



Full wwPDB EM Validation Report ⓘ

Jun 26, 2025 – 12:49 AM JST

PDB ID : 7VH5 / pdb_00007vh5
EMDB ID : EMD-31986
Title : Cryo-EM structure of the hexameric plasma membrane H⁺-ATPase in the autoinhibited state (pH 7.4, C1 symmetry)
Authors : Zhao, P.; Zhao, C.; Chen, D.; Yun, C.; Li, H.; Bai, L.
Deposited on : 2021-09-21
Resolution : 3.20 Å(reported)

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

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

A user guide is available at

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

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev118
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4-5-2 with Phenix2.0rc1
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.44

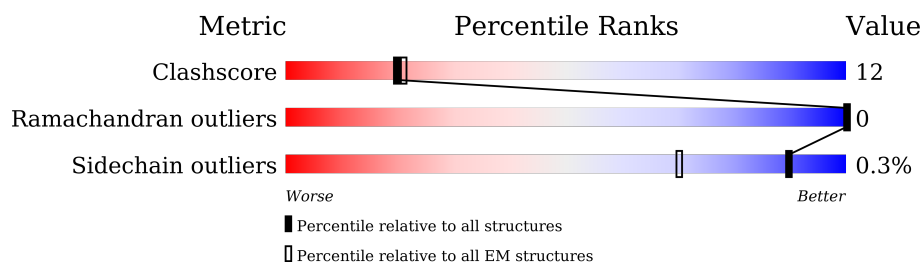
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 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)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	918	<div> <div>19%</div> <div>68%</div> <div>19%</div> <div>12%</div> </div>
1	B	918	<div> <div>28%</div> <div>68%</div> <div>19%</div> <div>12%</div> </div>
1	C	918	<div> <div>29%</div> <div>69%</div> <div>19%</div> <div>12%</div> </div>
1	D	918	<div> <div>30%</div> <div>68%</div> <div>19%</div> <div>12%</div> </div>
1	E	918	<div> <div>32%</div> <div>69%</div> <div>19%</div> <div>12%</div> </div>
1	F	918	<div> <div>33%</div> <div>69%</div> <div>18%</div> <div>12%</div> </div>

2 Entry composition ⓘ

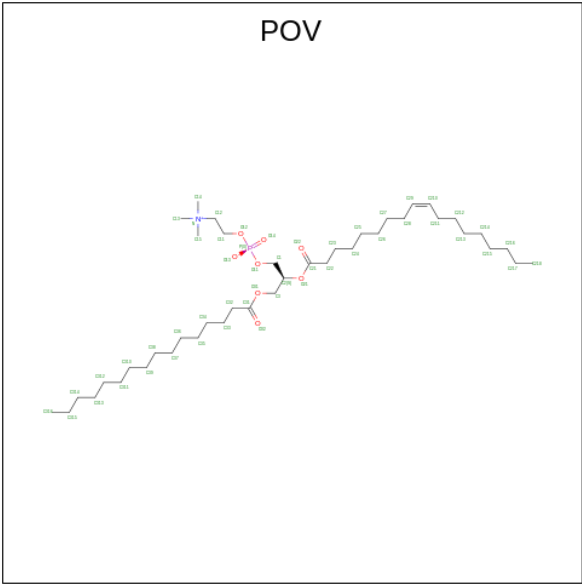
There are 3 unique types of molecules in this entry. The entry contains 39615 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Plasma membrane ATPase 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	804	Total	C	N	O	S	0	0
			6157	3976	1020	1130	31		
1	B	804	Total	C	N	O	S	0	0
			6157	3976	1020	1130	31		
1	C	804	Total	C	N	O	S	0	0
			6157	3976	1020	1130	31		
1	D	804	Total	C	N	O	S	0	0
			6157	3976	1020	1130	31		
1	E	804	Total	C	N	O	S	0	0
			6157	3976	1020	1130	31		
1	F	804	Total	C	N	O	S	0	0
			6157	3976	1020	1130	31		

- Molecule 2 is (2S)-3-(hexadecanoyloxy)-2-[(9Z)-octadec-9-enoyloxy]propyl 2-(trimethylamm onio)ethyl phosphate (CCD ID: POV) (formula: C₄₂H₈₂NO₈P).



Mol	Chain	Residues	Atoms					AltConf
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	B	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	

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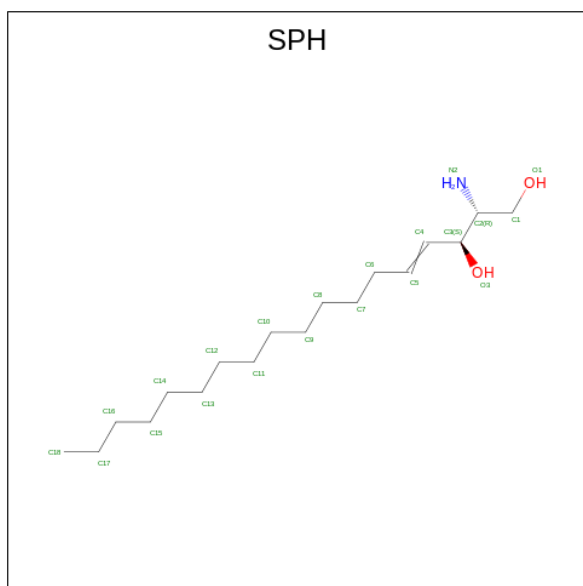
Mol	Chain	Residues	Atoms					AltConf
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	C	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	E	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	

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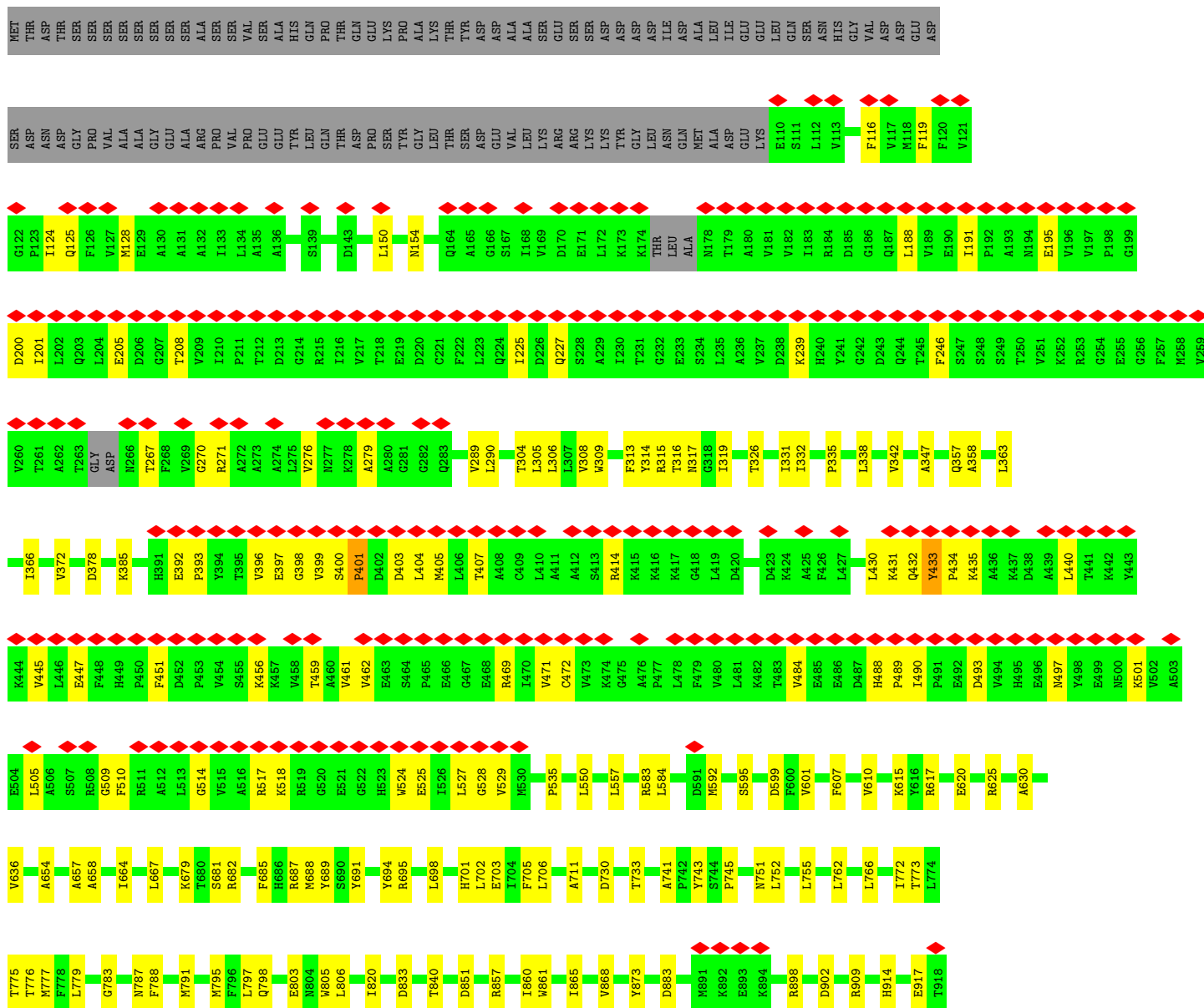
Mol	Chain	Residues	Atoms					AltConf
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	F	1	Total	C	N	O	P	0
			52	42	1	8	1	

- Molecule 3 is SPHINGOSINE (CCD ID: SPH) (formula: $C_{18}H_{37}NO_2$).

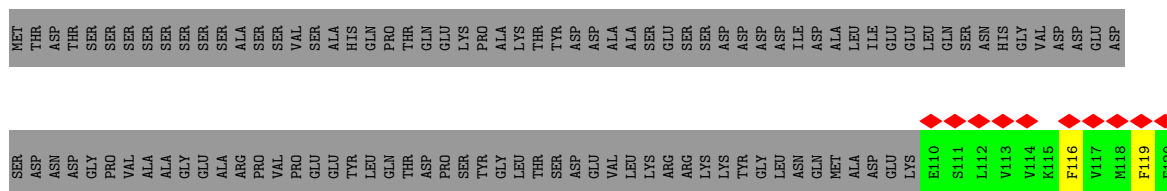


Mol	Chain	Residues	Atoms					AltConf
3	F	1	Total	C	N	O		0
			21	18	1	2		

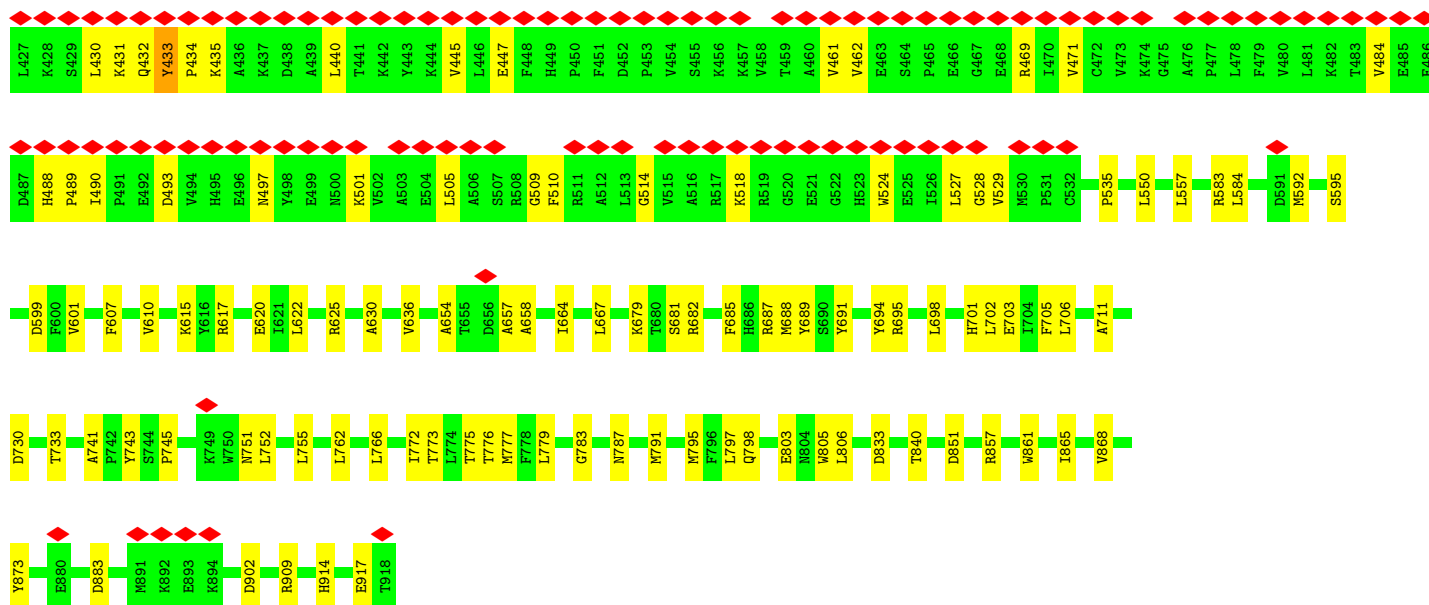
Chain B:



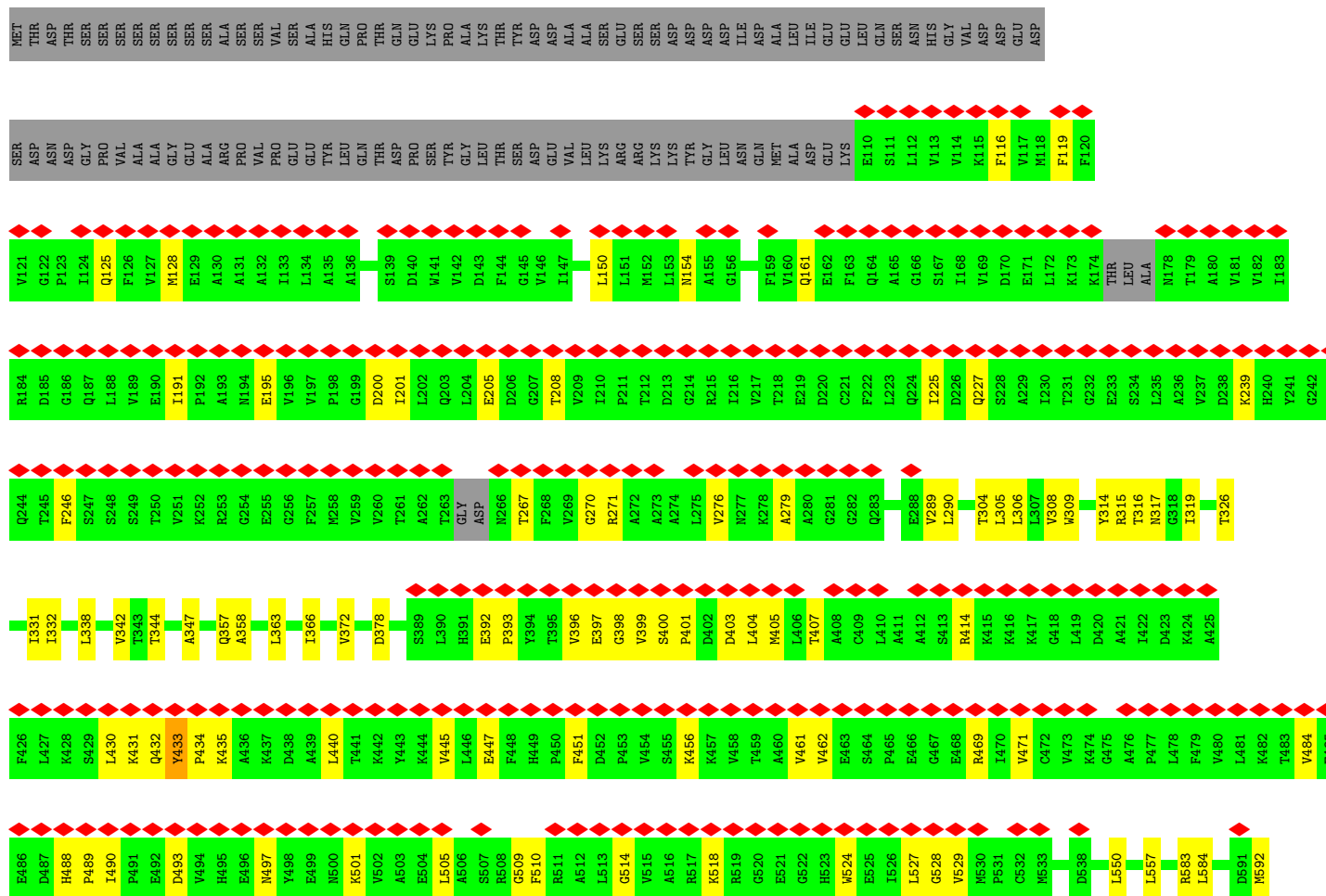
Chain C: 

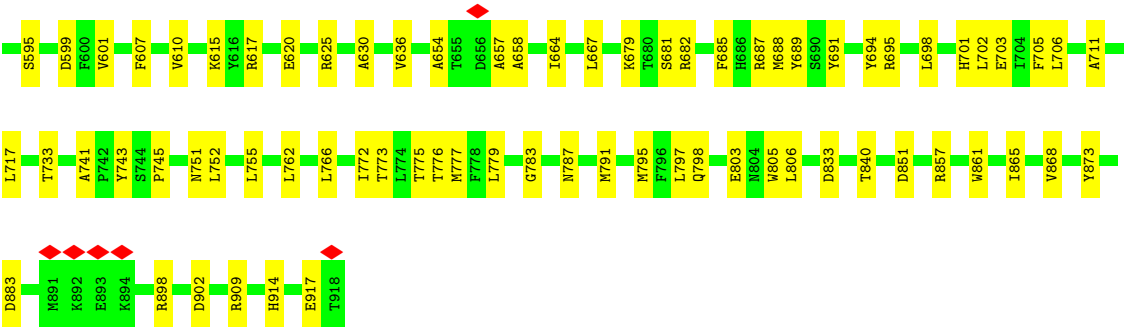






• Molecule 1: Plasma membrane ATPase 1





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	179392	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.6	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.185	Depositor
Minimum map value	-0.110	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.019	Depositor
Map size (\AA)	308.7, 308.7, 308.7	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.029, 1.029, 1.029	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: SPH, POV

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.57	0/6282	0.60	2/8531 (0.0%)
1	B	0.57	0/6282	0.60	2/8531 (0.0%)
1	C	0.57	0/6282	0.60	2/8531 (0.0%)
1	D	0.57	0/6282	0.60	2/8531 (0.0%)
1	E	0.57	0/6282	0.60	2/8531 (0.0%)
1	F	0.57	0/6282	0.60	2/8531 (0.0%)
All	All	0.57	0/37692	0.60	12/51186 (0.0%)

There are no bond length outliers.

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	399	VAL	N-CA-C	5.80	116.54	110.62
1	B	399	VAL	N-CA-C	5.77	116.50	110.62
1	D	399	VAL	N-CA-C	5.75	116.48	110.62
1	A	399	VAL	N-CA-C	5.75	116.48	110.62
1	F	399	VAL	N-CA-C	5.74	116.47	110.62
1	C	399	VAL	N-CA-C	5.74	116.47	110.62
1	A	401	PRO	N-CA-C	-5.21	106.41	113.40
1	F	401	PRO	N-CA-C	-5.19	106.44	113.40
1	B	401	PRO	N-CA-C	-5.17	106.47	113.40
1	D	401	PRO	N-CA-C	-5.17	106.47	113.40
1	E	401	PRO	N-CA-C	-5.15	106.50	113.40
1	C	401	PRO	N-CA-C	-5.14	106.51	113.40

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	6157	0	6264	149	0
1	B	6157	0	6265	155	0
1	C	6157	0	6264	159	0
1	D	6157	0	6265	155	0
1	E	6157	0	6264	144	0
1	F	6157	0	6265	145	0
2	A	416	0	654	39	0
2	B	416	0	654	45	0
2	C	468	0	736	55	0
2	D	416	0	654	47	0
2	E	468	0	736	52	0
2	F	468	0	736	50	0
3	F	21	0	37	7	0
All	All	39615	0	41794	990	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 12.

