



Full wwPDB EM Validation Report ⓘ

Aug 8, 2026 – 10:39 AM EDT

PDB ID : 11LX / pdb_000011lx
EMDB ID : EMD-75829
Title : Bacteriophage Goslar Baseplate
Authors : Basu, D.; Gu, Y.; Corbett, K.D.
Deposited on : 2026-03-03
Resolution : 3.88 Å(reported)
Based on initial model : .

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:

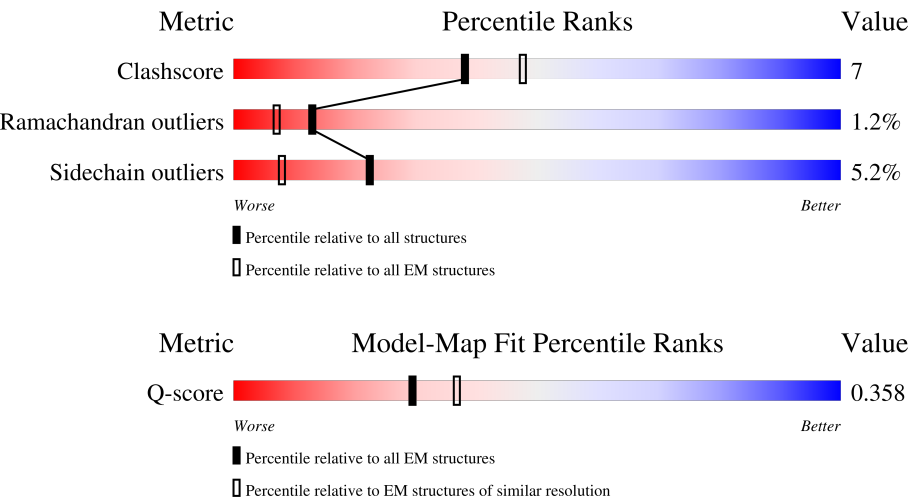
EMDB validation analysis : 0.0.1.dev133
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.50

1 Overall quality at a glance i

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

The reported resolution of this entry is 3.88 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.



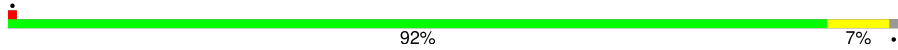
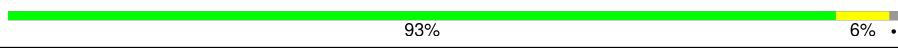
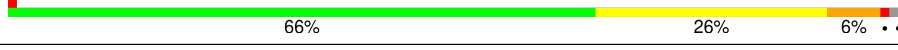
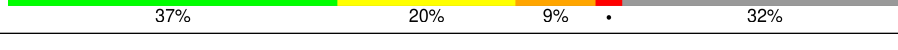
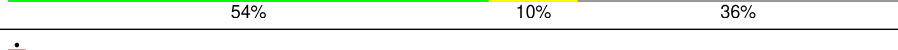
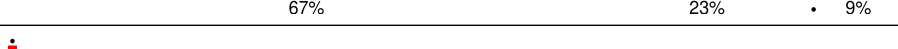
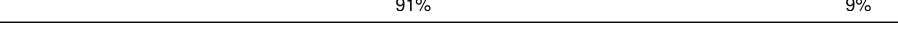
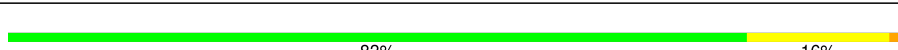
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	8773 (3.38 - 4.38)

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	AJ	401	74%15%10%
2	AO	296	92%5%
3	Aa	294	10% 80%9%11%
3	Ab	294	17% 82%10%9%

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Mol	Chain	Length	Quality of chain
4	Ah	690	
4	An	690	
4	Az	690	
5	Aq	997	
5	M	997	
6	Bh	803	
7	CJ	355	
8	H	713	
9	I	117	
10	V	137	
10	W	137	
10	s	137	
10	t	137	
11	X	135	
12	n	208	
12	o	208	

2 Entry composition

There are 12 unique types of molecules in this entry. The entry contains 60205 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 Tail Tube Initiator Protein gp62.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AJ	361	Total	C	N	O	S	0	0
			2954	1884	508	548	14		

- Molecule 2 is a protein called Tail Tube of Bacteriophage Goslar.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AO	287	Total	C	N	O	S	0	0
			2259	1432	385	431	11		

- Molecule 3 is a protein called Virion structural protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	Aa	263	Total	C	N	O	S	0	0
			2093	1324	356	405	8		
3	Ab	269	Total	C	N	O	S	0	0
			2130	1348	361	413	8		

- Molecule 4 is a protein called Tail sheath protein gp29 gp29PR domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	Ah	680	Total	C	N	O	S	0	0
			5306	3345	895	1044	22		
4	An	661	Total	C	N	O	S	0	0
			5179	3263	876	1019	21		
4	Az	680	Total	C	N	O	S	0	0
			5306	3345	895	1044	22		

- Molecule 5 is a protein called Baseplate wedge protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	Aq	979	Total	C	N	O	S	0	0
			7770	4918	1285	1537	30		

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Mol	Chain	Residues	Atoms					AltConf	Trace
5	M	962	Total	C	N	O	S	0	0
			7629	4830	1263	1508	28		

- Molecule 6 is a protein called Virion structural protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	Bh	579	Total	C	N	O	S	0	0
			4793	3063	797	902	31		

- Molecule 7 is a protein called Inner baseplate protein gp202.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	CJ	243	Total	C	N	O	S	0	0
			1908	1202	319	381	6		

- Molecule 8 is a protein called Tail tube initiator complex protein gp203.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	457	Total	C	N	O	S	0	0
			3563	2253	598	694	18		

- Molecule 9 is a protein called Inner Baseplate Protein gp172.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	106	Total	C	N	O	S	0	0
			866	553	143	166	4		

- Molecule 10 is a protein called SH3 fold domain-containing protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	V	137	Total	C	N	O	S	0	0
			1072	685	174	212	1		
10	W	137	Total	C	N	O	S	0	0
			1072	685	174	212	1		
10	s	137	Total	C	N	O	S	0	0
			1072	685	174	212	1		
10	t	137	Total	C	N	O	S	0	0
			1072	685	174	212	1		

- Molecule 11 is a protein called Inner Baseplate Protein gp180.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	X	128	Total	C	N	O	S	0	0
			1022	651	167	200	4		

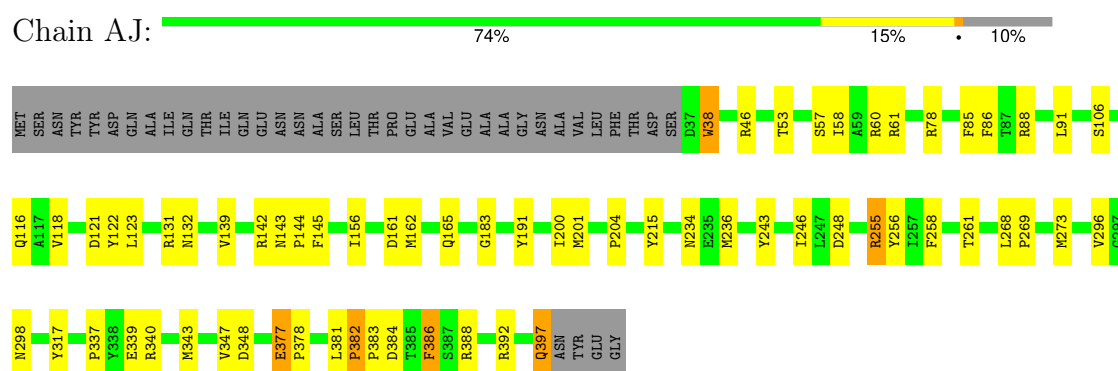
- Molecule 12 is a protein called Inner Baseplate Protein gp187.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	n	197	Total	C	N	O	S	0	0
			1538	981	253	301	3		
12	o	207	Total	C	N	O	S	0	0
			1601	1019	263	315	4		

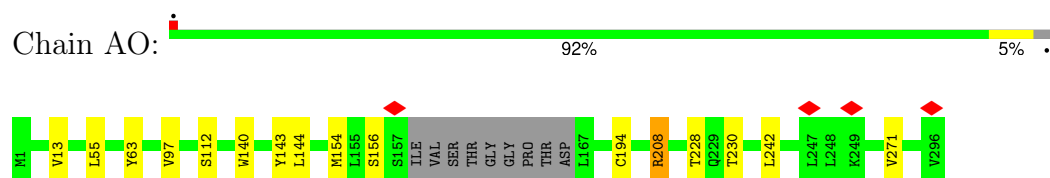
3 Residue-property plots

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.

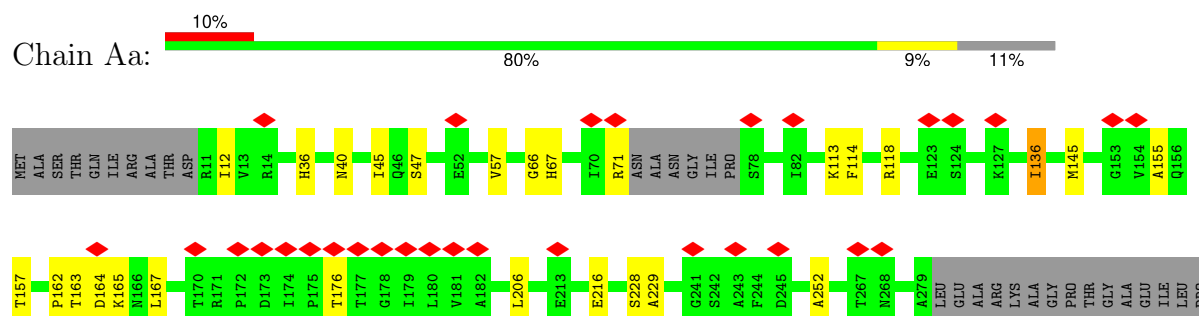
• Molecule 1: Tail Tube Initiator Protein gp62



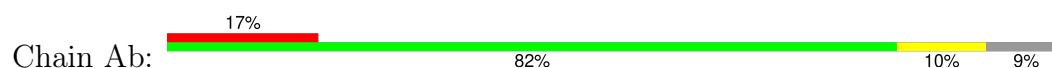
• Molecule 2: Tail Tube of Bacteriophage Goslar

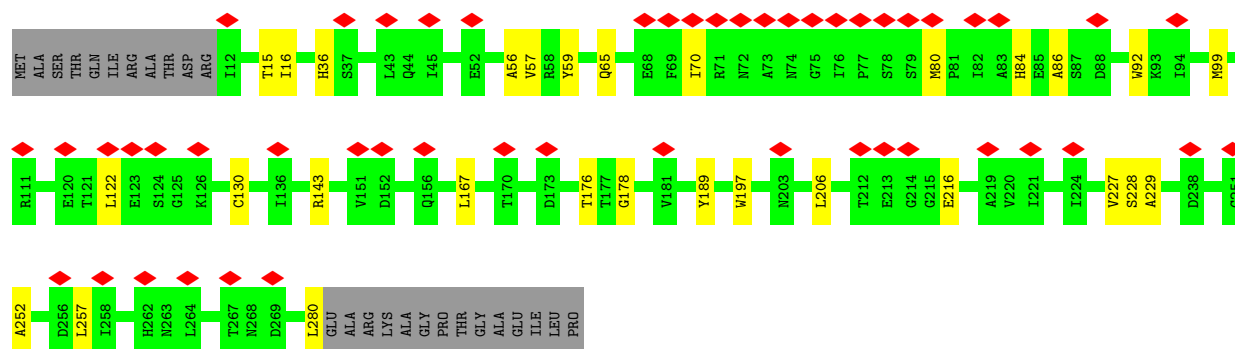


• Molecule 3: Virion structural protein



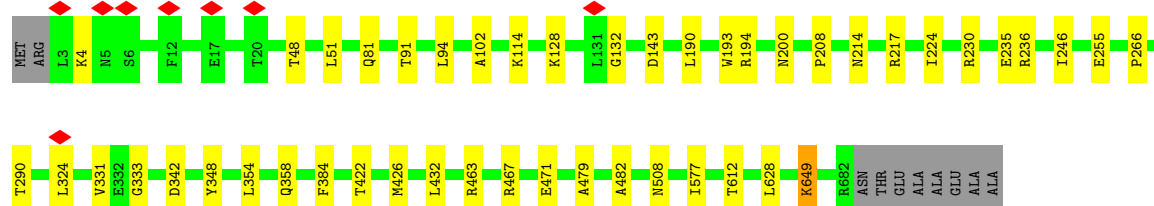
• Molecule 3: Virion structural protein





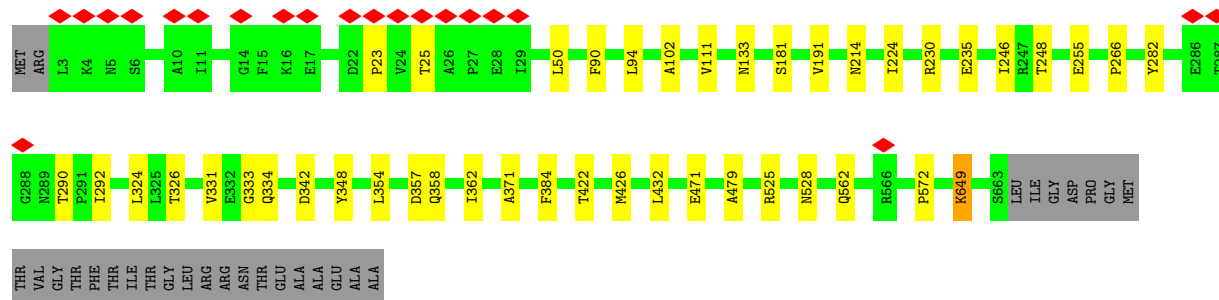
- Molecule 4: Tail sheath protein gp29 gp29PR domain-containing protein

Chain Ah: 92% 7%



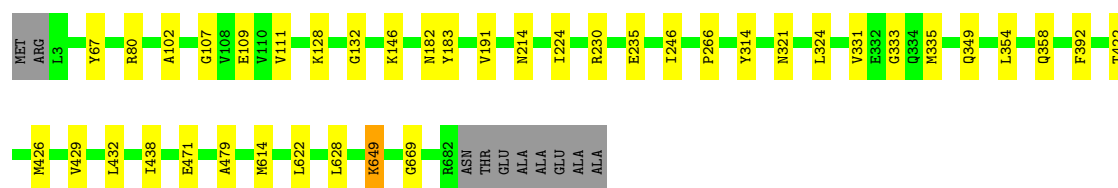
- Molecule 4: Tail sheath protein gp29 gp29PR domain-containing protein

Chain An: 89% 6%



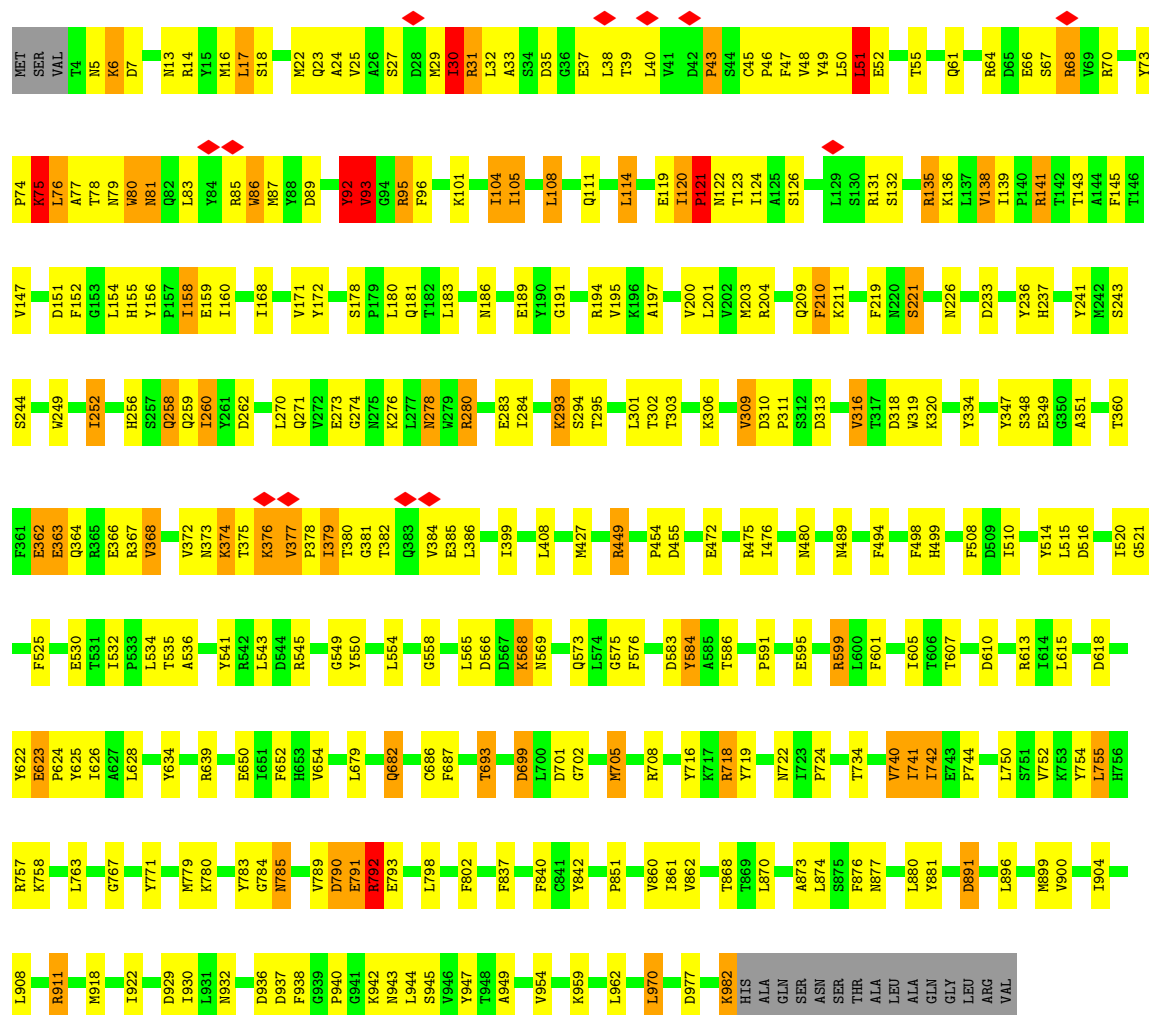
- Molecule 4: Tail sheath protein gp29 gp29PR domain-containing protein

