Full wwPDB EM Validation Report ⓘ

Mar 11, 2024 – 05:58 AM EDT

PDB ID	:	6PNS
EMDB ID	:	EMD-20398
Title	:	In situ structure of BTV RNA-dependent RNA polymerase in BTV virion
Authors	:	He, Y.; Shivakoti, S.; Ding, K.; Cui, Y.; Roy, P.; Zhou, Z.H.
Deposited on	:	2019-07-03
Resolution	:	3.70 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

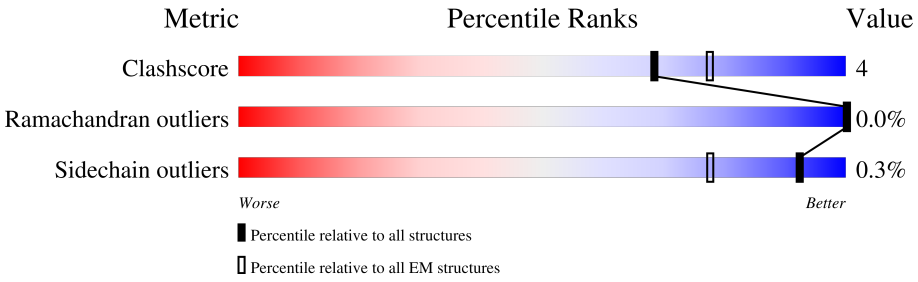
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance

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

The reported resolution of this entry is 3.70 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	1302	19% 85% 14%
2	B	901	90% 7%
2	C	901	87% 11%
2	D	901	88% 8%
2	E	901	90% 8%
2	F	901	87% 9%
2	G	901	88% 10%
2	H	901	87% 10%

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Mol	Chain	Length	Quality of chain
2	I	901	
2	J	901	
2	K	901	

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 81300 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called RNA-directed RNA polymerase.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1291	Total	C	N	O	S	0	0
			10432	6654	1791	1926	61		

- Molecule 2 is a protein called Inner core structural protein VP3.

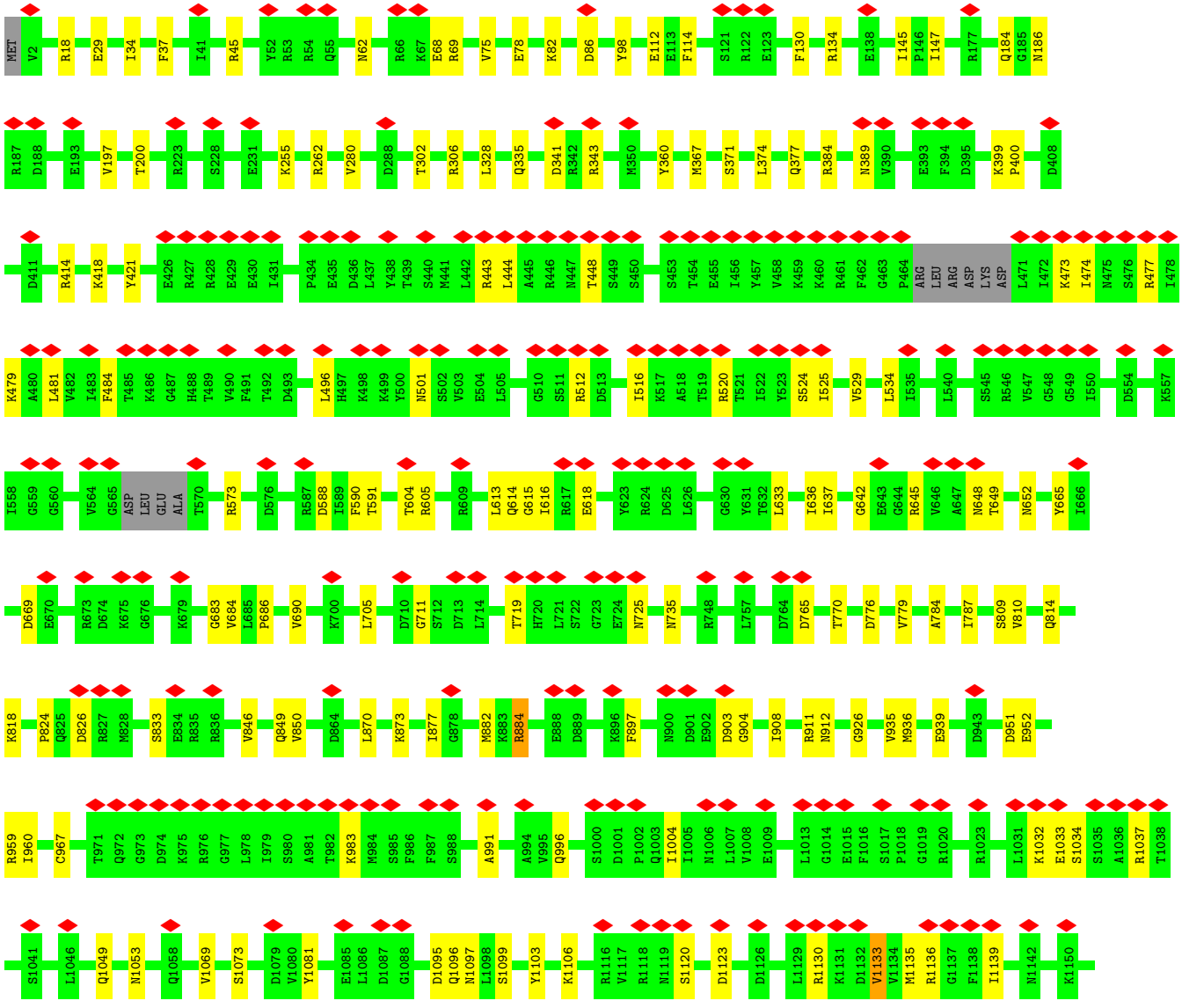
Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	873	Total	C	N	O	S	0	0
			7053	4501	1223	1288	41		
2	C	885	Total	C	N	O	S	0	0
			7151	4561	1239	1310	41		
2	D	865	Total	C	N	O	S	0	0
			6983	4457	1211	1275	40		
2	E	885	Total	C	N	O	S	0	0
			7151	4561	1239	1310	41		
2	F	867	Total	C	N	O	S	0	0
			6996	4466	1214	1276	40		
2	G	885	Total	C	N	O	S	0	0
			7151	4561	1239	1310	41		
2	H	874	Total	C	N	O	S	0	0
			7057	4503	1224	1289	41		
2	I	885	Total	C	N	O	S	0	0
			7151	4561	1239	1310	41		
2	J	869	Total	C	N	O	S	0	0
			7024	4481	1219	1283	41		
2	K	885	Total	C	N	O	S	0	0
			7151	4561	1239	1310	41		

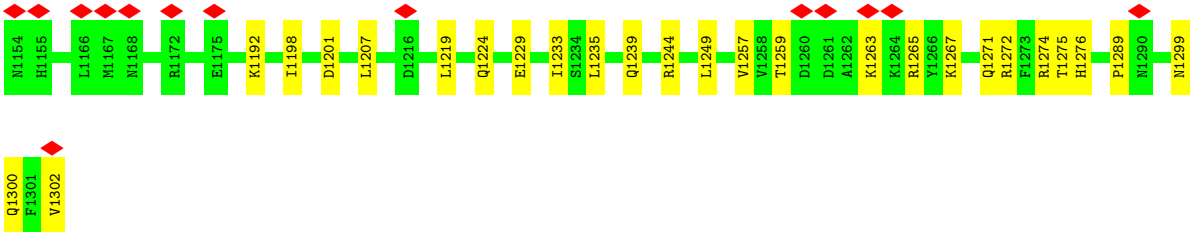
3 Residue-property plots (i)

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

- Molecule 1: RNA-directed RNA polymerase

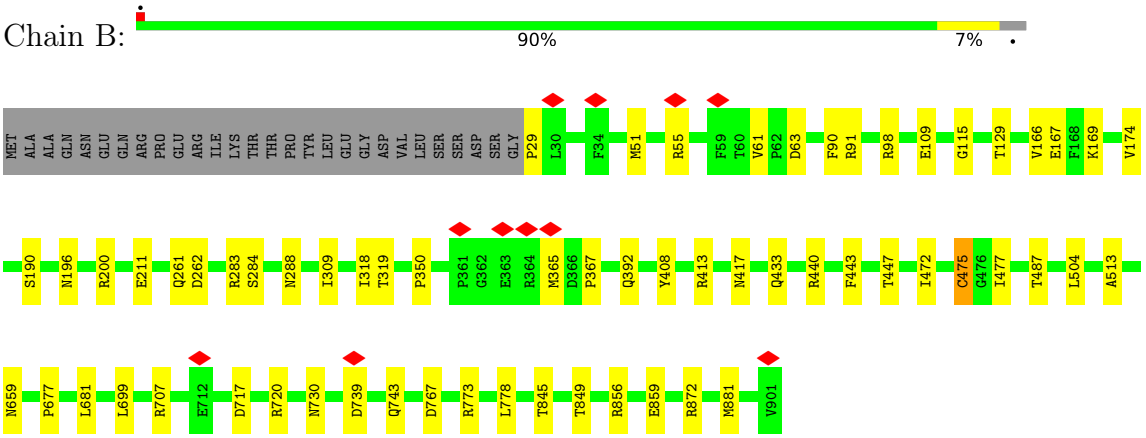
Chain A:





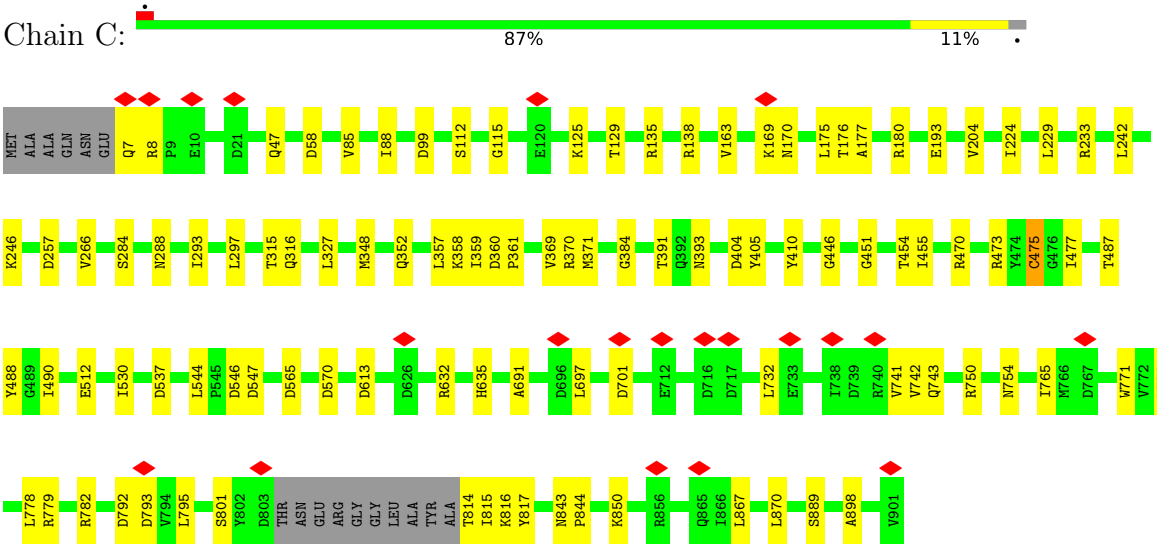
• Molecule 2: Inner core structural protein VP3

Chain B:



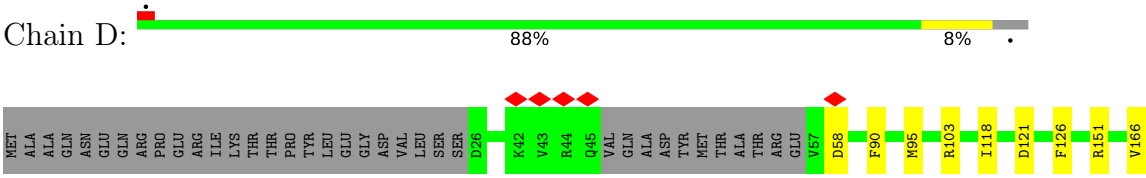
• Molecule 2: Inner core structural protein VP3

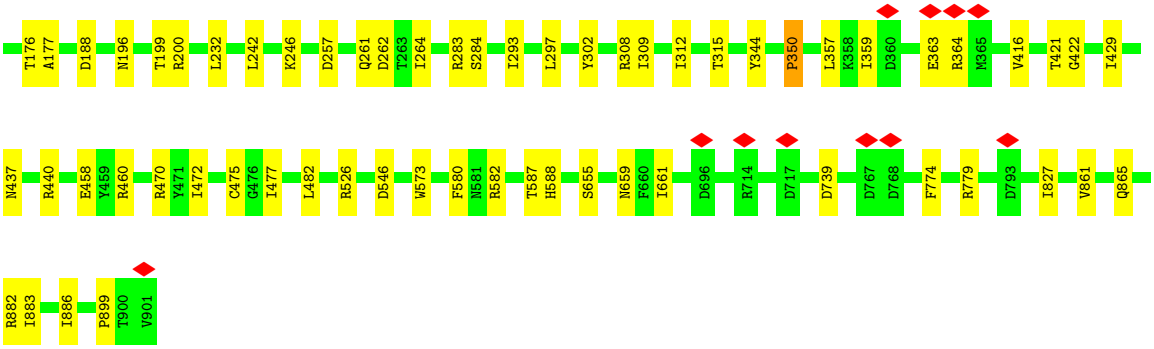
Chain C:



• Molecule 2: Inner core structural protein VP3

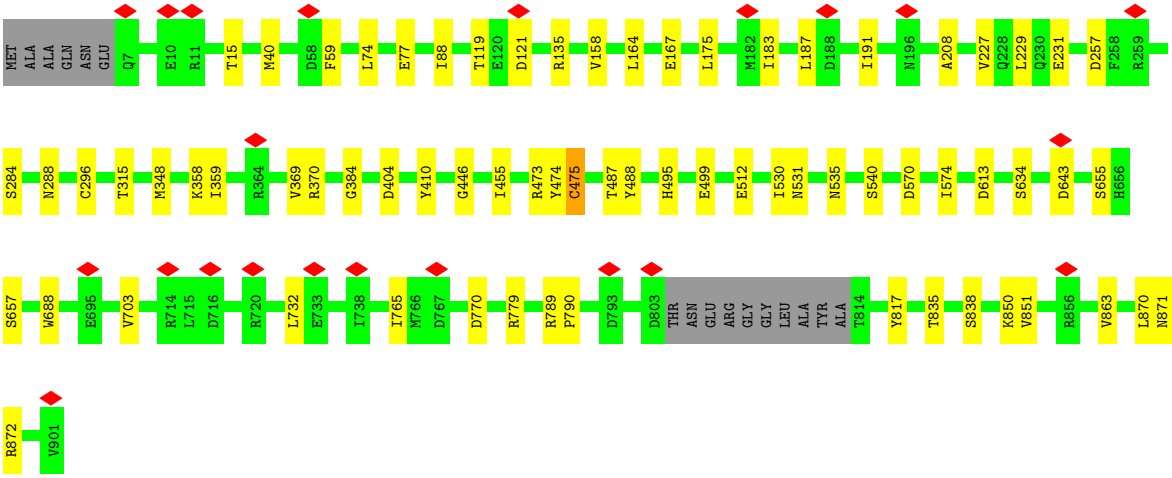
Chain D:





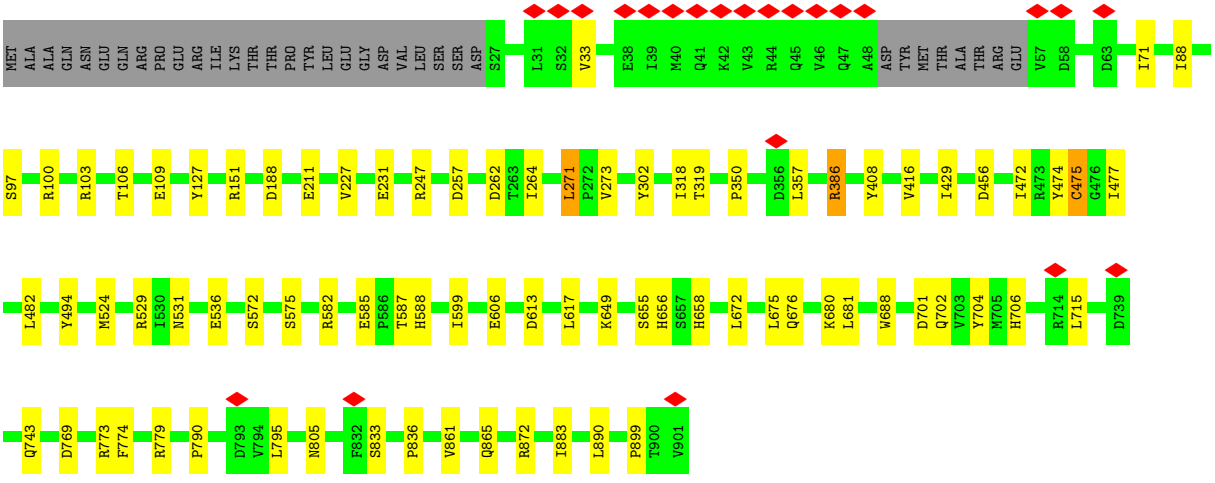
• Molecule 2: Inner core structural protein VP3

Chain E:



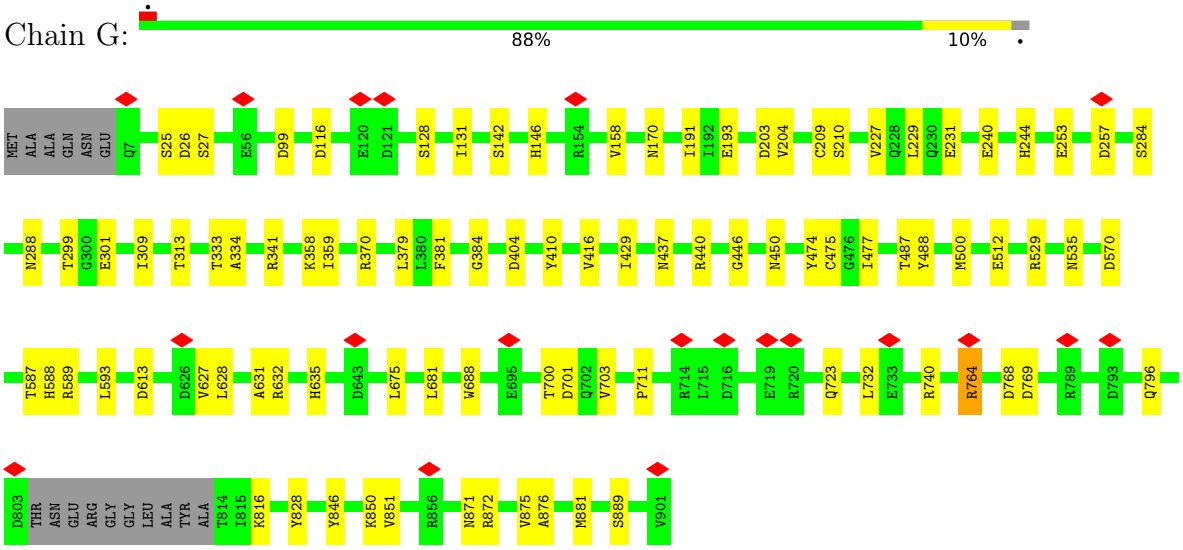
• Molecule 2: Inner core structural protein VP3

Chain F:



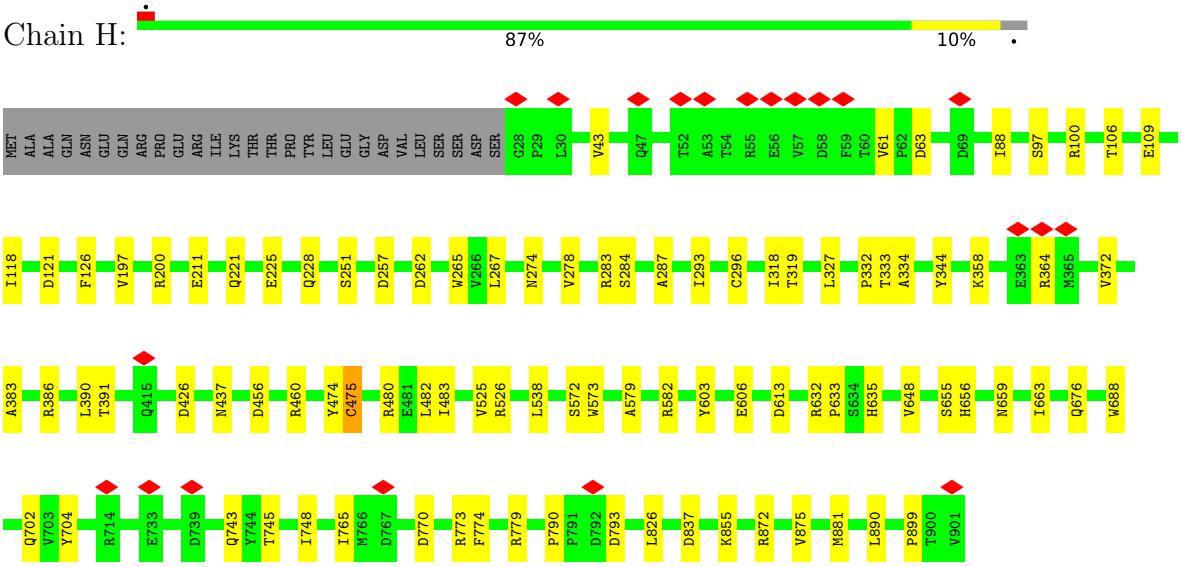
• Molecule 2: Inner core structural protein VP3

Chain G:



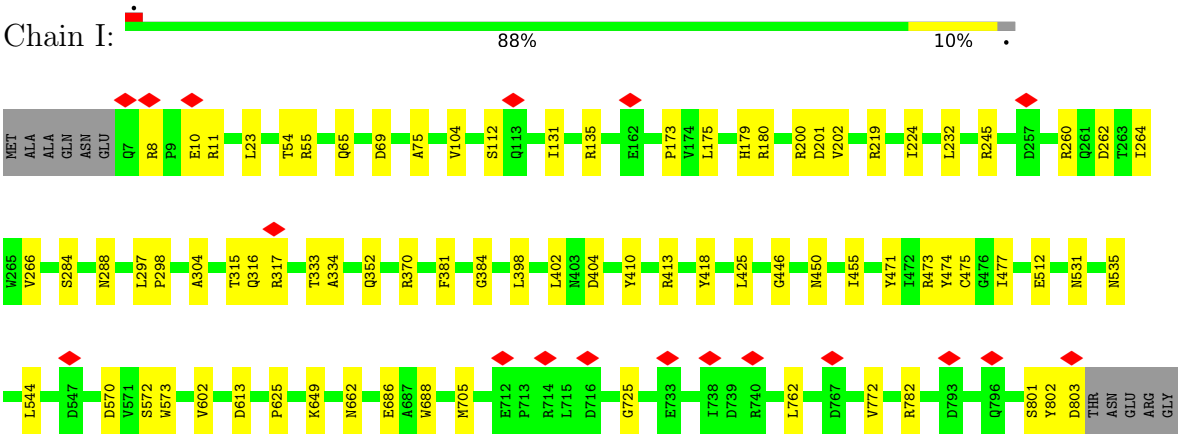
• Molecule 2: Inner core structural protein VP3

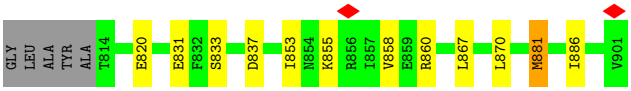
Chain H:



• Molecule 2: Inner core structural protein VP3

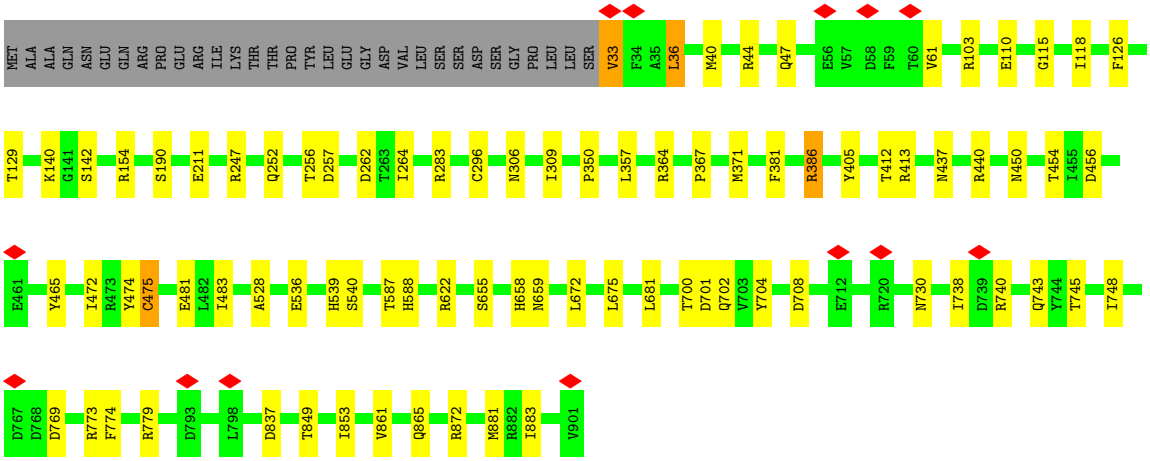
Chain I:





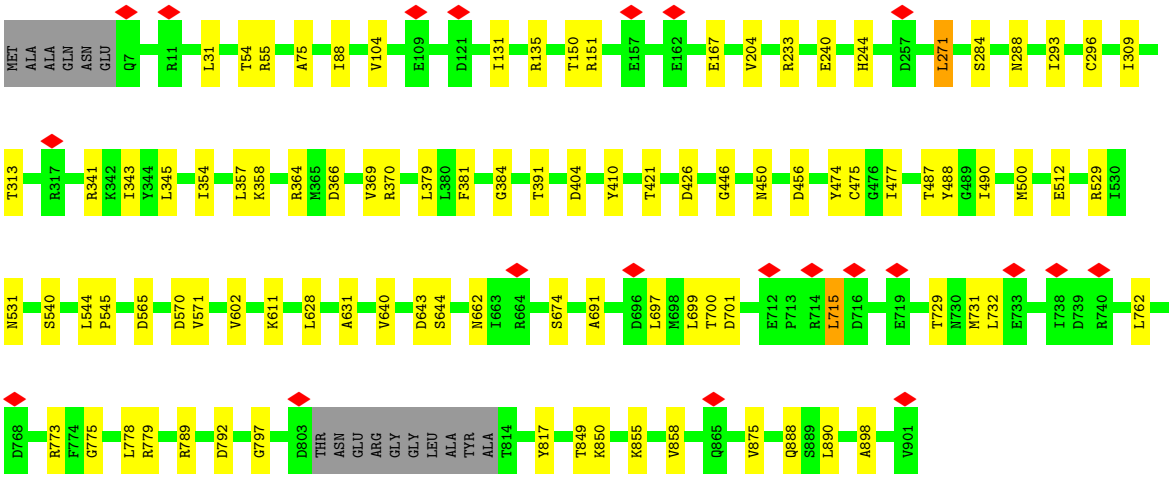
• Molecule 2: Inner core structural protein VP3

Chain J:



• Molecule 2: Inner core structural protein VP3

Chain K:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	244063	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	32.0	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.091	Depositor
Minimum map value	-0.050	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.009	Depositor
Recommended contour level	0.02	Depositor
Map size (Å)	399.84, 399.84, 399.84	wwPDB
Map dimensions	294, 294, 294	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.36, 1.36, 1.36	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.29	0/10644	0.53	0/14362
2	B	0.34	0/7211	0.52	0/9793
2	C	0.33	0/7310	0.52	0/9927
2	D	0.35	0/7139	0.51	0/9694
2	E	0.33	0/7310	0.51	0/9927
2	F	0.35	0/7152	0.51	0/9712
2	G	0.33	0/7310	0.51	0/9927
2	H	0.35	0/7215	0.51	0/9799
2	I	0.33	0/7310	0.51	0/9927
2	J	0.35	0/7181	0.51	0/9752
2	K	0.33	0/7310	0.52	0/9927
All	All	0.33	0/83092	0.52	0/112747

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	10432	0	10514	113	0
2	B	7053	0	7040	38	0
2	C	7151	0	7137	63	0
2	D	6983	0	6968	45	0
2	E	7151	0	7137	44	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	F	6996	0	6986	50	0
2	G	7151	0	7137	54	0
2	H	7057	0	7042	55	0
2	I	7151	0	7137	63	0
2	J	7024	0	7005	69	0
2	K	7151	0	7137	63	0
All	All	81300	0	81240	623	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 4.

