



Full wwPDB EM Validation Report ⓘ

Jun 8, 2024 – 07:49 am BST

PDB ID : 8C8M
EMDB ID : EMD-16484
Title : In vitro structure of the Nitrosopumilus maritimus S-layer - Composite map between two and six-fold symmetrised
Authors : von Kuegelgen, A.; Bharat, T.
Deposited on : 2023-01-20
Resolution : 2.87 Å(reported)

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<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.dev92
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

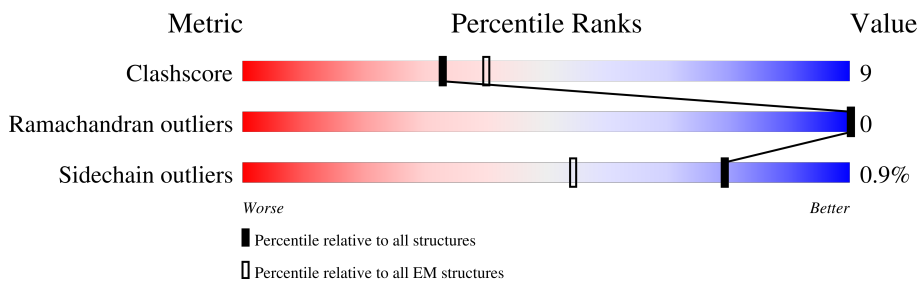
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.87 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	1734	
1	B	1734	
1	C	1734	
1	D	1734	
1	E	1734	
1	F	1734	

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 70506 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.

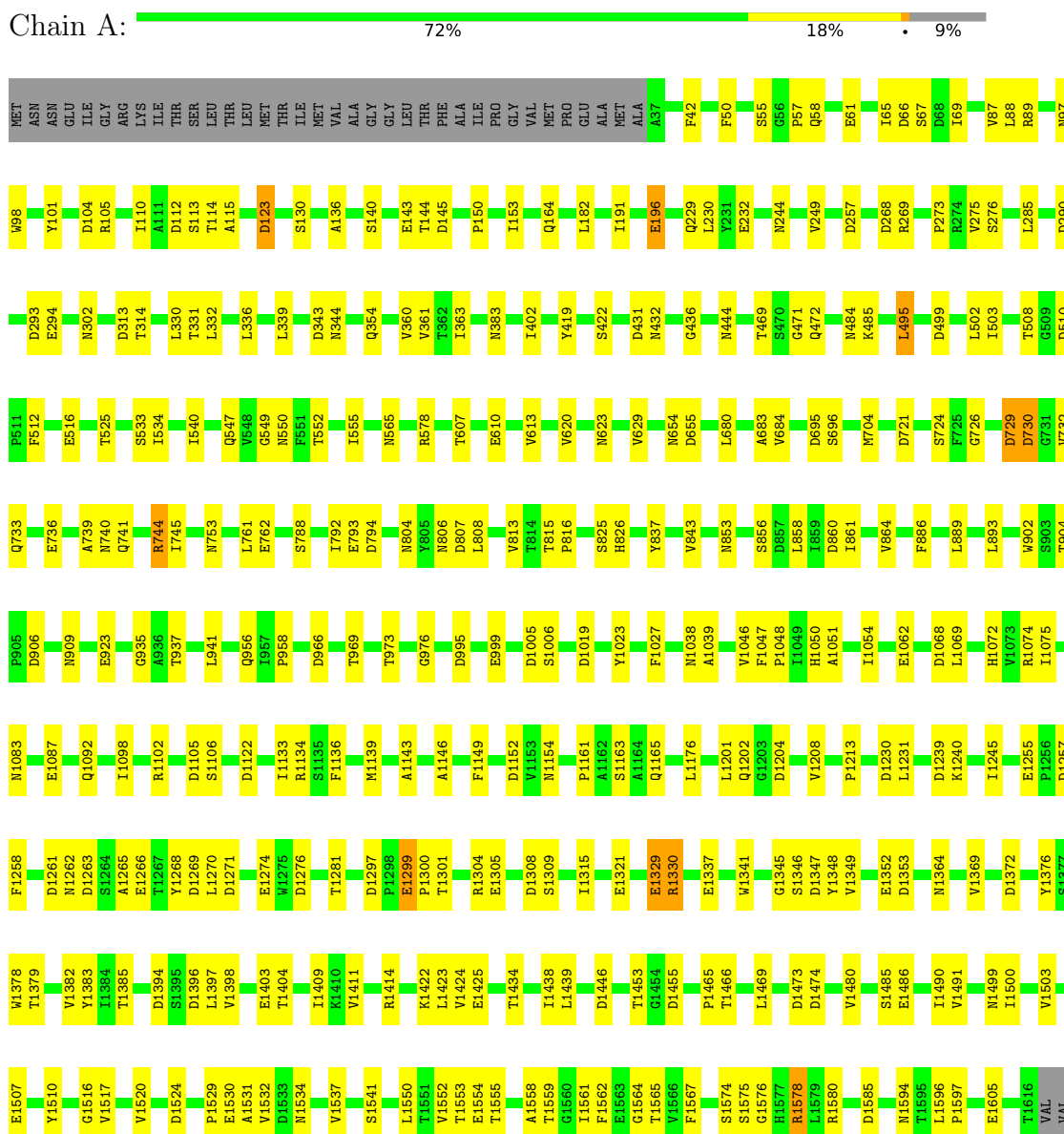
- Molecule 1 is a protein called Cell surface protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	1580	11751	7234	1888	2610	19	0	0
1	B	1580	11751	7234	1888	2610	19	0	0
1	C	1580	11751	7234	1888	2610	19	0	0
1	D	1580	11751	7234	1888	2610	19	0	0
1	E	1580	11751	7234	1888	2610	19	0	0
1	F	1580	11751	7234	1888	2610	19	0	0

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: Cell surface protein



I1098	E1266	D1390	S1641	LEU
R1102	I1267	F1393	L1560	ASP
D1105	Y1268	F1551	T1561	SER
S1106	D1269	V1552	V1552	THR
D1122	D1270	E1403	T1553	GLU
I1133	D1271	T1404	E1554	VAL
R1134	E1274	I1409	T1555	ASP
S1136	W1275	K1410	A1558	GLN
F1136	D1276	V1411	T1559	THR
M1139	T1281	R1414	G1560	ALA
A1143	D1297	K1422	F1561	THR
A1146	P1298	L1423	F1562	ALA
F1149	E1299	T1434	E1563	VAL
D1152	P1300	I1438	S1574	ASP
V1153	T1301	L1439	G1576	ASP
W1154	T1304	D1446	G1576	ARG
P1161	R1304	D1446	H1577	THR
A1162	E1305	T1453	L1579	ALA
E1329	R1308	P1465	R1580	PHE
A1164	D1308	L1469	D1585	ALA
Q1165	S1309	L1469	M1594	THR
L1176	I1315	D1473	T1595	VAL
P1176	I1315	D1474	L1596	GLN
L1201	R1321	V1480	P1597	GLN
Q1202	E1321	I1490	E1605	ASP
G1203	E1321	V1491	T1616	ALA
D1204	A1162	M1499	VAL	VAL
V1208	S1346	I1500	THR	THR
P1213	D1347	V1503	VAL	VAL
D1230	Y1348	E1507	PRO	PRO
L1231	V1349	Y1510	LEU	LEU
D1239	V1208	G1516	LEU	LEU
K1240	E1352	V1517	ALA	ALA
I1245	D1353	V1520	ASN	ASN
D1257	D1372	D1524	LEU	SER
F1258	Y1376	G1524	ARG	GLY
T1379	S1377	T1529	THR	GLN
D1261	W1378	P1529	VAL	SER
N1262	T1379	V1532	ASP	PHE
S1264	V1382	V1532	ALA	SER
A1265	I1383	V1537	ALA	PRO
	I1384		GLY	ALA
	S1264		ASN	LEU
	T1385		SER	SER

● Molecule 1: Cell surface protein



MET	D104	N302	I534	N740	G935	E1087	L1231
ASN	R105	F310	I540	R744	A936	Q1092	D1239
GLU	I110	D313	Q547	I745	T937	I1098	K1240
ILE	A111	T314	V548	E749	L941	R1102	I1245
ARG	D112	D314	G548	T750	D954	G1103	D1257
LYS	S113	N322	N550	G751	G956	S1104	F1258
THR	T114	L330	F951	N753	P957	D1105	I1261
GLN	A115	L331	T952	L761	D966	S1106	D1262
ALA	D123	T331	I555	E762	T969	D1122	D1263
SER	S130	L332	N655	S788	T973	I1133	S1264
PHE	A136	L333	R578	I792	T973	R1134	A1265
VAL	E143	D343	L579	N804	G976	F1136	T1267
ASP	T144	N344	I580	T805	G983	M1139	D1269
GLN	D145	I363	E610	N806	L984	A1143	L1270
ASN	P150	S401	V613	L807	D985	A1146	D1271
THR	I153	I402	V620	V813	D995	D1152	E1274
SER	Q164	P411	N623	T815	E999	V1153	W1275
PRO	L182	Y419	V629	P816	D1005	N1154	D1281
VAL	I191	E421	S422	S825	S1006	P1161	D1297
GLN	A197	S422	N654	H826	D1019	A1162	P1298
LEU	A197	D431	D655	Y837	Y1023	S1163	E1299
SER	Q164	N432	L680	V843	F1027	A1164	P1300
ALA	I166	R435	A683	N853	N1038	Q1165	T1301
THR	R38	G436	V684	L858	A1039	L1176	D1308
PRO	F42	M444	D695	I859	V1046	L1201	S1309
LEU	F50	T469	S696	D860	F1047	Q1202	I1315
LEU	Q58	Q472	M704	V864	P1048	D1204	E1321
THR	T65	M484	V717	F886	T1049	I1205	S1322
GLY	D66	R488	D721	L889	H1050	Q1207	K1327
SER	D66	S67	S724	L893	A1051	V1208	R1330
LEU	D68	L495	F725	L902	I1054	P1213	E1337
LEU	T69	L502	G726	N902	E1062	S1217	D1340
THR	V67	L503	D730	S903	D1068	G1218	V1341
GLN	L88	F512	G731	T904	L1069	D1219	G1345
SER	R89	F512	V732	P905	H1072	A1220	S1346
ASP	Y94	E516	Q733	D906	H1072	T1222	D1347
ALA	N97	T525	E736	N909	I1075	V1224	Y1348
GLY	N98	S533	A739	E923	M1083	D1285	V1349
SER						S1226	E1352
						D1230	D1353

V1369	G1516	ASN
D1372	V1517	LEU
Y1376	V1520	GLY
W1378	D1524	GLN
T1379	P1529	THR
V1382	V1532	VAL
Y1383	V1537	ASP
I1384	S1541	ALA
T1385	L1550	PHE
F1393	T1551	PRO
D1399	V1552	ALA
E1403	T1553	GLY
T1404	E1554	THR
I1409	T1555	TYR
K1410	A1558	THR
V1411	T1559	ALA
R1414	G1560	ALA
K1422	L1561	VAL
L1423	F1562	TRP
T1434	E1563	GLU
I1438	G1564	SER
L1439	T1565	VAL
D1446	W1566	ASP
T1453	F1567	ASN
P1465	S1574	PRO
L1469	R1578	THR
D1473	L1579	ALA
D1474	R1580	LEU
V1480	D1585	SER
I1490	M1594	PRO
V1491	T1595	THR
N1499	L1596	THR
I1500	P1597	VAL
V1503	E1605	ASN
E1507	T1618	VAL
Y1510	VAL	GLY
	VAL	THR
	VAL	VAL
	PRO	SER
	PRO	LEU
	LEU	ALA
	TRP	ALA
	GLU	TRP
	ARG	ILE
	ALA	THR
	PRO	GLY
	ALA	SER
	ALA	LEU

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	354860	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION; RELION refinement with in-built CTF correction. The function is similar to a Wiener filter, so amplitude correction included.	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	48.5	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	10.250	Depositor
Minimum map value	-4.662	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.422	Depositor
Recommended contour level	1.05514	Depositor
Map size (\AA)	349.44, 349.44, 349.44	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.092, 1.092, 1.092	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	0.75	9/11941 (0.1%)	0.81	18/16339 (0.1%)
1	B	0.69	2/11941 (0.0%)	0.77	8/16339 (0.0%)
1	C	0.69	2/11941 (0.0%)	0.77	6/16339 (0.0%)
1	D	0.68	1/11941 (0.0%)	0.76	7/16339 (0.0%)
1	E	0.69	2/11941 (0.0%)	0.77	7/16339 (0.0%)
1	F	0.70	3/11941 (0.0%)	0.77	5/16339 (0.0%)
All	All	0.70	19/71646 (0.0%)	0.77	51/98034 (0.1%)

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	A	0	2
1	B	0	1
All	All	0	3

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	793	GLU	CD-OE2	16.03	1.43	1.25
1	A	1255	GLU	CD-OE1	-15.38	1.08	1.25
1	A	793	GLU	CD-OE1	-13.35	1.10	1.25
1	A	196	GLU	CD-OE1	-10.86	1.13	1.25
1	A	1299	GLU	CD-OE1	-9.95	1.14	1.25
1	F	858	LEU	C-O	-8.47	1.07	1.23
1	C	858	LEU	C-O	-8.44	1.07	1.23
1	D	858	LEU	C-O	-7.86	1.08	1.23
1	A	858	LEU	C-O	-7.75	1.08	1.23
1	B	858	LEU	C-O	-7.45	1.09	1.23
1	E	858	LEU	C-O	-7.41	1.09	1.23
1	C	808	LEU	C-O	-5.62	1.12	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	808	LEU	C-O	-5.55	1.12	1.23
1	F	1399	ASP	CG-OD1	-5.41	1.12	1.25
1	A	1329	GLU	CD-OE2	-5.38	1.19	1.25
1	A	1425	GLU	CD-OE1	5.15	1.31	1.25
1	E	808	LEU	C-O	-5.12	1.13	1.23
1	B	808	LEU	C-O	-5.07	1.13	1.23
1	A	1299	GLU	CD-OE2	-5.04	1.20	1.25

All (51) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	729	ASP	CB-CG-OD1	15.40	132.16	118.30
1	A	123	ASP	CB-CG-OD1	11.60	128.74	118.30
1	A	794	ASP	CB-CG-OD2	10.58	127.82	118.30
1	A	729	ASP	CB-CG-OD2	-9.00	110.20	118.30
1	E	1257	ASP	CB-CG-OD1	-8.15	110.96	118.30
1	A	793	GLU	CG-CD-OE2	8.12	134.55	118.30
1	B	1257	ASP	CB-CG-OD1	-8.12	110.99	118.30
1	A	729	ASP	CA-CB-CG	7.90	130.77	113.40
1	D	1257	ASP	CB-CG-OD1	-7.82	111.27	118.30
1	F	1257	ASP	CB-CG-OD1	-7.71	111.36	118.30
1	A	794	ASP	CB-CG-OD1	-7.66	111.41	118.30
1	D	58	GLN	CB-CA-C	-7.20	96.00	110.40
1	A	58	GLN	CB-CA-C	-7.18	96.03	110.40
1	C	58	GLN	CB-CA-C	-7.10	96.20	110.40
1	F	38	ASN	CB-CA-C	6.91	124.22	110.40
1	B	58	GLN	CB-CA-C	-6.70	97.01	110.40
1	E	58	GLN	CB-CA-C	-6.31	97.78	110.40
1	A	793	GLU	CG-CD-OE1	-6.26	105.78	118.30
1	D	1340	ASP	CB-CG-OD2	-6.24	112.69	118.30
1	A	1299	GLU	OE1-CD-OE2	-6.20	115.86	123.30
1	A	1255	GLU	OE1-CD-OE2	-6.10	115.98	123.30
1	C	1257	ASP	CB-CG-OD1	-6.05	112.86	118.30
1	E	1340	ASP	CB-CG-OD2	-6.02	112.88	118.30
1	B	1340	ASP	CB-CG-OD2	-5.97	112.93	118.30
1	A	1257	ASP	CB-CG-OD2	5.93	123.64	118.30
1	A	730	ASP	CB-CG-OD2	5.86	123.58	118.30
1	B	744	ARG	NE-CZ-NH1	5.85	123.22	120.30
1	C	1340	ASP	CB-CG-OD2	-5.85	113.04	118.30
1	A	729	ASP	OD1-CG-OD2	-5.75	112.38	123.30
1	F	1340	ASP	CB-CG-OD2	-5.68	113.19	118.30
1	E	744	ARG	NE-CZ-NH1	5.68	123.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	510	ASP	CB-CG-OD2	5.54	123.28	118.30
1	B	1578	ARG	CG-CD-NE	-5.37	100.52	111.80
1	B	730	ASP	CB-CG-OD2	5.30	123.07	118.30
1	C	550	ASN	CB-CA-C	5.21	120.83	110.40
1	D	1578	ARG	CG-CD-NE	-5.21	100.85	111.80
1	F	550	ASN	CB-CA-C	5.21	120.82	110.40
1	A	1578	ARG	CG-CD-NE	-5.19	100.89	111.80
1	E	730	ASP	CB-CG-OD2	5.18	122.97	118.30
1	D	550	ASN	CB-CA-C	5.17	120.73	110.40
1	A	550	ASN	CB-CA-C	5.16	120.71	110.40
1	A	744	ARG	NE-CZ-NH1	5.11	122.86	120.30
1	B	550	ASN	CB-CA-C	5.11	120.62	110.40
1	E	123	ASP	CB-CG-OD1	5.11	122.89	118.30
1	E	550	ASN	CB-CA-C	5.10	120.60	110.40
1	D	744	ARG	NE-CZ-NH1	5.08	122.84	120.30
1	D	730	ASP	CB-CG-OD2	5.07	122.86	118.30
1	C	123	ASP	CB-CG-OD1	5.05	122.85	118.30
1	F	123	ASP	CB-CG-OD1	5.03	122.83	118.30
1	C	730	ASP	CB-CG-OD2	5.01	122.81	118.30
1	B	123	ASP	CB-CG-OD1	5.01	122.81	118.30

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	196	GLU	Sidechain
1	A	729	ASP	Sidechain
1	B	55	SER	Mainchain

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	11751	0	10951	245	0
1	B	11751	0	10951	221	0
1	C	11751	0	10951	248	0
1	D	11751	0	10951	252	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	E	11751	0	10949	221	0
1	F	11751	0	10951	248	0
All	All	70506	0	65704	1252	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 9.

