Full wwPDB EM Validation Report ⓘ

Nov 20, 2022 – 11:26 am GMT

PDB ID	:	6Q5U
EMDB ID	:	EMD-4461
Title	:	High resolution electron cryo-microscopy structure of the bacteriophage PR772
Authors	:	Narayana Reddy, H.K.; Svenda, M.
Deposited on	:	2018-12-09
Resolution	:	2.75 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:

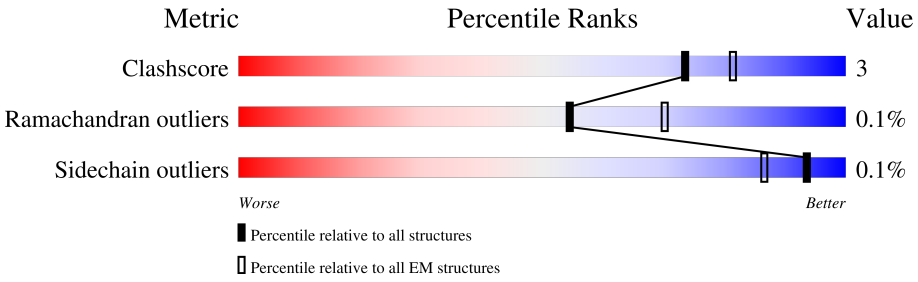
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.75 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	395	92% 6% ·
1	B	395	88% 8% 5%
1	C	395	92% 8%
1	D	395	87% 9% ·
1	E	395	90% 6% ·
1	F	395	92% 8%
1	G	395	90% 8% ·
1	H	395	86% 8% 5%

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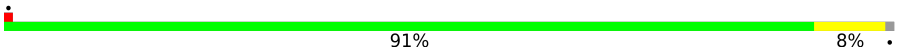
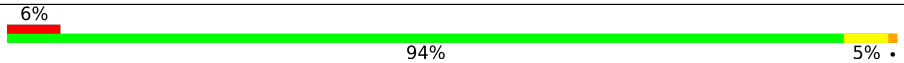
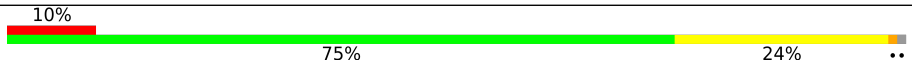
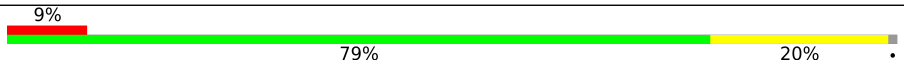
Mol	Chain	Length	Quality of chain
1	I	395	
1	J	395	
1	K	395	
1	L	395	
2	M	84	
3	N	117	
4	O	340	
4	P	340	
4	Q	340	
5	R	126	
5	S	126	

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 41731 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 Major Capsid Protein (P3).

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	390	Total	C	N	O	S	0	0
			3036	1925	517	587	7		
1	B	377	Total	C	N	O	S	0	0
			2937	1864	499	567	7		
1	C	394	Total	C	N	O	S	0	0
			3057	1937	520	593	7		
1	D	380	Total	C	N	O	S	0	0
			2958	1876	503	572	7		
1	E	379	Total	C	N	O	S	0	0
			2951	1872	502	570	7		
1	F	394	Total	C	N	O	S	0	0
			3061	1939	521	594	7		
1	G	388	Total	C	N	O	S	0	0
			3017	1913	513	584	7		
1	H	374	Total	C	N	O	S	0	0
			2919	1852	497	563	7		
1	I	394	Total	C	N	O	S	0	0
			3057	1937	520	593	7		
1	J	390	Total	C	N	O	S	0	0
			3036	1925	517	587	7		
1	K	377	Total	C	N	O	S	0	0
			2937	1864	499	567	7		
1	L	392	Total	C	N	O	S	0	0
			3045	1930	518	590	7		

- Molecule 2 is a protein called Minor Capsid Protein (P30).

Mol	Chain	Residues	Atoms					AltConf	Trace
2	M	84	Total	C	N	O	S	0	0
			652	418	112	118	4		

- Molecule 3 is a protein called Infectivity Protein (P16).

Mol	Chain	Residues	Atoms					AltConf	Trace
3	N	51	Total	C	N	O	S	0	0
			385	242	62	80	1		

- Molecule 4 is a protein called Spike protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	O	124	Total	C	N	O	S	0	0
			921	591	149	176	5		
4	P	124	Total	C	N	O	S	0	0
			921	591	149	176	5		
4	Q	124	Total	C	N	O	S	0	0
			921	591	149	176	5		

- Molecule 5 is a protein called Penton protein.

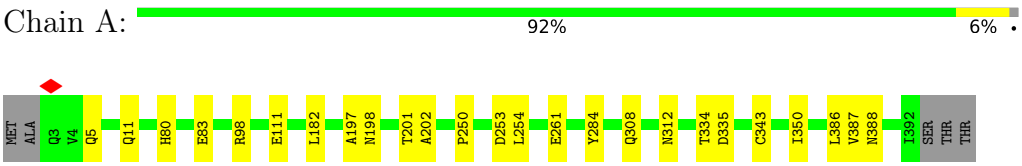
Mol	Chain	Residues	Atoms					AltConf	Trace
5	R	125	Total	C	N	O	S	0	0
			960	610	162	184	4		
5	S	125	Total	C	N	O	S	0	0
			960	610	162	184	4		

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.

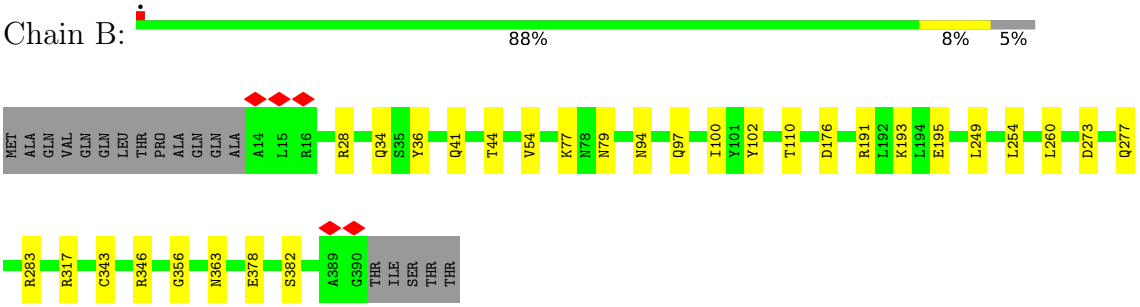
• Molecule 1: Major Capsid Protein (P3)

Chain A:



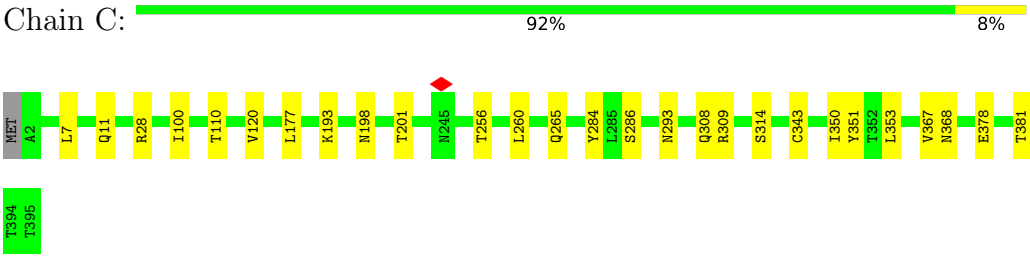
• Molecule 1: Major Capsid Protein (P3)

Chain B:



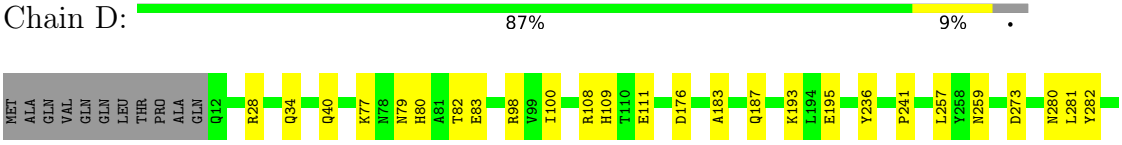
• Molecule 1: Major Capsid Protein (P3)

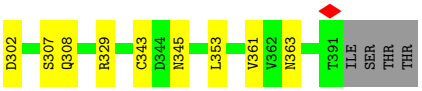
Chain C:



• Molecule 1: Major Capsid Protein (P3)

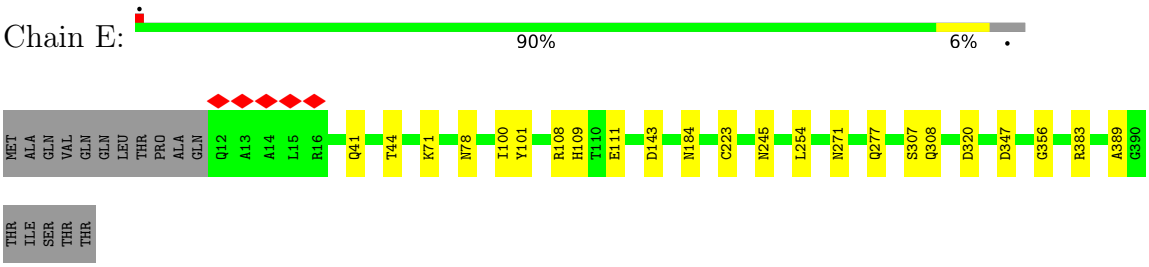
Chain D:





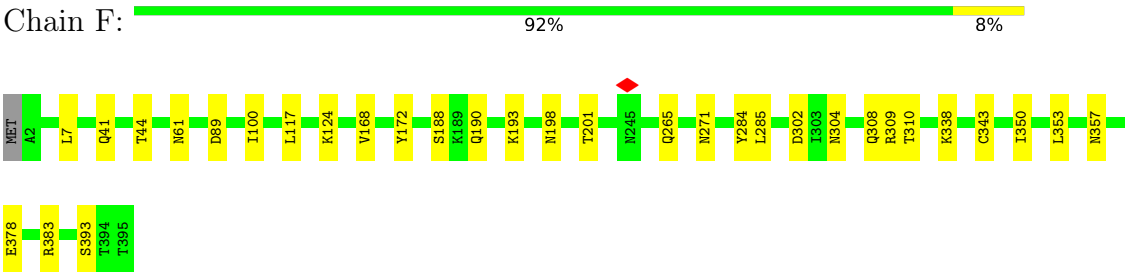
• Molecule 1: Major Capsid Protein (P3)

Chain E:



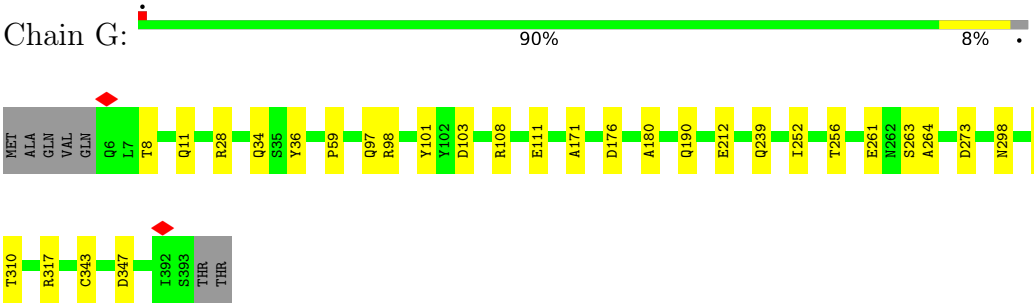
• Molecule 1: Major Capsid Protein (P3)

