



Full wwPDB EM Validation Report ⓘ

Sep 28, 2026 – 12:53 PM EDT

PDB ID : 11HT / pdb_000011ht
EMDB ID : EMD-75702
Title : Cryo-EM structure of the human ZNFX1 tetramer
Authors : Wang, F.; He, Q.; Li, H.
Deposited on : 2026-02-25
Resolution : 3.71 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

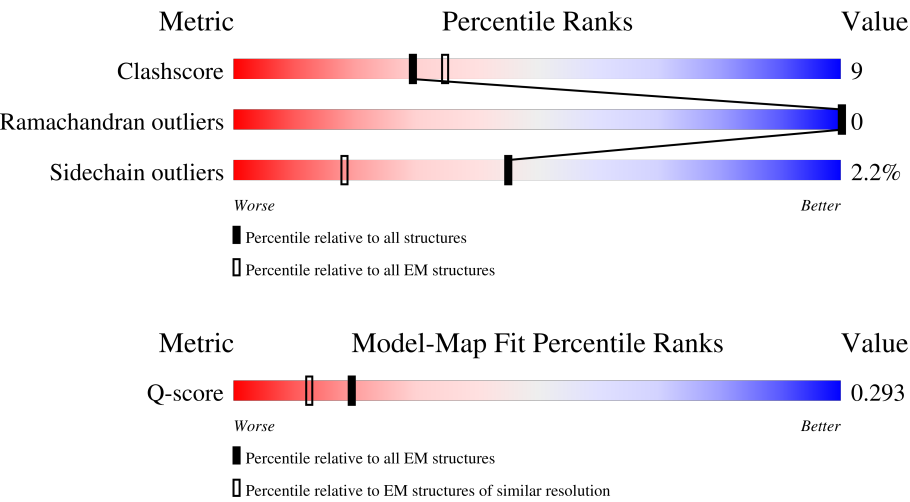
EMDB validation analysis : 0.0.1.dev133
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.2
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data 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) : 2.51

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 3.71 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	10534 (3.21 - 4.21)

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	1918	9% 53% 13% 33%
1	B	1918	19% 51% 16% 33%
1	C	1918	9% 52% 14% 33%
1	D	1918	19% 50% 16% 33%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	E	1918	7% 6% • 91%
1	F	1918	7% 7% • 91%

2 Entry composition [i](#)

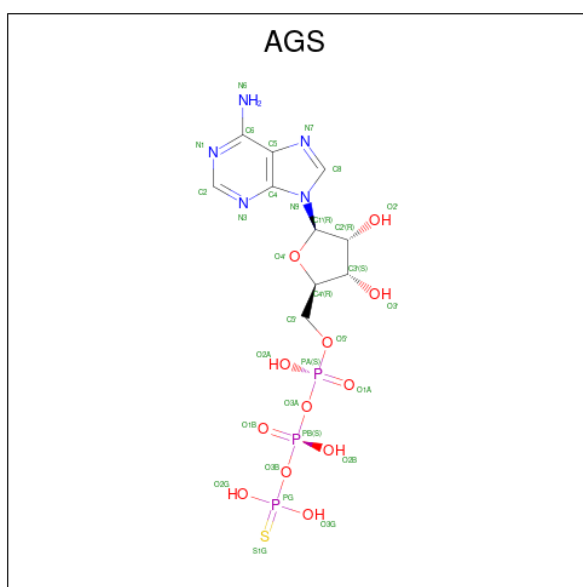
There are 2 unique types of molecules in this entry. The entry contains 44040 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 NFX1-type zinc finger-containing protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1282	Total	C	N	O	S	0	0
			10307	6503	1814	1909	81		
1	B	1282	Total	C	N	O	S	0	0
			10307	6503	1814	1909	81		
1	C	1282	Total	C	N	O	S	0	0
			10307	6503	1814	1909	81		
1	D	1282	Total	C	N	O	S	0	0
			10307	6503	1814	1909	81		
1	E	172	Total	C	N	O	S	0	0
			1344	855	226	256	7		
1	F	172	Total	C	N	O	S	0	0
			1344	855	226	256	7		

- Molecule 2 is PHOSPHOTHIOPHOSPHORIC ACID-ADENYLATE ESTER (CCD ID: AGS) (formula: $C_{10}H_{16}N_5O_{12}P_3S$) (labeled as "Ligand of Interest" by depositor).

