



wwPDB EM Validation Summary Report ⓘ

Aug 28, 2023 – 12:30 PM JST

PDB ID : 8HF1
EMDB ID : EMD-34708
Title : DmDcr-2/R2D2/LoqsPD with 19bp-dsRNA in Trimer state
Authors : Su, S.; Wang, J.; Ma, J.
Deposited on : 2022-11-09
Resolution : 3.70 Å (reported)

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.dev50
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) : 2.35

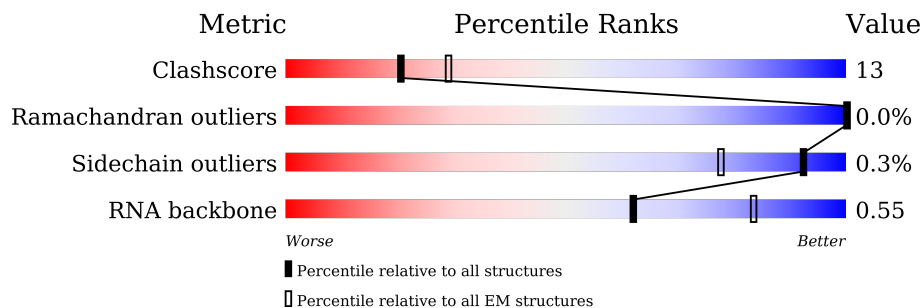
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.70 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
RNA backbone	4643	859

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	1721	9% (red), 67% (green), 24% (yellow), 9% (grey)
1	D	1721	7% (red), 67% (green), 23% (yellow), 9% (grey)
1	G	1721	48% (red), 60% (green), 30% (yellow), 9% (grey)
2	B	16	56% (red), 75% (green), 25% (yellow)
3	C	126	12% (red), 71% (green), 29% (yellow)
3	F	126	71% (green), 29% (yellow)
3	I	126	18% (red), 53% (green), 44% (yellow), .. (grey)

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Mol	Chain	Length	Quality of chain
4	E	9	<p>11% 22% 78%</p>
4	J	9	<p>11% 33% 44% 22%</p>
4	L	9	<p>100%</p>
5	H	11	<p>18% 27% 64% 9%</p>
5	K	11	<p>36% 64% 36%</p>
5	M	11	<p>36% 55% 45%</p>

2 Entry composition [i](#)

There are 5 unique types of molecules in this entry. The entry contains 42379 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 Dicer-2, isoform A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1561	12634	8098	2160	2308	68	0	0
1	D	1561	12634	8098	2160	2308	68	0	0
1	G	1561	12634	8098	2160	2308	68	0	0

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	1217	ASN	ASP	conflict	UNP A1ZAW0
A	1476	ASN	ASP	conflict	UNP A1ZAW0
D	1217	ASN	ASP	conflict	UNP A1ZAW0
D	1476	ASN	ASP	conflict	UNP A1ZAW0
G	1217	ASN	ASP	conflict	UNP A1ZAW0
G	1476	ASN	ASP	conflict	UNP A1ZAW0

- Molecule 2 is a protein called Loquacious, isoform D.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	B	16	144	94	22	28	0	0

- Molecule 3 is a protein called LD06392p.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	126	1027	651	163	204	9	0	0
3	F	126	1027	651	163	204	9	0	0
3	I	124	1010	641	161	200	8	0	0

- Molecule 4 is a RNA chain called RNA (5'-R(P*GP*AP*GP*AP*CP*UP*UP*GP*G)-3').

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	9	Total	C	N	O	P	0	0
			196	87	37	63	9		
4	J	9	Total	C	N	O	P	0	0
			196	87	37	63	9		
4	L	9	Total	C	N	O	P	0	0
			196	87	37	63	9		

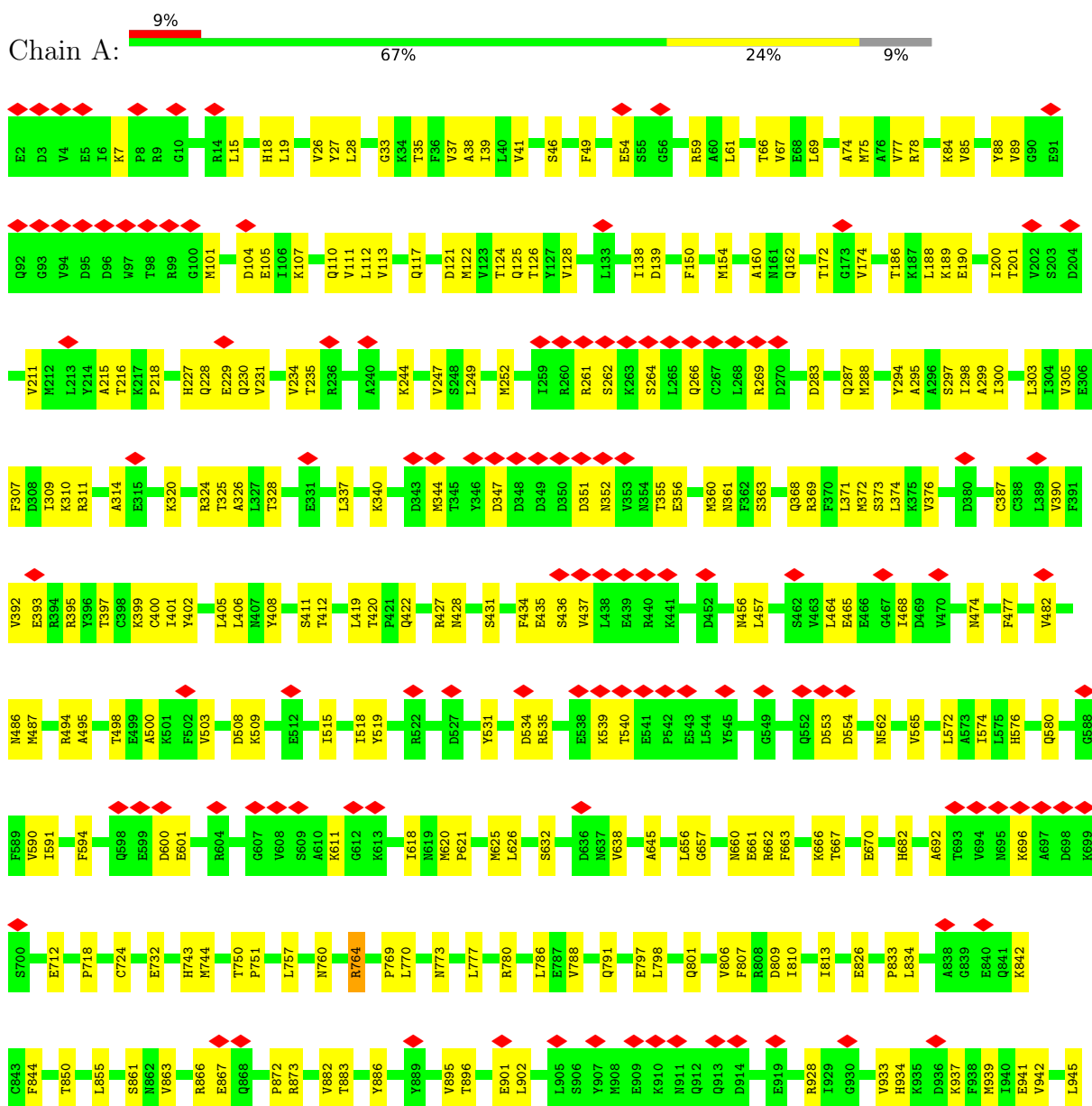
- Molecule 5 is a RNA chain called RNA (5'-R(P*CP*CP*AP*AP*GP*UP*CP*UP*CP*UP*U)-3').

