VAL:HG23 | 1.93 | 0.69 |
| 11:AL:13:ASN:HD21 | 11:AL:15:THR:HG22 | 1.56 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 12:AM:33:GLN:CB | 12:BM:5033:GLN:HB3 | 2.21 | 0.69 |
| 15:BU:5094:ILE:O | 15:BU:5097:LEU:HG | 1.92 | 0.69 |
| 1:AA:143:ILE:HD11 | 4:AD:217:THR:HA | 1.75 | 0.69 |
| 1:AA:334:ARG:HD3 | 4:AD:320:LEU:CD1 | 2.23 | 0.69 |
| 2:AB:298:LEU:HD23 | 2:AB:402:TYR:CZ | 2.28 | 0.69 |
| 4:BD:5018:LEU:HD22 | 18:BX:5038:ILE:CD1 | 2.22 | 0.69 |
| 5:AE:17:VAL:O | 5:AE:21:VAL:HG23 | 1.93 | 0.69 |
| 1:BA:5261:GLN:NE2 | 2:BB:5489:GLU:HG3 | 2.07 | 0.69 |
| 2:BB:5120:LEU:HD13 | 24:BB:5620:CLA:HMD2 | 1.75 | 0.69 |
| 24:BB:5614:CLA:H111 | 24:BB:5619:CLA:HAA1 | 1.75 | 0.69 |
| 3:BC:5154:LYS:HE2 | 3:BC:5261:ARG:HD2 | 1.74 | 0.69 |
| 4:AD:54:PHE:HB3 | 5:AE:47:PHE:CD2 | 2.27 | 0.69 |
| 6:AF:27:ALA:HB1 | 36:AF:101:HEM:HBC2 | 1.74 | 0.69 |
| 7:AH:55:LEU:O | 7:AH:58:VAL:HG12 | 1.92 | 0.69 |
| 3:BC:5158:THR:O | 3:BC:5251:HIS:HB3 | 1.92 | 0.69 |
| 4:BD:5274:VAL:HB | 4:BD:5275:PRO:HD3 | 1.74 | 0.69 |
| 4:AD:122:LEU:HB3 | 4:AD:150:ILE:CD1 | 2.22 | 0.69 |
| 13:AO:92:VAL:CG1 | 13:AO:93:PRO:HD2 | 2.23 | 0.69 |
| 20:AZ:49:ALA:O | 20:AZ:53:VAL:HG23 | 1.93 | 0.69 |
| 1:BA:5271:LEU:HD12 | 25:BA:5409:MST:H162 | 1.73 | 0.69 |
| 3:BC:5113:VAL:HG11 | 31:BC:5521:LMG:H132 | 1.74 | 0.69 |
| 4:BD:5103:ARG:HH12 | 5:BE:5077:GLU:HG3 | 1.58 | 0.69 |
| 1:AA:177:SER:HA | 1:AA:180:PHE:CD2 | 2.28 | 0.69 |
| 1:AA:278:TRP:CD2 | 28:AC:519:DGD:HAG2 | 2.25 | 0.69 |
| 3:AC:318:LEU:HG | 3:AC:328:VAL:HG11 | 1.75 | 0.69 |
| 1:BA:5300:PHE:HE2 | 28:BC:5519:DGD:O1A | 1.75 | 0.69 |
| 24:BC:5502:CLA:HBB2 | 24:BC:5510:CLA:H152 | 1.74 | 0.69 |
| 4:BD:5054:PHE:HB3 | 5:BE:5047:PHE:CD2 | 2.28 | 0.69 |
| 30:BB:5625:SQD:H172 | 32:BB:5627:LMT:H101 | 1.74 | 0.69 |
| 13:BO:5230:VAL:HG12 | 13:BO:5231:ASP:N | 2.08 | 0.69 |
| 1:AA:234:ASN:ND2 | 4:AD:266:TRP:HB2 | 2.08 | 0.68 |
| 2:AB:462:PHE:HA | 24:AB:611:CLA:HMC1 | 1.74 | 0.68 |
| 20:AZ:32:ASP:CG | 20:AZ:33:TRP:H | 1.96 | 0.68 |
| 3:BC:5415:ASN:O | 3:BC:5416:SER:HB3 | 1.93 | 0.68 |
| 6:BF:5027:ALA:HB1 | 36:BF:5101:HEM:HBC2 | 1.73 | 0.68 |
| 3:AC:347:GLY:HA3 | 13:AO:43:ASN:HB2 | 1.74 | 0.68 |
| 1:BA:5018:CYS:O | 1:BA:5022:THR:HG22 | 1.93 | 0.68 |
| 2:BB:5248:ALA:HA | 24:BB:5607:CLA:C4 | 2.22 | 0.68 |
| 4:AD:192:THR:HG23 | 24:AD:401:CLA:HBC2 | 1.74 | 0.68 |
| 3:BC:5472:LEU:HG | 4:BD:5251:ARG:NH1 | 2.08 | 0.68 |
| 27:AC:515:BCR:H312 | 20:AZ:55:GLY:HA2 | 1.74 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 4:AD:18:LEU:HD22 | 18:AX:38:ILE:HD13 | 1.75 | 0.68 |
| 1:BA:5038:ILE:HG23 | 30:BA:5401:SQD:H131 | 1.76 | 0.68 |
| 1:BA:5234:ASN:HD21 | 4:BD:5266:TRP:HB2 | 1.57 | 0.68 |
| 1:BA:5278:TRP:CZ3 | 28:BC:5519:DGD:HAG2 | 2.27 | 0.68 |
| 4:BD:5250:ASN:HD22 | 4:BD:5262:SER:HB3 | 1.57 | 0.68 |
| 2:AB:250:PHE:CD2 | 2:AB:459:ALA:HB1 | 2.29 | 0.68 |
| 3:AC:215:LYS:HB3 | 3:AC:223:TRP:HA | 1.76 | 0.68 |
| 3:AC:240:ILE:O | 3:AC:244:CYS:HB2 | 1.93 | 0.68 |
| 5:AE:23:HIS:HA | 5:AE:26:THR:OG1 | 1.93 | 0.68 |
| 8:AI:11:VAL:HG22 | 32:AI:102:LMT:H101 | 1.76 | 0.68 |
| 1:BA:5234:ASN:ND2 | 4:BD:5266:TRP:HB2 | 2.09 | 0.68 |
| 1:BA:5288:LEU:HD13 | 3:BC:5432:VAL:HG23 | 1.76 | 0.68 |
| 24:BC:5513:CLA:HMC2 | 27:BC:5515:BCR:H372 | 1.76 | 0.68 |
| 4:BD:5129:GLN:NE2 | 4:BD:5143:ALA:HA | 2.08 | 0.68 |
| 4:BD:5192:THR:HG23 | 24:BD:5402:CLA:HBC2 | 1.75 | 0.68 |
| 2:AB:4:PRO:HD2 | 2:AB:7:ARG:HB2 | 1.76 | 0.68 |
| 3:AC:209:ILE:HG23 | 27:AC:516:BCR:H382 | 1.76 | 0.68 |
| 3:AC:385:GLN:H | 3:AC:388:GLN:HE21 | 1.41 | 0.68 |
| 4:AD:53:THR:HG22 | 4:AD:67:TYR:CE2 | 2.29 | 0.68 |
| 18:AX:12:ILE:O | 18:AX:12:ILE:HG13 | 1.94 | 0.68 |
| 3:AC:158:THR:O | 3:AC:251:HIS:HB3 | 1.93 | 0.68 |
| 2:BB:5005:TRP:O | 2:BB:5008:VAL:HG13 | 1.93 | 0.68 |
| 30:AB:622:SQD:H172 | 32:AB:624:LMT:H101 | 1.75 | 0.68 |
| 2:BB:5357:ARG:HG3 | 2:BB:5357:ARG:NH1 | 2.06 | 0.68 |
| 6:AF:17:THR:HG23 | 6:AF:20:TRP:H | 1.59 | 0.68 |
| 15:AU:58:ASN:ND2 | 15:AU:114:VAL:HG13 | 2.08 | 0.68 |
| 16:AV:66:CYS:SG | 36:AV:201:HEM:CAC | 2.81 | 0.68 |
| 1:BA:5039:PRO:HB2 | 24:BA:5408:CLA:HBB1 | 1.74 | 0.68 |
| 3:BC:5062:PHE:HE2 | 10:BK:5028:ILE:HB | 1.58 | 0.68 |
| 2:AB:188:ASP:OD1 | 7:AH:58:VAL:HA | 1.94 | 0.67 |
| 3:AC:62:PHE:HE2 | 10:AK:28:ILE:HB | 1.59 | 0.67 |
| 3:AC:262:ARG:HH21 | 32:AI:103:LMT:H5' | 1.59 | 0.67 |
| 12:AM:33:GLN:HB3 | 12:BM:5033:GLN:CB | 2.23 | 0.67 |
| 3:BC:5150:ASP:HB3 | 3:BC:5153:ASP:HB2 | 1.75 | 0.67 |
| 2:AB:121:GLU:HG2 | 7:AH:4:ARG:HD2 | 1.74 | 0.67 |
| 2:BB:5065:PHE:O | 24:BB:5609:CLA:HBA1 | 1.94 | 0.67 |
| 10:BK:5040:GLN:HA | 10:BK:5043:VAL:HG12 | 1.74 | 0.67 |
| 3:AC:473:ASP:HB2 | 14:AT:26:PRO:HB3 | 1.76 | 0.67 |
| 4:AD:103:ARG:HH12 | 5:AE:77:GLU:HG3 | 1.60 | 0.67 |
| 1:BA:5239:PHE:O | 14:BT:5029:ILE:HA | 1.95 | 0.67 |
| 2:BB:5010:THR:O | 2:BB:5013:ILE:HG13 | 1.94 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 3:BC:5305:THR:CG2 | 3:BC:5308:GLU:H | 2.08 | 0.67 |
| 12:BM:5025:LEU:O | 12:BM:5028:GLN:HG3 | 1.95 | 0.67 |
| 2:AB:297:THR:HG22 | 2:AB:300:GLU:OE1 | 1.94 | 0.67 |
| 27:AC:515:BCR:C31 | 20:AZ:55:GLY:HA2 | 2.24 | 0.67 |
| 13:AO:114:ASN:HD21 | 13:AO:120:THR:HG23 | 1.59 | 0.67 |
| 2:BB:5068:ARG:HH12 | 24:BB:5608:CLA:CED | 2.07 | 0.67 |
| 13:BO:5092:VAL:CG1 | 13:BO:5093:PRO:HD2 | 2.24 | 0.67 |
| 1:AA:272:HIS:CD2 | 4:AD:218:VAL:HG21 | 2.30 | 0.67 |
| 2:AB:324:LEU:HA | 4:AD:293:LEU:HD23 | 1.76 | 0.67 |
| 3:AC:52:ALA:HA | 24:AC:511:CLA:CMB | 2.23 | 0.67 |
| 2:BB:5250:PHE:CD2 | 2:BB:5459:ALA:HB1 | 2.30 | 0.67 |
| 1:AA:214:MET:HA | 1:AA:214:MET:HE3 | 1.74 | 0.67 |
| 2:AB:103:LEU:HD21 | 24:AB:605:CLA:HMC3 | 1.76 | 0.67 |
| 2:AB:130:GLU:HB2 | 2:AB:131:PRO:HD2 | 1.76 | 0.67 |
| 2:AB:324:LEU:HA | 4:AD:293:LEU:CD2 | 2.24 | 0.67 |
| 24:AC:502:CLA:HBB2 | 24:AC:510:CLA:H152 | 1.76 | 0.67 |
| 7:AH:9:ASP:O | 7:AH:12:ARG:HB2 | 1.95 | 0.67 |
| 2:BB:5379:ALA:HA | 2:BB:5390:TYR:HB3 | 1.76 | 0.67 |
| 14:BT:5029:ILE:H | 14:BT:5029:ILE:HD12 | 1.58 | 0.67 |
| 2:AB:8:VAL:HB | 24:AB:614:CLA:O1D | 1.95 | 0.67 |
| 1:BA:5136:ARG:NH2 | 8:BI:5027:ASP:OD1 | 2.27 | 0.67 |
| 1:BA:5190:HIS:HB3 | 1:BA:5293:MET:HE2 | 1.76 | 0.67 |
| 2:BB:5233:ASN:O | 2:BB:5236:THR:HG22 | 1.95 | 0.67 |
| 31:AA:414:LMG:HO2 | 5:AE:10:PHE:HD2 | 1.43 | 0.67 |
| 2:AB:234:ILE:HD12 | 2:AB:237:VAL:HG21 | 1.77 | 0.67 |
| 4:AD:56:THR:HG21 | 5:AE:50:PRO:HD3 | 1.77 | 0.67 |
| 3:BC:5215:LYS:HB3 | 3:BC:5223:TRP:HA | 1.75 | 0.67 |
| 3:BC:5240:ILE:O | 3:BC:5244:CYS:HB2 | 1.95 | 0.67 |
| 3:BC:5347:GLY:HA3 | 13:BO:5043:ASN:HB2 | 1.75 | 0.67 |
| 4:BD:5134:ARG:HA | 4:BD:5134:ARG:HE | 1.60 | 0.67 |
| 3:AC:150:ASP:HB3 | 3:AC:153:ASP:HB2 | 1.77 | 0.67 |
| 3:BC:5089:ILE:N | 3:BC:5090:PRO:HD2 | 2.10 | 0.67 |
| 13:BO:5128:ASP:OD2 | 13:BO:5149:LYS:HG2 | 1.93 | 0.67 |
| 1:AA:93:PHE:CD2 | 1:AA:95:PRO:HD3 | 2.30 | 0.67 |
| 3:BC:5199:ILE:H | 3:BC:5199:ILE:HD12 | 1.60 | 0.67 |
| 3:BC:5308:GLU:HB2 | 3:BC:5361:PHE:CE1 | 2.29 | 0.67 |
| 4:BD:5171:PRO:HG3 | 4:BD:5181:PHE:CZ | 2.29 | 0.67 |
| 16:BV:5063:CYS:SG | 36:BV:5201:HEM:CAB | 2.81 | 0.67 |
| 1:AA:33:PHE:CE1 | 24:AC:505:CLA:H92 | 2.29 | 0.66 |
| 2:AB:62:VAL:HG13 | 24:AB:605:CLA:HED3 | 1.77 | 0.66 |
| 3:AC:199:ILE:H | 3:AC:199:ILE:HD12 | 1.60 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5297:LEU:HD11 | 3:BC:5404:LEU:HD12 | 1.77 | 0.66 |
| 13:BO:5169:LYS:HG2 | 13:BO:5224:SER:HB3 | 1.77 | 0.66 |
| 3:AC:134:ILE:HD11 | 24:AC:511:CLA:H93 | 1.77 | 0.66 |
| 15:AU:66:ILE:O | 15:AU:66:ILE:HG22 | 1.95 | 0.66 |
| 2:BB:5222:PRO:HG3 | 7:BH:5027:THR:H | 1.58 | 0.66 |
| 2:BB:5224:ARG:HG3 | 7:BH:5025:TRP:CD1 | 2.30 | 0.66 |
| 3:BC:5040:ALA:O | 3:BC:5043:ILE:HG13 | 1.95 | 0.66 |
| 1:AA:161:TYR:HB3 | 1:AA:162:PRO:HD3 | 1.77 | 0.66 |
| 24:AB:613:CLA:H2 | 24:AB:613:CLA:HED3 | 1.76 | 0.66 |
| 10:AK:40:GLN:HA | 10:AK:43:VAL:HG12 | 1.76 | 0.66 |
| 24:BB:5612:CLA:H18 | 24:BB:5613:CLA:H192 | 1.77 | 0.66 |
| 3:BC:5062:PHE:CE2 | 10:BK:5029:PRO:HD3 | 2.29 | 0.66 |
| 3:BC:5248:GLY:O | 3:BC:5252:ILE:HG12 | 1.94 | 0.66 |
| 3:BC:5254:THR:CG2 | 3:BC:5255:THR:H | 2.06 | 0.66 |
| 16:BV:5133:LEU:H | 16:BV:5133:LEU:HD12 | 1.59 | 0.66 |
| 2:AB:173:GLY:HA3 | 2:AB:265:ILE:HD11 | 1.76 | 0.66 |
| 2:AB:233:ASN:O | 2:AB:236:THR:HG22 | 1.95 | 0.66 |
| 24:AB:608:CLA:H18 | 24:AB:609:CLA:H192 | 1.77 | 0.66 |
| 4:AD:250:ASN:HD22 | 4:AD:262:SER:HB3 | 1.60 | 0.66 |
| 10:AK:17:ILE:H | 10:AK:17:ILE:HD12 | 1.59 | 0.66 |
| 10:AK:28:ILE:HA | 10:AK:31:LEU:CD1 | 2.17 | 0.66 |
| 18:AX:36:VAL:O | 18:AX:40:ILE:HG22 | 1.96 | 0.66 |
| 4:BD:5261:PHE:HA | 31:BD:5410:LMG:O2 | 1.96 | 0.66 |
| 5:BE:5027:ILE:HB | 5:BE:5028:PRO:HD3 | 1.78 | 0.66 |
| 1:AA:81:ALA:HB2 | 1:AA:175:GLY:HA3 | 1.77 | 0.66 |
| 2:AB:5:TRP:O | 2:AB:8:VAL:HG13 | 1.95 | 0.66 |
| 2:AB:222:PRO:HG3 | 7:AH:26:GLY:HA3 | 1.76 | 0.66 |
| 2:AB:357:ARG:HG3 | 2:AB:357:ARG:NH1 | 2.06 | 0.66 |
| 20:AZ:32:ASP:HA | 20:AZ:34:ASP:OD2 | 1.95 | 0.66 |
| 1:BA:5033:PHE:CE1 | 24:BC:5505:CLA:H92 | 2.27 | 0.66 |
| 2:AB:120:LEU:HD13 | 24:AB:616:CLA:HMD2 | 1.78 | 0.66 |
| 3:AC:62:PHE:CE2 | 10:AK:29:PRO:HD3 | 2.29 | 0.66 |
| 3:AC:337:LEU:HD12 | 13:AO:131:PRO:HG3 | 1.77 | 0.66 |
| 13:AO:31:LEU:HD12 | 13:AO:31:LEU:N | 2.11 | 0.66 |
| 13:AO:39:THR:OG1 | 13:AO:41:LEU:HB2 | 1.96 | 0.66 |
| 1:BA:5330:VAL:HG11 | 4:BD:5348:ARG:HG2 | 1.77 | 0.66 |
| 24:BC:5504:CLA:H172 | 28:BC:5519:DGD:HAE1 | 1.76 | 0.66 |
| 10:BK:5019:ASP:N | 10:BK:5020:PRO:HD2 | 2.10 | 0.66 |
| 4:AD:129:GLN:HE22 | 4:AD:143:ALA:HA | 1.61 | 0.66 |
| 2:BB:5208:VAL:HG21 | 24:BB:5606:CLA:HMC1 | 1.78 | 0.66 |
| 30:BB:5601:SQD:H242 | 30:BB:5601:SQD:H81 | 1.78 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:BC:5453:ALA:HA | 8:BI:5034:ARG:O | 1.95 | 0.66 |
| 15:BU:5057:LEU:HD11 | 15:BU:5112:PHE:HB3 | 1.76 | 0.66 |
| 1:AA:102:LEU:HB2 | 31:AA:417:LMG:C35 | 2.06 | 0.66 |
| 1:BA:5221:SER:HB2 | 4:BD:5139:ARG:O | 1.96 | 0.66 |
| 3:BC:5224:ILE:O | 3:BC:5227:VAL:HG23 | 1.94 | 0.66 |
| 3:BC:5305:THR:HG23 | 3:BC:5308:GLU:H | 1.59 | 0.66 |
| 3:AC:44:ASN:C | 3:AC:45:LEU:HD12 | 2.17 | 0.66 |
| 13:AO:87:GLN:O | 13:AO:88:GLU:CG | 2.41 | 0.66 |
| 2:BB:5008:VAL:HB | 24:BB:5618:CLA:O1D | 1.95 | 0.66 |
| 1:AA:39:PRO:HB2 | 24:AA:407:CLA:CBB | 2.25 | 0.66 |
| 30:AB:627:SQD:H81 | 30:AB:627:SQD:H242 | 1.76 | 0.66 |
| 3:AC:254:THR:CG2 | 3:AC:255:THR:H | 2.07 | 0.66 |
| 16:AV:133:LEU:H | 16:AV:133:LEU:HD12 | 1.61 | 0.66 |
| 1:BA:5081:ALA:HB2 | 1:BA:5175:GLY:HA3 | 1.77 | 0.66 |
| 1:BA:5176:ILE:HG22 | 1:BA:5180:PHE:CE2 | 2.30 | 0.66 |
| 24:BB:5617:CLA:H2 | 24:BB:5617:CLA:HED3 | 1.77 | 0.66 |
| 4:BD:5103:ARG:HG3 | 5:BE:5073:LYS:CG | 2.26 | 0.66 |
| 13:BO:5114:ASN:HD21 | 13:BO:5120:THR:HG23 | 1.60 | 0.66 |
| 2:AB:191:ASN:HB2 | 7:AH:58:VAL:CG2 | 2.25 | 0.65 |
| 3:AC:405:ASN:HB2 | 28:AC:519:DGD:HG32 | 1.77 | 0.65 |
| 1:BA:5180:PHE:CD1 | 4:BD:5192:THR:HB | 2.31 | 0.65 |
| 1:BA:5278:TRP:CD2 | 28:BC:5519:DGD:HAG2 | 2.29 | 0.65 |
| 4:BD:5122:LEU:HB3 | 4:BD:5150:ILE:CD1 | 2.26 | 0.65 |
| 15:BU:5068:TYR:HB2 | 15:BU:5071:LEU:HD12 | 1.77 | 0.65 |
| 1:AA:238:LYS:HD2 | 14:AT:32:LYS:HB3 | 1.79 | 0.65 |
| 2:AB:65:PHE:O | 24:AB:605:CLA:HBA1 | 1.96 | 0.65 |
| 2:AB:489:GLU:HB2 | 5:AE:3:GLY:N | 2.11 | 0.65 |
| 24:AB:614:CLA:OBD | 11:AL:10:VAL:HG21 | 1.95 | 0.65 |
| 31:AI:101:LMG:O8 | 31:AI:101:LMG:O9 | 2.14 | 0.65 |
| 3:BC:5262:ARG:HH21 | 32:BC:5522:LMT:H5' | 1.61 | 0.65 |
| 3:BC:5282:MET:HG2 | 24:BC:5501:CLA:H71 | 1.78 | 0.65 |
| 15:BU:5066:ILE:HG22 | 15:BU:5066:ILE:O | 1.95 | 0.65 |
| 4:AD:261:PHE:HA | 31:AD:408:LMG:O2 | 1.96 | 0.65 |
| 11:AL:16:SER:HA | 11:AL:19:LEU:HG | 1.75 | 0.65 |
| 11:BL:5026:VAL:HG21 | 31:BL:5101:LMG:H202 | 1.78 | 0.65 |
| 1:AA:228:THR:HG22 | 1:AA:229:GLU:H | 1.60 | 0.65 |
| 2:AB:468:TRP:HD1 | 2:AB:469:HIS:ND1 | 1.94 | 0.65 |
| 6:AF:11:VAL:HG12 | 6:AF:12:SER:N | 2.10 | 0.65 |
| 8:AI:19:PHE:CE1 | 8:AI:23:PHE:HE2 | 2.14 | 0.65 |
| 20:AZ:2:THR:HG23 | 20:AZ:3:ILE:H | 1.60 | 0.65 |
| 1:BA:5039:PRO:HB2 | 24:BA:5408:CLA:CBB | 2.27 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:BB:5183:PRO:HG3 | 2:BB:5199:VAL:CG1 | 2.27 | 0.65 |
| 4:BD:5103:ARG:CG | 5:BE:5073:LYS:HG3 | 2.26 | 0.65 |
| 5:BE:5017:VAL:O | 5:BE:5021:VAL:HG23 | 1.95 | 0.65 |
| 13:BO:5087:GLN:O | 13:BO:5088:GLU:CG | 2.41 | 0.65 |
| 2:AB:134:ASP:OD2 | 2:AB:137:LYS:HB2 | 1.97 | 0.65 |
| 2:AB:183:PRO:HG3 | 2:AB:199:VAL:HG11 | 1.78 | 0.65 |
| 1:BA:5057:PRO:HG3 | 1:BA:5068:SER:HB3 | 1.77 | 0.65 |
| 1:BA:5093:PHE:CD2 | 1:BA:5095:PRO:HD3 | 2.31 | 0.65 |
| 3:BC:5134:ILE:HD11 | 24:BC:5511:CLA:H93 | 1.79 | 0.65 |
| 3:BC:5416:SER:C | 28:BC:5519:DGD:O3E | 2.35 | 0.65 |
| 1:AA:278:TRP:CE3 | 28:AC:519:DGD:HAG1 | 2.30 | 0.65 |
| 3:AC:416:SER:N | 28:AC:519:DGD:O3E | 2.30 | 0.65 |
| 16:AV:71:ILE:HD12 | 16:AV:72:THR:N | 2.11 | 0.65 |
| 3:BC:5405:ASN:HB2 | 28:BC:5519:DGD:HG32 | 1.77 | 0.65 |
| 5:BE:5010:PHE:HD2 | 31:BE:5101:LMG:HO2 | 1.45 | 0.65 |
| 5:BE:5023:HIS:HA | 5:BE:5026:THR:OG1 | 1.96 | 0.65 |
| 31:BI:5101:LMG:O9 | 31:BI:5101:LMG:O8 | 2.15 | 0.65 |
| 1:AA:271:LEU:HD12 | 25:AA:408:MST:H162 | 1.78 | 0.65 |
| 2:AB:68:ARG:HH12 | 24:AB:604:CLA:CED | 2.09 | 0.65 |
| 2:AB:187:PRO:HB3 | 24:AB:601:CLA:HMB2 | 1.78 | 0.65 |
| 2:AB:213:GLY:O | 2:AB:217:ILE:HG13 | 1.97 | 0.65 |
| 3:AC:89:ILE:N | 3:AC:90:PRO:HD2 | 2.12 | 0.65 |
| 3:AC:110:PRO:O | 3:AC:114:VAL:HG23 | 1.97 | 0.65 |
| 1:BA:5097:TRP:HA | 8:BI:5001:MET:SD | 2.36 | 0.65 |
| 2:BB:5062:VAL:HG13 | 24:BB:5609:CLA:HED3 | 1.78 | 0.65 |
| 3:BC:5062:PHE:CE2 | 10:BK:5028:ILE:HB | 2.32 | 0.65 |
| 31:BD:5410:LMG:O6 | 11:BL:5015:THR:HG21 | 1.97 | 0.65 |
| 1:AA:32:TRP:HA | 1:AA:32:TRP:CE3 | 2.32 | 0.65 |
| 2:AB:10:THR:O | 2:AB:13:ILE:HG13 | 1.95 | 0.65 |
| 3:BC:5320:ARG:O | 3:BC:5324:LEU:HD23 | 1.96 | 0.65 |
| 16:BV:5071:ILE:HD12 | 16:BV:5072:THR:N | 2.12 | 0.65 |
| 3:AC:179:ALA:HB1 | 3:AC:199:ILE:HD13 | 1.79 | 0.65 |
| 3:AC:282:MET:HG2 | 24:AC:501:CLA:H71 | 1.79 | 0.65 |
| 5:AE:51:ARG:HG3 | 5:AE:51:ARG:HH11 | 1.62 | 0.65 |
| 2:BB:5009:HIS:HB2 | 24:BB:5615:CLA:HBA2 | 1.79 | 0.65 |
| 2:BB:5222:PRO:HG3 | 7:BH:5026:GLY:HA3 | 1.78 | 0.65 |
| 2:BB:5234:ILE:HD12 | 2:BB:5237:VAL:HG21 | 1.78 | 0.65 |
| 3:BC:5223:TRP:CD2 | 3:BC:5224:ILE:HG13 | 2.32 | 0.65 |
| 4:BD:5153:PHE:HB2 | 24:BD:5402:CLA:H41 | 1.79 | 0.65 |
| 2:AB:224:ARG:HG2 | 7:AH:24:GLY:O | 1.97 | 0.65 |
| 4:AD:153:PHE:HB2 | 24:AD:401:CLA:H41 | 1.79 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 5:AE:78:THR:HA | 5:AE:81:GLU:HG2 | 1.78 | 0.65 |
| 1:AA:257:ARG:HH11 | 1:AA:257:ARG:HG3 | 1.62 | 0.64 |
| 3:AC:308:GLU:HB2 | 3:AC:361:PHE:CE1 | 2.32 | 0.64 |
| 3:AC:362:ARG:HE | 3:AC:370:ARG:HH11 | 1.45 | 0.64 |
| 2:BB:5150:CYS:HB2 | 24:BB:5607:CLA:HMC3 | 1.78 | 0.64 |
| 2:BB:5393:GLU:HG2 | 15:BU:5044:ASP:O | 1.97 | 0.64 |
| 15:BU:5058:ASN:ND2 | 15:BU:5114:VAL:HG13 | 2.11 | 0.64 |
| 1:AA:288:LEU:HD22 | 3:AC:432:VAL:HG23 | 1.80 | 0.64 |
| 1:AA:300:PHE:CE2 | 28:AC:519:DGD:O1A | 2.50 | 0.64 |
| 5:AE:27:ILE:HB | 5:AE:28:PRO:HD3 | 1.79 | 0.64 |
| 3:BC:5416:SER:C | 28:BC:5519:DGD:HO3E | 2.01 | 0.64 |
| 3:AC:320:ARG:O | 3:AC:324:LEU:HD23 | 1.97 | 0.64 |
| 3:BC:5437:PHE:HA | 24:BC:5508:CLA:CMC | 2.27 | 0.64 |
| 20:BZ:5002:THR:HG23 | 20:BZ:5003:ILE:H | 1.60 | 0.64 |
| 16:AV:135:GLU:O | 16:AV:139:VAL:HG23 | 1.97 | 0.64 |
| 3:BC:5052:ALA:HA | 24:BC:5511:CLA:CMB | 2.24 | 0.64 |
| 1:BA:5048:PHE:HB2 | 1:BA:5115:ILE:HD13 | 1.79 | 0.64 |
| 3:BC:5149:TYR:HA | 3:BC:5156:LYS:HD3 | 1.77 | 0.64 |
| 2:AB:384:ARG:HD3 | 15:AU:132:LEU:CD1 | 2.28 | 0.64 |
| 24:AC:503:CLA:H171 | 24:AC:510:CLA:HBB2 | 1.79 | 0.64 |
| 10:AK:24:VAL:O | 10:AK:27:VAL:HG12 | 1.98 | 0.64 |
| 13:AO:234:THR:OG1 | 13:AO:236:GLU:HG2 | 1.98 | 0.64 |
| 2:BB:5213:GLY:O | 2:BB:5217:ILE:HG13 | 1.96 | 0.64 |
| 10:BK:5017:ILE:H | 10:BK:5017:ILE:HD12 | 1.62 | 0.64 |
| 3:AC:413:GLU:HG3 | 3:AC:414:ILE:H | 1.62 | 0.64 |
| 31:AD:408:LMG:O6 | 11:AL:15:THR:HG21 | 1.98 | 0.64 |
| 1:BA:5228:THR:HG22 | 1:BA:5229:GLU:H | 1.61 | 0.64 |
| 3:BC:5179:ALA:HB1 | 3:BC:5199:ILE:HD13 | 1.77 | 0.64 |
| 1:AA:136:ARG:NH2 | 8:AI:27:ASP:OD1 | 2.31 | 0.64 |
| 1:AA:228:THR:HG22 | 1:AA:229:GLU:N | 2.12 | 0.64 |
| 1:BA:5010:SER:HB3 | 1:BA:5016:ARG:NH1 | 2.13 | 0.64 |
| 2:BB:5246:PHE:CD1 | 2:BB:5246:PHE:C | 2.71 | 0.64 |
| 2:AB:9:HIS:HB2 | 24:AB:611:CLA:HBA2 | 1.79 | 0.64 |
| 2:AB:278:SER:HB3 | 2:AB:281:GLN:HE21 | 1.63 | 0.64 |
| 3:BC:5030:SER:HB3 | 10:BK:5046:ARG:O | 1.98 | 0.64 |
| 3:BC:5418:ASN:CA | 28:BC:5519:DGD:HE2 | 2.27 | 0.64 |
| 1:AA:281:VAL:CG1 | 28:AC:519:DGD:HAG3 | 2.27 | 0.64 |
| 2:AB:68:ARG:HH22 | 24:AB:604:CLA:HED1 | 1.62 | 0.64 |
| 2:AB:214:LEU:O | 2:AB:218:LEU:HG | 1.97 | 0.64 |
| 2:AB:247:PHE:HB2 | 24:AB:608:CLA:HBC1 | 1.80 | 0.64 |
| 3:AC:42:LEU:HD23 | 24:AC:511:CLA:HED3 | 1.79 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 7:AH:38:PHE:HB2 | 27:AX:101:BCR:H10C | 1.78 | 0.64 |
| 20:AZ:35:ARG:O | 20:AZ:38:GLN:HB3 | 1.98 | 0.64 |
| 1:BA:5077:ILE:HD11 | 14:BT:5006:TYR:HB3 | 1.79 | 0.64 |
| 2:BB:5103:LEU:HD21 | 24:BB:5609:CLA:HMC3 | 1.80 | 0.64 |
| 31:BB:5624:LMG:H411 | 4:BD:5284:ILE:HG12 | 1.80 | 0.63 |
| 4:BD:5261:PHE:CD2 | 4:BD:5267:LEU:HD12 | 2.33 | 0.63 |
| 13:BO:5039:THR:OG1 | 13:BO:5041:LEU:HB2 | 1.98 | 0.63 |
| 2:AB:208:VAL:HG21 | 24:AB:602:CLA:HMC1 | 1.79 | 0.63 |
| 31:AB:620:LMG:H202 | 11:AL:26:VAL:HG21 | 1.79 | 0.63 |
| 3:AC:154:LYS:HE2 | 3:AC:261:ARG:HD2 | 1.81 | 0.63 |
| 3:AC:437:PHE:HA | 24:AC:508:CLA:CMC | 2.28 | 0.63 |
| 28:AH:101:DGD:O1B | 28:AH:101:DGD:C1G | 2.46 | 0.63 |
| 3:BC:5449:ARG:HG2 | 24:BC:5505:CLA:HED1 | 1.80 | 0.63 |
| 8:BI:5014:PHE:CZ | 8:BI:5018:LEU:HD11 | 2.33 | 0.63 |
| 2:BB:5187:PRO:HB3 | 24:BB:5605:CLA:HMB2 | 1.79 | 0.63 |
| 2:BB:5191:ASN:HB2 | 7:BH:5058:VAL:HG23 | 1.79 | 0.63 |
| 28:BC:5518:DGD:HG11 | 31:BC:5520:LMG:H301 | 1.81 | 0.63 |
| 24:BC:5501:CLA:HMB3 | 27:BC:5516:BCR:C40 | 2.26 | 0.63 |
| 4:BD:5236:ASN:ND2 | 4:BD:5239:GLN:O | 2.29 | 0.63 |
| 8:BI:5011:VAL:HG22 | 32:BI:5102:LMT:H101 | 1.80 | 0.63 |
| 13:BO:5144:LEU:CD1 | 13:BO:5259:VAL:HG11 | 2.29 | 0.63 |
| 13:BO:5218:LEU:HD22 | 15:BU:5119:THR:HG21 | 1.80 | 0.63 |
| 1:AA:176:ILE:HG22 | 1:AA:180:PHE:CE2 | 2.34 | 0.63 |
| 3:AC:304:PRO:HB3 | 3:AC:395:TYR:CD1 | 2.33 | 0.63 |
| 4:AD:103:ARG:CG | 5:AE:73:LYS:HG3 | 2.28 | 0.63 |
| 8:AI:8:VAL:O | 8:AI:12:VAL:HG23 | 1.97 | 0.63 |
| 16:AV:95:ILE:O | 16:AV:99:VAL:HG23 | 1.99 | 0.63 |
| 4:BD:5041:ALA:HB1 | 34:BD:5404:PHO:H42 | 1.81 | 0.63 |
| 2:AB:68:ARG:HH12 | 24:AB:604:CLA:HED1 | 1.64 | 0.63 |
| 3:AC:117:VAL:CG1 | 31:AC:521:LMG:H192 | 2.28 | 0.63 |
| 3:AC:288:CYS:SG | 28:AC:517:DGD:HA21 | 2.39 | 0.63 |
| 28:AC:518:DGD:HG11 | 31:AC:520:LMG:H301 | 1.81 | 0.63 |
| 3:BC:5385:GLN:H | 3:BC:5388:GLN:HE21 | 1.46 | 0.63 |
| 4:BD:5080:THR:HG23 | 4:BD:5172:SER:OG | 1.99 | 0.63 |
| 28:BH:5101:DGD:C1G | 28:BH:5101:DGD:O1B | 2.45 | 0.63 |
| 15:BU:5058:ASN:OD1 | 15:BU:5084:PRO:HA | 1.98 | 0.63 |
| 1:AA:274:PHE:CE2 | 25:AA:408:MST:H133 | 2.33 | 0.63 |
| 2:AB:124:ARG:HG3 | 2:AB:124:ARG:HH11 | 1.63 | 0.63 |
| 2:AB:191:ASN:HB2 | 7:AH:58:VAL:HG23 | 1.80 | 0.63 |
| 3:AC:461:ARG:CG | 3:AC:461:ARG:NH1 | 2.60 | 0.63 |
| 5:AE:26:THR:O | 5:AE:29:ALA:HB3 | 1.98 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 20:AZ:14:ILE:O | 20:AZ:18:VAL:HG23 | 1.99 | 0.63 |
| 3:BC:5437:PHE:CZ | 24:BC:5502:CLA:HMC1 | 2.34 | 0.63 |
| 5:BE:5076:VAL:O | 5:BE:5080:LEU:HD22 | 1.98 | 0.63 |
| 1:AA:221:SER:HB2 | 4:AD:139:ARG:O | 1.99 | 0.63 |
| 1:BA:5343:LEU:O | 1:BA:5344:ALA:HB2 | 1.99 | 0.63 |
| 11:BL:5016:SER:HA | 11:BL:5019:LEU:HG | 1.80 | 0.63 |
| 13:BO:5206:GLU:H | 13:BO:5206:GLU:CD | 2.01 | 0.63 |
| 1:BA:5304:HIS:CE1 | 3:BC:5414:ILE:HD12 | 2.33 | 0.63 |
| 6:BF:5028:VAL:HB | 6:BF:5029:PRO:HD3 | 1.81 | 0.63 |
| 13:BO:5234:THR:OG1 | 13:BO:5236:GLU:HG2 | 1.99 | 0.63 |
| 11:BL:5008:GLN:N | 11:BL:5008:GLN:HE21 | 1.97 | 0.62 |
| 1:BA:5177:SER:HA | 1:BA:5180:PHE:CD2 | 2.32 | 0.62 |
| 2:BB:5118:TRP:CH2 | 11:BL:5005:PRO:HD2 | 2.34 | 0.62 |
| 13:BO:5069:LEU:HD12 | 13:BO:5070:CYS:H | 1.63 | 0.62 |
| 16:BV:5095:ILE:O | 16:BV:5099:VAL:HG23 | 1.98 | 0.62 |
| 13:AO:144:LEU:CD1 | 13:AO:259:VAL:HG11 | 2.29 | 0.62 |
| 4:BD:5053:THR:HG22 | 4:BD:5067:TYR:CD2 | 2.34 | 0.62 |
| 7:BH:5038:PHE:HB2 | 27:BX:5101:BCR:H10C | 1.81 | 0.62 |
| 2:AB:150:CYS:HB2 | 24:AB:603:CLA:HMC3 | 1.82 | 0.62 |
| 2:BB:5224:ARG:HG2 | 7:BH:5024:GLY:O | 1.99 | 0.62 |
| 3:BC:5413:GLU:HG3 | 3:BC:5414:ILE:H | 1.64 | 0.62 |
| 8:BI:5019:PHE:CE1 | 8:BI:5023:PHE:HE2 | 2.17 | 0.62 |
| 1:AA:45:THR:HG23 | 1:AA:46:ILE:N | 2.14 | 0.62 |
| 1:AA:265:PHE:CD1 | 1:AA:271:LEU:HA | 2.34 | 0.62 |
| 2:AB:379:ALA:HA | 2:AB:390:TYR:HB3 | 1.80 | 0.62 |
| 4:AD:207:GLY:HA3 | 4:AD:275:PRO:HG3 | 1.80 | 0.62 |
| 35:AD:405:PL9:H303 | 35:AD:405:PL9:C23 | 2.30 | 0.62 |
| 1:BA:5228:THR:HG22 | 1:BA:5229:GLU:N | 2.15 | 0.62 |
| 2:BB:5008:VAL:HG23 | 2:BB:5009:HIS:CD2 | 2.34 | 0.62 |
| 4:BD:5241:GLU:H | 4:BD:5241:GLU:CD | 2.01 | 0.62 |
| 11:BL:5018:TYR:CE2 | 14:BT:5020:ALA:HA | 2.35 | 0.62 |
| 16:BV:5047:LEU:HD11 | 16:BV:5143:GLY:HA3 | 1.81 | 0.62 |
| 4:AD:80:THR:HB | 4:AD:81:PRO:HD2 | 1.80 | 0.62 |
| 4:AD:103:ARG:HG3 | 5:AE:73:LYS:CG | 2.28 | 0.62 |
| 4:AD:185:PHE:CE2 | 4:AD:289:LEU:HD12 | 2.34 | 0.62 |
| 5:BE:5008:ARG:HH22 | 5:BE:5016:SER:HB3 | 1.64 | 0.62 |
| 3:AC:432:VAL:CG1 | 3:AC:433:LEU:N | 2.63 | 0.62 |
| 4:AD:261:PHE:CD2 | 4:AD:267:LEU:HD12 | 2.35 | 0.62 |
| 5:AE:34:GLY:CA | 6:AF:32:PHE:CE1 | 2.83 | 0.62 |
| 1:BA:5193:LEU:HD13 | 4:BD:5179:PHE:HB3 | 1.81 | 0.62 |
| 2:BB:5298:LEU:HD23 | 2:BB:5402:TYR:CZ | 2.35 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 16:BV:5092:ARG:HH11 | 16:BV:5092:ARG:HG3 | 1.65 | 0.62 |
| 1:AA:48:PHE:HB2 | 1:AA:115:ILE:HD13 | 1.81 | 0.62 |
| 2:AB:133:LEU:HB3 | 2:AB:138:MET:CE | 2.30 | 0.62 |
| 11:AL:13:ASN:ND2 | 11:AL:15:THR:HG22 | 2.15 | 0.62 |
| 3:BC:5039:ASN:HB3 | 24:BC:5509:CLA:CBB | 2.30 | 0.62 |
| 3:BC:5062:PHE:HD2 | 10:BK:5029:PRO:HG3 | 1.65 | 0.62 |
| 2:AB:179:GLN:HE21 | 2:AB:180:PRO:HD2 | 1.64 | 0.62 |
| 4:AD:14:TRP:CD1 | 4:AD:15:PHE:N | 2.68 | 0.62 |
| 15:AU:58:ASN:HD22 | 15:AU:114:VAL:HG13 | 1.64 | 0.62 |
| 1:BA:5296:ASN:HB2 | 3:BC:5400:PRO:O | 2.00 | 0.62 |
| 1:BA:5306:VAL:HG13 | 1:BA:5314:ILE:O | 2.00 | 0.62 |
| 2:BB:5284:ILE:HG23 | 2:BB:5305:ILE:HD12 | 1.82 | 0.62 |
| 18:BX:5036:VAL:O | 18:BX:5040:ILE:HG22 | 1.99 | 0.62 |
| 1:AA:200:LEU:HD13 | 28:AC:519:DGD:HAW2 | 1.76 | 0.62 |
| 2:AB:8:VAL:HG23 | 2:AB:9:HIS:CD2 | 2.34 | 0.62 |
| 2:AB:206:GLY:O | 2:AB:210:ILE:HG13 | 2.00 | 0.62 |
| 2:AB:329:PRO:HD3 | 24:AB:607:CLA:HED1 | 1.82 | 0.62 |
| 3:AC:40:ALA:O | 3:AC:43:ILE:HG13 | 2.00 | 0.62 |
| 3:AC:62:PHE:HD2 | 10:AK:29:PRO:HG3 | 1.65 | 0.62 |
| 3:AC:416:SER:C | 28:AC:519:DGD:O3E | 2.38 | 0.62 |
| 1:BA:5161:TYR:HB3 | 1:BA:5162:PRO:HD3 | 1.82 | 0.62 |
| 3:BC:5288:CYS:SG | 28:BC:5517:DGD:HA21 | 2.39 | 0.62 |
| 4:BD:5080:THR:HB | 4:BD:5081:PRO:HD2 | 1.81 | 0.62 |
| 6:BF:5017:THR:HG23 | 6:BF:5020:TRP:H | 1.65 | 0.62 |
| 2:AB:224:ARG:HG3 | 7:AH:25:TRP:CD1 | 2.34 | 0.61 |
| 24:AB:608:CLA:H143 | 24:AD:404:CLA:HMB2 | 1.82 | 0.61 |
| 5:AE:26:THR:HB | 36:AF:101:HEM:HAB | 1.81 | 0.61 |
| 13:AO:123:GLU:HG2 | 13:AO:124:GLU:N | 2.15 | 0.61 |
| 3:BC:5041:ARG:NH1 | 24:BC:5511:CLA:OBD | 2.33 | 0.61 |
| 3:BC:5047:GLY:O | 3:BC:5050:LEU:HB3 | 2.00 | 0.61 |
| 13:AO:69:LEU:HD12 | 13:AO:70:CYS:H | 1.65 | 0.61 |
| 16:AV:99:VAL:O | 16:AV:103:LYS:HG3 | 2.00 | 0.61 |
| 1:BA:5012:ASN:HD22 | 1:BA:5015:GLU:HB2 | 1.66 | 0.61 |
| 2:BB:5284:ILE:HG23 | 2:BB:5305:ILE:CD1 | 2.30 | 0.61 |
| 4:BD:5239:GLN:O | 4:BD:5240:ALA:HB3 | 2.00 | 0.61 |
| 2:AB:453:PHE:HB2 | 4:AD:291:LEU:HD23 | 1.82 | 0.61 |
| 31:AB:621:LMG:H411 | 4:AD:284:ILE:HG12 | 1.82 | 0.61 |
| 2:BB:5027:THR:CG2 | 2:BB:5107:LEU:HD13 | 2.21 | 0.61 |
| 2:BB:5068:ARG:HH22 | 24:BB:5608:CLA:CED | 2.12 | 0.61 |
| 2:BB:5134:ASP:OD2 | 2:BB:5137:LYS:HB2 | 2.00 | 0.61 |
| 11:BL:5007:ARG:HD2 | 11:BL:5007:ARG:O | 2.00 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:142:HIS:HA | 2:AB:145:LEU:HD12 | 1.83 | 0.61 |
| 3:AC:62:PHE:CE2 | 10:AK:28:ILE:HB | 2.34 | 0.61 |
| 1:BA:5064:ARG:HD3 | 1:BA:5064:ARG:N | 2.14 | 0.61 |
| 5:BE:5051:ARG:HH11 | 5:BE:5051:ARG:HG3 | 1.65 | 0.61 |
| 13:BO:5151:LEU:HD12 | 13:BO:5152:VAL:H | 1.65 | 0.61 |
| 2:BB:5247:PHE:HB2 | 24:BB:5612:CLA:HBC1 | 1.81 | 0.61 |
| 29:AA:412:LHG:HC11 | 3:AC:447:ARG:NH2 | 2.16 | 0.61 |
| 24:AB:611:CLA:H201 | 24:AB:613:CLA:H92 | 1.82 | 0.61 |
| 1:BA:5200:LEU:HD13 | 28:BC:5519:DGD:HAW2 | 1.78 | 0.61 |
| 28:BA:5412:DGD:HO2D | 3:BC:5216:SER:HB2 | 1.64 | 0.61 |
| 2:BB:5468:TRP:HD1 | 2:BB:5469:HIS:ND1 | 1.98 | 0.61 |
| 3:BC:5033:PHE:CE1 | 4:BD:5229:ALA:CB | 2.84 | 0.61 |
| 3:BC:5114:VAL:HG22 | 31:BC:5521:LMG:H141 | 1.81 | 0.61 |
| 3:BC:5324:LEU:HD22 | 3:BC:5324:LEU:N | 2.15 | 0.61 |
| 4:BD:5207:GLY:HA3 | 4:BD:5275:PRO:HG3 | 1.83 | 0.61 |
| 1:AA:10:SER:HB3 | 1:AA:16:ARG:NH1 | 2.14 | 0.61 |
| 2:AB:179:GLN:NE2 | 2:AB:180:PRO:HD2 | 2.15 | 0.61 |
| 3:AC:324:LEU:HD22 | 3:AC:324:LEU:N | 2.16 | 0.61 |
| 1:BA:5131:TRP:CE3 | 1:BA:5132:GLU:N | 2.69 | 0.61 |
| 24:BB:5612:CLA:H143 | 24:BD:5405:CLA:HMB2 | 1.83 | 0.61 |
| 3:BC:5264:PHE:HE1 | 27:BC:5516:BCR:H321 | 1.66 | 0.61 |
| 1:AA:133:LEU:O | 1:AA:137:LEU:HG | 2.00 | 0.61 |
| 3:AC:472:LEU:HG | 4:AD:251:ARG:NH1 | 2.16 | 0.61 |
| 27:AC:514:BCR:H391 | 10:AK:36:ALA:HB2 | 1.81 | 0.61 |
| 2:BB:5383:PHE:CZ | 13:BO:5193:GLY:HA2 | 2.35 | 0.61 |
| 24:BC:5511:CLA:H151 | 20:BZ:5024:PRO:HG3 | 1.83 | 0.61 |
| 3:AC:223:TRP:CD2 | 3:AC:224:ILE:HG13 | 2.36 | 0.61 |
| 4:AD:18:LEU:HD22 | 18:AX:38:ILE:CD1 | 2.29 | 0.61 |
| 9:AJ:11:TRP:CE2 | 9:AJ:12:ILE:HG13 | 2.36 | 0.61 |
| 2:BB:5278:SER:HB3 | 2:BB:5281:GLN:HE21 | 1.65 | 0.61 |
| 7:BH:5009:ASP:O | 7:BH:5012:ARG:HB2 | 2.01 | 0.61 |
| 1:AA:343:LEU:O | 1:AA:344:ALA:HB2 | 2.01 | 0.61 |
| 2:AB:246:PHE:C | 2:AB:246:PHE:CD1 | 2.72 | 0.61 |
| 3:AC:30:SER:HB3 | 10:AK:46:ARG:O | 2.00 | 0.61 |
| 13:AO:151:LEU:HD12 | 13:AO:152:VAL:H | 1.64 | 0.61 |
| 13:AO:169:LYS:HG2 | 13:AO:224:SER:HB3 | 1.82 | 0.61 |
| 2:BB:5173:GLY:CA | 2:BB:5265:ILE:HD11 | 2.31 | 0.61 |
| 1:AA:262:TYR:CZ | 31:AA:414:LMG:HC5 | 2.36 | 0.60 |
| 2:BB:5183:PRO:HG3 | 2:BB:5199:VAL:HG11 | 1.83 | 0.60 |
| 6:BF:5017:THR:O | 6:BF:5021:VAL:HG23 | 2.00 | 0.60 |
| 8:BI:5008:VAL:O | 8:BI:5012:VAL:HG23 | 2.01 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:222:PRO:HD2 | 2:AB:225:LEU:HD12 | 1.83 | 0.60 |
| 3:AC:113:VAL:HG11 | 31:AC:521:LMG:H132 | 1.83 | 0.60 |
| 2:BB:5133:LEU:HB3 | 2:BB:5138:MET:CE | 2.30 | 0.60 |
| 1:AA:262:TYR:OH | 31:AA:414:LMG:HC5 | 2.00 | 0.60 |
| 2:AB:153:PHE:N | 24:AB:606:CLA:HMC3 | 2.16 | 0.60 |
| 16:AV:92:ARG:HH11 | 16:AV:92:ARG:HG3 | 1.66 | 0.60 |
| 1:BA:5300:PHE:CE2 | 28:BC:5519:DGD:O1A | 2.54 | 0.60 |
| 7:BH:5006:TRP:CE2 | 7:BH:5010:ILE:HD11 | 2.36 | 0.60 |
| 1:AA:131:TRP:CE3 | 1:AA:132:GLU:N | 2.70 | 0.60 |
| 2:AB:479:PHE:O | 2:AB:480:SER:HB2 | 2.01 | 0.60 |
| 4:BD:5253:TRP:HA | 4:BD:5256:ILE:HG22 | 1.84 | 0.60 |
| 35:BD:5406:PL9:H303 | 35:BD:5406:PL9:C23 | 2.31 | 0.60 |
| 16:BV:5038:LEU:HD12 | 16:BV:5095:ILE:HB | 1.83 | 0.60 |
| 1:AA:306:VAL:HG13 | 1:AA:314:ILE:O | 2.02 | 0.60 |
| 1:AA:324:ALA:HB2 | 4:AD:329:MET:SD | 2.42 | 0.60 |
| 28:AA:411:DGD:HO2D | 3:AC:216:SER:HB2 | 1.65 | 0.60 |
| 24:AB:610:CLA:O1D | 24:AB:610:CLA:H121 | 2.01 | 0.60 |
| 9:AJ:17:ALA:O | 9:AJ:21:VAL:HG23 | 2.01 | 0.60 |
| 12:AM:19:SER:O | 12:AM:23:ILE:HD13 | 2.01 | 0.60 |
| 24:BC:5504:CLA:H152 | 28:BC:5519:DGD:HA91 | 1.84 | 0.60 |
| 10:BK:5018:PHE:CE1 | 20:BZ:5009:LEU:HG | 2.36 | 0.60 |
| 15:BU:5113:THR:O | 15:BU:5114:VAL:HG23 | 2.01 | 0.60 |
| 4:AD:80:THR:HG23 | 4:AD:172:SER:OG | 2.01 | 0.60 |
| 2:BB:5068:ARG:NH2 | 24:BB:5608:CLA:HED1 | 2.17 | 0.60 |
| 1:AA:297:LEU:HD11 | 3:AC:404:LEU:HD12 | 1.84 | 0.60 |
| 29:AA:415:LHG:HC41 | 29:AA:415:LHG:O9 | 2.02 | 0.60 |
| 2:AB:284:ILE:HG23 | 2:AB:305:ILE:CD1 | 2.31 | 0.60 |
| 2:AB:284:ILE:HG23 | 2:AB:305:ILE:HD12 | 1.82 | 0.60 |
| 3:AC:437:PHE:CZ | 24:AC:502:CLA:HMC1 | 2.36 | 0.60 |
| 10:AK:18:PHE:CE1 | 20:AZ:9:LEU:HG | 2.36 | 0.60 |
| 16:AV:104:ASN:HA | 16:AV:122:ARG:HD3 | 1.83 | 0.60 |
| 2:BB:5384:ARG:HD3 | 15:BU:5132:LEU:CD1 | 2.32 | 0.60 |
| 3:BC:5044:ASN:C | 3:BC:5045:LEU:HD12 | 2.21 | 0.60 |
| 24:BC:5503:CLA:H171 | 24:BC:5510:CLA:HBB2 | 1.83 | 0.60 |
| 12:BM:5001:MET:CG | 12:BM:5002:GLU:H | 2.13 | 0.60 |
| 1:AA:188:ALA:HB2 | 1:AA:328:MET:HB2 | 1.84 | 0.60 |
| 2:AB:113:TRP:CE2 | 2:AB:117:TYR:HD1 | 2.20 | 0.60 |
| 24:AB:603:CLA:H161 | 7:AH:38:PHE:HE2 | 1.65 | 0.60 |
| 3:AC:41:ARG:NH1 | 24:AC:511:CLA:OBD | 2.34 | 0.60 |
| 3:AC:149:TYR:HA | 3:AC:156:LYS:HD3 | 1.83 | 0.60 |
| 1:BA:5289:GLY:O | 1:BA:5292:THR:CG2 | 2.49 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:BB:5124:ARG:HH11 | 2:BB:5124:ARG:HG3 | 1.67 | 0.60 |
| 24:BB:5608:CLA:HMD2 | 24:BB:5616:CLA:H193 | 1.83 | 0.60 |
| 4:BD:5145:ALA:HB2 | 4:BD:5272:LEU:HD21 | 1.83 | 0.60 |
| 13:BO:5118:SER:HB3 | 13:BO:5157:PRO:HA | 1.84 | 0.60 |
| 1:AA:326:LEU:HD21 | 3:AC:412:THR:HB | 1.84 | 0.60 |
| 30:AB:622:SQD:H442 | 4:AD:23:LYS:HE2 | 1.82 | 0.60 |
| 13:AO:64:TYR:HD1 | 13:AO:271:PRO:HA | 1.67 | 0.60 |
| 2:BB:5142:HIS:HA | 2:BB:5145:LEU:HD12 | 1.83 | 0.60 |
| 3:BC:5156:LYS:O | 3:BC:5160:ILE:HG13 | 2.02 | 0.60 |
| 7:AH:6:TRP:CE2 | 7:AH:10:ILE:HD11 | 2.37 | 0.60 |
| 29:BA:5413:LHG:HC11 | 3:BC:5447:ARG:NH2 | 2.17 | 0.60 |
| 3:BC:5143:TYR:O | 3:BC:5144:SER:HB2 | 2.02 | 0.60 |
| 3:BC:5216:SER:HB3 | 3:BC:5221:GLU:HB2 | 1.84 | 0.60 |
| 27:BC:5514:BCR:H391 | 10:BK:5036:ALA:HB2 | 1.83 | 0.60 |
| 27:BC:5516:BCR:HC41 | 8:BI:5020:VAL:HG13 | 1.82 | 0.60 |
| 3:AC:52:ALA:CA | 24:AC:511:CLA:HMB3 | 2.27 | 0.59 |
| 3:AC:167:VAL:HG11 | 24:AC:512:CLA:H3A | 1.84 | 0.59 |
| 3:AC:216:SER:HB3 | 3:AC:221:GLU:HB2 | 1.84 | 0.59 |
| 3:AC:233:VAL:HA | 27:AC:516:BCR:H281 | 1.84 | 0.59 |
| 3:BC:5042:LEU:HD23 | 24:BC:5511:CLA:HED3 | 1.82 | 0.59 |
| 3:BC:5413:GLU:HG3 | 3:BC:5414:ILE:N | 2.17 | 0.59 |
| 9:BJ:5017:ALA:O | 9:BJ:5021:VAL:HG23 | 2.01 | 0.59 |
| 24:AA:405:CLA:HBA2 | 31:AB:620:LMG:C25 | 2.32 | 0.59 |
| 2:AB:27:THR:CG2 | 2:AB:107:LEU:HD13 | 2.25 | 0.59 |
| 2:AB:280:PHE:CE2 | 2:AB:312:TYR:HB3 | 2.36 | 0.59 |
| 2:AB:349:LYS:HG3 | 2:AB:350:GLU:OE1 | 2.02 | 0.59 |
| 2:AB:359:MET:HB2 | 2:AB:425:ILE:HG23 | 1.84 | 0.59 |
| 5:AE:8:ARG:HH22 | 5:AE:16:SER:HB3 | 1.67 | 0.59 |
| 8:AI:1:MET:HE1 | 32:BB:5604:LMT:H41 | 1.84 | 0.59 |
| 16:AV:47:LEU:HD11 | 16:AV:143:GLY:HA3 | 1.83 | 0.59 |
| 1:BA:5265:PHE:CD1 | 1:BA:5271:LEU:HA | 2.36 | 0.59 |
| 1:BA:5288:LEU:HD22 | 3:BC:5432:VAL:HG23 | 1.82 | 0.59 |
| 2:BB:5265:ILE:HG13 | 2:BB:5266:GLU:N | 2.17 | 0.59 |
| 3:BC:5178:LYS:HA | 3:BC:5182:PHE:HB2 | 1.83 | 0.59 |
| 10:BK:5024:VAL:O | 10:BK:5027:VAL:HG12 | 2.02 | 0.59 |
| 4:AD:53:THR:HG22 | 4:AD:67:TYR:CD2 | 2.38 | 0.59 |
| 13:AO:230:VAL:CG1 | 13:AO:231:ASP:H | 2.13 | 0.59 |
| 2:BB:5188:ASP:OD1 | 7:BH:5058:VAL:HA | 2.03 | 0.59 |
| 13:BO:5083:LYS:HG2 | 13:BO:5084:ASN:H | 1.66 | 0.59 |
| 3:AC:324:LEU:N | 3:AC:324:LEU:CD2 | 2.66 | 0.59 |
| 6:AF:19:ARG:HH11 | 6:AF:19:ARG:HG3 | 1.67 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 13:AO:206:GLU:H | 13:AO:206:GLU:CD | 2.05 | 0.59 |
| 1:BA:5257:ARG:HG3 | 1:BA:5257:ARG:HH11 | 1.66 | 0.59 |
| 3:BC:5415:ASN:HB3 | 9:BJ:5039:SER:OG | 2.03 | 0.59 |
| 4:BD:5014:TRP:CD1 | 4:BD:5015:PHE:N | 2.70 | 0.59 |
| 10:BK:5017:ILE:HD12 | 10:BK:5017:ILE:N | 2.17 | 0.59 |
| 24:AB:604:CLA:H121 | 24:AB:615:CLA:HBA1 | 1.83 | 0.59 |
| 3:AC:362:ARG:HE | 3:AC:370:ARG:NH1 | 1.99 | 0.59 |
| 1:BA:5220:THR:HG23 | 4:BD:5141:TYR:HD1 | 1.68 | 0.59 |
| 2:BB:5487:SER:N | 2:BB:5488:PRO:HD2 | 2.17 | 0.59 |
| 3:AC:305:THR:HG22 | 3:AC:308:GLU:HB3 | 1.81 | 0.59 |
| 13:AO:218:LEU:HD22 | 15:AU:119:THR:HG21 | 1.84 | 0.59 |
| 1:BA:5083:VAL:HG22 | 4:BD:5314:PHE:CE2 | 2.36 | 0.59 |
| 35:BD:5406:PL9:C30 | 35:BD:5406:PL9:H262 | 2.32 | 0.59 |
| 11:BL:5013:ASN:ND2 | 11:BL:5015:THR:HG22 | 2.18 | 0.59 |
| 16:BV:5099:VAL:O | 16:BV:5103:LYS:HG3 | 2.02 | 0.59 |
| 1:AA:97:TRP:HA | 8:AI:1:MET:SD | 2.43 | 0.59 |
| 1:AA:296:ASN:HB2 | 3:AC:400:PRO:O | 2.02 | 0.59 |
| 3:AC:178:LYS:HA | 3:AC:182:PHE:HB2 | 1.84 | 0.59 |
| 24:AC:511:CLA:H151 | 20:AZ:24:PRO:HG3 | 1.84 | 0.59 |
| 4:AD:299:ILE:HG13 | 11:AL:37:ASN:HD21 | 1.67 | 0.59 |
| 5:AE:51:ARG:HG3 | 5:AE:51:ARG:NH1 | 2.15 | 0.59 |
| 8:AI:14:PHE:CZ | 8:AI:18:LEU:HD11 | 2.38 | 0.59 |
| 24:BB:5607:CLA:H161 | 7:BH:5038:PHE:HE2 | 1.68 | 0.59 |
| 3:BC:5037:ALA:C | 24:BC:5508:CLA:HBA1 | 2.23 | 0.59 |
| 24:BC:5504:CLA:H151 | 28:BC:5519:DGD:C9A | 2.31 | 0.59 |
| 5:BE:5026:THR:HB | 36:BF:5101:HEM:HAB | 1.85 | 0.59 |
| 6:BF:5037:ILE:HA | 6:BF:5040:MET:SD | 2.43 | 0.59 |
| 2:AB:483:ASP:HB3 | 2:AB:484:PRO:HD2 | 1.85 | 0.59 |
| 1:BA:5032:TRP:HA | 1:BA:5032:TRP:HE3 | 1.67 | 0.59 |
| 3:BC:5033:PHE:CE1 | 4:BD:5229:ALA:HB3 | 2.38 | 0.59 |
| 3:BC:5170:ILE:HG22 | 3:BC:5174:LEU:CD2 | 2.33 | 0.59 |
| 2:AB:384:ARG:HD3 | 15:AU:132:LEU:HD11 | 1.85 | 0.59 |
| 35:AD:405:PL9:C30 | 35:AD:405:PL9:H262 | 2.33 | 0.59 |
| 15:AU:68:TYR:HB2 | 15:AU:71:LEU:HD12 | 1.84 | 0.59 |
| 1:BA:5188:ALA:HB2 | 1:BA:5328:MET:HB2 | 1.85 | 0.59 |
| 3:BC:5405:ASN:HB2 | 28:BC:5519:DGD:C3G | 2.32 | 0.59 |
| 7:BH:5055:LEU:O | 7:BH:5058:VAL:HG12 | 2.02 | 0.59 |
| 10:BK:5031:LEU:O | 10:BK:5034:ALA:HB3 | 2.03 | 0.59 |
| 1:AA:64:ARG:HD3 | 1:AA:64:ARG:N | 2.17 | 0.59 |
| 24:AA:405:CLA:H92 | 34:AD:402:PHO:HMB3 | 1.85 | 0.59 |
| 2:AB:356:VAL:HG22 | 2:AB:370:LEU:HD21 | 1.85 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:AC:413:GLU:HG3 | 3:AC:414:ILE:N | 2.18 | 0.59 |
| 3:AC:418:ASN:CB | 28:AC:519:DGD:HE2 | 2.32 | 0.59 |
| 4:AD:150:ILE:O | 4:AD:154:VAL:HG23 | 2.03 | 0.59 |
| 6:AF:15:ILE:HG22 | 6:AF:16:PHE:HD1 | 1.68 | 0.59 |
| 15:AU:98:THR:HG23 | 15:AU:101:GLN:OE1 | 2.03 | 0.59 |
| 24:BB:5612:CLA:H202 | 7:BH:5043:LEU:HD11 | 1.83 | 0.59 |
| 1:AA:180:PHE:CD1 | 4:AD:192:THR:HB | 2.38 | 0.58 |
| 3:AC:33:PHE:CE1 | 4:AD:229:ALA:CB | 2.85 | 0.58 |
| 3:AC:156:LYS:O | 3:AC:160:ILE:HG13 | 2.03 | 0.58 |
| 4:AD:49:LEU:O | 4:AD:53:THR:HG23 | 2.03 | 0.58 |
| 12:AM:25:LEU:O | 12:AM:28:GLN:HG3 | 2.03 | 0.58 |
| 1:BA:5013:LEU:CA | 1:BA:5016:ARG:HD3 | 2.33 | 0.58 |
| 2:BB:5458:PHE:HB3 | 24:BB:5608:CLA:HBC2 | 1.84 | 0.58 |
| 3:BC:5324:LEU:N | 3:BC:5324:LEU:CD2 | 2.65 | 0.58 |
| 3:AC:264:PHE:HE1 | 27:AC:516:BCR:H321 | 1.67 | 0.58 |
| 24:AC:501:CLA:HMB3 | 27:AC:516:BCR:C40 | 2.31 | 0.58 |
| 20:AZ:31:GLN:O | 20:AZ:32:ASP:HB3 | 2.02 | 0.58 |
| 4:BD:5299:ILE:HG13 | 11:BL:5037:ASN:HD21 | 1.68 | 0.58 |
| 6:BF:5015:ILE:HG22 | 6:BF:5016:PHE:HD1 | 1.68 | 0.58 |
| 7:BH:5012:ARG:N | 7:BH:5013:PRO:HD2 | 2.18 | 0.58 |
| 10:BK:5026:PRO:O | 10:BK:5029:PRO:HD2 | 2.02 | 0.58 |
| 1:BA:5020:TRP:CD1 | 1:BA:5020:TRP:C | 2.75 | 0.58 |
| 28:BC:5519:DGD:HG2 | 9:BJ:5033:TYR:OH | 2.03 | 0.58 |
| 9:BJ:5011:TRP:CE3 | 10:BK:5042:ALA:HB2 | 2.39 | 0.58 |
| 1:AA:333:GLU:HB2 | 1:AA:337:HIS:HE1 | 1.68 | 0.58 |
| 2:AB:144:PHE:CE1 | 2:AB:210:ILE:HG23 | 2.39 | 0.58 |
| 2:AB:490:GLN:OE1 | 2:AB:490:GLN:O | 2.21 | 0.58 |
| 3:AC:453:ALA:O | 8:AI:34:ARG:HB2 | 2.03 | 0.58 |
| 15:AU:54:LYS:HD2 | 15:AU:113:THR:HG23 | 1.86 | 0.58 |
| 1:BA:5163:ILE:HG12 | 28:BC:5517:DGD:HB31 | 1.85 | 0.58 |
| 24:BB:5615:CLA:H201 | 24:BB:5617:CLA:H92 | 1.84 | 0.58 |
| 3:BC:5167:VAL:HG11 | 24:BC:5512:CLA:H3A | 1.83 | 0.58 |
| 35:BD:5406:PL9:H301 | 35:BD:5406:PL9:C33 | 2.34 | 0.58 |
| 5:BE:5026:THR:O | 5:BE:5029:ALA:HB3 | 2.02 | 0.58 |
| 1:AA:271:LEU:C | 1:AA:271:LEU:HD23 | 2.24 | 0.58 |
| 2:BB:5246:PHE:C | 2:BB:5246:PHE:HD1 | 2.07 | 0.58 |
| 2:BB:5359:MET:HB2 | 2:BB:5425:ILE:HG23 | 1.85 | 0.58 |
| 3:BC:5110:PRO:O | 3:BC:5114:VAL:HG23 | 2.02 | 0.58 |
| 3:BC:5116:VAL:HG23 | 3:BC:5117:VAL:N | 2.19 | 0.58 |
| 16:BV:5056:LYS:O | 16:BV:5060:GLN:HG3 | 2.03 | 0.58 |
| 4:AD:41:ALA:HB1 | 34:AD:403:PHO:H42 | 1.85 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:BB:5349:LYS:HG3 | 2:BB:5350:GLU:OE1 | 2.03 | 0.58 |
| 3:BC:5432:VAL:CG1 | 3:BC:5433:LEU:N | 2.65 | 0.58 |
| 6:BF:5011:VAL:HG12 | 6:BF:5012:SER:H | 1.69 | 0.58 |
| 14:BT:5018:PHE:HB2 | 27:BT:5101:BCR:HC8 | 1.84 | 0.58 |
| 20:BZ:5033:TRP:HD1 | 20:BZ:5033:TRP:O | 1.87 | 0.58 |
| 2:AB:230:ARG:O | 2:AB:233:ASN:HB3 | 2.04 | 0.58 |
| 3:AC:39:ASN:HB3 | 24:AC:509:CLA:CBB | 2.33 | 0.58 |
| 3:AC:257:PHE:O | 3:AC:261:ARG:HG3 | 2.03 | 0.58 |
| 3:AC:279:LEU:HD23 | 3:AC:282:MET:HE3 | 1.85 | 0.58 |
| 14:AT:18:PHE:HB2 | 27:AT:101:BCR:HC8 | 1.84 | 0.58 |
| 1:BA:5274:PHE:CE2 | 25:BA:5409:MST:H133 | 2.37 | 0.58 |
| 2:BB:5170:ASP:HB2 | 2:BB:5171:PRO:CD | 2.32 | 0.58 |
| 1:AA:332:HIS:CD2 | 1:AA:333:GLU:HG3 | 2.38 | 0.58 |
| 3:AC:39:ASN:HB2 | 24:AC:508:CLA:HBA2 | 1.84 | 0.58 |
| 4:AD:244:TYR:OH | 4:AD:264:LYS:HD2 | 2.03 | 0.58 |
| 16:AV:74:THR:O | 16:AV:75:ASN:HB2 | 2.03 | 0.58 |
| 1:BA:5272:HIS:HD2 | 4:BD:5218:VAL:HG21 | 1.68 | 0.58 |
| 2:BB:5479:PHE:O | 2:BB:5480:SER:HB2 | 2.03 | 0.58 |
| 24:BB:5608:CLA:H121 | 24:BB:5619:CLA:HBA1 | 1.85 | 0.58 |
| 3:BC:5279:LEU:HD12 | 3:BC:5437:PHE:HE1 | 1.69 | 0.58 |
| 4:BD:5086:GLY:CA | 4:BD:5166:SER:HB2 | 2.34 | 0.58 |
| 4:BD:5267:LEU:HD23 | 4:BD:5267:LEU:C | 2.24 | 0.58 |
| 6:BF:5018:VAL:HG12 | 6:BF:5019:ARG:N | 2.19 | 0.58 |
| 16:BV:5133:LEU:H | 16:BV:5133:LEU:CD1 | 2.16 | 0.58 |
| 1:AA:219:VAL:HG11 | 4:AD:268:HIS:CD2 | 2.38 | 0.58 |
| 3:AC:47:GLY:O | 3:AC:50:LEU:HB3 | 2.03 | 0.58 |
| 4:AD:171:PRO:HG3 | 4:AD:181:PHE:CZ | 2.39 | 0.58 |
| 2:BB:5179:GLN:NE2 | 2:BB:5180:PRO:HD2 | 2.18 | 0.58 |
| 24:BB:5618:CLA:H202 | 31:BL:5101:LMG:H422 | 1.86 | 0.58 |
| 3:BC:5367:GLU:HB2 | 3:BC:5368:PRO:HD3 | 1.86 | 0.58 |
| 4:BD:5244:TYR:OH | 4:BD:5264:LYS:HD2 | 2.04 | 0.58 |
| 8:BI:5027:ASP:N | 8:BI:5028:PRO:CD | 2.66 | 0.58 |
| 2:AB:383:PHE:CZ | 13:AO:193:GLY:HA2 | 2.39 | 0.58 |
| 1:BA:5190:HIS:HB3 | 1:BA:5293:MET:CE | 2.34 | 0.58 |
| 1:BA:5219:VAL:HG11 | 4:BD:5268:HIS:CD2 | 2.38 | 0.58 |
| 1:BA:5307:ILE:HG22 | 1:BA:5313:VAL:HA | 1.86 | 0.58 |
| 24:BA:5406:CLA:HBA2 | 31:BL:5101:LMG:C25 | 2.33 | 0.58 |
| 2:BB:5113:TRP:CE2 | 2:BB:5117:TYR:HD1 | 2.22 | 0.58 |
| 1:AA:330:VAL:CG1 | 4:AD:348:ARG:HG2 | 2.34 | 0.57 |
| 2:AB:135:LEU:HD23 | 2:AB:138:MET:HE1 | 1.86 | 0.57 |
| 3:AC:37:ALA:C | 24:AC:508:CLA:HBA1 | 2.25 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 18:AX:16:LEU:O | 18:AX:16:LEU:HD13 | 2.04 | 0.57 |
| 1:BA:5341:LEU:HB2 | 3:BC:5313:GLN:NE2 | 2.10 | 0.57 |
| 3:BC:5226:SER:O | 28:BC:5517:DGD:HE62 | 2.04 | 0.57 |
| 3:BC:5377:LEU:O | 3:BC:5381:LYS:HB2 | 2.04 | 0.57 |
| 6:BF:5037:ILE:HG22 | 9:BJ:5028:PHE:CE1 | 2.38 | 0.57 |
| 13:BO:5123:GLU:HG2 | 13:BO:5124:GLU:N | 2.17 | 0.57 |
| 14:BT:5022:PHE:C | 14:BT:5023:PHE:HD2 | 2.06 | 0.57 |
| 1:AA:260:PHE:CZ | 1:AA:263:ALA:HB2 | 2.39 | 0.57 |
| 24:AB:604:CLA:HMD2 | 24:AB:612:CLA:H193 | 1.86 | 0.57 |
| 1:BA:5283:VAL:HG21 | 34:BD:5403:PHO:HBC3 | 1.86 | 0.57 |
| 2:BB:5153:PHE:N | 24:BB:5610:CLA:HMC3 | 2.19 | 0.57 |
| 24:BC:5505:CLA:O1A | 8:BI:5023:PHE:CE1 | 2.57 | 0.57 |
| 3:AC:449:ARG:HG2 | 24:AC:505:CLA:HED1 | 1.86 | 0.57 |
| 6:AF:37:ILE:HA | 6:AF:40:MET:SD | 2.44 | 0.57 |
| 8:AI:13:THR:HA | 8:AI:16:VAL:HG12 | 1.86 | 0.57 |
| 24:BB:5606:CLA:H11 | 7:BH:5049:TYR:HD2 | 1.69 | 0.57 |
| 30:BB:5625:SQD:H442 | 4:BD:5023:LYS:HE2 | 1.85 | 0.57 |
| 3:BC:5297:TYR:HA | 3:BC:5302:TYR:HE2 | 1.69 | 0.57 |
| 24:AB:602:CLA:HBD | 24:AB:602:CLA:H43 | 1.86 | 0.57 |
| 3:AC:279:LEU:HA | 3:AC:282:MET:HE3 | 1.86 | 0.57 |
| 13:AO:32:THR:O | 13:AO:36:ILE:CD1 | 2.52 | 0.57 |
| 20:AZ:23:VAL:O | 20:AZ:26:ALA:HB3 | 2.05 | 0.57 |
| 1:BA:5045:THR:HG23 | 1:BA:5046:ILE:N | 2.18 | 0.57 |
| 24:BC:5512:CLA:H203 | 31:BC:5521:LMG:H381 | 1.86 | 0.57 |
| 11:BL:5008:GLN:N | 11:BL:5008:GLN:NE2 | 2.52 | 0.57 |
| 2:AB:270:PRO:HG3 | 2:AB:312:TYR:HD2 | 1.69 | 0.57 |
| 2:AB:458:PHE:HB3 | 24:AB:604:CLA:HBC2 | 1.86 | 0.57 |
| 3:AC:226:SER:O | 28:AC:517:DGD:HE62 | 2.04 | 0.57 |
| 7:AH:58:VAL:O | 7:AH:58:VAL:CG1 | 2.52 | 0.57 |
| 2:BB:5135:LEU:HD23 | 2:BB:5138:MET:HE1 | 1.86 | 0.57 |
| 2:BB:5262:THR:HG23 | 2:BB:5263:THR:HG23 | 1.86 | 0.57 |
| 32:BB:5627:LMT:H112 | 7:BH:5035:MET:HE2 | 1.87 | 0.57 |
| 1:AA:13:LEU:CA | 1:AA:16:ARG:HD3 | 2.34 | 0.57 |
| 1:AA:57:PRO:HD3 | 1:AA:73:TYR:CD2 | 2.40 | 0.57 |
| 2:AB:483:ASP:CG | 2:AB:484:PRO:HD2 | 2.24 | 0.57 |
| 1:BA:5317:TRP:CD1 | 4:BD:5177:ALA:HB2 | 2.38 | 0.57 |
| 3:BC:5220:GLY:N | 28:BC:5517:DGD:O3D | 2.35 | 0.57 |
| 3:AC:199:ILE:HD12 | 3:AC:199:ILE:N | 2.18 | 0.57 |
| 4:AD:335:PRO:HB2 | 5:AE:65:LEU:HD21 | 1.86 | 0.57 |
| 13:AO:92:VAL:HG13 | 13:AO:93:PRO:HD2 | 1.87 | 0.57 |
| 20:AZ:33:TRP:O | 20:AZ:37:LYS:HB2 | 2.05 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5315:ASN:HD21 | 4:BD:5332:GLN:NE2 | 2.02 | 0.57 |
| 2:BB:5483:ASP:HB3 | 2:BB:5484:PRO:HD2 | 1.85 | 0.57 |
| 3:BC:5039:ASN:HB2 | 24:BC:5508:CLA:HBA2 | 1.85 | 0.57 |
| 4:BD:5056:THR:HG21 | 5:BE:5050:PRO:HD3 | 1.87 | 0.57 |
| 1:BA:5289:GLY:HA2 | 1:BA:5292:THR:HG22 | 1.86 | 0.57 |
| 2:BB:5237:VAL:HG22 | 24:BB:5614:CLA:HBC2 | 1.86 | 0.57 |
| 5:BE:5015:THR:HB | 9:BJ:5006:GLY:HA2 | 1.87 | 0.57 |
| 1:AA:190:HIS:HB3 | 1:AA:293:MET:HE2 | 1.87 | 0.57 |
| 2:AB:246:PHE:C | 2:AB:246:PHE:HD1 | 2.08 | 0.57 |
| 3:AC:33:PHE:CE1 | 4:AD:229:ALA:HB3 | 2.38 | 0.57 |
| 24:AC:504:CLA:H2 | 28:AC:518:DGD:HA21 | 1.87 | 0.57 |
| 24:BB:5614:CLA:O1D | 24:BB:5614:CLA:H121 | 2.04 | 0.57 |
| 3:BC:5405:ASN:HA | 28:BC:5519:DGD:HG11 | 1.87 | 0.57 |
| 28:BC:5519:DGD:O3D | 9:BJ:5037:GLY:O | 2.20 | 0.57 |
| 13:BO:5114:ASN:ND2 | 13:BO:5120:THR:HG23 | 2.20 | 0.57 |
| 2:AB:327:THR:O | 2:AB:444:ARG:NE | 2.36 | 0.57 |
| 3:AC:143:TYR:O | 3:AC:144:SER:HB2 | 2.05 | 0.57 |
| 24:AC:504:CLA:H172 | 28:AC:519:DGD:HAE1 | 1.85 | 0.57 |
| 1:BA:5191:ASN:HB2 | 3:BC:5411:ALA:HB1 | 1.85 | 0.57 |
| 24:BB:5613:CLA:HMC2 | 27:BX:5101:BCR:H343 | 1.85 | 0.57 |
| 3:BC:5233:VAL:HA | 27:BC:5516:BCR:H281 | 1.87 | 0.57 |
| 5:BE:5017:VAL:HG22 | 9:BJ:5008:ILE:HD11 | 1.87 | 0.57 |
| 13:BO:5218:LEU:CD2 | 15:BU:5119:THR:HG21 | 2.35 | 0.57 |
| 18:BX:5045:LYS:HD3 | 18:BX:5045:LYS:N | 2.19 | 0.57 |
| 25:AA:408:MST:N3 | 25:AA:408:MST:H122 | 2.20 | 0.56 |
| 2:AB:170:ASP:HB2 | 2:AB:171:PRO:CD | 2.35 | 0.56 |
| 2:AB:280:PHE:O | 2:AB:284:ILE:HG13 | 2.05 | 0.56 |
| 32:AB:624:LMT:H92 | 7:AH:35:MET:CE | 2.35 | 0.56 |
| 3:AC:367:GLU:HB2 | 3:AC:368:PRO:HD3 | 1.87 | 0.56 |
| 4:AD:239:GLN:O | 4:AD:240:ALA:HB3 | 2.04 | 0.56 |
| 1:BA:5278:TRP:O | 1:BA:5281:VAL:HG12 | 2.05 | 0.56 |
| 24:BB:5606:CLA:HBD | 24:BB:5606:CLA:H43 | 1.86 | 0.56 |
| 32:BB:5627:LMT:H92 | 7:BH:5035:MET:CE | 2.35 | 0.56 |
| 3:BC:5057:ALA:HB1 | 24:BC:5512:CLA:HED2 | 1.85 | 0.56 |
| 3:BC:5062:PHE:HZ | 10:BK:5028:ILE:HD12 | 1.69 | 0.56 |
| 4:BD:5150:ILE:O | 4:BD:5154:VAL:HG23 | 2.06 | 0.56 |
| 5:BE:5077:GLU:HA | 5:BE:5080:LEU:HD23 | 1.87 | 0.56 |
| 13:BO:5098:THR:HG23 | 13:BO:5133:THR:HB | 1.87 | 0.56 |
| 28:AA:411:DGD:C1G | 28:AA:411:DGD:O1B | 2.53 | 0.56 |
| 13:AO:114:ASN:ND2 | 13:AO:120:THR:HG23 | 2.19 | 0.56 |
| 1:BA:5180:PHE:CE1 | 4:BD:5192:THR:HB | 2.40 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 7:BH:5058:VAL:O | 7:BH:5058:VAL:CG1 | 2.53 | 0.56 |
| 1:AA:15:GLU:O | 1:AA:19:ASN:OD1 | 2.23 | 0.56 |
| 1:AA:262:TYR:CE1 | 31:AA:414:LMG:C5 | 2.89 | 0.56 |
| 2:AB:462:PHE:CZ | 24:AB:613:CLA:HMB3 | 2.40 | 0.56 |
| 24:AB:609:CLA:HMC2 | 27:AX:101:BCR:H343 | 1.87 | 0.56 |
| 3:AC:116:VAL:HG23 | 3:AC:117:VAL:N | 2.20 | 0.56 |
| 3:AC:343:ARG:NH1 | 3:AC:347:GLY:O | 2.38 | 0.56 |
| 27:AC:516:BCR:HC41 | 8:AI:20:VAL:HG13 | 1.86 | 0.56 |
| 5:AE:56:TYR:HE1 | 5:AE:63:ILE:HD12 | 1.69 | 0.56 |
| 8:AI:27:ASP:N | 8:AI:28:PRO:CD | 2.68 | 0.56 |
| 10:AK:26:PRO:O | 10:AK:29:PRO:HD2 | 2.06 | 0.56 |
| 13:AO:80:GLU:O | 13:AO:89:ALA:HB1 | 2.06 | 0.56 |
| 2:BB:5271:THR:OG1 | 2:BB:5274:GLN:HG3 | 2.05 | 0.56 |
| 2:BB:5453:PHE:HB2 | 4:BD:5291:LEU:HD23 | 1.87 | 0.56 |
| 2:BB:5462:PHE:HA | 24:BB:5615:CLA:CMC | 2.35 | 0.56 |
| 3:BC:5199:ILE:HD12 | 3:BC:5199:ILE:N | 2.20 | 0.56 |
| 3:BC:5304:PRO:HB3 | 3:BC:5395:TYR:CD1 | 2.40 | 0.56 |
| 3:BC:5362:ARG:HE | 3:BC:5370:ARG:HH11 | 1.52 | 0.56 |
| 3:BC:5375:LEU:HB3 | 3:BC:5380:ILE:HD11 | 1.87 | 0.56 |
| 4:BD:5086:GLY:C | 4:BD:5166:SER:HB2 | 2.25 | 0.56 |
| 4:BD:5158:LEU:O | 4:BD:5162:LEU:HG | 2.06 | 0.56 |
| 4:BD:5221:THR:CG2 | 4:BD:5244:TYR:HB2 | 2.35 | 0.56 |
| 20:BZ:5014:ILE:O | 20:BZ:5018:VAL:HG23 | 2.05 | 0.56 |
| 1:AA:126:TYR:O | 1:AA:130:GLN:HG3 | 2.06 | 0.56 |
| 1:AA:278:TRP:O | 1:AA:281:VAL:HG12 | 2.04 | 0.56 |
| 5:AE:69:ARG:HG3 | 5:AE:70:PHE:N | 2.21 | 0.56 |
| 10:AK:31:LEU:O | 10:AK:34:ALA:HB3 | 2.05 | 0.56 |
| 1:BA:5326:LEU:HD21 | 3:BC:5412:THR:HB | 1.87 | 0.56 |
| 2:BB:5027:THR:HG22 | 2:BB:5107:LEU:CD1 | 2.24 | 0.56 |
| 3:BC:5297:TYR:HA | 3:BC:5302:TYR:CE2 | 2.40 | 0.56 |
| 5:BE:5014:ILE:CG2 | 9:BJ:5013:VAL:HG11 | 2.35 | 0.56 |
| 5:BE:5051:ARG:HG3 | 5:BE:5051:ARG:NH1 | 2.19 | 0.56 |
| 8:BI:5013:THR:HA | 8:BI:5016:VAL:HG12 | 1.85 | 0.56 |
| 13:BO:5154:SER:O | 13:BO:5168:PHE:HA | 2.05 | 0.56 |
| 2:AB:262:THR:HG23 | 2:AB:263:THR:HG23 | 1.88 | 0.56 |
| 2:AB:271:THR:OG1 | 2:AB:274:GLN:HG3 | 2.05 | 0.56 |
| 24:AB:611:CLA:C5 | 24:AB:614:CLA:HBC2 | 2.36 | 0.56 |
| 16:AV:133:LEU:H | 16:AV:133:LEU:CD1 | 2.18 | 0.56 |
| 3:BC:5149:TYR:HA | 3:BC:5156:LYS:CD | 2.35 | 0.56 |
| 13:BO:5173:ASN:ND2 | 13:BO:5220:LYS:HD3 | 2.20 | 0.56 |
| 1:AA:142:TRP:HB2 | 4:AD:220:ASN:OD1 | 2.05 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 2:AB:235:GLU:OE1 | 2:AB:472:ARG:NH1 | 2.39 | 0.56 |
| 3:AC:114:VAL:HG22 | 31:AC:521:LMG:H141 | 1.87 | 0.56 |
| 24:AC:505:CLA:O1A | 8:AI:23:PHE:CE1 | 2.59 | 0.56 |
| 4:AD:145:ALA:HB2 | 4:AD:272:LEU:HD21 | 1.86 | 0.56 |
| 8:AI:13:THR:O | 8:AI:16:VAL:HG12 | 2.06 | 0.56 |
| 13:AO:148:VAL:HA | 13:AO:172:PHE:CD2 | 2.40 | 0.56 |
| 1:BA:5221:SER:HB3 | 4:BD:5141:TYR:HB2 | 1.86 | 0.56 |
| 2:BB:5206:GLY:O | 2:BB:5210:ILE:HG13 | 2.05 | 0.56 |
| 2:BB:5270:PRO:HG3 | 2:BB:5312:TYR:HD2 | 1.70 | 0.56 |
| 2:BB:5280:PHE:CE2 | 2:BB:5312:TYR:HB3 | 2.40 | 0.56 |
| 3:BC:5158:THR:HG21 | 3:BC:5254:THR:O | 2.06 | 0.56 |
| 3:BC:5461:ARG:NH2 | 4:BD:5242:GLU:O | 2.38 | 0.56 |
| 13:BO:5215:ARG:NH1 | 13:BO:5252:GLY:O | 2.38 | 0.56 |
| 15:BU:5083:ALA:CB | 15:BU:5084:PRO:CD | 2.82 | 0.56 |
| 1:AA:221:SER:HB3 | 4:AD:141:TYR:HB2 | 1.88 | 0.56 |
| 2:AB:250:PHE:CE2 | 2:AB:459:ALA:HB1 | 2.41 | 0.56 |
| 3:AC:42:LEU:CD2 | 24:AC:511:CLA:HED3 | 2.36 | 0.56 |
| 3:AC:44:ASN:O | 3:AC:45:LEU:HD12 | 2.05 | 0.56 |
| 3:AC:170:ILE:HG22 | 3:AC:174:LEU:CD2 | 2.36 | 0.56 |
| 4:AD:241:GLU:H | 4:AD:241:GLU:CD | 2.08 | 0.56 |
| 4:AD:330:ALA:HB3 | 4:AD:331:PRO:HD3 | 1.88 | 0.56 |
| 5:AE:57:ALA:H | 5:AE:60:GLN:NE2 | 2.04 | 0.56 |
| 1:BA:5092:HIS:HD2 | 3:BC:5219:GLY:HA3 | 1.71 | 0.56 |
| 1:BA:5124:SER:O | 1:BA:5127:MET:HB3 | 2.06 | 0.56 |
| 1:BA:5133:LEU:O | 1:BA:5137:LEU:HG | 2.06 | 0.56 |
| 2:BB:5179:GLN:HE21 | 2:BB:5180:PRO:HD2 | 1.71 | 0.56 |
| 2:BB:5329:PRO:HD3 | 24:BB:5611:CLA:HED1 | 1.86 | 0.56 |
| 4:BD:5129:GLN:HE22 | 4:BD:5143:ALA:HA | 1.70 | 0.56 |
| 5:BE:5056:TYR:HE1 | 5:BE:5063:ILE:HD12 | 1.71 | 0.56 |
| 10:BK:5035:LEU:HA | 10:BK:5038:VAL:HG23 | 1.88 | 0.56 |
| 13:BO:5080:GLU:O | 13:BO:5089:ALA:HB1 | 2.05 | 0.56 |
| 1:AA:157:VAL:HG21 | 24:AA:405:CLA:CMC | 2.36 | 0.56 |
| 1:AA:180:PHE:CE1 | 4:AD:192:THR:HB | 2.41 | 0.56 |
| 3:AC:57:ALA:HB1 | 24:AC:512:CLA:HED2 | 1.88 | 0.56 |
| 5:AE:15:THR:HB | 9:AJ:6:GLY:HA2 | 1.87 | 0.56 |
| 15:AU:66:ILE:HG12 | 15:AU:72:TYR:CG | 2.41 | 0.56 |
| 2:BB:5369:ILE:O | 2:BB:5370:LEU:HD23 | 2.04 | 0.56 |
| 2:BB:5462:PHE:CZ | 24:BB:5617:CLA:HMB3 | 2.41 | 0.56 |
| 3:BC:5305:THR:HG22 | 3:BC:5308:GLU:HB3 | 1.83 | 0.56 |
| 5:BE:5069:ARG:HG3 | 5:BE:5070:PHE:N | 2.20 | 0.56 |
| 3:AC:374:GLY:O | 3:AC:375:LEU:C | 2.44 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5057:PRO:HD3 | 1:BA:5073:TYR:CD2 | 2.41 | 0.56 |
| 3:BC:5343:ARG:NH1 | 3:BC:5347:GLY:O | 2.39 | 0.56 |
| 4:BD:5092:LEU:HA | 4:BD:5104:TRP:CD1 | 2.41 | 0.56 |
| 1:AA:77:ILE:HD11 | 14:AT:6:TYR:HB3 | 1.87 | 0.56 |
| 24:AB:608:CLA:H203 | 24:AD:404:CLA:HBA2 | 1.89 | 0.56 |
| 32:AB:624:LMT:H112 | 7:AH:35:MET:HE2 | 1.89 | 0.56 |
| 24:BA:5406:CLA:H93 | 34:BD:5403:PHO:HHB | 1.88 | 0.56 |
| 3:BC:5374:GLY:O | 3:BC:5375:LEU:C | 2.44 | 0.56 |
| 4:BD:5346:LEU:O | 4:BD:5348:ARG:HG3 | 2.06 | 0.56 |
| 15:BU:5058:ASN:HD22 | 15:BU:5114:VAL:HG13 | 1.69 | 0.56 |
| 2:AB:133:LEU:HB3 | 2:AB:138:MET:HE2 | 1.88 | 0.55 |
| 3:AC:95:LEU:HD13 | 24:AC:502:CLA:H143 | 1.89 | 0.55 |
| 3:AC:233:VAL:HA | 27:AC:516:BCR:C28 | 2.36 | 0.55 |
| 3:AC:405:ASN:HA | 28:AC:519:DGD:HG11 | 1.88 | 0.55 |
| 24:AC:513:CLA:HAA1 | 24:AC:513:CLA:H42 | 1.88 | 0.55 |
| 35:AD:405:PL9:H301 | 35:AD:405:PL9:C33 | 2.34 | 0.55 |
| 14:AT:29:ILE:HD12 | 14:AT:29:ILE:N | 2.06 | 0.55 |
| 18:AX:12:ILE:HA | 27:AX:101:BCR:H401 | 1.88 | 0.55 |
| 1:BA:5048:PHE:HA | 1:BA:5115:ILE:HD11 | 1.88 | 0.55 |
| 3:BC:5124:VAL:HB | 27:BC:5515:BCR:H362 | 1.88 | 0.55 |
| 28:BC:5518:DGD:HB22 | 28:BC:5519:DGD:HA21 | 1.88 | 0.55 |
| 16:AV:81:ARG:HG2 | 16:AV:81:ARG:HH11 | 1.70 | 0.55 |
| 24:BA:5406:CLA:H92 | 34:BD:5403:PHO:HMB3 | 1.87 | 0.55 |
| 2:BB:5144:PHE:CE1 | 2:BB:5210:ILE:HG23 | 2.41 | 0.55 |
| 2:BB:5483:ASP:CG | 2:BB:5484:PRO:HD2 | 2.26 | 0.55 |
| 24:BB:5605:CLA:HMB1 | 27:BX:5101:BCR:H393 | 1.88 | 0.55 |
| 3:BC:5033:PHE:HE1 | 4:BD:5229:ALA:CB | 2.19 | 0.55 |
| 3:BC:5416:SER:N | 28:BC:5519:DGD:O3E | 2.37 | 0.55 |
| 5:BE:5076:VAL:O | 5:BE:5080:LEU:CD2 | 2.54 | 0.55 |
| 1:AA:304:HIS:CE1 | 3:AC:414:ILE:HD12 | 2.41 | 0.55 |
| 1:AA:330:VAL:HG12 | 4:AD:348:ARG:HA | 1.89 | 0.55 |
| 24:AB:601:CLA:HMB1 | 27:AX:101:BCR:H393 | 1.88 | 0.55 |
| 1:BA:5281:VAL:HG11 | 28:BC:5519:DGD:CIA | 2.36 | 0.55 |
| 25:BA:5409:MST:N3 | 25:BA:5409:MST:H131 | 2.20 | 0.55 |
| 8:BI:5013:THR:O | 8:BI:5016:VAL:HG12 | 2.06 | 0.55 |
| 1:AA:217:SER:HA | 1:AA:220:THR:HG22 | 1.88 | 0.55 |
| 24:AA:405:CLA:H201 | 14:AT:14:ILE:HD11 | 1.86 | 0.55 |
| 4:AD:86:GLY:C | 4:AD:166:SER:HB2 | 2.26 | 0.55 |
| 2:BB:5154:GLY:O | 2:BB:5159:THR:HG23 | 2.06 | 0.55 |
| 2:BB:5384:ARG:HD3 | 15:BU:5132:LEU:HD11 | 1.89 | 0.55 |
| 3:BC:5170:ILE:HG22 | 3:BC:5174:LEU:HD23 | 1.88 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:BC:5225:VAL:HG22 | 3:BC:5289:PHE:CD1 | 2.42 | 0.55 |
| 4:BD:5014:TRP:NE1 | 7:BH:5025:TRP:HH2 | 1.95 | 0.55 |
| 4:BD:5239:GLN:O | 4:BD:5240:ALA:CB | 2.54 | 0.55 |
| 9:BJ:5011:TRP:CG | 10:BK:5042:ALA:HA | 2.41 | 0.55 |
| 12:BM:5005:GLN:HE22 | 32:BM:5101:LMT:H3' | 1.71 | 0.55 |
| 13:BO:5092:VAL:HG13 | 13:BO:5093:PRO:HD2 | 1.87 | 0.55 |
| 15:BU:5098:THR:HG23 | 15:BU:5101:GLN:OE1 | 2.07 | 0.55 |
| 2:AB:231:MET:HG2 | 24:AB:610:CLA:HMC1 | 1.89 | 0.55 |
| 4:AD:253:TRP:HA | 4:AD:256:ILE:HG22 | 1.89 | 0.55 |
| 3:BC:5155:ASN:O | 3:BC:5158:THR:HG22 | 2.07 | 0.55 |
| 4:BD:5266:TRP:CD1 | 31:BD:5410:LMG:HC1 | 2.42 | 0.55 |
| 15:BU:5066:ILE:HG12 | 15:BU:5072:TYR:CG | 2.42 | 0.55 |
| 20:BZ:5033:TRP:O | 20:BZ:5033:TRP:CD1 | 2.60 | 0.55 |
| 1:AA:124:SER:O | 1:AA:127:MET:HB3 | 2.07 | 0.55 |
| 1:AA:191:ASN:HB2 | 3:AC:411:ALA:HB1 | 1.89 | 0.55 |
| 1:AA:205:VAL:HG21 | 24:AA:404:CLA:CMA | 2.37 | 0.55 |
| 1:AA:340:PRO:HG2 | 3:AC:317:PHE:CZ | 2.42 | 0.55 |
| 2:AB:121:GLU:HG3 | 7:AH:4:ARG:CA | 2.36 | 0.55 |
| 24:AB:602:CLA:H11 | 7:AH:49:TYR:HD2 | 1.71 | 0.55 |
| 4:AD:201:VAL:O | 4:AD:205:LEU:HB2 | 2.07 | 0.55 |
| 4:AD:221:THR:CG2 | 4:AD:244:TYR:HB2 | 2.36 | 0.55 |
| 5:AE:76:VAL:O | 5:AE:80:LEU:HD22 | 2.06 | 0.55 |
| 1:BA:5176:ILE:HG22 | 1:BA:5180:PHE:HE2 | 1.71 | 0.55 |
| 1:BA:5271:LEU:HD21 | 25:BA:5409:MST:H83 | 1.89 | 0.55 |
| 2:BB:5176:GLY:HA3 | 2:BB:5266:GLU:OE1 | 2.06 | 0.55 |
| 2:BB:5275:TRP:CH2 | 2:BB:5358:ARG:HD3 | 2.41 | 0.55 |
| 3:BC:5461:ARG:CG | 3:BC:5461:ARG:NH1 | 2.61 | 0.55 |
| 27:BC:5515:BCR:H312 | 20:BZ:5055:GLY:HA2 | 1.88 | 0.55 |
| 4:BD:5049:LEU:O | 4:BD:5053:THR:HG23 | 2.06 | 0.55 |
| 1:AA:20:TRP:CD1 | 1:AA:20:TRP:C | 2.80 | 0.55 |
| 31:AB:620:LMG:H191 | 11:AL:22:LEU:HG | 1.88 | 0.55 |
| 32:AB:630:LMT:H41 | 8:BI:5001:MET:CE | 2.36 | 0.55 |
| 12:AM:20:VAL:HG22 | 12:BM:5020:VAL:HG11 | 1.89 | 0.55 |
| 29:BA:5415:LHG:HC41 | 29:BA:5415:LHG:O9 | 2.05 | 0.55 |
| 2:BB:5348:ASN:OD1 | 2:BB:5352:GLU:HB2 | 2.06 | 0.55 |
| 3:BC:5257:PHE:O | 3:BC:5261:ARG:HG3 | 2.06 | 0.55 |
| 7:BH:5055:LEU:HB2 | 7:BH:5058:VAL:HG12 | 1.89 | 0.55 |
| 1:AA:341:LEU:HB2 | 3:AC:313:GLN:NE2 | 2.17 | 0.55 |
| 2:AB:90:PHE:CE2 | 2:AB:91:TRP:CZ3 | 2.94 | 0.55 |
| 32:AB:630:LMT:H41 | 8:BI:5001:MET:HE1 | 1.89 | 0.55 |
| 3:AC:35:TRP:O | 24:AC:511:CLA:HMD3 | 2.07 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 4:AD:259:ILE:HG12 | 31:AD:408:LMG:H301 | 1.89 | 0.55 |
| 12:AM:23:ILE:HG12 | 31:AM:101:LMG:H212 | 1.89 | 0.55 |
| 13:AO:64:TYR:CD1 | 13:AO:271:PRO:HA | 2.41 | 0.55 |
| 1:BA:5157:VAL:HG21 | 24:BA:5406:CLA:CMC | 2.36 | 0.55 |
| 1:BA:5217:SER:HA | 1:BA:5220:THR:HG22 | 1.89 | 0.55 |
| 1:BA:5289:GLY:C | 1:BA:5292:THR:HG22 | 2.27 | 0.55 |
| 2:BB:5354:LEU:HD21 | 2:BB:5378:LYS:HB2 | 1.89 | 0.55 |
| 3:BC:5281:MET:O | 3:BC:5285:ILE:HG13 | 2.06 | 0.55 |
| 24:BC:5513:CLA:HAA1 | 24:BC:5513:CLA:H42 | 1.88 | 0.55 |
| 4:BD:5313:THR:OG1 | 4:BD:5315:TYR:HB3 | 2.07 | 0.55 |
| 13:BO:5064:TYR:HD1 | 13:BO:5271:PRO:HA | 1.72 | 0.55 |
| 20:BZ:5032:ASP:CG | 20:BZ:5033:TRP:N | 2.57 | 0.55 |
| 25:AA:408:MST:N3 | 25:AA:408:MST:H131 | 2.21 | 0.55 |
| 3:AC:62:PHE:HZ | 10:AK:28:ILE:HD12 | 1.71 | 0.55 |
| 13:AO:173:ASN:ND2 | 13:AO:220:LYS:HD3 | 2.22 | 0.55 |
| 2:BB:5230:ARG:O | 2:BB:5233:ASN:HB3 | 2.07 | 0.55 |
| 30:BB:5625:SQD:H152 | 32:BB:5627:LMT:H81 | 1.89 | 0.55 |
| 3:BC:5453:ALA:C | 8:BI:5034:ARG:HB2 | 2.27 | 0.55 |
| 7:BH:5011:LEU:C | 7:BH:5013:PRO:HD2 | 2.28 | 0.55 |
| 1:AA:288:LEU:HD13 | 3:AC:432:VAL:CG2 | 2.37 | 0.55 |
| 2:AB:76:SER:HB3 | 31:BA:5402:LMG:H301 | 1.88 | 0.55 |
| 2:AB:487:SER:N | 2:AB:488:PRO:HD2 | 2.22 | 0.55 |
| 24:AB:613:CLA:H203 | 31:AD:407:LMG:H401 | 1.89 | 0.55 |
| 24:AC:512:CLA:H203 | 31:AC:521:LMG:H381 | 1.88 | 0.55 |
| 13:AO:92:VAL:HG12 | 13:AO:93:PRO:HD2 | 1.88 | 0.55 |
| 1:BA:5064:ARG:HD3 | 1:BA:5064:ARG:H | 1.72 | 0.55 |
| 1:BA:5281:VAL:CG1 | 28:BC:5519:DGD:CIA | 2.84 | 0.55 |
| 1:BA:5330:VAL:HG12 | 4:BD:5348:ARG:HA | 1.87 | 0.55 |
| 28:BA:5412:DGD:O1B | 28:BA:5412:DGD:C1G | 2.55 | 0.55 |
| 3:BC:5326:ALA:HB2 | 15:BU:5128:TYR:CG | 2.42 | 0.55 |
| 27:BC:5515:BCR:C31 | 20:BZ:5055:GLY:HA2 | 2.37 | 0.55 |
| 4:BD:5053:THR:HG22 | 4:BD:5067:TYR:HE2 | 1.72 | 0.55 |
| 4:BD:5077:ALA:HB2 | 4:BD:5174:GLY:HA3 | 1.88 | 0.55 |
| 1:AA:38:ILE:HB | 1:AA:39:PRO:HD3 | 1.89 | 0.54 |
| 30:AA:416:SQD:H302 | 24:BB:5620:CLA:H51 | 1.88 | 0.54 |
| 2:AB:18:ARG:HD3 | 2:AB:118:TRP:HB3 | 1.87 | 0.54 |
| 28:AC:519:DGD:HE62 | 9:AJ:40:LEU:HD11 | 1.89 | 0.54 |
| 13:AO:116:ASP:OD2 | 13:AO:116:ASP:C | 2.46 | 0.54 |
| 15:AU:57:LEU:HD11 | 15:AU:112:PHE:HB3 | 1.89 | 0.54 |
| 1:BA:5234:ASN:HB2 | 31:BL:5101:LMG:O3 | 2.05 | 0.54 |
| 3:BC:5095:LEU:HD13 | 24:BC:5502:CLA:H143 | 1.87 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:BC:5259:TRP:H | 3:BC:5259:TRP:HD1 | 1.55 | 0.54 |
| 4:BD:5086:GLY:HA2 | 4:BD:5166:SER:HB2 | 1.88 | 0.54 |
| 13:BO:5086:ARG:NE | 13:BO:5086:ARG:O | 2.40 | 0.54 |
| 1:AA:32:TRP:HA | 1:AA:32:TRP:HE3 | 1.72 | 0.54 |
| 1:AA:289:GLY:HA2 | 1:AA:292:THR:HG22 | 1.90 | 0.54 |
| 2:AB:222:PRO:CG | 7:AH:27:THR:H | 2.20 | 0.54 |
| 3:AC:279:LEU:HD12 | 3:AC:437:PHE:HE1 | 1.73 | 0.54 |
| 2:BB:5068:ARG:NH1 | 24:BB:5608:CLA:HED1 | 2.22 | 0.54 |
| 2:BB:5222:PRO:HD2 | 2:BB:5225:LEU:HD12 | 1.88 | 0.54 |
| 24:BB:5617:CLA:H203 | 31:BD:5409:LMG:H401 | 1.88 | 0.54 |
| 3:BC:5035:TRP:O | 24:BC:5511:CLA:HMD3 | 2.07 | 0.54 |
| 3:BC:5279:LEU:HD23 | 3:BC:5282:MET:HE3 | 1.89 | 0.54 |
| 3:BC:5279:LEU:HA | 3:BC:5282:MET:HE3 | 1.89 | 0.54 |
| 7:BH:5017:GLU:CD | 7:BH:5017:GLU:H | 2.10 | 0.54 |
| 8:BI:5010:ILE:HG21 | 32:BI:5102:LMT:H82 | 1.88 | 0.54 |
| 20:BZ:5012:LEU:HD12 | 20:BZ:5012:LEU:O | 2.08 | 0.54 |
| 24:AB:609:CLA:OBD | 7:AH:27:THR:HB | 2.06 | 0.54 |
| 3:AC:466:VAL:HA | 3:AC:469:MET:HE1 | 1.89 | 0.54 |
| 24:BB:5615:CLA:C5 | 24:BB:5618:CLA:HBC2 | 2.38 | 0.54 |
| 3:BC:5279:LEU:HD22 | 24:BC:5503:CLA:H143 | 1.89 | 0.54 |
| 4:BD:5330:ALA:HB3 | 4:BD:5331:PRO:HD3 | 1.89 | 0.54 |
| 15:BU:5064:ALA:O | 15:BU:5067:GLN:HG2 | 2.06 | 0.54 |
| 20:BZ:5023:VAL:O | 20:BZ:5026:ALA:HB3 | 2.08 | 0.54 |
| 24:AB:610:CLA:HHC | 24:AB:610:CLA:HBB1 | 1.89 | 0.54 |
| 4:AD:14:TRP:NE1 | 7:AH:25:TRP:HH2 | 1.93 | 0.54 |
| 7:AH:55:LEU:HB2 | 7:AH:58:VAL:HG12 | 1.88 | 0.54 |
| 13:AO:117:GLY:O | 13:AO:159:VAL:HG12 | 2.07 | 0.54 |
| 13:AO:154:SER:O | 13:AO:168:PHE:HA | 2.07 | 0.54 |
| 1:BA:5069:GLY:HA2 | 1:BA:5075:ASN:ND2 | 2.22 | 0.54 |
| 2:BB:5183:PRO:HB2 | 2:BB:5185:TRP:CH2 | 2.42 | 0.54 |
| 5:BE:5034:GLY:CA | 6:BF:5032:PHE:CE1 | 2.90 | 0.54 |
| 1:AA:214:MET:HA | 1:AA:214:MET:HE2 | 1.90 | 0.54 |
| 1:AA:261:GLN:NE2 | 2:AB:489:GLU:HG3 | 2.22 | 0.54 |
| 2:AB:27:THR:HG22 | 2:AB:107:LEU:CD1 | 2.28 | 0.54 |
| 24:AB:603:CLA:H161 | 7:AH:38:PHE:CE2 | 2.43 | 0.54 |
| 3:AC:126:GLY:O | 3:AC:130:VAL:HG23 | 2.07 | 0.54 |
| 3:AC:281:MET:O | 3:AC:285:ILE:HG13 | 2.07 | 0.54 |
| 4:AD:128:ARG:HG2 | 4:AD:129:GLN:N | 2.22 | 0.54 |
| 4:AD:152:VAL:HG11 | 24:AD:401:CLA:H11 | 1.88 | 0.54 |
| 16:AV:71:ILE:HD12 | 16:AV:71:ILE:C | 2.28 | 0.54 |
| 2:BB:5018:ARG:HD3 | 2:BB:5118:TRP:HB3 | 1.89 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 27:BD:5407:BCR:H321 | 27:BD:5407:BCR:H343 | 1.89 | 0.54 |
| 31:BD:5410:LMG:H192 | 31:BL:5101:LMG:H201 | 1.89 | 0.54 |
| 13:BO:5180:ALA:HB1 | 13:BO:5191:ALA:HB2 | 1.90 | 0.54 |
| 20:BZ:5032:ASP:C | 20:BZ:5034:ASP:N | 2.60 | 0.54 |
| 28:AA:411:DGD:O1B | 28:AA:411:DGD:HG12 | 2.07 | 0.54 |
| 24:AB:614:CLA:H202 | 31:AB:620:LMG:H422 | 1.90 | 0.54 |
| 12:AM:33:GLN:HA | 31:AM:101:LMG:HC62 | 1.90 | 0.54 |
| 20:AZ:33:TRP:O | 20:AZ:33:TRP:HD1 | 1.90 | 0.54 |
| 2:BB:5058:GLN:O | 24:BB:5611:CLA:HED3 | 2.07 | 0.54 |
| 4:BD:5185:PHE:CE2 | 4:BD:5289:LEU:HD12 | 2.42 | 0.54 |
| 2:AB:12:LEU:CD1 | 2:AB:19:LEU:HD12 | 2.38 | 0.54 |
| 1:BA:5064:ARG:HH11 | 1:BA:5064:ARG:HG3 | 1.71 | 0.54 |
| 1:BA:5240:GLY:HA3 | 14:BT:5029:ILE:HG22 | 1.88 | 0.54 |
| 1:BA:5315:ASN:ND2 | 4:BD:5332:GLN:NE2 | 2.56 | 0.54 |
| 2:BB:5133:LEU:HB3 | 2:BB:5138:MET:HE2 | 1.89 | 0.54 |
| 3:BC:5042:LEU:CD2 | 24:BC:5511:CLA:HED3 | 2.37 | 0.54 |
| 35:BD:5406:PL9:H401 | 11:BL:5029:LEU:HD23 | 1.90 | 0.54 |
| 24:AA:405:CLA:H93 | 34:AD:402:PHO:HHB | 1.89 | 0.54 |
| 2:AB:237:VAL:HG22 | 24:AB:610:CLA:HBC2 | 1.88 | 0.54 |
| 3:AC:166:ILE:HG23 | 3:AC:245:ILE:HG23 | 1.90 | 0.54 |
| 35:AD:405:PL9:H401 | 11:AL:29:LEU:HD23 | 1.90 | 0.54 |
| 11:AL:18:TYR:CE2 | 14:AT:20:ALA:HA | 2.43 | 0.54 |
| 1:BA:5013:LEU:N | 1:BA:5016:ARG:HH11 | 2.06 | 0.54 |
| 1:BA:5081:ALA:CB | 1:BA:5175:GLY:HA3 | 2.37 | 0.54 |
| 24:BA:5405:CLA:H202 | 34:BD:5403:PHO:HMA2 | 1.89 | 0.54 |
| 24:BA:5406:CLA:C9 | 34:BD:5403:PHO:HHB | 2.37 | 0.54 |
| 2:BB:5011:VAL:HG23 | 11:BL:5006:ASN:O | 2.07 | 0.54 |
| 3:BC:5155:ASN:CA | 3:BC:5158:THR:HG22 | 2.36 | 0.54 |
| 3:BC:5311:GLN:OE1 | 3:BC:5355:THR:HG22 | 2.08 | 0.54 |
| 4:BD:5259:ILE:HG12 | 31:BD:5410:LMG:H301 | 1.89 | 0.54 |
| 4:BD:5335:PRO:HB2 | 5:BE:5065:LEU:HD21 | 1.89 | 0.54 |
| 6:BF:5011:VAL:HG12 | 6:BF:5012:SER:N | 2.23 | 0.54 |
| 1:AA:12:ASN:HD22 | 1:AA:15:GLU:HB2 | 1.73 | 0.54 |
| 2:AB:393:GLU:HG2 | 15:AU:44:ASP:O | 2.08 | 0.54 |
| 5:AE:76:VAL:O | 5:AE:80:LEU:CD2 | 2.56 | 0.54 |
| 1:BA:5012:ASN:ND2 | 1:BA:5015:GLU:HB2 | 2.22 | 0.54 |
| 1:BA:5119:PHE:HZ | 24:BA:5405:CLA:H101 | 1.72 | 0.54 |
| 1:BA:5278:TRP:CE3 | 28:BC:5519:DGD:HAG1 | 2.41 | 0.54 |
| 2:BB:5246:PHE:CE2 | 2:BB:5463:PHE:HA | 2.43 | 0.54 |
| 3:BC:5223:TRP:CE3 | 3:BC:5224:ILE:HG13 | 2.43 | 0.54 |
| 1:AA:64:ARG:HH11 | 1:AA:64:ARG:HG3 | 1.73 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:265:ILE:HG13 | 2:AB:266:GLU:N | 2.21 | 0.54 |
| 3:AC:259:TRP:H | 3:AC:259:TRP:HD1 | 1.56 | 0.54 |
| 10:AK:43:VAL:HG21 | 10:AK:46:ARG:HE | 1.72 | 0.54 |
| 1:BA:5260:PHE:CZ | 1:BA:5263:ALA:HB2 | 2.43 | 0.54 |
| 1:BA:5340:PRO:HG2 | 3:BC:5317:PHE:CZ | 2.43 | 0.54 |
| 2:BB:5331:ASN:HB3 | 2:BB:5437:LEU:HD22 | 1.88 | 0.54 |
| 2:BB:5356:VAL:HA | 2:BB:5370:LEU:HD22 | 1.90 | 0.54 |
| 3:BC:5250:TRP:CD1 | 3:BC:5250:TRP:C | 2.81 | 0.54 |
| 3:BC:5472:LEU:HG | 4:BD:5251:ARG:HH12 | 1.72 | 0.54 |
| 4:BD:5238:THR:O | 4:BD:5239:GLN:O | 2.26 | 0.54 |
| 12:BM:5023:ILE:HG12 | 31:BM:5102:LMG:H212 | 1.90 | 0.54 |
| 16:BV:5104:ASN:HA | 16:BV:5122:ARG:HD3 | 1.90 | 0.54 |
| 18:BX:5022:GLY:HA2 | 18:BX:5025:SER:OG | 2.08 | 0.54 |
| 1:AA:81:ALA:CB | 1:AA:175:GLY:HA3 | 2.37 | 0.53 |
| 2:AB:192:PRO:HD2 | 7:AH:60:VAL:HG12 | 1.91 | 0.53 |
| 15:AU:50:ALA:HB1 | 15:AU:113:THR:HG21 | 1.90 | 0.53 |
| 15:AU:113:THR:O | 15:AU:114:VAL:HG23 | 2.08 | 0.53 |
| 16:AV:38:LEU:HD12 | 16:AV:95:ILE:HB | 1.89 | 0.53 |
| 1:BA:5126:TYR:O | 1:BA:5130:GLN:HG3 | 2.07 | 0.53 |
| 1:BA:5244:GLU:OE2 | 4:BD:5264:LYS:NZ | 2.41 | 0.53 |
| 1:BA:5271:LEU:HD23 | 1:BA:5271:LEU:C | 2.28 | 0.53 |
| 1:AA:262:TYR:HE1 | 31:AA:414:LMG:HC5 | 1.72 | 0.53 |
| 24:AA:404:CLA:H202 | 34:AD:402:PHO:HMA2 | 1.89 | 0.53 |
| 2:AB:157:HIS:HD2 | 2:AB:158:LEU:HD23 | 1.73 | 0.53 |
| 3:AC:163:PHE:O | 3:AC:167:VAL:HG23 | 2.09 | 0.53 |
| 3:AC:170:ILE:HG22 | 3:AC:174:LEU:HD23 | 1.91 | 0.53 |
| 10:AK:19:ASP:N | 10:AK:20:PRO:CD | 2.70 | 0.53 |
| 2:BB:5250:PHE:CE2 | 2:BB:5459:ALA:HB1 | 2.43 | 0.53 |
| 24:BB:5609:CLA:H141 | 24:BB:5614:CLA:HED2 | 1.88 | 0.53 |
| 24:BB:5612:CLA:H203 | 24:BD:5405:CLA:HBA2 | 1.89 | 0.53 |
| 16:BV:5146:LEU:O | 16:BV:5150:LYS:HG3 | 2.08 | 0.53 |
| 1:AA:119:PHE:HZ | 24:AA:404:CLA:H101 | 1.74 | 0.53 |
| 1:AA:315:ASN:HD21 | 4:AD:332:GLN:NE2 | 2.05 | 0.53 |
| 2:AB:215:PHE:C | 2:AB:215:PHE:CD2 | 2.82 | 0.53 |
| 3:AC:432:VAL:HG13 | 3:AC:433:LEU:N | 2.23 | 0.53 |
| 9:AJ:19:MET:O | 9:AJ:23:VAL:HG23 | 2.07 | 0.53 |
| 1:BA:5332:HIS:HB3 | 4:BD:5321:LEU:HD21 | 1.90 | 0.53 |
| 3:BC:5044:ASN:O | 3:BC:5045:LEU:HD12 | 2.08 | 0.53 |
| 3:BC:5155:ASN:HA | 3:BC:5158:THR:CG2 | 2.34 | 0.53 |
| 4:BD:5068:LEU:HD11 | 5:BE:5044:TYR:CE1 | 2.43 | 0.53 |
| 9:BJ:5011:TRP:CE2 | 9:BJ:5012:ILE:HG13 | 2.42 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:92:HIS:HD2 | 3:AC:219:GLY:HA3 | 1.72 | 0.53 |
| 3:AC:311:GLN:OE1 | 3:AC:355:THR:HG22 | 2.08 | 0.53 |
| 3:AC:415:ASN:O | 3:AC:416:SER:CB | 2.55 | 0.53 |
| 4:AD:26:ARG:HG3 | 4:AD:26:ARG:HH11 | 1.72 | 0.53 |
| 4:AD:86:GLY:CA | 4:AD:166:SER:HB2 | 2.38 | 0.53 |
| 24:BA:5406:CLA:H201 | 14:BT:5014:ILE:HD11 | 1.90 | 0.53 |
| 20:BZ:5049:ALA:O | 20:BZ:5053:VAL:HG23 | 2.07 | 0.53 |
| 2:AB:348:ASN:OD1 | 2:AB:352:GLU:HB2 | 2.08 | 0.53 |
| 2:AB:462:PHE:CE1 | 24:AB:613:CLA:HMB3 | 2.44 | 0.53 |
| 24:AB:608:CLA:H202 | 7:AH:43:LEU:HD11 | 1.90 | 0.53 |
| 3:AC:124:VAL:HB | 27:AC:515:BCR:H362 | 1.89 | 0.53 |
| 31:AD:408:LMG:H392 | 27:AT:101:BCR:HC32 | 1.91 | 0.53 |
| 13:AO:98:THR:HG23 | 13:AO:133:THR:HB | 1.89 | 0.53 |
| 15:AU:64:ALA:O | 15:AU:67:GLN:HG2 | 2.08 | 0.53 |
| 18:AX:12:ILE:O | 18:AX:12:ILE:HG23 | 2.09 | 0.53 |
| 1:BA:5190:HIS:O | 1:BA:5298:ASN:HB3 | 2.09 | 0.53 |
| 1:BA:5324:ALA:HB2 | 4:BD:5329:MET:SD | 2.49 | 0.53 |
| 2:BB:5327:THR:O | 2:BB:5444:ARG:NE | 2.39 | 0.53 |
| 24:BC:5504:CLA:H2 | 28:BC:5518:DGD:HA21 | 1.89 | 0.53 |
| 4:BD:5088:SER:CB | 5:BE:5069:ARG:NH2 | 2.69 | 0.53 |
| 5:BE:5010:PHE:HD2 | 31:BE:5101:LMG:O2 | 1.92 | 0.53 |
| 3:AC:33:PHE:CD1 | 4:AD:229:ALA:HB3 | 2.43 | 0.53 |
| 3:AC:437:PHE:CZ | 24:AC:510:CLA:HMB3 | 2.44 | 0.53 |
| 2:BB:5231:MET:HG2 | 24:BB:5614:CLA:HMC1 | 1.90 | 0.53 |
| 11:BL:5022:LEU:HG | 31:BL:5101:LMG:H191 | 1.89 | 0.53 |
| 11:BL:5022:LEU:O | 11:BL:5026:VAL:HG22 | 2.08 | 0.53 |
| 3:AC:279:LEU:HD22 | 24:AC:503:CLA:H143 | 1.90 | 0.53 |
| 3:AC:405:ASN:HB2 | 28:AC:519:DGD:C3G | 2.38 | 0.53 |
| 4:AD:160:TYR:HB3 | 4:AD:161:PRO:CD | 2.39 | 0.53 |
| 27:AD:406:BCR:H343 | 27:AD:406:BCR:H321 | 1.91 | 0.53 |
| 8:AI:1:MET:CE | 32:BB:5604:LMT:H41 | 2.39 | 0.53 |
| 13:AO:144:LEU:HD13 | 13:AO:259:VAL:HG11 | 1.90 | 0.53 |
| 1:BA:5155:PHE:CE1 | 28:BA:5412:DGD:HBE1 | 2.44 | 0.53 |
| 1:BA:5254:TYR:CD1 | 4:BD:5132:ILE:HG22 | 2.43 | 0.53 |
| 2:BB:5030:VAL:HG12 | 24:BB:5609:CLA:HHD | 1.91 | 0.53 |
| 2:BB:5087:ASP:OD1 | 28:BB:5602:DGD:HD62 | 2.08 | 0.53 |
| 2:BB:5363:PHE:HD1 | 4:BD:5326:ARG:HD2 | 1.74 | 0.53 |
| 3:BC:5149:TYR:CA | 3:BC:5156:LYS:HD3 | 2.38 | 0.53 |
| 3:BC:5368:PRO:O | 3:BC:5379:LYS:HE2 | 2.08 | 0.53 |
| 4:BD:5037:LEU:HD13 | 4:BD:5125:PHE:N | 2.24 | 0.53 |
| 16:BV:5074:THR:O | 16:BV:5075:ASN:HB2 | 2.08 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:307:ILE:HG22 | 1:AA:313:VAL:HA | 1.89 | 0.53 |
| 1:AA:332:HIS:HB3 | 4:AD:321:LEU:HD21 | 1.91 | 0.53 |
| 2:AB:154:GLY:O | 2:AB:159:THR:HG23 | 2.08 | 0.53 |
| 2:AB:183:PRO:HG3 | 2:AB:199:VAL:HG12 | 1.90 | 0.53 |
| 2:AB:183:PRO:HB2 | 2:AB:185:TRP:CH2 | 2.44 | 0.53 |
| 2:AB:462:PHE:HA | 24:AB:611:CLA:CMC | 2.37 | 0.53 |
| 24:AB:616:CLA:H51 | 30:BA:5401:SQD:H302 | 1.90 | 0.53 |
| 13:AO:118:SER:HB3 | 13:AO:157:PRO:HA | 1.91 | 0.53 |
| 13:AO:218:LEU:CD2 | 15:AU:119:THR:HG21 | 2.39 | 0.53 |
| 20:AZ:12:LEU:O | 20:AZ:12:LEU:HD12 | 2.08 | 0.53 |
| 1:BA:5333:GLU:HB2 | 1:BA:5337:HIS:HE1 | 1.74 | 0.53 |
| 2:BB:5062:VAL:CG1 | 24:BB:5609:CLA:HED3 | 2.39 | 0.53 |
| 3:BC:5387:TRP:CE2 | 3:BC:5388:GLN:HG3 | 2.44 | 0.53 |
| 1:AA:220:THR:HG23 | 4:AD:141:TYR:HD1 | 1.73 | 0.53 |
| 1:AA:234:ASN:HB2 | 31:AB:620:LMG:O3 | 2.09 | 0.53 |
| 1:AA:289:GLY:O | 1:AA:292:THR:CG2 | 2.53 | 0.53 |
| 2:AB:68:ARG:HH22 | 24:AB:604:CLA:CED | 2.21 | 0.53 |
| 24:AC:504:CLA:H151 | 28:AC:519:DGD:C9A | 2.36 | 0.53 |
| 4:AD:313:THR:OG1 | 4:AD:315:TYR:HB3 | 2.09 | 0.53 |
| 10:AK:35:LEU:HA | 10:AK:38:VAL:HG23 | 1.89 | 0.53 |
| 4:BD:5076:VAL:O | 4:BD:5077:ALA:HB2 | 2.09 | 0.53 |
| 2:AB:91:TRP:CD1 | 24:AB:606:CLA:HBD | 2.43 | 0.53 |
| 2:AB:135:LEU:HD13 | 2:AB:237:VAL:CG2 | 2.39 | 0.53 |
| 2:AB:225:LEU:HD23 | 32:AB:624:LMT:H42 | 1.91 | 0.53 |
| 12:AM:20:VAL:O | 12:AM:24:ILE:HG13 | 2.07 | 0.53 |
| 20:AZ:21:ILE:O | 20:AZ:25:VAL:HG22 | 2.09 | 0.53 |
| 20:AZ:47:TRP:O | 20:AZ:50:LEU:HB2 | 2.09 | 0.53 |
| 1:BA:5142:TRP:HB2 | 4:BD:5220:ASN:OD1 | 2.09 | 0.53 |
| 24:BA:5406:CLA:H102 | 24:BA:5406:CLA:H152 | 1.91 | 0.53 |
| 3:BC:5166:ILE:HG23 | 3:BC:5245:ILE:HG23 | 1.91 | 0.53 |
| 3:BC:5233:VAL:HA | 27:BC:5516:BCR:C28 | 2.38 | 0.53 |
| 4:BD:5134:ARG:HE | 4:BD:5134:ARG:CA | 2.21 | 0.53 |
| 5:BE:5008:ARG:HD3 | 5:BE:5013:ILE:HG12 | 1.91 | 0.53 |
| 5:BE:5017:VAL:HG22 | 9:BJ:5008:ILE:CD1 | 2.38 | 0.53 |
| 24:AA:405:CLA:C9 | 34:AD:402:PHO:HHB | 2.39 | 0.52 |
| 4:AD:239:GLN:O | 4:AD:240:ALA:CB | 2.56 | 0.52 |
| 2:BB:5005:TRP:CH2 | 31:BL:5101:LMG:H291 | 2.44 | 0.52 |
| 24:BB:5614:CLA:HHC | 24:BB:5614:CLA:HBB1 | 1.89 | 0.52 |
| 3:BC:5137:PRO:HB2 | 3:BC:5139:THR:O | 2.09 | 0.52 |
| 6:BF:5041:GLN:N | 6:BF:5041:GLN:HE21 | 2.07 | 0.52 |
| 20:BZ:5030:PRO:C | 20:BZ:5032:ASP:H | 2.12 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 20:BZ:5035:ARG:O | 20:BZ:5038:GLN:HB3 | 2.09 | 0.52 |
| 1:AA:234:ASN:HD21 | 4:AD:266:TRP:CB | 2.21 | 0.52 |
| 24:AA:405:CLA:H102 | 24:AA:405:CLA:H152 | 1.91 | 0.52 |
| 2:AB:246:PHE:CE2 | 2:AB:463:PHE:HA | 2.44 | 0.52 |
| 30:AB:622:SQD:H152 | 32:AB:624:LMT:H81 | 1.90 | 0.52 |
| 4:AD:238:THR:O | 4:AD:239:GLN:O | 2.28 | 0.52 |
| 4:AD:267:LEU:HD23 | 4:AD:267:LEU:C | 2.30 | 0.52 |
| 20:AZ:30:PRO:C | 20:AZ:32:ASP:H | 2.12 | 0.52 |
| 20:AZ:34:ASP:OD1 | 20:AZ:35:ARG:N | 2.42 | 0.52 |
| 1:BA:5202:VAL:HG11 | 24:BA:5407:CLA:OBD | 2.10 | 0.52 |
| 1:BA:5254:TYR:OH | 4:BD:5129:GLN:HB3 | 2.09 | 0.52 |
| 3:BC:5042:LEU:HD13 | 24:BC:5511:CLA:HMA3 | 1.90 | 0.52 |
| 3:BC:5113:VAL:CG1 | 31:BC:5521:LMG:H132 | 2.40 | 0.52 |
| 3:BC:5126:GLY:O | 3:BC:5130:VAL:HG23 | 2.09 | 0.52 |
| 3:BC:5279:LEU:HD23 | 3:BC:5282:MET:CE | 2.39 | 0.52 |
| 3:BC:5337:LEU:HD12 | 13:BO:5131:PRO:CG | 2.39 | 0.52 |
| 13:BO:5223:ILE:HG12 | 13:BO:5224:SER:N | 2.25 | 0.52 |
| 20:BZ:5002:THR:CG2 | 20:BZ:5003:ILE:N | 2.72 | 0.52 |
| 24:AB:611:CLA:H51 | 24:AB:614:CLA:HBC2 | 1.92 | 0.52 |
| 3:AC:33:PHE:HE1 | 4:AD:229:ALA:CB | 2.21 | 0.52 |
| 3:AC:38:GLY:HA3 | 24:AC:511:CLA:HMD3 | 1.92 | 0.52 |
| 3:AC:149:TYR:HA | 3:AC:156:LYS:CD | 2.40 | 0.52 |
| 3:AC:259:TRP:CD1 | 3:AC:259:TRP:N | 2.78 | 0.52 |
| 24:AC:504:CLA:H61 | 28:AC:518:DGD:HA61 | 1.89 | 0.52 |
| 24:AC:504:CLA:H152 | 28:AC:519:DGD:HA91 | 1.90 | 0.52 |
| 16:AV:56:LYS:O | 16:AV:60:GLN:HG3 | 2.09 | 0.52 |
| 16:AV:90:PRO:O | 16:AV:92:ARG:HD3 | 2.10 | 0.52 |
| 1:BA:5035:VAL:HA | 27:BA:5411:BCR:H333 | 1.90 | 0.52 |
| 2:BB:5030:VAL:HG22 | 24:BB:5617:CLA:C3C | 2.39 | 0.52 |
| 2:BB:5143:LEU:HD12 | 2:BB:5143:LEU:O | 2.10 | 0.52 |
| 2:BB:5324:LEU:HA | 4:BD:5293:LEU:HD21 | 1.91 | 0.52 |
| 24:BB:5613:CLA:OBD | 7:BH:5027:THR:HB | 2.10 | 0.52 |
| 4:BD:5302:GLU:OE2 | 4:BD:5302:GLU:HA | 2.10 | 0.52 |
| 13:BO:5144:LEU:HD13 | 13:BO:5259:VAL:HG11 | 1.90 | 0.52 |
| 14:BT:5022:PHE:C | 14:BT:5023:PHE:CD2 | 2.83 | 0.52 |
| 31:AA:414:LMG:O2 | 5:AE:10:PHE:HD2 | 1.92 | 0.52 |
| 2:AB:62:VAL:CG1 | 24:AB:605:CLA:HED3 | 2.39 | 0.52 |
| 4:AD:334:GLN:N | 4:AD:335:PRO:HD3 | 2.25 | 0.52 |
| 16:AV:133:LEU:HD12 | 16:AV:133:LEU:N | 2.24 | 0.52 |
| 2:BB:5238:LEU:HB2 | 24:BB:5616:CLA:HMD3 | 1.91 | 0.52 |
| 13:BO:5210:ARG:HA | 15:BU:5039:LEU:CD1 | 2.40 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 15:BU:5054:LYS:HD2 | 15:BU:5113:THR:HG23 | 1.90 | 0.52 |
| 16:BV:5081:ARG:HG2 | 16:BV:5081:ARG:HH11 | 1.73 | 0.52 |
| 1:AA:29:TYR:CD2 | 1:AA:133:LEU:HD13 | 2.45 | 0.52 |
| 1:AA:155:PHE:CE1 | 28:AA:411:DGD:HBE1 | 2.44 | 0.52 |
| 24:AB:615:CLA:H142 | 24:AB:616:CLA:H151 | 1.91 | 0.52 |
| 3:AC:220:GLY:N | 28:AC:517:DGD:O3D | 2.42 | 0.52 |
| 3:AC:452:ALA:O | 3:AC:454:GLY:N | 2.42 | 0.52 |
| 4:AD:308:ASP:C | 4:AD:308:ASP:OD1 | 2.47 | 0.52 |
| 10:AK:17:ILE:HD12 | 10:AK:17:ILE:N | 2.23 | 0.52 |
| 12:AM:27:VAL:HG12 | 12:BM:5028:GLN:HB3 | 1.90 | 0.52 |
| 16:AV:119:PRO:HA | 16:AV:127:PHE:CD2 | 2.44 | 0.52 |
| 1:BA:5157:VAL:HG11 | 24:BA:5406:CLA:HMC3 | 1.92 | 0.52 |
| 1:BA:5220:THR:CG2 | 4:BD:5141:TYR:HD1 | 2.23 | 0.52 |
| 2:BB:5010:THR:HG22 | 2:BB:5013:ILE:HD11 | 1.92 | 0.52 |
| 2:BB:5090:PHE:CE2 | 2:BB:5091:TRP:CZ3 | 2.97 | 0.52 |
| 2:BB:5157:HIS:HD2 | 2:BB:5158:LEU:HD23 | 1.75 | 0.52 |
| 24:BB:5612:CLA:C4 | 4:BD:5127:LEU:HD11 | 2.20 | 0.52 |
| 2:AB:10:THR:C | 2:AB:12:LEU:H | 2.11 | 0.52 |
| 2:AB:260:SER:HG | 2:AB:262:THR:HG22 | 1.70 | 0.52 |
| 2:AB:331:ASN:HB3 | 2:AB:437:LEU:HD22 | 1.92 | 0.52 |
| 31:AB:620:LMG:H201 | 31:AD:408:LMG:H192 | 1.90 | 0.52 |
| 11:AL:22:LEU:O | 11:AL:26:VAL:HG22 | 2.10 | 0.52 |
| 13:AO:215:ARG:NH1 | 13:AO:252:GLY:O | 2.43 | 0.52 |
| 2:BB:5139:PHE:CZ | 24:BB:5613:CLA:HMB3 | 2.45 | 0.52 |
| 3:BC:5140:LEU:HB2 | 3:BC:5148:GLY:HA2 | 1.91 | 0.52 |
| 3:BC:5141:GLU:CD | 3:BC:5141:GLU:H | 2.13 | 0.52 |
| 20:BZ:5002:THR:CG2 | 20:BZ:5003:ILE:H | 2.22 | 0.52 |
| 2:AB:238:LEU:N | 24:AB:612:CLA:HMD3 | 2.25 | 0.52 |
| 3:AC:140:LEU:HB2 | 3:AC:148:GLY:HA2 | 1.92 | 0.52 |
| 3:AC:250:TRP:CD1 | 3:AC:250:TRP:C | 2.82 | 0.52 |
| 3:AC:279:LEU:HD23 | 3:AC:282:MET:CE | 2.39 | 0.52 |
| 3:AC:437:PHE:HA | 24:AC:508:CLA:HMC3 | 1.91 | 0.52 |
| 20:AZ:32:ASP:OD1 | 20:AZ:36:SER:HB2 | 2.10 | 0.52 |
| 20:AZ:32:ASP:C | 20:AZ:34:ASP:N | 2.60 | 0.52 |
| 1:BA:5289:GLY:CA | 1:BA:5292:THR:HG22 | 2.38 | 0.52 |
| 2:BB:5010:THR:C | 2:BB:5012:LEU:H | 2.11 | 0.52 |
| 3:BC:5418:ASN:HA | 28:BC:5519:DGD:HE2 | 1.91 | 0.52 |
| 4:BD:5128:ARG:HG2 | 4:BD:5129:GLN:N | 2.24 | 0.52 |
| 31:BL:5101:LMG:H302 | 12:BM:5022:LEU:HD21 | 1.91 | 0.52 |
| 1:AA:193:LEU:HD13 | 4:AD:179:PHE:HB3 | 1.91 | 0.52 |
| 2:AB:30:VAL:HG22 | 24:AB:613:CLA:C3C | 2.40 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 2:AB:354:LEU:HD21 | 2:AB:378:LYS:HB2 | 1.90 | 0.52 |
| 2:AB:356:VAL:HG22 | 2:AB:370:LEU:CD2 | 2.40 | 0.52 |
| 24:AB:601:CLA:HBB1 | 24:AB:601:CLA:HHC | 1.91 | 0.52 |
| 3:AC:366:LEU:HD23 | 3:AC:366:LEU:C | 2.29 | 0.52 |
| 4:AD:236:ASN:ND2 | 4:AD:239:GLN:O | 2.37 | 0.52 |
| 13:AO:46:PRO:HD2 | 13:AO:266:TYR:HD2 | 1.74 | 0.52 |
| 13:AO:91:PHE:CE1 | 13:AO:260:LYS:HB2 | 2.45 | 0.52 |
| 13:AO:180:ALA:HB1 | 13:AO:191:ALA:HB2 | 1.92 | 0.52 |
| 1:BA:5093:PHE:CZ | 24:BA:5408:CLA:HBA1 | 2.45 | 0.52 |
| 3:BC:5149:TYR:CB | 3:BC:5156:LYS:HD3 | 2.40 | 0.52 |
| 3:BC:5366:LEU:HD23 | 3:BC:5366:LEU:C | 2.30 | 0.52 |
| 4:BD:5154:VAL:O | 4:BD:5158:LEU:HB2 | 2.10 | 0.52 |
| 20:BZ:5042:LEU:O | 20:BZ:5046:LEU:HB2 | 2.10 | 0.52 |
| 1:AA:176:ILE:HG22 | 1:AA:180:PHE:HE2 | 1.73 | 0.52 |
| 1:AA:216:GLY:O | 1:AA:220:THR:HG22 | 2.10 | 0.52 |
| 3:AC:149:TYR:CB | 3:AC:156:LYS:HD3 | 2.40 | 0.52 |
| 3:AC:193:GLY:O | 3:AC:194:GLY:C | 2.49 | 0.52 |
| 3:AC:252:ILE:HG22 | 3:AC:253:LEU:HD23 | 1.91 | 0.52 |
| 4:AD:88:SER:CB | 5:AE:69:ARG:NH2 | 2.69 | 0.52 |
| 4:AD:158:LEU:O | 4:AD:162:LEU:HG | 2.09 | 0.52 |
| 5:AE:8:ARG:HD3 | 5:AE:13:ILE:HG12 | 1.92 | 0.52 |
| 5:AE:17:VAL:HG22 | 9:AJ:8:ILE:HD11 | 1.92 | 0.52 |
| 5:AE:26:THR:HB | 36:AF:101:HEM:CAB | 2.40 | 0.52 |
| 7:AH:12:ARG:N | 7:AH:13:PRO:HD2 | 2.25 | 0.52 |
| 1:BA:5064:ARG:HG3 | 1:BA:5064:ARG:NH1 | 2.25 | 0.52 |
| 1:BA:5315:ASN:ND2 | 4:BD:5332:GLN:HE22 | 2.06 | 0.52 |
| 25:BA:5409:MST:N3 | 25:BA:5409:MST:H122 | 2.24 | 0.52 |
| 3:BC:5037:ALA:O | 24:BC:5508:CLA:HBA1 | 2.10 | 0.52 |
| 3:BC:5052:ALA:CA | 24:BC:5511:CLA:HMB3 | 2.28 | 0.52 |
| 3:BC:5362:ARG:HE | 3:BC:5370:ARG:NH1 | 2.07 | 0.52 |
| 4:BD:5072:ASN:HA | 31:BD:5408:LMG:HC72 | 1.92 | 0.52 |
| 13:BO:5059:ASP:C | 13:BO:5061:SER:H | 2.13 | 0.52 |
| 2:AB:369:ILE:O | 2:AB:370:LEU:HD23 | 2.09 | 0.52 |
| 27:AT:101:BCR:H19C | 27:BB:5622:BCR:H363 | 1.91 | 0.52 |
| 1:BA:5027:ARG:NH1 | 1:BA:5027:ARG:O | 2.43 | 0.52 |
| 2:BB:5091:TRP:CD1 | 24:BB:5610:CLA:HBD | 2.45 | 0.52 |
| 2:BB:5461:LEU:HD21 | 31:BB:5624:LMG:C43 | 2.39 | 0.52 |
| 3:BC:5214:LEU:HD22 | 3:BC:5214:LEU:N | 2.24 | 0.52 |
| 4:BD:5026:ARG:HH11 | 4:BD:5026:ARG:HG3 | 1.75 | 0.52 |
| 4:BD:5201:VAL:O | 4:BD:5205:LEU:HB2 | 2.09 | 0.52 |
| 13:BO:5230:VAL:CG1 | 13:BO:5231:ASP:H | 2.17 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:315:ASN:ND2 | 4:AD:332:GLN:NE2 | 2.57 | 0.51 |
| 6:AF:11:VAL:CG1 | 6:AF:12:SER:H | 2.20 | 0.51 |
| 10:AK:18:PHE:C | 10:AK:20:PRO:HD2 | 2.29 | 0.51 |
| 13:AO:84:ASN:ND2 | 2:BB:5431:GLU:OE2 | 2.43 | 0.51 |
| 1:BA:5082:VAL:HB | 1:BA:5174:LEU:HB2 | 1.91 | 0.51 |
| 1:BA:5159:LEU:HD11 | 28:BC:5517:DGD:HB51 | 1.92 | 0.51 |
| 2:BB:5121:GLU:HG3 | 7:BH:5004:ARG:CA | 2.39 | 0.51 |
| 2:BB:5192:PRO:HD2 | 7:BH:5060:VAL:HG12 | 1.93 | 0.51 |
| 3:BC:5038:GLY:HA3 | 24:BC:5511:CLA:HMD3 | 1.92 | 0.51 |
| 28:BC:5519:DGD:HE62 | 9:BJ:5040:LEU:HD11 | 1.93 | 0.51 |
| 4:BD:5274:VAL:HA | 35:BD:5406:PL9:C25 | 2.34 | 0.51 |
| 4:BD:5350:ASN:O | 4:BD:5352:LEU:N | 2.42 | 0.51 |
| 20:BZ:5031:GLN:O | 20:BZ:5032:ASP:HB3 | 2.11 | 0.51 |
| 1:AA:283:VAL:HG21 | 34:AD:402:PHO:HBC3 | 1.91 | 0.51 |
| 4:AD:35:ILE:O | 24:AD:404:CLA:HBB2 | 2.11 | 0.51 |
| 4:AD:77:ALA:HB2 | 4:AD:174:GLY:HA3 | 1.91 | 0.51 |
| 4:AD:92:LEU:HA | 4:AD:104:TRP:CD1 | 2.45 | 0.51 |
| 20:AZ:42:LEU:O | 20:AZ:46:LEU:HB2 | 2.09 | 0.51 |
| 1:BA:5011:ALA:O | 1:BA:5012:ASN:CB | 2.58 | 0.51 |
| 1:BA:5288:LEU:HD13 | 3:BC:5432:VAL:CG2 | 2.37 | 0.51 |
| 4:BD:5171:PRO:HG3 | 4:BD:5181:PHE:CE2 | 2.46 | 0.51 |
| 4:BD:5188:PHE:CZ | 4:BD:5326:ARG:HG2 | 2.46 | 0.51 |
| 10:BK:5020:PRO:O | 10:BK:5023:ASP:HB2 | 2.11 | 0.51 |
| 27:BK:5102:BCR:H331 | 27:BK:5102:BCR:HC8 | 1.92 | 0.51 |
| 11:BL:5008:GLN:HB3 | 11:BL:5009:PRO:HD2 | 1.93 | 0.51 |
| 12:BM:5020:VAL:O | 12:BM:5024:ILE:HG13 | 2.11 | 0.51 |
| 13:BO:5046:PRO:HD2 | 13:BO:5266:TYR:HD2 | 1.75 | 0.51 |
| 13:BO:5180:ALA:HB2 | 15:BU:5120:ALA:O | 2.09 | 0.51 |
| 1:AA:38:ILE:HG23 | 30:AA:416:SQD:H131 | 1.93 | 0.51 |
| 1:AA:93:PHE:CZ | 24:AA:407:CLA:HBA1 | 2.44 | 0.51 |
| 1:AA:289:GLY:C | 1:AA:292:THR:HG22 | 2.31 | 0.51 |
| 24:AA:405:CLA:HMD2 | 24:AD:401:CLA:CBB | 2.40 | 0.51 |
| 2:AB:10:THR:HG22 | 2:AB:13:ILE:HD11 | 1.92 | 0.51 |
| 2:AB:58:GLN:O | 24:AB:607:CLA:HED3 | 2.10 | 0.51 |
| 3:AC:297:TYR:HA | 3:AC:302:TYR:CE2 | 2.46 | 0.51 |
| 3:AC:415:ASN:HB3 | 9:AJ:39:SER:OG | 2.08 | 0.51 |
| 9:AJ:15:THR:O | 9:AJ:19:MET:HG3 | 2.09 | 0.51 |
| 1:BA:5271:LEU:HD21 | 25:BA:5409:MST:C8 | 2.40 | 0.51 |
| 2:BB:5012:LEU:CD1 | 2:BB:5019:LEU:HD12 | 2.40 | 0.51 |
| 2:BB:5027:THR:HG23 | 24:BB:5609:CLA:HMC1 | 1.93 | 0.51 |
| 2:BB:5135:LEU:HD13 | 2:BB:5237:VAL:CG2 | 2.41 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:BC:5163:PHE:O | 3:BC:5167:VAL:HG23 | 2.09 | 0.51 |
| 3:BC:5259:TRP:CD1 | 3:BC:5259:TRP:N | 2.77 | 0.51 |
| 4:BD:5259:ILE:HD13 | 14:BT:5021:ILE:HG12 | 1.93 | 0.51 |
| 24:BD:5405:CLA:H42 | 18:BX:5023:LEU:HA | 1.92 | 0.51 |
| 9:BJ:5019:MET:O | 9:BJ:5023:VAL:HG23 | 2.10 | 0.51 |
| 2:AB:293:ALA:C | 2:AB:295:GLY:H | 2.14 | 0.51 |
| 3:AC:377:LEU:O | 3:AC:381:LYS:HB2 | 2.10 | 0.51 |
| 4:AD:76:VAL:O | 4:AD:77:ALA:HB2 | 2.10 | 0.51 |
| 4:AD:161:PRO:HB3 | 4:AD:170:ALA:HB2 | 1.93 | 0.51 |
| 14:AT:22:PHE:C | 14:AT:23:PHE:HD2 | 2.14 | 0.51 |
| 1:BA:5020:TRP:O | 1:BA:5021:VAL:C | 2.49 | 0.51 |
| 2:BB:5433:ASP:C | 2:BB:5433:ASP:OD1 | 2.47 | 0.51 |
| 24:BB:5607:CLA:H161 | 7:BH:5038:PHE:CE2 | 2.45 | 0.51 |
| 3:BC:5204:LEU:HD21 | 3:BC:5238:ILE:HG21 | 1.92 | 0.51 |
| 24:BC:5504:CLA:H61 | 28:BC:5518:DGD:HA61 | 1.92 | 0.51 |
| 4:BD:5334:GLN:N | 4:BD:5335:PRO:HD3 | 2.24 | 0.51 |
| 15:BU:5050:ALA:HB1 | 15:BU:5113:THR:HG21 | 1.93 | 0.51 |
| 16:BV:5058:LEU:HD13 | 16:BV:5137:ASP:HB3 | 1.92 | 0.51 |
| 1:AA:64:ARG:HD3 | 1:AA:64:ARG:H | 1.75 | 0.51 |
| 1:AA:83:VAL:HG22 | 4:AD:314:PHE:CE2 | 2.41 | 0.51 |
| 2:AB:461:LEU:HD21 | 31:AB:621:LMG:C43 | 2.41 | 0.51 |
| 3:AC:453:ALA:HA | 8:AI:34:ARG:O | 2.10 | 0.51 |
| 5:AE:8:ARG:HB2 | 6:AF:13:TYR:CB | 2.41 | 0.51 |
| 6:AF:23:VAL:O | 6:AF:27:ALA:CB | 2.59 | 0.51 |
| 7:AH:13:PRO:HG2 | 7:AH:14:LEU:H | 1.75 | 0.51 |
| 1:BA:5129:ARG:NH2 | 4:BD:5256:ILE:HA | 2.26 | 0.51 |
| 28:BA:5412:DGD:O1B | 28:BA:5412:DGD:HG12 | 2.11 | 0.51 |
| 2:BB:5462:PHE:CE1 | 24:BB:5617:CLA:HMB3 | 2.44 | 0.51 |
| 24:BB:5619:CLA:H142 | 24:BB:5620:CLA:H151 | 1.92 | 0.51 |
| 3:BC:5458:GLY:HA2 | 4:BD:5222:LEU:O | 2.11 | 0.51 |
| 4:BD:5266:TRP:HE1 | 31:BD:5410:LMG:HC72 | 1.74 | 0.51 |
| 18:BX:5022:GLY:HA2 | 18:BX:5025:SER:HG | 1.75 | 0.51 |
| 1:AA:82:VAL:HB | 1:AA:174:LEU:HB2 | 1.92 | 0.51 |
| 2:AB:229:LEU:O | 2:AB:231:MET:N | 2.43 | 0.51 |
| 3:AC:158:THR:HG21 | 3:AC:254:THR:O | 2.09 | 0.51 |
| 4:AD:302:GLU:HA | 4:AD:302:GLU:OE2 | 2.11 | 0.51 |
| 5:BE:5072:ALA:O | 5:BE:5076:VAL:HG23 | 2.10 | 0.51 |
| 2:AB:173:GLY:CA | 2:AB:265:ILE:HD11 | 2.41 | 0.51 |
| 2:AB:377:VAL:HG11 | 4:AD:342:PRO:HG2 | 1.93 | 0.51 |
| 24:AB:611:CLA:H142 | 31:AB:620:LMG:H371 | 1.92 | 0.51 |
| 3:AC:321:ASP:OD2 | 15:AU:129:ASN:HB2 | 2.11 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:BB:5187:PRO:HB3 | 24:BB:5605:CLA:CMB | 2.41 | 0.51 |
| 2:BB:5280:PHE:O | 2:BB:5284:ILE:HG13 | 2.10 | 0.51 |
| 2:BB:5315:ILE:HG22 | 2:BB:5426:PHE:HB3 | 1.92 | 0.51 |
| 3:BC:5297:TYR:HD1 | 3:BC:5302:TYR:CE2 | 2.29 | 0.51 |
| 13:BO:5071:LEU:HD23 | 13:BO:5265:PHE:HB3 | 1.91 | 0.51 |
| 15:BU:5080:VAL:HG22 | 15:BU:5127:ARG:HH21 | 1.76 | 0.51 |
| 18:BX:5024:LEU:O | 18:BX:5028:VAL:HG23 | 2.10 | 0.51 |
| 1:AA:244:GLU:OE2 | 4:AD:264:LYS:NZ | 2.43 | 0.51 |
| 2:AB:356:VAL:HA | 2:AB:370:LEU:HD22 | 1.93 | 0.51 |
| 2:AB:383:PHE:HE1 | 13:AO:194:TYR:CE2 | 2.29 | 0.51 |
| 32:AB:624:LMT:H92 | 7:AH:35:MET:HE2 | 1.92 | 0.51 |
| 3:AC:37:ALA:O | 24:AC:508:CLA:HBA1 | 2.11 | 0.51 |
| 3:AC:42:LEU:HD13 | 24:AC:511:CLA:HMA3 | 1.93 | 0.51 |
| 3:AC:171:GLY:O | 3:AC:174:LEU:HB2 | 2.11 | 0.51 |
| 3:AC:327:ASN:HB3 | 13:AO:125:ASP:OD1 | 2.11 | 0.51 |
| 4:AD:86:GLY:HA2 | 4:AD:166:SER:HB2 | 1.93 | 0.51 |
| 5:AE:8:ARG:HB2 | 6:AF:13:TYR:HB3 | 1.93 | 0.51 |
| 7:AH:55:LEU:HB2 | 7:AH:58:VAL:CG1 | 2.41 | 0.51 |
| 11:AL:8:GLN:N | 11:AL:8:GLN:HE21 | 2.08 | 0.51 |
| 20:AZ:2:THR:CG2 | 20:AZ:3:ILE:H | 2.23 | 0.51 |
| 24:BB:5615:CLA:H142 | 31:BL:5101:LMG:H371 | 1.92 | 0.51 |
| 1:AA:129:ARG:NH2 | 4:AD:256:ILE:HA | 2.26 | 0.51 |
| 2:AB:383:PHE:HE1 | 13:AO:194:TYR:CD2 | 2.29 | 0.51 |
| 3:AC:264:PHE:HE1 | 27:AC:516:BCR:C32 | 2.24 | 0.51 |
| 31:AC:520:LMG:H292 | 27:AJ:101:BCR:H363 | 1.93 | 0.51 |
| 4:AD:134:ARG:HE | 4:AD:134:ARG:CA | 2.20 | 0.51 |
| 2:BB:5015:ASP:N | 2:BB:5016:PRO:HD3 | 2.26 | 0.51 |
| 2:BB:5063:LEU:N | 2:BB:5064:PRO:HD2 | 2.26 | 0.51 |
| 2:BB:5091:TRP:CZ3 | 24:BB:5610:CLA:O1A | 2.64 | 0.51 |
| 2:BB:5225:LEU:HD23 | 32:BB:5627:LMT:H42 | 1.92 | 0.51 |
| 2:BB:5251:VAL:O | 2:BB:5255:THR:HG23 | 2.11 | 0.51 |
| 2:BB:5366:PHE:CD1 | 2:BB:5367:PRO:HD2 | 2.46 | 0.51 |
| 2:BB:5383:PHE:HE1 | 13:BO:5194:TYR:CE2 | 2.29 | 0.51 |
| 3:BC:5028:GLN:HB2 | 24:BC:5511:CLA:CED | 2.41 | 0.51 |
| 3:BC:5094:THR:HG22 | 3:BC:5298:PRO:HD2 | 1.93 | 0.51 |
| 3:BC:5315:MET:HE1 | 3:BC:5369:LEU:HD12 | 1.92 | 0.51 |
| 4:BD:5218:VAL:HG22 | 4:BD:5244:TYR:CE2 | 2.45 | 0.51 |
| 14:BT:5018:PHE:HB2 | 27:BT:5101:BCR:H10C | 1.93 | 0.51 |
| 20:BZ:5034:ASP:OD1 | 20:BZ:5035:ARG:N | 2.44 | 0.51 |
| 1:AA:317:TRP:CD1 | 4:AD:177:ALA:HB2 | 2.46 | 0.51 |
| 2:AB:30:VAL:HG12 | 24:AB:605:CLA:HHD | 1.93 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:238:LEU:HB2 | 24:AB:612:CLA:HMD3 | 1.93 | 0.51 |
| 2:AB:243:ALA:HB2 | 2:AB:466:HIS:CE1 | 2.46 | 0.51 |
| 2:AB:414:PRO:HB2 | 2:AB:415:PRO:CD | 2.35 | 0.51 |
| 4:AD:53:THR:HG22 | 4:AD:67:TYR:HE2 | 1.75 | 0.51 |
| 6:AF:23:VAL:O | 6:AF:27:ALA:HB2 | 2.10 | 0.51 |
| 13:AO:223:ILE:HG12 | 13:AO:224:SER:N | 2.25 | 0.51 |
| 15:AU:66:ILE:CG1 | 15:AU:72:TYR:CD1 | 2.94 | 0.51 |
| 3:BC:5288:CYS:HB3 | 28:BC:5517:DGD:HG2 | 1.92 | 0.51 |
| 13:BO:5092:VAL:HG12 | 13:BO:5093:PRO:HD2 | 1.91 | 0.51 |
| 1:AA:262:TYR:HE1 | 31:AA:414:LMG:C5 | 2.24 | 0.50 |
| 2:AB:2:GLY:HA3 | 11:AL:9:PRO:HG2 | 1.93 | 0.50 |
| 2:AB:176:GLY:HA3 | 2:AB:266:GLU:OE1 | 2.12 | 0.50 |
| 31:AB:620:LMG:HC91 | 11:AL:19:LEU:CD1 | 2.41 | 0.50 |
| 3:AC:458:GLY:HA2 | 4:AD:222:LEU:O | 2.10 | 0.50 |
| 4:AD:87:HIS:HB2 | 28:AH:101:DGD:O2D | 2.11 | 0.50 |
| 18:AX:43:ILE:O | 18:AX:43:ILE:HG22 | 2.10 | 0.50 |
| 1:BA:5205:VAL:HG21 | 24:BA:5405:CLA:CMA | 2.41 | 0.50 |
| 3:BC:5264:PHE:HE1 | 27:BC:5516:BCR:C32 | 2.25 | 0.50 |
| 18:BX:5044:ASP:O | 18:BX:5045:LYS:HB3 | 2.11 | 0.50 |
| 27:AB:618:BCR:H363 | 27:BT:5101:BCR:H19C | 1.92 | 0.50 |
| 5:AE:14:ILE:CG2 | 9:AJ:13:VAL:HG11 | 2.41 | 0.50 |
| 31:AM:101:LMG:O2 | 11:BL:5009:PRO:HB3 | 2.11 | 0.50 |
| 13:AO:240:THR:HA | 13:AO:264:VAL:HA | 1.92 | 0.50 |
| 29:BA:5413:LHG:HC11 | 3:BC:5447:ARG:CZ | 2.41 | 0.50 |
| 2:BB:5172:TYR:OH | 7:BH:5063:LYS:HE2 | 2.11 | 0.50 |
| 2:BB:5354:LEU:HD12 | 2:BB:5354:LEU:N | 2.26 | 0.50 |
| 4:BD:5253:TRP:HB2 | 4:BD:5260:ALA:HB2 | 1.93 | 0.50 |
| 1:AA:92:HIS:CD2 | 3:AC:219:GLY:HA3 | 2.45 | 0.50 |
| 3:AC:321:ASP:OD1 | 3:AC:321:ASP:N | 2.42 | 0.50 |
| 4:AD:37:LEU:HD13 | 4:AD:125:PHE:N | 2.26 | 0.50 |
| 20:AZ:23:VAL:HG12 | 20:AZ:27:TYR:CE2 | 2.46 | 0.50 |
| 1:BA:5057:PRO:HD3 | 1:BA:5073:TYR:CE2 | 2.47 | 0.50 |
| 1:BA:5275:LEU:HD13 | 25:BA:5409:MST:H83 | 1.93 | 0.50 |
| 3:BC:5033:PHE:CD1 | 4:BD:5229:ALA:HB3 | 2.45 | 0.50 |
| 24:BC:5505:CLA:H2 | 24:BC:5505:CLA:HAA1 | 1.94 | 0.50 |
| 16:BV:5133:LEU:HD12 | 16:BV:5133:LEU:N | 2.24 | 0.50 |
| 1:AA:11:ALA:O | 1:AA:12:ASN:CB | 2.60 | 0.50 |
| 1:AA:48:PHE:HA | 1:AA:115:ILE:HD11 | 1.92 | 0.50 |
| 1:AA:200:LEU:HD11 | 28:AC:519:DGD:CCA | 2.29 | 0.50 |
| 24:AA:405:CLA:H92 | 34:AD:402:PHO:CMB | 2.41 | 0.50 |
| 24:AB:612:CLA:H171 | 24:AB:613:CLA:HBB2 | 1.92 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:AC:262:ARG:HH21 | 32:AI:103:LMT:C5' | 2.25 | 0.50 |
| 24:AC:502:CLA:H122 | 24:AC:503:CLA:HMB2 | 1.93 | 0.50 |
| 7:AH:50:ASN:HD22 | 28:AH:101:DGD:HA21 | 1.76 | 0.50 |
| 8:AI:19:PHE:CZ | 8:AI:23:PHE:HE2 | 2.29 | 0.50 |
| 8:AI:21:PHE:HE1 | 32:AI:103:LMT:H41 | 1.75 | 0.50 |
| 10:AK:14:ALA:O | 10:AK:17:ILE:HD13 | 2.10 | 0.50 |
| 13:AO:46:PRO:HD2 | 13:AO:266:TYR:CD2 | 2.45 | 0.50 |
| 24:BA:5406:CLA:H92 | 34:BD:5403:PHO:CMB | 2.41 | 0.50 |
| 2:BB:5139:PHE:HZ | 24:BB:5613:CLA:HMB3 | 1.77 | 0.50 |
| 2:BB:5215:PHE:C | 2:BB:5215:PHE:CD2 | 2.85 | 0.50 |
| 2:BB:5405:GLU:OE1 | 2:BB:5405:GLU:HA | 2.10 | 0.50 |
| 3:BC:5415:ASN:CB | 9:BJ:5039:SER:OG | 2.60 | 0.50 |
| 3:BC:5437:PHE:HA | 24:BC:5508:CLA:HMC3 | 1.92 | 0.50 |
| 3:BC:5437:PHE:CZ | 24:BC:5510:CLA:HMB3 | 2.47 | 0.50 |
| 11:BL:5019:LEU:CD1 | 31:BL:5101:LMG:HC91 | 2.42 | 0.50 |
| 13:BO:5046:PRO:HD2 | 13:BO:5266:TYR:CD2 | 2.46 | 0.50 |
| 16:BV:5119:PRO:HA | 16:BV:5127:PHE:CD2 | 2.46 | 0.50 |
| 3:AC:235:GLY:O | 3:AC:238:ILE:HB | 2.12 | 0.50 |
| 3:AC:326:ALA:HB2 | 15:AU:128:TYR:CG | 2.46 | 0.50 |
| 3:AC:350:ILE:HG21 | 3:AC:359:TRP:HB2 | 1.93 | 0.50 |
| 24:AC:501:CLA:CAD | 24:AC:503:CLA:H12 | 2.42 | 0.50 |
| 24:AD:401:CLA:H2 | 34:AD:403:PHO:HBB1 | 1.92 | 0.50 |
| 6:AF:19:ARG:O | 6:AF:23:VAL:HG23 | 2.11 | 0.50 |
| 24:BB:5616:CLA:H171 | 24:BB:5617:CLA:HBB2 | 1.93 | 0.50 |
| 3:BC:5193:GLY:O | 3:BC:5194:GLY:C | 2.48 | 0.50 |
| 3:BC:5321:ASP:OD1 | 3:BC:5321:ASP:N | 2.44 | 0.50 |
| 3:BC:5377:LEU:CD2 | 13:BO:5126:GLY:HA2 | 2.41 | 0.50 |
| 13:BO:5032:THR:O | 13:BO:5036:ILE:CD1 | 2.54 | 0.50 |
| 18:BX:5012:ILE:O | 18:BX:5012:ILE:HG13 | 2.11 | 0.50 |
| 20:BZ:5033:TRP:O | 20:BZ:5037:LYS:HB2 | 2.12 | 0.50 |
| 1:AA:57:PRO:HG3 | 1:AA:68:SER:CB | 2.39 | 0.50 |
| 13:AO:155:THR:HG23 | 13:AO:168:PHE:CE2 | 2.47 | 0.50 |
| 1:BA:5182:PHE:O | 1:BA:5186:PHE:HB2 | 2.12 | 0.50 |
| 1:BA:5234:ASN:HD21 | 4:BD:5266:TRP:CB | 2.23 | 0.50 |
| 2:BB:5377:VAL:HG11 | 4:BD:5342:PRO:HG2 | 1.93 | 0.50 |
| 13:BO:5091:PHE:CE1 | 13:BO:5260:LYS:HB2 | 2.47 | 0.50 |
| 14:BT:5022:PHE:O | 14:BT:5023:PHE:CD2 | 2.64 | 0.50 |
| 1:AA:20:TRP:O | 1:AA:21:VAL:C | 2.50 | 0.50 |
| 1:AA:190:HIS:HB3 | 1:AA:293:MET:CE | 2.41 | 0.50 |
| 2:AB:5:TRP:CH2 | 31:AB:620:LMG:H291 | 2.47 | 0.50 |
| 3:AC:225:VAL:CG2 | 28:AC:517:DGD:HG11 | 2.41 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:AC:368:PRO:O | 3:AC:379:LYS:HE2 | 2.12 | 0.50 |
| 4:AD:190:ASN:HB2 | 4:AD:296:TYR:CE1 | 2.47 | 0.50 |
| 7:AH:11:LEU:HA | 7:AH:14:LEU:HD12 | 1.93 | 0.50 |
| 10:AK:43:VAL:CG2 | 10:AK:46:ARG:HE | 2.24 | 0.50 |
| 27:AK:102:BCR:HC8 | 27:AK:102:BCR:H331 | 1.93 | 0.50 |
| 13:AO:234:THR:HG1 | 13:AO:236:GLU:HG2 | 1.76 | 0.50 |
| 3:BC:5335:THR:HA | 13:BO:5178:ARG:HD3 | 1.94 | 0.50 |
| 4:BD:5279:LEU:HD22 | 24:BD:5402:CLA:HMA2 | 1.93 | 0.50 |
| 10:BK:5017:ILE:H | 10:BK:5017:ILE:CD1 | 2.25 | 0.50 |
| 2:AB:25:MET:HE2 | 27:AB:617:BCR:H393 | 1.93 | 0.50 |
| 3:AC:418:ASN:CA | 28:AC:519:DGD:HE2 | 2.42 | 0.50 |
| 4:AD:86:GLY:O | 4:AD:166:SER:HB2 | 2.12 | 0.50 |
| 14:AT:29:ILE:N | 14:AT:29:ILE:CD1 | 2.71 | 0.50 |
| 1:BA:5258:LEU:HB3 | 1:BA:5259:ILE:CD1 | 2.40 | 0.50 |
| 24:BA:5406:CLA:HMD2 | 24:BD:5402:CLA:CBB | 2.42 | 0.50 |
| 3:BC:5055:ALA:CB | 27:BC:5514:BCR:H373 | 2.38 | 0.50 |
| 27:BC:5516:BCR:HC41 | 8:BI:5020:VAL:CG1 | 2.41 | 0.50 |
| 5:BE:5014:ILE:HG22 | 5:BE:5014:ILE:O | 2.12 | 0.50 |
| 12:BM:5025:LEU:HD23 | 12:BM:5025:LEU:N | 2.27 | 0.50 |
| 13:BO:5225:LEU:HD12 | 13:BO:5225:LEU:N | 2.27 | 0.50 |
| 1:AA:235:TYR:C | 1:AA:237:TYR:H | 2.16 | 0.50 |
| 31:AB:620:LMG:H302 | 12:AM:22:LEU:HD21 | 1.93 | 0.50 |
| 3:AC:89:ILE:N | 3:AC:90:PRO:CD | 2.75 | 0.50 |
| 3:AC:109:PHE:O | 3:AC:113:VAL:HG23 | 2.11 | 0.50 |
| 10:AK:17:ILE:H | 10:AK:17:ILE:CD1 | 2.23 | 0.50 |
| 13:AO:86:ARG:NE | 13:AO:86:ARG:O | 2.45 | 0.50 |
| 1:BA:5275:LEU:HD13 | 25:BA:5409:MST:C8 | 2.42 | 0.50 |
| 24:BB:5615:CLA:H51 | 24:BB:5618:CLA:HBC2 | 1.94 | 0.50 |
| 3:BC:5276:LEU:HD21 | 24:BC:5508:CLA:HBB1 | 1.93 | 0.50 |
| 6:BF:5018:VAL:CG1 | 6:BF:5019:ARG:N | 2.74 | 0.50 |
| 11:BL:5022:LEU:HD13 | 14:BT:5016:LEU:HD23 | 1.94 | 0.50 |
| 13:BO:5064:TYR:CD1 | 13:BO:5271:PRO:HA | 2.47 | 0.50 |
| 1:AA:258:LEU:HB3 | 1:AA:259:ILE:CD1 | 2.39 | 0.49 |
| 29:AA:412:LHG:HC11 | 3:AC:447:ARG:CZ | 2.41 | 0.49 |
| 3:AC:29:GLU:CB | 10:AK:46:ARG:NH1 | 2.71 | 0.49 |
| 3:AC:223:TRP:CE3 | 3:AC:224:ILE:HG13 | 2.46 | 0.49 |
| 3:BC:5171:GLY:O | 3:BC:5174:LEU:HB2 | 2.12 | 0.49 |
| 13:BO:5117:GLY:O | 13:BO:5159:VAL:HG12 | 2.11 | 0.49 |
| 1:AA:69:GLY:HA2 | 1:AA:75:ASN:ND2 | 2.27 | 0.49 |
| 1:AA:200:LEU:HD21 | 28:AC:519:DGD:HAW1 | 1.94 | 0.49 |
| 1:AA:271:LEU:HD21 | 25:AA:408:MST:C8 | 2.41 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:289:GLY:CA | 1:AA:292:THR:HG22 | 2.42 | 0.49 |
| 2:AB:311:PHE:HA | 2:AB:430:PHE:CZ | 2.47 | 0.49 |
| 28:AC:519:DGD:HG2 | 9:AJ:33:TYR:OH | 2.12 | 0.49 |
| 4:AD:141:TYR:OH | 31:AD:407:LMG:HC2 | 2.11 | 0.49 |
| 4:AD:154:VAL:O | 4:AD:158:LEU:HB2 | 2.12 | 0.49 |
| 4:AD:193:LEU:HG | 4:AD:193:LEU:O | 2.11 | 0.49 |
| 4:AD:350:ASN:O | 4:AD:352:LEU:N | 2.42 | 0.49 |
| 9:AJ:18:GLY:HA3 | 27:AK:102:BCR:H371 | 1.94 | 0.49 |
| 1:BA:5043:ALA:HB3 | 1:BA:5118:HIS:HD2 | 1.77 | 0.49 |
| 1:BA:5257:ARG:HG3 | 1:BA:5257:ARG:NH1 | 2.26 | 0.49 |
| 2:BB:5235:GLU:OE1 | 2:BB:5472:ARG:NH1 | 2.44 | 0.49 |
| 2:BB:5311:PHE:HA | 2:BB:5430:PHE:CZ | 2.47 | 0.49 |
| 3:BC:5225:VAL:CG2 | 28:BC:5517:DGD:HG11 | 2.42 | 0.49 |
| 4:BD:5053:THR:HA | 4:BD:5067:TYR:CD2 | 2.47 | 0.49 |
| 4:BD:5141:TYR:OH | 31:BD:5409:LMG:HC2 | 2.13 | 0.49 |
| 13:BO:5186:LYS:HE2 | 13:BO:5186:LYS:HA | 1.92 | 0.49 |
| 15:BU:5080:VAL:HG22 | 15:BU:5127:ARG:NH2 | 2.27 | 0.49 |
| 2:AB:91:TRP:CZ3 | 24:AB:606:CLA:O1A | 2.65 | 0.49 |
| 2:AB:371:THR:HG22 | 2:AB:377:VAL:CA | 2.41 | 0.49 |
| 24:AB:608:CLA:C4 | 4:AD:127:LEU:HD11 | 2.21 | 0.49 |
| 3:AC:137:PRO:HB2 | 3:AC:139:THR:O | 2.12 | 0.49 |
| 3:AC:225:VAL:HG22 | 3:AC:289:PHE:CD1 | 2.47 | 0.49 |
| 5:AE:7:GLU:O | 5:AE:9:PRO:HD3 | 2.12 | 0.49 |
| 15:AU:72:TYR:O | 15:AU:73:PRO:C | 2.48 | 0.49 |
| 24:BB:5605:CLA:HBC3 | 7:BH:5041:PHE:CE1 | 2.47 | 0.49 |
| 3:BC:5109:PHE:O | 3:BC:5113:VAL:HG23 | 2.12 | 0.49 |
| 20:BZ:5029:SER:C | 20:BZ:5031:GLN:H | 2.16 | 0.49 |
| 2:AB:243:ALA:HB2 | 2:AB:466:HIS:ND1 | 2.27 | 0.49 |
| 2:AB:384:ARG:HD3 | 15:AU:132:LEU:HD13 | 1.94 | 0.49 |
| 3:AC:55:ALA:CB | 27:AC:514:BCR:H373 | 2.40 | 0.49 |
| 4:AD:57:SER:HA | 4:AD:60:THR:HG22 | 1.95 | 0.49 |
| 6:AF:41:GLN:N | 6:AF:41:GLN:HE21 | 2.10 | 0.49 |
| 13:AO:225:LEU:HD12 | 13:AO:225:LEU:N | 2.28 | 0.49 |
| 15:AU:83:ALA:CB | 15:AU:84:PRO:CD | 2.80 | 0.49 |
| 20:AZ:2:THR:CG2 | 20:AZ:3:ILE:N | 2.73 | 0.49 |
| 2:BB:5224:ARG:HG3 | 7:BH:5025:TRP:HA | 1.94 | 0.49 |
| 2:BB:5372:ASP:OD1 | 2:BB:5374:ASN:N | 2.44 | 0.49 |
| 2:BB:5450:TRP:HB3 | 24:BB:5611:CLA:HMB2 | 1.95 | 0.49 |
| 3:BC:5114:VAL:CG2 | 31:BC:5521:LMG:H141 | 2.41 | 0.49 |
| 3:BC:5332:GLN:HG3 | 13:BO:5129:PHE:CE2 | 2.47 | 0.49 |
| 31:BC:5520:LMG:H292 | 27:BJ:5101:BCR:H363 | 1.93 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 12:BM:5017:VAL:HG12 | 12:BM:5018:PRO:N | 2.26 | 0.49 |
| 14:BT:5025:GLU:O | 14:BT:5026:PRO:C | 2.50 | 0.49 |
| 1:AA:57:PRO:HD3 | 1:AA:73:TYR:CE2 | 2.48 | 0.49 |
| 1:AA:163:ILE:HG12 | 28:AC:517:DGD:HB31 | 1.93 | 0.49 |
| 1:AA:257:ARG:HG3 | 1:AA:257:ARG:NH1 | 2.24 | 0.49 |
| 28:AC:519:DGD:O3D | 9:AJ:37:GLY:O | 2.25 | 0.49 |
| 4:AD:279:LEU:HD22 | 24:AD:401:CLA:HMA2 | 1.94 | 0.49 |
| 6:AF:19:ARG:HG3 | 6:AF:19:ARG:NH1 | 2.28 | 0.49 |
| 13:AO:147:THR:OG1 | 13:AO:148:VAL:N | 2.46 | 0.49 |
| 13:AO:186:LYS:HE2 | 13:AO:186:LYS:HA | 1.95 | 0.49 |
| 2:BB:5133:LEU:HB3 | 2:BB:5138:MET:HE1 | 1.93 | 0.49 |
| 3:BC:5252:ILE:HG22 | 3:BC:5253:LEU:HD23 | 1.95 | 0.49 |
| 3:BC:5437:PHE:HA | 24:BC:5508:CLA:HMC1 | 1.93 | 0.49 |
| 3:BC:5452:ALA:O | 3:BC:5454:GLY:N | 2.44 | 0.49 |
| 11:BL:5020:GLY:HA3 | 12:BM:5022:LEU:CD1 | 2.43 | 0.49 |
| 13:BO:5178:ARG:HD2 | 13:BO:5182:PHE:CD1 | 2.46 | 0.49 |
| 16:BV:5090:PRO:O | 16:BV:5092:ARG:HD3 | 2.13 | 0.49 |
| 2:AB:41:GLU:HB3 | 2:AB:60:MET:SD | 2.52 | 0.49 |
| 2:AB:44:THR:HB | 32:AB:629:LMT:O6' | 2.13 | 0.49 |
| 3:AC:155:ASN:CA | 3:AC:158:THR:HG22 | 2.39 | 0.49 |
| 3:AC:276:LEU:HD21 | 24:AC:508:CLA:HBB1 | 1.94 | 0.49 |
| 28:AH:101:DGD:O1B | 28:AH:101:DGD:HG12 | 2.12 | 0.49 |
| 13:AO:178:ARG:HD2 | 13:AO:182:PHE:CD1 | 2.48 | 0.49 |
| 18:AX:24:LEU:O | 18:AX:28:VAL:HG23 | 2.12 | 0.49 |
| 20:AZ:23:VAL:HB | 20:AZ:24:PRO:HD3 | 1.95 | 0.49 |
| 1:BA:5077:ILE:HG12 | 14:BT:5006:TYR:CD1 | 2.47 | 0.49 |
| 2:BB:5252:VAL:HG12 | 24:BB:5607:CLA:O1A | 2.13 | 0.49 |
| 2:BB:5305:ILE:O | 2:BB:5305:ILE:HG22 | 2.11 | 0.49 |
| 4:BD:5161:PRO:HB3 | 4:BD:5170:ALA:HB2 | 1.94 | 0.49 |
| 1:AA:207:GLY:O | 1:AA:210:LEU:HB3 | 2.12 | 0.49 |
| 2:AB:251:VAL:O | 2:AB:255:THR:HG23 | 2.12 | 0.49 |
| 24:AB:605:CLA:H141 | 24:AB:610:CLA:HED2 | 1.94 | 0.49 |
| 3:AC:346:THR:O | 13:AO:40:GLY:HA2 | 2.13 | 0.49 |
| 13:AO:59:ASP:C | 13:AO:61:SER:H | 2.14 | 0.49 |
| 13:AO:126:GLY:O | 13:AO:128:ASP:N | 2.45 | 0.49 |
| 1:BA:5038:ILE:HB | 1:BA:5039:PRO:HD3 | 1.93 | 0.49 |
| 29:BA:5413:LHG:HC11 | 3:BC:5447:ARG:NE | 2.27 | 0.49 |
| 3:BC:5337:LEU:CD1 | 13:BO:5131:PRO:HG3 | 2.41 | 0.49 |
| 4:BD:5308:ASP:C | 4:BD:5308:ASP:OD1 | 2.49 | 0.49 |
| 9:BJ:5024:ILE:HG23 | 9:BJ:5025:VAL:N | 2.27 | 0.49 |
| 13:BO:5148:VAL:HA | 13:BO:5172:PHE:CD2 | 2.47 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 15:BU:5072:TYR:CB | 15:BU:5073:PRO:HD3 | 2.40 | 0.49 |
| 2:AB:133:LEU:HB3 | 2:AB:138:MET:HE1 | 1.94 | 0.49 |
| 3:AC:297:TYR:HA | 3:AC:302:TYR:HE2 | 1.77 | 0.49 |
| 4:AD:52:THR:HG22 | 4:AD:67:TYR:CE2 | 2.48 | 0.49 |
| 7:AH:44:ILE:HG12 | 18:AX:19:PHE:CE2 | 2.48 | 0.49 |
| 10:AK:12:PRO:HB3 | 20:AZ:62:VAL:HG11 | 1.93 | 0.49 |
| 13:AO:83:LYS:HE2 | 2:BB:5338:GLN:HA | 1.94 | 0.49 |
| 2:BB:5008:VAL:HG23 | 2:BB:5009:HIS:HD2 | 1.76 | 0.49 |
| 2:BB:5115:TRP:CZ2 | 24:BB:5618:CLA:HBA2 | 2.47 | 0.49 |
| 24:BB:5608:CLA:HMC2 | 24:BB:5615:CLA:H191 | 1.95 | 0.49 |
| 24:BB:5612:CLA:HMA1 | 4:BD:5130:PHE:CE1 | 2.48 | 0.49 |
| 3:BC:5049:LEU:HD23 | 3:BC:5149:TYR:OH | 2.12 | 0.49 |
| 3:BC:5089:ILE:N | 3:BC:5090:PRO:CD | 2.74 | 0.49 |
| 4:BD:5186:GLN:HB2 | 24:BD:5402:CLA:HBC1 | 1.95 | 0.49 |
| 9:BJ:5034:ALA:O | 9:BJ:5035:GLY:O | 2.31 | 0.49 |
| 16:BV:5071:ILE:HD12 | 16:BV:5071:ILE:C | 2.33 | 0.49 |
| 1:AA:22:THR:HG21 | 8:AI:30:ARG:HE | 1.78 | 0.49 |
| 24:AB:608:CLA:HMA1 | 4:AD:130:PHE:CE1 | 2.48 | 0.49 |
| 3:AC:155:ASN:O | 3:AC:158:THR:HG22 | 2.12 | 0.49 |
| 28:AC:518:DGD:HB22 | 28:AC:519:DGD:HA21 | 1.95 | 0.49 |
| 4:AD:57:SER:CA | 4:AD:60:THR:HG22 | 2.43 | 0.49 |
| 24:AD:404:CLA:C4 | 18:AX:23:LEU:HA | 2.43 | 0.49 |
| 13:AO:66:ILE:HD12 | 13:AO:121:PHE:CD1 | 2.48 | 0.49 |
| 13:AO:71:LEU:HD23 | 13:AO:265:PHE:HB3 | 1.94 | 0.49 |
| 2:BB:5002:GLY:HA3 | 11:BL:5009:PRO:HG2 | 1.94 | 0.49 |
| 4:BD:5052:THR:HG22 | 4:BD:5067:TYR:CE2 | 2.48 | 0.49 |
| 28:BH:5101:DGD:O1B | 28:BH:5101:DGD:HG12 | 2.12 | 0.49 |
| 13:BO:5155:THR:HG23 | 13:BO:5168:PHE:CE2 | 2.48 | 0.49 |
| 13:BO:5240:THR:HA | 13:BO:5264:VAL:HA | 1.95 | 0.49 |
| 1:AA:59:ASP:OD1 | 1:AA:64:ARG:N | 2.46 | 0.49 |
| 2:AB:8:VAL:HG23 | 2:AB:9:HIS:HD2 | 1.77 | 0.49 |
| 2:AB:27:THR:HG23 | 24:AB:605:CLA:HMC1 | 1.94 | 0.49 |
| 2:AB:187:PRO:HB3 | 24:AB:601:CLA:CMB | 2.42 | 0.49 |
| 3:AC:149:TYR:CA | 3:AC:156:LYS:HD3 | 2.42 | 0.49 |
| 3:AC:337:LEU:CD1 | 13:AO:131:PRO:HG3 | 2.43 | 0.49 |
| 13:AO:210:ARG:HA | 15:AU:39:LEU:CD1 | 2.43 | 0.49 |
| 15:AU:66:ILE:O | 15:AU:66:ILE:CG2 | 2.61 | 0.49 |
| 16:AV:45:ILE:HG12 | 16:AV:46:THR:N | 2.27 | 0.49 |
| 3:BC:5271:TYR:CE1 | 24:BC:5507:CLA:HAC2 | 2.48 | 0.49 |
| 3:BC:5346:THR:O | 13:BO:5040:GLY:HA2 | 2.13 | 0.49 |
| 18:BX:5043:ILE:HG22 | 18:BX:5043:ILE:O | 2.13 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:64:ARG:HG3 | 1:AA:64:ARG:NH1 | 2.27 | 0.48 |
| 2:AB:139:PHE:CZ | 24:AB:609:CLA:HMB3 | 2.48 | 0.48 |
| 2:AB:224:ARG:HG3 | 7:AH:25:TRP:HA | 1.94 | 0.48 |
| 24:AC:505:CLA:H2 | 24:AC:505:CLA:HAA1 | 1.95 | 0.48 |
| 15:AU:80:VAL:HG22 | 15:AU:127:ARG:HH21 | 1.78 | 0.48 |
| 20:AZ:48:ILE:O | 20:AZ:52:LEU:HG | 2.13 | 0.48 |
| 1:BA:5159:LEU:C | 1:BA:5162:PRO:HD2 | 2.34 | 0.48 |
| 24:BA:5408:CLA:HBA2 | 28:BA:5412:DGD:HB22 | 1.95 | 0.48 |
| 2:BB:5270:PRO:HG3 | 2:BB:5312:TYR:CD2 | 2.48 | 0.48 |
| 2:BB:5293:ALA:C | 2:BB:5295:GLY:H | 2.15 | 0.48 |
| 2:BB:5384:ARG:HH11 | 15:BU:5132:LEU:HD13 | 1.77 | 0.48 |
| 24:BB:5606:CLA:H191 | 4:BD:5158:LEU:HB3 | 1.96 | 0.48 |
| 3:BC:5296:VAL:HG23 | 3:BC:5297:TYR:CD2 | 2.48 | 0.48 |
| 3:BC:5380:ILE:CA | 3:BC:5384:ILE:HD11 | 2.37 | 0.48 |
| 5:BE:5026:THR:HB | 36:BF:5101:HEM:CAB | 2.43 | 0.48 |
| 13:BO:5116:ASP:OD2 | 13:BO:5116:ASP:C | 2.50 | 0.48 |
| 20:BZ:5023:VAL:HB | 20:BZ:5024:PRO:HD3 | 1.95 | 0.48 |
| 20:BZ:5032:ASP:OD1 | 20:BZ:5036:SER:HB2 | 2.13 | 0.48 |
| 20:BZ:5048:ILE:O | 20:BZ:5052:LEU:HG | 2.13 | 0.48 |
| 1:AA:190:HIS:O | 1:AA:298:ASN:HB3 | 2.13 | 0.48 |
| 2:AB:384:ARG:NH1 | 15:AU:132:LEU:HD13 | 2.28 | 0.48 |
| 24:AB:604:CLA:HMC2 | 24:AB:611:CLA:H191 | 1.95 | 0.48 |
| 3:AC:49:LEU:HD23 | 3:AC:149:TYR:OH | 2.13 | 0.48 |
| 4:AD:266:TRP:CD1 | 31:AD:408:LMG:HC1 | 2.47 | 0.48 |
| 13:AO:71:LEU:HD12 | 13:AO:104:LEU:HD12 | 1.95 | 0.48 |
| 16:AV:146:LEU:O | 16:AV:150:LYS:HG3 | 2.13 | 0.48 |
| 1:BA:5057:PRO:HG3 | 1:BA:5068:SER:CB | 2.43 | 0.48 |
| 2:BB:5238:LEU:N | 24:BB:5616:CLA:HMD3 | 2.28 | 0.48 |
| 2:BB:5324:LEU:CA | 4:BD:5293:LEU:HD23 | 2.38 | 0.48 |
| 3:BC:5235:GLY:O | 3:BC:5238:ILE:HB | 2.13 | 0.48 |
| 3:BC:5249:ILE:O | 3:BC:5253:LEU:HG | 2.13 | 0.48 |
| 4:BD:5266:TRP:NE1 | 31:BD:5410:LMG:HC72 | 2.28 | 0.48 |
| 13:BO:5066:ILE:HD12 | 13:BO:5121:PHE:CD1 | 2.48 | 0.48 |
| 15:BU:5057:LEU:HD11 | 15:BU:5112:PHE:CB | 2.42 | 0.48 |
| 1:AA:131:TRP:CE3 | 1:AA:132:GLU:CA | 2.97 | 0.48 |
| 2:AB:175:THR:O | 2:AB:176:GLY:O | 2.31 | 0.48 |
| 4:AD:337:GLU:O | 4:AD:338:ASN:C | 2.51 | 0.48 |
| 13:AO:159:VAL:HG13 | 13:AO:159:VAL:O | 2.13 | 0.48 |
| 15:AU:73:PRO:HG2 | 16:AV:107:THR:HB | 1.95 | 0.48 |
| 1:BA:5092:HIS:CD2 | 3:BC:5219:GLY:HA3 | 2.48 | 0.48 |
| 29:BA:5413:LHG:HC11 | 3:BC:5447:ARG:HH21 | 1.78 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 29:BA:5413:LHG:C1 | 3:BC:5447:ARG:HE | 2.26 | 0.48 |
| 24:BB:5605:CLA:HBB1 | 24:BB:5605:CLA:HHC | 1.94 | 0.48 |
| 13:BO:5065:ARG:HB2 | 13:BO:5065:ARG:NH1 | 2.28 | 0.48 |
| 13:BO:5147:THR:OG1 | 13:BO:5148:VAL:N | 2.47 | 0.48 |
| 1:AA:27:ARG:NH1 | 1:AA:27:ARG:O | 2.47 | 0.48 |
| 1:AA:254:TYR:CD1 | 4:AD:132:ILE:HG22 | 2.48 | 0.48 |
| 1:AA:318:ALA:HB2 | 4:AD:75:THR:HG22 | 1.95 | 0.48 |
| 2:AB:354:LEU:HD12 | 2:AB:354:LEU:N | 2.28 | 0.48 |
| 24:AB:611:CLA:H92 | 31:AD:407:LMG:H232 | 1.95 | 0.48 |
| 7:AH:35:MET:SD | 27:AX:101:BCR:H322 | 2.53 | 0.48 |
| 1:BA:5330:VAL:CG1 | 4:BD:5348:ARG:HG2 | 2.42 | 0.48 |
| 2:BB:5383:PHE:HE1 | 13:BO:5194:TYR:CD2 | 2.30 | 0.48 |
| 8:BI:5019:PHE:CZ | 8:BI:5023:PHE:HE2 | 2.30 | 0.48 |
| 20:BZ:5032:ASP:OD1 | 20:BZ:5033:TRP:N | 2.41 | 0.48 |
| 1:AA:45:THR:CG2 | 1:AA:46:ILE:N | 2.76 | 0.48 |
| 3:AC:94:THR:CG2 | 3:AC:298:PRO:HD2 | 2.44 | 0.48 |
| 3:AC:155:ASN:HA | 3:AC:158:THR:CG2 | 2.38 | 0.48 |
| 3:AC:337:LEU:HD12 | 13:AO:131:PRO:CG | 2.44 | 0.48 |
| 24:AC:506:CLA:HMC2 | 24:AC:507:CLA:H8 | 1.95 | 0.48 |
| 7:AH:11:LEU:C | 7:AH:13:PRO:HD2 | 2.34 | 0.48 |
| 2:BB:5004:PRO:CG | 2:BB:5007:ARG:HD2 | 2.35 | 0.48 |
| 4:BD:5087:HIS:HB2 | 28:BH:5101:DGD:O2D | 2.12 | 0.48 |
| 4:BD:5210:LEU:HA | 4:BD:5213:ILE:HG22 | 1.95 | 0.48 |
| 5:BE:5061:ARG:NH2 | 16:BV:5153:GLY:HA3 | 2.28 | 0.48 |
| 7:BH:5011:LEU:HA | 7:BH:5014:LEU:HD12 | 1.94 | 0.48 |
| 13:BO:5135:GLN:HG2 | 13:BO:5141:ARG:HG3 | 1.96 | 0.48 |
| 1:AA:182:PHE:O | 1:AA:186:PHE:HB2 | 2.14 | 0.48 |
| 2:AB:372:ASP:OD1 | 2:AB:374:ASN:N | 2.46 | 0.48 |
| 3:AC:80:PRO:HB3 | 3:AC:82:TYR:CE1 | 2.49 | 0.48 |
| 9:AJ:34:ALA:O | 9:AJ:35:GLY:O | 2.31 | 0.48 |
| 1:BA:5220:THR:HG23 | 4:BD:5141:TYR:CD1 | 2.49 | 0.48 |
| 2:BB:5012:LEU:HD12 | 2:BB:5019:LEU:HD12 | 1.96 | 0.48 |
| 24:BC:5511:CLA:H143 | 20:BZ:5024:PRO:HG2 | 1.96 | 0.48 |
| 5:BE:5078:THR:O | 5:BE:5081:GLU:HB2 | 2.14 | 0.48 |
| 6:BF:5015:ILE:HG22 | 6:BF:5016:PHE:CD1 | 2.47 | 0.48 |
| 13:BO:5120:THR:HA | 13:BO:5153:ALA:O | 2.14 | 0.48 |
| 3:AC:147:PHE:CD2 | 24:AC:513:CLA:H3A | 2.49 | 0.48 |
| 13:AO:155:THR:HG22 | 13:AO:167:ASP:O | 2.14 | 0.48 |
| 1:BA:5022:THR:HG21 | 8:BI:5030:ARG:HE | 1.78 | 0.48 |
| 1:BA:5278:TRP:HA | 28:BC:5519:DGD:HAG1 | 1.96 | 0.48 |
| 1:AA:248:ILE:O | 1:AA:248:ILE:CG1 | 2.61 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 2:AB:172:TYR:O | 2:AB:173:GLY:C | 2.52 | 0.48 |
| 2:AB:245:VAL:HG22 | 24:AB:612:CLA:H192 | 1.95 | 0.48 |
| 3:AC:214:LEU:HD22 | 3:AC:214:LEU:N | 2.28 | 0.48 |
| 3:AC:271:TYR:CE1 | 24:AC:507:CLA:HAC2 | 2.49 | 0.48 |
| 3:AC:461:ARG:NH2 | 4:AD:242:GLU:O | 2.46 | 0.48 |
| 4:AD:188:PHE:CZ | 4:AD:326:ARG:HG2 | 2.49 | 0.48 |
| 10:AK:25:LEU:HB2 | 10:AK:26:PRO:HD3 | 1.96 | 0.48 |
| 16:AV:143:GLY:O | 16:AV:147:VAL:HG23 | 2.14 | 0.48 |
| 18:AX:22:GLY:HA2 | 18:AX:25:SER:HG | 1.79 | 0.48 |
| 1:BA:5281:VAL:HG13 | 28:BC:5519:DGD:HAG3 | 1.93 | 0.48 |
| 3:BC:5350:ILE:HG21 | 3:BC:5359:TRP:HB2 | 1.96 | 0.48 |
| 3:BC:5418:ASN:HB2 | 28:BC:5519:DGD:HE2 | 1.92 | 0.48 |
| 24:BC:5501:CLA:CAD | 24:BC:5503:CLA:H12 | 2.44 | 0.48 |
| 7:BH:5013:PRO:HG2 | 7:BH:5014:LEU:H | 1.78 | 0.48 |
| 1:AA:315:ASN:ND2 | 4:AD:332:GLN:HE22 | 2.07 | 0.48 |
| 12:AM:1:MET:HG2 | 12:AM:2:GLU:H | 1.79 | 0.48 |
| 16:AV:58:LEU:HD13 | 16:AV:137:ASP:HB3 | 1.95 | 0.48 |
| 1:BA:5047:CYS:SG | 1:BA:5114:LEU:HD22 | 2.53 | 0.48 |
| 1:BA:5131:TRP:CE3 | 1:BA:5132:GLU:CA | 2.97 | 0.48 |
| 2:BB:5107:LEU:HD21 | 24:BB:5619:CLA:H42 | 1.95 | 0.48 |
| 3:BC:5436:PHE:O | 24:BC:5508:CLA:HAC1 | 2.14 | 0.48 |
| 24:BC:5507:CLA:HHC | 24:BC:5507:CLA:HBB1 | 1.96 | 0.48 |
| 4:BD:5209:LEU:HD23 | 4:BD:5209:LEU:C | 2.34 | 0.48 |
| 5:BE:5069:ARG:HG3 | 5:BE:5070:PHE:H | 1.79 | 0.48 |
| 11:BL:5016:SER:HA | 11:BL:5019:LEU:CG | 2.44 | 0.48 |
| 15:BU:5066:ILE:O | 15:BU:5066:ILE:CG2 | 2.61 | 0.48 |
| 2:AB:222:PRO:HG3 | 7:AH:27:THR:N | 2.25 | 0.48 |
| 2:AB:234:ILE:HD12 | 2:AB:237:VAL:CG2 | 2.43 | 0.48 |
| 2:AB:326:ARG:HD3 | 2:AB:442:ILE:HG22 | 1.95 | 0.48 |
| 3:AC:141:GLU:CD | 3:AC:141:GLU:H | 2.16 | 0.48 |
| 4:AD:218:VAL:HG22 | 4:AD:244:TYR:CE2 | 2.49 | 0.48 |
| 18:AX:44:ASP:N | 18:AX:44:ASP:OD1 | 2.46 | 0.48 |
| 20:AZ:32:ASP:C | 20:AZ:34:ASP:H | 2.17 | 0.48 |
| 2:BB:5329:PRO:HD2 | 31:BB:5624:LMG:O4 | 2.14 | 0.48 |
| 24:BB:5610:CLA:H52 | 27:BB:5623:BCR:H321 | 1.96 | 0.48 |
| 4:BD:5152:VAL:HG11 | 24:BD:5402:CLA:H11 | 1.94 | 0.48 |
| 16:BV:5121:LEU:CD2 | 16:BV:5138:LEU:HD11 | 2.44 | 0.48 |
| 1:AA:183:MET:HA | 24:AA:404:CLA:HMD2 | 1.96 | 0.47 |
| 1:AA:202:VAL:O | 1:AA:206:PHE:HB2 | 2.14 | 0.47 |
| 1:AA:215:HIS:O | 1:AA:216:GLY:C | 2.53 | 0.47 |
| 2:AB:12:LEU:HD12 | 2:AB:19:LEU:HD12 | 1.94 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:15:ASP:N | 2:AB:16:PRO:HD3 | 2.29 | 0.47 |
| 3:AC:256:PRO:HG2 | 3:AC:266:TRP:CH2 | 2.49 | 0.47 |
| 5:AE:69:ARG:HG3 | 5:AE:70:PHE:H | 1.78 | 0.47 |
| 11:AL:20:GLY:HA3 | 12:AM:22:LEU:CD1 | 2.44 | 0.47 |
| 13:AO:236:GLU:HG3 | 13:AO:236:GLU:O | 2.14 | 0.47 |
| 15:AU:38:GLU:O | 15:AU:39:LEU:O | 2.32 | 0.47 |
| 16:AV:81:ARG:HG2 | 16:AV:81:ARG:NH1 | 2.29 | 0.47 |
| 1:BA:5048:PHE:CA | 1:BA:5115:ILE:HD11 | 2.44 | 0.47 |
| 1:BA:5322:ASN:OD1 | 3:BC:5412:THR:HA | 2.14 | 0.47 |
| 24:BA:5406:CLA:HED2 | 4:BD:5198:MET:SD | 2.54 | 0.47 |
| 3:BC:5365:TRP:HA | 3:BC:5387:TRP:CH2 | 2.49 | 0.47 |
| 4:BD:5096:GLU:H | 4:BD:5096:GLU:CD | 2.17 | 0.47 |
| 5:BE:5051:ARG:O | 5:BE:5053:ASP:N | 2.47 | 0.47 |
| 13:BO:5071:LEU:HD12 | 13:BO:5104:LEU:HD12 | 1.96 | 0.47 |
| 13:BO:5157:PRO:O | 13:BO:5158:ASN:O | 2.32 | 0.47 |
| 1:AA:10:SER:C | 1:AA:12:ASN:H | 2.16 | 0.47 |
| 1:AA:21:VAL:HG11 | 1:AA:32:TRP:CE3 | 2.49 | 0.47 |
| 1:AA:275:LEU:HD13 | 25:AA:408:MST:C8 | 2.44 | 0.47 |
| 1:AA:295:PHE:O | 3:AC:424:SER:OG | 2.32 | 0.47 |
| 2:AB:24:LEU:HD13 | 2:AB:111:ALA:N | 2.29 | 0.47 |
| 24:AC:507:CLA:HBB1 | 24:AC:507:CLA:HHC | 1.96 | 0.47 |
| 4:AD:221:THR:HG23 | 4:AD:221:THR:O | 2.13 | 0.47 |
| 4:AD:261:PHE:HE1 | 4:AD:266:TRP:CD1 | 2.33 | 0.47 |
| 5:AE:14:ILE:HG22 | 5:AE:14:ILE:O | 2.13 | 0.47 |
| 5:AE:77:GLU:HA | 5:AE:80:LEU:HD23 | 1.96 | 0.47 |
| 19:AY:11:UNK:C | 19:AY:13:UNK:N | 2.75 | 0.47 |
| 1:BA:5281:VAL:HG11 | 28:BC:5519:DGD:HAV1 | 1.96 | 0.47 |
| 2:BB:5012:LEU:HD22 | 2:BB:5018:ARG:HB2 | 1.95 | 0.47 |
| 3:BC:5441:HIS:HD2 | 3:BC:5442:LEU:HD12 | 1.78 | 0.47 |
| 24:BC:5504:CLA:H192 | 28:BC:5518:DGD:HBN2 | 1.96 | 0.47 |
| 4:BD:5160:TYR:HB3 | 4:BD:5161:PRO:CD | 2.44 | 0.47 |
| 11:BL:5026:VAL:HG11 | 31:BL:5101:LMG:H202 | 1.96 | 0.47 |
| 20:BZ:5036:SER:HA | 20:BZ:5039:LEU:CG | 2.40 | 0.47 |
| 20:BZ:5047:TRP:O | 20:BZ:5050:LEU:HB2 | 2.14 | 0.47 |
| 24:AA:407:CLA:HBA2 | 28:AA:411:DGD:HB22 | 1.96 | 0.47 |
| 2:AB:450:TRP:HB3 | 24:AB:607:CLA:HMB2 | 1.95 | 0.47 |
| 2:AB:457:VAL:HG12 | 2:AB:458:PHE:N | 2.29 | 0.47 |
| 3:AC:297:TYR:HD1 | 3:AC:302:TYR:CE2 | 2.33 | 0.47 |
| 3:AC:330:SER:HB2 | 13:AO:149:LYS:NZ | 2.29 | 0.47 |
| 3:AC:437:PHE:HA | 24:AC:508:CLA:HMC1 | 1.95 | 0.47 |
| 3:AC:450:ALA:HA | 3:AC:455:PHE:CE2 | 2.49 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 4:BD:5084:SER:HB3 | 5:BE:5068:ASP:HA | 1.95 | 0.47 |
| 6:BF:5016:PHE:CD1 | 6:BF:5016:PHE:N | 2.82 | 0.47 |
| 6:BF:5019:ARG:HG3 | 6:BF:5019:ARG:HH11 | 1.78 | 0.47 |
| 1:AA:153:SER:CB | 24:AA:404:CLA:H11 | 2.45 | 0.47 |
| 2:AB:35:GLY:O | 2:AB:38:ALA:HB3 | 2.14 | 0.47 |
| 24:AB:603:CLA:H2 | 24:AB:605:CLA:H91 | 1.96 | 0.47 |
| 24:AB:608:CLA:C1 | 24:AB:608:CLA:HAA1 | 2.44 | 0.47 |
| 24:AC:504:CLA:H192 | 28:AC:518:DGD:HBN2 | 1.96 | 0.47 |
| 13:AO:155:THR:HG23 | 13:AO:168:PHE:CD2 | 2.50 | 0.47 |
| 1:BA:5091:LEU:HD11 | 1:BA:5163:ILE:HA | 1.94 | 0.47 |
| 1:BA:5119:PHE:HD1 | 34:BD:5403:PHO:H92 | 1.78 | 0.47 |
| 1:BA:5288:LEU:HD22 | 3:BC:5432:VAL:HA | 1.95 | 0.47 |
| 3:BC:5147:PHE:CD2 | 24:BC:5513:CLA:H3A | 2.49 | 0.47 |
| 24:BC:5502:CLA:H122 | 24:BC:5503:CLA:HMB2 | 1.96 | 0.47 |
| 7:BH:5050:ASN:HD22 | 28:BH:5101:DGD:HA21 | 1.79 | 0.47 |
| 8:BI:5014:PHE:CE2 | 8:BI:5018:LEU:HD11 | 2.49 | 0.47 |
| 13:BO:5039:THR:HB | 13:BO:5041:LEU:HD22 | 1.95 | 0.47 |
| 1:AA:272:HIS:HD2 | 4:AD:218:VAL:HG21 | 1.76 | 0.47 |
| 1:AA:326:LEU:CD2 | 3:AC:412:THR:HB | 2.44 | 0.47 |
| 29:AA:412:LHG:HC11 | 3:AC:447:ARG:HH21 | 1.78 | 0.47 |
| 2:AB:54:PRO:HD2 | 2:AB:57:ARG:HG3 | 1.95 | 0.47 |
| 3:AC:131:TYR:HE1 | 3:AC:135:ARG:HD2 | 1.79 | 0.47 |
| 3:AC:267:SER:O | 3:AC:271:TYR:CD2 | 2.67 | 0.47 |
| 28:AC:519:DGD:HE62 | 9:AJ:40:LEU:CD1 | 2.45 | 0.47 |
| 4:AD:96:GLU:CD | 4:AD:96:GLU:H | 2.18 | 0.47 |
| 4:AD:253:TRP:HB2 | 4:AD:260:ALA:HB2 | 1.96 | 0.47 |
| 4:AD:274:VAL:HA | 35:AD:405:PL9:C25 | 2.37 | 0.47 |
| 4:AD:299:ILE:HG13 | 11:AL:37:ASN:ND2 | 2.29 | 0.47 |
| 7:AH:17:GLU:H | 7:AH:17:GLU:CD | 2.16 | 0.47 |
| 12:AM:24:ILE:HD13 | 31:BM:5102:LMG:H351 | 1.96 | 0.47 |
| 20:AZ:53:VAL:O | 20:AZ:57:LEU:HB2 | 2.14 | 0.47 |
| 1:BA:5029:TYR:CD2 | 1:BA:5133:LEU:HD13 | 2.49 | 0.47 |
| 1:BA:5039:PRO:CB | 24:BA:5408:CLA:HBB1 | 2.44 | 0.47 |
| 2:BB:5198:VAL:HG11 | 24:BB:5607:CLA:HED2 | 1.97 | 0.47 |
| 3:BC:5131:TYR:HE1 | 3:BC:5135:ARG:HD2 | 1.80 | 0.47 |
| 3:BC:5327:ASN:HB3 | 13:BO:5125:ASP:OD1 | 2.14 | 0.47 |
| 24:BC:5506:CLA:HMC2 | 24:BC:5507:CLA:H8 | 1.96 | 0.47 |
| 5:BE:5027:ILE:CB | 5:BE:5028:PRO:HD3 | 2.43 | 0.47 |
| 11:BL:5024:ILE:HG21 | 12:BM:5019:SER:OG | 2.14 | 0.47 |
| 16:BV:5045:ILE:HG12 | 16:BV:5046:THR:N | 2.29 | 0.47 |
| 19:BY:5011:UNK:C | 19:BY:5013:UNK:N | 2.76 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 1:AA:13:LEU:N | 1:AA:16:ARG:HH11 | 2.13 | 0.47 |
| 1:AA:43:ALA:HB3 | 1:AA:118:HIS:HD2 | 1.80 | 0.47 |
| 1:AA:223:LEU:O | 2:AB:482:ILE:HG12 | 2.13 | 0.47 |
| 1:AA:238:LYS:O | 1:AA:241:GLN:HG3 | 2.14 | 0.47 |
| 2:AB:405:GLU:HA | 2:AB:405:GLU:OE1 | 2.14 | 0.47 |
| 31:AB:620:LMG:H202 | 11:AL:26:VAL:HG11 | 1.95 | 0.47 |
| 5:AE:9:PRO:O | 5:AE:10:PHE:C | 2.53 | 0.47 |
| 5:AE:27:ILE:CB | 5:AE:28:PRO:HD3 | 2.44 | 0.47 |
| 13:AO:36:ILE:HG23 | 13:AO:41:LEU:CB | 2.44 | 0.47 |
| 13:AO:39:THR:HB | 13:AO:41:LEU:HD22 | 1.96 | 0.47 |
| 20:AZ:29:SER:C | 20:AZ:31:GLN:H | 2.17 | 0.47 |
| 3:BC:5330:SER:HB2 | 13:BO:5149:LYS:NZ | 2.29 | 0.47 |
| 4:BD:5087:HIS:HD2 | 4:BD:5166:SER:HA | 1.72 | 0.47 |
| 4:BD:5180:ARG:HG3 | 4:BD:5181:PHE:N | 2.29 | 0.47 |
| 7:BH:5025:TRP:O | 7:BH:5026:GLY:C | 2.53 | 0.47 |
| 15:BU:5099:GLU:HA | 15:BU:5102:LYS:HE3 | 1.97 | 0.47 |
| 1:AA:32:TRP:HB2 | 8:AI:23:PHE:CZ | 2.49 | 0.47 |
| 1:AA:47:CYS:SG | 1:AA:114:LEU:HD22 | 2.54 | 0.47 |
| 1:AA:64:ARG:NH1 | 13:AO:98:THR:HG21 | 2.29 | 0.47 |
| 1:AA:119:PHE:HD1 | 34:AD:402:PHO:H92 | 1.79 | 0.47 |
| 1:AA:288:LEU:HD22 | 3:AC:432:VAL:HA | 1.96 | 0.47 |
| 2:AB:9:HIS:HB2 | 24:AB:611:CLA:CBA | 2.44 | 0.47 |
| 2:AB:143:LEU:HD12 | 2:AB:143:LEU:O | 2.14 | 0.47 |
| 2:AB:275:TRP:CH2 | 2:AB:358:ARG:HD3 | 2.50 | 0.47 |
| 2:AB:279:TYR:HE1 | 7:AH:63:LYS:HE3 | 1.80 | 0.47 |
| 2:AB:324:LEU:CA | 4:AD:293:LEU:HD23 | 2.43 | 0.47 |
| 2:AB:325:PHE:CD1 | 11:AL:34:TYR:HB3 | 2.49 | 0.47 |
| 24:AB:602:CLA:H93 | 7:AH:46:LEU:HD13 | 1.96 | 0.47 |
| 3:AC:94:THR:HG22 | 3:AC:298:PRO:HD2 | 1.95 | 0.47 |
| 3:AC:416:SER:CA | 28:AC:519:DGD:O3E | 2.62 | 0.47 |
| 3:AC:437:PHE:HZ | 24:AC:510:CLA:HMB3 | 1.79 | 0.47 |
| 3:AC:472:LEU:O | 3:AC:473:ASP:O | 2.32 | 0.47 |
| 4:AD:274:VAL:CB | 4:AD:275:PRO:HD3 | 2.44 | 0.47 |
| 24:AD:404:CLA:H42 | 18:AX:23:LEU:HA | 1.96 | 0.47 |
| 13:AO:65:ARG:NH1 | 13:AO:65:ARG:HB2 | 2.29 | 0.47 |
| 16:AV:148:GLU:OE1 | 16:AV:148:GLU:HA | 2.15 | 0.47 |
| 1:BA:5015:GLU:O | 1:BA:5019:ASN:OD1 | 2.32 | 0.47 |
| 1:BA:5059:ASP:OD2 | 1:BA:5062:GLY:HA2 | 2.15 | 0.47 |
| 1:BA:5153:SER:HB2 | 24:BA:5405:CLA:H11 | 1.97 | 0.47 |
| 1:BA:5183:MET:HG3 | 24:BA:5406:CLA:HBC1 | 1.96 | 0.47 |
| 1:BA:5248:ILE:O | 1:BA:5248:ILE:CG1 | 2.62 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:BB:5187:PRO:HG2 | 2:BB:5188:ASP:H | 1.80 | 0.47 |
| 2:BB:5250:PHE:O | 28:BH:5101:DGD:HB82 | 2.15 | 0.47 |
| 24:BB:5611:CLA:H61 | 24:BB:5611:CLA:H41 | 1.74 | 0.47 |
| 24:BB:5615:CLA:H92 | 31:BD:5409:LMG:H232 | 1.95 | 0.47 |
| 3:BC:5075:PHE:CD1 | 3:BC:5086:LEU:HD21 | 2.50 | 0.47 |
| 3:BC:5262:ARG:HH21 | 32:BC:5522:LMT:C5' | 2.26 | 0.47 |
| 3:BC:5271:TYR:HA | 3:BC:5274:TYR:CD2 | 2.49 | 0.47 |
| 3:BC:5318:LEU:HD21 | 3:BC:5380:ILE:HG23 | 1.97 | 0.47 |
| 3:BC:5394:GLU:OE2 | 3:BC:5398:HIS:CD2 | 2.68 | 0.47 |
| 24:BC:5510:CLA:H161 | 24:BC:5510:CLA:H122 | 1.81 | 0.47 |
| 4:BD:5263:ASN:O | 4:BD:5266:TRP:N | 2.47 | 0.47 |
| 5:BE:5015:THR:O | 9:BJ:5008:ILE:CD1 | 2.63 | 0.47 |
| 13:BO:5236:GLU:O | 13:BO:5236:GLU:HG3 | 2.14 | 0.47 |
| 1:AA:39:PRO:CB | 24:AA:407:CLA:HBB1 | 2.44 | 0.47 |
| 1:AA:214:MET:HE1 | 4:AD:142:ASN:OD1 | 2.14 | 0.47 |
| 2:AB:250:PHE:O | 28:AH:101:DGD:HB82 | 2.15 | 0.47 |
| 2:AB:329:PRO:HD2 | 31:AB:621:LMG:O4 | 2.15 | 0.47 |
| 2:AB:356:VAL:HA | 2:AB:370:LEU:CD2 | 2.45 | 0.47 |
| 2:AB:384:ARG:HH11 | 15:AU:132:LEU:HD13 | 1.79 | 0.47 |
| 3:AC:319:ILE:O | 3:AC:323:LYS:HG3 | 2.15 | 0.47 |
| 3:AC:387:TRP:CE2 | 3:AC:388:GLN:HG3 | 2.49 | 0.47 |
| 4:AD:68:LEU:HD11 | 5:AE:44:TYR:CE1 | 2.49 | 0.47 |
| 11:AL:8:GLN:N | 11:AL:8:GLN:NE2 | 2.62 | 0.47 |
| 11:AL:17:LEU:HD11 | 12:AM:23:ILE:HD12 | 1.97 | 0.47 |
| 13:AO:271:PRO:HG2 | 13:AO:272:ALA:H | 1.79 | 0.47 |
| 15:AU:58:ASN:OD1 | 15:AU:84:PRO:CA | 2.61 | 0.47 |
| 1:BA:5135:TYR:HE1 | 3:BC:5449:ARG:O | 1.97 | 0.47 |
| 29:BA:5415:LHG:H102 | 31:BE:5101:LMG:H142 | 1.97 | 0.47 |
| 2:BB:5250:PHE:HD1 | 28:BH:5101:DGD:HB92 | 1.80 | 0.47 |
| 24:BB:5618:CLA:H162 | 31:BL:5101:LMG:H422 | 1.96 | 0.47 |
| 4:BD:5086:GLY:O | 4:BD:5166:SER:HB2 | 2.15 | 0.47 |
| 16:BV:5143:GLY:O | 16:BV:5147:VAL:HG23 | 2.14 | 0.47 |
| 1:AA:159:LEU:C | 1:AA:162:PRO:HD2 | 2.35 | 0.47 |
| 2:AB:329:PRO:HD3 | 24:AB:607:CLA:CED | 2.44 | 0.47 |
| 2:AB:425:ILE:HG22 | 2:AB:426:PHE:HD2 | 1.75 | 0.47 |
| 2:AB:485:GLU:HG2 | 2:AB:486:LEU:N | 2.29 | 0.47 |
| 3:AC:56:HIS:C | 3:AC:58:GLY:N | 2.68 | 0.47 |
| 3:AC:193:GLY:O | 3:AC:194:GLY:O | 2.33 | 0.47 |
| 3:AC:436:PHE:O | 24:AC:508:CLA:HAC1 | 2.15 | 0.47 |
| 8:AI:11:VAL:CG2 | 32:AI:102:LMT:H101 | 2.44 | 0.47 |
| 1:BA:5183:MET:HA | 24:BA:5405:CLA:HMD2 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5329:GLU:O | 1:BA:5332:HIS:ND1 | 2.45 | 0.47 |
| 2:BB:5025:MET:HE2 | 27:BB:5621:BCR:H393 | 1.97 | 0.47 |
| 2:BB:5369:ILE:C | 2:BB:5370:LEU:HD23 | 2.35 | 0.47 |
| 24:BB:5614:CLA:H111 | 24:BB:5619:CLA:CAA | 2.44 | 0.47 |
| 5:BE:5014:ILE:HG22 | 9:BJ:5013:VAL:HG11 | 1.96 | 0.47 |
| 10:BK:5015:TYR:OH | 20:BZ:5058:ASN:ND2 | 2.48 | 0.47 |
| 13:BO:5031:LEU:N | 13:BO:5031:LEU:CD1 | 2.72 | 0.47 |
| 13:BO:5070:CYS:SG | 13:BO:5105:ASP:OD1 | 2.72 | 0.47 |
| 13:BO:5171:GLU:HA | 13:BO:5221:GLY:O | 2.15 | 0.47 |
| 1:AA:13:LEU:HD12 | 1:AA:16:ARG:NH1 | 2.29 | 0.47 |
| 1:AA:202:VAL:HG11 | 24:AA:406:CLA:OBD | 2.14 | 0.47 |
| 2:AB:24:LEU:HB3 | 2:AB:111:ALA:HB2 | 1.97 | 0.47 |
| 2:AB:115:TRP:CZ2 | 24:AB:614:CLA:HBA2 | 2.50 | 0.47 |
| 24:AB:601:CLA:HBC3 | 7:AH:41:PHE:CE1 | 2.50 | 0.47 |
| 3:AC:204:LEU:HD21 | 3:AC:238:ILE:HG21 | 1.97 | 0.47 |
| 3:AC:375:LEU:HB3 | 3:AC:380:ILE:HD11 | 1.96 | 0.47 |
| 3:AC:394:GLU:OE2 | 3:AC:398:HIS:CD2 | 2.68 | 0.47 |
| 15:AU:80:VAL:HG22 | 15:AU:127:ARG:NH2 | 2.30 | 0.47 |
| 2:BB:5009:HIS:HB2 | 24:BB:5615:CLA:CBA | 2.45 | 0.47 |
| 2:BB:5175:THR:O | 2:BB:5176:GLY:O | 2.33 | 0.47 |
| 2:BB:5183:PRO:HG3 | 2:BB:5199:VAL:HG12 | 1.95 | 0.47 |
| 3:BC:5042:LEU:HD21 | 24:BC:5511:CLA:H2A | 1.97 | 0.47 |
| 3:BC:5143:TYR:O | 3:BC:5144:SER:CB | 2.62 | 0.47 |
| 3:BC:5473:ASP:HB2 | 14:BT:5026:PRO:HB3 | 1.96 | 0.47 |
| 28:BC:5518:DGD:O3D | 27:BJ:5101:BCR:H382 | 2.14 | 0.47 |
| 5:BE:5078:THR:HA | 5:BE:5081:GLU:CG | 2.43 | 0.47 |
| 13:BO:5077:LEU:HB3 | 13:BO:5091:PHE:HB3 | 1.97 | 0.47 |
| 16:BV:5081:ARG:CZ | 16:BV:5157:GLY:HA3 | 2.45 | 0.47 |
| 1:AA:78:ILE:O | 1:AA:176:ILE:HB | 2.15 | 0.46 |
| 3:AC:264:PHE:CE1 | 27:AC:516:BCR:H321 | 2.50 | 0.46 |
| 3:AC:452:ALA:C | 3:AC:454:GLY:N | 2.68 | 0.46 |
| 7:AH:25:TRP:O | 7:AH:26:GLY:C | 2.53 | 0.46 |
| 10:AK:20:PRO:O | 10:AK:23:ASP:HB2 | 2.15 | 0.46 |
| 13:AO:36:ILE:HG23 | 13:AO:41:LEU:HB2 | 1.97 | 0.46 |
| 1:BA:5222:SER:O | 1:BA:5246:TYR:HB2 | 2.14 | 0.46 |
| 2:BB:5112:CYS:HB3 | 27:BB:5623:BCR:H393 | 1.96 | 0.46 |
| 2:BB:5193:TYR:CD1 | 2:BB:5260:SER:HA | 2.50 | 0.46 |
| 3:BC:5038:GLY:HA3 | 24:BC:5511:CLA:C2D | 2.45 | 0.46 |
| 3:BC:5420:VAL:HB | 3:BC:5425:TRP:HE1 | 1.80 | 0.46 |
| 3:BC:5432:VAL:HG13 | 3:BC:5433:LEU:N | 2.29 | 0.46 |
| 24:BC:5510:CLA:HHC | 24:BC:5510:CLA:HBB1 | 1.96 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 24:BD:5405:CLA:C4 | 18:BX:5023:LEU:HA | 2.45 | 0.46 |
| 5:BE:5036:LEU:HA | 5:BE:5039:SER:OG | 2.15 | 0.46 |
| 11:BL:5016:SER:O | 11:BL:5019:LEU:HD12 | 2.14 | 0.46 |
| 15:BU:5072:TYR:O | 15:BU:5073:PRO:C | 2.51 | 0.46 |
| 20:BZ:5023:VAL:HG12 | 20:BZ:5027:TYR:CE2 | 2.49 | 0.46 |
| 1:AA:12:ASN:ND2 | 1:AA:15:GLU:HB2 | 2.29 | 0.46 |
| 1:AA:210:LEU:HD23 | 1:AA:210:LEU:C | 2.36 | 0.46 |
| 1:AA:240:GLY:HA3 | 14:AT:29:ILE:HG22 | 1.98 | 0.46 |
| 2:AB:489:GLU:C | 2:AB:490:GLN:HG3 | 2.36 | 0.46 |
| 24:AB:602:CLA:H191 | 4:AD:158:LEU:HB3 | 1.97 | 0.46 |
| 5:AE:78:THR:O | 5:AE:81:GLU:HB2 | 2.15 | 0.46 |
| 6:AF:24:HIS:HA | 6:AF:27:ALA:HB3 | 1.97 | 0.46 |
| 8:AI:33:LYS:O | 8:AI:35:LYS:HG2 | 2.14 | 0.46 |
| 1:BA:5131:TRP:CE3 | 1:BA:5132:GLU:HA | 2.51 | 0.46 |
| 1:BA:5140:ARG:HB2 | 4:BD:5220:ASN:HA | 1.96 | 0.46 |
| 2:BB:5007:ARG:HA | 24:BB:5615:CLA:HBA1 | 1.97 | 0.46 |
| 2:BB:5153:PHE:CZ | 2:BB:5158:LEU:HD21 | 2.50 | 0.46 |
| 4:BD:5093:TRP:HA | 4:BD:5099:GLY:H | 1.81 | 0.46 |
| 10:BK:5043:VAL:HG21 | 10:BK:5046:ARG:HE | 1.80 | 0.46 |
| 15:BU:5073:PRO:HG2 | 16:BV:5107:THR:HB | 1.97 | 0.46 |
| 16:BV:5098:LEU:O | 16:BV:5102:MET:HG3 | 2.14 | 0.46 |
| 18:BX:5012:ILE:CD1 | 18:BX:5016:LEU:HD12 | 2.44 | 0.46 |
| 18:BX:5024:LEU:HD12 | 18:BX:5024:LEU:HA | 1.74 | 0.46 |
| 1:AA:11:ALA:HB1 | 1:AA:15:GLU:OE1 | 2.15 | 0.46 |
| 1:AA:35:VAL:HA | 27:AA:410:BCR:H333 | 1.95 | 0.46 |
| 24:AB:608:CLA:CAB | 4:AD:123:ILE:HG23 | 2.45 | 0.46 |
| 3:AC:328:VAL:HG23 | 3:AC:329:GLY:N | 2.30 | 0.46 |
| 4:AD:36:LEU:O | 4:AD:39:PRO:HD2 | 2.16 | 0.46 |
| 6:AF:15:ILE:HG22 | 6:AF:16:PHE:N | 2.29 | 0.46 |
| 7:AH:43:LEU:O | 7:AH:47:GLU:HG3 | 2.14 | 0.46 |
| 1:BA:5021:VAL:HG12 | 1:BA:5022:THR:N | 2.30 | 0.46 |
| 1:BA:5138:GLY:HA3 | 8:BI:5032:PRO:HG2 | 1.98 | 0.46 |
| 1:BA:5326:LEU:CD2 | 3:BC:5412:THR:HB | 2.46 | 0.46 |
| 2:BB:5005:TRP:CZ2 | 31:BL:5101:LMG:H291 | 2.50 | 0.46 |
| 2:BB:5243:ALA:HB2 | 2:BB:5466:HIS:ND1 | 2.30 | 0.46 |
| 2:BB:5245:VAL:HG22 | 24:BB:5616:CLA:H192 | 1.96 | 0.46 |
| 2:BB:5384:ARG:NH1 | 15:BU:5132:LEU:HD13 | 2.30 | 0.46 |
| 4:BD:5036:LEU:O | 4:BD:5039:PRO:HD2 | 2.15 | 0.46 |
| 4:BD:5299:ILE:HG13 | 11:BL:5037:ASN:ND2 | 2.30 | 0.46 |
| 5:BE:5017:VAL:HA | 9:BJ:5008:ILE:HD11 | 1.96 | 0.46 |
| 6:BF:5023:VAL:O | 6:BF:5027:ALA:CB | 2.63 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 13:BO:5086:ARG:O | 13:BO:5086:ARG:CG | 2.63 | 0.46 |
| 1:AA:21:VAL:HG12 | 1:AA:22:THR:N | 2.29 | 0.46 |
| 1:AA:48:PHE:CA | 1:AA:115:ILE:HD11 | 2.45 | 0.46 |
| 1:AA:214:MET:O | 1:AA:215:HIS:C | 2.54 | 0.46 |
| 1:AA:275:LEU:HD13 | 25:AA:408:MST:H83 | 1.96 | 0.46 |
| 31:AA:417:LMG:H301 | 2:BB:5076:SER:HB3 | 1.96 | 0.46 |
| 2:AB:112:CYS:HB3 | 27:AB:619:BCR:H393 | 1.98 | 0.46 |
| 2:AB:242:ILE:HG22 | 2:AB:466:HIS:HB2 | 1.96 | 0.46 |
| 2:AB:298:LEU:HD23 | 2:AB:402:TYR:CE1 | 2.51 | 0.46 |
| 3:AC:420:VAL:HB | 3:AC:425:TRP:HE1 | 1.79 | 0.46 |
| 4:AD:251:ARG:HG2 | 4:AD:255:GLN:OE1 | 2.16 | 0.46 |
| 8:AI:30:ARG:O | 8:AI:31:ASN:HB3 | 2.15 | 0.46 |
| 20:AZ:36:SER:C | 20:AZ:38:GLN:N | 2.69 | 0.46 |
| 1:BA:5064:ARG:NH1 | 13:BO:5098:THR:HG21 | 2.31 | 0.46 |
| 1:BA:5244:GLU:HG3 | 1:BA:5246:TYR:H | 1.80 | 0.46 |
| 3:BC:5057:ALA:O | 3:BC:5061:VAL:HG23 | 2.15 | 0.46 |
| 3:BC:5094:THR:CG2 | 3:BC:5298:PRO:HD2 | 2.44 | 0.46 |
| 24:BC:5511:CLA:H141 | 20:BZ:5020:VAL:O | 2.16 | 0.46 |
| 4:BD:5136:VAL:O | 4:BD:5136:VAL:HG12 | 2.15 | 0.46 |
| 16:BV:5148:GLU:OE1 | 16:BV:5148:GLU:HA | 2.15 | 0.46 |
| 1:AA:131:TRP:CE3 | 1:AA:132:GLU:HA | 2.50 | 0.46 |
| 1:AA:220:THR:CG2 | 4:AD:141:TYR:HD1 | 2.29 | 0.46 |
| 29:AA:412:LHG:HC11 | 3:AC:447:ARG:NE | 2.31 | 0.46 |
| 2:AB:179:GLN:HE21 | 2:AB:179:GLN:CA | 2.18 | 0.46 |
| 2:AB:237:VAL:HB | 24:AB:612:CLA:CMD | 2.46 | 0.46 |
| 4:AD:209:LEU:HD23 | 4:AD:209:LEU:C | 2.35 | 0.46 |
| 4:AD:279:LEU:CD2 | 24:AD:401:CLA:HMA2 | 2.45 | 0.46 |
| 2:BB:5243:ALA:HB2 | 2:BB:5466:HIS:CE1 | 2.50 | 0.46 |
| 3:BC:5029:GLU:HA | 10:BK:5046:ARG:HH12 | 1.80 | 0.46 |
| 3:BC:5380:ILE:HA | 3:BC:5384:ILE:CD1 | 2.37 | 0.46 |
| 4:BD:5250:ASN:ND2 | 4:BD:5262:SER:HB3 | 2.28 | 0.46 |
| 6:BF:5021:VAL:HG21 | 30:BF:5102:SQD:H101 | 1.97 | 0.46 |
| 13:BO:5072:GLN:O | 13:BO:5263:GLY:HA3 | 2.14 | 0.46 |
| 20:BZ:5021:ILE:O | 20:BZ:5025:VAL:HG22 | 2.16 | 0.46 |
| 1:AA:84:PRO:HA | 1:AA:112:TYR:CG | 2.50 | 0.46 |
| 1:AA:214:MET:HE1 | 34:AD:403:PHO:OBD | 2.14 | 0.46 |
| 24:AA:407:CLA:HMA2 | 28:AA:411:DGD:HB42 | 1.98 | 0.46 |
| 2:AB:334:ASP:HB3 | 13:AO:202:GLN:HG3 | 1.98 | 0.46 |
| 24:AB:610:CLA:H111 | 24:AB:615:CLA:CAA | 2.43 | 0.46 |
| 3:AC:239:TRP:CE3 | 3:AC:243:ILE:HD11 | 2.28 | 0.46 |
| 3:AC:288:CYS:HB3 | 28:AC:517:DGD:HG2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 4:AD:67:TYR:CE1 | 4:AD:76:VAL:HG11 | 2.51 | 0.46 |
| 4:AD:72:ASN:HA | 31:AJ:102:LMG:HC72 | 1.97 | 0.46 |
| 4:AD:88:SER:HA | 7:AH:50:ASN:OD1 | 2.15 | 0.46 |
| 4:AD:155:SER:HA | 4:AD:159:ILE:HG13 | 1.98 | 0.46 |
| 4:AD:210:LEU:HA | 4:AD:213:ILE:HG22 | 1.97 | 0.46 |
| 1:BA:5010:SER:C | 1:BA:5012:ASN:H | 2.19 | 0.46 |
| 1:BA:5140:ARG:HD3 | 4:BD:5219:GLU:O | 2.15 | 0.46 |
| 2:BB:5124:ARG:HD3 | 2:BB:5131:PRO:N | 2.30 | 0.46 |
| 30:BB:5601:SQD:H141 | 24:BB:5618:CLA:H143 | 1.97 | 0.46 |
| 3:BC:5266:TRP:HZ3 | 24:BC:5507:CLA:HBC2 | 1.80 | 0.46 |
| 4:BD:5253:TRP:HA | 4:BD:5256:ILE:CG2 | 2.45 | 0.46 |
| 13:BO:5071:LEU:HD23 | 13:BO:5265:PHE:CB | 2.45 | 0.46 |
| 20:BZ:5032:ASP:C | 20:BZ:5034:ASP:H | 2.17 | 0.46 |
| 1:AA:32:TRP:CB | 8:AI:23:PHE:CZ | 2.98 | 0.46 |
| 1:AA:153:SER:HB2 | 24:AA:404:CLA:H11 | 1.98 | 0.46 |
| 1:AA:210:LEU:C | 1:AA:210:LEU:CD2 | 2.84 | 0.46 |
| 24:AA:405:CLA:H72 | 31:AB:620:LMG:C25 | 2.46 | 0.46 |
| 2:AB:135:LEU:HD21 | 2:AB:234:ILE:HD13 | 1.98 | 0.46 |
| 2:AB:229:LEU:O | 2:AB:230:ARG:C | 2.54 | 0.46 |
| 3:AC:57:ALA:O | 3:AC:61:VAL:HG23 | 2.16 | 0.46 |
| 3:AC:418:ASN:HB2 | 28:AC:519:DGD:HE2 | 1.98 | 0.46 |
| 4:AD:119:ALA:O | 4:AD:123:ILE:HG13 | 2.16 | 0.46 |
| 5:AE:26:THR:HB | 36:AF:101:HEM:C3B | 2.51 | 0.46 |
| 1:BA:5149:ALA:HB1 | 1:BA:5283:VAL:CG1 | 2.45 | 0.46 |
| 2:BB:5012:LEU:HB2 | 24:BB:5616:CLA:HMC2 | 1.98 | 0.46 |
| 2:BB:5371:THR:HG22 | 2:BB:5377:VAL:CA | 2.42 | 0.46 |
| 2:BB:5490:GLN:OE1 | 2:BB:5490:GLN:O | 2.33 | 0.46 |
| 3:BC:5213:LEU:HD21 | 27:BC:5516:BCR:C19 | 2.46 | 0.46 |
| 3:BC:5267:SER:O | 3:BC:5271:TYR:CD2 | 2.69 | 0.46 |
| 3:BC:5319:ILE:O | 3:BC:5323:LYS:HG3 | 2.15 | 0.46 |
| 4:BD:5057:SER:HA | 4:BD:5060:THR:HG22 | 1.97 | 0.46 |
| 4:BD:5210:LEU:HD13 | 4:BD:5271:MET:HG2 | 1.98 | 0.46 |
| 6:BF:5031:ILE:HG12 | 36:BF:5101:HEM:HMC2 | 1.97 | 0.46 |
| 16:BV:5059:PHE:HA | 16:BV:5063:CYS:SG | 2.56 | 0.46 |
| 1:AA:135:TYR:HE1 | 3:AC:449:ARG:O | 1.99 | 0.46 |
| 2:AB:12:LEU:HD22 | 2:AB:18:ARG:HB2 | 1.96 | 0.46 |
| 2:AB:107:LEU:HD21 | 24:AB:615:CLA:H42 | 1.97 | 0.46 |
| 2:AB:363:PHE:HD1 | 4:AD:326:ARG:HD2 | 1.80 | 0.46 |
| 3:AC:62:PHE:HZ | 10:AK:28:ILE:CD1 | 2.29 | 0.46 |
| 3:AC:164:HIS:HA | 3:AC:167:VAL:HG23 | 1.97 | 0.46 |
| 4:AD:30:VAL:HG12 | 4:AD:31:GLY:N | 2.30 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 4:AD:162:LEU:HD21 | 4:AD:167:TRP:CH2 | 2.50 | 0.46 |
| 4:AD:180:ARG:HG3 | 4:AD:181:PHE:N | 2.31 | 0.46 |
| 8:AI:24:LEU:O | 8:AI:26:GLY:N | 2.41 | 0.46 |
| 1:BA:5179:THR:HG22 | 1:BA:5183:MET:CE | 2.46 | 0.46 |
| 24:BA:5406:CLA:H61 | 34:BD:5403:PHO:HMB3 | 1.97 | 0.46 |
| 2:BB:5179:GLN:HE21 | 2:BB:5179:GLN:CA | 2.17 | 0.46 |
| 2:BB:5356:VAL:HG22 | 2:BB:5370:LEU:HD21 | 1.97 | 0.46 |
| 2:BB:5384:ARG:HD3 | 15:BU:5132:LEU:HD13 | 1.98 | 0.46 |
| 24:BB:5612:CLA:CAB | 4:BD:5123:ILE:HG23 | 2.46 | 0.46 |
| 3:BC:5272:LEU:HA | 24:BC:5509:CLA:HMD3 | 1.97 | 0.46 |
| 4:BD:5217:THR:O | 4:BD:5221:THR:HB | 2.15 | 0.46 |
| 1:AA:107:TYR:CD1 | 13:AO:141:ARG:NH1 | 2.84 | 0.46 |
| 2:AB:121:GLU:HG2 | 7:AH:4:ARG:CD | 2.43 | 0.46 |
| 2:AB:152:GLY:C | 24:AB:606:CLA:HMC3 | 2.36 | 0.46 |
| 2:AB:187:PRO:HG2 | 2:AB:188:ASP:H | 1.80 | 0.46 |
| 3:AC:215:LYS:HZ3 | 3:AC:226:SER:CB | 2.28 | 0.46 |
| 3:AC:271:TYR:HA | 3:AC:274:TYR:CD2 | 2.50 | 0.46 |
| 9:AJ:11:TRP:CE3 | 10:AK:42:ALA:HB2 | 2.51 | 0.46 |
| 11:AL:22:LEU:HD13 | 14:AT:16:LEU:HD23 | 1.98 | 0.46 |
| 20:AZ:33:TRP:O | 20:AZ:33:TRP:CD1 | 2.67 | 0.46 |
| 1:BA:5114:LEU:HD23 | 1:BA:5114:LEU:C | 2.37 | 0.46 |
| 1:BA:5151:LEU:HD21 | 1:BA:5155:PHE:HE2 | 1.81 | 0.46 |
| 2:BB:5012:LEU:O | 2:BB:5014:ASN:N | 2.49 | 0.46 |
| 2:BB:5121:GLU:HG2 | 7:BH:5004:ARG:CD | 2.42 | 0.46 |
| 2:BB:5425:ILE:HG22 | 2:BB:5426:PHE:HD2 | 1.78 | 0.46 |
| 30:BB:5601:SQD:H92 | 24:BB:5618:CLA:H42 | 1.98 | 0.46 |
| 3:BC:5335:THR:HA | 13:BO:5178:ARG:CD | 2.46 | 0.46 |
| 3:BC:5465:PRO:O | 3:BC:5469:MET:HE3 | 2.16 | 0.46 |
| 4:BD:5193:LEU:O | 4:BD:5193:LEU:HG | 2.16 | 0.46 |
| 4:BD:5323:GLU:HG2 | 13:BO:5194:TYR:OH | 2.16 | 0.46 |
| 9:BJ:5003:SER:CA | 9:BJ:5007:ARG:HH22 | 2.29 | 0.46 |
| 13:BO:5086:ARG:O | 13:BO:5086:ARG:CD | 2.64 | 0.46 |
| 13:BO:5159:VAL:HG13 | 13:BO:5159:VAL:O | 2.16 | 0.46 |
| 1:AA:159:LEU:HD11 | 28:AC:517:DGD:HB51 | 1.97 | 0.46 |
| 2:AB:9:HIS:HB2 | 24:AB:611:CLA:CGA | 2.46 | 0.46 |
| 2:AB:226:TYR:HA | 2:AB:231:MET:HE2 | 1.97 | 0.46 |
| 2:AB:485:GLU:CG | 2:AB:486:LEU:N | 2.78 | 0.46 |
| 3:AC:107:ASP:OD2 | 3:AC:110:PRO:HD3 | 2.16 | 0.46 |
| 3:AC:272:LEU:HA | 24:AC:509:CLA:HMD3 | 1.97 | 0.46 |
| 4:AD:93:TRP:HA | 4:AD:99:GLY:H | 1.81 | 0.46 |
| 1:BA:5021:VAL:HG11 | 1:BA:5032:TRP:CE3 | 2.51 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5318:ALA:HB2 | 4:BD:5075:THR:HG22 | 1.97 | 0.46 |
| 2:BB:5285:ASN:N | 2:BB:5285:ASN:HD22 | 2.14 | 0.46 |
| 2:BB:5354:LEU:HD21 | 2:BB:5378:LYS:CB | 2.46 | 0.46 |
| 2:BB:5485:GLU:CG | 2:BB:5486:LEU:N | 2.79 | 0.46 |
| 3:BC:5185:LEU:HD12 | 3:BC:5230:LEU:HD12 | 1.97 | 0.46 |
| 3:BC:5460:ASP:O | 3:BC:5461:ARG:C | 2.54 | 0.46 |
| 4:BD:5084:SER:HB3 | 5:BE:5068:ASP:CA | 2.46 | 0.46 |
| 35:BD:5406:PL9:H303 | 35:BD:5406:PL9:H262 | 1.97 | 0.46 |
| 7:BH:5006:TRP:O | 7:BH:5010:ILE:HG13 | 2.16 | 0.46 |
| 12:BM:5019:SER:O | 12:BM:5023:ILE:HD13 | 2.16 | 0.46 |
| 13:BO:5036:ILE:HG23 | 13:BO:5041:LEU:CB | 2.46 | 0.46 |
| 13:BO:5271:PRO:HG2 | 13:BO:5272:ALA:H | 1.81 | 0.46 |
| 1:AA:10:SER:C | 1:AA:12:ASN:N | 2.69 | 0.45 |
| 1:AA:244:GLU:HG3 | 1:AA:246:TYR:H | 1.80 | 0.45 |
| 2:AB:16:PRO:HB3 | 2:AB:133:LEU:HD21 | 1.99 | 0.45 |
| 2:AB:398:THR:HG22 | 2:AB:412:THR:HG22 | 1.96 | 0.45 |
| 24:AB:604:CLA:H111 | 24:AB:615:CLA:H2 | 1.97 | 0.45 |
| 31:AC:520:LMG:H202 | 9:AJ:22:ILE:HG21 | 1.97 | 0.45 |
| 4:AD:136:VAL:HG12 | 4:AD:136:VAL:O | 2.16 | 0.45 |
| 11:AL:7:ARG:O | 11:AL:7:ARG:HD2 | 2.16 | 0.45 |
| 1:BA:5084:PRO:HA | 1:BA:5112:TYR:CG | 2.49 | 0.45 |
| 2:BB:5356:VAL:HA | 2:BB:5370:LEU:CD2 | 2.45 | 0.45 |
| 3:BC:5229:ASN:ND2 | 3:BC:5231:GLU:HB2 | 2.31 | 0.45 |
| 13:BO:5215:ARG:HD2 | 15:BU:5039:LEU:HD22 | 1.98 | 0.45 |
| 14:BT:5014:ILE:HD13 | 14:BT:5017:PHE:CD2 | 2.52 | 0.45 |
| 1:AA:29:TYR:HD2 | 1:AA:133:LEU:HB2 | 1.80 | 0.45 |
| 2:AB:144:PHE:CE1 | 2:AB:210:ILE:CG2 | 2.99 | 0.45 |
| 2:AB:366:PHE:CD1 | 2:AB:367:PRO:HD2 | 2.52 | 0.45 |
| 3:AC:55:ALA:HB1 | 27:AC:514:BCR:C37 | 2.43 | 0.45 |
| 3:AC:75:PHE:CD1 | 3:AC:86:LEU:HD21 | 2.51 | 0.45 |
| 4:AD:126:MET:HE1 | 4:AD:147:SER:HA | 1.99 | 0.45 |
| 1:BA:5042:LEU:HD21 | 30:BA:5401:SQD:H152 | 1.97 | 0.45 |
| 1:BA:5214:MET:HE1 | 34:BD:5404:PHO:OBD | 2.16 | 0.45 |
| 2:BB:5016:PRO:HB3 | 2:BB:5133:LEU:HD21 | 1.97 | 0.45 |
| 2:BB:5329:PRO:HD3 | 24:BB:5611:CLA:CED | 2.46 | 0.45 |
| 3:BC:5414:ILE:HG22 | 3:BC:5415:ASN:N | 2.32 | 0.45 |
| 3:BC:5435:PHE:O | 3:BC:5438:LEU:N | 2.47 | 0.45 |
| 3:BC:5450:ALA:HA | 3:BC:5455:PHE:CE2 | 2.51 | 0.45 |
| 4:BD:5119:ALA:O | 4:BD:5123:ILE:HG13 | 2.16 | 0.45 |
| 6:BF:5016:PHE:HD1 | 6:BF:5016:PHE:N | 2.14 | 0.45 |
| 16:BV:5141:ILE:O | 16:BV:5145:ILE:HG13 | 2.16 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:179:GLN:HA | 2:AB:179:GLN:NE2 | 2.22 | 0.45 |
| 3:AC:318:LEU:HD21 | 3:AC:380:ILE:HG23 | 1.97 | 0.45 |
| 14:AT:18:PHE:CB | 27:AT:101:BCR:HC8 | 2.47 | 0.45 |
| 2:BB:5102:VAL:HB | 24:BB:5610:CLA:H91 | 1.98 | 0.45 |
| 3:BC:5055:ALA:HB1 | 27:BC:5514:BCR:C37 | 2.41 | 0.45 |
| 3:BC:5202:PRO:HB2 | 3:BC:5235:GLY:HA2 | 1.98 | 0.45 |
| 3:BC:5438:LEU:HD23 | 28:BC:5517:DGD:HAW2 | 1.97 | 0.45 |
| 4:BD:5079:SER:HA | 4:BD:5172:SER:HB3 | 1.97 | 0.45 |
| 7:BH:5044:ILE:HG12 | 18:BX:5019:PHE:CE2 | 2.51 | 0.45 |
| 11:BL:5022:LEU:HG | 31:BL:5101:LMG:C19 | 2.46 | 0.45 |
| 13:BO:5114:ASN:HD21 | 13:BO:5120:THR:CG2 | 2.29 | 0.45 |
| 16:BV:5130:MET:SD | 16:BV:5133:LEU:HD22 | 2.56 | 0.45 |
| 20:BZ:5036:SER:C | 20:BZ:5038:GLN:N | 2.70 | 0.45 |
| 1:AA:342:ASP:HB2 | 4:AD:352:LEU:HD21 | 1.98 | 0.45 |
| 2:AB:112:CYS:O | 2:AB:116:VAL:HG23 | 2.16 | 0.45 |
| 24:AC:510:CLA:HHC | 24:AC:510:CLA:HBB1 | 1.98 | 0.45 |
| 4:AD:291:LEU:O | 4:AD:292:ASN:HB2 | 2.16 | 0.45 |
| 35:AD:405:PL9:H303 | 35:AD:405:PL9:H262 | 1.98 | 0.45 |
| 6:AF:24:HIS:NE2 | 36:AF:101:HEM:NB | 2.65 | 0.45 |
| 13:AO:135:GLN:HE21 | 13:AO:135:GLN:HB3 | 1.48 | 0.45 |
| 16:AV:118:HIS:ND1 | 16:AV:119:PRO:HD2 | 2.31 | 0.45 |
| 1:BA:5041:LEU:HD21 | 1:BA:5122:GLY:HA3 | 1.99 | 0.45 |
| 1:BA:5292:THR:HB | 28:BC:5518:DGD:HAH2 | 1.99 | 0.45 |
| 24:BA:5408:CLA:HMA2 | 28:BA:5412:DGD:HB42 | 1.98 | 0.45 |
| 2:BB:5041:GLU:HB3 | 2:BB:5060:MET:SD | 2.55 | 0.45 |
| 24:BB:5612:CLA:C1 | 24:BB:5612:CLA:HAA1 | 2.45 | 0.45 |
| 4:BD:5057:SER:CA | 4:BD:5060:THR:HG22 | 2.46 | 0.45 |
| 4:BD:5088:SER:HA | 7:BH:5050:ASN:OD1 | 2.16 | 0.45 |
| 8:BI:5024:LEU:O | 8:BI:5026:GLY:N | 2.41 | 0.45 |
| 1:AA:65:GLU:N | 1:AA:66:PRO:HD3 | 2.32 | 0.45 |
| 1:AA:234:ASN:HD21 | 4:AD:266:TRP:CA | 2.30 | 0.45 |
| 2:AB:153:PHE:O | 2:AB:157:HIS:HB3 | 2.17 | 0.45 |
| 24:AB:612:CLA:H13 | 24:AB:613:CLA:CBB | 2.47 | 0.45 |
| 3:AC:213:LEU:HD21 | 27:AC:516:BCR:C19 | 2.47 | 0.45 |
| 24:AC:507:CLA:O1D | 24:AC:509:CLA:H101 | 2.17 | 0.45 |
| 4:AD:19:ASP:O | 4:AD:20:ASP:C | 2.55 | 0.45 |
| 5:AE:17:VAL:HG22 | 9:AJ:8:ILE:CD1 | 2.47 | 0.45 |
| 5:AE:36:LEU:HA | 5:AE:39:SER:OG | 2.16 | 0.45 |
| 13:AO:215:ARG:HD2 | 15:AU:39:LEU:HD22 | 1.97 | 0.45 |
| 18:AX:43:ILE:O | 18:AX:43:ILE:CG2 | 2.64 | 0.45 |
| 1:BA:5045:THR:CG2 | 1:BA:5046:ILE:N | 2.79 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5096:ILE:HD12 | 24:BA:5408:CLA:HMD1 | 1.98 | 0.45 |
| 1:BA:5216:GLY:O | 1:BA:5220:THR:HG22 | 2.17 | 0.45 |
| 2:BB:5007:ARG:HG2 | 24:BB:5615:CLA:HED1 | 1.97 | 0.45 |
| 2:BB:5172:TYR:O | 2:BB:5173:GLY:C | 2.52 | 0.45 |
| 24:BB:5608:CLA:H111 | 24:BB:5619:CLA:H2 | 1.99 | 0.45 |
| 10:BK:5021:LEU:HD11 | 27:BK:5102:BCR:HC42 | 1.99 | 0.45 |
| 1:AA:29:TYR:CD2 | 1:AA:133:LEU:HB2 | 2.51 | 0.45 |
| 2:AB:226:TYR:HA | 2:AB:231:MET:CE | 2.47 | 0.45 |
| 3:AC:365:TRP:HA | 3:AC:387:TRP:CH2 | 2.51 | 0.45 |
| 5:AE:14:ILE:HG22 | 9:AJ:13:VAL:HG11 | 1.99 | 0.45 |
| 5:AE:51:ARG:O | 5:AE:53:ASP:N | 2.49 | 0.45 |
| 16:AV:103:LYS:O | 16:AV:122:ARG:HG2 | 2.17 | 0.45 |
| 20:AZ:30:PRO:HA | 20:AZ:33:TRP:CE3 | 2.51 | 0.45 |
| 24:BA:5408:CLA:HBC1 | 31:BI:5101:LMG:H361 | 1.98 | 0.45 |
| 2:BB:5153:PHE:O | 2:BB:5157:HIS:HB3 | 2.17 | 0.45 |
| 2:BB:5234:ILE:HD12 | 2:BB:5237:VAL:CG2 | 2.45 | 0.45 |
| 2:BB:5278:SER:HB3 | 2:BB:5281:GLN:NE2 | 2.31 | 0.45 |
| 2:BB:5279:TYR:HE1 | 7:BH:5063:LYS:HE3 | 1.80 | 0.45 |
| 2:BB:5390:TYR:HD2 | 4:BD:5344:GLU:OE1 | 2.00 | 0.45 |
| 32:BB:5627:LMT:H92 | 7:BH:5035:MET:HE2 | 1.98 | 0.45 |
| 3:BC:5193:GLY:O | 3:BC:5194:GLY:O | 2.34 | 0.45 |
| 4:BD:5038:PHE:CE2 | 4:BD:5128:ARG:NH2 | 2.85 | 0.45 |
| 4:BD:5176:ALA:HA | 4:BD:5179:PHE:CD2 | 2.52 | 0.45 |
| 4:BD:5251:ARG:HG2 | 4:BD:5255:GLN:OE1 | 2.17 | 0.45 |
| 32:BD:5411:LMT:O2' | 18:BX:5021:ILE:HG21 | 2.15 | 0.45 |
| 6:BF:5030:THR:HG22 | 6:BF:5034:LEU:CD1 | 2.47 | 0.45 |
| 9:BJ:5003:SER:CB | 9:BJ:5007:ARG:HH22 | 2.30 | 0.45 |
| 12:BM:5003:VAL:HG11 | 14:BT:5002:GLU:HG2 | 1.99 | 0.45 |
| 13:BO:5184:ASP:HB2 | 13:BO:5185:PRO:HD2 | 1.99 | 0.45 |
| 13:BO:5210:ARG:HA | 15:BU:5039:LEU:HD13 | 1.97 | 0.45 |
| 15:BU:5056:ASP:OD2 | 15:BU:5115:THR:OG1 | 2.34 | 0.45 |
| 16:BV:5081:ARG:HG2 | 16:BV:5081:ARG:NH1 | 2.31 | 0.45 |
| 1:AA:157:VAL:HG11 | 24:AA:405:CLA:HMC3 | 1.99 | 0.45 |
| 1:AA:205:VAL:HG21 | 24:AA:404:CLA:HMA2 | 1.99 | 0.45 |
| 27:AB:617:BCR:HC41 | 12:AM:9:ILE:HG23 | 1.98 | 0.45 |
| 3:AC:38:GLY:HA3 | 24:AC:511:CLA:C2D | 2.46 | 0.45 |
| 28:AC:518:DGD:O3D | 27:AJ:101:BCR:H382 | 2.16 | 0.45 |
| 8:AI:10:ILE:HG21 | 32:AI:102:LMT:H82 | 1.98 | 0.45 |
| 8:AI:14:PHE:CE2 | 8:AI:18:LEU:HD11 | 2.52 | 0.45 |
| 13:AO:171:GLU:HA | 13:AO:221:GLY:O | 2.17 | 0.45 |
| 20:AZ:9:LEU:HD13 | 20:AZ:54:VAL:HG11 | 1.97 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:BA:5013:LEU:CA | 1:BA:5016:ARG:HH11 | 2.30 | 0.45 |
| 1:BA:5180:PHE:O | 1:BA:5184:ILE:HG13 | 2.17 | 0.45 |
| 1:BA:5295:PHE:O | 3:BC:5424:SER:OG | 2.31 | 0.45 |
| 2:BB:5010:THR:C | 2:BB:5012:LEU:N | 2.70 | 0.45 |
| 2:BB:5112:CYS:O | 2:BB:5116:VAL:HG23 | 2.16 | 0.45 |
| 3:BC:5276:LEU:HD23 | 3:BC:5276:LEU:HA | 1.75 | 0.45 |
| 4:BD:5035:ILE:O | 24:BD:5405:CLA:HBB2 | 2.16 | 0.45 |
| 4:BD:5337:GLU:O | 4:BD:5338:ASN:C | 2.55 | 0.45 |
| 10:BK:5011:LEU:HD12 | 10:BK:5019:ASP:HA | 1.98 | 0.45 |
| 12:BM:5033:GLN:HG2 | 12:BM:5034:LYS:N | 2.32 | 0.45 |
| 13:BO:5126:GLY:O | 13:BO:5128:ASP:N | 2.50 | 0.45 |
| 15:BU:5066:ILE:CG1 | 15:BU:5072:TYR:CD1 | 3.00 | 0.45 |
| 16:BV:5124:ALA:HB1 | 16:BV:5131:ARG:CG | 2.47 | 0.45 |
| 20:BZ:5009:LEU:HD13 | 20:BZ:5054:VAL:HG11 | 1.98 | 0.45 |
| 1:AA:103:ASP:OD1 | 31:AA:417:LMG:H342 | 2.16 | 0.45 |
| 3:AC:249:ILE:O | 3:AC:253:LEU:HG | 2.17 | 0.45 |
| 3:AC:435:PHE:O | 3:AC:438:LEU:N | 2.49 | 0.45 |
| 3:AC:472:LEU:HG | 4:AD:251:ARG:HH12 | 1.80 | 0.45 |
| 4:AD:277:THR:HG22 | 35:AD:405:PL9:H272 | 1.98 | 0.45 |
| 6:AF:37:ILE:HG22 | 9:AJ:28:PHE:CE1 | 2.52 | 0.45 |
| 13:AO:56:TYR:O | 13:AO:161:SER:HA | 2.17 | 0.45 |
| 13:AO:71:LEU:HD23 | 13:AO:265:PHE:CB | 2.47 | 0.45 |
| 13:AO:83:LYS:HG2 | 13:AO:84:ASN:N | 2.28 | 0.45 |
| 13:AO:91:PHE:CD1 | 13:AO:260:LYS:HB2 | 2.51 | 0.45 |
| 13:AO:147:THR:O | 13:AO:172:PHE:CE2 | 2.70 | 0.45 |
| 1:BA:5235:TYR:C | 1:BA:5237:TYR:H | 2.20 | 0.45 |
| 2:BB:5088:PRO:HD2 | 28:BB:5602:DGD:O4D | 2.17 | 0.45 |
| 2:BB:5229:LEU:O | 2:BB:5231:MET:N | 2.50 | 0.45 |
| 2:BB:5357:ARG:NH2 | 4:BD:5337:GLU:OE1 | 2.50 | 0.45 |
| 24:BB:5612:CLA:HBA1 | 30:BB:5625:SQD:H102 | 1.98 | 0.45 |
| 3:BC:5095:LEU:HD21 | 24:BC:5501:CLA:OBD | 2.16 | 0.45 |
| 3:BC:5239:TRP:CE3 | 3:BC:5243:ILE:HD11 | 2.27 | 0.45 |
| 4:BD:5067:TYR:CE1 | 4:BD:5076:VAL:HG11 | 2.51 | 0.45 |
| 7:BH:5055:LEU:HB2 | 7:BH:5058:VAL:CG1 | 2.46 | 0.45 |
| 13:BO:5056:TYR:O | 13:BO:5161:SER:HA | 2.17 | 0.45 |
| 1:AA:176:ILE:HD12 | 24:AA:405:CLA:HED3 | 1.98 | 0.45 |
| 1:AA:179:THR:HG22 | 1:AA:183:MET:CE | 2.47 | 0.45 |
| 2:AB:69:LEU:HD21 | 24:AB:603:CLA:OBD | 2.17 | 0.45 |
| 2:AB:112:CYS:HA | 27:AB:617:BCR:H282 | 1.98 | 0.45 |
| 2:AB:345:VAL:HG21 | 2:AB:402:TYR:HE2 | 1.82 | 0.45 |
| 3:AC:347:GLY:CA | 13:AO:43:ASN:HB2 | 2.45 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 24:AC:511:CLA:H2 | 24:AC:511:CLA:H61 | 1.86 | 0.45 |
| 7:AH:18:TYR:C | 7:AH:18:TYR:CD1 | 2.89 | 0.45 |
| 8:AI:19:PHE:CE1 | 8:AI:23:PHE:CE2 | 3.00 | 0.45 |
| 12:AM:5:GLN:HE22 | 32:AM:102:LMT:H3' | 1.82 | 0.45 |
| 13:AO:168:PHE:O | 13:AO:224:SER:HA | 2.17 | 0.45 |
| 18:AX:24:LEU:HD12 | 18:AX:24:LEU:HA | 1.69 | 0.45 |
| 2:BB:5008:VAL:HG22 | 24:BB:5615:CLA:O1A | 2.17 | 0.45 |
| 24:BB:5620:CLA:HHC | 24:BB:5620:CLA:HBB1 | 1.99 | 0.45 |
| 3:BC:5256:PRO:HG2 | 3:BC:5266:TRP:CH2 | 2.51 | 0.45 |
| 3:BC:5328:VAL:HG23 | 3:BC:5329:GLY:N | 2.31 | 0.45 |
| 18:BX:5043:ILE:O | 18:BX:5043:ILE:CG2 | 2.64 | 0.45 |
| 1:AA:224:ILE:H | 1:AA:224:ILE:HG13 | 1.55 | 0.45 |
| 2:AB:124:ARG:HD3 | 2:AB:131:PRO:N | 2.32 | 0.45 |
| 2:AB:172:TYR:O | 2:AB:174:LEU:HG | 2.17 | 0.45 |
| 2:AB:476:ARG:HB3 | 2:AB:476:ARG:CZ | 2.46 | 0.45 |
| 24:AB:611:CLA:H52 | 24:AB:614:CLA:HBC2 | 1.99 | 0.45 |
| 3:AC:414:ILE:HG22 | 3:AC:415:ASN:N | 2.31 | 0.45 |
| 3:AC:453:ALA:C | 8:AI:34:ARG:HB2 | 2.38 | 0.45 |
| 16:AV:63:CYS:O | 16:AV:64:ALA:C | 2.55 | 0.45 |
| 2:BB:5009:HIS:HB2 | 24:BB:5615:CLA:CGA | 2.47 | 0.45 |
| 2:BB:5073:GLY:O | 2:BB:5093:PHE:CD1 | 2.70 | 0.45 |
| 3:BC:5164:HIS:HA | 3:BC:5167:VAL:HG23 | 1.98 | 0.45 |
| 3:BC:5472:LEU:O | 3:BC:5473:ASP:O | 2.35 | 0.45 |
| 24:BC:5511:CLA:H151 | 20:BZ:5024:PRO:CG | 2.45 | 0.45 |
| 24:BD:5405:CLA:H41 | 18:BX:5023:LEU:CD1 | 2.42 | 0.45 |
| 31:BM:5102:LMG:O8 | 31:BM:5102:LMG:O9 | 2.35 | 0.45 |
| 20:BZ:5030:PRO:HB3 | 20:BZ:5033:TRP:CZ3 | 2.51 | 0.45 |
| 1:AA:93:PHE:CE2 | 24:AA:407:CLA:HBA1 | 2.52 | 0.44 |
| 1:AA:187:GLN:HG2 | 4:AD:183:LEU:HD21 | 2.00 | 0.44 |
| 2:AB:193:TYR:CD1 | 2:AB:260:SER:HA | 2.52 | 0.44 |
| 2:AB:223:GLN:HG3 | 2:AB:227:LYS:CE | 2.41 | 0.44 |
| 31:AB:620:LMG:C19 | 11:AL:22:LEU:HG | 2.46 | 0.44 |
| 3:AC:452:ALA:O | 3:AC:453:ALA:C | 2.56 | 0.44 |
| 4:AD:70:GLY:O | 9:AJ:37:GLY:CA | 2.64 | 0.44 |
| 6:AF:31:ILE:HG12 | 36:AF:101:HEM:HMC2 | 1.99 | 0.44 |
| 18:AX:12:ILE:CD1 | 18:AX:16:LEU:HD12 | 2.47 | 0.44 |
| 1:BA:5271:LEU:CD1 | 25:BA:5409:MST:H162 | 2.45 | 0.44 |
| 2:BB:5035:GLY:O | 2:BB:5038:ALA:HB3 | 2.16 | 0.44 |
| 2:BB:5435:GLU:O | 2:BB:5436:THR:C | 2.56 | 0.44 |
| 30:BB:5625:SQD:H281 | 32:BB:5627:LMT:H82 | 1.98 | 0.44 |
| 3:BC:5437:PHE:HZ | 24:BC:5510:CLA:HMB3 | 1.82 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 4:BD:5052:THR:HG22 | 4:BD:5067:TYR:CZ | 2.53 | 0.44 |
| 4:BD:5053:THR:CB | 4:BD:5067:TYR:HD2 | 2.30 | 0.44 |
| 5:BE:5051:ARG:O | 5:BE:5054:SER:N | 2.50 | 0.44 |
| 13:BO:5155:THR:HG23 | 13:BO:5168:PHE:CD2 | 2.52 | 0.44 |
| 16:BV:5092:ARG:HG3 | 16:BV:5092:ARG:NH1 | 2.31 | 0.44 |
| 2:AB:15:ASP:O | 2:AB:17:GLY:N | 2.50 | 0.44 |
| 4:AD:87:HIS:HD2 | 4:AD:166:SER:HA | 1.74 | 0.44 |
| 6:AF:15:ILE:HG23 | 36:AF:101:HEM:HAA1 | 1.98 | 0.44 |
| 13:AO:72:GLN:O | 13:AO:263:GLY:HA3 | 2.17 | 0.44 |
| 15:AU:89:GLU:H | 15:AU:89:GLU:CD | 2.21 | 0.44 |
| 16:AV:121:LEU:CD2 | 16:AV:138:LEU:HD11 | 2.47 | 0.44 |
| 1:BA:5011:ALA:O | 1:BA:5012:ASN:HB3 | 2.17 | 0.44 |
| 1:BA:5032:TRP:CZ2 | 8:BI:5022:GLY:HA2 | 2.52 | 0.44 |
| 1:BA:5343:LEU:O | 1:BA:5344:ALA:CB | 2.64 | 0.44 |
| 2:BB:5173:GLY:N | 2:BB:5265:ILE:HD11 | 2.33 | 0.44 |
| 2:BB:5399:VAL:HG12 | 2:BB:5417:VAL:HG22 | 1.99 | 0.44 |
| 24:BC:5511:CLA:C14 | 20:BZ:5024:PRO:HG2 | 2.47 | 0.44 |
| 4:BD:5218:VAL:HG22 | 4:BD:5244:TYR:CD2 | 2.53 | 0.44 |
| 4:BD:5261:PHE:CG | 4:BD:5267:LEU:HD12 | 2.53 | 0.44 |
| 13:BO:5184:ASP:OD2 | 13:BO:5188:ARG:HB2 | 2.17 | 0.44 |
| 31:AA:414:LMG:H142 | 29:AA:415:LHG:H102 | 1.99 | 0.44 |
| 2:AB:248:ALA:CA | 24:AB:603:CLA:H42 | 2.32 | 0.44 |
| 3:AC:437:PHE:CD2 | 24:AC:508:CLA:HMC2 | 2.52 | 0.44 |
| 4:AD:78:VAL:HG11 | 4:AD:114:ILE:HD12 | 1.98 | 0.44 |
| 31:AD:408:LMG:HC71 | 11:AL:15:THR:HG23 | 1.98 | 0.44 |
| 9:AJ:24:ILE:HG23 | 9:AJ:25:VAL:N | 2.32 | 0.44 |
| 12:AM:28:GLN:HB3 | 12:BM:5027:VAL:HG12 | 1.99 | 0.44 |
| 14:AT:22:PHE:C | 14:AT:23:PHE:CD2 | 2.91 | 0.44 |
| 18:AX:12:ILE:H | 27:AX:101:BCR:C29 | 2.30 | 0.44 |
| 1:BA:5042:LEU:HD23 | 1:BA:5042:LEU:HA | 1.76 | 0.44 |
| 1:BA:5051:ALA:HA | 27:BA:5411:BCR:H381 | 1.99 | 0.44 |
| 2:BB:5045:PHE:HE2 | 2:BB:5047:PRO:HB3 | 1.83 | 0.44 |
| 2:BB:5485:GLU:HG2 | 2:BB:5486:LEU:N | 2.31 | 0.44 |
| 3:BC:5056:HIS:C | 3:BC:5058:GLY:N | 2.70 | 0.44 |
| 24:BC:5507:CLA:O1D | 24:BC:5509:CLA:H101 | 2.17 | 0.44 |
| 5:BE:5009:PRO:O | 5:BE:5010:PHE:C | 2.55 | 0.44 |
| 5:BE:5078:THR:O | 5:BE:5082:GLN:OE1 | 2.36 | 0.44 |
| 8:BI:5030:ARG:O | 8:BI:5031:ASN:HB3 | 2.17 | 0.44 |
| 31:BI:5101:LMG:H132 | 32:BI:5102:LMT:H42 | 1.98 | 0.44 |
| 12:BM:5001:MET:CG | 12:BM:5002:GLU:N | 2.81 | 0.44 |
| 13:BO:5055:ALA:HA | 13:BO:5230:VAL:HG11 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 18:BX:5030:LEU:HD23 | 18:BX:5030:LEU:HA | 1.87 | 0.44 |
| 4:AD:127:LEU:HD23 | 4:AD:127:LEU:HA | 1.80 | 0.44 |
| 11:AL:24:ILE:HG21 | 12:AM:19:SER:OG | 2.17 | 0.44 |
| 1:BA:5153:SER:CB | 24:BA:5405:CLA:H11 | 2.47 | 0.44 |
| 1:BA:5261:GLN:CD | 2:BB:5489:GLU:HG3 | 2.36 | 0.44 |
| 2:BB:5334:ASP:HB3 | 13:BO:5202:GLN:HG3 | 2.00 | 0.44 |
| 3:BC:5166:ILE:HG13 | 3:BC:5248:GLY:HA3 | 1.99 | 0.44 |
| 3:BC:5205:ASP:OD1 | 3:BC:5207:ARG:HB3 | 2.17 | 0.44 |
| 4:BD:5126:MET:HE1 | 4:BD:5147:SER:HA | 2.00 | 0.44 |
| 4:BD:5291:LEU:O | 4:BD:5292:ASN:HB2 | 2.17 | 0.44 |
| 5:BE:5015:THR:CG2 | 9:BJ:5006:GLY:HA2 | 2.47 | 0.44 |
| 5:BE:5026:THR:HB | 36:BF:5101:HEM:C3B | 2.53 | 0.44 |
| 6:BF:5030:THR:HG22 | 6:BF:5034:LEU:HD12 | 1.99 | 0.44 |
| 7:BH:5019:GLY:O | 7:BH:5021:VAL:CG1 | 2.66 | 0.44 |
| 13:BO:5080:GLU:O | 13:BO:5089:ALA:CB | 2.65 | 0.44 |
| 13:BO:5109:GLY:HA3 | 13:BO:5122:VAL:O | 2.16 | 0.44 |
| 1:AA:11:ALA:O | 1:AA:12:ASN:HB3 | 2.18 | 0.44 |
| 1:AA:59:ASP:OD2 | 1:AA:62:GLY:HA2 | 2.17 | 0.44 |
| 1:AA:91:LEU:HD11 | 1:AA:163:ILE:HA | 1.99 | 0.44 |
| 1:AA:113:GLN:HB3 | 1:AA:117:PHE:CE2 | 2.52 | 0.44 |
| 2:AB:11:VAL:HG23 | 11:AL:6:ASN:O | 2.18 | 0.44 |
| 2:AB:139:PHE:HZ | 24:AB:609:CLA:HMB3 | 1.83 | 0.44 |
| 2:AB:252:VAL:HG12 | 24:AB:603:CLA:O1A | 2.17 | 0.44 |
| 3:AC:42:LEU:HD21 | 24:AC:511:CLA:H2A | 1.98 | 0.44 |
| 3:AC:165:LEU:HD11 | 24:AC:506:CLA:CHC | 2.47 | 0.44 |
| 3:AC:414:ILE:HD11 | 16:AV:163:TYR:CG | 2.53 | 0.44 |
| 3:AC:438:LEU:HD23 | 28:AC:517:DGD:HAW2 | 1.99 | 0.44 |
| 4:AD:195:PRO:HD3 | 11:AL:34:TYR:CE1 | 2.52 | 0.44 |
| 5:AE:49:THR:HA | 5:AE:50:PRO:HD3 | 1.86 | 0.44 |
| 11:AL:17:LEU:HD12 | 12:AM:22:LEU:HB3 | 2.00 | 0.44 |
| 13:AO:210:ARG:HA | 15:AU:39:LEU:HD13 | 1.99 | 0.44 |
| 15:AU:56:ASP:OD2 | 15:AU:115:THR:OG1 | 2.36 | 0.44 |
| 1:BA:5215:HIS:O | 1:BA:5216:GLY:C | 2.56 | 0.44 |
| 2:BB:5222:PRO:HG3 | 7:BH:5027:THR:N | 2.30 | 0.44 |
| 2:BB:5413:ASP:O | 2:BB:5414:PRO:C | 2.55 | 0.44 |
| 3:BC:5081:MET:HE2 | 3:BC:5090:PRO:HD3 | 2.00 | 0.44 |
| 3:BC:5452:ALA:C | 3:BC:5454:GLY:N | 2.68 | 0.44 |
| 24:BD:5402:CLA:H2 | 34:BD:5404:PHO:HBB1 | 2.00 | 0.44 |
| 11:BL:5016:SER:HA | 11:BL:5019:LEU:CD1 | 2.48 | 0.44 |
| 15:BU:5058:ASN:OD1 | 15:BU:5084:PRO:CA | 2.65 | 0.44 |
| 18:BX:5012:ILE:HD13 | 18:BX:5016:LEU:HD12 | 1.98 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:12:ASN:O | 1:AA:15:GLU:HB3 | 2.17 | 0.44 |
| 1:AA:41:LEU:HD21 | 1:AA:122:GLY:HA3 | 2.00 | 0.44 |
| 1:AA:214:MET:CE | 4:AD:142:ASN:OD1 | 2.65 | 0.44 |
| 24:AB:606:CLA:H52 | 27:AB:619:BCR:H321 | 2.00 | 0.44 |
| 3:AC:205:ASP:OD1 | 3:AC:207:ARG:HB3 | 2.18 | 0.44 |
| 3:AC:344:SER:HB2 | 3:AC:345:PRO:CD | 2.48 | 0.44 |
| 3:AC:363:GLY:O | 3:AC:364:PRO:C | 2.56 | 0.44 |
| 4:AD:122:LEU:HB3 | 4:AD:150:ILE:HD11 | 1.99 | 0.44 |
| 4:AD:186:GLN:HB2 | 24:AD:401:CLA:HBC1 | 2.00 | 0.44 |
| 4:AD:323:GLU:HG2 | 13:AO:194:TYR:OH | 2.18 | 0.44 |
| 4:AD:346:LEU:O | 4:AD:348:ARG:HG3 | 2.18 | 0.44 |
| 6:AF:17:THR:O | 6:AF:21:VAL:HG23 | 2.18 | 0.44 |
| 12:AM:20:VAL:HG11 | 12:BM:5020:VAL:HG22 | 2.00 | 0.44 |
| 13:AO:184:ASP:HB2 | 13:AO:185:PRO:HD2 | 1.99 | 0.44 |
| 18:AX:22:GLY:HA2 | 18:AX:25:SER:OG | 2.18 | 0.44 |
| 2:BB:5054:PRO:HD2 | 2:BB:5057:ARG:HG3 | 2.00 | 0.44 |
| 2:BB:5466:HIS:HE1 | 24:BB:5612:CLA:C4D | 2.30 | 0.44 |
| 28:BB:5602:DGD:C6E | 32:BB:5626:LMT:H2' | 2.47 | 0.44 |
| 24:BB:5607:CLA:H2 | 24:BB:5609:CLA:H91 | 2.00 | 0.44 |
| 3:BC:5057:ALA:CB | 24:BC:5512:CLA:HED2 | 2.48 | 0.44 |
| 3:BC:5176:VAL:O | 3:BC:5180:MET:HG3 | 2.17 | 0.44 |
| 4:BD:5221:THR:HG23 | 4:BD:5221:THR:O | 2.16 | 0.44 |
| 2:AB:63:LEU:N | 2:AB:64:PRO:HD2 | 2.32 | 0.44 |
| 2:AB:435:GLU:O | 2:AB:436:THR:C | 2.56 | 0.44 |
| 2:AB:483:ASP:OD2 | 2:AB:484:PRO:HD2 | 2.18 | 0.44 |
| 3:AC:217:PRO:O | 28:AC:517:DGD:HB21 | 2.17 | 0.44 |
| 3:AC:296:VAL:HG23 | 3:AC:297:TYR:CD2 | 2.53 | 0.44 |
| 10:AK:12:PRO:CB | 20:AZ:62:VAL:HG11 | 2.48 | 0.44 |
| 13:AO:94:THR:HB | 13:AO:135:GLN:O | 2.18 | 0.44 |
| 1:BA:5135:TYR:HD2 | 1:BA:5136:ARG:HH11 | 1.64 | 0.44 |
| 1:BA:5210:LEU:HD23 | 1:BA:5210:LEU:C | 2.38 | 0.44 |
| 3:BC:5053:HIS:ND1 | 24:BC:5509:CLA:H141 | 2.33 | 0.44 |
| 3:BC:5053:HIS:HB3 | 24:BC:5512:CLA:OBD | 2.17 | 0.44 |
| 3:BC:5116:VAL:CG2 | 3:BC:5117:VAL:N | 2.81 | 0.44 |
| 4:BD:5145:ALA:HB2 | 4:BD:5272:LEU:CD2 | 2.47 | 0.44 |
| 31:BD:5410:LMG:HC71 | 11:BL:5015:THR:HG23 | 1.99 | 0.44 |
| 8:BI:5011:VAL:CG2 | 32:BI:5102:LMT:H101 | 2.46 | 0.44 |
| 8:BI:5028:PRO:O | 8:BI:5031:ASN:ND2 | 2.51 | 0.44 |
| 10:BK:5025:LEU:HB2 | 10:BK:5026:PRO:HD3 | 2.00 | 0.44 |
| 13:BO:5036:ILE:HG23 | 13:BO:5041:LEU:HB2 | 2.00 | 0.44 |
| 20:BZ:5002:THR:O | 20:BZ:5005:PHE:HB3 | 2.18 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:292:THR:HB | 28:AC:518:DGD:HAH2 | 1.99 | 0.44 |
| 24:AB:614:CLA:H162 | 31:AB:620:LMG:H422 | 1.98 | 0.44 |
| 3:AC:208:VAL:O | 3:AC:209:ILE:C | 2.56 | 0.44 |
| 4:AD:14:TRP:CG | 4:AD:15:PHE:N | 2.85 | 0.44 |
| 4:AD:161:PRO:CB | 4:AD:170:ALA:HB2 | 2.47 | 0.44 |
| 11:AL:16:SER:O | 11:AL:19:LEU:HD12 | 2.17 | 0.44 |
| 12:AM:18:PRO:O | 12:AM:21:PHE:HB3 | 2.18 | 0.44 |
| 13:AO:141:ARG:HG2 | 13:AO:141:ARG:HH11 | 1.83 | 0.44 |
| 1:BA:5059:ASP:OD1 | 1:BA:5064:ARG:N | 2.50 | 0.44 |
| 1:BA:5210:LEU:C | 1:BA:5210:LEU:CD2 | 2.86 | 0.44 |
| 1:BA:5272:HIS:CD2 | 4:BD:5218:VAL:HG11 | 2.53 | 0.44 |
| 1:BA:5304:HIS:CD2 | 1:BA:5313:VAL:HG11 | 2.52 | 0.44 |
| 2:BB:5144:PHE:CE1 | 2:BB:5210:ILE:CG2 | 3.01 | 0.44 |
| 2:BB:5326:ARG:HD3 | 2:BB:5442:ILE:HG22 | 1.98 | 0.44 |
| 2:BB:5363:PHE:CD1 | 4:BD:5326:ARG:HD2 | 2.52 | 0.44 |
| 3:BC:5264:PHE:CE1 | 27:BC:5516:BCR:H321 | 2.49 | 0.44 |
| 4:BD:5126:MET:HE2 | 4:BD:5146:PHE:HB3 | 2.00 | 0.44 |
| 35:BD:5406:PL9:H103 | 35:BD:5406:PL9:HC72 | 1.77 | 0.44 |
| 10:BK:5044:GLY:O | 10:BK:5045:PHE:C | 2.56 | 0.44 |
| 28:AA:411:DGD:HA82 | 3:AC:223:TRP:CH2 | 2.53 | 0.44 |
| 2:AB:7:ARG:HG2 | 24:AB:611:CLA:HED1 | 1.99 | 0.44 |
| 2:AB:10:THR:C | 2:AB:12:LEU:N | 2.71 | 0.44 |
| 2:AB:12:LEU:HB2 | 24:AB:612:CLA:HMC2 | 1.98 | 0.44 |
| 2:AB:153:PHE:CZ | 2:AB:158:LEU:HD21 | 2.53 | 0.44 |
| 4:AD:253:TRP:HA | 4:AD:256:ILE:CG2 | 2.48 | 0.44 |
| 7:AH:19:GLY:O | 7:AH:21:VAL:CG1 | 2.66 | 0.44 |
| 1:BA:5107:TYR:CD1 | 13:BO:5141:ARG:NH1 | 2.86 | 0.44 |
| 1:BA:5131:TRP:HZ3 | 1:BA:5132:GLU:HG3 | 1.83 | 0.44 |
| 1:BA:5276:ALA:HB2 | 4:BD:5215:GLY:HA3 | 2.00 | 0.44 |
| 24:BA:5406:CLA:H72 | 31:BL:5101:LMG:C25 | 2.47 | 0.44 |
| 2:BB:5049:ASP:HA | 2:BB:5050:PRO:HD2 | 1.81 | 0.44 |
| 3:BC:5028:GLN:HB2 | 24:BC:5511:CLA:HED1 | 1.99 | 0.44 |
| 3:BC:5029:GLU:CB | 10:BK:5046:ARG:NH1 | 2.79 | 0.44 |
| 3:BC:5080:PRO:HB3 | 3:BC:5082:TYR:CE1 | 2.53 | 0.44 |
| 3:BC:5416:SER:CA | 28:BC:5519:DGD:O3E | 2.66 | 0.44 |
| 4:BD:5279:LEU:CD2 | 24:BD:5402:CLA:HMA2 | 2.48 | 0.44 |
| 1:AA:205:VAL:HG21 | 24:AA:404:CLA:HMA1 | 2.00 | 0.43 |
| 2:AB:169:SER:O | 7:AH:65:LEU:HG | 2.18 | 0.43 |
| 2:AB:246:PHE:CD2 | 2:AB:463:PHE:HA | 2.53 | 0.43 |
| 2:AB:433:ASP:C | 2:AB:433:ASP:OD1 | 2.55 | 0.43 |
| 24:AB:607:CLA:HMD3 | 27:BT:5101:BCR:H271 | 2.00 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 30:AB:627:SQD:H45 | 14:BT:5023:PHE:CD1 | 2.52 | 0.43 |
| 3:AC:311:GLN:OE1 | 3:AC:355:THR:CG2 | 2.66 | 0.43 |
| 4:AD:128:ARG:CG | 4:AD:129:GLN:N | 2.81 | 0.43 |
| 13:AO:51:THR:OG1 | 13:AO:52:ALA:N | 2.50 | 0.43 |
| 1:BA:5214:MET:O | 1:BA:5215:HIS:C | 2.54 | 0.43 |
| 2:BB:5091:TRP:CE3 | 24:BB:5610:CLA:O1A | 2.71 | 0.43 |
| 2:BB:5137:LYS:HG3 | 2:BB:5220:ARG:NH2 | 2.32 | 0.43 |
| 2:BB:5226:TYR:HA | 2:BB:5231:MET:CE | 2.48 | 0.43 |
| 24:BB:5607:CLA:H3A | 24:BB:5607:CLA:CGA | 2.48 | 0.43 |
| 3:BC:5347:GLY:CA | 13:BO:5043:ASN:HB2 | 2.47 | 0.43 |
| 4:BD:5039:PRO:HB3 | 24:BD:5405:CLA:HMC3 | 2.00 | 0.43 |
| 4:BD:5183:LEU:HD23 | 4:BD:5183:LEU:HA | 1.87 | 0.43 |
| 4:BD:5253:TRP:HB2 | 4:BD:5260:ALA:CB | 2.48 | 0.43 |
| 5:BE:5008:ARG:HB2 | 6:BF:5013:TYR:CB | 2.47 | 0.43 |
| 13:BO:5190:LEU:HB2 | 13:BO:5214:LYS:HB2 | 2.00 | 0.43 |
| 1:AA:157:VAL:HG21 | 24:AA:405:CLA:HMC1 | 2.00 | 0.43 |
| 1:AA:309:ALA:HB3 | 16:AV:27:ALA:O | 2.17 | 0.43 |
| 2:AB:137:LYS:HG3 | 2:AB:220:ARG:NH2 | 2.33 | 0.43 |
| 2:AB:250:PHE:HB3 | 28:AH:101:DGD:HB82 | 2.00 | 0.43 |
| 24:AB:608:CLA:HBA1 | 30:AB:622:SQD:H102 | 2.00 | 0.43 |
| 3:AC:116:VAL:CG2 | 3:AC:117:VAL:N | 2.81 | 0.43 |
| 3:AC:143:TYR:O | 3:AC:144:SER:CB | 2.65 | 0.43 |
| 4:AD:266:TRP:HE1 | 31:AD:408:LMG:HC72 | 1.82 | 0.43 |
| 9:AJ:3:SER:CA | 9:AJ:7:ARG:HH22 | 2.32 | 0.43 |
| 11:AL:9:PRO:HB3 | 31:BM:5102:LMG:O2 | 2.18 | 0.43 |
| 14:AT:23:PHE:CD1 | 30:BB:5601:SQD:H45 | 2.53 | 0.43 |
| 15:AU:72:TYR:CB | 15:AU:73:PRO:HD3 | 2.40 | 0.43 |
| 1:BA:5093:PHE:CE2 | 24:BA:5408:CLA:HBA1 | 2.52 | 0.43 |
| 24:BB:5614:CLA:H2 | 24:BB:5614:CLA:H61 | 1.88 | 0.43 |
| 24:BB:5616:CLA:H13 | 24:BB:5617:CLA:CBB | 2.47 | 0.43 |
| 4:BD:5081:PRO:HB2 | 4:BD:5085:MET:HG3 | 1.99 | 0.43 |
| 4:BD:5190:ASN:HB2 | 4:BD:5296:TYR:CE1 | 2.53 | 0.43 |
| 5:BE:5008:ARG:NH2 | 9:BJ:5004:GLU:HB2 | 2.34 | 0.43 |
| 24:AA:405:CLA:H61 | 34:AD:402:PHO:HMB3 | 2.00 | 0.43 |
| 2:AB:247:PHE:O | 2:AB:251:VAL:HG23 | 2.19 | 0.43 |
| 3:AC:166:ILE:HG13 | 3:AC:248:GLY:HA3 | 2.01 | 0.43 |
| 3:AC:185:LEU:HD12 | 3:AC:230:LEU:HD12 | 2.00 | 0.43 |
| 31:AM:101:LMG:H132 | 24:BB:5618:CLA:H12 | 2.00 | 0.43 |
| 13:AO:230:VAL:CG1 | 13:AO:231:ASP:N | 2.73 | 0.43 |
| 16:AV:54:GLU:O | 16:AV:58:LEU:HG | 2.18 | 0.43 |
| 16:AV:64:ALA:O | 16:AV:65:SER:C | 2.56 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 18:AX:20:PHE:HZ | 27:AX:101:BCR:H371 | 1.84 | 0.43 |
| 1:BA:5010:SER:C | 1:BA:5012:ASN:N | 2.71 | 0.43 |
| 1:BA:5193:LEU:CD1 | 4:BD:5179:PHE:HB3 | 2.47 | 0.43 |
| 1:BA:5234:ASN:HD21 | 4:BD:5266:TRP:CA | 2.30 | 0.43 |
| 2:BB:5024:LEU:HD13 | 2:BB:5111:ALA:N | 2.34 | 0.43 |
| 2:BB:5222:PRO:O | 2:BB:5223:GLN:C | 2.56 | 0.43 |
| 2:BB:5222:PRO:CG | 7:BH:5027:THR:H | 2.26 | 0.43 |
| 3:BC:5161:LEU:HD23 | 3:BC:5251:HIS:HD2 | 1.84 | 0.43 |
| 3:BC:5224:ILE:HG22 | 3:BC:5289:PHE:CZ | 2.53 | 0.43 |
| 12:BM:5021:PHE:CD2 | 12:BM:5022:LEU:HD23 | 2.53 | 0.43 |
| 13:BO:5155:THR:HG22 | 13:BO:5167:ASP:O | 2.18 | 0.43 |
| 3:AC:438:LEU:HD12 | 3:AC:438:LEU:O | 2.18 | 0.43 |
| 31:AI:101:LMG:H132 | 32:AI:102:LMT:H42 | 2.00 | 0.43 |
| 13:AO:184:ASP:OD2 | 13:AO:188:ARG:HB2 | 2.17 | 0.43 |
| 14:AT:25:GLU:O | 14:AT:26:PRO:C | 2.54 | 0.43 |
| 27:AT:101:BCR:H271 | 24:BB:5611:CLA:HMD3 | 2.01 | 0.43 |
| 1:BA:5309:ALA:HB3 | 5:BE:5053:ASP:HA | 2.01 | 0.43 |
| 2:BB:5075:TRP:CZ3 | 28:BB:5602:DGD:HB32 | 2.54 | 0.43 |
| 2:BB:5179:GLN:HA | 2:BB:5179:GLN:NE2 | 2.22 | 0.43 |
| 2:BB:5260:SER:HG | 2:BB:5262:THR:HG22 | 1.77 | 0.43 |
| 2:BB:5343:HIS:O | 2:BB:5401:PHE:HA | 2.18 | 0.43 |
| 2:BB:5356:VAL:HG22 | 2:BB:5370:LEU:CD2 | 2.48 | 0.43 |
| 2:BB:5476:ARG:HB3 | 2:BB:5476:ARG:CZ | 2.44 | 0.43 |
| 3:BC:5407:VAL:HA | 28:BC:5519:DGD:O2E | 2.18 | 0.43 |
| 5:BE:5007:GLU:O | 5:BE:5009:PRO:HD3 | 2.17 | 0.43 |
| 13:BO:5135:GLN:HE21 | 13:BO:5135:GLN:HB3 | 1.53 | 0.43 |
| 13:BO:5168:PHE:O | 13:BO:5224:SER:HA | 2.18 | 0.43 |
| 1:AA:271:LEU:HD21 | 25:AA:408:MST:H83 | 2.00 | 0.43 |
| 2:AB:37:MET:O | 2:AB:41:GLU:HG3 | 2.18 | 0.43 |
| 3:AC:29:GLU:CD | 3:AC:29:GLU:N | 2.72 | 0.43 |
| 27:AC:514:BCR:H11C | 27:AK:102:BCR:H322 | 2.00 | 0.43 |
| 4:AD:17:ILE:CG2 | 18:AX:42:GLN:HG2 | 2.42 | 0.43 |
| 14:AT:18:PHE:CD1 | 27:AT:101:BCR:HC8 | 2.54 | 0.43 |
| 16:AV:148:GLU:N | 16:AV:149:PRO:HD2 | 2.34 | 0.43 |
| 2:BB:5348:ASN:O | 2:BB:5349:LYS:C | 2.56 | 0.43 |
| 24:BB:5607:CLA:HMB1 | 24:BB:5607:CLA:HAB | 1.81 | 0.43 |
| 3:BC:5266:TRP:HB3 | 3:BC:5271:TYR:OH | 2.17 | 0.43 |
| 28:BC:5519:DGD:HE62 | 9:BJ:5040:LEU:CD1 | 2.48 | 0.43 |
| 4:BD:5078:VAL:HG11 | 4:BD:5114:ILE:HD12 | 2.01 | 0.43 |
| 1:AA:222:SER:O | 1:AA:246:TYR:HB2 | 2.19 | 0.43 |
| 1:AA:281:VAL:HG13 | 1:AA:282:GLY:N | 2.33 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:5:TRP:CZ2 | 31:AB:620:LMG:H291 | 2.53 | 0.43 |
| 2:AB:68:ARG:NH1 | 24:AB:604:CLA:HED1 | 2.30 | 0.43 |
| 2:AB:90:PHE:HE2 | 2:AB:91:TRP:CZ3 | 2.35 | 0.43 |
| 2:AB:230:ARG:H | 2:AB:230:ARG:HD2 | 1.84 | 0.43 |
| 3:AC:377:LEU:CD2 | 13:AO:126:GLY:HA2 | 2.48 | 0.43 |
| 3:AC:380:ILE:CA | 3:AC:384:ILE:HD11 | 2.40 | 0.43 |
| 24:AC:510:CLA:H161 | 24:AC:510:CLA:H122 | 1.85 | 0.43 |
| 6:AF:15:ILE:HG22 | 6:AF:16:PHE:CD1 | 2.50 | 0.43 |
| 13:AO:180:ALA:HB2 | 15:AU:120:ALA:O | 2.18 | 0.43 |
| 14:AT:31:LYS:O | 14:AT:32:LYS:HB2 | 2.18 | 0.43 |
| 1:BA:5013:LEU:HA | 1:BA:5016:ARG:NH1 | 2.33 | 0.43 |
| 1:BA:5078:ILE:O | 1:BA:5176:ILE:HB | 2.18 | 0.43 |
| 1:BA:5149:ALA:HB1 | 1:BA:5283:VAL:HG12 | 2.00 | 0.43 |
| 2:BB:5159:THR:OG1 | 2:BB:5161:LEU:HD13 | 2.19 | 0.43 |
| 3:BC:5203:THR:O | 3:BC:5235:GLY:HA3 | 2.19 | 0.43 |
| 3:BC:5466:VAL:HA | 3:BC:5469:MET:CE | 2.48 | 0.43 |
| 24:BC:5502:CLA:HHC | 24:BC:5502:CLA:HBB1 | 2.01 | 0.43 |
| 24:BC:5505:CLA:HAA2 | 24:BC:5505:CLA:HBD | 2.00 | 0.43 |
| 24:BC:5507:CLA:O1A | 24:BC:5509:CLA:H2 | 2.19 | 0.43 |
| 5:BE:5082:GLN:O | 5:BE:5083:LEU:C | 2.56 | 0.43 |
| 7:BH:5043:LEU:O | 7:BH:5047:GLU:HG3 | 2.17 | 0.43 |
| 19:BY:5023:UNK:O | 19:BY:5024:UNK:C | 2.67 | 0.43 |
| 1:AA:228:THR:CG2 | 1:AA:229:GLU:N | 2.81 | 0.43 |
| 24:AA:405:CLA:HED2 | 4:AD:198:MET:SD | 2.58 | 0.43 |
| 27:AA:410:BCR:H312 | 8:AI:15:PHE:CE1 | 2.54 | 0.43 |
| 2:AB:12:LEU:CD1 | 2:AB:19:LEU:HA | 2.36 | 0.43 |
| 2:AB:358:ARG:O | 2:AB:360:PRO:HD3 | 2.18 | 0.43 |
| 30:AB:622:SQD:H281 | 32:AB:624:LMT:H82 | 2.00 | 0.43 |
| 3:AC:95:LEU:HD21 | 24:AC:501:CLA:OBD | 2.18 | 0.43 |
| 3:AC:315:MET:HE2 | 3:AC:365:TRP:HZ3 | 1.83 | 0.43 |
| 24:AC:505:CLA:HMD2 | 27:AC:516:BCR:H343 | 2.01 | 0.43 |
| 24:AC:511:CLA:H141 | 20:AZ:20:VAL:O | 2.18 | 0.43 |
| 4:AD:52:THR:HG22 | 4:AD:67:TYR:CZ | 2.53 | 0.43 |
| 4:AD:253:TRP:HB2 | 4:AD:260:ALA:CB | 2.49 | 0.43 |
| 13:AO:127:ILE:H | 13:AO:127:ILE:HG12 | 1.64 | 0.43 |
| 15:AU:66:ILE:HG12 | 15:AU:72:TYR:CD1 | 2.54 | 0.43 |
| 1:BA:5214:MET:CE | 4:BD:5142:ASN:OD1 | 2.66 | 0.43 |
| 1:BA:5342:ASP:HB2 | 4:BD:5352:LEU:HD21 | 1.99 | 0.43 |
| 2:BB:5098:LEU:O | 2:BB:5102:VAL:HG23 | 2.18 | 0.43 |
| 2:BB:5457:VAL:HG12 | 2:BB:5458:PHE:N | 2.33 | 0.43 |
| 3:BC:5071:GLU:OE2 | 3:BC:5088:LEU:HG | 2.19 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 3:BC:5324:LEU:HB3 | 15:BU:5062:ILE:HD13 | 2.01 | 0.43 |
| 3:BC:5404:LEU:HD12 | 3:BC:5404:LEU:HA | 1.73 | 0.43 |
| 3:BC:5452:ALA:O | 3:BC:5453:ALA:C | 2.57 | 0.43 |
| 4:BD:5261:PHE:HE1 | 4:BD:5266:TRP:CD1 | 2.37 | 0.43 |
| 8:BI:5027:ASP:N | 8:BI:5028:PRO:HD3 | 2.33 | 0.43 |
| 11:BL:5024:ILE:HG22 | 11:BL:5025:LEU:N | 2.33 | 0.43 |
| 14:BT:5029:ILE:O | 14:BT:5031:LYS:N | 2.52 | 0.43 |
| 1:AA:248:ILE:O | 1:AA:248:ILE:HG12 | 2.18 | 0.43 |
| 1:AA:281:VAL:HG11 | 28:AC:519:DGD:CIA | 2.49 | 0.43 |
| 1:AA:325:ASN:HA | 1:AA:328:MET:CE | 2.31 | 0.43 |
| 2:AB:249:ALA:O | 2:AB:252:VAL:HG22 | 2.19 | 0.43 |
| 2:AB:271:THR:N | 2:AB:274:GLN:OE1 | 2.47 | 0.43 |
| 3:AC:460:ASP:O | 3:AC:461:ARG:C | 2.55 | 0.43 |
| 4:AD:43:LEU:HD23 | 4:AD:117:HIS:CE1 | 2.53 | 0.43 |
| 4:AD:203:GLY:O | 4:AD:207:GLY:N | 2.52 | 0.43 |
| 4:AD:263:ASN:O | 4:AD:265:ARG:N | 2.52 | 0.43 |
| 5:AE:15:THR:CG2 | 9:AJ:6:GLY:HA2 | 2.49 | 0.43 |
| 6:AF:30:THR:HG22 | 6:AF:34:LEU:CD1 | 2.48 | 0.43 |
| 1:BA:5013:LEU:HD12 | 1:BA:5016:ARG:NH1 | 2.33 | 0.43 |
| 1:BA:5065:GLU:N | 1:BA:5066:PRO:HD3 | 2.34 | 0.43 |
| 1:BA:5299:GLY:O | 3:BC:5403:SER:HB2 | 2.18 | 0.43 |
| 2:BB:5011:VAL:CG2 | 11:BL:5007:ARG:HA | 2.49 | 0.43 |
| 2:BB:5024:LEU:HB3 | 2:BB:5111:ALA:HB2 | 2.00 | 0.43 |
| 2:BB:5229:LEU:O | 2:BB:5230:ARG:C | 2.56 | 0.43 |
| 24:BB:5616:CLA:H12 | 24:BB:5619:CLA:HAA2 | 2.01 | 0.43 |
| 4:BD:5171:PRO:HG3 | 4:BD:5181:PHE:CE1 | 2.53 | 0.43 |
| 5:BE:5057:ALA:H | 5:BE:5060:GLN:NE2 | 2.17 | 0.43 |
| 16:BV:5063:CYS:O | 16:BV:5064:ALA:C | 2.56 | 0.43 |
| 1:AA:42:LEU:HA | 1:AA:45:THR:HG22 | 2.00 | 0.43 |
| 1:AA:51:ALA:HA | 27:AA:410:BCR:H381 | 2.01 | 0.43 |
| 1:AA:77:ILE:HG12 | 14:AT:6:TYR:CD1 | 2.54 | 0.43 |
| 2:AB:68:ARG:NH2 | 24:AB:604:CLA:HED1 | 2.29 | 0.43 |
| 2:AB:102:VAL:HG13 | 27:AB:618:BCR:H401 | 2.00 | 0.43 |
| 2:AB:354:LEU:HD21 | 2:AB:378:LYS:CB | 2.49 | 0.43 |
| 3:AC:466:VAL:HA | 3:AC:469:MET:CE | 2.48 | 0.43 |
| 24:AC:504:CLA:H141 | 28:AC:518:DGD:HBT1 | 2.01 | 0.43 |
| 24:AC:512:CLA:H162 | 24:AC:512:CLA:H122 | 1.87 | 0.43 |
| 4:AD:217:THR:O | 4:AD:221:THR:HB | 2.18 | 0.43 |
| 5:AE:16:SER:HB2 | 9:AJ:3:SER:O | 2.18 | 0.43 |
| 10:AK:44:GLY:O | 10:AK:45:PHE:C | 2.57 | 0.43 |
| 13:AO:120:THR:HA | 13:AO:153:ALA:O | 2.19 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 16:AV:130:MET:SD | 16:AV:133:LEU:HD22 | 2.58 | 0.43 |
| 20:AZ:30:PRO:C | 20:AZ:32:ASP:N | 2.73 | 0.43 |
| 1:BA:5113:GLN:HB3 | 1:BA:5117:PHE:CE2 | 2.54 | 0.43 |
| 1:BA:5176:ILE:HD12 | 24:BA:5406:CLA:HED3 | 2.01 | 0.43 |
| 2:BB:5011:VAL:HG23 | 11:BL:5007:ARG:HA | 2.01 | 0.43 |
| 3:BC:5062:PHE:HZ | 10:BK:5028:ILE:CD1 | 2.29 | 0.43 |
| 3:BC:5313:GLN:HE21 | 3:BC:5313:GLN:HB2 | 1.54 | 0.43 |
| 3:BC:5415:ASN:O | 3:BC:5416:SER:CB | 2.63 | 0.43 |
| 3:BC:5438:LEU:HD12 | 3:BC:5438:LEU:O | 2.19 | 0.43 |
| 27:BC:5514:BCR:H11C | 27:BK:5102:BCR:H322 | 2.00 | 0.43 |
| 13:BO:5147:THR:O | 13:BO:5172:PHE:CE2 | 2.71 | 0.43 |
| 15:BU:5130:ASN:O | 15:BU:5132:LEU:HD23 | 2.18 | 0.43 |
| 16:BV:5071:ILE:CD1 | 16:BV:5072:THR:N | 2.81 | 0.43 |
| 1:AA:18:CYS:O | 1:AA:22:THR:CG2 | 2.65 | 0.43 |
| 1:AA:286:THR:HG23 | 24:AA:404:CLA:HED3 | 2.01 | 0.43 |
| 1:AA:295:PHE:HD2 | 3:AC:291:TRP:CD2 | 2.37 | 0.43 |
| 2:AB:222:PRO:HB3 | 7:AH:26:GLY:N | 2.34 | 0.43 |
| 2:AB:315:ILE:HG22 | 2:AB:426:PHE:HB3 | 2.00 | 0.43 |
| 2:AB:345:VAL:HG21 | 2:AB:402:TYR:CE2 | 2.53 | 0.43 |
| 24:AB:603:CLA:H3A | 24:AB:603:CLA:CGA | 2.49 | 0.43 |
| 3:AC:232:ASP:OD2 | 3:AC:232:ASP:N | 2.52 | 0.43 |
| 3:AC:417:VAL:O | 3:AC:417:VAL:HG13 | 2.19 | 0.43 |
| 4:AD:39:PRO:HB3 | 24:AD:404:CLA:HMC3 | 2.00 | 0.43 |
| 4:AD:171:PRO:HG3 | 4:AD:181:PHE:CE2 | 2.54 | 0.43 |
| 11:AL:16:SER:HA | 11:AL:19:LEU:CG | 2.45 | 0.43 |
| 13:AO:32:THR:OG1 | 13:AO:33:TYR:N | 2.52 | 0.43 |
| 13:AO:92:VAL:HG12 | 13:AO:93:PRO:CD | 2.49 | 0.43 |
| 13:AO:109:GLY:HA3 | 13:AO:122:VAL:O | 2.18 | 0.43 |
| 18:AX:44:ASP:O | 18:AX:45:LYS:HB3 | 2.18 | 0.43 |
| 20:AZ:31:GLN:HG3 | 20:AZ:32:ASP:OD2 | 2.19 | 0.43 |
| 20:AZ:32:ASP:CG | 20:AZ:33:TRP:N | 2.68 | 0.43 |
| 1:BA:5032:TRP:HB2 | 8:BI:5023:PHE:CZ | 2.54 | 0.43 |
| 1:BA:5157:VAL:HG21 | 24:BA:5406:CLA:HMC1 | 2.00 | 0.43 |
| 1:BA:5207:GLY:HA3 | 1:BA:5278:TRP:HE1 | 1.84 | 0.43 |
| 1:BA:5239:PHE:HB3 | 14:BT:5028:ARG:O | 2.18 | 0.43 |
| 2:BB:5037:MET:O | 2:BB:5041:GLU:HG3 | 2.19 | 0.43 |
| 24:BB:5609:CLA:H143 | 24:BB:5614:CLA:HBA1 | 2.01 | 0.43 |
| 3:BC:5366:LEU:HD21 | 3:BC:5370:ARG:NH2 | 2.34 | 0.43 |
| 4:BD:5272:LEU:O | 4:BD:5276:VAL:HG23 | 2.19 | 0.43 |
| 5:BE:5008:ARG:HB2 | 6:BF:5013:TYR:HB3 | 2.00 | 0.43 |
| 5:BE:5035:TRP:CD1 | 5:BE:5035:TRP:C | 2.92 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 10:BK:5014:ALA:HB2 | 20:BZ:5061:VAL:HG12 | 2.00 | 0.43 |
| 19:BY:5023:UNK:O | 19:BY:5025:UNK:N | 2.52 | 0.43 |
| 23:AA:403[A]:CL:CL | 4:AD:317:LYS:HD3 | 2.56 | 0.42 |
| 2:AB:102:VAL:HB | 24:AB:606:CLA:H91 | 2.00 | 0.42 |
| 2:AB:144:PHE:HE1 | 2:AB:210:ILE:CG2 | 2.31 | 0.42 |
| 2:AB:250:PHE:HD1 | 28:AH:101:DGD:HB92 | 1.83 | 0.42 |
| 2:AB:490:GLN:O | 2:AB:491:VAL:O | 2.37 | 0.42 |
| 3:AC:404:LEU:HD12 | 3:AC:404:LEU:HA | 1.69 | 0.42 |
| 24:AD:404:CLA:H41 | 18:AX:23:LEU:CD1 | 2.43 | 0.42 |
| 16:AV:92:ARG:HG3 | 16:AV:92:ARG:NH1 | 2.33 | 0.42 |
| 1:BA:5281:VAL:HG11 | 28:BC:5519:DGD:CHA | 2.48 | 0.42 |
| 2:BB:5135:LEU:HD21 | 2:BB:5234:ILE:HD13 | 2.01 | 0.42 |
| 2:BB:5169:SER:O | 7:BH:5065:LEU:HG | 2.19 | 0.42 |
| 2:BB:5437:LEU:N | 2:BB:5437:LEU:HD12 | 2.34 | 0.42 |
| 24:BB:5609:CLA:H41 | 24:BB:5609:CLA:H61 | 1.83 | 0.42 |
| 3:BC:5042:LEU:CD1 | 24:BC:5511:CLA:HMA3 | 2.50 | 0.42 |
| 3:BC:5239:TRP:O | 3:BC:5243:ILE:HD12 | 2.19 | 0.42 |
| 3:BC:5437:PHE:CD2 | 24:BC:5508:CLA:HMC2 | 2.54 | 0.42 |
| 3:BC:5466:VAL:HA | 3:BC:5469:MET:HE1 | 2.01 | 0.42 |
| 6:BF:5025:THR:O | 6:BF:5029:PRO:HG2 | 2.18 | 0.42 |
| 7:BH:5040:VAL:O | 7:BH:5044:ILE:HG13 | 2.19 | 0.42 |
| 13:BO:5069:LEU:HD12 | 13:BO:5070:CYS:N | 2.33 | 0.42 |
| 13:BO:5127:ILE:H | 13:BO:5127:ILE:HG12 | 1.65 | 0.42 |
| 16:BV:5121:LEU:HD21 | 16:BV:5138:LEU:HD11 | 2.01 | 0.42 |
| 19:BY:5021:UNK:O | 19:BY:5022:UNK:C | 2.66 | 0.42 |
| 1:AA:96:ILE:HD12 | 24:AA:407:CLA:HMD1 | 2.00 | 0.42 |
| 1:AA:303:ASN:O | 1:AA:304:HIS:HB2 | 2.20 | 0.42 |
| 4:AD:266:TRP:NE1 | 31:AD:408:LMG:HC72 | 2.34 | 0.42 |
| 10:AK:14:ALA:HB2 | 20:AZ:61:VAL:HG12 | 2.01 | 0.42 |
| 16:AV:90:PRO:O | 16:AV:92:ARG:CD | 2.67 | 0.42 |
| 1:BA:5259:ILE:N | 1:BA:5259:ILE:CD1 | 2.69 | 0.42 |
| 29:BA:5413:LHG:HC62 | 3:BC:5443:TRP:HH2 | 1.85 | 0.42 |
| 2:BB:5015:ASP:N | 2:BB:5016:PRO:CD | 2.81 | 0.42 |
| 2:BB:5137:LYS:HE2 | 7:BH:5017:GLU:CG | 2.49 | 0.42 |
| 2:BB:5358:ARG:O | 2:BB:5360:PRO:HD3 | 2.19 | 0.42 |
| 3:BC:5165:LEU:HD11 | 24:BC:5506:CLA:CHC | 2.48 | 0.42 |
| 3:BC:5243:ILE:O | 24:BC:5506:CLA:HMC1 | 2.19 | 0.42 |
| 3:BC:5426:LEU:HD23 | 3:BC:5426:LEU:HA | 1.86 | 0.42 |
| 28:BC:5518:DGD:HBT2 | 27:BJ:5101:BCR:H342 | 2.01 | 0.42 |
| 4:BD:5210:LEU:HD21 | 35:BD:5406:PL9:H13 | 2.00 | 0.42 |
| 13:BO:5051:THR:OG1 | 13:BO:5052:ALA:N | 2.52 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 13:BO:5075:THR:HG21 | 13:BO:5077:LEU:HD21 | 2.01 | 0.42 |
| 15:BU:5072:TYR:CG | 15:BU:5073:PRO:N | 2.84 | 0.42 |
| 1:AA:20:TRP:O | 1:AA:23:SER:HB3 | 2.18 | 0.42 |
| 1:AA:288:LEU:CD1 | 3:AC:432:VAL:HG23 | 2.44 | 0.42 |
| 2:AB:297:THR:OG1 | 2:AB:298:LEU:N | 2.52 | 0.42 |
| 24:AB:614:CLA:HMB1 | 24:AB:614:CLA:HAB | 1.89 | 0.42 |
| 30:AB:627:SQD:H45 | 14:BT:5023:PHE:HD1 | 1.85 | 0.42 |
| 3:AC:304:PRO:HB3 | 3:AC:395:TYR:CG | 2.54 | 0.42 |
| 3:AC:369:LEU:HD21 | 3:AC:384:ILE:HD13 | 2.01 | 0.42 |
| 3:AC:385:GLN:O | 3:AC:388:GLN:HB2 | 2.19 | 0.42 |
| 3:AC:415:ASN:CB | 9:AJ:39:SER:OG | 2.67 | 0.42 |
| 4:AD:181:PHE:CZ | 4:AD:185:PHE:CE1 | 3.07 | 0.42 |
| 31:AM:101:LMG:O8 | 31:AM:101:LMG:O9 | 2.37 | 0.42 |
| 13:AO:135:GLN:HG2 | 13:AO:141:ARG:HG3 | 2.00 | 0.42 |
| 2:BB:5141:ILE:O | 2:BB:5144:PHE:HB3 | 2.20 | 0.42 |
| 2:BB:5234:ILE:C | 2:BB:5236:THR:H | 2.23 | 0.42 |
| 2:BB:5345:VAL:HG21 | 2:BB:5402:TYR:CE2 | 2.54 | 0.42 |
| 2:BB:5477:ASP:OD2 | 2:BB:5478:VAL:HG13 | 2.19 | 0.42 |
| 24:BB:5607:CLA:H203 | 24:BB:5613:CLA:H92 | 2.00 | 0.42 |
| 3:BC:5321:ASP:OD2 | 15:BU:5129:ASN:HB2 | 2.19 | 0.42 |
| 4:BD:5122:LEU:HD21 | 24:BD:5402:CLA:C9 | 2.41 | 0.42 |
| 4:BD:5155:SER:HA | 4:BD:5159:ILE:HG13 | 2.01 | 0.42 |
| 4:BD:5164:GLN:NE2 | 4:BD:5290:ALA:O | 2.53 | 0.42 |
| 1:AA:322:ASN:OD1 | 3:AC:412:THR:HA | 2.19 | 0.42 |
| 2:AB:162:PHE:O | 24:AB:606:CLA:HMD3 | 2.19 | 0.42 |
| 2:AB:466:HIS:CE1 | 24:AB:608:CLA:ND | 2.87 | 0.42 |
| 24:AB:613:CLA:H61 | 24:AB:613:CLA:H41 | 1.63 | 0.42 |
| 27:AC:516:BCR:HC41 | 8:AI:20:VAL:CG1 | 2.48 | 0.42 |
| 28:AC:518:DGD:HBT2 | 27:AJ:101:BCR:H342 | 2.02 | 0.42 |
| 9:AJ:3:SER:CB | 9:AJ:7:ARG:HH22 | 2.32 | 0.42 |
| 13:AO:57:PRO:HA | 13:AO:161:SER:OG | 2.19 | 0.42 |
| 1:BA:5042:LEU:HA | 1:BA:5045:THR:HG22 | 2.01 | 0.42 |
| 1:BA:5131:TRP:CZ3 | 1:BA:5132:GLU:HG3 | 2.53 | 0.42 |
| 2:BB:5144:PHE:HE1 | 2:BB:5210:ILE:CG2 | 2.33 | 0.42 |
| 2:BB:5230:ARG:HD2 | 2:BB:5230:ARG:H | 1.84 | 0.42 |
| 2:BB:5298:LEU:HD23 | 2:BB:5402:TYR:CE1 | 2.54 | 0.42 |
| 24:BB:5618:CLA:HAA2 | 24:BB:5618:CLA:HBD | 2.01 | 0.42 |
| 32:BC:5522:LMT:H41 | 8:BI:5021:PHE:HE1 | 1.84 | 0.42 |
| 10:BK:5018:PHE:O | 10:BK:5019:ASP:C | 2.57 | 0.42 |
| 13:BO:5141:ARG:HG2 | 13:BO:5141:ARG:HH11 | 1.83 | 0.42 |
| 13:BO:5178:ARG:HG3 | 13:BO:5178:ARG:NH1 | 2.28 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 15:BU:5056:ASP:HB3 | 15:BU:5060:THR:H | 1.84 | 0.42 |
| 1:AA:257:ARG:NH1 | 2:AB:489:GLU:OE2 | 2.52 | 0.42 |
| 2:AB:12:LEU:HD13 | 2:AB:19:LEU:CA | 2.38 | 0.42 |
| 2:AB:124:ARG:HG3 | 2:AB:124:ARG:NH1 | 2.33 | 0.42 |
| 2:AB:357:ARG:NH2 | 4:AD:337:GLU:OE1 | 2.53 | 0.42 |
| 3:AC:229:ASN:O | 3:AC:233:VAL:HG23 | 2.18 | 0.42 |
| 3:AC:390:ARG:CZ | 16:AV:126:ILE:HG21 | 2.50 | 0.42 |
| 10:AK:16:ALA:O | 10:AK:19:ASP:HB2 | 2.19 | 0.42 |
| 13:AO:70:CYS:SG | 13:AO:105:ASP:OD1 | 2.77 | 0.42 |
| 13:AO:73:PRO:HG3 | 13:AO:146:PHE:CE2 | 2.54 | 0.42 |
| 15:AU:56:ASP:HB3 | 15:AU:60:THR:H | 1.85 | 0.42 |
| 1:BA:5217:SER:HB2 | 4:BD:5141:TYR:O | 2.19 | 0.42 |
| 2:BB:5274:GLN:HG2 | 2:BB:5279:TYR:CD2 | 2.54 | 0.42 |
| 3:BC:5217:PRO:O | 28:BC:5517:DGD:HB21 | 2.20 | 0.42 |
| 5:BE:5069:ARG:CG | 5:BE:5070:PHE:N | 2.82 | 0.42 |
| 13:BO:5081:GLU:HA | 13:BO:5082:PRO:HD3 | 1.88 | 0.42 |
| 13:BO:5091:PHE:CD1 | 13:BO:5260:LYS:HB2 | 2.55 | 0.42 |
| 16:BV:5062:ALA:O | 36:BV:5201:HEM:HAB | 2.20 | 0.42 |
| 19:BY:5018:UNK:O | 19:BY:5022:UNK:N | 2.52 | 0.42 |
| 20:BZ:5030:PRO:C | 20:BZ:5032:ASP:N | 2.72 | 0.42 |
| 2:AB:224:ARG:CZ | 32:AB:624:LMT:H2' | 2.50 | 0.42 |
| 2:AB:450:TRP:NE1 | 24:AB:607:CLA:HBA2 | 2.34 | 0.42 |
| 2:AB:466:HIS:HE1 | 24:AB:608:CLA:C4D | 2.31 | 0.42 |
| 3:AC:266:TRP:HB3 | 3:AC:271:TYR:OH | 2.20 | 0.42 |
| 3:AC:337:LEU:HA | 13:AO:131:PRO:HG3 | 2.01 | 0.42 |
| 4:AD:164:GLN:NE2 | 4:AD:290:ALA:O | 2.53 | 0.42 |
| 4:AD:263:ASN:O | 4:AD:266:TRP:N | 2.50 | 0.42 |
| 6:AF:27:ALA:CB | 36:AF:101:HEM:HBC2 | 2.46 | 0.42 |
| 8:AI:21:PHE:HD1 | 8:AI:21:PHE:HA | 1.76 | 0.42 |
| 10:AK:43:VAL:O | 10:AK:46:ARG:HG3 | 2.20 | 0.42 |
| 14:AT:14:ILE:HD13 | 14:AT:17:PHE:CD2 | 2.55 | 0.42 |
| 1:BA:5069:GLY:HA2 | 1:BA:5075:ASN:HD21 | 1.83 | 0.42 |
| 2:BB:5112:CYS:HA | 27:BB:5621:BCR:H282 | 2.01 | 0.42 |
| 2:BB:5238:LEU:CD2 | 2:BB:5469:HIS:CD2 | 3.03 | 0.42 |
| 2:BB:5246:PHE:CD2 | 2:BB:5463:PHE:HA | 2.54 | 0.42 |
| 3:BC:5272:LEU:CA | 24:BC:5509:CLA:HMD3 | 2.50 | 0.42 |
| 8:BI:5019:PHE:CE1 | 8:BI:5023:PHE:CE2 | 3.02 | 0.42 |
| 13:BO:5094:THR:HB | 13:BO:5135:GLN:O | 2.20 | 0.42 |
| 1:AA:259:ILE:N | 1:AA:259:ILE:CD1 | 2.71 | 0.42 |
| 24:AA:405:CLA:H62 | 34:AD:402:PHO:HMA1 | 2.01 | 0.42 |
| 2:AB:91:TRP:CE3 | 24:AB:606:CLA:O1A | 2.73 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 2:AB:234:ILE:C | 2:AB:236:THR:H | 2.23 | 0.42 |
| 24:AB:607:CLA:HMB1 | 24:AB:607:CLA:HAB | 1.88 | 0.42 |
| 3:AC:269:GLU:O | 3:AC:272:LEU:HB3 | 2.19 | 0.42 |
| 3:AC:324:LEU:HB3 | 15:AU:62:ILE:HD13 | 2.01 | 0.42 |
| 4:AD:79:SER:HA | 4:AD:172:SER:HB3 | 2.02 | 0.42 |
| 10:AK:34:ALA:O | 10:AK:37:PHE:HB2 | 2.19 | 0.42 |
| 13:AO:56:TYR:CD1 | 13:AO:235:GLY:HA2 | 2.55 | 0.42 |
| 13:AO:190:LEU:HB2 | 13:AO:214:LYS:HB2 | 2.02 | 0.42 |
| 1:BA:5118:HIS:HE1 | 24:BA:5408:CLA:C1A | 2.32 | 0.42 |
| 1:BA:5157:VAL:HG13 | 1:BA:5172:MET:HB2 | 2.00 | 0.42 |
| 1:BA:5207:GLY:O | 1:BA:5210:LEU:HB3 | 2.19 | 0.42 |
| 2:BB:5188:ASP:HA | 7:BH:5058:VAL:HG23 | 2.02 | 0.42 |
| 3:BC:5142:GLU:C | 3:BC:5144:SER:H | 2.22 | 0.42 |
| 3:BC:5223:TRP:CH2 | 3:BC:5224:ILE:HD11 | 2.54 | 0.42 |
| 13:BO:5059:ASP:O | 13:BO:5061:SER:N | 2.53 | 0.42 |
| 1:AA:149:ALA:HB1 | 1:AA:283:VAL:CG1 | 2.49 | 0.42 |
| 1:AA:262:TYR:HE1 | 31:AA:414:LMG:HO5 | 1.66 | 0.42 |
| 1:AA:288:LEU:CD2 | 3:AC:432:VAL:HG23 | 2.49 | 0.42 |
| 2:AB:270:PRO:HG3 | 2:AB:312:TYR:CD2 | 2.51 | 0.42 |
| 2:AB:413:ASP:O | 2:AB:414:PRO:C | 2.57 | 0.42 |
| 3:AC:276:LEU:HD23 | 3:AC:276:LEU:HA | 1.76 | 0.42 |
| 3:AC:366:LEU:HD23 | 3:AC:366:LEU:O | 2.20 | 0.42 |
| 28:AC:518:DGD:O1B | 28:AC:518:DGD:C1G | 2.68 | 0.42 |
| 4:AD:68:LEU:HB2 | 6:AF:40:MET:HE1 | 2.02 | 0.42 |
| 6:AF:20:TRP:NE1 | 6:AF:24:HIS:CE1 | 2.88 | 0.42 |
| 13:AO:141:ARG:NH1 | 13:AO:141:ARG:HG2 | 2.35 | 0.42 |
| 1:BA:5225:ARG:CA | 2:BB:5481:GLY:HA3 | 2.50 | 0.42 |
| 1:BA:5240:GLY:HA3 | 14:BT:5029:ILE:CG2 | 2.48 | 0.42 |
| 2:BB:5238:LEU:CA | 24:BB:5616:CLA:HMD3 | 2.50 | 0.42 |
| 2:BB:5475:PHE:HB3 | 2:BB:5478:VAL:HG22 | 2.02 | 0.42 |
| 3:BC:5318:LEU:HD23 | 3:BC:5318:LEU:C | 2.40 | 0.42 |
| 3:BC:5418:ASN:HB2 | 28:BC:5519:DGD:O4E | 2.20 | 0.42 |
| 4:BD:5014:TRP:CG | 4:BD:5015:PHE:N | 2.88 | 0.42 |
| 6:BF:5023:VAL:O | 6:BF:5027:ALA:HB2 | 2.20 | 0.42 |
| 7:BH:5019:GLY:O | 7:BH:5021:VAL:HG13 | 2.20 | 0.42 |
| 9:BJ:5021:VAL:HA | 9:BJ:5024:ILE:HG22 | 2.02 | 0.42 |
| 1:AA:96:ILE:C | 1:AA:98:GLU:H | 2.23 | 0.42 |
| 1:AA:254:TYR:OH | 4:AD:129:GLN:HB3 | 2.20 | 0.42 |
| 1:AA:292:THR:HB | 28:AC:518:DGD:CDA | 2.49 | 0.42 |
| 2:AB:19:LEU:HA | 2:AB:19:LEU:HD12 | 1.80 | 0.42 |
| 2:AB:264:PRO:HG2 | 2:AB:267:LEU:HB2 | 2.02 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:AB:356:VAL:HG21 | 2:AB:424:ALA:CB | 2.50 | 0.42 |
| 4:AD:128:ARG:HE | 4:AD:128:ARG:HB2 | 1.66 | 0.42 |
| 4:AD:303:ILE:HG21 | 12:AM:2:GLU:HG2 | 2.02 | 0.42 |
| 6:AF:30:THR:HG22 | 6:AF:34:LEU:HD12 | 2.01 | 0.42 |
| 18:AX:16:LEU:HD13 | 18:AX:16:LEU:C | 2.39 | 0.42 |
| 20:AZ:30:PRO:HB3 | 20:AZ:33:TRP:CZ3 | 2.54 | 0.42 |
| 1:BA:5200:LEU:HD12 | 1:BA:5285:PHE:CG | 2.54 | 0.42 |
| 1:BA:5286:THR:HG23 | 24:BA:5405:CLA:HED3 | 2.02 | 0.42 |
| 24:BA:5405:CLA:H111 | 34:BD:5403:PHO:H3A | 2.00 | 0.42 |
| 2:BB:5162:PHE:O | 24:BB:5610:CLA:HMD3 | 2.20 | 0.42 |
| 32:BB:5603:LMT:H5' | 32:BB:5603:LMT:H1B | 1.79 | 0.42 |
| 4:BD:5161:PRO:HG3 | 4:BD:5170:ALA:HB2 | 2.02 | 0.42 |
| 4:BD:5203:GLY:O | 4:BD:5207:GLY:N | 2.51 | 0.42 |
| 4:BD:5274:VAL:CB | 4:BD:5275:PRO:HD3 | 2.47 | 0.42 |
| 8:BI:5027:ASP:O | 8:BI:5028:PRO:C | 2.56 | 0.42 |
| 20:BZ:5031:GLN:HG3 | 20:BZ:5032:ASP:OD2 | 2.18 | 0.42 |
| 1:AA:13:LEU:CA | 1:AA:16:ARG:HH11 | 2.33 | 0.42 |
| 1:AA:281:VAL:HG11 | 28:AC:519:DGD:HAG3 | 2.01 | 0.42 |
| 2:AB:450:TRP:CZ3 | 24:AB:607:CLA:H2 | 2.55 | 0.42 |
| 3:AC:45:LEU:O | 3:AC:46:SER:C | 2.58 | 0.42 |
| 3:AC:243:ILE:O | 24:AC:506:CLA:HAC1 | 2.20 | 0.42 |
| 3:AC:335:THR:HA | 13:AO:178:ARG:HD3 | 2.02 | 0.42 |
| 5:AE:72:ALA:O | 5:AE:76:VAL:HG23 | 2.20 | 0.42 |
| 5:AE:78:THR:HA | 5:AE:81:GLU:CG | 2.49 | 0.42 |
| 13:AO:59:ASP:O | 13:AO:61:SER:N | 2.53 | 0.42 |
| 14:AT:14:ILE:HD13 | 14:AT:14:ILE:HA | 1.88 | 0.42 |
| 20:AZ:38:GLN:O | 20:AZ:42:LEU:HG | 2.19 | 0.42 |
| 1:BA:5133:LEU:HD23 | 4:BD:5252:PHE:HD1 | 1.81 | 0.42 |
| 1:BA:5147:TYR:O | 1:BA:5147:TYR:CG | 2.73 | 0.42 |
| 1:BA:5183:MET:HG3 | 24:BA:5406:CLA:CBC | 2.50 | 0.42 |
| 2:BB:5135:LEU:HB2 | 2:BB:5136:PRO:CD | 2.41 | 0.42 |
| 2:BB:5224:ARG:NH1 | 32:BB:5627:LMT:H2' | 2.35 | 0.42 |
| 2:BB:5237:VAL:HB | 24:BB:5616:CLA:CMD | 2.50 | 0.42 |
| 2:BB:5450:TRP:NE1 | 24:BB:5611:CLA:HBA2 | 2.35 | 0.42 |
| 3:BC:5128:GLY:HA3 | 24:BC:5513:CLA:C3C | 2.50 | 0.42 |
| 3:BC:5141:GLU:HA | 3:BC:5148:GLY:HA3 | 2.02 | 0.42 |
| 3:BC:5160:ILE:HA | 3:BC:5163:PHE:CD2 | 2.54 | 0.42 |
| 3:BC:5269:GLU:OE1 | 3:BC:5447:ARG:HD3 | 2.20 | 0.42 |
| 24:BC:5509:CLA:HBB1 | 24:BC:5509:CLA:HHC | 2.02 | 0.42 |
| 5:BE:5015:THR:O | 9:BJ:5008:ILE:HD13 | 2.19 | 0.42 |
| 1:AA:220:THR:HG23 | 4:AD:141:TYR:CD1 | 2.54 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:232:SER:HB3 | 1:AA:235:TYR:CD2 | 2.55 | 0.41 |
| 1:AA:317:TRP:HZ3 | 4:AD:180:ARG:HD3 | 1.85 | 0.41 |
| 1:AA:343:LEU:O | 1:AA:344:ALA:CB | 2.66 | 0.41 |
| 2:AB:187:PRO:HG2 | 2:AB:188:ASP:N | 2.35 | 0.41 |
| 2:AB:363:PHE:CD1 | 4:AD:326:ARG:HD2 | 2.55 | 0.41 |
| 2:AB:390:TYR:HD2 | 4:AD:344:GLU:OE1 | 2.02 | 0.41 |
| 24:AB:616:CLA:HHC | 24:AB:616:CLA:HBB1 | 2.01 | 0.41 |
| 32:AB:629:LMT:H51 | 14:BT:5004:ILE:CG1 | 2.42 | 0.41 |
| 3:AC:160:ILE:HA | 3:AC:163:PHE:CD2 | 2.55 | 0.41 |
| 15:AU:89:GLU:CD | 15:AU:89:GLU:N | 2.74 | 0.41 |
| 1:BA:5032:TRP:CB | 8:BI:5023:PHE:CZ | 3.03 | 0.41 |
| 1:BA:5191:ASN:ND2 | 1:BA:5194:MET:HB2 | 2.35 | 0.41 |
| 27:BA:5411:BCR:H312 | 8:BI:5015:PHE:CE1 | 2.54 | 0.41 |
| 2:BB:5152:GLY:C | 24:BB:5610:CLA:HMC3 | 2.40 | 0.41 |
| 2:BB:5324:LEU:HD13 | 4:BD:5293:LEU:CD2 | 2.50 | 0.41 |
| 2:BB:5466:HIS:CE1 | 24:BB:5612:CLA:ND | 2.87 | 0.41 |
| 24:BB:5606:CLA:H93 | 7:BH:5046:LEU:HD13 | 2.02 | 0.41 |
| 24:BB:5615:CLA:H52 | 24:BB:5618:CLA:HBC2 | 2.01 | 0.41 |
| 3:BC:5229:ASN:O | 3:BC:5233:VAL:HG23 | 2.19 | 0.41 |
| 3:BC:5307:PRO:O | 3:BC:5311:GLN:HG2 | 2.20 | 0.41 |
| 4:BD:5318:ASN:O | 4:BD:5321:LEU:HB2 | 2.20 | 0.41 |
| 13:BO:5065:ARG:CB | 13:BO:5065:ARG:HH11 | 2.33 | 0.41 |
| 13:BO:5141:ARG:NH1 | 13:BO:5141:ARG:HG2 | 2.35 | 0.41 |
| 16:BV:5090:PRO:O | 16:BV:5092:ARG:CD | 2.67 | 0.41 |
| 20:BZ:5005:PHE:HA | 20:BZ:5057:LEU:CD2 | 2.50 | 0.41 |
| 1:AA:140:ARG:HB2 | 4:AD:220:ASN:HA | 2.01 | 0.41 |
| 1:AA:278:TRP:HB3 | 1:AA:279:PRO:CD | 2.46 | 0.41 |
| 1:AA:306:VAL:HG22 | 1:AA:314:ILE:HB | 2.03 | 0.41 |
| 2:AB:12:LEU:O | 2:AB:14:ASN:N | 2.53 | 0.41 |
| 2:AB:198:VAL:HG11 | 24:AB:603:CLA:HED2 | 2.02 | 0.41 |
| 2:AB:338:GLN:HB2 | 2:AB:431:GLU:O | 2.21 | 0.41 |
| 2:AB:348:ASN:O | 2:AB:349:LYS:C | 2.58 | 0.41 |
| 24:AB:603:CLA:H203 | 24:AB:609:CLA:H92 | 2.02 | 0.41 |
| 3:AC:225:VAL:O | 3:AC:225:VAL:HG12 | 2.20 | 0.41 |
| 3:AC:441:HIS:HD2 | 3:AC:442:LEU:HD12 | 1.85 | 0.41 |
| 24:AC:502:CLA:HAA2 | 24:AC:502:CLA:HBD | 2.01 | 0.41 |
| 24:AC:511:CLA:H143 | 20:AZ:24:PRO:HG2 | 2.02 | 0.41 |
| 4:AD:53:THR:HA | 4:AD:67:TYR:CD2 | 2.56 | 0.41 |
| 9:AJ:32:ALA:HA | 31:AJ:102:LMG:O3 | 2.20 | 0.41 |
| 12:AM:17:VAL:HG12 | 12:AM:18:PRO:N | 2.34 | 0.41 |
| 31:AM:101:LMG:H132 | 24:BB:5618:CLA:C1 | 2.51 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 13:AO:46:PRO:HB2 | 13:AO:266:TYR:CD2 | 2.55 | 0.41 |
| 13:AO:114:ASN:HD21 | 13:AO:120:THR:CG2 | 2.29 | 0.41 |
| 18:AX:42:GLN:O | 18:AX:43:ILE:HG13 | 2.20 | 0.41 |
| 1:BA:5239:PHE:O | 14:BT:5030:THR:N | 2.53 | 0.41 |
| 1:BA:5243:GLU:HA | 4:BD:5240:ALA:O | 2.20 | 0.41 |
| 2:BB:5185:TRP:HD1 | 24:BB:5606:CLA:HBB2 | 1.85 | 0.41 |
| 2:BB:5225:LEU:O | 2:BB:5226:TYR:C | 2.59 | 0.41 |
| 24:BB:5618:CLA:H162 | 31:BL:5101:LMG:C42 | 2.50 | 0.41 |
| 3:BC:5062:PHE:CD2 | 10:BK:5029:PRO:HG3 | 2.50 | 0.41 |
| 3:BC:5215:LYS:HZ3 | 3:BC:5226:SER:CB | 2.32 | 0.41 |
| 3:BC:5337:LEU:HD23 | 3:BC:5342:MET:HE1 | 2.01 | 0.41 |
| 3:BC:5337:LEU:HA | 13:BO:5131:PRO:HG3 | 2.02 | 0.41 |
| 4:BD:5161:PRO:CB | 4:BD:5170:ALA:HB2 | 2.50 | 0.41 |
| 7:BH:5017:GLU:CD | 7:BH:5017:GLU:N | 2.72 | 0.41 |
| 7:BH:5018:TYR:C | 7:BH:5018:TYR:CD1 | 2.94 | 0.41 |
| 12:BM:5018:PRO:O | 12:BM:5021:PHE:HB3 | 2.20 | 0.41 |
| 13:BO:5106:GLN:HE21 | 13:BO:5106:GLN:HB3 | 1.68 | 0.41 |
| 16:BV:5062:ALA:O | 36:BV:5201:HEM:CAB | 2.68 | 0.41 |
| 2:AB:238:LEU:CA | 24:AB:612:CLA:HMD3 | 2.50 | 0.41 |
| 2:AB:373:LYS:HG3 | 2:AB:374:ASN:N | 2.35 | 0.41 |
| 24:AB:614:CLA:HAA2 | 24:AB:614:CLA:HBD | 2.01 | 0.41 |
| 24:AB:615:CLA:HBB1 | 24:AB:615:CLA:HHC | 2.02 | 0.41 |
| 3:AC:142:GLU:C | 3:AC:144:SER:H | 2.24 | 0.41 |
| 3:AC:204:LEU:HA | 3:AC:204:LEU:HD23 | 1.79 | 0.41 |
| 4:AD:199:MET:HG2 | 35:AD:405:PL9:H312 | 2.03 | 0.41 |
| 5:AE:8:ARG:NH2 | 9:AJ:4:GLU:HB2 | 2.35 | 0.41 |
| 13:AO:77:LEU:HB3 | 13:AO:91:PHE:HB3 | 2.02 | 0.41 |
| 13:AO:156:GLN:OE1 | 13:AO:156:GLN:HA | 2.20 | 0.41 |
| 13:AO:157:PRO:O | 13:AO:158:ASN:O | 2.38 | 0.41 |
| 14:AT:23:PHE:HD1 | 30:BB:5601:SQD:H45 | 1.85 | 0.41 |
| 1:BA:5048:PHE:HA | 1:BA:5115:ILE:CD1 | 2.48 | 0.41 |
| 1:BA:5096:ILE:C | 1:BA:5098:GLU:H | 2.24 | 0.41 |
| 1:BA:5135:TYR:CE1 | 3:BC:5449:ARG:HB3 | 2.55 | 0.41 |
| 1:BA:5321:ILE:HG22 | 1:BA:5325:ASN:ND2 | 2.35 | 0.41 |
| 24:BA:5406:CLA:H72 | 31:BL:5101:LMG:H241 | 2.02 | 0.41 |
| 2:BB:5224:ARG:CZ | 32:BB:5627:LMT:H2' | 2.50 | 0.41 |
| 3:BC:5417:VAL:O | 3:BC:5417:VAL:HG13 | 2.19 | 0.41 |
| 3:BC:5466:VAL:HG21 | 4:BD:5248:THR:OG1 | 2.20 | 0.41 |
| 28:BC:5519:DGD:HD3 | 9:BJ:5032:ALA:O | 2.20 | 0.41 |
| 4:BD:5019:ASP:O | 4:BD:5020:ASP:C | 2.57 | 0.41 |
| 7:BH:5035:MET:SD | 27:BX:5101:BCR:H322 | 2.61 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 9:BJ:5003:SER:CB | 9:BJ:5007:ARG:NH2 | 2.83 | 0.41 |
| 16:BV:5069:GLY:O | 16:BV:5156:TRP:O | 2.38 | 0.41 |
| 20:BZ:5022:GLY:O | 20:BZ:5023:VAL:C | 2.58 | 0.41 |
| 1:AA:36:ILE:HD13 | 1:AA:36:ILE:HA | 1.89 | 0.41 |
| 1:AA:57:PRO:HA | 1:AA:68:SER:HA | 2.03 | 0.41 |
| 1:AA:296:ASN:HB3 | 3:AC:401:LEU:HD13 | 2.02 | 0.41 |
| 3:AC:367:GLU:OE1 | 3:AC:367:GLU:HA | 2.18 | 0.41 |
| 28:AC:519:DGD:HD3 | 9:AJ:32:ALA:O | 2.20 | 0.41 |
| 4:AD:53:THR:CB | 4:AD:67:TYR:HD2 | 2.34 | 0.41 |
| 12:AM:21:PHE:CD2 | 12:AM:22:LEU:HD23 | 2.55 | 0.41 |
| 1:BA:5119:PHE:CZ | 24:BA:5405:CLA:H101 | 2.52 | 0.41 |
| 1:BA:5138:GLY:CA | 8:BI:5032:PRO:HG2 | 2.51 | 0.41 |
| 1:BA:5278:TRP:HB3 | 1:BA:5279:PRO:CD | 2.42 | 0.41 |
| 1:BA:5306:VAL:HG22 | 1:BA:5314:ILE:HB | 2.02 | 0.41 |
| 2:BB:5034:ALA:HB2 | 24:BB:5609:CLA:C2D | 2.51 | 0.41 |
| 5:BE:5069:ARG:HG3 | 5:BE:5070:PHE:CD1 | 2.55 | 0.41 |
| 6:BF:5024:HIS:NE2 | 36:BF:5101:HEM:NB | 2.67 | 0.41 |
| 7:BH:5063:LYS:O | 7:BH:5064:ALA:HB3 | 2.20 | 0.41 |
| 13:BO:5120:THR:HG22 | 13:BO:5154:SER:CB | 2.50 | 0.41 |
| 15:BU:5077:LYS:O | 15:BU:5081:LYS:HB2 | 2.21 | 0.41 |
| 1:AA:200:LEU:HD21 | 28:AC:519:DGD:CCA | 2.50 | 0.41 |
| 2:AB:252:VAL:HG23 | 2:AB:253:ALA:N | 2.35 | 0.41 |
| 2:AB:483:ASP:CB | 2:AB:484:PRO:CD | 2.94 | 0.41 |
| 3:AC:42:LEU:CD1 | 24:AC:511:CLA:HMA3 | 2.50 | 0.41 |
| 3:AC:62:PHE:CD2 | 10:AK:29:PRO:HG3 | 2.50 | 0.41 |
| 3:AC:244:CYS:HA | 24:AC:506:CLA:CMC | 2.51 | 0.41 |
| 3:AC:449:ARG:HE | 24:AC:505:CLA:HED1 | 1.86 | 0.41 |
| 4:AD:218:VAL:HG22 | 4:AD:244:TYR:CD2 | 2.54 | 0.41 |
| 4:AD:259:ILE:HD13 | 14:AT:21:ILE:HG12 | 2.02 | 0.41 |
| 7:AH:42:LEU:HD12 | 7:AH:42:LEU:HA | 1.83 | 0.41 |
| 9:AJ:36:LEU:C | 9:AJ:38:SER:H | 2.24 | 0.41 |
| 10:AK:11:LEU:O | 10:AK:12:PRO:C | 2.59 | 0.41 |
| 10:AK:21:LEU:HD11 | 27:AK:102:BCR:HC42 | 2.03 | 0.41 |
| 18:AX:12:ILE:CA | 27:AX:101:BCR:H401 | 2.48 | 0.41 |
| 1:BA:5092:HIS:HE1 | 3:BC:5359:TRP:CZ2 | 2.38 | 0.41 |
| 1:BA:5172:MET:HA | 1:BA:5173:PRO:HD3 | 1.97 | 0.41 |
| 1:BA:5292:THR:HB | 28:BC:5518:DGD:CDA | 2.50 | 0.41 |
| 1:BA:5340:PRO:HG3 | 15:BU:5133:TYR:CD1 | 2.55 | 0.41 |
| 2:BB:5026:HIS:HB2 | 24:BB:5616:CLA:HMB2 | 2.01 | 0.41 |
| 2:BB:5271:THR:N | 2:BB:5274:GLN:OE1 | 2.45 | 0.41 |
| 2:BB:5298:LEU:HD12 | 2:BB:5298:LEU:HA | 1.89 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|--------------------|---------------------|--------------------------|-------------------|
| 3:BC:5244:CYS:HA | 24:BC:5506:CLA:CMC | 2.51 | 0.41 |
| 4:BD:5272:LEU:HD22 | 4:BD:5276:VAL:HG21 | 2.03 | 0.41 |
| 7:BH:5016:SER:C | 7:BH:5018:TYR:H | 2.23 | 0.41 |
| 9:BJ:5038:SER:OG | 9:BJ:5039:SER:N | 2.53 | 0.41 |
| 19:BY:5025:UNK:C | 19:BY:5027:UNK:N | 2.82 | 0.41 |
| 1:AA:184:ILE:CD1 | 4:AD:186:GLN:HG2 | 2.51 | 0.41 |
| 24:AA:405:CLA:H72 | 31:AB:620:LMG:H241 | 2.01 | 0.41 |
| 2:AB:4:PRO:CG | 2:AB:7:ARG:HD2 | 2.42 | 0.41 |
| 2:AB:105:GLY:O | 2:AB:108:PHE:HB3 | 2.20 | 0.41 |
| 2:AB:278:SER:HB3 | 2:AB:281:GLN:NE2 | 2.32 | 0.41 |
| 24:AB:605:CLA:H143 | 24:AB:610:CLA:HBA1 | 2.02 | 0.41 |
| 3:AC:71:GLU:OE2 | 3:AC:88:LEU:HG | 2.21 | 0.41 |
| 3:AC:149:TYR:HB3 | 3:AC:156:LYS:HD3 | 2.02 | 0.41 |
| 3:AC:437:PHE:CD2 | 24:AC:508:CLA:CMC | 3.04 | 0.41 |
| 3:AC:459:ILE:HG21 | 3:AC:464:GLU:HG3 | 2.02 | 0.41 |
| 3:AC:466:VAL:HG13 | 4:AD:251:ARG:CD | 2.50 | 0.41 |
| 24:AC:505:CLA:HBD | 24:AC:505:CLA:HAA2 | 2.02 | 0.41 |
| 4:AD:84:SER:HB3 | 5:AE:68:ASP:HA | 2.03 | 0.41 |
| 4:AD:202:ALA:HB3 | 35:AD:405:PL9:C30 | 2.49 | 0.41 |
| 13:AO:168:PHE:HB2 | 13:AO:225:LEU:HB2 | 2.03 | 0.41 |
| 1:BA:5020:TRP:O | 1:BA:5023:SER:HB3 | 2.19 | 0.41 |
| 1:BA:5044:ALA:HB1 | 34:BD:5403:PHO:H91 | 2.02 | 0.41 |
| 2:BB:5112:CYS:CB | 27:BB:5623:BCR:H393 | 2.51 | 0.41 |
| 2:BB:5135:LEU:HD23 | 2:BB:5138:MET:CE | 2.50 | 0.41 |
| 2:BB:5193:TYR:CE1 | 2:BB:5260:SER:HA | 2.55 | 0.41 |
| 2:BB:5489:GLU:CB | 5:BE:5003:GLY:N | 2.76 | 0.41 |
| 24:BB:5615:CLA:HHC | 24:BB:5615:CLA:HBB1 | 2.03 | 0.41 |
| 15:BU:5072:TYR:CB | 15:BU:5073:PRO:CD | 2.98 | 0.41 |
| 20:BZ:5032:ASP:HA | 20:BZ:5034:ASP:OD2 | 2.21 | 0.41 |
| 1:AA:119:PHE:CZ | 24:AA:404:CLA:H101 | 2.53 | 0.41 |
| 1:AA:278:TRP:CD2 | 28:AC:519:DGD:CIA | 2.96 | 0.41 |
| 29:AA:412:LHG:C1 | 3:AC:447:ARG:HE | 2.34 | 0.41 |
| 2:AB:12:LEU:HD13 | 2:AB:19:LEU:HD12 | 2.03 | 0.41 |
| 2:AB:369:ILE:HD13 | 4:AD:340:VAL:O | 2.21 | 0.41 |
| 24:AB:612:CLA:H12 | 24:AB:615:CLA:HAA2 | 2.03 | 0.41 |
| 3:AC:48:LYS:HE2 | 3:AC:138:GLU:OE2 | 2.20 | 0.41 |
| 3:AC:229:ASN:ND2 | 3:AC:231:GLU:HB2 | 2.36 | 0.41 |
| 3:AC:243:ILE:O | 24:AC:506:CLA:HMC1 | 2.20 | 0.41 |
| 4:AD:128:ARG:O | 4:AD:129:GLN:C | 2.59 | 0.41 |
| 4:AD:261:PHE:CG | 4:AD:267:LEU:HD12 | 2.56 | 0.41 |
| 7:AH:40:VAL:O | 7:AH:44:ILE:HG13 | 2.21 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 27:AJ:101:BCR:H361 | 27:AJ:101:BCR:H20C | 1.91 | 0.41 |
| 16:AV:59:PHE:HA | 16:AV:63:CYS:SG | 2.60 | 0.41 |
| 1:BA:5129:ARG:NH2 | 4:BD:5256:ILE:O | 2.54 | 0.41 |
| 1:BA:5224:ILE:H | 1:BA:5224:ILE:HG13 | 1.57 | 0.41 |
| 3:BC:5038:GLY:HA3 | 24:BC:5511:CLA:CMD | 2.51 | 0.41 |
| 3:BC:5311:GLN:OE1 | 3:BC:5355:THR:CG2 | 2.68 | 0.41 |
| 3:BC:5384:ILE:H | 3:BC:5384:ILE:HG12 | 1.75 | 0.41 |
| 4:BD:5030:VAL:HG12 | 4:BD:5031:GLY:N | 2.35 | 0.41 |
| 6:BF:5015:ILE:HG23 | 36:BF:5101:HEM:HAA1 | 2.03 | 0.41 |
| 10:BK:5019:ASP:N | 10:BK:5020:PRO:CD | 2.81 | 0.41 |
| 18:BX:5044:ASP:C | 18:BX:5045:LYS:HD3 | 2.41 | 0.41 |
| 24:AA:404:CLA:H111 | 34:AD:402:PHO:H3A | 2.02 | 0.41 |
| 2:AB:73:GLY:O | 2:AB:93:PHE:CD1 | 2.74 | 0.41 |
| 2:AB:113:TRP:NE1 | 2:AB:117:TYR:CD1 | 2.89 | 0.41 |
| 2:AB:324:LEU:HA | 4:AD:293:LEU:HD21 | 1.99 | 0.41 |
| 3:AC:189:TRP:O | 3:AC:190:ALA:C | 2.59 | 0.41 |
| 3:AC:332:GLN:HG3 | 13:AO:129:PHE:CE2 | 2.56 | 0.41 |
| 27:AC:515:BCR:H342 | 27:AC:515:BCR:H331 | 2.02 | 0.41 |
| 4:AD:168:PHE:CD2 | 4:AD:168:PHE:O | 2.74 | 0.41 |
| 4:AD:272:LEU:O | 4:AD:276:VAL:HG23 | 2.21 | 0.41 |
| 5:AE:10:PHE:CD2 | 5:AE:10:PHE:N | 2.89 | 0.41 |
| 13:AO:86:ARG:O | 13:AO:86:ARG:CG | 2.69 | 0.41 |
| 19:AY:23:UNK:O | 19:AY:24:UNK:C | 2.68 | 0.41 |
| 20:AZ:36:SER:C | 20:AZ:38:GLN:H | 2.24 | 0.41 |
| 28:BA:5412:DGD:HA82 | 3:BC:5223:TRP:CH2 | 2.56 | 0.41 |
| 2:BB:5103:LEU:O | 2:BB:5107:LEU:HG | 2.20 | 0.41 |
| 3:BC:5466:VAL:HG13 | 4:BD:5251:ARG:CD | 2.51 | 0.41 |
| 24:BC:5505:CLA:HMD2 | 27:BC:5516:BCR:H343 | 2.01 | 0.41 |
| 24:BC:5513:CLA:NB | 27:BC:5515:BCR:H383 | 2.36 | 0.41 |
| 4:BD:5056:THR:OG1 | 4:BD:5057:SER:N | 2.53 | 0.41 |
| 4:BD:5128:ARG:O | 4:BD:5129:GLN:C | 2.59 | 0.41 |
| 4:BD:5162:LEU:HD21 | 4:BD:5167:TRP:CH2 | 2.56 | 0.41 |
| 7:BH:5018:TYR:CG | 7:BH:5019:GLY:N | 2.89 | 0.41 |
| 10:BK:5030:VAL:CG1 | 10:BK:5031:LEU:N | 2.84 | 0.41 |
| 1:AA:38:ILE:O | 1:AA:42:LEU:HG | 2.20 | 0.41 |
| 1:AA:151:LEU:HD21 | 1:AA:155:PHE:HE2 | 1.85 | 0.41 |
| 2:AB:26:HIS:HB2 | 24:AB:612:CLA:HMB2 | 2.03 | 0.41 |
| 2:AB:168:VAL:O | 2:AB:176:GLY:HA2 | 2.20 | 0.41 |
| 2:AB:173:GLY:N | 2:AB:265:ILE:HD11 | 2.36 | 0.41 |
| 2:AB:224:ARG:NH1 | 32:AB:624:LMT:H2' | 2.35 | 0.41 |
| 2:AB:329:PRO:CD | 24:AB:607:CLA:HED1 | 2.49 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 24:AB:602:CLA:C9 | 7:AH:46:LEU:HD22 | 2.51 | 0.41 |
| 24:AB:607:CLA:HAC2 | 27:BT:5101:BCR:H393 | 2.02 | 0.41 |
| 24:AB:611:CLA:HMD1 | 31:AD:407:LMG:HC92 | 2.02 | 0.41 |
| 3:AC:114:VAL:CG2 | 31:AC:521:LMG:H141 | 2.50 | 0.41 |
| 3:AC:272:LEU:CA | 24:AC:509:CLA:HMD3 | 2.51 | 0.41 |
| 4:AD:162:LEU:HD22 | 28:AH:101:DGD:O1A | 2.21 | 0.41 |
| 6:AF:40:MET:O | 6:AF:43:ILE:HG13 | 2.21 | 0.41 |
| 11:AL:24:ILE:HG22 | 11:AL:25:LEU:N | 2.35 | 0.41 |
| 27:AT:101:BCR:H372 | 27:BB:5621:BCR:H353 | 2.03 | 0.41 |
| 16:AV:98:LEU:O | 16:AV:102:MET:HG3 | 2.20 | 0.41 |
| 1:BA:5092:HIS:HE1 | 3:BC:5359:TRP:HZ2 | 1.68 | 0.41 |
| 1:BA:5205:VAL:HG21 | 24:BA:5405:CLA:HMA2 | 2.03 | 0.41 |
| 1:BA:5278:TRP:HA | 28:BC:5519:DGD:CIA | 2.51 | 0.41 |
| 1:BA:5289:GLY:HA2 | 1:BA:5292:THR:CG2 | 2.51 | 0.41 |
| 2:BB:5137:LYS:HE3 | 7:BH:5014:LEU:O | 2.21 | 0.41 |
| 2:BB:5150:CYS:HB2 | 24:BB:5607:CLA:CMC | 2.47 | 0.41 |
| 3:BC:5455:PHE:C | 3:BC:5457:LYS:H | 2.24 | 0.41 |
| 4:BD:5145:ALA:CB | 4:BD:5272:LEU:HD21 | 2.51 | 0.41 |
| 4:BD:5179:PHE:HA | 4:BD:5182:LEU:HD12 | 2.03 | 0.41 |
| 4:BD:5214:HIS:HA | 35:BD:5406:PL9:O2 | 2.21 | 0.41 |
| 27:BD:5407:BCR:H392 | 9:BJ:5025:VAL:HG21 | 2.03 | 0.41 |
| 9:BJ:5036:LEU:C | 9:BJ:5038:SER:H | 2.22 | 0.41 |
| 10:BK:5014:ALA:HB2 | 20:BZ:5061:VAL:CG1 | 2.51 | 0.41 |
| 10:BK:5043:VAL:CG2 | 10:BK:5046:ARG:HE | 2.34 | 0.41 |
| 13:BO:5078:VAL:HG22 | 13:BO:5259:VAL:HG22 | 2.03 | 0.41 |
| 13:BO:5162:ILE:O | 13:BO:5230:VAL:HG11 | 2.20 | 0.41 |
| 14:BT:5018:PHE:CD1 | 27:BT:5101:BCR:HC8 | 2.56 | 0.41 |
| 16:BV:5039:ASN:HD21 | 16:BV:5043:LYS:HB3 | 1.86 | 0.41 |
| 16:BV:5148:GLU:N | 16:BV:5149:PRO:HD2 | 2.36 | 0.41 |
| 19:BY:5021:UNK:HA | 19:BY:5024:UNK:CB | 2.51 | 0.41 |
| 1:AA:29:TYR:CG | 1:AA:133:LEU:HD13 | 2.56 | 0.41 |
| 2:AB:45:PHE:HE2 | 2:AB:47:PRO:HB3 | 1.86 | 0.41 |
| 2:AB:222:PRO:O | 2:AB:223:GLN:C | 2.58 | 0.41 |
| 2:AB:447:PRO:O | 2:AB:448:ARG:C | 2.60 | 0.41 |
| 3:AC:203:THR:O | 3:AC:235:GLY:HA3 | 2.20 | 0.41 |
| 3:AC:266:TRP:HZ3 | 24:AC:507:CLA:HBC2 | 1.86 | 0.41 |
| 3:AC:390:ARG:NE | 16:AV:126:ILE:CG2 | 2.84 | 0.41 |
| 24:AC:504:CLA:H2 | 28:AC:518:DGD:C2A | 2.51 | 0.41 |
| 4:AD:126:MET:HE2 | 4:AD:146:PHE:HB3 | 2.02 | 0.41 |
| 4:AD:250:ASN:ND2 | 4:AD:262:SER:HB3 | 2.33 | 0.41 |
| 8:AI:25:SER:HA | 32:AI:103:LMT:H6D | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 10:AK:30:VAL:CG1 | 10:AK:31:LEU:N | 2.84 | 0.41 |
| 13:AO:55:ALA:HA | 13:AO:230:VAL:HG11 | 2.03 | 0.41 |
| 19:AY:23:UNK:O | 19:AY:25:UNK:N | 2.54 | 0.41 |
| 1:BA:5258:LEU:HD12 | 4:BD:5128:ARG:CG | 2.51 | 0.41 |
| 29:BA:5415:LHG:H272 | 10:BK:5045:PHE:CE2 | 2.56 | 0.41 |
| 2:BB:5005:TRP:CE3 | 24:BB:5615:CLA:H42 | 2.56 | 0.41 |
| 2:BB:5187:PRO:C | 2:BB:5189:GLY:H | 2.24 | 0.41 |
| 2:BB:5297:THR:OG1 | 2:BB:5298:LEU:N | 2.54 | 0.41 |
| 2:BB:5328:GLY:O | 24:BB:5611:CLA:HBA1 | 2.21 | 0.41 |
| 2:BB:5348:ASN:O | 2:BB:5350:GLU:N | 2.54 | 0.41 |
| 2:BB:5377:VAL:HG11 | 4:BD:5342:PRO:CG | 2.51 | 0.41 |
| 24:BB:5606:CLA:H161 | 28:BH:5101:DGD:HAW1 | 2.02 | 0.41 |
| 32:BB:5627:LMT:H92 | 7:BH:5035:MET:HE1 | 2.03 | 0.41 |
| 3:BC:5172:ALA:O | 3:BC:5176:VAL:HG23 | 2.21 | 0.41 |
| 3:BC:5305:THR:HG23 | 3:BC:5307:PRO:HG2 | 2.03 | 0.41 |
| 3:BC:5472:LEU:HD11 | 4:BD:5255:GLN:CD | 2.40 | 0.41 |
| 28:BC:5518:DGD:O1B | 28:BC:5518:DGD:C1G | 2.69 | 0.41 |
| 4:BD:5070:GLY:O | 9:BJ:5037:GLY:CA | 2.69 | 0.41 |
| 4:BD:5202:ALA:HB3 | 35:BD:5406:PL9:C30 | 2.51 | 0.41 |
| 6:BF:5024:HIS:HA | 6:BF:5027:ALA:HB3 | 2.03 | 0.41 |
| 32:BM:5101:LMT:H5' | 32:BM:5101:LMT:H1B | 1.97 | 0.41 |
| 13:BO:5056:TYR:CD1 | 13:BO:5235:GLY:HA2 | 2.55 | 0.41 |
| 1:AA:76:ASN:ND2 | 11:AL:33:SER:HB3 | 2.37 | 0.40 |
| 1:AA:333:GLU:HB2 | 1:AA:337:HIS:CE1 | 2.53 | 0.40 |
| 1:AA:340:PRO:HG3 | 15:AU:133:TYR:CD1 | 2.56 | 0.40 |
| 2:AB:431:GLU:OE2 | 13:BO:5084:ASN:ND2 | 2.54 | 0.40 |
| 24:AB:602:CLA:H93 | 7:AH:46:LEU:HD22 | 2.02 | 0.40 |
| 3:AC:269:GLU:OE1 | 3:AC:447:ARG:HD3 | 2.21 | 0.40 |
| 3:AC:282:MET:SD | 24:AC:503:CLA:H142 | 2.61 | 0.40 |
| 24:AC:509:CLA:HBB1 | 24:AC:509:CLA:HHC | 2.03 | 0.40 |
| 6:AF:29:PRO:O | 6:AF:32:PHE:HB3 | 2.21 | 0.40 |
| 7:AH:63:LYS:C | 7:AH:65:LEU:N | 2.73 | 0.40 |
| 8:AI:11:VAL:O | 8:AI:15:PHE:HD2 | 2.04 | 0.40 |
| 9:AJ:10:LEU:HD12 | 9:AJ:10:LEU:HA | 1.86 | 0.40 |
| 16:AV:71:ILE:CD1 | 16:AV:72:THR:N | 2.82 | 0.40 |
| 1:BA:5012:ASN:O | 1:BA:5015:GLU:HB3 | 2.22 | 0.40 |
| 1:BA:5184:ILE:CD1 | 4:BD:5186:GLN:HG2 | 2.51 | 0.40 |
| 1:BA:5206:PHE:HD2 | 1:BA:5206:PHE:HA | 1.77 | 0.40 |
| 1:BA:5295:PHE:HD2 | 3:BC:5291:TRP:CD2 | 2.39 | 0.40 |
| 2:BB:5004:PRO:HB2 | 2:BB:5006:TYR:CE1 | 2.56 | 0.40 |
| 2:BB:5172:TYR:O | 2:BB:5174:LEU:HG | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 2:BB:5238:LEU:CD2 | 2:BB:5469:HIS:HD2 | 2.34 | 0.40 |
| 2:BB:5328:GLY:N | 24:BB:5611:CLA:O1A | 2.49 | 0.40 |
| 4:BD:5263:ASN:O | 4:BD:5265:ARG:N | 2.54 | 0.40 |
| 1:AA:129:ARG:C | 1:AA:131:TRP:H | 2.23 | 0.40 |
| 1:AA:278:TRP:HA | 28:AC:519:DGD:HAG1 | 2.02 | 0.40 |
| 2:AB:121:GLU:CG | 7:AH:4:ARG:CA | 2.94 | 0.40 |
| 3:AC:34:ALA:HB2 | 4:AD:230:SER:CB | 2.51 | 0.40 |
| 3:AC:113:VAL:CG1 | 31:AC:521:LMG:H132 | 2.49 | 0.40 |
| 27:AD:406:BCR:H392 | 9:AJ:25:VAL:HG21 | 2.03 | 0.40 |
| 6:AF:15:ILE:CG2 | 6:AF:16:PHE:HD1 | 2.33 | 0.40 |
| 10:AK:15:TYR:OH | 20:AZ:58:ASN:ND2 | 2.52 | 0.40 |
| 13:AO:83:LYS:CG | 13:AO:84:ASN:H | 2.29 | 0.40 |
| 14:AT:29:ILE:HG22 | 14:AT:30:THR:H | 1.86 | 0.40 |
| 15:AU:72:TYR:CG | 15:AU:73:PRO:N | 2.89 | 0.40 |
| 15:AU:75:LEU:HD23 | 15:AU:75:LEU:HA | 1.85 | 0.40 |
| 16:AV:121:LEU:HD21 | 16:AV:138:LEU:HD11 | 2.02 | 0.40 |
| 1:BA:5029:TYR:HD2 | 1:BA:5133:LEU:HB2 | 1.87 | 0.40 |
| 2:BB:5161:LEU:N | 2:BB:5161:LEU:CD1 | 2.84 | 0.40 |
| 28:BB:5602:DGD:HE61 | 32:BB:5626:LMT:H2' | 2.02 | 0.40 |
| 4:BD:5277:THR:HG22 | 35:BD:5406:PL9:H272 | 2.02 | 0.40 |
| 9:BJ:5008:ILE:HD12 | 9:BJ:5008:ILE:H | 1.85 | 0.40 |
| 11:BL:5008:GLN:HE21 | 11:BL:5008:GLN:H | 1.68 | 0.40 |
| 13:BO:5032:THR:OG1 | 13:BO:5033:TYR:N | 2.54 | 0.40 |
| 1:AA:217:SER:O | 1:AA:220:THR:HG22 | 2.22 | 0.40 |
| 2:AB:238:LEU:CD2 | 2:AB:469:HIS:CD2 | 3.05 | 0.40 |
| 24:AB:603:CLA:HMB1 | 24:AB:603:CLA:HAB | 1.80 | 0.40 |
| 32:AB:629:LMT:H5' | 32:AB:629:LMT:H1B | 1.80 | 0.40 |
| 3:AC:161:LEU:HD23 | 3:AC:251:HIS:HD2 | 1.85 | 0.40 |
| 4:AD:180:ARG:NH1 | 4:AD:333:ASP:OD1 | 2.54 | 0.40 |
| 35:AD:405:PL9:H103 | 35:AD:405:PL9:HC72 | 1.74 | 0.40 |
| 5:AE:69:ARG:CG | 5:AE:70:PHE:N | 2.83 | 0.40 |
| 10:AK:46:ARG:NH1 | 10:AK:46:ARG:HB2 | 2.36 | 0.40 |
| 1:BA:5069:GLY:CA | 1:BA:5075:ASN:ND2 | 2.84 | 0.40 |
| 1:BA:5200:LEU:HD11 | 28:BC:5519:DGD:CCA | 2.27 | 0.40 |
| 2:BB:5151:PHE:CE1 | 2:BB:5203:ILE:HG23 | 2.57 | 0.40 |
| 2:BB:5385:ARG:O | 2:BB:5386:ALA:C | 2.60 | 0.40 |
| 24:BC:5502:CLA:HAA2 | 24:BC:5502:CLA:HBD | 2.03 | 0.40 |
| 24:BC:5505:CLA:HAA1 | 24:BC:5505:CLA:C2 | 2.51 | 0.40 |
| 24:BC:5507:CLA:H122 | 27:BC:5516:BCR:H362 | 2.03 | 0.40 |
| 4:BD:5148:ALA:HB3 | 4:BD:5149:PRO:CD | 2.41 | 0.40 |
| 15:BU:5072:TYR:CD2 | 15:BU:5073:PRO:N | 2.90 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 1:AA:39:PRO:HG3 | 27:AA:410:BCR:HC8 | 2.04 | 0.40 |
| 1:AA:200:LEU:CD2 | 28:AC:519:DGD:CCA | 2.99 | 0.40 |
| 1:AA:278:TRP:HE3 | 28:AC:519:DGD:HAG1 | 1.83 | 0.40 |
| 2:AB:285:ASN:N | 2:AB:285:ASN:HD22 | 2.18 | 0.40 |
| 3:AC:38:GLY:HA3 | 24:AC:511:CLA:CMD | 2.50 | 0.40 |
| 3:AC:134:ILE:HD11 | 24:AC:511:CLA:C9 | 2.49 | 0.40 |
| 24:AC:502:CLA:HHC | 24:AC:502:CLA:HBB1 | 2.03 | 0.40 |
| 4:AD:210:LEU:HD21 | 35:AD:405:PL9:H13 | 2.03 | 0.40 |
| 4:AD:262:SER:N | 31:AD:408:LMG:O3 | 2.55 | 0.40 |
| 4:AD:313:THR:H | 4:AD:316:THR:HG23 | 1.86 | 0.40 |
| 14:AT:30:THR:HB | 14:AT:31:LYS:NZ | 2.35 | 0.40 |
| 27:AT:101:BCR:H393 | 24:BB:5611:CLA:HAC2 | 2.03 | 0.40 |
| 15:AU:51:TYR:HE1 | 15:AU:60:THR:HG1 | 1.66 | 0.40 |
| 15:AU:83:ALA:CB | 15:AU:84:PRO:HD2 | 2.17 | 0.40 |
| 18:AX:30:LEU:HA | 18:AX:30:LEU:HD23 | 1.88 | 0.40 |
| 1:BA:5238:LYS:O | 1:BA:5241:GLN:HG3 | 2.21 | 0.40 |
| 24:BB:5615:CLA:HMD1 | 31:BD:5409:LMG:HC92 | 2.03 | 0.40 |
| 3:BC:5278:ALA:HB1 | 24:BC:5501:CLA:H142 | 2.03 | 0.40 |
| 3:BC:5447:ARG:HH11 | 3:BC:5447:ARG:HG2 | 1.86 | 0.40 |
| 8:BI:5007:THR:O | 8:BI:5008:VAL:C | 2.59 | 0.40 |
| 27:BK:5102:BCR:H332 | 20:BZ:5017:PHE:CD1 | 2.56 | 0.40 |
| 13:BO:5081:GLU:C | 13:BO:5083:LYS:H | 2.25 | 0.40 |
| 1:AA:271:LEU:CD1 | 25:AA:408:MST:H162 | 2.48 | 0.40 |
| 2:AB:243:ALA:O | 24:AB:608:CLA:HBC3 | 2.22 | 0.40 |
| 2:AB:283:GLU:O | 2:AB:287:ARG:HG3 | 2.21 | 0.40 |
| 3:AC:202:PRO:HB2 | 3:AC:235:GLY:HA2 | 2.02 | 0.40 |
| 3:AC:307:PRO:O | 3:AC:311:GLN:HG2 | 2.21 | 0.40 |
| 24:AC:511:CLA:H151 | 20:AZ:24:PRO:CG | 2.50 | 0.40 |
| 4:AD:24:ARG:NH2 | 18:AX:44:ASP:O | 2.55 | 0.40 |
| 5:AE:38:VAL:HG21 | 6:AF:36:ALA:O | 2.21 | 0.40 |
| 6:AF:21:VAL:HG21 | 30:AF:102:SQD:H101 | 2.02 | 0.40 |
| 7:AH:41:PHE:O | 7:AH:45:ILE:HG12 | 2.21 | 0.40 |
| 1:BA:5011:ALA:HB1 | 1:BA:5015:GLU:OE1 | 2.21 | 0.40 |
| 1:BA:5296:ASN:HB3 | 3:BC:5401:LEU:HD13 | 2.04 | 0.40 |
| 24:BA:5406:CLA:H62 | 34:BD:5403:PHO:HMA1 | 2.02 | 0.40 |
| 2:BB:5170:ASP:CB | 2:BB:5171:PRO:CD | 2.97 | 0.40 |
| 24:BB:5607:CLA:H52 | 24:BB:5607:CLA:HMB2 | 2.02 | 0.40 |
| 24:BB:5619:CLA:HBB1 | 24:BB:5619:CLA:HHC | 2.03 | 0.40 |
| 4:BD:5095:PRO:HG3 | 18:BX:5015:SER:HB3 | 2.03 | 0.40 |
| 4:BD:5261:PHE:HB2 | 35:BD:5406:PL9:H522 | 2.03 | 0.40 |
| 4:BD:5262:SER:N | 31:BD:5410:LMG:O3 | 2.54 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|---------------------|---------------------|--------------------------|-------------------|
| 6:BF:5020:TRP:NE1 | 6:BF:5024:HIS:CE1 | 2.89 | 0.40 |
| 6:BF:5029:PRO:O | 6:BF:5032:PHE:HB3 | 2.22 | 0.40 |
| 12:BM:5016:LEU:HA | 12:BM:5016:LEU:HD23 | 1.78 | 0.40 |
| 13:BO:5065:ARG:NH1 | 13:BO:5065:ARG:CB | 2.85 | 0.40 |
| 13:BO:5132:VAL:HG12 | 13:BO:5133:THR:N | 2.37 | 0.40 |