Chain F:



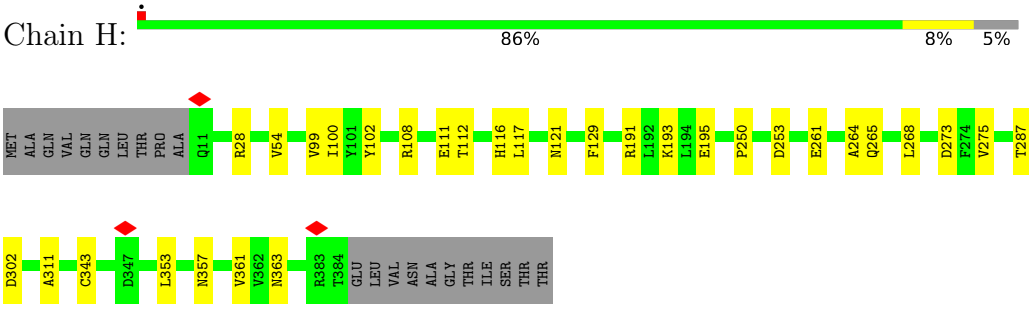
• Molecule 1: Major Capsid Protein (P3)

Chain G:



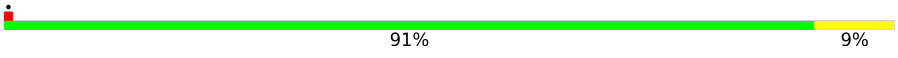
• Molecule 1: Major Capsid Protein (P3)

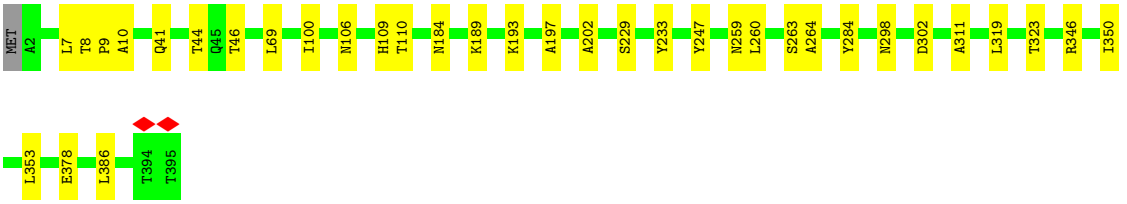
Chain H:



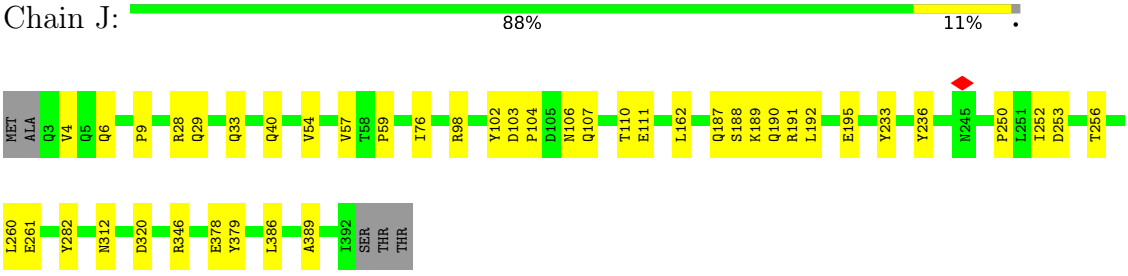
• Molecule 1: Major Capsid Protein (P3)

Chain I:

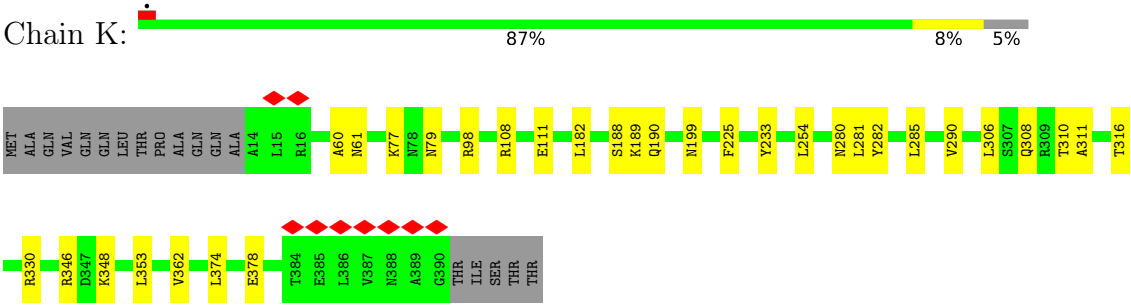




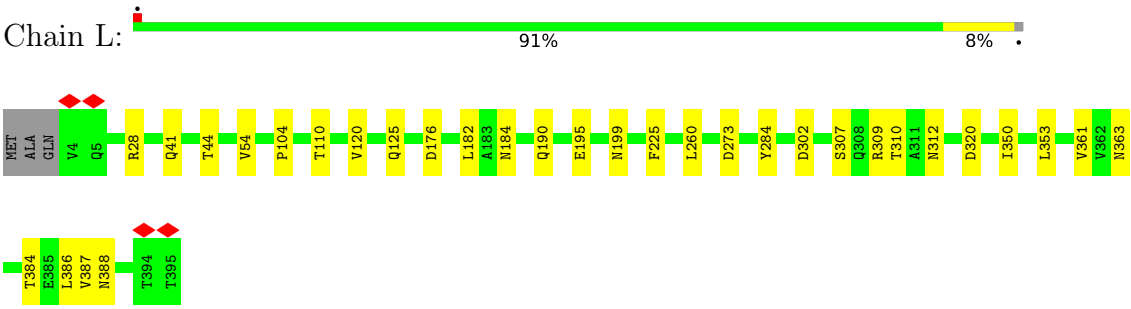
• Molecule 1: Major Capsid Protein (P3)



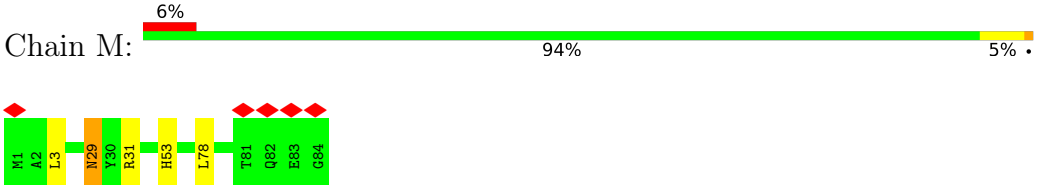
• Molecule 1: Major Capsid Protein (P3)



• Molecule 1: Major Capsid Protein (P3)

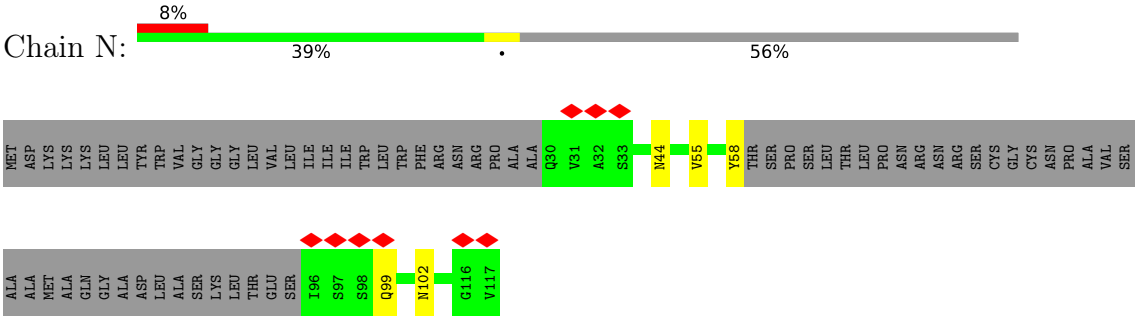


• Molecule 2: Minor Capsid Protein (P30)



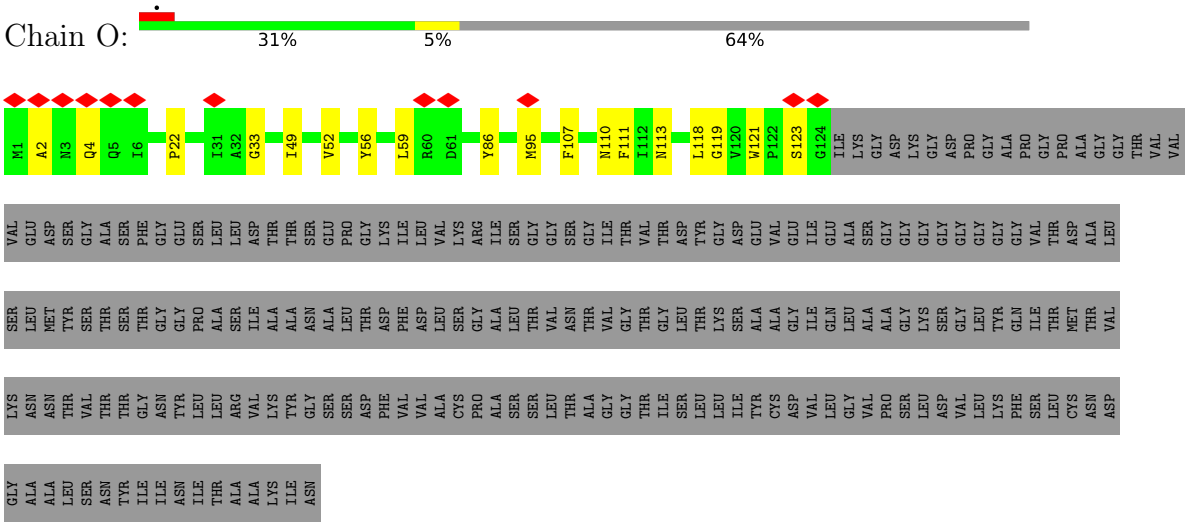
• Molecule 3: Infectivity Protein (P16)

Chain N:



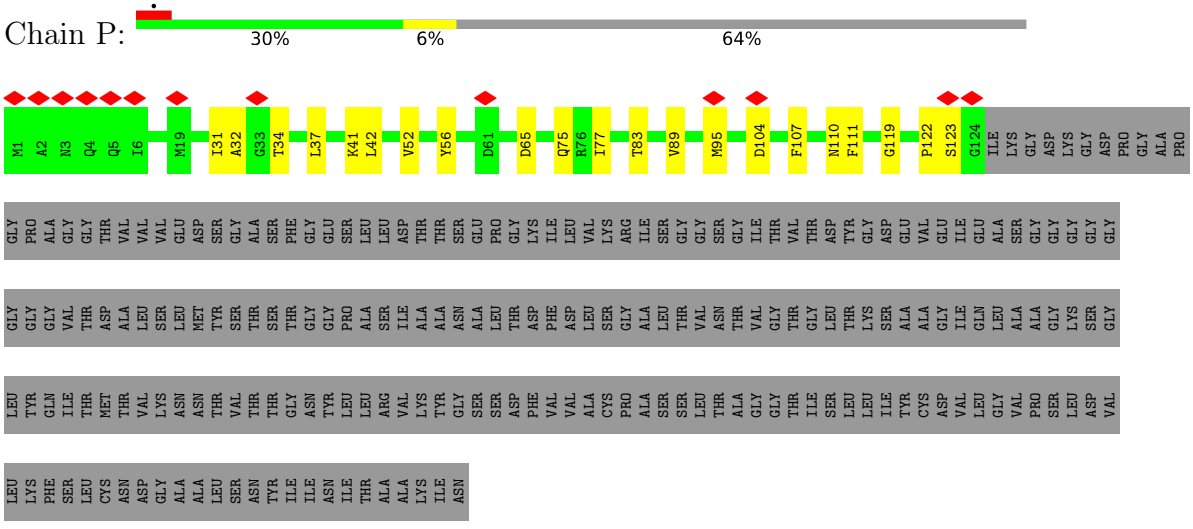
• Molecule 4: Spike protein

Chain O:



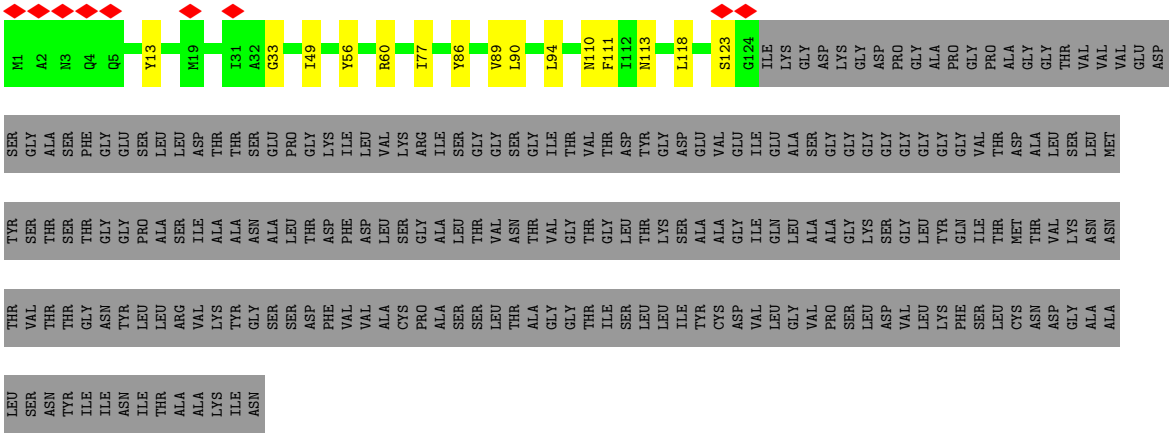
• Molecule 4: Spike protein

Chain P:



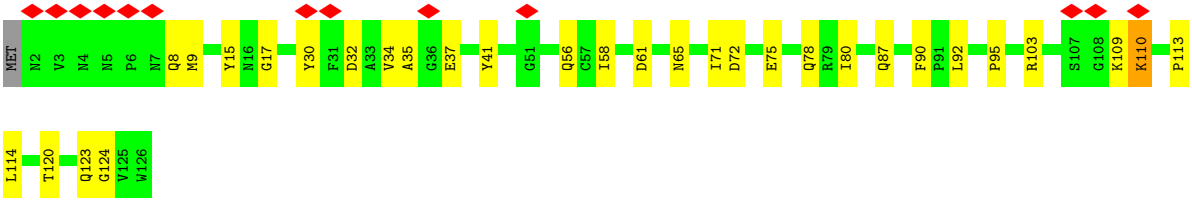
• Molecule 4: Spike protein

Chain Q:



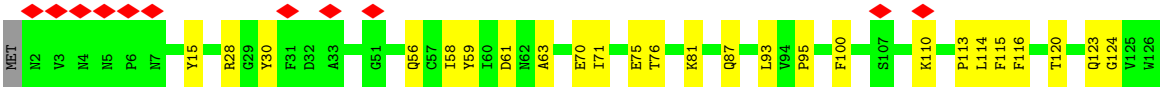
• Molecule 5: Penton protein

Chain R:



• Molecule 5: Penton protein

Chain S:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, I	Depositor
Number of particles used	46000	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 ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	800.00	Depositor
Maximum defocus (nm)	2600.00	Depositor
Magnification	130000	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	16.194	Depositor
Minimum map value	-6.641	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	2.5	Depositor
Map size (Å)	909.48, 909.48, 909.48	wwPDB
Map dimensions	858, 858, 858	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.06, 1.06, 1.06	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	0.37	0/3103	0.53	0/4241
1	B	0.36	0/3003	0.52	0/4103
1	C	0.36	0/3124	0.55	0/4271
1	D	0.34	0/3024	0.53	0/4132
1	E	0.34	0/3017	0.49	0/4122
1	F	0.36	0/3128	0.55	1/4276 (0.0%)
1	G	0.34	0/3083	0.51	0/4212
1	H	0.34	0/2985	0.51	0/4078
1	I	0.34	0/3124	0.53	0/4271
1	J	0.36	0/3103	0.54	0/4241
1	K	0.36	0/3003	0.52	0/4103
1	L	0.35	0/3112	0.54	0/4254
2	M	0.36	0/671	0.56	0/916
3	N	0.32	0/394	0.49	0/540
4	O	0.38	0/939	0.68	1/1280 (0.1%)
4	P	0.40	0/939	0.66	0/1280
4	Q	0.40	0/939	0.67	1/1280 (0.1%)
5	R	0.38	0/983	0.67	0/1335
5	S	0.36	0/983	0.63	0/1335
All	All	0.36	0/42657	0.54	3/58270 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C	0	1
1	L	0	2
2	M	0	1
4	O	0	1
4	P	0	1
4	Q	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
5	R	0	1
5	S	0	1
All	All	0	9

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	Q	94	LEU	CA-CB-CG	6.50	130.24	115.30
4	O	59	LEU	CA-CB-CG	6.47	130.18	115.30
1	F	383	ARG	C-N-CA	5.65	135.81	121.70

There are no chirality outliers.

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	351	TYR	Peptide
1	L	310	THR	Peptide
1	L	312	ASN	Peptide
2	M	29	ASN	Peptide
4	O	111	PHE	Peptide
4	P	111	PHE	Peptide
4	Q	111	PHE	Peptide
5	R	30	TYR	Peptide
5	S	116	PHE	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3036	0	2956	16	0
1	B	2937	0	2854	16	0
1	C	3057	0	2974	16	0
1	D	2958	0	2874	23	0
1	E	2951	0	2867	15	0
1	F	3061	0	2980	18	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	G	3017	0	2935	18	0
1	H	2919	0	2835	20	0
1	I	3057	0	2974	19	0
1	J	3036	0	2956	25	0
1	K	2937	0	2854	20	0
1	L	3045	0	2962	19	0
2	M	652	0	643	5	0
3	N	385	0	353	3	0
4	O	921	0	928	12	0
4	P	921	0	928	15	0
4	Q	921	0	928	8	0
5	R	960	0	918	21	0
5	S	960	0	918	15	0
All	All	41731	0	40637	269	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 3.

