



wwPDB EM Validation Summary Report ⓘ

Jan 21, 2025 – 03:05 PM EST

PDB ID : 9CQ9
EMDB ID : EMD-45812
Title : Modifying region of EcPKS1
Authors : Schubert, H.L.; Hill, C.P.
Deposited on : 2024-07-19
Resolution : 3.50 Å (reported)
Based on initial model : .

This is a wwPDB EM Validation Summary 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.dev113
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.40

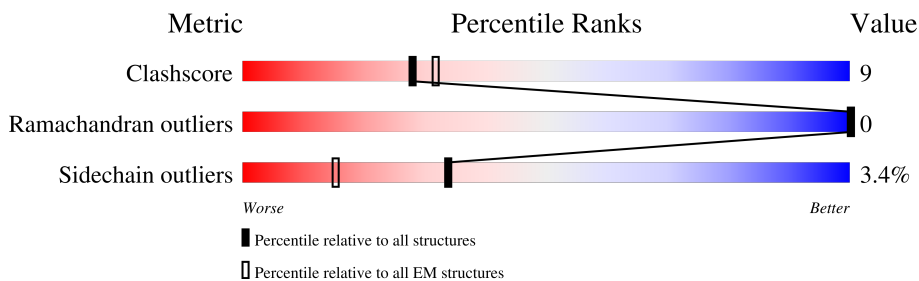
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	2272	
1	B	2272	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 38874 atoms, of which 19370 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 Polyketide synthase 1.

Mol	Chain	Residues	Atoms						AltConf	Trace
			Total	C	H	N	O	S		
1	A	1256	19437	6164	9685	1709	1825	54	0	0
1	B	1256	19437	6164	9685	1709	1825	54	0	0

E1598	F1469	M1343	SER	GLU	SER	L923	V1099	L1099	GLU	SER	VAL	GLY	SER	ASP	ASN	ALA	CYS	ASN	THR
T1604	L1470	D1344	SER	ALA	PRO	F931	V1100	L1101	PRO	LYS	PRO	HIS	GLU	ALA	ALA	HIS	LYS	ASN	THR
L1613	L1471	D1345	SER	VAL	ILE	V957	D1110	SER	HIS	LYS	CYS	GLU	VAL	VAL	VAL	VAL	VAL	VAL	VAL
E1633	R1474	T1353	GLY	GLY	PRO	Q969	I1111	PRO	ASN	ALA	ASN	VAL	ALA	SER	SER	SER	GLY	GLY	PHE
L1634	VAL	L1354	LEU	LEU	PRO	THR	V1112	THR	ALA	GLU	VAL	GLY	VAL	THR	THR	THR	THR	THR	THR
V1637	GLU	A1358	PRO	GLN	ARG	E972	S1113	PRO	ASP	ASP	CYS	CYS	VAL	VAL	VAL	VAL	VAL	VAL	VAL
Y1638	MET	E1226	THR	SER	THR	ARG	G1115	THR	SER	THR	ALA	ALA	THR	THR	THR	THR	THR	THR	THR
P1480	THR	R1227	ASP	VAL	R1227	ASP	G1116	VAL	VAL	VAL	VAL	CYS	THR	THR	THR	THR	THR	THR	THR
V1643	P1480	PRO	A1362	ILE	I1228	ASP	V1117	THR	THR	THR	THR	ASP	THR	THR	THR	THR	THR	THR	THR
S1644	D1488	M1363	M1363	ARG	MET	THR	I1118	ARG	ARG	ARG	ARG	THR	THR	THR	THR	THR	THR	THR	THR
R1645	L1489	Q1232	VAL	VAL	VAL	V982	I1119	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
D1646	L1493	ASN	T1124	ALA	ALA	D986	T1124	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA
L1647	W1493	GLY	R1130	GLY	GLY	K987	R1130	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
D1657	L1494	HIS	E1139	HIS	ALA	V988	E1139	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
E1658	V1497	GLN	E1140	GLN	ASP	S1000	E1140	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER	SER
M1663	D1510	H1238	H1238	GLN	THR	S1001	H1238	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
G1671	L1515	F1239	F1239	VAL	VAL	L1002	F1239	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
E1673	K1518	G1239	G1239	CYS	CYS	Q1003	G1239	CYS	CYS	CYS	CYS	CYS	CYS	CYS	CYS	CYS	CYS	CYS	CYS
F1674	S1519	F1240	F1240	VAL	VAL	T991	F1240	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
D1678	G1523	L1241	L1241	GLY	GLY	T992	L1241	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
T1679	M1524	G1241	G1241	THR	THR	E1026	G1241	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
K1680	M1524	L1242	L1242	GLN	GLN	E1026	L1242	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
R1683	F1528	M1391	M1391	VAL	VAL	S1000	M1391	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
L1687	P1414	T1415	T1415	THR	THR	S1001	T1415	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
C1688	N1529	L1416	L1416	ARG	ARG	L1002	L1416	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG
A1689	L1417	L1417	L1417	LYS	LYS	Q1003	L1417	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS
P1690	Q1533	L1427	L1427	PRO	PRO	L1022	L1427	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
P1691	E1534	P1428	P1428	GLY	GLY	E1026	P1428	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
A1692	S1537	R1429	R1429	ALA	ALA	E1026	R1429	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA
V1697	V1540	LYS	LYS	THR	THR	E1026	LYS	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
L1698	R1541	SER	SER	GLY	GLY	E1026	R1541	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
C1699	C1542	GLY	GLY	ALA	ALA	E1026	C1542	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA
L1700	F1560	L1436	L1436	VAL	VAL	E1026	F1560	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
S1702	R1561	Y1440	Y1440	THR	THR	E1026	R1561	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
Q1709	Y1562	S1441	S1441	VAL	VAL	E1026	Y1562	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL	VAL
H1710	M1566	A1442	A1442	THR	THR	E1026	M1566	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
L1713	D1567	Q1444	Q1444	GLN	GLN	E1026	D1567	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN
P1720	L1568	F1446	F1446	ASN	ASN	E1026	L1568	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN	ASN
V1721	H1583	R1446	R1446	PRO	PRO	E1026	H1583	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
A1722	T1587	D1332	D1332	ILE	ILE	E1026	T1587	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE	ILE
R1733	D1588	Y1385	Y1385	TYR	TYR	E1026	D1588	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR	TYR
G1734	E1456	T1336	T1336	LEU	LEU	E1026	E1456	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
H1735	V1457	G1337	G1337	PRO	PRO	E1026	V1457	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO	PRO
	I1458	I1458	I1458	LYS	LYS	E1026	I1458	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS	LYS