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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 | AA | 333/344 (97%) | 284 (85%) | 42 (13%) | 7 (2%) | 7 | 37 |
| 1 | BA | 333/344 (97%) | 285 (86%) | 41 (12%) | 7 (2%) | 7 | 37 |
| 2 | AB | 488/510 (96%) | 418 (86%) | 54 (11%) | 16 (3%) | 4 | 25 |
| 2 | BB | 488/510 (96%) | 422 (86%) | 51 (10%) | 15 (3%) | 4 | 26 |
| 3 | AC | 445/461 (96%) | 371 (83%) | 58 (13%) | 16 (4%) | 3 | 23 |
| 3 | BC | 445/461 (96%) | 372 (84%) | 56 (13%) | 17 (4%) | 3 | 22 |
| 4 | AD | 339/352 (96%) | 286 (84%) | 44 (13%) | 9 (3%) | 5 | 30 |
| 4 | BD | 339/352 (96%) | 288 (85%) | 43 (13%) | 8 (2%) | 6 | 34 |
| 5 | AE | 80/84 (95%) | 71 (89%) | 6 (8%) | 3 (4%) | 3 | 22 |
| 5 | BE | 80/84 (95%) | 70 (88%) | 7 (9%) | 3 (4%) | 3 | 22 |
| 6 | AF | 33/45 (73%) | 24 (73%) | 8 (24%) | 1 (3%) | 4 | 28 |
| 6 | BF | 33/45 (73%) | 24 (73%) | 8 (24%) | 1 (3%) | 4 | 28 |
| 7 | AH | 63/66 (96%) | 47 (75%) | 11 (18%) | 5 (8%) | 1 | 6 |
| 7 | BH | 63/66 (96%) | 48 (76%) | 11 (18%) | 4 (6%) | 1 | 10 |
| 8 | AI | 33/38 (87%) | 20 (61%) | 11 (33%) | 2 (6%) | 1 | 12 |
| 8 | BI | 33/38 (87%) | 21 (64%) | 10 (30%) | 2 (6%) | 1 | 12 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|-----------|----------|-------------|-----|
| 9 | AJ | 36/40 (90%) | 27 (75%) | 6 (17%) | 3 (8%) | 1 | 5 |
| 9 | BJ | 36/40 (90%) | 25 (69%) | 8 (22%) | 3 (8%) | 1 | 5 |
| 10 | AK | 35/37 (95%) | 28 (80%) | 5 (14%) | 2 (6%) | 1 | 14 |
| 10 | BK | 35/37 (95%) | 28 (80%) | 5 (14%) | 2 (6%) | 1 | 14 |
| 11 | AL | 35/37 (95%) | 33 (94%) | 2 (6%) | 0 | 100 | 100 |
| 11 | BL | 35/37 (95%) | 33 (94%) | 2 (6%) | 0 | 100 | 100 |
| 12 | AM | 32/36 (89%) | 24 (75%) | 8 (25%) | 0 | 100 | 100 |
| 12 | BM | 32/36 (89%) | 24 (75%) | 8 (25%) | 0 | 100 | 100 |
| 13 | AO | 241/247 (98%) | 198 (82%) | 31 (13%) | 12 (5%) | 2 | 16 |
| 13 | BO | 241/247 (98%) | 199 (83%) | 31 (13%) | 11 (5%) | 2 | 18 |
| 14 | AT | 30/32 (94%) | 26 (87%) | 3 (10%) | 1 (3%) | 4 | 25 |
| 14 | BT | 30/32 (94%) | 25 (83%) | 4 (13%) | 1 (3%) | 4 | 25 |
| 15 | AU | 95/104 (91%) | 78 (82%) | 12 (13%) | 5 (5%) | 2 | 15 |
| 15 | BU | 95/104 (91%) | 79 (83%) | 12 (13%) | 4 (4%) | 3 | 20 |
| 16 | AV | 135/137 (98%) | 111 (82%) | 23 (17%) | 1 (1%) | 22 | 61 |
| 16 | BV | 135/137 (98%) | 112 (83%) | 22 (16%) | 1 (1%) | 22 | 61 |
| 17 | Ay | 26/46 (56%) | 15 (58%) | 7 (27%) | 4 (15%) | 0 | 1 |
| 17 | By | 26/46 (56%) | 14 (54%) | 9 (35%) | 3 (12%) | 0 | 2 |
| 18 | AX | 35/41 (85%) | 26 (74%) | 5 (14%) | 4 (11%) | 0 | 2 |
| 18 | BX | 35/41 (85%) | 27 (77%) | 4 (11%) | 4 (11%) | 0 | 2 |
| 20 | AZ | 60/62 (97%) | 48 (80%) | 9 (15%) | 3 (5%) | 2 | 16 |
| 20 | BZ | 60/62 (97%) | 48 (80%) | 9 (15%) | 3 (5%) | 2 | 16 |
| All | All | 5148/5438 (95%) | 4279 (83%) | 686 (13%) | 183 (4%) | 3 | 23 |

All (183) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | AA | 12 | ASN |
| 1 | AA | 141 | PRO |
| 1 | AA | 142 | TRP |
| 2 | AB | 176 | GLY |
| 2 | AB | 230 | ARG |
| 2 | AB | 484 | PRO |
| 2 | AB | 488 | PRO |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | AB | 490 | GLN |
| 3 | AC | 144 | SER |
| 3 | AC | 257 | PHE |
| 3 | AC | 416 | SER |
| 3 | AC | 452 | ALA |
| 4 | AD | 239 | GLN |
| 4 | AD | 240 | ALA |
| 4 | AD | 262 | SER |
| 7 | AH | 18 | TYR |
| 8 | AI | 25 | SER |
| 9 | AJ | 35 | GLY |
| 13 | AO | 52 | ALA |
| 14 | AT | 30 | THR |
| 15 | AU | 72 | TYR |
| 15 | AU | 83 | ALA |
| 16 | AV | 75 | ASN |
| 17 | Ay | 43 | ARG |
| 18 | AX | 45 | LYS |
| 20 | AZ | 32 | ASP |
| 1 | BA | 5012 | ASN |
| 1 | BA | 5141 | PRO |
| 1 | BA | 5142 | TRP |
| 2 | BB | 5176 | GLY |
| 2 | BB | 5230 | ARG |
| 2 | BB | 5484 | PRO |
| 2 | BB | 5488 | PRO |
| 3 | BC | 5144 | SER |
| 3 | BC | 5257 | PHE |
| 3 | BC | 5416 | SER |
| 3 | BC | 5452 | ALA |
| 4 | BD | 5239 | GLN |
| 4 | BD | 5240 | ALA |
| 4 | BD | 5262 | SER |
| 7 | BH | 5018 | TYR |
| 8 | BI | 5025 | SER |
| 9 | BJ | 5035 | GLY |
| 13 | BO | 5052 | ALA |
| 14 | BT | 5030 | THR |
| 15 | BU | 5072 | TYR |
| 15 | BU | 5083 | ALA |
| 17 | By | 5043 | ARG |
| 18 | BX | 5045 | LYS |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 20 | BZ | 5032 | ASP |
| 2 | AB | 349 | LYS |
| 3 | AC | 46 | SER |
| 3 | AC | 136 | GLY |
| 3 | AC | 194 | GLY |
| 3 | AC | 209 | ILE |
| 3 | AC | 456 | GLU |
| 4 | AD | 234 | ALA |
| 4 | AD | 264 | LYS |
| 7 | AH | 26 | GLY |
| 9 | AJ | 38 | SER |
| 13 | AO | 231 | ASP |
| 15 | AU | 39 | LEU |
| 15 | AU | 73 | PRO |
| 17 | Ay | 25 | ILE |
| 18 | AX | 43 | ILE |
| 2 | BB | 5349 | LYS |
| 2 | BB | 5436 | THR |
| 3 | BC | 5136 | GLY |
| 3 | BC | 5141 | GLU |
| 3 | BC | 5194 | GLY |
| 4 | BD | 5234 | ALA |
| 7 | BH | 5026 | GLY |
| 9 | BJ | 5038 | SER |
| 13 | BO | 5158 | ASN |
| 13 | BO | 5231 | ASP |
| 15 | BU | 5073 | PRO |
| 16 | BV | 5075 | ASN |
| 18 | BX | 5043 | ILE |
| 2 | AB | 13 | ILE |
| 2 | AB | 127 | ARG |
| 2 | AB | 183 | PRO |
| 2 | AB | 414 | PRO |
| 2 | AB | 436 | THR |
| 3 | AC | 32 | GLY |
| 3 | AC | 141 | GLU |
| 3 | AC | 375 | LEU |
| 3 | AC | 453 | ALA |
| 4 | AD | 263 | ASN |
| 5 | AE | 9 | PRO |
| 7 | AH | 16 | SER |
| 10 | AK | 13 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 10 | AK | 45 | PHE |
| 13 | AO | 60 | SER |
| 13 | AO | 158 | ASN |
| 13 | AO | 165 | SER |
| 20 | AZ | 24 | PRO |
| 20 | AZ | 28 | ALA |
| 2 | BB | 5013 | ILE |
| 2 | BB | 5127 | ARG |
| 2 | BB | 5183 | PRO |
| 2 | BB | 5414 | PRO |
| 3 | BC | 5032 | GLY |
| 3 | BC | 5046 | SER |
| 3 | BC | 5209 | ILE |
| 3 | BC | 5375 | LEU |
| 3 | BC | 5411 | ALA |
| 3 | BC | 5456 | GLU |
| 4 | BD | 5263 | ASN |
| 4 | BD | 5264 | LYS |
| 5 | BE | 5009 | PRO |
| 7 | BH | 5016 | SER |
| 10 | BK | 5013 | GLU |
| 10 | BK | 5045 | PHE |
| 13 | BO | 5165 | SER |
| 17 | By | 5025 | ILE |
| 20 | BZ | 5024 | PRO |
| 20 | BZ | 5028 | ALA |
| 2 | AB | 173 | GLY |
| 2 | AB | 231 | MET |
| 3 | AC | 154 | LYS |
| 4 | AD | 73 | PHE |
| 5 | AE | 10 | PHE |
| 13 | AO | 51 | THR |
| 13 | AO | 82 | PRO |
| 17 | Ay | 24 | MET |
| 18 | AX | 44 | ASP |
| 2 | BB | 5235 | GLU |
| 5 | BE | 5010 | PHE |
| 13 | BO | 5060 | SER |
| 13 | BO | 5082 | PRO |
| 1 | AA | 97 | TRP |
| 2 | AB | 235 | GLU |
| 3 | AC | 462 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 6 | AF | 41 | GLN |
| 7 | AH | 6 | TRP |
| 15 | AU | 42 | VAL |
| 2 | BB | 5435 | GLU |
| 2 | BB | 5490 | GLN |
| 3 | BC | 5453 | ALA |
| 3 | BC | 5462 | GLU |
| 4 | BD | 5252 | PHE |
| 6 | BF | 5041 | GLN |
| 7 | BH | 5006 | TRP |
| 13 | BO | 5085 | LYS |
| 13 | BO | 5088 | GLU |
| 15 | BU | 5042 | VAL |
| 17 | By | 5024 | MET |
| 18 | BX | 5044 | ASP |
| 1 | AA | 334 | ARG |
| 2 | AB | 435 | GLU |
| 4 | AD | 351 | ALA |
| 13 | AO | 88 | GLU |
| 18 | AX | 12 | ILE |
| 1 | BA | 5097 | TRP |
| 1 | BA | 5334 | ARG |
| 2 | BB | 5173 | GLY |
| 3 | BC | 5382 | ASN |
| 4 | BD | 5351 | ALA |
| 5 | BE | 5052 | PRO |
| 13 | BO | 5051 | THR |
| 13 | BO | 5159 | VAL |
| 18 | BX | 5012 | ILE |
| 1 | AA | 21 | VAL |
| 2 | AB | 16 | PRO |
| 9 | AJ | 5 | GLY |
| 13 | AO | 159 | VAL |
| 1 | BA | 5021 | VAL |
| 3 | AC | 201 | ASN |
| 17 | Ay | 35 | ILE |
| 3 | BC | 5201 | ASN |
| 5 | AE | 52 | PRO |
| 7 | AH | 60 | VAL |
| 8 | AI | 32 | PRO |
| 13 | AO | 232 | GLY |
| 2 | BB | 5016 | PRO |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 8 | BI | 5032 | PRO |
| 1 | AA | 176 | ILE |
| 4 | AD | 160 | TYR |
| 13 | AO | 127 | ILE |
| 1 | BA | 5039 | PRO |
| 13 | AO | 152 | VAL |
| 9 | BJ | 5005 | GLY |
| 13 | BO | 5152 | 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 X-ray entries followed by that with respect to entries of similar resolution.

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 | AA | 271/280 (97%) | 250 (92%) | 21 (8%) | 13 | 44 |
| 1 | BA | 271/280 (97%) | 253 (93%) | 18 (7%) | 16 | 51 |
| 2 | AB | 390/407 (96%) | 372 (95%) | 18 (5%) | 27 | 63 |
| 2 | BB | 390/407 (96%) | 374 (96%) | 16 (4%) | 30 | 66 |
| 3 | AC | 347/362 (96%) | 326 (94%) | 21 (6%) | 18 | 54 |
| 3 | BC | 347/362 (96%) | 325 (94%) | 22 (6%) | 18 | 52 |
| 4 | AD | 275/283 (97%) | 249 (90%) | 26 (10%) | 8 | 32 |
| 4 | BD | 275/283 (97%) | 249 (90%) | 26 (10%) | 8 | 32 |
| 5 | AE | 72/73 (99%) | 66 (92%) | 6 (8%) | 11 | 40 |
| 5 | BE | 72/73 (99%) | 66 (92%) | 6 (8%) | 11 | 40 |
| 6 | AF | 29/39 (74%) | 27 (93%) | 2 (7%) | 15 | 49 |
| 6 | BF | 29/39 (74%) | 28 (97%) | 1 (3%) | 37 | 70 |
| 7 | AH | 53/55 (96%) | 42 (79%) | 11 (21%) | 1 | 6 |
| 7 | BH | 53/55 (96%) | 43 (81%) | 10 (19%) | 1 | 8 |
| 8 | AI | 32/35 (91%) | 32 (100%) | 0 | 100 | 100 |
| 8 | BI | 32/35 (91%) | 31 (97%) | 1 (3%) | 40 | 72 |
| 9 | AJ | 25/28 (89%) | 24 (96%) | 1 (4%) | 31 | 66 |

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| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|------------|----------|-------------|----|
| 9 | BJ | 25/28 (89%) | 24 (96%) | 1 (4%) | 31 | 66 |
| 10 | AK | 30/30 (100%) | 29 (97%) | 1 (3%) | 38 | 71 |
| 10 | BK | 30/30 (100%) | 29 (97%) | 1 (3%) | 38 | 71 |
| 11 | AL | 35/35 (100%) | 33 (94%) | 2 (6%) | 20 | 56 |
| 11 | BL | 35/35 (100%) | 32 (91%) | 3 (9%) | 10 | 38 |
| 12 | AM | 31/33 (94%) | 30 (97%) | 1 (3%) | 39 | 71 |
| 12 | BM | 31/33 (94%) | 29 (94%) | 2 (6%) | 17 | 51 |
| 13 | AO | 202/208 (97%) | 187 (93%) | 15 (7%) | 13 | 46 |
| 13 | BO | 202/208 (97%) | 187 (93%) | 15 (7%) | 13 | 46 |
| 14 | AT | 29/29 (100%) | 28 (97%) | 1 (3%) | 37 | 70 |
| 14 | BT | 29/29 (100%) | 27 (93%) | 2 (7%) | 15 | 49 |
| 15 | AU | 84/89 (94%) | 76 (90%) | 8 (10%) | 8 | 32 |
| 15 | BU | 84/89 (94%) | 76 (90%) | 8 (10%) | 8 | 32 |
| 16 | AV | 116/117 (99%) | 111 (96%) | 5 (4%) | 29 | 64 |
| 16 | BV | 116/117 (99%) | 110 (95%) | 6 (5%) | 23 | 59 |
| 17 | Ay | 20/37 (54%) | 15 (75%) | 5 (25%) | 0 | 2 |
| 17 | By | 20/37 (54%) | 15 (75%) | 5 (25%) | 0 | 2 |
| 18 | AX | 30/34 (88%) | 29 (97%) | 1 (3%) | 38 | 71 |
| 18 | BX | 30/34 (88%) | 29 (97%) | 1 (3%) | 38 | 71 |
| 20 | AZ | 52/52 (100%) | 49 (94%) | 3 (6%) | 20 | 55 |
| 20 | BZ | 52/52 (100%) | 48 (92%) | 4 (8%) | 13 | 44 |
| All | All | 4246/4452 (95%) | 3950 (93%) | 296 (7%) | 15 | 48 |

All (296) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | AA | 13 | LEU |
| 1 | AA | 30 | VAL |
| 1 | AA | 32 | TRP |
| 1 | AA | 56 | PRO |
| 1 | AA | 121 | LEU |
| 1 | AA | 129 | ARG |
| 1 | AA | 145 | VAL |
| 1 | AA | 170 | ASP |
| 1 | AA | 202 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | AA | 206 | PHE |
| 1 | AA | 210 | LEU |
| 1 | AA | 218 | LEU |
| 1 | AA | 226 | GLU |
| 1 | AA | 243 | GLU |
| 1 | AA | 245 | THR |
| 1 | AA | 247 | ASN |
| 1 | AA | 259 | ILE |
| 1 | AA | 266 | ASN |
| 1 | AA | 286 | THR |
| 1 | AA | 298 | ASN |
| 1 | AA | 335 | ASN |
| 2 | AB | 16 | PRO |
| 2 | AB | 18 | ARG |
| 2 | AB | 62 | VAL |
| 2 | AB | 79 | SER |
| 2 | AB | 121 | GLU |
| 2 | AB | 161 | LEU |
| 2 | AB | 179 | GLN |
| 2 | AB | 245 | VAL |
| 2 | AB | 246 | PHE |
| 2 | AB | 297 | THR |
| 2 | AB | 311 | PHE |
| 2 | AB | 433 | ASP |
| 2 | AB | 439 | SER |
| 2 | AB | 467 | ILE |
| 2 | AB | 484 | PRO |
| 2 | AB | 485 | GLU |
| 2 | AB | 488 | PRO |
| 2 | AB | 490 | GLN |
| 3 | AC | 27 | ASP |
| 3 | AC | 29 | GLU |
| 3 | AC | 78 | GLU |
| 3 | AC | 97 | TRP |
| 3 | AC | 121 | SER |
| 3 | AC | 165 | LEU |
| 3 | AC | 188 | THR |
| 3 | AC | 228 | ASN |
| 3 | AC | 244 | CYS |
| 3 | AC | 259 | TRP |
| 3 | AC | 289 | PHE |
| 3 | AC | 295 | THR |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 3 | AC | 318 | LEU |
| 3 | AC | 321 | ASP |
| 3 | AC | 324 | LEU |
| 3 | AC | 355 | THR |
| 3 | AC | 424 | SER |
| 3 | AC | 430 | HIS |
| 3 | AC | 456 | GLU |
| 3 | AC | 461 | ARG |
| 3 | AC | 473 | ASP |
| 4 | AD | 14 | TRP |
| 4 | AD | 43 | LEU |
| 4 | AD | 84 | SER |
| 4 | AD | 91 | LEU |
| 4 | AD | 110 | LEU |
| 4 | AD | 112 | THR |
| 4 | AD | 130 | PHE |
| 4 | AD | 166 | SER |
| 4 | AD | 180 | ARG |
| 4 | AD | 201 | VAL |
| 4 | AD | 205 | LEU |
| 4 | AD | 242 | GLU |
| 4 | AD | 256 | ILE |
| 4 | AD | 259 | ILE |
| 4 | AD | 262 | SER |
| 4 | AD | 264 | LYS |
| 4 | AD | 272 | LEU |
| 4 | AD | 279 | LEU |
| 4 | AD | 282 | SER |
| 4 | AD | 291 | LEU |
| 4 | AD | 293 | LEU |
| 4 | AD | 316 | THR |
| 4 | AD | 323 | GLU |
| 4 | AD | 331 | PRO |
| 4 | AD | 345 | VAL |
| 4 | AD | 346 | LEU |
| 5 | AE | 9 | PRO |
| 5 | AE | 10 | PHE |
| 5 | AE | 52 | PRO |
| 5 | AE | 60 | GLN |
| 5 | AE | 68 | ASP |
| 5 | AE | 84 | LYS |
| 6 | AF | 18 | VAL |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 6 | AF | 19 | ARG |
| 7 | AH | 12 | ARG |
| 7 | AH | 14 | LEU |
| 7 | AH | 21 | VAL |
| 7 | AH | 25 | TRP |
| 7 | AH | 27 | THR |
| 7 | AH | 42 | LEU |
| 7 | AH | 43 | LEU |
| 7 | AH | 45 | ILE |
| 7 | AH | 49 | TYR |
| 7 | AH | 56 | ASP |
| 7 | AH | 60 | VAL |
| 9 | AJ | 7 | ARG |
| 10 | AK | 19 | ASP |
| 11 | AL | 8 | GLN |
| 11 | AL | 15 | THR |
| 12 | AM | 25 | LEU |
| 13 | AO | 31 | LEU |
| 13 | AO | 41 | LEU |
| 13 | AO | 60 | SER |
| 13 | AO | 65 | ARG |
| 13 | AO | 84 | ASN |
| 13 | AO | 86 | ARG |
| 13 | AO | 97 | VAL |
| 13 | AO | 106 | GLN |
| 13 | AO | 141 | ARG |
| 13 | AO | 152 | VAL |
| 13 | AO | 158 | ASN |
| 13 | AO | 165 | SER |
| 13 | AO | 171 | GLU |
| 13 | AO | 207 | GLU |
| 13 | AO | 224 | SER |
| 14 | AT | 29 | ILE |
| 15 | AU | 44 | ASP |
| 15 | AU | 53 | GLU |
| 15 | AU | 61 | ASN |
| 15 | AU | 98 | THR |
| 15 | AU | 103 | GLN |
| 15 | AU | 114 | VAL |
| 15 | AU | 119 | THR |
| 15 | AU | 132 | LEU |
| 16 | AV | 32 | GLU |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 16 | AV | 40 | SER |
| 16 | AV | 68 | VAL |
| 16 | AV | 89 | THR |
| 16 | AV | 92 | ARG |
| 17 | Ay | 21 | GLN |
| 17 | Ay | 28 | ILE |
| 17 | Ay | 34 | MET |
| 17 | Ay | 35 | ILE |
| 17 | Ay | 36 | ILE |
| 18 | AX | 45 | LYS |
| 20 | AZ | 33 | TRP |
| 20 | AZ | 58 | ASN |
| 20 | AZ | 62 | VAL |
| 1 | BA | 5013 | LEU |
| 1 | BA | 5030 | VAL |
| 1 | BA | 5032 | TRP |
| 1 | BA | 5121 | LEU |
| 1 | BA | 5129 | ARG |
| 1 | BA | 5145 | VAL |
| 1 | BA | 5202 | VAL |
| 1 | BA | 5206 | PHE |
| 1 | BA | 5210 | LEU |
| 1 | BA | 5218 | LEU |
| 1 | BA | 5226 | GLU |
| 1 | BA | 5243 | GLU |
| 1 | BA | 5245 | THR |
| 1 | BA | 5247 | ASN |
| 1 | BA | 5259 | ILE |
| 1 | BA | 5286 | THR |
| 1 | BA | 5298 | ASN |
| 1 | BA | 5335 | ASN |
| 2 | BB | 5016 | PRO |
| 2 | BB | 5018 | ARG |
| 2 | BB | 5062 | VAL |
| 2 | BB | 5121 | GLU |
| 2 | BB | 5161 | LEU |
| 2 | BB | 5179 | GLN |
| 2 | BB | 5246 | PHE |
| 2 | BB | 5297 | THR |
| 2 | BB | 5311 | PHE |
| 2 | BB | 5433 | ASP |
| 2 | BB | 5439 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 2 | BB | 5467 | ILE |
| 2 | BB | 5484 | PRO |
| 2 | BB | 5485 | GLU |
| 2 | BB | 5488 | PRO |
| 2 | BB | 5490 | GLN |
| 3 | BC | 5027 | ASP |
| 3 | BC | 5029 | GLU |
| 3 | BC | 5078 | GLU |
| 3 | BC | 5097 | TRP |
| 3 | BC | 5121 | SER |
| 3 | BC | 5165 | LEU |
| 3 | BC | 5188 | THR |
| 3 | BC | 5228 | ASN |
| 3 | BC | 5244 | CYS |
| 3 | BC | 5259 | TRP |
| 3 | BC | 5289 | PHE |
| 3 | BC | 5295 | THR |
| 3 | BC | 5318 | LEU |
| 3 | BC | 5321 | ASP |
| 3 | BC | 5324 | LEU |
| 3 | BC | 5355 | THR |
| 3 | BC | 5424 | SER |
| 3 | BC | 5430 | HIS |
| 3 | BC | 5432 | VAL |
| 3 | BC | 5456 | GLU |
| 3 | BC | 5461 | ARG |
| 3 | BC | 5473 | ASP |
| 4 | BD | 5014 | TRP |
| 4 | BD | 5043 | LEU |
| 4 | BD | 5084 | SER |
| 4 | BD | 5091 | LEU |
| 4 | BD | 5110 | LEU |
| 4 | BD | 5112 | THR |
| 4 | BD | 5128 | ARG |
| 4 | BD | 5130 | PHE |
| 4 | BD | 5166 | SER |
| 4 | BD | 5180 | ARG |
| 4 | BD | 5201 | VAL |
| 4 | BD | 5205 | LEU |
| 4 | BD | 5242 | GLU |
| 4 | BD | 5259 | ILE |
| 4 | BD | 5262 | SER |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 4 | BD | 5264 | LYS |
| 4 | BD | 5272 | LEU |
| 4 | BD | 5279 | LEU |
| 4 | BD | 5282 | SER |
| 4 | BD | 5291 | LEU |
| 4 | BD | 5293 | LEU |
| 4 | BD | 5316 | THR |
| 4 | BD | 5323 | GLU |
| 4 | BD | 5331 | PRO |
| 4 | BD | 5345 | VAL |
| 4 | BD | 5346 | LEU |
| 5 | BE | 5009 | PRO |
| 5 | BE | 5010 | PHE |
| 5 | BE | 5052 | PRO |
| 5 | BE | 5060 | GLN |
| 5 | BE | 5068 | ASP |
| 5 | BE | 5084 | LYS |
| 6 | BF | 5018 | VAL |
| 7 | BH | 5012 | ARG |
| 7 | BH | 5021 | VAL |
| 7 | BH | 5025 | TRP |
| 7 | BH | 5027 | THR |
| 7 | BH | 5042 | LEU |
| 7 | BH | 5043 | LEU |
| 7 | BH | 5045 | ILE |
| 7 | BH | 5049 | TYR |
| 7 | BH | 5056 | ASP |
| 7 | BH | 5060 | VAL |
| 8 | BI | 5032 | PRO |
| 9 | BJ | 5007 | ARG |
| 10 | BK | 5023 | ASP |
| 11 | BL | 5008 | GLN |
| 11 | BL | 5009 | PRO |
| 11 | BL | 5015 | THR |
| 12 | BM | 5025 | LEU |
| 12 | BM | 5034 | LYS |
| 13 | BO | 5031 | LEU |
| 13 | BO | 5041 | LEU |
| 13 | BO | 5060 | SER |
| 13 | BO | 5065 | ARG |
| 13 | BO | 5084 | ASN |
| 13 | BO | 5086 | ARG |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 13 | BO | 5097 | VAL |
| 13 | BO | 5106 | GLN |
| 13 | BO | 5141 | ARG |
| 13 | BO | 5152 | VAL |
| 13 | BO | 5158 | ASN |
| 13 | BO | 5165 | SER |
| 13 | BO | 5171 | GLU |
| 13 | BO | 5207 | GLU |
| 13 | BO | 5224 | SER |
| 14 | BT | 5029 | ILE |
| 14 | BT | 5032 | LYS |
| 15 | BU | 5044 | ASP |
| 15 | BU | 5053 | GLU |
| 15 | BU | 5061 | ASN |
| 15 | BU | 5098 | THR |
| 15 | BU | 5103 | GLN |
| 15 | BU | 5114 | VAL |
| 15 | BU | 5119 | THR |
| 15 | BU | 5132 | LEU |
| 16 | BV | 5032 | GLU |
| 16 | BV | 5040 | SER |
| 16 | BV | 5068 | VAL |
| 16 | BV | 5089 | THR |
| 16 | BV | 5092 | ARG |
| 16 | BV | 5125 | ASP |
| 17 | By | 5021 | GLN |
| 17 | By | 5028 | ILE |
| 17 | By | 5034 | MET |
| 17 | By | 5035 | ILE |
| 17 | By | 5036 | ILE |
| 18 | BX | 5045 | LYS |
| 20 | BZ | 5025 | VAL |
| 20 | BZ | 5033 | TRP |
| 20 | BZ | 5058 | ASN |
| 20 | BZ | 5062 | VAL |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (112) such sidechains are listed below:

| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | AA | 12 | ASN |
| 1 | AA | 19 | ASN |
| 1 | AA | 75 | ASN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 1 | AA | 92 | HIS |
| 1 | AA | 118 | HIS |
| 1 | AA | 199 | GLN |
| 1 | AA | 234 | ASN |
| 1 | AA | 241 | GLN |
| 1 | AA | 247 | ASN |
| 1 | AA | 272 | HIS |
| 1 | AA | 315 | ASN |
| 1 | AA | 337 | HIS |
| 1 | AA | 338 | ASN |
| 2 | AB | 53 | ASN |
| 2 | AB | 157 | HIS |
| 2 | AB | 179 | GLN |
| 2 | AB | 201 | HIS |
| 2 | AB | 216 | HIS |
| 2 | AB | 281 | GLN |
| 2 | AB | 282 | GLN |
| 2 | AB | 285 | ASN |
| 2 | AB | 331 | ASN |
| 2 | AB | 490 | GLN |
| 3 | AC | 155 | ASN |
| 3 | AC | 201 | ASN |
| 3 | AC | 228 | ASN |
| 3 | AC | 322 | GLN |
| 3 | AC | 388 | GLN |
| 3 | AC | 398 | HIS |
| 4 | AD | 83 | ASN |
| 4 | AD | 129 | GLN |
| 4 | AD | 332 | GLN |
| 5 | AE | 60 | GLN |
| 5 | AE | 75 | GLN |
| 6 | AF | 41 | GLN |
| 11 | AL | 8 | GLN |
| 11 | AL | 37 | ASN |
| 12 | AM | 5 | GLN |
| 12 | AM | 32 | GLN |
| 13 | AO | 62 | GLN |
| 13 | AO | 84 | ASN |
| 13 | AO | 87 | GLN |
| 13 | AO | 106 | GLN |
| 13 | AO | 114 | ASN |
| 13 | AO | 135 | GLN |

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| Mol | Chain | Res | Type |
|------------|--------------|------------|-------------|
| 13 | AO | 150 | ASN |
| 13 | AO | 173 | ASN |
| 13 | AO | 181 | ASN |
| 13 | AO | 202 | GLN |
| 13 | AO | 222 | GLN |
| 18 | AX | 47 | GLN |
| 20 | AZ | 58 | ASN |
| 1 | BA | 5012 | ASN |
| 1 | BA | 5019 | ASN |
| 1 | BA | 5075 | ASN |
| 1 | BA | 5092 | HIS |
| 1 | BA | 5118 | HIS |
| 1 | BA | 5199 | GLN |
| 1 | BA | 5234 | ASN |
| 1 | BA | 5241 | GLN |
| 1 | BA | 5247 | ASN |
| 1 | BA | 5272 | HIS |
| 1 | BA | 5312 | ASN |
| 1 | BA | 5315 | ASN |
| 1 | BA | 5337 | HIS |
| 1 | BA | 5338 | ASN |
| 2 | BB | 5053 | ASN |
| 2 | BB | 5157 | HIS |
| 2 | BB | 5179 | GLN |
| 2 | BB | 5201 | HIS |
| 2 | BB | 5216 | HIS |
| 2 | BB | 5281 | GLN |
| 2 | BB | 5282 | GLN |
| 2 | BB | 5285 | ASN |
| 2 | BB | 5331 | ASN |
| 2 | BB | 5338 | GLN |
| 2 | BB | 5469 | HIS |
| 2 | BB | 5490 | GLN |
| 3 | BC | 5155 | ASN |
| 3 | BC | 5201 | ASN |
| 3 | BC | 5228 | ASN |
| 3 | BC | 5322 | GLN |
| 3 | BC | 5388 | GLN |
| 3 | BC | 5398 | HIS |
| 3 | BC | 5418 | ASN |
| 4 | BD | 5083 | ASN |
| 4 | BD | 5129 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|------|------|
| 4 | BD | 5250 | ASN |
| 4 | BD | 5332 | GLN |
| 5 | BE | 5060 | GLN |
| 5 | BE | 5075 | GLN |
| 6 | BF | 5041 | GLN |
| 11 | BL | 5008 | GLN |
| 11 | BL | 5037 | ASN |
| 12 | BM | 5005 | GLN |
| 12 | BM | 5028 | GLN |
| 12 | BM | 5032 | GLN |
| 13 | BO | 5062 | GLN |
| 13 | BO | 5084 | ASN |
| 13 | BO | 5087 | GLN |
| 13 | BO | 5106 | GLN |
| 13 | BO | 5114 | ASN |
| 13 | BO | 5135 | GLN |
| 13 | BO | 5150 | ASN |
| 13 | BO | 5173 | ASN |
| 13 | BO | 5181 | ASN |
| 13 | BO | 5202 | GLN |
| 13 | BO | 5222 | GLN |
| 16 | BV | 5060 | GLN |
| 18 | BX | 5042 | GLN |
| 18 | BX | 5047 | GLN |
| 20 | BZ | 5058 | ASN |

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

Of 196 ligands modelled in this entry, 12 are monoatomic - leaving 184 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$ |
| 24 | CLA | BA | 5408 | - | 65,73,73 | 2.56 | 20 (30%) | 76,113,113 | 2.19 | 14 (18%) |
| 24 | CLA | AC | 510 | - | 65,73,73 | 2.49 | 18 (27%) | 76,113,113 | 2.11 | 12 (15%) |
| 27 | BCR | AB | 617 | - | 41,41,41 | 1.58 | 7 (17%) | 56,56,56 | 2.12 | 20 (35%) |
| 28 | DGD | BC | 5519 | - | 67,67,67 | 1.53 | 12 (17%) | 81,81,81 | 3.36 | 30 (37%) |
| 24 | CLA | AB | 614 | - | 65,73,73 | 3.12 | 19 (29%) | 76,113,113 | 2.19 | 15 (19%) |
| 27 | BCR | BD | 5407 | - | 41,41,41 | 1.83 | 9 (21%) | 56,56,56 | 2.33 | 24 (42%) |
| 32 | LMT | AI | 102 | - | 36,36,36 | 1.62 | 7 (19%) | 47,47,47 | 1.01 | 2 (4%) |
| 30 | SQD | BA | 5401 | - | 53,54,54 | 2.46 | 28 (52%) | 62,65,65 | 2.78 | 21 (33%) |
| 34 | PHO | AD | 402 | - | 51,69,69 | 2.43 | 11 (21%) | 47,99,99 | 1.88 | 9 (19%) |
| 24 | CLA | AB | 601 | - | 65,73,73 | 2.96 | 22 (33%) | 76,113,113 | 2.27 | 10 (13%) |
| 27 | BCR | AB | 619 | - | 41,41,41 | 1.86 | 8 (19%) | 56,56,56 | 1.96 | 19 (33%) |
| 27 | BCR | BC | 5514 | - | 41,41,41 | 1.83 | 6 (14%) | 56,56,56 | 2.10 | 24 (42%) |
| 22 | BCT | AA | 402 | 21 | 2,3,3 | 0.31 | 0 | 2,3,3 | 0.14 | 0 |
| 32 | LMT | AM | 102 | - | 36,36,36 | 1.75 | 10 (27%) | 47,47,47 | 0.90 | 1 (2%) |
| 28 | DGD | AH | 101 | - | 59,59,67 | 1.33 | 9 (15%) | 73,73,81 | 2.10 | 18 (24%) |
| 34 | PHO | BD | 5403 | - | 51,69,69 | 2.56 | 11 (21%) | 47,99,99 | 1.92 | 9 (19%) |
| 24 | CLA | AB | 602 | - | 65,73,73 | 2.45 | 18 (27%) | 76,113,113 | 2.11 | 14 (18%) |
| 24 | CLA | BC | 5501 | - | 65,73,73 | 2.67 | 19 (29%) | 76,113,113 | 2.35 | 13 (17%) |
| 27 | BCR | BT | 5101 | - | 41,41,41 | 1.78 | 7 (17%) | 56,56,56 | 2.24 | 23 (41%) |
| 31 | LMG | BA | 5402 | - | 42,42,55 | 1.08 | 4 (9%) | 50,50,63 | 2.33 | 11 (22%) |
| 24 | CLA | AB | 609 | - | 65,73,73 | 2.63 | 20 (30%) | 76,113,113 | 2.07 | 14 (18%) |
| 27 | BCR | AK | 102 | - | 41,41,41 | 1.78 | 7 (17%) | 56,56,56 | 2.47 | 25 (44%) |
| 27 | BCR | AJ | 101 | - | 41,41,41 | 2.48 | 13 (31%) | 56,56,56 | 3.23 | 23 (41%) |
| 24 | CLA | BD | 5405 | - | 65,73,73 | 2.61 | 18 (27%) | 76,113,113 | 2.23 | 14 (18%) |
| 30 | SQD | AA | 413 | - | 50,51,54 | 2.41 | 25 (50%) | 59,62,65 | 2.82 | 20 (33%) |
| 31 | LMG | BM | 5102 | - | 42,42,55 | 1.01 | 3 (7%) | 50,50,63 | 1.64 | 8 (16%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 32 | LMT | AD | 409 | - | 32,32,36 | 1.75 | 7 (21%) | 43,43,47 | 1.25 | 3 (6%) |
| 36 | HEM | BV | 5201 | 16 | 41,50,50 | 2.96 | 18 (43%) | 45,82,82 | 2.88 | 18 (40%) |
| 24 | CLA | BB | 5612 | - | 65,73,73 | 2.61 | 21 (32%) | 76,113,113 | 2.36 | 15 (19%) |
| 24 | CLA | BB | 5618 | - | 65,73,73 | 3.05 | 18 (27%) | 76,113,113 | 2.17 | 14 (18%) |
| 24 | CLA | AC | 505 | - | 65,73,73 | 2.82 | 21 (32%) | 76,113,113 | 2.28 | 13 (17%) |
| 24 | CLA | BC | 5503 | - | 65,73,73 | 2.61 | 18 (27%) | 76,113,113 | 2.28 | 16 (21%) |
| 30 | SQD | AF | 102 | - | 44,45,54 | 2.52 | 20 (45%) | 53,56,65 | 2.95 | 17 (32%) |
| 31 | LMG | BL | 5101 | - | 51,51,55 | 1.38 | 3 (5%) | 59,59,63 | 2.00 | 12 (20%) |
| 29 | LHG | AA | 412 | - | 38,38,48 | 2.02 | 5 (13%) | 41,44,54 | 1.47 | 5 (12%) |
| 31 | LMG | BB | 5624 | - | 49,49,55 | 0.80 | 1 (2%) | 57,57,63 | 1.93 | 15 (26%) |
| 31 | LMG | BC | 5520 | - | 48,48,55 | 1.09 | 3 (6%) | 56,56,63 | 1.89 | 17 (30%) |
| 24 | CLA | BB | 5615 | - | 65,73,73 | 2.52 | 18 (27%) | 76,113,113 | 2.26 | 20 (26%) |
| 27 | BCR | AC | 515 | - | 41,41,41 | 1.76 | 7 (17%) | 56,56,56 | 2.24 | 20 (35%) |
| 31 | LMG | AA | 414 | - | 44,44,55 | 1.10 | 2 (4%) | 52,52,63 | 1.51 | 6 (11%) |
| 27 | BCR | BB | 5622 | - | 41,41,41 | 1.89 | 8 (19%) | 56,56,56 | 2.06 | 16 (28%) |
| 24 | CLA | AC | 506 | - | 65,73,73 | 2.72 | 22 (33%) | 76,113,113 | 2.15 | 13 (17%) |
| 24 | CLA | AB | 605 | - | 65,73,73 | 2.70 | 21 (32%) | 76,113,113 | 2.14 | 16 (21%) |
| 24 | CLA | BB | 5616 | - | 65,73,73 | 2.75 | 21 (32%) | 76,113,113 | 2.07 | 13 (17%) |
| 31 | LMG | AM | 101 | - | 42,42,55 | 0.95 | 2 (4%) | 50,50,63 | 1.64 | 8 (16%) |
| 32 | LMT | AB | 629 | - | 36,36,36 | 1.59 | 7 (19%) | 47,47,47 | 1.40 | 7 (14%) |
| 24 | CLA | BC | 5507 | - | 65,73,73 | 2.48 | 19 (29%) | 76,113,113 | 2.16 | 14 (18%) |
| 24 | CLA | BA | 5406 | - | 65,73,73 | 2.59 | 21 (32%) | 76,113,113 | 2.41 | 20 (26%) |
| 30 | SQD | BB | 5625 | - | 42,43,54 | 2.60 | 20 (47%) | 51,54,65 | 2.86 | 15 (29%) |
| 24 | CLA | AB | 606 | - | 65,73,73 | 2.58 | 20 (30%) | 76,113,113 | 2.15 | 15 (19%) |
| 33 | DMS | AB | 626 | - | 3,3,3 | 0.68 | 0 | 3,3,3 | 1.07 | 0 |
| 24 | CLA | AB | 616 | - | 65,73,73 | 2.56 | 17 (26%) | 76,113,113 | 2.12 | 11 (14%) |
| 29 | LHG | BA | 5415 | - | 36,36,48 | 1.08 | 2 (5%) | 39,42,54 | 1.12 | 3 (7%) |
| 33 | DMS | BV | 5202 | - | 3,3,3 | 0.86 | 0 | 3,3,3 | 1.00 | 0 |
| 31 | LMG | BC | 5521 | - | 45,45,55 | 1.04 | 2 (4%) | 53,53,63 | 1.91 | 13 (24%) |
| 24 | CLA | BA | 5407 | - | 65,73,73 | 2.66 | 20 (30%) | 76,113,113 | 2.27 | 12 (15%) |
| 36 | HEM | BF | 5101 | 5,6 | 41,50,50 | 3.06 | 17 (41%) | 45,82,82 | 3.09 | 20 (44%) |
| 30 | SQD | AA | 416 | - | 53,54,54 | 2.43 | 28 (52%) | 62,65,65 | 2.79 | 21 (33%) |
| 24 | CLA | AA | 406 | - | 65,73,73 | 2.52 | 20 (30%) | 76,113,113 | 2.23 | 15 (19%) |
| 24 | CLA | AD | 404 | - | 65,73,73 | 2.60 | 20 (30%) | 76,113,113 | 2.24 | 14 (18%) |
| 24 | CLA | BB | 5617 | - | 65,73,73 | 2.34 | 20 (30%) | 76,113,113 | 2.01 | 11 (14%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 24 | CLA | BB | 5613 | - | 65,73,73 | 2.65 | 22 (33%) | 76,113,113 | 2.09 | 15 (19%) |
| 28 | DGD | BH | 5101 | - | 59,59,67 | 1.31 | 9 (15%) | 73,73,81 | 2.11 | 17 (23%) |
| 36 | HEM | AV | 201 | 16 | 41,50,50 | 2.83 | 14 (34%) | 45,82,82 | 2.90 | 18 (40%) |
| 28 | DGD | AC | 518 | - | 63,63,67 | 1.23 | 6 (9%) | 77,77,81 | 2.80 | 23 (29%) |
| 32 | LMT | AB | 630 | - | 36,36,36 | 1.74 | 9 (25%) | 47,47,47 | 1.01 | 1 (2%) |
| 24 | CLA | BC | 5506 | - | 65,73,73 | 2.72 | 22 (33%) | 76,113,113 | 2.16 | 14 (18%) |
| 31 | LMG | AB | 621 | - | 49,49,55 | 0.78 | 1 (2%) | 57,57,63 | 1.93 | 14 (24%) |
| 24 | CLA | BC | 5513 | - | 65,73,73 | 3.16 | 21 (32%) | 76,113,113 | 1.99 | 13 (17%) |
| 31 | LMG | BD | 5408 | - | 46,46,55 | 0.97 | 3 (6%) | 54,54,63 | 2.58 | 16 (29%) |
| 27 | BCR | AD | 406 | - | 41,41,41 | 1.66 | 7 (17%) | 56,56,56 | 2.35 | 23 (41%) |
| 24 | CLA | AB | 610 | - | 65,73,73 | 2.46 | 16 (24%) | 76,113,113 | 2.10 | 13 (17%) |
| 27 | BCR | BX | 5101 | - | 41,41,41 | 1.89 | 8 (19%) | 56,56,56 | 2.24 | 22 (39%) |
| 29 | LHG | AA | 415 | - | 36,36,48 | 1.08 | 2 (5%) | 39,42,54 | 1.12 | 3 (7%) |
| 24 | CLA | BB | 5606 | - | 65,73,73 | 2.46 | 18 (27%) | 76,113,113 | 2.14 | 14 (18%) |
| 28 | DGD | AC | 519 | - | 67,67,67 | 1.49 | 13 (19%) | 81,81,81 | 3.36 | 30 (37%) |
| 24 | CLA | AB | 613 | - | 65,73,73 | 2.32 | 17 (26%) | 76,113,113 | 2.01 | 12 (15%) |
| 24 | CLA | AB | 604 | - | 65,73,73 | 2.53 | 19 (29%) | 76,113,113 | 2.08 | 13 (17%) |
| 34 | PHO | BD | 5404 | - | 51,69,69 | 2.49 | 9 (17%) | 47,99,99 | 2.01 | 12 (25%) |
| 28 | DGD | BA | 5412 | - | 57,57,67 | 1.83 | 13 (22%) | 71,71,81 | 3.63 | 23 (32%) |
| 24 | CLA | AC | 513 | - | 65,73,73 | 3.04 | 18 (27%) | 76,113,113 | 1.98 | 13 (17%) |
| 24 | CLA | BC | 5509 | - | 65,73,73 | 2.96 | 18 (27%) | 76,113,113 | 2.14 | 10 (13%) |
| 28 | DGD | AA | 411 | - | 57,57,67 | 1.80 | 13 (22%) | 71,71,81 | 3.62 | 24 (33%) |
| 35 | PL9 | AD | 405 | - | 55,55,55 | 3.85 | 18 (32%) | 68,69,69 | 2.76 | 24 (35%) |
| 27 | BCR | BB | 5623 | - | 41,41,41 | 1.73 | 8 (19%) | 56,56,56 | 1.94 | 17 (30%) |
| 24 | CLA | AC | 508 | - | 65,73,73 | 2.48 | 17 (26%) | 76,113,113 | 2.24 | 16 (21%) |
| 24 | CLA | BB | 5611 | - | 65,73,73 | 2.47 | 21 (32%) | 76,113,113 | 2.29 | 17 (22%) |
| 27 | BCR | AT | 101 | - | 41,41,41 | 1.65 | 7 (17%) | 56,56,56 | 2.24 | 23 (41%) |
| 24 | CLA | BC | 5511 | 3 | 65,73,73 | 3.16 | 21 (32%) | 76,113,113 | 2.16 | 16 (21%) |
| 24 | CLA | AC | 502 | - | 65,73,73 | 2.56 | 20 (30%) | 76,113,113 | 2.13 | 12 (15%) |
| 24 | CLA | AC | 512 | - | 65,73,73 | 2.64 | 19 (29%) | 76,113,113 | 2.22 | 11 (14%) |
| 31 | LMG | BI | 5101 | - | 43,43,55 | 1.02 | 3 (6%) | 51,51,63 | 1.68 | 7 (13%) |
| 24 | CLA | BB | 5619 | - | 65,73,73 | 2.50 | 17 (26%) | 76,113,113 | 2.26 | 12 (15%) |
| 36 | HEM | AF | 101 | 5,6 | 41,50,50 | 2.96 | 16 (39%) | 45,82,82 | 3.07 | 20 (44%) |
| 24 | CLA | BC | 5504 | - | 65,73,73 | 2.60 | 20 (30%) | 76,113,113 | 2.18 | 12 (15%) |
| 27 | BCR | BC | 5516 | - | 41,41,41 | 1.79 | 7 (17%) | 56,56,56 | 2.21 | 21 (37%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 24 | CLA | BC | 5512 | - | 65,73,73 | 2.74 | 19 (29%) | 76,113,113 | 2.22 | 10 (13%) |
| 24 | CLA | AB | 603 | - | 65,73,73 | 2.70 | 20 (30%) | 76,113,113 | 2.20 | 20 (26%) |
| 24 | CLA | BC | 5502 | - | 65,73,73 | 2.64 | 20 (30%) | 76,113,113 | 2.24 | 13 (17%) |
| 31 | LMG | AA | 417 | - | 42,42,55 | 1.07 | 5 (11%) | 50,50,63 | 2.33 | 12 (24%) |
| 24 | CLA | BB | 5610 | - | 65,73,73 | 2.64 | 19 (29%) | 76,113,113 | 2.17 | 17 (22%) |
| 31 | LMG | AC | 520 | - | 48,48,55 | 1.05 | 5 (10%) | 56,56,63 | 1.92 | 19 (33%) |
| 31 | LMG | BE | 5101 | - | 44,44,55 | 1.09 | 3 (6%) | 52,52,63 | 1.52 | 6 (11%) |
| 32 | LMT | BB | 5603 | - | 36,36,36 | 1.59 | 7 (19%) | 47,47,47 | 1.40 | 7 (14%) |
| 24 | CLA | AB | 615 | - | 65,73,73 | 2.50 | 17 (26%) | 76,113,113 | 2.22 | 10 (13%) |
| 31 | LMG | AD | 408 | - | 48,48,55 | 0.96 | 4 (8%) | 56,56,63 | 2.08 | 11 (19%) |
| 33 | DMS | BV | 5203 | - | 3,3,3 | 0.83 | 0 | 3,3,3 | 1.21 | 0 |
| 32 | LMT | BB | 5604 | - | 36,36,36 | 1.71 | 10 (27%) | 47,47,47 | 1.00 | 1 (2%) |
| 27 | BCR | AC | 514 | - | 41,41,41 | 1.64 | 7 (17%) | 56,56,56 | 2.14 | 22 (39%) |
| 24 | CLA | BB | 5608 | - | 65,73,73 | 2.49 | 20 (30%) | 76,113,113 | 2.13 | 14 (18%) |
| 24 | CLA | BB | 5607 | - | 65,73,73 | 2.70 | 19 (29%) | 76,113,113 | 2.19 | 20 (26%) |
| 24 | CLA | BC | 5508 | - | 65,73,73 | 2.57 | 18 (27%) | 76,113,113 | 2.32 | 15 (19%) |
| 28 | DGD | AE | 101 | - | 64,64,67 | 1.55 | 13 (20%) | 78,78,81 | 1.45 | 12 (15%) |
| 24 | CLA | AC | 511 | 3 | 65,73,73 | 3.02 | 19 (29%) | 76,113,113 | 2.14 | 17 (22%) |
| 24 | CLA | BD | 5402 | - | 65,73,73 | 2.52 | 18 (27%) | 76,113,113 | 2.17 | 16 (21%) |
| 27 | BCR | AB | 618 | - | 41,41,41 | 1.93 | 7 (17%) | 56,56,56 | 2.07 | 16 (28%) |
| 24 | CLA | AB | 611 | - | 65,73,73 | 2.48 | 19 (29%) | 76,113,113 | 2.26 | 20 (26%) |
| 28 | DGD | BC | 5518 | - | 63,63,67 | 1.26 | 6 (9%) | 77,77,81 | 2.78 | 22 (28%) |
| 30 | SQD | BB | 5601 | - | 46,47,54 | 2.47 | 22 (47%) | 55,58,65 | 2.71 | 16 (29%) |
| 24 | CLA | BC | 5505 | - | 65,73,73 | 2.85 | 22 (33%) | 76,113,113 | 2.29 | 14 (18%) |
| 31 | LMG | AC | 521 | - | 45,45,55 | 1.09 | 2 (4%) | 53,53,63 | 1.92 | 14 (26%) |
| 32 | LMT | AB | 624 | - | 36,36,36 | 1.66 | 8 (22%) | 47,47,47 | 0.93 | 2 (4%) |
| 27 | BCR | AA | 410 | - | 41,41,41 | 1.63 | 7 (17%) | 56,56,56 | 2.06 | 21 (37%) |
| 32 | LMT | BB | 5626 | - | 36,36,36 | 1.78 | 9 (25%) | 47,47,47 | 1.00 | 2 (4%) |
| 33 | DMS | BB | 5628 | - | 3,3,3 | 0.71 | 0 | 3,3,3 | 1.16 | 0 |
| 24 | CLA | AA | 404 | - | 65,73,73 | 2.45 | 16 (24%) | 76,113,113 | 1.97 | 14 (18%) |
| 24 | CLA | AC | 503 | - | 65,73,73 | 2.54 | 19 (29%) | 76,113,113 | 2.36 | 17 (22%) |
| 31 | LMG | BD | 5410 | - | 48,48,55 | 0.94 | 3 (6%) | 56,56,63 | 2.09 | 11 (19%) |
| 28 | DGD | BC | 5517 | - | 54,54,67 | 1.44 | 8 (14%) | 68,68,81 | 2.74 | 22 (32%) |
| 31 | LMG | AI | 101 | - | 43,43,55 | 1.03 | 3 (6%) | 51,51,63 | 1.69 | 8 (15%) |
| 27 | BCR | AX | 101 | - | 41,41,41 | 1.86 | 8 (19%) | 56,56,56 | 2.21 | 22 (39%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 29 | LHG | BA | 5413 | - | 38,38,48 | 2.01 | 5 (13%) | 41,44,54 | 1.44 | 5 (12%) |
| 27 | BCR | BJ | 5101 | - | 41,41,41 | 2.42 | 14 (34%) | 56,56,56 | 3.21 | 23 (41%) |
| 27 | BCR | BC | 5515 | - | 41,41,41 | 1.90 | 8 (19%) | 56,56,56 | 2.24 | 20 (35%) |
| 33 | DMS | BB | 5629 | - | 3,3,3 | 0.68 | 0 | 3,3,3 | 1.24 | 0 |
| 35 | PL9 | BD | 5406 | - | 55,55,55 | 3.95 | 18 (32%) | 68,69,69 | 2.76 | 23 (33%) |
| 27 | BCR | AC | 516 | - | 41,41,41 | 1.66 | 8 (19%) | 56,56,56 | 2.25 | 20 (35%) |
| 28 | DGD | AC | 517 | - | 54,54,67 | 1.35 | 7 (12%) | 68,68,81 | 2.74 | 22 (32%) |
| 32 | LMT | BM | 5101 | - | 36,36,36 | 1.76 | 9 (25%) | 47,47,47 | 0.89 | 1 (2%) |
| 24 | CLA | BB | 5620 | - | 65,73,73 | 2.56 | 18 (27%) | 76,113,113 | 2.13 | 10 (13%) |
| 32 | LMT | BD | 5411 | - | 32,32,36 | 1.74 | 8 (25%) | 43,43,47 | 1.26 | 2 (4%) |
| 33 | DMS | AB | 625 | - | 3,3,3 | 0.73 | 0 | 3,3,3 | 1.48 | 1 (33%) |
| 24 | CLA | AD | 401 | - | 65,73,73 | 2.42 | 17 (26%) | 76,113,113 | 2.15 | 16 (21%) |
| 30 | SQD | AB | 622 | - | 42,43,54 | 2.58 | 19 (45%) | 51,54,65 | 2.84 | 15 (29%) |
| 32 | LMT | BI | 5102 | - | 36,36,36 | 1.66 | 8 (22%) | 47,47,47 | 1.00 | 2 (4%) |
| 28 | DGD | BB | 5602 | - | 53,53,67 | 1.50 | 7 (13%) | 67,67,81 | 2.08 | 13 (19%) |
| 30 | SQD | BA | 5414 | - | 50,51,54 | 2.49 | 26 (52%) | 59,62,65 | 2.79 | 20 (33%) |
| 32 | LMT | BB | 5627 | - | 36,36,36 | 1.63 | 8 (22%) | 47,47,47 | 0.92 | 1 (2%) |
| 33 | DMS | AU | 201 | - | 3,3,3 | 0.92 | 0 | 3,3,3 | 1.14 | 0 |
| 24 | CLA | BB | 5614 | - | 65,73,73 | 2.47 | 17 (26%) | 76,113,113 | 2.10 | 13 (17%) |
| 30 | SQD | BF | 5102 | - | 44,45,54 | 2.52 | 19 (43%) | 53,56,65 | 2.96 | 19 (35%) |
| 24 | CLA | BB | 5609 | - | 65,73,73 | 2.62 | 20 (30%) | 76,113,113 | 2.14 | 17 (22%) |
| 24 | CLA | AC | 504 | - | 65,73,73 | 2.48 | 20 (30%) | 76,113,113 | 2.18 | 15 (19%) |
| 24 | CLA | BB | 5605 | - | 65,73,73 | 2.96 | 20 (30%) | 76,113,113 | 2.22 | 10 (13%) |
| 27 | BCR | BB | 5621 | - | 41,41,41 | 1.51 | 7 (17%) | 56,56,56 | 2.10 | 21 (37%) |
| 33 | DMS | AV | 202 | - | 3,3,3 | 0.76 | 0 | 3,3,3 | 1.08 | 0 |
| 24 | CLA | AC | 501 | - | 65,73,73 | 2.54 | 20 (30%) | 76,113,113 | 2.32 | 13 (17%) |
| 31 | LMG | AB | 620 | - | 51,51,55 | 1.33 | 3 (5%) | 59,59,63 | 2.01 | 12 (20%) |
| 24 | CLA | AB | 608 | - | 65,73,73 | 2.62 | 21 (32%) | 76,113,113 | 2.36 | 15 (19%) |
| 27 | BCR | BA | 5411 | - | 41,41,41 | 1.69 | 7 (17%) | 56,56,56 | 2.08 | 22 (39%) |
| 32 | LMT | AI | 103 | - | 36,36,36 | 1.45 | 6 (16%) | 47,47,47 | 1.77 | 10 (21%) |
| 24 | CLA | AB | 607 | - | 65,73,73 | 2.46 | 19 (29%) | 76,113,113 | 2.25 | 16 (21%) |
| 24 | CLA | AA | 405 | - | 65,73,73 | 2.45 | 21 (32%) | 76,113,113 | 2.37 | 20 (26%) |
| 24 | CLA | AA | 407 | - | 65,73,73 | 2.49 | 18 (27%) | 76,113,113 | 2.22 | 15 (19%) |
| 24 | CLA | AC | 507 | - | 65,73,73 | 2.37 | 19 (29%) | 76,113,113 | 2.16 | 11 (14%) |
| 32 | LMT | AB | 623 | - | 36,36,36 | 1.78 | 8 (22%) | 47,47,47 | 0.99 | 2 (4%) |

| Mol | Type | Chain | Res | Link | Bond lengths | | | Bond angles | | |
|-----|------|-------|------|------|--------------|------|----------|-------------|------|----------|
| | | | | | Counts | RMSZ | # Z > 2 | Counts | RMSZ | # Z > 2 |
| 28 | DGD | AB | 628 | - | 53,53,67 | 1.45 | 7 (13%) | 67,67,81 | 2.05 | 14 (20%) |
| 30 | SQD | AB | 627 | - | 46,47,54 | 2.48 | 22 (47%) | 55,58,65 | 2.71 | 15 (27%) |
| 27 | BCR | BK | 5102 | - | 41,41,41 | 1.91 | 9 (21%) | 56,56,56 | 2.43 | 25 (44%) |
| 31 | LMG | AJ | 102 | - | 46,46,55 | 0.97 | 3 (6%) | 54,54,63 | 2.58 | 17 (31%) |
| 32 | LMT | BC | 5522 | - | 36,36,36 | 1.52 | 7 (19%) | 47,47,47 | 1.77 | 8 (17%) |
| 24 | CLA | AC | 509 | - | 65,73,73 | 2.75 | 15 (23%) | 76,113,113 | 2.15 | 12 (15%) |
| 34 | PHO | AD | 403 | - | 51,69,69 | 2.40 | 9 (17%) | 47,99,99 | 1.98 | 11 (23%) |
| 31 | LMG | BD | 5409 | - | 49,49,55 | 0.71 | 0 | 57,57,63 | 2.73 | 20 (35%) |
| 24 | CLA | BA | 5405 | - | 65,73,73 | 2.44 | 16 (24%) | 76,113,113 | 1.98 | 15 (19%) |
| 24 | CLA | BC | 5510 | - | 65,73,73 | 2.55 | 16 (24%) | 76,113,113 | 2.11 | 11 (14%) |
| 28 | DGD | BE | 5102 | - | 64,64,67 | 1.52 | 14 (21%) | 78,78,81 | 1.43 | 11 (14%) |
| 25 | MST | AA | 408 | - | 16,16,16 | 0.50 | 0 | 22,22,22 | 4.16 | 9 (40%) |
| 22 | BCT | BA | 5403 | 21 | 2,3,3 | 0.35 | 0 | 2,3,3 | 0.38 | 0 |
| 25 | MST | BA | 5409 | - | 16,16,16 | 0.46 | 0 | 22,22,22 | 4.08 | 9 (40%) |
| 24 | CLA | AB | 612 | - | 65,73,73 | 2.71 | 19 (29%) | 76,113,113 | 2.01 | 13 (17%) |
| 31 | LMG | AD | 407 | - | 49,49,55 | 0.74 | 1 (2%) | 57,57,63 | 2.72 | 19 (33%) |

