



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 4, 2024 – 01:09 am GMT

PDB ID : 5K1I
Title : PDE4 crystal structure in complex with small molecule inhibitor
Authors : Segarra, V.; Hernandez, B.; Ferrer-Miralles, N.; Korndoerfer, I.; Aymami, J.
Deposited on : 2016-05-18
Resolution : 2.61 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467
Mogul : 1.8.4, CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.36
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

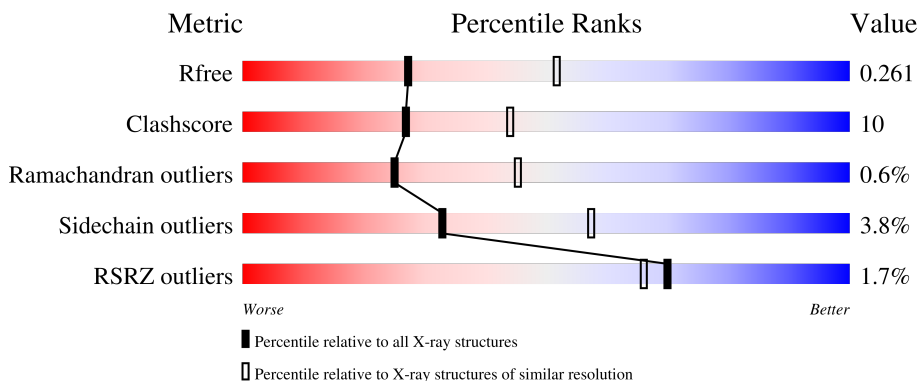
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.61 Å.

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



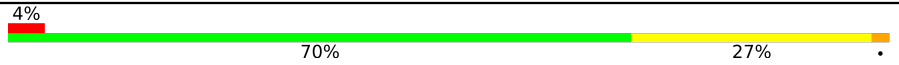


Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	3797 (2.64-2.60)
Clashscore	141614	4168 (2.64-2.60)
Ramachandran outliers	138981	4093 (2.64-2.60)
Sidechain outliers	138945	4093 (2.64-2.60)
RSRZ outliers	127900	3731 (2.64-2.60)

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

Mol	Chain	Length	Quality of chain
1	A	326	
1	B	326	
1	C	326	
1	D	326	
1	E	326	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	326	 4% 70% 27% •
1	G	326	 2% 77% 20% ••
1	H	326	 2% 76% 22% •

2 Entry composition

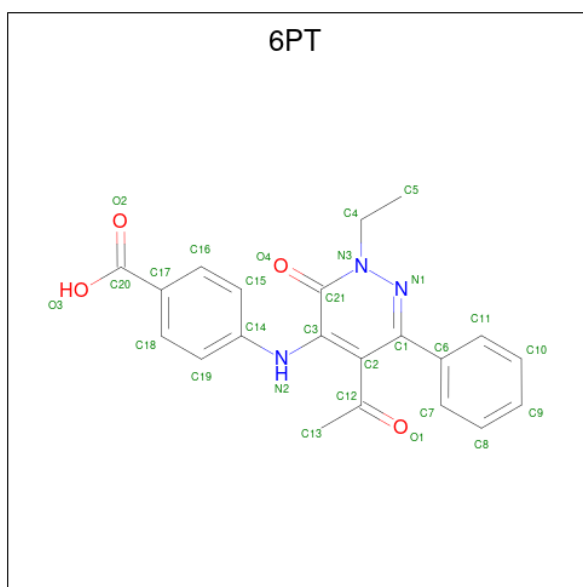
There are 5 unique types of molecules in this entry. The entry contains 21443 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called cAMP-specific 3',5'-cyclic phosphodiesterase 4D.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
1	A	322	Total 2613	C 1655	N 446	O 498	S 14	0	0	0
1	B	326	Total 2637	C 1668	N 450	O 505	S 14	0	0	0
1	C	321	Total 2608	C 1652	N 445	O 497	S 14	0	0	0
1	D	326	Total 2638	C 1668	N 450	O 506	S 14	0	0	0
1	E	321	Total 2608	C 1652	N 445	O 497	S 14	0	0	0
1	F	326	Total 2638	C 1668	N 450	O 506	S 14	0	0	0
1	G	322	Total 2613	C 1655	N 446	O 498	S 14	0	0	0
1	H	326	Total 2638	C 1668	N 450	O 506	S 14	0	0	0

- Molecule 2 is 4-[(5-acetyl-2-ethyl-3-oxo-6-phenyl-2,3-dihydropyridazin-4-yl)amino]benzoic acid (three-letter code: 6PT) (formula: C₂₁H₁₉N₃O₄).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	A	1	28	21	3	4	0	0
2	B	1	28	21	3	4	0	0
2	C	1	28	21	3	4	0	0
2	D	1	28	21	3	4	0	0
2	E	1	28	21	3	4	0	0
2	F	1	28	21	3	4	0	0
2	G	1	28	21	3	4	0	0
2	H	1	28	21	3	4	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
3	A	1	1	1	0	0
3	B	1	1	1	0	0
3	C	1	1	1	0	0
3	D	1	1	1	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	E	1	Total 1	Zn 1	0	0
3	F	1	Total 1	Zn 1	0	0
3	G	1	Total 1	Zn 1	0	0
3	H	1	Total 1	Zn 1	0	0

- Molecule 4 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total 1	Mg 1	0	0
4	B	1	Total 1	Mg 1	0	0
4	C	1	Total 1	Mg 1	0	0
4	D	1	Total 1	Mg 1	0	0
4	E	1	Total 1	Mg 1	0	0
4	F	1	Total 1	Mg 1	0	0
4	G	1	Total 1	Mg 1	0	0
4	H	1	Total 1	Mg 1	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	A	18	Total 18	O 18	0	0
5	B	35	Total 35	O 35	0	0
5	C	33	Total 33	O 33	0	0
5	D	21	Total 21	O 21	0	0
5	E	32	Total 32	O 32	0	0

Continued on next page...

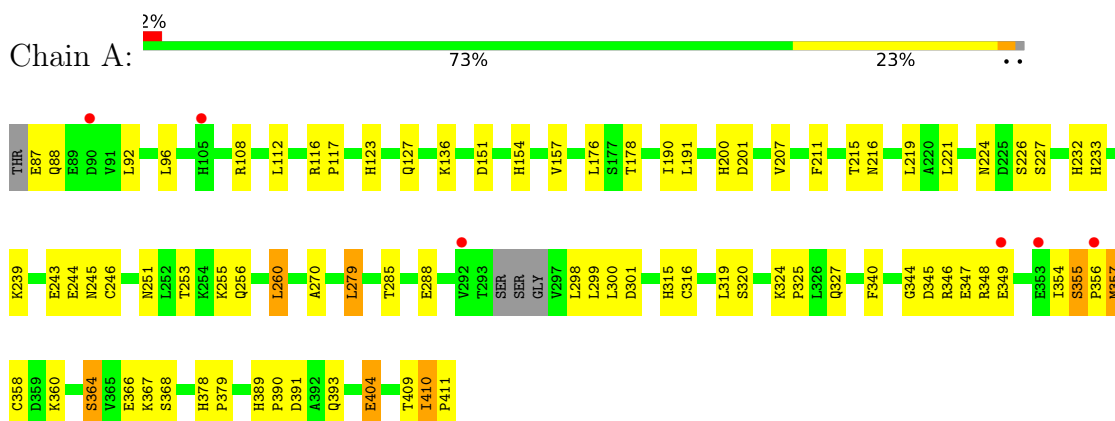
Continued from previous page...

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
5	F	15	Total 15	O 15	0	0
5	G	33	Total 33	O 33	0	0
5	H	23	Total 23	O 23	0	0

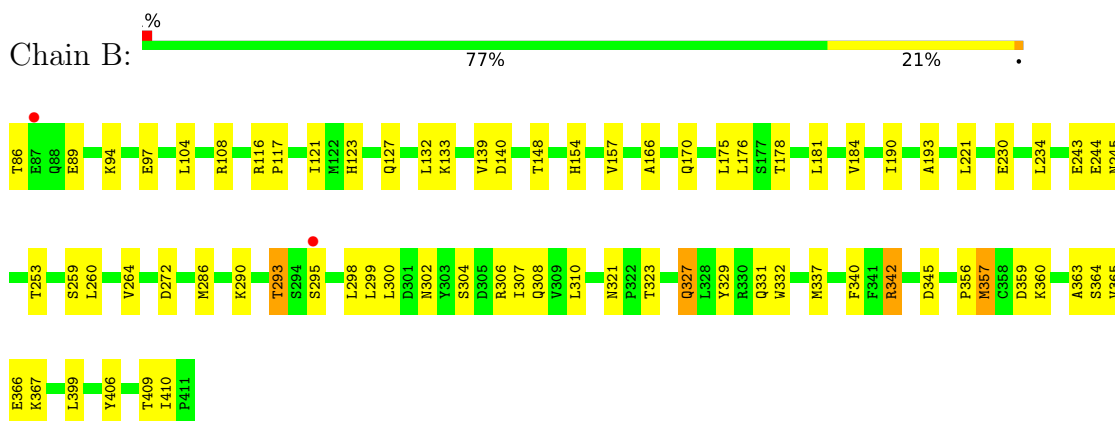
3 Residue-property plots [i](#)

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

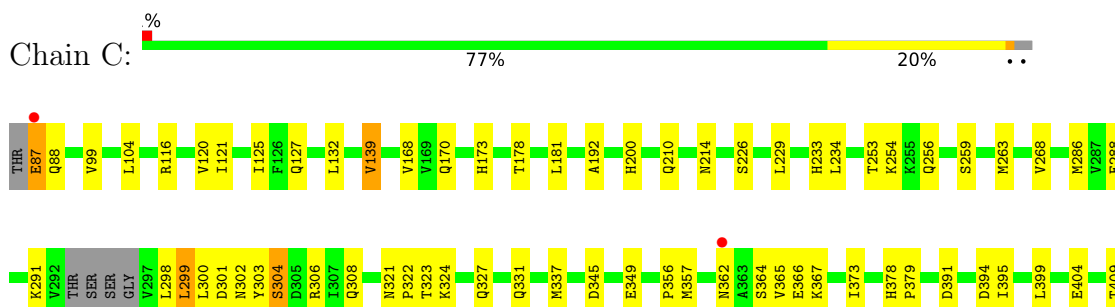
- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D



- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D

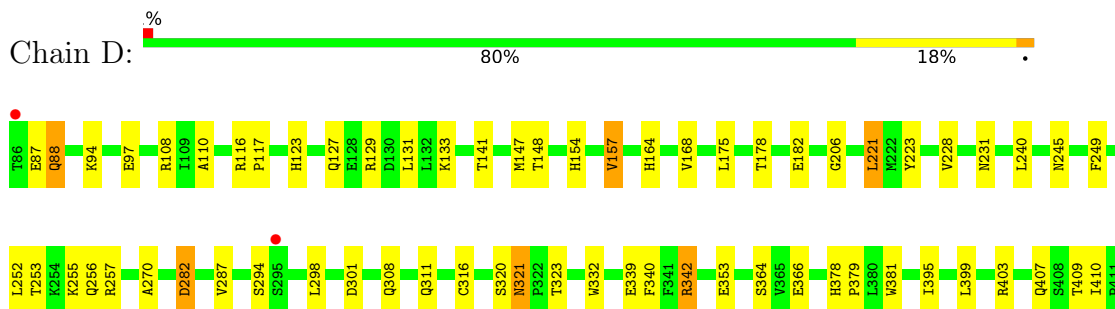


- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D

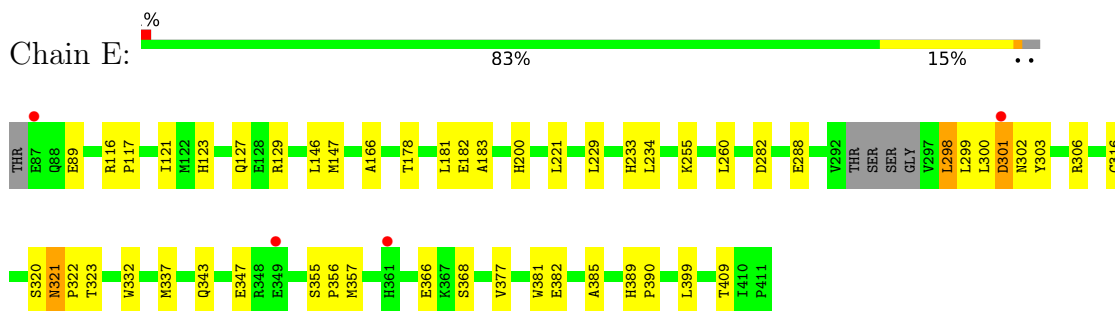


I410
P411

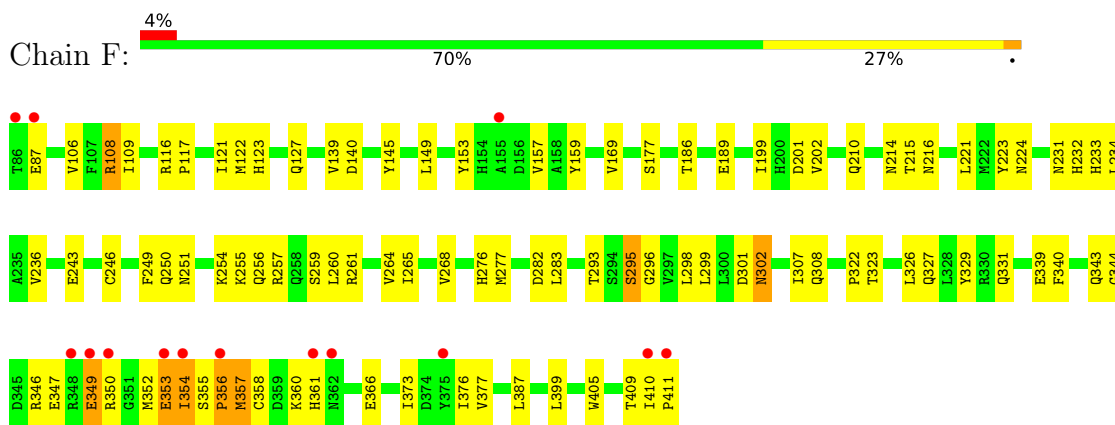
- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D



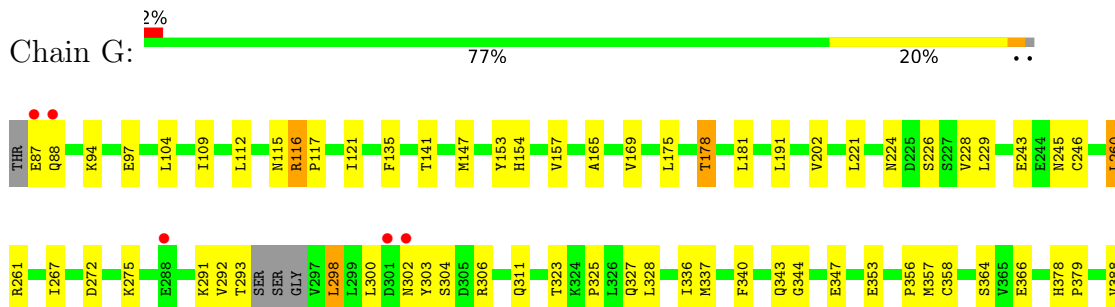
- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D



- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D

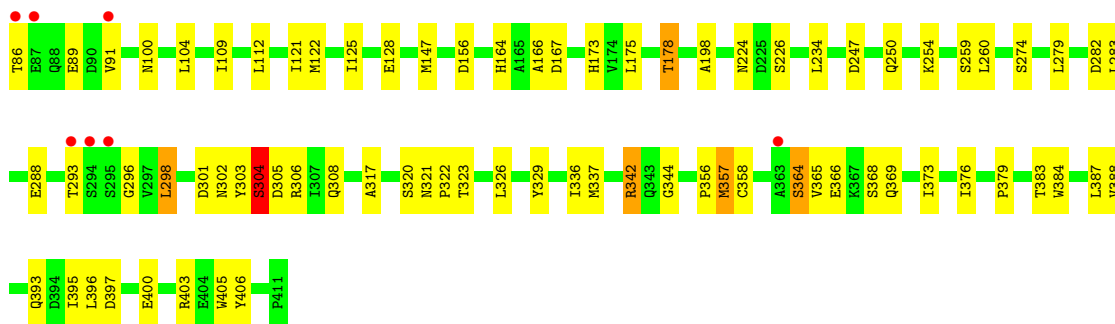
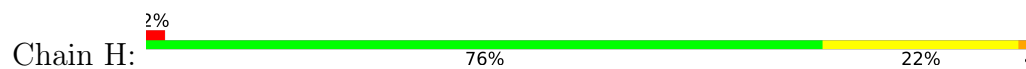


- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D





- Molecule 1: cAMP-specific 3',5'-cyclic phosphodiesterase 4D



4 Data and refinement statistics i

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α , β , γ	61.44Å 78.35Å 161.76Å 91.01° 92.79° 90.08°	Depositor
Resolution (Å)	25.00 – 2.61 24.98 – 2.61	Depositor EDS
% Data completeness (in resolution range)	94.8 (25.00-2.61) 94.8 (24.98-2.61)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	3.98 (at 2.60Å)	Xtrriage
Refinement program	REFMAC 5.2.0005	Depositor
R, R_{free}	0.191 , 0.258 0.197 , 0.261	Depositor DCC
R_{free} test set	4409 reflections (5.06%)	wwPDB-VP
Wilson B-factor (Å ²)	26.7	Xtrriage
Anisotropy	0.214	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.37 , 44.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	0.077 for h,-k,-l 0.069 for -h,k,-l 0.065 for -h,-k,l	Xtrriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	21443	wwPDB-VP
Average B, all atoms (Å ²)	30.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.95% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: 6PT, MG, ZN

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	0.56	0/2666	0.66	0/3621
1	B	0.62	0/2691	0.71	0/3656
1	C	0.61	0/2661	0.72	0/3614
1	D	0.61	0/2692	0.71	1/3658 (0.0%)
1	E	0.64	0/2661	0.74	1/3614 (0.0%)
1	F	0.54	0/2692	0.65	0/3658
1	G	0.60	0/2666	0.69	0/3621
1	H	0.61	0/2692	0.70	0/3658
All	All	0.60	0/21421	0.70	2/29100 (0.0%)

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	221	LEU	CA-CB-CG	-5.66	102.28	115.30
1	E	282	ASP	CB-CG-OD1	5.26	123.03	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts i

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	2613	0	2565	56	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	B	2637	0	2589	54	0
1	C	2608	0	2563	50	0
1	D	2638	0	2591	47	0
1	E	2608	0	2563	38	0
1	F	2638	0	2591	82	0
1	G	2613	0	2565	48	0
1	H	2638	0	2591	49	0
2	A	28	0	0	1	0
2	B	28	0	0	3	0
2	C	28	0	0	1	0
2	D	28	0	0	2	0
2	E	28	0	0	1	0
2	F	28	0	0	3	0
2	G	28	0	0	4	0
2	H	28	0	0	1	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	1	0	0	0	0
3	H	1	0	0	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
4	E	1	0	0	0	0
4	F	1	0	0	0	0
4	G	1	0	0	0	0
4	H	1	0	0	0	0
5	A	18	0	0	6	0
5	B	35	0	0	3	0
5	C	33	0	0	3	0
5	D	21	0	0	2	0
5	E	32	0	0	3	0
5	F	15	0	0	11	0
5	G	33	0	0	0	0
5	H	23	0	0	4	0
All	All	21443	0	20618	425	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (425) 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:F:301:ASP:HB3	5:F:1109:HOH:O	1.18	1.27
1:C:411:PRO:HB3	5:C:1125:HOH:O	1.35	1.26
1:F:358:CYS:HB3	5:F:1103:HOH:O	1.02	1.17
1:F:331:GLN:HB3	5:F:1104:HOH:O	1.40	1.16
1:F:108:ARG:CG	1:F:108:ARG:HH11	1.57	1.14
1:H:337:MET:HE2	5:H:1106:HOH:O	1.45	1.13
1:A:357:MET:HE3	1:A:357:MET:HA	1.13	1.10
1:F:108:ARG:HH11	1:F:108:ARG:HG2	0.96	1.09
1:H:175:LEU:O	1:H:178:THR:HG22	1.49	1.09
1:E:337:MET:CE	5:E:1106:HOH:O	2.03	1.04
1:B:293:THR:HG23	1:B:299:LEU:HD21	1.37	1.04
1:A:358:CYS:HA	5:A:1107:HOH:O	1.60	1.01
1:H:86:THR:HB	1:H:89:GLU:OE1	1.61	1.00
1:B:357:MET:HE3	1:B:357:MET:HA	1.43	1.00
1:F:108:ARG:HG2	1:F:108:ARG:NH1	1.72	0.99
1:G:175:LEU:O	1:G:178:THR:HG22	1.69	0.93
1:D:342:ARG:CG	1:D:342:ARG:HH11	1.82	0.90
1:D:253:THR:OG1	1:D:256:GLN:HG3	1.70	0.90
1:D:342:ARG:HH11	1:D:342:ARG:HG2	1.37	0.89
1:E:306:ARG:HG2	1:E:306:ARG:HH11	1.35	0.89
1:D:407:GLN:HA	1:D:410:ILE:HD12	1.54	0.88
1:A:357:MET:HA	1:A:357:MET:CE	2.01	0.88
1:C:87:GLU:HG3	1:C:88:GLN:N	1.89	0.86
1:B:356:PRO:O	1:B:357:MET:HB2	1.74	0.85
1:F:123:HIS:CE1	1:F:127:GLN:HE21	1.92	0.85
1:H:337:MET:CE	5:H:1106:HOH:O	2.09	0.83
1:B:340:PHE:HZ	2:B:1001:6PT:C13	1.92	0.82
1:G:356:PRO:O	1:G:357:MET:HB2	1.80	0.80
1:B:193:ALA:HB2	1:B:310:LEU:HD22	1.63	0.79
1:B:357:MET:HA	1:B:357:MET:CE	2.11	0.79
1:F:373:ILE:HA	1:F:377:VAL:HB	1.65	0.79
1:E:306:ARG:HG2	1:E:306:ARG:NH1	1.98	0.77
1:H:125:ILE:HD13	1:H:173:HIS:HB2	1.67	0.76
1:C:324:LYS:NZ	5:C:1101:HOH:O	2.17	0.76
1:F:123:HIS:HE1	1:F:127:GLN:HE21	1.32	0.76
1:F:282:ASP:HB3	1:F:308:GLN:NE2	2.01	0.76
1:E:337:MET:HE1	5:E:1106:HOH:O	1.71	0.76
1:E:234:LEU:HB3	1:F:224:ASN:OD1	1.86	0.75
1:C:378:HIS:HB3	1:C:379:PRO:HD3	1.68	0.74
1:B:410:ILE:O	5:B:1101:HOH:O	2.04	0.74