All (1252) 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:1217:SER:CB	1:D:1424:VAL:HG21	1.65	1.25
1:A:1424:VAL:HG21	1:F:1217:SER:CB	1.65	1.24
1:C:816:PRO:HD2	1:D:1083:ASN:HD21	1.01	1.14
1:A:1424:VAL:CG2	1:F:1217:SER:HB2	1.82	1.09
1:C:1217:SER:HB2	1:D:1424:VAL:CG2	1.83	1.08
1:D:1330:ARG:HB2	1:D:1364:ASN:OD1	1.53	1.06
1:C:816:PRO:HD2	1:D:1083:ASN:ND2	1.72	1.03
1:C:816:PRO:CD	1:D:1083:ASN:HD21	1.75	1.00
1:A:1329:GLU:OE1	1:A:1486:GLU:OE2	1.78	0.99
1:D:1321:GLU:OE1	1:D:1393:PHE:CZ	2.16	0.99
1:C:1217:SER:HB2	1:D:1424:VAL:HG21	1.01	0.98
1:D:1363:SER:HB3	1:D:1390:ASP:OD1	1.62	0.98
1:A:1424:VAL:HG21	1:F:1217:SER:HB2	0.99	0.96
1:C:985:ASP:OD1	1:D:1394:ASP:OD2	1.85	0.94
1:A:1329:GLU:OE1	1:A:1486:GLU:CD	2.06	0.93
1:B:1567:PHE:HD2	1:B:1578:ARG:HG3	1.32	0.93
1:A:1394:ASP:OD2	1:F:985:ASP:OD1	1.87	0.92
1:D:57:PRO:HG3	1:D:339:LEU:HD22	1.54	0.90
1:C:57:PRO:HG3	1:C:339:LEU:HD22	1.53	0.90
1:C:886:PHE:O	1:D:1301:THR:HG21	1.71	0.90
1:A:57:PRO:HG3	1:A:339:LEU:HD22	1.54	0.90
1:B:57:PRO:HG3	1:B:339:LEU:HD22	1.54	0.90
1:A:1301:THR:HG21	1:F:886:PHE:O	1.72	0.89
1:E:57:PRO:HG3	1:E:339:LEU:HD22	1.54	0.88
1:D:886:PHE:O	1:E:1301:THR:HG21	1.76	0.86
1:D:1321:GLU:OE1	1:D:1393:PHE:CE1	2.28	0.86
1:E:1567:PHE:HD2	1:E:1578:ARG:HG2	1.41	0.85
1:A:1329:GLU:OE1	1:A:1486:GLU:OE1	1.93	0.84
1:A:1567:PHE:HD2	1:A:1578:ARG:HG2	1.42	0.84
1:A:886:PHE:O	1:B:1301:THR:HG21	1.76	0.84
1:D:1567:PHE:HD2	1:D:1578:ARG:HG2	1.42	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1261:ASP:O	1:C:1266:GLU:OE2	1.98	0.82
1:F:1261:ASP:O	1:F:1266:GLU:OE2	1.98	0.82
1:E:1567:PHE:CD2	1:E:1578:ARG:HG2	2.15	0.81
1:A:1261:ASP:O	1:A:1266:GLU:OE2	1.99	0.81
1:B:1261:ASP:O	1:B:1266:GLU:OE2	1.99	0.81
1:E:1261:ASP:O	1:E:1266:GLU:OE2	1.99	0.81
1:C:1068:ASP:HB3	1:C:1154:ASN:HD21	1.46	0.80
1:F:1068:ASP:HB3	1:F:1154:ASN:HD21	1.46	0.80
1:B:363:ILE:HD13	1:B:402:ILE:HG23	1.64	0.80
1:D:1261:ASP:O	1:D:1266:GLU:OE2	1.98	0.80
1:D:1567:PHE:CD2	1:D:1578:ARG:HG2	2.16	0.80
1:C:363:ILE:HD13	1:C:402:ILE:HG23	1.63	0.80
1:A:1567:PHE:CD2	1:A:1578:ARG:HG2	2.16	0.80
1:E:1068:ASP:HB3	1:E:1154:ASN:HD21	1.47	0.80
1:A:1352:GLU:OE2	1:B:1578:ARG:CZ	2.30	0.79
1:B:234:ASN:CB	1:C:422:SER:HB3	2.12	0.79
1:F:363:ILE:HD13	1:F:402:ILE:HG23	1.63	0.79
1:D:1068:ASP:HB3	1:D:1154:ASN:HD21	1.48	0.79
1:B:1068:ASP:HB3	1:B:1154:ASN:HD21	1.47	0.79
1:E:363:ILE:HD13	1:E:402:ILE:HG23	1.63	0.79
1:E:234:ASN:CB	1:F:422:SER:HB3	2.13	0.78
1:A:1397:LEU:HD12	1:F:985:ASP:H	1.48	0.78
1:A:1068:ASP:HB3	1:A:1154:ASN:HD21	1.48	0.78
1:C:985:ASP:H	1:D:1397:LEU:HD12	1.49	0.78
1:D:1345:GLY:CA	1:E:1578:ARG:HG3	2.14	0.78
1:A:1330:ARG:HB3	1:A:1364:ASN:HA	1.65	0.77
1:A:363:ILE:HD13	1:A:402:ILE:HG23	1.65	0.77
1:D:363:ILE:HD13	1:D:402:ILE:HG23	1.65	0.77
1:D:1321:GLU:OE2	1:D:1393:PHE:CG	2.37	0.77
1:A:956:GLN:NE2	1:F:813:VAL:HG11	2.01	0.76
1:F:1567:PHE:CD2	1:F:1578:ARG:HG2	2.21	0.76
1:B:449:THR:HG21	1:C:859:ILE:HB	1.68	0.75
1:E:449:THR:HG21	1:F:859:ILE:HB	1.68	0.75
1:B:886:PHE:O	1:C:1301:THR:HG21	1.88	0.74
1:E:886:PHE:O	1:F:1301:THR:HG21	1.86	0.74
1:D:1330:ARG:CB	1:D:1364:ASN:OD1	2.34	0.74
1:F:1567:PHE:HD2	1:F:1578:ARG:HG2	1.52	0.73
1:F:1046:VAL:HG23	1:F:1048:PRO:HD3	1.71	0.73
1:A:815:THR:HG23	1:B:1083:ASN:OD1	1.89	0.73
1:C:813:VAL:HG11	1:D:956:GLN:NE2	2.03	0.73
1:D:825:SER:OG	1:D:995:ASP:O	2.07	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:825:SER:OG	1:F:995:ASP:O	2.06	0.73
1:A:1532:VAL:HB	1:F:1226:SER:OG	1.89	0.72
1:C:816:PRO:CD	1:D:1083:ASN:ND2	2.41	0.72
1:C:825:SER:OG	1:C:995:ASP:O	2.06	0.72
1:C:1046:VAL:HG23	1:C:1048:PRO:HD3	1.71	0.72
1:D:815:THR:HG23	1:E:1083:ASN:OD1	1.89	0.72
1:E:825:SER:OG	1:E:995:ASP:O	2.07	0.72
1:C:1226:SER:OG	1:D:1532:VAL:HB	1.89	0.72
1:D:1596:LEU:HD12	1:D:1597:PRO:HD2	1.72	0.72
1:A:1083:ASN:ND2	1:F:816:PRO:HD2	2.05	0.72
1:B:1046:VAL:HG23	1:B:1048:PRO:HD3	1.72	0.72
1:C:1596:LEU:HD12	1:C:1597:PRO:HD2	1.72	0.72
1:F:1596:LEU:HD12	1:F:1597:PRO:HD2	1.72	0.72
1:B:816:PRO:HD2	1:C:1083:ASN:ND2	2.05	0.72
1:B:1596:LEU:HD12	1:B:1597:PRO:HD2	1.72	0.72
1:A:1596:LEU:HD12	1:A:1597:PRO:HD2	1.72	0.72
1:E:1596:LEU:HD12	1:E:1597:PRO:HD2	1.72	0.72
1:B:825:SER:OG	1:B:995:ASP:O	2.07	0.71
1:A:825:SER:OG	1:A:995:ASP:O	2.07	0.71
1:E:816:PRO:HD2	1:F:1083:ASN:ND2	2.05	0.71
1:D:816:PRO:HD2	1:E:1083:ASN:ND2	2.06	0.71
1:D:1244:ILE:HA	1:D:1363:SER:OG	1.90	0.70
1:A:1046:VAL:HG23	1:A:1048:PRO:HD3	1.72	0.70
1:A:1424:VAL:CG2	1:F:1217:SER:CB	2.54	0.70
1:C:985:ASP:HB3	1:D:1396:ASP:O	1.91	0.70
1:D:1330:ARG:HB3	1:D:1364:ASN:HA	1.71	0.70
1:A:816:PRO:HD2	1:B:1083:ASN:ND2	2.06	0.70
1:A:1297:ASP:OD2	1:A:1299:GLU:OE2	2.09	0.69
1:E:1046:VAL:HG23	1:E:1048:PRO:HD3	1.72	0.69
1:B:435:ARG:NH1	1:C:937:THR:O	2.26	0.69
1:C:816:PRO:HG2	1:D:1083:ASN:ND2	2.07	0.69
1:D:1046:VAL:HG23	1:D:1048:PRO:HD3	1.72	0.69
1:E:435:ARG:NH1	1:F:937:THR:O	2.25	0.69
1:E:1517:VAL:HG22	1:E:1565:THR:HG22	1.74	0.69
1:B:1567:PHE:CD2	1:B:1578:ARG:HG3	2.23	0.69
1:F:1517:VAL:HG22	1:F:1565:THR:HG22	1.75	0.69
1:A:1517:VAL:HG22	1:A:1565:THR:HG22	1.74	0.69
1:A:1396:ASP:O	1:F:985:ASP:HB3	1.93	0.69
1:C:1217:SER:CB	1:D:1424:VAL:CG2	2.54	0.69
1:D:1517:VAL:HG22	1:D:1565:THR:HG22	1.74	0.69
1:E:813:VAL:HG11	1:F:956:GLN:NE2	2.09	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1398:VAL:HG22	1:F:983:GLY:CA	2.23	0.68
1:B:813:VAL:HG11	1:C:956:GLN:NE2	2.08	0.68
1:C:1345:GLY:HA3	1:D:1578:ARG:HE	1.58	0.68
1:D:1363:SER:CB	1:D:1390:ASP:OD1	2.39	0.68
1:A:1530:GLU:O	1:F:1224:THR:HB	1.94	0.68
1:B:343:ASP:O	1:B:444:ASN:HA	1.94	0.68
1:D:1072:HIS:ND1	1:D:1152:ASP:OD1	2.27	0.68
1:E:721:ASP:OD2	1:E:744:ARG:NH2	2.27	0.68
1:B:721:ASP:OD2	1:B:744:ARG:NH2	2.27	0.68
1:C:983:GLY:CA	1:D:1398:VAL:HG22	2.22	0.67
1:B:1517:VAL:HG22	1:B:1565:THR:HG22	1.75	0.67
1:C:1517:VAL:HG22	1:C:1565:THR:HG22	1.75	0.67
1:E:343:ASP:O	1:E:444:ASN:HA	1.94	0.67
1:E:816:PRO:HD2	1:F:1083:ASN:HD21	1.60	0.67
1:C:1224:THR:HB	1:D:1530:GLU:O	1.94	0.67
1:C:1345:GLY:O	1:D:1576:GLY:HA3	1.95	0.67
1:D:721:ASP:OD2	1:D:744:ARG:NH2	2.27	0.67
1:A:1531:ALA:CB	1:F:1207:GLN:OE1	2.44	0.66
1:E:1072:HIS:ND1	1:E:1152:ASP:OD1	2.28	0.66
1:A:1072:HIS:ND1	1:A:1152:ASP:OD1	2.27	0.66
1:F:721:ASP:OD2	1:F:744:ARG:NH2	2.28	0.66
1:F:1072:HIS:ND1	1:F:1152:ASP:OD1	2.28	0.66
1:B:84:ASN:HD22	1:C:421:GLU:CB	2.09	0.66
1:C:1072:HIS:ND1	1:C:1152:ASP:OD1	2.28	0.66
1:D:1345:GLY:HA3	1:E:1578:ARG:HG3	1.78	0.66
1:B:886:PHE:HA	1:C:1301:THR:HG21	1.77	0.66
1:A:343:ASP:O	1:A:444:ASN:HA	1.96	0.66
1:A:1578:ARG:HE	1:F:1345:GLY:HA3	1.59	0.66
1:B:1072:HIS:ND1	1:B:1152:ASP:OD1	2.28	0.66
1:A:721:ASP:OD2	1:A:744:ARG:NH2	2.27	0.66
1:B:816:PRO:HD2	1:C:1083:ASN:HD21	1.60	0.65
1:B:923:GLU:OE1	1:B:976:GLY:O	2.15	0.65
1:C:721:ASP:OD2	1:C:744:ARG:NH2	2.28	0.65
1:C:923:GLU:OE1	1:C:976:GLY:O	2.15	0.65
1:E:886:PHE:HA	1:F:1301:THR:HG21	1.78	0.65
1:C:343:ASP:O	1:C:444:ASN:HA	1.96	0.65
1:C:1207:GLN:OE1	1:D:1531:ALA:CB	2.44	0.65
1:C:864:VAL:HG11	1:C:935:GLY:HA2	1.79	0.65
1:F:343:ASP:O	1:F:444:ASN:HA	1.96	0.65
1:F:923:GLU:OE1	1:F:976:GLY:O	2.15	0.65
1:A:923:GLU:OE1	1:A:976:GLY:O	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:84:ASN:HD22	1:F:421:GLU:CB	2.09	0.65
1:A:1576:GLY:HA3	1:F:1345:GLY:O	1.96	0.65
1:D:105:ARG:HA	1:D:230:LEU:HD12	1.78	0.65
1:E:923:GLU:OE1	1:E:976:GLY:O	2.15	0.65
1:A:105:ARG:HA	1:A:230:LEU:HD12	1.78	0.65
1:F:864:VAL:HG11	1:F:935:GLY:HA2	1.79	0.65
1:A:275:VAL:HG12	1:A:275:VAL:O	1.97	0.65
1:B:105:ARG:HA	1:B:230:LEU:HD12	1.79	0.65
1:C:1550:LEU:HD21	1:C:1564:GLY:HA3	1.79	0.65
1:B:275:VAL:HG12	1:B:275:VAL:O	1.97	0.64
1:D:1550:LEU:HD21	1:D:1564:GLY:HA3	1.80	0.64
1:A:1531:ALA:HB2	1:F:1207:GLN:OE1	1.98	0.64
1:B:1550:LEU:HD21	1:B:1564:GLY:HA3	1.79	0.64
1:F:1550:LEU:HD21	1:F:1564:GLY:HA3	1.79	0.64
1:C:1207:GLN:OE1	1:D:1531:ALA:HB2	1.98	0.64
1:D:275:VAL:HG12	1:D:275:VAL:O	1.97	0.64
1:D:343:ASP:O	1:D:444:ASN:HA	1.96	0.64
1:D:923:GLU:OE1	1:D:976:GLY:O	2.15	0.64
1:A:1550:LEU:HD21	1:A:1564:GLY:HA3	1.80	0.64
1:C:105:ARG:HA	1:C:230:LEU:HD12	1.80	0.64
1:E:105:ARG:HA	1:E:230:LEU:HD12	1.80	0.64
1:E:1550:LEU:HD21	1:E:1564:GLY:HA3	1.80	0.64
1:E:275:VAL:O	1:E:275:VAL:HG12	1.97	0.63
1:A:145:ASP:OD2	1:A:232:GLU:N	2.31	0.63
1:E:145:ASP:OD2	1:E:232:GLU:N	2.32	0.63
1:F:909:ASN:HB3	1:F:973:THR:HG22	1.81	0.63
1:A:813:VAL:HG11	1:B:956:GLN:NE2	2.14	0.63
1:A:864:VAL:HG11	1:A:935:GLY:HA2	1.80	0.63
1:C:495:LEU:HD12	1:C:503:ILE:HD13	1.81	0.63
1:B:86:LYS:HG2	1:C:322:ASN:HB2	1.80	0.63
1:B:909:ASN:HB3	1:B:973:THR:HG22	1.81	0.63
1:B:864:VAL:HG11	1:B:935:GLY:HA2	1.81	0.63
1:C:275:VAL:HG12	1:C:275:VAL:O	1.99	0.63
1:D:864:VAL:HG11	1:D:935:GLY:HA2	1.80	0.63
1:C:909:ASN:HB3	1:C:973:THR:HG22	1.81	0.63
1:E:864:VAL:HG11	1:E:935:GLY:HA2	1.81	0.63
1:E:86:LYS:HG2	1:F:322:ASN:HB2	1.80	0.62
1:D:613:VAL:HG22	1:D:623:ASN:HD21	1.64	0.62
1:F:275:VAL:HG12	1:F:275:VAL:O	1.99	0.62
1:A:909:ASN:HB3	1:A:973:THR:HG22	1.81	0.62
1:D:813:VAL:HG11	1:E:956:GLN:NE2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:105:ARG:HA	1:F:230:LEU:HD12	1.80	0.62
1:C:816:PRO:CG	1:D:1083:ASN:ND2	2.62	0.62
1:D:1345:GLY:O	1:E:1576:GLY:HA3	2.00	0.62
1:A:1329:GLU:HG3	1:A:1485:SER:HB2	1.81	0.62
1:A:1083:ASN:OD1	1:F:815:THR:HG23	1.99	0.62
1:D:1329:GLU:HG3	1:D:1485:SER:HB2	1.81	0.62
1:A:613:VAL:HG22	1:A:623:ASN:HD21	1.64	0.61
1:B:145:ASP:OD2	1:B:232:GLU:N	2.32	0.61
1:D:495:LEU:HD12	1:D:503:ILE:HD13	1.81	0.61
1:D:1330:ARG:HB3	1:D:1363:SER:O	1.99	0.61
1:A:1466:THR:OG1	1:F:1220:ALA:O	2.18	0.61
1:E:234:ASN:HB2	1:F:422:SER:HB3	1.83	0.61
1:E:909:ASN:HB3	1:E:973:THR:HG22	1.81	0.61
1:A:495:LEU:HD12	1:A:503:ILE:HD13	1.81	0.61
1:F:613:VAL:HG22	1:F:623:ASN:HD21	1.66	0.61
1:C:1104:SER:CB	1:D:1455:ASP:OD1	2.48	0.61
1:F:495:LEU:HD12	1:F:503:ILE:HD13	1.81	0.61
1:D:909:ASN:HB3	1:D:973:THR:HG22	1.81	0.61
1:F:1341:TRP:CZ3	1:F:1353:ASP:HB3	2.36	0.61
1:B:1341:TRP:CZ3	1:B:1353:ASP:HB3	2.36	0.60
1:D:145:ASP:OD2	1:D:232:GLU:N	2.31	0.60
1:E:613:VAL:HG22	1:E:623:ASN:HD21	1.66	0.60
1:B:495:LEU:HD12	1:B:503:ILE:HD13	1.83	0.60
1:C:145:ASP:OD2	1:C:232:GLU:N	2.32	0.60
1:E:1341:TRP:CZ3	1:E:1353:ASP:HB3	2.36	0.60
1:A:1341:TRP:CZ3	1:A:1353:ASP:HB3	2.36	0.60
1:C:1341:TRP:CZ3	1:C:1353:ASP:HB3	2.36	0.60
1:C:613:VAL:HG22	1:C:623:ASN:HD21	1.66	0.60
1:E:495:LEU:HD12	1:E:503:ILE:HD13	1.83	0.60
1:D:1341:TRP:CZ3	1:D:1353:ASP:HB3	2.36	0.60
1:B:234:ASN:HB2	1:C:422:SER:HB3	1.83	0.60
1:C:1220:ALA:O	1:D:1466:THR:OG1	2.18	0.60
1:B:87:VAL:HG12	1:B:143:GLU:HB2	1.84	0.60
1:B:1567:PHE:HD2	1:B:1578:ARG:CG	2.11	0.59
1:F:145:ASP:OD2	1:F:232:GLU:N	2.31	0.59
1:F:1269:ASP:OD2	1:F:1271:ASP:OD2	2.21	0.59
1:B:613:VAL:HG22	1:B:623:ASN:HD21	1.67	0.59
1:E:1269:ASP:OD2	1:E:1271:ASP:OD2	2.21	0.59
1:A:1269:ASP:OD2	1:A:1271:ASP:OD2	2.21	0.59
1:B:1269:ASP:OD2	1:B:1271:ASP:OD2	2.21	0.59
1:A:1455:ASP:OD1	1:F:1104:SER:CB	2.51	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1352:GLU:OE2	1:F:1578:ARG:NH2	2.35	0.59
1:D:1269:ASP:OD2	1:D:1271:ASP:OD2	2.21	0.58
1:E:87:VAL:HG12	1:E:143:GLU:HB2	1.84	0.58
1:B:739:ALA:HB2	1:B:792:ILE:CG1	2.34	0.58
1:C:1201:LEU:HD12	1:C:1347:ASP:HB3	1.86	0.58
1:C:1269:ASP:OD2	1:C:1271:ASP:OD2	2.21	0.58
1:B:1102:ARG:NH2	1:B:1161:PRO:O	2.37	0.58
1:F:1102:ARG:NH2	1:F:1161:PRO:O	2.37	0.58
1:F:1201:LEU:HD12	1:F:1347:ASP:HB3	1.85	0.58
1:C:1438:ILE:HB	1:C:1469:LEU:HD23	1.85	0.58
1:A:1102:ARG:NH2	1:A:1161:PRO:O	2.37	0.58
1:B:1438:ILE:HB	1:B:1469:LEU:HD23	1.85	0.58
1:C:302:ASN:HB2	1:C:402:ILE:HD12	1.86	0.58
1:F:302:ASN:HB2	1:F:402:ILE:HD12	1.86	0.58
1:B:540:ILE:HA	1:B:547:GLN:OE1	2.04	0.58
1:D:1321:GLU:OE1	1:D:1393:PHE:CE2	2.55	0.58
1:D:540:ILE:HA	1:D:547:GLN:OE1	2.04	0.58
1:A:540:ILE:HA	1:A:547:GLN:OE1	2.04	0.57
1:B:1201:LEU:HD12	1:B:1347:ASP:HB3	1.86	0.57
1:E:77:GLY:H	1:F:94:VAL:HG21	1.69	0.57
1:F:1019:ASP:OD1	1:F:1262:ASN:ND2	2.37	0.57
1:E:1102:ARG:NH2	1:E:1161:PRO:O	2.37	0.57
1:F:540:ILE:HA	1:F:547:GLN:OE1	2.04	0.57
1:D:302:ASN:HB2	1:D:402:ILE:HD12	1.85	0.57
1:E:1201:LEU:HD12	1:E:1347:ASP:HB3	1.86	0.57
1:C:1102:ARG:NH2	1:C:1161:PRO:O	2.37	0.57
1:D:1438:ILE:HB	1:D:1469:LEU:HD23	1.85	0.57
1:C:739:ALA:HB2	1:C:792:ILE:CG1	2.35	0.57
1:A:302:ASN:HB2	1:A:402:ILE:HD12	1.85	0.57
1:A:816:PRO:HD2	1:B:1083:ASN:HD21	1.69	0.57
1:C:1019:ASP:OD1	1:C:1262:ASN:ND2	2.37	0.57
1:E:302:ASN:HB2	1:E:402:ILE:HD12	1.87	0.57
1:F:279:HIS:CE1	1:F:488:ARG:HD3	2.40	0.57
1:F:1092:GLN:HG2	1:F:1213:PRO:HG3	1.87	0.57
1:A:1019:ASP:OD1	1:A:1262:ASN:ND2	2.38	0.57
1:A:1201:LEU:HD12	1:A:1347:ASP:HB3	1.86	0.57
1:A:1438:ILE:HB	1:A:1469:LEU:HD23	1.86	0.57
1:C:1499:ASN:N	1:C:1524:ASP:OD2	2.35	0.57
1:D:1102:ARG:NH2	1:D:1161:PRO:O	2.37	0.57
1:D:1537:VAL:O	1:D:1550:LEU:N	2.38	0.57
1:F:1438:ILE:HB	1:F:1469:LEU:HD23	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:739:ALA:HB2	1:A:792:ILE:CG1	2.35	0.56
1:B:1019:ASP:OD1	1:B:1262:ASN:ND2	2.38	0.56
1:E:540:ILE:HA	1:E:547:GLN:OE1	2.04	0.56
1:B:77:GLY:H	1:C:94:VAL:HG21	1.69	0.56
1:B:302:ASN:HB2	1:B:402:ILE:HD12	1.86	0.56
1:C:1537:VAL:O	1:C:1550:LEU:N	2.38	0.56
1:D:739:ALA:HB2	1:D:792:ILE:CG1	2.35	0.56
1:E:1537:VAL:O	1:E:1550:LEU:N	2.38	0.56
1:F:1537:VAL:O	1:F:1550:LEU:N	2.38	0.56
1:C:540:ILE:HA	1:C:547:GLN:OE1	2.04	0.56
1:F:739:ALA:HB2	1:F:792:ILE:CG1	2.35	0.56
1:A:1092:GLN:HG2	1:A:1213:PRO:HG3	1.87	0.56
1:A:1537:VAL:O	1:A:1550:LEU:N	2.38	0.56
1:E:739:ALA:HB2	1:E:792:ILE:CG1	2.34	0.56
1:B:886:PHE:CA	1:C:1301:THR:HG21	2.36	0.56
1:E:1438:ILE:HB	1:E:1469:LEU:HD23	1.85	0.56
1:D:1019:ASP:OD1	1:D:1262:ASN:ND2	2.38	0.56
1:E:1092:GLN:HG2	1:E:1213:PRO:HG3	1.88	0.56
1:C:1092:GLN:HG2	1:C:1213:PRO:HG3	1.87	0.56
1:E:1019:ASP:OD1	1:E:1262:ASN:ND2	2.37	0.56
1:E:1376:TYR:CE1	1:E:1382:VAL:HG12	2.41	0.56
1:D:1201:LEU:HD12	1:D:1347:ASP:HB3	1.86	0.56
1:D:1369:VAL:HG23	1:D:1490:ILE:HD12	1.87	0.56
1:A:1376:TYR:CE1	1:A:1382:VAL:HG12	2.41	0.56
1:B:1019:ASP:HB3	1:B:1023:TYR:OH	2.06	0.56
1:B:1376:TYR:CE1	1:B:1382:VAL:HG12	2.41	0.56
1:F:1376:TYR:CE1	1:F:1382:VAL:HG12	2.41	0.56
1:B:1499:ASN:N	1:B:1524:ASP:OD2	2.34	0.56
1:F:1019:ASP:HB3	1:F:1023:TYR:OH	2.06	0.56
1:D:1376:TYR:CE1	1:D:1382:VAL:HG12	2.41	0.55
1:D:1499:ASN:N	1:D:1524:ASP:OD2	2.35	0.55
1:E:1019:ASP:HB3	1:E:1023:TYR:OH	2.06	0.55
1:F:1369:VAL:HG23	1:F:1490:ILE:HD12	1.88	0.55