All (623) 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)
2:K:475:CYS:SG	2:K:477:ILE:CD1	2.43	1.06
2:K:475:CYS:SG	2:K:477:ILE:HD11	2.02	0.98
2:C:475:CYS:SG	2:C:477:ILE:HG22	2.03	0.98
1:A:952:GLU:CB	2:J:33:VAL:CG1	2.44	0.95
1:A:952:GLU:CB	2:J:33:VAL:HG11	1.98	0.94
1:A:952:GLU:HB2	2:J:33:VAL:CG1	2.01	0.90
2:K:474:TYR:O	2:K:475:CYS:SG	2.31	0.88
2:I:264:ILE:HG12	2:I:881:MET:CE	2.04	0.88
2:F:475:CYS:SG	2:F:475:CYS:O	2.32	0.87
2:C:475:CYS:HG	2:C:477:ILE:HG22	1.38	0.85
1:A:952:GLU:HB3	2:J:33:VAL:CG1	2.07	0.83
2:I:474:TYR:O	2:I:475:CYS:SG	2.40	0.79
2:E:474:TYR:O	2:E:475:CYS:SG	2.41	0.77
2:J:36:LEU:HD23	2:J:40:MET:HE1	1.68	0.76
1:A:952:GLU:HB2	2:J:33:VAL:HG13	1.67	0.75
2:I:264:ILE:HG12	2:I:881:MET:HE3	1.67	0.75
2:I:264:ILE:HG12	2:I:881:MET:HE2	1.69	0.74
1:A:414:ARG:HD3	1:A:614:GLN:HE21	1.53	0.74
1:A:98:TYR:HH	1:A:200:THR:HG1	1.36	0.73
2:E:474:TYR:C	2:E:475:CYS:SG	2.66	0.72
2:K:475:CYS:SG	2:K:477:ILE:HG13	2.29	0.72
2:K:475:CYS:SG	2:K:477:ILE:CG1	2.80	0.70
2:E:88:ILE:HD11	2:E:167:GLU:HB2	1.74	0.69
2:I:264:ILE:CG1	2:I:881:MET:HE2	2.23	0.69
2:J:36:LEU:HD23	2:J:36:LEU:C	2.15	0.67
2:K:475:CYS:SG	2:K:477:ILE:HD12	2.32	0.67
2:I:201:ASP:OD2	2:I:881:MET:HG2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:475:CYS:SG	2:F:477:ILE:HG12	2.34	0.66
1:A:952:GLU:HB2	2:J:33:VAL:HG11	1.67	0.66
2:J:36:LEU:CD2	2:J:40:MET:HE1	2.26	0.65
2:K:88:ILE:HD11	2:K:167:GLU:HB2	1.78	0.65
2:J:474:TYR:C	2:J:475:CYS:SG	2.75	0.65
2:J:36:LEU:HD21	2:J:40:MET:HE3	1.79	0.64
1:A:959:ARG:HG3	1:A:960:ILE:HD12	1.80	0.64
2:I:264:ILE:CG1	2:I:881:MET:CE	2.75	0.64
1:A:1069:VAL:HG12	1:A:1192:LYS:HB2	1.80	0.63
2:H:318:ILE:HG13	2:H:319:THR:HG23	1.79	0.63
2:H:526:ARG:NH2	2:H:579:ALA:O	2.31	0.63
1:A:262:ARG:HH11	1:A:516:ILE:HG13	1.65	0.62
2:K:715:LEU:O	2:K:715:LEU:HD23	1.98	0.62
2:D:302:TYR:HB3	2:D:582:ARG:HB3	1.82	0.62
2:K:715:LEU:H	2:K:715:LEU:CD2	2.13	0.62
2:J:36:LEU:O	2:J:40:MET:HE1	2.00	0.61
2:H:774:PHE:HB2	2:H:779:ARG:HH22	1.66	0.61
1:A:37:PHE:HA	1:A:904:GLY:HA2	1.82	0.60
2:H:327:LEU:HG	2:H:372:VAL:HG11	1.83	0.60
2:D:283:ARG:HE	2:D:659:ASN:HB3	1.66	0.60
2:H:283:ARG:HE	2:H:659:ASN:HB3	1.66	0.60
2:I:352:GLN:HE21	2:I:544:LEU:HB2	1.65	0.60
2:H:200:ARG:HB3	2:H:881:MET:HE1	1.83	0.60
2:J:36:LEU:HD21	2:J:40:MET:CE	2.32	0.60
2:B:318:ILE:HG13	2:B:319:THR:HG23	1.84	0.59
2:D:293:ILE:HG23	2:D:297:LEU:HD12	1.83	0.59
1:A:78:GLU:OE2	1:A:186:ASN:ND2	2.35	0.59
2:B:413:ARG:HH22	2:J:413:ARG:HH11	1.50	0.59
2:E:474:TYR:H	2:E:531:ASN:HD21	1.51	0.59
1:A:501:ASN:HB3	1:A:648:ASN:HB3	1.85	0.58
2:E:175:LEU:HD11	2:E:863:VAL:HG21	1.85	0.58
2:I:384:GLY:HA2	2:I:446:GLY:HA3	1.85	0.58
1:A:45:ARG:HH22	1:A:897:PHE:HB3	1.68	0.58
2:I:474:TYR:C	2:I:475:CYS:SG	2.82	0.58
2:J:36:LEU:CD2	2:J:40:MET:CE	2.81	0.58
1:A:1198:ILE:HD11	1:A:1235:LEU:HD22	1.86	0.58
2:K:729:THR:HG22	2:K:731:MET:H	1.69	0.58
2:G:732:LEU:HD21	2:G:850:LYS:HD3	1.84	0.57
2:G:474:TYR:O	2:G:475:CYS:SG	2.61	0.57
2:E:531:ASN:O	2:E:535:ASN:ND2	2.37	0.57
2:H:211:GLU:OE1	2:H:872:ARG:NH2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:283:ARG:HH11	2:K:490:ILE:HG12	1.69	0.57
1:A:645:ARG:O	1:A:649:THR:OG1	2.22	0.57
1:A:1201:ASP:OD1	1:A:1201:ASP:N	2.34	0.57
1:A:477:ARG:HD2	1:A:1034:SER:HB2	1.86	0.56
1:A:642:GLY:HA3	1:A:645:ARG:HB2	1.86	0.56
2:F:302:TYR:HB3	2:F:582:ARG:HB3	1.86	0.56
1:A:684:VAL:HG13	1:A:705:LEU:HB3	1.88	0.56
1:A:903:ASP:OD1	1:A:903:ASP:N	2.37	0.56
2:C:115:GLY:HA3	2:C:129:THR:HG23	1.86	0.56
2:C:293:ILE:HG23	2:C:297:LEU:HD12	1.87	0.56
2:J:474:TYR:O	2:J:475:CYS:SG	2.63	0.56
2:B:367:PRO:HG3	2:D:309:ILE:HG13	1.86	0.56
2:F:715:LEU:HB2	2:F:836:PRO:HA	1.88	0.56
2:C:475:CYS:SG	2:C:477:ILE:CG2	2.87	0.56
2:F:416:VAL:HG22	2:F:429:ILE:HG13	1.88	0.56
2:E:613:ASP:OD1	2:E:688:TRP:NE1	2.39	0.55
2:H:386:ARG:HH21	2:H:456:ASP:H	1.54	0.55
2:B:417:ASN:ND2	2:B:433:GLN:OE1	2.39	0.55
2:J:211:GLU:OE1	2:J:872:ARG:NH2	2.39	0.55
2:H:613:ASP:OD1	2:H:688:TRP:NE1	2.35	0.55
2:C:85:VAL:HG23	2:C:163:VAL:HA	1.89	0.55
2:J:381:PHE:O	2:J:450:ASN:ND2	2.39	0.55
2:B:284:SER:O	2:B:288:ASN:ND2	2.38	0.55
1:A:112:GLU:O	1:A:134:ARG:NH2	2.40	0.55
2:E:40:MET:HB3	2:E:59:PHE:HB3	1.88	0.55
2:E:158:VAL:HG12	2:E:191:ILE:HG22	1.88	0.55
2:D:437:ASN:OD1	2:D:440:ARG:NH2	2.40	0.55
2:E:135:ARG:NH1	2:E:643:ASP:OD2	2.40	0.55
2:H:474:TYR:C	2:H:475:CYS:SG	2.85	0.55
2:G:284:SER:O	2:G:288:ASN:ND2	2.38	0.55
2:C:792:ASP:HA	2:C:795:LEU:HB2	1.89	0.55
2:K:204:VAL:HG22	2:K:875:VAL:HG22	1.89	0.55
2:J:36:LEU:HD23	2:J:36:LEU:O	2.06	0.54
2:B:309:ILE:HD13	2:J:367:PRO:HG3	1.90	0.54
2:C:327:LEU:HD11	2:C:369:VAL:HG23	1.89	0.54
2:K:233:ARG:NH2	2:K:898:ALA:O	2.40	0.54
1:A:418:LYS:HE2	1:A:618:GLU:HB3	1.90	0.54
2:B:475:CYS:O	2:B:475:CYS:SG	2.65	0.54
2:C:358:LYS:HB2	2:C:570:ASP:HB2	1.89	0.54
2:C:475:CYS:HG	2:C:477:ILE:CG2	2.16	0.54
2:D:103:ARG:NH1	2:D:865:GLN:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:318:ILE:HG13	2:F:319:THR:HG23	1.89	0.54
2:K:284:SER:O	2:K:288:ASN:ND2	2.39	0.54
2:B:717:ASP:OD2	2:B:720:ARG:NH1	2.41	0.54
2:I:531:ASN:O	2:I:535:ASN:ND2	2.41	0.54
2:C:732:LEU:HD21	2:C:850:LYS:HD3	1.89	0.54
1:A:384:ARG:NH2	1:A:833:SER:O	2.41	0.54
2:G:116:ASP:N	2:G:116:ASP:OD1	2.41	0.54
1:A:335:GLN:HE22	1:A:341:ASP:HA	1.73	0.53
2:G:437:ASN:OD1	2:G:440:ARG:NH1	2.39	0.53
2:K:570:ASP:OD1	2:K:570:ASP:N	2.41	0.53
1:A:690:VAL:H	1:A:711:GLY:HA3	1.74	0.53
1:A:1302:VAL:O	2:D:308:ARG:NH1	2.42	0.53
2:B:487:THR:OG1	2:J:364:ARG:NH1	2.41	0.53
2:C:175:LEU:O	2:C:180:ARG:NH2	2.42	0.53
2:F:701:ASP:OD2	2:F:773:ARG:NH2	2.42	0.53
2:G:384:GLY:HA2	2:G:446:GLY:HA3	1.90	0.53
1:A:1271:GLN:HE21	1:A:1275:THR:HG23	1.74	0.53
1:A:1049:GLN:O	1:A:1053:ASN:ND2	2.41	0.52
2:E:410:TYR:OH	2:E:512:GLU:OE1	2.27	0.52
2:G:589:ARG:HD3	2:G:593:LEU:HD23	1.90	0.52
2:I:370:ARG:NH2	2:I:404:ASP:OD2	2.38	0.52
2:J:701:ASP:OD2	2:J:773:ARG:NH2	2.41	0.52
2:B:350:PRO:HG2	2:B:472:ILE:HD13	1.92	0.52
2:I:175:LEU:HD13	2:I:179:HIS:HB3	1.91	0.52
2:I:803:ASP:OD1	2:I:803:ASP:N	2.42	0.52
2:E:358:LYS:HB2	2:E:570:ASP:HB2	1.91	0.52
1:A:306:ARG:HH22	1:A:588:ASP:HB3	1.74	0.52
1:A:784:ALA:HA	1:A:787:ILE:HD12	1.90	0.52
2:C:135:ARG:NH2	2:C:613:ASP:OD2	2.42	0.52
2:D:151:ARG:NH2	2:D:188:ASP:OD1	2.42	0.52
2:E:227:VAL:HA	2:E:231:GLU:HG3	1.91	0.52
2:F:743:GLN:HE22	2:F:773:ARG:HH11	1.56	0.52
2:J:386:ARG:NH2	2:J:456:ASP:OD2	2.43	0.52
1:A:809:SER:OG	1:A:818:LYS:NZ	2.43	0.52
2:C:7:GLN:HG2	2:C:8:ARG:HG3	1.91	0.52
2:C:58:ASP:OD1	2:C:58:ASP:N	2.42	0.52
2:D:257:ASP:N	2:D:257:ASP:OD1	2.40	0.52
2:H:743:GLN:HE22	2:H:773:ARG:HD3	1.74	0.52
2:B:475:CYS:SG	2:B:477:ILE:HG12	2.50	0.52
2:C:547:ASP:N	2:C:547:ASP:OD1	2.40	0.52
2:F:805:ASN:ND2	2:G:253:GLU:OE2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:262:ASP:OD1	2:D:262:ASP:N	2.41	0.52
2:J:264:ILE:HB	2:J:883:ILE:HG12	1.90	0.52
1:A:850:VAL:HG22	1:A:870:LEU:HD13	1.93	0.51
1:A:1299:ASN:ND2	2:D:315:THR:O	2.43	0.51
2:H:655:SER:OG	2:H:656:HIS:N	2.44	0.51
2:J:257:ASP:OD1	2:J:257:ASP:N	2.44	0.51
2:F:475:CYS:SG	2:F:477:ILE:CG1	2.98	0.51
2:H:632:ARG:H	2:H:635:HIS:HD2	1.57	0.51
2:J:283:ARG:HE	2:J:659:ASN:HB3	1.75	0.51
2:E:296:CYS:SG	2:E:540:SER:OG	2.68	0.51
2:E:384:GLY:HA2	2:E:446:GLY:HA3	1.91	0.51
2:F:655:SER:OG	2:F:656:HIS:N	2.43	0.51
2:F:658:HIS:HB2	2:G:309:ILE:HA	1.92	0.51
2:I:413:ARG:NH1	2:J:481:GLU:OE2	2.43	0.51
2:F:774:PHE:HB2	2:F:779:ARG:HH22	1.75	0.51
2:G:26:ASP:OD1	2:G:341:ARG:NH2	2.43	0.51
2:G:740:ARG:NH2	2:G:769:ASP:O	2.43	0.51
2:C:246:LYS:NZ	2:C:537:ASP:O	2.43	0.51
2:J:262:ASP:HB2	2:J:881:MET:HG2	1.92	0.51
2:J:350:PRO:HG2	2:J:472:ILE:HD13	1.92	0.51
1:A:443:ARG:HH11	1:A:1133:VAL:HG23	1.75	0.51
1:A:935:VAL:O	1:A:1239:GLN:NE2	2.42	0.51
1:A:34:ILE:HG13	1:A:908:ILE:HB	1.93	0.51
1:A:145:ILE:HD11	1:A:873:LYS:HA	1.91	0.51
2:H:257:ASP:OD1	2:H:257:ASP:N	2.43	0.51
2:K:779:ARG:NH2	2:K:817:TYR:O	2.43	0.51
1:A:669:ASP:OD1	1:A:669:ASP:N	2.43	0.51
2:B:211:GLU:OE2	2:B:872:ARG:NH2	2.44	0.51
2:H:358:LYS:O	2:H:364:ARG:NH2	2.44	0.51
2:B:743:GLN:HE22	2:B:773:ARG:HH11	1.57	0.51
2:C:233:ARG:NH2	2:C:898:ALA:O	2.43	0.51
2:J:262:ASP:OD1	2:J:262:ASP:N	2.41	0.51
2:F:211:GLU:OE1	2:F:872:ARG:NH2	2.44	0.50
2:K:384:GLY:HA2	2:K:446:GLY:HA3	1.92	0.50
2:D:196:ASN:HD21	2:D:199:THR:HA	1.76	0.50
2:I:284:SER:O	2:I:288:ASN:ND2	2.36	0.50
1:A:735:ASN:ND2	1:A:765:ASP:O	2.42	0.50
2:C:741:VAL:HG22	2:C:771:TRP:HB2	1.94	0.50
2:C:742:VAL:HG11	2:C:765:ILE:HD13	1.92	0.50
2:F:247:ARG:NH1	2:F:536:GLU:OE2	2.45	0.50
2:G:99:ASP:OD2	2:G:723:GLN:NE2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:359:ILE:HB	2:H:251:SER:HB2	1.91	0.50
2:I:201:ASP:OD2	2:I:881:MET:CG	2.59	0.50
2:K:715:LEU:CD2	2:K:715:LEU:N	2.73	0.50
1:A:418:LYS:HE3	1:A:615:GLY:HA2	1.93	0.50
1:A:534:LEU:HA	1:A:725:ASN:HD22	1.77	0.50
1:A:952:GLU:HB3	2:J:33:VAL:HG12	1.93	0.50
2:H:106:THR:HA	2:H:109:GLU:HB2	1.94	0.50
2:I:201:ASP:OD2	2:I:881:MET:SD	2.70	0.50
2:K:75:ALA:O	2:K:888:GLN:NE2	2.45	0.50
1:A:952:GLU:CG	2:J:33:VAL:HG11	2.41	0.50
2:C:793:ASP:OD1	2:C:793:ASP:N	2.44	0.50
2:D:103:ARG:HH11	2:D:861:VAL:HG21	1.76	0.50
2:I:112:SER:O	2:I:782:ARG:NH1	2.44	0.50
1:A:1004:ILE:HG23	2:H:43:VAL:HG12	1.93	0.50
2:I:831:GLU:HG3	2:I:833:SER:H	1.76	0.50
2:D:587:THR:OG1	2:D:588:HIS:N	2.43	0.50
2:I:381:PHE:O	2:I:450:ASN:ND2	2.45	0.50
2:J:110:GLU:OE2	2:J:140:LYS:NZ	2.42	0.50
1:A:633:LEU:HD13	1:A:636:ILE:HD11	1.93	0.50
2:D:118:ILE:HD12	2:D:126:PHE:HD1	1.76	0.50
2:E:74:LEU:HD23	2:E:77:GLU:HG3	1.93	0.50
2:F:529:ARG:NE	2:F:585:GLU:OE1	2.42	0.50
2:C:867:LEU:HD12	2:C:870:LEU:HD11	1.92	0.49
2:I:613:ASP:OD1	2:I:688:TRP:NE1	2.41	0.49
2:E:229:LEU:HD11	2:E:257:ASP:HB2	1.94	0.49
2:E:835:THR:HB	2:E:838:SER:HB3	1.94	0.49