All (990) 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:A:315:ARG:NE	2:A:1001:POV:O13	1.70	1.24
1:B:315:ARG:NE	2:B:1001:POV:O13	1.70	1.24
1:E:315:ARG:NE	2:E:1001:POV:O13	1.70	1.24
1:D:315:ARG:NE	2:D:1001:POV:O13	1.70	1.24
1:F:315:ARG:NE	2:F:1001:POV:O13	1.70	1.23
1:C:315:ARG:NE	2:C:1001:POV:O13	1.70	1.23
1:C:595:SER:CB	1:D:902:ASP:OD1	1.88	1.21
1:B:595:SER:OG	1:C:902:ASP:OD1	1.58	1.20
1:C:306:LEU:HD11	1:D:868:VAL:CG2	1.71	1.19
1:C:400:SER:CB	1:C:403:ASP:HB3	1.73	1.19
1:B:400:SER:CB	1:B:403:ASP:HB3	1.73	1.19
1:A:400:SER:CB	1:A:403:ASP:HB3	1.73	1.18
1:E:400:SER:CB	1:E:403:ASP:HB3	1.73	1.18
1:A:902:ASP:OD1	1:F:595:SER:OG	1.59	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:400:SER:CB	1:D:403:ASP:HB3	1.73	1.17
1:C:595:SER:OG	1:D:902:ASP:OD1	1.56	1.16
1:F:400:SER:CB	1:F:403:ASP:HB3	1.73	1.16
1:A:902:ASP:OD1	1:F:595:SER:CB	1.98	1.10
1:A:868:VAL:CG2	1:F:306:LEU:HD11	1.82	1.09
1:D:595:SER:OG	1:E:902:ASP:OD1	1.71	1.08
1:B:595:SER:CB	1:C:902:ASP:OD1	2.04	1.05
1:E:400:SER:HB3	1:E:403:ASP:HB3	1.06	1.05
1:D:400:SER:HB3	1:D:403:ASP:HB3	1.06	1.04
1:E:306:LEU:HD11	1:F:868:VAL:CG2	1.88	1.04
1:B:400:SER:HB3	1:B:403:ASP:HB3	1.06	1.03
1:A:306:LEU:HD11	1:B:868:VAL:CG2	1.88	1.02
1:C:400:SER:HB3	1:C:403:ASP:HB3	1.06	1.02
1:F:400:SER:HB3	1:F:403:ASP:HB3	1.06	1.01
1:B:306:LEU:HD11	1:C:868:VAL:CG2	1.90	1.01
1:A:400:SER:HB3	1:A:403:ASP:HB3	1.06	1.01
1:C:306:LEU:CD1	1:D:868:VAL:CG2	2.42	0.97
1:C:306:LEU:HD11	1:D:868:VAL:HG23	1.45	0.96
1:C:595:SER:OG	1:D:902:ASP:CG	2.11	0.92
1:A:306:LEU:HD11	1:B:868:VAL:HG23	1.52	0.92
1:C:306:LEU:CD1	1:D:868:VAL:HG21	2.00	0.90
1:A:868:VAL:HG23	1:F:306:LEU:HD11	1.54	0.89
1:E:306:LEU:HD11	1:F:868:VAL:HG23	1.53	0.89
1:C:316:THR:OG1	1:D:783:GLY:N	2.06	0.88
1:B:306:LEU:HD11	1:C:868:VAL:HG23	1.53	0.88
1:E:400:SER:HB3	1:E:403:ASP:CB	2.01	0.87
1:C:400:SER:HB3	1:C:403:ASP:CB	2.01	0.86
1:D:306:LEU:HD11	1:E:868:VAL:CG2	2.05	0.86
1:D:400:SER:HB3	1:D:403:ASP:CB	2.01	0.86
1:F:400:SER:HB3	1:F:403:ASP:CB	2.01	0.86
1:A:868:VAL:CG2	1:F:306:LEU:CD1	2.53	0.86
1:E:306:LEU:CD1	1:F:868:VAL:CG2	2.54	0.85
1:C:304:THR:HG22	2:C:1001:POV:H315	1.59	0.85
1:D:304:THR:HG22	2:D:1001:POV:H315	1.59	0.85
1:A:304:THR:HG22	2:A:1001:POV:H315	1.59	0.84
1:B:306:LEU:CD1	1:C:868:VAL:CG2	2.56	0.84
1:C:595:SER:HB3	1:D:902:ASP:OD1	1.75	0.84
1:A:306:LEU:CD1	1:B:868:VAL:CG2	2.54	0.84
2:C:1003:POV:H27	2:C:1003:POV:H34A	1.60	0.84
1:E:304:THR:HG22	2:E:1001:POV:H315	1.59	0.84
2:B:1003:POV:H34A	2:B:1003:POV:H27	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:332:ILE:HD12	1:D:702:LEU:HB3	1.60	0.83
2:A:1003:POV:H27	2:A:1003:POV:H34A	1.60	0.83
2:E:1003:POV:H27	2:E:1003:POV:H34A	1.60	0.83
1:C:306:LEU:HD11	1:D:868:VAL:HG21	1.54	0.83
1:E:332:ILE:HD12	1:E:702:LEU:HB3	1.60	0.83
1:B:304:THR:HG22	2:B:1001:POV:H315	1.59	0.83
1:A:332:ILE:HD12	1:A:702:LEU:HB3	1.60	0.83
1:F:304:THR:HG22	2:F:1001:POV:H315	1.59	0.83
1:F:332:ILE:HD12	1:F:702:LEU:HB3	1.60	0.83
2:E:1009:POV:H23	3:F:1010:SPH:H4	1.60	0.82
1:C:400:SER:CB	1:C:403:ASP:CB	2.57	0.82
1:D:595:SER:CB	1:E:902:ASP:OD1	2.26	0.82
1:B:400:SER:CB	1:B:403:ASP:CB	2.57	0.82
2:D:1003:POV:H34A	2:D:1003:POV:H27	1.60	0.82
1:B:400:SER:HB3	1:B:403:ASP:CB	2.01	0.82
1:B:332:ILE:HD12	1:B:702:LEU:HB3	1.60	0.82
2:C:1005:POV:H1	2:D:1008:POV:H15B	1.60	0.81
1:F:400:SER:CB	1:F:403:ASP:CB	2.57	0.81
2:F:1003:POV:H27	2:F:1003:POV:H34A	1.60	0.81
1:E:400:SER:CB	1:E:403:ASP:CB	2.57	0.81
1:C:332:ILE:HD12	1:C:702:LEU:HB3	1.60	0.81
1:A:400:SER:HB3	1:A:403:ASP:CB	2.01	0.80
1:A:902:ASP:CG	1:F:595:SER:OG	2.24	0.80
1:B:595:SER:OG	1:C:902:ASP:CG	2.25	0.79
1:D:400:SER:CB	1:D:403:ASP:CB	2.57	0.79
2:D:1003:POV:H27A	2:D:1004:POV:H27A	1.65	0.79
2:F:1003:POV:H27A	2:F:1004:POV:H27A	1.65	0.79
1:A:400:SER:CB	1:A:403:ASP:CB	2.57	0.79
2:F:1002:POV:H21B	2:F:1003:POV:H21B	1.65	0.79
2:A:1003:POV:H27A	2:A:1004:POV:H27A	1.65	0.78
2:D:1002:POV:H21B	2:D:1003:POV:H21B	1.65	0.78
1:C:316:THR:HG1	1:D:783:GLY:H	1.29	0.78
1:A:902:ASP:OD1	1:F:595:SER:HB3	1.82	0.78
2:A:1002:POV:H21B	2:A:1003:POV:H21B	1.65	0.78
2:B:1002:POV:H21B	2:B:1003:POV:H21B	1.65	0.78
2:E:1002:POV:H21B	2:E:1003:POV:H21B	1.65	0.77
2:C:1003:POV:H27A	2:C:1004:POV:H27A	1.65	0.77
2:B:1003:POV:H27A	2:B:1004:POV:H27A	1.65	0.77
2:C:1002:POV:H21B	2:C:1003:POV:H21B	1.65	0.77
1:E:316:THR:OG1	1:F:783:GLY:N	2.18	0.77
1:C:599:ASP:OD2	1:D:898:ARG:NH2	2.16	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:902:ASP:CG	1:F:595:SER:HG	1.93	0.76
1:A:868:VAL:HG21	1:F:306:LEU:CD1	2.14	0.76
2:E:1003:POV:H27A	2:E:1004:POV:H27A	1.65	0.76
1:A:868:VAL:HG21	1:F:306:LEU:HD11	1.67	0.76
2:E:1005:POV:H1	2:F:1008:POV:H15B	1.67	0.76
1:A:592:MET:O	1:B:909:ARG:NH2	2.19	0.75
1:A:306:LEU:CD1	1:B:868:VAL:HG21	2.17	0.74
1:B:595:SER:HG	1:C:902:ASP:CG	1.95	0.74
2:E:1009:POV:H32	3:F:1010:SPH:H5	1.68	0.74
1:B:400:SER:O	1:B:404:LEU:HB2	1.88	0.74
1:E:400:SER:O	1:E:404:LEU:HB2	1.88	0.73
1:F:400:SER:O	1:F:404:LEU:HB2	1.88	0.73
1:B:316:THR:OG1	1:C:783:GLY:N	2.20	0.73
1:D:400:SER:O	1:D:404:LEU:HB2	1.88	0.73
1:B:306:LEU:CD1	1:C:868:VAL:HG21	2.19	0.73
1:E:306:LEU:CD1	1:F:868:VAL:HG21	2.17	0.72
1:C:304:THR:HG22	2:C:1001:POV:C315	2.19	0.72
1:A:400:SER:O	1:A:404:LEU:HB2	1.88	0.72
1:E:592:MET:O	1:F:909:ARG:NH2	2.21	0.72
2:D:1005:POV:H1	2:E:1008:POV:H15B	1.71	0.72
1:A:316:THR:OG1	1:B:783:GLY:N	2.22	0.72
1:C:227:GLN:O	1:C:357:GLN:NE2	2.23	0.72
1:C:400:SER:O	1:C:404:LEU:HB2	1.88	0.72
1:A:304:THR:HG22	2:A:1001:POV:C315	2.19	0.72
1:E:304:THR:HG22	2:E:1001:POV:C315	2.20	0.71
1:F:227:GLN:O	1:F:357:GLN:NE2	2.23	0.71
1:B:304:THR:HG22	2:B:1001:POV:C315	2.20	0.71
1:F:304:THR:HG22	2:F:1001:POV:C315	2.19	0.71
1:B:227:GLN:O	1:B:357:GLN:NE2	2.23	0.71
1:D:595:SER:HG	1:E:902:ASP:CG	1.98	0.71
1:E:227:GLN:O	1:E:357:GLN:NE2	2.23	0.71
1:A:783:GLY:N	1:F:316:THR:OG1	2.24	0.71
1:D:304:THR:HG22	2:D:1001:POV:C315	2.19	0.71
1:A:227:GLN:O	1:A:357:GLN:NE2	2.23	0.71
1:D:227:GLN:O	1:D:357:GLN:NE2	2.23	0.70
1:D:306:LEU:HD11	1:E:868:VAL:HG23	1.72	0.70
2:C:1005:POV:O32	2:D:1003:POV:H24	1.91	0.70
1:C:316:THR:OG1	1:D:783:GLY:CA	2.40	0.69
2:A:1008:POV:H15B	2:F:1005:POV:H1	1.75	0.69
2:E:1002:POV:H38	2:E:1003:POV:H311	1.75	0.69
1:B:595:SER:HB3	1:C:902:ASP:OD1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:599:ASP:OD2	1:B:898:ARG:NH2	2.25	0.69
1:A:304:THR:HG21	1:A:703:GLU:HB3	1.75	0.69
1:A:315:ARG:CZ	2:A:1001:POV:O13	2.41	0.68
1:E:304:THR:HG21	1:E:703:GLU:HB3	1.75	0.68
2:B:1002:POV:H38	2:B:1003:POV:H311	1.75	0.68
2:F:1002:POV:H38	2:F:1003:POV:H311	1.75	0.68
1:C:304:THR:HG21	1:C:703:GLU:HB3	1.75	0.68
1:C:314:TYR:O	1:D:779:LEU:HD13	1.93	0.68
1:F:304:THR:HG21	1:F:703:GLU:HB3	1.75	0.68
1:C:682:ARG:NH1	1:C:745:PRO:O	2.27	0.68
1:D:682:ARG:NH1	1:D:745:PRO:O	2.27	0.68
2:D:1002:POV:H38	2:D:1003:POV:H311	1.75	0.68
1:A:682:ARG:NH1	1:A:745:PRO:O	2.27	0.68
1:D:315:ARG:CZ	2:D:1001:POV:O13	2.41	0.68
1:E:315:ARG:CZ	2:E:1001:POV:O13	2.41	0.68
2:A:1002:POV:H38	2:A:1003:POV:H311	1.75	0.68
1:C:315:ARG:CZ	2:C:1001:POV:O13	2.41	0.68
1:A:909:ARG:NH2	1:F:592:MET:O	2.26	0.67
1:C:595:SER:N	1:D:902:ASP:OD1	2.28	0.67
1:F:372:VAL:HG21	1:F:630:ALA:HB2	1.76	0.67
1:D:372:VAL:HG21	1:D:630:ALA:HB2	1.77	0.67
1:E:682:ARG:NH1	1:E:745:PRO:O	2.27	0.67
1:B:304:THR:HG21	1:B:703:GLU:HB3	1.75	0.67
1:B:315:ARG:CZ	2:B:1001:POV:O13	2.41	0.67
1:F:682:ARG:NH1	1:F:745:PRO:O	2.27	0.67
2:A:1005:POV:H1	2:B:1008:POV:H15B	1.77	0.67
2:C:1002:POV:H38	2:C:1003:POV:H311	1.75	0.67
1:B:682:ARG:NH1	1:B:745:PRO:O	2.27	0.67
1:C:317:ASN:O	1:D:857:ARG:NH1	2.27	0.67
1:D:304:THR:HG21	1:D:703:GLU:HB3	1.75	0.67
1:C:372:VAL:HG21	1:C:630:ALA:HB2	1.76	0.67
1:A:378:ASP:OD2	1:A:615:LYS:NZ	2.28	0.66
2:B:1005:POV:H1	2:C:1008:POV:H15B	1.77	0.66
1:A:392:GLU:HG2	1:A:393:PRO:HD3	1.78	0.66
1:D:306:LEU:CD1	1:E:868:VAL:CG2	2.74	0.66
1:D:378:ASP:OD2	1:D:615:LYS:NZ	2.28	0.66
1:E:805:TRP:NE1	1:E:833:ASP:OD2	2.29	0.66
1:F:805:TRP:NE1	1:F:833:ASP:OD2	2.29	0.66
1:E:372:VAL:HG21	1:E:630:ALA:HB2	1.77	0.65
1:E:583:ARG:NE	1:E:917:GLU:OE1	2.29	0.65
1:F:378:ASP:OD2	1:F:615:LYS:NZ	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:372:VAL:HG21	1:A:630:ALA:HB2	1.77	0.65
1:D:583:ARG:NE	1:D:917:GLU:OE1	2.29	0.65
1:B:805:TRP:NE1	1:B:833:ASP:OD2	2.29	0.65
1:C:378:ASP:OD2	1:C:615:LYS:NZ	2.28	0.65
1:C:392:GLU:HG2	1:C:393:PRO:HD3	1.78	0.65
1:E:378:ASP:OD2	1:E:615:LYS:NZ	2.28	0.65
1:F:315:ARG:CZ	2:F:1001:POV:O13	2.41	0.65
1:B:372:VAL:HG21	1:B:630:ALA:HB2	1.76	0.65
1:B:378:ASP:OD2	1:B:615:LYS:NZ	2.28	0.65
1:B:583:ARG:NE	1:B:917:GLU:OE1	2.29	0.65
1:D:805:TRP:NE1	1:D:833:ASP:OD2	2.29	0.65
1:F:583:ARG:NE	1:F:917:GLU:OE1	2.29	0.65
1:C:306:LEU:HD13	1:D:868:VAL:HG21	1.78	0.65
1:C:583:ARG:NE	1:C:917:GLU:OE1	2.29	0.65
1:F:392:GLU:HG2	1:F:393:PRO:HD3	1.78	0.65
1:A:583:ARG:NE	1:A:917:GLU:OE1	2.29	0.65
1:C:276:VAL:HG13	1:C:347:ALA:HB1	1.80	0.65
1:C:805:TRP:NE1	1:C:833:ASP:OD2	2.29	0.65
2:D:1005:POV:H3	2:E:1008:POV:H15B	1.78	0.65
1:E:599:ASP:OD2	1:F:898:ARG:NH2	2.28	0.65
1:F:787:ASN:ND2	1:F:851:ASP:OD2	2.26	0.65
1:B:392:GLU:HG2	1:B:393:PRO:HD3	1.78	0.64
1:B:592:MET:O	1:C:909:ARG:NH2	2.31	0.64
1:A:805:TRP:NE1	1:A:833:ASP:OD2	2.29	0.64
1:B:276:VAL:HG13	1:B:347:ALA:HB1	1.80	0.64
1:D:775:THR:HG21	2:D:1002:POV:H21A	1.79	0.64
1:C:319:ILE:HD12	1:D:857:ARG:HG2	1.80	0.64
1:D:392:GLU:HG2	1:D:393:PRO:HD3	1.78	0.64
1:E:276:VAL:HG13	1:E:347:ALA:HB1	1.80	0.64
1:E:392:GLU:HG2	1:E:393:PRO:HD3	1.78	0.64
1:A:775:THR:HG21	2:A:1002:POV:H21A	1.79	0.64
2:C:1005:POV:H37	2:D:1003:POV:H210	1.80	0.64
1:C:775:THR:HG21	2:C:1002:POV:H21A	1.79	0.64
1:C:316:THR:OG1	1:D:783:GLY:HA2	1.98	0.63
1:C:358:ALA:HB1	1:C:664:ILE:HD11	1.80	0.63
1:D:358:ALA:HB1	1:D:664:ILE:HD11	1.80	0.63
1:C:432:GLN:HB3	1:C:434:PRO:HD2	1.80	0.63
1:F:432:GLN:HB3	1:F:434:PRO:HD2	1.80	0.63
1:F:775:THR:HG21	2:F:1002:POV:H21A	1.79	0.63
1:D:787:ASN:ND2	1:D:851:ASP:OD2	2.26	0.63
1:E:358:ALA:HB1	1:E:664:ILE:HD11	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:775:THR:HG21	2:E:1002:POV:H21A	1.79	0.63
1:B:775:THR:HG21	2:B:1002:POV:H21A	1.79	0.63
1:D:276:VAL:HG13	1:D:347:ALA:HB1	1.80	0.63
1:F:276:VAL:HG13	1:F:347:ALA:HB1	1.80	0.63
1:C:787:ASN:ND2	1:C:851:ASP:OD2	2.26	0.63
1:D:432:GLN:HB3	1:D:434:PRO:HD2	1.80	0.63
1:B:432:GLN:HB3	1:B:434:PRO:HD2	1.80	0.62
1:B:687:ARG:HH12	1:B:741:ALA:HB2	1.64	0.62
1:B:358:ALA:HB1	1:B:664:ILE:HD11	1.80	0.62
1:A:276:VAL:HG13	1:A:347:ALA:HB1	1.80	0.62
1:E:432:GLN:HB3	1:E:434:PRO:HD2	1.80	0.62
1:C:592:MET:O	1:D:909:ARG:NH2	2.33	0.62
1:F:358:ALA:HB1	1:F:664:ILE:HD11	1.80	0.62
1:F:687:ARG:HH12	1:F:741:ALA:HB2	1.65	0.62
1:A:432:GLN:HB3	1:A:434:PRO:HD2	1.80	0.62
1:C:314:TYR:O	1:D:779:LEU:CD1	2.48	0.62
1:E:687:ARG:HH12	1:E:741:ALA:HB2	1.64	0.62
1:C:595:SER:OG	1:D:902:ASP:OD2	2.16	0.62
1:D:687:ARG:HH12	1:D:741:ALA:HB2	1.64	0.62
2:E:1005:POV:O32	2:F:1003:POV:H24	1.99	0.62
1:A:787:ASN:ND2	1:A:851:ASP:OD2	2.26	0.61
1:C:687:ARG:HH12	1:C:741:ALA:HB2	1.64	0.61
1:A:358:ALA:HB1	1:A:664:ILE:HD11	1.80	0.61
1:A:687:ARG:HH12	1:A:741:ALA:HB2	1.64	0.61
1:B:290:LEU:HD11	1:B:342:VAL:HG11	1.83	0.61
1:E:787:ASN:ND2	1:E:851:ASP:OD2	2.26	0.61
1:B:787:ASN:ND2	1:B:851:ASP:OD2	2.26	0.61
1:E:397:GLU:OE2	1:E:501:LYS:NZ	2.34	0.61
1:F:397:GLU:OE2	1:F:501:LYS:NZ	2.34	0.61
1:B:397:GLU:OE2	1:B:501:LYS:NZ	2.34	0.60
1:A:290:LEU:HD11	1:A:342:VAL:HG11	1.83	0.60
1:D:290:LEU:HD11	1:D:342:VAL:HG11	1.83	0.60
1:C:397:GLU:OE2	1:C:501:LYS:NZ	2.34	0.60
1:C:290:LEU:HD11	1:C:342:VAL:HG11	1.83	0.60
1:F:290:LEU:HD11	1:F:342:VAL:HG11	1.83	0.59
1:D:397:GLU:OE2	1:D:501:LYS:NZ	2.34	0.59
1:F:601:VAL:HA	1:F:607:PHE:HZ	1.67	0.59
1:A:397:GLU:OE2	1:A:501:LYS:NZ	2.34	0.59
1:A:601:VAL:HA	1:A:607:PHE:HZ	1.67	0.59
1:E:306:LEU:HD11	1:F:868:VAL:HG21	1.74	0.59
1:D:601:VAL:HA	1:D:607:PHE:HZ	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:150:LEU:HD11	1:A:331:ILE:HG12	1.85	0.59
1:B:150:LEU:HD11	1:B:331:ILE:HG12	1.85	0.59
1:B:601:VAL:HA	1:B:607:PHE:HZ	1.67	0.59
1:E:751:ASN:ND2	1:E:883:ASP:OD2	2.36	0.59
1:E:150:LEU:HD11	1:E:331:ILE:HG12	1.85	0.59
1:E:290:LEU:HD11	1:E:342:VAL:HG11	1.83	0.58
2:E:1006:POV:H12A	2:E:1006:POV:O13	2.03	0.58
1:E:601:VAL:HA	1:E:607:PHE:HZ	1.67	0.58
1:C:150:LEU:HD11	1:C:331:ILE:HG12	1.85	0.58
1:D:595:SER:OG	1:E:902:ASP:CG	2.45	0.58
2:C:1007:POV:H21G	2:C:1009:POV:H31F	1.85	0.58
1:D:751:ASN:ND2	1:D:883:ASP:OD2	2.36	0.58
1:E:493:ASP:OD1	1:E:497:ASN:ND2	2.37	0.58
1:A:857:ARG:HG2	1:F:319:ILE:HD12	1.86	0.58
1:D:150:LEU:HD11	1:D:331:ILE:HG12	1.85	0.58
1:C:493:ASP:OD1	1:C:497:ASN:ND2	2.37	0.58
1:F:150:LEU:HD11	1:F:331:ILE:HG12	1.85	0.58
2:C:1007:POV:O32	2:D:1007:POV:H22	2.03	0.58
1:A:493:ASP:OD1	1:A:497:ASN:ND2	2.37	0.58
2:B:1006:POV:O13	2:B:1006:POV:H12A	2.03	0.58
1:C:751:ASN:ND2	1:C:883:ASP:OD2	2.36	0.58
1:A:751:ASN:ND2	1:A:883:ASP:OD2	2.36	0.58
1:D:493:ASP:OD1	1:D:497:ASN:ND2	2.37	0.58
1:F:773:THR:HG21	1:F:798:GLN:HG3	1.86	0.58
1:C:601:VAL:HA	1:C:607:PHE:HZ	1.67	0.58
2:D:1005:POV:H1	2:E:1008:POV:C15	2.34	0.57
1:B:751:ASN:ND2	1:B:883:ASP:OD2	2.36	0.57
1:F:493:ASP:OD1	1:F:497:ASN:ND2	2.37	0.57
1:D:306:LEU:CD1	1:E:868:VAL:HG21	2.34	0.57
2:C:1006:POV:H12A	2:C:1006:POV:O13	2.03	0.57
1:A:857:ARG:NH1	1:F:317:ASN:O	2.38	0.57
1:B:493:ASP:OD1	1:B:497:ASN:ND2	2.37	0.57
1:C:595:SER:CA	1:D:902:ASP:OD1	2.52	0.57
1:D:267:THR:HG23	1:D:270:GLY:H	1.70	0.57
1:D:773:THR:HG21	1:D:798:GLN:HG3	1.86	0.57
1:F:751:ASN:ND2	1:F:883:ASP:OD2	2.36	0.57
1:A:405:MET:HE3	1:A:430:LEU:HD12	1.87	0.57
2:D:1006:POV:O13	2:D:1006:POV:H12A	2.03	0.57
1:E:773:THR:HG21	1:E:798:GLN:HG3	1.86	0.57
1:C:267:THR:HG23	1:C:270:GLY:H	1.70	0.56
1:D:316:THR:OG1	1:E:783:GLY:N	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:306:LEU:HD13	1:B:868:VAL:HG21	1.87	0.56
1:D:405:MET:HE3	1:D:430:LEU:HD12	1.87	0.56
1:B:773:THR:HG21	1:B:798:GLN:HG3	1.86	0.56
1:B:777:MET:HE3	1:B:791:MET:HA	1.88	0.56
2:C:1004:POV:H37A	2:D:1008:POV:H27A	1.87	0.56
1:E:267:THR:HG23	1:E:270:GLY:H	1.70	0.56
1:E:306:LEU:HD13	1:F:868:VAL:HG21	1.88	0.56
1:F:777:MET:HE3	1:F:791:MET:HA	1.88	0.56
1:A:773:THR:HG21	1:A:798:GLN:HG3	1.86	0.56
1:B:445:VAL:HG22	1:B:462:VAL:HG12	1.88	0.56
1:C:777:MET:HE3	1:C:791:MET:HA	1.88	0.56
1:B:317:ASN:O	1:C:857:ARG:NH1	2.39	0.56
1:C:773:THR:HG21	1:C:798:GLN:HG3	1.86	0.56
1:F:405:MET:HE3	1:F:430:LEU:HD12	1.87	0.56
2:F:1006:POV:H12A	2:F:1006:POV:O13	2.03	0.56
1:A:267:THR:HG23	1:A:270:GLY:H	1.70	0.56
2:E:1007:POV:H3	2:E:1007:POV:O13	2.06	0.56
1:A:595:SER:N	1:B:902:ASP:OD1	2.38	0.56
1:A:783:GLY:CA	1:F:316:THR:OG1	2.53	0.56
1:C:405:MET:HE3	1:C:430:LEU:HD12	1.87	0.56
1:F:267:THR:HG23	1:F:270:GLY:H	1.70	0.56
1:B:267:THR:HG23	1:B:270:GLY:H	1.70	0.56
1:E:405:MET:HE3	1:E:430:LEU:HD12	1.87	0.56
1:D:400:SER:OG	1:D:403:ASP:CB	2.54	0.55
1:D:777:MET:HE3	1:D:791:MET:HA	1.88	0.55
1:E:777:MET:HE3	1:E:791:MET:HA	1.88	0.55
2:A:1007:POV:H3	2:A:1007:POV:O13	2.06	0.55
1:E:316:THR:OG1	1:F:783:GLY:CA	2.54	0.55
1:F:400:SER:OG	1:F:403:ASP:CB	2.54	0.55
2:A:1002:POV:H24	2:A:1003:POV:H23	1.88	0.55
2:B:1002:POV:H24	2:B:1003:POV:H23	1.88	0.55
2:C:1007:POV:H3	2:C:1007:POV:O13	2.06	0.55
2:E:1002:POV:H24	2:E:1003:POV:H23	1.88	0.55
1:F:445:VAL:HG22	1:F:462:VAL:HG12	1.88	0.55
1:A:317:ASN:O	1:B:857:ARG:NH1	2.40	0.55
1:A:777:MET:HE3	1:A:791:MET:HA	1.88	0.55
1:E:599:ASP:OD1	1:E:625:ARG:NH2	2.40	0.55
1:E:400:SER:OG	1:E:403:ASP:CB	2.54	0.55
2:F:1007:POV:O13	2:F:1007:POV:H3	2.06	0.55
1:A:445:VAL:HG22	1:A:462:VAL:HG12	1.88	0.55
2:C:1002:POV:H24	2:C:1003:POV:H23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1002:POV:H24	2:D:1003:POV:H23	1.88	0.55
1:E:317:ASN:O	1:F:857:ARG:NH1	2.40	0.55
1:A:400:SER:OG	1:A:403:ASP:CB	2.54	0.55
1:A:488:HIS:ND1	1:A:489:PRO:O	2.35	0.55
1:B:400:SER:OG	1:B:403:ASP:CB	2.54	0.55
1:A:599:ASP:OD1	1:A:625:ARG:NH2	2.40	0.54
2:B:1007:POV:O13	2:B:1007:POV:H3	2.06	0.54
1:C:400:SER:OG	1:C:403:ASP:CB	2.54	0.54
1:C:445:VAL:HG22	1:C:462:VAL:HG12	1.88	0.54
2:D:1007:POV:O13	2:D:1007:POV:H3	2.06	0.54
1:A:783:GLY:HA2	1:F:316:THR:OG1	2.06	0.54
2:A:1006:POV:H12A	2:A:1006:POV:O13	2.03	0.54
1:B:366:ILE:O	1:B:681:SER:OG	2.25	0.54
1:D:445:VAL:HG22	1:D:462:VAL:HG12	1.88	0.54
2:E:1005:POV:H1	2:F:1008:POV:C15	2.37	0.54
2:F:1002:POV:H24	2:F:1003:POV:H23	1.88	0.54
1:B:405:MET:HE3	1:B:430:LEU:HD12	1.87	0.54
1:B:599:ASP:OD1	1:B:625:ARG:NH2	2.40	0.54
1:E:488:HIS:ND1	1:E:489:PRO:O	2.35	0.54
1:A:779:LEU:HD13	1:F:314:TYR:O	2.07	0.54
1:F:366:ILE:O	1:F:681:SER:OG	2.25	0.54
1:A:447:GLU:OE2	1:A:469:ARG:NH1	2.41	0.54
1:E:445:VAL:HG22	1:E:462:VAL:HG12	1.88	0.54
2:A:1005:POV:O32	2:B:1003:POV:H24	2.08	0.54
1:E:314:TYR:O	1:F:779:LEU:HD13	2.08	0.54
1:B:447:GLU:OE2	1:B:469:ARG:NH1	2.41	0.54
1:C:366:ILE:O	1:C:681:SER:OG	2.25	0.54
1:C:599:ASP:OD1	1:C:625:ARG:NH2	2.40	0.54
1:D:306:LEU:HD11	1:E:868:VAL:HG21	1.87	0.54
1:F:447:GLU:OE2	1:F:469:ARG:NH1	2.41	0.54
1:F:599:ASP:OD1	1:F:625:ARG:NH2	2.40	0.54
1:A:366:ILE:O	1:A:681:SER:OG	2.25	0.54
1:D:599:ASP:OD1	1:D:625:ARG:NH2	2.40	0.54
2:E:1005:POV:H37	2:F:1003:POV:H210	1.90	0.53
1:D:366:ILE:O	1:D:681:SER:OG	2.25	0.53
1:E:366:ILE:O	1:E:681:SER:OG	2.25	0.53
1:D:313:PHE:O	1:E:783:GLY:HA2	2.08	0.53
1:D:490:ILE:HD12	1:D:493:ASP:HB3	1.91	0.53
1:D:592:MET:O	1:E:909:ARG:NH2	2.41	0.53
1:F:490:ILE:HD12	1:F:493:ASP:HB3	1.91	0.53
1:A:306:LEU:HD11	1:B:868:VAL:HG21	1.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:396:VAL:HG23	1:B:398:GLY:H	1.74	0.53
2:E:1009:POV:H29	3:F:1010:SPH:H102	1.89	0.53
1:B:488:HIS:ND1	1:B:489:PRO:O	2.35	0.53
1:C:447:GLU:OE2	1:C:469:ARG:NH1	2.41	0.53
1:D:773:THR:OG1	1:D:795:MET:SD	2.66	0.53
1:E:447:GLU:OE2	1:E:469:ARG:NH1	2.41	0.53
1:A:396:VAL:HG23	1:A:398:GLY:H	1.74	0.53
1:D:396:VAL:HG23	1:D:398:GLY:H	1.74	0.53
1:E:490:ILE:HD12	1:E:493:ASP:HB3	1.91	0.53
1:F:396:VAL:HG23	1:F:398:GLY:H	1.74	0.53
1:B:306:LEU:HD13	1:C:868:VAL:HG21	1.89	0.52
2:B:1005:POV:H3	2:C:1008:POV:H15B	1.90	0.52
1:B:599:ASP:OD2	1:C:898:ARG:NH2	2.37	0.52
1:B:773:THR:OG1	1:B:795:MET:SD	2.66	0.52
1:F:773:THR:OG1	1:F:795:MET:SD	2.66	0.52
1:A:868:VAL:HG21	1:F:306:LEU:HD13	1.90	0.52
1:D:447:GLU:OE2	1:D:469:ARG:NH1	2.41	0.52
1:A:316:THR:OG1	1:B:783:GLY:CA	2.58	0.52
2:B:1005:POV:O32	2:C:1003:POV:H24	2.09	0.52
1:E:191:ILE:HD12	1:E:195:GLU:HB3	1.92	0.52
2:C:1009:POV:H210	3:F:1010:SPH:H121	1.90	0.52
1:B:730:ASP:O	1:B:733:THR:OG1	2.24	0.52
1:A:490:ILE:HD12	1:A:493:ASP:HB3	1.91	0.52
1:C:490:ILE:HD12	1:C:493:ASP:HB3	1.91	0.52
1:E:396:VAL:HG23	1:E:398:GLY:H	1.74	0.52
1:E:773:THR:OG1	1:E:795:MET:SD	2.66	0.52
1:B:405:MET:HE1	1:B:431:LYS:HG2	1.92	0.52
1:C:405:MET:HE1	1:C:431:LYS:HG2	1.92	0.52
1:D:191:ILE:HD12	1:D:195:GLU:HB3	1.92	0.52
1:A:405:MET:HE1	1:A:431:LYS:HG2	1.92	0.51
1:B:316:THR:OG1	1:C:783:GLY:CA	2.57	0.51
1:B:595:SER:N	1:C:902:ASP:OD1	2.43	0.51
1:C:773:THR:OG1	1:C:795:MET:SD	2.66	0.51
1:D:405:MET:HE1	1:D:431:LYS:HG2	1.92	0.51
1:F:405:MET:HE1	1:F:431:LYS:HG2	1.92	0.51
1:A:898:ARG:NH2	1:F:599:ASP:OD2	2.38	0.51
1:C:396:VAL:HG23	1:C:398:GLY:H	1.74	0.51
1:E:405:MET:HE1	1:E:431:LYS:HG2	1.92	0.51
1:E:766:LEU:HD11	1:E:806:LEU:HD22	1.92	0.51
1:C:775:THR:HG22	2:C:1002:POV:H28A	1.93	0.51
1:D:766:LEU:HD11	1:D:806:LEU:HD22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:191:ILE:HD12	1:B:195:GLU:HB3	1.92	0.51
1:C:191:ILE:HD12	1:C:195:GLU:HB3	1.92	0.51
1:A:191:ILE:HD12	1:A:195:GLU:HB3	1.92	0.51
1:A:773:THR:OG1	1:A:795:MET:SD	2.66	0.51
1:C:488:HIS:ND1	1:C:489:PRO:O	2.35	0.51
1:C:766:LEU:HD11	1:C:806:LEU:HD22	1.93	0.51
1:D:505:LEU:O	1:D:509:GLY:N	2.44	0.51
1:A:766:LEU:HD11	1:A:806:LEU:HD22	1.93	0.51
2:B:1008:POV:H22A	2:B:1008:POV:H3A	1.93	0.51
1:D:128:MET:HE1	1:D:154:ASN:HD22	1.76	0.51
2:E:1008:POV:H22A	2:E:1008:POV:H3A	1.93	0.51
2:F:1008:POV:H22A	2:F:1008:POV:H3A	1.93	0.51
1:B:128:MET:HE1	1:B:154:ASN:HD22	1.76	0.51
1:B:490:ILE:HD12	1:B:493:ASP:HB3	1.91	0.51
1:D:267:THR:O	1:D:271:ARG:N	2.41	0.51
1:D:775:THR:HG22	2:D:1002:POV:H28A	1.93	0.51
1:E:775:THR:HG22	2:E:1002:POV:H28A	1.93	0.51
1:F:505:LEU:O	1:F:509:GLY:N	2.44	0.51
1:A:775:THR:HG22	2:A:1002:POV:H28A	1.93	0.50
1:B:766:LEU:HD11	1:B:806:LEU:HD22	1.92	0.50
1:C:505:LEU:O	1:C:509:GLY:N	2.44	0.50
1:F:400:SER:OG	1:F:403:ASP:N	2.43	0.50
2:C:1005:POV:H1	2:D:1008:POV:C15	2.35	0.50
2:C:1008:POV:H22A	2:C:1008:POV:H3A	1.93	0.50
1:E:505:LEU:O	1:E:509:GLY:N	2.44	0.50
1:F:191:ILE:HD12	1:F:195:GLU:HB3	1.92	0.50
2:A:1008:POV:H22A	2:A:1008:POV:H3A	1.93	0.50
1:B:775:THR:HG22	2:B:1002:POV:H28A	1.93	0.50
1:D:488:HIS:ND1	1:D:489:PRO:O	2.35	0.50
1:B:617:ARG:NH1	1:B:620:GLU:OE1	2.45	0.50
1:E:617:ARG:NH1	1:E:620:GLU:OE1	2.45	0.50
1:B:505:LEU:O	1:B:509:GLY:N	2.44	0.50
1:E:128:MET:HE1	1:E:154:ASN:HD22	1.76	0.50
1:E:762:LEU:HD13	1:E:806:LEU:HD11	1.94	0.50
2:C:1007:POV:H311	2:D:1007:POV:H21B	1.93	0.50
1:D:617:ARG:NH1	1:D:620:GLU:OE1	2.45	0.50
1:A:267:THR:O	1:A:271:ARG:N	2.41	0.50
1:F:128:MET:HE1	1:F:154:ASN:HD22	1.76	0.50
1:F:766:LEU:HD11	1:F:806:LEU:HD22	1.92	0.50
1:A:505:LEU:O	1:A:509:GLY:N	2.44	0.50
1:F:775:THR:HG22	2:F:1002:POV:H28A	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:689:TYR:CE2	1:C:755:LEU:HD12	2.47	0.50
1:E:279:ALA:HB1	1:E:363:LEU:HD11	1.94	0.50
1:E:313:PHE:O	1:F:783:GLY:HA2	2.12	0.50
1:F:689:TYR:CE2	1:F:755:LEU:HD12	2.47	0.50
1:A:128:MET:HE1	1:A:154:ASN:HD22	1.76	0.49
1:B:682:ARG:HB3	1:B:743:TYR:HB2	1.94	0.49
1:B:689:TYR:CE2	1:B:755:LEU:HD12	2.47	0.49
1:A:617:ARG:NH1	1:A:620:GLU:OE1	2.45	0.49
1:D:314:TYR:HD1	1:E:779:LEU:HD11	1.78	0.49
1:D:682:ARG:HB3	1:D:743:TYR:HB2	1.94	0.49
2:D:1008:POV:H22A	2:D:1008:POV:H3A	1.93	0.49
1:F:617:ARG:NH1	1:F:620:GLU:OE1	2.45	0.49
1:C:279:ALA:HB1	1:C:363:LEU:HD11	1.94	0.49
2:B:1005:POV:H1	2:C:1008:POV:C15	2.41	0.49
1:E:595:SER:N	1:F:902:ASP:OD1	2.43	0.49
1:F:762:LEU:HD13	1:F:806:LEU:HD11	1.94	0.49
2:F:1009:POV:H1A	3:F:1010:SPH:H11	1.93	0.49
1:C:617:ARG:NH1	1:C:620:GLU:OE1	2.45	0.49
2:C:1007:POV:H35A	2:D:1007:POV:H27A	1.95	0.49
1:D:471:VAL:HB	1:D:518:LYS:HB2	1.95	0.49
1:E:682:ARG:HB3	1:E:743:TYR:HB2	1.94	0.49
1:F:471:VAL:HB	1:F:518:LYS:HB2	1.95	0.49
2:A:1005:POV:H3	2:B:1008:POV:H15B	1.95	0.49
1:B:313:PHE:O	1:C:783:GLY:HA2	2.12	0.49
1:B:762:LEU:HD13	1:B:806:LEU:HD11	1.94	0.49
1:C:682:ARG:HB3	1:C:743:TYR:HB2	1.94	0.49
1:D:689:TYR:CE2	1:D:755:LEU:HD12	2.47	0.49
1:E:689:TYR:CE2	1:E:755:LEU:HD12	2.47	0.49
1:A:762:LEU:HD13	1:A:806:LEU:HD11	1.94	0.49
1:B:471:VAL:HB	1:B:518:LYS:HB2	1.95	0.49
1:F:682:ARG:HB3	1:F:743:TYR:HB2	1.94	0.49
1:C:128:MET:HE1	1:C:154:ASN:HD22	1.76	0.49
1:D:762:LEU:HD13	1:D:806:LEU:HD11	1.94	0.49
1:E:775:THR:HG21	2:E:1002:POV:C211	2.43	0.49
1:B:400:SER:OG	1:B:403:ASP:N	2.43	0.49
1:F:584:LEU:HD12	1:F:592:MET:HE1	1.95	0.49
1:C:471:VAL:HB	1:C:518:LYS:HB2	1.95	0.49
1:F:279:ALA:HB1	1:F:363:LEU:HD11	1.94	0.49
1:F:488:HIS:ND1	1:F:489:PRO:O	2.35	0.49
1:C:313:PHE:O	1:D:783:GLY:HA2	2.13	0.48
1:C:400:SER:OG	1:C:403:ASP:N	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:762:LEU:HD13	1:C:806:LEU:HD11	1.94	0.48
1:C:775:THR:HG21	2:C:1002:POV:C211	2.43	0.48
1:E:267:THR:O	1:E:271:ARG:N	2.41	0.48
1:A:471:VAL:HB	1:A:518:LYS:HB2	1.95	0.48
1:A:682:ARG:HB3	1:A:743:TYR:HB2	1.94	0.48
1:D:775:THR:HG21	2:D:1002:POV:C211	2.43	0.48
1:F:267:THR:O	1:F:271:ARG:N	2.41	0.48
1:D:279:ALA:HB1	1:D:363:LEU:HD11	1.94	0.48
2:A:1005:POV:H13B	2:A:1005:POV:H11A	1.57	0.48
1:D:319:ILE:HD12	1:E:857:ARG:HG2	1.94	0.48
1:A:689:TYR:CE2	1:A:755:LEU:HD12	2.47	0.48
1:B:279:ALA:HB1	1:B:363:LEU:HD11	1.94	0.48
1:B:484:VAL:HG23	1:B:524:TRP:HD1	1.79	0.48
2:B:1004:POV:H32	2:B:1006:POV:H32A	1.96	0.48
1:E:316:THR:OG1	1:F:783:GLY:HA2	2.12	0.48
1:A:584:LEU:HD12	1:A:592:MET:HE1	1.95	0.48
1:A:279:ALA:HB1	1:A:363:LEU:HD11	1.94	0.48
2:A:1005:POV:H1	2:B:1008:POV:C15	2.43	0.48
2:C:1004:POV:H32	2:C:1006:POV:H32A	1.96	0.48
2:D:1004:POV:H32	2:D:1006:POV:H32A	1.96	0.48
1:E:773:THR:O	1:E:776:THR:OG1	2.32	0.48
1:A:484:VAL:HG23	1:A:524:TRP:HD1	1.79	0.48
1:B:584:LEU:HD12	1:B:592:MET:HE1	1.95	0.48
1:D:584:LEU:HD12	1:D:592:MET:HE1	1.95	0.48
1:F:484:VAL:HG23	1:F:524:TRP:HD1	1.79	0.48
2:A:1004:POV:H32	2:A:1006:POV:H32A	1.96	0.48
1:C:484:VAL:HG23	1:C:524:TRP:HD1	1.79	0.48
1:A:705:PHE:CZ	1:A:795:MET:HE2	2.49	0.48
1:C:584:LEU:HD12	1:C:592:MET:HE1	1.95	0.48
1:D:484:VAL:HG23	1:D:524:TRP:HD1	1.79	0.48
2:E:1007:POV:H12A	2:E:1009:POV:H14	1.96	0.48
2:C:1004:POV:H11	2:C:1004:POV:H15A	1.47	0.47
2:C:1005:POV:C37	2:D:1003:POV:H210	2.43	0.47
1:F:705:PHE:CZ	1:F:795:MET:HE2	2.49	0.47
1:C:772:ILE:O	1:C:776:THR:HG23	2.15	0.47
1:E:484:VAL:HG23	1:E:524:TRP:HD1	1.79	0.47
2:F:1004:POV:H32	2:F:1006:POV:H32A	1.96	0.47
1:A:772:ILE:O	1:A:776:THR:HG23	2.15	0.47
1:B:705:PHE:CZ	1:B:795:MET:HE2	2.49	0.47
1:B:775:THR:HG21	2:B:1002:POV:C211	2.43	0.47
1:C:267:THR:O	1:C:271:ARG:N	2.41	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:701:HIS:ND1	1:D:766:LEU:HB3	2.30	0.47
1:E:705:PHE:CZ	1:E:795:MET:HE2	2.49	0.47
2:E:1004:POV:H32	2:E:1006:POV:H32A	1.96	0.47
1:D:773:THR:O	1:D:776:THR:OG1	2.32	0.47
1:E:772:ILE:O	1:E:776:THR:HG23	2.15	0.47
1:B:701:HIS:ND1	1:B:766:LEU:HB3	2.30	0.47
1:D:705:PHE:CZ	1:D:795:MET:HE2	2.49	0.47
2:D:1004:POV:H11	2:D:1004:POV:H15A	1.47	0.47
2:D:1005:POV:H13B	2:D:1005:POV:H11A	1.58	0.47
2:E:1005:POV:H13B	2:E:1005:POV:H11A	1.57	0.47
2:E:1007:POV:O32	2:F:1007:POV:H22	2.14	0.47
1:D:595:SER:HB3	1:E:902:ASP:OD1	2.13	0.47
1:E:701:HIS:ND1	1:E:766:LEU:HB3	2.30	0.47
1:F:772:ILE:O	1:F:776:THR:HG23	2.15	0.47
1:A:313:PHE:O	1:B:783:GLY:HA2	2.15	0.47
1:A:902:ASP:OD1	1:F:595:SER:N	2.47	0.47
1:B:309:TRP:CZ2	1:C:860:ILE:HG21	2.50	0.47
2:B:1003:POV:H29	2:B:1003:POV:H26	1.59	0.47
1:C:116:PHE:HA	1:C:119:PHE:HD2	1.80	0.47
1:C:599:ASP:CG	1:D:898:ARG:HH12	2.22	0.47
1:C:705:PHE:CZ	1:C:795:MET:HE2	2.49	0.47
1:D:772:ILE:O	1:D:776:THR:HG23	2.15	0.47
2:D:1002:POV:H2	2:D:1002:POV:H25	1.97	0.47
1:E:116:PHE:HA	1:E:119:PHE:HD2	1.80	0.47
1:E:471:VAL:HB	1:E:518:LYS:HB2	1.95	0.47
1:F:701:HIS:ND1	1:F:766:LEU:HB3	2.30	0.47
1:A:400:SER:OG	1:A:403:ASP:N	2.43	0.47
1:B:772:ILE:O	1:B:776:THR:HG23	2.15	0.47
1:D:116:PHE:HA	1:D:119:PHE:HD2	1.80	0.47
1:E:319:ILE:HD12	1:F:857:ARG:HG2	1.96	0.47
1:B:116:PHE:HA	1:B:119:PHE:HD2	1.80	0.47
1:B:773:THR:O	1:B:776:THR:OG1	2.32	0.47
2:E:1002:POV:H2	2:E:1002:POV:H25	1.97	0.47
2:F:1009:POV:H14A	2:F:1009:POV:O14	2.15	0.47
2:A:1007:POV:H21G	2:F:1009:POV:H31F	1.97	0.47
1:B:550:LEU:HD11	1:B:679:LYS:HG3	1.97	0.47
1:D:550:LEU:HD11	1:D:679:LYS:HG3	1.97	0.47
1:E:550:LEU:HD11	1:E:679:LYS:HG3	1.97	0.47
2:F:1002:POV:H25	2:F:1002:POV:H2	1.97	0.47
1:A:775:THR:HG21	2:A:1002:POV:C211	2.43	0.46
2:D:1001:POV:H22	2:D:1005:POV:C15	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:116:PHE:HA	1:A:119:PHE:HD2	1.80	0.46
1:A:550:LEU:HD11	1:A:679:LYS:HG3	1.97	0.46
2:A:1002:POV:H25	2:A:1002:POV:H2	1.97	0.46
2:C:1001:POV:H22	2:C:1005:POV:C15	2.45	0.46
1:D:583:ARG:NH2	1:D:917:GLU:HB3	2.31	0.46
1:E:309:TRP:HE1	1:E:326:THR:HG21	1.80	0.46
1:E:584:LEU:HD12	1:E:592:MET:HE1	1.95	0.46
1:F:116:PHE:HA	1:F:119:PHE:HD2	1.80	0.46
2:A:1003:POV:H24	2:F:1005:POV:O32	2.16	0.46
2:B:1001:POV:H22	2:B:1005:POV:C15	2.45	0.46
1:C:701:HIS:ND1	1:C:766:LEU:HB3	2.30	0.46
1:F:309:TRP:HE1	1:F:326:THR:HG21	1.81	0.46
1:B:314:TYR:O	1:C:779:LEU:HD13	2.16	0.46
2:C:1009:POV:H14A	2:C:1009:POV:O14	2.15	0.46
1:E:783:GLY:O	1:E:857:ARG:NH2	2.49	0.46
1:F:654:ALA:HB1	1:F:658:ALA:HB3	1.98	0.46
1:A:309:TRP:HE1	1:A:326:THR:HG21	1.80	0.46
1:A:583:ARG:NH2	1:A:917:GLU:HB3	2.31	0.46
1:A:701:HIS:ND1	1:A:766:LEU:HB3	2.30	0.46
2:E:1009:POV:H23	3:F:1010:SPH:C4	2.39	0.46
1:A:783:GLY:O	1:A:857:ARG:NH2	2.49	0.46
1:C:385:LYS:HZ3	1:C:535:PRO:HG2	1.80	0.46
1:D:314:TYR:O	1:E:779:LEU:HD13	2.15	0.46
1:D:783:GLY:O	1:D:857:ARG:NH2	2.49	0.46
2:F:1001:POV:H22	2:F:1005:POV:C15	2.45	0.46
1:B:583:ARG:NH2	1:B:917:GLU:HB3	2.31	0.46
2:E:1004:POV:H11	2:E:1004:POV:H15A	1.47	0.46
2:A:1003:POV:H210	2:F:1005:POV:H37	1.98	0.46
1:E:309:TRP:NE1	1:E:326:THR:HG21	2.31	0.46
2:E:1007:POV:H21G	2:E:1009:POV:H31F	1.98	0.46
1:F:550:LEU:HD11	1:F:679:LYS:HG3	1.97	0.46
1:F:775:THR:HG21	2:F:1002:POV:C211	2.43	0.46
1:A:314:TYR:O	1:B:779:LEU:HD13	2.16	0.46
2:B:1002:POV:H2	2:B:1002:POV:H25	1.97	0.46
2:C:1002:POV:H2	2:C:1002:POV:H25	1.97	0.46
1:E:583:ARG:NH2	1:E:917:GLU:HB3	2.31	0.46
1:A:309:TRP:NE1	1:A:326:THR:HG21	2.31	0.46
1:C:309:TRP:HE1	1:C:326:THR:HG21	1.80	0.46
1:C:461:VAL:HG22	1:C:471:VAL:HG13	1.98	0.46
1:E:315:ARG:NH1	1:E:711:ALA:O	2.38	0.46
1:F:783:GLY:O	1:F:857:ARG:NH2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:316:THR:OG1	1:B:783:GLY:HA2	2.16	0.45
1:A:461:VAL:HG22	1:A:471:VAL:HG13	1.99	0.45
1:B:309:TRP:HE1	1:B:326:THR:HG21	1.80	0.45
1:C:550:LEU:HD11	1:C:679:LYS:HG3	1.97	0.45
1:F:309:TRP:NE1	1:F:326:THR:HG21	2.31	0.45
1:A:583:ARG:HH21	1:A:914:HIS:HA	1.81	0.45
2:A:1001:POV:H22	2:A:1005:POV:C15	2.45	0.45
1:B:583:ARG:HH21	1:B:914:HIS:HA	1.81	0.45
1:B:319:ILE:HD12	1:C:857:ARG:HG2	1.97	0.45
1:B:461:VAL:HG22	1:B:471:VAL:HG13	1.98	0.45
1:C:583:ARG:HH21	1:C:914:HIS:HA	1.81	0.45
1:F:583:ARG:NH2	1:F:917:GLU:HB3	2.31	0.45
2:F:1009:POV:H28	2:F:1009:POV:H211	1.82	0.45
2:A:1005:POV:H37	2:B:1003:POV:H210	1.98	0.45
1:C:309:TRP:NE1	1:C:326:THR:HG21	2.31	0.45
1:C:407:THR:HG21	1:C:527:LEU:HD12	1.98	0.45
2:C:1007:POV:H29	2:C:1009:POV:H36A	1.98	0.45
1:E:407:THR:HG21	1:E:527:LEU:HD12	1.98	0.45
2:E:1001:POV:H22	2:E:1005:POV:C15	2.45	0.45
2:E:1007:POV:H12A	2:E:1009:POV:C14	2.46	0.45
1:F:315:ARG:NH1	1:F:711:ALA:O	2.38	0.45
2:B:1007:POV:H28	2:B:1007:POV:H211	1.80	0.45
1:C:289:VAL:HG13	1:C:752:LEU:HD11	1.99	0.45
1:D:400:SER:OG	1:D:403:ASP:N	2.43	0.45
1:D:636:VAL:HG12	1:D:657:ALA:HB3	1.99	0.45
1:E:654:ALA:HB1	1:E:658:ALA:HB3	1.98	0.45
2:E:1007:POV:H35	2:F:1006:POV:H27	1.97	0.45
1:A:654:ALA:HB1	1:A:658:ALA:HB3	1.98	0.45
1:B:783:GLY:O	1:B:857:ARG:NH2	2.49	0.45
2:C:1004:POV:H311	2:D:1008:POV:H211	1.98	0.45
1:A:289:VAL:HG13	1:A:752:LEU:HD11	1.99	0.45
2:D:1006:POV:H28	2:D:1006:POV:H211	1.82	0.45
1:B:306:LEU:HD11	1:C:868:VAL:HG21	1.77	0.45
1:C:309:TRP:CZ2	1:D:860:ILE:HG21	2.51	0.45
1:C:783:GLY:O	1:C:857:ARG:NH2	2.49	0.45
1:D:309:TRP:HE1	1:D:326:THR:HG21	1.80	0.45
1:D:698:LEU:HD22	1:D:803:GLU:HG2	1.99	0.45
2:E:1009:POV:H14A	2:E:1009:POV:O14	2.17	0.45
2:F:1009:POV:H1A	3:F:1010:SPH:C1	2.47	0.45
1:A:779:LEU:CD1	1:F:314:TYR:O	2.64	0.45
1:B:309:TRP:NE1	1:B:326:THR:HG21	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:583:ARG:NH2	1:C:917:GLU:HB3	2.31	0.45
1:D:289:VAL:HG13	1:D:752:LEU:HD11	1.99	0.45
1:D:461:VAL:HG22	1:D:471:VAL:HG13	1.98	0.45
1:D:654:ALA:HB1	1:D:658:ALA:HB3	1.98	0.45
1:E:289:VAL:HG13	1:E:752:LEU:HD11	1.99	0.45
1:F:461:VAL:HG22	1:F:471:VAL:HG13	1.99	0.45
1:A:400:SER:O	1:A:404:LEU:N	2.50	0.45
1:B:636:VAL:HG12	1:B:657:ALA:HB3	1.99	0.45
1:B:691:TYR:CE2	1:B:733:THR:HG22	2.53	0.45
1:D:309:TRP:NE1	1:D:326:THR:HG21	2.31	0.45
1:A:691:TYR:CE2	1:A:733:THR:HG22	2.52	0.44
1:B:316:THR:OG1	1:C:783:GLY:HA2	2.16	0.44
1:C:654:ALA:HB1	1:C:658:ALA:HB3	1.98	0.44
1:E:314:TYR:O	1:F:779:LEU:CD1	2.65	0.44
1:E:385:LYS:HZ3	1:E:535:PRO:HG2	1.82	0.44
1:E:400:SER:O	1:E:404:LEU:N	2.50	0.44
1:F:407:THR:HG21	1:F:527:LEU:HD12	1.98	0.44
1:F:698:LEU:HD22	1:F:803:GLU:HG2	1.99	0.44
2:F:1009:POV:H11	2:F:1009:POV:H15B	1.71	0.44
1:A:396:VAL:HG21	1:A:528:GLY:HA3	1.99	0.44
1:B:698:LEU:HD22	1:B:803:GLU:HG2	1.99	0.44
2:B:1005:POV:H37	2:C:1003:POV:H210	1.99	0.44
1:C:400:SER:O	1:C:404:LEU:N	2.50	0.44
1:E:125:GLN:HA	1:E:128:MET:HE3	1.99	0.44
1:E:583:ARG:HH21	1:E:914:HIS:HA	1.81	0.44
1:F:636:VAL:HG12	1:F:657:ALA:HB3	1.99	0.44
1:B:400:SER:O	1:B:404:LEU:N	2.50	0.44
1:C:396:VAL:HG21	1:C:528:GLY:HA3	1.99	0.44
1:C:636:VAL:HG12	1:C:657:ALA:HB3	1.99	0.44
1:E:461:VAL:HG22	1:E:471:VAL:HG13	1.98	0.44
1:E:691:TYR:CE2	1:E:733:THR:HG22	2.53	0.44
1:A:319:ILE:HD12	1:B:857:ARG:HG2	2.00	0.44
1:A:407:THR:HG21	1:A:527:LEU:HD12	1.98	0.44
1:C:685:PHE:O	1:C:688:MET:HG2	2.18	0.44
1:D:691:TYR:CE2	1:D:733:THR:HG22	2.53	0.44
1:E:332:ILE:HD13	1:E:706:LEU:HD12	2.00	0.44
1:E:396:VAL:HG21	1:E:528:GLY:HA3	1.99	0.44
1:A:332:ILE:HD13	1:A:706:LEU:HD12	2.00	0.44
1:B:289:VAL:HG13	1:B:752:LEU:HD11	1.99	0.44
1:C:691:TYR:CE2	1:C:733:THR:HG22	2.52	0.44
1:D:385:LYS:HZ3	1:D:535:PRO:HG2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:1005:POV:H37	2:E:1003:POV:H210	2.00	0.44
1:E:636:VAL:HG12	1:E:657:ALA:HB3	1.99	0.44
1:E:685:PHE:O	1:E:688:MET:HG2	2.18	0.44
1:F:691:TYR:CE2	1:F:733:THR:HG22	2.53	0.44
1:C:125:GLN:HA	1:C:128:MET:HE3	1.99	0.44
1:C:719:ILE:HA	1:C:719:ILE:HD12	1.82	0.44
1:D:685:PHE:O	1:D:688:MET:HG2	2.18	0.44
1:F:289:VAL:HG13	1:F:752:LEU:HD11	1.99	0.44
1:A:636:VAL:HG12	1:A:657:ALA:HB3	1.99	0.44
1:B:505:LEU:O	1:B:510:PHE:N	2.50	0.44
1:C:557:LEU:HB3	1:C:610:VAL:HG11	2.00	0.44
1:C:698:LEU:HD22	1:C:803:GLU:HG2	1.99	0.44
1:F:400:SER:O	1:F:404:LEU:N	2.50	0.44
1:B:407:THR:HG21	1:B:527:LEU:HD12	1.98	0.44
1:B:654:ALA:HB1	1:B:658:ALA:HB3	1.98	0.44
1:D:583:ARG:HH21	1:D:914:HIS:HA	1.81	0.44
2:E:1005:POV:H29	2:E:1005:POV:H26A	1.76	0.44
1:F:396:VAL:HG21	1:F:528:GLY:HA3	1.99	0.44
1:A:125:GLN:HA	1:A:128:MET:HE3	1.99	0.44
1:A:309:TRP:CZ2	1:B:860:ILE:HG21	2.52	0.44
1:A:557:LEU:HB3	1:A:610:VAL:HG11	2.00	0.44
2:A:1007:POV:H35	2:B:1006:POV:H27	1.99	0.44
1:B:332:ILE:HD13	1:B:706:LEU:HD12	2.00	0.44
1:B:557:LEU:HB3	1:B:610:VAL:HG11	2.00	0.44
1:B:820:ILE:HD12	1:B:820:ILE:HA	1.92	0.44
2:C:1007:POV:C35	2:D:1007:POV:H27A	2.47	0.44
1:D:125:GLN:HA	1:D:128:MET:HE3	1.99	0.44
1:F:583:ARG:HH21	1:F:914:HIS:HA	1.81	0.44
1:F:685:PHE:O	1:F:688:MET:HG2	2.18	0.44
1:F:773:THR:O	1:F:776:THR:OG1	2.32	0.44
1:D:332:ILE:HD13	1:D:706:LEU:HD12	2.00	0.43
1:D:407:THR:HG21	1:D:527:LEU:HD12	1.98	0.43
1:B:267:THR:O	1:B:271:ARG:N	2.41	0.43
1:D:315:ARG:NH1	1:D:711:ALA:O	2.38	0.43
1:D:396:VAL:HG21	1:D:528:GLY:HA3	1.99	0.43
1:E:505:LEU:HD22	1:E:510:PHE:HD2	1.83	0.43
1:E:557:LEU:HB3	1:E:610:VAL:HG11	2.00	0.43
1:E:698:LEU:HD22	1:E:803:GLU:HG2	1.99	0.43
1:F:557:LEU:HB3	1:F:610:VAL:HG11	2.00	0.43
1:B:396:VAL:HG21	1:B:528:GLY:HA3	1.99	0.43
2:B:1004:POV:H11	2:B:1004:POV:H15A	1.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:505:LEU:HD22	1:D:510:PHE:HD2	1.83	0.43
2:F:1005:POV:H29	2:F:1005:POV:H26A	1.76	0.43
1:A:338:LEU:HD11	1:A:695:ARG:HB3	2.01	0.43
1:B:752:LEU:HD23	1:B:752:LEU:HA	1.87	0.43
2:B:1008:POV:H11	2:B:1008:POV:H15A	1.71	0.43
1:D:505:LEU:O	1:D:510:PHE:N	2.50	0.43
1:A:685:PHE:O	1:A:688:MET:HG2	2.18	0.43
1:A:698:LEU:HD22	1:A:803:GLU:HG2	1.99	0.43
1:C:332:ILE:HD13	1:C:706:LEU:HD12	2.00	0.43
1:D:414:ARG:HE	1:D:440:LEU:HD23	1.84	0.43
1:E:338:LEU:HD11	1:E:695:ARG:HB3	2.01	0.43
1:E:414:ARG:HE	1:E:440:LEU:HD23	1.84	0.43
1:F:332:ILE:HD13	1:F:706:LEU:HD12	2.00	0.43
1:B:505:LEU:HD22	1:B:510:PHE:HD2	1.83	0.43
2:B:1005:POV:H25	2:B:1005:POV:H32	2.01	0.43
1:C:315:ARG:NH1	1:C:711:ALA:O	2.38	0.43
1:C:773:THR:O	1:C:776:THR:OG1	2.32	0.43
1:D:400:SER:O	1:D:404:LEU:N	2.50	0.43
2:D:1005:POV:H32	2:D:1005:POV:H25	2.01	0.43
1:E:400:SER:OG	1:E:403:ASP:N	2.43	0.43
2:E:1001:POV:H21E	2:E:1001:POV:H39	2.00	0.43
1:A:200:ASP:OD1	1:A:201:ILE:N	2.52	0.43
2:A:1005:POV:H25	2:A:1005:POV:H32	2.01	0.43
1:D:225:ILE:HD11	1:D:239:LYS:HE2	2.01	0.43
1:F:225:ILE:HD11	1:F:239:LYS:HE2	2.01	0.43
1:F:505:LEU:O	1:F:510:PHE:N	2.50	0.43
1:A:505:LEU:HD22	1:A:510:PHE:HD2	1.83	0.43
2:A:1002:POV:H11A	2:A:1002:POV:H14B	1.75	0.43
1:B:200:ASP:OD1	1:B:201:ILE:N	2.52	0.43
1:B:338:LEU:HD11	1:B:695:ARG:HB3	2.01	0.43
1:B:685:PHE:O	1:B:688:MET:HG2	2.18	0.43
1:C:305:LEU:HA	1:C:308:VAL:HG22	2.01	0.43
2:C:1001:POV:H21E	2:C:1001:POV:H39	2.00	0.43
2:C:1007:POV:H12A	2:C:1009:POV:H14	2.01	0.43
2:E:1004:POV:H37A	2:F:1008:POV:H27A	2.00	0.43
2:F:1002:POV:H14B	2:F:1002:POV:H11A	1.75	0.43
2:F:1005:POV:H25	2:F:1005:POV:H32	2.01	0.43
1:C:414:ARG:HE	1:C:440:LEU:HD23	1.84	0.43
1:C:433:TYR:N	1:C:434:PRO:CD	2.82	0.43
1:C:505:LEU:O	1:C:510:PHE:N	2.50	0.43
1:C:505:LEU:HD22	1:C:510:PHE:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1003:POV:H29	2:C:1003:POV:H26	1.59	0.43
2:C:1005:POV:H25	2:C:1005:POV:H32	2.01	0.43
2:F:1001:POV:H29	2:F:1004:POV:H310	2.01	0.43
2:F:1007:POV:H11	2:F:1007:POV:H14A	1.71	0.43
1:A:517:ARG:O	1:A:525:GLU:N	2.49	0.43
2:A:1003:POV:H26	2:A:1003:POV:H29	1.59	0.43
1:D:557:LEU:HB3	1:D:610:VAL:HG11	2.00	0.43
1:F:717:LEU:HD12	1:F:717:LEU:HA	1.81	0.43
2:F:1003:POV:H26	2:F:1003:POV:H29	1.59	0.43
1:A:305:LEU:HA	1:A:308:VAL:HG22	2.01	0.42
1:B:762:LEU:HD21	1:B:873:TYR:HB2	2.01	0.42
1:C:762:LEU:HD21	1:C:873:TYR:HB2	2.01	0.42
2:C:1006:POV:H28	2:C:1006:POV:H211	1.82	0.42
2:C:1007:POV:H11	2:C:1007:POV:H14A	1.71	0.42
1:A:225:ILE:HD11	1:A:239:LYS:HE2	2.01	0.42
2:A:1001:POV:H21E	2:A:1001:POV:H39	2.00	0.42
1:B:125:GLN:HA	1:B:128:MET:HE3	1.99	0.42
1:B:414:ARG:HE	1:B:440:LEU:HD23	1.84	0.42
1:E:225:ILE:HD11	1:E:239:LYS:HE2	2.01	0.42
2:E:1005:POV:H25	2:E:1005:POV:H32	2.01	0.42
1:F:125:GLN:HA	1:F:128:MET:HE3	1.99	0.42
1:A:353:LEU:HD23	1:A:353:LEU:HA	1.87	0.42
1:A:414:ARG:HE	1:A:440:LEU:HD23	1.84	0.42
1:B:400:SER:HA	1:B:401:PRO:HD3	1.91	0.42
2:B:1001:POV:H21E	2:B:1001:POV:H39	2.00	0.42
2:D:1001:POV:H21E	2:D:1001:POV:H39	2.00	0.42
1:E:762:LEU:HD21	1:E:873:TYR:HB2	2.01	0.42
2:E:1007:POV:H311	2:F:1007:POV:H21B	2.00	0.42
1:F:433:TYR:N	1:F:434:PRO:CD	2.82	0.42
1:F:505:LEU:HD22	1:F:510:PHE:HD2	1.83	0.42
1:A:315:ARG:NH1	1:A:711:ALA:O	2.38	0.42
1:A:433:TYR:N	1:A:434:PRO:CD	2.82	0.42
1:B:315:ARG:NH1	1:B:711:ALA:O	2.38	0.42
1:B:433:TYR:N	1:B:434:PRO:CD	2.82	0.42
1:C:717:LEU:HA	1:C:717:LEU:HD12	1.81	0.42
1:E:505:LEU:O	1:E:510:PHE:N	2.50	0.42
1:B:225:ILE:HD11	1:B:239:LYS:HE2	2.01	0.42
1:D:338:LEU:HD11	1:D:695:ARG:HB3	2.01	0.42
1:D:433:TYR:N	1:D:434:PRO:CD	2.82	0.42
2:D:1001:POV:H29	2:D:1004:POV:H310	2.01	0.42
2:D:1004:POV:H210	2:D:1006:POV:H39	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1003:POV:H29	2:E:1003:POV:H26	1.60	0.42
1:F:200:ASP:OD1	1:F:201:ILE:N	2.52	0.42
1:F:752:LEU:HD23	1:F:752:LEU:HA	1.87	0.42
1:A:305:LEU:HA	1:A:305:LEU:HD23	1.88	0.42
2:A:1004:POV:H210	2:A:1006:POV:H39	2.02	0.42
2:B:1007:POV:O22	2:B:1007:POV:H1	2.20	0.42
1:C:338:LEU:HD11	1:C:695:ARG:HB3	2.01	0.42
1:C:797:LEU:HB2	1:C:840:THR:OG1	2.20	0.42
2:C:1007:POV:H211	2:C:1007:POV:H28	1.81	0.42
2:D:1008:POV:H11	2:D:1008:POV:H15A	1.72	0.42
1:E:214:GLY:O	1:E:245:THR:OG1	2.37	0.42
1:A:599:ASP:CG	1:B:898:ARG:HH12	2.27	0.42
1:A:719:ILE:HD12	1:A:719:ILE:HA	1.82	0.42
1:A:797:LEU:HB2	1:A:840:THR:OG1	2.20	0.42
2:B:1004:POV:H210	2:B:1006:POV:H39	2.02	0.42
1:D:205:GLU:H	1:D:208:THR:HG21	1.85	0.42
1:D:762:LEU:HD21	1:D:873:TYR:HB2	2.01	0.42
1:F:205:GLU:H	1:F:208:THR:HG21	1.85	0.42
2:F:1004:POV:H210	2:F:1006:POV:H39	2.01	0.42
1:C:200:ASP:OD1	1:C:201:ILE:N	2.52	0.42
1:E:433:TYR:N	1:E:434:PRO:CD	2.82	0.42
2:F:1001:POV:H21E	2:F:1001:POV:H39	2.00	0.42
1:B:205:GLU:H	1:B:208:THR:HG21	1.85	0.42
2:B:1002:POV:C212	2:B:1003:POV:H21B	2.45	0.42
1:D:501:LYS:O	1:D:505:LEU:HG	2.20	0.42
1:D:694:TYR:CZ	1:D:698:LEU:HD11	2.55	0.42
1:E:200:ASP:OD1	1:E:201:ILE:N	2.52	0.42
1:A:246:PHE:CE2	1:A:667:LEU:HB3	2.55	0.42
1:A:298:LEU:HD23	1:A:298:LEU:HA	1.94	0.42
1:A:694:TYR:CZ	1:A:698:LEU:HD11	2.55	0.42
1:B:305:LEU:HA	1:B:308:VAL:HG22	2.01	0.42
2:B:1001:POV:H29	2:B:1004:POV:H310	2.01	0.42
1:C:225:ILE:HD11	1:C:239:LYS:HE2	2.01	0.42
2:C:1002:POV:H11A	2:C:1002:POV:H14B	1.75	0.42
1:D:797:LEU:HB2	1:D:840:THR:OG1	2.20	0.42
1:E:246:PHE:CE2	1:E:667:LEU:HB3	2.55	0.42
1:E:851:ASP:OD1	1:E:851:ASP:N	2.53	0.42
2:E:1001:POV:H29	2:E:1004:POV:H310	2.01	0.42
1:F:797:LEU:HB2	1:F:840:THR:OG1	2.20	0.42
1:A:205:GLU:H	1:A:208:THR:HG21	1.85	0.41
2:A:1001:POV:H29	2:A:1004:POV:H310	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:246:PHE:CE2	1:D:667:LEU:HB3	2.55	0.41
1:E:305:LEU:HA	1:E:308:VAL:HG22	2.01	0.41
1:F:414:ARG:HE	1:F:440:LEU:HD23	1.84	0.41
1:B:246:PHE:CE2	1:B:667:LEU:HB3	2.55	0.41
2:B:1005:POV:H13B	2:B:1005:POV:H11A	1.57	0.41
1:C:323:LEU:HD23	1:C:323:LEU:HA	1.89	0.41
1:D:719:ILE:HA	1:D:719:ILE:HD12	1.81	0.41
1:F:694:TYR:CZ	1:F:698:LEU:HD11	2.55	0.41
1:F:762:LEU:HD21	1:F:873:TYR:HB2	2.01	0.41
1:A:861:TRP:NE1	1:A:865:ILE:HD11	2.36	0.41
2:B:1005:POV:H26A	2:B:1005:POV:H29	1.76	0.41
2:B:1007:POV:H35	2:C:1006:POV:H27	2.02	0.41
1:C:861:TRP:NE1	1:C:865:ILE:HD11	2.36	0.41
1:D:305:LEU:HA	1:D:308:VAL:HG22	2.01	0.41
1:D:617:ARG:HD2	1:D:617:ARG:HA	1.88	0.41
2:E:1004:POV:H210	2:E:1006:POV:H39	2.02	0.41
1:F:617:ARG:HD2	1:F:617:ARG:HA	1.88	0.41
1:F:861:TRP:NE1	1:F:865:ILE:HD11	2.36	0.41
1:A:762:LEU:HD21	1:A:873:TYR:HB2	2.01	0.41
1:B:188:LEU:HD12	1:B:188:LEU:HA	1.91	0.41
1:B:687:ARG:HH11	1:B:687:ARG:HD3	1.72	0.41
1:B:861:TRP:NE1	1:B:865:ILE:HD11	2.35	0.41
2:B:1002:POV:H14B	2:B:1002:POV:H11A	1.75	0.41
1:E:861:TRP:NE1	1:E:865:ILE:HD11	2.36	0.41
1:C:694:TYR:CZ	1:C:698:LEU:HD11	2.55	0.41
1:D:702:LEU:HD23	1:D:702:LEU:HA	1.90	0.41
2:D:1006:POV:H11	2:D:1006:POV:H14A	1.74	0.41
1:E:617:ARG:HA	1:E:617:ARG:HD2	1.88	0.41
1:A:214:GLY:O	1:A:245:THR:OG1	2.37	0.41
1:B:459:THR:OG1	1:B:472:CYS:O	2.33	0.41
2:B:1003:POV:C1	2:B:1003:POV:H11	2.51	0.41
1:C:313:PHE:HB3	1:D:776:THR:HG21	2.02	0.41
2:C:1001:POV:H14B	2:C:1001:POV:H11A	1.71	0.41
1:E:797:LEU:HB2	1:E:840:THR:OG1	2.20	0.41
2:E:1003:POV:C1	2:E:1003:POV:H11	2.51	0.41
1:F:338:LEU:HD11	1:F:695:ARG:HB3	2.01	0.41
1:A:617:ARG:HD2	1:A:617:ARG:HA	1.88	0.41
1:B:385:LYS:HZ3	1:B:535:PRO:HG2	1.85	0.41
1:C:501:LYS:O	1:C:505:LEU:HG	2.20	0.41
2:C:1001:POV:H29	2:C:1004:POV:H310	2.01	0.41
2:C:1004:POV:H210	2:C:1006:POV:H39	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1004:POV:H211	2:E:1004:POV:H28	1.85	0.41
1:F:501:LYS:O	1:F:505:LEU:HG	2.20	0.41
1:A:501:LYS:O	1:A:505:LEU:HG	2.20	0.41
1:C:820:ILE:HD12	1:C:820:ILE:HA	1.92	0.41
2:C:1003:POV:C1	2:C:1003:POV:H11	2.51	0.41
2:C:1006:POV:H11	2:C:1006:POV:H14A	1.74	0.41
1:D:602:GLU:OE2	1:D:627:TYR:OH	2.28	0.41
1:D:861:TRP:NE1	1:D:865:ILE:HD11	2.35	0.41
2:D:1005:POV:O32	2:E:1003:POV:H24	2.21	0.41
1:E:501:LYS:O	1:E:505:LEU:HG	2.20	0.41
2:E:1007:POV:O22	2:E:1007:POV:H1	2.20	0.41
1:F:305:LEU:HA	1:F:308:VAL:HG22	2.01	0.41
2:F:1007:POV:O22	2:F:1007:POV:H1	2.20	0.41
1:A:335:PRO:HG2	1:A:338:LEU:HD13	2.03	0.41
2:A:1003:POV:H11	2:A:1003:POV:C1	2.51	0.41
1:B:501:LYS:O	1:B:505:LEU:HG	2.20	0.41
1:B:797:LEU:HB2	1:B:840:THR:OG1	2.20	0.41
2:C:1004:POV:H28	2:C:1004:POV:H211	1.85	0.41
2:C:1007:POV:O22	2:C:1007:POV:H1	2.20	0.41
1:D:353:LEU:HD23	1:D:353:LEU:HA	1.87	0.41
2:D:1006:POV:H3A	2:D:1007:POV:H2	2.03	0.41
2:D:1007:POV:H1	2:D:1007:POV:O22	2.20	0.41
1:E:335:PRO:HG2	1:E:338:LEU:HD13	2.03	0.41
1:E:730:ASP:O	1:E:733:THR:OG1	2.24	0.41
2:E:1007:POV:H211	2:E:1007:POV:H28	1.81	0.41
1:F:246:PHE:CE2	1:F:667:LEU:HB3	2.55	0.41
1:F:451:PHE:CE1	1:F:456:LYS:HA	2.56	0.41
1:A:514:GLY:HA2	1:A:529:VAL:HA	2.03	0.41
2:A:1007:POV:H12A	2:F:1009:POV:H14	2.03	0.41
1:C:788:PHE:CE2	1:C:851:ASP:HB3	2.57	0.41
1:D:124:ILE:HG22	1:D:128:MET:HE2	2.03	0.41
1:D:200:ASP:OD1	1:D:201:ILE:N	2.52	0.41
1:D:451:PHE:CE1	1:D:456:LYS:HA	2.56	0.41
1:E:702:LEU:HD23	1:E:702:LEU:HA	1.90	0.41
2:F:1003:POV:H11	2:F:1003:POV:C1	2.51	0.41
2:F:1007:POV:H28	2:F:1007:POV:H211	1.81	0.41
1:A:161:GLN:HG3	1:A:344:THR:HG21	2.03	0.40
2:D:1005:POV:C1	2:E:1008:POV:H15B	2.48	0.40
1:E:161:GLN:HG3	1:E:344:THR:HG21	2.03	0.40
1:E:205:GLU:H	1:E:208:THR:HG21	1.85	0.40
1:E:622:LEU:HD23	1:E:622:LEU:HA	1.91	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:694:TYR:CZ	1:E:698:LEU:HD11	2.55	0.40
1:E:752:LEU:HD23	1:E:752:LEU:HA	1.87	0.40
1:F:514:GLY:HA2	1:F:529:VAL:HA	2.03	0.40
2:F:1005:POV:H13B	2:F:1005:POV:H11A	1.57	0.40
1:B:335:PRO:HG2	1:B:338:LEU:HD13	2.03	0.40
1:B:514:GLY:HA2	1:B:529:VAL:HA	2.04	0.40
1:B:583:ARG:HH11	1:B:583:ARG:HD2	1.76	0.40
1:B:788:PHE:CE2	1:B:851:ASP:HB3	2.57	0.40
1:C:205:GLU:H	1:C:208:THR:HG21	1.85	0.40
1:C:246:PHE:CE2	1:C:667:LEU:HB3	2.55	0.40
1:C:335:PRO:HG2	1:C:338:LEU:HD13	2.03	0.40
1:C:752:LEU:HD23	1:C:752:LEU:HA	1.87	0.40
1:C:851:ASP:OD1	1:C:851:ASP:N	2.53	0.40
1:D:517:ARG:O	1:D:525:GLU:N	2.49	0.40
1:E:514:GLY:HA2	1:E:529:VAL:HA	2.03	0.40
2:A:1002:POV:H27A	2:A:1002:POV:H24A	1.96	0.40
2:A:1007:POV:O22	2:A:1007:POV:H1	2.20	0.40
1:B:124:ILE:HG22	1:B:128:MET:HE2	2.04	0.40
2:B:1006:POV:H11	2:B:1006:POV:H14A	1.74	0.40
1:C:451:PHE:CE1	1:C:456:LYS:HA	2.56	0.40
1:F:161:GLN:HG3	1:F:344:THR:HG21	2.03	0.40
2:F:1004:POV:H11	2:F:1004:POV:H15A	1.47	0.40
1:A:788:PHE:CE2	1:A:851:ASP:HB3	2.57	0.40
1:B:451:PHE:CE1	1:B:456:LYS:HA	2.56	0.40
1:B:694:TYR:CZ	1:B:698:LEU:HD11	2.55	0.40
1:D:514:GLY:HA2	1:D:529:VAL:HA	2.04	0.40
2:D:1003:POV:H29	2:D:1003:POV:H26	1.59	0.40
1:F:239:LYS:HD3	1:F:239:LYS:HA	1.96	0.40
2:F:1006:POV:H3A	2:F:1007:POV:H2	2.03	0.40
1:A:717:LEU:HD12	1:A:717:LEU:HA	1.81	0.40
1:B:517:ARG:O	1:B:525:GLU:N	2.49	0.40
1:D:151:LEU:HD23	1:D:151:LEU:HA	1.92	0.40
1:D:161:GLN:HG3	1:D:344:THR:HG21	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	798/918 (87%)	770 (96%)	28 (4%)	0	100	100
1	B	798/918 (87%)	770 (96%)	28 (4%)	0	100	100
1	C	798/918 (87%)	770 (96%)	28 (4%)	0	100	100
1	D	798/918 (87%)	770 (96%)	28 (4%)	0	100	100
1	E	798/918 (87%)	770 (96%)	28 (4%)	0	100	100
1	F	798/918 (87%)	770 (96%)	28 (4%)	0	100	100
All	All	4788/5508 (87%)	4620 (96%)	168 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	655/752 (87%)	653 (100%)	2 (0%)	91	96
1	B	655/752 (87%)	653 (100%)	2 (0%)	91	96
1	C	655/752 (87%)	653 (100%)	2 (0%)	91	96
1	D	655/752 (87%)	653 (100%)	2 (0%)	91	96
1	E	655/752 (87%)	653 (100%)	2 (0%)	91	96
1	F	655/752 (87%)	653 (100%)	2 (0%)	91	96
All	All	3930/4512 (87%)	3918 (100%)	12 (0%)	90	96