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|-----------|---------------|---------|
| 24 | CLA | BA | 5408 | - | 2/2/15/20 | 12/37/115/115 | - |
| 24 | CLA | AC | 510 | - | 2/2/15/20 | 10/37/115/115 | - |
| 28 | DGD | BC | 5519 | - | 1/1/13/13 | 7/55/95/95 | 0/2/2/2 |
| 27 | BCR | AB | 617 | - | - | 1/29/63/63 | 0/2/2/2 |
| 24 | CLA | AB | 614 | - | 2/2/15/20 | 12/37/115/115 | - |
| 27 | BCR | BD | 5407 | - | - | 5/29/63/63 | 0/2/2/2 |
| 32 | LMT | AI | 102 | - | - | 3/21/61/61 | 0/2/2/2 |
| 34 | PHO | AD | 402 | - | 1/1/17/22 | 11/37/103/103 | 0/5/6/6 |
| 30 | SQD | BA | 5401 | - | - | 23/49/69/69 | 0/1/1/1 |
| 24 | CLA | AB | 601 | - | 2/2/15/20 | 12/37/115/115 | - |
| 27 | BCR | AB | 619 | - | - | 4/29/63/63 | 0/2/2/2 |
| 27 | BCR | BC | 5514 | - | - | 5/29/63/63 | 0/2/2/2 |
| 32 | LMT | AM | 102 | - | - | 3/21/61/61 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|-----------|---------------|---------|
| 28 | DGD | AH | 101 | - | - | 3/47/87/95 | 0/2/2/2 |
| 34 | PHO | BD | 5403 | - | 1/1/17/22 | 11/37/103/103 | 0/5/6/6 |
| 24 | CLA | AB | 602 | - | 2/2/15/20 | 7/37/115/115 | - |
| 24 | CLA | BC | 5501 | - | 2/2/15/20 | 12/37/115/115 | - |
| 27 | BCR | BT | 5101 | - | - | 4/29/63/63 | 0/2/2/2 |
| 31 | LMG | BA | 5402 | - | - | 3/37/57/70 | 0/1/1/1 |
| 24 | CLA | AB | 609 | - | 2/2/15/20 | 7/37/115/115 | - |
| 27 | BCR | AK | 102 | - | - | 2/29/63/63 | 0/2/2/2 |
| 27 | BCR | AJ | 101 | - | - | 1/29/63/63 | 0/2/2/2 |
| 24 | CLA | BD | 5405 | - | 2/2/15/20 | 10/37/115/115 | - |
| 30 | SQD | AA | 413 | - | - | 23/46/66/69 | 0/1/1/1 |
| 31 | LMG | BM | 5102 | - | - | 3/37/57/70 | 0/1/1/1 |
| 32 | LMT | AD | 409 | - | - | 1/17/57/61 | 0/2/2/2 |
| 36 | HEM | BV | 5201 | 16 | - | 4/12/54/54 | - |
| 24 | CLA | BB | 5612 | - | 2/2/15/20 | 10/37/115/115 | - |
| 24 | CLA | BB | 5618 | - | 2/2/15/20 | 12/37/115/115 | - |
| 24 | CLA | AC | 505 | - | 2/2/15/20 | 8/37/115/115 | - |
| 24 | CLA | BC | 5503 | - | 2/2/15/20 | 14/37/115/115 | - |
| 30 | SQD | AF | 102 | - | - | 22/40/60/69 | 0/1/1/1 |
| 31 | LMG | BL | 5101 | - | - | 5/46/66/70 | 0/1/1/1 |
| 29 | LHG | AA | 412 | - | - | 19/43/43/53 | - |
| 31 | LMG | BB | 5624 | - | - | 4/44/64/70 | 0/1/1/1 |
| 31 | LMG | BC | 5520 | - | - | 5/43/63/70 | 0/1/1/1 |
| 24 | CLA | BB | 5615 | - | 2/2/15/20 | 10/37/115/115 | - |
| 27 | BCR | AC | 515 | - | - | 3/29/63/63 | 0/2/2/2 |
| 31 | LMG | AA | 414 | - | - | 5/39/59/70 | 0/1/1/1 |
| 27 | BCR | BB | 5622 | - | - | 1/29/63/63 | 0/2/2/2 |
| 24 | CLA | AC | 506 | - | 2/2/15/20 | 5/37/115/115 | - |
| 24 | CLA | AB | 605 | - | 2/2/15/20 | 7/37/115/115 | - |
| 24 | CLA | BB | 5616 | - | 2/2/15/20 | 10/37/115/115 | - |
| 31 | LMG | AM | 101 | - | - | 3/37/57/70 | 0/1/1/1 |
| 32 | LMT | AB | 629 | - | - | 3/21/61/61 | 0/2/2/2 |
| 24 | CLA | BC | 5507 | - | 2/2/15/20 | 6/37/115/115 | - |
| 24 | CLA | BA | 5406 | - | 2/2/15/20 | 15/37/115/115 | - |
| 30 | SQD | BB | 5625 | - | - | 18/38/58/69 | 0/1/1/1 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|-----------|---------------|---------|
| 24 | CLA | AB | 606 | - | 2/2/15/20 | 12/37/115/115 | - |
| 24 | CLA | AB | 616 | - | 2/2/15/20 | 11/37/115/115 | - |
| 29 | LHG | BA | 5415 | - | - | 23/41/41/53 | - |
| 31 | LMG | BC | 5521 | - | - | 6/40/60/70 | 0/1/1/1 |
| 24 | CLA | BA | 5407 | - | 2/2/15/20 | 3/37/115/115 | - |
| 36 | HEM | BF | 5101 | 5,6 | - | 6/12/54/54 | - |
| 30 | SQD | AA | 416 | - | - | 21/49/69/69 | 0/1/1/1 |
| 24 | CLA | AA | 406 | - | 2/2/15/20 | 3/37/115/115 | - |
| 24 | CLA | AD | 404 | - | 2/2/15/20 | 10/37/115/115 | - |
| 24 | CLA | BB | 5617 | - | 2/2/15/20 | 9/37/115/115 | - |
| 24 | CLA | BB | 5613 | - | 2/2/15/20 | 7/37/115/115 | - |
| 28 | DGD | BH | 5101 | - | - | 3/47/87/95 | 0/2/2/2 |
| 36 | HEM | AV | 201 | 16 | - | 4/12/54/54 | - |
| 28 | DGD | AC | 518 | - | 1/1/13/13 | 8/51/91/95 | 0/2/2/2 |
| 32 | LMT | AB | 630 | - | - | 3/21/61/61 | 0/2/2/2 |
| 24 | CLA | BC | 5506 | - | 2/2/15/20 | 5/37/115/115 | - |
| 31 | LMG | AB | 621 | - | - | 4/44/64/70 | 0/1/1/1 |
| 24 | CLA | BC | 5513 | - | 2/2/15/20 | 10/37/115/115 | - |
| 31 | LMG | BD | 5408 | - | - | 5/41/61/70 | 0/1/1/1 |
| 27 | BCR | AD | 406 | - | - | 5/29/63/63 | 0/2/2/2 |
| 24 | CLA | AB | 610 | - | 2/2/15/20 | 8/37/115/115 | - |
| 27 | BCR | BX | 5101 | - | - | 1/29/63/63 | 0/2/2/2 |
| 29 | LHG | AA | 415 | - | - | 24/41/41/53 | - |
| 24 | CLA | BB | 5606 | - | 2/2/15/20 | 7/37/115/115 | - |
| 28 | DGD | AC | 519 | - | 1/1/13/13 | 9/55/95/95 | 0/2/2/2 |
| 24 | CLA | AB | 613 | - | 2/2/15/20 | 8/37/115/115 | - |
| 24 | CLA | AB | 604 | - | 2/2/15/20 | 9/37/115/115 | - |
| 34 | PHO | BD | 5404 | - | 1/1/17/22 | 12/37/103/103 | 0/5/6/6 |
| 28 | DGD | BA | 5412 | - | - | 7/45/85/95 | 0/2/2/2 |
| 24 | CLA | AC | 513 | - | 2/2/15/20 | 10/37/115/115 | - |
| 24 | CLA | BC | 5509 | - | 2/2/15/20 | 4/37/115/115 | - |
| 28 | DGD | AA | 411 | - | - | 7/45/85/95 | 0/2/2/2 |
| 35 | PL9 | AD | 405 | - | - | 16/53/73/73 | 0/1/1/1 |
| 27 | BCR | BB | 5623 | - | - | 4/29/63/63 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|-----------|---------------|---------|
| 24 | CLA | AC | 508 | - | 2/2/15/20 | 7/37/115/115 | - |
| 24 | CLA | BB | 5611 | - | 2/2/15/20 | 5/37/115/115 | - |
| 27 | BCR | AT | 101 | - | - | 4/29/63/63 | 0/2/2/2 |
| 24 | CLA | BC | 5511 | 3 | 2/2/15/20 | 14/37/115/115 | - |
| 24 | CLA | AC | 502 | - | 2/2/15/20 | 9/37/115/115 | - |
| 24 | CLA | AC | 512 | - | 2/2/15/20 | 12/37/115/115 | - |
| 31 | LMG | BI | 5101 | - | - | 2/38/58/70 | 0/1/1/1 |
| 24 | CLA | BB | 5619 | - | 2/2/15/20 | 5/37/115/115 | - |
| 36 | HEM | AF | 101 | 5,6 | - | 6/12/54/54 | - |
| 24 | CLA | BC | 5504 | - | 2/2/15/20 | 9/37/115/115 | - |
| 27 | BCR | BC | 5516 | - | - | 4/29/63/63 | 0/2/2/2 |
| 24 | CLA | BC | 5512 | - | 2/2/15/20 | 12/37/115/115 | - |
| 24 | CLA | AB | 603 | - | 2/2/15/20 | 11/37/115/115 | - |
| 24 | CLA | BC | 5502 | - | 2/2/15/20 | 9/37/115/115 | - |
| 31 | LMG | AA | 417 | - | - | 3/37/57/70 | 0/1/1/1 |
| 24 | CLA | BB | 5610 | - | 2/2/15/20 | 11/37/115/115 | - |
| 31 | LMG | AC | 520 | - | - | 5/43/63/70 | 0/1/1/1 |
| 31 | LMG | BE | 5101 | - | - | 5/39/59/70 | 0/1/1/1 |
| 32 | LMT | BB | 5603 | - | - | 3/21/61/61 | 0/2/2/2 |
| 24 | CLA | AB | 615 | - | 2/2/15/20 | 5/37/115/115 | - |
| 31 | LMG | AD | 408 | - | - | 5/43/63/70 | 0/1/1/1 |
| 32 | LMT | BB | 5604 | - | - | 3/21/61/61 | 0/2/2/2 |
| 27 | BCR | AC | 514 | - | - | 5/29/63/63 | 0/2/2/2 |
| 24 | CLA | BB | 5608 | - | 2/2/15/20 | 9/37/115/115 | - |
| 24 | CLA | BB | 5607 | - | 2/2/15/20 | 11/37/115/115 | - |
| 24 | CLA | BC | 5508 | - | 2/2/15/20 | 8/37/115/115 | - |
| 28 | DGD | AE | 101 | - | - | 5/52/92/95 | 0/2/2/2 |
| 24 | CLA | AC | 511 | 3 | 2/2/15/20 | 15/37/115/115 | - |
| 24 | CLA | BD | 5402 | - | 2/2/15/20 | 11/37/115/115 | - |
| 27 | BCR | AB | 618 | - | - | 1/29/63/63 | 0/2/2/2 |
| 24 | CLA | AB | 611 | - | 2/2/15/20 | 10/37/115/115 | - |
| 28 | DGD | BC | 5518 | - | 1/1/13/13 | 8/51/91/95 | 0/2/2/2 |
| 30 | SQD | BB | 5601 | - | - | 24/42/62/69 | 0/1/1/1 |
| 24 | CLA | BC | 5505 | - | 2/2/15/20 | 10/37/115/115 | - |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|-----------|---------------|---------|
| 31 | LMG | AC | 521 | - | - | 6/40/60/70 | 0/1/1/1 |
| 32 | LMT | AB | 624 | - | - | 3/21/61/61 | 0/2/2/2 |
| 27 | BCR | AA | 410 | - | - | 5/29/63/63 | 0/2/2/2 |
| 32 | LMT | BB | 5626 | - | - | 1/21/61/61 | 0/2/2/2 |
| 24 | CLA | AA | 404 | - | 2/2/15/20 | 13/37/115/115 | - |
| 24 | CLA | AC | 503 | - | 2/2/15/20 | 13/37/115/115 | - |
| 31 | LMG | BD | 5410 | - | - | 5/43/63/70 | 0/1/1/1 |
| 28 | DGD | BC | 5517 | - | - | 4/42/82/95 | 0/2/2/2 |
| 31 | LMG | AI | 101 | - | - | 2/38/58/70 | 0/1/1/1 |
| 27 | BCR | AX | 101 | - | - | 2/29/63/63 | 0/2/2/2 |
| 27 | BCR | BJ | 5101 | - | - | 1/29/63/63 | 0/2/2/2 |
| 27 | BCR | BC | 5515 | - | - | 3/29/63/63 | 0/2/2/2 |
| 35 | PL9 | BD | 5406 | - | - | 17/53/73/73 | 0/1/1/1 |
| 27 | BCR | AC | 516 | - | - | 5/29/63/63 | 0/2/2/2 |
| 28 | DGD | AC | 517 | - | - | 4/42/82/95 | 0/2/2/2 |
| 32 | LMT | BM | 5101 | - | - | 3/21/61/61 | 0/2/2/2 |
| 24 | CLA | BB | 5620 | - | 2/2/15/20 | 10/37/115/115 | - |
| 32 | LMT | BD | 5411 | - | - | 1/17/57/61 | 0/2/2/2 |
| 24 | CLA | AD | 401 | - | 2/2/15/20 | 11/37/115/115 | - |
| 30 | SQD | AB | 622 | - | - | 20/38/58/69 | 0/1/1/1 |
| 32 | LMT | BI | 5102 | - | - | 3/21/61/61 | 0/2/2/2 |
| 28 | DGD | BB | 5602 | - | - | 6/41/81/95 | 0/2/2/2 |
| 30 | SQD | BA | 5414 | - | - | 23/46/66/69 | 0/1/1/1 |
| 32 | LMT | BB | 5627 | - | - | 3/21/61/61 | 0/2/2/2 |
| 24 | CLA | BB | 5614 | - | 2/2/15/20 | 9/37/115/115 | - |
| 30 | SQD | BF | 5102 | - | - | 23/40/60/69 | 0/1/1/1 |
| 24 | CLA | BB | 5609 | - | 2/2/15/20 | 8/37/115/115 | - |
| 24 | CLA | AC | 504 | - | 2/2/15/20 | 9/37/115/115 | - |
| 24 | CLA | BB | 5605 | - | 2/2/15/20 | 12/37/115/115 | - |
| 27 | BCR | BB | 5621 | - | - | 1/29/63/63 | 0/2/2/2 |
| 24 | CLA | AC | 501 | - | 2/2/15/20 | 12/37/115/115 | - |
| 31 | LMG | AB | 620 | - | - | 5/46/66/70 | 0/1/1/1 |
| 24 | CLA | AB | 608 | - | 2/2/15/20 | 10/37/115/115 | - |
| 27 | BCR | BA | 5411 | - | - | 5/29/63/63 | 0/2/2/2 |
| 32 | LMT | AI | 103 | - | - | 2/21/61/61 | 0/2/2/2 |

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| Mol | Type | Chain | Res | Link | Chirals | Torsions | Rings |
|-----|------|-------|------|------|-----------|---------------|---------|
| 24 | CLA | AB | 607 | - | 2/2/15/20 | 5/37/115/115 | - |
| 24 | CLA | AA | 405 | - | 2/2/15/20 | 15/37/115/115 | - |
| 24 | CLA | AA | 407 | - | 2/2/15/20 | 13/37/115/115 | - |
| 24 | CLA | AC | 507 | - | 2/2/15/20 | 5/37/115/115 | - |
| 32 | LMT | AB | 623 | - | - | 1/21/61/61 | 0/2/2/2 |
| 28 | DGD | AB | 628 | - | - | 7/41/81/95 | 0/2/2/2 |
| 30 | SQD | AB | 627 | - | - | 24/42/62/69 | 0/1/1/1 |
| 27 | BCR | BK | 5102 | - | - | 2/29/63/63 | 0/2/2/2 |
| 31 | LMG | AJ | 102 | - | - | 5/41/61/70 | 0/1/1/1 |
| 34 | PHO | AD | 403 | - | 1/1/17/22 | 10/37/103/103 | 0/5/6/6 |
| 24 | CLA | AC | 509 | - | 2/2/15/20 | 4/37/115/115 | - |
| 32 | LMT | BC | 5522 | - | - | 2/21/61/61 | 0/2/2/2 |
| 31 | LMG | BD | 5409 | - | - | 7/44/64/70 | 0/1/1/1 |
| 24 | CLA | BA | 5405 | - | 2/2/15/20 | 14/37/115/115 | - |
| 24 | CLA | BC | 5510 | - | 2/2/15/20 | 11/37/115/115 | - |
| 28 | DGD | BE | 5102 | - | - | 6/52/92/95 | 0/2/2/2 |
| 25 | MST | AA | 408 | - | - | 2/10/10/10 | 0/1/1/1 |
| 29 | LHG | BA | 5413 | - | - | 19/43/43/53 | - |
| 25 | MST | BA | 5409 | - | - | 2/10/10/10 | 0/1/1/1 |
| 24 | CLA | AB | 612 | - | 2/2/15/20 | 10/37/115/115 | - |
| 31 | LMG | AD | 407 | - | - | 7/44/64/70 | 0/1/1/1 |

All (2237) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|-------|-------|-------------|----------|
| 24 | AB | 614 | CLA | MG-NA | 12.11 | 2.35 | 2.06 |
| 24 | BC | 5513 | CLA | MG-NA | 12.03 | 2.34 | 2.06 |
| 24 | BC | 5511 | CLA | MG-NA | 11.84 | 2.34 | 2.06 |
| 24 | AC | 513 | CLA | MG-NA | 11.69 | 2.34 | 2.06 |
| 24 | AC | 511 | CLA | MG-NA | 11.67 | 2.34 | 2.06 |
| 24 | BB | 5618 | CLA | MG-NA | 11.37 | 2.33 | 2.06 |
| 24 | AC | 509 | CLA | MG-NA | 10.83 | 2.32 | 2.06 |
| 24 | AB | 608 | CLA | C2-C3 | 10.50 | 1.58 | 1.33 |
| 24 | BB | 5612 | CLA | C2-C3 | 10.49 | 1.58 | 1.33 |
| 24 | AB | 606 | CLA | C2-C3 | 10.48 | 1.58 | 1.33 |
| 24 | BB | 5610 | CLA | C2-C3 | 10.47 | 1.58 | 1.33 |
| 24 | BC | 5509 | CLA | MG-NA | 10.38 | 2.30 | 2.06 |
| 24 | AB | 607 | CLA | C2-C3 | 10.17 | 1.57 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BB | 5620 | CLA | C2-C3 | 10.17 | 1.57 | 1.33 |
| 24 | BC | 5511 | CLA | C2-C3 | 10.15 | 1.57 | 1.33 |
| 24 | AB | 614 | CLA | C2-C3 | 9.96 | 1.56 | 1.33 |
| 24 | BB | 5613 | CLA | C2-C3 | 9.96 | 1.56 | 1.33 |
| 24 | AB | 616 | CLA | C2-C3 | 9.95 | 1.56 | 1.33 |
| 24 | AC | 511 | CLA | C2-C3 | 9.95 | 1.56 | 1.33 |
| 24 | AB | 603 | CLA | C2-C3 | 9.89 | 1.56 | 1.33 |
| 24 | BC | 5505 | CLA | C2-C3 | 9.78 | 1.56 | 1.33 |
| 35 | AD | 405 | PL9 | C28-C29 | 9.76 | 1.56 | 1.33 |
| 24 | AB | 609 | CLA | C2-C3 | 9.75 | 1.56 | 1.33 |
| 24 | BC | 5506 | CLA | C2-C3 | 9.72 | 1.56 | 1.33 |
| 24 | BB | 5607 | CLA | C2-C3 | 9.72 | 1.56 | 1.33 |
| 35 | BD | 5406 | PL9 | C13-C14 | 9.69 | 1.56 | 1.33 |
| 34 | AD | 403 | PHO | C2-C3 | 9.66 | 1.56 | 1.33 |
| 24 | AC | 506 | CLA | C2-C3 | 9.63 | 1.56 | 1.33 |
| 24 | BB | 5615 | CLA | C2-C3 | 9.63 | 1.56 | 1.33 |
| 24 | BB | 5611 | CLA | C2-C3 | 9.62 | 1.56 | 1.33 |
| 24 | BB | 5605 | CLA | C2-C3 | 9.62 | 1.56 | 1.33 |
| 35 | BD | 5406 | PL9 | C28-C29 | 9.61 | 1.56 | 1.33 |
| 24 | BB | 5618 | CLA | C2-C3 | 9.60 | 1.56 | 1.33 |
| 35 | BD | 5406 | PL9 | C23-C24 | 9.59 | 1.56 | 1.33 |
| 35 | AD | 405 | PL9 | C13-C14 | 9.57 | 1.55 | 1.33 |
| 34 | BD | 5404 | PHO | C2-C3 | 9.56 | 1.55 | 1.33 |
| 24 | AC | 505 | CLA | C2-C3 | 9.56 | 1.55 | 1.33 |
| 34 | BD | 5403 | PHO | C2-C3 | 9.55 | 1.55 | 1.33 |
| 24 | AB | 605 | CLA | C2-C3 | 9.52 | 1.55 | 1.33 |
| 24 | AC | 513 | CLA | C2-C3 | 9.51 | 1.55 | 1.33 |
| 24 | BC | 5513 | CLA | C2-C3 | 9.49 | 1.55 | 1.33 |
| 24 | AC | 501 | CLA | C2-C3 | 9.49 | 1.55 | 1.33 |
| 35 | BD | 5406 | PL9 | C33-C34 | 9.47 | 1.55 | 1.33 |
| 24 | BD | 5405 | CLA | C2-C3 | 9.46 | 1.55 | 1.33 |
| 24 | AC | 502 | CLA | C2-C3 | 9.44 | 1.55 | 1.33 |
| 24 | BB | 5609 | CLA | C2-C3 | 9.44 | 1.55 | 1.33 |
| 24 | AB | 601 | CLA | C2-C3 | 9.42 | 1.55 | 1.33 |
| 24 | BC | 5501 | CLA | C2-C3 | 9.40 | 1.55 | 1.33 |
| 24 | BA | 5408 | CLA | C2-C3 | 9.35 | 1.55 | 1.33 |
| 24 | BC | 5509 | CLA | C2-C3 | 9.34 | 1.55 | 1.33 |
| 24 | BC | 5508 | CLA | C2-C3 | 9.32 | 1.55 | 1.33 |
| 24 | AA | 405 | CLA | C2-C3 | 9.31 | 1.55 | 1.33 |
| 24 | BA | 5406 | CLA | C2-C3 | 9.28 | 1.55 | 1.33 |
| 24 | AB | 611 | CLA | C2-C3 | 9.28 | 1.55 | 1.33 |
| 34 | AD | 402 | PHO | C2-C3 | 9.27 | 1.55 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 35 | BD | 5406 | PL9 | C43-C44 | 9.24 | 1.55 | 1.33 |
| 24 | BB | 5605 | CLA | C3B-C2B | 9.22 | 1.53 | 1.40 |
| 24 | AC | 508 | CLA | C2-C3 | 9.19 | 1.55 | 1.33 |
| 35 | AD | 405 | PL9 | C33-C34 | 9.18 | 1.55 | 1.33 |
| 24 | AA | 406 | CLA | C2-C3 | 9.18 | 1.55 | 1.33 |
| 24 | BC | 5502 | CLA | C2-C3 | 9.18 | 1.55 | 1.33 |
| 24 | AB | 612 | CLA | C2-C3 | 9.16 | 1.55 | 1.33 |
| 24 | BC | 5504 | CLA | C2-C3 | 9.11 | 1.54 | 1.33 |
| 24 | BB | 5606 | CLA | C2-C3 | 9.09 | 1.54 | 1.33 |
| 24 | BB | 5616 | CLA | MG-NA | 9.09 | 2.27 | 2.06 |
| 24 | AA | 407 | CLA | C2-C3 | 9.07 | 1.54 | 1.33 |
| 24 | BC | 5503 | CLA | C2-C3 | 9.06 | 1.54 | 1.33 |
| 35 | BD | 5406 | PL9 | C8-C9 | 9.06 | 1.54 | 1.33 |
| 24 | BB | 5616 | CLA | C2-C3 | 9.05 | 1.54 | 1.33 |
| 24 | AC | 503 | CLA | C2-C3 | 9.03 | 1.54 | 1.33 |
| 24 | BD | 5402 | CLA | C2-C3 | 9.02 | 1.54 | 1.33 |
| 24 | BC | 5507 | CLA | C2-C3 | 9.02 | 1.54 | 1.33 |
| 24 | AD | 404 | CLA | C2-C3 | 9.01 | 1.54 | 1.33 |
| 24 | BC | 5512 | CLA | C2-C3 | 9.00 | 1.54 | 1.33 |
| 24 | BB | 5607 | CLA | MG-NA | 9.00 | 2.27 | 2.06 |
| 24 | BA | 5407 | CLA | C2-C3 | 8.99 | 1.54 | 1.33 |
| 24 | AC | 510 | CLA | C2-C3 | 8.98 | 1.54 | 1.33 |
| 35 | AD | 405 | PL9 | C8-C9 | 8.96 | 1.54 | 1.33 |
| 24 | AB | 602 | CLA | C2-C3 | 8.95 | 1.54 | 1.33 |
| 24 | BC | 5505 | CLA | C3B-C2B | 8.95 | 1.52 | 1.40 |
| 24 | AB | 604 | CLA | C2-C3 | 8.94 | 1.54 | 1.33 |
| 24 | AC | 512 | CLA | C2-C3 | 8.93 | 1.54 | 1.33 |
| 35 | AD | 405 | PL9 | C43-C44 | 8.93 | 1.54 | 1.33 |
| 24 | BC | 5510 | CLA | C2-C3 | 8.90 | 1.54 | 1.33 |
| 35 | BD | 5406 | PL9 | C2-C3 | 8.88 | 1.57 | 1.34 |
| 24 | BB | 5617 | CLA | C2-C3 | 8.86 | 1.54 | 1.33 |
| 24 | AD | 401 | CLA | C2-C3 | 8.86 | 1.54 | 1.33 |
| 24 | BB | 5608 | CLA | C2-C3 | 8.85 | 1.54 | 1.33 |
| 24 | AB | 603 | CLA | MG-NA | 8.82 | 2.27 | 2.06 |
| 24 | AC | 504 | CLA | C2-C3 | 8.82 | 1.54 | 1.33 |
| 24 | AB | 613 | CLA | C2-C3 | 8.82 | 1.54 | 1.33 |
| 35 | AD | 405 | PL9 | C2-C3 | 8.78 | 1.57 | 1.34 |
| 24 | AA | 404 | CLA | C2-C3 | 8.77 | 1.54 | 1.33 |
| 24 | AB | 610 | CLA | C2-C3 | 8.76 | 1.54 | 1.33 |
| 24 | AB | 601 | CLA | C3B-C2B | 8.75 | 1.52 | 1.40 |
| 24 | AC | 509 | CLA | C2-C3 | 8.75 | 1.54 | 1.33 |
| 24 | AC | 507 | CLA | C2-C3 | 8.68 | 1.53 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | AC | 505 | CLA | C3B-C2B | 8.66 | 1.52 | 1.40 |
| 24 | AB | 615 | CLA | C2-C3 | 8.63 | 1.53 | 1.33 |
| 24 | BB | 5614 | CLA | C2-C3 | 8.62 | 1.53 | 1.33 |
| 24 | BB | 5619 | CLA | C2-C3 | 8.57 | 1.53 | 1.33 |
| 34 | BD | 5404 | PHO | C3B-C2B | 8.57 | 1.52 | 1.40 |
| 35 | AD | 405 | PL9 | C23-C24 | 8.56 | 1.53 | 1.33 |
| 30 | BB | 5625 | SQD | C4-C3 | 8.56 | 1.74 | 1.52 |
| 30 | AB | 622 | SQD | C4-C3 | 8.36 | 1.73 | 1.52 |
| 24 | BA | 5406 | CLA | C3B-C2B | 8.34 | 1.51 | 1.40 |
| 24 | AB | 612 | CLA | MG-NA | 8.31 | 2.26 | 2.06 |
| 24 | BC | 5512 | CLA | C3B-C2B | 8.28 | 1.51 | 1.40 |
| 24 | BC | 5513 | CLA | C3B-C2B | 8.25 | 1.51 | 1.40 |
| 36 | BF | 5101 | HEM | C3C-C2C | 8.20 | 1.51 | 1.40 |
| 24 | BC | 5509 | CLA | C3B-C2B | 8.19 | 1.51 | 1.40 |
| 35 | BD | 5406 | PL9 | C48-C49 | 8.09 | 1.55 | 1.32 |
| 24 | AC | 512 | CLA | C3B-C2B | 8.08 | 1.51 | 1.40 |
| 24 | AB | 605 | CLA | C3B-C2B | 8.03 | 1.51 | 1.40 |
| 29 | AA | 412 | LHG | P-O5 | 8.03 | 1.79 | 1.50 |
| 34 | BD | 5403 | PHO | C3B-C2B | 8.00 | 1.51 | 1.40 |
| 30 | AB | 627 | SQD | C4-C3 | 7.98 | 1.72 | 1.52 |
| 24 | BC | 5503 | CLA | C3B-C2B | 7.97 | 1.51 | 1.40 |
| 29 | BA | 5413 | LHG | P-O5 | 7.96 | 1.79 | 1.50 |
| 24 | BC | 5501 | CLA | C3B-C2B | 7.96 | 1.51 | 1.40 |
| 30 | BA | 5401 | SQD | C4-C3 | 7.93 | 1.72 | 1.52 |
| 35 | AD | 405 | PL9 | C48-C49 | 7.89 | 1.55 | 1.32 |
| 24 | AC | 506 | CLA | C3B-C2B | 7.89 | 1.51 | 1.40 |
| 24 | BB | 5609 | CLA | C3B-C2B | 7.86 | 1.51 | 1.40 |
| 24 | BB | 5619 | CLA | C3B-C2B | 7.83 | 1.51 | 1.40 |
| 30 | BA | 5414 | SQD | C4-C3 | 7.83 | 1.72 | 1.52 |
| 24 | BA | 5405 | CLA | C2-C3 | 7.80 | 1.51 | 1.33 |
| 24 | BC | 5511 | CLA | C3B-C2B | 7.80 | 1.51 | 1.40 |
| 24 | BB | 5613 | CLA | C3B-C2B | 7.79 | 1.51 | 1.40 |
| 24 | AC | 513 | CLA | C3B-C2B | 7.78 | 1.51 | 1.40 |
| 30 | BB | 5601 | SQD | C4-C3 | 7.77 | 1.72 | 1.52 |
| 24 | BA | 5407 | CLA | C3B-C2B | 7.76 | 1.51 | 1.40 |
| 24 | BC | 5506 | CLA | C3B-C2B | 7.76 | 1.51 | 1.40 |
| 24 | AB | 609 | CLA | C3B-C2B | 7.75 | 1.51 | 1.40 |
| 30 | AA | 416 | SQD | C4-C3 | 7.73 | 1.72 | 1.52 |
| 24 | BC | 5511 | CLA | C1B-NB | 7.72 | 1.42 | 1.35 |
| 24 | BC | 5510 | CLA | C3B-C2B | 7.67 | 1.51 | 1.40 |
| 24 | AB | 616 | CLA | C3B-C2B | 7.67 | 1.51 | 1.40 |
| 34 | BD | 5403 | PHO | CHA-CBD | 7.60 | 1.61 | 1.52 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | BB | 5614 | CLA | C3B-C2B | 7.59 | 1.50 | 1.40 |
| 30 | BF | 5102 | SQD | C4-C3 | 7.58 | 1.71 | 1.52 |
| 34 | AD | 403 | PHO | C3B-C2B | 7.55 | 1.50 | 1.40 |
| 24 | AB | 615 | CLA | C3B-C2B | 7.54 | 1.50 | 1.40 |
| 24 | BC | 5502 | CLA | C1B-NB | 7.51 | 1.41 | 1.35 |
| 24 | AC | 503 | CLA | C3B-C2B | 7.50 | 1.50 | 1.40 |
| 24 | AC | 506 | CLA | C1B-NB | 7.49 | 1.41 | 1.35 |
| 24 | BC | 5502 | CLA | C3B-C2B | 7.47 | 1.50 | 1.40 |
| 30 | AF | 102 | SQD | C4-C3 | 7.44 | 1.71 | 1.52 |
| 24 | AC | 511 | CLA | C3B-C2B | 7.41 | 1.50 | 1.40 |
| 24 | AA | 406 | CLA | C3B-C2B | 7.38 | 1.50 | 1.40 |
| 24 | BB | 5605 | CLA | C1B-NB | 7.35 | 1.41 | 1.35 |
| 24 | AC | 510 | CLA | C3B-C2B | 7.35 | 1.50 | 1.40 |
| 24 | AB | 614 | CLA | C3B-C2B | 7.29 | 1.50 | 1.40 |
| 24 | AB | 604 | CLA | C3B-C2B | 7.28 | 1.50 | 1.40 |
| 24 | BB | 5618 | CLA | C3B-C2B | 7.27 | 1.50 | 1.40 |
| 24 | BB | 5615 | CLA | C3B-C2B | 7.26 | 1.50 | 1.40 |
| 24 | BC | 5507 | CLA | C3B-C2B | 7.26 | 1.50 | 1.40 |
| 24 | AB | 610 | CLA | C3B-C2B | 7.26 | 1.50 | 1.40 |
| 24 | AD | 404 | CLA | C3B-C2B | 7.23 | 1.50 | 1.40 |
| 24 | BB | 5605 | CLA | MG-NA | 7.23 | 2.23 | 2.06 |
| 24 | BB | 5608 | CLA | C3B-C2B | 7.22 | 1.50 | 1.40 |
| 30 | AA | 413 | SQD | C4-C3 | 7.21 | 1.70 | 1.52 |
| 36 | AF | 101 | HEM | O1D-CGD | 7.20 | 1.46 | 1.22 |
| 24 | BD | 5405 | CLA | C3B-C2B | 7.19 | 1.50 | 1.40 |
| 24 | BC | 5509 | CLA | C1B-NB | 7.18 | 1.41 | 1.35 |
| 36 | AF | 101 | HEM | C3C-C2C | 7.18 | 1.50 | 1.40 |
| 36 | BF | 5101 | HEM | O1D-CGD | 7.15 | 1.45 | 1.22 |
| 24 | AC | 501 | CLA | C3B-C2B | 7.15 | 1.50 | 1.40 |
| 27 | AJ | 101 | BCR | C30-C25 | 7.14 | 1.63 | 1.53 |
| 24 | AB | 601 | CLA | C3C-C2C | 7.13 | 1.51 | 1.36 |
| 24 | AB | 605 | CLA | C1B-NB | 7.13 | 1.41 | 1.35 |
| 35 | BD | 5406 | PL9 | O2-C1 | 7.10 | 1.43 | 1.24 |
| 24 | BA | 5405 | CLA | C3B-C2B | 7.10 | 1.50 | 1.40 |
| 24 | BB | 5620 | CLA | C3B-C2B | 7.10 | 1.50 | 1.40 |
| 24 | AB | 601 | CLA | C1B-NB | 7.08 | 1.41 | 1.35 |
| 24 | AB | 612 | CLA | C3B-C2B | 7.08 | 1.50 | 1.40 |
| 35 | AD | 405 | PL9 | O2-C1 | 7.07 | 1.43 | 1.24 |
| 24 | BB | 5605 | CLA | C3C-C2C | 7.06 | 1.51 | 1.36 |
| 24 | AB | 608 | CLA | C3B-C2B | 7.05 | 1.50 | 1.40 |
| 36 | AV | 201 | HEM | C3C-C2C | 7.05 | 1.50 | 1.40 |
| 24 | AB | 611 | CLA | C3B-C2B | 7.05 | 1.50 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 34 | AD | 402 | PHO | C3B-C2B | 7.04 | 1.50 | 1.40 |
| 24 | BD | 5402 | CLA | C3B-C2B | 7.02 | 1.50 | 1.40 |
| 24 | BC | 5506 | CLA | C1B-NB | 7.00 | 1.41 | 1.35 |
| 24 | BC | 5510 | CLA | C1B-NB | 6.99 | 1.41 | 1.35 |
| 36 | BV | 5201 | HEM | O1D-CGD | 6.98 | 1.45 | 1.22 |
| 24 | BB | 5616 | CLA | C3B-C2B | 6.98 | 1.50 | 1.40 |
| 34 | AD | 402 | PHO | CHA-CBD | 6.97 | 1.60 | 1.52 |
| 36 | BV | 5201 | HEM | C3C-C2C | 6.96 | 1.50 | 1.40 |
| 24 | BA | 5408 | CLA | C3B-C2B | 6.96 | 1.50 | 1.40 |
| 24 | AC | 509 | CLA | C3B-C2B | 6.94 | 1.50 | 1.40 |
| 24 | BC | 5513 | CLA | C1B-NB | 6.94 | 1.41 | 1.35 |
| 24 | AD | 404 | CLA | C3C-C2C | 6.93 | 1.51 | 1.36 |
| 24 | BC | 5504 | CLA | C3C-C2C | 6.92 | 1.51 | 1.36 |
| 24 | BB | 5606 | CLA | C3B-C2B | 6.92 | 1.50 | 1.40 |
| 24 | BB | 5610 | CLA | C3B-C2B | 6.91 | 1.50 | 1.40 |
| 36 | BF | 5101 | HEM | C3B-C2B | 6.89 | 1.51 | 1.37 |
| 24 | AB | 614 | CLA | C1B-NB | 6.89 | 1.41 | 1.35 |
| 34 | BD | 5404 | PHO | CHA-CBD | 6.87 | 1.60 | 1.52 |
| 24 | BC | 5508 | CLA | C3B-C2B | 6.86 | 1.49 | 1.40 |
| 24 | AC | 502 | CLA | C3B-C2B | 6.85 | 1.49 | 1.40 |
| 24 | AA | 407 | CLA | C3B-C2B | 6.85 | 1.49 | 1.40 |
| 24 | BC | 5513 | CLA | C3C-C2C | 6.83 | 1.51 | 1.36 |
| 24 | AB | 603 | CLA | C3C-C2C | 6.81 | 1.51 | 1.36 |
| 24 | BB | 5609 | CLA | C1B-NB | 6.80 | 1.41 | 1.35 |
| 24 | BB | 5613 | CLA | C1B-NB | 6.79 | 1.41 | 1.35 |
| 24 | BC | 5511 | CLA | C3C-C2C | 6.78 | 1.51 | 1.36 |
| 24 | AC | 504 | CLA | C3B-C2B | 6.78 | 1.49 | 1.40 |
| 24 | BC | 5505 | CLA | C1B-NB | 6.78 | 1.41 | 1.35 |
| 24 | AA | 404 | CLA | C3B-C2B | 6.77 | 1.49 | 1.40 |
| 27 | BJ | 5101 | BCR | C30-C25 | 6.76 | 1.63 | 1.53 |
| 24 | BC | 5504 | CLA | C3B-C2B | 6.73 | 1.49 | 1.40 |
| 24 | AC | 502 | CLA | C1B-NB | 6.73 | 1.41 | 1.35 |
| 24 | AC | 513 | CLA | C3C-C2C | 6.70 | 1.51 | 1.36 |
| 24 | AD | 401 | CLA | C3B-C2B | 6.70 | 1.49 | 1.40 |
| 24 | BD | 5405 | CLA | C3C-C2C | 6.68 | 1.50 | 1.36 |
| 36 | AV | 201 | HEM | O1D-CGD | 6.66 | 1.44 | 1.22 |
| 24 | AB | 601 | CLA | MG-NA | 6.64 | 2.22 | 2.06 |
| 24 | BC | 5508 | CLA | C1B-NB | 6.64 | 1.41 | 1.35 |
| 24 | AB | 604 | CLA | C3C-C2C | 6.62 | 1.50 | 1.36 |
| 36 | AF | 101 | HEM | C3B-C2B | 6.62 | 1.50 | 1.37 |
| 24 | AB | 602 | CLA | C3B-C2B | 6.62 | 1.49 | 1.40 |
| 24 | BC | 5512 | CLA | C1B-NB | 6.60 | 1.41 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | BC | 5509 | CLA | C3C-C2C | 6.59 | 1.50 | 1.36 |
| 24 | AC | 511 | CLA | C3C-C2C | 6.59 | 1.50 | 1.36 |
| 34 | AD | 403 | PHO | CHA-CBD | 6.58 | 1.59 | 1.52 |
| 36 | BV | 5201 | HEM | C3B-C2B | 6.56 | 1.50 | 1.37 |
| 24 | AC | 508 | CLA | C3B-C2B | 6.52 | 1.49 | 1.40 |
| 24 | BA | 5405 | CLA | C3C-C2C | 6.52 | 1.50 | 1.36 |
| 24 | BC | 5512 | CLA | C3C-C2C | 6.51 | 1.50 | 1.36 |
| 24 | AC | 511 | CLA | C1B-NB | 6.51 | 1.41 | 1.35 |
| 24 | BA | 5408 | CLA | C3C-C2C | 6.50 | 1.50 | 1.36 |
| 24 | BB | 5612 | CLA | C3B-C2B | 6.50 | 1.49 | 1.40 |
| 24 | AA | 404 | CLA | C3C-C2C | 6.49 | 1.50 | 1.36 |
| 24 | BB | 5612 | CLA | C3C-C2C | 6.48 | 1.50 | 1.36 |
| 24 | BC | 5502 | CLA | C3C-C2C | 6.48 | 1.50 | 1.36 |
| 24 | BB | 5616 | CLA | C3C-C2C | 6.47 | 1.50 | 1.36 |
| 24 | AC | 512 | CLA | C1B-NB | 6.46 | 1.41 | 1.35 |
| 24 | BC | 5505 | CLA | C3C-C2C | 6.45 | 1.50 | 1.36 |
| 24 | AC | 503 | CLA | C1B-NB | 6.44 | 1.41 | 1.35 |
| 24 | AC | 505 | CLA | C3C-C2C | 6.42 | 1.50 | 1.36 |
| 24 | AB | 614 | CLA | C4B-NB | 6.40 | 1.40 | 1.35 |
| 24 | AC | 507 | CLA | C3B-C2B | 6.40 | 1.49 | 1.40 |
| 24 | BB | 5607 | CLA | C3C-C2C | 6.35 | 1.50 | 1.36 |
| 24 | AA | 405 | CLA | C3B-C2B | 6.35 | 1.49 | 1.40 |
| 24 | BB | 5618 | CLA | C4B-NB | 6.33 | 1.40 | 1.35 |
| 24 | BC | 5501 | CLA | C1B-NB | 6.32 | 1.40 | 1.35 |
| 24 | BC | 5511 | CLA | C4B-NB | 6.32 | 1.40 | 1.35 |
| 24 | AB | 609 | CLA | C1B-NB | 6.32 | 1.40 | 1.35 |
| 24 | AB | 615 | CLA | C3C-C2C | 6.31 | 1.50 | 1.36 |
| 24 | AC | 508 | CLA | C1B-NB | 6.31 | 1.40 | 1.35 |
| 24 | BB | 5618 | CLA | C1B-NB | 6.30 | 1.40 | 1.35 |
| 24 | BB | 5618 | CLA | C3C-C2C | 6.30 | 1.50 | 1.36 |
| 24 | BC | 5506 | CLA | C3C-C2C | 6.30 | 1.50 | 1.36 |
| 24 | AC | 504 | CLA | C3C-C2C | 6.29 | 1.50 | 1.36 |
| 24 | AB | 608 | CLA | C3C-C2C | 6.27 | 1.50 | 1.36 |
| 24 | AB | 612 | CLA | C3C-C2C | 6.27 | 1.50 | 1.36 |
| 36 | AV | 201 | HEM | C3B-C2B | 6.26 | 1.50 | 1.37 |
| 24 | BD | 5402 | CLA | C3C-C2C | 6.26 | 1.50 | 1.36 |
| 24 | AA | 407 | CLA | C3C-C2C | 6.24 | 1.50 | 1.36 |
| 24 | BA | 5407 | CLA | C3C-C2C | 6.23 | 1.50 | 1.36 |
| 24 | BB | 5614 | CLA | C3C-C2C | 6.23 | 1.50 | 1.36 |
| 24 | BB | 5610 | CLA | C3C-C2C | 6.23 | 1.50 | 1.36 |
| 24 | BC | 5501 | CLA | C3C-C2C | 6.22 | 1.50 | 1.36 |
| 24 | AB | 610 | CLA | C3C-C2C | 6.22 | 1.50 | 1.36 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | BA | 5412 | DGD | O5D-C1E | 6.19 | 1.50 | 1.40 |
| 24 | BC | 5503 | CLA | C1B-NB | 6.19 | 1.40 | 1.35 |
| 24 | AB | 606 | CLA | C3B-C2B | 6.17 | 1.48 | 1.40 |
| 24 | BB | 5606 | CLA | C3C-C2C | 6.16 | 1.49 | 1.36 |
| 24 | AD | 401 | CLA | C3C-C2C | 6.15 | 1.49 | 1.36 |
| 24 | BA | 5406 | CLA | C1B-NB | 6.15 | 1.40 | 1.35 |
| 24 | AC | 512 | CLA | C3C-C2C | 6.14 | 1.49 | 1.36 |
| 24 | AC | 505 | CLA | CAA-C2A | -6.13 | 1.42 | 1.54 |
| 24 | BB | 5611 | CLA | C3B-C2B | 6.12 | 1.48 | 1.40 |
| 24 | AC | 511 | CLA | C4B-NB | 6.09 | 1.40 | 1.35 |
| 24 | BC | 5510 | CLA | C3C-C2C | 6.05 | 1.49 | 1.36 |
| 24 | AB | 602 | CLA | C3C-C2C | 6.05 | 1.49 | 1.36 |
| 24 | BC | 5503 | CLA | C3C-C2C | 6.04 | 1.49 | 1.36 |
| 24 | AC | 509 | CLA | C3C-C2C | 6.03 | 1.49 | 1.36 |
| 24 | AC | 506 | CLA | C3C-C2C | 6.03 | 1.49 | 1.36 |
| 28 | AA | 411 | DGD | O5D-C1E | 6.01 | 1.50 | 1.40 |
| 24 | AB | 606 | CLA | C3C-C2C | 6.00 | 1.49 | 1.36 |
| 24 | AC | 503 | CLA | C3C-C2C | 5.99 | 1.49 | 1.36 |
| 24 | BA | 5407 | CLA | C1B-NB | 5.99 | 1.40 | 1.35 |
| 24 | BB | 5615 | CLA | C1B-NB | 5.98 | 1.40 | 1.35 |
| 24 | BC | 5509 | CLA | C4B-NB | 5.96 | 1.40 | 1.35 |
| 24 | AC | 510 | CLA | C1B-NB | 5.96 | 1.40 | 1.35 |
| 24 | AC | 508 | CLA | C3C-C2C | 5.95 | 1.49 | 1.36 |
| 24 | AB | 601 | CLA | O2D-CGD | 5.95 | 1.47 | 1.33 |
| 24 | AB | 614 | CLA | C3C-C2C | 5.94 | 1.49 | 1.36 |
| 27 | BC | 5514 | BCR | C1-C6 | 5.93 | 1.61 | 1.53 |
| 24 | AC | 501 | CLA | C3C-C2C | 5.92 | 1.49 | 1.36 |
| 24 | BA | 5406 | CLA | C3C-C2C | 5.92 | 1.49 | 1.36 |
| 24 | AC | 505 | CLA | MG-NA | 5.92 | 2.20 | 2.06 |
| 24 | BB | 5608 | CLA | C3C-C2C | 5.90 | 1.49 | 1.36 |
| 24 | AB | 611 | CLA | C1B-NB | 5.87 | 1.40 | 1.35 |
| 24 | AB | 616 | CLA | C1B-NB | 5.86 | 1.40 | 1.35 |
| 24 | AC | 505 | CLA | C1B-NB | 5.85 | 1.40 | 1.35 |
| 24 | BC | 5508 | CLA | C3C-C2C | 5.85 | 1.49 | 1.36 |
| 24 | BC | 5513 | CLA | C4B-NB | 5.85 | 1.40 | 1.35 |
| 24 | AB | 607 | CLA | C3C-C2C | 5.84 | 1.49 | 1.36 |
| 27 | AB | 619 | BCR | C30-C25 | 5.82 | 1.61 | 1.53 |
| 24 | AB | 609 | CLA | C3C-C2C | 5.82 | 1.49 | 1.36 |
| 24 | AC | 513 | CLA | C4B-NB | 5.80 | 1.40 | 1.35 |
| 24 | BB | 5619 | CLA | C3C-C2C | 5.77 | 1.49 | 1.36 |
| 27 | BB | 5622 | BCR | C1-C6 | 5.77 | 1.61 | 1.53 |
| 27 | BK | 5102 | BCR | C30-C25 | 5.77 | 1.61 | 1.53 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BB | 5615 | CLA | C3C-C2C | 5.76 | 1.49 | 1.36 |
| 24 | BC | 5508 | CLA | O2D-CGD | 5.75 | 1.47 | 1.33 |
| 24 | BB | 5612 | CLA | C1B-NB | 5.74 | 1.40 | 1.35 |
| 24 | AB | 601 | CLA | C4B-NB | 5.72 | 1.40 | 1.35 |
| 24 | BB | 5605 | CLA | O2D-CGD | 5.72 | 1.47 | 1.33 |
| 31 | BL | 5101 | LMG | O1-C1 | 5.69 | 1.49 | 1.40 |
| 24 | AC | 513 | CLA | C1B-NB | 5.67 | 1.40 | 1.35 |
| 31 | BL | 5101 | LMG | O7-C8 | -5.67 | 1.32 | 1.46 |
| 24 | AC | 510 | CLA | C3C-C2C | 5.66 | 1.48 | 1.36 |
| 24 | BC | 5512 | CLA | C4B-NB | 5.65 | 1.40 | 1.35 |
| 24 | BB | 5617 | CLA | C3C-C2C | 5.65 | 1.48 | 1.36 |
| 24 | BB | 5619 | CLA | C1B-NB | 5.63 | 1.40 | 1.35 |
| 24 | AB | 613 | CLA | C3C-C2C | 5.63 | 1.48 | 1.36 |
| 27 | BC | 5514 | BCR | C30-C25 | 5.61 | 1.61 | 1.53 |
| 27 | AB | 618 | BCR | C1-C6 | 5.60 | 1.61 | 1.53 |
| 24 | BC | 5504 | CLA | C1B-NB | 5.59 | 1.40 | 1.35 |
| 24 | AA | 406 | CLA | C3C-C2C | 5.59 | 1.48 | 1.36 |
| 24 | AD | 404 | CLA | C1B-NB | 5.58 | 1.40 | 1.35 |
| 24 | BB | 5620 | CLA | C3C-C2C | 5.57 | 1.48 | 1.36 |
| 24 | BB | 5613 | CLA | C3C-C2C | 5.57 | 1.48 | 1.36 |
| 27 | BT | 5101 | BCR | C1-C6 | 5.57 | 1.61 | 1.53 |
| 24 | AB | 605 | CLA | C3C-C2C | 5.56 | 1.48 | 1.36 |
| 24 | BB | 5619 | CLA | MG-NA | 5.55 | 2.19 | 2.06 |
| 24 | AC | 509 | CLA | C1B-NB | 5.54 | 1.40 | 1.35 |
| 24 | AC | 502 | CLA | C3C-C2C | 5.53 | 1.48 | 1.36 |
| 27 | BC | 5515 | BCR | C30-C25 | 5.53 | 1.61 | 1.53 |
| 27 | AK | 102 | BCR | C30-C25 | 5.52 | 1.61 | 1.53 |
| 24 | AB | 605 | CLA | O2D-CGD | 5.50 | 1.46 | 1.33 |
| 31 | AB | 620 | LMG | O1-C1 | 5.50 | 1.49 | 1.40 |
| 24 | BC | 5513 | CLA | O2D-CGD | 5.49 | 1.46 | 1.33 |
| 24 | BA | 5408 | CLA | C1B-NB | 5.49 | 1.40 | 1.35 |
| 27 | BD | 5407 | BCR | C30-C25 | 5.48 | 1.61 | 1.53 |
| 27 | AB | 619 | BCR | C1-C6 | 5.47 | 1.61 | 1.53 |
| 24 | BB | 5607 | CLA | C4B-NB | 5.46 | 1.40 | 1.35 |
| 24 | AB | 613 | CLA | C3B-C2B | 5.45 | 1.47 | 1.40 |
| 24 | AB | 611 | CLA | C3C-C2C | 5.45 | 1.48 | 1.36 |
| 27 | AC | 515 | BCR | C30-C25 | 5.44 | 1.61 | 1.53 |
| 24 | AA | 406 | CLA | C1B-NB | 5.44 | 1.40 | 1.35 |
| 24 | BD | 5405 | CLA | C1B-NB | 5.42 | 1.40 | 1.35 |
| 24 | BB | 5614 | CLA | C1B-NB | 5.41 | 1.40 | 1.35 |
| 24 | AC | 507 | CLA | C3C-C2C | 5.41 | 1.48 | 1.36 |
| 24 | AB | 602 | CLA | C1B-NB | 5.41 | 1.40 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AA | 407 | CLA | C1B-NB | 5.37 | 1.40 | 1.35 |
| 24 | BC | 5507 | CLA | C3C-C2C | 5.35 | 1.48 | 1.36 |
| 27 | BA | 5411 | BCR | C1-C6 | 5.33 | 1.61 | 1.53 |
| 24 | BC | 5506 | CLA | O2D-CGD | 5.33 | 1.46 | 1.33 |
| 24 | BB | 5609 | CLA | C3C-C2C | 5.32 | 1.48 | 1.36 |
| 27 | AJ | 101 | BCR | C1-C6 | 5.32 | 1.61 | 1.53 |
| 24 | BB | 5610 | CLA | C1B-NB | 5.30 | 1.39 | 1.35 |
| 24 | AC | 501 | CLA | C1B-NB | 5.30 | 1.39 | 1.35 |
| 27 | BJ | 5101 | BCR | C5-C6 | 5.30 | 1.43 | 1.34 |
| 31 | AB | 620 | LMG | O7-C8 | -5.29 | 1.33 | 1.46 |
| 24 | AB | 616 | CLA | C3C-C2C | 5.29 | 1.48 | 1.36 |
| 27 | BC | 5515 | BCR | C1-C6 | 5.28 | 1.61 | 1.53 |
| 24 | AC | 506 | CLA | O2D-CGD | 5.28 | 1.46 | 1.33 |
| 24 | AC | 509 | CLA | O2D-CGD | 5.27 | 1.46 | 1.33 |
| 24 | AB | 604 | CLA | C4B-NB | 5.26 | 1.39 | 1.35 |
| 24 | AC | 513 | CLA | O2D-CGD | 5.26 | 1.46 | 1.33 |
| 27 | BX | 5101 | BCR | C30-C25 | 5.26 | 1.61 | 1.53 |
| 24 | AA | 405 | CLA | C3C-C2C | 5.25 | 1.47 | 1.36 |
| 24 | AC | 512 | CLA | MG-NA | 5.25 | 2.18 | 2.06 |
| 24 | BB | 5617 | CLA | C4B-NB | 5.24 | 1.39 | 1.35 |
| 24 | BB | 5620 | CLA | C1B-NB | 5.21 | 1.39 | 1.35 |
| 24 | BB | 5605 | CLA | C4B-NB | 5.20 | 1.39 | 1.35 |
| 24 | AA | 404 | CLA | MG-NA | 5.20 | 2.18 | 2.06 |
| 24 | AC | 504 | CLA | C1B-NB | 5.19 | 1.39 | 1.35 |
| 27 | AJ | 101 | BCR | C5-C6 | 5.18 | 1.43 | 1.34 |
| 27 | AC | 514 | BCR | C30-C25 | 5.17 | 1.60 | 1.53 |
| 24 | AB | 612 | CLA | C4B-NB | 5.15 | 1.39 | 1.35 |
| 24 | AB | 612 | CLA | C1B-NB | 5.15 | 1.39 | 1.35 |
| 24 | AB | 615 | CLA | C1B-NB | 5.14 | 1.39 | 1.35 |
| 24 | BC | 5504 | CLA | C4B-NB | 5.13 | 1.39 | 1.35 |
| 24 | BB | 5618 | CLA | O2D-CGD | 5.13 | 1.45 | 1.33 |
| 24 | BC | 5505 | CLA | CAA-C2A | -5.13 | 1.44 | 1.54 |
| 24 | BB | 5609 | CLA | O2D-CGD | 5.11 | 1.45 | 1.33 |
| 24 | BB | 5620 | CLA | O2D-CGD | 5.10 | 1.45 | 1.33 |
| 27 | AB | 618 | BCR | C30-C25 | 5.09 | 1.60 | 1.53 |
| 27 | BB | 5622 | BCR | C30-C25 | 5.09 | 1.60 | 1.53 |
| 24 | BA | 5407 | CLA | C4B-NB | 5.08 | 1.39 | 1.35 |
| 36 | AV | 201 | HEM | C4D-C3D | 5.08 | 1.53 | 1.45 |
| 24 | BC | 5507 | CLA | O2D-CGD | 5.08 | 1.45 | 1.33 |
| 24 | AB | 604 | CLA | C1B-NB | 5.07 | 1.39 | 1.35 |
| 27 | BB | 5623 | BCR | C1-C6 | 5.07 | 1.60 | 1.53 |
| 24 | AB | 606 | CLA | O2D-CGD | 5.06 | 1.45 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 35 | BD | 5406 | PL9 | C6-C1 | -5.05 | 1.39 | 1.48 |
| 24 | BC | 5503 | CLA | C4B-NB | 5.05 | 1.39 | 1.35 |
| 24 | BD | 5405 | CLA | MG-NA | 5.04 | 2.18 | 2.06 |
| 24 | AA | 404 | CLA | O2D-CGD | 5.04 | 1.45 | 1.33 |
| 24 | AB | 608 | CLA | C1B-NB | 5.04 | 1.39 | 1.35 |
| 27 | BJ | 5101 | BCR | C1-C6 | 5.02 | 1.60 | 1.53 |
| 28 | BB | 5602 | DGD | O5D-C1E | 5.02 | 1.48 | 1.40 |
| 24 | BC | 5502 | CLA | MG-NA | 5.01 | 2.18 | 2.06 |
| 36 | AF | 101 | HEM | C4D-C3D | 5.01 | 1.53 | 1.45 |
| 27 | AX | 101 | BCR | C30-C25 | 5.01 | 1.60 | 1.53 |
| 34 | BD | 5403 | PHO | O2D-CGD | 5.01 | 1.45 | 1.33 |
| 24 | AB | 610 | CLA | O2D-CGD | 5.00 | 1.45 | 1.33 |
| 28 | BA | 5412 | DGD | O6D-C1D | 5.00 | 1.54 | 1.41 |
| 24 | AB | 609 | CLA | O2D-CGD | 4.99 | 1.45 | 1.33 |
| 24 | BA | 5408 | CLA | C4B-NB | 4.99 | 1.39 | 1.35 |
| 36 | BV | 5201 | HEM | C4D-C3D | 4.99 | 1.53 | 1.45 |
| 24 | BD | 5402 | CLA | C4B-NB | 4.99 | 1.39 | 1.35 |
| 28 | BC | 5517 | DGD | O5D-C1E | 4.98 | 1.48 | 1.40 |
| 27 | BC | 5516 | BCR | C1-C6 | 4.98 | 1.60 | 1.53 |
| 24 | BB | 5608 | CLA | C1B-NB | 4.98 | 1.39 | 1.35 |
| 35 | AD | 405 | PL9 | C6-C1 | -4.97 | 1.39 | 1.48 |
| 24 | AC | 507 | CLA | C4C-C3C | 4.96 | 1.53 | 1.45 |
| 29 | BA | 5413 | LHG | P-O3 | 4.96 | 1.79 | 1.59 |
| 36 | BV | 5201 | HEM | C3C-CAC | 4.95 | 1.58 | 1.47 |
| 24 | AB | 616 | CLA | O2D-CGD | 4.95 | 1.45 | 1.33 |
| 24 | BC | 5501 | CLA | O2D-CGD | 4.94 | 1.45 | 1.33 |
| 27 | BX | 5101 | BCR | C26-C25 | 4.94 | 1.43 | 1.34 |
| 24 | BB | 5607 | CLA | O2D-CGD | 4.93 | 1.45 | 1.33 |
| 24 | BB | 5613 | CLA | O2D-CGD | 4.92 | 1.45 | 1.33 |
| 24 | AD | 404 | CLA | MG-NA | 4.92 | 2.18 | 2.06 |
| 28 | AC | 519 | DGD | O6D-C1D | 4.91 | 1.54 | 1.41 |
| 36 | BF | 5101 | HEM | C4D-C3D | 4.91 | 1.53 | 1.45 |
| 24 | BB | 5617 | CLA | C3B-C2B | 4.91 | 1.47 | 1.40 |
| 27 | AT | 101 | BCR | C1-C6 | 4.91 | 1.60 | 1.53 |
| 24 | AB | 607 | CLA | C3B-C2B | 4.89 | 1.47 | 1.40 |
| 24 | BB | 5611 | CLA | C3C-C2C | 4.88 | 1.47 | 1.36 |
| 27 | AX | 101 | BCR | C26-C25 | 4.88 | 1.42 | 1.34 |
| 36 | AV | 201 | HEM | C2C-C1C | 4.87 | 1.53 | 1.42 |
| 24 | BB | 5612 | CLA | O2A-CGA | 4.87 | 1.47 | 1.33 |
| 24 | BB | 5615 | CLA | O2D-CGD | 4.86 | 1.45 | 1.33 |
| 24 | AB | 614 | CLA | O2D-CGD | 4.85 | 1.45 | 1.33 |
| 24 | AB | 613 | CLA | MG-NA | 4.85 | 2.17 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | BC | 5506 | CLA | C4B-NB | 4.85 | 1.39 | 1.35 |
| 36 | AF | 101 | HEM | C2C-C1C | 4.84 | 1.53 | 1.42 |
| 24 | AB | 603 | CLA | C4B-NB | 4.84 | 1.39 | 1.35 |
| 24 | AB | 608 | CLA | O2A-CGA | 4.84 | 1.47 | 1.33 |
| 27 | AA | 410 | BCR | C1-C6 | 4.83 | 1.60 | 1.53 |
| 24 | BC | 5502 | CLA | O2D-CGD | 4.83 | 1.45 | 1.33 |
| 29 | AA | 412 | LHG | P-O3 | 4.83 | 1.78 | 1.59 |
| 36 | BF | 5101 | HEM | C2C-C1C | 4.82 | 1.53 | 1.42 |
| 28 | BC | 5519 | DGD | O6D-C1D | 4.82 | 1.54 | 1.41 |
| 24 | BC | 5512 | CLA | MG-NA | 4.82 | 2.17 | 2.06 |
| 24 | BC | 5501 | CLA | C4B-NB | 4.81 | 1.39 | 1.35 |
| 24 | BC | 5508 | CLA | C4B-NB | 4.81 | 1.39 | 1.35 |
| 24 | AC | 510 | CLA | C4B-NB | 4.81 | 1.39 | 1.35 |
| 24 | BC | 5507 | CLA | C1B-NB | 4.80 | 1.39 | 1.35 |
| 24 | AC | 512 | CLA | C4B-NB | 4.80 | 1.39 | 1.35 |
| 24 | BB | 5610 | CLA | O2D-CGD | 4.80 | 1.44 | 1.33 |
| 24 | BB | 5614 | CLA | C4C-C3C | 4.80 | 1.53 | 1.45 |
| 24 | BC | 5510 | CLA | O2D-CGD | 4.80 | 1.44 | 1.33 |
| 24 | BB | 5608 | CLA | C4B-NB | 4.79 | 1.39 | 1.35 |
| 24 | BC | 5509 | CLA | O2D-CGD | 4.79 | 1.44 | 1.33 |
| 24 | AB | 615 | CLA | C4B-NB | 4.78 | 1.39 | 1.35 |
| 24 | BC | 5511 | CLA | O2D-CGD | 4.78 | 1.44 | 1.33 |
| 24 | AA | 407 | CLA | C4B-NB | 4.78 | 1.39 | 1.35 |
| 24 | AB | 610 | CLA | C1B-NB | 4.78 | 1.39 | 1.35 |
| 36 | BF | 5101 | HEM | CBB-CAB | 4.77 | 1.53 | 1.30 |
| 36 | BV | 5201 | HEM | C2C-C1C | 4.76 | 1.53 | 1.42 |
| 27 | AX | 101 | BCR | C1-C6 | 4.75 | 1.60 | 1.53 |
| 24 | BD | 5405 | CLA | O2D-CGD | 4.75 | 1.44 | 1.33 |
| 27 | AJ | 101 | BCR | C14-C13 | 4.75 | 1.42 | 1.35 |
| 24 | AC | 504 | CLA | C4B-NB | 4.74 | 1.39 | 1.35 |
| 30 | BB | 5625 | SQD | O47-C7 | 4.73 | 1.47 | 1.34 |
| 34 | AD | 403 | PHO | O2D-CGD | 4.72 | 1.44 | 1.33 |
| 24 | AD | 401 | CLA | C4B-NB | 4.71 | 1.39 | 1.35 |
| 24 | BD | 5402 | CLA | C1C-C2C | 4.71 | 1.53 | 1.44 |
| 24 | BA | 5405 | CLA | O2D-CGD | 4.70 | 1.44 | 1.33 |
| 24 | AC | 508 | CLA | O2D-CGD | 4.70 | 1.44 | 1.33 |
| 28 | BC | 5518 | DGD | O6D-C1D | 4.70 | 1.53 | 1.41 |
| 24 | BC | 5512 | CLA | C4C-C3C | 4.69 | 1.53 | 1.45 |
| 36 | AF | 101 | HEM | CBB-CAB | 4.69 | 1.53 | 1.30 |
| 36 | BV | 5201 | HEM | CBB-CAB | 4.68 | 1.53 | 1.30 |
| 24 | AD | 401 | CLA | C1C-C2C | 4.68 | 1.53 | 1.44 |
| 28 | BE | 5102 | DGD | O3G-C1D | 4.67 | 1.48 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BB | 5615 | CLA | C4B-NB | 4.66 | 1.39 | 1.35 |
| 24 | AC | 505 | CLA | C1C-C2C | 4.65 | 1.53 | 1.44 |
| 36 | BF | 5101 | HEM | C4D-ND | -4.65 | 1.32 | 1.40 |
| 28 | BC | 5517 | DGD | O6D-C1D | 4.65 | 1.53 | 1.41 |
| 24 | BA | 5405 | CLA | C1C-C2C | 4.65 | 1.53 | 1.44 |
| 24 | AB | 605 | CLA | C4B-NB | 4.65 | 1.39 | 1.35 |
| 24 | BB | 5618 | CLA | C1C-C2C | 4.65 | 1.53 | 1.44 |
| 24 | BA | 5406 | CLA | C1C-C2C | 4.63 | 1.53 | 1.44 |
| 24 | AB | 614 | CLA | C1C-C2C | 4.63 | 1.53 | 1.44 |
| 24 | BC | 5513 | CLA | C1C-C2C | 4.63 | 1.53 | 1.44 |
| 24 | BA | 5408 | CLA | C1C-C2C | 4.63 | 1.53 | 1.44 |
| 24 | BB | 5607 | CLA | C3B-C2B | 4.63 | 1.46 | 1.40 |
| 24 | AB | 610 | CLA | MG-NA | 4.62 | 2.17 | 2.06 |
| 24 | AB | 610 | CLA | C4C-C3C | 4.62 | 1.53 | 1.45 |
| 24 | BC | 5506 | CLA | C1C-C2C | 4.62 | 1.53 | 1.44 |
| 24 | BA | 5405 | CLA | C4C-C3C | 4.62 | 1.53 | 1.45 |
| 24 | AC | 506 | CLA | C1C-C2C | 4.62 | 1.53 | 1.44 |
| 24 | AC | 502 | CLA | O2D-CGD | 4.61 | 1.44 | 1.33 |
| 24 | AA | 405 | CLA | C1C-C2C | 4.61 | 1.53 | 1.44 |
| 24 | BC | 5505 | CLA | C4B-NB | 4.61 | 1.39 | 1.35 |
| 24 | BC | 5505 | CLA | C1C-C2C | 4.60 | 1.53 | 1.44 |
| 24 | BC | 5510 | CLA | C1C-C2C | 4.60 | 1.53 | 1.44 |
| 24 | AB | 602 | CLA | C4C-C3C | 4.60 | 1.53 | 1.45 |
| 30 | BF | 5102 | SQD | O47-C7 | 4.60 | 1.47 | 1.34 |
| 24 | BD | 5402 | CLA | C4C-C3C | 4.60 | 1.53 | 1.45 |
| 24 | AB | 604 | CLA | C1C-C2C | 4.60 | 1.53 | 1.44 |
| 27 | BD | 5407 | BCR | C26-C25 | 4.60 | 1.42 | 1.34 |
| 24 | BB | 5620 | CLA | C4B-NB | 4.60 | 1.39 | 1.35 |
| 24 | BC | 5511 | CLA | C1C-C2C | 4.59 | 1.53 | 1.44 |
| 24 | AC | 513 | CLA | C1C-C2C | 4.59 | 1.53 | 1.44 |
| 24 | BA | 5405 | CLA | C4B-NB | 4.59 | 1.39 | 1.35 |
| 30 | BA | 5414 | SQD | O47-C7 | 4.59 | 1.47 | 1.34 |
| 34 | BD | 5404 | PHO | O2D-CGD | 4.59 | 1.44 | 1.33 |
| 24 | AA | 406 | CLA | C4B-NB | 4.59 | 1.39 | 1.35 |
| 24 | BB | 5616 | CLA | C4C-C3C | 4.58 | 1.52 | 1.45 |
| 24 | BB | 5611 | CLA | C1C-C2C | 4.58 | 1.53 | 1.44 |
| 24 | AC | 509 | CLA | C1C-C2C | 4.58 | 1.53 | 1.44 |
| 24 | AB | 608 | CLA | C1C-C2C | 4.58 | 1.53 | 1.44 |
| 27 | BK | 5102 | BCR | C5-C6 | 4.58 | 1.42 | 1.34 |
| 24 | AB | 607 | CLA | C1C-C2C | 4.58 | 1.53 | 1.44 |
| 24 | BC | 5504 | CLA | C1C-C2C | 4.57 | 1.53 | 1.44 |
| 24 | AA | 407 | CLA | C1C-C2C | 4.57 | 1.53 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AA | 404 | CLA | C1C-C2C | 4.57 | 1.53 | 1.44 |
| 24 | AA | 405 | CLA | C4D-ND | -4.57 | 1.31 | 1.37 |
| 30 | BF | 5102 | SQD | O5-C5 | 4.56 | 1.55 | 1.44 |
| 24 | AC | 511 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | AB | 605 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | BC | 5508 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | AD | 404 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | AC | 503 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | AB | 613 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | BB | 5613 | CLA | C1C-C2C | 4.56 | 1.53 | 1.44 |
| 24 | BC | 5504 | CLA | O2D-CGD | 4.55 | 1.44 | 1.33 |
| 27 | BB | 5623 | BCR | C30-C25 | 4.55 | 1.60 | 1.53 |
| 24 | AA | 406 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | AB | 603 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | BB | 5616 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | BC | 5502 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | AB | 602 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | AB | 611 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 36 | AF | 101 | HEM | C3C-CAC | 4.55 | 1.57 | 1.47 |
| 24 | BB | 5612 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | AB | 609 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | AC | 508 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | BB | 5607 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | BC | 5507 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | AC | 510 | CLA | C1C-C2C | 4.55 | 1.53 | 1.44 |
| 24 | BC | 5509 | CLA | C1C-C2C | 4.54 | 1.53 | 1.44 |
| 27 | BA | 5411 | BCR | C30-C25 | 4.54 | 1.60 | 1.53 |
| 24 | BB | 5619 | CLA | C4B-NB | 4.54 | 1.39 | 1.35 |
| 24 | AB | 612 | CLA | C1C-C2C | 4.54 | 1.53 | 1.44 |
| 24 | AC | 507 | CLA | C1C-C2C | 4.54 | 1.53 | 1.44 |
| 24 | BC | 5503 | CLA | C1C-C2C | 4.54 | 1.53 | 1.44 |
| 24 | AB | 601 | CLA | C1C-C2C | 4.54 | 1.53 | 1.44 |
| 24 | BB | 5606 | CLA | O2D-CGD | 4.54 | 1.44 | 1.33 |
| 30 | BA | 5401 | SQD | O5-C5 | 4.54 | 1.55 | 1.44 |
| 24 | AB | 610 | CLA | C1C-C2C | 4.54 | 1.53 | 1.44 |
| 24 | AB | 616 | CLA | C1C-C2C | 4.53 | 1.53 | 1.44 |
| 24 | BB | 5617 | CLA | C1C-C2C | 4.53 | 1.53 | 1.44 |
| 24 | BC | 5512 | CLA | C1C-C2C | 4.53 | 1.53 | 1.44 |
| 24 | AB | 615 | CLA | C1C-C2C | 4.53 | 1.53 | 1.44 |
| 24 | BD | 5402 | CLA | O2D-CGD | 4.53 | 1.44 | 1.33 |
| 30 | AF | 102 | SQD | O5-C5 | 4.53 | 1.55 | 1.44 |
| 24 | BA | 5407 | CLA | C1C-C2C | 4.53 | 1.53 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | BB | 5608 | CLA | C1C-C2C | 4.53 | 1.53 | 1.44 |
| 24 | BB | 5606 | CLA | C1C-C2C | 4.52 | 1.53 | 1.44 |
| 24 | BA | 5407 | CLA | MG-NA | 4.52 | 2.17 | 2.06 |
| 24 | AC | 512 | CLA | C1C-C2C | 4.52 | 1.53 | 1.44 |
| 24 | AC | 501 | CLA | C1C-C2C | 4.52 | 1.53 | 1.44 |
| 24 | BB | 5614 | CLA | C1C-C2C | 4.52 | 1.53 | 1.44 |
| 24 | BB | 5609 | CLA | C1C-C2C | 4.52 | 1.53 | 1.44 |
| 24 | BB | 5609 | CLA | C4B-NB | 4.51 | 1.39 | 1.35 |
| 24 | BB | 5619 | CLA | C1C-C2C | 4.51 | 1.53 | 1.44 |
| 24 | BD | 5405 | CLA | C1C-C2C | 4.51 | 1.53 | 1.44 |
| 34 | BD | 5404 | PHO | C3C-C2C | 4.51 | 1.51 | 1.37 |
| 30 | BA | 5401 | SQD | O47-C7 | 4.51 | 1.47 | 1.34 |
| 24 | BB | 5611 | CLA | C4B-NB | 4.50 | 1.39 | 1.35 |
| 24 | BC | 5501 | CLA | C1C-C2C | 4.50 | 1.53 | 1.44 |
| 24 | AC | 504 | CLA | C1C-C2C | 4.50 | 1.53 | 1.44 |
| 24 | BB | 5605 | CLA | C1C-C2C | 4.50 | 1.53 | 1.44 |
| 27 | AB | 618 | BCR | C26-C25 | 4.50 | 1.42 | 1.34 |
| 24 | AB | 601 | CLA | C4C-C3C | 4.50 | 1.52 | 1.45 |
| 24 | BB | 5610 | CLA | C4C-C3C | 4.50 | 1.52 | 1.45 |
| 24 | BC | 5505 | CLA | O2D-CGD | 4.49 | 1.44 | 1.33 |
| 24 | AB | 606 | CLA | C1C-C2C | 4.49 | 1.53 | 1.44 |
| 24 | BD | 5402 | CLA | C1B-NB | 4.49 | 1.39 | 1.35 |
| 24 | BC | 5507 | CLA | C4C-C3C | 4.49 | 1.52 | 1.45 |
| 24 | BC | 5512 | CLA | O2D-CGD | 4.49 | 1.44 | 1.33 |
| 24 | AC | 507 | CLA | O2D-CGD | 4.48 | 1.44 | 1.33 |
| 24 | BB | 5615 | CLA | C1C-C2C | 4.48 | 1.53 | 1.44 |
| 24 | AC | 510 | CLA | O2D-CGD | 4.48 | 1.44 | 1.33 |
| 24 | BB | 5610 | CLA | C1C-C2C | 4.48 | 1.53 | 1.44 |
| 24 | AB | 603 | CLA | O2A-CGA | 4.48 | 1.46 | 1.33 |
| 28 | AC | 518 | DGD | O6D-C1D | 4.48 | 1.53 | 1.41 |
| 24 | AC | 512 | CLA | C4C-C3C | 4.48 | 1.52 | 1.45 |
| 24 | BC | 5505 | CLA | MG-NA | 4.48 | 2.16 | 2.06 |
| 24 | AB | 602 | CLA | O2D-CGD | 4.47 | 1.44 | 1.33 |
| 24 | AB | 606 | CLA | C4C-C3C | 4.47 | 1.52 | 1.45 |
| 24 | BC | 5503 | CLA | O2D-CGD | 4.47 | 1.44 | 1.33 |
| 24 | AC | 502 | CLA | C1C-C2C | 4.46 | 1.53 | 1.44 |
| 24 | BB | 5616 | CLA | C4B-NB | 4.46 | 1.39 | 1.35 |
| 24 | BB | 5618 | CLA | C4C-C3C | 4.46 | 1.52 | 1.45 |
| 24 | BB | 5611 | CLA | MG-NA | 4.46 | 2.16 | 2.06 |
| 24 | BB | 5620 | CLA | C1C-C2C | 4.46 | 1.53 | 1.44 |
| 24 | AC | 507 | CLA | C1B-NB | 4.45 | 1.39 | 1.35 |
| 24 | AB | 611 | CLA | O2D-CGD | 4.45 | 1.44 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AC | 510 | CLA | C4C-C3C | 4.45 | 1.52 | 1.45 |
| 30 | AF | 102 | SQD | C1-C2 | 4.45 | 1.65 | 1.52 |
| 32 | BB | 5603 | LMT | C1B-C2B | -4.45 | 1.39 | 1.52 |
| 27 | AC | 514 | BCR | C1-C6 | 4.45 | 1.59 | 1.53 |
| 27 | BT | 5101 | BCR | C5-C6 | 4.45 | 1.42 | 1.34 |
| 32 | BD | 5411 | LMT | C1B-C2B | -4.45 | 1.39 | 1.52 |
| 24 | BC | 5513 | CLA | C4C-C3C | 4.45 | 1.52 | 1.45 |
| 30 | AA | 413 | SQD | O47-C7 | 4.45 | 1.46 | 1.34 |
| 32 | AB | 624 | LMT | C1B-C2B | -4.45 | 1.39 | 1.52 |
| 32 | AB | 629 | LMT | C1B-C2B | -4.44 | 1.39 | 1.52 |
| 24 | BB | 5610 | CLA | C4B-NB | 4.44 | 1.39 | 1.35 |
| 29 | AA | 412 | LHG | P-O6 | 4.44 | 1.77 | 1.59 |
| 24 | AB | 613 | CLA | C4B-NB | 4.44 | 1.39 | 1.35 |
| 24 | AC | 502 | CLA | C4B-NB | 4.44 | 1.39 | 1.35 |
| 32 | AD | 409 | LMT | C1B-C2B | -4.43 | 1.39 | 1.52 |
| 32 | AI | 103 | LMT | C1B-C2B | -4.43 | 1.39 | 1.52 |
| 32 | BB | 5604 | LMT | C1B-C2B | -4.43 | 1.39 | 1.52 |
| 32 | BB | 5627 | LMT | C1B-C2B | -4.43 | 1.39 | 1.52 |
| 24 | BB | 5606 | CLA | C1B-NB | 4.43 | 1.39 | 1.35 |
| 24 | AC | 512 | CLA | O2D-CGD | 4.42 | 1.44 | 1.33 |
| 24 | AD | 404 | CLA | C4B-NB | 4.42 | 1.39 | 1.35 |
| 36 | BF | 5101 | HEM | C3C-CAC | 4.42 | 1.56 | 1.47 |
| 32 | AI | 102 | LMT | C1B-C2B | -4.41 | 1.39 | 1.52 |
| 32 | BM | 5101 | LMT | C1B-C2B | -4.41 | 1.39 | 1.52 |
| 32 | AB | 630 | LMT | C1B-C2B | -4.41 | 1.39 | 1.52 |
| 32 | BI | 5102 | LMT | C1B-C2B | -4.41 | 1.39 | 1.52 |
| 24 | AB | 614 | CLA | CHC-C1C | 4.41 | 1.46 | 1.35 |
| 24 | AB | 611 | CLA | C4B-NB | 4.40 | 1.39 | 1.35 |
| 24 | BB | 5608 | CLA | O2D-CGD | 4.40 | 1.43 | 1.33 |
| 24 | BB | 5616 | CLA | C1B-NB | 4.40 | 1.39 | 1.35 |
| 32 | AM | 102 | LMT | C1B-C2B | -4.40 | 1.39 | 1.52 |
| 34 | BD | 5403 | PHO | C3A-C2A | -4.40 | 1.50 | 1.54 |
| 27 | BT | 5101 | BCR | C30-C25 | 4.40 | 1.59 | 1.53 |
| 27 | BX | 5101 | BCR | C1-C6 | 4.40 | 1.59 | 1.53 |
| 32 | BB | 5626 | LMT | C1B-C2B | -4.40 | 1.39 | 1.52 |
| 24 | AB | 603 | CLA | C3B-C2B | 4.40 | 1.46 | 1.40 |
| 24 | AC | 511 | CLA | O2D-CGD | 4.39 | 1.43 | 1.33 |
| 32 | BC | 5522 | LMT | C1B-C2B | -4.39 | 1.39 | 1.52 |
| 27 | AD | 406 | BCR | C30-C25 | 4.39 | 1.59 | 1.53 |
| 24 | AA | 406 | CLA | MG-NA | 4.38 | 2.16 | 2.06 |
| 24 | BB | 5618 | CLA | CHC-C1C | 4.38 | 1.46 | 1.35 |
| 24 | AB | 603 | CLA | O2D-CGD | 4.38 | 1.43 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 32 | AB | 623 | LMT | C1B-C2B | -4.38 | 1.39 | 1.52 |
| 36 | AF | 101 | HEM | C4D-ND | -4.37 | 1.32 | 1.40 |
| 24 | AB | 606 | CLA | C1B-NB | 4.37 | 1.39 | 1.35 |
| 24 | AB | 613 | CLA | C4C-C3C | 4.37 | 1.52 | 1.45 |
| 28 | AA | 411 | DGD | O6D-C1D | 4.37 | 1.53 | 1.41 |
| 36 | AV | 201 | HEM | CBB-CAB | 4.36 | 1.51 | 1.30 |
| 27 | AD | 406 | BCR | C26-C25 | 4.36 | 1.42 | 1.34 |
| 24 | BB | 5613 | CLA | MG-NA | 4.36 | 2.16 | 2.06 |
| 24 | BB | 5619 | CLA | O2D-CGD | 4.36 | 1.43 | 1.33 |
| 24 | AB | 614 | CLA | C4C-C3C | 4.36 | 1.52 | 1.45 |
| 24 | AA | 407 | CLA | O2D-CGD | 4.35 | 1.43 | 1.33 |
| 27 | BC | 5516 | BCR | C5-C6 | 4.35 | 1.42 | 1.34 |
| 24 | BB | 5606 | CLA | C4C-C3C | 4.35 | 1.52 | 1.45 |
| 24 | BB | 5616 | CLA | O2D-CGD | 4.34 | 1.43 | 1.33 |
| 24 | AC | 506 | CLA | C4B-NB | 4.34 | 1.39 | 1.35 |
| 24 | BA | 5408 | CLA | O2D-CGD | 4.34 | 1.43 | 1.33 |
| 24 | AC | 506 | CLA | C4C-C3C | 4.33 | 1.52 | 1.45 |
| 28 | AC | 517 | DGD | O6D-C1D | 4.32 | 1.52 | 1.41 |
| 24 | AC | 501 | CLA | O2D-CGD | 4.32 | 1.43 | 1.33 |
| 30 | AB | 622 | SQD | O47-C7 | 4.31 | 1.46 | 1.34 |
| 24 | BB | 5606 | CLA | C4B-NB | 4.31 | 1.39 | 1.35 |
| 30 | BB | 5625 | SQD | O5-C5 | 4.31 | 1.54 | 1.44 |
| 24 | AA | 404 | CLA | C4C-C3C | 4.30 | 1.52 | 1.45 |
| 24 | AB | 615 | CLA | O2D-CGD | 4.30 | 1.43 | 1.33 |
| 29 | AA | 415 | LHG | O8-C23 | 4.30 | 1.45 | 1.33 |
| 27 | AA | 410 | BCR | C30-C25 | 4.30 | 1.59 | 1.53 |
| 30 | AB | 622 | SQD | O5-C5 | 4.30 | 1.54 | 1.44 |
| 34 | AD | 402 | PHO | C3A-C2A | -4.30 | 1.50 | 1.54 |
| 24 | AC | 501 | CLA | MG-NA | 4.30 | 2.16 | 2.06 |
| 24 | AC | 505 | CLA | C4B-NB | 4.29 | 1.39 | 1.35 |
| 24 | AC | 513 | CLA | C4C-C3C | 4.29 | 1.52 | 1.45 |
| 34 | AD | 402 | PHO | O2D-CGD | 4.28 | 1.43 | 1.33 |
| 24 | BB | 5620 | CLA | C4C-C3C | 4.27 | 1.52 | 1.45 |
| 24 | BB | 5607 | CLA | O2A-CGA | 4.27 | 1.45 | 1.33 |
| 24 | BA | 5406 | CLA | C4B-NB | 4.27 | 1.39 | 1.35 |
| 30 | AA | 416 | SQD | O5-C5 | 4.27 | 1.54 | 1.44 |
| 29 | BA | 5415 | LHG | O8-C23 | 4.27 | 1.45 | 1.33 |
| 27 | BJ | 5101 | BCR | C14-C13 | 4.26 | 1.41 | 1.35 |
| 30 | AA | 416 | SQD | O47-C7 | 4.26 | 1.46 | 1.34 |
| 24 | AB | 609 | CLA | C4B-NB | 4.25 | 1.39 | 1.35 |
| 36 | AV | 201 | HEM | C3C-CAC | 4.25 | 1.56 | 1.47 |
| 30 | BB | 5601 | SQD | O5-C5 | 4.25 | 1.54 | 1.44 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 30 | AF | 102 | SQD | O47-C7 | 4.25 | 1.46 | 1.34 |
| 24 | AB | 609 | CLA | MG-NA | 4.24 | 2.16 | 2.06 |
| 24 | AB | 615 | CLA | MG-NA | 4.24 | 2.16 | 2.06 |
| 24 | AD | 401 | CLA | C1B-NB | 4.24 | 1.39 | 1.35 |
| 30 | BB | 5625 | SQD | C1-C2 | 4.24 | 1.64 | 1.52 |
| 24 | AD | 404 | CLA | C4C-C3C | 4.23 | 1.52 | 1.45 |
| 24 | BC | 5501 | CLA | C4C-C3C | 4.23 | 1.52 | 1.45 |
| 24 | BB | 5605 | CLA | C4C-C3C | 4.23 | 1.52 | 1.45 |
| 24 | AB | 607 | CLA | MG-NA | 4.22 | 2.16 | 2.06 |
| 24 | BD | 5402 | CLA | C1C-NC | 4.21 | 1.44 | 1.37 |
| 28 | BH | 5101 | DGD | O5D-C1E | 4.20 | 1.47 | 1.40 |
| 24 | BB | 5613 | CLA | C4B-NB | 4.20 | 1.39 | 1.35 |
| 24 | AD | 401 | CLA | C4C-C3C | 4.19 | 1.52 | 1.45 |
| 28 | AC | 519 | DGD | O5D-C6D | -4.19 | 1.36 | 1.43 |
| 24 | BC | 5503 | CLA | C4C-C3C | 4.19 | 1.52 | 1.45 |
| 24 | AC | 505 | CLA | O2A-CGA | 4.18 | 1.45 | 1.33 |
| 30 | AF | 102 | SQD | O48-C23 | 4.18 | 1.45 | 1.33 |
| 24 | AC | 503 | CLA | O2D-CGD | 4.18 | 1.43 | 1.33 |
| 34 | AD | 403 | PHO | C3C-C2C | 4.16 | 1.50 | 1.37 |
| 30 | BF | 5102 | SQD | C1-C2 | 4.16 | 1.64 | 1.52 |
| 24 | BC | 5509 | CLA | C4C-C3C | 4.16 | 1.52 | 1.45 |
| 36 | BF | 5101 | HEM | O2D-CGD | 4.16 | 1.44 | 1.30 |
| 27 | AJ | 101 | BCR | C29-C30 | 4.15 | 1.63 | 1.54 |
| 28 | AE | 101 | DGD | O3G-C1D | 4.15 | 1.47 | 1.40 |
| 24 | BB | 5610 | CLA | MG-NA | 4.14 | 2.16 | 2.06 |
| 24 | AC | 504 | CLA | O2D-CGD | 4.14 | 1.43 | 1.33 |
| 30 | BB | 5601 | SQD | C1-C2 | 4.14 | 1.64 | 1.52 |
| 24 | AD | 404 | CLA | O2D-CGD | 4.14 | 1.43 | 1.33 |
| 24 | BB | 5617 | CLA | O2D-CGD | 4.14 | 1.43 | 1.33 |
| 24 | AC | 501 | CLA | C4B-NB | 4.13 | 1.38 | 1.35 |
| 30 | AB | 622 | SQD | C1-C2 | 4.13 | 1.64 | 1.52 |
| 29 | BA | 5415 | LHG | O7-C7 | 4.13 | 1.45 | 1.34 |
| 30 | BB | 5601 | SQD | O7-S | 4.13 | 1.57 | 1.45 |
| 30 | BA | 5414 | SQD | O7-S | 4.12 | 1.57 | 1.45 |
| 27 | AT | 101 | BCR | C30-C25 | 4.12 | 1.59 | 1.53 |
| 24 | AB | 616 | CLA | MG-NA | 4.12 | 2.16 | 2.06 |
| 24 | AC | 508 | CLA | C4B-NB | 4.11 | 1.38 | 1.35 |
| 30 | AB | 622 | SQD | O48-C23 | 4.11 | 1.45 | 1.33 |
| 24 | AD | 401 | CLA | O2D-CGD | 4.11 | 1.43 | 1.33 |
| 24 | AB | 616 | CLA | C4C-C3C | 4.11 | 1.52 | 1.45 |
| 24 | AB | 606 | CLA | MG-NA | 4.11 | 2.16 | 2.06 |
| 24 | BC | 5504 | CLA | C4C-C3C | 4.11 | 1.52 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | AB | 604 | CLA | C4C-C3C | 4.11 | 1.52 | 1.45 |
| 24 | BB | 5613 | CLA | C4C-C3C | 4.10 | 1.52 | 1.45 |
| 24 | AB | 615 | CLA | C4C-C3C | 4.10 | 1.52 | 1.45 |
| 24 | BD | 5405 | CLA | C4B-NB | 4.09 | 1.38 | 1.35 |
| 27 | AJ | 101 | BCR | C26-C25 | 4.09 | 1.41 | 1.34 |
| 30 | AB | 622 | SQD | O7-S | 4.09 | 1.57 | 1.45 |
| 30 | AB | 627 | SQD | C1-C2 | 4.09 | 1.64 | 1.52 |
| 30 | AB | 627 | SQD | O5-C5 | 4.08 | 1.54 | 1.44 |
| 24 | AC | 503 | CLA | C4C-C3C | 4.08 | 1.52 | 1.45 |
| 24 | AC | 509 | CLA | C4B-NB | 4.08 | 1.38 | 1.35 |
| 24 | BC | 5506 | CLA | C4C-C3C | 4.08 | 1.52 | 1.45 |
| 24 | BA | 5405 | CLA | MG-NA | 4.08 | 2.16 | 2.06 |
| 27 | AX | 101 | BCR | C29-C30 | 4.08 | 1.63 | 1.54 |
| 27 | BJ | 5101 | BCR | C26-C25 | 4.08 | 1.41 | 1.34 |
| 29 | AA | 415 | LHG | O7-C7 | 4.07 | 1.45 | 1.34 |
| 24 | AC | 505 | CLA | O2D-CGD | 4.07 | 1.43 | 1.33 |
| 27 | AC | 515 | BCR | C1-C6 | 4.07 | 1.59 | 1.53 |
| 24 | BD | 5405 | CLA | C4C-C3C | 4.07 | 1.52 | 1.45 |
| 24 | BC | 5512 | CLA | MG-NC | 4.07 | 2.15 | 2.06 |
| 28 | AH | 101 | DGD | O5D-C1E | 4.06 | 1.47 | 1.40 |
| 24 | BC | 5510 | CLA | C4C-C3C | 4.05 | 1.52 | 1.45 |
| 24 | AA | 405 | CLA | O2D-CGD | 4.05 | 1.43 | 1.33 |
| 24 | BA | 5408 | CLA | C1C-NC | 4.05 | 1.43 | 1.37 |
| 27 | BK | 5102 | BCR | C1-C6 | 4.05 | 1.59 | 1.53 |
| 28 | AA | 411 | DGD | O6E-C1E | 4.04 | 1.52 | 1.41 |
| 24 | BB | 5611 | CLA | C4C-C3C | 4.04 | 1.52 | 1.45 |
| 24 | BB | 5614 | CLA | O2D-CGD | 4.04 | 1.43 | 1.33 |
| 24 | BC | 5505 | CLA | O2A-CGA | 4.04 | 1.45 | 1.33 |
| 28 | AE | 101 | DGD | O5D-C1E | 4.03 | 1.47 | 1.40 |
| 34 | AD | 402 | PHO | C3C-C2C | 4.03 | 1.49 | 1.37 |
| 24 | BC | 5510 | CLA | C4B-NB | 4.03 | 1.38 | 1.35 |
| 24 | AA | 404 | CLA | C4B-NB | 4.03 | 1.38 | 1.35 |
| 30 | AF | 102 | SQD | O6-C1 | 4.03 | 1.47 | 1.40 |
| 32 | AB | 623 | LMT | O5B-C1B | 4.02 | 1.52 | 1.41 |
| 28 | AB | 628 | DGD | O5D-C1E | 4.02 | 1.47 | 1.40 |
| 30 | AB | 627 | SQD | O7-S | 4.02 | 1.56 | 1.45 |
| 24 | BB | 5608 | CLA | MG-NA | 4.02 | 2.15 | 2.06 |
| 27 | BJ | 5101 | BCR | C29-C30 | 4.01 | 1.63 | 1.54 |
| 24 | AC | 504 | CLA | MG-NA | 4.01 | 2.15 | 2.06 |
| 24 | BB | 5609 | CLA | MG-NA | 4.01 | 2.15 | 2.06 |
| 27 | BC | 5516 | BCR | C30-C25 | 4.01 | 1.59 | 1.53 |
| 27 | BC | 5515 | BCR | C26-C25 | 4.00 | 1.41 | 1.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AB | 608 | CLA | O2D-CGD | 4.00 | 1.43 | 1.33 |
| 24 | AB | 612 | CLA | O2D-CGD | 4.00 | 1.43 | 1.33 |
| 24 | AB | 609 | CLA | C4C-C3C | 3.99 | 1.51 | 1.45 |
| 24 | AB | 603 | CLA | C4C-C3C | 3.99 | 1.51 | 1.45 |
| 24 | AB | 616 | CLA | C4B-NB | 3.98 | 1.38 | 1.35 |
| 36 | BV | 5201 | HEM | O2D-CGD | 3.98 | 1.44 | 1.30 |
| 30 | BA | 5414 | SQD | O5-C5 | 3.98 | 1.54 | 1.44 |
| 24 | BC | 5511 | CLA | CHC-C1C | 3.97 | 1.45 | 1.35 |
| 30 | BF | 5102 | SQD | O48-C23 | 3.97 | 1.44 | 1.33 |
| 28 | AB | 628 | DGD | O3G-C1D | 3.97 | 1.47 | 1.40 |
| 24 | BB | 5614 | CLA | MG-NA | 3.97 | 2.15 | 2.06 |
| 27 | AC | 515 | BCR | C26-C25 | 3.97 | 1.41 | 1.34 |
| 24 | BC | 5511 | CLA | C4C-C3C | 3.96 | 1.51 | 1.45 |
| 24 | AC | 503 | CLA | C4B-NB | 3.96 | 1.38 | 1.35 |
| 24 | AB | 612 | CLA | C4C-C3C | 3.96 | 1.51 | 1.45 |
| 24 | AB | 607 | CLA | O2D-CGD | 3.95 | 1.42 | 1.33 |
| 27 | AK | 102 | BCR | C5-C6 | 3.95 | 1.41 | 1.34 |
| 24 | AA | 405 | CLA | C1B-NB | 3.95 | 1.38 | 1.35 |
| 24 | AB | 606 | CLA | C3D-C4D | 3.95 | 1.53 | 1.44 |
| 32 | AB | 630 | LMT | O5B-C1B | 3.95 | 1.51 | 1.41 |
| 24 | BC | 5510 | CLA | C3D-C4D | 3.95 | 1.53 | 1.44 |
| 24 | BC | 5503 | CLA | C3D-C4D | 3.94 | 1.53 | 1.44 |
| 24 | BB | 5615 | CLA | C3D-C4D | 3.94 | 1.53 | 1.44 |
| 24 | AC | 512 | CLA | C3D-C4D | 3.94 | 1.53 | 1.44 |
| 24 | AA | 406 | CLA | C4C-C3C | 3.93 | 1.51 | 1.45 |
| 24 | AB | 601 | CLA | C3D-C4D | 3.93 | 1.53 | 1.44 |
| 27 | BC | 5515 | BCR | C5-C6 | 3.93 | 1.41 | 1.34 |
| 24 | BB | 5618 | CLA | C3D-C4D | 3.93 | 1.53 | 1.44 |
| 24 | AB | 608 | CLA | C4B-NB | 3.93 | 1.38 | 1.35 |
| 30 | BF | 5102 | SQD | O6-C1 | 3.93 | 1.46 | 1.40 |
| 24 | AA | 407 | CLA | C3D-C4D | 3.93 | 1.53 | 1.44 |
| 24 | AB | 601 | CLA | MG-NC | 3.93 | 2.15 | 2.06 |
| 24 | AC | 509 | CLA | C4C-C3C | 3.92 | 1.51 | 1.45 |
| 24 | BC | 5512 | CLA | C3D-C4D | 3.92 | 1.53 | 1.44 |
| 24 | BC | 5509 | CLA | C3D-C4D | 3.92 | 1.53 | 1.44 |
| 28 | AC | 518 | DGD | C2A-C1A | -3.92 | 1.39 | 1.50 |
| 24 | AC | 513 | CLA | C3D-C4D | 3.92 | 1.53 | 1.44 |
| 24 | AC | 511 | CLA | CHC-C1C | 3.92 | 1.45 | 1.35 |
| 24 | BB | 5605 | CLA | C3D-C4D | 3.92 | 1.53 | 1.44 |
| 24 | BB | 5606 | CLA | C3D-C4D | 3.92 | 1.53 | 1.44 |
| 27 | BX | 5101 | BCR | C29-C30 | 3.91 | 1.63 | 1.54 |
| 28 | BC | 5518 | DGD | C2A-C1A | -3.91 | 1.39 | 1.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|------|-------------|----------|
| 24 | BB | 5610 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 24 | AC | 502 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 24 | BC | 5513 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 24 | AC | 508 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 24 | AB | 614 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 24 | AC | 506 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 29 | BA | 5413 | LHG | P-O6 | 3.91 | 1.75 | 1.59 |
| 27 | BD | 5407 | BCR | C29-C30 | 3.91 | 1.63 | 1.54 |
| 36 | AF | 101 | HEM | O2D-CGD | 3.91 | 1.43 | 1.30 |
| 24 | AB | 602 | CLA | C3D-C4D | 3.91 | 1.53 | 1.44 |
| 24 | AC | 503 | CLA | MG-NA | 3.90 | 2.15 | 2.06 |
| 24 | AB | 616 | CLA | C3D-C4D | 3.90 | 1.53 | 1.44 |
| 24 | AC | 507 | CLA | C3D-C4D | 3.90 | 1.53 | 1.44 |
| 24 | AB | 608 | CLA | C3D-C4D | 3.90 | 1.53 | 1.44 |
| 28 | AC | 517 | DGD | O5D-C1E | 3.90 | 1.46 | 1.40 |
| 24 | BC | 5503 | CLA | MG-NC | 3.90 | 2.15 | 2.06 |
| 24 | AC | 504 | CLA | C3D-C4D | 3.89 | 1.53 | 1.44 |
| 24 | BC | 5507 | CLA | C3D-C4D | 3.89 | 1.53 | 1.44 |
| 24 | BB | 5614 | CLA | C3D-C4D | 3.89 | 1.53 | 1.44 |
| 24 | BD | 5405 | CLA | C3D-C4D | 3.89 | 1.53 | 1.44 |
| 24 | AB | 607 | CLA | C3D-C4D | 3.89 | 1.53 | 1.44 |
| 24 | AC | 511 | CLA | C3D-C4D | 3.89 | 1.53 | 1.44 |
| 30 | BB | 5625 | SQD | O48-C23 | 3.89 | 1.44 | 1.33 |
| 24 | AB | 605 | CLA | C3D-C4D | 3.89 | 1.52 | 1.44 |
| 24 | AD | 404 | CLA | C3D-C4D | 3.89 | 1.52 | 1.44 |
| 24 | BC | 5505 | CLA | C3D-C4D | 3.89 | 1.52 | 1.44 |
| 27 | BB | 5622 | BCR | C26-C25 | 3.89 | 1.41 | 1.34 |
| 24 | BA | 5405 | CLA | C3D-C4D | 3.89 | 1.52 | 1.44 |
| 24 | AB | 612 | CLA | C3D-C4D | 3.89 | 1.52 | 1.44 |
| 24 | BC | 5511 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | AA | 404 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | BB | 5617 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | AC | 509 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | AC | 505 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | AB | 615 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | BC | 5508 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | AB | 610 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | BB | 5612 | CLA | C3D-C4D | 3.88 | 1.52 | 1.44 |
| 24 | AB | 613 | CLA | O2D-CGD | 3.87 | 1.42 | 1.33 |
| 24 | BB | 5611 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 24 | BB | 5619 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 34 | BD | 5403 | PHO | C3C-C2C | 3.87 | 1.49 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BB | 5608 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 30 | AA | 416 | SQD | C1-C2 | 3.87 | 1.63 | 1.52 |
| 24 | AC | 510 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 24 | BA | 5408 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 24 | BB | 5609 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 28 | BC | 5517 | DGD | C2A-C1A | -3.87 | 1.39 | 1.50 |
| 24 | AB | 603 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 24 | BA | 5406 | CLA | C4D-ND | -3.87 | 1.32 | 1.37 |
| 24 | BB | 5608 | CLA | C4C-C3C | 3.87 | 1.51 | 1.45 |
| 24 | BB | 5612 | CLA | O2D-CGD | 3.87 | 1.42 | 1.33 |
| 24 | BB | 5614 | CLA | C4B-NB | 3.87 | 1.38 | 1.35 |
| 24 | AB | 611 | CLA | C3D-C4D | 3.87 | 1.52 | 1.44 |
| 28 | AC | 519 | DGD | C2A-C1A | -3.86 | 1.39 | 1.50 |
| 24 | BB | 5613 | CLA | C3D-C4D | 3.86 | 1.52 | 1.44 |
| 27 | AT | 101 | BCR | C5-C6 | 3.86 | 1.41 | 1.34 |
| 24 | AB | 604 | CLA | O2D-CGD | 3.86 | 1.42 | 1.33 |
| 24 | BC | 5504 | CLA | C3D-C4D | 3.86 | 1.52 | 1.44 |
| 24 | BC | 5506 | CLA | C3D-C4D | 3.86 | 1.52 | 1.44 |
| 24 | AC | 502 | CLA | MG-NA | 3.86 | 2.15 | 2.06 |
| 32 | AB | 623 | LMT | O1'-C1' | 3.86 | 1.46 | 1.40 |
| 24 | AC | 503 | CLA | C3D-C4D | 3.86 | 1.52 | 1.44 |
| 24 | AC | 501 | CLA | C4C-C3C | 3.85 | 1.51 | 1.45 |
| 24 | BA | 5406 | CLA | C3D-C4D | 3.85 | 1.52 | 1.44 |
| 24 | BB | 5620 | CLA | C3D-C4D | 3.85 | 1.52 | 1.44 |
| 24 | AB | 613 | CLA | C3D-C4D | 3.85 | 1.52 | 1.44 |
| 28 | BH | 5101 | DGD | C2A-C1A | -3.85 | 1.39 | 1.50 |
| 24 | BC | 5502 | CLA | C3D-C4D | 3.85 | 1.52 | 1.44 |
| 24 | AB | 613 | CLA | C1B-NB | 3.84 | 1.38 | 1.35 |
| 24 | BB | 5616 | CLA | C3D-C4D | 3.84 | 1.52 | 1.44 |
| 24 | BC | 5507 | CLA | MG-NC | 3.84 | 2.15 | 2.06 |
| 24 | AC | 501 | CLA | C3D-C4D | 3.84 | 1.52 | 1.44 |
| 28 | BA | 5412 | DGD | O6E-C1E | 3.84 | 1.51 | 1.41 |
| 24 | BD | 5402 | CLA | C3D-C4D | 3.84 | 1.52 | 1.44 |
| 24 | BC | 5501 | CLA | C3D-C4D | 3.84 | 1.52 | 1.44 |
| 24 | BB | 5607 | CLA | C4C-C3C | 3.84 | 1.51 | 1.45 |
| 24 | BB | 5607 | CLA | C3D-C4D | 3.83 | 1.52 | 1.44 |
| 28 | AC | 517 | DGD | C2A-C1A | -3.83 | 1.39 | 1.50 |
| 24 | BC | 5507 | CLA | C4B-NB | 3.83 | 1.38 | 1.35 |
| 24 | AB | 609 | CLA | C3D-C4D | 3.83 | 1.52 | 1.44 |
| 27 | AC | 516 | BCR | C1-C6 | 3.83 | 1.59 | 1.53 |
| 30 | BA | 5401 | SQD | C1-C2 | 3.82 | 1.63 | 1.52 |
| 28 | BC | 5519 | DGD | C2A-C1A | -3.82 | 1.39 | 1.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AA | 406 | CLA | C3D-C4D | 3.82 | 1.52 | 1.44 |
| 24 | AB | 604 | CLA | C3D-C4D | 3.82 | 1.52 | 1.44 |
| 24 | BA | 5407 | CLA | C3D-C4D | 3.81 | 1.52 | 1.44 |
| 24 | AB | 602 | CLA | C4B-NB | 3.81 | 1.38 | 1.35 |
| 24 | BA | 5407 | CLA | C4C-C3C | 3.81 | 1.51 | 1.45 |
| 29 | AA | 412 | LHG | O8-C23 | 3.81 | 1.44 | 1.33 |
| 28 | AB | 628 | DGD | C2A-C1A | -3.81 | 1.39 | 1.50 |
| 28 | AH | 101 | DGD | C2A-C1A | -3.81 | 1.39 | 1.50 |
| 24 | BC | 5505 | CLA | CBB-CAB | 3.80 | 1.54 | 1.29 |
| 28 | BC | 5519 | DGD | C3E-C2E | 3.80 | 1.62 | 1.52 |
| 24 | AA | 405 | CLA | C3D-C4D | 3.80 | 1.52 | 1.44 |
| 28 | BE | 5102 | DGD | O5D-C1E | 3.80 | 1.46 | 1.40 |
| 32 | BB | 5626 | LMT | O5B-C1B | 3.80 | 1.51 | 1.41 |
| 29 | BA | 5413 | LHG | O7-C7 | 3.80 | 1.45 | 1.34 |
| 24 | AC | 505 | CLA | CBB-CAB | 3.80 | 1.54 | 1.29 |
| 24 | AC | 511 | CLA | C4C-C3C | 3.80 | 1.51 | 1.45 |
| 30 | BA | 5414 | SQD | C1-C2 | 3.80 | 1.63 | 1.52 |
| 27 | BB | 5622 | BCR | C2-C1 | 3.79 | 1.62 | 1.54 |
| 24 | AB | 601 | CLA | CBB-CAB | 3.79 | 1.54 | 1.29 |
| 24 | AD | 401 | CLA | C3D-C4D | 3.79 | 1.52 | 1.44 |
| 28 | AE | 101 | DGD | C2A-C1A | -3.79 | 1.39 | 1.50 |
| 24 | AB | 614 | CLA | O2A-CGA | 3.78 | 1.44 | 1.33 |
| 36 | AV | 201 | HEM | CBC-CAC | 3.78 | 1.54 | 1.29 |
| 24 | BC | 5501 | CLA | MG-NA | 3.78 | 2.15 | 2.06 |
| 24 | AB | 607 | CLA | C4C-C3C | 3.78 | 1.51 | 1.45 |
| 36 | BV | 5201 | HEM | CBC-CAC | 3.77 | 1.54 | 1.29 |
| 28 | BB | 5602 | DGD | C2A-C1A | -3.77 | 1.39 | 1.50 |
| 24 | AB | 606 | CLA | C4B-NB | 3.77 | 1.38 | 1.35 |
| 27 | BK | 5102 | BCR | C26-C25 | 3.77 | 1.41 | 1.34 |
| 24 | AB | 605 | CLA | MG-NA | 3.77 | 2.15 | 2.06 |
| 27 | AJ | 101 | BCR | C10-C9 | 3.77 | 1.40 | 1.35 |
| 27 | AB | 617 | BCR | C26-C25 | 3.77 | 1.41 | 1.34 |
| 24 | AB | 607 | CLA | C4B-NB | 3.77 | 1.38 | 1.35 |
| 28 | BE | 5102 | DGD | C2A-C1A | -3.76 | 1.39 | 1.50 |
| 28 | AA | 411 | DGD | C2A-C1A | -3.76 | 1.39 | 1.50 |
| 24 | AC | 505 | CLA | C4C-C3C | 3.76 | 1.51 | 1.45 |
| 24 | BB | 5606 | CLA | MG-NC | 3.76 | 2.15 | 2.06 |
| 36 | AV | 201 | HEM | O2D-CGD | 3.76 | 1.43 | 1.30 |
| 30 | AB | 627 | SQD | O48-C23 | 3.76 | 1.44 | 1.33 |
| 30 | AF | 102 | SQD | O7-S | 3.75 | 1.56 | 1.45 |
| 30 | BB | 5625 | SQD | O7-S | 3.74 | 1.56 | 1.45 |
| 24 | AA | 405 | CLA | CBB-CAB | 3.74 | 1.54 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BC | 5505 | CLA | MG-NC | 3.74 | 2.15 | 2.06 |
| 24 | BB | 5611 | CLA | O2D-CGD | 3.74 | 1.42 | 1.33 |
| 27 | BC | 5516 | BCR | C2-C1 | 3.73 | 1.62 | 1.54 |
| 30 | BA | 5401 | SQD | O7-S | 3.73 | 1.56 | 1.45 |
| 28 | BA | 5412 | DGD | C2A-C1A | -3.73 | 1.39 | 1.50 |
| 24 | BC | 5501 | CLA | CBB-CAB | 3.73 | 1.54 | 1.29 |
| 24 | BA | 5408 | CLA | C4C-C3C | 3.73 | 1.51 | 1.45 |
| 27 | AK | 102 | BCR | C26-C25 | 3.72 | 1.40 | 1.34 |
| 24 | AB | 605 | CLA | CBB-CAB | 3.72 | 1.54 | 1.29 |
| 30 | BA | 5401 | SQD | O48-C23 | 3.72 | 1.44 | 1.33 |
| 24 | AC | 502 | CLA | O2A-CGA | 3.71 | 1.44 | 1.33 |
| 24 | BB | 5605 | CLA | CBB-CAB | 3.71 | 1.53 | 1.29 |
| 30 | AB | 627 | SQD | O47-C7 | 3.70 | 1.44 | 1.34 |
| 24 | AB | 601 | CLA | O1D-CGD | 3.70 | 1.30 | 1.21 |
| 24 | BB | 5617 | CLA | C4C-C3C | 3.70 | 1.51 | 1.45 |
| 24 | BC | 5506 | CLA | MG-NC | 3.70 | 2.15 | 2.06 |
| 32 | AM | 102 | LMT | C6B-C5B | -3.70 | 1.39 | 1.51 |
| 24 | BB | 5609 | CLA | CBB-CAB | 3.69 | 1.53 | 1.29 |
| 24 | BA | 5405 | CLA | C1B-NB | 3.69 | 1.38 | 1.35 |
| 32 | AD | 409 | LMT | C6B-C5B | -3.69 | 1.39 | 1.51 |
| 24 | BB | 5613 | CLA | CBB-CAB | 3.69 | 1.53 | 1.29 |
| 30 | BB | 5601 | SQD | O47-C7 | 3.69 | 1.44 | 1.34 |
| 36 | BF | 5101 | HEM | CBC-CAC | 3.69 | 1.53 | 1.29 |
| 24 | BA | 5407 | CLA | C4D-ND | -3.69 | 1.32 | 1.37 |
| 32 | BD | 5411 | LMT | C6B-C5B | -3.68 | 1.39 | 1.51 |
| 32 | AB | 623 | LMT | C6B-C5B | -3.68 | 1.39 | 1.51 |
| 24 | AB | 604 | CLA | CBB-CAB | 3.68 | 1.53 | 1.29 |
| 32 | AI | 102 | LMT | O5B-C1B | 3.68 | 1.51 | 1.41 |
| 24 | AC | 512 | CLA | MG-NC | 3.68 | 2.15 | 2.06 |
| 32 | BB | 5604 | LMT | C6B-C5B | -3.68 | 1.39 | 1.51 |
| 24 | BB | 5618 | CLA | O2A-CGA | 3.68 | 1.44 | 1.33 |
| 28 | AC | 518 | DGD | O5D-C1E | 3.67 | 1.46 | 1.40 |
| 24 | BA | 5407 | CLA | CBB-CAB | 3.67 | 1.53 | 1.29 |
| 32 | AI | 103 | LMT | C6B-C5B | -3.67 | 1.39 | 1.51 |
| 30 | AA | 413 | SQD | C1-C2 | 3.67 | 1.63 | 1.52 |
| 27 | AK | 102 | BCR | C29-C30 | 3.67 | 1.62 | 1.54 |
| 32 | AB | 624 | LMT | C6B-C5B | -3.67 | 1.39 | 1.51 |
| 32 | BC | 5522 | LMT | C6B-C5B | -3.66 | 1.39 | 1.51 |
| 27 | AC | 516 | BCR | C5-C6 | 3.66 | 1.40 | 1.34 |
| 28 | BC | 5518 | DGD | O5D-C1E | 3.66 | 1.46 | 1.40 |
| 32 | AI | 102 | LMT | C6B-C5B | -3.66 | 1.39 | 1.51 |
| 24 | BB | 5607 | CLA | CHC-C1C | 3.66 | 1.44 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 32 | BB | 5603 | LMT | C6B-C5B | -3.66 | 1.39 | 1.51 |
| 24 | AC | 501 | CLA | CBB-CAB | 3.66 | 1.53 | 1.29 |
| 32 | AB | 630 | LMT | C6B-C5B | -3.66 | 1.39 | 1.51 |
| 32 | BM | 5101 | LMT | C6B-C5B | -3.66 | 1.39 | 1.51 |
| 32 | BB | 5627 | LMT | C6B-C5B | -3.66 | 1.39 | 1.51 |
| 32 | BI | 5102 | LMT | C6B-C5B | -3.65 | 1.39 | 1.51 |
| 32 | BB | 5626 | LMT | C6B-C5B | -3.65 | 1.39 | 1.51 |
| 31 | AJ | 102 | LMG | O1-C1 | 3.65 | 1.46 | 1.40 |
| 24 | BA | 5407 | CLA | O2D-CGD | 3.65 | 1.42 | 1.33 |
| 24 | BB | 5619 | CLA | CBB-CAB | 3.64 | 1.53 | 1.29 |
| 27 | AB | 618 | BCR | C2-C1 | 3.64 | 1.62 | 1.54 |
| 24 | BC | 5510 | CLA | MG-NA | 3.64 | 2.14 | 2.06 |
| 24 | AB | 611 | CLA | C4C-C3C | 3.64 | 1.51 | 1.45 |
| 28 | AA | 411 | DGD | O2G-C1B | 3.64 | 1.44 | 1.34 |
| 27 | BB | 5621 | BCR | C26-C25 | 3.64 | 1.40 | 1.34 |
| 32 | AD | 409 | LMT | O5B-C1B | 3.64 | 1.51 | 1.41 |
| 32 | AB | 629 | LMT | C6B-C5B | -3.64 | 1.39 | 1.51 |
| 24 | AB | 615 | CLA | CBB-CAB | 3.63 | 1.53 | 1.29 |
| 24 | BA | 5406 | CLA | CBB-CAB | 3.63 | 1.53 | 1.29 |
| 30 | BF | 5102 | SQD | O7-S | 3.63 | 1.55 | 1.45 |
| 24 | BC | 5513 | CLA | CBB-CAB | 3.63 | 1.53 | 1.29 |
| 34 | BD | 5404 | PHO | CBB-CAB | 3.63 | 1.53 | 1.29 |
| 30 | AA | 413 | SQD | O5-C5 | 3.62 | 1.53 | 1.44 |
| 24 | AC | 506 | CLA | MG-NC | 3.62 | 2.14 | 2.06 |
| 28 | BA | 5412 | DGD | O2G-C1B | 3.62 | 1.44 | 1.34 |
| 24 | AA | 406 | CLA | CBB-CAB | 3.61 | 1.53 | 1.29 |
| 32 | BB | 5604 | LMT | O5B-C1B | 3.61 | 1.51 | 1.41 |
| 24 | AB | 616 | CLA | CBB-CAB | 3.61 | 1.53 | 1.29 |
| 24 | BB | 5620 | CLA | MG-NA | 3.61 | 2.14 | 2.06 |
| 24 | BB | 5612 | CLA | CBB-CAB | 3.60 | 1.53 | 1.29 |
| 24 | BA | 5406 | CLA | O2D-CGD | 3.60 | 1.42 | 1.33 |
| 24 | BB | 5620 | CLA | MG-NC | 3.60 | 2.14 | 2.06 |
| 24 | BC | 5502 | CLA | C4C-C3C | 3.59 | 1.51 | 1.45 |
| 28 | AB | 628 | DGD | O6D-C1D | 3.59 | 1.51 | 1.41 |
| 24 | BB | 5605 | CLA | O2A-CGA | 3.59 | 1.43 | 1.33 |
| 32 | BB | 5626 | LMT | O1'-C1' | 3.59 | 1.46 | 1.40 |
| 24 | AC | 513 | CLA | CHC-C1C | 3.59 | 1.44 | 1.35 |
| 24 | AB | 602 | CLA | CBB-CAB | 3.58 | 1.53 | 1.29 |
| 30 | AB | 622 | SQD | O6-C1 | 3.57 | 1.46 | 1.40 |
| 32 | BM | 5101 | LMT | O5B-C1B | 3.57 | 1.50 | 1.41 |
| 24 | BC | 5503 | CLA | CBB-CAB | 3.57 | 1.53 | 1.29 |
| 24 | AC | 513 | CLA | CBB-CAB | 3.57 | 1.53 | 1.29 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | BB | 5602 | DGD | O6D-C1D | 3.57 | 1.50 | 1.41 |
| 24 | AB | 608 | CLA | CBB-CAB | 3.56 | 1.52 | 1.29 |
| 32 | BI | 5102 | LMT | O5B-C1B | 3.56 | 1.50 | 1.41 |
| 36 | AF | 101 | HEM | CBC-CAC | 3.56 | 1.52 | 1.29 |
| 27 | BC | 5515 | BCR | C29-C30 | 3.56 | 1.62 | 1.54 |
| 24 | AB | 609 | CLA | CBB-CAB | 3.55 | 1.52 | 1.29 |
| 24 | AC | 506 | CLA | CBB-CAB | 3.55 | 1.52 | 1.29 |
| 24 | BB | 5611 | CLA | C1B-NB | 3.55 | 1.38 | 1.35 |
| 24 | AC | 504 | CLA | C4C-C3C | 3.55 | 1.51 | 1.45 |
| 24 | BC | 5502 | CLA | CBB-CAB | 3.55 | 1.52 | 1.29 |
| 24 | BC | 5505 | CLA | CMC-C2C | 3.55 | 1.58 | 1.50 |
| 34 | BD | 5403 | PHO | CBB-CAB | 3.55 | 1.52 | 1.29 |
| 34 | AD | 402 | PHO | CBB-CAB | 3.55 | 1.52 | 1.29 |
| 27 | BB | 5623 | BCR | C2-C1 | 3.54 | 1.62 | 1.54 |
| 24 | BC | 5506 | CLA | CBB-CAB | 3.54 | 1.52 | 1.29 |
| 24 | BB | 5608 | CLA | CBB-CAB | 3.54 | 1.52 | 1.29 |
| 24 | AA | 407 | CLA | MG-NA | 3.54 | 2.14 | 2.06 |
| 24 | AC | 510 | CLA | CBB-CAB | 3.54 | 1.52 | 1.29 |
| 24 | BC | 5510 | CLA | CBB-CAB | 3.53 | 1.52 | 1.29 |
| 24 | AD | 404 | CLA | CMC-C2C | 3.53 | 1.58 | 1.50 |
| 34 | AD | 403 | PHO | CBB-CAB | 3.53 | 1.52 | 1.29 |
| 24 | BB | 5606 | CLA | CBB-CAB | 3.53 | 1.52 | 1.29 |
| 24 | BC | 5512 | CLA | CBB-CAB | 3.53 | 1.52 | 1.29 |
| 24 | AC | 512 | CLA | CBB-CAB | 3.53 | 1.52 | 1.29 |
| 24 | BC | 5506 | CLA | O2A-CGA | 3.53 | 1.43 | 1.33 |
| 24 | AA | 405 | CLA | C4B-NB | 3.53 | 1.38 | 1.35 |
| 24 | BA | 5407 | CLA | O1D-CGD | 3.52 | 1.30 | 1.21 |
| 27 | AB | 619 | BCR | C29-C30 | 3.52 | 1.62 | 1.54 |
| 24 | AB | 612 | CLA | CHC-C1C | 3.52 | 1.44 | 1.35 |
| 24 | BA | 5405 | CLA | CBB-CAB | 3.52 | 1.52 | 1.29 |
| 24 | AC | 508 | CLA | C4D-ND | -3.51 | 1.32 | 1.37 |
| 24 | BB | 5612 | CLA | C4B-NB | 3.51 | 1.38 | 1.35 |
| 24 | AD | 401 | CLA | MG-NA | 3.51 | 2.14 | 2.06 |
| 24 | BB | 5620 | CLA | CBB-CAB | 3.51 | 1.52 | 1.29 |
| 30 | AA | 416 | SQD | O48-C23 | 3.50 | 1.43 | 1.33 |
| 24 | BB | 5605 | CLA | O1D-CGD | 3.50 | 1.30 | 1.21 |
| 24 | BC | 5505 | CLA | C4C-C3C | 3.50 | 1.51 | 1.45 |
| 24 | BB | 5614 | CLA | CBB-CAB | 3.50 | 1.52 | 1.29 |
| 27 | AK | 102 | BCR | C1-C6 | 3.50 | 1.58 | 1.53 |
| 30 | AA | 416 | SQD | O7-S | 3.50 | 1.55 | 1.45 |
| 27 | AB | 618 | BCR | C29-C30 | 3.50 | 1.62 | 1.54 |
| 24 | BC | 5512 | CLA | C1C-NC | 3.50 | 1.43 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 32 | AB | 629 | LMT | O5B-C1B | 3.49 | 1.50 | 1.41 |
| 24 | BC | 5508 | CLA | MG-NC | 3.49 | 2.14 | 2.06 |
| 27 | AA | 410 | BCR | C26-C25 | 3.49 | 1.40 | 1.34 |
| 24 | AD | 401 | CLA | CBB-CAB | 3.49 | 1.52 | 1.29 |
| 24 | AC | 507 | CLA | CBB-CAB | 3.49 | 1.52 | 1.29 |
| 24 | BC | 5507 | CLA | CBB-CAB | 3.49 | 1.52 | 1.29 |
| 30 | BA | 5401 | SQD | O6-C1 | 3.49 | 1.46 | 1.40 |
| 27 | AB | 617 | BCR | C5-C6 | 3.48 | 1.40 | 1.34 |
| 24 | AB | 610 | CLA | CBB-CAB | 3.48 | 1.52 | 1.29 |
| 24 | AB | 603 | CLA | CHC-C1C | 3.48 | 1.43 | 1.35 |
| 24 | AB | 601 | CLA | O2A-CGA | 3.48 | 1.43 | 1.33 |
| 24 | BB | 5617 | CLA | C1C-NC | 3.47 | 1.43 | 1.37 |
| 27 | AD | 406 | BCR | C29-C30 | 3.47 | 1.62 | 1.54 |
| 24 | AB | 606 | CLA | CBB-CAB | 3.47 | 1.52 | 1.29 |
| 28 | BB | 5602 | DGD | O3G-C1D | 3.47 | 1.46 | 1.40 |
| 27 | BT | 5101 | BCR | C2-C1 | 3.47 | 1.62 | 1.54 |
| 24 | BA | 5406 | CLA | CBA-CGA | 3.46 | 1.60 | 1.50 |
| 32 | BC | 5522 | LMT | O5B-C1B | 3.46 | 1.50 | 1.41 |
| 24 | BD | 5402 | CLA | MG-NA | 3.46 | 2.14 | 2.06 |
| 27 | BJ | 5101 | BCR | C10-C9 | 3.46 | 1.40 | 1.35 |
| 34 | BD | 5404 | PHO | C3A-C2A | -3.46 | 1.51 | 1.54 |
| 27 | BB | 5623 | BCR | C29-C30 | 3.46 | 1.62 | 1.54 |
| 27 | AB | 619 | BCR | C2-C1 | 3.45 | 1.62 | 1.54 |
| 24 | BC | 5508 | CLA | CHC-C1C | 3.45 | 1.43 | 1.35 |
| 24 | AC | 503 | CLA | CBB-CAB | 3.45 | 1.52 | 1.29 |
| 24 | AA | 406 | CLA | O2D-CGD | 3.45 | 1.41 | 1.33 |
| 24 | AC | 507 | CLA | MG-NC | 3.45 | 2.14 | 2.06 |
| 24 | BC | 5513 | CLA | CHC-C1C | 3.45 | 1.43 | 1.35 |
| 24 | BB | 5619 | CLA | C4C-C3C | 3.45 | 1.51 | 1.45 |
| 24 | AC | 508 | CLA | CBB-CAB | 3.44 | 1.52 | 1.29 |
| 27 | BB | 5621 | BCR | C2-C1 | 3.44 | 1.62 | 1.54 |
| 30 | AA | 416 | SQD | O6-C1 | 3.44 | 1.46 | 1.40 |
| 30 | AF | 102 | SQD | O5-C1 | 3.44 | 1.50 | 1.41 |
| 30 | BA | 5414 | SQD | O48-C23 | 3.43 | 1.43 | 1.33 |
| 24 | AC | 509 | CLA | CBB-CAB | 3.43 | 1.52 | 1.29 |
| 30 | BB | 5601 | SQD | O48-C23 | 3.43 | 1.43 | 1.33 |
| 24 | AC | 502 | CLA | CBB-CAB | 3.43 | 1.52 | 1.29 |
| 24 | AC | 509 | CLA | O1D-CGD | 3.43 | 1.29 | 1.21 |
| 30 | BB | 5625 | SQD | O3-C3 | 3.42 | 1.51 | 1.43 |
| 24 | BB | 5610 | CLA | CBB-CAB | 3.42 | 1.52 | 1.29 |
| 32 | BB | 5603 | LMT | O5B-C1B | 3.42 | 1.50 | 1.41 |
| 24 | AB | 609 | CLA | O2A-CGA | 3.42 | 1.43 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BD | 5402 | CLA | CBB-CAB | 3.42 | 1.51 | 1.29 |
| 32 | BD | 5411 | LMT | O5B-C1B | 3.41 | 1.50 | 1.41 |
| 24 | AC | 505 | CLA | CMC-C2C | 3.41 | 1.58 | 1.50 |
| 27 | AJ | 101 | BCR | C2-C1 | 3.41 | 1.62 | 1.54 |
| 24 | AA | 404 | CLA | CBB-CAB | 3.41 | 1.51 | 1.29 |
| 24 | AD | 401 | CLA | C1C-NC | 3.41 | 1.42 | 1.37 |
| 24 | AA | 406 | CLA | CHC-C1C | 3.41 | 1.43 | 1.35 |
| 24 | AC | 510 | CLA | MG-NC | 3.40 | 2.14 | 2.06 |
| 24 | AB | 607 | CLA | C5-C3 | 3.40 | 1.58 | 1.51 |
| 24 | AB | 605 | CLA | C4C-C3C | 3.40 | 1.50 | 1.45 |
| 27 | AC | 516 | BCR | C30-C25 | 3.40 | 1.58 | 1.53 |
| 27 | BC | 5514 | BCR | C29-C30 | 3.39 | 1.61 | 1.54 |
| 27 | AT | 101 | BCR | C29-C30 | 3.39 | 1.61 | 1.54 |
| 27 | BB | 5622 | BCR | C29-C30 | 3.39 | 1.61 | 1.54 |
| 24 | AB | 605 | CLA | O2A-CGA | 3.39 | 1.43 | 1.33 |
| 24 | BC | 5501 | CLA | O2A-CGA | 3.39 | 1.43 | 1.33 |
| 24 | AB | 602 | CLA | MG-NC | 3.39 | 2.14 | 2.06 |
| 28 | AH | 101 | DGD | O2G-C2G | 3.39 | 1.55 | 1.46 |
| 24 | BC | 5508 | CLA | CBB-CAB | 3.39 | 1.51 | 1.29 |
| 27 | AB | 617 | BCR | C2-C1 | 3.38 | 1.61 | 1.54 |
| 24 | AA | 405 | CLA | CBA-CGA | 3.38 | 1.60 | 1.50 |
| 27 | BX | 5101 | BCR | C2-C1 | 3.37 | 1.61 | 1.54 |
| 36 | BV | 5201 | HEM | C4D-ND | -3.37 | 1.34 | 1.40 |
| 24 | BC | 5511 | CLA | O1D-CGD | 3.37 | 1.29 | 1.21 |
| 32 | AM | 102 | LMT | O5B-C1B | 3.37 | 1.50 | 1.41 |
| 24 | BA | 5405 | CLA | C1C-NC | 3.37 | 1.42 | 1.37 |
| 24 | BB | 5615 | CLA | CBB-CAB | 3.37 | 1.51 | 1.29 |
| 24 | BD | 5405 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 24 | BC | 5504 | CLA | MG-NA | 3.36 | 2.14 | 2.06 |
| 35 | BD | 5406 | PL9 | C37-C38 | -3.36 | 1.39 | 1.50 |
| 24 | AD | 404 | CLA | CBB-CAB | 3.36 | 1.51 | 1.29 |
| 24 | BB | 5605 | CLA | MG-NC | 3.36 | 2.14 | 2.06 |
| 24 | BB | 5609 | CLA | O2A-CGA | 3.35 | 1.43 | 1.33 |
| 28 | BH | 5101 | DGD | O2G-C2G | 3.35 | 1.55 | 1.46 |
| 27 | BJ | 5101 | BCR | C2-C1 | 3.35 | 1.61 | 1.54 |
| 27 | BK | 5102 | BCR | C29-C30 | 3.35 | 1.61 | 1.54 |
| 24 | BC | 5504 | CLA | CHC-C1C | 3.35 | 1.43 | 1.35 |
| 24 | BB | 5609 | CLA | C4C-C3C | 3.35 | 1.50 | 1.45 |
| 24 | BB | 5616 | CLA | CBB-CAB | 3.35 | 1.51 | 1.29 |
| 27 | AC | 515 | BCR | C29-C30 | 3.35 | 1.61 | 1.54 |
| 24 | BC | 5509 | CLA | CBB-CAB | 3.34 | 1.51 | 1.29 |
| 32 | AB | 624 | LMT | O1'-C1' | 3.34 | 1.45 | 1.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AC | 510 | CLA | MG-NA | 3.34 | 2.14 | 2.06 |
| 24 | BB | 5620 | CLA | O1D-CGD | 3.34 | 1.29 | 1.21 |
| 27 | AC | 515 | BCR | C5-C6 | 3.34 | 1.40 | 1.34 |
| 24 | BB | 5606 | CLA | MG-NA | 3.34 | 2.14 | 2.06 |
| 24 | AC | 506 | CLA | O2A-CGA | 3.33 | 1.43 | 1.33 |
| 30 | AB | 622 | SQD | O3-C3 | 3.33 | 1.50 | 1.43 |
| 30 | AA | 413 | SQD | O7-S | 3.33 | 1.54 | 1.45 |
| 24 | AD | 401 | CLA | CMC-C2C | 3.33 | 1.57 | 1.50 |
| 35 | BD | 5406 | PL9 | C32-C33 | -3.32 | 1.39 | 1.50 |
| 24 | AB | 603 | CLA | CBB-CAB | 3.31 | 1.51 | 1.29 |
| 24 | AB | 610 | CLA | C4B-NB | 3.31 | 1.38 | 1.35 |
| 24 | BC | 5502 | CLA | O2A-CGA | 3.31 | 1.43 | 1.33 |
| 31 | AC | 521 | LMG | O1-C1 | 3.31 | 1.45 | 1.40 |
| 24 | AB | 616 | CLA | O1D-CGD | 3.30 | 1.29 | 1.21 |
| 24 | BA | 5407 | CLA | CBA-CGA | 3.30 | 1.60 | 1.50 |
| 35 | AD | 405 | PL9 | C32-C33 | -3.30 | 1.39 | 1.50 |
| 27 | AC | 516 | BCR | C2-C1 | 3.30 | 1.61 | 1.54 |
| 24 | BC | 5513 | CLA | O1D-CGD | 3.29 | 1.29 | 1.21 |
| 24 | AB | 607 | CLA | O2A-CGA | 3.29 | 1.42 | 1.33 |
| 24 | AB | 611 | CLA | CBB-CAB | 3.29 | 1.51 | 1.29 |
| 24 | AD | 401 | CLA | CHC-C1C | 3.28 | 1.43 | 1.35 |
| 24 | BC | 5507 | CLA | MG-NA | 3.28 | 2.14 | 2.06 |
| 24 | AB | 612 | CLA | CBB-CAB | 3.28 | 1.51 | 1.29 |
| 30 | AA | 413 | SQD | O48-C23 | 3.28 | 1.42 | 1.33 |
| 27 | BT | 5101 | BCR | C29-C30 | 3.27 | 1.61 | 1.54 |
| 32 | AI | 103 | LMT | O5B-C1B | 3.27 | 1.50 | 1.41 |
| 24 | BC | 5501 | CLA | MG-NC | 3.26 | 2.14 | 2.06 |
| 27 | BC | 5514 | BCR | C2-C1 | 3.26 | 1.61 | 1.54 |
| 24 | BB | 5612 | CLA | C4C-C3C | 3.26 | 1.50 | 1.45 |
| 31 | AC | 521 | LMG | O6-C1 | 3.26 | 1.50 | 1.41 |
| 24 | BB | 5611 | CLA | C5-C3 | 3.26 | 1.58 | 1.51 |
| 24 | BC | 5503 | CLA | O2A-CGA | 3.25 | 1.42 | 1.33 |
| 24 | BD | 5405 | CLA | CMC-C2C | 3.25 | 1.57 | 1.50 |
| 24 | AA | 407 | CLA | C4C-C3C | 3.25 | 1.50 | 1.45 |
| 27 | AB | 618 | BCR | C5-C6 | 3.25 | 1.40 | 1.34 |
| 30 | BF | 5102 | SQD | O5-C1 | 3.25 | 1.50 | 1.41 |
| 27 | AC | 514 | BCR | C29-C30 | 3.25 | 1.61 | 1.54 |
| 27 | BD | 5407 | BCR | C2-C1 | 3.25 | 1.61 | 1.54 |
| 27 | AT | 101 | BCR | C2-C1 | 3.24 | 1.61 | 1.54 |
| 30 | BB | 5625 | SQD | O6-C1 | 3.24 | 1.45 | 1.40 |
| 24 | BC | 5504 | CLA | CBB-CAB | 3.24 | 1.50 | 1.29 |
| 24 | AA | 407 | CLA | C1C-NC | 3.24 | 1.42 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AA | 405 | CLA | CMC-C2C | 3.24 | 1.57 | 1.50 |
| 24 | BD | 5402 | CLA | CHC-C1C | 3.23 | 1.43 | 1.35 |
| 27 | BA | 5411 | BCR | C26-C25 | 3.23 | 1.40 | 1.34 |
| 31 | AA | 414 | LMG | O1-C1 | 3.23 | 1.45 | 1.40 |
| 34 | BD | 5403 | PHO | O1D-CGD | 3.23 | 1.29 | 1.21 |
| 24 | AC | 505 | CLA | CAA-CBA | -3.23 | 1.42 | 1.52 |
| 27 | AC | 515 | BCR | C2-C1 | 3.23 | 1.61 | 1.54 |
| 24 | AC | 504 | CLA | CBB-CAB | 3.23 | 1.50 | 1.29 |
| 36 | AF | 101 | HEM | CAA-C2A | 3.23 | 1.56 | 1.52 |
| 29 | AA | 412 | LHG | O7-C7 | 3.23 | 1.43 | 1.34 |
| 24 | AC | 508 | CLA | CHC-C1C | 3.23 | 1.43 | 1.35 |
| 29 | BA | 5413 | LHG | O8-C23 | 3.22 | 1.42 | 1.33 |
| 24 | BB | 5617 | CLA | MG-NA | 3.22 | 2.13 | 2.06 |
| 24 | BA | 5406 | CLA | CMC-C2C | 3.22 | 1.57 | 1.50 |
| 24 | BA | 5408 | CLA | CBB-CAB | 3.22 | 1.50 | 1.29 |
| 24 | BD | 5402 | CLA | MG-NC | 3.21 | 2.13 | 2.06 |
| 24 | AB | 608 | CLA | C4C-C3C | 3.21 | 1.50 | 1.45 |
| 24 | AB | 602 | CLA | MG-NA | 3.21 | 2.13 | 2.06 |
| 27 | AB | 617 | BCR | C30-C25 | 3.21 | 1.58 | 1.53 |
| 27 | AB | 619 | BCR | C5-C6 | 3.21 | 1.40 | 1.34 |
| 24 | AC | 503 | CLA | O2A-CGA | 3.20 | 1.42 | 1.33 |
| 27 | AJ | 101 | BCR | C21-C22 | 3.20 | 1.40 | 1.35 |
| 27 | BK | 5102 | BCR | C2-C1 | 3.20 | 1.61 | 1.54 |
| 24 | BC | 5505 | CLA | O1D-CGD | 3.20 | 1.29 | 1.21 |
| 30 | BA | 5401 | SQD | O5-C1 | 3.20 | 1.50 | 1.41 |
| 36 | AV | 201 | HEM | C4D-ND | -3.20 | 1.34 | 1.40 |
| 24 | BB | 5616 | CLA | O1D-CGD | 3.19 | 1.29 | 1.21 |
| 35 | AD | 405 | PL9 | C37-C38 | -3.19 | 1.40 | 1.50 |
| 24 | AA | 406 | CLA | CBA-CGA | 3.19 | 1.60 | 1.50 |
| 24 | BA | 5408 | CLA | CHC-C1C | 3.19 | 1.43 | 1.35 |
| 24 | BB | 5618 | CLA | CBB-CAB | 3.19 | 1.50 | 1.29 |
| 31 | BD | 5408 | LMG | O1-C1 | 3.19 | 1.45 | 1.40 |
| 24 | BC | 5511 | CLA | CBB-CAB | 3.19 | 1.50 | 1.29 |
| 24 | AA | 404 | CLA | CMC-C2C | 3.19 | 1.57 | 1.50 |
| 24 | BB | 5607 | CLA | CBB-CAB | 3.19 | 1.50 | 1.29 |
| 30 | AA | 416 | SQD | O3-C3 | 3.19 | 1.50 | 1.43 |
| 24 | AC | 504 | CLA | CHC-C1C | 3.18 | 1.43 | 1.35 |
| 30 | AA | 413 | SQD | O6-C44 | -3.18 | 1.37 | 1.43 |
| 27 | AB | 617 | BCR | C29-C30 | 3.18 | 1.61 | 1.54 |
| 27 | BB | 5621 | BCR | C5-C6 | 3.18 | 1.39 | 1.34 |
| 24 | BC | 5509 | CLA | CHC-C1C | 3.18 | 1.43 | 1.35 |
| 24 | BC | 5513 | CLA | O2A-CGA | 3.18 | 1.42 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 27 | AC | 514 | BCR | C26-C25 | 3.18 | 1.39 | 1.34 |
| 24 | BB | 5616 | CLA | CHC-C1C | 3.17 | 1.43 | 1.35 |
| 24 | AC | 501 | CLA | O2A-CGA | 3.17 | 1.42 | 1.33 |
| 24 | AC | 507 | CLA | MG-NA | 3.17 | 2.13 | 2.06 |
| 24 | BB | 5617 | CLA | MG-NC | 3.17 | 2.13 | 2.06 |
| 28 | AA | 411 | DGD | O1G-C1A | 3.17 | 1.42 | 1.33 |
| 24 | BB | 5616 | CLA | O2A-CGA | 3.17 | 1.42 | 1.33 |
| 24 | AA | 407 | CLA | CBB-CAB | 3.17 | 1.50 | 1.29 |
| 24 | BD | 5405 | CLA | O1D-CGD | 3.17 | 1.29 | 1.21 |
| 24 | AB | 605 | CLA | CHC-C1C | 3.16 | 1.43 | 1.35 |
| 27 | BD | 5407 | BCR | C1-C6 | 3.16 | 1.58 | 1.53 |
| 24 | AB | 614 | CLA | CBB-CAB | 3.16 | 1.50 | 1.29 |
| 24 | BC | 5502 | CLA | C4B-NB | 3.16 | 1.38 | 1.35 |
| 24 | AC | 508 | CLA | MG-NC | 3.16 | 2.13 | 2.06 |
| 36 | BV | 5201 | HEM | O2A-CGA | -3.16 | 1.20 | 1.30 |
| 32 | BM | 5101 | LMT | O1B-C4' | 3.16 | 1.52 | 1.43 |
| 24 | BB | 5611 | CLA | O2A-CGA | 3.15 | 1.42 | 1.33 |
| 24 | AB | 607 | CLA | CHC-C1C | 3.15 | 1.43 | 1.35 |
| 24 | AB | 604 | CLA | CMC-C2C | 3.15 | 1.57 | 1.50 |
| 32 | BB | 5604 | LMT | O1B-C4' | 3.15 | 1.52 | 1.43 |
| 24 | AC | 511 | CLA | CBB-CAB | 3.14 | 1.50 | 1.29 |
| 24 | AB | 615 | CLA | C1C-NC | 3.14 | 1.42 | 1.37 |
| 32 | AD | 409 | LMT | O1'-C1' | 3.14 | 1.45 | 1.40 |
| 24 | BA | 5408 | CLA | CMC-C2C | 3.14 | 1.57 | 1.50 |
| 24 | BB | 5613 | CLA | O2A-CGA | 3.14 | 1.42 | 1.33 |
| 24 | BA | 5408 | CLA | MG-NC | 3.14 | 2.13 | 2.06 |
| 24 | AC | 502 | CLA | MG-NC | 3.14 | 2.13 | 2.06 |
| 32 | BB | 5603 | LMT | O1B-C1B | 3.14 | 1.50 | 1.41 |
| 27 | AD | 406 | BCR | C2-C1 | 3.14 | 1.61 | 1.54 |
| 24 | AC | 502 | CLA | C4C-C3C | 3.14 | 1.50 | 1.45 |
| 27 | BA | 5411 | BCR | C29-C30 | 3.13 | 1.61 | 1.54 |
| 24 | BB | 5614 | CLA | CMC-C2C | 3.13 | 1.57 | 1.50 |
| 24 | AB | 602 | CLA | C1C-NC | 3.13 | 1.42 | 1.37 |
| 24 | AB | 616 | CLA | MG-NC | 3.13 | 2.13 | 2.06 |
| 27 | BJ | 5101 | BCR | C21-C22 | 3.13 | 1.39 | 1.35 |
| 24 | BC | 5504 | CLA | C1C-NC | 3.12 | 1.42 | 1.37 |
| 27 | AA | 410 | BCR | C29-C30 | 3.12 | 1.61 | 1.54 |
| 32 | BB | 5627 | LMT | O1'-C1' | 3.12 | 1.45 | 1.40 |
| 24 | BC | 5512 | CLA | O1D-CGD | 3.12 | 1.29 | 1.21 |
| 24 | BA | 5407 | CLA | CHC-C1C | 3.11 | 1.42 | 1.35 |
| 24 | BB | 5615 | CLA | MG-NC | 3.11 | 2.13 | 2.06 |
| 24 | AC | 507 | CLA | C4B-NB | 3.11 | 1.38 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BC | 5509 | CLA | O1D-CGD | 3.11 | 1.29 | 1.21 |
| 31 | BL | 5101 | LMG | O6-C1 | 3.10 | 1.49 | 1.41 |
| 24 | AB | 601 | CLA | C1C-NC | 3.10 | 1.42 | 1.37 |
| 24 | AC | 501 | CLA | CMC-C2C | 3.10 | 1.57 | 1.50 |
| 32 | AB | 629 | LMT | O1B-C1B | 3.10 | 1.50 | 1.41 |
| 28 | BB | 5602 | DGD | O6E-C1E | 3.10 | 1.49 | 1.41 |
| 32 | BM | 5101 | LMT | O1'-C1' | 3.10 | 1.45 | 1.40 |
| 24 | BC | 5511 | CLA | O2A-CGA | 3.09 | 1.42 | 1.33 |
| 24 | BC | 5508 | CLA | C4C-C3C | 3.09 | 1.50 | 1.45 |
| 36 | AV | 201 | HEM | O2A-CGA | -3.09 | 1.20 | 1.30 |
| 24 | AB | 613 | CLA | CBB-CAB | 3.09 | 1.49 | 1.29 |
| 32 | AM | 102 | LMT | O1'-C1' | 3.08 | 1.45 | 1.40 |
| 24 | AD | 401 | CLA | MG-NC | 3.08 | 2.13 | 2.06 |
| 24 | BC | 5510 | CLA | MG-NC | 3.08 | 2.13 | 2.06 |
| 27 | BB | 5621 | BCR | C29-C30 | 3.08 | 1.61 | 1.54 |
| 32 | AM | 102 | LMT | O1B-C4' | 3.08 | 1.51 | 1.43 |
| 24 | AB | 610 | CLA | CMC-C2C | 3.08 | 1.57 | 1.50 |
| 24 | BB | 5614 | CLA | MG-NC | 3.08 | 2.13 | 2.06 |
| 24 | AA | 404 | CLA | C1B-NB | 3.07 | 1.38 | 1.35 |
| 28 | BA | 5412 | DGD | O1G-C1A | 3.07 | 1.42 | 1.33 |
| 30 | AA | 416 | SQD | O5-C1 | 3.07 | 1.49 | 1.41 |
| 30 | BA | 5414 | SQD | O5-C1 | 3.07 | 1.49 | 1.41 |
| 28 | AB | 628 | DGD | O6E-C1E | 3.07 | 1.49 | 1.41 |
| 28 | BC | 5519 | DGD | C4E-C3E | 3.07 | 1.60 | 1.52 |
| 24 | AC | 511 | CLA | O2A-CGA | 3.07 | 1.42 | 1.33 |
| 24 | AC | 508 | CLA | C4C-C3C | 3.07 | 1.50 | 1.45 |
| 24 | AB | 605 | CLA | O1D-CGD | 3.07 | 1.28 | 1.21 |
| 27 | AA | 410 | BCR | C2-C1 | 3.07 | 1.61 | 1.54 |
| 24 | AC | 513 | CLA | O2A-CGA | 3.07 | 1.42 | 1.33 |
| 30 | AA | 413 | SQD | O3-C3 | 3.07 | 1.50 | 1.43 |
| 24 | AB | 607 | CLA | C1C-NC | 3.06 | 1.42 | 1.37 |
| 24 | BB | 5617 | CLA | CBB-CAB | 3.06 | 1.49 | 1.29 |
| 30 | BA | 5401 | SQD | O3-C3 | 3.06 | 1.50 | 1.43 |
| 24 | AB | 606 | CLA | O1D-CGD | 3.05 | 1.28 | 1.21 |
| 24 | AA | 406 | CLA | C4D-ND | -3.05 | 1.33 | 1.37 |
| 24 | BC | 5501 | CLA | O1D-CGD | 3.04 | 1.28 | 1.21 |
| 24 | AB | 609 | CLA | O1D-CGD | 3.04 | 1.28 | 1.21 |
| 24 | AB | 604 | CLA | CHC-C1C | 3.04 | 1.42 | 1.35 |
| 24 | AB | 606 | CLA | O2A-CGA | 3.04 | 1.42 | 1.33 |
| 31 | BC | 5521 | LMG | O1-C1 | 3.04 | 1.45 | 1.40 |
| 30 | AB | 622 | SQD | O8-S | 3.04 | 1.58 | 1.47 |
| 24 | BB | 5617 | CLA | C1B-NB | 3.04 | 1.37 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | BC | 5519 | DGD | O5D-C6D | -3.04 | 1.38 | 1.43 |
| 27 | BX | 5101 | BCR | C5-C6 | 3.04 | 1.39 | 1.34 |
| 24 | AC | 510 | CLA | C1C-NC | 3.04 | 1.42 | 1.37 |
| 32 | BB | 5627 | LMT | O5B-C1B | 3.04 | 1.49 | 1.41 |
| 27 | BB | 5623 | BCR | C5-C6 | 3.03 | 1.39 | 1.34 |
| 24 | AA | 405 | CLA | C4C-C3C | 3.03 | 1.50 | 1.45 |
| 24 | BA | 5405 | CLA | CHC-C1C | 3.03 | 1.42 | 1.35 |
| 24 | BC | 5507 | CLA | O2A-CGA | 3.03 | 1.42 | 1.33 |
| 24 | BC | 5512 | CLA | CMC-C2C | 3.03 | 1.57 | 1.50 |
| 24 | AB | 616 | CLA | O2A-CGA | 3.03 | 1.42 | 1.33 |
| 24 | AA | 404 | CLA | O1D-CGD | 3.02 | 1.28 | 1.21 |
| 24 | BC | 5504 | CLA | O2A-CGA | 3.02 | 1.42 | 1.33 |
| 24 | BB | 5612 | CLA | CMC-C2C | 3.02 | 1.57 | 1.50 |
| 24 | AB | 606 | CLA | C1D-C2D | 3.02 | 1.51 | 1.45 |
| 24 | BB | 5617 | CLA | O1D-CGD | 3.01 | 1.28 | 1.21 |
| 24 | BB | 5611 | CLA | CBB-CAB | 3.01 | 1.49 | 1.29 |
| 32 | AM | 102 | LMT | C4'-C5' | 3.01 | 1.60 | 1.52 |
| 24 | AA | 405 | CLA | C1C-NC | 3.01 | 1.42 | 1.37 |
| 24 | AB | 604 | CLA | MG-NA | 3.00 | 2.13 | 2.06 |
| 24 | BC | 5508 | CLA | C4D-ND | -3.00 | 1.33 | 1.37 |
| 34 | AD | 402 | PHO | O1D-CGD | 3.00 | 1.28 | 1.21 |
| 24 | BB | 5615 | CLA | C4C-C3C | 3.00 | 1.50 | 1.45 |
| 28 | BA | 5412 | DGD | O5D-C6D | -3.00 | 1.38 | 1.43 |
| 24 | BC | 5506 | CLA | C1C-NC | 3.00 | 1.42 | 1.37 |
| 24 | BD | 5402 | CLA | CMC-C2C | 3.00 | 1.57 | 1.50 |
| 30 | BA | 5414 | SQD | O3-C3 | 3.00 | 1.50 | 1.43 |
| 28 | AH | 101 | DGD | O6D-C1D | 3.00 | 1.49 | 1.41 |
| 24 | BB | 5615 | CLA | O1D-CGD | 3.00 | 1.28 | 1.21 |
| 30 | AB | 627 | SQD | O3-C3 | 2.99 | 1.50 | 1.43 |
| 24 | BB | 5606 | CLA | C1C-NC | 2.99 | 1.42 | 1.37 |
| 24 | AC | 513 | CLA | O1D-CGD | 2.99 | 1.28 | 1.21 |
| 27 | AB | 619 | BCR | C26-C25 | 2.99 | 1.39 | 1.34 |
| 24 | BC | 5505 | CLA | CAA-CBA | -2.99 | 1.43 | 1.52 |
| 24 | BC | 5501 | CLA | CMC-C2C | 2.99 | 1.57 | 1.50 |
| 27 | AD | 406 | BCR | C1-C6 | 2.99 | 1.57 | 1.53 |
| 24 | AB | 608 | CLA | C1C-NC | 2.99 | 1.42 | 1.37 |
| 24 | BC | 5510 | CLA | O1D-CGD | 2.98 | 1.28 | 1.21 |
| 31 | AA | 414 | LMG | O6-C1 | 2.98 | 1.49 | 1.41 |
| 24 | AB | 611 | CLA | O2A-CGA | 2.98 | 1.42 | 1.33 |
| 24 | BB | 5613 | CLA | O1D-CGD | 2.98 | 1.28 | 1.21 |
| 24 | AB | 604 | CLA | C1C-NC | 2.98 | 1.42 | 1.37 |
| 24 | AC | 507 | CLA | O2A-CGA | 2.98 | 1.42 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AB | 615 | CLA | MG-NC | 2.98 | 2.13 | 2.06 |
| 24 | AA | 404 | CLA | CHC-C1C | 2.98 | 1.42 | 1.35 |
| 24 | AC | 505 | CLA | MG-NC | 2.98 | 2.13 | 2.06 |
| 24 | BA | 5407 | CLA | CMC-C2C | 2.98 | 1.57 | 1.50 |
| 27 | BC | 5515 | BCR | C2-C1 | 2.97 | 1.61 | 1.54 |
| 36 | BF | 5101 | HEM | CAA-C2A | 2.97 | 1.56 | 1.52 |
| 31 | BE | 5101 | LMG | O6-C1 | 2.97 | 1.49 | 1.41 |
| 24 | AB | 607 | CLA | CBB-CAB | 2.97 | 1.49 | 1.29 |
| 27 | BA | 5411 | BCR | C2-C1 | 2.97 | 1.60 | 1.54 |
| 24 | AC | 509 | CLA | CMC-C2C | 2.96 | 1.57 | 1.50 |
| 27 | BC | 5516 | BCR | C29-C30 | 2.96 | 1.60 | 1.54 |
| 24 | BA | 5406 | CLA | C1C-NC | 2.96 | 1.42 | 1.37 |
| 24 | AC | 503 | CLA | CMC-C2C | 2.96 | 1.57 | 1.50 |
| 24 | BA | 5405 | CLA | CMC-C2C | 2.96 | 1.57 | 1.50 |
| 24 | BC | 5509 | CLA | CMC-C2C | 2.96 | 1.57 | 1.50 |
| 24 | AA | 405 | CLA | CHC-C1C | 2.96 | 1.42 | 1.35 |
| 32 | AB | 624 | LMT | O5B-C1B | 2.96 | 1.49 | 1.41 |
| 24 | AB | 611 | CLA | MG-NC | 2.95 | 2.13 | 2.06 |
| 24 | BC | 5502 | CLA | O1D-CGD | 2.95 | 1.28 | 1.21 |
| 24 | BD | 5405 | CLA | C1D-C2D | 2.95 | 1.51 | 1.45 |
| 24 | AC | 503 | CLA | MG-NC | 2.95 | 2.13 | 2.06 |
| 24 | BB | 5606 | CLA | CMC-C2C | 2.95 | 1.57 | 1.50 |
| 27 | AX | 101 | BCR | C2-C1 | 2.94 | 1.60 | 1.54 |
| 24 | AB | 604 | CLA | MG-NC | 2.94 | 2.13 | 2.06 |
| 24 | BD | 5405 | CLA | MG-NC | 2.94 | 2.13 | 2.06 |
| 30 | AF | 102 | SQD | O3-C3 | 2.94 | 1.49 | 1.43 |
| 27 | AC | 514 | BCR | C2-C1 | 2.93 | 1.60 | 1.54 |
| 30 | BB | 5625 | SQD | O8-S | 2.93 | 1.58 | 1.47 |
| 27 | BC | 5516 | BCR | C26-C25 | 2.93 | 1.39 | 1.34 |
| 24 | BA | 5405 | CLA | O1D-CGD | 2.93 | 1.28 | 1.21 |
| 24 | AC | 506 | CLA | MG-NA | 2.93 | 2.13 | 2.06 |
| 24 | AB | 605 | CLA | C1C-NC | 2.93 | 1.42 | 1.37 |
| 24 | AB | 609 | CLA | MG-NC | 2.92 | 2.13 | 2.06 |
| 32 | BB | 5603 | LMT | O5'-C1' | 2.92 | 1.49 | 1.41 |
| 24 | AA | 405 | CLA | O2A-CGA | 2.92 | 1.41 | 1.33 |
| 24 | BC | 5506 | CLA | CMC-C2C | 2.92 | 1.57 | 1.50 |
| 24 | BB | 5608 | CLA | MG-NC | 2.92 | 2.13 | 2.06 |
| 27 | BC | 5514 | BCR | C26-C25 | 2.91 | 1.39 | 1.34 |
| 24 | AB | 611 | CLA | CHC-C1C | 2.91 | 1.42 | 1.35 |
| 28 | AE | 101 | DGD | O6E-C1E | 2.91 | 1.49 | 1.41 |
| 30 | BB | 5625 | SQD | C12-C11 | -2.91 | 1.35 | 1.51 |
| 30 | AA | 413 | SQD | O5-C1 | 2.91 | 1.49 | 1.41 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AC | 502 | CLA | O1D-CGD | 2.91 | 1.28 | 1.21 |
| 24 | AA | 407 | CLA | C1D-C2D | 2.91 | 1.51 | 1.45 |
| 31 | AJ | 102 | LMG | O7-C8 | -2.91 | 1.39 | 1.46 |
| 24 | AB | 607 | CLA | C1B-NB | 2.91 | 1.37 | 1.35 |
| 24 | AB | 605 | CLA | CMC-C2C | 2.91 | 1.56 | 1.50 |
| 28 | BH | 5101 | DGD | O6D-C1D | 2.91 | 1.49 | 1.41 |
| 24 | AB | 603 | CLA | CHD-C1D | 2.91 | 1.44 | 1.38 |
| 32 | BD | 5411 | LMT | O1'-C1' | 2.90 | 1.45 | 1.40 |
| 27 | BD | 5407 | BCR | C5-C6 | 2.90 | 1.39 | 1.34 |
| 24 | AD | 404 | CLA | O1D-CGD | 2.90 | 1.28 | 1.21 |
| 31 | BD | 5408 | LMG | O7-C8 | -2.90 | 1.39 | 1.46 |
| 28 | AA | 411 | DGD | O5D-C6D | -2.90 | 1.38 | 1.43 |
| 34 | AD | 402 | PHO | O2A-CGA | 2.89 | 1.41 | 1.33 |
| 24 | BC | 5502 | CLA | C4D-ND | -2.89 | 1.33 | 1.37 |
| 24 | BB | 5619 | CLA | O2A-CGA | 2.89 | 1.41 | 1.33 |
| 24 | AC | 512 | CLA | C1C-NC | 2.89 | 1.42 | 1.37 |
| 30 | BB | 5601 | SQD | O6-C1 | 2.89 | 1.45 | 1.40 |
| 27 | AK | 102 | BCR | C2-C1 | 2.89 | 1.60 | 1.54 |
| 24 | AA | 407 | CLA | MG-NC | 2.88 | 2.13 | 2.06 |
| 24 | BB | 5610 | CLA | C1D-C2D | 2.88 | 1.51 | 1.45 |
| 27 | BA | 5411 | BCR | C5-C6 | 2.88 | 1.39 | 1.34 |
| 24 | BB | 5607 | CLA | CHD-C1D | 2.88 | 1.44 | 1.38 |
| 24 | AA | 405 | CLA | O1D-CGD | 2.88 | 1.28 | 1.21 |
| 30 | AB | 622 | SQD | C12-C11 | -2.87 | 1.35 | 1.51 |
| 31 | AB | 620 | LMG | O6-C1 | 2.87 | 1.49 | 1.41 |
| 24 | BB | 5608 | CLA | CHC-C1C | 2.87 | 1.42 | 1.35 |
| 24 | BC | 5506 | CLA | O1D-CGD | 2.87 | 1.28 | 1.21 |
| 24 | AB | 608 | CLA | CHC-C1C | 2.87 | 1.42 | 1.35 |
| 24 | BC | 5506 | CLA | CHC-C1C | 2.86 | 1.42 | 1.35 |
| 24 | AC | 506 | CLA | O1D-CGD | 2.86 | 1.28 | 1.21 |
| 24 | AD | 404 | CLA | C1D-C2D | 2.86 | 1.51 | 1.45 |
| 24 | AC | 502 | CLA | C4D-ND | -2.86 | 1.33 | 1.37 |
| 24 | AC | 510 | CLA | O1D-CGD | 2.86 | 1.28 | 1.21 |
| 32 | BM | 5101 | LMT | C4'-C5' | 2.86 | 1.60 | 1.52 |
| 27 | AC | 516 | BCR | C26-C25 | 2.85 | 1.39 | 1.34 |
| 24 | BB | 5617 | CLA | CHC-C1C | 2.85 | 1.42 | 1.35 |
| 31 | BC | 5521 | LMG | O6-C1 | 2.85 | 1.49 | 1.41 |
| 30 | AA | 413 | SQD | C17-C16 | -2.85 | 1.35 | 1.51 |
| 24 | AB | 608 | CLA | CMC-C2C | 2.85 | 1.56 | 1.50 |
| 24 | BC | 5504 | CLA | CMC-C2C | 2.85 | 1.56 | 1.50 |
| 24 | AD | 404 | CLA | C1C-NC | 2.85 | 1.42 | 1.37 |
| 30 | BA | 5414 | SQD | O6-C44 | -2.85 | 1.38 | 1.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 30 | BB | 5625 | SQD | C11-C10 | -2.85 | 1.35 | 1.51 |
| 30 | BB | 5601 | SQD | C12-C11 | -2.84 | 1.35 | 1.51 |
| 24 | AC | 511 | CLA | O1D-CGD | 2.84 | 1.28 | 1.21 |
| 30 | BF | 5102 | SQD | O3-C3 | 2.84 | 1.49 | 1.43 |
| 28 | BC | 5519 | DGD | O5D-C1E | 2.84 | 1.45 | 1.40 |
| 24 | BB | 5609 | CLA | O1D-CGD | 2.84 | 1.28 | 1.21 |
| 24 | BC | 5503 | CLA | C1D-C2D | 2.84 | 1.50 | 1.45 |
| 24 | AC | 512 | CLA | CMC-C2C | 2.83 | 1.56 | 1.50 |
| 35 | BD | 5406 | PL9 | C3-C4 | 2.83 | 1.54 | 1.49 |
| 24 | AB | 615 | CLA | CMC-C2C | 2.83 | 1.56 | 1.50 |
| 24 | AC | 509 | CLA | CHC-C1C | 2.83 | 1.42 | 1.35 |
| 24 | AB | 611 | CLA | C4D-ND | -2.83 | 1.33 | 1.37 |
| 24 | BB | 5611 | CLA | CHC-C1C | 2.83 | 1.42 | 1.35 |
| 24 | BC | 5509 | CLA | O2A-CGA | 2.83 | 1.41 | 1.33 |
| 32 | AB | 630 | LMT | O1B-C4' | 2.83 | 1.51 | 1.43 |
| 24 | BB | 5607 | CLA | CBA-CGA | 2.83 | 1.59 | 1.50 |
| 34 | AD | 403 | PHO | C3A-C2A | -2.82 | 1.52 | 1.54 |
| 28 | AA | 411 | DGD | O6D-C5D | 2.82 | 1.51 | 1.44 |
| 24 | BC | 5503 | CLA | C1C-NC | 2.82 | 1.42 | 1.37 |
| 31 | BA | 5402 | LMG | O1-C1 | 2.82 | 1.45 | 1.40 |
| 24 | BB | 5610 | CLA | O1D-CGD | 2.82 | 1.28 | 1.21 |
| 24 | BC | 5503 | CLA | CMC-C2C | 2.82 | 1.56 | 1.50 |
| 32 | BI | 5102 | LMT | O1'-C1' | 2.82 | 1.45 | 1.40 |
| 30 | AB | 627 | SQD | C15-C14 | -2.82 | 1.35 | 1.51 |
| 30 | BB | 5601 | SQD | O8-S | 2.82 | 1.57 | 1.47 |
| 24 | AC | 505 | CLA | CHC-C1C | 2.82 | 1.42 | 1.35 |
| 31 | BA | 5402 | LMG | O6-C1 | 2.81 | 1.49 | 1.41 |
| 24 | AB | 615 | CLA | O2A-CGA | 2.81 | 1.41 | 1.33 |
| 27 | BB | 5621 | BCR | C1-C6 | 2.81 | 1.57 | 1.53 |
| 31 | BC | 5520 | LMG | O6-C1 | 2.81 | 1.49 | 1.41 |
| 24 | AB | 603 | CLA | CBA-CGA | 2.81 | 1.58 | 1.50 |
| 30 | BB | 5601 | SQD | C15-C14 | -2.81 | 1.35 | 1.51 |
| 28 | BE | 5102 | DGD | O6E-C1E | 2.80 | 1.49 | 1.41 |
| 24 | AB | 602 | CLA | CMC-C2C | 2.80 | 1.56 | 1.50 |
| 36 | AF | 101 | HEM | O2A-CGA | -2.80 | 1.21 | 1.30 |
| 24 | BB | 5618 | CLA | CMC-C2C | 2.80 | 1.56 | 1.50 |
| 24 | BB | 5615 | CLA | CHC-C1C | 2.80 | 1.42 | 1.35 |
| 24 | AB | 603 | CLA | O1D-CGD | 2.80 | 1.28 | 1.21 |
| 24 | BB | 5620 | CLA | O2A-CGA | 2.80 | 1.41 | 1.33 |
| 30 | BB | 5601 | SQD | C16-C15 | -2.80 | 1.35 | 1.51 |
| 30 | AB | 627 | SQD | C20-C19 | -2.80 | 1.35 | 1.51 |
| 24 | AD | 404 | CLA | MG-NC | 2.79 | 2.12 | 2.06 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 30 | BA | 5414 | SQD | C17-C16 | -2.79 | 1.35 | 1.51 |
| 24 | BC | 5502 | CLA | CHC-C1C | 2.79 | 1.42 | 1.35 |
| 30 | AA | 413 | SQD | C15-C14 | -2.79 | 1.35 | 1.51 |
| 27 | BB | 5621 | BCR | C30-C25 | 2.79 | 1.57 | 1.53 |
| 24 | BB | 5605 | CLA | CMC-C2C | 2.79 | 1.56 | 1.50 |
| 30 | AB | 622 | SQD | C11-C10 | -2.79 | 1.35 | 1.51 |
| 24 | BB | 5615 | CLA | O2A-CGA | 2.78 | 1.41 | 1.33 |
| 30 | BB | 5601 | SQD | O3-C3 | 2.78 | 1.49 | 1.43 |
| 30 | AB | 627 | SQD | C16-C15 | -2.78 | 1.36 | 1.51 |
| 24 | BD | 5405 | CLA | O2A-CGA | 2.78 | 1.41 | 1.33 |
| 24 | BB | 5607 | CLA | O1D-CGD | 2.78 | 1.28 | 1.21 |
| 35 | BD | 5406 | PL9 | C38-C39 | 2.78 | 1.39 | 1.33 |
| 24 | BA | 5406 | CLA | C4C-C3C | 2.78 | 1.49 | 1.45 |
| 24 | AB | 606 | CLA | C1C-NC | 2.78 | 1.42 | 1.37 |
| 27 | AB | 617 | BCR | C1-C6 | 2.78 | 1.57 | 1.53 |
| 24 | BB | 5608 | CLA | O1D-CGD | 2.78 | 1.28 | 1.21 |
| 24 | BB | 5619 | CLA | O1D-CGD | 2.78 | 1.28 | 1.21 |
| 30 | AB | 627 | SQD | C12-C11 | -2.77 | 1.36 | 1.51 |
| 31 | BE | 5101 | LMG | O1-C1 | 2.77 | 1.44 | 1.40 |
| 24 | BC | 5505 | CLA | CHC-C1C | 2.77 | 1.42 | 1.35 |
| 24 | BC | 5503 | CLA | O1D-CGD | 2.77 | 1.28 | 1.21 |
| 24 | AB | 601 | CLA | CMC-C2C | 2.77 | 1.56 | 1.50 |
| 32 | AB | 629 | LMT | O5'-C1' | 2.77 | 1.48 | 1.41 |
| 30 | AA | 413 | SQD | C8-C7 | 2.77 | 1.58 | 1.50 |
| 30 | BF | 5102 | SQD | C17-C16 | -2.77 | 1.36 | 1.51 |
| 30 | BA | 5414 | SQD | C33-C32 | -2.77 | 1.36 | 1.51 |
| 28 | BC | 5519 | DGD | O6E-C1E | 2.76 | 1.48 | 1.41 |
| 30 | BA | 5414 | SQD | C15-C14 | -2.76 | 1.36 | 1.51 |
| 36 | BF | 5101 | HEM | O2A-CGA | -2.76 | 1.21 | 1.30 |
| 30 | BB | 5601 | SQD | C20-C19 | -2.76 | 1.36 | 1.51 |
| 24 | AB | 604 | CLA | O2A-CGA | 2.76 | 1.41 | 1.33 |
| 24 | AB | 608 | CLA | CBA-CGA | 2.76 | 1.58 | 1.50 |
| 24 | BA | 5408 | CLA | O1D-CGD | 2.76 | 1.28 | 1.21 |
| 27 | BB | 5622 | BCR | C5-C6 | 2.75 | 1.39 | 1.34 |
| 28 | AC | 517 | DGD | O3G-C3G | -2.75 | 1.38 | 1.43 |
| 24 | AC | 512 | CLA | O1D-CGD | 2.75 | 1.28 | 1.21 |
| 24 | AB | 612 | CLA | CMC-C2C | 2.75 | 1.56 | 1.50 |
| 30 | AB | 627 | SQD | C19-C18 | -2.75 | 1.36 | 1.51 |
| 31 | AA | 417 | LMG | O6-C1 | 2.75 | 1.48 | 1.41 |
| 28 | AE | 101 | DGD | O6E-C5E | 2.75 | 1.51 | 1.44 |
| 27 | BB | 5622 | BCR | C14-C13 | 2.74 | 1.39 | 1.35 |
| 30 | BB | 5601 | SQD | C11-C10 | -2.74 | 1.36 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BC | 5506 | CLA | C4D-ND | -2.74 | 1.33 | 1.37 |
| 30 | AB | 627 | SQD | C14-C13 | -2.74 | 1.36 | 1.51 |
| 30 | AA | 413 | SQD | C16-C15 | -2.74 | 1.36 | 1.51 |
| 24 | BA | 5407 | CLA | C1C-NC | 2.74 | 1.41 | 1.37 |
| 31 | BI | 5101 | LMG | O6-C1 | 2.74 | 1.48 | 1.41 |
| 24 | BB | 5612 | CLA | CBA-CGA | 2.74 | 1.58 | 1.50 |
| 32 | AB | 630 | LMT | O1'-C1' | 2.73 | 1.44 | 1.40 |
| 24 | AA | 407 | CLA | O1D-CGD | 2.73 | 1.28 | 1.21 |
| 24 | BC | 5513 | CLA | CHD-C4C | 2.73 | 1.45 | 1.39 |
| 24 | AB | 612 | CLA | O2A-CGA | 2.73 | 1.41 | 1.33 |
| 30 | BB | 5601 | SQD | C14-C13 | -2.73 | 1.36 | 1.51 |
| 24 | AC | 501 | CLA | MG-NC | 2.73 | 2.12 | 2.06 |
| 35 | BD | 5406 | PL9 | C18-C19 | 2.72 | 1.39 | 1.33 |
| 24 | BB | 5619 | CLA | MG-NC | 2.72 | 2.12 | 2.06 |
| 30 | AA | 413 | SQD | O8-S | 2.72 | 1.57 | 1.47 |
| 31 | AD | 408 | LMG | O1-C1 | 2.72 | 1.44 | 1.40 |
| 30 | BA | 5414 | SQD | C16-C15 | -2.72 | 1.36 | 1.51 |
| 30 | AB | 627 | SQD | O8-S | 2.72 | 1.57 | 1.47 |
| 30 | BA | 5414 | SQD | O8-S | 2.72 | 1.57 | 1.47 |
| 24 | BB | 5612 | CLA | C1C-NC | 2.72 | 1.41 | 1.37 |
| 30 | AA | 413 | SQD | C33-C32 | -2.72 | 1.36 | 1.51 |
| 24 | BB | 5609 | CLA | CHC-C1C | 2.72 | 1.41 | 1.35 |
| 24 | AB | 613 | CLA | O1D-CGD | 2.72 | 1.28 | 1.21 |
| 24 | AB | 612 | CLA | C2A-C1A | -2.72 | 1.46 | 1.52 |
| 24 | BB | 5616 | CLA | C2A-C1A | -2.72 | 1.46 | 1.52 |
| 24 | AB | 613 | CLA | C1C-NC | 2.72 | 1.41 | 1.37 |
| 35 | AD | 405 | PL9 | C18-C19 | 2.71 | 1.39 | 1.33 |
| 24 | AC | 506 | CLA | C4D-ND | -2.71 | 1.34 | 1.37 |
| 32 | BB | 5604 | LMT | O1'-C1' | 2.71 | 1.44 | 1.40 |
| 24 | AB | 602 | CLA | CHC-C1C | 2.71 | 1.41 | 1.35 |
| 24 | AC | 506 | CLA | C1C-NC | 2.71 | 1.41 | 1.37 |
| 24 | AA | 407 | CLA | CMC-C2C | 2.71 | 1.56 | 1.50 |
| 24 | BC | 5510 | CLA | CMC-C2C | 2.71 | 1.56 | 1.50 |
| 28 | AC | 517 | DGD | O6D-C5D | 2.71 | 1.50 | 1.44 |
| 30 | BF | 5102 | SQD | C11-C10 | -2.70 | 1.36 | 1.51 |
| 24 | BB | 5619 | CLA | CMC-C2C | 2.70 | 1.56 | 1.50 |
| 27 | BB | 5621 | BCR | C23-C22 | -2.70 | 1.40 | 1.45 |
| 28 | BE | 5102 | DGD | O6D-C1D | 2.70 | 1.48 | 1.41 |
| 30 | AB | 627 | SQD | C11-C10 | -2.70 | 1.36 | 1.51 |
| 30 | BB | 5601 | SQD | C17-C16 | -2.70 | 1.36 | 1.51 |
| 24 | BB | 5609 | CLA | CMC-C2C | 2.70 | 1.56 | 1.50 |
| 30 | BF | 5102 | SQD | C16-C15 | -2.70 | 1.36 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AC | 502 | CLA | CHC-C1C | 2.70 | 1.41 | 1.35 |
| 31 | BB | 5624 | LMG | O6-C1 | 2.70 | 1.48 | 1.41 |
| 24 | BC | 5501 | CLA | CBA-CGA | 2.69 | 1.58 | 1.50 |
| 24 | AB | 608 | CLA | CAA-C2A | -2.69 | 1.49 | 1.54 |
| 24 | BB | 5607 | CLA | CHD-C4C | 2.69 | 1.45 | 1.39 |
| 27 | BC | 5516 | BCR | C19-C18 | -2.69 | 1.40 | 1.45 |
| 24 | AB | 607 | CLA | CBA-CGA | 2.69 | 1.58 | 1.50 |
| 27 | AC | 516 | BCR | C29-C30 | 2.68 | 1.60 | 1.54 |
| 36 | AV | 201 | HEM | C1B-C2B | -2.68 | 1.39 | 1.44 |
| 31 | BC | 5520 | LMG | O1-C1 | 2.68 | 1.44 | 1.40 |
| 27 | BT | 5101 | BCR | C26-C25 | 2.68 | 1.39 | 1.34 |
| 30 | AB | 627 | SQD | C13-C12 | -2.68 | 1.36 | 1.51 |
| 30 | AF | 102 | SQD | C17-C16 | -2.68 | 1.36 | 1.51 |
| 24 | AC | 506 | CLA | CHC-C1C | 2.68 | 1.41 | 1.35 |
| 28 | AE | 101 | DGD | O6D-C1D | 2.68 | 1.48 | 1.41 |
| 30 | BB | 5601 | SQD | C19-C18 | -2.68 | 1.36 | 1.51 |
| 32 | AB | 623 | LMT | O5'-C1' | 2.68 | 1.48 | 1.41 |
| 35 | AD | 405 | PL9 | C38-C39 | 2.68 | 1.39 | 1.33 |
| 30 | AF | 102 | SQD | C11-C10 | -2.68 | 1.36 | 1.51 |
| 24 | BC | 5511 | CLA | C4D-ND | -2.67 | 1.34 | 1.37 |
| 30 | BA | 5414 | SQD | C11-C10 | -2.67 | 1.36 | 1.51 |
| 30 | AA | 416 | SQD | C17-C16 | -2.67 | 1.36 | 1.51 |
| 24 | BB | 5608 | CLA | O2A-CGA | 2.67 | 1.41 | 1.33 |
| 32 | BB | 5604 | LMT | O1B-C1B | 2.66 | 1.49 | 1.41 |
| 24 | BD | 5402 | CLA | O2A-CGA | 2.66 | 1.41 | 1.33 |
| 31 | BD | 5410 | LMG | O6-C1 | 2.66 | 1.48 | 1.41 |
| 36 | BF | 5101 | HEM | CBA-CGA | 2.66 | 1.56 | 1.50 |
| 31 | AI | 101 | LMG | O6-C1 | 2.66 | 1.48 | 1.41 |
| 28 | BA | 5412 | DGD | O6D-C5D | 2.66 | 1.50 | 1.44 |
| 24 | BC | 5504 | CLA | C4D-ND | -2.66 | 1.34 | 1.37 |
| 30 | BB | 5601 | SQD | C13-C12 | -2.66 | 1.36 | 1.51 |
| 30 | BA | 5414 | SQD | C12-C11 | -2.66 | 1.36 | 1.51 |
| 24 | BC | 5510 | CLA | C1C-NC | 2.66 | 1.41 | 1.37 |
| 24 | BB | 5612 | CLA | O1D-CGD | 2.66 | 1.27 | 1.21 |
| 24 | BA | 5406 | CLA | C1D-C2D | 2.65 | 1.50 | 1.45 |
| 24 | BA | 5408 | CLA | C1D-C2D | 2.65 | 1.50 | 1.45 |
| 24 | BB | 5610 | CLA | C1C-NC | 2.65 | 1.41 | 1.37 |
| 24 | AB | 614 | CLA | C1C-NC | 2.65 | 1.41 | 1.37 |
| 24 | AB | 603 | CLA | CHD-C4C | 2.65 | 1.45 | 1.39 |
| 30 | BB | 5625 | SQD | O5-C1 | 2.65 | 1.48 | 1.41 |
| 27 | BB | 5623 | BCR | C26-C25 | 2.65 | 1.39 | 1.34 |
| 30 | BF | 5102 | SQD | O8-S | 2.65 | 1.57 | 1.47 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BB | 5618 | CLA | O1D-CGD | 2.65 | 1.27 | 1.21 |
| 28 | BE | 5102 | DGD | C3G-C2G | 2.65 | 1.58 | 1.50 |
| 32 | AB | 624 | LMT | O5'-C1' | 2.65 | 1.48 | 1.41 |
| 30 | BA | 5414 | SQD | C19-C18 | -2.65 | 1.36 | 1.51 |
| 24 | AB | 611 | CLA | O1D-CGD | 2.64 | 1.27 | 1.21 |
| 32 | AD | 409 | LMT | O1B-C1B | 2.64 | 1.49 | 1.41 |
| 24 | BA | 5406 | CLA | O1D-CGD | 2.64 | 1.27 | 1.21 |
| 24 | AC | 501 | CLA | C5-C3 | 2.64 | 1.56 | 1.51 |
| 24 | AC | 503 | CLA | C1C-NC | 2.64 | 1.41 | 1.37 |
| 24 | BB | 5611 | CLA | CBA-CGA | 2.64 | 1.58 | 1.50 |
| 24 | BB | 5613 | CLA | MG-NC | 2.64 | 2.12 | 2.06 |
| 30 | BF | 5102 | SQD | C15-C14 | -2.64 | 1.36 | 1.51 |
| 30 | AB | 622 | SQD | O5-C1 | 2.64 | 1.48 | 1.41 |
| 28 | AE | 101 | DGD | O6D-C5D | 2.64 | 1.50 | 1.44 |
| 24 | BB | 5610 | CLA | O2A-CGA | 2.64 | 1.41 | 1.33 |
| 30 | AB | 627 | SQD | C17-C16 | -2.63 | 1.36 | 1.51 |
| 24 | BB | 5606 | CLA | O2A-CGA | 2.63 | 1.41 | 1.33 |
| 24 | BB | 5613 | CLA | CMC-C2C | 2.63 | 1.56 | 1.50 |
| 24 | BD | 5405 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 24 | BB | 5610 | CLA | CHC-C1C | 2.63 | 1.41 | 1.35 |
| 30 | AA | 413 | SQD | C19-C18 | -2.63 | 1.36 | 1.51 |
| 30 | BB | 5625 | SQD | C16-C15 | -2.63 | 1.36 | 1.51 |
| 24 | AB | 612 | CLA | C1D-C2D | 2.63 | 1.50 | 1.45 |
| 36 | AF | 101 | HEM | C1B-C2B | -2.62 | 1.39 | 1.44 |
| 24 | BA | 5405 | CLA | MG-NC | 2.62 | 2.12 | 2.06 |
| 24 | BA | 5406 | CLA | OBD-CAD | 2.62 | 1.27 | 1.22 |
| 30 | AF | 102 | SQD | C12-C11 | -2.62 | 1.36 | 1.51 |
| 35 | AD | 405 | PL9 | C3-C4 | 2.62 | 1.53 | 1.49 |
| 30 | AA | 416 | SQD | C16-C15 | -2.62 | 1.36 | 1.51 |
| 30 | BF | 5102 | SQD | C12-C11 | -2.62 | 1.36 | 1.51 |
| 24 | BB | 5612 | CLA | CHC-C1C | 2.62 | 1.41 | 1.35 |
| 30 | BA | 5401 | SQD | C36-C35 | -2.62 | 1.36 | 1.51 |
| 24 | AB | 609 | CLA | C4D-ND | -2.61 | 1.34 | 1.37 |
| 30 | AA | 413 | SQD | C12-C11 | -2.61 | 1.36 | 1.51 |
| 24 | BA | 5407 | CLA | C1D-C2D | 2.61 | 1.50 | 1.45 |
| 24 | BB | 5610 | CLA | CMC-C2C | 2.61 | 1.56 | 1.50 |
| 24 | BC | 5508 | CLA | O1D-CGD | 2.60 | 1.27 | 1.21 |
| 24 | BD | 5405 | CLA | C1C-NC | 2.60 | 1.41 | 1.37 |
| 24 | AB | 608 | CLA | MG-NC | 2.60 | 2.12 | 2.06 |
| 24 | AB | 615 | CLA | O1D-CGD | 2.60 | 1.27 | 1.21 |
| 36 | BF | 5101 | HEM | C1B-C2B | -2.60 | 1.39 | 1.44 |
| 24 | BC | 5502 | CLA | CMC-C2C | 2.60 | 1.56 | 1.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AC | 503 | CLA | O1D-CGD | 2.60 | 1.27 | 1.21 |
| 24 | AB | 612 | CLA | O1D-CGD | 2.60 | 1.27 | 1.21 |
| 24 | BC | 5507 | CLA | C1C-NC | 2.60 | 1.41 | 1.37 |
| 30 | AB | 627 | SQD | O5-C1 | 2.60 | 1.48 | 1.41 |
| 30 | AB | 622 | SQD | C16-C15 | -2.59 | 1.37 | 1.51 |
| 24 | BB | 5617 | CLA | C1D-C2D | 2.59 | 1.50 | 1.45 |
| 24 | AC | 504 | CLA | O2A-CGA | 2.59 | 1.40 | 1.33 |
| 31 | AB | 621 | LMG | O6-C1 | 2.59 | 1.48 | 1.41 |
| 36 | BV | 5201 | HEM | C1B-C2B | -2.59 | 1.39 | 1.44 |
| 36 | BV | 5201 | HEM | CAA-C2A | 2.59 | 1.55 | 1.52 |
| 28 | AH | 101 | DGD | O6E-C1E | 2.59 | 1.48 | 1.41 |
| 32 | BD | 5411 | LMT | C4'-C5' | 2.59 | 1.59 | 1.52 |
| 30 | AA | 416 | SQD | C19-C18 | -2.59 | 1.37 | 1.51 |
| 28 | AA | 411 | DGD | C3G-C2G | 2.59 | 1.58 | 1.50 |
| 30 | AA | 416 | SQD | C12-C11 | -2.59 | 1.37 | 1.51 |
| 24 | BB | 5608 | CLA | C4D-ND | -2.59 | 1.34 | 1.37 |
| 31 | BM | 5102 | LMG | O1-C1 | 2.59 | 1.44 | 1.40 |
| 32 | AB | 630 | LMT | O1B-C1B | 2.58 | 1.49 | 1.41 |
| 24 | BC | 5501 | CLA | C1C-NC | 2.58 | 1.41 | 1.37 |
| 24 | BC | 5512 | CLA | O2A-CGA | 2.58 | 1.40 | 1.33 |
| 27 | AX | 101 | BCR | C5-C6 | 2.58 | 1.38 | 1.34 |
| 24 | BB | 5607 | CLA | CMC-C2C | 2.58 | 1.56 | 1.50 |
| 24 | AB | 608 | CLA | O1D-CGD | 2.58 | 1.27 | 1.21 |
| 30 | AF | 102 | SQD | C15-C14 | -2.58 | 1.37 | 1.51 |
| 32 | AI | 102 | LMT | O1'-C1' | 2.58 | 1.44 | 1.40 |
| 30 | BB | 5601 | SQD | O5-C1 | 2.58 | 1.48 | 1.41 |
| 24 | BC | 5513 | CLA | CHD-C1D | 2.58 | 1.43 | 1.38 |
| 24 | AD | 401 | CLA | O1D-CGD | 2.58 | 1.27 | 1.21 |
| 30 | BA | 5401 | SQD | C12-C11 | -2.58 | 1.37 | 1.51 |
| 30 | AB | 627 | SQD | O6-C1 | 2.58 | 1.44 | 1.40 |
| 24 | BA | 5406 | CLA | O2A-CGA | 2.57 | 1.40 | 1.33 |
| 32 | AB | 630 | LMT | O5'-C1' | 2.57 | 1.48 | 1.41 |
| 24 | AB | 605 | CLA | MG-NC | 2.57 | 2.12 | 2.06 |
| 24 | BB | 5608 | CLA | CMC-C2C | 2.57 | 1.56 | 1.50 |
| 24 | AB | 604 | CLA | C4D-ND | -2.57 | 1.34 | 1.37 |
| 24 | AB | 603 | CLA | CMC-C2C | 2.57 | 1.56 | 1.50 |
| 31 | AD | 408 | LMG | O6-C1 | 2.57 | 1.48 | 1.41 |
| 28 | AC | 519 | DGD | O3G-C3G | 2.57 | 1.48 | 1.43 |
| 30 | AA | 413 | SQD | C32-C31 | -2.57 | 1.37 | 1.51 |
| 24 | AA | 407 | CLA | CHC-C1C | 2.57 | 1.41 | 1.35 |
| 24 | AB | 607 | CLA | O1D-CGD | 2.57 | 1.27 | 1.21 |
| 24 | AD | 404 | CLA | O2A-CGA | 2.57 | 1.40 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | BH | 5101 | DGD | C1G-C2G | 2.57 | 1.58 | 1.50 |
| 30 | AB | 622 | SQD | C13-C12 | -2.57 | 1.37 | 1.51 |
| 31 | AM | 101 | LMG | O1-C1 | 2.57 | 1.44 | 1.40 |
| 24 | BB | 5612 | CLA | CAA-C2A | -2.57 | 1.49 | 1.54 |
| 32 | BI | 5102 | LMT | O1B-C1B | 2.57 | 1.49 | 1.41 |
| 24 | BB | 5615 | CLA | C2A-C1A | -2.56 | 1.46 | 1.52 |
| 24 | BA | 5407 | CLA | O2A-CGA | 2.56 | 1.40 | 1.33 |
| 30 | AF | 102 | SQD | C16-C15 | -2.56 | 1.37 | 1.51 |
| 30 | BA | 5401 | SQD | C33-C32 | -2.56 | 1.37 | 1.51 |
| 24 | BC | 5507 | CLA | O1D-CGD | 2.56 | 1.27 | 1.21 |
| 30 | BB | 5625 | SQD | C13-C12 | -2.56 | 1.37 | 1.51 |
| 24 | AC | 504 | CLA | CMC-C2C | 2.56 | 1.56 | 1.50 |
| 30 | AA | 416 | SQD | C36-C35 | -2.56 | 1.37 | 1.51 |
| 24 | AC | 502 | CLA | C1D-C2D | 2.56 | 1.50 | 1.45 |
| 24 | AB | 607 | CLA | CMC-C2C | 2.56 | 1.56 | 1.50 |
| 24 | BB | 5617 | CLA | CMC-C2C | 2.56 | 1.56 | 1.50 |
| 27 | AC | 516 | BCR | C19-C18 | -2.56 | 1.40 | 1.45 |
| 30 | BA | 5414 | SQD | C14-C13 | -2.56 | 1.37 | 1.51 |
| 32 | BB | 5626 | LMT | C4'-C5' | 2.55 | 1.59 | 1.52 |
| 32 | BB | 5626 | LMT | O5'-C1' | 2.55 | 1.48 | 1.41 |
| 24 | AB | 606 | CLA | MG-NC | 2.55 | 2.12 | 2.06 |
| 24 | AB | 606 | CLA | CHC-C1C | 2.55 | 1.41 | 1.35 |
| 24 | AC | 506 | CLA | CMC-C2C | 2.54 | 1.56 | 1.50 |
| 30 | BA | 5401 | SQD | C17-C16 | -2.54 | 1.37 | 1.51 |
| 24 | AC | 508 | CLA | O2A-CGA | 2.54 | 1.40 | 1.33 |
| 24 | AB | 607 | CLA | C3B-CAB | -2.54 | 1.42 | 1.47 |
| 30 | BA | 5401 | SQD | C15-C14 | -2.54 | 1.37 | 1.51 |
| 24 | AB | 613 | CLA | CHC-C1C | 2.54 | 1.41 | 1.35 |
| 30 | BA | 5401 | SQD | C8-C7 | 2.54 | 1.58 | 1.50 |
| 32 | BM | 5101 | LMT | O1B-C1B | 2.54 | 1.48 | 1.41 |
| 30 | AA | 413 | SQD | C14-C13 | -2.54 | 1.37 | 1.51 |
| 24 | BC | 5507 | CLA | C1D-C2D | 2.54 | 1.50 | 1.45 |
| 28 | AE | 101 | DGD | C3G-C2G | 2.54 | 1.58 | 1.50 |
| 30 | AA | 416 | SQD | O8-S | 2.54 | 1.56 | 1.47 |
| 32 | BC | 5522 | LMT | C4'-C5' | 2.54 | 1.59 | 1.52 |
| 24 | AB | 602 | CLA | O1D-CGD | 2.54 | 1.27 | 1.21 |
| 30 | AA | 413 | SQD | C11-C10 | -2.54 | 1.37 | 1.51 |
| 28 | BH | 5101 | DGD | O6E-C1E | 2.54 | 1.48 | 1.41 |
| 27 | AB | 619 | BCR | C23-C22 | -2.54 | 1.40 | 1.45 |
| 24 | BB | 5605 | CLA | C1C-NC | 2.53 | 1.41 | 1.37 |
| 24 | BC | 5508 | CLA | C1C-NC | 2.53 | 1.41 | 1.37 |
| 24 | BC | 5511 | CLA | CHD-C4C | 2.53 | 1.45 | 1.39 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 32 | BB | 5627 | LMT | C4'-C5' | 2.53 | 1.59 | 1.52 |
| 24 | BB | 5617 | CLA | O2A-CGA | 2.53 | 1.40 | 1.33 |
| 30 | BA | 5401 | SQD | C16-C15 | -2.53 | 1.37 | 1.51 |
| 24 | BB | 5609 | CLA | C4D-ND | -2.53 | 1.34 | 1.37 |
| 30 | AA | 413 | SQD | C18-C17 | -2.53 | 1.37 | 1.51 |
| 30 | AA | 413 | SQD | C20-C19 | -2.52 | 1.37 | 1.51 |
| 24 | BC | 5507 | CLA | CMC-C2C | 2.52 | 1.56 | 1.50 |
| 30 | BB | 5601 | SQD | C18-C17 | -2.52 | 1.37 | 1.51 |
| 24 | AA | 405 | CLA | MG-NC | 2.52 | 2.12 | 2.06 |
| 24 | AA | 406 | CLA | C1C-NC | 2.52 | 1.41 | 1.37 |
| 24 | BB | 5611 | CLA | C1D-C2D | 2.52 | 1.50 | 1.45 |
| 24 | AC | 513 | CLA | CMC-C2C | 2.52 | 1.56 | 1.50 |
| 36 | AV | 201 | HEM | CAA-C2A | 2.52 | 1.55 | 1.52 |
| 24 | BB | 5616 | CLA | CMC-C2C | 2.52 | 1.56 | 1.50 |
| 30 | BA | 5414 | SQD | C20-C19 | -2.52 | 1.37 | 1.51 |
| 27 | BC | 5515 | BCR | C19-C18 | -2.51 | 1.40 | 1.45 |
| 24 | AB | 614 | CLA | CMC-C2C | 2.51 | 1.56 | 1.50 |
| 24 | AB | 602 | CLA | O2A-CGA | 2.51 | 1.40 | 1.33 |
| 30 | BA | 5414 | SQD | C8-C7 | 2.51 | 1.58 | 1.50 |
| 24 | AC | 501 | CLA | O1D-CGD | 2.51 | 1.27 | 1.21 |
| 24 | AC | 501 | CLA | C1D-C2D | 2.51 | 1.50 | 1.45 |
| 28 | AA | 411 | DGD | C4E-C3E | 2.51 | 1.58 | 1.52 |
| 30 | AA | 416 | SQD | C15-C14 | -2.50 | 1.37 | 1.51 |
| 31 | AC | 520 | LMG | O6-C1 | 2.50 | 1.48 | 1.41 |
| 30 | AA | 416 | SQD | C33-C32 | -2.50 | 1.37 | 1.51 |
| 24 | BB | 5610 | CLA | MG-NC | 2.50 | 2.12 | 2.06 |
| 24 | BC | 5504 | CLA | O1D-CGD | 2.50 | 1.27 | 1.21 |
| 24 | BD | 5402 | CLA | O1D-CGD | 2.50 | 1.27 | 1.21 |
| 30 | BA | 5414 | SQD | C32-C31 | -2.50 | 1.37 | 1.51 |
| 28 | AH | 101 | DGD | C1G-C2G | 2.50 | 1.58 | 1.50 |
| 32 | BD | 5411 | LMT | O1B-C1B | 2.50 | 1.48 | 1.41 |
| 30 | AB | 622 | SQD | C44-C45 | 2.49 | 1.58 | 1.50 |
| 24 | BB | 5611 | CLA | CMC-C2C | 2.49 | 1.56 | 1.50 |
| 24 | BB | 5609 | CLA | C1C-NC | 2.49 | 1.41 | 1.37 |
| 30 | BB | 5625 | SQD | C15-C14 | -2.49 | 1.37 | 1.51 |
| 35 | BD | 5406 | PL9 | C27-C28 | 2.49 | 1.58 | 1.50 |
| 30 | AB | 622 | SQD | C15-C14 | -2.48 | 1.37 | 1.51 |
| 30 | BA | 5401 | SQD | C13-C12 | -2.48 | 1.37 | 1.51 |
| 24 | BC | 5502 | CLA | C1D-C2D | 2.48 | 1.50 | 1.45 |
| 28 | BC | 5518 | DGD | O2G-C1B | 2.48 | 1.41 | 1.34 |
| 31 | BD | 5408 | LMG | O6-C1 | 2.48 | 1.48 | 1.41 |
| 28 | BA | 5412 | DGD | C3G-C2G | 2.48 | 1.58 | 1.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | AB | 605 | CLA | C4D-ND | -2.47 | 1.34 | 1.37 |
| 30 | BA | 5401 | SQD | C32-C31 | -2.47 | 1.37 | 1.51 |
| 31 | BM | 5102 | LMG | O7-C10 | 2.47 | 1.41 | 1.34 |
| 24 | AC | 513 | CLA | C1D-C2D | 2.47 | 1.50 | 1.45 |
| 28 | AE | 101 | DGD | O2G-C2G | 2.47 | 1.52 | 1.46 |
| 32 | AB | 630 | LMT | C4'-C5' | 2.47 | 1.59 | 1.52 |
| 24 | AB | 614 | CLA | O1D-CGD | 2.47 | 1.27 | 1.21 |
| 24 | AB | 608 | CLA | C1D-C2D | 2.47 | 1.50 | 1.45 |
| 24 | AC | 510 | CLA | CMC-C2C | 2.47 | 1.56 | 1.50 |
| 24 | AC | 513 | CLA | CHD-C1D | 2.47 | 1.43 | 1.38 |
| 24 | BB | 5613 | CLA | CHC-C1C | 2.46 | 1.41 | 1.35 |
| 28 | BE | 5102 | DGD | O6E-C5E | 2.46 | 1.50 | 1.44 |
| 30 | BB | 5625 | SQD | C14-C13 | -2.46 | 1.37 | 1.51 |
| 30 | BA | 5414 | SQD | C13-C12 | -2.46 | 1.37 | 1.51 |
| 34 | BD | 5403 | PHO | O2A-CGA | 2.46 | 1.40 | 1.33 |
| 32 | BB | 5603 | LMT | O1B-C4' | 2.46 | 1.50 | 1.43 |
| 27 | AX | 101 | BCR | C38-C26 | 2.46 | 1.55 | 1.50 |
| 28 | AC | 519 | DGD | C4E-C3E | 2.46 | 1.58 | 1.52 |
| 30 | BA | 5414 | SQD | C18-C17 | -2.46 | 1.37 | 1.51 |
| 24 | BB | 5612 | CLA | C1D-C2D | 2.46 | 1.50 | 1.45 |
| 24 | AB | 602 | CLA | C1D-C2D | 2.46 | 1.50 | 1.45 |
| 32 | AB | 624 | LMT | C4'-C5' | 2.46 | 1.59 | 1.52 |
| 24 | AC | 507 | CLA | C1C-NC | 2.46 | 1.41 | 1.37 |
| 24 | BB | 5606 | CLA | CHC-C1C | 2.46 | 1.41 | 1.35 |
| 24 | BB | 5611 | CLA | C1C-NC | 2.46 | 1.41 | 1.37 |
| 30 | AB | 627 | SQD | C18-C17 | -2.45 | 1.37 | 1.51 |
| 24 | AB | 609 | CLA | CMC-C2C | 2.45 | 1.56 | 1.50 |
| 30 | AA | 416 | SQD | C11-C10 | -2.45 | 1.37 | 1.51 |
| 27 | AJ | 101 | BCR | C24-C23 | 2.45 | 1.40 | 1.33 |
| 24 | AA | 406 | CLA | CMC-C2C | 2.45 | 1.56 | 1.50 |
| 24 | AB | 605 | CLA | C1D-C2D | 2.45 | 1.50 | 1.45 |
| 28 | BC | 5517 | DGD | O3G-C1D | 2.45 | 1.44 | 1.40 |
| 24 | AB | 610 | CLA | O1D-CGD | 2.45 | 1.27 | 1.21 |
| 36 | BF | 5101 | HEM | CMC-C2C | 2.45 | 1.57 | 1.51 |
| 30 | BF | 5102 | SQD | C24-C23 | 2.44 | 1.57 | 1.50 |
| 24 | AC | 509 | CLA | O2A-CGA | 2.44 | 1.40 | 1.33 |
| 24 | BB | 5620 | CLA | C1C-NC | 2.44 | 1.41 | 1.37 |
| 24 | AB | 613 | CLA | C1D-C2D | 2.44 | 1.50 | 1.45 |
| 24 | AC | 504 | CLA | C1C-NC | 2.44 | 1.41 | 1.37 |
| 24 | BC | 5504 | CLA | MG-NC | 2.44 | 2.12 | 2.06 |
| 30 | AF | 102 | SQD | C14-C13 | -2.44 | 1.37 | 1.51 |
| 24 | AA | 406 | CLA | C1D-C2D | 2.44 | 1.50 | 1.45 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 27 | BJ | 5101 | BCR | C24-C23 | 2.44 | 1.40 | 1.33 |
| 24 | BC | 5503 | CLA | MG-NA | 2.44 | 2.12 | 2.06 |
| 30 | BA | 5401 | SQD | C34-C33 | -2.44 | 1.37 | 1.51 |
| 32 | BB | 5604 | LMT | C4'-C5' | 2.44 | 1.59 | 1.52 |
| 24 | AB | 604 | CLA | O1D-CGD | 2.43 | 1.27 | 1.21 |
| 24 | AC | 507 | CLA | O1D-CGD | 2.43 | 1.27 | 1.21 |
| 24 | BC | 5513 | CLA | CMC-C2C | 2.43 | 1.55 | 1.50 |
| 24 | BB | 5613 | CLA | C4D-ND | -2.43 | 1.34 | 1.37 |
| 30 | AF | 102 | SQD | C24-C23 | 2.43 | 1.57 | 1.50 |
| 30 | AB | 622 | SQD | C14-C13 | -2.43 | 1.37 | 1.51 |
| 24 | BB | 5614 | CLA | C1C-NC | 2.43 | 1.41 | 1.37 |
| 30 | AA | 416 | SQD | C20-C19 | -2.43 | 1.37 | 1.51 |
| 24 | BC | 5511 | CLA | CMC-C2C | 2.43 | 1.55 | 1.50 |
| 24 | BC | 5502 | CLA | MG-NC | 2.43 | 2.12 | 2.06 |
| 30 | BA | 5401 | SQD | C14-C13 | -2.43 | 1.37 | 1.51 |
| 24 | AC | 504 | CLA | C1D-C2D | 2.43 | 1.50 | 1.45 |
| 30 | AA | 413 | SQD | C13-C12 | -2.43 | 1.38 | 1.51 |
| 30 | AA | 416 | SQD | C32-C31 | -2.43 | 1.38 | 1.51 |
| 24 | BB | 5612 | CLA | MG-NA | 2.42 | 2.12 | 2.06 |
| 28 | BE | 5102 | DGD | O2G-C2G | 2.42 | 1.52 | 1.46 |
| 30 | AA | 416 | SQD | C8-C7 | 2.42 | 1.57 | 1.50 |
| 24 | AC | 507 | CLA | CMC-C2C | 2.42 | 1.55 | 1.50 |
| 30 | AF | 102 | SQD | C13-C12 | -2.42 | 1.38 | 1.51 |
| 24 | BC | 5513 | CLA | C1D-C2D | 2.42 | 1.50 | 1.45 |
| 24 | BB | 5615 | CLA | C4D-ND | -2.42 | 1.34 | 1.37 |
| 24 | BB | 5606 | CLA | O1D-CGD | 2.42 | 1.27 | 1.21 |
| 35 | AD | 405 | PL9 | C27-C28 | 2.42 | 1.58 | 1.50 |
| 32 | BI | 5102 | LMT | O5'-C1' | 2.42 | 1.48 | 1.41 |
| 30 | BA | 5401 | SQD | C35-C34 | -2.42 | 1.38 | 1.51 |
| 32 | AD | 409 | LMT | C4'-C5' | 2.41 | 1.59 | 1.52 |
| 24 | BB | 5613 | CLA | MG-ND | -2.41 | 2.01 | 2.05 |
| 28 | BC | 5519 | DGD | O3E-C3E | -2.41 | 1.37 | 1.43 |
| 27 | BJ | 5101 | BCR | C17-C18 | 2.41 | 1.39 | 1.35 |
| 30 | BA | 5401 | SQD | O8-S | 2.41 | 1.56 | 1.47 |
| 24 | BA | 5406 | CLA | MG-NC | 2.41 | 2.12 | 2.06 |
| 27 | AD | 406 | BCR | C5-C6 | 2.41 | 1.38 | 1.34 |
| 24 | AB | 611 | CLA | C1C-NC | 2.41 | 1.41 | 1.37 |
| 27 | BX | 5101 | BCR | C14-C13 | 2.40 | 1.39 | 1.35 |
| 30 | AA | 416 | SQD | C13-C12 | -2.40 | 1.38 | 1.51 |
| 31 | AA | 417 | LMG | O1-C1 | 2.40 | 1.44 | 1.40 |
| 28 | BE | 5102 | DGD | C1G-C2G | 2.40 | 1.58 | 1.50 |
| 24 | AC | 504 | CLA | C4D-ND | -2.40 | 1.34 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BB | 5618 | CLA | C1C-NC | 2.40 | 1.41 | 1.37 |
| 24 | AA | 407 | CLA | O2A-CGA | 2.40 | 1.40 | 1.33 |
| 24 | BC | 5508 | CLA | O2A-CGA | 2.40 | 1.40 | 1.33 |
| 32 | AB | 623 | LMT | O1B-C1B | 2.40 | 1.48 | 1.41 |
| 34 | AD | 403 | PHO | O1D-CGD | 2.39 | 1.27 | 1.21 |
| 27 | AC | 514 | BCR | C5-C6 | 2.39 | 1.38 | 1.34 |
| 24 | BB | 5617 | CLA | MG-ND | -2.39 | 2.01 | 2.05 |
| 24 | BC | 5506 | CLA | CBA-CGA | 2.39 | 1.57 | 1.50 |
| 31 | AC | 520 | LMG | O1-C1 | 2.39 | 1.44 | 1.40 |
| 34 | AD | 402 | PHO | CMC-C2C | 2.39 | 1.57 | 1.51 |
| 24 | AC | 506 | CLA | CBA-CGA | 2.39 | 1.57 | 1.50 |
| 24 | BC | 5512 | CLA | CHC-C1C | 2.39 | 1.41 | 1.35 |
| 28 | BA | 5412 | DGD | O3G-C1D | 2.39 | 1.44 | 1.40 |
| 30 | BF | 5102 | SQD | C14-C13 | -2.38 | 1.38 | 1.51 |
| 30 | BA | 5401 | SQD | C19-C18 | -2.38 | 1.38 | 1.51 |
| 30 | BA | 5401 | SQD | C20-C19 | -2.38 | 1.38 | 1.51 |
| 30 | AA | 416 | SQD | C35-C34 | -2.38 | 1.38 | 1.51 |
| 24 | AC | 504 | CLA | MG-NC | 2.38 | 2.11 | 2.06 |
| 24 | BC | 5509 | CLA | C1C-NC | 2.38 | 1.41 | 1.37 |
| 28 | AC | 519 | DGD | C6E-C5E | 2.38 | 1.59 | 1.51 |
| 27 | BB | 5623 | BCR | C23-C22 | -2.38 | 1.40 | 1.45 |
| 36 | BV | 5201 | HEM | CMC-C2C | 2.38 | 1.57 | 1.51 |
| 24 | AB | 611 | CLA | C2A-C1A | -2.38 | 1.46 | 1.52 |
| 24 | AC | 501 | CLA | CBA-CGA | 2.37 | 1.57 | 1.50 |
| 24 | AC | 504 | CLA | O1D-CGD | 2.37 | 1.27 | 1.21 |
| 24 | AC | 505 | CLA | O1D-CGD | 2.37 | 1.27 | 1.21 |
| 24 | AC | 513 | CLA | CHD-C4C | 2.37 | 1.44 | 1.39 |
| 24 | AB | 610 | CLA | MG-NC | 2.37 | 2.11 | 2.06 |
| 30 | BF | 5102 | SQD | C13-C12 | -2.37 | 1.38 | 1.51 |
| 24 | AA | 406 | CLA | MG-ND | -2.36 | 2.01 | 2.05 |
| 27 | BK | 5102 | BCR | C14-C13 | 2.36 | 1.38 | 1.35 |
| 30 | BA | 5401 | SQD | C11-C10 | -2.36 | 1.38 | 1.51 |
| 27 | AJ | 101 | BCR | C7-C6 | 2.36 | 1.53 | 1.45 |
| 28 | BH | 5101 | DGD | O3G-C1D | 2.36 | 1.44 | 1.40 |
| 24 | AC | 508 | CLA | O1D-CGD | 2.36 | 1.27 | 1.21 |
| 35 | BD | 5406 | PL9 | C11-C9 | 2.36 | 1.56 | 1.51 |
| 27 | BB | 5623 | BCR | C33-C5 | 2.36 | 1.54 | 1.50 |
| 27 | BJ | 5101 | BCR | C7-C6 | 2.36 | 1.53 | 1.45 |
| 32 | BB | 5604 | LMT | O5'-C1' | 2.35 | 1.47 | 1.41 |
| 24 | BA | 5408 | CLA | O2A-CGA | 2.35 | 1.40 | 1.33 |
| 24 | AC | 512 | CLA | O2A-CGA | 2.35 | 1.40 | 1.33 |
| 30 | AA | 416 | SQD | C34-C33 | -2.35 | 1.38 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | AE | 101 | DGD | C1G-C2G | 2.35 | 1.57 | 1.50 |
| 24 | BC | 5504 | CLA | C5-C3 | 2.35 | 1.56 | 1.51 |
| 30 | AA | 416 | SQD | C18-C17 | -2.35 | 1.38 | 1.51 |
| 30 | AA | 416 | SQD | C14-C13 | -2.34 | 1.38 | 1.51 |
| 31 | BI | 5101 | LMG | O1-C1 | 2.34 | 1.44 | 1.40 |
| 27 | BC | 5514 | BCR | C5-C6 | 2.34 | 1.38 | 1.34 |
| 24 | BB | 5615 | CLA | C1C-NC | 2.34 | 1.41 | 1.37 |
| 24 | AC | 512 | CLA | CHC-C1C | 2.33 | 1.41 | 1.35 |
| 28 | AH | 101 | DGD | O3G-C1D | 2.33 | 1.44 | 1.40 |
| 24 | AC | 501 | CLA | C1C-NC | 2.33 | 1.41 | 1.37 |
| 24 | BD | 5402 | CLA | C4D-ND | -2.33 | 1.34 | 1.37 |
| 28 | BC | 5517 | DGD | O6D-C5D | 2.33 | 1.50 | 1.44 |
| 24 | AC | 504 | CLA | C5-C3 | 2.33 | 1.56 | 1.51 |
| 24 | AB | 613 | CLA | MG-NC | 2.33 | 2.11 | 2.06 |
| 34 | AD | 403 | PHO | O2A-CGA | 2.33 | 1.40 | 1.33 |
| 24 | AC | 503 | CLA | C1D-C2D | 2.33 | 1.49 | 1.45 |
| 24 | BB | 5613 | CLA | C1C-NC | 2.32 | 1.41 | 1.37 |
| 28 | BC | 5519 | DGD | C6E-C5E | 2.32 | 1.59 | 1.51 |
| 24 | BA | 5408 | CLA | MG-NA | 2.32 | 2.11 | 2.06 |
| 24 | BA | 5408 | CLA | C4D-ND | -2.32 | 1.34 | 1.37 |
| 28 | AC | 519 | DGD | C1E-C2E | -2.32 | 1.45 | 1.52 |
| 31 | AA | 417 | LMG | O7-C8 | -2.32 | 1.40 | 1.46 |
| 34 | BD | 5404 | PHO | O1D-CGD | 2.32 | 1.27 | 1.21 |
| 32 | BB | 5627 | LMT | O5'-C1' | 2.32 | 1.47 | 1.41 |
| 24 | BB | 5612 | CLA | MG-NC | 2.32 | 2.11 | 2.06 |
| 24 | BC | 5504 | CLA | C1D-C2D | 2.32 | 1.49 | 1.45 |
| 24 | AB | 608 | CLA | C2A-C1A | -2.31 | 1.47 | 1.52 |
| 24 | AB | 612 | CLA | CHD-C1D | 2.31 | 1.42 | 1.38 |
| 24 | AB | 601 | CLA | MG-ND | -2.31 | 2.01 | 2.05 |
| 34 | BD | 5403 | PHO | CBD-CGD | 2.31 | 1.55 | 1.52 |
| 36 | BF | 5101 | HEM | FE-NB | 2.31 | 2.08 | 1.96 |
| 28 | AC | 519 | DGD | O5D-C1E | 2.31 | 1.44 | 1.40 |
| 24 | AD | 404 | CLA | CAC-C3C | 2.30 | 1.57 | 1.51 |
| 30 | AA | 413 | SQD | O6-C1 | 2.30 | 1.44 | 1.40 |
| 24 | AC | 511 | CLA | CMC-C2C | 2.30 | 1.55 | 1.50 |
| 32 | AB | 623 | LMT | C4'-C5' | 2.30 | 1.59 | 1.52 |
| 27 | BK | 5102 | BCR | C38-C26 | 2.30 | 1.54 | 1.50 |
| 24 | AB | 609 | CLA | CHC-C1C | 2.30 | 1.40 | 1.35 |
| 24 | AC | 505 | CLA | C1C-NC | 2.30 | 1.41 | 1.37 |
| 36 | AF | 101 | HEM | CBA-CGA | 2.30 | 1.55 | 1.50 |
| 24 | AA | 404 | CLA | C1C-NC | 2.29 | 1.41 | 1.37 |
| 24 | AC | 508 | CLA | C1C-NC | 2.29 | 1.41 | 1.37 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 31 | BM | 5102 | LMG | O6-C1 | 2.29 | 1.47 | 1.41 |
| 27 | BD | 5407 | BCR | C38-C26 | 2.29 | 1.54 | 1.50 |
| 24 | BB | 5607 | CLA | C1D-C2D | 2.28 | 1.49 | 1.45 |
| 32 | BC | 5522 | LMT | O1'-C1' | 2.28 | 1.44 | 1.40 |
| 24 | AD | 404 | CLA | CHC-C1C | 2.28 | 1.40 | 1.35 |
| 24 | BB | 5620 | CLA | CHC-C1C | 2.28 | 1.40 | 1.35 |
| 24 | AB | 610 | CLA | C1D-C2D | 2.28 | 1.49 | 1.45 |
| 27 | AT | 101 | BCR | C26-C25 | 2.28 | 1.38 | 1.34 |
| 24 | BB | 5613 | CLA | C1D-C2D | 2.28 | 1.49 | 1.45 |
| 24 | AB | 606 | CLA | CMC-C2C | 2.28 | 1.55 | 1.50 |
| 24 | BC | 5511 | CLA | C5-C3 | 2.28 | 1.56 | 1.51 |
| 30 | BF | 5102 | SQD | C8-C7 | 2.28 | 1.57 | 1.50 |
| 36 | BV | 5201 | HEM | CBD-CAD | 2.28 | 1.59 | 1.52 |
| 30 | BB | 5601 | SQD | C24-C23 | 2.28 | 1.57 | 1.50 |
| 24 | BB | 5620 | CLA | C5-C3 | 2.28 | 1.56 | 1.51 |
| 24 | BB | 5619 | CLA | CHC-C1C | 2.27 | 1.40 | 1.35 |
| 24 | BB | 5605 | CLA | CAC-C3C | 2.27 | 1.56 | 1.51 |
| 30 | BB | 5625 | SQD | C17-C16 | -2.27 | 1.35 | 1.51 |
| 24 | BC | 5511 | CLA | CHD-C1D | 2.27 | 1.42 | 1.38 |
| 32 | AI | 102 | LMT | O5'-C1' | 2.27 | 1.47 | 1.41 |
| 24 | BB | 5605 | CLA | CBD-CHA | 2.26 | 1.63 | 1.52 |
| 27 | BX | 5101 | BCR | C38-C26 | 2.26 | 1.54 | 1.50 |
| 27 | AD | 406 | BCR | C38-C26 | 2.26 | 1.54 | 1.50 |
| 30 | AB | 622 | SQD | C17-C16 | -2.26 | 1.35 | 1.51 |
| 24 | BC | 5512 | CLA | C1D-C2D | 2.26 | 1.49 | 1.45 |
| 28 | AC | 518 | DGD | O2G-C1B | 2.26 | 1.40 | 1.34 |
| 24 | AB | 601 | CLA | CAC-C3C | 2.25 | 1.56 | 1.51 |
| 24 | BC | 5510 | CLA | C1D-C2D | 2.25 | 1.49 | 1.45 |
| 31 | AI | 101 | LMG | O1-C1 | 2.25 | 1.44 | 1.40 |
| 24 | BB | 5614 | CLA | MG-ND | -2.25 | 2.01 | 2.05 |
| 24 | BB | 5606 | CLA | C1D-C2D | 2.25 | 1.49 | 1.45 |
| 27 | AA | 410 | BCR | C5-C6 | 2.25 | 1.38 | 1.34 |
| 31 | AD | 407 | LMG | O7-C8 | -2.25 | 1.41 | 1.46 |
| 24 | AC | 507 | CLA | C3B-CAB | -2.25 | 1.43 | 1.47 |
| 32 | BD | 5411 | LMT | O5'-C1' | 2.24 | 1.47 | 1.41 |
| 24 | BB | 5614 | CLA | O1D-CGD | 2.24 | 1.26 | 1.21 |
| 32 | AI | 103 | LMT | O1B-C1B | 2.24 | 1.48 | 1.41 |
| 24 | AB | 601 | CLA | CBD-CGD | 2.24 | 1.59 | 1.52 |
| 24 | AC | 506 | CLA | C1D-C2D | 2.24 | 1.49 | 1.45 |
| 24 | BB | 5619 | CLA | C1C-NC | 2.23 | 1.41 | 1.37 |
| 30 | AB | 627 | SQD | C21-C20 | -2.23 | 1.35 | 1.51 |
| 24 | BC | 5509 | CLA | MG-ND | -2.23 | 2.01 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | AC | 519 | DGD | O4D-C4D | 2.23 | 1.48 | 1.43 |
| 31 | AA | 417 | LMG | C4-C5 | 2.23 | 1.57 | 1.53 |
| 27 | AC | 514 | BCR | C23-C22 | -2.23 | 1.41 | 1.45 |
| 24 | BC | 5511 | CLA | C1D-C2D | 2.23 | 1.49 | 1.45 |
| 24 | AB | 616 | CLA | C5-C3 | 2.23 | 1.55 | 1.51 |
| 24 | BB | 5611 | CLA | O1D-CGD | 2.22 | 1.26 | 1.21 |
| 24 | AC | 511 | CLA | CHD-C4C | 2.22 | 1.44 | 1.39 |
| 24 | BC | 5503 | CLA | CHC-C1C | 2.22 | 1.40 | 1.35 |
| 24 | BB | 5609 | CLA | C1D-C2D | 2.22 | 1.49 | 1.45 |
| 32 | AI | 103 | LMT | C4'-C5' | 2.22 | 1.58 | 1.52 |
| 24 | AB | 609 | CLA | C1C-NC | 2.22 | 1.41 | 1.37 |
| 24 | BB | 5613 | CLA | CBA-CGA | 2.22 | 1.57 | 1.50 |
| 24 | BB | 5607 | CLA | C1B-CHB | -2.22 | 1.34 | 1.41 |
| 30 | BB | 5625 | SQD | C44-C45 | 2.21 | 1.57 | 1.50 |
| 24 | AC | 510 | CLA | C1D-C2D | 2.21 | 1.49 | 1.45 |
| 24 | AB | 613 | CLA | CMC-C2C | 2.21 | 1.55 | 1.50 |
| 31 | AM | 101 | LMG | O7-C10 | 2.21 | 1.40 | 1.34 |
| 32 | AM | 102 | LMT | O5'-C1' | 2.21 | 1.47 | 1.41 |
| 24 | AC | 501 | CLA | CHC-C1C | 2.21 | 1.40 | 1.35 |
| 36 | AV | 201 | HEM | C1A-NA | 2.21 | 1.40 | 1.36 |
| 31 | AJ | 102 | LMG | O6-C1 | 2.21 | 1.47 | 1.41 |
| 30 | BB | 5601 | SQD | C21-C20 | -2.21 | 1.36 | 1.51 |
| 24 | AA | 406 | CLA | O1D-CGD | 2.21 | 1.26 | 1.21 |
| 32 | BB | 5626 | LMT | O1B-C1B | 2.20 | 1.48 | 1.41 |
| 31 | BA | 5402 | LMG | O7-C8 | -2.20 | 1.41 | 1.46 |
| 27 | AJ | 101 | BCR | C17-C18 | 2.20 | 1.38 | 1.35 |
| 31 | AD | 408 | LMG | O3-C3 | -2.20 | 1.37 | 1.43 |
| 30 | AA | 416 | SQD | O6-C44 | -2.20 | 1.39 | 1.43 |
| 27 | AC | 515 | BCR | C19-C18 | -2.20 | 1.41 | 1.45 |
| 24 | AB | 609 | CLA | C1D-C2D | 2.20 | 1.49 | 1.45 |
| 30 | AF | 102 | SQD | O8-S | 2.20 | 1.55 | 1.47 |
| 24 | AA | 406 | CLA | O2A-CGA | 2.20 | 1.39 | 1.33 |
| 24 | BB | 5615 | CLA | C1D-C2D | 2.19 | 1.49 | 1.45 |
| 24 | BC | 5505 | CLA | C1C-NC | 2.19 | 1.41 | 1.37 |
| 31 | AD | 408 | LMG | O7-C8 | -2.19 | 1.41 | 1.46 |
| 28 | BE | 5102 | DGD | O6D-C5D | 2.19 | 1.49 | 1.44 |
| 24 | BC | 5513 | CLA | CAC-C3C | 2.19 | 1.56 | 1.51 |
| 32 | AM | 102 | LMT | O1B-C1B | 2.19 | 1.47 | 1.41 |
| 28 | BC | 5519 | DGD | C6A-C5A | -2.18 | 1.39 | 1.51 |
| 24 | BB | 5608 | CLA | C2A-C1A | -2.18 | 1.47 | 1.52 |
| 28 | AC | 519 | DGD | C6A-C5A | -2.18 | 1.39 | 1.51 |
| 27 | AX | 101 | BCR | C14-C13 | 2.18 | 1.38 | 1.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 30 | BA | 5401 | SQD | C18-C17 | -2.18 | 1.39 | 1.51 |
| 36 | BV | 5201 | HEM | C2A-C3A | 2.18 | 1.44 | 1.37 |
| 32 | AB | 629 | LMT | O1B-C4' | 2.18 | 1.49 | 1.43 |
| 27 | BJ | 5101 | BCR | C4-C5 | 2.18 | 1.55 | 1.51 |
| 24 | BB | 5616 | CLA | MG-ND | -2.18 | 2.01 | 2.05 |
| 24 | AC | 503 | CLA | CHC-C1C | 2.18 | 1.40 | 1.35 |
| 32 | BB | 5603 | LMT | C10-C9 | -2.17 | 1.39 | 1.51 |
| 24 | AB | 611 | CLA | MG-NA | 2.17 | 2.11 | 2.06 |
| 31 | AA | 417 | LMG | O8-C9 | 2.17 | 1.50 | 1.45 |
| 24 | BB | 5605 | CLA | MG-ND | -2.17 | 2.01 | 2.05 |
| 28 | AC | 518 | DGD | C6A-C5A | -2.17 | 1.39 | 1.51 |
| 28 | BC | 5518 | DGD | C6A-C5A | -2.17 | 1.39 | 1.51 |
| 32 | BB | 5604 | LMT | C10-C9 | -2.17 | 1.39 | 1.51 |
| 24 | BA | 5406 | CLA | CHC-C1C | 2.17 | 1.40 | 1.35 |
| 24 | BC | 5505 | CLA | CBD-CHA | 2.17 | 1.62 | 1.52 |
| 32 | AI | 102 | LMT | C10-C9 | -2.17 | 1.39 | 1.51 |
| 32 | AB | 629 | LMT | C10-C9 | -2.17 | 1.39 | 1.51 |
| 27 | AB | 618 | BCR | C33-C5 | 2.17 | 1.54 | 1.50 |
| 28 | BC | 5518 | DGD | CEB-CDB | -2.17 | 1.39 | 1.51 |
| 30 | BA | 5414 | SQD | O6-C1 | 2.17 | 1.43 | 1.40 |
| 28 | AA | 411 | DGD | C6A-C5A | -2.17 | 1.39 | 1.51 |
| 28 | AH | 101 | DGD | C6A-C5A | -2.17 | 1.39 | 1.51 |
| 28 | AC | 518 | DGD | CEB-CDB | -2.16 | 1.39 | 1.51 |
| 28 | BB | 5602 | DGD | C3E-C2E | 2.16 | 1.57 | 1.52 |
| 28 | BA | 5412 | DGD | C6A-C5A | -2.16 | 1.39 | 1.51 |
| 28 | BC | 5517 | DGD | C6A-C5A | -2.16 | 1.39 | 1.51 |
| 32 | AI | 103 | LMT | C10-C9 | -2.16 | 1.39 | 1.51 |
| 32 | BC | 5522 | LMT | C10-C9 | -2.16 | 1.39 | 1.51 |
| 28 | AC | 517 | DGD | C6A-C5A | -2.16 | 1.39 | 1.51 |
| 28 | AE | 101 | DGD | CEB-CDB | -2.16 | 1.39 | 1.51 |
| 36 | AF | 101 | HEM | CMC-C2C | 2.16 | 1.56 | 1.51 |
| 28 | BH | 5101 | DGD | C6A-C5A | -2.16 | 1.39 | 1.51 |
| 27 | AB | 619 | BCR | C33-C5 | 2.16 | 1.54 | 1.50 |
| 27 | AA | 410 | BCR | C19-C18 | -2.16 | 1.41 | 1.45 |
| 24 | AC | 505 | CLA | CBD-CHA | 2.16 | 1.62 | 1.52 |
| 24 | BB | 5608 | CLA | C1D-C2D | 2.16 | 1.49 | 1.45 |
| 30 | AF | 102 | SQD | C8-C7 | 2.16 | 1.57 | 1.50 |
| 24 | BB | 5611 | CLA | MG-NC | 2.16 | 2.11 | 2.06 |
| 28 | AB | 628 | DGD | C6A-C5A | -2.16 | 1.39 | 1.51 |
| 28 | BE | 5102 | DGD | CEB-CDB | -2.16 | 1.39 | 1.51 |
| 24 | BC | 5506 | CLA | CMD-C2D | 2.15 | 1.55 | 1.50 |
| 32 | AB | 630 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 32 | AB | 623 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |
| 24 | BB | 5609 | CLA | MG-NC | 2.15 | 2.11 | 2.06 |
| 32 | BI | 5102 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |
| 28 | BB | 5602 | DGD | C6A-C5A | -2.15 | 1.39 | 1.51 |
| 35 | BD | 5406 | PL9 | C7-C3 | 2.15 | 1.53 | 1.51 |
| 32 | AB | 624 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |
| 32 | AI | 102 | LMT | O1B-C1B | 2.15 | 1.47 | 1.41 |
| 32 | BB | 5626 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |
| 24 | AD | 401 | CLA | O2A-CGA | 2.15 | 1.39 | 1.33 |
| 24 | BC | 5502 | CLA | C1C-NC | 2.15 | 1.41 | 1.37 |
| 24 | BC | 5506 | CLA | C1D-C2D | 2.15 | 1.49 | 1.45 |
| 32 | BM | 5101 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |
| 24 | AB | 603 | CLA | C1C-NC | 2.15 | 1.41 | 1.37 |
| 32 | AM | 102 | LMT | C10-C9 | -2.15 | 1.39 | 1.51 |
| 24 | AC | 511 | CLA | C1D-C2D | 2.15 | 1.49 | 1.45 |
| 28 | AE | 101 | DGD | C6A-C5A | -2.15 | 1.39 | 1.51 |
| 24 | AC | 511 | CLA | C4D-ND | -2.15 | 1.34 | 1.37 |
| 24 | AB | 616 | CLA | CHC-C1C | 2.15 | 1.40 | 1.35 |
| 28 | BC | 5519 | DGD | CEB-CDB | -2.14 | 1.39 | 1.51 |
| 28 | BA | 5412 | DGD | C1G-C2G | 2.14 | 1.57 | 1.50 |
| 24 | AA | 405 | CLA | C3D-C2D | -2.14 | 1.33 | 1.39 |
| 28 | AC | 519 | DGD | CEB-CDB | -2.14 | 1.39 | 1.51 |
| 34 | BD | 5403 | PHO | CMC-C2C | 2.14 | 1.56 | 1.51 |
| 34 | AD | 402 | PHO | CBD-CGD | 2.14 | 1.55 | 1.52 |
| 28 | BE | 5102 | DGD | C6A-C5A | -2.14 | 1.39 | 1.51 |
| 27 | AC | 516 | BCR | C33-C5 | 2.14 | 1.54 | 1.50 |
| 32 | BC | 5522 | LMT | O1B-C1B | 2.14 | 1.47 | 1.41 |
| 24 | AB | 601 | CLA | CBD-CHA | 2.14 | 1.62 | 1.52 |
| 27 | AJ | 101 | BCR | C4-C5 | 2.14 | 1.55 | 1.51 |
| 30 | AA | 416 | SQD | C37-C36 | -2.14 | 1.36 | 1.51 |
| 24 | AB | 611 | CLA | C1D-C2D | 2.14 | 1.49 | 1.45 |
| 28 | AH | 101 | DGD | O6D-C5D | 2.13 | 1.49 | 1.44 |
| 32 | BB | 5627 | LMT | C10-C9 | -2.13 | 1.39 | 1.51 |
| 24 | BB | 5611 | CLA | CBD-CHA | 2.13 | 1.62 | 1.52 |
| 28 | AE | 101 | DGD | C4E-C5E | 2.13 | 1.57 | 1.53 |
| 31 | AC | 520 | LMG | O7-C10 | 2.13 | 1.40 | 1.34 |
| 24 | BC | 5513 | CLA | CMD-C2D | 2.13 | 1.55 | 1.50 |
| 30 | AB | 627 | SQD | C24-C23 | 2.13 | 1.56 | 1.50 |
| 36 | BF | 5101 | HEM | CAD-C3D | -2.13 | 1.45 | 1.51 |
| 24 | BB | 5605 | CLA | CBD-CGD | 2.13 | 1.59 | 1.52 |
| 36 | AF | 101 | HEM | CMD-C2D | 2.13 | 1.55 | 1.50 |
| 24 | BA | 5407 | CLA | MG-ND | -2.12 | 2.01 | 2.05 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 35 | AD | 405 | PL9 | C7-C3 | 2.12 | 1.53 | 1.51 |
| 24 | BB | 5616 | CLA | CHD-C1D | 2.12 | 1.42 | 1.38 |
| 31 | BC | 5520 | LMG | O7-C8 | 2.11 | 1.51 | 1.46 |
| 36 | BV | 5201 | HEM | C1A-NA | 2.11 | 1.40 | 1.36 |
| 24 | AB | 606 | CLA | OBD-CAD | 2.11 | 1.26 | 1.22 |
| 24 | BB | 5617 | CLA | C4D-ND | -2.11 | 1.34 | 1.37 |
| 30 | BA | 5401 | SQD | O6-C44 | -2.11 | 1.39 | 1.43 |
| 30 | BA | 5414 | SQD | C34-C33 | -2.11 | 1.36 | 1.51 |
| 24 | AB | 614 | CLA | C1D-C2D | 2.11 | 1.49 | 1.45 |
| 24 | BC | 5505 | CLA | CAC-C3C | 2.11 | 1.56 | 1.51 |
| 24 | AB | 615 | CLA | CHC-C1C | 2.11 | 1.40 | 1.35 |
| 24 | BB | 5612 | CLA | C2A-C1A | -2.10 | 1.47 | 1.52 |
| 24 | BC | 5506 | CLA | MG-ND | -2.10 | 2.01 | 2.05 |
| 24 | BC | 5506 | CLA | MG-NA | 2.10 | 2.11 | 2.06 |
| 24 | BC | 5508 | CLA | MG-NA | 2.10 | 2.11 | 2.06 |
| 28 | BC | 5517 | DGD | O6E-C1E | 2.10 | 1.47 | 1.41 |
| 24 | BC | 5501 | CLA | C5-C3 | 2.10 | 1.55 | 1.51 |
| 27 | BD | 5407 | BCR | C23-C22 | -2.09 | 1.41 | 1.45 |
| 24 | AC | 506 | CLA | CMD-C2D | 2.09 | 1.55 | 1.50 |
| 24 | AB | 616 | CLA | MG-ND | -2.09 | 2.01 | 2.05 |
| 24 | AB | 601 | CLA | CBA-CGA | 2.09 | 1.56 | 1.50 |
| 27 | BA | 5411 | BCR | C19-C18 | -2.09 | 1.41 | 1.45 |
| 24 | AC | 511 | CLA | C5-C3 | 2.09 | 1.55 | 1.51 |
| 24 | BB | 5610 | CLA | CBA-CGA | 2.09 | 1.56 | 1.50 |
| 24 | AC | 505 | CLA | MG-ND | -2.09 | 2.01 | 2.05 |
| 24 | BB | 5614 | CLA | CHC-C1C | 2.09 | 1.40 | 1.35 |
| 31 | AC | 520 | LMG | O7-C8 | 2.09 | 1.51 | 1.46 |
| 24 | AC | 512 | CLA | C1D-C2D | 2.09 | 1.49 | 1.45 |
| 31 | AC | 520 | LMG | C4-C5 | 2.09 | 1.57 | 1.53 |
| 28 | BE | 5102 | DGD | O2G-C1B | 2.09 | 1.40 | 1.34 |
| 24 | BC | 5512 | CLA | CAC-C3C | 2.09 | 1.56 | 1.51 |
| 28 | BE | 5102 | DGD | C4D-C5D | 2.09 | 1.57 | 1.53 |
| 24 | AB | 605 | CLA | C5-C3 | 2.09 | 1.55 | 1.51 |
| 31 | BD | 5410 | LMG | O7-C8 | -2.08 | 1.41 | 1.46 |
| 32 | AM | 102 | LMT | O5'-C5' | 2.08 | 1.49 | 1.44 |
| 24 | AC | 510 | CLA | CHC-C1C | 2.08 | 1.40 | 1.35 |
| 36 | BV | 5201 | HEM | CMD-C2D | 2.08 | 1.55 | 1.50 |
| 32 | BI | 5102 | LMT | O1B-C4' | 2.08 | 1.49 | 1.43 |
| 32 | BM | 5101 | LMT | O5'-C1' | 2.08 | 1.47 | 1.41 |
| 27 | BC | 5515 | BCR | C38-C26 | 2.08 | 1.54 | 1.50 |
| 27 | BD | 5407 | BCR | C14-C13 | 2.08 | 1.38 | 1.35 |
| 24 | AB | 614 | CLA | CAA-C2A | -2.08 | 1.50 | 1.54 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 24 | BC | 5505 | CLA | MG-ND | -2.08 | 2.01 | 2.05 |
| 24 | BC | 5501 | CLA | C1D-C2D | 2.08 | 1.49 | 1.45 |
| 32 | BB | 5626 | LMT | O5B-C5B | 2.07 | 1.49 | 1.44 |
| 34 | BD | 5404 | PHO | CMC-C2C | 2.07 | 1.56 | 1.51 |
| 24 | BA | 5406 | CLA | C3D-C2D | -2.07 | 1.33 | 1.39 |
| 30 | AA | 413 | SQD | C34-C33 | -2.07 | 1.36 | 1.51 |
| 28 | AC | 519 | DGD | C3E-C2E | 2.07 | 1.57 | 1.52 |
| 24 | AB | 610 | CLA | O2A-CGA | 2.07 | 1.39 | 1.33 |
| 24 | AB | 608 | CLA | C5-C3 | 2.07 | 1.55 | 1.51 |
| 27 | AT | 101 | BCR | C19-C18 | -2.07 | 1.41 | 1.45 |
| 28 | BC | 5517 | DGD | C3G-C2G | 2.07 | 1.57 | 1.50 |
| 24 | BB | 5609 | CLA | CAA-C2A | -2.07 | 1.50 | 1.54 |
| 24 | AA | 404 | CLA | MG-ND | -2.07 | 2.01 | 2.05 |
| 28 | AB | 628 | DGD | O6D-C5D | 2.06 | 1.49 | 1.44 |
| 24 | BC | 5513 | CLA | C5-C3 | 2.06 | 1.55 | 1.51 |
| 32 | BD | 5411 | LMT | C3'-C4' | 2.06 | 1.57 | 1.52 |
| 24 | BC | 5507 | CLA | CMD-C2D | 2.06 | 1.55 | 1.50 |
| 30 | AF | 102 | SQD | C44-C45 | 2.06 | 1.57 | 1.50 |
| 28 | AA | 411 | DGD | C4D-C3D | -2.06 | 1.47 | 1.52 |
| 24 | BC | 5502 | CLA | CMD-C2D | 2.06 | 1.55 | 1.50 |
| 31 | AI | 101 | LMG | C4-C3 | 2.06 | 1.57 | 1.52 |
| 31 | BI | 5101 | LMG | C4-C5 | 2.06 | 1.57 | 1.53 |
| 24 | AC | 508 | CLA | CAC-C3C | 2.06 | 1.56 | 1.51 |
| 31 | BD | 5410 | LMG | O1-C1 | 2.06 | 1.43 | 1.40 |
| 28 | BC | 5519 | DGD | O4D-C4D | 2.06 | 1.47 | 1.43 |
| 27 | AB | 617 | BCR | C19-C18 | -2.06 | 1.41 | 1.45 |
| 24 | BC | 5511 | CLA | CBA-CGA | 2.06 | 1.56 | 1.50 |
| 24 | AC | 502 | CLA | CMC-C2C | 2.06 | 1.55 | 1.50 |
| 24 | AB | 612 | CLA | MG-ND | -2.05 | 2.01 | 2.05 |
| 24 | AC | 503 | CLA | C4D-ND | -2.05 | 1.34 | 1.37 |
| 24 | AC | 502 | CLA | MG-ND | -2.05 | 2.01 | 2.05 |
| 24 | BB | 5618 | CLA | C1D-C2D | 2.05 | 1.49 | 1.45 |
| 24 | BB | 5620 | CLA | C4D-ND | -2.05 | 1.34 | 1.37 |
| 24 | AB | 603 | CLA | C1D-C2D | 2.05 | 1.49 | 1.45 |
| 32 | AB | 624 | LMT | C1'-C2' | 2.05 | 1.58 | 1.52 |
| 24 | AD | 404 | CLA | CBA-CGA | 2.05 | 1.56 | 1.50 |
| 24 | AB | 609 | CLA | CBA-CGA | 2.05 | 1.56 | 1.50 |
| 32 | BB | 5604 | LMT | O5B-C5B | 2.05 | 1.49 | 1.44 |
| 30 | BB | 5625 | SQD | C24-C23 | 2.04 | 1.56 | 1.50 |
| 24 | BB | 5616 | CLA | CHD-C4C | 2.04 | 1.43 | 1.39 |
| 24 | BB | 5608 | CLA | C1C-NC | 2.04 | 1.40 | 1.37 |
| 24 | BB | 5616 | CLA | C5-C3 | 2.04 | 1.55 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|------|------|---------|-------|-------------|----------|
| 28 | AA | 411 | DGD | O2D-C2D | -2.04 | 1.38 | 1.43 |
| 30 | AB | 622 | SQD | C24-C23 | 2.04 | 1.56 | 1.50 |
| 32 | AD | 409 | LMT | O5'-C1' | 2.04 | 1.47 | 1.41 |
| 27 | BJ | 5101 | BCR | C11-C12 | 2.04 | 1.39 | 1.34 |
| 31 | BE | 5101 | LMG | C3-C2 | 2.03 | 1.57 | 1.52 |
| 24 | BC | 5508 | CLA | C1D-C2D | 2.03 | 1.49 | 1.45 |
| 27 | BK | 5102 | BCR | C19-C18 | -2.03 | 1.41 | 1.45 |
| 24 | AC | 507 | CLA | C4D-ND | -2.03 | 1.34 | 1.37 |
| 28 | BA | 5412 | DGD | C4E-C3E | 2.03 | 1.57 | 1.52 |
| 30 | BA | 5401 | SQD | C37-C36 | -2.03 | 1.37 | 1.51 |
| 30 | BA | 5414 | SQD | C21-C20 | -2.03 | 1.37 | 1.51 |
| 27 | BT | 5101 | BCR | C19-C18 | -2.03 | 1.41 | 1.45 |
| 24 | AB | 604 | CLA | C1D-C2D | 2.03 | 1.49 | 1.45 |
| 24 | AB | 614 | CLA | C5-C3 | 2.03 | 1.55 | 1.51 |
| 24 | AC | 506 | CLA | CAC-C3C | 2.03 | 1.56 | 1.51 |
| 24 | AA | 405 | CLA | OBD-CAD | 2.02 | 1.26 | 1.22 |
| 24 | AA | 405 | CLA | C1D-C2D | 2.02 | 1.49 | 1.45 |
| 24 | BC | 5509 | CLA | C1D-C2D | 2.02 | 1.49 | 1.45 |
| 30 | BB | 5625 | SQD | C8-C7 | 2.02 | 1.56 | 1.50 |
| 31 | BA | 5402 | LMG | C4-C5 | 2.02 | 1.57 | 1.53 |
| 24 | BC | 5507 | CLA | C3B-CAB | -2.02 | 1.43 | 1.47 |
| 24 | AC | 507 | CLA | C1D-C2D | 2.02 | 1.49 | 1.45 |
| 24 | BB | 5616 | CLA | C1D-C2D | 2.02 | 1.49 | 1.45 |
| 24 | BB | 5618 | CLA | CHD-C4C | 2.01 | 1.43 | 1.39 |
| 24 | AC | 510 | CLA | C4D-ND | -2.01 | 1.34 | 1.37 |
| 24 | BA | 5408 | CLA | CBD-CHA | 2.01 | 1.61 | 1.52 |
| 27 | BB | 5622 | BCR | C33-C5 | 2.01 | 1.54 | 1.50 |
| 24 | AB | 606 | CLA | CBA-CGA | 2.01 | 1.56 | 1.50 |
| 24 | AC | 512 | CLA | CAC-C3C | 2.01 | 1.56 | 1.51 |
| 28 | AC | 519 | DGD | O3E-C3E | -2.01 | 1.38 | 1.43 |
| 24 | BB | 5613 | CLA | CMD-C2D | 2.01 | 1.55 | 1.50 |
| 24 | AB | 601 | CLA | CMD-C2D | 2.01 | 1.55 | 1.50 |
| 24 | AC | 502 | CLA | C1C-NC | 2.01 | 1.40 | 1.37 |
| 35 | AD | 405 | PL9 | C11-C9 | 2.01 | 1.55 | 1.51 |
| 24 | AB | 605 | CLA | CAA-C2A | -2.01 | 1.50 | 1.54 |
| 27 | AK | 102 | BCR | C19-C18 | -2.00 | 1.41 | 1.45 |
| 24 | AB | 603 | CLA | C1B-CHB | -2.00 | 1.35 | 1.41 |
| 28 | AC | 517 | DGD | C2B-C1B | -2.00 | 1.44 | 1.50 |
| 28 | BH | 5101 | DGD | O6D-C5D | 2.00 | 1.49 | 1.44 |
| 32 | BB | 5627 | LMT | O1B-C4' | 2.00 | 1.49 | 1.43 |