1:C:1376:TYR:CE1	1:C:1382:VAL:HG12	2.41	0.55
1:E:435:ARG:NH2	1:F:954:ASP:O	2.37	0.55
1:F:1098:ILE:HG13	1:F:1208:VAL:HG12	1.88	0.55
1:E:886:PHE:CA	1:F:1301:THR:HG21	2.36	0.55
1:E:1098:ILE:HG13	1:E:1208:VAL:HG12	1.88	0.55
1:C:279:HIS:CE1	1:C:488:ARG:HD3	2.40	0.55
1:C:1019:ASP:HB3	1:C:1023:TYR:OH	2.06	0.55
1:B:1369:VAL:HG23	1:B:1490:ILE:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:816:PRO:HD2	1:E:1083:ASN:HD21	1.69	0.55
1:B:1098:ILE:HG13	1:B:1208:VAL:HG12	1.88	0.55
1:D:1321:GLU:OE2	1:D:1393:PHE:CD2	2.59	0.55
1:A:1098:ILE:HG13	1:A:1208:VAL:HG12	1.88	0.55
1:D:1019:ASP:HB3	1:D:1023:TYR:OH	2.06	0.55
1:B:1092:GLN:HG2	1:B:1213:PRO:HG3	1.88	0.55
1:B:1537:VAL:O	1:B:1550:LEU:N	2.38	0.55
1:C:1098:ILE:HG13	1:C:1208:VAL:HG12	1.88	0.55
1:B:435:ARG:NH2	1:C:954:ASP:O	2.37	0.55
1:C:1369:VAL:HG23	1:C:1490:ILE:HD12	1.88	0.55
1:A:1369:VAL:HG23	1:A:1490:ILE:HD12	1.89	0.54
1:B:534:ILE:HD13	1:B:549:GLY:HA3	1.89	0.54
1:D:1092:GLN:HG2	1:D:1213:PRO:HG3	1.87	0.54
1:E:1369:VAL:HG23	1:E:1490:ILE:HD12	1.88	0.54
1:A:1019:ASP:HB3	1:A:1023:TYR:OH	2.06	0.54
1:C:150:PRO:HB3	1:C:191:ILE:HG13	1.89	0.54
1:D:1098:ILE:HG13	1:D:1208:VAL:HG12	1.88	0.54
1:D:1269:ASP:OD1	1:D:1270:LEU:N	2.41	0.54
1:C:1269:ASP:OD1	1:C:1270:LEU:N	2.40	0.54
1:A:1269:ASP:OD1	1:A:1270:LEU:N	2.41	0.54
1:C:1297:ASP:OD2	1:C:1299:GLU:OE2	2.26	0.54
1:D:969:THR:HG21	1:D:973:THR:HG23	1.89	0.54
1:A:534:ILE:HD13	1:A:549:GLY:HA3	1.90	0.54
1:B:1269:ASP:OD1	1:B:1270:LEU:N	2.40	0.54
1:F:533:SER:OG	1:F:552:THR:O	2.25	0.54
1:A:1422:LYS:O	1:A:1423:LEU:HD12	2.08	0.54
1:B:547:GLN:HG3	1:B:683:ALA:HB3	1.90	0.54
1:B:1422:LYS:O	1:B:1423:LEU:HD12	2.08	0.54
1:E:534:ILE:HD13	1:E:549:GLY:HA3	1.89	0.54
1:B:150:PRO:HB3	1:B:191:ILE:HG13	1.90	0.54
1:D:1297:ASP:OD2	1:D:1299:GLU:OE2	2.26	0.54
1:D:1422:LYS:O	1:D:1423:LEU:HD12	2.08	0.54
1:C:1422:LYS:O	1:C:1423:LEU:HD12	2.08	0.54
1:E:533:SER:OG	1:E:552:THR:O	2.25	0.54
1:E:1269:ASP:OD1	1:E:1270:LEU:N	2.40	0.54
1:F:150:PRO:HB3	1:F:191:ILE:HG13	1.89	0.54
1:A:1398:VAL:HG22	1:F:983:GLY:HA3	1.91	0.53
1:B:1297:ASP:OD2	1:B:1299:GLU:OE2	2.26	0.53
1:E:1265:ALA:HA	1:E:1305:GLU:OE2	2.08	0.53
1:F:534:ILE:HD13	1:F:549:GLY:HA3	1.90	0.53
1:F:1422:LYS:O	1:F:1423:LEU:HD12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1499:ASN:N	1:A:1524:ASP:OD2	2.35	0.53
1:F:1269:ASP:OD1	1:F:1270:LEU:N	2.40	0.53
1:D:436:GLY:O	1:E:861:ILE:HD13	2.08	0.53
1:E:1422:LYS:O	1:E:1423:LEU:HD12	2.08	0.53
1:B:1573:GLU:O	1:B:1578:ARG:NH1	2.42	0.53
1:C:525:THR:HG21	1:C:555:ILE:HD13	1.91	0.53
1:E:249:VAL:HG11	1:F:411:PRO:HG2	1.90	0.53
1:E:813:VAL:HG13	1:E:815:THR:HG23	1.91	0.53
1:E:1297:ASP:OD2	1:E:1299:GLU:OE2	2.26	0.53
1:B:1372:ASP:OD2	1:B:1383:TYR:HD2	1.92	0.53
1:C:534:ILE:HD13	1:C:549:GLY:HA3	1.90	0.53
1:D:534:ILE:HD13	1:D:549:GLY:HA3	1.90	0.53
1:E:1499:ASN:N	1:E:1524:ASP:OD2	2.35	0.53
1:C:969:THR:HG21	1:C:973:THR:HG23	1.90	0.53
1:D:1265:ALA:HA	1:D:1305:GLU:OE2	2.08	0.53
1:D:1321:GLU:CD	1:D:1393:PHE:CD1	2.82	0.53
1:F:969:THR:HG21	1:F:973:THR:HG23	1.90	0.53
1:A:969:THR:HG21	1:A:973:THR:HG23	1.89	0.53
1:B:813:VAL:HG13	1:B:815:THR:HG23	1.91	0.53
1:B:1532:VAL:HG13	1:B:1554:GLU:HB3	1.91	0.53
1:C:1163:SER:OG	1:C:1165:GLN:OE1	2.21	0.53
1:C:1265:ALA:HA	1:C:1305:GLU:OE2	2.08	0.53
1:C:1372:ASP:OD2	1:C:1383:TYR:HD2	1.92	0.53
1:D:1345:GLY:HA2	1:E:1578:ARG:HG3	1.88	0.53
1:E:150:PRO:HB3	1:E:191:ILE:HG13	1.90	0.53
1:F:1499:ASN:N	1:F:1524:ASP:OD2	2.34	0.53
1:A:1345:GLY:O	1:B:1576:GLY:HA3	2.08	0.53
1:B:249:VAL:HG11	1:C:411:PRO:HG2	1.90	0.53
1:C:436:GLY:O	1:D:861:ILE:HD13	2.09	0.53
1:A:533:SER:OG	1:A:552:THR:O	2.25	0.53
1:A:1102:ARG:NH1	1:A:1204:ASP:OD2	2.42	0.53
1:B:1102:ARG:NH1	1:B:1204:ASP:OD2	2.42	0.53
1:C:401:SER:O	1:C:401:SER:OG	2.22	0.53
1:C:1532:VAL:HG13	1:C:1554:GLU:HB3	1.90	0.53
1:D:1262:ASN:HB2	1:D:1309:SER:OG	2.09	0.53
1:D:1321:GLU:CD	1:D:1393:PHE:CG	2.81	0.53
1:D:1372:ASP:OD2	1:D:1383:TYR:HD2	1.92	0.53
1:E:1532:VAL:HG13	1:E:1554:GLU:HB3	1.91	0.53
1:A:436:GLY:O	1:B:861:ILE:HD13	2.08	0.52
1:A:1083:ASN:HD21	1:F:816:PRO:HD2	1.73	0.52
1:A:1372:ASP:OD2	1:A:1383:TYR:HD2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:739:ALA:HB2	1:B:792:ILE:HG13	1.91	0.52
1:D:1102:ARG:NH1	1:D:1204:ASP:OD2	2.42	0.52
1:D:1510:TYR:CE1	1:D:1516:GLY:HA2	2.45	0.52
1:E:401:SER:O	1:E:401:SER:OG	2.23	0.52
1:E:547:GLN:HG3	1:E:683:ALA:HB3	1.90	0.52
1:A:1262:ASN:HB2	1:A:1309:SER:OG	2.09	0.52
1:B:1265:ALA:HA	1:B:1305:GLU:OE2	2.08	0.52
1:C:435:ARG:NH1	1:D:937:THR:O	2.42	0.52
1:E:1510:TYR:CE1	1:E:1516:GLY:HA2	2.44	0.52
1:F:1102:ARG:NH1	1:F:1204:ASP:OD2	2.42	0.52
1:F:1574:SER:OG	1:F:1580:ARG:N	2.26	0.52
1:A:999:GLU:HB3	1:B:1304:ARG:NH1	2.25	0.52
1:C:1102:ARG:NH1	1:C:1204:ASP:OD2	2.42	0.52
1:C:1104:SER:HB3	1:D:1455:ASP:OD1	2.08	0.52
1:C:1503:VAL:HG22	1:C:1520:VAL:HG23	1.91	0.52
1:D:533:SER:OG	1:D:552:THR:O	2.25	0.52
1:D:1503:VAL:HG22	1:D:1520:VAL:HG23	1.91	0.52
1:F:1297:ASP:OD2	1:F:1299:GLU:OE2	2.26	0.52
1:B:76:LYS:HD2	1:C:94:VAL:O	2.10	0.52
1:C:322:ASN:OD1	1:C:322:ASN:C	2.48	0.52
1:C:1262:ASN:HB2	1:C:1309:SER:OG	2.10	0.52
1:A:150:PRO:HB3	1:A:191:ILE:HG13	1.90	0.52
1:A:937:THR:O	1:F:435:ARG:NH1	2.42	0.52
1:A:1265:ALA:HA	1:A:1305:GLU:OE2	2.08	0.52
1:A:1465:PRO:CG	1:F:1219:ASP:HB2	2.39	0.52
1:C:1510:TYR:CE1	1:C:1516:GLY:HA2	2.44	0.52
1:D:150:PRO:HB3	1:D:191:ILE:HG13	1.90	0.52
1:F:322:ASN:C	1:F:322:ASN:OD1	2.48	0.52
1:A:547:GLN:HG3	1:A:683:ALA:HB3	1.91	0.52
1:A:1532:VAL:HG13	1:A:1554:GLU:HB3	1.91	0.52
1:B:969:THR:HG21	1:B:973:THR:HG23	1.91	0.52
1:E:502:LEU:HD13	1:E:806:ASN:O	2.10	0.52
1:E:807:ASP:OD1	1:E:808:LEU:N	2.43	0.52
1:E:969:THR:HG21	1:E:973:THR:HG23	1.91	0.52
1:E:1262:ASN:HB2	1:E:1309:SER:OG	2.10	0.52
1:A:1503:VAL:HG22	1:A:1520:VAL:HG23	1.91	0.52
1:C:547:GLN:HG3	1:C:683:ALA:HB3	1.92	0.52
1:E:1372:ASP:OD2	1:E:1383:TYR:HD2	1.92	0.52
1:A:112:ASP:OD1	1:A:123:ASP:OD2	2.28	0.52
1:B:1411:VAL:HG12	1:B:1480:VAL:HG22	1.92	0.52
1:C:807:ASP:OD1	1:C:808:LEU:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:739:ALA:HB2	1:D:792:ILE:HG13	1.92	0.52
1:F:525:THR:HG21	1:F:555:ILE:HD13	1.91	0.52
1:F:1262:ASN:HB2	1:F:1309:SER:OG	2.10	0.52
1:F:1510:TYR:CE1	1:F:1516:GLY:HA2	2.44	0.52
1:A:739:ALA:HB2	1:A:792:ILE:HG13	1.92	0.52
1:E:739:ALA:HB2	1:E:792:ILE:HG13	1.92	0.52
1:F:1372:ASP:OD2	1:F:1383:TYR:HD2	1.92	0.52
1:F:1503:VAL:HG22	1:F:1520:VAL:HG23	1.91	0.52
1:B:807:ASP:OD1	1:B:808:LEU:N	2.43	0.52
1:B:1510:TYR:CE1	1:B:1516:GLY:HA2	2.45	0.52
1:C:1510:TYR:HE1	1:C:1516:GLY:HA2	1.75	0.52
1:E:1102:ARG:NH1	1:E:1204:ASP:OD2	2.42	0.52
1:F:807:ASP:OD1	1:F:808:LEU:N	2.43	0.52
1:C:1219:ASP:HB2	1:D:1465:PRO:CG	2.39	0.51
1:C:1411:VAL:HG12	1:C:1480:VAL:HG22	1.92	0.51
1:C:1473:ASP:OD1	1:C:1474:ASP:N	2.42	0.51
1:E:525:THR:HG21	1:E:555:ILE:HD13	1.92	0.51
1:F:1532:VAL:HG13	1:F:1554:GLU:HB3	1.90	0.51
1:A:695:ASP:OD2	1:A:696:SER:N	2.43	0.51
1:A:861:ILE:HD13	1:F:436:GLY:O	2.10	0.51
1:B:502:LEU:HD13	1:B:806:ASN:O	2.10	0.51
1:C:816:PRO:CG	1:D:1083:ASN:HD21	2.18	0.51
1:C:1055:THR:OG1	1:C:1062:GLU:OE2	2.22	0.51
1:A:1083:ASN:ND2	1:F:816:PRO:HG2	2.25	0.51
1:D:547:GLN:HG3	1:D:683:ALA:HB3	1.92	0.51
1:E:1163:SER:OG	1:E:1165:GLN:OE1	2.22	0.51
1:B:88:LEU:HD12	1:B:229:GLN:OE1	2.10	0.51
1:B:1503:VAL:HG22	1:B:1520:VAL:HG23	1.91	0.51
1:D:1532:VAL:HG13	1:D:1554:GLU:HB3	1.91	0.51
1:A:1446:ASP:OD1	1:A:1453:THR:HA	2.11	0.51
1:A:1578:ARG:HG3	1:F:1345:GLY:CA	2.40	0.51
1:A:724:SER:OG	1:A:740:ASN:ND2	2.44	0.51
1:A:807:ASP:OD1	1:A:808:LEU:N	2.44	0.51
1:A:1411:VAL:HG12	1:A:1480:VAL:HG22	1.92	0.51
1:A:1510:TYR:CE1	1:A:1516:GLY:HA2	2.44	0.51
1:A:1532:VAL:CG2	1:F:1226:SER:HB3	2.41	0.51
1:D:1446:ASP:OD1	1:D:1453:THR:HA	2.11	0.51
1:F:547:GLN:HG3	1:F:683:ALA:HB3	1.92	0.51
1:B:401:SER:O	1:B:401:SER:OG	2.23	0.51
1:B:533:SER:OG	1:B:552:THR:O	2.25	0.51
1:C:739:ALA:HB2	1:C:792:ILE:HG13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1262:ASN:O	1:E:1308:ASP:HB3	2.11	0.51
1:E:1446:ASP:OD1	1:E:1453:THR:HA	2.11	0.51
1:F:695:ASP:OD2	1:F:696:SER:N	2.44	0.51
1:B:525:THR:HG21	1:B:555:ILE:HD13	1.92	0.51
1:B:1262:ASN:HB2	1:B:1309:SER:OG	2.10	0.51
1:D:502:LEU:HD13	1:D:806:ASN:O	2.11	0.51
1:D:695:ASP:OD2	1:D:696:SER:N	2.43	0.51
1:D:1510:TYR:HE1	1:D:1516:GLY:HA2	1.76	0.51
1:D:1574:SER:OG	1:D:1580:ARG:N	2.26	0.51
1:E:76:LYS:HD2	1:F:94:VAL:O	2.10	0.51
1:E:88:LEU:HD12	1:E:229:GLN:OE1	2.10	0.51
1:E:1503:VAL:HG22	1:E:1520:VAL:HG23	1.91	0.51
1:E:1574:SER:OG	1:E:1580:ARG:N	2.26	0.51
1:F:88:LEU:HD12	1:F:229:GLN:OE1	2.11	0.51
1:A:525:THR:HG21	1:A:555:ILE:HD13	1.93	0.51
1:A:1345:GLY:HA2	1:B:1578:ARG:HB2	1.92	0.51
1:B:695:ASP:OD2	1:B:696:SER:N	2.43	0.51
1:C:695:ASP:OD2	1:C:696:SER:N	2.44	0.51
1:C:1345:GLY:CA	1:D:1578:ARG:HG3	2.41	0.51
1:D:807:ASP:OD1	1:D:808:LEU:N	2.44	0.51
1:D:893:LEU:HD13	1:D:941:LEU:HD11	1.93	0.51
1:F:739:ALA:HB2	1:F:792:ILE:HG13	1.92	0.51
1:F:1411:VAL:HG12	1:F:1480:VAL:HG22	1.92	0.51
1:C:1446:ASP:OD1	1:C:1453:THR:HA	2.11	0.51
1:F:37:ALA:HB2	1:F:251:SER:O	2.11	0.51
1:F:1262:ASN:O	1:F:1308:ASP:HB3	2.11	0.51
1:D:525:THR:HG21	1:D:555:ILE:HD13	1.94	0.50
1:D:1262:ASN:O	1:D:1308:ASP:HB3	2.11	0.50
1:E:695:ASP:OD2	1:E:696:SER:N	2.43	0.50
1:A:88:LEU:HD12	1:A:229:GLN:OE1	2.11	0.50
1:A:502:LEU:HD13	1:A:806:ASN:O	2.11	0.50
1:D:1411:VAL:HG12	1:D:1480:VAL:HG22	1.92	0.50
1:F:1050:HIS:NE2	1:F:1274:GLU:OE1	2.45	0.50
1:B:1446:ASP:OD1	1:B:1453:THR:HA	2.11	0.50
1:E:1050:HIS:NE2	1:E:1274:GLU:OE1	2.45	0.50
1:F:1446:ASP:OD1	1:F:1453:THR:HA	2.11	0.50
1:F:1510:TYR:HE1	1:F:1516:GLY:HA2	1.75	0.50
1:C:1262:ASN:O	1:C:1308:ASP:HB3	2.11	0.50
1:F:502:LEU:HD13	1:F:806:ASN:O	2.12	0.50
1:A:1050:HIS:NE2	1:A:1274:GLU:OE1	2.45	0.50
1:A:1473:ASP:OD1	1:A:1474:ASP:N	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1262:ASN:O	1:B:1308:ASP:HB3	2.10	0.50
1:C:1050:HIS:NE2	1:C:1274:GLU:OE1	2.45	0.50
1:D:724:SER:OG	1:D:740:ASN:ND2	2.44	0.50
1:D:1050:HIS:NE2	1:D:1274:GLU:OE1	2.45	0.50
1:A:1163:SER:OG	1:A:1165:GLN:OE1	2.21	0.50
1:A:1262:ASN:O	1:A:1308:ASP:HB3	2.11	0.50
1:B:724:SER:OG	1:B:740:ASN:ND2	2.45	0.50
1:B:1050:HIS:NE2	1:B:1274:GLU:OE1	2.45	0.50
1:C:88:LEU:HD12	1:C:229:GLN:OE1	2.11	0.50
1:C:1385:THR:HG22	1:C:1434:THR:HG22	1.94	0.50
1:D:999:GLU:HG2	1:E:1304:ARG:NH1	2.27	0.50
1:E:1510:TYR:HE1	1:E:1516:GLY:HA2	1.75	0.50
1:F:724:SER:OG	1:F:740:ASN:ND2	2.44	0.50
1:A:1510:TYR:HE1	1:A:1516:GLY:HA2	1.76	0.50
1:B:1385:THR:HG22	1:B:1434:THR:HG22	1.94	0.50
1:C:502:LEU:HD13	1:C:806:ASN:O	2.12	0.50
1:E:1411:VAL:HG12	1:E:1480:VAL:HG22	1.92	0.50
1:C:724:SER:OG	1:C:740:ASN:ND2	2.44	0.50
1:C:1226:SER:HB3	1:D:1532:VAL:CG2	2.41	0.50
1:D:88:LEU:HD12	1:D:229:GLN:OE1	2.11	0.50
1:E:1473:ASP:OD1	1:E:1474:ASP:N	2.42	0.50
1:C:1226:SER:HB3	1:D:1532:VAL:HG23	1.94	0.49
1:C:533:SER:OG	1:C:552:THR:O	2.25	0.49
1:D:1385:THR:HG22	1:D:1434:THR:HG22	1.94	0.49
1:E:84:ASN:ND2	1:F:421:GLU:HB3	2.27	0.49
1:F:1438:ILE:HD12	1:F:1529:PRO:HG2	1.95	0.49
1:A:1574:SER:OG	1:A:1580:ARG:N	2.27	0.49
1:B:1163:SER:OG	1:B:1165:GLN:OE1	2.21	0.49
1:B:1510:TYR:HE1	1:B:1516:GLY:HA2	1.76	0.49
1:E:893:LEU:HD13	1:E:941:LEU:HD11	1.95	0.49
1:B:84:ASN:ND2	1:C:421:GLU:CB	2.75	0.49
1:B:1276:ASP:HB3	1:B:1281:THR:HG23	1.95	0.49
1:B:1438:ILE:HD12	1:B:1529:PRO:HG2	1.95	0.49
1:C:983:GLY:HA3	1:D:1398:VAL:HG22	1.91	0.49
1:C:1438:ILE:HD12	1:C:1529:PRO:HG2	1.94	0.49
1:E:724:SER:OG	1:E:740:ASN:ND2	2.45	0.49
1:F:1276:ASP:HB3	1:F:1281:THR:HG23	1.95	0.49
1:A:745:ILE:HD11	1:A:761:LEU:HD21	1.94	0.49
1:A:1385:THR:HG22	1:A:1434:THR:HG22	1.94	0.49
1:A:1455:ASP:OD1	1:F:1104:SER:HB3	2.12	0.49
1:A:1578:ARG:CZ	1:F:1352:GLU:OE2	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:512:PHE:HA	1:E:516:GLU:HG3	1.95	0.49
1:E:745:ILE:HD11	1:E:761:LEU:HD21	1.94	0.49
1:A:512:PHE:HA	1:A:516:GLU:HG3	1.94	0.49
1:B:112:ASP:OD1	1:B:123:ASP:OD2	2.31	0.49
1:C:1122:ASP:HB2	1:C:1133:ILE:HD12	1.95	0.49
1:A:275:VAL:HB	1:A:485:LYS:HE3	1.94	0.49
1:A:893:LEU:HD13	1:A:941:LEU:HD11	1.93	0.49
1:A:1122:ASP:HB2	1:A:1133:ILE:HD12	1.95	0.49
1:B:275:VAL:HB	1:B:485:LYS:HE3	1.95	0.49
1:B:512:PHE:HA	1:B:516:GLU:HG3	1.95	0.49
1:B:745:ILE:HD11	1:B:761:LEU:HD21	1.94	0.49
1:C:512:PHE:HA	1:C:516:GLU:HG3	1.95	0.49
1:C:1276:ASP:HB3	1:C:1281:THR:HG23	1.95	0.49
1:D:512:PHE:HA	1:D:516:GLU:HG3	1.94	0.49
1:D:745:ILE:HD11	1:D:761:LEU:HD21	1.94	0.49
1:F:512:PHE:HA	1:F:516:GLU:HG3	1.95	0.49
1:E:84:ASN:ND2	1:F:421:GLU:CB	2.75	0.49
1:E:730:ASP:HB2	1:E:732:VAL:HG23	1.95	0.49
1:E:813:VAL:HG11	1:F:956:GLN:CD	2.33	0.49
1:B:1051:ALA:HA	1:B:1054:ILE:HD12	1.95	0.49
1:A:804:ASN:HD21	1:B:1087:GLU:HG3	1.78	0.49
1:A:1276:ASP:HB3	1:A:1281:THR:HG23	1.95	0.49
1:A:1532:VAL:HG23	1:F:1226:SER:HB3	1.94	0.49
1:B:84:ASN:ND2	1:C:421:GLU:HB3	2.27	0.49
1:B:1122:ASP:HB2	1:B:1133:ILE:HD12	1.95	0.49
1:D:1122:ASP:HB2	1:D:1133:ILE:HD12	1.95	0.49
1:D:275:VAL:HB	1:D:485:LYS:HE3	1.94	0.48
1:D:804:ASN:HD21	1:E:1087:GLU:HG3	1.77	0.48
1:E:902:TRP:CZ2	1:E:958:PRO:HG3	2.48	0.48
1:E:1239:ASP:OD1	1:E:1240:LYS:N	2.46	0.48
1:A:1051:ALA:HA	1:A:1054:ILE:HD12	1.95	0.48
1:B:813:VAL:HG11	1:C:956:GLN:CD	2.33	0.48
1:D:112:ASP:OD1	1:D:123:ASP:OD2	2.30	0.48
1:E:1051:ALA:HA	1:E:1054:ILE:HD12	1.95	0.48
1:E:1385:THR:HG22	1:E:1434:THR:HG22	1.94	0.48
1:E:1438:ILE:HD12	1:E:1529:PRO:HG2	1.94	0.48
1:A:354:GLN:NE2	1:B:861:ILE:HD12	2.28	0.48
1:B:1075:ILE:HD12	1:B:1139:MET:CE	2.43	0.48
1:E:1276:ASP:HB3	1:E:1281:THR:HG23	1.95	0.48
1:E:1346:SER:OG	1:E:1348:TYR:O	2.30	0.48
1:F:89:ARG:NH1	1:F:140:SER:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1385:THR:HG22	1:F:1434:THR:HG22	1.94	0.48
1:B:293:ASP:OD1	1:B:294:GLU:OE1	2.31	0.48
1:B:902:TRP:CZ2	1:B:958:PRO:HG3	2.48	0.48
1:A:1438:ILE:HD12	1:A:1529:PRO:HG2	1.95	0.48
1:D:730:ASP:HB2	1:D:732:VAL:HG23	1.95	0.48
1:D:1163:SER:OG	1:D:1165:GLN:OE1	2.21	0.48
1:D:1346:SER:OG	1:D:1348:TYR:O	2.30	0.48
1:E:275:VAL:HB	1:E:485:LYS:HE3	1.95	0.48
1:E:1075:ILE:HD12	1:E:1139:MET:CE	2.43	0.48
1:F:110:ILE:O	1:F:113:SER:OG	2.31	0.48
1:F:112:ASP:OD1	1:F:123:ASP:OD2	2.31	0.48
1:F:1239:ASP:OD1	1:F:1240:LYS:N	2.46	0.48
1:A:273:PRO:HG2	1:A:276:SER:OG	2.14	0.48
1:B:1559:THR:HG23	1:B:1561:ILE:H	1.78	0.48
1:C:89:ARG:NH1	1:C:140:SER:O	2.46	0.48
1:E:112:ASP:OD1	1:E:123:ASP:OD2	2.31	0.48