HIS	GLY	M2105	V1960	T1741
HIS	LEU	Y2106	L1963	I1756
HIS	LYS	M2110	F1966	C1764
HIS	VAL	S2111	G1967	E1765
	SER	D2114	L1968	I1766
	GLY	R2115	E1969	F1767
	VAL	L2116	V1979	I1768
	ASP	G2124	R1987	E1800
	PRO	L2125	I1990	V1803
	ASP	Q2131	T1991	T1807
	LYS	I2135	G1992	G1993
	VAL	V2149	K1998	M1817
	PHE	T2150	V2010	R1829
	LEU	E2151	V2011	A1841
	LEU	M2154	D2031	GLY
	LEU	M2158	L2032	SER
	SER	Y2167	L2035	ARG
	MET	F2168	L2041	GLY
	SER	Q2171	N2044	SER
	VAL	N2172	L2045	ASP
	GLU	R2173	N2046	ALA
	LEU	V2176	R2047	E1849
	LEU	A2177	D2047	D1859
	LEU	C2178	Y2058	T1860
	LEU	K2184	T2061	S1861
	ALA	VAL	K2065	M1878
	LEU	LYS	I2066	L1881
	GLY	ALA	T2069	L1897
	THR	VAL	L2072	A1898
	LYS	GLY	D2073	R1899
	VAL	ILE	S2076	T1900
	ASP	GLU	I2081	V1901
	ILE	GLU	L2085	V1908
	GLN	THR	D2086	D1909
	GLN	THR	ALA	E1915
	GLN	PHE	GLN	K1926
	GLN	ALA	VAL	I1927
	LEU	VAL	ILE	K1930
	GLN	ALA	LYS	E1930
	ALA	LYS	ALA	K1940
	MET	ALA	VAL	K1941
	VAL	VAL	GLY	Y1957
	GLN	ASN	VAL	
	HIS	VAL	LEU	
	HIS	LEU		

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of particles used	143694	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.226	Depositor
Minimum map value	-0.124	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.0229	Depositor
Map size (Å)	271.36, 271.36, 271.36	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.53, 0.53, 0.53	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0/9950	0.51	0/13478
1	B	0.29	0/9950	0.51	0/13478
All	All	0.29	0/19900	0.51	0/26956

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 [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	9752	9685	9684	186	0
1	B	9752	9685	9684	184	0
All	All	19504	19370	19368	365	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 9.

The worst 5 of 365 close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1311:ALA:HB2	1:A:1337:VAL:HG13	1.23	1.11
1:B:1311:ALA:HB2	1:B:1337:VAL:HG13	1.23	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1311:ALA:CB	1:A:1337:VAL:HG13	1.84	1.08
1:B:1311:ALA:CB	1:B:1337:VAL:HG13	1.84	1.05
1:A:1308:GLU:OE1	1:A:1335:TYR:OH	1.83	0.96

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	1240/2272 (55%)	1137 (92%)	103 (8%)	0	100	100
1	B	1240/2272 (55%)	1137 (92%)	103 (8%)	0	100	100
All	All	2480/4544 (55%)	2274 (92%)	206 (8%)	0	100	100

There are no Ramachandran outliers to report.

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	1050/1892 (56%)	1014 (97%)	36 (3%)	32	60
1	B	1050/1892 (56%)	1014 (97%)	36 (3%)	32	60
All	All	2100/3784 (56%)	2028 (97%)	72 (3%)	34	60

5 of 72 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	1699	CYS
1	B	2178	CYS
1	B	1721	VAL
1	B	2031	ASP
1	A	1764	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (2) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1452	HIS
1	B	1452	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

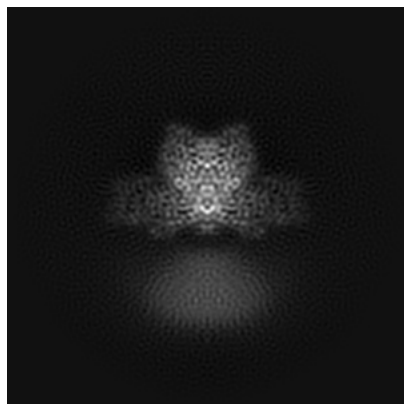
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-45812. These allow visual inspection of the internal detail of the map and identification of artifacts.

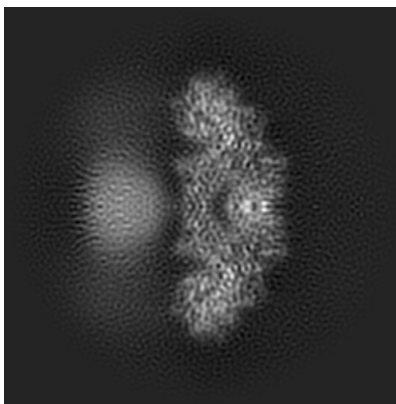
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

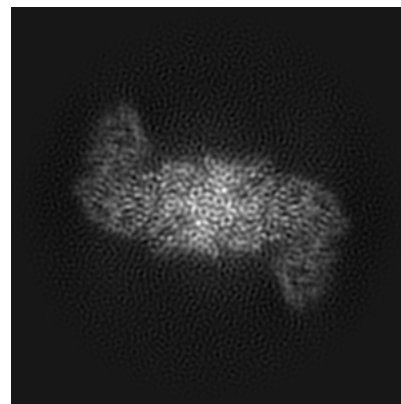
6.1.1 Primary map



X

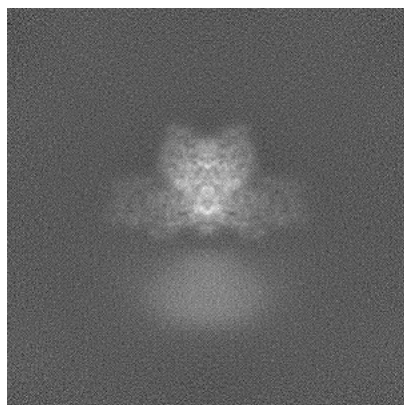


Y

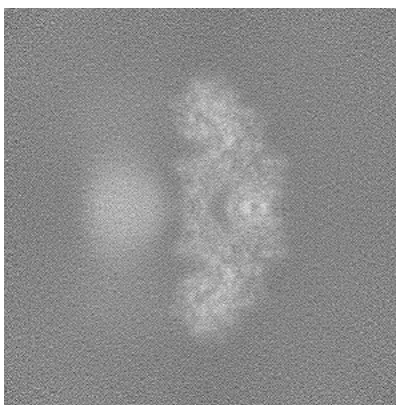


Z

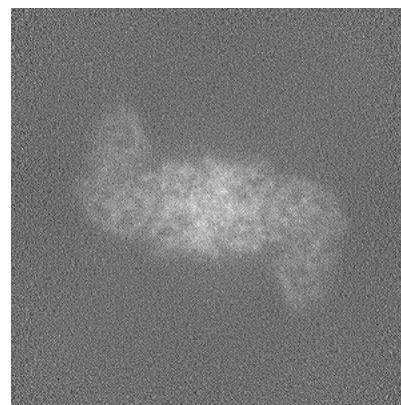
6.1.2 Raw map



X



Y

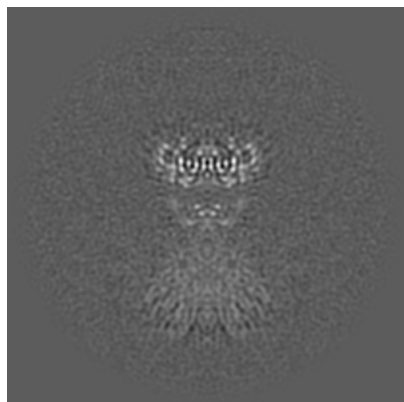


Z

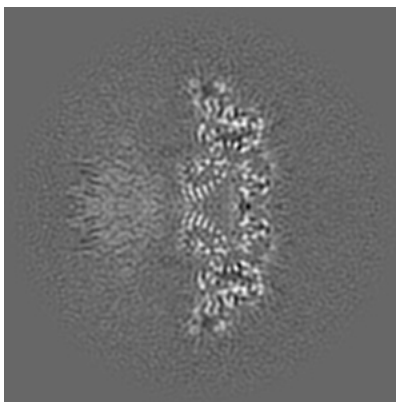
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