2:J:44:ARG:NH1	2:J:47:GLN:OE1	2.45	0.49
2:E:119:THR:HG22	2:E:121:ASP:H	1.78	0.49
2:E:789:ARG:NH1	2:E:790:PRO:O	2.45	0.49
2:I:572:SER:OG	2:I:573:TRP:N	2.45	0.49
2:K:628:LEU:HD12	2:K:631:ALA:HB2	1.94	0.49
1:A:951:ASP:OD1	1:A:951:ASP:N	2.41	0.49
1:A:1259:THR:O	1:A:1265:ARG:NH2	2.45	0.49
2:C:284:SER:OG	2:C:288:ASN:ND2	2.45	0.49
2:D:350:PRO:HG2	2:D:472:ILE:HD13	1.94	0.49
2:G:627:VAL:HG13	2:G:628:LEU:HD22	1.95	0.49
2:I:782:ARG:NE	2:I:820:GLU:OE2	2.46	0.49
2:I:801:SER:OG	2:I:802:TYR:N	2.45	0.49
2:B:51:MET:SD	2:B:55:ARG:NH2	2.82	0.49
2:B:262:ASP:HB2	2:B:881:MET:HG2	1.94	0.49
2:D:200:ARG:NH2	2:D:261:GLN:O	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:703:VAL:HG22	2:G:851:VAL:HG22	1.94	0.49
2:H:262:ASP:HB2	2:H:881:MET:HG2	1.93	0.49
1:A:1095:ASP:OD2	1:A:1106:LYS:NZ	2.45	0.49
2:E:570:ASP:OD1	2:E:570:ASP:N	2.45	0.49
2:I:570:ASP:N	2:I:570:ASP:OD1	2.44	0.49
1:A:496:LEU:O	1:A:645:ARG:NH2	2.45	0.49
2:D:458:GLU:OE2	2:D:460:ARG:NH2	2.45	0.49
2:E:765:ILE:HG23	2:E:770:ASP:HB2	1.94	0.49
2:G:796:GLN:NE2	2:G:846:TYR:O	2.45	0.49
2:F:675:LEU:HD12	2:F:681:LEU:HD11	1.94	0.49
2:K:296:CYS:SG	2:K:540:SER:OG	2.67	0.49
1:A:882:MET:SD	1:A:884:ARG:NH2	2.86	0.49
2:C:814:THR:OG1	2:C:815:ILE:N	2.44	0.49
2:F:257:ASP:N	2:F:257:ASP:OD1	2.45	0.49
2:B:115:GLY:HA3	2:B:129:THR:HG23	1.95	0.49
2:C:370:ARG:NH2	2:C:404:ASP:OD2	2.39	0.49
2:J:283:ARG:O	2:J:655:SER:OG	2.30	0.49
2:J:730:ASN:HD22	2:J:849:THR:HG23	1.78	0.49
2:K:487:THR:OG1	2:K:488:TYR:N	2.46	0.49
1:A:1263:LYS:O	1:A:1267:LYS:NZ	2.43	0.48
2:B:261:GLN:NE2	2:K:565:ASP:OD2	2.43	0.48
2:H:97:SER:OG	2:H:100:ARG:O	2.31	0.48
2:H:745:THR:H	2:H:748:ILE:HG22	1.78	0.48
1:A:616:ILE:HD12	1:A:637:ILE:HD11	1.95	0.48
1:A:477:ARG:HH11	1:A:1032:LYS:HB2	1.78	0.48
1:A:1289:PRO:HB3	2:F:33:VAL:HG13	1.95	0.48
2:B:90:PHE:HB2	2:B:166:VAL:HG12	1.96	0.48
1:A:1229:GLU:OE2	1:A:1276:HIS:NE2	2.39	0.48
2:F:262:ASP:OD1	2:F:262:ASP:N	2.44	0.48
2:G:203:ASP:HB2	2:G:876:ALA:HB3	1.96	0.48
2:K:421:THR:OG1	2:K:426:ASP:OD2	2.30	0.48
1:A:147:ILE:HG13	1:A:184:GLN:HE22	1.78	0.48
2:E:487:THR:OG1	2:E:488:TYR:N	2.46	0.48
2:G:675:LEU:HD23	2:G:681:LEU:HD21	1.96	0.48
2:G:871:ASN:OD1	2:G:872:ARG:NH1	2.46	0.48
2:J:483:ILE:HG12	2:J:528:ALA:HB1	1.96	0.48
2:H:228:GLN:NE2	2:H:265:TRP:O	2.47	0.48
2:H:333:THR:OG1	2:H:334:ALA:N	2.47	0.48
2:F:702:GLN:NE2	2:F:704:TYR:OH	2.47	0.48
2:K:370:ARG:NH2	2:K:404:ASP:OD2	2.42	0.48
2:C:229:LEU:HD21	2:C:257:ASP:HB2	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:475:CYS:SG	2:D:477:ILE:HD11	2.54	0.48
2:E:164:LEU:HD13	2:E:870:LEU:HD21	1.96	0.48
2:H:572:SER:OG	2:H:573:TRP:N	2.47	0.48
2:I:333:THR:OG1	2:I:334:ALA:N	2.46	0.48
2:C:455:ILE:O	2:C:473:ARG:NH1	2.47	0.47
2:D:58:ASP:HB2	2:E:315:THR:HG21	1.96	0.47
2:F:350:PRO:HG2	2:F:472:ILE:HD13	1.96	0.47
2:G:379:LEU:HD23	2:G:500:MET:HG2	1.95	0.47
1:A:665:TYR:OH	1:A:686:PRO:O	2.27	0.47
2:E:284:SER:O	2:E:288:ASN:ND2	2.38	0.47
2:H:118:ILE:HD12	2:H:126:PHE:HD1	1.79	0.47
2:J:743:GLN:HE22	2:J:773:ARG:HH11	1.61	0.47
2:K:715:LEU:HD23	2:K:715:LEU:N	2.29	0.47
1:A:1135:MET:O	1:A:1139:ILE:N	2.44	0.47
2:C:371:MET:HB3	2:C:405:TYR:HB2	1.95	0.47
2:K:343:ILE:HG13	2:K:571:VAL:HG11	1.97	0.47
1:A:371:SER:HB3	1:A:824:PRO:HD2	1.95	0.47
1:A:846:VAL:HA	1:A:849:GLN:HB2	1.96	0.47
2:J:587:THR:OG1	2:J:588:HIS:N	2.48	0.47
2:C:391:THR:HG23	2:C:393:ASN:H	1.79	0.47
2:D:526:ARG:NH2	2:D:580:PHE:O	2.47	0.47
2:I:65:GLN:NE2	2:I:69:ASP:OD2	2.42	0.47
2:H:121:ASP:N	2:H:121:ASP:OD1	2.46	0.47
2:D:416:VAL:HG22	2:D:429:ILE:HG13	1.96	0.47
2:F:271:LEU:HD23	2:F:890:LEU:HD13	1.96	0.47
1:A:400:PRO:HD3	1:A:605:ARG:HH21	1.78	0.47
1:A:573:ARG:NH2	1:A:814:GLN:O	2.48	0.47
2:G:333:THR:OG1	2:G:334:ALA:N	2.48	0.47
2:H:262:ASP:OD1	2:H:262:ASP:N	2.42	0.47
2:I:625:PRO:O	2:J:154:ARG:NH2	2.47	0.47
2:J:702:GLN:NE2	2:J:704:TYR:OH	2.47	0.47
2:D:774:PHE:O	2:D:779:ARG:NH2	2.48	0.47
2:E:158:VAL:HA	2:E:191:ILE:HA	1.97	0.47
2:E:370:ARG:NH2	2:E:404:ASP:OD2	2.38	0.47
2:I:455:ILE:O	2:I:473:ARG:NH1	2.48	0.47
2:I:725:GLY:O	2:I:860:ARG:NH1	2.47	0.47
2:B:730:ASN:HD22	2:B:849:THR:HG23	1.79	0.47
2:K:135:ARG:NH1	2:K:643:ASP:OD2	2.48	0.47
2:F:103:ARG:NH1	2:F:865:GLN:O	2.48	0.46
2:G:25:SER:HA	2:G:301:GLU:HA	1.98	0.46
2:G:370:ARG:NH2	2:G:404:ASP:OD2	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:606:GLU:HB2	2:H:648:VAL:HG21	1.97	0.46
2:K:104:VAL:HG22	2:K:858:VAL:HG13	1.97	0.46
2:K:715:LEU:H	2:K:715:LEU:HD22	1.78	0.46
1:A:1272:ARG:HH12	1:A:1300:GLN:HE21	1.63	0.46
2:E:703:VAL:HG23	2:E:851:VAL:HG22	1.96	0.46
2:B:707:ARG:NH2	2:B:767:ASP:OD1	2.42	0.46
2:B:856:ARG:NE	2:B:859:GLU:OE1	2.48	0.46
2:G:632:ARG:H	2:G:635:HIS:HD2	1.61	0.46
2:I:219:ARG:HG2	2:I:686:GLU:HG3	1.97	0.46
2:B:196:ASN:ND2	2:B:200:ARG:O	2.48	0.46
2:C:169:LYS:HA	2:C:169:LYS:HD3	1.77	0.46
2:C:176:THR:OG1	2:C:177:ALA:N	2.48	0.46
2:C:284:SER:O	2:C:288:ASN:ND2	2.49	0.46
2:D:739:ASP:OD1	2:D:739:ASP:N	2.49	0.46
2:G:227:VAL:HA	2:G:231:GLU:HG3	1.97	0.46
2:G:229:LEU:HD11	2:G:257:ASP:HB2	1.96	0.46
2:K:296:CYS:HG	2:K:540:SER:HG	1.61	0.46
1:A:1274:ARG:NH2	2:B:29:PRO:O	2.48	0.46
2:B:98:ARG:NH1	2:B:174:VAL:O	2.48	0.46
2:D:344:TYR:OH	2:D:582:ARG:O	2.28	0.46
2:H:702:GLN:NE2	2:H:704:TYR:OH	2.49	0.46
2:J:371:MET:HB3	2:J:405:TYR:HB2	1.98	0.46
2:E:208:ALA:HB2	2:E:870:LEU:HA	1.97	0.46
2:F:474:TYR:H	2:F:531:ASN:HD21	1.64	0.46
2:G:613:ASP:OD1	2:G:688:TRP:NE1	2.39	0.46
1:A:477:ARG:HH22	1:A:481:LEU:HD21	1.80	0.46
1:A:1033:GLU:HA	1:A:1037:ARG:HD2	1.97	0.46
2:C:410:TYR:OH	2:C:512:GLU:OE2	2.33	0.46
1:A:512:ARG:HH12	1:A:520:ARG:HH21	1.63	0.46
2:B:283:ARG:HE	2:B:659:ASN:HB3	1.80	0.46
2:C:99:ASP:N	2:C:99:ASP:OD1	2.49	0.46
2:C:224:ILE:HD12	2:C:266:VAL:HG12	1.97	0.46
2:E:369:VAL:HG21	2:E:574:ILE:HG13	1.98	0.46
2:G:889:SER:O	2:G:889:SER:OG	2.32	0.46
2:C:451:GLY:HA2	2:C:454:THR:HB	1.98	0.46
2:F:477:ILE:HD11	2:F:524:MET:HE3	1.97	0.46
2:K:271:LEU:HD21	2:K:890:LEU:HB3	1.98	0.46
2:K:366:ASP:HB3	2:K:369:VAL:HG23	1.97	0.46
2:I:474:TYR:H	2:I:531:ASN:HD21	1.64	0.45
2:C:112:SER:O	2:C:782:ARG:NH1	2.49	0.45
2:C:193:GLU:HB2	2:C:204:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:242:LEU:HD11	2:D:246:LYS:HE3	1.99	0.45
2:H:855:LYS:HA	2:H:855:LYS:HD3	1.70	0.45
2:D:176:THR:OG1	2:D:177:ALA:N	2.47	0.45
2:F:482:LEU:HD22	2:F:899:PRO:HD2	1.97	0.45
1:A:69:ARG:HA	1:A:75:VAL:HG12	1.99	0.45
1:A:1120:SER:OG	1:A:1123:ASP:OD2	2.30	0.45
2:C:750:ARG:O	2:C:754:ASN:ND2	2.42	0.45
2:D:284:SER:O	2:D:284:SER:OG	2.28	0.45
2:F:273:VAL:HA	2:F:676:GLN:HE22	1.81	0.45
2:F:606:GLU:OE1	2:F:680:LYS:NZ	2.44	0.45
2:G:142:SER:O	2:G:142:SER:OG	2.34	0.45
2:G:240:GLU:O	2:G:244:HIS:N	2.45	0.45
2:J:296:CYS:SG	2:J:540:SER:OG	2.74	0.45
2:F:71:ILE:HG21	2:F:599:ILE:HG23	1.98	0.45
2:G:381:PHE:O	2:G:450:ASN:ND2	2.49	0.45
2:J:386:ARG:NH2	2:J:454:THR:O	2.50	0.45
2:E:655:SER:OG	2:E:657:SER:OG	2.35	0.45
2:J:252:GLN:O	2:J:256:THR:OG1	2.35	0.45
2:J:437:ASN:HD22	2:J:440:ARG:HH21	1.63	0.45
2:J:700:THR:HG21	2:J:853:ILE:HG12	1.99	0.45
1:A:473:LYS:NZ	1:A:474:ILE:O	2.40	0.45
2:H:793:ASP:OD1	2:H:793:ASP:N	2.48	0.45
2:K:789:ARG:NH2	2:K:792:ASP:OD1	2.49	0.45
2:B:504:LEU:HB3	2:B:513:ALA:HB2	1.99	0.45
2:C:565:ASP:OD1	2:D:261:GLN:NE2	2.50	0.45
2:G:284:SER:O	2:G:284:SER:OG	2.34	0.45
2:H:287:ALA:HB2	2:H:655:SER:HB3	1.99	0.45
2:J:745:THR:H	2:J:748:ILE:HG22	1.82	0.45
2:K:410:TYR:OH	2:K:512:GLU:OE2	2.35	0.45
1:A:525:ILE:HD12	1:A:529:VAL:HG23	1.99	0.44
1:A:765:ASP:OD1	1:A:765:ASP:N	2.50	0.44
2:H:293:ILE:HG21	2:I:315:THR:HG22	1.99	0.44
2:K:381:PHE:O	2:K:450:ASN:ND2	2.50	0.44
2:I:837:ASP:N	2:I:837:ASP:OD1	2.50	0.44
1:A:367:MET:HG2	1:A:1096:GLN:HB2	2.00	0.44
2:B:408:TYR:OH	2:D:312:ILE:O	2.36	0.44
2:C:348:MET:HG2	2:C:530:ILE:HG23	1.98	0.44
2:E:455:ILE:O	2:E:473:ARG:NH1	2.50	0.44
2:F:833:SER:O	2:F:833:SER:OG	2.34	0.44
2:I:402:LEU:HD23	2:I:425:LEU:HD11	2.00	0.44
2:K:150:THR:OG1	2:K:151:ARG:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:700:THR:OG1	2:K:701:ASP:N	2.49	0.44
2:K:797:GLY:O	2:K:849:THR:OG1	2.32	0.44
2:C:47:GLN:HE21	2:D:882:ARG:HH21	1.64	0.44
2:F:743:GLN:HE22	2:F:773:ARG:HD3	1.82	0.44
2:G:570:ASP:N	2:G:570:ASP:OD1	2.49	0.44
2:H:332:PRO:HG3	2:H:582:ARG:HH12	1.83	0.44
2:H:482:LEU:HD12	2:H:899:PRO:HD2	1.98	0.44
2:H:837:ASP:OD1	2:H:837:ASP:N	2.50	0.44
2:I:104:VAL:HG22	2:I:858:VAL:HG22	2.00	0.44
2:I:135:ARG:NH2	2:I:613:ASP:OD2	2.50	0.44
2:J:61:VAL:HG13	2:K:313:THR:HG21	2.00	0.44
2:J:247:ARG:NH1	2:J:536:GLU:OE2	2.49	0.44
2:K:240:GLU:O	2:K:244:HIS:N	2.49	0.44
2:K:474:TYR:H	2:K:531:ASN:HD21	1.65	0.44
1:A:604:THR:HG22	1:A:719:THR:HA	2.00	0.44
2:D:121:ASP:OD1	2:D:121:ASP:N	2.43	0.44
2:D:421:THR:OG1	2:D:422:GLY:N	2.50	0.44
2:F:151:ARG:NH2	2:F:188:ASP:OD1	2.47	0.44
2:J:708:ASP:OD1	2:J:708:ASP:N	2.51	0.44
1:A:367:MET:HG3	1:A:1097:ASN:HB2	2.00	0.44
1:A:991:ALA:HB3	1:A:996:GLN:HG2	2.00	0.44
2:C:384:GLY:HA2	2:C:446:GLY:HA3	2.00	0.44
2:D:90:PHE:HB2	2:D:166:VAL:HG12	1.99	0.44
2:E:732:LEU:HD11	2:E:850:LYS:HD3	1.99	0.44
2:H:284:SER:O	2:H:284:SER:OG	2.30	0.44
2:H:344:TYR:OH	2:H:526:ARG:NH2	2.44	0.44
2:D:264:ILE:HB	2:D:883:ILE:HG12	1.99	0.44
2:G:146:HIS:NE2	2:G:881:MET:O	2.50	0.44
2:K:640:VAL:O	2:K:644:SER:OG	2.32	0.44
2:K:855:LYS:HA	2:K:855:LYS:HD3	1.87	0.44
2:G:711:PRO:O	2:G:828:TYR:OH	2.36	0.44
2:H:88:ILE:HD12	2:H:88:ILE:HA	1.92	0.44
2:H:274:ASN:H	2:H:676:GLN:HE22	1.66	0.44
2:K:75:ALA:HB2	2:K:602:VAL:HG21	2.00	0.44
2:B:283:ARG:HH11	2:C:490:ILE:HG12	1.82	0.44
2:G:816:LYS:HA	2:G:816:LYS:HD3	1.81	0.44
2:I:224:ILE:HD12	2:I:266:VAL:HG22	2.00	0.44
2:K:31:LEU:HD23	2:K:341:ARG:HH21	1.83	0.44
1:A:1219:LEU:HD21	1:A:1233:ILE:HG22	1.99	0.43