1:A:1087:GLU:HG3	1:F:804:ASN:HD21	1.79	0.48
1:A:1143:ALA:HB3	1:A:1146:ALA:HB2	1.96	0.48
1:A:1559:THR:HG23	1:A:1561:ILE:H	1.78	0.48
1:F:275:VAL:O	1:F:275:VAL:CG1	2.62	0.48
1:F:1143:ALA:HB3	1:F:1146:ALA:HB2	1.96	0.48
1:F:1346:SER:OG	1:F:1348:TYR:O	2.30	0.48
1:F:1559:THR:HG23	1:F:1561:ILE:H	1.78	0.48
1:A:629:VAL:HG11	1:A:704:MET:HE3	1.96	0.48
1:B:893:LEU:HD13	1:B:941:LEU:HD11	1.95	0.48
1:B:1258:PHE:HB3	1:B:1268:TYR:CE2	2.49	0.48
1:C:273:PRO:HG2	1:C:276:SER:OG	2.14	0.48
1:C:902:TRP:CZ2	1:C:958:PRO:HG3	2.49	0.48
1:C:1352:GLU:OE2	1:D:1578:ARG:CZ	2.62	0.48
1:C:1559:THR:HG23	1:C:1561:ILE:H	1.78	0.48
1:D:354:GLN:NE2	1:E:861:ILE:HD12	2.28	0.48
1:D:902:TRP:CZ2	1:D:958:PRO:HG3	2.49	0.48
1:D:1269:ASP:CG	1:D:1271:ASP:OD2	2.52	0.48
1:D:1559:THR:HG23	1:D:1561:ILE:H	1.78	0.48
1:E:804:ASN:HD21	1:F:1087:GLU:HG3	1.79	0.48
1:F:902:TRP:CZ2	1:F:958:PRO:HG3	2.49	0.48
1:A:275:VAL:O	1:A:275:VAL:CG1	2.62	0.48
1:A:902:TRP:CZ2	1:A:958:PRO:HG3	2.49	0.48
1:A:1269:ASP:CG	1:A:1271:ASP:OD2	2.52	0.48
1:B:730:ASP:HB2	1:B:732:VAL:HG23	1.95	0.48
1:C:112:ASP:OD1	1:C:123:ASP:OD2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:110:ILE:O	1:D:113:SER:OG	2.30	0.48
1:D:273:PRO:HG2	1:D:276:SER:OG	2.14	0.48
1:D:1473:ASP:OD1	1:D:1474:ASP:N	2.42	0.48
1:E:89:ARG:NH1	1:E:140:SER:O	2.47	0.48
1:E:1245:ILE:HD12	1:E:1245:ILE:H	1.79	0.48
1:E:1269:ASP:CG	1:E:1271:ASP:OD2	2.52	0.48
1:F:1122:ASP:HB2	1:F:1133:ILE:HD12	1.95	0.48
1:C:804:ASN:HD21	1:D:1087:GLU:HG3	1.78	0.48
1:C:1258:PHE:HB3	1:C:1268:TYR:CE2	2.49	0.48
1:D:1051:ALA:HA	1:D:1054:ILE:HD12	1.95	0.48
1:A:730:ASP:HB2	1:A:732:VAL:HG23	1.94	0.47
1:B:1143:ALA:HB3	1:B:1146:ALA:HB2	1.95	0.47
1:B:1245:ILE:HD12	1:B:1245:ILE:H	1.79	0.47
1:C:730:ASP:HB2	1:C:732:VAL:HG23	1.95	0.47
1:C:1269:ASP:CG	1:C:1271:ASP:OD2	2.52	0.47
1:D:1239:ASP:OD1	1:D:1240:LYS:N	2.46	0.47
1:E:293:ASP:OD1	1:E:294:GLU:OE1	2.31	0.47
1:E:1559:THR:HG23	1:E:1561:ILE:H	1.78	0.47
1:F:1048:PRO:HD2	1:F:1341:TRP:CD1	2.49	0.47
1:C:275:VAL:O	1:C:275:VAL:CG1	2.62	0.47
1:C:1239:ASP:OD1	1:C:1240:LYS:N	2.46	0.47
1:D:1438:ILE:HD12	1:D:1529:PRO:HG2	1.95	0.47
1:D:1555:THR:OG1	1:D:1559:THR:HG21	2.14	0.47
1:F:293:ASP:OD1	1:F:294:GLU:OE1	2.32	0.47
1:B:275:VAL:O	1:B:275:VAL:CG1	2.62	0.47
1:B:290:ASP:OD2	1:B:293:ASP:N	2.46	0.47
1:F:273:PRO:HG2	1:F:276:SER:OG	2.14	0.47
1:A:293:ASP:OD1	1:A:294:GLU:OE1	2.32	0.47
1:A:1075:ILE:HD12	1:A:1139:MET:HE3	1.96	0.47
1:A:1239:ASP:OD1	1:A:1240:LYS:N	2.46	0.47
1:A:1534:ASN:CG	1:F:1205:ILE:HG12	2.34	0.47
1:B:1269:ASP:CG	1:B:1271:ASP:OD2	2.52	0.47
1:B:1473:ASP:OD1	1:B:1474:ASP:N	2.42	0.47
1:D:1276:ASP:HB3	1:D:1281:THR:HG23	1.95	0.47
1:D:1403:GLU:HG2	1:D:1404:THR:HG23	1.97	0.47
1:E:1122:ASP:HB2	1:E:1133:ILE:HD12	1.95	0.47
1:F:730:ASP:HB2	1:F:732:VAL:HG23	1.96	0.47
1:F:1051:ALA:HA	1:F:1054:ILE:HD12	1.96	0.47
1:A:89:ARG:NH1	1:A:140:SER:O	2.47	0.47
1:A:104:ASP:OD2	1:A:105:ARG:N	2.48	0.47
1:B:89:ARG:NH1	1:B:140:SER:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1507:GLU:HB2	1:C:1510:TYR:CE2	2.50	0.47
1:D:1507:GLU:HB2	1:D:1510:TYR:CE2	2.50	0.47
1:E:275:VAL:O	1:E:275:VAL:CG1	2.62	0.47
1:E:1403:GLU:HG2	1:E:1404:THR:HG23	1.97	0.47
1:E:1555:THR:OG1	1:E:1559:THR:HG21	2.14	0.47
1:F:1258:PHE:HB3	1:F:1268:TYR:CE2	2.49	0.47
1:F:1555:THR:OG1	1:F:1559:THR:HG21	2.14	0.47
1:A:1258:PHE:HB3	1:A:1268:TYR:CE2	2.50	0.47
1:B:1239:ASP:OD1	1:B:1240:LYS:N	2.46	0.47
1:C:104:ASP:OD2	1:C:105:ARG:N	2.48	0.47
1:C:629:VAL:HG11	1:C:704:MET:HE3	1.97	0.47
1:C:1048:PRO:HD2	1:C:1341:TRP:CD1	2.49	0.47
1:C:1245:ILE:HD12	1:C:1245:ILE:H	1.79	0.47
1:C:1555:THR:OG1	1:C:1559:THR:HG21	2.14	0.47
1:D:1075:ILE:HD12	1:D:1139:MET:CE	2.45	0.47
1:F:104:ASP:OD2	1:F:105:ARG:N	2.48	0.47
1:F:290:ASP:OD2	1:F:293:ASP:N	2.47	0.47
1:A:1069:LEU:O	1:A:1154:ASN:ND2	2.47	0.47
1:B:1048:PRO:HD2	1:B:1341:TRP:CD1	2.49	0.47
1:C:525:THR:HG21	1:C:555:ILE:CD1	2.45	0.47
1:C:733:GLN:HB2	1:C:736:GLU:OE2	2.15	0.47
1:C:1143:ALA:HB3	1:C:1146:ALA:HB2	1.96	0.47
1:C:1205:ILE:HG12	1:D:1534:ASN:ND2	2.29	0.47
1:C:1205:ILE:HG12	1:D:1534:ASN:CG	2.34	0.47
1:D:1143:ALA:HB3	1:D:1146:ALA:HB2	1.96	0.47
1:D:1596:LEU:HD12	1:D:1597:PRO:CD	2.44	0.47
1:E:234:ASN:HB3	1:F:422:SER:HB3	1.94	0.47
1:E:1507:GLU:HB2	1:E:1510:TYR:CE2	2.50	0.47
1:F:1507:GLU:HB2	1:F:1510:TYR:CE2	2.50	0.47
1:A:607:THR:O	1:A:610:GLU:HG2	2.15	0.47
1:B:234:ASN:HB3	1:C:422:SER:HB3	1.94	0.47
1:B:484:ASN:HD21	1:B:753:ASN:HA	1.80	0.47
1:B:1069:LEU:O	1:B:1154:ASN:ND2	2.47	0.47
1:C:1051:ALA:HA	1:C:1054:ILE:HD12	1.96	0.47
1:D:89:ARG:NH1	1:D:140:SER:O	2.47	0.47
1:D:1048:PRO:HD2	1:D:1341:TRP:CD1	2.49	0.47
1:D:1322:SER:HB2	1:D:1327:LYS:HG2	1.96	0.47
1:E:273:PRO:HG2	1:E:276:SER:OG	2.15	0.47
1:B:804:ASN:HD21	1:C:1087:GLU:HG3	1.79	0.47
1:D:104:ASP:OD2	1:D:105:ARG:N	2.48	0.47
1:D:293:ASP:OD1	1:D:294:GLU:OE1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1258:PHE:HB3	1:D:1268:TYR:CE2	2.50	0.47
1:E:886:PHE:C	1:F:1301:THR:HG21	2.36	0.47
1:E:1048:PRO:HD2	1:E:1341:TRP:CD1	2.50	0.47
1:E:1258:PHE:HB3	1:E:1268:TYR:CE2	2.49	0.47
1:C:290:ASP:OD2	1:C:293:ASP:N	2.47	0.47
1:C:293:ASP:OD1	1:C:294:GLU:OE1	2.32	0.47
1:C:1322:SER:HB2	1:C:1327:LYS:HG2	1.97	0.47
1:E:607:THR:O	1:E:610:GLU:HG2	2.15	0.47
1:F:1269:ASP:CG	1:F:1271:ASP:OD2	2.53	0.47
1:A:290:ASP:OD2	1:A:293:ASP:N	2.46	0.46
1:A:1048:PRO:HD2	1:A:1341:TRP:CD1	2.50	0.46
1:A:1534:ASN:ND2	1:F:1205:ILE:HG12	2.30	0.46
1:B:607:THR:O	1:B:610:GLU:HG2	2.15	0.46
1:B:1507:GLU:HB2	1:B:1510:TYR:CE2	2.50	0.46
1:B:1555:THR:OG1	1:B:1559:THR:HG21	2.14	0.46
1:D:290:ASP:OD2	1:D:293:ASP:N	2.46	0.46
1:E:84:ASN:HD22	1:F:421:GLU:HB3	1.80	0.46
1:E:104:ASP:OD2	1:E:105:ARG:N	2.48	0.46
1:E:1409:ILE:CD1	1:E:1423:LEU:HD13	2.46	0.46
1:F:525:THR:HG21	1:F:555:ILE:CD1	2.45	0.46
1:F:1403:GLU:HG2	1:F:1404:THR:HG23	1.97	0.46
1:A:956:GLN:CD	1:F:813:VAL:HG11	2.35	0.46
1:A:1507:GLU:HB2	1:A:1510:TYR:CE2	2.50	0.46
1:B:733:GLN:HB2	1:B:736:GLU:OE2	2.15	0.46
1:C:1403:GLU:HG2	1:C:1404:THR:HG23	1.97	0.46
1:E:733:GLN:HB2	1:E:736:GLU:OE2	2.15	0.46
1:E:1143:ALA:HB3	1:E:1146:ALA:HB2	1.95	0.46
1:F:607:THR:O	1:F:610:GLU:HG2	2.16	0.46
1:A:733:GLN:HB2	1:A:736:GLU:OE2	2.16	0.46
1:A:1409:ILE:CD1	1:A:1423:LEU:HD13	2.45	0.46
1:B:273:PRO:HG2	1:B:276:SER:OG	2.15	0.46
1:C:484:ASN:HD21	1:C:753:ASN:HA	1.80	0.46
1:C:1596:LEU:HD12	1:C:1597:PRO:CD	2.44	0.46
1:F:401:SER:O	1:F:401:SER:OG	2.22	0.46
1:F:484:ASN:HD21	1:F:753:ASN:HA	1.80	0.46
1:F:1075:ILE:HD12	1:F:1139:MET:CE	2.45	0.46
1:A:1075:ILE:HD12	1:A:1139:MET:CE	2.45	0.46
1:A:1555:THR:OG1	1:A:1559:THR:HG21	2.14	0.46
1:B:104:ASP:OD2	1:B:105:ARG:N	2.48	0.46
1:B:680:LEU:HD13	1:B:684:VAL:HG11	1.98	0.46
1:D:733:GLN:HB2	1:D:736:GLU:OE2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1245:ILE:HD12	1:F:1245:ILE:H	1.79	0.46
1:B:1346:SER:OG	1:B:1348:TYR:O	2.31	0.46
1:F:733:GLN:HB2	1:F:736:GLU:OE2	2.14	0.46
1:A:1578:ARG:NH2	1:F:1352:GLU:OE2	2.49	0.46
1:C:607:THR:O	1:C:610:GLU:HG2	2.16	0.46
1:C:1075:ILE:HD12	1:C:1139:MET:CE	2.45	0.46
1:C:1352:GLU:OE2	1:D:1578:ARG:NH2	2.49	0.46
1:D:275:VAL:O	1:D:275:VAL:CG1	2.62	0.46
1:E:484:ASN:HD21	1:E:753:ASN:HA	1.80	0.46
1:F:1409:ILE:CD1	1:F:1423:LEU:HD13	2.46	0.46
1:B:739:ALA:HB2	1:B:792:ILE:HG12	1.97	0.46
1:B:1300:PRO:O	1:B:1315:ILE:HD11	2.16	0.46
1:B:1403:GLU:HG2	1:B:1404:THR:HG23	1.97	0.46
1:C:1104:SER:HB2	1:D:1455:ASP:OD1	2.16	0.46
1:C:1574:SER:OG	1:C:1580:ARG:N	2.27	0.46
1:D:87:VAL:HG12	1:D:143:GLU:HB3	1.98	0.46
1:D:1409:ILE:CD1	1:D:1423:LEU:HD13	2.45	0.46
1:F:1300:PRO:O	1:F:1315:ILE:HD11	2.16	0.46
1:F:1322:SER:HB2	1:F:1327:LYS:HG2	1.97	0.46
1:A:1403:GLU:HG2	1:A:1404:THR:HG23	1.97	0.46
1:C:1075:ILE:HD12	1:C:1139:MET:HE3	1.97	0.46
1:D:484:ASN:HD21	1:D:753:ASN:HA	1.81	0.46
1:D:739:ALA:HB2	1:D:792:ILE:HG12	1.98	0.46
1:D:1300:PRO:O	1:D:1315:ILE:HD11	2.16	0.46
1:E:1069:LEU:O	1:E:1154:ASN:ND2	2.47	0.46
1:F:1027:PHE:HB3	1:F:1349:VAL:HB	1.98	0.46
1:A:1269:ASP:OD1	1:A:1271:ASP:OD2	2.34	0.46
1:B:525:THR:HG21	1:B:555:ILE:CD1	2.46	0.46
1:D:1269:ASP:OD1	1:D:1271:ASP:OD2	2.34	0.46
1:F:893:LEU:HD13	1:F:941:LEU:HD11	1.98	0.46
1:B:84:ASN:HD22	1:C:421:GLU:HB3	1.80	0.46
1:E:290:ASP:OD2	1:E:293:ASP:N	2.46	0.46
1:E:1596:LEU:HD12	1:E:1597:PRO:CD	2.44	0.46
1:A:1300:PRO:O	1:A:1315:ILE:HD11	2.16	0.45
1:B:502:LEU:HD22	1:B:806:ASN:HB3	1.98	0.45
1:C:739:ALA:HB2	1:C:792:ILE:HG12	1.98	0.45
1:C:1300:PRO:O	1:C:1315:ILE:HD11	2.16	0.45
1:D:680:LEU:HD13	1:D:684:VAL:HG11	1.98	0.45
1:F:745:ILE:HD11	1:F:761:LEU:HD21	1.98	0.45
1:F:1596:LEU:HD12	1:F:1597:PRO:CD	2.44	0.45
1:A:110:ILE:O	1:A:113:SER:OG	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:904:THR:OG1	1:A:906:ASP:OD2	2.34	0.45
1:A:1027:PHE:HB3	1:A:1349:VAL:HB	1.98	0.45
1:A:1346:SER:OG	1:A:1348:TYR:O	2.30	0.45
1:B:1575:SER:HB3	1:B:1578:ARG:HH21	1.81	0.45
1:C:1409:ILE:CD1	1:C:1423:LEU:HD13	2.46	0.45
1:E:66:ASP:OD1	1:E:67:SER:N	2.50	0.45
1:E:1300:PRO:O	1:E:1315:ILE:HD11	2.16	0.45
1:A:680:LEU:HD13	1:A:684:VAL:HG11	1.97	0.45
1:B:904:THR:OG1	1:B:906:ASP:OD2	2.35	0.45
1:C:893:LEU:HD13	1:C:941:LEU:HD11	1.98	0.45
1:C:1269:ASP:OD1	1:C:1271:ASP:OD2	2.35	0.45
1:D:607:THR:O	1:D:610:GLU:HG2	2.15	0.45
1:F:629:VAL:HG11	1:F:704:MET:HE3	1.98	0.45
1:B:66:ASP:OD1	1:B:67:SER:N	2.50	0.45
1:C:66:ASP:OD1	1:C:67:SER:N	2.49	0.45
1:C:87:VAL:HG12	1:C:143:GLU:HB3	1.99	0.45
1:D:66:ASP:OD1	1:D:67:SER:N	2.50	0.45
1:B:1409:ILE:CD1	1:B:1423:LEU:HD13	2.46	0.45
1:C:1222:THR:O	1:D:1530:GLU:OE1	2.35	0.45
1:D:1027:PHE:HB3	1:D:1349:VAL:HB	1.99	0.45
1:D:1330:ARG:CB	1:D:1364:ASN:HA	2.43	0.45
1:F:1473:ASP:OD1	1:F:1474:ASP:N	2.42	0.45
1:A:87:VAL:HG12	1:A:143:GLU:HB3	1.98	0.45
1:C:904:THR:OG1	1:C:906:ASP:OD2	2.35	0.45
1:C:1346:SER:OG	1:C:1348:TYR:O	2.30	0.45
1:D:1245:ILE:H	1:D:1245:ILE:HD12	1.81	0.45
1:E:525:THR:HG21	1:E:555:ILE:CD1	2.46	0.45
1:A:739:ALA:HB2	1:A:792:ILE:HG12	1.98	0.45
1:C:502:LEU:HD22	1:C:806:ASN:HB3	1.98	0.45
1:C:1027:PHE:HB3	1:C:1349:VAL:HB	1.98	0.45
1:D:1345:GLY:HA3	1:E:1578:ARG:CG	2.45	0.45
1:E:680:LEU:HD13	1:E:684:VAL:HG11	1.98	0.45
1:F:654:ASN:OD1	1:F:655:ASP:N	2.50	0.45
1:F:1069:LEU:O	1:F:1154:ASN:ND2	2.47	0.45
1:B:837:TYR:CZ	1:B:843:VAL:HG23	2.52	0.45
1:B:1027:PHE:HB3	1:B:1349:VAL:HB	1.99	0.45
1:B:1269:ASP:OD1	1:B:1271:ASP:OD2	2.35	0.45
1:C:816:PRO:HG2	1:D:1083:ASN:HD22	1.79	0.45
1:E:654:ASN:OD1	1:E:655:ASP:N	2.50	0.45
1:E:837:TYR:CZ	1:E:843:VAL:HG23	2.52	0.45
1:F:66:ASP:OD1	1:F:67:SER:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:739:ALA:HB2	1:F:792:ILE:HG12	1.98	0.45
1:C:813:VAL:HG11	1:D:956:GLN:CD	2.37	0.45
1:E:999:GLU:OE1	1:F:1265:ALA:HB3	2.17	0.45
1:F:837:TYR:CZ	1:F:843:VAL:HG23	2.52	0.45
1:A:502:LEU:HD22	1:A:806:ASN:HB3	1.99	0.45
1:A:654:ASN:OD1	1:A:655:ASP:N	2.50	0.45
1:B:1075:ILE:HD12	1:B:1139:MET:HE3	1.99	0.45
1:C:745:ILE:HD11	1:C:761:LEU:HD21	1.98	0.45
1:C:837:TYR:CZ	1:C:843:VAL:HG23	2.52	0.45
1:C:881:THR:OG1	1:C:888:GLU:OE2	2.25	0.45
1:D:629:VAL:HG11	1:D:704:MET:HE3	1.99	0.45
1:A:66:ASP:OD1	1:A:67:SER:N	2.50	0.44
1:A:484:ASN:HD21	1:A:753:ASN:HA	1.81	0.44
1:A:1530:GLU:OE1	1:F:1222:THR:O	2.35	0.44
1:C:110:ILE:O	1:C:113:SER:OG	2.31	0.44
1:D:1075:ILE:HD12	1:D:1139:MET:HE3	1.99	0.44
1:F:1269:ASP:OD1	1:F:1271:ASP:OD2	2.35	0.44
1:A:313:ASP:OD1	1:A:314:THR:N	2.47	0.44
1:A:525:THR:HG21	1:A:555:ILE:CD1	2.47	0.44
1:A:1534:ASN:O	1:F:1103:GLY:HA2	2.18	0.44
1:A:1596:LEU:HD12	1:A:1597:PRO:CD	2.44	0.44
1:B:1274:GLU:HB3	1:B:1337:GLU:HB3	2.00	0.44
1:C:313:ASP:OD1	1:C:314:THR:N	2.47	0.44
1:D:904:THR:OG1	1:D:906:ASP:OD2	2.35	0.44
1:E:110:ILE:O	1:E:113:SER:OG	2.30	0.44
1:E:739:ALA:HB2	1:E:792:ILE:HG12	1.97	0.44
1:E:1027:PHE:HB3	1:E:1349:VAL:HB	1.99	0.44
1:B:654:ASN:OD1	1:B:655:ASP:N	2.50	0.44
1:D:502:LEU:HD22	1:D:806:ASN:HB3	1.99	0.44
1:F:1163:SER:OG	1:F:1165:GLN:OE1	2.21	0.44
1:A:1005:ASP:OD2	1:A:1006:SER:N	2.51	0.44
1:B:1005:ASP:OD2	1:B:1006:SER:N	2.51	0.44
1:C:1202:GLN:HG2	1:C:1230:ASP:HA	1.99	0.44
1:E:447:PRO:HG2	1:F:858:LEU:HG	2.00	0.44
1:E:1202:GLN:HG2	1:E:1230:ASP:HA	1.99	0.44
1:F:313:ASP:OD1	1:F:314:THR:N	2.47	0.44
1:A:1202:GLN:HG2	1:A:1230:ASP:HA	1.99	0.44
1:C:1005:ASP:OD2	1:C:1006:SER:N	2.51	0.44
1:F:904:THR:OG1	1:F:906:ASP:OD2	2.35	0.44
1:A:130:SER:OG	1:A:144:THR:O	2.27	0.44
1:A:153:ILE:HD13	1:A:164:GLN:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:837:TYR:CZ	1:A:843:VAL:HG23	2.52	0.44
1:A:1274:GLU:HB3	1:A:1337:GLU:HB3	1.99	0.44
1:D:401:SER:O	1:D:401:SER:OG	2.23	0.44
1:E:1269:ASP:OD1	1:E:1271:ASP:OD2	2.35	0.44
1:B:886:PHE:C	1:C:1301:THR:HG21	2.37	0.44
1:B:1596:LEU:HD12	1:B:1597:PRO:CD	2.44	0.44
1:C:1594:ASN:HA	1:C:1605:GLU:OE1	2.18	0.44
1:D:837:TYR:CZ	1:D:843:VAL:HG23	2.52	0.44
1:D:1594:ASN:HA	1:D:1605:GLU:OE1	2.18	0.44
1:F:502:LEU:HD22	1:F:806:ASN:HB3	1.98	0.44
1:B:344:ASN:HB3	1:B:444:ASN:OD1	2.18	0.44
1:B:1594:ASN:HA	1:B:1605:GLU:OE1	2.18	0.44
1:C:469:THR:HG22	1:C:826:HIS:CE1	2.53	0.44
1:E:904:THR:OG1	1:E:906:ASP:OD2	2.35	0.44
1:A:1352:GLU:OE2	1:B:1578:ARG:NH1	2.51	0.44
1:C:654:ASN:OD1	1:C:655:ASP:N	2.50	0.44
1:C:1321:GLU:OE1	1:C:1393:PHE:CE1	2.71	0.44
1:A:1465:PRO:CD	1:F:1219:ASP:CB	2.96	0.43
1:B:313:ASP:OD1	1:B:314:THR:N	2.47	0.43
1:E:344:ASN:HB3	1:E:444:ASN:OD1	2.18	0.43
1:E:620:VAL:O	1:E:726:GLY:HA3	2.18	0.43
1:E:1274:GLU:HB3	1:E:1337:GLU:HB3	2.00	0.43
1:F:1005:ASP:OD2	1:F:1006:SER:N	2.51	0.43
1:A:629:VAL:HG11	1:A:704:MET:CE	2.49	0.43
1:A:1345:GLY:CA	1:B:1578:ARG:HB2	2.49	0.43
1:A:1532:VAL:HB	1:F:1226:SER:CB	2.49	0.43
1:B:1202:GLN:HG2	1:B:1230:ASP:HA	2.00	0.43
1:D:153:ILE:HD13	1:D:164:GLN:HB2	2.00	0.43
1:B:1379:THR:HA	1:B:1439:LEU:O	2.19	0.43
1:C:1103:GLY:HA2	1:D:1534:ASN:O	2.18	0.43
1:C:1572:ASP:HB3	1:C:1578:ARG:HH12	1.83	0.43
1:E:313:ASP:OD1	1:E:314:THR:N	2.47	0.43
1:E:502:LEU:HD22	1:E:806:ASN:HB3	1.98	0.43
1:F:1321:GLU:OE1	1:F:1393:PHE:CE1	2.71	0.43
1:F:1517:VAL:HA	1:F:1564:GLY:O	2.18	0.43
1:A:1352:GLU:CD	1:B:1578:ARG:CZ	2.85	0.43
1:A:1594:ASN:HA	1:A:1605:GLU:OE1	2.18	0.43
1:C:1379:THR:HA	1:C:1439:LEU:O	2.19	0.43
1:D:130:SER:OG	1:D:144:THR:O	2.27	0.43
1:D:654:ASN:OD1	1:D:655:ASP:N	2.50	0.43
1:D:1005:ASP:OD2	1:D:1006:SER:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1202:GLN:HG2	1:D:1230:ASP:HA	1.99	0.43
1:D:1379:THR:HA	1:D:1439:LEU:O	2.19	0.43