All (269) 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)
5:R:87:GLN:HE22	5:S:81:LYS:H	1.29	0.79
4:P:123:SER:HB3	4:Q:123:SER:HB2	1.76	0.67
4:O:123:SER:HB3	4:P:123:SER:HB2	1.78	0.65
5:S:75:GLU:HB2	5:S:95:PRO:HG3	1.80	0.64
1:G:36:TYR:HB2	1:G:239:GLN:HE21	1.63	0.63
4:P:32:ALA:HB2	4:P:104:ASP:HA	1.80	0.62
1:B:346:ARG:NH1	1:B:378:GLU:OE2	2.33	0.62
1:J:6:GLN:HE21	1:J:9:PRO:HA	1.65	0.62
5:R:75:GLU:HB3	5:R:95:PRO:HG3	1.81	0.62
1:C:293:ASN:HD21	1:C:367:VAL:HA	1.65	0.61
1:K:108:ARG:HD3	1:K:111:GLU:HB2	1.81	0.61
1:J:187:GLN:HE22	2:M:3:LEU:H	1.47	0.61
1:F:41:GLN:NE2	1:F:44:THR:OG1	2.33	0.60
1:G:273:ASP:OD2	1:G:309:ARG:NH2	2.34	0.60
1:I:311:ALA:O	1:K:108:ARG:NH2	2.35	0.60
1:D:34:GLN:HB2	1:D:241:PRO:HG3	1.82	0.60
1:L:273:ASP:OD2	1:L:309:ARG:NH2	2.35	0.60
4:Q:49:ILE:HG13	4:Q:113:ASN:HD22	1.67	0.59
1:D:183:ALA:HA	1:D:187:GLN:HE22	1.66	0.59
1:H:311:ALA:HB2	1:H:357:ASN:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:100:ILE:HD12	1:I:193:LYS:HD3	1.86	0.58
1:G:108:ARG:NH2	1:G:261:GLU:OE2	2.37	0.58
1:K:61:ASN:ND2	1:K:188:SER:O	2.35	0.57
1:F:124:LYS:NZ	1:F:172:TYR:O	2.36	0.57
4:O:119:GLY:HA3	5:R:123:GLN:HG2	1.87	0.57
1:K:346:ARG:NH1	1:K:378:GLU:OE2	2.38	0.57
5:S:61:ASP:HB3	5:S:113:PRO:HG2	1.87	0.56
1:L:28:ARG:NH1	1:L:176:ASP:OD1	2.39	0.56
5:R:124:GLY:HA3	5:S:123:GLN:HG2	1.86	0.56
1:D:108:ARG:HD3	1:D:111:GLU:HB2	1.87	0.56
1:I:346:ARG:NH1	1:I:378:GLU:OE2	2.38	0.56
5:R:72:ASP:OD2	5:R:103:ARG:NH2	2.38	0.56
5:S:56:GLN:NE2	5:S:120:THR:OG1	2.38	0.56
1:C:100:ILE:HD12	1:C:193:LYS:HD3	1.87	0.56
1:C:284:TYR:HB2	1:C:350:ILE:HB	1.88	0.56
1:D:28:ARG:NH2	1:D:176:ASP:OD2	2.39	0.56
1:F:308:GLN:NE2	1:F:343:CYS:SG	2.79	0.56
1:I:184:ASN:ND2	1:I:247:TYR:OH	2.39	0.56
1:C:265:GLN:NE2	1:C:393:SER:OG	2.39	0.55
1:B:273:ASP:OD1	1:B:363:ASN:ND2	2.37	0.55
1:K:98:ARG:NH2	1:K:111:GLU:OE2	2.39	0.55
1:L:110:THR:HG23	1:L:260:LEU:HB2	1.88	0.55
1:D:108:ARG:NH1	1:D:111:GLU:OE2	2.37	0.55
1:F:285:LEU:HB2	1:F:378:GLU:HG3	1.89	0.55
1:D:308:GLN:HE22	1:D:345:ASN:HD21	1.53	0.55
1:D:308:GLN:NE2	1:D:343:CYS:SG	2.80	0.55
1:H:353:LEU:HD12	2:M:78:LEU:HD12	1.88	0.55
1:J:106:ASN:OD1	1:J:191:ARG:NH2	2.36	0.55
1:E:41:GLN:NE2	1:E:44:THR:OG1	2.41	0.54
1:A:250:PRO:HB2	1:A:253:ASP:HB2	1.88	0.54
1:L:353:LEU:HD22	2:M:29:ASN:HD22	1.73	0.54
1:A:182:LEU:HB2	1:A:254:LEU:HD13	1.89	0.54
1:H:108:ARG:NH1	1:H:261:GLU:OE2	2.41	0.54
5:R:61:ASP:HB3	5:R:113:PRO:HG2	1.90	0.54
1:D:40:GLN:NE2	1:D:236:TYR:OH	2.41	0.54
1:J:4:VAL:O	1:J:312:ASN:ND2	2.41	0.54
1:C:293:ASN:OD1	1:C:368:ASN:ND2	2.41	0.53
1:D:98:ARG:HH21	1:D:111:GLU:HG2	1.74	0.53
1:H:108:ARG:HD2	1:H:111:GLU:HB2	1.91	0.53
1:A:198:ASN:H	1:A:201:THR:HG22	1.73	0.53
1:G:98:ARG:NH2	1:G:111:GLU:OE2	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:263:SER:OG	1:I:264:ALA:N	2.41	0.53
1:L:386:LEU:HD12	1:L:387:VAL:HG23	1.91	0.53
5:R:71:ILE:HD11	5:R:114:LEU:HD11	1.91	0.52
5:S:71:ILE:HD11	5:S:100:PHE:HB3	1.90	0.52
4:O:118:LEU:HD22	4:P:119:GLY:HA3	1.91	0.52
1:B:100:ILE:HD12	1:B:193:LYS:HD3	1.90	0.52
1:D:329:ARG:NH2	1:E:143:ASP:OD1	2.39	0.52
1:E:254:LEU:O	1:E:383:ARG:NH2	2.42	0.52
1:J:28:ARG:NH1	1:J:253:ASP:OD2	2.42	0.52
1:E:78:ASN:ND2	1:E:223:CYS:SG	2.83	0.52
1:H:250:PRO:HB2	1:H:253:ASP:HB2	1.90	0.52
1:I:109:HIS:O	1:I:259:ASN:ND2	2.43	0.52
1:J:102:TYR:HB2	1:J:191:ARG:HB2	1.92	0.52
4:P:56:TYR:HB3	4:P:110:ASN:HB2	1.90	0.52
1:L:199:ASN:HD21	1:L:225:PHE:H	1.58	0.52
1:J:40:GLN:NE2	1:J:236:TYR:OH	2.44	0.51
1:L:182:LEU:HD23	1:L:184:ASN:H	1.74	0.51
1:D:280:ASN:O	1:D:282:TYR:N	2.44	0.51
1:F:7:LEU:HD11	1:F:353:LEU:HD22	1.92	0.51
1:F:265:GLN:NE2	1:F:393:SER:OG	2.43	0.51
1:B:41:GLN:NE2	1:B:44:THR:OG1	2.44	0.51
4:O:22:PRO:HB2	5:R:15:TYR:HB2	1.93	0.51
1:C:309:ARG:NH1	1:C:314:SER:OG	2.44	0.51
1:L:388:ASN:OD1	1:L:388:ASN:N	2.42	0.51
4:P:77:ILE:HD12	4:P:89:VAL:HG12	1.94	0.50
1:L:120:VAL:HG11	1:L:260:LEU:HD11	1.93	0.50
1:I:106:ASN:HB2	1:I:189:LYS:HE2	1.92	0.50
1:K:280:ASN:O	1:K:282:TYR:N	2.44	0.50
1:H:273:ASP:OD2	1:H:363:ASN:ND2	2.39	0.50
5:S:28:ARG:HE	5:S:30:TYR:HB3	1.77	0.50
1:L:41:GLN:NE2	1:L:44:THR:OG1	2.44	0.50
1:H:102:TYR:HB2	1:H:191:ARG:HB3	1.94	0.49
1:I:319:LEU:HB3	1:I:323:THR:HB	1.94	0.49
3:N:99:GLN:HB3	3:N:102:ASN:HB2	1.93	0.49
1:C:7:LEU:HA	1:C:11:GLN:HE21	1.76	0.49
1:H:261:GLU:OE1	4:P:41:LYS:NZ	2.46	0.49
1:G:101:TYR:OH	1:G:190:GLN:OE1	2.30	0.49
1:K:285:LEU:HB2	1:K:378:GLU:HG3	1.94	0.49
1:J:59:PRO:HD2	1:J:190:GLN:HB2	1.94	0.49
1:J:188:SER:OG	1:J:189:LYS:N	2.46	0.49
5:R:58:ILE:HG22	5:R:90:PHE:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:298:ASN:ND2	1:G:302:ASP:OD2	2.43	0.48
4:Q:77:ILE:HG13	4:Q:89:VAL:HG12	1.95	0.48
1:E:277:GLN:HB3	1:E:356:GLY:HA2	1.95	0.48
1:F:309:ARG:NH1	1:F:310:THR:O	2.47	0.48
1:H:298:ASN:ND2	1:H:302:ASP:OD2	2.45	0.48
1:J:346:ARG:NH2	1:J:378:GLU:OE2	2.44	0.48
1:D:307:SER:HB3	1:D:361:VAL:HB	1.95	0.48
1:K:310:THR:OG1	1:K:311:ALA:N	2.46	0.48
1:B:77:LYS:NZ	1:B:79:ASN:OD1	2.45	0.48
1:G:317:ARG:NH1	1:G:343:CYS:SG	2.86	0.48
1:H:265:GLN:HE21	4:P:42:LEU:HD22	1.79	0.48
4:P:75:GLN:NE2	4:Q:86:TYR:OH	2.44	0.48
1:B:28:ARG:NH1	1:B:176:ASP:OD1	2.47	0.48
1:J:233:TYR:OH	1:L:320:ASP:OD1	2.28	0.48
5:R:8:GLN:HG2	5:R:9:MET:HG2	1.96	0.48
5:S:63:ALA:HB2	5:S:87:GLN:HE21	1.79	0.48
1:K:182:LEU:HB2	1:K:254:LEU:HD13	1.96	0.48
4:P:65:ASP:OD2	4:Q:60:ARG:NH2	2.44	0.48
1:E:100:ILE:HG12	1:E:111:GLU:HG3	1.95	0.48
1:H:99:VAL:HG11	1:H:117:LEU:HD22	1.96	0.47
1:G:263:SER:OG	1:G:264:ALA:N	2.45	0.47
1:K:290:VAL:HB	1:K:374:LEU:HB2	1.95	0.47
1:G:8:THR:HB	1:G:11:GLN:HG2	1.96	0.47
1:I:7:LEU:HD21	1:I:353:LEU:HD22	1.96	0.47
1:A:284:TYR:HB2	1:A:350:ILE:HB	1.97	0.47
1:C:308:GLN:NE2	1:C:343:CYS:SG	2.88	0.47
1:J:98:ARG:HH21	1:J:111:GLU:HG2	1.79	0.47
1:E:307:SER:OG	1:E:308:GLN:N	2.47	0.47
1:I:41:GLN:NE2	1:I:44:THR:OG1	2.48	0.47
1:A:5:GLN:HG2	1:B:36:TYR:CG	2.50	0.46
1:H:54:VAL:HG13	1:H:195:GLU:HG2	1.97	0.46
4:P:31:ILE:HG22	4:P:32:ALA:H	1.80	0.46
1:I:284:TYR:HB2	1:I:350:ILE:HB	1.97	0.46
1:K:188:SER:OG	1:K:189:LYS:N	2.48	0.46
1:J:104:PRO:HD3	1:J:190:GLN:HG2	1.98	0.46
4:Q:13:TYR:CZ	4:Q:90:LEU:HB3	2.50	0.46
1:C:381:THR:HG21	1:C:386:LEU:HD22	1.97	0.46
1:D:100:ILE:HB	1:D:193:LYS:HB3	1.98	0.46
1:D:109:HIS:HA	1:D:259:ASN:HD22	1.79	0.46
1:A:308:GLN:NE2	1:A:343:CYS:SG	2.89	0.46
1:E:245:ASN:OD1	1:E:245:ASN:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:384:THR:HB	2:M:31:ARG:HD3	1.97	0.46
1:B:102:TYR:HB2	1:B:191:ARG:HB3	1.97	0.46
1:C:28:ARG:HD2	1:C:177:LEU:H	1.81	0.46
1:J:282:TYR:OH	1:J:389:ALA:O	2.30	0.46
1:J:320:ASP:OD1	1:K:233:TYR:OH	2.33	0.46
4:Q:118:LEU:HG	5:S:124:GLY:HA3	1.97	0.46
1:H:287:THR:HB	1:H:343:CYS:HB3	1.97	0.45
1:G:34:GLN:HE22	1:I:10:ALA:H	1.65	0.45
1:K:199:ASN:HD21	1:K:225:PHE:H	1.65	0.45
4:O:86:TYR:OH	5:R:78:GLN:NE2	2.41	0.45
1:C:198:ASN:H	1:C:201:THR:HG22	1.82	0.45
1:C:110:THR:HG23	1:C:260:LEU:HB2	1.98	0.45
1:J:29:GLN:NE2	1:J:33:GLN:OE1	2.48	0.45
1:J:250:PRO:HB2	1:J:253:ASP:HB2	1.99	0.45
5:R:32:ASP:OD2	5:R:41:TYR:OH	2.34	0.45
1:B:317:ARG:NH1	1:B:343:CYS:SG	2.89	0.45
1:E:101:TYR:HD2	1:E:109:HIS:HB2	1.80	0.45
5:R:65:ASN:HA	5:R:110:LYS:HD2	1.98	0.45
1:G:28:ARG:NH1	1:G:176:ASP:OD2	2.49	0.45
1:D:273:ASP:OD1	1:D:363:ASN:ND2	2.39	0.45
1:G:59:PRO:HD2	1:G:190:GLN:HG3	1.99	0.45
1:J:54:VAL:HG13	1:J:195:GLU:HG2	1.98	0.45
1:D:100:ILE:HG12	1:D:111:GLU:HG3	1.99	0.45
1:J:261:GLU:OE1	1:J:379:TYR:OH	2.31	0.45
5:S:70:GLU:HG3	5:S:81:LYS:HB2	1.99	0.45
1:C:256:THR:HA	1:C:382:SER:HA	1.99	0.45
1:H:112:THR:OG1	1:H:116:HIS:ND1	2.37	0.45
1:L:104:PRO:HD3	1:L:190:GLN:HG2	1.99	0.45
5:R:58:ILE:HD12	5:R:92:LEU:HD11	1.99	0.45
1:A:312:ASN:HB2	1:J:386:LEU:HA	1.99	0.44
1:B:249:LEU:HD22	1:B:254:LEU:HD11	1.99	0.44
5:R:56:GLN:NE2	5:R:120:THR:OG1	2.50	0.44
5:S:58:ILE:HD11	5:S:114:LEU:HD21	1.99	0.44
1:C:286:SER:HB3	1:C:378:GLU:HB3	2.00	0.44
1:J:110:THR:HG23	1:J:260:LEU:HB2	1.99	0.44
1:D:77:LYS:NZ	1:D:79:ASN:OD1	2.49	0.44
1:E:184:ASN:ND2	1:E:389:ALA:O	2.51	0.44
1:J:103:ASP:HB3	1:J:107:GLN:HB3	2.00	0.44
1:J:57:VAL:HB	1:J:192:LEU:HB3	1.99	0.44
1:D:80:HIS:CD2	1:D:83:GLU:H	2.36	0.44
1:L:302:ASP:N	1:L:302:ASP:OD1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:94:ASN:O	1:B:97:GLN:NE2	2.51	0.44
1:I:197:ALA:HB1	1:I:202:ALA:HB2	2.00	0.44
5:R:34:VAL:HG12	5:R:37:GLU:H	1.83	0.44
1:A:386:LEU:HD12	1:A:387:VAL:HG13	2.00	0.43
1:F:188:SER:HB3	1:K:61:ASN:HB2	1.99	0.43
4:O:121:TRP:HE1	5:R:80:ILE:HG23	1.82	0.43
1:A:80:HIS:HD2	1:A:83:GLU:H	1.67	0.43
4:O:56:TYR:HB3	4:O:110:ASN:HB2	2.00	0.43
1:A:11:GLN:H	1:B:34:GLN:HE22	1.64	0.43
1:F:302:ASP:OD2	1:F:302:ASP:N	2.50	0.43
1:K:77:LYS:NZ	1:K:79:ASN:OD1	2.47	0.43
5:R:80:ILE:HD12	5:R:92:LEU:HD23	2.00	0.43
4:Q:56:TYR:HB3	4:Q:110:ASN:HB2	2.00	0.43
1:A:261:GLU:OE2	1:F:309:ARG:NH2	2.51	0.43
1:L:307:SER:HB3	1:L:361:VAL:HB	2.00	0.43
5:S:15:TYR:CZ	5:S:93:LEU:HB3	2.54	0.43
1:K:330:ARG:NH1	1:L:125:GLN:OE1	2.52	0.43
1:C:120:VAL:HG11	1:C:260:LEU:HD11	2.01	0.43
1:D:353:LEU:HD23	1:D:353:LEU:HA	1.91	0.43
1:K:308:GLN:O	1:K:316:THR:OG1	2.35	0.42
3:N:55:VAL:HG23	3:N:58:TYR:H	1.84	0.42
1:B:110:THR:HG23	1:B:260:LEU:HB2	2.01	0.42
1:E:320:ASP:N	1:E:320:ASP:OD1	2.51	0.42
1:F:117:LEU:HD21	1:F:168:VAL:HG22	2.01	0.42
1:H:264:ALA:HB3	4:O:4:GLN:HE21	1.84	0.42
1:J:252:ILE:O	1:J:256:THR:OG1	2.35	0.42
1:L:54:VAL:HG22	1:L:195:GLU:HG3	2.01	0.42
1:A:388:ASN:O	1:F:357:ASN:ND2	2.49	0.42
1:A:197:ALA:HB1	1:A:202:ALA:HB2	2.02	0.42
1:F:271:ASN:HD22	1:F:304:ASN:HD21	1.67	0.42
1:G:171:ALA:HB2	1:G:180:ALA:HB2	2.01	0.42
4:P:31:ILE:HD12	4:P:107:PHE:HE2	1.84	0.42
1:D:80:HIS:HD2	1:D:82:THR:H	1.67	0.42
1:F:198:ASN:H	1:F:201:THR:HG22	1.84	0.42
1:H:275:VAL:HG22	1:H:361:VAL:HG22	2.01	0.42
1:K:353:LEU:HB3	2:M:53:HIS:HB2	2.02	0.42
1:A:80:HIS:CD2	1:A:83:GLU:H	2.38	0.42
1:E:347:ASP:N	1:E:347:ASP:OD1	2.45	0.42
1:G:252:ILE:O	1:G:256:THR:OG1	2.32	0.42
5:S:76:THR:HG21	5:S:93:LEU:HB2	2.01	0.42
1:G:347:ASP:OD1	1:G:347:ASP:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:28:ARG:NH1	1:H:253:ASP:OD2	2.53	0.42
1:D:257:LEU:HD23	1:D:259:ASN:HD21	1.84	0.41
1:K:60:ALA:O	1:K:190:GLN:NE2	2.52	0.41
3:N:44:ASN:OD1	3:N:44:ASN:N	2.53	0.41
1:C:7:LEU:HD11	1:C:353:LEU:HD22	2.02	0.41
1:I:386:LEU:HD12	1:I:386:LEU:HA	1.93	0.41
1:K:306:LEU:HG	1:K:362:VAL:HG22	2.01	0.41
4:O:49:ILE:HD11	4:O:113:ASN:HB3	2.03	0.41
1:E:108:ARG:HD2	1:E:111:GLU:HB2	2.01	0.41
5:S:61:ASP:OD1	5:S:87:GLN:NE2	2.53	0.41
1:F:89:ASP:OD2	1:F:338:LYS:NZ	2.51	0.41
4:P:83:THR:HG22	4:P:122:PRO:HG2	2.03	0.41
1:B:283:ARG:HH22	1:B:382:SER:HB2	1.85	0.41
1:H:100:ILE:HB	1:H:193:LYS:HB2	2.02	0.41
1:I:110:THR:HG23	1:I:260:LEU:HB2	2.02	0.41
1:A:98:ARG:HH22	1:A:111:GLU:HB2	1.86	0.41
1:D:98:ARG:HB2	1:D:195:GLU:HB2	2.01	0.41
1:F:61:ASN:ND2	1:F:190:GLN:OE1	2.54	0.41
5:R:35:ALA:HB2	5:R:109:LYS:N	2.34	0.41
1:A:334:THR:OG1	1:A:335:ASP:N	2.54	0.41
1:F:100:ILE:HD12	1:F:193:LYS:HD3	2.03	0.41
4:O:2:ALA:HB1	4:P:37:LEU:HB2	2.03	0.41
4:O:22:PRO:HG3	5:R:17:GLY:H	1.85	0.41
1:D:302:ASP:OD1	1:D:302:ASP:N	2.53	0.41
1:E:271:ASN:HD21	1:G:111:GLU:HG2	1.85	0.41
1:I:69:LEU:HB3	1:I:233:TYR:HB2	2.03	0.41
4:O:52:VAL:HG23	4:O:95:MET:HG2	2.03	0.41
5:S:59:TYR:HB3	5:S:115:PHE:HB2	2.03	0.41
1:B:54:VAL:HG22	1:B:195:GLU:HG2	2.02	0.41
1:G:307:SER:OG	1:G:308:GLN:N	2.54	0.41
1:H:268:LEU:HD13	1:H:291:PHE:HE1	1.85	0.41
1:F:284:TYR:HB2	1:F:350:ILE:HB	2.03	0.40
1:I:8:THR:O	1:I:10:ALA:N	2.54	0.40
1:I:298:ASN:ND2	1:I:302:ASP:OD2	2.45	0.40
5:R:35:ALA:HB2	5:R:109:LYS:H	1.85	0.40
1:B:277:GLN:HB3	1:B:356:GLY:HA2	2.02	0.40
1:L:284:TYR:HB2	1:L:350:ILE:HB	2.03	0.40
4:P:52:VAL:HG23	4:P:95:MET:HG2	2.02	0.40
1:G:97:GLN:HE22	1:G:212:GLU:HB3	1.85	0.40
1:H:121:ASN:HB3	1:H:129:PHE:CG	2.56	0.40
1:I:46:THR:HA	1:I:229:SER:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:71:LYS:HE3	1:E:71:LYS:HB2	1.83	0.40
1:J:76:ILE:HD12	1:J:162:LEU:HD21	2.04	0.40
1:L:273:ASP:OD1	1:L:363:ASN:ND2	2.41	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	388/395 (98%)	371 (96%)	17 (4%)	0	100	100
1	B	375/395 (95%)	363 (97%)	12 (3%)	0	100	100
1	C	392/395 (99%)	367 (94%)	25 (6%)	0	100	100
1	D	378/395 (96%)	350 (93%)	27 (7%)	1 (0%)	41	60
1	E	377/395 (95%)	364 (97%)	13 (3%)	0	100	100
1	F	392/395 (99%)	372 (95%)	20 (5%)	0	100	100
1	G	384/395 (97%)	365 (95%)	19 (5%)	0	100	100
1	H	372/395 (94%)	351 (94%)	21 (6%)	0	100	100
1	I	392/395 (99%)	365 (93%)	26 (7%)	1 (0%)	41	60
1	J	388/395 (98%)	371 (96%)	17 (4%)	0	100	100
1	K	375/395 (95%)	353 (94%)	21 (6%)	1 (0%)	41	60
1	L	390/395 (99%)	369 (95%)	21 (5%)	0	100	100
2	M	82/84 (98%)	74 (90%)	8 (10%)	0	100	100
3	N	47/117 (40%)	40 (85%)	7 (15%)	0	100	100
4	O	122/340 (36%)	103 (84%)	18 (15%)	1 (1%)	19	34
4	P	122/340 (36%)	100 (82%)	22 (18%)	0	100	100
4	Q	122/340 (36%)	96 (79%)	25 (20%)	1 (1%)	19	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
5	R	123/126 (98%)	99 (80%)	23 (19%)	1 (1%)	19 34
5	S	123/126 (98%)	101 (82%)	21 (17%)	1 (1%)	19 34
All	All	5344/6213 (86%)	4974 (93%)	363 (7%)	7 (0%)	54 75