Chain Az: 93% 6%



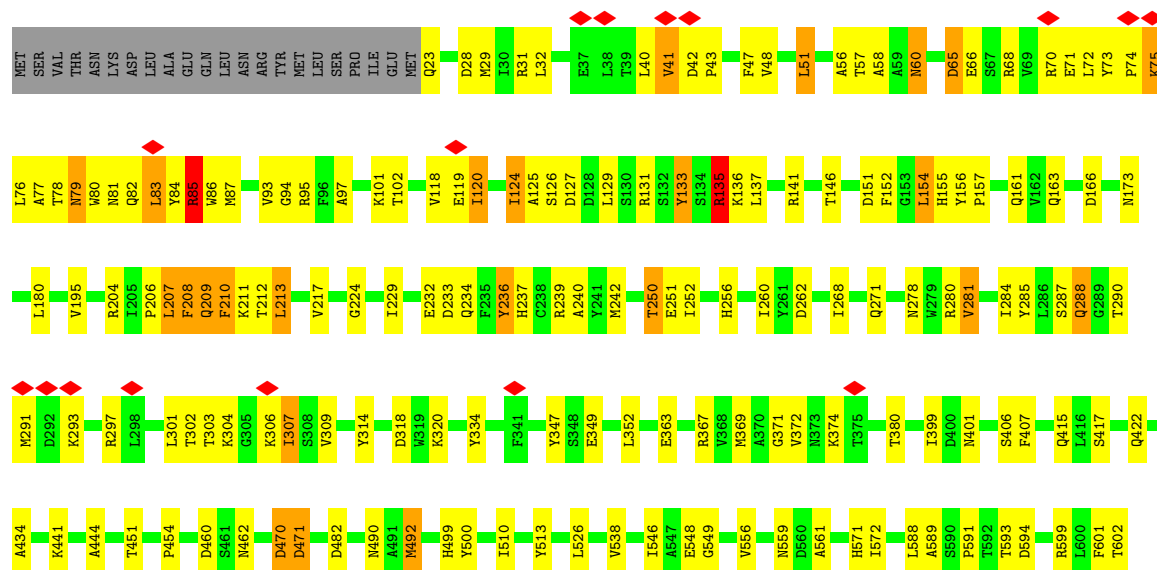
- Molecule 5: Baseplate wedge protein

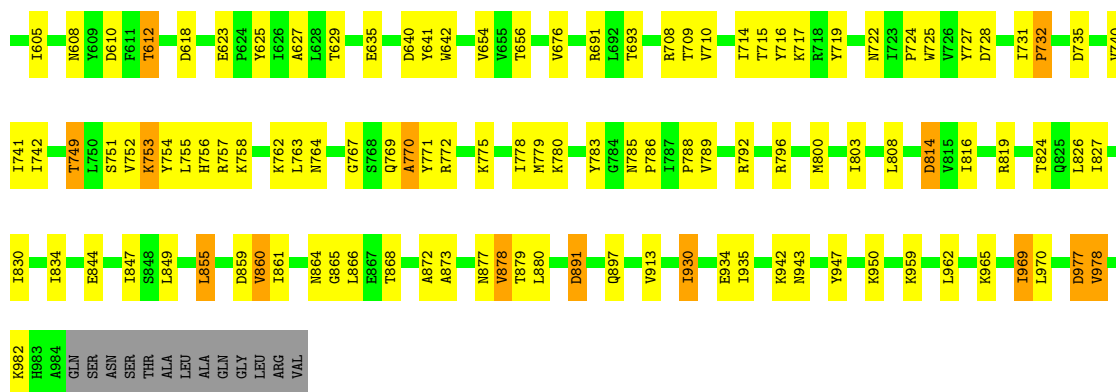
Chain Aq: 66% 26% 6%



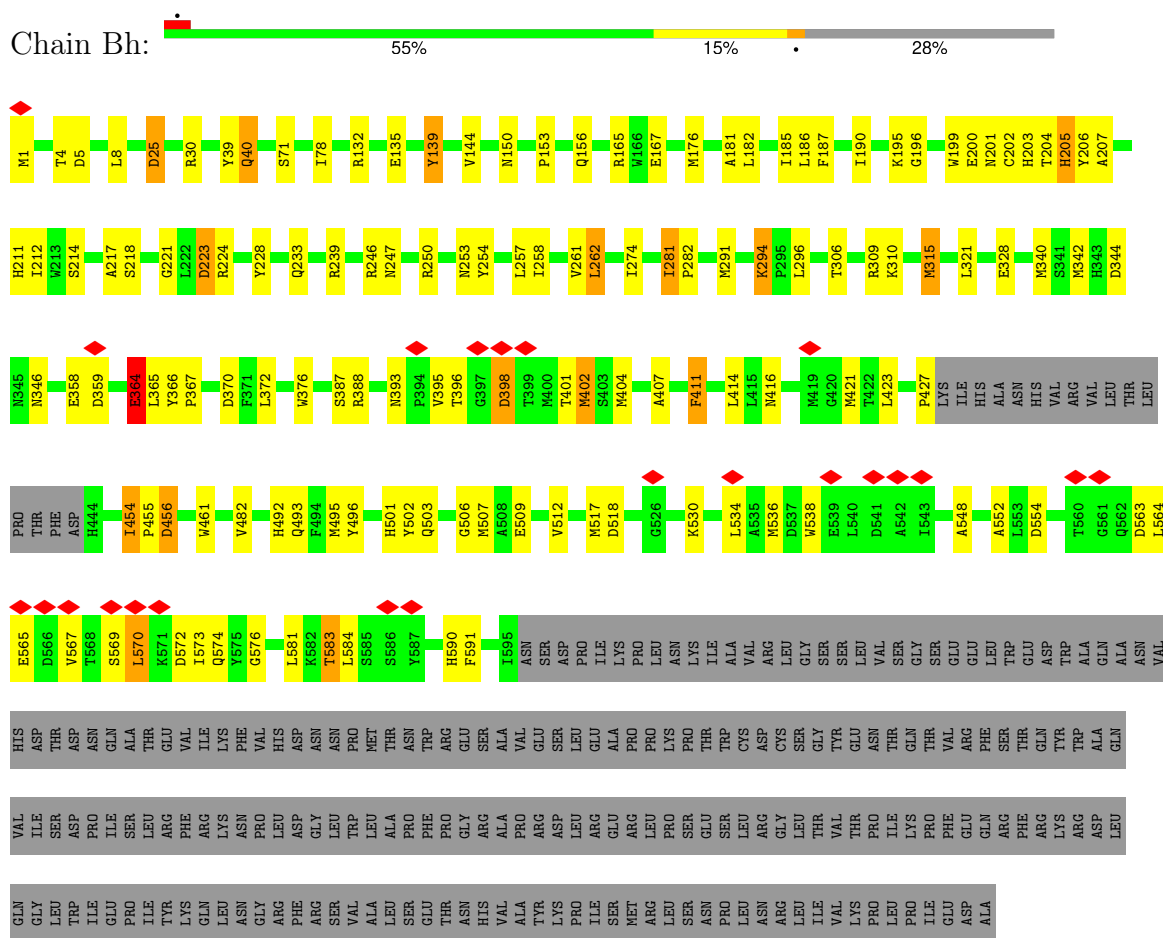
• Molecule 5: Baseplate wedge protein

Chain M: 68% 24%

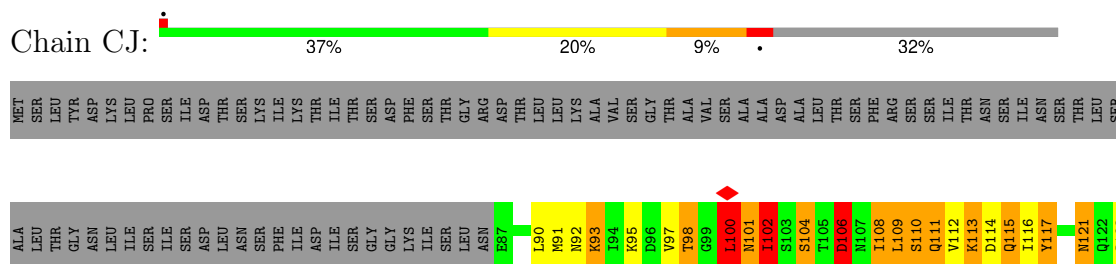


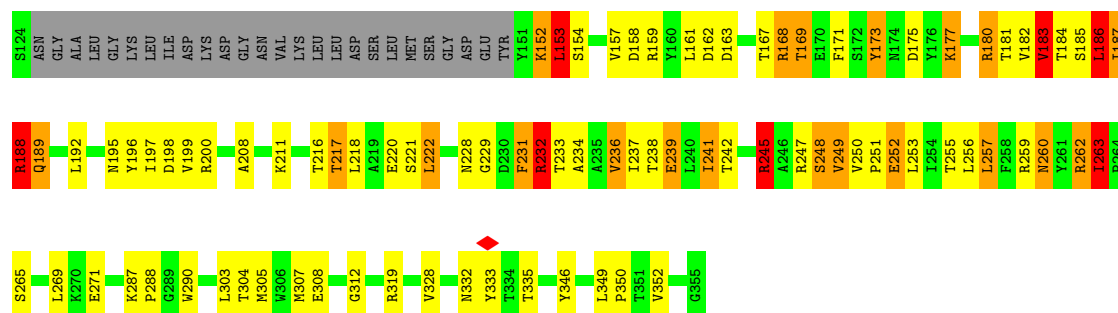


• Molecule 6: Virion structural protein



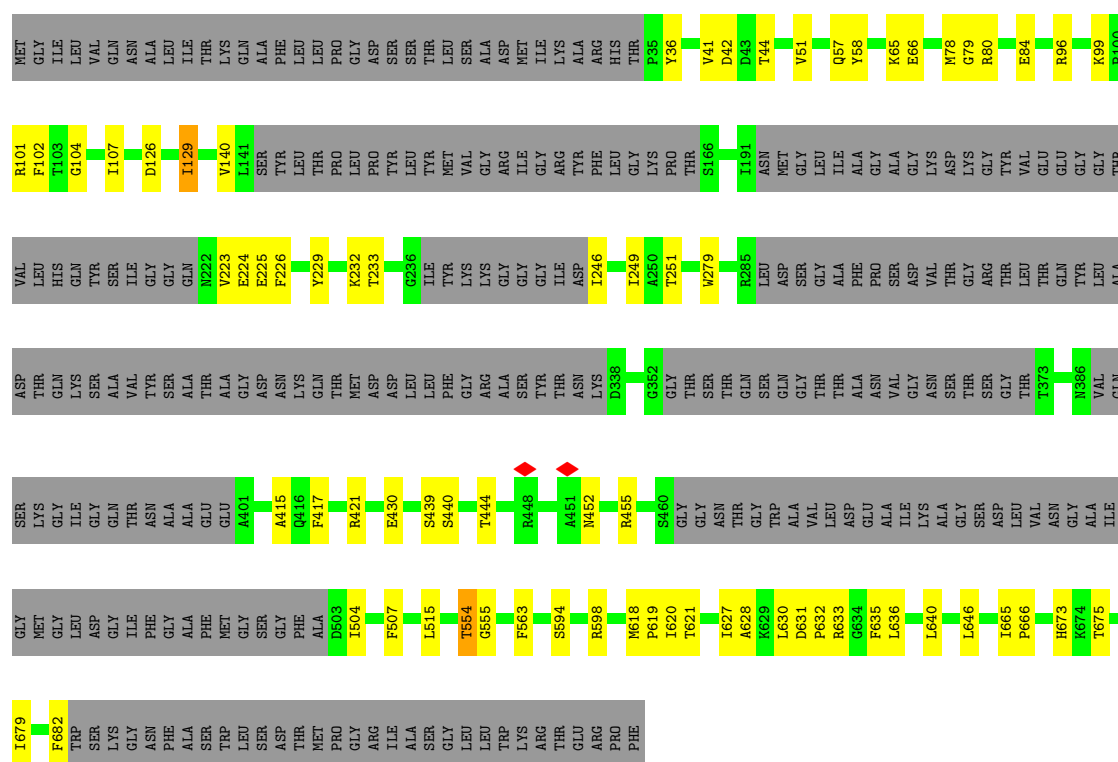
• Molecule 7: Inner baseplate protein gp202





• Molecule 8: Tail tube initiator complex protein gp203

Chain H: 54% 10% 36%



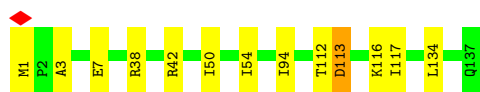
• Molecule 9: Inner Baseplate Protein gp172

Chain I: 67% 23% 9%



• Molecule 10: SH3 fold domain-containing protein

Chain V: 91% 9%



- Molecule 10: SH3 fold domain-containing protein

Chain W: 91% 9%



- Molecule 10: SH3 fold domain-containing protein

Chain s: 88% 12%



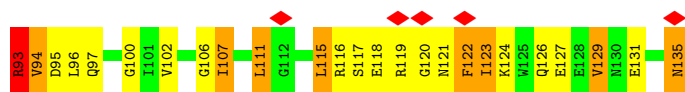
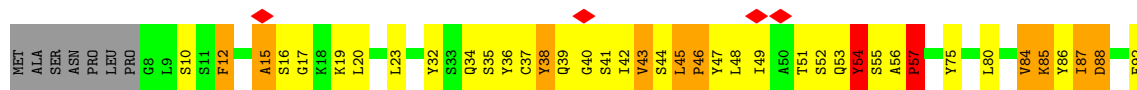
- Molecule 10: SH3 fold domain-containing protein

Chain t: 87% 12%



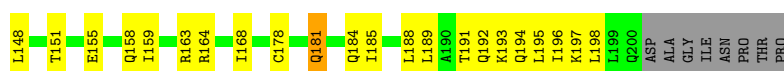
- Molecule 11: Inner Baseplate Protein gp180

Chain X: 7% 47% 33% 13% 5%



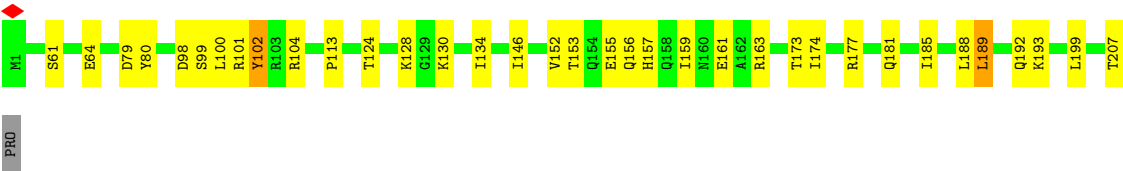
- Molecule 12: Inner Baseplate Protein gp187

Chain n: 68% 25% 5%



- Molecule 12: Inner Baseplate Protein gp187

Chain o: 83% 16%



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	31110	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 ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOCONTINUUM (6k x 4k)	Depositor
Maximum map value	2.440	Depositor
Minimum map value	-1.154	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.101	Depositor
Recommended contour level	0.4	Depositor
Map size (Å)	1120.2, 1120.2, 1120.2	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.8669999, 1.8669999, 1.8669999	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	AJ	0.19	0/3034	0.43	0/4133
2	AO	0.16	0/2310	0.33	0/3144
3	Aa	0.11	0/2138	0.35	0/2903
3	Ab	0.11	0/2178	0.33	0/2963
4	Ah	0.14	0/5414	0.31	0/7355
4	An	0.15	0/5285	0.34	0/7178
4	Az	0.14	0/5414	0.30	0/7355
5	Aq	0.19	0/7930	0.56	6/10787 (0.1%)
5	M	0.17	0/7787	0.42	0/10593
6	Bh	0.16	0/4905	0.40	0/6652
7	CJ	0.23	0/1937	0.81	5/2621 (0.2%)
8	H	0.17	0/3635	0.43	0/4932
9	I	0.20	0/886	0.49	0/1204
10	V	0.13	0/1092	0.29	0/1492
10	W	0.14	0/1092	0.32	0/1492
10	s	0.16	0/1092	0.35	0/1492
10	t	0.14	0/1092	0.32	0/1492
11	X	0.24	0/1042	0.72	2/1407 (0.1%)
12	n	0.16	0/1566	0.42	0/2133
12	o	0.15	0/1630	0.36	0/2223
All	All	0.17	0/61459	0.43	13/83551 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	AJ	0	4
2	AO	0	1
5	Aq	0	8
5	M	0	1
7	CJ	0	6

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Mol	Chain	#Chirality outliers	#Planarity outliers
11	X	0	2
12	n	0	1
All	All	0	23

There are no bond length outliers.

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	Aq	792	ARG	CB-CG-CD	9.60	133.37	111.30
7	CJ	188	ARG	CA-CB-CG	9.56	133.22	114.10
5	Aq	791	GLU	CA-C-N	9.56	138.91	121.70
5	Aq	791	GLU	C-N-CA	9.56	138.91	121.70
7	CJ	100	LEU	CA-C-N	8.93	137.78	121.70
7	CJ	100	LEU	C-N-CA	8.93	137.78	121.70
5	Aq	792	ARG	CA-CB-CG	8.56	131.22	114.10
7	CJ	188	ARG	CB-CG-CD	7.68	128.97	111.30
5	Aq	363	GLU	CA-CB-CG	5.68	125.46	114.10
5	Aq	51	LEU	CA-CB-CG	5.65	136.07	116.30
7	CJ	186	LEU	CA-CB-CG	5.45	135.39	116.30
11	X	37	CYS	CA-C-N	5.33	131.71	121.54
11	X	37	CYS	C-N-CA	5.33	131.71	121.54

There are no chirality outliers.

All (23) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AJ	236	MET	Peptide
1	AJ	255	ARG	Sidechain
1	AJ	46	ARG	Sidechain
1	AJ	78	ARG	Sidechain
2	AO	208	ARG	Sidechain
5	Aq	135	ARG	Sidechain
5	Aq	303	THR	Peptide
5	Aq	545	ARG	Sidechain
5	Aq	639	ARG	Sidechain
5	Aq	68	ARG	Sidechain
5	Aq	790	ASP	Peptide
5	Aq	792	ARG	Sidechain
5	Aq	95	ARG	Sidechain
7	CJ	106	ASP	Peptide
7	CJ	200	ARG	Sidechain

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Mol	Chain	Res	Type	Group
7	CJ	232	ARG	Sidechain
7	CJ	245	ARG	Sidechain
7	CJ	251	PRO	Peptide
7	CJ	262	ARG	Sidechain
5	M	135	ARG	Sidechain
11	X	15	ALA	Peptide
11	X	93	ARG	Sidechain
12	n	20	ALA	Peptide

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	AJ	2954	0	2864	45	0
2	AO	2259	0	2206	7	0
3	Aa	2093	0	2041	20	0
3	Ab	2130	0	2079	18	0
4	Ah	5306	0	5150	27	0
4	An	5179	0	5024	29	0
4	Az	5306	0	5150	21	0
5	Aq	7770	0	7582	224	0
5	M	7629	0	7436	185	0
6	Bh	4793	0	4686	108	0
7	CJ	1908	0	1900	76	0
8	H	3563	0	3472	38	0
9	I	866	0	839	19	0
10	V	1072	0	1077	7	0
10	W	1072	0	1077	9	0
10	s	1072	0	1077	12	0
10	t	1072	0	1077	11	0
11	X	1022	0	1007	47	0
12	n	1538	0	1564	41	0
12	o	1601	0	1622	30	0
All	All	60205	0	58930	877	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 7.

All (877) close contacts within the same asymmetric unit are listed below, sorted by their clash

magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Aq:50:LEU:HD21	6:Bh:185:ILE:HD13	1.51	0.92
5:Aq:5:ASN:H	5:M:40:LEU:HD22	1.35	0.91
5:Aq:791:GLU:HA	5:Aq:792:ARG:HD3	1.57	0.87
5:Aq:37:GLU:HB2	5:Aq:38:LEU:HA	1.59	0.83
5:Aq:6:LYS:HE2	5:Aq:7:ASP:H	1.42	0.83
5:Aq:22:MET:HE3	5:Aq:51:LEU:HD23	1.60	0.82
5:Aq:68:ARG:HH21	6:Bh:202:CYS:HB2	1.45	0.81
5:Aq:236:TYR:HB3	5:Aq:301:LEU:HB3	1.61	0.81
5:Aq:70:ARG:HB3	5:Aq:75:LYS:HG3	1.62	0.81
6:Bh:261:VAL:HG23	6:Bh:262:LEU:HD23	1.62	0.81
6:Bh:364:GLU:HG2	6:Bh:365:LEU:H	1.46	0.80
6:Bh:181:ALA:O	6:Bh:185:ILE:HG13	1.83	0.78
4:An:525:ARG:HD3	4:An:528:ASN:HD21	1.50	0.76
5:Aq:724:PRO:HA	5:Aq:771:TYR:HA	1.67	0.75
5:Aq:510:ILE:HD12	5:Aq:798:LEU:HD13	1.67	0.74
5:Aq:259:GLN:HG3	6:Bh:239:ARG:HH12	1.51	0.74
11:X:123:ILE:HG23	11:X:124:LYS:HG2	1.67	0.74
5:Aq:521:GLY:HA3	5:Aq:693:THR:HB	1.69	0.74
5:M:783:TYR:HD2	10:s:38:ARG:HH21	1.33	0.73
5:Aq:575:GLY:HA3	5:Aq:586:THR:HG22	1.71	0.72
5:Aq:860:VAL:HG12	5:Aq:947:TYR:HD1	1.54	0.72
6:Bh:393:ASN:HB3	6:Bh:398:ASP:H	1.55	0.72
5:Aq:83:LEU:HA	5:Aq:86:TRP:HB2	1.71	0.71
12:n:104:ARG:HB3	12:o:146:ILE:HB	1.71	0.71
4:An:25:THR:HA	4:An:290:THR:HB	1.72	0.71
5:Aq:226:ASN:HA	5:Aq:280:ARG:HB3	1.73	0.71
1:AJ:234:ASN:HD21	8:H:673:HIS:HD2	1.35	0.71
5:Aq:75:LYS:HD2	5:Aq:78:THR:HB	1.72	0.71
4:Ah:81:GLN:HE22	4:Ah:508:ASN:HA	1.56	0.70
5:Aq:22:MET:SD	5:Aq:51:LEU:HB2	2.31	0.70
7:CJ:188:ARG:NH2	7:CJ:189:GLN:HB2	2.06	0.70
5:Aq:123:THR:HB	5:Aq:126:SER:HB3	1.74	0.70
4:An:23:PRO:HB2	4:An:292:ILE:HD13	1.72	0.69
5:Aq:311:PRO:HD3	5:Aq:351:ALA:HB2	1.73	0.69
5:Aq:83:LEU:HD21	5:Aq:368:VAL:HB	1.74	0.69
7:CJ:307:MET:HE1	7:CJ:335:THR:HG23	1.74	0.69
5:Aq:375:THR:OG1	6:Bh:246:ARG:HD3	1.93	0.69
5:Aq:573:GLN:HB3	5:Aq:652:PHE:HB2	1.74	0.69
7:CJ:333:TYR:HA	12:o:146:ILE:HG23	1.74	0.69
5:M:742:ILE:HA	5:M:752:VAL:HG22	1.75	0.69
6:Bh:372:LEU:HD13	6:Bh:482:VAL:HG11	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Bh:411:PHE:HD1	6:Bh:552:ALA:HB1	1.58	0.68
8:H:618:MET:HE1	8:H:682:PHE:HB3	1.75	0.68
5:M:81:ASN:HA	5:M:84:TYR:HD2	1.58	0.68
5:M:593:THR:HB	5:M:594:ASP:HB3	1.74	0.67
5:M:763:LEU:HB3	5:M:767:GLY:HA2	1.77	0.67
5:M:232:GLU:HB3	5:M:302:THR:HG22	1.76	0.67
5:Aq:35:ASP:HB2	5:Aq:38:LEU:HG	1.75	0.67
10:s:31:ILE:HA	10:s:74:VAL:HG12	1.77	0.67
7:CJ:106:ASP:HB3	7:CJ:109:LEU:HG	1.77	0.67
8:H:36:TYR:HD1	8:H:80:ARG:HH22	1.40	0.67
8:H:251:THR:HG21	8:H:415:ALA:HB2	1.77	0.66
3:Aa:45:ILE:HD11	3:Aa:118:ARG:HD2	1.76	0.66
11:X:117:SER:HA	11:X:123:ILE:HB	1.77	0.66
5:Aq:708:ARG:HD3	6:Bh:344:ASP:O	1.96	0.66
5:Aq:244:SER:HB2	5:Aq:293:LYS:HG2	1.77	0.66
5:M:157:PRO:HB2	5:M:173:ASN:HB3	1.78	0.66
5:Aq:219:PHE:HB3	5:Aq:294:SER:HA	1.77	0.65
11:X:38:TYR:CE2	11:X:39:GLN:HG2	2.31	0.65
10:t:54:ILE:HA	10:t:57:ARG:HH21	1.61	0.65
4:Az:214:ASN:HB2	4:Az:230:ARG:HH12	1.62	0.65
5:Aq:233:ASP:HB3	5:Aq:302:THR:HB	1.79	0.65
5:Aq:742:ILE:HB	5:Aq:750:LEU:HB3	1.77	0.65
7:CJ:100:LEU:HD12	7:CJ:101:ASN:HB3	1.78	0.65
7:CJ:183:VAL:O	7:CJ:187:ILE:HG12	1.96	0.65
8:H:630:LEU:C	8:H:632:PRO:HD3	2.22	0.65
5:M:407:PHE:HB2	5:M:847:ILE:HG12	1.79	0.65
9:I:11:LYS:HG2	9:I:12:THR:H	1.61	0.65
3:Ab:16:ILE:H	3:Ab:86:ALA:HB1	1.62	0.65
11:X:15:ALA:C	11:X:17:GLY:H	2.05	0.64
5:Aq:67:SER:HA	5:Aq:70:ARG:HD2	1.79	0.64
6:Bh:195:LYS:O	6:Bh:199:TRP:HB2	1.96	0.64
3:Ab:280:LEU:HD11	6:Bh:502:TYR:HA	1.79	0.64
5:Aq:75:LYS:HB3	5:Aq:79:ASN:HB2	1.80	0.64
10:V:1:MET:HA	10:V:94:ILE:HB	1.80	0.63
5:M:252:ILE:HB	5:M:293:LYS:HE3	1.81	0.63
5:Aq:489:ASN:HD21	5:Aq:962:LEU:H	1.46	0.63
6:Bh:182:LEU:HD23	6:Bh:185:ILE:HD12	1.81	0.63
7:CJ:350:PRO:HD2	12:o:163:ARG:HH11	1.63	0.63
3:Aa:71:ARG:HD2	6:Bh:427:PRO:HD3	1.80	0.63
4:An:357:ASP:HA	5:Aq:111:GLN:NE2	2.14	0.63
5:Aq:132:SER:N	5:Aq:530:GLU:HG2	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Bh:262:LEU:HD22	6:Bh:581:LEU:HG	1.80	0.63
5:M:101:LYS:HE2	5:M:206:PRO:HB2	1.80	0.63
12:n:146:ILE:HG13	12:o:104:ARG:HB2	1.81	0.63
5:Aq:45:CYS:SG	5:Aq:47:PHE:HB2	2.39	0.62
5:Aq:186:ASN:HD21	5:Aq:525:PHE:HB3	1.64	0.62
5:Aq:70:ARG:CB	5:Aq:75:LYS:HG3	2.28	0.62
3:Aa:167:LEU:HD22	3:Ab:36:HIS:HA	1.81	0.62
7:CJ:196:TYR:O	7:CJ:199:VAL:HG12	2.00	0.62
5:Aq:155:HIS:HB2	5:Aq:181:GLN:HE22	1.64	0.62
3:Ab:70:ILE:HD12	3:Ab:80:MET:HG3	1.81	0.62
5:M:434:ALA:HB3	5:M:792:ARG:HA	1.80	0.62
5:Aq:740:VAL:HB	5:Aq:752:VAL:HG21	1.82	0.62
6:Bh:402:MET:HG3	6:Bh:407:ALA:HB2	1.81	0.61
3:Aa:36:HIS:HA	3:Ab:167:LEU:HD22	1.81	0.61
9:I:103:ILE:HG22	9:I:107:LYS:HE3	1.82	0.61
5:Aq:104:ILE:HA	5:Aq:349:GLU:HG3	1.83	0.61
5:M:873:ALA:HB1	5:M:959:LYS:HB2	1.81	0.61
5:M:119:GLU:HA	5:M:135:ARG:HG2	1.83	0.61
5:Aq:310:ASP:HB3	5:Aq:313:ASP:HB2	1.81	0.61
6:Bh:388:ARG:HB3	6:Bh:401:THR:HB	1.82	0.61
12:o:189:LEU:HD22	12:o:193:LYS:HE3	1.83	0.61
5:M:65:ASP:HA	5:M:68:ARG:HE	1.65	0.61
4:An:528:ASN:HB3	11:X:52:SER:OG	2.01	0.61
7:CJ:287:LYS:HB3	7:CJ:290:TRP:HB3	1.83	0.61
9:I:106:LEU:HD12	9:I:109:GLN:HE21	1.65	0.61
6:Bh:218:SER:HA	5:M:74:PRO:HD3	1.83	0.60
11:X:93:ARG:HG2	11:X:118:GLU:HA	1.82	0.60
9:I:53:PHE:HB3	9:I:56:ASN:HB3	1.83	0.60
10:W:38:ARG:O	10:W:42:ARG:HG3	2.00	0.60
1:Aj:337:PRO:HG2	1:Aj:388:ARG:HD2	1.83	0.60
5:Aq:379:ILE:HG23	5:Aq:384:VAL:HG21	1.81	0.60
11:X:116:ARG:HE	11:X:126:GLN:HB2	1.67	0.60
6:Bh:30:ARG:HH21	6:Bh:176:MET:HG3	1.65	0.60
5:Aq:123:THR:H	5:Aq:131:ARG:HH21	1.49	0.60
7:CJ:100:LEU:HA	7:CJ:101:ASN:HB2	1.83	0.60
5:Aq:374:LYS:HA	6:Bh:246:ARG:HG2	1.82	0.60
5:M:717:LYS:HZ3	5:M:789:VAL:N	2.00	0.60
4:An:357:ASP:HA	5:Aq:111:GLN:HE21	1.67	0.59
10:s:100:LEU:HD12	10:t:134:LEU:HD11	1.82	0.59
5:Aq:74:PRO:HG3	5:M:262:ASP:OD1	2.02	0.59
5:Aq:520:ILE:HD11	5:Aq:543:LEU:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:722:ASN:HB3	5:M:771:TYR:CG	2.37	0.59
10:t:12:VAL:H	10:t:98:LYS:HE2	1.66	0.59
7:CJ:114:ASP:O	7:CJ:117:TYR:HB3	2.02	0.59
11:X:12:PHE:HD1	11:X:12:PHE:H	1.50	0.59
5:Aq:757:ARG:HD3	5:Aq:758:LYS:H	1.68	0.59
6:Bh:414:LEU:HD13	6:Bh:548:ALA:HB1	1.85	0.59
9:I:104:ASN:O	9:I:108:GLN:HG3	2.03	0.59
5:M:102:THR:HB	5:M:209:GLN:HB2	1.84	0.59
5:M:859:ASP:HB3	5:M:950:LYS:HD3	1.83	0.59
10:s:35:TYR:HB3	10:s:39:THR:HB	1.85	0.59
5:Aq:472:GLU:HA	5:Aq:475:ARG:HD2	1.83	0.59
7:CJ:104:SER:HB3	7:CJ:108:ILE:HD11	1.84	0.59
4:Ah:4:LYS:HD2	4:Ah:217:ARG:HH22	1.68	0.59
5:Aq:64:ARG:HD3	6:Bh:200:GLU:HB3	1.85	0.59
4:Az:471:GLU:HB2	4:Az:479:ALA:HA	1.84	0.59
7:CJ:188:ARG:HE	7:CJ:189:GLN:H	1.51	0.59
5:M:415:GLN:HE21	5:M:422:GLN:HB2	1.67	0.58
1:AJ:165:GLN:HB2	1:AJ:183:GLY:HA3	1.85	0.58
5:M:753:LYS:HZ3	5:M:754:TYR:H	1.49	0.58
1:AJ:388:ARG:HG2	2:AO:156:SER:O	2.02	0.58
5:M:101:LYS:HA	5:M:209:GLN:H	1.67	0.58
4:An:572:PRO:HG2	11:X:119:ARG:HE	1.69	0.58
7:CJ:252:GLU:OE2	12:n:80:TYR:HA	2.03	0.58
8:H:675:THR:O	8:H:679:ILE:HG13	2.04	0.58
5:M:124:ILE:HG12	5:M:125:ALA:H	1.67	0.58
1:AJ:200:ILE:HG12	1:AJ:201:MET:H	1.69	0.58
1:AJ:382:PRO:HB2	1:AJ:383:PRO:HD3	1.85	0.58
5:Aq:763:LEU:HB3	5:Aq:767:GLY:HA2	1.85	0.58
6:Bh:342:MET:HE3	10:s:64:ASN:HD21	1.67	0.58
5:M:209:GLN:O	5:M:210:PHE:HB3	2.03	0.58
2:AO:143:TYR:HA	2:AO:154:MET:HB2	1.85	0.58
3:Ab:206:LEU:HD22	3:Ab:216:GLU:HB3	1.86	0.58
12:n:184:GLN:HE22	12:o:185:ILE:HG12	1.69	0.58
5:Aq:76:LEU:HD13	5:Aq:77:ALA:H	1.68	0.57
5:Aq:86:TRP:HH2	6:Bh:203:HIS:HB3	1.68	0.57
8:H:620:ILE:HG23	8:H:621:THR:HG22	1.86	0.57
5:Aq:791:GLU:HA	5:Aq:792:ARG:CD	2.33	0.57
5:M:285:TYR:HE1	5:M:291:MET:HB3	1.69	0.57
5:Aq:962:LEU:HD22	5:Aq:970:LEU:HD22	1.87	0.57
6:Bh:454:ILE:HG12	6:Bh:455:PRO:HD2	1.87	0.57
5:Aq:48:VAL:HG11	11:X:38:TYR:HE1	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CJ:184:THR:O	7:CJ:187:ILE:HG13	2.03	0.57
11:X:87:ILE:HG22	11:X:95:ASP:HB2	1.85	0.57
5:M:608:ASN:HD21	5:M:610:ASP:HB2	1.68	0.57
11:X:85:LYS:H	11:X:85:LYS:HD2	1.69	0.57
6:Bh:132:ARG:HE	6:Bh:135:GLU:HG3	1.70	0.57
7:CJ:259:ARG:HB3	7:CJ:308:GLU:O	2.05	0.57
4:Ah:354:LEU:HB3	4:Ah:358:GLN:HB2	1.87	0.57
5:Aq:613:ARG:HB3	5:Aq:622:TYR:HB3	1.87	0.57
6:Bh:493:GLN:HA	6:Bh:496:TYR:CE2	2.39	0.57
12:n:19:SER:OG	12:n:90:TYR:HB3	2.05	0.57
5:M:962:LEU:HD21	5:M:970:LEU:HB3	1.87	0.57
12:n:184:GLN:O	12:n:188:LEU:HG	2.05	0.57
12:o:124:THR:HG22	12:o:128:LYS:HE3	1.87	0.57
5:Aq:43:PRO:C	5:Aq:45:CYS:H	2.13	0.57
4:Az:429:VAL:HB	4:Az:438:ILE:HD11	1.87	0.56
5:M:627:ALA:HB2	5:M:642:TRP:CZ3	2.40	0.56
5:M:83:LEU:HD21	5:M:95:ARG:HH12	1.69	0.56
4:An:133:ASN:HA	5:Aq:194:ARG:HH22	1.71	0.56
4:An:230:ARG:HA	4:An:255:GLU:O	2.05	0.56
5:Aq:940:PRO:HA	5:Aq:942:LYS:NZ	2.21	0.56
7:CJ:93:LYS:O	7:CJ:97:VAL:HG23	2.06	0.56
8:H:619:PRO:HD2	8:H:646:LEU:HD21	1.88	0.56
5:Aq:376:LYS:O	5:Aq:377:VAL:HB	2.05	0.56
8:H:101:ARG:HG2	8:H:102:PHE:H	1.71	0.56
5:M:861:ILE:HG23	5:M:865:GLY:HA2	1.88	0.56
3:Aa:71:ARG:HB2	6:Bh:427:PRO:HG3	1.87	0.56
5:Aq:259:GLN:HE22	6:Bh:205:HIS:CG	2.23	0.56
7:CJ:252:GLU:O	7:CJ:255:THR:HG22	2.06	0.56
5:M:93:VAL:HG21	5:M:237:HIS:CD2	2.41	0.56
5:M:151:ASP:HB2	5:M:211:LYS:HG3	1.86	0.56
12:n:191:THR:O	12:n:195:LEU:HG	2.05	0.56
5:Aq:734:THR:HG22	5:Aq:740:VAL:HA	1.88	0.56
5:M:725:TRP:HB2	5:M:772:ARG:HB2	1.87	0.55
5:M:72:LEU:O	5:M:73:TYR:HD1	1.89	0.55
5:M:371:GLY:HA3	5:M:374:LYS:HE3	1.88	0.55
9:I:113:ILE:HG21	5:M:224:GLY:HA3	1.89	0.55
5:M:242:MET:HA	5:M:293:LYS:HG2	1.89	0.55
5:Aq:271:GLN:HB3	5:Aq:278:ASN:ND2	2.22	0.55
5:Aq:791:GLU:CA	5:Aq:792:ARG:HD3	2.32	0.55
5:Aq:243:SER:HB2	5:Aq:249:TRP:HA	1.87	0.55
5:Aq:911:ARG:NH2	5:Aq:949:ALA:H	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Bh:416:ASN:HB3	6:Bh:421:MET:HB2	1.87	0.55
11:X:38:TYR:CZ	11:X:39:GLN:HG2	2.41	0.55
5:M:826:LEU:O	5:M:830:ILE:HG13	2.06	0.55
10:W:54:ILE:HA	10:W:57:ARG:HH21	1.71	0.55
11:X:36:TYR:C	11:X:38:TYR:H	2.15	0.55
5:Aq:81:ASN:ND2	5:Aq:273:GLU:HG3	2.21	0.55
5:Aq:877:ASN:HA	5:Aq:977:ASP:HB3	1.89	0.54
4:Az:224:ILE:HD11	4:Az:266:PRO:HD3	1.88	0.54
5:M:834:ILE:HD12	5:M:849:LEU:HD11	1.89	0.54
5:Aq:50:LEU:CD2	6:Bh:185:ILE:HD13	2.33	0.54
7:CJ:196:TYR:OH	7:CJ:232:ARG:HB2	2.07	0.54
5:Aq:837:PHE:HA	5:Aq:840:PHE:CE2	2.42	0.54
7:CJ:349:LEU:HG	12:o:163:ARG:HH12	1.73	0.54
5:M:236:TYR:CE1	5:M:301:LEU:HD22	2.43	0.54
4:An:362:ILE:HD12	5:Aq:197:ALA:HA	1.90	0.54
5:Aq:70:ARG:HG2	5:Aq:73:TYR:CD2	2.43	0.54
5:M:31:ARG:HG3	5:M:32:LEU:HG	1.90	0.54
5:Aq:780:LYS:HB3	5:Aq:784:GLY:HA2	1.90	0.54
4:An:525:ARG:HD3	4:An:528:ASN:ND2	2.20	0.54
7:CJ:332:ASN:HD22	12:n:144:MET:HE1	1.72	0.54
11:X:80:LEU:HD23	11:X:100:GLY:HA3	1.89	0.54
12:n:148:LEU:HD21	12:o:104:ARG:HG3	1.90	0.54
4:Ah:471:GLU:HB2	4:Ah:479:ALA:HA	1.89	0.54
11:X:15:ALA:C	11:X:17:GLY:N	2.65	0.54
5:Aq:132:SER:H	5:Aq:530:GLU:HG2	1.73	0.54
7:CJ:229:GLY:HA2	7:CJ:260:ASN:HD22	1.73	0.54
5:M:66:GLU:HA	5:M:70:ARG:HD3	1.89	0.54
5:M:70:ARG:O	5:M:73:TYR:HB2	2.08	0.54
12:o:177:ARG:HG2	12:o:181:GLN:HE21	1.73	0.54
5:M:40:LEU:O	5:M:41:VAL:HB	2.08	0.53
5:M:70:ARG:NE	5:M:76:LEU:HB3	2.23	0.53
7:CJ:109:LEU:O	7:CJ:112:VAL:HG22	2.08	0.53
4:An:354:LEU:HB3	4:An:358:GLN:HB2	1.90	0.53
8:H:223:VAL:HG22	8:H:224:GLU:H	1.73	0.53
5:M:242:MET:HG2	5:M:293:LYS:HE2	1.90	0.53
5:Aq:48:VAL:HG11	11:X:38:TYR:CE1	2.43	0.53
6:Bh:395:VAL:HG12	6:Bh:396:THR:HG23	1.91	0.53
11:X:94:VAL:HG22	11:X:96:LEU:HG	1.90	0.53
5:Aq:24:ALA:HB1	9:I:11:LYS:HE3	1.90	0.53
5:Aq:566:ASP:HB3	5:Aq:568:LYS:HZ1	1.72	0.53
5:M:725:TRP:CD1	5:M:772:ARG:HE	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:65:LYS:HA	8:H:79:GLY:HA2	1.91	0.53
4:An:102:ALA:HB3	4:An:191:VAL:HG21	1.91	0.53
6:Bh:221:GLY:HA3	6:Bh:224:ARG:HH21	1.73	0.53
7:CJ:188:ARG:NE	7:CJ:189:GLN:H	2.05	0.53
7:CJ:242:THR:HB	7:CJ:245:ARG:HB2	1.91	0.53
5:M:135:ARG:HG3	5:M:135:ARG:HH11	1.74	0.53
5:Aq:536:ALA:HA	5:Aq:558:GLY:HA2	1.90	0.52
5:Aq:613:ARG:NH2	5:Aq:622:TYR:HB2	2.24	0.52
11:X:19:LYS:O	11:X:23:LEU:HG	2.09	0.52
1:AJ:397:GLN:H	1:AJ:397:GLN:HE21	1.57	0.52
8:H:57:GLN:HE22	8:H:78:MET:HA	1.74	0.52
5:Aq:6:LYS:HE2	5:Aq:7:ASP:N	2.20	0.52
3:Aa:206:LEU:HD22	3:Aa:216:GLU:HB3	1.90	0.52
5:Aq:50:LEU:HD21	6:Bh:185:ILE:CD1	2.34	0.52
5:Aq:86:TRP:CH2	6:Bh:203:HIS:HB3	2.43	0.52
5:Aq:120:ILE:HG23	5:Aq:334:TYR:CZ	2.45	0.52
5:M:93:VAL:HG21	5:M:237:HIS:HD2	1.75	0.52
5:M:753:LYS:HG3	5:M:755:LEU:H	1.74	0.52
11:X:84:VAL:HG13	11:X:96:LEU:HD23	1.92	0.52
11:X:117:SER:HA	11:X:123:ILE:H	1.75	0.52
3:Aa:66:GLY:O	3:Aa:67:HIS:ND1	2.43	0.52
5:Aq:201:LEU:HG	5:Aq:203:MET:HE2	1.91	0.52
5:Aq:379:ILE:HA	5:Aq:384:VAL:CG2	2.40	0.52
5:M:146:THR:HB	5:M:320:LYS:HG2	1.91	0.52
1:AJ:268:LEU:HD12	1:AJ:269:PRO:HD2	1.91	0.52
3:Aa:163:THR:C	3:Aa:165:LYS:H	2.18	0.52
5:Aq:119:GLU:HB3	5:Aq:135:ARG:HG2	1.91	0.52
7:CJ:106:ASP:HA	7:CJ:108:ILE:HG12	1.90	0.52
5:M:84:TYR:HD1	5:M:256:HIS:HB2	1.75	0.52
12:o:177:ARG:HG2	12:o:181:GLN:NE2	2.24	0.52
5:Aq:591:PRO:HB2	5:Aq:599:ARG:HB3	1.90	0.52
7:CJ:259:ARG:HD3	7:CJ:308:GLU:HB3	1.90	0.52
5:M:236:TYR:CZ	5:M:301:LEU:HD22	2.45	0.52
5:M:749:THR:HA	12:o:192:GLN:HE22	1.75	0.52
3:Aa:157:THR:HB	6:Bh:359:ASP:HA	1.90	0.52
4:An:471:GLU:HB2	4:An:479:ALA:HA	1.92	0.52
8:H:627:ILE:HG13	8:H:628:ALA:H	1.74	0.52
10:s:36:ASN:HD21	10:s:38:ARG:HB2	1.75	0.52
4:Az:321:ASN:HD21	4:Az:349:GLN:HB2	1.74	0.52
5:M:307:ILE:HD11	5:M:352:LEU:HB3	1.90	0.52
5:M:526:LEU:HD11	5:M:691:ARG:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Aq:271:GLN:HB3	5:Aq:278:ASN:HD21	1.75	0.51
7:CJ:233:THR:O	7:CJ:237:ILE:HG13	2.10	0.51
5:M:722:ASN:HB3	5:M:771:TYR:CD1	2.45	0.51
5:M:860:VAL:HG22	5:M:868:THR:H	1.75	0.51
1:AJ:377:GLU:HB3	1:AJ:378:PRO:HD3	1.92	0.51
7:CJ:269:LEU:C	7:CJ:271:GLU:H	2.19	0.51
8:H:44:THR:HG21	8:H:57:GLN:HB2	1.92	0.51
5:M:60:ASN:OD1	5:M:60:ASN:N	2.41	0.51
1:AJ:386:PHE:CD1	1:AJ:386:PHE:N	2.79	0.51
5:Aq:615:LEU:HA	5:Aq:622:TYR:HA	1.92	0.51
6:Bh:71:SER:HB2	6:Bh:78:ILE:HD13	1.92	0.51
5:M:546:ILE:HG13	5:M:548:GLU:H	1.74	0.51
10:s:45:ARG:HG2	10:s:83:ILE:HB	1.92	0.51
5:Aq:399:ILE:HD13	5:Aq:408:LEU:HG	1.92	0.51
6:Bh:388:ARG:HH11	6:Bh:402:MET:HA	1.75	0.51
11:X:32:TYR:C	11:X:43:VAL:HG11	2.36	0.51
3:Aa:71:ARG:CZ	6:Bh:423:LEU:HD22	2.40	0.51
5:Aq:145:PHE:HB2	5:Aq:319:TRP:HZ3	1.75	0.51
4:Az:422:THR:O	4:Az:426:MET:HG3	2.11	0.51
5:Aq:61:GLN:HE22	6:Bh:196:GLY:CA	2.24	0.51
12:n:194:GLN:O	12:n:198:LEU:HG	2.11	0.51
5:Aq:472:GLU:O	5:Aq:476:ILE:HG13	2.11	0.51
5:M:74:PRO:HD2	5:M:75:LYS:HZ2	1.76	0.51
12:o:155:GLU:O	12:o:159:ILE:HG12	2.11	0.51
5:Aq:33:ALA:HA	5:Aq:39:THR:HG23	1.93	0.50
5:Aq:719:TYR:HA	5:Aq:779:MET:HE3	1.93	0.50
5:M:728:ASP:O	5:M:758:LYS:HD2	2.11	0.50
5:Aq:937:ASP:HB3	5:Aq:942:LYS:HG2	1.93	0.50
5:M:74:PRO:HD2	5:M:75:LYS:NZ	2.26	0.50
5:M:101:LYS:C	5:M:209:GLN:HB3	2.36	0.50
5:M:236:TYR:CG	5:M:301:LEU:HD13	2.46	0.50
5:M:880:LEU:HD22	5:M:930:ILE:HD12	1.92	0.50
5:Aq:78:THR:HA	5:Aq:81:ASN:OD1	2.11	0.50
9:I:62:ARG:HG2	9:I:73:HIS:CE1	2.46	0.50
1:AJ:57:SER:O	1:AJ:61:ARG:HG2	2.12	0.50
1:AJ:142:ARG:HG2	1:AJ:317:TYR:HD1	1.76	0.50
5:Aq:48:VAL:O	5:Aq:51:LEU:HD22	2.11	0.50
5:Aq:367:ARG:HG3	5:Aq:368:VAL:N	2.26	0.50
7:CJ:100:LEU:HA	7:CJ:101:ASN:CB	2.41	0.50
5:M:66:GLU:HG3	5:M:70:ARG:CZ	2.41	0.50
5:M:751:SER:HA	12:n:191:THR:HG21	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:913:VAL:HB	5:M:947:TYR:CE1	2.47	0.50
3:Aa:57:VAL:HA	3:Aa:228:SER:HA	1.93	0.50
4:An:214:ASN:HB2	4:An:230:ARG:HH12	1.77	0.50
5:Aq:364:GLN:O	5:Aq:367:ARG:HG2	2.12	0.50
5:M:717:LYS:O	5:M:778:ILE:HA	2.11	0.50
1:AJ:234:ASN:ND2	8:H:673:HIS:HD2	2.05	0.50
4:Az:614:MET:HE1	4:Az:622:LEU:HD22	1.94	0.50
5:M:66:GLU:HA	5:M:70:ARG:HB2	1.94	0.50
1:AJ:347:VAL:HG12	1:AJ:348:ASP:N	2.26	0.50
12:n:102:TYR:CE2	12:o:113:PRO:HA	2.47	0.50
5:Aq:139:ILE:HD12	5:Aq:158:ILE:HD12	1.94	0.50
9:I:45:ILE:HD13	9:I:60:LEU:HD21	1.94	0.50
5:Aq:654:VAL:HG22	5:Aq:686:CYS:HB2	1.94	0.49
5:M:70:ARG:HG2	5:M:76:LEU:HD13	1.94	0.49
5:M:268:ILE:HG13	5:M:280:ARG:O	2.12	0.49
10:V:3:ALA:O	10:V:7:GLU:HG3	2.12	0.49
11:X:35:SER:O	11:X:36:TYR:HB2	2.12	0.49
4:Az:649:LYS:H	4:Az:649:LYS:HD3	1.77	0.49
12:n:106:ILE:HG22	12:n:107:LEU:H	1.77	0.49
5:Aq:870:LEU:HD11	5:Aq:944:LEU:HD11	1.93	0.49
8:H:619:PRO:HG2	8:H:646:LEU:HD11	1.94	0.49
5:M:460:ASP:HB3	5:M:492:MET:SD	2.52	0.49
5:M:897:GLN:HG3	5:M:978:VAL:HG21	1.94	0.49
12:n:159:ILE:HG22	12:n:163:ARG:HH22	1.78	0.49
5:Aq:508:PHE:HE2	5:Aq:798:LEU:HD21	1.78	0.49
8:H:665:ILE:HG23	8:H:666:PRO:HD2	1.94	0.49
5:Aq:940:PRO:HA	5:Aq:942:LYS:HZ2	1.76	0.49
10:W:42:ARG:NH1	10:t:81:TYR:HE1	2.11	0.49
12:n:47:ASP:O	12:n:51:GLU:HG2	2.11	0.49
5:Aq:258:GLN:HG2	5:Aq:259:GLN:N	2.27	0.49
5:Aq:259:GLN:OE1	6:Bh:205:HIS:HB3	2.12	0.49
6:Bh:294:LYS:HB2	6:Bh:306:THR:HG22	1.93	0.49
6:Bh:364:GLU:CG	6:Bh:365:LEU:H	2.22	0.49
5:M:757:ARG:HD2	5:M:758:LYS:H	1.78	0.49
5:M:764:ASN:HD21	5:M:770:ALA:HB2	1.78	0.49
4:Ah:214:ASN:HB2	4:Ah:230:ARG:HH12	1.78	0.49
4:Az:354:LEU:HB3	4:Az:358:GLN:HB2	1.95	0.49
5:M:753:LYS:NZ	5:M:754:TYR:H	2.11	0.49
1:AJ:88:ARG:CZ	1:AJ:143:ASN:HD22	2.26	0.49
1:AJ:118:VAL:HG12	1:AJ:122:TYR:HE2	1.77	0.48
1:AJ:121:ASP:HB2	1:AJ:139:VAL:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Aa:155:ALA:O	6:Bh:573:ILE:HD11	2.12	0.48
3:Aa:229:ALA:HB2	3:Aa:252:ALA:HA	1.95	0.48
5:Aq:380:THR:HA	5:Aq:381:GLY:HA2	1.58	0.48
5:M:65:ASP:HA	5:M:68:ARG:HG2	1.95	0.48
3:Aa:40:ASN:HB3	3:Aa:47:SER:HA	1.94	0.48
4:Ah:230:ARG:HA	4:Ah:255:GLU:O	2.13	0.48
6:Bh:201:ASN:HB3	6:Bh:206:TYR:O	2.13	0.48
6:Bh:536:MET:HB3	6:Bh:538:TRP:CE2	2.49	0.48
5:Aq:376:LYS:HE3	5:Aq:377:VAL:HG23	1.94	0.48
6:Bh:186:LEU:O	6:Bh:190:ILE:HG13	2.14	0.48
7:CJ:307:MET:HE2	7:CJ:307:MET:HB3	1.74	0.48
1:AJ:255:ARG:HG2	1:AJ:256:TYR:HD1	1.78	0.48
5:Aq:18:SER:HB2	9:I:19:HIS:CD2	2.49	0.48
5:Aq:259:GLN:HG3	6:Bh:239:ARG:NH1	2.22	0.48
7:CJ:217:THR:HA	7:CJ:220:GLU:OE1	2.13	0.48
10:V:38:ARG:CZ	10:V:42:ARG:HH21	2.26	0.48
1:AJ:392:ARG:HG3	2:AO:63:TYR:OH	2.14	0.48
4:Ah:224:ILE:HD11	4:Ah:266:PRO:HD3	1.94	0.48
4:Ah:649:LYS:HD3	4:Ah:649:LYS:H	1.78	0.48
4:An:102:ALA:HB1	4:An:371:ALA:HB1	1.96	0.48
5:Aq:364:GLN:NE2	5:Aq:367:ARG:HD3	2.29	0.48
6:Bh:581:LEU:HB3	6:Bh:591:PHE:CZ	2.48	0.48
7:CJ:307:MET:SD	7:CJ:333:TYR:HB3	2.53	0.48
11:X:44:SER:O	11:X:45:LEU:C	2.57	0.48
10:t:45:ARG:HH21	10:t:83:ILE:H	1.60	0.48
4:An:235:GLU:HB2	4:An:246:ILE:HD11	1.94	0.48
4:An:649:LYS:H	4:An:649:LYS:HD3	1.79	0.48
5:Aq:22:MET:O	5:Aq:25:VAL:HB	2.13	0.48
5:Aq:494:PHE:HB3	5:Aq:802:PHE:HB3	1.96	0.48
7:CJ:252:GLU:OE2	12:n:80:TYR:HD1	1.97	0.48
7:CJ:263:ILE:HD11	7:CJ:312:GLY:CA	2.44	0.48
5:M:66:GLU:HA	5:M:70:ARG:CD	2.43	0.48
5:M:471:ASP:N	5:M:471:ASP:OD1	2.45	0.48
12:n:192:GLN:O	12:n:196:ILE:HG13	2.14	0.48
1:AJ:397:GLN:HE21	1:AJ:397:GLN:N	2.11	0.48
5:Aq:896:LEU:O	5:Aq:900:VAL:HG23	2.14	0.48
6:Bh:165:ARG:NH1	9:I:56:ASN:HB2	2.28	0.48
6:Bh:411:PHE:CD1	6:Bh:552:ALA:HB1	2.45	0.48
7:CJ:234:ALA:O	7:CJ:238:THR:HG23	2.13	0.48
5:M:588:LEU:HD22	5:M:589:ALA:H	1.77	0.48
5:M:593:THR:HG21	5:M:599:ARG:HH11	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Bh:182:LEU:HA	6:Bh:185:ILE:HD12	1.95	0.48
5:Aq:68:ARG:NH2	6:Bh:202:CYS:HB2	2.21	0.47
8:H:57:GLN:HG2	8:H:58:TYR:H	1.79	0.47
8:H:439:SER:HG	8:H:507:PHE:HD2	1.61	0.47
9:I:46:PRO:HB2	9:I:49:ARG:HG2	1.96	0.47
5:M:725:TRP:CD1	5:M:772:ARG:HH21	2.31	0.47
10:W:38:ARG:HG2	10:W:42:ARG:HE	1.79	0.47
3:Aa:145:MET:HE1	3:Aa:162:PRO:HD3	1.96	0.47
5:Aq:105:ILE:HD13	5:Aq:204:ARG:HB2	1.95	0.47
6:Bh:254:TYR:O	6:Bh:258:ILE:HG13	2.14	0.47
5:M:454:PRO:HD3	5:M:499:HIS:CD2	2.50	0.47
1:Aj:85:PHE:HB2	1:Aj:243:TYR:HB2	1.95	0.47
5:Aq:120:ILE:HD13	5:Aq:131:ARG:NH2	2.29	0.47
5:Aq:624:PRO:HG3	5:Aq:699:ASP:OD2	2.14	0.47
5:Aq:840:PHE:HB3	6:Bh:250:ARG:HH21	1.79	0.47
8:H:594:SER:HB3	8:H:598:ARG:HA	1.95	0.47
11:X:122:PHE:HD1	11:X:122:PHE:N	2.12	0.47
1:Aj:88:ARG:NH1	1:Aj:143:ASN:HB2	2.30	0.47
3:Ab:15:THR:HA	3:Ab:86:ALA:HA	1.97	0.47
5:Aq:75:LYS:HE3	5:Aq:79:ASN:CA	2.45	0.47
5:Aq:76:LEU:CD1	9:I:32:GLU:HG3	2.45	0.47
5:M:549:GLY:HA3	5:M:605:ILE:O	2.14	0.47
11:X:118:GLU:H	11:X:123:ILE:HB	1.80	0.47
4:Ah:102:ALA:O	4:Ah:190:LEU:HD12	2.15	0.47
5:Aq:744:PRO:HD3	5:Aq:750:LEU:HD23	1.96	0.47
6:Bh:150:ASN:C	6:Bh:153:PRO:HD2	2.39	0.47
6:Bh:366:TYR:HA	6:Bh:370:ASP:OD2	2.15	0.47
5:M:70:ARG:HE	5:M:76:LEU:HB3	1.77	0.47
5:M:441:LYS:HE2	5:M:470:ASP:HB3	1.97	0.47
5:M:732:PRO:HA	5:M:754:TYR:HA	1.97	0.47
5:M:753:LYS:HE2	5:M:753:LYS:HA	1.95	0.47
11:X:47:TYR:HB2	11:X:54:TYR:HE2	1.79	0.47
11:X:122:PHE:HD1	11:X:122:PHE:H	1.61	0.47
12:n:194:GLN:O	12:n:197:LYS:HG2	2.14	0.47
5:Aq:47:PHE:CZ	5:M:47:PHE:HB2	2.49	0.47
5:Aq:123:THR:N	5:Aq:131:ARG:HH21	2.12	0.47
5:Aq:534:LEU:HD13	5:Aq:565:LEU:HD11	1.97	0.47
8:H:126:ASP:HB2	8:H:129:ILE:HA	1.97	0.47
11:X:56:ALA:O	11:X:57:PRO:C	2.57	0.47
12:n:102:TYR:CG	12:n:103:ARG:N	2.73	0.47
