Full wwPDB EM Validation Report ⓘ

May 6, 2026 – 07:45 PM EDT

PDB ID	:	9O1Q / pdb_00009o1q
EMDB ID	:	EMD-70017
Title	:	TMEM16F D409G mutant in liposomes in the presence of Ca2+ (active state)
Authors	:	Feng, Z.; Accardi, A.
Deposited on	:	2025-04-03
Resolution	:	4.20 Å(reported)
Based on initial model	:	6QP6

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:

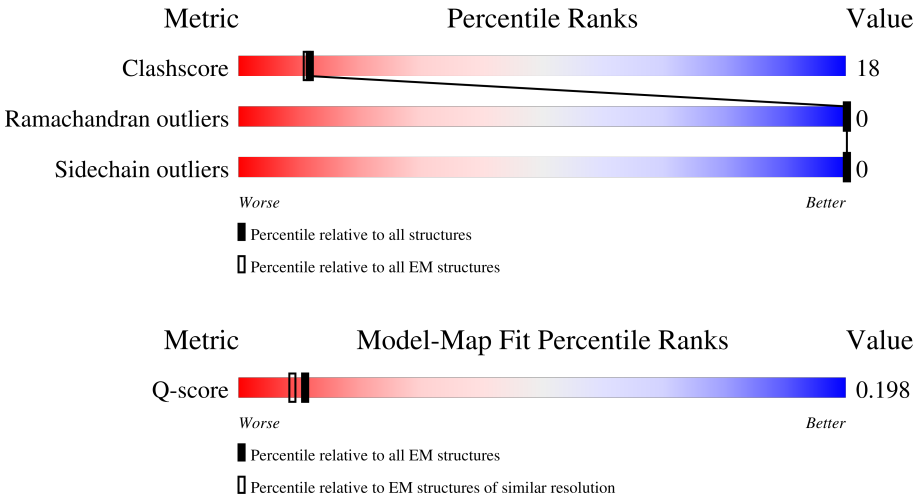
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 4.20 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	5410 (3.70 - 4.70)

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	911	22% 47% 31% 22%
1	B	911	22% 47% 31% 22%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 11556 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 Anoctamin-6.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	709	Total 5775	C 3793	N 934	O 1011	S 37	0	0
1	B	709	Total 5775	C 3793	N 934	O 1011	S 37	0	0

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	409	GLY	ASP	engineered mutation	UNP Q6P9J9
B	409	GLY	ASP	engineered mutation	UNP Q6P9J9

- Molecule 2 is CALCIUM ION (CCD ID: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

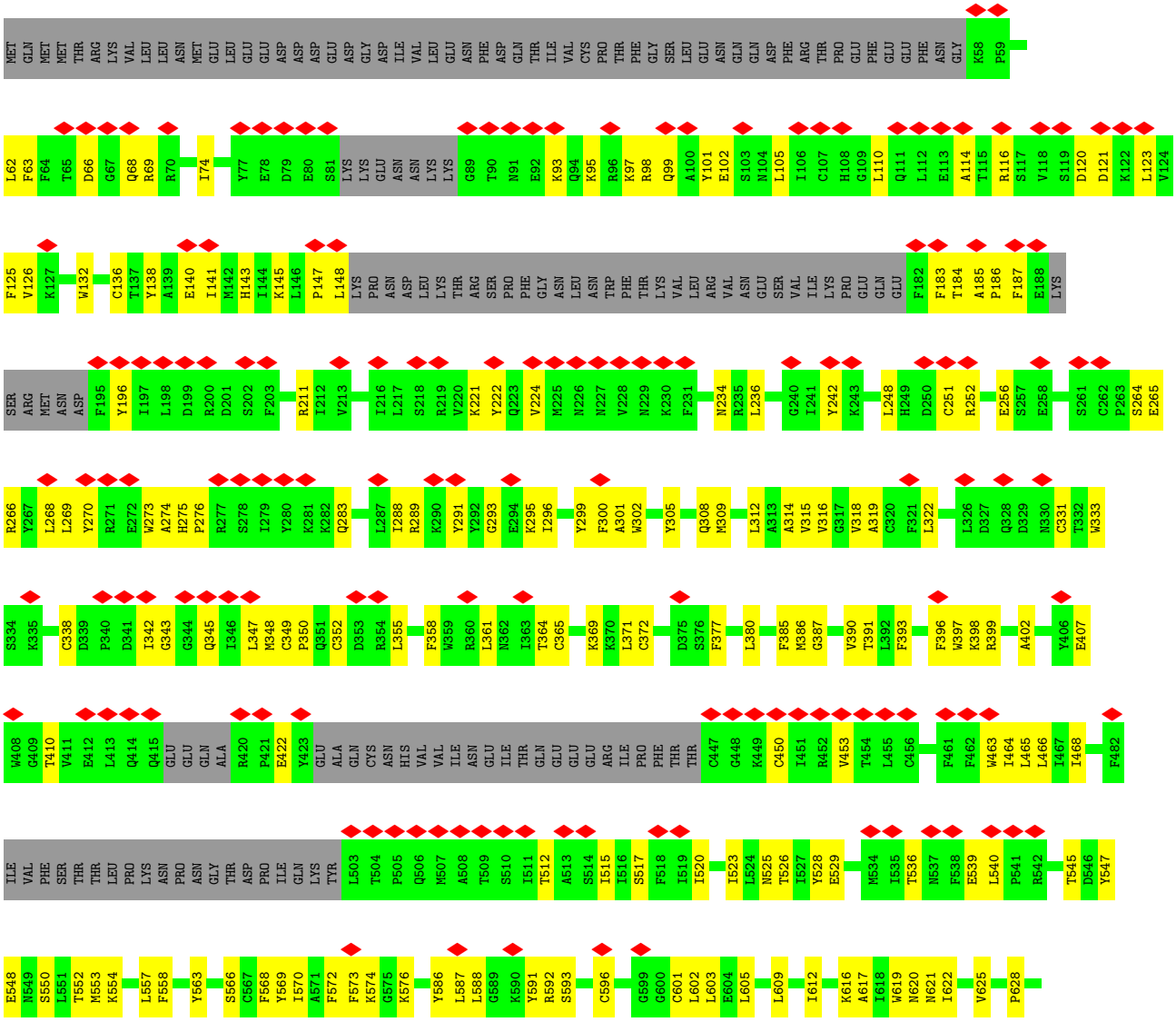
Mol	Chain	Residues	Atoms		AltConf
2	A	3	Total 3	Ca 3	0
2	B	3	Total 3	Ca 3	0

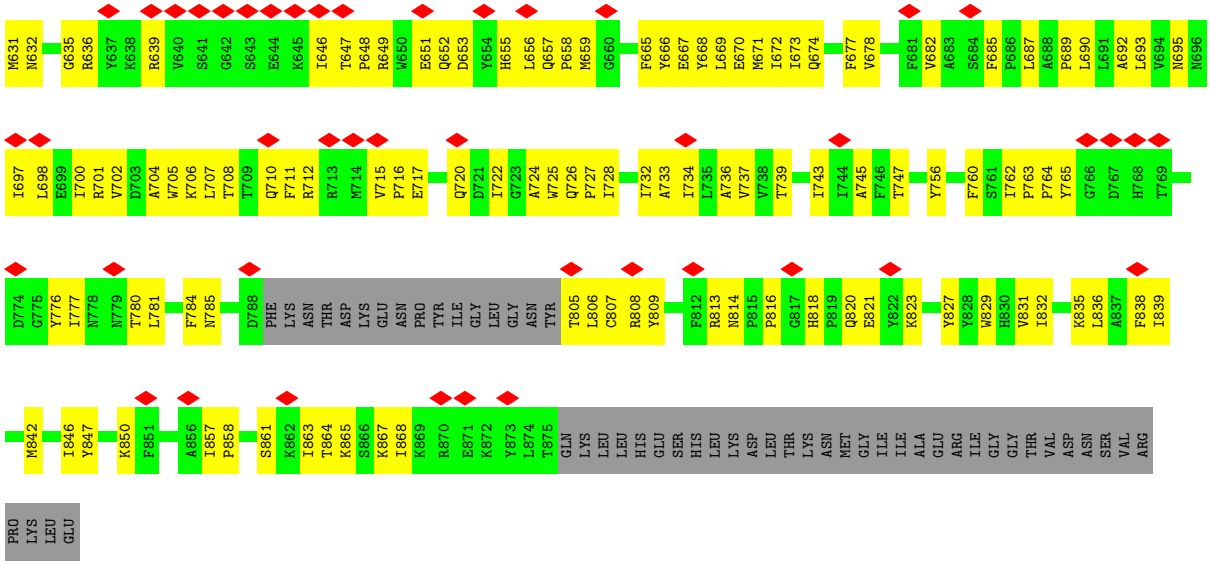
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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: Anoctamin-6

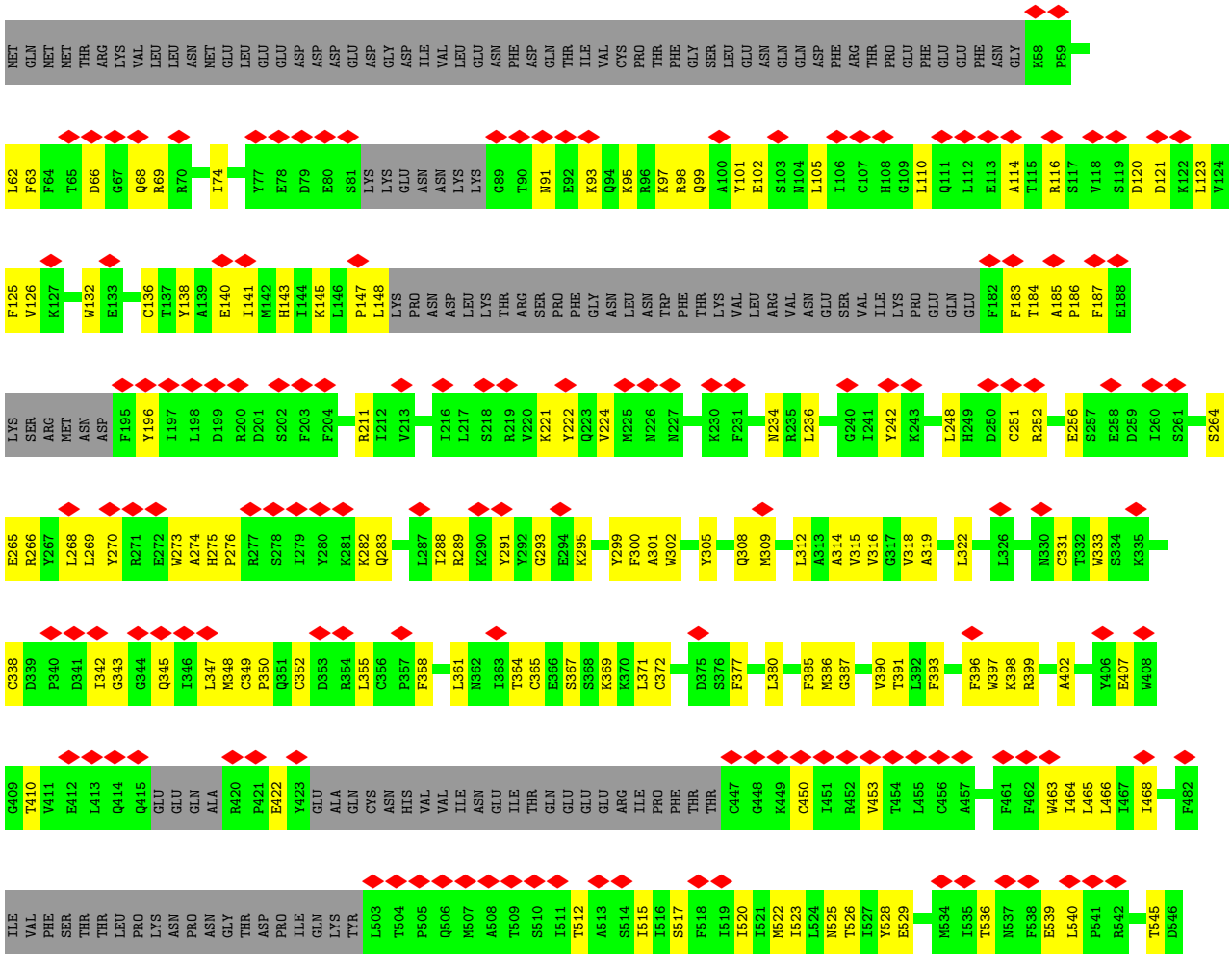
Chain A:

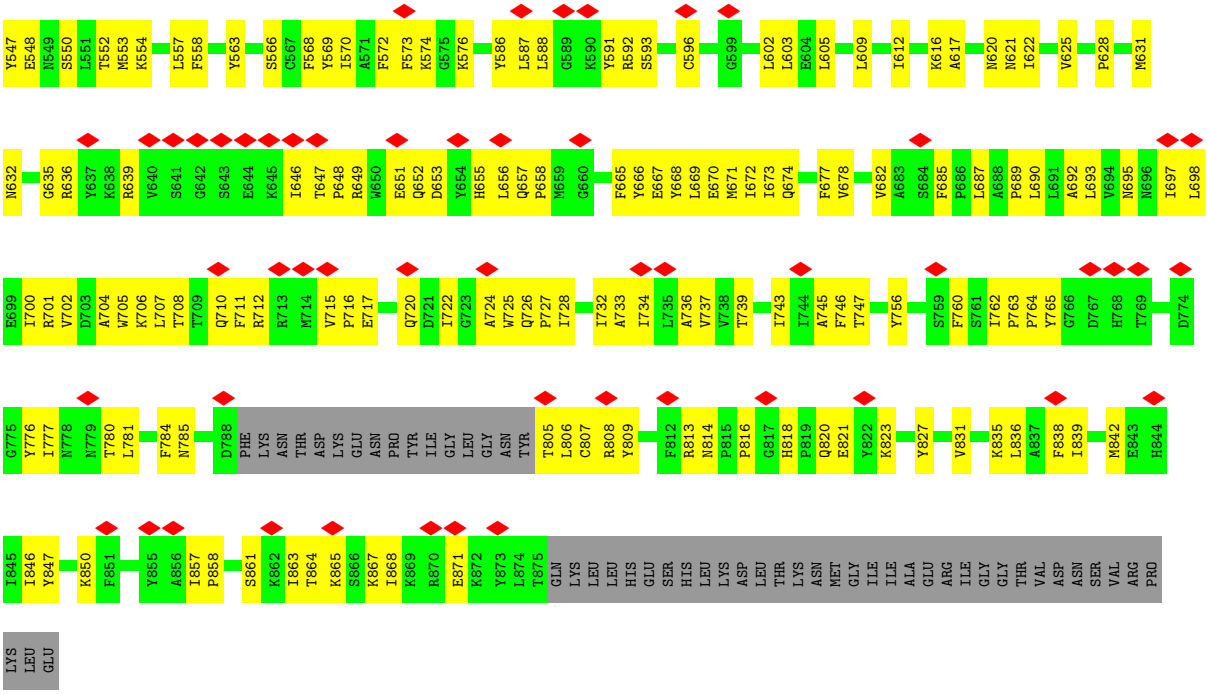




• Molecule 1: Anoctamin-6

Chain B:




Y547 E548 N549 S550 L551 T552 N553 K554 L557 F558 Y563 S566 C567 F568 Y569 I570 A571 F572 F573 K574 G575 K576 Y586 L587 L588 G589 K590 Y591 R592 S593 C596 G599 L602 L603 E604 L605 L609 I612 K616 A617 N620 N621 I622 V625 P628 M631
N632 G635 R636 Y637 K638 R639 V640 S641 G642 S643 E644 K645 I646 T647 P648 R649 W650 E651 Q652 D653 Y654 H655 L656 Q657 P658 M659 G660 F665 Y666 E667 Y668 L669 E670 M671 I672 I673 Q674 F677 V678 V682 A683 S684 F685 P686 L687 A688 P689 L690 L691 A692 L693 V694 N695 N696 I697 L698
E699 I700 R701 V702 D703 A704 W705 K706 L707 T708 T709 Q710 F711 R712 R713 M714 V715 P716 E717 Q720 D721 I722 G723 A724 W725 Q726 P727 I728 I732 A733 I734 L735 A736 V737 V738 T739 I743 I744 A745 F746 T747 Y756 S759 F760 S761 I762 P763 P764 Y765 G766 D767 H768 T769 D774
G775 Y776 I777 N778 N779 T780 L781 F784 N785 D788 PHE LYS ASN THR ASP LYS GLU ASN PRO TYR ILE GLY LEU GLY ASN TYR T805 L806 C807 R808 Y809 F812 R813 N814 P815 P816 G817 H818 P819 Q820 E821 Y822 K823 Y827 V831 K835 L836 A837 F838 I839 M842 E843 H844
I845 I846 Y847 K850 F851 Y855 A856 I857 P858 S861 K862 I863 T864 K865 S866 K867 I868 K869 R870 E871 K872 Y873 L874 T875 GLN LYS LEU LEU HIS GLU SER HIS LEU LYS ASP LEU THR LYS ASN MET GLY ILE ILE ALA GLU ARG ILE GLY GLY THR VAL ASP ASN SER VAL ARG PRO
LYS LEU GLU

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	143932	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 ($e^-/Å^2$)	50.02	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2800	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.323	Depositor
Minimum map value	-0.157	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.014	Depositor
Recommended contour level	0.06	Depositor
Map size (Å)	211.2, 211.2, 211.2	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.825, 0.825, 0.825	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: CA

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	0.14	0/5930	0.40	0/8046
1	B	0.14	0/5930	0.40	0/8046
All	All	0.14	0/11860	0.40	0/16092

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5775	0	5706	206	0
1	B	5775	0	5706	202	0
2	A	3	0	0	0	0
2	B	3	0	0	0	0
All	All	11556	0	11412	405	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 18.