2:B:91:ARG:NH1	2:B:109:GLU:OE2	2.50	0.43
2:F:127:TYR:HD1	2:F:617:LEU:HD22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:572:SER:OG	2:F:575:SER:OG	2.34	0.43
2:H:774:PHE:O	2:H:779:ARG:NH1	2.45	0.43
2:K:293:ILE:HD13	2:K:345:LEU:HD11	1.99	0.43
1:A:1095:ASP:OD1	1:A:1095:ASP:N	2.49	0.43
2:C:135:ARG:HD3	2:C:138:ARG:HH21	1.83	0.43
2:C:691:ALA:HB1	2:C:697:LEU:HD11	2.00	0.43
2:G:158:VAL:HG12	2:G:191:ILE:HG22	1.99	0.43
2:H:61:VAL:HG22	2:H:63:ASP:H	1.83	0.43
2:I:131:ILE:HD12	2:I:131:ILE:HA	1.87	0.43
2:I:200:ARG:NH1	2:I:202:VAL:O	2.51	0.43
2:I:662:ASN:OD1	2:I:662:ASN:N	2.52	0.43
2:C:487:THR:OG1	2:C:488:TYR:N	2.52	0.43
2:I:173:PRO:HA	2:I:180:ARG:HH21	1.83	0.43
2:F:494:TYR:HD1	2:F:524:MET:HE1	1.84	0.43
1:A:399:LYS:HE3	1:A:400:PRO:HD2	2.00	0.43
1:A:1099:SER:O	1:A:1103:TYR:N	2.48	0.43
2:B:167:GLU:OE2	2:B:169:LYS:NZ	2.43	0.43
2:C:779:ARG:NH2	2:C:817:TYR:O	2.50	0.43
2:D:655:SER:O	2:D:655:SER:OG	2.34	0.43
2:F:613:ASP:OD1	2:F:688:TRP:NE1	2.42	0.43
2:I:8:ARG:HB2	2:I:11:ARG:HD3	2.00	0.43
2:I:705:MET:HB3	2:I:772:VAL:HG13	2.00	0.43
2:J:738:ILE:HD12	2:J:738:ILE:HA	1.92	0.43
2:J:658:HIS:HB2	2:K:309:ILE:HA	2.00	0.43
2:J:740:ARG:NH1	2:J:769:ASP:O	2.40	0.43
1:A:280:VAL:HB	1:A:302:THR:HG22	1.99	0.43
1:A:591:THR:HG21	1:A:810:VAL:HG22	2.01	0.43
2:C:242:LEU:HD11	2:C:246:LYS:HE2	2.00	0.43
2:C:352:GLN:HE21	2:C:544:LEU:HB2	1.84	0.43
2:C:701:ASP:HB3	2:C:778:LEU:HD12	1.99	0.43
2:F:790:PRO:HG2	2:F:795:LEU:HG	1.99	0.43
2:G:209:CYS:SG	2:G:210:SER:N	2.91	0.43
2:H:278:VAL:HG13	2:H:603:TYR:HE2	1.84	0.43
2:J:465:TYR:HD2	2:J:539:HIS:HD2	1.66	0.43
2:K:358:LYS:HB2	2:K:570:ASP:HB2	2.00	0.43
1:A:374:LEU:HA	1:A:377:GLN:HE22	1.84	0.43
1:A:590:PHE:O	1:A:770:THR:OG1	2.32	0.43
2:B:739:ASP:OD1	2:B:739:ASP:N	2.51	0.43
2:C:315:THR:OG1	2:C:316:GLN:N	2.50	0.43
2:C:357:LEU:HD23	2:C:359:ILE:HD11	1.99	0.43
2:E:183:ILE:O	2:E:187:LEU:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:779:ARG:NH2	2:E:817:TYR:O	2.52	0.43
2:G:410:TYR:OH	2:G:512:GLU:OE2	2.37	0.43
2:G:416:VAL:HB	2:G:429:ILE:HD12	2.01	0.43
2:H:197:VAL:HG23	2:H:225:GLU:HG3	2.00	0.43
2:I:54:THR:OG1	2:I:55:ARG:N	2.52	0.43
2:K:691:ALA:HB1	2:K:697:LEU:HD11	2.00	0.43
2:F:386:ARG:HE	2:F:456:ASP:HB2	1.84	0.42
2:G:27:SER:HA	2:G:299:THR:HA	2.01	0.42
2:I:232:LEU:HD22	2:I:886:ILE:HD12	2.01	0.42
2:I:410:TYR:OH	2:I:512:GLU:OE2	2.36	0.42
2:K:544:LEU:HD12	2:K:545:PRO:HD2	2.01	0.42
1:A:82:LYS:NZ	1:A:86:ASP:OD2	2.52	0.42
2:B:190:SER:O	2:B:190:SER:OG	2.36	0.42
2:D:232:LEU:HD11	2:D:886:ILE:HD11	2.00	0.42
2:G:158:VAL:HA	2:G:191:ILE:HA	2.00	0.42
2:I:264:ILE:CD1	2:I:881:MET:CE	2.97	0.42
2:I:418:TYR:OH	2:J:481:GLU:OE1	2.35	0.42
2:K:662:ASN:OD1	2:K:662:ASN:N	2.52	0.42
1:A:328:LEU:HD11	1:A:343:ARG:HH21	1.84	0.42
1:A:444:LEU:O	1:A:448:THR:OG1	2.31	0.42
1:A:479:LYS:HD3	1:A:479:LYS:HA	1.75	0.42
1:A:939:GLU:HG2	1:A:1073:SER:HA	2.01	0.42
1:A:1081:TYR:CG	1:A:1257:VAL:HG21	2.54	0.42
2:B:440:ARG:O	2:B:447:THR:OG1	2.37	0.42
2:F:264:ILE:HB	2:F:883:ILE:HG12	2.01	0.42
2:F:357:LEU:HD12	2:F:357:LEU:HA	1.92	0.42
2:J:142:SER:O	2:J:142:SER:OG	2.34	0.42
2:K:354:ILE:HD12	2:K:391:THR:HG22	2.01	0.42
2:K:456:ASP:OD1	2:K:456:ASP:N	2.53	0.42
1:A:613:LEU:HD23	1:A:613:LEU:HA	1.86	0.42
1:A:776:ASP:HB3	1:A:779:VAL:HG12	2.01	0.42
2:F:97:SER:OG	2:F:100:ARG:O	2.35	0.42
2:F:649:LYS:HB2	2:F:649:LYS:HE3	1.86	0.42
2:I:10:GLU:H	2:I:10:GLU:HG2	1.66	0.42
1:A:389:ASN:ND2	1:A:652:ASN:O	2.52	0.42
1:A:605:ARG:HD2	1:A:605:ARG:HA	1.79	0.42
2:G:587:THR:OG1	2:G:588:HIS:N	2.53	0.42
2:J:861:VAL:HG22	2:J:865:GLN:HG3	2.02	0.42
2:C:801:SER:HB2	2:C:816:LYS:HD3	2.02	0.42
2:D:482:LEU:HD12	2:D:899:PRO:HD2	2.00	0.42
2:G:128:SER:HA	2:G:131:ILE:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:267:LEU:HD11	2:H:890:LEU:HD11	2.00	0.42
1:A:1224:GLN:H	1:A:1224:GLN:HG2	1.60	0.42
2:D:363:GLU:HG3	2:D:573:TRP:HB2	2.01	0.42
2:D:475:CYS:SG	2:D:475:CYS:O	2.77	0.42
2:E:284:SER:OG	2:E:288:ASN:ND2	2.53	0.42
2:H:633:PRO:HB2	2:H:663:ILE:HG21	2.01	0.42
2:H:790:PRO:HD3	2:H:826:LEU:HD13	2.02	0.42
2:I:23:LEU:HD11	2:I:304:ALA:HB2	2.02	0.42
2:K:732:LEU:HD21	2:K:850:LYS:HD3	2.02	0.42
1:A:484:PHE:CG	1:A:983:LYS:HE2	2.55	0.42
1:A:926:GLY:O	1:A:936:MET:N	2.47	0.42
2:C:360:ASP:HA	2:C:361:PRO:HD3	1.92	0.42
2:E:634:SER:O	2:E:634:SER:OG	2.31	0.42
2:H:474:TYR:O	2:H:475:CYS:SG	2.77	0.42
2:K:131:ILE:HD12	2:K:131:ILE:HA	1.96	0.42
1:A:18:ARG:HE	1:A:18:ARG:HB2	1.70	0.41
2:C:125:LYS:HB3	2:C:125:LYS:HE2	1.87	0.41
2:F:106:THR:HA	2:F:109:GLU:HB2	2.02	0.41
2:G:475:CYS:SG	2:G:477:ILE:CD1	3.08	0.41
2:K:357:LEU:HD12	2:K:357:LEU:HA	1.89	0.41
2:K:611:LYS:NZ	2:K:674:SER:O	2.49	0.41
1:A:62:ASN:HB3	1:A:68:GLU:HG2	2.01	0.41
1:A:421:TYR:HE2	1:A:616:ILE:HG22	1.86	0.41
2:C:743:GLN:OE1	2:C:773:ARG:NH1	2.51	0.41
2:D:359:ILE:HG23	2:D:364:ARG:HH11	1.85	0.41
2:E:284:SER:O	2:E:284:SER:OG	2.37	0.41
2:G:358:LYS:HB2	2:G:570:ASP:HB2	2.01	0.41
2:G:628:LEU:HD12	2:G:631:ALA:HB2	2.02	0.41
2:I:867:LEU:HD12	2:I:870:LEU:HD11	2.01	0.41
2:J:103:ARG:HE	2:J:861:VAL:HG11	1.84	0.41
2:J:115:GLY:HA3	2:J:129:THR:HG23	2.02	0.41
2:J:190:SER:O	2:J:190:SER:OG	2.35	0.41
2:J:837:ASP:OD1	2:J:837:ASP:N	2.52	0.41
1:A:1207:LEU:HD23	1:A:1207:LEU:HA	1.95	0.41
2:B:677:PRO:HA	2:B:681:LEU:HD23	2.03	0.41
2:I:475:CYS:SG	2:I:477:ILE:HD12	2.60	0.41
2:J:675:LEU:HD12	2:J:681:LEU:HD11	2.02	0.41
1:A:399:LYS:HA	1:A:399:LYS:HD2	1.76	0.41
2:B:392:GLN:HG2	2:B:443:PHE:HE2	1.84	0.41
2:C:470:ARG:NH1	2:C:546:ASP:OD1	2.43	0.41
2:H:426:ASP:OD1	2:H:437:ASN:ND2	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:765:ILE:HG23	2:H:770:ASP:HB2	2.02	0.41
1:A:873:LYS:O	1:A:877:ILE:HG12	2.21	0.41
2:C:632:ARG:H	2:C:635:HIS:HD2	1.68	0.41
2:G:170:ASN:OD1	2:G:170:ASN:N	2.52	0.41
2:I:245:ARG:NH1	2:I:471:TYR:OH	2.54	0.41
2:I:762:LEU:HD23	2:I:762:LEU:HA	1.92	0.41
2:J:774:PHE:HB2	2:J:779:ARG:HH22	1.84	0.41
2:C:88:ILE:HD12	2:C:88:ILE:HA	1.97	0.41
2:G:764:ARG:NH1	2:G:768:ASP:OD2	2.53	0.41
2:J:622:ARG:HA	2:J:622:ARG:HD2	1.77	0.41
2:K:762:LEU:HD23	2:K:762:LEU:HA	1.90	0.41
1:A:826:ASP:OD1	1:A:826:ASP:N	2.53	0.41
2:C:843:ASN:HA	2:C:844:PRO:HD3	1.89	0.41
2:D:661:ILE:HG13	2:E:15:THR:HG21	2.01	0.41
2:E:359:ILE:HD13	2:E:359:ILE:HA	1.94	0.41
2:F:672:LEU:HD23	2:F:672:LEU:HA	1.88	0.41
2:H:383:ALA:HB2	2:H:390:LEU:HD12	2.02	0.41
2:E:871:ASN:OD1	2:E:872:ARG:NH1	2.54	0.41
2:F:88:ILE:HD12	2:F:88:ILE:HA	1.87	0.41
2:F:227:VAL:HA	2:F:231:GLU:HB3	2.02	0.41
2:F:587:THR:OG1	2:F:588:HIS:N	2.54	0.41
2:F:706:HIS:NE2	2:F:769:ASP:OD1	2.43	0.41
2:G:700:THR:OG1	2:G:701:ASP:N	2.54	0.41
2:I:297:LEU:HD12	2:I:298:PRO:HD2	2.02	0.41
2:I:649:LYS:HB2	2:I:649:LYS:HE3	1.95	0.41
2:J:118:ILE:HD12	2:J:126:PHE:HD1	1.86	0.41
2:J:306:ASN:HB3	2:J:309:ILE:HG13	2.03	0.41
2:K:699:LEU:HD12	2:K:778:LEU:HB3	2.03	0.41
1:A:130:PHE:HB2	1:A:683:GLY:HA3	2.03	0.41
1:A:1244:ARG:HE	1:A:1249:LEU:HD13	1.85	0.41
2:B:200:ARG:HB3	2:B:881:MET:HE1	2.02	0.41
2:D:357:LEU:HD12	2:D:357:LEU:HA	1.89	0.41
2:E:348:MET:HG2	2:E:530:ILE:HG23	2.03	0.41
2:G:487:THR:OG1	2:G:488:TYR:N	2.54	0.41
2:G:535:ASN:OD1	2:G:535:ASN:N	2.49	0.41
2:K:379:LEU:HD23	2:K:500:MET:HG2	2.03	0.41
2:K:773:ARG:HG2	2:K:775:GLY:H	1.86	0.41
2:I:75:ALA:HB2	2:I:602:VAL:HG21	2.03	0.40
1:A:114:PHE:CD1	1:A:255:LYS:HB3	2.57	0.40
1:A:1130:ARG:HA	1:A:1136:ARG:HD3	2.02	0.40
2:C:170:ASN:OD1	2:C:170:ASN:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:889:SER:O	2:C:889:SER:OG	2.32	0.40
2:D:95:MET:HG2	2:D:827:ILE:HD12	2.03	0.40
2:G:193:GLU:HB2	2:G:204:VAL:HB	2.02	0.40
2:H:483:ILE:HD11	2:H:525:VAL:HB	2.04	0.40
2:I:853:ILE:HG23	2:I:855:LYS:H	1.86	0.40
2:J:672:LEU:HD23	2:J:672:LEU:HA	1.89	0.40
1:A:29:GLU:O	1:A:912:ASN:ND2	2.51	0.40
2:B:61:VAL:HG22	2:B:63:ASP:H	1.86	0.40
2:I:260:ARG:HH21	2:I:262:ASP:HB2	1.86	0.40
1:A:524:SER:O	1:A:524:SER:OG	2.33	0.40
2:B:699:LEU:HD12	2:B:778:LEU:HB3	2.04	0.40
2:D:470:ARG:NH1	2:D:546:ASP:OD1	2.51	0.40
2:E:495:HIS:CE1	2:E:499:GLU:HG3	2.56	0.40
2:H:296:CYS:HB2	2:H:538:LEU:HD23	2.04	0.40
2:I:315:THR:OG1	2:I:316:GLN:N	2.53	0.40
1:A:911:ARG:NH2	1:A:967:CYS:SG	2.95	0.40
2:F:861:VAL:HG13	2:F:865:GLN:HB2	2.02	0.40
2:G:204:VAL:HG22	2:G:875:VAL:HG22	2.04	0.40
2:H:221:GLN:HG2	2:H:875:VAL:HG11	2.04	0.40
2:H:460:ARG:CZ	2:H:480:ARG:HH21	2.35	0.40
2:I:398:LEU:HD23	2:I:398:LEU:HA	1.89	0.40
2:K:54:THR:OG1	2:K:55:ARG:N	2.54	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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	1285/1302 (99%)	1210 (94%)	74 (6%)	1 (0%)	51 83
2	B	871/901 (97%)	825 (95%)	46 (5%)	0	100 100
2	C	881/901 (98%)	821 (93%)	60 (7%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	D	861/901 (96%)	803 (93%)	57 (7%)	1 (0%)	51 83
2	E	881/901 (98%)	826 (94%)	55 (6%)	0	100 100
2	F	863/901 (96%)	807 (94%)	56 (6%)	0	100 100
2	G	881/901 (98%)	815 (92%)	66 (8%)	0	100 100
2	H	872/901 (97%)	820 (94%)	52 (6%)	0	100 100
2	I	881/901 (98%)	820 (93%)	61 (7%)	0	100 100
2	J	867/901 (96%)	821 (95%)	46 (5%)	0	100 100
2	K	881/901 (98%)	829 (94%)	52 (6%)	0	100 100
All	All	10024/10312 (97%)	9397 (94%)	625 (6%)	2 (0%)	100 100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	197	VAL
2	D	350	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	1151/1161 (99%)	1148 (100%)	3 (0%)	92 96
2	B	768/792 (97%)	765 (100%)	3 (0%)	91 95
2	C	782/792 (99%)	781 (100%)	1 (0%)	93 98
2	D	761/792 (96%)	761 (100%)	0	100 100
2	E	782/792 (99%)	781 (100%)	1 (0%)	93 98
2	F	762/792 (96%)	758 (100%)	4 (0%)	88 94
2	G	782/792 (99%)	779 (100%)	3 (0%)	91 95
2	H	768/792 (97%)	766 (100%)	2 (0%)	92 96
2	I	782/792 (99%)	780 (100%)	2 (0%)	92 96
2	J	764/792 (96%)	758 (99%)	6 (1%)	81 89