12:n:102:TYR:HE2	12:o:113:PRO:HA	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aj:131:ARG:HG3	1:Aj:132:ASN:H	1.80	0.47
5:Aq:454:PRO:HD3	5:Aq:499:HIS:CD2	2.50	0.47
5:M:314:TYR:CG	5:M:314:TYR:O	2.68	0.47
1:Aj:191:TYR:CZ	1:Aj:298:ASN:ND2	2.83	0.47
4:An:342:ASP:HB3	4:An:348:TYR:HE1	1.79	0.47
6:Bh:135:GLU:HA	6:Bh:156:GLN:HE22	1.79	0.47
1:Aj:144:PRO:HB2	1:Aj:145:PHE:CD2	2.50	0.46
5:Aq:16:MET:O	5:Aq:17:LEU:HB2	2.15	0.46
5:Aq:111:GLN:O	5:Aq:114:LEU:HG	2.15	0.46
5:Aq:122:ASN:HA	5:Aq:131:ARG:HE	1.80	0.46
5:Aq:791:GLU:OE1	5:Aq:793:GLU:HB3	2.15	0.46
5:M:363:GLU:HB3	5:M:367:ARG:HH12	1.80	0.46
5:Aq:708:ARG:HH11	6:Bh:346:ASN:HB3	1.80	0.46
5:Aq:881:TYR:CD1	5:Aq:932:ASN:HB3	2.51	0.46
6:Bh:214:SER:HB3	5:M:73:TYR:CE2	2.50	0.46
7:Cj:352:VAL:H	12:o:156:GLN:NE2	2.13	0.46
5:M:120:ILE:H	5:M:120:ILE:HG13	1.36	0.46
11:X:122:PHE:N	11:X:122:PHE:CD1	2.82	0.46
4:An:224:ILE:HD11	4:An:266:PRO:HD3	1.96	0.46
5:Aq:156:TYR:CE2	5:Aq:178:SER:HB2	2.51	0.46
7:Cj:168:ARG:HB3	7:Cj:169:THR:H	1.44	0.46
11:X:115:LEU:H	11:X:115:LEU:HG	1.53	0.46
1:Aj:86:PHE:O	1:Aj:145:PHE:HD1	1.98	0.46
5:Aq:73:TYR:CZ	5:M:260:ILE:HD11	2.50	0.46
5:Aq:145:PHE:HB3	5:Aq:320:LYS:O	2.15	0.46
6:Bh:358:GLU:HA	6:Bh:574:GLN:HE22	1.80	0.46
5:M:233:ASP:HA	5:M:304:LYS:HE3	1.98	0.46
5:Aq:874:LEU:HB2	5:Aq:876:PHE:HE1	1.80	0.46
6:Bh:328:GLU:HA	5:M:708:ARG:NH1	2.30	0.46
11:X:32:TYR:C	11:X:34:GLN:H	2.23	0.46
11:X:55:SER:O	11:X:56:ALA:C	2.58	0.46
12:n:98:ASP:H	12:n:100:LEU:HD11	1.80	0.46
4:Ah:331:VAL:HG12	4:Ah:333:GLY:H	1.81	0.46
6:Bh:496:TYR:HD2	6:Bh:512:VAL:HG21	1.81	0.46
6:Bh:218:SER:HA	5:M:74:PRO:CD	2.45	0.46
5:M:79:ASN:HD22	5:M:80:TRP:H	1.62	0.46
10:W:38:ARG:NE	10:W:42:ARG:HH21	2.14	0.46
10:t:76:THR:H	10:t:79:GLY:HA2	1.81	0.46
1:Aj:118:VAL:HG12	1:Aj:122:TYR:CE2	2.51	0.46
3:Aa:71:ARG:HB2	6:Bh:427:PRO:CG	2.45	0.46
3:Ab:56:ALA:O	3:Ab:228:SER:HA	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Aq:120:ILE:O	5:Aq:121:PRO:C	2.59	0.46
5:Aq:362:GLU:CD	5:Aq:362:GLU:H	2.24	0.46
5:Aq:498:PHE:CE1	5:Aq:514:TYR:HB2	2.51	0.46
5:Aq:873:ALA:O	5:Aq:959:LYS:HB2	2.15	0.46
7:CJ:106:ASP:CB	7:CJ:109:LEU:HG	2.45	0.46
8:H:36:TYR:HD1	8:H:80:ARG:NH2	2.10	0.46
9:I:70:GLU:HA	9:I:73:HIS:CE1	2.50	0.46
12:n:148:LEU:HD12	12:o:102:TYR:HB3	1.97	0.46
2:AO:140:TRP:CD1	2:AO:144:LEU:HD12	2.51	0.46
5:Aq:120:ILE:HG23	5:Aq:334:TYR:CE1	2.50	0.46
5:Aq:209:GLN:O	5:Aq:210:PHE:HB3	2.16	0.46
5:Aq:256:HIS:CE1	5:Aq:270:LEU:HB2	2.51	0.46
6:Bh:387:SER:O	6:Bh:404:MET:HE1	2.16	0.46
5:M:240:ALA:HB3	5:M:252:ILE:HG22	1.97	0.46
1:AJ:91:LEU:HD22	1:AJ:215:TYR:CE2	2.51	0.46
6:Bh:496:TYR:CD2	6:Bh:512:VAL:HG21	2.51	0.46
7:CJ:93:LYS:HD3	7:CJ:93:LYS:HA	1.62	0.46
5:M:399:ILE:HB	5:M:406:SER:HB3	1.97	0.46
5:M:855:LEU:HA	5:M:872:ALA:HB3	1.97	0.46
1:AJ:347:VAL:HG12	1:AJ:348:ASP:H	1.81	0.45
4:Ah:200:ASN:HB3	4:Ah:236:ARG:O	2.16	0.45
4:Az:67:TYR:OH	4:Az:80:ARG:HD3	2.16	0.45
12:o:157:HIS:O	12:o:161:GLU:HG2	2.16	0.45
5:Aq:623:GLU:HB3	5:Aq:625:TYR:CE2	2.51	0.45
6:Bh:247:ASN:OD1	6:Bh:250:ARG:HD3	2.16	0.45
7:CJ:346:TYR:HB2	7:CJ:349:LEU:HD13	1.97	0.45
5:M:627:ALA:HA	5:M:641:TYR:O	2.16	0.45
10:W:33:ALA:HB2	10:t:35:TYR:HB3	1.96	0.45
12:n:113:PRO:HB2	12:o:102:TYR:HD2	1.81	0.45
4:Ah:128:LYS:HB3	4:Ah:132:GLY:HA2	1.99	0.45
5:Aq:364:GLN:HA	5:Aq:367:ARG:HG2	1.99	0.45
5:Aq:734:THR:HA	5:Aq:741:ILE:HG13	1.97	0.45
5:M:208:PHE:HB3	5:M:210:PHE:CE1	2.51	0.45
5:M:878:VAL:HG13	5:M:880:LEU:HG	1.98	0.45
10:V:50:ILE:O	10:V:54:ILE:HG12	2.15	0.45
11:X:32:TYR:C	11:X:34:GLN:N	2.73	0.45
12:n:35:LEU:HD11	12:n:72:TYR:HB3	1.97	0.45
10:s:29:VAL:HG12	10:s:76:THR:HA	1.97	0.45
4:Ah:422:THR:O	4:Ah:426:MET:HG3	2.16	0.45
8:H:440:SER:O	8:H:444:THR:HG23	2.16	0.45
2:AO:97:VAL:HG23	2:AO:112:SER:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Aq:543:LEU:HD11	5:Aq:550:TYR:HB3	1.97	0.45
7:CJ:185:SER:O	7:CJ:188:ARG:NE	2.49	0.45
7:CJ:346:TYR:CE1	12:n:137:VAL:HG21	2.51	0.45
8:H:226:PHE:HA	8:H:229:TYR:CZ	2.52	0.45
5:M:715:THR:OG1	5:M:789:VAL:HG21	2.17	0.45
12:o:199:LEU:HD23	12:o:199:LEU:HA	1.82	0.45
1:AJ:337:PRO:HA	1:AJ:340:ARG:HG3	1.99	0.45
5:Aq:123:THR:H	5:Aq:131:ARG:NH2	2.14	0.45
7:CJ:333:TYR:N	12:o:146:ILE:HG12	2.31	0.45
5:M:444:ALA:HB3	5:M:451:THR:HB	1.99	0.45
11:X:135:ASN:N	11:X:135:ASN:HD22	2.13	0.45
4:Az:111:VAL:HG12	4:Az:146:LYS:HB2	1.99	0.45
6:Bh:583:THR:HG22	6:Bh:584:LEU:HD23	1.99	0.45
9:I:43:ILE:HD13	9:I:97:ILE:HD11	1.98	0.45
10:s:75:ILE:HA	10:s:80:GLU:O	2.17	0.45
5:M:51:LEU:HD13	5:M:51:LEU:O	2.17	0.45
11:X:38:TYR:CG	11:X:39:GLN:N	2.85	0.45
12:n:189:LEU:O	12:n:193:LYS:HD2	2.16	0.45
3:Ab:65:GLN:HB2	3:Ab:92:TRP:HB2	1.98	0.45
4:Ah:94:LEU:HD12	4:Ah:384:PHE:HE1	1.82	0.45
4:An:248:THR:HG22	4:An:282:TYR:CZ	2.52	0.45
5:Aq:85:ARG:HE	5:Aq:85:ARG:HB2	1.64	0.45
5:Aq:899:MET:HE3	5:Aq:899:MET:HB3	1.85	0.45
7:CJ:106:ASP:HA	7:CJ:108:ILE:CG1	2.46	0.45
5:M:719:TYR:CE2	5:M:779:MET:HG2	2.51	0.45
5:Aq:918:MET:O	5:Aq:922:ILE:HG13	2.16	0.45
6:Bh:456:ASP:OD1	6:Bh:456:ASP:N	2.49	0.45
1:AJ:162:MET:HE2	1:AJ:162:MET:HB3	1.88	0.44
6:Bh:217:ALA:HB2	6:Bh:223:ASP:HB3	2.00	0.44
9:I:103:ILE:O	9:I:107:LYS:HG3	2.17	0.44
10:s:100:LEU:HD23	10:s:100:LEU:H	1.82	0.44
5:M:28:ASP:HA	5:M:31:ARG:HG2	1.99	0.44
10:t:37:TYR:HA	10:t:71:TYR:HE1	1.83	0.44
4:Ah:628:LEU:HD23	4:Ah:628:LEU:HA	1.86	0.44
4:An:111:VAL:HB	4:An:181:SER:HB3	2.00	0.44
4:An:562:GLN:HE22	11:X:120:GLY:HA3	1.83	0.44
7:CJ:257:LEU:HD22	7:CJ:257:LEU:HA	1.80	0.44
5:M:152:PHE:CE1	5:M:209:GLN:HA	2.52	0.44
5:M:538:VAL:HA	5:M:556:VAL:HG22	1.99	0.44
12:n:188:LEU:HB3	12:o:188:LEU:HD22	1.99	0.44
12:o:155:GLU:OE2	10:s:116:LYS:HD3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:Aj:88:ARG:NH2	1:Aj:143:ASN:HD22	2.16	0.44
5:Aq:33:ALA:HA	5:Aq:39:THR:H	1.82	0.44
10:V:134:LEU:HD11	10:W:100:LEU:HD11	1.99	0.44
5:Aq:862:VAL:HB	5:Aq:943:ASN:ND2	2.33	0.44
8:H:452:ASN:HA	8:H:455:ARG:HG2	2.00	0.44
5:M:152:PHE:HA	5:M:210:PHE:O	2.16	0.44
5:M:492:MET:SD	5:M:492:MET:N	2.91	0.44
3:Ab:59:TYR:HB2	3:Ab:227:VAL:HB	1.99	0.44
4:Ah:235:GLU:HB2	4:Ah:246:ILE:HD11	1.99	0.44
5:M:70:ARG:CZ	5:M:76:LEU:HD22	2.48	0.44
5:M:85:ARG:O	5:M:260:ILE:HD12	2.17	0.44
5:M:93:VAL:HG22	5:M:94:GLY:H	1.82	0.44
12:n:184:GLN:NE2	12:n:188:LEU:HD11	2.33	0.44
3:Aa:71:ARG:NH2	6:Bh:423:LEU:HD22	2.33	0.44
3:Ab:84:HIS:CG	3:Ab:257:LEU:HD13	2.53	0.44
5:Aq:306:LYS:HE2	5:Aq:306:LYS:HB3	1.86	0.44
5:Aq:554:LEU:HB2	5:Aq:601:PHE:HB2	1.99	0.44
5:Aq:568:LYS:HD2	5:Aq:569:ASN:OD1	2.17	0.44
5:Aq:911:ARG:HH22	5:Aq:949:ALA:H	1.66	0.44
4:Az:128:LYS:HB3	4:Az:132:GLY:HA2	2.00	0.44
7:CJ:115:GLN:OE1	7:CJ:116:ILE:HD12	2.18	0.44
7:CJ:121:ASN:OD1	7:CJ:121:ASN:N	2.43	0.44
7:CJ:152:LYS:O	7:CJ:153:LEU:C	2.60	0.44
7:CJ:255:THR:HB	7:CJ:305:MET:SD	2.58	0.44
8:H:554:THR:HG22	8:H:555:GLY:H	1.83	0.44
5:M:120:ILE:HD13	5:M:334:TYR:CD2	2.53	0.44
5:M:211:LYS:HE3	5:M:213:LEU:HD22	1.99	0.44
10:t:45:ARG:NH2	10:t:83:ILE:H	2.15	0.44
2:AO:194:CYS:SG	2:AO:228:THR:HG22	2.58	0.44
5:Aq:180:LEU:HB3	5:Aq:181:GLN:H	1.68	0.44
6:Bh:1:MET:N	5:M:75:LYS:HG3	2.32	0.44
6:Bh:4:THR:O	6:Bh:8:LEU:HG	2.18	0.44
6:Bh:223:ASP:OD1	6:Bh:223:ASP:N	2.50	0.44
5:M:101:LYS:HA	5:M:209:GLN:N	2.30	0.44
5:M:727:TYR:CE1	5:M:762:LYS:HD3	2.53	0.44
5:M:965:LYS:HB3	5:M:969:ILE:HG22	1.99	0.44
11:X:87:ILE:O	11:X:88:ASP:HB2	2.18	0.44
10:s:134:LEU:HD11	10:t:100:LEU:HD11	2.00	0.44
5:Aq:86:TRP:O	5:Aq:87:MET:C	2.61	0.44
5:Aq:108:LEU:HB2	5:Aq:203:MET:HE1	1.99	0.44
5:Aq:549:GLY:HA3	5:Aq:605:ILE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Aq:860:VAL:HG12	5:Aq:947:TYR:CD1	2.43	0.44
7:CJ:231:PHE:HB3	7:CJ:257:LEU:HD11	1.99	0.44
7:CJ:304:THR:HG22	7:CJ:333:TYR:CG	2.53	0.44
5:M:120:ILE:HG12	5:M:334:TYR:HB3	2.00	0.44
5:M:709:THR:OG1	5:M:796:ARG:HD3	2.17	0.44
5:M:716:TYR:CE1	5:M:786:PRO:HB2	2.53	0.44
1:AJ:91:LEU:HD12	1:AJ:123:LEU:HB3	1.99	0.43
4:Ah:114:LYS:HD3	4:Ah:143:ASP:HA	2.00	0.43
4:An:422:THR:O	4:An:426:MET:HG3	2.18	0.43
5:Aq:191:GLY:O	5:Aq:201:LEU:HD12	2.18	0.43
5:M:154:LEU:HB3	5:M:207:LEU:HB2	1.98	0.43
5:M:415:GLN:HE22	5:M:417:SER:HB3	1.83	0.43
5:M:877:ASN:HA	5:M:977:ASP:HB3	1.99	0.43
3:Aa:36:HIS:HB3	3:Ab:167:LEU:HB2	1.99	0.43
4:An:94:LEU:HD12	4:An:384:PHE:HE1	1.82	0.43
5:Aq:379:ILE:HA	5:Aq:384:VAL:HG21	2.00	0.43
5:Aq:754:TYR:O	5:Aq:755:LEU:C	2.60	0.43
6:Bh:274:ILE:HA	6:Bh:291:MET:HG2	2.00	0.43
6:Bh:274:ILE:HD11	6:Bh:340:MET:HG2	2.00	0.43
6:Bh:315:MET:HE1	5:M:401:ASN:HB2	2.00	0.43
5:M:29:MET:SD	5:M:48:VAL:HB	2.58	0.43
1:AJ:381:LEU:HG	1:AJ:384:ASP:HB2	2.00	0.43
3:Aa:57:VAL:HG22	3:Aa:228:SER:HB2	1.99	0.43
4:Ah:114:LYS:NZ	4:Ah:143:ASP:HB2	2.33	0.43
5:M:71:GLU:HA	5:M:77:ALA:HA	1.99	0.43
5:M:780:LYS:HE2	5:M:780:LYS:HB3	1.67	0.43
10:W:66:PRO:HA	10:W:69:TYR:CZ	2.53	0.43
1:AJ:337:PRO:HB2	1:AJ:388:ARG:CZ	2.48	0.43
4:Ah:612:THR:HG22	4:Az:669:GLY:HA3	1.99	0.43
5:Aq:22:MET:HE2	5:Aq:22:MET:HB3	1.89	0.43
5:Aq:95:ARG:HD3	5:Aq:95:ARG:H	1.83	0.43
5:Aq:449:ARG:HD2	5:Aq:610:ASP:OD1	2.19	0.43
6:Bh:187:PHE:HA	6:Bh:190:ILE:HD12	1.99	0.43
8:H:515:LEU:HD23	8:H:515:LEU:HA	1.89	0.43
5:M:74:PRO:HA	5:M:369:MET:SD	2.58	0.43
12:n:40:GLU:H	12:n:40:GLU:HG2	1.64	0.43
1:AJ:386:PHE:N	1:AJ:386:PHE:HD1	2.15	0.43
3:Ab:143:ARG:HD2	3:Ab:189:TYR:OH	2.19	0.43
4:Ah:208:PRO:HG3	4:Ah:230:ARG:NE	2.34	0.43
5:Aq:86:TRP:HZ2	6:Bh:203:HIS:HD1	1.67	0.43
5:Aq:141:ARG:HD2	5:Aq:141:ARG:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:Aq:705:MET:HB2	5:Aq:705:MET:HE3	1.75	0.43
5:M:559:ASN:HD21	5:M:561:ALA:HB3	1.84	0.43
5:Aq:50:LEU:HD22	5:Aq:50:LEU:HA	1.71	0.43
6:Bh:501:HIS:CG	6:Bh:502:TYR:N	2.87	0.43
5:M:724:PRO:HA	5:M:771:TYR:HA	2.00	0.43
1:Aj:339:GLU:O	1:Aj:343:MET:HG2	2.19	0.43
3:Ab:57:VAL:HA	3:Ab:228:SER:HA	2.00	0.43
3:Ab:178:GLY:HA3	6:Bh:518:ASP:HB2	2.01	0.43
5:Aq:151:ASP:C	5:Aq:152:PHE:HD1	2.27	0.43
8:H:66:GLU:CB	8:H:80:ARG:HE	2.32	0.43
3:Ab:229:ALA:HB2	3:Ab:252:ALA:HA	2.01	0.43
5:Aq:66:GLU:HB3	5:Aq:70:ARG:NH2	2.33	0.43
5:Aq:151:ASP:HB2	5:Aq:211:LYS:HG3	2.01	0.43
5:Aq:237:HIS:O	5:Aq:301:LEU:HB2	2.19	0.43
7:Cj:106:ASP:OD1	7:Cj:109:LEU:HG	2.19	0.43
7:Cj:208:ALA:O	7:Cj:211:LYS:HB2	2.16	0.43
5:M:71:GLU:HB3	5:M:78:THR:HG22	2.01	0.43
5:M:233:ASP:CB	5:M:303:THR:H	2.32	0.43
10:W:39:THR:HA	10:W:42:ARG:HD2	2.00	0.43
5:Aq:258:GLN:O	5:Aq:260:ILE:HG13	2.19	0.43
5:M:65:ASP:CA	5:M:68:ARG:HE	2.30	0.43
5:M:816:ILE:HG12	5:M:819:ARG:HH21	1.83	0.43
5:M:982:LYS:HE3	5:M:982:LYS:HB3	1.89	0.43
5:Aq:47:PHE:O	5:Aq:51:LEU:HD13	2.19	0.43
5:Aq:80:TRP:CD1	5:Aq:80:TRP:C	2.96	0.43
5:Aq:379:ILE:HD12	5:Aq:842:TYR:CD2	2.54	0.43
6:Bh:376:TRP:HE1	6:Bh:404:MET:HG3	1.84	0.43
7:Cj:111:GLN:HE21	7:Cj:111:GLN:HB2	1.52	0.43
12:o:130:LYS:O	12:o:134:ILE:HG13	2.18	0.43
5:Aq:70:ARG:HA	5:Aq:73:TYR:CG	2.54	0.42
5:Aq:311:PRO:HG3	5:Aq:351:ALA:N	2.34	0.42
5:Aq:615:LEU:HB2	5:Aq:622:TYR:CE2	2.54	0.42
6:Bh:281:ILE:N	6:Bh:282:PRO:HD2	2.35	0.42
7:Cj:262:ARG:O	7:Cj:263:ILE:C	2.62	0.42
7:Cj:303:LEU:HA	7:Cj:303:LEU:HD23	1.77	0.42
8:H:99:LYS:HE2	8:H:563:PHE:CD1	2.54	0.42
9:I:70:GLU:HA	9:I:73:HIS:ND1	2.34	0.42
5:M:118:VAL:HG11	5:M:137:LEU:HD22	2.01	0.42
5:M:237:HIS:HE1	5:M:239:ARG:HD2	1.84	0.42
5:Aq:83:LEU:O	5:Aq:87:MET:HG3	2.20	0.42
6:Bh:1:MET:HB3	6:Bh:5:ASP:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:Bh:39:TYR:O	6:Bh:40:GLN:HB2	2.18	0.42
6:Bh:207:ALA:HB3	6:Bh:212:ILE:HD11	2.02	0.42
6:Bh:253:ASN:O	6:Bh:257:LEU:HG	2.19	0.42
6:Bh:367:PRO:O	6:Bh:370:ASP:HB2	2.18	0.42
5:Aq:364:GLN:O	5:Aq:368:VAL:HG23	2.19	0.42
5:Aq:740:VAL:HG22	12:n:192:GLN:HE21	1.84	0.42
7:CJ:319:ARG:HA	12:o:80:TYR:HE1	1.84	0.42
8:H:246:ILE:HD13	8:H:249:ILE:HD12	2.02	0.42
5:M:415:GLN:OE1	5:M:417:SER:HB3	2.19	0.42
5:Aq:43:PRO:HG2	9:I:9:PHE:HD2	1.85	0.42
7:CJ:328:VAL:HG12	12:n:144:MET:HE3	2.01	0.42
5:M:250:THR:HG22	5:M:251:GLU:H	1.84	0.42
5:M:629:THR:HG22	5:M:640:ASP:HA	2.00	0.42
11:X:36:TYR:C	11:X:38:TYR:N	2.78	0.42
11:X:52:SER:O	11:X:53:GLN:C	2.61	0.42
12:n:151:THR:HB	12:o:99:SER:OG	2.19	0.42
1:Aj:139:VAL:HG12	1:Aj:143:ASN:HD21	1.84	0.42
4:Ah:51:LEU:HD22	4:Ah:290:THR:HG23	2.02	0.42
4:Ah:342:ASP:HB3	4:Ah:348:TYR:HE1	1.85	0.42
5:Aq:92:TYR:O	5:Aq:93:VAL:HG13	2.20	0.42
6:Bh:25:ASP:OD1	6:Bh:25:ASP:N	2.52	0.42
5:M:97:ALA:O	5:M:236:TYR:HE1	2.02	0.42
10:V:112:THR:O	10:V:116:LYS:HG3	2.18	0.42
1:Aj:60:ARG:HA	1:Aj:60:ARG:HD3	1.90	0.42
1:Aj:273:MET:HE2	1:Aj:273:MET:HB3	1.91	0.42
3:Ab:99:MET:HG2	3:Ab:130:CYS:SG	2.60	0.42
4:Az:628:LEU:HD23	4:Az:628:LEU:HA	1.88	0.42
7:CJ:180:ARG:O	7:CJ:181:THR:C	2.62	0.42
5:M:808:LEU:HD12	5:M:819:ARG:HH11	1.85	0.42
10:t:1:MET:N	10:t:2:PRO:HD2	2.35	0.42
1:Aj:91:LEU:HB2	1:Aj:123:LEU:O	2.20	0.42
4:An:326:THR:H	4:An:334:GLN:HE22	1.66	0.42
5:Aq:379:ILE:HA	5:Aq:384:VAL:HG23	2.02	0.42
4:Az:107:GLY:HA3	4:Az:183:TYR:CZ	2.55	0.42
4:Az:314:TYR:HB2	4:Az:335:MET:HE3	2.01	0.42
6:Bh:281:ILE:HA	6:Bh:281:ILE:HD12	1.81	0.42
7:CJ:189:GLN:O	7:CJ:192:LEU:HB3	2.20	0.42
5:M:73:TYR:O	5:M:369:MET:HE2	2.20	0.42
5:M:271:GLN:HB3	5:M:278:ASN:HB2	2.02	0.42
5:M:288:GLN:HB2	5:M:290:THR:HG23	2.02	0.42
5:M:879:THR:HG23	5:M:934:GLU:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:X:75:TYR:CD2	11:X:102:VAL:HB	2.55	0.42
1:Aj:246:ILE:HG13	1:Aj:256:TYR:CZ	2.55	0.42
5:Aq:607:THR:HB	5:Aq:628:LEU:HD23	2.02	0.42
8:H:96:ARG:HD3	8:H:417:PHE:CE2	2.55	0.42
8:H:630:LEU:O	8:H:632:PRO:HD3	2.20	0.42
9:I:41:SER:O	9:I:96:LYS:HA	2.19	0.42
5:M:65:ASP:HA	5:M:68:ARG:CG	2.50	0.42
11:X:106:GLY:C	11:X:107:ILE:HG12	2.43	0.42
12:n:122:TYR:O	12:n:126:ILE:HG12	2.19	0.42
3:Ab:99:MET:HE1	3:Ab:122:LEU:HD21	2.01	0.42
5:Aq:14:ARG:CZ	5:Aq:14:ARG:HA	2.50	0.42
5:Aq:566:ASP:HB3	5:Aq:568:LYS:NZ	2.35	0.42
5:Aq:679:LEU:HA	5:Aq:682:GLN:CD	2.45	0.42
4:Az:331:VAL:HG12	4:Az:333:GLY:H	1.83	0.42
6:Bh:563:ASP:C	6:Bh:565:GLU:H	2.28	0.42
7:CJ:187:ILE:O	7:CJ:188:ARG:C	2.62	0.42
8:H:635:PHE:CG	8:H:636:LEU:N	2.88	0.42
5:M:719:TYR:CD2	5:M:779:MET:HG2	2.55	0.42
5:Aq:783:TYR:HB2	5:Aq:785:ASN:ND2	2.35	0.41
5:Aq:904:ILE:O	5:Aq:908:LEU:HG	2.19	0.41
5:Aq:982:LYS:HE2	5:Aq:982:LYS:HB3	1.78	0.41
6:Bh:224:ARG:H	6:Bh:224:ARG:HG2	1.68	0.41
6:Bh:501:HIS:CG	6:Bh:502:TYR:H	2.38	0.41
7:CJ:328:VAL:HG12	12:n:144:MET:CE	2.50	0.41
5:M:242:MET:HB2	5:M:250:THR:H	1.85	0.41
12:n:185:ILE:O	12:n:189:LEU:HG	2.20	0.41
5:Aq:880:LEU:HD13	5:Aq:930:ILE:HD11	2.02	0.41
6:Bh:530:LYS:O	6:Bh:534:LEU:HG	2.19	0.41
8:H:126:ASP:CB	8:H:129:ILE:HA	2.50	0.41
5:M:612:THR:HG23	5:M:625:TYR:HB2	2.02	0.41
3:Aa:113:LYS:HE3	3:Aa:114:PHE:CZ	2.55	0.41
5:Aq:68:ARG:NH1	6:Bh:199:TRP:CE2	2.88	0.41
5:M:40:LEU:C	5:M:40:LEU:HD12	2.45	0.41
5:M:816:ILE:HG12	5:M:819:ARG:NH2	2.34	0.41
5:M:891:ASP:OD1	5:M:891:ASP:N	2.53	0.41
12:o:159:ILE:HG22	12:o:163:ARG:NE	2.35	0.41
4:An:331:VAL:HG12	4:An:333:GLY:H	1.85	0.41
5:Aq:17:LEU:O	5:Aq:55:THR:HB	2.20	0.41
6:Bh:364:GLU:HG2	6:Bh:365:LEU:N	2.26	0.41
6:Bh:503:GLN:HE21	6:Bh:507:MET:HG2	1.85	0.41
7:CJ:157:VAL:O	7:CJ:161:LEU:HG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:51:VAL:HG11	8:H:421:ARG:HB2	2.00	0.41
5:M:763:LEU:HD22	5:M:767:GLY:O	2.19	0.41
1:Aj:38:TRP:CZ3	2:AO:55:LEU:HD13	2.56	0.41
5:Aq:37:GLU:CB	5:Aq:38:LEU:HA	2.37	0.41
5:Aq:576:PHE:C	5:Aq:584:TYR:HB3	2.45	0.41
6:Bh:506:GLY:HA2	6:Bh:509:GLU:HG2	2.03	0.41
7:CJ:241:ILE:HG22	7:CJ:242:THR:H	1.85	0.41
8:H:140:VAL:HG13	8:H:633:ARG:HH22	1.84	0.41
5:M:571:HIS:HB2	5:M:654:VAL:HG23	2.03	0.41
4:An:50:LEU:HB2	4:An:90:PHE:CZ	2.55	0.41
5:Aq:783:TYR:HB2	5:Aq:785:ASN:HD21	1.86	0.41
4:Az:235:GLU:HB2	4:Az:246:ILE:HD11	2.02	0.41
6:Bh:461:TRP:CZ3	6:Bh:495:MET:HG3	2.56	0.41
6:Bh:572:ASP:HB3	6:Bh:576:GLY:HA3	2.03	0.41
7:CJ:113:LYS:HZ3	7:CJ:114:ASP:CG	2.28	0.41
7:CJ:183:VAL:O	7:CJ:186:LEU:HD22	2.21	0.41
5:M:120:ILE:HD11	5:M:136:LYS:O	2.19	0.41
5:M:731:ILE:HD12	5:M:756:HIS:CD2	2.56	0.41
4:Ah:4:LYS:HD2	4:Ah:217:ARG:NH2	2.35	0.41
5:Aq:27:SER:HA	5:Aq:40:LEU:HB2	2.02	0.41
5:Aq:219:PHE:CZ	5:Aq:221:SER:HB3	2.55	0.41
5:Aq:274:GLY:C	5:Aq:276:LYS:H	2.28	0.41
5:Aq:382:THR:O	5:Aq:385:GLU:HB3	2.19	0.41
5:Aq:532:ILE:HG22	5:Aq:534:LEU:HG	2.03	0.41
6:Bh:262:LEU:HD13	6:Bh:581:LEU:HD21	2.02	0.41
6:Bh:388:ARG:NH1	6:Bh:402:MET:HA	2.35	0.41
7:CJ:121:ASN:HB3	7:CJ:177:LYS:NZ	2.36	0.41
5:M:133:TYR:CD1	5:M:133:TYR:N	2.89	0.41
5:M:133:TYR:N	5:M:133:TYR:HD1	2.18	0.41
5:Aq:520:ILE:HG21	5:Aq:541:TYR:CD1	2.56	0.41
4:Az:102:ALA:HB3	4:Az:191:VAL:HG21	2.02	0.41
7:CJ:245:ARG:O	7:CJ:249:VAL:HG23	2.21	0.41
5:M:66:GLU:O	5:M:78:THR:HB	2.20	0.41
5:M:252:ILE:HB	5:M:293:LYS:CE	2.50	0.41
5:M:281:VAL:HG21	5:M:291:MET:HG2	2.02	0.41
4:Ah:193:TRP:HD1	4:Ah:194:ARG:O	2.04	0.41
4:An:354:LEU:HD22	4:An:358:GLN:HG3	2.02	0.41
5:Aq:309:VAL:HG23	5:Aq:313:ASP:OD2	2.21	0.41
5:Aq:376:LYS:HB2	5:Aq:376:LYS:HZ2	1.85	0.41
5:Aq:716:TYR:C	5:Aq:718:ARG:HH21	2.28	0.41
5:Aq:891:ASP:OD1	5:Aq:891:ASP:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CJ:102:ILE:HD12	7:CJ:102:ILE:HA	1.75	0.41
7:CJ:108:ILE:HA	7:CJ:111:GLN:NE2	2.36	0.41
7:CJ:349:LEU:HG	12:o:163:ARG:NH1	2.34	0.41
5:M:70:ARG:HE	5:M:70:ARG:HB3	1.64	0.41
5:M:141:ARG:HH22	5:M:297:ARG:HH12	1.69	0.41
5:M:824:THR:HA	5:M:827:ILE:HD12	2.03	0.41
11:X:46:PRO:HB2	11:X:49:ILE:HG22	2.03	0.41
11:X:54:TYR:OH	11:X:92:GLU:HB3	2.21	0.41
12:n:71:ALA:HB1	12:n:88:ASP:OD1	2.21	0.41
12:n:164:ARG:O	12:n:168:ILE:HG12	2.21	0.41
12:n:178:CYS:HA	12:n:181:GLN:OE1	2.20	0.41
4:Ah:482:ALA:HB3	4:Ah:577:ILE:HD13	2.02	0.41
6:Bh:139:TYR:HD1	6:Bh:139:TYR:H	1.69	0.41
8:H:232:LYS:HD2	8:H:232:LYS:HA	1.88	0.41
5:M:211:LYS:HG2	5:M:213:LEU:HD23	2.03	0.41
5:M:281:VAL:HG11	5:M:285:TYR:OH	2.21	0.41
5:M:500:TYR:CE1	5:M:800:MET:HE3	2.56	0.41
10:V:113:ASP:O	10:V:117:ILE:HG13	2.20	0.41
11:X:38:TYR:C	11:X:40:GLY:H	2.28	0.41
12:n:41:VAL:HG11	12:n:48:LEU:HD11	2.03	0.41
12:n:101:ARG:HE	12:n:101:ARG:HA	1.86	0.41
5:Aq:427:MET:HE1	5:Aq:851:PRO:HD2	2.04	0.40
5:M:152:PHE:CD1	5:M:209:GLN:HA	2.57	0.40
5:M:591:PRO:HB3	5:M:601:PHE:CE1	2.56	0.40
5:M:725:TRP:HD1	5:M:772:ARG:HH21	1.69	0.40
11:X:20:LEU:HD21	11:X:111:LEU:HD22	2.03	0.40
12:n:155:GLU:HA	12:n:158:GLN:CD	2.46	0.40
4:Ah:463:ARG:O	4:Ah:467:ARG:HG3	2.21	0.40
5:Aq:13:ASN:HA	5:Aq:16:MET:SD	2.62	0.40
5:Aq:283:GLU:H	5:Aq:283:GLU:HG2	1.71	0.40
4:Az:392:PHE:CE2	4:Az:426:MET:HG2	2.56	0.40
6:Bh:495:MET:HE3	6:Bh:495:MET:HB3	1.92	0.40
7:CJ:236:VAL:HA	7:CJ:239:GLU:OE1	2.21	0.40
7:CJ:248:SER:O	7:CJ:249:VAL:C	2.65	0.40
8:H:104:GLY:HA3	8:H:107:ILE:HD13	2.03	0.40
1:AJ:106:SER:HB2	1:AJ:116:GLN:HG2	2.03	0.40
4:Ah:48:THR:HA	4:Ah:91:THR:O	2.21	0.40
5:Aq:30:ILE:O	5:Aq:31:ARG:C	2.63	0.40
5:Aq:722:ASN:HB3	5:Aq:771:TYR:CG	2.56	0.40
4:Az:109:GLU:HA	4:Az:182:ASN:O	2.22	0.40
5:M:56:ALA:O	5:M:58:ALA:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:87:MET:HE2	5:M:87:MET:HB3	1.97	0.40
12:o:61:SER:HA	12:o:64:GLU:OE1	2.21	0.40
1:AJ:261:THR:HB	1:AJ:296:VAL:O	2.21	0.40
5:Aq:46:PRO:HA	5:Aq:49:TYR:CD1	2.56	0.40
7:CJ:158:ASP:O	7:CJ:161:LEU:HB2	2.21	0.40
5:M:814:ASP:OD1	5:M:814:ASP:N	2.53	0.40
12:o:173:THR:C	12:o:174:ILE:HD12	2.46	0.40
5:Aq:101:LYS:HE3	5:Aq:101:LYS:HB2	1.88	0.40
5:Aq:136:LYS:HA	5:Aq:160:ILE:O	2.22	0.40
5:Aq:236:TYR:HD2	5:Aq:301:LEU:HD22	1.86	0.40
6:Bh:321:LEU:HD22	6:Bh:590:HIS:CE1	2.56	0.40
6:Bh:570:LEU:HD22	6:Bh:570:LEU:HA	1.97	0.40
7:CJ:109:LEU:O	7:CJ:110:SER:C	2.64	0.40
5:M:204:ARG:HG2	5:M:206:PRO:HD3	2.02	0.40
5:M:593:THR:HA	5:M:594:ASP:HA	1.85	0.40
11:X:118:GLU:O	11:X:119:ARG:HB3	2.21	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	AJ	357/401 (89%)	316 (88%)	38 (11%)	3 (1%)	16	50
2	AO	283/296 (96%)	273 (96%)	10 (4%)	0	100	100
3	Aa	257/294 (87%)	244 (95%)	11 (4%)	2 (1%)	16	50
3	Ab	267/294 (91%)	256 (96%)	11 (4%)	0	100	100
4	Ah	678/690 (98%)	655 (97%)	23 (3%)	0	100	100
4	An	659/690 (96%)	637 (97%)	22 (3%)	0	100	100
4	Az	678/690 (98%)	653 (96%)	25 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	Aq	977/997 (98%)	821 (84%)	125 (13%)	31 (3%)	3	25
5	M	958/997 (96%)	814 (85%)	129 (14%)	15 (2%)	7	36
6	Bh	575/803 (72%)	521 (91%)	51 (9%)	3 (0%)	24	59
7	CJ	237/355 (67%)	155 (65%)	59 (25%)	23 (10%)	0	8
8	H	441/713 (62%)	370 (84%)	68 (15%)	3 (1%)	18	52
9	I	104/117 (89%)	94 (90%)	9 (9%)	1 (1%)	12	45
10	V	135/137 (98%)	131 (97%)	4 (3%)	0	100	100
10	W	135/137 (98%)	135 (100%)	0	0	100	100
10	s	135/137 (98%)	119 (88%)	16 (12%)	0	100	100
10	t	135/137 (98%)	123 (91%)	12 (9%)	0	100	100
11	X	126/135 (93%)	83 (66%)	32 (25%)	11 (9%)	0	10
12	n	195/208 (94%)	170 (87%)	23 (12%)	2 (1%)	12	45
12	o	205/208 (99%)	186 (91%)	19 (9%)	0	100	100
All	All	7537/8436 (89%)	6756 (90%)	687 (9%)	94 (1%)	13	41

