Full wwPDB X-ray Structure Validation Report ⓘ

Sep 16, 2025 – 04:08 PM EDT

PDB ID	:	9Y9Y / pdb_00009y9y
Title	:	Crystal structure of DNA integrity scanning protein DisA from Mycobacterium tuberculosis in complex with cyclic di-AMP and bromide
Authors	:	Seattle Structural Genomics Center for Infectious Disease (SSGCID)
Deposited on	:	2025-09-15
Resolution	:	3.03 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:

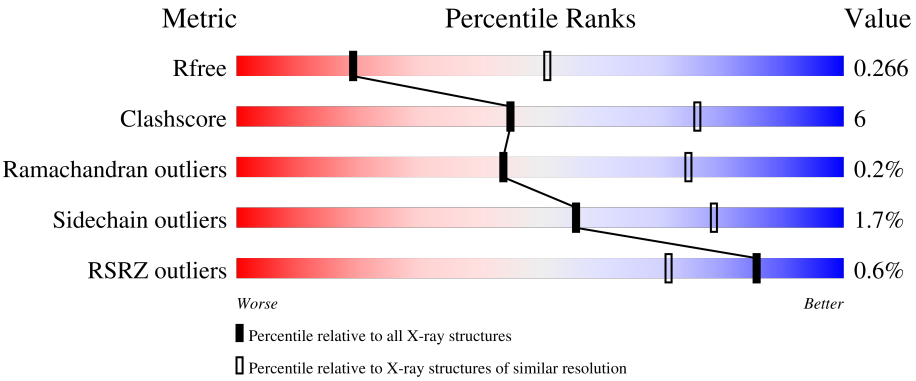
MolProbity	:	4-5-2 with Phenix2.0rc1
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.03 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}	164625	3418 (3.08-3.00)
Clashscore	180529	3811 (3.08-3.00)
Ramachandran outliers	177936	3656 (3.08-3.00)
Sidechain outliers	177891	3658 (3.08-3.00)
RSRZ outliers	164620	3430 (3.08-3.00)

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 <=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	360	83% 13% • •
1	B	360	82% 14% •
1	C	360	% 80% 11% • 9%
1	D	360	2% 83% 12% • •
1	E	360	84% 12% •

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	360	
1	G	360	
1	H	360	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 20018 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 DNA integrity scanning protein DisA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	350	Total	C	N	O	S	0	0	0
			2674	1652	493	522	7			
1	B	350	Total	C	N	O	S	0	0	0
			2680	1655	496	522	7			
1	C	329	Total	C	N	O	S	0	0	0
			2464	1522	455	480	7			
1	D	346	Total	C	N	O	S	0	0	0
			2593	1606	473	507	7			
1	E	349	Total	C	N	O	S	0	0	0
			2661	1642	492	520	7			
1	F	348	Total	C	N	O	S	0	0	0
			2650	1639	485	519	7			
1	G	349	Total	C	N	O	S	0	0	0
			2643	1633	486	517	7			
1	H	205	Total	C	N	O	S	0	0	0
			1463	898	272	289	4			

There are 64 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-3	MET	-	initiating methionine	UNP P9WNW5
A	-2	ALA	-	expression tag	UNP P9WNW5
A	-1	HIS	-	expression tag	UNP P9WNW5
A	0	HIS	-	expression tag	UNP P9WNW5
A	1	HIS	-	expression tag	UNP P9WNW5
A	2	HIS	-	expression tag	UNP P9WNW5
A	3	HIS	-	expression tag	UNP P9WNW5
A	4	HIS	-	expression tag	UNP P9WNW5
B	-3	MET	-	initiating methionine	UNP P9WNW5
B	-2	ALA	-	expression tag	UNP P9WNW5
B	-1	HIS	-	expression tag	UNP P9WNW5
B	0	HIS	-	expression tag	UNP P9WNW5
B	1	HIS	-	expression tag	UNP P9WNW5

Continued on next page...

Continued from previous page...

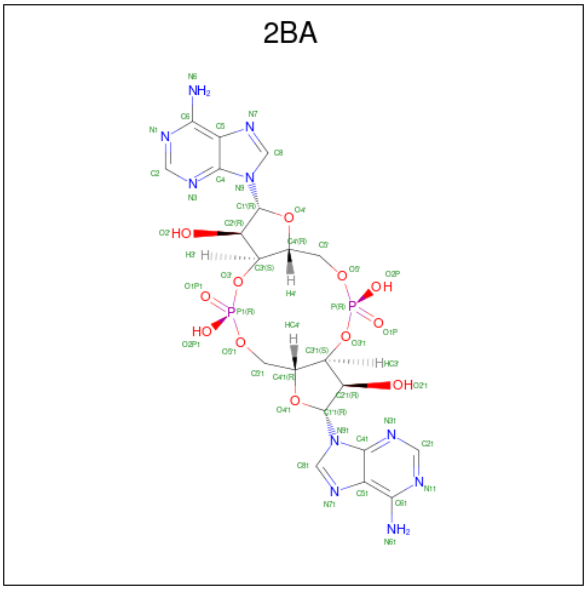
Chain	Residue	Modelled	Actual	Comment	Reference
B	2	HIS	-	expression tag	UNP P9WNW5
B	3	HIS	-	expression tag	UNP P9WNW5
B	4	HIS	-	expression tag	UNP P9WNW5
C	-3	MET	-	initiating methionine	UNP P9WNW5
C	-2	ALA	-	expression tag	UNP P9WNW5
C	-1	HIS	-	expression tag	UNP P9WNW5
C	0	HIS	-	expression tag	UNP P9WNW5
C	1	HIS	-	expression tag	UNP P9WNW5
C	2	HIS	-	expression tag	UNP P9WNW5
C	3	HIS	-	expression tag	UNP P9WNW5
C	4	HIS	-	expression tag	UNP P9WNW5
D	-3	MET	-	initiating methionine	UNP P9WNW5
D	-2	ALA	-	expression tag	UNP P9WNW5
D	-1	HIS	-	expression tag	UNP P9WNW5
D	0	HIS	-	expression tag	UNP P9WNW5
D	1	HIS	-	expression tag	UNP P9WNW5
D	2	HIS	-	expression tag	UNP P9WNW5
D	3	HIS	-	expression tag	UNP P9WNW5
D	4	HIS	-	expression tag	UNP P9WNW5
E	-3	MET	-	initiating methionine	UNP P9WNW5
E	-2	ALA	-	expression tag	UNP P9WNW5
E	-1	HIS	-	expression tag	UNP P9WNW5
E	0	HIS	-	expression tag	UNP P9WNW5
E	1	HIS	-	expression tag	UNP P9WNW5
E	2	HIS	-	expression tag	UNP P9WNW5
E	3	HIS	-	expression tag	UNP P9WNW5
E	4	HIS	-	expression tag	UNP P9WNW5
F	-3	MET	-	initiating methionine	UNP P9WNW5
F	-2	ALA	-	expression tag	UNP P9WNW5
F	-1	HIS	-	expression tag	UNP P9WNW5
F	0	HIS	-	expression tag	UNP P9WNW5
F	1	HIS	-	expression tag	UNP P9WNW5
F	2	HIS	-	expression tag	UNP P9WNW5
F	3	HIS	-	expression tag	UNP P9WNW5
F	4	HIS	-	expression tag	UNP P9WNW5
G	-3	MET	-	initiating methionine	UNP P9WNW5
G	-2	ALA	-	expression tag	UNP P9WNW5
G	-1	HIS	-	expression tag	UNP P9WNW5
G	0	HIS	-	expression tag	UNP P9WNW5
G	1	HIS	-	expression tag	UNP P9WNW5
G	2	HIS	-	expression tag	UNP P9WNW5
G	3	HIS	-	expression tag	UNP P9WNW5

Continued on next page...

Continued from previous page...

Chain	Residue	Modelled	Actual	Comment	Reference
G	4	HIS	-	expression tag	UNP P9WNW5
H	-3	MET	-	initiating methionine	UNP P9WNW5
H	-2	ALA	-	expression tag	UNP P9WNW5
H	-1	HIS	-	expression tag	UNP P9WNW5
H	0	HIS	-	expression tag	UNP P9WNW5
H	1	HIS	-	expression tag	UNP P9WNW5
H	2	HIS	-	expression tag	UNP P9WNW5
H	3	HIS	-	expression tag	UNP P9WNW5
H	4	HIS	-	expression tag	UNP P9WNW5

- Molecule 2 is (2R,3R,3aS,5R,7aR,9R,10R,10aS,12R,14aR)-2,9-bis(6-amino-9H-purin-9-yl)octahydro-2H,7H-difuro[3,2-d:3',2'-j][1,3,7,9,2,8]tetraoxadiphosphacyclododecine-3,5,1 0,12-tetrol 5,12-dioxide (CCD ID: 2BA) (formula: $C_{20}H_{24}N_{10}O_{12}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
2	A	1	Total	C	N	O	P	0	0
			44	20	10	12	2		
2	E	1	Total	C	N	O	P	0	0
			44	20	10	12	2		
2	G	1	Total	C	N	O	P	0	0
			44	20	10	12	2		
2	H	1	Total	C	N	O	P	0	0
			44	20	10	12	2		

- Molecule 3 is BROMIDE ION (CCD ID: BR) (formula: Br) (labeled as "Ligand of Interest" by depositor).

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

- Molecule 4 is CHLORIDE ION (CCD ID: CL) (formula: Cl).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	B	1	Total Cl 1 1	0	0
4	C	1	Total Cl 1 1	0	0
4	E	1	Total Cl 1 1	0	0

- Molecule 5 is water.

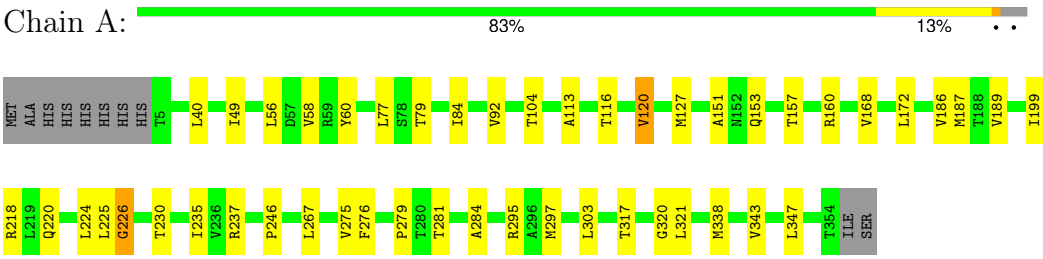
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total O 1 1	0	0
5	E	1	Total O 1 1	0	0
5	F	1	Total O 1 1	0	0

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.