All (2489) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AB | 601 | CLA | C4A-NA-C1A | 14.32 | 113.14 | 106.71 |
| 24 | BB | 5605 | CLA | C4A-NA-C1A | 13.87 | 112.94 | 106.71 |
| 24 | AC | 512 | CLA | C4A-NA-C1A | 13.52 | 112.78 | 106.71 |
| 24 | BC | 5512 | CLA | C4A-NA-C1A | 13.51 | 112.78 | 106.71 |
| 24 | BB | 5619 | CLA | C4A-NA-C1A | 13.42 | 112.74 | 106.71 |
| 24 | BC | 5501 | CLA | C4A-NA-C1A | 13.21 | 112.65 | 106.71 |
| 24 | BC | 5508 | CLA | C4A-NA-C1A | 13.10 | 112.59 | 106.71 |
| 24 | BC | 5502 | CLA | C4A-NA-C1A | 13.09 | 112.59 | 106.71 |
| 24 | AB | 615 | CLA | C4A-NA-C1A | 12.88 | 112.50 | 106.71 |
| 24 | AC | 501 | CLA | C4A-NA-C1A | 12.75 | 112.44 | 106.71 |
| 24 | BD | 5405 | CLA | C4A-NA-C1A | 12.75 | 112.44 | 106.71 |
| 24 | AC | 503 | CLA | C4A-NA-C1A | 12.66 | 112.40 | 106.71 |
| 24 | AB | 616 | CLA | C4A-NA-C1A | 12.59 | 112.37 | 106.71 |
| 24 | AD | 404 | CLA | C4A-NA-C1A | 12.58 | 112.36 | 106.71 |
| 24 | AC | 507 | CLA | C4A-NA-C1A | 12.57 | 112.36 | 106.71 |
| 24 | BB | 5620 | CLA | C4A-NA-C1A | 12.56 | 112.35 | 106.71 |
| 24 | BC | 5507 | CLA | C4A-NA-C1A | 12.38 | 112.27 | 106.71 |
| 24 | BC | 5505 | CLA | C4A-NA-C1A | 12.32 | 112.24 | 106.71 |
| 24 | AA | 407 | CLA | C4A-NA-C1A | 12.25 | 112.21 | 106.71 |
| 24 | AC | 505 | CLA | C4A-NA-C1A | 12.11 | 112.15 | 106.71 |
| 28 | AC | 519 | DGD | O5D-C6D-C5D | 12.10 | 131.44 | 109.05 |
| 24 | BB | 5606 | CLA | C4A-NA-C1A | 12.07 | 112.13 | 106.71 |
| 24 | BC | 5510 | CLA | C4A-NA-C1A | 12.06 | 112.13 | 106.71 |
| 28 | BC | 5519 | DGD | O5D-C6D-C5D | 12.02 | 131.30 | 109.05 |
| 24 | AC | 510 | CLA | C4A-NA-C1A | 12.01 | 112.11 | 106.71 |
| 24 | BC | 5509 | CLA | C4A-NA-C1A | 12.00 | 112.10 | 106.71 |
| 24 | BC | 5503 | CLA | C4A-NA-C1A | 11.98 | 112.09 | 106.71 |
| 24 | BC | 5506 | CLA | C4A-NA-C1A | 11.96 | 112.08 | 106.71 |
| 24 | AC | 502 | CLA | C4A-NA-C1A | 11.95 | 112.08 | 106.71 |
| 24 | AC | 508 | CLA | C4A-NA-C1A | 11.93 | 112.07 | 106.71 |
| 24 | AC | 509 | CLA | C4A-NA-C1A | 11.81 | 112.02 | 106.71 |
| 24 | BB | 5610 | CLA | C4A-NA-C1A | 11.77 | 112.00 | 106.71 |
| 24 | AC | 506 | CLA | C4A-NA-C1A | 11.76 | 111.99 | 106.71 |
| 24 | BB | 5608 | CLA | C4A-NA-C1A | 11.75 | 111.99 | 106.71 |
| 24 | AB | 611 | CLA | C4A-NA-C1A | 11.75 | 111.99 | 106.71 |
| 24 | AB | 602 | CLA | C4A-NA-C1A | 11.73 | 111.98 | 106.71 |
| 24 | BB | 5612 | CLA | C4A-NA-C1A | 11.71 | 111.97 | 106.71 |
| 24 | BB | 5615 | CLA | C4A-NA-C1A | 11.69 | 111.96 | 106.71 |
| 24 | AB | 608 | CLA | C4A-NA-C1A | 11.66 | 111.95 | 106.71 |
| 24 | AB | 606 | CLA | C4A-NA-C1A | 11.62 | 111.93 | 106.71 |
| 24 | AB | 610 | CLA | C4A-NA-C1A | 11.62 | 111.93 | 106.71 |
| 24 | AD | 401 | CLA | C4A-NA-C1A | 11.58 | 111.91 | 106.71 |
| 24 | BB | 5614 | CLA | C4A-NA-C1A | 11.58 | 111.91 | 106.71 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|--------|-------------|----------|
| 24 | BD | 5402 | CLA | C4A-NA-C1A | 11.54 | 111.89 | 106.71 |
| 24 | BA | 5408 | CLA | C4A-NA-C1A | 11.51 | 111.88 | 106.71 |
| 24 | AB | 613 | CLA | C4A-NA-C1A | 11.47 | 111.86 | 106.71 |
| 24 | BB | 5617 | CLA | C4A-NA-C1A | 11.43 | 111.85 | 106.71 |
| 24 | AB | 614 | CLA | C4A-NA-C1A | 11.36 | 111.81 | 106.71 |
| 24 | BB | 5611 | CLA | C4A-NA-C1A | 11.21 | 111.75 | 106.71 |
| 24 | AB | 604 | CLA | C4A-NA-C1A | 11.18 | 111.73 | 106.71 |
| 28 | AC | 518 | DGD | O5D-C1E-C2E | 11.18 | 125.75 | 108.30 |
| 25 | AA | 408 | MST | C2-N1-C6 | 11.14 | 120.12 | 113.85 |
| 24 | BC | 5511 | CLA | C4A-NA-C1A | 11.13 | 111.71 | 106.71 |
| 24 | AC | 504 | CLA | C4A-NA-C1A | 11.10 | 111.70 | 106.71 |
| 24 | BB | 5618 | CLA | C4A-NA-C1A | 11.07 | 111.68 | 106.71 |
| 24 | BC | 5504 | CLA | C4A-NA-C1A | 11.07 | 111.68 | 106.71 |
| 24 | AB | 607 | CLA | C4A-NA-C1A | 11.05 | 111.67 | 106.71 |
| 25 | BA | 5409 | MST | C2-N1-C6 | 11.02 | 120.06 | 113.85 |
| 28 | BC | 5518 | DGD | O5D-C1E-C2E | 10.97 | 125.43 | 108.30 |
| 24 | BB | 5613 | CLA | C4A-NA-C1A | 10.94 | 111.62 | 106.71 |
| 24 | AB | 609 | CLA | C4A-NA-C1A | 10.94 | 111.62 | 106.71 |
| 24 | BA | 5407 | CLA | C4A-NA-C1A | 10.93 | 111.62 | 106.71 |
| 24 | BA | 5406 | CLA | C4A-NA-C1A | 10.92 | 111.61 | 106.71 |
| 28 | AA | 411 | DGD | O5D-C6D-C5D | 10.89 | 129.19 | 109.05 |
| 24 | AC | 511 | CLA | C4A-NA-C1A | 10.86 | 111.59 | 106.71 |
| 28 | BA | 5412 | DGD | O5D-C6D-C5D | 10.85 | 129.13 | 109.05 |
| 24 | BB | 5609 | CLA | C4A-NA-C1A | 10.79 | 111.56 | 106.71 |
| 24 | AB | 605 | CLA | C4A-NA-C1A | 10.74 | 111.53 | 106.71 |
| 24 | BB | 5616 | CLA | C4A-NA-C1A | 10.71 | 111.52 | 106.71 |
| 24 | BC | 5513 | CLA | C4A-NA-C1A | 10.58 | 111.46 | 106.71 |
| 25 | AA | 408 | MST | C2-N3-C4 | 10.53 | 119.78 | 113.85 |
| 28 | AC | 519 | DGD | C3G-O3G-C1D | -10.49 | 93.25 | 113.74 |
| 24 | AA | 405 | CLA | C4A-NA-C1A | 10.47 | 111.41 | 106.71 |
| 28 | BC | 5519 | DGD | C3G-O3G-C1D | -10.31 | 93.61 | 113.74 |
| 24 | AB | 603 | CLA | C4A-NA-C1A | 10.27 | 111.32 | 106.71 |
| 24 | AC | 513 | CLA | C4A-NA-C1A | 10.19 | 111.29 | 106.71 |
| 25 | BA | 5409 | MST | C2-N3-C4 | 10.14 | 119.56 | 113.85 |
| 24 | BB | 5607 | CLA | C4A-NA-C1A | 10.08 | 111.24 | 106.71 |
| 24 | AB | 612 | CLA | C4A-NA-C1A | 10.05 | 111.22 | 106.71 |
| 24 | AA | 406 | CLA | C4A-NA-C1A | 10.01 | 111.21 | 106.71 |
| 27 | BJ | 5101 | BCR | C32-C1-C6 | -9.98 | 94.11 | 110.30 |
| 27 | AJ | 101 | BCR | C32-C1-C6 | -9.92 | 94.20 | 110.30 |
| 24 | BA | 5405 | CLA | C4A-NA-C1A | 9.85 | 111.13 | 106.71 |
| 24 | AA | 404 | CLA | C4A-NA-C1A | 9.71 | 111.07 | 106.71 |
| 28 | BB | 5602 | DGD | C2G-O2G-C1B | 9.52 | 141.23 | 117.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | AJ | 102 | LMG | C8-O7-C10 | 9.42 | 140.99 | 117.79 |
| 27 | BJ | 5101 | BCR | C32-C1-C31 | -9.41 | 79.64 | 108.53 |
| 30 | BF | 5102 | SQD | O7-S-C6 | 9.37 | 118.07 | 106.94 |
| 27 | AJ | 101 | BCR | C32-C1-C31 | -9.37 | 79.78 | 108.53 |
| 36 | BF | 5101 | HEM | CMA-C3A-C2A | -9.33 | 107.34 | 124.94 |
| 30 | AF | 102 | SQD | O7-S-C6 | 9.31 | 118.01 | 106.94 |
| 28 | AB | 628 | DGD | C2G-O2G-C1B | 9.30 | 140.68 | 117.79 |
| 24 | AC | 503 | CLA | C1-C2-C3 | -9.23 | 110.08 | 126.04 |
| 28 | BC | 5519 | DGD | O5D-C1E-C2E | 9.22 | 122.70 | 108.30 |
| 31 | BD | 5408 | LMG | C8-O7-C10 | 9.21 | 140.46 | 117.79 |
| 36 | AF | 101 | HEM | CMA-C3A-C2A | -9.14 | 107.71 | 124.94 |
| 28 | BA | 5412 | DGD | O1G-C1G-C2G | 9.11 | 134.96 | 108.43 |
| 28 | AA | 411 | DGD | O1G-C1G-C2G | 9.10 | 134.92 | 108.43 |
| 30 | AA | 413 | SQD | O5-C1-O6 | 9.09 | 131.51 | 109.97 |
| 28 | AC | 519 | DGD | O5D-C1E-C2E | 9.07 | 122.46 | 108.30 |
| 28 | BC | 5517 | DGD | C2G-O2G-C1B | 9.06 | 140.10 | 117.79 |
| 24 | BC | 5503 | CLA | C1-C2-C3 | -9.06 | 110.38 | 126.04 |
| 35 | AD | 405 | PL9 | C7-C3-C4 | 9.05 | 124.24 | 116.88 |
| 30 | AA | 416 | SQD | O5-C1-O6 | 9.04 | 131.39 | 109.97 |
| 36 | AV | 201 | HEM | CMA-C3A-C2A | -9.00 | 107.97 | 124.94 |
| 30 | BA | 5401 | SQD | O5-C1-O6 | 9.00 | 131.28 | 109.97 |
| 30 | BA | 5414 | SQD | O5-C1-O6 | 8.97 | 131.22 | 109.97 |
| 36 | BV | 5201 | HEM | CMA-C3A-C2A | -8.97 | 108.03 | 124.94 |
| 35 | BD | 5406 | PL9 | C7-C3-C4 | 8.89 | 124.11 | 116.88 |
| 28 | AC | 517 | DGD | C2G-O2G-C1B | 8.84 | 139.56 | 117.79 |
| 28 | AA | 411 | DGD | C6D-C5D-C4D | -8.81 | 93.70 | 112.09 |
| 30 | BF | 5102 | SQD | O5-C1-O6 | 8.78 | 130.76 | 109.97 |
| 30 | AF | 102 | SQD | O5-C1-O6 | 8.74 | 130.67 | 109.97 |
| 28 | BA | 5412 | DGD | C6D-C5D-C4D | -8.70 | 93.92 | 112.09 |
| 35 | AD | 405 | PL9 | C7-C8-C9 | -8.66 | 112.38 | 126.79 |
| 30 | AA | 413 | SQD | O7-S-C6 | 8.64 | 117.20 | 106.94 |
| 28 | BA | 5412 | DGD | O5D-C1E-C2E | 8.60 | 121.73 | 108.30 |
| 28 | AC | 519 | DGD | O6D-C5D-C6D | 8.59 | 124.01 | 106.67 |
| 35 | BD | 5406 | PL9 | C7-C8-C9 | -8.58 | 112.50 | 126.79 |
| 24 | AB | 611 | CLA | C1-C2-C3 | -8.56 | 111.24 | 126.04 |
| 24 | BB | 5615 | CLA | C1-C2-C3 | -8.55 | 111.26 | 126.04 |
| 28 | BA | 5412 | DGD | O6D-C5D-C6D | 8.53 | 123.89 | 106.67 |
| 28 | AA | 411 | DGD | O6D-C5D-C6D | 8.49 | 123.81 | 106.67 |
| 30 | BB | 5625 | SQD | O7-S-C6 | 8.46 | 116.99 | 106.94 |
| 28 | AA | 411 | DGD | O5D-C1E-C2E | 8.42 | 121.44 | 108.30 |
| 28 | AA | 411 | DGD | O3G-C3G-C2G | -8.41 | 90.62 | 110.90 |
| 28 | BA | 5412 | DGD | O3G-C3G-C2G | -8.40 | 90.63 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36 | BF | 5101 | HEM | CMA-C3A-C4A | 8.39 | 141.36 | 128.46 |
| 30 | BA | 5414 | SQD | O7-S-C6 | 8.39 | 116.91 | 106.94 |
| 24 | BC | 5501 | CLA | C1-C2-C3 | -8.33 | 111.64 | 126.04 |
| 30 | AA | 416 | SQD | O7-S-C6 | 8.31 | 116.82 | 106.94 |
| 24 | BB | 5619 | CLA | C1-C2-C3 | -8.31 | 111.68 | 126.04 |
| 36 | AF | 101 | HEM | CMA-C3A-C4A | 8.27 | 141.18 | 128.46 |
| 24 | BA | 5405 | CLA | C1-C2-C3 | -8.27 | 111.74 | 126.04 |
| 30 | AB | 622 | SQD | O5-C1-O6 | 8.26 | 129.55 | 109.97 |
| 28 | AC | 518 | DGD | O5D-C6D-C5D | 8.26 | 124.33 | 109.05 |
| 24 | AC | 501 | CLA | C1-C2-C3 | -8.25 | 111.77 | 126.04 |
| 28 | BC | 5518 | DGD | O5D-C6D-C5D | 8.22 | 124.25 | 109.05 |
| 24 | AB | 615 | CLA | C1-C2-C3 | -8.22 | 111.83 | 126.04 |
| 30 | BB | 5601 | SQD | O5-C1-O6 | 8.21 | 129.41 | 109.97 |
| 24 | BB | 5608 | CLA | C1-C2-C3 | -8.20 | 111.86 | 126.04 |
| 28 | AC | 519 | DGD | C2G-O2G-C1B | 8.19 | 137.95 | 117.79 |
| 30 | AB | 627 | SQD | O5-C1-O6 | 8.17 | 129.33 | 109.97 |
| 30 | BB | 5625 | SQD | O5-C1-O6 | 8.14 | 129.25 | 109.97 |
| 24 | AB | 604 | CLA | C1-C2-C3 | -8.13 | 111.99 | 126.04 |
| 30 | BA | 5401 | SQD | O7-S-C6 | 8.11 | 116.58 | 106.94 |
| 28 | BA | 5412 | DGD | O3G-C1D-C2D | -8.09 | 95.67 | 108.30 |
| 24 | BB | 5614 | CLA | C1-C2-C3 | -8.09 | 112.05 | 126.04 |
| 24 | BC | 5512 | CLA | C1-C2-C3 | -8.09 | 112.05 | 126.04 |
| 24 | AA | 404 | CLA | C1-C2-C3 | -8.08 | 112.08 | 126.04 |
| 24 | BD | 5402 | CLA | C1-C2-C3 | -8.06 | 112.11 | 126.04 |
| 30 | AB | 622 | SQD | O7-S-C6 | 8.05 | 116.51 | 106.94 |
| 28 | BC | 5519 | DGD | C6D-O5D-C1E | -8.05 | 98.02 | 113.74 |
| 28 | AA | 411 | DGD | O3G-C1D-C2D | -8.01 | 95.80 | 108.30 |
| 28 | BC | 5519 | DGD | O6D-C5D-C6D | 8.00 | 122.82 | 106.67 |
| 24 | AC | 512 | CLA | C1-C2-C3 | -7.97 | 112.25 | 126.04 |
| 24 | AC | 508 | CLA | C1-C2-C3 | -7.97 | 112.26 | 126.04 |
| 28 | BC | 5519 | DGD | C2G-O2G-C1B | 7.97 | 137.41 | 117.79 |
| 34 | BD | 5403 | PHO | C1-C2-C3 | -7.93 | 112.33 | 126.04 |
| 24 | AB | 610 | CLA | C1-C2-C3 | -7.89 | 112.39 | 126.04 |
| 24 | BC | 5510 | CLA | C1-C2-C3 | -7.89 | 112.39 | 126.04 |
| 24 | BC | 5508 | CLA | C1-C2-C3 | -7.86 | 112.45 | 126.04 |
| 24 | AC | 509 | CLA | C1-C2-C3 | -7.85 | 112.46 | 126.04 |
| 24 | AC | 510 | CLA | C1-C2-C3 | -7.85 | 112.46 | 126.04 |
| 36 | AV | 201 | HEM | CMA-C3A-C4A | 7.85 | 140.52 | 128.46 |
| 24 | AD | 401 | CLA | C1-C2-C3 | -7.84 | 112.48 | 126.04 |
| 36 | BV | 5201 | HEM | CMA-C3A-C4A | 7.83 | 140.50 | 128.46 |
| 30 | AB | 627 | SQD | O7-S-C6 | 7.82 | 116.23 | 106.94 |
| 34 | AD | 403 | PHO | C1-C2-C3 | -7.80 | 112.55 | 126.04 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 34 | AD | 402 | PHO | C1-C2-C3 | -7.77 | 112.60 | 126.04 |
| 24 | BA | 5408 | CLA | C1-C2-C3 | -7.76 | 112.62 | 126.04 |
| 24 | BC | 5504 | CLA | C1-C2-C3 | -7.76 | 112.62 | 126.04 |
| 24 | BA | 5407 | CLA | C1-C2-C3 | -7.76 | 112.63 | 126.04 |
| 24 | AB | 612 | CLA | C1-C2-C3 | -7.74 | 112.65 | 126.04 |
| 24 | BB | 5616 | CLA | C1-C2-C3 | -7.73 | 112.67 | 126.04 |
| 24 | AA | 407 | CLA | C1-C2-C3 | -7.73 | 112.67 | 126.04 |
| 24 | AC | 504 | CLA | C1-C2-C3 | -7.70 | 112.73 | 126.04 |
| 24 | AC | 506 | CLA | C1-C2-C3 | -7.68 | 112.75 | 126.04 |
| 34 | BD | 5404 | PHO | C1-C2-C3 | -7.67 | 112.77 | 126.04 |
| 24 | BC | 5509 | CLA | C1-C2-C3 | -7.64 | 112.83 | 126.04 |
| 24 | BB | 5606 | CLA | C1-C2-C3 | -7.63 | 112.84 | 126.04 |
| 31 | AD | 407 | LMG | C19-C18-C17 | -7.62 | 75.76 | 114.42 |
| 24 | BB | 5609 | CLA | C1-C2-C3 | -7.61 | 112.88 | 126.04 |
| 24 | AA | 406 | CLA | C1-C2-C3 | -7.59 | 112.91 | 126.04 |
| 24 | BC | 5506 | CLA | C1-C2-C3 | -7.59 | 112.91 | 126.04 |
| 31 | BD | 5409 | LMG | C19-C18-C17 | -7.59 | 75.90 | 114.42 |
| 24 | BB | 5617 | CLA | C1-C2-C3 | -7.58 | 112.94 | 126.04 |
| 24 | AB | 613 | CLA | C1-C2-C3 | -7.57 | 112.94 | 126.04 |
| 31 | BA | 5402 | LMG | C8-O7-C10 | 7.57 | 136.44 | 117.79 |
| 24 | BC | 5502 | CLA | C1-C2-C3 | -7.57 | 112.95 | 126.04 |
| 24 | AD | 404 | CLA | C1-C2-C3 | -7.57 | 112.96 | 126.04 |
| 24 | BB | 5612 | CLA | C1-C2-C3 | -7.56 | 112.96 | 126.04 |
| 24 | BC | 5505 | CLA | C1-C2-C3 | -7.56 | 112.96 | 126.04 |
| 24 | AB | 601 | CLA | C1-C2-C3 | -7.56 | 112.97 | 126.04 |
| 28 | AC | 519 | DGD | C6D-O5D-C1E | -7.55 | 98.99 | 113.74 |
| 30 | BB | 5601 | SQD | O6-C1-C2 | 7.55 | 120.09 | 108.30 |
| 28 | AC | 518 | DGD | O6D-C5D-C6D | 7.54 | 121.89 | 106.67 |
| 24 | BC | 5513 | CLA | C1-C2-C3 | -7.54 | 113.00 | 126.04 |
| 24 | AB | 608 | CLA | C1-C2-C3 | -7.53 | 113.01 | 126.04 |
| 30 | BB | 5625 | SQD | O6-C1-C2 | 7.52 | 120.05 | 108.30 |
| 30 | AB | 622 | SQD | O6-C1-C2 | 7.50 | 120.01 | 108.30 |
| 24 | AC | 505 | CLA | C1-C2-C3 | -7.49 | 113.09 | 126.04 |
| 30 | BB | 5601 | SQD | O7-S-C6 | 7.48 | 115.83 | 106.94 |
| 36 | AF | 101 | HEM | C4A-C3A-C2A | -7.48 | 101.79 | 107.00 |
| 24 | AB | 616 | CLA | C1-C2-C3 | -7.48 | 113.11 | 126.04 |
| 24 | AB | 602 | CLA | C1-C2-C3 | -7.48 | 113.11 | 126.04 |
| 31 | AC | 520 | LMG | O7-C10-C11 | 7.47 | 127.60 | 111.50 |
| 24 | AC | 513 | CLA | C1-C2-C3 | -7.47 | 113.13 | 126.04 |
| 24 | BD | 5405 | CLA | C1-C2-C3 | -7.45 | 113.15 | 126.04 |
| 24 | AB | 605 | CLA | C1-C2-C3 | -7.43 | 113.19 | 126.04 |
| 30 | AB | 627 | SQD | O6-C1-C2 | 7.41 | 119.87 | 108.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | AD | 407 | LMG | C8-O7-C10 | 7.41 | 136.04 | 117.79 |
| 31 | AA | 417 | LMG | C8-O7-C10 | 7.40 | 136.00 | 117.79 |
| 24 | BB | 5605 | CLA | C1-C2-C3 | -7.39 | 113.26 | 126.04 |
| 24 | BB | 5613 | CLA | C1-C2-C3 | -7.38 | 113.28 | 126.04 |
| 24 | BB | 5620 | CLA | C1-C2-C3 | -7.36 | 113.31 | 126.04 |
| 24 | AB | 609 | CLA | C1-C2-C3 | -7.36 | 113.32 | 126.04 |
| 31 | BD | 5409 | LMG | C8-O7-C10 | 7.35 | 135.90 | 117.79 |
| 24 | AA | 405 | CLA | C1-C2-C3 | -7.34 | 113.34 | 126.04 |
| 28 | BC | 5518 | DGD | O6D-C5D-C6D | 7.34 | 121.48 | 106.67 |
| 28 | BA | 5412 | DGD | C6D-O5D-C1E | -7.34 | 99.41 | 113.74 |
| 24 | BA | 5406 | CLA | C1-C2-C3 | -7.33 | 113.36 | 126.04 |
| 24 | AC | 502 | CLA | C1-C2-C3 | -7.33 | 113.36 | 126.04 |
| 36 | BF | 5101 | HEM | C4A-C3A-C2A | -7.32 | 101.90 | 107.00 |
| 30 | BF | 5102 | SQD | O6-C1-C2 | 7.31 | 119.72 | 108.30 |
| 31 | BC | 5520 | LMG | O7-C10-C11 | 7.27 | 127.16 | 111.50 |
| 30 | AF | 102 | SQD | O6-C1-C2 | 7.26 | 119.64 | 108.30 |
| 24 | AC | 507 | CLA | C1-C2-C3 | -7.26 | 113.48 | 126.04 |
| 24 | BC | 5507 | CLA | C1-C2-C3 | -7.25 | 113.51 | 126.04 |
| 28 | AA | 411 | DGD | C6D-O5D-C1E | -7.24 | 99.60 | 113.74 |
| 24 | BB | 5618 | CLA | C1-C2-C3 | -7.19 | 113.60 | 126.04 |
| 24 | BB | 5607 | CLA | C1-C2-C3 | -7.15 | 113.68 | 126.04 |
| 31 | BL | 5101 | LMG | C7-O1-C1 | -7.15 | 99.77 | 113.74 |
| 24 | AB | 614 | CLA | C1-C2-C3 | -7.14 | 113.70 | 126.04 |
| 24 | AB | 606 | CLA | C1-C2-C3 | -7.08 | 113.79 | 126.04 |
| 27 | AD | 406 | BCR | C38-C26-C25 | 7.08 | 132.47 | 124.53 |
| 24 | BB | 5610 | CLA | C1-C2-C3 | -7.07 | 113.82 | 126.04 |
| 24 | AB | 603 | CLA | C1-C2-C3 | -7.06 | 113.83 | 126.04 |
| 31 | AB | 620 | LMG | C7-O1-C1 | -7.04 | 99.99 | 113.74 |
| 27 | AJ | 101 | BCR | C32-C1-C2 | -6.94 | 81.14 | 108.91 |
| 28 | BA | 5412 | DGD | C3G-O3G-C1D | 6.93 | 127.27 | 113.74 |
| 28 | AA | 411 | DGD | C3G-O3G-C1D | 6.91 | 127.24 | 113.74 |
| 31 | AA | 417 | LMG | C7-O1-C1 | -6.90 | 100.25 | 113.74 |
| 28 | AH | 101 | DGD | O2G-C1B-C2B | 6.89 | 126.36 | 111.50 |
| 31 | BD | 5408 | LMG | C7-O1-C1 | -6.87 | 100.31 | 113.74 |
| 31 | AD | 408 | LMG | C13-C12-C11 | -6.87 | 88.49 | 113.19 |
| 31 | BD | 5410 | LMG | C13-C12-C11 | -6.87 | 88.49 | 113.19 |
| 28 | BH | 5101 | DGD | O2G-C1B-C2B | 6.87 | 126.30 | 111.50 |
| 24 | BA | 5406 | CLA | CBA-CAA-C2A | 6.84 | 134.05 | 113.86 |
| 27 | BJ | 5101 | BCR | C32-C1-C2 | -6.82 | 81.62 | 108.91 |
| 31 | AD | 408 | LMG | C8-O7-C10 | 6.81 | 134.55 | 117.79 |
| 27 | BD | 5407 | BCR | C38-C26-C25 | 6.80 | 132.16 | 124.53 |
| 31 | BD | 5410 | LMG | C8-O7-C10 | 6.77 | 134.47 | 117.79 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AA | 405 | CLA | CBA-CAA-C2A | 6.76 | 133.82 | 113.86 |
| 31 | BA | 5402 | LMG | C7-O1-C1 | -6.75 | 100.56 | 113.74 |
| 31 | BM | 5102 | LMG | O7-C10-C11 | 6.72 | 125.98 | 111.50 |
| 36 | BV | 5201 | HEM | C4A-C3A-C2A | -6.72 | 102.32 | 107.00 |
| 31 | AJ | 102 | LMG | C7-O1-C1 | -6.71 | 100.63 | 113.74 |
| 27 | AJ | 101 | BCR | C2-C1-C6 | 6.67 | 120.75 | 110.48 |
| 31 | AM | 101 | LMG | O7-C10-C11 | 6.65 | 125.83 | 111.50 |
| 30 | BA | 5401 | SQD | O6-C1-C2 | 6.65 | 118.68 | 108.30 |
| 31 | BB | 5624 | LMG | O7-C10-C11 | 6.62 | 125.77 | 111.50 |
| 36 | AV | 201 | HEM | C4A-C3A-C2A | -6.60 | 102.40 | 107.00 |
| 27 | BJ | 5101 | BCR | C2-C1-C6 | 6.60 | 120.64 | 110.48 |
| 31 | AB | 621 | LMG | O7-C10-C11 | 6.60 | 125.72 | 111.50 |
| 31 | AJ | 102 | LMG | C13-C12-C11 | -6.57 | 89.56 | 113.19 |
| 31 | AB | 620 | LMG | C13-C12-C11 | -6.53 | 89.70 | 113.19 |
| 31 | BD | 5408 | LMG | C13-C12-C11 | -6.53 | 89.73 | 113.19 |
| 24 | BC | 5511 | CLA | C1-C2-C3 | -6.50 | 114.80 | 126.04 |
| 27 | AK | 102 | BCR | C33-C5-C6 | 6.50 | 131.82 | 124.53 |
| 30 | AA | 416 | SQD | O6-C1-C2 | 6.49 | 118.44 | 108.30 |
| 24 | BB | 5611 | CLA | C1-C2-C3 | -6.49 | 114.83 | 126.04 |
| 28 | AC | 517 | DGD | O6D-C5D-C6D | 6.48 | 119.75 | 106.67 |
| 31 | BL | 5101 | LMG | C13-C12-C11 | -6.48 | 89.90 | 113.19 |
| 24 | AC | 511 | CLA | C1-C2-C3 | -6.45 | 114.89 | 126.04 |
| 35 | BD | 5406 | PL9 | C32-C33-C34 | -6.41 | 112.22 | 127.66 |
| 31 | AC | 521 | LMG | C8-O7-C10 | 6.41 | 133.57 | 117.79 |
| 28 | BB | 5602 | DGD | C3G-O3G-C1D | -6.41 | 101.22 | 113.74 |
| 24 | AB | 607 | CLA | C1-C2-C3 | -6.41 | 114.96 | 126.04 |
| 31 | BA | 5402 | LMG | C13-C12-C11 | -6.40 | 90.20 | 113.19 |
| 28 | AC | 519 | DGD | C6D-C5D-C4D | -6.39 | 98.75 | 112.09 |
| 31 | AA | 417 | LMG | C13-C12-C11 | -6.38 | 90.26 | 113.19 |
| 27 | AB | 618 | BCR | C38-C26-C25 | 6.38 | 131.69 | 124.53 |
| 28 | BC | 5517 | DGD | C6D-O5D-C1E | -6.37 | 101.29 | 113.74 |
| 29 | AA | 412 | LHG | C25-C24-C23 | 6.37 | 136.79 | 113.62 |
| 28 | AC | 517 | DGD | O5D-C6D-C5D | 6.36 | 120.81 | 109.05 |
| 31 | BC | 5521 | LMG | C8-O7-C10 | 6.34 | 133.41 | 117.79 |
| 28 | BC | 5517 | DGD | O5D-C6D-C5D | 6.34 | 120.78 | 109.05 |
| 28 | AB | 628 | DGD | C3G-O3G-C1D | -6.32 | 101.39 | 113.74 |
| 35 | AD | 405 | PL9 | C32-C33-C34 | -6.32 | 112.45 | 127.66 |
| 28 | BC | 5519 | DGD | C4B-C3B-C2B | -6.29 | 90.56 | 113.19 |
| 24 | AA | 406 | CLA | CBA-CAA-C2A | 6.29 | 132.42 | 113.86 |
| 29 | BA | 5413 | LHG | C25-C24-C23 | 6.26 | 136.39 | 113.62 |
| 28 | AC | 518 | DGD | C4A-C3A-C2A | -6.26 | 90.70 | 113.19 |
| 25 | AA | 408 | MST | C10-N9-C4 | -6.26 | 120.93 | 127.96 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | AA | 413 | SQD | O6-C1-C2 | 6.25 | 118.06 | 108.30 |
| 27 | BK | 5102 | BCR | C33-C5-C6 | 6.25 | 131.54 | 124.53 |
| 30 | BB | 5601 | SQD | C10-C9-C8 | 6.24 | 135.62 | 113.19 |
| 27 | AC | 516 | BCR | C33-C5-C6 | 6.23 | 131.53 | 124.53 |
| 32 | BC | 5522 | LMT | C1B-O1B-C4' | -6.23 | 102.55 | 117.96 |
| 30 | BA | 5401 | SQD | C10-C9-C8 | 6.23 | 135.57 | 113.19 |
| 27 | BB | 5622 | BCR | C38-C26-C25 | 6.22 | 131.51 | 124.53 |
| 27 | BC | 5516 | BCR | C33-C5-C6 | 6.21 | 131.50 | 124.53 |
| 30 | AA | 413 | SQD | C10-C9-C8 | 6.20 | 135.49 | 113.19 |
| 30 | BA | 5414 | SQD | O6-C1-C2 | 6.20 | 117.99 | 108.30 |
| 28 | AC | 518 | DGD | C3G-O3G-C1D | -6.18 | 101.66 | 113.74 |
| 28 | BC | 5517 | DGD | O6D-C5D-C6D | 6.17 | 119.12 | 106.67 |
| 30 | AA | 416 | SQD | C10-C9-C8 | 6.17 | 135.38 | 113.19 |
| 30 | BA | 5414 | SQD | C10-C9-C8 | 6.15 | 135.31 | 113.19 |
| 28 | BC | 5518 | DGD | C6D-O5D-C1E | -6.15 | 101.72 | 113.74 |
| 28 | AC | 519 | DGD | C4B-C3B-C2B | -6.11 | 91.23 | 113.19 |
| 30 | AB | 627 | SQD | C10-C9-C8 | 6.10 | 135.12 | 113.19 |
| 27 | BX | 5101 | BCR | C38-C26-C25 | 6.09 | 131.37 | 124.53 |
| 28 | BC | 5518 | DGD | C3G-O3G-C1D | -6.09 | 101.84 | 113.74 |
| 31 | BD | 5409 | LMG | C13-C12-C11 | -6.08 | 91.32 | 113.19 |
| 30 | BB | 5625 | SQD | C10-C9-C8 | 6.08 | 135.04 | 113.19 |
| 28 | AC | 517 | DGD | C4B-C3B-C2B | -6.08 | 91.35 | 113.19 |
| 27 | BC | 5515 | BCR | C33-C5-C6 | 6.08 | 131.35 | 124.53 |
| 28 | BC | 5518 | DGD | C4A-C3A-C2A | -6.07 | 91.37 | 113.19 |
| 36 | BF | 5101 | HEM | CHA-C4D-ND | 6.07 | 131.88 | 124.38 |
| 28 | BC | 5517 | DGD | C4B-C3B-C2B | -6.06 | 91.39 | 113.19 |
| 28 | AC | 517 | DGD | C6D-O5D-C1E | -6.06 | 101.91 | 113.74 |
| 24 | BA | 5407 | CLA | CBA-CAA-C2A | 6.05 | 131.72 | 113.86 |
| 27 | AJ | 101 | BCR | C38-C26-C25 | 6.04 | 131.31 | 124.53 |
| 27 | AC | 515 | BCR | C38-C26-C25 | 6.03 | 131.29 | 124.53 |
| 30 | AF | 102 | SQD | C10-C9-C8 | 6.03 | 134.85 | 113.19 |
| 31 | AD | 407 | LMG | C13-C12-C11 | -6.02 | 91.53 | 113.19 |
| 30 | BF | 5102 | SQD | C10-C9-C8 | 6.02 | 134.84 | 113.19 |
| 32 | AI | 103 | LMT | C1B-O1B-C4' | -6.02 | 103.06 | 117.96 |
| 30 | BF | 5102 | SQD | C25-C24-C23 | 6.02 | 135.51 | 113.62 |
| 30 | AB | 622 | SQD | C10-C9-C8 | 6.02 | 134.82 | 113.19 |
| 27 | AT | 101 | BCR | C33-C5-C6 | 5.99 | 131.25 | 124.53 |
| 30 | AF | 102 | SQD | C25-C24-C23 | 5.97 | 135.35 | 113.62 |
| 27 | BJ | 5101 | BCR | C38-C26-C25 | 5.95 | 131.21 | 124.53 |
| 27 | BT | 5101 | BCR | C33-C5-C6 | 5.94 | 131.20 | 124.53 |
| 27 | AC | 515 | BCR | C33-C5-C6 | 5.94 | 131.19 | 124.53 |
| 28 | AA | 411 | DGD | C1D-O6D-C5D | -5.93 | 102.04 | 113.69 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | BA | 5414 | SQD | C25-C24-C23 | 5.92 | 135.16 | 113.62 |
| 35 | AD | 405 | PL9 | C10-C9-C8 | -5.91 | 108.51 | 123.68 |
| 27 | BC | 5515 | BCR | C38-C26-C25 | 5.91 | 131.16 | 124.53 |
| 25 | BA | 5409 | MST | C10-N9-C4 | -5.90 | 121.33 | 127.96 |
| 30 | AA | 413 | SQD | C25-C24-C23 | 5.89 | 135.05 | 113.62 |
| 28 | BC | 5518 | DGD | O2G-C1B-C2B | 5.89 | 124.20 | 111.50 |
| 28 | BA | 5412 | DGD | O6D-C1D-O3G | 5.89 | 123.91 | 109.97 |
| 27 | BB | 5621 | BCR | C38-C26-C25 | 5.89 | 131.14 | 124.53 |
| 27 | AX | 101 | BCR | C38-C26-C25 | 5.88 | 131.14 | 124.53 |
| 28 | AC | 518 | DGD | O2G-C1B-C2B | 5.88 | 124.18 | 111.50 |
| 27 | AB | 617 | BCR | C38-C26-C25 | 5.87 | 131.12 | 124.53 |
| 31 | AI | 101 | LMG | O7-C10-C11 | 5.86 | 124.13 | 111.50 |
| 36 | AF | 101 | HEM | CHA-C4D-ND | 5.85 | 131.61 | 124.38 |
| 24 | AA | 405 | CLA | CAA-C2A-C1A | -5.85 | 92.81 | 111.97 |
| 28 | AC | 518 | DGD | C6D-O5D-C1E | -5.84 | 102.33 | 113.74 |
| 28 | BA | 5412 | DGD | C1D-O6D-C5D | -5.84 | 102.23 | 113.69 |
| 28 | BC | 5519 | DGD | C6D-C5D-C4D | -5.83 | 99.91 | 112.09 |
| 24 | BA | 5406 | CLA | CAA-C2A-C1A | -5.82 | 92.90 | 111.97 |
| 30 | BB | 5601 | SQD | C25-C24-C23 | 5.81 | 134.76 | 113.62 |
| 30 | AB | 627 | SQD | C25-C24-C23 | 5.79 | 134.67 | 113.62 |
| 31 | BI | 5101 | LMG | O7-C10-C11 | 5.78 | 123.95 | 111.50 |
| 28 | AC | 517 | DGD | C6D-C5D-C4D | -5.77 | 100.05 | 112.09 |
| 28 | AA | 411 | DGD | O6D-C1D-O3G | 5.77 | 123.63 | 109.97 |
| 27 | BJ | 5101 | BCR | C31-C1-C6 | 5.77 | 119.65 | 110.30 |
| 31 | AD | 407 | LMG | O7-C8-C7 | 5.76 | 129.26 | 108.40 |
| 28 | AC | 517 | DGD | O1G-C1G-C2G | -5.76 | 91.68 | 108.43 |
| 28 | BA | 5412 | DGD | O1G-C1A-C2A | 5.76 | 129.97 | 111.91 |
| 31 | BD | 5409 | LMG | C17-C16-C15 | -5.74 | 85.27 | 114.42 |
| 31 | BD | 5409 | LMG | O7-C8-C7 | 5.70 | 129.03 | 108.40 |
| 28 | BC | 5517 | DGD | C6D-C5D-C4D | -5.70 | 100.20 | 112.09 |
| 28 | AA | 411 | DGD | O1G-C1A-C2A | 5.69 | 129.76 | 111.91 |
| 35 | BD | 5406 | PL9 | C10-C9-C8 | -5.68 | 109.11 | 123.68 |
| 27 | AC | 516 | BCR | C38-C26-C25 | 5.67 | 130.90 | 124.53 |
| 30 | BA | 5401 | SQD | C25-C24-C23 | 5.67 | 134.22 | 113.62 |
| 31 | AD | 407 | LMG | C17-C16-C15 | -5.66 | 85.67 | 114.42 |
| 27 | BK | 5102 | BCR | C38-C26-C25 | 5.65 | 130.87 | 124.53 |
| 27 | AJ | 101 | BCR | C31-C1-C6 | 5.64 | 119.44 | 110.30 |
| 30 | AA | 416 | SQD | C25-C24-C23 | 5.63 | 134.10 | 113.62 |
| 31 | AJ | 102 | LMG | O7-C8-C7 | 5.63 | 128.79 | 108.40 |
| 32 | BD | 5411 | LMT | C1B-O1B-C4' | -5.62 | 104.06 | 117.96 |
| 27 | AK | 102 | BCR | C38-C26-C25 | 5.62 | 130.83 | 124.53 |
| 28 | BC | 5517 | DGD | O1G-C1G-C2G | -5.60 | 92.14 | 108.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | BT | 5101 | BCR | C38-C26-C25 | 5.59 | 130.80 | 124.53 |
| 31 | BD | 5408 | LMG | O7-C8-C7 | 5.58 | 128.61 | 108.40 |
| 35 | AD | 405 | PL9 | C22-C23-C24 | -5.53 | 114.33 | 127.66 |
| 28 | BC | 5517 | DGD | C1G-O1G-C1A | 5.50 | 137.50 | 117.12 |
| 27 | AC | 514 | BCR | C38-C26-C25 | 5.50 | 130.70 | 124.53 |
| 27 | BC | 5516 | BCR | C38-C26-C25 | 5.48 | 130.68 | 124.53 |
| 24 | BB | 5612 | CLA | CAA-C2A-C1A | -5.45 | 94.13 | 111.97 |
| 36 | AV | 201 | HEM | CHA-C4D-ND | 5.44 | 131.10 | 124.38 |
| 30 | AB | 622 | SQD | C25-C24-C23 | 5.44 | 133.39 | 113.62 |
| 32 | AD | 409 | LMT | C1B-O1B-C4' | -5.43 | 104.52 | 117.96 |
| 24 | AB | 608 | CLA | CAA-C2A-C1A | -5.42 | 94.20 | 111.97 |
| 30 | BB | 5625 | SQD | C25-C24-C23 | 5.42 | 133.35 | 113.62 |
| 34 | BD | 5404 | PHO | O2D-CGD-CBD | 5.42 | 117.87 | 111.00 |
| 28 | AC | 517 | DGD | C1G-O1G-C1A | 5.41 | 137.16 | 117.12 |
| 27 | AT | 101 | BCR | C38-C26-C25 | 5.39 | 130.58 | 124.53 |
| 30 | BF | 5102 | SQD | C44-O6-C1 | 5.38 | 124.26 | 113.74 |
| 27 | BA | 5411 | BCR | C33-C5-C6 | 5.38 | 130.57 | 124.53 |
| 36 | BV | 5201 | HEM | CHA-C4D-ND | 5.37 | 131.01 | 124.38 |
| 34 | BD | 5403 | PHO | O2D-CGD-CBD | 5.37 | 117.80 | 111.00 |
| 27 | BA | 5411 | BCR | C38-C26-C25 | 5.37 | 130.55 | 124.53 |
| 28 | BH | 5101 | DGD | C6D-O5D-C1E | -5.37 | 103.26 | 113.74 |
| 34 | AD | 402 | PHO | O2D-CGD-CBD | 5.37 | 117.79 | 111.00 |
| 35 | BD | 5406 | PL9 | C22-C23-C24 | -5.35 | 114.77 | 127.66 |
| 24 | AC | 505 | CLA | CAA-CBA-CGA | -5.34 | 97.64 | 113.25 |
| 28 | BA | 5412 | DGD | O2G-C1B-C2B | 5.34 | 123.02 | 111.50 |
| 24 | BC | 5505 | CLA | CAA-CBA-CGA | -5.33 | 97.68 | 113.25 |
| 28 | AA | 411 | DGD | O2G-C1B-C2B | 5.31 | 122.96 | 111.50 |
| 24 | BB | 5612 | CLA | CBA-CAA-C2A | 5.30 | 129.52 | 113.86 |
| 27 | BC | 5514 | BCR | C38-C26-C25 | 5.30 | 130.48 | 124.53 |
| 27 | BB | 5621 | BCR | C33-C5-C6 | 5.30 | 130.48 | 124.53 |
| 24 | AB | 607 | CLA | CBA-CAA-C2A | 5.28 | 129.45 | 113.86 |
| 24 | BA | 5407 | CLA | CAA-C2A-C1A | -5.27 | 94.72 | 111.97 |
| 27 | AB | 617 | BCR | C33-C5-C6 | 5.26 | 130.44 | 124.53 |
| 27 | BJ | 5101 | BCR | C33-C5-C6 | 5.26 | 130.43 | 124.53 |
| 28 | BH | 5101 | DGD | C6D-C5D-C4D | -5.26 | 101.12 | 112.09 |
| 34 | AD | 403 | PHO | O2D-CGD-CBD | 5.25 | 117.65 | 111.00 |
| 27 | AA | 410 | BCR | C33-C5-C6 | 5.25 | 130.42 | 124.53 |
| 27 | AJ | 101 | BCR | C33-C5-C6 | 5.25 | 130.42 | 124.53 |
| 27 | AA | 410 | BCR | C38-C26-C25 | 5.25 | 130.42 | 124.53 |
| 25 | AA | 408 | MST | C8-S7-C2 | 5.24 | 106.18 | 102.27 |
| 31 | BL | 5101 | LMG | O7-C8-C7 | 5.24 | 127.36 | 108.40 |
| 25 | BA | 5409 | MST | C8-S7-C2 | 5.23 | 106.17 | 102.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | AF | 102 | SQD | C44-O6-C1 | 5.22 | 123.94 | 113.74 |
| 30 | AA | 413 | SQD | O8-S-C6 | -5.21 | 97.44 | 105.74 |
| 31 | AB | 620 | LMG | O7-C8-C7 | 5.21 | 127.26 | 108.40 |
| 30 | AA | 416 | SQD | O8-S-C6 | -5.21 | 97.45 | 105.74 |
| 28 | AC | 518 | DGD | C6D-C5D-C4D | -5.20 | 101.24 | 112.09 |
| 28 | AH | 101 | DGD | C6D-C5D-C4D | -5.19 | 101.26 | 112.09 |
| 24 | AB | 608 | CLA | CBA-CAA-C2A | 5.18 | 129.16 | 113.86 |
| 30 | AF | 102 | SQD | O8-S-C6 | -5.17 | 97.50 | 105.74 |
| 28 | BC | 5519 | DGD | O6D-C5D-C4D | 5.14 | 119.03 | 109.69 |
| 24 | BB | 5611 | CLA | CAA-C2A-C1A | -5.14 | 95.14 | 111.97 |
| 28 | AH | 101 | DGD | C6D-O5D-C1E | -5.12 | 103.73 | 113.74 |
| 30 | BF | 5102 | SQD | O8-S-C6 | -5.11 | 97.60 | 105.74 |
| 27 | AB | 619 | BCR | C33-C5-C6 | 5.11 | 130.27 | 124.53 |
| 30 | BA | 5401 | SQD | O8-S-C6 | -5.08 | 97.65 | 105.74 |
| 24 | BB | 5611 | CLA | CBA-CAA-C2A | 5.07 | 128.83 | 113.86 |
| 24 | AB | 607 | CLA | CAA-C2A-C1A | -5.07 | 95.36 | 111.97 |
| 27 | BD | 5407 | BCR | C33-C5-C6 | 5.07 | 130.22 | 124.53 |
| 31 | AC | 521 | LMG | C7-O1-C1 | -5.06 | 103.86 | 113.74 |
| 28 | BC | 5518 | DGD | C6D-C5D-C4D | -5.04 | 101.56 | 112.09 |
| 31 | BC | 5521 | LMG | C7-O1-C1 | -5.04 | 103.90 | 113.74 |
| 27 | AB | 619 | BCR | C38-C26-C25 | 5.04 | 130.18 | 124.53 |
| 24 | AA | 406 | CLA | CAA-C2A-C1A | -5.03 | 95.48 | 111.97 |
| 27 | BB | 5623 | BCR | C38-C26-C25 | 5.03 | 130.18 | 124.53 |
| 27 | BX | 5101 | BCR | C33-C5-C6 | 5.03 | 130.17 | 124.53 |
| 27 | AX | 101 | BCR | C33-C5-C6 | 4.99 | 130.13 | 124.53 |
| 28 | BC | 5519 | DGD | O2G-C2G-C1G | -4.97 | 90.41 | 108.40 |
| 35 | BD | 5406 | PL9 | C12-C13-C14 | -4.96 | 115.73 | 127.66 |
| 31 | BE | 5101 | LMG | C7-O1-C1 | -4.95 | 104.06 | 113.74 |
| 31 | AA | 414 | LMG | C7-O1-C1 | -4.95 | 104.08 | 113.74 |
| 27 | AD | 406 | BCR | C33-C5-C6 | 4.89 | 130.02 | 124.53 |
| 35 | AD | 405 | PL9 | C20-C19-C21 | 4.88 | 123.47 | 115.27 |
| 27 | AJ | 101 | BCR | C1-C6-C5 | -4.87 | 115.75 | 122.61 |
| 31 | BC | 5521 | LMG | C13-C12-C11 | -4.87 | 95.69 | 113.19 |
| 31 | AC | 521 | LMG | C13-C12-C11 | -4.86 | 95.72 | 113.19 |
| 31 | BD | 5409 | LMG | C20-C19-C18 | 4.84 | 139.00 | 114.42 |
| 27 | BB | 5623 | BCR | C33-C5-C6 | 4.83 | 129.96 | 124.53 |
| 27 | BJ | 5101 | BCR | C1-C6-C5 | -4.83 | 115.81 | 122.61 |
| 27 | AB | 618 | BCR | C33-C5-C6 | 4.82 | 129.94 | 124.53 |
| 35 | AD | 405 | PL9 | C12-C13-C14 | -4.82 | 116.06 | 127.66 |
| 31 | AD | 407 | LMG | C20-C19-C18 | 4.79 | 138.73 | 114.42 |
| 31 | BD | 5409 | LMG | C9-C8-C7 | -4.77 | 100.51 | 111.79 |
| 28 | BC | 5517 | DGD | C4A-C3A-C2A | -4.75 | 96.12 | 113.19 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | AD | 407 | LMG | C9-C8-C7 | -4.74 | 100.58 | 111.79 |
| 24 | BB | 5618 | CLA | CBA-CAA-C2A | 4.73 | 127.82 | 113.86 |
| 28 | AH | 101 | DGD | O3G-C3G-C2G | -4.73 | 99.50 | 110.90 |
| 35 | BD | 5406 | PL9 | C20-C19-C21 | 4.71 | 123.19 | 115.27 |
| 36 | AF | 101 | HEM | CAD-C3D-C2D | 4.70 | 136.62 | 127.88 |
| 28 | AC | 519 | DGD | O6D-C5D-C4D | 4.69 | 118.22 | 109.69 |
| 30 | AB | 627 | SQD | O8-S-C6 | -4.69 | 98.26 | 105.74 |
| 24 | AB | 614 | CLA | CBA-CAA-C2A | 4.69 | 127.70 | 113.86 |
| 30 | AA | 413 | SQD | C44-O6-C1 | 4.68 | 122.89 | 113.74 |
| 28 | AH | 101 | DGD | O5D-C6D-C5D | 4.68 | 117.70 | 109.05 |
| 28 | AC | 519 | DGD | O2G-C2G-C1G | -4.67 | 91.50 | 108.40 |
| 28 | AC | 519 | DGD | O6E-C1E-O5D | 4.66 | 121.00 | 109.97 |
| 28 | BC | 5519 | DGD | O6E-C1E-O5D | 4.65 | 121.00 | 109.97 |
| 28 | BC | 5519 | DGD | C1D-O6D-C5D | -4.64 | 104.59 | 113.69 |
| 36 | BF | 5101 | HEM | CAD-C3D-C2D | 4.63 | 136.50 | 127.88 |
| 27 | AK | 102 | BCR | C11-C10-C9 | 4.63 | 133.91 | 127.31 |
| 27 | AC | 514 | BCR | C33-C5-C6 | 4.62 | 129.71 | 124.53 |
| 24 | BC | 5505 | CLA | CBA-CAA-C2A | 4.61 | 127.48 | 113.86 |
| 28 | BC | 5517 | DGD | O5D-C1E-C2E | 4.60 | 115.49 | 108.30 |
| 30 | BA | 5414 | SQD | C44-O6-C1 | 4.59 | 122.71 | 113.74 |
| 28 | AC | 517 | DGD | C4A-C3A-C2A | -4.58 | 96.74 | 113.19 |
| 31 | BD | 5409 | LMG | C18-C17-C16 | 4.55 | 137.54 | 114.42 |
| 27 | AD | 406 | BCR | C38-C26-C27 | -4.55 | 104.87 | 113.62 |
| 32 | AI | 103 | LMT | C1-O1'-C1' | 4.55 | 121.39 | 113.84 |
| 28 | BH | 5101 | DGD | O5D-C6D-C5D | 4.55 | 117.47 | 109.05 |
| 24 | AB | 608 | CLA | CAA-CBA-CGA | -4.55 | 99.96 | 113.25 |
| 28 | AC | 517 | DGD | O5D-C1E-C2E | 4.52 | 115.36 | 108.30 |
| 28 | BH | 5101 | DGD | O3G-C3G-C2G | -4.51 | 100.01 | 110.90 |
| 35 | BD | 5406 | PL9 | C35-C34-C36 | 4.51 | 122.86 | 115.27 |
| 28 | BB | 5602 | DGD | C1G-O1G-C1A | 4.50 | 133.80 | 117.12 |
| 30 | BA | 5401 | SQD | C44-O6-C1 | 4.50 | 122.53 | 113.74 |
| 28 | AB | 628 | DGD | C1G-O1G-C1A | 4.50 | 133.79 | 117.12 |
| 31 | BE | 5101 | LMG | C8-O7-C10 | 4.50 | 128.86 | 117.79 |
| 24 | AC | 505 | CLA | CBA-CAA-C2A | 4.49 | 127.12 | 113.86 |
| 28 | BC | 5518 | DGD | C1D-O6D-C5D | -4.49 | 104.88 | 113.69 |
| 31 | AD | 407 | LMG | C18-C17-C16 | 4.47 | 137.13 | 114.42 |
| 30 | BA | 5414 | SQD | O8-S-C6 | -4.47 | 98.61 | 105.74 |
| 27 | AC | 516 | BCR | C29-C30-C25 | 4.47 | 117.36 | 110.48 |
| 31 | AA | 414 | LMG | C8-O7-C10 | 4.46 | 128.76 | 117.79 |
| 28 | AC | 519 | DGD | C1D-O6D-C5D | -4.45 | 104.95 | 113.69 |
| 30 | AB | 622 | SQD | O8-S-C6 | -4.44 | 98.66 | 105.74 |
| 32 | BC | 5522 | LMT | C1-O1'-C1' | 4.42 | 121.17 | 113.84 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | AJ | 101 | BCR | C38-C26-C27 | -4.41 | 105.14 | 113.62 |
| 35 | AD | 405 | PL9 | C35-C34-C36 | 4.41 | 122.68 | 115.27 |
| 30 | AA | 416 | SQD | C44-O6-C1 | 4.40 | 122.34 | 113.74 |
| 24 | AC | 504 | CLA | CAA-C2A-C1A | -4.40 | 97.56 | 111.97 |
| 36 | BF | 5101 | HEM | CHA-C4D-C3D | -4.39 | 117.09 | 125.33 |
| 27 | BK | 5102 | BCR | C11-C10-C9 | 4.39 | 133.57 | 127.31 |
| 24 | BC | 5504 | CLA | CBA-CAA-C2A | 4.39 | 126.81 | 113.86 |
| 27 | AK | 102 | BCR | C33-C5-C4 | -4.37 | 105.21 | 113.62 |
| 28 | BH | 5101 | DGD | O3G-C1D-C2D | -4.37 | 101.48 | 108.30 |
| 27 | BB | 5622 | BCR | C33-C5-C6 | 4.36 | 129.42 | 124.53 |
| 32 | AI | 103 | LMT | O1B-C1B-C2B | 4.35 | 119.38 | 108.10 |
| 24 | AC | 504 | CLA | CBA-CAA-C2A | 4.35 | 126.70 | 113.86 |
| 28 | AC | 518 | DGD | C1D-O6D-C5D | -4.35 | 105.16 | 113.69 |
| 28 | BE | 5102 | DGD | C6D-O5D-C1E | -4.35 | 105.25 | 113.74 |
| 30 | BB | 5601 | SQD | O8-S-C6 | -4.35 | 98.81 | 105.74 |
| 27 | BD | 5407 | BCR | C38-C26-C27 | -4.34 | 105.28 | 113.62 |
| 24 | BA | 5406 | CLA | C4D-C3D-CAD | 4.34 | 113.21 | 108.10 |
| 24 | BB | 5612 | CLA | CAA-CBA-CGA | -4.33 | 100.59 | 113.25 |
| 36 | AF | 101 | HEM | C1B-NB-C4B | 4.33 | 109.55 | 105.07 |
| 24 | BB | 5610 | CLA | O2A-CGA-CBA | 4.33 | 125.50 | 111.91 |
| 31 | AD | 407 | LMG | C15-C14-C13 | -4.32 | 92.47 | 114.42 |
| 36 | BV | 5201 | HEM | C1B-NB-C4B | 4.32 | 109.53 | 105.07 |
| 31 | AA | 417 | LMG | C9-C8-C7 | 4.32 | 122.00 | 111.79 |
| 31 | BA | 5402 | LMG | C9-C8-C7 | 4.32 | 122.00 | 111.79 |
| 27 | BC | 5514 | BCR | C33-C5-C6 | 4.31 | 129.37 | 124.53 |
| 36 | AF | 101 | HEM | CHA-C4D-C3D | -4.31 | 117.24 | 125.33 |
| 31 | BD | 5409 | LMG | C15-C14-C13 | -4.31 | 92.55 | 114.42 |
| 30 | BB | 5625 | SQD | O8-S-C6 | -4.29 | 98.90 | 105.74 |
| 24 | BC | 5504 | CLA | CAA-C2A-C1A | -4.29 | 97.90 | 111.97 |
| 28 | AH | 101 | DGD | O3G-C1D-C2D | -4.29 | 101.60 | 108.30 |
| 28 | AH | 101 | DGD | C5B-C4B-C3B | -4.28 | 92.68 | 114.42 |
| 27 | AK | 102 | BCR | C2-C1-C6 | 4.28 | 117.07 | 110.48 |
| 28 | AE | 101 | DGD | O2G-C1B-C2B | 4.27 | 120.70 | 111.50 |
| 24 | AB | 612 | CLA | O2D-CGD-CBD | 4.27 | 118.85 | 111.27 |
| 27 | BC | 5514 | BCR | C24-C23-C22 | 4.26 | 132.67 | 126.23 |
| 27 | BJ | 5101 | BCR | C38-C26-C27 | -4.25 | 105.45 | 113.62 |
| 28 | BE | 5102 | DGD | O2G-C1B-C2B | 4.25 | 120.66 | 111.50 |
| 28 | BH | 5101 | DGD | C5B-C4B-C3B | -4.25 | 92.85 | 114.42 |
| 28 | BC | 5519 | DGD | C1E-C2E-C3E | -4.25 | 101.15 | 110.00 |
| 27 | AB | 618 | BCR | C38-C26-C27 | -4.24 | 105.47 | 113.62 |
| 24 | AB | 606 | CLA | O2A-CGA-CBA | 4.24 | 125.20 | 111.91 |
| 24 | BB | 5611 | CLA | O2A-CGA-CBA | 4.24 | 125.20 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | BC | 5521 | LMG | C9-O8-C28 | 4.23 | 132.78 | 117.12 |
| 24 | AA | 405 | CLA | O2D-CGD-CBD | 4.22 | 118.77 | 111.27 |
| 27 | BC | 5516 | BCR | C29-C30-C25 | 4.22 | 116.97 | 110.48 |
| 25 | AA | 408 | MST | N5-C6-N1 | -4.21 | 119.57 | 126.23 |
| 24 | BA | 5406 | CLA | O2D-CGD-CBD | 4.21 | 118.76 | 111.27 |
| 36 | AV | 201 | HEM | C1B-NB-C4B | 4.20 | 109.41 | 105.07 |
| 28 | AB | 628 | DGD | C4B-C3B-C2B | -4.20 | 98.10 | 113.19 |
| 27 | AC | 516 | BCR | C2-C1-C6 | 4.20 | 116.94 | 110.48 |
| 24 | BA | 5406 | CLA | O2A-CGA-CBA | 4.20 | 125.08 | 111.91 |
| 24 | AA | 406 | CLA | O2D-CGD-CBD | 4.19 | 118.72 | 111.27 |
| 27 | BB | 5622 | BCR | C38-C26-C27 | -4.19 | 105.56 | 113.62 |
| 24 | AB | 603 | CLA | C3A-C2A-C1A | 4.19 | 107.61 | 101.34 |
| 28 | AE | 101 | DGD | C6D-O5D-C1E | -4.19 | 105.56 | 113.74 |
| 25 | BA | 5409 | MST | N5-C6-N1 | -4.19 | 119.61 | 126.23 |
| 28 | AC | 519 | DGD | C8A-C7A-C6A | -4.18 | 93.20 | 114.42 |
| 27 | AK | 102 | BCR | C7-C8-C9 | 4.18 | 132.55 | 126.23 |
| 31 | BM | 5102 | LMG | C9-O8-C28 | 4.16 | 132.54 | 117.12 |
| 27 | BD | 5407 | BCR | C29-C30-C25 | 4.16 | 116.89 | 110.48 |
| 31 | AD | 408 | LMG | C7-O1-C1 | -4.16 | 105.61 | 113.74 |
| 24 | AB | 607 | CLA | O2A-CGA-CBA | 4.16 | 124.95 | 111.91 |
| 28 | BB | 5602 | DGD | C4B-C3B-C2B | -4.15 | 98.26 | 113.19 |
| 31 | AC | 521 | LMG | C9-O8-C28 | 4.15 | 132.49 | 117.12 |
| 24 | AD | 404 | CLA | O2D-CGD-CBD | 4.15 | 118.64 | 111.27 |
| 24 | BB | 5607 | CLA | C3A-C2A-C1A | 4.15 | 107.55 | 101.34 |
| 32 | AB | 629 | LMT | C1-O1'-C1' | -4.15 | 106.96 | 113.84 |
| 24 | BC | 5511 | CLA | CBA-CAA-C2A | 4.15 | 126.10 | 113.86 |
| 31 | AB | 620 | LMG | O1-C7-C8 | 4.14 | 120.90 | 110.90 |
| 28 | BC | 5519 | DGD | C8A-C7A-C6A | -4.14 | 93.40 | 114.42 |
| 32 | BC | 5522 | LMT | O1B-C1B-C2B | 4.14 | 118.83 | 108.10 |
| 31 | AM | 101 | LMG | C9-O8-C28 | 4.14 | 132.46 | 117.12 |
| 27 | BX | 5101 | BCR | C38-C26-C27 | -4.14 | 105.66 | 113.62 |
| 27 | BK | 5102 | BCR | C33-C5-C4 | -4.14 | 105.67 | 113.62 |
| 31 | BD | 5410 | LMG | C7-O1-C1 | -4.13 | 105.68 | 113.74 |
| 27 | BC | 5516 | BCR | C33-C5-C4 | -4.12 | 105.69 | 113.62 |
| 28 | AC | 517 | DGD | O3G-C1D-C2D | -4.12 | 101.87 | 108.30 |
| 36 | BF | 5101 | HEM | C1B-NB-C4B | 4.12 | 109.33 | 105.07 |
| 27 | AT | 101 | BCR | C29-C30-C25 | 4.12 | 116.82 | 110.48 |
| 27 | BB | 5621 | BCR | C38-C26-C27 | -4.12 | 105.71 | 113.62 |
| 30 | AB | 622 | SQD | C44-O6-C1 | 4.11 | 121.78 | 113.74 |
| 24 | AB | 603 | CLA | C2A-C1A-CHA | 4.11 | 131.05 | 123.86 |
| 24 | AC | 511 | CLA | CBA-CAA-C2A | 4.10 | 125.98 | 113.86 |
| 24 | BC | 5504 | CLA | O2D-CGD-CBD | 4.10 | 118.55 | 111.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 28 | AH | 101 | DGD | C3B-C2B-C1B | -4.09 | 98.73 | 113.62 |
| 27 | AC | 514 | BCR | C24-C23-C22 | 4.09 | 132.41 | 126.23 |
| 32 | BB | 5626 | LMT | C1B-O1B-C4' | -4.09 | 107.85 | 117.96 |
| 31 | AD | 407 | LMG | C21-C20-C19 | 4.08 | 135.14 | 114.42 |
| 27 | BK | 5102 | BCR | C2-C1-C6 | 4.08 | 116.76 | 110.48 |
| 31 | BD | 5410 | LMG | C19-C18-C17 | -4.08 | 93.72 | 114.42 |
| 27 | BT | 5101 | BCR | C33-C5-C4 | -4.08 | 105.79 | 113.62 |
| 27 | AX | 101 | BCR | C38-C26-C27 | -4.07 | 105.80 | 113.62 |
| 31 | BD | 5408 | LMG | O8-C9-C8 | -4.07 | 96.59 | 108.43 |
| 31 | AB | 620 | LMG | C8-O7-C10 | 4.07 | 127.81 | 117.79 |
| 24 | BB | 5607 | CLA | C2A-C1A-CHA | 4.06 | 130.97 | 123.86 |
| 28 | BH | 5101 | DGD | C3B-C2B-C1B | -4.06 | 98.84 | 113.62 |
| 24 | AA | 407 | CLA | O2D-CGD-CBD | 4.06 | 118.48 | 111.27 |
| 27 | AT | 101 | BCR | C33-C5-C4 | -4.06 | 105.81 | 113.62 |
| 27 | BX | 5101 | BCR | C29-C30-C25 | 4.06 | 116.73 | 110.48 |
| 31 | BC | 5520 | LMG | C12-C11-C10 | -4.06 | 98.87 | 113.62 |
| 24 | BB | 5616 | CLA | O2D-CGD-CBD | 4.06 | 118.48 | 111.27 |
| 27 | BK | 5102 | BCR | C7-C8-C9 | 4.05 | 132.36 | 126.23 |
| 24 | AA | 405 | CLA | C4D-C3D-CAD | 4.05 | 112.87 | 108.10 |
| 28 | BC | 5518 | DGD | C8A-C7A-C6A | -4.05 | 93.86 | 114.42 |
| 24 | BA | 5407 | CLA | O2A-CGA-CBA | 4.05 | 124.62 | 111.91 |
| 24 | BA | 5407 | CLA | O2D-CGD-CBD | 4.04 | 118.45 | 111.27 |
| 24 | AA | 405 | CLA | O2A-CGA-CBA | 4.04 | 124.59 | 111.91 |
| 31 | AD | 408 | LMG | C19-C18-C17 | -4.04 | 93.94 | 114.42 |
| 28 | AC | 518 | DGD | C8A-C7A-C6A | -4.03 | 93.96 | 114.42 |
| 32 | BB | 5603 | LMT | C1-O1'-C1' | -4.02 | 107.17 | 113.84 |
| 29 | AA | 415 | LHG | O7-C7-C8 | 4.02 | 120.16 | 111.50 |
| 29 | BA | 5415 | LHG | O7-C7-C8 | 4.01 | 120.15 | 111.50 |
| 24 | AA | 406 | CLA | O2A-CGA-CBA | 4.01 | 124.48 | 111.91 |
| 31 | BL | 5101 | LMG | O1-C7-C8 | 4.00 | 120.56 | 110.90 |
| 27 | AC | 514 | BCR | C38-C26-C27 | -4.00 | 105.93 | 113.62 |
| 24 | BC | 5505 | CLA | C4D-C3D-CAD | 4.00 | 112.81 | 108.10 |
| 27 | AB | 617 | BCR | C38-C26-C27 | -4.00 | 105.94 | 113.62 |
| 28 | AC | 519 | DGD | C1E-C2E-C3E | -3.99 | 101.68 | 110.00 |
| 24 | BA | 5408 | CLA | O2D-CGD-CBD | 3.99 | 118.36 | 111.27 |
| 30 | BA | 5401 | SQD | C31-C30-C29 | 3.99 | 134.68 | 114.42 |
| 31 | AC | 520 | LMG | C12-C11-C10 | -3.99 | 99.12 | 113.62 |
| 27 | AX | 101 | BCR | C29-C30-C25 | 3.99 | 116.62 | 110.48 |
| 27 | AC | 515 | BCR | C38-C26-C27 | -3.98 | 105.96 | 113.62 |
| 27 | BT | 5101 | BCR | C29-C30-C25 | 3.98 | 116.61 | 110.48 |
| 24 | AC | 511 | CLA | O2D-CGD-CBD | 3.98 | 118.34 | 111.27 |
| 27 | AJ | 101 | BCR | C30-C25-C26 | -3.98 | 117.00 | 122.61 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | AA | 416 | SQD | C31-C30-C29 | 3.98 | 134.63 | 114.42 |
| 24 | BD | 5405 | CLA | O2D-CGD-CBD | 3.98 | 118.34 | 111.27 |
| 27 | AJ | 101 | BCR | C23-C24-C25 | 3.97 | 138.36 | 127.20 |
| 24 | AC | 501 | CLA | C3A-C2A-C1A | 3.97 | 107.29 | 101.34 |
| 27 | AC | 516 | BCR | C33-C5-C4 | -3.97 | 105.99 | 113.62 |
| 27 | BA | 5411 | BCR | C7-C8-C9 | 3.96 | 132.22 | 126.23 |
| 27 | BC | 5515 | BCR | C33-C5-C4 | -3.95 | 106.02 | 113.62 |
| 31 | AJ | 102 | LMG | O8-C9-C8 | -3.95 | 96.92 | 108.43 |
| 24 | BB | 5609 | CLA | CBA-CAA-C2A | 3.95 | 125.53 | 113.86 |
| 30 | AB | 622 | SQD | O48-C23-C24 | 3.94 | 124.29 | 111.91 |
| 27 | BB | 5621 | BCR | C33-C5-C4 | -3.94 | 106.04 | 113.62 |
| 35 | BD | 5406 | PL9 | C15-C14-C16 | 3.94 | 121.90 | 115.27 |
| 31 | AA | 417 | LMG | O7-C8-C7 | 3.94 | 122.67 | 108.40 |
| 24 | AC | 504 | CLA | O2D-CGD-CBD | 3.94 | 118.27 | 111.27 |
| 27 | AC | 515 | BCR | C33-C5-C4 | -3.94 | 106.05 | 113.62 |
| 31 | BD | 5409 | LMG | C21-C20-C19 | 3.93 | 134.40 | 114.42 |
| 24 | BC | 5508 | CLA | CAA-C2A-C1A | -3.93 | 99.09 | 111.97 |
| 31 | AI | 101 | LMG | C9-C8-C7 | -3.93 | 102.50 | 111.79 |
| 28 | BC | 5517 | DGD | O3G-C1D-C2D | -3.93 | 102.17 | 108.30 |
| 24 | BB | 5612 | CLA | C3A-C2A-C1A | 3.92 | 107.22 | 101.34 |
| 24 | BC | 5505 | CLA | CAA-C2A-C1A | -3.92 | 99.12 | 111.97 |
| 32 | AB | 623 | LMT | C1B-O1B-C4' | -3.92 | 108.26 | 117.96 |
| 25 | AA | 408 | MST | N5-C4-N3 | -3.92 | 120.03 | 126.23 |
| 27 | BJ | 5101 | BCR | C30-C25-C26 | -3.91 | 117.11 | 122.61 |
| 31 | AB | 621 | LMG | C34-C33-C32 | 3.91 | 134.27 | 114.42 |
| 28 | BH | 5101 | DGD | O6D-C5D-C6D | 3.91 | 114.56 | 106.67 |
| 30 | BB | 5625 | SQD | C44-O6-C1 | 3.91 | 121.37 | 113.74 |
| 27 | BT | 5101 | BCR | C38-C26-C27 | -3.90 | 106.12 | 113.62 |
| 24 | AB | 606 | CLA | C3A-C2A-C1A | 3.90 | 107.18 | 101.34 |
| 27 | AC | 516 | BCR | C38-C26-C27 | -3.90 | 106.13 | 113.62 |
| 24 | AB | 605 | CLA | CBA-CAA-C2A | 3.89 | 125.35 | 113.86 |
| 27 | AD | 406 | BCR | C29-C30-C25 | 3.89 | 116.46 | 110.48 |
| 31 | BL | 5101 | LMG | C8-O7-C10 | 3.88 | 127.36 | 117.79 |
| 30 | BA | 5401 | SQD | C11-C10-C9 | 3.88 | 134.14 | 114.42 |
| 31 | AC | 521 | LMG | O7-C8-C7 | 3.88 | 122.46 | 108.40 |
| 34 | BD | 5404 | PHO | C1A-C2A-C3A | 3.88 | 106.53 | 102.84 |
| 28 | AC | 517 | DGD | C1D-O6D-C5D | -3.88 | 106.07 | 113.69 |
| 28 | AC | 519 | DGD | C6B-C5B-C4B | -3.88 | 94.73 | 114.42 |
| 31 | BB | 5624 | LMG | C34-C33-C32 | 3.88 | 134.12 | 114.42 |
| 30 | AA | 416 | SQD | C11-C10-C9 | 3.88 | 134.12 | 114.42 |
| 27 | BJ | 5101 | BCR | C33-C5-C4 | -3.88 | 106.17 | 113.62 |
| 30 | BB | 5625 | SQD | O9-S-C6 | -3.87 | 102.33 | 106.94 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | BA | 5401 | SQD | O48-C23-C24 | 3.87 | 124.05 | 111.91 |
| 27 | AD | 406 | BCR | C24-C23-C22 | 3.87 | 132.08 | 126.23 |
| 24 | AC | 508 | CLA | CBA-CAA-C2A | 3.87 | 125.28 | 113.86 |
| 24 | AC | 505 | CLA | CAA-C2A-C1A | -3.87 | 99.30 | 111.97 |
| 27 | BX | 5101 | BCR | C2-C1-C6 | 3.87 | 116.43 | 110.48 |
| 30 | AA | 416 | SQD | O48-C23-C24 | 3.86 | 124.04 | 111.91 |
| 35 | AD | 405 | PL9 | C20-C19-C18 | -3.86 | 113.77 | 123.68 |
| 28 | BA | 5412 | DGD | O6E-C1E-O5D | 3.86 | 119.11 | 109.97 |
| 24 | AB | 608 | CLA | C3A-C2A-C1A | 3.85 | 107.11 | 101.34 |
| 28 | AA | 411 | DGD | O6E-C1E-O5D | 3.85 | 119.10 | 109.97 |
| 28 | AH | 101 | DGD | O6D-C5D-C6D | 3.85 | 114.44 | 106.67 |
| 28 | BC | 5517 | DGD | C1D-O6D-C5D | -3.85 | 106.13 | 113.69 |
| 27 | AT | 101 | BCR | C38-C26-C27 | -3.85 | 106.22 | 113.62 |
| 27 | AJ | 101 | BCR | C7-C8-C9 | 3.85 | 132.05 | 126.23 |
| 31 | BC | 5521 | LMG | O7-C8-C7 | 3.84 | 122.32 | 108.40 |
| 24 | BB | 5613 | CLA | O2A-CGA-CBA | 3.84 | 123.96 | 111.91 |
| 24 | AC | 502 | CLA | CBA-CAA-C2A | 3.84 | 125.19 | 113.86 |
| 27 | BJ | 5101 | BCR | C23-C24-C25 | 3.84 | 137.97 | 127.20 |
| 27 | AK | 102 | BCR | C38-C26-C27 | -3.84 | 106.25 | 113.62 |
| 27 | BC | 5515 | BCR | C38-C26-C27 | -3.83 | 106.25 | 113.62 |
| 36 | AV | 201 | HEM | CHA-C4D-C3D | -3.83 | 118.14 | 125.33 |
| 24 | AC | 505 | CLA | C4D-C3D-CAD | 3.83 | 112.61 | 108.10 |
| 27 | AJ | 101 | BCR | C33-C5-C4 | -3.83 | 106.26 | 113.62 |
| 27 | BC | 5515 | BCR | C23-C24-C25 | 3.83 | 137.95 | 127.20 |
| 24 | AB | 604 | CLA | O2A-CGA-CBA | 3.83 | 123.91 | 111.91 |
| 31 | AB | 621 | LMG | C14-C13-C12 | -3.82 | 95.02 | 114.42 |
| 25 | BA | 5409 | MST | N5-C4-N3 | -3.82 | 120.19 | 126.23 |
| 32 | BC | 5522 | LMT | O1'-C1-C2 | -3.82 | 96.18 | 109.56 |
| 24 | BB | 5610 | CLA | C3A-C2A-C1A | 3.82 | 107.06 | 101.34 |
| 24 | AC | 510 | CLA | O2D-CGD-CBD | 3.82 | 118.05 | 111.27 |
| 24 | BB | 5608 | CLA | O2A-CGA-CBA | 3.82 | 123.89 | 111.91 |
| 31 | BA | 5402 | LMG | O7-C8-C7 | 3.82 | 122.22 | 108.40 |
| 27 | AC | 515 | BCR | C23-C24-C25 | 3.81 | 137.89 | 127.20 |
| 28 | BC | 5519 | DGD | C6B-C5B-C4B | -3.81 | 95.10 | 114.42 |
| 30 | AB | 622 | SQD | C11-C10-C9 | 3.81 | 133.75 | 114.42 |
| 31 | BB | 5624 | LMG | C14-C13-C12 | -3.81 | 95.11 | 114.42 |
| 25 | AA | 408 | MST | C6-N5-C4 | 3.80 | 120.34 | 113.89 |
| 24 | AC | 503 | CLA | O2D-CGD-CBD | 3.80 | 118.03 | 111.27 |
| 24 | AC | 508 | CLA | CAA-C2A-C1A | -3.80 | 99.52 | 111.97 |
| 30 | AA | 413 | SQD | C31-C30-C29 | 3.80 | 133.70 | 114.42 |
| 32 | AI | 103 | LMT | O1'-C1-C2 | -3.80 | 96.26 | 109.56 |
| 35 | AD | 405 | PL9 | C15-C14-C16 | 3.80 | 121.66 | 115.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AC | 505 | CLA | O2D-CGD-CBD | 3.79 | 118.01 | 111.27 |
| 24 | BC | 5501 | CLA | C3A-C2A-C1A | 3.79 | 107.02 | 101.34 |
| 24 | BC | 5503 | CLA | O2D-CGD-CBD | 3.79 | 118.01 | 111.27 |
| 31 | AI | 101 | LMG | C9-O8-C28 | 3.79 | 131.14 | 117.12 |
| 30 | BB | 5625 | SQD | C11-C10-C9 | 3.79 | 133.64 | 114.42 |
| 27 | BB | 5621 | BCR | C29-C30-C25 | 3.78 | 116.31 | 110.48 |
| 31 | AB | 621 | LMG | C37-C36-C35 | -3.78 | 95.23 | 114.42 |
| 24 | AB | 609 | CLA | O2A-CGA-CBA | 3.78 | 123.77 | 111.91 |
| 30 | BA | 5414 | SQD | C31-C30-C29 | 3.78 | 133.59 | 114.42 |
| 35 | AD | 405 | PL9 | C25-C24-C26 | 3.77 | 121.62 | 115.27 |
| 35 | BD | 5406 | PL9 | C11-C9-C8 | -3.77 | 113.48 | 121.12 |
| 31 | BB | 5624 | LMG | C37-C36-C35 | -3.77 | 95.28 | 114.42 |
| 24 | BC | 5507 | CLA | O2D-CGD-CBD | 3.76 | 117.96 | 111.27 |
| 31 | BI | 5101 | LMG | C9-C8-C7 | -3.76 | 102.89 | 111.79 |
| 30 | AF | 102 | SQD | C11-C10-C9 | 3.76 | 133.51 | 114.42 |
| 24 | BB | 5610 | CLA | C4D-C3D-CAD | 3.76 | 112.53 | 108.10 |
| 27 | BC | 5516 | BCR | C38-C26-C27 | -3.76 | 106.40 | 113.62 |
| 31 | BD | 5408 | LMG | O1-C7-C8 | 3.76 | 119.96 | 110.90 |
| 25 | BA | 5409 | MST | C6-N5-C4 | 3.76 | 120.26 | 113.89 |
| 31 | BA | 5402 | LMG | C9-O8-C28 | 3.75 | 131.02 | 117.12 |
| 31 | BI | 5101 | LMG | C9-O8-C28 | 3.75 | 131.01 | 117.12 |
| 24 | BC | 5503 | CLA | C4D-C3D-CAD | 3.75 | 112.52 | 108.10 |
| 30 | BF | 5102 | SQD | C11-C10-C9 | 3.75 | 133.46 | 114.42 |
| 27 | BK | 5102 | BCR | C38-C26-C27 | -3.74 | 106.43 | 113.62 |
| 24 | BB | 5619 | CLA | C2A-C1A-CHA | 3.74 | 130.40 | 123.86 |
| 27 | AA | 410 | BCR | C7-C8-C9 | 3.74 | 131.89 | 126.23 |
| 24 | BC | 5508 | CLA | CBA-CAA-C2A | 3.74 | 124.90 | 113.86 |
| 24 | AC | 509 | CLA | C4D-C3D-CAD | 3.74 | 112.50 | 108.10 |
| 30 | AA | 413 | SQD | C11-C10-C9 | 3.73 | 133.38 | 114.42 |
| 30 | BA | 5414 | SQD | C11-C10-C9 | 3.73 | 133.37 | 114.42 |
| 24 | AC | 505 | CLA | C3A-C2A-C1A | 3.73 | 106.92 | 101.34 |
| 27 | AJ | 101 | BCR | C29-C30-C25 | 3.72 | 116.21 | 110.48 |
| 24 | BC | 5502 | CLA | CBA-CAA-C2A | 3.72 | 124.85 | 113.86 |
| 30 | BB | 5601 | SQD | O9-S-C6 | -3.72 | 102.52 | 106.94 |
| 24 | BB | 5615 | CLA | O2A-CGA-CBA | 3.72 | 123.58 | 111.91 |
| 30 | BB | 5601 | SQD | C11-C10-C9 | 3.72 | 133.29 | 114.42 |
| 30 | BB | 5601 | SQD | O48-C23-C24 | 3.72 | 123.57 | 111.91 |
| 28 | AC | 518 | DGD | C3G-C2G-C1G | -3.72 | 103.00 | 111.79 |
| 24 | BD | 5402 | CLA | O2A-CGA-CBA | 3.71 | 123.56 | 111.91 |
| 36 | AV | 201 | HEM | CAD-CBD-CGD | 3.71 | 121.59 | 113.60 |
| 25 | AA | 408 | MST | N3-C2-N1 | -3.71 | 120.15 | 126.95 |
| 24 | BC | 5510 | CLA | O2D-CGD-CBD | 3.71 | 117.86 | 111.27 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | AJ | 102 | LMG | C12-C11-C10 | 3.71 | 127.11 | 113.62 |
| 24 | AB | 615 | CLA | C2A-C1A-CHA | 3.71 | 130.34 | 123.86 |
| 30 | AA | 413 | SQD | C45-O47-C7 | 3.71 | 126.92 | 117.79 |
| 24 | BB | 5611 | CLA | C3A-C2A-C1A | 3.70 | 106.89 | 101.34 |
| 30 | AF | 102 | SQD | O48-C23-C24 | 3.70 | 123.53 | 111.91 |
| 24 | BB | 5609 | CLA | C3A-C2A-C1A | 3.70 | 106.88 | 101.34 |
| 24 | BD | 5402 | CLA | C4D-C3D-CAD | 3.70 | 112.46 | 108.10 |
| 27 | AB | 617 | BCR | C23-C24-C25 | 3.70 | 137.59 | 127.20 |
| 30 | BA | 5414 | SQD | C45-O47-C7 | 3.70 | 126.89 | 117.79 |
| 24 | AB | 603 | CLA | C4D-C3D-CAD | 3.69 | 112.45 | 108.10 |
| 27 | AB | 617 | BCR | C33-C5-C4 | -3.69 | 106.52 | 113.62 |
| 28 | BC | 5518 | DGD | C3G-C2G-C1G | -3.69 | 103.06 | 111.79 |
| 24 | AB | 611 | CLA | O2A-CGA-CBA | 3.69 | 123.48 | 111.91 |
| 36 | BV | 5201 | HEM | CAD-CBD-CGD | 3.69 | 121.54 | 113.60 |
| 27 | AD | 406 | BCR | C30-C25-C26 | -3.69 | 117.42 | 122.61 |
| 30 | AB | 627 | SQD | O48-C23-C24 | 3.69 | 123.47 | 111.91 |
| 24 | AC | 509 | CLA | C2A-C1A-CHA | 3.68 | 130.30 | 123.86 |
| 27 | BD | 5407 | BCR | C30-C25-C26 | -3.68 | 117.43 | 122.61 |
| 30 | BF | 5102 | SQD | O48-C23-C24 | 3.68 | 123.45 | 111.91 |
| 24 | BC | 5512 | CLA | C2A-C1A-CHA | 3.68 | 130.29 | 123.86 |
| 24 | BC | 5505 | CLA | C3A-C2A-C1A | 3.68 | 106.85 | 101.34 |
| 27 | BD | 5407 | BCR | C24-C23-C22 | 3.68 | 131.79 | 126.23 |
| 24 | AB | 601 | CLA | O2D-CGD-CBD | 3.67 | 117.80 | 111.27 |
| 27 | BA | 5411 | BCR | C38-C26-C27 | -3.67 | 106.56 | 113.62 |
| 24 | AB | 615 | CLA | C4D-C3D-CAD | 3.67 | 112.42 | 108.10 |
| 36 | BV | 5201 | HEM | CHA-C4D-C3D | -3.67 | 118.44 | 125.33 |
| 24 | BA | 5407 | CLA | C4D-C3D-CAD | 3.67 | 112.42 | 108.10 |
| 31 | AA | 417 | LMG | C9-O8-C28 | 3.66 | 130.69 | 117.12 |
| 24 | BC | 5512 | CLA | C4D-C3D-CAD | 3.66 | 112.41 | 108.10 |
| 35 | BD | 5406 | PL9 | C20-C19-C18 | -3.66 | 114.29 | 123.68 |
| 24 | BC | 5511 | CLA | C4D-C3D-CAD | 3.66 | 112.41 | 108.10 |
| 30 | AB | 627 | SQD | C11-C10-C9 | 3.66 | 132.99 | 114.42 |
| 27 | AC | 514 | BCR | C33-C5-C4 | -3.66 | 106.59 | 113.62 |
| 27 | BJ | 5101 | BCR | C29-C30-C25 | 3.65 | 116.11 | 110.48 |
| 24 | AC | 513 | CLA | O2A-CGA-CBA | 3.65 | 123.37 | 111.91 |
| 24 | AB | 602 | CLA | O2A-CGA-CBA | 3.65 | 123.37 | 111.91 |
| 27 | BB | 5623 | BCR | C38-C26-C27 | -3.65 | 106.60 | 113.62 |
| 24 | AC | 507 | CLA | O2D-CGD-CBD | 3.65 | 117.75 | 111.27 |
| 27 | BC | 5514 | BCR | C38-C26-C27 | -3.65 | 106.61 | 113.62 |
| 30 | BB | 5625 | SQD | O48-C23-C24 | 3.65 | 123.35 | 111.91 |
| 24 | BB | 5614 | CLA | O2D-CGD-CBD | 3.64 | 117.74 | 111.27 |
| 28 | BA | 5412 | DGD | C3A-C2A-C1A | -3.64 | 100.38 | 113.62 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BC | 5509 | CLA | C4D-C3D-CAD | 3.64 | 112.38 | 108.10 |
| 31 | AJ | 102 | LMG | O1-C7-C8 | 3.64 | 119.67 | 110.90 |
| 24 | AB | 607 | CLA | C3A-C2A-C1A | 3.64 | 106.78 | 101.34 |
| 24 | BB | 5620 | CLA | O2D-CGD-CBD | 3.63 | 117.72 | 111.27 |
| 27 | AX | 101 | BCR | C30-C25-C26 | -3.63 | 117.50 | 122.61 |
| 24 | AC | 512 | CLA | C2A-C1A-CHA | 3.63 | 130.20 | 123.86 |
| 27 | AB | 617 | BCR | C29-C30-C25 | 3.63 | 116.06 | 110.48 |
| 24 | AC | 503 | CLA | C4D-C3D-CAD | 3.62 | 112.37 | 108.10 |
| 24 | BB | 5619 | CLA | C4D-C3D-CAD | 3.62 | 112.37 | 108.10 |
| 27 | BC | 5515 | BCR | C29-C30-C25 | 3.62 | 116.06 | 110.48 |
| 27 | AA | 410 | BCR | C38-C26-C27 | -3.62 | 106.66 | 113.62 |
| 27 | BA | 5411 | BCR | C33-C5-C4 | -3.62 | 106.66 | 113.62 |
| 25 | BA | 5409 | MST | N3-C2-N1 | -3.62 | 120.32 | 126.95 |
| 35 | BD | 5406 | PL9 | C25-C24-C26 | 3.62 | 121.36 | 115.27 |
| 36 | BV | 5201 | HEM | CBD-CAD-C3D | -3.62 | 102.58 | 112.63 |
| 24 | AB | 606 | CLA | C4D-C3D-CAD | 3.61 | 112.36 | 108.10 |
| 27 | AX | 101 | BCR | C2-C1-C6 | 3.61 | 116.04 | 110.48 |
| 31 | BD | 5408 | LMG | C12-C11-C10 | 3.61 | 126.75 | 113.62 |
| 35 | AD | 405 | PL9 | C11-C9-C8 | -3.61 | 113.81 | 121.12 |
| 24 | BC | 5508 | CLA | O2D-CGD-CBD | 3.61 | 117.68 | 111.27 |
| 24 | BC | 5501 | CLA | C4D-C3D-CAD | 3.60 | 112.34 | 108.10 |
| 27 | BJ | 5101 | BCR | C7-C8-C9 | 3.60 | 131.68 | 126.23 |
| 31 | BA | 5402 | LMG | O8-C9-C8 | -3.60 | 97.96 | 108.43 |
| 24 | AB | 612 | CLA | C3A-C2A-C1A | 3.60 | 106.73 | 101.34 |
| 28 | AA | 411 | DGD | C3A-C2A-C1A | -3.60 | 100.54 | 113.62 |
| 27 | AB | 619 | BCR | C29-C30-C25 | 3.60 | 116.02 | 110.48 |
| 27 | BK | 5102 | BCR | C23-C24-C25 | 3.59 | 137.30 | 127.20 |
| 24 | AC | 501 | CLA | CAA-C2A-C1A | -3.59 | 100.20 | 111.97 |
| 27 | AD | 406 | BCR | C23-C24-C25 | 3.59 | 137.29 | 127.20 |
| 24 | AD | 401 | CLA | O2A-CGA-CBA | 3.59 | 123.18 | 111.91 |
| 24 | BC | 5506 | CLA | O2A-CGA-CBA | 3.59 | 123.18 | 111.91 |
| 27 | AC | 516 | BCR | C1-C6-C5 | -3.59 | 117.56 | 122.61 |
| 36 | BV | 5201 | HEM | C4C-CHD-C1D | 3.59 | 127.30 | 122.56 |
| 24 | AD | 404 | CLA | CBA-CAA-C2A | 3.59 | 124.45 | 113.86 |
| 27 | AK | 102 | BCR | C23-C24-C25 | 3.59 | 137.28 | 127.20 |
| 27 | BT | 5101 | BCR | C30-C25-C26 | -3.59 | 117.56 | 122.61 |
| 24 | BC | 5509 | CLA | C2A-C1A-CHA | 3.59 | 130.13 | 123.86 |
| 24 | BC | 5506 | CLA | CBA-CAA-C2A | 3.58 | 124.44 | 113.86 |
| 24 | BC | 5501 | CLA | CAA-C2A-C1A | -3.58 | 100.24 | 111.97 |
| 31 | AI | 101 | LMG | C7-O1-C1 | -3.58 | 106.74 | 113.74 |
| 31 | BD | 5408 | LMG | C9-C8-C7 | 3.58 | 120.26 | 111.79 |
| 24 | AB | 603 | CLA | O2A-CGA-CBA | 3.58 | 123.14 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | AJ | 102 | LMG | C9-C8-C7 | 3.58 | 120.25 | 111.79 |
| 24 | AB | 610 | CLA | O2D-CGD-CBD | 3.58 | 117.63 | 111.27 |
| 27 | AK | 102 | BCR | C29-C30-C25 | 3.58 | 115.99 | 110.48 |
| 27 | AK | 102 | BCR | C1-C6-C5 | -3.57 | 117.58 | 122.61 |
| 24 | AB | 605 | CLA | C4D-C3D-CAD | 3.57 | 112.31 | 108.10 |
| 24 | BB | 5616 | CLA | C4D-C3D-CAD | 3.57 | 112.30 | 108.10 |
| 27 | AT | 101 | BCR | C30-C25-C26 | -3.56 | 117.59 | 122.61 |
| 27 | AC | 515 | BCR | C2-C1-C6 | 3.56 | 115.97 | 110.48 |
| 24 | BB | 5605 | CLA | O2D-CGD-CBD | 3.56 | 117.60 | 111.27 |
| 24 | AC | 508 | CLA | O2A-CGA-CBA | 3.56 | 123.08 | 111.91 |
| 24 | AC | 508 | CLA | C4D-C3D-CAD | 3.56 | 112.29 | 108.10 |
| 24 | BD | 5402 | CLA | O2D-CGD-CBD | 3.56 | 117.59 | 111.27 |
| 24 | BB | 5612 | CLA | O2D-CGD-CBD | 3.55 | 117.58 | 111.27 |
| 24 | BC | 5511 | CLA | O2D-CGD-CBD | 3.55 | 117.58 | 111.27 |
| 30 | BF | 5102 | SQD | O9-S-C6 | -3.55 | 102.72 | 106.94 |
| 32 | BB | 5603 | LMT | C1B-O1B-C4' | -3.55 | 109.18 | 117.96 |
| 24 | AB | 601 | CLA | C4D-C3D-CAD | 3.55 | 112.28 | 108.10 |
| 24 | BB | 5611 | CLA | C4D-C3D-CAD | 3.54 | 112.27 | 108.10 |
| 24 | AC | 501 | CLA | C4D-C3D-CAD | 3.54 | 112.27 | 108.10 |
| 27 | BK | 5102 | BCR | C1-C6-C5 | -3.54 | 117.63 | 122.61 |
| 27 | AC | 516 | BCR | C23-C24-C25 | 3.54 | 137.14 | 127.20 |
| 24 | AC | 511 | CLA | C4D-C3D-CAD | 3.54 | 112.27 | 108.10 |
| 24 | AC | 509 | CLA | O2A-CGA-CBA | 3.54 | 123.01 | 111.91 |
| 27 | BB | 5621 | BCR | C23-C24-C25 | 3.53 | 137.12 | 127.20 |
| 31 | BI | 5101 | LMG | C7-O1-C1 | -3.53 | 106.84 | 113.74 |
| 24 | BC | 5508 | CLA | C3A-C2A-C1A | 3.53 | 106.63 | 101.34 |
| 24 | BB | 5606 | CLA | O2A-CGA-CBA | 3.53 | 122.99 | 111.91 |
| 32 | AB | 629 | LMT | C1B-O1B-C4' | -3.53 | 109.23 | 117.96 |
| 24 | AC | 503 | CLA | O2A-CGA-CBA | 3.53 | 122.98 | 111.91 |
| 24 | BC | 5501 | CLA | O2A-CGA-CBA | 3.53 | 122.98 | 111.91 |
| 27 | BD | 5407 | BCR | C23-C24-C25 | 3.53 | 137.11 | 127.20 |
| 24 | BC | 5507 | CLA | O2A-CGA-CBA | 3.53 | 122.98 | 111.91 |
| 31 | AB | 621 | LMG | C12-C11-C10 | -3.53 | 100.80 | 113.62 |
| 24 | BB | 5605 | CLA | C4D-C3D-CAD | 3.53 | 112.25 | 108.10 |
| 24 | AD | 404 | CLA | C4D-C3D-CAD | 3.52 | 112.25 | 108.10 |
| 30 | AF | 102 | SQD | O9-S-C6 | -3.52 | 102.75 | 106.94 |
| 24 | BB | 5616 | CLA | C3A-C2A-C1A | 3.52 | 106.61 | 101.34 |
| 27 | BK | 5102 | BCR | C29-C30-C25 | 3.52 | 115.90 | 110.48 |
| 24 | AB | 614 | CLA | C4D-C3D-CAD | 3.52 | 112.24 | 108.10 |
| 27 | AB | 619 | BCR | C38-C26-C27 | -3.52 | 106.86 | 113.62 |
| 24 | AC | 507 | CLA | O2A-CGA-CBA | 3.52 | 122.95 | 111.91 |
| 36 | AV | 201 | HEM | CBD-CAD-C3D | -3.52 | 102.86 | 112.63 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BC | 5513 | CLA | O2A-CGA-CBA | 3.52 | 122.94 | 111.91 |
| 27 | BX | 5101 | BCR | C33-C5-C4 | -3.51 | 106.86 | 113.62 |
| 27 | BC | 5516 | BCR | C2-C1-C6 | 3.51 | 115.89 | 110.48 |
| 28 | BC | 5519 | DGD | C3B-C2B-C1B | 3.51 | 126.39 | 113.62 |
| 27 | BD | 5407 | BCR | C33-C5-C4 | -3.51 | 106.87 | 113.62 |
| 24 | BB | 5608 | CLA | C4D-C3D-CAD | 3.51 | 112.23 | 108.10 |
| 35 | BD | 5406 | PL9 | C50-C49-C48 | -3.51 | 112.51 | 122.65 |
| 27 | BA | 5411 | BCR | C29-C30-C25 | 3.51 | 115.88 | 110.48 |
| 34 | AD | 403 | PHO | C1A-C2A-C3A | 3.50 | 106.17 | 102.84 |
| 28 | BA | 5412 | DGD | O1G-C1A-O1A | -3.50 | 114.75 | 123.59 |
| 27 | AA | 410 | BCR | C33-C5-C4 | -3.50 | 106.89 | 113.62 |
| 24 | AB | 605 | CLA | C3A-C2A-C1A | 3.50 | 106.59 | 101.34 |
| 31 | BB | 5624 | LMG | C33-C32-C31 | -3.50 | 96.64 | 114.42 |
| 24 | BC | 5501 | CLA | C2A-C1A-CHA | 3.50 | 129.98 | 123.86 |
| 24 | AC | 506 | CLA | CBA-CAA-C2A | 3.50 | 124.20 | 113.86 |
| 24 | BB | 5615 | CLA | C3A-C2A-C1A | 3.50 | 106.58 | 101.34 |
| 24 | BC | 5508 | CLA | C4D-C3D-CAD | 3.50 | 112.22 | 108.10 |
| 27 | AK | 102 | BCR | C30-C25-C26 | -3.50 | 117.68 | 122.61 |
| 27 | BC | 5515 | BCR | C2-C1-C6 | 3.50 | 115.86 | 110.48 |
| 24 | AC | 506 | CLA | O2A-CGA-CBA | 3.50 | 122.88 | 111.91 |
| 31 | AD | 408 | LMG | C12-C11-C10 | 3.50 | 126.33 | 113.62 |
| 24 | BB | 5618 | CLA | C4D-C3D-CAD | 3.49 | 112.22 | 108.10 |
| 24 | AC | 501 | CLA | C2A-C1A-CHA | 3.49 | 129.97 | 123.86 |
| 28 | AA | 411 | DGD | O1G-C1A-O1A | -3.49 | 114.78 | 123.59 |
| 30 | AB | 622 | SQD | O9-S-C6 | -3.49 | 102.79 | 106.94 |
| 30 | AB | 627 | SQD | O9-S-C6 | -3.49 | 102.79 | 106.94 |
| 27 | BX | 5101 | BCR | C30-C25-C26 | -3.49 | 117.70 | 122.61 |
| 24 | AB | 608 | CLA | O2D-CGD-CBD | 3.49 | 117.47 | 111.27 |
| 24 | BC | 5510 | CLA | C4D-C3D-CAD | 3.49 | 112.21 | 108.10 |
| 35 | AD | 405 | PL9 | C51-C49-C50 | 3.49 | 122.30 | 114.60 |
| 24 | BC | 5503 | CLA | O2A-CGA-CBA | 3.49 | 122.85 | 111.91 |
| 24 | BD | 5405 | CLA | C4D-C3D-CAD | 3.48 | 112.20 | 108.10 |
| 24 | AB | 616 | CLA | O2D-CGD-CBD | 3.48 | 117.46 | 111.27 |
| 24 | BB | 5607 | CLA | O2A-CGA-CBA | 3.48 | 122.84 | 111.91 |
| 30 | BA | 5414 | SQD | O9-S-C6 | -3.47 | 102.81 | 106.94 |
| 27 | BC | 5516 | BCR | C23-C24-C25 | 3.47 | 136.96 | 127.20 |
| 24 | BA | 5408 | CLA | C4D-C3D-CAD | 3.47 | 112.19 | 108.10 |
| 30 | AA | 416 | SQD | O9-S-C6 | -3.47 | 102.81 | 106.94 |
| 27 | AB | 618 | BCR | C30-C25-C26 | -3.47 | 117.72 | 122.61 |
| 24 | BA | 5408 | CLA | C3A-C2A-C1A | 3.47 | 106.53 | 101.34 |
| 31 | BB | 5624 | LMG | C39-C38-C37 | 3.47 | 132.03 | 114.42 |
| 31 | BB | 5624 | LMG | C12-C11-C10 | -3.47 | 101.01 | 113.62 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | AC | 516 | BCR | C8-C7-C6 | 3.47 | 136.94 | 127.20 |
| 27 | AB | 618 | BCR | C29-C30-C25 | 3.46 | 115.81 | 110.48 |
| 24 | AC | 512 | CLA | C4D-C3D-CAD | 3.46 | 112.17 | 108.10 |
| 27 | AX | 101 | BCR | C33-C5-C4 | -3.46 | 106.97 | 113.62 |
| 24 | BB | 5618 | CLA | CAA-CBA-CGA | -3.46 | 103.15 | 113.25 |
| 24 | BC | 5502 | CLA | C4D-C3D-CAD | 3.46 | 112.17 | 108.10 |
| 24 | BC | 5507 | CLA | C4D-C3D-CAD | 3.46 | 112.17 | 108.10 |
| 27 | AC | 515 | BCR | C29-C30-C25 | 3.45 | 115.80 | 110.48 |
| 31 | AI | 101 | LMG | C12-C11-C10 | -3.45 | 101.06 | 113.62 |
| 32 | BD | 5411 | LMT | O1B-C1B-C2B | 3.45 | 117.04 | 108.10 |
| 27 | BK | 5102 | BCR | C8-C9-C10 | -3.45 | 113.64 | 118.94 |
| 27 | BB | 5622 | BCR | C2-C1-C6 | 3.45 | 115.79 | 110.48 |
| 27 | BB | 5623 | BCR | C29-C30-C25 | 3.45 | 115.79 | 110.48 |
| 28 | BC | 5517 | DGD | C3B-C2B-C1B | 3.45 | 126.16 | 113.62 |
| 24 | BB | 5606 | CLA | O2D-CGD-CBD | 3.45 | 117.39 | 111.27 |
| 31 | BD | 5410 | LMG | C12-C11-C10 | 3.45 | 126.15 | 113.62 |
| 24 | AB | 615 | CLA | O2D-CGD-CBD | 3.45 | 117.39 | 111.27 |
| 31 | BI | 5101 | LMG | C12-C11-C10 | -3.44 | 101.09 | 113.62 |
| 24 | BC | 5511 | CLA | CAA-C2A-C1A | -3.44 | 100.70 | 111.97 |
| 27 | BB | 5622 | BCR | C30-C25-C26 | -3.44 | 117.77 | 122.61 |
| 31 | AJ | 102 | LMG | C9-O8-C28 | 3.44 | 129.86 | 117.12 |
| 24 | AB | 604 | CLA | C4D-C3D-CAD | 3.44 | 112.15 | 108.10 |
| 31 | BD | 5410 | LMG | C9-O8-C28 | 3.43 | 129.84 | 117.12 |
| 30 | BA | 5401 | SQD | O9-S-C6 | -3.43 | 102.86 | 106.94 |
| 24 | BC | 5508 | CLA | O2A-CGA-CBA | 3.43 | 122.69 | 111.91 |
| 24 | BA | 5408 | CLA | O2A-CGA-CBA | 3.43 | 122.67 | 111.91 |
| 31 | AD | 408 | LMG | C9-O8-C28 | 3.43 | 129.82 | 117.12 |
| 24 | BB | 5609 | CLA | C4D-C3D-CAD | 3.43 | 112.14 | 108.10 |
| 28 | AA | 411 | DGD | C1G-O1G-C1A | -3.43 | 104.42 | 117.12 |
| 34 | AD | 403 | PHO | O2A-CGA-CBA | 3.43 | 122.66 | 111.91 |
| 35 | AD | 405 | PL9 | C50-C49-C48 | -3.43 | 112.74 | 122.65 |
| 27 | BB | 5622 | BCR | C29-C30-C25 | 3.43 | 115.76 | 110.48 |
| 24 | AB | 605 | CLA | CAA-C2A-C1A | -3.43 | 100.74 | 111.97 |
| 28 | BA | 5412 | DGD | C1G-O1G-C1A | -3.43 | 104.43 | 117.12 |
| 24 | AC | 502 | CLA | O2A-CGA-CBA | 3.43 | 122.66 | 111.91 |
| 32 | AD | 409 | LMT | O1B-C1B-C2B | 3.43 | 116.97 | 108.10 |
| 24 | BC | 5501 | CLA | CBA-CAA-C2A | 3.43 | 123.97 | 113.86 |
| 24 | AC | 508 | CLA | C3A-C2A-C1A | 3.42 | 106.47 | 101.34 |
| 28 | BB | 5602 | DGD | O1G-C1G-C2G | -3.42 | 98.46 | 108.43 |
| 24 | BB | 5607 | CLA | C4D-C3D-CAD | 3.42 | 112.13 | 108.10 |
| 28 | BC | 5518 | DGD | O6E-C1E-O5D | 3.42 | 118.08 | 109.97 |
| 27 | BB | 5622 | BCR | C23-C24-C25 | 3.42 | 136.80 | 127.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 28 | AB | 628 | DGD | O3G-C3G-C2G | 3.42 | 119.14 | 110.90 |
| 27 | AB | 618 | BCR | C33-C5-C4 | -3.42 | 107.05 | 113.62 |
| 24 | BD | 5405 | CLA | CBA-CAA-C2A | 3.42 | 123.94 | 113.86 |
| 31 | AB | 621 | LMG | C33-C32-C31 | -3.41 | 97.09 | 114.42 |
| 24 | AB | 611 | CLA | O2D-CGD-CBD | 3.41 | 117.33 | 111.27 |
| 24 | AC | 504 | CLA | C3A-C2A-C1A | 3.41 | 106.45 | 101.34 |
| 27 | AC | 514 | BCR | C29-C30-C25 | 3.41 | 115.73 | 110.48 |
| 31 | AB | 621 | LMG | C39-C38-C37 | 3.41 | 131.74 | 114.42 |
| 24 | AC | 512 | CLA | O2A-CGA-CBA | 3.41 | 122.61 | 111.91 |
| 24 | AC | 510 | CLA | O2A-CGA-CBA | 3.41 | 122.61 | 111.91 |
| 24 | AC | 508 | CLA | O2D-CGD-CBD | 3.41 | 117.32 | 111.27 |
| 24 | AB | 612 | CLA | C4D-C3D-CAD | 3.40 | 112.11 | 108.10 |
| 24 | BC | 5504 | CLA | C3A-C2A-C1A | 3.40 | 106.44 | 101.34 |
| 27 | AC | 516 | BCR | C30-C25-C26 | -3.40 | 117.82 | 122.61 |
| 24 | BC | 5502 | CLA | O2A-CGA-CBA | 3.40 | 122.58 | 111.91 |
| 24 | BB | 5620 | CLA | C2A-C1A-CHA | 3.40 | 129.80 | 123.86 |
| 27 | AD | 406 | BCR | C33-C5-C4 | -3.40 | 107.09 | 113.62 |
| 28 | BC | 5517 | DGD | C6B-C5B-C4B | -3.39 | 97.20 | 114.42 |
| 24 | AC | 503 | CLA | C7-C6-C5 | -3.39 | 104.15 | 113.36 |
| 27 | AB | 618 | BCR | C2-C1-C6 | 3.39 | 115.70 | 110.48 |
| 30 | AA | 416 | SQD | C32-C31-C30 | 3.39 | 131.63 | 114.42 |
| 30 | BA | 5414 | SQD | O48-C23-C24 | 3.39 | 122.54 | 111.91 |
| 24 | AB | 614 | CLA | CAA-CBA-CGA | -3.39 | 103.35 | 113.25 |
| 28 | AC | 517 | DGD | C6B-C5B-C4B | -3.39 | 97.22 | 114.42 |
| 35 | BD | 5406 | PL9 | C51-C49-C50 | 3.38 | 122.08 | 114.60 |
| 31 | AA | 417 | LMG | O8-C9-C8 | -3.38 | 98.58 | 108.43 |
| 27 | BB | 5623 | BCR | C2-C1-C6 | 3.38 | 115.69 | 110.48 |
| 34 | BD | 5404 | PHO | O2A-CGA-CBA | 3.38 | 122.52 | 111.91 |
| 24 | AA | 407 | CLA | O2A-CGA-CBA | 3.38 | 122.52 | 111.91 |
| 36 | AF | 101 | HEM | C4B-CHC-C1C | 3.38 | 127.02 | 122.56 |
| 27 | AB | 619 | BCR | C33-C5-C4 | -3.38 | 107.12 | 113.62 |
| 24 | AB | 616 | CLA | C2A-C1A-CHA | 3.38 | 129.76 | 123.86 |
| 28 | AE | 101 | DGD | O5D-C1E-C2E | 3.38 | 113.58 | 108.30 |
| 24 | BC | 5513 | CLA | O2D-CGD-CBD | 3.38 | 117.27 | 111.27 |
| 24 | AA | 406 | CLA | C4D-C3D-CAD | 3.37 | 112.07 | 108.10 |
| 24 | BC | 5506 | CLA | C4D-C3D-CAD | 3.37 | 112.07 | 108.10 |
| 27 | AD | 406 | BCR | C8-C7-C6 | 3.37 | 136.68 | 127.20 |
| 24 | AC | 511 | CLA | CAA-C2A-C1A | -3.37 | 100.92 | 111.97 |
| 30 | AA | 413 | SQD | O48-C23-C24 | 3.37 | 122.49 | 111.91 |
| 24 | BB | 5609 | CLA | CAA-C2A-C1A | -3.37 | 100.93 | 111.97 |
| 27 | BC | 5516 | BCR | C1-C6-C5 | -3.37 | 117.86 | 122.61 |
| 28 | AB | 628 | DGD | O1G-C1G-C2G | -3.37 | 98.63 | 108.43 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | BD | 5407 | BCR | C8-C7-C6 | 3.36 | 136.64 | 127.20 |
| 24 | AC | 503 | CLA | C3A-C2A-C1A | 3.36 | 106.37 | 101.34 |
| 36 | AV | 201 | HEM | CAD-C3D-C2D | 3.36 | 134.13 | 127.88 |
| 27 | AA | 410 | BCR | C29-C30-C25 | 3.36 | 115.65 | 110.48 |
| 24 | AB | 605 | CLA | O2A-CGA-CBA | 3.36 | 122.45 | 111.91 |
| 24 | BC | 5502 | CLA | CAA-C2A-C1A | -3.36 | 100.97 | 111.97 |
| 24 | AB | 602 | CLA | C4D-C3D-CAD | 3.36 | 112.05 | 108.10 |
| 27 | BC | 5516 | BCR | C8-C7-C6 | 3.35 | 136.61 | 127.20 |
| 30 | BA | 5401 | SQD | C32-C31-C30 | 3.35 | 131.44 | 114.42 |
| 29 | AA | 412 | LHG | O8-C23-C24 | 3.35 | 122.42 | 111.91 |
| 24 | AC | 504 | CLA | O2A-CGA-CBA | 3.35 | 122.41 | 111.91 |
| 24 | BA | 5405 | CLA | O2A-CGA-CBA | 3.34 | 122.40 | 111.91 |
| 24 | BC | 5509 | CLA | O2A-CGA-CBA | 3.34 | 122.40 | 111.91 |
| 24 | AA | 407 | CLA | C4D-C3D-CAD | 3.34 | 112.04 | 108.10 |
| 24 | AB | 610 | CLA | C4D-C3D-CAD | 3.34 | 112.04 | 108.10 |
| 28 | AE | 101 | DGD | C2G-O2G-C1B | 3.34 | 126.02 | 117.79 |
| 28 | AC | 518 | DGD | O6E-C1E-O5D | 3.34 | 117.88 | 109.97 |
| 24 | AC | 507 | CLA | C4D-C3D-CAD | 3.34 | 112.03 | 108.10 |
| 27 | BX | 5101 | BCR | C24-C23-C22 | 3.34 | 131.28 | 126.23 |
| 27 | BX | 5101 | BCR | C23-C24-C25 | 3.34 | 136.58 | 127.20 |
| 24 | AA | 404 | CLA | O2A-CGA-CBA | 3.34 | 122.38 | 111.91 |
| 24 | BC | 5511 | CLA | O2A-CGA-CBA | 3.33 | 122.37 | 111.91 |
| 24 | BB | 5618 | CLA | O2D-CGD-CBD | 3.33 | 117.19 | 111.27 |
| 27 | AX | 101 | BCR | C23-C24-C25 | 3.33 | 136.56 | 127.20 |
| 27 | AC | 515 | BCR | C30-C25-C26 | -3.33 | 117.92 | 122.61 |
| 27 | AD | 406 | BCR | C2-C1-C6 | 3.33 | 115.61 | 110.48 |
| 24 | AC | 501 | CLA | CAA-CBA-CGA | -3.33 | 103.53 | 113.25 |
| 31 | BD | 5408 | LMG | C9-O8-C28 | 3.32 | 129.43 | 117.12 |
| 28 | BH | 5101 | DGD | C4B-C3B-C2B | 3.32 | 125.12 | 113.19 |
| 27 | BC | 5515 | BCR | C1-C6-C5 | -3.32 | 117.94 | 122.61 |
| 27 | BT | 5101 | BCR | C16-C17-C18 | 3.32 | 132.04 | 127.31 |
| 24 | AB | 606 | CLA | C2A-C1A-CHA | 3.32 | 129.66 | 123.86 |
| 24 | BB | 5612 | CLA | C4D-C3D-CAD | 3.31 | 112.00 | 108.10 |
| 36 | BF | 5101 | HEM | O1D-CGD-CBD | -3.31 | 112.44 | 123.08 |
| 24 | AB | 607 | CLA | C4D-C3D-CAD | 3.31 | 112.00 | 108.10 |
| 27 | BC | 5514 | BCR | C33-C5-C4 | -3.31 | 107.26 | 113.62 |
| 24 | BB | 5610 | CLA | C2A-C1A-CHA | 3.31 | 129.65 | 123.86 |
| 24 | AC | 504 | CLA | C4D-C3D-CAD | 3.31 | 112.00 | 108.10 |
| 24 | BB | 5607 | CLA | O2D-CGD-CBD | 3.31 | 117.14 | 111.27 |
| 31 | BI | 5101 | LMG | C8-O7-C10 | 3.31 | 125.93 | 117.79 |
| 28 | BE | 5102 | DGD | C2G-O2G-C1B | 3.31 | 125.93 | 117.79 |
| 24 | AC | 501 | CLA | O2A-CGA-CBA | 3.30 | 122.28 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | AK | 102 | BCR | C8-C9-C10 | -3.30 | 113.87 | 118.94 |
| 31 | AD | 408 | LMG | C17-C16-C15 | -3.30 | 97.65 | 114.42 |
| 24 | BC | 5513 | CLA | C4D-C3D-CAD | 3.30 | 111.99 | 108.10 |
| 27 | BB | 5622 | BCR | C8-C7-C6 | 3.30 | 136.47 | 127.20 |
| 24 | AC | 506 | CLA | C4D-C3D-CAD | 3.30 | 111.98 | 108.10 |
| 24 | AA | 407 | CLA | C3A-C2A-C1A | 3.30 | 106.28 | 101.34 |
| 28 | BC | 5519 | DGD | O1G-C1G-C2G | -3.29 | 98.84 | 108.43 |
| 24 | AB | 601 | CLA | O2A-CGA-CBA | 3.29 | 122.24 | 111.91 |
| 24 | AB | 605 | CLA | O2D-CGD-CBD | 3.29 | 117.11 | 111.27 |
| 24 | AC | 511 | CLA | O2A-CGA-CBA | 3.29 | 122.23 | 111.91 |
| 24 | BB | 5611 | CLA | CAA-CBA-CGA | -3.29 | 103.64 | 113.25 |
| 27 | BB | 5621 | BCR | C30-C25-C26 | -3.29 | 117.98 | 122.61 |
| 24 | AB | 611 | CLA | C3A-C2A-C1A | 3.29 | 106.26 | 101.34 |
| 27 | BC | 5514 | BCR | C2-C1-C6 | 3.29 | 115.54 | 110.48 |
| 36 | AV | 201 | HEM | CAB-C3B-C2B | -3.29 | 117.78 | 128.60 |
| 35 | BD | 5406 | PL9 | C35-C34-C33 | -3.28 | 115.25 | 123.68 |
| 27 | BB | 5623 | BCR | C33-C5-C4 | -3.28 | 107.31 | 113.62 |
| 24 | AB | 603 | CLA | O2D-CGD-CBD | 3.28 | 117.10 | 111.27 |
| 24 | BC | 5504 | CLA | C4D-C3D-CAD | 3.28 | 111.96 | 108.10 |
| 27 | AT | 101 | BCR | C24-C23-C22 | 3.28 | 131.19 | 126.23 |
| 36 | BF | 5101 | HEM | C4C-CHD-C1D | 3.28 | 126.88 | 122.56 |
| 36 | BV | 5201 | HEM | CAD-C3D-C2D | 3.28 | 133.98 | 127.88 |
| 24 | AC | 502 | CLA | O2D-CGD-CBD | 3.28 | 117.09 | 111.27 |
| 24 | BB | 5615 | CLA | CAA-C2A-C1A | -3.28 | 101.23 | 111.97 |
| 31 | AM | 101 | LMG | C12-C11-C10 | -3.28 | 101.71 | 113.62 |
| 24 | BA | 5405 | CLA | C4D-C3D-CAD | 3.27 | 111.95 | 108.10 |
| 24 | AC | 501 | CLA | CBA-CAA-C2A | 3.27 | 123.52 | 113.86 |
| 24 | AC | 513 | CLA | O2D-CGD-CBD | 3.27 | 117.08 | 111.27 |
| 27 | BK | 5102 | BCR | C30-C25-C26 | -3.27 | 118.01 | 122.61 |
| 24 | AC | 510 | CLA | C4D-C3D-CAD | 3.27 | 111.95 | 108.10 |
| 24 | BC | 5510 | CLA | O2A-CGA-CBA | 3.27 | 122.16 | 111.91 |
| 24 | BB | 5609 | CLA | O2A-CGA-CBA | 3.27 | 122.16 | 111.91 |
| 31 | BD | 5409 | LMG | O1-C7-C8 | -3.27 | 103.02 | 110.90 |
| 27 | AC | 515 | BCR | C1-C6-C5 | -3.27 | 118.01 | 122.61 |
| 24 | AC | 513 | CLA | C4D-C3D-CAD | 3.26 | 111.94 | 108.10 |
| 28 | AC | 519 | DGD | C3B-C2B-C1B | 3.26 | 125.48 | 113.62 |
| 24 | AD | 401 | CLA | O2D-CGD-CBD | 3.26 | 117.06 | 111.27 |
| 27 | AB | 618 | BCR | C23-C24-C25 | 3.26 | 136.35 | 127.20 |
| 27 | AX | 101 | BCR | C24-C23-C22 | 3.25 | 131.15 | 126.23 |
| 27 | AC | 514 | BCR | C1-C6-C5 | -3.25 | 118.03 | 122.61 |
| 28 | AC | 517 | DGD | C3B-C2B-C1B | 3.25 | 125.45 | 113.62 |
| 30 | AB | 627 | SQD | C44-O6-C1 | 3.25 | 120.08 | 113.74 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 35 | AD | 405 | PL9 | C35-C34-C33 | -3.25 | 115.35 | 123.68 |
| 31 | AC | 520 | LMG | C14-C13-C12 | -3.25 | 97.94 | 114.42 |
| 24 | AB | 614 | CLA | CAA-C2A-C1A | -3.25 | 101.34 | 111.97 |
| 28 | AB | 628 | DGD | O6D-C5D-C6D | 3.24 | 113.22 | 106.67 |
| 27 | BX | 5101 | BCR | C1-C6-C5 | -3.24 | 118.04 | 122.61 |
| 30 | BB | 5601 | SQD | C44-O6-C1 | 3.24 | 120.08 | 113.74 |
| 24 | BB | 5619 | CLA | C3A-C2A-C1A | 3.24 | 106.20 | 101.34 |
| 31 | AA | 417 | LMG | O1-C7-C8 | 3.24 | 118.72 | 110.90 |
| 24 | BB | 5613 | CLA | C4D-C3D-CAD | 3.24 | 111.92 | 108.10 |
| 24 | BC | 5512 | CLA | O2A-CGA-CBA | 3.24 | 122.08 | 111.91 |
| 28 | AH | 101 | DGD | C4B-C3B-C2B | 3.24 | 124.84 | 113.19 |
| 31 | BD | 5410 | LMG | C17-C16-C15 | -3.24 | 97.98 | 114.42 |
| 24 | BC | 5503 | CLA | C3A-C2A-C1A | 3.24 | 106.19 | 101.34 |
| 24 | BB | 5619 | CLA | O2D-CGD-CBD | 3.24 | 117.02 | 111.27 |
| 28 | AC | 517 | DGD | C3G-O3G-C1D | -3.24 | 107.41 | 113.74 |
| 27 | BC | 5514 | BCR | C29-C30-C25 | 3.24 | 115.47 | 110.48 |
| 24 | BC | 5501 | CLA | CAA-CBA-CGA | -3.24 | 103.79 | 113.25 |
| 27 | BK | 5102 | BCR | C12-C13-C14 | -3.23 | 113.98 | 118.94 |
| 24 | BB | 5614 | CLA | O2A-CGA-CBA | 3.23 | 122.05 | 111.91 |
| 24 | BC | 5502 | CLA | O2D-CGD-CBD | 3.23 | 117.01 | 111.27 |
| 27 | BC | 5516 | BCR | C30-C25-C26 | -3.23 | 118.07 | 122.61 |
| 27 | AB | 618 | BCR | C8-C7-C6 | 3.23 | 136.26 | 127.20 |
| 36 | AV | 201 | HEM | C4C-CHD-C1D | 3.22 | 126.81 | 122.56 |
| 24 | BC | 5503 | CLA | C7-C6-C5 | -3.22 | 104.61 | 113.36 |
| 28 | BB | 5602 | DGD | O3G-C3G-C2G | 3.22 | 118.66 | 110.90 |
| 36 | AF | 101 | HEM | CBD-CAD-C3D | -3.22 | 103.69 | 112.63 |
| 27 | AB | 617 | BCR | C30-C25-C26 | -3.22 | 118.08 | 122.61 |
| 27 | BC | 5515 | BCR | C30-C25-C26 | -3.21 | 118.09 | 122.61 |
| 24 | BB | 5618 | CLA | CAA-C2A-C1A | -3.21 | 101.44 | 111.97 |
| 24 | BB | 5605 | CLA | O2A-CGA-CBA | 3.21 | 121.98 | 111.91 |
| 27 | BB | 5622 | BCR | C33-C5-C4 | -3.21 | 107.46 | 113.62 |
| 24 | AC | 502 | CLA | CAA-C2A-C1A | -3.21 | 101.47 | 111.97 |
| 24 | BB | 5620 | CLA | C4D-C3D-CAD | 3.21 | 111.87 | 108.10 |
| 28 | BH | 5101 | DGD | C1D-O6D-C5D | -3.20 | 107.40 | 113.69 |
| 24 | AB | 602 | CLA | O2D-CGD-CBD | 3.20 | 116.96 | 111.27 |
| 24 | AA | 406 | CLA | O2A-CGA-O1A | -3.20 | 115.52 | 123.59 |
| 36 | BF | 5101 | HEM | CBD-CAD-C3D | -3.20 | 103.74 | 112.63 |
| 24 | AB | 616 | CLA | C4D-C3D-CAD | 3.20 | 111.86 | 108.10 |
| 24 | BB | 5606 | CLA | C4D-C3D-CAD | 3.20 | 111.86 | 108.10 |
| 24 | AB | 615 | CLA | C3A-C2A-C1A | 3.20 | 106.13 | 101.34 |
| 31 | AI | 101 | LMG | C8-O7-C10 | 3.19 | 125.65 | 117.79 |
| 27 | BD | 5407 | BCR | C2-C1-C6 | 3.19 | 115.40 | 110.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BC | 5506 | CLA | C3A-C2A-C1A | 3.19 | 106.12 | 101.34 |
| 24 | BC | 5505 | CLA | O2D-CGD-CBD | 3.19 | 116.94 | 111.27 |
| 24 | BB | 5613 | CLA | O2D-CGD-CBD | 3.19 | 116.94 | 111.27 |
| 28 | BB | 5602 | DGD | O6D-C5D-C6D | 3.19 | 113.10 | 106.67 |
| 31 | AC | 520 | LMG | C8-O7-C10 | 3.19 | 125.64 | 117.79 |
| 28 | AE | 101 | DGD | C1G-O1G-C1A | 3.19 | 128.93 | 117.12 |
| 31 | BB | 5624 | LMG | O7-C10-O9 | -3.19 | 116.00 | 123.70 |
| 31 | BC | 5520 | LMG | C14-C13-C12 | -3.18 | 98.27 | 114.42 |
| 24 | AB | 610 | CLA | O2A-CGA-CBA | 3.18 | 121.89 | 111.91 |
| 28 | AB | 628 | DGD | C3B-C2B-C1B | 3.18 | 125.19 | 113.62 |
| 28 | AC | 518 | DGD | O2G-C2G-C3G | 3.18 | 119.92 | 108.40 |
| 24 | AC | 506 | CLA | C3A-C2A-C1A | 3.18 | 106.10 | 101.34 |
| 28 | BB | 5602 | DGD | C3B-C2B-C1B | 3.18 | 125.18 | 113.62 |
| 28 | BE | 5102 | DGD | O5D-C1E-C2E | 3.18 | 113.27 | 108.30 |
| 31 | BD | 5408 | LMG | O7-C10-C11 | -3.18 | 104.65 | 111.50 |
| 27 | BT | 5101 | BCR | C24-C23-C22 | 3.17 | 131.03 | 126.23 |
| 24 | AC | 502 | CLA | C4D-C3D-CAD | 3.17 | 111.83 | 108.10 |
| 28 | BC | 5518 | DGD | O2G-C2G-C3G | 3.17 | 119.88 | 108.40 |
| 36 | AF | 101 | HEM | O1D-CGD-CBD | -3.17 | 112.90 | 123.08 |
| 27 | AK | 102 | BCR | C24-C23-C22 | 3.17 | 131.02 | 126.23 |
| 27 | BK | 5102 | BCR | C24-C23-C22 | 3.17 | 131.02 | 126.23 |
| 24 | AB | 613 | CLA | C4D-C3D-CAD | 3.16 | 111.83 | 108.10 |
| 31 | AD | 407 | LMG | C12-C11-C10 | 3.16 | 125.13 | 113.62 |
| 24 | AB | 607 | CLA | C2A-C1A-CHA | 3.16 | 129.39 | 123.86 |
| 31 | BD | 5408 | LMG | C15-C14-C13 | -3.16 | 98.37 | 114.42 |
| 24 | AC | 511 | CLA | C6-C7-C8 | -3.16 | 105.70 | 115.92 |
| 30 | BA | 5414 | SQD | C32-C31-C30 | 3.16 | 130.46 | 114.42 |
| 27 | AT | 101 | BCR | C7-C8-C9 | 3.16 | 131.01 | 126.23 |
| 28 | BC | 5517 | DGD | C3G-O3G-C1D | -3.16 | 107.57 | 113.74 |
| 31 | AJ | 102 | LMG | C15-C14-C13 | -3.16 | 98.41 | 114.42 |
| 28 | BE | 5102 | DGD | C1G-O1G-C1A | 3.15 | 128.80 | 117.12 |
| 24 | BB | 5613 | CLA | CBA-CAA-C2A | 3.15 | 123.17 | 113.86 |
| 27 | BC | 5515 | BCR | C35-C13-C12 | 3.15 | 123.03 | 118.08 |
| 36 | BV | 5201 | HEM | CAB-C3B-C2B | -3.14 | 118.25 | 128.60 |
| 24 | AA | 405 | CLA | CAA-CBA-CGA | -3.14 | 104.07 | 113.25 |
| 31 | BA | 5402 | LMG | C12-C11-C10 | 3.14 | 125.05 | 113.62 |
| 24 | BB | 5614 | CLA | C4D-C3D-CAD | 3.14 | 111.80 | 108.10 |
| 31 | BM | 5102 | LMG | O7-C8-C7 | 3.14 | 119.78 | 108.40 |
| 27 | AB | 618 | BCR | C24-C23-C22 | 3.14 | 130.98 | 126.23 |
| 28 | BC | 5519 | DGD | CBA-CAA-C9A | -3.14 | 98.49 | 114.42 |
| 31 | BD | 5409 | LMG | C12-C11-C10 | 3.14 | 125.03 | 113.62 |
| 24 | AB | 608 | CLA | C4D-C3D-CAD | 3.14 | 111.79 | 108.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BB | 5609 | CLA | CED-O2D-CGD | 3.14 | 123.03 | 115.94 |
| 31 | BM | 5102 | LMG | C12-C11-C10 | -3.14 | 102.21 | 113.62 |
| 24 | BC | 5507 | CLA | C7-C6-C5 | -3.14 | 104.84 | 113.36 |
| 27 | AD | 406 | BCR | C16-C17-C18 | 3.13 | 131.78 | 127.31 |
| 24 | BB | 5615 | CLA | C4D-C3D-CAD | 3.13 | 111.79 | 108.10 |
| 31 | AD | 407 | LMG | C16-C15-C14 | 3.13 | 130.31 | 114.42 |
| 36 | AF | 101 | HEM | C4C-CHD-C1D | 3.13 | 126.69 | 122.56 |
| 36 | BF | 5101 | HEM | C4B-CHC-C1C | 3.13 | 126.69 | 122.56 |
| 24 | BC | 5504 | CLA | O2A-CGA-CBA | 3.13 | 121.72 | 111.91 |
| 28 | AA | 411 | DGD | O2G-C2G-C3G | 3.13 | 119.72 | 108.40 |
| 24 | BA | 5407 | CLA | O2A-CGA-O1A | -3.13 | 115.70 | 123.59 |
| 24 | AA | 405 | CLA | C3A-C2A-C1A | 3.12 | 106.02 | 101.34 |
| 24 | AB | 609 | CLA | CBA-CAA-C2A | 3.12 | 123.08 | 113.86 |
| 31 | AB | 621 | LMG | O7-C10-O9 | -3.12 | 116.17 | 123.70 |
| 24 | BB | 5615 | CLA | O2D-CGD-CBD | 3.12 | 116.81 | 111.27 |
| 24 | BA | 5406 | CLA | O2A-CGA-O1A | -3.12 | 115.73 | 123.59 |
| 31 | BA | 5402 | LMG | O1-C7-C8 | 3.11 | 118.41 | 110.90 |
| 24 | AD | 401 | CLA | C4D-C3D-CAD | 3.11 | 111.77 | 108.10 |
| 27 | AC | 514 | BCR | C2-C1-C6 | 3.11 | 115.28 | 110.48 |
| 27 | BX | 5101 | BCR | C8-C7-C6 | 3.11 | 135.95 | 127.20 |
| 27 | AX | 101 | BCR | C8-C7-C6 | 3.11 | 135.93 | 127.20 |
| 27 | AA | 410 | BCR | C30-C25-C26 | -3.10 | 118.24 | 122.61 |
| 31 | AD | 407 | LMG | O1-C7-C8 | -3.10 | 103.41 | 110.90 |
| 28 | BA | 5412 | DGD | O2G-C2G-C3G | 3.10 | 119.64 | 108.40 |
| 29 | BA | 5413 | LHG | O8-C23-C24 | 3.10 | 121.64 | 111.91 |
| 30 | BB | 5625 | SQD | C45-O47-C7 | 3.10 | 125.43 | 117.79 |
| 24 | BB | 5612 | CLA | O2A-CGA-CBA | 3.10 | 121.63 | 111.91 |
| 27 | BD | 5407 | BCR | C7-C8-C9 | 3.10 | 130.91 | 126.23 |
| 28 | AC | 519 | DGD | O1G-C1G-C2G | -3.10 | 99.42 | 108.43 |
| 31 | AM | 101 | LMG | O7-C8-C7 | 3.09 | 119.61 | 108.40 |
| 31 | BC | 5520 | LMG | C8-O7-C10 | 3.09 | 125.41 | 117.79 |
| 31 | BD | 5408 | LMG | O7-C8-C9 | -3.09 | 97.20 | 108.40 |
| 25 | BA | 5409 | MST | C15-N14-C6 | -3.09 | 120.03 | 123.85 |
| 31 | BD | 5409 | LMG | C16-C15-C14 | 3.09 | 130.13 | 114.42 |
| 24 | BB | 5611 | CLA | C2A-C1A-CHA | 3.09 | 129.27 | 123.86 |
| 27 | BX | 5101 | BCR | C12-C13-C14 | -3.09 | 114.20 | 118.94 |
| 24 | AC | 507 | CLA | C2A-C1A-CHA | 3.09 | 129.26 | 123.86 |
| 31 | AA | 417 | LMG | C12-C11-C10 | 3.09 | 124.84 | 113.62 |
| 32 | BC | 5522 | LMT | C4-C3-C2 | -3.08 | 98.77 | 114.42 |
| 24 | BC | 5511 | CLA | C6-C7-C8 | -3.08 | 105.95 | 115.92 |
| 30 | AA | 413 | SQD | C32-C31-C30 | 3.08 | 130.06 | 114.42 |
| 24 | AB | 603 | CLA | C7-C6-C5 | -3.08 | 105.00 | 113.36 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AC | 505 | CLA | O2A-CGA-CBA | 3.08 | 121.56 | 111.91 |
| 28 | AH | 101 | DGD | C3G-O3G-C1D | 3.08 | 119.75 | 113.74 |
| 24 | BB | 5616 | CLA | O2A-CGA-CBA | 3.07 | 121.55 | 111.91 |
| 27 | BC | 5514 | BCR | C1-C6-C5 | -3.07 | 118.29 | 122.61 |
| 24 | BA | 5406 | CLA | CAA-CBA-CGA | -3.07 | 104.28 | 113.25 |
| 28 | AH | 101 | DGD | C1D-O6D-C5D | -3.07 | 107.66 | 113.69 |
| 27 | BB | 5622 | BCR | C24-C23-C22 | 3.07 | 130.87 | 126.23 |
| 24 | AB | 608 | CLA | O2A-CGA-CBA | 3.06 | 121.53 | 111.91 |
| 32 | AI | 103 | LMT | C4-C3-C2 | -3.06 | 98.87 | 114.42 |
| 24 | AB | 614 | CLA | C2C-C1C-NC | -3.06 | 107.10 | 109.97 |
| 24 | BD | 5405 | CLA | CAA-C2A-C1A | -3.06 | 101.94 | 111.97 |
| 24 | BC | 5511 | CLA | C2C-C1C-NC | -3.06 | 107.10 | 109.97 |
| 27 | AK | 102 | BCR | C8-C7-C6 | 3.06 | 135.80 | 127.20 |
| 24 | AB | 611 | CLA | CAA-C2A-C1A | -3.06 | 101.94 | 111.97 |
| 24 | AA | 404 | CLA | C4D-C3D-CAD | 3.06 | 111.70 | 108.10 |
| 28 | BA | 5412 | DGD | C4A-C3A-C2A | 3.06 | 124.19 | 113.19 |
| 35 | BD | 5406 | PL9 | C15-C14-C13 | -3.06 | 115.83 | 123.68 |
| 27 | AB | 617 | BCR | C2-C1-C6 | 3.06 | 115.19 | 110.48 |
| 24 | AB | 601 | CLA | C2A-C1A-CHA | 3.06 | 129.20 | 123.86 |
| 28 | BH | 5101 | DGD | C3G-O3G-C1D | 3.06 | 119.71 | 113.74 |
| 24 | BB | 5617 | CLA | C4D-C3D-CAD | 3.06 | 111.70 | 108.10 |
| 24 | BD | 5405 | CLA | C3A-C2A-C1A | 3.06 | 105.92 | 101.34 |
| 24 | BC | 5507 | CLA | C2A-C1A-CHA | 3.06 | 129.20 | 123.86 |
| 27 | AB | 619 | BCR | C2-C1-C6 | 3.05 | 115.18 | 110.48 |
| 24 | AB | 605 | CLA | CED-O2D-CGD | 3.05 | 122.84 | 115.94 |
| 27 | BA | 5411 | BCR | C30-C25-C26 | -3.05 | 118.32 | 122.61 |
| 27 | AK | 102 | BCR | C12-C13-C14 | -3.05 | 114.26 | 118.94 |
| 27 | AJ | 101 | BCR | C8-C7-C6 | 3.05 | 135.76 | 127.20 |
| 31 | AJ | 102 | LMG | O7-C8-C9 | -3.05 | 97.37 | 108.40 |
| 27 | AT | 101 | BCR | C16-C17-C18 | 3.05 | 131.66 | 127.31 |
| 35 | BD | 5406 | PL9 | C26-C27-C28 | 3.04 | 121.89 | 111.88 |
| 24 | AD | 404 | CLA | CAA-C2A-C1A | -3.04 | 102.00 | 111.97 |
| 36 | BF | 5101 | HEM | CAB-C3B-C2B | -3.04 | 118.58 | 128.60 |
| 24 | AC | 513 | CLA | CED-O2D-CGD | 3.04 | 122.82 | 115.94 |
| 27 | AC | 515 | BCR | C8-C7-C6 | 3.04 | 135.75 | 127.20 |
| 24 | BD | 5402 | CLA | C2A-C1A-CHA | 3.04 | 129.18 | 123.86 |
| 24 | AD | 404 | CLA | O2A-CGA-CBA | 3.04 | 121.45 | 111.91 |
| 32 | BB | 5603 | LMT | C9-C8-C7 | -3.04 | 98.99 | 114.42 |
| 27 | BC | 5515 | BCR | C12-C13-C14 | -3.04 | 114.28 | 118.94 |
| 28 | AC | 519 | DGD | CBA-CAA-C9A | -3.04 | 99.00 | 114.42 |
| 27 | BA | 5411 | BCR | C23-C24-C25 | 3.04 | 135.74 | 127.20 |
| 27 | AX | 101 | BCR | C12-C13-C14 | -3.04 | 114.28 | 118.94 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | BB | 5621 | BCR | C2-C1-C6 | 3.04 | 115.15 | 110.48 |
| 36 | AF | 101 | HEM | CAB-C3B-C2B | -3.03 | 118.61 | 128.60 |
| 24 | AB | 610 | CLA | C2A-C1A-CHA | 3.03 | 129.16 | 123.86 |
| 24 | BA | 5408 | CLA | CBA-CAA-C2A | 3.03 | 122.81 | 113.86 |
| 27 | BC | 5515 | BCR | C8-C7-C6 | 3.03 | 135.71 | 127.20 |
| 27 | BB | 5623 | BCR | C30-C25-C26 | -3.03 | 118.35 | 122.61 |
| 32 | AB | 629 | LMT | C9-C8-C7 | -3.03 | 99.06 | 114.42 |
| 28 | AA | 411 | DGD | C4A-C3A-C2A | 3.03 | 124.07 | 113.19 |
| 24 | AB | 607 | CLA | CAA-CBA-CGA | -3.03 | 104.41 | 113.25 |
| 24 | AC | 507 | CLA | C7-C6-C5 | -3.03 | 105.14 | 113.36 |
| 24 | AB | 610 | CLA | C3A-C2A-C1A | 3.03 | 105.87 | 101.34 |
| 24 | AB | 609 | CLA | C4D-C3D-CAD | 3.03 | 111.66 | 108.10 |
| 24 | BC | 5508 | CLA | CED-O2D-CGD | 3.03 | 122.78 | 115.94 |
| 24 | AC | 501 | CLA | O2D-CGD-CBD | 3.03 | 116.64 | 111.27 |
| 24 | AC | 508 | CLA | CED-O2D-CGD | 3.02 | 122.78 | 115.94 |
| 24 | AC | 511 | CLA | C2C-C1C-NC | -3.02 | 107.14 | 109.97 |
| 34 | BD | 5404 | PHO | O1D-CGD-CBD | -3.02 | 119.71 | 124.74 |
| 28 | BH | 5101 | DGD | C3G-C2G-C1G | -3.02 | 104.65 | 111.79 |
| 27 | AC | 515 | BCR | C16-C17-C18 | 3.02 | 131.62 | 127.31 |
| 27 | BD | 5407 | BCR | C16-C17-C18 | 3.01 | 131.61 | 127.31 |
| 27 | AB | 619 | BCR | C30-C25-C26 | -3.01 | 118.37 | 122.61 |
| 27 | AA | 410 | BCR | C23-C24-C25 | 3.01 | 135.66 | 127.20 |
| 30 | AB | 622 | SQD | C3-C4-C5 | -3.01 | 104.87 | 110.24 |
| 24 | BC | 5505 | CLA | O2A-CGA-CBA | 3.01 | 121.36 | 111.91 |
| 24 | BB | 5608 | CLA | C3A-C2A-C1A | 3.01 | 105.85 | 101.34 |
| 24 | AB | 609 | CLA | O2D-CGD-CBD | 3.01 | 116.62 | 111.27 |
| 34 | AD | 403 | PHO | O1D-CGD-CBD | -3.01 | 119.73 | 124.74 |
| 24 | AB | 613 | CLA | C2A-C1A-CHA | 3.01 | 129.12 | 123.86 |
| 32 | BB | 5604 | LMT | C4-C3-C2 | -3.01 | 99.16 | 114.42 |
| 24 | AC | 504 | CLA | CAA-CBA-CGA | -3.01 | 104.47 | 113.25 |
| 27 | AC | 514 | BCR | C30-C25-C26 | -3.01 | 118.38 | 122.61 |
| 27 | AA | 410 | BCR | C2-C1-C6 | 3.00 | 115.11 | 110.48 |
| 24 | BB | 5614 | CLA | C2A-C1A-CHA | 3.00 | 129.11 | 123.86 |
| 24 | AB | 614 | CLA | O2D-CGD-CBD | 3.00 | 116.61 | 111.27 |
| 28 | BC | 5519 | DGD | C8B-C7B-C6B | -3.00 | 99.21 | 114.42 |
| 27 | BC | 5514 | BCR | C35-C13-C12 | 2.99 | 122.80 | 118.08 |
| 24 | BC | 5504 | CLA | CAA-CBA-CGA | -2.99 | 104.50 | 113.25 |
| 27 | AT | 101 | BCR | C1-C6-C5 | -2.99 | 118.40 | 122.61 |
| 35 | AD | 405 | PL9 | C25-C24-C23 | -2.99 | 116.01 | 123.68 |
| 35 | BD | 5406 | PL9 | C7-C3-C2 | -2.99 | 119.37 | 123.30 |
| 24 | AB | 616 | CLA | C3A-C2A-C1A | 2.99 | 105.81 | 101.34 |
| 32 | AB | 630 | LMT | C4-C3-C2 | -2.99 | 99.27 | 114.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 28 | AH | 101 | DGD | C7B-C6B-C5B | -2.98 | 99.28 | 114.42 |
| 24 | AA | 407 | CLA | C2A-C1A-CHA | 2.98 | 129.08 | 123.86 |
| 24 | AB | 606 | CLA | CED-O2D-CGD | 2.98 | 122.68 | 115.94 |
| 24 | AB | 609 | CLA | C3A-C2A-C1A | 2.98 | 105.81 | 101.34 |
| 28 | BC | 5519 | DGD | O6E-C5E-C4E | 2.98 | 115.11 | 109.69 |
| 31 | BE | 5101 | LMG | O7-C10-C11 | 2.98 | 117.92 | 111.50 |
| 27 | AB | 619 | BCR | C23-C24-C25 | 2.98 | 135.57 | 127.20 |
| 24 | BB | 5614 | CLA | C3A-C2A-C1A | 2.98 | 105.80 | 101.34 |
| 27 | AX | 101 | BCR | C1-C6-C5 | -2.98 | 118.42 | 122.61 |
| 27 | AD | 406 | BCR | C12-C13-C14 | -2.97 | 114.38 | 118.94 |
| 27 | BT | 5101 | BCR | C1-C6-C5 | -2.97 | 118.42 | 122.61 |
| 24 | BC | 5509 | CLA | C3A-C2A-C1A | 2.97 | 105.79 | 101.34 |
| 27 | AC | 515 | BCR | C12-C13-C14 | -2.97 | 114.38 | 118.94 |
| 28 | AC | 519 | DGD | C8B-C7B-C6B | -2.97 | 99.34 | 114.42 |
| 24 | AD | 404 | CLA | C3A-C2A-C1A | 2.97 | 105.79 | 101.34 |
| 24 | BB | 5616 | CLA | C2A-C1A-CHA | 2.97 | 129.05 | 123.86 |
| 24 | BB | 5618 | CLA | CED-O2D-CGD | 2.97 | 122.64 | 115.94 |
| 24 | AC | 506 | CLA | CAA-C2A-C1A | -2.97 | 102.26 | 111.97 |
| 24 | BC | 5506 | CLA | CED-O2D-CGD | 2.96 | 122.64 | 115.94 |
| 24 | AA | 405 | CLA | O2A-CGA-O1A | -2.96 | 116.11 | 123.59 |
| 27 | BX | 5101 | BCR | C35-C13-C12 | 2.96 | 122.74 | 118.08 |
| 24 | BA | 5406 | CLA | C3A-C2A-C1A | 2.96 | 105.77 | 101.34 |
| 24 | AA | 404 | CLA | CED-O2D-CGD | 2.96 | 122.63 | 115.94 |
| 24 | BB | 5609 | CLA | O2D-CGD-CBD | 2.96 | 116.52 | 111.27 |
| 24 | BC | 5510 | CLA | C2A-C1A-CHA | 2.96 | 129.03 | 123.86 |
| 27 | BJ | 5101 | BCR | C8-C7-C6 | 2.95 | 135.49 | 127.20 |
| 24 | AC | 506 | CLA | CED-O2D-CGD | 2.95 | 122.61 | 115.94 |
| 30 | BB | 5625 | SQD | C3-C4-C5 | -2.95 | 104.98 | 110.24 |
| 31 | AC | 520 | LMG | C9-C8-C7 | -2.95 | 104.82 | 111.79 |
| 27 | AT | 101 | BCR | C2-C1-C6 | 2.94 | 115.01 | 110.48 |
| 24 | BB | 5615 | CLA | CBA-CAA-C2A | 2.94 | 122.54 | 113.86 |
| 32 | BB | 5603 | LMT | C4-C3-C2 | -2.94 | 99.51 | 114.42 |
| 27 | BK | 5102 | BCR | C8-C7-C6 | 2.93 | 135.44 | 127.20 |
| 28 | BH | 5101 | DGD | C7B-C6B-C5B | -2.93 | 99.53 | 114.42 |
| 28 | BC | 5517 | DGD | O6D-C1D-O3G | 2.93 | 116.92 | 109.97 |
| 31 | AA | 414 | LMG | O7-C10-C11 | 2.93 | 117.82 | 111.50 |
| 24 | BB | 5620 | CLA | C3A-C2A-C1A | 2.93 | 105.73 | 101.34 |
| 24 | BB | 5613 | CLA | C3A-C2A-C1A | 2.93 | 105.73 | 101.34 |
| 27 | BD | 5407 | BCR | C11-C10-C9 | 2.93 | 131.49 | 127.31 |
| 24 | AB | 603 | CLA | CAA-C2A-C1A | -2.93 | 102.38 | 111.97 |
| 24 | BC | 5510 | CLA | C3A-C2A-C1A | 2.93 | 105.73 | 101.34 |
| 31 | AJ | 102 | LMG | O7-C10-C11 | -2.93 | 105.19 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | AD | 406 | BCR | C11-C10-C9 | 2.93 | 131.49 | 127.31 |
| 24 | BC | 5506 | CLA | CAA-C2A-C1A | -2.93 | 102.38 | 111.97 |
| 31 | BI | 5101 | LMG | C14-C13-C12 | -2.93 | 99.56 | 114.42 |
| 31 | BD | 5410 | LMG | C32-C31-C30 | -2.93 | 99.56 | 114.42 |
| 24 | BB | 5605 | CLA | C2A-C1A-CHA | 2.92 | 128.97 | 123.86 |
| 27 | AJ | 101 | BCR | C16-C15-C14 | 2.92 | 129.46 | 123.47 |
| 24 | BC | 5502 | CLA | C3A-C2A-C1A | 2.92 | 105.71 | 101.34 |
| 24 | BB | 5618 | CLA | C2C-C1C-NC | -2.92 | 107.24 | 109.97 |
| 27 | BT | 5101 | BCR | C2-C1-C6 | 2.92 | 114.97 | 110.48 |
| 35 | AD | 405 | PL9 | C15-C14-C13 | -2.91 | 116.20 | 123.68 |
| 24 | BB | 5607 | CLA | C7-C6-C5 | -2.91 | 105.45 | 113.36 |
| 24 | AA | 407 | CLA | CAA-C2A-C1A | -2.91 | 102.44 | 111.97 |
| 35 | AD | 405 | PL9 | C26-C27-C28 | 2.91 | 121.44 | 111.88 |
| 27 | AD | 406 | BCR | C23-C22-C21 | -2.91 | 114.48 | 118.94 |
| 28 | AH | 101 | DGD | C3G-C2G-C1G | -2.91 | 104.91 | 111.79 |
| 31 | BC | 5520 | LMG | C9-C8-C7 | -2.90 | 104.93 | 111.79 |
| 27 | AK | 102 | BCR | C35-C13-C12 | 2.90 | 122.65 | 118.08 |
| 24 | AB | 607 | CLA | CAA-C2A-C3A | -2.90 | 104.84 | 112.78 |
| 28 | AC | 517 | DGD | O6D-C1D-O3G | 2.90 | 116.84 | 109.97 |
| 35 | AD | 405 | PL9 | C30-C29-C31 | 2.90 | 120.14 | 115.27 |
| 27 | BK | 5102 | BCR | C16-C17-C18 | 2.90 | 131.44 | 127.31 |
| 24 | AB | 603 | CLA | CHA-C4D-ND | 2.89 | 138.56 | 132.50 |
| 31 | AD | 408 | LMG | C32-C31-C30 | -2.89 | 99.73 | 114.42 |
| 27 | BC | 5514 | BCR | C23-C22-C21 | -2.89 | 114.50 | 118.94 |
| 24 | AB | 604 | CLA | C3A-C2A-C1A | 2.89 | 105.67 | 101.34 |
| 24 | AD | 401 | CLA | C2A-C1A-CHA | 2.89 | 128.92 | 123.86 |
| 27 | AB | 619 | BCR | C8-C7-C6 | 2.89 | 135.33 | 127.20 |
| 31 | BC | 5520 | LMG | O8-C9-C8 | 2.89 | 116.85 | 108.43 |
| 27 | BB | 5623 | BCR | C8-C7-C6 | 2.89 | 135.32 | 127.20 |
| 24 | BB | 5619 | CLA | O2A-CGA-CBA | 2.89 | 120.97 | 111.91 |
| 36 | AV | 201 | HEM | C4B-CHC-C1C | 2.89 | 126.37 | 122.56 |
| 28 | AC | 519 | DGD | C1D-C2D-C3D | -2.89 | 103.98 | 110.00 |
| 27 | BJ | 5101 | BCR | C16-C15-C14 | 2.89 | 129.39 | 123.47 |
| 27 | AB | 617 | BCR | C35-C13-C12 | 2.89 | 122.63 | 118.08 |
| 31 | AA | 414 | LMG | C34-C33-C32 | 2.88 | 129.06 | 114.42 |
| 27 | BT | 5101 | BCR | C7-C8-C9 | 2.88 | 130.58 | 126.23 |
| 24 | AB | 614 | CLA | CED-O2D-CGD | 2.88 | 122.44 | 115.94 |
| 24 | AB | 611 | CLA | CBA-CAA-C2A | 2.88 | 122.35 | 113.86 |
| 27 | AB | 617 | BCR | C36-C18-C19 | 2.87 | 122.61 | 118.08 |
| 34 | BD | 5403 | PHO | O1D-CGD-CBD | -2.87 | 119.95 | 124.74 |
| 31 | BB | 5624 | LMG | C16-C15-C14 | -2.87 | 99.86 | 114.42 |
| 24 | BB | 5617 | CLA | C2A-C1A-CHA | 2.87 | 128.87 | 123.86 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | AA | 416 | SQD | C3-C4-C5 | -2.87 | 105.13 | 110.24 |
| 27 | BK | 5102 | BCR | C35-C13-C12 | 2.87 | 122.59 | 118.08 |
| 24 | AB | 615 | CLA | O2A-CGA-CBA | 2.86 | 120.90 | 111.91 |
| 35 | BD | 5406 | PL9 | C30-C29-C31 | 2.86 | 120.09 | 115.27 |
| 31 | AC | 520 | LMG | O8-C9-C8 | 2.86 | 116.76 | 108.43 |
| 29 | BA | 5413 | LHG | O7-C7-C8 | 2.86 | 117.66 | 111.50 |
| 24 | AB | 612 | CLA | O2A-CGA-CBA | 2.86 | 120.87 | 111.91 |
| 31 | BE | 5101 | LMG | C34-C33-C32 | 2.85 | 128.90 | 114.42 |
| 31 | BL | 5101 | LMG | C15-C14-C13 | -2.85 | 99.95 | 114.42 |
| 27 | AK | 102 | BCR | C16-C17-C18 | 2.85 | 131.38 | 127.31 |
| 31 | AI | 101 | LMG | C14-C13-C12 | -2.85 | 99.95 | 114.42 |
| 29 | AA | 412 | LHG | O7-C7-C8 | 2.85 | 117.64 | 111.50 |
| 24 | BD | 5405 | CLA | O2A-CGA-CBA | 2.85 | 120.84 | 111.91 |
| 31 | AD | 408 | LMG | O7-C8-C7 | 2.85 | 118.71 | 108.40 |
| 24 | AB | 603 | CLA | CAA-C2A-C3A | -2.85 | 104.98 | 112.78 |
| 35 | BD | 5406 | PL9 | C25-C24-C23 | -2.85 | 116.38 | 123.68 |
| 24 | BA | 5408 | CLA | C2A-C1A-CHA | 2.85 | 128.83 | 123.86 |
| 24 | BB | 5620 | CLA | CED-O2D-CGD | 2.85 | 122.37 | 115.94 |
| 27 | AX | 101 | BCR | C35-C13-C12 | 2.84 | 122.56 | 118.08 |
| 24 | BC | 5513 | CLA | CED-O2D-CGD | 2.84 | 122.37 | 115.94 |
| 30 | BA | 5401 | SQD | C3-C4-C5 | -2.84 | 105.17 | 110.24 |
| 27 | BT | 5101 | BCR | C32-C1-C6 | 2.84 | 114.91 | 110.30 |
| 24 | BB | 5610 | CLA | CAA-C2A-C1A | -2.84 | 102.67 | 111.97 |
| 24 | BB | 5605 | CLA | CED-O2D-CGD | 2.84 | 122.36 | 115.94 |
| 24 | AC | 510 | CLA | C2A-C1A-CHA | 2.84 | 128.82 | 123.86 |
| 31 | AB | 621 | LMG | C16-C15-C14 | -2.84 | 100.03 | 114.42 |
| 24 | BC | 5509 | CLA | CHA-C4D-ND | 2.84 | 138.43 | 132.50 |
| 24 | BB | 5616 | CLA | CHA-C4D-ND | 2.83 | 138.43 | 132.50 |
| 24 | AC | 509 | CLA | CED-O2D-CGD | 2.83 | 122.34 | 115.94 |
| 27 | AK | 102 | BCR | C34-C9-C8 | 2.83 | 122.54 | 118.08 |
| 24 | BB | 5611 | CLA | O2A-CGA-O1A | -2.83 | 116.45 | 123.59 |
| 24 | AB | 614 | CLA | CHA-C4D-ND | 2.83 | 138.42 | 132.50 |
| 27 | BB | 5622 | BCR | C1-C6-C5 | -2.83 | 118.63 | 122.61 |
| 28 | AC | 519 | DGD | O6E-C1E-C2E | 2.83 | 116.33 | 110.35 |
| 24 | BB | 5610 | CLA | O2A-CGA-O1A | -2.83 | 116.46 | 123.59 |
| 24 | BC | 5501 | CLA | O2D-CGD-CBD | 2.82 | 116.29 | 111.27 |
| 24 | BB | 5607 | CLA | CHA-C4D-ND | 2.82 | 138.41 | 132.50 |
| 27 | AC | 514 | BCR | C35-C13-C12 | 2.82 | 122.52 | 118.08 |
| 24 | AB | 614 | CLA | O2A-CGA-CBA | 2.82 | 120.76 | 111.91 |
| 24 | AA | 404 | CLA | C3A-C2A-C1A | 2.82 | 105.56 | 101.34 |
| 24 | BA | 5407 | CLA | C3A-C2A-C1A | 2.82 | 105.56 | 101.34 |
| 27 | AD | 406 | BCR | C7-C8-C9 | 2.82 | 130.49 | 126.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | AD | 406 | BCR | C1-C6-C5 | -2.82 | 118.65 | 122.61 |
| 24 | AB | 612 | CLA | C2A-C1A-CHA | 2.82 | 128.78 | 123.86 |
| 32 | AB | 629 | LMT | C4-C3-C2 | -2.81 | 100.14 | 114.42 |
| 31 | AB | 620 | LMG | C15-C14-C13 | -2.81 | 100.14 | 114.42 |
| 27 | BC | 5516 | BCR | C35-C13-C12 | 2.81 | 122.51 | 118.08 |
| 24 | BB | 5610 | CLA | CED-O2D-CGD | 2.81 | 122.30 | 115.94 |
| 24 | BC | 5509 | CLA | O2D-CGD-CBD | 2.81 | 116.26 | 111.27 |
| 24 | BB | 5607 | CLA | CAA-C2A-C1A | -2.81 | 102.78 | 111.97 |
| 27 | BB | 5623 | BCR | C23-C24-C25 | 2.81 | 135.08 | 127.20 |
| 24 | AA | 407 | CLA | CBA-CAA-C2A | 2.80 | 122.14 | 113.86 |
| 24 | BC | 5506 | CLA | O2D-CGD-CBD | 2.80 | 116.25 | 111.27 |
| 28 | BB | 5602 | DGD | O6E-C1E-O5D | 2.80 | 116.60 | 109.97 |
| 27 | AA | 410 | BCR | C1-C6-C5 | -2.80 | 118.67 | 122.61 |
| 27 | BB | 5621 | BCR | C35-C13-C12 | 2.80 | 122.49 | 118.08 |
| 27 | BD | 5407 | BCR | C1-C6-C5 | -2.79 | 118.68 | 122.61 |
| 35 | AD | 405 | PL9 | C7-C3-C2 | -2.79 | 119.63 | 123.30 |
| 24 | AB | 611 | CLA | C4D-C3D-CAD | 2.79 | 111.39 | 108.10 |
| 27 | AC | 514 | BCR | C23-C22-C21 | -2.79 | 114.66 | 118.94 |
| 27 | BC | 5515 | BCR | C16-C17-C18 | 2.79 | 131.29 | 127.31 |
| 28 | AH | 101 | DGD | O6D-C1D-O3G | 2.79 | 116.58 | 109.97 |
| 24 | AB | 611 | CLA | C7-C6-C5 | -2.79 | 105.78 | 113.36 |
| 27 | AC | 515 | BCR | C35-C13-C12 | 2.79 | 122.47 | 118.08 |
| 31 | BD | 5410 | LMG | O7-C8-C7 | 2.79 | 118.49 | 108.40 |
| 24 | AC | 509 | CLA | CHA-C4D-ND | 2.79 | 138.33 | 132.50 |
| 27 | BB | 5623 | BCR | C1-C6-C5 | -2.78 | 118.69 | 122.61 |
| 28 | BC | 5518 | DGD | O6D-C5D-C4D | 2.78 | 114.75 | 109.69 |
| 27 | BJ | 5101 | BCR | C21-C20-C19 | 2.78 | 131.90 | 123.22 |
| 30 | AB | 622 | SQD | C45-O47-C7 | 2.78 | 124.63 | 117.79 |
| 31 | AC | 521 | LMG | O8-C9-C8 | -2.78 | 100.35 | 108.43 |
| 36 | AF | 101 | HEM | C2C-C3C-C4C | -2.78 | 104.96 | 106.90 |
| 24 | BB | 5607 | CLA | CAA-C2A-C3A | -2.77 | 105.18 | 112.78 |
| 36 | BV | 5201 | HEM | O1D-CGD-CBD | -2.77 | 114.17 | 123.08 |
| 24 | BB | 5611 | CLA | CAA-C2A-C3A | -2.77 | 105.19 | 112.78 |
| 24 | BB | 5607 | CLA | C2C-C1C-NC | -2.77 | 107.38 | 109.97 |
| 24 | AB | 601 | CLA | CED-O2D-CGD | 2.77 | 122.20 | 115.94 |
| 24 | BB | 5615 | CLA | C7-C6-C5 | -2.77 | 105.84 | 113.36 |
| 36 | AV | 201 | HEM | O1D-CGD-CBD | -2.77 | 114.19 | 123.08 |
| 24 | BC | 5508 | CLA | O1D-CGD-CBD | -2.77 | 118.82 | 124.48 |
| 27 | BA | 5411 | BCR | C35-C13-C12 | 2.76 | 122.43 | 118.08 |
| 27 | BA | 5411 | BCR | C24-C23-C22 | 2.76 | 130.41 | 126.23 |
| 24 | AB | 608 | CLA | C11-C12-C13 | 2.76 | 124.84 | 115.92 |
| 28 | AA | 411 | DGD | O6D-C1D-C2D | -2.76 | 104.51 | 110.35 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AC | 509 | CLA | O2D-CGD-CBD | 2.76 | 116.17 | 111.27 |
| 31 | BD | 5410 | LMG | C15-C14-C13 | -2.76 | 100.43 | 114.42 |
| 24 | BA | 5408 | CLA | CAA-C2A-C1A | -2.75 | 102.96 | 111.97 |
| 27 | AX | 101 | BCR | C11-C10-C9 | 2.75 | 131.24 | 127.31 |
| 24 | AB | 602 | CLA | C3A-C2A-C1A | 2.75 | 105.46 | 101.34 |
| 28 | AC | 517 | DGD | C3G-C2G-C1G | 2.75 | 118.29 | 111.79 |
| 28 | BH | 5101 | DGD | O6D-C1D-O3G | 2.75 | 116.48 | 109.97 |
| 27 | BD | 5407 | BCR | C23-C22-C21 | -2.75 | 114.72 | 118.94 |
| 28 | BC | 5517 | DGD | C3G-C2G-C1G | 2.74 | 118.28 | 111.79 |
| 27 | AJ | 101 | BCR | C11-C10-C9 | 2.74 | 131.23 | 127.31 |
| 36 | AF | 101 | HEM | CAD-CBD-CGD | 2.74 | 119.50 | 113.60 |
| 34 | BD | 5403 | PHO | C3D-CAD-CBD | -2.74 | 104.00 | 107.61 |
| 32 | BI | 5102 | LMT | C4-C3-C2 | -2.74 | 100.52 | 114.42 |
| 24 | BC | 5512 | CLA | C3A-C2A-C1A | 2.74 | 105.44 | 101.34 |
| 24 | BB | 5618 | CLA | CHA-C4D-ND | 2.74 | 138.22 | 132.50 |
| 24 | AD | 401 | CLA | CHA-C4D-ND | 2.73 | 138.22 | 132.50 |
| 24 | BB | 5620 | CLA | O2A-CGA-CBA | 2.73 | 120.48 | 111.91 |
| 30 | AA | 413 | SQD | O9-S-C6 | -2.73 | 103.69 | 106.94 |
| 24 | BB | 5612 | CLA | C11-C12-C13 | 2.73 | 124.74 | 115.92 |
| 29 | AA | 412 | LHG | O8-C6-C5 | 2.73 | 116.38 | 108.43 |
| 28 | BC | 5519 | DGD | O6E-C1E-C2E | 2.73 | 116.13 | 110.35 |
| 24 | BB | 5617 | CLA | O2A-CGA-CBA | 2.73 | 120.47 | 111.91 |
| 31 | AM | 101 | LMG | O7-C10-O9 | -2.73 | 117.11 | 123.70 |
| 31 | BC | 5521 | LMG | O8-C9-C8 | -2.73 | 100.50 | 108.43 |
| 32 | AI | 102 | LMT | C4-C3-C2 | -2.73 | 100.59 | 114.42 |
| 27 | BC | 5516 | BCR | C40-C30-C29 | -2.72 | 98.02 | 108.91 |
| 24 | AC | 509 | CLA | C3A-C2A-C1A | 2.72 | 105.41 | 101.34 |
| 31 | AA | 414 | LMG | O8-C28-C29 | 2.72 | 120.44 | 111.91 |
| 27 | AT | 101 | BCR | C23-C24-C25 | 2.72 | 134.84 | 127.20 |
| 24 | AB | 606 | CLA | CAA-C2A-C1A | -2.72 | 103.06 | 111.97 |
| 24 | AB | 614 | CLA | C3A-C2A-C1A | 2.72 | 105.41 | 101.34 |
| 28 | AC | 519 | DGD | O6E-C5E-C4E | 2.72 | 114.63 | 109.69 |
| 24 | BC | 5501 | CLA | O2A-CGA-O1A | -2.72 | 116.73 | 123.59 |
| 28 | BA | 5412 | DGD | O6D-C1D-C2D | -2.72 | 104.60 | 110.35 |
| 24 | BC | 5512 | CLA | CED-O2D-CGD | 2.72 | 122.08 | 115.94 |
| 31 | BE | 5101 | LMG | O8-C28-C29 | 2.72 | 120.43 | 111.91 |
| 24 | AB | 607 | CLA | O2D-CGD-CBD | 2.72 | 116.09 | 111.27 |
| 24 | BA | 5405 | CLA | C3A-C2A-C1A | 2.72 | 105.41 | 101.34 |
| 34 | AD | 402 | PHO | C3D-CAD-CBD | -2.71 | 104.03 | 107.61 |
| 24 | BB | 5605 | CLA | CHA-C4D-ND | 2.71 | 138.17 | 132.50 |
| 28 | AC | 519 | DGD | O1G-C1A-C2A | 2.71 | 120.42 | 111.91 |
| 24 | AB | 613 | CLA | C3A-C2A-C1A | 2.70 | 105.39 | 101.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BB | 5607 | CLA | CED-O2D-CGD | 2.70 | 122.05 | 115.94 |
| 24 | AC | 506 | CLA | C2A-C1A-CHA | 2.70 | 128.58 | 123.86 |
| 31 | BL | 5101 | LMG | C12-C11-C10 | 2.70 | 123.43 | 113.62 |
| 24 | AB | 609 | CLA | CED-O2D-CGD | 2.70 | 122.04 | 115.94 |
| 28 | AB | 628 | DGD | O6E-C1E-O5D | 2.70 | 116.36 | 109.97 |
| 24 | BC | 5501 | CLA | CED-O2D-CGD | 2.70 | 122.03 | 115.94 |
| 27 | BB | 5621 | BCR | C36-C18-C19 | 2.69 | 122.32 | 118.08 |
| 34 | AD | 402 | PHO | O1D-CGD-CBD | -2.69 | 120.25 | 124.74 |
| 24 | AC | 501 | CLA | CED-O2D-CGD | 2.69 | 122.03 | 115.94 |
| 27 | BX | 5101 | BCR | C15-C14-C13 | 2.69 | 131.15 | 127.31 |
| 24 | BB | 5618 | CLA | O2A-CGA-CBA | 2.69 | 120.35 | 111.91 |
| 31 | BB | 5624 | LMG | O7-C8-C7 | 2.69 | 118.13 | 108.40 |
| 27 | BC | 5514 | BCR | C30-C25-C26 | -2.69 | 118.83 | 122.61 |
| 27 | AT | 101 | BCR | C36-C18-C19 | 2.68 | 122.31 | 118.08 |
| 36 | AV | 201 | HEM | C4D-C3D-C2D | -2.68 | 102.99 | 106.90 |
| 27 | AB | 618 | BCR | C1-C6-C5 | -2.68 | 118.83 | 122.61 |
| 24 | AB | 607 | CLA | O2A-CGA-O1A | -2.68 | 116.82 | 123.59 |
| 27 | BC | 5514 | BCR | C37-C22-C23 | 2.68 | 122.30 | 118.08 |
| 27 | BB | 5621 | BCR | C16-C17-C18 | 2.68 | 131.14 | 127.31 |
| 27 | BX | 5101 | BCR | C11-C10-C9 | 2.68 | 131.13 | 127.31 |
| 27 | AJ | 101 | BCR | C21-C20-C19 | 2.68 | 131.58 | 123.22 |
| 27 | BT | 5101 | BCR | C8-C9-C10 | -2.68 | 114.83 | 118.94 |
| 27 | AB | 619 | BCR | C1-C6-C5 | -2.68 | 118.84 | 122.61 |
| 24 | BB | 5611 | CLA | O2D-CGD-CBD | 2.68 | 116.03 | 111.27 |
| 24 | AA | 406 | CLA | CMB-C2B-C1B | -2.68 | 124.35 | 128.46 |
| 24 | BC | 5511 | CLA | CHA-C4D-ND | 2.68 | 138.10 | 132.50 |
| 31 | AB | 621 | LMG | O8-C28-C29 | 2.68 | 120.30 | 111.91 |
| 34 | AD | 403 | PHO | C6-C7-C8 | -2.67 | 107.27 | 115.92 |
| 24 | AB | 604 | CLA | O2D-CGD-CBD | 2.67 | 116.02 | 111.27 |
| 36 | AF | 101 | HEM | CAD-C3D-C4D | -2.67 | 119.98 | 124.66 |
| 27 | AT | 101 | BCR | C32-C1-C6 | 2.67 | 114.64 | 110.30 |
| 27 | AC | 514 | BCR | C37-C22-C23 | 2.67 | 122.29 | 118.08 |
| 31 | AC | 520 | LMG | O7-C8-C7 | 2.67 | 118.07 | 108.40 |
| 24 | BB | 5613 | CLA | C2A-C1A-CHA | 2.67 | 128.53 | 123.86 |
| 27 | AD | 406 | BCR | C35-C13-C12 | 2.67 | 122.28 | 118.08 |
| 34 | BD | 5403 | PHO | C1A-C2A-C3A | 2.67 | 105.38 | 102.84 |
| 28 | BC | 5518 | DGD | C3A-C2A-C1A | 2.67 | 123.33 | 113.62 |
| 31 | BM | 5102 | LMG | O7-C10-O9 | -2.67 | 117.25 | 123.70 |
| 24 | AC | 511 | CLA | CHA-C4D-ND | 2.67 | 138.08 | 132.50 |
| 27 | AD | 406 | BCR | C37-C22-C23 | 2.67 | 122.28 | 118.08 |
| 24 | AB | 616 | CLA | CED-O2D-CGD | 2.67 | 121.97 | 115.94 |
| 27 | BA | 5411 | BCR | C2-C1-C6 | 2.67 | 114.58 | 110.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 28 | AC | 518 | DGD | C3A-C2A-C1A | 2.67 | 123.31 | 113.62 |
| 27 | AC | 516 | BCR | C40-C30-C29 | -2.67 | 98.25 | 108.91 |
| 24 | AB | 601 | CLA | CHA-C4D-ND | 2.67 | 138.07 | 132.50 |
| 27 | BB | 5621 | BCR | C1-C6-C5 | -2.66 | 118.86 | 122.61 |
| 24 | AC | 502 | CLA | CED-O2D-CGD | 2.66 | 121.96 | 115.94 |
| 24 | BC | 5506 | CLA | C2A-C1A-CHA | 2.66 | 128.51 | 123.86 |
| 28 | BE | 5102 | DGD | O5D-C6D-C5D | 2.66 | 113.97 | 109.05 |
| 31 | AB | 620 | LMG | C12-C11-C10 | 2.66 | 123.29 | 113.62 |
| 28 | BC | 5519 | DGD | O1G-C1A-C2A | 2.66 | 120.25 | 111.91 |
| 31 | BC | 5520 | LMG | O7-C8-C7 | 2.66 | 118.02 | 108.40 |
| 28 | AE | 101 | DGD | O5D-C6D-C5D | 2.65 | 113.96 | 109.05 |
| 24 | AB | 616 | CLA | O2A-CGA-CBA | 2.65 | 120.23 | 111.91 |
| 36 | AV | 201 | HEM | CAB-C3B-C4B | 2.65 | 136.83 | 124.47 |
| 24 | AC | 512 | CLA | CED-O2D-CGD | 2.65 | 121.93 | 115.94 |
| 28 | AC | 517 | DGD | C8A-C7A-C6A | -2.65 | 100.97 | 114.42 |
| 24 | BC | 5509 | CLA | CED-O2D-CGD | 2.65 | 121.93 | 115.94 |
| 24 | BB | 5607 | CLA | CAA-CBA-CGA | -2.65 | 105.51 | 113.25 |
| 28 | AC | 517 | DGD | C3A-C2A-C1A | 2.65 | 123.25 | 113.62 |
| 24 | AC | 506 | CLA | O2D-CGD-CBD | 2.65 | 115.97 | 111.27 |
| 24 | AB | 615 | CLA | CHA-C4D-ND | 2.65 | 138.04 | 132.50 |
| 24 | AB | 611 | CLA | CED-O2D-CGD | 2.65 | 121.93 | 115.94 |
| 36 | BF | 5101 | HEM | CAD-CBD-CGD | 2.65 | 119.30 | 113.60 |
| 27 | AA | 410 | BCR | C16-C17-C18 | 2.65 | 131.09 | 127.31 |
| 31 | AA | 417 | LMG | C15-C14-C13 | -2.65 | 101.00 | 114.42 |
| 29 | BA | 5415 | LHG | O8-C23-C24 | 2.64 | 120.21 | 111.91 |
| 30 | BB | 5625 | SQD | C31-C30-C29 | 2.64 | 133.50 | 113.42 |
| 27 | BC | 5516 | BCR | C37-C22-C23 | 2.64 | 122.24 | 118.08 |
| 24 | BB | 5613 | CLA | CED-O2D-CGD | 2.64 | 121.91 | 115.94 |
| 24 | AC | 513 | CLA | C2C-C1C-NC | -2.64 | 107.50 | 109.97 |
| 27 | AC | 514 | BCR | C7-C8-C9 | 2.64 | 130.23 | 126.23 |
| 24 | BB | 5618 | CLA | C3A-C2A-C1A | 2.64 | 105.29 | 101.34 |
| 24 | AB | 603 | CLA | C2C-C1C-NC | -2.64 | 107.50 | 109.97 |
| 31 | AD | 408 | LMG | C15-C14-C13 | -2.64 | 101.05 | 114.42 |
| 24 | BB | 5606 | CLA | C3A-C2A-C1A | 2.63 | 105.28 | 101.34 |
| 24 | AA | 404 | CLA | C2A-C1A-CHA | 2.63 | 128.46 | 123.86 |
| 31 | AB | 621 | LMG | O7-C8-C7 | 2.63 | 117.93 | 108.40 |
| 27 | BD | 5407 | BCR | C37-C22-C23 | 2.63 | 122.22 | 118.08 |
| 27 | BC | 5514 | BCR | C1-C6-C7 | 2.63 | 123.22 | 115.78 |
| 27 | BT | 5101 | BCR | C23-C24-C25 | 2.63 | 134.59 | 127.20 |
| 29 | AA | 415 | LHG | O8-C23-C24 | 2.63 | 120.16 | 111.91 |
| 36 | AF | 101 | HEM | C4B-C3B-C2B | -2.63 | 105.03 | 107.11 |
| 24 | BC | 5503 | CLA | O1D-CGD-CBD | -2.63 | 119.11 | 124.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AC | 501 | CLA | CHA-C4D-ND | 2.63 | 138.00 | 132.50 |
| 32 | BC | 5522 | LMT | O1'-C1'-C2' | -2.63 | 104.20 | 108.30 |
| 24 | AB | 613 | CLA | C6-C7-C8 | -2.63 | 107.43 | 115.92 |
| 27 | BT | 5101 | BCR | C19-C18-C17 | -2.62 | 114.92 | 118.94 |
| 31 | AC | 520 | LMG | C9-O8-C28 | 2.62 | 126.84 | 117.12 |
| 31 | BA | 5402 | LMG | C15-C14-C13 | -2.62 | 101.12 | 114.42 |
| 27 | AX | 101 | BCR | C16-C17-C18 | 2.62 | 131.05 | 127.31 |
| 27 | AT | 101 | BCR | C8-C9-C10 | -2.62 | 114.92 | 118.94 |
| 27 | AT | 101 | BCR | C19-C18-C17 | -2.62 | 114.92 | 118.94 |
| 27 | AT | 101 | BCR | C23-C22-C21 | -2.62 | 114.92 | 118.94 |
| 31 | AC | 520 | LMG | C32-C31-C30 | -2.62 | 101.14 | 114.42 |
| 30 | AB | 622 | SQD | C31-C30-C29 | 2.62 | 133.28 | 113.42 |
| 27 | AB | 617 | BCR | C16-C17-C18 | 2.61 | 131.04 | 127.31 |
| 24 | BC | 5507 | CLA | CED-O2D-CGD | 2.61 | 121.84 | 115.94 |
| 24 | AB | 609 | CLA | C2A-C1A-CHA | 2.61 | 128.43 | 123.86 |
| 27 | BK | 5102 | BCR | C34-C9-C8 | 2.61 | 122.19 | 118.08 |
| 24 | AB | 613 | CLA | CHA-C4D-ND | 2.61 | 137.96 | 132.50 |
| 27 | BD | 5407 | BCR | C35-C13-C12 | 2.61 | 122.19 | 118.08 |
| 30 | AB | 627 | SQD | C31-C30-C29 | 2.61 | 133.21 | 113.42 |
| 27 | AX | 101 | BCR | C15-C14-C13 | 2.61 | 131.03 | 127.31 |
| 27 | AT | 101 | BCR | C20-C21-C22 | 2.60 | 131.03 | 127.31 |
| 28 | AC | 518 | DGD | O6D-C5D-C4D | 2.60 | 114.42 | 109.69 |
| 24 | BB | 5607 | CLA | CMB-C2B-C1B | -2.60 | 124.46 | 128.46 |
| 27 | BC | 5514 | BCR | C8-C7-C6 | 2.60 | 134.51 | 127.20 |
| 27 | BC | 5515 | BCR | C19-C18-C17 | -2.60 | 114.95 | 118.94 |
| 27 | AC | 516 | BCR | C35-C13-C12 | 2.60 | 122.17 | 118.08 |
| 24 | BB | 5615 | CLA | CED-O2D-CGD | 2.60 | 121.81 | 115.94 |
| 31 | BC | 5520 | LMG | C9-O8-C28 | 2.60 | 126.74 | 117.12 |
| 25 | AA | 408 | MST | C15-N14-C6 | -2.60 | 120.65 | 123.85 |
| 27 | AC | 514 | BCR | C40-C30-C25 | 2.60 | 114.51 | 110.30 |
| 27 | AC | 515 | BCR | C19-C18-C17 | -2.60 | 114.96 | 118.94 |
| 36 | BF | 5101 | HEM | C2C-C3C-C4C | -2.60 | 105.08 | 106.90 |
| 30 | BB | 5601 | SQD | C31-C30-C29 | 2.60 | 133.12 | 113.42 |
| 24 | BB | 5608 | CLA | O2D-CGD-CBD | 2.59 | 115.88 | 111.27 |
| 24 | BC | 5510 | CLA | O1D-CGD-CBD | -2.59 | 119.18 | 124.48 |
| 24 | AC | 502 | CLA | C3A-C2A-C1A | 2.59 | 105.22 | 101.34 |
| 24 | AB | 606 | CLA | O2A-CGA-O1A | -2.59 | 117.05 | 123.59 |
| 24 | AC | 512 | CLA | CHA-C4D-ND | 2.59 | 137.92 | 132.50 |
| 24 | AB | 616 | CLA | CHA-C4D-ND | 2.59 | 137.91 | 132.50 |
| 31 | AB | 621 | LMG | C7-O1-C1 | -2.59 | 108.68 | 113.74 |
| 27 | AB | 617 | BCR | C8-C9-C10 | -2.59 | 114.97 | 118.94 |
| 24 | AB | 613 | CLA | O2A-CGA-CBA | 2.58 | 120.02 | 111.91 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | AA | 416 | SQD | C36-C35-C34 | 2.58 | 127.54 | 114.42 |
| 27 | AK | 102 | BCR | C37-C22-C23 | 2.58 | 122.15 | 118.08 |
| 30 | BB | 5601 | SQD | C3-C4-C5 | -2.58 | 105.63 | 110.24 |
| 36 | BV | 5201 | HEM | CAB-C3B-C4B | 2.58 | 136.50 | 124.47 |
| 24 | BC | 5501 | CLA | CHA-C4D-ND | 2.58 | 137.90 | 132.50 |
| 24 | AC | 510 | CLA | CED-O2D-CGD | 2.58 | 121.78 | 115.94 |
| 32 | AI | 103 | LMT | O1'-C1'-C2' | -2.58 | 104.27 | 108.30 |
| 28 | AC | 519 | DGD | C3G-C2G-C1G | 2.58 | 117.89 | 111.79 |
| 24 | AC | 505 | CLA | C2A-C1A-CHA | 2.58 | 128.37 | 123.86 |
| 24 | BC | 5502 | CLA | CED-O2D-CGD | 2.58 | 121.77 | 115.94 |
| 31 | AC | 521 | LMG | C12-C11-C10 | 2.57 | 122.98 | 113.62 |
| 24 | BD | 5402 | CLA | CHA-C4D-ND | 2.57 | 137.88 | 132.50 |
| 24 | AC | 505 | CLA | CHA-C4D-ND | 2.57 | 137.88 | 132.50 |
| 27 | BK | 5102 | BCR | C37-C22-C23 | 2.57 | 122.13 | 118.08 |
| 27 | AB | 619 | BCR | C35-C13-C12 | 2.57 | 122.12 | 118.08 |
| 24 | BB | 5608 | CLA | CBA-CAA-C2A | 2.57 | 121.44 | 113.86 |
| 24 | BB | 5617 | CLA | CED-O2D-CGD | 2.57 | 121.74 | 115.94 |
| 27 | AC | 514 | BCR | C8-C7-C6 | 2.57 | 134.41 | 127.20 |
| 32 | BB | 5603 | LMT | O1B-C1B-C2B | 2.57 | 114.75 | 108.10 |
| 24 | BC | 5510 | CLA | CED-O2D-CGD | 2.57 | 121.74 | 115.94 |
| 28 | BC | 5519 | DGD | O3D-C3D-C2D | 2.56 | 116.28 | 110.35 |
| 24 | AC | 513 | CLA | CHA-C4D-ND | 2.56 | 137.86 | 132.50 |
| 27 | BD | 5407 | BCR | C12-C13-C14 | -2.56 | 115.01 | 118.94 |
| 28 | BC | 5517 | DGD | C3A-C2A-C1A | 2.56 | 122.94 | 113.62 |
| 30 | BA | 5401 | SQD | C45-O47-C7 | 2.56 | 124.10 | 117.79 |
| 31 | AA | 417 | LMG | C32-C31-C30 | -2.56 | 101.42 | 114.42 |
| 31 | BC | 5520 | LMG | C32-C31-C30 | -2.56 | 101.42 | 114.42 |
| 34 | BD | 5403 | PHO | CED-O2D-CGD | 2.56 | 121.73 | 115.94 |
| 32 | AB | 629 | LMT | O1B-C1B-C2B | 2.56 | 114.73 | 108.10 |
| 24 | AA | 406 | CLA | CAA-CBA-CGA | -2.56 | 105.77 | 113.25 |
| 24 | AC | 512 | CLA | O2D-CGD-CBD | 2.56 | 115.81 | 111.27 |
| 24 | BA | 5405 | CLA | CED-O2D-CGD | 2.56 | 121.72 | 115.94 |
| 24 | BB | 5619 | CLA | CHA-C4D-ND | 2.56 | 137.84 | 132.50 |
| 24 | AC | 507 | CLA | CED-O2D-CGD | 2.56 | 121.72 | 115.94 |
| 24 | BB | 5608 | CLA | O2A-CGA-O1A | -2.55 | 117.15 | 123.59 |
| 36 | AF | 101 | HEM | CAB-C3B-C4B | 2.55 | 136.36 | 124.47 |
| 24 | BC | 5513 | CLA | C2C-C1C-NC | -2.55 | 107.58 | 109.97 |
| 24 | AB | 612 | CLA | CHA-C4D-ND | 2.55 | 137.84 | 132.50 |
| 24 | BB | 5608 | CLA | C6-C7-C8 | -2.55 | 107.68 | 115.92 |
| 30 | AF | 102 | SQD | C45-O47-C7 | 2.55 | 124.07 | 117.79 |
| 30 | BB | 5625 | SQD | C15-C14-C13 | 2.55 | 127.36 | 114.42 |
| 36 | BV | 5201 | HEM | C4B-CHC-C1C | 2.55 | 125.92 | 122.56 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | BT | 5101 | BCR | C36-C18-C19 | 2.55 | 122.09 | 118.08 |
| 35 | BD | 5406 | PL9 | C45-C44-C46 | 2.54 | 119.55 | 115.27 |
| 36 | BF | 5101 | HEM | CAB-C3B-C4B | 2.54 | 136.32 | 124.47 |
| 27 | BC | 5516 | BCR | C24-C23-C22 | 2.54 | 130.08 | 126.23 |
| 24 | AA | 405 | CLA | CMB-C2B-C1B | -2.54 | 124.55 | 128.46 |
| 36 | BF | 5101 | HEM | C4B-C3B-C2B | -2.54 | 105.10 | 107.11 |
| 28 | AA | 411 | DGD | C5A-C4A-C3A | -2.54 | 101.53 | 114.42 |
| 27 | AA | 410 | BCR | C35-C13-C12 | 2.54 | 122.08 | 118.08 |
| 28 | AC | 518 | DGD | C5A-C4A-C3A | 2.54 | 127.32 | 114.42 |
| 31 | BC | 5521 | LMG | C9-C8-C7 | 2.54 | 117.80 | 111.79 |
| 24 | AB | 603 | CLA | CMB-C2B-C1B | -2.54 | 124.56 | 128.46 |
| 24 | AA | 406 | CLA | C3A-C2A-C1A | 2.54 | 105.14 | 101.34 |
| 28 | BC | 5518 | DGD | C5A-C4A-C3A | 2.54 | 127.31 | 114.42 |
| 31 | BA | 5402 | LMG | C32-C31-C30 | -2.53 | 101.56 | 114.42 |
| 24 | AB | 610 | CLA | CED-O2D-CGD | 2.53 | 121.66 | 115.94 |
| 24 | AD | 401 | CLA | O2A-CGA-O1A | -2.53 | 117.20 | 123.59 |
| 30 | AB | 622 | SQD | C15-C14-C13 | 2.53 | 127.27 | 114.42 |
| 31 | AJ | 102 | LMG | C32-C31-C30 | -2.53 | 101.58 | 114.42 |
| 27 | BA | 5411 | BCR | C1-C6-C5 | -2.53 | 119.05 | 122.61 |
| 27 | BC | 5514 | BCR | C12-C13-C14 | -2.53 | 115.06 | 118.94 |
| 24 | AB | 605 | CLA | CAA-CBA-CGA | -2.53 | 105.86 | 113.25 |
| 24 | BC | 5511 | CLA | C3A-C2A-C1A | 2.53 | 105.13 | 101.34 |
| 31 | BB | 5624 | LMG | O8-C28-C29 | 2.53 | 119.84 | 111.91 |
| 27 | AC | 516 | BCR | C37-C22-C23 | 2.53 | 122.06 | 118.08 |
| 28 | BC | 5517 | DGD | C8A-C7A-C6A | -2.53 | 101.60 | 114.42 |
| 24 | BB | 5620 | CLA | CHA-C4D-ND | 2.53 | 137.78 | 132.50 |
| 24 | BC | 5513 | CLA | CHA-C4D-ND | 2.53 | 137.78 | 132.50 |
| 36 | BF | 5101 | HEM | C4D-C3D-C2D | -2.52 | 103.22 | 106.90 |
| 27 | AB | 617 | BCR | C24-C23-C22 | 2.52 | 130.05 | 126.23 |
| 24 | AD | 401 | CLA | C6-C7-C8 | -2.52 | 107.76 | 115.92 |
| 24 | AC | 503 | CLA | CAA-C2A-C1A | -2.52 | 103.71 | 111.97 |
| 27 | BJ | 5101 | BCR | C1-C6-C7 | 2.52 | 122.92 | 115.78 |
| 28 | BA | 5412 | DGD | C5A-C4A-C3A | -2.52 | 101.62 | 114.42 |
| 27 | AC | 516 | BCR | C16-C17-C18 | 2.52 | 130.91 | 127.31 |
| 30 | BF | 5102 | SQD | O47-C7-C8 | 2.51 | 116.92 | 111.50 |
| 36 | AV | 201 | HEM | C2C-C3C-C4C | -2.51 | 105.14 | 106.90 |
| 31 | AC | 520 | LMG | C13-C12-C11 | 2.51 | 122.22 | 113.19 |
| 30 | AA | 416 | SQD | C45-O47-C7 | 2.51 | 123.97 | 117.79 |
| 24 | BB | 5609 | CLA | C2A-C1A-CHA | 2.51 | 128.25 | 123.86 |
| 27 | AJ | 101 | BCR | C1-C6-C7 | 2.51 | 122.88 | 115.78 |
| 30 | BA | 5401 | SQD | C36-C35-C34 | 2.51 | 127.17 | 114.42 |
| 24 | AD | 401 | CLA | C3A-C2A-C1A | 2.51 | 105.10 | 101.34 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36 | BF | 5101 | HEM | CAD-C3D-C4D | -2.51 | 120.27 | 124.66 |
| 27 | BJ | 5101 | BCR | C11-C10-C9 | 2.51 | 130.89 | 127.31 |
| 24 | AC | 503 | CLA | CBA-CAA-C2A | 2.51 | 121.27 | 113.86 |
| 24 | AC | 508 | CLA | O2A-CGA-O1A | -2.51 | 117.26 | 123.59 |
| 24 | AB | 601 | CLA | C3A-C2A-C1A | 2.51 | 105.09 | 101.34 |
| 28 | AC | 519 | DGD | O3D-C3D-C2D | 2.51 | 116.14 | 110.35 |
| 24 | BD | 5402 | CLA | C3A-C2A-C1A | 2.51 | 105.09 | 101.34 |
| 24 | BB | 5617 | CLA | CHA-C4D-ND | 2.50 | 137.74 | 132.50 |
| 24 | BC | 5512 | CLA | CHA-C4D-ND | 2.50 | 137.74 | 132.50 |
| 24 | AC | 507 | CLA | C3A-C2A-C1A | 2.50 | 105.09 | 101.34 |
| 28 | BC | 5519 | DGD | C3G-C2G-C1G | 2.50 | 117.70 | 111.79 |
| 27 | BK | 5102 | BCR | C30-C25-C24 | 2.50 | 122.85 | 115.78 |
| 27 | AC | 515 | BCR | C36-C18-C19 | 2.50 | 122.02 | 118.08 |
| 24 | AB | 615 | CLA | CED-O2D-CGD | 2.50 | 121.59 | 115.94 |
| 24 | AA | 404 | CLA | CHA-C4D-ND | 2.50 | 137.73 | 132.50 |
| 24 | BC | 5513 | CLA | C3A-C2A-C1A | 2.50 | 105.08 | 101.34 |
| 27 | BB | 5621 | BCR | C12-C13-C14 | -2.50 | 115.11 | 118.94 |
| 31 | BC | 5521 | LMG | C12-C11-C10 | 2.49 | 122.69 | 113.62 |
| 28 | BH | 5101 | DGD | O2G-C1B-O1B | -2.49 | 117.67 | 123.70 |
| 27 | BC | 5514 | BCR | C40-C30-C25 | 2.49 | 114.34 | 110.30 |
| 24 | AB | 603 | CLA | CAA-CBA-CGA | -2.49 | 105.97 | 113.25 |
| 24 | BB | 5612 | CLA | C2A-C1A-CHA | 2.49 | 128.22 | 123.86 |
| 27 | BT | 5101 | BCR | C23-C22-C21 | -2.49 | 115.12 | 118.94 |
| 31 | BD | 5408 | LMG | C36-C35-C34 | -2.49 | 101.78 | 114.42 |
| 24 | BD | 5405 | CLA | C2A-C1A-CHA | 2.49 | 128.21 | 123.86 |
| 30 | AB | 627 | SQD | C3-C4-C5 | -2.49 | 105.80 | 110.24 |
| 24 | BC | 5503 | CLA | CAA-C2A-C1A | -2.49 | 103.82 | 111.97 |
| 24 | BC | 5508 | CLA | CAA-CBA-CGA | -2.49 | 105.98 | 113.25 |
| 27 | AB | 617 | BCR | C1-C6-C5 | -2.49 | 119.11 | 122.61 |
| 34 | BD | 5404 | PHO | C3D-CAD-CBD | -2.49 | 104.33 | 107.61 |
| 24 | BD | 5402 | CLA | C6-C7-C8 | -2.49 | 107.88 | 115.92 |
| 24 | BC | 5503 | CLA | CBA-CAA-C2A | 2.48 | 121.20 | 113.86 |
| 31 | AC | 520 | LMG | O7-C10-O9 | -2.48 | 117.70 | 123.70 |
| 27 | AC | 514 | BCR | C1-C6-C7 | 2.48 | 122.80 | 115.78 |
| 24 | AB | 605 | CLA | C2A-C1A-CHA | 2.48 | 128.19 | 123.86 |
| 27 | AA | 410 | BCR | C24-C23-C22 | 2.48 | 129.98 | 126.23 |
| 31 | BB | 5624 | LMG | C13-C12-C11 | 2.48 | 122.10 | 113.19 |
| 24 | AC | 513 | CLA | C3A-C2A-C1A | 2.47 | 105.05 | 101.34 |
| 28 | AB | 628 | DGD | C4A-C3A-C2A | -2.47 | 104.30 | 113.19 |
| 24 | AC | 511 | CLA | C3A-C2A-C1A | 2.47 | 105.04 | 101.34 |
| 24 | BA | 5406 | CLA | CMB-C2B-C1B | -2.47 | 124.67 | 128.46 |
| 27 | BB | 5621 | BCR | C19-C18-C17 | -2.47 | 115.15 | 118.94 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 31 | AB | 620 | LMG | C9-O8-C28 | 2.47 | 126.27 | 117.12 |
| 27 | BC | 5514 | BCR | C7-C8-C9 | 2.47 | 129.97 | 126.23 |
| 28 | AC | 518 | DGD | O6D-C1D-O3G | 2.47 | 115.82 | 109.97 |
| 24 | AC | 501 | CLA | O2A-CGA-O1A | -2.47 | 117.36 | 123.59 |
| 27 | AB | 617 | BCR | C37-C22-C23 | 2.47 | 121.97 | 118.08 |
| 31 | BD | 5408 | LMG | C32-C31-C30 | -2.46 | 101.92 | 114.42 |
| 27 | BD | 5407 | BCR | C8-C9-C10 | -2.46 | 115.16 | 118.94 |
| 24 | AC | 512 | CLA | C3A-C2A-C1A | 2.46 | 105.03 | 101.34 |
| 34 | BD | 5404 | PHO | C4C-NC-C1C | 2.46 | 112.15 | 107.09 |
| 24 | BB | 5615 | CLA | CMB-C2B-C1B | -2.46 | 124.68 | 128.46 |
| 31 | BE | 5101 | LMG | O8-C9-C8 | 2.46 | 115.60 | 108.43 |
| 27 | BA | 5411 | BCR | C12-C13-C14 | -2.46 | 115.17 | 118.94 |
| 28 | BC | 5519 | DGD | O1G-C1A-O1A | -2.46 | 117.38 | 123.59 |
| 27 | BC | 5514 | BCR | C32-C1-C6 | 2.46 | 114.29 | 110.30 |
| 24 | AD | 404 | CLA | C2A-C1A-CHA | 2.46 | 128.16 | 123.86 |
| 24 | AC | 510 | CLA | C3A-C2A-C1A | 2.46 | 105.02 | 101.34 |
| 31 | AC | 521 | LMG | C15-C14-C13 | -2.46 | 101.95 | 114.42 |
| 31 | AD | 407 | LMG | C39-C38-C37 | 2.46 | 126.90 | 114.42 |
| 24 | AB | 606 | CLA | O2D-CGD-CBD | 2.46 | 115.63 | 111.27 |
| 27 | AC | 514 | BCR | C32-C1-C6 | 2.46 | 114.28 | 110.30 |
| 24 | AB | 604 | CLA | CBA-CAA-C2A | 2.45 | 121.11 | 113.86 |
| 31 | BB | 5624 | LMG | C7-O1-C1 | -2.45 | 108.95 | 113.74 |
| 27 | BC | 5515 | BCR | C36-C18-C19 | 2.45 | 121.94 | 118.08 |
| 27 | BD | 5407 | BCR | C34-C9-C8 | 2.45 | 121.94 | 118.08 |
| 24 | BB | 5609 | CLA | CAA-CBA-CGA | -2.45 | 106.09 | 113.25 |
| 24 | AC | 503 | CLA | C2A-C1A-CHA | 2.45 | 128.15 | 123.86 |
| 32 | BB | 5627 | LMT | C4-C3-C2 | -2.45 | 101.98 | 114.42 |
| 24 | BC | 5508 | CLA | O2A-CGA-O1A | -2.45 | 117.41 | 123.59 |
| 31 | AB | 621 | LMG | C13-C12-C11 | 2.45 | 122.00 | 113.19 |
| 27 | AK | 102 | BCR | C30-C25-C24 | 2.45 | 122.71 | 115.78 |
| 30 | BA | 5414 | SQD | C15-C14-C13 | 2.45 | 126.86 | 114.42 |
| 24 | AB | 604 | CLA | C6-C7-C8 | -2.45 | 108.00 | 115.92 |
| 27 | BC | 5516 | BCR | C23-C22-C21 | -2.45 | 115.18 | 118.94 |
| 24 | AB | 610 | CLA | CMB-C2B-C1B | -2.45 | 124.70 | 128.46 |
| 24 | AC | 510 | CLA | O2A-CGA-O1A | -2.45 | 117.42 | 123.59 |
| 27 | AD | 406 | BCR | C36-C18-C19 | 2.45 | 121.93 | 118.08 |
| 27 | BB | 5622 | BCR | C32-C1-C6 | 2.45 | 114.27 | 110.30 |
| 24 | AC | 510 | CLA | CHA-C4D-ND | 2.45 | 137.61 | 132.50 |
| 31 | BL | 5101 | LMG | C9-O8-C28 | 2.44 | 126.17 | 117.12 |
| 24 | BB | 5614 | CLA | CMB-C2B-C1B | -2.44 | 124.71 | 128.46 |
| 24 | BC | 5505 | CLA | C2A-C1A-CHA | 2.44 | 128.13 | 123.86 |
| 24 | AD | 401 | CLA | CED-O2D-CGD | 2.44 | 121.46 | 115.94 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BC | 5505 | CLA | CHA-C4D-ND | 2.44 | 137.61 | 132.50 |
| 36 | BV | 5201 | HEM | C4D-C3D-C2D | -2.44 | 103.34 | 106.90 |
| 27 | AC | 514 | BCR | C12-C13-C14 | -2.44 | 115.19 | 118.94 |
| 28 | AC | 518 | DGD | CBA-CAA-C9A | -2.44 | 102.03 | 114.42 |
| 24 | BB | 5616 | CLA | O1D-CGD-CBD | -2.44 | 119.49 | 124.48 |
| 24 | AB | 608 | CLA | C2A-C1A-CHA | 2.44 | 128.12 | 123.86 |
| 24 | BB | 5610 | CLA | CBA-CAA-C2A | 2.44 | 121.06 | 113.86 |
| 28 | BC | 5518 | DGD | CBA-CAA-C9A | -2.44 | 102.05 | 114.42 |
| 31 | BC | 5521 | LMG | C15-C14-C13 | -2.44 | 102.05 | 114.42 |
| 24 | BB | 5613 | CLA | O2A-CGA-O1A | -2.43 | 117.45 | 123.59 |
| 28 | AB | 628 | DGD | O2G-C2G-C3G | 2.43 | 117.21 | 108.40 |
| 31 | BC | 5521 | LMG | C34-C33-C32 | 2.43 | 126.78 | 114.42 |
| 30 | AF | 102 | SQD | O47-C7-C8 | 2.43 | 116.75 | 111.50 |
| 31 | BD | 5409 | LMG | C39-C38-C37 | 2.43 | 126.77 | 114.42 |
| 24 | BC | 5507 | CLA | C3A-C2A-C1A | 2.43 | 104.98 | 101.34 |
| 24 | BB | 5610 | CLA | CMB-C2B-C1B | -2.43 | 124.73 | 128.46 |
| 29 | BA | 5415 | LHG | C5-O7-C7 | -2.43 | 111.81 | 117.79 |
| 34 | AD | 403 | PHO | C3D-CAD-CBD | -2.43 | 104.41 | 107.61 |
| 31 | AD | 407 | LMG | O1-C1-C2 | -2.43 | 104.51 | 108.30 |
| 28 | AC | 517 | DGD | O2G-C2G-C1G | -2.43 | 99.61 | 108.40 |
| 31 | BB | 5624 | LMG | C40-C39-C38 | -2.43 | 102.10 | 114.42 |
| 27 | BX | 5101 | BCR | C16-C17-C18 | 2.43 | 130.78 | 127.31 |
| 27 | AB | 617 | BCR | C11-C10-C9 | 2.43 | 130.77 | 127.31 |
| 27 | AB | 617 | BCR | C12-C13-C14 | -2.43 | 115.22 | 118.94 |
| 24 | AB | 613 | CLA | O2D-CGD-CBD | 2.42 | 115.58 | 111.27 |
| 24 | AC | 508 | CLA | CAA-CBA-CGA | -2.42 | 106.17 | 113.25 |
| 24 | AC | 505 | CLA | CMB-C2B-C1B | -2.42 | 124.74 | 128.46 |
| 24 | AB | 611 | CLA | CAA-CBA-CGA | -2.42 | 106.17 | 113.25 |
| 27 | BB | 5623 | BCR | C24-C23-C22 | 2.42 | 129.90 | 126.23 |
| 24 | BD | 5402 | CLA | CBA-CAA-C2A | 2.42 | 121.02 | 113.86 |
| 24 | AC | 503 | CLA | CED-O2D-CGD | 2.42 | 121.42 | 115.94 |
| 24 | AC | 511 | CLA | CED-O2D-CGD | 2.42 | 121.42 | 115.94 |
| 29 | AA | 415 | LHG | C5-O7-C7 | -2.42 | 111.83 | 117.79 |
| 30 | AA | 413 | SQD | C15-C14-C13 | 2.42 | 126.72 | 114.42 |
| 27 | BT | 5101 | BCR | C37-C22-C23 | 2.42 | 121.89 | 118.08 |
| 32 | AB | 624 | LMT | C4-C3-C2 | -2.42 | 102.15 | 114.42 |
| 30 | BF | 5102 | SQD | C3-C4-C5 | -2.42 | 105.93 | 110.24 |
| 24 | BC | 5512 | CLA | O2D-CGD-CBD | 2.42 | 115.56 | 111.27 |
| 36 | BV | 5201 | HEM | C2C-C3C-C4C | -2.42 | 105.21 | 106.90 |
| 24 | AB | 603 | CLA | C6-C5-C3 | 2.42 | 119.79 | 113.45 |
| 24 | AD | 401 | CLA | CMB-C2B-C1B | -2.41 | 124.75 | 128.46 |
| 24 | BA | 5406 | CLA | C12-C11-C10 | -2.41 | 102.16 | 113.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 28 | AH | 101 | DGD | O2G-C1B-O1B | -2.41 | 117.87 | 123.70 |
| 31 | AB | 621 | LMG | C40-C39-C38 | -2.41 | 102.18 | 114.42 |
| 24 | AB | 601 | CLA | CMB-C2B-C1B | -2.41 | 124.76 | 128.46 |
| 30 | BA | 5414 | SQD | O8-S-O9 | -2.41 | 105.38 | 111.27 |
| 36 | AF | 101 | HEM | C4D-C3D-C2D | -2.41 | 103.38 | 106.90 |
| 24 | BB | 5605 | CLA | CMB-C2B-C1B | -2.41 | 124.76 | 128.46 |
| 31 | AA | 414 | LMG | O8-C9-C8 | 2.41 | 115.44 | 108.43 |
| 28 | BC | 5519 | DGD | C1D-C2D-C3D | -2.41 | 104.98 | 110.00 |
| 27 | AC | 515 | BCR | C24-C23-C22 | 2.41 | 129.87 | 126.23 |
| 28 | AC | 519 | DGD | O6D-C1D-C2D | -2.41 | 105.25 | 110.35 |
| 28 | BC | 5517 | DGD | CBA-CAA-C9A | -2.41 | 102.21 | 114.42 |
| 34 | BD | 5404 | PHO | C6-C7-C8 | -2.41 | 108.14 | 115.92 |
| 31 | BC | 5520 | LMG | C13-C12-C11 | 2.41 | 121.84 | 113.19 |
| 34 | BD | 5403 | PHO | O2A-CGA-CBA | 2.41 | 119.45 | 111.91 |
| 24 | BB | 5606 | CLA | C2A-C1A-CHA | 2.40 | 128.06 | 123.86 |
| 31 | AD | 408 | LMG | O7-C8-C9 | -2.40 | 99.70 | 108.40 |
| 24 | BA | 5406 | CLA | CMD-C2D-C1D | 2.40 | 128.95 | 124.71 |
| 31 | AC | 521 | LMG | C34-C33-C32 | 2.40 | 126.62 | 114.42 |
| 24 | AB | 602 | CLA | C2A-C1A-CHA | 2.40 | 128.05 | 123.86 |
| 24 | BB | 5616 | CLA | CAA-CBA-CGA | -2.40 | 106.25 | 113.25 |
| 27 | BB | 5622 | BCR | C1-C6-C7 | 2.40 | 122.56 | 115.78 |
| 30 | BA | 5401 | SQD | O47-C7-C8 | 2.40 | 116.67 | 111.50 |
| 28 | BB | 5602 | DGD | C4A-C3A-C2A | -2.39 | 104.59 | 113.19 |
| 24 | BD | 5402 | CLA | CMB-C2B-C1B | -2.39 | 124.79 | 128.46 |
| 36 | BF | 5101 | HEM | O2D-CGD-CBD | 2.39 | 121.72 | 114.03 |
| 28 | AC | 517 | DGD | CBA-CAA-C9A | -2.39 | 102.29 | 114.42 |
| 27 | BA | 5411 | BCR | C36-C18-C19 | 2.39 | 121.84 | 118.08 |
| 27 | AB | 618 | BCR | C32-C1-C6 | 2.39 | 114.17 | 110.30 |
| 31 | BD | 5409 | LMG | O1-C1-C2 | -2.39 | 104.58 | 108.30 |
| 24 | BC | 5510 | CLA | CHA-C4D-ND | 2.39 | 137.49 | 132.50 |
| 24 | BA | 5407 | CLA | CAA-CBA-CGA | -2.38 | 106.29 | 113.25 |
| 32 | AB | 623 | LMT | O1B-C1B-C2B | 2.38 | 114.28 | 108.10 |
| 24 | AB | 612 | CLA | C2C-C1C-NC | -2.38 | 107.74 | 109.97 |
| 24 | AB | 612 | CLA | CAA-CBA-CGA | -2.38 | 106.29 | 113.25 |
| 29 | BA | 5413 | LHG | O8-C6-C5 | 2.38 | 115.37 | 108.43 |
| 24 | BD | 5405 | CLA | CHA-C4D-ND | 2.38 | 137.48 | 132.50 |
| 24 | AB | 608 | CLA | CED-O2D-CGD | 2.38 | 121.32 | 115.94 |
| 31 | BM | 5102 | LMG | C14-C13-C12 | -2.38 | 102.33 | 114.42 |
| 24 | BB | 5619 | CLA | CED-O2D-CGD | 2.38 | 121.32 | 115.94 |
| 24 | BA | 5405 | CLA | C2A-C1A-CHA | 2.38 | 128.02 | 123.86 |
| 30 | BF | 5102 | SQD | C45-O47-C7 | 2.38 | 123.65 | 117.79 |
| 24 | BC | 5505 | CLA | CMB-C2B-C1B | -2.38 | 124.81 | 128.46 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BC | 5511 | CLA | CED-O2D-CGD | 2.38 | 121.32 | 115.94 |
| 24 | AA | 406 | CLA | CHA-C4D-ND | 2.38 | 137.48 | 132.50 |
| 24 | BC | 5508 | CLA | C2A-C1A-CHA | 2.38 | 128.02 | 123.86 |
| 27 | BT | 5101 | BCR | C8-C7-C6 | 2.38 | 133.88 | 127.20 |
| 27 | BA | 5411 | BCR | C37-C22-C23 | 2.38 | 121.82 | 118.08 |
| 24 | BB | 5605 | CLA | C3A-C2A-C1A | 2.37 | 104.90 | 101.34 |
| 31 | AB | 620 | LMG | O7-C8-C9 | -2.37 | 99.81 | 108.40 |
| 27 | AC | 516 | BCR | C24-C23-C22 | 2.37 | 129.82 | 126.23 |
| 24 | BB | 5613 | CLA | CHA-C4D-ND | 2.37 | 137.45 | 132.50 |
| 27 | AT | 101 | BCR | C37-C22-C23 | 2.37 | 121.81 | 118.08 |
| 30 | AA | 416 | SQD | C15-C14-C13 | 2.37 | 126.44 | 114.42 |
| 24 | AB | 604 | CLA | O2A-CGA-O1A | -2.37 | 117.62 | 123.59 |
| 24 | BC | 5503 | CLA | CED-O2D-CGD | 2.37 | 121.29 | 115.94 |
| 24 | AB | 612 | CLA | O1D-CGD-CBD | -2.36 | 119.65 | 124.48 |
| 24 | BB | 5614 | CLA | CHA-C4D-ND | 2.36 | 137.44 | 132.50 |
| 28 | BB | 5602 | DGD | O2G-C2G-C3G | 2.36 | 116.96 | 108.40 |
| 24 | AA | 407 | CLA | O2A-CGA-O1A | -2.36 | 117.63 | 123.59 |
| 24 | AC | 508 | CLA | C2A-C1A-CHA | 2.36 | 127.99 | 123.86 |
| 24 | BB | 5617 | CLA | C3A-C2A-C1A | 2.36 | 104.88 | 101.34 |
| 27 | AX | 101 | BCR | C36-C18-C19 | 2.36 | 121.80 | 118.08 |
| 28 | AB | 628 | DGD | C6B-C5B-C4B | -2.36 | 102.44 | 114.42 |
| 24 | BB | 5608 | CLA | CAA-C2A-C1A | -2.36 | 104.24 | 111.97 |
| 31 | AM | 101 | LMG | C14-C13-C12 | -2.36 | 102.44 | 114.42 |
| 27 | BC | 5515 | BCR | C34-C9-C8 | 2.36 | 121.80 | 118.08 |
| 27 | AB | 617 | BCR | C19-C18-C17 | -2.36 | 115.32 | 118.94 |
| 24 | BA | 5408 | CLA | CED-O2D-CGD | 2.36 | 121.27 | 115.94 |
| 27 | BB | 5623 | BCR | C1-C6-C7 | 2.36 | 122.45 | 115.78 |
| 24 | AC | 507 | CLA | CHA-C4D-ND | 2.36 | 137.43 | 132.50 |
| 24 | BA | 5407 | CLA | CMB-C2B-C1B | -2.36 | 124.84 | 128.46 |
| 27 | AT | 101 | BCR | C8-C7-C6 | 2.36 | 133.82 | 127.20 |
| 34 | AD | 402 | PHO | O2A-CGA-CBA | 2.36 | 119.30 | 111.91 |
| 28 | BC | 5519 | DGD | C1E-O6E-C5E | 2.36 | 118.31 | 113.69 |
| 24 | AB | 603 | CLA | CED-O2D-CGD | 2.36 | 121.26 | 115.94 |
| 31 | AJ | 102 | LMG | C36-C35-C34 | -2.36 | 102.47 | 114.42 |
| 27 | BK | 5102 | BCR | C15-C14-C13 | 2.36 | 130.67 | 127.31 |
| 31 | AC | 521 | LMG | C19-C18-C17 | -2.35 | 102.48 | 114.42 |
| 24 | AD | 401 | CLA | CBA-CAA-C2A | 2.35 | 120.80 | 113.86 |
| 27 | BB | 5621 | BCR | C8-C9-C10 | -2.35 | 115.33 | 118.94 |
| 31 | AC | 521 | LMG | C9-C8-C7 | 2.35 | 117.35 | 111.79 |
| 27 | AB | 617 | BCR | C8-C7-C6 | 2.35 | 133.80 | 127.20 |
| 35 | AD | 405 | PL9 | C45-C44-C46 | 2.35 | 119.22 | 115.27 |
| 29 | BA | 5413 | LHG | P-O6-C4 | -2.35 | 107.92 | 121.68 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 36 | BV | 5201 | HEM | C4B-C3B-C2B | -2.35 | 105.25 | 107.11 |
| 28 | BE | 5102 | DGD | C5B-C4B-C3B | -2.35 | 102.52 | 114.42 |
| 27 | BA | 5411 | BCR | C16-C17-C18 | 2.35 | 130.66 | 127.31 |
| 27 | BB | 5623 | BCR | C35-C13-C12 | 2.34 | 121.77 | 118.08 |
| 24 | AB | 609 | CLA | CHA-C4D-ND | 2.34 | 137.40 | 132.50 |
| 31 | BL | 5101 | LMG | O7-C8-C9 | -2.34 | 99.92 | 108.40 |
| 27 | BC | 5515 | BCR | C37-C22-C23 | 2.34 | 121.76 | 118.08 |
| 24 | BB | 5610 | CLA | O2D-CGD-CBD | 2.34 | 115.42 | 111.27 |
| 24 | AB | 604 | CLA | CAA-C2A-C1A | -2.34 | 104.31 | 111.97 |
| 27 | AA | 410 | BCR | C37-C22-C23 | 2.34 | 121.76 | 118.08 |
| 24 | AB | 602 | CLA | CED-O2D-CGD | 2.34 | 121.22 | 115.94 |
| 27 | AC | 515 | BCR | C34-C9-C8 | 2.34 | 121.76 | 118.08 |
| 24 | BA | 5405 | CLA | C7-C6-C5 | -2.34 | 107.02 | 113.36 |
| 30 | AA | 416 | SQD | O47-C7-C8 | 2.34 | 116.53 | 111.50 |
| 24 | AC | 503 | CLA | CHA-C4D-ND | 2.33 | 137.38 | 132.50 |
| 28 | AC | 519 | DGD | O3G-C3G-C2G | 2.33 | 116.53 | 110.90 |
| 31 | AC | 520 | LMG | C39-C38-C37 | 2.33 | 126.26 | 114.42 |
| 24 | AD | 404 | CLA | CHA-C4D-ND | 2.33 | 137.38 | 132.50 |
| 27 | BC | 5516 | BCR | C36-C18-C19 | 2.33 | 121.75 | 118.08 |
| 24 | BD | 5402 | CLA | CED-O2D-CGD | 2.33 | 121.21 | 115.94 |
| 36 | BF | 5101 | HEM | C4D-ND-C1D | 2.33 | 107.48 | 105.07 |
| 24 | AC | 503 | CLA | O1D-CGD-CBD | -2.33 | 119.72 | 124.48 |
| 27 | BJ | 5101 | BCR | C16-C17-C18 | 2.33 | 130.63 | 127.31 |
| 27 | AA | 410 | BCR | C36-C18-C19 | 2.33 | 121.75 | 118.08 |
| 24 | BB | 5617 | CLA | C6-C7-C8 | -2.33 | 108.40 | 115.92 |
| 27 | BC | 5516 | BCR | C30-C25-C24 | 2.33 | 122.36 | 115.78 |
| 27 | AB | 619 | BCR | C37-C22-C23 | 2.32 | 121.74 | 118.08 |
| 24 | BA | 5408 | CLA | O2A-CGA-O1A | -2.32 | 117.73 | 123.59 |
| 31 | BD | 5410 | LMG | O7-C8-C9 | -2.32 | 99.99 | 108.40 |
| 27 | BD | 5407 | BCR | C36-C18-C19 | 2.32 | 121.74 | 118.08 |
| 24 | BB | 5613 | CLA | CMB-C2B-C1B | -2.32 | 124.90 | 128.46 |
| 28 | BB | 5602 | DGD | C6B-C5B-C4B | -2.32 | 102.64 | 114.42 |
| 28 | BE | 5102 | DGD | C3G-C2G-C1G | 2.32 | 117.28 | 111.79 |
| 24 | BA | 5407 | CLA | CHA-C4D-ND | 2.32 | 137.35 | 132.50 |
| 28 | AC | 519 | DGD | C5B-C4B-C3B | 2.32 | 126.19 | 114.42 |
| 24 | AB | 609 | CLA | C6-C7-C8 | -2.32 | 108.43 | 115.92 |
| 31 | AC | 520 | LMG | O9-C10-C11 | -2.32 | 114.69 | 123.73 |
| 27 | BB | 5621 | BCR | C8-C7-C6 | 2.32 | 133.71 | 127.20 |
| 24 | BC | 5508 | CLA | C2C-C1C-NC | -2.32 | 107.80 | 109.97 |
| 31 | BC | 5520 | LMG | O9-C10-C11 | -2.32 | 114.70 | 123.73 |
| 24 | BB | 5607 | CLA | C6-C5-C3 | 2.31 | 119.52 | 113.45 |
| 24 | AA | 407 | CLA | CED-O2D-CGD | 2.31 | 121.17 | 115.94 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | BT | 5101 | BCR | C40-C30-C25 | 2.31 | 114.05 | 110.30 |
| 24 | BD | 5402 | CLA | O2A-CGA-O1A | -2.31 | 117.76 | 123.59 |
| 24 | AA | 404 | CLA | C6-C7-C8 | -2.31 | 108.45 | 115.92 |
| 34 | AD | 403 | PHO | CED-O2D-CGD | 2.31 | 121.16 | 115.94 |
| 35 | BD | 5406 | PL9 | C42-C41-C39 | -2.31 | 105.38 | 112.98 |
| 24 | AB | 606 | CLA | CBA-CAA-C2A | 2.31 | 120.68 | 113.86 |
| 24 | AB | 611 | CLA | O1D-CGD-CBD | -2.31 | 119.76 | 124.48 |
| 31 | BD | 5409 | LMG | C32-C31-C30 | -2.31 | 102.70 | 114.42 |
| 28 | AE | 101 | DGD | C5B-C4B-C3B | -2.31 | 102.71 | 114.42 |
| 34 | AD | 402 | PHO | C1A-C2A-C3A | 2.31 | 105.03 | 102.84 |
| 27 | AJ | 101 | BCR | C40-C30-C25 | 2.31 | 114.04 | 110.30 |
| 27 | AC | 516 | BCR | C30-C25-C24 | 2.30 | 122.30 | 115.78 |
| 24 | AB | 607 | CLA | CHA-C4D-ND | 2.30 | 137.32 | 132.50 |
| 24 | AA | 406 | CLA | O1D-CGD-CBD | -2.30 | 119.77 | 124.48 |
| 30 | AF | 102 | SQD | C3-C4-C5 | -2.30 | 106.13 | 110.24 |
| 24 | AC | 508 | CLA | O1D-CGD-CBD | -2.30 | 119.77 | 124.48 |
| 24 | BC | 5511 | CLA | CAA-CBA-CGA | -2.30 | 106.53 | 113.25 |
| 31 | BC | 5520 | LMG | O7-C10-O9 | -2.30 | 118.14 | 123.70 |
| 24 | BA | 5405 | CLA | CAA-C2A-C3A | -2.30 | 106.48 | 112.78 |
| 24 | BB | 5611 | CLA | CHA-C4D-ND | 2.30 | 137.31 | 132.50 |
| 24 | BA | 5405 | CLA | CHA-C4D-ND | 2.30 | 137.30 | 132.50 |
| 27 | BC | 5516 | BCR | C19-C18-C17 | -2.30 | 115.42 | 118.94 |
| 24 | BA | 5408 | CLA | CMB-C2B-C1B | -2.30 | 124.94 | 128.46 |
| 24 | AA | 404 | CLA | CMB-C2B-C1B | -2.30 | 124.94 | 128.46 |
| 24 | BC | 5510 | CLA | O2A-CGA-O1A | -2.29 | 117.80 | 123.59 |
| 31 | AB | 620 | LMG | C34-C33-C32 | 2.29 | 126.07 | 114.42 |
| 32 | BC | 5522 | LMT | C1B-C2B-C3B | 2.29 | 114.77 | 110.00 |
| 28 | BC | 5517 | DGD | O2G-C2G-C1G | -2.29 | 100.10 | 108.40 |
| 27 | AA | 410 | BCR | C8-C9-C10 | -2.29 | 115.42 | 118.94 |
| 32 | BB | 5626 | LMT | O1B-C1B-C2B | 2.29 | 114.04 | 108.10 |
| 24 | AC | 510 | CLA | O1D-CGD-CBD | -2.29 | 119.79 | 124.48 |
| 24 | BB | 5612 | CLA | CED-O2D-CGD | 2.29 | 121.12 | 115.94 |
| 27 | AB | 619 | BCR | C1-C6-C7 | 2.29 | 122.26 | 115.78 |
| 24 | AC | 511 | CLA | CAA-CBA-CGA | -2.29 | 106.56 | 113.25 |
| 34 | BD | 5404 | PHO | CED-O2D-CGD | 2.29 | 121.12 | 115.94 |
| 24 | BC | 5507 | CLA | CHA-C4D-ND | 2.29 | 137.29 | 132.50 |
| 24 | AA | 407 | CLA | CHD-C1D-ND | -2.29 | 122.35 | 124.45 |
| 24 | BB | 5606 | CLA | CED-O2D-CGD | 2.29 | 121.11 | 115.94 |
| 24 | BA | 5408 | CLA | CHA-C4D-ND | 2.29 | 137.28 | 132.50 |
| 30 | BA | 5401 | SQD | C15-C14-C13 | 2.28 | 126.02 | 114.42 |
| 31 | BL | 5101 | LMG | C19-C18-C17 | -2.28 | 102.83 | 114.42 |
| 27 | AC | 515 | BCR | C15-C14-C13 | 2.28 | 130.57 | 127.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | AF | 102 | SQD | C15-C14-C13 | 2.28 | 126.01 | 114.42 |
| 27 | AK | 102 | BCR | C32-C1-C2 | -2.28 | 99.78 | 108.91 |
| 24 | BC | 5504 | CLA | CMB-C2B-C1B | -2.28 | 124.96 | 128.46 |
| 31 | BC | 5520 | LMG | O1-C7-C8 | -2.28 | 105.40 | 110.90 |
| 24 | BB | 5615 | CLA | C5-C3-C2 | 2.28 | 125.73 | 121.12 |
| 31 | BD | 5409 | LMG | O8-C28-C29 | 2.28 | 119.05 | 111.91 |
| 24 | BB | 5613 | CLA | C6-C7-C8 | -2.28 | 108.56 | 115.92 |
| 24 | AB | 606 | CLA | CAA-C2A-C3A | -2.27 | 106.55 | 112.78 |
| 36 | AF | 101 | HEM | O2D-CGD-CBD | 2.27 | 121.34 | 114.03 |
| 30 | BF | 5102 | SQD | C15-C14-C13 | 2.27 | 125.97 | 114.42 |
| 24 | BA | 5408 | CLA | O1D-CGD-CBD | -2.27 | 119.83 | 124.48 |
| 27 | AC | 516 | BCR | C23-C22-C21 | -2.27 | 115.45 | 118.94 |
| 24 | AA | 405 | CLA | C12-C11-C10 | -2.27 | 102.80 | 113.24 |
| 24 | AC | 512 | CLA | CHA-C1A-NA | -2.27 | 121.19 | 126.40 |
| 28 | BB | 5602 | DGD | O5D-C1E-C2E | 2.27 | 111.85 | 108.30 |
| 31 | AD | 407 | LMG | C32-C31-C30 | -2.27 | 102.89 | 114.42 |
| 24 | BD | 5405 | CLA | CAA-CBA-CGA | -2.27 | 106.62 | 113.25 |
| 24 | BB | 5609 | CLA | CHA-C4D-ND | 2.27 | 137.25 | 132.50 |
| 27 | AC | 515 | BCR | C37-C22-C23 | 2.27 | 121.65 | 118.08 |
| 27 | AK | 102 | BCR | C15-C14-C13 | 2.27 | 130.55 | 127.31 |
| 27 | BA | 5411 | BCR | C8-C9-C10 | -2.27 | 115.46 | 118.94 |
| 24 | BC | 5507 | CLA | C11-C12-C13 | 2.27 | 123.25 | 115.92 |
| 28 | BC | 5519 | DGD | C5B-C4B-C3B | 2.27 | 125.94 | 114.42 |
| 31 | BD | 5409 | LMG | C6-C5-C4 | -2.27 | 107.70 | 113.00 |
| 24 | AA | 404 | CLA | CAA-C2A-C3A | -2.26 | 106.58 | 112.78 |
| 27 | AB | 618 | BCR | C23-C22-C21 | -2.26 | 115.47 | 118.94 |
| 24 | AC | 509 | CLA | CHA-C1A-NA | -2.26 | 121.22 | 126.40 |
| 24 | AB | 611 | CLA | CMB-C2B-C1B | -2.26 | 124.99 | 128.46 |
| 30 | AA | 416 | SQD | C34-C33-C32 | 2.26 | 125.90 | 114.42 |
| 28 | BC | 5518 | DGD | O6D-C1D-O3G | 2.26 | 115.33 | 109.97 |
| 24 | AB | 611 | CLA | C6-C5-C3 | 2.26 | 119.38 | 113.45 |
| 32 | AI | 103 | LMT | C1B-C2B-C3B | 2.26 | 114.70 | 110.00 |
| 24 | AB | 603 | CLA | CBA-CAA-C2A | 2.26 | 120.53 | 113.86 |
| 28 | BC | 5518 | DGD | C7A-C6A-C5A | 2.26 | 125.89 | 114.42 |
| 27 | AB | 619 | BCR | C12-C13-C14 | -2.26 | 115.48 | 118.94 |
| 30 | AB | 622 | SQD | O8-S-O9 | -2.26 | 105.76 | 111.27 |
| 30 | AB | 627 | SQD | O47-C7-C8 | 2.26 | 116.36 | 111.50 |
| 30 | BB | 5625 | SQD | O8-S-O9 | -2.25 | 105.77 | 111.27 |
| 24 | AA | 406 | CLA | CMB-C2B-C3B | 2.25 | 128.90 | 124.68 |
| 27 | BT | 5101 | BCR | C20-C21-C22 | 2.25 | 130.53 | 127.31 |
| 27 | BA | 5411 | BCR | C30-C25-C24 | 2.25 | 122.15 | 115.78 |
| 27 | AC | 514 | BCR | C15-C14-C13 | 2.25 | 130.53 | 127.31 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BA | 5406 | CLA | CMB-C2B-C3B | 2.25 | 128.89 | 124.68 |
| 27 | AA | 410 | BCR | C30-C25-C24 | 2.25 | 122.14 | 115.78 |
| 31 | AD | 407 | LMG | C14-C13-C12 | 2.25 | 125.84 | 114.42 |
| 31 | BC | 5520 | LMG | C39-C38-C37 | 2.25 | 125.84 | 114.42 |
| 27 | AD | 406 | BCR | C8-C9-C10 | -2.25 | 115.49 | 118.94 |
| 28 | AC | 518 | DGD | CDB-CCB-CBB | -2.25 | 103.01 | 114.42 |
| 27 | BX | 5101 | BCR | C36-C18-C19 | 2.25 | 121.62 | 118.08 |
| 24 | AA | 405 | CLA | CMB-C2B-C3B | 2.24 | 128.88 | 124.68 |
| 28 | BC | 5518 | DGD | O2G-C2G-C1G | 2.24 | 116.53 | 108.40 |
| 24 | BB | 5615 | CLA | C4-C3-C5 | -2.24 | 111.50 | 115.27 |
| 28 | AE | 101 | DGD | C6D-C5D-C4D | -2.24 | 107.41 | 112.09 |
| 24 | AB | 603 | CLA | C3C-C4C-NC | -2.24 | 108.06 | 110.57 |
| 24 | AB | 602 | CLA | O2A-CGA-O1A | -2.24 | 117.94 | 123.59 |
| 31 | BC | 5521 | LMG | C19-C18-C17 | -2.24 | 103.07 | 114.42 |
| 34 | AD | 402 | PHO | CED-O2D-CGD | 2.24 | 121.00 | 115.94 |
| 29 | AA | 412 | LHG | P-O6-C4 | -2.24 | 108.57 | 121.68 |
| 35 | AD | 405 | PL9 | C42-C41-C39 | -2.24 | 105.62 | 112.98 |
| 24 | AA | 404 | CLA | C7-C6-C5 | -2.24 | 107.29 | 113.36 |
| 31 | AB | 620 | LMG | C19-C18-C17 | -2.24 | 103.08 | 114.42 |
| 27 | BB | 5622 | BCR | C37-C22-C23 | 2.23 | 121.60 | 118.08 |
| 27 | AD | 406 | BCR | C19-C18-C17 | -2.23 | 115.51 | 118.94 |
| 34 | AD | 403 | PHO | C4C-NC-C1C | 2.23 | 111.68 | 107.09 |
| 28 | BC | 5518 | DGD | CDB-CCB-CBB | -2.23 | 103.09 | 114.42 |
| 24 | AB | 604 | CLA | CHA-C4D-ND | 2.23 | 137.17 | 132.50 |
| 27 | AA | 410 | BCR | C12-C13-C14 | -2.23 | 115.52 | 118.94 |
| 30 | BB | 5601 | SQD | O47-C7-C8 | 2.23 | 116.31 | 111.50 |
| 31 | BL | 5101 | LMG | C34-C33-C32 | 2.23 | 125.75 | 114.42 |
| 28 | AC | 518 | DGD | C8B-C7B-C6B | -2.23 | 103.11 | 114.42 |
| 27 | AX | 101 | BCR | C28-C27-C26 | 2.23 | 118.06 | 114.08 |
| 24 | AB | 614 | CLA | C2A-C1A-CHA | 2.23 | 127.75 | 123.86 |
| 30 | BA | 5401 | SQD | C34-C33-C32 | 2.23 | 125.74 | 114.42 |
| 27 | AD | 406 | BCR | C15-C14-C13 | 2.23 | 130.49 | 127.31 |
| 24 | BB | 5610 | CLA | CHA-C4D-ND | 2.23 | 137.16 | 132.50 |
| 27 | AC | 516 | BCR | C36-C18-C19 | 2.23 | 121.58 | 118.08 |
| 24 | AC | 513 | CLA | CMB-C2B-C1B | -2.23 | 125.04 | 128.46 |
| 24 | AB | 608 | CLA | C4-C3-C5 | -2.23 | 111.53 | 115.27 |
| 27 | AA | 410 | BCR | C34-C9-C8 | 2.22 | 121.58 | 118.08 |
| 27 | AX | 101 | BCR | C1-C6-C7 | 2.22 | 122.07 | 115.78 |
| 27 | BT | 5101 | BCR | C40-C30-C29 | -2.22 | 100.02 | 108.91 |
| 24 | BB | 5610 | CLA | CAA-C2A-C3A | -2.22 | 106.70 | 112.78 |
| 31 | AB | 620 | LMG | C17-C16-C15 | -2.22 | 103.15 | 114.42 |
| 24 | AB | 610 | CLA | O1D-CGD-CBD | -2.22 | 119.94 | 124.48 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BB | 5615 | CLA | C2C-C1C-NC | -2.22 | 107.89 | 109.97 |
| 24 | BB | 5614 | CLA | CMB-C2B-C3B | 2.22 | 128.83 | 124.68 |
| 28 | BC | 5518 | DGD | C8B-C7B-C6B | -2.22 | 103.17 | 114.42 |
| 27 | AB | 619 | BCR | C24-C23-C22 | 2.22 | 129.58 | 126.23 |
| 24 | BC | 5503 | CLA | CAA-CBA-CGA | -2.22 | 106.78 | 113.25 |
| 27 | BK | 5102 | BCR | C32-C1-C2 | -2.22 | 100.04 | 108.91 |
| 31 | AD | 407 | LMG | O8-C28-C29 | 2.22 | 118.86 | 111.91 |
| 36 | AF | 101 | HEM | C4D-ND-C1D | 2.21 | 107.36 | 105.07 |
| 24 | BB | 5607 | CLA | O1D-CGD-CBD | -2.21 | 119.96 | 124.48 |
| 24 | AA | 407 | CLA | CHA-C4D-ND | 2.21 | 137.13 | 132.50 |
| 24 | AC | 513 | CLA | C3C-C4C-NC | -2.21 | 108.09 | 110.57 |
| 24 | BB | 5607 | CLA | C3C-C4C-NC | -2.21 | 108.09 | 110.57 |
| 31 | BD | 5409 | LMG | C14-C13-C12 | 2.21 | 125.65 | 114.42 |
| 24 | BB | 5611 | CLA | CHD-C1D-ND | -2.21 | 122.42 | 124.45 |
| 28 | AC | 518 | DGD | C7A-C6A-C5A | 2.21 | 125.64 | 114.42 |
| 24 | BB | 5606 | CLA | CHA-C4D-ND | 2.21 | 137.12 | 132.50 |
| 24 | AB | 609 | CLA | CMB-C2B-C1B | -2.21 | 125.07 | 128.46 |
| 27 | AB | 618 | BCR | C16-C17-C18 | 2.21 | 130.46 | 127.31 |
| 24 | BB | 5614 | CLA | CED-O2D-CGD | 2.21 | 120.93 | 115.94 |
| 24 | AA | 405 | CLA | C2A-C1A-CHA | 2.21 | 127.72 | 123.86 |
| 27 | BC | 5516 | BCR | C16-C17-C18 | 2.20 | 130.46 | 127.31 |
| 24 | BB | 5615 | CLA | CAA-CBA-CGA | -2.20 | 106.81 | 113.25 |
| 30 | BA | 5401 | SQD | C17-C16-C15 | 2.20 | 125.61 | 114.42 |
| 24 | BC | 5502 | CLA | O1D-CGD-CBD | -2.20 | 119.98 | 124.48 |
| 24 | AB | 605 | CLA | CHA-C4D-ND | 2.20 | 137.10 | 132.50 |
| 24 | AC | 502 | CLA | CAA-CBA-CGA | -2.20 | 106.82 | 113.25 |
| 31 | BL | 5101 | LMG | C17-C16-C15 | -2.20 | 103.25 | 114.42 |
| 24 | BB | 5615 | CLA | O1D-CGD-CBD | -2.20 | 119.98 | 124.48 |
| 27 | BD | 5407 | BCR | C19-C18-C17 | -2.20 | 115.56 | 118.94 |
| 24 | BA | 5405 | CLA | CMB-C2B-C1B | -2.20 | 125.08 | 128.46 |
| 27 | BB | 5622 | BCR | C16-C17-C18 | 2.20 | 130.45 | 127.31 |
| 24 | BA | 5406 | CLA | CBC-CAC-C3C | -2.20 | 106.37 | 112.43 |
| 27 | BA | 5411 | BCR | C34-C9-C8 | 2.20 | 121.54 | 118.08 |
| 36 | AV | 201 | HEM | O2D-CGD-CBD | 2.20 | 121.09 | 114.03 |
| 27 | BJ | 5101 | BCR | C40-C30-C25 | 2.20 | 113.86 | 110.30 |
| 24 | BC | 5503 | CLA | C2A-C1A-CHA | 2.20 | 127.70 | 123.86 |
| 27 | AC | 514 | BCR | C36-C18-C19 | 2.19 | 121.53 | 118.08 |
| 28 | AC | 517 | DGD | O2G-C2G-C3G | 2.19 | 116.34 | 108.40 |
| 24 | AC | 508 | CLA | C2C-C1C-NC | -2.19 | 107.92 | 109.97 |
| 24 | BB | 5608 | CLA | CHA-C4D-ND | 2.19 | 137.08 | 132.50 |
| 24 | BC | 5504 | CLA | O1D-CGD-CBD | -2.19 | 120.00 | 124.48 |
| 24 | AB | 610 | CLA | CHA-C4D-ND | 2.19 | 137.08 | 132.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BC | 5513 | CLA | C3C-C4C-NC | -2.19 | 108.12 | 110.57 |
| 24 | AB | 609 | CLA | O2A-CGA-O1A | -2.19 | 118.07 | 123.59 |
| 28 | AH | 101 | DGD | O2G-C2G-C3G | 2.19 | 116.33 | 108.40 |
| 31 | BC | 5521 | LMG | C17-C16-C15 | -2.19 | 103.31 | 114.42 |
| 27 | AA | 410 | BCR | C1-C6-C7 | 2.19 | 121.97 | 115.78 |
| 30 | AA | 413 | SQD | O8-S-O7 | 2.19 | 116.62 | 111.27 |
| 24 | BB | 5612 | CLA | C4-C3-C5 | -2.19 | 111.59 | 115.27 |
| 24 | AD | 401 | CLA | O1D-CGD-CBD | -2.19 | 120.01 | 124.48 |
| 24 | AC | 511 | CLA | C12-C11-C10 | -2.19 | 103.20 | 113.24 |
| 24 | AC | 507 | CLA | C11-C12-C13 | 2.19 | 122.98 | 115.92 |
| 28 | BH | 5101 | DGD | O2G-C2G-C3G | 2.18 | 116.31 | 108.40 |
| 24 | BC | 5509 | CLA | CHA-C1A-NA | -2.18 | 121.40 | 126.40 |
| 24 | BA | 5406 | CLA | C4-C3-C5 | -2.18 | 111.60 | 115.27 |
| 24 | AC | 511 | CLA | C3C-C4C-NC | -2.18 | 108.12 | 110.57 |
| 24 | BC | 5512 | CLA | CHA-C1A-NA | -2.18 | 121.40 | 126.40 |
| 27 | AB | 618 | BCR | C1-C6-C7 | 2.18 | 121.95 | 115.78 |
| 24 | AB | 611 | CLA | O2A-CGA-O1A | -2.18 | 118.09 | 123.59 |
| 31 | AC | 520 | LMG | O7-C8-C9 | 2.18 | 116.30 | 108.40 |
| 24 | AA | 405 | CLA | O1D-CGD-CBD | -2.18 | 120.02 | 124.48 |
| 27 | AJ | 101 | BCR | C31-C1-C2 | 2.18 | 117.62 | 108.91 |
| 31 | AC | 520 | LMG | O1-C7-C8 | -2.18 | 105.64 | 110.90 |
| 32 | BC | 5522 | LMT | C6B-C5B-C4B | 2.18 | 118.11 | 113.00 |
| 24 | BC | 5506 | CLA | O2A-CGA-O1A | -2.18 | 118.10 | 123.59 |
| 24 | BC | 5513 | CLA | O2A-CGA-O1A | -2.18 | 118.10 | 123.59 |
| 24 | BB | 5607 | CLA | CBA-CAA-C2A | 2.18 | 120.29 | 113.86 |
| 24 | BA | 5406 | CLA | CHD-C1D-ND | -2.18 | 122.45 | 124.45 |
| 27 | BK | 5102 | BCR | C23-C22-C21 | -2.18 | 115.60 | 118.94 |
| 27 | BB | 5623 | BCR | C37-C22-C23 | 2.18 | 121.50 | 118.08 |
| 27 | BX | 5101 | BCR | C7-C8-C9 | 2.18 | 129.52 | 126.23 |
| 24 | BB | 5613 | CLA | CAA-C2A-C1A | -2.18 | 104.85 | 111.97 |
| 24 | AC | 503 | CLA | CMB-C2B-C1B | -2.17 | 125.12 | 128.46 |
| 28 | BA | 5412 | DGD | O1A-C1A-C2A | -2.17 | 115.25 | 123.73 |
| 27 | BJ | 5101 | BCR | C31-C1-C2 | 2.17 | 117.60 | 108.91 |
| 24 | BB | 5611 | CLA | C11-C12-C13 | 2.17 | 122.94 | 115.92 |
| 24 | AB | 607 | CLA | C11-C12-C13 | 2.17 | 122.94 | 115.92 |
| 24 | AA | 405 | CLA | CBC-CAC-C3C | -2.17 | 106.45 | 112.43 |
| 30 | BA | 5414 | SQD | C17-C16-C15 | 2.17 | 125.44 | 114.42 |
| 24 | BB | 5615 | CLA | C6-C5-C3 | 2.17 | 119.14 | 113.45 |
| 24 | BC | 5506 | CLA | CMB-C2B-C1B | -2.17 | 125.13 | 128.46 |
| 36 | AV | 201 | HEM | C4B-C3B-C2B | -2.17 | 105.39 | 107.11 |
| 24 | AB | 615 | CLA | CHA-C1A-NA | -2.17 | 121.43 | 126.40 |
| 24 | BB | 5615 | CLA | O2A-CGA-O1A | -2.17 | 118.12 | 123.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BA | 5405 | CLA | O2D-CGD-CBD | 2.17 | 115.12 | 111.27 |
| 24 | AB | 613 | CLA | CED-O2D-CGD | 2.17 | 120.84 | 115.94 |
| 31 | BM | 5102 | LMG | C6-C5-C4 | -2.17 | 107.93 | 113.00 |
| 24 | AC | 503 | CLA | CHD-C1D-ND | -2.17 | 122.46 | 124.45 |
| 24 | AC | 513 | CLA | O2A-CGA-O1A | -2.17 | 118.13 | 123.59 |
| 27 | BB | 5621 | BCR | C34-C9-C8 | 2.16 | 121.49 | 118.08 |
| 24 | AB | 606 | CLA | CHA-C4D-ND | 2.16 | 137.03 | 132.50 |
| 24 | BB | 5617 | CLA | O2D-CGD-CBD | 2.16 | 115.11 | 111.27 |
| 27 | BT | 5101 | BCR | C34-C9-C8 | 2.16 | 121.49 | 118.08 |
| 24 | AC | 503 | CLA | CAA-CBA-CGA | -2.16 | 106.93 | 113.25 |
| 31 | AM | 101 | LMG | C6-C5-C4 | -2.16 | 107.94 | 113.00 |
| 24 | AD | 404 | CLA | CMB-C2B-C1B | -2.16 | 125.14 | 128.46 |
| 31 | BC | 5520 | LMG | O7-C8-C9 | 2.16 | 116.23 | 108.40 |
| 27 | AB | 619 | BCR | C23-C22-C21 | -2.16 | 115.62 | 118.94 |
| 31 | BD | 5409 | LMG | C1-O6-C5 | -2.16 | 109.45 | 113.69 |
| 24 | AB | 609 | CLA | CAA-C2A-C1A | -2.16 | 104.90 | 111.97 |
| 27 | BC | 5514 | BCR | C23-C24-C25 | 2.16 | 133.27 | 127.20 |
| 34 | BD | 5404 | PHO | C12-C11-C10 | -2.16 | 103.32 | 113.24 |
| 30 | BF | 5102 | SQD | C32-C31-C30 | 2.16 | 129.81 | 113.42 |
| 32 | BM | 5101 | LMT | C6B-C5B-C4B | 2.16 | 118.06 | 113.00 |
| 34 | BD | 5403 | PHO | C4C-NC-C1C | 2.16 | 111.52 | 107.09 |
| 27 | BX | 5101 | BCR | C37-C22-C23 | 2.16 | 121.48 | 118.08 |
| 27 | AC | 514 | BCR | C23-C24-C25 | 2.16 | 133.26 | 127.20 |
| 27 | BX | 5101 | BCR | C34-C9-C8 | 2.16 | 121.47 | 118.08 |
| 24 | AB | 611 | CLA | C12-C11-C10 | -2.16 | 103.34 | 113.24 |
| 24 | AA | 406 | CLA | CED-O2D-CGD | 2.15 | 120.81 | 115.94 |
| 24 | BB | 5610 | CLA | CHD-C1D-ND | -2.15 | 122.48 | 124.45 |
| 24 | AB | 610 | CLA | CMB-C2B-C3B | 2.15 | 128.70 | 124.68 |
| 34 | AD | 402 | PHO | C4C-NC-C1C | 2.15 | 111.50 | 107.09 |
| 27 | BB | 5622 | BCR | C23-C22-C21 | -2.15 | 115.64 | 118.94 |
| 27 | BC | 5514 | BCR | C36-C18-C19 | 2.15 | 121.46 | 118.08 |
| 24 | BB | 5609 | CLA | CMB-C2B-C1B | -2.15 | 125.16 | 128.46 |
| 24 | BD | 5402 | CLA | O1D-CGD-CBD | -2.15 | 120.09 | 124.48 |
| 27 | AB | 618 | BCR | C37-C22-C23 | 2.15 | 121.46 | 118.08 |
| 28 | AE | 101 | DGD | C3G-C2G-C1G | 2.15 | 116.86 | 111.79 |
| 27 | BX | 5101 | BCR | C1-C6-C7 | 2.15 | 121.85 | 115.78 |
| 31 | BC | 5520 | LMG | C6-C5-C4 | -2.15 | 107.98 | 113.00 |
| 27 | BB | 5621 | BCR | C11-C10-C9 | 2.14 | 130.37 | 127.31 |
| 28 | AB | 628 | DGD | O5D-C1E-C2E | 2.14 | 111.65 | 108.30 |
| 28 | AC | 518 | DGD | O2G-C2G-C1G | 2.14 | 116.16 | 108.40 |
| 28 | BC | 5519 | DGD | O2E-C2E-C3E | 2.14 | 115.30 | 110.35 |
| 24 | BB | 5615 | CLA | CHC-C1C-NC | 2.14 | 127.45 | 124.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AC | 502 | CLA | CHA-C4D-ND | 2.14 | 136.98 | 132.50 |
| 30 | AF | 102 | SQD | C32-C31-C30 | 2.14 | 129.67 | 113.42 |
| 24 | BB | 5606 | CLA | CAA-CBA-CGA | -2.14 | 107.00 | 113.25 |
| 31 | AJ | 102 | LMG | C35-C34-C33 | 2.14 | 125.29 | 114.42 |
| 36 | BV | 5201 | HEM | O2D-CGD-CBD | 2.14 | 120.90 | 114.03 |
| 27 | AX | 101 | BCR | C7-C8-C9 | 2.14 | 129.47 | 126.23 |
| 24 | BB | 5611 | CLA | CED-O2D-CGD | 2.14 | 120.78 | 115.94 |
| 27 | AT | 101 | BCR | C34-C9-C8 | 2.14 | 121.45 | 118.08 |
| 31 | BD | 5408 | LMG | C35-C34-C33 | 2.14 | 125.28 | 114.42 |
| 24 | AC | 506 | CLA | O2A-CGA-O1A | -2.14 | 118.20 | 123.59 |
| 30 | AA | 413 | SQD | O47-C7-C8 | 2.14 | 116.11 | 111.50 |
| 34 | BD | 5404 | PHO | O2A-CGA-O1A | -2.14 | 118.20 | 123.59 |
| 24 | BC | 5506 | CLA | CHA-C4D-ND | 2.13 | 136.96 | 132.50 |
| 24 | BB | 5619 | CLA | O1D-CGD-CBD | -2.13 | 120.12 | 124.48 |
| 24 | AA | 407 | CLA | O1D-CGD-CBD | -2.13 | 120.12 | 124.48 |
| 24 | AB | 602 | CLA | CHA-C4D-ND | 2.13 | 136.96 | 132.50 |
| 24 | BC | 5502 | CLA | CHA-C4D-ND | 2.13 | 136.96 | 132.50 |
| 24 | AB | 605 | CLA | O1D-CGD-CBD | -2.13 | 120.12 | 124.48 |
| 24 | AD | 401 | CLA | C7-C6-C5 | -2.13 | 107.57 | 113.36 |
| 24 | BC | 5511 | CLA | C3C-C4C-NC | -2.13 | 108.18 | 110.57 |
| 27 | AT | 101 | BCR | C40-C30-C25 | 2.13 | 113.75 | 110.30 |
| 28 | AC | 518 | DGD | O6E-C5E-C4E | 2.13 | 113.56 | 109.69 |
| 30 | BB | 5601 | SQD | C15-C14-C13 | 2.13 | 125.23 | 114.42 |
| 34 | BD | 5403 | PHO | C6-C7-C8 | -2.13 | 109.04 | 115.92 |
| 24 | AC | 504 | CLA | CED-O2D-CGD | 2.13 | 120.75 | 115.94 |
| 28 | AA | 411 | DGD | O1A-C1A-C2A | -2.13 | 115.43 | 123.73 |
| 24 | BB | 5609 | CLA | O1D-CGD-CBD | -2.13 | 120.13 | 124.48 |
| 30 | BB | 5601 | SQD | O48-C23-O10 | -2.13 | 118.23 | 123.59 |
| 28 | AC | 519 | DGD | C4D-C3D-C2D | 2.13 | 114.53 | 110.82 |
| 24 | AC | 513 | CLA | C2A-C1A-CHA | 2.13 | 127.58 | 123.86 |
| 34 | AD | 403 | PHO | C12-C11-C10 | -2.12 | 103.47 | 113.24 |
| 27 | AT | 101 | BCR | C40-C30-C29 | -2.12 | 100.41 | 108.91 |
| 30 | AA | 413 | SQD | C17-C16-C15 | 2.12 | 125.21 | 114.42 |
| 24 | BC | 5504 | CLA | C6-C7-C8 | -2.12 | 109.06 | 115.92 |
| 28 | BC | 5519 | DGD | O3G-C3G-C2G | 2.12 | 116.02 | 110.90 |
| 24 | AC | 506 | CLA | CMB-C2B-C1B | -2.12 | 125.20 | 128.46 |
| 24 | BC | 5502 | CLA | C4D-CHA-C1A | 2.12 | 123.83 | 121.25 |
| 24 | AB | 612 | CLA | CED-O2D-CGD | 2.12 | 120.73 | 115.94 |
| 27 | AC | 516 | BCR | C19-C18-C17 | -2.12 | 115.69 | 118.94 |
| 27 | AB | 617 | BCR | C34-C9-C8 | 2.12 | 121.42 | 118.08 |
| 27 | BC | 5514 | BCR | C34-C9-C8 | 2.12 | 121.41 | 118.08 |
| 24 | BC | 5511 | CLA | C12-C11-C10 | -2.12 | 103.52 | 113.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BB | 5608 | CLA | C2A-C1A-CHA | 2.12 | 127.56 | 123.86 |
| 28 | AA | 411 | DGD | C3G-C2G-C1G | 2.12 | 116.79 | 111.79 |
| 30 | AF | 102 | SQD | C17-C16-C15 | 2.11 | 125.16 | 114.42 |
| 31 | AC | 521 | LMG | C17-C16-C15 | -2.11 | 103.69 | 114.42 |
| 30 | AA | 416 | SQD | C17-C16-C15 | 2.11 | 125.15 | 114.42 |
| 24 | AC | 506 | CLA | CHA-C4D-ND | 2.11 | 136.92 | 132.50 |
| 27 | AD | 406 | BCR | C34-C9-C8 | 2.11 | 121.40 | 118.08 |
| 27 | BC | 5514 | BCR | C8-C9-C10 | -2.11 | 115.70 | 118.94 |
| 24 | BB | 5617 | CLA | CHA-C1A-NA | -2.11 | 121.56 | 126.40 |
| 24 | BB | 5609 | CLA | CHD-C1D-ND | -2.11 | 122.51 | 124.45 |
| 32 | AM | 102 | LMT | C6B-C5B-C4B | 2.11 | 117.94 | 113.00 |
| 24 | BC | 5503 | CLA | CHD-C1D-ND | -2.11 | 122.52 | 124.45 |
| 28 | BE | 5102 | DGD | C6E-C5E-C4E | -2.11 | 108.07 | 113.00 |
| 24 | BD | 5405 | CLA | O1D-CGD-CBD | -2.11 | 120.17 | 124.48 |
| 33 | AB | 625 | DMS | O-S-C1 | 2.11 | 117.29 | 106.54 |
| 27 | BD | 5407 | BCR | C28-C27-C26 | 2.11 | 117.84 | 114.08 |
| 31 | BD | 5408 | LMG | C17-C16-C15 | -2.11 | 103.73 | 114.42 |
| 28 | BA | 5412 | DGD | O1B-C1B-C2B | -2.11 | 115.52 | 123.73 |
| 27 | BC | 5515 | BCR | C24-C23-C22 | 2.11 | 129.42 | 126.23 |
| 24 | AB | 610 | CLA | C7-C6-C5 | -2.11 | 107.64 | 113.36 |
| 27 | BC | 5515 | BCR | C8-C9-C10 | -2.11 | 115.71 | 118.94 |
| 24 | BC | 5503 | CLA | CHA-C4D-ND | 2.10 | 136.90 | 132.50 |
| 24 | BC | 5507 | CLA | O1D-CGD-CBD | -2.10 | 120.18 | 124.48 |
| 24 | BB | 5614 | CLA | O2A-CGA-O1A | -2.10 | 118.28 | 123.59 |
| 27 | BX | 5101 | BCR | C28-C27-C26 | 2.10 | 117.83 | 114.08 |
| 32 | AI | 103 | LMT | C3'-C4'-C5' | -2.10 | 106.11 | 110.93 |
| 24 | BC | 5513 | CLA | C2A-C1A-CHA | 2.10 | 127.53 | 123.86 |
| 24 | AB | 603 | CLA | CHA-C1A-NA | -2.10 | 121.59 | 126.40 |
| 24 | BB | 5609 | CLA | CBC-CAC-C3C | -2.10 | 106.64 | 112.43 |
| 24 | BB | 5618 | CLA | CMB-C2B-C1B | -2.10 | 125.24 | 128.46 |
| 24 | BA | 5405 | CLA | C6-C7-C8 | -2.10 | 109.13 | 115.92 |
| 24 | BB | 5616 | CLA | C2C-C1C-NC | -2.10 | 108.00 | 109.97 |
| 27 | AX | 101 | BCR | C34-C9-C8 | 2.10 | 121.39 | 118.08 |
| 30 | AB | 627 | SQD | C15-C14-C13 | 2.10 | 125.07 | 114.42 |
| 24 | AC | 502 | CLA | O1D-CGD-CBD | -2.10 | 120.19 | 124.48 |
| 24 | AC | 504 | CLA | C6-C7-C8 | -2.10 | 109.14 | 115.92 |
| 24 | AC | 504 | CLA | C2C-C1C-NC | -2.10 | 108.01 | 109.97 |
| 24 | AB | 613 | CLA | CHA-C1A-NA | -2.10 | 121.60 | 126.40 |
| 24 | AB | 607 | CLA | CED-O2D-CGD | 2.10 | 120.68 | 115.94 |
| 27 | BA | 5411 | BCR | C1-C6-C7 | 2.09 | 121.70 | 115.78 |
| 32 | AI | 103 | LMT | C6B-C5B-C4B | 2.09 | 117.91 | 113.00 |
| 28 | AC | 519 | DGD | O1G-C1A-O1A | -2.09 | 118.31 | 123.59 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | AC | 504 | CLA | CHA-C4D-ND | 2.09 | 136.88 | 132.50 |
| 24 | AB | 606 | CLA | CMB-C2B-C1B | -2.09 | 125.25 | 128.46 |
| 24 | BD | 5405 | CLA | CMB-C2B-C1B | -2.09 | 125.25 | 128.46 |
| 24 | AB | 604 | CLA | C2A-C1A-CHA | 2.09 | 127.52 | 123.86 |
| 31 | AC | 521 | LMG | O1-C7-C8 | 2.09 | 115.94 | 110.90 |
| 28 | AB | 628 | DGD | C6D-O5D-C1E | -2.09 | 109.66 | 113.74 |
| 30 | BF | 5102 | SQD | O8-S-O9 | -2.09 | 106.17 | 111.27 |
| 24 | AB | 605 | CLA | CBC-CAC-C3C | -2.09 | 106.67 | 112.43 |
| 24 | BB | 5620 | CLA | CMB-C2B-C1B | -2.09 | 125.25 | 128.46 |
| 24 | AB | 602 | CLA | C12-C11-C10 | -2.09 | 103.65 | 113.24 |
| 27 | AJ | 101 | BCR | C16-C17-C18 | 2.09 | 130.29 | 127.31 |
| 24 | AD | 404 | CLA | CED-O2D-CGD | 2.09 | 120.66 | 115.94 |
| 24 | AD | 404 | CLA | O2A-CGA-O1A | -2.09 | 118.33 | 123.59 |
| 27 | AC | 516 | BCR | C12-C13-C14 | -2.09 | 115.74 | 118.94 |
| 24 | AB | 616 | CLA | CMB-C2B-C1B | -2.09 | 125.26 | 128.46 |
| 27 | BC | 5514 | BCR | C30-C25-C24 | 2.09 | 121.68 | 115.78 |
| 24 | AB | 606 | CLA | CHD-C1D-ND | -2.08 | 122.54 | 124.45 |
| 24 | BB | 5606 | CLA | C12-C11-C10 | -2.08 | 103.67 | 113.24 |
| 27 | AA | 410 | BCR | C19-C18-C17 | -2.08 | 115.74 | 118.94 |
| 30 | BA | 5414 | SQD | C3-C4-C5 | -2.08 | 106.52 | 110.24 |
| 24 | AA | 405 | CLA | CHD-C1D-ND | -2.08 | 122.54 | 124.45 |
| 31 | AD | 407 | LMG | C6-C5-C4 | -2.08 | 108.13 | 113.00 |
| 24 | BA | 5406 | CLA | C2A-C1A-CHA | 2.08 | 127.50 | 123.86 |
| 24 | BC | 5505 | CLA | CED-O2D-CGD | 2.08 | 120.64 | 115.94 |
| 24 | BB | 5618 | CLA | C2A-C1A-CHA | 2.08 | 127.50 | 123.86 |
| 27 | BC | 5515 | BCR | C7-C8-C9 | 2.08 | 129.38 | 126.23 |
| 28 | AA | 411 | DGD | O1B-C1B-C2B | -2.08 | 115.62 | 123.73 |
| 27 | BB | 5621 | BCR | C24-C23-C22 | 2.08 | 129.38 | 126.23 |
| 27 | BB | 5623 | BCR | C23-C22-C21 | -2.08 | 115.75 | 118.94 |
| 27 | BB | 5623 | BCR | C36-C18-C19 | 2.08 | 121.35 | 118.08 |
| 32 | AB | 629 | LMT | C6B-C5B-C4B | 2.08 | 117.87 | 113.00 |
| 24 | BB | 5608 | CLA | CMB-C2B-C1B | -2.08 | 125.27 | 128.46 |
| 27 | AK | 102 | BCR | C11-C12-C13 | 2.08 | 132.25 | 126.42 |
| 30 | BF | 5102 | SQD | C17-C16-C15 | 2.08 | 124.96 | 114.42 |
| 24 | BB | 5614 | CLA | C7-C6-C5 | -2.08 | 107.72 | 113.36 |
| 32 | AD | 409 | LMT | C6B-C5B-C4B | 2.07 | 117.86 | 113.00 |
| 31 | AC | 521 | LMG | O7-C8-C9 | -2.07 | 100.89 | 108.40 |
| 27 | BC | 5514 | BCR | C32-C1-C2 | -2.07 | 100.62 | 108.91 |
| 28 | AE | 101 | DGD | C3G-O3G-C1D | -2.07 | 109.69 | 113.74 |
| 24 | BB | 5612 | CLA | CHA-C4D-ND | 2.07 | 136.83 | 132.50 |
| 24 | BD | 5405 | CLA | CED-O2D-CGD | 2.07 | 120.62 | 115.94 |
| 28 | AE | 101 | DGD | C4A-C3A-C2A | -2.07 | 105.75 | 113.19 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | AK | 102 | BCR | C19-C18-C17 | -2.07 | 115.77 | 118.94 |
| 31 | BM | 5102 | LMG | C34-C33-C32 | 2.07 | 124.93 | 114.42 |
| 32 | BI | 5102 | LMT | C9-C8-C7 | -2.07 | 103.92 | 114.42 |
| 35 | BD | 5406 | PL9 | C31-C29-C28 | -2.07 | 116.93 | 121.12 |
| 30 | BA | 5414 | SQD | C13-C12-C11 | 2.07 | 124.93 | 114.42 |
| 24 | AD | 404 | CLA | CAA-CBA-CGA | -2.07 | 107.21 | 113.25 |
| 27 | AK | 102 | BCR | C36-C18-C19 | 2.07 | 121.33 | 118.08 |
| 24 | AB | 605 | CLA | CAA-C2A-C3A | -2.07 | 107.12 | 112.78 |
| 31 | AC | 520 | LMG | C36-C35-C34 | -2.07 | 103.94 | 114.42 |
| 32 | AI | 103 | LMT | C3-C2-C1 | 2.07 | 122.64 | 113.49 |
| 27 | AB | 619 | BCR | C40-C30-C25 | 2.06 | 113.65 | 110.30 |
| 24 | BC | 5507 | CLA | CMB-C2B-C1B | -2.06 | 125.29 | 128.46 |
| 24 | BB | 5606 | CLA | O2A-CGA-O1A | -2.06 | 118.38 | 123.59 |
| 35 | AD | 405 | PL9 | C31-C29-C28 | -2.06 | 116.94 | 121.12 |
| 24 | AC | 510 | CLA | C2A-C3A-C4A | 2.06 | 105.20 | 101.87 |
| 30 | BF | 5102 | SQD | O48-C23-O10 | -2.06 | 118.39 | 123.59 |
| 24 | AB | 614 | CLA | CMB-C2B-C1B | -2.06 | 125.30 | 128.46 |
| 24 | AB | 612 | CLA | CMB-C2B-C1B | -2.06 | 125.30 | 128.46 |
| 24 | BB | 5615 | CLA | C12-C11-C10 | -2.06 | 103.77 | 113.24 |
| 28 | AH | 101 | DGD | O1B-C1B-C2B | -2.06 | 115.69 | 123.73 |
| 24 | BB | 5616 | CLA | C3C-C4C-NC | -2.06 | 108.26 | 110.57 |
| 24 | AC | 508 | CLA | CMB-C2B-C1B | -2.06 | 125.30 | 128.46 |
| 24 | AA | 404 | CLA | O2D-CGD-CBD | 2.06 | 114.93 | 111.27 |
| 24 | AB | 611 | CLA | C2C-C1C-NC | -2.06 | 108.04 | 109.97 |
| 24 | AC | 512 | CLA | O2A-CGA-O1A | -2.06 | 118.40 | 123.59 |
| 24 | BB | 5610 | CLA | CMB-C2B-C3B | 2.06 | 128.53 | 124.68 |
| 24 | AC | 511 | CLA | O1D-CGD-CBD | -2.06 | 120.27 | 124.48 |
| 24 | AB | 608 | CLA | CHA-C4D-ND | 2.06 | 136.80 | 132.50 |
| 27 | AX | 101 | BCR | C37-C22-C23 | 2.06 | 121.32 | 118.08 |
| 32 | AB | 624 | LMT | C1'-O5'-C5' | -2.06 | 109.65 | 113.69 |
| 24 | BC | 5513 | CLA | CMB-C2B-C1B | -2.06 | 125.30 | 128.46 |
| 28 | BC | 5517 | DGD | C4E-C3E-C2E | -2.06 | 107.23 | 110.82 |
| 34 | AD | 402 | PHO | C6-C7-C8 | -2.06 | 109.27 | 115.92 |
| 30 | AA | 416 | SQD | C13-C12-C11 | 2.05 | 124.85 | 114.42 |
| 27 | AB | 619 | BCR | C30-C25-C24 | 2.05 | 121.59 | 115.78 |
| 24 | AB | 611 | CLA | CHA-C4D-ND | 2.05 | 136.79 | 132.50 |
| 24 | AB | 608 | CLA | CMB-C2B-C1B | -2.05 | 125.31 | 128.46 |
| 24 | BC | 5508 | CLA | CMB-C2B-C1B | -2.05 | 125.31 | 128.46 |
| 24 | AB | 602 | CLA | CAA-CBA-CGA | -2.05 | 107.26 | 113.25 |
| 24 | BC | 5502 | CLA | CAA-CBA-CGA | -2.05 | 107.26 | 113.25 |
| 24 | BB | 5608 | CLA | CAA-CBA-CGA | -2.05 | 107.26 | 113.25 |
| 24 | AD | 401 | CLA | C12-C11-C10 | -2.05 | 103.82 | 113.24 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 30 | BA | 5401 | SQD | C13-C12-C11 | 2.05 | 124.83 | 114.42 |
| 27 | BK | 5102 | BCR | C19-C18-C17 | -2.05 | 115.80 | 118.94 |
| 30 | AA | 413 | SQD | C3-C4-C5 | -2.05 | 106.59 | 110.24 |
| 24 | BB | 5609 | CLA | CAA-C2A-C3A | -2.05 | 107.18 | 112.78 |
| 24 | BC | 5503 | CLA | CMB-C2B-C1B | -2.04 | 125.32 | 128.46 |
| 27 | BD | 5407 | BCR | C15-C14-C13 | 2.04 | 130.23 | 127.31 |
| 24 | BA | 5406 | CLA | O1D-CGD-CBD | -2.04 | 120.31 | 124.48 |
| 28 | BE | 5102 | DGD | C6D-C5D-C4D | -2.04 | 107.83 | 112.09 |
| 30 | AB | 627 | SQD | C17-C16-C15 | 2.04 | 124.79 | 114.42 |
| 31 | AI | 101 | LMG | O7-C10-O9 | -2.04 | 118.77 | 123.70 |
| 30 | AA | 413 | SQD | C13-C12-C11 | 2.04 | 124.79 | 114.42 |
| 34 | BD | 5404 | PHO | C4-C3-C5 | -2.04 | 111.84 | 115.27 |
| 24 | BB | 5613 | CLA | CMB-C2B-C3B | 2.04 | 128.49 | 124.68 |
| 24 | AC | 504 | CLA | O2A-CGA-O1A | -2.04 | 118.45 | 123.59 |
| 24 | AC | 511 | CLA | CMB-C2B-C1B | -2.04 | 125.33 | 128.46 |
| 24 | BB | 5616 | CLA | CED-O2D-CGD | 2.04 | 120.55 | 115.94 |
| 24 | AA | 404 | CLA | O2A-CGA-O1A | -2.04 | 118.45 | 123.59 |
| 24 | AB | 611 | CLA | C5-C3-C2 | 2.04 | 125.24 | 121.12 |
| 24 | AB | 605 | CLA | CMB-C2B-C1B | -2.04 | 125.34 | 128.46 |
| 24 | AB | 602 | CLA | C6-C7-C8 | -2.04 | 109.34 | 115.92 |
| 24 | BB | 5607 | CLA | CHD-C1D-ND | -2.03 | 122.58 | 124.45 |
| 24 | BD | 5402 | CLA | C7-C6-C5 | -2.03 | 107.83 | 113.36 |
| 27 | BA | 5411 | BCR | C19-C18-C17 | -2.03 | 115.82 | 118.94 |
| 27 | BA | 5411 | BCR | C32-C1-C6 | 2.03 | 113.60 | 110.30 |
| 24 | AC | 503 | CLA | O2A-CGA-O1A | -2.03 | 118.46 | 123.59 |
| 31 | AC | 520 | LMG | O8-C28-C29 | 2.03 | 118.29 | 111.91 |
| 24 | AB | 607 | CLA | C2C-C1C-NC | -2.03 | 108.07 | 109.97 |
| 31 | AC | 520 | LMG | C35-C34-C33 | 2.03 | 124.75 | 114.42 |
| 30 | BA | 5414 | SQD | O47-C7-C8 | 2.03 | 115.88 | 111.50 |
| 24 | BB | 5606 | CLA | CMB-C2B-C1B | -2.03 | 125.34 | 128.46 |
| 24 | BB | 5612 | CLA | CHD-C1D-ND | -2.03 | 122.59 | 124.45 |
| 24 | BC | 5507 | CLA | CMB-C2B-C3B | 2.03 | 128.48 | 124.68 |
| 27 | BB | 5621 | BCR | C37-C22-C23 | 2.03 | 121.28 | 118.08 |
| 32 | BB | 5603 | LMT | C6B-C5B-C4B | 2.03 | 117.76 | 113.00 |
| 30 | AF | 102 | SQD | C13-C12-C11 | 2.03 | 124.73 | 114.42 |
| 30 | AA | 416 | SQD | O8-S-O7 | 2.03 | 116.23 | 111.27 |
| 31 | BB | 5624 | LMG | C6-C5-C4 | -2.03 | 108.25 | 113.00 |
| 24 | BB | 5606 | CLA | C7-C6-C5 | -2.03 | 107.85 | 113.36 |
| 24 | AA | 405 | CLA | CMD-C2D-C1D | 2.03 | 128.29 | 124.71 |
| 31 | BC | 5521 | LMG | O7-C8-C9 | -2.03 | 101.06 | 108.40 |
| 24 | BA | 5405 | CLA | CMB-C2B-C3B | 2.03 | 128.47 | 124.68 |
| 32 | AI | 102 | LMT | C9-C8-C7 | -2.03 | 104.14 | 114.42 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 27 | BB | 5621 | BCR | C15-C16-C17 | -2.02 | 119.33 | 123.47 |
| 31 | AJ | 102 | LMG | C17-C16-C15 | -2.02 | 104.15 | 114.42 |
| 24 | AC | 509 | CLA | O1D-CGD-CBD | -2.02 | 120.34 | 124.48 |
| 28 | AE | 101 | DGD | C6E-C5E-C4E | -2.02 | 108.27 | 113.00 |
| 30 | BA | 5414 | SQD | O8-S-O7 | 2.02 | 116.22 | 111.27 |
| 24 | BB | 5619 | CLA | CHA-C1A-NA | -2.02 | 121.77 | 126.40 |
| 24 | AB | 613 | CLA | CHD-C1D-ND | -2.02 | 122.60 | 124.45 |
| 24 | BC | 5511 | CLA | O1D-CGD-CBD | -2.02 | 120.35 | 124.48 |
| 30 | BF | 5102 | SQD | C13-C12-C11 | 2.02 | 124.68 | 114.42 |
| 30 | BB | 5601 | SQD | C17-C16-C15 | 2.02 | 124.68 | 114.42 |
| 30 | AA | 413 | SQD | O47-C45-C44 | 2.02 | 115.72 | 108.40 |
| 24 | AC | 504 | CLA | CMB-C2B-C1B | -2.02 | 125.36 | 128.46 |
| 24 | BC | 5506 | CLA | CAA-CBA-CGA | -2.02 | 107.35 | 113.25 |
| 24 | AA | 405 | CLA | CAA-C2A-C3A | -2.02 | 107.25 | 112.78 |
| 24 | BB | 5610 | CLA | CHC-C1C-NC | 2.02 | 127.27 | 124.20 |
| 31 | BC | 5520 | LMG | C35-C34-C33 | 2.02 | 124.67 | 114.42 |
| 31 | AC | 520 | LMG | C6-C5-C4 | -2.02 | 108.28 | 113.00 |
| 27 | AJ | 101 | BCR | C30-C25-C24 | 2.02 | 121.49 | 115.78 |
| 24 | AA | 405 | CLA | C4-C3-C5 | -2.02 | 111.88 | 115.27 |
| 31 | AM | 101 | LMG | C34-C33-C32 | 2.02 | 124.67 | 114.42 |
| 24 | AB | 604 | CLA | OBD-CAD-C3D | 2.02 | 133.38 | 128.52 |
| 32 | BB | 5603 | LMT | C6-C5-C4 | 2.02 | 124.66 | 114.42 |
| 27 | BJ | 5101 | BCR | C34-C9-C8 | 2.02 | 121.25 | 118.08 |
| 35 | AD | 405 | PL9 | C2-C3-C4 | -2.02 | 116.02 | 118.80 |
| 27 | BC | 5516 | BCR | C32-C1-C2 | -2.02 | 100.84 | 108.91 |
| 24 | BB | 5619 | CLA | CMB-C2B-C1B | -2.01 | 125.37 | 128.46 |
| 24 | BA | 5406 | CLA | CHD-C4C-NC | 2.01 | 127.38 | 124.20 |
| 28 | BE | 5102 | DGD | C4A-C3A-C2A | -2.01 | 105.95 | 113.19 |
| 32 | AB | 629 | LMT | C6'-C5'-C4' | -2.01 | 107.47 | 113.33 |
| 24 | AC | 509 | CLA | C12-C11-C10 | -2.01 | 104.00 | 113.24 |
| 24 | AA | 407 | CLA | CAA-CBA-CGA | -2.01 | 107.38 | 113.25 |
| 24 | AC | 508 | CLA | CHD-C1D-ND | -2.01 | 122.61 | 124.45 |
| 27 | AB | 619 | BCR | C36-C18-C19 | 2.01 | 121.24 | 118.08 |
| 24 | BC | 5505 | CLA | CMB-C2B-C3B | 2.01 | 128.44 | 124.68 |
| 24 | AB | 616 | CLA | O1D-CGD-CBD | -2.01 | 120.38 | 124.48 |
| 24 | AB | 611 | CLA | CHC-C1C-NC | 2.01 | 127.25 | 124.20 |
| 24 | AB | 602 | CLA | CHD-C1D-ND | -2.01 | 122.61 | 124.45 |
| 24 | AC | 505 | CLA | CMB-C2B-C3B | 2.01 | 128.43 | 124.68 |
| 24 | BB | 5611 | CLA | CMC-C2C-C1C | 2.01 | 128.09 | 125.04 |
| 30 | BA | 5401 | SQD | O48-C23-O10 | -2.01 | 118.53 | 123.59 |
| 34 | AD | 403 | PHO | C4-C3-C5 | -2.01 | 111.90 | 115.27 |
| 24 | AB | 614 | CLA | C3C-C4C-NC | -2.01 | 108.32 | 110.57 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|------|------|-------------|-------|-------------|----------|
| 24 | BA | 5405 | CLA | CAA-CBA-CGA | -2.01 | 107.39 | 113.25 |
| 24 | AB | 603 | CLA | CMA-C3A-C4A | 2.01 | 117.16 | 111.77 |
| 27 | AC | 514 | BCR | C30-C25-C24 | 2.00 | 121.45 | 115.78 |
| 27 | BB | 5623 | BCR | C30-C25-C24 | 2.00 | 121.45 | 115.78 |
| 31 | AJ | 102 | LMG | C6-C5-C4 | -2.00 | 108.31 | 113.00 |
| 27 | AC | 515 | BCR | C32-C1-C6 | 2.00 | 113.55 | 110.30 |
| 31 | AA | 417 | LMG | C18-C17-C16 | -2.00 | 104.26 | 114.42 |
| 27 | BK | 5102 | BCR | C11-C12-C13 | 2.00 | 132.04 | 126.42 |
| 24 | BD | 5402 | CLA | C12-C11-C10 | -2.00 | 104.05 | 113.24 |
| 27 | BC | 5516 | BCR | C12-C13-C14 | -2.00 | 115.87 | 118.94 |