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	K	782/792 (99%)	778 (100%)	4 (0%)	88 94
All	All	8884/9081 (98%)	8855 (100%)	29 (0%)	92 96

All (29) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	360	TYR
1	A	884	ARG
1	A	1133	VAL
2	B	365	MET
2	B	475	CYS
2	B	845	THR
2	C	475	CYS
2	E	475	CYS
2	F	271	LEU
2	F	386	ARG
2	F	408	TYR
2	F	475	CYS
2	G	313	THR
2	G	529	ARG
2	G	764	ARG
2	H	391	THR
2	H	475	CYS
2	I	317	ARG
2	I	881	MET
2	J	33	VAL
2	J	36	LEU
2	J	357	LEU
2	J	386	ARG
2	J	412	THR
2	J	475	CYS
2	K	271	LEU
2	K	364	ARG
2	K	529	ARG
2	K	715	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (126) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	7	GLN
1	A	117	ASN

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Mol	Chain	Res	Type
1	A	140	GLN
1	A	184	GLN
1	A	253	HIS
1	A	258	ASN
1	A	335	GLN
1	A	377	GLN
1	A	614	GLN
1	A	734	HIS
1	A	796	HIS
1	A	814	GLN
1	A	867	GLN
1	A	909	GLN
1	A	972	GLN
1	A	1027	HIS
1	A	1053	ASN
1	A	1105	GLN
1	A	1212	GLN
1	A	1271	GLN
1	A	1299	ASN
1	A	1300	GLN
2	B	96	GLN
2	B	389	ASN
2	B	417	ASN
2	B	433	GLN
2	B	437	ASN
2	B	450	ASN
2	B	467	HIS
2	B	535	ASN
2	B	659	ASN
2	B	702	GLN
2	B	743	GLN
2	B	829	ASN
2	C	92	HIS
2	C	288	ASN
2	C	467	HIS
2	C	635	HIS
2	C	642	ASN
2	C	653	ASN
2	C	692	ASN
2	D	92	HIS
2	D	96	GLN
2	D	196	ASN