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	R	110	LYS
5	S	110	LYS
1	D	281	LEU
1	K	281	LEU
1	I	9	PRO
4	O	33	GLY
4	Q	33	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 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	322/326 (99%)	322 (100%)	0	100 100
1	B	311/326 (95%)	311 (100%)	0	100 100
1	C	324/326 (99%)	324 (100%)	0	100 100
1	D	313/326 (96%)	313 (100%)	0	100 100
1	E	312/326 (96%)	312 (100%)	0	100 100
1	F	325/326 (100%)	325 (100%)	0	100 100
1	G	320/326 (98%)	318 (99%)	2 (1%)	86 90
1	H	309/326 (95%)	309 (100%)	0	100 100
1	I	324/326 (99%)	324 (100%)	0	100 100
1	J	322/326 (99%)	322 (100%)	0	100 100
1	K	311/326 (95%)	310 (100%)	1 (0%)	92 95
1	L	323/326 (99%)	323 (100%)	0	100 100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	M	68/68 (100%)	68 (100%)	0	100 100
3	N	41/94 (44%)	41 (100%)	0	100 100
4	O	99/260 (38%)	98 (99%)	1 (1%)	76 85
4	P	99/260 (38%)	98 (99%)	1 (1%)	76 85
4	Q	99/260 (38%)	99 (100%)	0	100 100
5	R	101/102 (99%)	101 (100%)	0	100 100
5	S	101/102 (99%)	101 (100%)	0	100 100
All	All	4424/5058 (88%)	4419 (100%)	5 (0%)	93 96

All (5) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	G	103	ASP
1	G	310	THR
1	K	348	LYS
4	O	107	PHE
4	P	34	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (116) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	6	GLN
1	A	34	GLN
1	A	80	HIS
1	A	121	ASN
1	A	198	ASN
1	A	308	GLN
1	A	368	ASN
1	B	34	GLN
1	B	41	GLN
1	B	109	HIS
1	B	308	GLN
1	B	345	ASN
1	C	11	GLN
1	C	51	ASN
1	C	97	GLN
1	C	121	ASN
1	C	265	GLN

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Mol	Chain	Res	Type
1	C	271	ASN
1	C	293	ASN
1	C	308	GLN
1	C	345	ASN
1	C	368	ASN
1	C	369	GLN
1	D	40	GLN
1	D	41	GLN
1	D	80	HIS
1	D	121	ASN
1	D	125	GLN
1	D	259	ASN
1	D	280	ASN
1	D	308	GLN
1	D	345	ASN
1	E	41	GLN
1	E	61	ASN
1	E	78	ASN
1	E	106	ASN
1	E	121	ASN
1	E	259	ASN
1	E	265	GLN
1	E	271	ASN
1	E	308	GLN
1	E	370	ASN
1	F	41	GLN
1	F	97	GLN
1	F	121	ASN
1	F	265	GLN
1	F	271	ASN
1	F	308	GLN
1	F	345	ASN
1	G	34	GLN
1	G	41	GLN
1	G	80	HIS
1	G	97	GLN
1	G	106	ASN
1	G	239	GLN
1	G	277	GLN
1	G	308	GLN
1	G	368	ASN
1	H	17	ASN