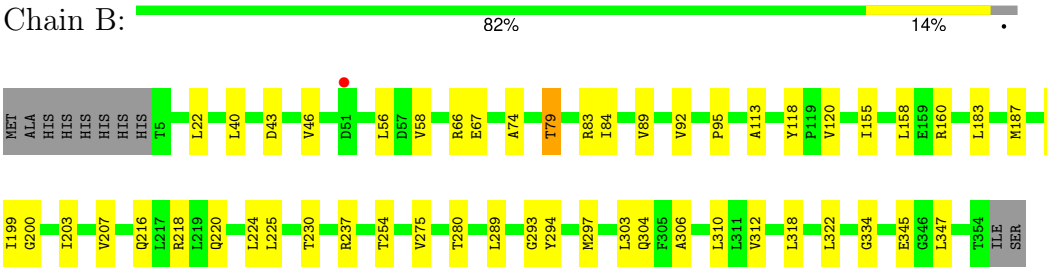
• Molecule 1: DNA integrity scanning protein DisA

Chain A:



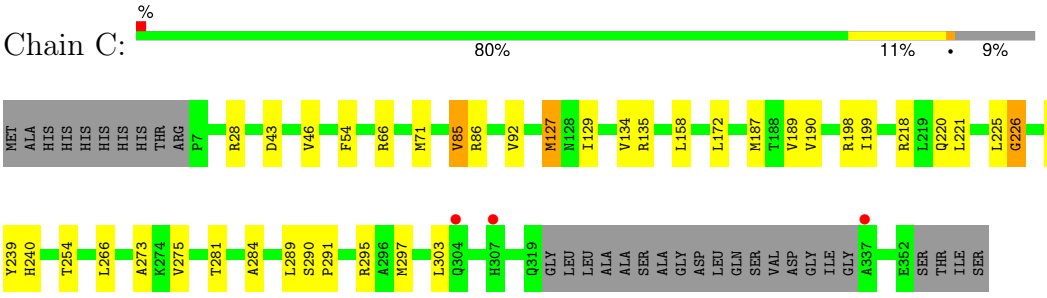
• Molecule 1: DNA integrity scanning protein DisA

Chain B:



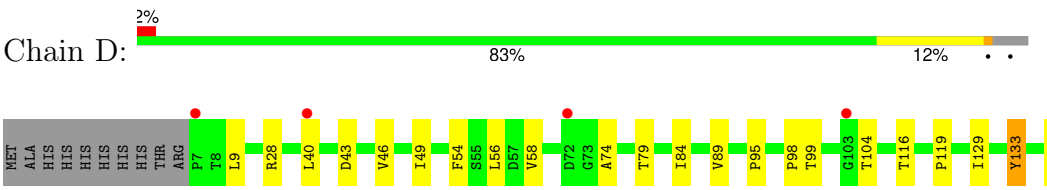
• Molecule 1: DNA integrity scanning protein DisA

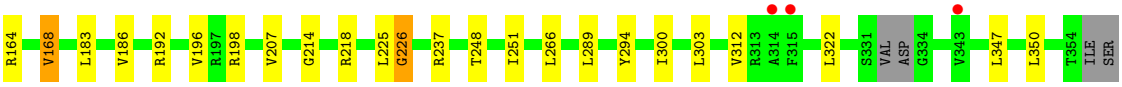
Chain C:



• Molecule 1: DNA integrity scanning protein DisA

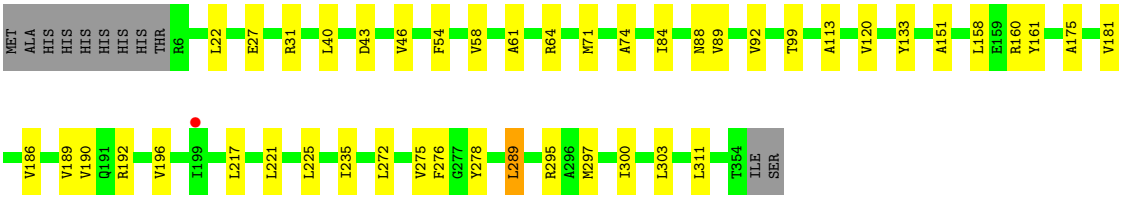
Chain D:





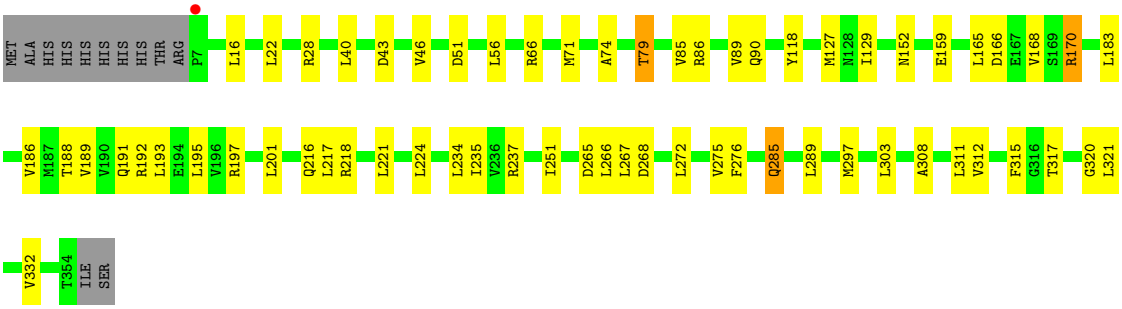
• Molecule 1: DNA integrity scanning protein DisA

Chain E:



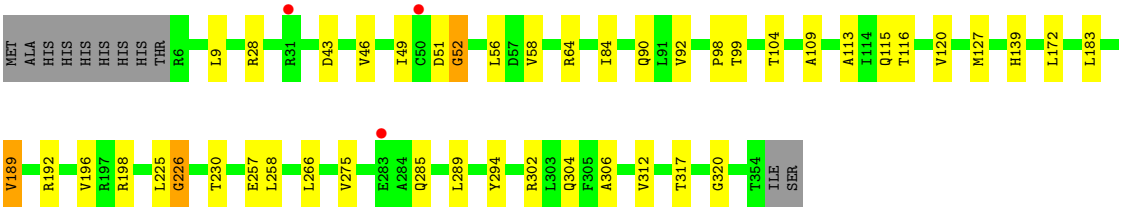
• Molecule 1: DNA integrity scanning protein DisA

Chain F:



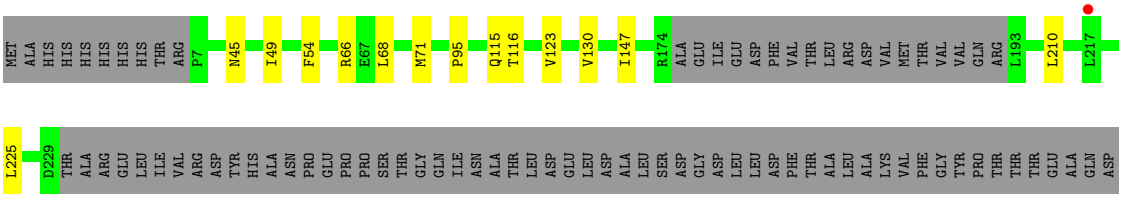
• Molecule 1: DNA integrity scanning protein DisA

Chain G:



• Molecule 1: DNA integrity scanning protein DisA

Chain H:



SER THR LEU SER PRO ARG GLY TYR ARG ALA MET ALA GLY ILE PRO ARG LEU GLN PHE ALA HIS ALA ASP LEU LEU VAL ARG ALA PHE GLY THR LEU GLN GLY LEU LEU ALA ALA SER ALA GLY ASP LEU GLN SER VAL ASP GLY ILE GLY ALA MET TRP ALA ARG HIS VAL ARG GLU GLY

LEU SER GLN LEU ALA GLU SER THR ILE SER

4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	279.21Å 74.64Å 197.79Å 90.00° 125.89° 90.00°	Depositor
Resolution (Å)	48.83 – 3.03 48.83 – 3.03	Depositor EDS
% Data completeness (in resolution range)	99.4 (48.83-3.03) 99.4 (48.83-3.03)	Depositor EDS
R_{merge}	0.13	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.93 (at 3.01Å)	Xtriage
Refinement program	PHENIX (2.0_5806: ???)	Depositor
R, R_{free}	0.230 , 0.268 0.230 , 0.266	Depositor DCC
R_{free} test set	3215 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	86.5	Xtriage
Anisotropy	0.399	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 54.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	20018	wwPDB-VP
Average B, all atoms (Å^2)	105.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.21% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 2BA, BR, CL

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	0.12	0/2708	0.32	0/3676
1	B	0.12	0/2714	0.31	0/3683
1	C	0.11	0/2494	0.30	0/3389
1	D	0.11	0/2625	0.31	0/3567
1	E	0.12	0/2694	0.32	0/3657
1	F	0.13	0/2684	0.35	0/3644
1	G	0.11	0/2676	0.31	0/3635
1	H	0.11	0/1476	0.25	0/2009
All	All	0.12	0/20071	0.31	0/27260

There are no bond length outliers.

There are no bond angle outliers.

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	2674	0	2687	38	0
1	B	2680	0	2698	36	0
1	C	2464	0	2427	29	0
1	D	2593	0	2570	29	0
1	E	2661	0	2673	27	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	F	2650	0	2657	44	0
1	G	2643	0	2642	38	0
1	H	1463	0	1393	13	0
2	A	44	0	23	0	0
2	E	44	0	23	0	0
2	G	44	0	23	1	0
2	H	44	0	23	0	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	B	1	0	0	0	0
4	C	1	0	0	0	0
4	E	1	0	0	0	0
5	A	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
All	All	20018	0	19839	231	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 6.