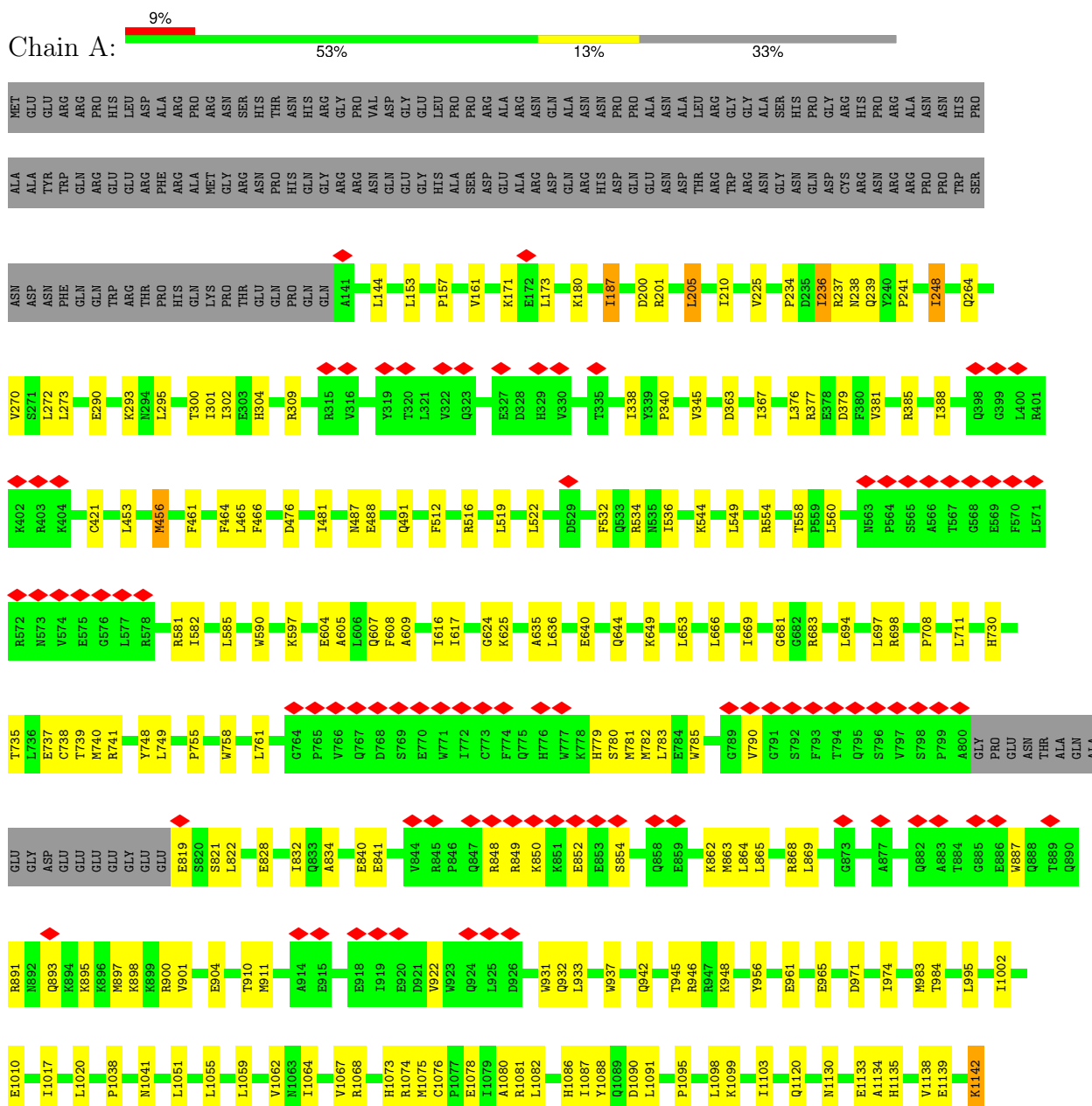


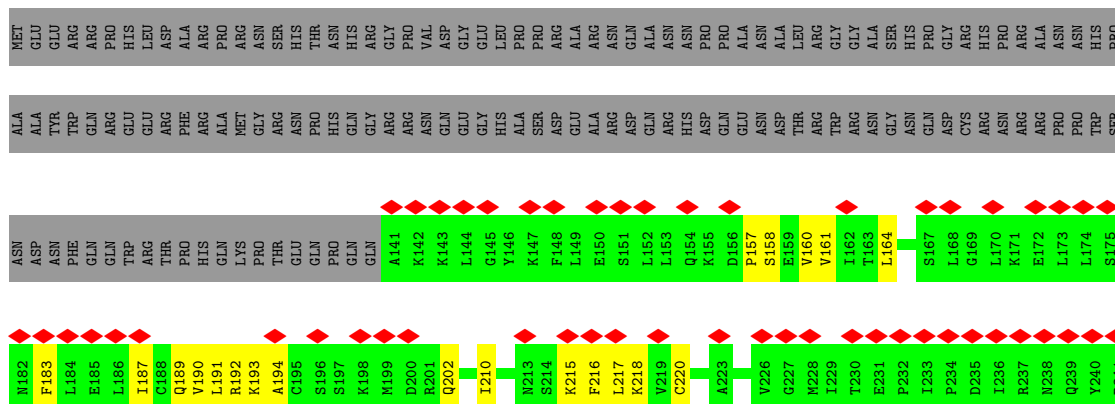
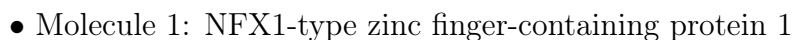
Mol	Chain	Residues	Atoms						AltConf
2	A	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	B	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	C	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	
2	D	1	Total	C	N	O	P	S	0
			31	10	5	12	3	1	

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: NFX1-type zinc finger-containing protein 1