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Mol	Chain	Res	Type
1	H	26	GLN
1	H	61	ASN
1	H	121	ASN
1	H	199	ASN
1	I	19	GLN
1	I	24	ASN
1	I	41	GLN
1	I	61	ASN
1	I	79	ASN
1	I	97	GLN
1	I	121	ASN
1	I	184	ASN
1	I	190	GLN
1	I	259	ASN
1	I	271	ASN
1	I	308	GLN
1	I	345	ASN
1	I	369	GLN
1	J	5	GLN
1	J	6	GLN
1	J	19	GLN
1	J	40	GLN
1	J	41	GLN
1	J	80	HIS
1	J	97	GLN
1	J	187	GLN
1	J	308	GLN
1	J	357	ASN
1	K	19	GLN
1	K	33	GLN
1	K	109	HIS
1	K	121	ASN
1	K	125	GLN
1	K	199	ASN
1	K	265	GLN
1	K	308	GLN
1	K	388	ASN
1	L	24	ASN
1	L	33	GLN
1	L	41	GLN
1	L	97	GLN
1	L	121	ASN

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Mol	Chain	Res	Type
1	L	199	ASN
1	L	271	ASN
1	L	308	GLN
1	L	345	ASN
1	L	368	ASN
2	M	29	ASN
3	N	99	GLN
3	N	108	ASN
5	R	56	GLN
5	R	62	ASN
5	R	87	GLN
5	S	56	GLN
5	S	62	ASN
5	S	87	GLN
5	S	118	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 (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	G	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G	383:ARG	C	384:THR	N	3.16

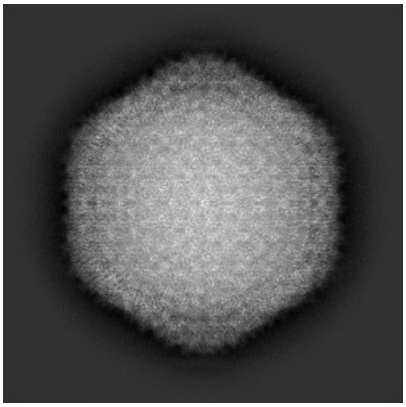
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-4461. These allow visual inspection of the internal detail of the map and identification of artifacts.

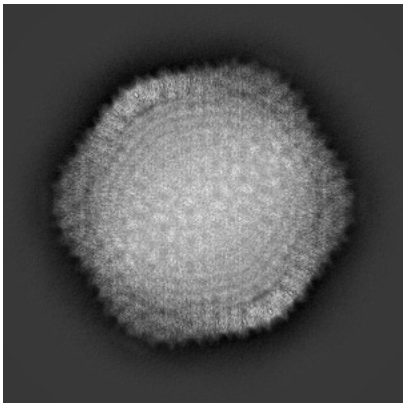
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

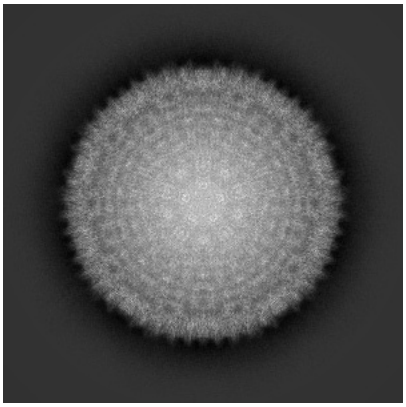
6.1.1 Primary map



X



Y

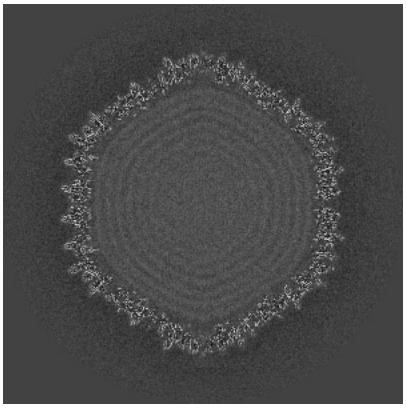


Z

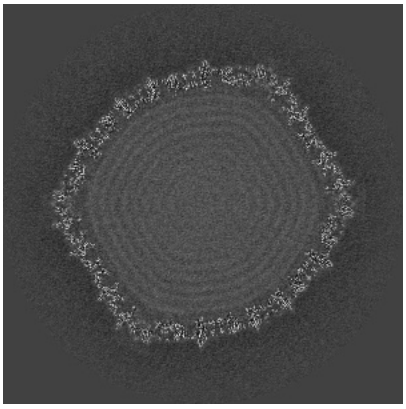
The images above show the map projected in three orthogonal directions.

6.2 Central slices

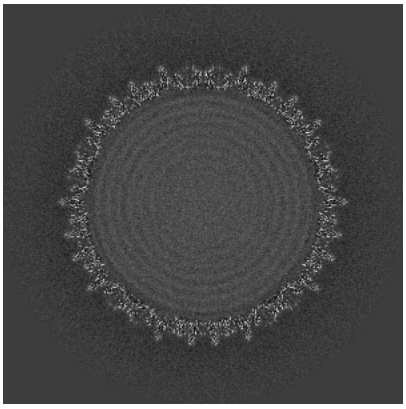
6.2.1 Primary map



X Index: 429



Y Index: 429

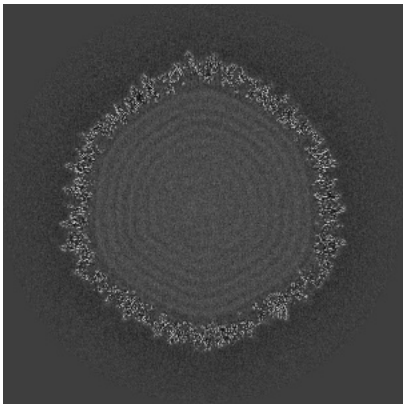


Z Index: 429

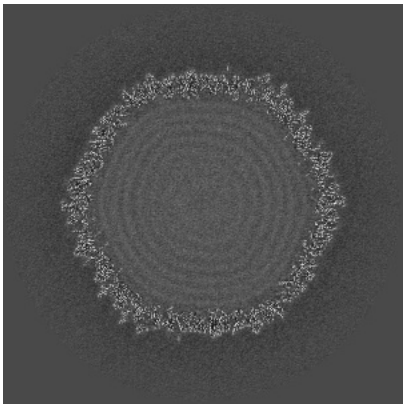
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

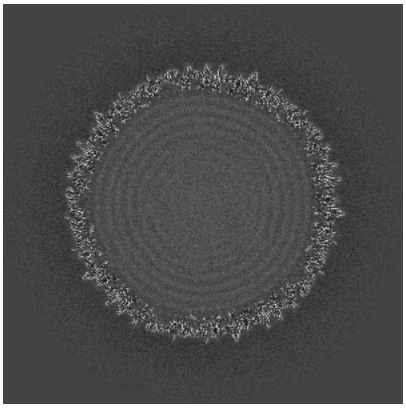
6.3.1 Primary map



X Index: 395



Y Index: 507



Z Index: 410

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

6.4 Orthogonal surface views (i)

6.4.1 Primary map

X

Y

Z

The images above show the 3D surface view of the map at the recommended contour level 2.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

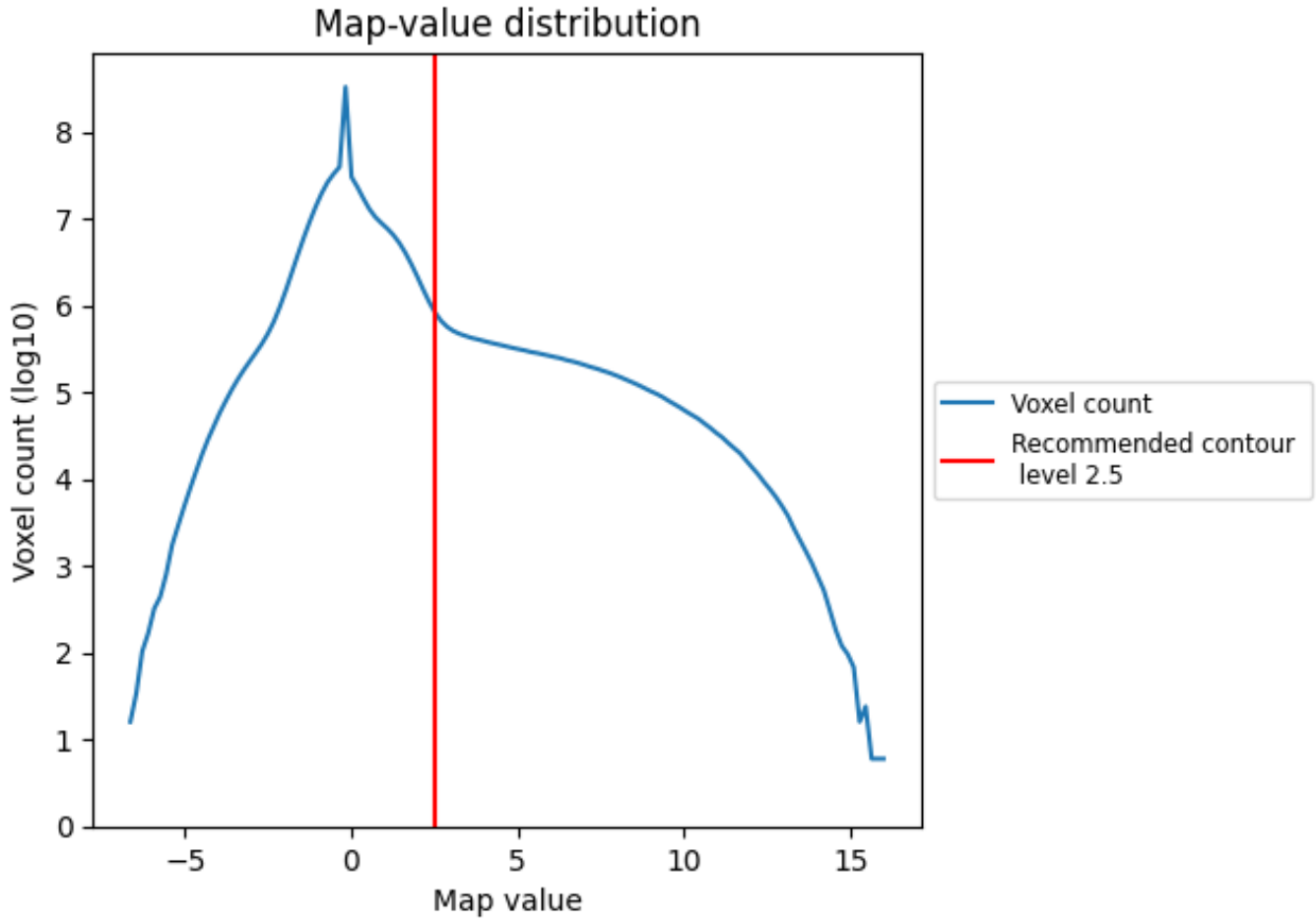
6.5 Mask visualisation (i)