All (12) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	433	TYR
1	A	435	LYS
1	B	433	TYR
1	B	435	LYS
1	C	433	TYR
1	C	435	LYS
1	D	433	TYR
1	D	435	LYS
1	E	433	TYR
1	E	435	LYS
1	F	433	TYR
1	F	435	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (38) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	154	ASN
1	A	203	GLN
1	A	244	GLN
1	A	357	GLN
1	A	361	GLN
1	A	804	ASN
1	B	154	ASN
1	B	203	GLN
1	B	244	GLN
1	B	357	GLN
1	B	361	GLN
1	B	804	ASN
1	C	154	ASN
1	C	203	GLN
1	C	244	GLN
1	C	357	GLN
1	C	361	GLN
1	C	804	ASN
1	D	154	ASN
1	D	203	GLN
1	D	244	GLN
1	D	357	GLN
1	D	361	GLN
1	D	804	ASN
1	D	848	ASN

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Mol	Chain	Res	Type
1	E	154	ASN
1	E	203	GLN
1	E	244	GLN
1	E	357	GLN
1	E	361	GLN
1	E	804	ASN
1	E	848	ASN
1	F	154	ASN
1	F	203	GLN
1	F	244	GLN
1	F	357	GLN
1	F	361	GLN
1	F	804	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

52 ligands are modelled in this entry.

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	$\# Z > 2$
2	POV	F	1005	-	51,51,51	1.21	4 (7%)	57,59,59	1.12	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	POV	A	1002	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	B	1003	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	D	1007	-	51,51,51	1.22	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	B	1006	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	2 (3%)
2	POV	B	1004	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	C	1005	-	51,51,51	1.22	4 (7%)	57,59,59	1.12	2 (3%)
2	POV	F	1003	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	E	1008	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	F	1002	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	A	1008	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	B	1007	-	51,51,51	1.22	4 (7%)	57,59,59	1.08	3 (5%)
2	POV	C	1003	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	C	1002	-	51,51,51	1.21	4 (7%)	57,59,59	1.08	2 (3%)
2	POV	A	1007	-	51,51,51	1.22	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	C	1006	-	51,51,51	1.21	5 (9%)	57,59,59	1.09	2 (3%)
2	POV	D	1005	-	51,51,51	1.22	4 (7%)	57,59,59	1.12	2 (3%)
2	POV	E	1009	-	51,51,51	1.21	5 (9%)	57,59,59	1.06	3 (5%)
2	POV	B	1001	-	51,51,51	1.22	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	A	1003	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	B	1005	-	51,51,51	1.21	4 (7%)	57,59,59	1.12	2 (3%)
2	POV	E	1007	-	51,51,51	1.22	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	E	1003	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	D	1002	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	A	1006	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	2 (3%)
2	POV	A	1004	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	F	1001	-	51,51,51	1.22	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	F	1009	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	3 (5%)
2	POV	C	1001	-	51,51,51	1.22	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	C	1009	-	51,51,51	1.21	5 (9%)	57,59,59	1.12	3 (5%)
2	POV	F	1008	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	F	1004	-	51,51,51	1.20	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	B	1002	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	E	1005	-	51,51,51	1.21	5 (9%)	57,59,59	1.12	2 (3%)
2	POV	C	1008	-	51,51,51	1.20	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	E	1002	-	51,51,51	1.21	4 (7%)	57,59,59	1.08	2 (3%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	POV	A	1001	-	51,51,51	1.22	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	D	1001	-	51,51,51	1.22	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	D	1008	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	3 (5%)
2	POV	E	1001	-	51,51,51	1.22	4 (7%)	57,59,59	1.11	2 (3%)
2	POV	D	1003	-	51,51,51	1.21	4 (7%)	57,59,59	1.07	2 (3%)
2	POV	C	1004	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	E	1004	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
3	SPH	F	1010	-	19,20,20	0.88	1 (5%)	18,21,21	1.17	2 (11%)
2	POV	F	1007	-	51,51,51	1.22	4 (7%)	57,59,59	1.08	3 (5%)
2	POV	F	1006	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	C	1007	-	51,51,51	1.22	4 (7%)	57,59,59	1.08	3 (5%)
2	POV	D	1006	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	2 (3%)
2	POV	E	1006	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	B	1008	-	51,51,51	1.21	4 (7%)	57,59,59	1.09	3 (5%)
2	POV	D	1004	-	51,51,51	1.21	4 (7%)	57,59,59	1.10	2 (3%)
2	POV	A	1005	-	51,51,51	1.21	4 (7%)	57,59,59	1.12	2 (3%)

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
2	POV	F	1005	-	-	22/55/55/55	-
2	POV	A	1002	-	-	26/55/55/55	-
2	POV	B	1003	-	-	24/55/55/55	-
2	POV	D	1007	-	-	19/55/55/55	-
2	POV	B	1006	-	-	28/55/55/55	-
2	POV	B	1004	-	-	30/55/55/55	-
2	POV	C	1005	-	-	22/55/55/55	-
2	POV	F	1003	-	-	24/55/55/55	-
2	POV	E	1008	-	-	20/55/55/55	-
2	POV	F	1002	-	-	26/55/55/55	-
2	POV	A	1008	-	-	20/55/55/55	-
2	POV	B	1007	-	-	19/55/55/55	-
2	POV	C	1003	-	-	24/55/55/55	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	POV	C	1002	-	-	26/55/55/55	-
2	POV	A	1007	-	-	19/55/55/55	-
2	POV	C	1006	-	-	28/55/55/55	-
2	POV	D	1005	-	-	22/55/55/55	-
2	POV	E	1009	-	-	22/55/55/55	-
2	POV	B	1001	-	-	26/55/55/55	-
2	POV	A	1003	-	-	24/55/55/55	-
2	POV	B	1005	-	-	22/55/55/55	-
2	POV	E	1007	-	-	19/55/55/55	-
2	POV	E	1003	-	-	24/55/55/55	-
2	POV	D	1002	-	-	26/55/55/55	-
2	POV	A	1006	-	-	28/55/55/55	-
2	POV	A	1004	-	-	30/55/55/55	-
2	POV	F	1001	-	-	27/55/55/55	-
2	POV	F	1009	-	-	21/55/55/55	-
2	POV	C	1001	-	-	27/55/55/55	-
2	POV	C	1009	-	-	22/55/55/55	-
2	POV	F	1008	-	-	20/55/55/55	-
2	POV	F	1004	-	-	30/55/55/55	-
2	POV	B	1002	-	-	26/55/55/55	-
2	POV	E	1005	-	-	22/55/55/55	-
2	POV	C	1008	-	-	20/55/55/55	-
2	POV	E	1002	-	-	26/55/55/55	-
2	POV	A	1001	-	-	27/55/55/55	-
2	POV	D	1001	-	-	27/55/55/55	-
2	POV	D	1008	-	-	20/55/55/55	-
2	POV	E	1001	-	-	27/55/55/55	-
2	POV	D	1003	-	-	24/55/55/55	-
2	POV	C	1004	-	-	30/55/55/55	-
2	POV	E	1004	-	-	30/55/55/55	-
3	SPH	F	1010	-	-	7/21/21/21	-
2	POV	F	1007	-	-	19/55/55/55	-
2	POV	F	1006	-	-	28/55/55/55	-
2	POV	C	1007	-	-	19/55/55/55	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	POV	D	1006	-	-	28/55/55/55	-
2	POV	E	1006	-	-	28/55/55/55	-
2	POV	B	1008	-	-	20/55/55/55	-
2	POV	D	1004	-	-	30/55/55/55	-
2	POV	A	1005	-	-	22/55/55/55	-