All (148) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 24 | AA | 404 | CLA | ND |
| 24 | AA | 404 | CLA | C8 |
| 24 | AA | 405 | CLA | ND |
| 24 | AA | 405 | CLA | C8 |
| 24 | AA | 406 | CLA | ND |
| 24 | AA | 406 | CLA | C8 |
| 24 | AA | 407 | CLA | ND |
| 24 | AA | 407 | CLA | C8 |
| 24 | AB | 601 | CLA | ND |
| 24 | AB | 601 | CLA | C8 |
| 24 | AB | 602 | CLA | ND |
| 24 | AB | 602 | CLA | C8 |
| 24 | AB | 603 | CLA | ND |
| 24 | AB | 603 | CLA | C8 |
| 24 | AB | 604 | CLA | ND |
| 24 | AB | 604 | CLA | C8 |
| 24 | AB | 605 | CLA | ND |
| 24 | AB | 605 | CLA | C8 |
| 24 | AB | 606 | CLA | ND |
| 24 | AB | 606 | CLA | C8 |
| 24 | AB | 607 | CLA | ND |
| 24 | AB | 607 | CLA | C8 |
| 24 | AB | 608 | CLA | ND |
| 24 | AB | 608 | CLA | C8 |
| 24 | AB | 609 | CLA | ND |
| 24 | AB | 609 | CLA | C8 |
| 24 | AB | 610 | CLA | ND |
| 24 | AB | 610 | CLA | C8 |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 24 | AB | 611 | CLA | ND |
| 24 | AB | 611 | CLA | C8 |
| 24 | AB | 612 | CLA | ND |
| 24 | AB | 612 | CLA | C8 |
| 24 | AB | 613 | CLA | ND |
| 24 | AB | 613 | CLA | C8 |
| 24 | AB | 614 | CLA | ND |
| 24 | AB | 614 | CLA | C8 |
| 24 | AB | 615 | CLA | ND |
| 24 | AB | 615 | CLA | C8 |
| 24 | AB | 616 | CLA | ND |
| 24 | AB | 616 | CLA | C8 |
| 24 | AC | 501 | CLA | ND |
| 24 | AC | 501 | CLA | C8 |
| 24 | AC | 502 | CLA | ND |
| 24 | AC | 502 | CLA | C8 |
| 24 | AC | 503 | CLA | ND |
| 24 | AC | 503 | CLA | C8 |
| 24 | AC | 504 | CLA | ND |
| 24 | AC | 504 | CLA | C8 |
| 24 | AC | 505 | CLA | ND |
| 24 | AC | 505 | CLA | C8 |
| 24 | AC | 506 | CLA | ND |
| 24 | AC | 506 | CLA | C8 |
| 24 | AC | 507 | CLA | ND |
| 24 | AC | 507 | CLA | C8 |
| 24 | AC | 508 | CLA | ND |
| 24 | AC | 508 | CLA | C8 |
| 24 | AC | 509 | CLA | ND |
| 24 | AC | 509 | CLA | C8 |
| 24 | AC | 510 | CLA | ND |
| 24 | AC | 510 | CLA | C8 |
| 24 | AC | 511 | CLA | ND |
| 24 | AC | 511 | CLA | C8 |
| 24 | AC | 512 | CLA | ND |
| 24 | AC | 512 | CLA | C8 |
| 24 | AC | 513 | CLA | ND |
| 24 | AC | 513 | CLA | C8 |
| 24 | AD | 401 | CLA | ND |
| 24 | AD | 401 | CLA | C8 |
| 24 | AD | 404 | CLA | ND |
| 24 | AD | 404 | CLA | C8 |

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| Mol | Chain | Res | Type | Atom |
|------------|--------------|------------|-------------|-------------|
| 24 | BA | 5405 | CLA | ND |
| 24 | BA | 5405 | CLA | C8 |
| 24 | BA | 5406 | CLA | ND |
| 24 | BA | 5406 | CLA | C8 |
| 24 | BA | 5407 | CLA | ND |
| 24 | BA | 5407 | CLA | C8 |
| 24 | BA | 5408 | CLA | ND |
| 24 | BA | 5408 | CLA | C8 |
| 24 | BB | 5605 | CLA | ND |
| 24 | BB | 5605 | CLA | C8 |
| 24 | BB | 5606 | CLA | ND |
| 24 | BB | 5606 | CLA | C8 |
| 24 | BB | 5607 | CLA | ND |
| 24 | BB | 5607 | CLA | C8 |
| 24 | BB | 5608 | CLA | ND |
| 24 | BB | 5608 | CLA | C8 |
| 24 | BB | 5609 | CLA | ND |
| 24 | BB | 5609 | CLA | C8 |
| 24 | BB | 5610 | CLA | ND |
| 24 | BB | 5610 | CLA | C8 |
| 24 | BB | 5611 | CLA | ND |
| 24 | BB | 5611 | CLA | C8 |
| 24 | BB | 5612 | CLA | ND |
| 24 | BB | 5612 | CLA | C8 |
| 24 | BB | 5613 | CLA | ND |
| 24 | BB | 5613 | CLA | C8 |
| 24 | BB | 5614 | CLA | ND |
| 24 | BB | 5614 | CLA | C8 |
| 24 | BB | 5615 | CLA | ND |
| 24 | BB | 5615 | CLA | C8 |
| 24 | BB | 5616 | CLA | ND |
| 24 | BB | 5616 | CLA | C8 |
| 24 | BB | 5617 | CLA | ND |
| 24 | BB | 5617 | CLA | C8 |
| 24 | BB | 5618 | CLA | ND |
| 24 | BB | 5618 | CLA | C8 |
| 24 | BB | 5619 | CLA | ND |
| 24 | BB | 5619 | CLA | C8 |
| 24 | BB | 5620 | CLA | ND |
| 24 | BB | 5620 | CLA | C8 |
| 24 | BC | 5501 | CLA | ND |
| 24 | BC | 5501 | CLA | C8 |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|------|------|------|
| 24 | BC | 5502 | CLA | ND |
| 24 | BC | 5502 | CLA | C8 |
| 24 | BC | 5503 | CLA | ND |
| 24 | BC | 5503 | CLA | C8 |
| 24 | BC | 5504 | CLA | ND |
| 24 | BC | 5504 | CLA | C8 |
| 24 | BC | 5505 | CLA | ND |
| 24 | BC | 5505 | CLA | C8 |
| 24 | BC | 5506 | CLA | ND |
| 24 | BC | 5506 | CLA | C8 |
| 24 | BC | 5507 | CLA | ND |
| 24 | BC | 5507 | CLA | C8 |
| 24 | BC | 5508 | CLA | ND |
| 24 | BC | 5508 | CLA | C8 |
| 24 | BC | 5509 | CLA | ND |
| 24 | BC | 5509 | CLA | C8 |
| 24 | BC | 5510 | CLA | ND |
| 24 | BC | 5510 | CLA | C8 |
| 24 | BC | 5511 | CLA | ND |
| 24 | BC | 5511 | CLA | C8 |
| 24 | BC | 5512 | CLA | ND |
| 24 | BC | 5512 | CLA | C8 |
| 24 | BC | 5513 | CLA | ND |
| 24 | BC | 5513 | CLA | C8 |
| 24 | BD | 5402 | CLA | ND |
| 24 | BD | 5402 | CLA | C8 |
| 24 | BD | 5405 | CLA | ND |
| 24 | BD | 5405 | CLA | C8 |
| 28 | AC | 518 | DGD | C1E |
| 28 | AC | 519 | DGD | C1E |
| 28 | BC | 5518 | DGD | C1E |
| 28 | BC | 5519 | DGD | C1E |
| 34 | AD | 402 | PHO | C8 |
| 34 | AD | 403 | PHO | C8 |
| 34 | BD | 5403 | PHO | C8 |
| 34 | BD | 5404 | PHO | C8 |

All (1365) torsion outliers are listed below:

| Mol | Chain | Res | Type | Atoms |
|-----|-------|-----|------|-----------------|
| 24 | AA | 405 | CLA | CHA-CBD-CGD-O1D |
| 24 | AA | 405 | CLA | CHA-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | AA | 405 | CLA | C6-C7-C8-C9 |
| 24 | AB | 601 | CLA | C2A-CAA-CBA-CGA |
| 24 | AB | 606 | CLA | CHA-CBD-CGD-O1D |
| 24 | AB | 606 | CLA | CHA-CBD-CGD-O2D |
| 24 | AB | 607 | CLA | C2-C3-C5-C6 |
| 24 | AB | 607 | CLA | C4-C3-C5-C6 |
| 24 | AB | 610 | CLA | C14-C13-C15-C16 |
| 24 | AB | 613 | CLA | C2-C3-C5-C6 |
| 24 | AB | 613 | CLA | C4-C3-C5-C6 |
| 24 | AC | 512 | CLA | CHA-CBD-CGD-O1D |
| 24 | AC | 512 | CLA | CHA-CBD-CGD-O2D |
| 24 | AC | 513 | CLA | CHA-CBD-CGD-O1D |
| 24 | AC | 513 | CLA | CHA-CBD-CGD-O2D |
| 24 | BA | 5406 | CLA | CHA-CBD-CGD-O1D |
| 24 | BA | 5406 | CLA | CHA-CBD-CGD-O2D |
| 24 | BA | 5406 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5605 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5610 | CLA | CHA-CBD-CGD-O1D |
| 24 | BB | 5610 | CLA | CHA-CBD-CGD-O2D |
| 24 | BB | 5611 | CLA | C2-C3-C5-C6 |
| 24 | BB | 5611 | CLA | C4-C3-C5-C6 |
| 24 | BB | 5614 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5617 | CLA | C2-C3-C5-C6 |
| 24 | BB | 5617 | CLA | C4-C3-C5-C6 |
| 24 | BC | 5512 | CLA | CHA-CBD-CGD-O1D |
| 24 | BC | 5512 | CLA | CHA-CBD-CGD-O2D |
| 24 | BC | 5513 | CLA | CHA-CBD-CGD-O1D |
| 24 | BC | 5513 | CLA | CHA-CBD-CGD-O2D |
| 25 | AA | 408 | MST | N1-C2-S7-C8 |
| 25 | AA | 408 | MST | N3-C2-S7-C8 |
| 25 | BA | 5409 | MST | N1-C2-S7-C8 |
| 25 | BA | 5409 | MST | N3-C2-S7-C8 |
| 27 | AB | 618 | BCR | C6-C7-C8-C9 |
| 27 | AB | 619 | BCR | C23-C24-C25-C26 |
| 27 | AB | 619 | BCR | C23-C24-C25-C30 |
| 27 | AC | 514 | BCR | C1-C6-C7-C8 |
| 27 | AC | 514 | BCR | C5-C6-C7-C8 |
| 27 | AC | 514 | BCR | C6-C7-C8-C9 |
| 27 | AC | 515 | BCR | C6-C7-C8-C9 |
| 27 | AC | 515 | BCR | C23-C24-C25-C30 |
| 27 | AC | 516 | BCR | C6-C7-C8-C9 |
| 27 | AC | 516 | BCR | C23-C24-C25-C26 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 27 | AC | 516 | BCR | C23-C24-C25-C30 |
| 27 | AD | 406 | BCR | C1-C6-C7-C8 |
| 27 | AD | 406 | BCR | C6-C7-C8-C9 |
| 27 | AD | 406 | BCR | C23-C24-C25-C26 |
| 27 | AJ | 101 | BCR | C6-C7-C8-C9 |
| 27 | AT | 101 | BCR | C6-C7-C8-C9 |
| 27 | AT | 101 | BCR | C22-C23-C24-C25 |
| 27 | AX | 101 | BCR | C6-C7-C8-C9 |
| 27 | BB | 5622 | BCR | C6-C7-C8-C9 |
| 27 | BB | 5623 | BCR | C23-C24-C25-C26 |
| 27 | BB | 5623 | BCR | C23-C24-C25-C30 |
| 27 | BC | 5514 | BCR | C1-C6-C7-C8 |
| 27 | BC | 5514 | BCR | C5-C6-C7-C8 |
| 27 | BC | 5514 | BCR | C6-C7-C8-C9 |
| 27 | BC | 5515 | BCR | C6-C7-C8-C9 |
| 27 | BC | 5515 | BCR | C23-C24-C25-C30 |
| 27 | BC | 5516 | BCR | C6-C7-C8-C9 |
| 27 | BC | 5516 | BCR | C23-C24-C25-C26 |
| 27 | BC | 5516 | BCR | C23-C24-C25-C30 |
| 27 | BD | 5407 | BCR | C1-C6-C7-C8 |
| 27 | BD | 5407 | BCR | C6-C7-C8-C9 |
| 27 | BD | 5407 | BCR | C23-C24-C25-C26 |
| 27 | BJ | 5101 | BCR | C6-C7-C8-C9 |
| 27 | BT | 5101 | BCR | C6-C7-C8-C9 |
| 27 | BT | 5101 | BCR | C22-C23-C24-C25 |
| 27 | BX | 5101 | BCR | C6-C7-C8-C9 |
| 28 | AA | 411 | DGD | O6E-C1E-O5D-C6D |
| 28 | AC | 518 | DGD | O6E-C1E-O5D-C6D |
| 28 | BA | 5412 | DGD | O6E-C1E-O5D-C6D |
| 28 | BC | 5518 | DGD | O6E-C1E-O5D-C6D |
| 29 | AA | 412 | LHG | O2-C2-C3-O3 |
| 29 | AA | 415 | LHG | C1-C2-C3-O3 |
| 29 | BA | 5413 | LHG | O2-C2-C3-O3 |
| 29 | BA | 5415 | LHG | C1-C2-C3-O3 |
| 30 | AA | 413 | SQD | O5-C1-O6-C44 |
| 30 | AA | 413 | SQD | C8-C7-O47-C45 |
| 30 | AA | 413 | SQD | O5-C5-C6-S |
| 30 | AA | 413 | SQD | C5-C6-S-O7 |
| 30 | AA | 413 | SQD | C5-C6-S-O8 |
| 30 | AA | 413 | SQD | C5-C6-S-O9 |
| 30 | AA | 416 | SQD | O6-C44-C45-O47 |
| 30 | AA | 416 | SQD | O5-C5-C6-S |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|----------------|
| 30 | AA | 416 | SQD | C5-C6-S-O7 |
| 30 | AA | 416 | SQD | C5-C6-S-O8 |
| 30 | AA | 416 | SQD | C5-C6-S-O9 |
| 30 | AB | 622 | SQD | O5-C1-O6-C44 |
| 30 | AB | 622 | SQD | O5-C5-C6-S |
| 30 | AB | 622 | SQD | C5-C6-S-O7 |
| 30 | AB | 622 | SQD | C5-C6-S-O8 |
| 30 | AB | 627 | SQD | O49-C7-O47-C45 |
| 30 | AB | 627 | SQD | C8-C7-O47-C45 |
| 30 | AB | 627 | SQD | O5-C5-C6-S |
| 30 | AB | 627 | SQD | C5-C6-S-O7 |
| 30 | AB | 627 | SQD | C5-C6-S-O8 |
| 30 | AB | 627 | SQD | C5-C6-S-O9 |
| 30 | AF | 102 | SQD | C8-C7-O47-C45 |
| 30 | AF | 102 | SQD | O5-C5-C6-S |
| 30 | AF | 102 | SQD | C5-C6-S-O7 |
| 30 | AF | 102 | SQD | C5-C6-S-O8 |
| 30 | AF | 102 | SQD | C5-C6-S-O9 |
| 30 | BA | 5401 | SQD | O6-C44-C45-O47 |
| 30 | BA | 5401 | SQD | O5-C5-C6-S |
| 30 | BA | 5401 | SQD | C5-C6-S-O7 |
| 30 | BA | 5401 | SQD | C5-C6-S-O8 |
| 30 | BA | 5401 | SQD | C5-C6-S-O9 |
| 30 | BA | 5414 | SQD | O5-C1-O6-C44 |
| 30 | BA | 5414 | SQD | C8-C7-O47-C45 |
| 30 | BA | 5414 | SQD | O5-C5-C6-S |
| 30 | BA | 5414 | SQD | C5-C6-S-O8 |
| 30 | BB | 5601 | SQD | O49-C7-O47-C45 |
| 30 | BB | 5601 | SQD | C8-C7-O47-C45 |
| 30 | BB | 5601 | SQD | O5-C5-C6-S |
| 30 | BB | 5601 | SQD | C5-C6-S-O7 |
| 30 | BB | 5601 | SQD | C5-C6-S-O8 |
| 30 | BB | 5601 | SQD | C5-C6-S-O9 |
| 30 | BB | 5625 | SQD | O5-C1-O6-C44 |
| 30 | BB | 5625 | SQD | O5-C5-C6-S |
| 30 | BB | 5625 | SQD | C5-C6-S-O7 |
| 30 | BB | 5625 | SQD | C5-C6-S-O8 |
| 30 | BF | 5102 | SQD | C8-C7-O47-C45 |
| 30 | BF | 5102 | SQD | O5-C5-C6-S |
| 30 | BF | 5102 | SQD | C5-C6-S-O7 |
| 30 | BF | 5102 | SQD | C5-C6-S-O8 |
| 30 | BF | 5102 | SQD | C5-C6-S-O9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 31 | AB | 620 | LMG | O1-C7-C8-O7 |
| 31 | AC | 520 | LMG | O7-C8-C9-O8 |
| 31 | BC | 5520 | LMG | O7-C8-C9-O8 |
| 31 | BL | 5101 | LMG | O1-C7-C8-O7 |
| 34 | AD | 403 | PHO | CBD-CGD-O2D-CED |
| 34 | BD | 5404 | PHO | CBD-CGD-O2D-CED |
| 35 | AD | 405 | PL9 | C7-C8-C9-C10 |
| 35 | AD | 405 | PL9 | C26-C27-C28-C29 |
| 35 | AD | 405 | PL9 | C28-C29-C31-C32 |
| 35 | AD | 405 | PL9 | C46-C47-C48-C49 |
| 35 | BD | 5406 | PL9 | C7-C8-C9-C10 |
| 35 | BD | 5406 | PL9 | C26-C27-C28-C29 |
| 35 | BD | 5406 | PL9 | C28-C29-C31-C32 |
| 35 | BD | 5406 | PL9 | C46-C47-C48-C49 |
| 36 | AF | 101 | HEM | C2B-C3B-CAB-CBB |
| 36 | AF | 101 | HEM | C4B-C3B-CAB-CBB |
| 36 | AV | 201 | HEM | C2B-C3B-CAB-CBB |
| 36 | AV | 201 | HEM | C4B-C3B-CAB-CBB |
| 36 | BF | 5101 | HEM | C2B-C3B-CAB-CBB |
| 36 | BF | 5101 | HEM | C4B-C3B-CAB-CBB |
| 36 | BV | 5201 | HEM | C2B-C3B-CAB-CBB |
| 36 | BV | 5201 | HEM | C4B-C3B-CAB-CBB |
| 30 | AA | 416 | SQD | O10-C23-O48-C46 |
| 30 | BA | 5401 | SQD | O10-C23-O48-C46 |
| 34 | AD | 403 | PHO | O1D-CGD-O2D-CED |
| 28 | AC | 519 | DGD | O6D-C5D-C6D-O5D |
| 28 | BC | 5519 | DGD | O6D-C5D-C6D-O5D |
| 34 | BD | 5404 | PHO | O1D-CGD-O2D-CED |
| 24 | BB | 5606 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 602 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 513 | CLA | O1A-CGA-O2A-C1 |
| 24 | AD | 401 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5606 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5513 | CLA | O1A-CGA-O2A-C1 |
| 24 | BD | 5402 | CLA | O1A-CGA-O2A-C1 |
| 29 | AA | 412 | LHG | O10-C23-O8-C6 |
| 29 | AA | 415 | LHG | O10-C23-O8-C6 |
| 29 | BA | 5413 | LHG | O10-C23-O8-C6 |
| 29 | BA | 5415 | LHG | O10-C23-O8-C6 |
| 30 | AF | 102 | SQD | O10-C23-O48-C46 |
| 30 | BF | 5102 | SQD | O10-C23-O48-C46 |
| 24 | AB | 612 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | BB | 5616 | CLA | C10-C11-C12-C13 |
| 30 | AA | 413 | SQD | O49-C7-O47-C45 |
| 30 | AF | 102 | SQD | O49-C7-O47-C45 |
| 30 | BA | 5414 | SQD | O49-C7-O47-C45 |
| 30 | BF | 5102 | SQD | O49-C7-O47-C45 |
| 24 | AA | 405 | CLA | C3-C5-C6-C7 |
| 24 | AA | 406 | CLA | C3-C5-C6-C7 |
| 24 | AA | 407 | CLA | C3-C5-C6-C7 |
| 24 | AB | 613 | CLA | C3-C5-C6-C7 |
| 24 | AB | 614 | CLA | C3-C5-C6-C7 |
| 24 | AC | 501 | CLA | C3-C5-C6-C7 |
| 24 | AC | 504 | CLA | C3-C5-C6-C7 |
| 24 | AC | 506 | CLA | C3-C5-C6-C7 |
| 24 | AC | 511 | CLA | C3-C5-C6-C7 |
| 24 | AC | 513 | CLA | C3-C5-C6-C7 |
| 24 | BA | 5408 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5617 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5618 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5501 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5504 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5506 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5511 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5513 | CLA | C3-C5-C6-C7 |
| 24 | AB | 602 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 608 | CLA | CBA-CGA-O2A-C1 |
| 24 | AC | 513 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5612 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5513 | CLA | CBA-CGA-O2A-C1 |
| 29 | AA | 415 | LHG | C24-C23-O8-C6 |
| 30 | AA | 416 | SQD | C24-C23-O48-C46 |
| 30 | BA | 5401 | SQD | C24-C23-O48-C46 |
| 24 | AA | 407 | CLA | O1A-CGA-O2A-C1 |
| 24 | BA | 5408 | CLA | O1A-CGA-O2A-C1 |
| 32 | AI | 102 | LMT | C3'-C4'-O1B-C1B |
| 32 | BI | 5102 | LMT | C3'-C4'-O1B-C1B |
| 24 | AC | 501 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5610 | CLA | C2A-CAA-CBA-CGA |
| 24 | BC | 5501 | CLA | C2A-CAA-CBA-CGA |
| 28 | AA | 411 | DGD | C7A-C8A-C9A-CAA |
| 28 | AC | 517 | DGD | C7A-C8A-C9A-CAA |
| 28 | AC | 519 | DGD | C7B-C8B-C9B-CAB |
| 28 | BC | 5517 | DGD | C7A-C8A-C9A-CAA |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 28 | BC | 5519 | DGD | C7B-C8B-C9B-CAB |
| 31 | AA | 414 | LMG | C18-C19-C20-C21 |
| 31 | AA | 417 | LMG | C18-C19-C20-C21 |
| 31 | AB | 621 | LMG | C18-C19-C20-C21 |
| 31 | AB | 621 | LMG | C36-C37-C38-C39 |
| 31 | AC | 520 | LMG | C36-C37-C38-C39 |
| 31 | AC | 521 | LMG | C36-C37-C38-C39 |
| 31 | AD | 407 | LMG | C18-C19-C20-C21 |
| 31 | AD | 407 | LMG | C36-C37-C38-C39 |
| 31 | AJ | 102 | LMG | C36-C37-C38-C39 |
| 31 | AM | 101 | LMG | C18-C19-C20-C21 |
| 31 | BA | 5402 | LMG | C18-C19-C20-C21 |
| 31 | BB | 5624 | LMG | C18-C19-C20-C21 |
| 31 | BB | 5624 | LMG | C36-C37-C38-C39 |
| 31 | BC | 5520 | LMG | C36-C37-C38-C39 |
| 31 | BC | 5521 | LMG | C36-C37-C38-C39 |
| 31 | BD | 5408 | LMG | C36-C37-C38-C39 |
| 31 | BD | 5409 | LMG | C18-C19-C20-C21 |
| 31 | BD | 5409 | LMG | C36-C37-C38-C39 |
| 31 | BD | 5410 | LMG | C36-C37-C38-C39 |
| 31 | BE | 5101 | LMG | C18-C19-C20-C21 |
| 31 | BM | 5102 | LMG | C18-C19-C20-C21 |
| 32 | AB | 623 | LMT | C3-C4-C5-C6 |
| 32 | AB | 629 | LMT | C3-C4-C5-C6 |
| 32 | AB | 630 | LMT | C3-C4-C5-C6 |
| 32 | AD | 409 | LMT | C3-C4-C5-C6 |
| 32 | AI | 102 | LMT | C3-C4-C5-C6 |
| 32 | BB | 5603 | LMT | C3-C4-C5-C6 |
| 32 | BB | 5604 | LMT | C3-C4-C5-C6 |
| 32 | BB | 5626 | LMT | C3-C4-C5-C6 |
| 32 | BD | 5411 | LMT | C3-C4-C5-C6 |
| 32 | BI | 5102 | LMT | C3-C4-C5-C6 |
| 24 | AB | 604 | CLA | C3-C5-C6-C7 |
| 24 | AB | 607 | CLA | C3-C5-C6-C7 |
| 24 | BA | 5406 | CLA | C3-C5-C6-C7 |
| 24 | BA | 5407 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5608 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5611 | CLA | C3-C5-C6-C7 |
| 24 | AC | 501 | CLA | CBA-CGA-O2A-C1 |
| 24 | AD | 401 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5501 | CLA | CBA-CGA-O2A-C1 |
| 24 | BD | 5402 | CLA | CBA-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 29 | AA | 412 | LHG | C24-C23-O8-C6 |
| 29 | BA | 5413 | LHG | C24-C23-O8-C6 |
| 29 | BA | 5415 | LHG | C24-C23-O8-C6 |
| 30 | AF | 102 | SQD | C24-C23-O48-C46 |
| 30 | BF | 5102 | SQD | C24-C23-O48-C46 |
| 28 | AE | 101 | DGD | C7B-C8B-C9B-CAB |
| 28 | BA | 5412 | DGD | C7A-C8A-C9A-CAA |
| 28 | BC | 5518 | DGD | C7B-C8B-C9B-CAB |
| 28 | BE | 5102 | DGD | C7A-C8A-C9A-CAA |
| 28 | BE | 5102 | DGD | C7B-C8B-C9B-CAB |
| 31 | AB | 620 | LMG | C18-C19-C20-C21 |
| 31 | AB | 620 | LMG | C36-C37-C38-C39 |
| 31 | AC | 521 | LMG | C18-C19-C20-C21 |
| 31 | AD | 408 | LMG | C36-C37-C38-C39 |
| 31 | AI | 101 | LMG | C18-C19-C20-C21 |
| 31 | AJ | 102 | LMG | C18-C19-C20-C21 |
| 31 | BC | 5521 | LMG | C18-C19-C20-C21 |
| 31 | BD | 5408 | LMG | C18-C19-C20-C21 |
| 31 | BD | 5410 | LMG | C18-C19-C20-C21 |
| 31 | BI | 5101 | LMG | C18-C19-C20-C21 |
| 31 | BL | 5101 | LMG | C18-C19-C20-C21 |
| 31 | BL | 5101 | LMG | C36-C37-C38-C39 |
| 32 | AB | 624 | LMT | C3-C4-C5-C6 |
| 32 | AI | 103 | LMT | C3-C4-C5-C6 |
| 32 | AM | 102 | LMT | C3-C4-C5-C6 |
| 32 | BB | 5627 | LMT | C3-C4-C5-C6 |
| 32 | BC | 5522 | LMT | C3-C4-C5-C6 |
| 32 | BM | 5101 | LMT | C3-C4-C5-C6 |
| 28 | AA | 411 | DGD | C7B-C8B-C9B-CAB |
| 28 | AB | 628 | DGD | C7B-C8B-C9B-CAB |
| 28 | AC | 518 | DGD | C7A-C8A-C9A-CAA |
| 28 | AC | 518 | DGD | C7B-C8B-C9B-CAB |
| 28 | AE | 101 | DGD | C7A-C8A-C9A-CAA |
| 28 | BA | 5412 | DGD | C7B-C8B-C9B-CAB |
| 28 | BB | 5602 | DGD | C7B-C8B-C9B-CAB |
| 28 | BC | 5518 | DGD | C7A-C8A-C9A-CAA |
| 31 | AC | 520 | LMG | C18-C19-C20-C21 |
| 31 | AD | 408 | LMG | C18-C19-C20-C21 |
| 31 | BC | 5520 | LMG | C18-C19-C20-C21 |
| 24 | AB | 612 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 501 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 510 | CLA | O1A-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | BB | 5612 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5616 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5501 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5510 | CLA | O1A-CGA-O2A-C1 |
| 28 | AH | 101 | DGD | C7A-C8A-C9A-CAA |
| 28 | AH | 101 | DGD | C7B-C8B-C9B-CAB |
| 28 | BH | 5101 | DGD | C7A-C8A-C9A-CAA |
| 28 | BH | 5101 | DGD | C7B-C8B-C9B-CAB |
| 29 | AA | 415 | LHG | O2-C2-C3-O3 |
| 29 | BA | 5415 | LHG | O2-C2-C3-O3 |
| 24 | AB | 606 | CLA | C3-C5-C6-C7 |
| 24 | AC | 502 | CLA | C3-C5-C6-C7 |
| 24 | AC | 508 | CLA | C3-C5-C6-C7 |
| 24 | AD | 404 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5610 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5502 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5512 | CLA | C3-C5-C6-C7 |
| 24 | BD | 5405 | CLA | C3-C5-C6-C7 |
| 28 | AC | 519 | DGD | C7A-C8A-C9A-CAA |
| 28 | BC | 5519 | DGD | C7A-C8A-C9A-CAA |
| 24 | AB | 608 | CLA | O1A-CGA-O2A-C1 |
| 30 | AA | 416 | SQD | C29-C30-C31-C32 |
| 30 | BA | 5401 | SQD | C29-C30-C31-C32 |
| 24 | AA | 404 | CLA | C3-C5-C6-C7 |
| 24 | AC | 512 | CLA | C3-C5-C6-C7 |
| 24 | BA | 5405 | CLA | C3-C5-C6-C7 |
| 24 | BC | 5508 | CLA | C3-C5-C6-C7 |
| 24 | AA | 407 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 612 | CLA | CBA-CGA-O2A-C1 |
| 24 | AC | 510 | CLA | CBA-CGA-O2A-C1 |
| 24 | BA | 5408 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5616 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5510 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 606 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5614 | CLA | O1A-CGA-O2A-C1 |
| 28 | AC | 519 | DGD | O6E-C1E-O5D-C6D |
| 28 | BC | 5519 | DGD | O6E-C1E-O5D-C6D |
| 30 | AA | 416 | SQD | O5-C1-O6-C44 |
| 30 | AB | 627 | SQD | O5-C1-O6-C44 |
| 30 | BA | 5401 | SQD | O5-C1-O6-C44 |
| 30 | BB | 5601 | SQD | O5-C1-O6-C44 |
| 24 | AB | 610 | CLA | CBA-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | AB | 614 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5614 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5618 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5505 | CLA | CBA-CGA-O2A-C1 |
| 30 | AA | 413 | SQD | C24-C23-O48-C46 |
| 24 | AB | 610 | CLA | O1A-CGA-O2A-C1 |
| 24 | AB | 614 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5618 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 505 | CLA | CBA-CGA-O2A-C1 |
| 24 | AC | 508 | CLA | CBA-CGA-O2A-C1 |
| 24 | AC | 512 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5508 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5512 | CLA | CBA-CGA-O2A-C1 |
| 30 | AB | 627 | SQD | C24-C23-O48-C46 |
| 30 | BA | 5414 | SQD | C24-C23-O48-C46 |
| 30 | BB | 5601 | SQD | C24-C23-O48-C46 |
| 34 | BD | 5403 | PHO | C15-C16-C17-C18 |
| 24 | AD | 404 | CLA | C2C-C3C-CAC-CBC |
| 24 | AC | 512 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5512 | CLA | C10-C11-C12-C13 |
| 34 | BD | 5404 | PHO | C5-C6-C7-C8 |
| 28 | AE | 101 | DGD | O1G-C1G-C2G-O2G |
| 28 | BE | 5102 | DGD | O1G-C1G-C2G-O2G |
| 31 | BB | 5624 | LMG | O1-C7-C8-O7 |
| 24 | BC | 5512 | CLA | O1A-CGA-O2A-C1 |
| 24 | AB | 603 | CLA | C11-C12-C13-C14 |
| 24 | AC | 504 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5607 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5504 | CLA | C11-C12-C13-C14 |
| 34 | AD | 403 | PHO | C5-C6-C7-C8 |
| 24 | AB | 612 | CLA | C2A-CAA-CBA-CGA |
| 24 | AC | 508 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 512 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5508 | CLA | O1A-CGA-O2A-C1 |
| 30 | AB | 627 | SQD | O10-C23-O48-C46 |
| 30 | BB | 5601 | SQD | O10-C23-O48-C46 |
| 24 | AC | 503 | CLA | C13-C15-C16-C17 |
| 24 | AC | 504 | CLA | C13-C15-C16-C17 |
| 24 | BC | 5504 | CLA | C13-C15-C16-C17 |
| 34 | AD | 402 | PHO | C15-C16-C17-C18 |
| 32 | BM | 5101 | LMT | C5'-C4'-O1B-C1B |
| 24 | BA | 5405 | CLA | CBA-CGA-O2A-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | AA | 404 | CLA | C10-C11-C12-C13 |
| 24 | AA | 407 | CLA | C10-C11-C12-C13 |
| 24 | AB | 602 | CLA | C10-C11-C12-C13 |
| 24 | AB | 614 | CLA | C13-C15-C16-C17 |
| 24 | BA | 5405 | CLA | C10-C11-C12-C13 |
| 24 | BA | 5408 | CLA | C10-C11-C12-C13 |
| 24 | BB | 5618 | CLA | C13-C15-C16-C17 |
| 32 | AM | 102 | LMT | C5'-C4'-O1B-C1B |
| 24 | AB | 614 | CLA | C10-C11-C12-C13 |
| 24 | BB | 5606 | CLA | C10-C11-C12-C13 |
| 24 | BB | 5618 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5503 | CLA | C13-C15-C16-C17 |
| 24 | BD | 5405 | CLA | C2C-C3C-CAC-CBC |
| 32 | BB | 5604 | LMT | C5'-C4'-O1B-C1B |
| 24 | AB | 602 | CLA | C13-C15-C16-C17 |
| 24 | AB | 607 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5606 | CLA | C13-C15-C16-C17 |
| 24 | BD | 5402 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5613 | CLA | C3-C5-C6-C7 |
| 32 | AB | 630 | LMT | C5'-C4'-O1B-C1B |
| 24 | AD | 401 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5611 | CLA | C13-C15-C16-C17 |
| 35 | AD | 405 | PL9 | C30-C29-C31-C32 |
| 24 | AB | 611 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5615 | CLA | C12-C13-C15-C16 |
| 24 | BC | 5503 | CLA | C11-C12-C13-C15 |
| 24 | AB | 608 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5612 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5616 | CLA | C2A-CAA-CBA-CGA |
| 27 | AB | 617 | BCR | C6-C7-C8-C9 |
| 27 | BB | 5621 | BCR | C6-C7-C8-C9 |
| 24 | BC | 5505 | CLA | O1A-CGA-O2A-C1 |
| 30 | AF | 102 | SQD | O5-C1-O6-C44 |
| 30 | BF | 5102 | SQD | O5-C1-O6-C44 |
| 24 | AA | 405 | CLA | C10-C11-C12-C13 |
| 24 | BA | 5406 | CLA | C10-C11-C12-C13 |
| 35 | AD | 405 | PL9 | C39-C41-C42-C43 |
| 35 | BD | 5406 | PL9 | C39-C41-C42-C43 |
| 29 | BA | 5415 | LHG | C23-C24-C25-C26 |
| 28 | AE | 101 | DGD | CFB-CGB-CHB-CIB |
| 28 | BE | 5102 | DGD | CFB-CGB-CHB-CIB |
| 31 | AA | 414 | LMG | C36-C37-C38-C39 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 31 | BE | 5101 | LMG | C36-C37-C38-C39 |
| 24 | AB | 610 | CLA | C3-C5-C6-C7 |
| 24 | AA | 405 | CLA | C13-C15-C16-C17 |
| 24 | AD | 404 | CLA | C13-C15-C16-C17 |
| 24 | BA | 5406 | CLA | C13-C15-C16-C17 |
| 24 | BD | 5405 | CLA | C13-C15-C16-C17 |
| 34 | AD | 403 | PHO | C15-C16-C17-C18 |
| 24 | AC | 507 | CLA | CBA-CGA-O2A-C1 |
| 24 | AC | 505 | CLA | O1A-CGA-O2A-C1 |
| 24 | BA | 5405 | CLA | O1A-CGA-O2A-C1 |
| 30 | AA | 413 | SQD | O10-C23-O48-C46 |
| 30 | BA | 5414 | SQD | O10-C23-O48-C46 |
| 29 | AA | 415 | LHG | C23-C24-C25-C26 |
| 28 | AC | 518 | DGD | CFB-CGB-CHB-CIB |
| 28 | BC | 5518 | DGD | CFB-CGB-CHB-CIB |
| 24 | AB | 601 | CLA | C10-C11-C12-C13 |
| 24 | AC | 513 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5605 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5513 | CLA | C13-C15-C16-C17 |
| 34 | BD | 5404 | PHO | C15-C16-C17-C18 |
| 28 | BC | 5519 | DGD | CFB-CGB-CHB-CIB |
| 32 | AB | 629 | LMT | C3'-C4'-O1B-C1B |
| 24 | AA | 404 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 604 | CLA | CBA-CGA-O2A-C1 |
| 28 | AC | 519 | DGD | CFB-CGB-CHB-CIB |
| 29 | AA | 412 | LHG | C1-C2-C3-O3 |
| 29 | BA | 5413 | LHG | C1-C2-C3-O3 |
| 35 | BD | 5406 | PL9 | C30-C29-C31-C32 |
| 24 | BA | 5408 | CLA | C13-C15-C16-C17 |
| 24 | AB | 603 | CLA | C2A-CAA-CBA-CGA |
| 24 | AB | 609 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5608 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5507 | CLA | CBA-CGA-O2A-C1 |
| 30 | AA | 413 | SQD | C24-C25-C26-C27 |
| 32 | BB | 5603 | LMT | C3'-C4'-O1B-C1B |
| 24 | BB | 5614 | CLA | C3-C5-C6-C7 |
| 30 | AA | 416 | SQD | C15-C16-C17-C18 |
| 30 | AA | 416 | SQD | C27-C28-C29-C30 |
| 30 | AB | 627 | SQD | C26-C27-C28-C29 |
| 30 | AF | 102 | SQD | C11-C12-C13-C14 |
| 30 | BA | 5401 | SQD | C15-C16-C17-C18 |
| 30 | BA | 5401 | SQD | C27-C28-C29-C30 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 30 | BA | 5414 | SQD | C24-C25-C26-C27 |
| 30 | BB | 5601 | SQD | C15-C16-C17-C18 |
| 30 | BB | 5601 | SQD | C26-C27-C28-C29 |
| 30 | BF | 5102 | SQD | C11-C12-C13-C14 |
| 29 | AA | 415 | LHG | C11-C10-C9-C8 |
| 29 | BA | 5415 | LHG | C11-C10-C9-C8 |
| 30 | AB | 627 | SQD | C15-C16-C17-C18 |
| 28 | AB | 628 | DGD | C3G-C2G-O2G-C1B |
| 28 | BB | 5602 | DGD | C3G-C2G-O2G-C1B |
| 31 | AD | 408 | LMG | C7-C8-O7-C10 |
| 31 | AJ | 102 | LMG | C7-C8-O7-C10 |
| 31 | BD | 5408 | LMG | C7-C8-O7-C10 |
| 31 | BD | 5410 | LMG | C7-C8-O7-C10 |
| 24 | AA | 407 | CLA | C13-C15-C16-C17 |
| 24 | AB | 616 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5620 | CLA | C13-C15-C16-C17 |
| 30 | AB | 622 | SQD | C12-C13-C14-C15 |
| 30 | BB | 5625 | SQD | C12-C13-C14-C15 |
| 30 | AB | 627 | SQD | C17-C18-C19-C20 |
| 30 | BB | 5601 | SQD | C17-C18-C19-C20 |
| 32 | BB | 5603 | LMT | C5'-C4'-O1B-C1B |
| 31 | AB | 621 | LMG | O1-C7-C8-O7 |
| 24 | AD | 404 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5503 | CLA | CBA-CGA-O2A-C1 |
| 24 | AA | 404 | CLA | O1A-CGA-O2A-C1 |
| 24 | AB | 604 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5608 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5507 | CLA | O1A-CGA-O2A-C1 |
| 35 | BD | 5406 | PL9 | C15-C14-C16-C17 |
| 30 | AA | 413 | SQD | C18-C19-C20-C21 |
| 30 | AB | 627 | SQD | C9-C10-C11-C12 |
| 30 | BA | 5414 | SQD | C18-C19-C20-C21 |
| 30 | BB | 5601 | SQD | C9-C10-C11-C12 |
| 24 | AB | 606 | CLA | C14-C13-C15-C16 |
| 24 | AB | 608 | CLA | C14-C13-C15-C16 |
| 24 | AB | 611 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5612 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5612 | CLA | C14-C13-C15-C16 |
| 24 | BC | 5503 | CLA | C14-C13-C15-C16 |
| 24 | AD | 404 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5607 | CLA | C2A-CAA-CBA-CGA |
| 24 | BD | 5405 | CLA | C2A-CAA-CBA-CGA |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 29 | AA | 415 | LHG | O1-C1-C2-C3 |
| 29 | BA | 5415 | LHG | O1-C1-C2-C3 |
| 24 | AB | 616 | CLA | C3-C5-C6-C7 |
| 24 | BB | 5620 | CLA | C3-C5-C6-C7 |
| 24 | AB | 601 | CLA | C13-C15-C16-C17 |
| 29 | AA | 412 | LHG | C11-C10-C9-C8 |
| 29 | BA | 5413 | LHG | C11-C10-C9-C8 |
| 30 | AB | 622 | SQD | C11-C12-C13-C14 |
| 30 | BB | 5625 | SQD | C11-C12-C13-C14 |
| 32 | AB | 629 | LMT | C5'-C4'-O1B-C1B |
| 24 | AC | 509 | CLA | C10-C11-C12-C13 |
| 30 | BB | 5625 | SQD | C25-C26-C27-C28 |
| 30 | AB | 622 | SQD | C25-C26-C27-C28 |
| 24 | AC | 511 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5511 | CLA | C10-C11-C12-C13 |
| 24 | AC | 507 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 503 | CLA | CBA-CGA-O2A-C1 |
| 24 | BD | 5405 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5509 | CLA | C10-C11-C12-C13 |
| 30 | AA | 413 | SQD | C15-C16-C17-C18 |
| 30 | BA | 5414 | SQD | C17-C18-C19-C20 |
| 30 | BA | 5414 | SQD | C15-C16-C17-C18 |
| 24 | BA | 5406 | CLA | O2A-C1-C2-C3 |
| 34 | AD | 403 | PHO | O2A-C1-C2-C3 |
| 34 | BD | 5404 | PHO | O2A-C1-C2-C3 |
| 30 | AA | 413 | SQD | C17-C18-C19-C20 |
| 24 | BB | 5605 | CLA | C13-C15-C16-C17 |
| 24 | AA | 405 | CLA | C4-C3-C5-C6 |
| 24 | AC | 511 | CLA | C4-C3-C5-C6 |
| 24 | BA | 5406 | CLA | C4-C3-C5-C6 |
| 24 | BC | 5511 | CLA | C4-C3-C5-C6 |
| 35 | AD | 405 | PL9 | C15-C14-C16-C17 |
| 24 | AA | 405 | CLA | C2-C3-C5-C6 |
| 24 | AC | 511 | CLA | C2-C3-C5-C6 |
| 24 | BA | 5406 | CLA | C2-C3-C5-C6 |
| 24 | BC | 5511 | CLA | C2-C3-C5-C6 |
| 35 | AD | 405 | PL9 | C13-C14-C16-C17 |
| 35 | BD | 5406 | PL9 | C13-C14-C16-C17 |
| 30 | AA | 413 | SQD | C11-C10-C9-C8 |
| 30 | BF | 5102 | SQD | C12-C13-C14-C15 |
| 24 | AC | 510 | CLA | C3-C5-C6-C7 |
| 30 | AF | 102 | SQD | C12-C13-C14-C15 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 29 | AA | 415 | LHG | C9-C10-C11-C12 |
| 30 | BF | 5102 | SQD | C24-C25-C26-C27 |
| 24 | AB | 612 | CLA | C2-C1-O2A-CGA |
| 24 | BB | 5616 | CLA | C2-C1-O2A-CGA |
| 29 | BA | 5415 | LHG | C9-C10-C11-C12 |
| 30 | AF | 102 | SQD | C24-C25-C26-C27 |
| 24 | AC | 507 | CLA | C10-C11-C12-C13 |
| 24 | AD | 404 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5503 | CLA | O1A-CGA-O2A-C1 |
| 24 | AD | 404 | CLA | C4C-C3C-CAC-CBC |
| 24 | BC | 5510 | CLA | C3-C5-C6-C7 |
| 27 | AA | 410 | BCR | C1-C6-C7-C8 |
| 27 | AA | 410 | BCR | C5-C6-C7-C8 |
| 27 | AA | 410 | BCR | C23-C24-C25-C26 |
| 27 | AA | 410 | BCR | C23-C24-C25-C30 |
| 27 | AB | 619 | BCR | C1-C6-C7-C8 |
| 27 | AB | 619 | BCR | C5-C6-C7-C8 |
| 27 | AC | 514 | BCR | C23-C24-C25-C26 |
| 27 | AC | 514 | BCR | C23-C24-C25-C30 |
| 27 | AC | 515 | BCR | C23-C24-C25-C26 |
| 27 | AD | 406 | BCR | C5-C6-C7-C8 |
| 27 | AD | 406 | BCR | C23-C24-C25-C30 |
| 27 | AK | 102 | BCR | C5-C6-C7-C8 |
| 27 | AT | 101 | BCR | C23-C24-C25-C26 |
| 27 | AT | 101 | BCR | C23-C24-C25-C30 |
| 27 | BA | 5411 | BCR | C1-C6-C7-C8 |
| 27 | BA | 5411 | BCR | C5-C6-C7-C8 |
| 27 | BA | 5411 | BCR | C23-C24-C25-C26 |
| 27 | BA | 5411 | BCR | C23-C24-C25-C30 |
| 27 | BB | 5623 | BCR | C1-C6-C7-C8 |
| 27 | BB | 5623 | BCR | C5-C6-C7-C8 |
| 27 | BC | 5514 | BCR | C23-C24-C25-C26 |
| 27 | BC | 5514 | BCR | C23-C24-C25-C30 |
| 27 | BC | 5515 | BCR | C23-C24-C25-C26 |
| 27 | BD | 5407 | BCR | C5-C6-C7-C8 |
| 27 | BD | 5407 | BCR | C23-C24-C25-C30 |
| 27 | BK | 5102 | BCR | C5-C6-C7-C8 |
| 27 | BT | 5101 | BCR | C23-C24-C25-C26 |
| 27 | BT | 5101 | BCR | C23-C24-C25-C30 |
| 24 | BB | 5605 | CLA | C2C-C3C-CAC-CBC |
| 32 | AB | 630 | LMT | C3'-C4'-O1B-C1B |
| 24 | BC | 5501 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 30 | AB | 627 | SQD | C10-C11-C12-C13 |
| 30 | BA | 5414 | SQD | C11-C10-C9-C8 |
| 32 | AM | 102 | LMT | C3'-C4'-O1B-C1B |
| 30 | BB | 5625 | SQD | C27-C28-C29-C30 |
| 29 | AA | 412 | LHG | C25-C26-C27-C28 |
| 29 | BA | 5413 | LHG | C25-C26-C27-C28 |
| 24 | AB | 602 | CLA | C12-C13-C15-C16 |
| 24 | AB | 605 | CLA | C11-C12-C13-C15 |
| 24 | AB | 606 | CLA | C12-C13-C15-C16 |
| 24 | AB | 608 | CLA | C11-C12-C13-C15 |
| 24 | AC | 503 | CLA | C11-C12-C13-C15 |
| 24 | AC | 512 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5606 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5609 | CLA | C11-C12-C13-C15 |
| 24 | BB | 5610 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5612 | CLA | C11-C12-C13-C15 |
| 24 | BC | 5512 | CLA | C12-C13-C15-C16 |
| 24 | AC | 503 | CLA | O1A-CGA-O2A-C1 |
| 24 | BD | 5405 | CLA | O1A-CGA-O2A-C1 |
| 24 | AB | 601 | CLA | C2C-C3C-CAC-CBC |
| 30 | AB | 622 | SQD | C27-C28-C29-C30 |
| 32 | BB | 5604 | LMT | C3'-C4'-O1B-C1B |
| 32 | BM | 5101 | LMT | C3'-C4'-O1B-C1B |
| 24 | AC | 501 | CLA | C10-C11-C12-C13 |
| 24 | AC | 501 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5609 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5501 | CLA | C13-C15-C16-C17 |
| 24 | BC | 5507 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5513 | CLA | C10-C11-C12-C13 |
| 34 | BD | 5403 | PHO | CBD-CGD-O2D-CED |
| 30 | AB | 622 | SQD | O49-C7-O47-C45 |
| 24 | BA | 5407 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5615 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 602 | CLA | C2A-CAA-CBA-CGA |
| 24 | BB | 5606 | CLA | C2A-CAA-CBA-CGA |
| 30 | BB | 5601 | SQD | C10-C11-C12-C13 |
| 34 | AD | 402 | PHO | CBD-CGD-O2D-CED |
| 24 | AB | 605 | CLA | C10-C11-C12-C13 |
| 24 | AC | 504 | CLA | C10-C11-C12-C13 |
| 24 | AC | 513 | CLA | C10-C11-C12-C13 |
| 24 | BC | 5504 | CLA | C10-C11-C12-C13 |
| 30 | AB | 622 | SQD | C8-C7-O47-C45 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 30 | BB | 5625 | SQD | C8-C7-O47-C45 |
| 30 | BB | 5625 | SQD | O49-C7-O47-C45 |
| 30 | AF | 102 | SQD | C2-C1-O6-C44 |
| 30 | BF | 5102 | SQD | C2-C1-O6-C44 |
| 28 | AC | 519 | DGD | O2G-C2G-C3G-O3G |
| 28 | BC | 5519 | DGD | O2G-C2G-C3G-O3G |
| 31 | AJ | 102 | LMG | O1-C7-C8-O7 |
| 31 | BD | 5408 | LMG | O1-C7-C8-O7 |
| 30 | AF | 102 | SQD | C25-C26-C27-C28 |
| 35 | AD | 405 | PL9 | C4-C3-C7-C8 |
| 35 | BD | 5406 | PL9 | C4-C3-C7-C8 |
| 24 | AA | 405 | CLA | C14-C13-C15-C16 |
| 24 | AB | 602 | CLA | C14-C13-C15-C16 |
| 24 | AB | 605 | CLA | C11-C12-C13-C14 |
| 24 | AB | 608 | CLA | C11-C12-C13-C14 |
| 24 | AB | 611 | CLA | C6-C7-C8-C9 |
| 24 | AC | 501 | CLA | C11-C12-C13-C14 |
| 24 | AC | 503 | CLA | C11-C12-C13-C14 |
| 24 | AC | 504 | CLA | C6-C7-C8-C9 |
| 24 | BA | 5406 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5606 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5609 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5610 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5615 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5501 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5503 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5504 | CLA | C6-C7-C8-C9 |
| 24 | BD | 5402 | CLA | C11-C12-C13-C14 |
| 34 | BD | 5404 | PHO | C6-C7-C8-C9 |
| 30 | AA | 416 | SQD | C24-C25-C26-C27 |
| 24 | AC | 502 | CLA | O1A-CGA-O2A-C1 |
| 29 | AA | 412 | LHG | C26-C27-C28-C29 |
| 29 | BA | 5415 | LHG | C13-C14-C15-C16 |
| 30 | BF | 5102 | SQD | C25-C26-C27-C28 |
| 24 | AB | 603 | CLA | C10-C11-C12-C13 |
| 24 | AD | 401 | CLA | C10-C11-C12-C13 |
| 29 | AA | 415 | LHG | C3-O3-P-O6 |
| 29 | BA | 5415 | LHG | C3-O3-P-O6 |
| 24 | BD | 5405 | CLA | C4C-C3C-CAC-CBC |
| 24 | AC | 502 | CLA | CBA-CGA-O2A-C1 |
| 30 | BA | 5401 | SQD | C24-C25-C26-C27 |
| 28 | AC | 518 | DGD | O6D-C5D-C6D-O5D |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 28 | BC | 5518 | DGD | O6D-C5D-C6D-O5D |
| 29 | AA | 415 | LHG | C13-C14-C15-C16 |
| 30 | AA | 416 | SQD | C9-C10-C11-C12 |
| 30 | BA | 5401 | SQD | C10-C11-C12-C13 |
| 30 | BF | 5102 | SQD | C11-C10-C9-C8 |
| 24 | AB | 611 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5502 | CLA | CBA-CGA-O2A-C1 |
| 30 | AA | 416 | SQD | C10-C11-C12-C13 |
| 30 | AF | 102 | SQD | C10-C11-C12-C13 |
| 24 | BC | 5502 | CLA | O1A-CGA-O2A-C1 |
| 29 | BA | 5413 | LHG | C26-C27-C28-C29 |
| 30 | BF | 5102 | SQD | C10-C11-C12-C13 |
| 24 | AA | 405 | CLA | C2A-CAA-CBA-CGA |
| 24 | BA | 5406 | CLA | C2A-CAA-CBA-CGA |
| 28 | AA | 411 | DGD | C1G-C2G-C3G-O3G |
| 28 | AC | 518 | DGD | C1G-C2G-C3G-O3G |
| 28 | AE | 101 | DGD | O1G-C1G-C2G-C3G |
| 28 | BA | 5412 | DGD | C1G-C2G-C3G-O3G |
| 28 | BC | 5518 | DGD | C1G-C2G-C3G-O3G |
| 28 | BE | 5102 | DGD | O1G-C1G-C2G-C3G |
| 30 | AA | 413 | SQD | O6-C44-C45-C46 |
| 30 | AB | 622 | SQD | O6-C44-C45-C46 |
| 30 | BA | 5414 | SQD | O6-C44-C45-C46 |
| 30 | BB | 5625 | SQD | O6-C44-C45-C46 |
| 31 | AJ | 102 | LMG | O1-C7-C8-C9 |
| 31 | BD | 5408 | LMG | O1-C7-C8-C9 |
| 24 | BD | 5402 | CLA | C10-C11-C12-C13 |
| 30 | AF | 102 | SQD | C11-C10-C9-C8 |
| 24 | BB | 5607 | CLA | C10-C11-C12-C13 |
| 29 | AA | 412 | LHG | C9-C10-C11-C12 |
| 29 | BA | 5413 | LHG | C9-C10-C11-C12 |
| 24 | BB | 5615 | CLA | O1A-CGA-O2A-C1 |
| 29 | AA | 415 | LHG | O1-C1-C2-O2 |
| 29 | BA | 5415 | LHG | O1-C1-C2-O2 |
| 24 | BA | 5407 | CLA | O1A-CGA-O2A-C1 |
| 24 | AB | 601 | CLA | C4-C3-C5-C6 |
| 24 | BB | 5605 | CLA | C4-C3-C5-C6 |
| 24 | BC | 5503 | CLA | C4-C3-C5-C6 |
| 24 | AA | 406 | CLA | CBA-CGA-O2A-C1 |
| 24 | BC | 5509 | CLA | CBA-CGA-O2A-C1 |
| 30 | AB | 627 | SQD | C19-C20-C21-C22 |
| 30 | BA | 5401 | SQD | C9-C10-C11-C12 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 30 | BB | 5601 | SQD | C19-C20-C21-C22 |
| 28 | AA | 411 | DGD | C1G-C2G-O2G-C1B |
| 28 | AC | 517 | DGD | C3G-C2G-O2G-C1B |
| 28 | AH | 101 | DGD | C1G-C2G-O2G-C1B |
| 28 | BA | 5412 | DGD | C1G-C2G-O2G-C1B |
| 28 | BC | 5517 | DGD | C3G-C2G-O2G-C1B |
| 28 | BH | 5101 | DGD | C1G-C2G-O2G-C1B |
| 29 | BA | 5415 | LHG | C4-C5-O7-C7 |
| 30 | AA | 413 | SQD | C44-C45-O47-C7 |
| 30 | BA | 5414 | SQD | C44-C45-O47-C7 |
| 31 | AA | 417 | LMG | C7-C8-O7-C10 |
| 31 | AC | 520 | LMG | C9-C8-O7-C10 |
| 31 | AC | 521 | LMG | C7-C8-O7-C10 |
| 31 | BA | 5402 | LMG | C7-C8-O7-C10 |
| 31 | BC | 5520 | LMG | C9-C8-O7-C10 |
| 31 | BC | 5521 | LMG | C7-C8-O7-C10 |
| 24 | AD | 401 | CLA | C2-C1-O2A-CGA |
| 24 | BA | 5405 | CLA | C2-C1-O2A-CGA |
| 30 | AA | 413 | SQD | C10-C11-C12-C13 |
| 30 | BA | 5414 | SQD | C11-C12-C13-C14 |
| 24 | AB | 613 | CLA | C13-C15-C16-C17 |
| 24 | AC | 508 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5617 | CLA | C13-C15-C16-C17 |
| 24 | AB | 615 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5619 | CLA | CBA-CGA-O2A-C1 |
| 28 | AB | 628 | DGD | O1G-C1G-C2G-O2G |
| 28 | BB | 5602 | DGD | O1G-C1G-C2G-O2G |
| 31 | AC | 521 | LMG | O7-C8-C9-O8 |
| 31 | BC | 5521 | LMG | O7-C8-C9-O8 |
| 24 | AC | 503 | CLA | C4-C3-C5-C6 |
| 24 | AA | 405 | CLA | C6-C7-C8-C10 |
| 24 | AA | 405 | CLA | C12-C13-C15-C16 |
| 24 | AA | 407 | CLA | C6-C7-C8-C10 |
| 24 | AA | 407 | CLA | C12-C13-C15-C16 |
| 24 | AB | 603 | CLA | C11-C12-C13-C15 |
| 24 | AB | 612 | CLA | C11-C12-C13-C15 |
| 24 | AB | 612 | CLA | C12-C13-C15-C16 |
| 24 | AC | 501 | CLA | C11-C12-C13-C15 |
| 24 | AC | 504 | CLA | C6-C7-C8-C10 |
| 24 | AC | 504 | CLA | C11-C12-C13-C15 |
| 24 | AC | 510 | CLA | C11-C12-C13-C15 |
| 24 | BA | 5406 | CLA | C6-C7-C8-C10 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | BA | 5406 | CLA | C12-C13-C15-C16 |
| 24 | BA | 5408 | CLA | C6-C7-C8-C10 |
| 24 | BA | 5408 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5605 | CLA | C2-C3-C5-C6 |
| 24 | BB | 5607 | CLA | C11-C12-C13-C15 |
| 24 | BC | 5501 | CLA | C11-C12-C13-C15 |
| 24 | BC | 5504 | CLA | C6-C7-C8-C10 |
| 24 | BC | 5504 | CLA | C11-C12-C13-C15 |
| 24 | BC | 5510 | CLA | C11-C12-C13-C15 |
| 24 | BC | 5511 | CLA | C6-C7-C8-C10 |
| 34 | AD | 402 | PHO | C12-C13-C15-C16 |
| 34 | AD | 403 | PHO | C6-C7-C8-C10 |
| 34 | BD | 5403 | PHO | C12-C13-C15-C16 |
| 34 | BD | 5404 | PHO | C6-C7-C8-C10 |
| 24 | AB | 611 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5619 | CLA | O1A-CGA-O2A-C1 |
| 30 | AA | 413 | SQD | C11-C12-C13-C14 |
| 30 | AB | 622 | SQD | C10-C11-C12-C13 |
| 24 | AA | 404 | CLA | C6-C7-C8-C9 |
| 24 | AA | 407 | CLA | C14-C13-C15-C16 |
| 24 | AB | 612 | CLA | C14-C13-C15-C16 |
| 24 | AB | 613 | CLA | C6-C7-C8-C9 |
| 24 | AB | 614 | CLA | C14-C13-C15-C16 |
| 24 | AC | 502 | CLA | C14-C13-C15-C16 |
| 24 | AC | 503 | CLA | C14-C13-C15-C16 |
| 24 | AC | 506 | CLA | C6-C7-C8-C9 |
| 24 | AC | 510 | CLA | C11-C12-C13-C14 |
| 24 | AD | 401 | CLA | C11-C12-C13-C14 |
| 24 | BA | 5405 | CLA | C6-C7-C8-C9 |
| 24 | BA | 5408 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5615 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5616 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5617 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5618 | CLA | C14-C13-C15-C16 |
| 24 | BC | 5502 | CLA | C14-C13-C15-C16 |
| 24 | BC | 5506 | CLA | C6-C7-C8-C9 |
| 24 | BC | 5510 | CLA | C11-C12-C13-C14 |
| 34 | AD | 402 | PHO | C14-C13-C15-C16 |
| 34 | AD | 403 | PHO | C6-C7-C8-C9 |
| 34 | BD | 5403 | PHO | C14-C13-C15-C16 |
| 30 | BB | 5625 | SQD | C10-C11-C12-C13 |
| 24 | AB | 616 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 24 | BC | 5508 | CLA | C13-C15-C16-C17 |
| 29 | AA | 415 | LHG | C8-C7-O7-C5 |
| 29 | BA | 5415 | LHG | C8-C7-O7-C5 |
| 24 | BC | 5509 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 509 | CLA | CBA-CGA-O2A-C1 |
| 30 | AA | 413 | SQD | C23-C24-C25-C26 |
| 30 | BA | 5401 | SQD | C17-C18-C19-C20 |
| 29 | AA | 415 | LHG | C25-C26-C27-C28 |
| 30 | BA | 5414 | SQD | C10-C11-C12-C13 |
| 24 | BB | 5620 | CLA | C10-C11-C12-C13 |
| 24 | AB | 611 | CLA | C4-C3-C5-C6 |
| 24 | AB | 601 | CLA | C2-C3-C5-C6 |
| 24 | AC | 503 | CLA | C2-C3-C5-C6 |
| 24 | BC | 5503 | CLA | C2-C3-C5-C6 |
| 29 | AA | 415 | LHG | C15-C16-C17-C18 |
| 29 | BA | 5415 | LHG | C15-C16-C17-C18 |
| 30 | AA | 416 | SQD | C17-C18-C19-C20 |
| 30 | BF | 5102 | SQD | C27-C28-C29-C30 |
| 34 | AD | 403 | PHO | C3-C5-C6-C7 |
| 30 | BA | 5401 | SQD | C8-C7-O47-C45 |
| 30 | BA | 5414 | SQD | C23-C24-C25-C26 |
| 30 | AA | 413 | SQD | C44-C45-C46-O48 |
| 30 | AB | 622 | SQD | C44-C45-C46-O48 |
| 30 | AB | 627 | SQD | C44-C45-C46-O48 |
| 30 | BA | 5414 | SQD | C44-C45-C46-O48 |
| 30 | BB | 5601 | SQD | C44-C45-C46-O48 |
| 30 | BB | 5625 | SQD | C44-C45-C46-O48 |
| 31 | AB | 620 | LMG | O1-C7-C8-C9 |
| 31 | AB | 620 | LMG | C7-C8-C9-O8 |
| 31 | AB | 621 | LMG | O1-C7-C8-C9 |
| 31 | AC | 520 | LMG | C7-C8-C9-O8 |
| 31 | AC | 521 | LMG | O1-C7-C8-C9 |
| 31 | AD | 407 | LMG | C7-C8-C9-O8 |
| 31 | BC | 5520 | LMG | C7-C8-C9-O8 |
| 31 | BC | 5521 | LMG | O1-C7-C8-C9 |
| 31 | BD | 5409 | LMG | C7-C8-C9-O8 |
| 31 | BL | 5101 | LMG | O1-C7-C8-C9 |
| 31 | BL | 5101 | LMG | C7-C8-C9-O8 |
| 30 | AF | 102 | SQD | C27-C28-C29-C30 |
| 24 | AB | 615 | CLA | O1A-CGA-O2A-C1 |
| 24 | AA | 405 | CLA | O2A-C1-C2-C3 |
| 24 | BB | 5611 | CLA | C10-C11-C12-C13 |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 34 | BD | 5404 | PHO | C3-C5-C6-C7 |
| 24 | AA | 406 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5615 | CLA | C4-C3-C5-C6 |
| 24 | AB | 610 | CLA | C2A-CAA-CBA-CGA |
| 24 | AB | 607 | CLA | C10-C11-C12-C13 |
| 29 | BA | 5415 | LHG | C25-C26-C27-C28 |
| 28 | AC | 517 | DGD | O2G-C2G-C3G-O3G |
| 28 | BC | 5517 | DGD | O2G-C2G-C3G-O3G |
| 30 | AB | 622 | SQD | O6-C44-C45-O47 |
| 30 | AB | 627 | SQD | O47-C45-C46-O48 |
| 30 | BB | 5601 | SQD | O47-C45-C46-O48 |
| 30 | BB | 5625 | SQD | O6-C44-C45-O47 |
| 31 | AD | 407 | LMG | O1-C7-C8-O7 |
| 31 | AD | 407 | LMG | O7-C8-C9-O8 |
| 31 | AD | 408 | LMG | O7-C8-C9-O8 |
| 31 | BD | 5409 | LMG | O1-C7-C8-O7 |
| 31 | BD | 5409 | LMG | O7-C8-C9-O8 |
| 31 | BD | 5410 | LMG | O7-C8-C9-O8 |
| 30 | AA | 416 | SQD | C8-C7-O47-C45 |
| 24 | BB | 5613 | CLA | C10-C11-C12-C13 |
| 30 | BB | 5601 | SQD | C25-C26-C27-C28 |
| 30 | AA | 416 | SQD | O49-C7-O47-C45 |
| 30 | BA | 5401 | SQD | O49-C7-O47-C45 |
| 24 | AA | 404 | CLA | C2-C1-O2A-CGA |
| 24 | BD | 5402 | CLA | C2-C1-O2A-CGA |
| 30 | AB | 627 | SQD | C25-C26-C27-C28 |
| 24 | AB | 612 | CLA | C11-C12-C13-C14 |
| 24 | AB | 616 | CLA | C6-C7-C8-C9 |
| 24 | AC | 503 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5616 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5620 | CLA | C6-C7-C8-C9 |
| 24 | BC | 5503 | CLA | C6-C7-C8-C9 |
| 34 | AD | 402 | PHO | C11-C10-C8-C9 |
| 34 | BD | 5403 | PHO | C11-C10-C8-C9 |
| 24 | AB | 609 | CLA | C10-C11-C12-C13 |
| 29 | AA | 412 | LHG | C2-C3-O3-P |
| 29 | BA | 5413 | LHG | C2-C3-O3-P |
| 27 | AC | 516 | BCR | C5-C6-C7-C8 |
| 27 | AK | 102 | BCR | C1-C6-C7-C8 |
| 27 | BK | 5102 | BCR | C1-C6-C7-C8 |
| 24 | BB | 5605 | CLA | C4C-C3C-CAC-CBC |
| 29 | AA | 415 | LHG | O9-C7-O7-C5 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 29 | BA | 5415 | LHG | O9-C7-O7-C5 |
| 24 | AB | 601 | CLA | C3-C5-C6-C7 |
| 24 | AB | 609 | CLA | C13-C15-C16-C17 |
| 24 | AA | 404 | CLA | C6-C7-C8-C10 |
| 24 | AB | 601 | CLA | C12-C13-C15-C16 |
| 24 | AB | 604 | CLA | C11-C12-C13-C15 |
| 24 | AB | 610 | CLA | C12-C13-C15-C16 |
| 24 | AB | 611 | CLA | C2-C3-C5-C6 |
| 24 | AB | 613 | CLA | C6-C7-C8-C10 |
| 24 | AB | 615 | CLA | C11-C12-C13-C15 |
| 24 | AB | 616 | CLA | C6-C7-C8-C10 |
| 24 | AC | 502 | CLA | C12-C13-C15-C16 |
| 24 | AC | 506 | CLA | C6-C7-C8-C10 |
| 24 | AC | 511 | CLA | C12-C13-C15-C16 |
| 24 | AD | 401 | CLA | C11-C12-C13-C15 |
| 24 | BA | 5405 | CLA | C6-C7-C8-C10 |
| 24 | BB | 5605 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5608 | CLA | C11-C12-C13-C15 |
| 24 | BB | 5610 | CLA | C11-C12-C13-C15 |
| 24 | BB | 5614 | CLA | C11-C12-C13-C15 |
| 24 | BB | 5614 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5615 | CLA | C2-C3-C5-C6 |
| 24 | BB | 5616 | CLA | C11-C12-C13-C15 |
| 24 | BB | 5616 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5617 | CLA | C6-C7-C8-C10 |
| 24 | BB | 5619 | CLA | C11-C12-C13-C15 |
| 24 | BB | 5620 | CLA | C6-C7-C8-C10 |
| 24 | BC | 5502 | CLA | C12-C13-C15-C16 |
| 24 | BC | 5503 | CLA | C6-C7-C8-C10 |
| 24 | BC | 5506 | CLA | C6-C7-C8-C10 |
| 24 | BC | 5511 | CLA | C12-C13-C15-C16 |
| 24 | BD | 5402 | CLA | C11-C12-C13-C15 |
| 34 | AD | 403 | PHO | C11-C10-C8-C7 |
| 34 | BD | 5404 | PHO | C11-C10-C8-C7 |
| 24 | BB | 5613 | CLA | C13-C15-C16-C17 |
| 24 | AB | 601 | CLA | C4C-C3C-CAC-CBC |
| 24 | AB | 608 | CLA | C10-C11-C12-C13 |
| 24 | AC | 509 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5614 | CLA | C2A-CAA-CBA-CGA |
| 34 | AD | 402 | PHO | C3-C5-C6-C7 |
| 34 | BD | 5403 | PHO | C3-C5-C6-C7 |
| 24 | AB | 603 | CLA | CAA-CBA-CGA-O2A |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | AA | 404 | CLA | CAD-CBD-CGD-O2D |
| 24 | BA | 5405 | CLA | CAD-CBD-CGD-O2D |
| 28 | AC | 519 | DGD | C3G-C2G-O2G-C1B |
| 28 | BC | 5519 | DGD | C3G-C2G-O2G-C1B |
| 31 | AD | 407 | LMG | C7-C8-O7-C10 |
| 31 | BD | 5409 | LMG | C7-C8-O7-C10 |
| 24 | BB | 5605 | CLA | C3-C5-C6-C7 |
| 27 | AA | 410 | BCR | C6-C7-C8-C9 |
| 27 | BA | 5411 | BCR | C6-C7-C8-C9 |
| 34 | AD | 402 | PHO | C4-C3-C5-C6 |
| 24 | BB | 5612 | CLA | C10-C11-C12-C13 |
| 28 | AA | 411 | DGD | O1G-C1G-C2G-C3G |
| 28 | BA | 5412 | DGD | O1G-C1G-C2G-C3G |
| 29 | AA | 412 | LHG | C4-C5-C6-O8 |
| 29 | BA | 5413 | LHG | C4-C5-C6-O8 |
| 30 | AA | 416 | SQD | O6-C44-C45-C46 |
| 30 | BA | 5401 | SQD | O6-C44-C45-C46 |
| 31 | AD | 407 | LMG | O1-C7-C8-C9 |
| 31 | BB | 5624 | LMG | O1-C7-C8-C9 |
| 31 | BD | 5409 | LMG | O1-C7-C8-C9 |
| 24 | BB | 5613 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 503 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5607 | CLA | CAA-CBA-CGA-O2A |
| 24 | AB | 603 | CLA | CHA-CBD-CGD-O1D |
| 24 | AB | 603 | CLA | CHA-CBD-CGD-O2D |
| 24 | AC | 508 | CLA | CHA-CBD-CGD-O1D |
| 24 | AC | 508 | CLA | CHA-CBD-CGD-O2D |
| 24 | BB | 5607 | CLA | CHA-CBD-CGD-O1D |
| 24 | BB | 5607 | CLA | CHA-CBD-CGD-O2D |
| 24 | BC | 5508 | CLA | CHA-CBD-CGD-O1D |
| 24 | BC | 5508 | CLA | CHA-CBD-CGD-O2D |
| 28 | AA | 411 | DGD | O2G-C2G-C3G-O3G |
| 28 | AB | 628 | DGD | O2G-C2G-C3G-O3G |
| 28 | BA | 5412 | DGD | O2G-C2G-C3G-O3G |
| 28 | BB | 5602 | DGD | O2G-C2G-C3G-O3G |
| 29 | AA | 412 | LHG | O7-C5-C6-O8 |
| 29 | BA | 5413 | LHG | O7-C5-C6-O8 |
| 30 | AA | 413 | SQD | O6-C44-C45-O47 |
| 30 | AB | 622 | SQD | O47-C45-C46-O48 |
| 30 | BA | 5414 | SQD | O6-C44-C45-O47 |
| 30 | BA | 5414 | SQD | O47-C45-C46-O48 |
| 30 | BB | 5625 | SQD | O47-C45-C46-O48 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 31 | AM | 101 | LMG | O1-C7-C8-O7 |
| 31 | BM | 5102 | LMG | O1-C7-C8-O7 |
| 24 | AB | 601 | CLA | C14-C13-C15-C16 |
| 24 | AB | 611 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5605 | CLA | C14-C13-C15-C16 |
| 34 | AD | 403 | PHO | C11-C10-C8-C9 |
| 34 | BD | 5404 | PHO | C11-C10-C8-C9 |
| 24 | AB | 609 | CLA | O1A-CGA-O2A-C1 |
| 29 | BA | 5413 | LHG | C23-C24-C25-C26 |
| 24 | BC | 5503 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5613 | CLA | CBA-CGA-O2A-C1 |
| 29 | BA | 5413 | LHG | C30-C31-C32-C33 |
| 24 | BC | 5503 | CLA | C10-C11-C12-C13 |
| 32 | BI | 5102 | LMT | C5'-C4'-O1B-C1B |
| 32 | AI | 102 | LMT | C5'-C4'-O1B-C1B |
| 29 | AA | 415 | LHG | C3-O3-P-O4 |
| 24 | AB | 609 | CLA | CBA-CGA-O2A-C1 |
| 29 | AA | 412 | LHG | C30-C31-C32-C33 |
| 24 | AB | 603 | CLA | CAD-CBD-CGD-O1D |
| 24 | BB | 5607 | CLA | CAD-CBD-CGD-O1D |
| 30 | BA | 5414 | SQD | C5-C6-S-O7 |
| 30 | BA | 5414 | SQD | C5-C6-S-O9 |
| 29 | AA | 412 | LHG | C23-C24-C25-C26 |
| 24 | AC | 511 | CLA | CBA-CGA-O2A-C1 |
| 24 | AB | 603 | CLA | C6-C7-C8-C10 |
| 24 | AB | 606 | CLA | C11-C12-C13-C15 |
| 24 | AB | 610 | CLA | C11-C12-C13-C15 |
| 24 | AB | 613 | CLA | C12-C13-C15-C16 |
| 24 | AC | 501 | CLA | C6-C7-C8-C10 |
| 24 | AC | 503 | CLA | C6-C7-C8-C10 |
| 24 | AC | 505 | CLA | C11-C12-C13-C15 |
| 24 | AC | 511 | CLA | C6-C7-C8-C10 |
| 24 | BB | 5607 | CLA | C6-C7-C8-C10 |
| 24 | BB | 5617 | CLA | C12-C13-C15-C16 |
| 24 | BC | 5501 | CLA | C6-C7-C8-C10 |
| 24 | BC | 5505 | CLA | C11-C12-C13-C15 |
| 30 | BF | 5102 | SQD | C15-C16-C17-C18 |
| 24 | AC | 503 | CLA | C10-C11-C12-C13 |
| 31 | AM | 101 | LMG | O1-C7-C8-C9 |
| 31 | BM | 5102 | LMG | O1-C7-C8-C9 |
| 30 | AA | 413 | SQD | O47-C45-C46-O48 |
| 30 | AF | 102 | SQD | C45-C44-O6-C1 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 30 | BF | 5102 | SQD | C45-C44-O6-C1 |
| 34 | BD | 5403 | PHO | C4-C3-C5-C6 |
| 24 | BC | 5511 | CLA | CBA-CGA-O2A-C1 |
| 24 | AC | 502 | CLA | C10-C11-C12-C13 |
| 24 | AA | 407 | CLA | C6-C7-C8-C9 |
| 24 | AB | 604 | CLA | C11-C12-C13-C14 |
| 24 | AB | 606 | CLA | C11-C12-C13-C14 |
| 24 | AB | 610 | CLA | C11-C12-C13-C14 |
| 24 | AB | 615 | CLA | C11-C12-C13-C14 |
| 24 | AC | 511 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5607 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5608 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5610 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5614 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5615 | CLA | C14-C13-C15-C16 |
| 24 | BC | 5511 | CLA | C6-C7-C8-C9 |
| 28 | AC | 518 | DGD | C1G-C2G-O2G-C1B |
| 28 | BC | 5518 | DGD | C1G-C2G-O2G-C1B |
| 29 | AA | 415 | LHG | C4-C5-O7-C7 |
| 31 | AA | 414 | LMG | C9-C8-O7-C10 |
| 31 | AI | 101 | LMG | C9-C8-O7-C10 |
| 31 | BE | 5101 | LMG | C9-C8-O7-C10 |
| 24 | AA | 407 | CLA | C2-C1-O2A-CGA |
| 24 | AC | 512 | CLA | C2-C1-O2A-CGA |
| 24 | AC | 513 | CLA | C2-C1-O2A-CGA |
| 24 | BA | 5408 | CLA | C2-C1-O2A-CGA |
| 24 | BC | 5512 | CLA | C2-C1-O2A-CGA |
| 24 | BC | 5513 | CLA | C2-C1-O2A-CGA |
| 24 | AC | 511 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5608 | CLA | C10-C11-C12-C13 |
| 24 | AB | 605 | CLA | C4-C3-C5-C6 |
| 34 | BD | 5403 | PHO | O1D-CGD-O2D-CED |
| 27 | BC | 5516 | BCR | C5-C6-C7-C8 |
| 24 | BA | 5406 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5511 | CLA | O1A-CGA-O2A-C1 |
| 24 | AC | 510 | CLA | C10-C11-C12-C13 |
| 29 | BA | 5415 | LHG | C27-C28-C29-C30 |
| 24 | BB | 5612 | CLA | C13-C15-C16-C17 |
| 34 | AD | 402 | PHO | C2A-CAA-CBA-CGA |
| 34 | BD | 5403 | PHO | C2A-CAA-CBA-CGA |
| 30 | AB | 627 | SQD | C2-C1-O6-C44 |
| 30 | BB | 5601 | SQD | C2-C1-O6-C44 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 31 | AC | 521 | LMG | O1-C7-C8-O7 |
| 31 | BC | 5521 | LMG | O1-C7-C8-O7 |
| 29 | AA | 412 | LHG | C3-O3-P-O6 |
| 29 | BA | 5413 | LHG | C3-O3-P-O6 |
| 30 | BA | 5414 | SQD | C19-C20-C21-C22 |
| 29 | AA | 415 | LHG | C27-C28-C29-C30 |
| 24 | BB | 5615 | CLA | C6-C7-C8-C10 |
| 24 | BC | 5503 | CLA | C12-C13-C15-C16 |
| 34 | AD | 402 | PHO | C2-C3-C5-C6 |
| 24 | AB | 603 | CLA | C6-C7-C8-C9 |
| 24 | AC | 501 | CLA | C6-C7-C8-C9 |
| 24 | AC | 511 | CLA | C14-C13-C15-C16 |
| 24 | AC | 512 | CLA | C14-C13-C15-C16 |
| 24 | BA | 5408 | CLA | C6-C7-C8-C9 |
| 24 | BB | 5619 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5501 | CLA | C6-C7-C8-C9 |
| 24 | BC | 5511 | CLA | C14-C13-C15-C16 |
| 24 | AB | 608 | CLA | C13-C15-C16-C17 |
| 34 | AD | 402 | PHO | O1D-CGD-O2D-CED |
| 30 | AA | 413 | SQD | C19-C20-C21-C22 |
| 30 | AF | 102 | SQD | C15-C16-C17-C18 |
| 24 | BC | 5502 | CLA | C10-C11-C12-C13 |
| 24 | AB | 604 | CLA | C10-C11-C12-C13 |
| 29 | BA | 5413 | LHG | O9-C7-O7-C5 |
| 24 | AB | 606 | CLA | CBA-CGA-O2A-C1 |
| 24 | BA | 5406 | CLA | CBA-CGA-O2A-C1 |
| 32 | BB | 5627 | LMT | C3'-C4'-O1B-C1B |
| 29 | AA | 412 | LHG | O9-C7-O7-C5 |
| 29 | AA | 412 | LHG | C24-C25-C26-C27 |
| 24 | AB | 606 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5504 | CLA | C2-C1-O2A-CGA |
| 29 | BA | 5413 | LHG | C24-C25-C26-C27 |
| 24 | AB | 616 | CLA | C2C-C3C-CAC-CBC |
| 32 | AB | 624 | LMT | C3'-C4'-O1B-C1B |
| 34 | BD | 5403 | PHO | C2-C3-C5-C6 |
| 24 | AC | 511 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5512 | CLA | C14-C13-C15-C16 |
| 24 | BB | 5619 | CLA | C13-C15-C16-C17 |
| 31 | BD | 5410 | LMG | C7-C8-C9-O8 |
| 35 | AD | 405 | PL9 | C34-C36-C37-C38 |
| 35 | BD | 5406 | PL9 | C34-C36-C37-C38 |
| 30 | BB | 5601 | SQD | C12-C13-C14-C15 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 29 | AA | 415 | LHG | C26-C27-C28-C29 |
| 31 | BI | 5101 | LMG | C9-C8-O7-C10 |
| 24 | BB | 5609 | CLA | C4-C3-C5-C6 |
| 24 | BD | 5402 | CLA | C4-C3-C5-C6 |
| 24 | AA | 404 | CLA | C12-C13-C15-C16 |
| 24 | AB | 611 | CLA | C6-C7-C8-C10 |
| 24 | AC | 503 | CLA | C12-C13-C15-C16 |
| 24 | AC | 507 | CLA | C12-C13-C15-C16 |
| 24 | AC | 510 | CLA | C12-C13-C15-C16 |
| 24 | BC | 5507 | CLA | C12-C13-C15-C16 |
| 24 | BC | 5510 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5612 | CLA | CAA-CBA-CGA-O2A |
| 24 | AB | 615 | CLA | C13-C15-C16-C17 |
| 24 | BC | 5510 | CLA | C10-C11-C12-C13 |
| 24 | AB | 608 | CLA | CAA-CBA-CGA-O2A |
| 24 | BC | 5501 | CLA | CAA-CBA-CGA-O2A |
| 35 | AD | 405 | PL9 | C3-C7-C8-C9 |
| 30 | AB | 627 | SQD | C11-C10-C9-C8 |
| 29 | AA | 412 | LHG | C8-C7-O7-C5 |
| 29 | BA | 5413 | LHG | C8-C7-O7-C5 |
| 24 | AB | 606 | CLA | C4-C3-C5-C6 |
| 24 | AD | 401 | CLA | C4-C3-C5-C6 |
| 24 | BB | 5620 | CLA | C4-C3-C5-C6 |
| 30 | AB | 622 | SQD | C11-C10-C9-C8 |
| 36 | AF | 101 | HEM | CAD-CBD-CGD-O1D |
| 24 | AA | 405 | CLA | O1A-CGA-O2A-C1 |
| 24 | BC | 5511 | CLA | C13-C15-C16-C17 |
| 31 | AA | 414 | LMG | O7-C8-C9-O8 |
| 31 | BE | 5101 | LMG | O7-C8-C9-O8 |
| 24 | AC | 501 | CLA | CAA-CBA-CGA-O2A |
| 30 | BF | 5102 | SQD | C29-C30-C31-C32 |
| 36 | BF | 5101 | HEM | CAD-CBD-CGD-O1D |
| 30 | AB | 622 | SQD | O10-C23-O48-C46 |
| 36 | AF | 101 | HEM | CAD-CBD-CGD-O2D |
| 24 | AC | 505 | CLA | C4-C3-C5-C6 |
| 35 | AD | 405 | PL9 | C45-C44-C46-C47 |
| 30 | BB | 5625 | SQD | C11-C10-C9-C8 |
| 24 | AB | 604 | CLA | C2-C1-O2A-CGA |
| 24 | BB | 5608 | CLA | C2-C1-O2A-CGA |
| 24 | BD | 5402 | CLA | C2-C3-C5-C6 |
| 29 | BA | 5415 | LHG | C26-C27-C28-C29 |
| 36 | BF | 5101 | HEM | CAD-CBD-CGD-O2D |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 24 | AC | 510 | CLA | C6-C7-C8-C9 |
| 24 | AC | 512 | CLA | C13-C15-C16-C17 |
| 24 | BB | 5610 | CLA | O1A-CGA-O2A-C1 |
| 27 | AC | 516 | BCR | C1-C6-C7-C8 |
| 27 | AX | 101 | BCR | C1-C6-C7-C8 |
| 24 | AB | 611 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5615 | CLA | CAA-CBA-CGA-O2A |
| 28 | AC | 518 | DGD | O1G-C1G-C2G-C3G |
| 31 | AD | 408 | LMG | C7-C8-C9-O8 |
| 31 | BA | 5402 | LMG | O1-C7-C8-C9 |
| 36 | AV | 201 | HEM | CAD-CBD-CGD-O2D |
| 36 | BV | 5201 | HEM | CAD-CBD-CGD-O2D |
| 30 | AB | 622 | SQD | C24-C23-O48-C46 |
| 24 | AA | 404 | CLA | C4-C3-C5-C6 |
| 24 | AB | 616 | CLA | C4-C3-C5-C6 |
| 24 | BC | 5505 | CLA | C4-C3-C5-C6 |
| 24 | BB | 5608 | CLA | CAA-CBA-CGA-O2A |
| 24 | BC | 5502 | CLA | CAA-CBA-CGA-O2A |
| 30 | AB | 627 | SQD | C12-C13-C14-C15 |
| 24 | BC | 5512 | CLA | C13-C15-C16-C17 |
| 24 | AB | 604 | CLA | CAA-CBA-CGA-O2A |
| 24 | AA | 405 | CLA | CBA-CGA-O2A-C1 |
| 24 | BB | 5610 | CLA | CBA-CGA-O2A-C1 |
| 28 | AB | 628 | DGD | O6E-C1E-O5D-C6D |
| 28 | BB | 5602 | DGD | O6E-C1E-O5D-C6D |
| 24 | AC | 502 | CLA | CAA-CBA-CGA-O2A |
| 24 | AC | 504 | CLA | O1A-CGA-O2A-C1 |
| 24 | BB | 5610 | CLA | C4-C3-C5-C6 |
| 35 | BD | 5406 | PL9 | C45-C44-C46-C47 |
| 24 | AB | 614 | CLA | C12-C13-C15-C16 |
| 24 | AB | 616 | CLA | C2-C3-C5-C6 |
| 24 | BB | 5612 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5618 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5620 | CLA | C12-C13-C15-C16 |
| 24 | BC | 5505 | CLA | C12-C13-C15-C16 |
| 30 | BB | 5625 | SQD | O10-C23-O48-C46 |
| 24 | AB | 601 | CLA | CAA-CBA-CGA-O2A |
| 24 | AC | 508 | CLA | CAA-CBA-CGA-O2A |
| 24 | BC | 5508 | CLA | CAA-CBA-CGA-O2A |
| 30 | AF | 102 | SQD | C29-C30-C31-C32 |
| 24 | AC | 511 | CLA | C13-C15-C16-C17 |
| 24 | AD | 401 | CLA | C2-C3-C5-C6 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | BB | 5620 | CLA | C2-C3-C5-C6 |
| 24 | AD | 401 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5605 | CLA | CAA-CBA-CGA-O2A |
| 24 | AB | 613 | CLA | C14-C13-C15-C16 |
| 24 | AC | 505 | CLA | C11-C12-C13-C14 |
| 24 | AD | 404 | CLA | C6-C7-C8-C9 |
| 24 | AD | 404 | CLA | C11-C12-C13-C14 |
| 24 | BB | 5620 | CLA | C14-C13-C15-C16 |
| 24 | BC | 5505 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5511 | CLA | C11-C12-C13-C14 |
| 24 | BD | 5405 | CLA | C6-C7-C8-C9 |
| 24 | AB | 605 | CLA | C3-C5-C6-C7 |
| 24 | AB | 605 | CLA | CAD-CBD-CGD-O2D |
| 24 | AC | 501 | CLA | CAD-CBD-CGD-O2D |
| 24 | AC | 502 | CLA | CAD-CBD-CGD-O2D |
| 24 | AC | 506 | CLA | CAD-CBD-CGD-O2D |
| 24 | AC | 509 | CLA | CAD-CBD-CGD-O2D |
| 24 | BB | 5609 | CLA | CAD-CBD-CGD-O2D |
| 24 | BC | 5501 | CLA | CAD-CBD-CGD-O2D |
| 24 | BC | 5502 | CLA | CAD-CBD-CGD-O2D |
| 24 | BC | 5506 | CLA | CAD-CBD-CGD-O2D |
| 24 | BC | 5509 | CLA | CAD-CBD-CGD-O2D |
| 24 | BC | 5510 | CLA | CAD-CBD-CGD-O2D |
| 34 | BD | 5403 | PHO | CAD-CBD-CGD-O2D |
| 24 | BD | 5402 | CLA | CAA-CBA-CGA-O2A |
| 24 | AC | 510 | CLA | C4-C3-C5-C6 |
| 24 | BC | 5510 | CLA | C4-C3-C5-C6 |
| 36 | AV | 201 | HEM | CAD-CBD-CGD-O1D |
| 28 | AB | 628 | DGD | C1G-C2G-C3G-O3G |
| 28 | AC | 517 | DGD | C1G-C2G-C3G-O3G |
| 28 | BB | 5602 | DGD | C1G-C2G-C3G-O3G |
| 28 | BC | 5517 | DGD | C1G-C2G-C3G-O3G |
| 28 | BC | 5518 | DGD | O1G-C1G-C2G-C3G |
| 31 | AA | 414 | LMG | C7-C8-C9-O8 |
| 31 | AA | 417 | LMG | O1-C7-C8-C9 |
| 31 | BE | 5101 | LMG | C7-C8-C9-O8 |
| 36 | BF | 5101 | HEM | CAA-CBA-CGA-O1A |
| 36 | BF | 5101 | HEM | CAA-CBA-CGA-O2A |
| 24 | AB | 614 | CLA | O2A-C1-C2-C3 |
| 24 | BB | 5618 | CLA | O2A-C1-C2-C3 |
| 34 | AD | 402 | PHO | O2A-C1-C2-C3 |
| 30 | BB | 5625 | SQD | C24-C23-O48-C46 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 24 | AC | 511 | CLA | CAA-CBA-CGA-O2A |
| 24 | BC | 5511 | CLA | CAA-CBA-CGA-O2A |
| 36 | AF | 101 | HEM | CAA-CBA-CGA-O1A |
| 24 | AB | 614 | CLA | CHA-CBD-CGD-O1D |
| 24 | AB | 614 | CLA | CHA-CBD-CGD-O2D |
| 24 | AC | 507 | CLA | CHA-CBD-CGD-O1D |
| 24 | BB | 5614 | CLA | CHA-CBD-CGD-O2D |
| 24 | BB | 5618 | CLA | CHA-CBD-CGD-O1D |
| 24 | BB | 5618 | CLA | CHA-CBD-CGD-O2D |
| 24 | BC | 5503 | CLA | CHA-CBD-CGD-O1D |
| 24 | BC | 5507 | CLA | CHA-CBD-CGD-O1D |
| 24 | BC | 5507 | CLA | CHA-CBD-CGD-O2D |
| 24 | AC | 512 | CLA | CAA-CBA-CGA-O2A |
| 24 | BC | 5512 | CLA | CAA-CBA-CGA-O2A |
| 24 | AC | 510 | CLA | C2-C3-C5-C6 |
| 24 | BC | 5510 | CLA | C2-C3-C5-C6 |
| 24 | AA | 404 | CLA | CAA-CBA-CGA-O2A |
| 29 | AA | 415 | LHG | O7-C7-C8-C9 |
| 30 | BB | 5601 | SQD | C11-C10-C9-C8 |
| 36 | AF | 101 | HEM | CAA-CBA-CGA-O2A |
| 36 | BV | 5201 | HEM | CAD-CBD-CGD-O1D |
| 24 | AC | 505 | CLA | CAA-CBA-CGA-O2A |
| 29 | AA | 412 | LHG | C31-C32-C33-C34 |
| 24 | AA | 407 | CLA | C11-C12-C13-C15 |
| 24 | AB | 605 | CLA | C2-C3-C5-C6 |
| 24 | AB | 616 | CLA | C12-C13-C15-C16 |
| 24 | AC | 505 | CLA | C12-C13-C15-C16 |
| 24 | AD | 404 | CLA | C6-C7-C8-C10 |
| 24 | BA | 5408 | CLA | C11-C12-C13-C15 |
| 24 | BA | 5405 | CLA | CAA-CBA-CGA-O2A |
| 29 | BA | 5415 | LHG | O7-C7-C8-C9 |
| 24 | AB | 616 | CLA | C4C-C3C-CAC-CBC |
| 24 | BB | 5617 | CLA | C14-C13-C15-C16 |
| 32 | BB | 5627 | LMT | C5'-C4'-O1B-C1B |
| 24 | AB | 603 | CLA | CAA-CBA-CGA-O1A |
| 28 | AC | 519 | DGD | C4D-C5D-C6D-O5D |
| 35 | AD | 405 | PL9 | C31-C32-C33-C34 |
| 35 | AD | 405 | PL9 | C41-C42-C43-C44 |
| 35 | BD | 5406 | PL9 | C21-C22-C23-C24 |
| 35 | BD | 5406 | PL9 | C31-C32-C33-C34 |
| 35 | BD | 5406 | PL9 | C41-C42-C43-C44 |
| 29 | AA | 415 | LHG | O8-C23-C24-C25 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 29 | BA | 5415 | LHG | O8-C23-C24-C25 |
| 30 | BA | 5401 | SQD | C12-C13-C14-C15 |
| 24 | BB | 5605 | CLA | CAA-CBA-CGA-O1A |
| 32 | AB | 624 | LMT | C5'-C4'-O1B-C1B |
| 24 | BA | 5405 | CLA | C4-C3-C5-C6 |
| 24 | BB | 5616 | CLA | C4-C3-C5-C6 |
| 24 | AB | 601 | CLA | CAA-CBA-CGA-O1A |
| 24 | AC | 512 | CLA | CAA-CBA-CGA-O1A |
| 24 | BD | 5402 | CLA | CAA-CBA-CGA-O1A |
| 35 | AD | 405 | PL9 | C11-C12-C13-C14 |
| 35 | AD | 405 | PL9 | C21-C22-C23-C24 |
| 35 | BD | 5406 | PL9 | C11-C12-C13-C14 |
| 24 | BC | 5512 | CLA | CAA-CBA-CGA-O1A |
| 30 | AB | 627 | SQD | C27-C28-C29-C30 |
| 28 | AB | 628 | DGD | O1G-C1G-C2G-C3G |
| 28 | AC | 519 | DGD | C1G-C2G-C3G-O3G |
| 24 | AD | 401 | CLA | CAA-CBA-CGA-O1A |
| 29 | AA | 415 | LHG | O9-C7-C8-C9 |
| 29 | BA | 5415 | LHG | O9-C7-C8-C9 |
| 24 | AB | 612 | CLA | C4-C3-C5-C6 |
| 24 | BB | 5613 | CLA | C4-C3-C5-C6 |
| 24 | BC | 5511 | CLA | CAA-CBA-CGA-O1A |
| 24 | BB | 5620 | CLA | C2C-C3C-CAC-CBC |
| 30 | AA | 416 | SQD | C2-C1-O6-C44 |
| 30 | BA | 5401 | SQD | C2-C1-O6-C44 |
| 29 | BA | 5415 | LHG | C3-O3-P-O4 |
| 35 | BD | 5406 | PL9 | C3-C7-C8-C9 |
| 32 | AI | 103 | LMT | C2B-C1B-O1B-C4' |
| 24 | BA | 5405 | CLA | C13-C15-C16-C17 |
| 30 | AA | 416 | SQD | C12-C13-C14-C15 |
| 35 | BD | 5406 | PL9 | C24-C26-C27-C28 |
| 24 | AC | 511 | CLA | CAA-CBA-CGA-O1A |
| 30 | BA | 5401 | SQD | C30-C31-C32-C33 |
| 24 | AA | 404 | CLA | C2A-CAA-CBA-CGA |
| 30 | BB | 5601 | SQD | C27-C28-C29-C30 |
| 24 | BB | 5607 | CLA | CAA-CBA-CGA-O1A |
| 24 | BC | 5505 | CLA | C2-C3-C5-C6 |
| 24 | AC | 502 | CLA | CAD-CBD-CGD-O1D |
| 24 | BC | 5502 | CLA | CAD-CBD-CGD-O1D |
| 24 | BC | 5505 | CLA | CAD-CBD-CGD-O1D |
| 28 | BE | 5102 | DGD | C1G-C2G-O2G-C1B |
| 29 | AA | 412 | LHG | C4-C5-O7-C7 |

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| Mol | Chain | Res | Type | Atoms |
|------------|--------------|------------|-------------|-----------------|
| 29 | BA | 5413 | LHG | C4-C5-O7-C7 |
| 24 | BC | 5504 | CLA | O1A-CGA-O2A-C1 |
| 24 | AA | 407 | CLA | C11-C12-C13-C14 |
| 24 | AB | 609 | CLA | C14-C13-C15-C16 |
| 24 | AB | 616 | CLA | C14-C13-C15-C16 |
| 24 | AC | 505 | CLA | C14-C13-C15-C16 |
| 24 | BA | 5408 | CLA | C11-C12-C13-C14 |
| 24 | BC | 5505 | CLA | C14-C13-C15-C16 |
| 24 | BC | 5508 | CLA | C6-C7-C8-C9 |
| 24 | BC | 5510 | CLA | C6-C7-C8-C9 |
| 24 | BD | 5405 | CLA | C11-C12-C13-C14 |
| 29 | BA | 5413 | LHG | C31-C32-C33-C34 |
| 24 | BB | 5609 | CLA | C3-C5-C6-C7 |
| 24 | AC | 513 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5617 | CLA | CAA-CBA-CGA-O2A |
| 30 | AB | 622 | SQD | O47-C7-C8-C9 |
| 30 | AB | 627 | SQD | O47-C7-C8-C9 |
| 30 | BF | 5102 | SQD | O47-C7-C8-C9 |
| 30 | AF | 102 | SQD | O47-C7-C8-C9 |
| 30 | BF | 5102 | SQD | C26-C27-C28-C29 |
| 24 | AA | 404 | CLA | CAA-CBA-CGA-O1A |
| 24 | BA | 5405 | CLA | CAA-CBA-CGA-O1A |
| 24 | AB | 609 | CLA | C4-C3-C5-C6 |
| 24 | AB | 604 | CLA | C12-C13-C15-C16 |
| 24 | AB | 606 | CLA | C2-C3-C5-C6 |
| 24 | AB | 608 | CLA | C12-C13-C15-C16 |
| 24 | AC | 511 | CLA | C11-C12-C13-C15 |
| 24 | AC | 513 | CLA | C12-C13-C15-C16 |
| 24 | BA | 5405 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5608 | CLA | C12-C13-C15-C16 |
| 24 | BB | 5609 | CLA | C2-C3-C5-C6 |
| 24 | BC | 5513 | CLA | C12-C13-C15-C16 |
| 24 | BD | 5405 | CLA | C6-C7-C8-C10 |
| 34 | BD | 5404 | PHO | C2-C3-C5-C6 |
| 24 | BB | 5609 | CLA | CAA-CBA-CGA-O2A |
| 30 | AB | 622 | SQD | C24-C25-C26-C27 |
| 29 | BA | 5415 | LHG | O10-C23-C24-C25 |
| 30 | BB | 5601 | SQD | O49-C7-C8-C9 |
| 30 | BF | 5102 | SQD | O49-C7-C8-C9 |
| 24 | BC | 5505 | CLA | CAA-CBA-CGA-O2A |
| 30 | BA | 5401 | SQD | O47-C7-C8-C9 |
| 30 | BB | 5601 | SQD | O47-C7-C8-C9 |

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| Mol | Chain | Res | Type | Atoms |
|-----|-------|------|------|-----------------|
| 30 | BA | 5401 | SQD | C31-C32-C33-C34 |
| 30 | AA | 416 | SQD | C30-C31-C32-C33 |
| 24 | AB | 614 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5613 | CLA | CAA-CBA-CGA-O2A |
| 24 | BB | 5618 | CLA | CAA-CBA-CGA-O2A |
| 24 | AB | 614 | CLA | C2C-C3C-CAC-CBC |
| 24 | BB | 5618 | CLA | C2C-C3C-CAC-CBC |
| 29 | AA | 415 | LHG | O10-C23-C24-C25 |
| 30 | AF | 102 | SQD | O49-C7-C8-C9 |
| 24 | AA | 407 | CLA | C2A-CAA-CBA-CGA |
| 24 | BA | 5405 | CLA | C2A-CAA-CBA-CGA |
| 24 | BC | 5506 | CLA | C2A-CAA-CBA-CGA |
| 32 | BC | 5522 | LMT | C2B-C1B-O1B-C4' |
| 24 | AC | 506 | CLA | C10-C11-C12-C13 |
| 24 | AC | 504 | CLA | CBA-CGA-O2A-C1 |
| 30 | AB | 627 | SQD | O49-C7-C8-C9 |
| 34 | BD | 5404 | PHO | C4-C3-C5-C6 |
| 29 | AA | 415 | LHG | C11-C12-C13-C14 |
| 24 | BC | 5513 | CLA | CAA-CBA-CGA-O2A |

There are no ring outliers.