SER	R1381	M1234	H1182	E1007	I919	E852	M782	R701	G624	L522	R403	Y319	L261
CYS	C1386	Q1235	E1133	E1007	E920	E853	W785	F703	Y627	E528	K404	T320	Q252
SER	H1387	L1237	H1135	L1012	D921	S854	W789	R704	Y627	E528	F405	L321	D253
CYS	H1388	F1136	F1136	E1013	V922	G855	G789	R705	L630	I536	D406	V322	V255
PHE	E1392	L1242	V1137	L1020	Q923	G856	G791	R706	K631	V537	R409	Q323	S256
GLU		M1243	V1138	L1020	Q924	D857	G792	L707	I632	P324	I410	P324	V257
GLY		S1244	Y1143	C1024	L925	G858	G793	R708	V633	V543	Y411	A326	Q264
ARG	Q1396	K1245	Y1156	Q1025	D926	E859	G794	R709	Q634	A543	F412	A325	E265
PHE	L1397	I1245	P1151	H1026	S928	L860	T793	R710	A635	L550	D413	E327	T266
GLU	C1398	I1247	L1027	L1027	S929	A861	Q795	R711	L636	M551	D413	D328	S267
ARG	S1399	I1256	T1154			X862	S796	R712	L637	T418	T418	H329	M268
CYS	E1400		T1155	Q1035	Y934	R863	S797	R713	T638	R554	I426	V330	L269
GLN	M1401	L1262	L1156	A1040	R935	L864	S798	R714	N639	D556	I426	V330	V270
PRO	V1402		L1157	M1041	L936	L865	S799	R715	Q644	W643	V427	M336	S271
CYS	T1403		T1159	W937	L938	A866	P799	R716	Q644	W643	D433	P337	L272
LYS	T1404			F1049	Q939	R867	A800	R717	Q644	W643	D433	I338	L273
ARG	K1405		G1162	F1049	Q939	R868	GLY	R718	Q644	W643	D433	Y339	L274
LEU	L1406		Q1163	F1049	Q939	R869	PRO	R719	Q644	W643	D433	P340	P274
LEU	H1271		L1051	L1051	L940	L869	GLU	R720	Q644	W643	D433	P340	P274
ILE	K1407		E1052	E1052	Y941	D870	THR	R721	Q644	W643	D433	P340	P274
CYS	C1408		V1053	V1053	Q942	D871	ALA	R722	Q644	W643	D433	P340	P274
GLY	G1409		S1054	S1054	A943	C872	ALA	R723	Q644	W643	D433	P340	P274
HIS	H1410		L1055	L1055	D944	C873	GLN	R724	Q644	W643	D433	P340	P274
LYS	H1411		F1056	F1056	T945	C873	ALA	R725	Q644	W643	D433	P340	P274
CYS	S1411		E1057	E1057	R946	C873	GLU	R726	Q644	W643	D433	P340	P274
GLN	G1412		R1058	R1058	R947	A878	GLY	R727	Q644	W643	D433	P340	P274
GLY	D1279		A1177	A1177	K948		ASP	R728	Q644	W643	D433	P340	P274
PRO	F1280		V1060	V1060	I949		GLU	R729	Q644	W643	D433	P340	P274
CYS	Y1414		K1061	K1061	Y952		GLU	R730	Q644	W643	D433	P340	P274
ILE	K1415		R1068	R1068	Y952		GLU	R731	Q644	W643	D433	P340	P274
GLY	C1416		L1082	L1082	A860		GLY	R732	Q644	W643	D433	P340	P274
GLU	G1417		L1082	L1082	E961		GLY	R733	Q644	W643	D433	P340	P274
CYS	H1418		Q1188	Q1188	E962		GLU	R734	Q644	W643	D433	P340	P274
