



Full wwPDB EM Validation Report ⓘ

Mar 23, 2026 – 05:34 PM UTC

PDB ID : 9E9F / pdb_00009e9f
EMDB ID : EMD-47796
Title : Pseudomonas aeruginosa MexY
Authors : Gregor, W.D.; Maharjan, R.; Zhang, Z.; Yu, E.W.
Deposited on : 2024-11-08
Resolution : 3.63 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

EMDB validation analysis : 0.0.1.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

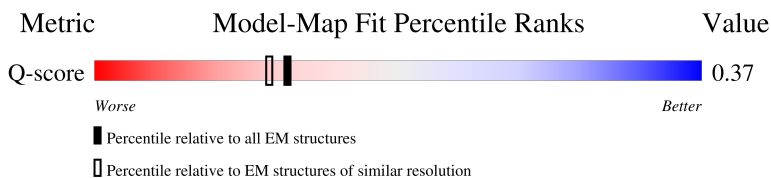
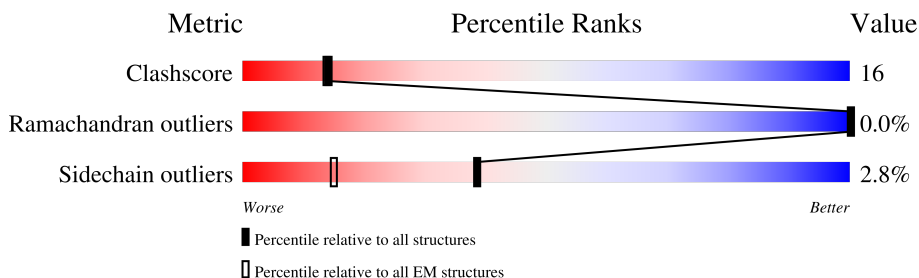
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.63 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	11696 (3.13 - 4.13)

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	1031	
1	B	1031	
1	C	1031	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 23048 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.

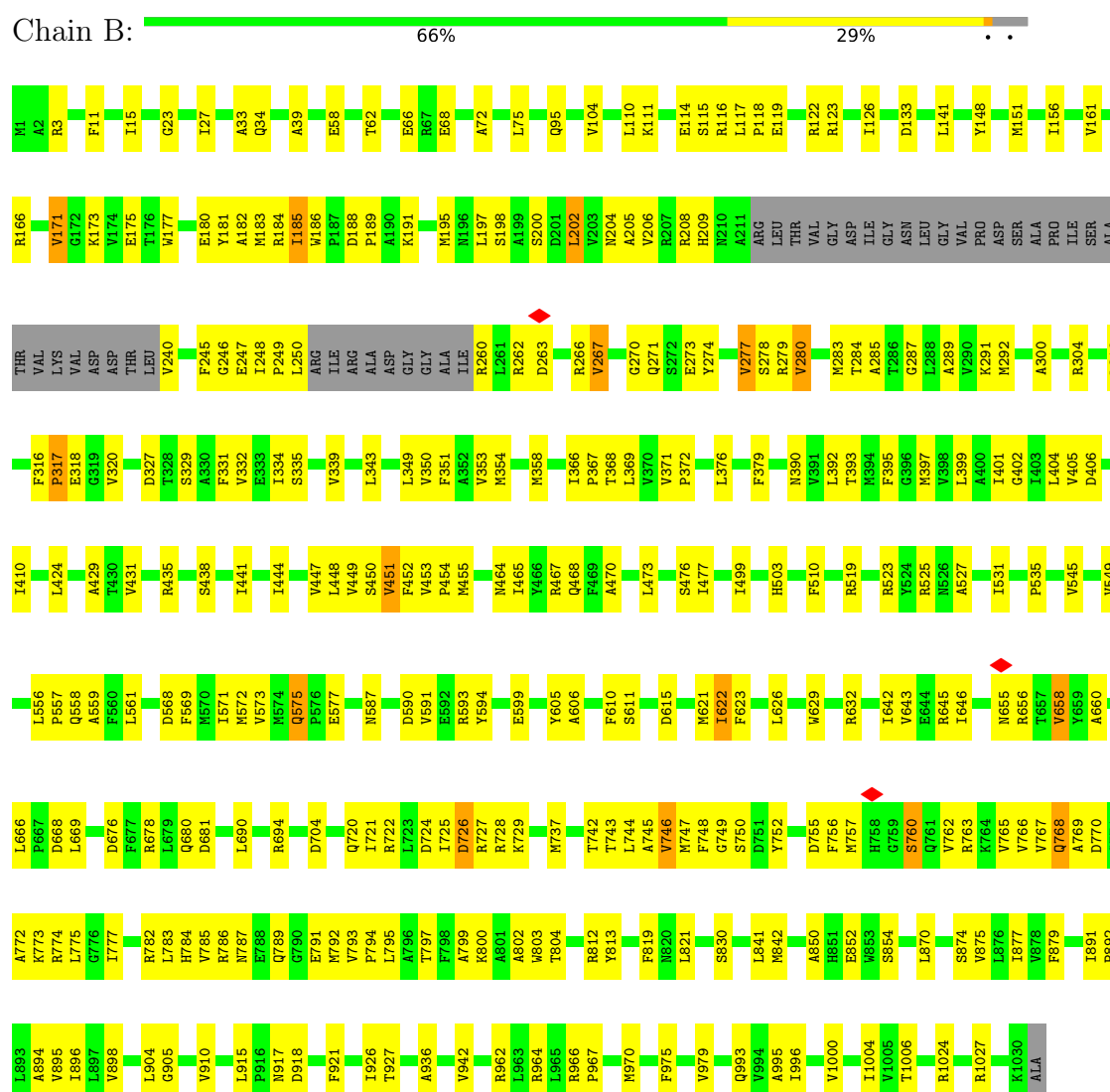
- Molecule 1 is a protein called Efflux pump membrane transporter.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	B	993	Total	C	N	O	S	0	0
			7556	4859	1293	1369	35		
1	C	1011	Total	C	N	O	S	0	0
			7669	4929	1315	1390	35		
1	A	1031	Total	C	N	O	S	0	0
			7823	5024	1343	1421	35		

3 Residue-property plots

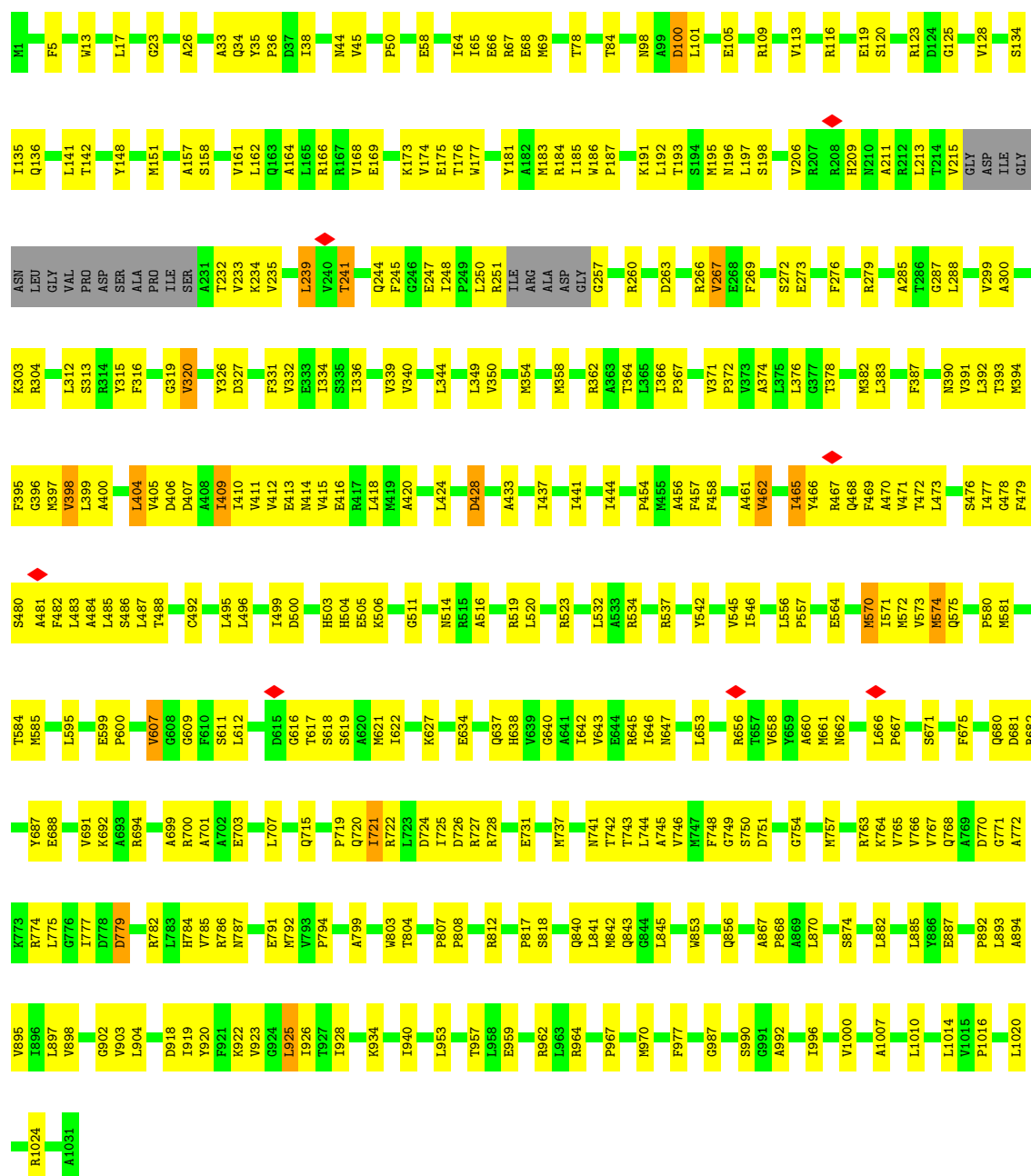
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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



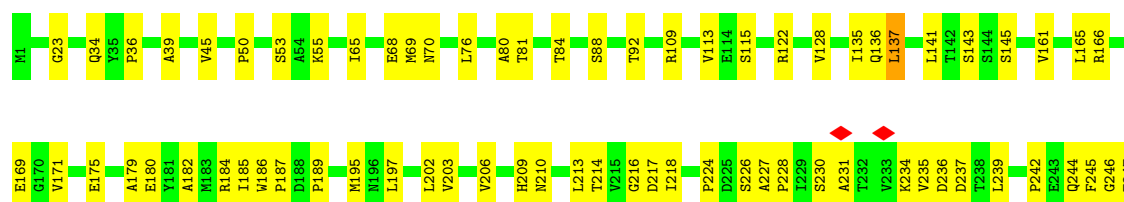
• Molecule 1: Efflux pump membrane transporter

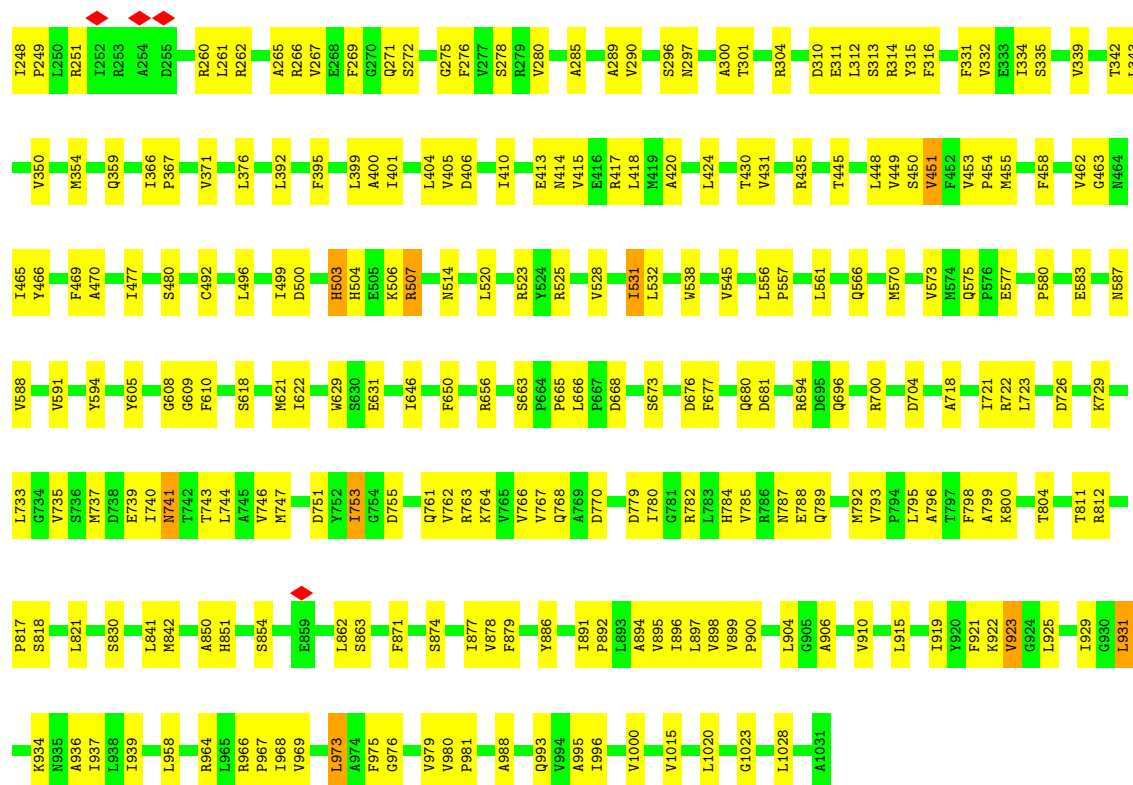




• Molecule 1: Efflux pump membrane transporter

Chain A: 69% 30%





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	8886	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 ($e^-/\text{\AA}^2$)	37.7	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.690	Depositor
Minimum map value	-0.359	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.029	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	385.2, 385.2, 385.2	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.07, 1.07, 1.07	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	0.15	0/7974	0.32	0/10839
1	B	0.15	0/7703	0.34	0/10467
1	C	0.17	0/7815	0.38	0/10622
All	All	0.16	0/23492	0.35	0/31928

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	7823	0	8001	222	0
1	B	7556	0	7714	227	0
1	C	7669	0	7836	310	0
All	All	23048	0	23551	727	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 16.