1:E:1005:ASP:OD2	1:E:1006:SER:N	2.51	0.43
1:E:1379:THR:HA	1:E:1439:LEU:O	2.19	0.43
1:F:629:VAL:HG11	1:F:704:MET:CE	2.48	0.43
1:F:1541:SER:OG	1:F:1585:ASP:OD1	2.37	0.43
1:A:813:VAL:HG11	1:B:956:GLN:CD	2.39	0.43
1:B:1574:SER:OG	1:B:1580:ARG:N	2.27	0.43
1:C:629:VAL:HG11	1:C:704:MET:CE	2.48	0.43
1:D:431:ASP:OD1	1:D:432:ASN:N	2.52	0.43
1:D:1262:ASN:OD1	1:D:1263:ASP:N	2.52	0.43
1:E:1329:GLU:N	1:E:1329:GLU:OE2	2.52	0.43
1:A:115:ALA:HA	1:A:330:LEU:HD13	2.00	0.43
1:B:447:PRO:HG2	1:C:858:LEU:HG	2.00	0.43
1:C:1207:GLN:OE1	1:D:1531:ALA:HB1	2.18	0.43
1:C:1230:ASP:OD1	1:C:1231:LEU:N	2.52	0.43
1:D:136:ALA:O	1:D:182:LEU:HD11	2.19	0.43
1:F:1202:GLN:HG2	1:F:1230:ASP:HA	1.99	0.43
1:F:1567:PHE:HB3	1:F:1578:ARG:HG2	1.99	0.43
1:F:1594:ASN:HA	1:F:1605:GLU:OE1	2.18	0.43
1:A:1455:ASP:OD1	1:F:1104:SER:HB2	2.19	0.43
1:A:1517:VAL:HA	1:A:1564:GLY:O	2.18	0.43
1:C:605:LEU:HD23	1:C:605:LEU:HA	1.89	0.43
1:C:1226:SER:CB	1:D:1532:VAL:HB	2.49	0.43
1:D:471:GLY:O	1:D:856:SER:HB3	2.19	0.43
1:D:813:VAL:HG11	1:E:956:GLN:CD	2.39	0.43
1:E:1262:ASN:OD1	1:E:1263:ASP:N	2.52	0.43
1:E:1517:VAL:HA	1:E:1564:GLY:O	2.18	0.43
1:F:620:VAL:O	1:F:726:GLY:HA3	2.19	0.43
1:A:471:GLY:O	1:A:856:SER:HB3	2.19	0.43
1:B:1422:LYS:O	1:B:1465:PRO:HA	2.19	0.43
1:C:431:ASP:OD1	1:C:432:ASN:N	2.52	0.43
1:D:1274:GLU:HB3	1:D:1337:GLU:HB3	2.00	0.43
1:F:42:PHE:CE1	1:F:65:ILE:HD12	2.54	0.43
1:F:431:ASP:OD1	1:F:432:ASN:N	2.52	0.43
1:F:1379:THR:HA	1:F:1439:LEU:O	2.19	0.43
1:A:620:VAL:O	1:A:726:GLY:HA3	2.19	0.43
1:A:1245:ILE:HD12	1:A:1245:ILE:H	1.83	0.43
1:B:471:GLY:O	1:B:856:SER:HB3	2.19	0.43
1:B:620:VAL:O	1:B:726:GLY:HA3	2.18	0.43
1:E:1541:SER:OG	1:E:1585:ASP:OD1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1230:ASP:OD1	1:A:1231:LEU:N	2.52	0.43
1:B:1262:ASN:OD1	1:B:1263:ASP:N	2.52	0.43
1:B:1329:GLU:N	1:B:1329:GLU:OE2	2.52	0.43
1:B:1550:LEU:HD22	1:B:1552:VAL:HG13	2.01	0.43
1:C:886:PHE:HZ	1:C:889:LEU:HD13	1.84	0.43
1:C:1219:ASP:CB	1:D:1465:PRO:CD	2.96	0.43
1:C:1262:ASN:OD1	1:C:1263:ASP:N	2.52	0.43
1:C:1541:SER:OG	1:C:1585:ASP:OD1	2.37	0.43
1:D:313:ASP:OD1	1:D:314:THR:N	2.47	0.43
1:D:525:THR:HG21	1:D:555:ILE:CD1	2.48	0.43
1:D:886:PHE:HZ	1:D:889:LEU:HD13	1.84	0.43
1:F:469:THR:HG22	1:F:826:HIS:CE1	2.53	0.43
1:F:1134:ARG:HH11	1:F:1176:LEU:HD21	1.84	0.43
1:A:431:ASP:OD1	1:A:432:ASN:N	2.52	0.42
1:A:1537:VAL:N	1:A:1550:LEU:O	2.47	0.42
1:A:1550:LEU:HD22	1:A:1552:VAL:HG13	2.01	0.42
1:B:431:ASP:OD1	1:B:432:ASN:N	2.52	0.42
1:B:1230:ASP:OD1	1:B:1231:LEU:N	2.52	0.42
1:C:50:PHE:HB3	1:C:285:LEU:HD12	2.00	0.42
1:D:115:ALA:HA	1:D:330:LEU:HD13	2.00	0.42
1:D:629:VAL:HG11	1:D:704:MET:CE	2.49	0.42
1:D:1517:VAL:HA	1:D:1564:GLY:O	2.18	0.42
1:E:886:PHE:HZ	1:E:889:LEU:HD13	1.84	0.42
1:F:87:VAL:HG12	1:F:143:GLU:HB3	2.01	0.42
1:C:1274:GLU:HB3	1:C:1337:GLU:HB3	2.01	0.42
1:D:469:THR:HG22	1:D:826:HIS:CE1	2.55	0.42
1:D:620:VAL:O	1:D:726:GLY:HA3	2.19	0.42
1:E:431:ASP:OD1	1:E:432:ASN:N	2.52	0.42
1:E:629:VAL:HG11	1:E:704:MET:CE	2.49	0.42
1:E:1134:ARG:HH11	1:E:1176:LEU:HD21	1.84	0.42
1:E:1594:ASN:HA	1:E:1605:GLU:OE1	2.18	0.42
1:F:1262:ASN:OD1	1:F:1263:ASP:N	2.52	0.42
1:A:1379:THR:HA	1:A:1439:LEU:O	2.19	0.42
1:A:1422:LYS:O	1:A:1465:PRO:HA	2.19	0.42
1:A:1541:SER:OG	1:A:1585:ASP:OD1	2.37	0.42
1:B:110:ILE:O	1:B:113:SER:OG	2.30	0.42
1:B:886:PHE:O	1:C:1301:THR:CG2	2.64	0.42
1:B:1541:SER:OG	1:B:1585:ASP:OD1	2.37	0.42
1:C:999:GLU:HG2	1:D:1304:ARG:NH1	2.34	0.42
1:F:1274:GLU:HB3	1:F:1337:GLU:HB3	2.01	0.42
1:A:136:ALA:O	1:A:182:LEU:HD11	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:886:PHE:HZ	1:A:889:LEU:HD13	1.84	0.42
1:A:1134:ARG:HH11	1:A:1176:LEU:HD21	1.85	0.42
1:B:1321:GLU:OE1	1:B:1393:PHE:CE1	2.72	0.42
1:C:136:ALA:O	1:C:182:LEU:HD11	2.19	0.42
1:D:1134:ARG:HH11	1:D:1176:LEU:HD21	1.85	0.42
1:E:469:THR:HG22	1:E:826:HIS:CE1	2.54	0.42
1:E:1230:ASP:OD1	1:E:1231:LEU:N	2.52	0.42
1:A:1304:ARG:NH1	1:F:999:GLU:HB3	2.34	0.42
1:B:130:SER:OG	1:B:144:THR:O	2.28	0.42
1:B:886:PHE:HZ	1:B:889:LEU:HD13	1.84	0.42
1:C:1038:ASN:OD1	1:C:1039:ALA:N	2.53	0.42
1:C:1517:VAL:HA	1:C:1564:GLY:O	2.19	0.42
1:C:1550:LEU:HD22	1:C:1552:VAL:HG13	2.01	0.42
1:D:1038:ASN:OD1	1:D:1039:ALA:N	2.53	0.42
1:E:153:ILE:HD13	1:E:164:GLN:HB2	2.02	0.42
1:E:629:VAL:HG11	1:E:704:MET:HE3	2.02	0.42
1:E:1422:LYS:O	1:E:1465:PRO:HA	2.19	0.42
1:A:1038:ASN:OD1	1:A:1039:ALA:N	2.53	0.42
1:A:1262:ASN:OD1	1:A:1263:ASP:N	2.52	0.42
1:B:114:THR:HG21	1:B:332:LEU:HD23	2.02	0.42
1:B:268:ASP:OD1	1:B:268:ASP:N	2.52	0.42
1:B:629:VAL:HG11	1:B:704:MET:HE3	2.02	0.42
1:B:1134:ARG:HH11	1:B:1176:LEU:HD21	1.84	0.42
1:C:344:ASN:HB3	1:C:444:ASN:OD1	2.19	0.42
1:C:680:LEU:HD13	1:C:684:VAL:HG11	2.01	0.42
1:D:1230:ASP:OD1	1:D:1231:LEU:N	2.52	0.42
1:E:471:GLY:O	1:E:856:SER:HB3	2.19	0.42
1:E:1054:ILE:HG23	1:E:1062:GLU:OE1	2.20	0.42
1:F:268:ASP:OD1	1:F:268:ASP:N	2.53	0.42
1:F:886:PHE:HZ	1:F:889:LEU:HD13	1.84	0.42
1:A:1105:ASP:OD2	1:A:1106:SER:N	2.53	0.42
1:B:153:ILE:HD13	1:B:164:GLN:HB2	2.02	0.42
1:B:629:VAL:HG11	1:B:704:MET:CE	2.49	0.42
1:D:1054:ILE:HG23	1:D:1062:GLU:OE1	2.20	0.42
1:D:1422:LYS:O	1:D:1465:PRO:HA	2.19	0.42
1:F:580:ILE:HG12	1:F:717:VAL:HG12	2.02	0.42
1:A:1321:GLU:OE1	1:A:1321:GLU:N	2.52	0.42
1:B:55:SER:HB2	1:B:257:ASP:O	2.20	0.42
1:B:966:ASP:HB3	1:B:973:THR:OG1	2.20	0.42
1:C:1422:LYS:O	1:C:1465:PRO:HA	2.19	0.42
1:E:1038:ASN:OD1	1:E:1039:ALA:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1517:VAL:HA	1:B:1564:GLY:O	2.18	0.42
1:C:620:VAL:O	1:C:726:GLY:HA3	2.19	0.42
1:C:1134:ARG:HH11	1:C:1176:LEU:HD21	1.84	0.42
1:D:344:ASN:HB3	1:D:444:ASN:OD1	2.20	0.42
1:E:69:ILE:HD12	1:E:98:TRP:NE1	2.35	0.42
1:E:268:ASP:OD1	1:E:268:ASP:N	2.52	0.42
1:F:1038:ASN:OD1	1:F:1039:ALA:N	2.53	0.42
1:F:1054:ILE:HG23	1:F:1062:GLU:OE1	2.20	0.42
1:F:1230:ASP:OD1	1:F:1231:LEU:N	2.52	0.42
1:F:1422:LYS:O	1:F:1465:PRO:HA	2.19	0.42
1:A:995:ASP:OD2	1:A:999:GLU:N	2.48	0.42
1:B:136:ALA:O	1:B:182:LEU:HD11	2.19	0.42
1:C:966:ASP:HB3	1:C:973:THR:OG1	2.20	0.42
1:D:1098:ILE:HD13	1:D:1136:PHE:CE1	2.55	0.42
1:E:136:ALA:O	1:E:182:LEU:HD11	2.19	0.42
1:E:1105:ASP:OD2	1:E:1106:SER:N	2.53	0.42
1:F:680:LEU:HD13	1:F:684:VAL:HG11	2.01	0.42
1:F:966:ASP:HB3	1:F:973:THR:OG1	2.20	0.42
1:F:1105:ASP:OD2	1:F:1106:SER:N	2.53	0.42
1:A:114:THR:HG21	1:A:332:LEU:HD23	2.01	0.41
1:A:268:ASP:OD1	1:A:268:ASP:N	2.52	0.41
1:A:344:ASN:HB3	1:A:444:ASN:OD1	2.19	0.41
1:A:469:THR:HG22	1:A:826:HIS:CE1	2.54	0.41
1:A:1329:GLU:OE2	1:A:1329:GLU:N	2.52	0.41
1:A:1500:ILE:HG22	1:A:1596:LEU:CD1	2.50	0.41
1:B:469:THR:HG22	1:B:826:HIS:CE1	2.55	0.41
1:C:42:PHE:CE1	1:C:65:ILE:HD12	2.55	0.41
1:D:966:ASP:HB3	1:D:973:THR:OG1	2.20	0.41
1:D:1541:SER:OG	1:D:1585:ASP:OD1	2.37	0.41
1:D:1553:THR:O	1:D:1562:PHE:HA	2.20	0.41
1:E:1550:LEU:HD22	1:E:1552:VAL:HG13	2.01	0.41
1:F:153:ILE:HD13	1:F:164:GLN:HB2	2.02	0.41
1:F:344:ASN:HB3	1:F:444:ASN:OD1	2.20	0.41
1:F:1500:ILE:HG22	1:F:1596:LEU:CD1	2.50	0.41
1:F:1550:LEU:HD22	1:F:1552:VAL:HG13	2.02	0.41
1:B:1105:ASP:OD2	1:B:1106:SER:N	2.53	0.41
1:B:1321:GLU:OE1	1:B:1393:PHE:CD1	2.73	0.41
1:C:268:ASP:OD1	1:C:268:ASP:N	2.53	0.41
1:C:332:LEU:O	1:C:336:LEU:HG	2.20	0.41
1:D:268:ASP:OD1	1:D:268:ASP:N	2.52	0.41
1:E:1321:GLU:OE1	1:E:1393:PHE:CD1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1553:THR:O	1:E:1562:PHE:HA	2.20	0.41
1:F:50:PHE:HB3	1:F:285:LEU:HD12	2.00	0.41
1:A:332:LEU:O	1:A:336:LEU:HG	2.20	0.41
1:B:84:ASN:HD22	1:C:421:GLU:HG2	1.85	0.41
1:B:1038:ASN:OD1	1:B:1039:ALA:N	2.53	0.41
1:B:1098:ILE:HD13	1:B:1136:PHE:CE1	2.55	0.41
1:C:983:GLY:HA2	1:D:1398:VAL:HG22	2.00	0.41
1:C:1105:ASP:OD2	1:C:1106:SER:N	2.53	0.41
1:C:1329:GLU:N	1:C:1329:GLU:OE2	2.52	0.41
1:D:1480:VAL:O	1:D:1491:VAL:HA	2.21	0.41
1:D:1550:LEU:HD22	1:D:1552:VAL:HG13	2.01	0.41
1:E:84:ASN:HD22	1:F:421:GLU:HG2	1.85	0.41
1:E:1098:ILE:HD13	1:E:1136:PHE:CE1	2.55	0.41
1:E:1537:VAL:N	1:E:1550:LEU:O	2.48	0.41
1:F:197:ALA:HB2	1:F:226:PRO:HG3	2.03	0.41
1:F:310:PHE:CE2	1:F:401:SER:HB2	2.56	0.41
1:A:1098:ILE:HD13	1:A:1136:PHE:CE1	2.55	0.41
1:B:50:PHE:HB3	1:B:285:LEU:HD12	2.02	0.41
1:C:1239:ASP:OD1	1:C:1243:TYR:OH	2.25	0.41
1:D:1329:GLU:OE2	1:D:1329:GLU:N	2.53	0.41
1:E:114:THR:HG21	1:E:332:LEU:HD23	2.02	0.41
1:E:313:ASP:OD2	1:E:331:THR:HG23	2.21	0.41
1:E:966:ASP:HB3	1:E:973:THR:OG1	2.20	0.41
1:E:1075:ILE:HD12	1:E:1139:MET:HE1	2.03	0.41
1:E:1321:GLU:OE1	1:E:1393:PHE:CE1	2.72	0.41
1:E:1500:ILE:HG22	1:E:1596:LEU:CD1	2.51	0.41
1:F:136:ALA:O	1:F:182:LEU:HD11	2.19	0.41
1:B:65:ILE:HG12	1:B:97:ASN:CG	2.41	0.41
1:B:1038:ASN:OD1	1:B:1040:ALA:N	2.45	0.41
1:D:114:THR:HG21	1:D:332:LEU:HD23	2.01	0.41
1:D:1105:ASP:OD2	1:D:1106:SER:N	2.53	0.41
1:D:1500:ILE:HG22	1:D:1596:LEU:CD1	2.50	0.41
1:A:42:PHE:CE1	1:A:65:ILE:HD12	2.56	0.41
1:A:966:ASP:HB3	1:A:973:THR:OG1	2.20	0.41
1:A:1553:THR:O	1:A:1562:PHE:HA	2.20	0.41
1:B:244:ASN:HA	1:B:249:VAL:HG12	2.03	0.41
1:C:69:ILE:HD12	1:C:98:TRP:NE1	2.36	0.41
1:C:749:GLU:HG2	1:C:751:GLY:O	2.21	0.41
1:C:1224:THR:CB	1:D:1530:GLU:O	2.66	0.41
1:D:853:ASN:HA	1:D:860:ASP:OD2	2.21	0.41
1:E:310:PHE:CE2	1:E:401:SER:HB2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:853:ASN:HA	1:E:860:ASP:OD2	2.20	0.41
1:F:65:ILE:HG12	1:F:97:ASN:CG	2.41	0.41
1:F:115:ALA:HA	1:F:330:LEU:HD13	2.02	0.41
1:F:1480:VAL:O	1:F:1491:VAL:HA	2.21	0.41
1:F:1553:THR:O	1:F:1562:PHE:HA	2.20	0.41
1:A:65:ILE:HG12	1:A:97:ASN:CG	2.41	0.41
1:A:230:LEU:HD13	1:A:230:LEU:HA	1.94	0.41
1:A:762:GLU:O	1:A:788:SER:HA	2.21	0.41
1:A:1529:PRO:O	1:A:1558:ALA:HB2	2.21	0.41
1:B:310:PHE:CE2	1:B:401:SER:HB2	2.56	0.41
1:B:313:ASP:OD2	1:B:331:THR:HG23	2.21	0.41
1:B:1365:PHE:N	1:B:1390:ASP:OD2	2.53	0.41
1:C:310:PHE:CE2	1:C:401:SER:HB2	2.56	0.41
1:C:1537:VAL:N	1:C:1550:LEU:O	2.47	0.41
1:D:508:THR:OG1	1:D:741:GLN:HG2	2.21	0.41
1:E:1365:PHE:N	1:E:1390:ASP:OD2	2.53	0.41
1:F:762:GLU:O	1:F:788:SER:HA	2.21	0.41
1:A:55:SER:HB2	1:A:257:ASP:O	2.21	0.41
1:B:69:ILE:HD12	1:B:98:TRP:NE1	2.35	0.41
1:B:469:THR:OG1	1:B:472:GLN:OE1	2.39	0.41
1:B:1054:ILE:HG23	1:B:1062:GLU:OE1	2.20	0.41
1:B:1553:THR:O	1:B:1562:PHE:HA	2.20	0.41
1:C:197:ALA:HB2	1:C:226:PRO:HG3	2.03	0.41
1:C:1553:THR:O	1:C:1562:PHE:HA	2.20	0.41
1:D:69:ILE:HD12	1:D:98:TRP:NE1	2.36	0.41
1:D:1069:LEU:O	1:D:1154:ASN:ND2	2.47	0.41
1:E:50:PHE:HB3	1:E:285:LEU:HD12	2.02	0.41
1:E:130:SER:OG	1:E:144:THR:O	2.28	0.41
1:E:332:LEU:O	1:E:336:LEU:HG	2.20	0.41
1:F:469:THR:OG1	1:F:472:GLN:OE1	2.39	0.41
1:F:1529:PRO:O	1:F:1558:ALA:HB2	2.21	0.41
1:A:50:PHE:HB3	1:A:285:LEU:HD12	2.02	0.41
1:A:244:ASN:HA	1:A:249:VAL:HG12	2.03	0.41
1:A:360:VAL:HG12	1:A:361:VAL:HG23	2.03	0.41
1:A:508:THR:OG1	1:A:741:GLN:HG2	2.21	0.41
1:A:1398:VAL:HG22	1:F:983:GLY:HA2	2.02	0.41
1:A:1576:GLY:CA	1:F:1345:GLY:O	2.68	0.41
1:B:54:MET:HA	1:B:285:LEU:HD21	2.03	0.41
1:C:115:ALA:HA	1:C:330:LEU:HD13	2.02	0.41
1:C:313:ASP:OD2	1:C:331:THR:HG23	2.21	0.41
1:C:580:ILE:HG12	1:C:717:VAL:HG12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1098:ILE:HD13	1:C:1136:PHE:CE1	2.55	0.41
1:C:1480:VAL:O	1:C:1491:VAL:HA	2.21	0.41
1:D:55:SER:HB2	1:D:257:ASP:O	2.21	0.41
1:D:332:LEU:O	1:D:336:LEU:HG	2.20	0.41
1:D:469:THR:OG1	1:D:472:GLN:OE1	2.39	0.41
1:F:1098:ILE:HD13	1:F:1136:PHE:CE1	2.55	0.41
1:F:1341:TRP:CE3	1:F:1353:ASP:HB3	2.56	0.41
1:A:313:ASP:OD2	1:A:331:THR:HG23	2.21	0.41
1:A:469:THR:OG1	1:A:472:GLN:OE1	2.39	0.41
1:B:1529:PRO:O	1:B:1558:ALA:HB2	2.21	0.41
1:C:853:ASN:HA	1:C:860:ASP:OD2	2.21	0.41
1:C:1054:ILE:HG23	1:C:1062:GLU:OE1	2.20	0.41
1:E:55:SER:HB2	1:E:257:ASP:O	2.21	0.41
1:F:114:THR:HG21	1:F:332:LEU:HD23	2.02	0.41
1:F:313:ASP:OD2	1:F:331:THR:HG23	2.21	0.41
1:A:1087:GLU:CG	1:F:804:ASN:HD21	2.34	0.40
1:B:508:THR:OG1	1:B:741:GLN:HG2	2.21	0.40
1:C:153:ILE:HD13	1:C:164:GLN:HB2	2.02	0.40
1:C:469:THR:OG1	1:C:472:GLN:OE1	2.39	0.40
1:D:605:LEU:HD23	1:D:605:LEU:HA	1.88	0.40
1:E:383:ASN:ND2	1:E:432:ASN:OD1	2.55	0.40
1:E:1038:ASN:OD1	1:E:1040:ALA:N	2.45	0.40
1:E:1529:PRO:O	1:E:1558:ALA:HB2	2.21	0.40
1:F:69:ILE:HD12	1:F:98:TRP:NE1	2.36	0.40
1:F:749:GLU:HG2	1:F:751:GLY:O	2.21	0.40
1:A:383:ASN:ND2	1:A:432:ASN:OD1	2.55	0.40
1:A:1074:ARG:HA	1:A:1149:PHE:O	2.21	0.40
1:A:1341:TRP:CE3	1:A:1353:ASP:HB3	2.56	0.40
1:B:1341:TRP:CE3	1:B:1353:ASP:HB3	2.56	0.40
1:D:42:PHE:CE1	1:D:65:ILE:HD12	2.56	0.40
1:D:61:GLU:HG3	1:D:101:TYR:CE1	2.57	0.40
1:D:65:ILE:HG12	1:D:97:ASN:CG	2.41	0.40
1:D:313:ASP:OD2	1:D:331:THR:HG23	2.21	0.40
1:D:1409:ILE:HD13	1:D:1423:LEU:HD13	2.04	0.40
1:E:1074:ARG:HA	1:E:1149:PHE:O	2.22	0.40
1:E:1341:TRP:CE3	1:E:1353:ASP:HB3	2.56	0.40
1:F:332:LEU:O	1:F:336:LEU:HG	2.20	0.40
1:A:69:ILE:HD12	1:A:98:TRP:NE1	2.36	0.40
1:A:853:ASN:HA	1:A:860:ASP:OD2	2.21	0.40
1:A:1480:VAL:O	1:A:1491:VAL:HA	2.21	0.40
1:A:1530:GLU:OE2	1:F:1222:THR:O	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:115:ALA:HA	1:B:330:LEU:HD13	2.03	0.40
1:B:1205:ILE:CD1	1:B:1228:THR:HG22	2.52	0.40
1:C:114:THR:HG21	1:C:332:LEU:HD23	2.02	0.40
1:C:1500:ILE:HG22	1:C:1596:LEU:CD1	2.50	0.40
1:C:1529:PRO:O	1:C:1558:ALA:HB2	2.21	0.40
1:D:50:PHE:HB3	1:D:285:LEU:HD12	2.02	0.40
1:D:1341:TRP:CE3	1:D:1353:ASP:HB3	2.56	0.40
1:E:54:MET:HA	1:E:285:LEU:HD21	2.03	0.40
1:E:508:THR:OG1	1:E:741:GLN:HG2	2.21	0.40
1:E:762:GLU:O	1:E:788:SER:HA	2.21	0.40
1:F:130:SER:OG	1:F:144:THR:O	2.28	0.40
1:A:61:GLU:HG3	1:A:101:TYR:CE1	2.57	0.40
1:A:1054:ILE:HG23	1:A:1062:GLU:OE1	2.20	0.40
1:A:1530:GLU:O	1:F:1224:THR:CB	2.66	0.40
1:A:1531:ALA:HB1	1:F:1207:GLN:OE1	2.18	0.40
1:B:624:PHE:HB2	1:B:723:PHE:HB2	2.02	0.40
1:B:858:LEU:HD23	1:B:858:LEU:HA	1.93	0.40
1:C:508:THR:OG1	1:C:741:GLN:HG2	2.22	0.40
1:D:1529:PRO:O	1:D:1558:ALA:HB2	2.21	0.40
1:E:65:ILE:HG12	1:E:97:ASN:CG	2.41	0.40
1:E:624:PHE:HB2	1:E:723:PHE:HB2	2.02	0.40
1:E:886:PHE:O	1:F:1301:THR:CG2	2.63	0.40
1:E:1409:ILE:HD13	1:E:1423:LEU:HD13	2.04	0.40
1:E:1480:VAL:O	1:E:1491:VAL:HA	2.21	0.40
1:F:333:ARG:HG3	1:F:334:THR:HG23	2.03	0.40
1:F:1019:ASP:OD2	1:F:1072:HIS:HD2	2.05	0.40
1:B:61:GLU:HG3	1:B:101:TYR:CE1	2.57	0.40
1:B:853:ASN:HA	1:B:860:ASP:OD2	2.21	0.40
1:B:1480:VAL:O	1:B:1491:VAL:HA	2.21	0.40
1:C:1217:SER:HB2	1:D:1424:VAL:CB	2.48	0.40
1:E:244:ASN:HA	1:E:249:VAL:HG12	2.03	0.40
1:F:853:ASN:HA	1:F:860:ASP:OD2	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM

entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1578/1734 (91%)	1517 (96%)	61 (4%)	0	100	100
1	B	1578/1734 (91%)	1518 (96%)	60 (4%)	0	100	100
1	C	1578/1734 (91%)	1520 (96%)	58 (4%)	0	100	100
1	D	1578/1734 (91%)	1518 (96%)	60 (4%)	0	100	100
1	E	1578/1734 (91%)	1518 (96%)	60 (4%)	0	100	100
1	F	1578/1734 (91%)	1520 (96%)	58 (4%)	0	100	100
All	All	9468/10404 (91%)	9111 (96%)	357 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
1	B	1312/1438 (91%)	1301 (99%)	11 (1%)	81	93
1	C	1312/1438 (91%)	1302 (99%)	10 (1%)	81	93
1	D	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
1	E	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
1	F	1312/1438 (91%)	1300 (99%)	12 (1%)	78	92
All	All	7872/8628 (91%)	7803 (99%)	69 (1%)	79	92

All (69) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	269	ARG
1	A	419	TYR
1	A	422	SER

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Mol	Chain	Res	Type
1	A	495	LEU
1	A	499	ASP
1	A	565	ASN
1	A	578	ARG
1	A	1047	PHE
1	A	1330	ARG
1	A	1378	TRP
1	A	1414	ARG
1	A	1575	SER
1	B	269	ARG
1	B	419	TYR
1	B	422	SER
1	B	495	LEU
1	B	501	THR
1	B	565	ASN
1	B	578	ARG
1	B	1047	PHE
1	B	1330	ARG
1	B	1378	TRP
1	B	1414	ARG
1	C	269	ARG
1	C	274	ARG
1	C	419	TYR
1	C	495	LEU
1	C	565	ASN
1	C	578	ARG
1	C	1047	PHE
1	C	1330	ARG
1	C	1378	TRP
1	C	1414	ARG
1	D	269	ARG
1	D	422	SER
1	D	495	LEU
1	D	499	ASP
1	D	501	THR
1	D	565	ASN
1	D	578	ARG
1	D	1047	PHE
1	D	1330	ARG
1	D	1378	TRP
1	D	1414	ARG
1	D	1575	SER