All (231) 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:56:LEU:HD13	1:A:58:VAL:HG22	1.53	0.89
1:F:127:MET:HE2	1:G:28:ARG:HH11	1.44	0.81
1:G:113:ALA:HB2	1:G:120:VAL:HG22	1.63	0.81
1:A:220:GLN:O	1:A:224:LEU:HD12	1.82	0.79
1:G:192:ARG:O	1:G:196:VAL:HG23	1.83	0.78
1:A:56:LEU:HD11	1:A:84:ILE:HG22	1.68	0.76
1:B:22:LEU:HD11	1:B:40:LEU:HD21	1.69	0.74
1:F:22:LEU:HD11	1:F:40:LEU:HD21	1.69	0.74
1:C:172:LEU:HD22	1:C:189:VAL:HG21	1.70	0.73
1:D:104:THR:HG22	1:G:90:GLN:HG3	1.71	0.72
1:A:40:LEU:HD23	1:A:77:LEU:HD12	1.73	0.71
1:F:168:VAL:HG21	1:F:188:THR:HG22	1.72	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:192:ARG:O	1:E:196:VAL:HG23	1.94	0.68
1:F:127:MET:HE1	1:G:28:ARG:HA	1.78	0.65
1:A:297:MET:SD	1:A:321:LEU:HD21	2.37	0.65
1:B:297:MET:HE3	1:B:303:LEU:HD21	1.80	0.64
1:D:56:LEU:HD13	1:D:58:VAL:HG22	1.80	0.63
1:C:172:LEU:HD23	1:C:295:ARG:HH12	1.63	0.63
1:D:95:PRO:HB3	1:G:92:VAL:HG11	1.80	0.63
1:B:200:GLY:HA3	1:B:225:LEU:HD11	1.80	0.63
1:F:159:GLU:HG2	1:F:224:LEU:HD21	1.81	0.63
1:G:56:LEU:CD1	1:G:84:ILE:HG23	2.28	0.63
1:G:317:THR:HG23	1:G:320:GLY:H	1.63	0.63
1:H:49:ILE:HD13	1:H:116:THR:HG22	1.82	0.62
1:C:43:ASP:OD1	1:C:46:VAL:HG23	2.00	0.62
1:G:109:ALA:O	1:G:120:VAL:HG21	2.00	0.61
1:C:92:VAL:HG13	1:C:92:VAL:O	2.00	0.61
1:B:95:PRO:HB3	1:E:92:VAL:HG21	1.82	0.61
1:E:161:TYR:HB3	1:E:196:VAL:HG22	1.82	0.61
1:A:317:THR:HG23	1:A:320:GLY:H	1.65	0.61
1:A:160:ARG:HH21	1:B:224:LEU:HD21	1.66	0.60
1:F:183:LEU:HD23	1:F:289:LEU:HG	1.83	0.60
1:F:191:GLN:O	1:F:195:LEU:HD22	2.01	0.60
1:F:218:ARG:NH2	1:F:221:LEU:HD23	2.15	0.60
1:D:322:LEU:HD23	1:D:347:LEU:HB3	1.84	0.59
1:E:300:ILE:HG22	1:E:303:LEU:HD23	1.83	0.59
1:E:158:LEU:HD21	1:E:225:LEU:CD2	2.33	0.59
1:E:92:VAL:O	1:E:92:VAL:HG13	2.03	0.58
1:A:157:THR:HG21	1:B:216:GLN:OE1	2.03	0.58
1:F:317:THR:HG23	1:F:320:GLY:H	1.68	0.58
1:D:198:ARG:CZ	1:D:266:LEU:HD11	2.34	0.58
1:A:40:LEU:CD2	1:A:77:LEU:HD12	2.33	0.58
1:C:281:THR:HG23	1:C:284:ALA:H	1.69	0.57
1:C:172:LEU:HD23	1:C:295:ARG:NH1	2.19	0.57
1:E:278:TYR:OH	1:E:289:LEU:HD11	2.03	0.57
1:C:92:VAL:HG22	1:H:95:PRO:HB3	1.87	0.56
1:F:189:VAL:O	1:F:193:LEU:HD23	2.05	0.56
1:B:254:THR:HG23	1:B:275:VAL:HG12	1.87	0.56
1:F:74:ALA:O	1:F:89:VAL:HG22	2.05	0.56
1:C:187:MET:HE3	1:C:273:ALA:HA	1.88	0.56
1:F:186:VAL:O	1:F:189:VAL:HG22	2.06	0.56
1:A:297:MET:HE3	1:A:303:LEU:HD21	1.85	0.56
1:A:56:LEU:HD13	1:A:58:VAL:CG2	2.33	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:92:VAL:O	1:B:92:VAL:HG23	2.05	0.56
1:C:198:ARG:CZ	1:C:266:LEU:HD11	2.35	0.56
1:G:98:PRO:O	1:G:99:THR:HG23	2.06	0.56
1:C:254:THR:HG23	1:C:275:VAL:HG12	1.87	0.56
1:F:165:LEU:HD11	1:F:193:LEU:HD22	1.88	0.55
1:G:198:ARG:CZ	1:G:266:LEU:HD11	2.35	0.55
1:B:67:GLU:HB3	1:F:71:MET:HE3	1.87	0.55
1:G:127:MET:HE2	1:H:66:ARG:HH11	1.70	0.55
1:C:289:LEU:HD23	1:C:290:SER:N	2.20	0.55
1:D:49:ILE:HD11	1:D:116:THR:CG2	2.36	0.55
1:F:297:MET:HE3	1:F:303:LEU:HD21	1.89	0.55
1:G:183:LEU:HD23	1:G:285:GLN:HA	1.87	0.55
1:E:22:LEU:HD11	1:E:40:LEU:HD21	1.89	0.55
1:G:104:THR:HG22	2:G:401:2BA:O1P	2.07	0.55
1:D:300:ILE:HB	1:D:303:LEU:HD22	1.89	0.55
1:E:74:ALA:O	1:E:89:VAL:HG22	2.06	0.55
1:A:92:VAL:HG23	1:A:92:VAL:O	2.08	0.54
1:G:49:ILE:HD11	1:G:115:GLN:OE1	2.08	0.54
1:G:46:VAL:HG12	1:G:116:THR:CG2	2.38	0.54
1:A:56:LEU:CD1	1:A:58:VAL:HG22	2.30	0.53
1:D:56:LEU:HD13	1:D:58:VAL:CG2	2.38	0.53
1:G:56:LEU:HD11	1:G:84:ILE:HG23	1.90	0.53
1:B:74:ALA:O	1:B:89:VAL:HG22	2.09	0.53
1:D:300:ILE:HG22	1:D:303:LEU:HD13	1.90	0.53
1:F:159:GLU:CG	1:F:224:LEU:HD21	2.39	0.53
1:C:239:TYR:HD1	1:C:289:LEU:HD22	1.73	0.52
1:F:168:VAL:HG21	1:F:188:THR:CG2	2.36	0.52
1:A:343:VAL:O	1:A:347:LEU:HD22	2.08	0.52
1:C:127:MET:HE1	1:D:28:ARG:HB3	1.91	0.52
1:D:40:LEU:HD12	1:D:119:PRO:HB2	1.91	0.52
1:C:54:PHE:HE2	1:C:71:MET:HE1	1.75	0.52
1:A:49:ILE:HD11	1:A:116:THR:CG2	2.41	0.51
1:H:54:PHE:HE2	1:H:71:MET:HE1	1.76	0.51
1:H:123:VAL:HG22	1:H:130:VAL:HG22	1.93	0.51
1:C:218:ARG:NH2	1:C:221:LEU:HD23	2.25	0.51
1:B:183:LEU:CD1	1:B:289:LEU:HD11	2.41	0.51
1:A:207:VAL:HG22	1:A:217:LEU:HD23	1.92	0.50
1:B:56:LEU:HD12	1:B:84:ILE:O	2.12	0.50
1:F:79:THR:HG23	1:F:118:TYR:CE1	2.46	0.50
1:G:127:MET:HE2	1:H:66:ARG:NH1	2.26	0.50
1:F:127:MET:HE2	1:G:28:ARG:NH1	2.21	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:104:THR:HG22	1:F:90:GLN:OE1	2.12	0.50
1:B:293:GLY:O	1:B:297:MET:HG2	2.11	0.50
1:F:308:ALA:O	1:F:312:VAL:HG23	2.12	0.50
1:E:190:VAL:HG22	1:E:235:ILE:HG21	1.94	0.49
1:E:54:PHE:CE2	1:E:71:MET:HE1	2.47	0.49
1:C:127:MET:HE1	1:D:28:ARG:CB	2.43	0.49
1:D:225:LEU:O	1:D:226:GLY:C	2.56	0.49
1:F:234:LEU:HD12	1:F:235:ILE:N	2.27	0.49
1:H:45:ASN:O	1:H:49:ILE:HD12	2.12	0.49
1:G:49:ILE:O	1:G:49:ILE:HG22	2.12	0.49
1:B:56:LEU:HD13	1:B:58:VAL:HG22	1.94	0.49
1:F:28:ARG:HB3	1:F:66:ARG:HG3	1.93	0.49
1:D:56:LEU:HD12	1:D:84:ILE:O	2.12	0.48
1:F:315:PHE:HD2	1:F:321:LEU:HD23	1.78	0.48
1:B:294:TYR:CE2	1:B:312:VAL:HG11	2.48	0.48
1:C:158:LEU:HD13	1:C:199:ILE:CG2	2.43	0.48
1:D:9:LEU:HD21	1:D:139:HIS:HB2	1.95	0.48
1:D:294:TYR:CE2	1:D:312:VAL:HG11	2.48	0.48
1:H:49:ILE:HD11	1:H:115:GLN:HG2	1.95	0.48
1:D:43:ASP:OD1	1:D:46:VAL:HG23	2.12	0.48
1:F:43:ASP:OD1	1:F:46:VAL:HG23	2.13	0.48
1:G:225:LEU:O	1:G:226:GLY:C	2.56	0.48
1:A:151:ALA:HB1	1:A:217:LEU:HD21	1.96	0.47
1:E:272:LEU:O	1:E:275:VAL:HG22	2.13	0.47
1:F:195:LEU:HD13	1:F:266:LEU:HD23	1.96	0.47
1:B:158:LEU:HD13	1:B:199:ILE:HG23	1.96	0.47
1:E:113:ALA:HB2	1:E:120:VAL:HG23	1.97	0.47
1:B:322:LEU:HD23	1:B:347:LEU:HB3	1.97	0.47
1:G:172:LEU:HD22	1:G:189:VAL:HG21	1.97	0.47
1:A:49:ILE:HD11	1:A:116:THR:HG21	1.96	0.47
1:C:225:LEU:O	1:C:226:GLY:C	2.58	0.47
1:F:56:LEU:O	1:F:85:VAL:O	2.33	0.47
1:G:198:ARG:NE	1:G:266:LEU:HD11	2.29	0.47
1:D:207:VAL:HG11	1:D:218:ARG:HE	1.80	0.47
1:A:207:VAL:HG11	1:A:218:ARG:HD2	1.96	0.46
1:A:225:LEU:O	1:A:226:GLY:C	2.57	0.46
1:H:49:ILE:HD13	1:H:116:THR:CG2	2.44	0.46
1:A:157:THR:HG22	1:B:220:GLN:CG	2.45	0.46
1:B:192:ARG:O	1:B:196:VAL:HG23	2.15	0.46
1:C:134:VAL:HG12	1:C:135:ARG:HD3	1.98	0.46
1:G:51:ASP:O	1:G:52:GLY:C	2.59	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:58:VAL:HG11	1:G:64:ARG:HD3	1.98	0.46
1:H:54:PHE:CE2	1:H:71:MET:HE1	2.51	0.46
1:E:221:LEU:HD12	1:E:225:LEU:HD23	1.97	0.46
1:F:237:ARG:CG	1:F:251:ILE:HD11	2.46	0.46
1:C:127:MET:HE3	1:D:28:ARG:HH11	1.81	0.46
1:B:79:THR:HG23	1:B:118:TYR:CE1	2.51	0.45
1:A:237:ARG:HA	1:A:246:PRO:HG3	1.97	0.45
1:F:152:ASN:OD1	1:F:217:LEU:HD21	2.15	0.45
1:D:164:ARG:O	1:D:168:VAL:HG13	2.17	0.45
1:F:272:LEU:O	1:F:275:VAL:HG22	2.16	0.45
1:A:77:LEU:CD2	1:A:84:ILE:HG12	2.46	0.45
1:C:297:MET:HE3	1:C:303:LEU:HD21	1.98	0.45
1:G:258:LEU:HG	1:G:275:VAL:HG11	1.97	0.45
1:E:175:ALA:CB	1:E:181:VAL:HG22	2.47	0.45
1:H:147:ILE:HB	1:H:210:LEU:HD21	1.99	0.45
1:H:225:LEU:HD23	1:H:225:LEU:O	2.17	0.45
1:C:85:VAL:O	1:C:86:ARG:HG3	2.16	0.45
1:C:239:TYR:CD1	1:C:289:LEU:HD22	2.51	0.44
1:F:166:ASP:O	1:F:170:ARG:HD3	2.17	0.44
1:F:183:LEU:HD12	1:F:285:GLN:HA	1.99	0.44
1:B:304:GLN:HG3	1:B:306:ALA:H	1.83	0.44
1:B:113:ALA:HB2	1:B:120:VAL:HG23	2.00	0.44
1:F:275:VAL:HG23	1:F:276:PHE:HD1	1.83	0.44
1:B:183:LEU:HD11	1:B:187:MET:HE3	1.99	0.44
1:C:54:PHE:CE2	1:C:71:MET:HE1	2.52	0.44
1:B:237:ARG:HB3	1:B:294:TYR:CD2	2.53	0.44
1:B:318:LEU:O	1:B:322:LEU:HG	2.17	0.44
1:C:190:VAL:HG22	1:C:235:ILE:HG12	2.00	0.44
1:F:85:VAL:O	1:F:86:ARG:HG3	2.17	0.44
1:G:294:TYR:CE2	1:G:312:VAL:HG11	2.52	0.44
1:G:304:GLN:HG3	1:G:306:ALA:H	1.83	0.44
1:E:61:ALA:HB3	1:E:64:ARG:HG3	2.00	0.43
1:D:54:PHE:CE2	1:H:68:LEU:HD21	2.53	0.43
1:F:315:PHE:CD2	1:F:321:LEU:HD23	2.54	0.43
1:G:183:LEU:CD1	1:G:289:LEU:HD11	2.48	0.43
1:A:49:ILE:O	1:A:92:VAL:HG22	2.19	0.43
1:E:275:VAL:HG23	1:E:276:PHE:HD1	1.82	0.43
1:A:60:TYR:CD1	1:A:60:TYR:C	2.97	0.43
1:D:237:ARG:HG2	1:D:251:ILE:HD11	2.01	0.43
1:D:183:LEU:HD13	1:D:289:LEU:HD11	1.99	0.43
1:E:43:ASP:OD1	1:E:46:VAL:HG23	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:71:MET:HE2	1:E:88:ASN:HB2	1.99	0.42
1:G:120:VAL:HG23	1:G:120:VAL:O	2.18	0.42
1:G:183:LEU:HD13	1:G:289:LEU:HD11	2.01	0.42
1:A:267:LEU:N	1:A:267:LEU:HD12	2.34	0.42
1:B:43:ASP:OD1	1:B:46:VAL:HG23	2.19	0.42
1:F:311:LEU:HD23	1:F:332:VAL:HG21	2.01	0.42
1:A:56:LEU:C	1:A:56:LEU:HD12	2.45	0.42
1:G:257:GLU:HB3	1:G:275:VAL:HG13	2.00	0.42
1:D:158:LEU:HD11	1:D:196:VAL:HG13	2.01	0.42
1:B:95:PRO:HB3	1:E:92:VAL:CG2	2.49	0.42
1:D:207:VAL:HG13	1:D:214:GLY:O	2.20	0.42
1:E:297:MET:CE	1:E:311:LEU:HD12	2.50	0.42
1:B:207:VAL:HG11	1:B:218:ARG:HE	1.85	0.42
1:A:153:GLN:O	1:A:157:THR:HG23	2.20	0.41
1:A:172:LEU:HD22	1:A:189:VAL:HG21	2.02	0.41
1:A:235:ILE:HD11	1:A:295:ARG:HE	1.84	0.41
1:B:155:ILE:CD1	1:B:203:ILE:HD13	2.50	0.41
1:B:183:LEU:HD12	1:B:289:LEU:HD11	2.02	0.41
1:B:280:THR:HG22	1:B:280:THR:O	2.20	0.41
1:D:133:TYR:CD1	1:D:133:TYR:N	2.88	0.41
1:E:160:ARG:HD3	1:F:159:GLU:OE1	2.20	0.41
1:E:297:MET:HE2	1:E:311:LEU:HD12	2.02	0.41
1:F:188:THR:O	1:F:192:ARG:HG2	2.20	0.41
1:A:113:ALA:HB2	1:A:120:VAL:HG23	2.02	0.41
1:B:160:ARG:NH2	1:C:220:GLN:HG2	2.35	0.41
1:C:28:ARG:HB3	1:C:66:ARG:HG3	2.01	0.41
1:D:74:ALA:O	1:D:89:VAL:HG22	2.19	0.41
1:E:151:ALA:HB1	1:E:217:LEU:HD13	2.01	0.41
1:F:197:ARG:O	1:F:201:LEU:HD13	2.20	0.41
1:E:27:GLU:O	1:E:31:ARG:HG3	2.20	0.41
1:G:51:ASP:O	1:G:52:GLY:O	2.39	0.41
1:G:56:LEU:HD11	1:G:84:ILE:HG12	2.01	0.41
1:D:98:PRO:O	1:D:99:THR:HG23	2.20	0.41
1:A:56:LEU:HD12	1:A:84:ILE:O	2.20	0.41
1:A:104:THR:CG2	1:F:90:GLN:OE1	2.69	0.41
1:B:56:LEU:CD1	1:B:58:VAL:HG22	2.51	0.41
1:B:310:LEU:HD13	1:B:334:GLY:HA3	2.02	0.41
1:A:279:PRO:HB2	1:A:281:THR:HG22	2.03	0.41
1:C:238:ASP:OD2	1:C:291:PRO:HB3	2.20	0.41
1:F:51:ASP:HB3	1:F:90:GLN:HB2	2.03	0.41
1:C:236:VAL:O	1:C:240:HIS:HB2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:56:LEU:HD12	1:G:84:ILE:O	2.21	0.41
1:A:127:MET:HE2	1:B:66:ARG:NH1	2.36	0.40
1:B:183:LEU:HD13	1:B:289:LEU:HD11	2.01	0.40
1:E:58:VAL:HG23	1:E:84:ILE:HB	2.03	0.40
1:G:43:ASP:H	1:G:46:VAL:HG22	1.86	0.40
1:G:49:ILE:HG22	1:G:92:VAL:H	1.86	0.40
1:F:265:ASP:O	1:F:267:LEU:O	2.38	0.40
1:G:9:LEU:HD21	1:G:139:HIS:HB2	2.02	0.40
1:D:49:ILE:HD11	1:D:116:THR:HG21	2.03	0.40
1:A:187:MET:HE1	1:A:276:PHE:CG	2.56	0.40
1:F:16:LEU:CD2	1:F:22:LEU:HD13	2.51	0.40
1:A:281:THR:HG23	1:A:284:ALA:H	1.87	0.40
1:E:235:ILE:HD13	1:E:295:ARG:HD2	2.03	0.40
1:F:267:LEU:HD22	1:F:267:LEU:H	1.86	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	348/360 (97%)	343 (99%)	4 (1%)	1 (0%)	37 68
1	B	348/360 (97%)	345 (99%)	3 (1%)	0	100 100
1	C	325/360 (90%)	321 (99%)	3 (1%)	1 (0%)	37 68
1	D	342/360 (95%)	338 (99%)	3 (1%)	1 (0%)	37 68
1	E	347/360 (96%)	343 (99%)	4 (1%)	0	100 100
1	F	346/360 (96%)	337 (97%)	8 (2%)	1 (0%)	37 68
1	G	347/360 (96%)	341 (98%)	4 (1%)	2 (1%)	22 54
1	H	201/360 (56%)	198 (98%)	3 (2%)	0	100 100
All	All	2604/2880 (90%)	2566 (98%)	32 (1%)	6 (0%)	44 74