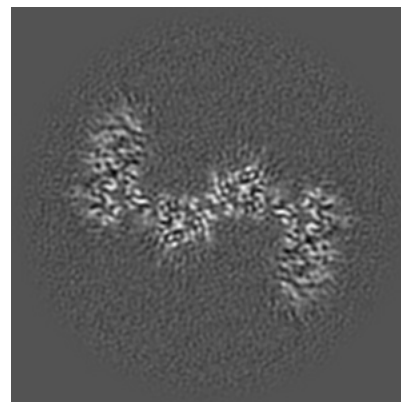
6.2.1 Primary map



X Index: 256

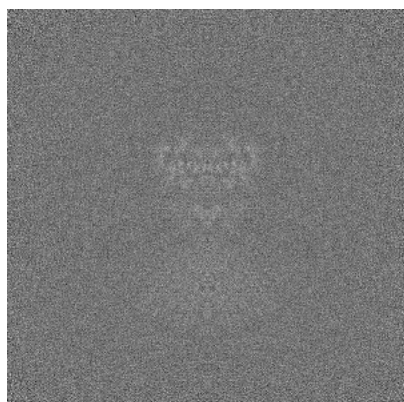


Y Index: 256

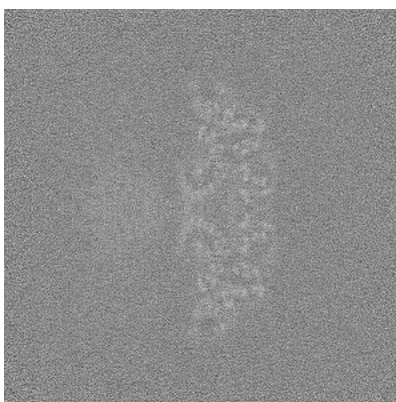


Z Index: 256

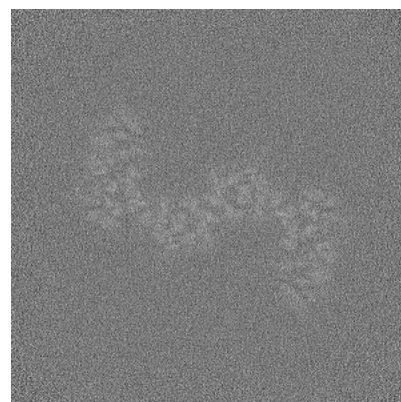
6.2.2 Raw map



X Index: 256



Y Index: 256

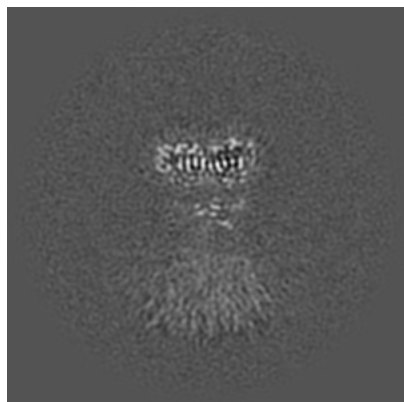


Z Index: 256

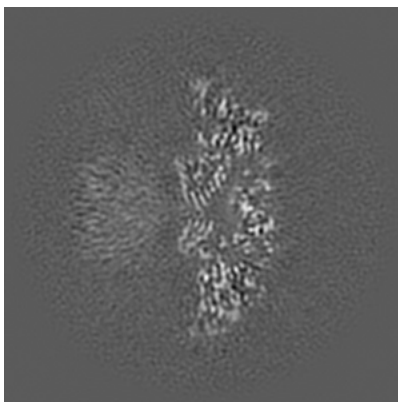
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