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Mol	Chain	Res	Type
2	D	228	GLN
2	D	276	GLN
2	D	389	ASN
2	D	535	ASN
2	D	635	HIS
2	D	656	HIS
2	E	7	GLN
2	E	65	GLN
2	E	92	HIS
2	E	218	ASN
2	E	230	GLN
2	E	288	ASN
2	E	433	GLN
2	E	531	ASN
2	E	653	ASN
2	F	96	GLN
2	F	389	ASN
2	F	437	ASN
2	F	450	ASN
2	F	550	ASN
2	F	635	HIS
2	F	676	GLN
2	F	702	GLN
2	F	743	GLN
2	G	184	GLN
2	G	218	ASN
2	G	228	GLN
2	G	230	GLN
2	G	484	ASN
2	G	635	HIS
2	G	653	ASN
2	G	834	ASN
2	H	47	GLN
2	H	96	GLN
2	H	228	GLN
2	H	244	HIS
2	H	276	GLN
2	H	378	HIS
2	H	415	GLN
2	H	495	HIS
2	H	532	GLN
2	H	535	ASN

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Mol	Chain	Res	Type
2	H	550	ASN
2	H	635	HIS
2	H	659	ASN
2	H	676	GLN
2	H	702	GLN
2	H	743	GLN
2	H	829	ASN
2	I	194	ASN
2	I	218	ASN
2	I	230	GLN
2	I	288	ASN
2	I	352	GLN
2	I	389	ASN
2	I	531	ASN
2	I	535	ASN
2	I	635	HIS
2	I	653	ASN
2	I	829	ASN
2	J	244	HIS
2	J	276	GLN
2	J	389	ASN
2	J	437	ASN
2	J	495	HIS
2	J	535	ASN
2	J	539	HIS
2	J	550	ASN
2	J	635	HIS
2	J	702	GLN
2	J	743	GLN
2	J	805	ASN
2	J	829	ASN
2	K	92	HIS
2	K	218	ASN
2	K	230	GLN
2	K	288	ASN
2	K	378	HIS
2	K	389	ASN
2	K	635	HIS
2	K	653	ASN
2	K	834	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 monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

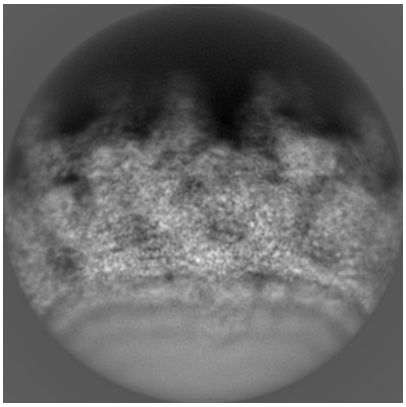
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-20398. These allow visual inspection of the internal detail of the map and identification of artifacts.

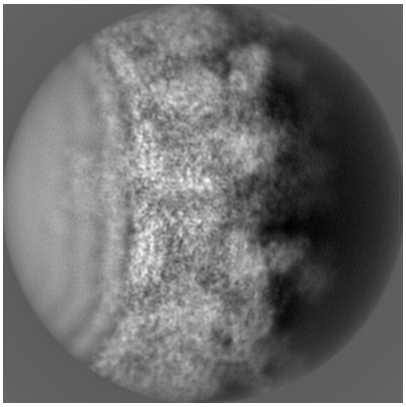
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

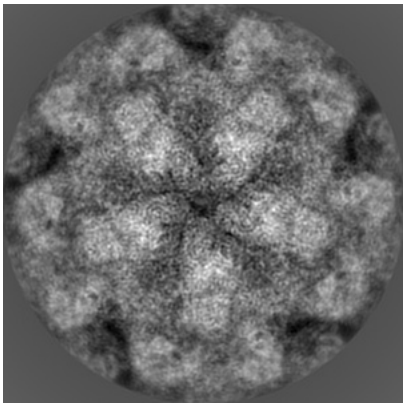
6.1.1 Primary map



X



Y

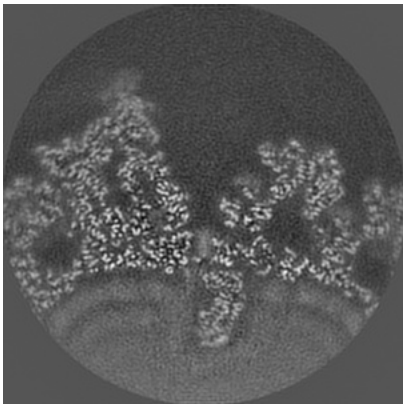


Z

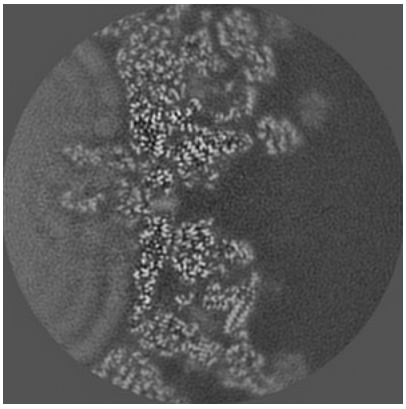
The images above show the map projected in three orthogonal directions.

6.2 Central slices

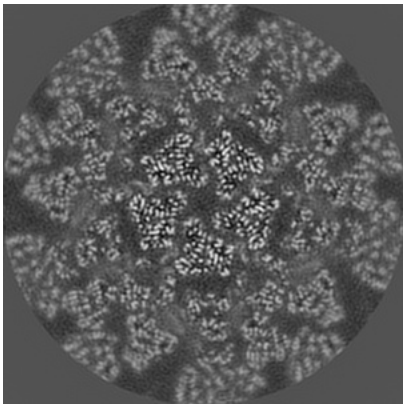
6.2.1 Primary map



X Index: 147



Y Index: 147

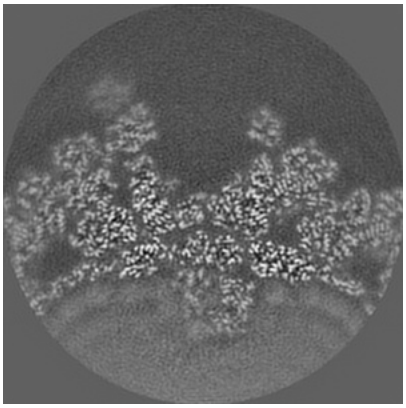


Z Index: 147

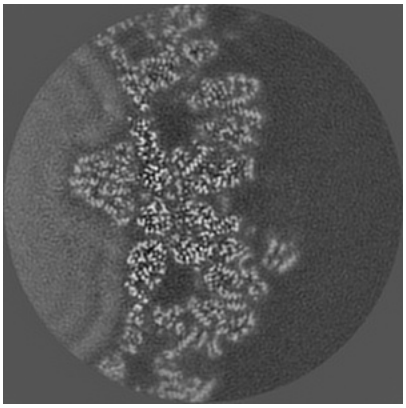
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

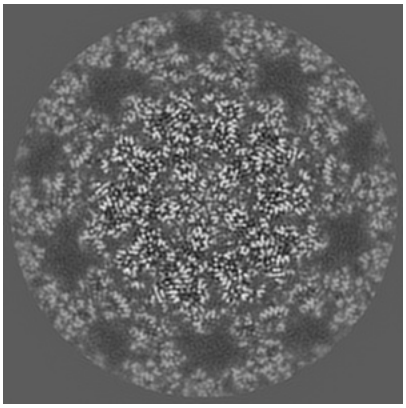
6.3.1 Primary map



X Index: 159



Y Index: 171

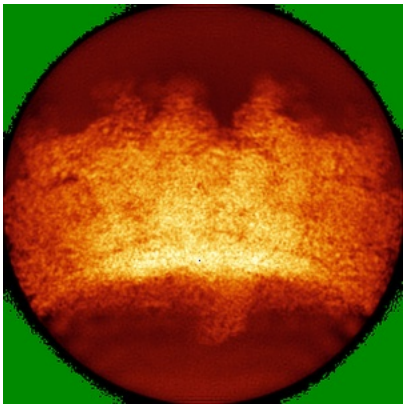


Z Index: 105

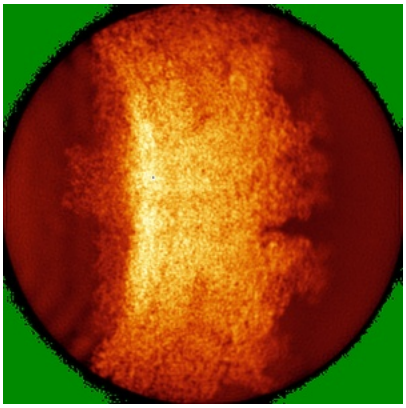
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

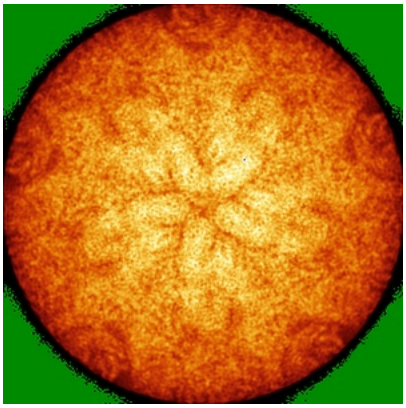
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.02. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

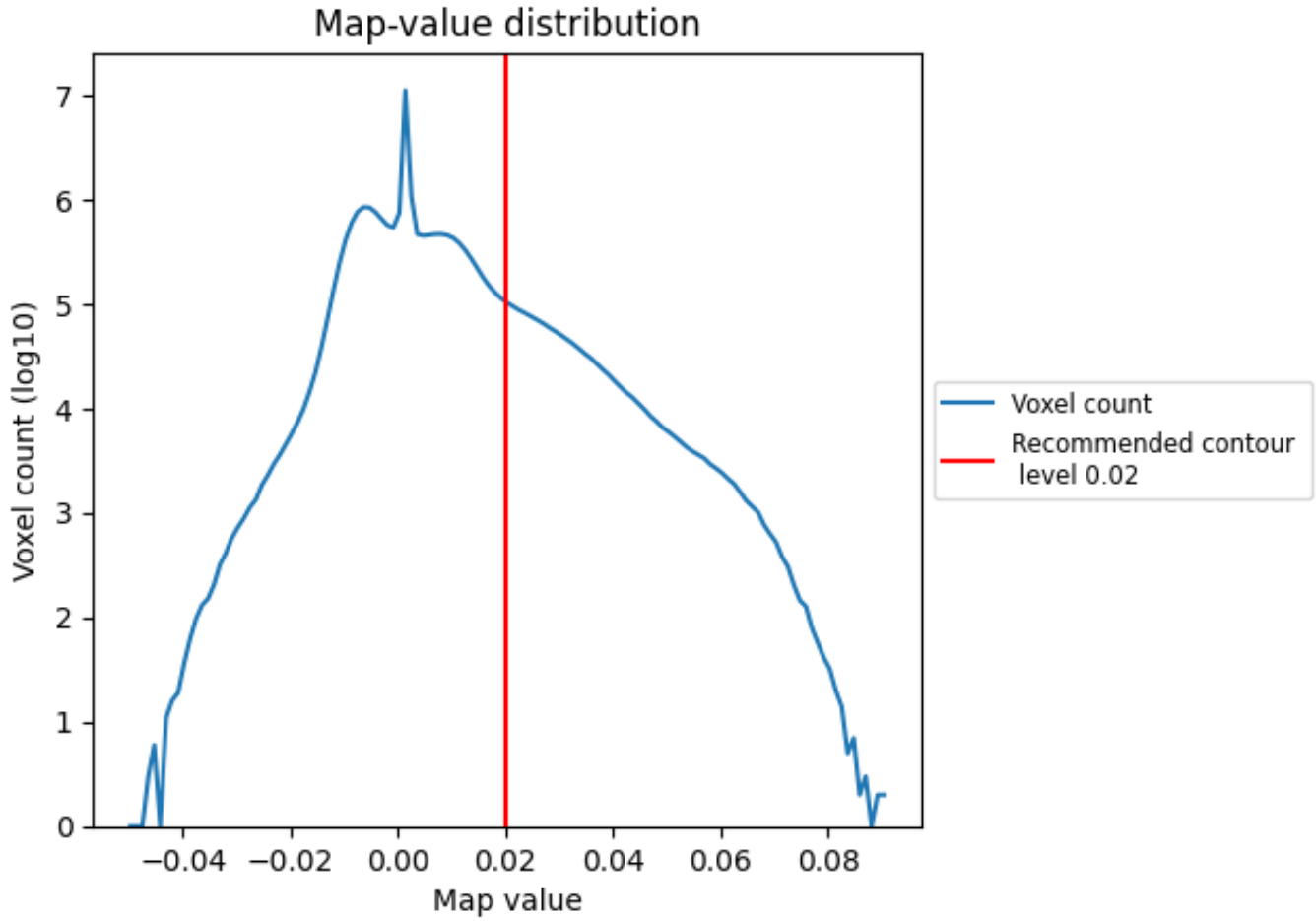
6.6 Mask visualisation (i)