All (727) 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:C:382:MET:HE1	1:C:393:THR:CG2	1.90	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:749:GLY:HA2	1:A:216:GLY:HA3	1.42	1.01
1:C:36:PRO:HD3	1:C:390:ASN:ND2	1.78	0.97
1:C:382:MET:HE1	1:C:393:THR:HG23	1.46	0.97
1:C:745:ALA:HA	1:C:749:GLY:HA3	1.46	0.97
1:C:181:TYR:HA	1:C:272:SER:HB3	1.53	0.90
1:C:404:LEU:HA	1:C:477:ILE:HD11	1.54	0.88
1:A:525:ARG:HE	1:A:958:LEU:HB3	1.38	0.88
1:C:374:ALA:HB1	1:C:476:SER:HB3	1.59	0.84
1:C:339:VAL:HG11	1:C:394:MET:HB3	1.57	0.84
1:B:189:PRO:HD3	1:B:775:LEU:HA	1.59	0.84
1:C:260:ARG:HB3	1:C:263:ASP:H	1.44	0.82
1:B:726:ASP:HB2	1:B:729:LYS:HB2	1.61	0.81
1:C:722:ARG:HA	1:A:234:LYS:H	1.45	0.81
1:C:754:GLY:H	1:C:764:LYS:HA	1.48	0.79
1:C:748:PHE:HA	1:A:218:ILE:HB	1.65	0.78
1:B:724:ASP:HB2	1:B:800:LYS:HB2	1.66	0.78
1:B:200:SER:HB3	1:B:792:MET:HE1	1.67	0.76
1:C:396:GLY:HA3	1:C:469:PHE:CE1	2.21	0.76
1:C:727:ARG:HG2	1:A:237:ASP:HB2	1.68	0.75
1:C:456:ALA:HB2	1:C:467:ARG:HD2	1.67	0.75
1:C:572:MET:HE1	1:C:612:LEU:HG	1.69	0.74
1:C:480:SER:HA	1:C:483:LEU:HB2	1.70	0.74
1:C:784:HIS:HA	1:C:794:PRO:HA	1.69	0.73
1:B:725:ILE:HA	1:B:799:ALA:HA	1.71	0.72
1:C:903:VAL:HA	1:C:925:LEU:HD21	1.71	0.72
1:A:68:GLU:HG3	1:A:109:ARG:HB3	1.71	0.72
1:C:480:SER:O	1:C:484:ALA:N	2.23	0.72
1:C:239:LEU:HB3	1:C:244:GLN:HB3	1.72	0.71
1:B:795:LEU:HD21	1:B:799:ALA:H	1.56	0.71
1:A:248:ILE:HB	1:A:261:LEU:HD13	1.72	0.71
1:C:35:TYR:HB2	1:C:666:LEU:HD12	1.71	0.70
1:A:23:GLY:HA3	1:A:376:LEU:HB3	1.72	0.70
1:C:382:MET:CE	1:C:393:THR:CG2	2.69	0.69
1:C:572:MET:HE2	1:C:574:MET:HG2	1.74	0.69
1:B:770:ASP:HA	1:B:775:LEU:HB3	1.73	0.69
1:C:581:MET:HE2	1:C:617:THR:HG23	1.75	0.69
1:C:959:GLU:HG3	1:C:962:ARG:HH12	1.57	0.69
1:A:185:ILE:HB	1:A:767:VAL:HG12	1.73	0.69
1:C:653:LEU:HB2	1:C:656:ARG:HB2	1.74	0.68
1:B:784:HIS:HA	1:B:794:PRO:HA	1.75	0.68
1:C:36:PRO:CD	1:C:390:ASN:ND2	2.55	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:382:MET:CE	1:C:393:THR:HG23	2.21	0.68
1:C:183:MET:HB3	1:C:765:VAL:HG12	1.75	0.68
1:B:23:GLY:HA3	1:B:376:LEU:HB3	1.77	0.67
1:C:191:LYS:NZ	1:C:257:GLY:O	2.24	0.67
1:C:350:VAL:HG21	1:C:405:VAL:HG21	1.77	0.67
1:C:483:LEU:O	1:C:487:LEU:N	2.28	0.66
1:A:80:ALA:HB3	1:A:812:ARG:HB2	1.77	0.66
1:A:448:LEU:HD11	1:A:934:LYS:HD2	1.77	0.66
1:B:267:VAL:HG12	1:B:773:LYS:HD2	1.77	0.66
1:C:241:THR:O	1:C:245:PHE:N	2.28	0.66
1:A:735:VAL:HG22	1:A:787:ASN:HA	1.77	0.66
1:B:575:GLN:OE1	1:B:587:ASN:ND2	2.29	0.66
1:C:770:ASP:HB3	1:C:774:ARG:HA	1.78	0.66
1:B:545:VAL:HG13	1:B:904:LEU:HD22	1.77	0.66
1:B:727:ARG:NH1	1:C:209:HIS:O	2.27	0.66
1:A:34:GLN:HB2	1:A:332:VAL:HG22	1.75	0.65
1:A:115:SER:HA	1:A:122:ARG:HH12	1.61	0.65
1:A:410:ILE:O	1:A:414:ASN:ND2	2.29	0.65
1:B:186:TRP:CE2	1:B:767:VAL:HA	2.32	0.65
1:B:351:PHE:HD1	1:B:368:THR:HG21	1.62	0.65
1:C:245:PHE:HA	1:C:248:ILE:HG22	1.76	0.65
1:C:185:ILE:HB	1:C:767:VAL:HA	1.78	0.65
1:A:751:ASP:HB3	1:A:767:VAL:HG23	1.79	0.65
1:B:680:GLN:HB2	1:B:850:ALA:HB3	1.79	0.64
1:C:572:MET:HE3	1:C:611:SER:HB3	1.80	0.64
1:A:50:PRO:HB2	1:A:746:VAL:HG12	1.80	0.64
1:B:206:VAL:HG22	1:B:248:ILE:HD12	1.80	0.64
1:C:263:ASP:O	1:C:266:ARG:NH2	2.31	0.64
1:C:691:VAL:HG22	1:C:694:ARG:HH12	1.62	0.64
1:C:653:LEU:HD22	1:C:656:ARG:HD3	1.80	0.64
1:B:722:ARG:HB3	1:B:802:ALA:HB3	1.78	0.64
1:C:177:TRP:HB2	1:C:287:GLY:HA3	1.79	0.64
1:C:483:LEU:HA	1:C:487:LEU:H	1.62	0.64
1:C:466:TYR:HA	1:C:469:PHE:CZ	2.33	0.64
1:C:611:SER:HB2	1:C:619:SER:HB2	1.80	0.64
1:B:122:ARG:HH22	1:C:125:GLY:HA3	1.62	0.64
1:B:248:ILE:HG12	1:B:260:ARG:HH21	1.63	0.64
1:C:186:TRP:HB3	1:C:771:GLY:HA2	1.80	0.63
1:C:241:THR:H	1:C:244:GLN:HB2	1.63	0.63
1:B:58:GLU:HA	1:B:62:THR:HB	1.80	0.63
1:B:752:TYR:HA	1:B:765:VAL:O	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:414:ASN:HA	1:A:417:ARG:HE	1.64	0.63
1:C:444:ILE:HD13	1:C:934:LYS:HG3	1.81	0.63
1:C:666:LEU:HB3	1:C:667:PRO:HD3	1.81	0.63
1:A:342:THR:HG23	1:A:981:PRO:HB2	1.81	0.63
1:C:483:LEU:O	1:C:488:THR:N	2.29	0.62
1:C:141:LEU:HD11	1:C:161:VAL:HG21	1.80	0.62
1:C:671:SER:HB3	1:C:856:GLN:HG3	1.80	0.62
1:C:757:MET:HB2	1:C:763:ARG:HB2	1.81	0.62
1:A:175:GLU:HB2	1:A:289:ALA:HB3	1.80	0.62
1:B:590:ASP:OD1	1:B:593:ARG:NH2	2.31	0.62
1:B:768:GLN:HE22	1:B:770:ASP:HB3	1.64	0.62
1:B:278:SER:HB2	1:B:285:ALA:O	2.01	0.61
1:C:34:GLN:HB2	1:C:332:VAL:HG22	1.82	0.61
1:B:450:SER:HB2	1:B:877:ILE:HG22	1.81	0.61
1:C:634:GLU:HB2	1:C:637:GLN:HG2	1.83	0.61
1:B:744:LEU:O	1:B:748:PHE:N	2.26	0.61
1:A:242:PRO:HG2	1:A:269:PHE:HD1	1.66	0.61
1:C:382:MET:HE1	1:C:393:THR:HG21	1.79	0.61
1:A:189:PRO:HB2	1:A:782:ARG:HH21	1.66	0.61
1:B:185:ILE:HD13	1:B:270:GLY:H	1.66	0.61
1:C:400:ALA:HB3	1:C:473:LEU:HD13	1.83	0.61
1:C:724:ASP:HA	1:A:236:ASP:HB3	1.83	0.61
1:C:725:ILE:HB	1:A:237:ASP:HB3	1.83	0.61
1:C:575:GLN:HE22	1:C:584:THR:HA	1.67	0.60
1:A:39:ALA:HB2	1:A:668:ASP:HB2	1.83	0.60
1:A:462:VAL:HG11	1:A:863:SER:HB2	1.84	0.60
1:A:280:VAL:HG22	1:A:605:TYR:HD1	1.65	0.60
1:B:280:VAL:HB	1:B:605:TYR:HD1	1.67	0.60
1:C:720:GLN:HA	1:A:230:SER:HB2	1.83	0.60
1:B:392:LEU:HD13	1:B:465:ILE:HG23	1.83	0.60
1:B:247:GLU:HG3	1:B:262:ARG:HB2	1.84	0.59
1:A:545:VAL:HG13	1:A:904:LEU:HD22	1.84	0.59
1:B:171:VAL:HA	1:B:292:MET:HA	1.84	0.59
1:B:499:ILE:HG23	1:B:503:HIS:HB2	1.84	0.59
1:C:484:ALA:HA	1:C:488:THR:HB	1.83	0.59
1:A:53:SER:HA	1:A:84:THR:HG23	1.83	0.59
1:A:787:ASN:ND2	1:A:789:GLN:OE1	2.36	0.59
1:B:785:VAL:HB	1:B:795:LEU:HB2	1.85	0.59
1:A:744:LEU:HD11	1:A:785:VAL:HA	1.84	0.59
1:A:915:LEU:HD13	1:A:995:ALA:HA	1.85	0.59
1:C:516:ALA:HA	1:C:519:ARG:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:482:PHE:O	1:C:486:SER:HB2	2.02	0.59
1:A:210:ASN:HA	1:A:239:LEU:HD21	1.85	0.59
1:C:480:SER:C	1:C:483:LEU:H	2.11	0.59
1:B:535:PRO:HG2	1:B:1024:ARG:HH12	1.66	0.58
1:B:727:ARG:HD3	1:C:209:HIS:NE2	2.19	0.58
1:C:378:THR:OG1	1:C:476:SER:OG	2.20	0.58
1:C:731:GLU:HG2	1:A:249:PRO:HG3	1.85	0.58
1:B:720:GLN:HA	1:C:232:THR:HB	1.85	0.58
1:C:407:ASP:O	1:C:410:ILE:HG13	2.03	0.58
1:B:183:MET:HB3	1:B:765:VAL:HG23	1.84	0.58
1:C:67:ARG:O	1:A:166:ARG:NH2	2.36	0.58
1:C:393:THR:HA	1:C:469:PHE:CD2	2.39	0.58
1:A:681:ASP:HB3	1:A:817:PRO:HG2	1.84	0.58
1:C:399:LEU:HD11	1:C:996:ILE:HD12	1.86	0.57
1:A:343:LEU:HG	1:A:401:ILE:HD11	1.84	0.57
1:C:197:LEU:O	1:C:251:ARG:NH1	2.37	0.57
1:C:312:LEU:HA	1:C:315:TYR:HD2	1.69	0.57
1:C:374:ALA:HB3	1:C:404:LEU:HD11	1.86	0.57
1:B:350:VAL:HG11	1:B:405:VAL:HG11	1.86	0.57
1:B:519:ARG:HH21	1:B:523:ARG:HH22	1.51	0.57
1:C:750:SER:HB2	1:A:217:ASP:HB2	1.86	0.57
1:C:787:ASN:OD1	1:C:791:GLU:N	2.36	0.57
1:A:445:THR:HG23	1:A:477:ILE:HG22	1.87	0.57
1:C:276:PHE:HB3	1:C:607:VAL:HG23	1.86	0.57
1:C:556:LEU:HD12	1:C:557:PRO:HD2	1.86	0.57
1:C:575:GLN:HB2	1:C:618:SER:HB2	1.86	0.57
1:C:198:SER:OG	1:C:251:ARG:NH1	2.37	0.57
1:C:213:LEU:HB2	1:C:234:LYS:HD3	1.85	0.57
1:A:209:HIS:ND1	1:A:248:ILE:HG12	2.18	0.57
1:C:38:ILE:HD13	1:C:462:VAL:HG22	1.87	0.57
1:A:587:ASN:HB3	1:A:656:ARG:HD3	1.87	0.57
1:A:871:PHE:HZ	1:A:922:LYS:HB3	1.70	0.57
1:B:68:GLU:O	1:C:166:ARG:NH2	2.38	0.57
1:C:173:LYS:HE3	1:C:175:GLU:HG2	1.87	0.57
1:B:431:VAL:O	1:B:435:ARG:HG2	2.05	0.56
1:C:371:VAL:HG13	1:C:404:LEU:HD13	1.86	0.56
1:A:575:GLN:HB2	1:A:618:SER:HB2	1.86	0.56
1:B:755:ASP:H	1:B:763:ARG:C	2.13	0.56
1:C:480:SER:O	1:C:485:LEU:N	2.28	0.56
1:C:382:MET:SD	1:C:393:THR:HG21	2.46	0.56
1:C:480:SER:CA	1:C:484:ALA:H	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:58:GLU:HG3	1:C:812:ARG:HD2	1.86	0.56
1:C:299:VAL:HG12	1:C:303:LYS:HE3	1.87	0.56
1:B:114:GLU:HA	1:B:117:LEU:HD12	1.88	0.56
1:B:198:SER:H	1:B:792:MET:HE3	1.69	0.56
1:C:680:GLN:HA	1:C:818:SER:HB3	1.88	0.56
1:C:784:HIS:HE1	1:C:786:ARG:HG3	1.71	0.56
1:C:479:PHE:O	1:C:483:LEU:N	2.38	0.55
1:B:271:GLN:HG3	1:B:274:TYR:HE2	1.70	0.55
1:A:195:MET:O	1:A:251:ARG:NH2	2.39	0.55
1:B:455:MET:HG3	1:B:470:ALA:HB2	1.88	0.55
1:A:185:ILE:HG23	1:A:267:VAL:HG22	1.88	0.55
1:B:184:ARG:HA	1:B:186:TRP:NE1	2.21	0.55
1:B:335:SER:O	1:B:339:VAL:HG23	2.07	0.55
1:C:571:ILE:HD12	1:C:595:LEU:HD11	1.89	0.55
1:C:680:GLN:HG3	1:C:681:ASP:H	1.72	0.55
1:B:186:TRP:NE1	1:B:767:VAL:HA	2.22	0.55
1:A:135:ILE:HD12	1:A:289:ALA:HB1	1.87	0.55