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:340:PHE:HB3	5:A:1107:HOH:O	1.86	0.74
1:C:356:PRO:O	1:C:357:MET:HB2	1.86	0.74
1:F:356:PRO:O	1:F:357:MET:HB2	1.86	0.74
1:D:342:ARG:HG2	1:D:342:ARG:NH1	2.00	0.73
1:D:116:ARG:N	1:D:117:PRO:CD	2.51	0.73
1:H:393:GLN:NE2	1:H:397:ASP:OD1	2.21	0.73
1:B:86:THR:HB	1:B:89:GLU:OE1	1.88	0.72
1:B:175:LEU:O	1:B:178:THR:HG22	1.90	0.72
1:F:87:GLU:O	1:F:87:GLU:HG2	1.88	0.72
1:E:298:LEU:HD13	1:E:300:LEU:HD11	1.72	0.72
1:E:337:MET:HE3	5:E:1106:HOH:O	1.73	0.71
1:F:108:ARG:CG	1:F:108:ARG:NH1	2.29	0.71
1:G:104:LEU:HD11	1:G:109:ILE:HD11	1.74	0.70
1:D:94:LYS:O	1:D:97:GLU:HB2	1.93	0.69
1:A:357:MET:HE3	1:A:357:MET:CA	2.08	0.69
1:B:340:PHE:CZ	2:B:1001:6PT:C13	2.75	0.69
1:A:345:ASP:OD1	1:A:360:LYS:HE2	1.93	0.69
1:F:327:GLN:O	1:F:331:GLN:HG3	1.93	0.68
1:G:323:THR:HB	1:G:395:ILE:HG23	1.75	0.68
1:A:123:HIS:CE1	1:A:127:GLN:HE21	2.12	0.68
1:B:364:SER:OG	1:B:367:LYS:HB2	1.94	0.68
1:C:373:ILE:HG23	1:C:399:LEU:HD11	1.76	0.67
1:F:355:SER:HB2	1:F:358:CYS:SG	2.34	0.67
1:D:407:GLN:HA	1:D:410:ILE:CD1	2.25	0.67
1:C:132:LEU:CD2	1:C:139:VAL:HG23	2.24	0.66
1:G:366:GLU:OE2	1:G:366:GLU:N	2.25	0.66
1:G:298:LEU:HD13	1:G:300:LEU:HD21	1.77	0.65
1:D:116:ARG:CZ	1:D:147:MET:HE2	2.27	0.65
1:G:94:LYS:O	1:G:97:GLU:HB2	1.96	0.65
1:H:121:ILE:HD12	1:H:166:ALA:HB1	1.78	0.65
1:C:345:ASP:O	1:C:349:GLU:HG2	1.96	0.65
1:B:366:GLU:HG2	1:B:409:THR:OG1	1.97	0.65
1:G:154:HIS:HB2	1:G:157:VAL:HG13	1.77	0.64
1:B:293:THR:CG2	1:B:299:LEU:HD21	2.23	0.64
1:C:178:THR:HG22	1:C:181:LEU:HD12	1.80	0.64
1:F:327:GLN:HB3	5:F:1115:HOH:O	1.97	0.64
1:C:104:LEU:HD22	1:C:170:GLN:HG3	1.79	0.64
1:D:175:LEU:O	1:D:178:THR:HG22	1.98	0.64
2:D:1001:6PT:C12	2:D:1001:6PT:C15	2.75	0.64
1:G:243:GLU:O	1:G:246:CYS:HB2	1.98	0.63
1:A:136:LYS:O	1:A:251:ASN:ND2	2.31	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:292:VAL:HG23	1:G:292:VAL:O	1.98	0.63
1:D:123:HIS:CE1	1:D:127:GLN:HE21	2.16	0.62
1:E:321:ASN:HB3	1:E:332:TRP:CD1	2.33	0.62
1:B:359:ASP:O	1:B:363:ALA:HB2	1.98	0.62
1:B:342:ARG:HH11	1:B:342:ARG:CG	2.13	0.62
1:C:286:MET:HE2	1:C:308:GLN:HB2	1.82	0.62
1:F:326:LEU:HD21	1:F:405:TRP:CD2	2.35	0.62
1:H:298:LEU:HD11	1:H:387:LEU:HD11	1.80	0.62
1:C:366:GLU:HG2	1:C:409:THR:OG1	1.99	0.62
1:B:123:HIS:CE1	1:B:127:GLN:HE21	2.19	0.61
1:F:302:ASN:H	1:F:302:ASN:ND2	1.98	0.61
1:G:141:THR:OG1	1:G:245:ASN:ND2	2.33	0.61
1:D:366:GLU:HG2	1:D:409:THR:OG1	2.01	0.61
1:H:282:ASP:HB3	1:H:308:GLN:NE2	2.16	0.61
2:H:1001:6PT:C15	2:H:1001:6PT:C12	2.78	0.61
1:B:104:LEU:HD22	1:B:170:GLN:HG3	1.83	0.61
1:F:340:PHE:HZ	2:F:1001:6PT:C13	2.14	0.61
1:B:345:ASP:OD1	1:B:360:LYS:HE2	2.00	0.60
1:C:356:PRO:O	1:C:357:MET:CB	2.47	0.60
1:F:327:GLN:CB	5:F:1115:HOH:O	2.50	0.60
1:A:301:ASP:HB3	5:A:1113:HOH:O	1.99	0.60
1:F:277:MET:HG2	5:F:1105:HOH:O	2.01	0.60
1:B:356:PRO:O	1:B:357:MET:CB	2.47	0.60
1:D:116:ARG:N	1:D:117:PRO:HD2	2.16	0.60
1:B:260:LEU:O	1:B:264:VAL:HG23	2.01	0.59
1:D:321:ASN:HB3	1:D:332:TRP:CD1	2.37	0.59
2:A:1001:6PT:C12	2:A:1001:6PT:C15	2.81	0.59
1:B:123:HIS:HE1	1:B:127:GLN:HE21	1.50	0.59
1:H:322:PRO:HB3	1:H:329:TYR:CZ	2.38	0.59
1:H:125:ILE:HD13	1:H:173:HIS:CB	2.32	0.59
1:H:303:TYR:O	1:H:305:ASP:N	2.35	0.59
1:F:366:GLU:HG2	1:F:409:THR:OG1	2.03	0.59
1:F:301:ASP:CB	5:F:1109:HOH:O	2.02	0.58
1:E:357:MET:SD	1:E:368:SER:OG	2.61	0.58
1:E:123:HIS:HE1	1:E:127:GLN:HE21	1.51	0.58
1:C:394:ASP:HB2	5:C:1117:HOH:O	2.02	0.58
1:A:404:GLU:O	1:A:404:GLU:HG3	2.04	0.58
2:C:1001:6PT:C15	2:C:1001:6PT:C12	2.82	0.58
1:E:260:LEU:HD23	1:E:260:LEU:C	2.23	0.58
1:E:356:PRO:O	1:E:357:MET:HB2	2.03	0.58
1:A:176:LEU:HD13	1:A:190:ILE:HG23	1.86	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:260:LEU:O	1:F:264:VAL:HG23	2.04	0.57
1:F:352:MET:O	1:F:354:ILE:N	2.37	0.57
1:C:304:SER:O	1:C:308:GLN:HG3	2.05	0.57
1:G:410:ILE:O	1:G:411:PRO:O	2.22	0.57
1:C:178:THR:CG2	1:C:181:LEU:HD12	2.35	0.57
1:H:356:PRO:O	1:H:357:MET:HB2	2.04	0.57
1:C:378:HIS:HB3	1:C:379:PRO:CD	2.35	0.57
1:F:243:GLU:O	1:F:246:CYS:HB2	2.05	0.56
1:F:356:PRO:O	1:F:357:MET:CB	2.53	0.56
1:A:239:LYS:HB2	1:B:221:LEU:HD21	1.86	0.56
1:G:302:ASN:OD1	1:G:304:SER:HB3	2.05	0.56
1:H:321:ASN:N	1:H:322:PRO:CD	2.68	0.56
1:D:154:HIS:HB2	1:D:157:VAL:HG13	1.88	0.56
1:C:210:GLN:HE21	1:C:214:ASN:ND2	2.04	0.56
1:A:344:GLY:HA2	1:A:347:GLU:HB2	1.87	0.56
1:C:87:GLU:CG	1:C:88:GLN:N	2.68	0.56
1:H:342:ARG:HD3	5:H:1115:HOH:O	2.06	0.56
1:A:393:GLN:OE1	1:A:393:GLN:HA	2.06	0.55
1:C:410:ILE:O	1:C:411:PRO:C	2.43	0.55
1:F:282:ASP:HB3	1:F:308:GLN:HE22	1.69	0.55
1:H:224:ASN:O	1:H:226:SER:HB2	2.06	0.55
1:D:141:THR:OG1	1:D:245:ASN:ND2	2.40	0.55
1:A:211:PHE:O	1:A:215:THR:HG23	2.07	0.55
1:A:285:THR:O	1:A:288:GLU:HB3	2.07	0.55
1:F:250:GLN:HA	1:F:257:ARG:HH12	1.71	0.55
1:B:94:LYS:O	1:B:97:GLU:HB2	2.07	0.55
1:F:87:GLU:O	1:F:87:GLU:CG	2.54	0.55
1:H:369:GLN:HG2	5:H:1106:HOH:O	2.06	0.55
1:D:182:GLU:OE2	1:D:182:GLU:HA	2.06	0.54
1:F:199:ILE:O	1:F:202:VAL:HG12	2.08	0.54
1:H:344:GLY:HA3	1:H:358:CYS:O	2.07	0.54
1:A:232:HIS:ND1	5:A:1101:HOH:O	2.30	0.54
1:D:228:VAL:HG23	5:D:1107:HOH:O	2.08	0.54
1:B:327:GLN:HE21	1:B:327:GLN:H	1.56	0.54
1:B:342:ARG:HH21	1:G:291:LYS:HE2	1.72	0.54
1:A:116:ARG:NH2	1:A:151:ASP:OD2	2.36	0.54
1:C:291:LYS:O	1:C:299:LEU:HB2	2.08	0.54
1:F:123:HIS:HE1	1:F:127:GLN:NE2	2.05	0.54
1:F:159:TYR:HB3	1:F:339:GLU:OE1	2.08	0.54
1:B:342:ARG:CG	1:B:342:ARG:NH1	2.70	0.54
1:A:154:HIS:HB2	1:A:157:VAL:HG13	1.89	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:249:PHE:O	1:D:257:ARG:NH1	2.40	0.53
1:G:104:LEU:HD11	1:G:109:ILE:CD1	2.37	0.53
1:C:286:MET:CE	1:C:308:GLN:HB2	2.39	0.53
1:E:129:ARG:HG2	1:E:129:ARG:HH11	1.72	0.53
1:A:324:LYS:HB3	1:A:325:PRO:HD2	1.90	0.53
1:C:116:ARG:O	1:C:120:VAL:HG22	2.09	0.53
1:F:293:THR:O	1:F:296:GLY:N	2.35	0.53
1:A:92:LEU:O	1:A:96:LEU:HG	2.10	0.52
1:H:91:VAL:HG12	1:H:112:LEU:HD13	1.91	0.52
1:B:181:LEU:HD21	1:B:298:LEU:HD12	1.92	0.52
1:B:342:ARG:NH1	1:B:342:ARG:HG2	2.23	0.52
1:F:283:LEU:HD11	1:F:387:LEU:HD22	1.90	0.52
1:F:282:ASP:CB	1:F:308:GLN:NE2	2.70	0.52
1:F:340:PHE:CZ	2:F:1001:6PT:C13	2.92	0.52
1:F:254:LYS:O	1:F:255:LYS:C	2.47	0.52
1:A:340:PHE:CB	5:A:1107:HOH:O	2.52	0.52
1:D:116:ARG:NE	1:D:147:MET:HE2	2.23	0.52
1:E:343:GLN:O	1:E:347:GLU:HG3	2.09	0.52
1:G:116:ARG:NE	1:G:147:MET:HE2	2.25	0.52
1:G:292:VAL:O	1:G:292:VAL:CG2	2.57	0.52
1:E:116:ARG:CZ	1:E:147:MET:CE	2.88	0.52
1:B:321:ASN:HB2	1:B:332:TRP:CD1	2.45	0.51
1:D:323:THR:HB	1:D:395:ILE:HG23	1.91	0.51
1:G:154:HIS:HB2	1:G:157:VAL:CG1	2.38	0.51
1:G:340:PHE:HZ	2:G:1001:6PT:C13	2.23	0.51
1:D:164:HIS:O	1:D:168:VAL:HG23	2.11	0.51
1:H:317:ALA:HA	1:H:320:SER:HB3	1.92	0.51
1:F:326:LEU:HD21	1:F:405:TRP:CE3	2.46	0.51
1:C:321:ASN:N	1:C:322:PRO:CD	2.73	0.51
1:A:116:ARG:N	1:A:117:PRO:CD	2.73	0.50
1:C:299:LEU:O	1:C:300:LEU:HD23	2.11	0.50
1:E:322:PRO:HG2	1:E:377:VAL:HG21	1.94	0.50
1:F:123:HIS:O	1:F:127:GLN:HG2	2.12	0.50
1:H:326:LEU:HD21	1:H:405:TRP:CD2	2.47	0.50
1:A:357:MET:SD	1:A:368:SER:OG	2.54	0.50
1:B:184:VAL:HG11	1:B:300:LEU:HD12	1.91	0.50
1:B:321:ASN:CB	1:B:332:TRP:CD1	2.95	0.50
1:F:108:ARG:HH11	1:F:108:ARG:HG3	1.63	0.50
1:F:355:SER:HB3	1:F:356:PRO:CD	2.42	0.50
1:G:135:PHE:CE2	1:G:191:LEU:HD22	2.47	0.50
1:C:253:THR:HB	1:E:288:GLU:HG3	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:369:GLN:O	1:H:373:ILE:HG13	2.11	0.49
1:A:200:HIS:NE2	1:A:201:ASP:OD2	2.45	0.49
1:A:340:PHE:C	5:A:1107:HOH:O	2.49	0.49
1:F:302:ASN:H	1:F:302:ASN:HD22	1.58	0.49
1:A:366:GLU:HG2	1:A:409:THR:OG1	2.12	0.49
1:D:301:ASP:N	5:D:1102:HOH:O	2.30	0.49
1:G:336:ILE:HG23	1:G:337:MET:HE2	1.94	0.49
1:E:123:HIS:CE1	1:E:127:GLN:HE21	2.29	0.49
1:F:357:MET:HA	1:F:357:MET:CE	2.42	0.49
1:C:132:LEU:HD22	1:C:139:VAL:HG23	1.95	0.49
1:C:323:THR:HB	1:C:395:ILE:HG23	1.94	0.49
1:D:282:ASP:HB3	1:D:308:GLN:NE2	2.28	0.49
1:G:302:ASN:O	1:G:306:ARG:HG3	2.12	0.49
1:E:116:ARG:CZ	1:E:147:MET:HE3	2.42	0.49
1:B:243:GLU:O	1:B:244:GLU:C	2.49	0.49
2:E:1001:6PT:C15	2:E:1001:6PT:C12	2.91	0.49
1:E:366:GLU:HG2	1:E:409:THR:OG1	2.12	0.48
1:C:373:ILE:CG2	1:C:399:LEU:HD11	2.43	0.48
1:F:122:MET:SD	1:F:169:VAL:HG11	2.53	0.48
1:G:224:ASN:OD1	1:H:234:LEU:HB3	2.12	0.48
2:G:1001:6PT:C15	2:G:1001:6PT:C12	2.91	0.48
1:D:123:HIS:HE1	1:D:127:GLN:HE21	1.60	0.48
1:D:342:ARG:HH11	1:D:342:ARG:HG3	1.74	0.48
1:B:327:GLN:H	1:B:327:GLN:NE2	2.10	0.48
1:C:337:MET:HG3	1:C:365:VAL:HG22	1.95	0.48
1:D:116:ARG:CZ	1:D:147:MET:CE	2.91	0.48
1:H:337:MET:HE3	1:H:365:VAL:HA	1.96	0.48
1:A:355:SER:HB3	1:A:356:PRO:CD	2.43	0.48
1:B:323:THR:HG22	1:B:399:LEU:HD13	1.95	0.48
1:E:301:ASP:O	1:E:302:ASN:HB3	2.13	0.48
1:F:344:GLY:HA2	1:F:347:GLU:HB2	1.95	0.48
1:D:342:ARG:CG	1:D:342:ARG:NH1	2.53	0.48
1:H:125:ILE:HD13	1:H:173:HIS:CG	2.49	0.48
1:E:116:ARG:N	1:E:117:PRO:CD	2.77	0.47
1:F:106:VAL:HA	1:F:109:ILE:HD12	1.95	0.47
1:F:344:GLY:CA	5:F:1103:HOH:O	2.62	0.47
1:F:410:ILE:CG2	1:F:411:PRO:HD2	2.44	0.47
2:F:1001:6PT:C12	2:F:1001:6PT:C15	2.92	0.47
1:H:100:ASN:OD1	1:H:173:HIS:NE2	2.43	0.47
1:A:315:HIS:CE1	1:A:319:LEU:HD11	2.50	0.47
1:D:316:CYS:HB3	1:D:381:TRP:CZ2	2.50	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:302:ASN:O	1:E:303:TYR:C	2.52	0.47
2:B:1001:6PT:C12	2:B:1001:6PT:C15	2.93	0.47
1:D:253:THR:HG1	1:D:256:GLN:HG3	1.78	0.47
1:F:293:THR:C	1:F:295:SER:N	2.68	0.47
1:D:110:ALA:HA	1:D:117:PRO:HD3	1.95	0.47
1:F:234:LEU:HD21	1:F:268:VAL:HB	1.96	0.47
1:F:344:GLY:N	5:F:1103:HOH:O	2.48	0.47
1:G:410:ILE:HG22	1:G:411:PRO:N	2.30	0.47
1:F:215:THR:O	1:F:216:ASN:C	2.53	0.46
1:C:178:THR:OG1	1:C:391:ASP:OD2	2.31	0.46
1:D:148:THR:HG22	1:D:240:LEU:HD22	1.97	0.46
1:B:121:ILE:HD12	1:B:166:ALA:HB1	1.97	0.46
1:D:129:ARG:HB2	1:D:131:LEU:HG	1.98	0.46
1:G:117:PRO:O	1:G:121:ILE:HD12	2.15	0.46
1:E:182:GLU:O	1:E:183:ALA:HB3	2.16	0.46
1:E:298:LEU:HD13	1:E:300:LEU:CD1	2.43	0.46
1:F:254:LYS:C	1:F:256:GLN:N	2.68	0.46
1:H:323:THR:HB	1:H:395:ILE:HG23	1.97	0.46
1:G:178:THR:CG2	1:G:181:LEU:HD12	2.45	0.46
1:H:279:LEU:HA	1:H:279:LEU:HD12	1.77	0.46
1:A:348:ARG:HH11	1:A:348:ARG:HB3	1.79	0.46
1:F:157:VAL:HG23	1:F:157:VAL:O	2.16	0.46
1:G:292:VAL:O	1:G:293:THR:C	2.52	0.46
1:H:384:TRP:O	1:H:388:VAL:HG22	2.15	0.46
1:D:407:GLN:CA	1:D:410:ILE:HD12	2.36	0.46
1:E:129:ARG:HG2	1:E:129:ARG:NH1	2.31	0.46
1:G:340:PHE:CZ	2:G:1001:6PT:C13	2.98	0.46
1:F:210:GLN:HE21	1:F:214:ASN:ND2	2.13	0.46
1:A:178:THR:OG1	1:A:391:ASP:CB	2.64	0.46
1:A:345:ASP:HA	1:A:348:ARG:HH12	1.81	0.46
1:F:349:GLU:O	1:F:350:ARG:C	2.54	0.46
1:H:322:PRO:HA	1:H:329:TYR:CD1	2.51	0.46
1:A:316:CYS:O	1:A:320:SER:HB3	2.16	0.45
1:B:230:GLU:OE2	1:B:272:ASP:HA	2.16	0.45
1:B:331:GLN:HB3	5:B:1122:HOH:O	2.16	0.45
1:C:210:GLN:HE21	1:C:214:ASN:HD21	1.63	0.45
1:A:367:LYS:HE3	1:A:367:LYS:HB2	1.65	0.45
1:H:298:LEU:HD11	1:H:387:LEU:CD1	2.44	0.45
1:F:358:CYS:CB	5:F:1103:HOH:O	1.90	0.45
1:H:364:SER:O	1:H:368:SER:OG	2.28	0.45
1:A:224:ASN:OD1	1:B:234:LEU:HB3	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:316:CYS:O	1:E:320:SER:HB3	2.17	0.45
1:F:116:ARG:N	1:F:117:PRO:CD	2.80	0.45
1:A:270:ALA:HB1	1:A:279:LEU:HD21	1.97	0.45
1:A:299:LEU:O	1:A:300:LEU:HD23	2.17	0.45
1:C:301:ASP:O	1:C:302:ASN:CB	2.64	0.45
1:E:121:ILE:HD12	1:E:166:ALA:HB1	1.99	0.45
1:C:367:LYS:HE3	1:C:367:LYS:HB2	1.68	0.45
1:H:303:TYR:O	1:H:304:SER:C	2.55	0.45
1:B:342:ARG:NH2	1:G:291:LYS:HE2	2.31	0.45
1:C:301:ASP:O	1:C:302:ASN:HB3	2.17	0.45
1:C:364:SER:HB3	1:C:367:LYS:HB3	1.98	0.45
1:F:323:THR:HG22	1:F:399:LEU:HD13	1.99	0.45
1:G:410:ILE:HB	1:G:411:PRO:HD3	1.98	0.45
1:H:104:LEU:HD11	1:H:109:ILE:CD1	2.47	0.45
1:H:254:LYS:HE3	1:H:254:LYS:HB2	1.64	0.45
1:D:316:CYS:O	1:D:320:SER:HB3	2.17	0.45
1:F:186:THR:N	1:F:189:GLU:OE1	2.42	0.45
1:G:298:LEU:CD1	1:G:300:LEU:HD21	2.45	0.45
1:C:288:GLU:OE2	1:C:288:GLU:HA	2.16	0.45
1:F:108:ARG:NH1	1:F:108:ARG:HG3	2.27	0.45
1:F:250:GLN:HG3	1:F:251:ASN:OD1	2.17	0.45
1:G:302:ASN:O	1:G:303:TYR:C	2.56	0.45
1:H:156:ASP:OD2	1:H:156:ASP:N	2.51	0.44
1:D:206:GLY:HA2	1:D:339:GLU:OE2	2.17	0.44
1:H:247:ASP:O	1:H:250:GLN:HG2	2.17	0.44
1:C:303:TYR:HA	1:C:306:ARG:HD3	1.98	0.44
1:D:87:GLU:O	1:D:88:GLN:C	2.55	0.44
1:D:223:TYR:CE1	1:D:231:ASN:HB3	2.52	0.44
1:C:234:LEU:HD11	1:C:268:VAL:HB	1.99	0.44
1:D:116:ARG:NE	1:D:147:MET:CE	2.80	0.44
1:B:329:TYR:CE2	1:B:406:TYR:HE2	2.35	0.44
1:A:191:LEU:HD23	1:A:260:LEU:HD13	1.99	0.44
1:E:381:TRP:O	1:E:385:ALA:N	2.48	0.44
1:F:117:PRO:O	1:F:121:ILE:HG13	2.17	0.44
1:G:260:LEU:O	1:G:261:ARG:C	2.56	0.44
1:E:229:LEU:HD23	1:E:229:LEU:HA	1.88	0.44
1:E:321:ASN:CB	1:E:332:TRP:CD1	3.01	0.44
1:E:323:THR:HG22	1:E:399:LEU:HD13	2.00	0.44
1:A:355:SER:HB2	1:A:358:CYS:HB2	2.00	0.43
1:D:270:ALA:CB	1:D:311:GLN:HG2	2.47	0.43
1:E:306:ARG:HH11	1:E:306:ARG:CG	2.13	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:360:LYS:HG3	1:F:361:HIS:CD2	2.53	0.43
1:B:307:ILE:CG2	1:B:308:GLN:N	2.81	0.43
1:G:88:GLN:OE1	1:G:112:LEU:O	2.36	0.43
1:H:104:LEU:HD11	1:H:109:ILE:HD11	2.00	0.43
1:B:181:LEU:CD2	1:B:298:LEU:HD12	2.49	0.43
1:H:283:LEU:HG	1:H:383:THR:HG22	1.99	0.43
1:B:302:ASN:OD1	1:B:304:SER:HB3	2.18	0.43
1:C:286:MET:HE2	1:C:308:GLN:CB	2.47	0.43
1:E:200:HIS:O	1:E:233:HIS:CD2	2.72	0.43
1:F:223:TYR:CE1	1:F:231:ASN:HB3	2.54	0.43
1:A:207:VAL:HG11	1:A:346:ARG:NH1	2.33	0.43
1:B:139:VAL:HG13	1:B:140:ASP:N	2.34	0.43
1:B:154:HIS:HB2	1:B:157:VAL:HG13	2.00	0.43
1:D:340:PHE:CZ	2:D:1001:6PT:C13	3.02	0.43
1:F:276:HIS:CD2	1:F:376:ILE:HD12	2.54	0.43
1:A:201:ASP:HA	1:A:233:HIS:CD2	2.54	0.43
1:D:88:GLN:HE21	1:D:88:GLN:HB2	1.67	0.43
1:D:378:HIS:O	1:D:379:PRO:C	2.54	0.43
1:F:322:PRO:HA	1:F:329:TYR:CG	2.54	0.43
1:A:88:GLN:O	1:A:88:GLN:HG2	2.19	0.43
1:A:348:ARG:HG3	1:A:354:ILE:HD11	2.01	0.43
1:G:154:HIS:CB	1:G:157:VAL:HG13	2.46	0.42
1:G:344:GLY:HA3	1:G:358:CYS:O	2.19	0.42
1:H:125:ILE:O	1:H:128:GLU:HB3	2.19	0.42
1:A:389:HIS:HA	1:A:390:PRO:HA	1.68	0.42
1:B:286:MET:HE3	1:B:286:MET:HB2	1.87	0.42
1:C:121:ILE:O	1:C:125:ILE:HD12	2.19	0.42
1:C:168:VAL:HG21	1:C:200:HIS:CE1	2.54	0.42
1:F:322:PRO:HA	1:F:329:TYR:CD1	2.54	0.42
1:G:267:ILE:HA	1:G:311:GLN:HG2	2.00	0.42
1:B:329:TYR:CE2	1:B:406:TYR:CE2	3.07	0.42
1:C:192:ALA:HB2	1:C:263:MET:HE3	2.02	0.42
1:D:154:HIS:CB	1:D:157:VAL:HG13	2.48	0.42
1:C:253:THR:OG1	1:C:256:GLN:HG3	2.19	0.42
1:H:302:ASN:H	1:H:302:ASN:ND2	2.17	0.42
1:H:122:MET:CE	1:H:198:ALA:HB2	2.49	0.42
1:A:200:HIS:O	1:A:233:HIS:CD2	2.73	0.42
1:B:116:ARG:N	1:B:117:PRO:CD	2.83	0.42
1:E:316:CYS:HB3	1:E:381:TRP:CZ2	2.54	0.42
1:G:272:ASP:HB3	1:G:275:LYS:HD2	2.01	0.42
1:H:326:LEU:HD12	1:H:326:LEU:HA	1.75	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:327:GLN:O	1:C:331:GLN:HG3	2.18	0.42
1:E:146:LEU:HD23	1:E:146:LEU:HA	1.80	0.42
1:E:389:HIS:HA	1:E:390:PRO:HA	1.76	0.42
1:G:165:ALA:O	1:G:169:VAL:HG23	2.20	0.42
1:G:229:LEU:HD23	1:G:229:LEU:HA	1.81	0.42
1:C:127:GLN:OE1	1:C:127:GLN:HA	2.20	0.42
1:G:175:LEU:HD23	1:G:175:LEU:HA	1.91	0.42
1:B:253:THR:HB	5:B:1114:HOH:O	2.20	0.42
1:G:115:ASN:C	1:G:117:PRO:HD2	2.40	0.42
1:G:325:PRO:HD2	1:G:328:LEU:HD12	2.02	0.42
1:A:215:THR:O	1:A:216:ASN:C	2.58	0.41
1:B:307:ILE:HD12	1:B:307:ILE:HA	1.79	0.41
1:F:153:TYR:CE2	1:F:202:VAL:HA	2.55	0.41
1:A:178:THR:OG1	1:A:391:ASP:HB3	2.20	0.41
1:A:357:MET:HE1	1:A:364:SER:H	1.85	0.41
1:A:378:HIS:HB3	1:A:379:PRO:HD3	2.02	0.41
1:B:176:LEU:HD13	1:B:190:ILE:HG23	2.03	0.41
1:A:201:ASP:HA	1:A:233:HIS:CG	2.56	0.41
1:A:243:GLU:HB2	1:A:246:CYS:SG	2.61	0.41
1:A:346:ARG:HA	1:A:349:GLU:HB2	2.02	0.41
1:G:153:TYR:CE2	1:G:202:VAL:HA	2.55	0.41
1:G:378:HIS:HB3	1:G:379:PRO:HD3	2.02	0.41
1:H:329:TYR:CE2	1:H:406:TYR:HE2	2.38	0.41
1:A:253:THR:OG1	1:A:256:GLN:HB2	2.21	0.41
1:B:302:ASN:O	1:B:306:ARG:HG3	2.21	0.41
1:C:404:GLU:OE1	1:C:404:GLU:HA	2.21	0.41
1:C:410:ILE:HB	1:C:411:PRO:CD	2.50	0.41
1:D:321:ASN:CB	1:D:332:TRP:CD1	3.04	0.41
1:F:232:HIS:O	1:F:236:VAL:HG23	2.21	0.41
1:F:327:GLN:HB2	5:F:1115:HOH:O	2.18	0.41
1:H:366:GLU:H	1:H:366:GLU:CD	2.24	0.41
1:B:337:MET:HG3	1:B:365:VAL:HG22	2.03	0.41
1:D:323:THR:HG22	1:D:399:LEU:HB2	2.02	0.41
1:F:201:ASP:HA	1:F:233:HIS:CD2	2.55	0.41
1:G:337:MET:HE1	2:G:1001:6PT:C8	2.51	0.41
1:A:201:ASP:HA	1:A:233:HIS:CE1	2.55	0.41
1:A:226:SER:O	1:A:227:SER:C	2.59	0.41
1:A:410:ILE:HG22	1:A:411:PRO:N	2.35	0.41
1:C:229:LEU:HB3	1:C:233:HIS:NE2	2.36	0.41
1:G:343:GLN:O	1:G:347:GLU:HG3	2.21	0.41
1:H:164:HIS:O	1:H:167:ASP:HB3	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:396:LEU:HD12	1:H:396:LEU:HA	1.92	0.41
1:E:178:THR:HG22	1:E:181:LEU:HD12	2.03	0.41
1:H:376:ILE:C	1:H:379:PRO:HD2	2.41	0.41
1:F:353:GLU:O	1:F:354:ILE:C	2.59	0.40
1:G:388:VAL:O	1:G:389:HIS:C	2.59	0.40
1:H:396:LEU:O	1:H:400:GLU:HG3	2.21	0.40
1:C:170:GLN:O	1:C:173:HIS:HB3	2.22	0.40
1:F:302:ASN:ND2	1:F:302:ASN:N	2.66	0.40
1:F:355:SER:HB3	1:F:356:PRO:HD3	2.04	0.40
1:D:252:LEU:HB3	1:D:256:GLN:HB2	2.03	0.40
1:F:145:TYR:CE2	1:F:149:LEU:HD22	2.56	0.40
1:B:132:LEU:HD12	1:B:132:LEU:H	1.87	0.40
1:F:249:PHE:O	1:F:257:ARG:NH1	2.54	0.40
1:F:139:VAL:HG13	1:F:140:ASP:N	2.37	0.40
1:F:261:ARG:O	1:F:265:ILE:HG13	2.21	0.40
1:F:343:GLN:O	1:F:346:ARG:HB2	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	318/326 (98%)	286 (90%)	29 (9%)	3 (1%)	17	33
1	B	324/326 (99%)	306 (94%)	17 (5%)	1 (0%)	41	62
1	C	317/326 (97%)	299 (94%)	18 (6%)	0	100	100
1	D	324/326 (99%)	306 (94%)	18 (6%)	0	100	100
1	E	317/326 (97%)	301 (95%)	16 (5%)	0	100	100
1	F	324/326 (99%)	284 (88%)	35 (11%)	5 (2%)	10	19
1	G	318/326 (98%)	293 (92%)	22 (7%)	3 (1%)	17	33