All (209) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	1003	POV	O31-C31	3.85	1.44	1.33
2	E	1007	POV	O31-C31	3.84	1.44	1.33
2	C	1003	POV	O31-C31	3.84	1.44	1.33
2	B	1003	POV	O31-C31	3.83	1.44	1.33
2	F	1003	POV	O31-C31	3.83	1.44	1.33
2	C	1007	POV	O31-C31	3.83	1.44	1.33
2	B	1007	POV	O31-C31	3.83	1.44	1.33
2	D	1007	POV	O31-C31	3.83	1.44	1.33
2	A	1003	POV	O31-C31	3.83	1.44	1.33
2	E	1003	POV	O31-C31	3.83	1.44	1.33
2	A	1007	POV	O31-C31	3.82	1.44	1.33
2	B	1004	POV	O31-C31	3.82	1.44	1.33
2	F	1007	POV	O31-C31	3.81	1.44	1.33
2	F	1008	POV	O31-C31	3.80	1.44	1.33
2	E	1004	POV	O31-C31	3.80	1.44	1.33
2	D	1008	POV	O31-C31	3.79	1.44	1.33
2	F	1001	POV	O31-C31	3.79	1.44	1.33
2	B	1008	POV	O31-C31	3.79	1.44	1.33
2	D	1006	POV	O31-C31	3.79	1.44	1.33
2	C	1004	POV	O31-C31	3.79	1.44	1.33
2	E	1006	POV	O31-C31	3.79	1.44	1.33
2	B	1006	POV	O31-C31	3.78	1.44	1.33
2	A	1004	POV	O31-C31	3.78	1.44	1.33
2	A	1008	POV	O31-C31	3.78	1.44	1.33
2	F	1006	POV	O31-C31	3.78	1.44	1.33
2	A	1006	POV	O31-C31	3.78	1.44	1.33
2	A	1001	POV	O31-C31	3.78	1.44	1.33
2	C	1006	POV	O31-C31	3.77	1.44	1.33
2	B	1001	POV	O31-C31	3.77	1.44	1.33
2	E	1008	POV	O31-C31	3.77	1.44	1.33
2	D	1001	POV	O31-C31	3.77	1.44	1.33
2	D	1004	POV	O31-C31	3.77	1.44	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1005	POV	O31-C31	3.76	1.44	1.33
2	C	1001	POV	O31-C31	3.76	1.44	1.33
2	F	1004	POV	O31-C31	3.76	1.44	1.33
2	E	1001	POV	O31-C31	3.76	1.44	1.33
2	C	1005	POV	O31-C31	3.76	1.44	1.33
2	C	1008	POV	O31-C31	3.76	1.44	1.33
2	A	1005	POV	O31-C31	3.76	1.44	1.33
2	D	1005	POV	O31-C31	3.76	1.44	1.33
2	F	1005	POV	O31-C31	3.75	1.44	1.33
2	F	1009	POV	O31-C31	3.74	1.44	1.33
2	E	1005	POV	O31-C31	3.74	1.44	1.33
2	C	1009	POV	O31-C31	3.73	1.44	1.33
2	E	1009	POV	O31-C31	3.73	1.44	1.33
2	B	1002	POV	O31-C31	3.72	1.44	1.33
2	C	1002	POV	O31-C31	3.72	1.44	1.33
2	F	1002	POV	O31-C31	3.72	1.44	1.33
2	A	1002	POV	O31-C31	3.72	1.44	1.33
2	D	1002	POV	O31-C31	3.71	1.44	1.33
2	E	1002	POV	O31-C31	3.71	1.44	1.33
3	F	1010	SPH	C4-C5	3.55	1.46	1.31
2	D	1007	POV	O21-C21	2.82	1.42	1.34
2	B	1007	POV	O21-C21	2.81	1.42	1.34
2	C	1007	POV	O21-C21	2.80	1.42	1.34
2	A	1007	POV	O21-C21	2.80	1.42	1.34
2	F	1007	POV	O21-C21	2.80	1.42	1.34
2	F	1005	POV	O21-C21	2.79	1.42	1.34
2	C	1005	POV	O21-C21	2.78	1.42	1.34
2	B	1005	POV	O21-C21	2.78	1.42	1.34
2	A	1005	POV	O21-C21	2.78	1.42	1.34
2	E	1007	POV	O21-C21	2.77	1.42	1.34
2	E	1009	POV	O21-C21	2.77	1.42	1.34
2	E	1005	POV	O21-C21	2.77	1.42	1.34
2	D	1002	POV	O21-C21	2.77	1.42	1.34
2	D	1005	POV	O21-C21	2.76	1.42	1.34
2	E	1002	POV	O21-C21	2.76	1.42	1.34
2	A	1002	POV	O21-C21	2.75	1.42	1.34
2	B	1002	POV	O21-C21	2.75	1.42	1.34
2	C	1009	POV	O21-C21	2.74	1.42	1.34
2	C	1002	POV	O21-C21	2.74	1.42	1.34
2	C	1004	POV	O21-C21	2.74	1.42	1.34
2	E	1004	POV	O21-C21	2.73	1.42	1.34
2	F	1004	POV	O21-C21	2.73	1.42	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	1006	POV	O21-C21	2.73	1.42	1.34
2	F	1002	POV	O21-C21	2.73	1.42	1.34
2	E	1006	POV	O21-C21	2.73	1.42	1.34
2	C	1001	POV	O21-C21	2.72	1.42	1.34
2	D	1004	POV	O21-C21	2.72	1.42	1.34
2	F	1009	POV	O21-C21	2.72	1.42	1.34
2	C	1006	POV	O21-C21	2.72	1.42	1.34
2	F	1006	POV	O21-C21	2.72	1.42	1.34
2	A	1006	POV	O21-C21	2.72	1.42	1.34
2	A	1004	POV	O21-C21	2.71	1.42	1.34
2	D	1001	POV	O21-C21	2.71	1.42	1.34
2	B	1006	POV	O21-C21	2.71	1.41	1.34
2	B	1004	POV	O21-C21	2.70	1.41	1.34
2	A	1001	POV	O21-C21	2.70	1.41	1.34
2	E	1001	POV	O21-C21	2.70	1.41	1.34
2	F	1001	POV	O21-C21	2.69	1.41	1.34
2	B	1001	POV	O21-C21	2.68	1.41	1.34
2	F	1008	POV	O21-C21	2.68	1.41	1.34
2	C	1006	POV	P-O12	2.67	1.70	1.59
2	A	1006	POV	P-O12	2.67	1.70	1.59
2	F	1006	POV	P-O12	2.67	1.70	1.59
2	B	1006	POV	P-O12	2.67	1.70	1.59
2	B	1008	POV	O21-C21	2.67	1.41	1.34
2	E	1006	POV	P-O12	2.67	1.70	1.59
2	E	1008	POV	O21-C21	2.67	1.41	1.34
2	D	1008	POV	O21-C21	2.67	1.41	1.34
2	D	1006	POV	P-O12	2.66	1.70	1.59
2	A	1008	POV	O21-C21	2.66	1.41	1.34
2	C	1008	POV	O21-C21	2.66	1.41	1.34
2	D	1003	POV	P-O12	2.65	1.70	1.59
2	F	1003	POV	P-O12	2.65	1.70	1.59
2	C	1003	POV	P-O12	2.64	1.70	1.59
2	A	1003	POV	P-O12	2.64	1.70	1.59
2	E	1003	POV	P-O12	2.64	1.70	1.59
2	E	1003	POV	O21-C21	2.64	1.41	1.34
2	F	1003	POV	O21-C21	2.63	1.41	1.34
2	D	1003	POV	O21-C21	2.63	1.41	1.34
2	B	1003	POV	P-O12	2.63	1.69	1.59
2	A	1003	POV	O21-C21	2.63	1.41	1.34
2	B	1003	POV	O21-C21	2.62	1.41	1.34
2	C	1003	POV	O21-C21	2.61	1.41	1.34
2	F	1007	POV	P-O12	2.61	1.69	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	1005	POV	P-O12	2.61	1.69	1.59
2	B	1007	POV	P-O12	2.61	1.69	1.59
2	F	1005	POV	P-O12	2.61	1.69	1.59
2	B	1005	POV	P-O12	2.60	1.69	1.59
2	A	1007	POV	P-O12	2.60	1.69	1.59
2	C	1007	POV	P-O12	2.60	1.69	1.59
2	D	1005	POV	P-O12	2.59	1.69	1.59
2	A	1005	POV	P-O12	2.59	1.69	1.59
2	E	1005	POV	P-O12	2.59	1.69	1.59
2	A	1008	POV	P-O12	2.59	1.69	1.59
2	D	1007	POV	P-O12	2.59	1.69	1.59
2	E	1007	POV	P-O12	2.59	1.69	1.59
2	D	1002	POV	P-O12	2.58	1.69	1.59
2	F	1002	POV	P-O12	2.58	1.69	1.59
2	B	1008	POV	P-O12	2.58	1.69	1.59
2	D	1008	POV	P-O12	2.58	1.69	1.59
2	E	1001	POV	P-O12	2.58	1.69	1.59
2	F	1001	POV	P-O12	2.58	1.69	1.59
2	F	1008	POV	P-O12	2.58	1.69	1.59
2	E	1008	POV	P-O12	2.58	1.69	1.59
2	A	1001	POV	P-O12	2.58	1.69	1.59
2	C	1001	POV	P-O12	2.58	1.69	1.59
2	D	1001	POV	P-O12	2.58	1.69	1.59
2	C	1002	POV	P-O12	2.58	1.69	1.59
2	B	1002	POV	P-O12	2.57	1.69	1.59
2	B	1001	POV	P-O12	2.57	1.69	1.59
2	A	1002	POV	P-O12	2.57	1.69	1.59
2	C	1008	POV	P-O12	2.57	1.69	1.59
2	F	1009	POV	P-O12	2.57	1.69	1.59
2	E	1002	POV	P-O12	2.57	1.69	1.59
2	E	1009	POV	P-O12	2.57	1.69	1.59
2	E	1004	POV	P-O12	2.56	1.69	1.59
2	C	1004	POV	P-O12	2.56	1.69	1.59
2	D	1004	POV	P-O12	2.56	1.69	1.59
2	C	1009	POV	P-O12	2.55	1.69	1.59
2	B	1004	POV	P-O12	2.55	1.69	1.59
2	A	1004	POV	P-O12	2.55	1.69	1.59
2	F	1004	POV	P-O12	2.53	1.69	1.59
2	C	1002	POV	C12-C11	2.34	1.58	1.51
2	E	1002	POV	C12-C11	2.33	1.58	1.51
2	A	1002	POV	C12-C11	2.33	1.58	1.51
2	D	1002	POV	C12-C11	2.33	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	1006	POV	C12-C11	2.33	1.58	1.51
2	C	1006	POV	C12-C11	2.32	1.58	1.51
2	E	1006	POV	C12-C11	2.32	1.58	1.51
2	B	1006	POV	C12-C11	2.32	1.58	1.51
2	C	1003	POV	C12-C11	2.32	1.58	1.51
2	D	1003	POV	C12-C11	2.32	1.58	1.51
2	F	1002	POV	C12-C11	2.32	1.58	1.51
2	D	1004	POV	C12-C11	2.32	1.58	1.51
2	A	1006	POV	C12-C11	2.32	1.58	1.51
2	B	1002	POV	C12-C11	2.31	1.58	1.51
2	D	1006	POV	C12-C11	2.31	1.58	1.51
2	A	1004	POV	C12-C11	2.31	1.58	1.51
2	F	1003	POV	C12-C11	2.31	1.58	1.51
2	E	1004	POV	C12-C11	2.31	1.58	1.51
2	E	1003	POV	C12-C11	2.31	1.58	1.51
2	F	1004	POV	C12-C11	2.30	1.58	1.51
2	B	1008	POV	C12-C11	2.30	1.58	1.51
2	D	1008	POV	C12-C11	2.30	1.58	1.51
2	B	1004	POV	C12-C11	2.30	1.58	1.51
2	E	1008	POV	C12-C11	2.30	1.58	1.51
2	A	1003	POV	C12-C11	2.30	1.58	1.51
2	A	1008	POV	C12-C11	2.30	1.58	1.51
2	D	1005	POV	C12-C11	2.30	1.58	1.51
2	F	1005	POV	C12-C11	2.29	1.58	1.51
2	C	1008	POV	C12-C11	2.29	1.58	1.51
2	C	1005	POV	C12-C11	2.29	1.58	1.51
2	F	1008	POV	C12-C11	2.28	1.58	1.51
2	C	1004	POV	C12-C11	2.28	1.58	1.51
2	B	1003	POV	C12-C11	2.28	1.58	1.51
2	E	1005	POV	C12-C11	2.27	1.58	1.51
2	A	1005	POV	C12-C11	2.27	1.58	1.51
2	B	1001	POV	C12-C11	2.27	1.58	1.51
2	F	1009	POV	C12-C11	2.27	1.58	1.51
2	D	1007	POV	C12-C11	2.26	1.58	1.51
2	B	1007	POV	C12-C11	2.26	1.58	1.51
2	C	1009	POV	C12-C11	2.26	1.58	1.51
2	E	1009	POV	C12-C11	2.26	1.58	1.51
2	C	1007	POV	C12-C11	2.26	1.58	1.51
2	C	1001	POV	C12-C11	2.25	1.58	1.51
2	B	1005	POV	C12-C11	2.25	1.58	1.51
2	F	1007	POV	C12-C11	2.24	1.58	1.51
2	A	1001	POV	C12-C11	2.24	1.58	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	1001	POV	C12-C11	2.24	1.58	1.51
2	A	1007	POV	C12-C11	2.24	1.58	1.51
2	F	1001	POV	C12-C11	2.24	1.58	1.51
2	E	1001	POV	C12-C11	2.24	1.58	1.51
2	E	1007	POV	C12-C11	2.23	1.58	1.51
2	C	1009	POV	C22-C21	2.03	1.56	1.50
2	E	1009	POV	C22-C21	2.01	1.56	1.50
2	E	1005	POV	C22-C21	2.00	1.56	1.50
2	C	1006	POV	C22-C21	2.00	1.56	1.50

All (119) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	1009	POV	O21-C21-C22	4.19	120.52	111.50
2	B	1005	POV	O21-C21-C22	4.18	120.50	111.50
2	A	1005	POV	O21-C21-C22	4.17	120.48	111.50
2	E	1005	POV	O21-C21-C22	4.16	120.48	111.50
2	F	1005	POV	O21-C21-C22	4.16	120.47	111.50
2	D	1005	POV	O21-C21-C22	4.15	120.45	111.50
2	C	1005	POV	O21-C21-C22	4.13	120.41	111.50
2	E	1002	POV	O21-C21-C22	4.11	120.36	111.50
2	B	1002	POV	O21-C21-C22	4.11	120.36	111.50
2	F	1002	POV	O21-C21-C22	4.11	120.36	111.50
2	C	1002	POV	O21-C21-C22	4.10	120.34	111.50
2	D	1004	POV	O21-C21-C22	4.10	120.33	111.50
2	F	1004	POV	O21-C21-C22	4.10	120.33	111.50
2	B	1004	POV	O21-C21-C22	4.10	120.33	111.50
2	A	1002	POV	O21-C21-C22	4.09	120.32	111.50
2	A	1004	POV	O21-C21-C22	4.08	120.30	111.50
2	C	1004	POV	O21-C21-C22	4.08	120.30	111.50
2	F	1009	POV	O21-C21-C22	4.08	120.29	111.50
2	D	1002	POV	O21-C21-C22	4.08	120.29	111.50
2	E	1004	POV	O21-C21-C22	4.08	120.28	111.50
2	F	1006	POV	O21-C21-C22	3.96	120.03	111.50
2	E	1006	POV	O21-C21-C22	3.95	120.01	111.50
2	A	1006	POV	O21-C21-C22	3.94	119.98	111.50
2	D	1006	POV	O21-C21-C22	3.93	119.97	111.50
2	B	1006	POV	O21-C21-C22	3.93	119.97	111.50
2	C	1006	POV	O21-C21-C22	3.92	119.96	111.50
2	E	1007	POV	O21-C21-C22	3.91	119.93	111.50
2	E	1009	POV	O21-C21-C22	3.91	119.92	111.50
2	D	1007	POV	O21-C21-C22	3.89	119.89	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1007	POV	O21-C21-C22	3.89	119.89	111.50
2	A	1007	POV	O21-C21-C22	3.89	119.88	111.50
2	E	1001	POV	O21-C21-C22	3.88	119.87	111.50
2	F	1007	POV	O21-C21-C22	3.88	119.86	111.50
2	D	1001	POV	O21-C21-C22	3.87	119.84	111.50
2	C	1007	POV	O21-C21-C22	3.87	119.84	111.50
2	B	1001	POV	O21-C21-C22	3.87	119.84	111.50
2	F	1001	POV	O21-C21-C22	3.87	119.83	111.50
2	A	1001	POV	O21-C21-C22	3.87	119.83	111.50
2	C	1001	POV	O21-C21-C22	3.86	119.81	111.50
2	D	1008	POV	O21-C21-C22	3.67	119.40	111.50
2	A	1008	POV	O21-C21-C22	3.65	119.36	111.50
2	F	1008	POV	O21-C21-C22	3.65	119.36	111.50
2	B	1008	POV	O21-C21-C22	3.64	119.35	111.50
2	C	1008	POV	O21-C21-C22	3.64	119.35	111.50
2	E	1008	POV	O21-C21-C22	3.64	119.34	111.50
2	D	1003	POV	O21-C21-C22	3.45	118.94	111.50
2	F	1003	POV	O21-C21-C22	3.45	118.93	111.50
2	A	1003	POV	O21-C21-C22	3.44	118.91	111.50
2	B	1003	POV	O21-C21-C22	3.43	118.90	111.50
2	E	1003	POV	O21-C21-C22	3.43	118.90	111.50
2	C	1003	POV	O21-C21-C22	3.43	118.89	111.50
2	D	1001	POV	O31-C31-C32	2.96	121.20	111.91
2	F	1001	POV	O31-C31-C32	2.96	121.20	111.91
2	E	1001	POV	O31-C31-C32	2.96	121.19	111.91
2	C	1001	POV	O31-C31-C32	2.95	121.16	111.91
2	A	1001	POV	O31-C31-C32	2.95	121.15	111.91
2	B	1001	POV	O31-C31-C32	2.93	121.11	111.91
3	F	1010	SPH	C3-C4-C5	-2.86	118.41	124.79
2	C	1005	POV	O31-C31-C32	2.72	120.46	111.91
2	F	1005	POV	O31-C31-C32	2.72	120.45	111.91
2	D	1005	POV	O31-C31-C32	2.72	120.44	111.91
2	E	1005	POV	O31-C31-C32	2.71	120.42	111.91
2	A	1005	POV	O31-C31-C32	2.71	120.42	111.91
2	B	1008	POV	O31-C31-C32	2.70	120.39	111.91
2	B	1005	POV	O31-C31-C32	2.70	120.39	111.91
2	C	1008	POV	O31-C31-C32	2.70	120.38	111.91
2	F	1008	POV	O31-C31-C32	2.69	120.36	111.91
2	A	1008	POV	O31-C31-C32	2.69	120.35	111.91
2	E	1008	POV	O31-C31-C32	2.68	120.33	111.91
2	D	1008	POV	O31-C31-C32	2.68	120.31	111.91
2	D	1007	POV	O31-C31-C32	2.66	120.27	111.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1007	POV	O31-C31-C32	2.66	120.26	111.91
2	C	1007	POV	O31-C31-C32	2.66	120.26	111.91
2	F	1007	POV	O31-C31-C32	2.66	120.25	111.91
2	E	1007	POV	O31-C31-C32	2.66	120.25	111.91
2	C	1006	POV	O31-C31-C32	2.66	120.24	111.91
2	A	1006	POV	O31-C31-C32	2.65	120.23	111.91
2	B	1007	POV	O31-C31-C32	2.65	120.23	111.91
2	B	1006	POV	O31-C31-C32	2.65	120.22	111.91
2	F	1006	POV	O31-C31-C32	2.65	120.22	111.91
2	E	1006	POV	O31-C31-C32	2.65	120.22	111.91
2	D	1006	POV	O31-C31-C32	2.64	120.20	111.91
2	C	1002	POV	O31-C31-C32	2.61	120.10	111.91
2	E	1002	POV	O31-C31-C32	2.60	120.06	111.91
2	A	1002	POV	O31-C31-C32	2.60	120.06	111.91
2	D	1002	POV	O31-C31-C32	2.60	120.06	111.91
2	B	1002	POV	O31-C31-C32	2.59	120.04	111.91
2	F	1002	POV	O31-C31-C32	2.59	120.02	111.91
2	B	1003	POV	O31-C31-C32	2.54	119.87	111.91
2	E	1003	POV	O31-C31-C32	2.53	119.85	111.91
2	F	1003	POV	O31-C31-C32	2.53	119.84	111.91
2	A	1003	POV	O31-C31-C32	2.52	119.83	111.91
2	C	1003	POV	O31-C31-C32	2.52	119.81	111.91
2	D	1003	POV	O31-C31-C32	2.52	119.81	111.91
2	F	1009	POV	O31-C31-C32	2.50	119.75	111.91
2	C	1009	POV	O31-C31-C32	2.49	119.73	111.91
3	F	1010	SPH	O3-C3-C2	2.46	111.22	107.31
2	B	1004	POV	O31-C31-C32	2.37	119.35	111.91
2	D	1004	POV	O31-C31-C32	2.37	119.34	111.91
2	F	1004	POV	O31-C31-C32	2.37	119.34	111.91
2	A	1004	POV	O31-C31-C32	2.37	119.33	111.91
2	C	1004	POV	O31-C31-C32	2.36	119.33	111.91
2	E	1004	POV	O31-C31-C32	2.35	119.29	111.91
2	E	1009	POV	O31-C31-C32	2.34	119.24	111.91
2	C	1007	POV	C11-C12-N	-2.23	108.33	115.78
2	D	1007	POV	C11-C12-N	-2.22	108.35	115.78
2	A	1007	POV	C11-C12-N	-2.22	108.36	115.78
2	E	1007	POV	C11-C12-N	-2.22	108.36	115.78
2	B	1007	POV	C11-C12-N	-2.22	108.38	115.78
2	F	1007	POV	C11-C12-N	-2.21	108.40	115.78
2	F	1009	POV	C11-C12-N	-2.07	108.88	115.78
2	E	1009	POV	C11-C12-N	-2.06	108.89	115.78
2	C	1008	POV	C2-O21-C21	-2.05	112.73	117.79

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	1008	POV	C2-O21-C21	-2.05	112.75	117.79
2	F	1008	POV	C2-O21-C21	-2.05	112.75	117.79
2	A	1008	POV	C2-O21-C21	-2.04	112.76	117.79
2	D	1008	POV	C2-O21-C21	-2.04	112.76	117.79
2	B	1008	POV	C2-O21-C21	-2.04	112.76	117.79
2	C	1009	POV	C11-C12-N	-2.01	109.07	115.78

There are no chirality outliers.

All (1247) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	1001	POV	C11-O12-P-O13
2	A	1001	POV	C12-C11-O12-P
2	A	1002	POV	C1-O11-P-O12
2	A	1002	POV	C1-O11-P-O13
2	A	1002	POV	C1-O11-P-O14
2	A	1003	POV	C22-C21-O21-C2
2	A	1004	POV	C1-O11-P-O14
2	A	1004	POV	C11-O12-P-O11
2	A	1004	POV	C11-O12-P-O13
2	A	1004	POV	C11-O12-P-O14
2	A	1004	POV	O12-C11-C12-N
2	A	1005	POV	C11-O12-P-O11
2	A	1005	POV	C11-O12-P-O13
2	A	1005	POV	C11-O12-P-O14
2	A	1005	POV	O12-C11-C12-N
2	A	1005	POV	C22-C21-O21-C2
2	A	1005	POV	O22-C21-O21-C2
2	A	1006	POV	C1-O11-P-O13
2	A	1006	POV	O12-C11-C12-N
2	A	1006	POV	C12-C11-O12-P
2	A	1006	POV	C22-C21-O21-C2
2	A	1008	POV	C1-O11-P-O14
2	A	1008	POV	C22-C21-O21-C2
2	A	1008	POV	O22-C21-O21-C2
2	B	1001	POV	C11-O12-P-O13
2	B	1001	POV	C12-C11-O12-P
2	B	1002	POV	C1-O11-P-O12
2	B	1002	POV	C1-O11-P-O13
2	B	1002	POV	C1-O11-P-O14
2	B	1003	POV	C22-C21-O21-C2
2	B	1004	POV	C1-O11-P-O14

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Mol	Chain	Res	Type	Atoms
2	B	1004	POV	C11-O12-P-O11
2	B	1004	POV	C11-O12-P-O13
2	B	1004	POV	C11-O12-P-O14
2	B	1004	POV	O12-C11-C12-N
2	B	1005	POV	C11-O12-P-O11
2	B	1005	POV	C11-O12-P-O13
2	B	1005	POV	C11-O12-P-O14
2	B	1005	POV	O12-C11-C12-N
2	B	1005	POV	C22-C21-O21-C2
2	B	1005	POV	O22-C21-O21-C2
2	B	1006	POV	C1-O11-P-O13
2	B	1006	POV	O12-C11-C12-N
2	B	1006	POV	C12-C11-O12-P
2	B	1006	POV	C22-C21-O21-C2
2	B	1008	POV	C1-O11-P-O14
2	B	1008	POV	C22-C21-O21-C2
2	B	1008	POV	O22-C21-O21-C2
2	C	1001	POV	C11-O12-P-O13
2	C	1001	POV	C12-C11-O12-P
2	C	1002	POV	C1-O11-P-O12
2	C	1002	POV	C1-O11-P-O13
2	C	1002	POV	C1-O11-P-O14
2	C	1003	POV	C22-C21-O21-C2
2	C	1004	POV	C1-O11-P-O14
2	C	1004	POV	C11-O12-P-O11
2	C	1004	POV	C11-O12-P-O13
2	C	1004	POV	C11-O12-P-O14
2	C	1004	POV	O12-C11-C12-N
2	C	1005	POV	C11-O12-P-O11
2	C	1005	POV	C11-O12-P-O13
2	C	1005	POV	C11-O12-P-O14
2	C	1005	POV	O12-C11-C12-N
2	C	1005	POV	C22-C21-O21-C2
2	C	1005	POV	O22-C21-O21-C2
2	C	1006	POV	C1-O11-P-O13
2	C	1006	POV	O12-C11-C12-N
2	C	1006	POV	C12-C11-O12-P
2	C	1006	POV	C22-C21-O21-C2
2	C	1008	POV	C1-O11-P-O14
2	C	1008	POV	C22-C21-O21-C2
2	C	1008	POV	O22-C21-O21-C2
2	C	1009	POV	C11-O12-P-O13

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Mol	Chain	Res	Type	Atoms
2	C	1009	POV	O12-C11-C12-N
2	D	1001	POV	C11-O12-P-O13
2	D	1001	POV	C12-C11-O12-P
2	D	1002	POV	C1-O11-P-O12
2	D	1002	POV	C1-O11-P-O13
2	D	1002	POV	C1-O11-P-O14
2	D	1003	POV	C22-C21-O21-C2
2	D	1004	POV	C1-O11-P-O14
2	D	1004	POV	C11-O12-P-O11
2	D	1004	POV	C11-O12-P-O13
2	D	1004	POV	C11-O12-P-O14
2	D	1004	POV	O12-C11-C12-N
2	D	1005	POV	C11-O12-P-O11
2	D	1005	POV	C11-O12-P-O13
2	D	1005	POV	C11-O12-P-O14
2	D	1005	POV	O12-C11-C12-N
2	D	1005	POV	C22-C21-O21-C2
2	D	1005	POV	O22-C21-O21-C2
2	D	1006	POV	C1-O11-P-O13
2	D	1006	POV	O12-C11-C12-N
2	D	1006	POV	C12-C11-O12-P
2	D	1006	POV	C22-C21-O21-C2
2	D	1008	POV	C1-O11-P-O14
2	D	1008	POV	C22-C21-O21-C2
2	D	1008	POV	O22-C21-O21-C2
2	E	1001	POV	C11-O12-P-O13
2	E	1001	POV	C12-C11-O12-P
2	E	1002	POV	C1-O11-P-O12
2	E	1002	POV	C1-O11-P-O13
2	E	1002	POV	C1-O11-P-O14
2	E	1003	POV	C22-C21-O21-C2
2	E	1004	POV	C1-O11-P-O14
2	E	1004	POV	C11-O12-P-O11
2	E	1004	POV	C11-O12-P-O13
2	E	1004	POV	C11-O12-P-O14
2	E	1004	POV	O12-C11-C12-N
2	E	1005	POV	C11-O12-P-O11
2	E	1005	POV	C11-O12-P-O13
2	E	1005	POV	C11-O12-P-O14
2	E	1005	POV	O12-C11-C12-N
2	E	1005	POV	C22-C21-O21-C2
2	E	1005	POV	O22-C21-O21-C2

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Mol	Chain	Res	Type	Atoms
2	E	1006	POV	C1-O11-P-O13
2	E	1006	POV	O12-C11-C12-N
2	E	1006	POV	C12-C11-O12-P
2	E	1006	POV	C22-C21-O21-C2
2	E	1008	POV	C1-O11-P-O14
2	E	1008	POV	C22-C21-O21-C2
2	E	1008	POV	O22-C21-O21-C2
2	E	1009	POV	O12-C11-C12-N
2	F	1001	POV	C11-O12-P-O13
2	F	1001	POV	C12-C11-O12-P
2	F	1002	POV	C1-O11-P-O12
2	F	1002	POV	C1-O11-P-O13
2	F	1002	POV	C1-O11-P-O14
2	F	1003	POV	C22-C21-O21-C2
2	F	1004	POV	C1-O11-P-O14
2	F	1004	POV	C11-O12-P-O11
2	F	1004	POV	C11-O12-P-O13
2	F	1004	POV	C11-O12-P-O14
2	F	1004	POV	O12-C11-C12-N
2	F	1005	POV	C11-O12-P-O11
2	F	1005	POV	C11-O12-P-O13
2	F	1005	POV	C11-O12-P-O14
2	F	1005	POV	O12-C11-C12-N
2	F	1005	POV	C22-C21-O21-C2
2	F	1005	POV	O22-C21-O21-C2
2	F	1006	POV	C1-O11-P-O13
2	F	1006	POV	O12-C11-C12-N
2	F	1006	POV	C12-C11-O12-P
2	F	1006	POV	C22-C21-O21-C2
2	F	1008	POV	C1-O11-P-O14
2	F	1008	POV	C22-C21-O21-C2
2	F	1008	POV	O22-C21-O21-C2
2	F	1009	POV	O12-C11-C12-N
3	F	1010	SPH	O1-C1-C2-N2
3	F	1010	SPH	O1-C1-C2-C3
3	F	1010	SPH	C3-C4-C5-C6
2	A	1008	POV	O32-C31-O31-C3
2	B	1008	POV	O32-C31-O31-C3
2	C	1008	POV	O32-C31-O31-C3
2	D	1008	POV	O32-C31-O31-C3
2	E	1008	POV	O32-C31-O31-C3
2	F	1008	POV	O32-C31-O31-C3

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Mol	Chain	Res	Type	Atoms
2	A	1002	POV	O22-C21-O21-C2
2	A	1003	POV	O22-C21-O21-C2
2	A	1006	POV	O22-C21-O21-C2
2	B	1002	POV	O22-C21-O21-C2
2	B	1003	POV	O22-C21-O21-C2
2	B	1006	POV	O22-C21-O21-C2
2	C	1002	POV	O22-C21-O21-C2
2	C	1003	POV	O22-C21-O21-C2
2	C	1006	POV	O22-C21-O21-C2
2	D	1002	POV	O22-C21-O21-C2
2	D	1003	POV	O22-C21-O21-C2
2	D	1006	POV	O22-C21-O21-C2
2	E	1002	POV	O22-C21-O21-C2
2	E	1003	POV	O22-C21-O21-C2
2	E	1006	POV	O22-C21-O21-C2
2	F	1002	POV	O22-C21-O21-C2
2	F	1003	POV	O22-C21-O21-C2
2	F	1006	POV	O22-C21-O21-C2
2	A	1008	POV	C32-C31-O31-C3
2	B	1008	POV	C32-C31-O31-C3
2	C	1008	POV	C32-C31-O31-C3
2	D	1008	POV	C32-C31-O31-C3
2	E	1008	POV	C32-C31-O31-C3
2	F	1008	POV	C32-C31-O31-C3
2	A	1002	POV	C22-C21-O21-C2
2	B	1002	POV	C22-C21-O21-C2
2	C	1002	POV	C22-C21-O21-C2
2	D	1002	POV	C22-C21-O21-C2
2	E	1002	POV	C22-C21-O21-C2
2	F	1002	POV	C22-C21-O21-C2
2	A	1005	POV	C32-C31-O31-C3
2	B	1005	POV	C32-C31-O31-C3
2	C	1005	POV	C32-C31-O31-C3
2	D	1005	POV	C32-C31-O31-C3
2	E	1005	POV	C32-C31-O31-C3
2	F	1005	POV	C32-C31-O31-C3
2	A	1005	POV	O32-C31-O31-C3
2	B	1005	POV	O32-C31-O31-C3
2	C	1005	POV	O32-C31-O31-C3
2	D	1005	POV	O32-C31-O31-C3
2	E	1005	POV	O32-C31-O31-C3
2	F	1005	POV	O32-C31-O31-C3

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Mol	Chain	Res	Type	Atoms
2	A	1006	POV	C32-C31-O31-C3
2	A	1007	POV	C32-C31-O31-C3
2	B	1006	POV	C32-C31-O31-C3
2	B	1007	POV	C32-C31-O31-C3
2	C	1006	POV	C32-C31-O31-C3
2	C	1007	POV	C32-C31-O31-C3
2	D	1006	POV	C32-C31-O31-C3
2	D	1007	POV	C32-C31-O31-C3
2	E	1006	POV	C32-C31-O31-C3
2	E	1007	POV	C32-C31-O31-C3
2	F	1006	POV	C32-C31-O31-C3
2	F	1007	POV	C32-C31-O31-C3
2	A	1003	POV	C31-C32-C33-C34
2	A	1008	POV	C31-C32-C33-C34
2	B	1003	POV	C31-C32-C33-C34
2	B	1008	POV	C31-C32-C33-C34
2	C	1003	POV	C31-C32-C33-C34
2	C	1008	POV	C31-C32-C33-C34
2	D	1003	POV	C31-C32-C33-C34
2	D	1008	POV	C31-C32-C33-C34
2	E	1003	POV	C31-C32-C33-C34
2	E	1008	POV	C31-C32-C33-C34
2	F	1003	POV	C31-C32-C33-C34
2	F	1008	POV	C31-C32-C33-C34
2	A	1007	POV	O32-C31-O31-C3
2	B	1007	POV	O32-C31-O31-C3
2	C	1007	POV	O32-C31-O31-C3
2	D	1007	POV	O32-C31-O31-C3
2	E	1007	POV	O32-C31-O31-C3
2	F	1007	POV	O32-C31-O31-C3
2	A	1007	POV	C21-C22-C23-C24
2	B	1007	POV	C21-C22-C23-C24
2	C	1007	POV	C21-C22-C23-C24
2	D	1007	POV	C21-C22-C23-C24
2	E	1007	POV	C21-C22-C23-C24
2	F	1007	POV	C21-C22-C23-C24
2	A	1005	POV	C21-C22-C23-C24
2	B	1005	POV	C21-C22-C23-C24
2	C	1005	POV	C21-C22-C23-C24
2	D	1005	POV	C21-C22-C23-C24
2	E	1005	POV	C21-C22-C23-C24
2	F	1005	POV	C21-C22-C23-C24

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Mol	Chain	Res	Type	Atoms
2	A	1004	POV	C31-C32-C33-C34
2	B	1004	POV	C31-C32-C33-C34
2	C	1004	POV	C31-C32-C33-C34
2	C	1009	POV	C31-C32-C33-C34
2	D	1004	POV	C31-C32-C33-C34
2	E	1004	POV	C31-C32-C33-C34
2	E	1009	POV	C31-C32-C33-C34
2	F	1004	POV	C31-C32-C33-C34
2	F	1009	POV	C31-C32-C33-C34
2	C	1009	POV	C21-C22-C23-C24
2	A	1006	POV	O32-C31-O31-C3
2	B	1006	POV	O32-C31-O31-C3
2	C	1006	POV	O32-C31-O31-C3
2	D	1006	POV	O32-C31-O31-C3
2	E	1006	POV	O32-C31-O31-C3
2	F	1006	POV	O32-C31-O31-C3
2	E	1009	POV	C21-C22-C23-C24
2	F	1009	POV	C21-C22-C23-C24
2	A	1002	POV	C21-C22-C23-C24
2	B	1002	POV	C21-C22-C23-C24
2	C	1002	POV	C21-C22-C23-C24
2	D	1002	POV	C21-C22-C23-C24
2	E	1002	POV	C21-C22-C23-C24
2	F	1002	POV	C21-C22-C23-C24
2	A	1001	POV	C1-O11-P-O12
2	A	1001	POV	C11-O12-P-O11
2	A	1003	POV	C11-O12-P-O11
2	A	1006	POV	C1-O11-P-O12
2	A	1008	POV	C1-O11-P-O12
2	A	1008	POV	C11-O12-P-O11
2	B	1001	POV	C1-O11-P-O12
2	B	1001	POV	C11-O12-P-O11
2	B	1003	POV	C11-O12-P-O11
2	B	1006	POV	C1-O11-P-O12
2	B	1008	POV	C1-O11-P-O12
2	B	1008	POV	C11-O12-P-O11
2	C	1001	POV	C1-O11-P-O12
2	C	1001	POV	C11-O12-P-O11
2	C	1003	POV	C11-O12-P-O11
2	C	1006	POV	C1-O11-P-O12
2	C	1008	POV	C1-O11-P-O12
2	C	1008	POV	C11-O12-P-O11

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Mol	Chain	Res	Type	Atoms
2	C	1009	POV	C11-O12-P-O11
2	D	1001	POV	C1-O11-P-O12
2	D	1001	POV	C11-O12-P-O11
2	D	1003	POV	C11-O12-P-O11
2	D	1006	POV	C1-O11-P-O12
2	D	1008	POV	C1-O11-P-O12
2	D	1008	POV	C11-O12-P-O11
2	E	1001	POV	C1-O11-P-O12
2	E	1001	POV	C11-O12-P-O11
2	E	1003	POV	C11-O12-P-O11
2	E	1006	POV	C1-O11-P-O12
2	E	1008	POV	C1-O11-P-O12
2	E	1008	POV	C11-O12-P-O11
2	E	1009	POV	C11-O12-P-O11
2	F	1001	POV	C1-O11-P-O12
2	F	1001	POV	C11-O12-P-O11
2	F	1003	POV	C11-O12-P-O11
2	F	1006	POV	C1-O11-P-O12
2	F	1008	POV	C1-O11-P-O12
2	F	1008	POV	C11-O12-P-O11
2	F	1009	POV	C11-O12-P-O11
2	C	1009	POV	C32-C31-O31-C3
2	F	1009	POV	C32-C31-O31-C3
2	A	1004	POV	C22-C21-O21-C2
2	B	1004	POV	C22-C21-O21-C2
2	C	1004	POV	C22-C21-O21-C2
2	D	1004	POV	C22-C21-O21-C2
2	E	1004	POV	C22-C21-O21-C2
2	F	1004	POV	C22-C21-O21-C2
2	A	1001	POV	C311-C310-C39-C38
2	A	1003	POV	C33-C34-C35-C36
2	B	1001	POV	C311-C310-C39-C38
2	B	1003	POV	C33-C34-C35-C36
2	C	1001	POV	C311-C310-C39-C38
2	C	1003	POV	C33-C34-C35-C36
2	D	1001	POV	C311-C310-C39-C38
2	D	1003	POV	C33-C34-C35-C36
2	E	1001	POV	C311-C310-C39-C38
2	E	1003	POV	C33-C34-C35-C36
2	E	1009	POV	C310-C311-C312-C313
2	F	1001	POV	C311-C310-C39-C38
2	F	1003	POV	C33-C34-C35-C36

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Mol	Chain	Res	Type	Atoms
2	A	1008	POV	C212-C213-C214-C215
2	B	1001	POV	C310-C311-C312-C313
2	B	1008	POV	C212-C213-C214-C215
2	C	1001	POV	C310-C311-C312-C313
2	C	1008	POV	C212-C213-C214-C215
2	C	1009	POV	C310-C311-C312-C313
2	D	1008	POV	C212-C213-C214-C215
2	E	1001	POV	C310-C311-C312-C313
2	E	1008	POV	C212-C213-C214-C215
2	F	1001	POV	C310-C311-C312-C313
2	F	1008	POV	C212-C213-C214-C215
2	F	1009	POV	C310-C311-C312-C313
2	A	1004	POV	O22-C21-O21-C2
2	B	1004	POV	O22-C21-O21-C2
2	C	1004	POV	O22-C21-O21-C2
2	D	1004	POV	O22-C21-O21-C2
2	E	1004	POV	O22-C21-O21-C2
2	F	1004	POV	O22-C21-O21-C2
2	A	1001	POV	C310-C311-C312-C313
2	D	1001	POV	C310-C311-C312-C313
2	C	1009	POV	C311-C312-C313-C314
2	E	1009	POV	C32-C31-O31-C3
2	E	1009	POV	C311-C312-C313-C314
2	F	1009	POV	C311-C312-C313-C314
2	A	1004	POV	C24-C25-C26-C27
2	B	1004	POV	C24-C25-C26-C27
2	C	1004	POV	C24-C25-C26-C27
2	E	1004	POV	C24-C25-C26-C27
2	F	1004	POV	C24-C25-C26-C27
2	A	1001	POV	C39-C310-C311-C312
2	B	1001	POV	C39-C310-C311-C312
2	C	1001	POV	C39-C310-C311-C312
2	D	1001	POV	C39-C310-C311-C312
2	D	1004	POV	C24-C25-C26-C27
2	E	1001	POV	C39-C310-C311-C312
2	F	1001	POV	C39-C310-C311-C312
2	A	1006	POV	C211-C212-C213-C214
2	B	1006	POV	C211-C212-C213-C214
2	C	1006	POV	C211-C212-C213-C214
2	D	1006	POV	C211-C212-C213-C214
2	E	1006	POV	C211-C212-C213-C214
2	F	1006	POV	C211-C212-C213-C214

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Mol	Chain	Res	Type	Atoms
3	F	1010	SPH	C5-C6-C7-C8
2	A	1001	POV	C32-C33-C34-C35
2	A	1004	POV	C32-C33-C34-C35
2	A	1006	POV	C36-C37-C38-C39
2	A	1008	POV	C22-C23-C24-C25
2	B	1001	POV	C32-C33-C34-C35
2	B	1004	POV	C32-C33-C34-C35
2	B	1006	POV	C212-C213-C214-C215
2	B	1006	POV	C36-C37-C38-C39
2	B	1008	POV	C22-C23-C24-C25
2	C	1001	POV	C32-C33-C34-C35
2	C	1004	POV	C32-C33-C34-C35
2	C	1006	POV	C212-C213-C214-C215
2	C	1006	POV	C36-C37-C38-C39
2	C	1008	POV	C22-C23-C24-C25
2	D	1001	POV	C32-C33-C34-C35
2	D	1004	POV	C32-C33-C34-C35
2	D	1006	POV	C36-C37-C38-C39
2	D	1008	POV	C22-C23-C24-C25
2	E	1001	POV	C32-C33-C34-C35
2	E	1004	POV	C32-C33-C34-C35
2	E	1006	POV	C36-C37-C38-C39
2	E	1008	POV	C22-C23-C24-C25
2	F	1001	POV	C32-C33-C34-C35
2	F	1004	POV	C32-C33-C34-C35
2	F	1006	POV	C36-C37-C38-C39
2	F	1008	POV	C22-C23-C24-C25
2	A	1006	POV	C212-C213-C214-C215
2	D	1006	POV	C212-C213-C214-C215
2	E	1006	POV	C212-C213-C214-C215
2	F	1006	POV	C212-C213-C214-C215
2	A	1004	POV	C22-C23-C24-C25
2	B	1004	POV	C22-C23-C24-C25
2	C	1004	POV	C22-C23-C24-C25
2	D	1004	POV	C22-C23-C24-C25
2	E	1004	POV	C22-C23-C24-C25
2	F	1004	POV	C22-C23-C24-C25
2	A	1006	POV	C24-C25-C26-C27
2	B	1006	POV	C24-C25-C26-C27
2	C	1006	POV	C24-C25-C26-C27
2	D	1006	POV	C24-C25-C26-C27
2	E	1006	POV	C24-C25-C26-C27