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Mol	Chain	Res	Type
1	E	269	ARG
1	E	419	TYR
1	E	422	SER
1	E	495	LEU
1	E	501	THR
1	E	565	ASN
1	E	578	ARG
1	E	999	GLU
1	E	1047	PHE
1	E	1330	ARG
1	E	1378	TRP
1	E	1414	ARG
1	F	38	ASN
1	F	58	GLN
1	F	269	ARG
1	F	274	ARG
1	F	419	TYR
1	F	495	LEU
1	F	565	ASN
1	F	578	ARG
1	F	1047	PHE
1	F	1330	ARG
1	F	1378	TRP
1	F	1414	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (75) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	58	GLN
1	A	92	GLN
1	A	97	ASN
1	A	211	GLN
1	A	623	ASN
1	A	682	ASN
1	A	733	GLN
1	A	740	ASN
1	A	804	ASN
1	A	956	GLN
1	A	1154	ASN
1	B	58	GLN
1	B	84	ASN
1	B	92	GLN

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Mol	Chain	Res	Type
1	B	97	ASN
1	B	211	GLN
1	B	484	ASN
1	B	623	ASN
1	B	733	GLN
1	B	740	ASN
1	B	804	ASN
1	B	853	ASN
1	B	956	GLN
1	B	1083	ASN
1	B	1154	ASN
1	C	58	GLN
1	C	92	GLN
1	C	97	ASN
1	C	211	GLN
1	C	484	ASN
1	C	623	ASN
1	C	733	GLN
1	C	740	ASN
1	C	804	ASN
1	C	956	GLN
1	C	1083	ASN
1	C	1154	ASN
1	C	1577	HIS
1	D	58	GLN
1	D	92	GLN
1	D	97	ASN
1	D	211	GLN
1	D	623	ASN
1	D	733	GLN
1	D	740	ASN
1	D	804	ASN
1	D	956	GLN
1	D	1083	ASN
1	D	1154	ASN
1	E	58	GLN
1	E	84	ASN
1	E	92	GLN
1	E	97	ASN
1	E	211	GLN
1	E	484	ASN
1	E	623	ASN

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Mol	Chain	Res	Type
1	E	733	GLN
1	E	740	ASN
1	E	804	ASN
1	E	853	ASN
1	E	956	GLN
1	E	1083	ASN
1	E	1154	ASN
1	F	58	GLN
1	F	92	GLN
1	F	97	ASN
1	F	211	GLN
1	F	623	ASN
1	F	733	GLN
1	F	740	ASN
1	F	804	ASN
1	F	956	GLN
1	F	1083	ASN
1	F	1154	ASN
1	F	1577	HIS

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

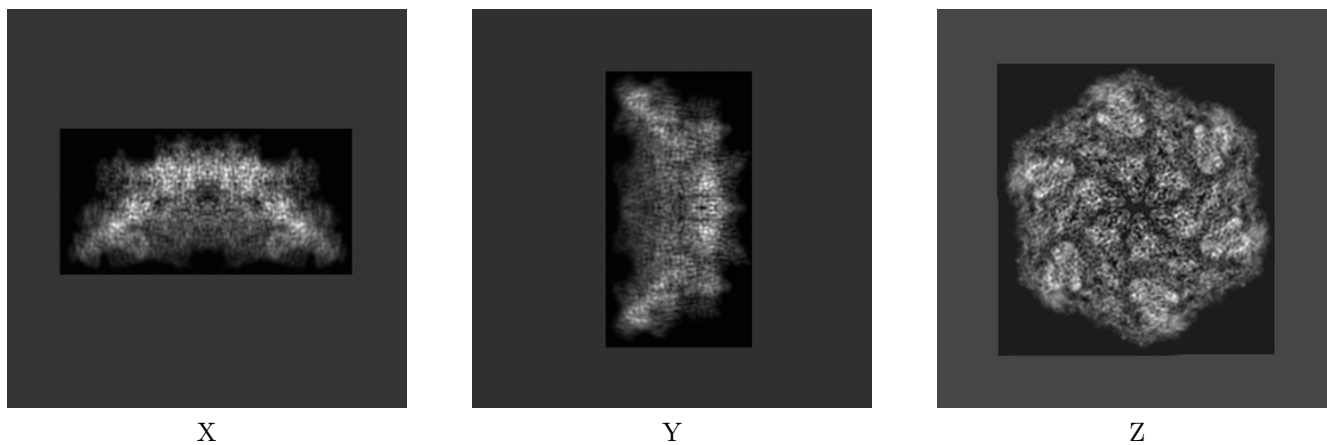
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16484. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

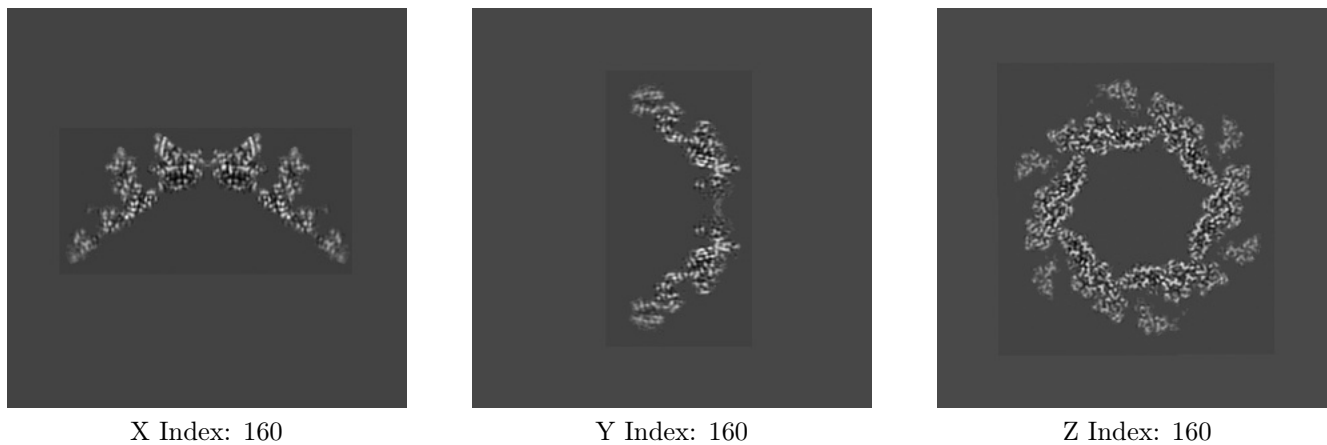
6.1.1 Primary map



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

6.2 Central slices [i](#)

6.2.1 Primary map



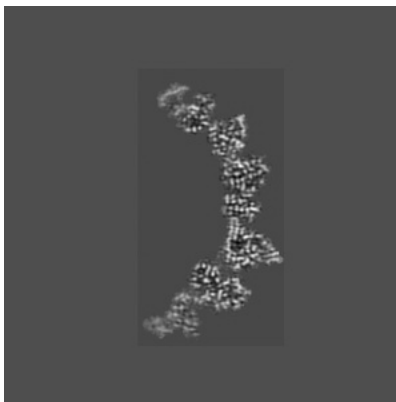
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 156



Y Index: 175

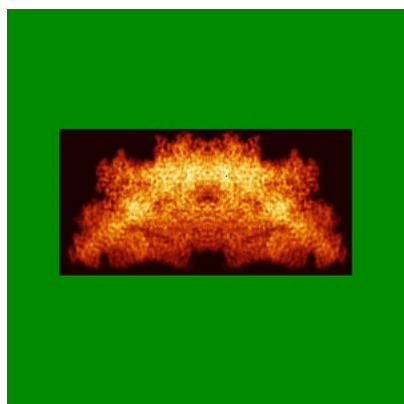


Z Index: 186

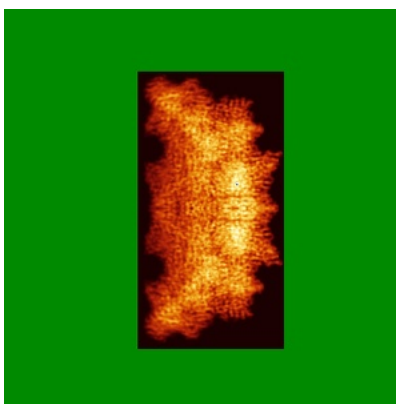
The images above show the largest variance slices of the map in three orthogonal directions.

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

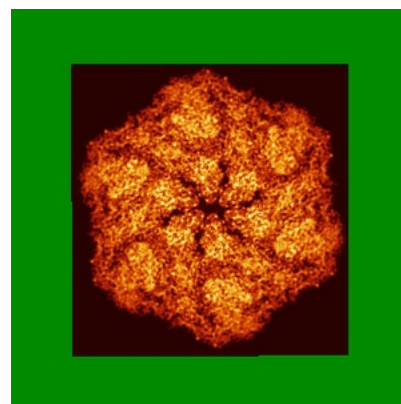
6.4.1 Primary map



X



Y

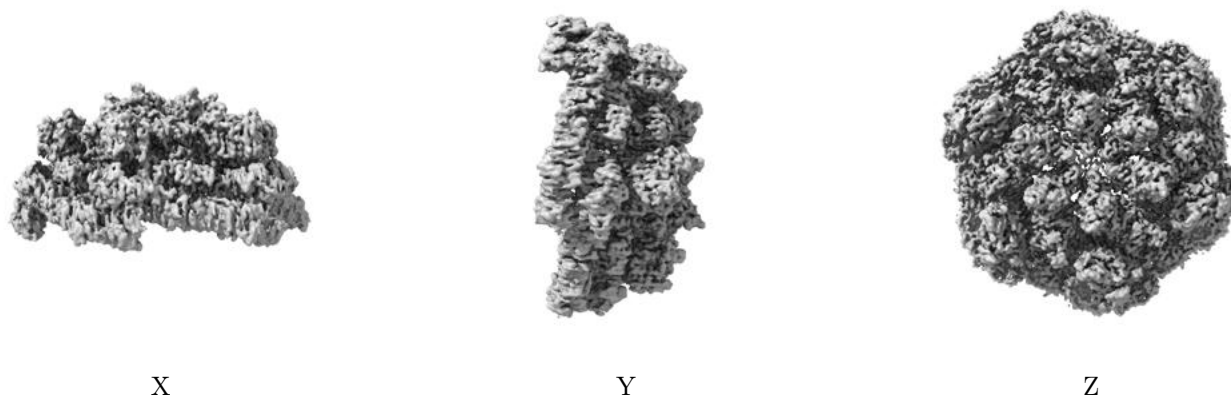


Z

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 1.05514. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