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

7 Map analysis

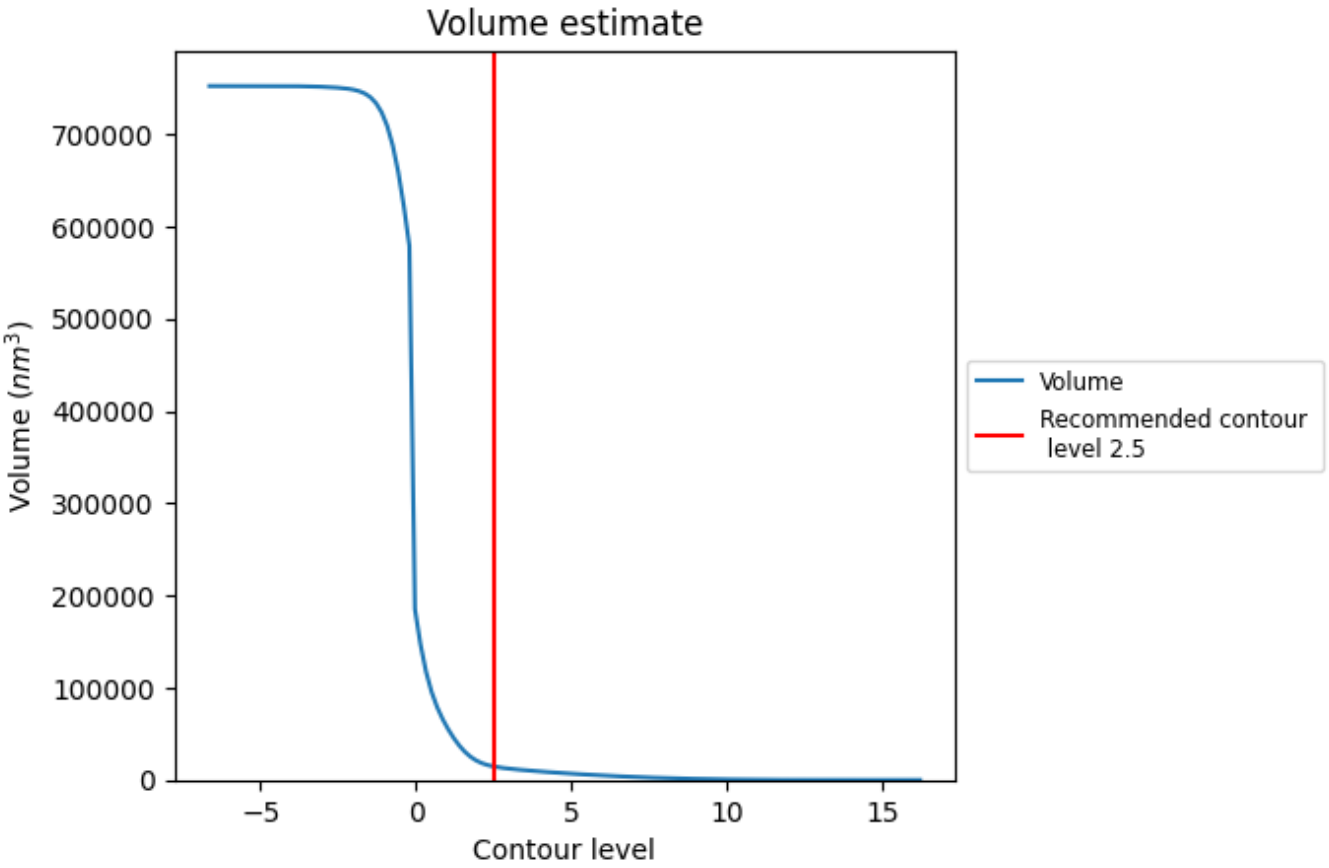
This section contains the results of statistical analysis of the map.

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.

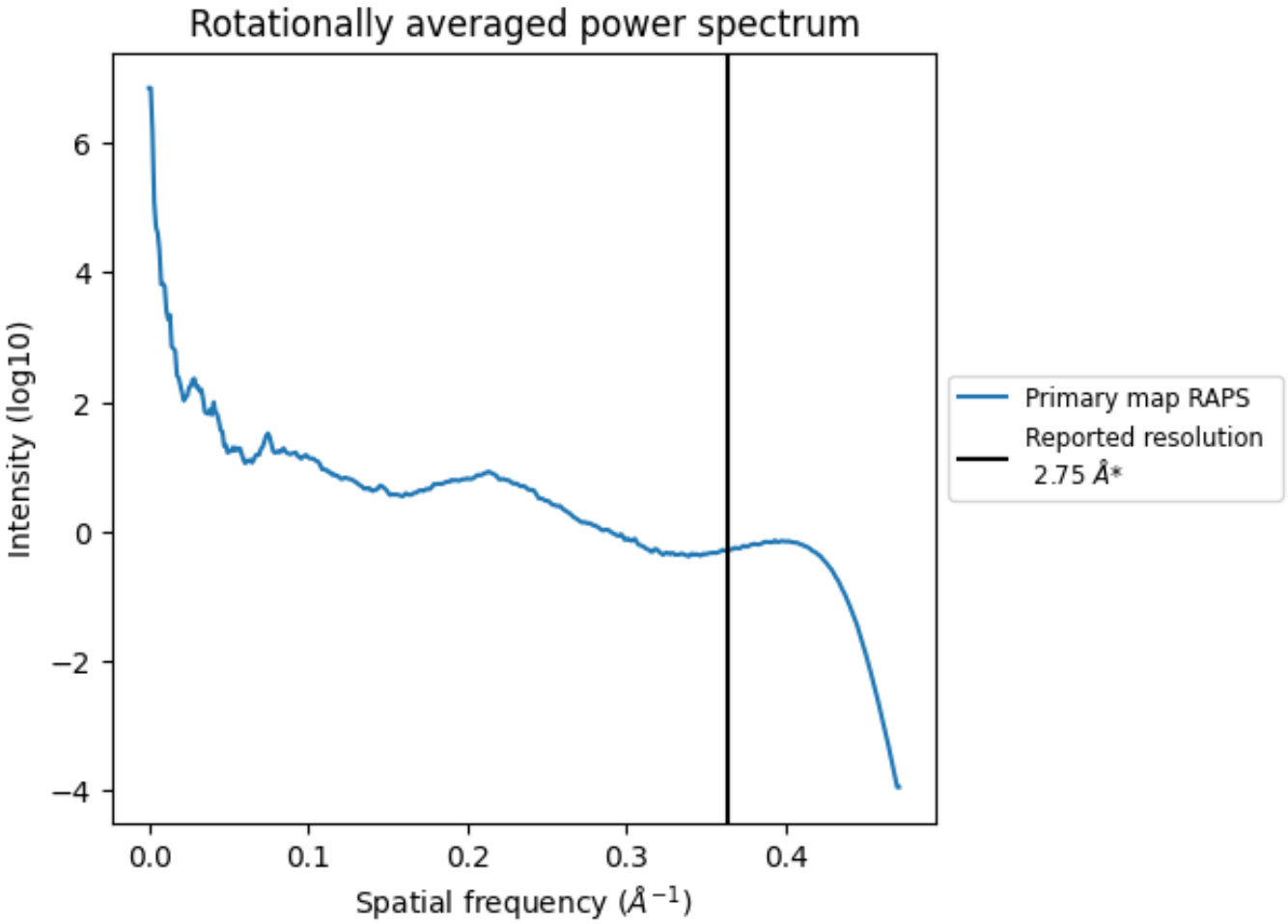
7.2 Volume estimate



The volume at the recommended contour level is 14575 nm^3; this corresponds to an approximate mass of 13166 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)

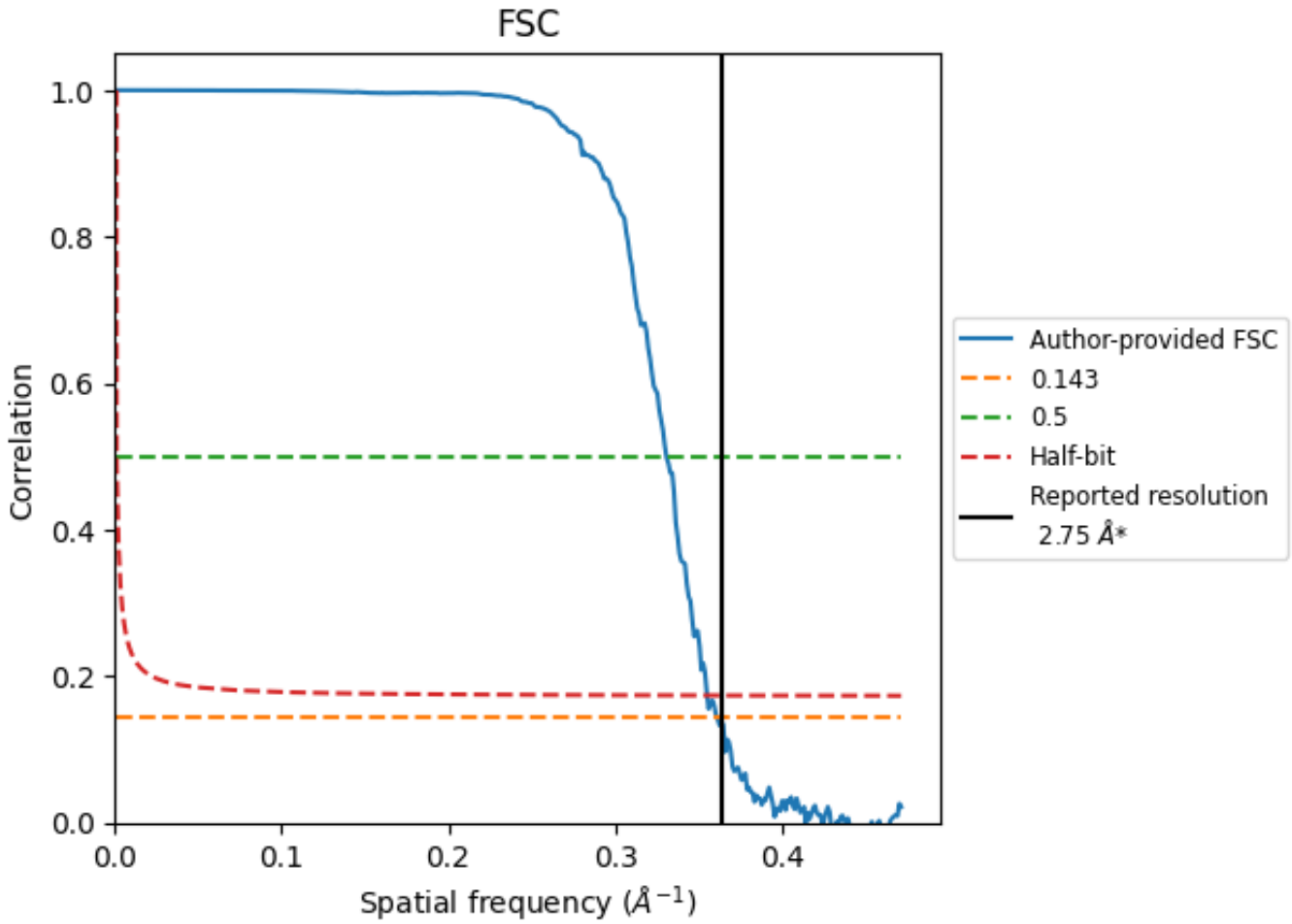


*Reported resolution corresponds to spatial frequency of 0.364 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.364 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.75	-	-
Author-provided FSC curve	2.77	3.02	2.81
Unmasked-calculated*	-	-	-