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Mol	Chain	Res	Type	Atoms
2	F	1006	POV	C24-C25-C26-C27
2	A	1007	POV	C22-C21-O21-C2
2	B	1007	POV	C22-C21-O21-C2
2	C	1007	POV	C22-C21-O21-C2
2	D	1007	POV	C22-C21-O21-C2
2	E	1007	POV	C22-C21-O21-C2
2	F	1007	POV	C22-C21-O21-C2
2	A	1002	POV	C23-C24-C25-C26
2	B	1002	POV	C23-C24-C25-C26
2	C	1002	POV	C23-C24-C25-C26
2	D	1002	POV	C23-C24-C25-C26
2	E	1002	POV	C23-C24-C25-C26
2	F	1002	POV	C23-C24-C25-C26
2	A	1005	POV	C210-C211-C212-C213
2	A	1008	POV	C26-C27-C28-C29
2	B	1005	POV	C210-C211-C212-C213
2	B	1008	POV	C26-C27-C28-C29
2	C	1005	POV	C210-C211-C212-C213
2	C	1008	POV	C26-C27-C28-C29
2	D	1005	POV	C210-C211-C212-C213
2	D	1008	POV	C26-C27-C28-C29
2	E	1005	POV	C210-C211-C212-C213
2	E	1008	POV	C26-C27-C28-C29
2	F	1005	POV	C210-C211-C212-C213
2	F	1008	POV	C26-C27-C28-C29
2	A	1007	POV	C211-C212-C213-C214
2	E	1007	POV	C211-C212-C213-C214
2	F	1007	POV	C211-C212-C213-C214
2	C	1009	POV	O32-C31-O31-C3
2	F	1009	POV	O32-C31-O31-C3
2	A	1001	POV	C31-C32-C33-C34
2	B	1001	POV	C31-C32-C33-C34
2	C	1001	POV	C31-C32-C33-C34
2	D	1001	POV	C31-C32-C33-C34
2	E	1001	POV	C31-C32-C33-C34
2	F	1001	POV	C31-C32-C33-C34
2	B	1007	POV	C211-C212-C213-C214
2	C	1003	POV	C22-C23-C24-C25
2	C	1007	POV	C211-C212-C213-C214
2	D	1007	POV	C211-C212-C213-C214
2	F	1003	POV	C22-C23-C24-C25
2	A	1007	POV	O22-C21-O21-C2

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Mol	Chain	Res	Type	Atoms
2	B	1007	POV	O22-C21-O21-C2
2	C	1007	POV	O22-C21-O21-C2
2	D	1007	POV	O22-C21-O21-C2
2	E	1007	POV	O22-C21-O21-C2
2	F	1007	POV	O22-C21-O21-C2
2	A	1003	POV	C22-C23-C24-C25
2	B	1003	POV	C22-C23-C24-C25
2	D	1003	POV	C22-C23-C24-C25
2	E	1003	POV	C22-C23-C24-C25
2	A	1001	POV	C24-C25-C26-C27
2	B	1001	POV	C24-C25-C26-C27
2	C	1001	POV	C24-C25-C26-C27
2	C	1009	POV	C22-C23-C24-C25
2	D	1001	POV	C24-C25-C26-C27
2	E	1001	POV	C24-C25-C26-C27
2	E	1009	POV	C22-C23-C24-C25
2	F	1001	POV	C24-C25-C26-C27
2	A	1002	POV	C11-C12-N-C14
2	B	1002	POV	C11-C12-N-C14
2	C	1002	POV	C11-C12-N-C14
2	D	1002	POV	C11-C12-N-C14
2	E	1002	POV	C11-C12-N-C14
2	F	1002	POV	C11-C12-N-C14
2	E	1009	POV	O32-C31-O31-C3
2	A	1007	POV	C310-C311-C312-C313
2	C	1007	POV	C310-C311-C312-C313
2	D	1007	POV	C310-C311-C312-C313
2	E	1007	POV	C310-C311-C312-C313
2	F	1007	POV	C310-C311-C312-C313
2	B	1007	POV	C310-C311-C312-C313
2	A	1001	POV	C26-C27-C28-C29
2	B	1001	POV	C26-C27-C28-C29
2	C	1001	POV	C26-C27-C28-C29
2	D	1001	POV	C26-C27-C28-C29
2	E	1001	POV	C26-C27-C28-C29
2	F	1001	POV	C26-C27-C28-C29
2	A	1007	POV	C31-C32-C33-C34
2	B	1007	POV	C31-C32-C33-C34
2	C	1007	POV	C31-C32-C33-C34
2	D	1007	POV	C31-C32-C33-C34
2	E	1007	POV	C31-C32-C33-C34
2	F	1007	POV	C31-C32-C33-C34

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Mol	Chain	Res	Type	Atoms
2	A	1004	POV	C32-C31-O31-C3
2	B	1004	POV	C32-C31-O31-C3
2	C	1004	POV	C32-C31-O31-C3
2	D	1004	POV	C32-C31-O31-C3
2	E	1004	POV	C32-C31-O31-C3
2	F	1004	POV	C32-C31-O31-C3
2	A	1007	POV	C22-C23-C24-C25
2	B	1006	POV	C35-C36-C37-C38
2	B	1007	POV	C22-C23-C24-C25
2	C	1007	POV	C22-C23-C24-C25
2	D	1006	POV	C35-C36-C37-C38
2	D	1007	POV	C22-C23-C24-C25
2	E	1007	POV	C22-C23-C24-C25
2	F	1006	POV	C35-C36-C37-C38
2	F	1007	POV	C22-C23-C24-C25
2	A	1006	POV	C35-C36-C37-C38
2	C	1006	POV	C35-C36-C37-C38
2	E	1006	POV	C35-C36-C37-C38
2	B	1005	POV	C312-C313-C314-C315
2	E	1005	POV	C312-C313-C314-C315
2	A	1004	POV	C21-C22-C23-C24
2	B	1004	POV	C21-C22-C23-C24
2	C	1004	POV	C21-C22-C23-C24
2	D	1004	POV	C21-C22-C23-C24
2	E	1004	POV	C21-C22-C23-C24
2	F	1004	POV	C21-C22-C23-C24
2	A	1005	POV	C312-C313-C314-C315
2	C	1005	POV	C312-C313-C314-C315
2	D	1005	POV	C312-C313-C314-C315
2	F	1005	POV	C312-C313-C314-C315
2	F	1009	POV	C32-C33-C34-C35
2	C	1009	POV	C22-C21-O21-C2
2	F	1009	POV	C22-C21-O21-C2
2	A	1002	POV	C24-C25-C26-C27
2	B	1002	POV	C24-C25-C26-C27
2	C	1002	POV	C24-C25-C26-C27
2	E	1002	POV	C24-C25-C26-C27
2	A	1006	POV	C37-C38-C39-C310
2	B	1006	POV	C37-C38-C39-C310
2	C	1006	POV	C37-C38-C39-C310
2	D	1002	POV	C24-C25-C26-C27
2	D	1006	POV	C37-C38-C39-C310

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Mol	Chain	Res	Type	Atoms
2	E	1006	POV	C37-C38-C39-C310
2	F	1002	POV	C24-C25-C26-C27
2	F	1006	POV	C37-C38-C39-C310
2	A	1008	POV	C33-C34-C35-C36
2	B	1008	POV	C33-C34-C35-C36
2	C	1008	POV	C33-C34-C35-C36
2	C	1009	POV	C32-C33-C34-C35
2	D	1008	POV	C33-C34-C35-C36
2	E	1008	POV	C33-C34-C35-C36
2	F	1008	POV	C33-C34-C35-C36
2	A	1002	POV	C210-C211-C212-C213
2	A	1003	POV	C210-C211-C212-C213
2	B	1002	POV	C210-C211-C212-C213
2	B	1003	POV	C210-C211-C212-C213
2	C	1002	POV	C210-C211-C212-C213
2	C	1003	POV	C210-C211-C212-C213
2	D	1002	POV	C210-C211-C212-C213
2	D	1003	POV	C210-C211-C212-C213
2	E	1002	POV	C210-C211-C212-C213
2	E	1003	POV	C210-C211-C212-C213
2	F	1002	POV	C210-C211-C212-C213
2	F	1003	POV	C210-C211-C212-C213
2	E	1009	POV	C32-C33-C34-C35
2	B	1001	POV	C312-C313-C314-C315
2	C	1009	POV	O22-C21-O21-C2
2	A	1001	POV	C312-C313-C314-C315
2	C	1001	POV	C312-C313-C314-C315
2	D	1001	POV	C312-C313-C314-C315
2	E	1001	POV	C312-C313-C314-C315
2	F	1001	POV	C312-C313-C314-C315
2	A	1004	POV	C214-C215-C216-C217
2	B	1004	POV	C214-C215-C216-C217
2	C	1004	POV	C214-C215-C216-C217
2	D	1004	POV	C214-C215-C216-C217
2	E	1004	POV	C214-C215-C216-C217
2	F	1004	POV	C214-C215-C216-C217
2	A	1008	POV	C21-C22-C23-C24
2	B	1008	POV	C21-C22-C23-C24
2	C	1008	POV	C21-C22-C23-C24
2	D	1008	POV	C21-C22-C23-C24
2	E	1008	POV	C21-C22-C23-C24
2	F	1008	POV	C21-C22-C23-C24

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Mol	Chain	Res	Type	Atoms
2	A	1003	POV	C26-C27-C28-C29
2	B	1003	POV	C26-C27-C28-C29
2	C	1003	POV	C26-C27-C28-C29
2	D	1003	POV	C26-C27-C28-C29
2	E	1003	POV	C26-C27-C28-C29
2	F	1003	POV	C26-C27-C28-C29
2	A	1003	POV	C311-C312-C313-C314
2	B	1003	POV	C311-C312-C313-C314
2	C	1003	POV	C311-C312-C313-C314
2	D	1003	POV	C311-C312-C313-C314
2	E	1003	POV	C311-C312-C313-C314
2	F	1009	POV	O22-C21-O21-C2
2	F	1003	POV	C311-C312-C313-C314
2	C	1004	POV	O32-C31-O31-C3
2	F	1004	POV	O32-C31-O31-C3
2	A	1004	POV	O32-C31-O31-C3
2	B	1004	POV	O32-C31-O31-C3
2	D	1004	POV	O32-C31-O31-C3
2	E	1004	POV	O32-C31-O31-C3
2	C	1007	POV	C212-C213-C214-C215
2	A	1007	POV	C212-C213-C214-C215
2	B	1007	POV	C212-C213-C214-C215
2	D	1007	POV	C212-C213-C214-C215
2	E	1007	POV	C212-C213-C214-C215
2	F	1007	POV	C212-C213-C214-C215
2	E	1007	POV	C311-C312-C313-C314
2	A	1001	POV	C311-C312-C313-C314
2	A	1007	POV	C311-C312-C313-C314
2	B	1007	POV	C311-C312-C313-C314
2	C	1001	POV	C311-C312-C313-C314
2	C	1007	POV	C311-C312-C313-C314
2	D	1007	POV	C311-C312-C313-C314
2	E	1001	POV	C311-C312-C313-C314
2	F	1001	POV	C311-C312-C313-C314
2	F	1007	POV	C311-C312-C313-C314
2	B	1001	POV	C311-C312-C313-C314
2	D	1001	POV	C311-C312-C313-C314
2	D	1003	POV	C23-C24-C25-C26
2	A	1003	POV	C23-C24-C25-C26
2	B	1003	POV	C23-C24-C25-C26
2	C	1003	POV	C23-C24-C25-C26
2	E	1003	POV	C23-C24-C25-C26

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Mol	Chain	Res	Type	Atoms
2	F	1003	POV	C23-C24-C25-C26
2	B	1001	POV	C36-C37-C38-C39
2	C	1003	POV	C212-C213-C214-C215
2	D	1001	POV	C36-C37-C38-C39
2	F	1009	POV	C39-C310-C311-C312
2	A	1001	POV	C214-C215-C216-C217
2	A	1001	POV	C36-C37-C38-C39
2	A	1003	POV	C212-C213-C214-C215
2	A	1005	POV	C313-C314-C315-C316
2	B	1001	POV	C214-C215-C216-C217
2	B	1003	POV	C212-C213-C214-C215
2	C	1001	POV	C214-C215-C216-C217
2	C	1001	POV	C36-C37-C38-C39
2	D	1001	POV	C214-C215-C216-C217
2	D	1003	POV	C212-C213-C214-C215
2	E	1001	POV	C214-C215-C216-C217
2	E	1001	POV	C36-C37-C38-C39
2	E	1003	POV	C212-C213-C214-C215
2	E	1005	POV	C313-C314-C315-C316
2	F	1001	POV	C214-C215-C216-C217
2	F	1001	POV	C36-C37-C38-C39
2	F	1003	POV	C212-C213-C214-C215
2	A	1002	POV	C11-C12-N-C15
2	B	1002	POV	C11-C12-N-C15
2	C	1002	POV	C11-C12-N-C15
2	D	1002	POV	C11-C12-N-C15
2	E	1002	POV	C11-C12-N-C15
2	F	1002	POV	C11-C12-N-C15
2	B	1005	POV	C313-C314-C315-C316
2	C	1005	POV	C313-C314-C315-C316
2	D	1005	POV	C313-C314-C315-C316
2	F	1005	POV	C313-C314-C315-C316
2	A	1004	POV	C211-C212-C213-C214
2	B	1004	POV	C211-C212-C213-C214
2	C	1004	POV	C211-C212-C213-C214
2	D	1004	POV	C211-C212-C213-C214
2	E	1004	POV	C211-C212-C213-C214
2	F	1004	POV	C211-C212-C213-C214
2	E	1009	POV	C211-C212-C213-C214
2	F	1009	POV	C22-C23-C24-C25
2	C	1009	POV	C23-C24-C25-C26
2	A	1002	POV	C37-C38-C39-C310

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Mol	Chain	Res	Type	Atoms
2	B	1002	POV	C37-C38-C39-C310
2	C	1002	POV	C37-C38-C39-C310
2	D	1002	POV	C37-C38-C39-C310
2	E	1002	POV	C37-C38-C39-C310
2	E	1009	POV	C39-C310-C311-C312
2	F	1002	POV	C37-C38-C39-C310
2	C	1009	POV	C312-C313-C314-C315
2	E	1009	POV	C23-C24-C25-C26
2	A	1003	POV	C1-C2-C3-O31
2	A	1006	POV	C1-C2-C3-O31
2	B	1003	POV	C1-C2-C3-O31
2	B	1006	POV	C1-C2-C3-O31
2	C	1003	POV	C1-C2-C3-O31
2	C	1006	POV	C1-C2-C3-O31
2	D	1003	POV	C1-C2-C3-O31
2	D	1006	POV	C1-C2-C3-O31
2	E	1003	POV	C1-C2-C3-O31
2	E	1006	POV	C1-C2-C3-O31
2	F	1003	POV	C1-C2-C3-O31
2	F	1006	POV	C1-C2-C3-O31
2	A	1006	POV	C22-C23-C24-C25
2	B	1006	POV	C22-C23-C24-C25
2	C	1006	POV	C22-C23-C24-C25
2	D	1006	POV	C22-C23-C24-C25
2	E	1006	POV	C22-C23-C24-C25
2	F	1006	POV	C22-C23-C24-C25
2	F	1009	POV	C211-C212-C213-C214
2	A	1007	POV	C39-C310-C311-C312
2	B	1007	POV	C39-C310-C311-C312
2	B	1008	POV	C24-C25-C26-C27
2	C	1007	POV	C39-C310-C311-C312
2	C	1008	POV	C24-C25-C26-C27
2	D	1007	POV	C39-C310-C311-C312
2	E	1008	POV	C24-C25-C26-C27
2	F	1007	POV	C39-C310-C311-C312
2	F	1008	POV	C24-C25-C26-C27
2	A	1003	POV	O11-C1-C2-O21
2	B	1003	POV	O11-C1-C2-O21
2	C	1003	POV	O11-C1-C2-O21
2	D	1003	POV	O11-C1-C2-O21
2	E	1003	POV	O11-C1-C2-O21
2	F	1003	POV	O11-C1-C2-O21

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Mol	Chain	Res	Type	Atoms
2	A	1008	POV	C24-C25-C26-C27
2	D	1008	POV	C24-C25-C26-C27
2	E	1007	POV	C39-C310-C311-C312
2	A	1004	POV	C210-C211-C212-C213
2	B	1004	POV	C210-C211-C212-C213
2	C	1004	POV	C210-C211-C212-C213
2	D	1004	POV	C210-C211-C212-C213
2	E	1004	POV	C210-C211-C212-C213
2	F	1004	POV	C210-C211-C212-C213
2	C	1009	POV	C211-C212-C213-C214
2	A	1004	POV	O21-C2-C3-O31
2	A	1006	POV	O21-C2-C3-O31
2	B	1004	POV	O21-C2-C3-O31
2	B	1006	POV	O21-C2-C3-O31
2	C	1004	POV	O21-C2-C3-O31
2	C	1006	POV	O21-C2-C3-O31
2	D	1004	POV	O21-C2-C3-O31
2	D	1006	POV	O21-C2-C3-O31
2	E	1004	POV	O21-C2-C3-O31
2	E	1006	POV	O21-C2-C3-O31
2	F	1004	POV	O21-C2-C3-O31
2	F	1006	POV	O21-C2-C3-O31
2	E	1009	POV	C22-C21-O21-C2
2	F	1009	POV	C23-C24-C25-C26
2	B	1007	POV	C23-C24-C25-C26
2	A	1007	POV	C23-C24-C25-C26
2	C	1007	POV	C23-C24-C25-C26
2	D	1007	POV	C23-C24-C25-C26
2	E	1007	POV	C23-C24-C25-C26
2	F	1007	POV	C23-C24-C25-C26
2	B	1006	POV	C34-C35-C36-C37
2	A	1006	POV	C34-C35-C36-C37
2	C	1006	POV	C34-C35-C36-C37
2	D	1006	POV	C34-C35-C36-C37
2	E	1006	POV	C34-C35-C36-C37
2	F	1006	POV	C34-C35-C36-C37
2	A	1003	POV	C24-C25-C26-C27
2	B	1003	POV	C24-C25-C26-C27
2	D	1003	POV	C24-C25-C26-C27
2	E	1003	POV	C24-C25-C26-C27
2	F	1003	POV	C24-C25-C26-C27
2	C	1003	POV	C24-C25-C26-C27

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Mol	Chain	Res	Type	Atoms
2	A	1003	POV	C32-C33-C34-C35
2	B	1003	POV	C32-C33-C34-C35
2	C	1003	POV	C32-C33-C34-C35
2	D	1003	POV	C32-C33-C34-C35
2	E	1003	POV	C32-C33-C34-C35
2	F	1003	POV	C32-C33-C34-C35
2	A	1003	POV	O11-C1-C2-C3
2	B	1003	POV	O11-C1-C2-C3
2	C	1003	POV	O11-C1-C2-C3
2	D	1003	POV	O11-C1-C2-C3
2	E	1003	POV	O11-C1-C2-C3
2	F	1003	POV	O11-C1-C2-C3
2	E	1009	POV	O22-C21-O21-C2
2	A	1001	POV	C35-C36-C37-C38
2	B	1001	POV	C35-C36-C37-C38
2	E	1001	POV	C35-C36-C37-C38
2	F	1001	POV	C35-C36-C37-C38
2	A	1008	POV	C214-C215-C216-C217
2	B	1008	POV	C214-C215-C216-C217
2	C	1001	POV	C35-C36-C37-C38
2	C	1008	POV	C214-C215-C216-C217
2	D	1001	POV	C35-C36-C37-C38
2	D	1008	POV	C214-C215-C216-C217
2	E	1008	POV	C214-C215-C216-C217
2	F	1008	POV	C214-C215-C216-C217
2	E	1009	POV	C26-C27-C28-C29
2	A	1004	POV	C1-C2-C3-O31
2	B	1004	POV	C1-C2-C3-O31
2	C	1004	POV	C1-C2-C3-O31
2	D	1004	POV	C1-C2-C3-O31
2	E	1004	POV	C1-C2-C3-O31
2	F	1004	POV	C1-C2-C3-O31
2	A	1002	POV	O11-C1-C2-O21
2	A	1008	POV	O11-C1-C2-O21
2	B	1002	POV	O11-C1-C2-O21
2	B	1008	POV	O11-C1-C2-O21
2	C	1002	POV	O11-C1-C2-O21
2	C	1008	POV	O11-C1-C2-O21
2	D	1002	POV	O11-C1-C2-O21
2	D	1008	POV	O11-C1-C2-O21
2	E	1002	POV	O11-C1-C2-O21
2	E	1008	POV	O11-C1-C2-O21

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Mol	Chain	Res	Type	Atoms
2	F	1002	POV	O11-C1-C2-O21
2	F	1008	POV	O11-C1-C2-O21
2	A	1001	POV	C215-C216-C217-C218
2	B	1001	POV	C215-C216-C217-C218
2	D	1001	POV	C215-C216-C217-C218
2	E	1001	POV	C215-C216-C217-C218
2	F	1001	POV	C215-C216-C217-C218
2	A	1002	POV	C11-C12-N-C13
2	C	1002	POV	C11-C12-N-C13
2	C	1004	POV	C11-C12-N-C15
2	D	1002	POV	C11-C12-N-C13
2	E	1002	POV	C11-C12-N-C13
2	F	1004	POV	C11-C12-N-C15
2	C	1001	POV	C215-C216-C217-C218
2	C	1009	POV	C26-C27-C28-C29
2	A	1007	POV	C25-C26-C27-C28
2	C	1004	POV	C39-C310-C311-C312
2	D	1007	POV	C25-C26-C27-C28
2	E	1007	POV	C25-C26-C27-C28
2	F	1007	POV	C25-C26-C27-C28
2	A	1004	POV	C39-C310-C311-C312
2	C	1007	POV	C25-C26-C27-C28
2	D	1004	POV	C39-C310-C311-C312
2	E	1004	POV	C39-C310-C311-C312
2	F	1004	POV	C39-C310-C311-C312
2	A	1004	POV	C213-C214-C215-C216
2	B	1004	POV	C39-C310-C311-C312
2	B	1004	POV	C213-C214-C215-C216
2	B	1007	POV	C25-C26-C27-C28
2	C	1004	POV	C213-C214-C215-C216
2	D	1004	POV	C213-C214-C215-C216
2	E	1004	POV	C213-C214-C215-C216
2	F	1004	POV	C213-C214-C215-C216
2	A	1002	POV	C32-C31-O31-C3
2	B	1002	POV	C32-C31-O31-C3
2	C	1002	POV	C32-C31-O31-C3
2	D	1002	POV	C32-C31-O31-C3
2	E	1002	POV	C32-C31-O31-C3
2	F	1002	POV	C32-C31-O31-C3
2	A	1004	POV	C1-O11-P-O12
2	B	1004	POV	C1-O11-P-O12
2	C	1004	POV	C1-O11-P-O12

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Mol	Chain	Res	Type	Atoms
2	D	1004	POV	C1-O11-P-O12
2	E	1004	POV	C1-O11-P-O12
2	F	1004	POV	C1-O11-P-O12
2	C	1009	POV	C39-C310-C311-C312
2	A	1001	POV	C1-O11-P-O13
2	A	1001	POV	C1-O11-P-O14
2	A	1002	POV	C11-O12-P-O14
2	A	1003	POV	C11-O12-P-O13
2	A	1003	POV	C11-O12-P-O14
2	A	1004	POV	C11-C12-N-C15
2	A	1006	POV	C1-O11-P-O14
2	A	1008	POV	C11-O12-P-O14
2	B	1001	POV	C1-O11-P-O13
2	B	1001	POV	C1-O11-P-O14
2	B	1002	POV	C11-C12-N-C13
2	B	1002	POV	C11-O12-P-O14
2	B	1003	POV	C11-O12-P-O13
2	B	1003	POV	C11-O12-P-O14
2	B	1004	POV	C11-C12-N-C15
2	B	1006	POV	C1-O11-P-O14
2	B	1008	POV	C11-O12-P-O14
2	C	1001	POV	C1-O11-P-O13
2	C	1001	POV	C1-O11-P-O14
2	C	1002	POV	C11-O12-P-O14
2	C	1003	POV	C11-O12-P-O13
2	C	1003	POV	C11-O12-P-O14
2	C	1006	POV	C1-O11-P-O14
2	C	1008	POV	C11-O12-P-O14
2	D	1001	POV	C1-O11-P-O13
2	D	1001	POV	C1-O11-P-O14
2	D	1002	POV	C11-O12-P-O14
2	D	1003	POV	C11-O12-P-O13
2	D	1003	POV	C11-O12-P-O14
2	D	1004	POV	C11-C12-N-C15
2	D	1006	POV	C1-O11-P-O14
2	D	1008	POV	C11-O12-P-O14
2	E	1001	POV	C1-O11-P-O13
2	E	1001	POV	C1-O11-P-O14
2	E	1002	POV	C11-O12-P-O14
2	E	1003	POV	C11-O12-P-O13
2	E	1003	POV	C11-O12-P-O14
2	E	1004	POV	C11-C12-N-C15

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Mol	Chain	Res	Type	Atoms
2	E	1006	POV	C1-O11-P-O14
2	E	1008	POV	C11-O12-P-O14
2	E	1009	POV	C11-O12-P-O13
2	F	1001	POV	C1-O11-P-O13
2	F	1001	POV	C1-O11-P-O14
2	F	1002	POV	C11-C12-N-C13
2	F	1002	POV	C11-O12-P-O14
2	F	1003	POV	C11-O12-P-O13
2	F	1003	POV	C11-O12-P-O14
2	F	1006	POV	C1-O11-P-O14
2	F	1008	POV	C11-O12-P-O14
2	F	1009	POV	C11-O12-P-O13
2	A	1002	POV	O11-C1-C2-C3
2	A	1008	POV	O11-C1-C2-C3
2	B	1002	POV	O11-C1-C2-C3
2	B	1008	POV	O11-C1-C2-C3
2	C	1002	POV	O11-C1-C2-C3
2	C	1008	POV	O11-C1-C2-C3
2	D	1002	POV	O11-C1-C2-C3
2	D	1008	POV	O11-C1-C2-C3
2	E	1002	POV	O11-C1-C2-C3
2	E	1008	POV	O11-C1-C2-C3
2	F	1002	POV	O11-C1-C2-C3
2	F	1008	POV	O11-C1-C2-C3
2	A	1005	POV	C12-C11-O12-P
2	B	1005	POV	C12-C11-O12-P
2	C	1005	POV	C12-C11-O12-P
2	D	1005	POV	C12-C11-O12-P
2	E	1005	POV	C12-C11-O12-P
2	F	1005	POV	C12-C11-O12-P
2	F	1009	POV	C312-C313-C314-C315
2	A	1004	POV	C11-C12-N-C14
2	A	1005	POV	C11-C12-N-C13
2	B	1004	POV	C11-C12-N-C14
2	B	1005	POV	C11-C12-N-C13
2	C	1004	POV	C11-C12-N-C14
2	C	1005	POV	C11-C12-N-C13
2	D	1004	POV	C11-C12-N-C14
2	D	1005	POV	C11-C12-N-C13
2	E	1004	POV	C11-C12-N-C14
2	E	1005	POV	C11-C12-N-C13
2	F	1004	POV	C11-C12-N-C14

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Mol	Chain	Res	Type	Atoms
2	F	1005	POV	C11-C12-N-C13
2	A	1001	POV	O12-C11-C12-N
2	A	1003	POV	O12-C11-C12-N
2	A	1007	POV	O12-C11-C12-N
2	A	1008	POV	O12-C11-C12-N
2	B	1001	POV	O12-C11-C12-N
2	B	1003	POV	O12-C11-C12-N
2	B	1007	POV	O12-C11-C12-N
2	B	1008	POV	O12-C11-C12-N
2	C	1001	POV	O12-C11-C12-N
2	C	1003	POV	O12-C11-C12-N
2	C	1007	POV	O12-C11-C12-N
2	C	1008	POV	O12-C11-C12-N
2	D	1001	POV	O12-C11-C12-N
2	D	1003	POV	O12-C11-C12-N
2	D	1007	POV	O12-C11-C12-N
2	D	1008	POV	O12-C11-C12-N
2	E	1001	POV	O12-C11-C12-N
2	E	1003	POV	O12-C11-C12-N
2	E	1007	POV	O12-C11-C12-N
2	E	1008	POV	O12-C11-C12-N
2	F	1001	POV	O12-C11-C12-N
2	F	1003	POV	O12-C11-C12-N
2	F	1007	POV	O12-C11-C12-N
2	F	1008	POV	O12-C11-C12-N
2	A	1003	POV	O21-C2-C3-O31
2	B	1003	POV	O21-C2-C3-O31
2	C	1003	POV	O21-C2-C3-O31
2	D	1003	POV	O21-C2-C3-O31
2	E	1003	POV	O21-C2-C3-O31
2	F	1003	POV	O21-C2-C3-O31
2	B	1002	POV	C310-C311-C312-C313
2	C	1002	POV	O32-C31-O31-C3
2	E	1002	POV	O32-C31-O31-C3
2	A	1002	POV	C310-C311-C312-C313
2	C	1002	POV	C310-C311-C312-C313
2	D	1002	POV	C310-C311-C312-C313
2	E	1002	POV	C310-C311-C312-C313
2	F	1002	POV	C310-C311-C312-C313
2	A	1002	POV	O32-C31-O31-C3
2	B	1002	POV	O32-C31-O31-C3
2	D	1002	POV	O32-C31-O31-C3

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Mol	Chain	Res	Type	Atoms
2	F	1002	POV	O32-C31-O31-C3
2	A	1007	POV	C32-C33-C34-C35
2	B	1007	POV	C32-C33-C34-C35
2	C	1007	POV	C32-C33-C34-C35
2	D	1007	POV	C32-C33-C34-C35
2	E	1007	POV	C32-C33-C34-C35
2	F	1007	POV	C32-C33-C34-C35
2	C	1006	POV	C31-C32-C33-C34
2	B	1006	POV	C32-C33-C34-C35
2	A	1006	POV	C31-C32-C33-C34
2	B	1006	POV	C31-C32-C33-C34
2	D	1006	POV	C31-C32-C33-C34
2	E	1006	POV	C31-C32-C33-C34
2	F	1006	POV	C31-C32-C33-C34
2	A	1006	POV	C32-C33-C34-C35
2	D	1006	POV	C32-C33-C34-C35
2	E	1006	POV	C32-C33-C34-C35
2	F	1006	POV	C32-C33-C34-C35
2	C	1006	POV	C32-C33-C34-C35
2	A	1004	POV	C311-C310-C39-C38
2	C	1004	POV	C311-C310-C39-C38
2	E	1004	POV	C311-C310-C39-C38
2	B	1004	POV	C311-C310-C39-C38
2	B	1005	POV	C33-C34-C35-C36
2	D	1004	POV	C311-C310-C39-C38
2	D	1005	POV	C33-C34-C35-C36
2	F	1004	POV	C311-C310-C39-C38
2	C	1005	POV	C33-C34-C35-C36
2	E	1005	POV	C33-C34-C35-C36
2	A	1005	POV	C33-C34-C35-C36
2	F	1005	POV	C33-C34-C35-C36
3	F	1010	SPH	C2-C3-C4-C5
2	A	1007	POV	C2-C1-O11-P
2	B	1007	POV	C2-C1-O11-P
2	C	1009	POV	C2-C1-O11-P
2	D	1007	POV	C2-C1-O11-P
2	E	1009	POV	C2-C1-O11-P
2	F	1007	POV	C2-C1-O11-P
2	A	1005	POV	C11-C12-N-C14
2	B	1005	POV	C11-C12-N-C14
2	C	1005	POV	C11-C12-N-C14
2	D	1005	POV	C11-C12-N-C14

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Mol	Chain	Res	Type	Atoms
2	E	1005	POV	C11-C12-N-C14
2	F	1005	POV	C11-C12-N-C14
2	A	1002	POV	C29-C210-C211-C212
2	B	1002	POV	C29-C210-C211-C212
2	C	1002	POV	C29-C210-C211-C212
2	D	1002	POV	C29-C210-C211-C212
2	E	1002	POV	C29-C210-C211-C212
2	F	1002	POV	C29-C210-C211-C212
2	A	1005	POV	C1-O11-P-O12
2	A	1006	POV	C11-O12-P-O11
2	A	1007	POV	C11-O12-P-O11
2	B	1005	POV	C1-O11-P-O12
2	B	1006	POV	C11-O12-P-O11
2	B	1007	POV	C11-O12-P-O11
2	C	1005	POV	C1-O11-P-O12
2	C	1006	POV	C11-O12-P-O11
2	C	1007	POV	C11-O12-P-O11
2	D	1005	POV	C1-O11-P-O12
2	D	1006	POV	C11-O12-P-O11
2	D	1007	POV	C11-O12-P-O11
2	E	1005	POV	C1-O11-P-O12
2	E	1006	POV	C11-O12-P-O11
2	E	1007	POV	C11-O12-P-O11
2	F	1005	POV	C1-O11-P-O12
2	F	1006	POV	C11-O12-P-O11
2	F	1007	POV	C11-O12-P-O11
2	C	1003	POV	C312-C313-C314-C315
2	A	1003	POV	C312-C313-C314-C315
2	B	1003	POV	C312-C313-C314-C315
2	F	1003	POV	C312-C313-C314-C315
2	D	1003	POV	C312-C313-C314-C315
2	E	1003	POV	C312-C313-C314-C315
2	A	1001	POV	C2-C1-O11-P
2	B	1001	POV	C2-C1-O11-P
2	C	1001	POV	C2-C1-O11-P
2	C	1007	POV	C2-C1-O11-P
2	D	1001	POV	C2-C1-O11-P
2	E	1001	POV	C2-C1-O11-P
2	E	1007	POV	C2-C1-O11-P
2	F	1001	POV	C2-C1-O11-P
2	F	1006	POV	C311-C310-C39-C38
2	A	1006	POV	C311-C310-C39-C38

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Mol	Chain	Res	Type	Atoms
2	B	1006	POV	C311-C310-C39-C38
2	C	1006	POV	C311-C310-C39-C38
2	D	1006	POV	C311-C310-C39-C38
2	E	1006	POV	C311-C310-C39-C38
2	B	1005	POV	C213-C214-C215-C216
2	A	1001	POV	C210-C211-C212-C213
2	B	1001	POV	C210-C211-C212-C213
2	C	1001	POV	C210-C211-C212-C213
2	D	1001	POV	C210-C211-C212-C213
2	E	1001	POV	C210-C211-C212-C213
2	F	1001	POV	C210-C211-C212-C213
2	D	1005	POV	C213-C214-C215-C216
2	A	1005	POV	C213-C214-C215-C216
2	C	1005	POV	C213-C214-C215-C216
2	E	1005	POV	C213-C214-C215-C216
2	F	1005	POV	C213-C214-C215-C216
2	F	1009	POV	C26-C27-C28-C29
2	E	1009	POV	O21-C2-C3-O31
2	C	1004	POV	C23-C24-C25-C26
2	D	1004	POV	C23-C24-C25-C26
2	A	1004	POV	C23-C24-C25-C26
2	E	1004	POV	C23-C24-C25-C26
2	F	1004	POV	C23-C24-C25-C26
2	B	1004	POV	C23-C24-C25-C26
2	E	1009	POV	C312-C313-C314-C315
2	C	1005	POV	C35-C36-C37-C38
2	B	1005	POV	C35-C36-C37-C38
2	D	1005	POV	C35-C36-C37-C38
2	E	1005	POV	C35-C36-C37-C38
2	F	1005	POV	C35-C36-C37-C38
2	A	1005	POV	C35-C36-C37-C38
2	D	1002	POV	C32-C33-C34-C35
2	E	1002	POV	C32-C33-C34-C35
2	F	1002	POV	C32-C33-C34-C35
2	A	1002	POV	C32-C33-C34-C35
2	B	1002	POV	C32-C33-C34-C35
2	C	1002	POV	C32-C33-C34-C35
2	A	1004	POV	C11-C12-N-C13
2	A	1005	POV	C11-C12-N-C15
2	B	1004	POV	C11-C12-N-C13
2	B	1005	POV	C11-C12-N-C15
2	C	1004	POV	C11-C12-N-C13

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Mol	Chain	Res	Type	Atoms
2	C	1005	POV	C11-C12-N-C15
2	D	1004	POV	C11-C12-N-C13
2	D	1005	POV	C11-C12-N-C15
2	E	1004	POV	C11-C12-N-C13
2	E	1005	POV	C11-C12-N-C15
2	F	1004	POV	C11-C12-N-C13
2	F	1005	POV	C11-C12-N-C15
2	F	1002	POV	C22-C23-C24-C25
2	F	1009	POV	C2-C1-O11-P
2	A	1002	POV	C22-C23-C24-C25
2	B	1002	POV	C22-C23-C24-C25
2	C	1002	POV	C22-C23-C24-C25
2	E	1002	POV	C22-C23-C24-C25
2	D	1002	POV	C22-C23-C24-C25
2	F	1009	POV	C210-C211-C212-C213
2	A	1006	POV	C23-C24-C25-C26
2	B	1006	POV	C23-C24-C25-C26
2	D	1001	POV	C37-C38-C39-C310
2	D	1006	POV	C23-C24-C25-C26
2	E	1006	POV	C23-C24-C25-C26
2	A	1001	POV	C37-C38-C39-C310
2	B	1001	POV	C37-C38-C39-C310
2	C	1001	POV	C37-C38-C39-C310
2	C	1006	POV	C23-C24-C25-C26
2	C	1009	POV	C25-C26-C27-C28
2	E	1001	POV	C37-C38-C39-C310
2	F	1001	POV	C37-C38-C39-C310
2	F	1006	POV	C23-C24-C25-C26
2	C	1009	POV	O21-C2-C3-O31
2	E	1009	POV	C25-C26-C27-C28
3	F	1010	SPH	C9-C10-C11-C12
2	A	1001	POV	C21-C22-C23-C24
2	C	1001	POV	C21-C22-C23-C24
2	D	1001	POV	C21-C22-C23-C24
2	E	1001	POV	C21-C22-C23-C24
2	B	1001	POV	C21-C22-C23-C24
2	F	1001	POV	C21-C22-C23-C24
2	C	1003	POV	C27-C28-C29-C210
2	C	1002	POV	C35-C36-C37-C38
2	A	1002	POV	C35-C36-C37-C38
2	F	1002	POV	C35-C36-C37-C38
2	E	1009	POV	C210-C211-C212-C213

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Mol	Chain	Res	Type	Atoms
2	B	1002	POV	C35-C36-C37-C38
2	D	1002	POV	C35-C36-C37-C38
2	E	1002	POV	C35-C36-C37-C38
2	A	1003	POV	C27-C28-C29-C210
2	B	1003	POV	C27-C28-C29-C210
2	D	1003	POV	C27-C28-C29-C210
2	E	1003	POV	C27-C28-C29-C210
2	F	1003	POV	C27-C28-C29-C210
3	F	1010	SPH	C4-C5-C6-C7
2	D	1008	POV	C25-C26-C27-C28
2	A	1008	POV	C25-C26-C27-C28
2	B	1008	POV	C25-C26-C27-C28
2	C	1008	POV	C25-C26-C27-C28
2	E	1008	POV	C25-C26-C27-C28
2	F	1008	POV	C25-C26-C27-C28
2	A	1005	POV	C27-C28-C29-C210
2	B	1005	POV	C27-C28-C29-C210
2	C	1005	POV	C27-C28-C29-C210
2	D	1005	POV	C27-C28-C29-C210
2	E	1005	POV	C27-C28-C29-C210
2	F	1005	POV	C27-C28-C29-C210
2	F	1009	POV	C25-C26-C27-C28
2	B	1002	POV	C27-C28-C29-C210
2	A	1006	POV	O21-C21-C22-C23
2	B	1006	POV	O21-C21-C22-C23
2	C	1006	POV	O21-C21-C22-C23
2	D	1006	POV	O21-C21-C22-C23
2	E	1006	POV	O21-C21-C22-C23
2	A	1002	POV	C27-C28-C29-C210
2	C	1002	POV	C27-C28-C29-C210
2	D	1002	POV	C27-C28-C29-C210
2	E	1002	POV	C27-C28-C29-C210
2	F	1002	POV	C27-C28-C29-C210
2	F	1006	POV	O21-C21-C22-C23
2	C	1001	POV	C33-C34-C35-C36
2	E	1001	POV	C33-C34-C35-C36
2	A	1001	POV	C33-C34-C35-C36
2	D	1001	POV	C33-C34-C35-C36
2	F	1001	POV	C33-C34-C35-C36
2	B	1001	POV	C33-C34-C35-C36
2	D	1006	POV	C21-C22-C23-C24
2	B	1001	POV	C313-C314-C315-C316

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Mol	Chain	Res	Type	Atoms
2	C	1001	POV	C313-C314-C315-C316
2	F	1001	POV	C313-C314-C315-C316
2	C	1009	POV	C210-C211-C212-C213
2	E	1001	POV	C313-C314-C315-C316
2	A	1001	POV	C313-C314-C315-C316
2	D	1001	POV	C313-C314-C315-C316
2	E	1002	POV	C39-C310-C311-C312
2	A	1002	POV	C39-C310-C311-C312
2	B	1002	POV	C39-C310-C311-C312
2	D	1002	POV	C39-C310-C311-C312
2	A	1006	POV	C21-C22-C23-C24
2	B	1006	POV	C21-C22-C23-C24
2	E	1006	POV	C21-C22-C23-C24
2	C	1002	POV	C39-C310-C311-C312
2	F	1002	POV	C39-C310-C311-C312
2	C	1006	POV	C21-C22-C23-C24
2	F	1006	POV	C21-C22-C23-C24
2	A	1005	POV	C1-O11-P-O14
2	B	1005	POV	C1-O11-P-O14
2	C	1005	POV	C1-O11-P-O14
2	D	1005	POV	C1-O11-P-O14
2	E	1005	POV	C1-O11-P-O14
2	F	1005	POV	C1-O11-P-O14
2	A	1007	POV	O11-C1-C2-C3
2	B	1007	POV	O11-C1-C2-C3
2	C	1007	POV	O11-C1-C2-C3
2	D	1007	POV	O11-C1-C2-C3
2	E	1007	POV	O11-C1-C2-C3
2	F	1007	POV	O11-C1-C2-C3
2	D	1002	POV	C312-C313-C314-C315
2	A	1002	POV	C312-C313-C314-C315
2	E	1002	POV	C312-C313-C314-C315
2	B	1002	POV	C312-C313-C314-C315
2	F	1002	POV	C312-C313-C314-C315
2	C	1004	POV	C27-C28-C29-C210
2	F	1004	POV	C27-C28-C29-C210
2	C	1002	POV	C312-C313-C314-C315
2	A	1004	POV	C27-C28-C29-C210
2	B	1004	POV	C27-C28-C29-C210
2	D	1004	POV	C27-C28-C29-C210
2	E	1004	POV	C27-C28-C29-C210
2	A	1004	POV	O31-C31-C32-C33

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Mol	Chain	Res	Type	Atoms
2	B	1004	POV	O31-C31-C32-C33
2	D	1004	POV	O31-C31-C32-C33
2	E	1004	POV	O31-C31-C32-C33
2	D	1003	POV	C34-C35-C36-C37
2	A	1003	POV	C34-C35-C36-C37
2	C	1004	POV	O31-C31-C32-C33
2	F	1004	POV	O31-C31-C32-C33
2	A	1006	POV	C27-C28-C29-C210
2	B	1006	POV	C27-C28-C29-C210
2	C	1006	POV	C27-C28-C29-C210
2	D	1006	POV	C27-C28-C29-C210
2	E	1006	POV	C27-C28-C29-C210
2	F	1006	POV	C27-C28-C29-C210
2	F	1003	POV	C34-C35-C36-C37
2	B	1003	POV	C34-C35-C36-C37
2	C	1003	POV	C34-C35-C36-C37
2	E	1003	POV	C34-C35-C36-C37
2	A	1004	POV	O32-C31-C32-C33
2	A	1006	POV	O22-C21-C22-C23
2	B	1004	POV	O32-C31-C32-C33
2	B	1006	POV	O22-C21-C22-C23
2	C	1004	POV	O32-C31-C32-C33
2	C	1006	POV	O22-C21-C22-C23
2	D	1004	POV	O32-C31-C32-C33
2	D	1006	POV	O22-C21-C22-C23
2	E	1004	POV	O32-C31-C32-C33
2	E	1006	POV	O22-C21-C22-C23
2	F	1004	POV	O32-C31-C32-C33
2	F	1006	POV	O22-C21-C22-C23
2	B	1003	POV	O31-C31-C32-C33
2	A	1001	POV	O21-C21-C22-C23
2	A	1003	POV	O31-C31-C32-C33
2	C	1001	POV	O21-C21-C22-C23
2	C	1003	POV	O31-C31-C32-C33
2	D	1001	POV	O21-C21-C22-C23
2	D	1003	POV	O31-C31-C32-C33
2	E	1001	POV	O21-C21-C22-C23
2	E	1003	POV	O31-C31-C32-C33
2	F	1001	POV	O21-C21-C22-C23
2	F	1003	POV	O31-C31-C32-C33

There are no ring outliers.