167 monomers are involved in 1068 short contacts:

| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 24 | BA | 5408 | CLA | 11 | 0 |
| 24 | AC | 510 | CLA | 6 | 0 |
| 27 | AB | 617 | BCR | 3 | 0 |
| 28 | BC | 5519 | DGD | 45 | 0 |
| 24 | AB | 614 | CLA | 10 | 0 |
| 27 | BD | 5407 | BCR | 2 | 0 |
| 32 | AI | 102 | LMT | 5 | 0 |
| 30 | BA | 5401 | SQD | 3 | 0 |
| 34 | AD | 402 | PHO | 11 | 0 |
| 24 | AB | 601 | CLA | 5 | 0 |
| 27 | AB | 619 | BCR | 3 | 0 |
| 27 | BC | 5514 | BCR | 6 | 0 |
| 32 | AM | 102 | LMT | 1 | 0 |
| 28 | AH | 101 | DGD | 9 | 0 |
| 34 | BD | 5403 | PHO | 12 | 0 |
| 24 | AB | 602 | CLA | 7 | 0 |
| 24 | BC | 5501 | CLA | 6 | 0 |
| 27 | BT | 5101 | BCR | 6 | 0 |

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| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 31 | BA | 5402 | LMG | 3 | 0 |
| 24 | AB | 609 | CLA | 7 | 0 |
| 27 | AK | 102 | BCR | 5 | 0 |
| 27 | AJ | 101 | BCR | 4 | 0 |
| 24 | BD | 5405 | CLA | 8 | 0 |
| 31 | BM | 5102 | LMG | 4 | 0 |
| 36 | BV | 5201 | HEM | 6 | 0 |
| 24 | BB | 5612 | CLA | 14 | 0 |
| 24 | BB | 5618 | CLA | 14 | 0 |
| 24 | AC | 505 | CLA | 9 | 0 |
| 24 | BC | 5503 | CLA | 5 | 0 |
| 30 | AF | 102 | SQD | 1 | 0 |
| 31 | BL | 5101 | LMG | 18 | 0 |
| 29 | AA | 412 | LHG | 5 | 0 |
| 31 | BB | 5624 | LMG | 4 | 0 |
| 31 | BC | 5520 | LMG | 3 | 0 |
| 24 | BB | 5615 | CLA | 19 | 0 |
| 27 | AC | 515 | BCR | 6 | 0 |
| 31 | AA | 414 | LMG | 11 | 0 |
| 27 | BB | 5622 | BCR | 1 | 0 |
| 24 | AC | 506 | CLA | 5 | 0 |
| 24 | AB | 605 | CLA | 10 | 0 |
| 24 | BB | 5616 | CLA | 12 | 0 |
| 31 | AM | 101 | LMG | 6 | 0 |
| 32 | AB | 629 | LMT | 4 | 0 |
| 24 | BC | 5507 | CLA | 7 | 0 |
| 24 | BA | 5406 | CLA | 22 | 0 |
| 30 | BB | 5625 | SQD | 6 | 0 |
| 24 | AB | 606 | CLA | 9 | 0 |
| 24 | AB | 616 | CLA | 4 | 0 |
| 29 | BA | 5415 | LHG | 3 | 0 |
| 31 | BC | 5521 | LMG | 7 | 0 |
| 24 | BA | 5407 | CLA | 1 | 0 |
| 36 | BF | 5101 | HEM | 7 | 0 |
| 30 | AA | 416 | SQD | 2 | 0 |
| 24 | AA | 406 | CLA | 1 | 0 |
| 24 | AD | 404 | CLA | 8 | 0 |
| 24 | BB | 5617 | CLA | 8 | 0 |
| 24 | BB | 5613 | CLA | 7 | 0 |
| 28 | BH | 5101 | DGD | 8 | 0 |
| 36 | AV | 201 | HEM | 4 | 0 |
| 28 | AC | 518 | DGD | 12 | 0 |

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| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 32 | AB | 630 | LMT | 2 | 0 |
| 24 | BC | 5506 | CLA | 4 | 0 |
| 31 | AB | 621 | LMG | 4 | 0 |
| 24 | BC | 5513 | CLA | 5 | 0 |
| 31 | BD | 5408 | LMG | 1 | 0 |
| 27 | AD | 406 | BCR | 2 | 0 |
| 24 | AB | 610 | CLA | 8 | 0 |
| 27 | BX | 5101 | BCR | 4 | 0 |
| 29 | AA | 415 | LHG | 2 | 0 |
| 24 | BB | 5606 | CLA | 7 | 0 |
| 28 | AC | 519 | DGD | 42 | 0 |
| 24 | AB | 613 | CLA | 9 | 0 |
| 24 | AB | 604 | CLA | 12 | 0 |
| 34 | BD | 5404 | PHO | 3 | 0 |
| 28 | BA | 5412 | DGD | 9 | 0 |
| 24 | AC | 513 | CLA | 3 | 0 |
| 24 | BC | 5509 | CLA | 8 | 0 |
| 28 | AA | 411 | DGD | 9 | 0 |
| 35 | AD | 405 | PL9 | 15 | 0 |
| 27 | BB | 5623 | BCR | 4 | 0 |
| 24 | AC | 508 | CLA | 10 | 0 |
| 24 | BB | 5611 | CLA | 10 | 0 |
| 27 | AT | 101 | BCR | 10 | 0 |
| 24 | BC | 5511 | CLA | 23 | 0 |
| 24 | AC | 502 | CLA | 6 | 0 |
| 24 | AC | 512 | CLA | 4 | 0 |
| 31 | BI | 5101 | LMG | 4 | 0 |
| 24 | BB | 5619 | CLA | 8 | 0 |
| 36 | AF | 101 | HEM | 8 | 0 |
| 24 | BC | 5504 | CLA | 8 | 0 |
| 27 | BC | 5516 | BCR | 13 | 0 |
| 24 | BC | 5512 | CLA | 5 | 0 |
| 24 | AB | 603 | CLA | 15 | 0 |
| 24 | BC | 5502 | CLA | 6 | 0 |
| 31 | AA | 417 | LMG | 6 | 0 |
| 24 | BB | 5610 | CLA | 9 | 0 |
| 31 | AC | 520 | LMG | 4 | 0 |
| 31 | BE | 5101 | LMG | 4 | 0 |
| 32 | BB | 5603 | LMT | 2 | 0 |
| 24 | AB | 615 | CLA | 8 | 0 |
| 31 | AD | 408 | LMG | 11 | 0 |
| 32 | BB | 5604 | LMT | 2 | 0 |

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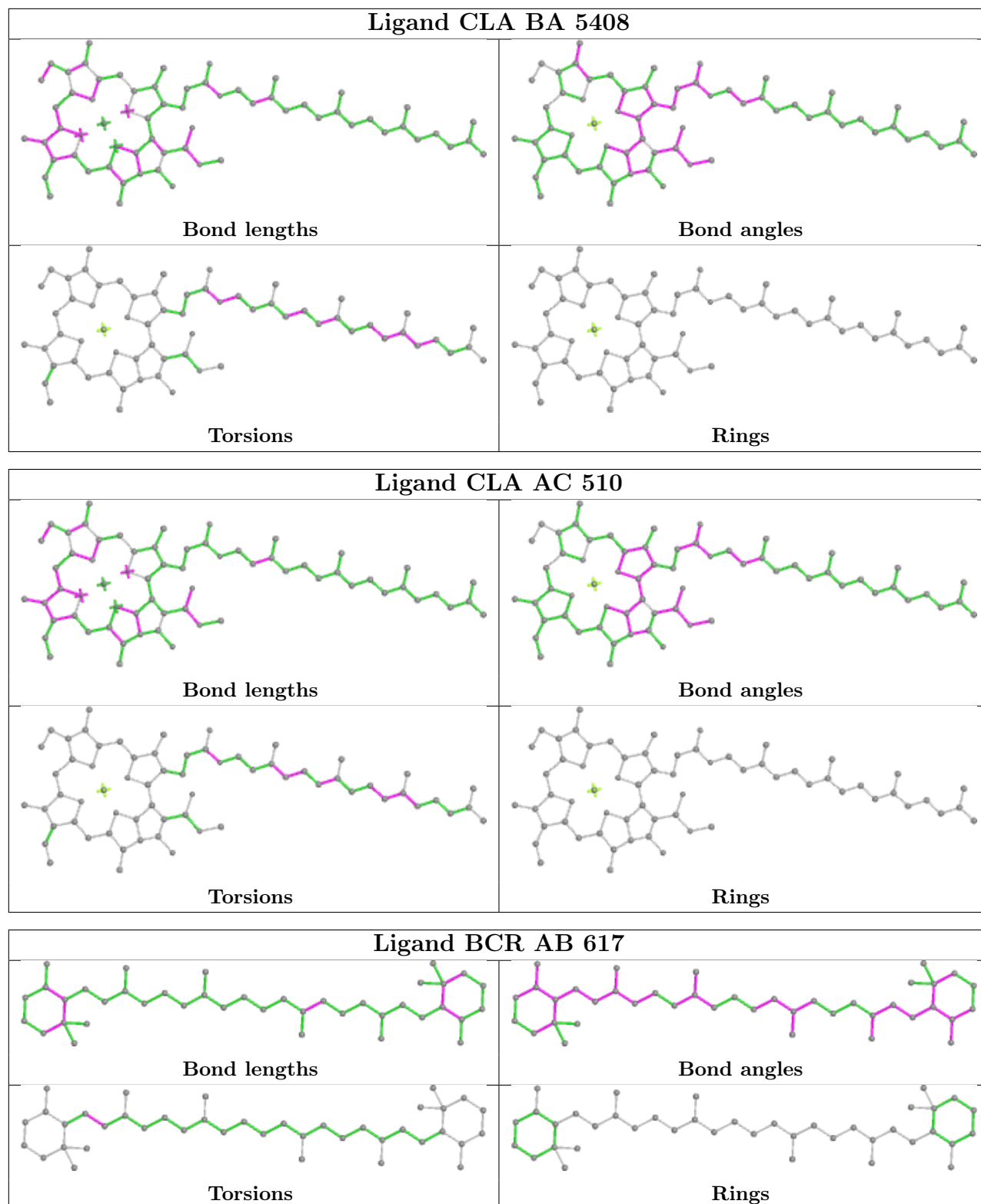
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 27 | AC | 514 | BCR | 6 | 0 |
| 24 | BB | 5608 | CLA | 12 | 0 |
| 24 | BB | 5607 | CLA | 15 | 0 |
| 24 | BC | 5508 | CLA | 9 | 0 |
| 28 | AE | 101 | DGD | 1 | 0 |
| 24 | AC | 511 | CLA | 22 | 0 |
| 24 | BD | 5402 | CLA | 10 | 0 |
| 27 | AB | 618 | BCR | 2 | 0 |
| 24 | AB | 611 | CLA | 15 | 0 |
| 28 | BC | 5518 | DGD | 10 | 0 |
| 30 | BB | 5601 | SQD | 5 | 0 |
| 24 | BC | 5505 | CLA | 9 | 0 |
| 31 | AC | 521 | LMG | 7 | 0 |
| 32 | AB | 624 | LMT | 9 | 0 |
| 27 | AA | 410 | BCR | 4 | 0 |
| 32 | BB | 5626 | LMT | 2 | 0 |
| 24 | AA | 404 | CLA | 12 | 0 |
| 24 | AC | 503 | CLA | 6 | 0 |
| 31 | BD | 5410 | LMG | 10 | 0 |
| 28 | BC | 5517 | DGD | 10 | 0 |
| 31 | AI | 101 | LMG | 3 | 0 |
| 27 | AX | 101 | BCR | 8 | 0 |
| 29 | BA | 5413 | LHG | 6 | 0 |
| 27 | BJ | 5101 | BCR | 3 | 0 |
| 27 | BC | 5515 | BCR | 6 | 0 |
| 35 | BD | 5406 | PL9 | 16 | 0 |
| 27 | AC | 516 | BCR | 12 | 0 |
| 28 | AC | 517 | DGD | 10 | 0 |
| 32 | BM | 5101 | LMT | 2 | 0 |
| 24 | BB | 5620 | CLA | 4 | 0 |
| 32 | BD | 5411 | LMT | 1 | 0 |
| 24 | AD | 401 | CLA | 9 | 0 |
| 30 | AB | 622 | SQD | 6 | 0 |
| 32 | BI | 5102 | LMT | 5 | 0 |
| 28 | BB | 5602 | DGD | 5 | 0 |
| 32 | BB | 5627 | LMT | 10 | 0 |
| 24 | BB | 5614 | CLA | 9 | 0 |
| 30 | BF | 5102 | SQD | 1 | 0 |
| 24 | BB | 5609 | CLA | 12 | 0 |
| 24 | AC | 504 | CLA | 10 | 0 |
| 24 | BB | 5605 | CLA | 5 | 0 |
| 27 | BB | 5621 | BCR | 3 | 0 |

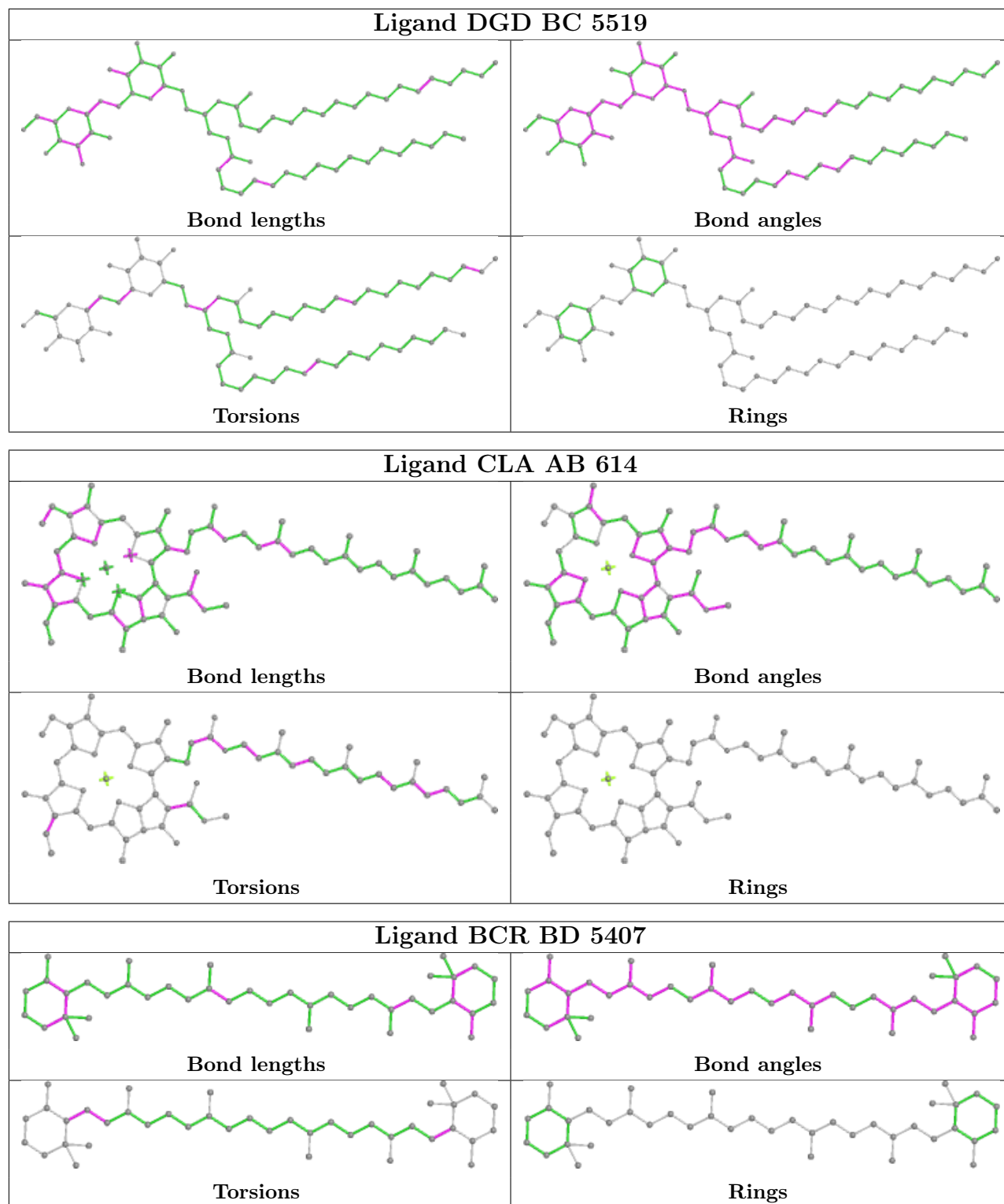
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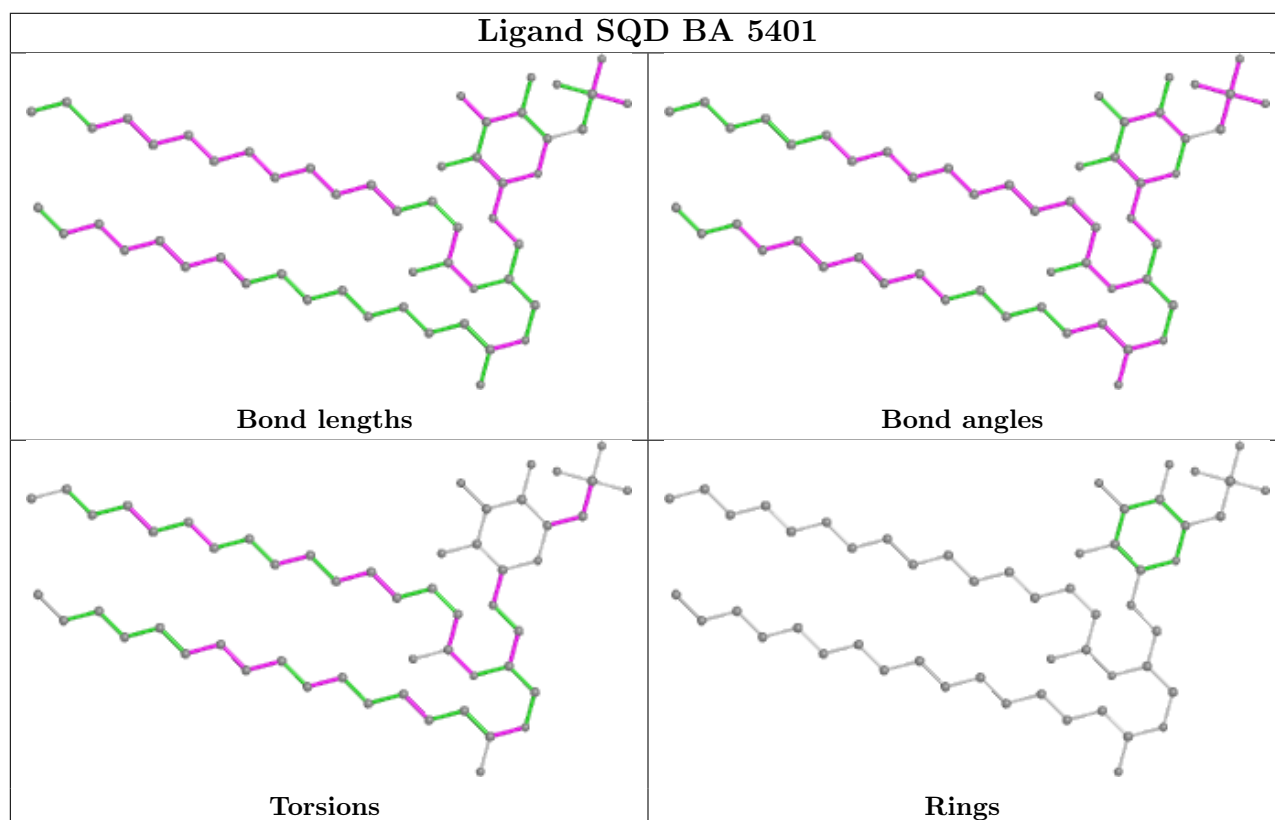
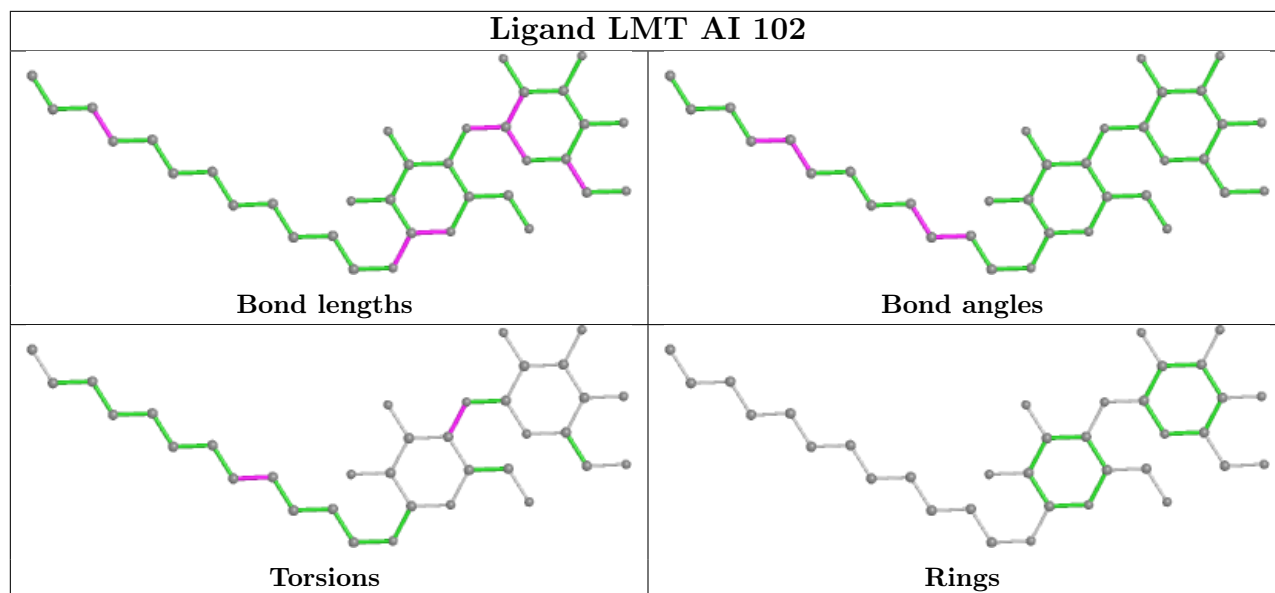
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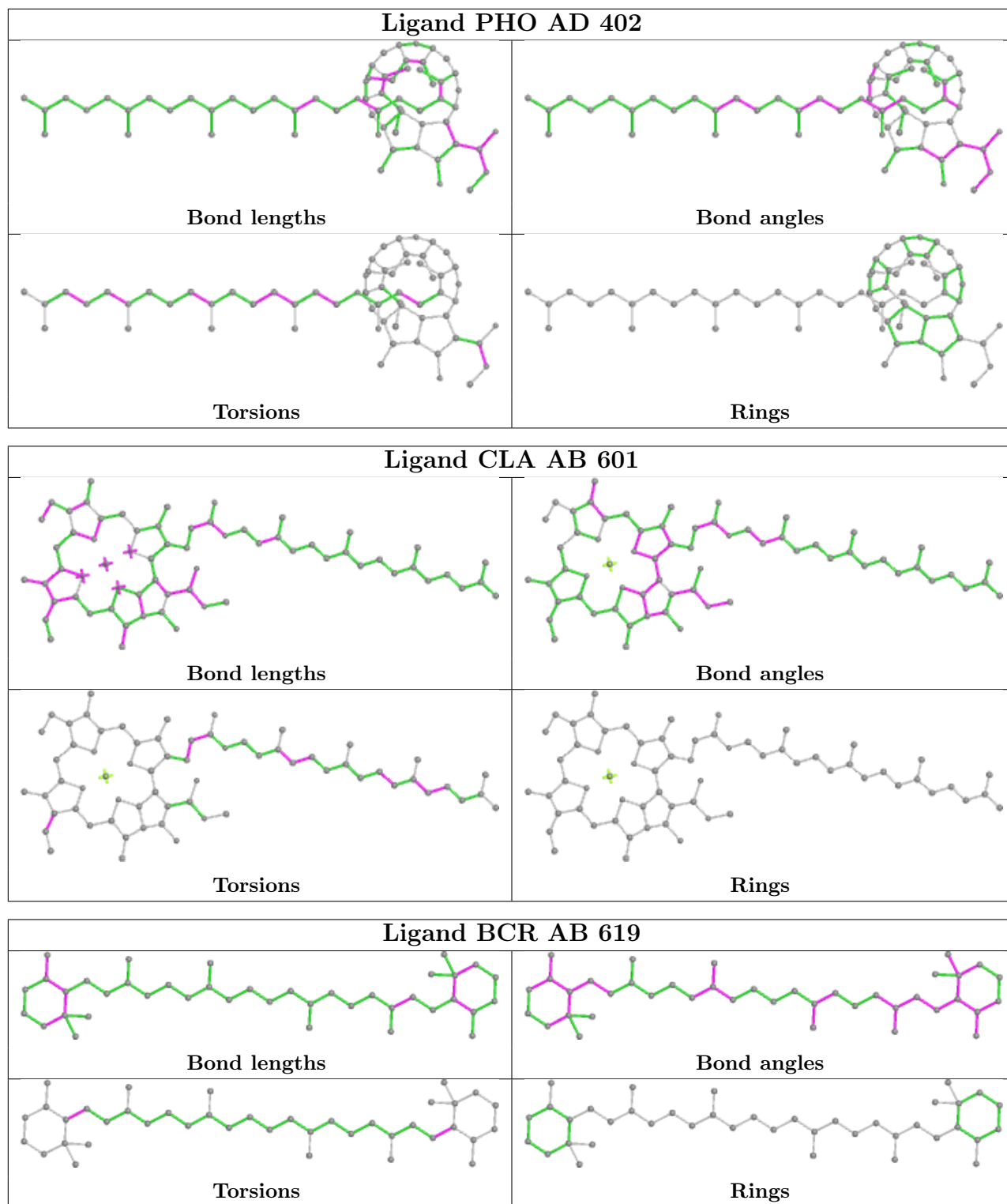
| Mol | Chain | Res | Type | Clashes | Symm-Clashes |
|-----|-------|------|------|---------|--------------|
| 24 | AC | 501 | CLA | 5 | 0 |
| 31 | AB | 620 | LMG | 17 | 0 |
| 24 | AB | 608 | CLA | 15 | 0 |
| 27 | BA | 5411 | BCR | 3 | 0 |
| 32 | AI | 103 | LMT | 4 | 0 |
| 24 | AB | 607 | CLA | 10 | 0 |
| 24 | AA | 405 | CLA | 20 | 0 |
| 24 | AA | 407 | CLA | 9 | 0 |
| 24 | AC | 507 | CLA | 5 | 0 |
| 30 | AB | 627 | SQD | 3 | 0 |
| 27 | BK | 5102 | BCR | 5 | 0 |
| 31 | AJ | 102 | LMG | 2 | 0 |
| 32 | BC | 5522 | LMT | 3 | 0 |
| 24 | AC | 509 | CLA | 6 | 0 |
| 34 | AD | 403 | PHO | 3 | 0 |
| 31 | BD | 5409 | LMG | 4 | 0 |
| 24 | BA | 5405 | CLA | 11 | 0 |
| 24 | BC | 5510 | CLA | 6 | 0 |
| 28 | BE | 5102 | DGD | 1 | 0 |
| 25 | AA | 408 | MST | 9 | 0 |
| 25 | BA | 5409 | MST | 9 | 0 |
| 24 | AB | 612 | CLA | 12 | 0 |
| 31 | AD | 407 | LMG | 4 | 0 |

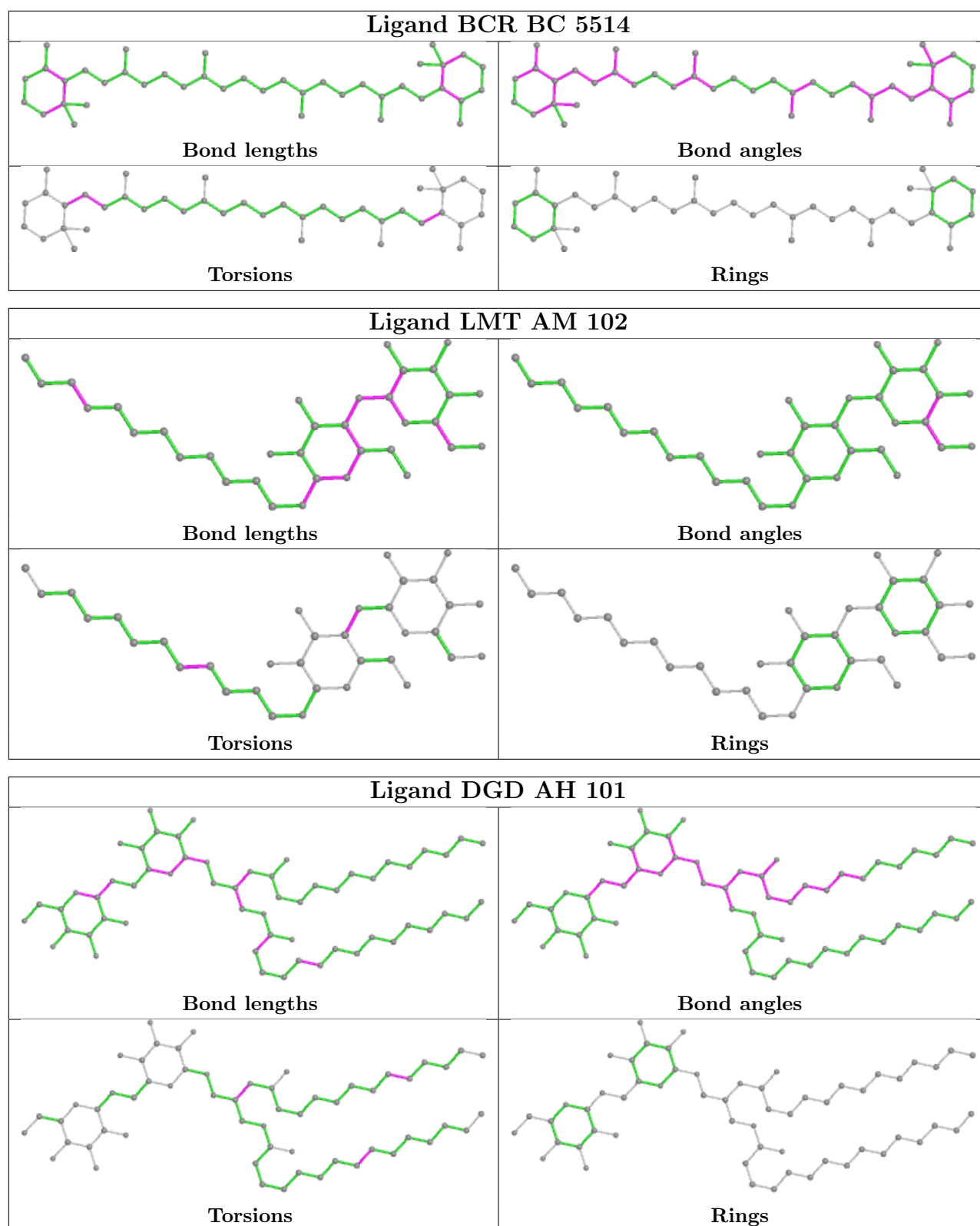
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

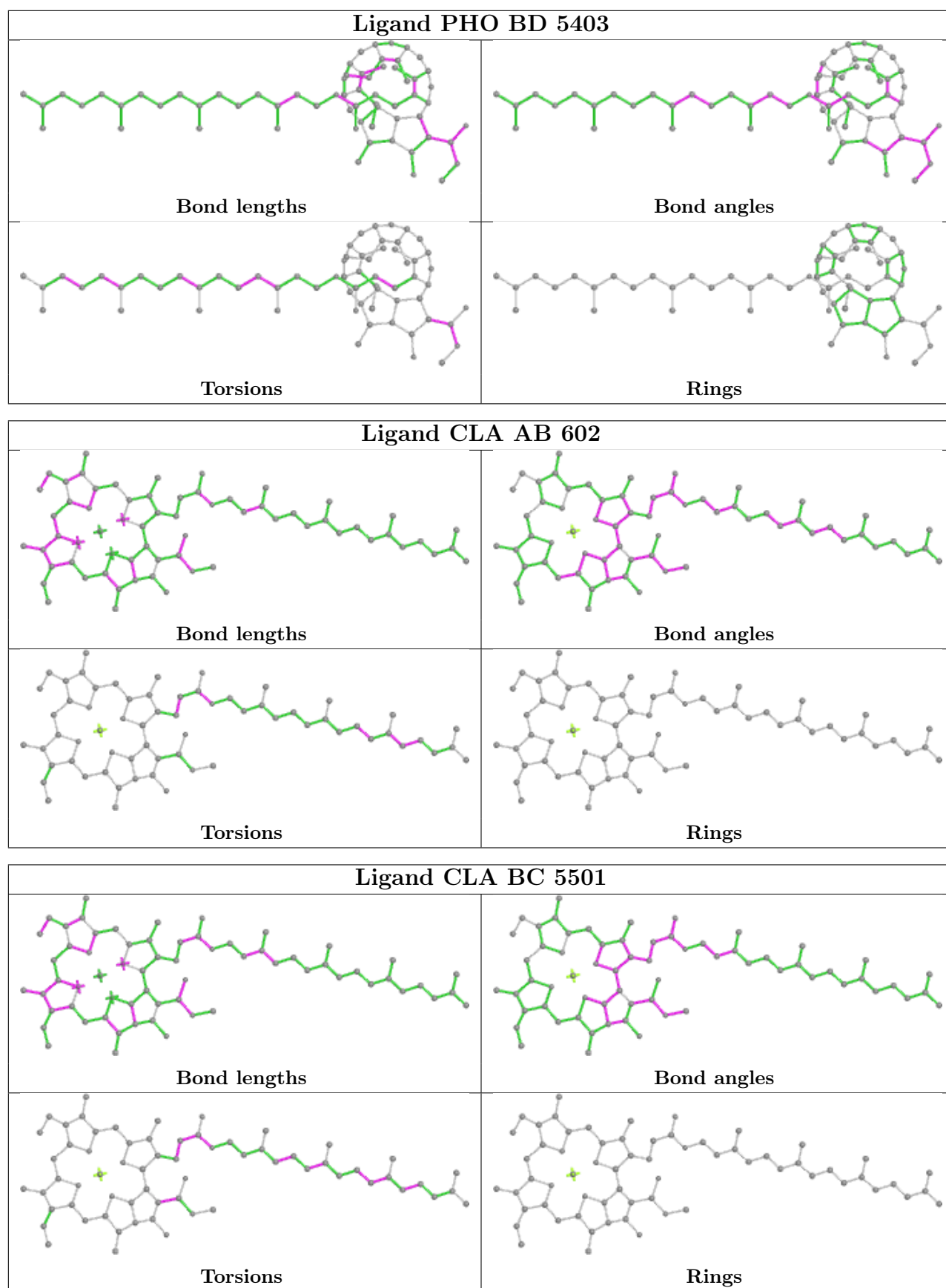


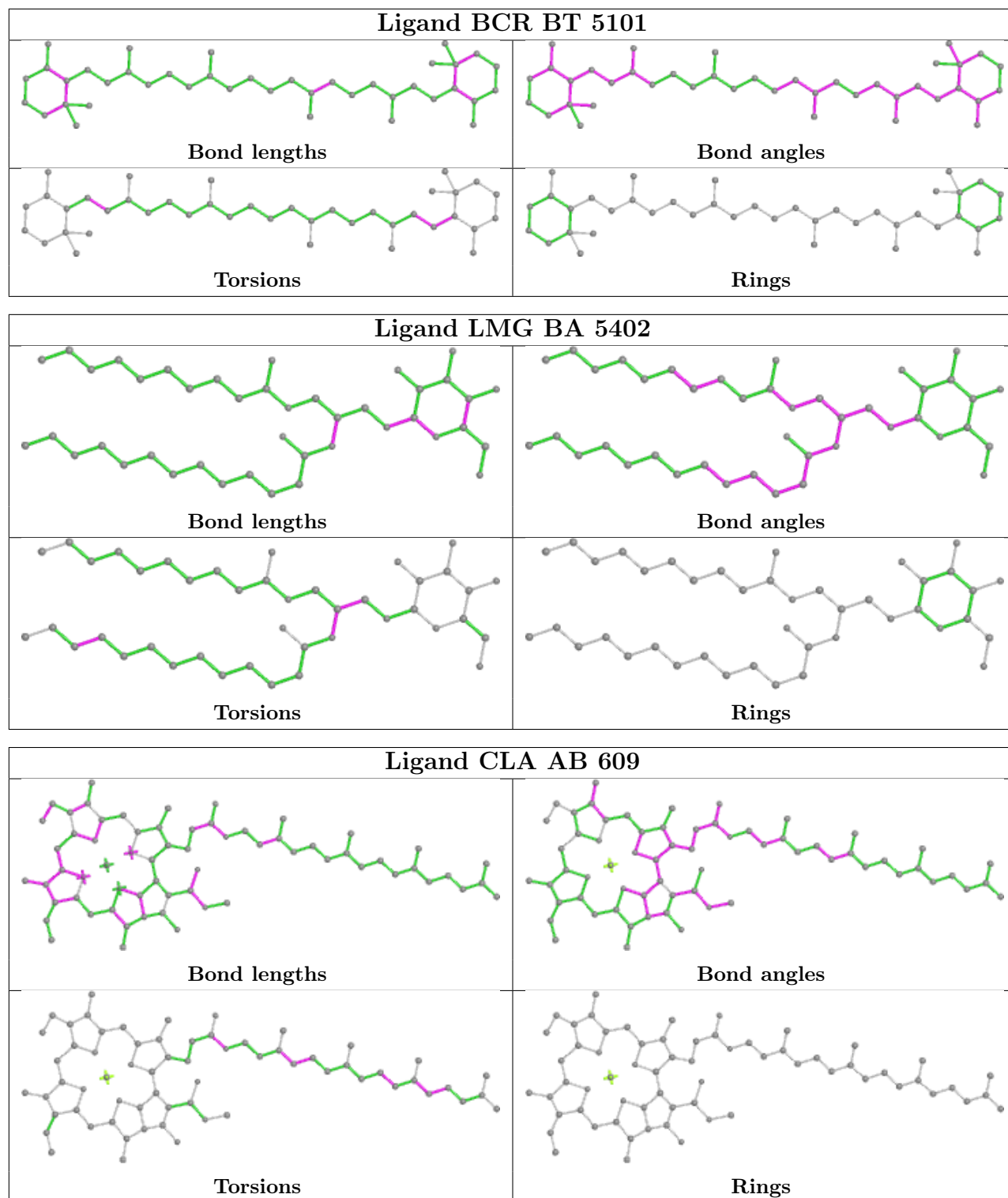


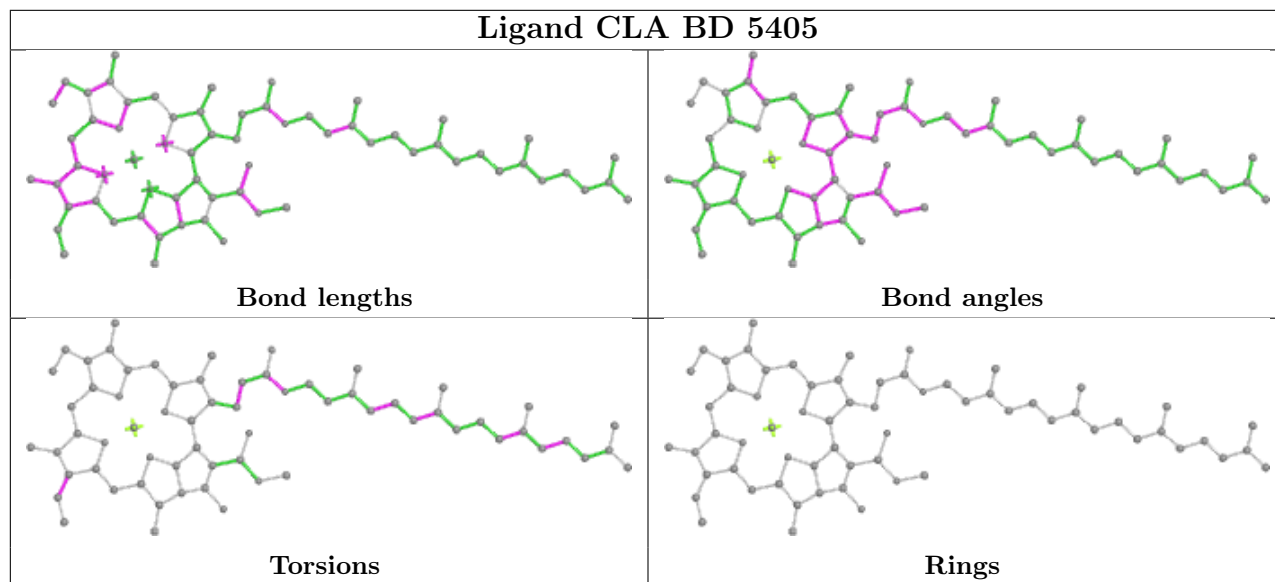
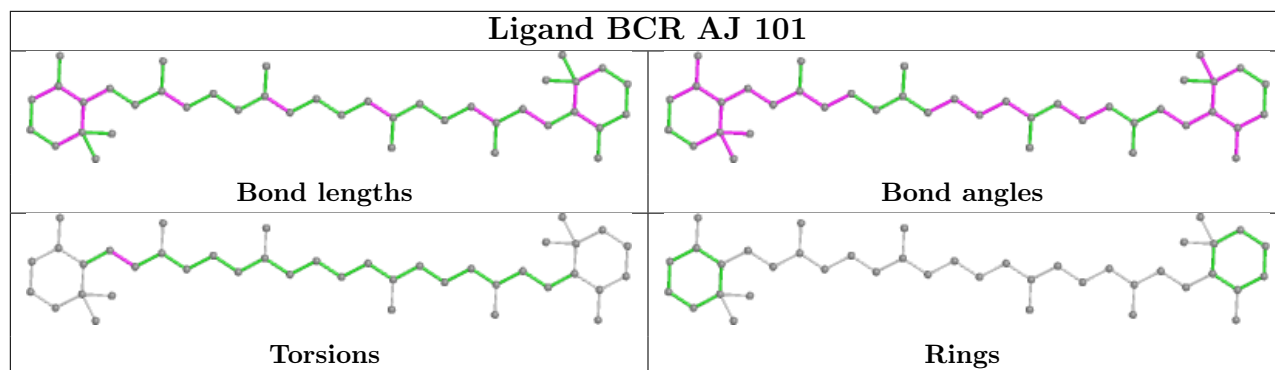
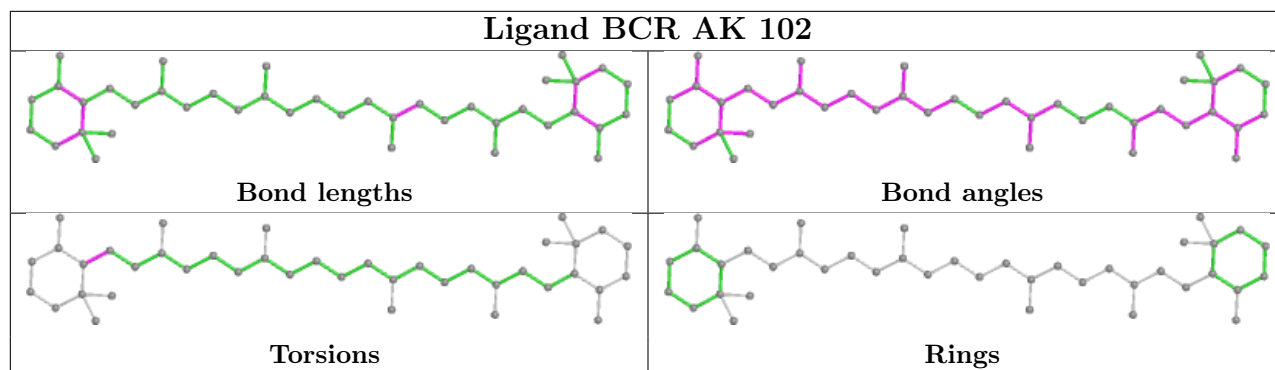


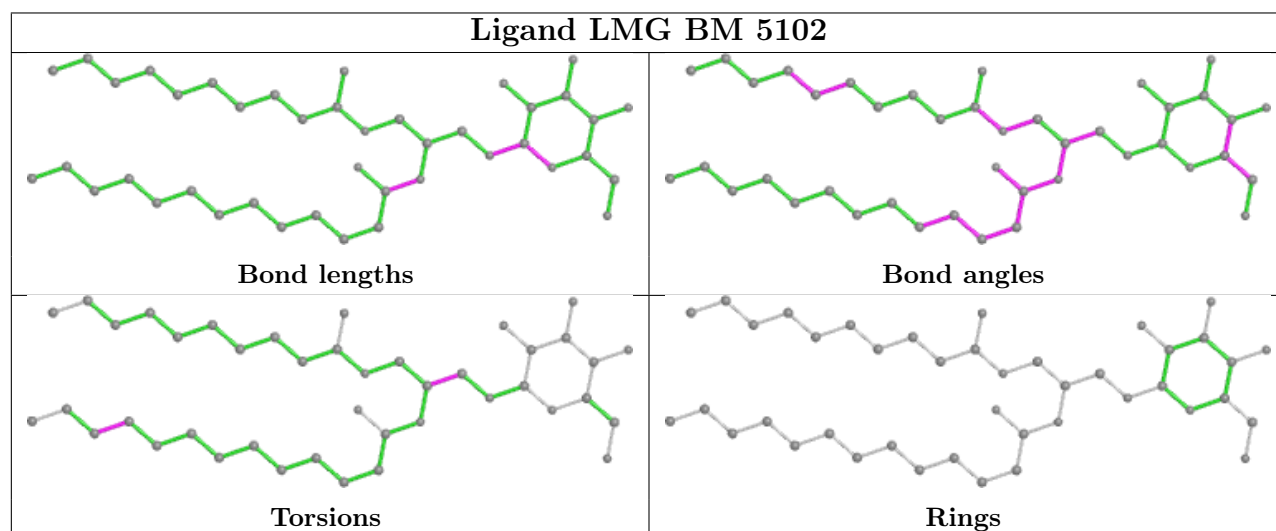
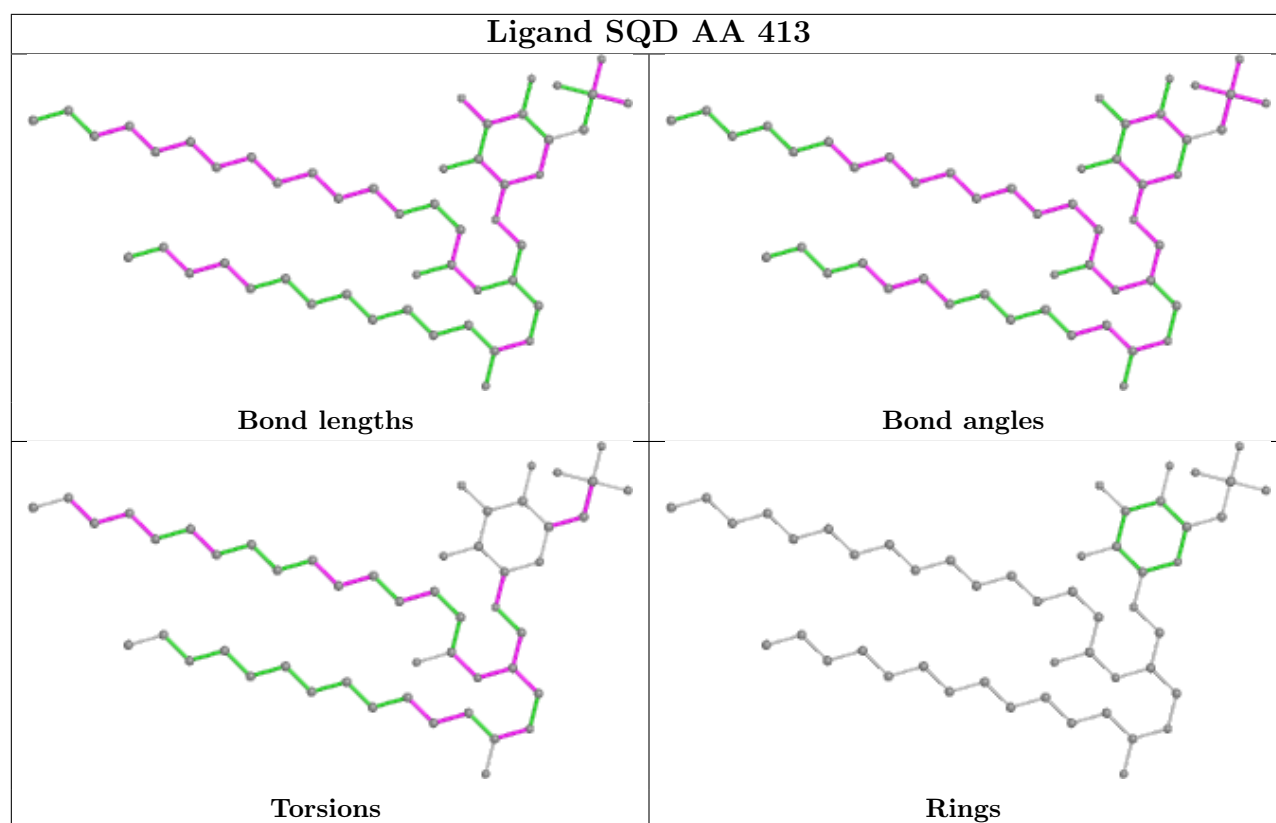


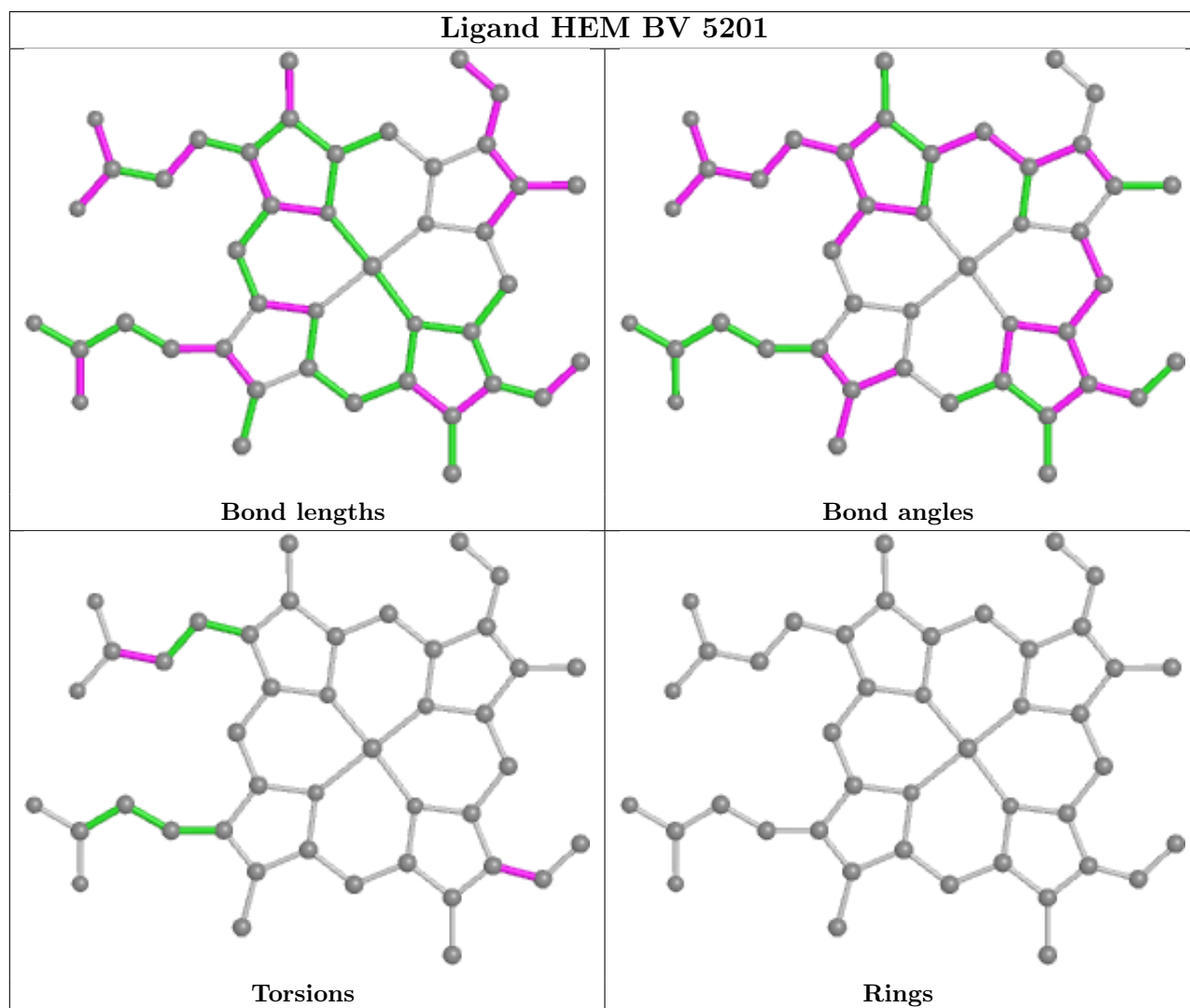
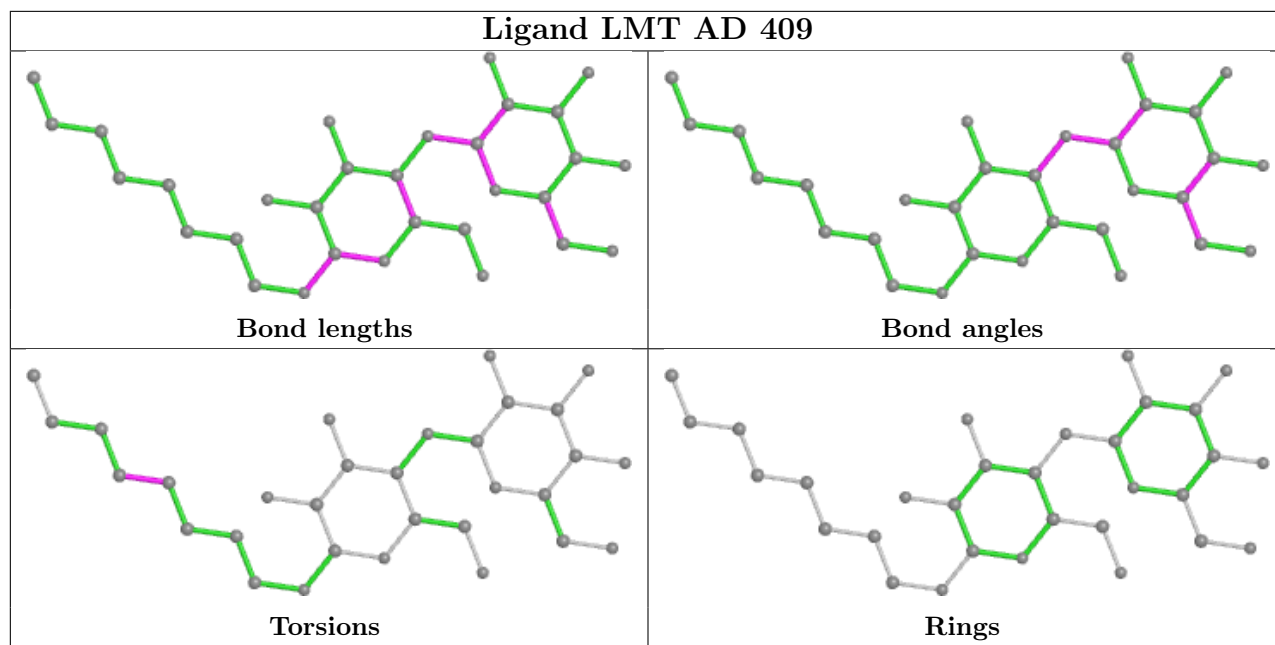


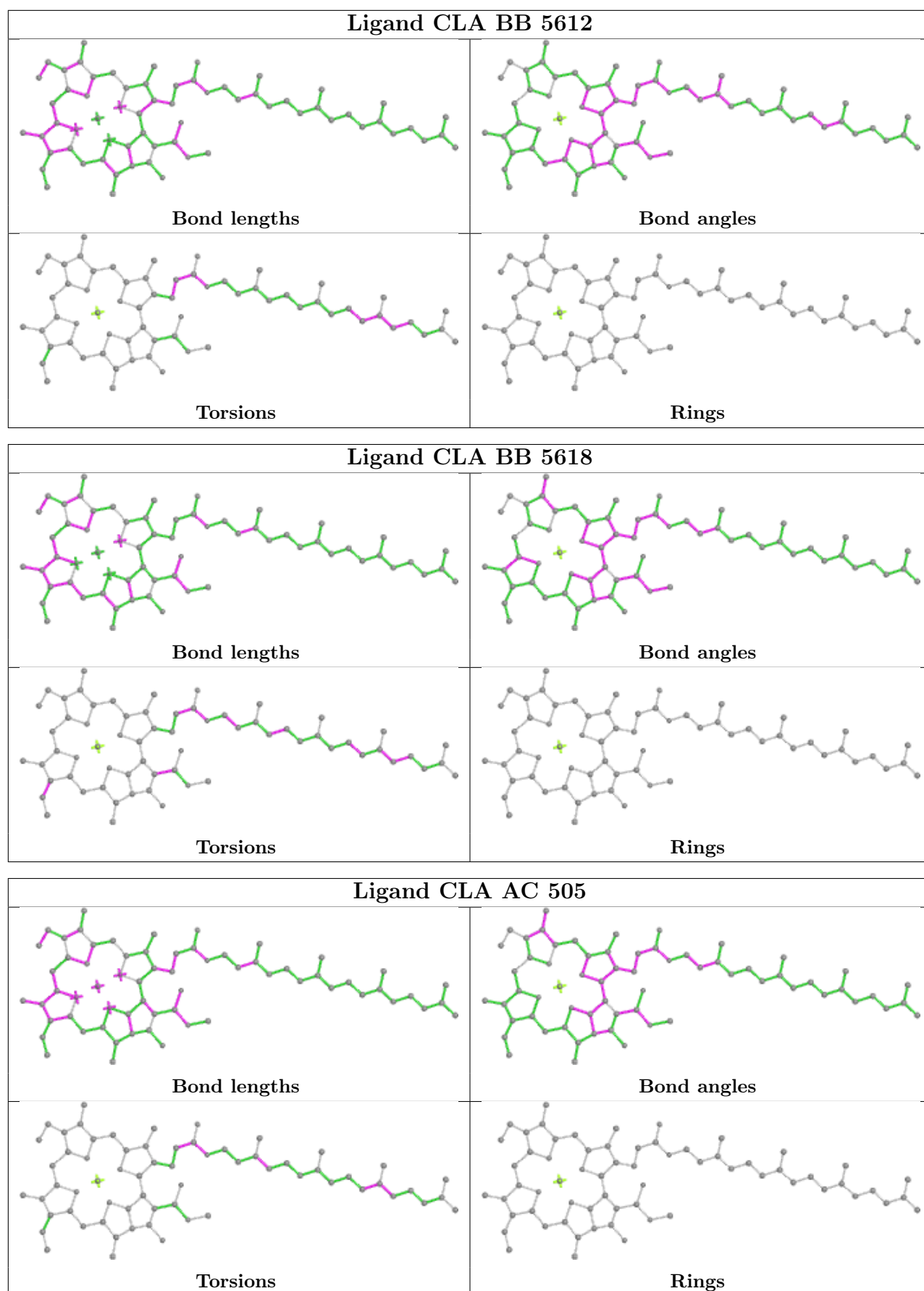


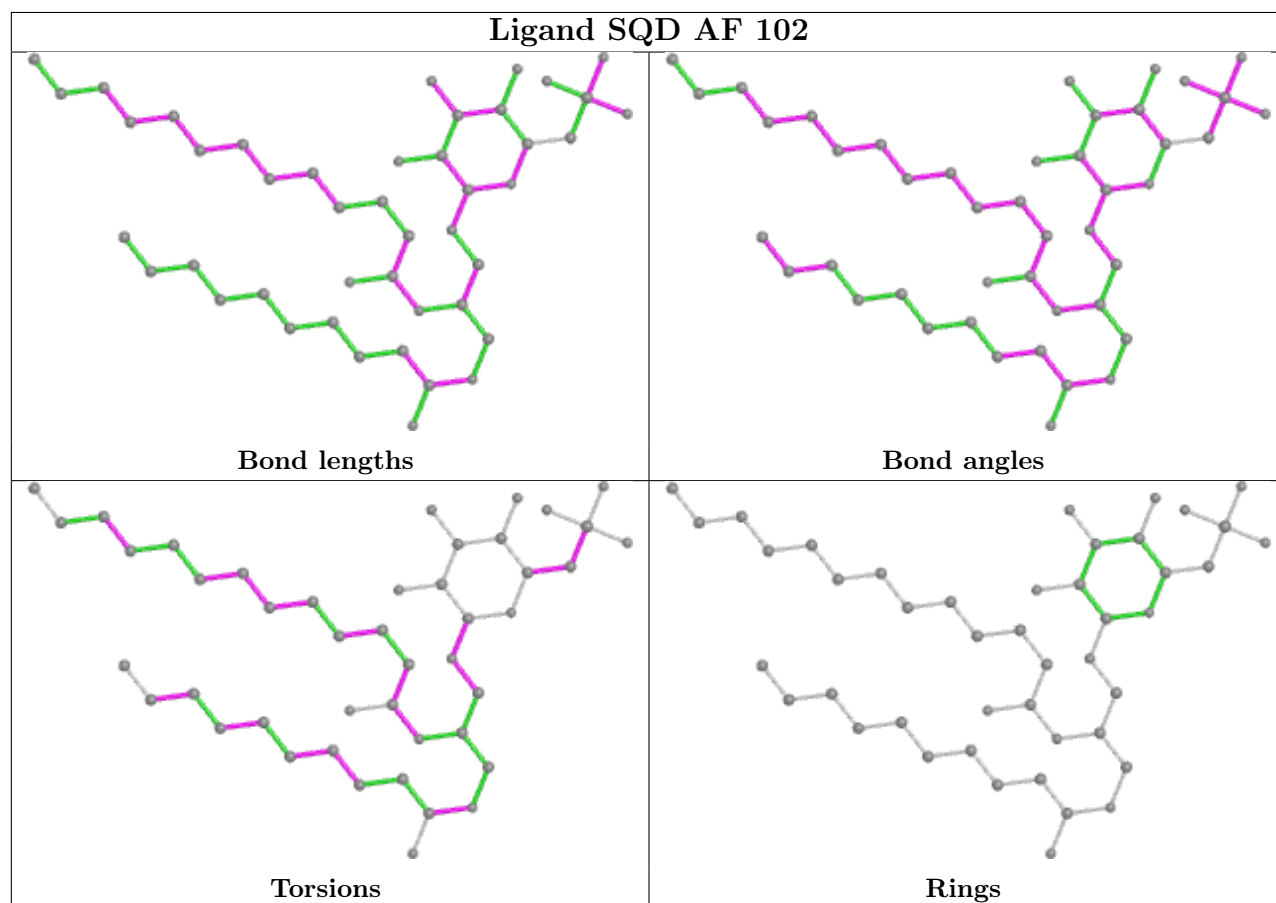
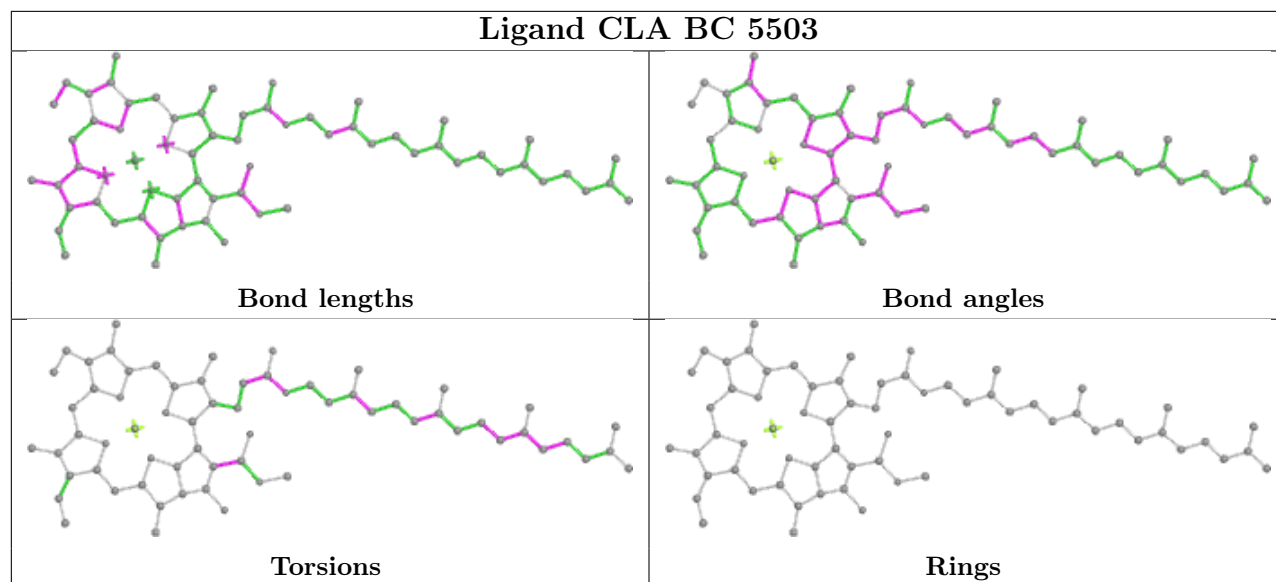


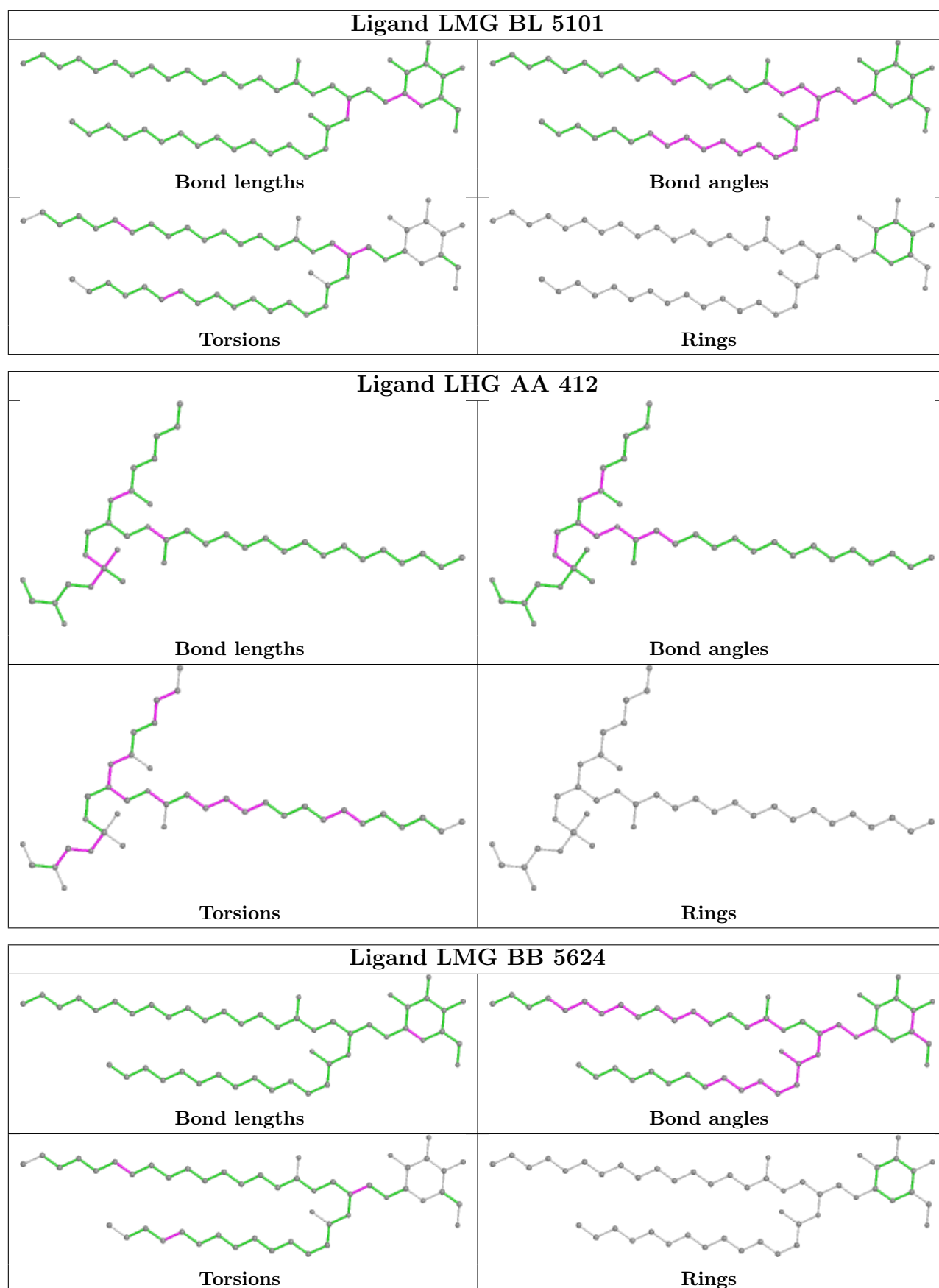


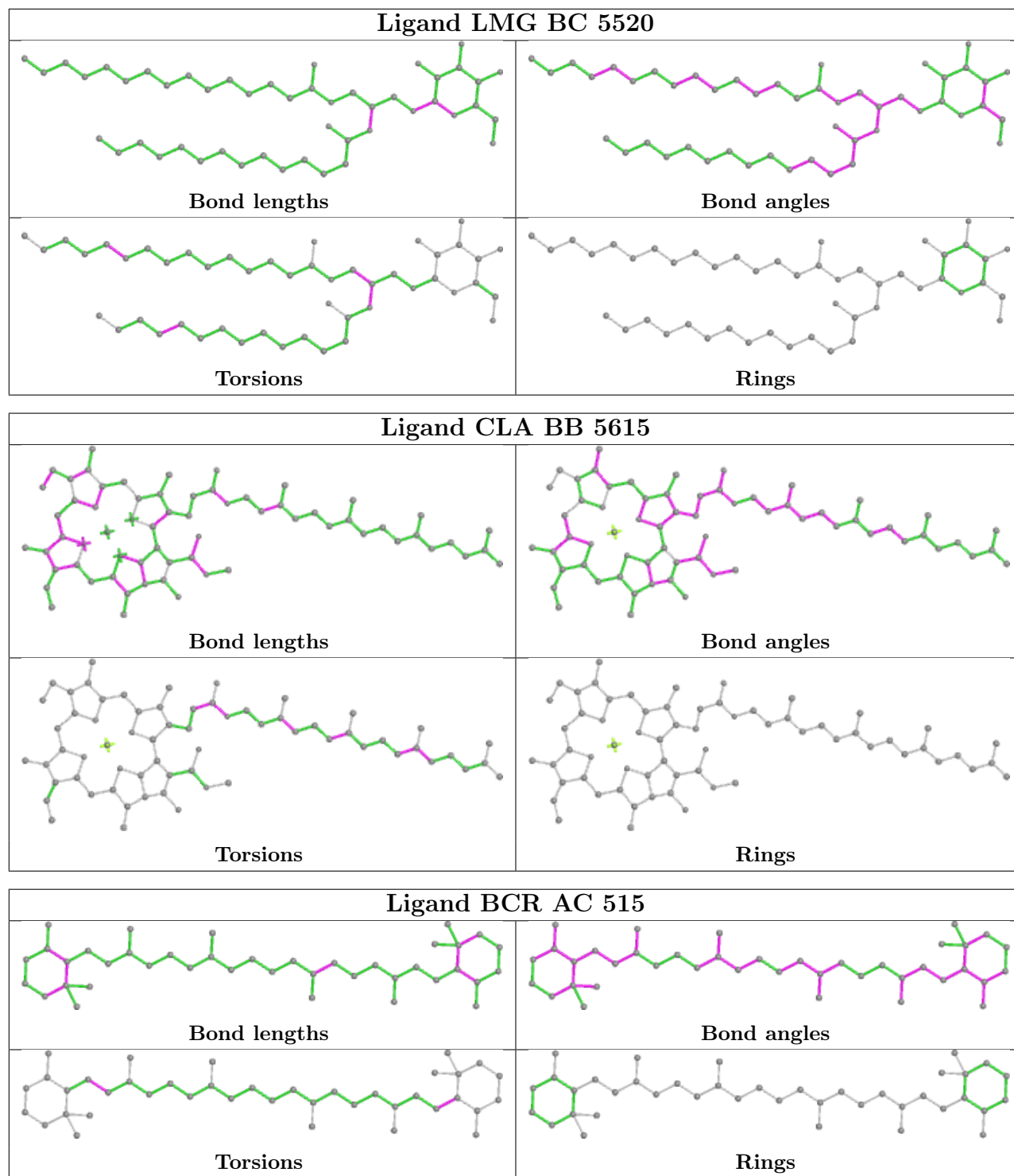


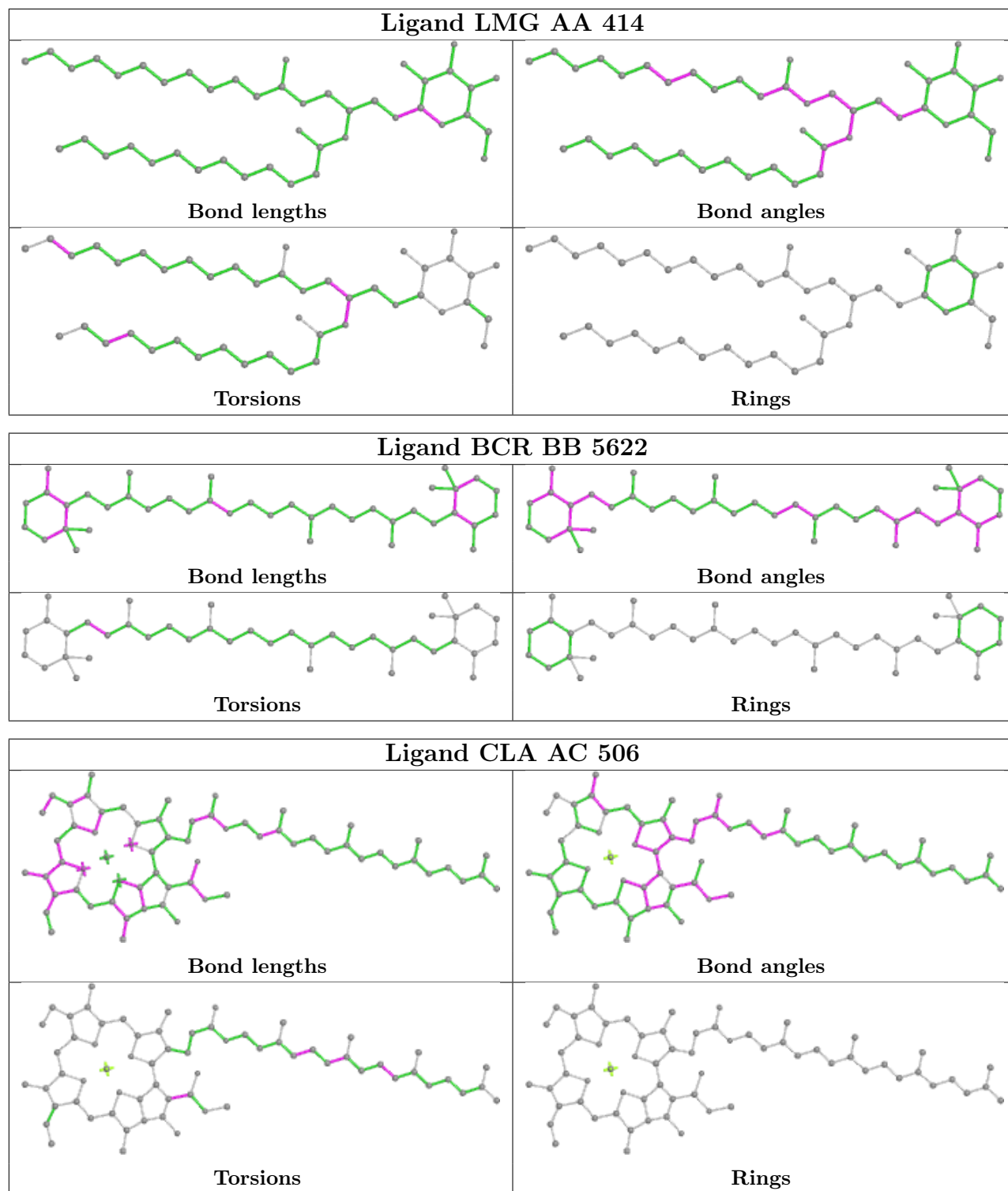


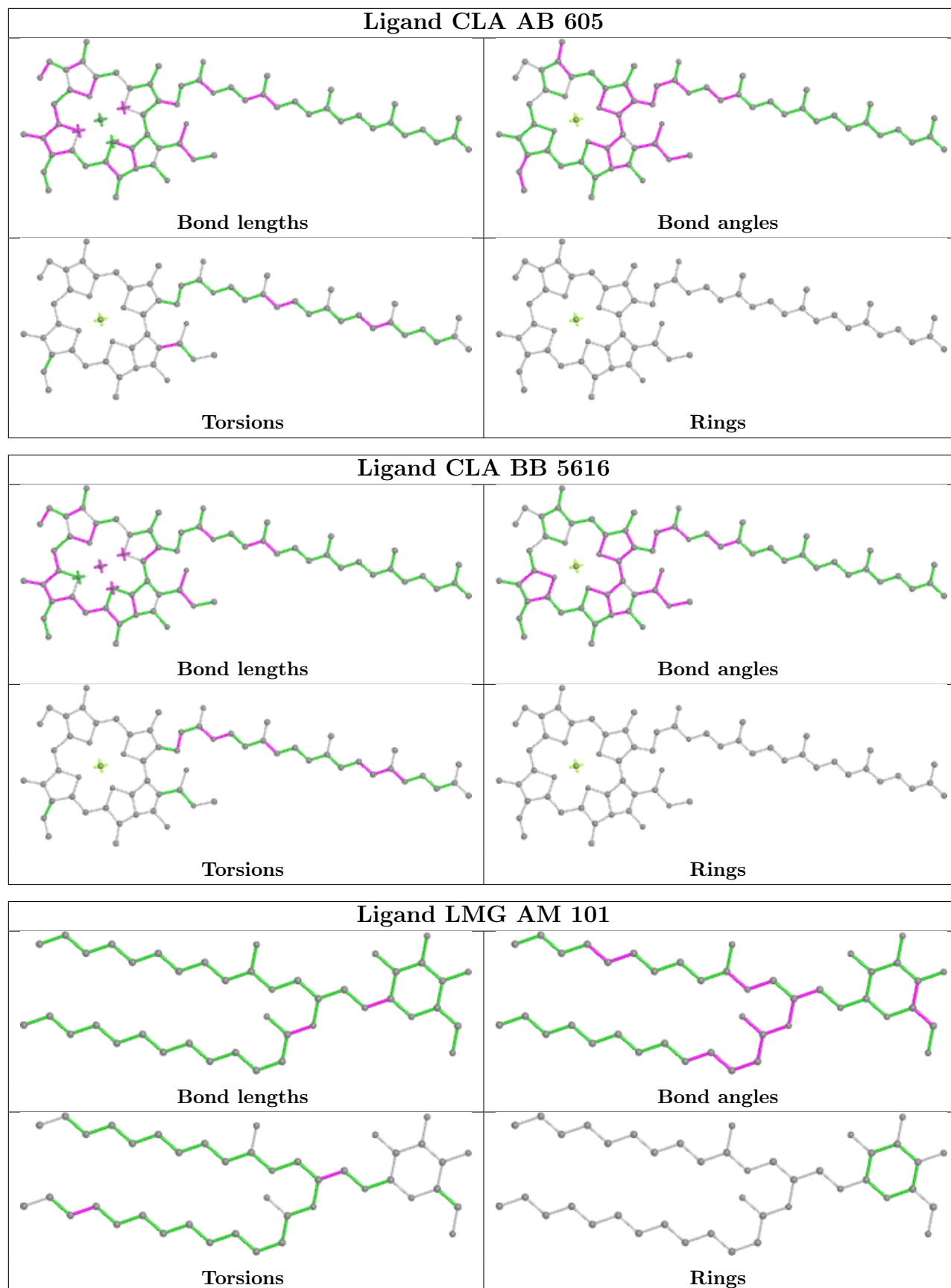


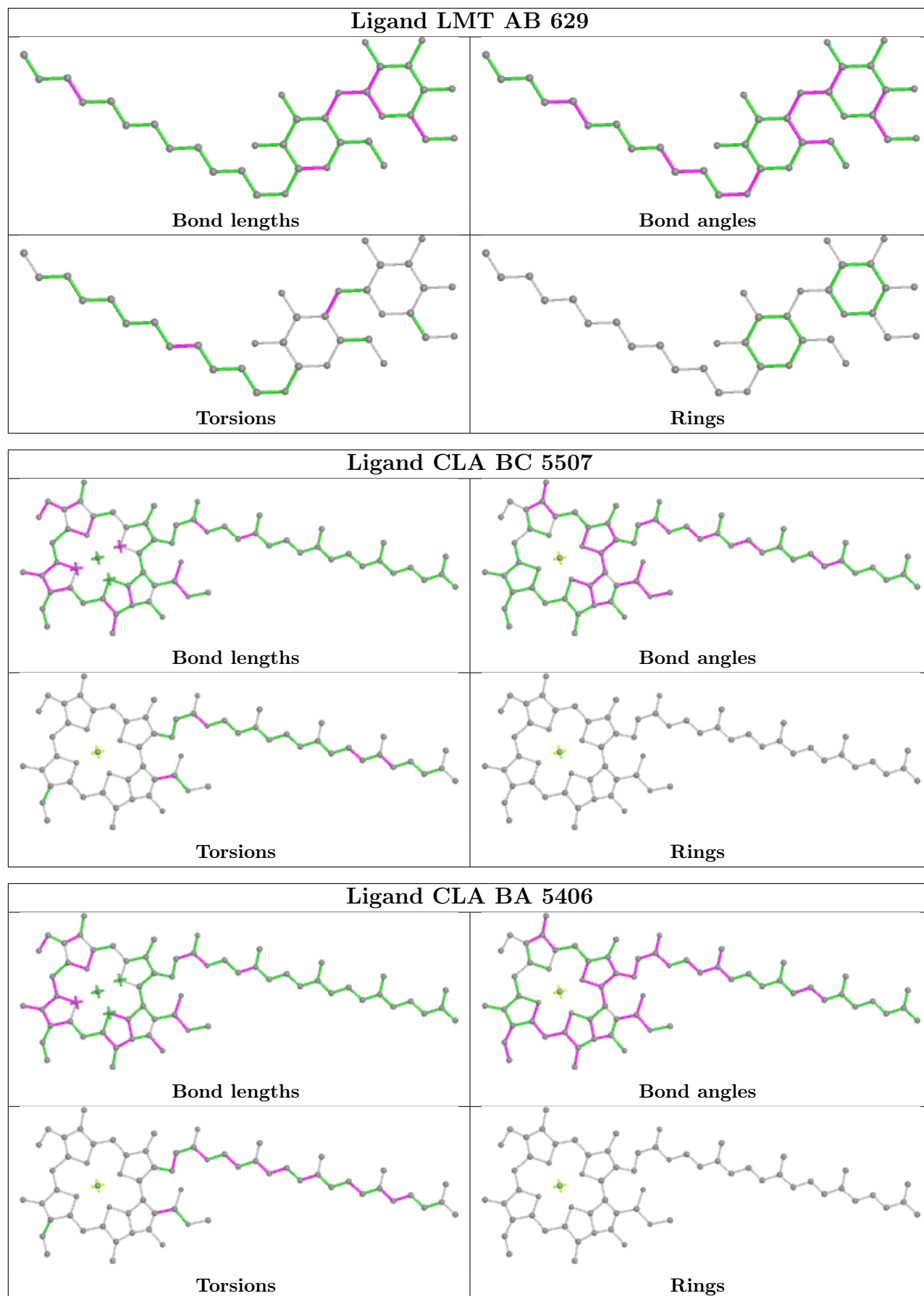


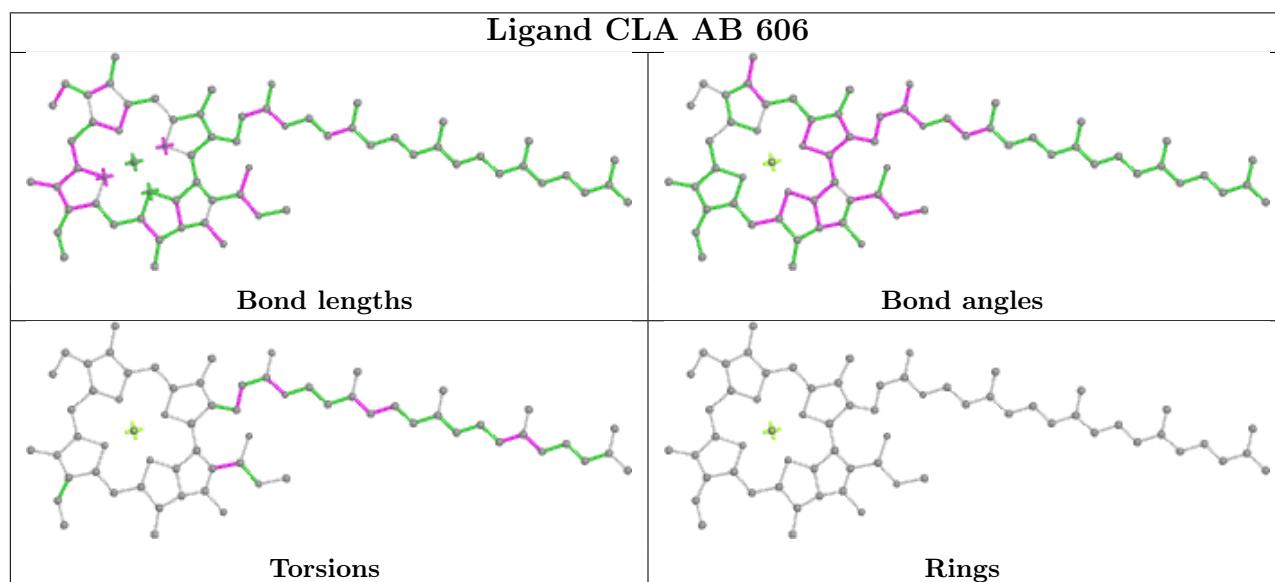
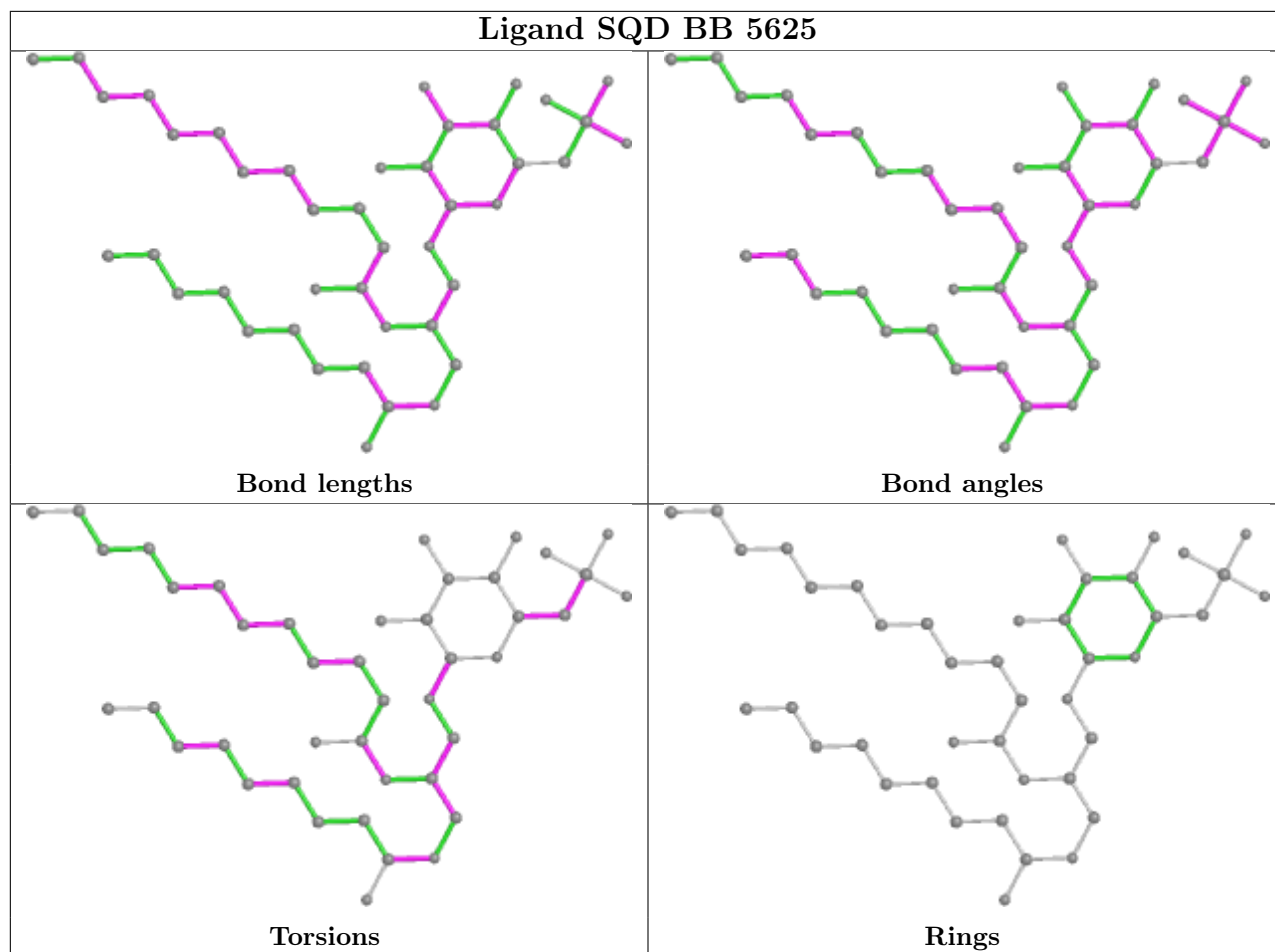


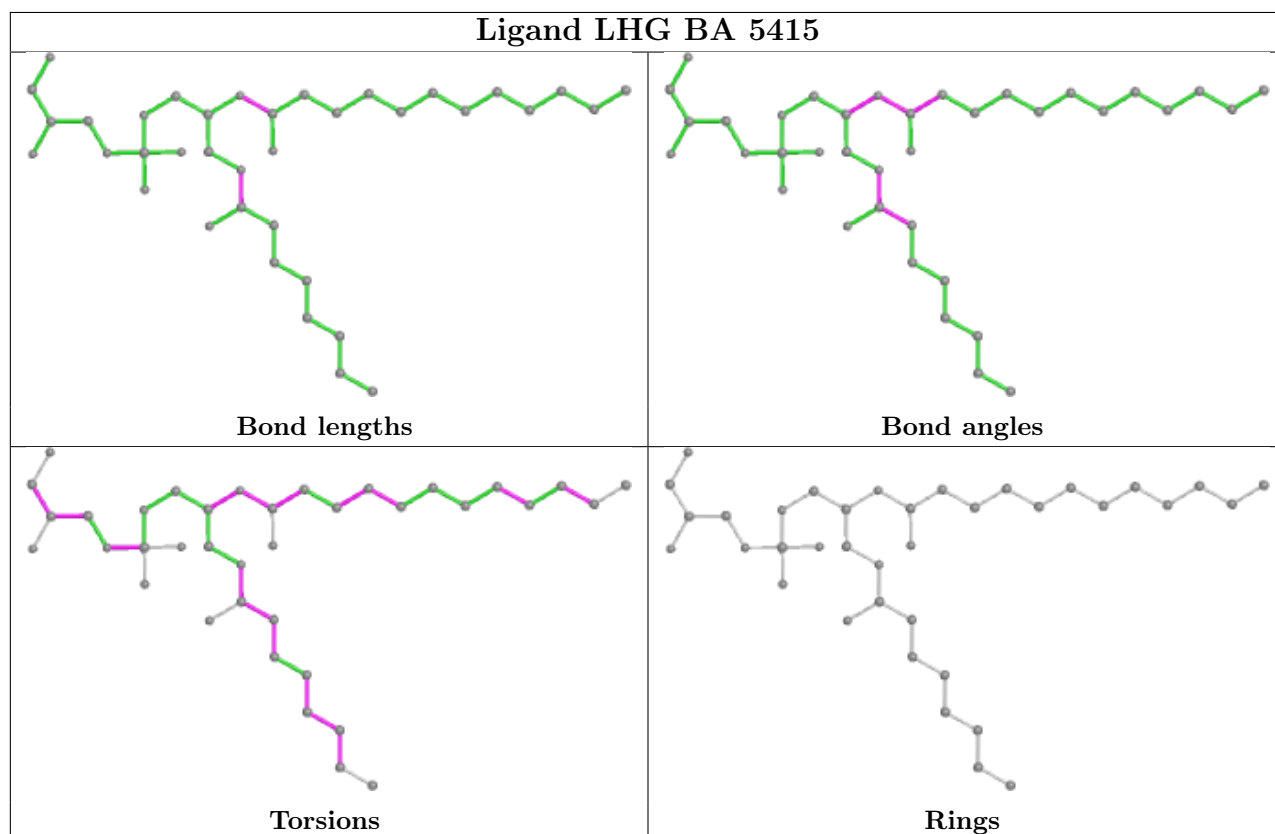
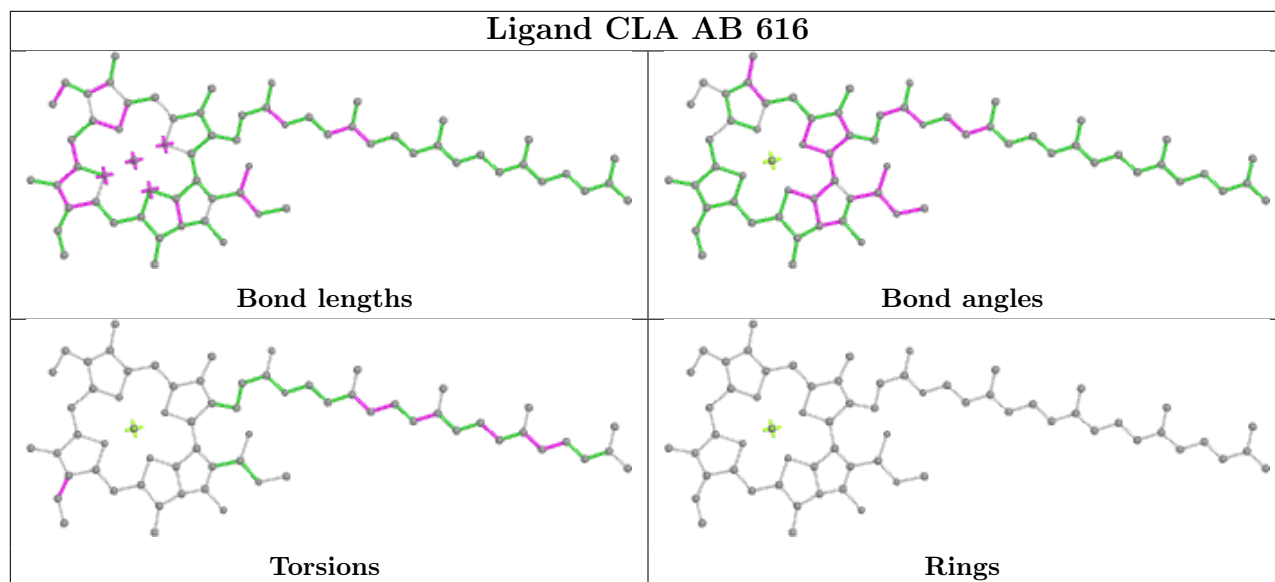


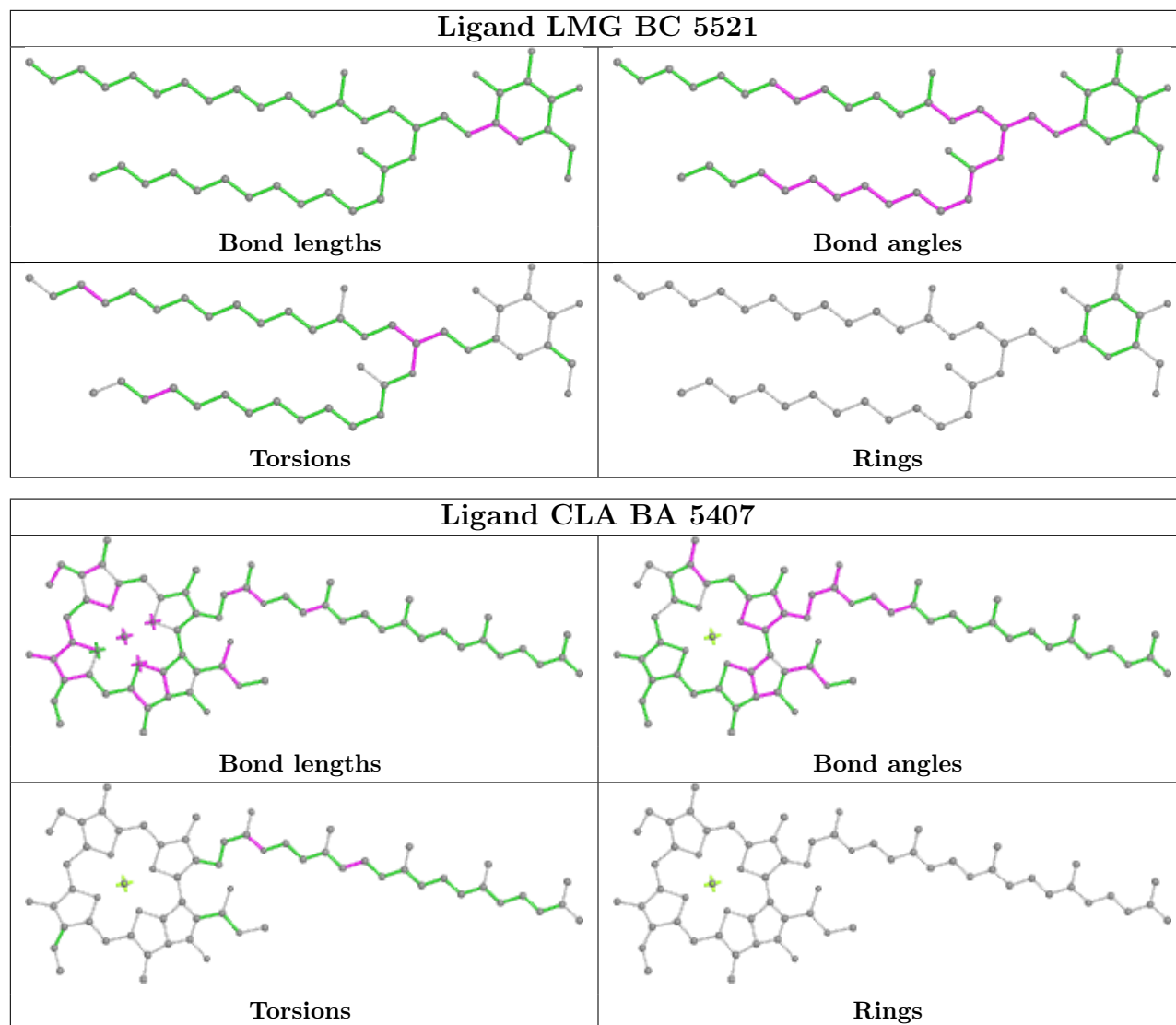


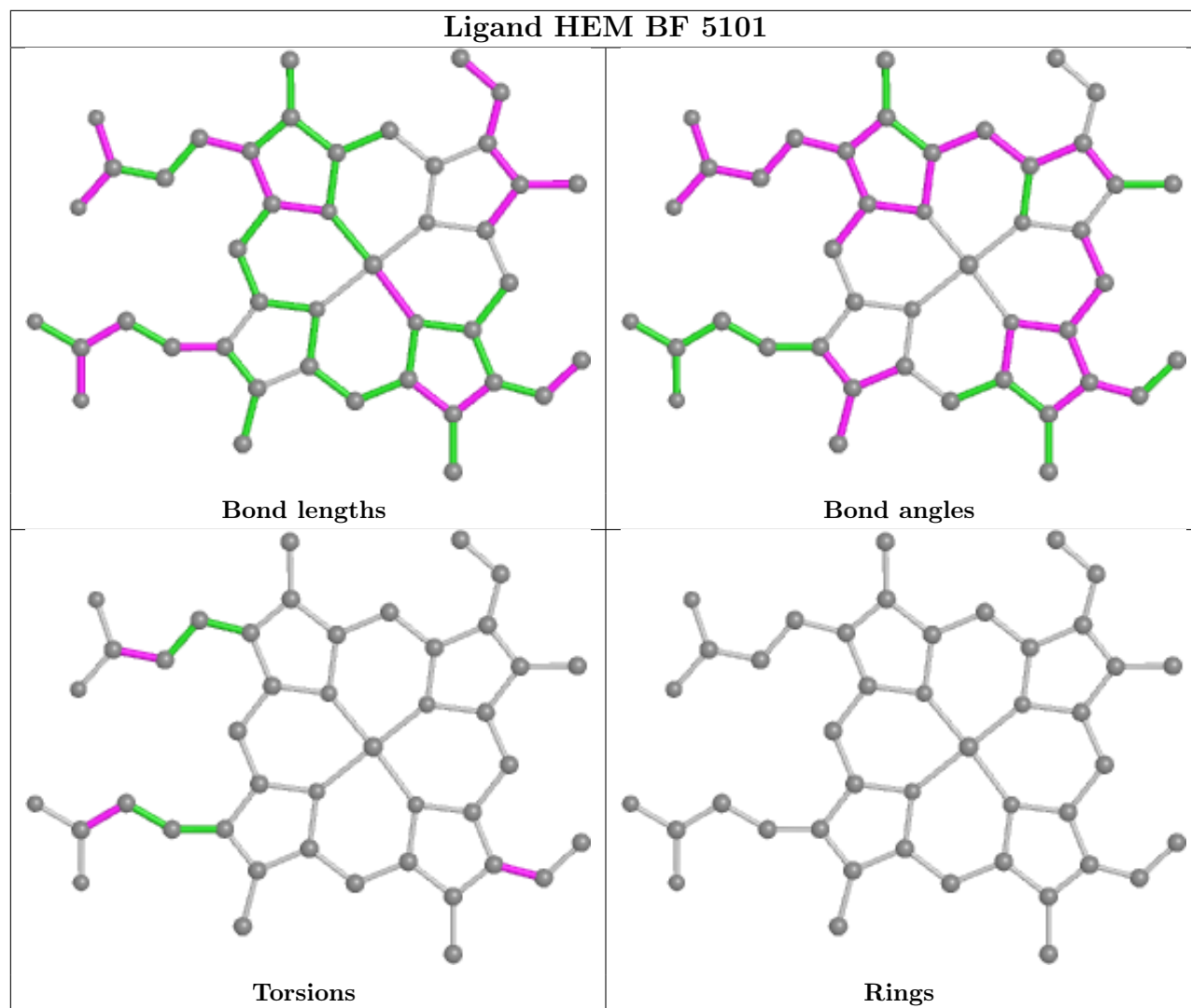


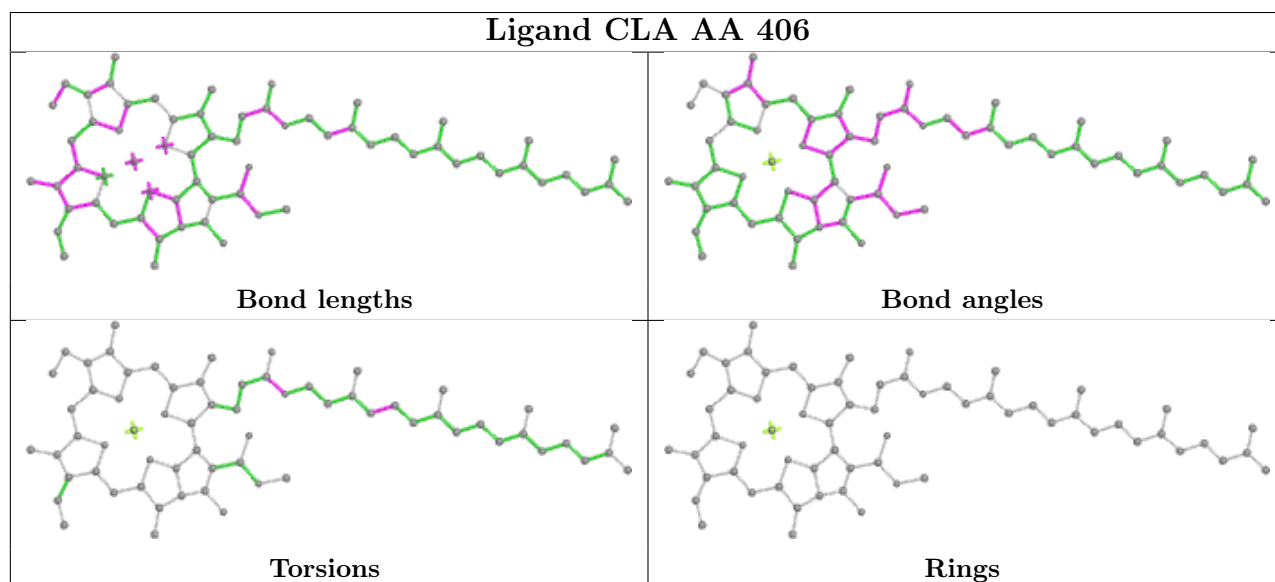
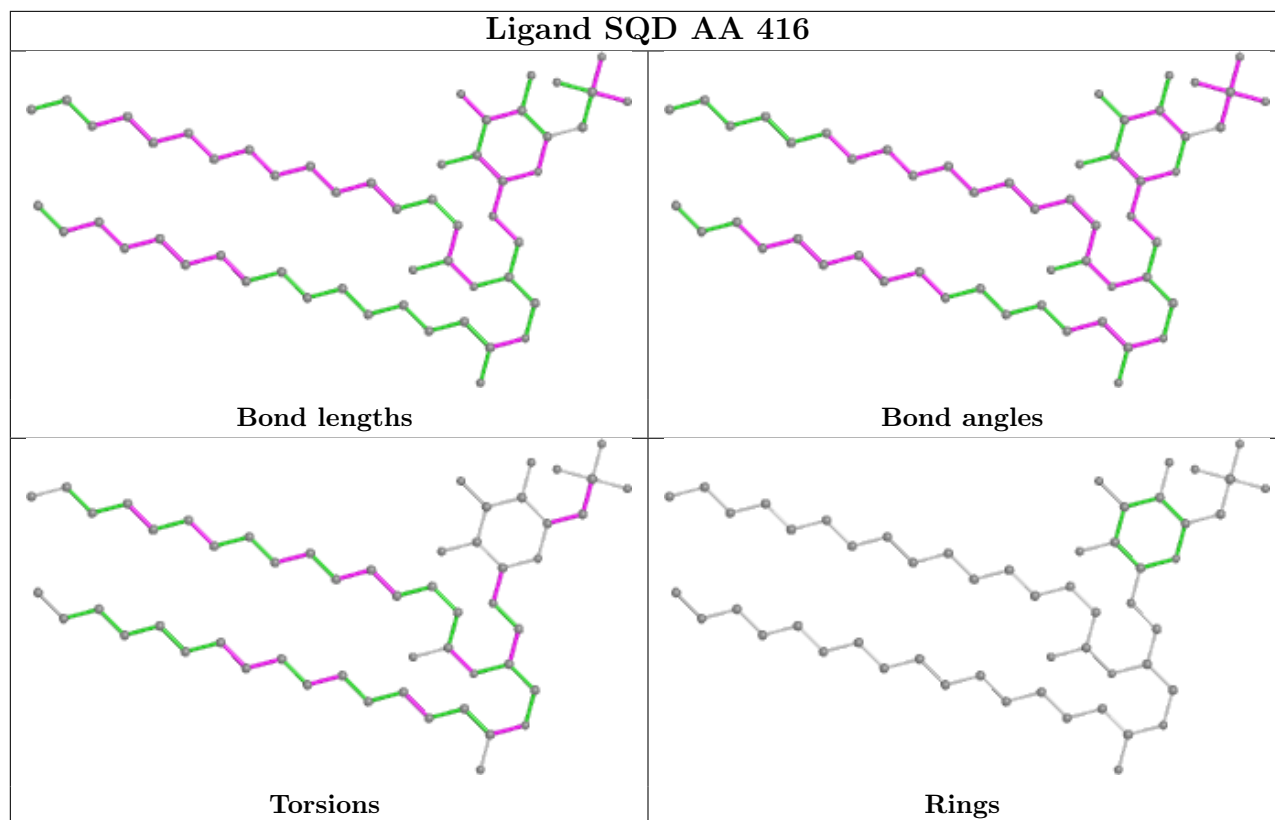


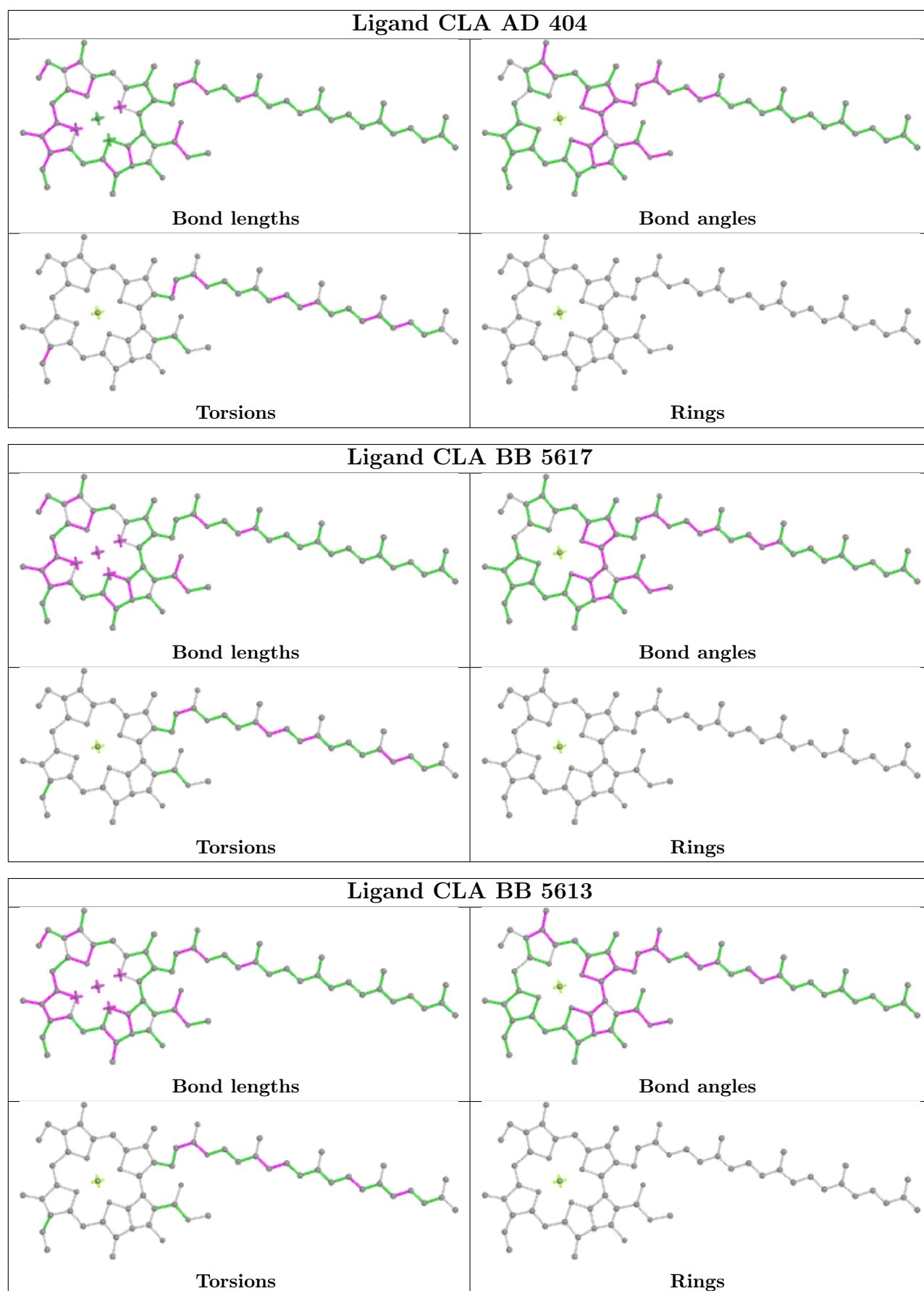


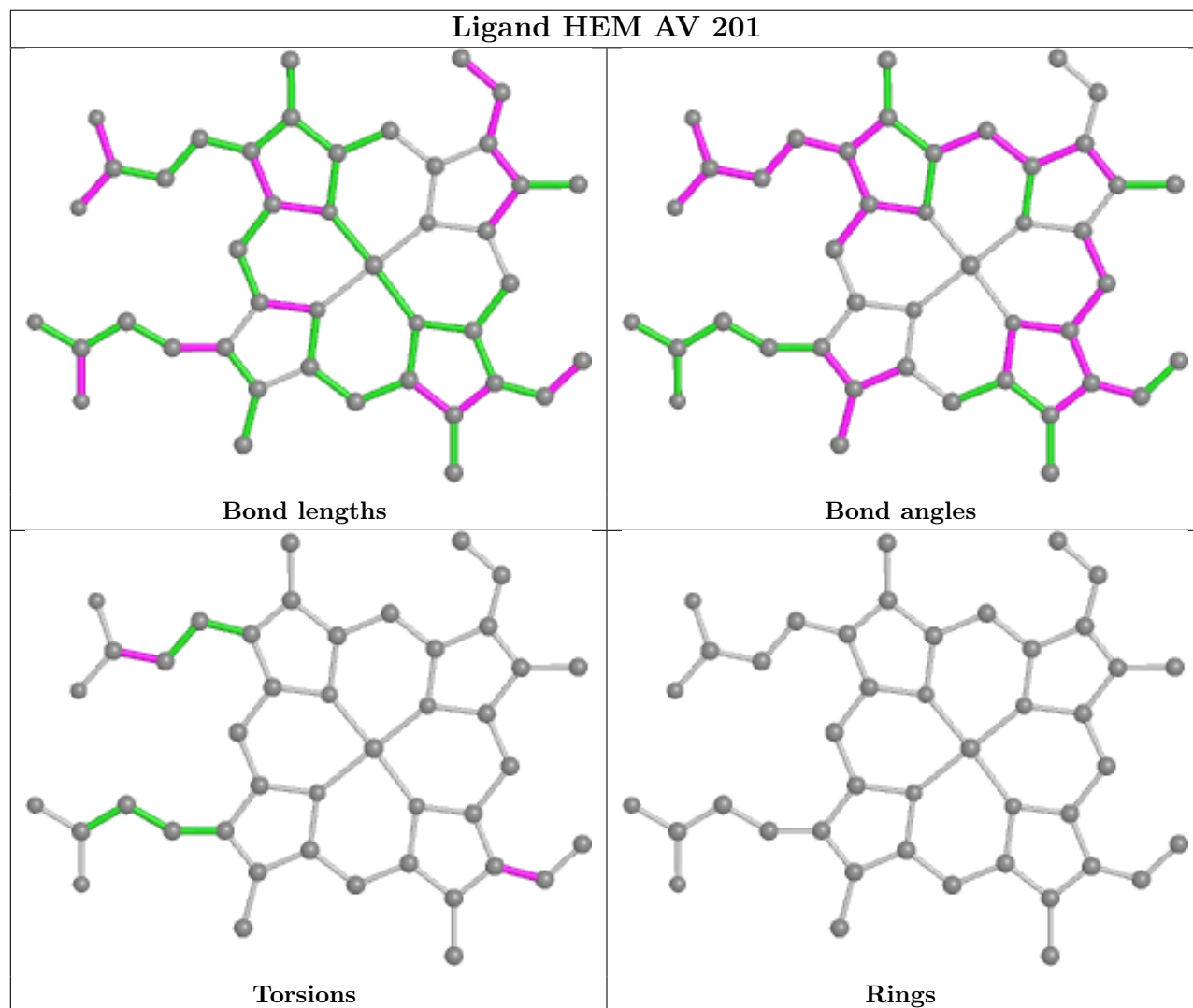
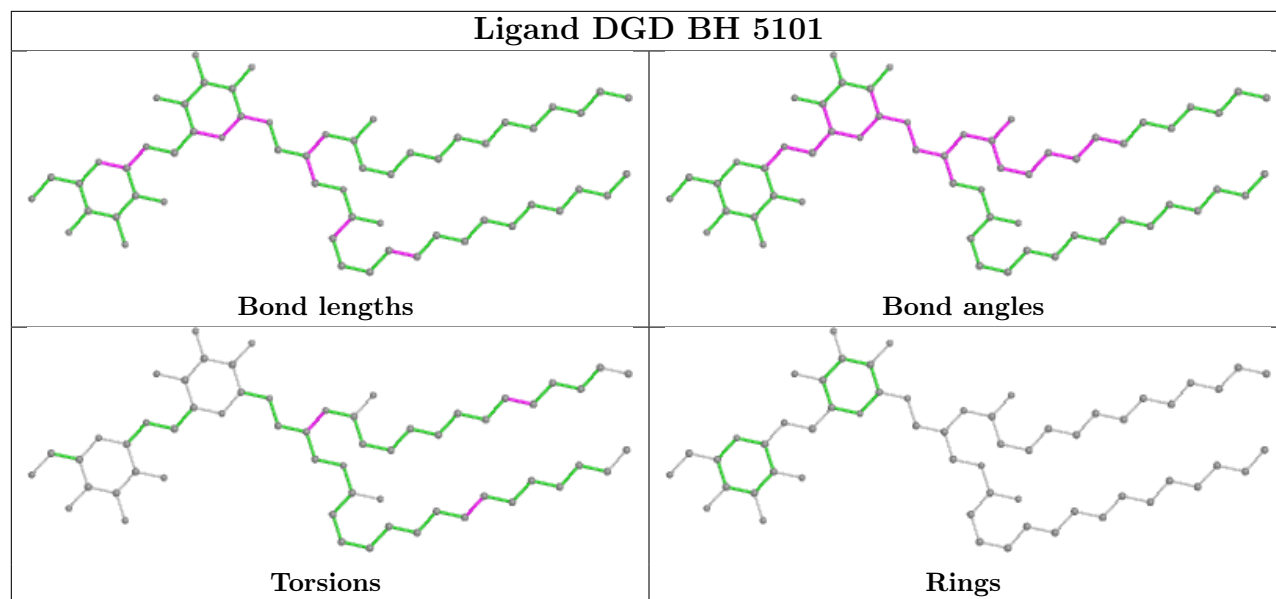


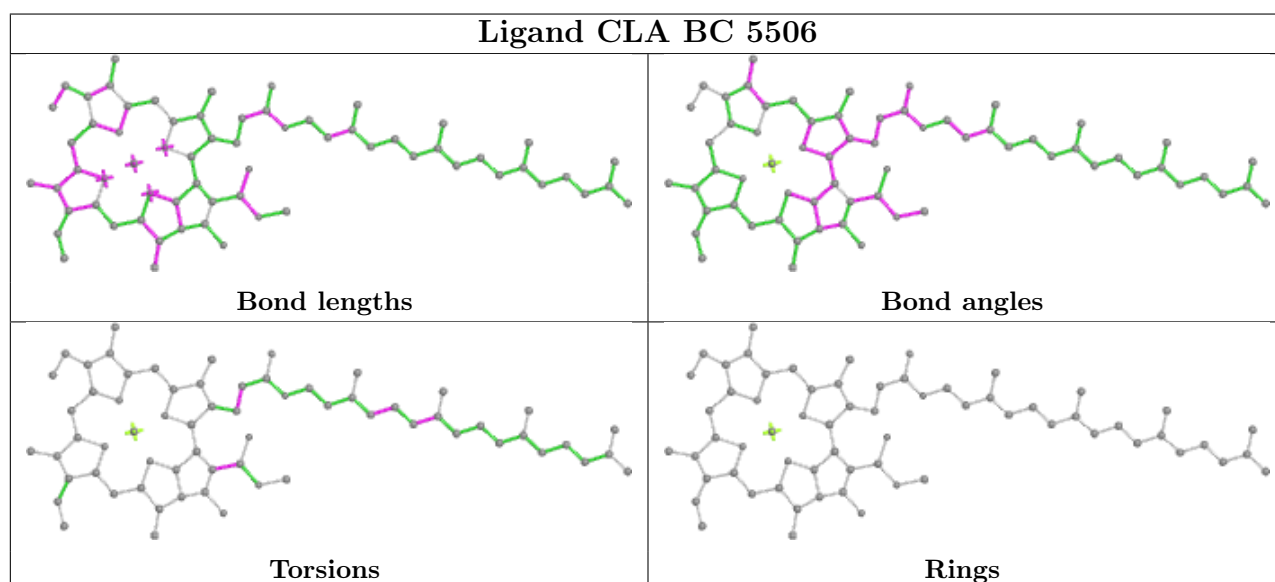
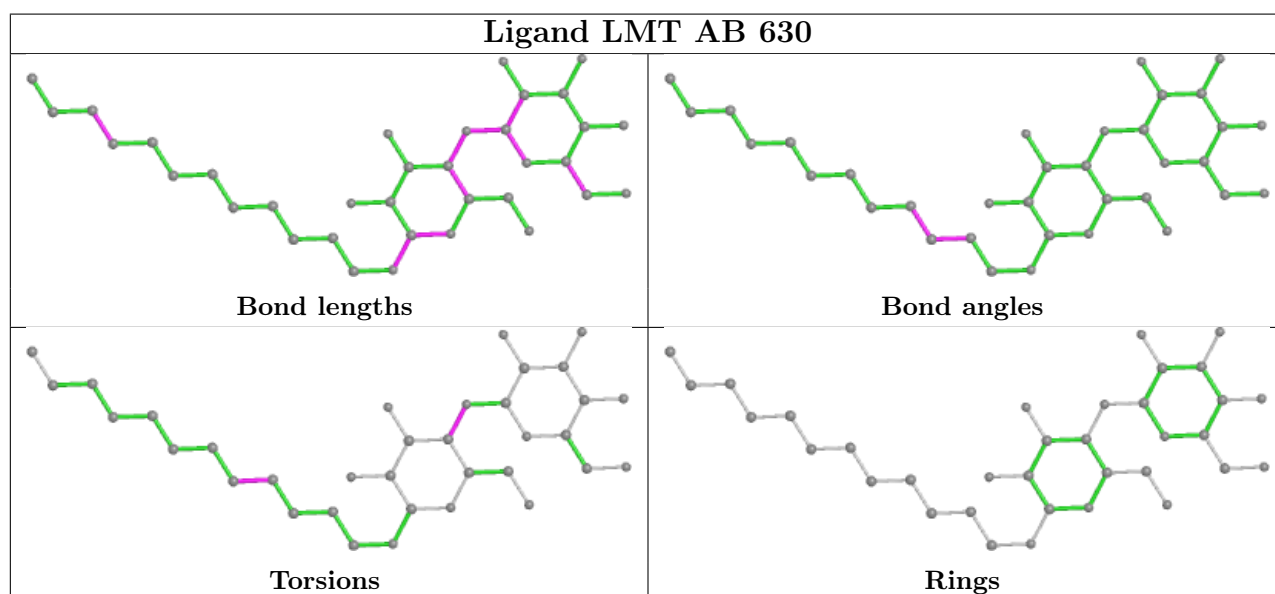
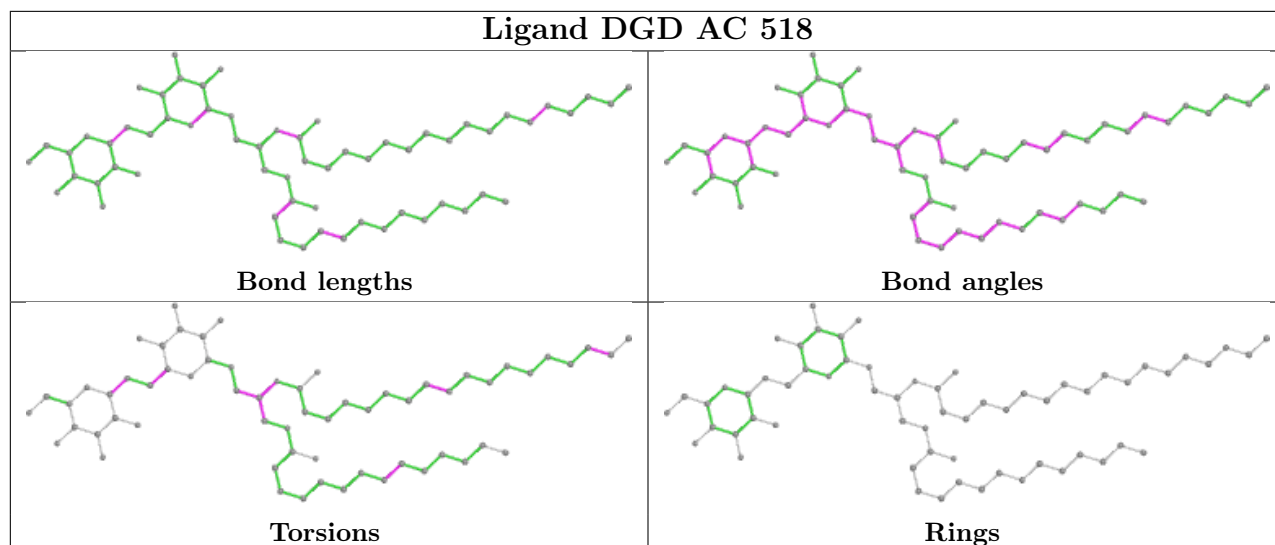


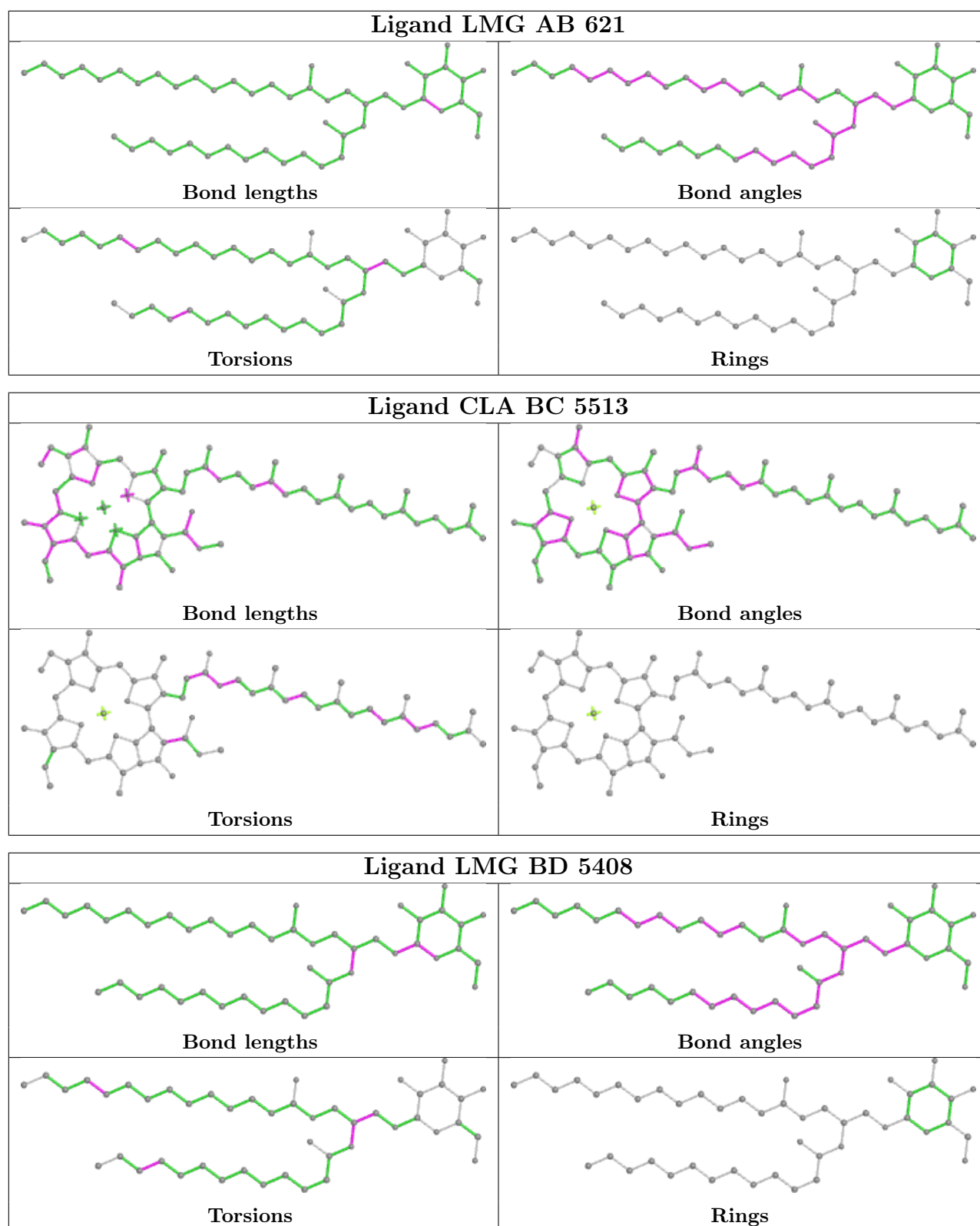


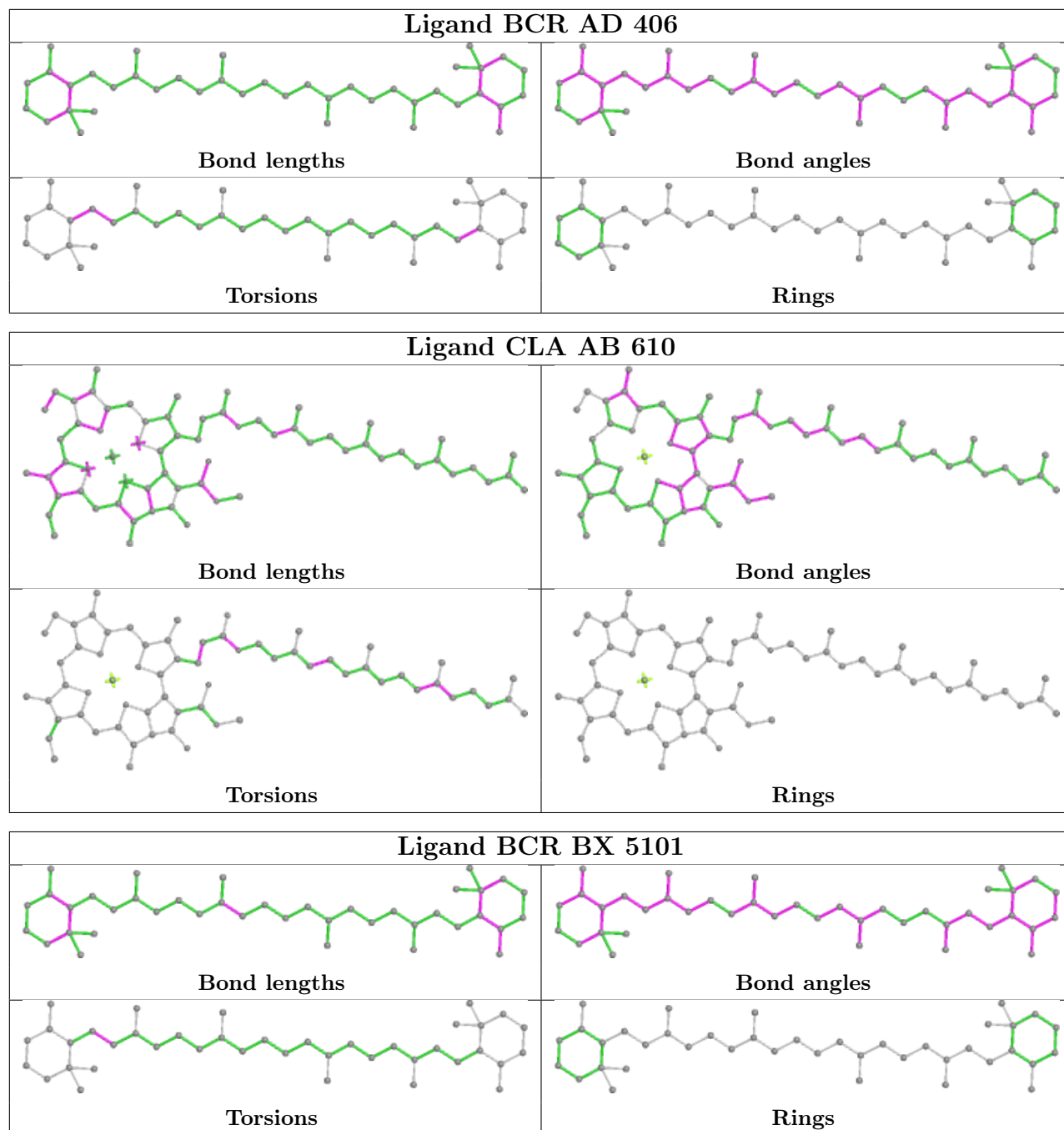


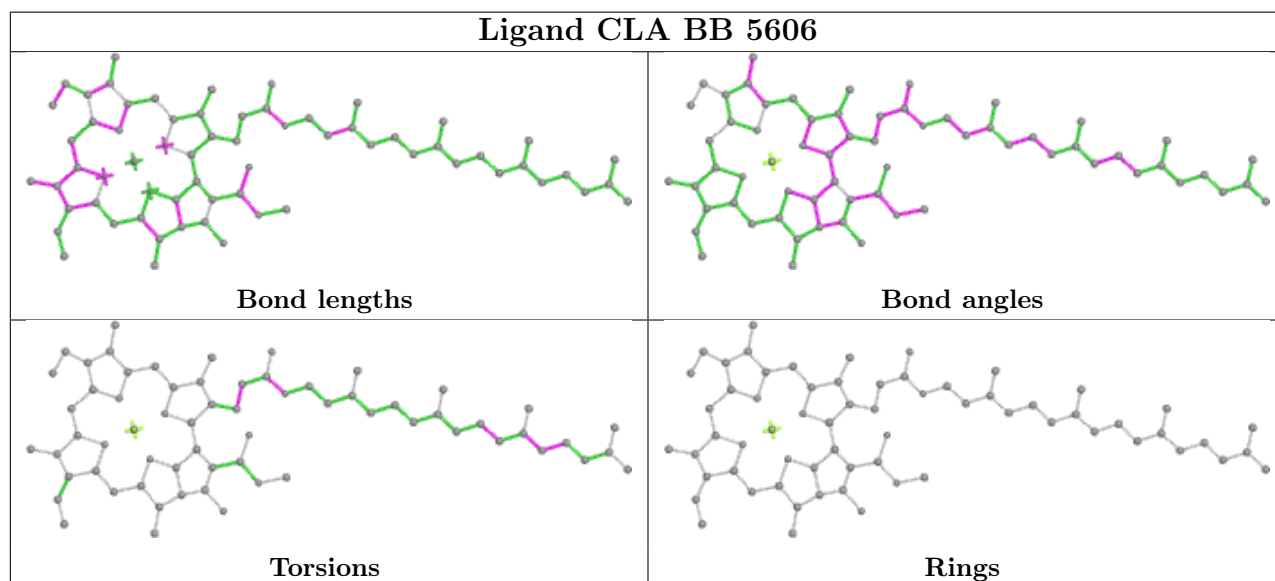
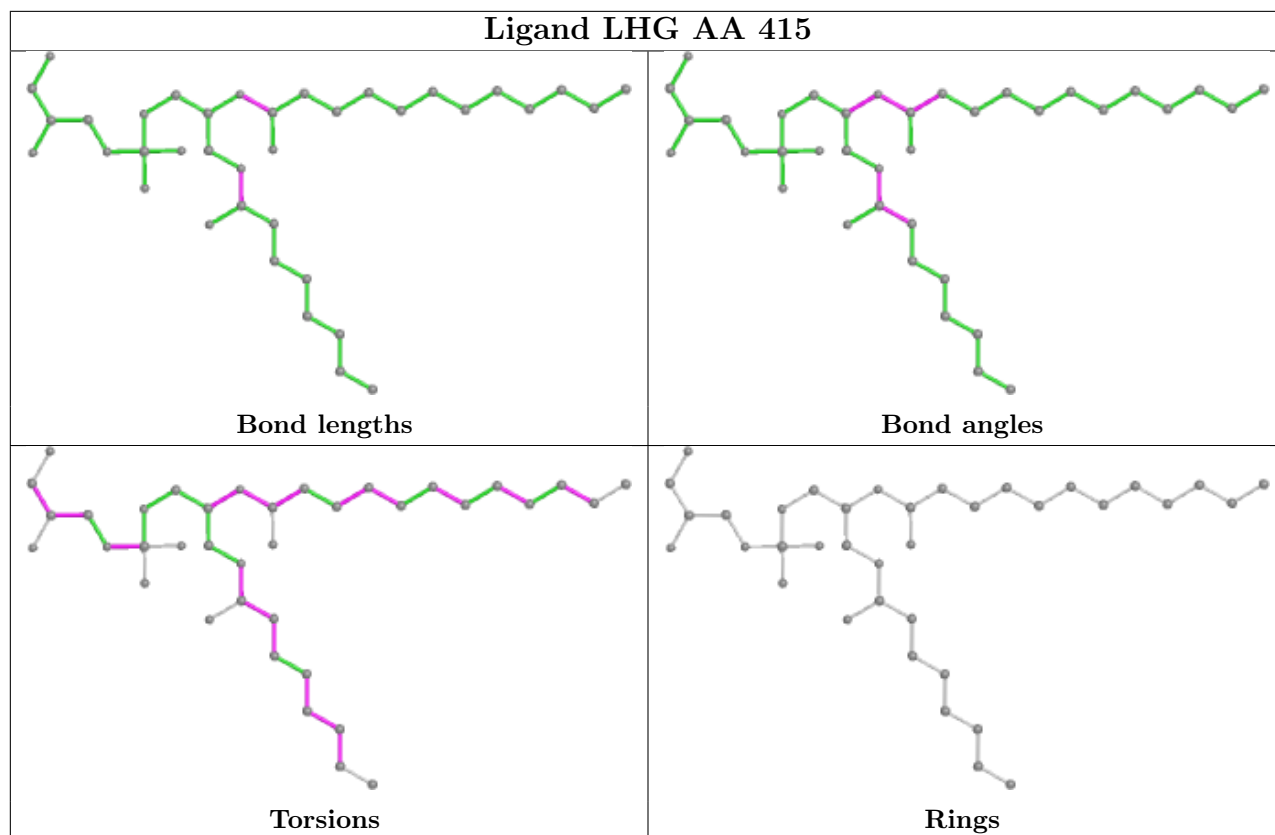


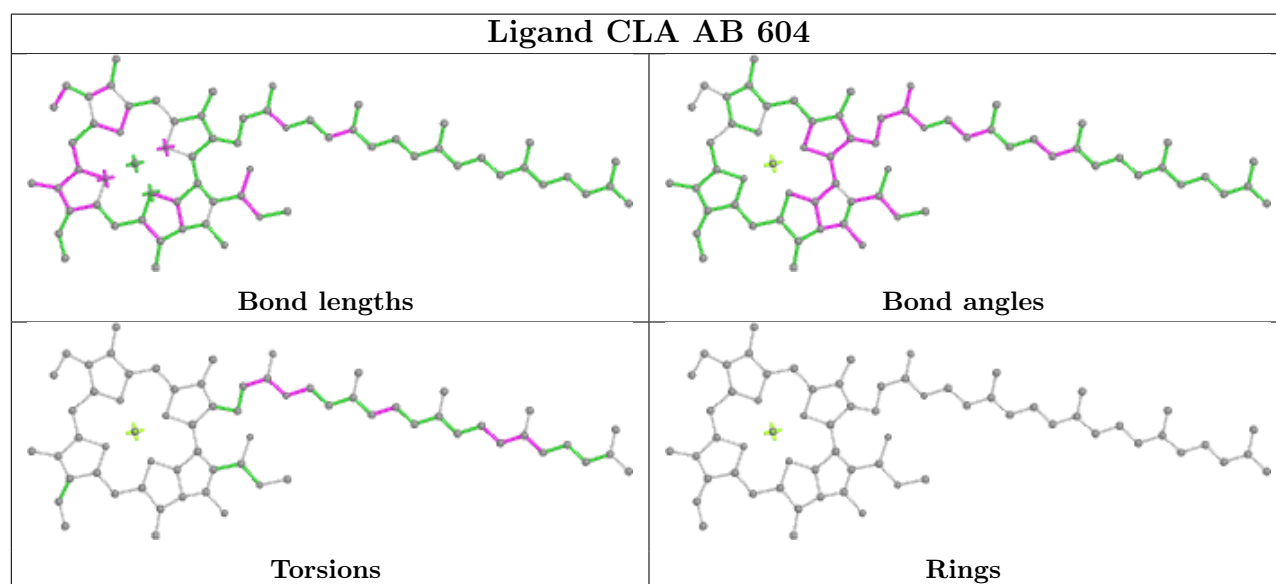
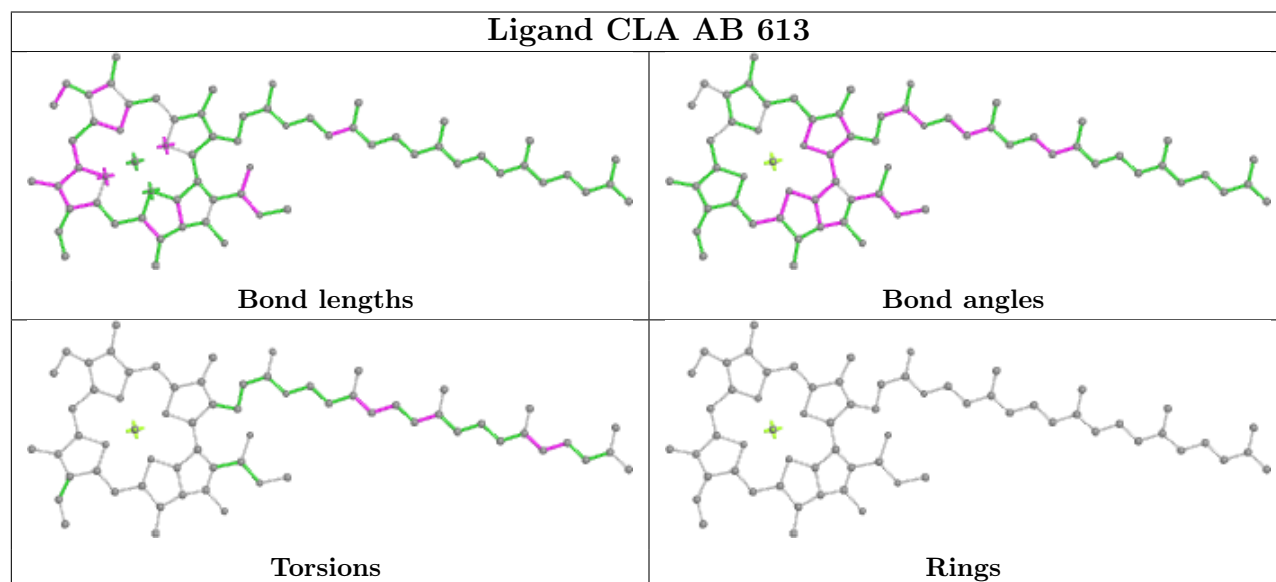
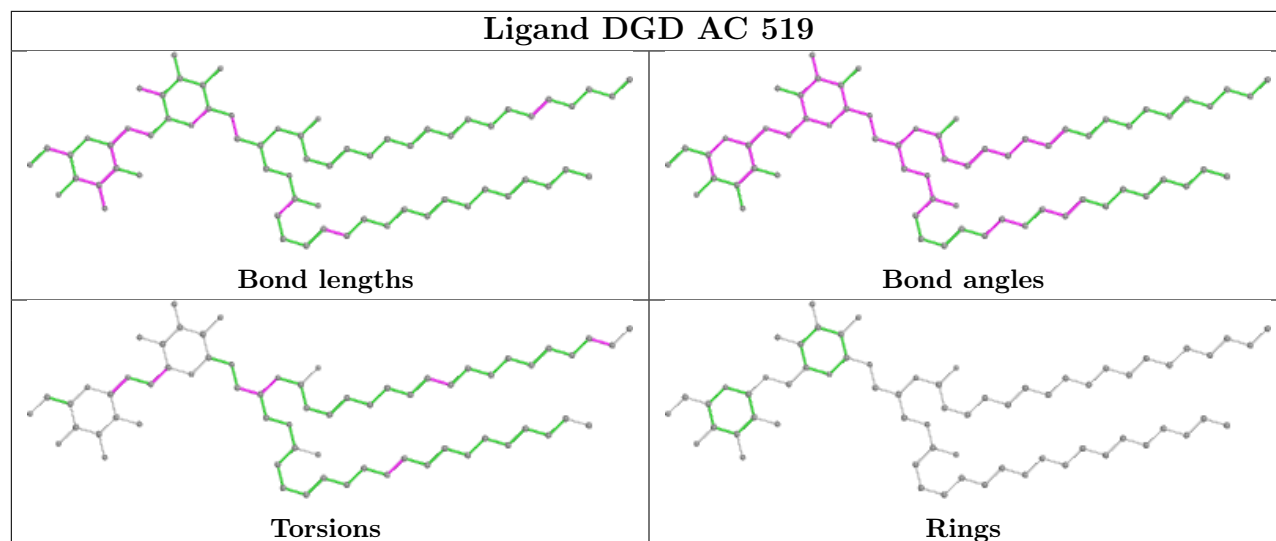


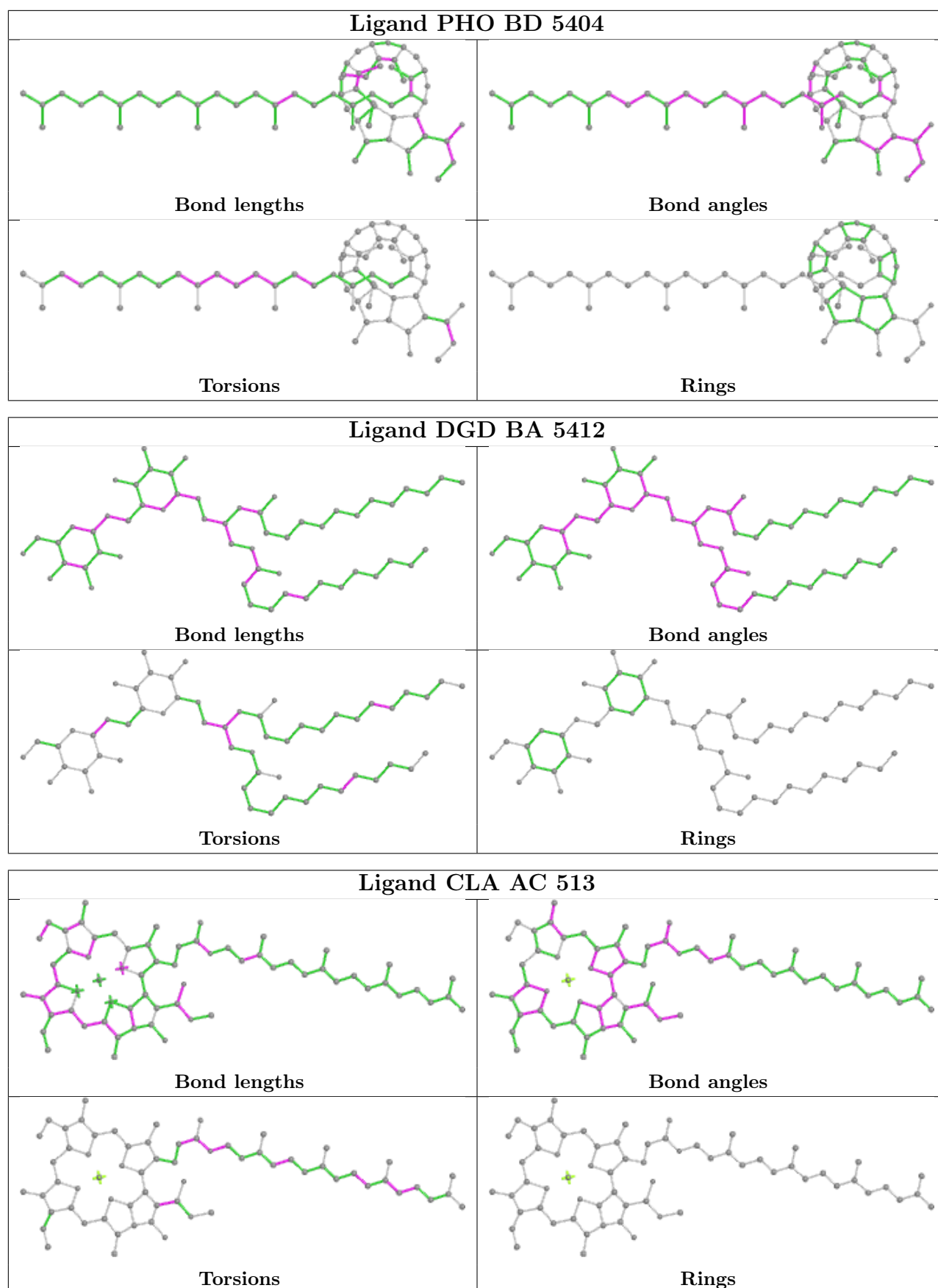


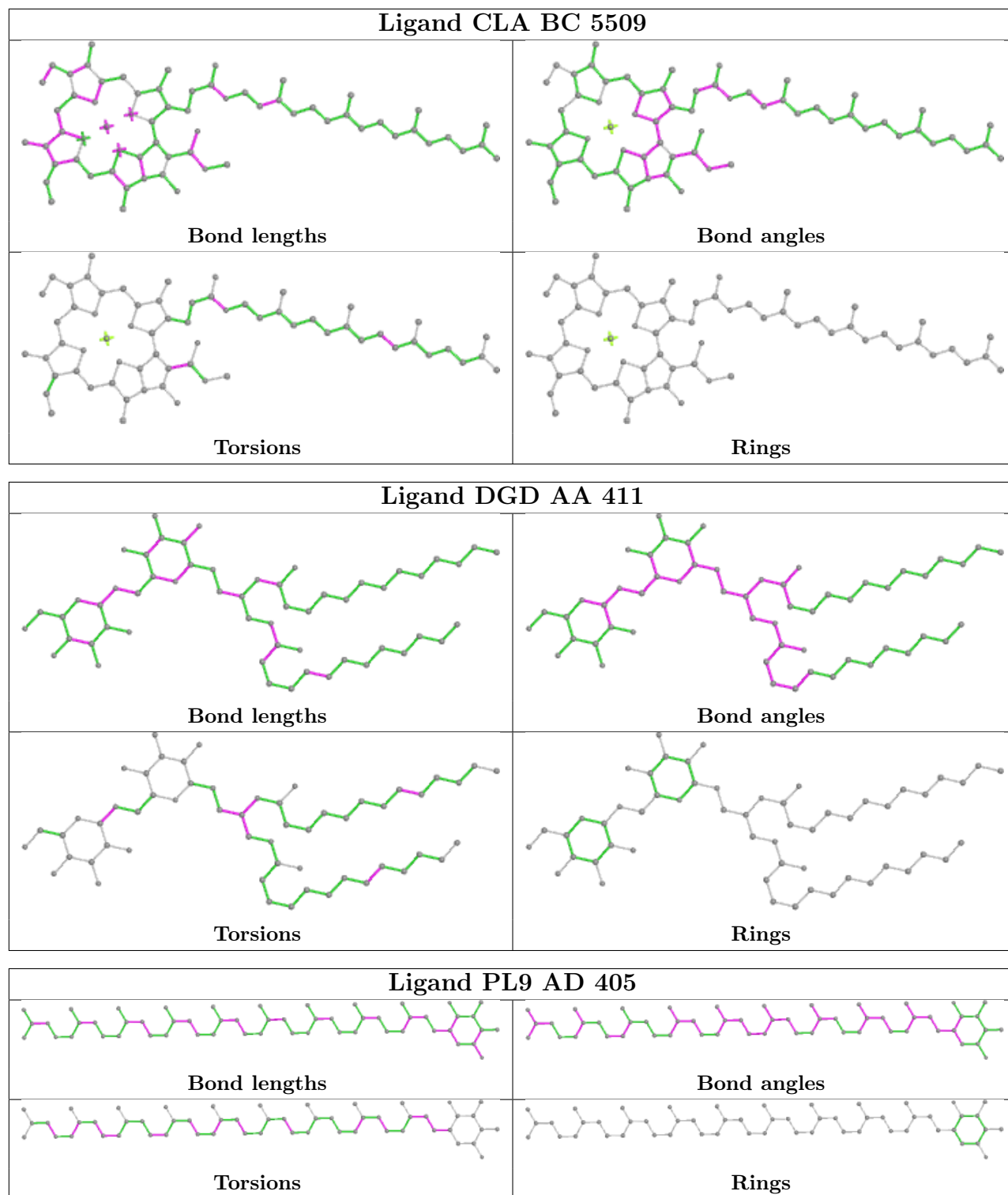


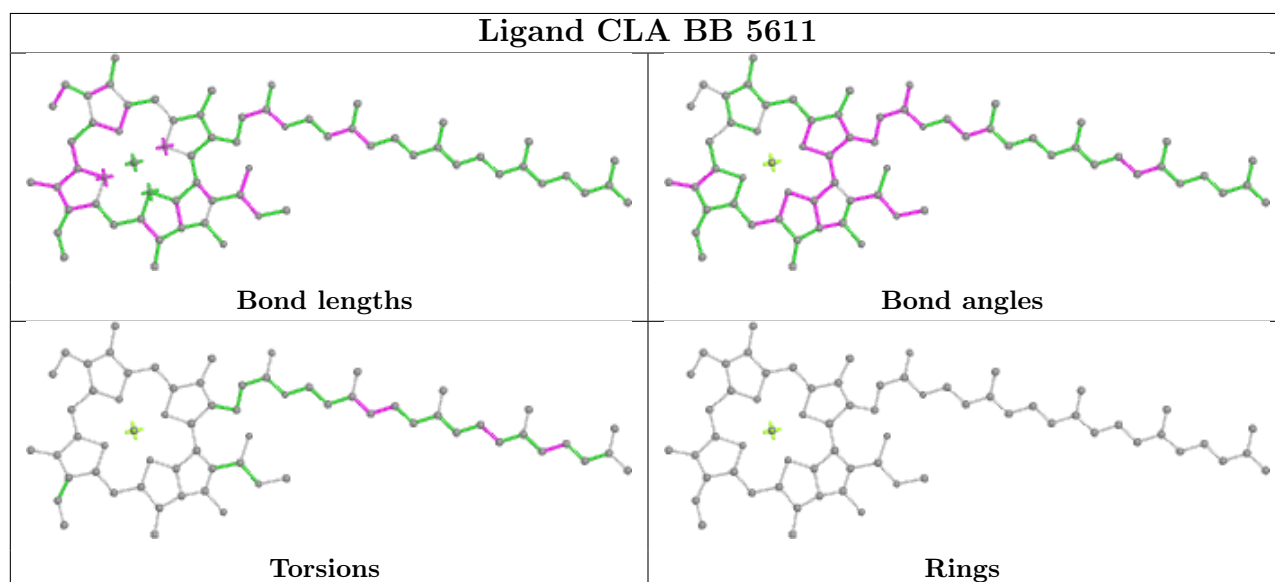
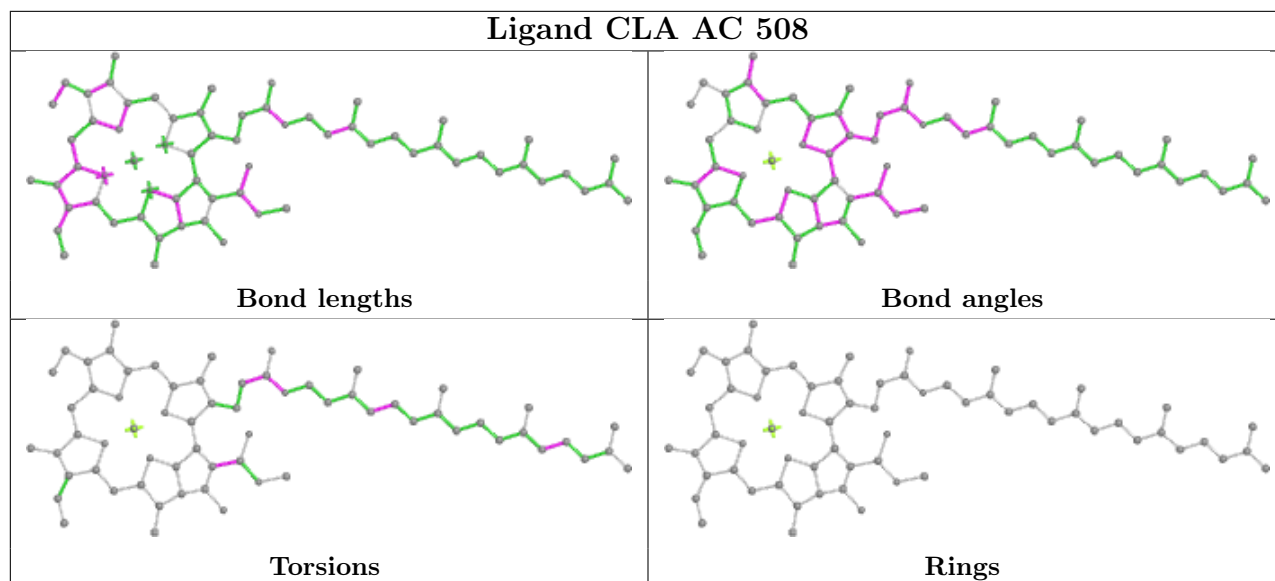
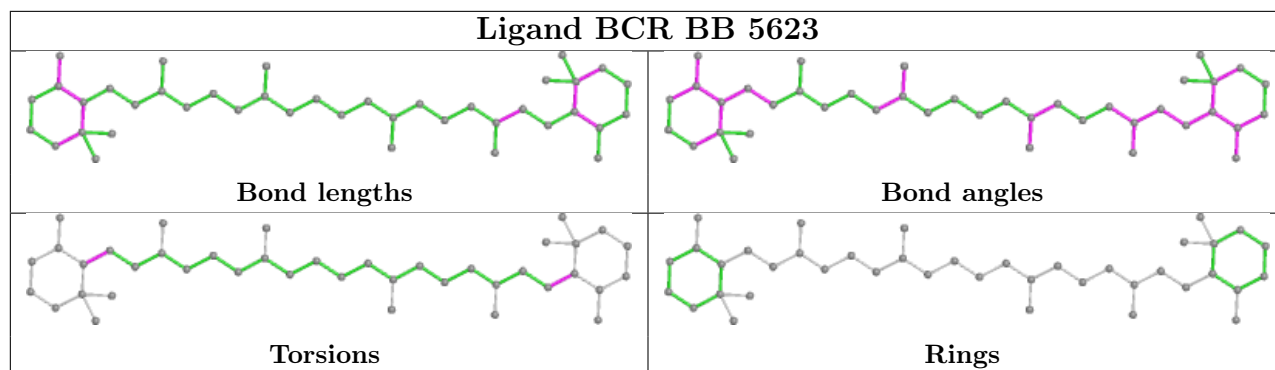


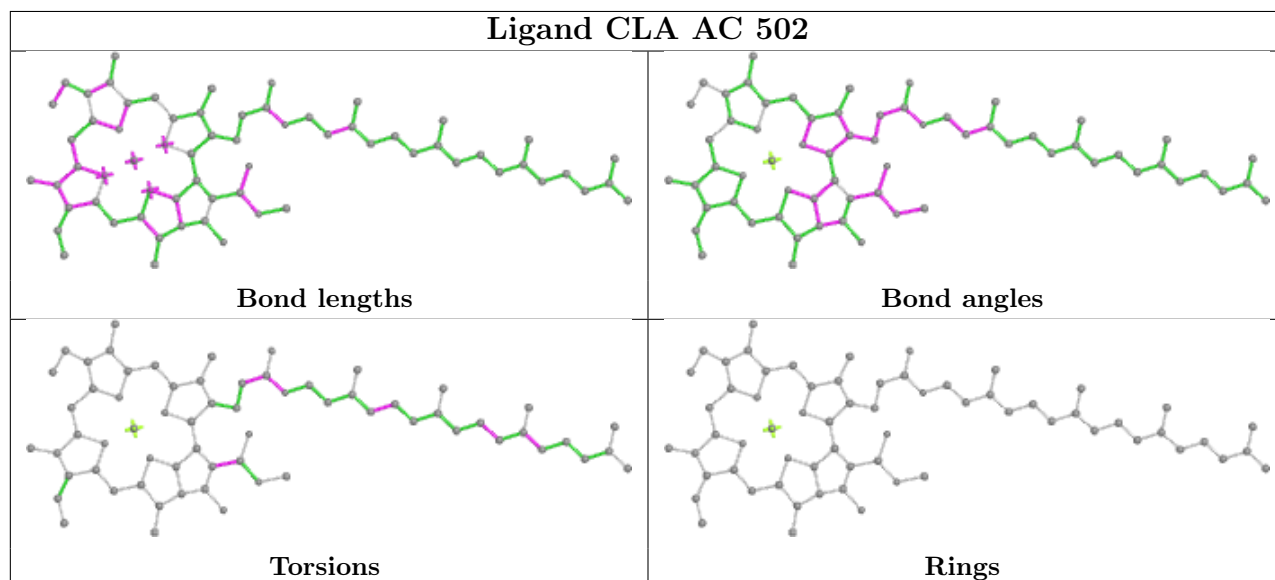
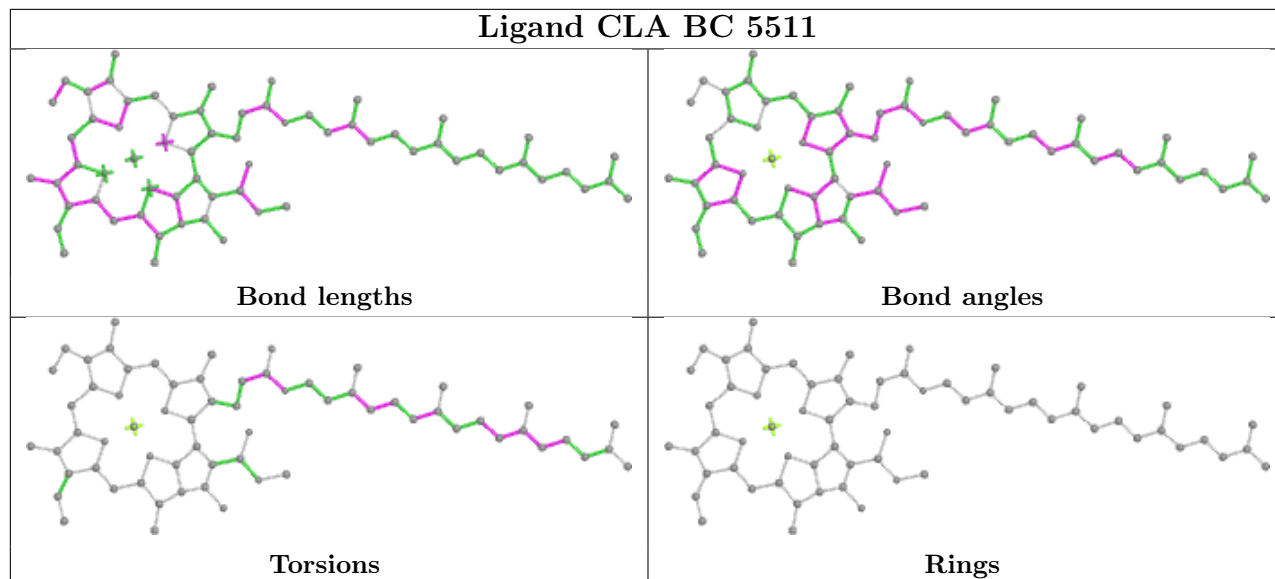
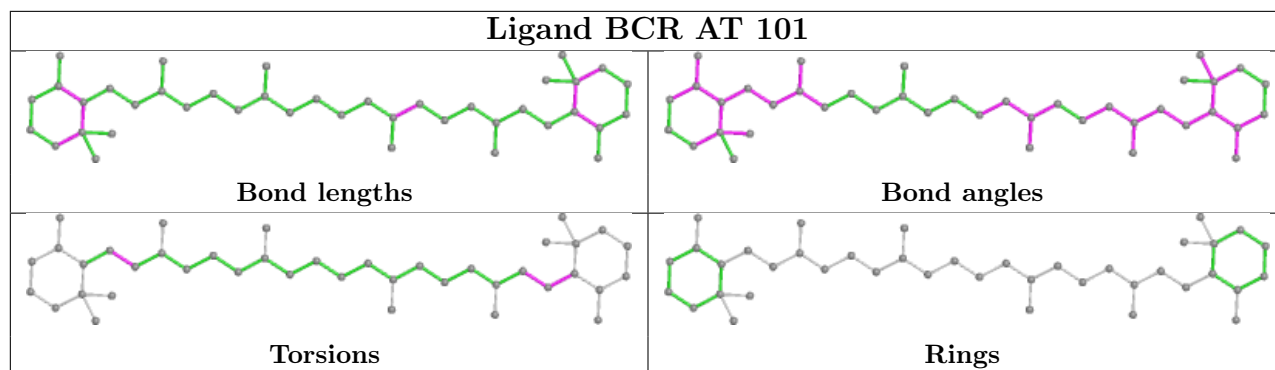


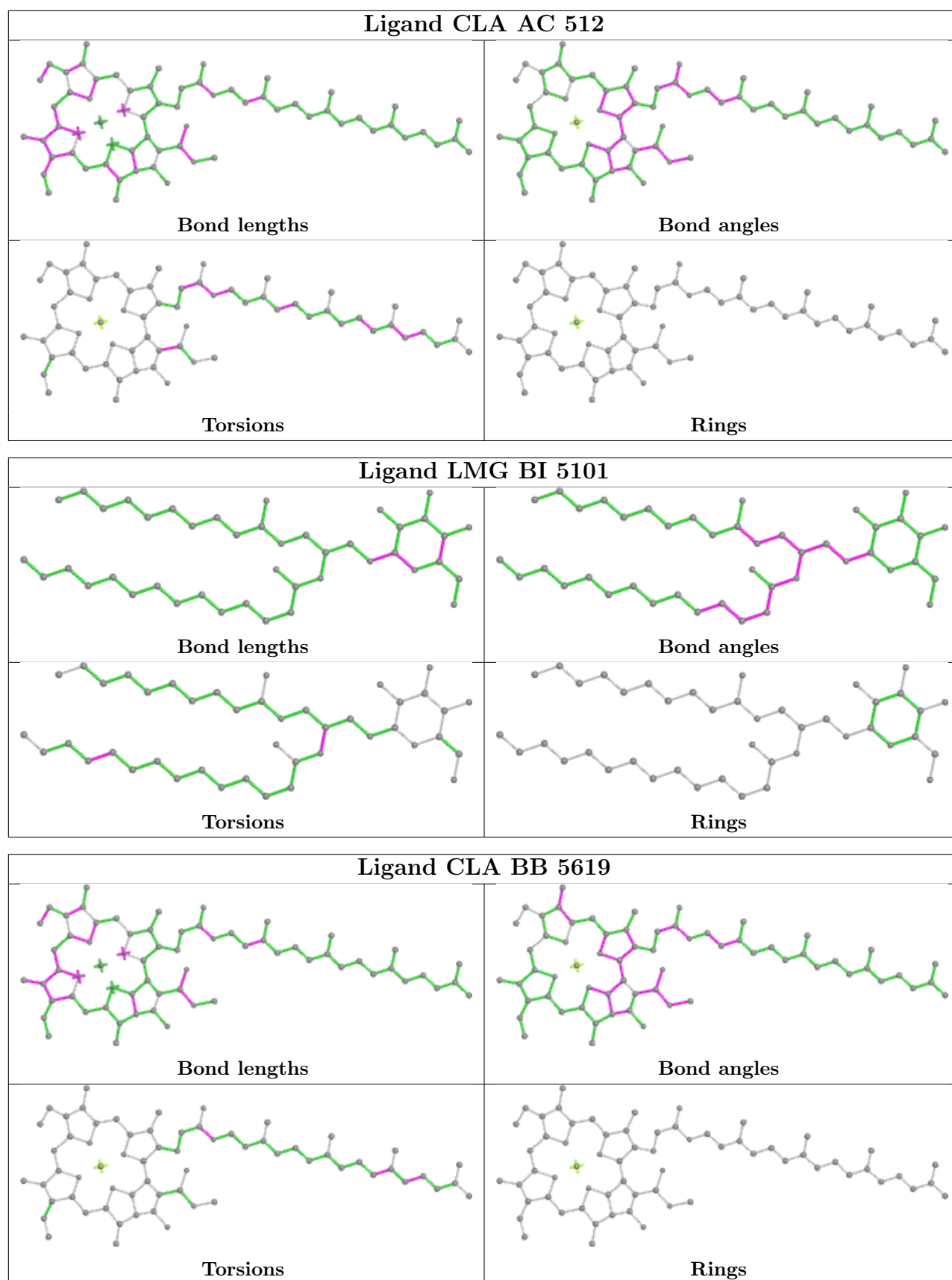


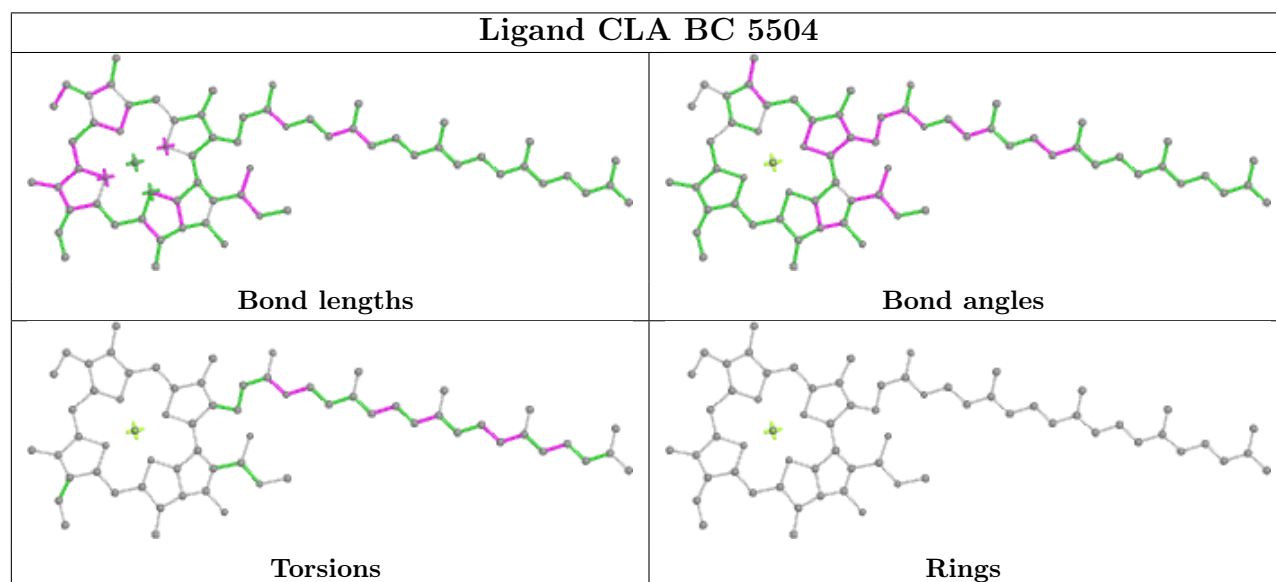
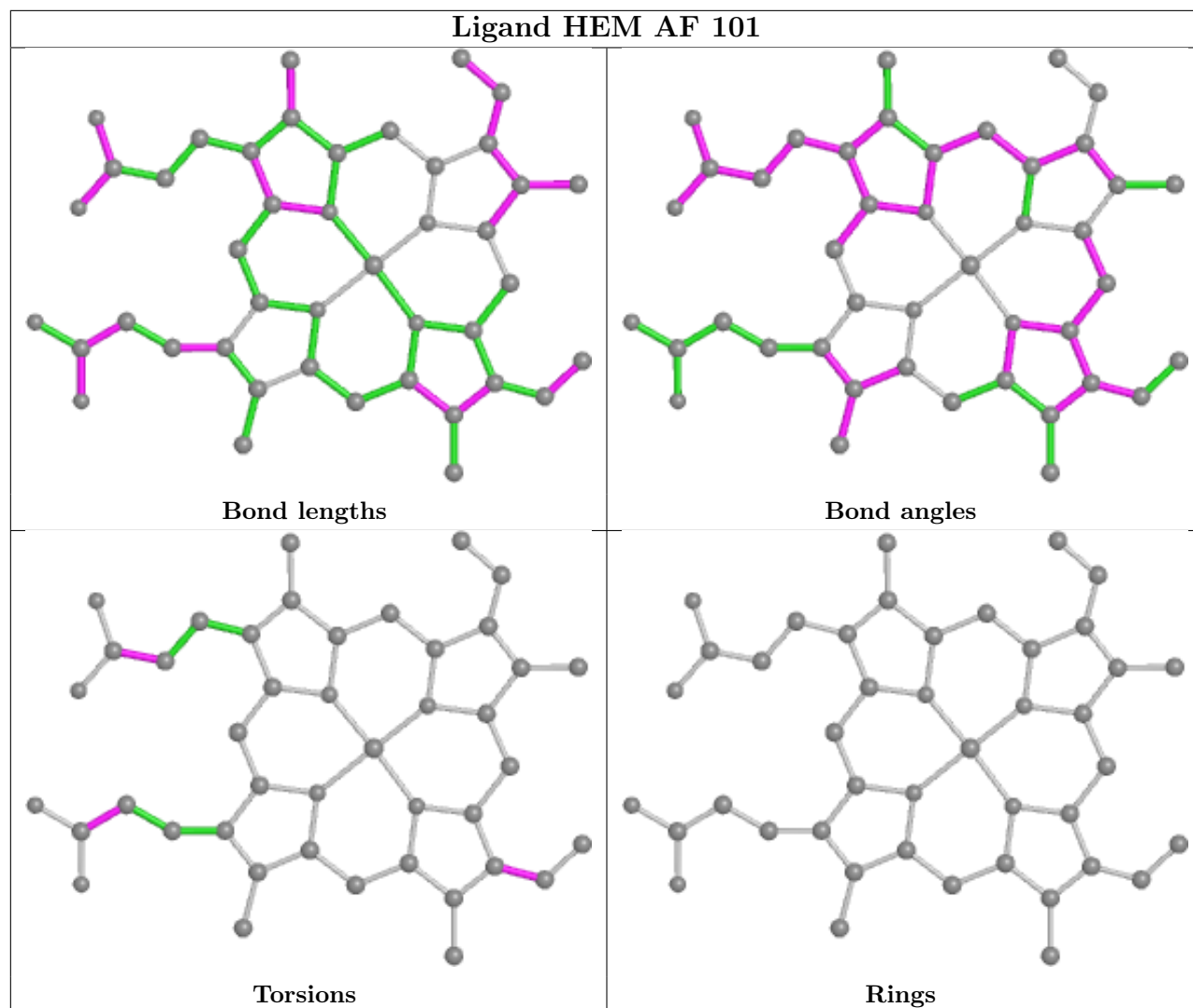


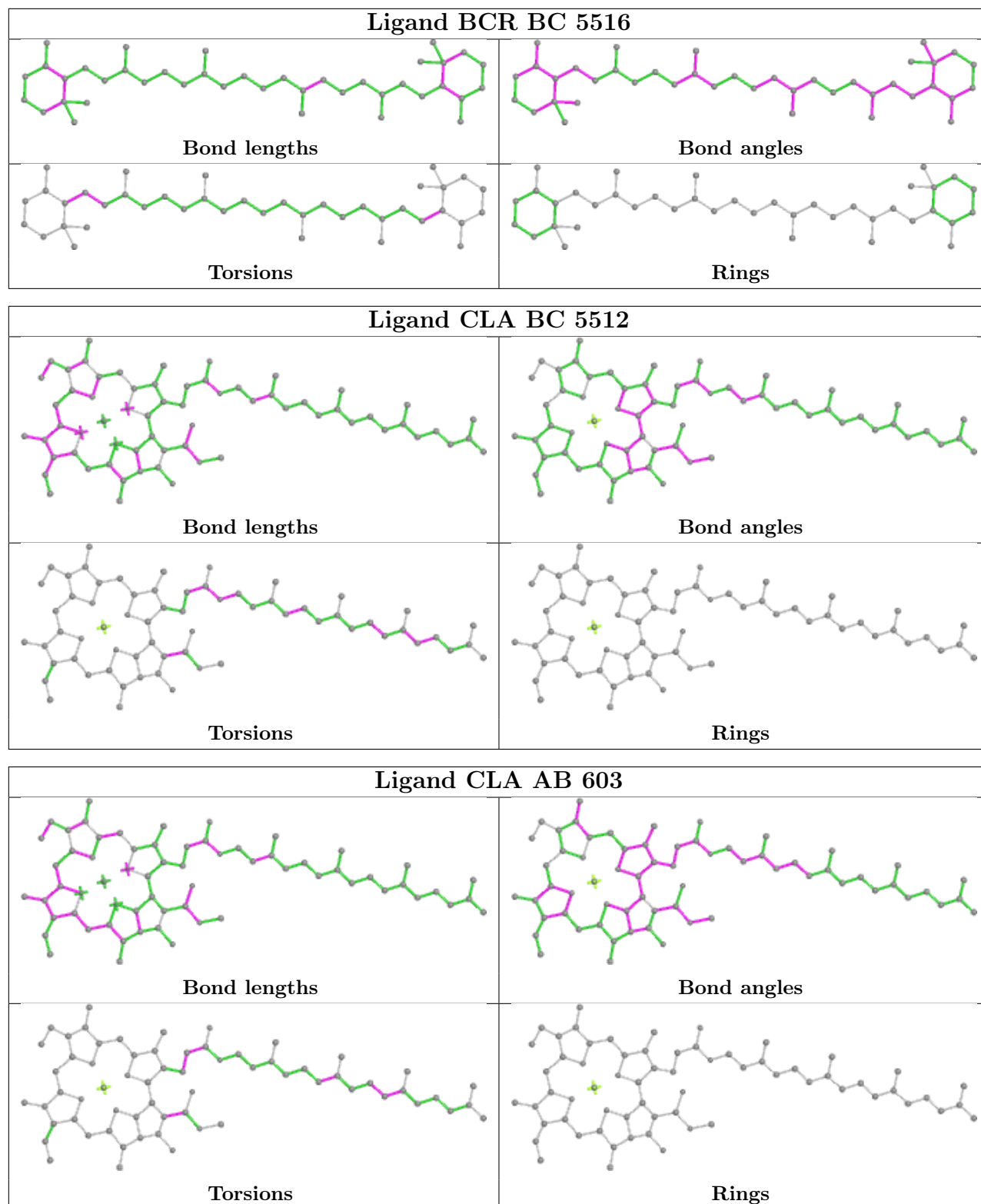


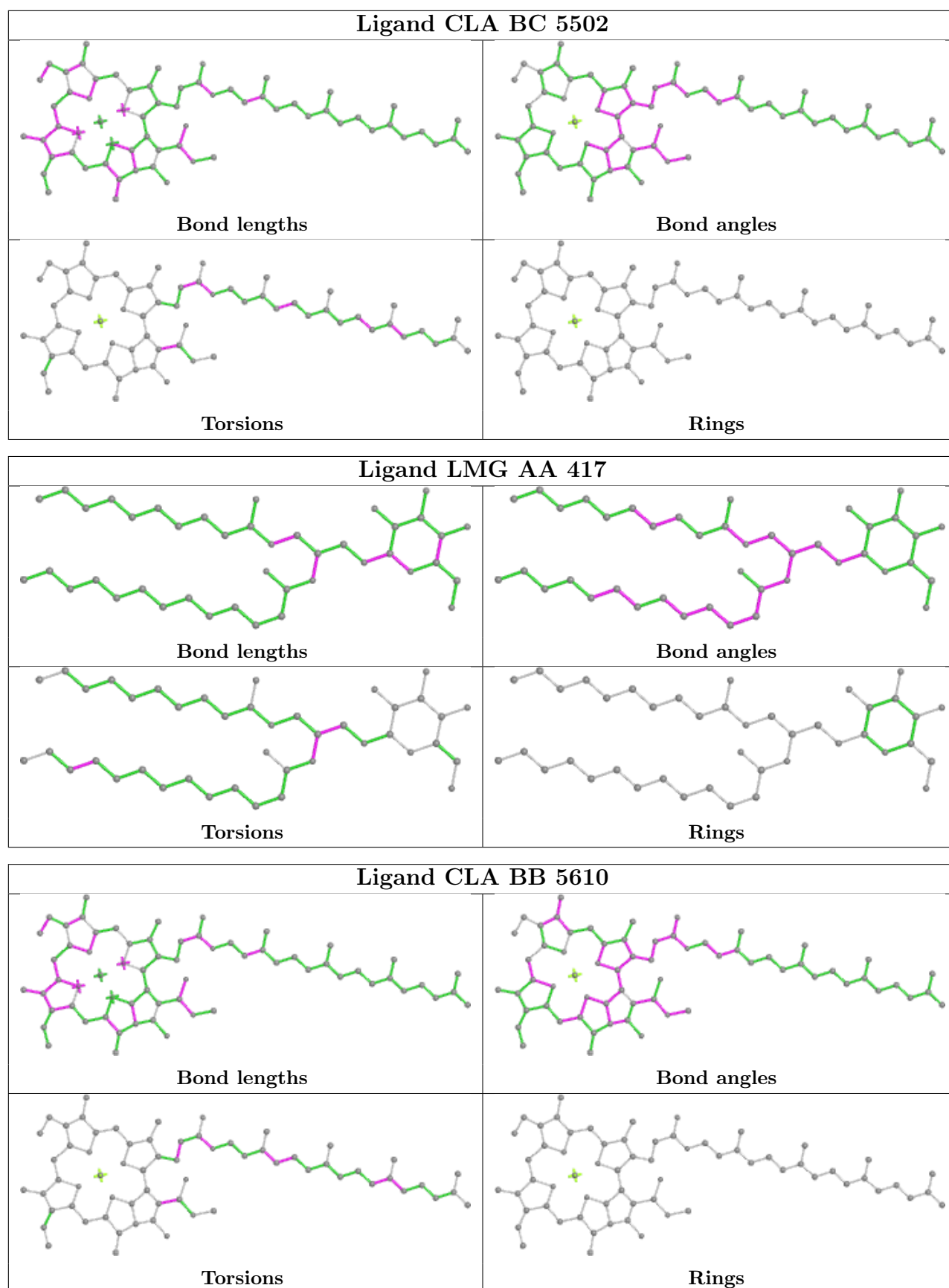


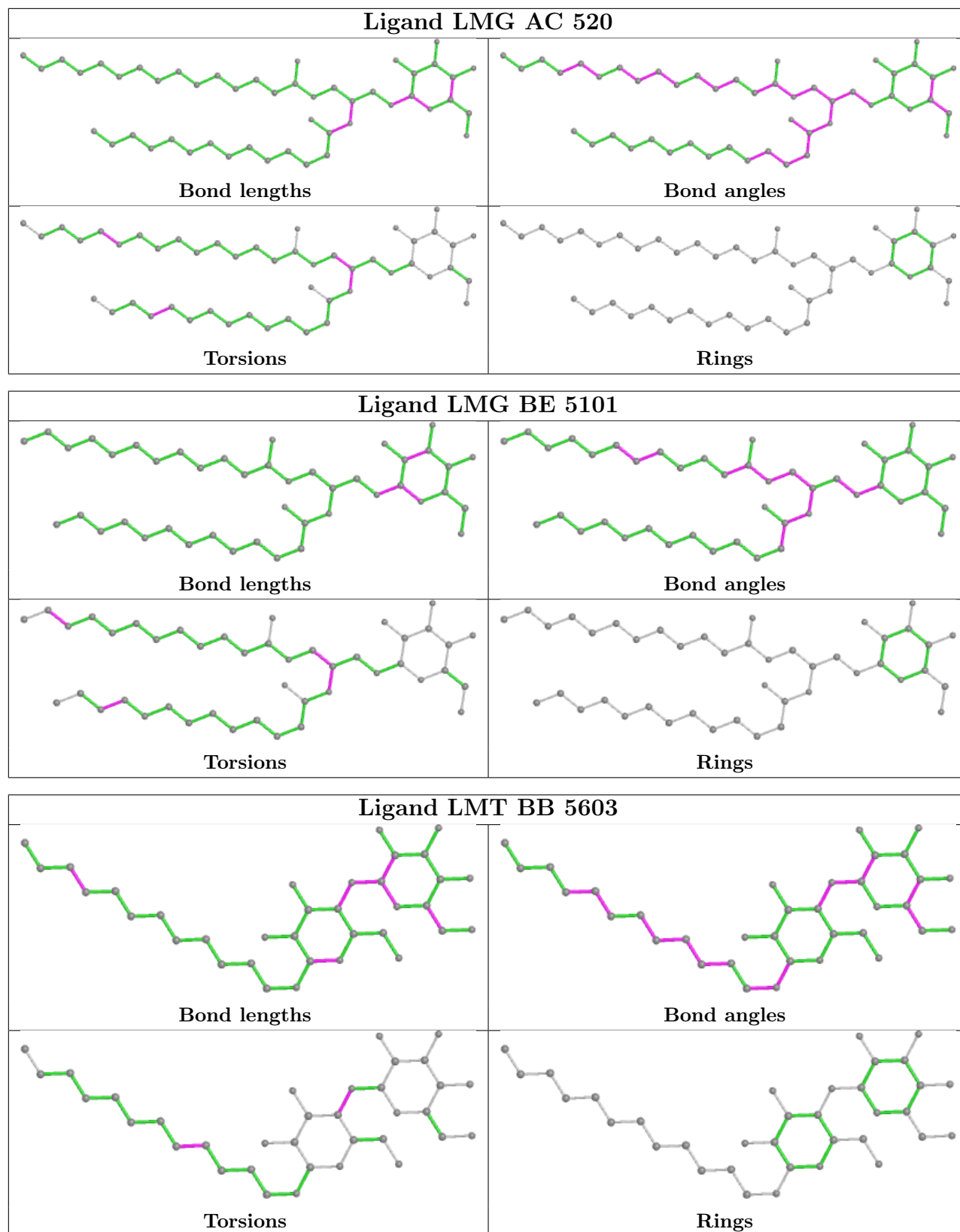


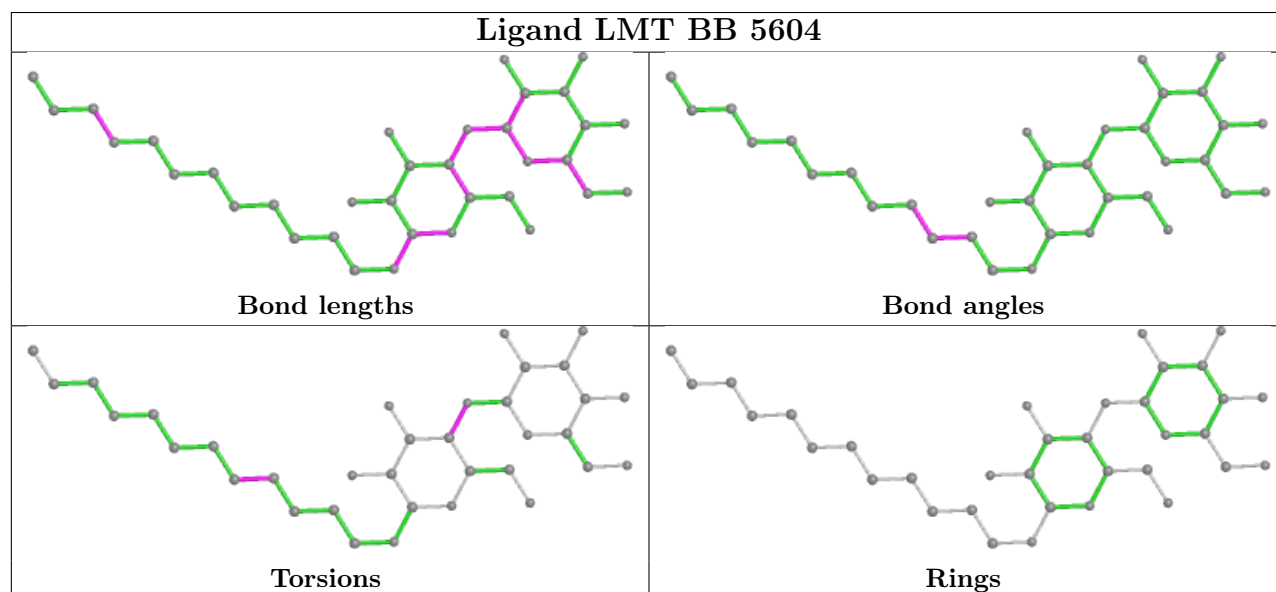
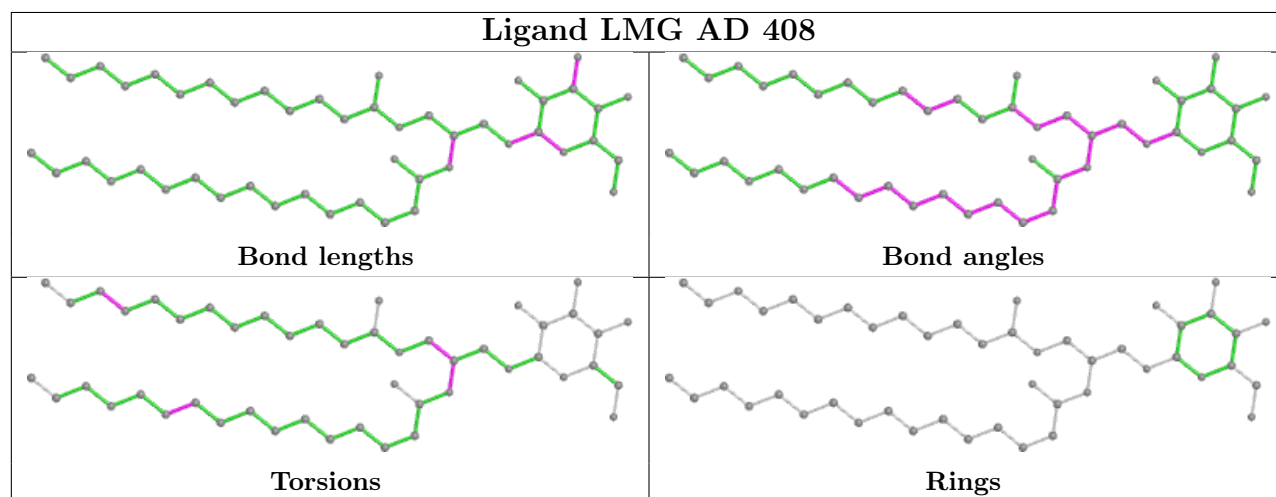
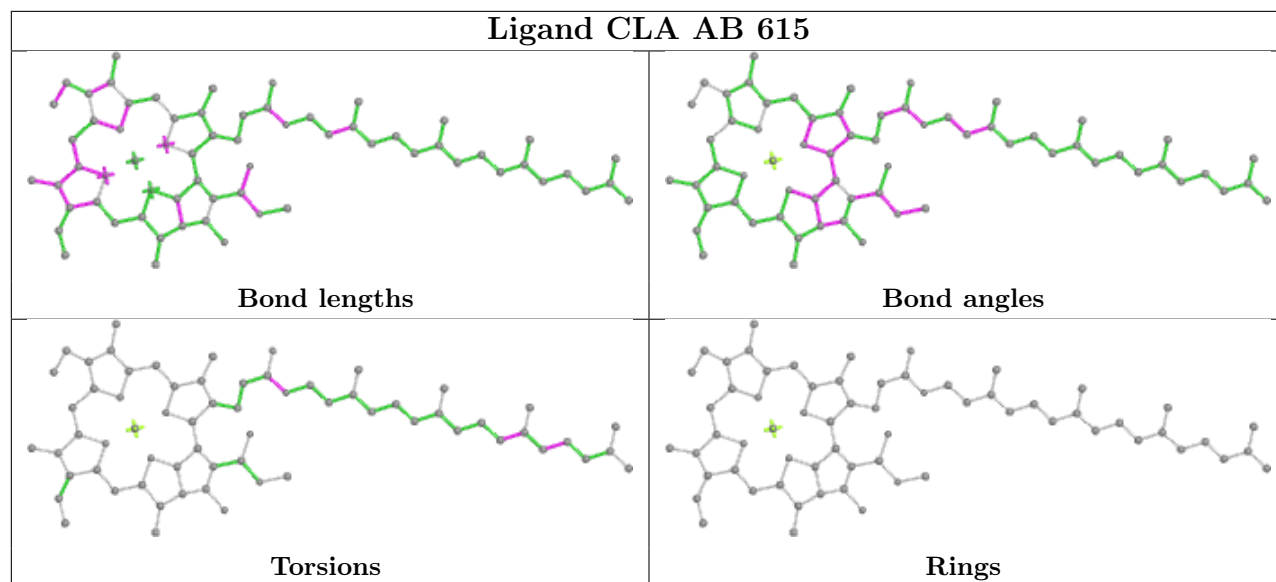


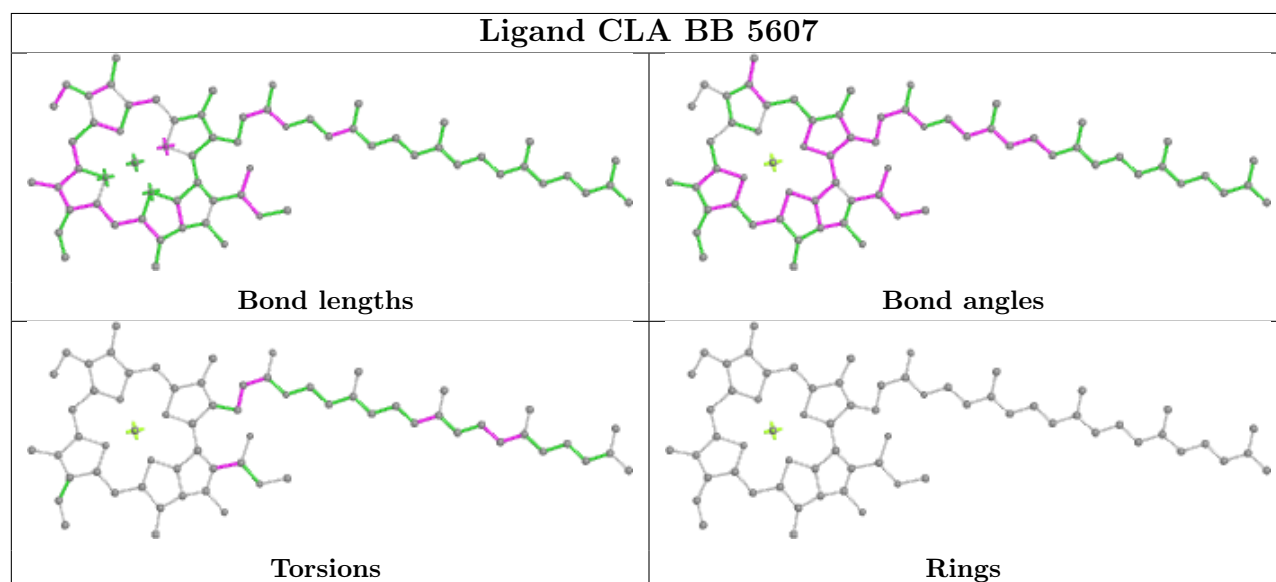
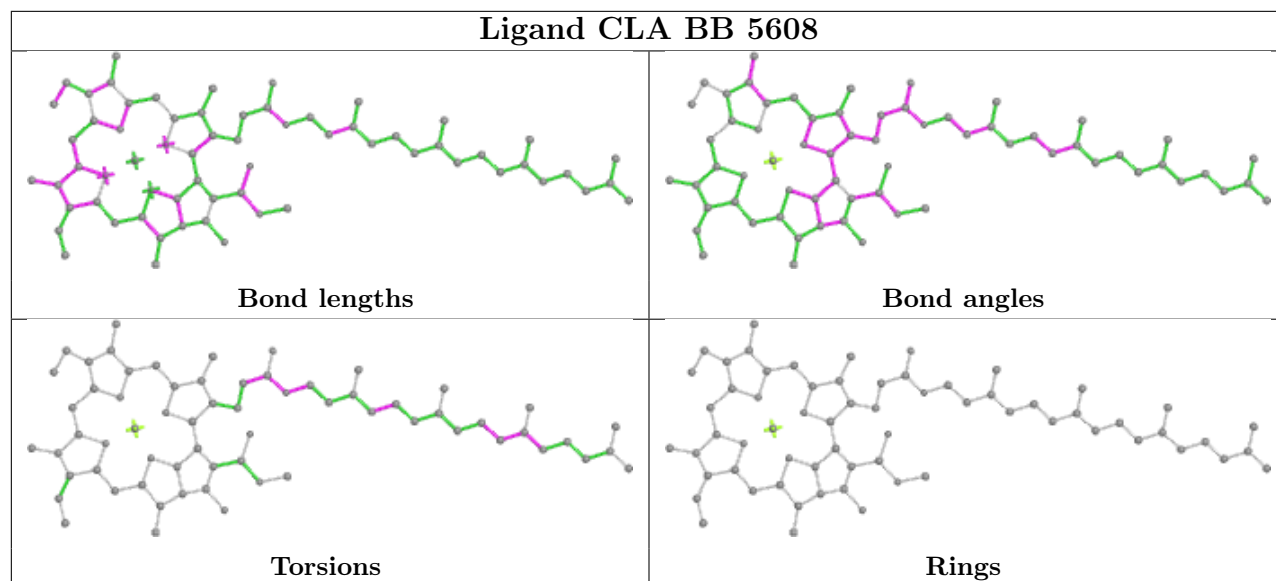
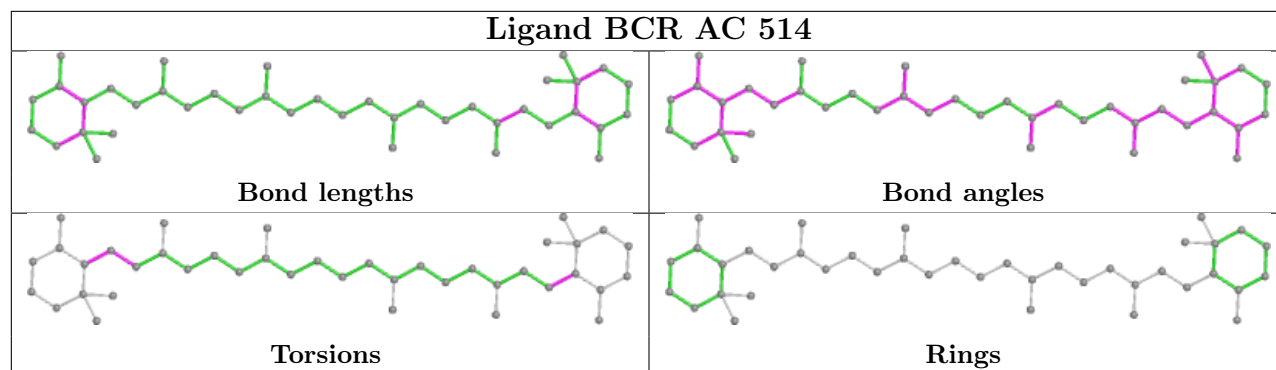


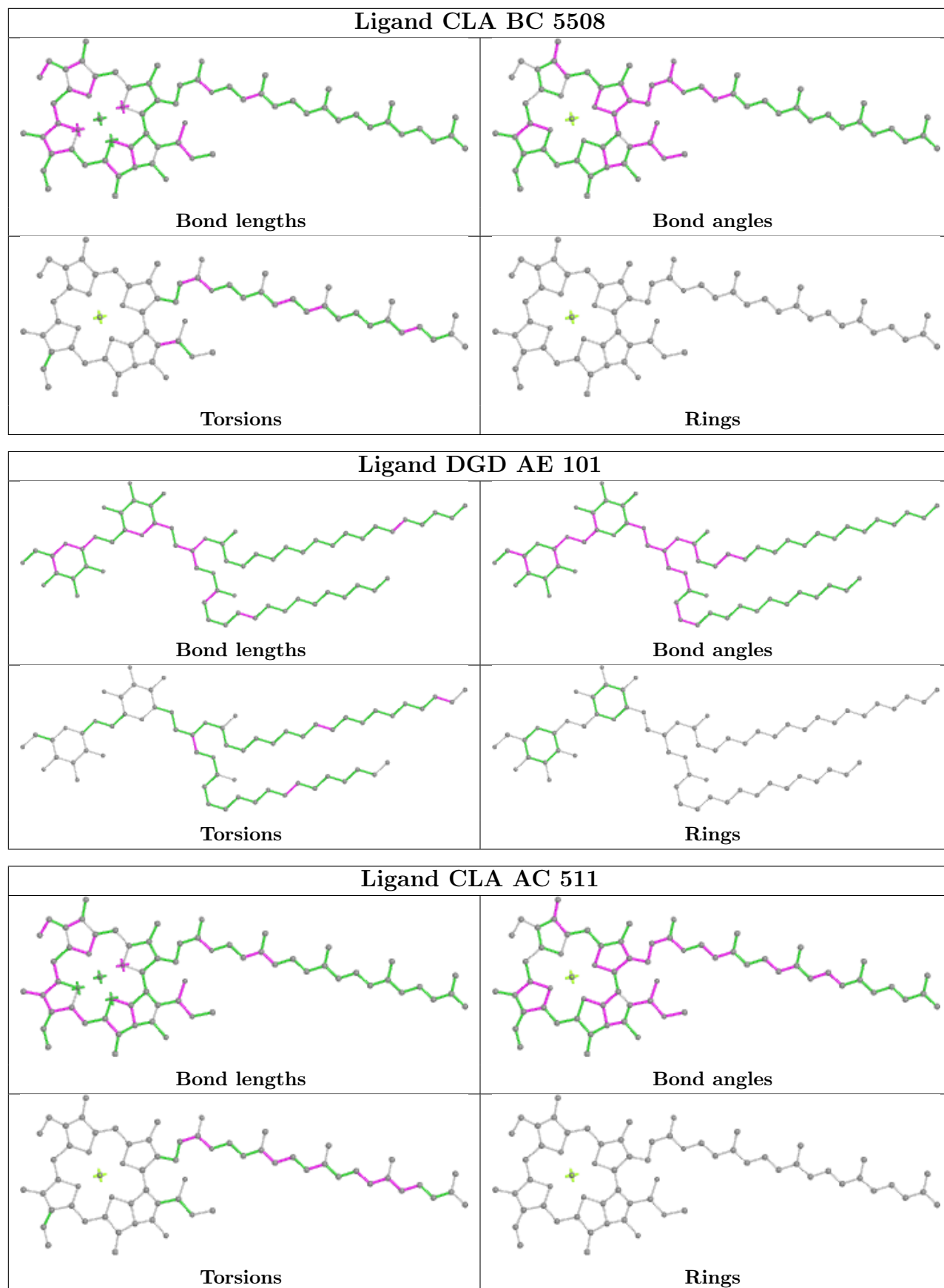


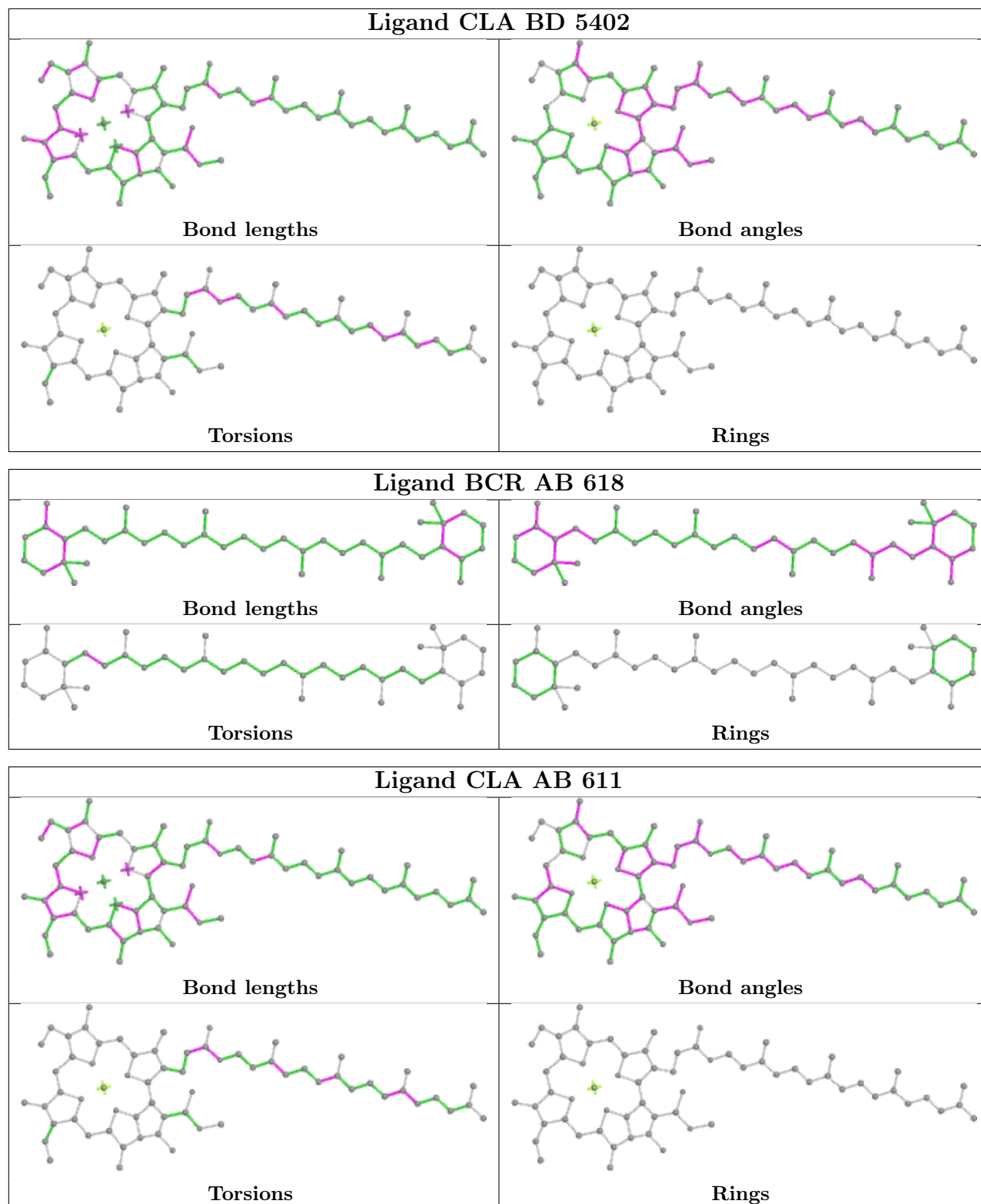


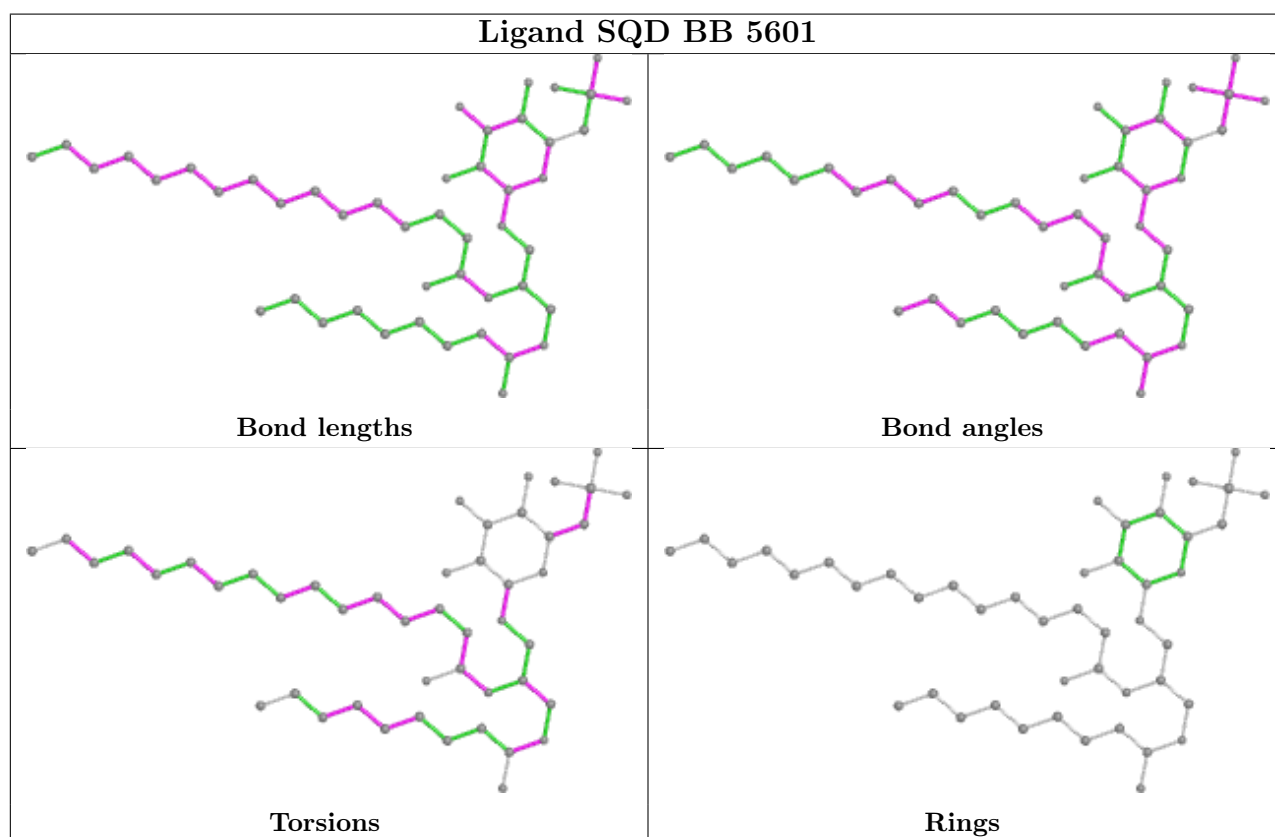
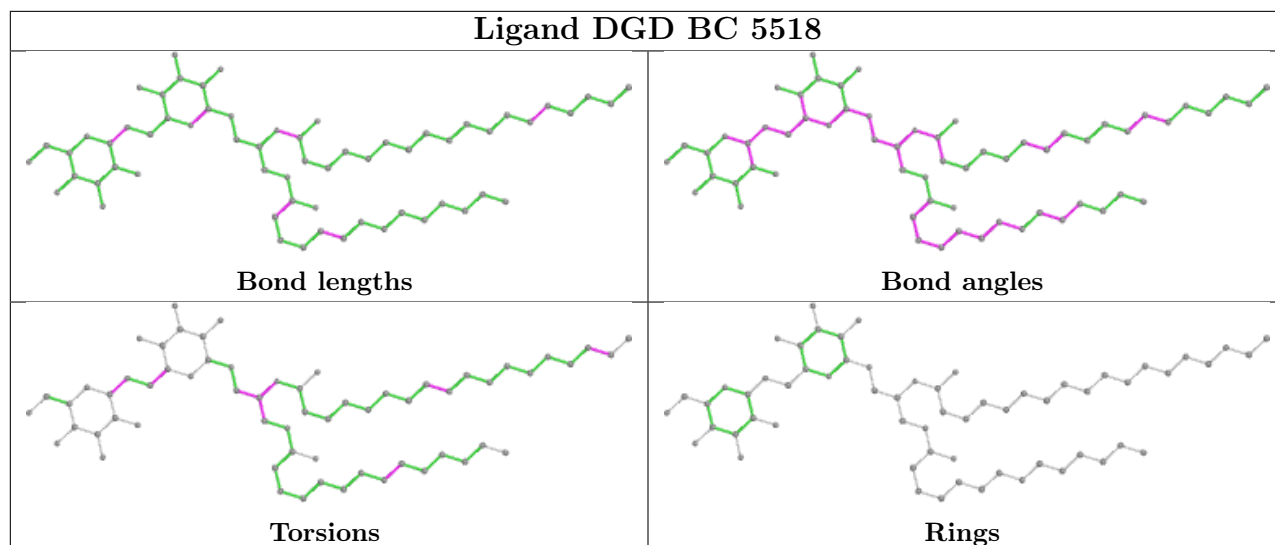


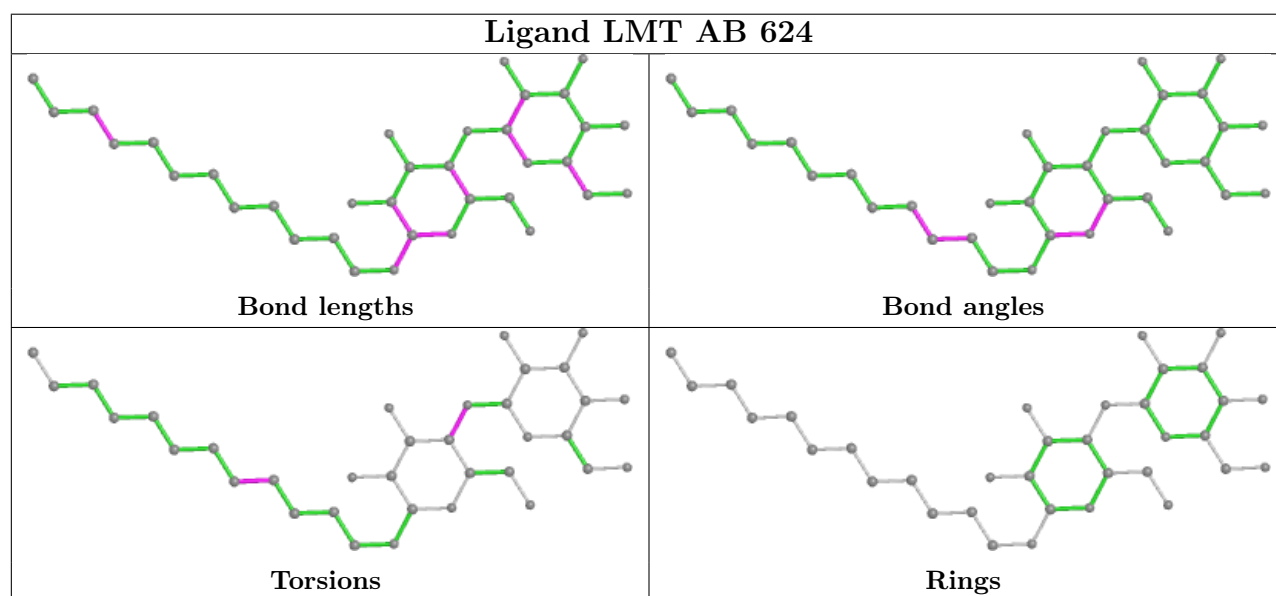
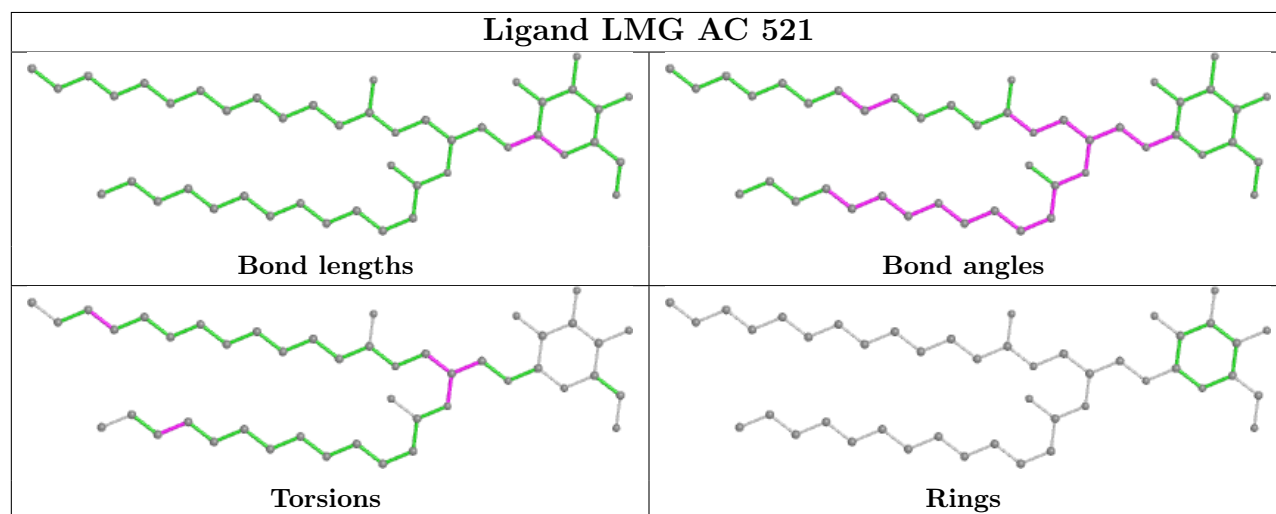
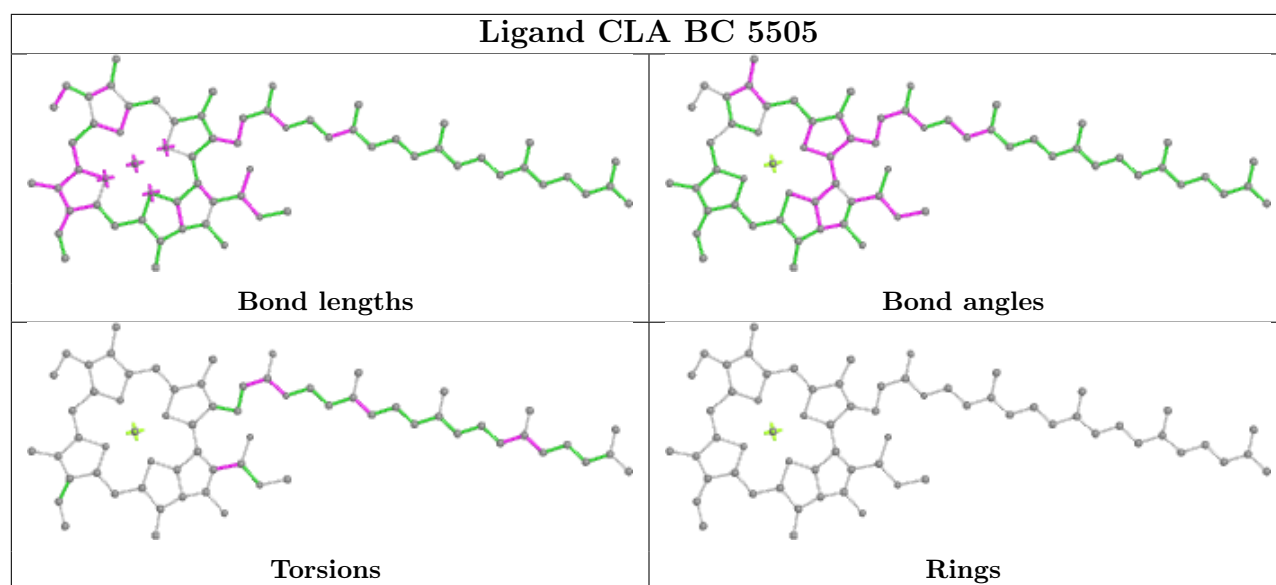


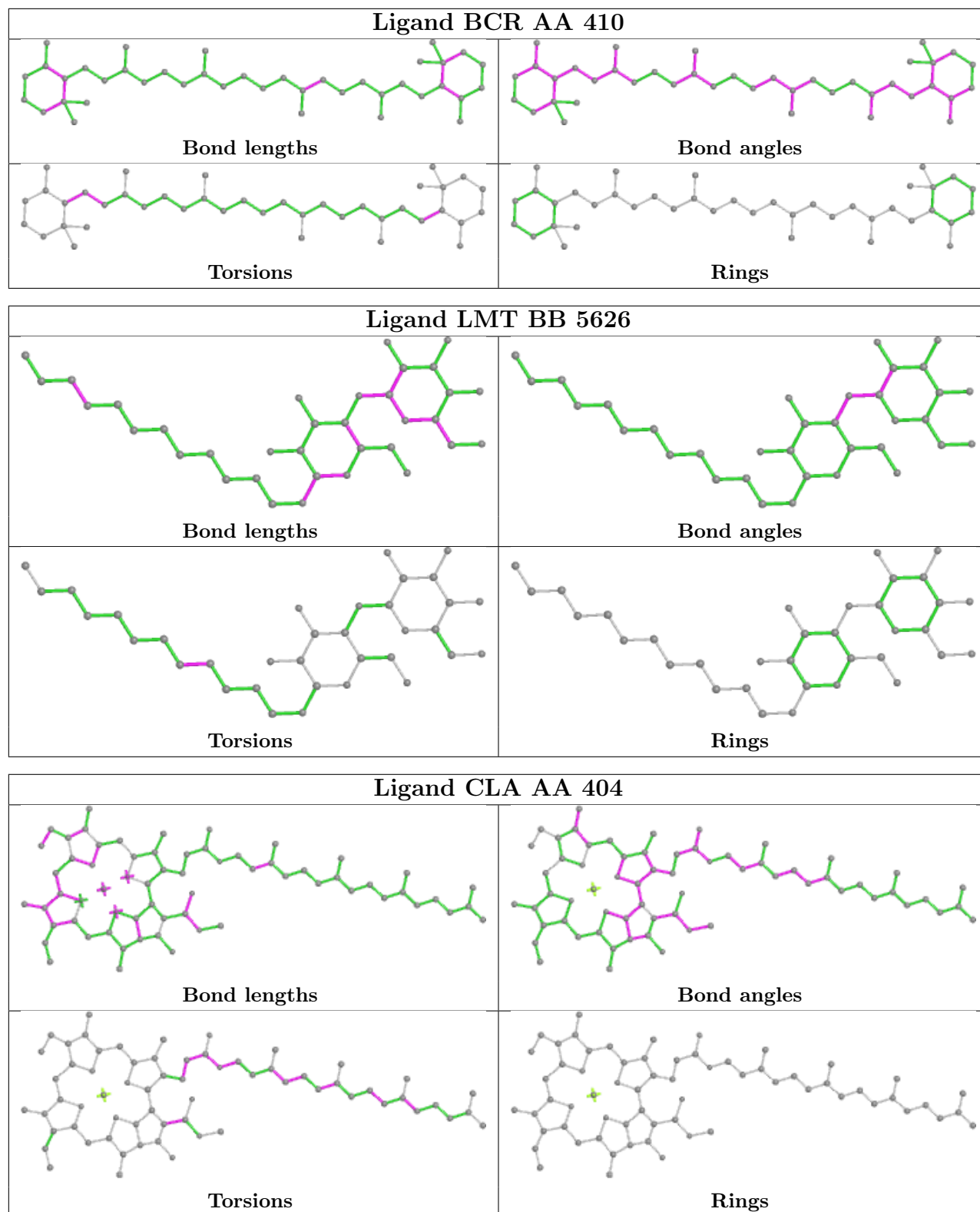


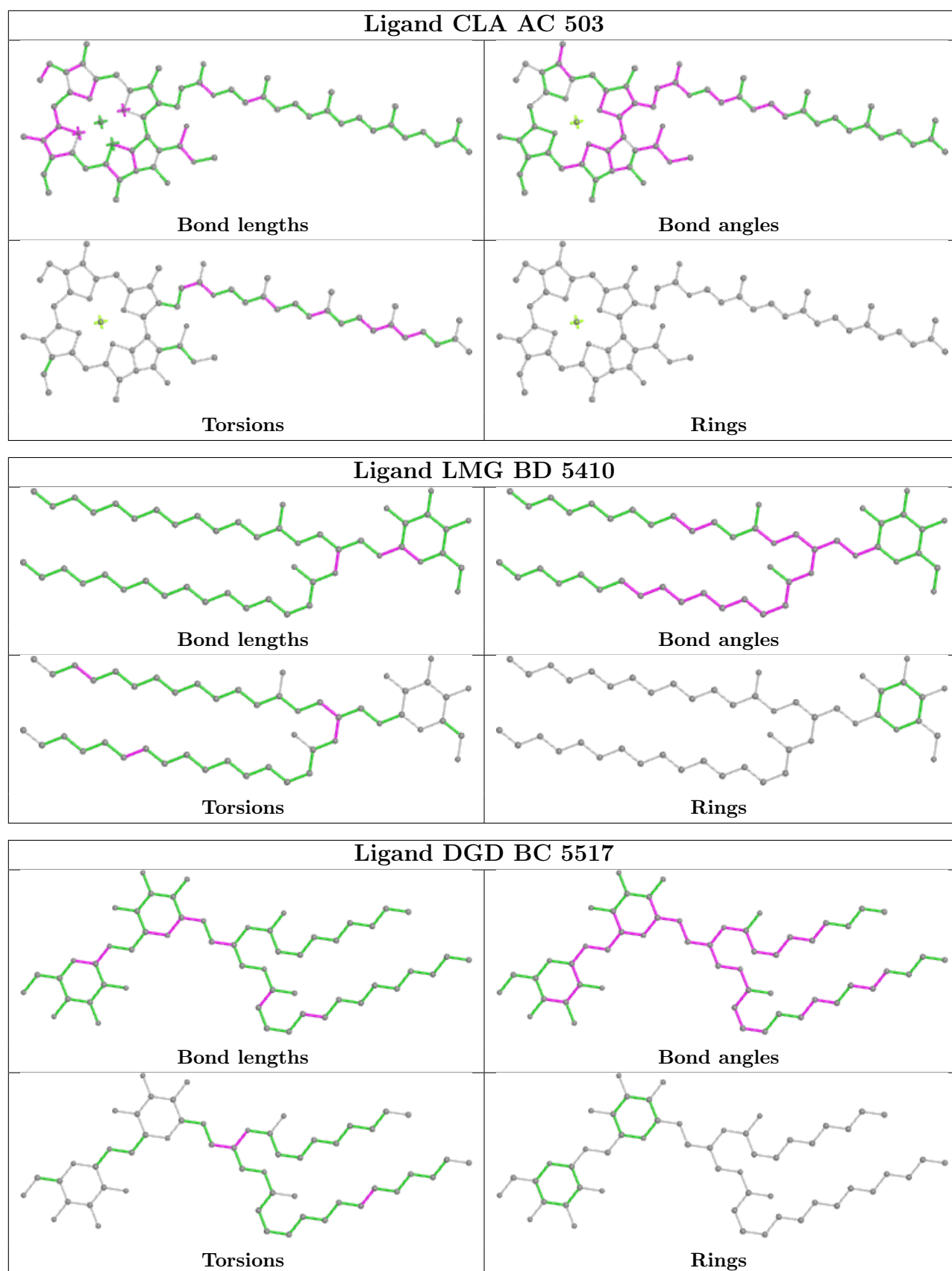


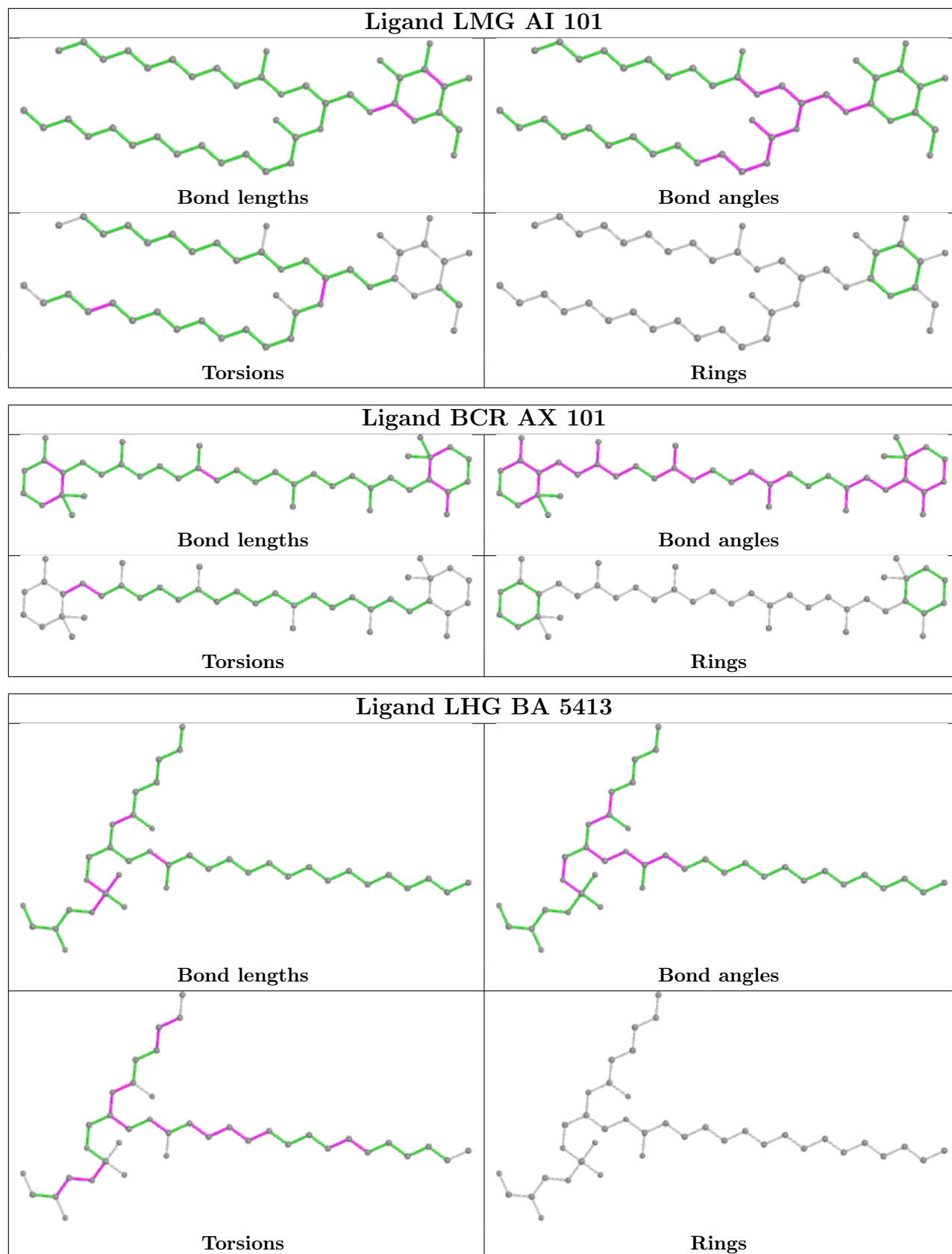


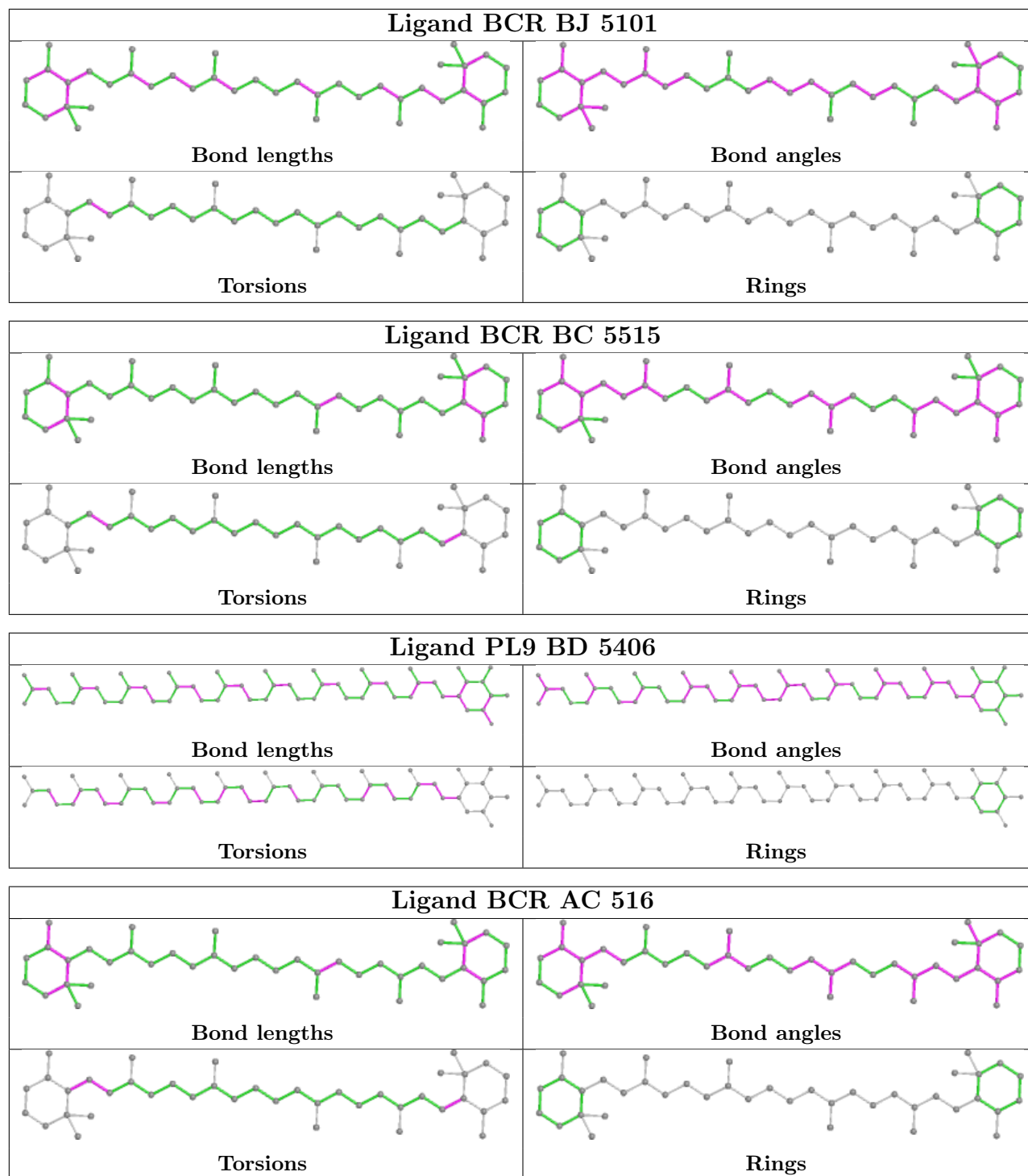


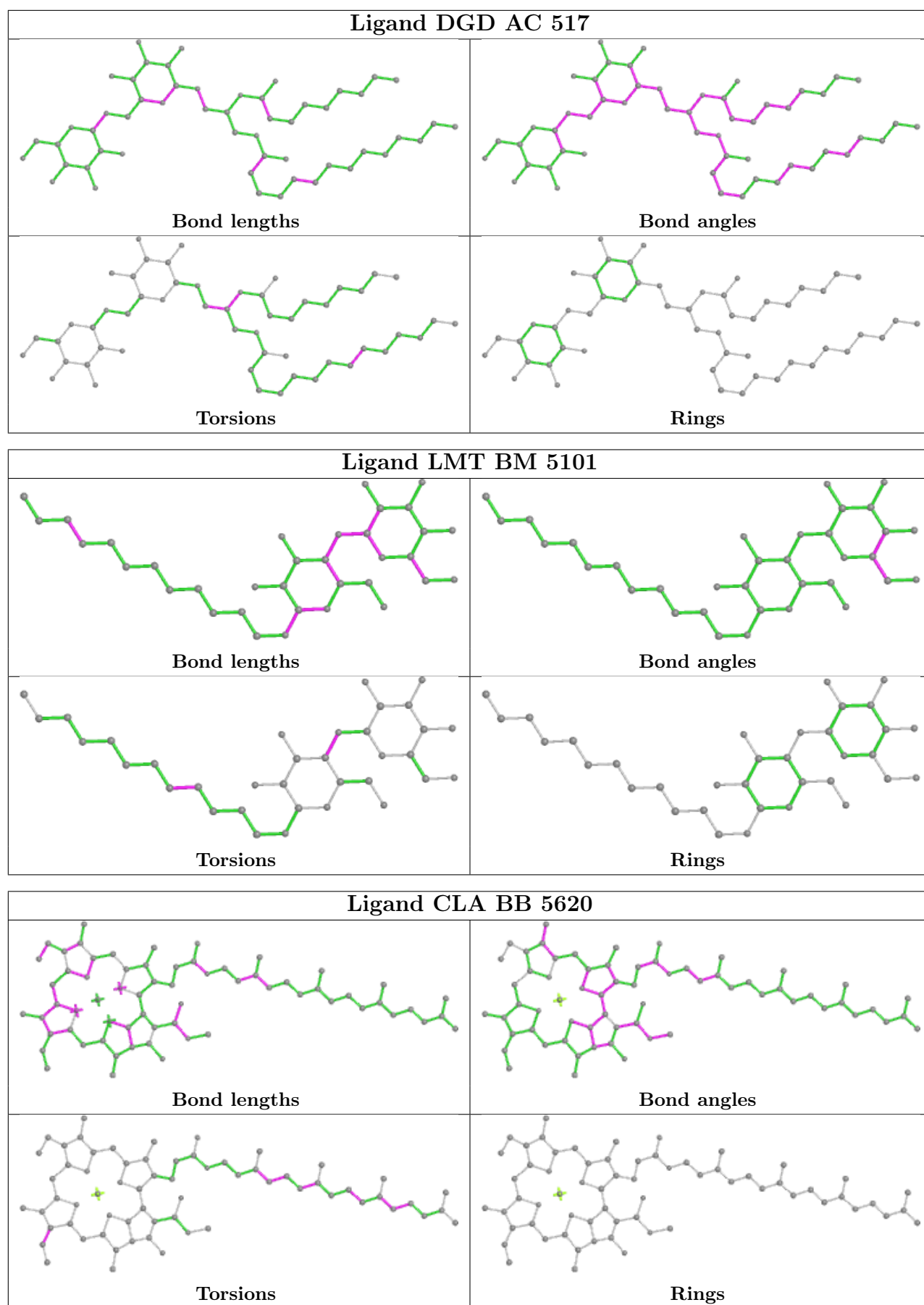


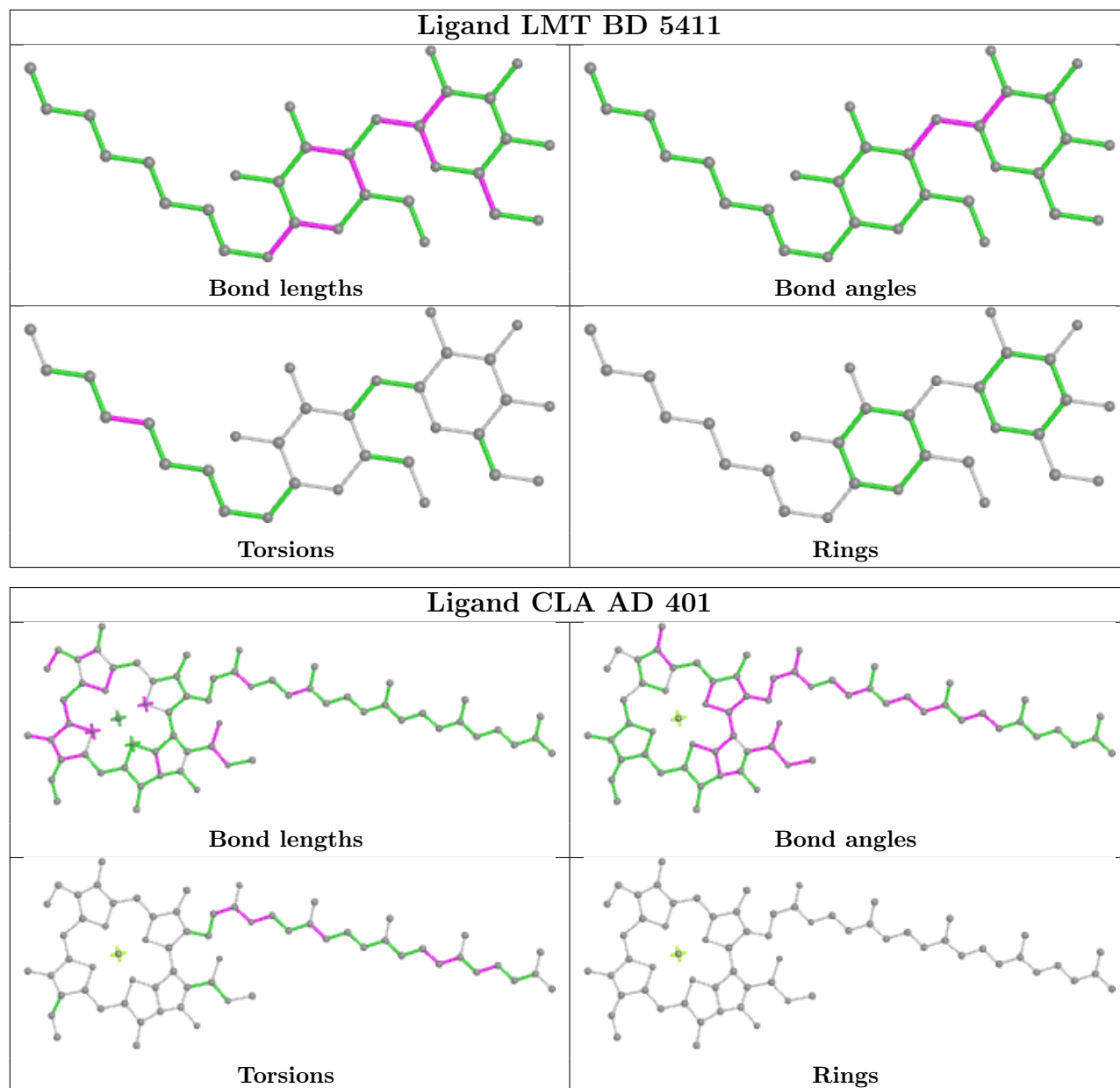


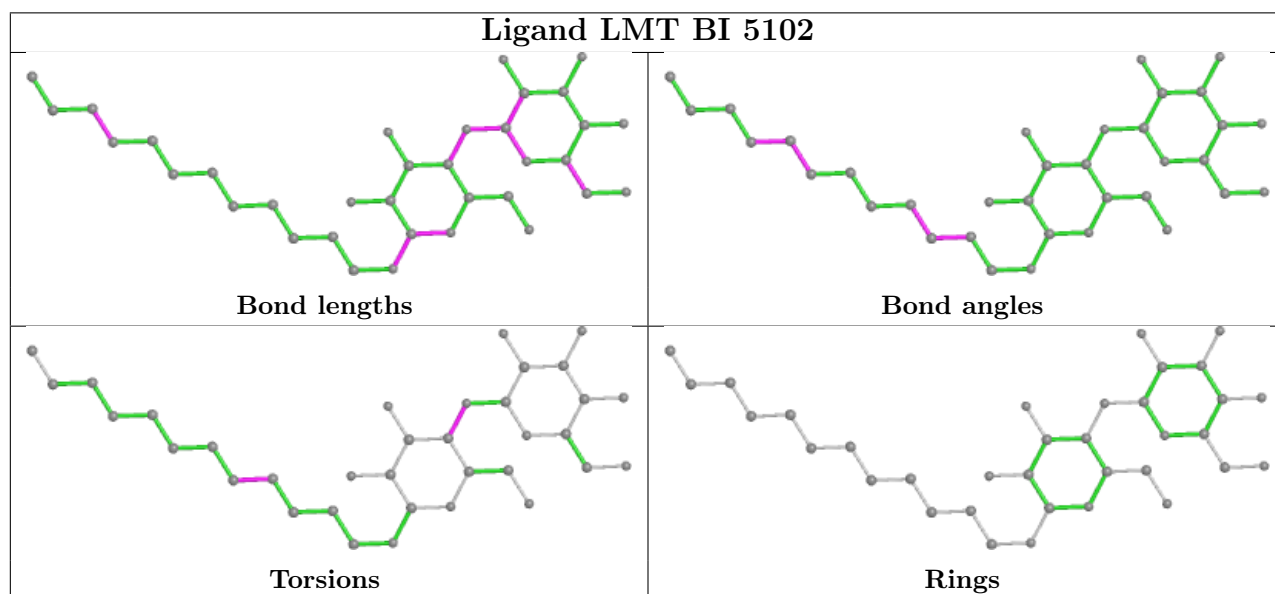
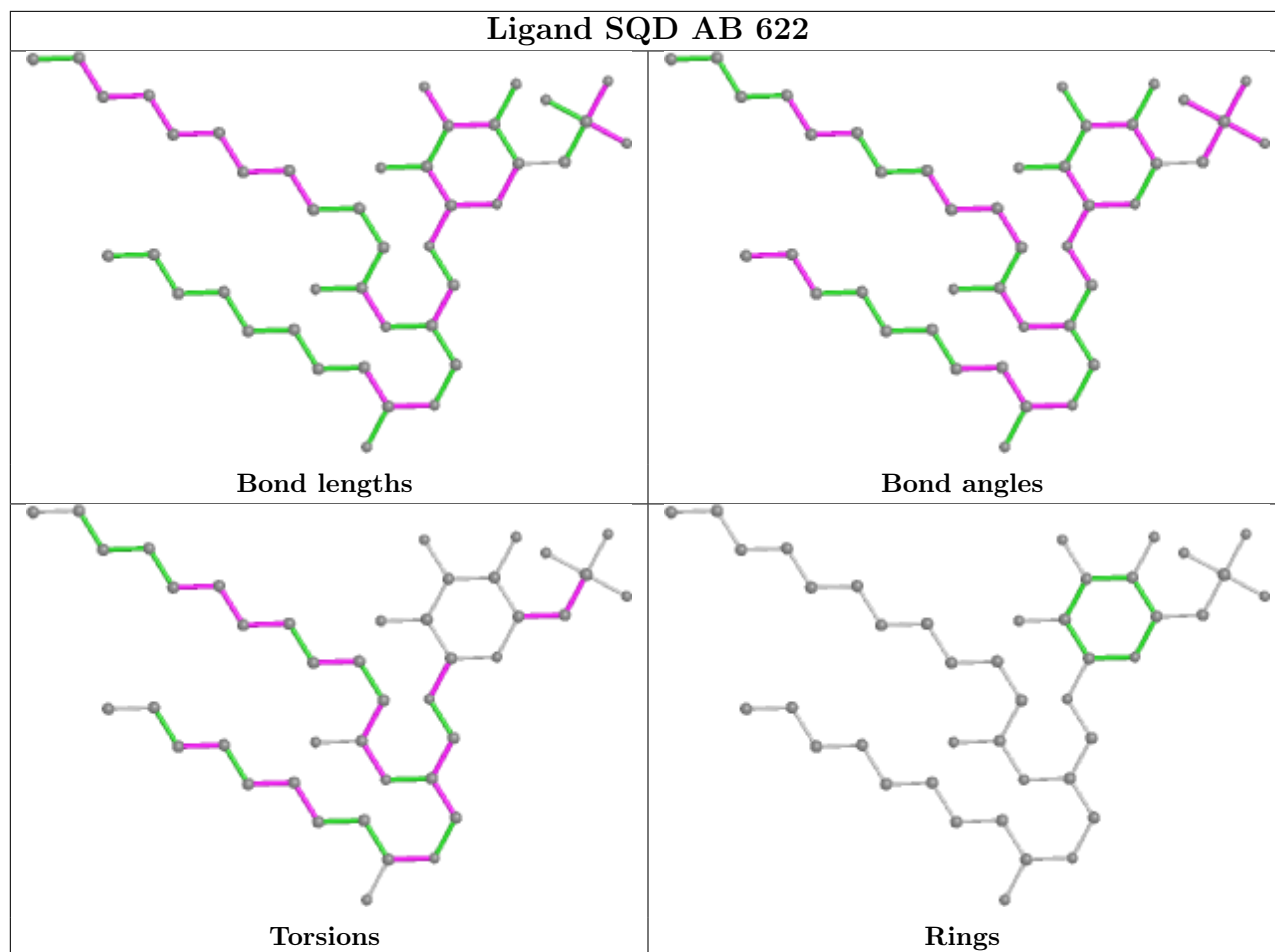