1:C:483:LEU:HD22	1:C:487:LEU:HD22	1.89	0.55
1:B:768:GLN:NE2	1:B:770:ASP:HB3	2.22	0.55
1:A:729:LYS:HB2	1:A:798:PHE:HB3	1.88	0.55
1:B:34:GLN:HB2	1:B:332:VAL:HG22	1.88	0.55
1:B:181:TYR:CE1	1:B:757:MET:HG3	2.42	0.55
1:B:591:VAL:HG11	1:B:622:ILE:HG13	1.89	0.55
1:A:278:SER:OG	1:A:285:ALA:O	2.20	0.55
1:B:743:THR:HG21	1:B:786:ARG:H	1.72	0.54
1:A:55:LYS:H	1:A:55:LYS:HD2	1.72	0.54
1:A:504:HIS:HB2	1:A:507:ARG:HD3	1.89	0.54
1:B:350:VAL:HG12	1:B:354:MET:HE2	1.89	0.54
1:C:245:PHE:HB3	1:C:250:LEU:HD11	1.89	0.54
1:C:151:MET:SD	1:C:151:MET:N	2.80	0.54
1:A:796:ALA:HA	1:A:799:ALA:HB3	1.87	0.54
1:A:171:VAL:HG23	1:A:290:VAL:HG13	1.88	0.54
1:C:479:PHE:O	1:C:483:LEU:HG	2.07	0.54
1:C:744:LEU:O	1:C:748:PHE:N	2.40	0.54
1:B:110:LEU:HD21	1:B:126:ILE:HB	1.89	0.54
1:B:175:GLU:HB2	1:B:289:ALA:HB3	1.89	0.54
1:B:743:THR:O	1:B:746:VAL:HG22	2.08	0.54
1:A:169:GLU:HB2	1:A:304:ARG:HH11	1.72	0.54
1:A:811:THR:OG1	1:A:818:SER:O	2.22	0.54
1:C:64:ILE:O	1:C:68:GLU:HG2	2.08	0.54
1:C:895:VAL:HG22	1:C:940:ILE:HD12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:224:PRO:HB2	1:A:227:ALA:HB3	1.89	0.54
1:B:975:PHE:O	1:B:979:VAL:HG23	2.08	0.54
1:C:36:PRO:HD3	1:C:390:ASN:HD22	1.71	0.54
1:B:572:MET:HB2	1:B:621:MET:HE3	1.90	0.53
1:B:910:VAL:HG13	1:B:915:LEU:HB2	1.89	0.53
1:A:239:LEU:HD23	1:A:239:LEU:H	1.72	0.53
1:A:588:VAL:HG13	1:A:622:ILE:HD11	1.89	0.53
1:C:638:HIS:CD2	1:C:640:GLY:H	2.26	0.53
1:B:783:LEU:O	1:B:795:LEU:N	2.41	0.53
1:C:186:TRP:HE3	1:C:267:VAL:HG12	1.72	0.53
1:A:185:ILE:HG12	1:A:267:VAL:HG13	1.89	0.53
1:A:556:LEU:HD12	1:A:557:PRO:HD2	1.91	0.53
1:C:727:ARG:O	1:C:731:GLU:HG3	2.08	0.53
1:A:182:ALA:HB3	1:A:272:SER:HB3	1.89	0.53
1:B:599:GLU:OE1	1:B:645:ARG:NH2	2.41	0.53
1:B:742:THR:O	1:B:746:VAL:HG13	2.09	0.53
1:C:313:SER:HA	1:C:316:PHE:CD2	2.44	0.53
1:A:366:ILE:HB	1:A:367:PRO:HD3	1.91	0.53
1:C:134:SER:HB2	1:C:136:GLN:HE21	1.73	0.53
1:B:358:MET:HE3	1:B:970:MET:HE1	1.91	0.53
1:C:721:ILE:HB	1:A:231:ALA:HA	1.91	0.53
1:C:918:ASP:OD1	1:C:919:ILE:N	2.42	0.53
1:C:467:ARG:HD3	1:C:468:GLN:N	2.24	0.53
1:A:186:TRP:HA	1:A:768:GLN:O	2.08	0.53
1:A:531:ILE:HG13	1:A:538:TRP:CD2	2.44	0.53
1:C:382:MET:CE	1:C:393:THR:HG21	2.37	0.53
1:C:742:THR:O	1:C:746:VAL:HG23	2.08	0.52
1:C:366:ILE:HB	1:C:367:PRO:HD3	1.90	0.52
1:C:573:VAL:HG13	1:C:658:VAL:HG22	1.91	0.52
1:A:694:ARG:HG3	1:A:821:LEU:HD21	1.90	0.52
1:B:186:TRP:HB2	1:B:769:ALA:HA	1.91	0.52
1:B:449:VAL:O	1:B:453:VAL:HG23	2.09	0.52
1:B:72:ALA:HB3	1:B:75:LEU:HB2	1.90	0.52
1:B:605:TYR:O	1:B:623:PHE:N	2.43	0.52
1:A:895:VAL:HG13	1:A:936:ALA:HB3	1.91	0.52
1:B:915:LEU:HD13	1:B:995:ALA:HA	1.91	0.52
1:C:192:LEU:HA	1:C:196:ASN:HA	1.90	0.52
1:A:594:TYR:HE2	1:A:646:ILE:HG12	1.75	0.52
1:B:271:GLN:HB2	1:B:273:GLU:HG2	1.92	0.52
1:B:910:VAL:HG21	1:B:921:PHE:CD1	2.45	0.52
1:C:183:MET:SD	1:C:184:ARG:N	2.83	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:571:ILE:HB	1:C:622:ILE:HB	1.91	0.52
1:C:599:GLU:OE1	1:C:645:ARG:NH2	2.43	0.52
1:A:141:LEU:HD11	1:A:161:VAL:HG21	1.92	0.52
1:A:448:LEU:O	1:A:451:VAL:HG12	2.10	0.52
1:B:156:ILE:HD13	1:B:320:VAL:HG21	1.91	0.52
1:A:454:PRO:HG3	1:A:877:ILE:HD12	1.92	0.52
1:C:5:PHE:CG	1:C:486:SER:HB3	2.45	0.52
1:C:420:ALA:HA	1:C:499:ILE:HD13	1.92	0.52
1:C:66:GLU:HG3	1:C:78:THR:HG21	1.91	0.52
1:C:67:ARG:HH22	1:A:761:GLN:HB3	1.75	0.52
1:A:420:ALA:HB2	1:A:499:ILE:HG13	1.92	0.52
1:C:185:ILE:N	1:C:766:VAL:O	2.43	0.51
1:A:350:VAL:HG11	1:A:405:VAL:HG11	1.92	0.51
1:A:454:PRO:HG2	1:A:874:SER:HA	1.93	0.51
1:C:506:LYS:O	1:C:511:GLY:HA3	2.11	0.51
1:C:643:VAL:HG11	1:C:662:ASN:HB2	1.93	0.51
1:B:277:VAL:HG23	1:B:284:THR:HG23	1.92	0.51
1:B:573:VAL:HG22	1:B:658:VAL:HG13	1.93	0.51
1:C:36:PRO:HD3	1:C:390:ASN:CG	2.33	0.51
1:C:728:ARG:HH21	1:A:262:ARG:HH22	1.59	0.51
1:A:746:VAL:HG23	1:A:751:ASP:HB2	1.92	0.51
1:B:594:TYR:HE2	1:B:646:ILE:HA	1.76	0.51
1:C:331:PHE:HA	1:C:334:ILE:HG22	1.93	0.51
1:C:413:GLU:HA	1:C:416:GLU:HG2	1.91	0.51
1:A:466:TYR:CE1	1:A:919:ILE:HG23	2.46	0.51
1:C:647:ASN:OD1	1:C:660:ALA:N	2.43	0.51
1:A:741:ASN:N	1:A:741:ASN:OD1	2.42	0.51
1:A:899:VAL:HG13	1:A:929:ILE:HG12	1.93	0.51
1:C:480:SER:HB3	1:C:484:ALA:CB	2.40	0.51
1:C:505:GLU:HG2	1:C:514:ASN:HD22	1.76	0.51
1:A:561:LEU:HD12	1:A:666:LEU:HD11	1.91	0.51
1:B:678:ARG:HB2	1:B:852:GLU:HB3	1.92	0.51
1:C:326:TYR:CE2	1:C:570:MET:HE1	2.46	0.51
1:B:279:ARG:HA	1:B:283:MET:O	2.11	0.51
1:B:395:PHE:CE1	1:B:993:GLN:HG2	2.46	0.51
1:B:694:ARG:HG3	1:B:821:LEU:HD21	1.91	0.51
1:C:466:TYR:CD1	1:C:923:VAL:HG11	2.45	0.51
1:B:629:TRP:CD1	1:B:632:ARG:HH22	2.28	0.50
1:A:335:SER:O	1:A:339:VAL:HG23	2.11	0.50
1:B:448:LEU:HB3	1:B:477:ILE:HD13	1.92	0.50
1:B:556:LEU:HD12	1:B:557:PRO:HD2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:5:PHE:CD1	1:C:486:SER:HB3	2.45	0.50
1:C:176:THR:HG22	1:C:288:LEU:HG	1.93	0.50
1:A:897:LEU:O	1:A:900:PRO:HD2	2.12	0.50
1:B:246:GLY:HA3	1:B:262:ARG:HG3	1.93	0.50
1:B:271:GLN:HG3	1:B:274:TYR:CE2	2.46	0.50
1:C:68:GLU:HG3	1:C:113:VAL:HG11	1.94	0.50
1:C:300:ALA:O	1:C:304:ARG:HG2	2.10	0.50
1:C:928:ILE:HD11	1:C:1000:VAL:HG13	1.94	0.50
1:A:202:LEU:O	1:A:206:VAL:HG23	2.12	0.50
1:A:939:ILE:HD11	1:A:968:ILE:HG13	1.93	0.50
1:B:606:ALA:HB2	1:B:622:ILE:HA	1.93	0.50
1:C:269:PHE:HE2	1:C:272:SER:HA	1.76	0.50
1:C:185:ILE:HG22	1:C:187:PRO:HD3	1.92	0.50
1:A:894:ALA:O	1:A:898:VAL:HG23	2.11	0.50
1:B:527:ALA:O	1:B:531:ILE:HG12	2.12	0.50
1:C:187:PRO:O	1:C:770:ASP:N	2.44	0.50
1:A:458:PHE:HB3	1:A:463:GLY:HA2	1.94	0.50
1:A:399:LEU:HD11	1:A:996:ILE:HD11	1.94	0.50
1:A:910:VAL:HG11	1:A:921:PHE:CD1	2.47	0.50
1:B:188:ASP:HB3	1:B:774:ARG:H	1.77	0.50
1:B:424:LEU:HB2	1:B:429:ALA:HB2	1.94	0.50
1:B:327:ASP:OD1	1:B:329:SER:N	2.45	0.49
1:B:782:ARG:NE	1:B:794:PRO:HB2	2.27	0.49
1:C:727:ARG:HD3	1:A:209:HIS:HE2	1.77	0.49
1:C:894:ALA:O	1:C:898:VAL:HG23	2.12	0.49
1:A:591:VAL:HA	1:A:650:PHE:CZ	2.47	0.49
1:B:448:LEU:O	1:B:451:VAL:HG12	2.12	0.49
1:B:879:PHE:CD1	1:B:892:PRO:HB2	2.47	0.49
1:C:23:GLY:HA3	1:C:376:LEU:HB3	1.94	0.49
1:B:721:ILE:HG12	1:B:803:TRP:HD1	1.77	0.49
1:A:700:ARG:NH1	1:A:841:LEU:O	2.41	0.49
1:B:464:ASN:O	1:B:468:GLN:HG2	2.13	0.49
1:B:727:ARG:HH22	1:C:211:ALA:H	1.61	0.49
1:C:142:THR:HG22	1:C:285:ALA:HB2	1.95	0.49
1:A:81:THR:HB	1:A:88:SER:HB3	1.95	0.49
1:C:480:SER:CA	1:C:483:LEU:H	2.25	0.49
1:A:450:SER:HB2	1:A:877:ILE:HG22	1.94	0.49
1:B:744:LEU:HD11	1:C:213:LEU:HD22	1.94	0.49
1:C:198:SER:HG	1:C:251:ARG:NH1	2.10	0.49
1:C:500:ASP:O	1:C:503:HIS:ND1	2.41	0.49
1:C:480:SER:HA	1:C:484:ALA:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:894:ALA:O	1:B:898:VAL:HG23	2.13	0.49
1:C:158:SER:HA	1:C:162:LEU:HB2	1.94	0.49
1:A:676:ASP:OD2	1:A:854:SER:OG	2.30	0.49
1:B:188:ASP:H	1:B:773:LYS:HD3	1.78	0.49
1:B:642:ILE:HG12	1:B:645:ARG:HH22	1.77	0.49
1:C:26:ALA:HA	1:C:383:LEU:HD22	1.95	0.49
1:A:36:PRO:HG2	1:A:465:ILE:HG12	1.95	0.49
1:B:151:MET:HB2	1:B:760:SER:HB3	1.95	0.49
1:C:193:THR:HA	1:C:784:HIS:NE2	2.27	0.49
1:C:396:GLY:HA3	1:C:469:PHE:CZ	2.47	0.49
1:C:609:GLY:HA2	1:C:616:GLY:O	2.13	0.49
1:C:784:HIS:CE1	1:C:786:ARG:HG3	2.48	0.49
1:A:206:VAL:HG22	1:A:261:LEU:HD11	1.94	0.49
1:A:975:PHE:O	1:A:979:VAL:HG23	2.12	0.49
1:B:366:ILE:HB	1:B:367:PRO:HD3	1.94	0.48
1:B:704:ASP:HB2	1:B:841:LEU:HD11	1.94	0.48
1:B:725:ILE:HB	1:B:737:MET:HE1	1.94	0.48
1:A:415:VAL:HG22	1:A:430:THR:HA	1.94	0.48
1:A:448:LEU:HD21	1:A:934:LYS:HB2	1.95	0.48
1:A:451:VAL:HG23	1:A:878:VAL:HG21	1.95	0.48
1:C:1020:LEU:O	1:C:1024:ARG:HG2	2.13	0.48
1:B:173:LYS:HE2	1:B:175:GLU:HG2	1.95	0.48
1:C:339:VAL:HG11	1:C:394:MET:CB	2.37	0.48
1:C:571:ILE:HD11	1:C:646:ILE:HD13	1.96	0.48
1:B:177:TRP:HB2	1:B:287:GLY:HA3	1.95	0.48
1:C:1010:LEU:O	1:C:1014:LEU:HB2	2.13	0.48
1:B:205:ALA:HA	1:B:208:ARG:HD2	1.94	0.48
1:B:721:ILE:HA	1:B:803:TRP:HA	1.95	0.48
1:C:119:GLU:O	1:C:123:ARG:HG3	2.13	0.48
1:C:247:GLU:O	1:C:260:ARG:NH2	2.46	0.48
1:C:570:MET:HB2	1:C:661:MET:HE2	1.96	0.48
1:C:779:ASP:N	1:C:779:ASP:OD1	2.42	0.48
1:C:920:TYR:CE2	1:C:992:ALA:HB1	2.49	0.48
1:A:206:VAL:HB	1:A:753:ILE:HG12	1.94	0.48
1:A:520:LEU:HA	1:A:523:ARG:HD2	1.95	0.48
1:A:726:ASP:OD2	1:A:800:LYS:NZ	2.45	0.48