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	H	324/326 (99%)	301 (93%)	20 (6%)	3 (1%)	17	33
All	All	2566/2608 (98%)	2376 (93%)	175 (7%)	15 (1%)	25	45

All (15) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	F	353	GLU
1	F	357	MET
1	G	410	ILE
1	H	304	SER
1	F	349	GLU
1	H	301	ASP
1	A	112	LEU
1	B	290	LYS
1	F	356	PRO
1	H	296	GLY
1	A	355	SER
1	A	410	ILE
1	G	228	VAL
1	F	354	ILE
1	G	116	ARG

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	294/298 (99%)	280 (95%)	14 (5%)	25	47
1	B	297/298 (100%)	287 (97%)	10 (3%)	37	61
1	C	294/298 (99%)	284 (97%)	10 (3%)	37	61
1	D	298/298 (100%)	283 (95%)	15 (5%)	24	46
1	E	294/298 (99%)	285 (97%)	9 (3%)	40	65
1	F	298/298 (100%)	289 (97%)	9 (3%)	41	66
1	G	294/298 (99%)	285 (97%)	9 (3%)	40	65

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	H	298/298 (100%)	283 (95%)	15 (5%)	24 46
All	All	2367/2384 (99%)	2276 (96%)	91 (4%)	33 57

All (91) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	87	GLU
1	A	108	ARG
1	A	219	LEU
1	A	221	LEU
1	A	244	GLU
1	A	245	ASN
1	A	255	LYS
1	A	260	LEU
1	A	279	LEU
1	A	298	LEU
1	A	327	GLN
1	A	357	MET
1	A	364	SER
1	A	404	GLU
1	B	108	ARG
1	B	133	LYS
1	B	148	THR
1	B	245	ASN
1	B	259	SER
1	B	293	THR
1	B	295	SER
1	B	327	GLN
1	B	342	ARG
1	B	357	MET
1	C	87	GLU
1	C	99	VAL
1	C	139	VAL
1	C	226	SER
1	C	254	LYS
1	C	259	SER
1	C	298	LEU
1	C	299	LEU
1	C	304	SER
1	C	362	ASN
1	D	88	GLN
1	D	108	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	133	LYS
1	D	157	VAL
1	D	221	LEU
1	D	255	LYS
1	D	282	ASP
1	D	287	VAL
1	D	294	SER
1	D	298	LEU
1	D	321	ASN
1	D	342	ARG
1	D	353	GLU
1	D	364	SER
1	D	403	ARG
1	E	89	GLU
1	E	221	LEU
1	E	255	LYS
1	E	298	LEU
1	E	299	LEU
1	E	301	ASP
1	E	321	ASN
1	E	355	SER
1	E	382	GLU
1	F	108	ARG
1	F	177	SER
1	F	221	LEU
1	F	259	SER
1	F	295	SER
1	F	298	LEU
1	F	299	LEU
1	F	302	ASN
1	F	307	ILE
1	G	87	GLU
1	G	178	THR
1	G	221	LEU
1	G	226	SER
1	G	260	LEU
1	G	298	LEU
1	G	327	GLN
1	G	353	GLU
1	G	364	SER
1	H	147	MET
1	H	178	THR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	259	SER
1	H	260	LEU
1	H	274	SER
1	H	288	GLU
1	H	293	THR
1	H	298	LEU
1	H	304	SER
1	H	306	ARG
1	H	336	ILE
1	H	342	ARG
1	H	357	MET
1	H	364	SER
1	H	403	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (46) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	88	GLN
1	A	123	HIS
1	A	245	ASN
1	B	88	GLN
1	B	123	HIS
1	B	210	GLN
1	B	245	ASN
1	B	308	GLN
1	B	327	GLN
1	C	88	GLN
1	C	210	GLN
1	C	242	GLN
1	C	245	ASN
1	C	258	GLN
1	D	88	GLN
1	D	123	HIS
1	D	242	GLN
1	D	245	ASN
1	D	321	ASN
1	D	389	HIS
1	E	123	HIS
1	E	210	GLN
1	E	242	GLN
1	E	245	ASN
1	E	250	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	E	308	GLN
1	E	321	ASN
1	E	369	GLN
1	F	88	GLN
1	F	123	HIS
1	F	210	GLN
1	F	245	ASN
1	F	302	ASN
1	F	308	GLN
1	F	362	ASN
1	F	369	GLN
1	G	88	GLN
1	G	123	HIS
1	G	245	ASN
1	G	258	GLN
1	H	88	GLN
1	H	210	GLN
1	H	242	GLN
1	H	245	ASN
1	H	302	ASN
1	H	308	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 24 ligands modelled in this entry, 16 are monoatomic - leaving 8 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The

Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	6PT	A	1001	-	30,30,30	1.04	2 (6%)	38,42,42	2.10	10 (26%)
2	6PT	E	1001	-	30,30,30	1.13	3 (10%)	38,42,42	2.16	13 (34%)
2	6PT	G	1001	-	30,30,30	1.04	1 (3%)	38,42,42	2.16	12 (31%)
2	6PT	F	1001	-	30,30,30	1.01	0	38,42,42	2.00	11 (28%)
2	6PT	D	1001	-	30,30,30	0.97	1 (3%)	38,42,42	2.20	11 (28%)
2	6PT	H	1001	-	30,30,30	1.00	2 (6%)	38,42,42	2.37	13 (34%)
2	6PT	B	1001	-	30,30,30	1.12	3 (10%)	38,42,42	2.17	10 (26%)
2	6PT	C	1001	-	30,30,30	0.96	2 (6%)	38,42,42	2.01	10 (26%)

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	6PT	A	1001	-	-	4/18/18/18	0/3/3/3
2	6PT	E	1001	-	-	1/18/18/18	0/3/3/3
2	6PT	G	1001	-	-	1/18/18/18	0/3/3/3
2	6PT	F	1001	-	-	4/18/18/18	0/3/3/3
2	6PT	D	1001	-	-	2/18/18/18	0/3/3/3
2	6PT	H	1001	-	-	3/18/18/18	0/3/3/3
2	6PT	B	1001	-	-	3/18/18/18	0/3/3/3
2	6PT	C	1001	-	-	4/18/18/18	0/3/3/3

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	1001	6PT	C1-N1	2.96	1.36	1.31
2	A	1001	6PT	C1-N1	2.79	1.36	1.31
2	G	1001	6PT	C3-C21	-2.79	1.37	1.42
2	E	1001	6PT	C1-N1	2.79	1.36	1.31
2	B	1001	6PT	C21-N3	-2.50	1.31	1.39
2	E	1001	6PT	C2-C3	2.49	1.44	1.38
2	A	1001	6PT	C21-N3	-2.42	1.32	1.39

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1001	6PT	C1-N1	2.35	1.35	1.31
2	D	1001	6PT	C1-N1	2.30	1.35	1.31
2	H	1001	6PT	C2-C12	2.07	1.53	1.46
2	B	1001	6PT	C3-C21	-2.06	1.38	1.42
2	C	1001	6PT	C2-C12	2.05	1.53	1.46
2	C	1001	6PT	C1-N1	2.05	1.35	1.31
2	E	1001	6PT	C2-C12	2.01	1.53	1.46

All (90) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	1001	6PT	C4-N3-N1	7.05	122.64	113.46
2	H	1001	6PT	C21-N3-N1	-6.98	118.45	126.29
2	B	1001	6PT	C21-N3-N1	-6.30	119.21	126.29
2	H	1001	6PT	C4-N3-N1	6.02	121.29	113.46
2	E	1001	6PT	C21-N3-N1	-6.01	119.54	126.29
2	G	1001	6PT	C21-N3-N1	-5.77	119.81	126.29
2	A	1001	6PT	C21-N3-N1	-5.68	119.91	126.29
2	D	1001	6PT	C21-N3-N1	-5.66	119.93	126.29
2	C	1001	6PT	C21-N3-N1	-5.59	120.01	126.29
2	B	1001	6PT	C4-N3-N1	5.46	120.57	113.46
2	D	1001	6PT	C4-N3-N1	5.15	120.17	113.46
2	F	1001	6PT	C4-N3-N1	5.13	120.14	113.46
2	G	1001	6PT	O4-C21-C3	-4.89	116.17	126.69
2	F	1001	6PT	C21-N3-N1	-4.77	120.93	126.29
2	G	1001	6PT	C21-C3-N2	-4.39	110.53	118.45
2	H	1001	6PT	C7-C6-C1	-4.26	113.69	120.73
2	H	1001	6PT	O4-C21-C3	-4.25	117.55	126.69
2	E	1001	6PT	O4-C21-C3	-4.24	117.56	126.69
2	B	1001	6PT	O4-C21-C3	-4.07	117.93	126.69
2	D	1001	6PT	O4-C21-C3	-4.03	118.02	126.69
2	C	1001	6PT	C1-C2-C12	-3.97	115.20	124.11
2	E	1001	6PT	C21-C3-N2	-3.94	111.34	118.45
2	D	1001	6PT	O1-C12-C2	-3.85	113.29	120.41
2	F	1001	6PT	O1-C12-C2	-3.79	113.39	120.41
2	C	1001	6PT	O4-C21-C3	-3.78	118.55	126.69
2	F	1001	6PT	C7-C6-C1	-3.69	114.63	120.73
2	B	1001	6PT	C21-C3-N2	-3.64	111.87	118.45
2	D	1001	6PT	C21-C3-N2	-3.64	111.88	118.45
2	D	1001	6PT	C13-C12-C2	3.53	127.96	120.43
2	H	1001	6PT	C3-C21-N3	3.51	123.07	113.98
2	B	1001	6PT	C3-C21-N3	3.46	122.95	113.98

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	E	1001	6PT	C1-N1-N3	3.44	122.60	119.00
2	G	1001	6PT	C4-N3-N1	3.42	117.91	113.46
2	E	1001	6PT	C13-C12-C2	3.40	127.69	120.43
2	H	1001	6PT	C13-C12-C2	3.37	127.63	120.43
2	F	1001	6PT	C1-C2-C12	-3.37	116.55	124.11
2	D	1001	6PT	C3-C21-N3	3.34	122.64	113.98
2	C	1001	6PT	C21-C3-N2	-3.28	112.53	118.45
2	G	1001	6PT	C15-C16-C17	-3.27	116.97	120.78
2	C	1001	6PT	C13-C12-C2	3.27	127.42	120.43
2	C	1001	6PT	C4-N3-N1	3.26	117.70	113.46
2	H	1001	6PT	C21-C3-N2	-3.25	112.59	118.45
2	A	1001	6PT	C3-C21-N3	3.24	122.38	113.98
2	A	1001	6PT	C7-C6-C1	-3.18	115.47	120.73
2	E	1001	6PT	C2-C1-N1	-3.18	118.99	122.02
2	C	1001	6PT	C3-C21-N3	3.17	122.18	113.98
2	D	1001	6PT	C1-C2-C12	-3.15	117.03	124.11
2	G	1001	6PT	C1-C2-C12	-3.14	117.07	124.11
2	G	1001	6PT	C16-C15-C14	3.12	123.90	120.30
2	A	1001	6PT	O4-C21-N3	-3.10	115.68	121.28
2	G	1001	6PT	C3-C21-N3	3.09	121.98	113.98
2	A	1001	6PT	C1-C2-C12	-3.07	117.21	124.11
2	B	1001	6PT	C1-C2-C12	-3.01	117.36	124.11
2	E	1001	6PT	C4-N3-N1	2.82	117.14	113.46
2	E	1001	6PT	C1-C2-C12	-2.81	117.79	124.11
2	H	1001	6PT	C11-C6-C1	2.80	125.37	120.73
2	G	1001	6PT	C7-C6-C1	-2.74	116.19	120.73
2	E	1001	6PT	O1-C12-C2	-2.74	115.34	120.41
2	E	1001	6PT	C6-C1-N1	2.67	118.67	114.24
2	B	1001	6PT	O3-C20-C17	2.67	121.77	114.85
2	F	1001	6PT	C21-C3-N2	-2.64	113.67	118.45
2	H	1001	6PT	C6-C1-N1	2.64	118.61	114.24
2	H	1001	6PT	C1-C2-C12	-2.63	118.20	124.11
2	E	1001	6PT	C3-C21-N3	2.61	120.75	113.98
2	F	1001	6PT	O4-C21-C3	-2.60	121.10	126.69
2	F	1001	6PT	C3-C21-N3	2.60	120.70	113.98
2	F	1001	6PT	C13-C12-C2	2.57	125.93	120.43
2	C	1001	6PT	C7-C6-C1	-2.52	116.56	120.73
2	B	1001	6PT	O1-C12-C2	-2.52	115.74	120.41
2	D	1001	6PT	C7-C6-C1	-2.51	116.58	120.73
2	H	1001	6PT	O1-C12-C2	-2.49	115.80	120.41
2	D	1001	6PT	O3-C20-C17	2.46	121.24	114.85
2	A	1001	6PT	C11-C6-C1	2.37	124.65	120.73

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1001	6PT	C6-C1-N1	2.37	118.17	114.24
2	D	1001	6PT	O3-C20-O2	-2.37	118.09	123.35
2	B	1001	6PT	C13-C12-C2	2.32	125.38	120.43
2	G	1001	6PT	C18-C19-C14	-2.32	117.62	120.30
2	C	1001	6PT	C5-C4-N3	-2.31	108.29	111.89
2	F	1001	6PT	C11-C6-C1	2.29	124.51	120.73
2	A	1001	6PT	O3-C20-C17	2.28	120.76	114.85
2	A	1001	6PT	O4-C21-C3	-2.21	121.93	126.69
2	A	1001	6PT	C21-C3-N2	-2.21	114.47	118.45
2	C	1001	6PT	O1-C12-C2	-2.19	116.35	120.41
2	H	1001	6PT	O3-C20-C17	2.19	120.53	114.85
2	G	1001	6PT	O3-C20-C17	2.19	120.52	114.85
2	F	1001	6PT	C10-C11-C6	-2.11	117.84	120.34
2	E	1001	6PT	C14-N2-C3	2.09	133.19	127.78
2	G	1001	6PT	C15-C14-N2	-2.06	113.48	120.40
2	E	1001	6PT	C16-C17-C20	-2.04	116.38	120.39
2	H	1001	6PT	C6-C1-C2	-2.02	118.07	122.74

There are no chirality outliers.

All (22) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	F	1001	6PT	C2-C1-C6-C11
2	F	1001	6PT	C2-C1-C6-C7
2	A	1001	6PT	C2-C1-C6-C7
2	A	1001	6PT	C2-C1-C6-C11
2	H	1001	6PT	C2-C1-C6-C7
2	F	1001	6PT	N1-C1-C6-C11
2	C	1001	6PT	C2-C1-C6-C7
2	F	1001	6PT	N1-C1-C6-C7
2	B	1001	6PT	C2-C1-C6-C7
2	C	1001	6PT	C2-C1-C6-C11
2	H	1001	6PT	C2-C1-C6-C11
2	A	1001	6PT	N1-C1-C6-C7
2	A	1001	6PT	N1-C1-C6-C11
2	C	1001	6PT	N1-C1-C6-C7
2	B	1001	6PT	C2-C1-C6-C11
2	D	1001	6PT	C2-C1-C6-C7
2	B	1001	6PT	N1-C1-C6-C7
2	H	1001	6PT	N1-C1-C6-C7
2	E	1001	6PT	C2-C1-C6-C7
2	C	1001	6PT	N1-C1-C6-C11

Continued on next page...

Continued from previous page...

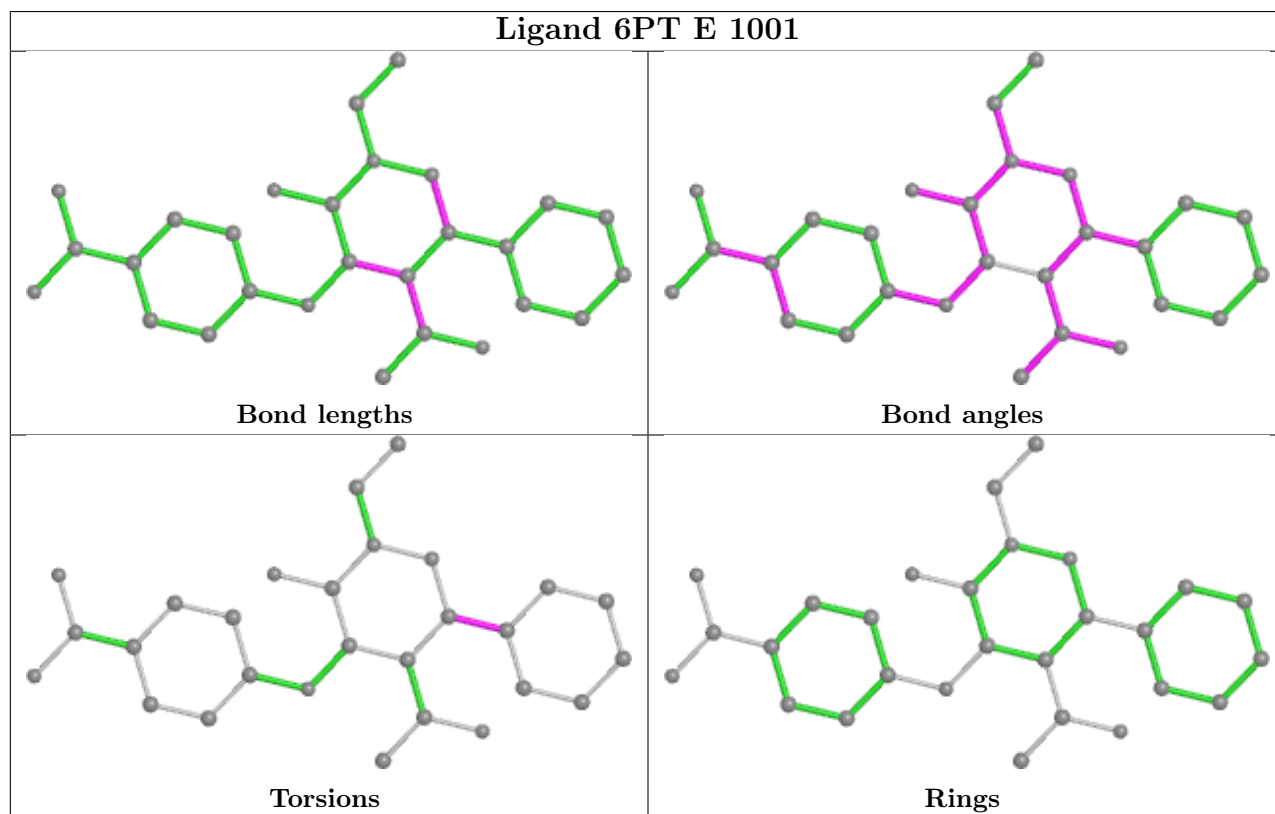
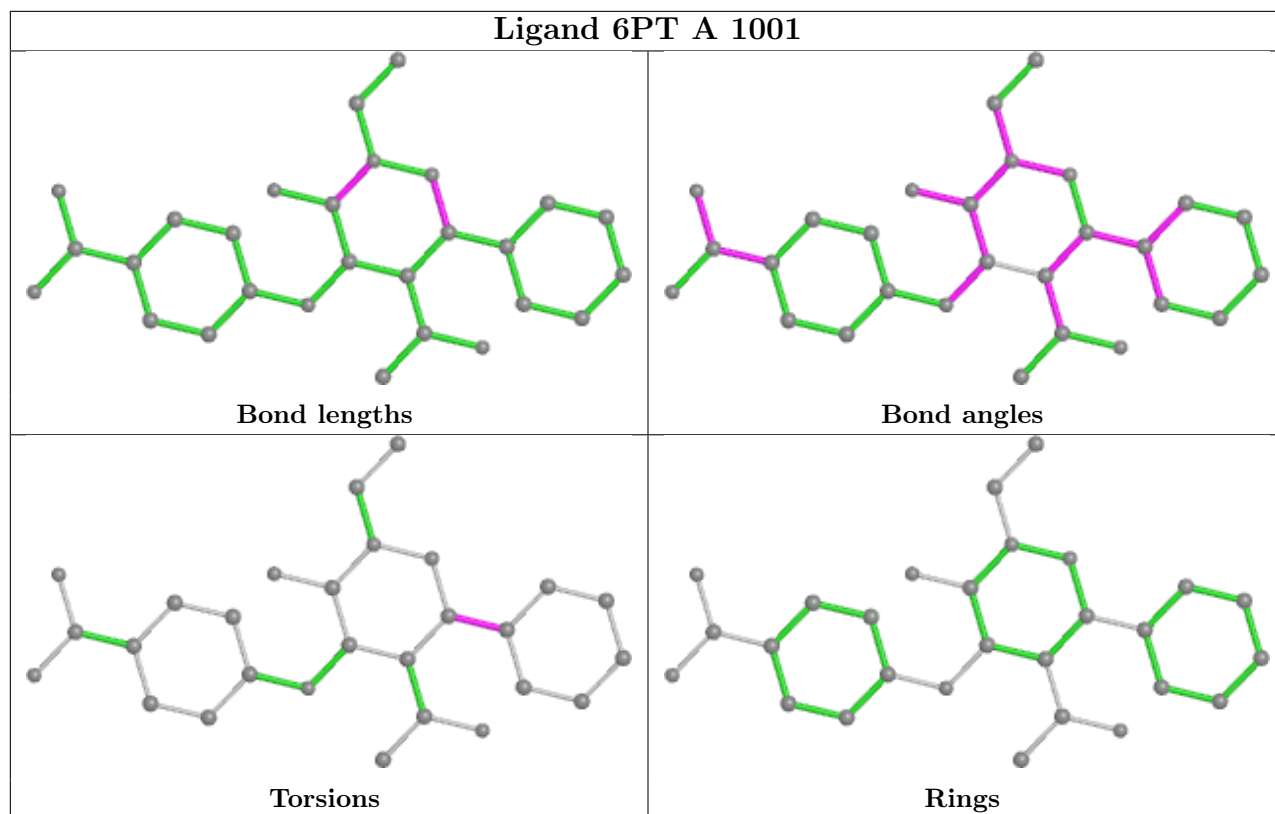
Mol	Chain	Res	Type	Atoms
2	G	1001	6PT	C2-C1-C6-C7
2	D	1001	6PT	C2-C1-C6-C11