All (405) 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:B:552:THR:HG23	1:B:665:PHE:HE2	1.02	1.13
1:A:552:THR:HG23	1:A:665:PHE:HE2	1.02	1.10
1:A:552:THR:HG23	1:A:665:PHE:CE2	1.88	1.09
1:B:552:THR:HG23	1:B:665:PHE:CE2	1.88	1.08
1:A:756:TYR:HA	1:A:760:PHE:HB2	1.62	0.80
1:B:756:TYR:HA	1:B:760:PHE:HB2	1.62	0.80
1:B:814:ASN:HB2	1:B:821:GLU:HA	1.67	0.77
1:A:814:ASN:HB2	1:A:821:GLU:HA	1.67	0.77
1:A:386:MET:HG2	1:A:682:VAL:HG11	1.68	0.74
1:B:348:MET:HE1	1:B:808:ARG:H	1.52	0.74
1:A:273:TRP:O	1:A:701:ARG:NH1	2.20	0.74
1:A:348:MET:HE1	1:A:808:ARG:H	1.52	0.74
1:B:386:MET:HG2	1:B:682:VAL:HG11	1.68	0.73
1:B:273:TRP:O	1:B:701:ARG:NH1	2.20	0.73
1:A:705:TRP:O	1:A:710:GLN:NE2	2.24	0.71
1:B:105:LEU:HD22	1:B:110:LEU:HD12	1.72	0.70
1:B:705:TRP:O	1:B:710:GLN:NE2	2.24	0.70
1:A:105:LEU:HD22	1:A:110:LEU:HD12	1.72	0.69
1:B:667:GLU:O	1:B:671:MET:HG2	1.93	0.69
1:B:116:ARG:HE	1:B:121:ASP:HA	1.59	0.67
1:A:211:ARG:NH1	1:A:716:PRO:O	2.28	0.67
1:A:116:ARG:HE	1:A:121:ASP:HA	1.58	0.67
1:A:211:ARG:HH12	1:A:715:VAL:HB	1.60	0.67
1:B:211:ARG:HH12	1:B:715:VAL:HB	1.60	0.67
1:B:211:ARG:NH1	1:B:716:PRO:O	2.28	0.67
1:A:552:THR:CG2	1:A:665:PHE:HE2	1.95	0.66
1:B:314:ALA:HB1	1:B:690:LEU:HD23	1.78	0.66
1:A:667:GLU:O	1:A:671:MET:HG2	1.93	0.66
1:A:314:ALA:HB1	1:A:690:LEU:HD23	1.78	0.65
1:B:552:THR:CG2	1:B:665:PHE:HE2	1.95	0.64
1:B:651:GLU:OE2	1:B:652:GLN:NE2	2.31	0.64
1:A:651:GLU:OE2	1:A:652:GLN:NE2	2.31	0.64
1:B:305:TYR:HA	1:B:308:GLN:HB2	1.78	0.64
1:A:305:TYR:HA	1:A:308:GLN:HB2	1.78	0.63
1:B:145:LYS:HG2	1:B:186:PRO:HD3	1.80	0.63
1:A:145:LYS:HG2	1:A:186:PRO:HD3	1.80	0.62
1:B:184:THR:HG22	1:B:185:ALA:O	1.99	0.62
1:A:781:LEU:HB3	1:A:808:ARG:HD2	1.80	0.62
1:B:66:ASP:OD2	1:B:68:GLN:NE2	2.33	0.62
1:A:184:THR:HG22	1:A:185:ALA:O	1.99	0.62
1:A:632:ASN:OD1	1:A:636:ARG:NH1	2.33	0.62
1:B:781:LEU:HB3	1:B:808:ARG:HD2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:632:ASN:OD1	1:B:636:ARG:NH1	2.33	0.61
1:A:66:ASP:OD2	1:A:68:GLN:NE2	2.32	0.61
1:B:745:ALA:O	1:B:835:LYS:NZ	2.30	0.61
1:B:805:THR:OG1	1:B:806:LEU:N	2.34	0.61
1:B:814:ASN:ND2	1:B:820:GLN:O	2.33	0.61
1:A:857:ILE:HD12	1:A:858:PRO:HD2	1.83	0.60
1:B:784:PHE:HB3	1:B:807:CYS:HB2	1.84	0.60
1:B:857:ILE:HD12	1:B:858:PRO:HD2	1.83	0.60
1:A:814:ASN:ND2	1:A:820:GLN:O	2.33	0.60
1:A:784:PHE:HB3	1:A:807:CYS:HB2	1.84	0.60
1:B:602:LEU:HD23	1:B:605:LEU:HD21	1.83	0.60
1:A:288:ILE:O	1:A:293:GLY:N	2.29	0.60
1:B:820:GLN:HB3	1:B:823:LYS:HE3	1.84	0.60
1:A:602:LEU:HD23	1:A:605:LEU:HD21	1.84	0.59
1:A:592:ARG:NH1	1:A:593:SER:O	2.35	0.59
1:A:612:ILE:HA	1:A:616:LYS:HB2	1.84	0.59
1:A:702:VAL:HG22	1:A:706:LYS:HZ3	1.68	0.59
1:B:609:LEU:HD11	1:B:685:PHE:CE1	2.38	0.59
1:B:592:ARG:NH1	1:B:593:SER:O	2.35	0.58
1:A:550:SER:HA	1:A:553:MET:SD	2.43	0.58
1:A:609:LEU:HD11	1:A:685:PHE:CE1	2.38	0.58
1:A:369:LYS:O	1:A:372:CYS:HB3	2.04	0.58
1:A:820:GLN:HB3	1:A:823:LYS:HE3	1.84	0.58
1:B:288:ILE:O	1:B:293:GLY:N	2.29	0.58
1:B:612:ILE:HA	1:B:616:LYS:HB2	1.84	0.58
1:B:289:ARG:HH22	1:B:407:GLU:HG3	1.68	0.58
1:B:702:VAL:HG22	1:B:706:LYS:NZ	2.19	0.58
1:A:702:VAL:HG22	1:A:706:LYS:NZ	2.19	0.58
1:B:550:SER:HA	1:B:553:MET:SD	2.43	0.58
1:A:609:LEU:HD11	1:A:685:PHE:HE1	1.69	0.57
1:A:289:ARG:HH22	1:A:407:GLU:HG3	1.68	0.57
1:B:369:LYS:O	1:B:372:CYS:HB3	2.04	0.57
1:B:702:VAL:HG22	1:B:706:LYS:HZ3	1.69	0.57
1:A:283:GLN:HG2	1:A:300:PHE:HB3	1.86	0.56
1:B:283:GLN:HG2	1:B:300:PHE:HB3	1.86	0.56
1:B:95:LYS:HB2	1:B:98:ARG:HH21	1.70	0.56
1:A:95:LYS:HB2	1:A:98:ARG:HH21	1.70	0.56
1:A:295:LYS:HD3	1:A:717:GLU:HB3	1.87	0.56
1:B:352:CYS:HB3	1:B:355:LEU:HB2	1.88	0.56
1:B:617:ALA:HA	1:B:620:ASN:HD21	1.71	0.56
1:B:631:MET:HE1	1:B:657:GLN:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:295:LYS:HD3	1:B:717:GLU:HB3	1.87	0.55
1:B:554:LYS:O	1:B:557:LEU:HG	2.06	0.55
1:A:554:LYS:O	1:A:557:LEU:HG	2.06	0.55
1:A:687:LEU:HG	1:A:690:LEU:HD12	1.88	0.55
1:B:609:LEU:HD11	1:B:685:PHE:HE1	1.69	0.55
1:A:393:PHE:O	1:A:397:TRP:HB2	2.07	0.55
1:A:667:GLU:O	1:A:670:GLU:HG3	2.07	0.55
1:A:62:LEU:HD21	1:A:649:ARG:HB2	1.89	0.55
1:A:631:MET:HE1	1:A:657:GLN:HG2	1.88	0.55
1:B:743:ILE:O	1:B:747:THR:OG1	2.25	0.55
1:B:838:PHE:CD2	1:B:842:MET:HE1	2.42	0.55
1:A:762:ILE:HG13	1:A:765:TYR:H	1.72	0.55
1:B:667:GLU:O	1:B:670:GLU:HG3	2.07	0.55
1:A:743:ILE:O	1:A:747:THR:OG1	2.25	0.54
1:A:352:CYS:HB3	1:A:355:LEU:HB2	1.88	0.54
1:A:861:SER:O	1:A:865:LYS:NZ	2.38	0.54
1:B:687:LEU:HG	1:B:690:LEU:HD12	1.88	0.54
1:B:736:ALA:O	1:B:739:THR:OG1	2.22	0.54
1:A:563:TYR:HD2	1:A:673:ILE:HG12	1.72	0.54
1:A:776:TYR:O	1:A:780:THR:OG1	2.20	0.54
1:A:838:PHE:CD2	1:A:842:MET:HE1	2.42	0.54
1:B:393:PHE:O	1:B:397:TRP:HB2	2.07	0.54
1:B:762:ILE:HG13	1:B:765:TYR:H	1.72	0.54
1:A:617:ALA:HA	1:A:620:ASN:HD21	1.71	0.54
1:B:62:LEU:HD21	1:B:649:ARG:HB2	1.89	0.54
1:B:305:TYR:CD2	1:B:309:MET:HE1	2.43	0.54
1:A:305:TYR:CD2	1:A:309:MET:HE1	2.43	0.54
1:A:361:LEU:O	1:A:364:THR:HG22	2.08	0.54
1:B:861:SER:O	1:B:865:LYS:NZ	2.38	0.54
1:B:616:LYS:O	1:B:620:ASN:ND2	2.41	0.53
1:B:609:LEU:HA	1:B:612:ILE:HG12	1.90	0.53
1:B:639:ARG:HH21	1:B:655:HIS:HB3	1.73	0.53
1:A:586:TYR:HD1	1:A:592:ARG:H	1.57	0.53
1:A:639:ARG:HH21	1:A:655:HIS:HB3	1.73	0.53
1:B:818:HIS:CD2	1:B:820:GLN:H	2.27	0.53
1:A:818:HIS:CD2	1:A:820:GLN:H	2.27	0.53
1:B:563:TYR:HD2	1:B:673:ILE:HG12	1.72	0.53
1:A:616:LYS:O	1:A:620:ASN:ND2	2.41	0.53
1:A:745:ALA:O	1:A:835:LYS:NZ	2.30	0.53
1:B:586:TYR:HD1	1:B:592:ARG:H	1.57	0.53
1:B:305:TYR:HD2	1:B:309:MET:HE1	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:301:ALA:O	1:A:305:TYR:HD1	1.91	0.53
1:A:813:ARG:HE	1:A:823:LYS:HA	1.74	0.53
1:B:622:ILE:HA	1:B:625:VAL:HG12	1.90	0.53
1:A:305:TYR:HD2	1:A:309:MET:HE1	1.74	0.52
1:B:361:LEU:O	1:B:364:THR:HG22	2.08	0.52
1:B:646:ILE:HG13	1:B:648:PRO:HD3	1.90	0.52
1:A:646:ILE:HG13	1:A:648:PRO:HD3	1.90	0.52
1:B:301:ALA:O	1:B:305:TYR:HD1	1.91	0.52
1:A:138:TYR:HD1	1:A:141:ILE:HD12	1.73	0.52
1:B:138:TYR:HD1	1:B:141:ILE:HD12	1.74	0.52
1:A:609:LEU:HA	1:A:612:ILE:HG12	1.91	0.52
1:B:776:TYR:O	1:B:780:THR:OG1	2.20	0.52
1:A:622:ILE:HA	1:A:625:VAL:HG12	1.90	0.52
1:B:566:SER:O	1:B:570:ILE:HG12	2.10	0.52
1:B:74:ILE:HD11	1:B:125:PHE:HD2	1.75	0.52
1:A:312:LEU:HA	1:A:315:VAL:HG12	1.92	0.52
1:A:147:PRO:HA	1:A:183:PHE:HA	1.93	0.51
1:B:364:THR:HG1	1:B:367:SER:HG	1.52	0.51
1:B:827:TYR:O	1:B:831:VAL:HG13	2.10	0.51
1:A:74:ILE:HD11	1:A:125:PHE:HD2	1.75	0.51
1:A:566:SER:O	1:A:570:ILE:HG12	2.10	0.51
1:B:813:ARG:HE	1:B:823:LYS:HA	1.74	0.51
1:A:847:TYR:HE1	1:B:847:TYR:HE1	1.57	0.51
1:A:674:GLN:HA	1:A:677:PHE:CD2	2.45	0.51
1:B:331:CYS:HA	1:B:333:TRP:CZ3	2.46	0.51
1:A:331:CYS:HA	1:A:333:TRP:CZ3	2.46	0.51
1:A:350:PRO:HD3	1:A:358:PHE:HA	1.93	0.51
1:A:827:TYR:O	1:A:831:VAL:HG13	2.10	0.51
1:B:147:PRO:HA	1:B:183:PHE:HA	1.92	0.51
1:B:763:PRO:HG2	1:B:764:PRO:HD3	1.93	0.51
1:B:785:ASN:HB2	1:B:816:PRO:HG2	1.93	0.51
1:B:312:LEU:HA	1:B:315:VAL:HG12	1.92	0.51
1:B:349:CYS:HA	1:B:358:PHE:HD1	1.76	0.51
1:B:674:GLN:HA	1:B:677:PHE:CD2	2.45	0.51
1:A:464:ILE:O	1:A:468:ILE:HG13	2.11	0.50
1:B:464:ILE:O	1:B:468:ILE:HG13	2.11	0.50
1:A:221:LYS:HZ3	1:A:224:VAL:HG22	1.76	0.50
1:A:299:TYR:O	1:A:302:TRP:HB3	2.11	0.50
1:A:349:CYS:HA	1:A:358:PHE:HD1	1.76	0.50
1:A:784:PHE:HB2	1:A:809:TYR:HE1	1.77	0.50
1:A:785:ASN:HB2	1:A:816:PRO:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:350:PRO:HD3	1:B:358:PHE:HA	1.93	0.50
1:B:700:ILE:HG13	1:B:701:ARG:N	2.27	0.50
1:A:628:PRO:HB2	1:A:710:GLN:HG2	1.94	0.50
1:A:805:THR:OG1	1:A:806:LEU:N	2.34	0.50
1:B:299:TYR:O	1:B:302:TRP:HB3	2.11	0.50
1:A:410:THR:O	1:A:720:GLN:NE2	2.45	0.50
1:B:465:LEU:HD11	1:B:558:PHE:HE1	1.77	0.50
1:B:784:PHE:HB2	1:B:809:TYR:HE1	1.77	0.50
1:A:673:ILE:HG13	1:A:677:PHE:CZ	2.47	0.49
1:A:763:PRO:HG2	1:A:764:PRO:HD3	1.92	0.49
1:A:465:LEU:HD11	1:A:558:PHE:HE1	1.77	0.49
1:B:863:ILE:O	1:B:867:LYS:HG2	2.12	0.49
1:A:635:GLY:O	1:A:639:ARG:HG2	2.13	0.49
1:B:410:THR:O	1:B:720:GLN:NE2	2.45	0.49
1:A:863:ILE:O	1:A:867:LYS:HG2	2.12	0.49
1:A:656:LEU:O	1:A:712:ARG:NH1	2.46	0.48
1:B:635:GLY:O	1:B:639:ARG:HG2	2.13	0.48
1:B:704:ALA:HA	1:B:707:LEU:HG	1.96	0.48
1:A:700:ILE:HG13	1:A:701:ARG:N	2.27	0.48
1:B:588:LEU:HD23	1:B:588:LEU:H	1.78	0.48
1:B:628:PRO:HB2	1:B:710:GLN:HG2	1.94	0.48
1:B:673:ILE:HG13	1:B:677:PHE:CZ	2.47	0.48
1:A:251:CYS:SG	1:A:264:SER:OG	2.66	0.48
1:B:342:ILE:O	1:B:345:GLN:NE2	2.44	0.48
1:A:236:LEU:HD13	1:A:242:TYR:HD2	1.78	0.48
1:A:342:ILE:O	1:A:345:GLN:NE2	2.44	0.48
1:A:396:PHE:HA	1:A:399:ARG:HB2	1.96	0.48
1:B:656:LEU:O	1:B:712:ARG:NH1	2.46	0.48
1:B:536:THR:HB	1:B:547:TYR:HE1	1.79	0.48
1:A:536:THR:HB	1:A:547:TYR:HE1	1.79	0.48
1:A:588:LEU:H	1:A:588:LEU:HD23	1.78	0.48
1:B:221:LYS:HZ3	1:B:224:VAL:HG22	1.78	0.47
1:B:318:VAL:HB	1:B:690:LEU:HD11	1.96	0.47
1:B:338:CYS:HB3	1:B:365:CYS:HB2	1.41	0.47
1:A:569:TYR:HA	1:A:573:PHE:HB2	1.96	0.47
1:A:704:ALA:HA	1:A:707:LEU:HG	1.96	0.47
1:B:569:TYR:HA	1:B:573:PHE:HB2	1.96	0.47
1:A:318:VAL:HB	1:A:690:LEU:HD11	1.96	0.47
1:B:132:TRP:CD1	1:B:136:CYS:HG	2.32	0.47
1:B:236:LEU:HD13	1:B:242:TYR:HD2	1.78	0.47
1:A:66:ASP:OD2	1:A:69:ARG:NE	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:99:GLN:O	1:B:102:GLU:HG3	2.15	0.47
1:B:396:PHE:HA	1:B:399:ARG:HB2	1.96	0.47
1:A:574:LYS:NZ	1:A:596:CYS:HB3	2.29	0.47