1:A:68:GLU:O	1:A:109:ARG:NH1	2.44	0.48
1:A:400:ALA:O	1:A:404:LEU:HG	2.14	0.48
1:B:942:VAL:HG21	1:B:964:ARG:HD3	1.96	0.48
1:C:545:VAL:HG13	1:C:904:LEU:HD22	1.95	0.48
1:A:296:SER:HB2	1:A:301:THR:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:261:LEU:O	1:A:265:ALA:N	2.47	0.48
1:A:404:LEU:HD22	1:A:480:SER:HB2	1.95	0.48
1:B:755:ASP:HB3	1:B:762:VAL:HG12	1.96	0.48
1:C:105:GLU:O	1:C:109:ARG:HG3	2.14	0.48
1:A:979:VAL:HG11	1:A:1000:VAL:HB	1.95	0.48
1:B:905:GLY:HA3	1:B:1006:THR:OG1	2.14	0.48
1:C:100:ASP:N	1:C:100:ASP:OD1	2.44	0.48
1:C:395:PHE:O	1:C:398:VAL:HG22	2.14	0.48
1:C:721:ILE:HG12	1:C:803:TRP:HA	1.96	0.48
1:A:68:GLU:HB2	1:A:113:VAL:HG11	1.96	0.48
1:C:164:ALA:O	1:C:168:VAL:HG23	2.14	0.47
1:C:197:LEU:HD23	1:C:746:VAL:HG22	1.96	0.47
1:A:737:MET:HG3	1:A:739:GLU:H	1.78	0.47
1:A:313:SER:HA	1:A:316:PHE:CD2	2.49	0.47
1:A:367:PRO:O	1:A:371:VAL:HG23	2.14	0.47
1:A:570:MET:HB3	1:A:621:MET:HE2	1.96	0.47
1:B:559:ALA:N	1:B:917:ASN:O	2.46	0.47
1:C:123:ARG:HE	1:C:123:ARG:HB2	1.47	0.47
1:C:327:ASP:N	1:C:327:ASP:OD1	2.47	0.47
1:A:143:SER:OG	1:A:145:SER:O	2.31	0.47
1:C:454:PRO:HG2	1:C:874:SER:HB2	1.96	0.47
1:C:542:TYR:O	1:C:546:ILE:HG12	2.14	0.47
1:A:206:VAL:HG12	1:A:753:ILE:HG21	1.97	0.47
1:B:744:LEU:HB2	1:B:748:PHE:CZ	2.50	0.47
1:B:745:ALA:HA	1:B:748:PHE:O	2.15	0.47
1:C:466:TYR:HA	1:C:469:PHE:CE2	2.49	0.47
1:C:687:TYR:OH	1:C:807:PRO:HB3	2.15	0.47
1:A:313:SER:HA	1:A:316:PHE:CG	2.49	0.47
1:A:939:ILE:HA	1:A:964:ARG:HG3	1.95	0.47
1:B:368:THR:O	1:B:372:PRO:HD3	2.14	0.47
1:B:452:PHE:HZ	1:B:927:THR:HG22	1.79	0.47
1:C:213:LEU:HG	1:C:235:VAL:HG23	1.96	0.47
1:C:279:ARG:HH22	1:C:585:MET:HB3	1.79	0.47
1:A:137:LEU:HB3	1:A:290:VAL:HB	1.97	0.47
1:A:312:LEU:O	1:A:316:PHE:N	2.48	0.47
1:B:399:LEU:HD11	1:B:996:ILE:HD11	1.96	0.47
1:C:573:VAL:HG22	1:C:658:VAL:HG13	1.96	0.47
1:B:166:ARG:HB2	1:A:70:ASN:HD21	1.80	0.47
1:B:197:LEU:HD12	1:B:792:MET:HG3	1.96	0.47
1:A:395:PHE:HE1	1:A:993:GLN:HG2	1.80	0.47
1:C:393:THR:HA	1:C:469:PHE:CE2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:643:VAL:HG21	1:C:662:ASN:HA	1.96	0.47
1:A:631:GLU:N	1:A:631:GLU:OE1	2.48	0.47
1:B:870:LEU:HG	1:B:926:ILE:HD11	1.96	0.46
1:A:203:VAL:HA	1:A:753:ILE:HD11	1.96	0.46
1:A:891:ILE:N	1:A:892:PRO:HD2	2.30	0.46
1:A:966:ARG:HB3	1:A:967:PRO:HD3	1.96	0.46
1:C:358:MET:HE3	1:C:970:MET:HE1	1.98	0.46
1:C:842:MET:HE1	1:A:315:TYR:OH	2.15	0.46
1:A:276:PHE:HE1	1:A:610:PHE:HB2	1.80	0.46
1:A:359:GLN:NE2	1:A:514:ASN:OD1	2.48	0.46
1:B:186:TRP:H	1:B:772:ALA:HB1	1.80	0.46
1:C:467:ARG:HE	1:C:471:VAL:HG21	1.80	0.46
1:A:186:TRP:HB2	1:A:266:ARG:HB3	1.97	0.46
1:A:301:THR:O	1:A:304:ARG:HG2	2.15	0.46
1:A:722:ARG:HG3	1:A:804:THR:HB	1.97	0.46
1:B:571:ILE:HG22	1:B:658:VAL:HG12	1.96	0.46
1:B:611:SER:H	1:B:615:ASP:HA	1.80	0.46
1:C:922:LYS:O	1:C:926:ILE:HG12	2.15	0.46
1:A:500:ASP:HB3	1:A:503:HIS:CE1	2.50	0.46
1:A:580:PRO:HG2	1:A:583:GLU:HG2	1.98	0.46
1:B:188:ASP:HB2	1:B:189:PRO:HD2	1.97	0.46
1:B:209:HIS:NE2	1:B:249:PRO:HD2	2.30	0.46
1:B:349:LEU:O	1:B:353:VAL:HG23	2.16	0.46
1:B:783:LEU:HB3	1:B:795:LEU:HD22	1.98	0.46
1:C:437:ILE:O	1:C:441:ILE:HG12	2.15	0.46
1:C:784:HIS:CG	1:C:792:MET:HG3	2.49	0.46
1:A:696:GLN:OE1	1:A:700:ARG:NH2	2.47	0.46
1:B:183:MET:HB3	1:B:765:VAL:CG2	2.46	0.46
1:B:572:MET:HA	1:B:621:MET:HG3	1.97	0.46
1:C:726:ASP:HB3	1:C:799:ALA:N	2.30	0.46
1:C:247:GLU:C	1:C:260:ARG:HH21	2.24	0.46
1:C:239:LEU:HD13	1:C:247:GLU:HB2	1.98	0.46
1:C:647:ASN:CG	1:C:660:ALA:H	2.24	0.46
1:C:743:THR:HG21	1:C:785:VAL:HG22	1.98	0.46
1:A:184:ARG:HE	1:A:272:SER:HA	1.81	0.46
1:B:454:PRO:HG3	1:B:877:ILE:HG13	1.98	0.46
1:B:575:GLN:HA	1:B:575:GLN:HE21	1.80	0.46
1:C:469:PHE:CD1	1:C:470:ALA:N	2.84	0.46
1:C:532:LEU:HD22	1:C:1020:LEU:HD22	1.98	0.46
1:B:549:VAL:HG22	1:B:904:LEU:HB2	1.97	0.46
1:B:568:ASP:OD1	1:B:568:ASP:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:787:ASN:ND2	1:B:791:GLU:OE2	2.49	0.46
1:C:542:TYR:CZ	1:C:546:ILE:HD11	2.51	0.46
1:C:893:LEU:O	1:C:897:LEU:HG	2.16	0.46
1:B:186:TRP:CZ2	1:B:767:VAL:HG22	2.51	0.45
1:B:721:ILE:HG12	1:B:803:TRP:CD1	2.51	0.45
1:B:729:LYS:NZ	1:B:797:THR:OG1	2.50	0.45
1:C:36:PRO:CG	1:C:390:ASN:ND2	2.79	0.45
1:C:642:ILE:HG12	1:C:645:ARG:HH22	1.81	0.45
1:A:213:LEU:HB3	1:A:235:VAL:HG11	1.98	0.45
1:A:532:LEU:HD22	1:A:1020:LEU:HD22	1.98	0.45
1:C:480:SER:HA	1:C:483:LEU:CB	2.44	0.45
1:A:213:LEU:HD12	1:A:213:LEU:HA	1.78	0.45
1:A:577:GLU:HB2	1:A:718:ALA:HB2	1.97	0.45
1:A:665:PRO:HD2	1:A:673:SER:HA	1.98	0.45
1:B:184:ARG:HA	1:B:186:TRP:HE1	1.81	0.45
1:C:354:MET:SD	1:C:367:PRO:HG2	2.56	0.45
1:B:464:ASN:OD1	1:B:467:ARG:NH2	2.50	0.45
1:C:382:MET:HE2	1:C:468:GLN:HE22	1.80	0.45
1:C:987:GLY:N	1:C:990:SER:HB3	2.31	0.45
1:A:392:LEU:HD13	1:A:465:ILE:HG23	1.99	0.45
1:B:202:LEU:HB2	1:B:250:LEU:HD13	1.99	0.45
1:B:379:PHE:CE1	1:B:397:MET:HE3	2.52	0.45
1:B:404:LEU:HD11	1:B:476:SER:HB3	1.98	0.45
1:C:480:SER:HA	1:C:483:LEU:H	1.81	0.45
1:C:701:ALA:HA	1:C:841:LEU:HD13	1.98	0.45
1:A:729:LYS:O	1:A:733:LEU:HG	2.17	0.45
1:C:186:TRP:NE1	1:C:768:GLN:OE1	2.50	0.45
1:B:27:ILE:HD11	1:B:379:PHE:CD2	2.52	0.45
1:B:569:PHE:HE2	1:B:571:ILE:HD11	1.81	0.45
1:B:587:ASN:CG	1:B:656:ARG:HD3	2.42	0.45
1:B:755:ASP:HB3	1:B:762:VAL:O	2.17	0.45
1:B:975:PHE:HD2	1:B:1004:ILE:HG12	1.82	0.45
1:C:98:ASN:HD22	1:C:101:LEU:HG	1.82	0.45
1:C:191:LYS:HG2	1:C:197:LEU:HD13	1.99	0.45
1:A:169:GLU:HB2	1:A:304:ARG:NH1	2.32	0.45
1:B:141:LEU:HD11	1:B:161:VAL:HG21	1.99	0.45
1:A:886:TYR:OH	1:A:937:ILE:HA	2.17	0.45
1:A:969:VAL:O	1:A:973:LEU:HB2	2.17	0.45
1:A:1023:GLY:HA2	1:A:1028:LEU:HG	1.98	0.45
1:B:402:GLY:O	1:B:405:VAL:HG22	2.16	0.45
1:C:691:VAL:HG13	1:C:694:ARG:HH22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:66:GLU:OE2	1:B:812:ARG:NE	2.50	0.44
1:B:748:PHE:HB3	1:B:775:LEU:HD12	1.98	0.44
1:B:438:SER:HA	1:B:441:ILE:HD12	1.98	0.44
1:C:682:ARG:HD2	1:C:817:PRO:HG2	1.99	0.44
1:A:239:LEU:HB2	1:A:244:GLN:HB3	1.99	0.44
1:C:141:LEU:HB3	1:C:320:VAL:HG12	1.99	0.44
1:C:903:VAL:HG22	1:C:925:LEU:HD11	2.00	0.44
1:A:179:ALA:HB1	1:A:271:GLN:HB2	1.99	0.44
1:A:557:PRO:HB2	1:A:830:SER:HB3	1.99	0.44
1:C:777:ILE:HB	1:A:226:SER:O	2.17	0.44
1:A:737:MET:HE3	1:A:739:GLU:HB2	1.99	0.44
1:A:779:ASP:HA	1:A:782:ARG:HG2	1.98	0.44
1:A:931:LEU:HD22	1:A:975:PHE:CD2	2.52	0.44
1:C:465:ILE:HA	1:C:468:GLN:HG3	1.98	0.44
1:C:504:HIS:ND1	1:C:505:GLU:HG3	2.33	0.44
1:C:580:PRO:HA	1:A:224:PRO:HD2	2.00	0.44
1:A:413:GLU:O	1:A:417:ARG:HG3	2.18	0.44
1:B:721:ILE:HD12	1:C:233:VAL:HG22	1.99	0.44
1:C:38:ILE:HG23	1:C:461:ALA:HB3	1.99	0.44
1:C:50:PRO:HB3	1:C:751:ASP:HB3	2.00	0.44
1:C:366:ILE:HG12	1:C:495:LEU:HD12	2.00	0.44
1:C:719:PRO:HB3	1:C:803:TRP:CZ2	2.53	0.44
1:A:395:PHE:CE1	1:A:993:GLN:HG2	2.53	0.44
1:B:183:MET:HG2	1:B:245:PHE:CD2	2.52	0.44
1:B:300:ALA:O	1:B:304:ARG:HG3	2.17	0.44
1:B:343:LEU:HG	1:B:401:ILE:HD11	1.99	0.44
1:A:276:PHE:HA	1:A:608:GLY:O	2.17	0.44
1:B:39:ALA:O	1:B:95:GLN:NE2	2.47	0.44
1:B:148:TYR:HE2	1:B:318:GLU:HB3	1.81	0.44
1:B:545:VAL:O	1:B:549:VAL:HG23	2.17	0.44
1:B:694:ARG:HD3	1:B:819:PHE:CD2	2.53	0.44
1:C:206:VAL:HA	1:C:248:ILE:HD11	1.99	0.44
1:A:187:PRO:HG2	1:A:747:MET:HE1	1.99	0.44
1:A:245:PHE:HB2	1:A:267:VAL:HG11	1.98	0.44
1:B:331:PHE:O	1:B:334:ILE:HG13	2.18	0.44
1:B:1027:ARG:HE	1:B:1027:ARG:HA	1.83	0.44
1:A:350:VAL:HG12	1:A:354:MET:HE2	2.00	0.44
1:A:406:ASP:OD1	1:A:934:LYS:NZ	2.51	0.44
1:A:680:GLN:HG3	1:A:850:ALA:HB3	2.00	0.44
1:B:175:GLU:O	1:B:289:ALA:N	2.51	0.43
1:B:450:SER:O	1:B:454:PRO:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:13:TRP:O	1:C:17:LEU:HG	2.18	0.43
1:C:273:GLU:CD	1:C:764:LYS:HZ1	2.26	0.43
1:C:340:VAL:O	1:C:344:LEU:HG	2.17	0.43
1:A:45:VAL:HG13	1:A:128:VAL:HG22	2.00	0.43
1:A:339:VAL:HG22	1:A:993:GLN:HE21	1.83	0.43
1:A:503:HIS:NE2	1:A:506:LYS:HE3	2.33	0.43
1:B:875:VAL:HG13	1:B:896:ILE:HD12	2.00	0.43
1:C:607:VAL:HG13	1:C:621:MET:HB3	2.00	0.43
1:C:688:GLU:O	1:C:692:LYS:HG3	2.18	0.43
1:C:691:VAL:HG13	1:C:694:ARG:NH2	2.33	0.43
1:C:964:ARG:HD3	1:C:967:PRO:HG2	1.99	0.43
1:A:109:ARG:O	1:A:113:VAL:HG22	2.18	0.43
1:A:733:LEU:HD13	1:A:793:VAL:HG11	1.99	0.43
1:C:500:ASP:N	1:C:500:ASP:OD1	2.44	0.43
1:C:653:LEU:HD12	1:C:653:LEU:H	1.82	0.43