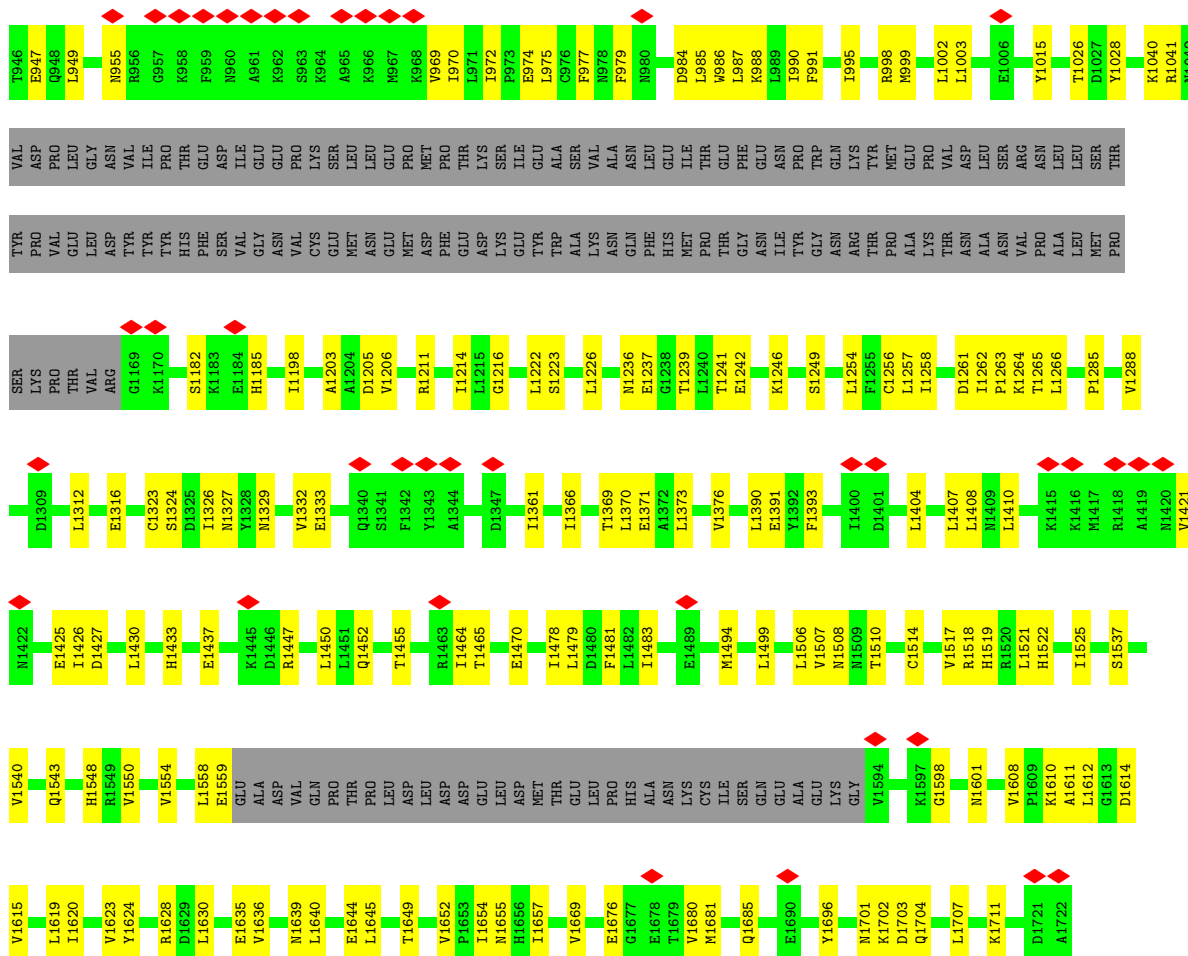
Mol	Chain	Residues	Atoms					AltConf	Trace
5	H	11	Total	C	N	O	P	0	0
			227	102	35	79	11		
5	K	11	Total	C	N	O	P	0	0
			227	102	35	79	11		
5	M	11	Total	C	N	O	P	0	0
			227	102	35	79	11		

3 Residue-property plots

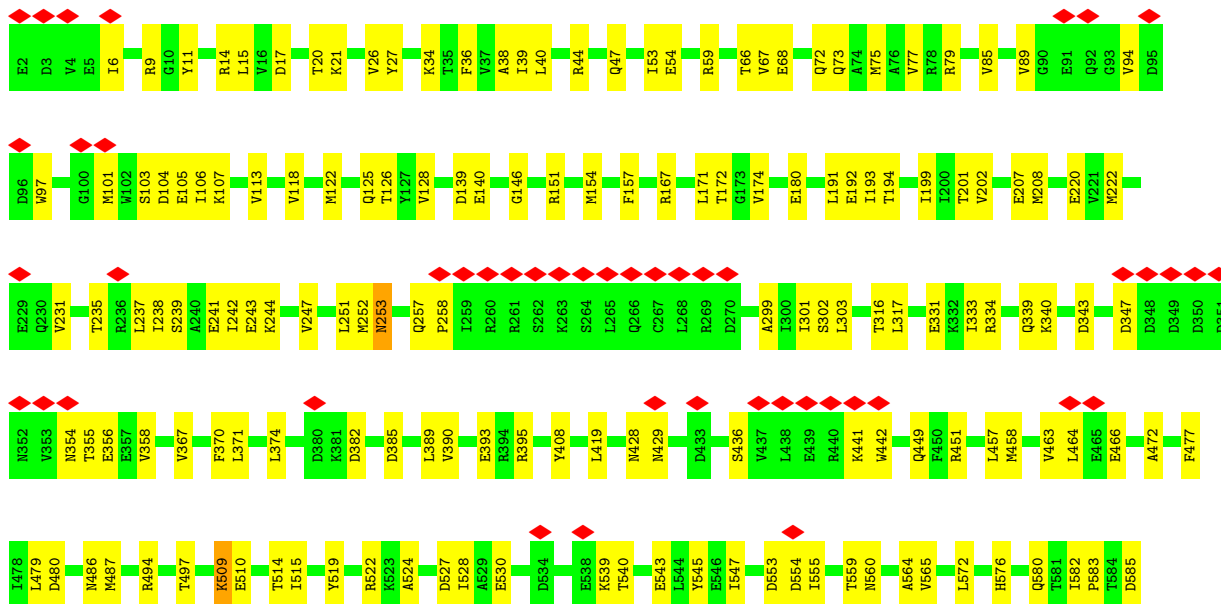
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Dicer-2, isoform A

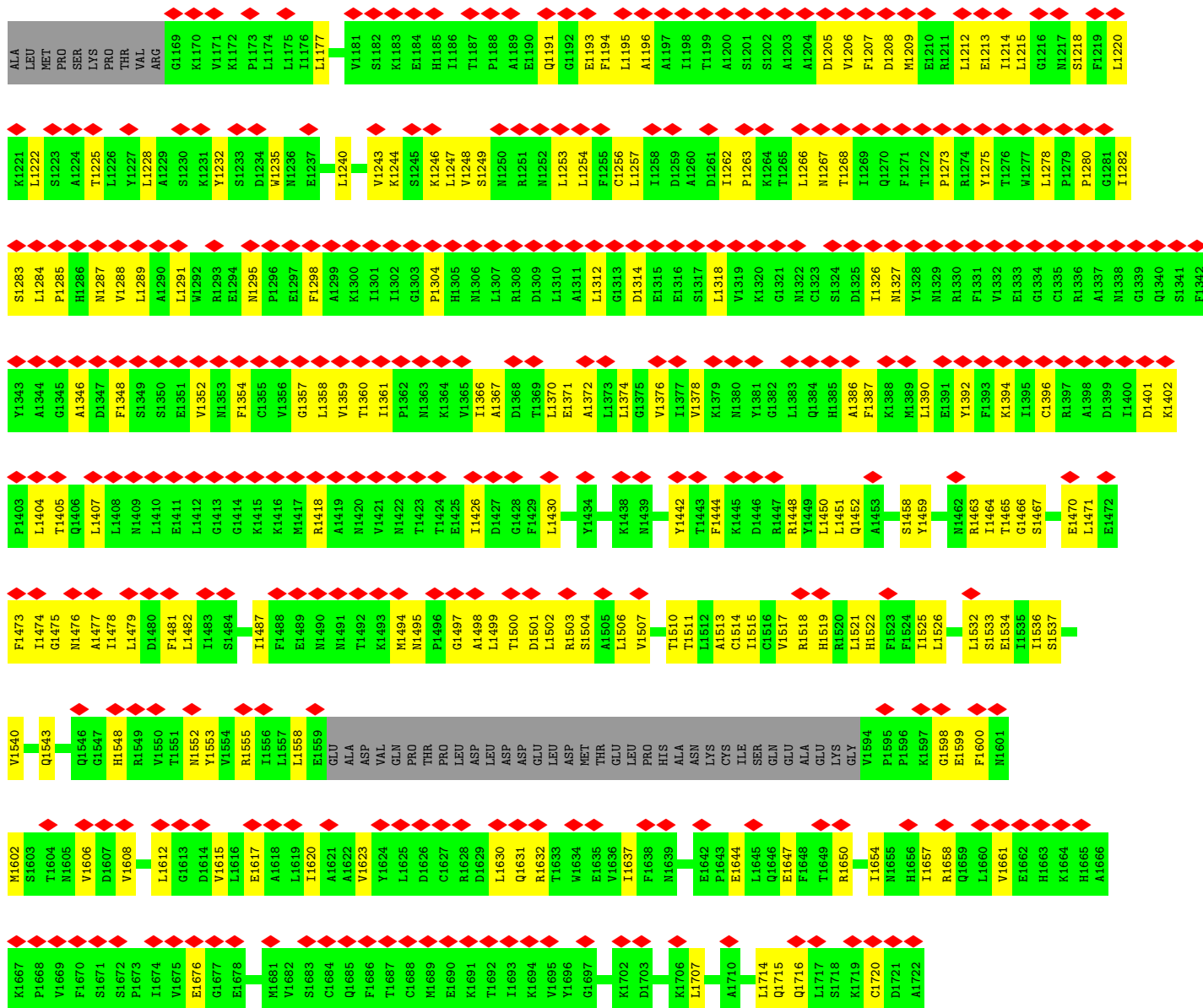




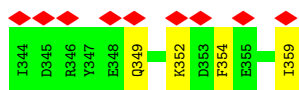
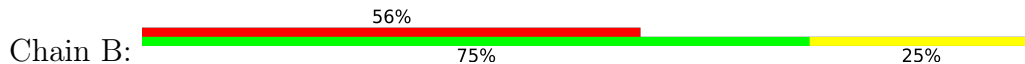
• Molecule 1: Dicer-2, isoform A