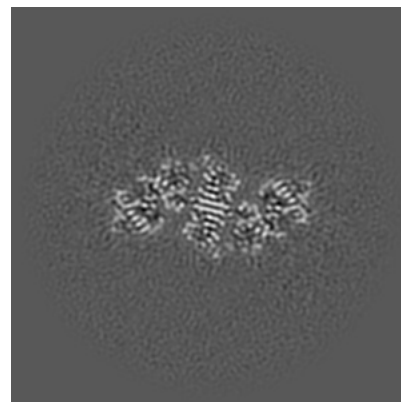
6.3.1 Primary map



X Index: 259

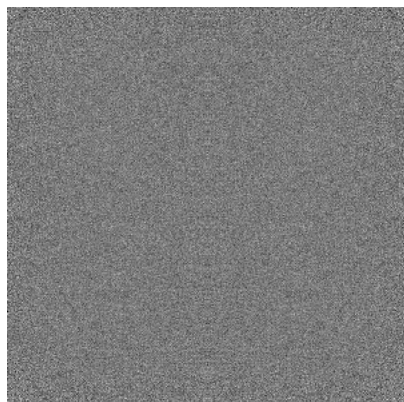


Y Index: 261

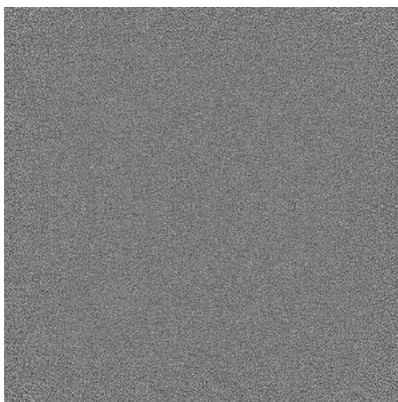


Z Index: 309

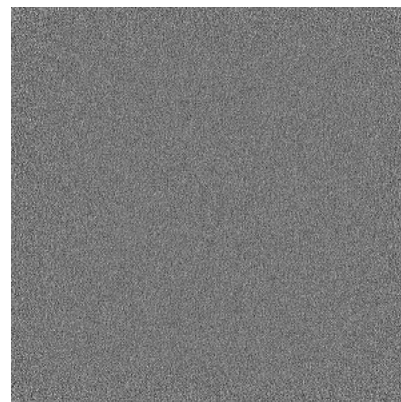
6.3.2 Raw map



X Index: 0



Y Index: 0

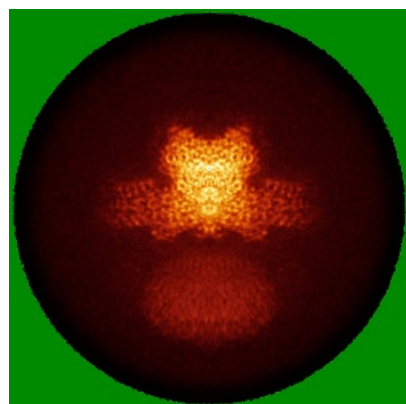


Z Index: 0

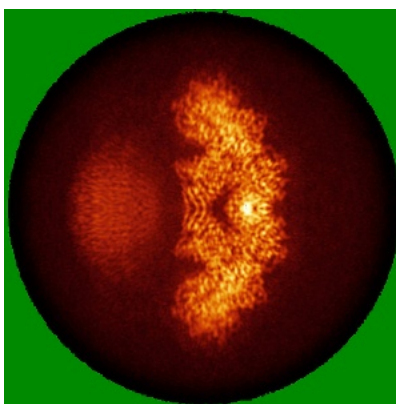
The images above show the largest variance slices of the map in three orthogonal directions.

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

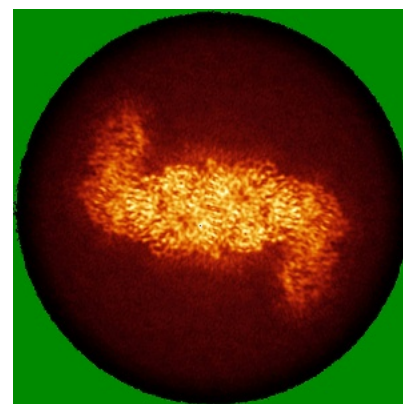
6.4.1 Primary map



X

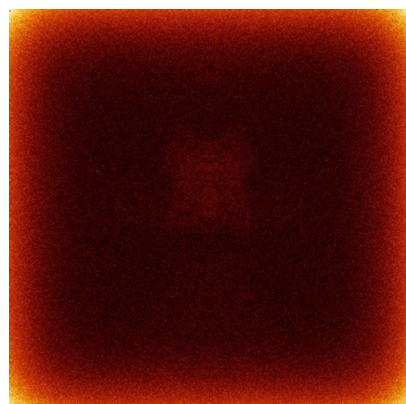


Y

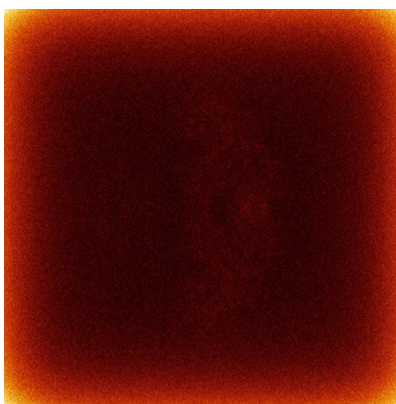


Z

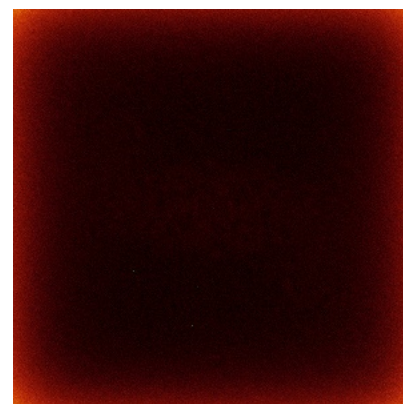
6.4.2 Raw map



X



Y

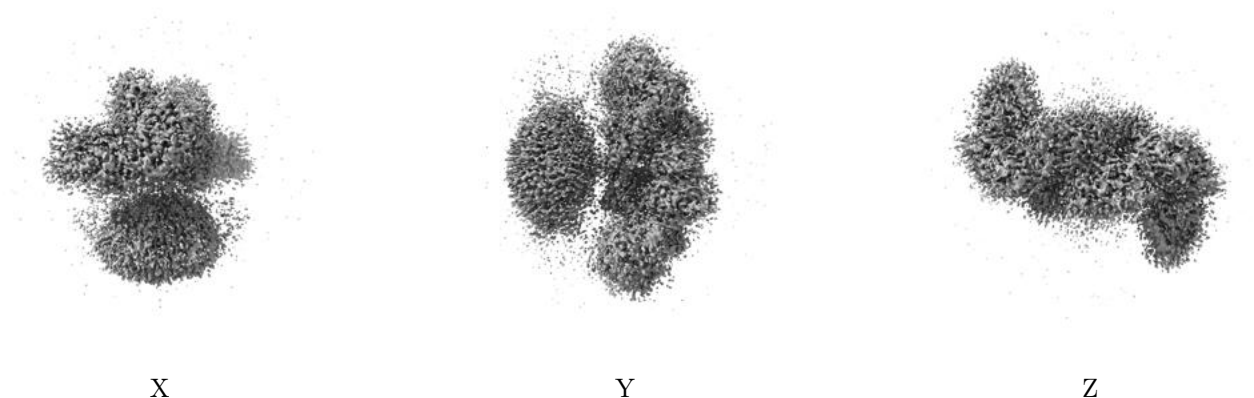


Z

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

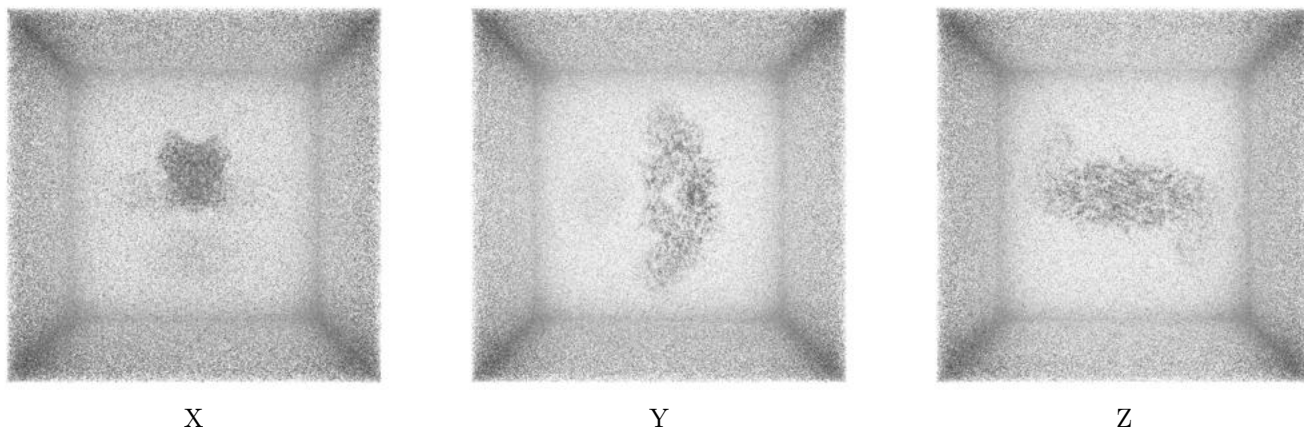
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.0229. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