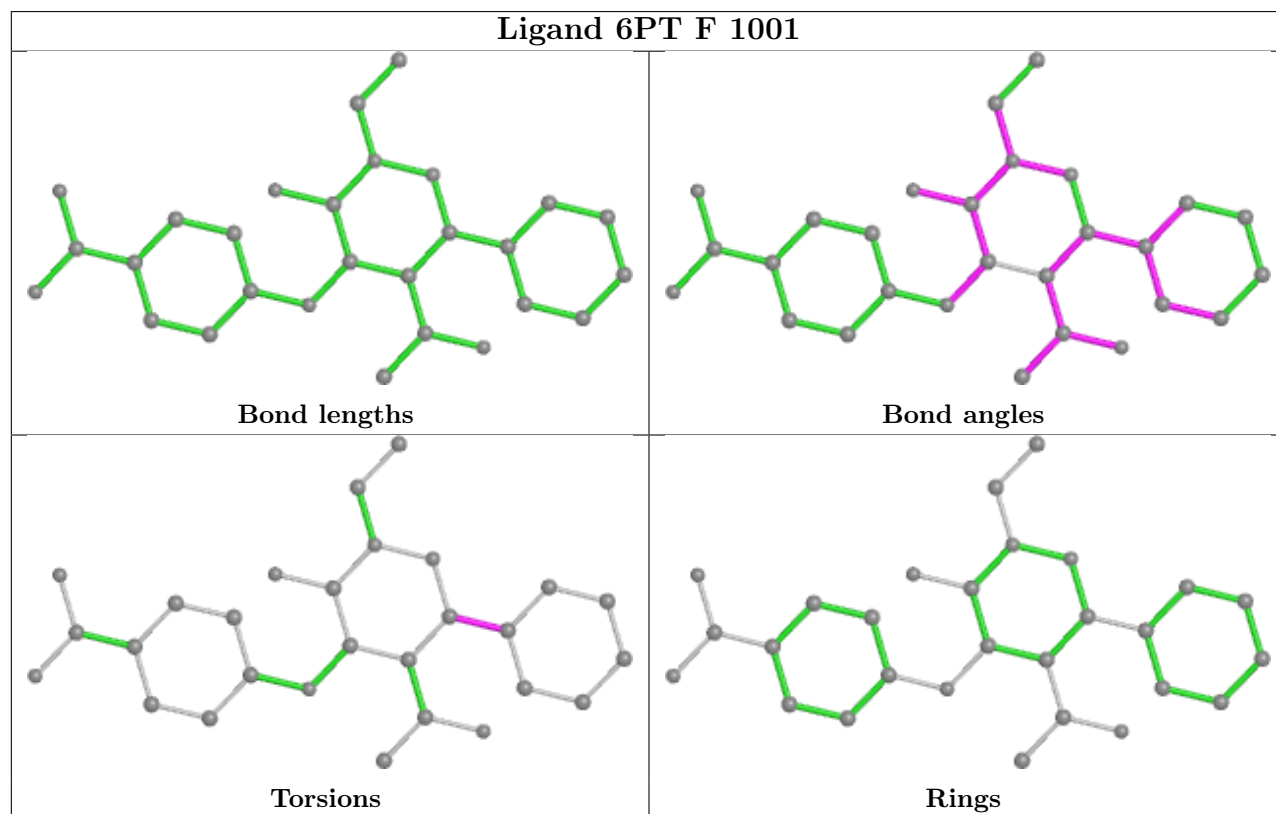
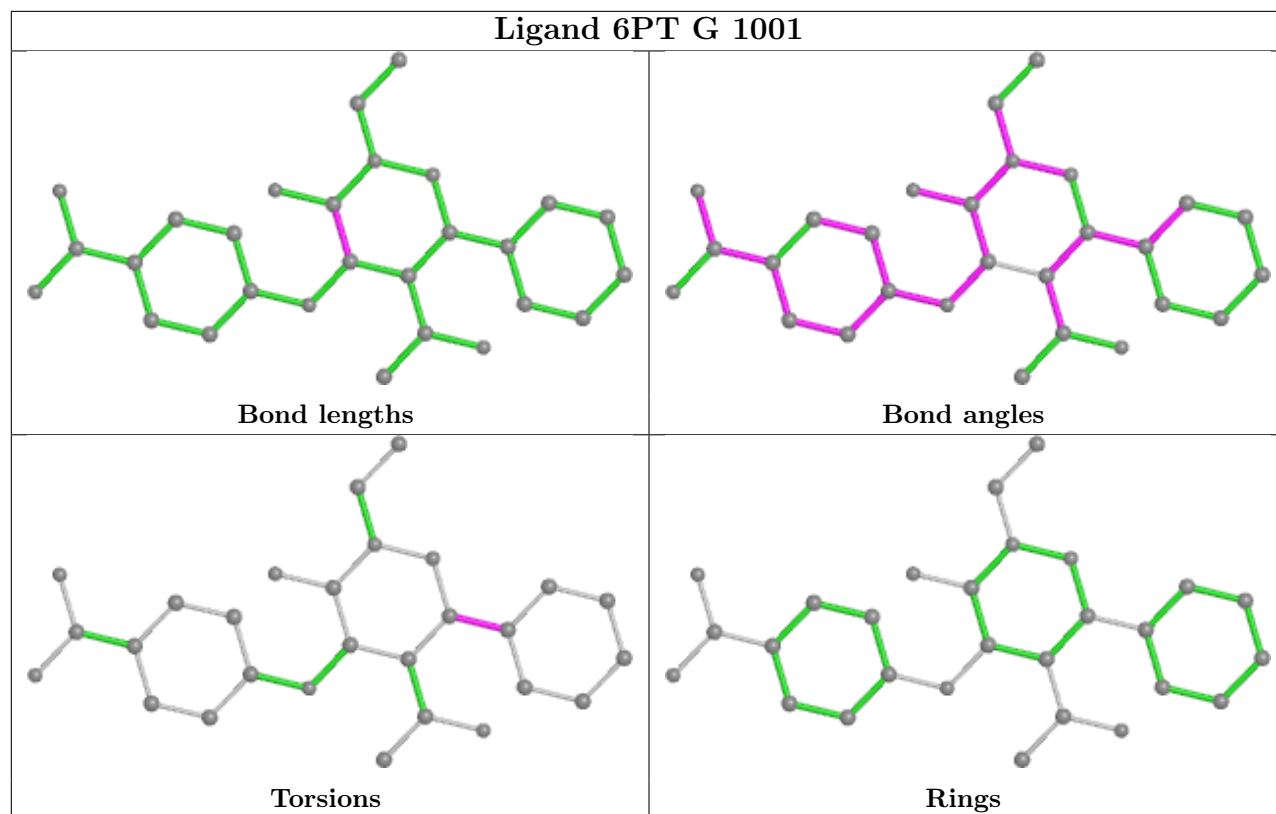
There are no ring outliers.

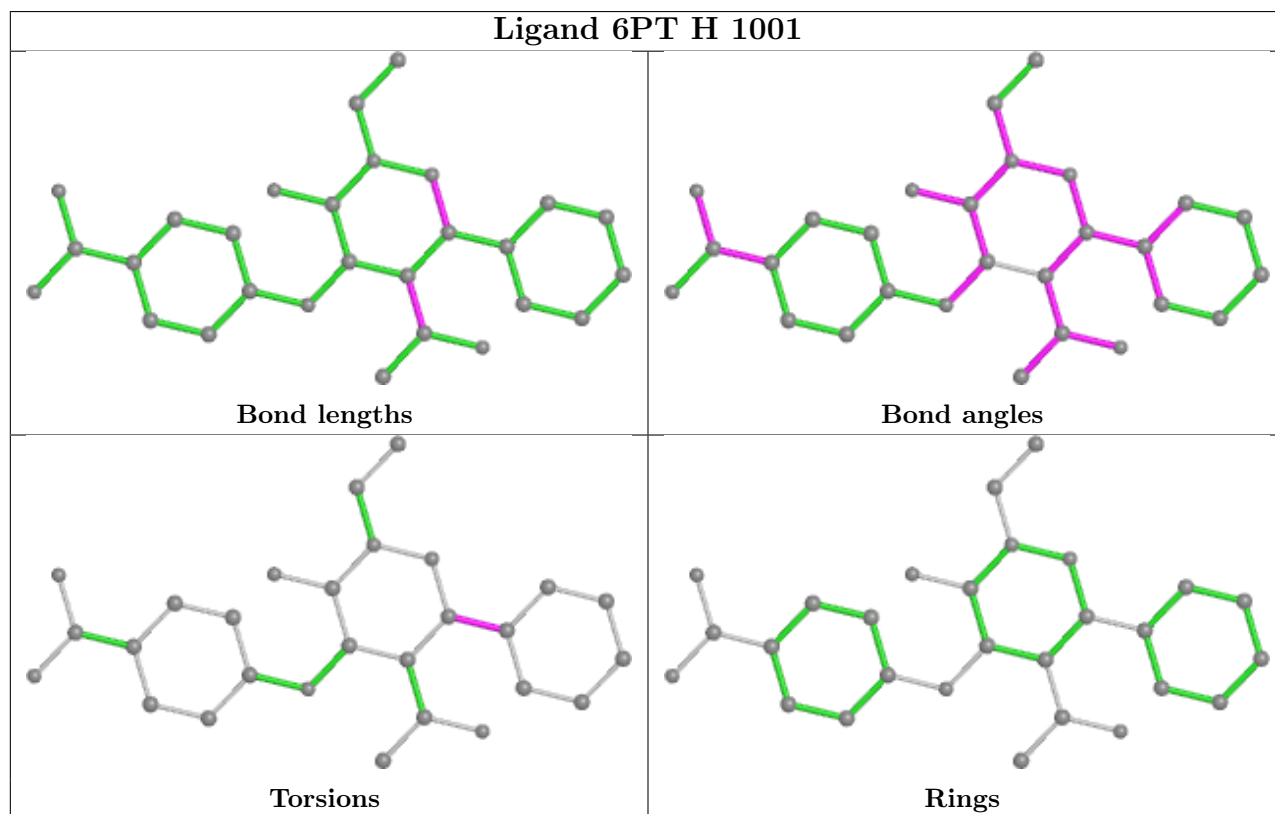
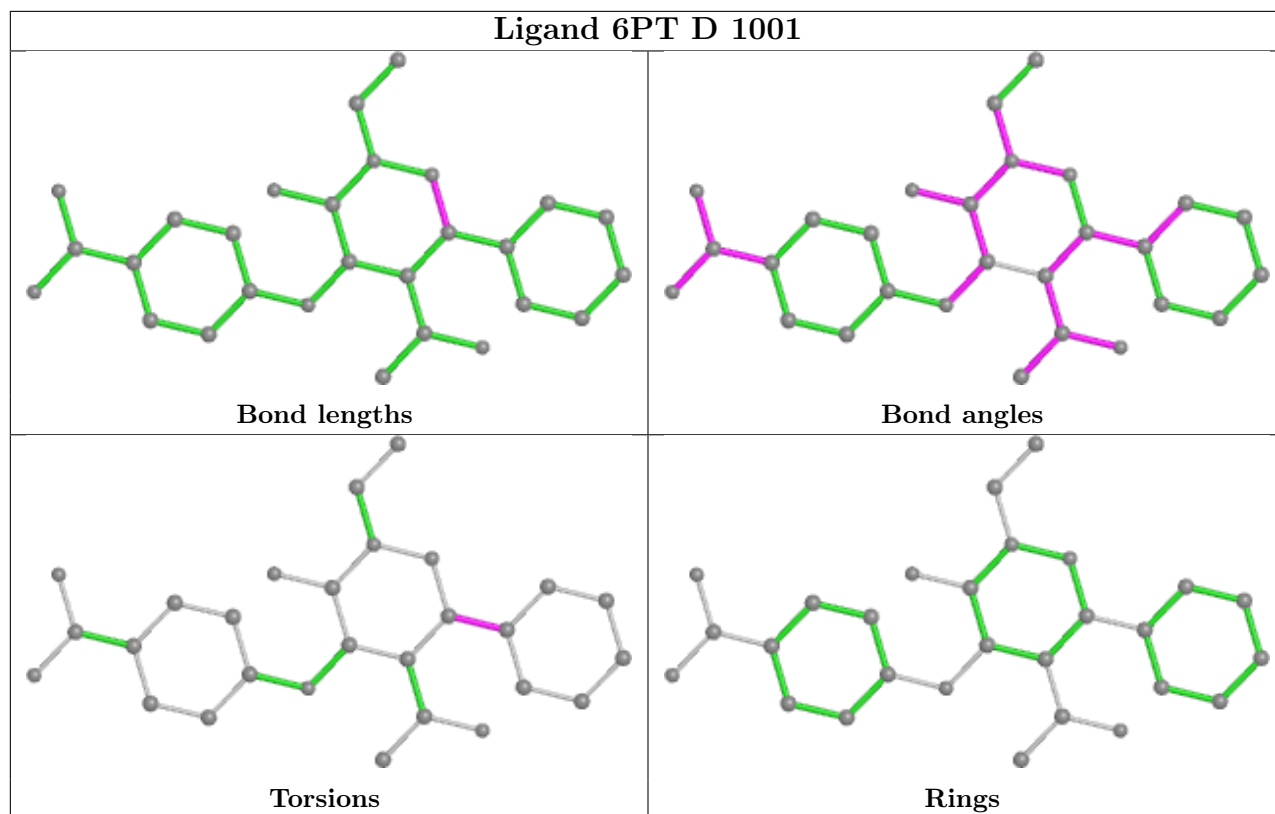
8 monomers are involved in 16 short contacts:

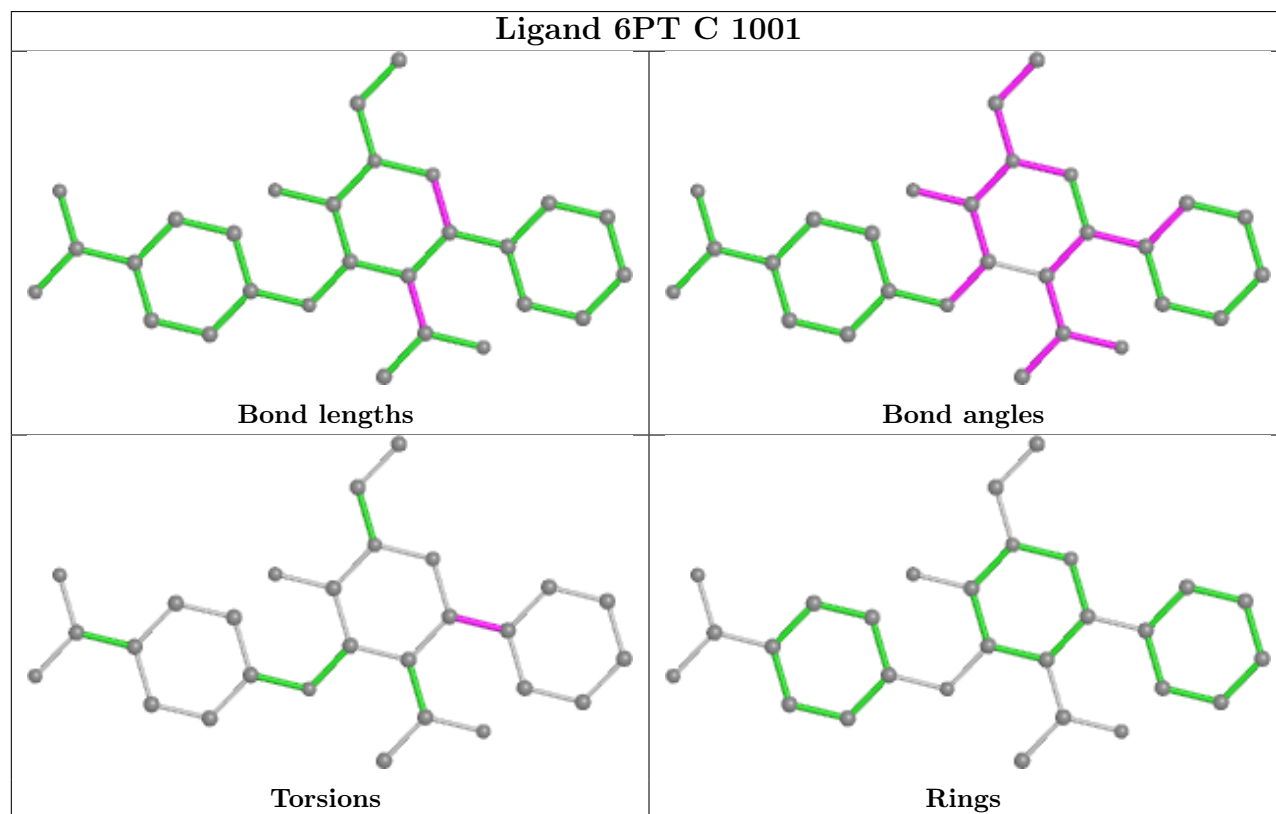
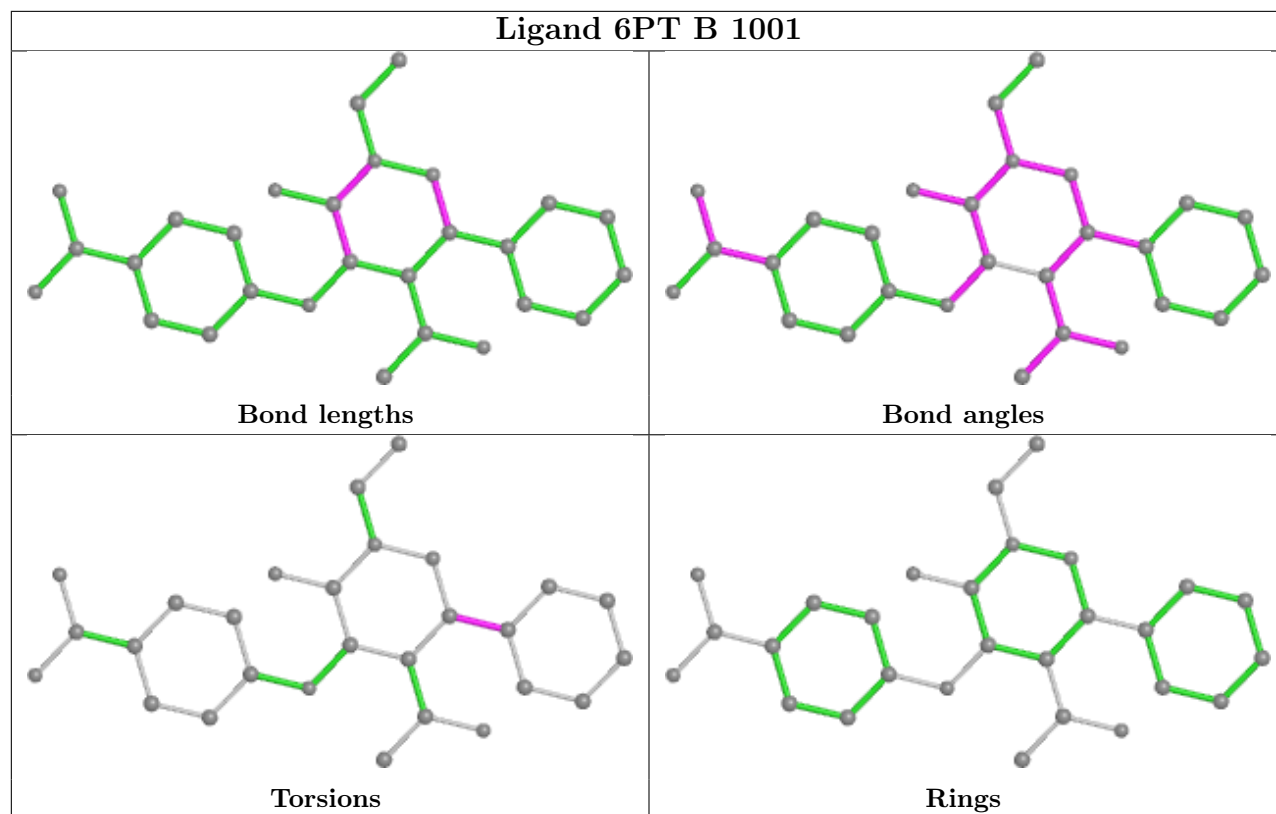
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	1001	6PT	1	0
2	E	1001	6PT	1	0
2	G	1001	6PT	4	0
2	F	1001	6PT	3	0
2	D	1001	6PT	2	0
2	H	1001	6PT	1	0
2	B	1001	6PT	3	0
2	C	1001	6PT	1	0

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









5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	322/326 (98%)	-0.12	6 (1%) 66 62	22, 36, 59, 82	0
1	B	326/326 (100%)	-0.32	2 (0%) 89 88	15, 27, 48, 63	0
1	C	321/326 (98%)	-0.27	3 (0%) 84 82	17, 26, 44, 55	0
1	D	326/326 (100%)	-0.35	2 (0%) 89 88	17, 26, 45, 65	0
1	E	321/326 (98%)	-0.34	4 (1%) 79 76	14, 24, 42, 52	0
1	F	326/326 (100%)	-0.05	14 (4%) 35 29	22, 37, 63, 83	0
1	G	322/326 (98%)	-0.36	5 (1%) 72 68	16, 27, 43, 63	0
1	H	326/326 (100%)	-0.17	7 (2%) 63 58	17, 30, 50, 71	0
All	All	2590/2608 (99%)	-0.25	43 (1%) 70 66	14, 29, 52, 83	0

All (43) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	411	PRO	5.1
1	H	86	THR	4.9
1	H	295	SER	4.3
1	F	353	GLU	3.9
1	F	86	THR	3.5
1	C	411	PRO	3.3
1	A	356	PRO	3.2
1	E	87	GLU	3.2
1	F	410	ILE	3.2
1	F	361	HIS	3.1
1	F	87	GLU	3.0
1	A	353	GLU	2.9
1	H	294	SER	2.8
1	G	301	ASP	2.7
1	C	362	ASN	2.7
1	H	363	ALA	2.7

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	B	295	SER	2.6
1	C	87	GLU	2.6
1	F	362	ASN	2.5
1	D	295	SER	2.5
1	E	301	ASP	2.5
1	F	354	ILE	2.4
1	H	87	GLU	2.4
1	G	288	GLU	2.4
1	F	155	ALA	2.4
1	B	87	GLU	2.3
1	F	348	ARG	2.3
1	G	87	GLU	2.2
1	D	86	THR	2.2
1	A	105	HIS	2.2
1	A	90	ASP	2.2
1	E	349	GLU	2.1
1	E	361	HIS	2.1
1	A	349	GLU	2.1
1	F	375	TYR	2.1
1	G	88	GLN	2.1
1	F	349	GLU	2.1
1	G	302	ASN	2.1
1	A	292	VAL	2.1
1	H	91	VAL	2.0
1	H	293	THR	2.0
1	F	350	ARG	2.0
1	F	356	PRO	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum,

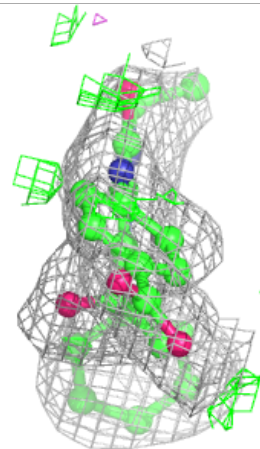
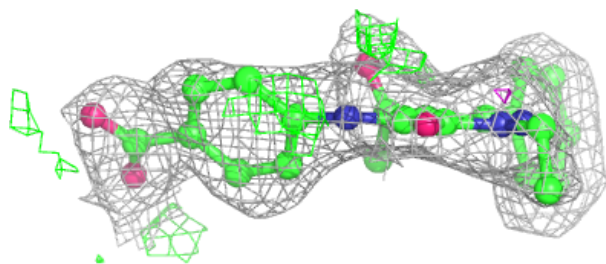
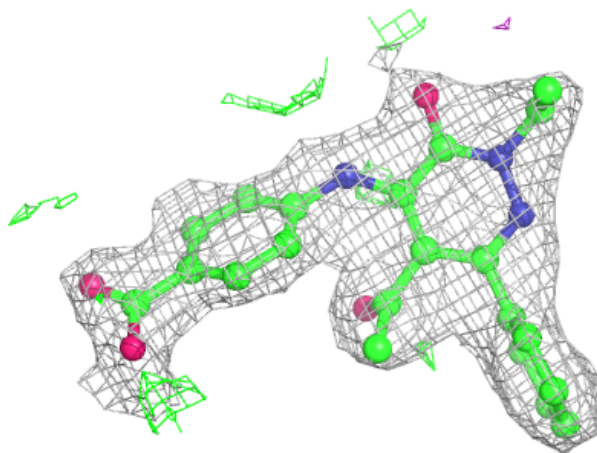
median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
4	MG	E	1003	1/1	0.85	0.38	38,38,38,38	0
4	MG	H	1003	1/1	0.87	0.62	38,38,38,38	0
4	MG	A	1003	1/1	0.89	0.41	42,42,42,42	0
2	6PT	F	1001	28/28	0.93	0.17	29,30,31,32	0
2	6PT	A	1001	28/28	0.93	0.18	28,30,31,32	0
2	6PT	C	1001	28/28	0.93	0.18	27,29,30,31	0
2	6PT	E	1001	28/28	0.93	0.19	27,29,30,31	0
4	MG	D	1003	1/1	0.94	0.63	34,34,34,34	0
2	6PT	B	1001	28/28	0.94	0.18	28,29,29,29	0
4	MG	G	1003	1/1	0.94	0.66	35,35,35,35	0
4	MG	B	1003	1/1	0.94	0.64	37,37,37,37	0
2	6PT	H	1001	28/28	0.95	0.14	28,29,30,31	0
2	6PT	D	1001	28/28	0.95	0.18	28,29,30,31	0
2	6PT	G	1001	28/28	0.95	0.20	27,28,30,30	0
4	MG	C	1003	1/1	0.95	0.59	38,38,38,38	0
4	MG	F	1003	1/1	0.96	0.56	37,37,37,37	0
3	ZN	H	1002	1/1	0.97	0.08	36,36,36,36	0
3	ZN	C	1002	1/1	0.98	0.13	32,32,32,32	0
3	ZN	D	1002	1/1	0.98	0.10	33,33,33,33	0
3	ZN	G	1002	1/1	0.98	0.12	26,26,26,26	0
3	ZN	A	1002	1/1	0.98	0.10	37,37,37,37	0
3	ZN	E	1002	1/1	0.99	0.10	31,31,31,31	0
3	ZN	F	1002	1/1	0.99	0.10	37,37,37,37	0
3	ZN	B	1002	1/1	0.99	0.12	29,29,29,29	0