1:A:65:ILE:O	1:A:69:MET:HG2	2.18	0.43
1:A:310:ASP:O	1:A:313:SER:OG	2.29	0.43
1:A:976:GLY:O	1:A:980:VAL:HG23	2.19	0.43
1:B:371:VAL:HB	1:B:372:PRO:HD3	2.01	0.43
1:B:643:VAL:HG13	1:B:660:ALA:HB3	2.00	0.43
1:C:456:ALA:HB2	1:C:467:ARG:CD	2.43	0.43
1:C:492:CYS:O	1:C:496:LEU:HB2	2.19	0.43
1:B:182:ALA:O	1:B:271:GLN:HA	2.18	0.43
1:B:454:PRO:HG2	1:B:874:SER:HA	2.00	0.43
1:C:411:VAL:O	1:C:415:VAL:HG23	2.18	0.43
1:A:575:GLN:HE22	1:A:656:ARG:HB2	1.83	0.43
1:A:629:TRP:CD2	1:A:988:ALA:HB2	2.53	0.43
1:B:118:PRO:O	1:B:122:ARG:HG3	2.19	0.43
1:B:676:ASP:HB3	1:B:854:SER:O	2.19	0.43
1:A:704:ASP:HB2	1:A:841:LEU:HD11	2.01	0.43
1:A:740:ILE:O	1:A:743:THR:OG1	2.30	0.43
1:B:39:ALA:HB2	1:B:668:ASP:HB3	2.00	0.43
1:B:180:GLU:OE1	1:B:180:GLU:N	2.51	0.43
1:B:200:SER:OG	1:B:204:ASN:ND2	2.52	0.43
1:B:452:PHE:CZ	1:B:927:THR:HG22	2.53	0.43
1:C:113:VAL:HG12	1:C:116:ARG:HD3	2.00	0.43
1:C:378:THR:HG23	1:C:472:THR:HG23	2.01	0.43
1:C:409:ILE:O	1:C:413:GLU:HB2	2.19	0.43
1:C:957:THR:HG22	1:C:1016:PRO:HB3	2.01	0.43
1:A:418:LEU:HB3	1:A:424:LEU:HD12	2.01	0.43
1:B:726:ASP:OD1	1:B:726:ASP:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:209:HIS:ND1	1:C:248:ILE:HG13	2.33	0.43
1:C:418:LEU:HB3	1:C:424:LEU:HD12	2.00	0.43
1:C:737:MET:HE2	1:A:213:LEU:HD13	2.00	0.43
1:C:920:TYR:HD2	1:C:996:ILE:HG12	1.84	0.43
1:A:246:GLY:HA2	1:A:261:LEU:HB2	2.00	0.43
1:A:266:ARG:NH1	1:A:770:ASP:OD2	2.52	0.43
1:B:195:MET:HE3	1:B:197:LEU:HD23	1.99	0.43
1:B:393:THR:O	1:B:397:MET:HG2	2.19	0.43
1:B:755:ASP:OD1	1:B:756:PHE:N	2.51	0.43
1:C:477:ILE:O	1:C:480:SER:HB2	2.19	0.43
1:C:478:GLY:O	1:C:481:ALA:HB3	2.18	0.43
1:C:534:ARG:HH21	1:C:537:ARG:NH1	2.17	0.43
1:A:455:MET:HE3	1:A:470:ALA:HB2	2.01	0.43
1:B:161:VAL:HA	1:B:312:LEU:HD13	2.01	0.43
1:B:367:PRO:O	1:B:371:VAL:HG23	2.18	0.43
1:B:891:ILE:O	1:B:895:VAL:HG23	2.19	0.43
1:C:184:ARG:HB2	1:C:269:PHE:HB2	2.01	0.43
1:C:393:THR:O	1:C:397:MET:HG2	2.18	0.43
1:A:275:GLY:O	1:A:609:GLY:HA3	2.19	0.43
1:A:458:PHE:CB	1:A:463:GLY:HA2	2.48	0.43
1:A:503:HIS:CE1	1:A:506:LYS:HE3	2.54	0.43
1:B:681:ASP:HB2	1:B:690:LEU:HD13	2.00	0.42
1:B:979:VAL:HG11	1:B:1000:VAL:HB	2.01	0.42
1:C:349:LEU:HD13	1:C:977:PHE:HB3	2.01	0.42
1:C:392:LEU:HD22	1:C:466:TYR:HE2	1.84	0.42
1:C:409:ILE:HA	1:C:412:VAL:HG12	2.01	0.42
1:C:700:ARG:HH12	1:C:845:LEU:HD21	1.82	0.42
1:C:741:ASN:HD21	1:A:214:THR:H	1.66	0.42
1:C:953:LEU:HG	1:C:1020:LEU:HD12	2.01	0.42
1:A:247:GLU:O	1:A:260:ARG:NH1	2.45	0.42
1:C:148:TYR:CE1	1:C:319:GLY:HA3	2.53	0.42
1:C:722:ARG:HE	1:C:804:THR:HG21	1.83	0.42
1:B:263:ASP:HA	1:B:266:ARG:HB2	2.01	0.42
1:C:250:LEU:HD12	1:C:260:ARG:HA	1.99	0.42
1:C:600:PRO:HB2	1:C:627:LYS:HE2	2.02	0.42
1:B:95:GLN:HG2	1:B:464:ASN:HD21	1.85	0.42
1:B:191:LYS:HE3	1:B:773:LYS:HE3	2.00	0.42
1:B:577:GLU:CD	1:B:577:GLU:H	2.27	0.42
1:C:520:LEU:HA	1:C:523:ARG:HD2	2.01	0.42
1:C:775:LEU:HD12	1:C:775:LEU:HA	1.93	0.42
1:A:677:PHE:HB3	1:A:821:LEU:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:898:VAL:HG22	1:A:1015:VAL:HG22	2.02	0.42
1:B:610:PHE:HA	1:B:615:ASP:OD1	2.19	0.42
1:B:774:ARG:NH1	1:B:777:ILE:HB	2.34	0.42
1:A:573:VAL:HG12	1:A:575:GLN:HE21	1.84	0.42
1:A:755:ASP:HB3	1:A:762:VAL:HG12	2.00	0.42
1:B:317:PRO:HD2	1:B:320:VAL:HB	2.02	0.42
1:B:525:ARG:HD2	1:B:962:ARG:HE	1.84	0.42
1:C:66:GLU:OE1	1:C:812:ARG:NH1	2.52	0.42
1:C:371:VAL:HA	1:C:404:LEU:HD22	2.02	0.42
1:C:715:GLN:HB2	1:C:808:PRO:HG3	2.02	0.42
1:A:787:ASN:OD1	1:A:788:GLU:N	2.52	0.42
1:B:749:GLY:HA2	1:C:215:VAL:HG11	2.01	0.42
1:C:186:TRP:CD2	1:C:269:PHE:HA	2.55	0.42
1:C:458:PHE:CE1	1:C:870:LEU:HD21	2.54	0.42
1:C:483:LEU:CA	1:C:487:LEU:H	2.31	0.42
1:C:741:ASN:HA	1:C:744:LEU:HD12	2.02	0.42
1:B:119:GLU:O	1:B:123:ARG:HG2	2.19	0.42
1:B:789:GLN:CD	1:B:789:GLN:H	2.27	0.42
1:C:484:ALA:HA	1:C:488:THR:CB	2.48	0.42
1:B:918:ASP:H	1:B:921:PHE:HB3	1.85	0.41
1:C:387:PHE:CE1	1:C:468:GLN:HG2	2.54	0.41
1:B:34:GLN:HB2	1:B:332:VAL:HG13	2.02	0.41
1:B:104:VAL:HG21	1:C:101:LEU:HD23	2.02	0.41
1:B:186:TRP:O	1:B:267:VAL:HG11	2.19	0.41
1:B:186:TRP:C	1:B:267:VAL:HG11	2.44	0.41
1:C:65:ILE:O	1:C:69:MET:HG2	2.20	0.41
1:C:457:PHE:HB2	1:C:870:LEU:HD22	2.02	0.41
1:C:902:GLY:HA2	1:C:1007:ALA:HB2	2.02	0.41
1:C:358:MET:HG2	1:C:416:GLU:OE2	2.20	0.41
1:C:700:ARG:NH2	1:C:841:LEU:O	2.49	0.41
1:B:587:ASN:O	1:B:591:VAL:HG23	2.20	0.41
1:C:157:ALA:O	1:C:161:VAL:N	2.53	0.41
1:C:433:ALA:O	1:C:437:ILE:HG12	2.20	0.41
1:C:675:PHE:HB3	1:C:853:TRP:HZ3	1.86	0.41
1:C:680:GLN:HG3	1:C:681:ASP:N	2.34	0.41
1:C:867:ALA:HB3	1:C:868:PRO:HD3	2.01	0.41
1:A:197:LEU:HB2	1:A:251:ARG:HH21	1.85	0.41
1:A:297:ASN:HD22	1:A:300:ALA:H	1.68	0.41
1:A:906:ALA:O	1:A:910:VAL:HG22	2.21	0.41
1:B:33:ALA:O	1:B:390:ASN:HA	2.20	0.41
1:B:444:ILE:O	1:B:447:VAL:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:680:GLN:HE21	1:B:813:TYR:HD1	1.69	0.41
1:C:33:ALA:O	1:C:390:ASN:HA	2.20	0.41
1:A:492:CYS:O	1:A:496:LEU:HB2	2.20	0.41
1:B:561:LEU:HD12	1:B:666:LEU:HD11	2.03	0.41
1:B:594:TYR:CE2	1:B:646:ILE:HA	2.53	0.41
1:C:382:MET:HG3	1:C:387:PHE:HB2	2.01	0.41
1:C:394:MET:O	1:C:398:VAL:HG13	2.21	0.41
1:A:76:LEU:N	1:A:92:THR:O	2.54	0.41
1:A:331:PHE:HA	1:A:334:ILE:HG22	2.02	0.41
1:B:133:ASP:OD1	1:B:291:LYS:NZ	2.54	0.41
1:B:156:ILE:HD13	1:B:317:PRO:HG2	2.03	0.41
1:B:898:VAL:HG21	1:B:936:ALA:CB	2.51	0.41
1:C:184:ARG:HE	1:C:768:GLN:NE2	2.19	0.41
1:C:332:VAL:O	1:C:336:ILE:HG12	2.21	0.41
1:C:480:SER:HB3	1:C:484:ALA:HB3	2.01	0.41
1:A:525:ARG:NE	1:A:958:LEU:HB3	2.20	0.41
1:A:528:VAL:O	1:A:532:LEU:HG	2.20	0.41
1:B:722:ARG:NH2	1:B:804:THR:HG21	2.36	0.41
1:C:186:TRP:CH2	1:C:772:ALA:HB2	2.56	0.41
1:A:414:ASN:HA	1:A:417:ARG:NE	2.32	0.41
1:A:469:PHE:CE2	1:A:923:VAL:HG13	2.55	0.41
1:A:779:ASP:OD1	1:A:780:ILE:N	2.52	0.41
1:A:784:HIS:HB2	1:A:792:MET:HE3	2.03	0.41
1:B:668:ASP:OD1	1:B:668:ASP:N	2.54	0.41
1:B:752:TYR:HB3	1:B:766:VAL:HG22	2.03	0.41
1:C:195:MET:HE3	1:C:195:MET:HB3	1.84	0.41
1:C:391:VAL:O	1:C:395:PHE:HB2	2.20	0.41
1:C:882:LEU:HB2	1:C:892:PRO:HB3	2.03	0.41
1:A:165:LEU:O	1:A:171:VAL:HG11	2.20	0.41
1:A:566:GLN:HG3	1:A:663:SER:HB2	2.03	0.41
1:A:879:PHE:HD1	1:A:896:ILE:HG13	1.86	0.41
1:B:510:PHE:HD1	1:B:510:PHE:HA	1.78	0.41
1:B:744:LEU:HA	1:B:747:MET:HB3	2.03	0.41
1:A:180:GLU:O	1:A:763:ARG:HD2	2.20	0.41
1:A:449:VAL:O	1:A:453:VAL:HG23	2.21	0.41
1:A:763:ARG:HA	1:A:763:ARG:HD3	1.92	0.41
1:A:784:HIS:HA	1:A:795:LEU:H	1.85	0.41
1:B:115:SER:HB3	1:B:116:ARG:HH11	1.86	0.40
1:B:558:GLN:HA	1:B:917:ASN:HB3	2.01	0.40
1:C:372:PRO:O	1:C:376:LEU:HG	2.21	0.40
1:C:580:PRO:HG3	1:A:224:PRO:HG2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:406:ASP:O	1:B:410:ILE:HG13	2.22	0.40
1:B:557:PRO:HB2	1:B:830:SER:OG	2.21	0.40
1:B:750:SER:HA	1:B:768:GLN:HG2	2.03	0.40
1:A:246:GLY:O	1:A:260:ARG:HB3	2.20	0.40
1:A:311:GLU:O	1:A:314:ARG:HB3	2.20	0.40
1:A:431:VAL:CG1	1:A:435:ARG:HE	2.33	0.40
1:A:454:PRO:HG2	1:A:874:SER:CA	2.50	0.40
1:A:842:MET:HE3	1:A:842:MET:HB3	1.90	0.40
1:B:11:PHE:O	1:B:15:ILE:HG12	2.20	0.40
1:B:626:LEU:HD23	1:B:626:LEU:HA	1.93	0.40
1:B:966:ARG:HB3	1:B:967:PRO:HD3	2.02	0.40
1:C:45:VAL:HG22	1:C:128:VAL:HG22	2.03	0.40
1:C:120:SER:HA	1:C:123:ARG:NE	2.36	0.40
1:C:646:ILE:HG22	1:C:647:ASN:H	1.86	0.40
1:A:677:PHE:HD2	1:A:821:LEU:HB2	1.86	0.40
1:A:764:LYS:HE3	1:A:764:LYS:HB2	1.86	0.40
1:B:3:ARG:HA	1:B:3:ARG:HD2	1.89	0.40
1:B:369:LEU:O	1:B:372:PRO:HD2	2.22	0.40
1:C:362:ARG:H	1:C:362:ARG:HG2	1.74	0.40
1:C:428:ASP:OD1	1:C:428:ASP:N	2.52	0.40
1:C:570:MET:HE3	1:C:570:MET:HB3	2.00	0.40
1:C:699:ALA:O	1:C:703:GLU:HG2	2.20	0.40
1:C:777:ILE:HD12	1:A:228:PRO:HD2	2.03	0.40
1:A:260:ARG:HG3	1:A:262:ARG:HH21	1.85	0.40
1:B:575:GLN:NE2	1:B:655:ASN:O	2.54	0.40
1:B:728:ARG:H	1:B:728:ARG:HG2	1.63	0.40
1:C:840:GLN:O	1:C:843:GLN:HB2	2.22	0.40
1:A:189:PRO:HB2	1:A:782:ARG:NH2	2.35	0.40
1:A:400:ALA:O	1:A:401:ILE:C	2.65	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	1029/1031 (100%)	1006 (98%)	23 (2%)	0	100	100
1	B	987/1031 (96%)	959 (97%)	27 (3%)	1 (0%)	48	78
1	C	1005/1031 (98%)	948 (94%)	57 (6%)	0	100	100
All	All	3021/3093 (98%)	2913 (96%)	107 (4%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	B	317	PRO