1:A:587:LEU:HD23	1:A:587:LEU:H	1.79	0.47
1:A:617:ALA:O	1:A:621:ASN:ND2	2.48	0.47
1:A:658:PRO:HA	1:A:711:PHE:HD1	1.80	0.47
1:B:66:ASP:OD2	1:B:69:ARG:NE	2.48	0.47
1:B:574:LYS:NZ	1:B:596:CYS:HB3	2.29	0.47
1:B:587:LEU:H	1:B:587:LEU:HD23	1.79	0.47
1:B:617:ALA:O	1:B:621:ASN:ND2	2.48	0.47
1:A:846:ILE:O	1:A:850:LYS:HG2	2.15	0.47
1:B:658:PRO:HA	1:B:711:PHE:HD1	1.80	0.46
1:A:525:ASN:O	1:A:528:TYR:HB2	2.16	0.46
1:A:265:GLU:O	1:A:268:LEU:HG	2.16	0.46
1:A:390:VAL:O	1:A:393:PHE:HB3	2.16	0.46
1:A:99:GLN:O	1:A:102:GLU:HG3	2.15	0.46
1:A:847:TYR:HE1	1:B:847:TYR:CE1	2.33	0.46
1:B:265:GLU:HG3	1:B:291:TYR:HB2	1.96	0.46
1:B:725:TRP:HA	1:B:728:ILE:HD13	1.98	0.46
1:B:846:ILE:O	1:B:850:LYS:HG2	2.15	0.46
1:A:265:GLU:HG3	1:A:291:TYR:HB2	1.96	0.46
1:A:266:ARG:NH2	1:A:708:THR:O	2.49	0.46
1:B:371:LEU:HB2	1:B:603:LEU:HD11	1.98	0.46
1:B:572:PHE:HA	1:B:576:LYS:NZ	2.31	0.46
1:A:316:VAL:HG21	1:A:385:PHE:CE2	2.51	0.46
1:A:572:PHE:HA	1:A:576:LYS:NZ	2.31	0.46
1:A:728:ILE:HD12	1:A:728:ILE:H	1.81	0.46
1:A:734:ILE:HD12	1:A:734:ILE:H	1.81	0.46
1:B:592:ARG:HA	1:B:592:ARG:HD2	1.78	0.46
1:A:132:TRP:NE1	1:A:136:CYS:SG	2.89	0.46
1:B:265:GLU:O	1:B:268:LEU:HG	2.16	0.46
1:B:266:ARG:NH2	1:B:708:THR:O	2.49	0.46
1:B:450:CYS:HB2	1:B:453:VAL:HG22	1.98	0.46
1:A:398:LYS:HZ1	1:A:402:ALA:HB2	1.81	0.46
1:A:450:CYS:HB2	1:A:453:VAL:HG22	1.98	0.46
1:B:316:VAL:HG21	1:B:385:PHE:CE2	2.51	0.46
1:A:101:TYR:CD1	1:A:222:TYR:HB3	2.51	0.46
1:A:347:LEU:HD23	1:A:805:THR:HG23	1.98	0.46
1:A:592:ARG:HD2	1:A:592:ARG:HA	1.78	0.46
1:B:252:ARG:NH2	1:B:256:GLU:O	2.49	0.46
1:B:390:VAL:O	1:B:393:PHE:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:371:LEU:HB2	1:A:603:LEU:HD11	1.98	0.45
1:B:525:ASN:O	1:B:528:TYR:HB2	2.16	0.45
1:B:728:ILE:HD12	1:B:728:ILE:H	1.81	0.45
1:B:734:ILE:HD12	1:B:734:ILE:H	1.81	0.45
1:B:251:CYS:SG	1:B:264:SER:OG	2.66	0.45
1:B:648:PRO:O	1:B:651:GLU:HG3	2.16	0.45
1:A:62:LEU:HD12	1:A:248:LEU:HD21	1.99	0.45
1:B:62:LEU:HD12	1:B:248:LEU:HD21	1.99	0.45
1:B:132:TRP:NE1	1:B:136:CYS:SG	2.89	0.45
1:A:105:LEU:HB3	1:A:110:LEU:HB2	1.99	0.45
1:A:736:ALA:O	1:A:739:THR:OG1	2.22	0.45
1:B:347:LEU:HD23	1:B:805:THR:HG23	1.98	0.45
1:B:398:LYS:HZ1	1:B:402:ALA:HB2	1.81	0.45
1:A:734:ILE:O	1:A:737:VAL:HG22	2.16	0.45
1:B:101:TYR:CD1	1:B:222:TYR:HB3	2.51	0.45
1:A:725:TRP:HA	1:A:728:ILE:HD13	1.98	0.45
1:A:733:ALA:O	1:A:736:ALA:HB3	2.17	0.45
1:B:836:LEU:HA	1:B:839:ILE:HG12	1.98	0.45
1:A:377:PHE:O	1:A:380:LEU:HG	2.16	0.45
1:A:520:ILE:HA	1:A:523:ILE:HG12	1.98	0.45
1:A:568:PHE:HD1	1:A:572:PHE:CD1	2.35	0.45
1:A:596:CYS:HB2	1:A:601:CYS:HB3	1.57	0.45
1:A:722:ILE:HB	1:A:726:GLN:HE21	1.82	0.45
1:B:377:PHE:O	1:B:380:LEU:HG	2.16	0.45
1:B:842:MET:HB3	1:B:846:ILE:HD12	1.98	0.45
1:A:387:GLY:O	1:A:390:VAL:HG12	2.18	0.44
1:A:777:ILE:O	1:A:808:ARG:NH1	2.50	0.44
1:A:517:SER:HA	1:A:520:ILE:HG12	1.99	0.44
1:A:648:PRO:O	1:A:651:GLU:HG3	2.16	0.44
1:B:105:LEU:HB3	1:B:110:LEU:HB2	1.99	0.44
1:B:568:PHE:HD1	1:B:572:PHE:CD1	2.35	0.44
1:A:252:ARG:NH2	1:A:256:GLU:O	2.49	0.44
1:B:517:SER:HA	1:B:520:ILE:HG12	1.99	0.44
1:B:734:ILE:O	1:B:737:VAL:HG22	2.17	0.44
1:B:647:THR:HB	1:B:652:GLN:HE22	1.83	0.44
1:B:652:GLN:O	1:B:656:LEU:HG	2.18	0.44
1:B:722:ILE:HB	1:B:726:GLN:HE21	1.82	0.44
1:A:63:PHE:HB2	1:A:69:ARG:O	2.18	0.44
1:A:319:ALA:O	1:A:322:LEU:HG	2.17	0.44
1:A:652:GLN:O	1:A:656:LEU:HG	2.18	0.44
1:B:319:ALA:O	1:B:322:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:391:THR:HG21	1:B:850:LYS:HD2	1.98	0.44
1:B:733:ALA:O	1:B:736:ALA:HB3	2.17	0.44
1:A:647:THR:HB	1:A:652:GLN:HE22	1.83	0.44
1:A:836:LEU:HA	1:A:839:ILE:HG12	1.98	0.44
1:B:132:TRP:NE1	1:B:136:CYS:HG	2.16	0.44
1:A:842:MET:HB3	1:A:846:ILE:HD12	1.98	0.44
1:B:387:GLY:O	1:B:390:VAL:HG12	2.18	0.44
1:B:525:ASN:O	1:B:529:GLU:OE1	2.36	0.44
1:A:847:TYR:CE1	1:B:847:TYR:HE1	2.35	0.44
1:B:602:LEU:O	1:B:605:LEU:HG	2.18	0.44
1:B:93:LYS:O	1:B:97:LYS:HG2	2.18	0.43
1:A:93:LYS:O	1:A:97:LYS:HG2	2.18	0.43
1:A:525:ASN:OD1	1:A:526:THR:N	2.51	0.43
1:B:520:ILE:HA	1:B:523:ILE:HG12	1.98	0.43
1:B:63:PHE:HB2	1:B:69:ARG:O	2.18	0.43
1:B:668:TYR:O	1:B:672:ILE:HG12	2.18	0.43
1:B:784:PHE:HB2	1:B:809:TYR:CE1	2.54	0.43
1:A:391:THR:HG21	1:A:850:LYS:HD2	1.98	0.43
1:A:525:ASN:O	1:A:529:GLU:OE1	2.36	0.43
1:A:574:LYS:HZ2	1:A:596:CYS:HB3	1.84	0.43
1:A:668:TYR:O	1:A:672:ILE:HG12	2.18	0.43
1:A:602:LEU:O	1:A:605:LEU:HG	2.18	0.43
1:B:777:ILE:O	1:B:808:ARG:NH1	2.50	0.43
1:B:865:LYS:HA	1:B:868:ILE:HG12	2.01	0.43
1:A:140:GLU:OE2	1:A:187:PHE:HB3	2.19	0.43
1:B:695:ASN:O	1:B:698:LEU:HG	2.19	0.43
1:A:234:ASN:OD1	1:A:234:ASN:N	2.52	0.43
1:A:776:TYR:CD1	1:A:780:THR:HG21	2.54	0.43
1:B:525:ASN:OD1	1:B:526:THR:N	2.51	0.43
1:A:689:PRO:O	1:A:692:ALA:HB3	2.19	0.43
1:A:148:LEU:H	1:A:183:PHE:HA	1.84	0.43
1:A:685:PHE:CD2	1:A:687:LEU:HB2	2.54	0.43
1:B:140:GLU:OE2	1:B:187:PHE:HB3	2.19	0.43
1:B:143:HIS:O	1:B:143:HIS:ND1	2.52	0.43
1:B:547:TYR:O	1:B:550:SER:OG	2.29	0.43
1:A:143:HIS:O	1:A:143:HIS:ND1	2.52	0.43
1:B:572:PHE:HA	1:B:576:LYS:HZ2	1.84	0.43
1:B:148:LEU:H	1:B:183:PHE:HA	1.84	0.42
1:B:273:TRP:CH2	1:B:283:GLN:HA	2.54	0.42
1:B:649:ARG:NH2	1:B:653:ASP:OD1	2.52	0.42
1:B:776:TYR:CD1	1:B:780:THR:HG21	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:120:ASP:HB3	1:A:123:LEU:HB2	2.01	0.42
1:A:536:THR:HA	1:A:539:GLU:HB3	2.01	0.42
1:B:120:ASP:HB3	1:B:123:LEU:HB2	2.01	0.42
1:B:536:THR:HA	1:B:539:GLU:HB3	2.01	0.42
1:A:512:THR:HA	1:A:515:ILE:HG12	2.02	0.42
1:A:338:CYS:HB3	1:A:365:CYS:HB2	1.41	0.42
1:A:463:TRP:O	1:A:466:LEU:HG	2.20	0.42
1:A:674:GLN:O	1:A:678:VAL:HG23	2.19	0.42
1:B:234:ASN:OD1	1:B:234:ASN:N	2.52	0.42
1:A:348:MET:HE3	1:A:349:CYS:N	2.35	0.42
1:B:269:LEU:O	1:B:273:TRP:HB3	2.19	0.42
1:B:512:THR:HA	1:B:515:ILE:HG12	2.02	0.42
1:A:422:GLU:HB2	1:A:540:LEU:HD21	2.02	0.42
1:A:586:TYR:CD1	1:A:591:TYR:HB2	2.55	0.42
1:A:693:LEU:O	1:A:697:ILE:HG12	2.20	0.42
1:A:695:ASN:O	1:A:698:LEU:HG	2.19	0.42
1:A:865:LYS:HA	1:A:868:ILE:HG12	2.01	0.42
1:B:387:GLY:C	1:B:850:LYS:HZ2	2.28	0.42
1:B:545:THR:O	1:B:548:GLU:HG3	2.20	0.42
1:B:465:LEU:HD11	1:B:558:PHE:CE1	2.55	0.42
1:A:273:TRP:CH2	1:A:283:GLN:HA	2.54	0.42
1:A:545:THR:O	1:A:548:GLU:HG3	2.20	0.42
1:A:572:PHE:HA	1:A:576:LYS:HZ2	1.84	0.42
1:A:728:ILE:O	1:A:732:ILE:N	2.53	0.42
1:B:586:TYR:CD1	1:B:591:TYR:HB2	2.55	0.42
1:B:693:LEU:O	1:B:697:ILE:HG12	2.20	0.42
1:A:649:ARG:NH2	1:A:653:ASP:OD1	2.52	0.42
1:B:863:ILE:HG13	1:B:864:THR:N	2.35	0.42
1:A:784:PHE:HB2	1:A:809:TYR:CE1	2.54	0.42
1:B:422:GLU:HB2	1:B:540:LEU:HD21	2.02	0.42
1:B:674:GLN:O	1:B:678:VAL:HG23	2.19	0.42
1:A:547:TYR:O	1:A:550:SER:OG	2.29	0.41
1:A:616:LYS:HA	1:A:619:TRP:HB2	2.02	0.41
1:B:685:PHE:CD2	1:B:687:LEU:HB2	2.54	0.41
1:B:689:PRO:O	1:B:692:ALA:HB3	2.19	0.41
1:A:465:LEU:HD11	1:A:558:PHE:CE1	2.55	0.41
1:A:665:PHE:HA	1:A:668:TYR:HB2	2.02	0.41
1:A:863:ILE:HG13	1:A:864:THR:N	2.35	0.41
1:B:728:ILE:O	1:B:732:ILE:HG12	2.20	0.41
1:A:114:ALA:HA	1:A:126:VAL:HG12	2.02	0.41
1:A:275:HIS:CG	1:A:276:PRO:HD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:342:ILE:HG13	1:B:343:GLY:N	2.35	0.41
1:B:463:TRP:O	1:B:466:LEU:HG	2.20	0.41
1:B:666:TYR:O	1:B:669:LEU:HG	2.21	0.41
1:B:275:HIS:CG	1:B:276:PRO:HD2	2.55	0.41
1:A:266:ARG:HA	1:A:269:LEU:HG	2.02	0.41
1:A:315:VAL:HA	1:A:318:VAL:HG12	2.02	0.41
1:A:724:ALA:O	1:A:727:PRO:HD2	2.21	0.41
1:B:266:ARG:HA	1:B:269:LEU:HG	2.02	0.41
1:B:724:ALA:O	1:B:727:PRO:HD2	2.21	0.41
1:A:342:ILE:HG13	1:A:343:GLY:N	2.35	0.41
1:B:282:LYS:HA	1:B:282:LYS:HD3	1.92	0.41
1:B:348:MET:HE3	1:B:349:CYS:N	2.35	0.41
1:A:101:TYR:HD1	1:A:222:TYR:HB3	1.86	0.41
1:A:269:LEU:O	1:A:273:TRP:HB3	2.19	0.41
1:A:666:TYR:O	1:A:669:LEU:HG	2.21	0.41
1:B:114:ALA:HA	1:B:126:VAL:HG12	2.02	0.41
1:A:270:TYR:HA	1:A:274:ALA:HB3	2.02	0.41
1:B:270:TYR:HA	1:B:274:ALA:HB3	2.02	0.41
1:B:315:VAL:HA	1:B:318:VAL:HG12	2.02	0.41
1:B:522:MET:O	1:B:526:THR:OG1	2.29	0.41
1:B:576:LYS:HE2	1:B:746:PHE:HB3	2.03	0.41
1:B:602:LEU:HD21	1:B:747:THR:HB	2.03	0.41
1:A:148:LEU:HD13	1:A:196:TYR:HD2	1.87	0.40
1:A:296:ILE:HD12	1:A:296:ILE:HA	1.96	0.40
1:A:659:MET:SD	1:A:659:MET:N	2.87	0.40
1:A:387:GLY:C	1:A:850:LYS:HZ2	2.28	0.40
1:A:617:ALA:HA	1:A:620:ASN:ND2	2.35	0.40
1:A:728:ILE:O	1:A:732:ILE:HG12	2.20	0.40
1:A:649:ARG:NH1	1:A:652:GLN:HB2	2.37	0.40
1:B:91:ASN:OD1	1:B:91:ASN:N	2.54	0.40
1:A:602:LEU:HD21	1:A:747:THR:HB	2.03	0.40
1:A:632:ASN:O	1:A:636:ARG:HG2	2.22	0.40
1:A:829:TRP:HA	1:A:832:ILE:HG12	2.02	0.40
1:B:148:LEU:HD13	1:B:196:TYR:HD2	1.87	0.40
1:B:867:LYS:O	1:B:871:GLU:HG2	2.22	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	693/911 (76%)	662 (96%)	31 (4%)	0	100	100
1	B	693/911 (76%)	662 (96%)	31 (4%)	0	100	100
All	All	1386/1822 (76%)	1324 (96%)	62 (4%)	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	621/826 (75%)	621 (100%)	0	100	100
1	B	621/826 (75%)	621 (100%)	0	100	100
All	All	1242/1652 (75%)	1242 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (16) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	129	HIS
1	A	549	ASN
1	A	620	ASN
1	A	621	ASN
1	A	710	GLN
1	A	720	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	726	GLN
1	A	818	HIS
1	B	129	HIS
1	B	549	ASN
1	B	620	ASN
1	B	621	ASN
1	B	710	GLN
1	B	720	GLN
1	B	726	GLN
1	B	818	HIS