PRO	E1293		G1189	G1189	M963		GLU	R735	Q644	W643	D433	P340	P274
PRO	L1296		E1190	E1190	A964		GLU	R736	Q644	W643	D433	P340	P274
CYS	E1420		E1190	E1190	E965		GLU	R737	Q644	W643	D433	P340	P274
GLN	D1310		D1193	T1088	N892		S820	R738	Q644	W643	D433	P340	P274
ARG	G1421		I1194	Q1089	S821		S821	R739	Q644	W643	D433	P340	P274
THR	L1422		I1195	D1090	R822		R822	R740	Q644	W643	D433	P340	P274
CYS	L1423		L1196	L1091	R823		R823	R741	Q644	W643	D433	P340	P274
GLN	K1314		L1197	L1423	R895		R895	R742	Q644	W643	D433	P340	P274
ASN	G1424		S1198	P1095	R896		R896	R743	Q644	W643	D433	P340	P274
ARG	E1315		L1199	P1095	R897		R897	R744	Q644	W643	D433	P340	P274
CYS	G1426		V1200	L1098	K896		K896	R745	Q644	W643	D433	P340	P274
VAL	Q1328			K1099	R897		R897	R746	Q644	W643	D433	P340	P274
SER	L1428		N1203	L1098	R898		R898	R747	Q644	W643	D433	P340	P274
SER	L1335		Q1204	K1099	R899		R899	R748	Q644	W643	D433	P340	P274
GLN	L1429		E1205		R899		R899	R749	Q644	W643	D433	P340	P274
CYS	F1338		K1225	I1103	K896		K896	R750	Q644	W643	D433	P340	P274
LYS	Q1339		K1226	E1114	R899		R899	R751	Q644	W643	D433	P340	P274
LYS	C1431		G1227	E1114	R899		R899	R752	Q644	W643	D433	P340	P274
LYS	T1432		G1227	I1122	R899		R899	R753	Q644	W643	D433	P340	P274
CYS	T1433		G1227	I1123	R899		R899	R754	Q644	W643	D433	P340	P274
GLY	K1434		C1230	E1124	R899		R899	R755	Q644	W643	D433	P340	P274
GLU	P1353		I1231	E1124	R899		R899	R756	Q644	W643	D433	P340	P274
LEU	G1436		G1232	E1124	R899		R899	R757	Q644	W643	D433	P340	P274
CYS	T1437		N1233	S1127	R899		R899	R758	Q644	W643	D433	P340	P274
CYS	I1438		N1233	Q1131	R899		R899	R759	Q644	W643	D433	P340	P274
CYS	F1370		L1002		R899		R899	R760	Q644	W643	D433	P340	P274
CYS	L1380		V1003		R899		R899	R761	Q644	W643	D433	P340	P274
CYS	D1440				R899		R899	R762	Q644	W643	D433	P340	P274
CYS					R899		R899	R763	Q644	W643	D433	P340	P274
GLY					R899		R899	R764	Q644	W643	D433	P340	P274
HIS					R899		R899	R765	Q644	W643	D433	P340	P274
PRO					R899		R899	R766	Q644	W643	D433	P340	P274
PRO					R899		R899	R767	Q644	W643	D433	P340	P274
PRO					R899		R899	R768	Q644	W643	D433	P340	P274
GLY					R899		R899	R769	Q644	W643	D433	P340	P274
GLY					R899		R899	R770	Q644	W643	D433	P340	P274
GLY					R899		R899	R771	Q644	W643	D433	P340	P274
GLY					R899		R899	R772	Q644	W643	D433	P340	P274
GLY					R899		R899	R773	Q644	W643	D433	P340	P274