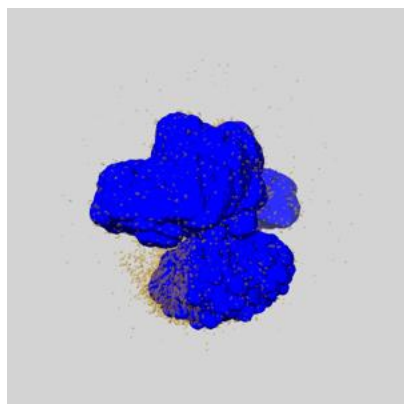
6.6 Mask visualisation [i](#)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

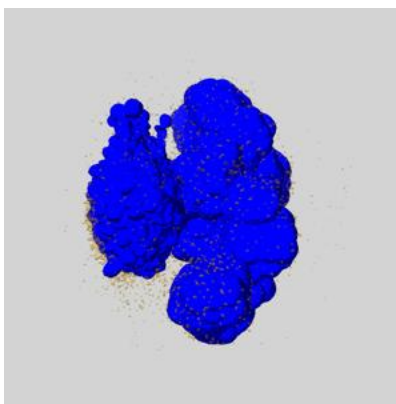
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

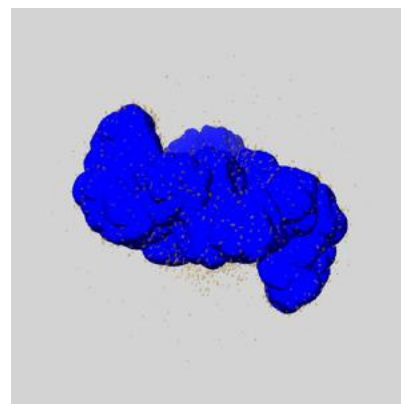
6.6.1 emd_45812_msk_1.map [i](#)