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 6 ligands modelled in this entry, 6 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

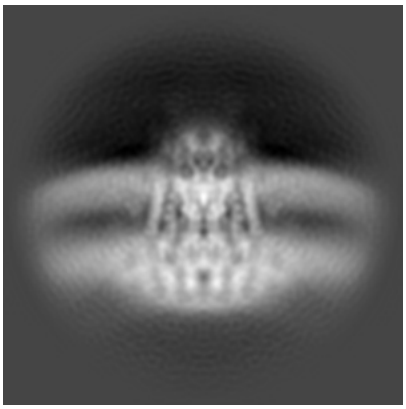
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-70017. These allow visual inspection of the internal detail of the map and identification of artifacts.

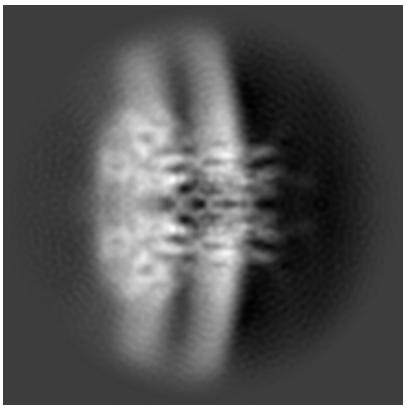
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

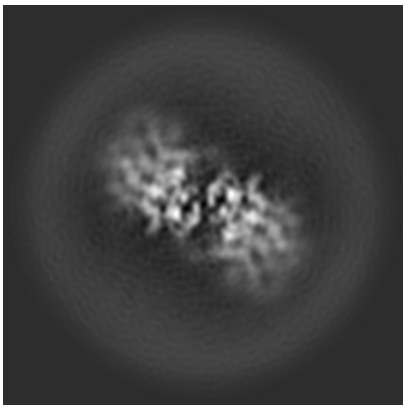
6.1.1 Primary map



X

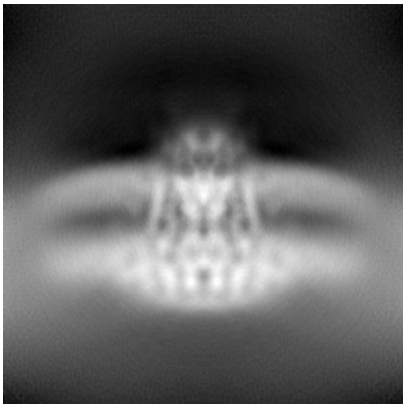


Y

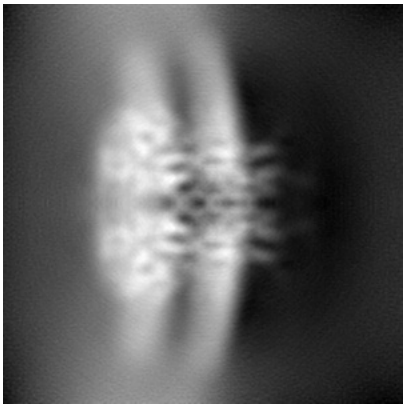


Z

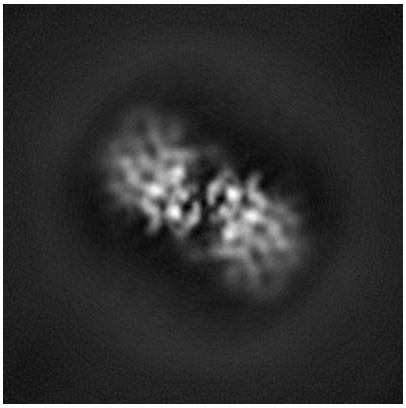
6.1.2 Raw map



X



Y

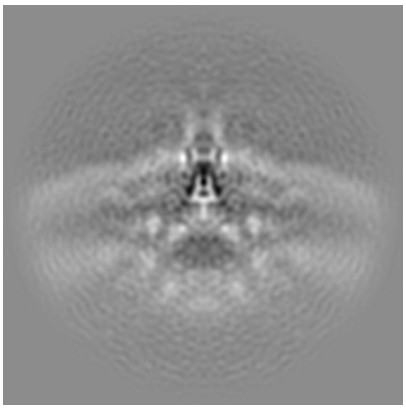


Z

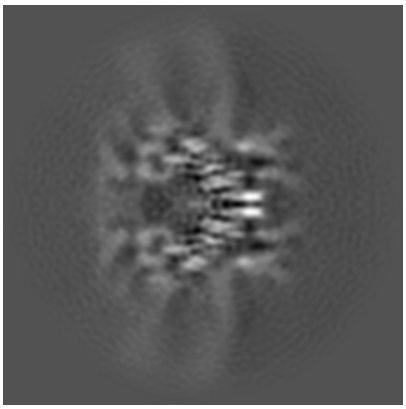
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