GLY					R899		R899	R774	Q644	W643	D433	P340	P274
GLY					R899		R899	R775	Q644	W643	D433	P340	P274
GLY					R899		R899	R776	Q644	W643	D433	P340	P274
GLY					R899		R899	R777	Q644	W643	D433	P340	P274
GLY					R899		R899	R778	Q644	W643	D433	P340	P274
GLY					R899		R899	R779	Q644	W643	D433	P340	P274
GLY					R899		R899	R780	Q644	W643	D433	P340	P274
GLY					R899		R899	R781	Q644	W643	D433	P340	P274
GLY					R899		R899	R782	Q644	W643	D433	P340	P274
GLY					R899		R899	R783	Q644	W643	D433	P340	P274
GLY					R899		R899	R784	Q644	W643	D433	P340	P274
GLY					R899		R899	R785	Q644	W643	D433	P340	P274
GLY					R899		R899	R786	Q644	W643	D433	P340	P274
GLY					R899		R899	R787	Q644	W643	D433	P340	P274
GLY					R899		R899	R788	Q644	W643	D433	P340	P274
GLY					R899		R899	R789	Q644	W643	D433	P340	P274
GLY					R899		R899	R790	Q644	W643	D433	P340	P274
GLY					R899		R899	R791	Q644	W643	D433	P340	P274
GLY					R899		R899	R792	Q644	W643	D433	P340	P274
GLY					R899		R899	R793	Q644	W643	D433	P340	P274
GLY					R899		R899	R794	Q644	W643	D433	P340	P274
GLY					R899		R899	R795	Q644	W643	D433	P340	P274
GLY					R899		R899	R796	Q644	W643	D433	P340	P274
GLY					R899		R899	R797	Q644	W643	D433	P340	P274
GLY					R899		R899	R798	Q644	W643	D433	P340	P274
GLY					R899		R899	R799	Q644	W643	D433	P340	P274
GLY					R899		R899	R800	Q644	W643	D433	P340	P274
GLY					R899		R899	R801	Q644	W643	D433	P340	P274
GLY					R899		R899	R802	Q644	W643	D433	P340	P274
GLY					R899		R899	R803	Q644	W643	D433	P340	P274
GLY					R899		R899	R804	Q644	W643	D433	P340	P274
GLY					R899		R899	R805	Q644	W643	D433	P340	P274
GLY					R899		R899	R806	Q644	W643	D433	P340	P274
GLY					R899		R899	R807	Q644	W643	D433	P340	P274
GLY					R899		R899	R808	Q644	W643	D433	P340	P274
GLY					R899		R899	R809	Q644	W643	D433	P340	P274
GLY					R899		R899	R810	Q644	W643	D433	P340	P274
GLY					R899		R899	R811	Q644	W643	D433	P340	P274
GLY					R899		R899	R812	Q644	W643	D433	P340	P274
GLY					R899		R899	R813	Q644	W643	D433	P340	P274
GLY					R899		R899	R814	Q644	W643	D433	P340	P274
GLY					R899		R899	R815	Q644	W643	D433	P340	P274
GLY					R899		R899	R816	Q644	W643	D433	P340	P274
GLY					R899		R899	R817	Q644	W643	D433	P340	P274
GLY					R899		R899	R818	Q644	W643	D433	P340	P274
GLY					R899		R899	R819	Q644	W64			