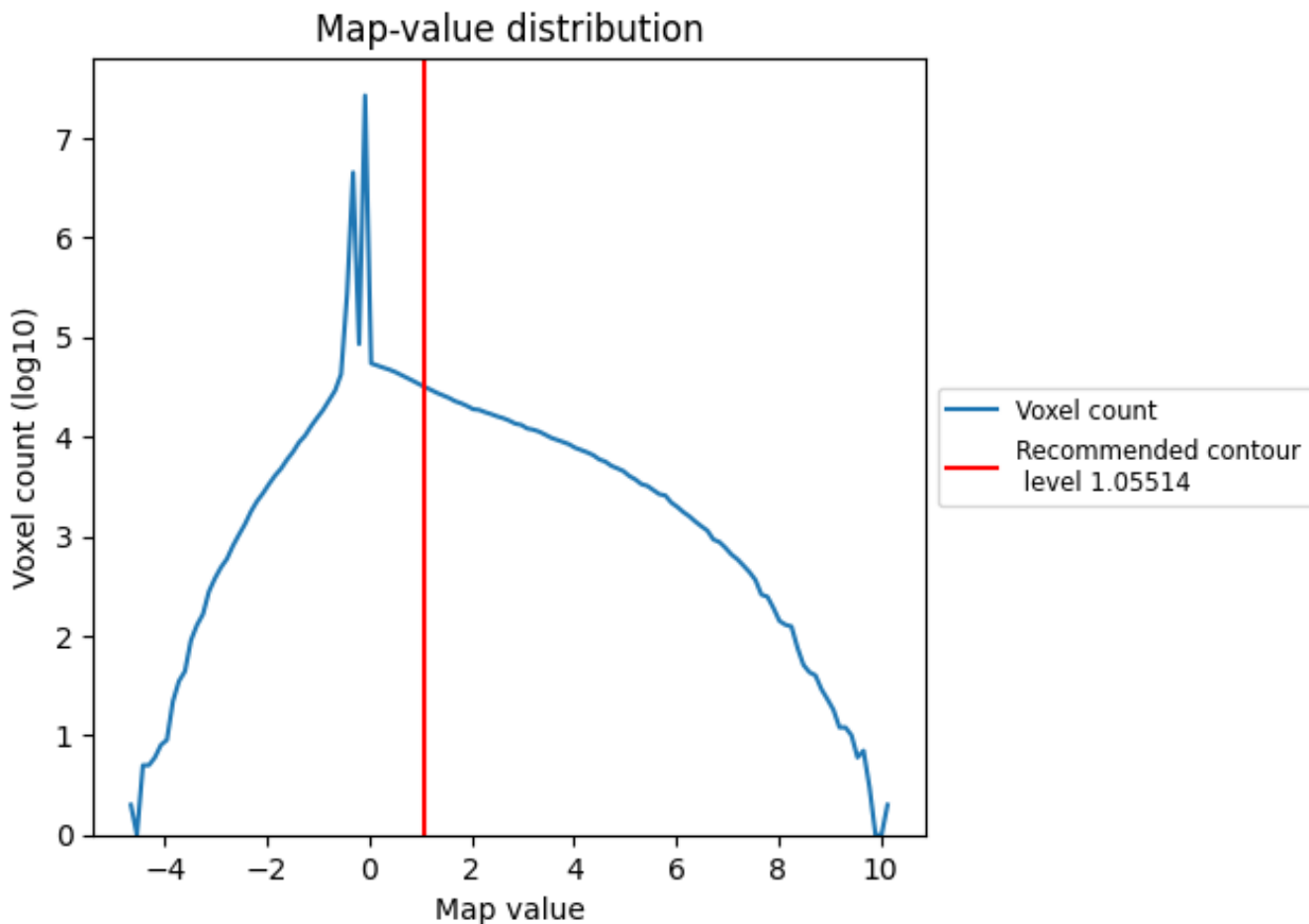
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

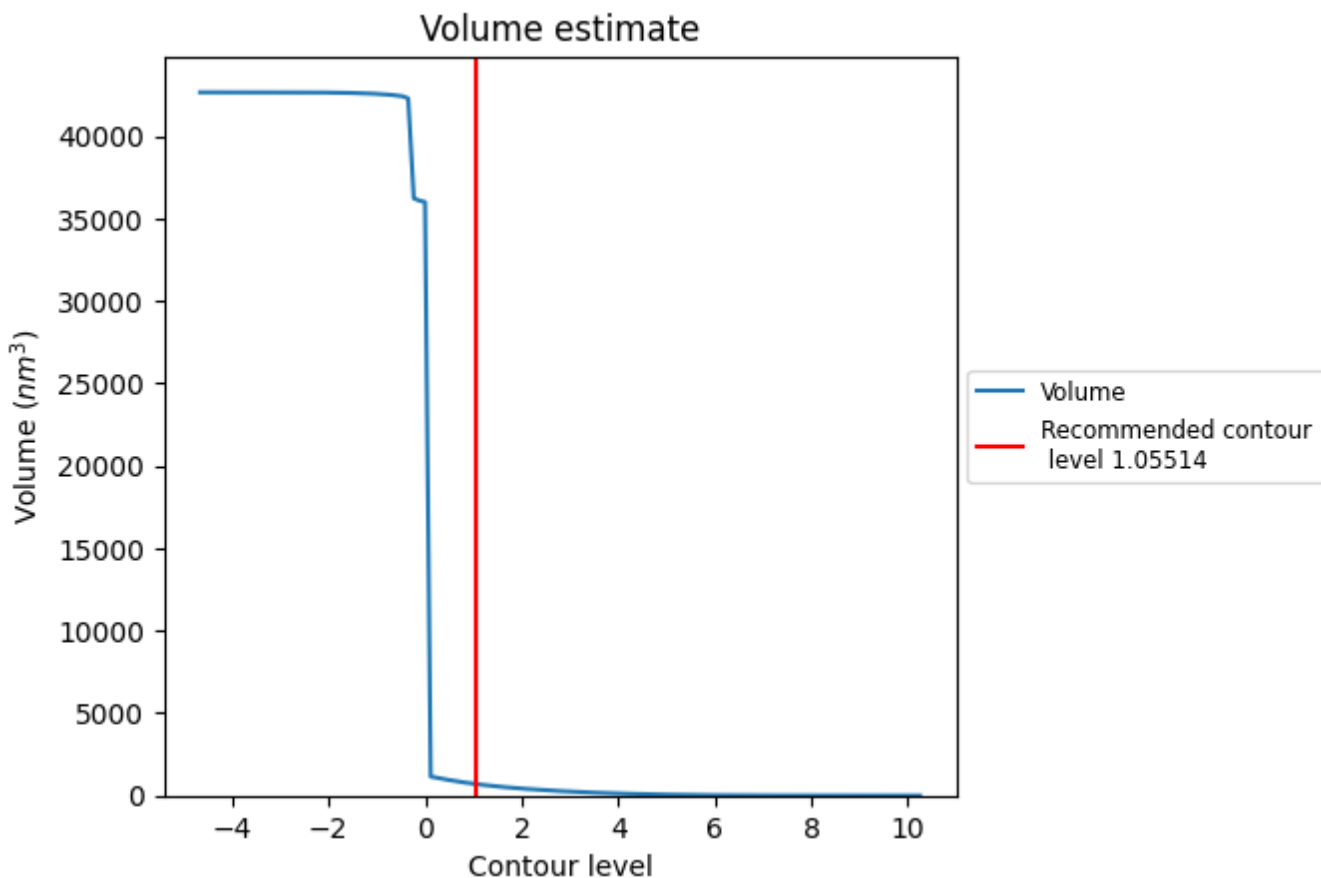
This section contains the results of statistical analysis of the map.

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.

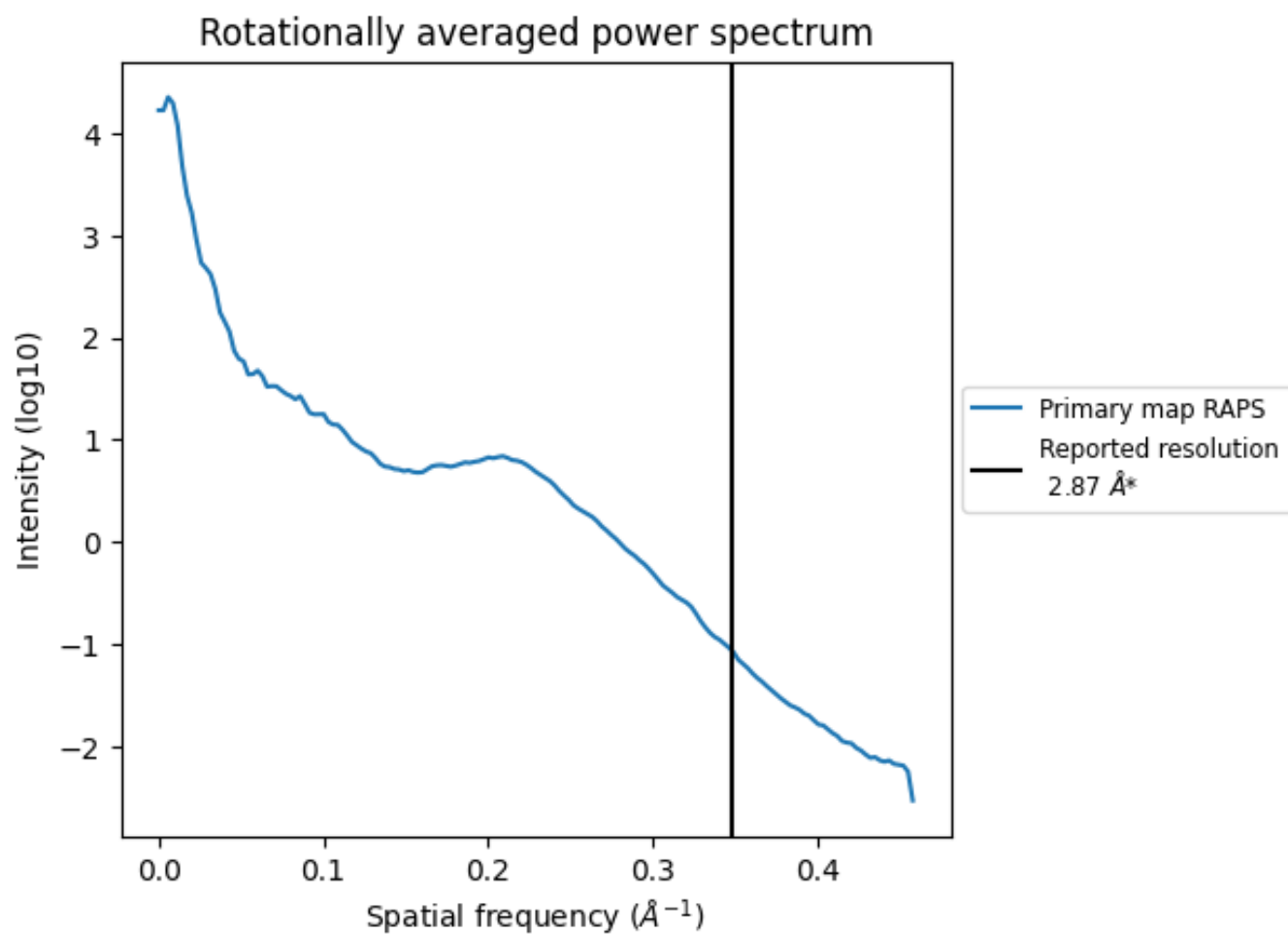
7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 697 nm³; this corresponds to an approximate mass of 630 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.348 Å⁻¹

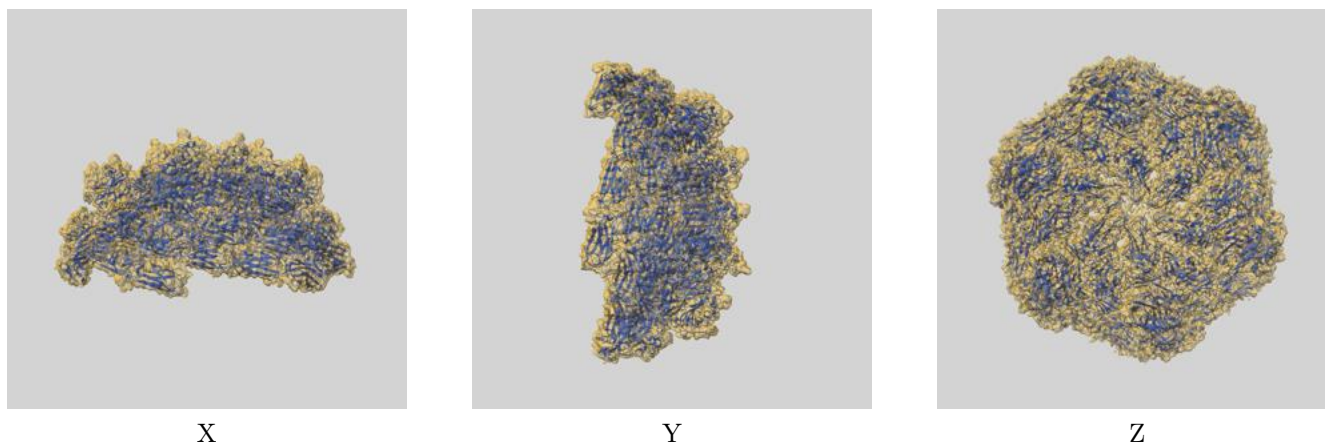
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

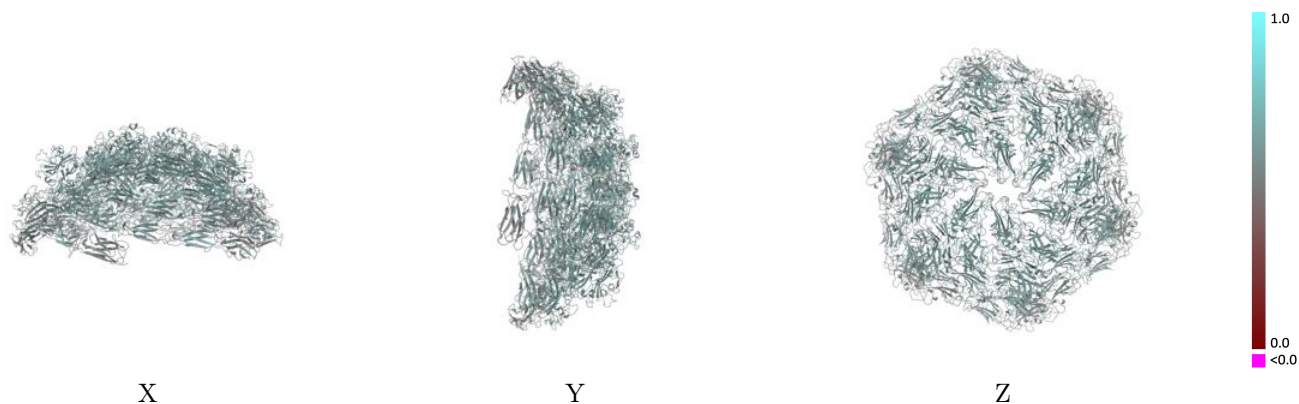
This section contains information regarding the fit between EMDB map EMD-16484 and PDB model 8C8M. Per-residue inclusion information can be found in section 3 on page 4.

9.1 Map-model overlay [i](#)



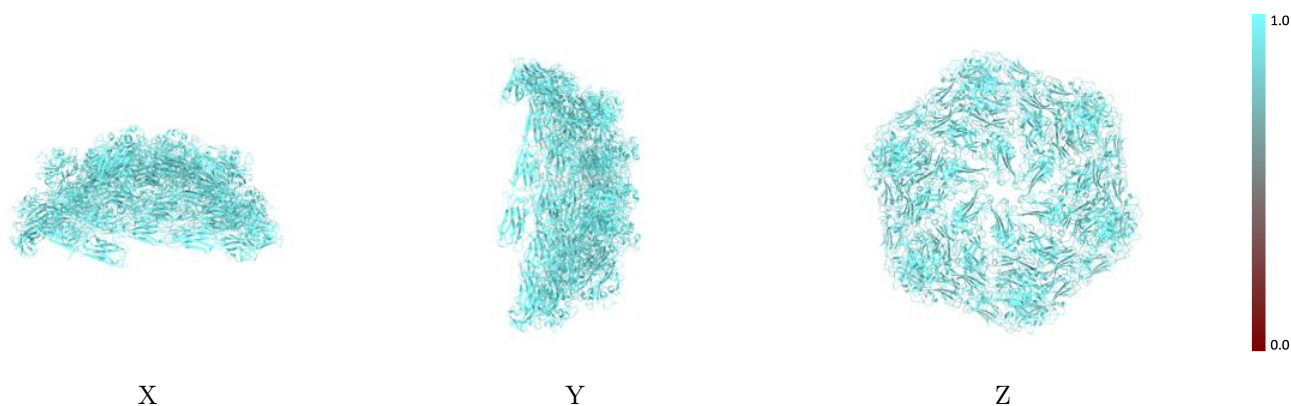
The images above show the 3D surface view of the map at the recommended contour level 1.05514 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



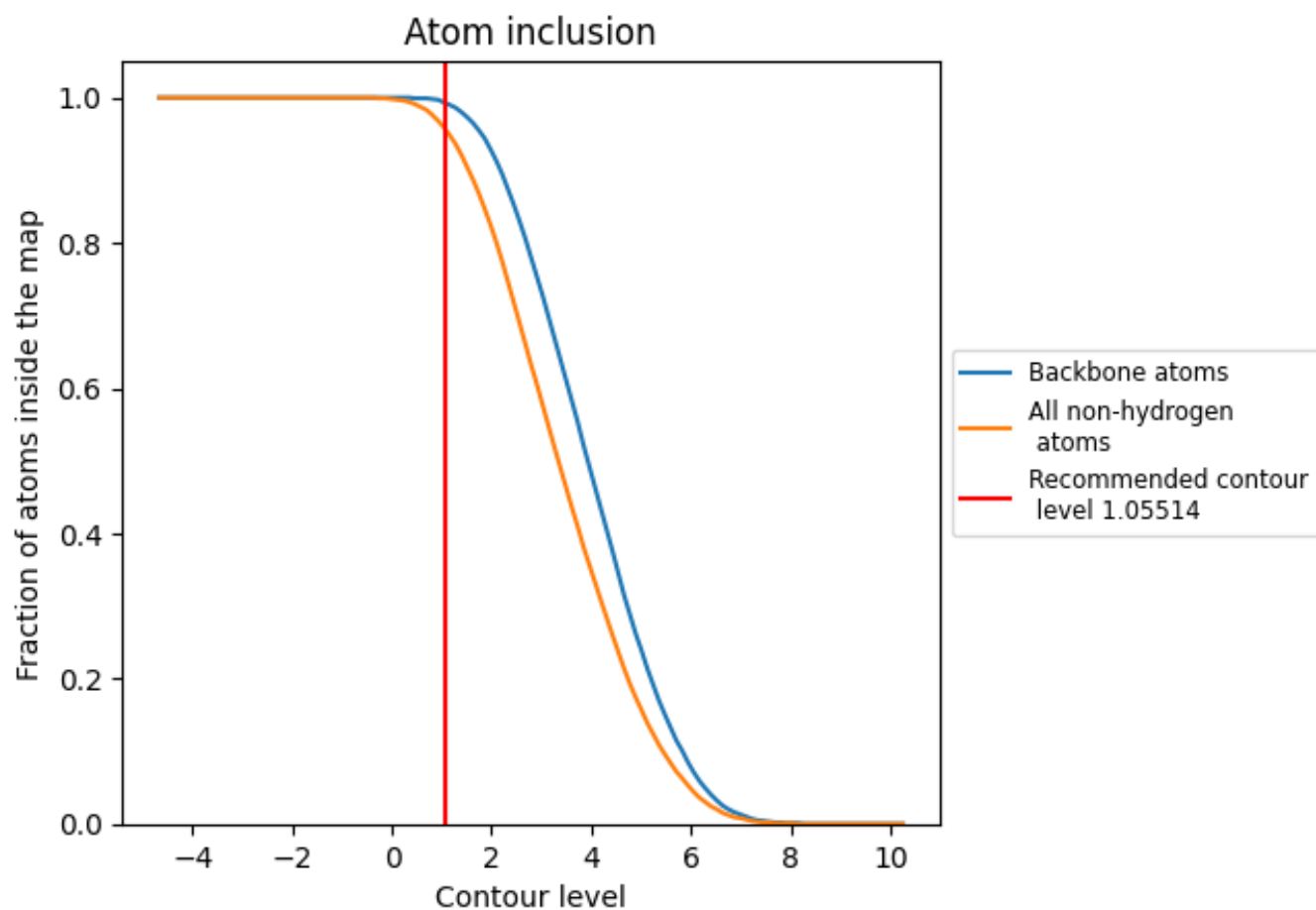
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (1.05514).















9.4 Atom inclusion [i](#)



At the recommended contour level, 99% of all backbone atoms, 96% 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 (1.05514) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9580	 0.5560
A	 0.9620	 0.5630
B	 0.9580	 0.5530
C	 0.9530	 0.5520
D	 0.9630	 0.5620
E	 0.9580	 0.5530
F	 0.9540	 0.5520