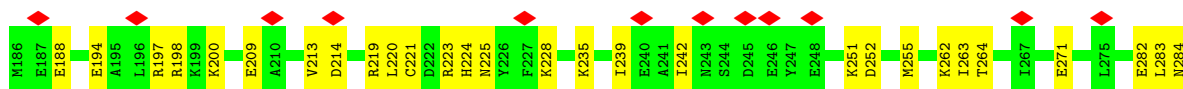
LEU	F979	L1039	F979	F859	L799	E739	H679	E601	F505	V418	L327	Q257	P166
LEU	N980	K1040	F920	G860	H800	Y740	F680	R602	E510	L419	C330	P258	R167
SER	F981	R1041	T921	S861	Q801	T741	E681	D603	E511	Q422	E531	I259	T172
THR	P982	N1042	M922	N862	F802	E742	H682	R604	E512	R427	H335	R260	G173
PRO	G983	VAL	S923	N863	H803	H743	H683	F606	I605	N428	L336	R261	V174
VAL	D984	ASP	K924	Q864	G804	M744	H684	G607	I606	M429	L337	S262	K177
GLU	L985	PRO	K925	Q865	G805	Y745	H685	V608	I518	I430	L338	K263	E180
LEU	N986	LEU	G926	Q866	H806	L746	H686	S609	Y519	S431	Q340	S264	T186
ASP	N987	GLY	N927	R867	F807	M747	G687	A610	Q520	P432	Q342	Q266	K187
TYR	K988	VAL	R928	Q868	R808	L748	D688	G613	R522	F434	D343	C267	E190
TYR	L989	ILE	R929	Q869	D809	Q749	S689	H614	R523	D433	D344	C268	E191
HIS	I990	THR	G930	P870	I810	T750	V690	V615	L532	F435	M345	L268	E192
THR	F991	GLU	D931	A871	L811	P751	T691	L516	K533	E436	T345	R269	L191
VAL	L992	ASP	V932	P872	R812	R752	A692	S617	D534	S436	Y346	D270	E192
GLY	P993	ILE	V933	R873	I813	M753	T693	I618	D535	V437	D347	P271	I193
ASN	S994	GLU	H934	P874	H814	Y754	V694	N619	E538	L438	D348	S272	Y194
VAL	K995	PRO	K935	E875	H815	M755	H695	M620	K539	L439	D349	K273	Y195
CYS	L996	GLU	R936	E876	H816	A756	K696	P621	E540	E439	D350	K274	M198
GLU	D997	SER	D936	D876	P816	A756	K696	V622	T940	R440	D351	K275	T201
SER	N997	LEU	F937	F877	F817	L757	A697	G623	P542	K441	N352	F276	S203
LEU	R998	LEU	F938	E878	F818	L757	D698	N623	E541	M442	V353	K278	V202
ASP	K999	GLU	M939	E879	W819	L758	D698	C624	P542	I447	N354	Q279	D204
PRO	Y1000	PRO	R940	G879	W820	R759	S700	M625	I547	Q448	M360	L280	E207
THR	F1001	THR	E941	K880	D821	M761	K701	R627	H650	Q449	M361	D283	M208
ASP	L1002	PRO	V822	V882	R822	L762	D702	D628	D553	F450	T364	F284	E209
LYS	L1003	LYS	R823	V883	R823	P763	R703	T629	D554	R451	Q368	Q287	N210
GLU	H1004	SER	S824	T883	R824	R764	T704	I630	D555	D452	Q369	M288	V211
TRP	A1005	ILE	R825	Q884	R825	R765	Y705	G632	D556	A455	R369	K289	E220
ALA	E1006	GLU	L945	W885	R826	L765	K706	S633	D556	M456	F370	M289	V211
ALA	A1007	ALA	T946	Y886	E826	A766	T707	D633	E561	L457	M372	E290	Y214
SER	L1008	SER	N947	Y887	N827	E767	E708	D636	N562	M458	S373	A296	E220
VAL	L1009	VAL	R948	A887	S828	E768	C709	G644	N562	I459	L374	S297	V221
ALA	K1010	ALA	Q949	N888	Y829	P769	C709	A645	A573	L464	D380	L298	M222
ASN	L1011	ASN	L949	Y889	R830	F770	P710	G645	I574	E466	E392	I300	V223
HIS	F1012	LEU	T950	D890	W831	L770	L711	A649	I574	E467	E393	I301	S224
PRO	T1013	GLU	F951	K891	V832	F771	L712	K648	R577	G467	E394	S302	E229
THR	T1014	THR	Y952	R892	W833	S772	F713	V652	Y578	I468	R384	Q230	E229
GLU	Y1015	PHE	Y953	M893	P833	N773	Y714	L653	C579	D469	C387	I304	V231
ILE	Y1016	GLU	H954	L894	L834	Q774	Y715	L654	I882	V470	V392	F307	T235
GLY	N1017	PRO	N955	W895	L836	G776	D715	S655	P883	V471	V393	D308	T235
ASN	L1018	TRP	G957	R897	G837	L777	L716	L656	T584	A472	E394	R312	R236
ARG	H1019	GLN	K958	W898	A838	H778	R719	G657	D585	M474	T397	R312	L237
THR	L1020	LYS	K959	H899	G839	H779	V720	N660	A586	D478	C398	E241	E241
PRO	L1021	ALA	R960	H899	E840	W779	W720	I675	F889	I478	K399	E315	E241
ALA	P1022	THR	A961	E901	Q841	R780	G721	I676	V590	L479	K399	T316	K244
ASN	F1023	VAL	K962	L902	K842	A782	E722	I677	V590	D480	Y402	L317	V247
ASN	G1025	ASP	S963	T903	C843	M783	I723	L668	I591	F485	L405	S318	L251
VAL	T1026	LEU	P904	Q904	F844	A784	C724	K669	P592	M486	L406	V319	L251
ARG	D1027	SER	L905	D845	D845	P785	Y725	E670	W593	M487	M407	K320	L251
ASN	Y1028	ARG	S906	S906	E847	L786	A726	G674	F594	Y488	Y408	L321	G255
ASN	M1029	ASN	Y907	Y907	E848	E787	Y727	I675	H595	R494	L415	M322	V256
PRO	P1030	PRO	N908	N908	L848	E787	E728	A676	Q598	R324	H504	H323	G255
PRO	P1031	PRO	E909	E909	H849	W789	I729	A677	E599	R324	H504	H323	G255
PRO	P1032	PRO	K910	K910	T850	I789	F730	D677	D600	R324	H504	H323	G255
PRO	L971	PRO	M911	M911	R851	I790	L731	D678	D600	R324	H504	H323	G255
PRO	L972	PRO	N912	N912	F852	Q791	E732	D678	D600	R324	H504	H323	G255
PRO	P973	PRO	Q913	Q913	R853	N792	P733	D678	D600	R324	H504	H323	G255
PRO	D1036	PRO	E974	E974	R854	S793	Q734	D678	D600	R324	H504	H323	G255
PRO	Y1037	PRO	L975	L975	L855	E794	F735	D678	D600	R324	H504	H323	G255
PRO	S1038	PRO	C976	C976	P856	Q795	E736	D678	D600	R324	H504	H323	G255
PRO	F977	PRO	N978	N978	Q857	E797	C738	D678	D600	R324	H504	H323	G255
PRO	N978	PRO	N978	N978	S858	L798	C738	D678	D600	R324	H504	H323	G255



• Molecule 2: Loquacious, isoform D

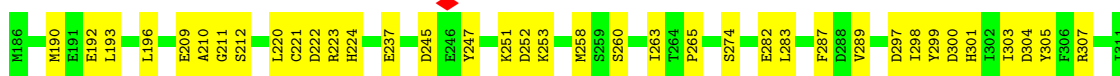


• Molecule 3: LD06392p

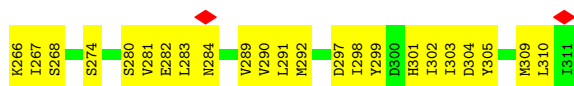
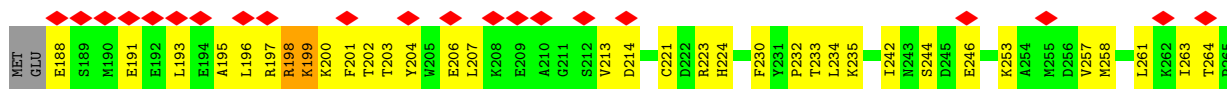




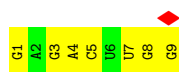
- Molecule 3: LD06392p



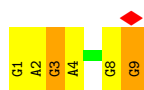
- Molecule 3: LD06392p



- Molecule 4: RNA (5'-R(P*GP*AP*GP*AP*CP*UP*UP*GP*G)-3')



- Molecule 4: RNA (5'-R(P*GP*AP*GP*AP*CP*UP*UP*GP*G)-3')

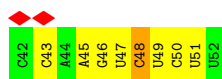


- Molecule 4: RNA (5'-R(P*GP*AP*GP*AP*CP*UP*UP*GP*G)-3')

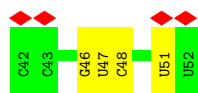


There are no outlier residues recorded for this chain.