X



Y

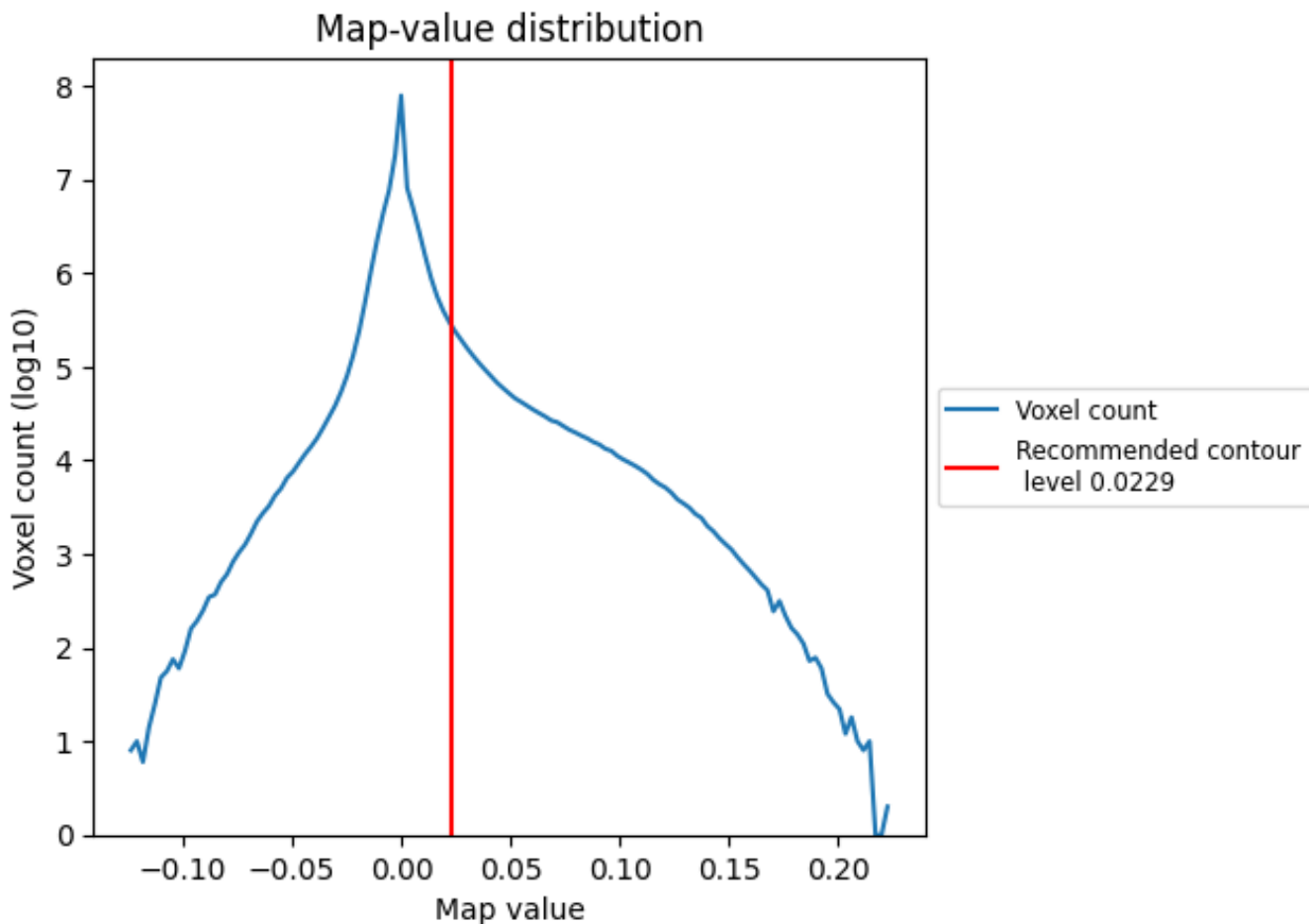


Z

7 Map analysis [i](#)

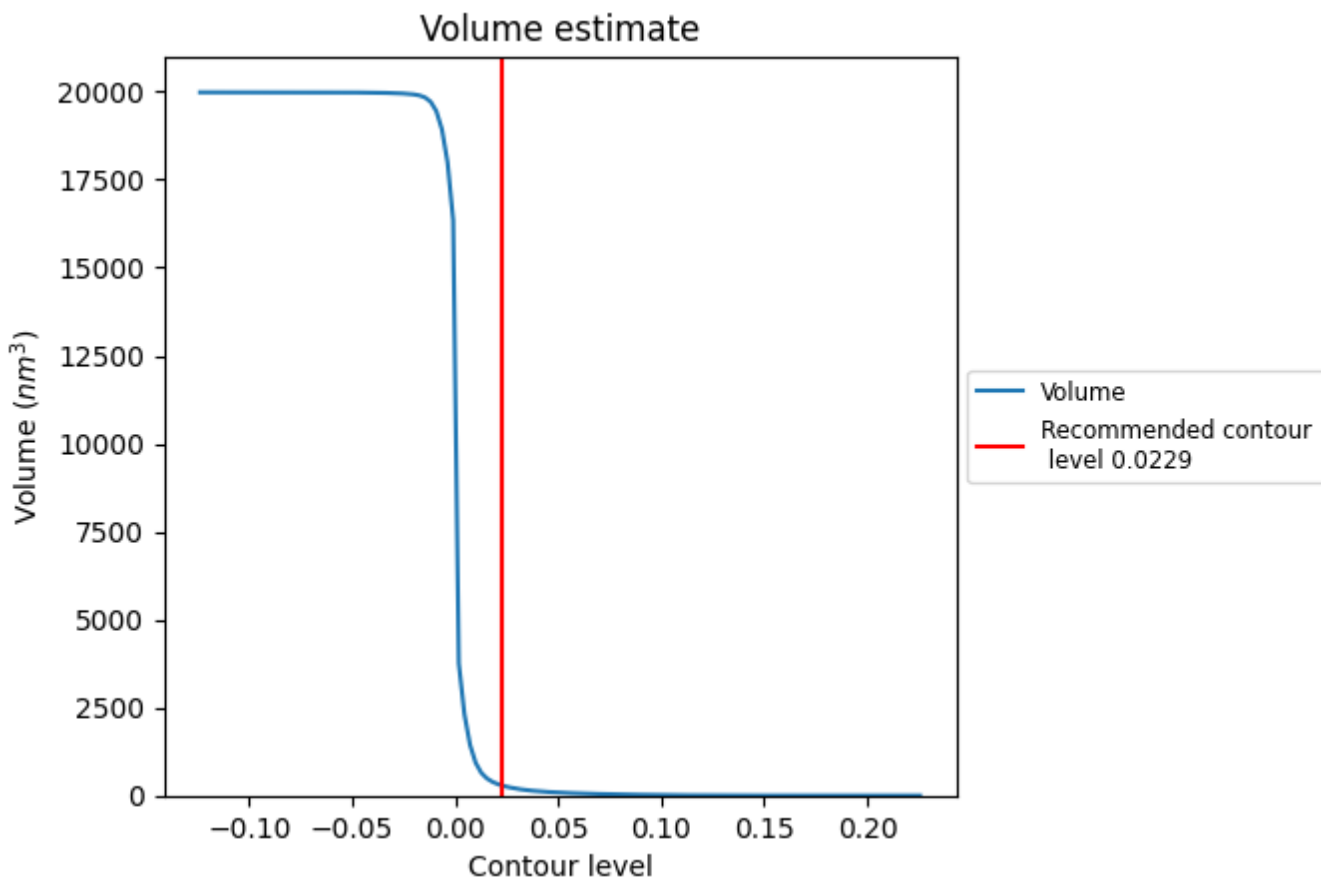
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

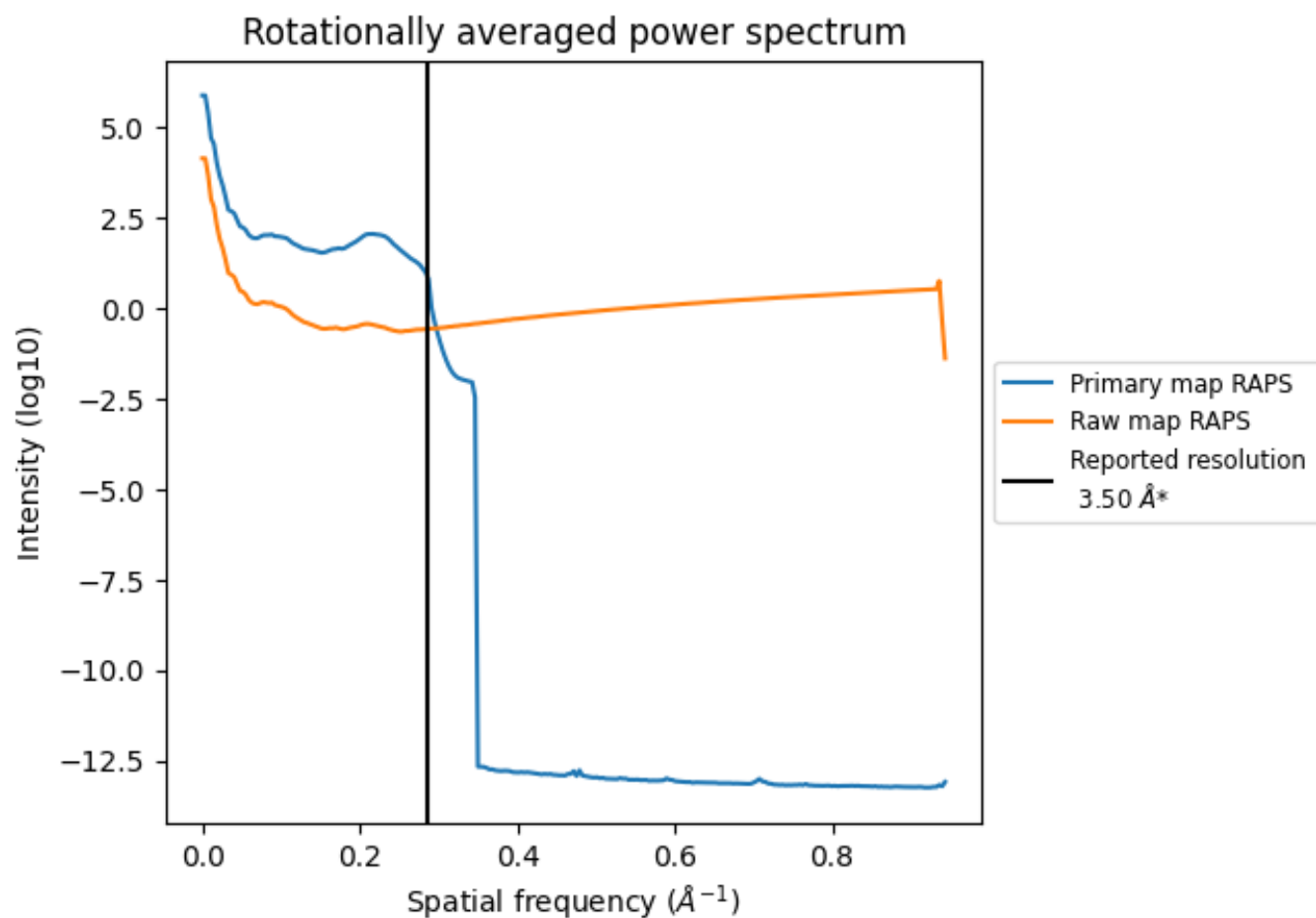
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 284 nm³; this corresponds to an approximate mass of 256 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](#)