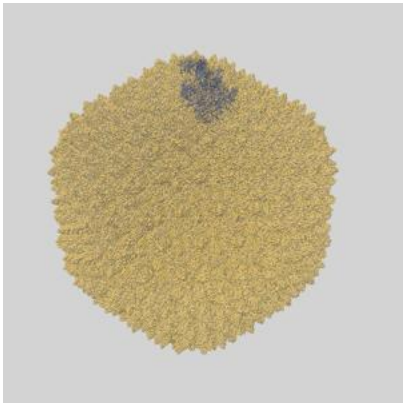
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit

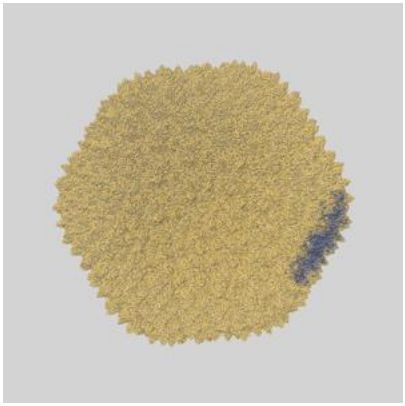
This section contains information regarding the fit between EMDB map EMD-4461 and PDB model 6Q5U. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlays

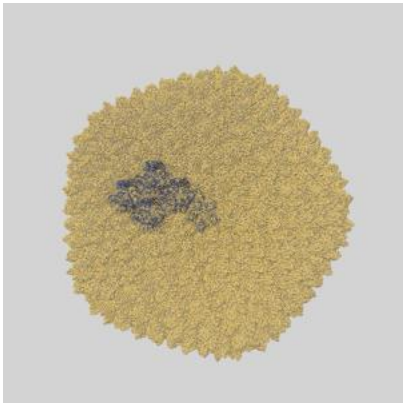
9.1.1 Map-model overlay



X

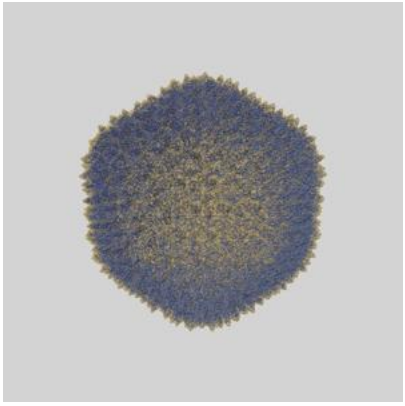


Y

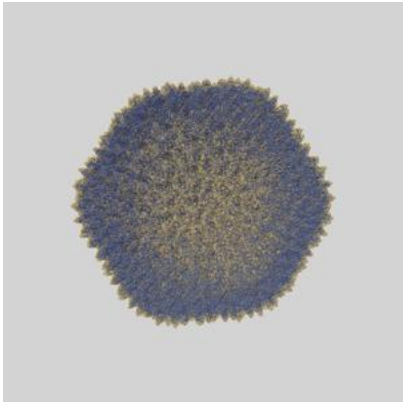


Z

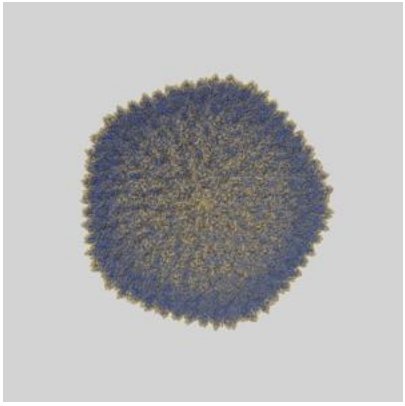
9.1.2 Map-model assembly overlay



X



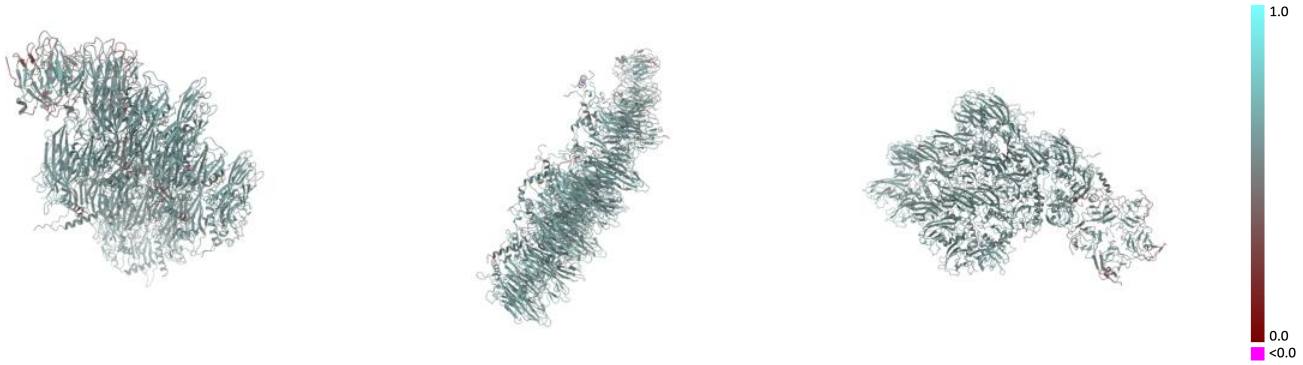
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 2.5 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.

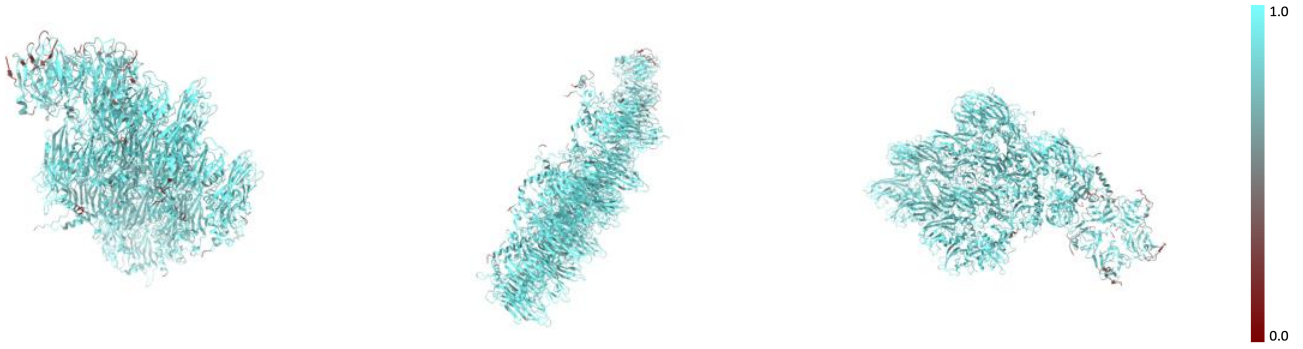
9.2 Q-score mapped to coordinate model (i)



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.

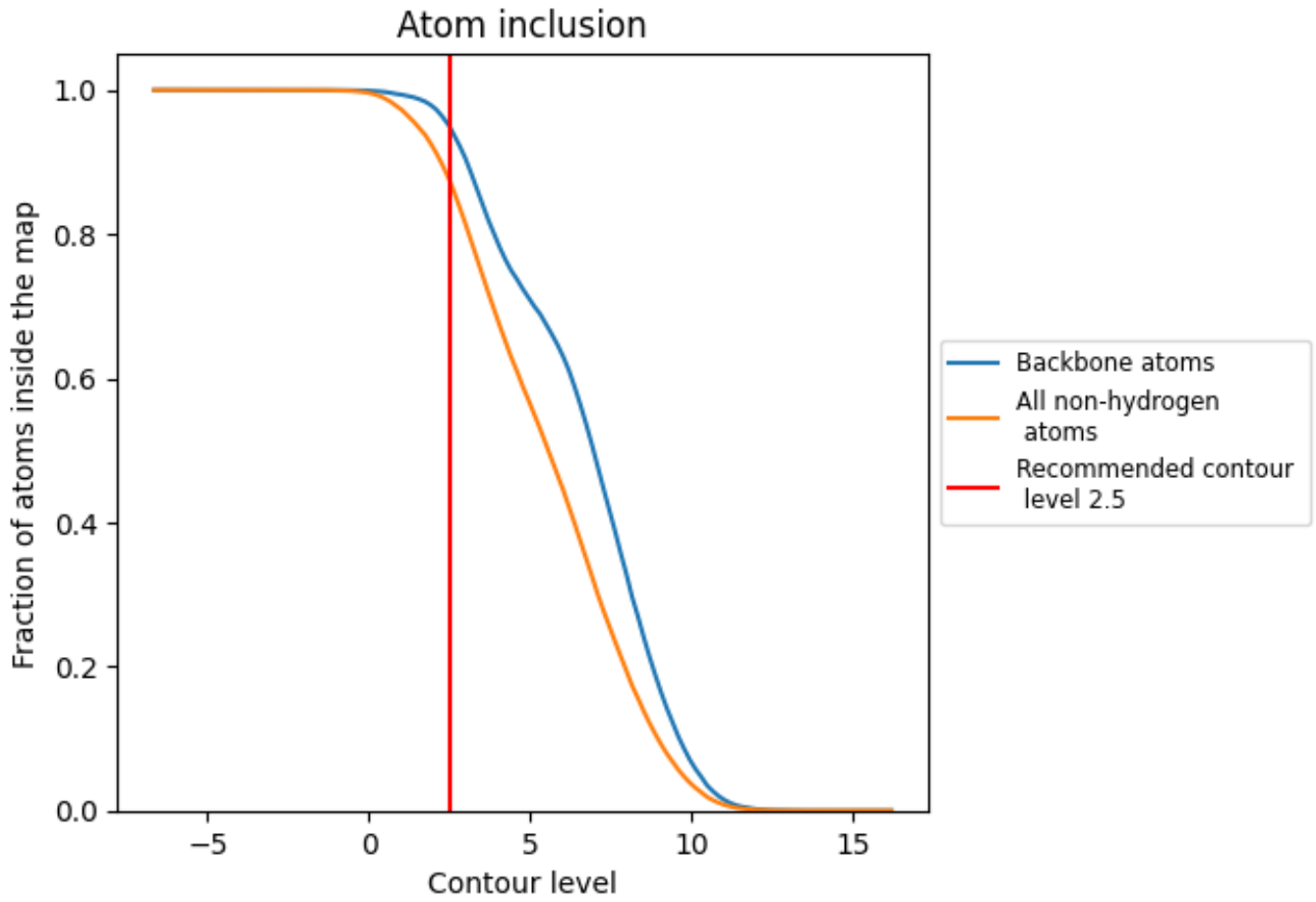
9.3 Atom inclusion mapped to coordinate model (i)



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 (2.5).

9.4 Atom inclusion (i)



At the recommended contour level, 95% of all backbone atoms, 88% 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 (2.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8755	0.5740
A	0.9121	0.5900
B	0.9063	0.5910
C	0.9060	0.5910
D	0.9011	0.5850
E	0.8929	0.5860
F	0.8988	0.5880
G	0.8882	0.5800
H	0.8711	0.5700
I	0.8850	0.5740
J	0.9040	0.5890
K	0.8844	0.5760
L	0.8929	0.5840
M	0.8641	0.5770
N	0.6781	0.4960
O	0.7525	0.5060
P	0.7459	0.5110
Q	0.7481	0.5100
R	0.7302	0.4920
S	0.7333	0.5020