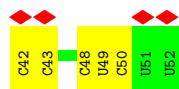
- Molecule 5: RNA (5'-R(P*CP*CP*AP*AP*GP*UP*CP*UP*CP*UP*U)-3')



- Molecule 5: RNA (5'-R(P*CP*CP*AP*AP*GP*UP*CP*UP*CP*UP*U)-3')



- Molecule 5: RNA (5'-R(P*CP*CP*AP*AP*GP*UP*CP*UP*CP*UP*U)-3')



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	46899	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 ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	1.081	Depositor
Minimum map value	-0.452	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.053	Depositor
Recommended contour level	0.3	Depositor
Map size (Å)	345.6, 345.6, 345.6	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.08, 1.08, 1.08	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	0/12907	0.49	0/17460
1	D	0.30	0/12907	0.50	0/17460
1	G	0.28	0/12907	0.51	0/17460
2	B	0.32	0/146	0.52	0/192
3	C	0.29	0/1045	0.51	0/1404
3	F	0.32	0/1045	0.55	0/1404
3	I	0.32	0/1028	0.58	1/1382 (0.1%)
4	E	0.34	0/219	0.81	0/340
4	J	0.30	0/219	0.74	0/340
4	L	0.26	0/219	0.68	0/340
5	H	0.31	0/251	0.74	0/387
5	K	0.29	0/251	0.73	0/387
5	M	0.30	0/251	0.73	0/387
All	All	0.29	0/43395	0.51	1/58943 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
3	I	199	LYS	CB-CG-CD	5.92	126.99	111.60

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	12634	0	12716	296	0
1	D	12634	0	12716	294	0
1	G	12634	0	12716	428	0
2	B	144	0	140	5	0
3	C	1027	0	1014	38	0
3	F	1027	0	1014	37	0
3	I	1010	0	999	61	0
4	E	196	0	98	8	0
4	J	196	0	98	4	0
4	L	196	0	98	0	0
5	H	227	0	118	10	0
5	K	227	0	118	5	0
5	M	227	0	118	9	0
All	All	42379	0	41963	1127	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 13.

The worst 5 of 1127 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:G:1479:LEU:HD21	1:G:1620:ILE:HG21	1.43	0.97
1:G:1518:ARG:NH2	1:G:1548:HIS:O	2.01	0.94
1:D:872:PRO:O	1:D:937:LYS:NZ	2.02	0.93
1:A:15:LEU:HD21	1:A:26:VAL:HG21	1.52	0.90
1:D:891:LYS:NZ	1:D:944:ASP:OD1	2.03	0.90

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	1555/1721 (90%)	1493 (96%)	62 (4%)	0	100	100
1	D	1555/1721 (90%)	1490 (96%)	64 (4%)	1 (0%)	51	83
1	G	1555/1721 (90%)	1466 (94%)	89 (6%)	0	100	100
2	B	14/16 (88%)	12 (86%)	2 (14%)	0	100	100
3	C	124/126 (98%)	119 (96%)	5 (4%)	0	100	100
3	F	124/126 (98%)	118 (95%)	6 (5%)	0	100	100
3	I	122/126 (97%)	110 (90%)	12 (10%)	0	100	100
All	All	5049/5557 (91%)	4808 (95%)	240 (5%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	253	ASN

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	1402/1548 (91%)	1396 (100%)	6 (0%)	91	95
1	D	1402/1548 (91%)	1398 (100%)	4 (0%)	92	96
1	G	1402/1548 (91%)	1398 (100%)	4 (0%)	92	96
2	B	16/16 (100%)	16 (100%)	0	100	100
3	C	117/117 (100%)	117 (100%)	0	100	100
3	F	117/117 (100%)	117 (100%)	0	100	100
3	I	115/117 (98%)	114 (99%)	1 (1%)	78	88
All	All	4571/5011 (91%)	4556 (100%)	15 (0%)	92	96

5 of 15 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	509	LYS
1	G	1715	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	910	LYS
3	I	198	ARG
1	G	604	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 15 such sidechains are listed below:

Mol	Chain	Res	Type
1	D	955	ASN
3	I	225	ASN
1	G	734	GLN
3	I	301	HIS
1	G	1716	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
4	E	8/9 (88%)	2 (25%)	0
4	J	8/9 (88%)	2 (25%)	0
4	L	8/9 (88%)	0	0
5	H	10/11 (90%)	1 (10%)	0
5	K	10/11 (90%)	0	0
5	M	10/11 (90%)	1 (10%)	0
All	All	54/60 (90%)	6 (11%)	0

5 of 6 RNA backbone outliers are listed below:

Mol	Chain	Res	Type
4	E	3	G
4	E	9	G
5	H	48	C
4	J	3	G
4	J	9	G

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

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.

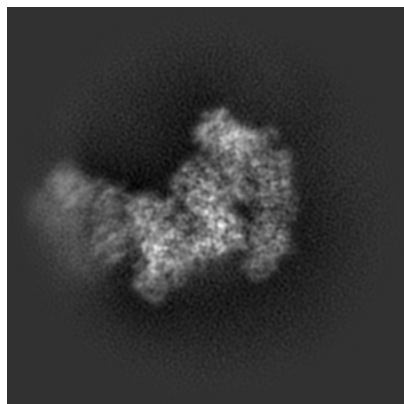
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-34708. These allow visual inspection of the internal detail of the map and identification of artifacts.

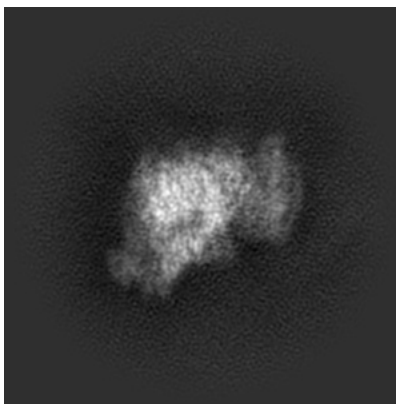
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

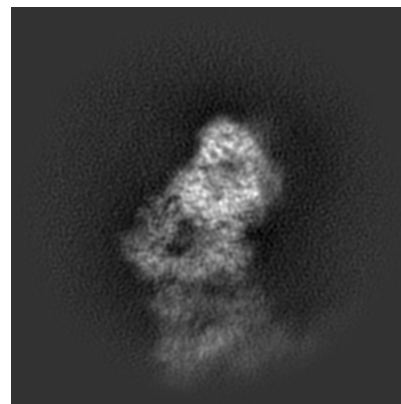
6.1.1 Primary map



X

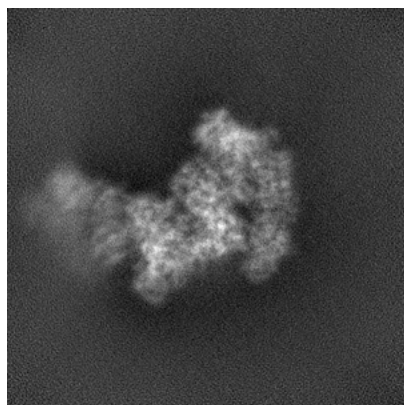


Y

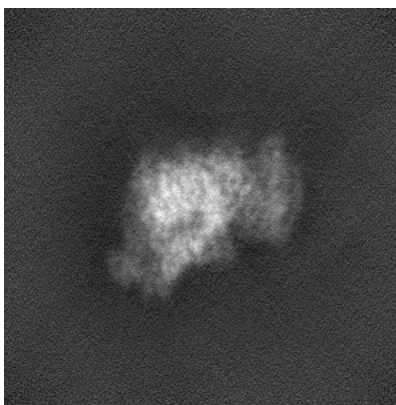


Z

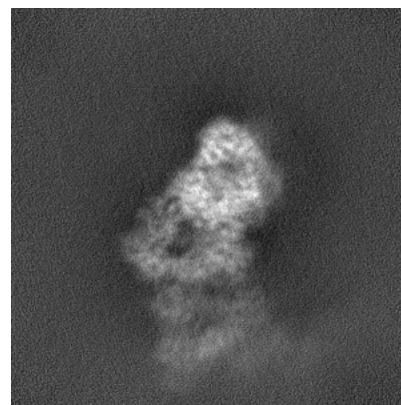
6.1.2 Raw map



X



Y

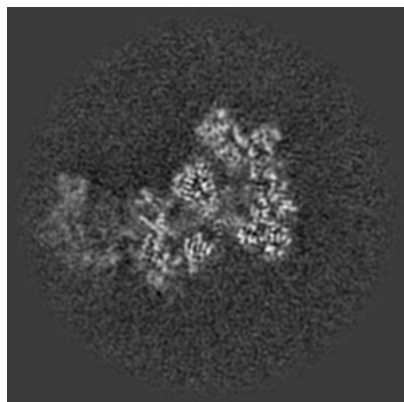


Z

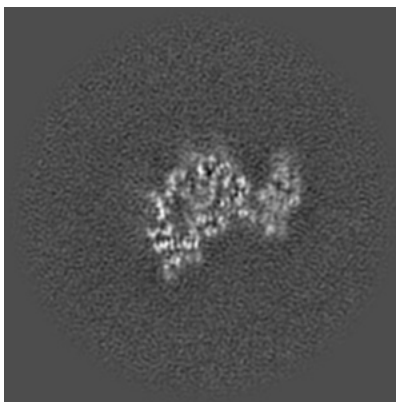
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