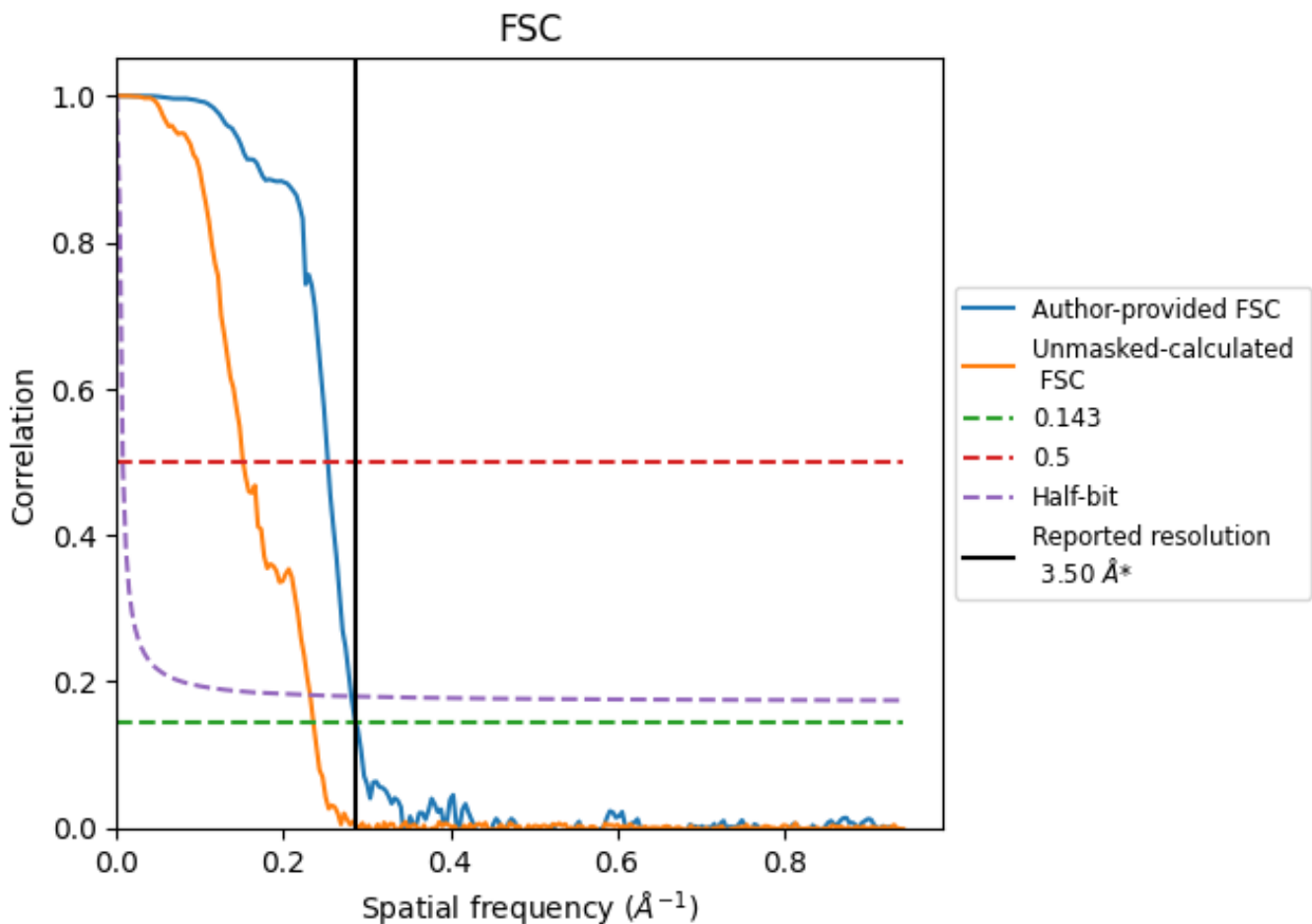


*Reported resolution corresponds to spatial frequency of 0.286 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.286\AA^{-1}

8.2 Resolution estimates [i](#)

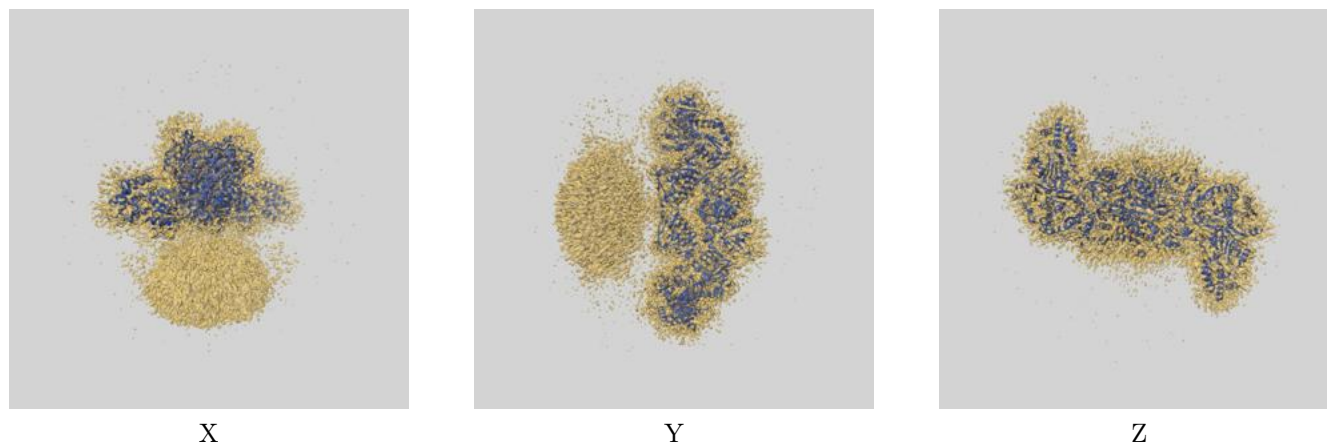
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.50	-	-
Author-provided FSC curve	3.49	3.95	3.55
Unmasked-calculated*	4.24	6.60	4.31

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.24 differs from the reported value 3.5 by more than 10 %

9 Map-model fit [i](#)

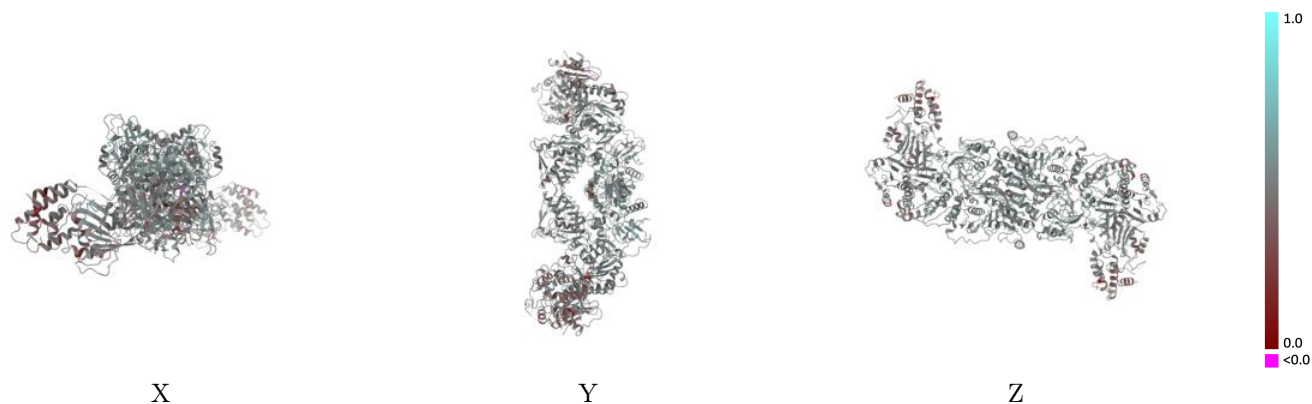
This section contains information regarding the fit between EMDB map EMD-45812 and PDB model 9CQ9. Per-residue inclusion information can be found in section [3](#) on page [4](#).