5.3.2 Protein sidechains ⓘ

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	817/819 (100%)	800 (98%)	17 (2%)	47	62
1	B	789/819 (96%)	768 (97%)	21 (3%)	39	57
1	C	799/819 (98%)	769 (96%)	30 (4%)	29	51
All	All	2405/2457 (98%)	2337 (97%)	68 (3%)	38	57

All (68) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	B	111	LYS
1	B	171	VAL
1	B	185	ILE
1	B	202	LEU
1	B	240	VAL
1	B	267	VAL
1	B	277	VAL
1	B	280	VAL
1	B	316	PHE
1	B	451	VAL
1	B	473	LEU
1	B	575	GLN

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Mol	Chain	Res	Type
1	B	622	ILE
1	B	658	VAL
1	B	669	LEU
1	B	726	ASP
1	B	746	VAL
1	B	760	SER
1	B	768	GLN
1	B	793	VAL
1	B	842	MET
1	C	44	ASN
1	C	84	THR
1	C	100	ASP
1	C	135	ILE
1	C	169	GLU
1	C	174	VAL
1	C	239	LEU
1	C	241	THR
1	C	267	VAL
1	C	320	VAL
1	C	364	THR
1	C	398	VAL
1	C	404	LEU
1	C	406	ASP
1	C	409	ILE
1	C	414	ASN
1	C	428	ASP
1	C	462	VAL
1	C	465	ILE
1	C	564	GLU
1	C	570	MET
1	C	574	MET
1	C	607	VAL
1	C	707	LEU
1	C	721	ILE
1	C	779	ASP
1	C	782	ARG
1	C	885	LEU
1	C	887	GLU
1	C	925	LEU
1	A	136	GLN
1	A	137	LEU
1	A	451	VAL

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Mol	Chain	Res	Type
1	A	503	HIS
1	A	507	ARG
1	A	531	ILE
1	A	721	ILE
1	A	723	LEU
1	A	741	ASN
1	A	753	ILE
1	A	766	VAL
1	A	851	HIS
1	A	862	LEU
1	A	923	VAL
1	A	925	LEU
1	A	931	LEU
1	A	973	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (28) such sidechains are listed below:

Mol	Chain	Res	Type
1	B	70	ASN
1	B	107	GLN
1	B	163	GLN
1	B	196	ASN
1	B	414	ASN
1	B	504	HIS
1	B	587	ASN
1	B	761	GLN
1	B	836	GLN
1	C	34	GLN
1	C	98	ASN
1	C	108	ASN
1	C	210	ASN
1	C	514	ASN
1	C	558	GLN
1	C	638	HIS
1	C	648	GLN
1	C	917	ASN
1	C	955	GLN
1	A	70	ASN
1	A	107	GLN
1	A	204	ASN
1	A	297	ASN
1	A	390	ASN

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Mol	Chain	Res	Type
1	A	758	HIS
1	A	768	GLN
1	A	809	GLN
1	A	843	GLN

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.

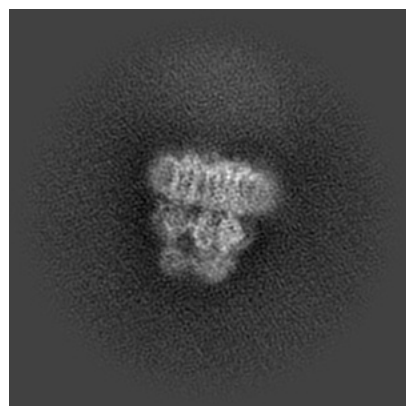
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-47796. These allow visual inspection of the internal detail of the map and identification of artifacts.

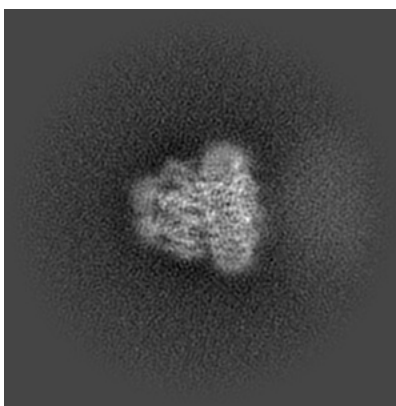
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

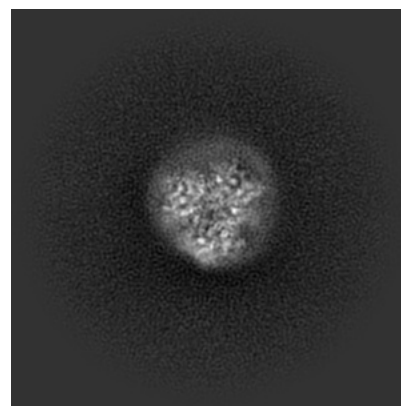
6.1.1 Primary map



X

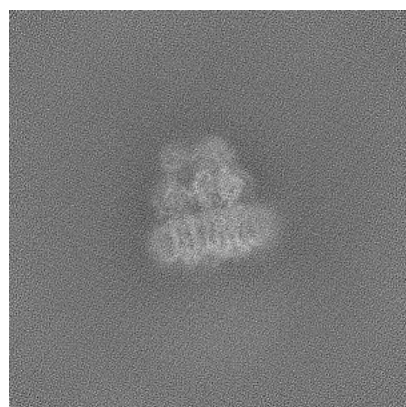


Y

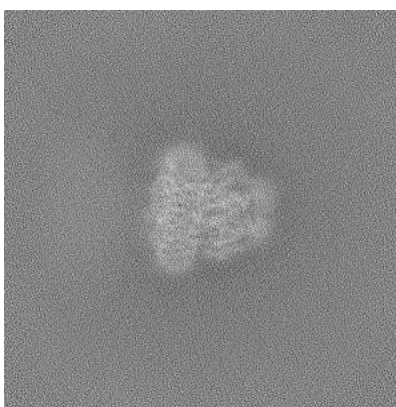


Z

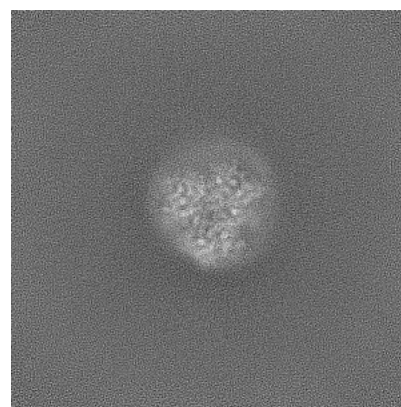
6.1.2 Raw map



X



Y

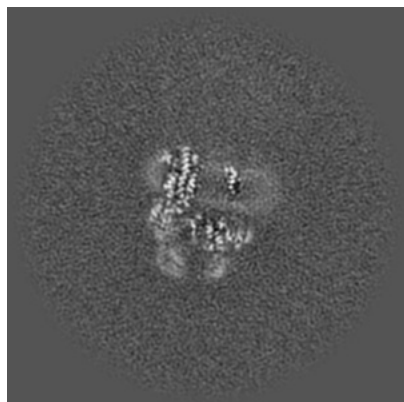


Z

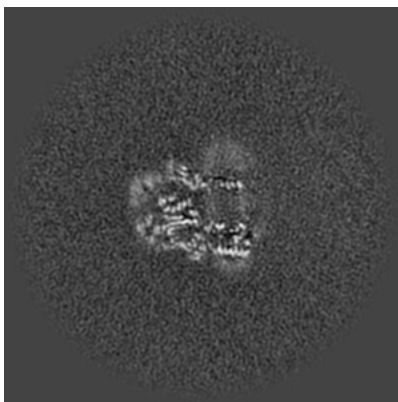
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

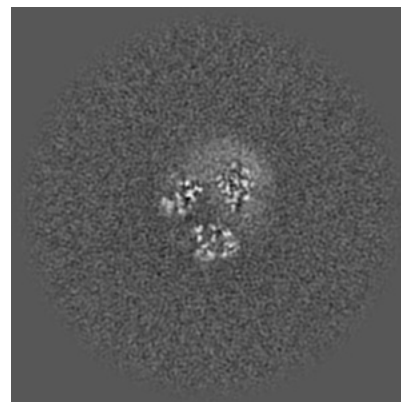
6.2.1 Primary map



X Index: 180

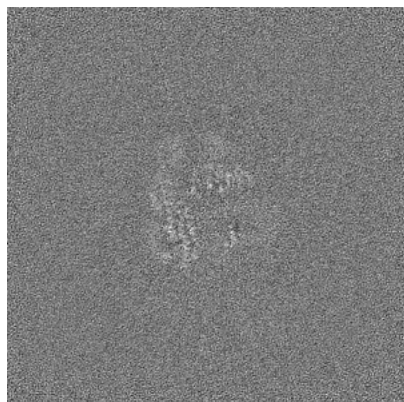


Y Index: 180



Z Index: 180

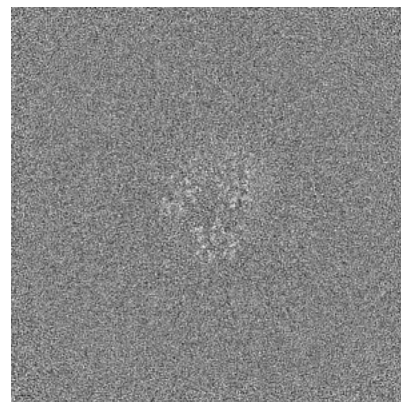
6.2.2 Raw map



X Index: 180



Y Index: 180

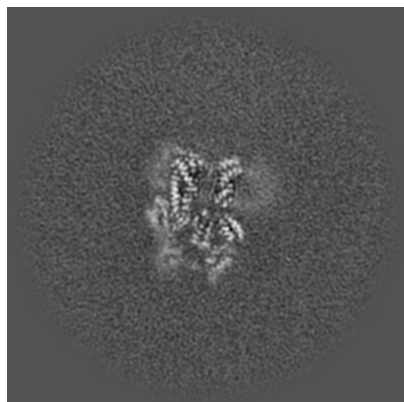


Z Index: 180

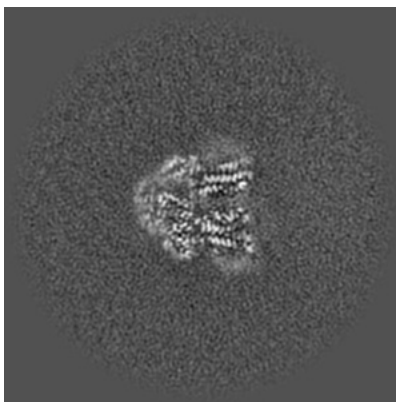
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

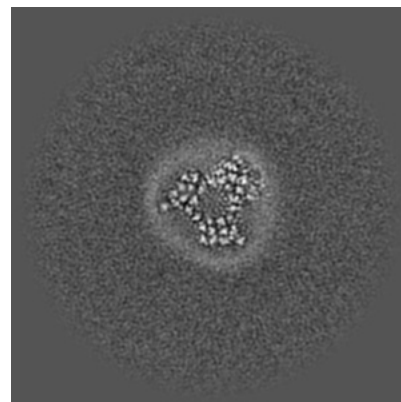
6.3.1 Primary map



X Index: 171

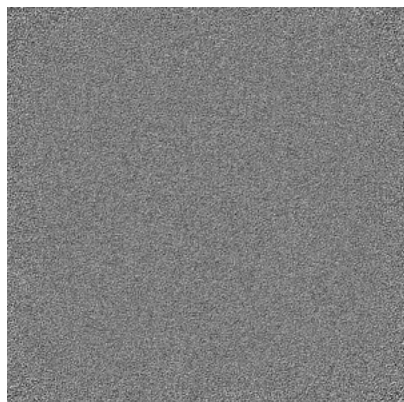


Y Index: 194

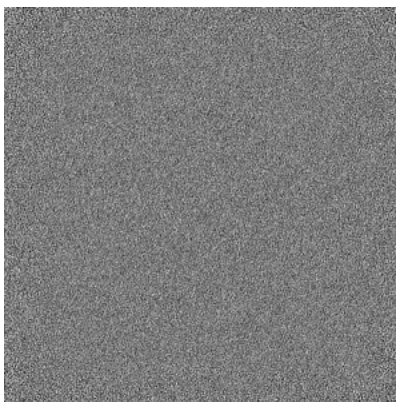


Z Index: 206

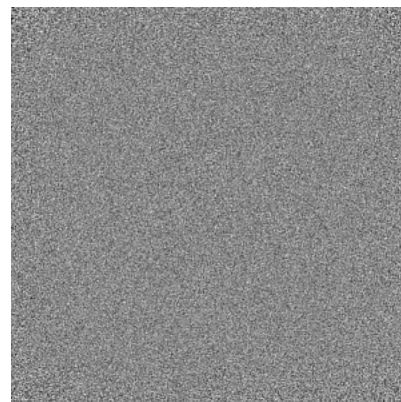
6.3.2 Raw map



X Index: 0



Y Index: 0

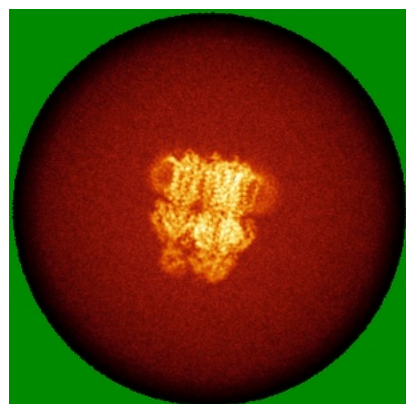


Z Index: 0

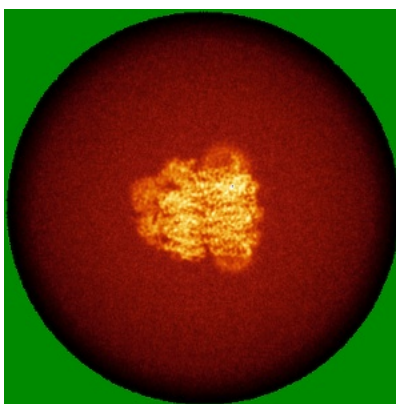
The images above show the largest variance slices of the map in three orthogonal directions.