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	G	52	GLY
1	A	226	GLY
1	C	226	GLY
1	D	226	GLY
1	F	268	ASP
1	G	226	GLY

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	285/295 (97%)	277 (97%)	8 (3%)	38	67
1	B	286/295 (97%)	282 (99%)	4 (1%)	62	81
1	C	253/295 (86%)	250 (99%)	3 (1%)	67	84
1	D	269/295 (91%)	261 (97%)	8 (3%)	36	66
1	E	283/295 (96%)	278 (98%)	5 (2%)	54	77
1	F	282/295 (96%)	277 (98%)	5 (2%)	54	77
1	G	279/295 (95%)	276 (99%)	3 (1%)	70	85
1	H	143/295 (48%)	143 (100%)	0	100	100
All	All	2080/2360 (88%)	2044 (98%)	36 (2%)	56	78

All (36) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	79	THR
1	A	120	VAL
1	A	168	VAL
1	A	186	VAL
1	A	199	ILE
1	A	230	THR
1	A	275	VAL
1	A	338	MET

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	79	THR
1	B	83	ARG
1	B	230	THR
1	B	345	GLU
1	C	85	VAL
1	C	127	MET
1	C	129	ILE
1	D	79	THR
1	D	129	ILE
1	D	133	TYR
1	D	168	VAL
1	D	186	VAL
1	D	192	ARG
1	D	248	THR
1	D	350	LEU
1	E	99	THR
1	E	133	TYR
1	E	186	VAL
1	E	189	VAL
1	E	289	LEU
1	F	79	THR
1	F	129	ILE
1	F	170	ARG
1	F	216	GLN
1	F	285	GLN
1	G	189	VAL
1	G	230	THR
1	G	302	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (13) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	216	GLN
1	A	220	GLN
1	B	45	ASN
1	B	153	GLN
1	B	228	ASN
1	C	152	ASN
1	C	216	GLN
1	E	125	HIS
1	E	319	GLN
1	E	330	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	F	125	HIS
1	F	307	HIS
1	G	88	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 15 ligands modelled in this entry, 11 are monoatomic - leaving 4 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	2BA	E	401	-	42,50,50	0.80	0	48,78,78	0.95	1 (2%)
2	2BA	A	401	-	42,50,50	0.81	0	48,78,78	0.99	1 (2%)
2	2BA	H	401	-	42,50,50	0.81	0	48,78,78	0.95	0
2	2BA	G	401	-	42,50,50	0.80	0	48,78,78	1.01	0

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	2BA	E	401	-	-	0/22/62/62	0/6/7/7
2	2BA	A	401	-	-	0/22/62/62	0/6/7/7
2	2BA	H	401	-	-	0/22/62/62	0/6/7/7
2	2BA	G	401	-	-	0/22/62/62	0/6/7/7

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	A	401	2BA	O2P1-P1-O1P1	2.03	121.90	112.44
2	E	401	2BA	O2P-P-O1P	2.03	121.87	112.44

There are no chirality outliers.

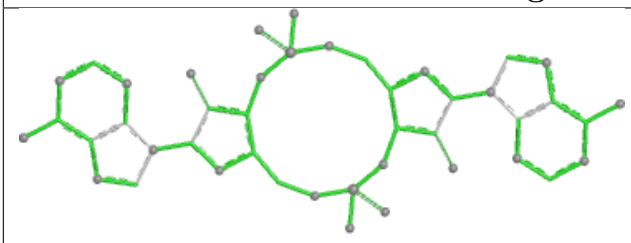
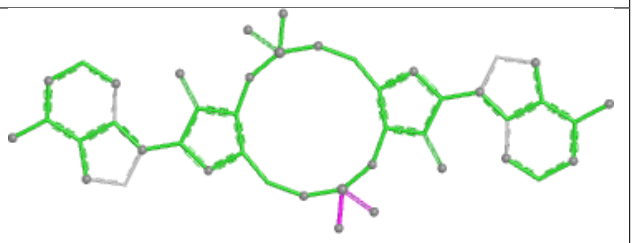
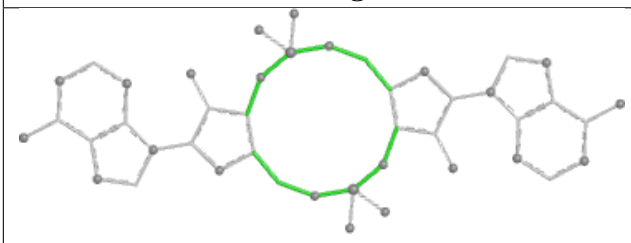
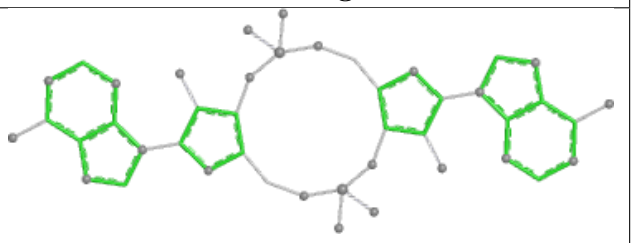
There are no torsion outliers.

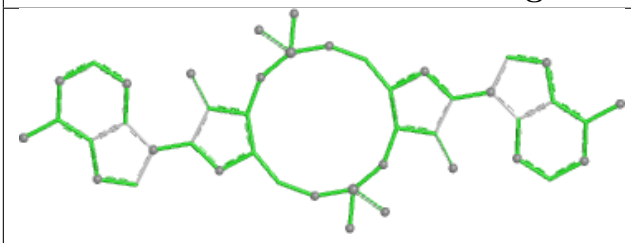
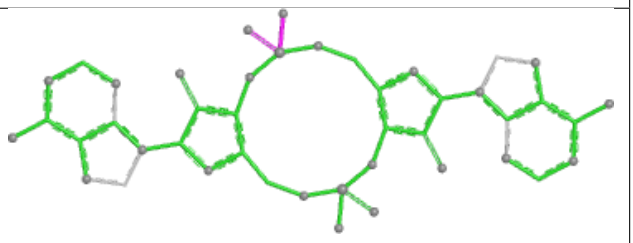
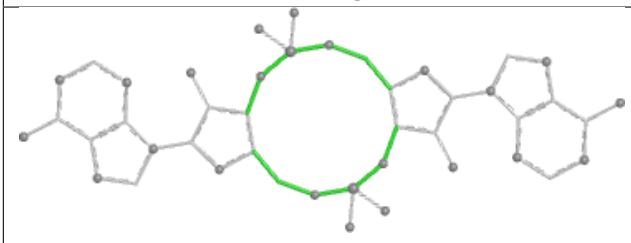
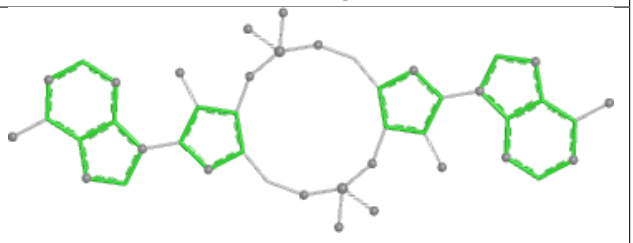
There are no ring outliers.