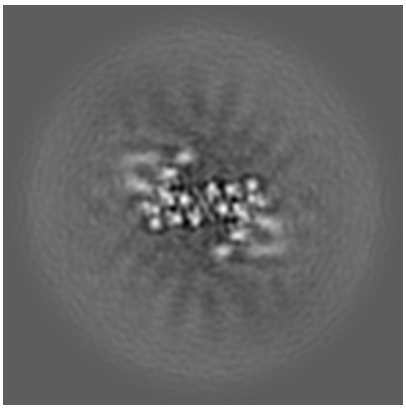
6.2.1 Primary map



X Index: 128

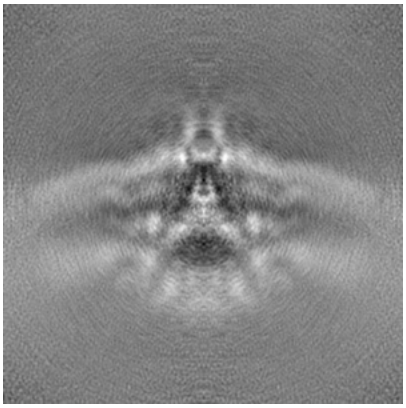


Y Index: 128

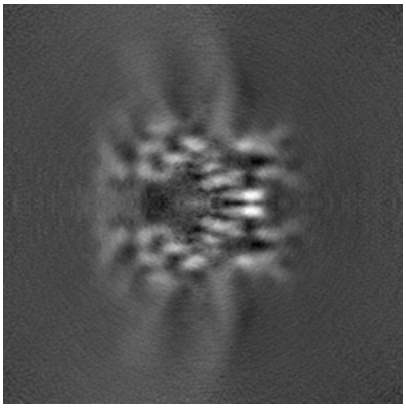


Z Index: 128

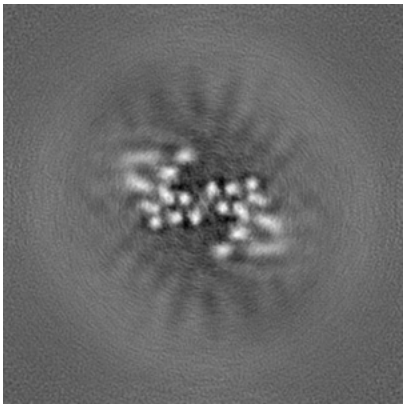
6.2.2 Raw map



X Index: 128



Y Index: 128

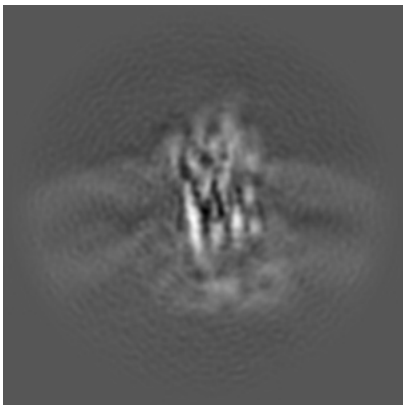


Z Index: 128

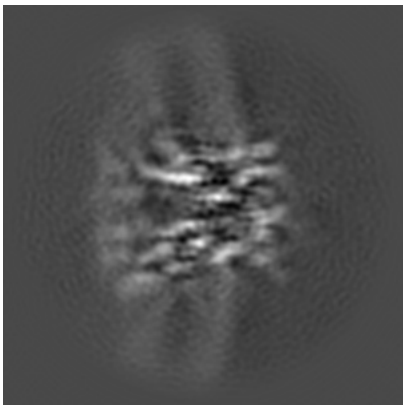
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

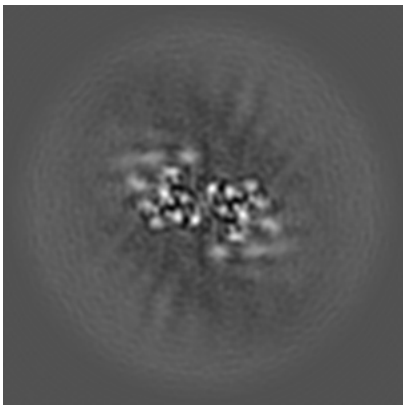
6.3.1 Primary map



X Index: 111

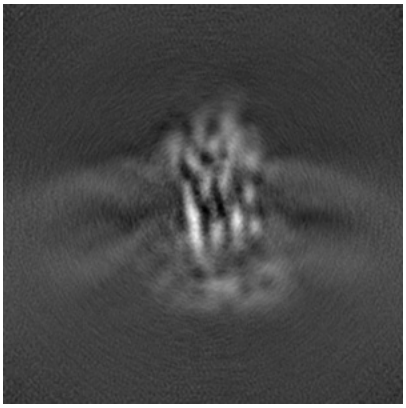


Y Index: 134

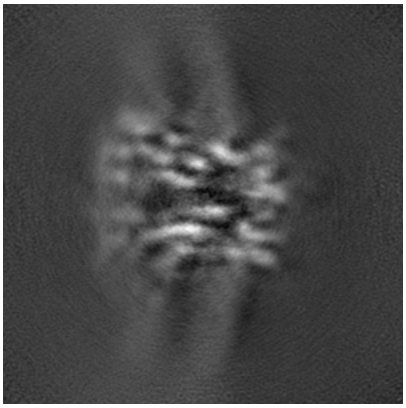


Z Index: 125

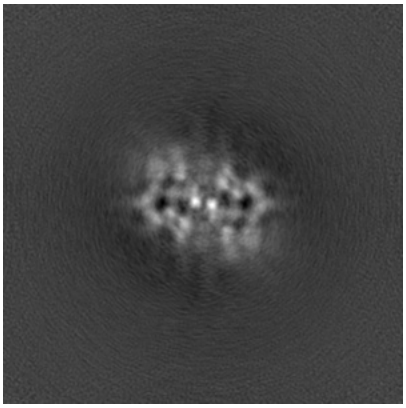
6.3.2 Raw map



X Index: 111



Y Index: 121

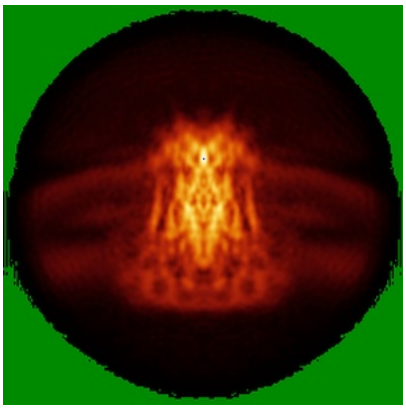


Z Index: 161

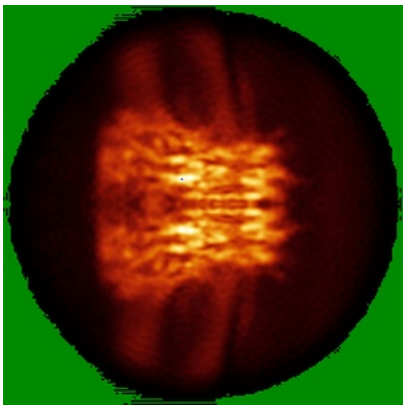
The images above show the largest variance slices of the map in three orthogonal directions.

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

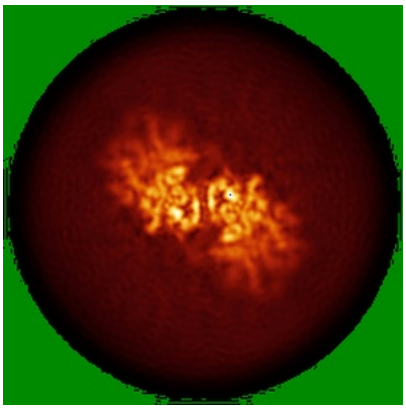
6.4.1 Primary map



X

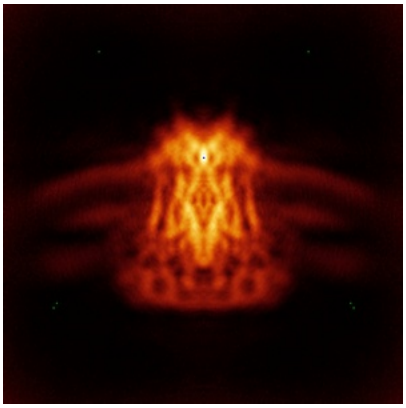


Y

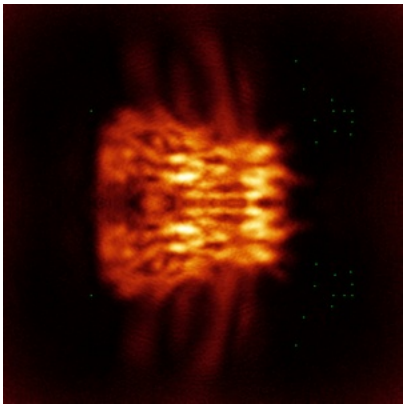


Z

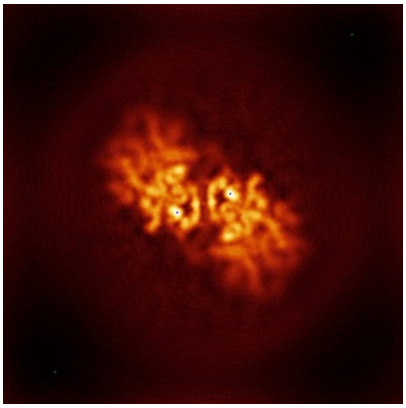
6.4.2 Raw map



X



Y

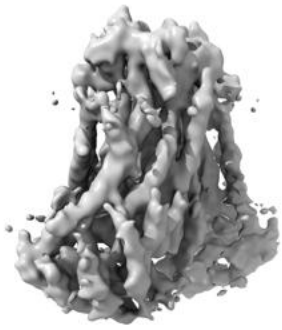


Z

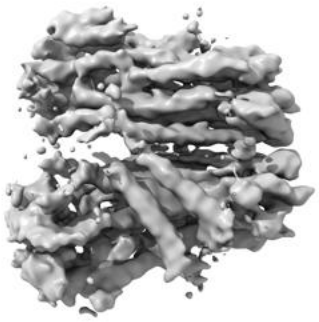
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

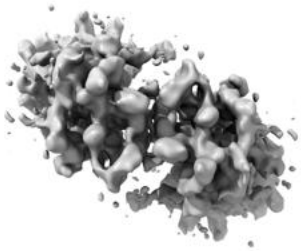
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.06. 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

X

Y

Z

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.

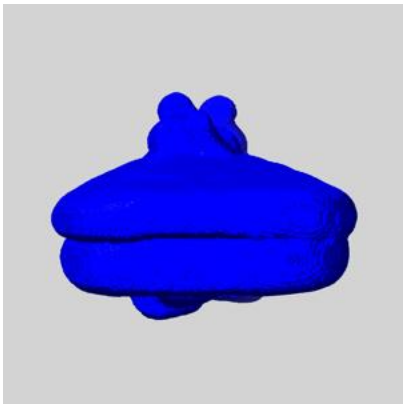
6.6 Mask visualisation (i)

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

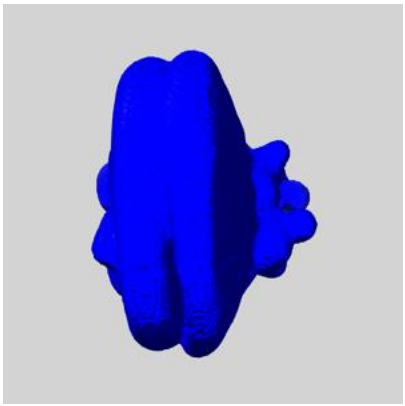
A mask typically either:

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

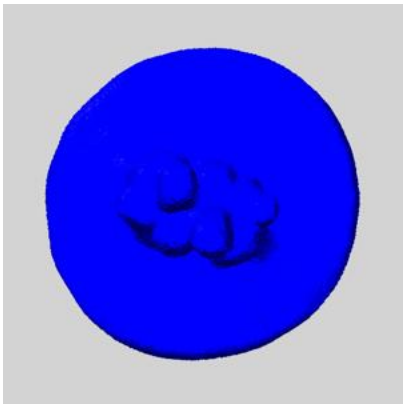
6.6.1 emd_70017_msk_1.map (i)