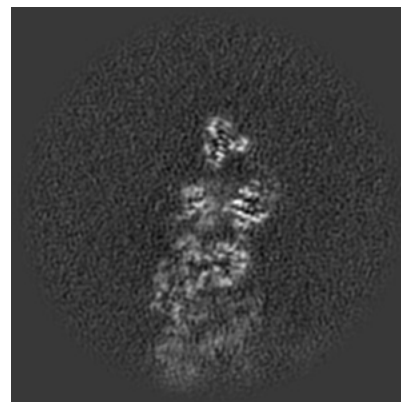
6.2.1 Primary map



X Index: 160

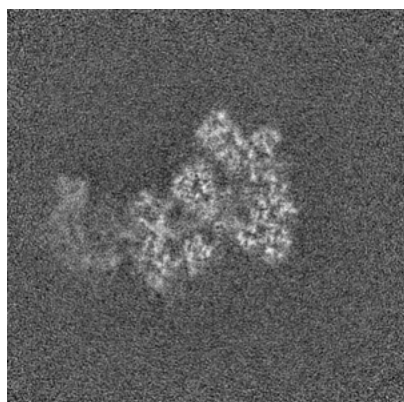


Y Index: 160

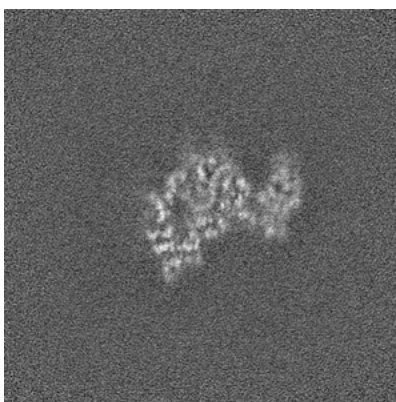


Z Index: 160

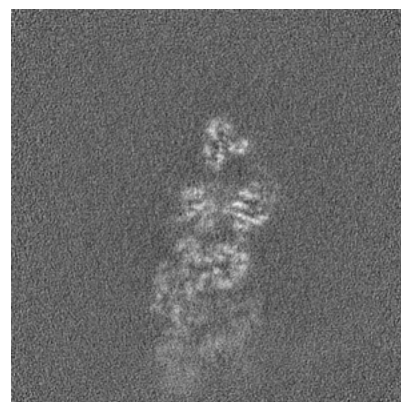
6.2.2 Raw map



X Index: 160



Y Index: 160

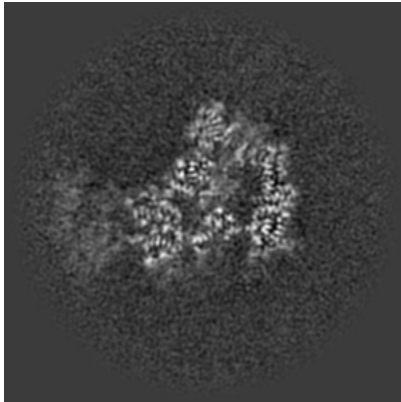


Z Index: 160

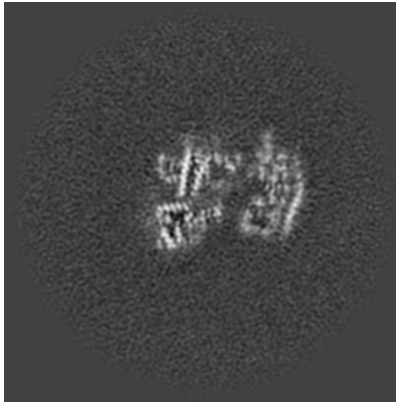
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

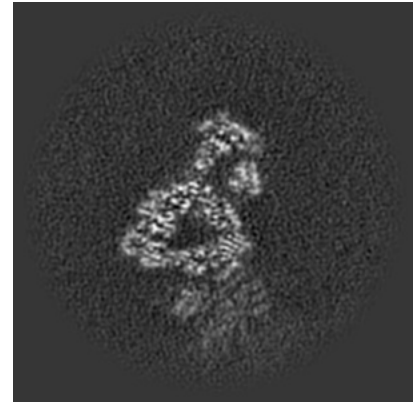
6.3.1 Primary map



X Index: 171

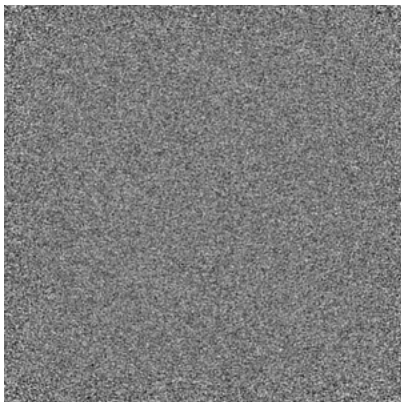


Y Index: 171

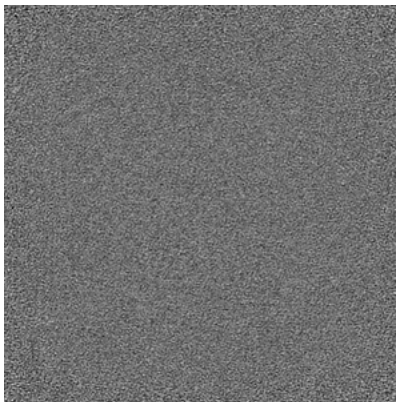


Z Index: 128

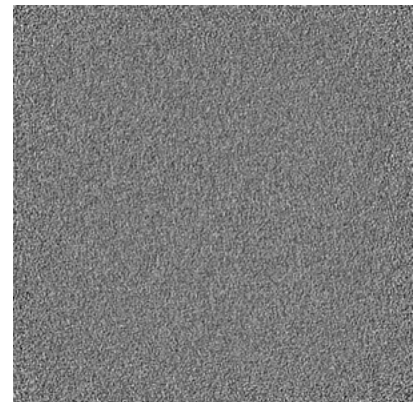
6.3.2 Raw map



X Index: 0



Y Index: 0

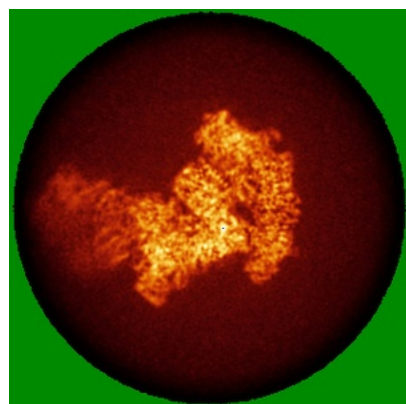


Z Index: 0

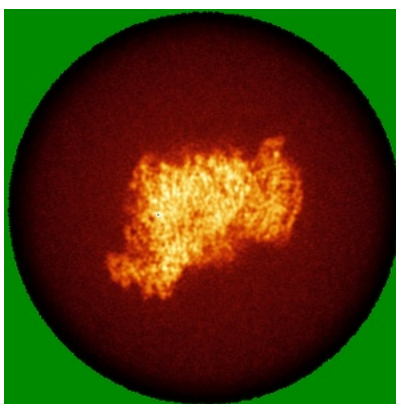
The images above show the largest variance slices of the map in three orthogonal directions.

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

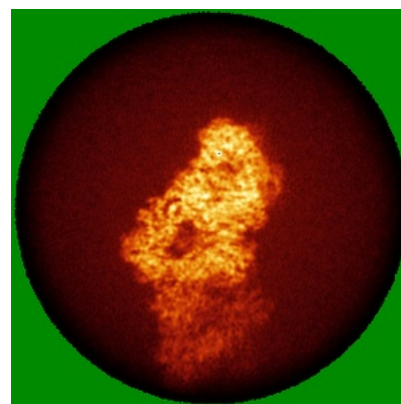
6.4.1 Primary map



X

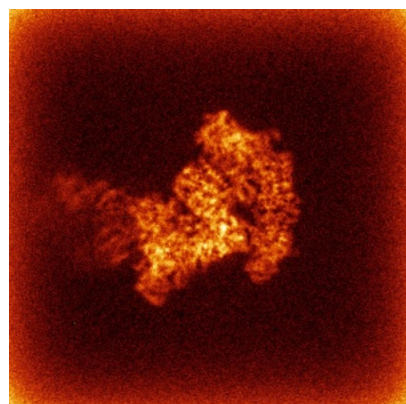


Y

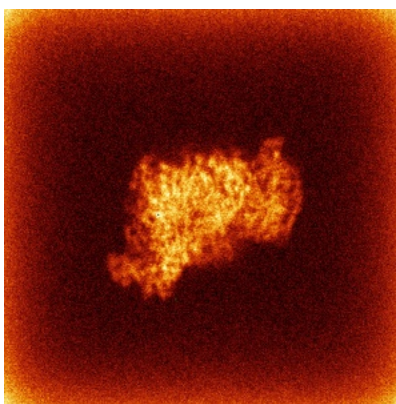


Z

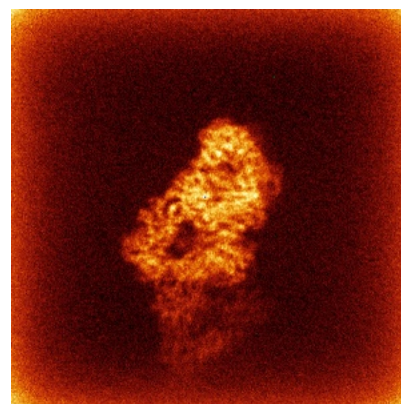
6.4.2 Raw map



X



Y

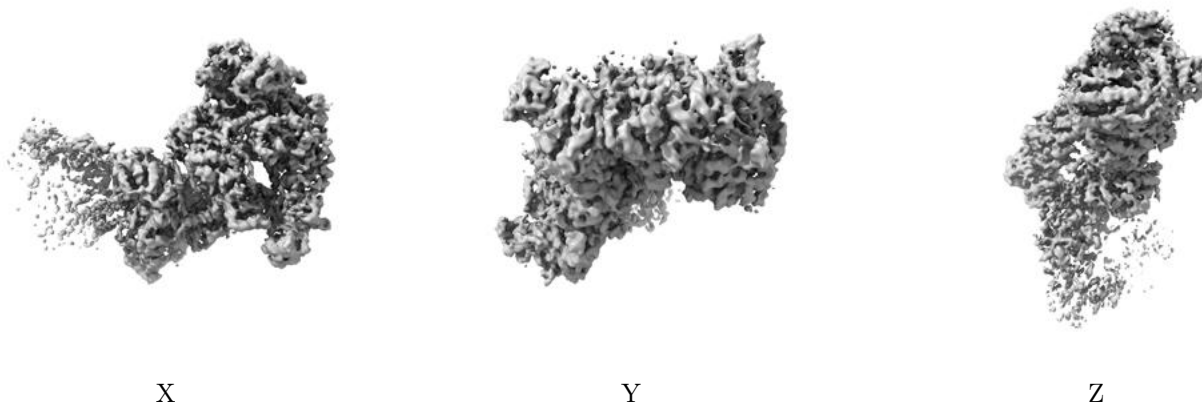


Z

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.