All (94) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	Aq	121	PRO
5	Aq	378	PRO
5	Aq	755	LEU
7	CJ	101	ASN
7	CJ	102	ILE
7	CJ	152	LYS
7	CJ	153	LEU
7	CJ	162	ASP
7	CJ	197	ILE
7	CJ	222	LEU
8	H	631	ASP
9	I	20	ASP
5	M	41	VAL
5	M	43	PRO
5	M	210	PHE
11	X	16	SER
11	X	41	SER
11	X	54	TYR
11	X	57	PRO

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Mol	Chain	Res	Type
12	n	39	SER
1	AJ	377	GLU
3	Aa	164	ASP
5	Aq	17	LEU
5	Aq	30	ILE
5	Aq	75	LYS
5	Aq	92	TYR
5	Aq	93	VAL
5	Aq	124	ILE
5	Aq	210	PHE
5	Aq	372	VAL
5	Aq	373	ASN
5	Aq	702	GLY
7	CJ	123	GLN
7	CJ	182	VAL
7	CJ	183	VAL
7	CJ	249	VAL
5	M	85	ARG
5	M	126	SER
5	M	287	SER
5	M	749	THR
5	M	930	ILE
11	X	38	TYR
11	X	129	VAL
5	Aq	138	VAL
5	Aq	221	SER
5	Aq	252	ILE
5	Aq	377	VAL
5	Aq	741	ILE
5	Aq	792	ARG
5	Aq	945	SER
6	Bh	364	GLU
6	Bh	569	SER
7	CJ	106	ASP
7	CJ	109	LEU
7	CJ	173	TYR
5	M	602	THR
5	M	770	ALA
5	Aq	348	SER
5	Aq	599	ARG
5	Aq	634	TYR
7	CJ	154	SER