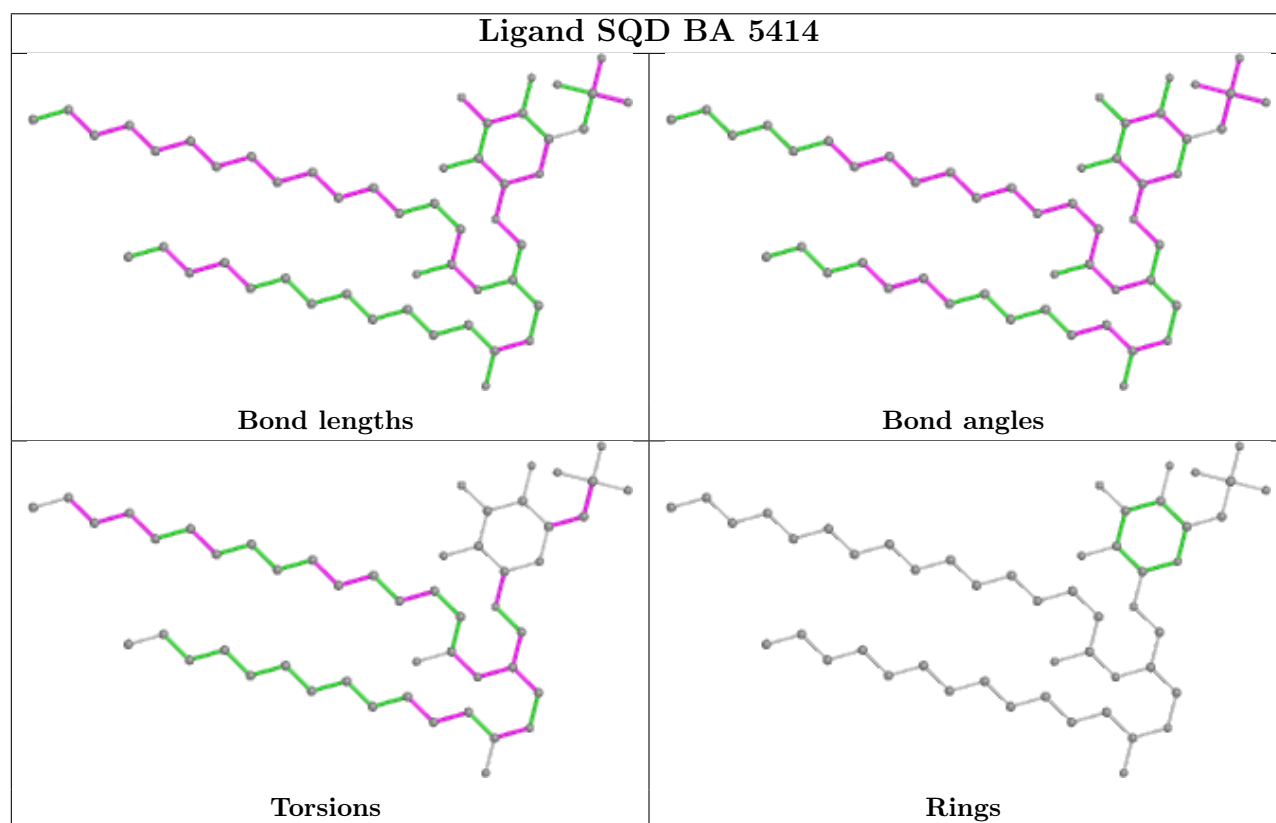
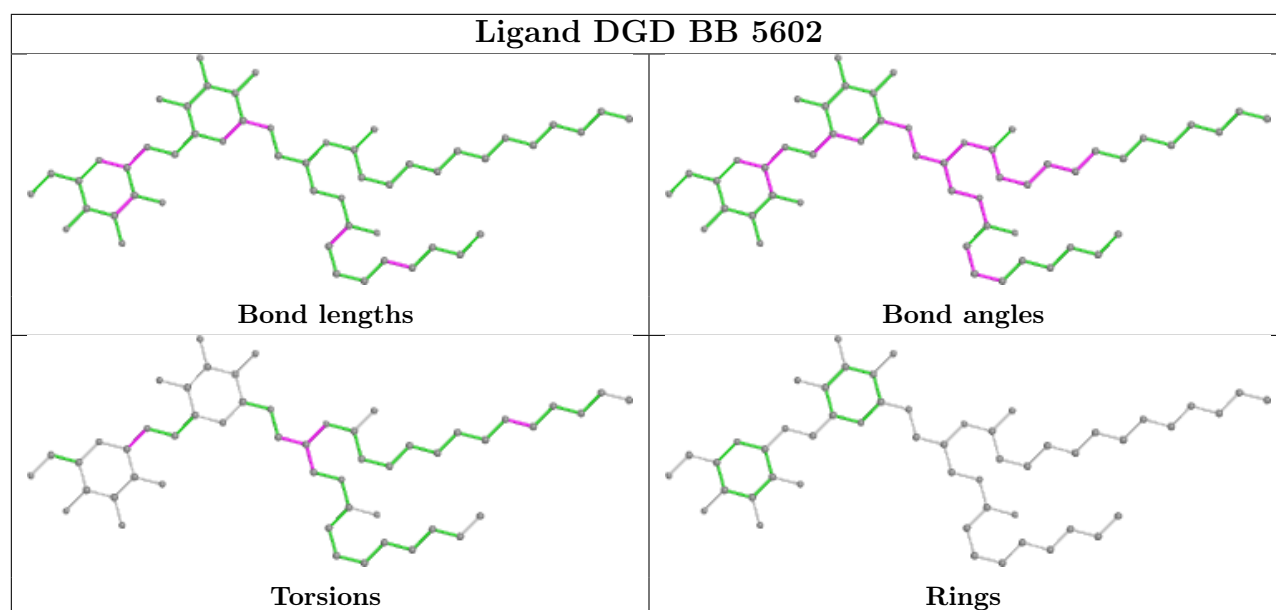


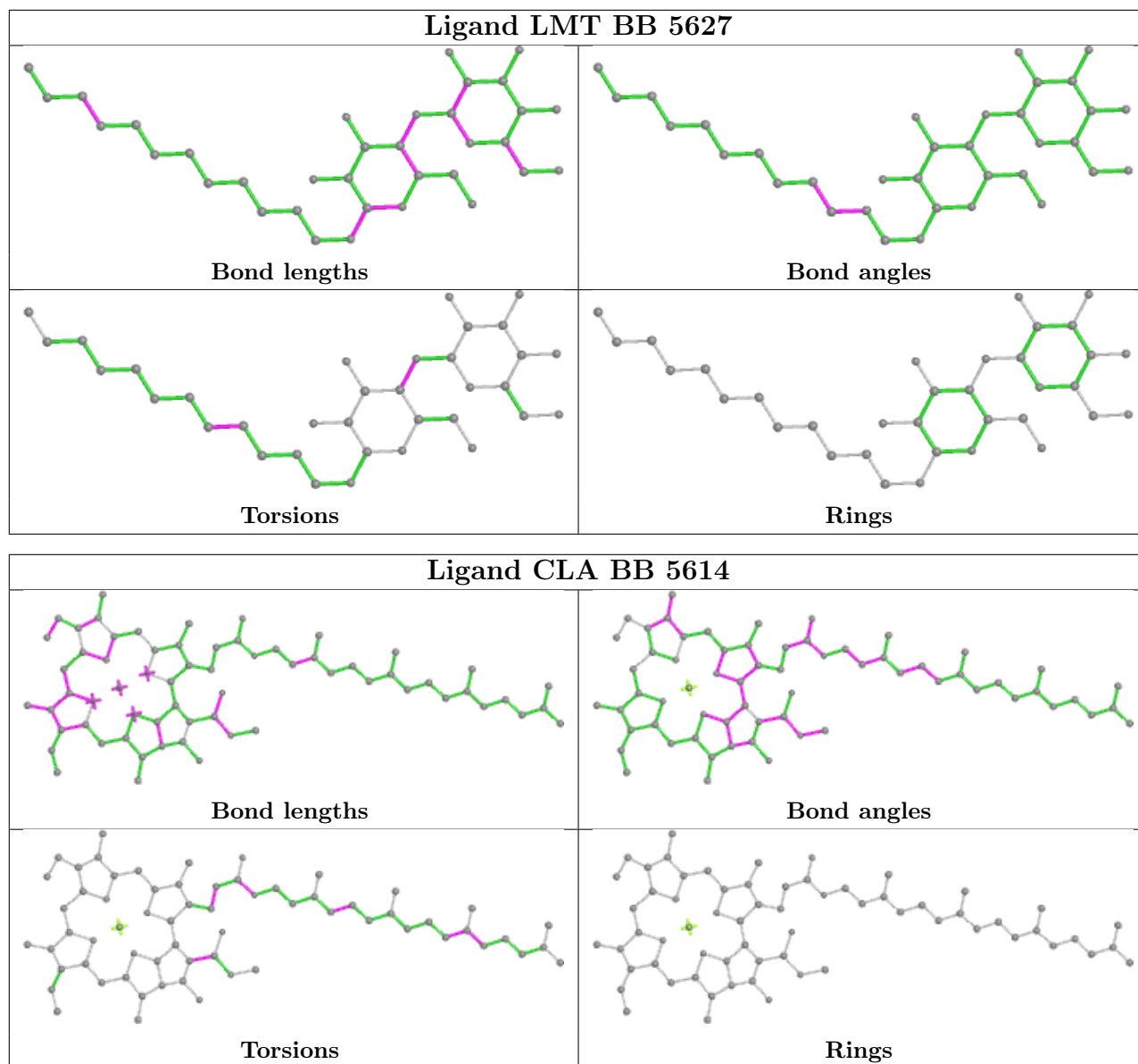


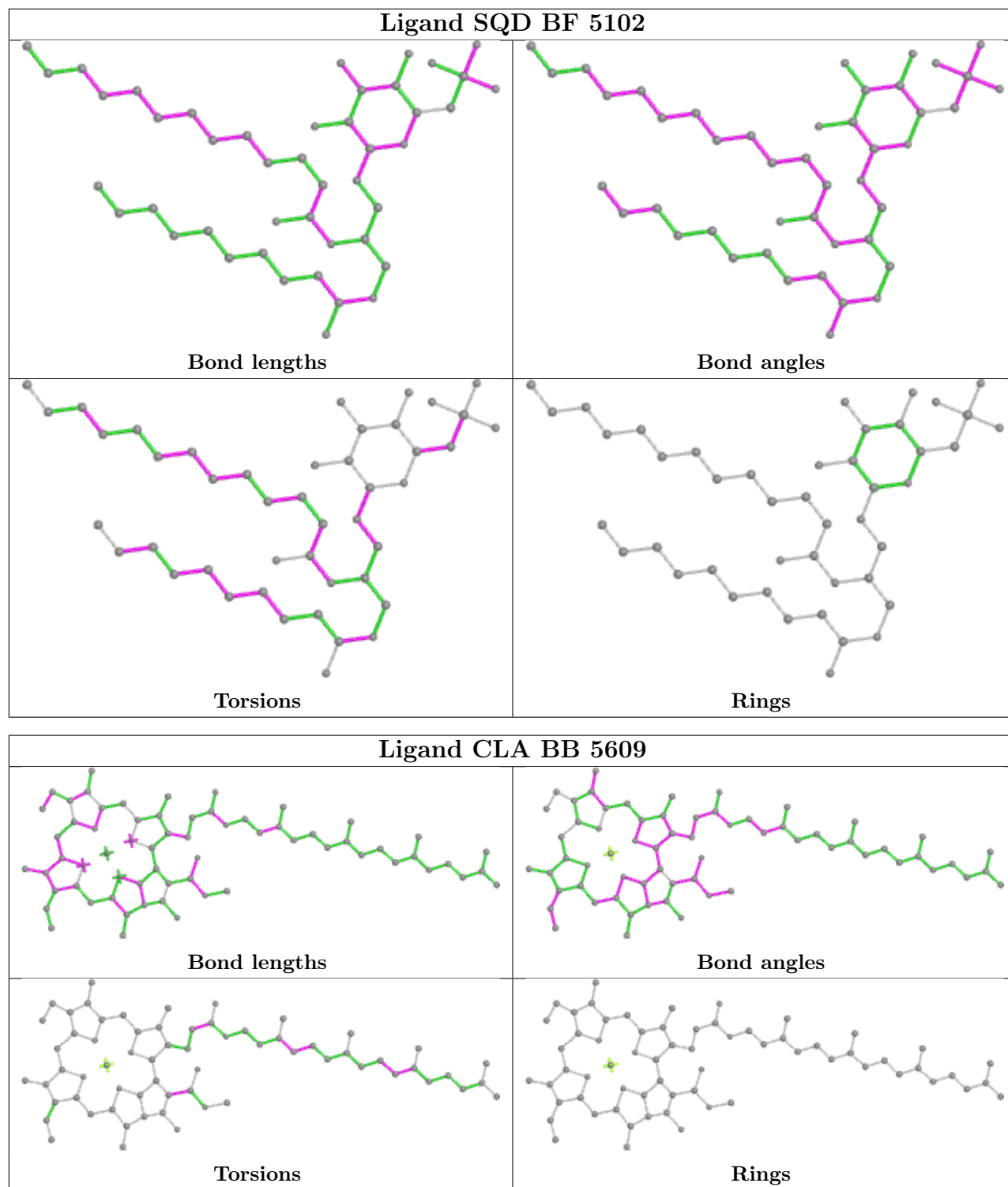


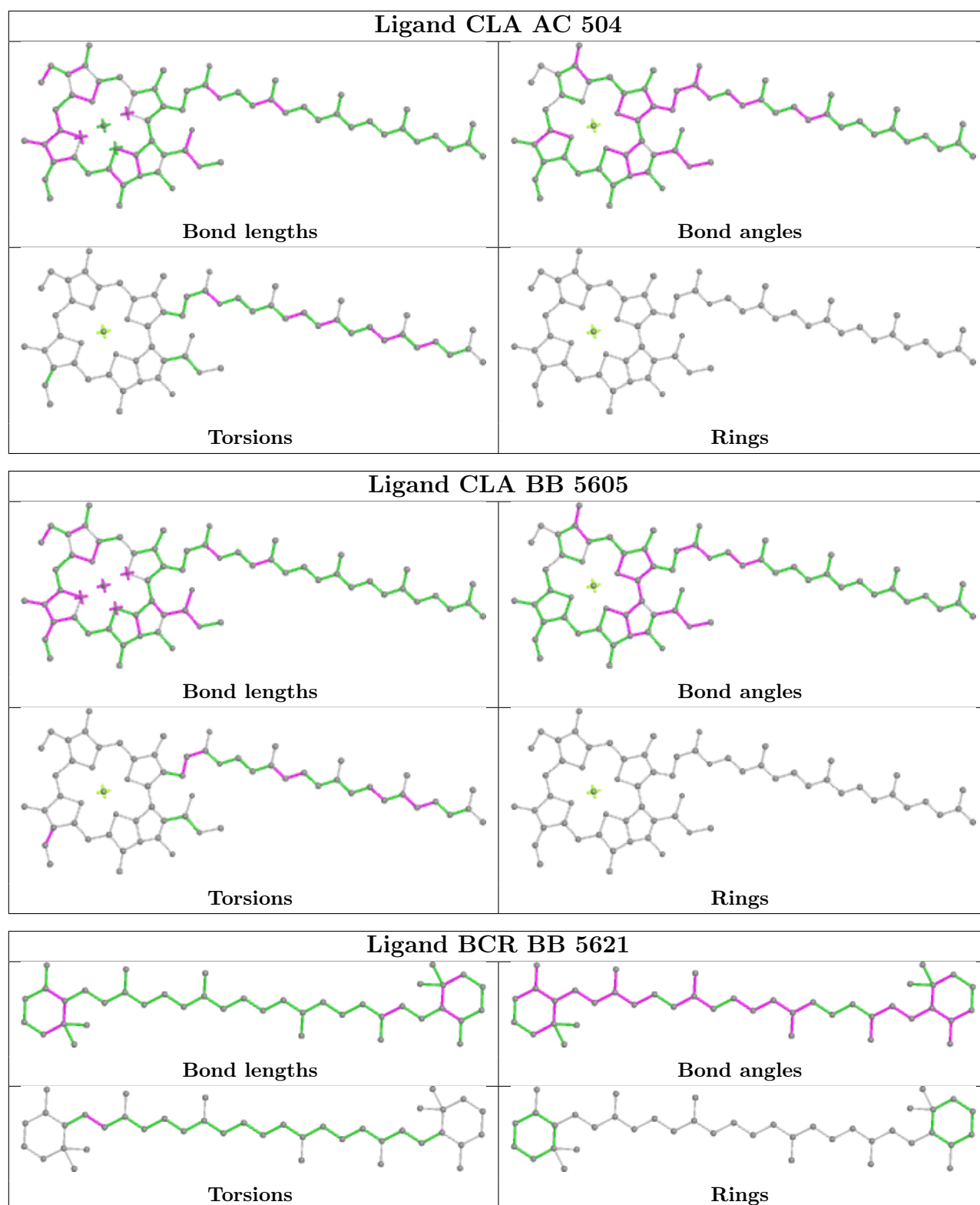


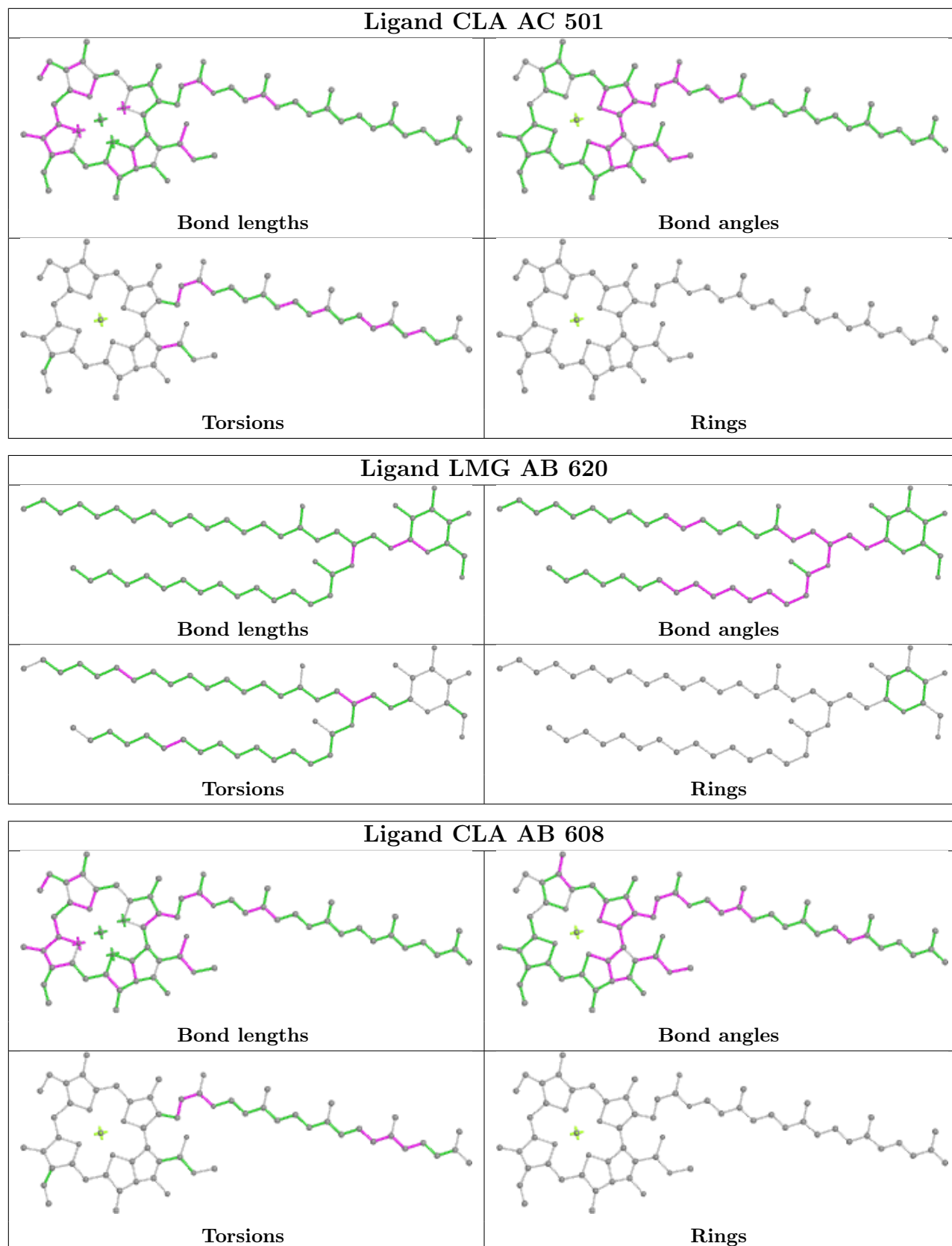


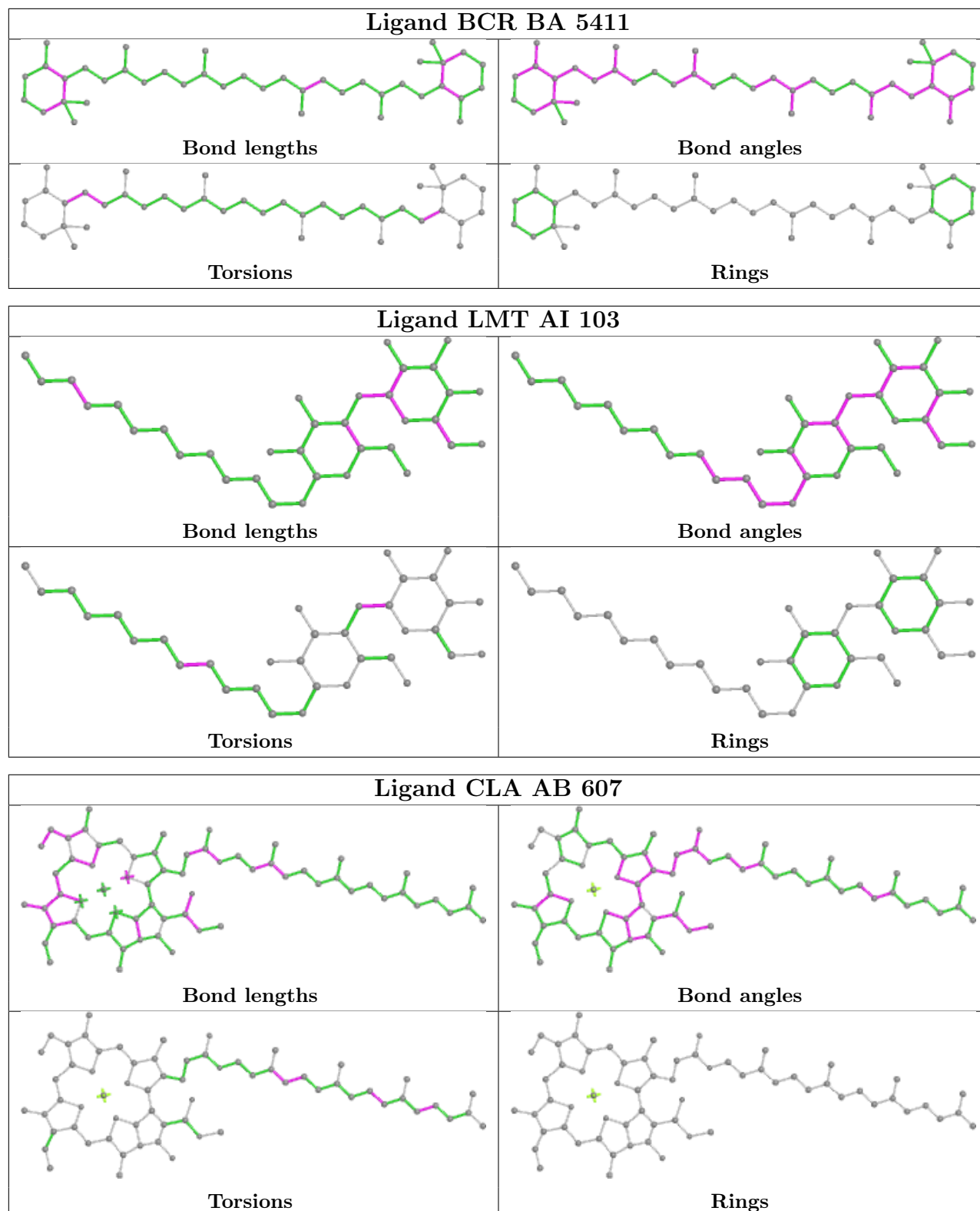


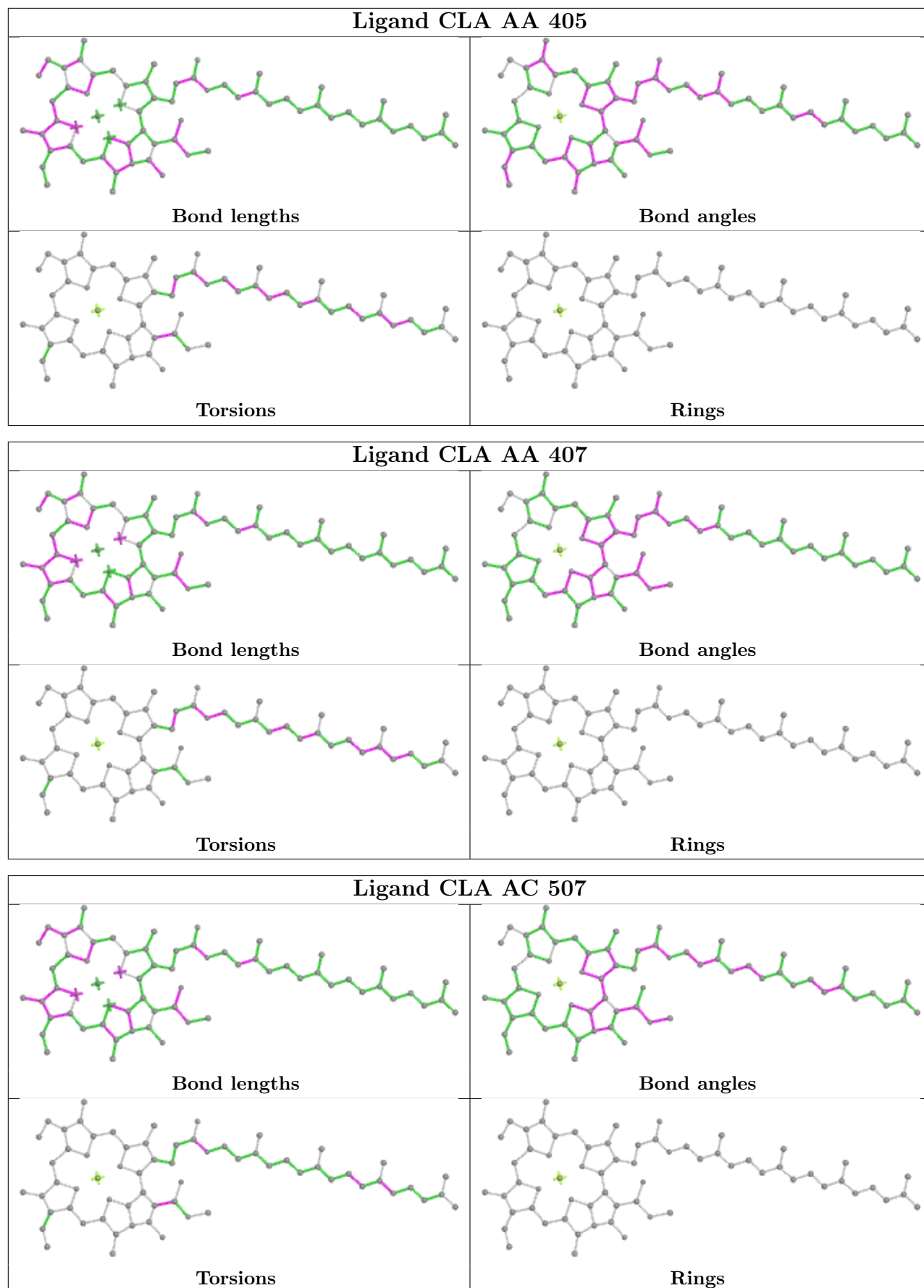


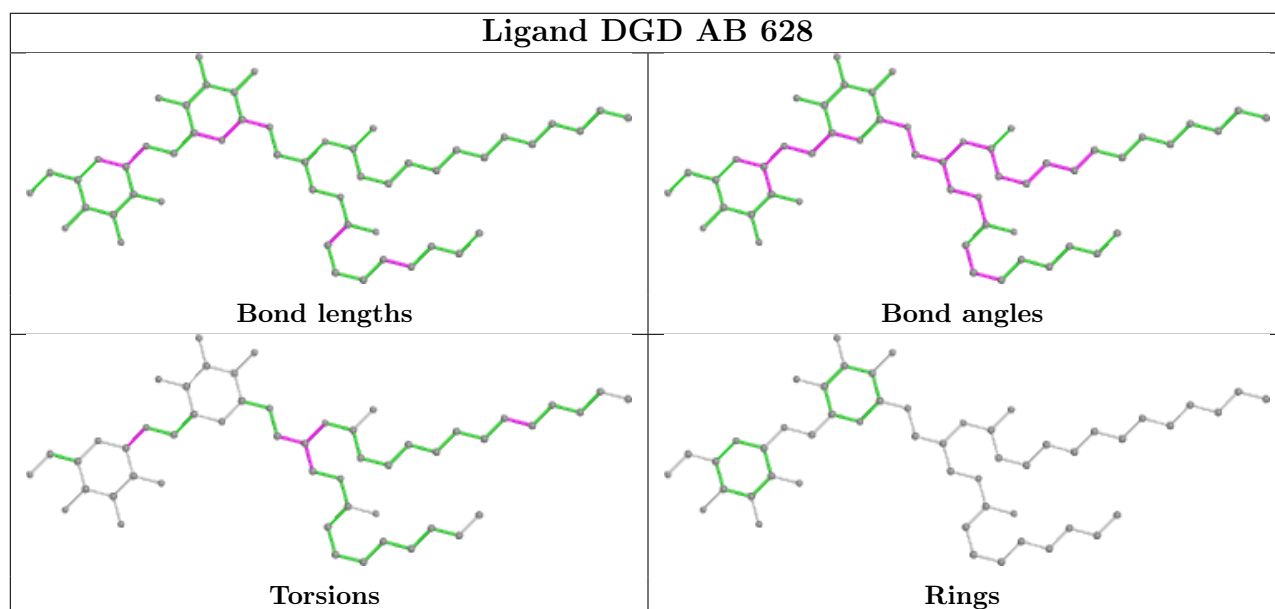
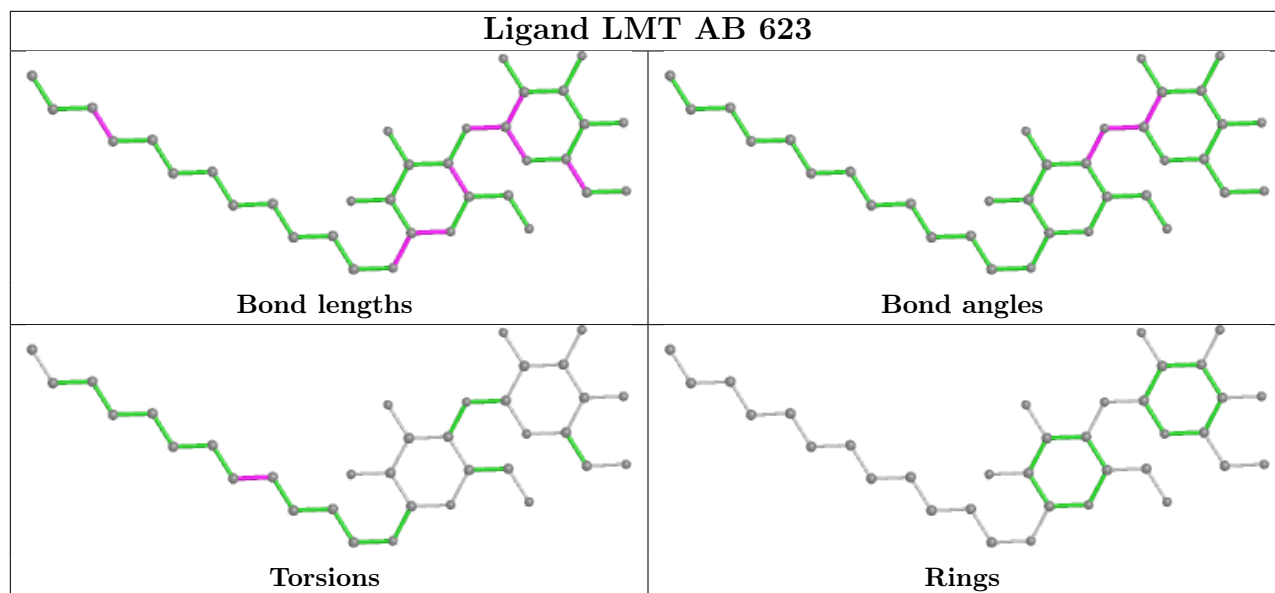


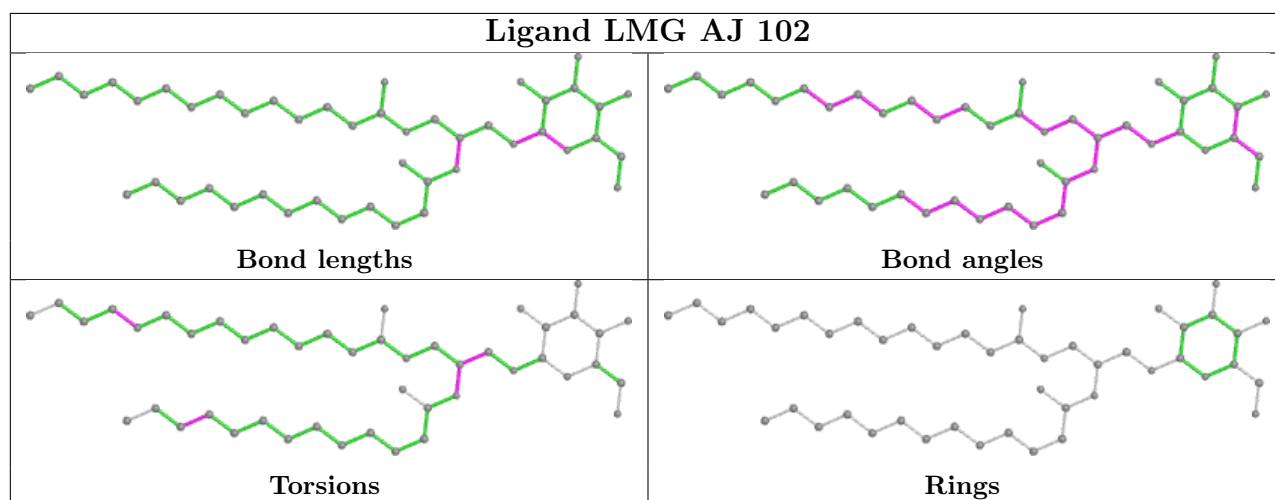
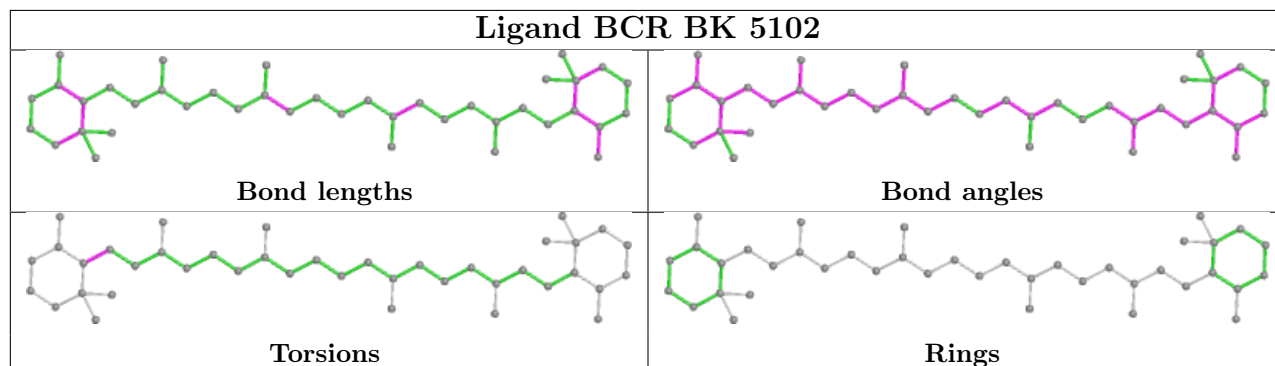
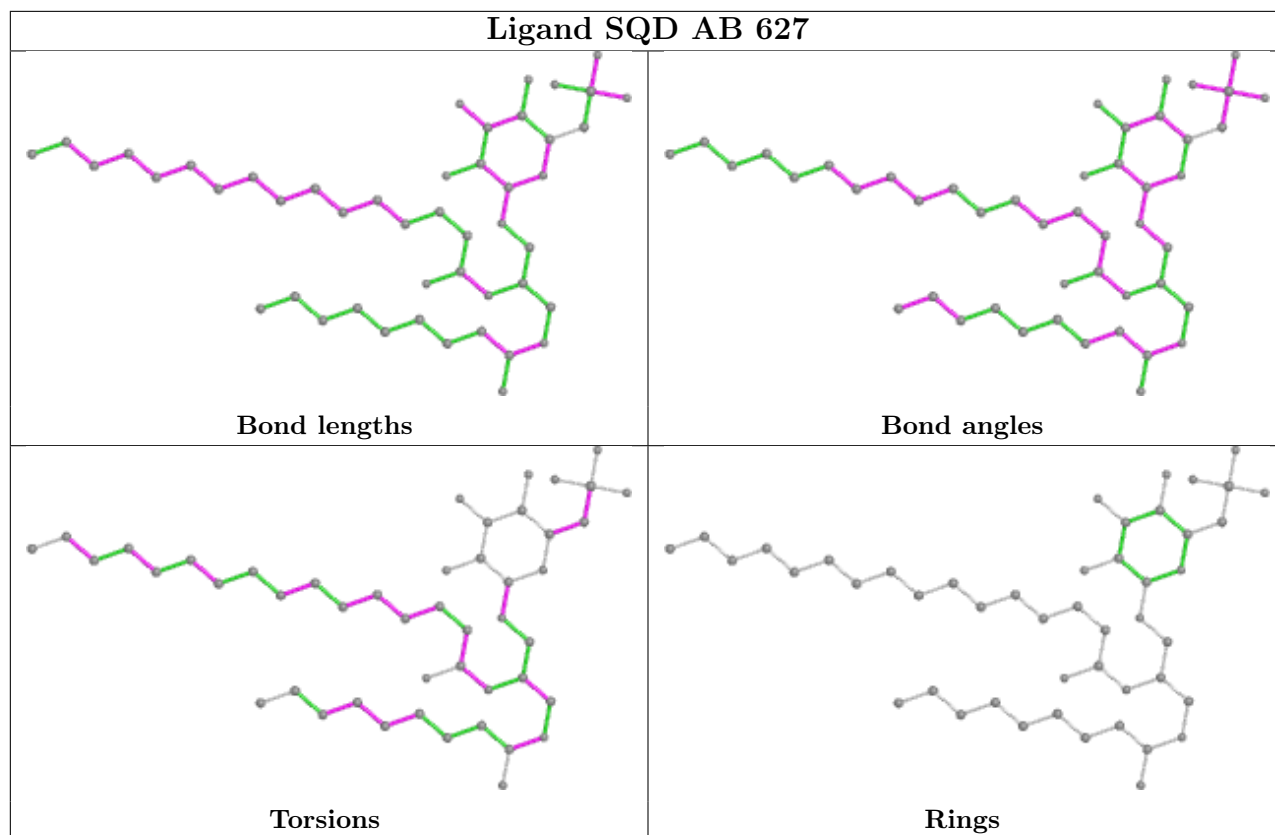


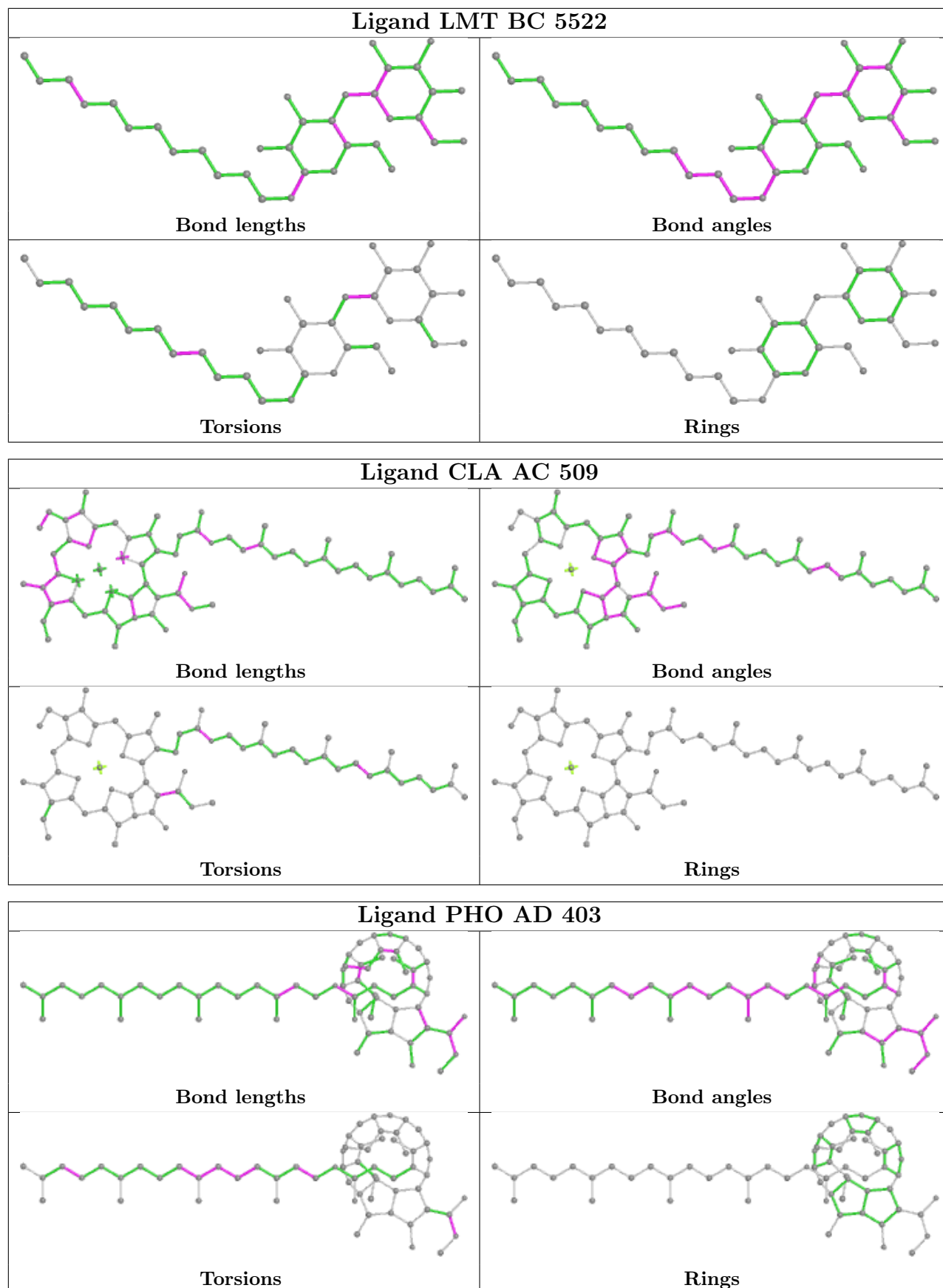


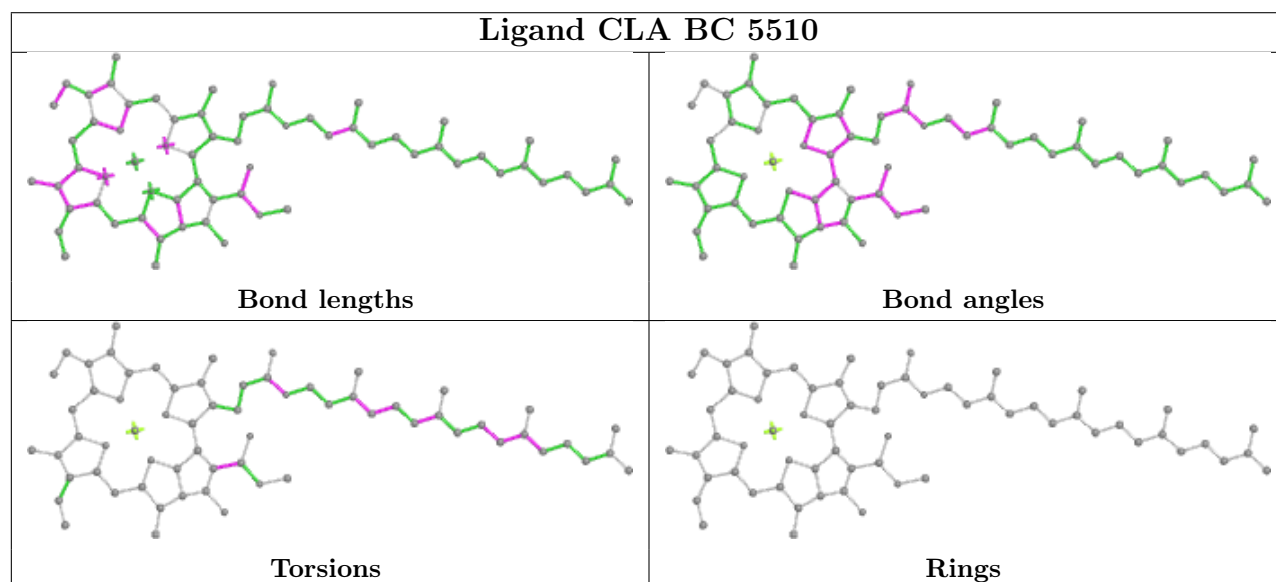
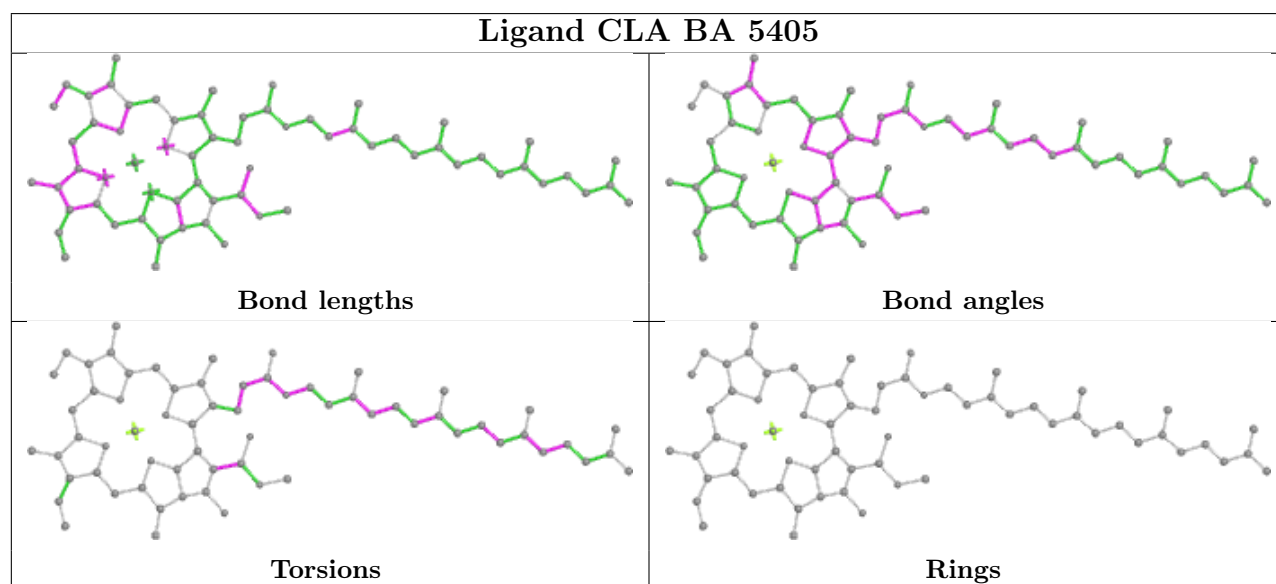
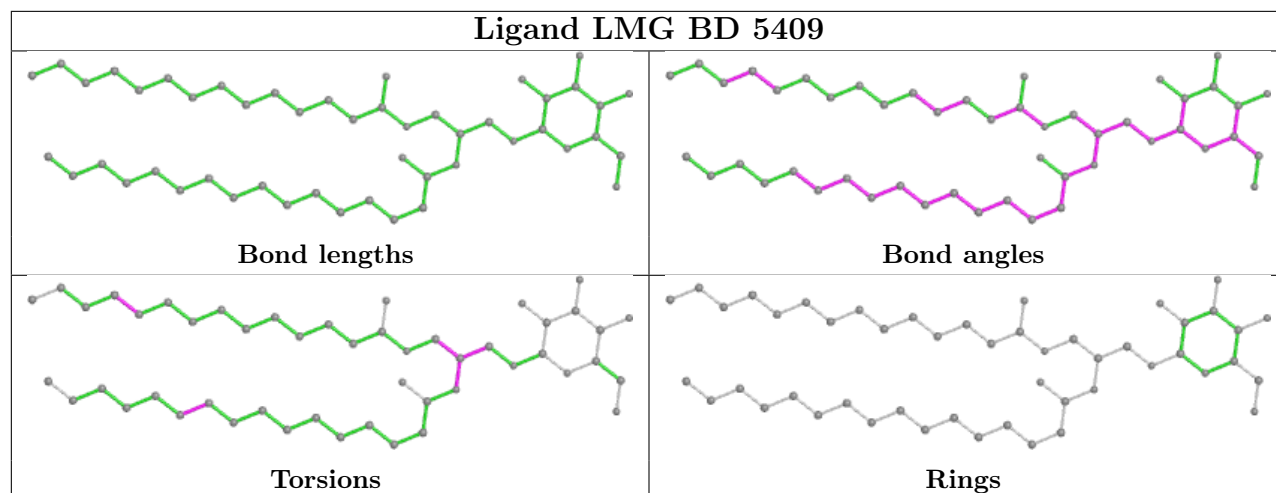


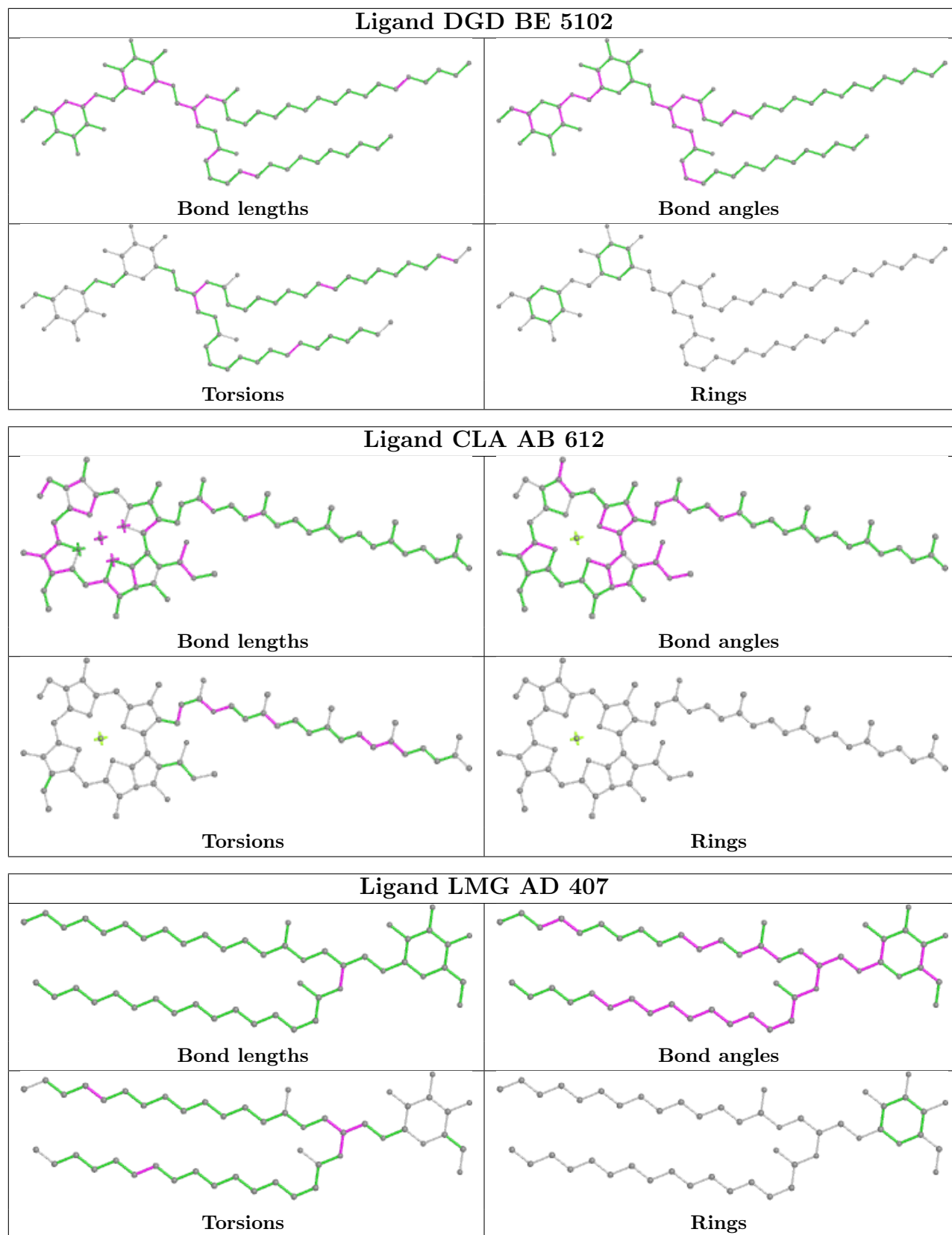












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled ‘#RSRZ > 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|---------------|--------|---------------|-----------------------|-------|
| 1 | AA | 335/344 (97%) | -0.01 | 6 (1%) 68 55 | 82, 104, 147, 160 | 0 |
| 1 | BA | 335/344 (97%) | -0.02 | 15 (4%) 33 21 | 86, 106, 148, 160 | 0 |
| 2 | AB | 490/510 (96%) | -0.02 | 12 (2%) 59 44 | 81, 103, 136, 152 | 0 |
| 2 | BB | 490/510 (96%) | 0.09 | 21 (4%) 35 22 | 81, 103, 137, 152 | 0 |
| 3 | AC | 447/461 (96%) | 0.29 | 22 (4%) 29 17 | 88, 122, 148, 158 | 0 |
| 3 | BC | 447/461 (96%) | 0.24 | 29 (6%) 18 11 | 91, 124, 149, 159 | 0 |
| 4 | AD | 341/352 (96%) | 0.00 | 6 (1%) 68 55 | 81, 105, 139, 153 | 0 |
| 4 | BD | 341/352 (96%) | -0.02 | 12 (3%) 44 28 | 84, 106, 140, 154 | 0 |
| 5 | AE | 82/84 (97%) | 0.45 | 7 (8%) 10 6 | 104, 126, 151, 155 | 0 |
| 5 | BE | 82/84 (97%) | 1.23 | 23 (28%) 0 0 | 106, 127, 152, 156 | 0 |
| 6 | AF | 35/45 (77%) | 0.39 | 5 (14%) 2 1 | 107, 122, 157, 160 | 0 |
| 6 | BF | 35/45 (77%) | 0.27 | 4 (11%) 5 3 | 110, 123, 157, 160 | 0 |
| 7 | AH | 65/66 (98%) | 0.48 | 8 (12%) 4 2 | 113, 124, 140, 147 | 0 |
| 7 | BH | 65/66 (98%) | 0.51 | 6 (9%) 9 5 | 114, 124, 140, 148 | 0 |
| 8 | AI | 35/38 (92%) | 0.07 | 2 (5%) 23 13 | 108, 115, 141, 147 | 0 |
| 8 | BI | 35/38 (92%) | 0.69 | 8 (22%) 0 0 | 108, 116, 142, 147 | 0 |
| 9 | AJ | 38/40 (95%) | 0.02 | 3 (7%) 12 6 | 109, 122, 157, 159 | 0 |
| 9 | BJ | 38/40 (95%) | 0.46 | 7 (18%) 1 1 | 111, 125, 158, 159 | 0 |
| 10 | AK | 37/37 (100%) | -0.08 | 1 (2%) 54 39 | 121, 135, 145, 147 | 0 |
| 10 | BK | 37/37 (100%) | 0.13 | 1 (2%) 54 39 | 123, 136, 147, 148 | 0 |
| 11 | AL | 37/37 (100%) | 0.26 | 4 (10%) 5 3 | 88, 104, 159, 160 | 0 |
| 11 | BL | 37/37 (100%) | 0.46 | 6 (16%) 1 1 | 90, 104, 158, 160 | 0 |
| 12 | AM | 34/36 (94%) | 0.24 | 3 (8%) 10 5 | 89, 99, 142, 153 | 0 |
| 12 | BM | 34/36 (94%) | -0.12 | 2 (5%) 22 13 | 90, 99, 140, 153 | 0 |

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| Mol | Chain | Analysed | <RSRZ> | #RSRZ>2 | OWAB(Å ²) | Q<0.9 |
|-----|-------|-----------------|--------|----------------|-----------------------|-------|
| 13 | AO | 243/247 (98%) | 0.33 | 16 (6%) 18 11 | 83, 116, 148, 160 | 0 |
| 13 | BO | 243/247 (98%) | 0.29 | 21 (8%) 10 5 | 85, 117, 147, 160 | 0 |
| 14 | AT | 32/32 (100%) | 0.35 | 3 (9%) 8 4 | 92, 106, 158, 160 | 0 |
| 14 | BT | 32/32 (100%) | 0.01 | 1 (3%) 49 32 | 93, 106, 158, 160 | 0 |
| 15 | AU | 97/104 (93%) | 0.25 | 4 (4%) 37 24 | 93, 105, 116, 125 | 0 |
| 15 | BU | 97/104 (93%) | 0.15 | 0 100 100 | 94, 106, 116, 127 | 0 |
| 16 | AV | 137/137 (100%) | 0.11 | 2 (1%) 73 61 | 96, 112, 128, 132 | 0 |
| 16 | BV | 137/137 (100%) | 0.46 | 14 (10%) 6 4 | 99, 114, 130, 134 | 0 |
| 17 | Ay | 28/46 (60%) | 0.62 | 4 (14%) 2 1 | 141, 154, 160, 160 | 0 |
| 17 | By | 28/46 (60%) | 0.80 | 5 (17%) 1 1 | 143, 154, 160, 160 | 0 |
| 18 | AX | 37/41 (90%) | 0.42 | 7 (18%) 1 1 | 121, 129, 147, 150 | 0 |
| 18 | BX | 37/41 (90%) | 0.38 | 5 (13%) 3 2 | 120, 130, 146, 149 | 0 |
| 19 | AY | 0/28 | - | - | - | - |
| 19 | BY | 0/28 | - | - | - | - |
| 20 | AZ | 62/62 (100%) | 0.63 | 11 (17%) 1 1 | 134, 148, 160, 160 | 0 |
| 20 | BZ | 62/62 (100%) | 1.40 | 19 (30%) 0 0 | 135, 150, 160, 160 | 0 |
| All | All | 5224/5494 (95%) | 0.20 | 325 (6%) 20 11 | 81, 113, 149, 160 | 0 |

All (325) RSRZ outliers are listed below:

| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 20 | BZ | 5062 | VAL | 9.2 |
| 20 | BZ | 5061 | VAL | 7.5 |
| 13 | BO | 5084 | ASN | 7.4 |
| 20 | BZ | 5001 | MET | 6.3 |
| 7 | BH | 5066 | GLY | 6.1 |
| 9 | AJ | 3 | SER | 6.0 |
| 17 | By | 5046 | LEU | 6.0 |
| 11 | BL | 5001 | MET | 5.7 |
| 20 | AZ | 34 | ASP | 5.5 |
| 1 | BA | 5011 | ALA | 5.4 |
| 7 | BH | 5065 | LEU | 5.4 |
| 2 | BB | 5491 | VAL | 5.4 |
| 18 | AX | 47 | GLN | 5.3 |
| 8 | BI | 5032 | PRO | 5.3 |
| 5 | BE | 5008 | ARG | 5.2 |
| 1 | BA | 5010 | SER | 4.9 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 20 | BZ | 5033 | TRP | 4.7 |
| 8 | BI | 5033 | LYS | 4.6 |
| 11 | AL | 1 | MET | 4.4 |
| 20 | AZ | 62 | VAL | 4.4 |
| 6 | AF | 12 | SER | 4.3 |
| 20 | BZ | 5060 | PHE | 4.3 |
| 6 | BF | 5012 | SER | 4.2 |
| 9 | BJ | 5004 | GLU | 4.2 |
| 20 | AZ | 30 | PRO | 4.1 |
| 17 | Ay | 45 | ASN | 4.1 |
| 2 | BB | 5002 | GLY | 4.1 |
| 4 | BD | 5099 | GLY | 4.1 |
| 3 | AC | 27 | ASP | 4.1 |
| 11 | BL | 5005 | PRO | 4.1 |
| 8 | BI | 5034 | ARG | 4.0 |
| 20 | AZ | 33 | TRP | 4.0 |
| 11 | BL | 5002 | GLU | 4.0 |
| 6 | AF | 11 | VAL | 4.0 |
| 20 | AZ | 61 | VAL | 4.0 |
| 5 | BE | 5007 | GLU | 3.9 |
| 10 | AK | 46 | ARG | 3.9 |
| 12 | BM | 5034 | LYS | 3.9 |
| 5 | AE | 83 | LEU | 3.9 |
| 3 | AC | 145 | SER | 3.9 |
| 18 | AX | 45 | LYS | 3.9 |
| 5 | BE | 5021 | VAL | 3.9 |
| 3 | AC | 137 | PRO | 3.8 |
| 13 | BO | 5051 | THR | 3.8 |
| 17 | By | 5041 | VAL | 3.8 |
| 20 | AZ | 60 | PHE | 3.8 |
| 3 | BC | 5183 | GLY | 3.8 |
| 3 | BC | 5144 | SER | 3.7 |
| 4 | AD | 241 | GLU | 3.7 |
| 8 | BI | 5002 | GLU | 3.7 |
| 4 | AD | 13 | GLY | 3.7 |
| 4 | BD | 5239 | GLN | 3.7 |
| 3 | BC | 5204 | LEU | 3.7 |
| 13 | BO | 5052 | ALA | 3.6 |
| 5 | AE | 12 | ASP | 3.6 |
| 18 | AX | 46 | VAL | 3.6 |
| 9 | BJ | 5005 | GLY | 3.6 |
| 11 | BL | 5003 | PRO | 3.6 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 5 | BE | 5017 | VAL | 3.6 |
| 13 | BO | 5050 | ASP | 3.6 |
| 3 | AC | 138 | GLU | 3.5 |
| 13 | BO | 5062 | GLN | 3.5 |
| 14 | AT | 30 | THR | 3.5 |
| 5 | BE | 5006 | GLY | 3.5 |
| 3 | BC | 5203 | THR | 3.4 |
| 20 | AZ | 57 | LEU | 3.4 |
| 3 | BC | 5184 | GLY | 3.4 |
| 2 | BB | 5490 | GLN | 3.4 |
| 6 | BF | 5011 | VAL | 3.4 |
| 7 | AH | 26 | GLY | 3.4 |
| 2 | BB | 5128 | THR | 3.4 |
| 13 | AO | 88 | GLU | 3.4 |
| 9 | BJ | 5003 | SER | 3.4 |
| 20 | BZ | 5002 | THR | 3.4 |
| 2 | AB | 129 | GLY | 3.4 |
| 7 | BH | 5027 | THR | 3.4 |
| 6 | AF | 13 | TYR | 3.4 |
| 3 | BC | 5255 | THR | 3.4 |
| 13 | AO | 51 | THR | 3.4 |
| 13 | AO | 114 | ASN | 3.3 |
| 5 | BE | 5016 | SER | 3.3 |
| 20 | BZ | 5004 | LEU | 3.3 |
| 2 | AB | 379 | ALA | 3.3 |
| 16 | BV | 5132 | ASN | 3.3 |
| 12 | AM | 31 | SER | 3.3 |
| 9 | AJ | 4 | GLU | 3.2 |
| 5 | AE | 17 | VAL | 3.2 |
| 7 | AH | 16 | SER | 3.2 |
| 5 | BE | 5013 | ILE | 3.2 |
| 13 | BO | 5060 | SER | 3.2 |
| 3 | AC | 78 | GLU | 3.2 |
| 3 | BC | 5135 | ARG | 3.2 |
| 7 | AH | 27 | THR | 3.2 |
| 9 | BJ | 5008 | ILE | 3.2 |
| 14 | AT | 31 | LYS | 3.2 |
| 4 | AD | 24 | ARG | 3.2 |
| 20 | AZ | 31 | GLN | 3.1 |
| 13 | BO | 5112 | LYS | 3.1 |
| 13 | BO | 5049 | ASP | 3.1 |
| 5 | AE | 21 | VAL | 3.1 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | AH | 23 | PRO | 3.1 |
| 17 | By | 5045 | ASN | 3.1 |
| 5 | BE | 5082 | GLN | 3.1 |
| 13 | BO | 5167 | ASP | 3.1 |
| 2 | BB | 5123 | PHE | 3.0 |
| 9 | BJ | 5006 | GLY | 3.0 |
| 3 | BC | 5057 | ALA | 3.0 |
| 5 | BE | 5073 | LYS | 3.0 |
| 3 | AC | 141 | GLU | 3.0 |
| 4 | BD | 5233 | ARG | 3.0 |
| 3 | AC | 198 | VAL | 3.0 |
| 13 | BO | 5063 | THR | 3.0 |
| 2 | BB | 5120 | LEU | 3.0 |
| 12 | BM | 5033 | GLN | 3.0 |
| 1 | BA | 5032 | TRP | 2.9 |
| 2 | BB | 5121 | GLU | 2.9 |
| 13 | BO | 5064 | TYR | 2.9 |
| 17 | Ay | 42 | ARG | 2.9 |
| 1 | BA | 5015 | GLU | 2.9 |
| 3 | AC | 199 | ILE | 2.9 |
| 6 | BF | 5013 | TYR | 2.9 |
| 5 | BE | 5059 | GLU | 2.9 |
| 12 | AM | 33 | GLN | 2.9 |
| 4 | BD | 5012 | ARG | 2.9 |
| 11 | AL | 4 | ASN | 2.9 |
| 18 | BX | 5043 | ILE | 2.8 |
| 3 | BC | 5030 | SER | 2.8 |
| 4 | AD | 98 | GLN | 2.8 |
| 2 | BB | 5162 | PHE | 2.8 |
| 3 | BC | 5207 | ARG | 2.8 |
| 3 | AC | 203 | THR | 2.8 |
| 6 | BF | 5015 | ILE | 2.8 |
| 14 | AT | 32 | LYS | 2.8 |
| 17 | Ay | 21 | GLN | 2.8 |
| 1 | AA | 242 | GLU | 2.8 |
| 13 | BO | 5048 | LEU | 2.8 |
| 16 | BV | 5111 | GLU | 2.8 |
| 13 | AO | 52 | ALA | 2.8 |
| 20 | BZ | 5005 | PHE | 2.8 |
| 20 | BZ | 5036 | SER | 2.8 |
| 18 | BX | 5011 | THR | 2.8 |
| 16 | BV | 5047 | LEU | 2.7 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 7 | AH | 25 | TRP | 2.7 |
| 2 | BB | 5161 | LEU | 2.7 |
| 3 | BC | 5131 | TYR | 2.7 |
| 13 | AO | 230 | VAL | 2.7 |
| 2 | BB | 5219 | VAL | 2.7 |
| 13 | AO | 84 | ASN | 2.7 |
| 2 | AB | 125 | ASP | 2.7 |
| 2 | AB | 378 | LYS | 2.7 |
| 3 | AC | 140 | LEU | 2.7 |
| 4 | BD | 5226 | GLY | 2.7 |
| 2 | AB | 130 | GLU | 2.7 |
| 5 | BE | 5018 | ARG | 2.7 |
| 13 | BO | 5160 | THR | 2.7 |
| 10 | BK | 5014 | ALA | 2.7 |
| 2 | AB | 118 | TRP | 2.6 |
| 13 | AO | 232 | GLY | 2.6 |
| 2 | BB | 5352 | GLU | 2.6 |
| 3 | BC | 5256 | PRO | 2.6 |
| 20 | BZ | 5029 | SER | 2.6 |
| 3 | BC | 5202 | PRO | 2.6 |
| 5 | AE | 84 | LYS | 2.6 |
| 20 | AZ | 32 | ASP | 2.6 |
| 1 | BA | 5233 | ALA | 2.6 |
| 16 | BV | 5043 | LYS | 2.6 |
| 4 | BD | 5098 | GLN | 2.6 |
| 17 | Ay | 41 | VAL | 2.6 |
| 3 | AC | 255 | THR | 2.6 |
| 5 | BE | 5061 | ARG | 2.6 |
| 7 | AH | 4 | ARG | 2.6 |
| 11 | BL | 5004 | ASN | 2.6 |
| 8 | AI | 6 | ILE | 2.6 |
| 1 | BA | 5268 | SER | 2.5 |
| 16 | BV | 5121 | LEU | 2.5 |
| 13 | AO | 120 | THR | 2.5 |
| 3 | BC | 5198 | VAL | 2.5 |
| 9 | BJ | 5013 | VAL | 2.5 |
| 2 | BB | 5374 | ASN | 2.5 |
| 8 | AI | 2 | GLU | 2.5 |
| 1 | BA | 5012 | ASN | 2.5 |
| 3 | BC | 5186 | TYR | 2.5 |
| 3 | BC | 5200 | THR | 2.5 |
| 11 | BL | 5010 | VAL | 2.5 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 3 | AC | 204 | LEU | 2.5 |
| 5 | BE | 5083 | LEU | 2.5 |
| 3 | AC | 253 | LEU | 2.5 |
| 1 | BA | 5019 | ASN | 2.5 |
| 3 | BC | 5143 | TYR | 2.5 |
| 1 | BA | 5232 | SER | 2.5 |
| 3 | AC | 48 | LYS | 2.5 |
| 3 | AC | 202 | PRO | 2.5 |
| 13 | BO | 5217 | SER | 2.5 |
| 15 | AU | 69 | ARG | 2.5 |
| 1 | AA | 11 | ALA | 2.5 |
| 16 | AV | 116 | GLU | 2.4 |
| 3 | AC | 144 | SER | 2.4 |
| 5 | BE | 5005 | THR | 2.4 |
| 13 | AO | 163 | THR | 2.4 |
| 20 | AZ | 35 | ARG | 2.4 |
| 16 | BV | 5031 | PRO | 2.4 |
| 13 | BO | 5091 | PHE | 2.4 |
| 2 | AB | 407 | ASN | 2.4 |
| 13 | BO | 5030 | THR | 2.4 |
| 18 | BX | 5047 | GLN | 2.4 |
| 14 | BT | 5030 | THR | 2.4 |
| 2 | BB | 5294 | SER | 2.4 |
| 16 | AV | 43 | LYS | 2.4 |
| 2 | BB | 5124 | ARG | 2.4 |
| 2 | AB | 120 | LEU | 2.4 |
| 5 | BE | 5010 | PHE | 2.4 |
| 3 | BC | 5230 | LEU | 2.4 |
| 8 | BI | 5030 | ARG | 2.4 |
| 16 | BV | 5042 | GLY | 2.4 |
| 2 | BB | 5293 | ALA | 2.4 |
| 1 | AA | 10 | SER | 2.4 |
| 2 | AB | 126 | PRO | 2.4 |
| 2 | BB | 5125 | ASP | 2.4 |
| 3 | BC | 5185 | LEU | 2.4 |
| 3 | BC | 5195 | ASP | 2.4 |
| 4 | AD | 227 | GLU | 2.4 |
| 3 | BC | 5249 | ILE | 2.4 |
| 15 | AU | 58 | ASN | 2.4 |
| 16 | BV | 5044 | THR | 2.4 |
| 18 | BX | 5046 | VAL | 2.3 |
| 1 | BA | 5018 | CYS | 2.3 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 12 | AM | 34 | LYS | 2.3 |
| 20 | BZ | 5003 | ILE | 2.3 |
| 13 | AO | 61 | SER | 2.3 |
| 18 | AX | 44 | ASP | 2.3 |
| 4 | AD | 234 | ALA | 2.3 |
| 18 | AX | 42 | GLN | 2.3 |
| 20 | BZ | 5031 | GLN | 2.3 |
| 5 | BE | 5071 | GLU | 2.3 |
| 11 | AL | 7 | ARG | 2.3 |
| 3 | BC | 5137 | PRO | 2.3 |
| 8 | BI | 5024 | LEU | 2.3 |
| 5 | BE | 5015 | THR | 2.3 |
| 8 | BI | 5031 | ASN | 2.3 |
| 20 | BZ | 5034 | ASP | 2.3 |
| 16 | BV | 5027 | ALA | 2.3 |
| 20 | BZ | 5058 | ASN | 2.3 |
| 3 | BC | 5033 | PHE | 2.3 |
| 13 | AO | 48 | LEU | 2.3 |
| 16 | BV | 5133 | LEU | 2.3 |
| 2 | AB | 480 | SER | 2.3 |
| 1 | BA | 5309 | ALA | 2.2 |
| 18 | BX | 5045 | LYS | 2.2 |
| 5 | BE | 5025 | ILE | 2.2 |
| 13 | BO | 5113 | VAL | 2.2 |
| 3 | BC | 5142 | GLU | 2.2 |
| 20 | BZ | 5042 | LEU | 2.2 |
| 17 | By | 5033 | PRO | 2.2 |
| 15 | AU | 97 | LEU | 2.2 |
| 2 | BB | 5482 | ILE | 2.2 |
| 5 | BE | 5022 | ILE | 2.2 |
| 20 | BZ | 5038 | GLN | 2.2 |
| 3 | AC | 277 | GLY | 2.2 |
| 4 | BD | 5059 | TYR | 2.2 |
| 2 | BB | 5126 | PRO | 2.2 |
| 3 | AC | 45 | LEU | 2.2 |
| 4 | BD | 5024 | ARG | 2.2 |
| 5 | AE | 18 | ARG | 2.2 |
| 6 | AF | 42 | PHE | 2.2 |
| 5 | BE | 5026 | THR | 2.2 |
| 18 | AX | 11 | THR | 2.2 |
| 1 | AA | 235 | TYR | 2.2 |
| 9 | BJ | 5007 | ARG | 2.2 |

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| Mol | Chain | Res | Type | RSRZ |
|------------|--------------|------------|-------------|-------------|
| 2 | BB | 5296 | ALA | 2.2 |
| 4 | BD | 5097 | ALA | 2.2 |
| 20 | BZ | 5039 | LEU | 2.2 |
| 1 | BA | 5227 | THR | 2.2 |
| 3 | AC | 149 | TYR | 2.1 |
| 13 | AO | 62 | GLN | 2.1 |
| 20 | AZ | 38 | GLN | 2.1 |
| 13 | BO | 5058 | ILE | 2.1 |
| 13 | BO | 5092 | VAL | 2.1 |
| 5 | BE | 5084 | LYS | 2.1 |
| 5 | BE | 5057 | ALA | 2.1 |
| 1 | AA | 243 | GLU | 2.1 |
| 2 | AB | 119 | ASP | 2.1 |
| 3 | BC | 5180 | MET | 2.1 |
| 13 | AO | 58 | ILE | 2.1 |
| 6 | AF | 14 | PRO | 2.1 |
| 20 | BZ | 5030 | PRO | 2.1 |
| 8 | BI | 5023 | PHE | 2.1 |
| 3 | BC | 5209 | ILE | 2.1 |
| 13 | AO | 87 | GLN | 2.1 |
| 4 | BD | 5025 | ASP | 2.1 |
| 18 | AX | 12 | ILE | 2.1 |
| 13 | AO | 162 | ILE | 2.1 |
| 5 | AE | 3 | GLY | 2.1 |
| 2 | AB | 491 | VAL | 2.1 |
| 1 | BA | 5240 | GLY | 2.1 |
| 3 | BC | 5100 | GLY | 2.1 |
| 4 | BD | 5013 | GLY | 2.1 |
| 16 | BV | 5113 | GLU | 2.1 |
| 3 | BC | 5205 | ASP | 2.1 |
| 1 | BA | 5230 | THR | 2.1 |
| 2 | BB | 5117 | TYR | 2.1 |
| 3 | AC | 143 | TYR | 2.1 |
| 7 | BH | 5018 | TYR | 2.1 |
| 7 | AH | 3 | ARG | 2.1 |
| 7 | AH | 2 | ALA | 2.1 |
| 5 | BE | 5030 | LEU | 2.1 |
| 13 | BO | 5225 | LEU | 2.1 |
| 13 | BO | 5231 | ASP | 2.1 |
| 17 | By | 5021 | GLN | 2.0 |
| 20 | BZ | 5007 | LEU | 2.0 |
| 1 | AA | 17 | PHE | 2.0 |

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| Mol | Chain | Res | Type | RSRZ |
|-----|-------|------|------|------|
| 7 | BH | 5003 | ARG | 2.0 |
| 16 | BV | 5045 | ILE | 2.0 |
| 4 | BD | 5085 | MET | 2.0 |
| 9 | AJ | 7 | ARG | 2.0 |
| 3 | AC | 122 | SER | 2.0 |
| 3 | BC | 5199 | ILE | 2.0 |
| 16 | BV | 5146 | LEU | 2.0 |
| 11 | AL | 3 | PRO | 2.0 |
| 2 | BB | 5118 | TRP | 2.0 |
| 3 | AC | 61 | VAL | 2.0 |
| 1 | BA | 5013 | LEU | 2.0 |
| 7 | BH | 5022 | ALA | 2.0 |
| 13 | AO | 55 | ALA | 2.0 |
| 15 | AU | 94 | ILE | 2.0 |
| 16 | BV | 5106 | THR | 2.0 |

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 37 | CA | BF | 5103 | 1/1 | 0.16 | 0.16 | 146,146,146,146 | 0 |
| 37 | CA | AF | 103 | 1/1 | 0.35 | 0.23 | 150,150,150,150 | 0 |
| 28 | DGD | AE | 101 | 63/66 | 0.36 | 0.71 | 146,160,160,160 | 0 |
| 32 | LMT | BB | 5626 | 35/35 | 0.39 | 0.62 | 131,160,160,160 | 0 |
| 31 | LMG | AI | 101 | 43/55 | 0.40 | 0.78 | 159,160,160,160 | 0 |
| 31 | LMG | AC | 521 | 45/55 | 0.40 | 0.63 | 154,160,160,160 | 0 |
| 28 | DGD | BE | 5102 | 63/66 | 0.44 | 0.70 | 145,160,160,160 | 0 |
| 29 | LHG | BA | 5415 | 37/49 | 0.48 | 0.61 | 151,160,160,160 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 37 | CA | AO | 301 | 1/1 | 0.51 | 0.23 | 152,152,152,152 | 0 |
| 28 | DGD | BB | 5602 | 52/66 | 0.51 | 0.53 | 152,160,160,160 | 0 |
| 28 | DGD | BA | 5412 | 56/66 | 0.53 | 0.58 | 150,160,160,160 | 0 |
| 32 | LMT | AB | 623 | 35/35 | 0.53 | 0.72 | 135,160,160,160 | 0 |
| 27 | BCR | AJ | 101 | 40/40 | 0.54 | 0.66 | 158,160,160,160 | 0 |
| 28 | DGD | AB | 628 | 52/66 | 0.55 | 0.60 | 154,160,160,160 | 0 |
| 28 | DGD | AA | 411 | 56/66 | 0.56 | 0.54 | 148,158,160,160 | 0 |
| 31 | LMG | BC | 5520 | 48/55 | 0.57 | 0.55 | 138,159,160,160 | 0 |
| 31 | LMG | BI | 5101 | 43/55 | 0.58 | 0.70 | 160,160,160,160 | 0 |
| 30 | SQD | BB | 5625 | 43/54 | 0.59 | 0.47 | 132,148,160,160 | 0 |
| 31 | LMG | AC | 520 | 48/55 | 0.60 | 0.57 | 136,157,160,160 | 0 |
| 27 | BCR | AX | 101 | 40/40 | 0.60 | 0.49 | 135,143,158,159 | 0 |
| 31 | LMG | BA | 5402 | 42/55 | 0.61 | 0.50 | 144,157,160,160 | 0 |
| 31 | LMG | AA | 414 | 44/55 | 0.61 | 0.46 | 140,160,160,160 | 0 |
| 27 | BCR | BX | 5101 | 40/40 | 0.62 | 0.49 | 136,143,157,158 | 0 |
| 31 | LMG | BC | 5521 | 45/55 | 0.64 | 0.55 | 154,160,160,160 | 0 |
| 27 | BCR | BJ | 5101 | 40/40 | 0.64 | 0.51 | 160,160,160,160 | 0 |
| 32 | LMT | BI | 5102 | 35/35 | 0.64 | 0.84 | 151,160,160,160 | 0 |
| 37 | CA | BK | 5101 | 1/1 | 0.64 | 0.22 | 145,145,145,145 | 0 |
| 30 | SQD | BA | 5401 | 54/54 | 0.65 | 0.47 | 136,160,160,160 | 0 |
| 31 | LMG | BE | 5101 | 44/55 | 0.65 | 0.46 | 140,160,160,160 | 0 |
| 32 | LMT | BB | 5603 | 35/35 | 0.65 | 0.46 | 132,160,160,160 | 0 |
| 30 | SQD | AB | 622 | 43/54 | 0.66 | 0.42 | 133,149,160,160 | 0 |
| 31 | LMG | BD | 5410 | 48/55 | 0.66 | 0.57 | 126,131,141,141 | 0 |
| 32 | LMT | BD | 5411 | 31/35 | 0.67 | 0.49 | 140,152,160,160 | 0 |
| 31 | LMG | AM | 101 | 42/55 | 0.67 | 0.53 | 136,158,160,160 | 0 |
| 27 | BCR | BC | 5516 | 40/40 | 0.67 | 0.45 | 136,140,145,145 | 0 |
| 32 | LMT | AB | 629 | 35/35 | 0.68 | 0.48 | 133,160,160,160 | 0 |
| 31 | LMG | AA | 417 | 42/55 | 0.68 | 0.45 | 145,157,160,160 | 0 |
| 30 | SQD | BF | 5102 | 45/54 | 0.68 | 0.56 | 154,160,160,160 | 0 |
| 37 | CA | BO | 5301 | 1/1 | 0.68 | 0.33 | 160,160,160,160 | 0 |
| 31 | LMG | AB | 621 | 49/55 | 0.69 | 0.44 | 145,150,157,160 | 0 |
| 32 | LMT | BB | 5604 | 35/35 | 0.70 | 0.52 | 131,160,160,160 | 0 |
| 32 | LMT | AI | 102 | 35/35 | 0.70 | 0.59 | 149,158,160,160 | 0 |
| 28 | DGD | BC | 5518 | 62/66 | 0.70 | 0.49 | 147,156,160,160 | 0 |
| 24 | CLA | AB | 601 | 65/65 | 0.71 | 0.55 | 146,159,160,160 | 0 |
| 31 | LMG | BD | 5408 | 46/55 | 0.71 | 0.46 | 139,145,160,160 | 0 |
| 27 | BCR | AC | 516 | 40/40 | 0.71 | 0.46 | 135,138,143,143 | 0 |
| 32 | LMT | AD | 409 | 31/35 | 0.71 | 0.43 | 139,154,160,160 | 0 |
| 27 | BCR | BC | 5515 | 40/40 | 0.71 | 0.43 | 150,152,155,156 | 0 |
| 24 | CLA | BB | 5605 | 65/65 | 0.72 | 0.58 | 146,159,160,160 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|---------|-------|------|------|----------------------------|-------|
| 32 | LMT | AB | 624 | 35/35 | 0.72 | 0.59 | 156,160,160,160 | 0 |
| 24 | CLA | BC | 5513 | 65/65 | 0.72 | 0.50 | 158,160,160,160 | 0 |
| 27 | BCR | AC | 515 | 40/40 | 0.72 | 0.44 | 149,152,155,155 | 0 |
| 24 | CLA | AC | 513 | 65/65 | 0.72 | 0.44 | 158,160,160,160 | 0 |
| 23 | CL | BA | 5404[A] | 1/1 | 0.73 | 0.34 | 29,29,29,29 | 1 |
| 31 | LMG | AB | 620 | 51/55 | 0.73 | 0.48 | 125,139,150,151 | 0 |
| 30 | SQD | BA | 5414 | 51/54 | 0.73 | 0.36 | 145,150,160,160 | 0 |
| 32 | LMT | BM | 5101 | 35/35 | 0.73 | 0.39 | 126,149,154,155 | 0 |
| 30 | SQD | BB | 5601 | 47/54 | 0.73 | 0.39 | 137,156,160,160 | 0 |
| 24 | CLA | AB | 609 | 65/65 | 0.73 | 0.39 | 126,136,141,143 | 0 |
| 32 | LMT | AI | 103 | 35/35 | 0.73 | 0.47 | 156,158,160,160 | 0 |
| 26 | OEC | BA | 5410 | 5/9 | 0.73 | 0.22 | 23,88,99,134 | 0 |
| 23 | CL | BA | 5404[B] | 1/1 | 0.73 | 0.34 | 115,115,115,115 | 1 |
| 31 | LMG | BM | 5102 | 42/55 | 0.74 | 0.45 | 136,160,160,160 | 0 |
| 32 | LMT | AB | 630 | 35/35 | 0.74 | 0.49 | 132,160,160,160 | 0 |
| 30 | SQD | AF | 102 | 45/54 | 0.74 | 0.45 | 154,160,160,160 | 0 |
| 31 | LMG | AJ | 102 | 46/55 | 0.74 | 0.43 | 139,144,160,160 | 0 |
| 33 | DMS | AU | 201 | 4/4 | 0.75 | 0.40 | 160,160,160,160 | 0 |
| 32 | LMT | BB | 5627 | 35/35 | 0.75 | 0.45 | 156,160,160,160 | 0 |
| 24 | CLA | AC | 506 | 65/65 | 0.75 | 0.37 | 136,143,160,160 | 0 |
| 30 | SQD | AA | 416 | 54/54 | 0.76 | 0.34 | 136,160,160,160 | 0 |
| 24 | CLA | BB | 5613 | 65/65 | 0.76 | 0.37 | 127,135,140,142 | 0 |
| 31 | LMG | BB | 5624 | 49/55 | 0.76 | 0.40 | 145,150,157,160 | 0 |
| 31 | LMG | AD | 408 | 48/55 | 0.76 | 0.47 | 121,130,139,139 | 0 |
| 24 | CLA | BC | 5506 | 65/65 | 0.76 | 0.39 | 136,143,160,160 | 0 |
| 28 | DGD | AC | 518 | 62/66 | 0.76 | 0.41 | 146,155,160,160 | 0 |
| 27 | BCR | BT | 5101 | 40/40 | 0.77 | 0.40 | 124,143,147,147 | 0 |
| 30 | SQD | AB | 627 | 47/54 | 0.77 | 0.36 | 138,157,160,160 | 0 |
| 32 | LMT | BC | 5522 | 35/35 | 0.77 | 0.67 | 157,160,160,160 | 0 |
| 29 | LHG | AA | 415 | 37/49 | 0.77 | 0.35 | 149,160,160,160 | 0 |
| 31 | LMG | AD | 407 | 49/55 | 0.78 | 0.46 | 126,133,143,145 | 0 |
| 32 | LMT | AM | 102 | 35/35 | 0.78 | 0.43 | 126,149,154,154 | 0 |
| 31 | LMG | BL | 5101 | 51/55 | 0.79 | 0.46 | 122,138,151,152 | 0 |
| 27 | BCR | BK | 5102 | 40/40 | 0.80 | 0.37 | 136,140,152,152 | 0 |
| 28 | DGD | BC | 5519 | 66/66 | 0.80 | 0.36 | 112,121,158,159 | 0 |
| 31 | LMG | BD | 5409 | 49/55 | 0.80 | 0.41 | 128,133,144,146 | 0 |
| 27 | BCR | BC | 5514 | 40/40 | 0.80 | 0.43 | 123,126,129,129 | 0 |
| 24 | CLA | AC | 512 | 65/65 | 0.80 | 0.44 | 154,158,160,160 | 0 |
| 24 | CLA | BC | 5512 | 65/65 | 0.81 | 0.35 | 157,160,160,160 | 0 |
| 24 | CLA | BC | 5511 | 65/65 | 0.81 | 0.43 | 154,158,159,160 | 0 |
| 27 | BCR | AK | 102 | 40/40 | 0.81 | 0.38 | 133,139,151,152 | 0 |
| 27 | BCR | BB | 5623 | 40/40 | 0.82 | 0.37 | 111,116,131,131 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|--------|-------|------|------|----------------------------|-------|
| 28 | DGD | AC | 517 | 53/66 | 0.82 | 0.39 | 121,128,135,140 | 0 |
| 27 | BCR | AT | 101 | 40/40 | 0.82 | 0.39 | 126,140,146,147 | 0 |
| 24 | CLA | BC | 5505 | 65/65 | 0.82 | 0.36 | 123,148,152,153 | 0 |
| 24 | CLA | BB | 5620 | 65/65 | 0.83 | 0.29 | 143,147,160,160 | 0 |
| 33 | DMS | AV | 202 | 4/4 | 0.83 | 0.64 | 148,148,148,149 | 0 |
| 24 | CLA | BB | 5610 | 65/65 | 0.83 | 0.31 | 121,132,140,141 | 0 |
| 24 | CLA | AB | 606 | 65/65 | 0.83 | 0.33 | 120,133,140,141 | 0 |
| 24 | CLA | BD | 5405 | 65/65 | 0.83 | 0.34 | 125,131,148,149 | 0 |
| 28 | DGD | BH | 5101 | 58/66 | 0.83 | 0.37 | 107,118,156,160 | 0 |
| 24 | CLA | BC | 5507 | 65/65 | 0.83 | 0.36 | 136,150,153,154 | 0 |
| 30 | SQD | AA | 413 | 51/54 | 0.84 | 0.31 | 143,150,160,160 | 0 |
| 37 | CA | AK | 101 | 1/1 | 0.84 | 0.12 | 146,146,146,146 | 0 |
| 24 | CLA | BC | 5503 | 65/65 | 0.84 | 0.35 | 137,147,148,152 | 0 |
| 24 | CLA | AB | 614 | 65/65 | 0.84 | 0.37 | 129,133,160,160 | 0 |
| 28 | DGD | AC | 519 | 66/66 | 0.84 | 0.36 | 110,120,157,158 | 0 |
| 24 | CLA | BC | 5508 | 65/65 | 0.84 | 0.33 | 142,146,157,159 | 0 |
| 33 | DMS | BB | 5628 | 4/4 | 0.85 | 0.58 | 156,157,157,157 | 0 |
| 35 | PL9 | BD | 5406 | 55/55 | 0.85 | 0.34 | 103,110,115,116 | 0 |
| 24 | CLA | BB | 5606 | 65/65 | 0.85 | 0.30 | 124,127,130,131 | 0 |
| 27 | BCR | AB | 619 | 40/40 | 0.85 | 0.29 | 111,117,131,131 | 0 |
| 24 | CLA | AB | 616 | 65/65 | 0.86 | 0.39 | 143,147,160,160 | 0 |
| 24 | CLA | AB | 602 | 65/65 | 0.86 | 0.33 | 124,127,129,132 | 0 |
| 28 | DGD | AH | 101 | 58/66 | 0.86 | 0.30 | 108,120,155,157 | 0 |
| 24 | CLA | BA | 5405 | 65/65 | 0.87 | 0.30 | 90,101,105,109 | 0 |
| 23 | CL | AA | 403[A] | 1/1 | 0.87 | 0.31 | 33,33,33,33 | 1 |
| 23 | CL | AA | 403[B] | 1/1 | 0.87 | 0.31 | 108,108,108,108 | 1 |
| 24 | CLA | AA | 406 | 65/65 | 0.87 | 0.34 | 105,112,138,139 | 0 |
| 24 | CLA | AD | 404 | 65/65 | 0.87 | 0.35 | 126,130,148,149 | 0 |
| 27 | BCR | AB | 617 | 40/40 | 0.87 | 0.32 | 112,121,125,125 | 0 |
| 27 | BCR | AB | 618 | 40/40 | 0.87 | 0.27 | 109,117,122,122 | 0 |
| 28 | DGD | BC | 5517 | 53/66 | 0.87 | 0.28 | 124,130,136,139 | 0 |
| 24 | CLA | BB | 5618 | 65/65 | 0.87 | 0.32 | 128,133,160,160 | 0 |
| 29 | LHG | BA | 5413 | 39/49 | 0.88 | 0.27 | 113,122,128,129 | 0 |
| 27 | BCR | AC | 514 | 40/40 | 0.88 | 0.33 | 120,123,127,128 | 0 |
| 24 | CLA | AB | 603 | 65/65 | 0.88 | 0.36 | 107,109,119,121 | 0 |
| 27 | BCR | BD | 5407 | 40/40 | 0.88 | 0.30 | 112,127,132,132 | 0 |
| 24 | CLA | AC | 501 | 65/65 | 0.88 | 0.37 | 133,136,139,143 | 0 |
| 27 | BCR | AD | 406 | 40/40 | 0.88 | 0.31 | 110,126,131,131 | 0 |
| 24 | CLA | AC | 503 | 65/65 | 0.88 | 0.48 | 137,144,147,152 | 0 |
| 24 | CLA | AC | 505 | 65/65 | 0.88 | 0.40 | 121,146,150,151 | 0 |
| 24 | CLA | BA | 5407 | 65/65 | 0.88 | 0.29 | 110,114,138,139 | 0 |
| 24 | CLA | AB | 615 | 65/65 | 0.88 | 0.33 | 134,139,155,157 | 0 |

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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 24 | CLA | AC | 507 | 65/65 | 0.88 | 0.38 | 137,149,152,153 | 0 |
| 24 | CLA | AC | 511 | 65/65 | 0.88 | 0.33 | 152,155,157,158 | 0 |
| 24 | CLA | BA | 5406 | 65/65 | 0.89 | 0.28 | 89,94,108,112 | 0 |
| 33 | DMS | AB | 625 | 4/4 | 0.89 | 0.44 | 156,157,157,157 | 0 |
| 33 | DMS | AB | 626 | 4/4 | 0.89 | 0.26 | 129,130,130,130 | 0 |
| 24 | CLA | AC | 509 | 65/65 | 0.89 | 0.39 | 115,128,135,137 | 0 |
| 27 | BCR | BA | 5411 | 40/40 | 0.89 | 0.29 | 94,122,132,132 | 0 |
| 27 | BCR | BB | 5621 | 40/40 | 0.89 | 0.32 | 112,120,124,125 | 0 |
| 34 | PHO | BD | 5403 | 64/64 | 0.89 | 0.34 | 102,109,118,118 | 0 |
| 24 | CLA | BA | 5408 | 65/65 | 0.89 | 0.30 | 95,103,150,150 | 0 |
| 24 | CLA | BC | 5509 | 65/65 | 0.89 | 0.30 | 116,128,138,138 | 0 |
| 24 | CLA | AC | 504 | 65/65 | 0.89 | 0.34 | 129,134,160,160 | 0 |
| 24 | CLA | BC | 5501 | 65/65 | 0.89 | 0.30 | 134,137,141,144 | 0 |
| 24 | CLA | AB | 608 | 65/65 | 0.89 | 0.40 | 123,127,135,140 | 0 |
| 24 | CLA | BC | 5504 | 65/65 | 0.89 | 0.33 | 132,135,160,160 | 0 |
| 24 | CLA | BB | 5607 | 65/65 | 0.89 | 0.28 | 108,111,120,123 | 0 |
| 34 | PHO | BD | 5404 | 64/64 | 0.90 | 0.28 | 123,125,129,130 | 0 |
| 35 | PL9 | AD | 405 | 55/55 | 0.90 | 0.36 | 99,109,113,113 | 0 |
| 24 | CLA | AB | 605 | 65/65 | 0.90 | 0.28 | 105,113,122,124 | 0 |
| 24 | CLA | BB | 5619 | 65/65 | 0.90 | 0.34 | 135,137,155,157 | 0 |
| 24 | CLA | BB | 5611 | 65/65 | 0.90 | 0.28 | 95,102,132,136 | 0 |
| 24 | CLA | AC | 508 | 65/65 | 0.90 | 0.35 | 140,144,157,158 | 0 |
| 24 | CLA | BC | 5502 | 65/65 | 0.90 | 0.32 | 108,111,143,144 | 0 |
| 29 | LHG | AA | 412 | 39/49 | 0.90 | 0.28 | 110,118,128,132 | 0 |
| 24 | CLA | BB | 5614 | 65/65 | 0.90 | 0.32 | 117,123,124,128 | 0 |
| 24 | CLA | AB | 610 | 65/65 | 0.91 | 0.33 | 117,121,123,127 | 0 |
| 24 | CLA | BB | 5612 | 65/65 | 0.91 | 0.39 | 122,127,136,139 | 0 |
| 24 | CLA | BD | 5402 | 65/65 | 0.91 | 0.26 | 97,101,117,119 | 0 |
| 24 | CLA | AC | 502 | 65/65 | 0.91 | 0.36 | 103,109,142,143 | 0 |
| 36 | HEM | BF | 5101 | 43/43 | 0.91 | 0.44 | 148,152,160,160 | 0 |
| 24 | CLA | BB | 5609 | 65/65 | 0.91 | 0.34 | 103,110,124,124 | 0 |
| 27 | BCR | AA | 410 | 40/40 | 0.91 | 0.27 | 91,122,130,130 | 0 |
| 24 | CLA | BB | 5616 | 65/65 | 0.91 | 0.31 | 108,110,120,122 | 0 |
| 24 | CLA | BC | 5510 | 65/65 | 0.91 | 0.34 | 113,116,130,131 | 0 |
| 24 | CLA | AA | 407 | 65/65 | 0.91 | 0.33 | 93,101,150,151 | 0 |
| 33 | DMS | BV | 5202 | 4/4 | 0.91 | 0.27 | 148,149,149,150 | 0 |
| 24 | CLA | AA | 404 | 65/65 | 0.92 | 0.26 | 89,99,106,108 | 0 |
| 24 | CLA | BB | 5615 | 65/65 | 0.92 | 0.26 | 101,113,117,120 | 0 |
| 25 | MST | BA | 5409 | 16/16 | 0.92 | 0.23 | 124,129,131,132 | 0 |
| 24 | CLA | AC | 510 | 65/65 | 0.92 | 0.33 | 110,113,129,130 | 0 |
| 34 | PHO | AD | 402 | 64/64 | 0.92 | 0.30 | 99,109,116,117 | 0 |
| 24 | CLA | BB | 5617 | 65/65 | 0.92 | 0.33 | 98,102,138,141 | 0 |

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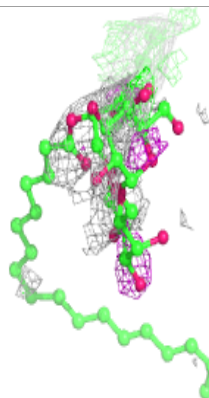
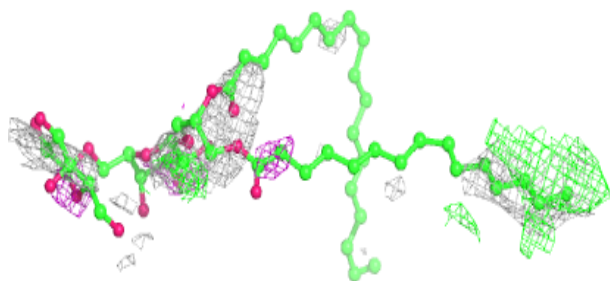
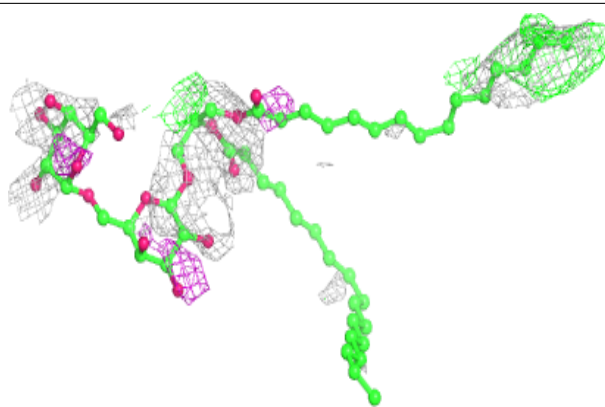
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| Mol | Type | Chain | Res | Atoms | RSCC | RSR | B-factors(Å ²) | Q<0.9 |
|-----|------|-------|------|-------|------|------|----------------------------|-------|
| 24 | CLA | AB | 607 | 65/65 | 0.92 | 0.26 | 94,100,132,135 | 0 |
| 27 | BCR | BB | 5622 | 40/40 | 0.92 | 0.34 | 110,117,120,121 | 0 |
| 33 | DMS | BB | 5629 | 4/4 | 0.93 | 0.29 | 125,126,127,127 | 0 |
| 24 | CLA | AB | 613 | 65/65 | 0.93 | 0.26 | 99,102,136,140 | 0 |
| 36 | HEM | BV | 5201 | 43/43 | 0.93 | 0.27 | 97,102,106,109 | 0 |
| 33 | DMS | BV | 5203 | 4/4 | 0.93 | 0.67 | 160,160,160,160 | 0 |
| 24 | CLA | AB | 604 | 65/65 | 0.93 | 0.30 | 96,104,125,127 | 0 |
| 34 | PHO | AD | 403 | 64/64 | 0.93 | 0.28 | 119,123,128,129 | 0 |
| 25 | MST | AA | 408 | 16/16 | 0.93 | 0.26 | 123,126,129,130 | 0 |
| 24 | CLA | AD | 401 | 65/65 | 0.93 | 0.27 | 93,100,115,119 | 0 |
| 24 | CLA | AB | 612 | 65/65 | 0.93 | 0.29 | 107,111,120,121 | 0 |
| 24 | CLA | AB | 611 | 65/65 | 0.94 | 0.30 | 99,113,116,122 | 0 |
| 21 | FE2 | BD | 5401 | 1/1 | 0.94 | 0.11 | 119,119,119,119 | 0 |
| 24 | CLA | AA | 405 | 65/65 | 0.94 | 0.26 | 88,93,108,111 | 0 |
| 36 | HEM | AF | 101 | 43/43 | 0.94 | 0.38 | 148,152,159,160 | 0 |
| 24 | CLA | BB | 5608 | 65/65 | 0.95 | 0.32 | 96,103,124,125 | 0 |
| 26 | OEC | AA | 409 | 5/9 | 0.95 | 0.28 | 82,83,90,110 | 0 |
| 36 | HEM | AV | 201 | 43/43 | 0.96 | 0.27 | 94,100,102,103 | 0 |
| 22 | BCT | BA | 5403 | 4/4 | 0.97 | 0.16 | 135,136,136,137 | 0 |
| 21 | FE2 | AA | 401 | 1/1 | 0.98 | 0.17 | 115,115,115,115 | 0 |
| 22 | BCT | AA | 402 | 4/4 | 0.99 | 0.20 | 135,136,137,137 | 0 |

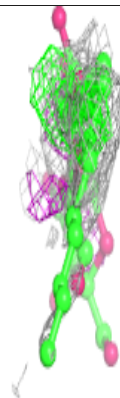
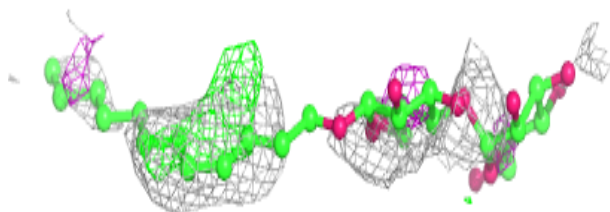
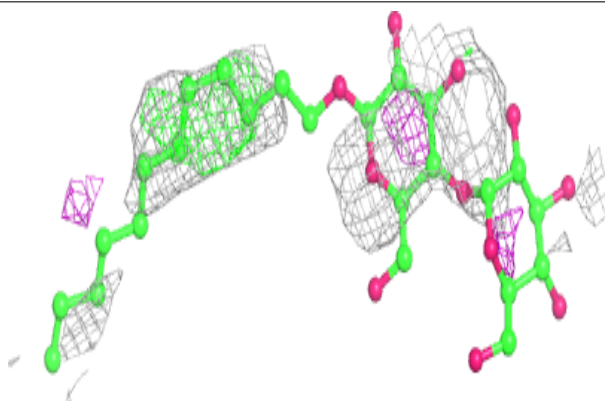
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

Electron density around DGD AE 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

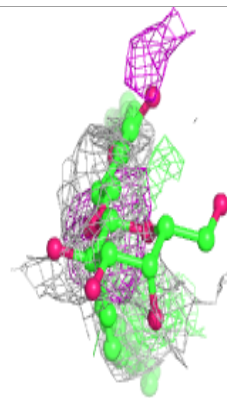
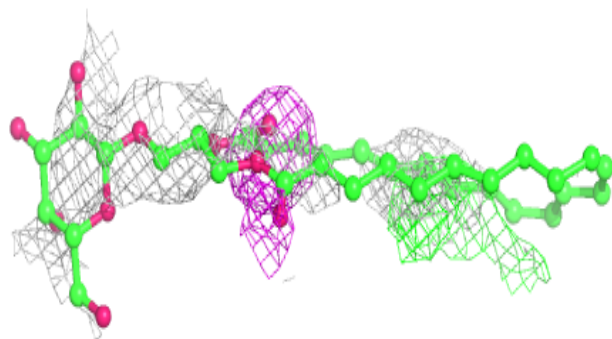
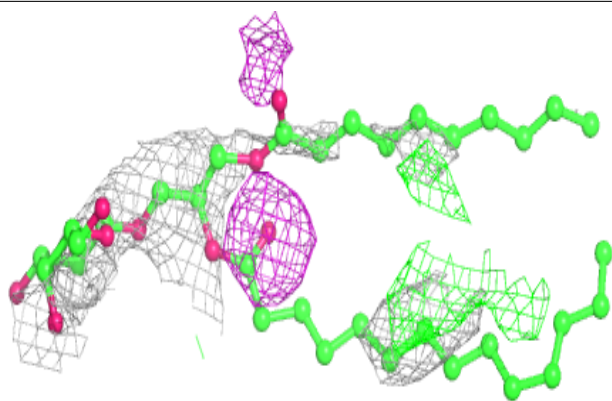
**Electron density around LMT BB 5626:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

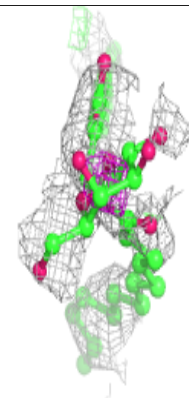
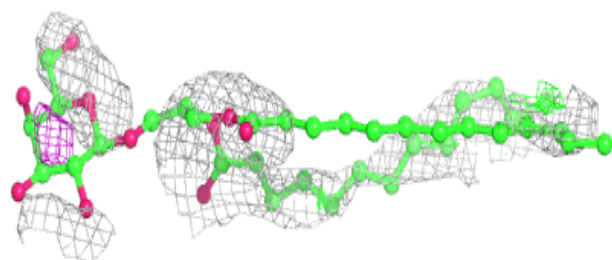
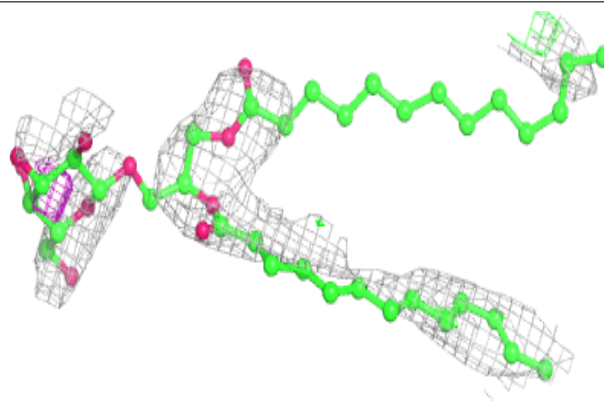


Electron density around LMG AI 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

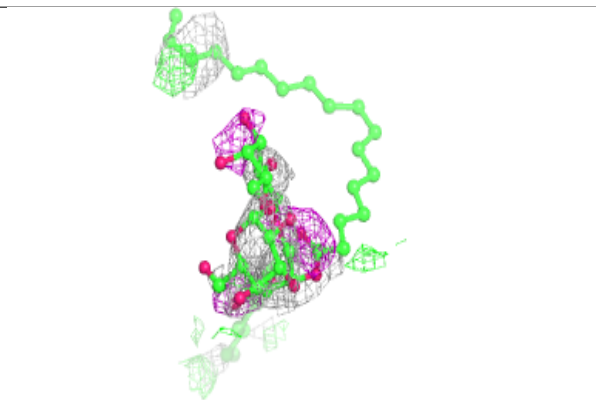
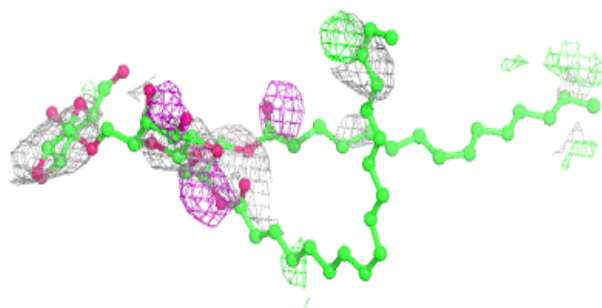
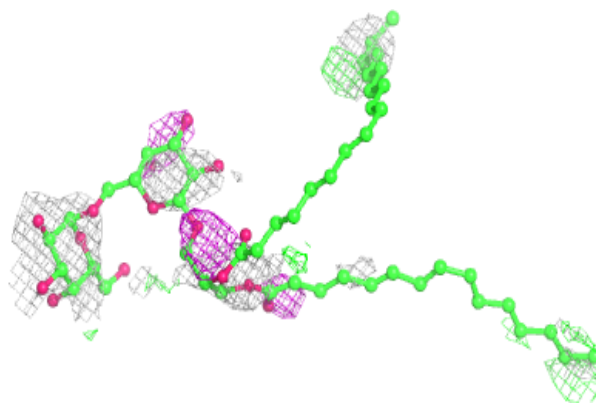
**Electron density around LMG AC 521:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

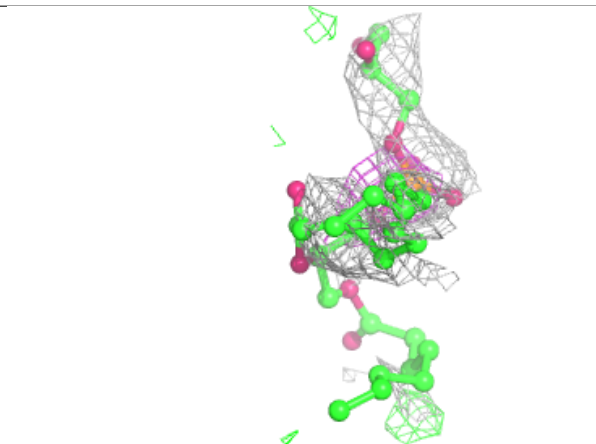
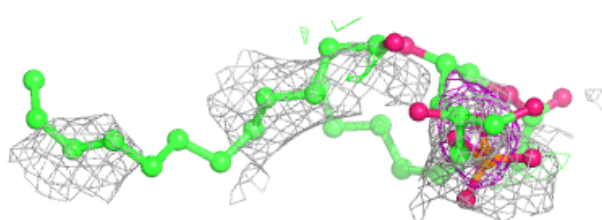
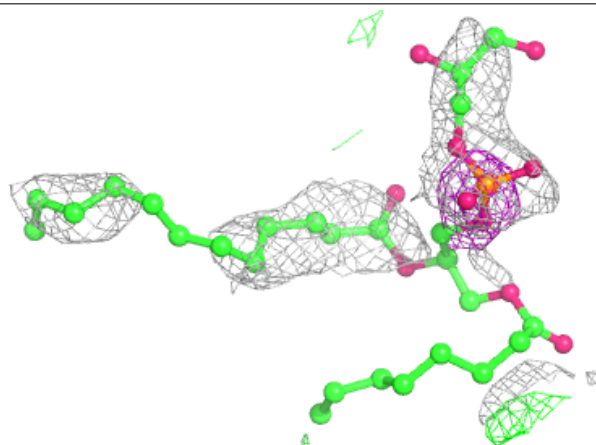


Electron density around DGD BE 5102:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

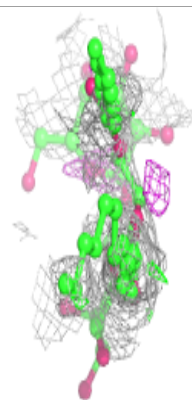
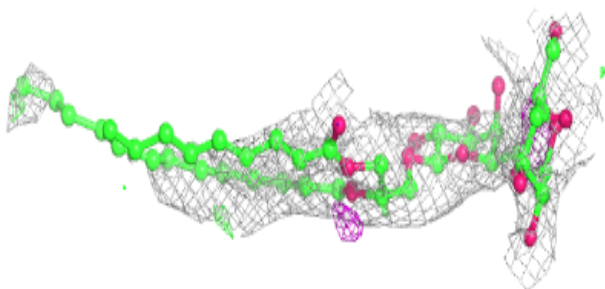
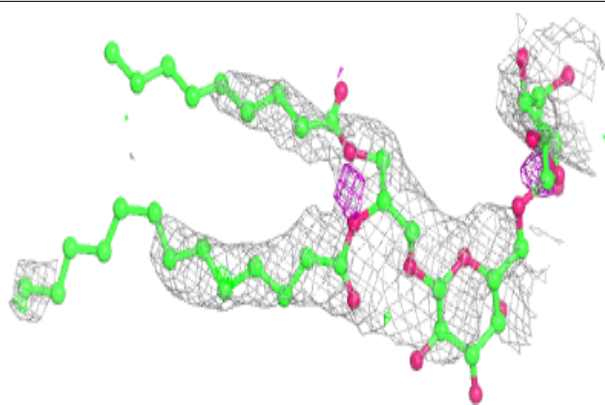
**Electron density around LHG BA 5415:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

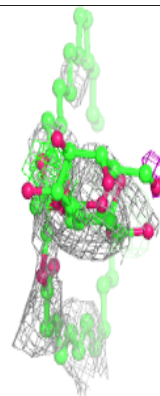
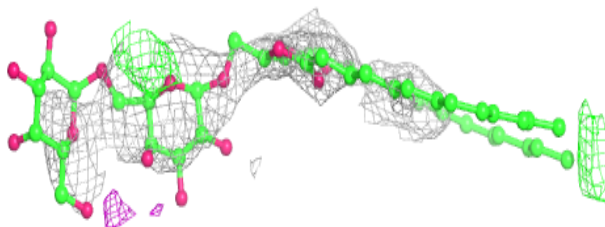
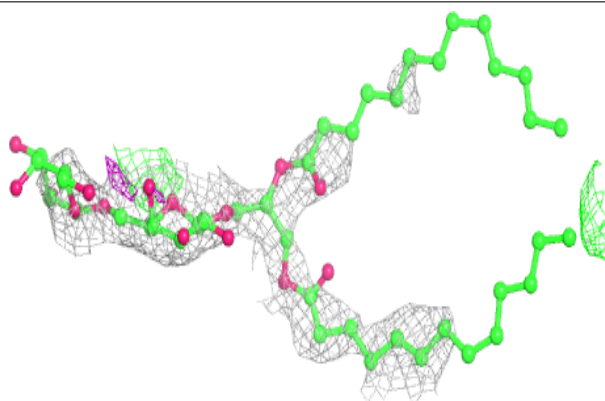


Electron density around DGD BB 5602:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

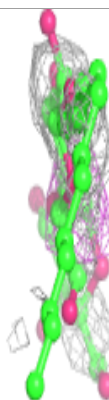
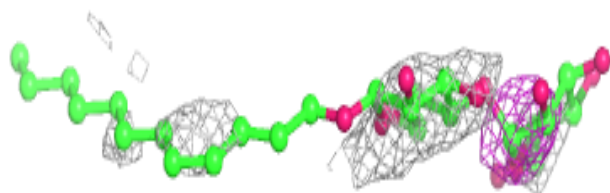
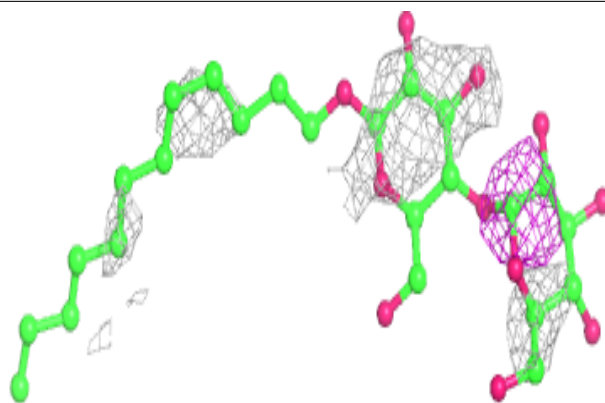
**Electron density around DGD BA 5412:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

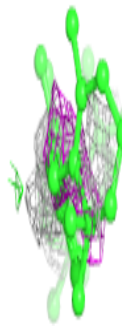
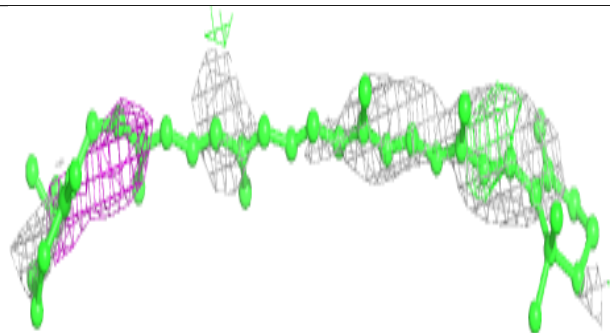
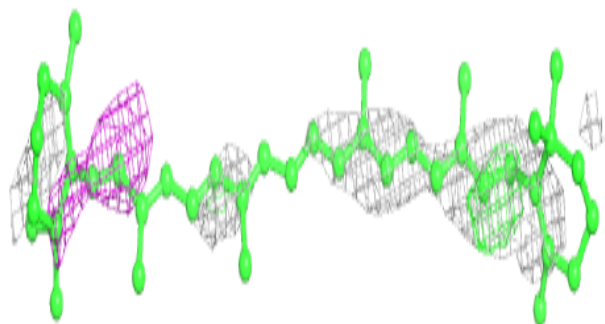


Electron density around LMT AB 623:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

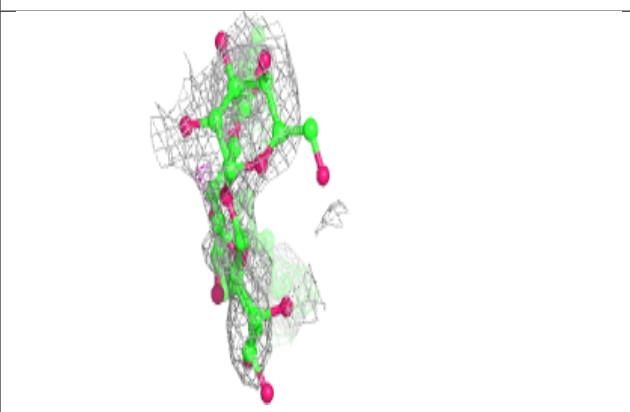
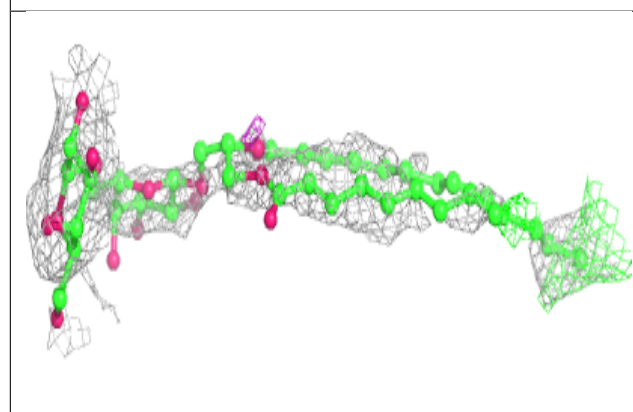
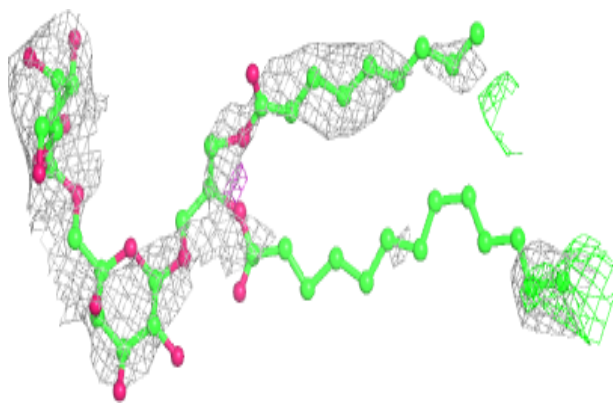
**Electron density around BCR AJ 101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

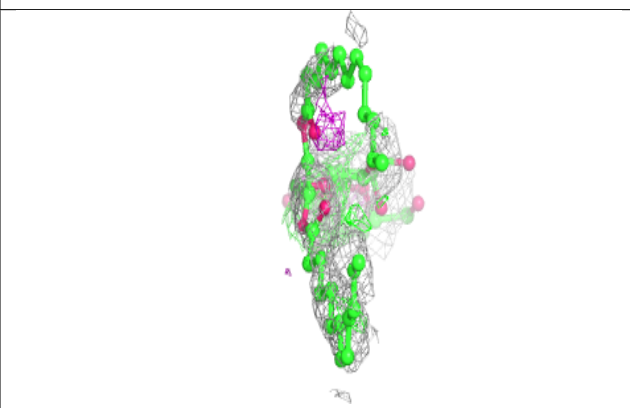
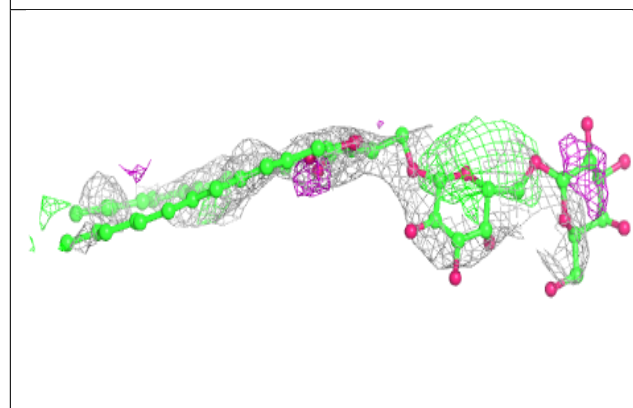
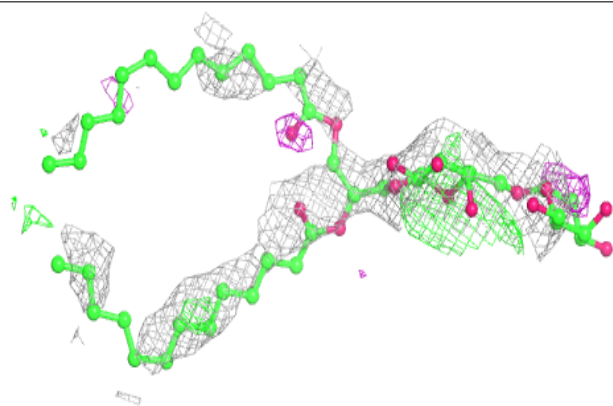


Electron density around DGD AB 628:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

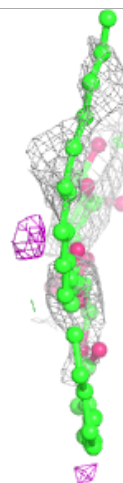
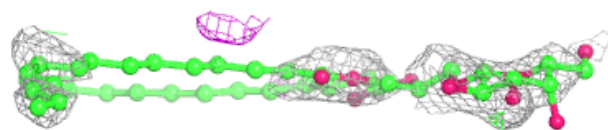
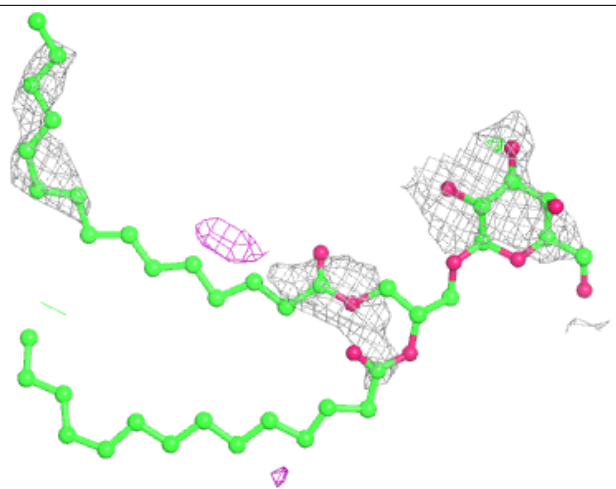
**Electron density around DGD AA 411:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



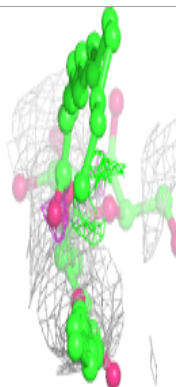
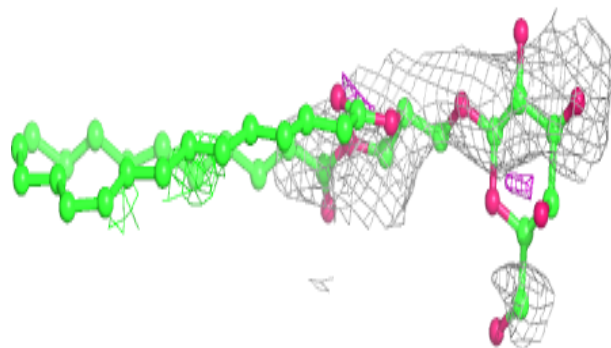
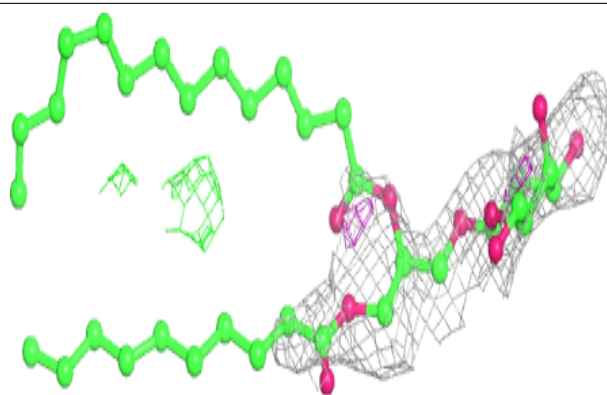
Electron density around LMG BC 5520:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

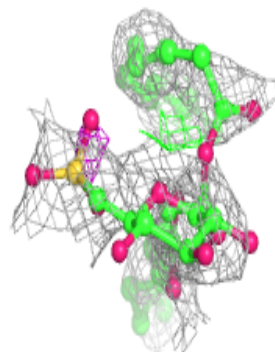
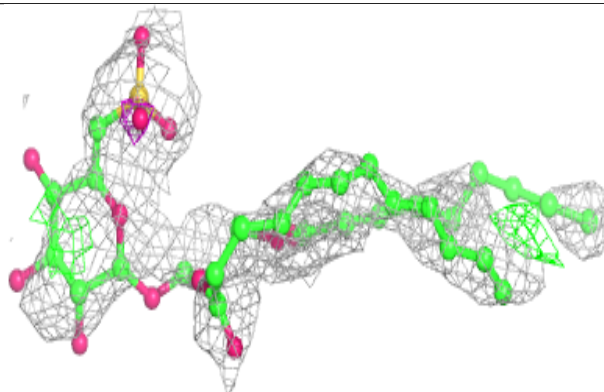
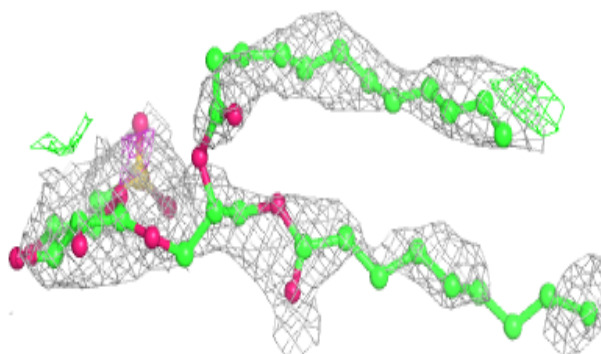


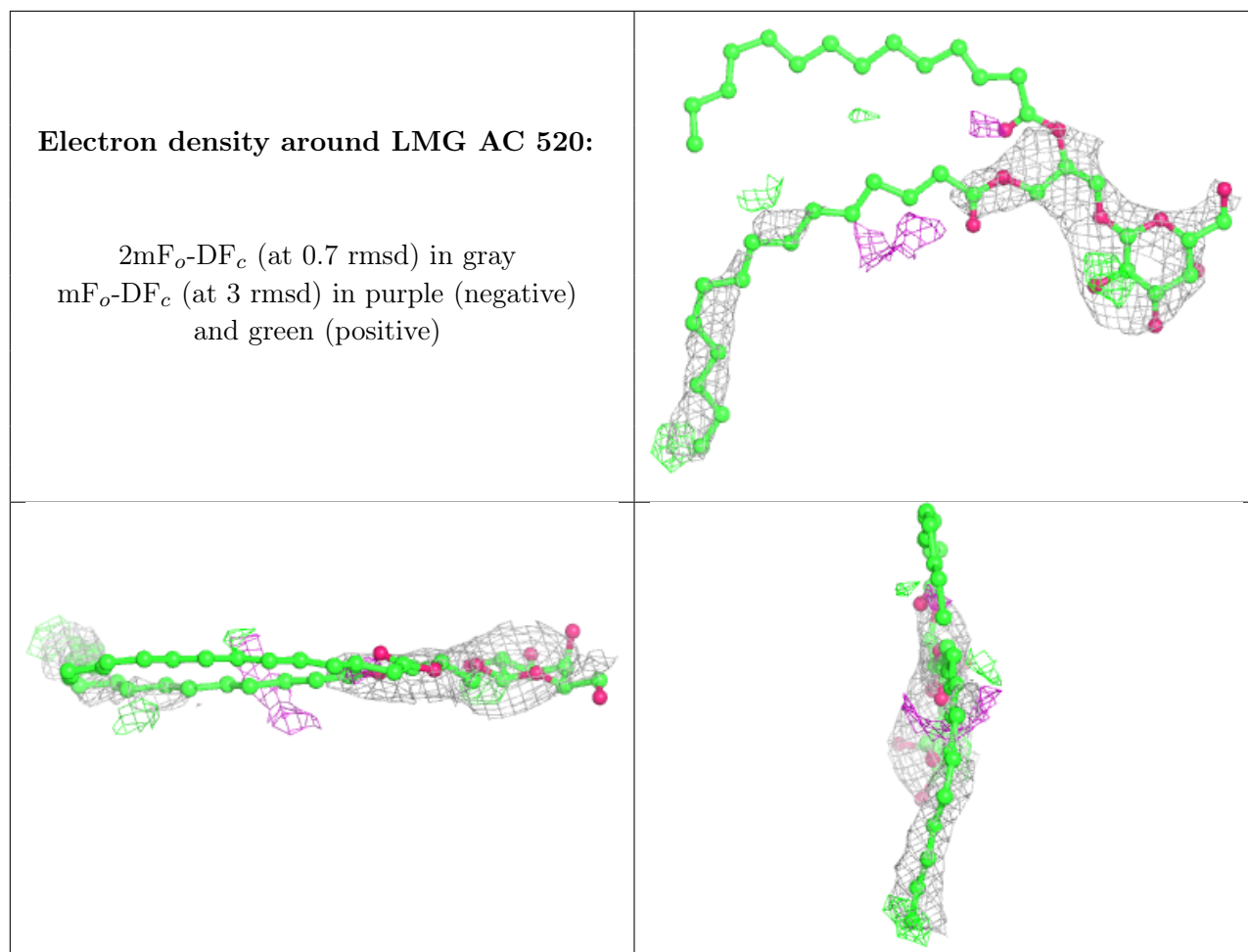
Electron density around LMG BI 5101:

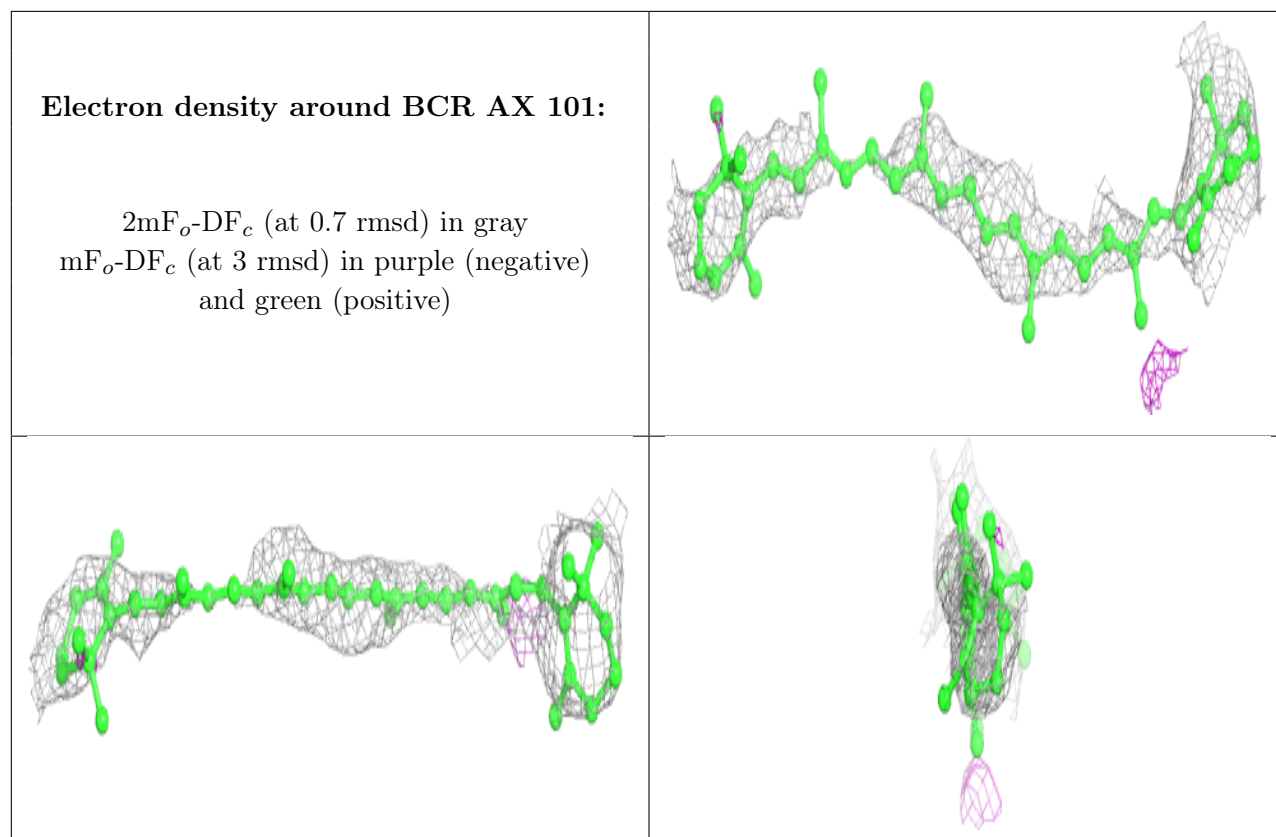
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around SQD BB 5625:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

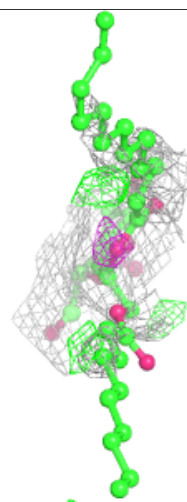
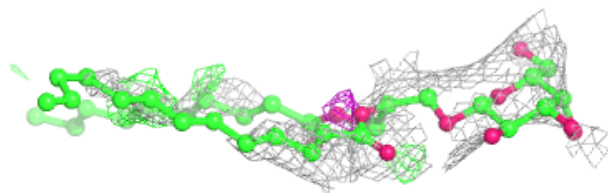
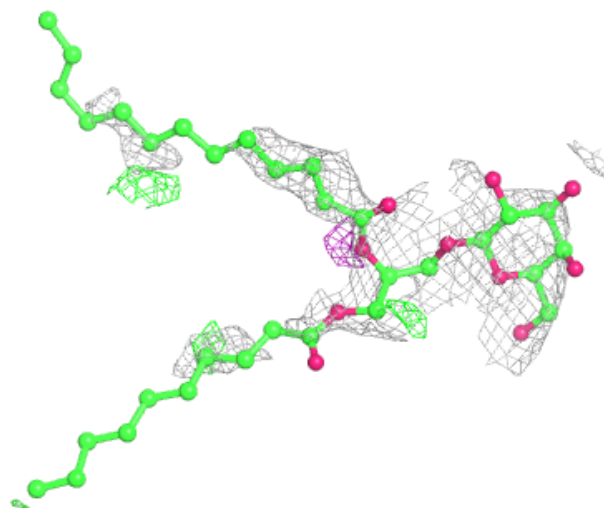






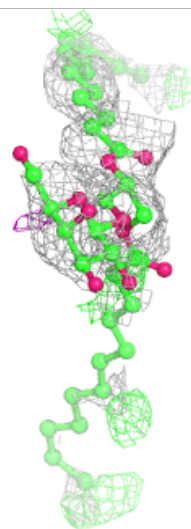
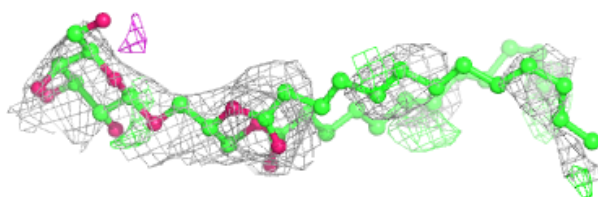
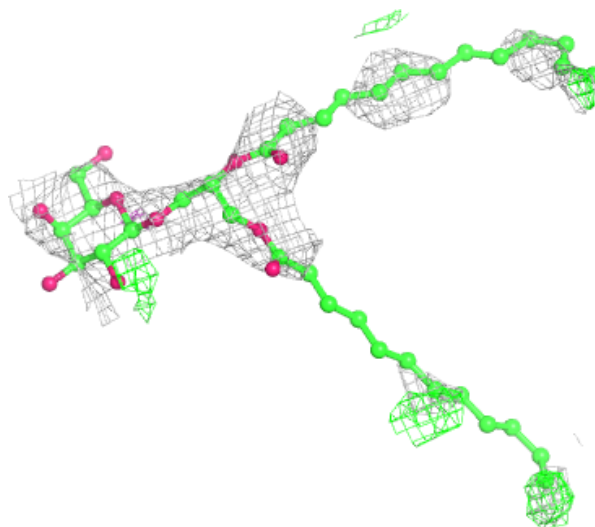
Electron density around LMG BA 5402:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



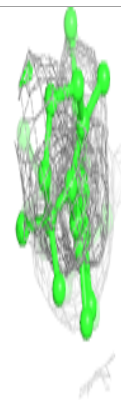
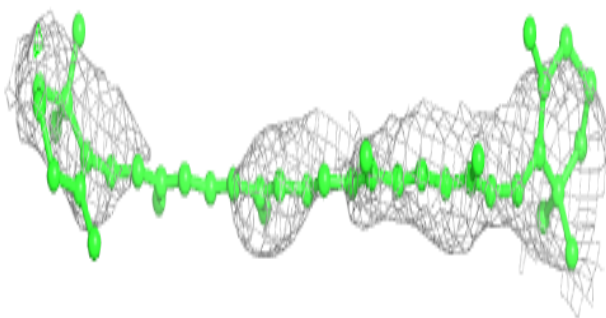
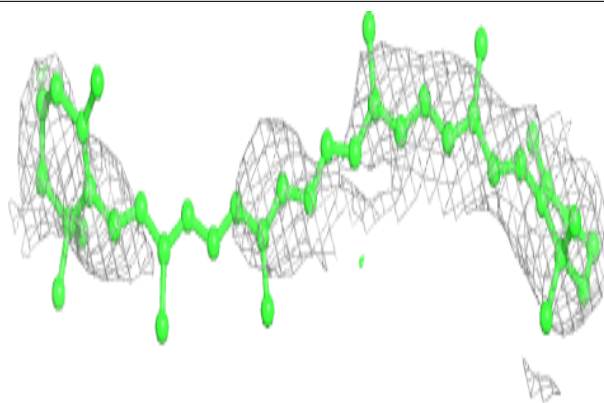
Electron density around LMG AA 414:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

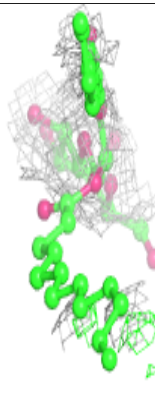
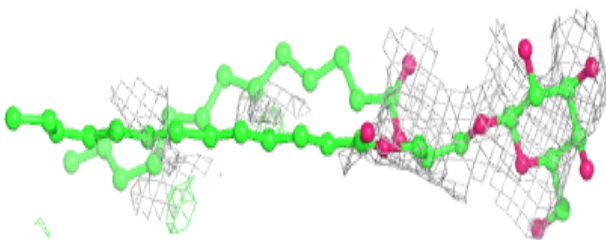
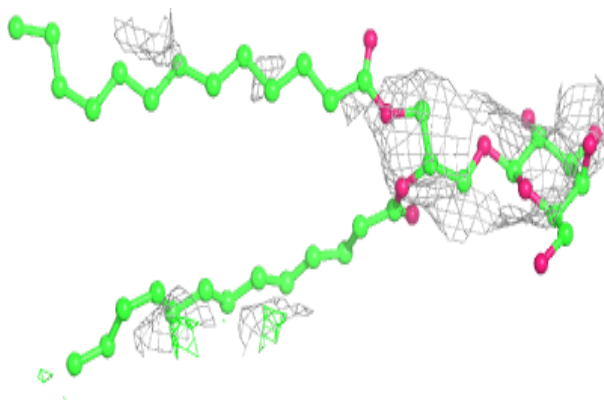


Electron density around BCR BX 5101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

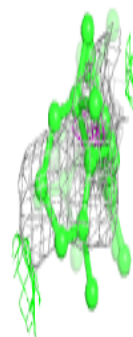
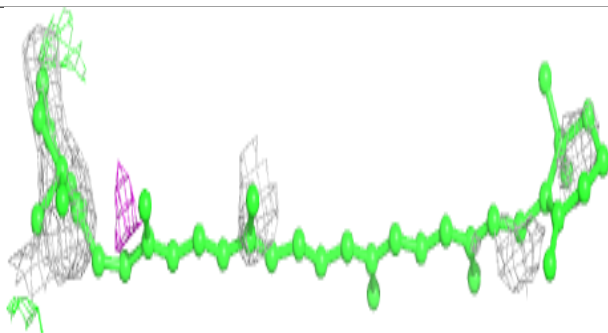
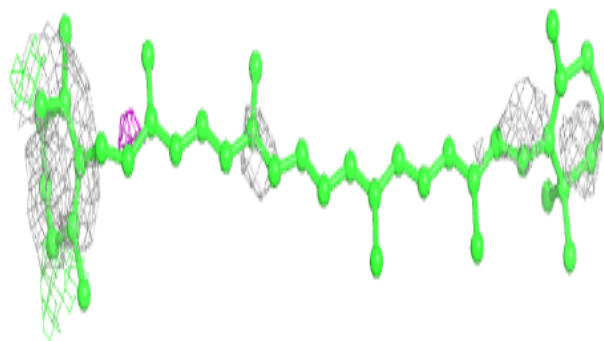
**Electron density around LMG BC 5521:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

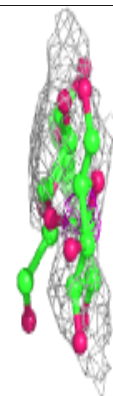
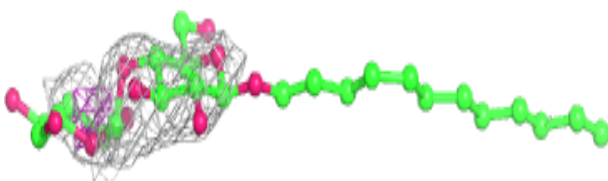
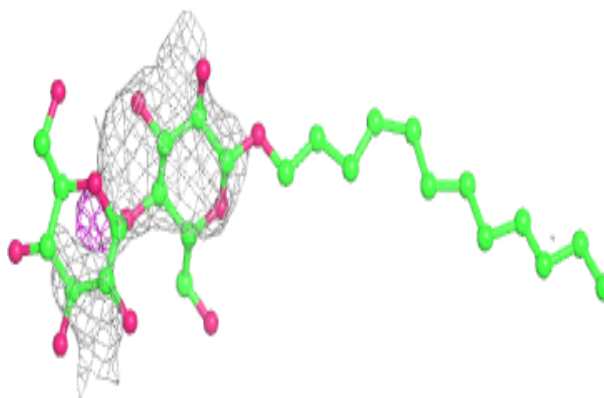


Electron density around BCR BJ 5101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

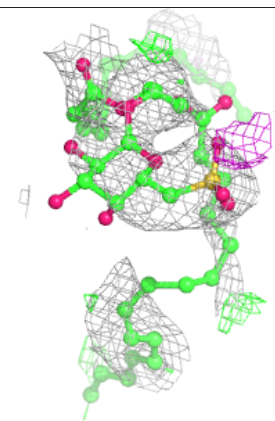
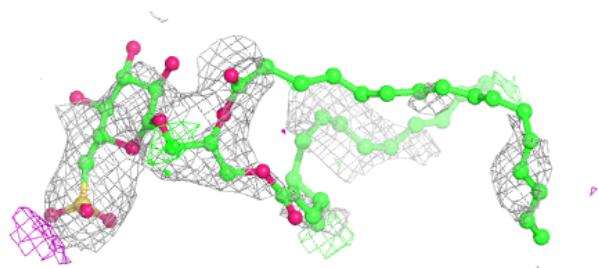
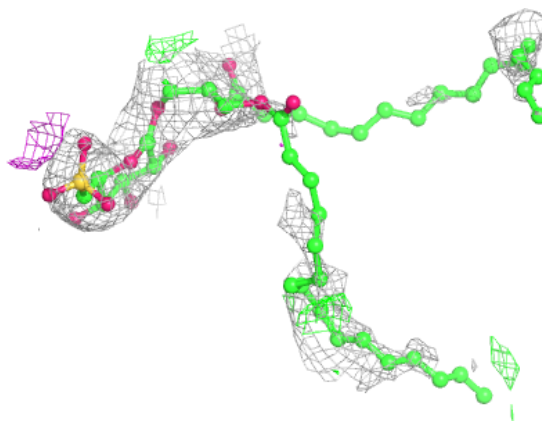
**Electron density around LMT BI 5102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



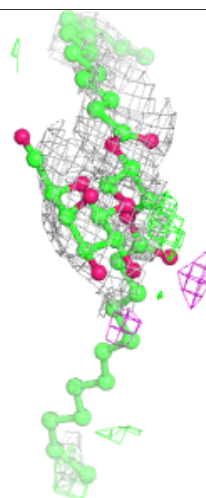
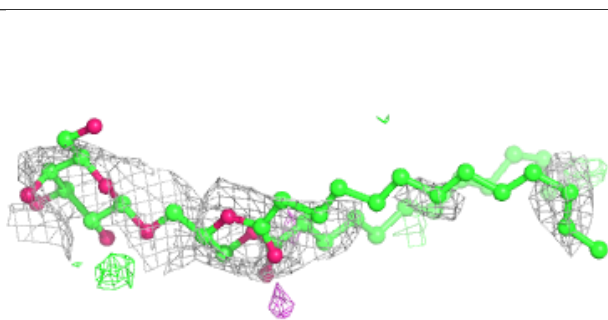
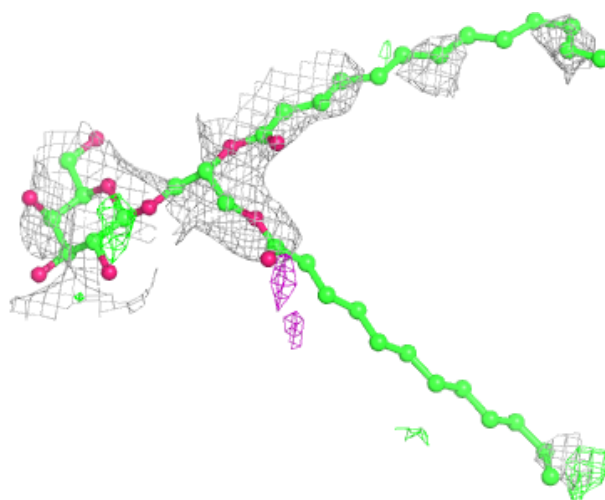
Electron density around SQD BA 5401:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



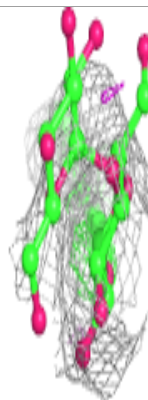
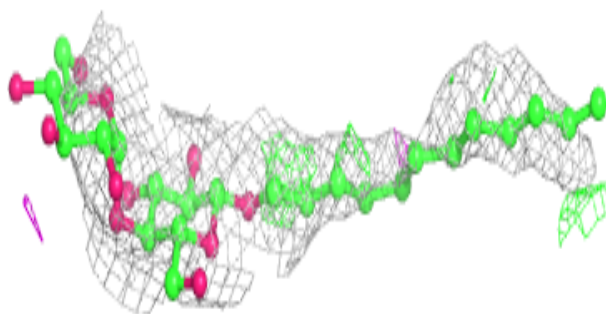
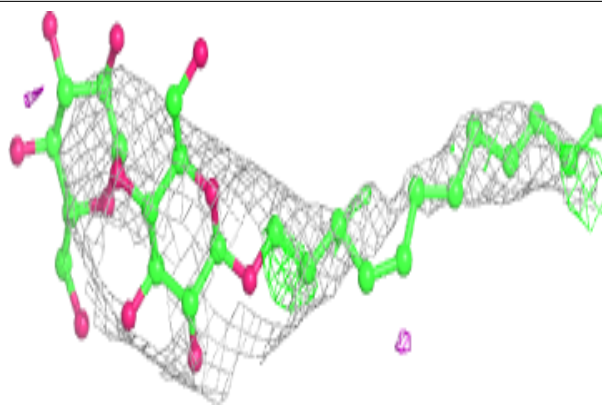
Electron density around LMG BE 5101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

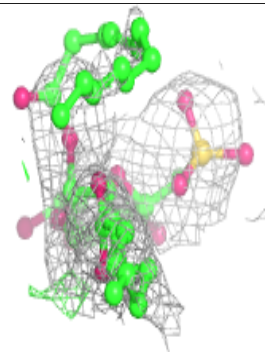
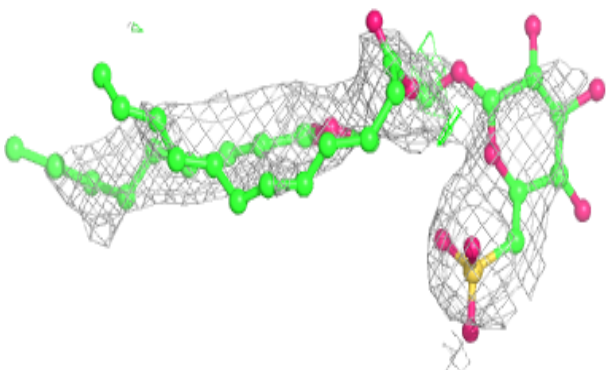
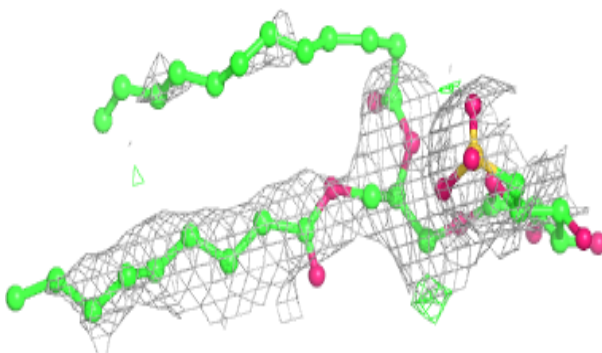


Electron density around LMT BB 5603:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

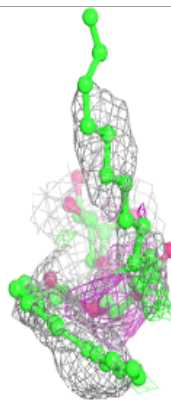
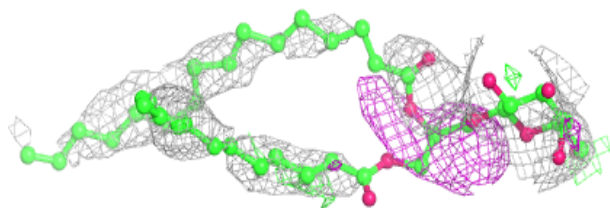
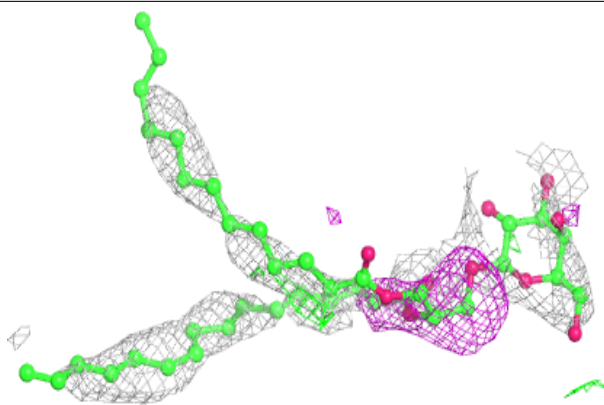
**Electron density around SQD AB 622:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

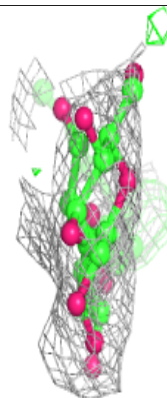
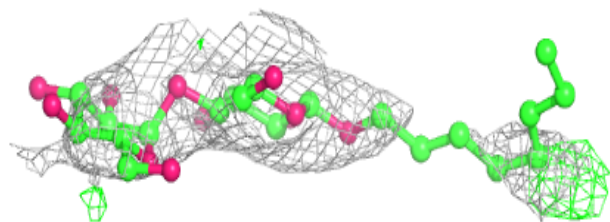
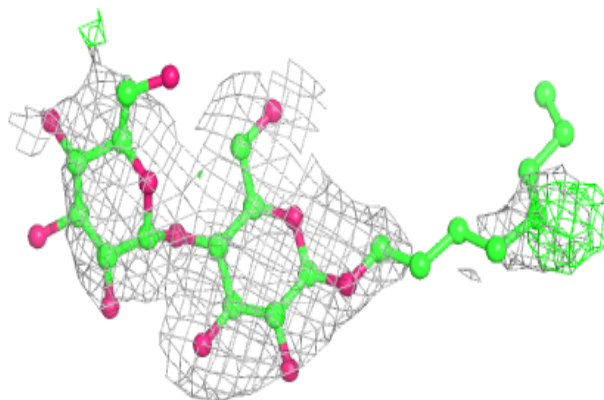


Electron density around LMG BD 5410:

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

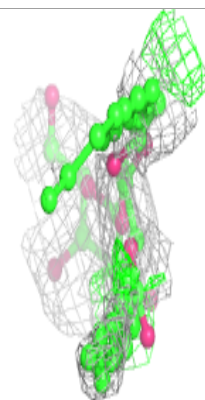
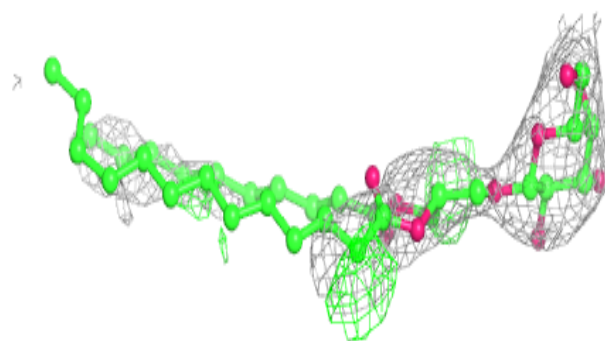
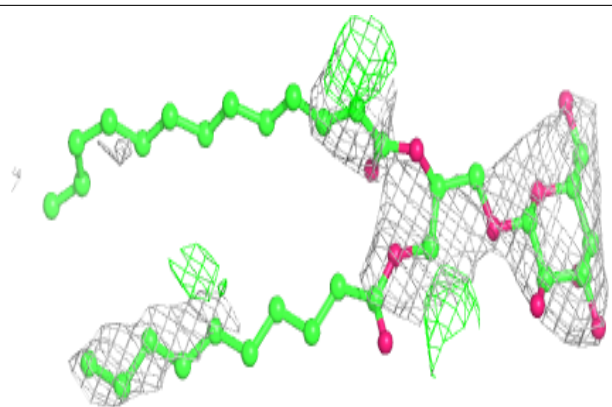
**Electron density around LMT BD 5411:**

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

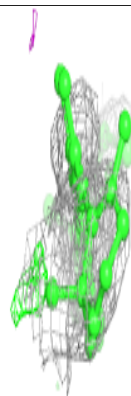
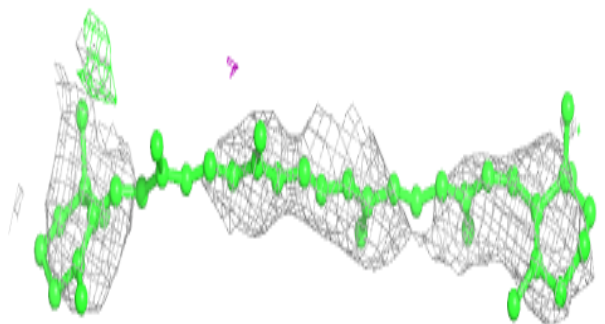
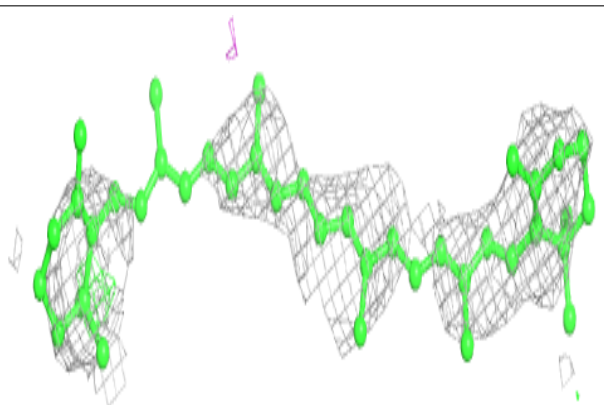


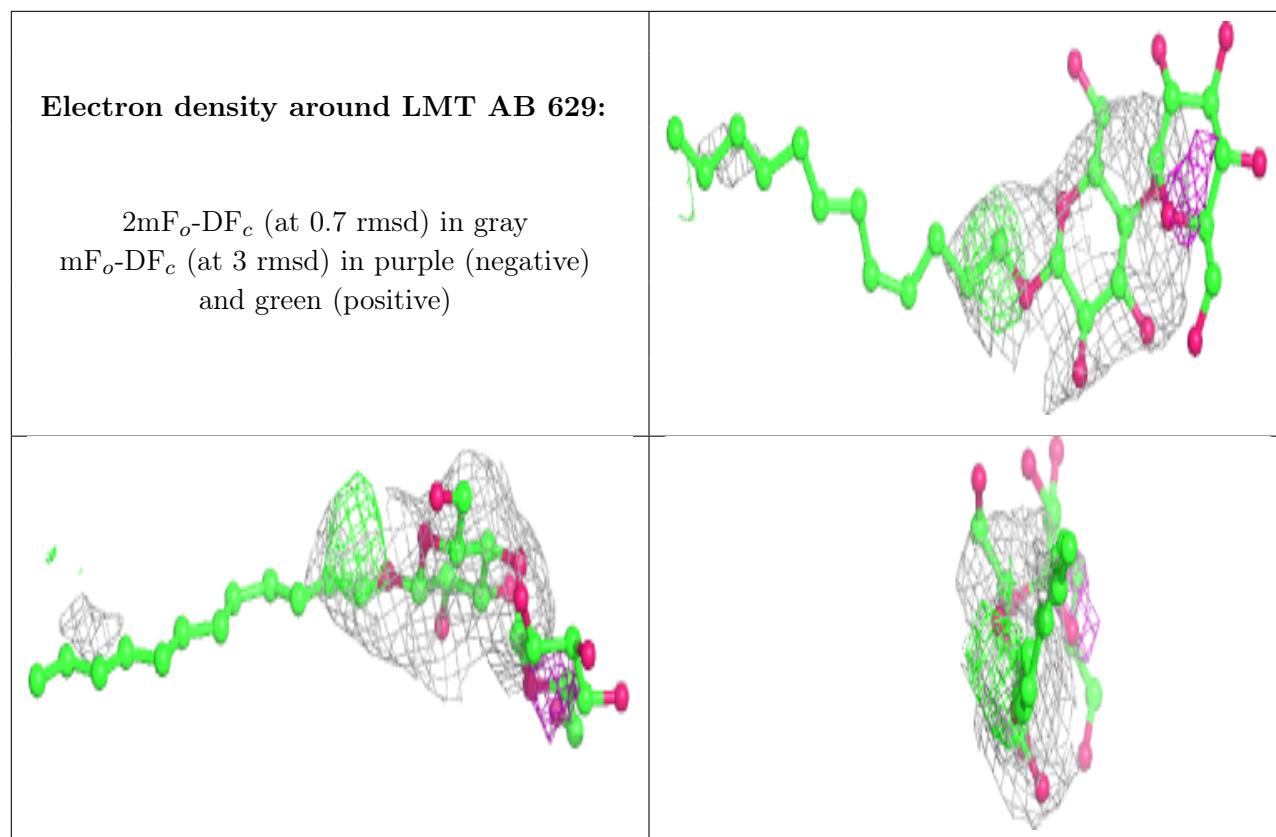
Electron density around LMG AM 101:

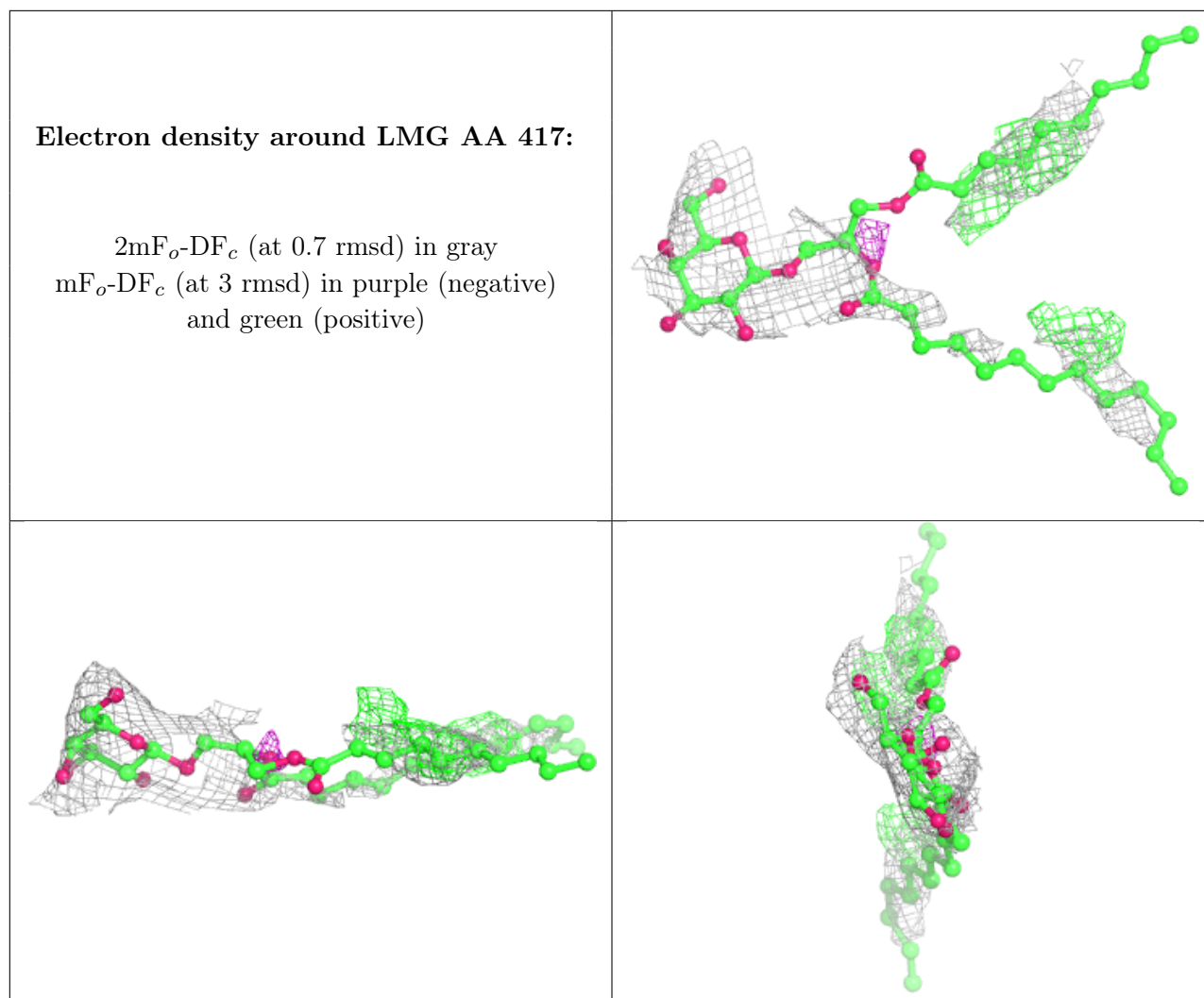
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

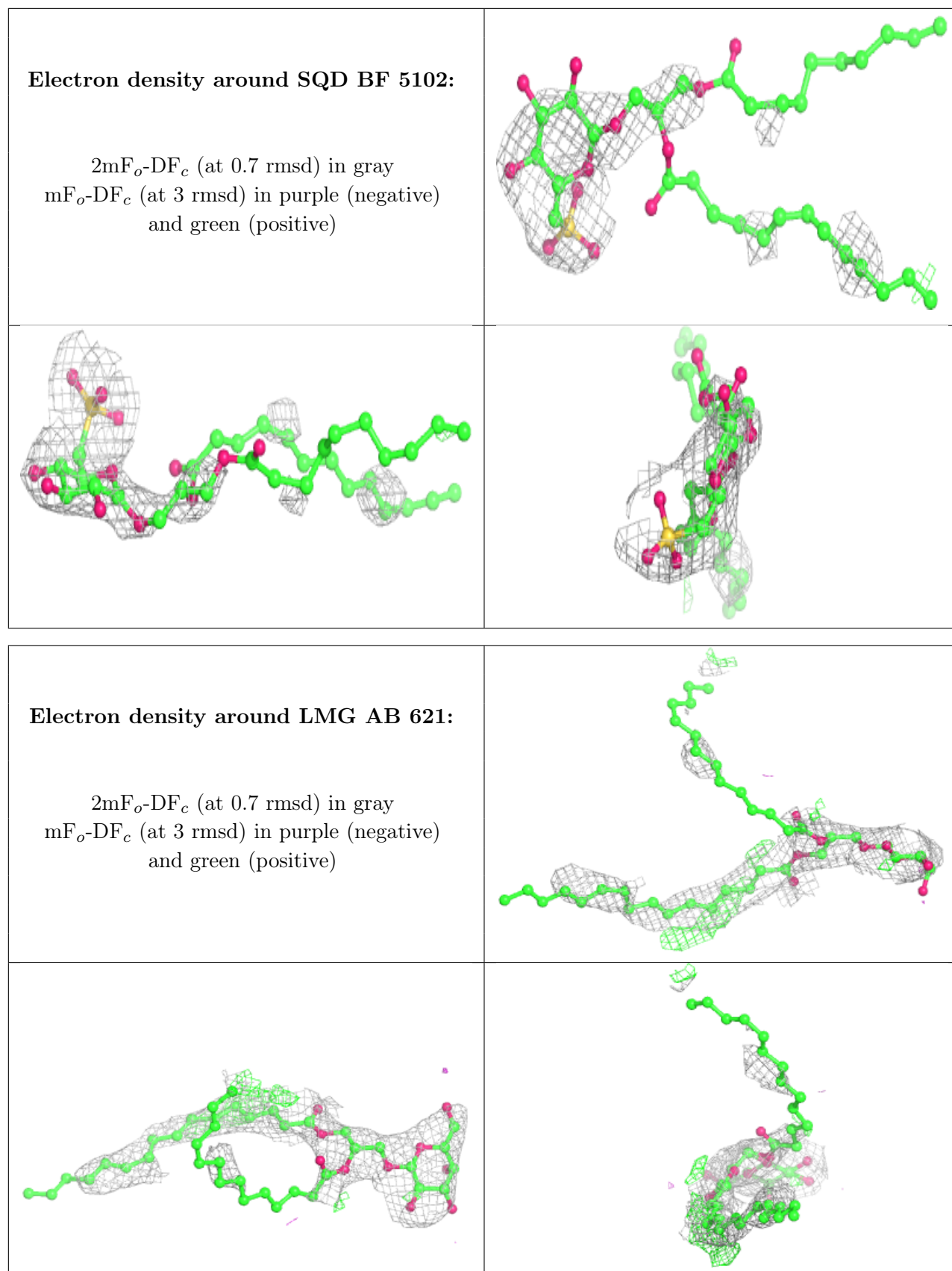
**Electron density around BCR BC 5516:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



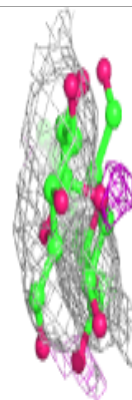
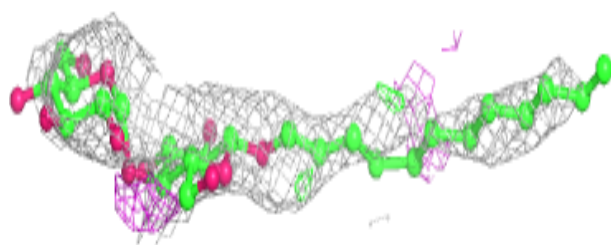
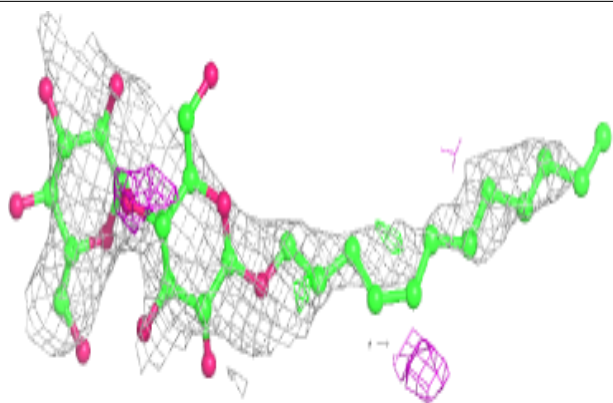




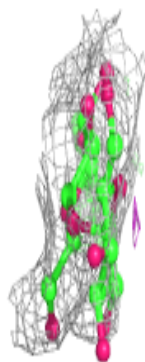
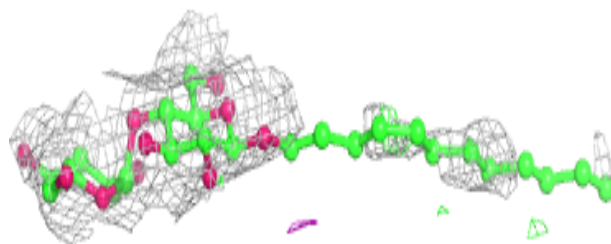
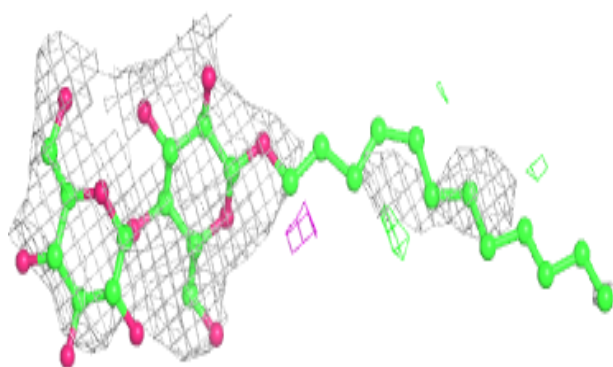


Electron density around LMT BB 5604:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

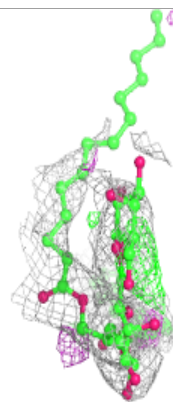
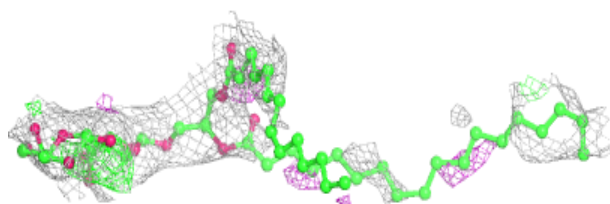
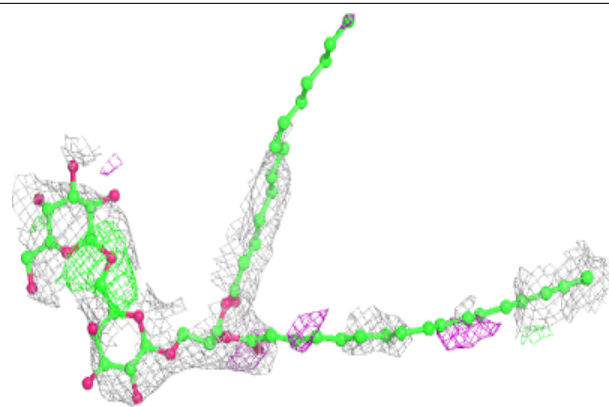
**Electron density around LMT AI 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



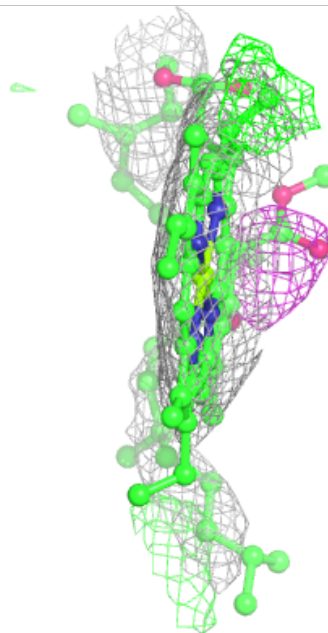
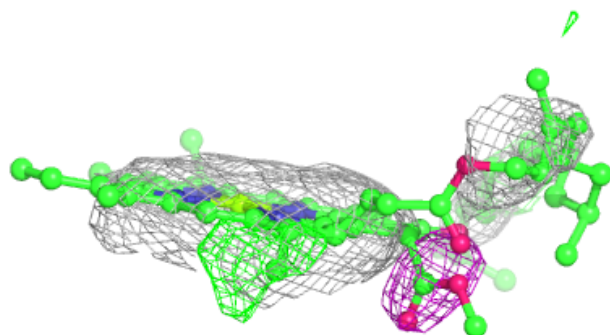
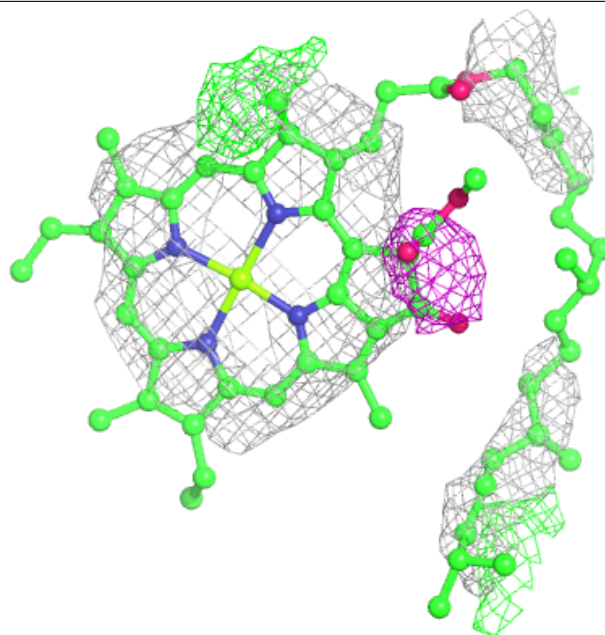
Electron density around DGD BC 5518:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



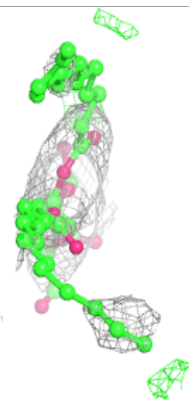
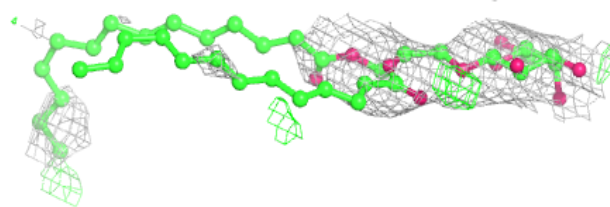
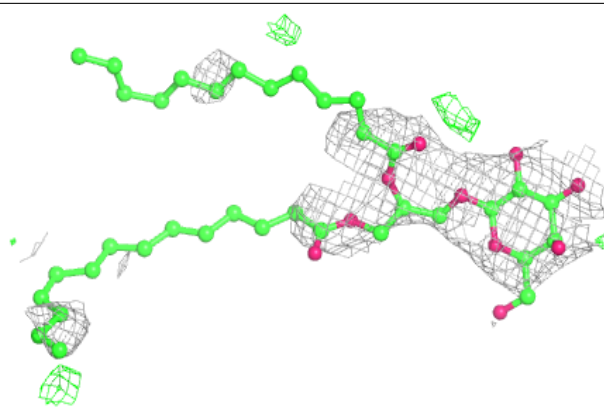
Electron density around CLA AB 601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

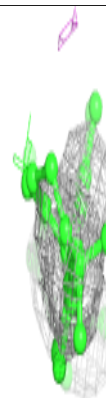
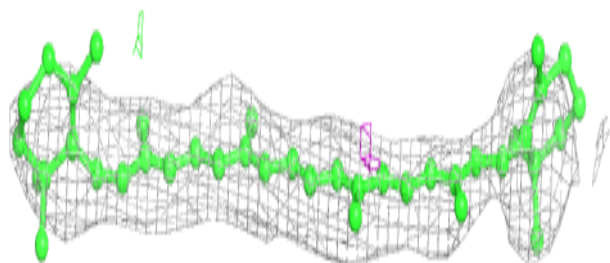
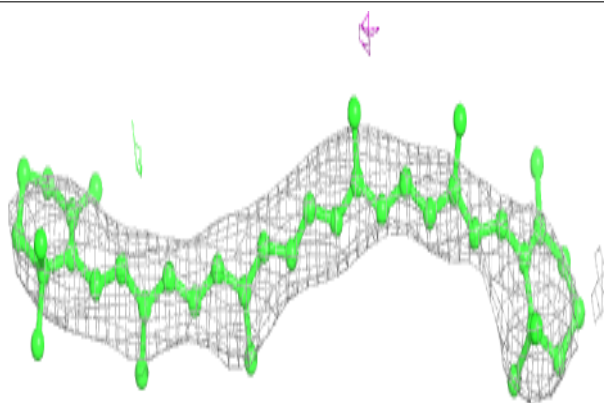


Electron density around LMG BD 5408:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

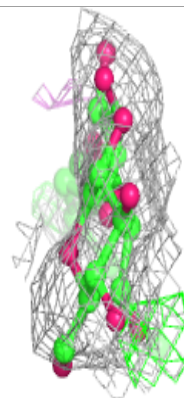
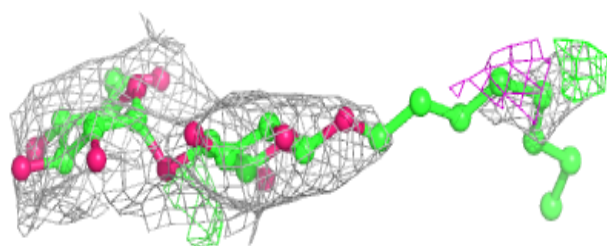
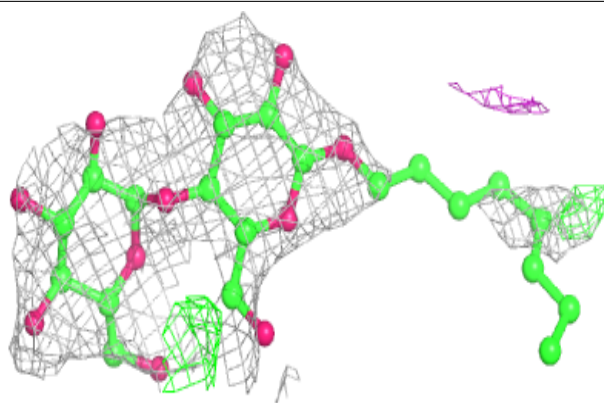
**Electron density around BCR AC 516:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

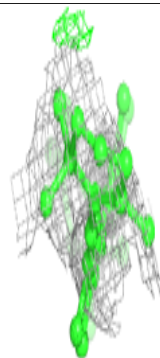
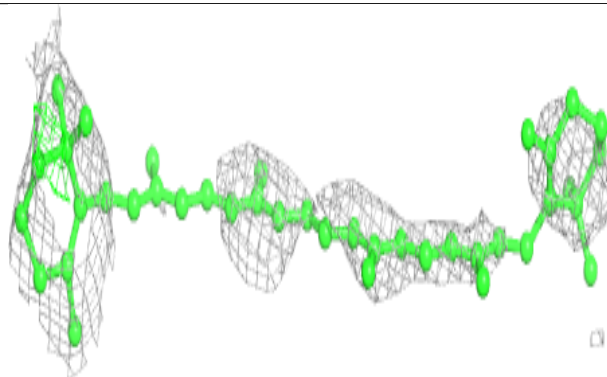
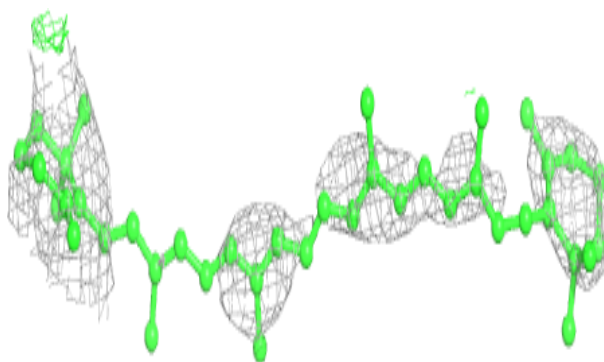


Electron density around LMT AD 409:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

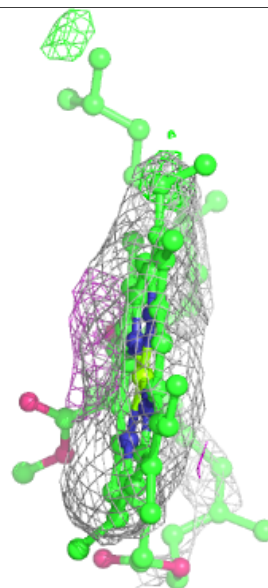
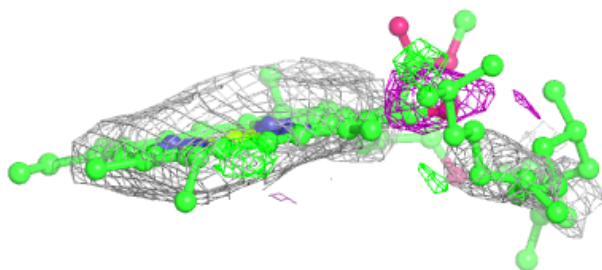
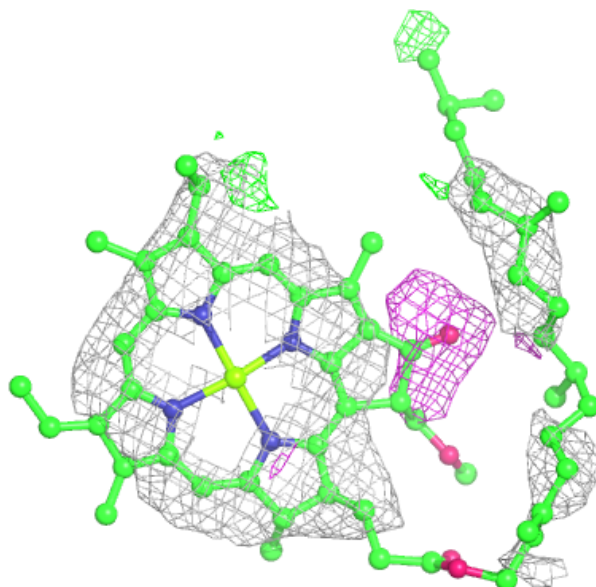
**Electron density around BCR BC 5515:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



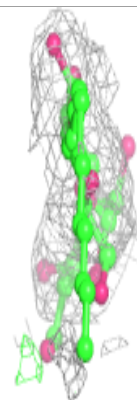
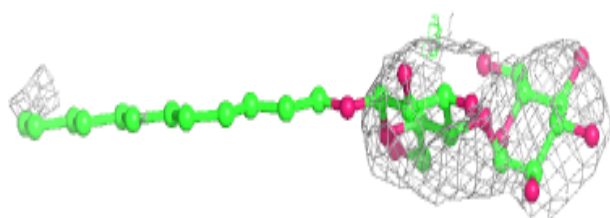
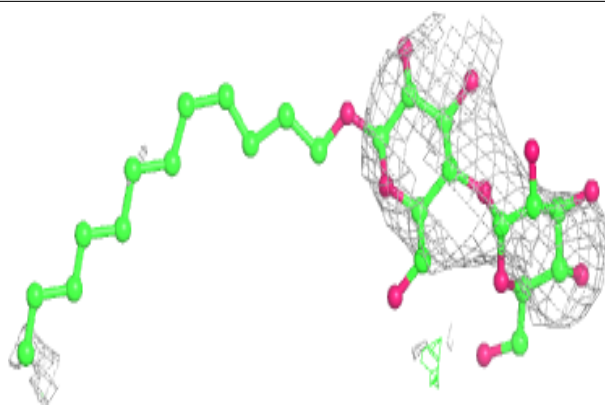
Electron density around CLA BB 5605:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

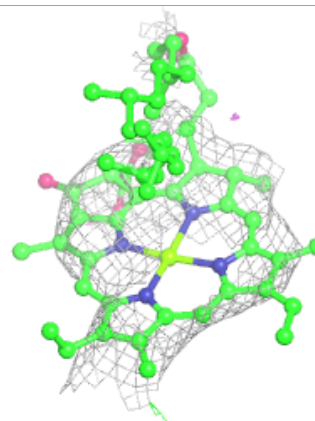
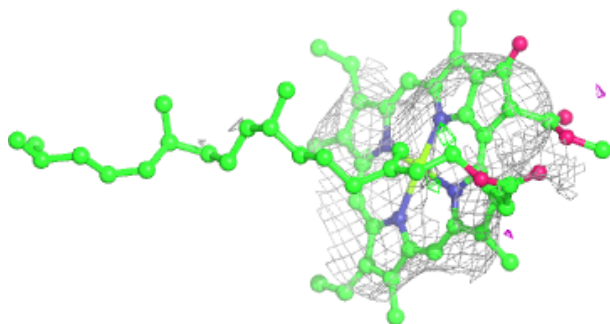
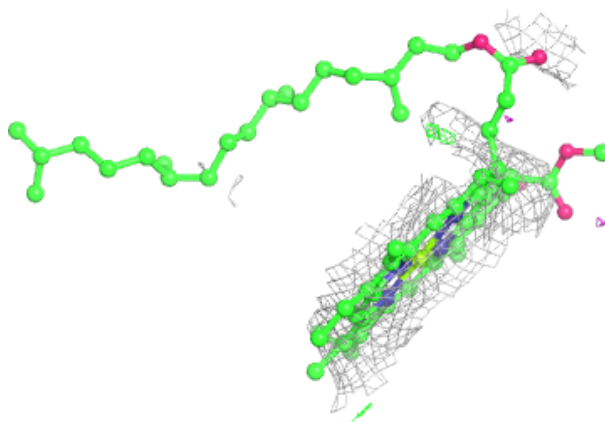


Electron density around LMT AB 624:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

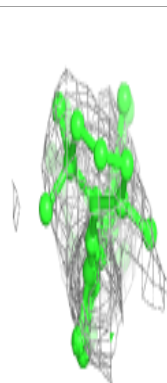
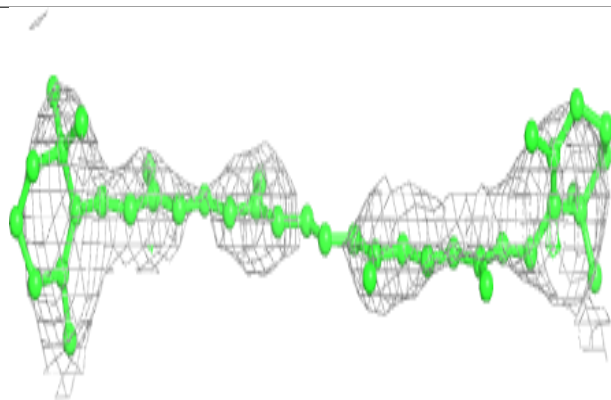
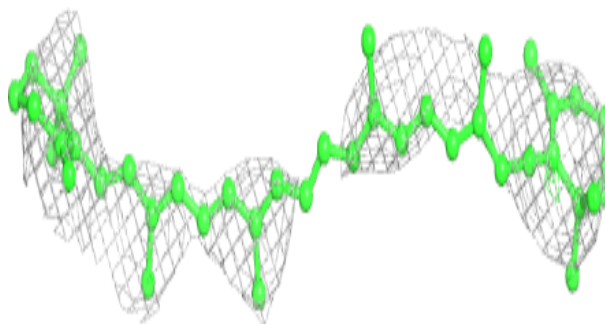
**Electron density around CLA BC 5513:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

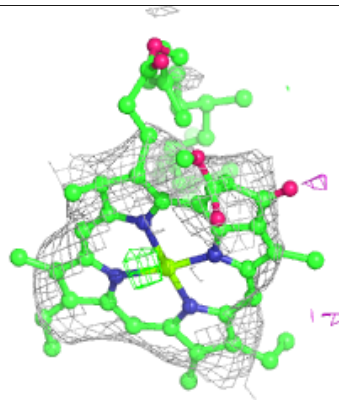
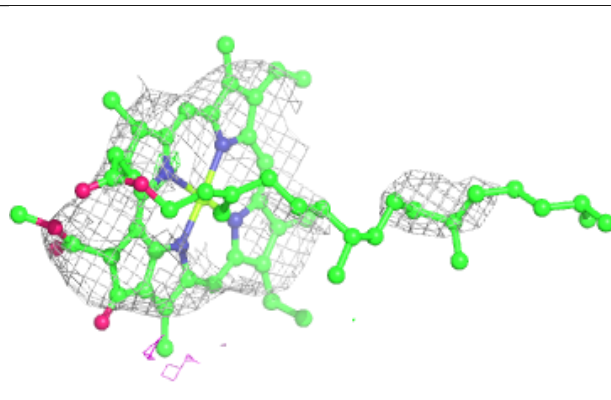
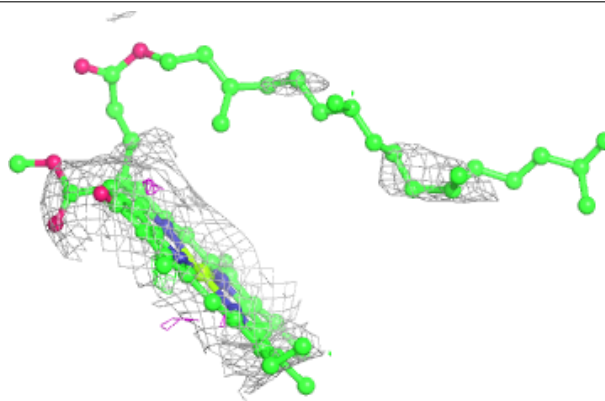


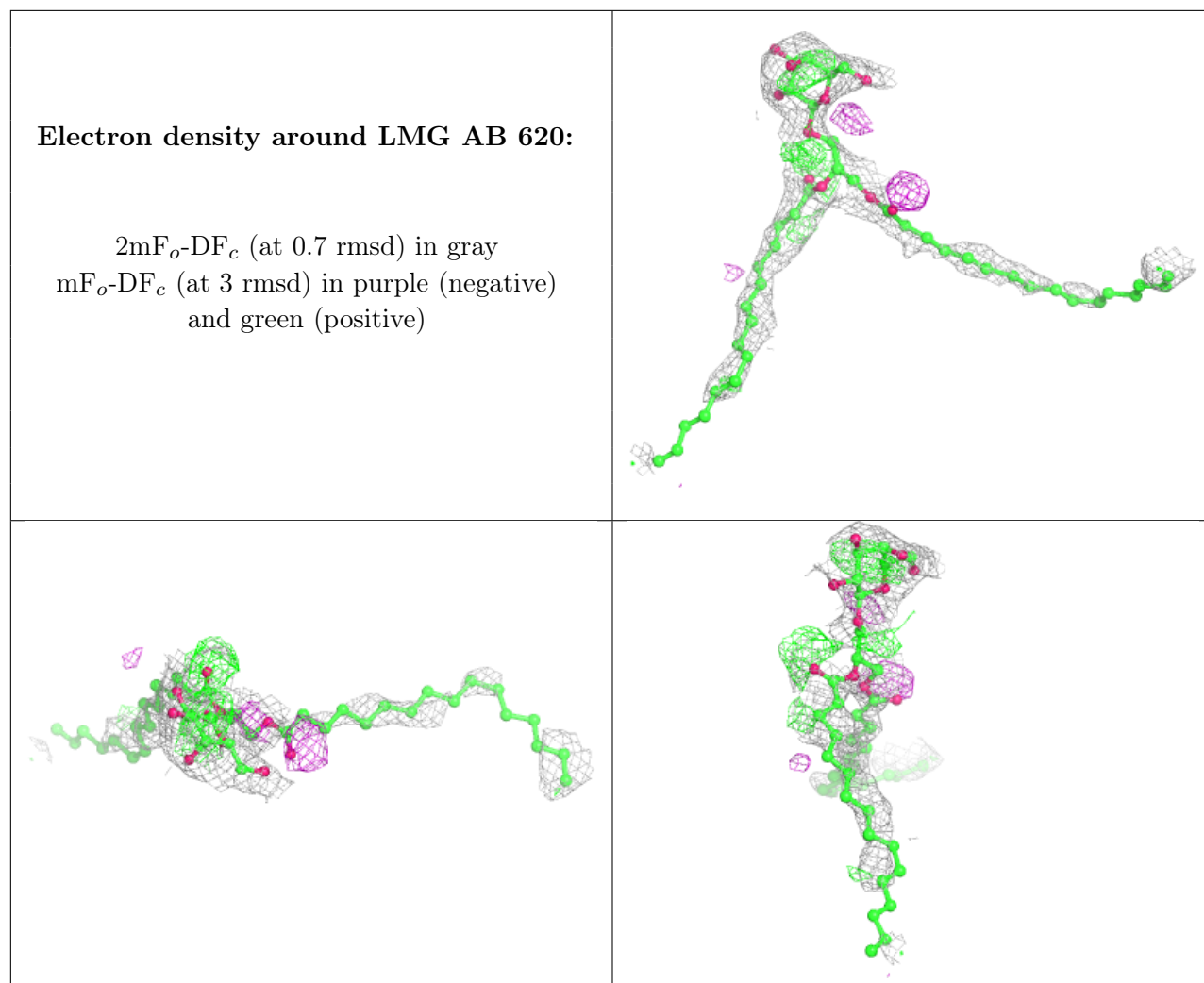
Electron density around BCR AC 515:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around CLA AC 513:**

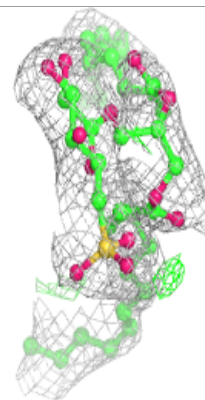
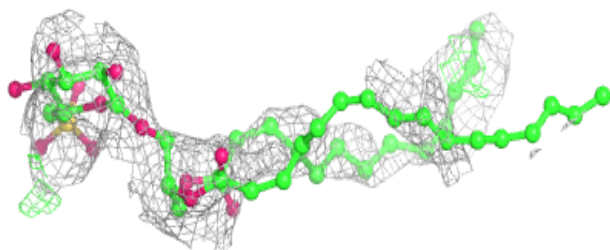
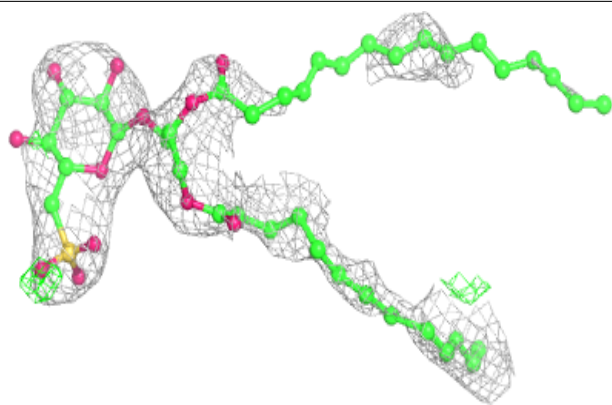
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



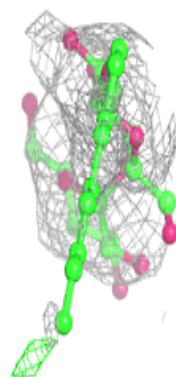
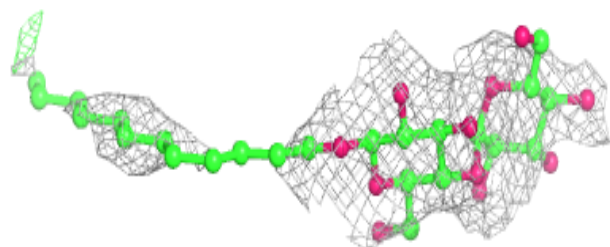
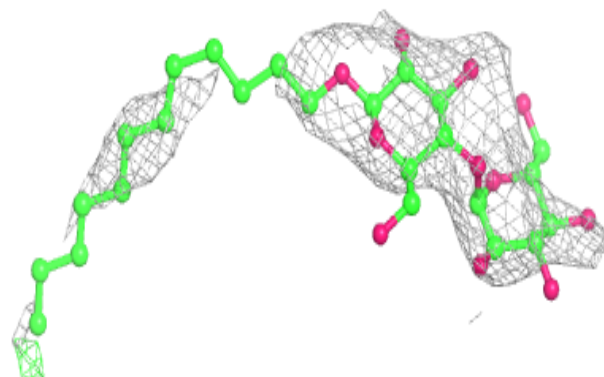


Electron density around SQD BA 5414:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

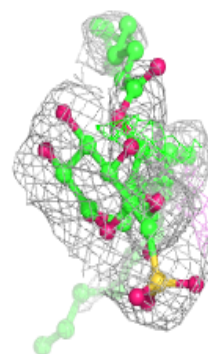
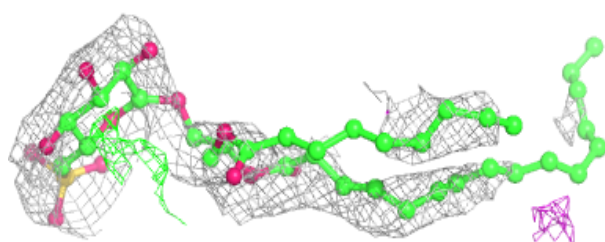
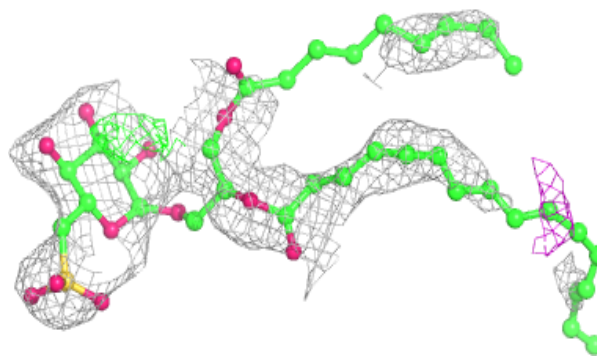
**Electron density around LMT BM 5101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

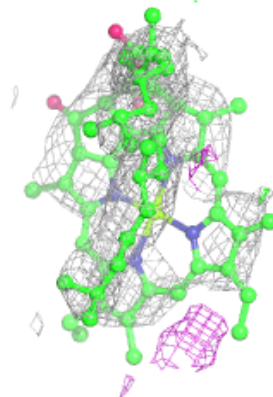
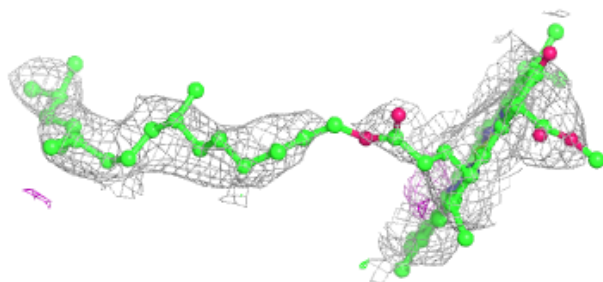
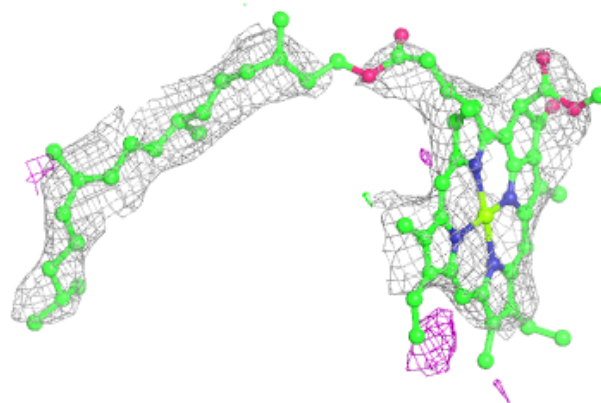


Electron density around SQD BB 5601:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

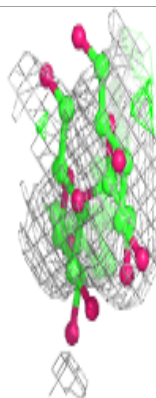
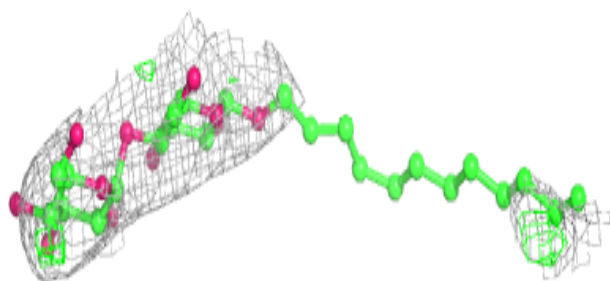
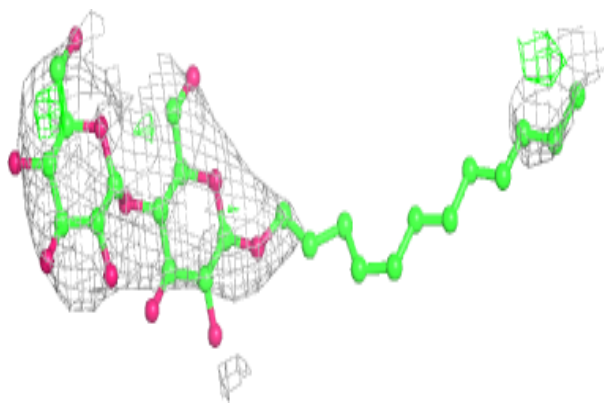
**Electron density around CLA AB 609:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

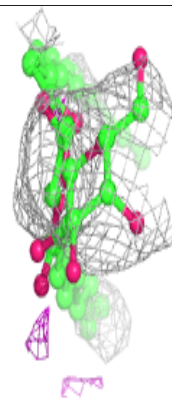
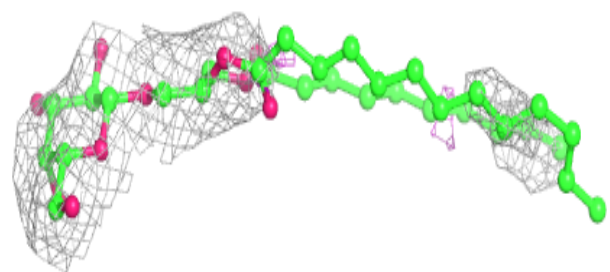
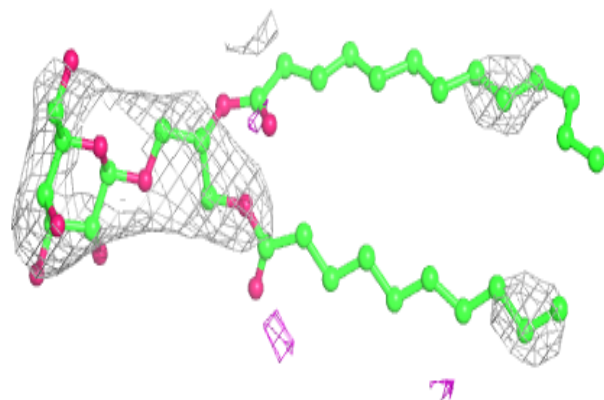


Electron density around LMT AI 103:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

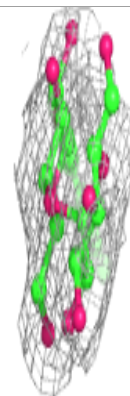
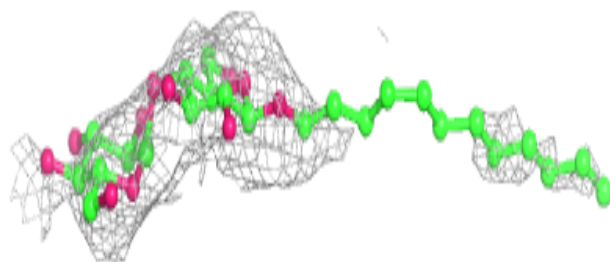
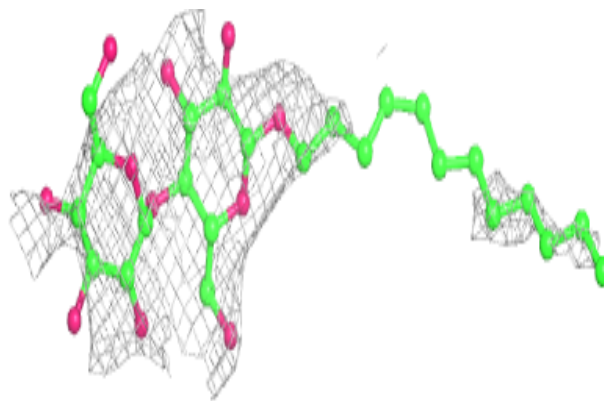
**Electron density around LMG BM 5102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

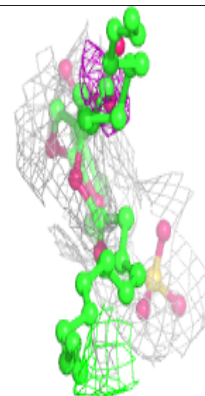
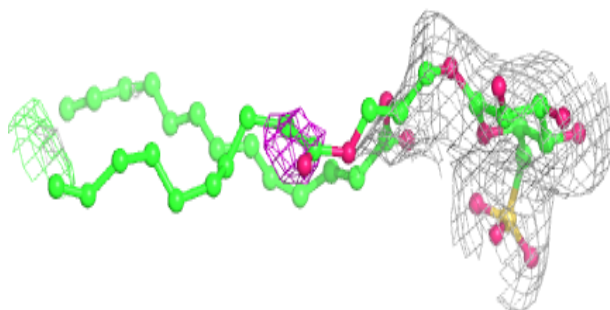
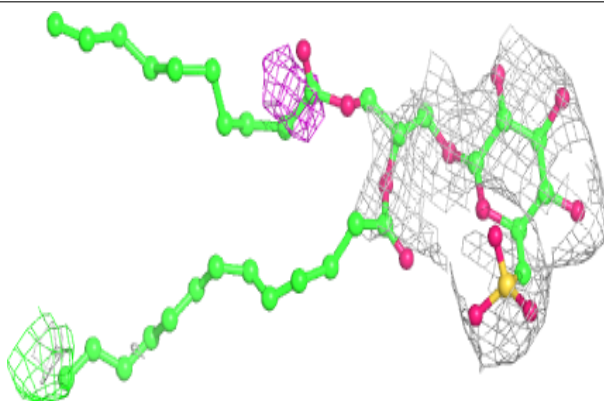


Electron density around LMT AB 630:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

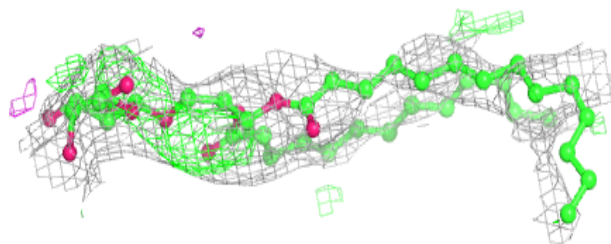
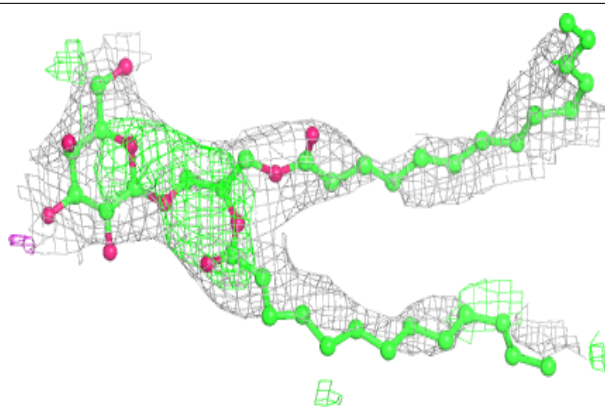
**Electron density around SQD AF 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

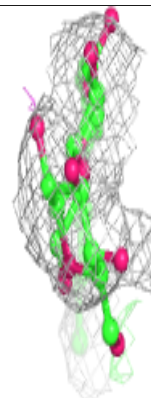
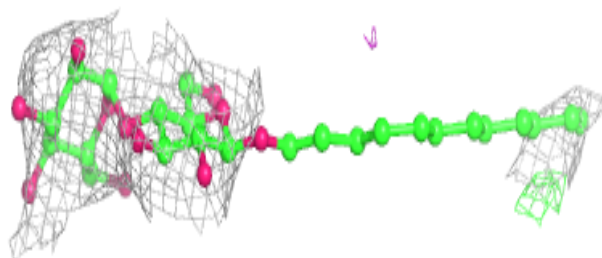
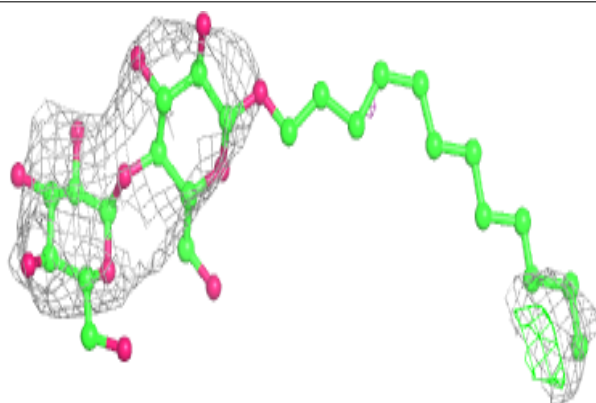