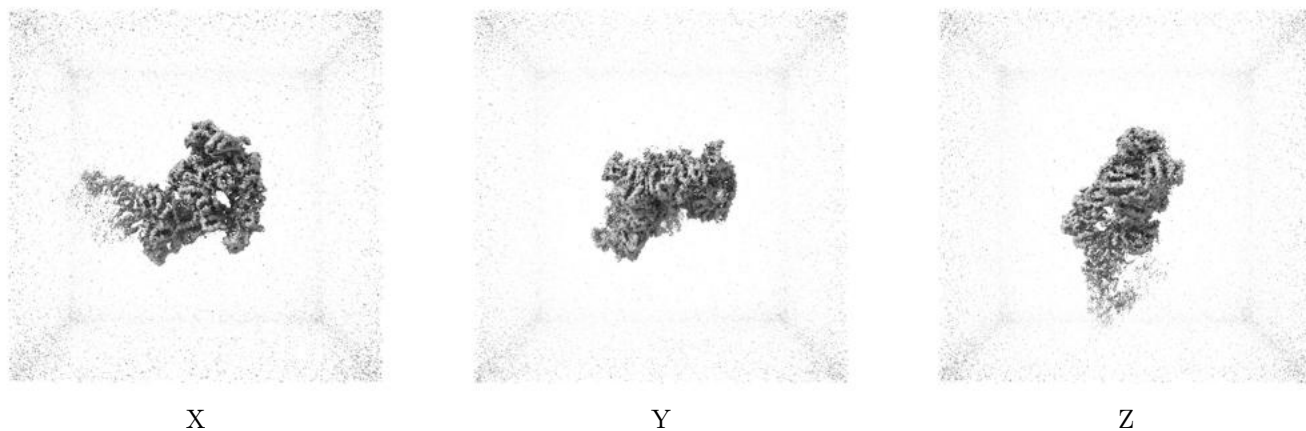
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.3. 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.

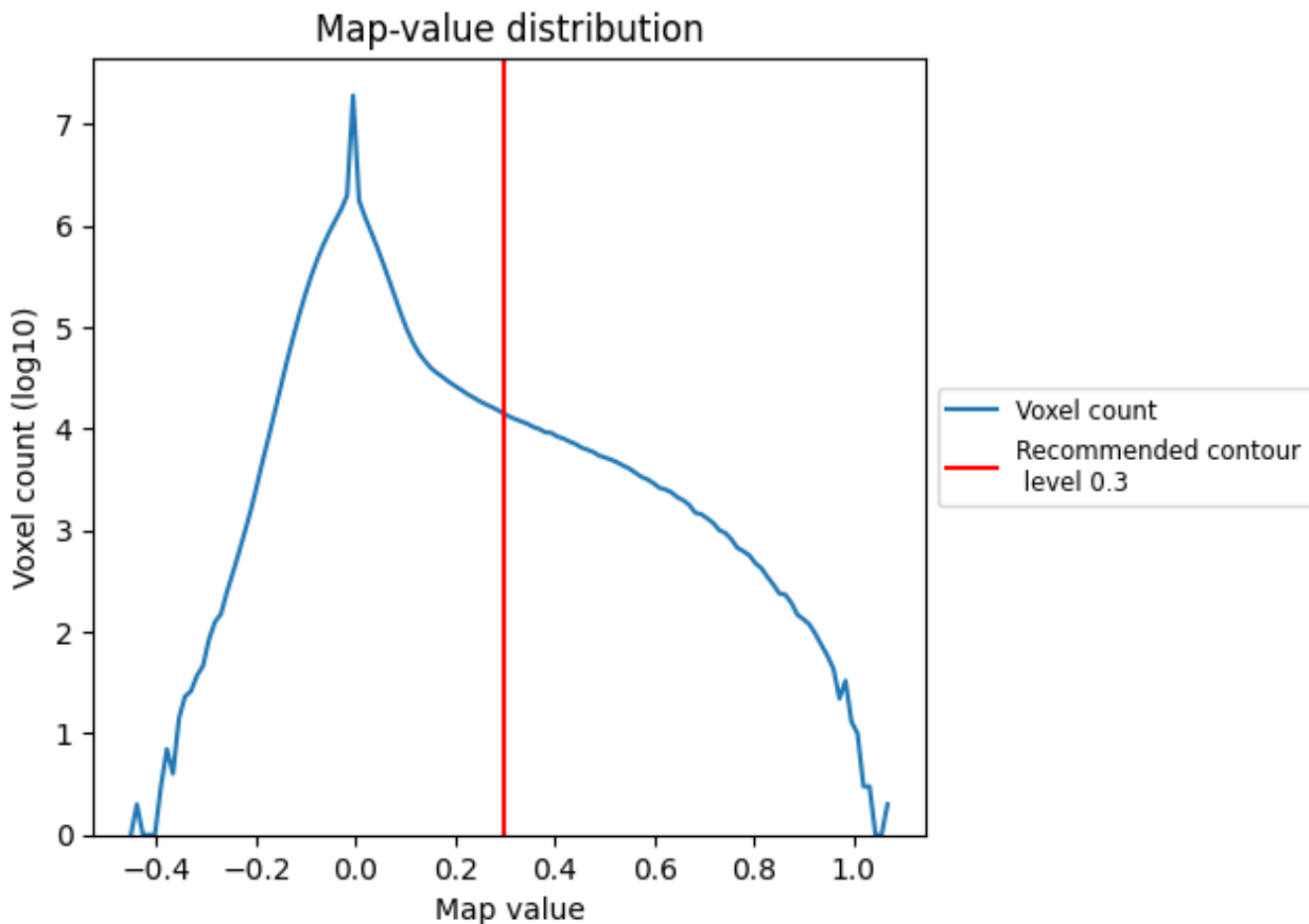
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

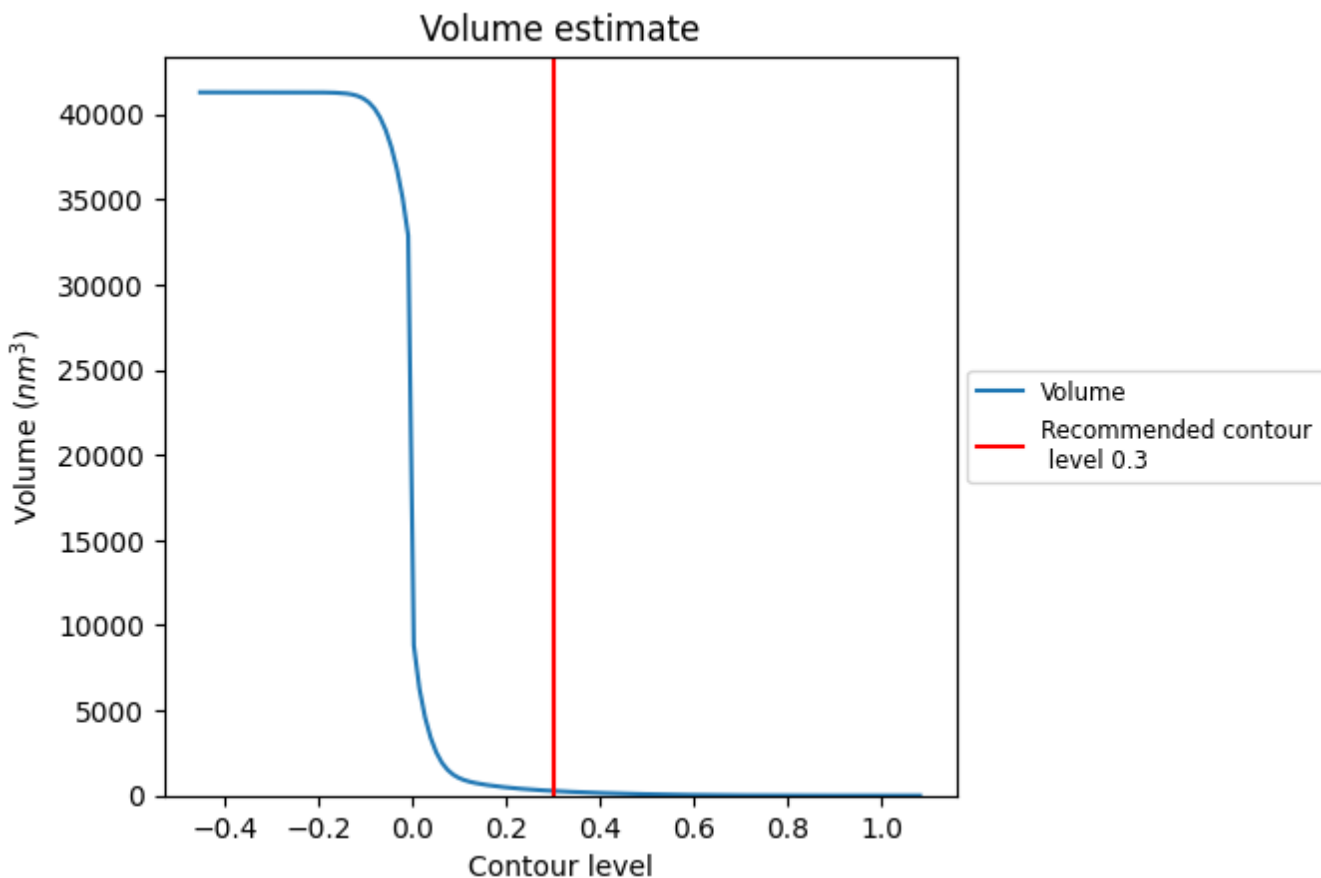
This section contains the results of statistical analysis of the map.