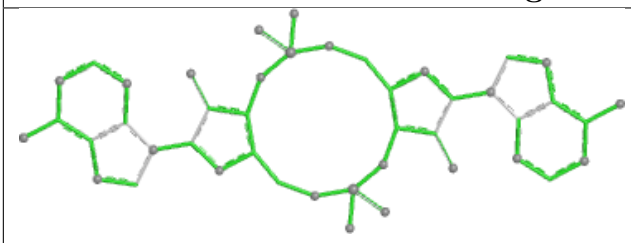
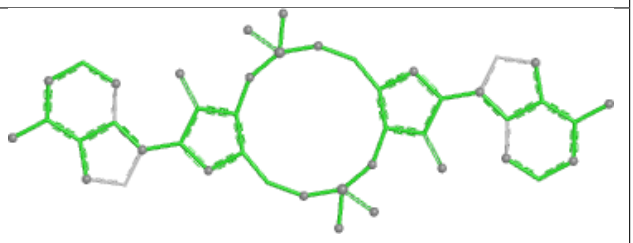
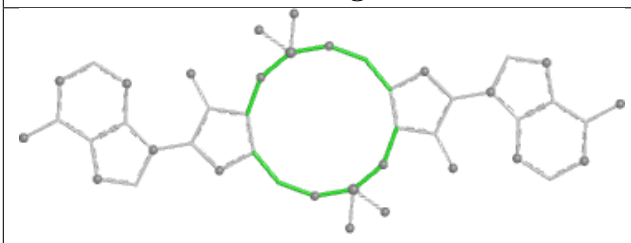
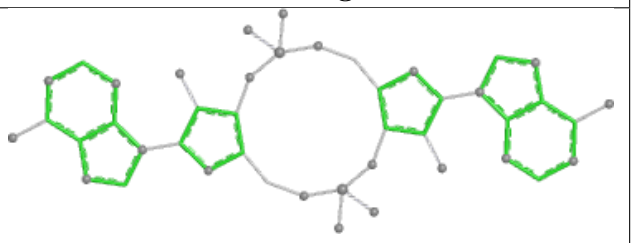
1 monomer is involved in 1 short contact:

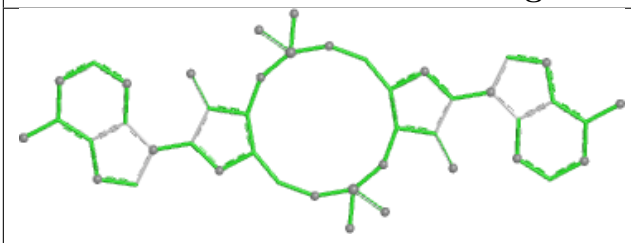
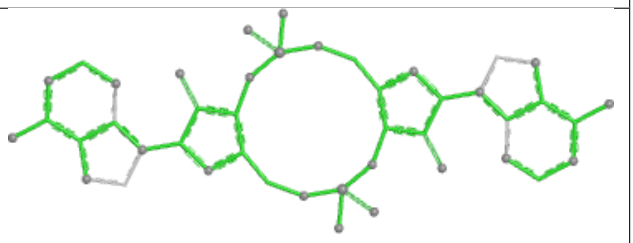
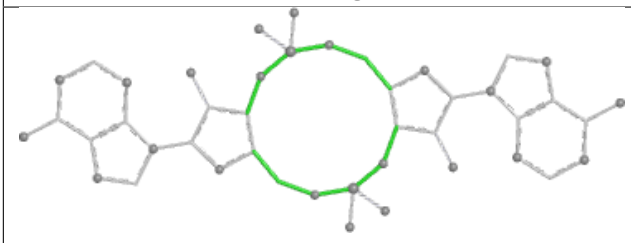
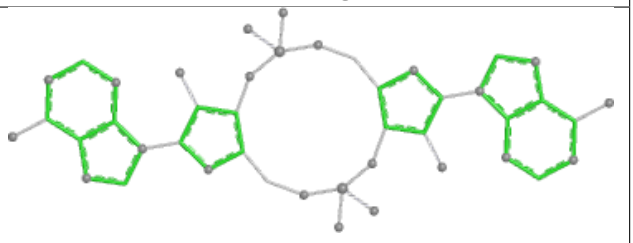
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	G	401	2BA	1	0

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 then 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.

Ligand 2BA E 401	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand 2BA A 401	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand 2BA H 401	
	
Bond lengths	Bond angles
	
Torsions	Rings

Ligand 2BA G 401	
	
Bond lengths	Bond angles
	
Torsions	Rings

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, 95^{th} 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	350/360 (97%)	-0.20	0 100 100	57, 85, 125, 157	0
1	B	350/360 (97%)	-0.08	1 (0%) 90 81	52, 81, 116, 174	0
1	C	329/360 (91%)	0.09	3 (0%) 81 63	61, 110, 183, 240	0
1	D	346/360 (96%)	0.28	7 (2%) 64 43	72, 120, 175, 221	0
1	E	349/360 (96%)	0.04	1 (0%) 90 81	54, 121, 176, 257	0
1	F	348/360 (96%)	-0.01	1 (0%) 90 81	59, 99, 136, 185	0
1	G	349/360 (96%)	0.18	3 (0%) 81 63	62, 114, 155, 198	0
1	H	205/360 (56%)	0.15	1 (0%) 87 74	62, 100, 160, 184	0
All	All	2626/2880 (91%)	0.05	17 (0%) 85 71	52, 101, 167, 257	0

All (17) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	C	307	HIS	4.2
1	G	283	GLU	3.8
1	D	72	ASP	2.9
1	E	199	ILE	2.6
1	D	103	GLY	2.6
1	G	50	CYS	2.6
1	D	7	PRO	2.4
1	B	51	ASP	2.4
1	F	7	PRO	2.2
1	D	40	LEU	2.2
1	D	314	ALA	2.1
1	G	31	ARG	2.1
1	H	217	LEU	2.1
1	C	337	ALA	2.1
1	D	315	PHE	2.1
1	C	304	GLN	2.0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	D	343	VAL	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 oligosaccharides in this entry.

6.4 Ligands (i)

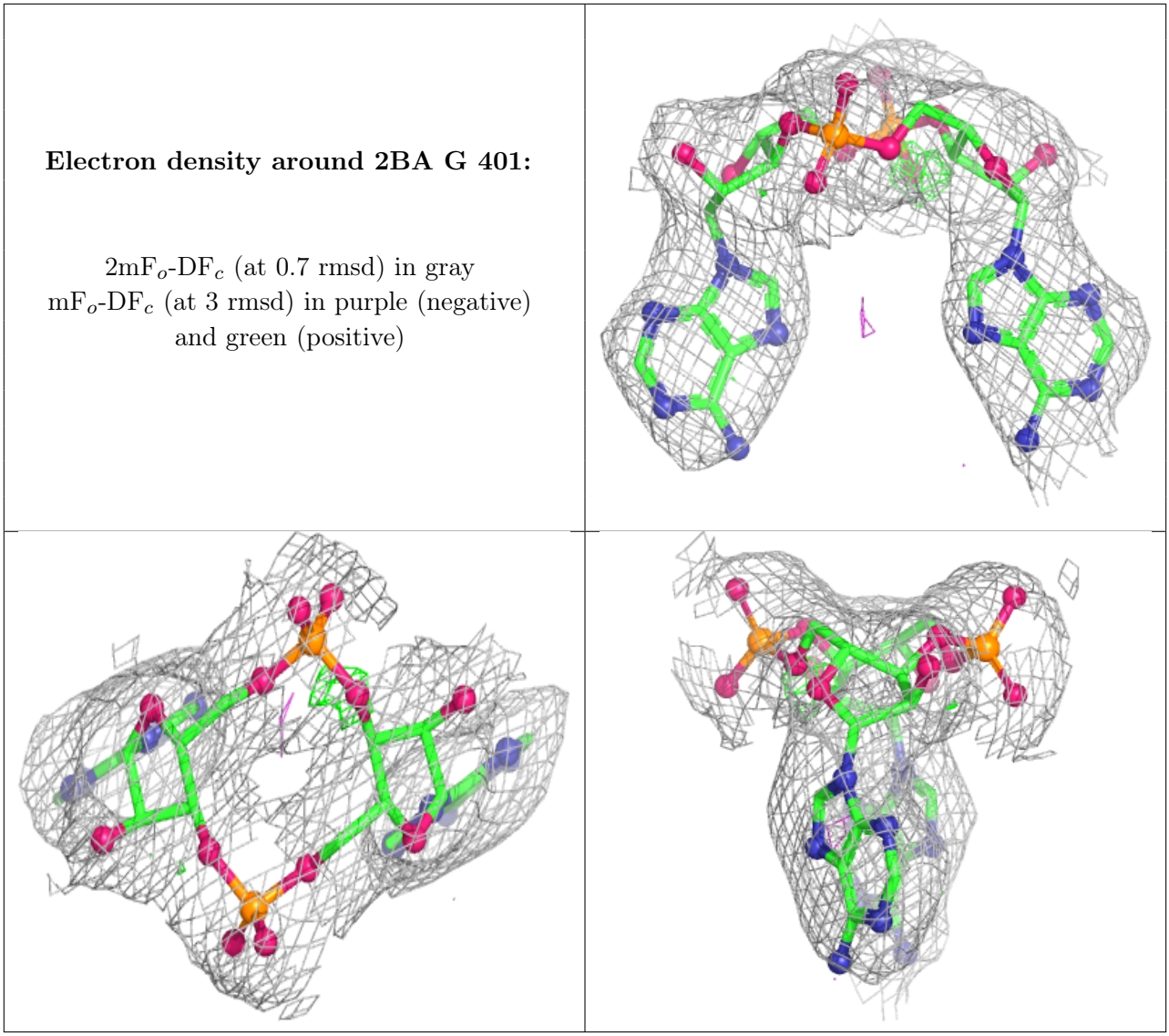
In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9'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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
4	CL	E	403	1/1	0.89	0.15	93,93,93,93	0
4	CL	B	402	1/1	0.92	0.09	98,98,98,98	0
2	2BA	G	401	44/44	0.94	0.09	73,80,87,90	0
3	BR	D	401	1/1	0.94	0.10	115,115,115,115	0
2	2BA	A	401	44/44	0.95	0.09	55,61,68,73	0
2	2BA	E	401	44/44	0.96	0.07	52,56,61,65	0
2	2BA	H	401	44/44	0.96	0.08	61,67,72,78	0
4	CL	C	402	1/1	0.96	0.18	84,84,84,84	0
3	BR	B	401	1/1	0.96	0.08	113,113,113,113	0
3	BR	H	402	1/1	0.97	0.06	104,104,104,104	0
3	BR	A	402	1/1	0.97	0.10	99,99,99,99	0
3	BR	F	401	1/1	0.97	0.08	97,97,97,97	0
3	BR	G	402	1/1	0.97	0.08	101,101,101,101	0
3	BR	C	401	1/1	0.98	0.06	87,87,87,87	0
3	BR	E	402	1/1	0.99	0.06	65,65,65,65	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.

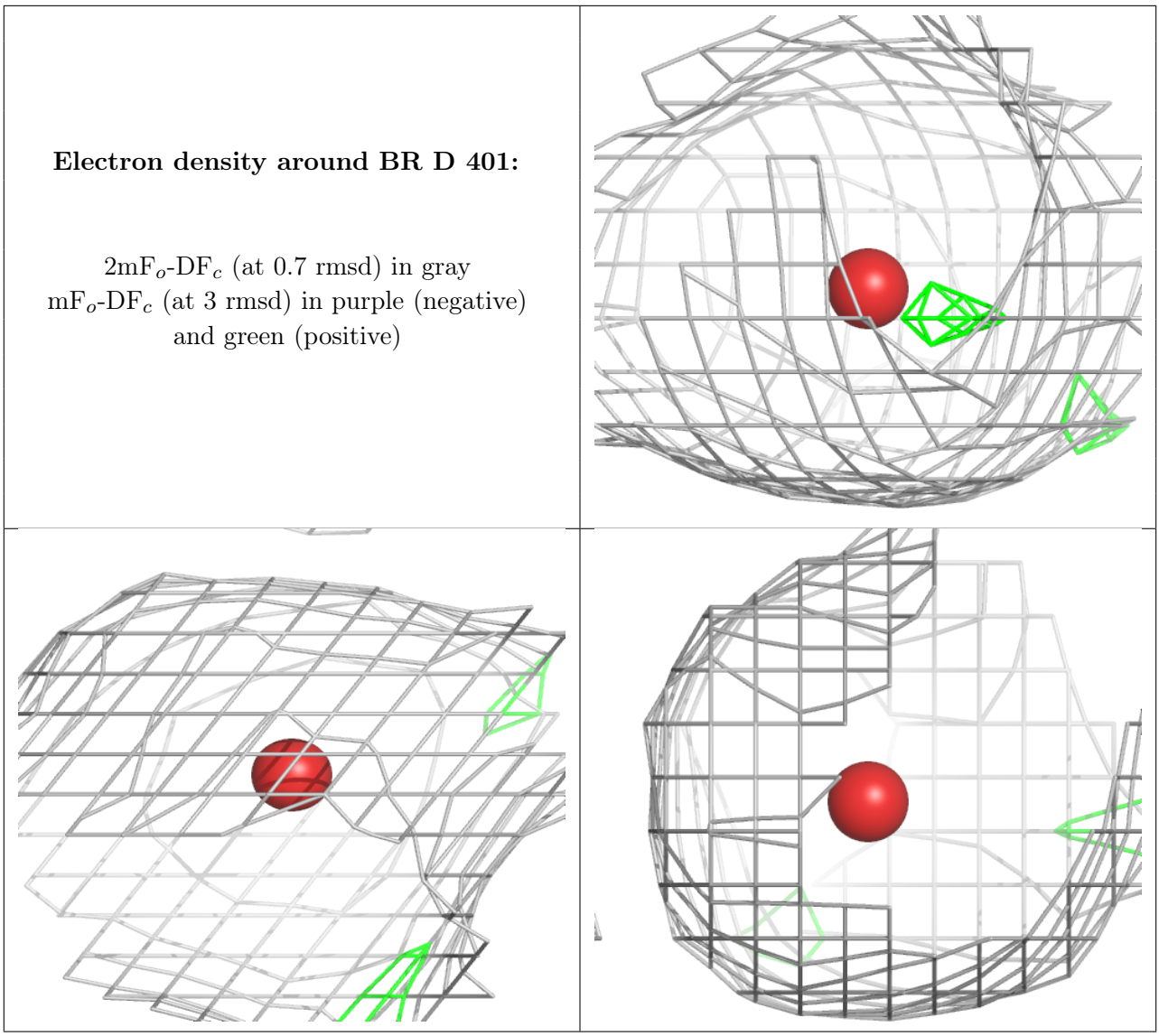
Electron density around 2BA G 401:

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



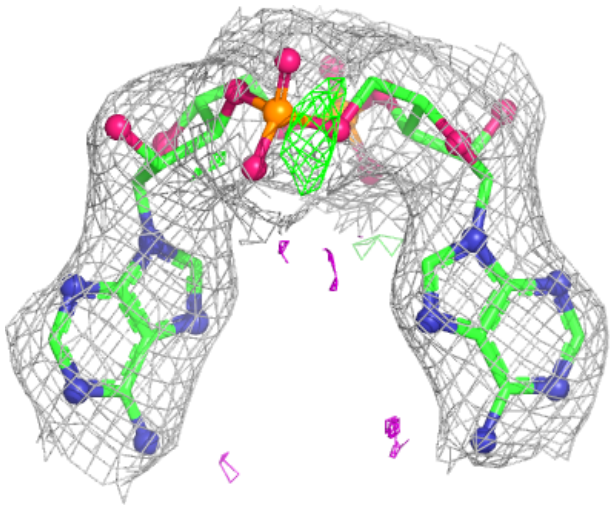
Electron density around BR D 401:

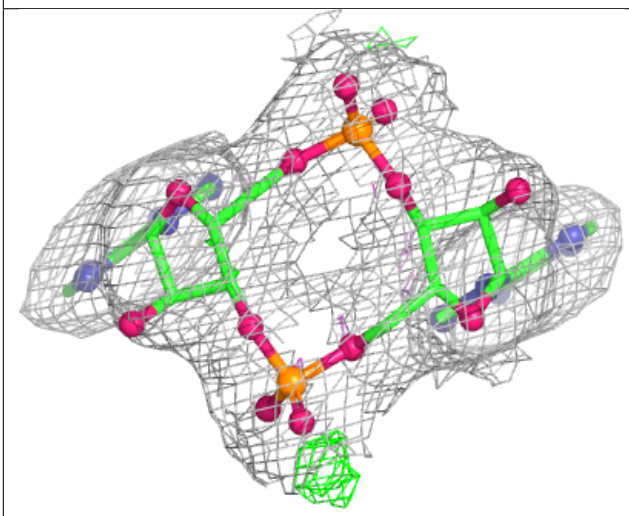
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

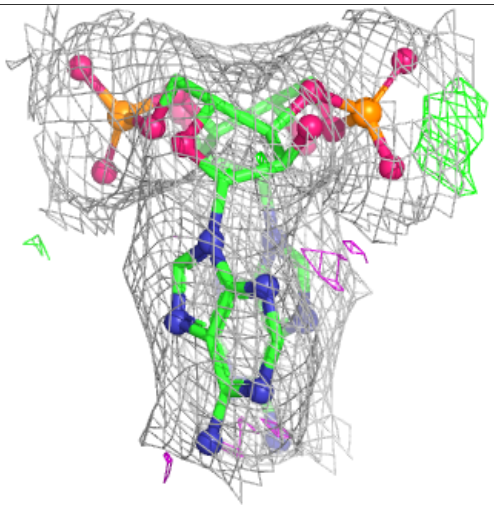


Electron density around 2BA A 401:

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

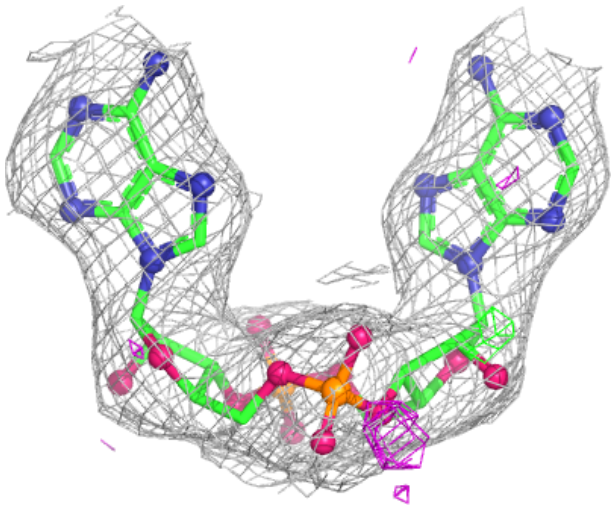


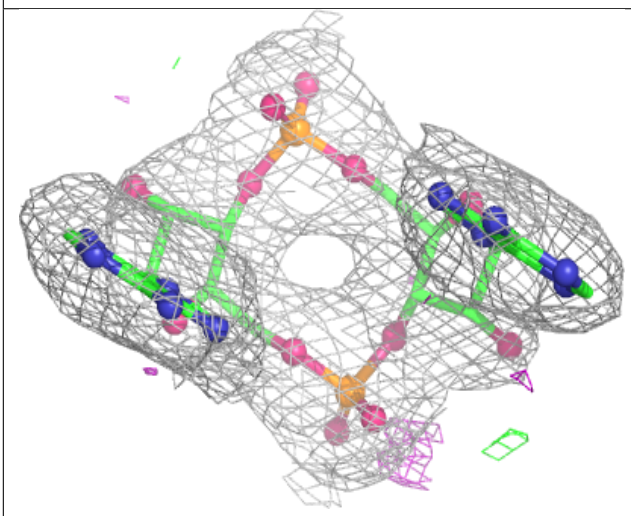


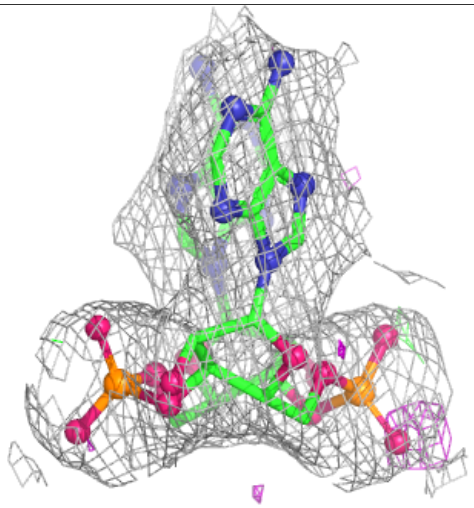


Electron density around 2BA E 401:

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

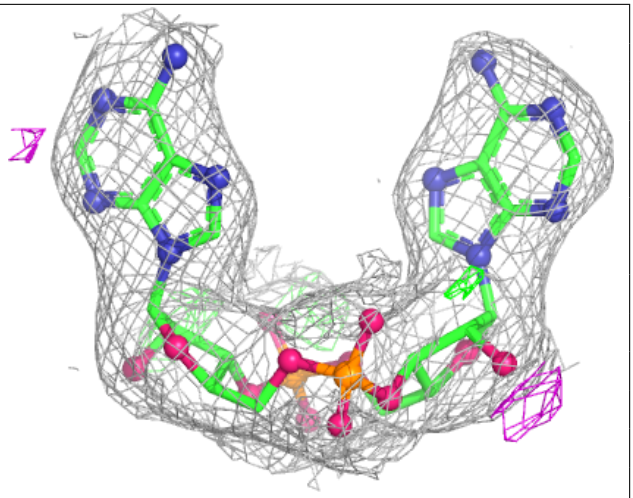


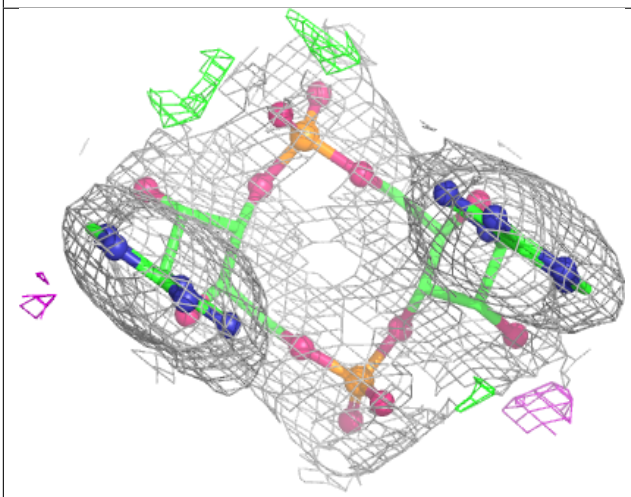


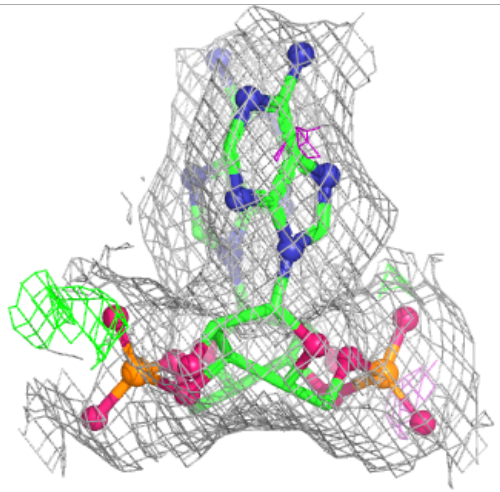


Electron density around 2BA H 401:

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

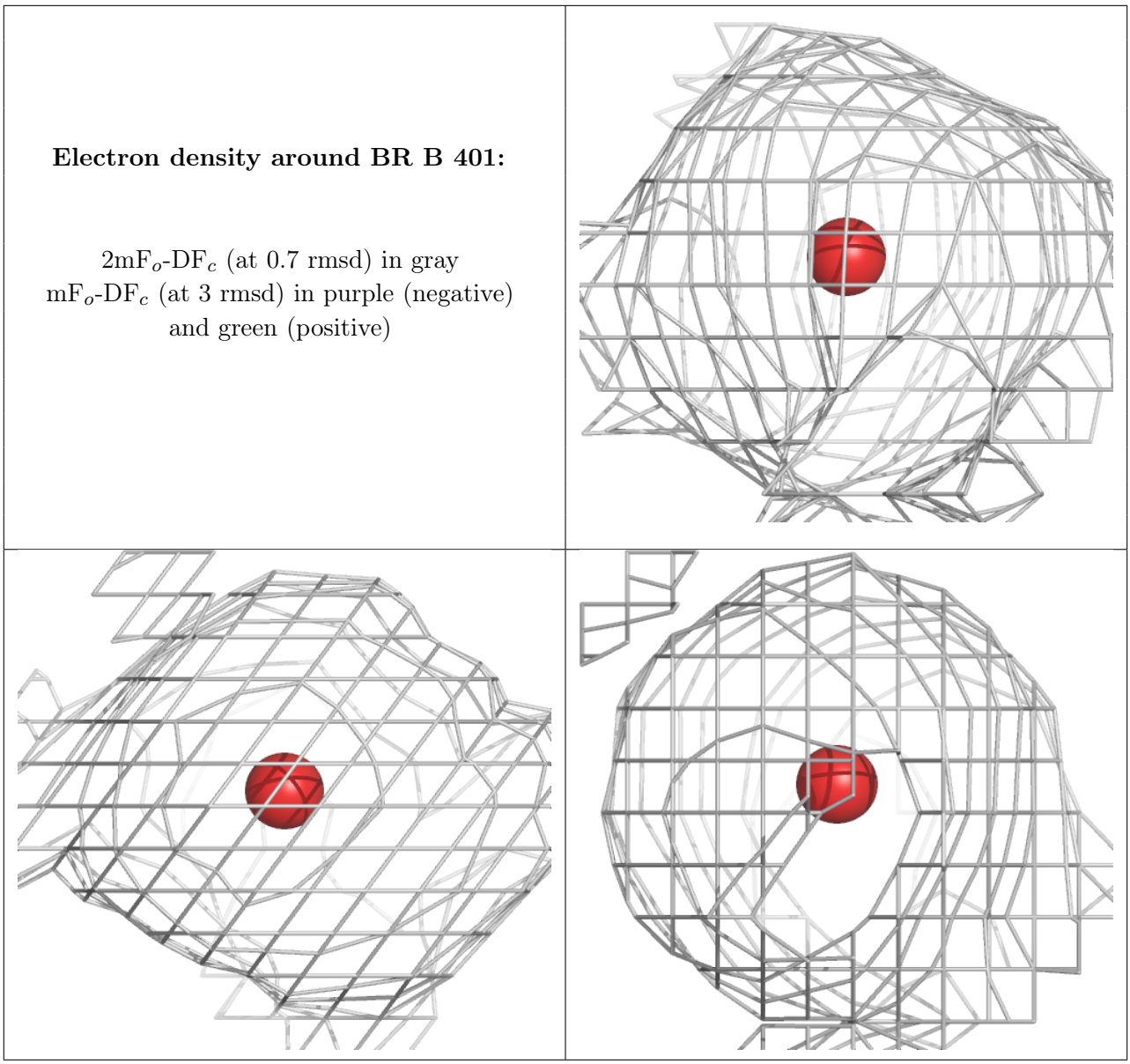






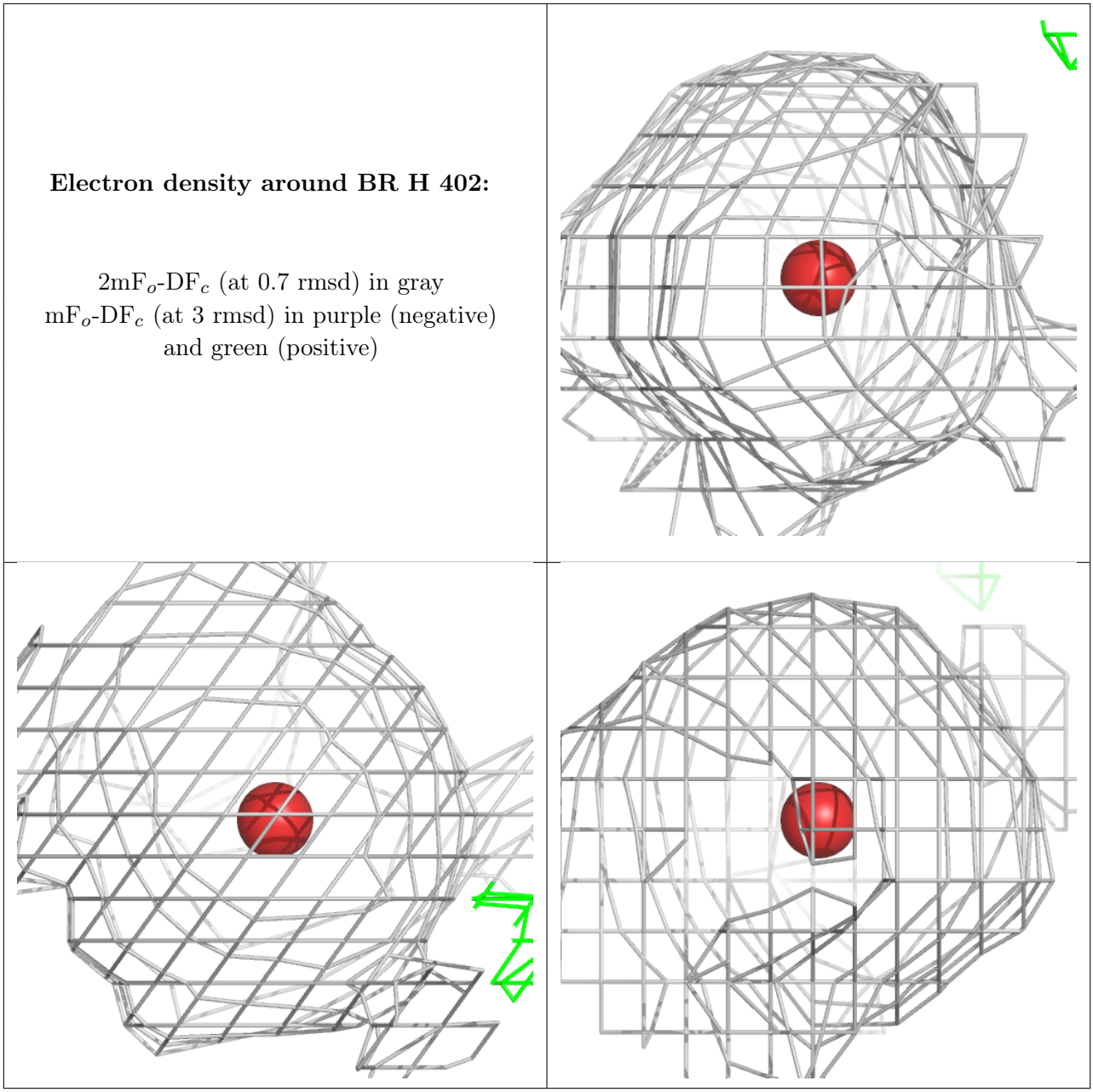
Electron density around BR B 401:

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



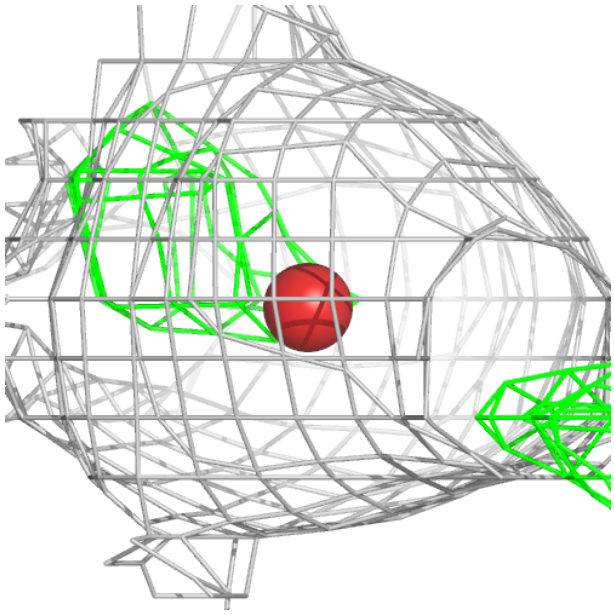
Electron density around BR H 402:

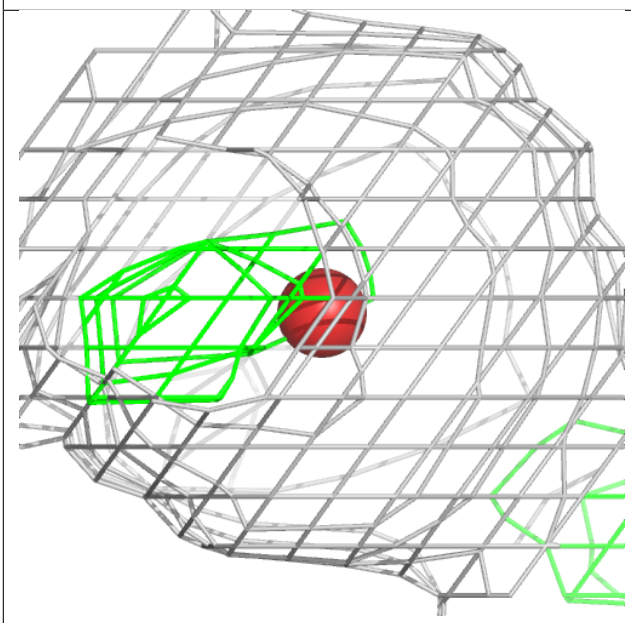
$2mF_o$-DF_c (at 0.7 rmsd) in gray
mF_o-DF_c (at 3 rmsd) in purple (negative) and green (positive)

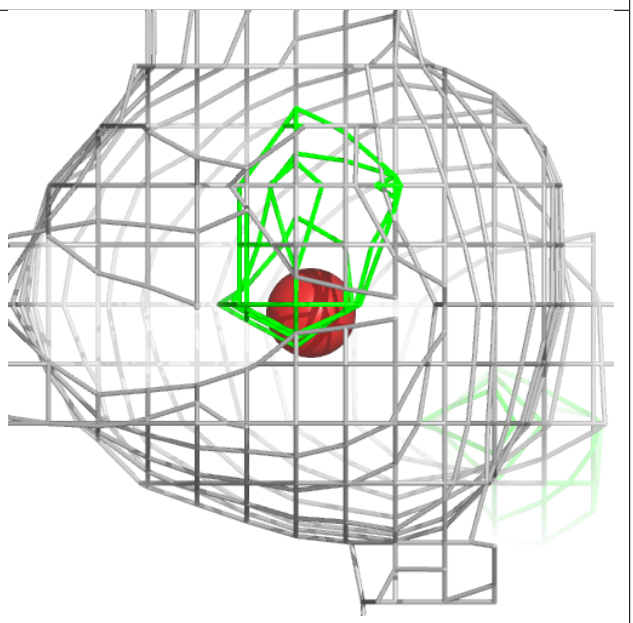


Electron density around BR A 402:

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

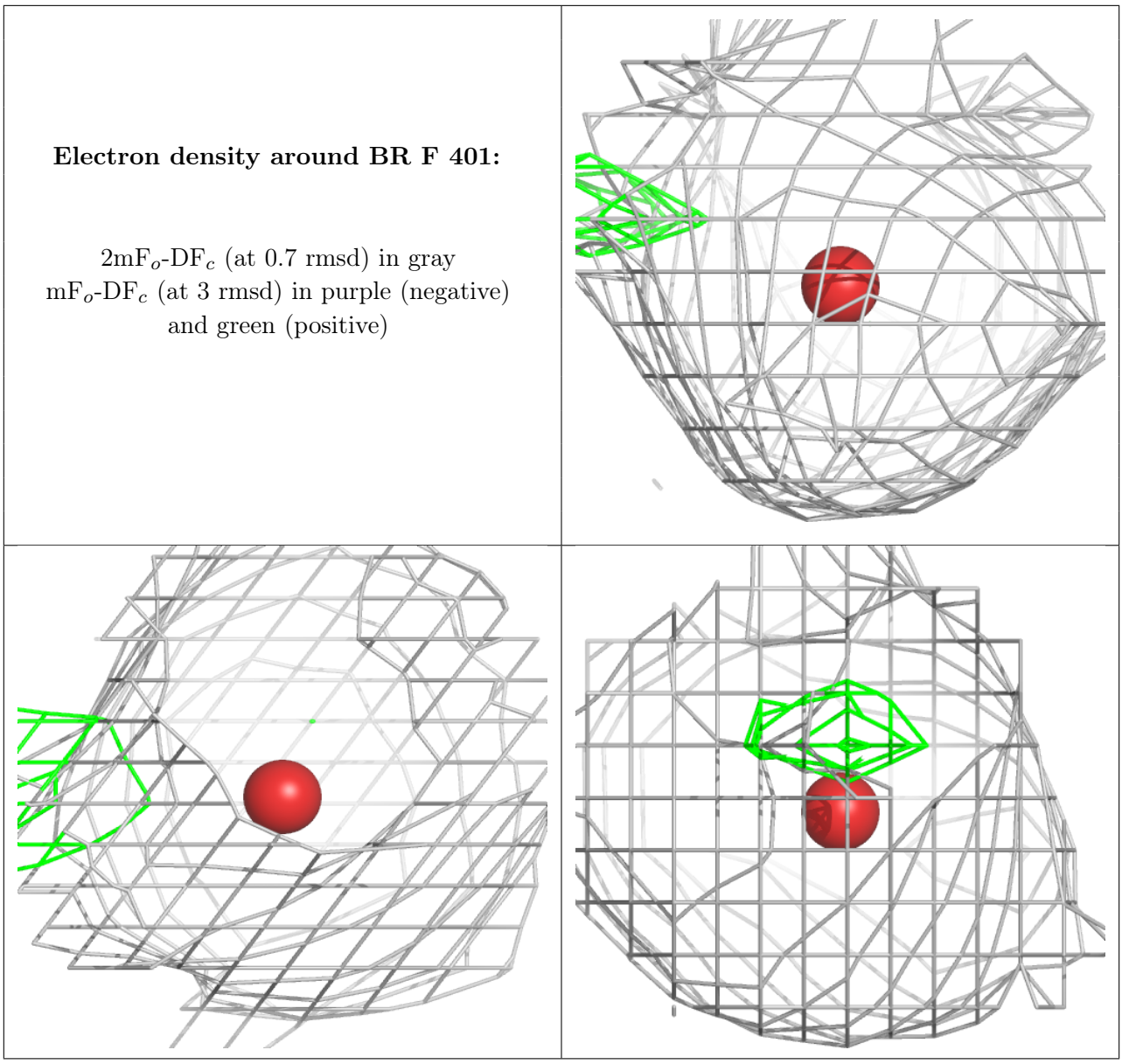






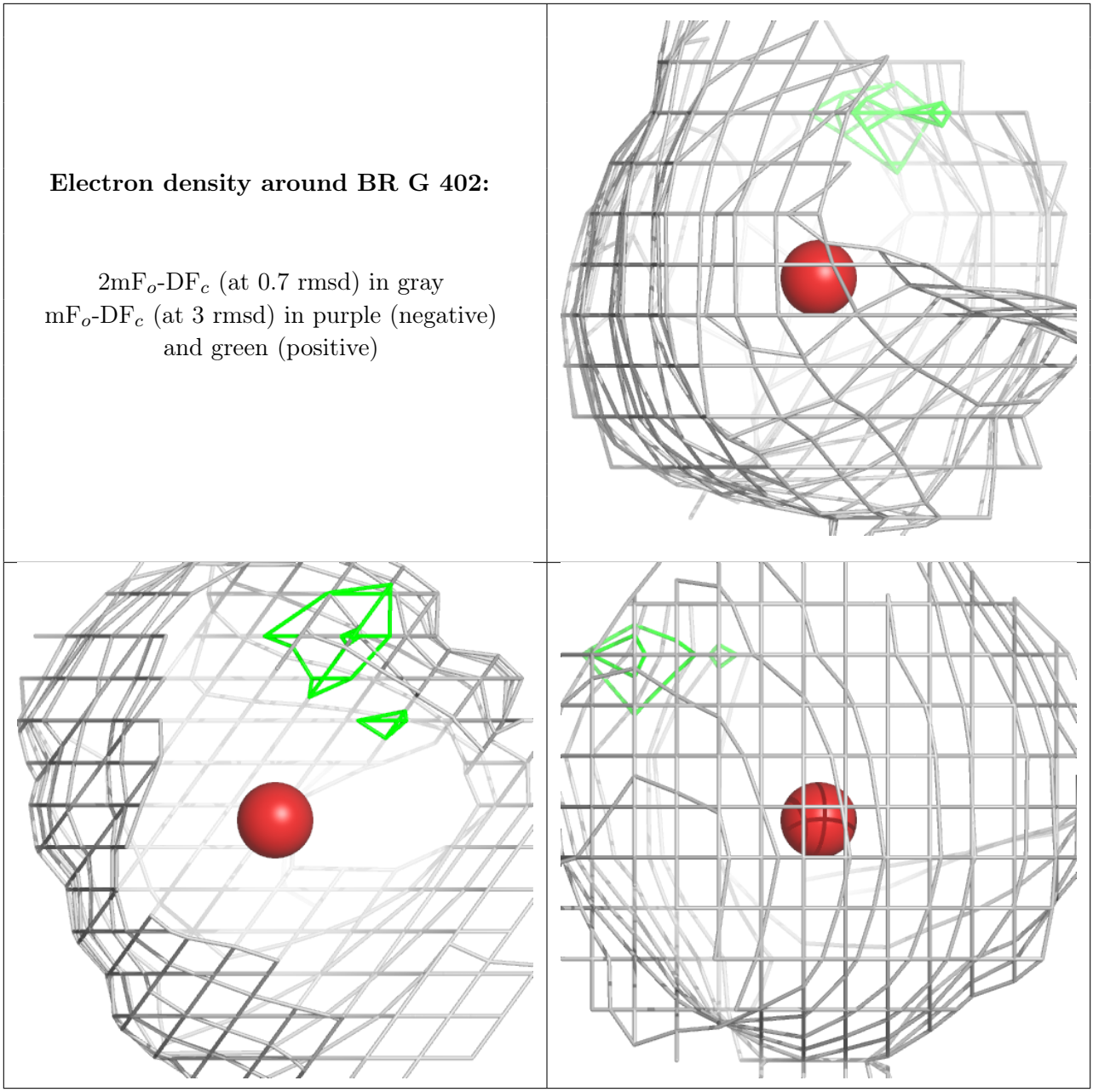
Electron density around BR F 401:

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



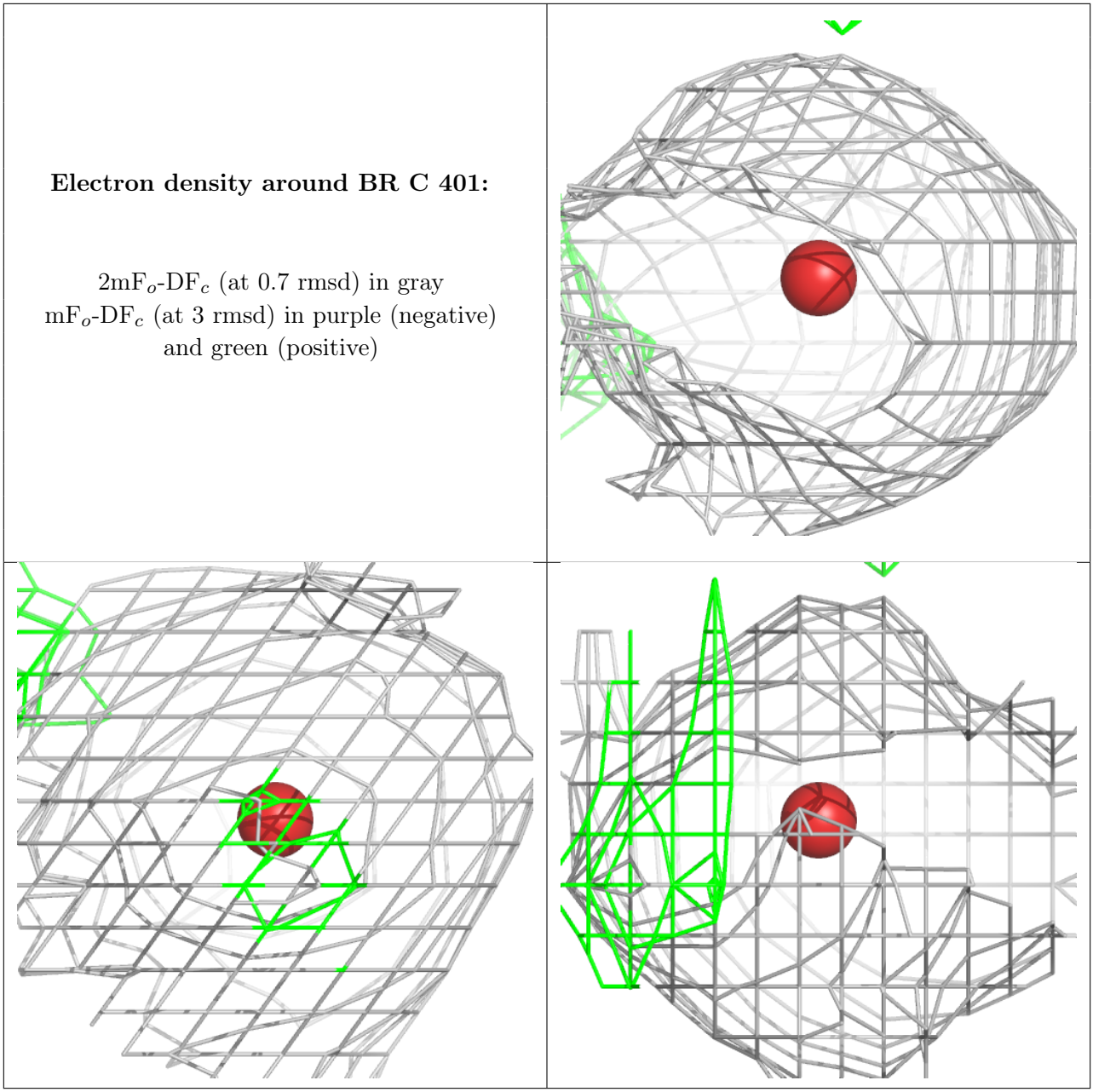
Electron density around BR G 402:

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



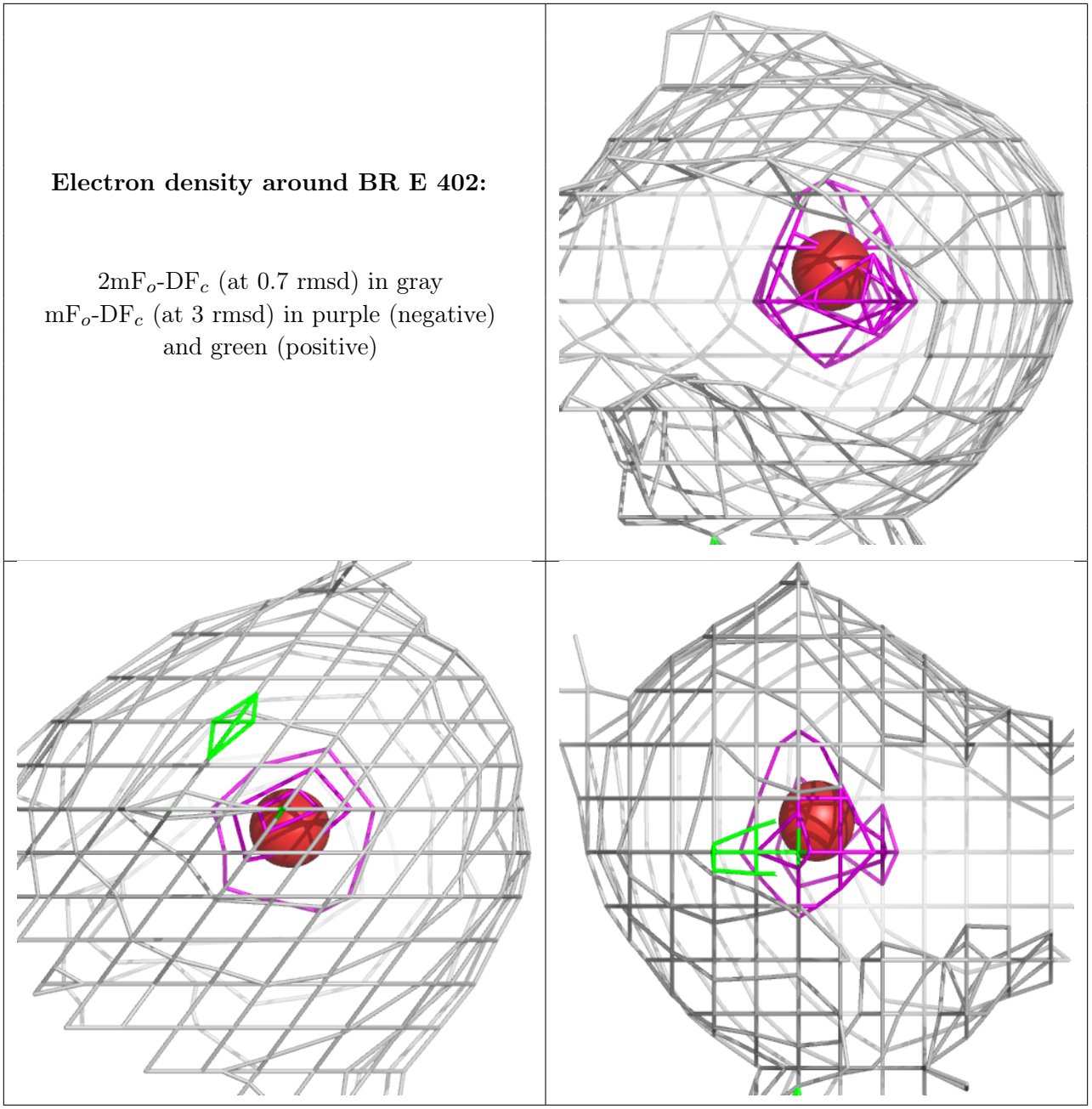
Electron density around BR C 401:

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



Electron density around BR E 402:

$2mF_o$-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.