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

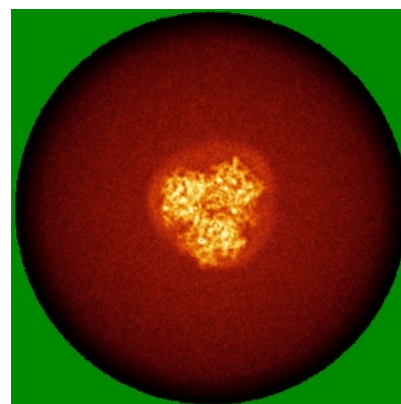
6.4.1 Primary map



X

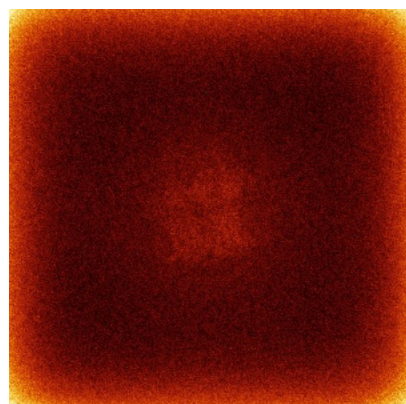


Y

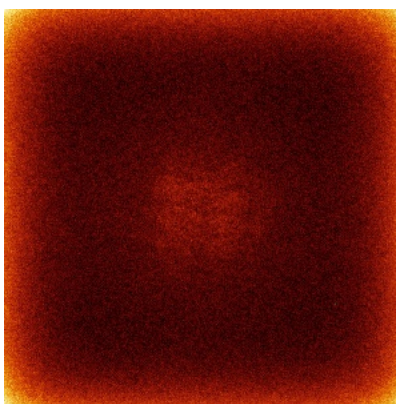


Z

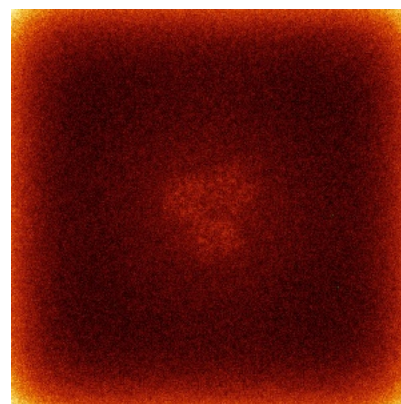
6.4.2 Raw map



X



Y

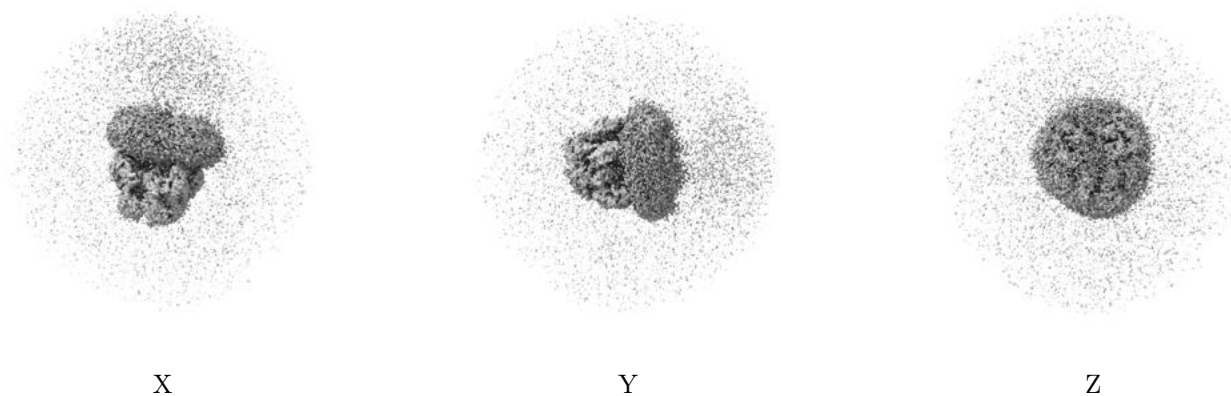


Z

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.

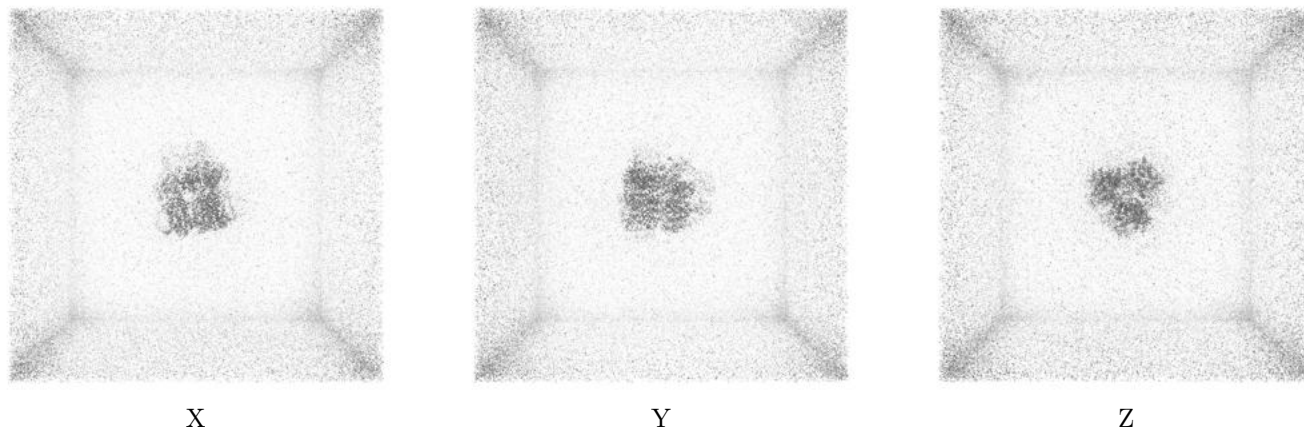
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.1. 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.

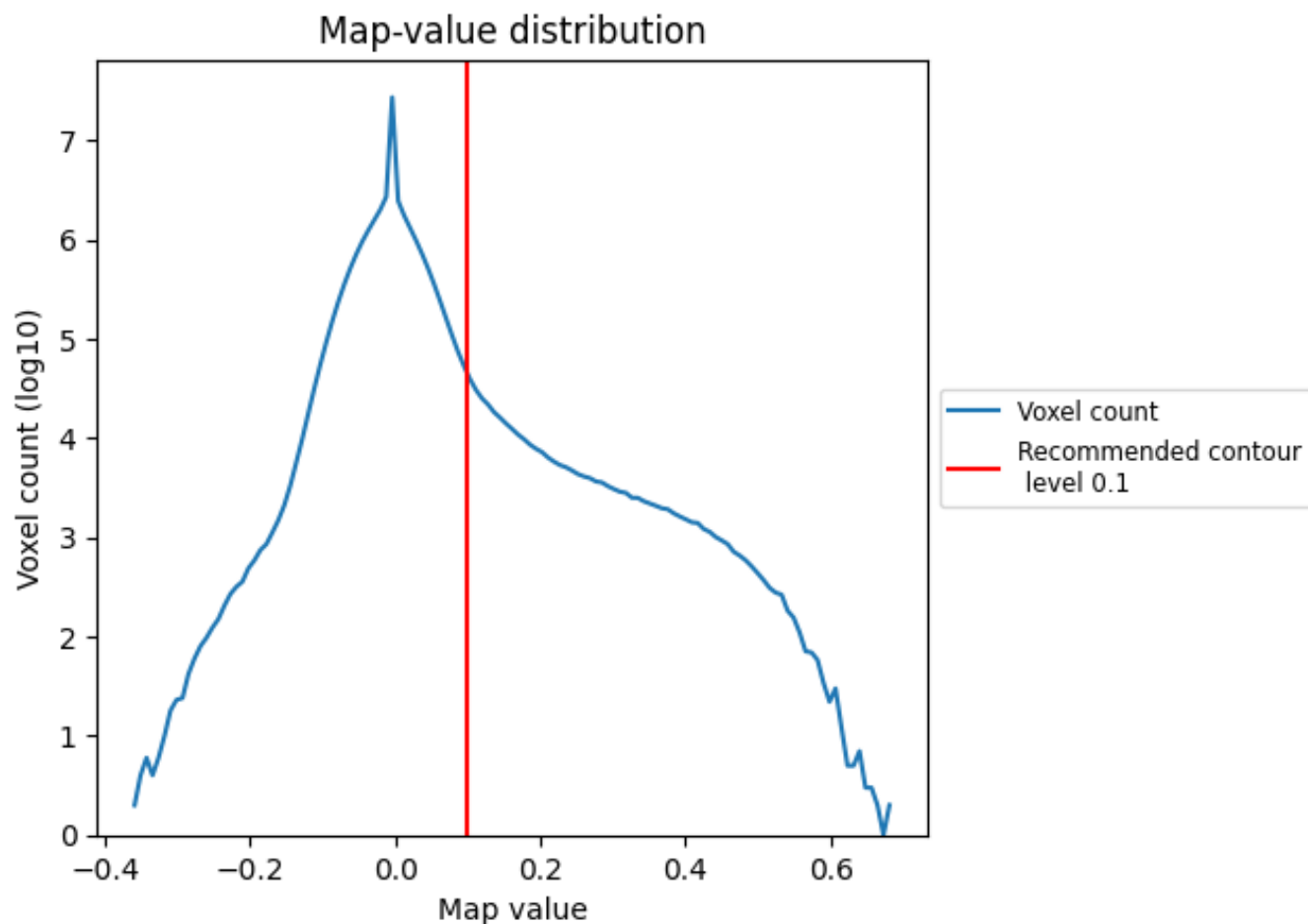
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

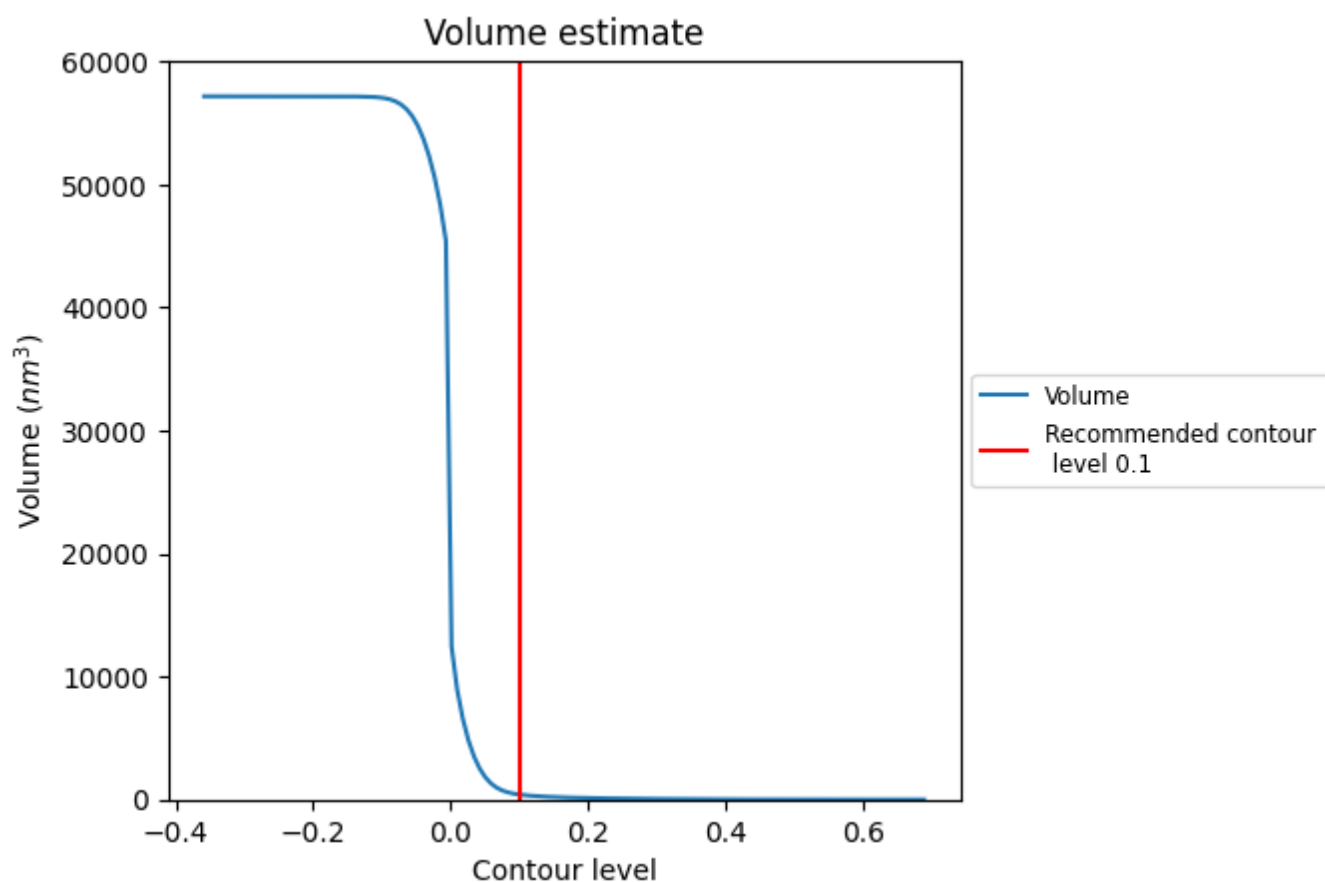
This section contains the results of statistical analysis of the map.

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.

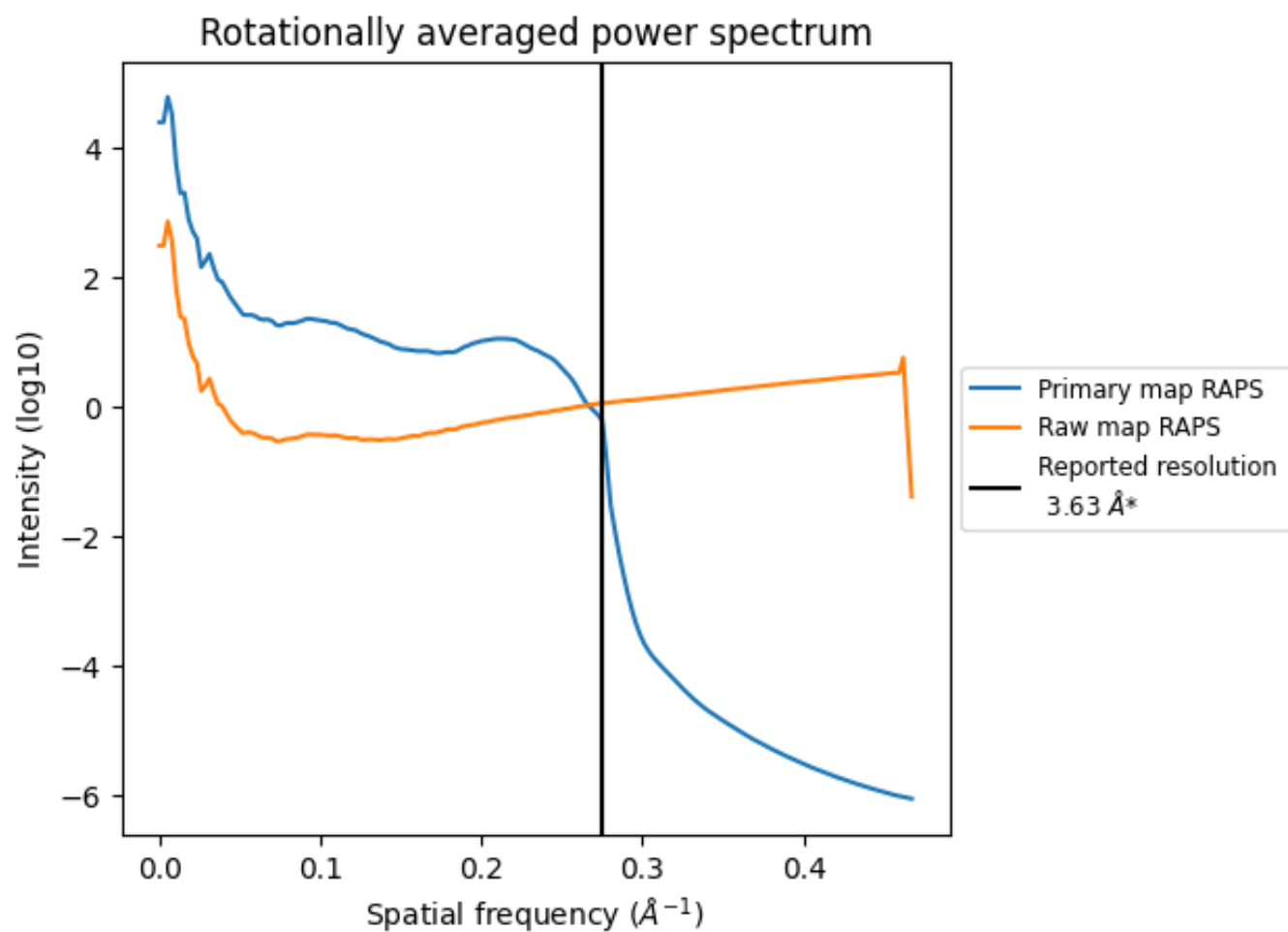
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 409 nm³; this corresponds to an approximate mass of 369 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 ⓘ