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.

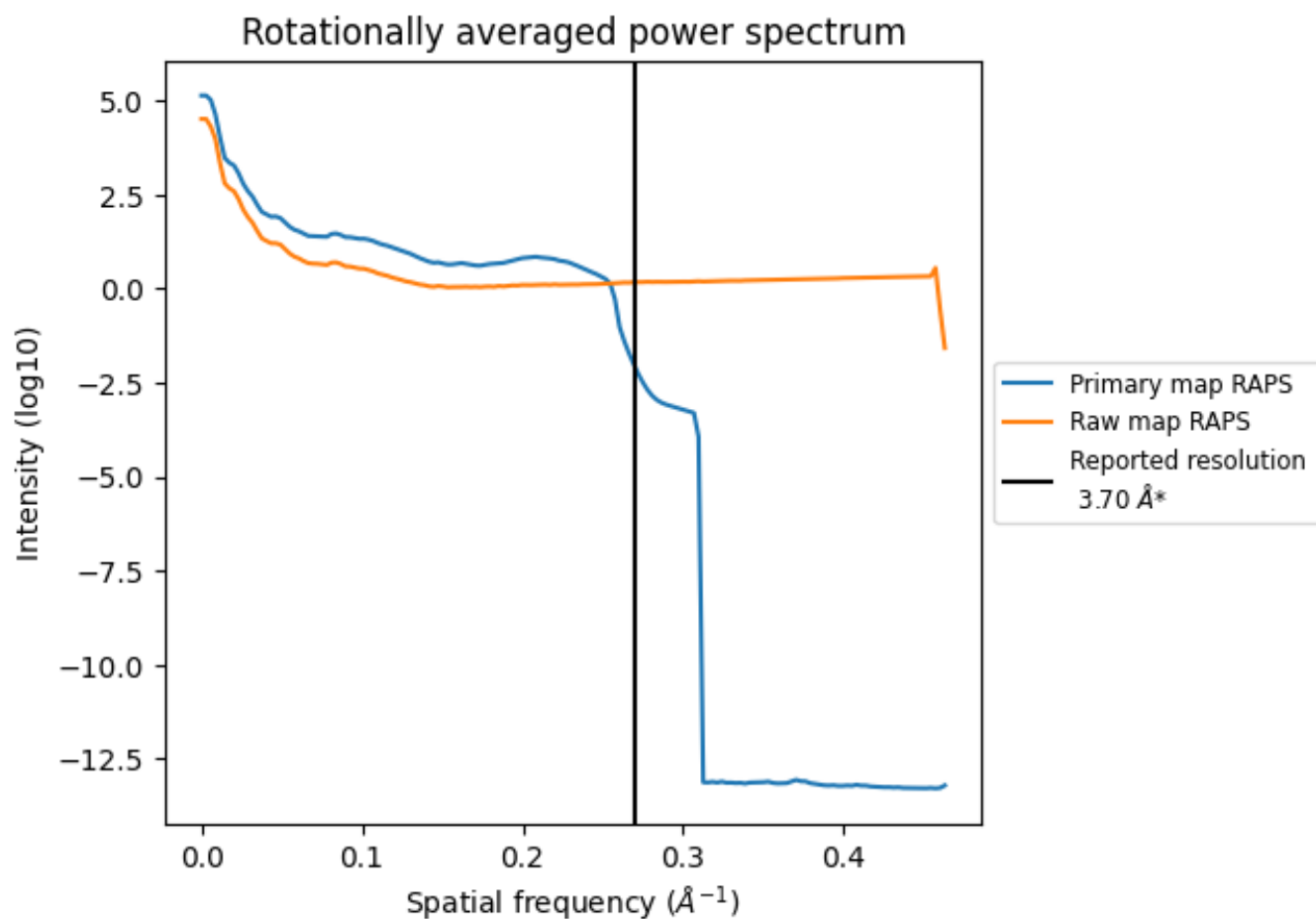
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 271 nm³; this corresponds to an approximate mass of 245 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](#)

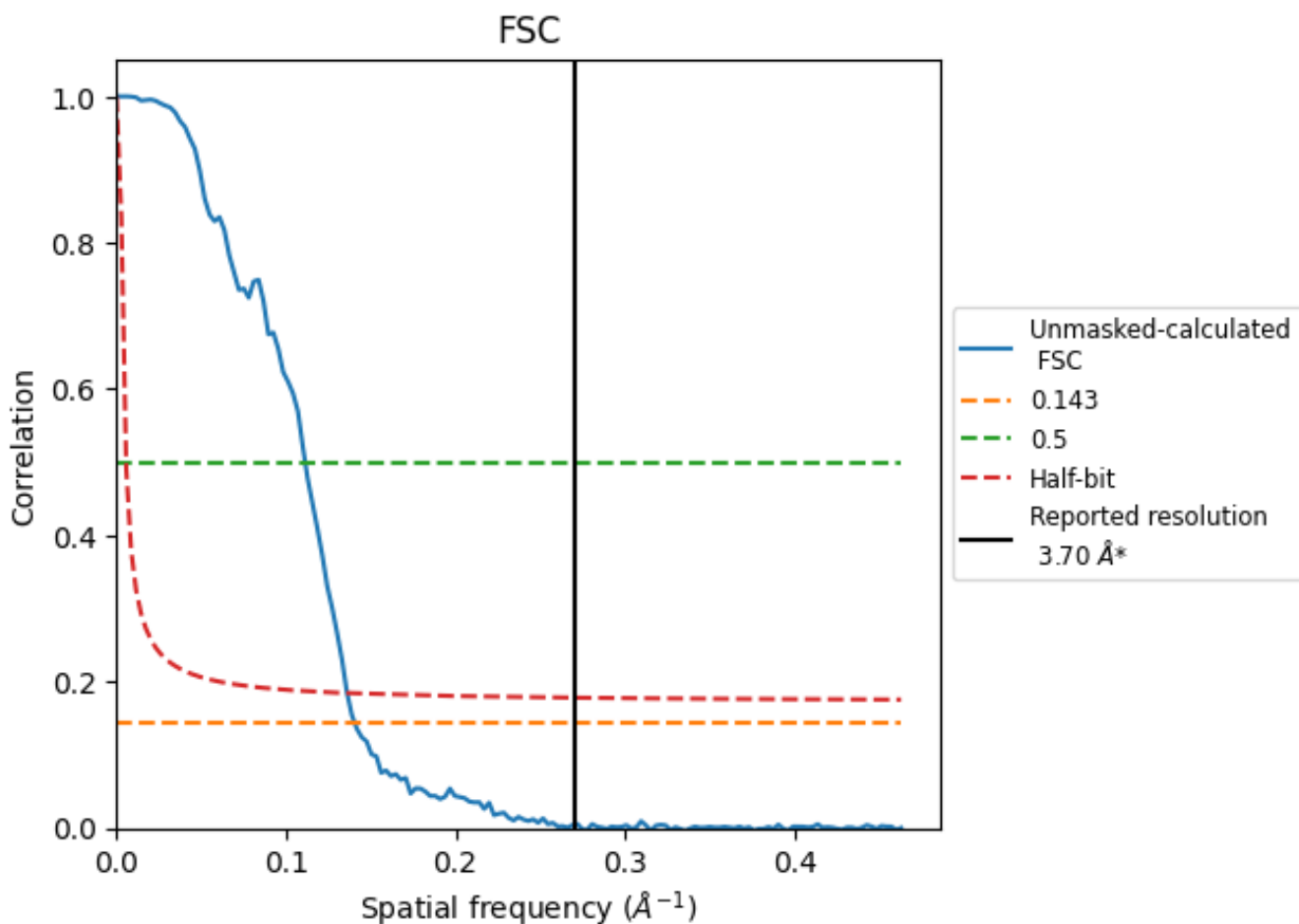


*Reported resolution corresponds to spatial frequency of 0.270 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 0.270 \AA^{-1}