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

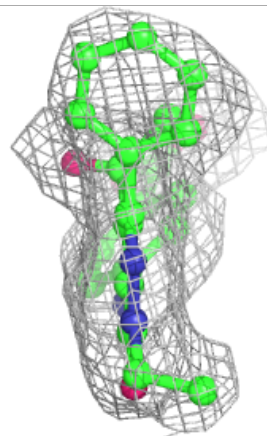
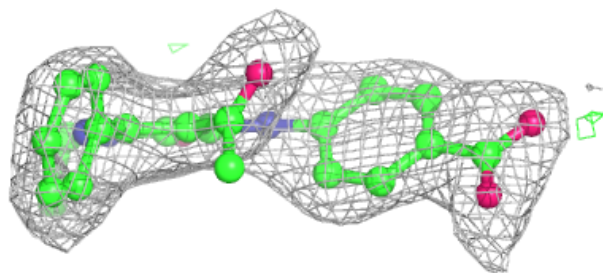
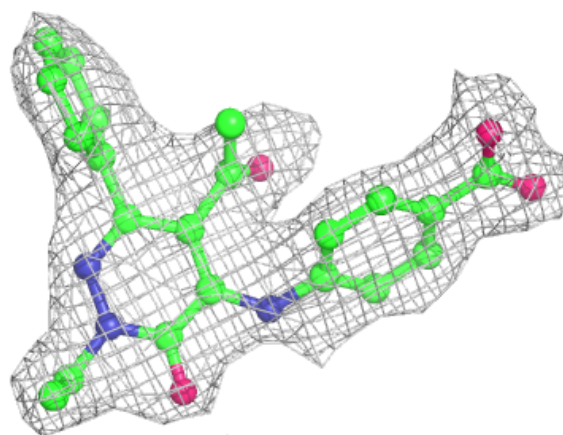
Electron density around 6PT F 1001:

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



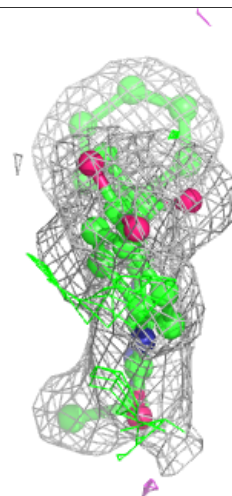
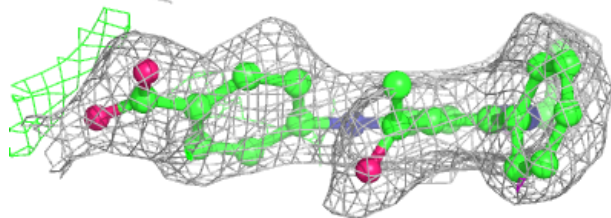
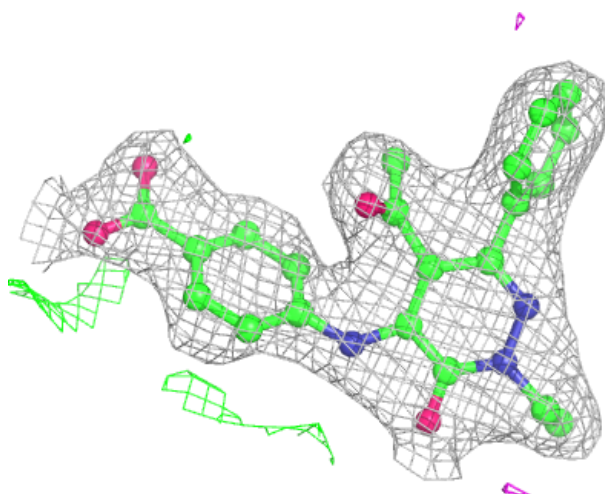
Electron density around 6PT A 1001:

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



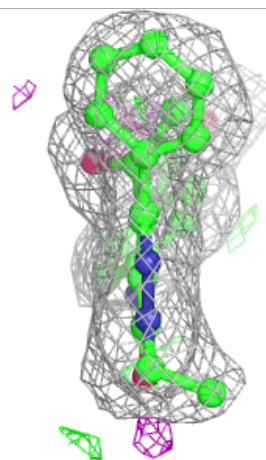
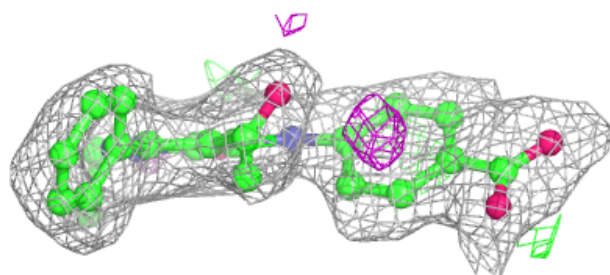
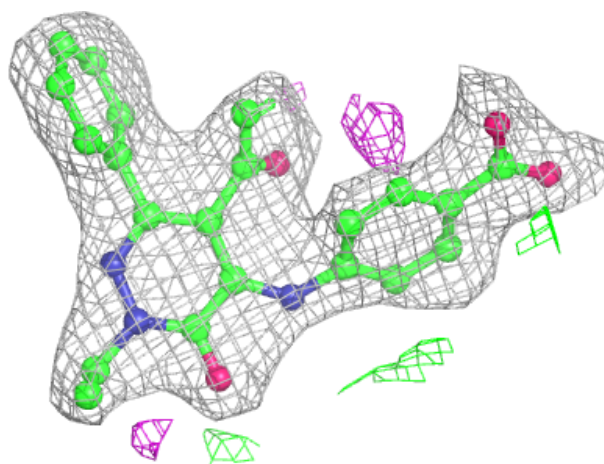
Electron density around 6PT C 1001:

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



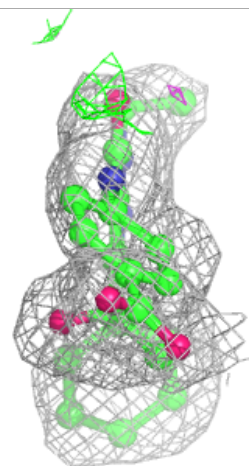
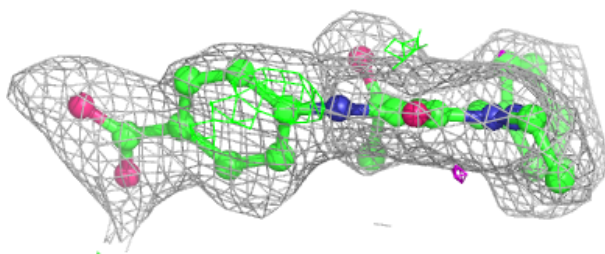
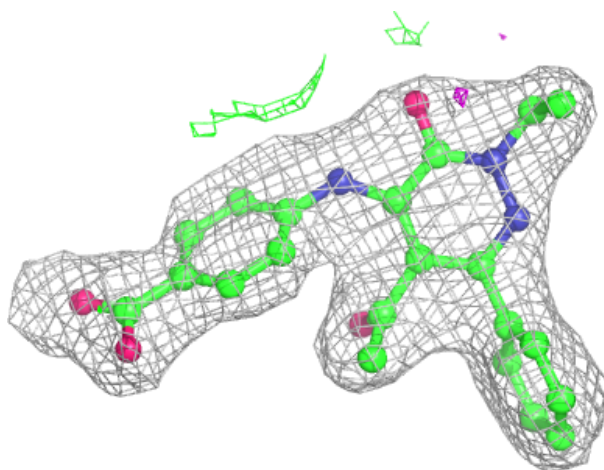
Electron density around 6PT E 1001:

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



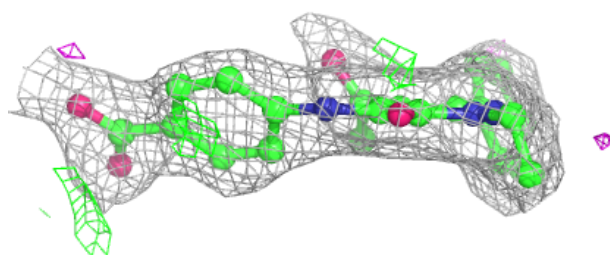
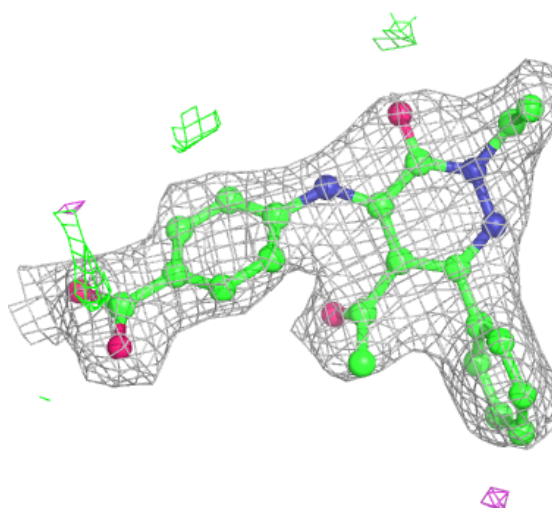
Electron density around 6PT B 1001:

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



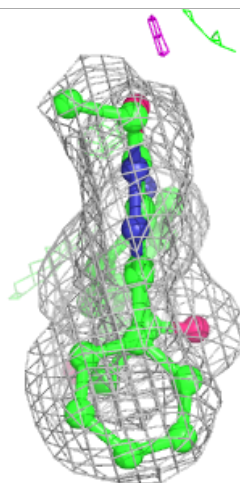
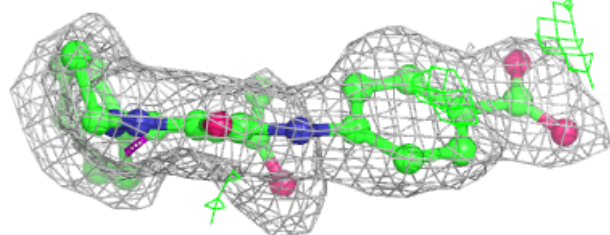
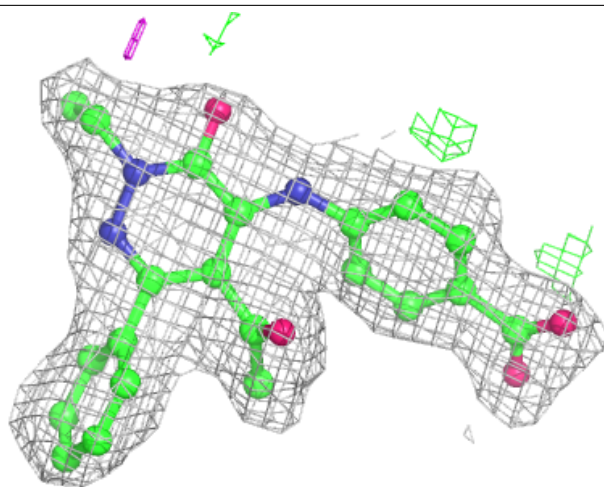
Electron density around 6PT H 1001:

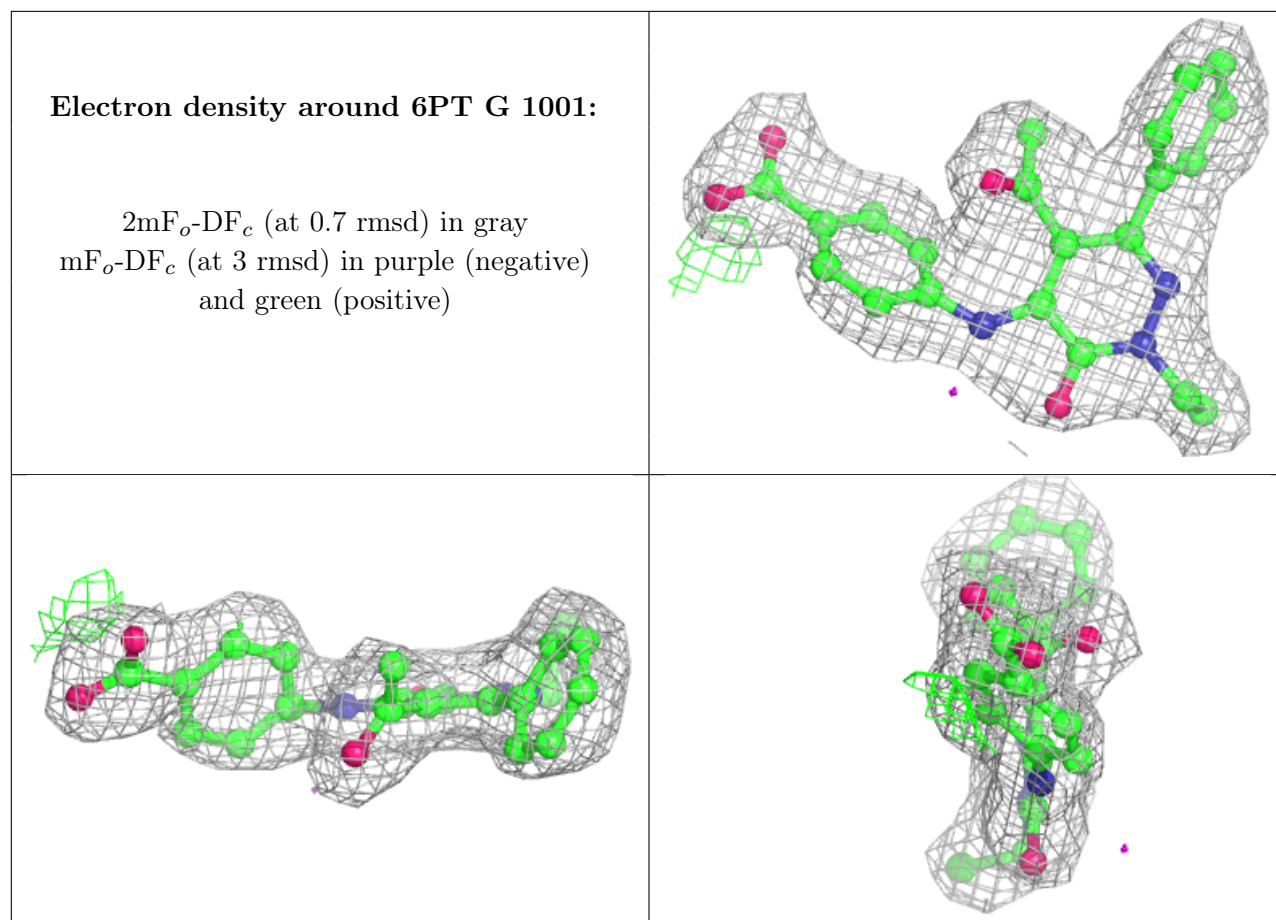
$2mF_o-DF_c$ (at 0.7 rmsd) in gray
 mF_o-DF_c (at 3 rmsd) in purple (negative)
and green (positive)



Electron density around 6PT D 1001:

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





6.5 Other polymers [i](#)

There are no such residues in this entry.