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Mol	Chain	Res	Type
8	H	129	ILE
5	M	57	THR
11	X	43	VAL
11	X	88	ASP
1	AJ	204	PRO
5	Aq	43	PRO
5	Aq	168	ILE
5	Aq	293	LYS
5	Aq	318	ASP
5	Aq	379	ILE
5	Aq	790	ASP
6	Bh	40	GLN
7	CJ	98	THR
7	CJ	110	SER
7	CJ	175	ASP
7	CJ	253	LEU
5	M	124	ILE
11	X	131	GLU
7	CJ	104	SER
7	CJ	180	ARG
7	CJ	288	PRO
8	H	640	LEU
5	M	732	PRO
5	M	978	VAL
5	Aq	316	VAL
1	AJ	382	PRO
3	Aa	136	ILE
11	X	45	LEU
5	Aq	105	ILE
7	CJ	263	ILE
5	M	935	ILE
12	n	21	PRO
11	X	46	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	AJ	325/357 (91%)	316 (97%)	9 (3%)	38	59
2	AO	246/254 (97%)	241 (98%)	5 (2%)	48	65
3	Aa	228/250 (91%)	225 (99%)	3 (1%)	61	71
3	Ab	232/250 (93%)	230 (99%)	2 (1%)	70	75
4	Ah	569/579 (98%)	566 (100%)	3 (0%)	81	81
4	An	556/579 (96%)	553 (100%)	3 (0%)	81	81
4	Az	569/579 (98%)	566 (100%)	3 (0%)	81	81
5	Aq	854/868 (98%)	763 (89%)	91 (11%)	6	24
5	M	837/868 (96%)	752 (90%)	85 (10%)	7	26
6	Bh	521/724 (72%)	491 (94%)	30 (6%)	18	44
7	CJ	210/306 (69%)	159 (76%)	51 (24%)	1	4
8	H	389/582 (67%)	380 (98%)	9 (2%)	44	63
9	I	96/106 (91%)	93 (97%)	3 (3%)	35	57
10	V	121/121 (100%)	120 (99%)	1 (1%)	73	77
10	W	121/121 (100%)	118 (98%)	3 (2%)	42	62
10	s	121/121 (100%)	120 (99%)	1 (1%)	73	77
10	t	121/121 (100%)	118 (98%)	3 (2%)	42	62
11	X	111/117 (95%)	88 (79%)	23 (21%)	1	7
12	n	172/180 (96%)	164 (95%)	8 (5%)	23	48
12	o	178/180 (99%)	169 (95%)	9 (5%)	21	46
All	All	6577/7263 (91%)	6232 (95%)	345 (5%)	22	46

All (345) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AJ	38	TRP
1	AJ	53	THR
1	AJ	58	ILE
1	AJ	156	ILE
1	AJ	161	ASP
1	AJ	248	ASP
1	AJ	258	PHE
1	AJ	386	PHE
1	AJ	397	GLN
2	AO	13	VAL
2	AO	208	ARG

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Mol	Chain	Res	Type
2	AO	230	THR
2	AO	242	LEU
2	AO	271	VAL
3	Aa	12	ILE
3	Aa	136	ILE
3	Aa	176	THR
3	Ab	176	THR
3	Ab	197	TRP
4	Ah	324	LEU
4	Ah	432	LEU
4	Ah	649	LYS
4	An	324	LEU
4	An	432	LEU
4	An	649	LYS
5	Aq	6	LYS
5	Aq	23	GLN
5	Aq	29	MET
5	Aq	30	ILE
5	Aq	31	ARG
5	Aq	32	LEU
5	Aq	51	LEU
5	Aq	52	GLU
5	Aq	75	LYS
5	Aq	76	LEU
5	Aq	80	TRP
5	Aq	81	ASN
5	Aq	86	TRP
5	Aq	89	ASP
5	Aq	92	TYR
5	Aq	93	VAL
5	Aq	96	PHE
5	Aq	104	ILE
5	Aq	108	LEU
5	Aq	114	LEU
5	Aq	120	ILE
5	Aq	121	PRO
5	Aq	138	VAL
5	Aq	141	ARG
5	Aq	143	THR
5	Aq	147	VAL
5	Aq	154	LEU
5	Aq	158	ILE

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Mol	Chain	Res	Type
5	Aq	159	GLU
5	Aq	171	VAL
5	Aq	172	TYR
5	Aq	183	LEU
5	Aq	189	GLU
5	Aq	195	VAL
5	Aq	200	VAL
5	Aq	241	TYR
5	Aq	252	ILE
5	Aq	258	GLN
5	Aq	260	ILE
5	Aq	262	ASP
5	Aq	278	ASN
5	Aq	280	ARG
5	Aq	284	ILE
5	Aq	295	THR
5	Aq	309	VAL
5	Aq	316	VAL
5	Aq	347	TYR
5	Aq	360	THR
5	Aq	362	GLU
5	Aq	363	GLU
5	Aq	366	GLU
5	Aq	368	VAL
5	Aq	374	LYS
5	Aq	376	LYS
5	Aq	386	LEU
5	Aq	449	ARG
5	Aq	455	ASP
5	Aq	480	ASN
5	Aq	515	LEU
5	Aq	516	ASP
5	Aq	535	THR
5	Aq	568	LYS
5	Aq	583	ASP
5	Aq	584	TYR
5	Aq	595	GLU
5	Aq	618	ASP
5	Aq	623	GLU
5	Aq	626	ILE
5	Aq	650	GLU
5	Aq	682	GLN

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Mol	Chain	Res	Type
5	Aq	687	PHE
5	Aq	693	THR
5	Aq	699	ASP
5	Aq	701	ASP
5	Aq	705	MET
5	Aq	718	ARG
5	Aq	740	VAL
5	Aq	742	ILE
5	Aq	785	ASN
5	Aq	789	VAL
5	Aq	792	ARG
5	Aq	861	ILE
5	Aq	868	THR
5	Aq	891	ASP
5	Aq	911	ARG
5	Aq	929	ASP
5	Aq	936	ASP
5	Aq	938	PHE
5	Aq	954	VAL
5	Aq	970	LEU
5	Aq	982	LYS
4	Az	324	LEU
4	Az	432	LEU
4	Az	649	LYS
6	Bh	25	ASP
6	Bh	139	TYR
6	Bh	144	VAL
6	Bh	167	GLU
6	Bh	204	THR
6	Bh	205	HIS
6	Bh	211	HIS
6	Bh	223	ASP
6	Bh	228	TYR
6	Bh	233	GLN
6	Bh	262	LEU
6	Bh	281	ILE
6	Bh	294	LYS
6	Bh	296	LEU
6	Bh	309	ARG
6	Bh	310	LYS
6	Bh	315	MET
6	Bh	364	GLU

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Mol	Chain	Res	Type
6	Bh	398	ASP
6	Bh	402	MET
6	Bh	411	PHE
6	Bh	454	ILE
6	Bh	456	ASP
6	Bh	492	HIS
6	Bh	517	MET
6	Bh	554	ASP
6	Bh	564	LEU
6	Bh	567	VAL
6	Bh	570	LEU
6	Bh	583	THR
7	CJ	90	LEU
7	CJ	91	MET
7	CJ	92	ASN
7	CJ	93	LYS
7	CJ	95	LYS
7	CJ	98	THR
7	CJ	100	LEU
7	CJ	102	ILE
7	CJ	108	ILE
7	CJ	111	GLN
7	CJ	113	LYS
7	CJ	115	GLN
7	CJ	117	TYR
7	CJ	121	ASN
7	CJ	153	LEU
7	CJ	159	ARG
7	CJ	163	ASP
7	CJ	167	THR
7	CJ	168	ARG
7	CJ	169	THR
7	CJ	171	PHE
7	CJ	173	TYR
7	CJ	177	LYS
7	CJ	183	VAL
7	CJ	186	LEU
7	CJ	187	ILE
7	CJ	188	ARG
7	CJ	189	GLN
7	CJ	195	ASN
7	CJ	198	ASP

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Mol	Chain	Res	Type
7	CJ	216	THR
7	CJ	217	THR
7	CJ	218	LEU
7	CJ	221	SER
7	CJ	222	LEU
7	CJ	228	ASN
7	CJ	231	PHE
7	CJ	232	ARG
7	CJ	236	VAL
7	CJ	239	GLU
7	CJ	241	ILE
7	CJ	245	ARG
7	CJ	247	ARG
7	CJ	248	SER
7	CJ	250	VAL
7	CJ	252	GLU
7	CJ	256	LEU
7	CJ	257	LEU
7	CJ	260	ASN
7	CJ	263	ILE
7	CJ	265	SER
8	H	41	VAL
8	H	42	ASP
8	H	84	GLU
8	H	225	GLU
8	H	233	THR
8	H	279	TRP
8	H	430	GLU
8	H	504	ILE
8	H	554	THR
9	I	18	ILE
9	I	40	VAL
9	I	113	ILE
5	M	23	GLN
5	M	42	ASP
5	M	51	LEU
5	M	60	ASN
5	M	65	ASP
5	M	75	LYS
5	M	79	ASN
5	M	82	GLN
5	M	83	LEU

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Mol	Chain	Res	Type
5	M	85	ARG
5	M	86	TRP
5	M	120	ILE
5	M	127	ASP
5	M	129	LEU
5	M	131	ARG
5	M	133	TYR
5	M	135	ARG
5	M	154	LEU
5	M	155	HIS
5	M	156	TYR
5	M	161	GLN
5	M	163	GLN
5	M	166	ASP
5	M	180	LEU
5	M	195	VAL
5	M	207	LEU
5	M	208	PHE
5	M	209	GLN
5	M	212	THR
5	M	213	LEU
5	M	217	VAL
5	M	229	ILE
5	M	234	GLN
5	M	236	TYR
5	M	250	THR
5	M	281	VAL
5	M	284	ILE
5	M	288	GLN
5	M	306	LYS
5	M	307	ILE
5	M	309	VAL
5	M	318	ASP
5	M	347	TYR
5	M	349	GLU
5	M	372	VAL
5	M	380	THR
5	M	462	ASN
5	M	470	ASP
5	M	471	ASP
5	M	482	ASP
5	M	490	ASN

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Mol	Chain	Res	Type
5	M	492	MET
5	M	510	ILE
5	M	513	TYR
5	M	572	ILE
5	M	612	THR
5	M	618	ASP
5	M	623	GLU
5	M	635	GLU
5	M	656	THR
5	M	676	VAL
5	M	693	THR
5	M	710	VAL
5	M	714	ILE
5	M	735	ASP
5	M	740	VAL
5	M	741	ILE
5	M	753	LYS
5	M	769	GLN
5	M	775	LYS
5	M	785	ASN
5	M	788	PRO
5	M	803	ILE
5	M	814	ASP
5	M	844	GLU
5	M	855	LEU
5	M	860	VAL
5	M	864	ASN
5	M	866	LEU
5	M	878	VAL
5	M	891	ASP
5	M	942	LYS
5	M	943	ASN
5	M	969	ILE
5	M	977	ASP
10	V	113	ASP
10	W	27	ASN
10	W	48	ASP
10	W	113	ASP
11	X	10	SER
11	X	12	PHE
11	X	42	ILE
11	X	48	LEU

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Mol	Chain	Res	Type
11	X	51	THR
11	X	54	TYR
11	X	57	PRO
11	X	84	VAL
11	X	85	LYS
11	X	86	TYR
11	X	87	ILE
11	X	93	ARG
11	X	94	VAL
11	X	97	GLN
11	X	107	ILE
11	X	111	LEU
11	X	115	LEU
11	X	121	ASN
11	X	122	PHE
11	X	123	ILE
11	X	127	GLU
11	X	129	VAL
11	X	135	ASN
12	n	13	VAL
12	n	48	LEU
12	n	59	ASP
12	n	74	VAL
12	n	92	THR
12	n	107	LEU
12	n	146	ILE
12	n	181	GLN
12	o	79	ASP
12	o	98	ASP
12	o	100	LEU
12	o	101	ARG
12	o	102	TYR
12	o	152	VAL
12	o	153	THR
12	o	189	LEU
12	o	207	THR
10	s	46	ASP
10	t	81	TYR
10	t	99	THR
10	t	113	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (82) such sidechains are listed below:

Mol	Chain	Res	Type
1	AJ	143	ASN
1	AJ	221	ASN
1	AJ	294	GLN
1	AJ	298	ASN
1	AJ	310	ASN
1	AJ	397	GLN
3	Aa	36	HIS
3	Aa	161	HIS
3	Aa	253	GLN
3	Ab	161	HIS
3	Ab	262	HIS
4	Ah	81	GLN
4	Ah	153	HIS
4	Ah	232	GLN
4	An	153	HIS
4	An	321	ASN
4	An	476	ASN
5	Aq	61	GLN
5	Aq	79	ASN
5	Aq	111	GLN
5	Aq	173	ASN
5	Aq	256	HIS
5	Aq	258	GLN
5	Aq	364	GLN
5	Aq	480	ASN
5	Aq	489	ASN
5	Aq	499	HIS
5	Aq	673	ASN
5	Aq	785	ASN
5	Aq	797	ASN
4	Az	81	GLN
4	Az	153	HIS
4	Az	232	GLN
4	Az	529	ASN
6	Bh	103	ASN
6	Bh	133	ASN
6	Bh	168	HIS
6	Bh	178	HIS
6	Bh	205	HIS
6	Bh	233	GLN
6	Bh	259	GLN
6	Bh	503	GLN
6	Bh	574	GLN

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Mol	Chain	Res	Type
6	Bh	590	HIS
7	CJ	111	GLN
7	CJ	122	GLN
7	CJ	174	ASN
7	CJ	195	ASN
7	CJ	260	ASN
7	CJ	296	HIS
7	CJ	332	ASN
8	H	57	GLN
8	H	171	GLN
8	H	673	HIS
9	I	13	ASN
9	I	30	HIS
9	I	109	GLN
5	M	62	ASN
5	M	79	ASN
5	M	81	ASN
5	M	237	HIS
5	M	383	GLN
5	M	415	GLN
5	M	569	ASN
5	M	608	ASN
5	M	653	HIS
5	M	756	HIS
5	M	764	ASN
10	V	36	ASN
11	X	39	GLN
11	X	53	GLN
11	X	126	GLN
11	X	135	ASN
12	n	156	GLN
12	o	156	GLN
12	o	158	GLN
12	o	192	GLN
12	o	194	GLN
12	o	205	ASN
10	s	36	ASN
10	s	64	ASN
10	t	43	ASN

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](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
7	CJ	1
3	Aa	1
1	AJ	1
5	M	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CJ	332:ASN	C	333:TYR	N	7.28
1	Aa	195:LEU	C	196:VAL	N	3.10
1	AJ	93:LEU	C	94:THR	N	3.06
1	M	788:PRO	C	789:VAL	N	3.06

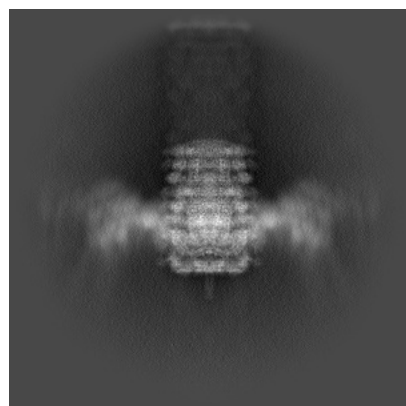
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-75829. These allow visual inspection of the internal detail of the map and identification of artifacts.