8.2 Resolution estimates [i](#)

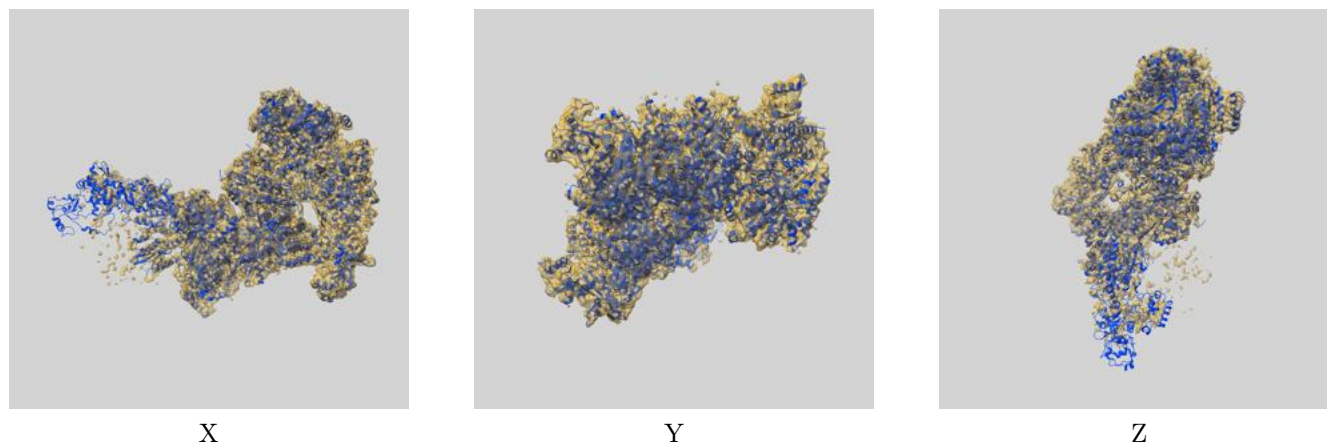
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	7.11	8.98	7.35

*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 7.11 differs from the reported value 3.7 by more than 10 %

9 Map-model fit [i](#)

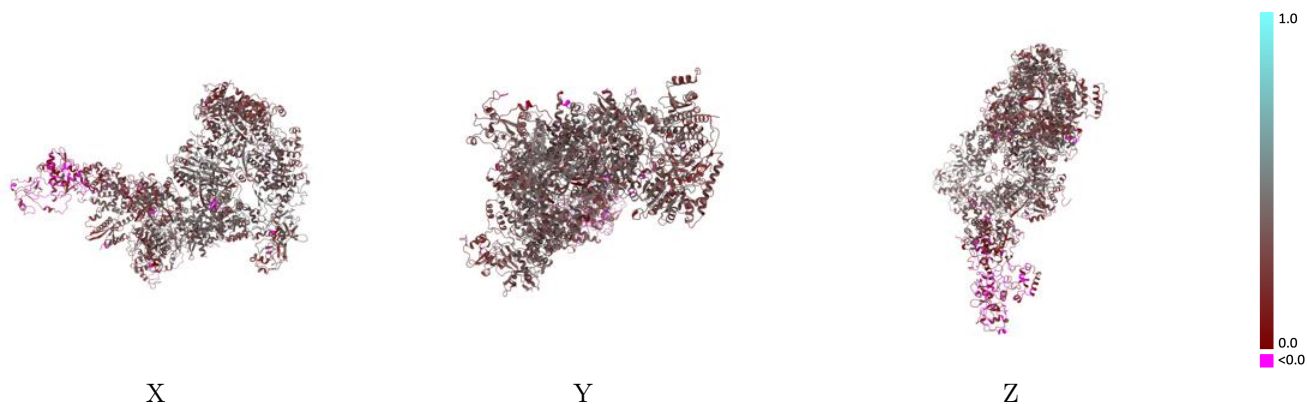
This section contains information regarding the fit between EMDB map EMD-34708 and PDB model 8HF1. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



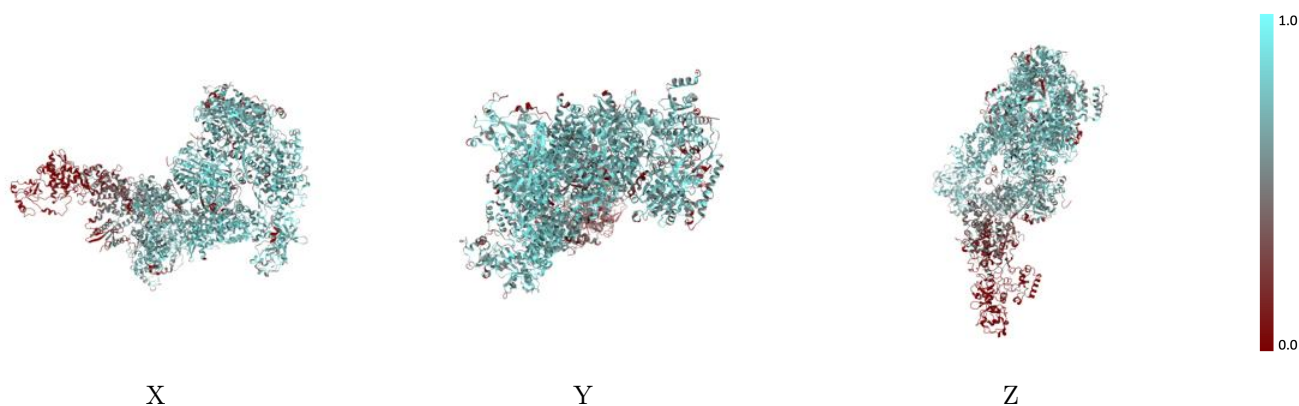
The images above show the 3D surface view of the map at the recommended contour level 0.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



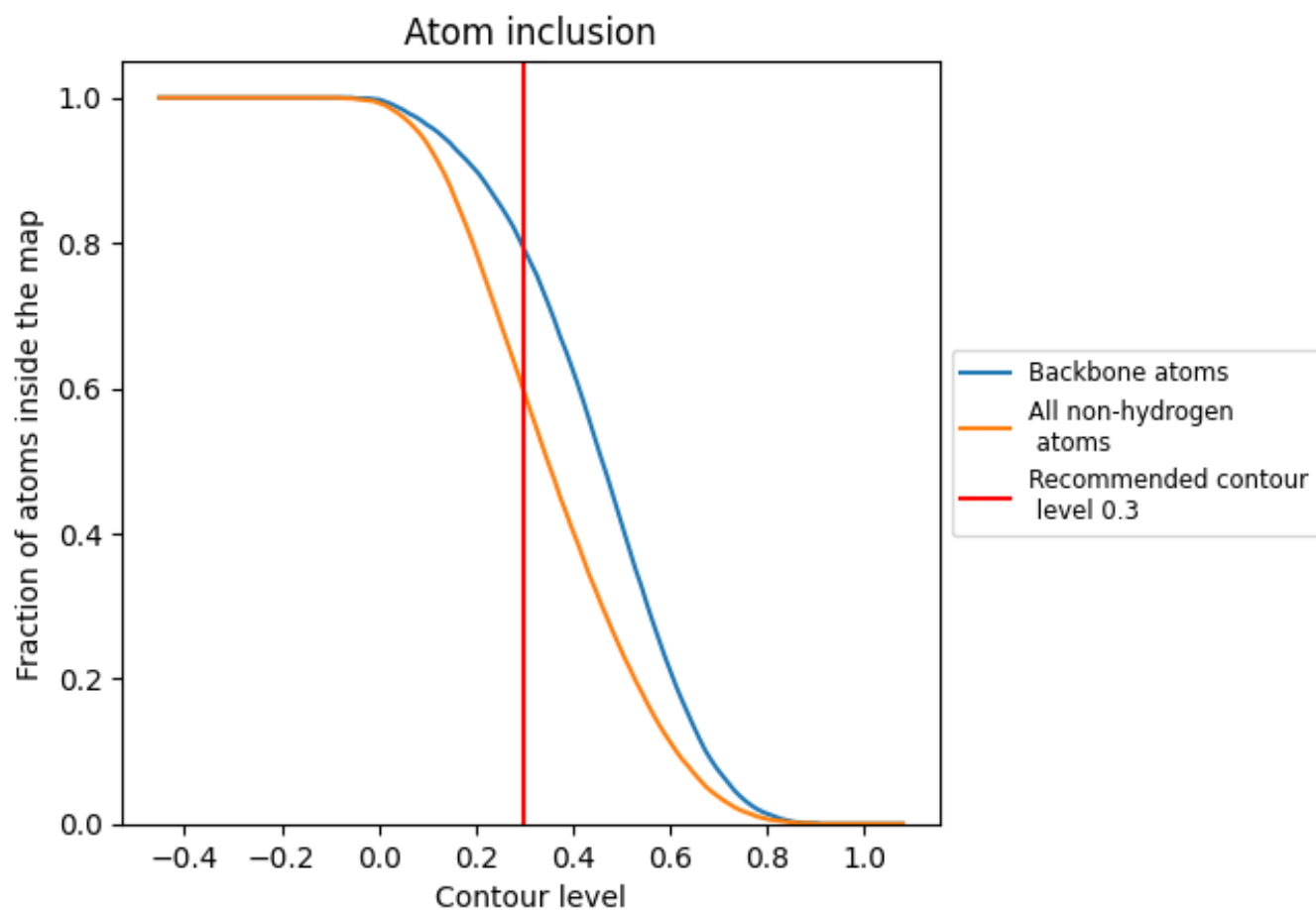
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.3).





























9.4 Atom inclusion [i](#)



At the recommended contour level, 79% of all backbone atoms, 60% 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 (0.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5950	 0.3070
A	 0.6790	 0.3400
B	 0.3900	 0.2040
C	 0.6450	 0.3240
D	 0.7150	 0.3550
E	 0.7190	 0.2730
F	 0.7500	 0.3720
G	 0.3660	 0.2220
H	 0.7360	 0.2440
I	 0.6000	 0.3090
J	 0.6790	 0.2900
K	 0.6080	 0.2910
L	 0.8060	 0.2750
M	 0.6340	 0.2710