52 monomers are involved in 246 short contacts:

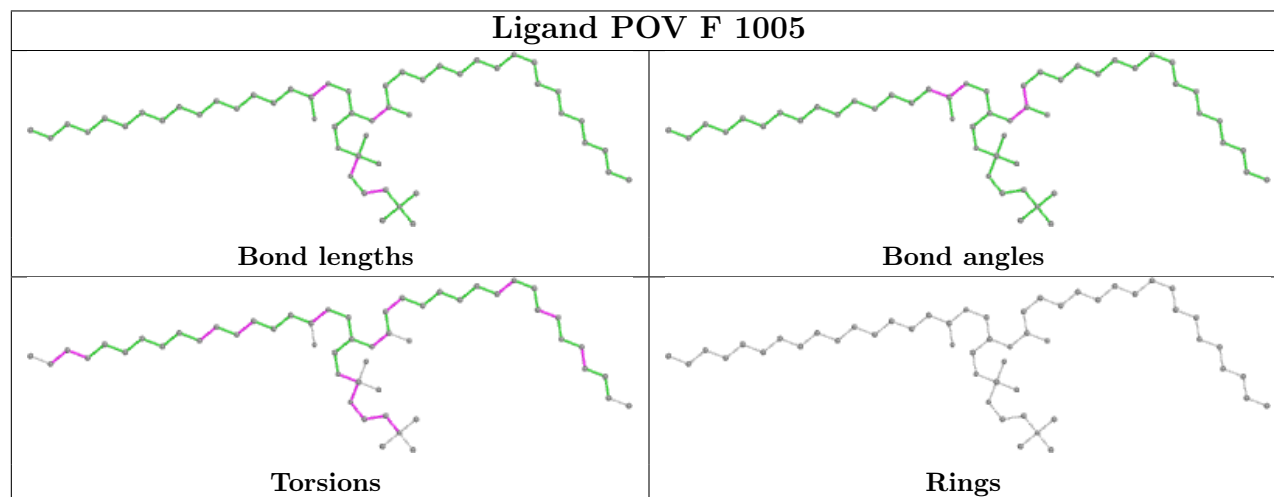
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	1005	POV	7	0
2	A	1002	POV	9	0
2	B	1003	POV	10	0
2	D	1007	POV	7	0
2	B	1006	POV	5	0
2	B	1004	POV	5	0
2	C	1005	POV	7	0
2	F	1003	POV	9	0
2	E	1008	POV	5	0
2	F	1002	POV	8	0
2	A	1008	POV	2	0
2	B	1007	POV	4	0
2	C	1003	POV	9	0
2	C	1002	POV	8	0
2	A	1007	POV	5	0
2	C	1006	POV	6	0
2	D	1005	POV	9	0
2	E	1009	POV	8	0
2	B	1001	POV	7	0
2	A	1003	POV	9	0
2	B	1005	POV	9	0
2	E	1007	POV	9	0
2	E	1003	POV	9	0
2	D	1002	POV	7	0
2	A	1006	POV	3	0
2	A	1004	POV	4	0
2	F	1001	POV	7	0
2	F	1009	POV	7	0
2	C	1001	POV	8	0
2	C	1009	POV	5	0
2	F	1008	POV	4	0
2	F	1004	POV	5	0
2	B	1002	POV	9	0
2	E	1005	POV	8	0
2	C	1008	POV	4	0
2	E	1002	POV	7	0
2	A	1001	POV	7	0
2	D	1001	POV	7	0
2	D	1008	POV	6	0
2	E	1001	POV	7	0
2	D	1003	POV	9	0
2	C	1004	POV	8	0

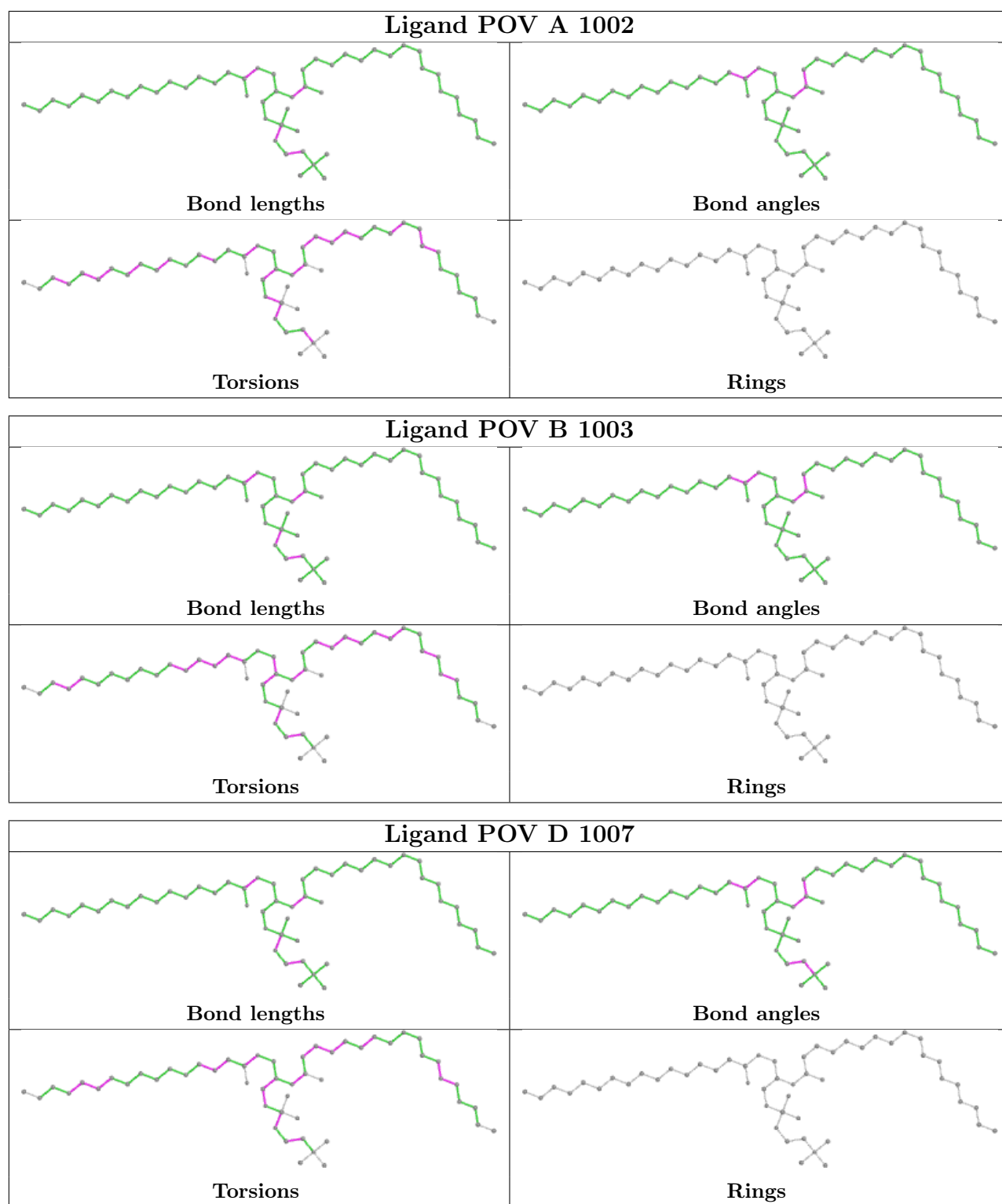
Continued on next page...

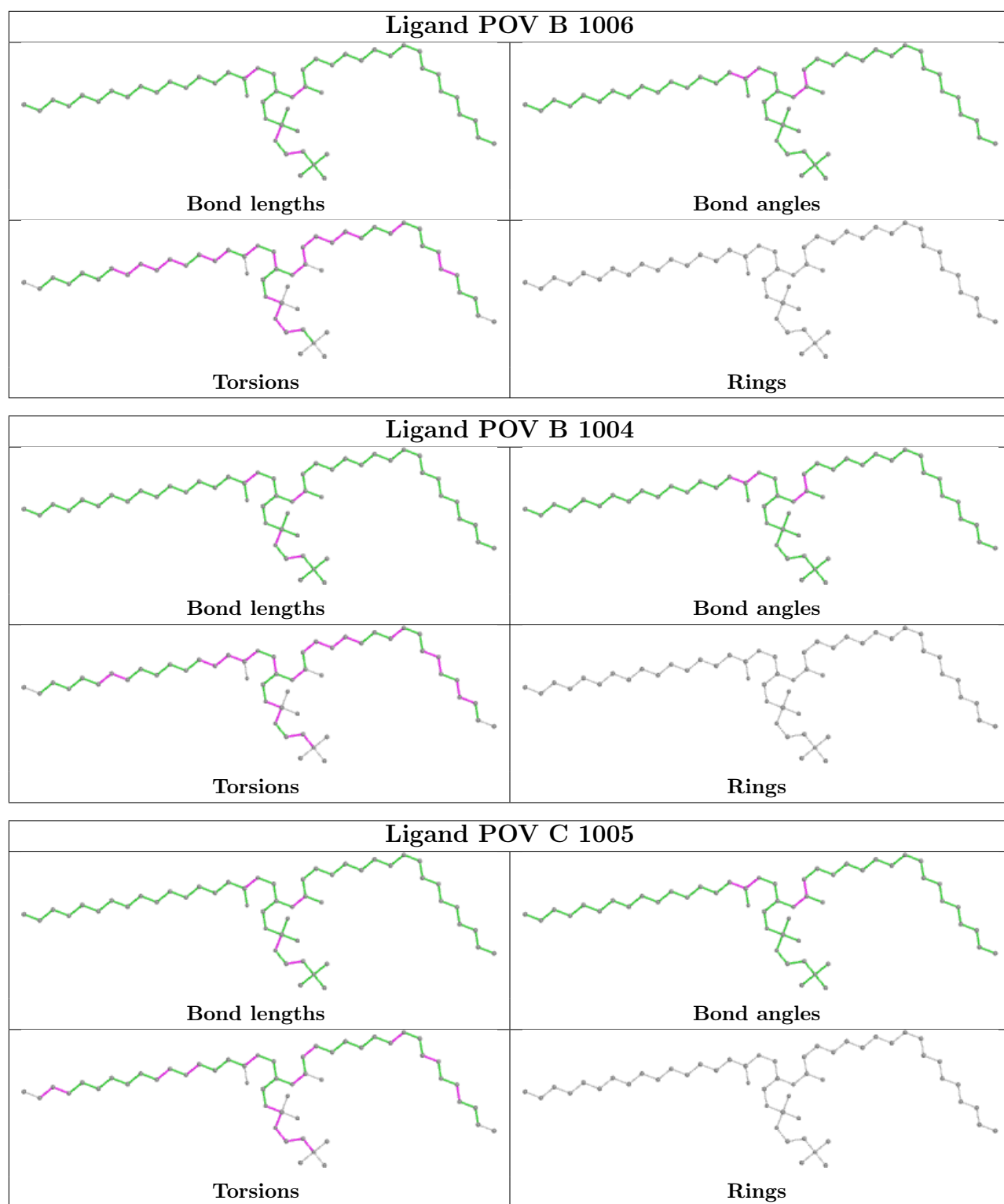
Continued from previous page...

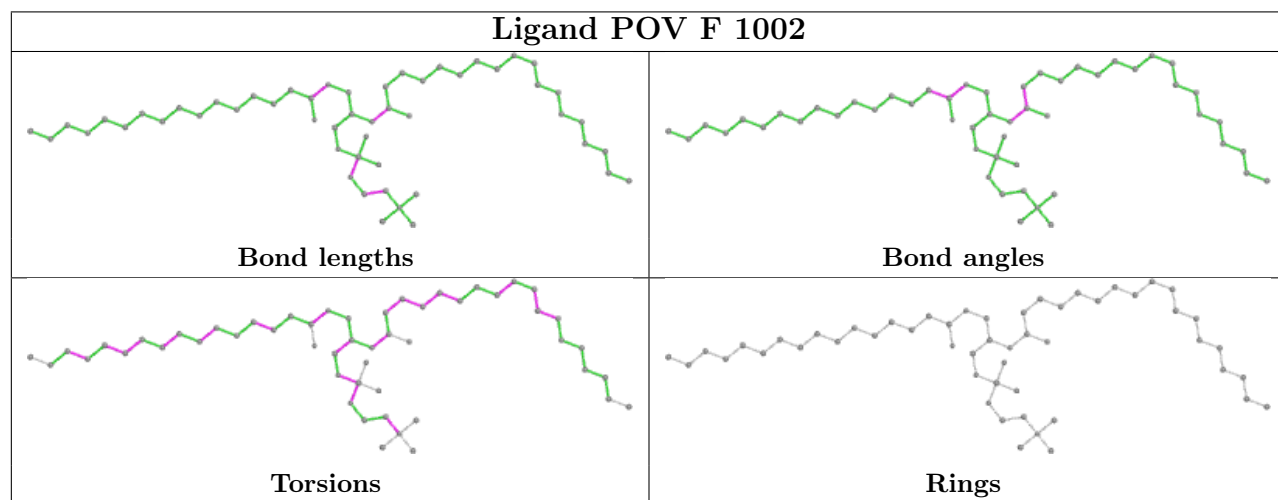
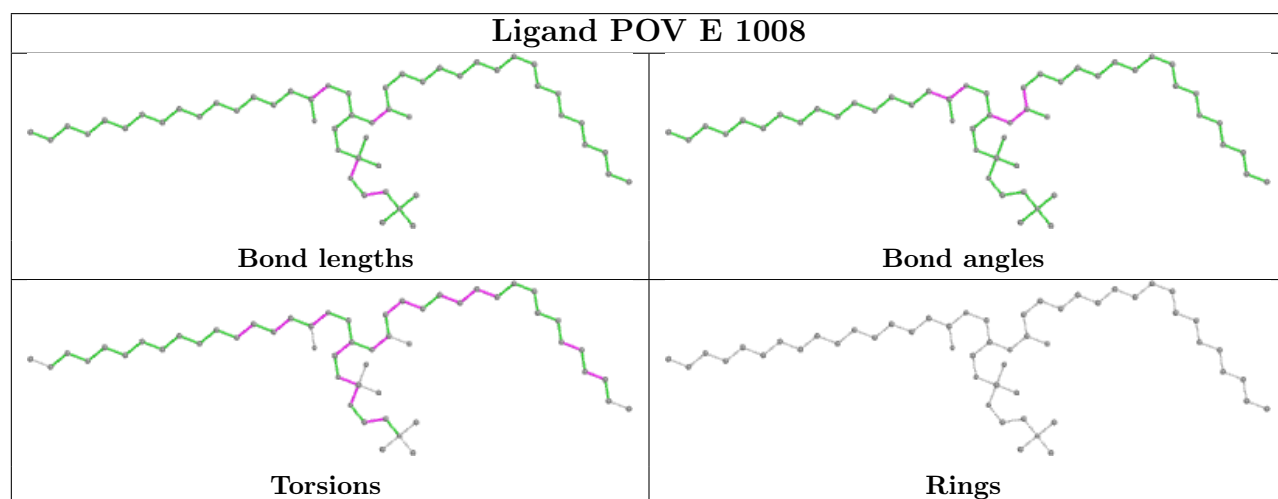
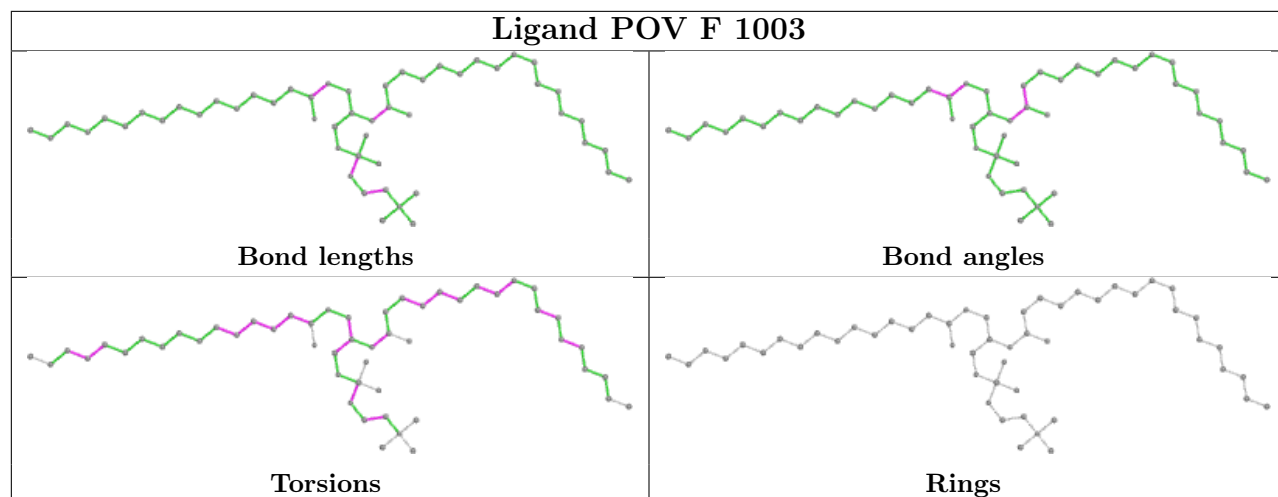
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	E	1004	POV	7	0
3	F	1010	SPH	7	0
2	F	1007	POV	7	0
2	F	1006	POV	5	0
2	C	1007	POV	11	0
2	D	1006	POV	6	0
2	E	1006	POV	3	0
2	B	1008	POV	5	0
2	D	1004	POV	5	0
2	A	1005	POV	8	0

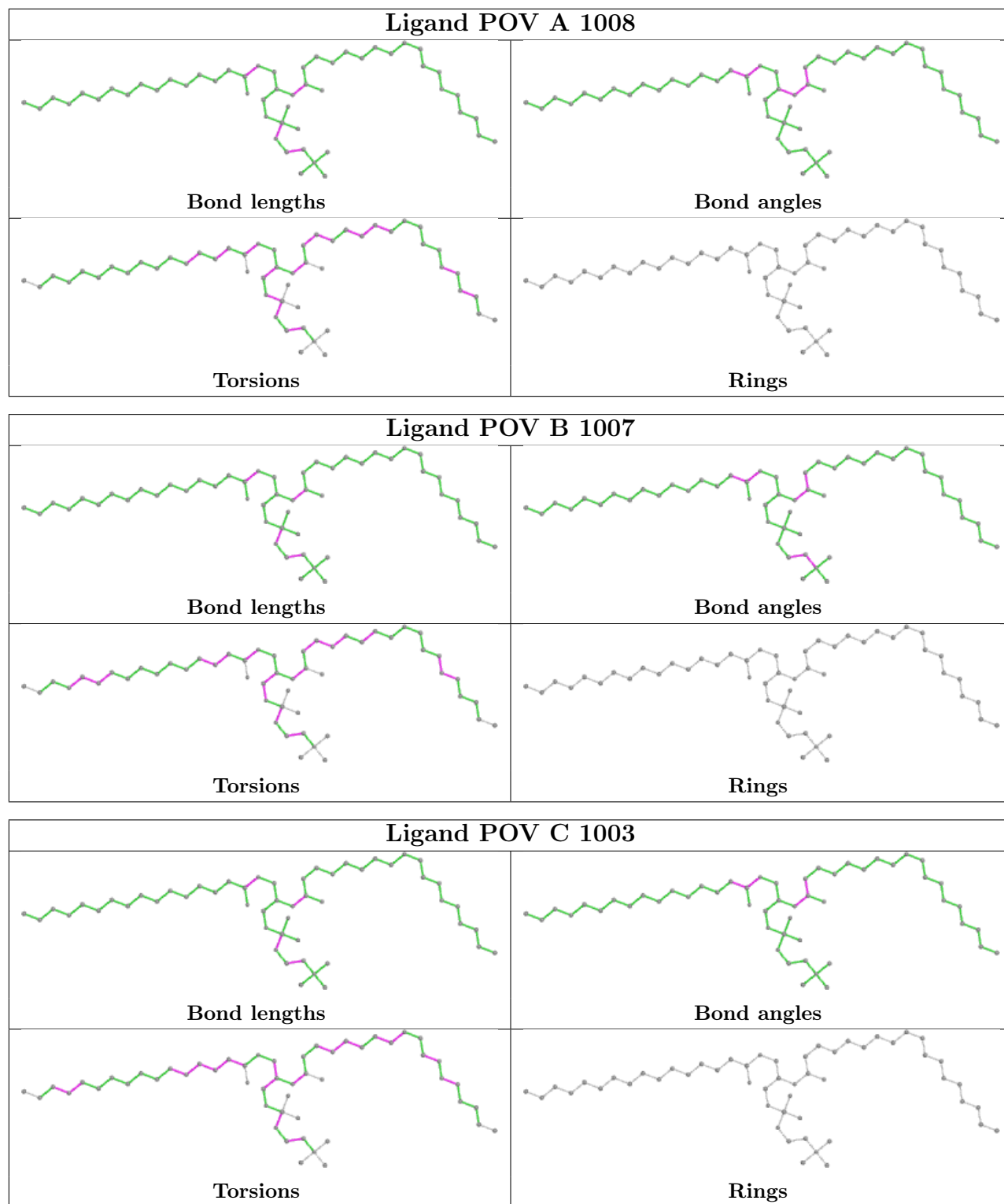
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

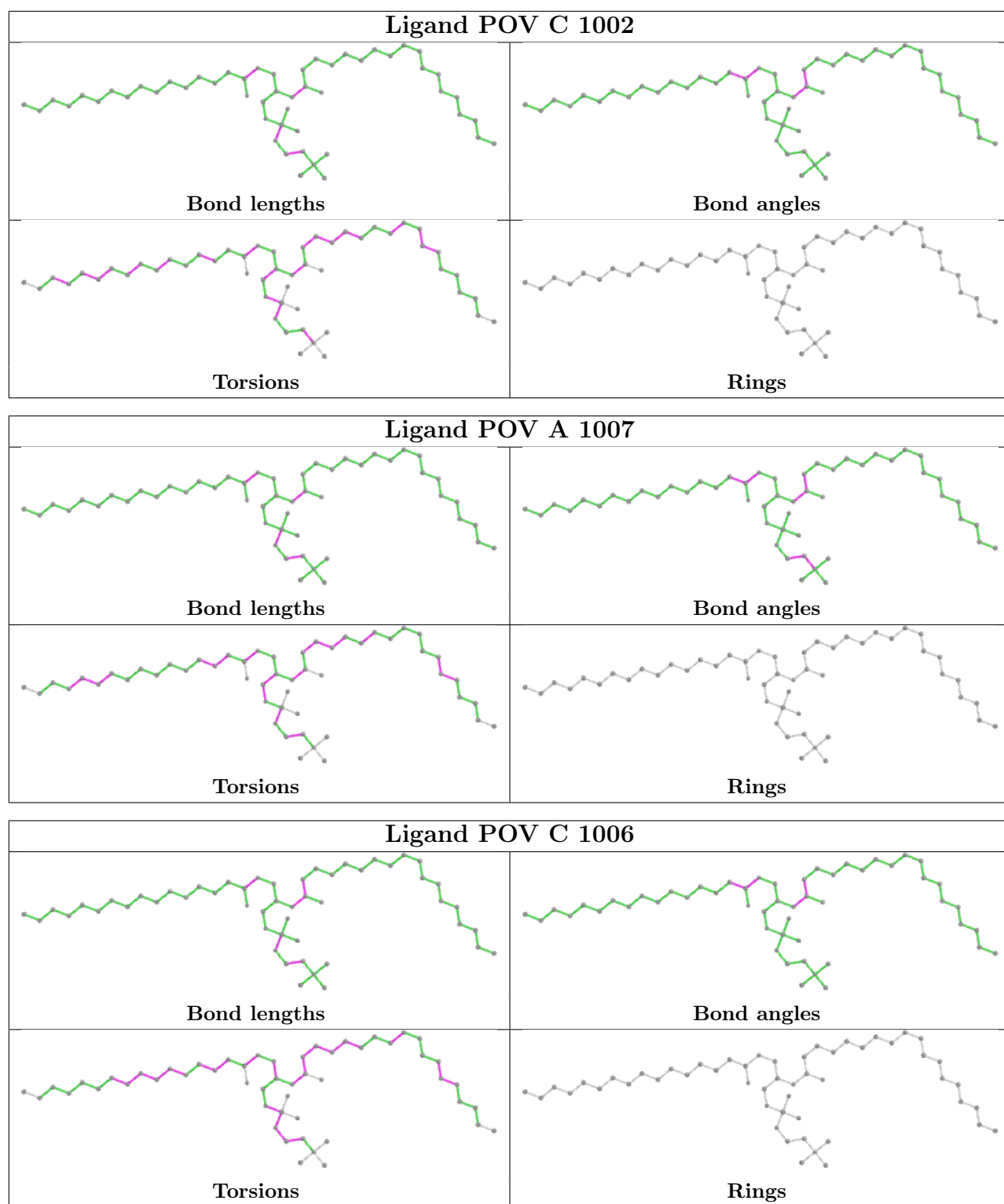


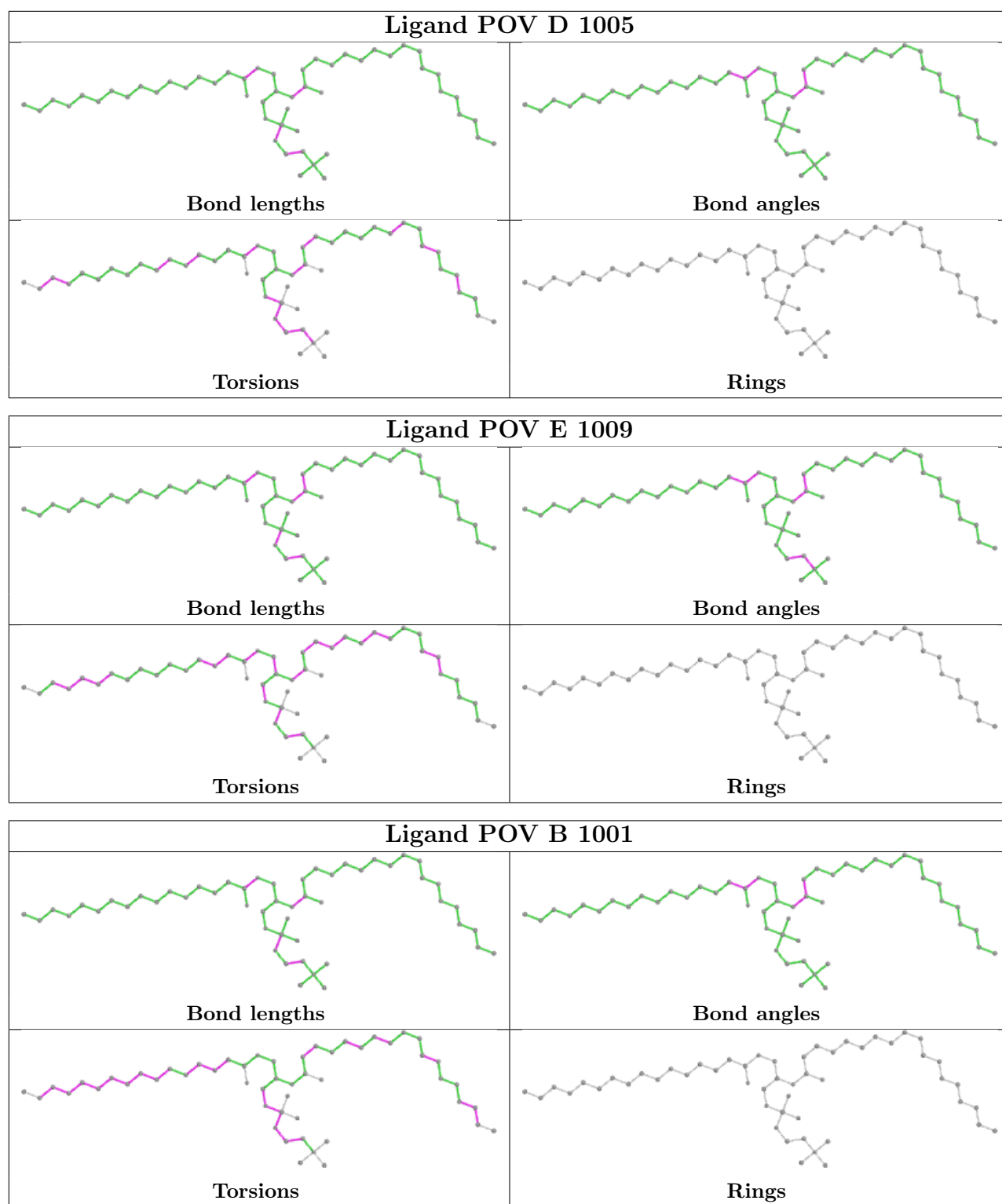


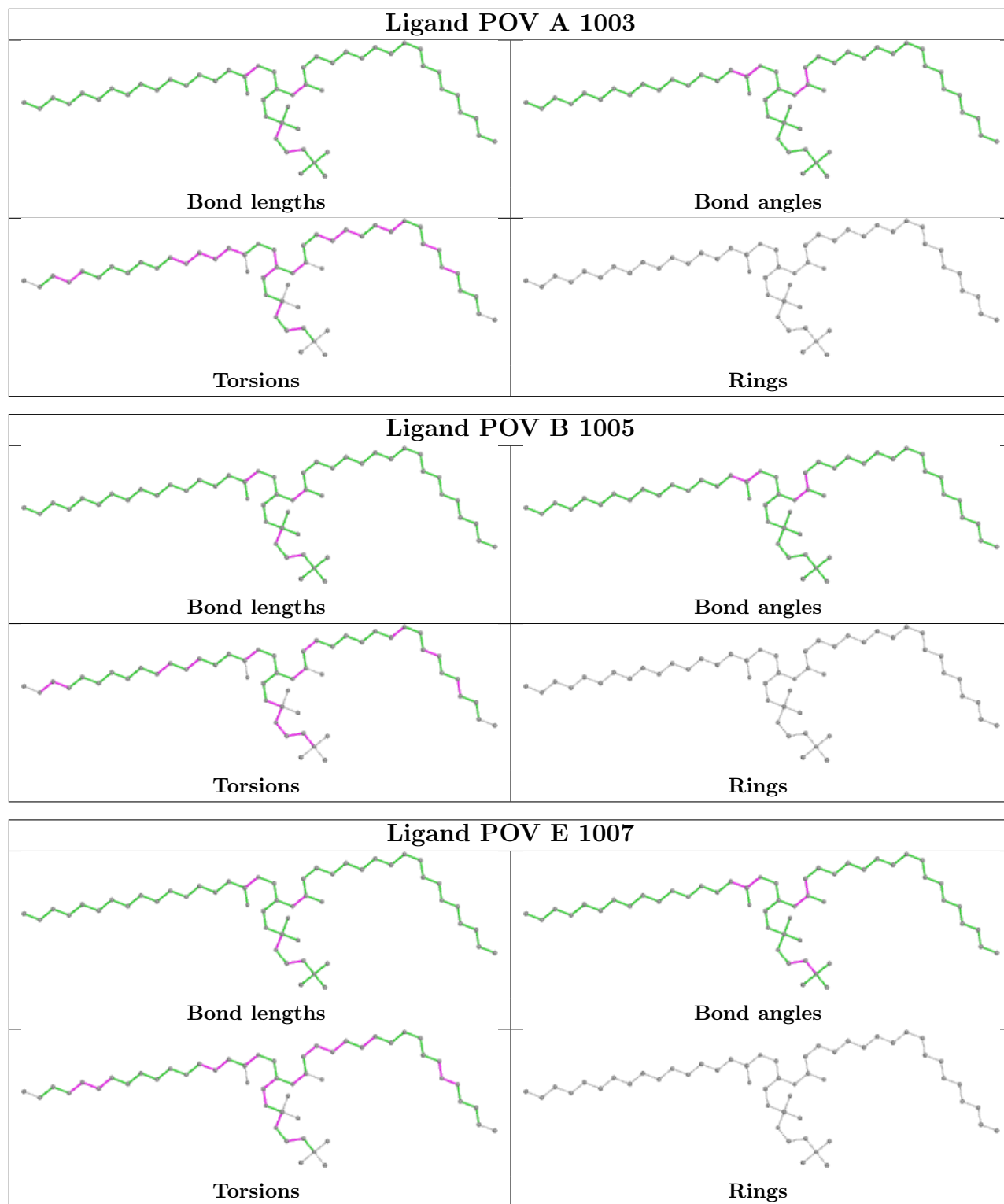


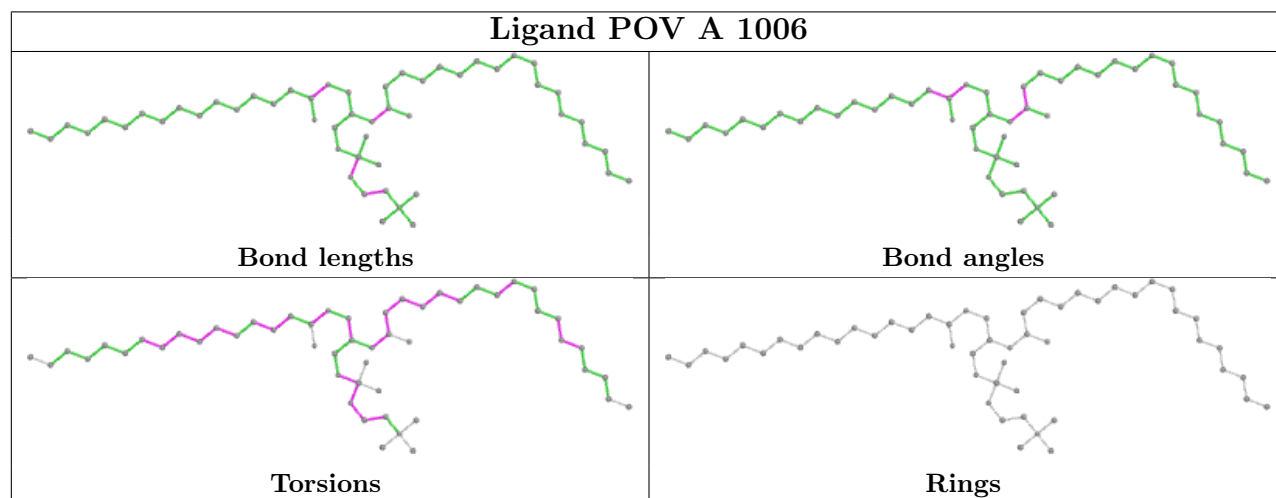
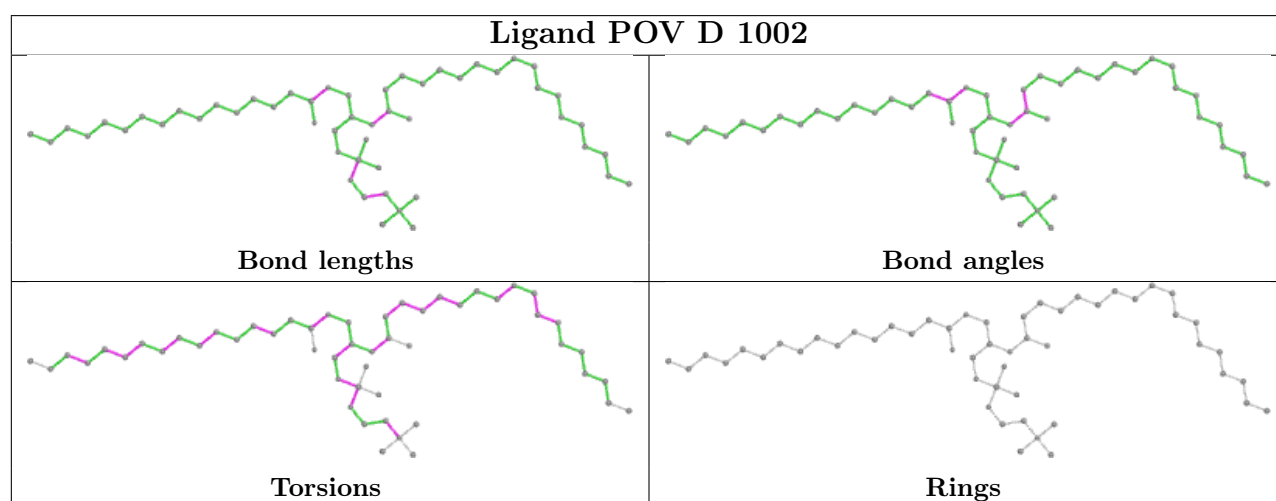
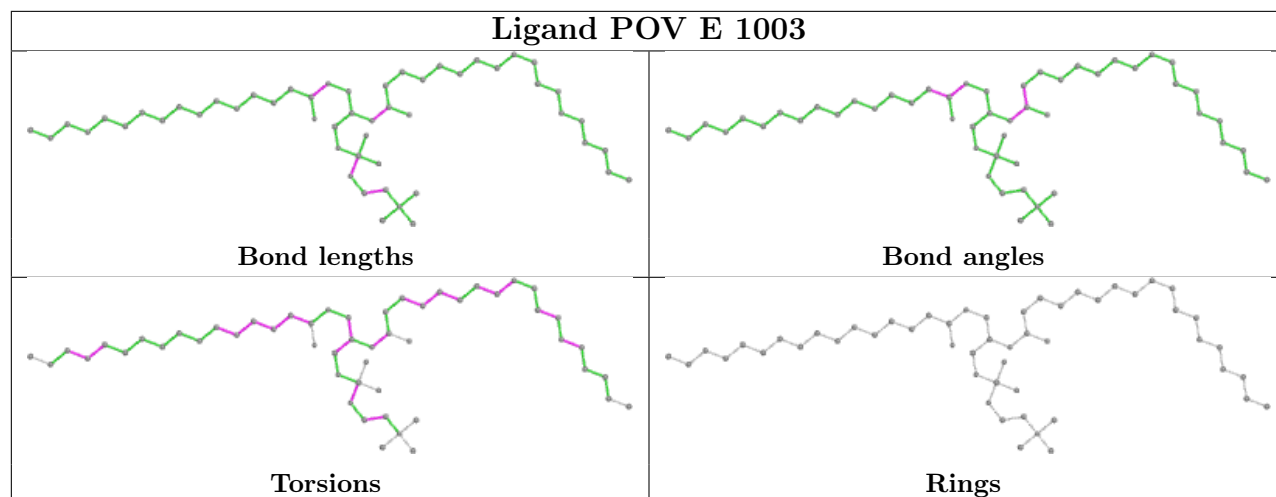