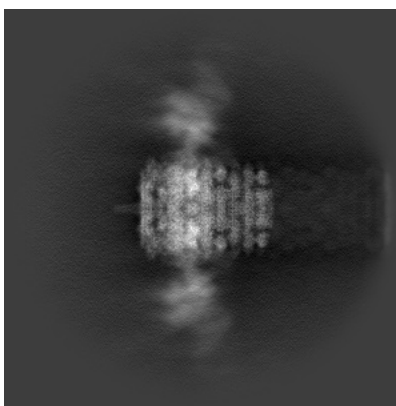
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

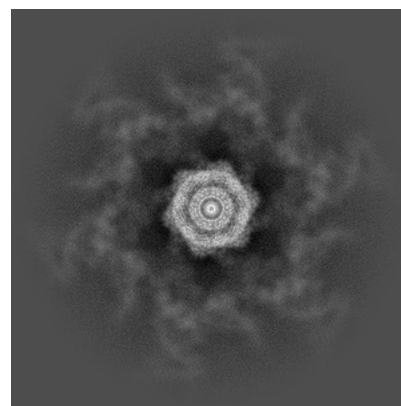
6.1.1 Primary map



X

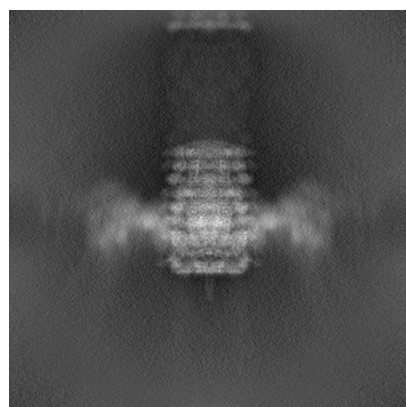


Y

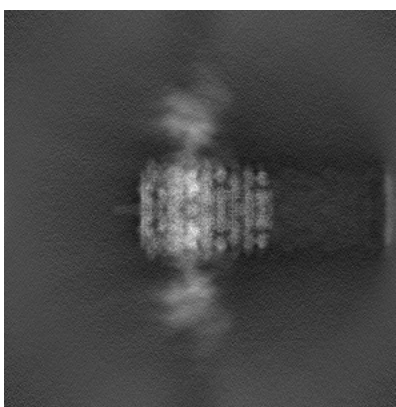


Z

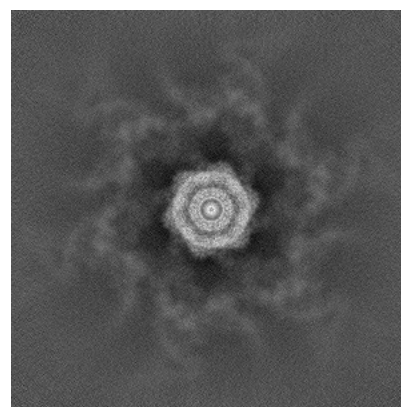
6.1.2 Raw map



X



Y

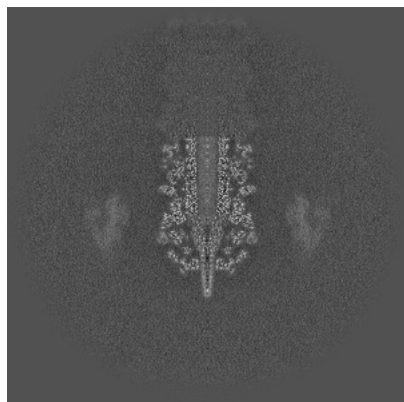


Z

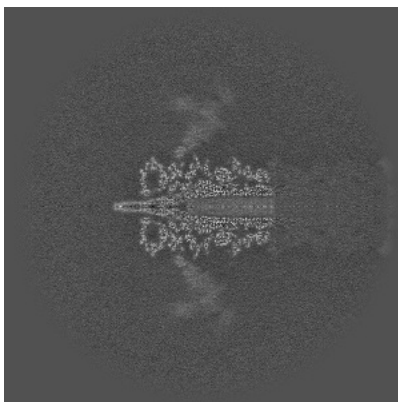
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

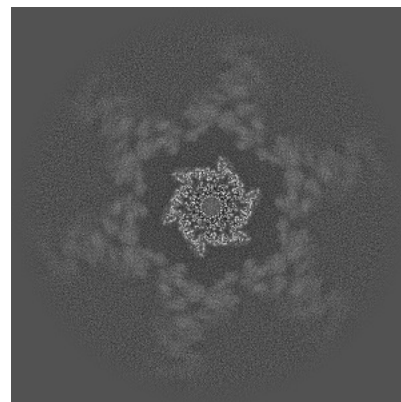
6.2.1 Primary map



X Index: 300

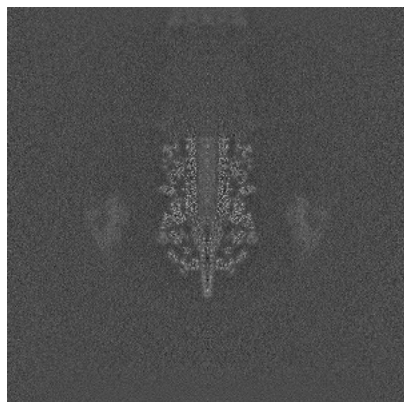


Y Index: 300

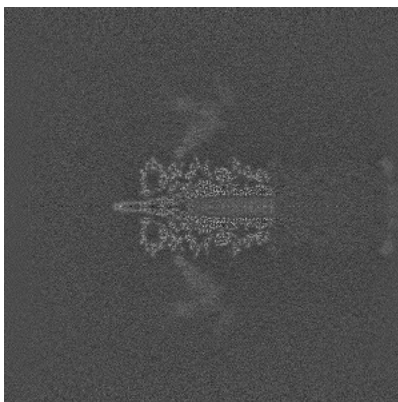


Z Index: 300

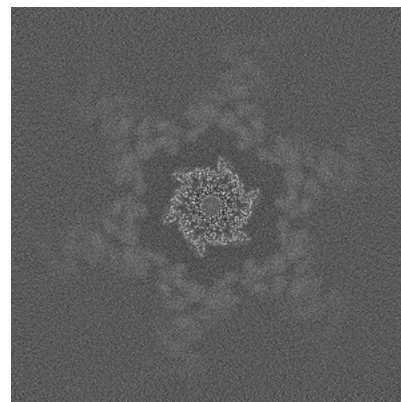
6.2.2 Raw map



X Index: 300



Y Index: 300

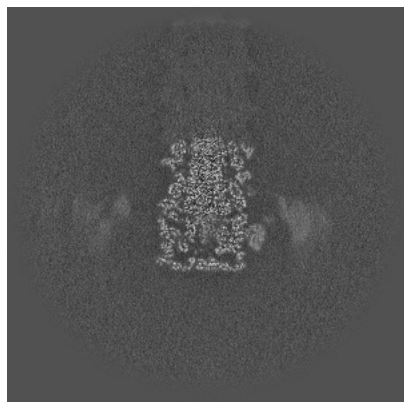


Z Index: 300

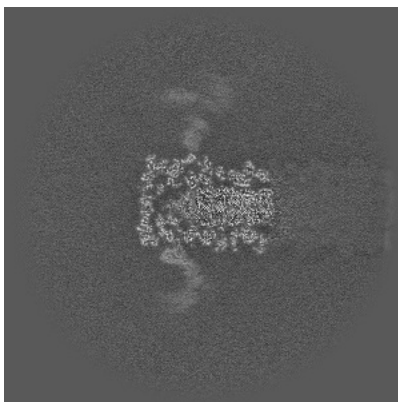
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

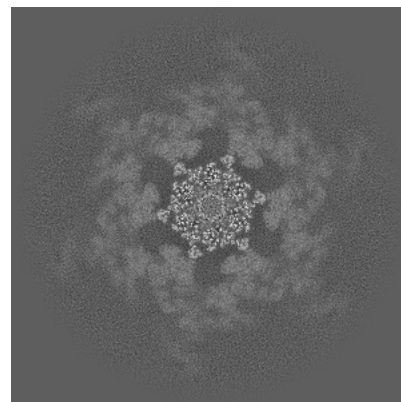
6.3.1 Primary map



X Index: 281

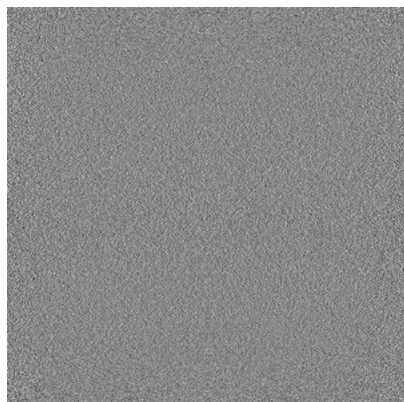


Y Index: 317

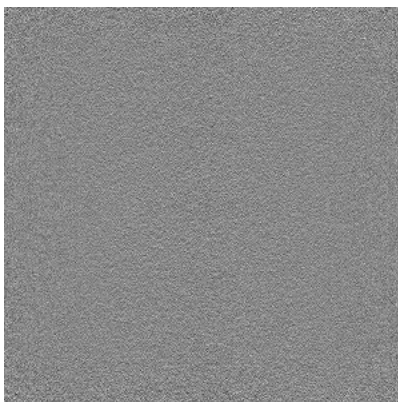


Z Index: 281

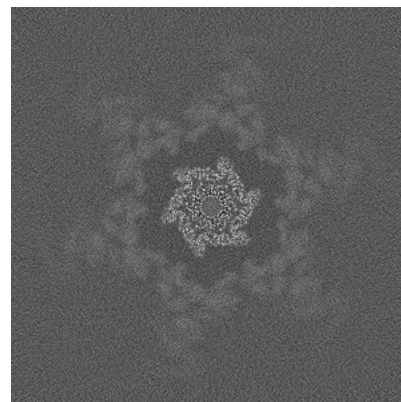
6.3.2 Raw map



X Index: 0



Y Index: 0

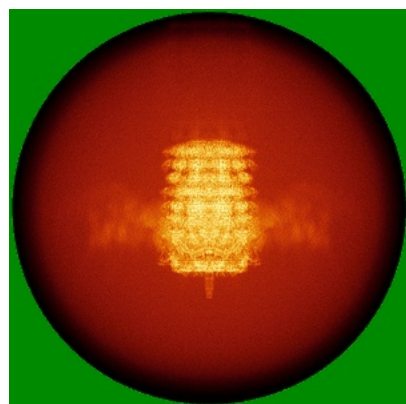


Z Index: 301

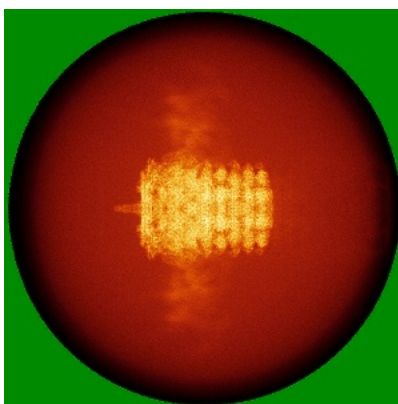
The images above show the largest variance slices of the map in three orthogonal directions.

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

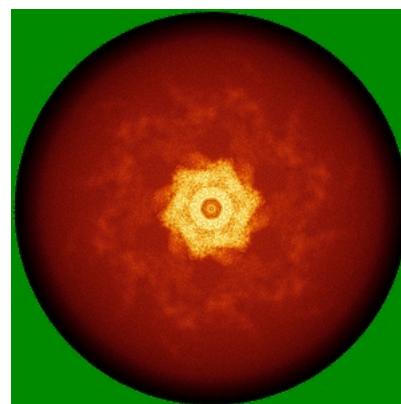
6.4.1 Primary map



X

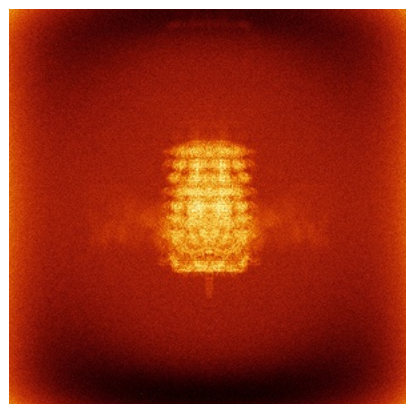


Y

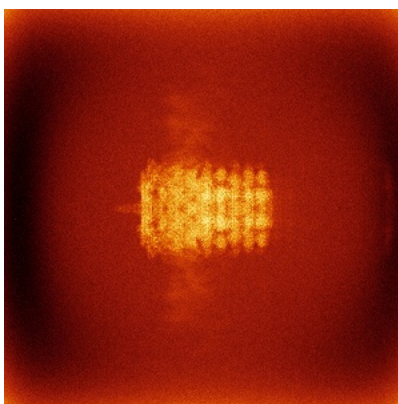


Z

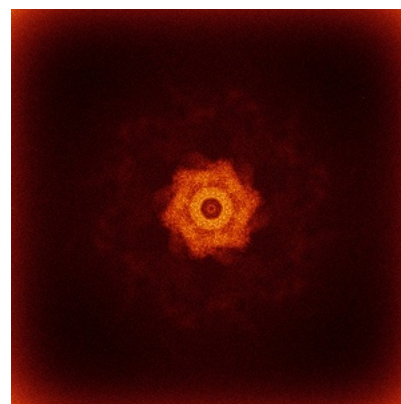
6.4.2 Raw map



X



Y

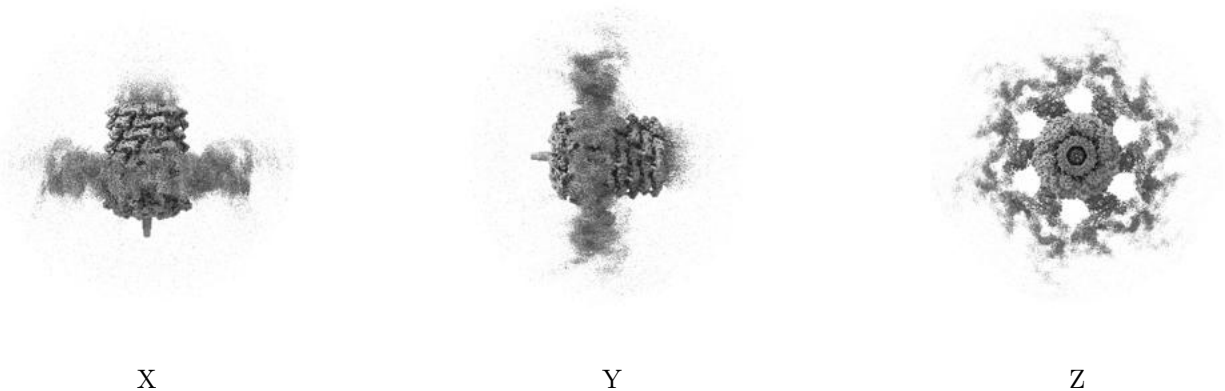


Z

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.

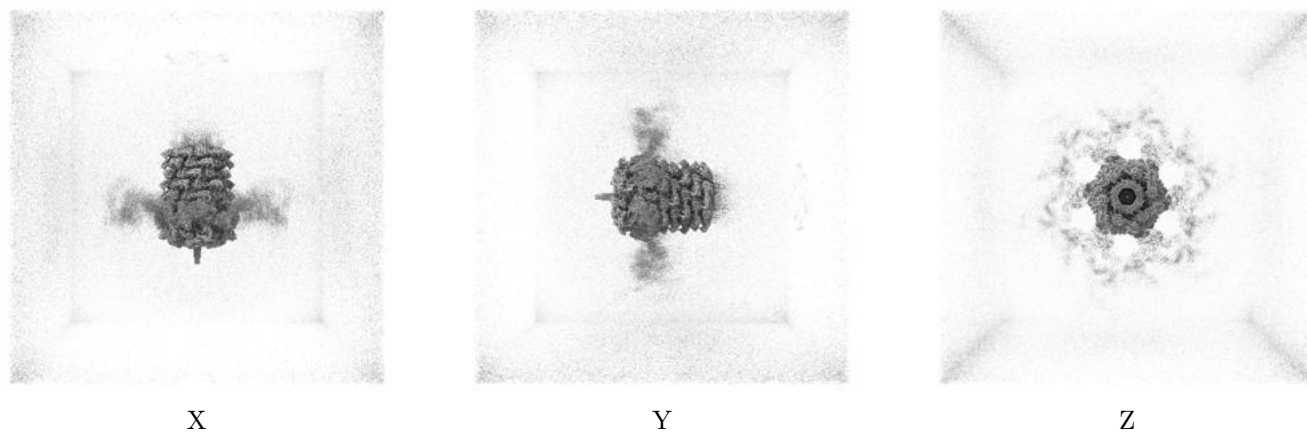
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.4. 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.