9.1 Map-model overlay [i](#)



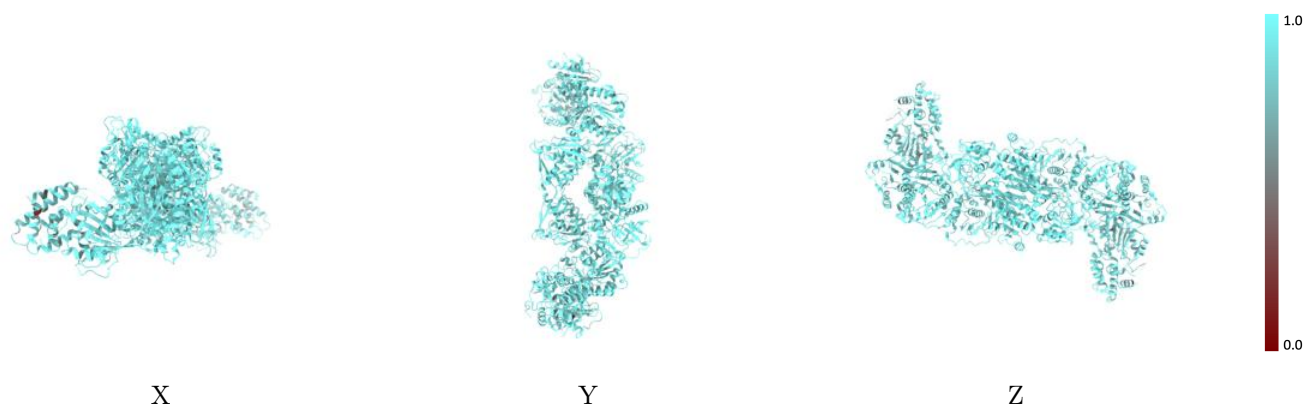
The images above show the 3D surface view of the map at the recommended contour level 0.0229 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



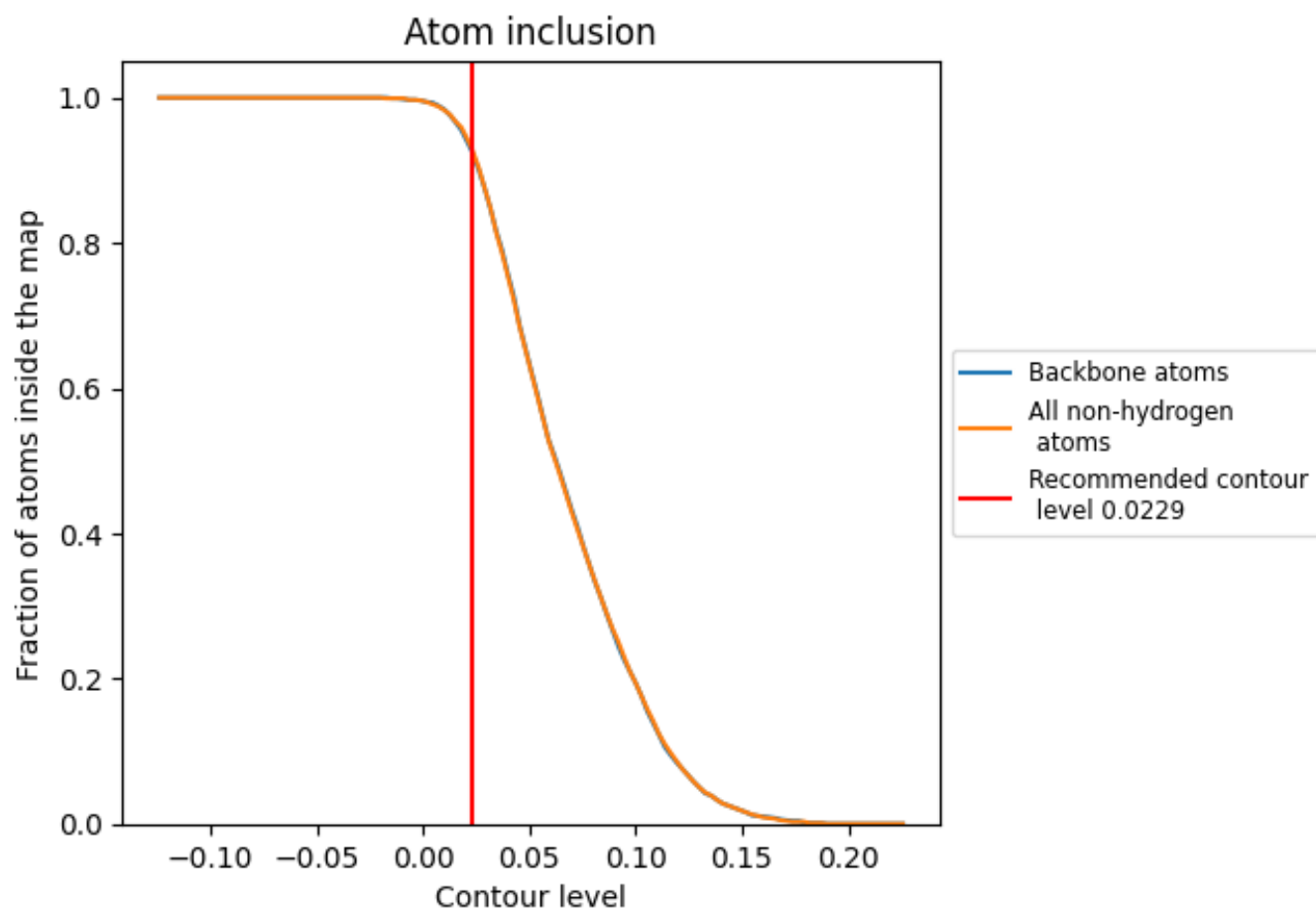
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0229).







9.4 Atom inclusion [i](#)



At the recommended contour level, 93% of all backbone atoms, 93% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.0229) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9310	 0.4880
A	 0.9290	 0.4880
B	 0.9290	 0.4890