Electron density around LMG AJ 102:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

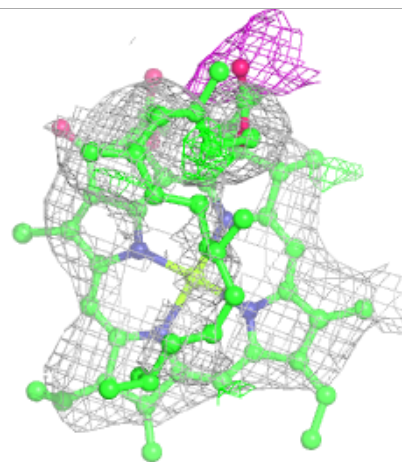
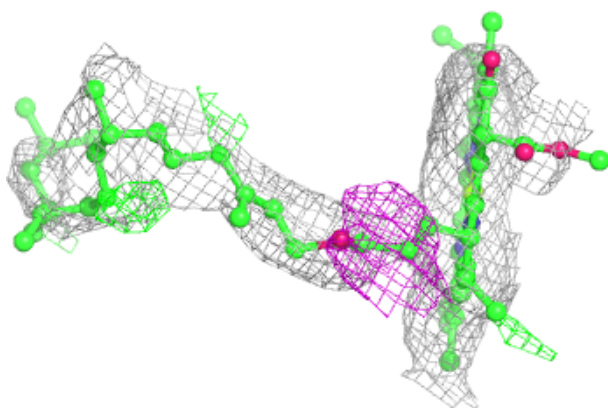
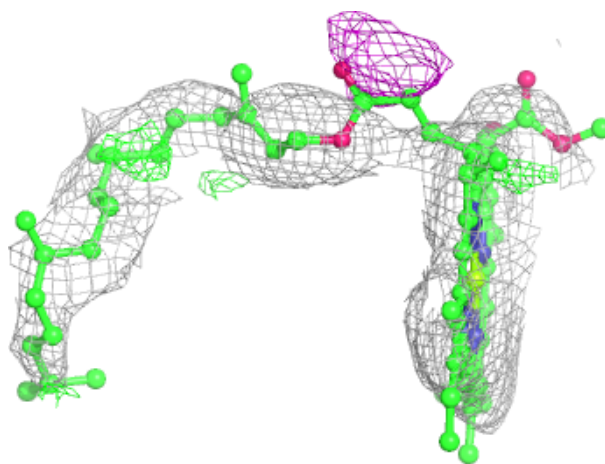
**Electron density around LMT BB 5627:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



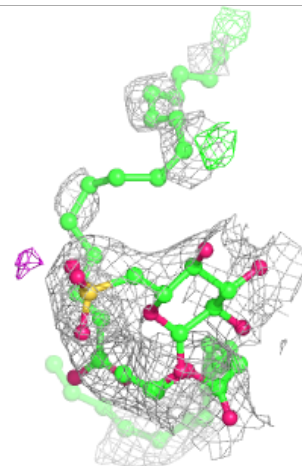
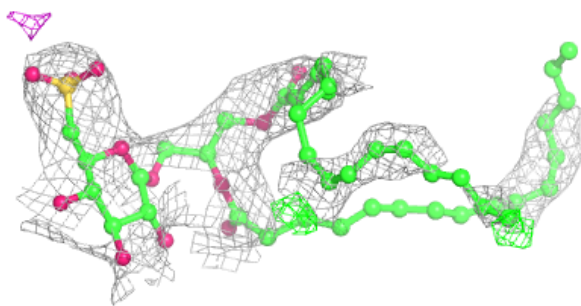
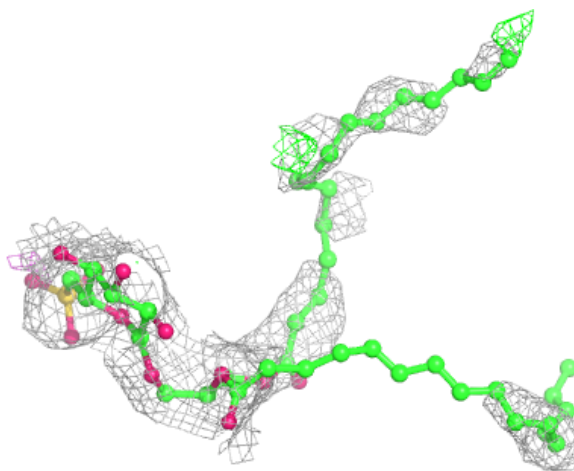
Electron density around CLA AC 506:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



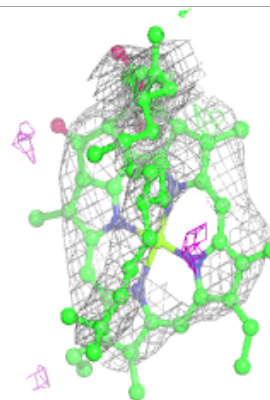
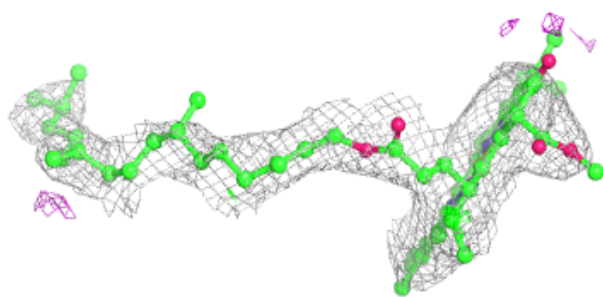
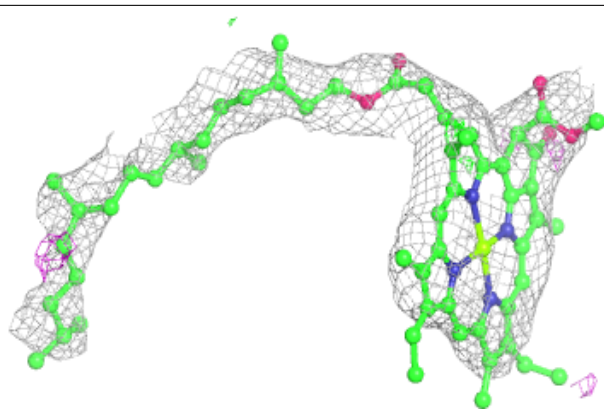
Electron density around SQD AA 416:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

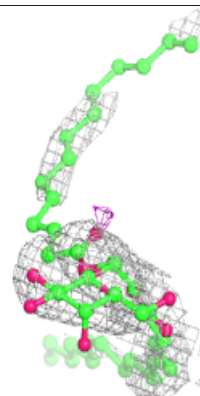
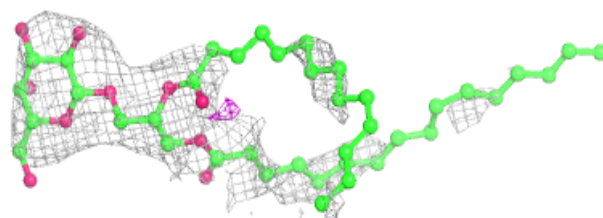
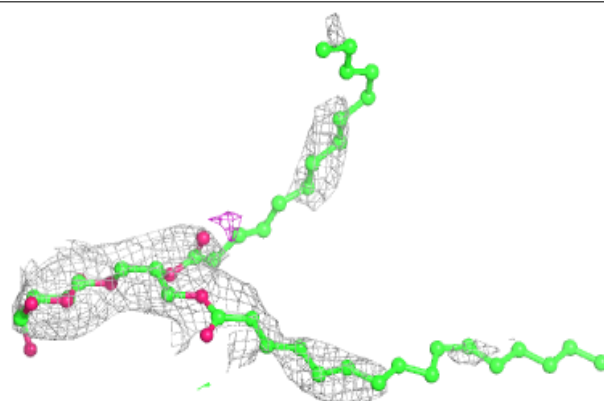


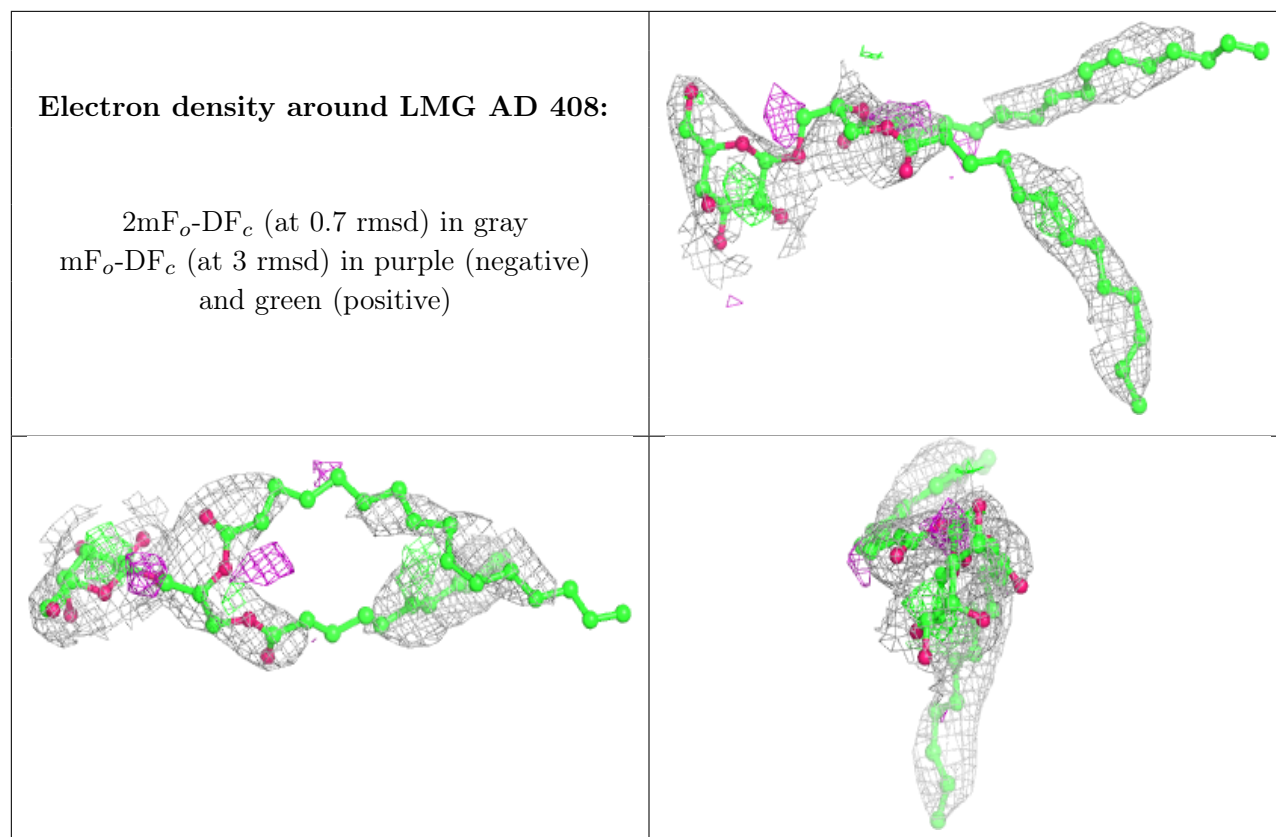
Electron density around CLA BB 5613:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around LMG BB 5624:**

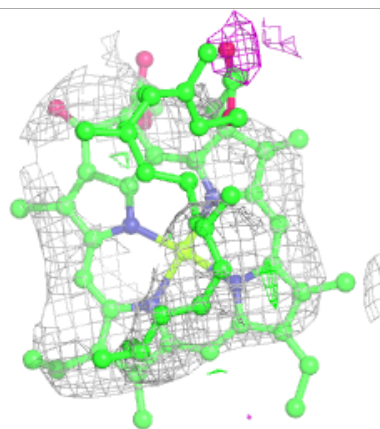
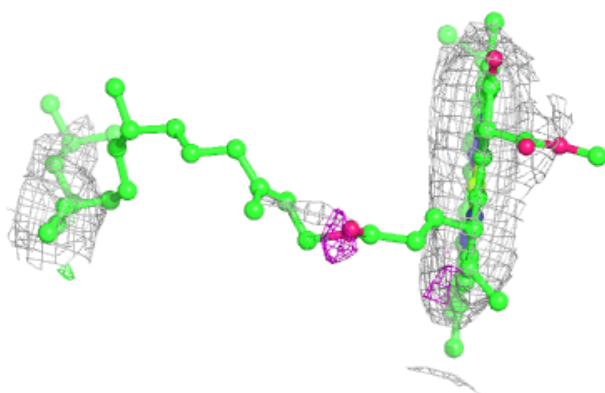
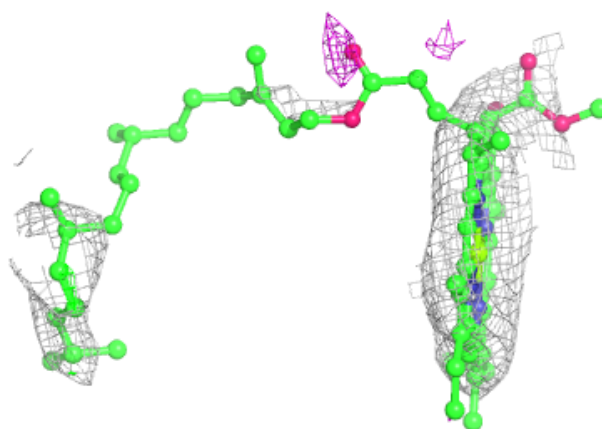
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





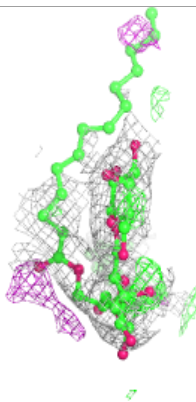
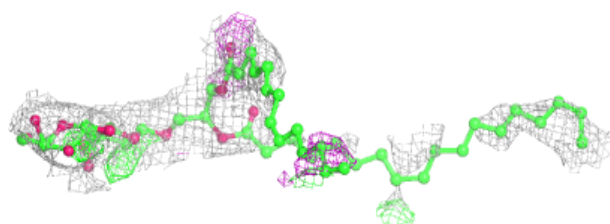
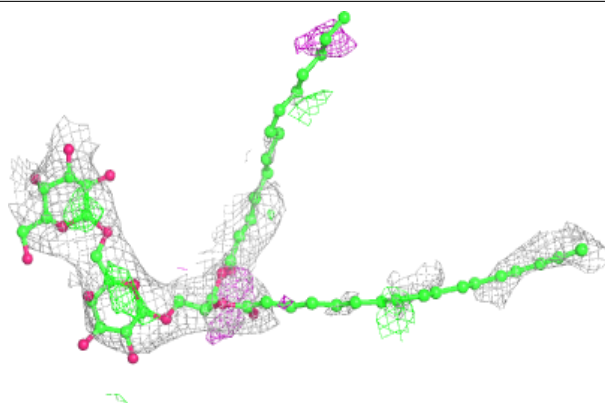
Electron density around CLA BC 5506:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

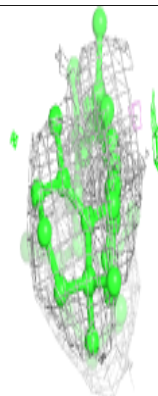
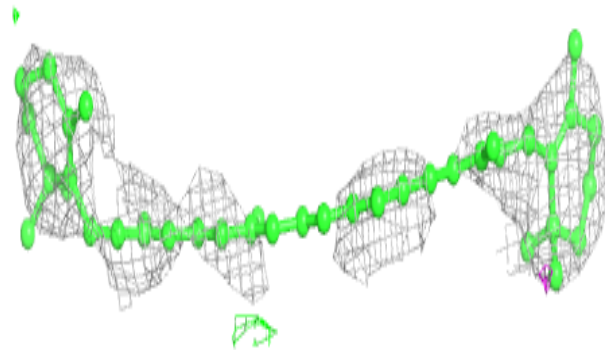
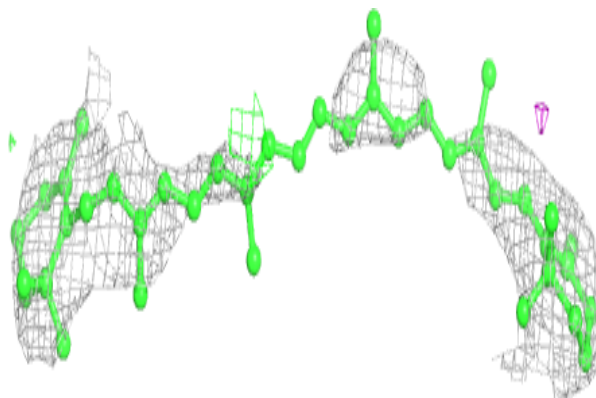


Electron density around DGD AC 518:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

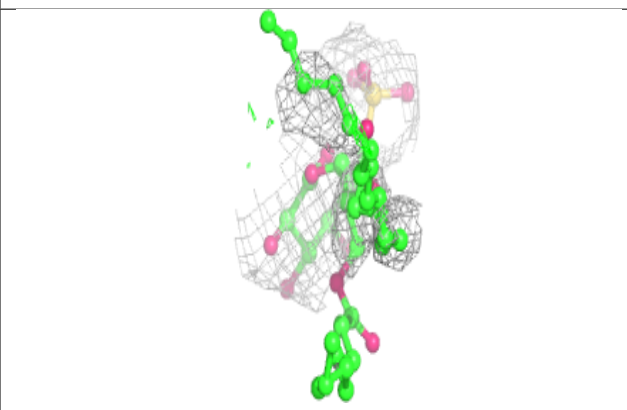
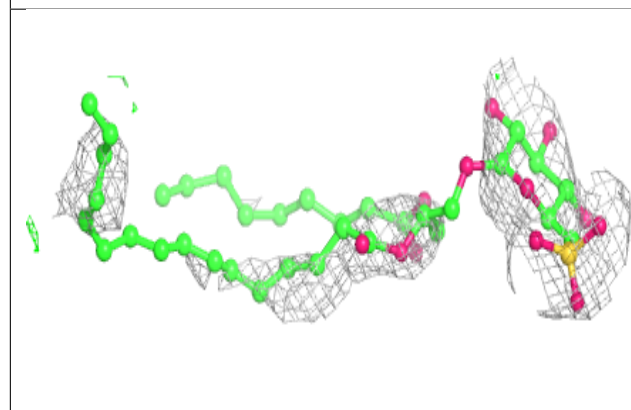
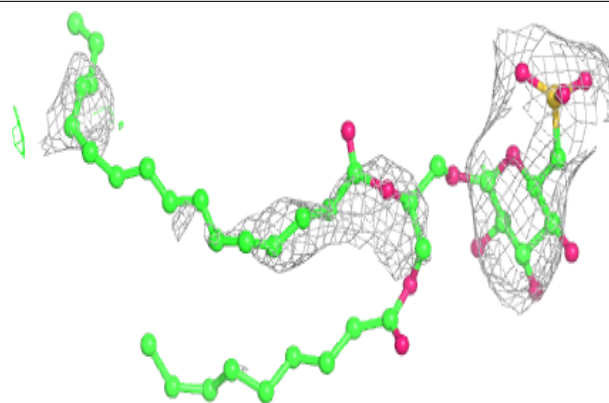
**Electron density around BCR BT 5101:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

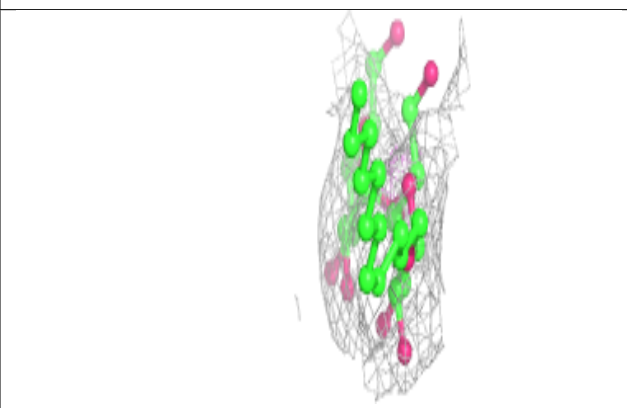
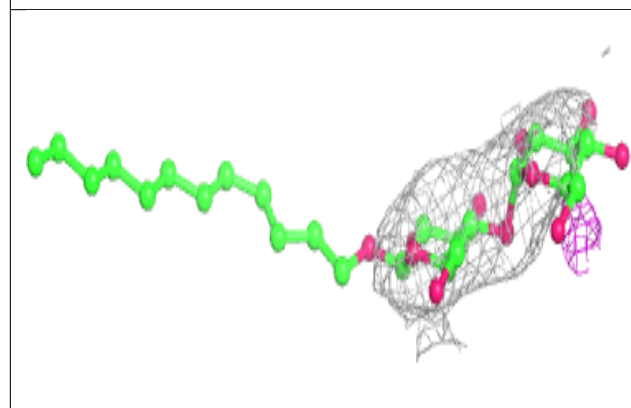
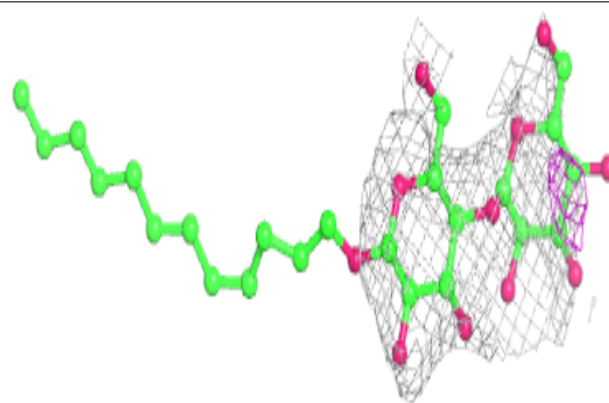


Electron density around SQD AB 627:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

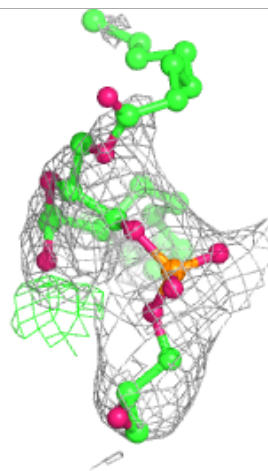
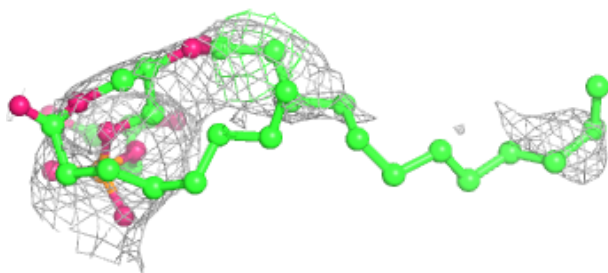
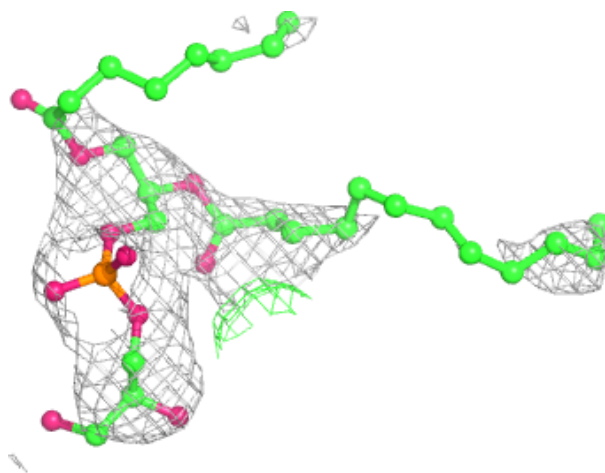
**Electron density around LMT BC 5522:**

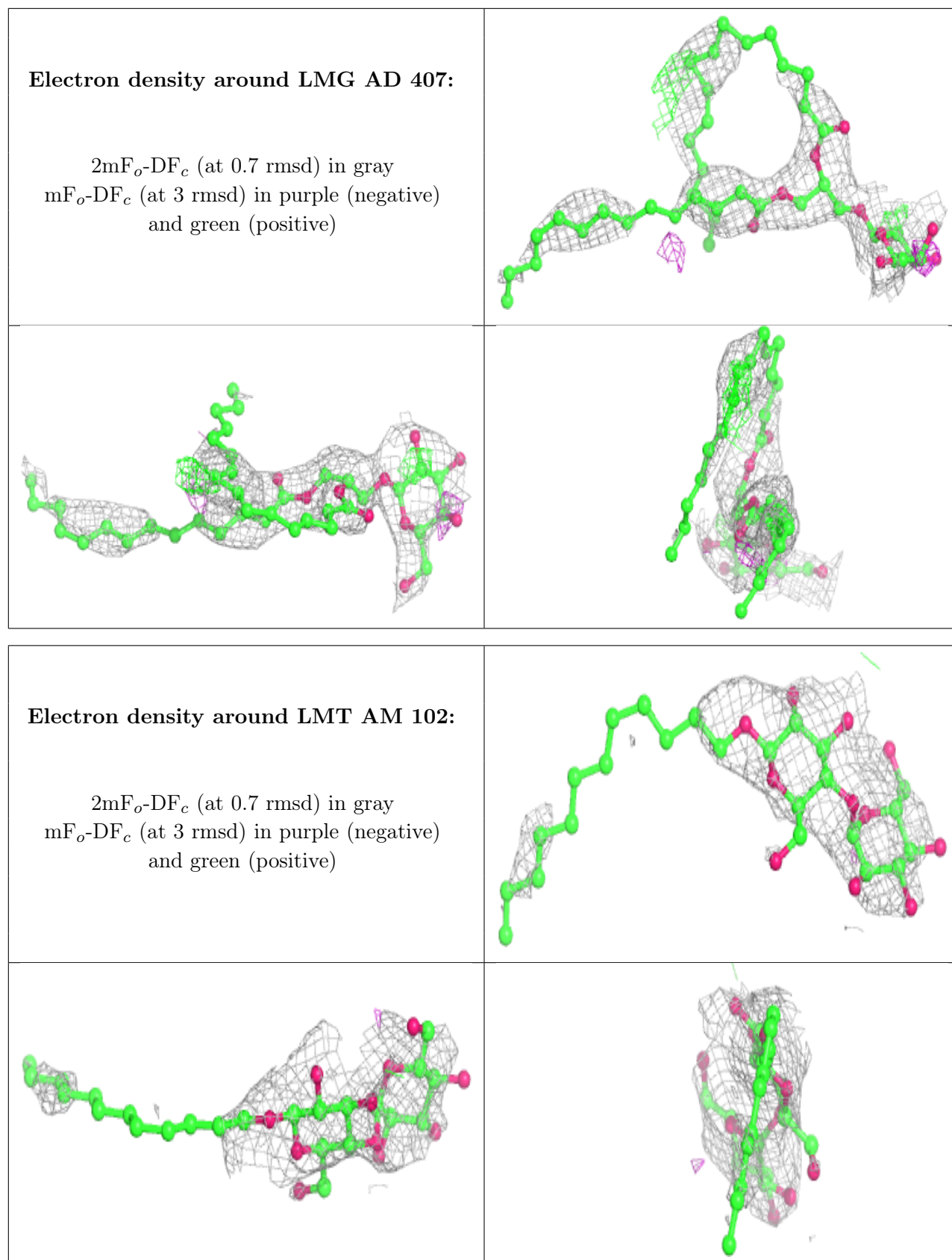
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around LHG AA 415:

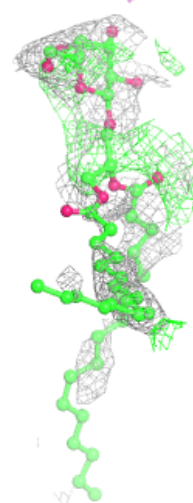
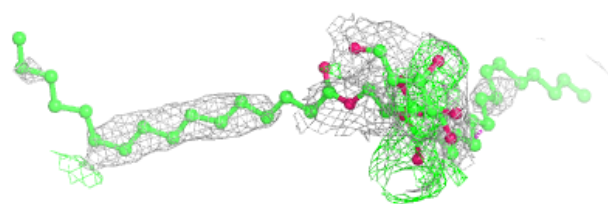
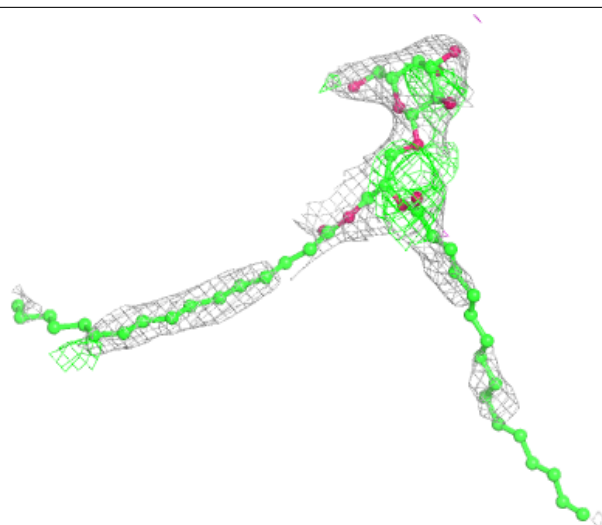
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





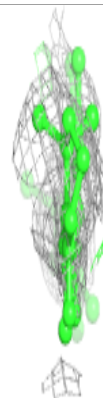
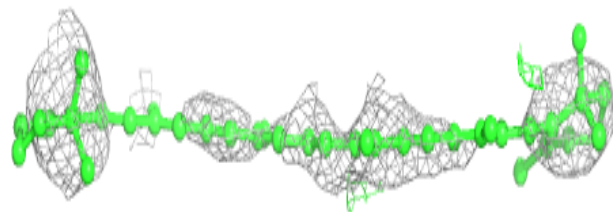
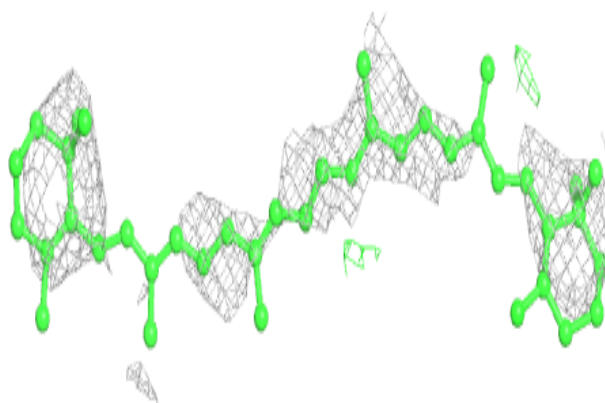
Electron density around LMG BL 5101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

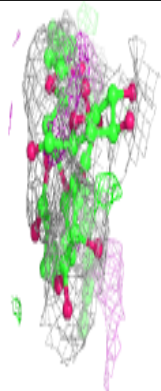
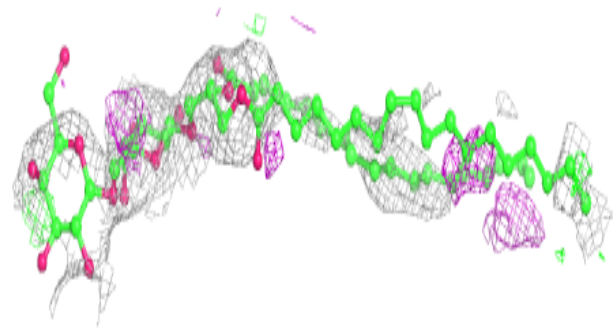
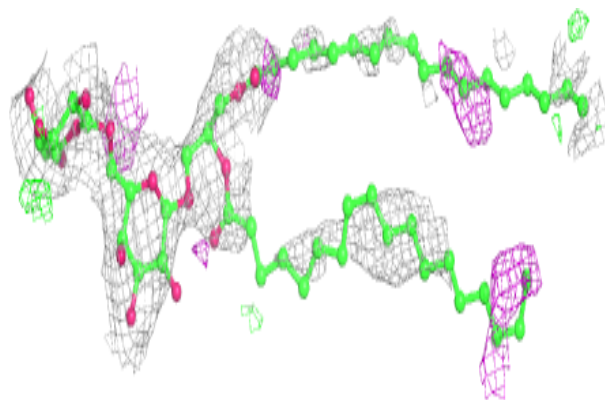


Electron density around BCR BK 5102:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

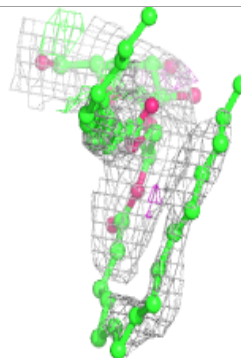
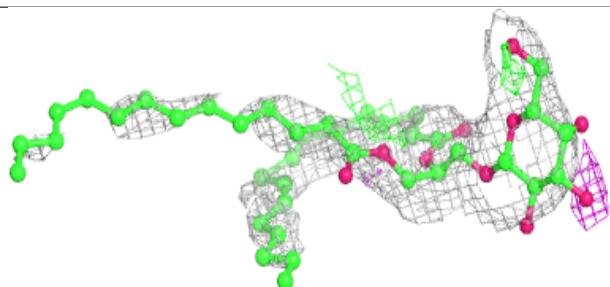
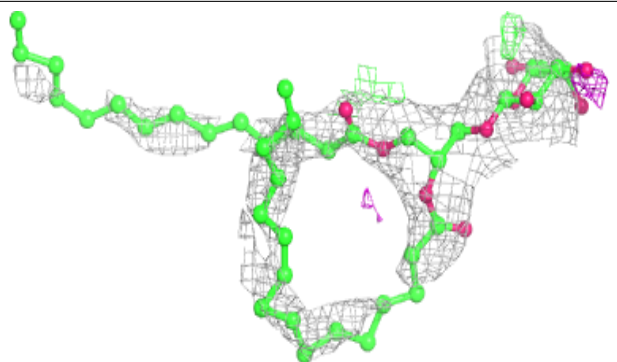
**Electron density around DGD BC 5519:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

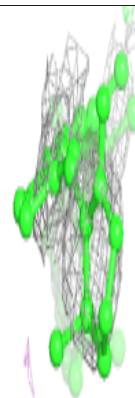
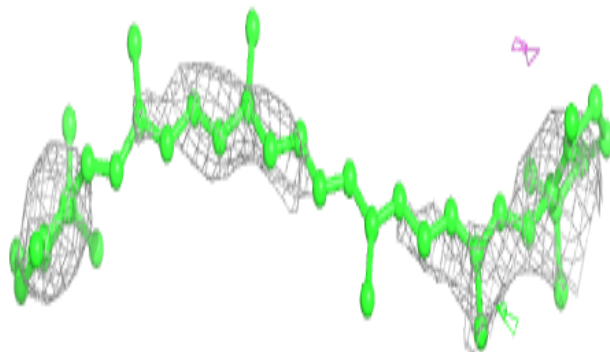
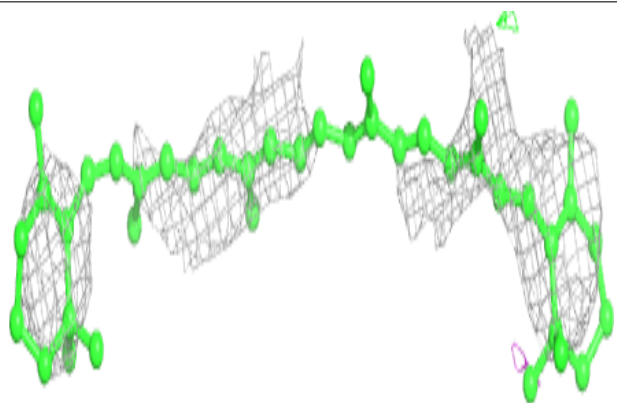


Electron density around LMG BD 5409:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

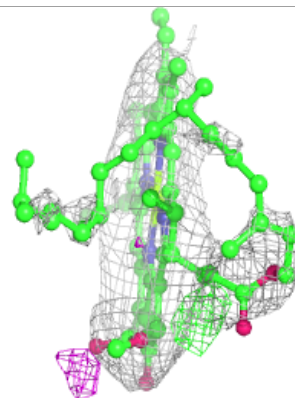
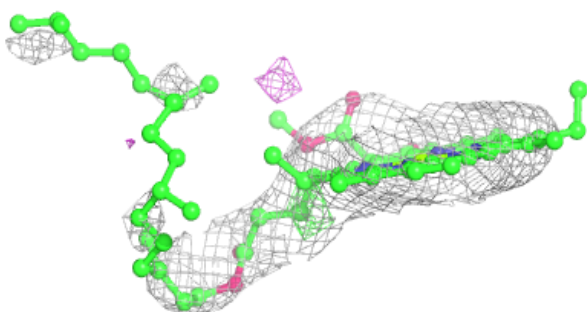
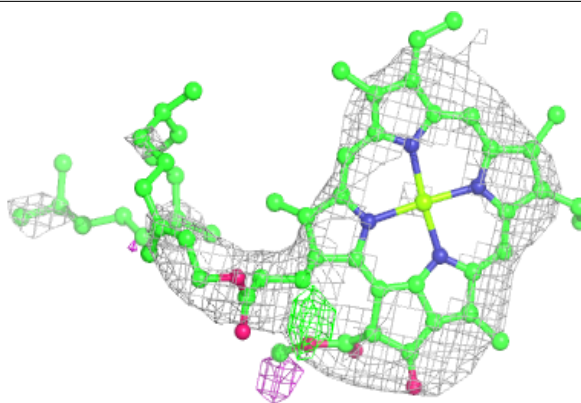
**Electron density around BCR BC 5514:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

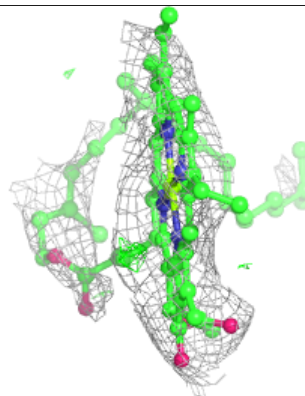
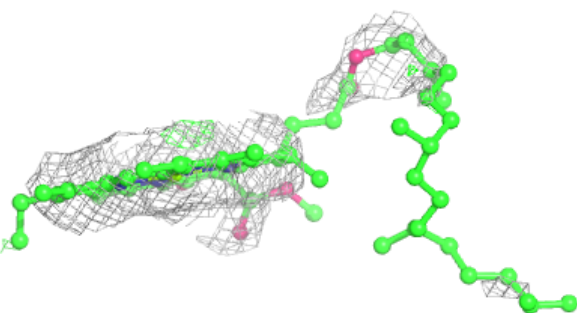
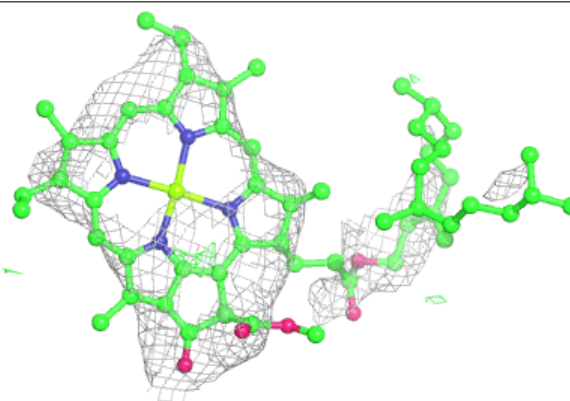


Electron density around CLA AC 512:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

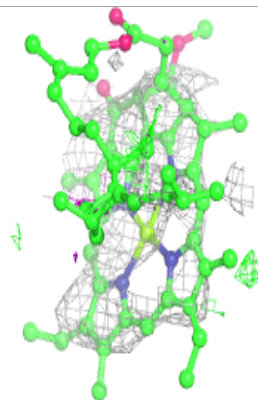
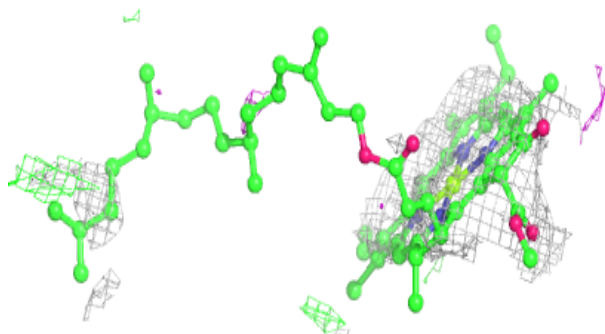
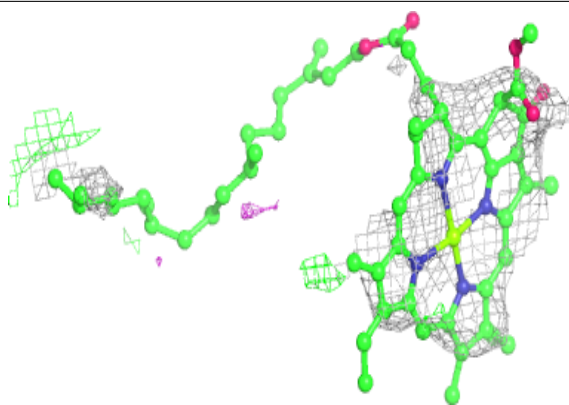
**Electron density around CLA BC 5512:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

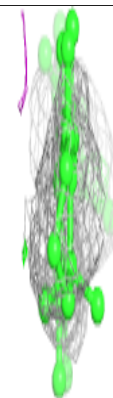
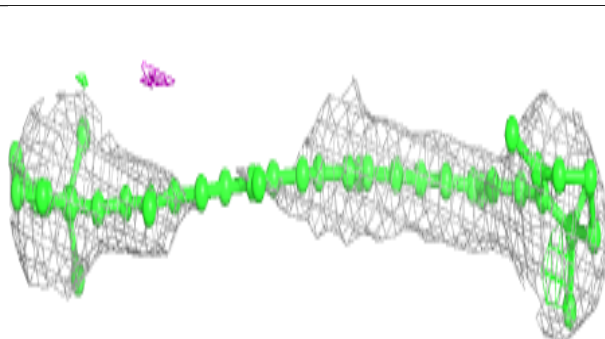
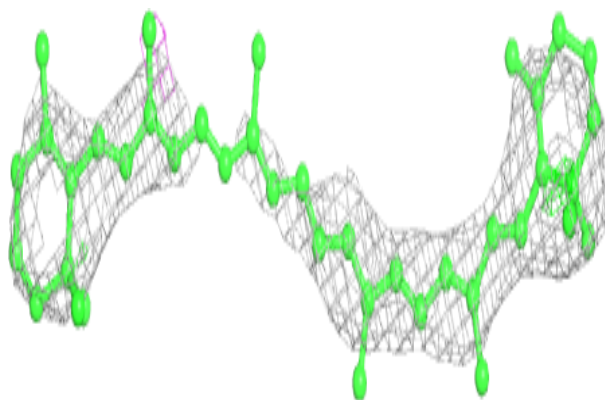


Electron density around CLA BC 5511:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

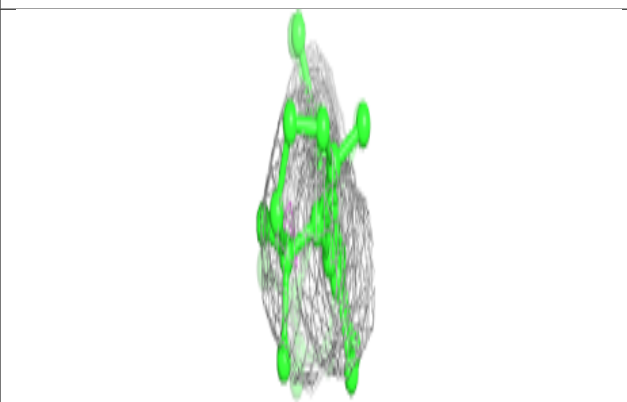
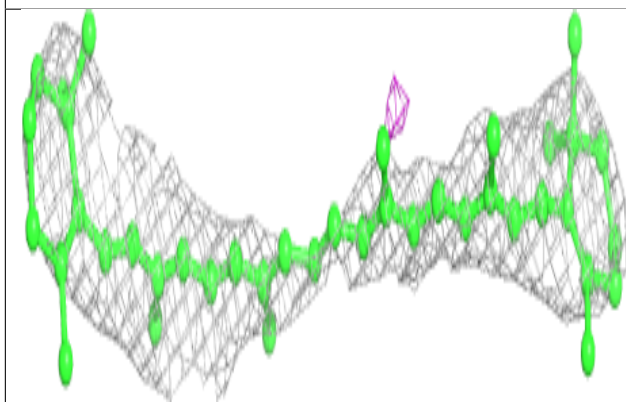
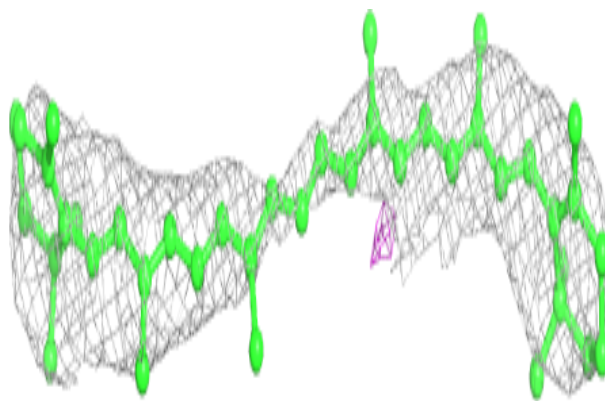
**Electron density around BCR AK 102:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

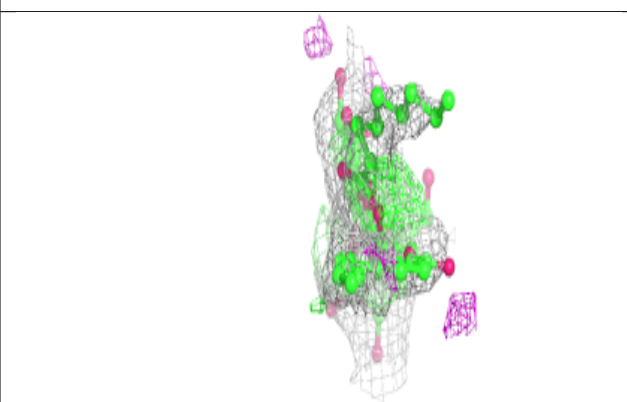
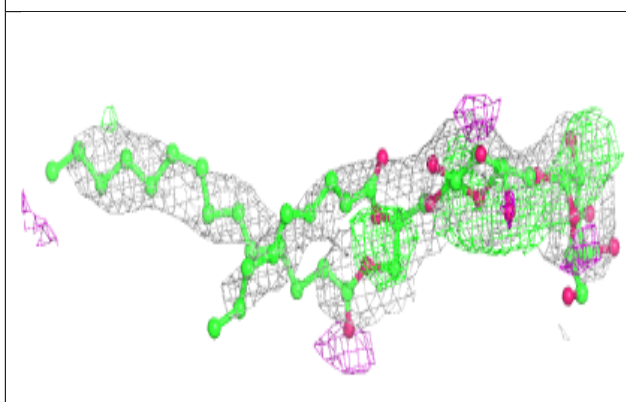
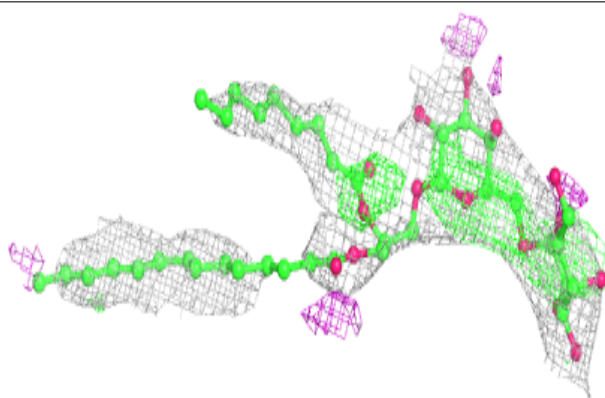


Electron density around BCR BB 5623:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

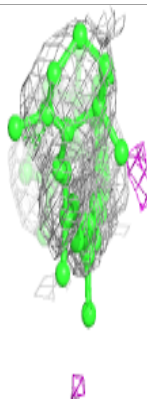
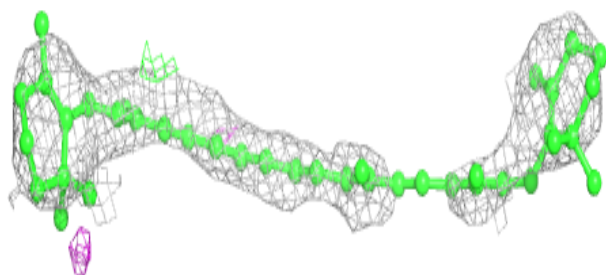
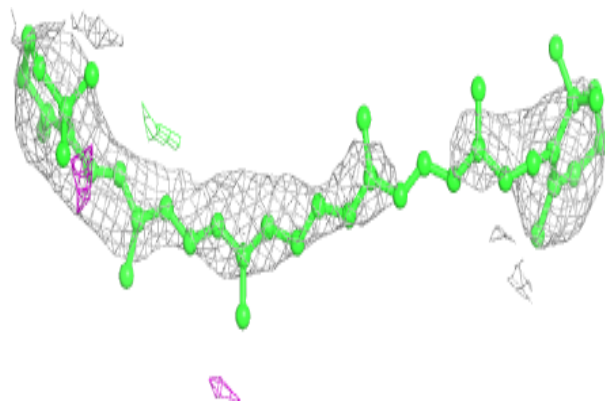
**Electron density around DGD AC 517:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

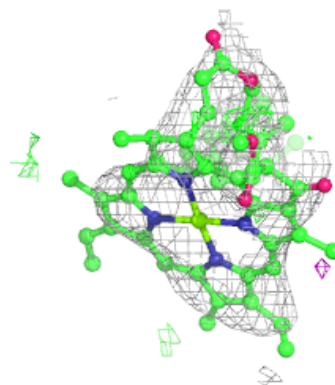
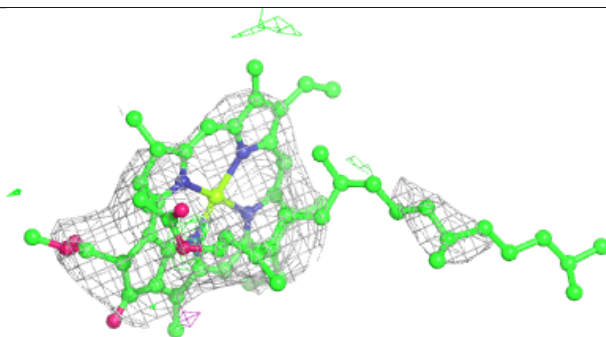
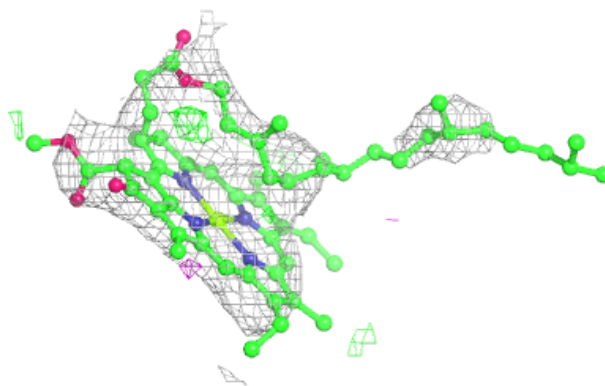


Electron density around BCR AT 101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

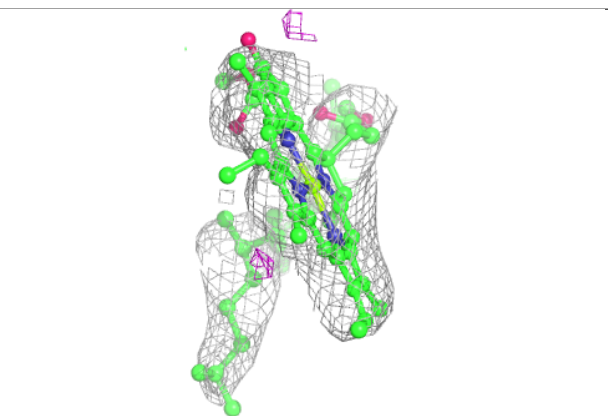
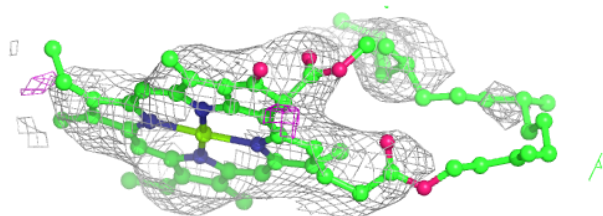
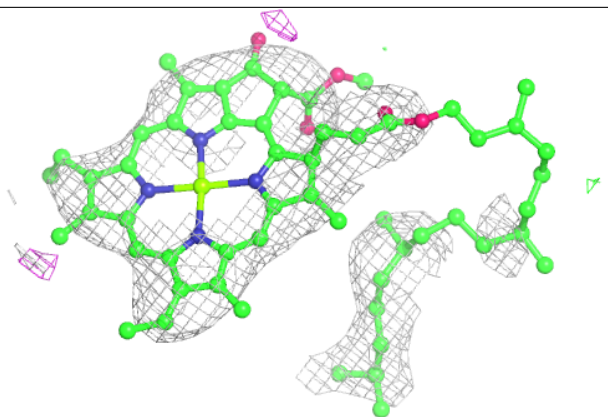
**Electron density around CLA BC 5505:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

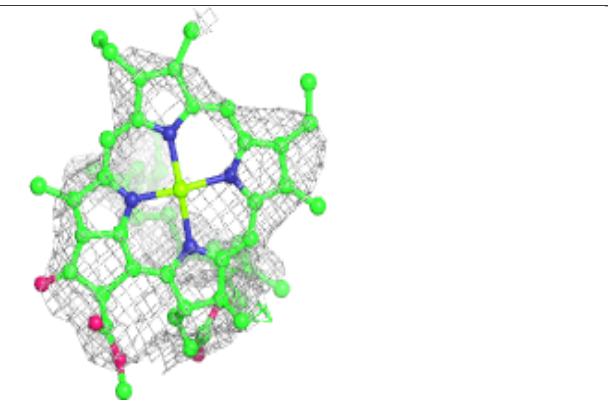
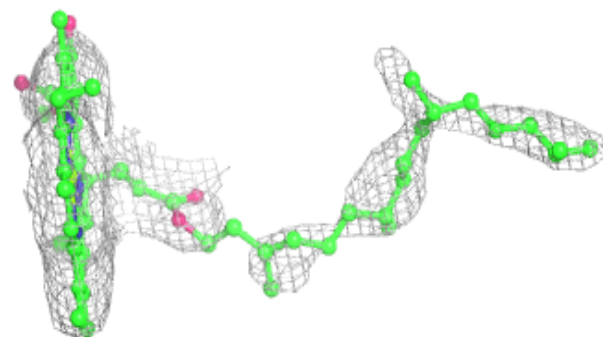
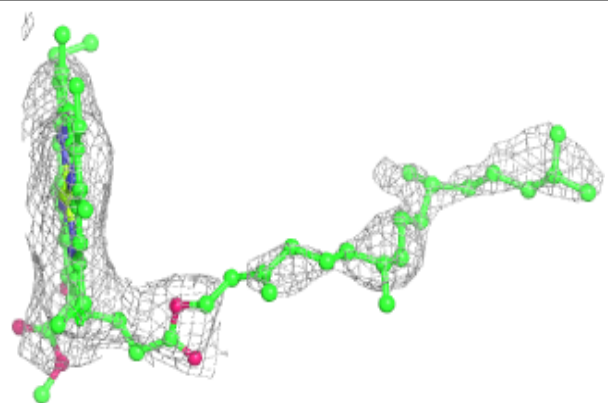


Electron density around CLA BB 5620:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

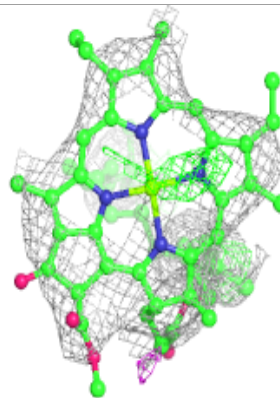
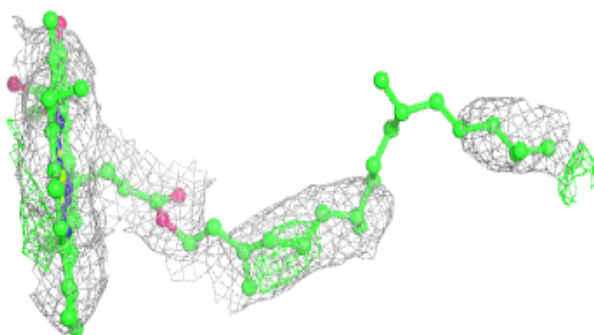
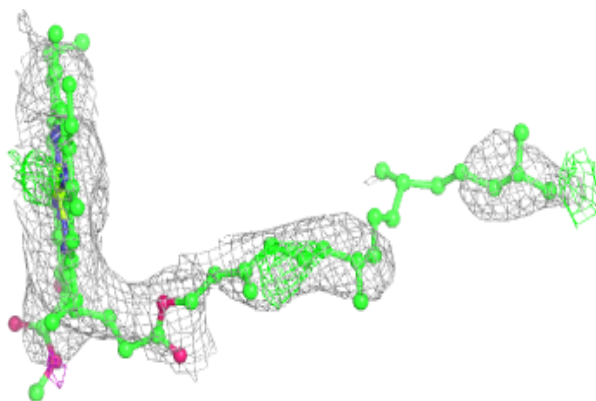
**Electron density around CLA BB 5610:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

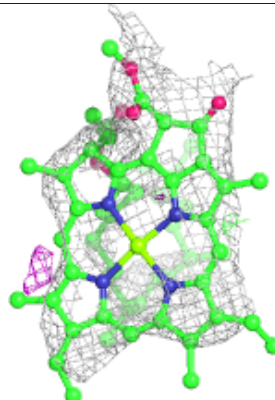
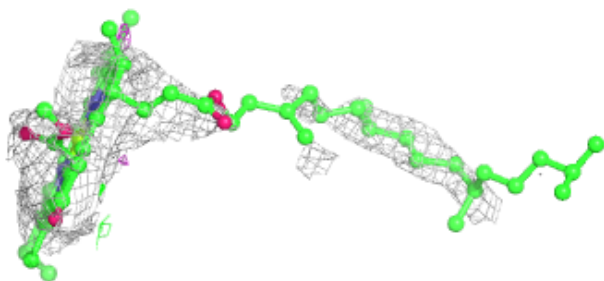
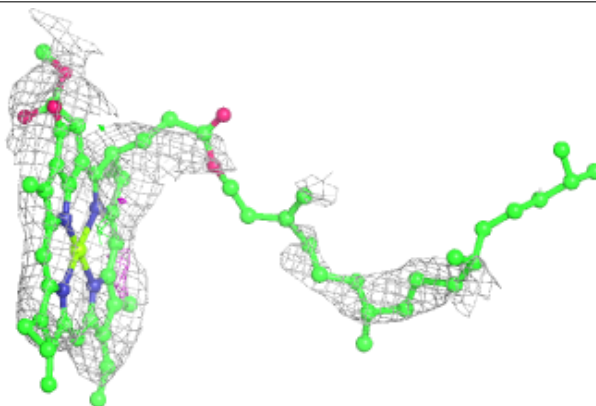


Electron density around CLA AB 606:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

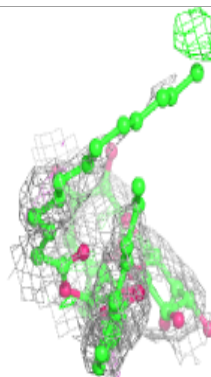
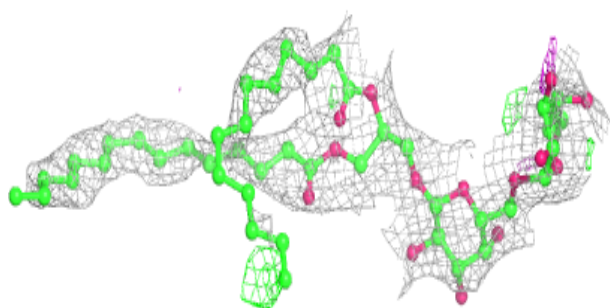
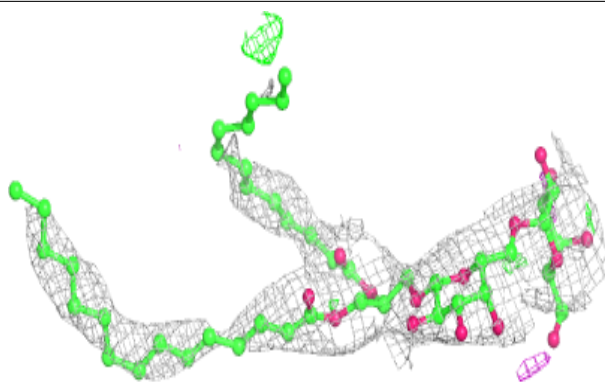
**Electron density around CLA BD 5405:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



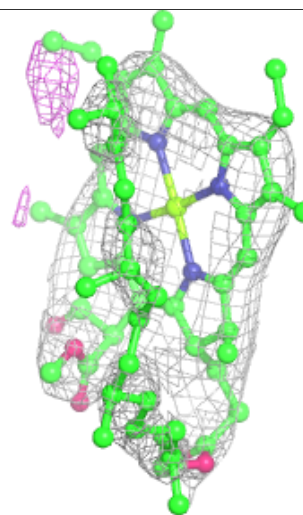
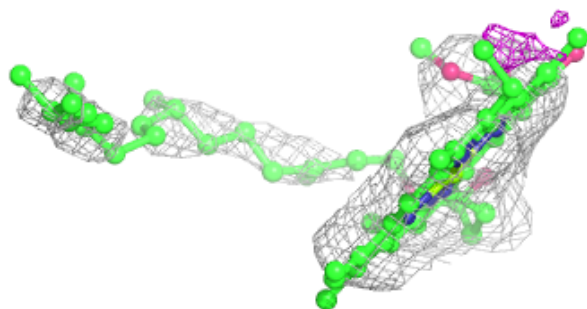
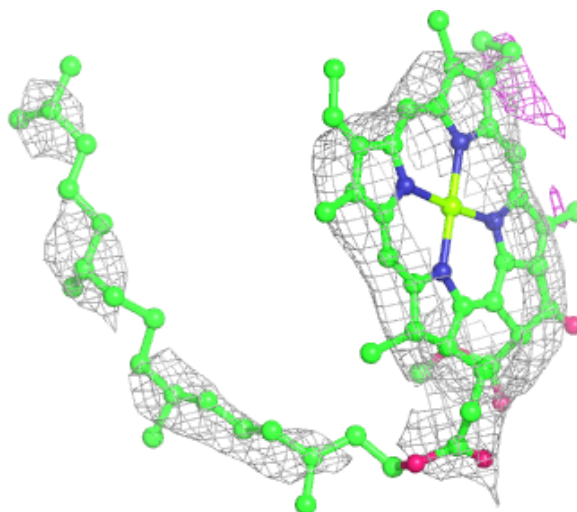
Electron density around DGD BH 5101:

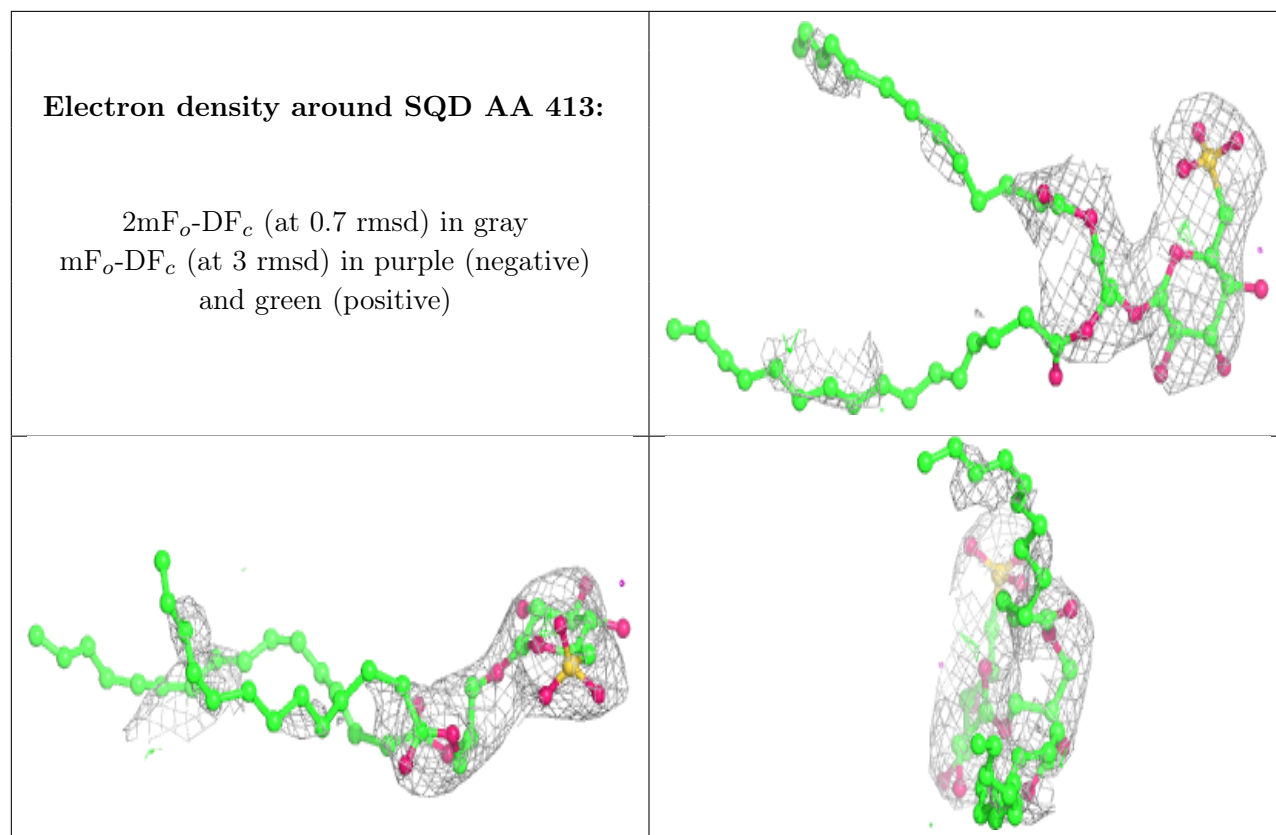
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CLA BC 5507:

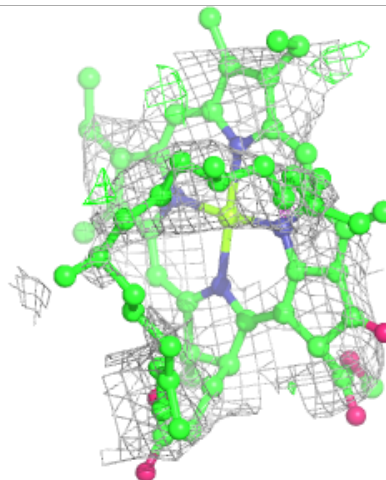
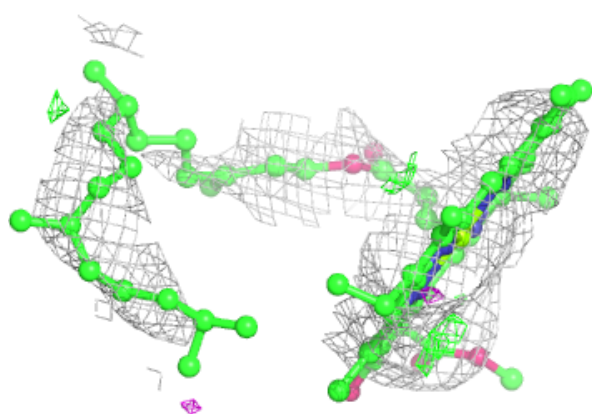
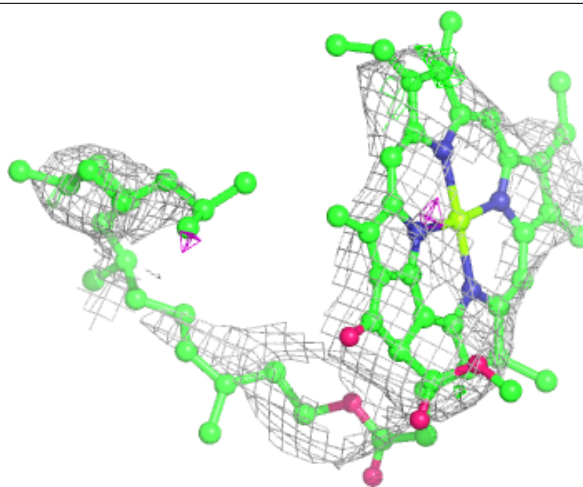
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





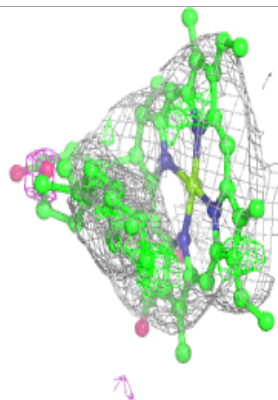
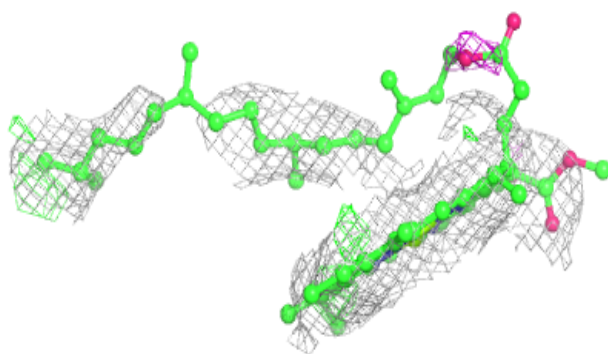
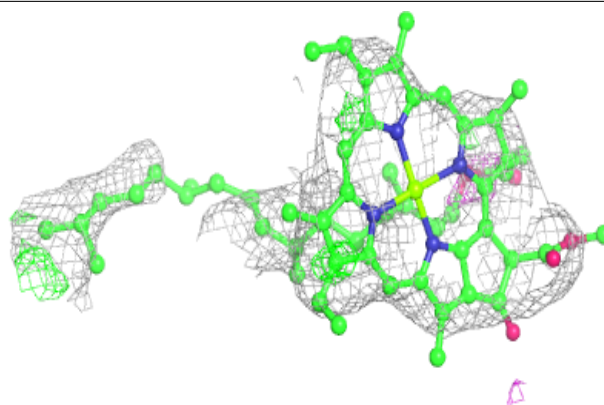
Electron density around CLA BC 5503:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

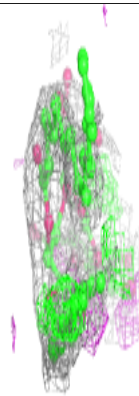
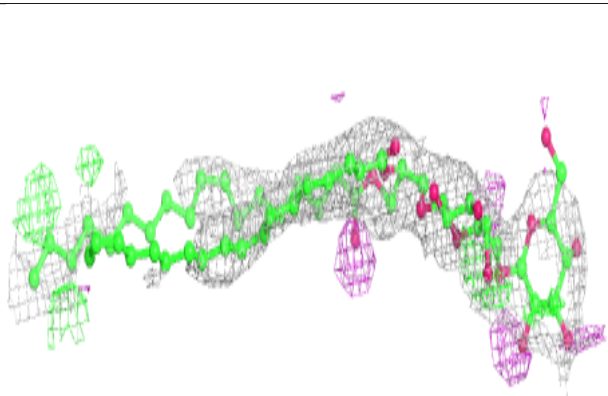
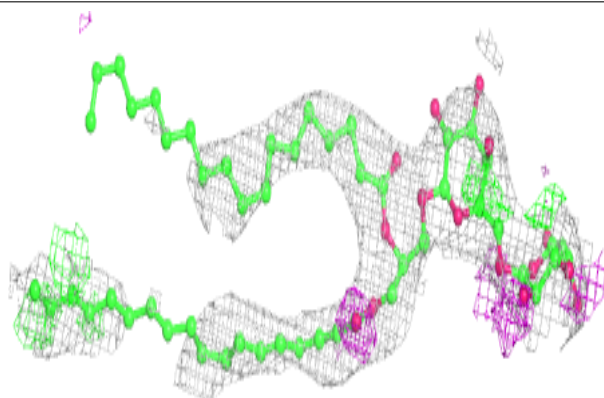


Electron density around CLA AB 614:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

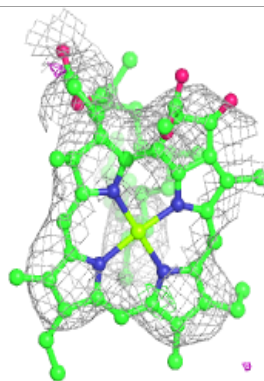
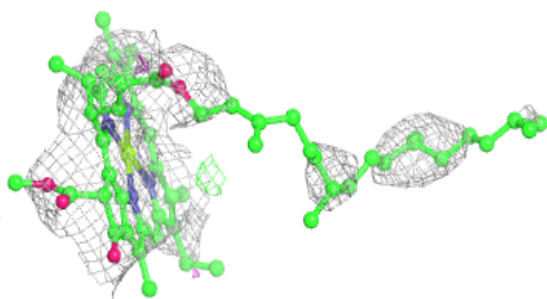
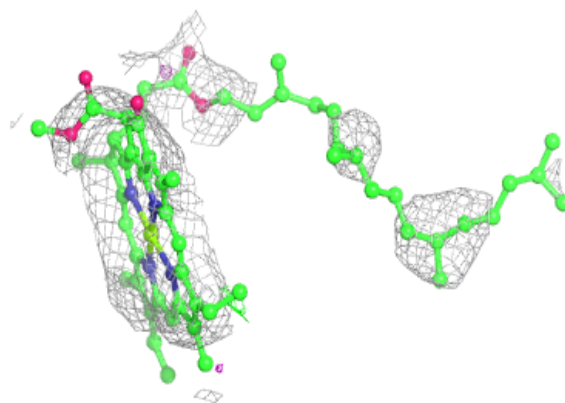
**Electron density around DGD AC 519:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

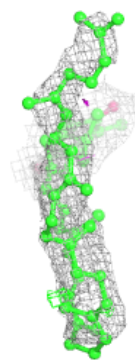
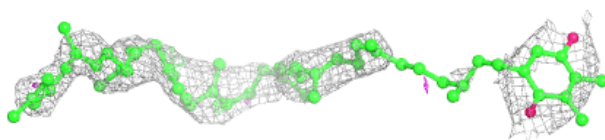
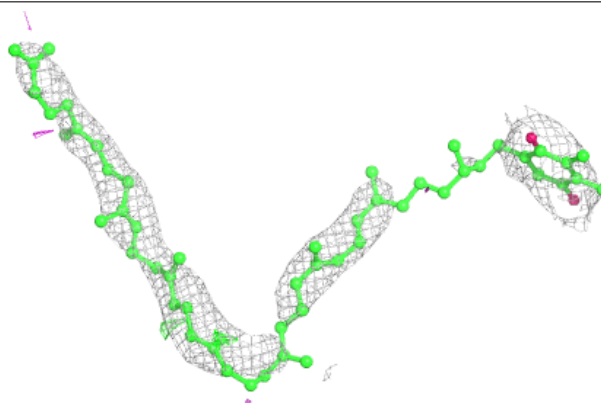


Electron density around CLA BC 5508:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

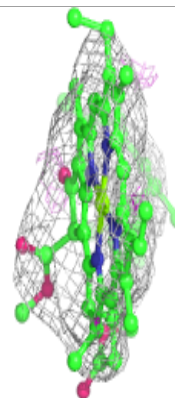
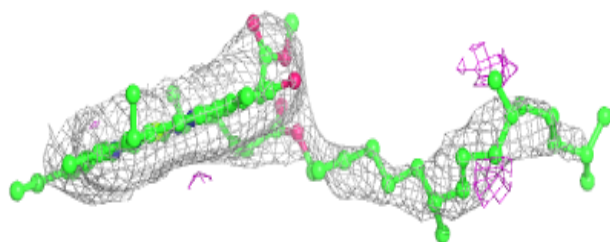
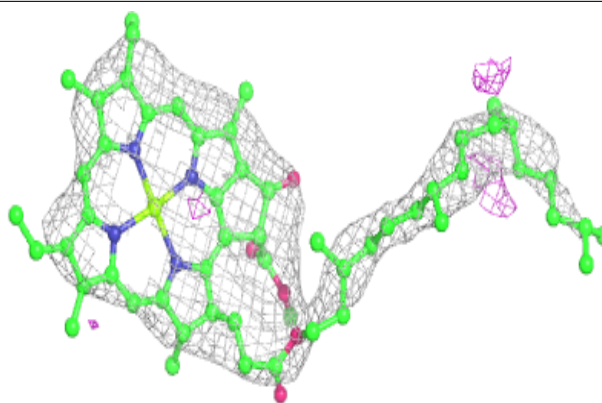
**Electron density around PL9 BD 5406:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

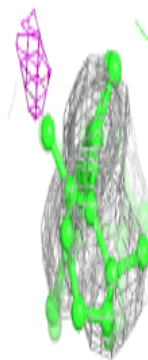
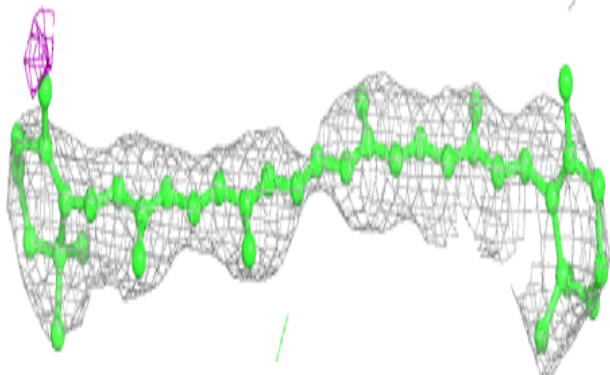
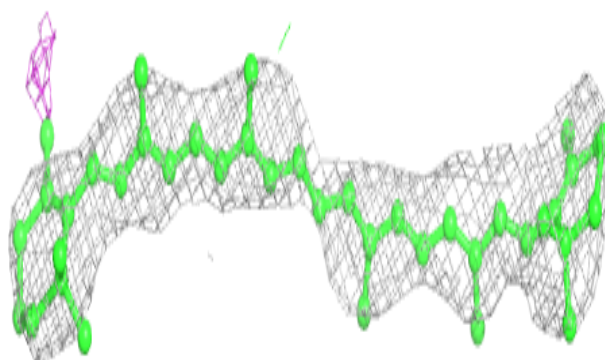


Electron density around CLA BB 5606:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

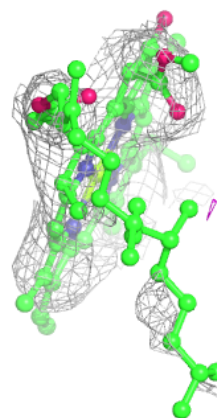
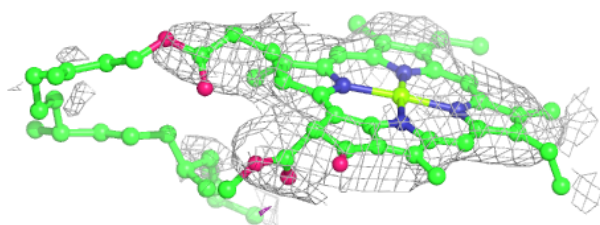
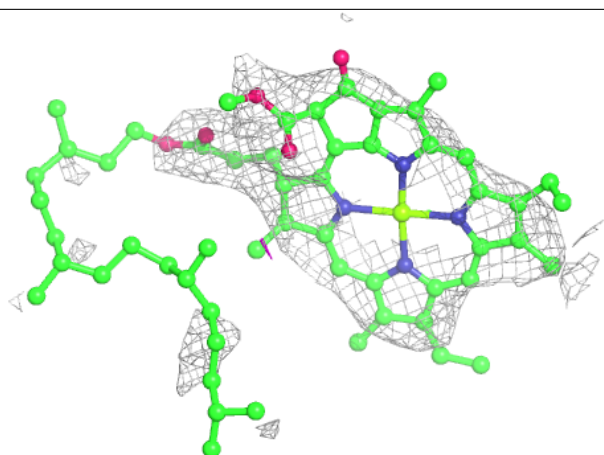
**Electron density around BCR AB 619:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

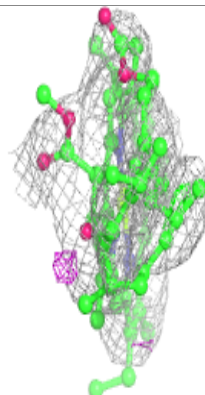
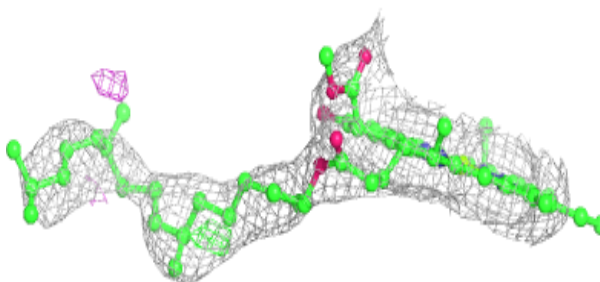
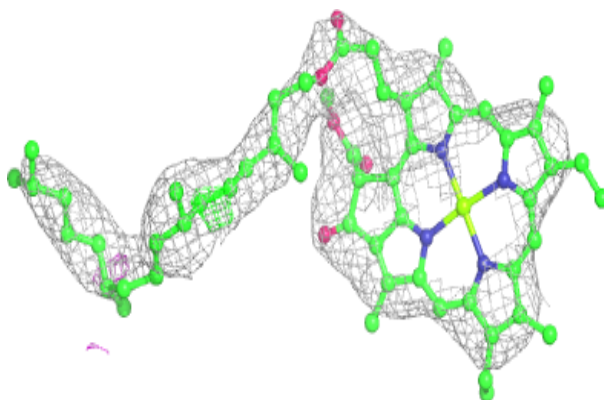


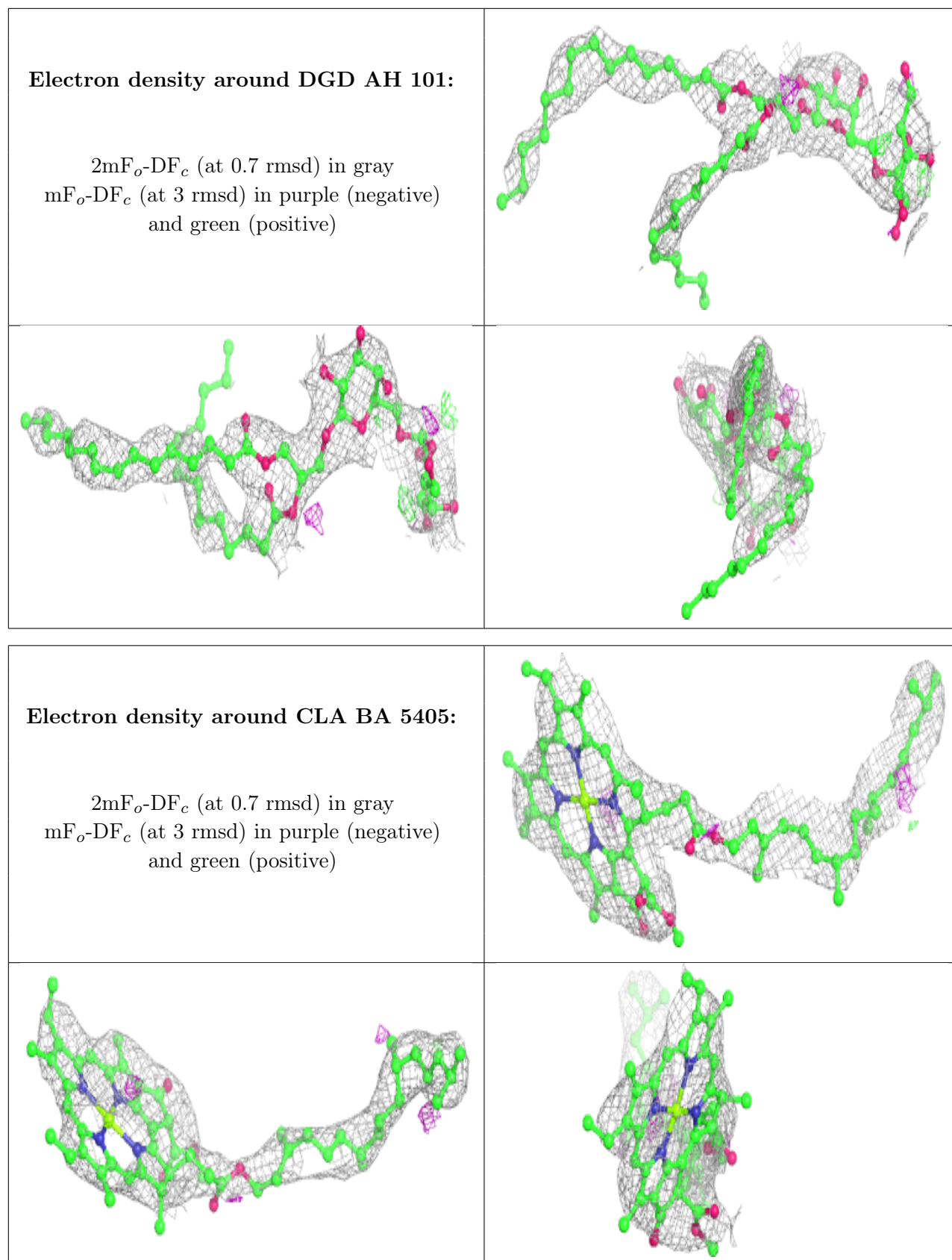
Electron density around CLA AB 616:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

**Electron density around CLA AB 602:**

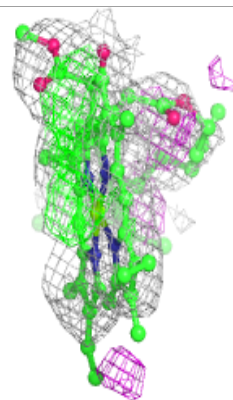
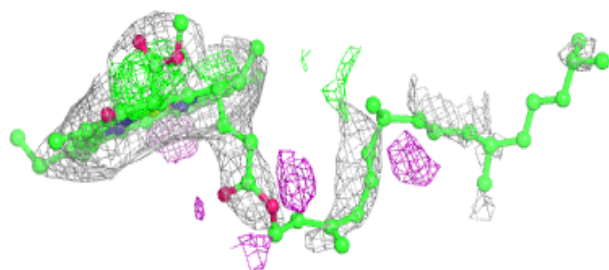
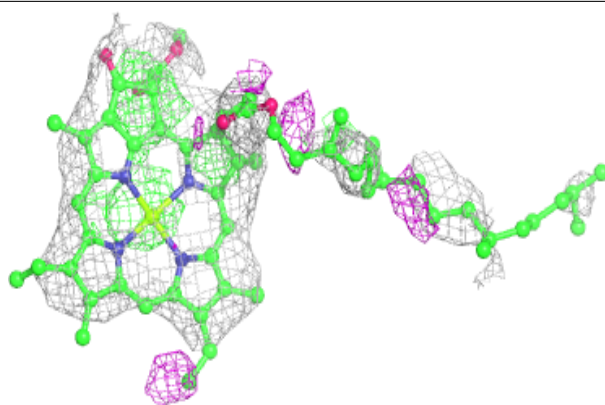
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



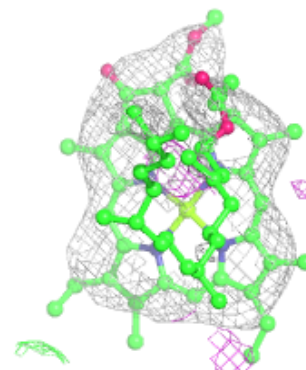
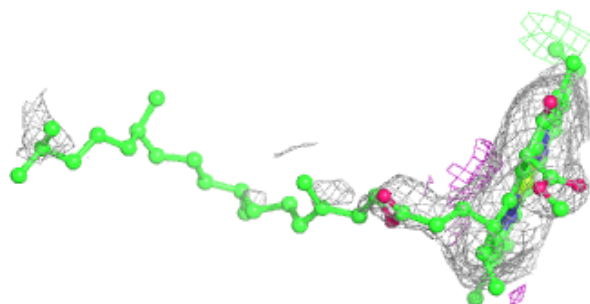
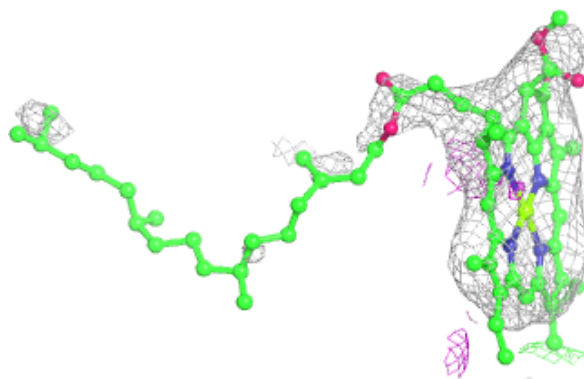


Electron density around CLA AA 406:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

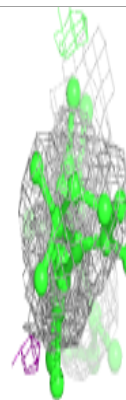
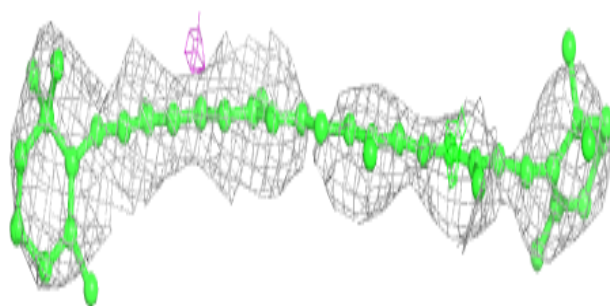
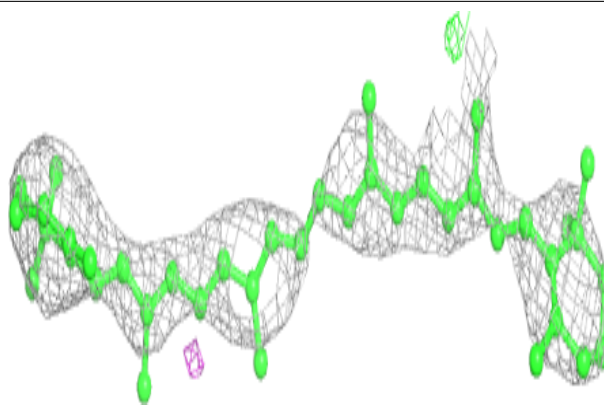
**Electron density around CLA AD 404:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

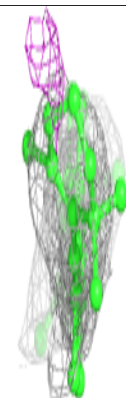
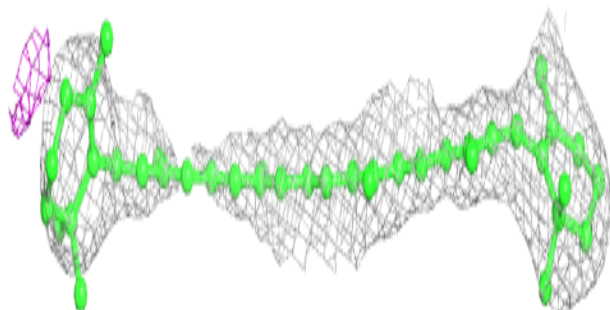
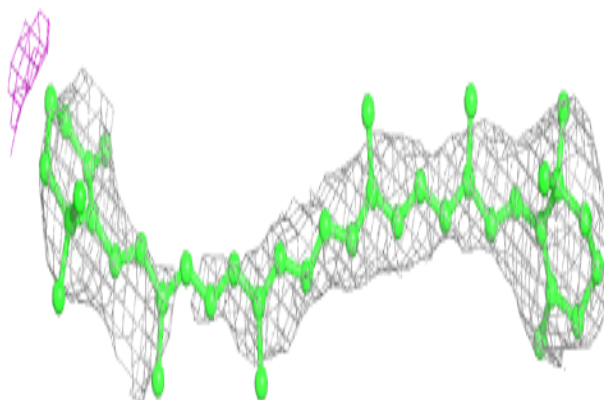


Electron density around BCR AB 617:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

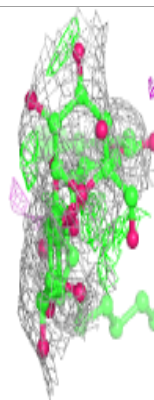
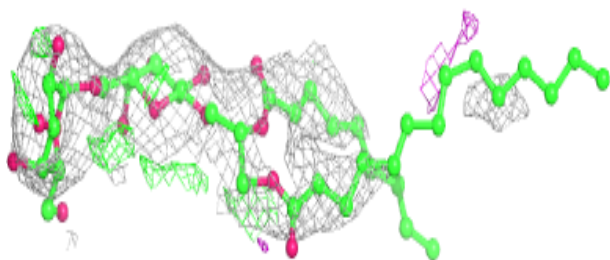
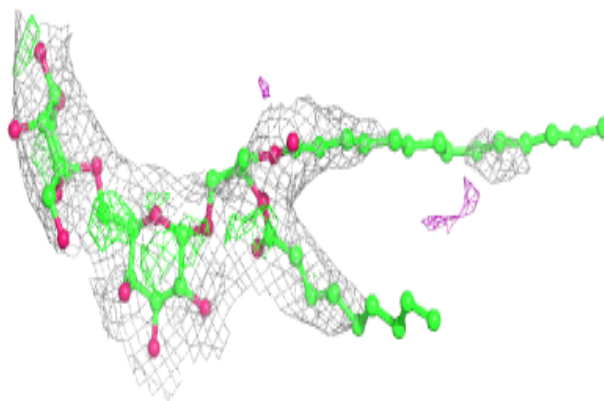
**Electron density around BCR AB 618:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

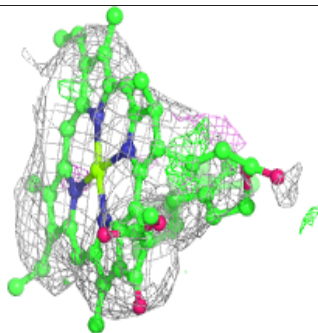
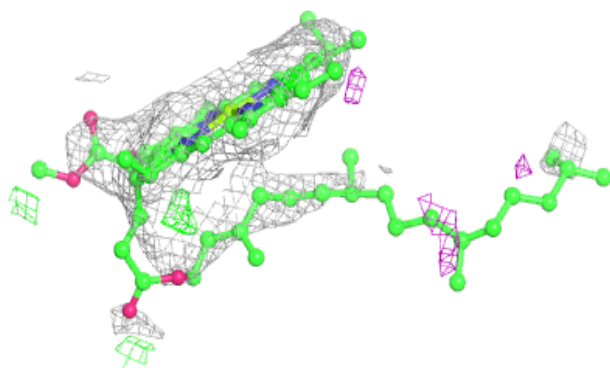
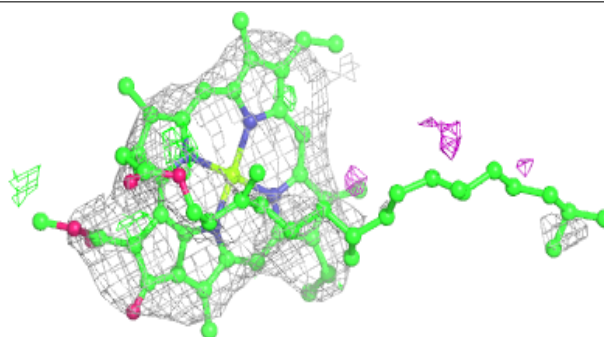


Electron density around DGD BC 5517:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

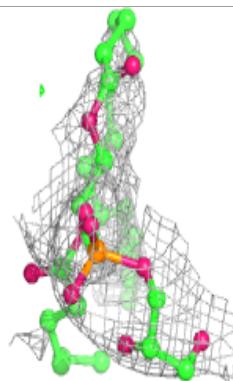
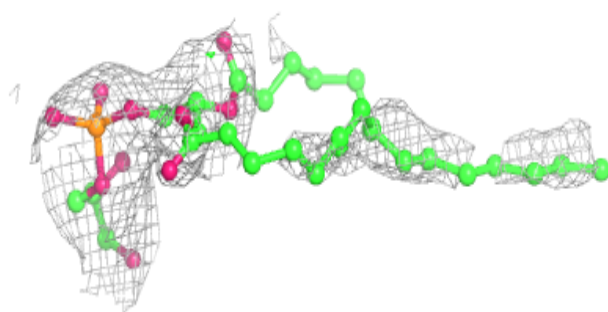
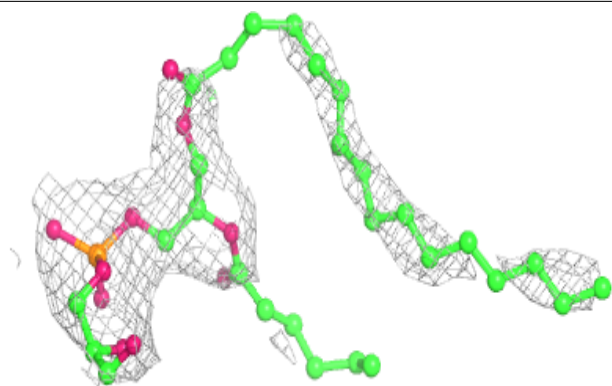
**Electron density around CLA BB 5618:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

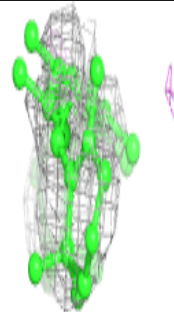
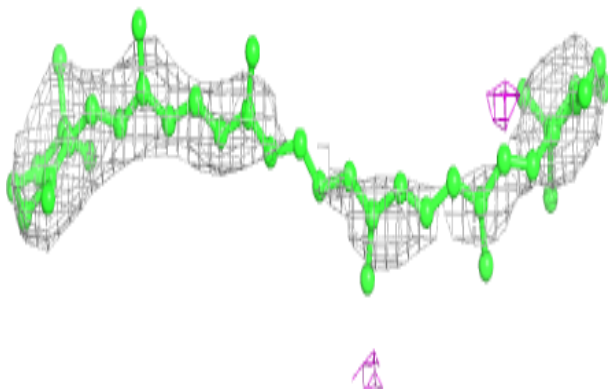
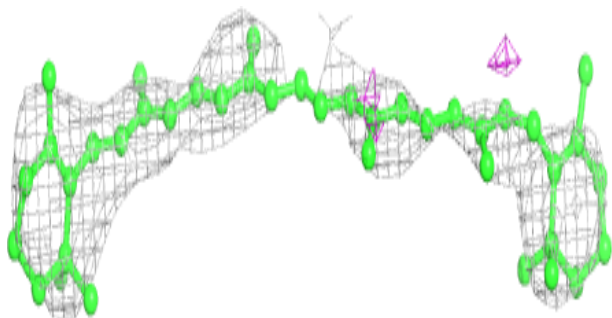


Electron density around LHG BA 5413:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

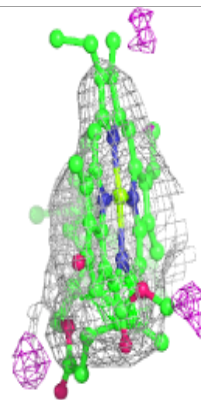
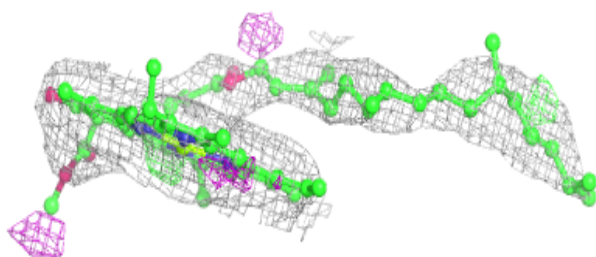
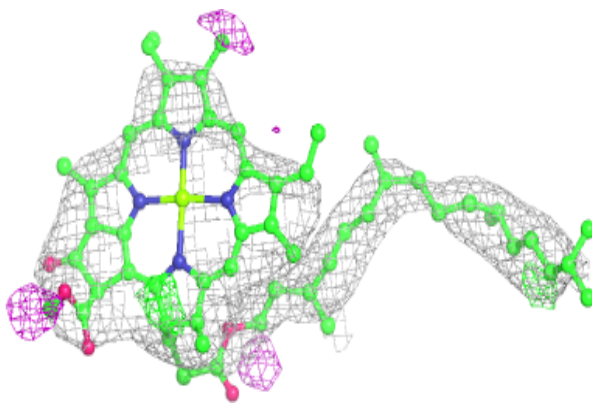
**Electron density around BCR AC 514:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

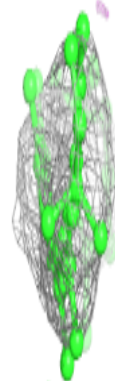
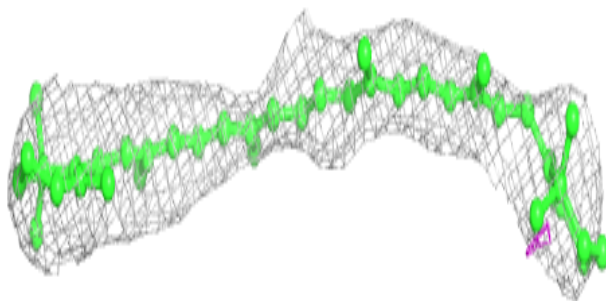
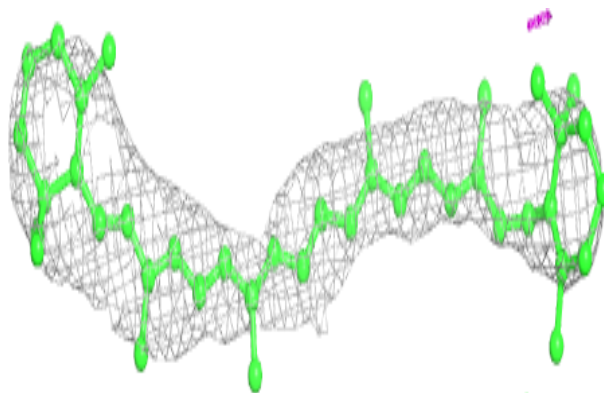


Electron density around CLA AB 603:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

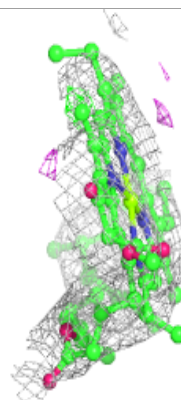
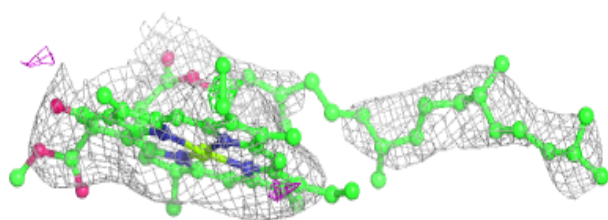
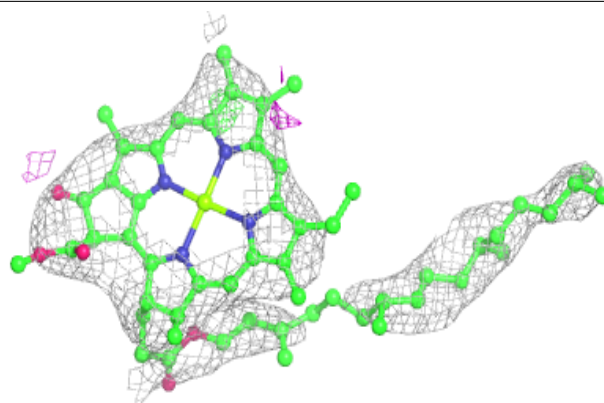
**Electron density around BCR BD 5407:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

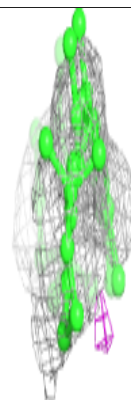
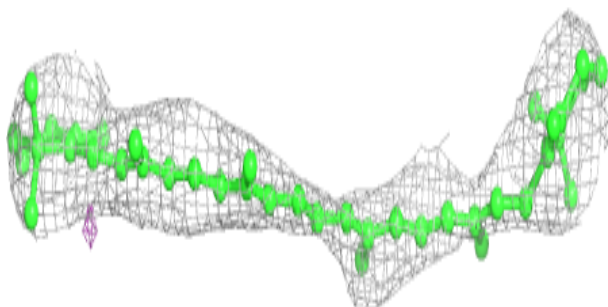
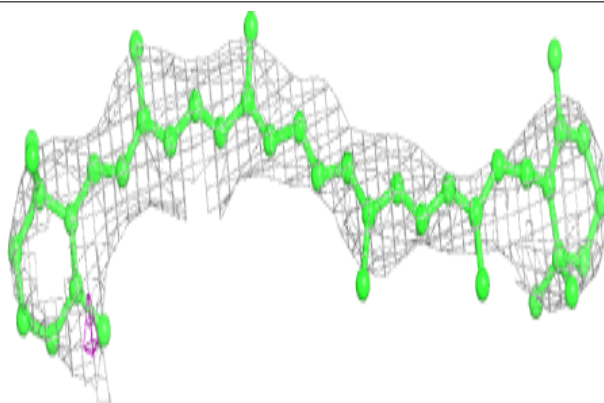


Electron density around CLA AC 501:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

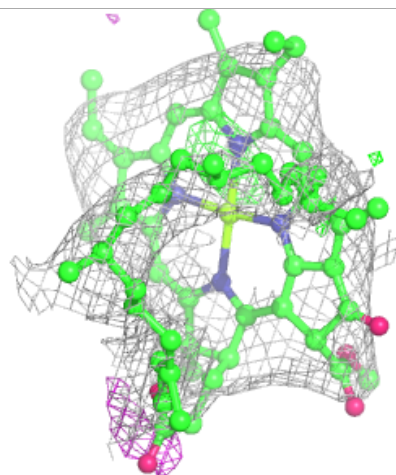
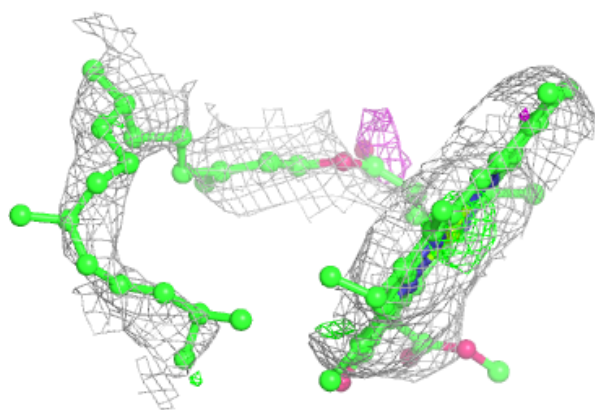
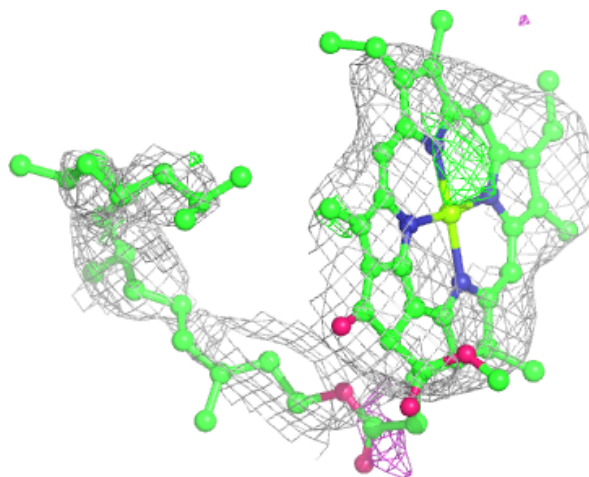
**Electron density around BCR AD 406:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



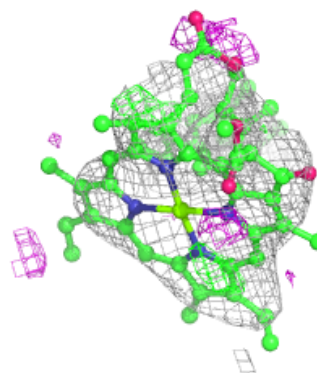
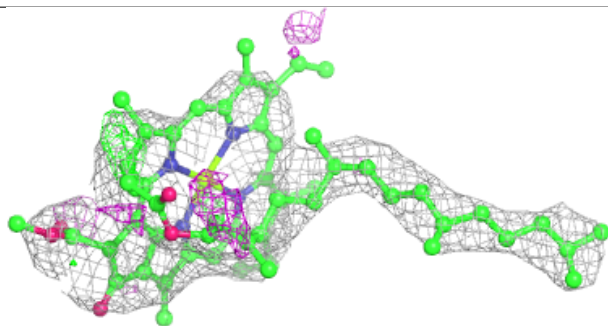
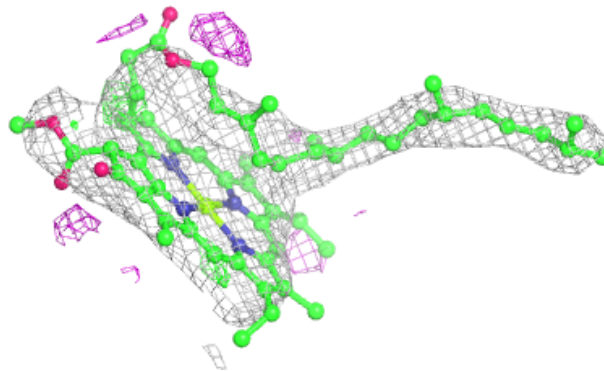
Electron density around CLA AC 503:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

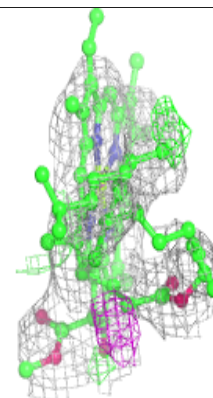
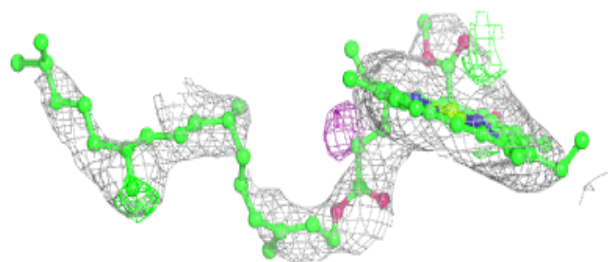
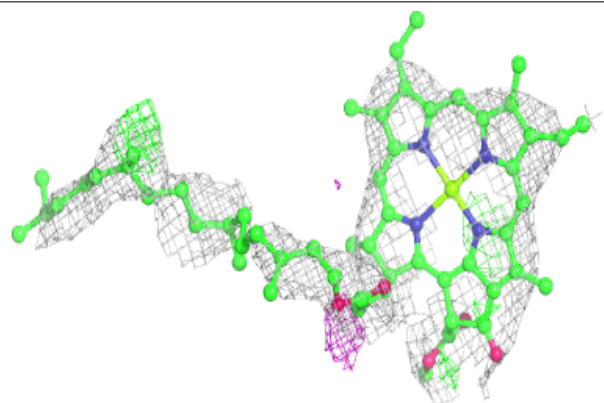


Electron density around CLA AC 505:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

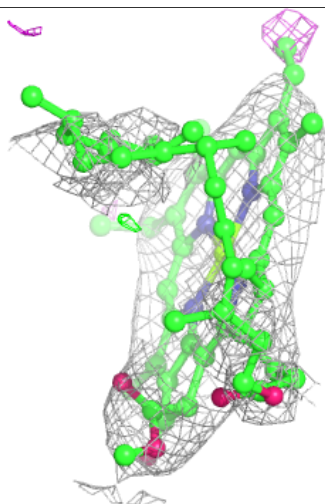
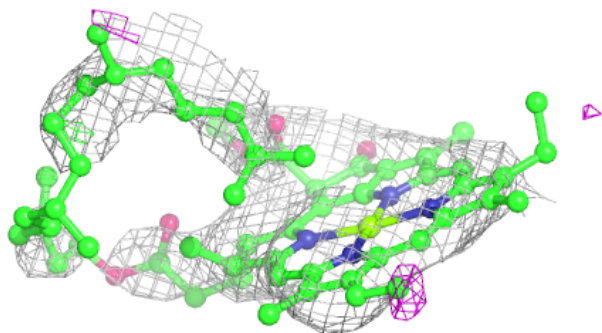
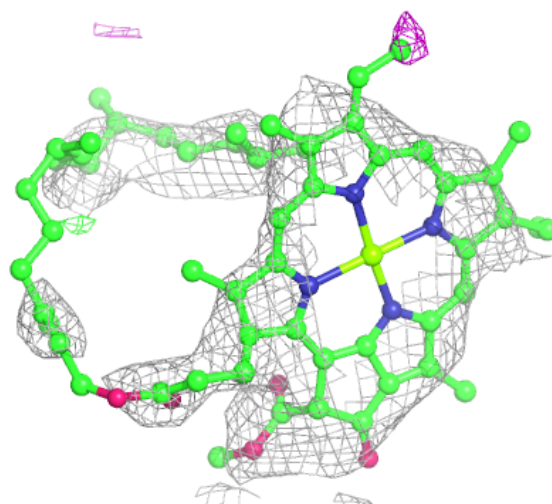
**Electron density around CLA BA 5407:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



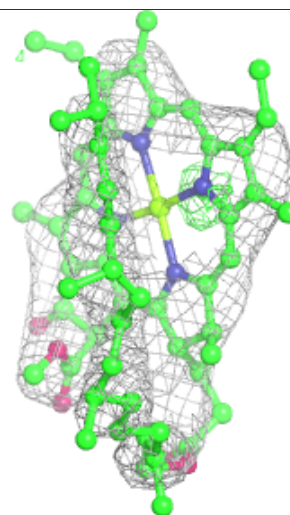
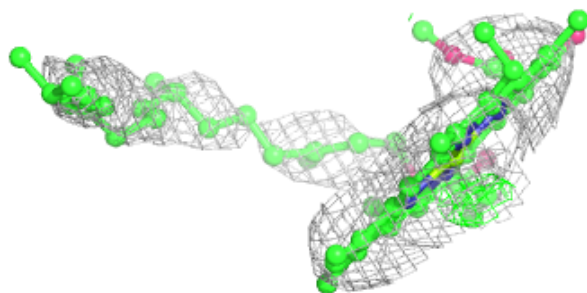
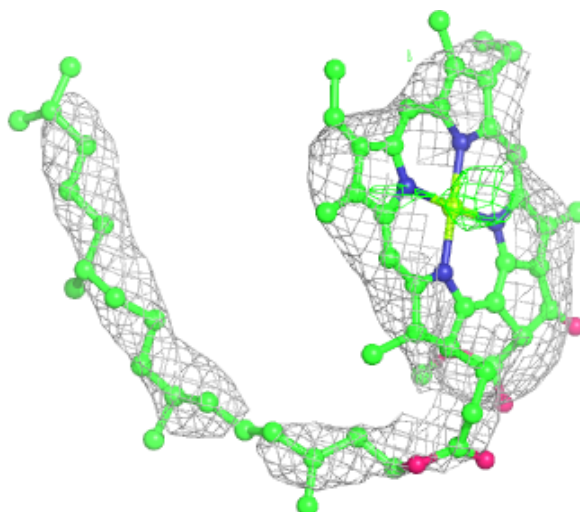
Electron density around CLA AB 615:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



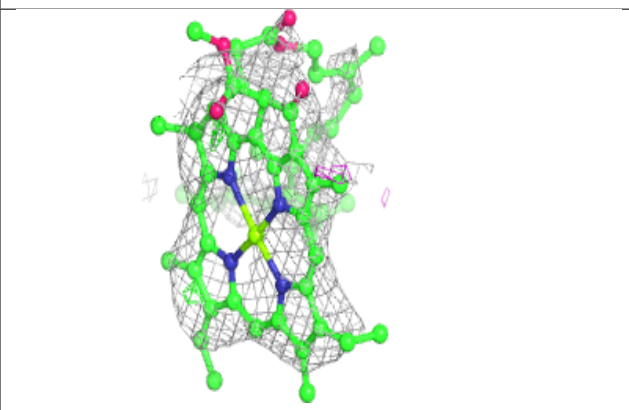
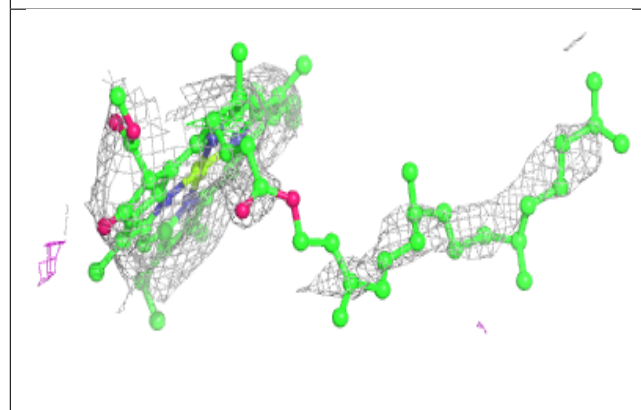
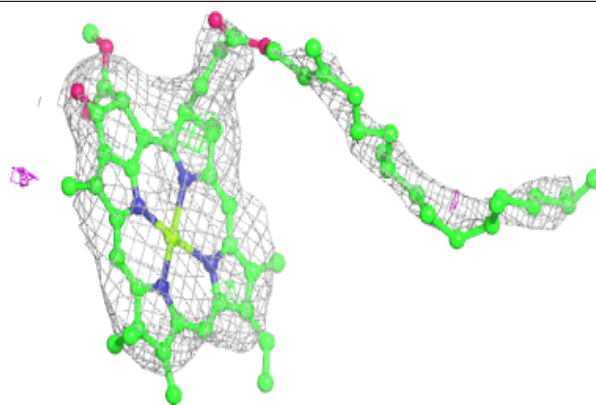
Electron density around CLA AC 507:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

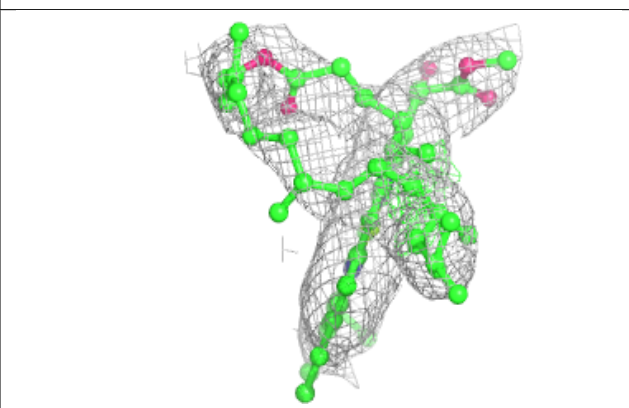
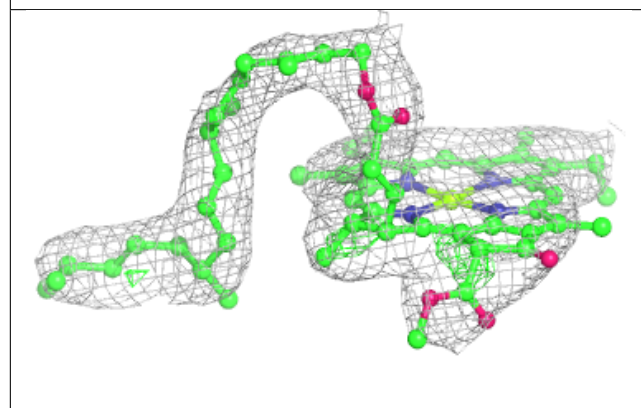
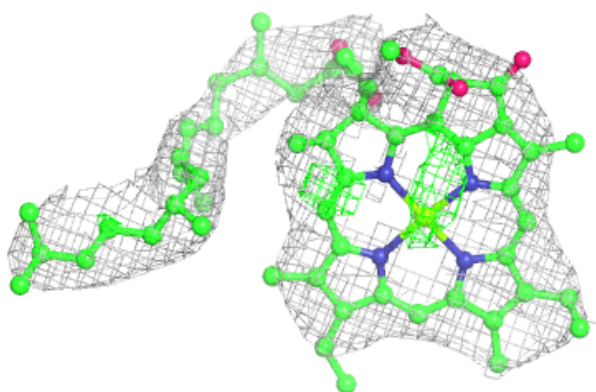


Electron density around CLA AC 511:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

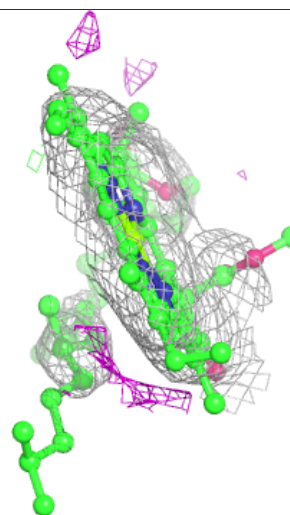
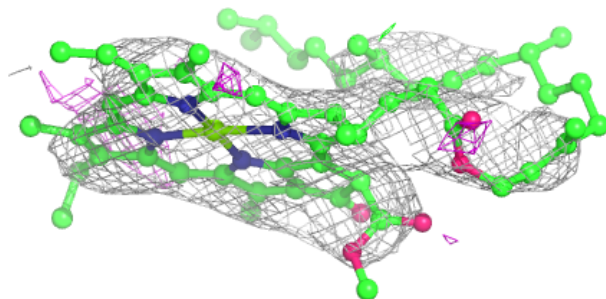
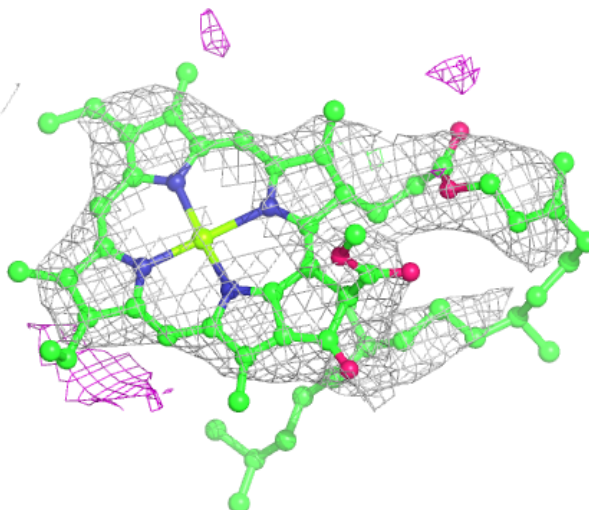
**Electron density around CLA BA 5406:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



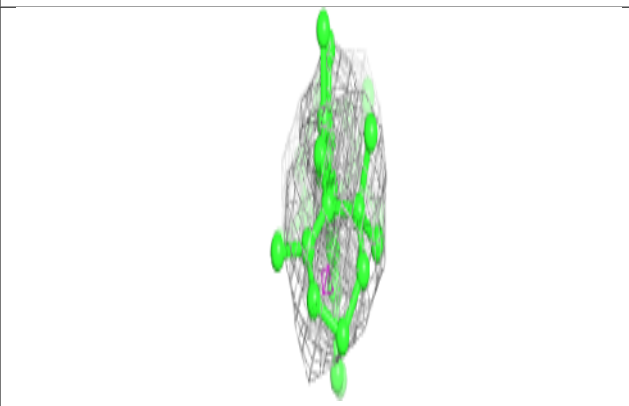
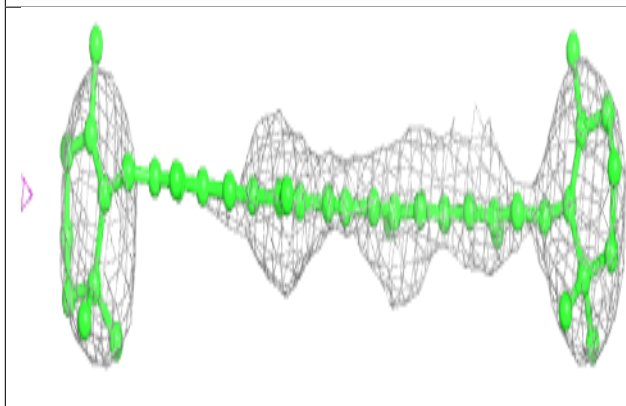
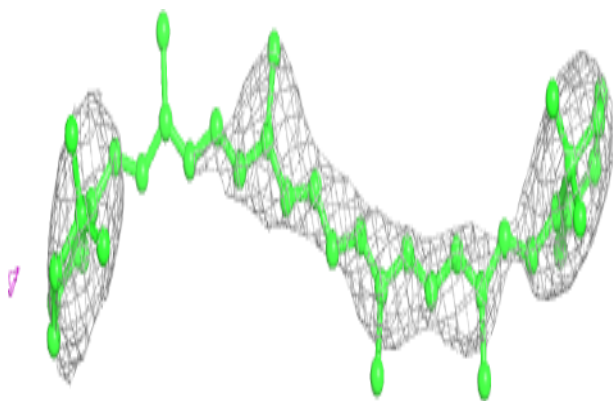
Electron density around CLA AC 509:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

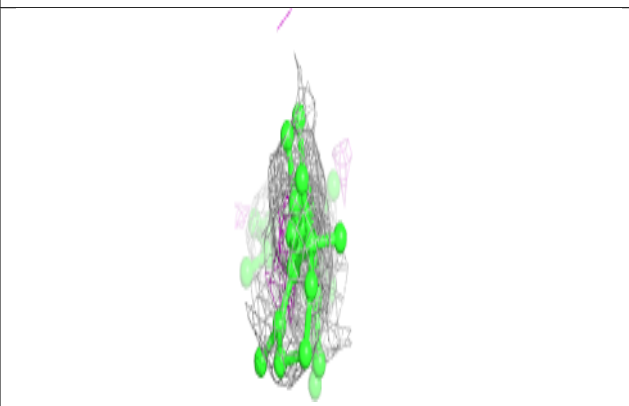
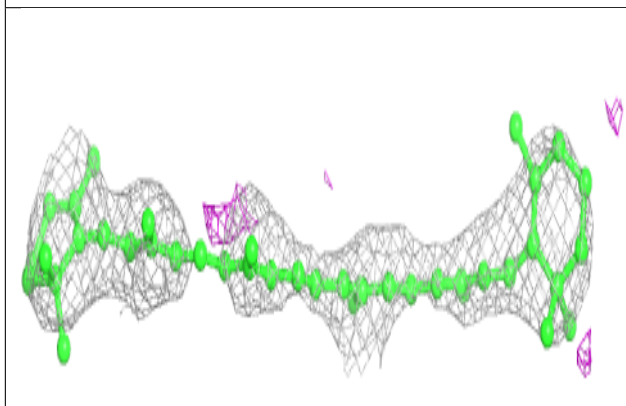
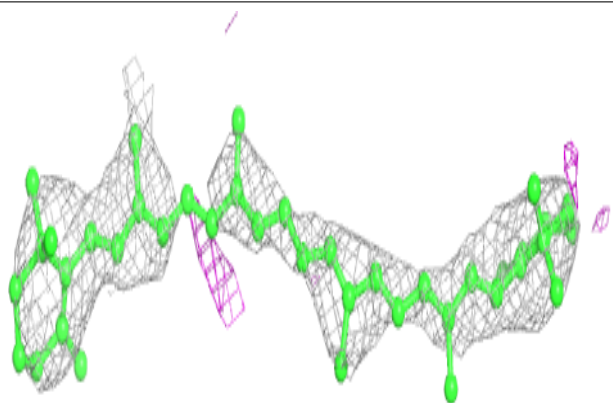


Electron density around BCR BA 5411:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

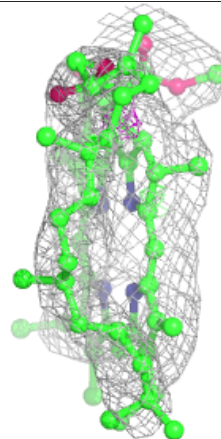
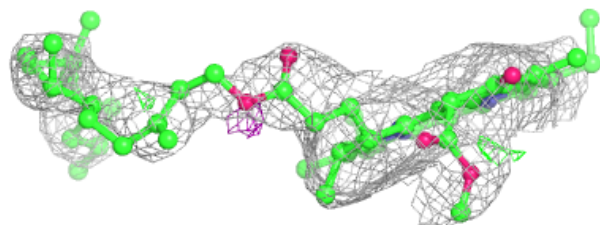
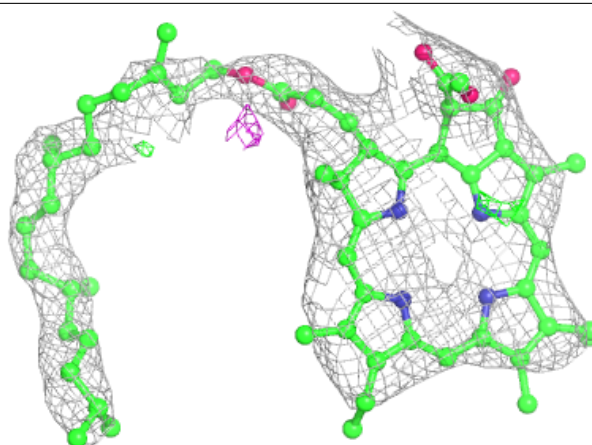
**Electron density around BCR BB 5621:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

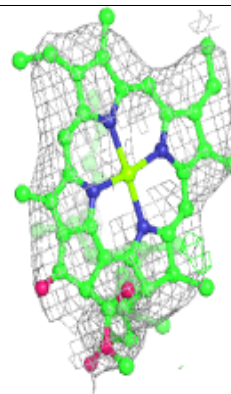
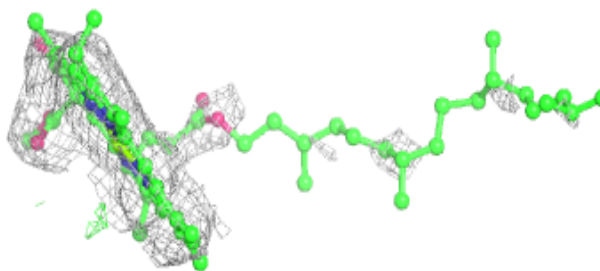
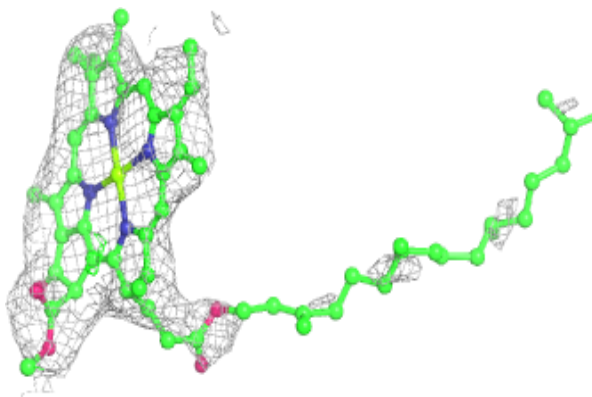


Electron density around PHO BD 5403:

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)

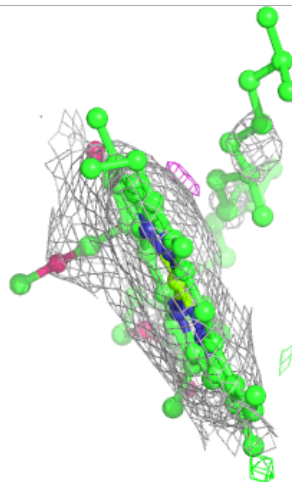
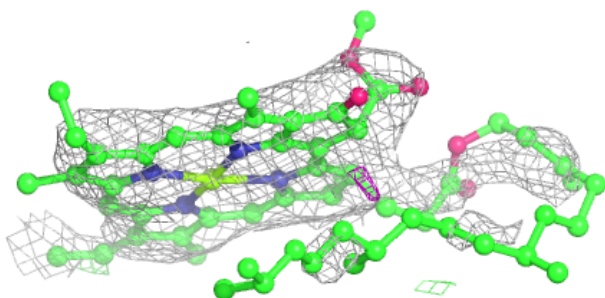
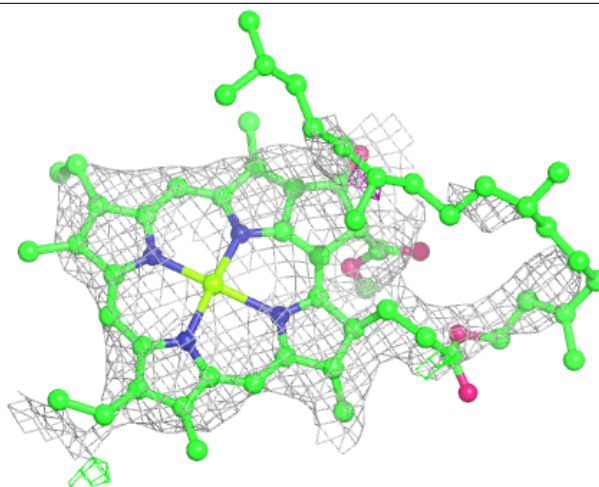
**Electron density around CLA BA 5408:**

$2mF_o-DF_c$ (at 0.7 rnsd) in gray
 mF_o-DF_c (at 3 rnsd) in purple (negative)
and green (positive)



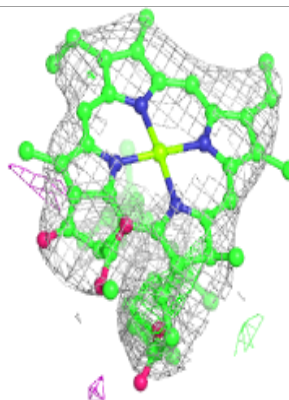
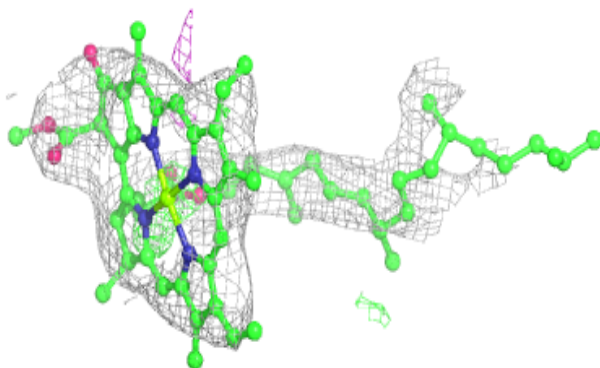
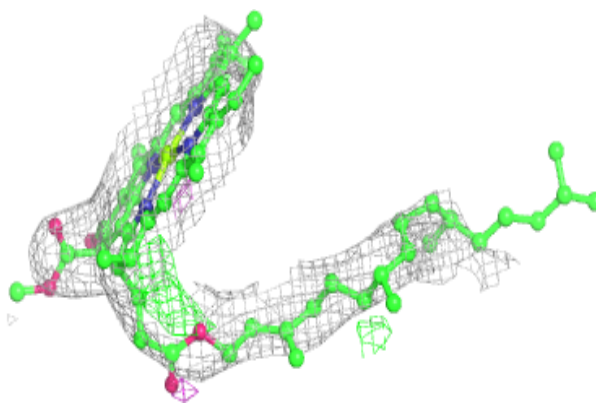
Electron density around CLA BC 5509:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

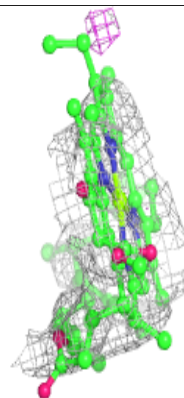
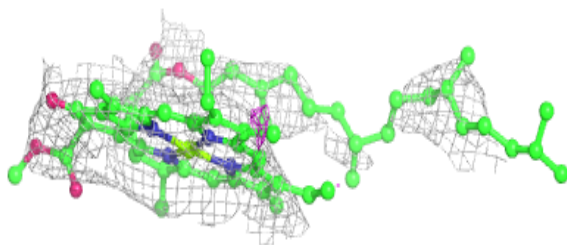
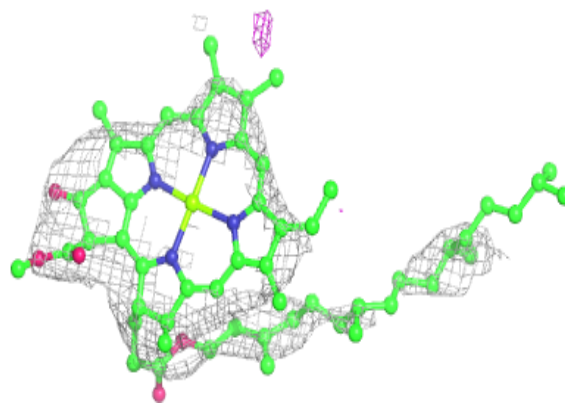


Electron density around CLA AC 504:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

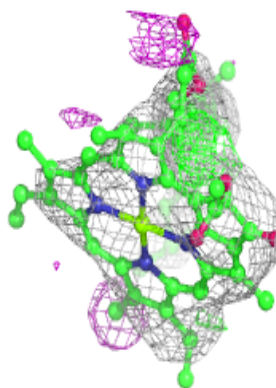
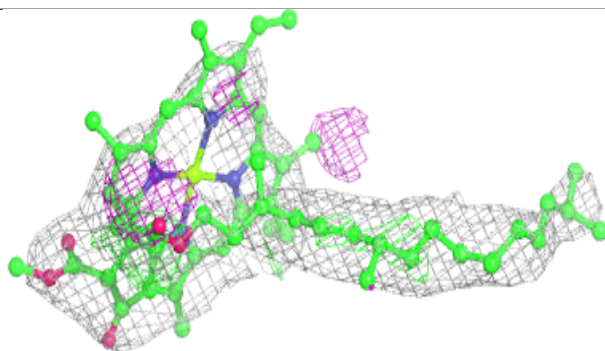
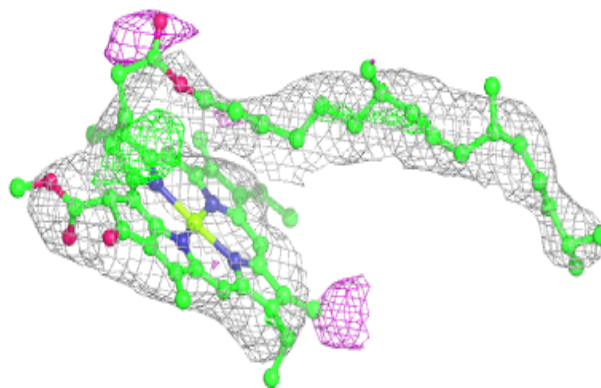
**Electron density around CLA BC 5501:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

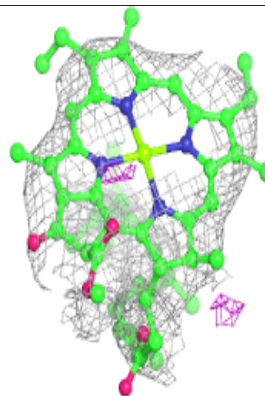
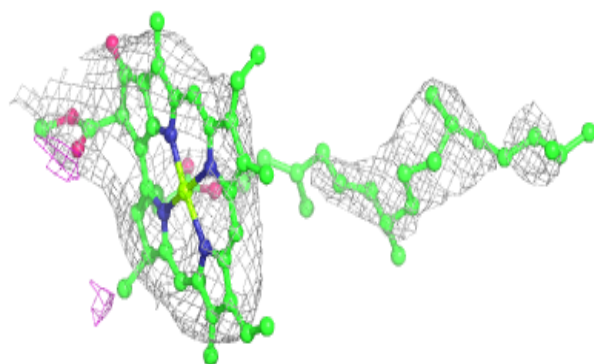
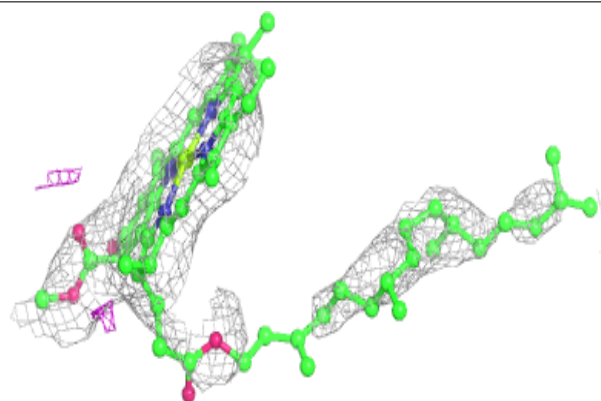


Electron density around CLA AB 608:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

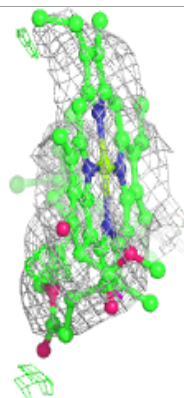
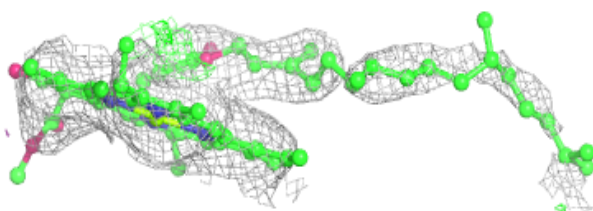
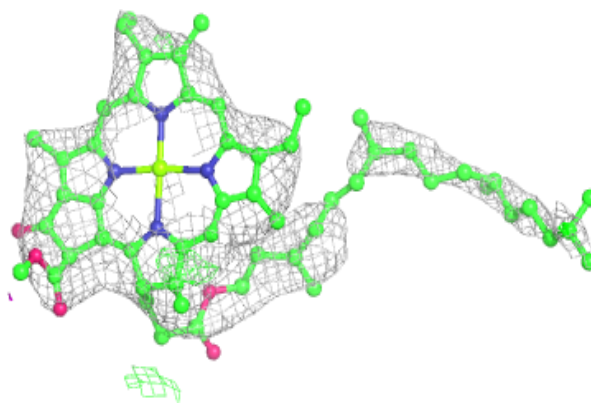
**Electron density around CLA BC 5504:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

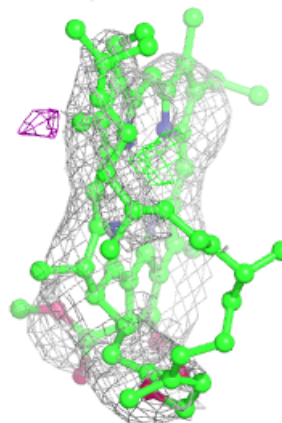
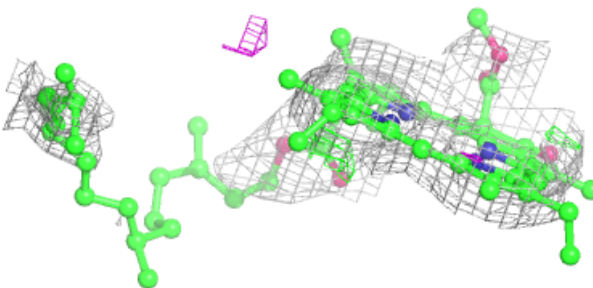
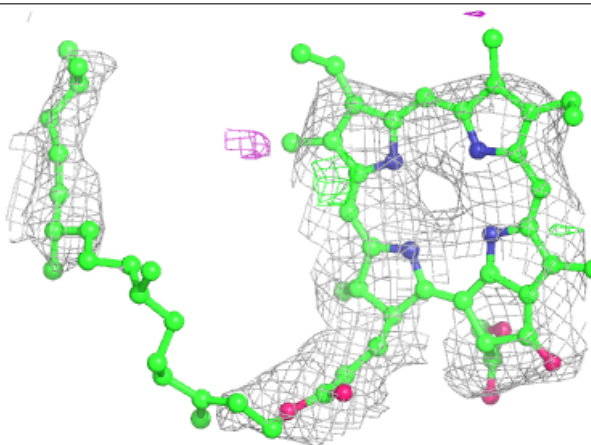


Electron density around CLA BB 5607:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

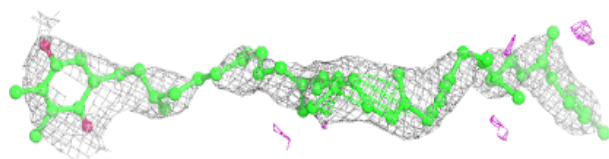
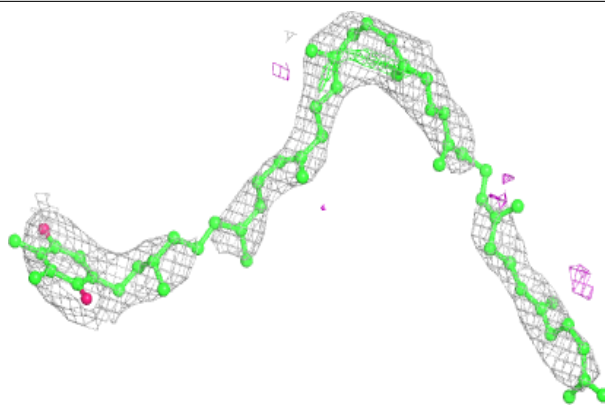
**Electron density around PHO BD 5404:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

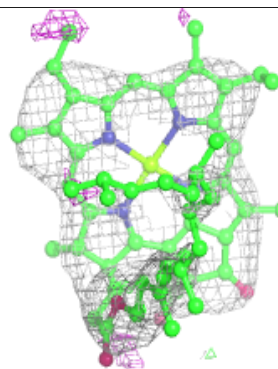
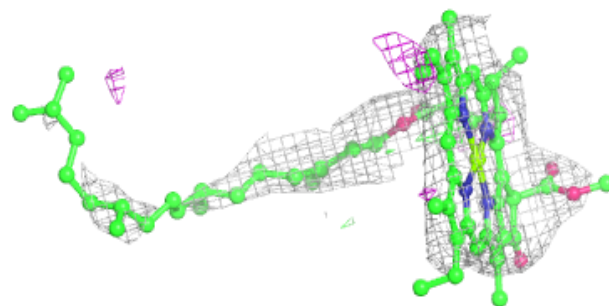
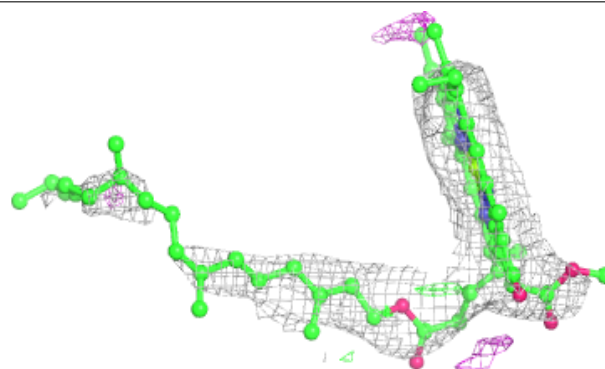


Electron density around PL9 AD 405:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

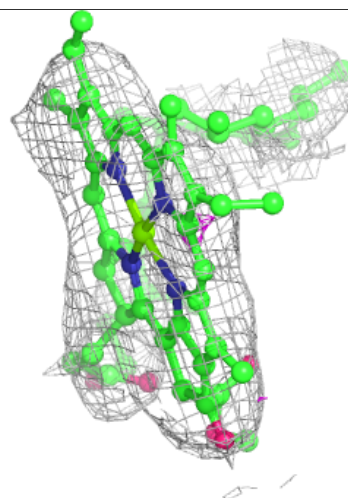
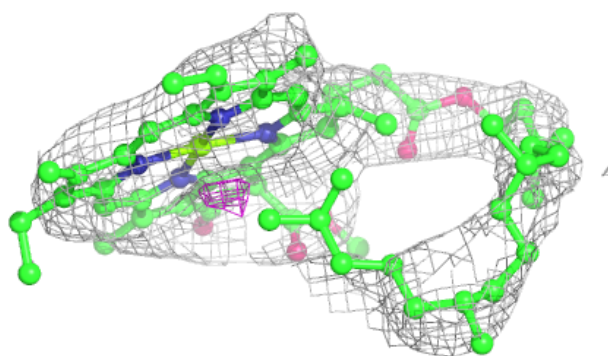
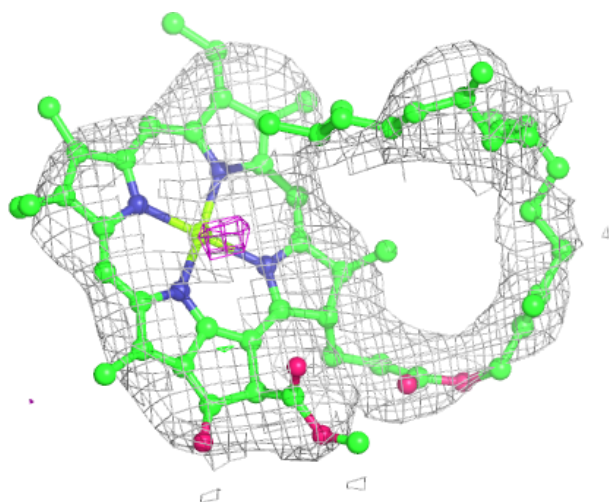
**Electron density around CLA AB 605:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



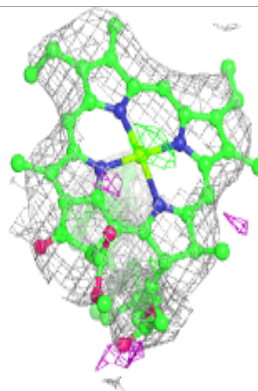
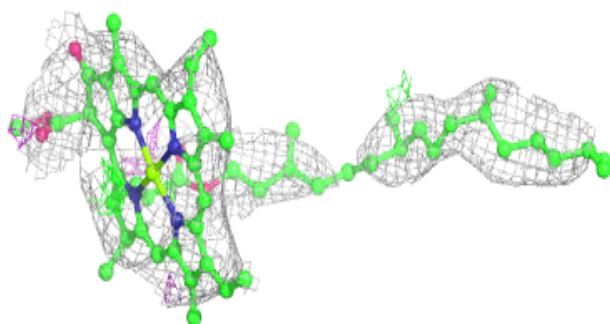
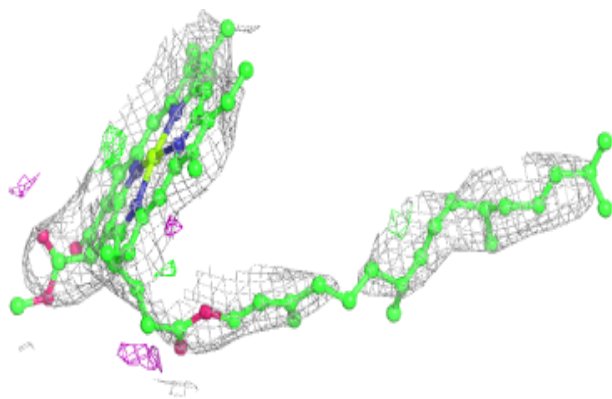
Electron density around CLA BB 5619:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

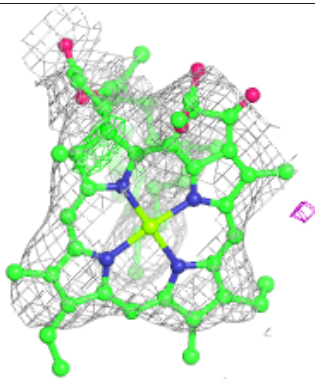
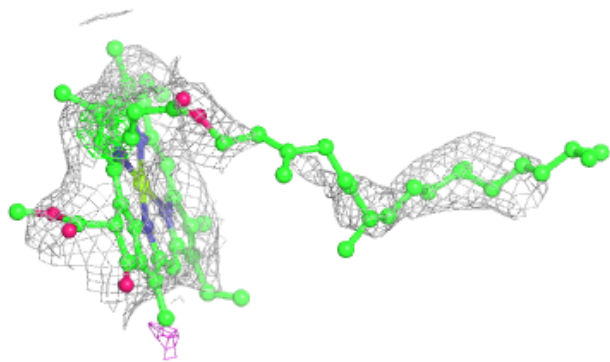
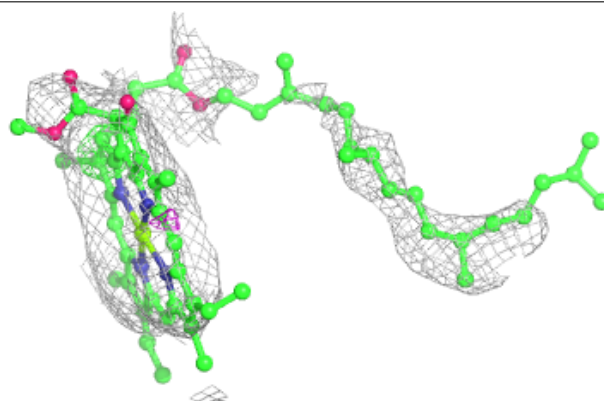


Electron density around CLA BB 5611:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

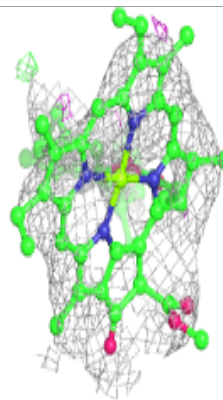
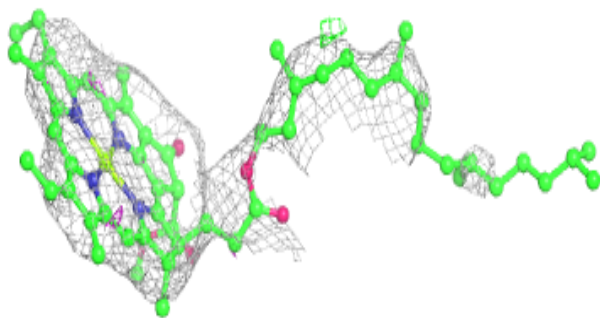
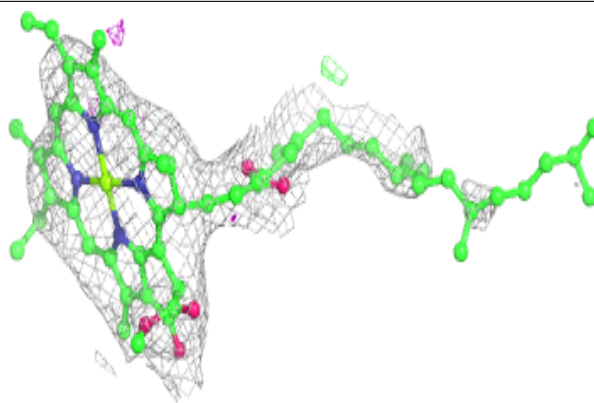
**Electron density around CLA AC 508:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

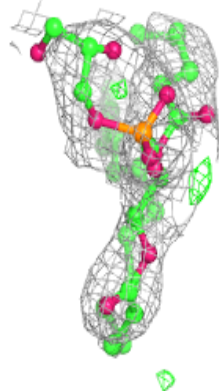
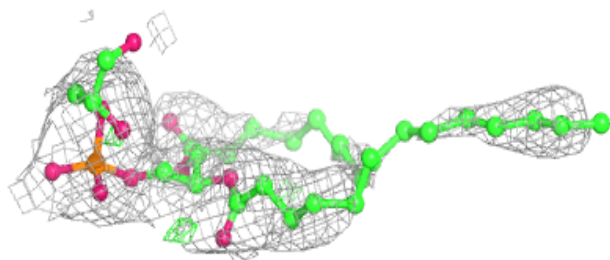
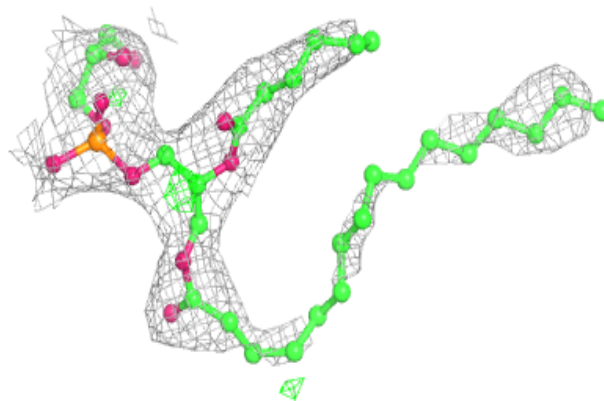


Electron density around CLA BC 5502:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

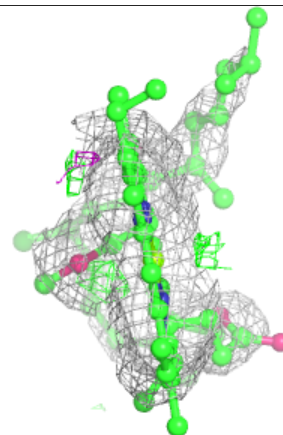
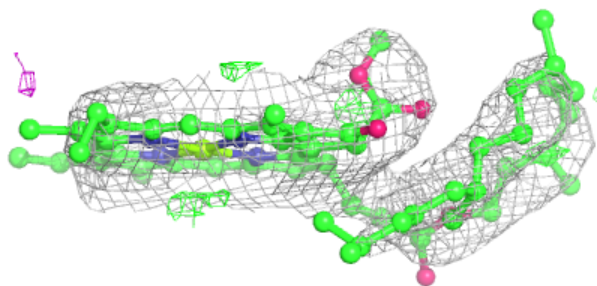
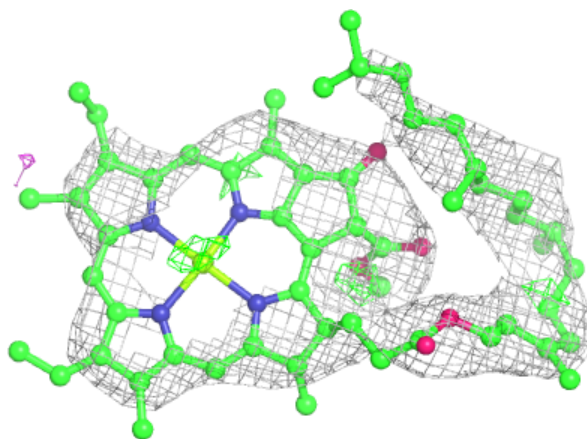
**Electron density around LHG AA 412:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



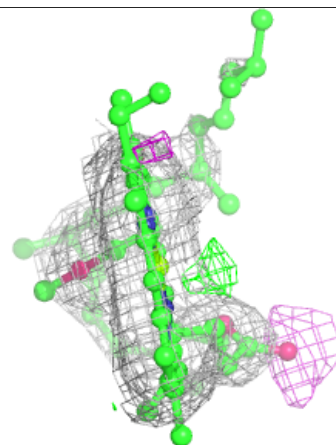
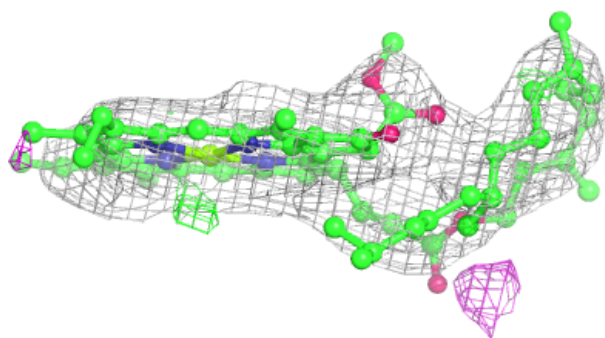
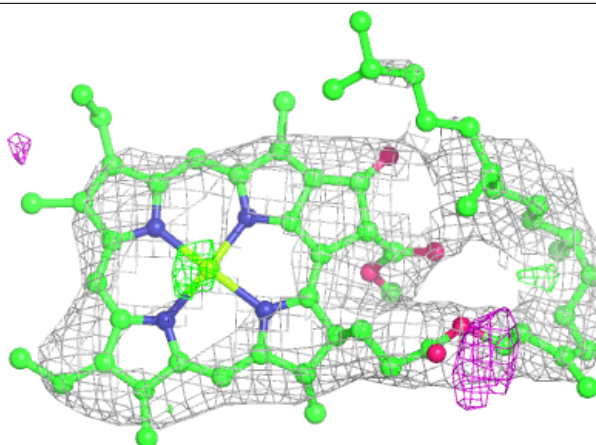
Electron density around CLA BB 5614:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

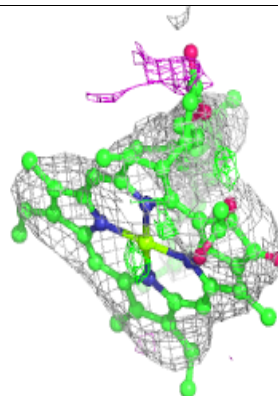
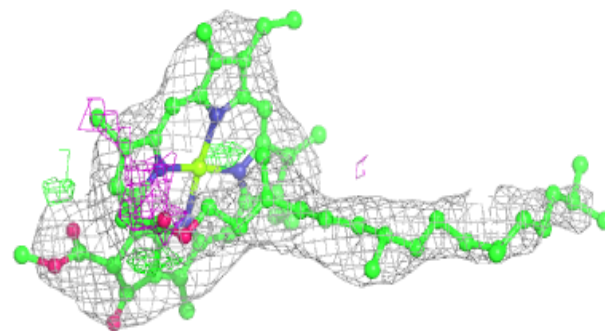
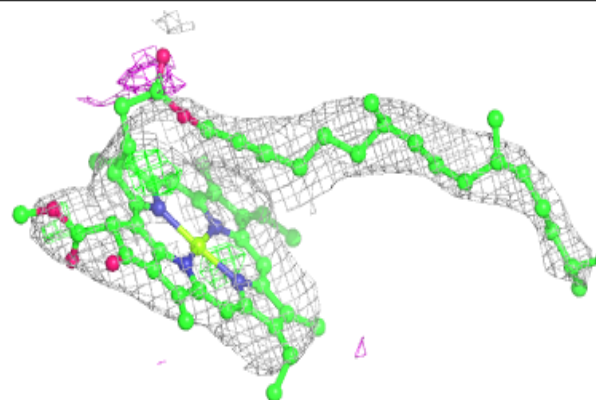


Electron density around CLA AB 610:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

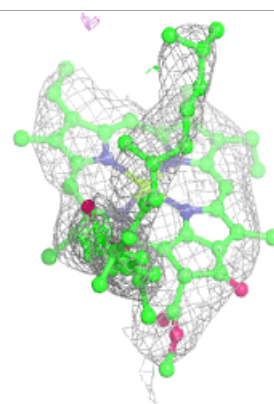
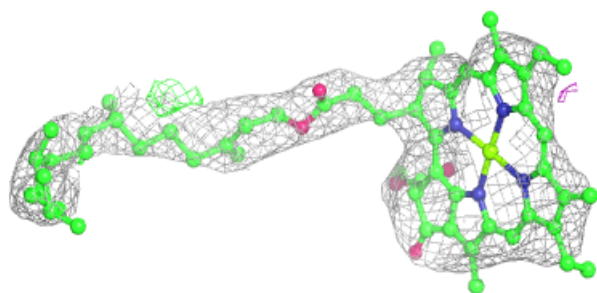
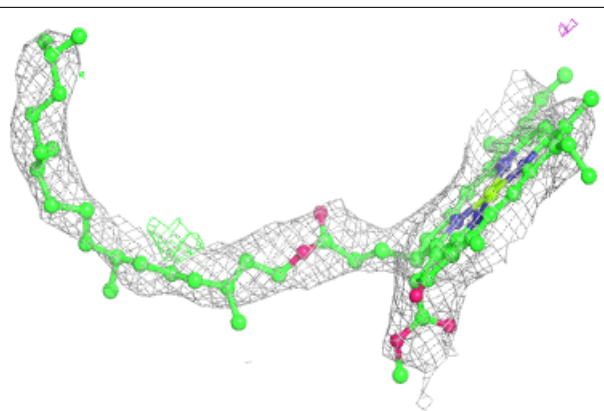
**Electron density around CLA BB 5612:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

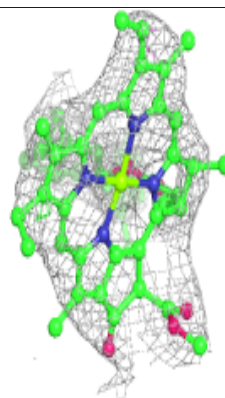
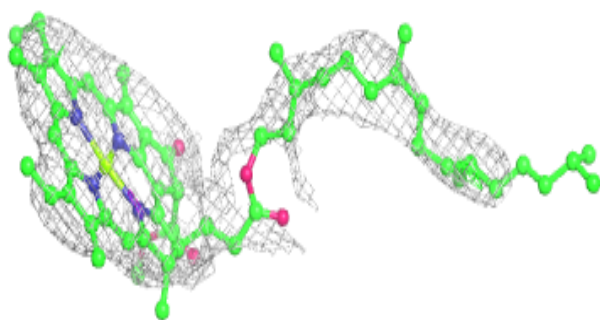
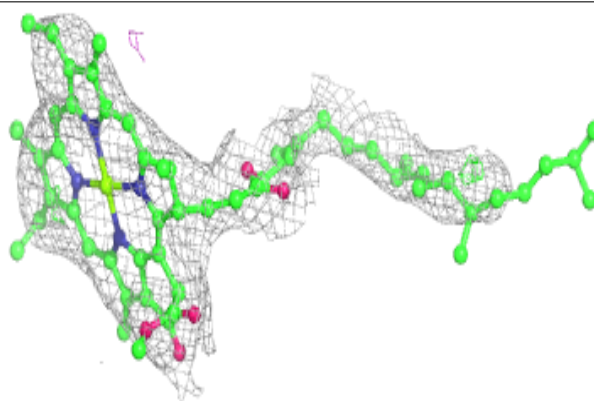


Electron density around CLA BD 5402:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

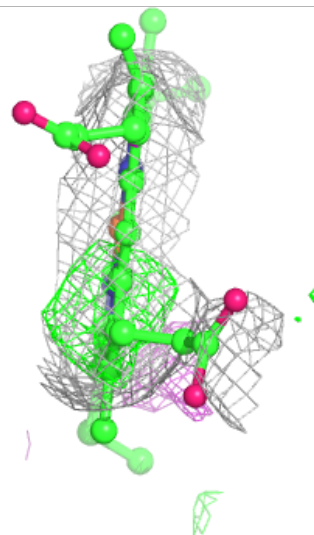
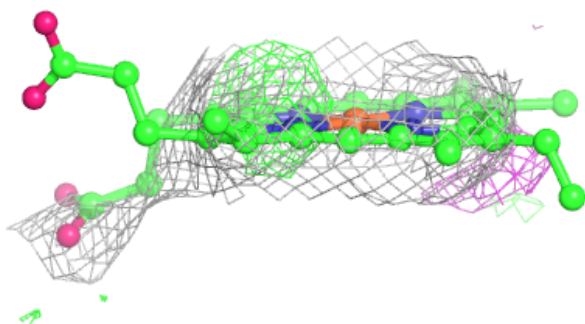
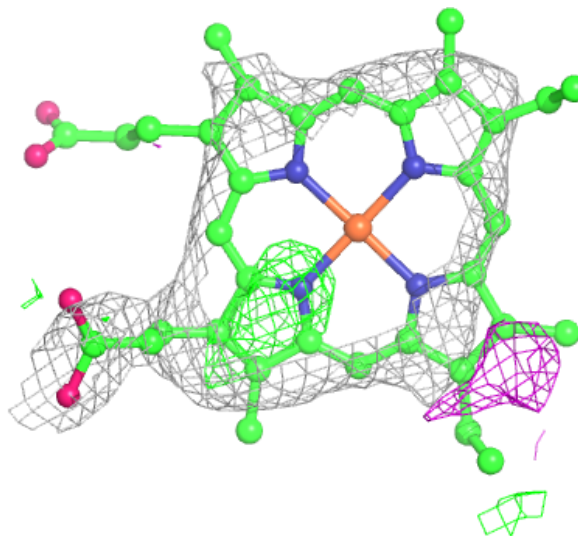
**Electron density around CLA AC 502:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



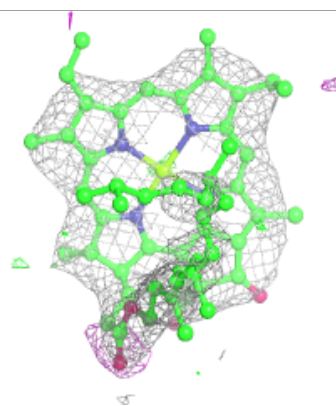
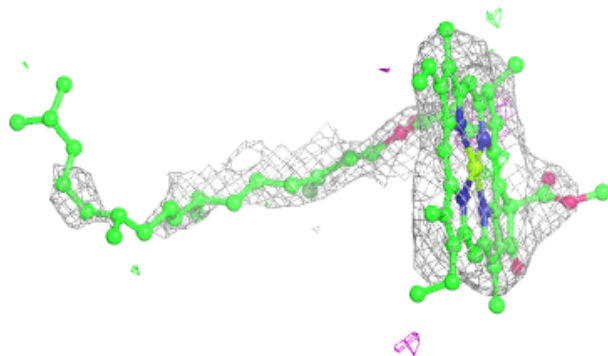
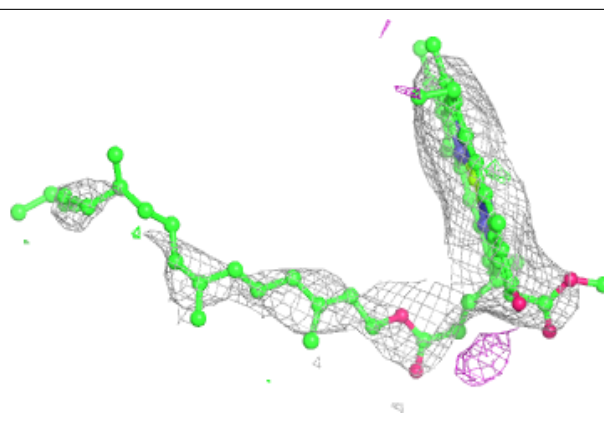
Electron density around HEM BF 5101:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

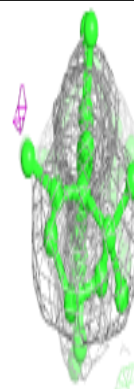
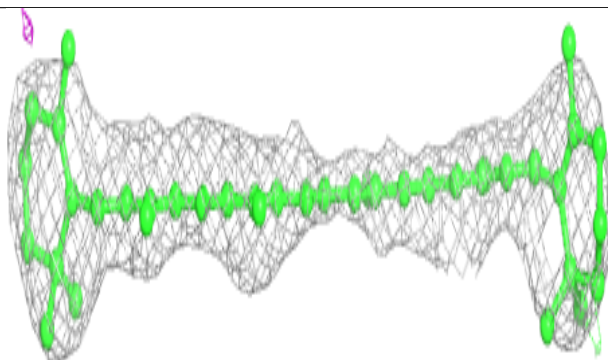
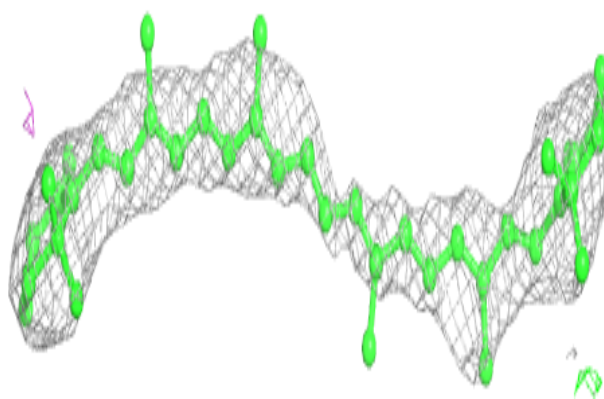


Electron density around CLA BB 5609:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

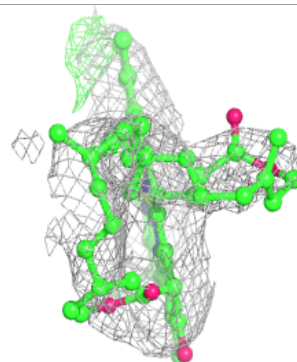
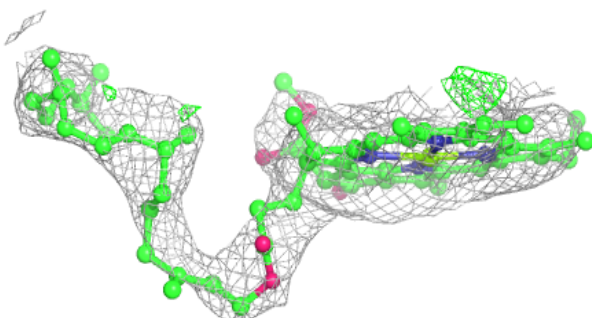
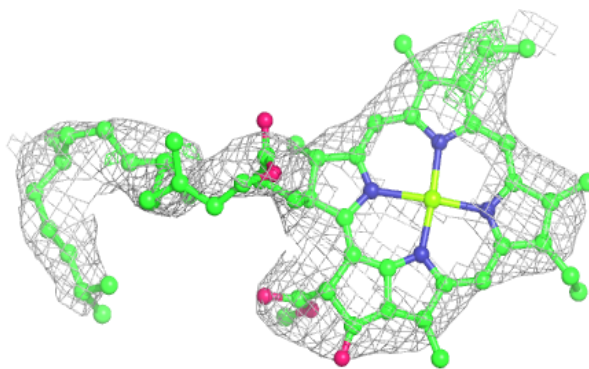
**Electron density around BCR AA 410:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

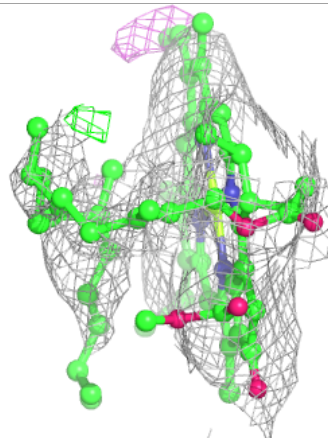
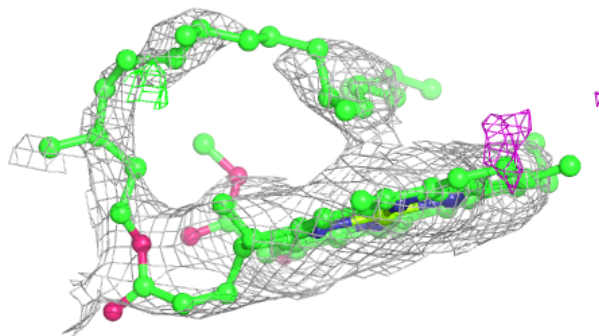
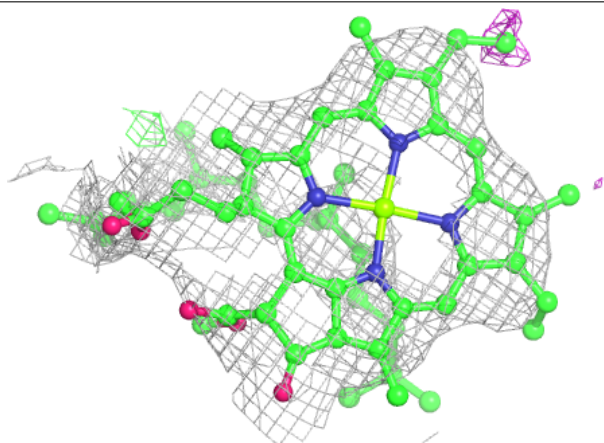


Electron density around CLA BB 5616:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

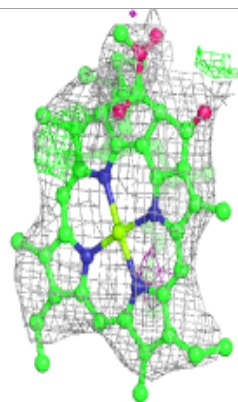
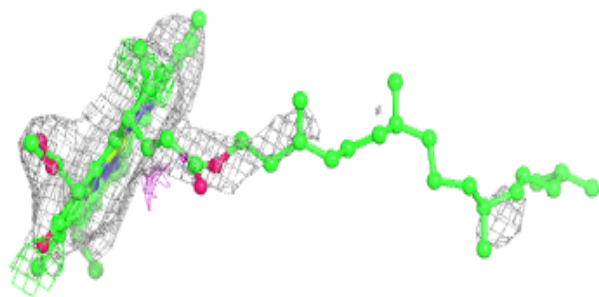
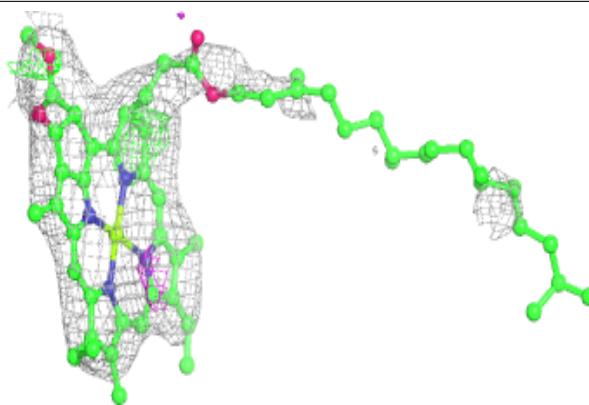
**Electron density around CLA BC 5510:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

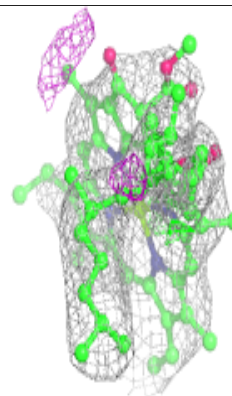
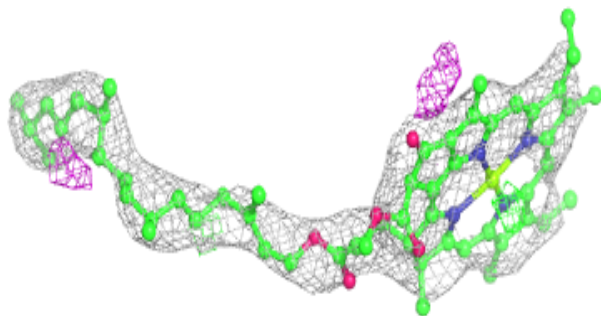
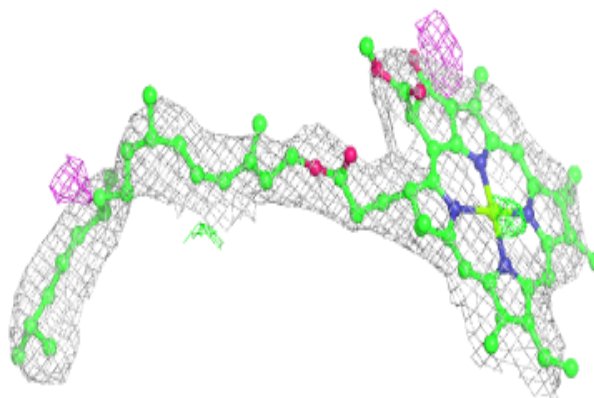


Electron density around CLA AA 407:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

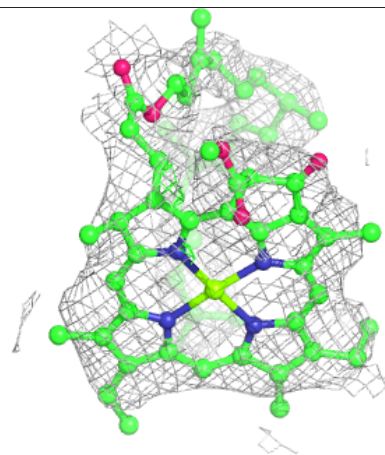
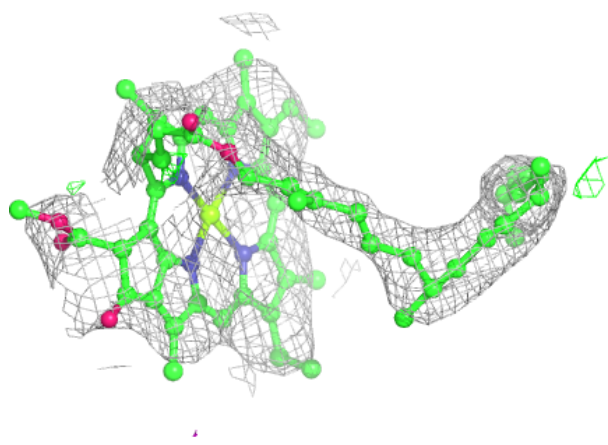
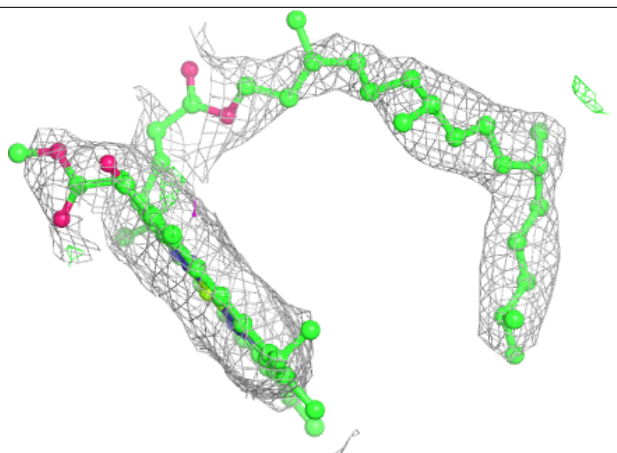
**Electron density around CLA AA 404:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



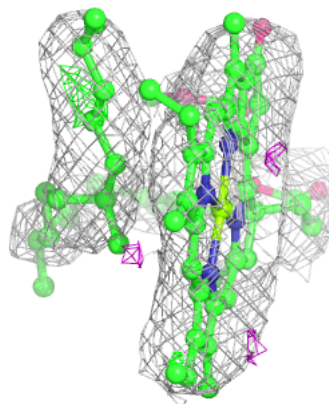
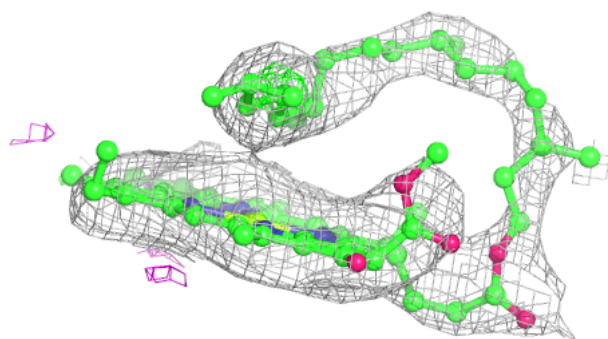
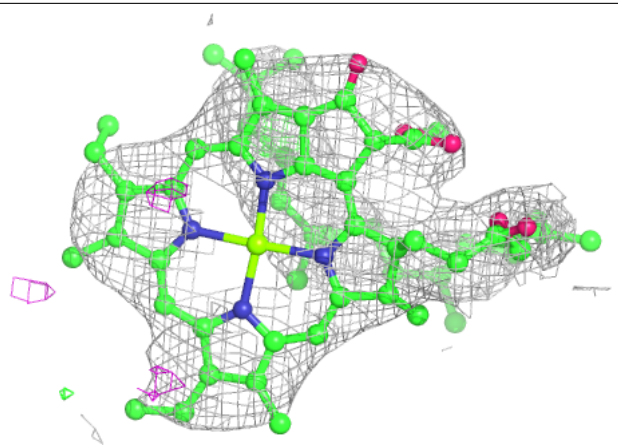
Electron density around CLA BB 5615:

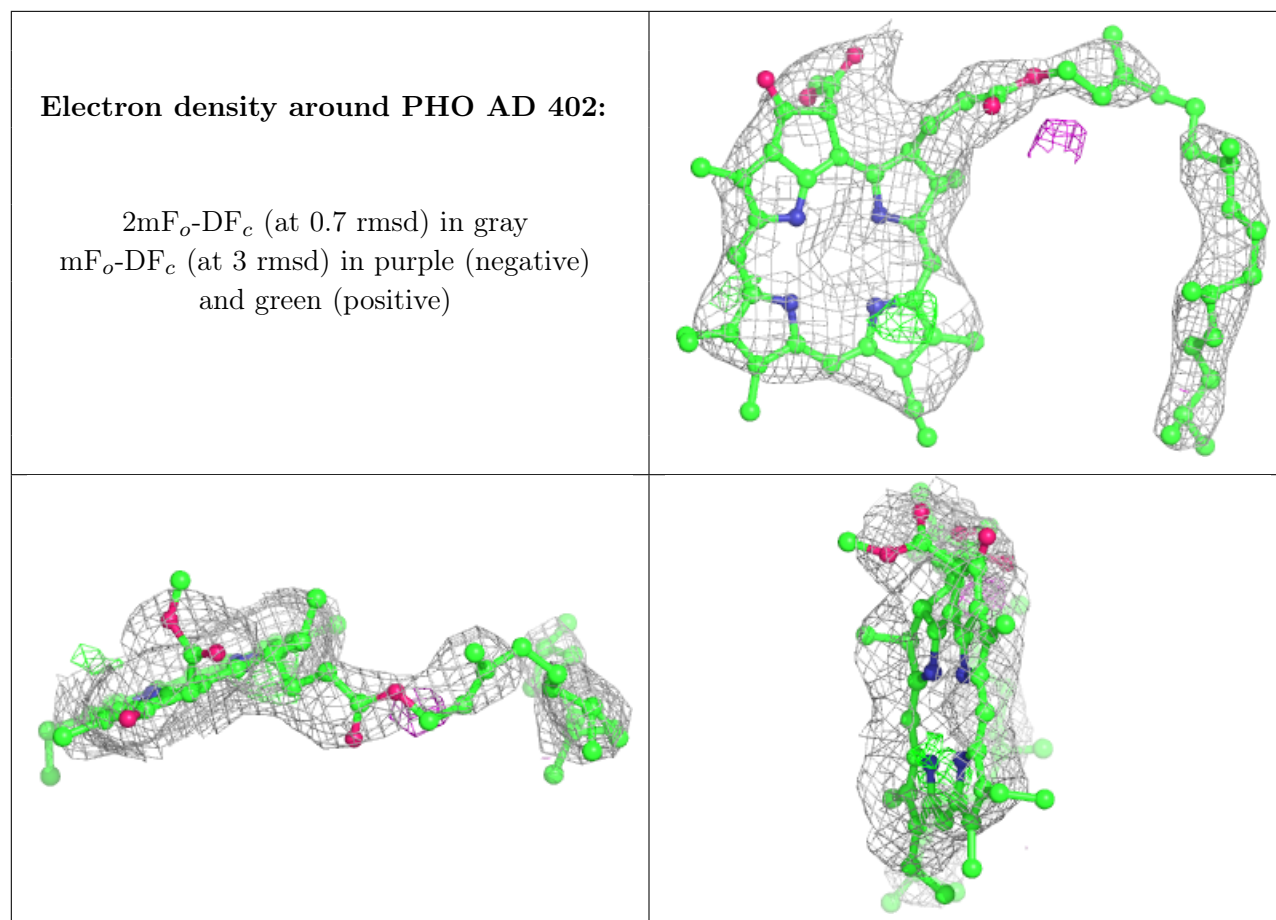
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CLA AC 510:

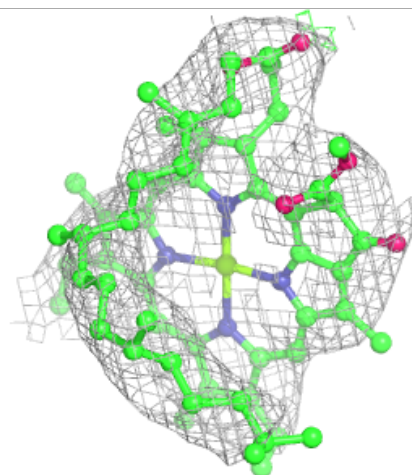
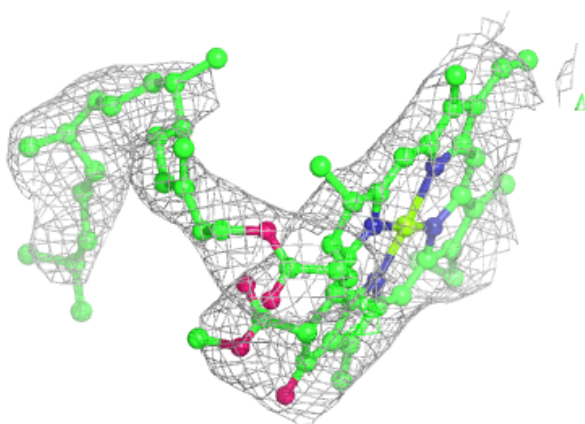
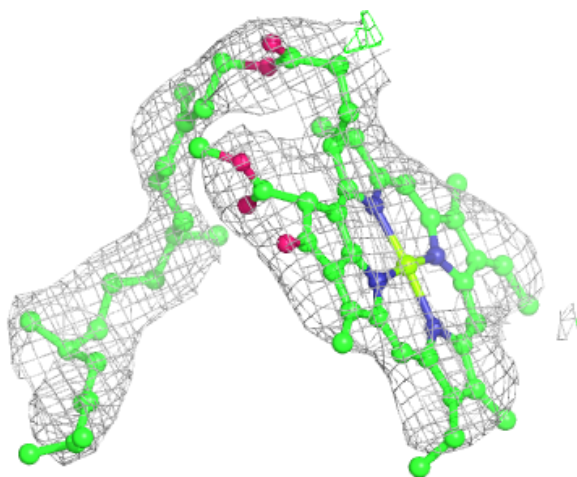
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





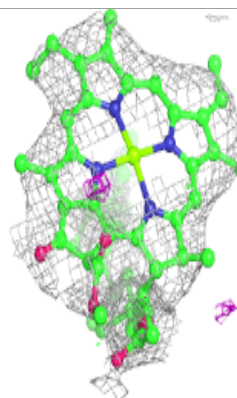
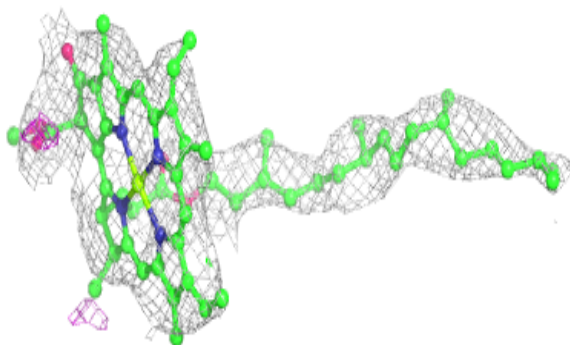
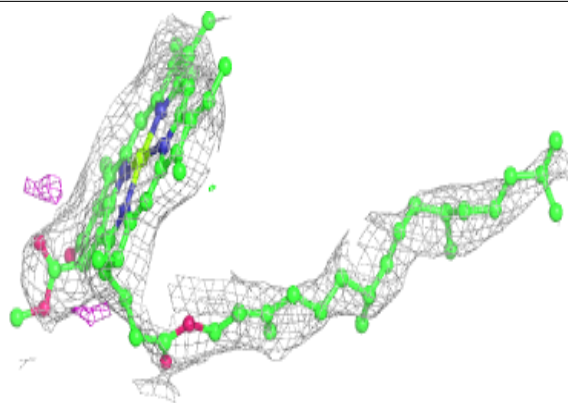
Electron density around CLA BB 5617:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

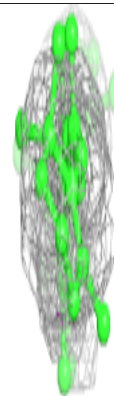
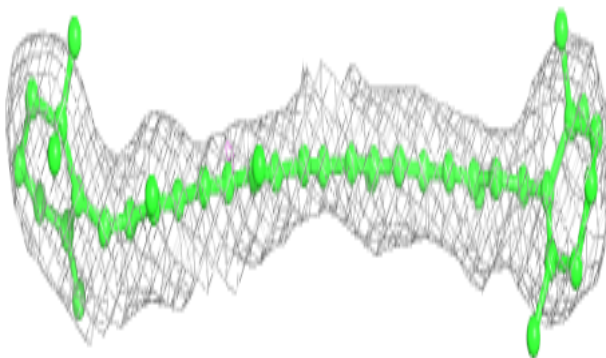
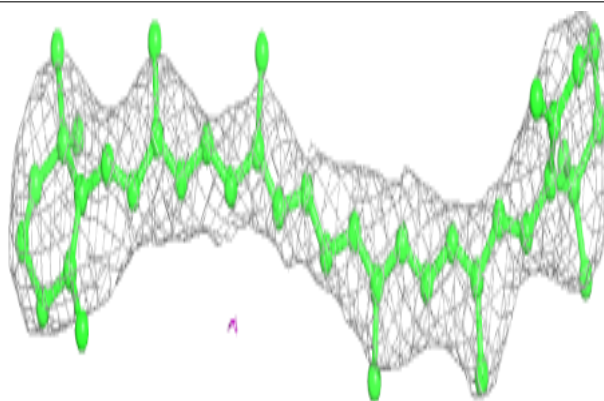


Electron density around CLA AB 607:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

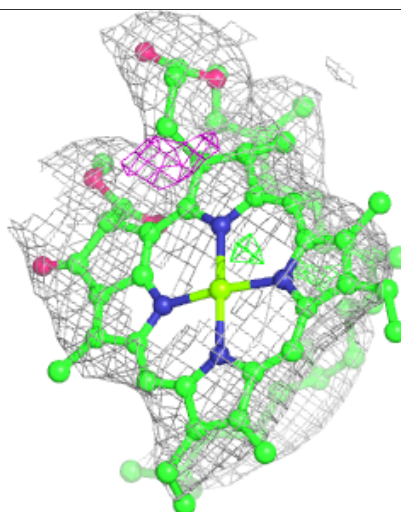
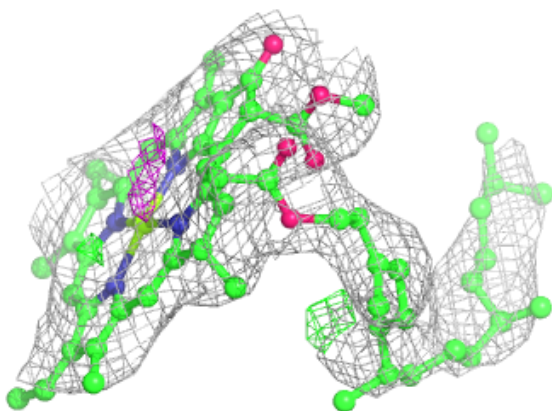
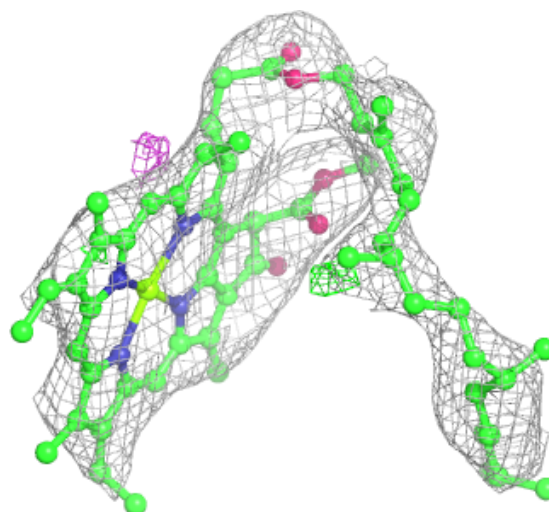
**Electron density around BCR BB 5622:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



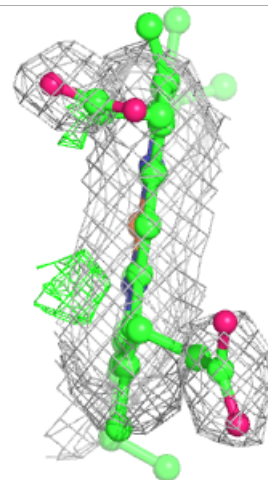
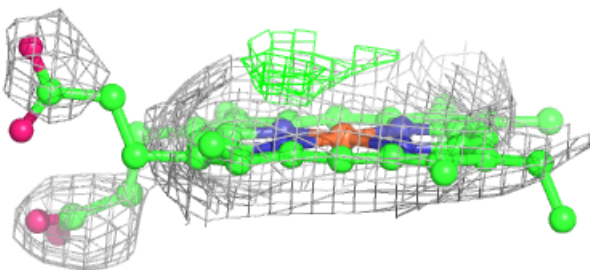
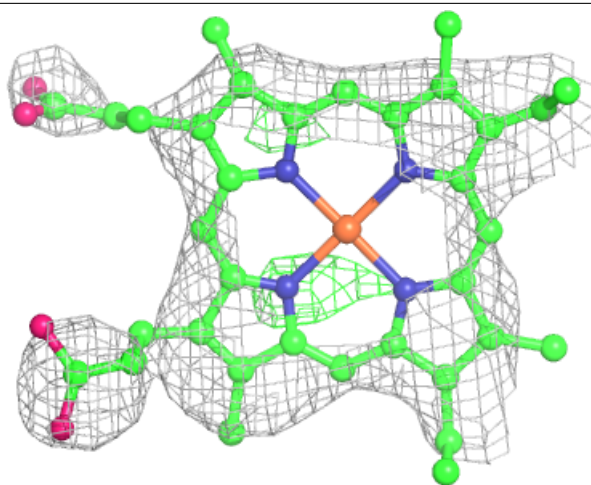
Electron density around CLA AB 613:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



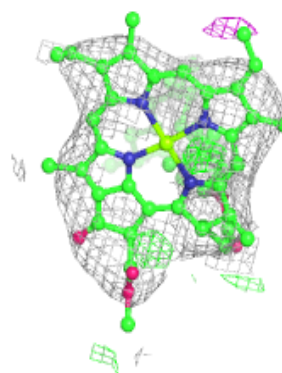
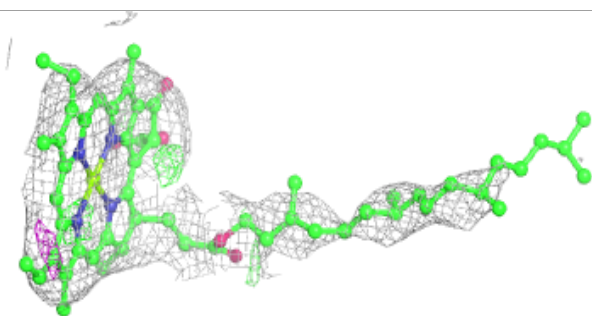
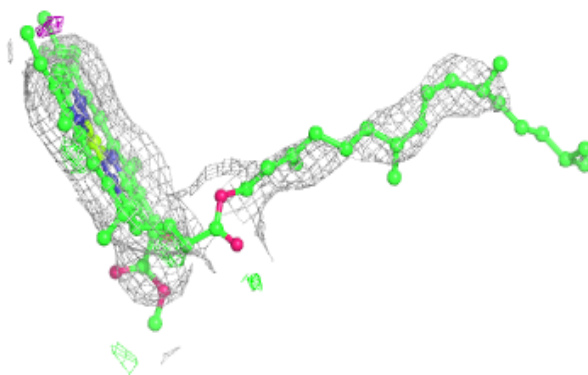
Electron density around HEM BV 5201:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

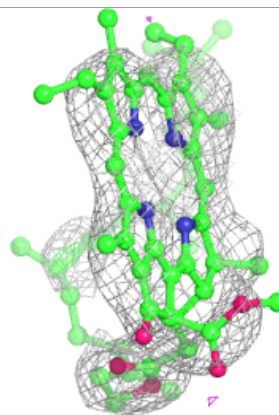
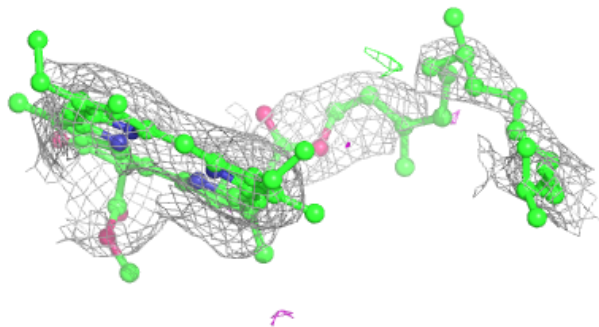
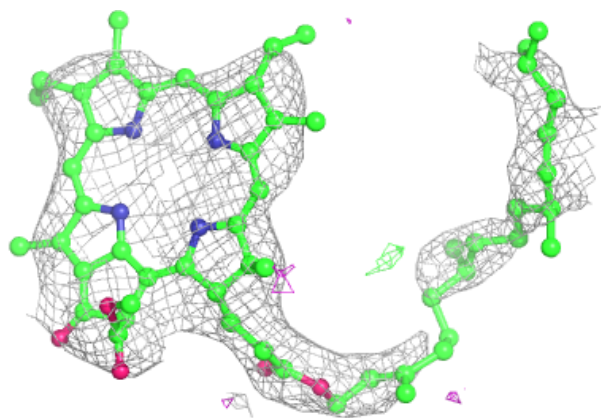


Electron density around CLA AB 604:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

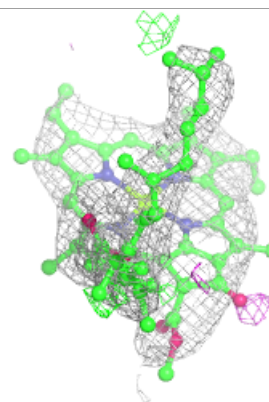
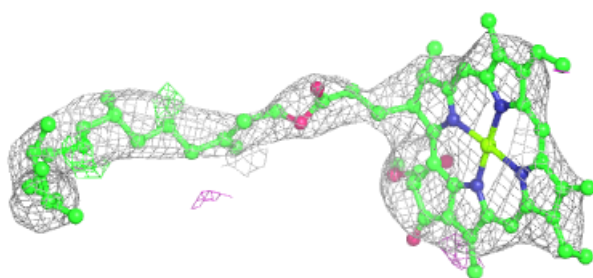
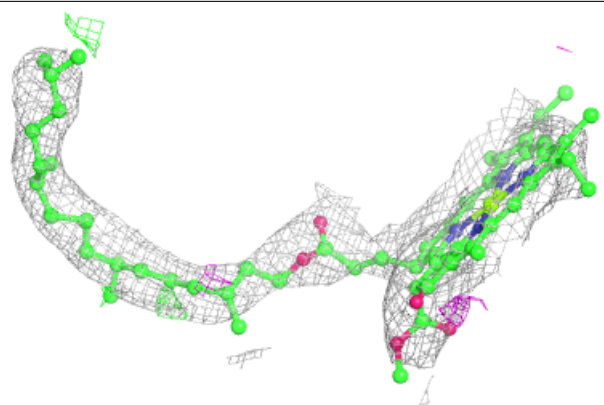
**Electron density around PHO AD 403:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

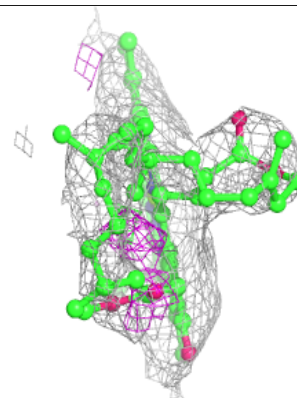
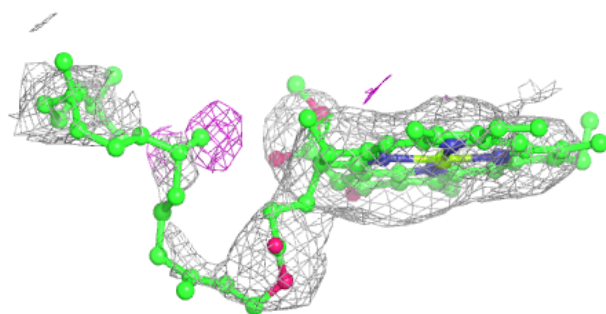
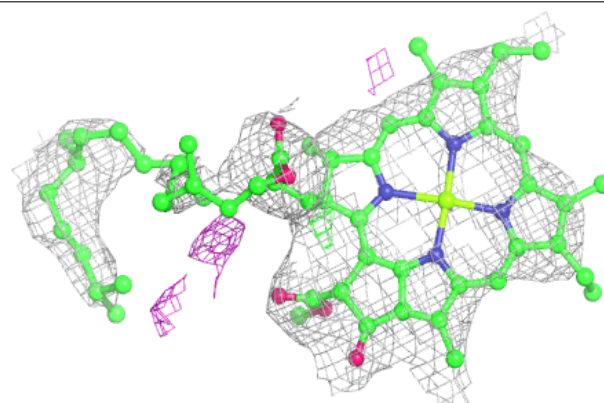


Electron density around CLA AD 401:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)

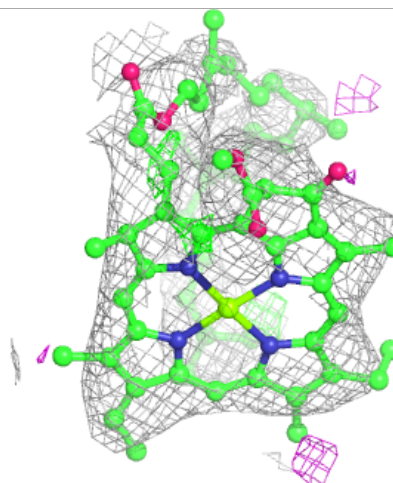
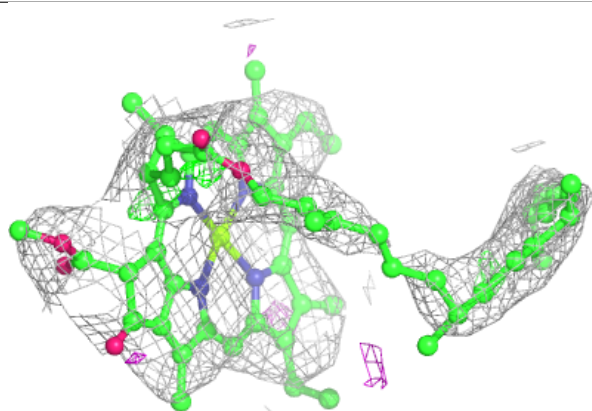
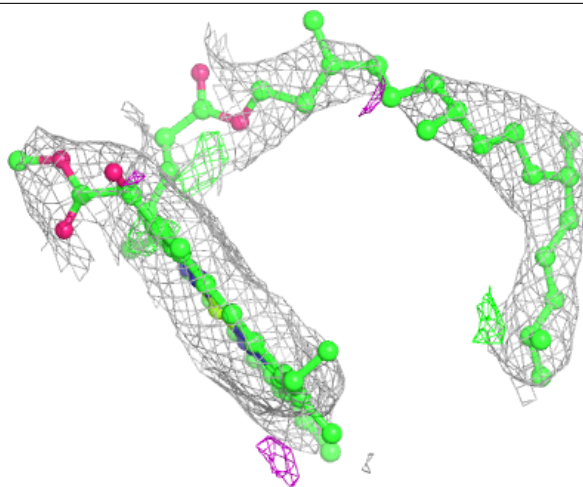
**Electron density around CLA AB 612:**

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



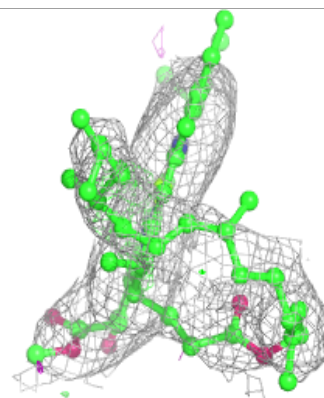
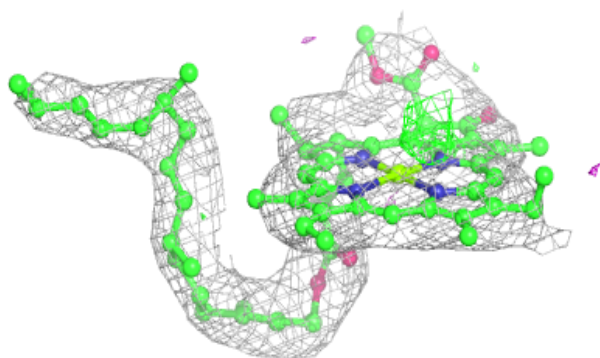
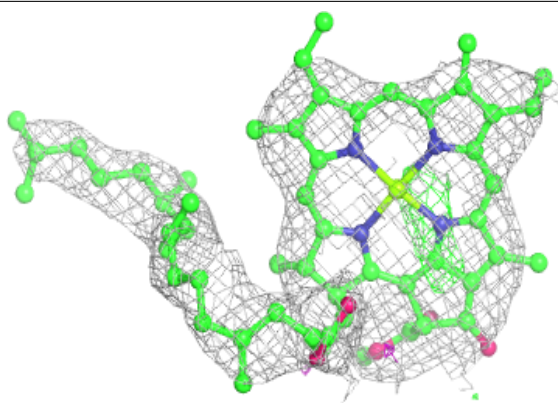
Electron density around CLA AB 611:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



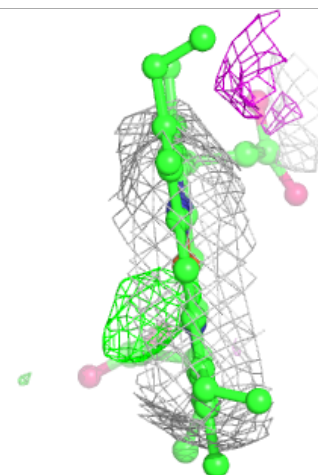
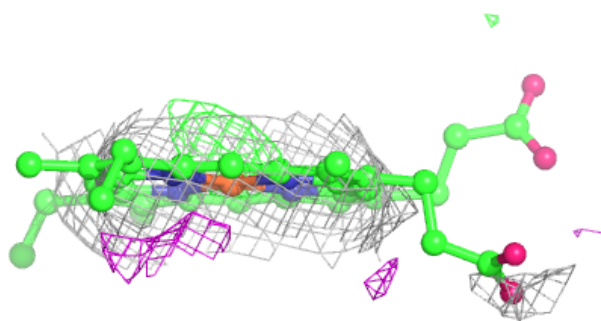
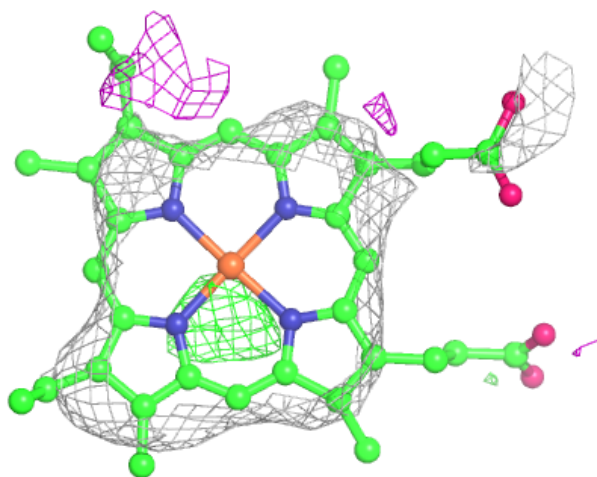
Electron density around CLA AA 405:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



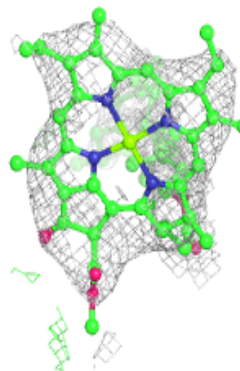
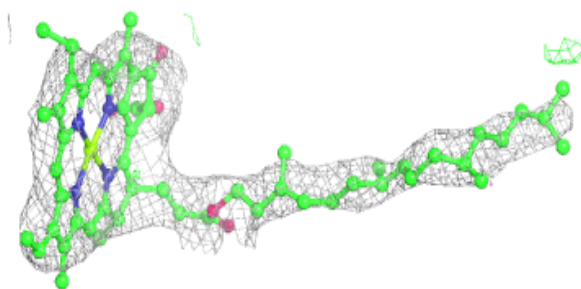
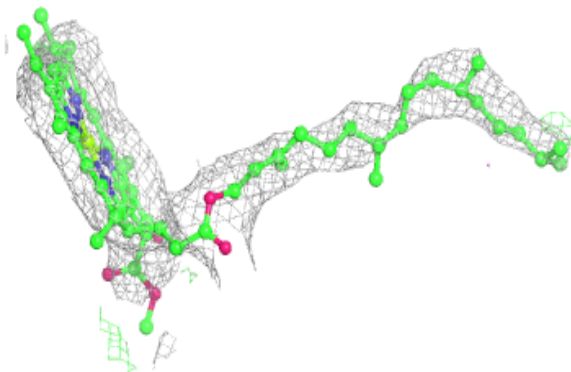
Electron density around HEM AF 101:

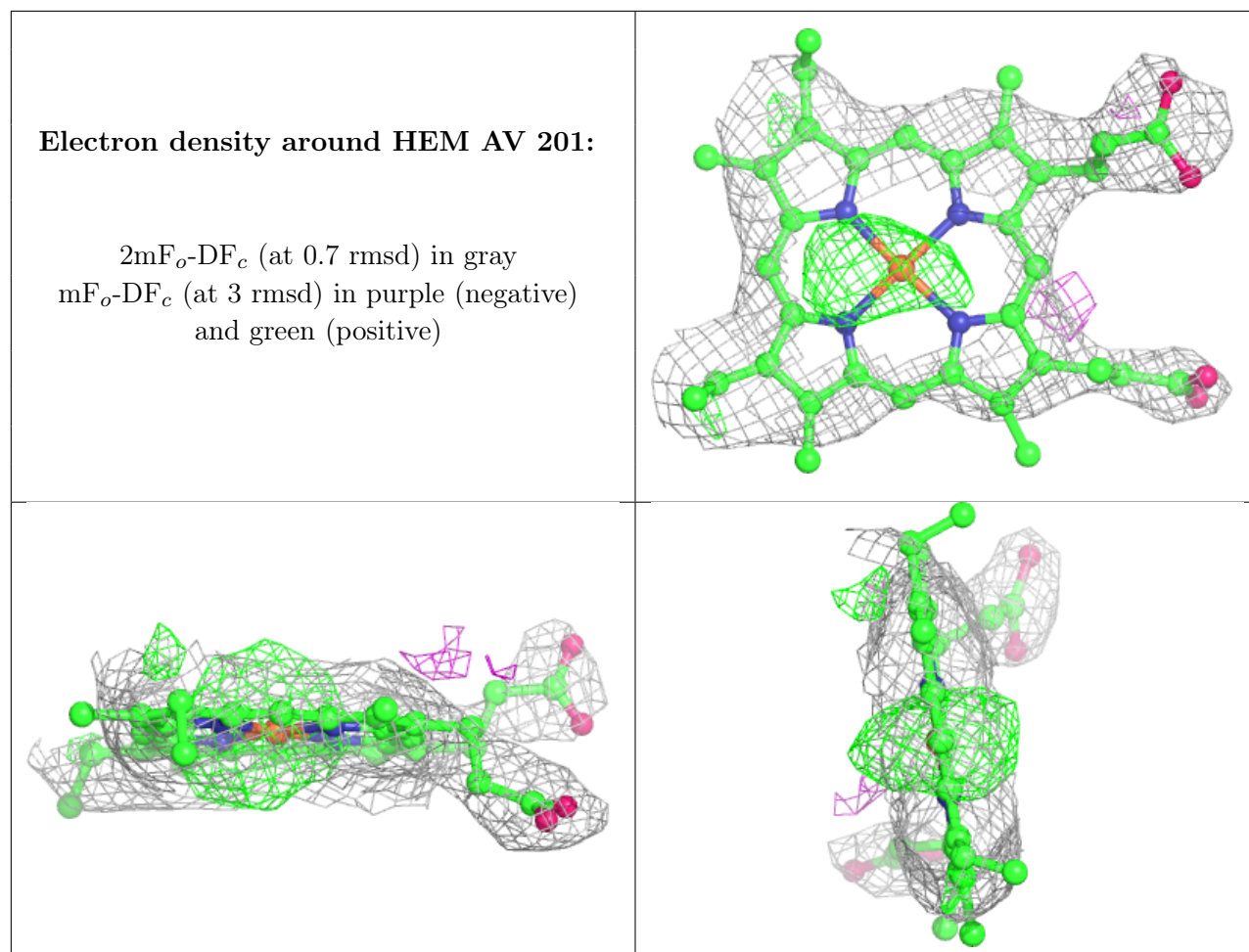
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around CLA BB 5608:

$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)





6.5 Other polymers [i](#)

There are no such residues in this entry.