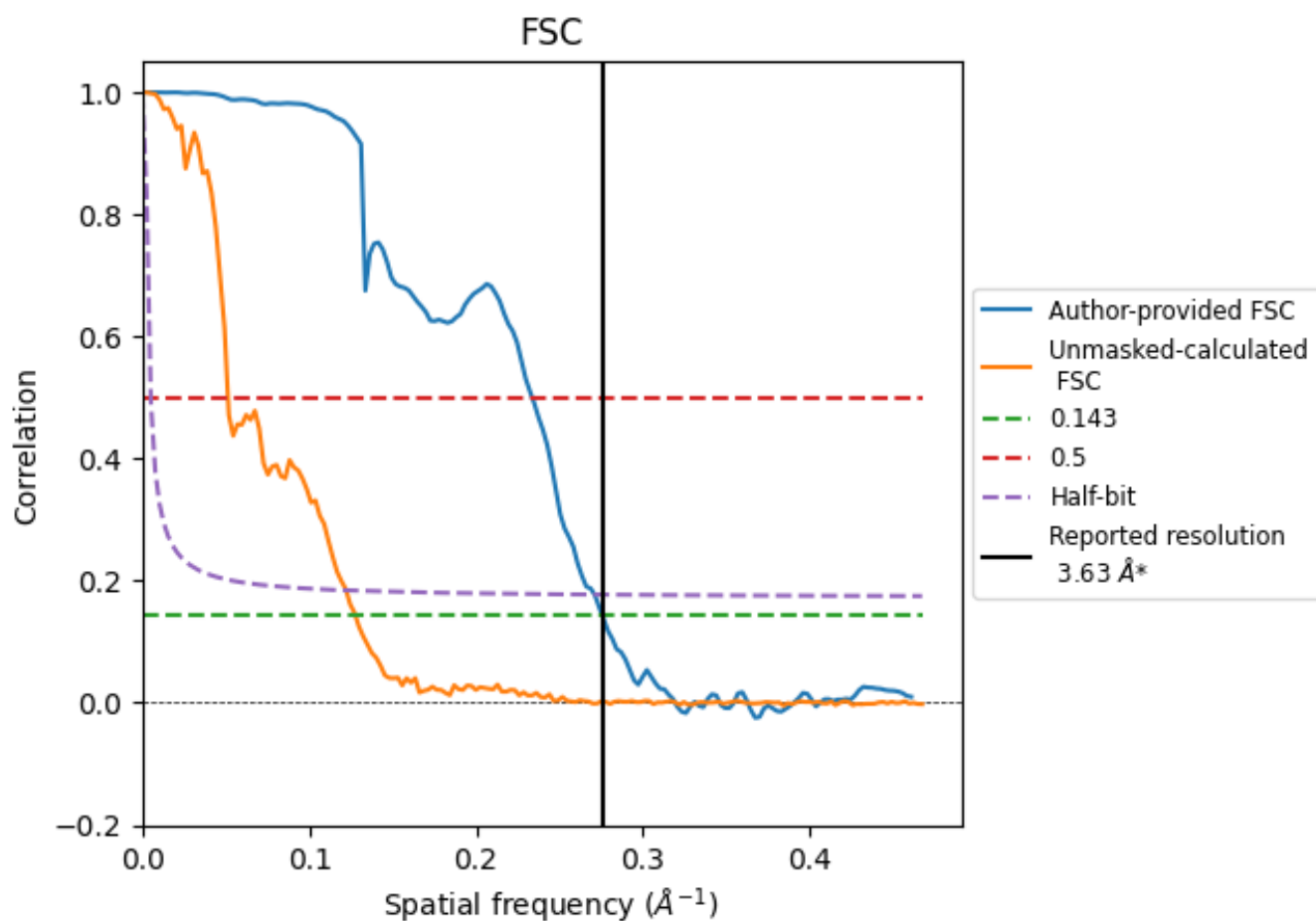


*Reported resolution corresponds to spatial frequency of 0.275 Å⁻¹

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 0.275 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

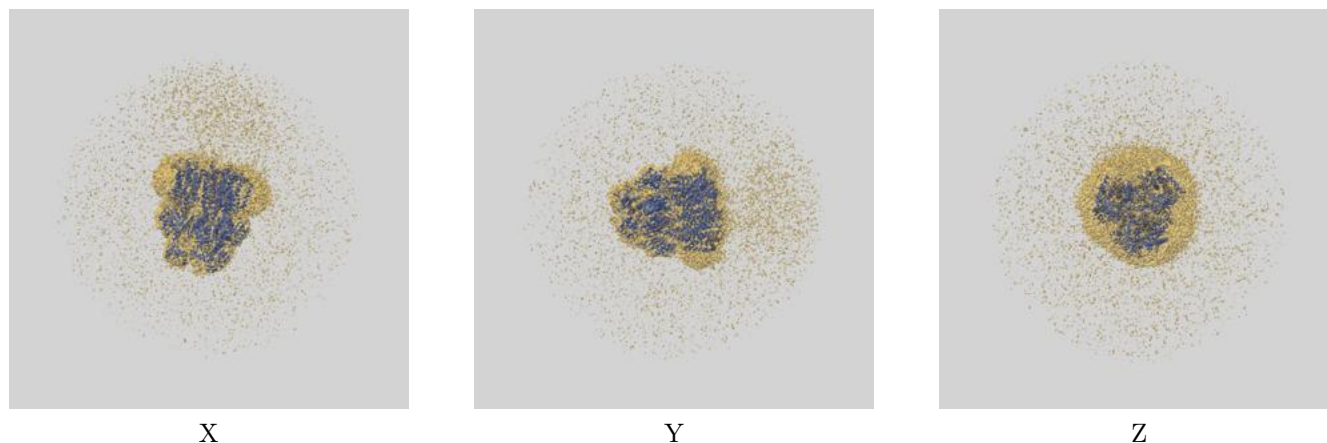
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.63	-	-
Author-provided FSC curve	3.63	4.28	3.69
Unmasked-calculated*	7.83	19.46	8.18

*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 7.83 differs from the reported value 3.63 by more than 10 %

9 Map-model fit [i](#)

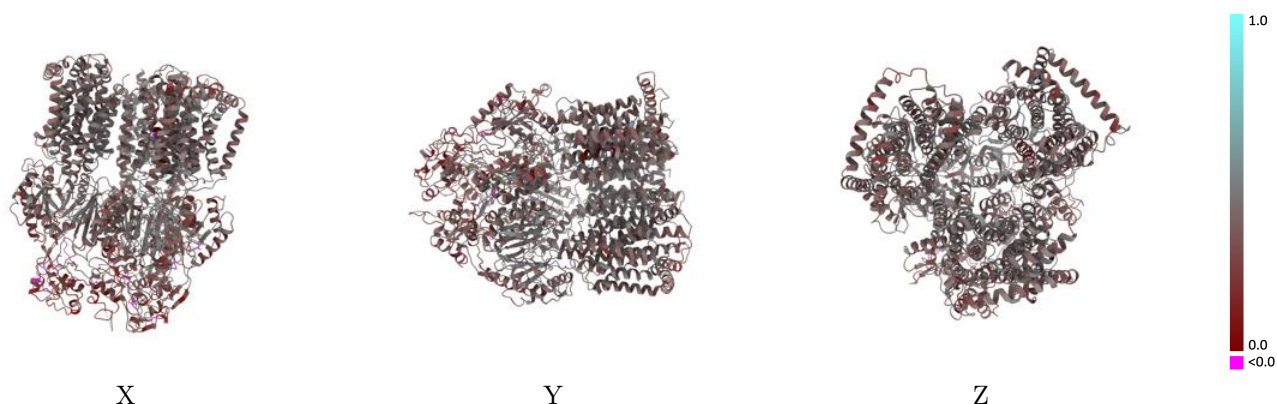
This section contains information regarding the fit between EMDB map EMD-47796 and PDB model 9E9F. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

9.1 Map-model overlay [i](#)



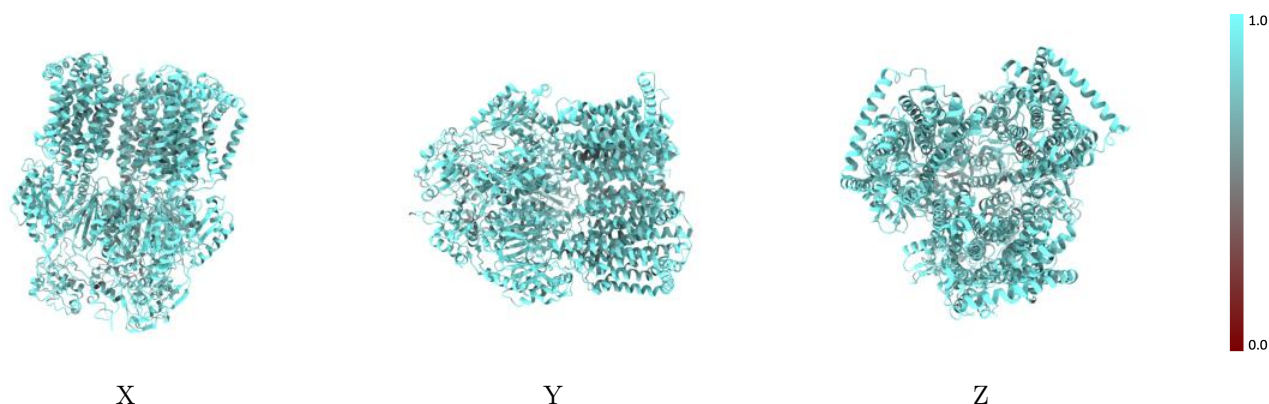
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



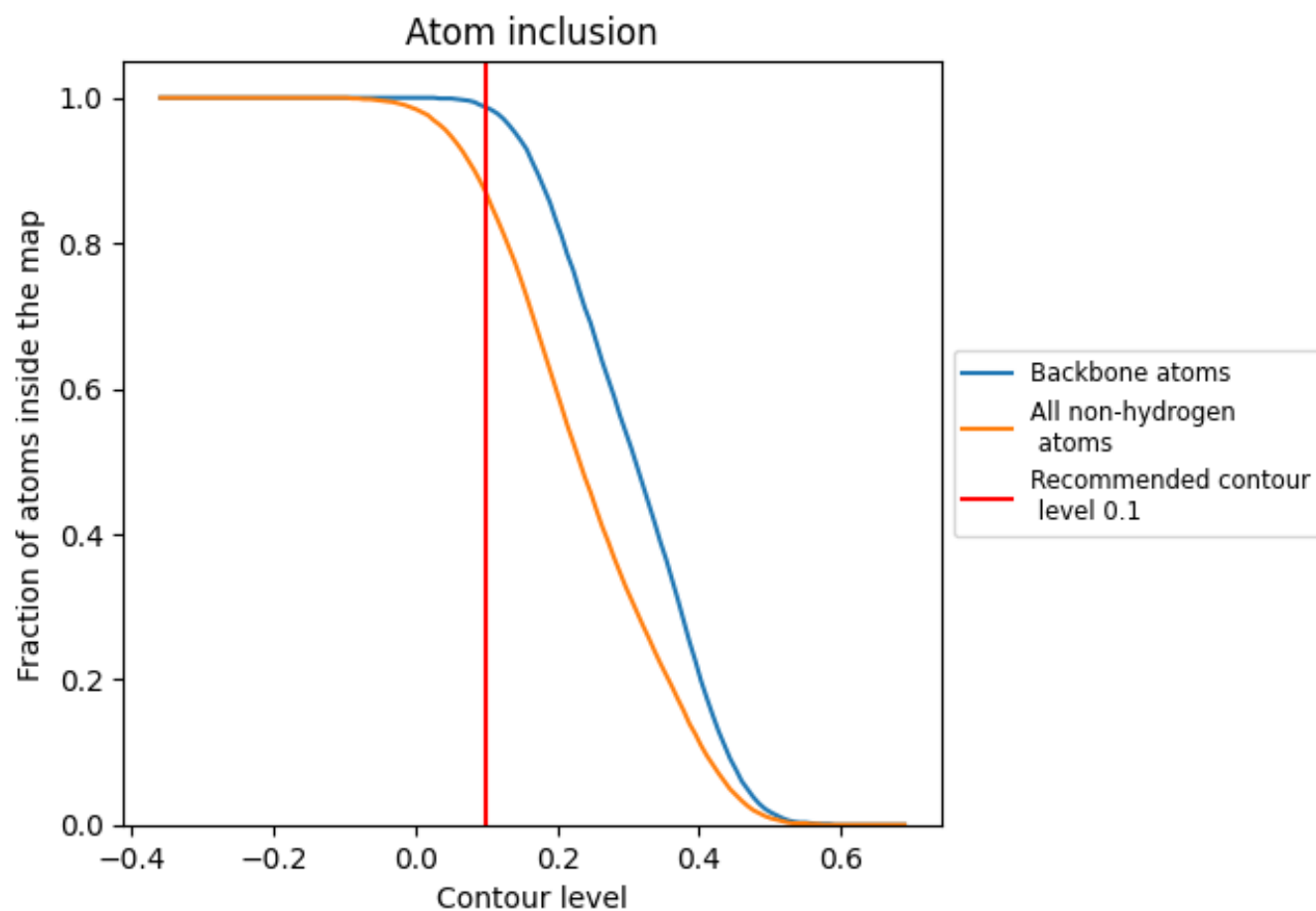
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.1).

9.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 87% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8690	0.3700
A	0.8700	0.3840
B	0.8730	0.3650
C	0.8640	0.3610