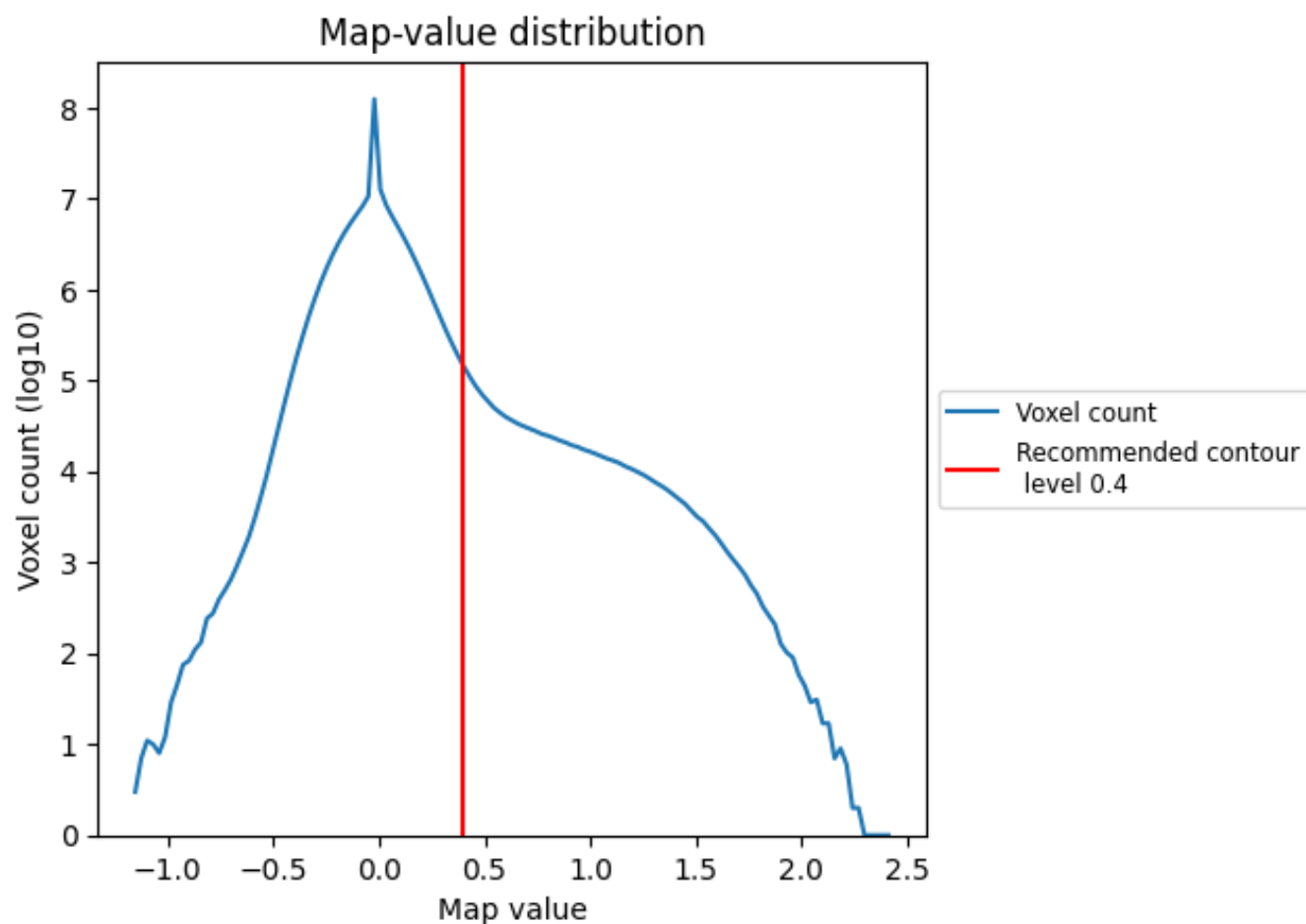
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

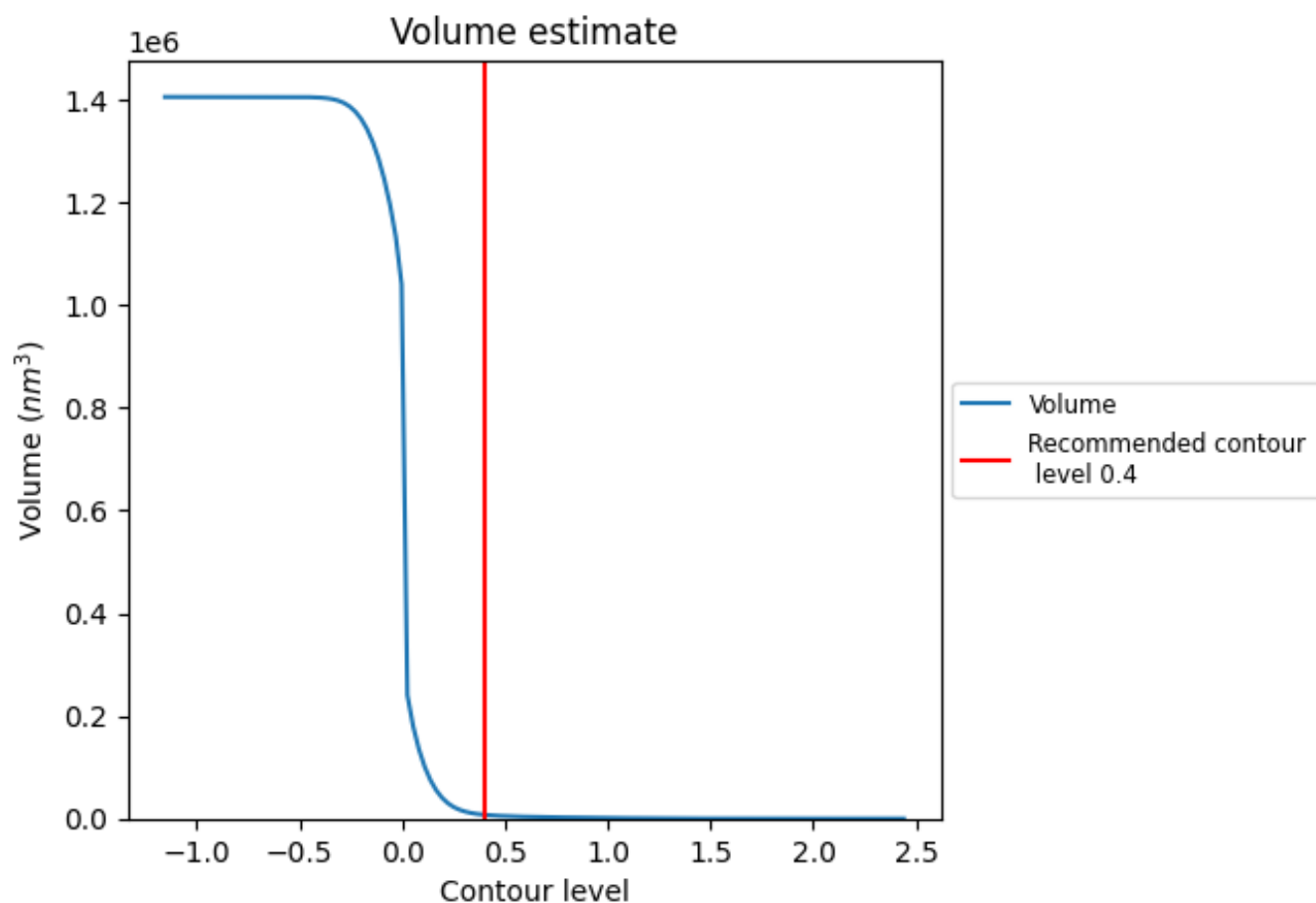
This section contains the results of statistical analysis of the map.

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.

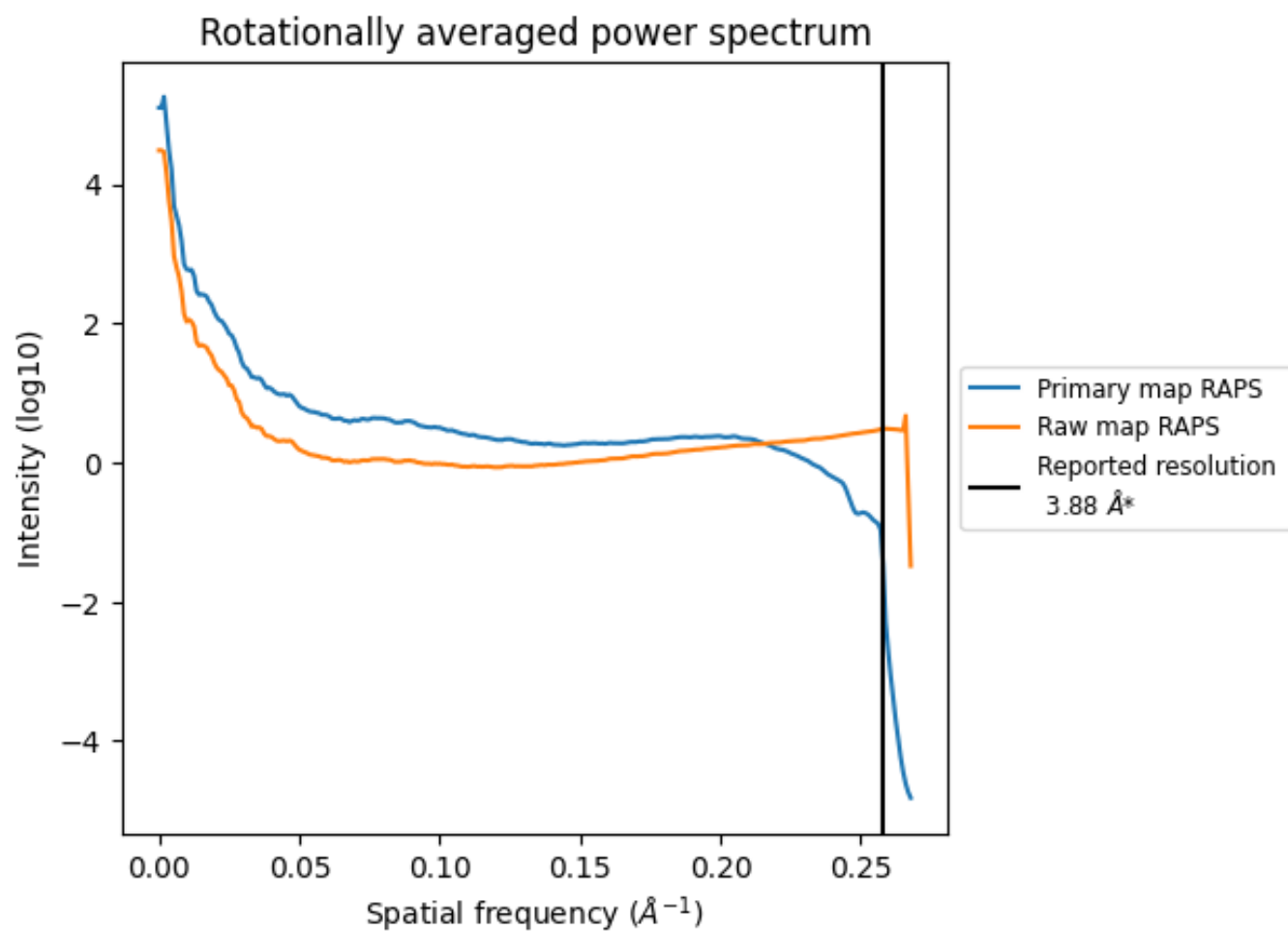
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 7436 nm³; this corresponds to an approximate mass of 6717 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 ⓘ

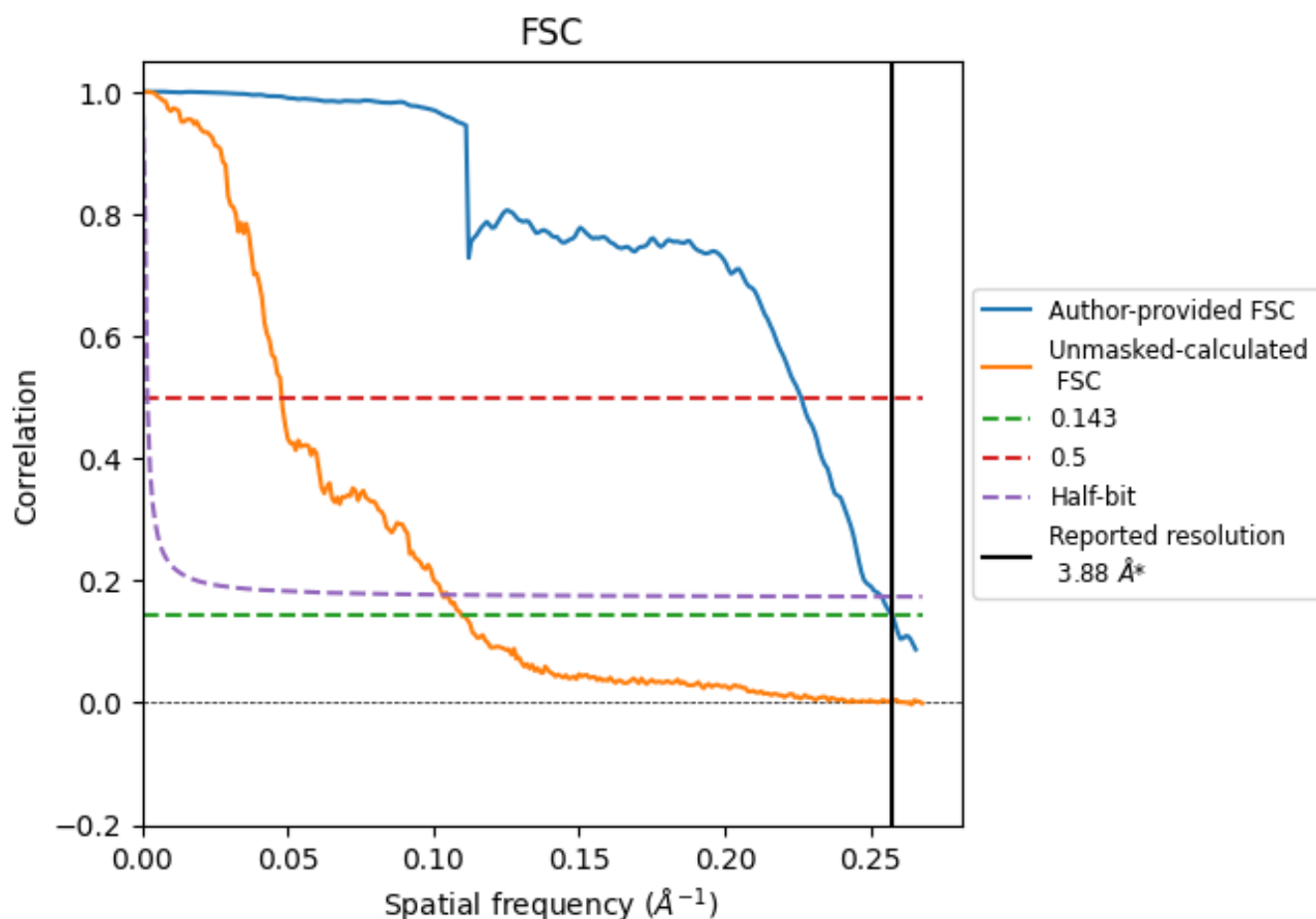


*Reported resolution corresponds to spatial frequency of 0.258 Å⁻¹

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 0.258 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

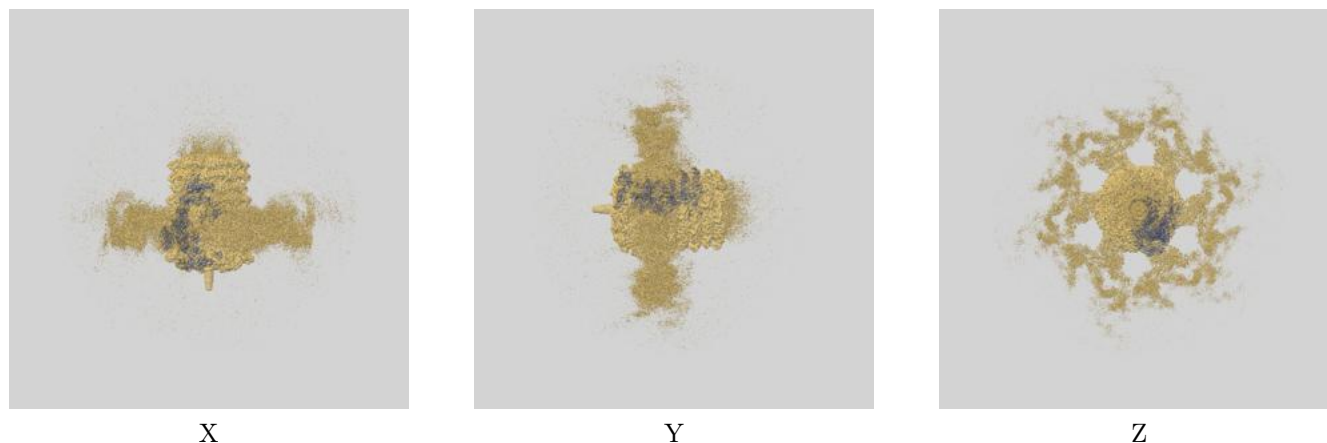
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.88	-	-
Author-provided FSC curve	3.88	4.42	3.94
Unmasked-calculated*	9.12	20.88	9.70

*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 9.12 differs from the reported value 3.88 by more than 10 %

9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-75829 and PDB model 11LX. Per-residue inclusion information can be found in section [3](#) on page [7](#).

9.1 Map-model overlay [i](#)



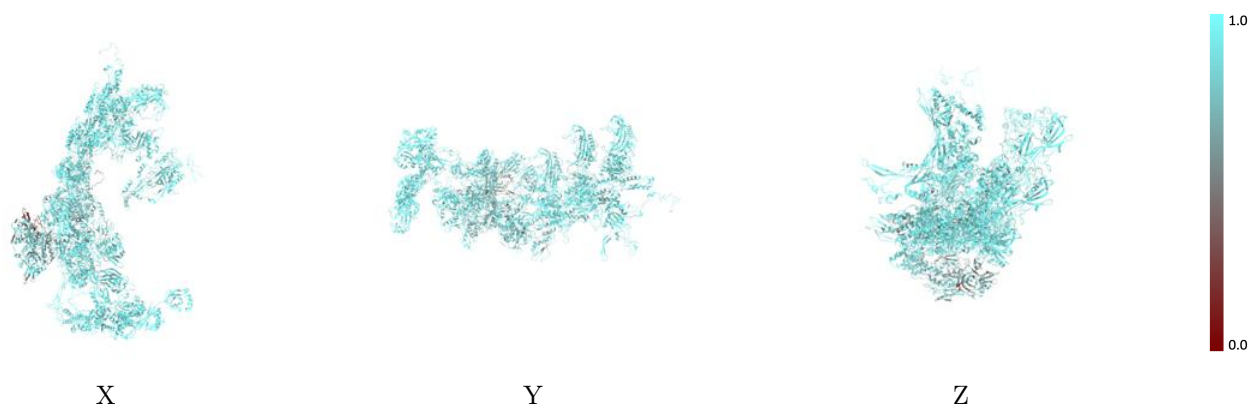
The images above show the 3D surface view of the map at the recommended contour level 0.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



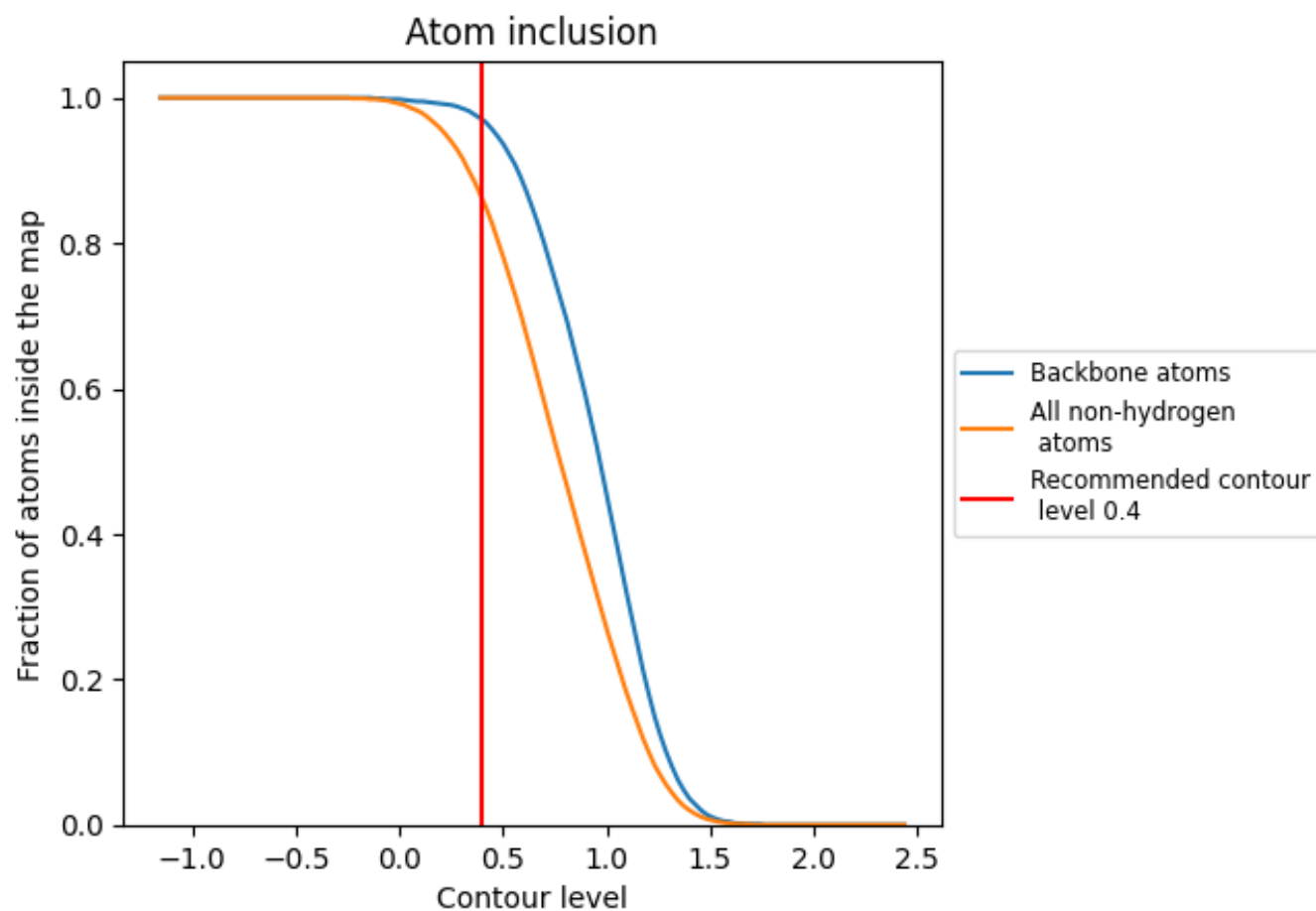
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.4).

9.4 Atom inclusion [i](#)



At the recommended contour level, 97% of all backbone atoms, 86% 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 (0.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8610	 0.3580
AJ	 0.8880	 0.4270
AO	 0.8740	 0.4270
Aa	 0.7630	 0.1880
Ab	 0.6460	 0.1510
Ah	 0.8800	 0.3770
An	 0.8690	 0.3790
Aq	 0.8670	 0.3580
Az	 0.8840	 0.3790
Bh	 0.8240	 0.3200
CJ	 0.8930	 0.3380
H	 0.8760	 0.3920
I	 0.8510	 0.3930
M	 0.8680	 0.3710
V	 0.9070	 0.3740
W	 0.9090	 0.3630
X	 0.7740	 0.3100
n	 0.9190	 0.3640
o	 0.9130	 0.3710
s	 0.8950	 0.3990
t	 0.8880	 0.3780