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

7 Map analysis

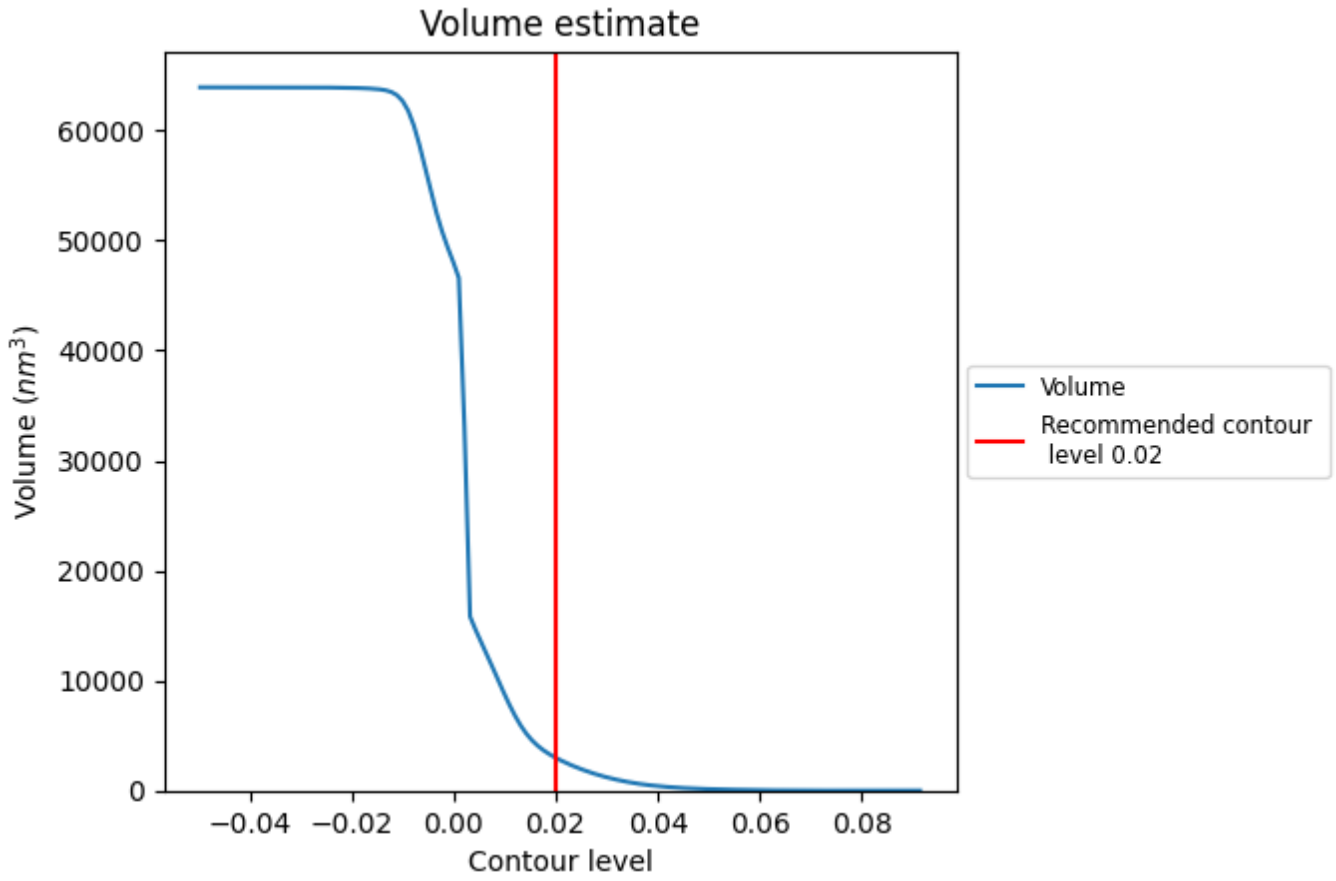
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

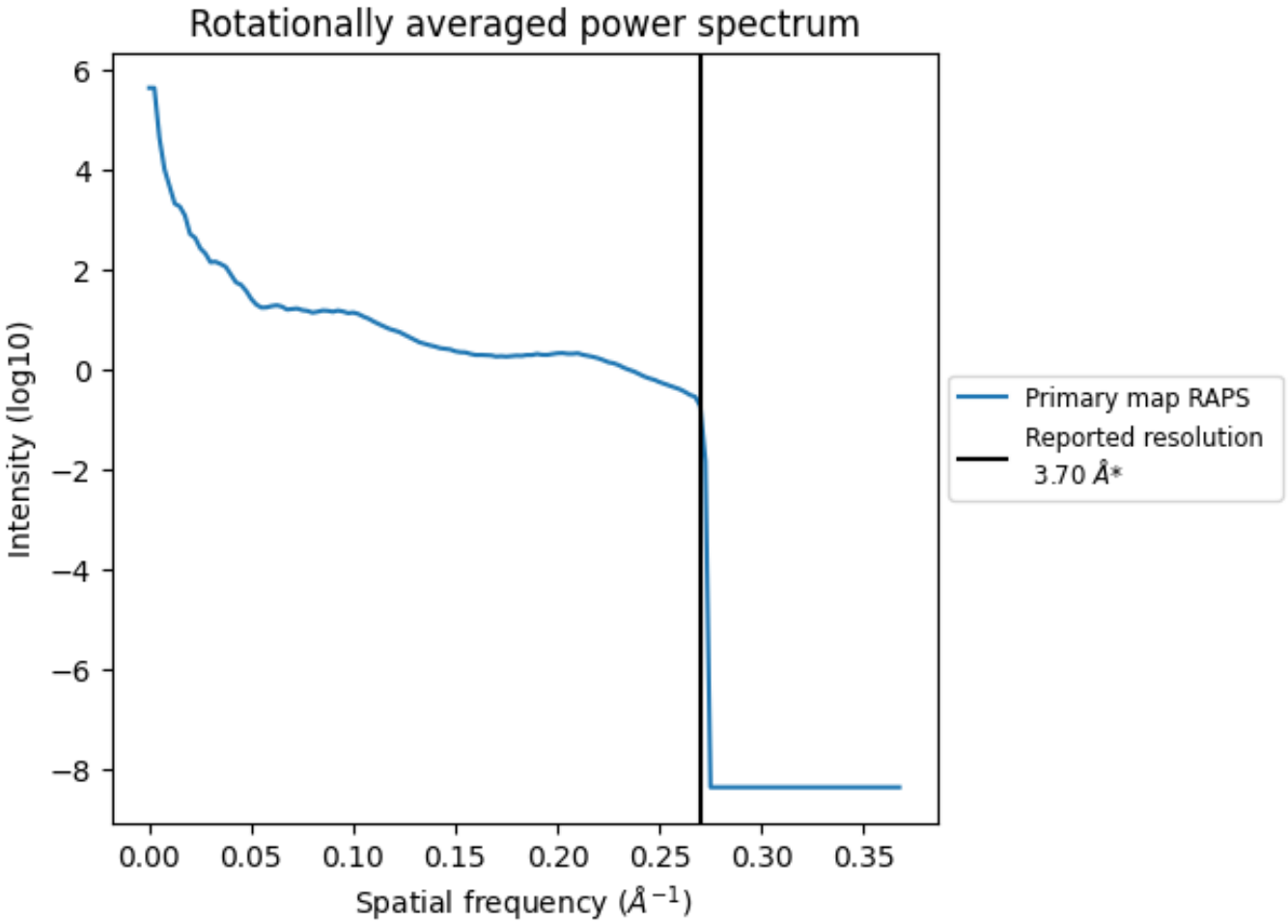
7.2 Volume estimate



The volume at the recommended contour level is 2990 nm^3; this corresponds to an approximate mass of 2701 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.270 Å^{-1}

8 Fourier-Shell correlation (i)

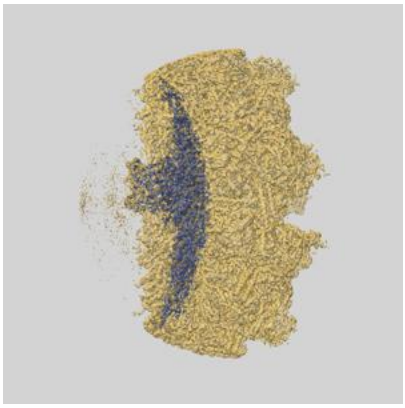
This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit

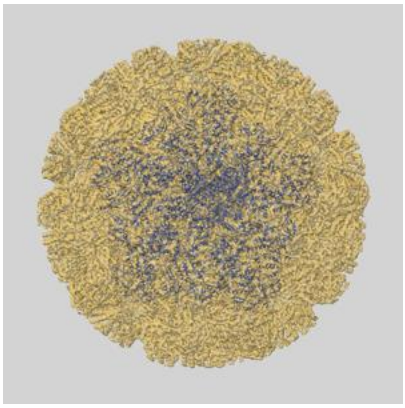
This section contains information regarding the fit between EMDB map EMD-20398 and PDB model 6PNS. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlay

X



Y



Z

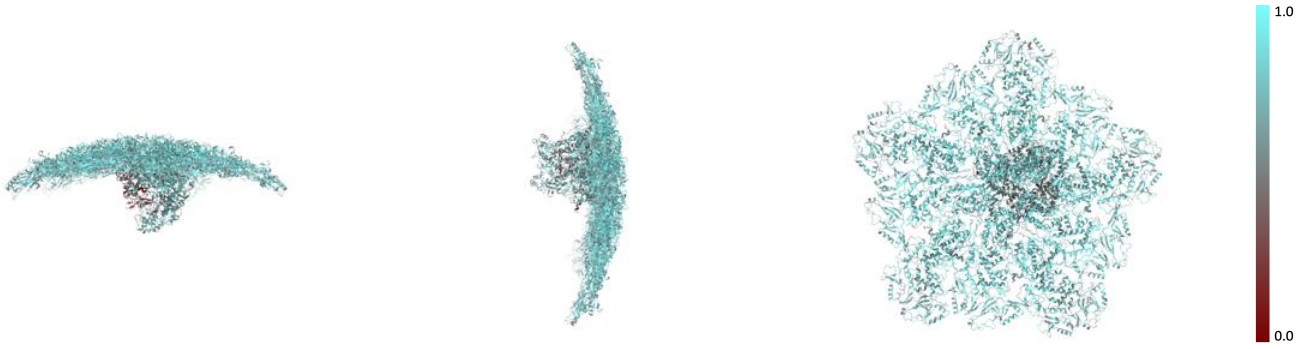
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model (i)

X Y Z

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

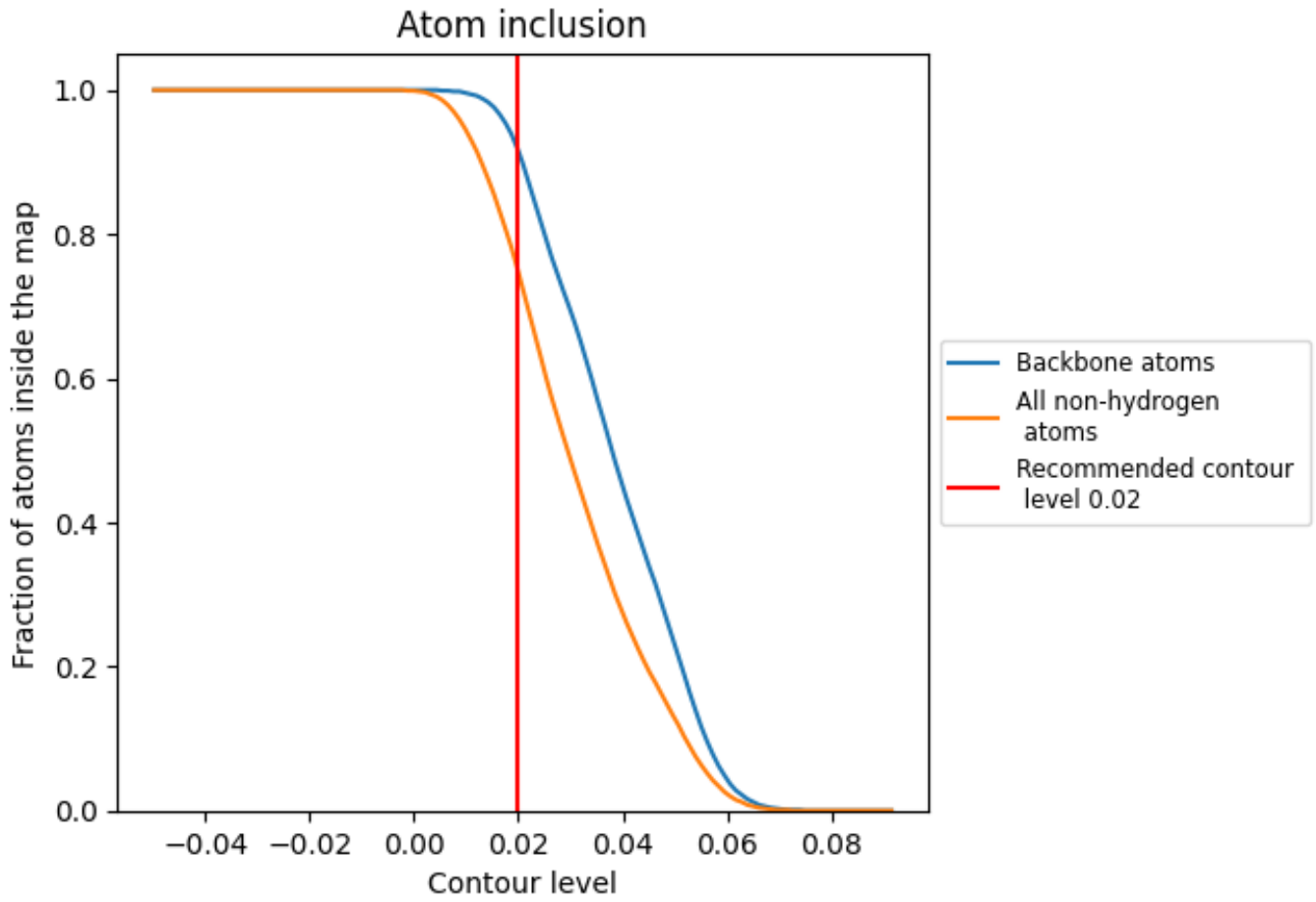
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.02).

9.4 Atom inclusion (i)



At the recommended contour level, 92% of all backbone atoms, 75% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7480	0.4840
A	0.5840	0.4290
B	0.7850	0.4960
C	0.7630	0.4890
D	0.7830	0.4980
E	0.7580	0.4870
F	0.7790	0.4950
G	0.7610	0.4880
H	0.7830	0.4960
I	0.7600	0.4880
J	0.7840	0.4990
K	0.7610	0.4890