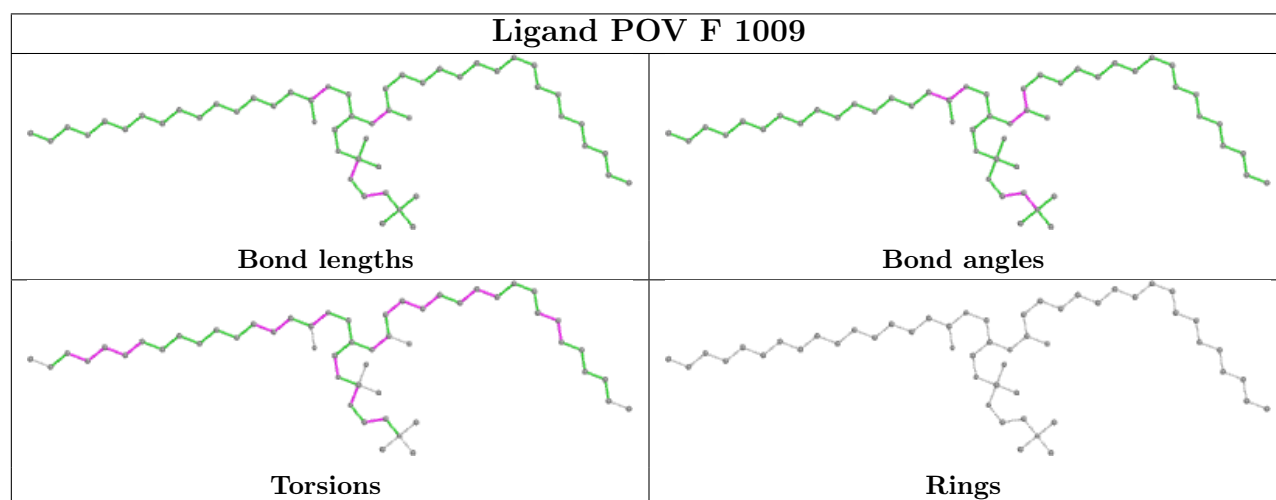
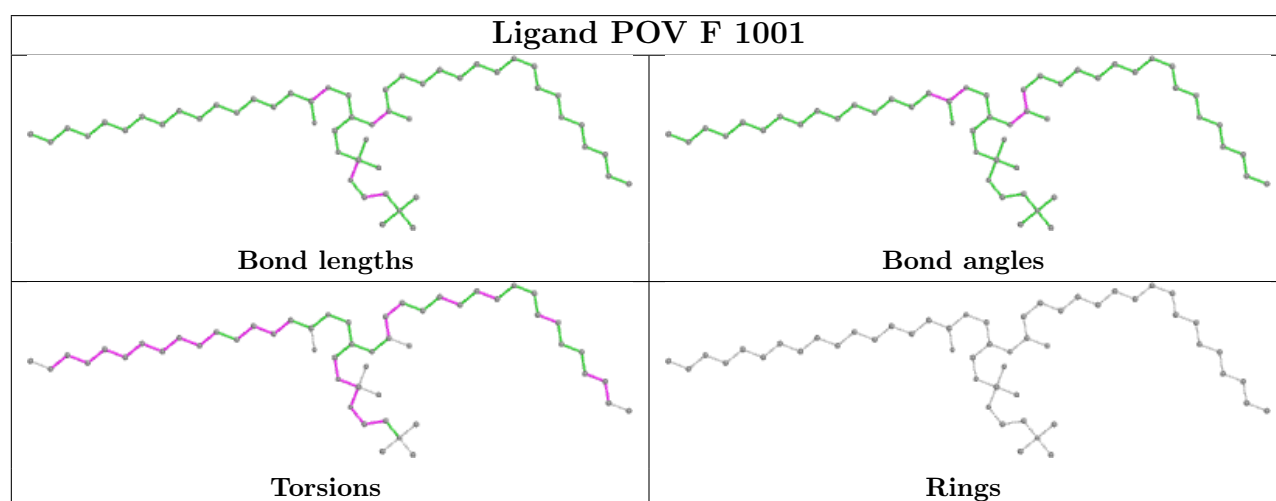
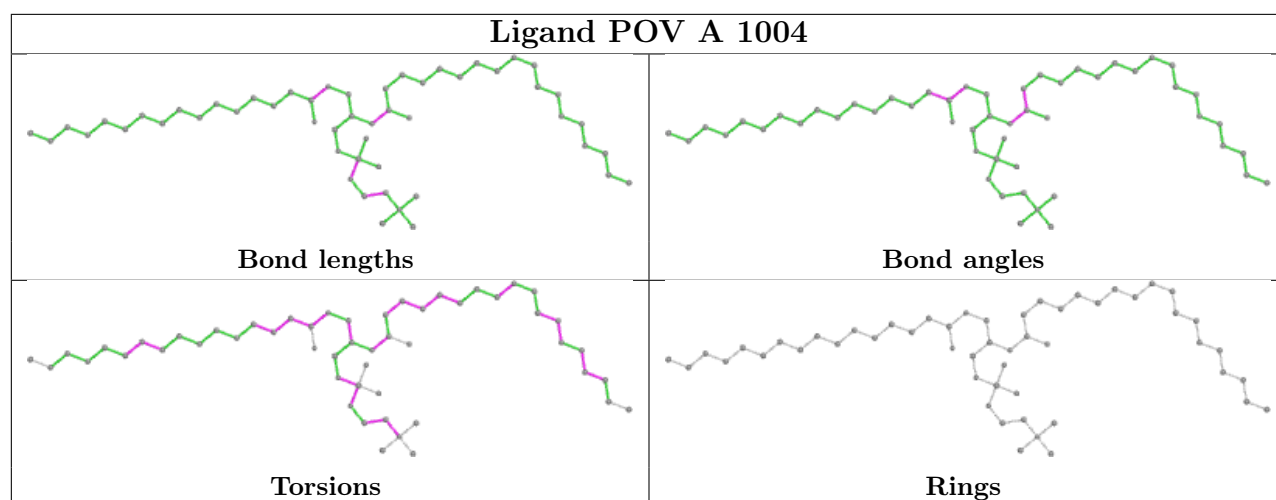


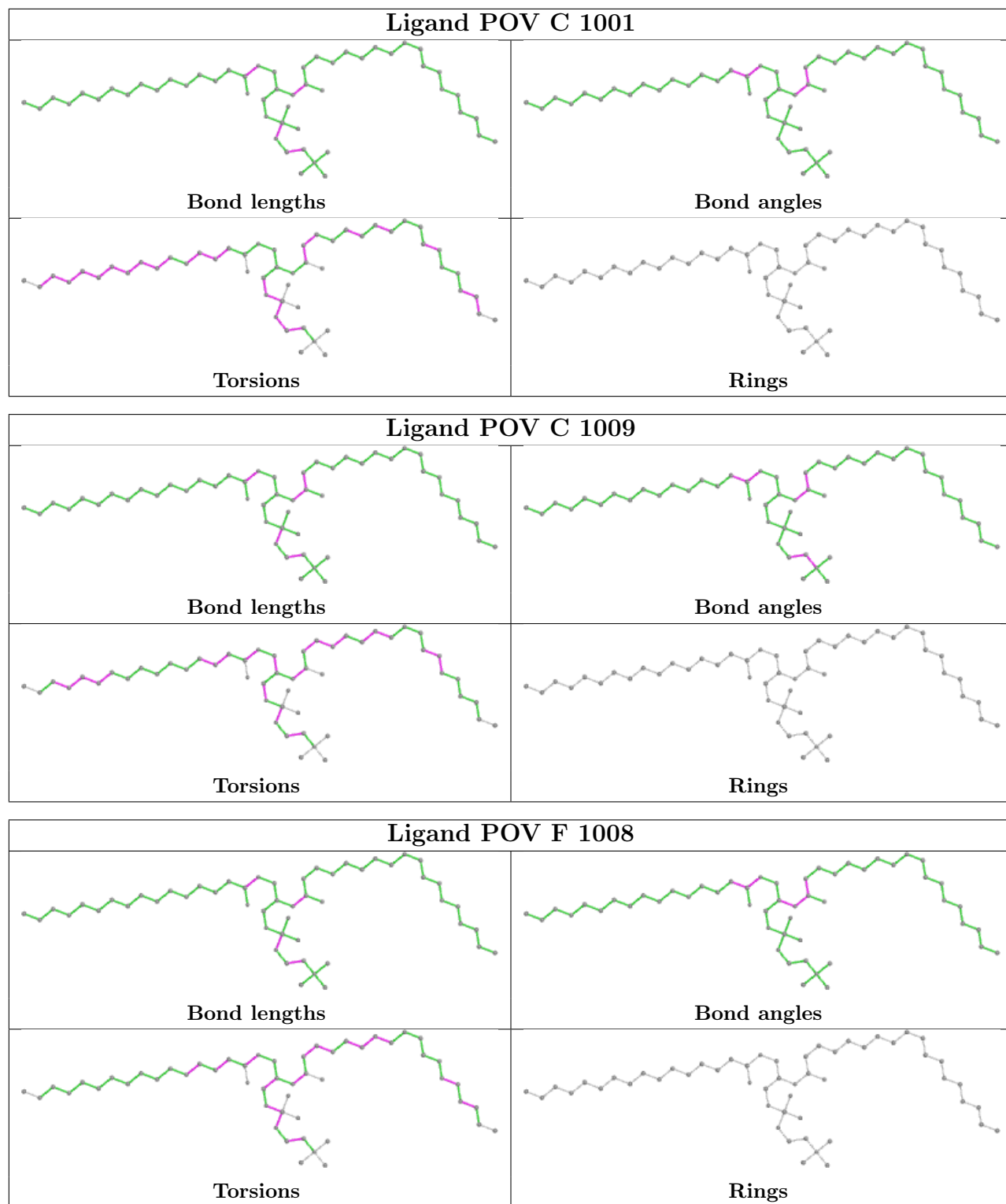


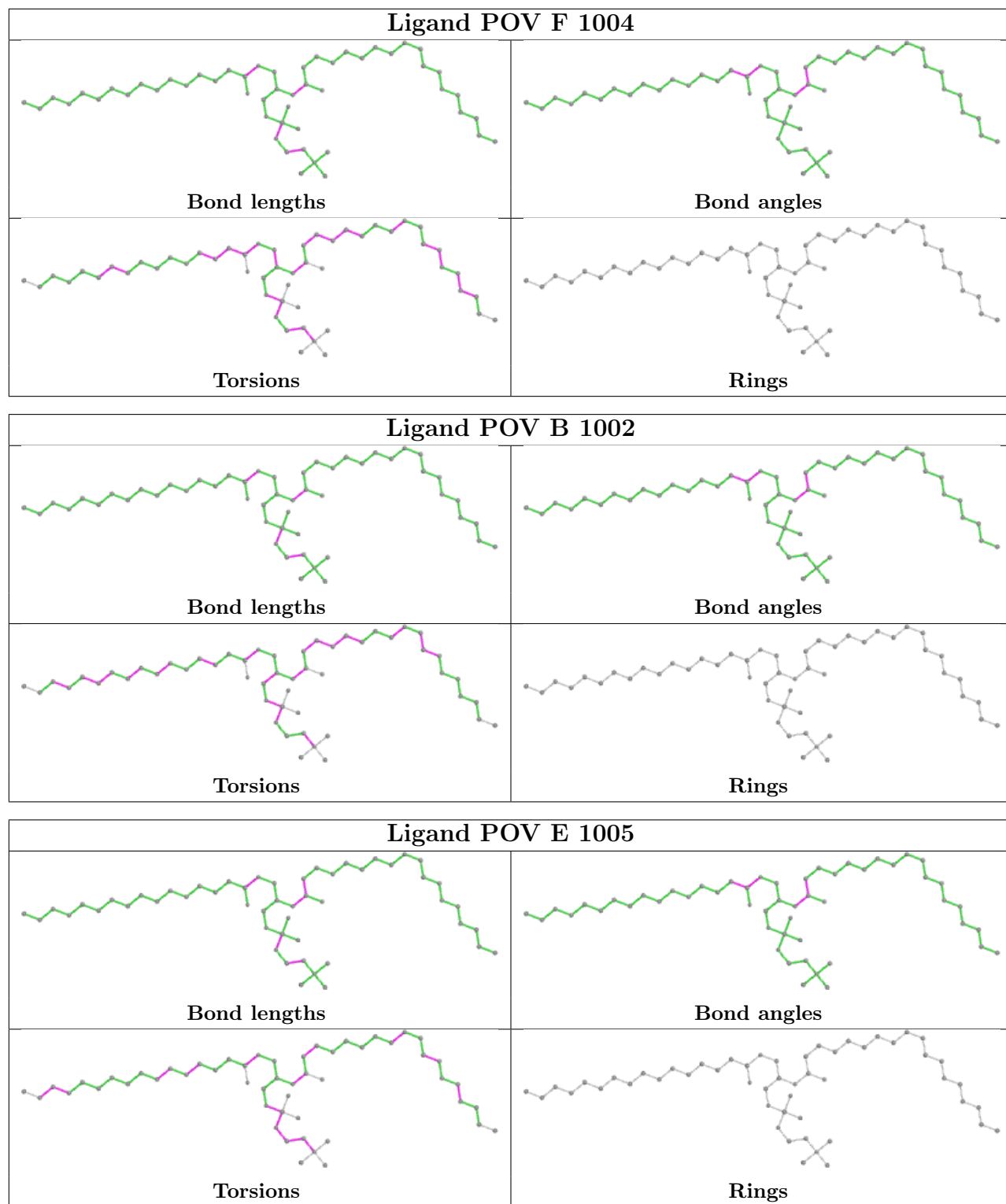


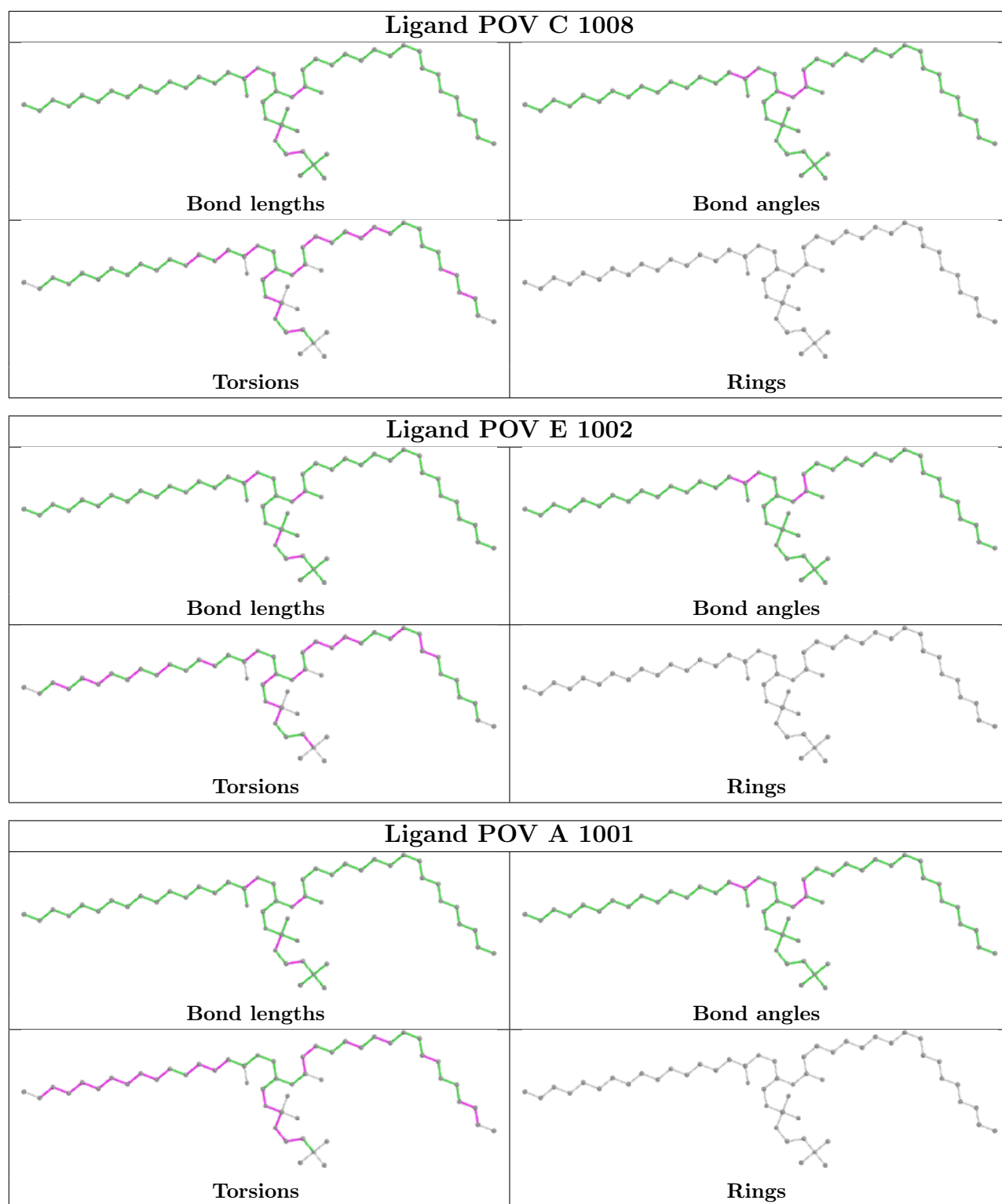


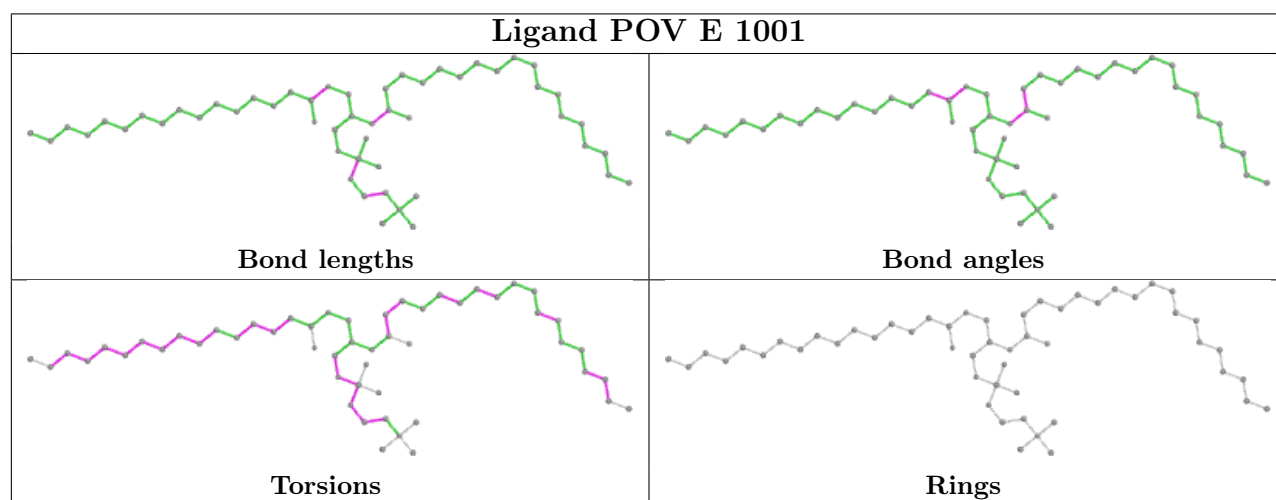
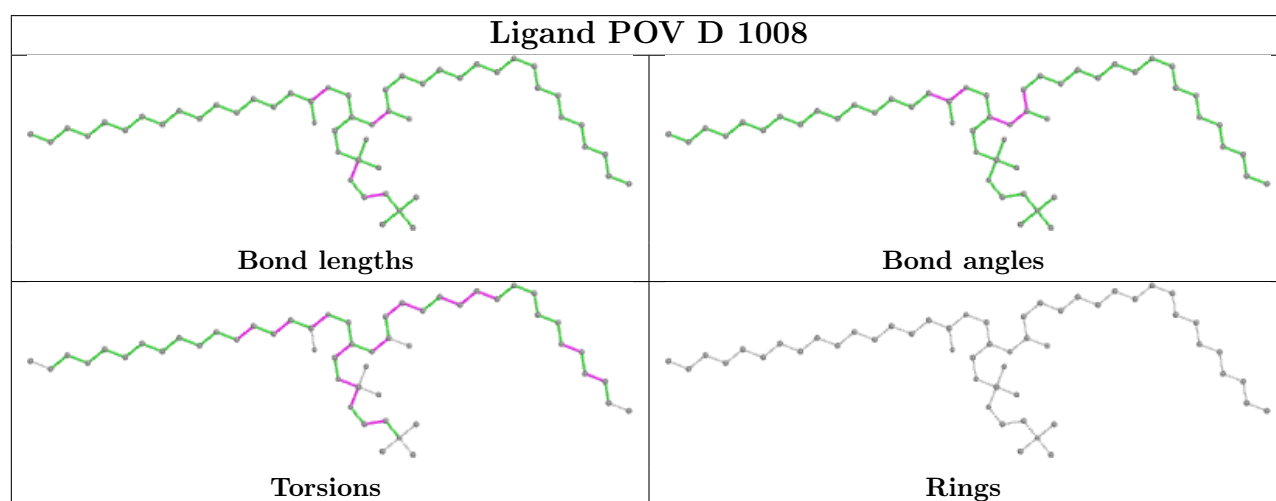
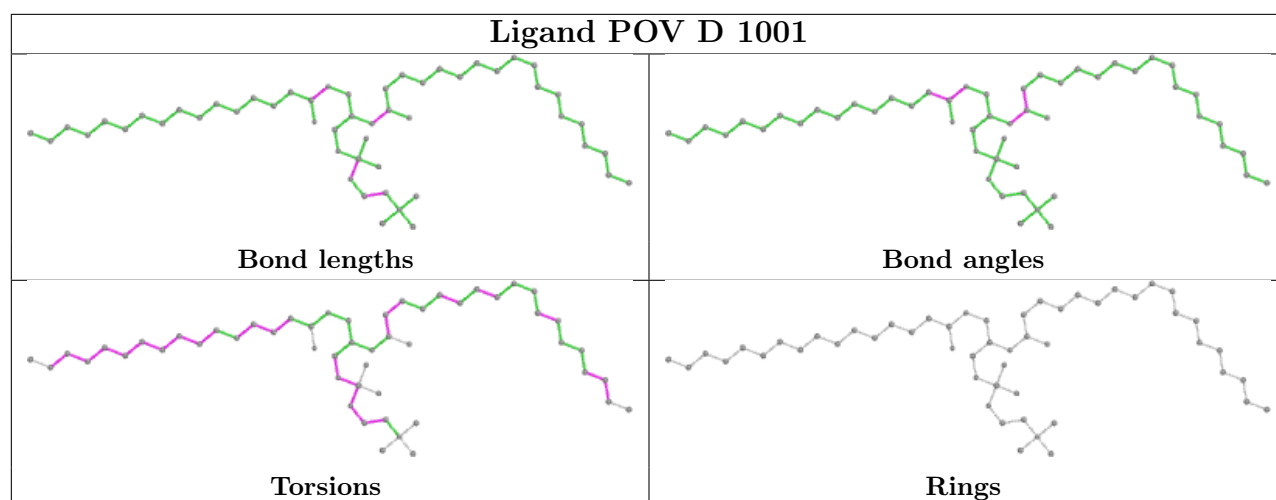


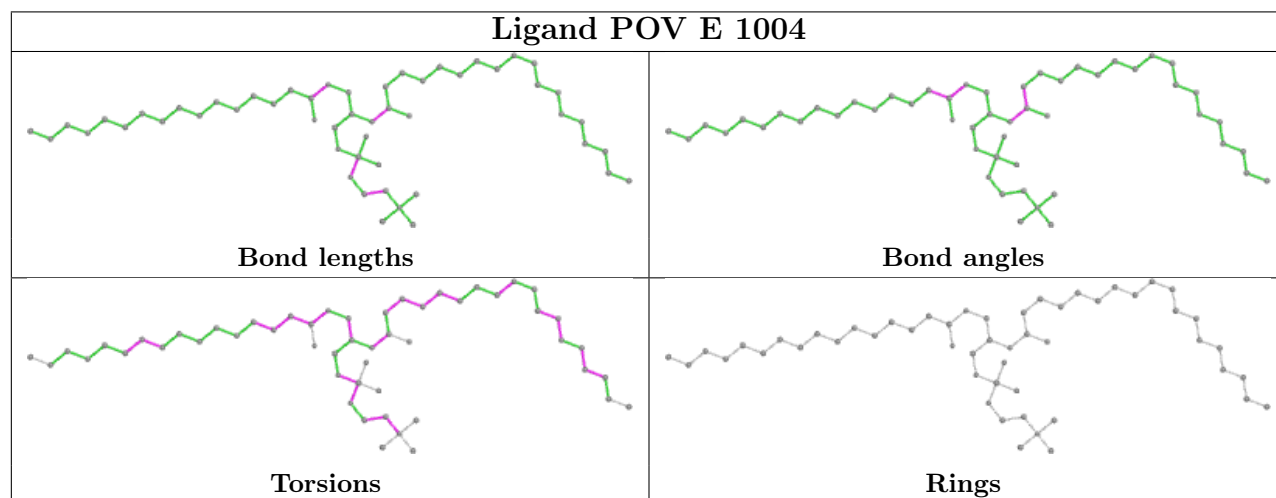
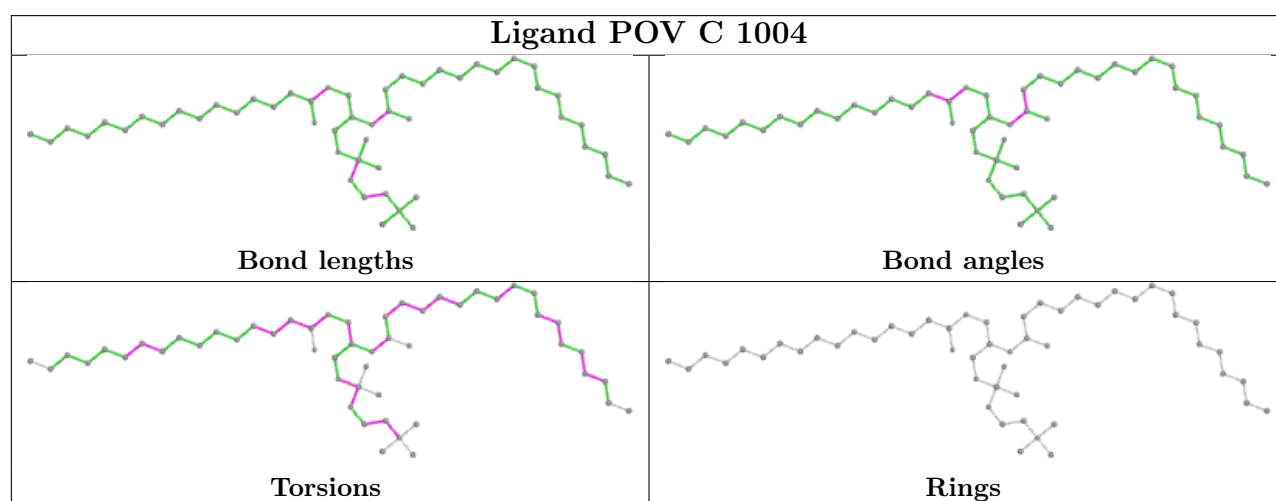
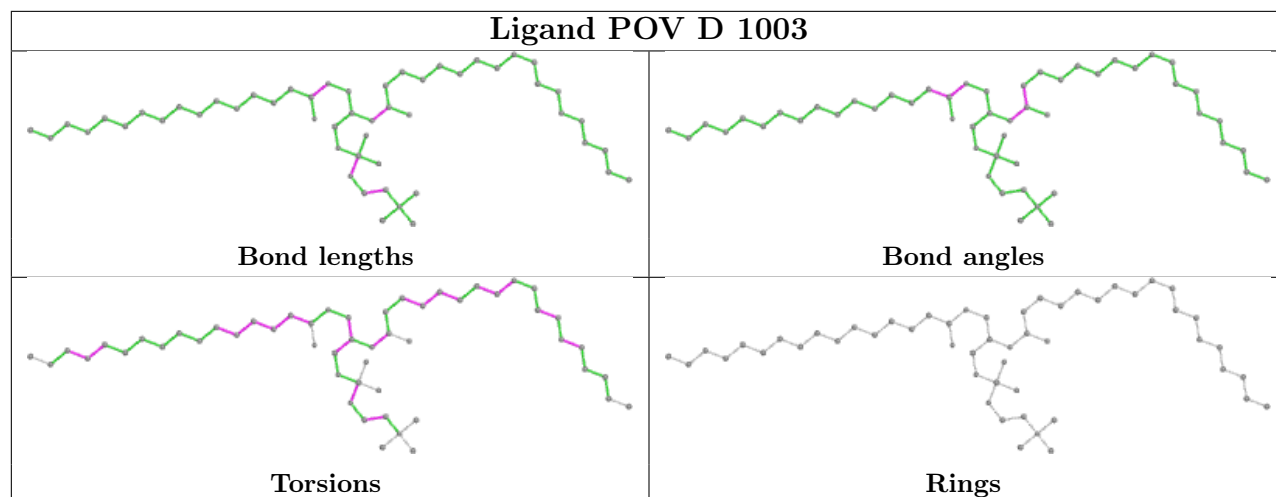


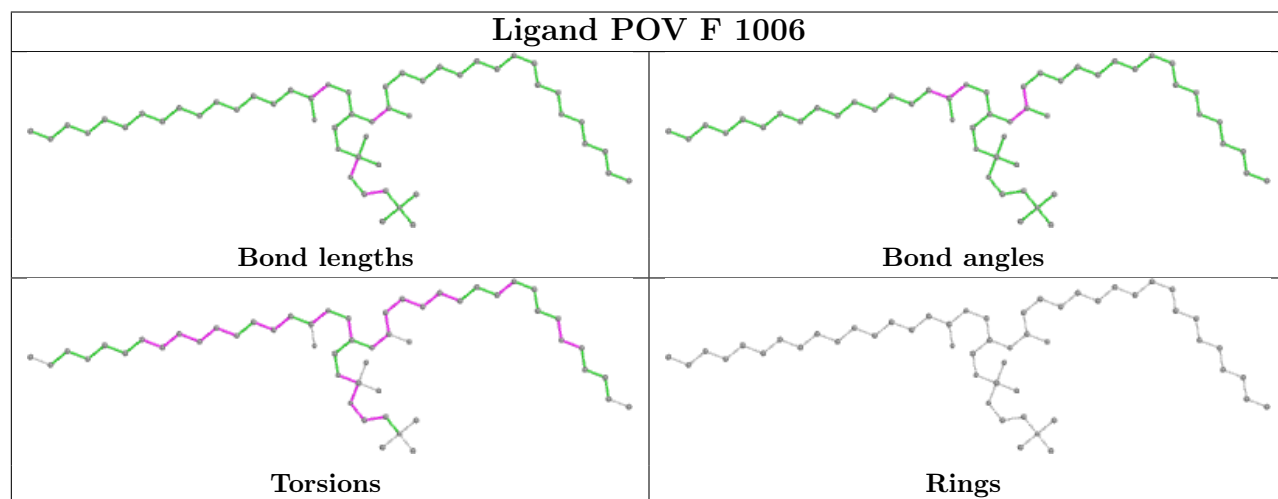
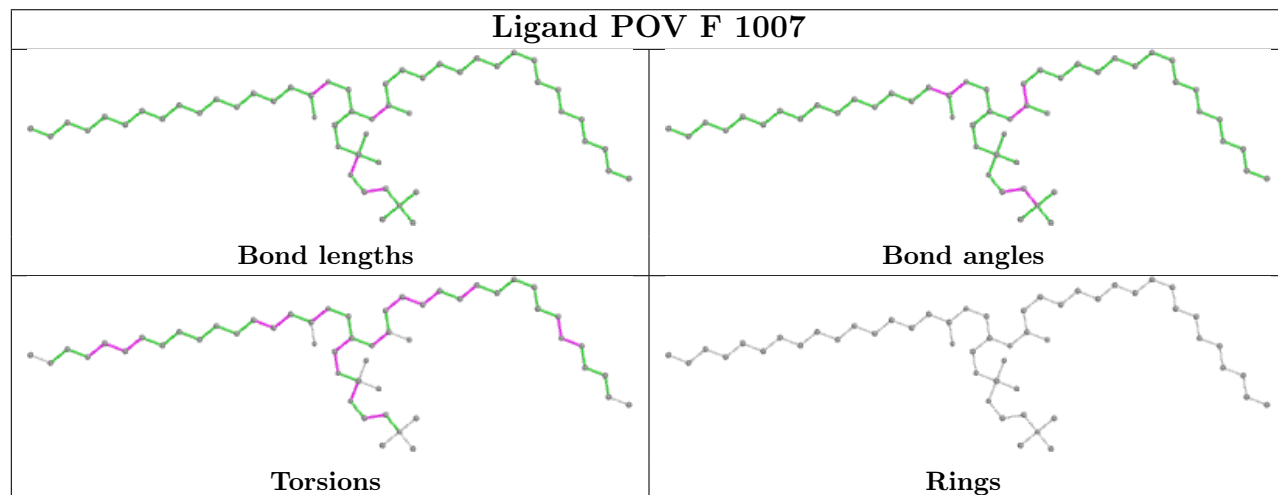
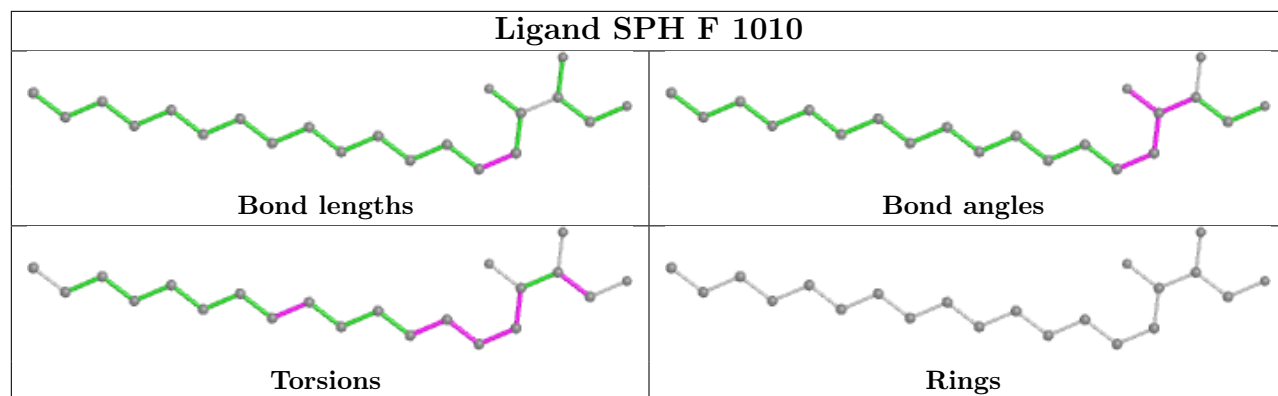