X



Y

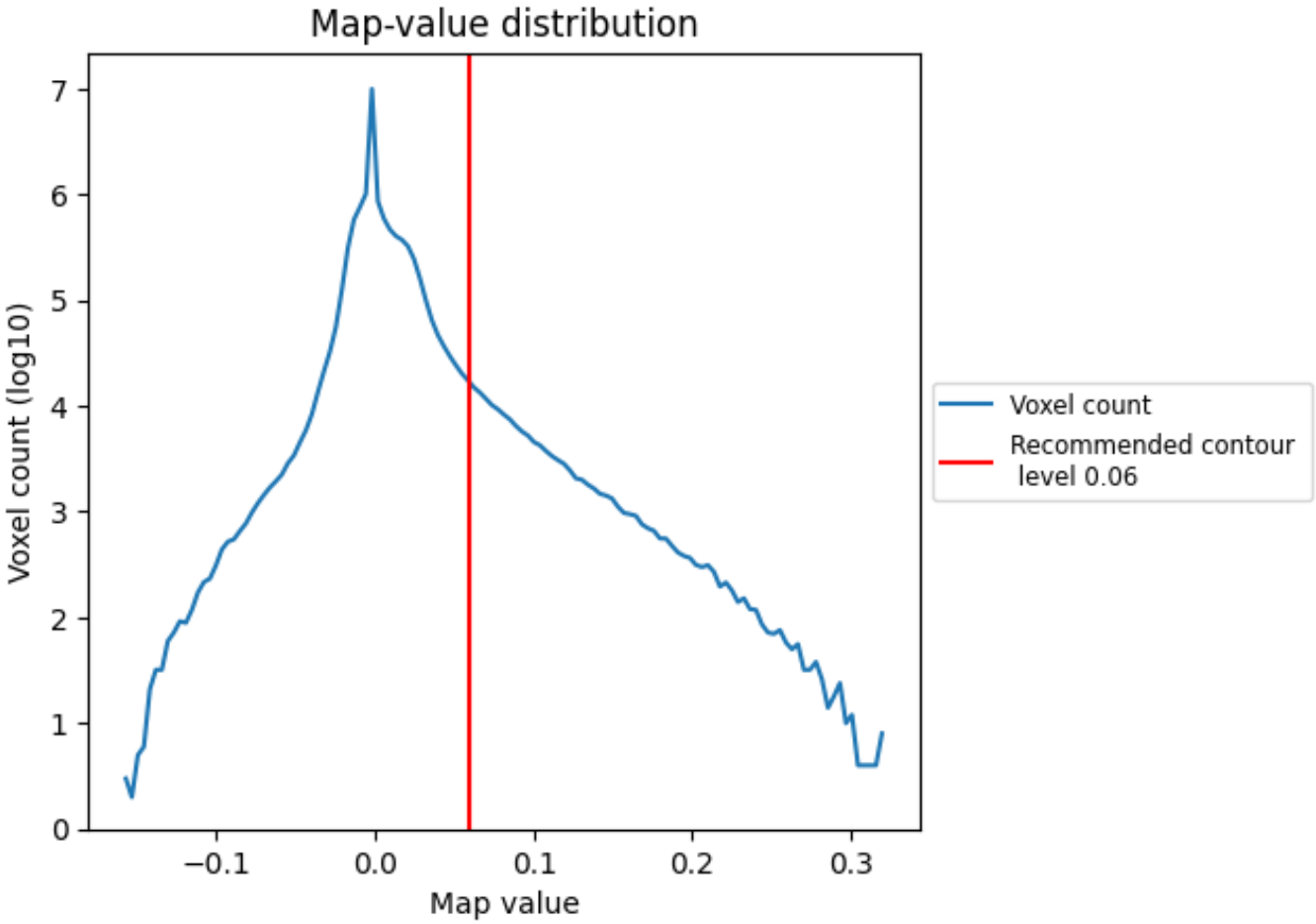


Z

7 Map analysis

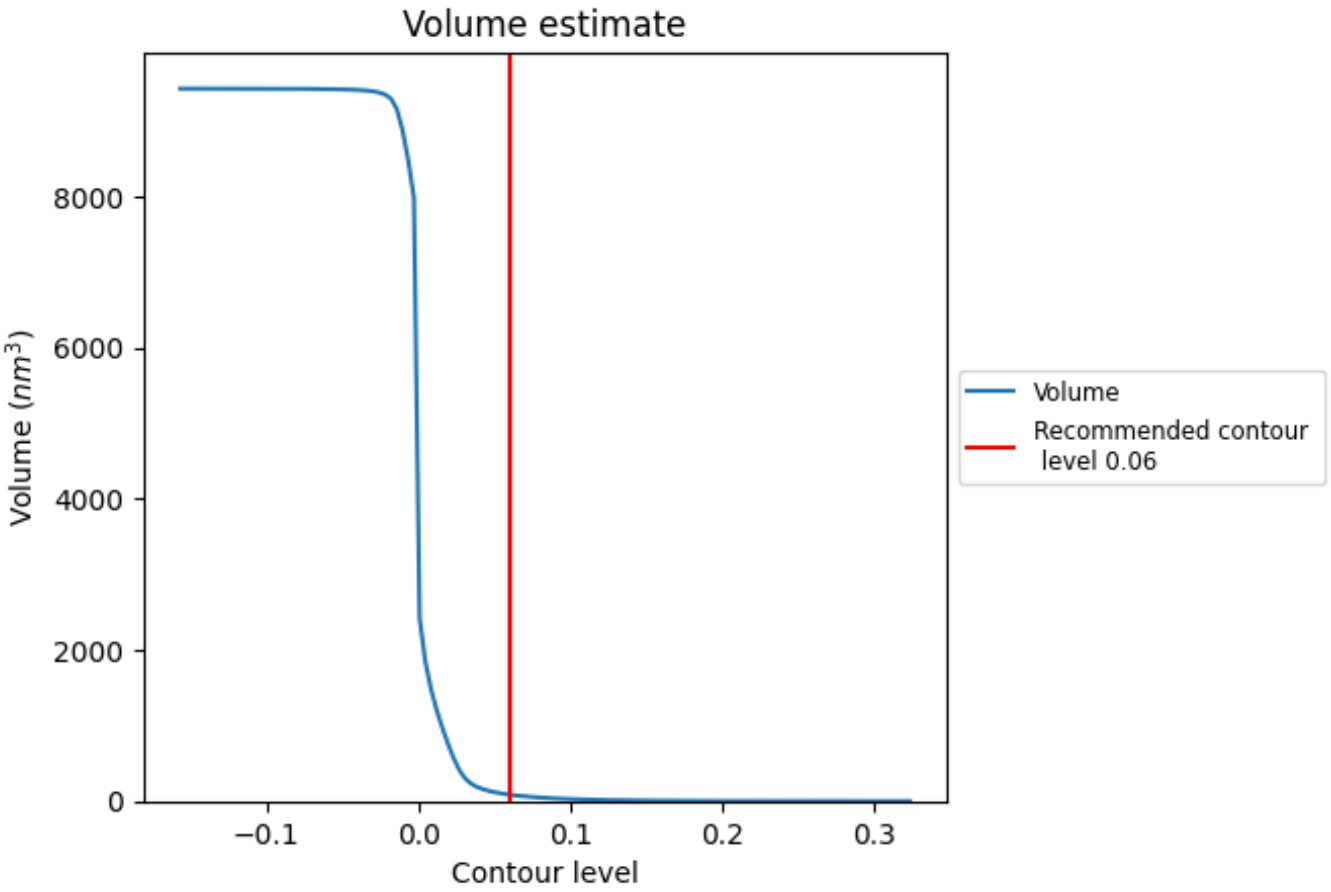
This section contains the results of statistical analysis of the map.

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.

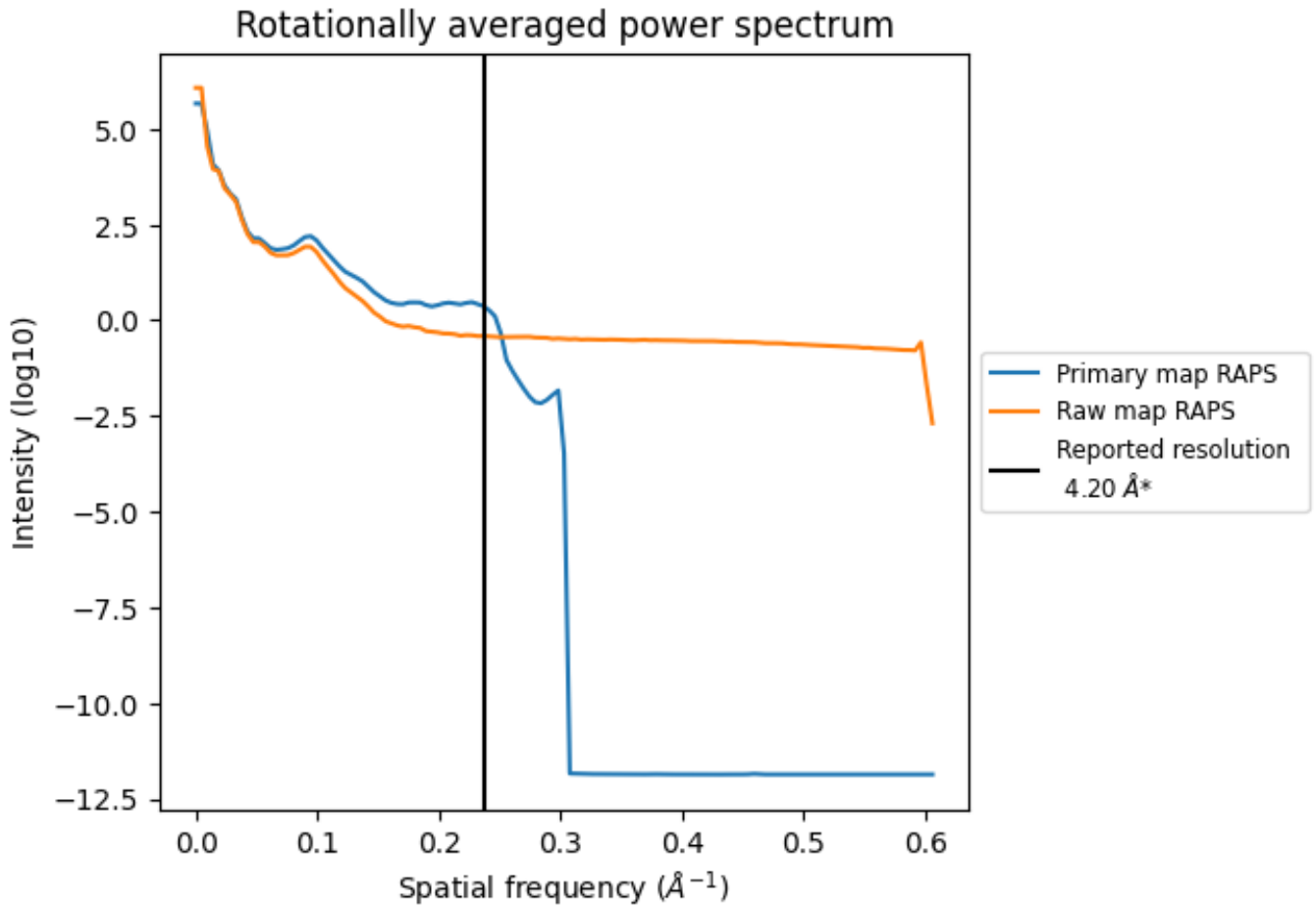
7.2 Volume estimate (i)



The volume at the recommended contour level is 85 nm^3; this corresponds to an approximate mass of 77 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)

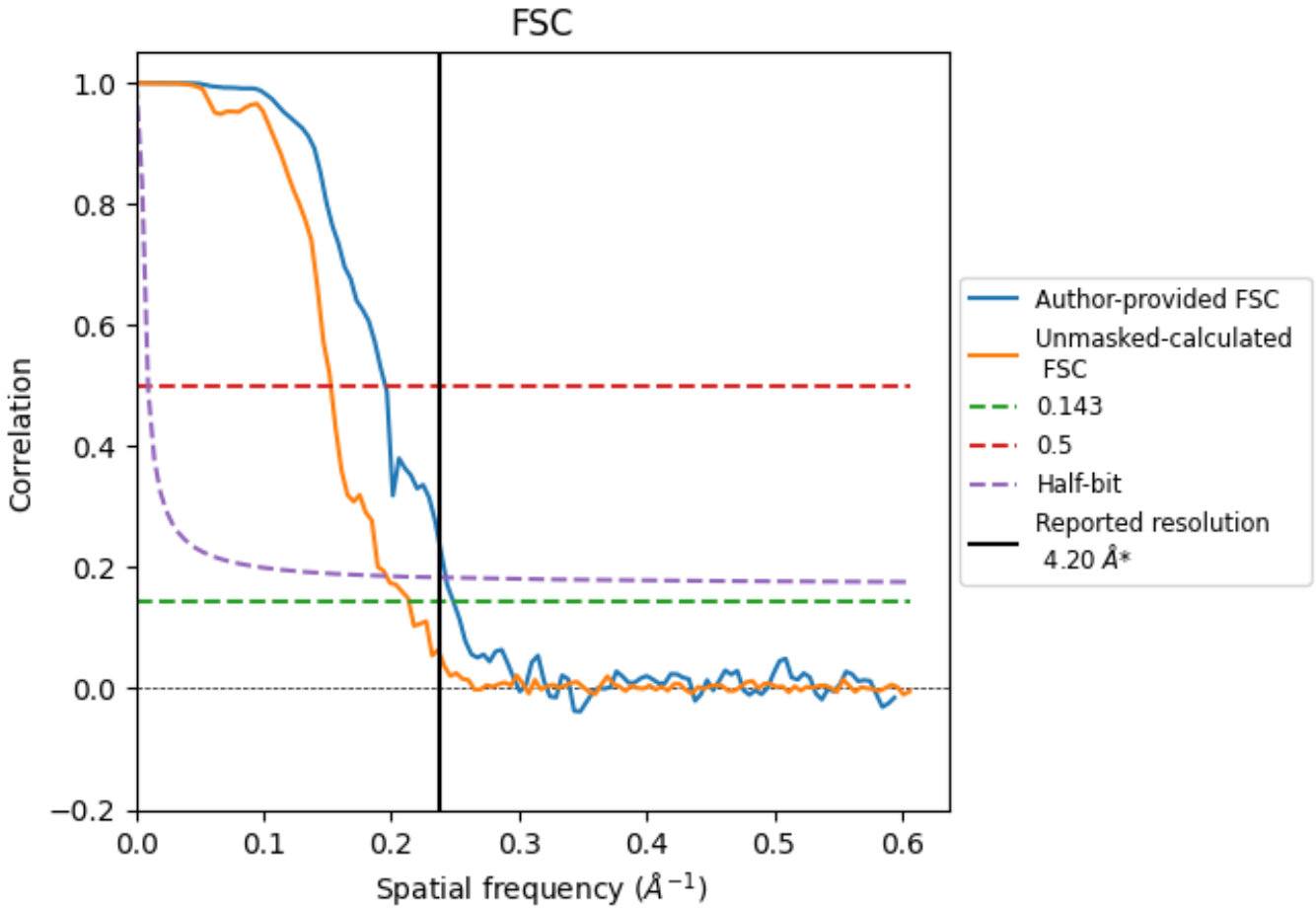


*Reported resolution corresponds to spatial frequency of 0.238 Å^{-1}

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 0.238 $Å^{-1}$

8.2 Resolution estimates (i)

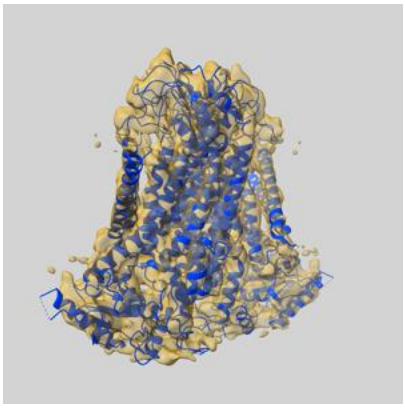
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.20	-	-
Author-provided FSC curve	4.02	5.12	4.12
Unmasked-calculated*	4.68	6.55	5.10

*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 4.68 differs from the reported value 4.2 by more than 10 %

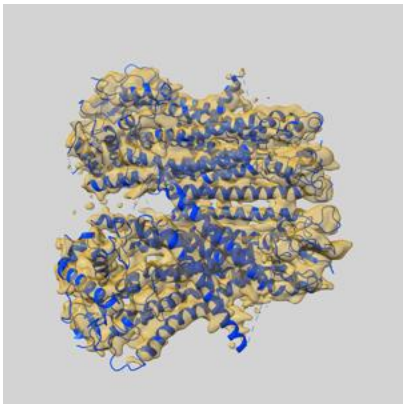
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-70017 and PDB model 9O1Q. Per-residue inclusion information can be found in section 3 on page 4.

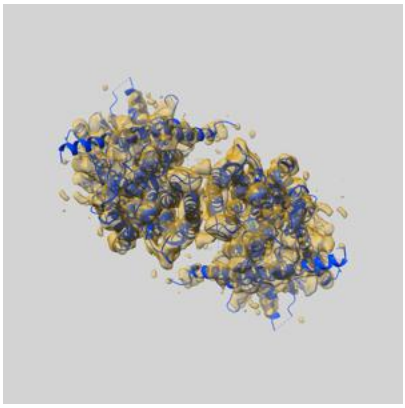
9.1 Map-model overlay



X



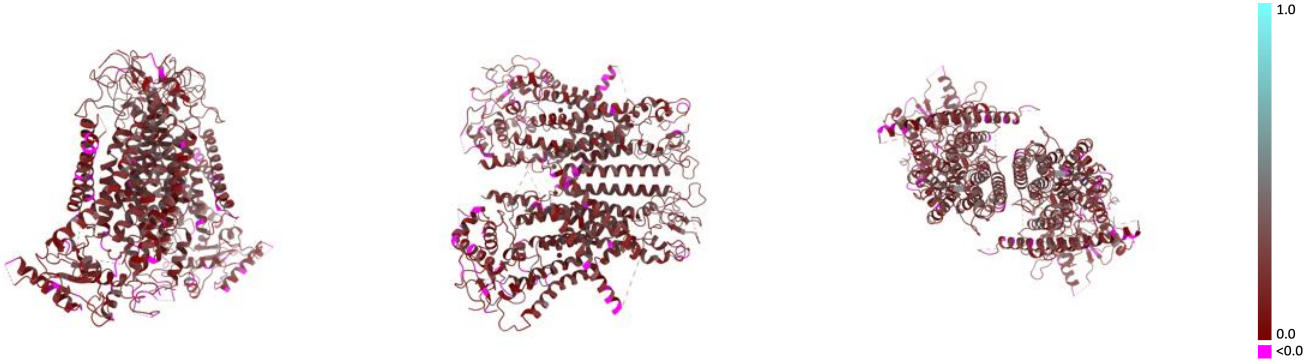
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.06 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

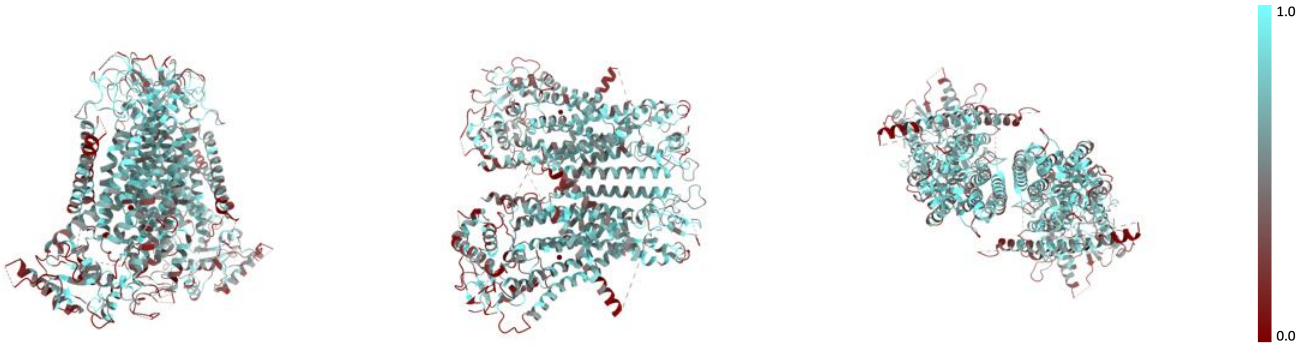
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

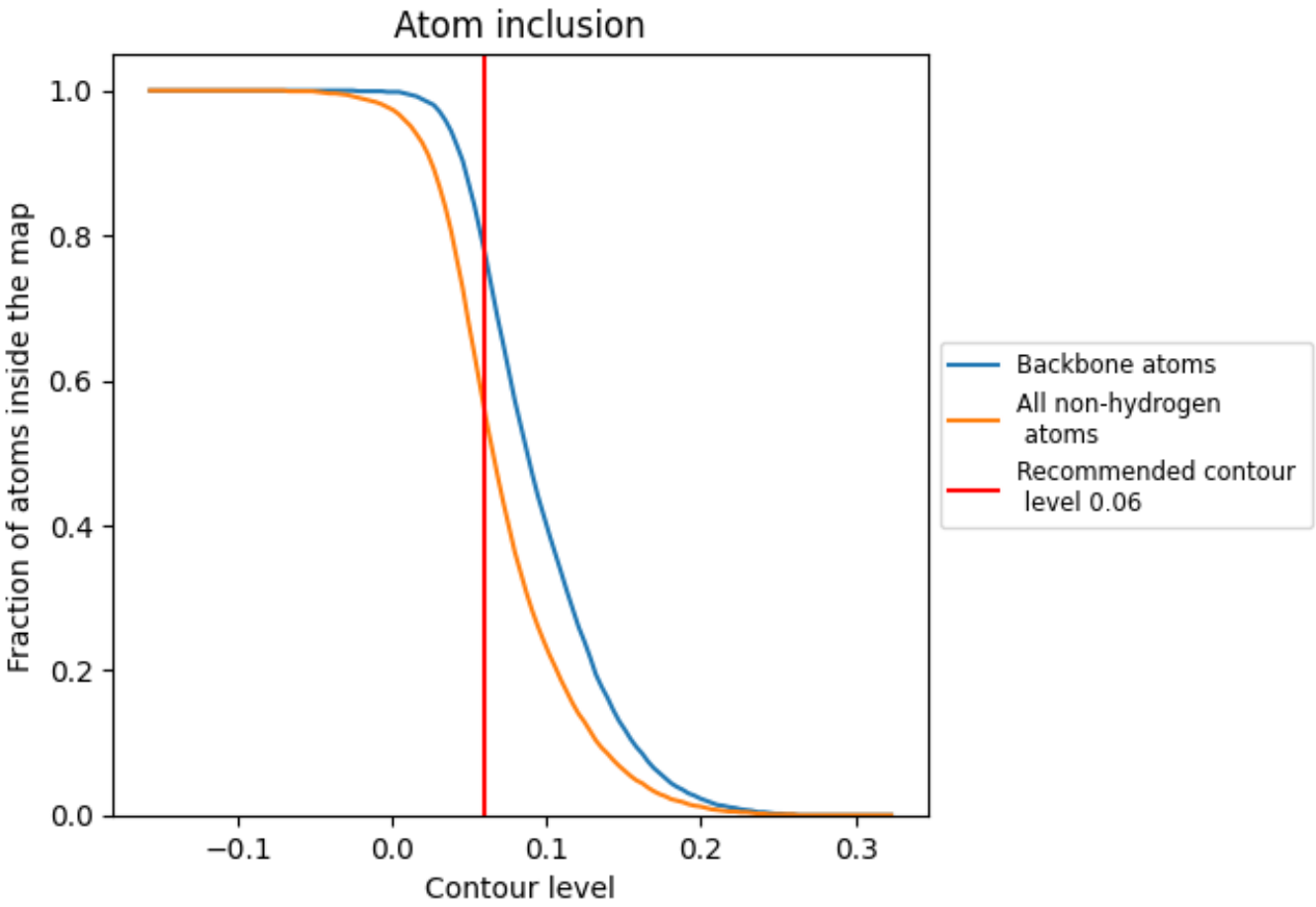
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.06).

9.4 Atom inclusion (i)



At the recommended contour level, 78% of all backbone atoms, 56% 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 (0.06) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5560	0.1980
A	0.5570	0.1970
B	0.5560	0.1980