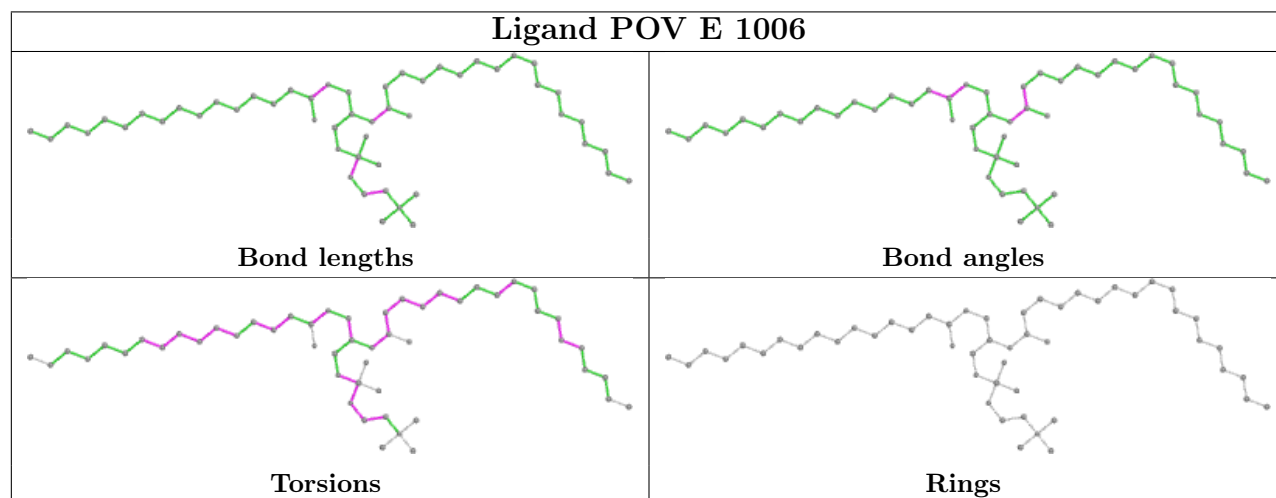
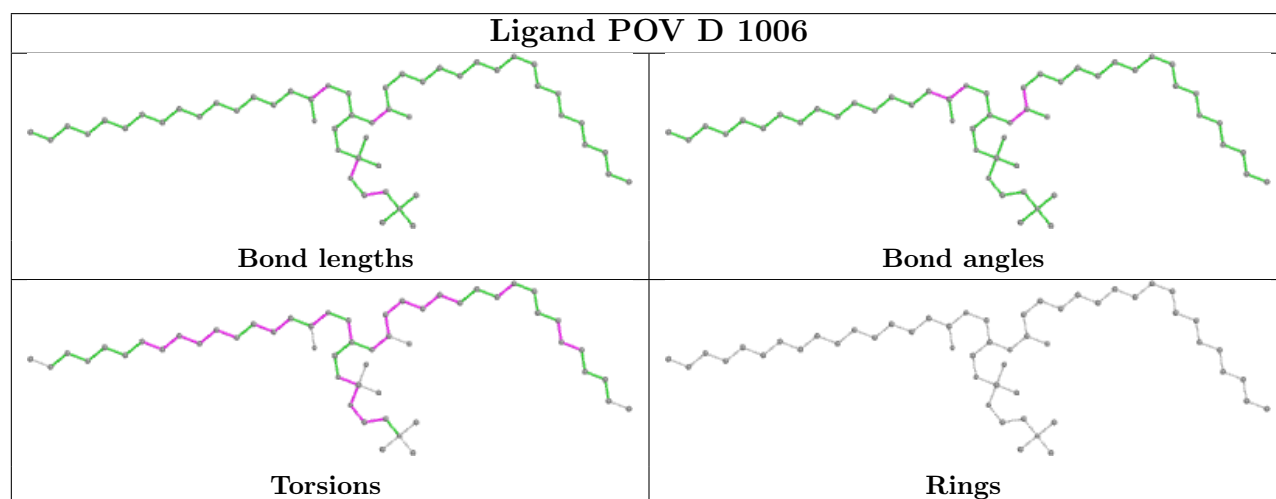
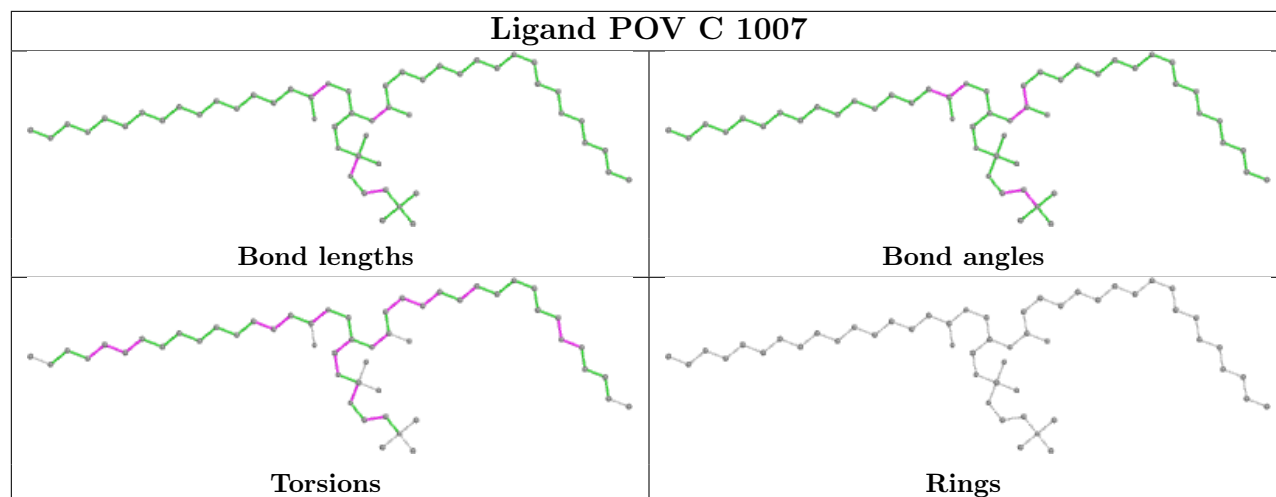


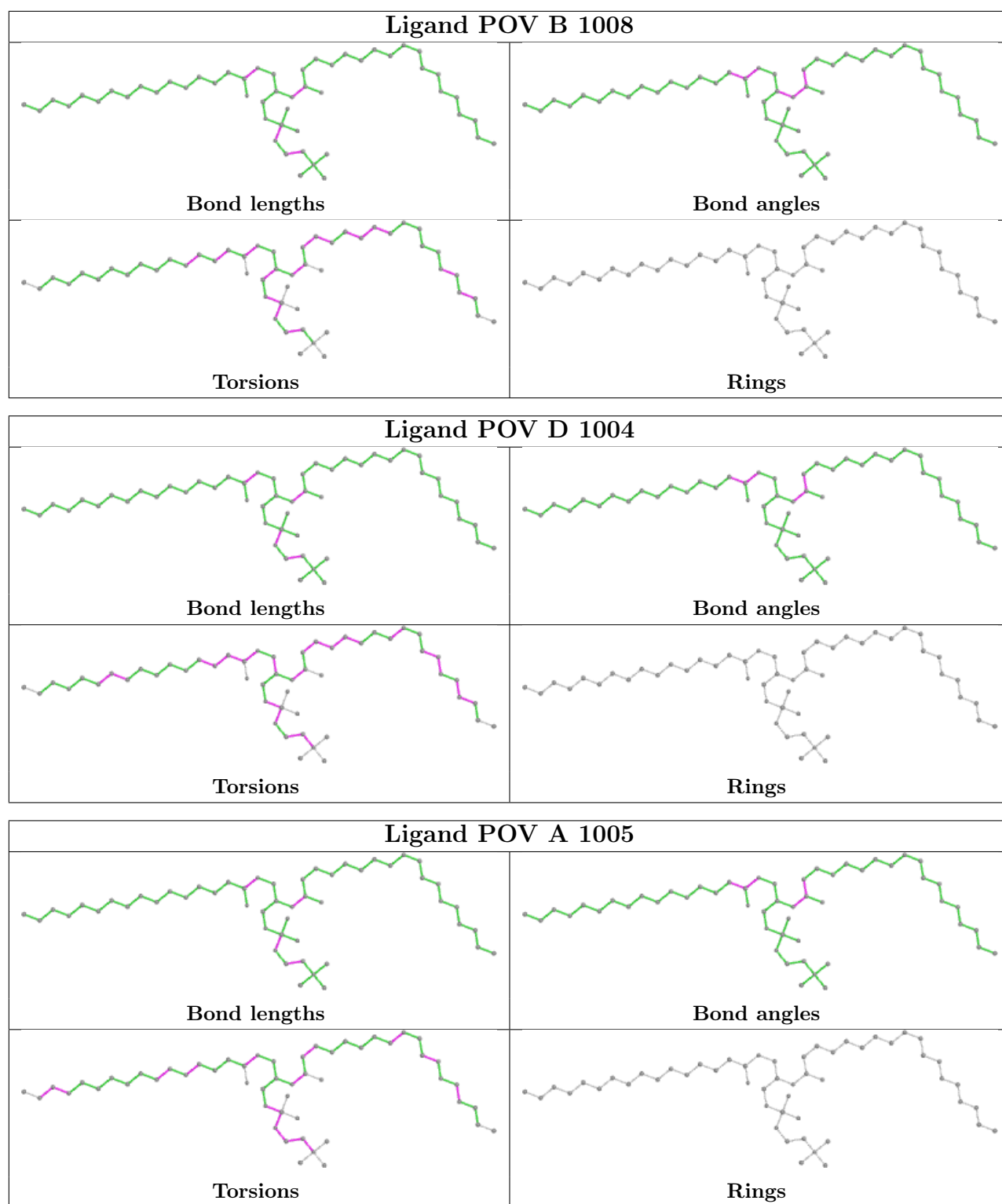












5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

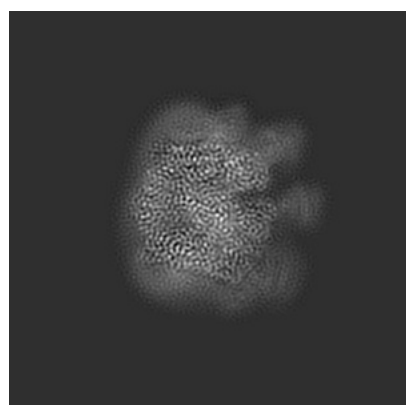
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-31986. These allow visual inspection of the internal detail of the map and identification of artifacts.

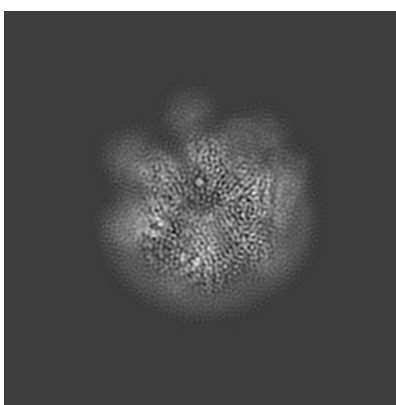
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

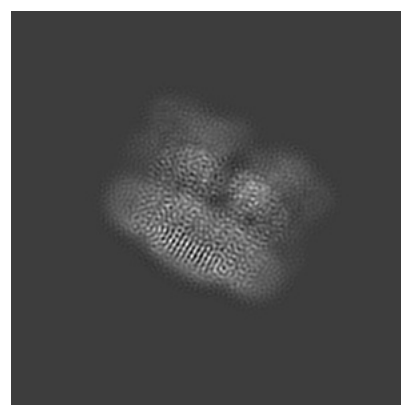
6.1.1 Primary map



X



Y

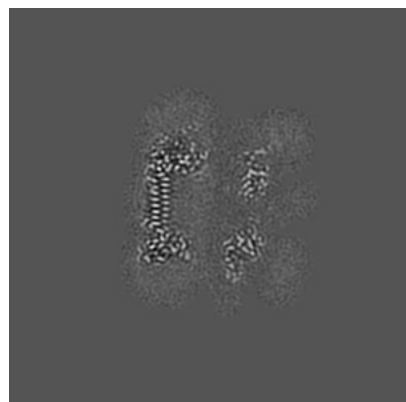


Z

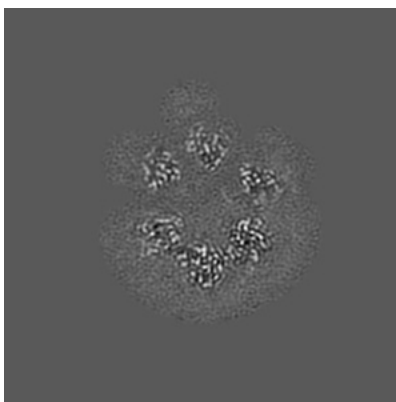
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

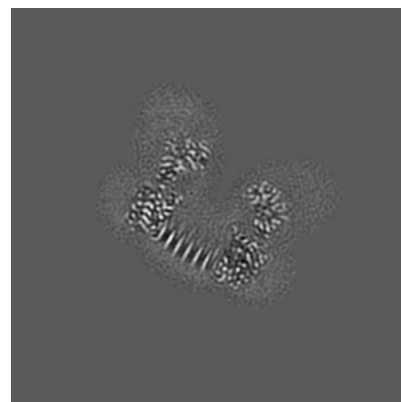
6.2.1 Primary map



X Index: 150



Y Index: 150

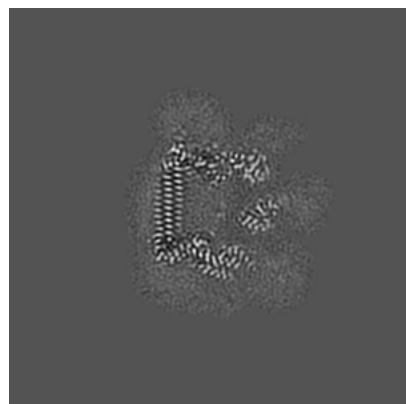


Z Index: 150

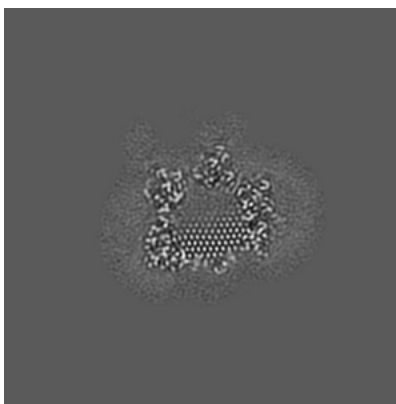
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

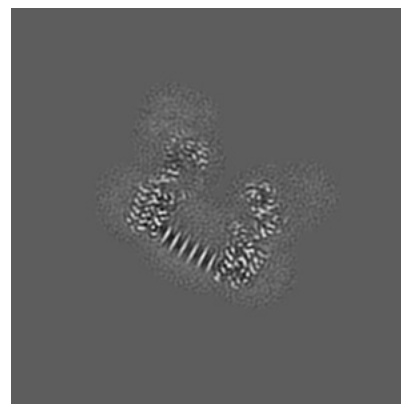
6.3.1 Primary map



X Index: 133



Y Index: 126

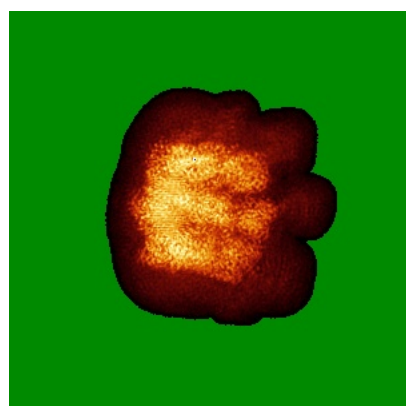


Z Index: 152

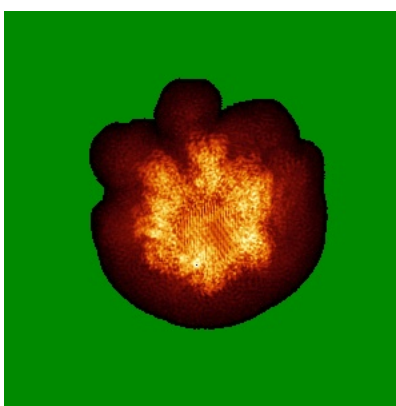
The images above show the largest variance slices of the map in three orthogonal directions.

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

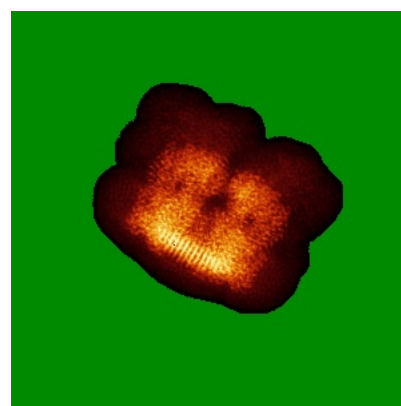
6.4.1 Primary map



X



Y

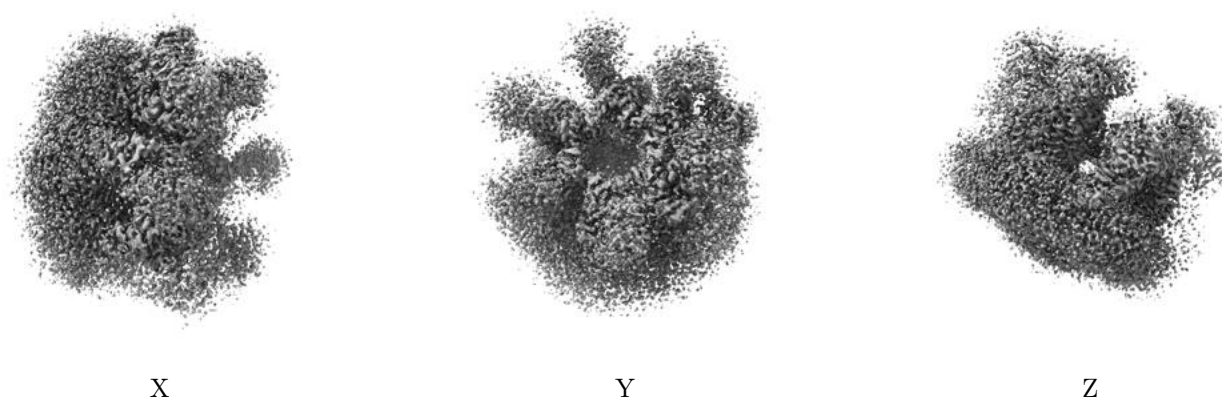


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.019. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

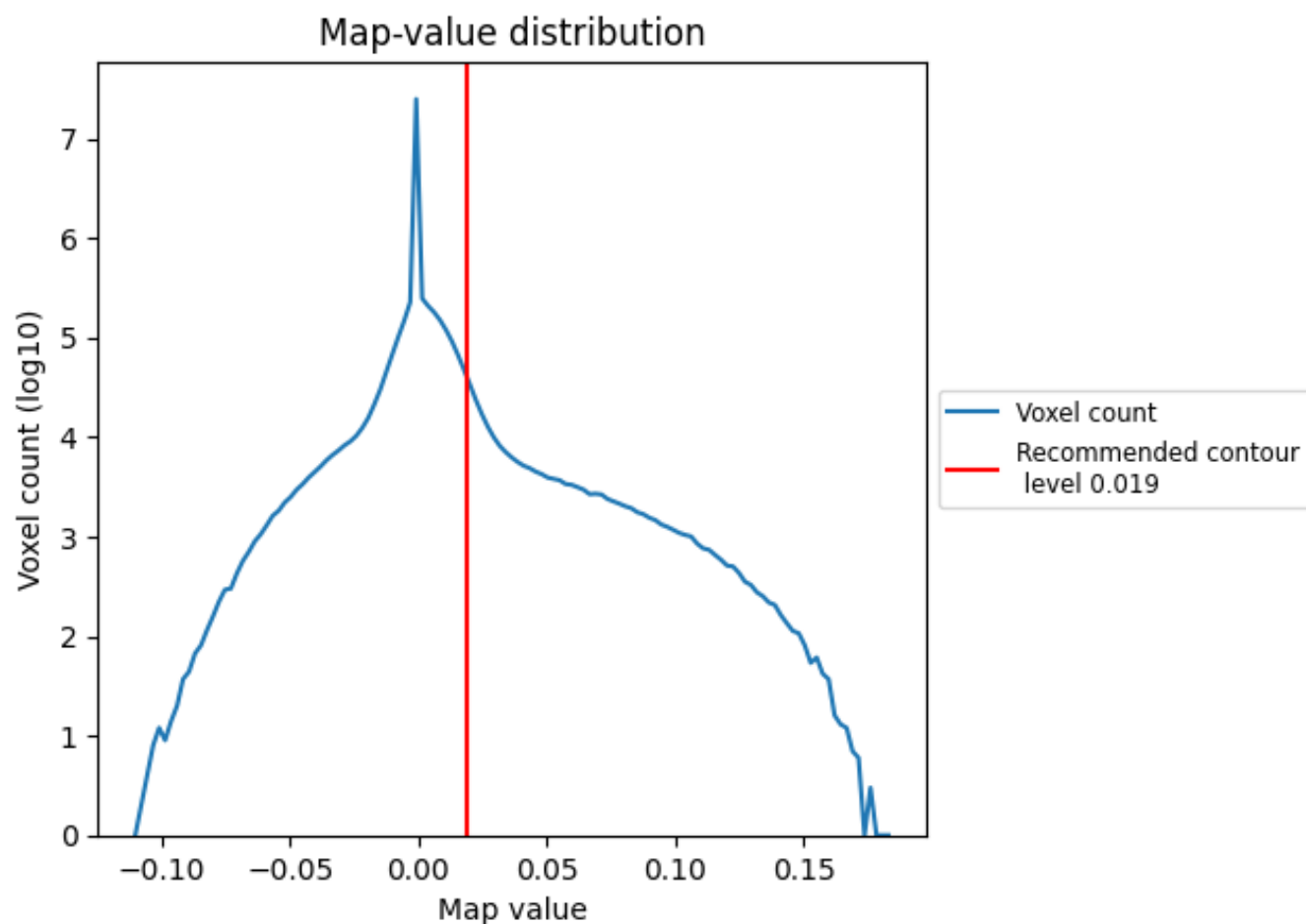
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

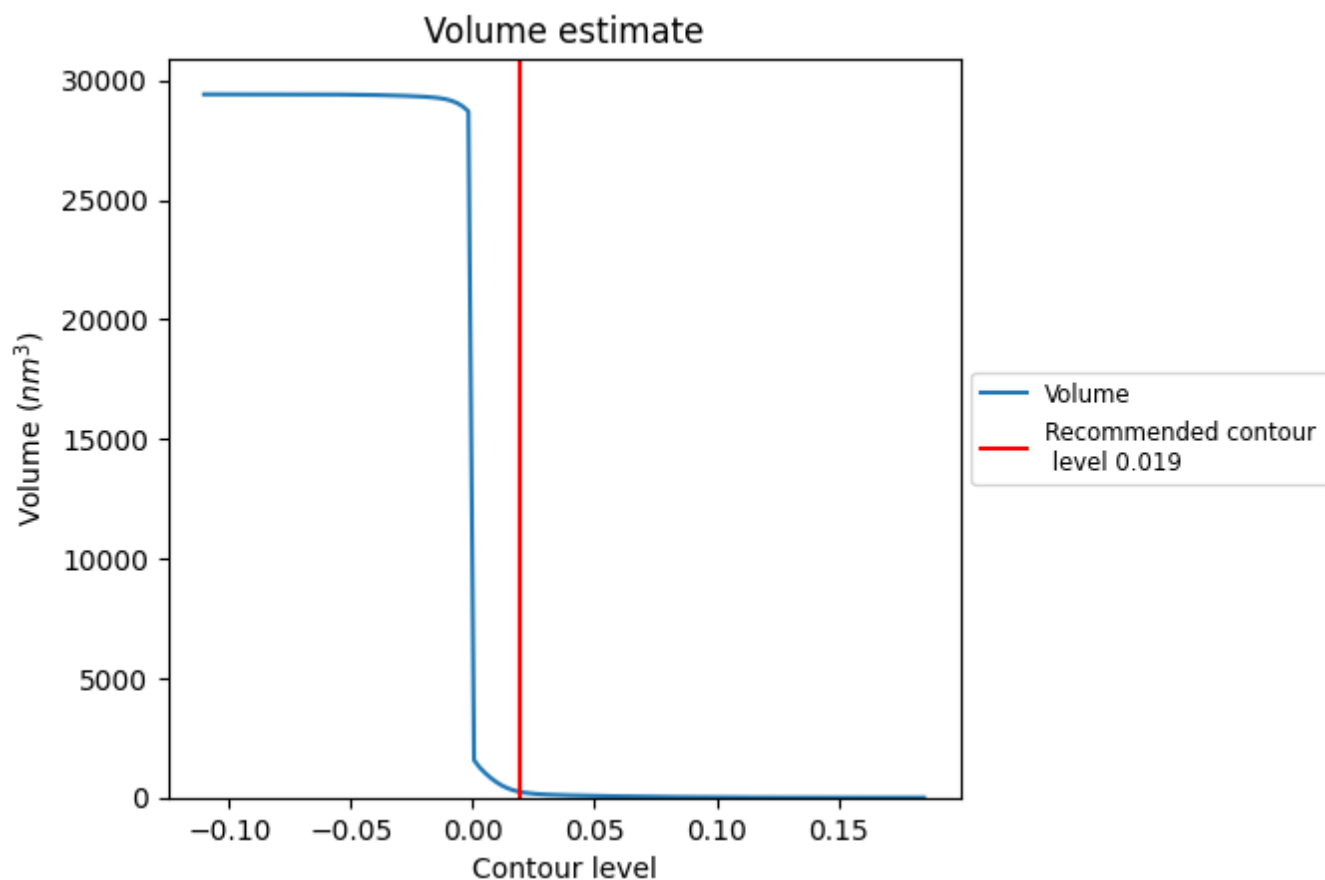
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

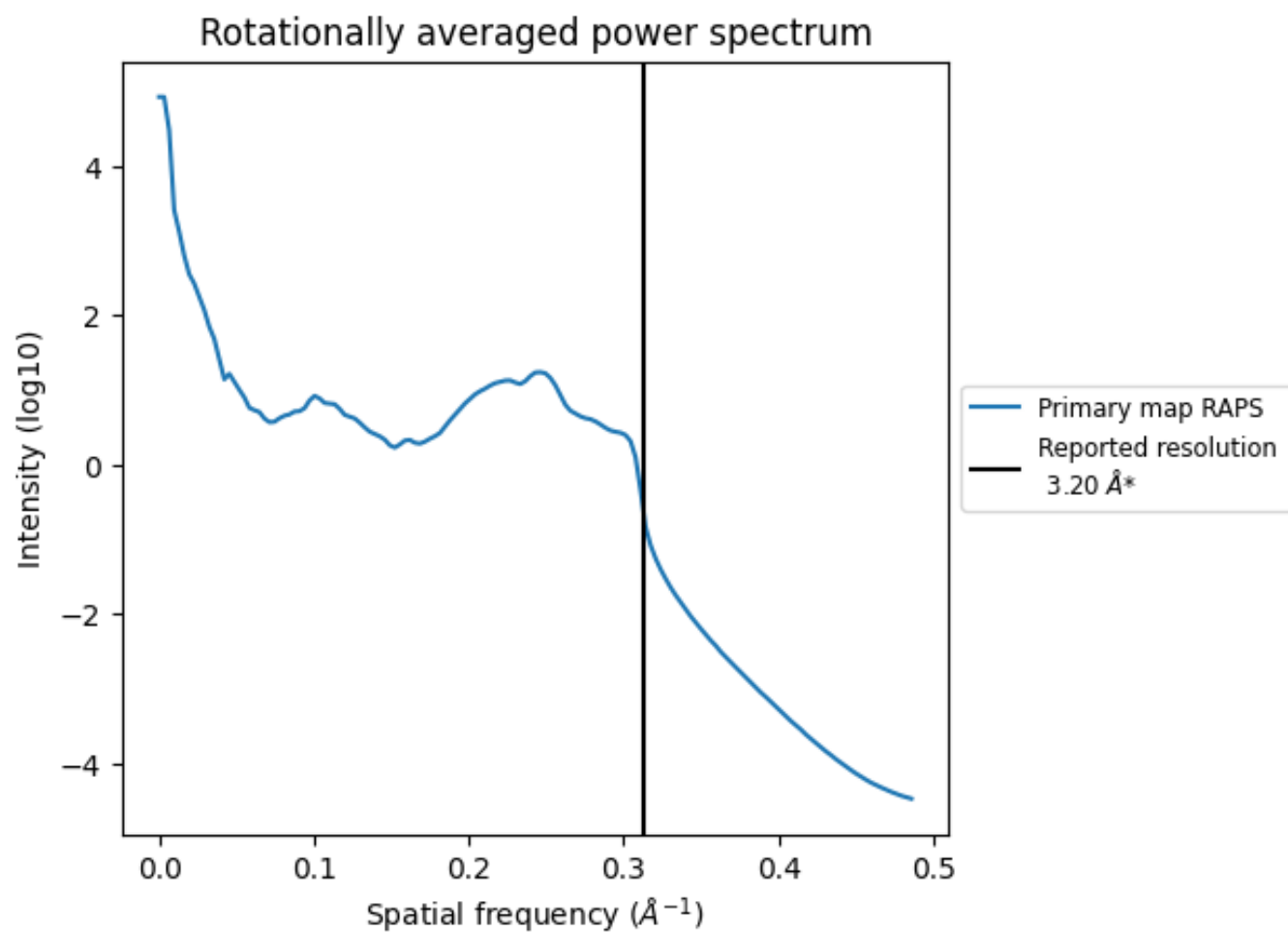
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 245 nm³; this corresponds to an approximate mass of 221 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.312 Å⁻¹

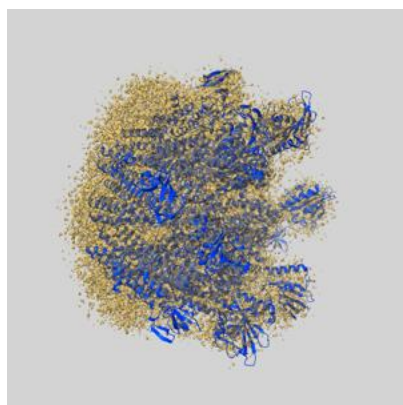
8 Fourier-Shell correlation ⓘ

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

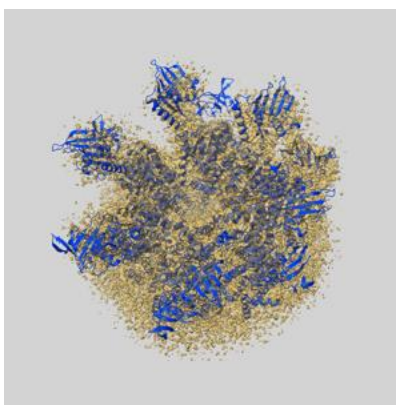
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-31986 and PDB model 7VH5. Per-residue inclusion information can be found in section [3](#) on page [7](#).

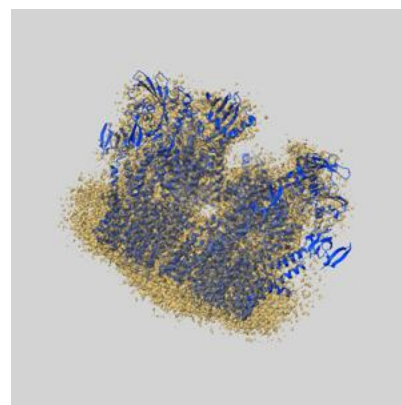
9.1 Map-model overlay [i](#)



X



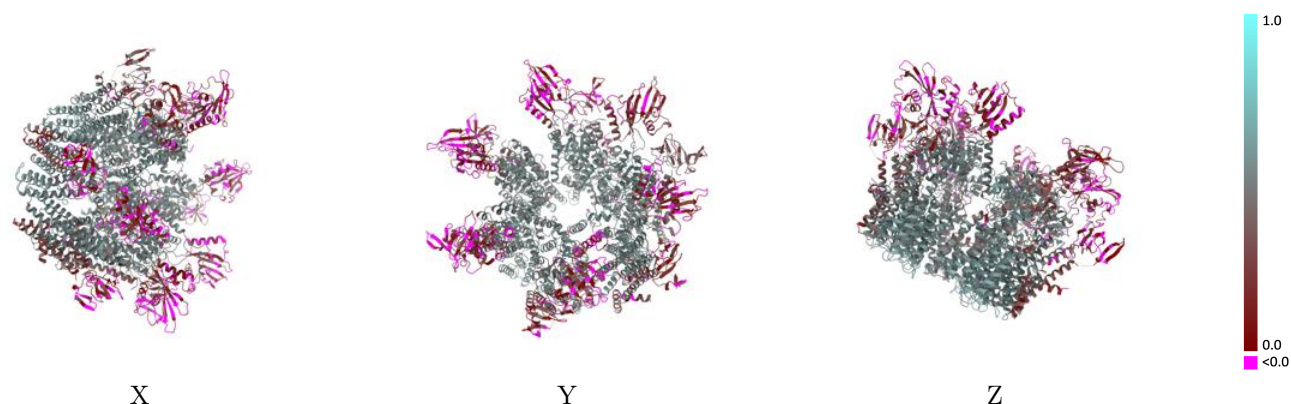
Y



Z

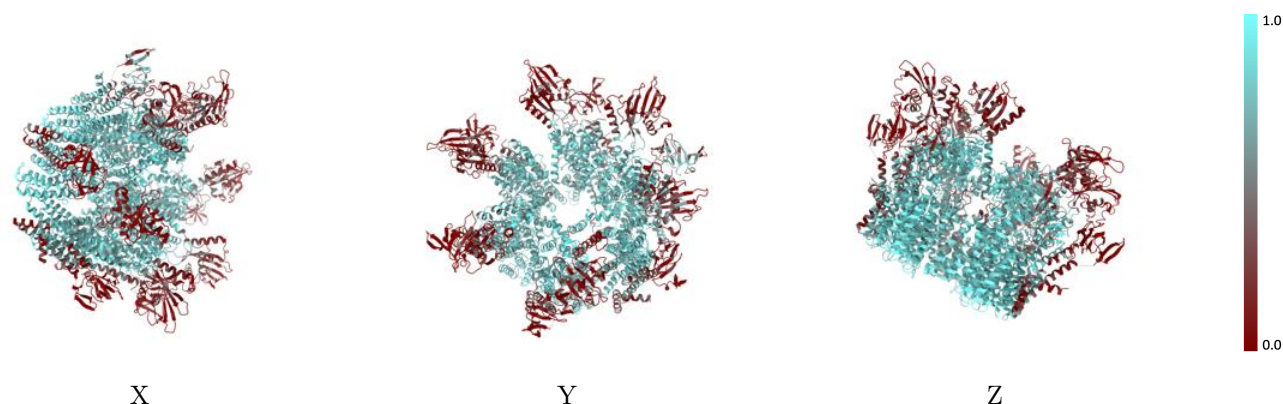
The images above show the 3D surface view of the map at the recommended contour level 0.019 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



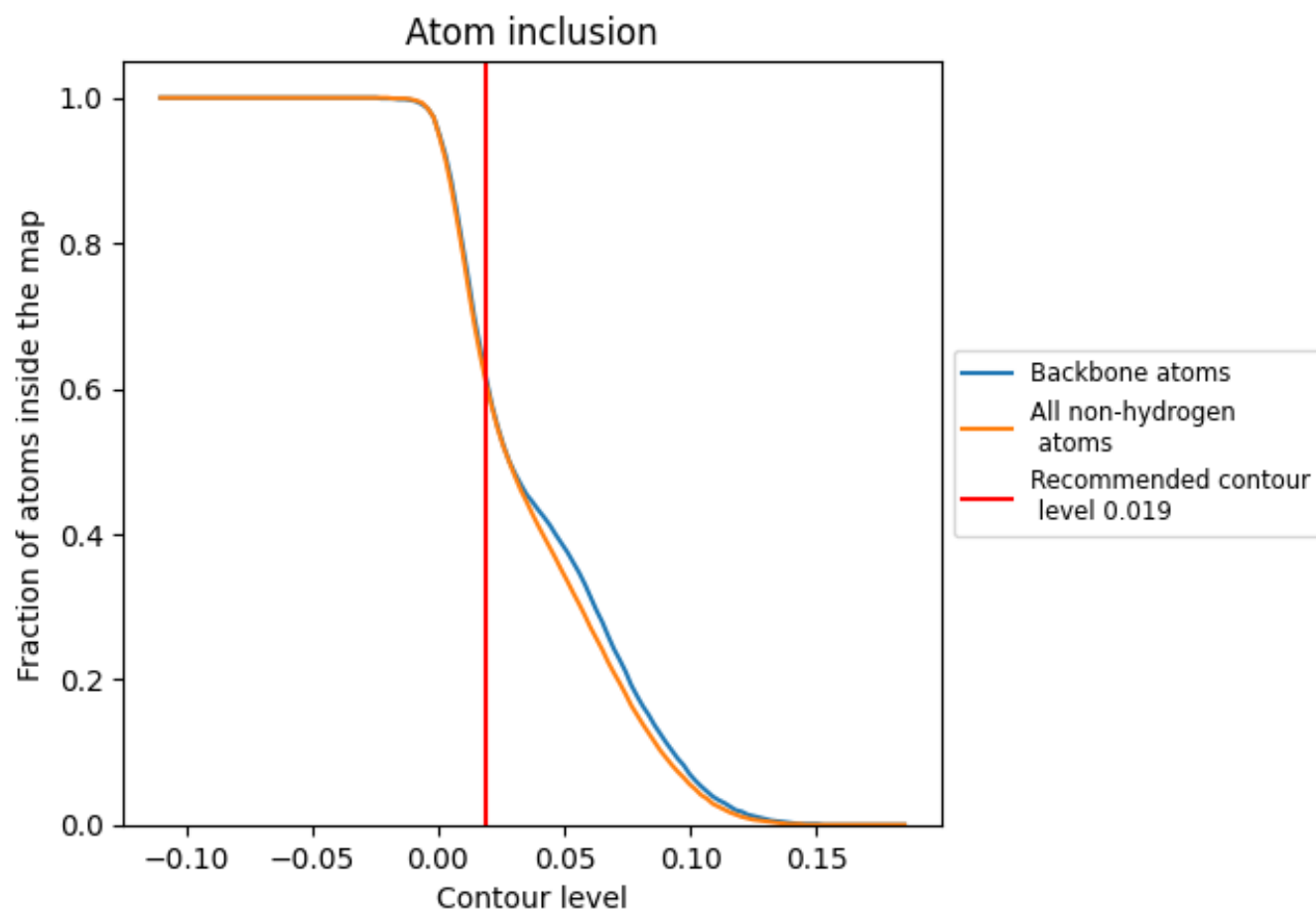
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.019).

9.4 Atom inclusion [i](#)



At the recommended contour level, 62% of all backbone atoms, 61% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.019) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.6080	<div></div> 0.4010
A	<div></div> 0.6890	<div></div> 0.4640
B	<div></div> 0.6190	<div></div> 0.4040
C	<div></div> 0.6010	<div></div> 0.3900
D	<div></div> 0.5840	<div></div> 0.3860
E	<div></div> 0.5790	<div></div> 0.3850
F	<div></div> 0.5760	<div></div> 0.3780