THR	LEU	PHE	LYS	LYS	LYS	ASP	SER
CYS	VAL	THR	LEU	LEU	GLN	GLU	PRO
PRO	GLN	THR	ALA	ALA	GLN	VAL	CYS
ASP	GLU	GLN	GLN	GLN	LYS	THR	GLU
CYS	LYS	GLU	ASN	ASN	GLY	ILE	VAL
LYS	MET	LEU	LEU	LEU	THR	ILE	PRO
GLU	GLU	SER	LEU	LEU	THR	CYS	VAL
VAL	ALA	ASP	SER	SER	THR	PHE	CYS
ILE	LEU	LEU	VAL	VAL	LEU	GLY	THR
GLY	LYS	ARG	LYS	LYS	LYS	PHE	ARG
THR	ALA	SER	ASP	ASP	GLN	GLU	CYS
GLY	THR	GLU	LEU	LEU	ARG	ASP	GLN
ASN	LEU	ILE	GLY	GLY	LEU	GLU	HIS
HIS	PRO	GLN	LEU	LEU	GLN	PRO	TYR
THR	CYS	ARG	VAL	VAL	GLU	ASP	GLN
LEU	SER	LEU	GLU	GLU	ILE	ALA	CYS
GLU	GLY	THR	ASN	ASN	GLU	ARG	THR
ARG	LEU	TYR	TYR	TYR	ILE	PHE	LYS
SER	GLY	LEU	ILE	ILE	ILE	VAL	LEU
ASN	ILE	VAL	SER	SER	LYS	GLN	CYS
GLN	SER	ASN	PHE	PHE	GLU	LEU	SER
LEU	GLU	LEU	TYR	TYR	LYS	GLU	GLU
ALA	GLU	LEU	ASP	ASP	ILE	ASP	PRO
ALA	GLU	THR	HIS	HIS	ILE	CYS	CYS
SER	GLU	THR	ASN	ASN	GLN	GLN	PRO
GLU	ARG	ARG	LEU	LEU	GLY	SER	ASN
MET	VAL	TYR	ALA	ALA	ALA	HIS	ARG
ASP	GLN	LYS	SER	SER	LYS	PRO	ARG
GLY	ILE	ILE	LEU	LEU	GLY	ILE	PRO
ALA	VAL	ALA	LEU	LEU	GLU	PHE	PRO
ALA	VAL	ALA	TRP	TRP	GLU	GLU	CYS
GLN	SER	GLU	ASP	ASP	ASP	VAL	TYR
HIS	ALA	LYS	SER	SER	ILE	ALA	VAL
ALA	ILE	LYS	LEU	LEU	THR	GLN	PRO
ALA	GLY	VAL	LEU	LEU	LYS	LEU	CYS
ALA	GLU	VAL	GLU	GLU	GLN	GLY	GLY
ASN	PHE	GLU	GLU	GLU	LYS	LYS	HIS
LEU	LYS	VAL	LYS	LYS	LEU	ASP	PRO
MET	CYS	TYR	ARG	ARG	GLU	PRO	CYS
ASN	ARG	SER	VAL	VAL	ARG	ASP	CYS
PHE	ASN	VAL	ARG	ARG	LYS	ASP	GLY
GLU	GLY	GLN	THR	THR	LEU	VAL	LEU
GLU	HIS	ASN	ARG	ARG	SER	ALA	CYS
ILE	ILE	ILE	LEU	LEU	LEU	ILE	CYS
GLN	TYR	LEU	GLU	GLU	HIS	ARG	GLY
GLY	VAL	GLU	GLN	GLN	LEU	LEU	GLY
MET	ILE	LYS	VAL	VAL	LYS	VAL	PRO
		THR	HIS	HIS	LEU	VAL	CYS
		CYS	VAL	VAL	LEU	VAL	ARG
		LYS	THR	THR	LEU	GLN	CYS
		ASP	LYS	LYS	ASP	ILE	LYS
		PHE	LEU	LEU	ILE	ILE	LYS
		THR	ALA	ALA	PHE	CYS	ARG
		GLN	LYS	LYS	LEU	GLN	CYS
		MET	ARG	ARG	MET	VAL	ARG
		GLU	LYS	LYS	ILE	GLU	CYS
		ASP	ARG	ARG	LEU	PRO	CYS
		GLU	THR	THR	LYS	ILE	HIS
		GLN	SER	SER	GLU	ILE	MET

- Molecule 1: NFX1-type zinc finger-containing protein 1



L831	R741	F608	L494	P351	P234	ALA
A834	R745	A609	L610	F352	D235	GLU
	E746	T611	L504	L353	L236	TYR
	Q747	R612	M505		R237	TRP
1838		E613	V506	S364	N238	GLN
E839	L761	L614			Q239	ARG
E840		A615	Y511	L369	Y240	PRO
		L616	F512			HIS
		L617	F512	L376	I244	LEU
			R516	R377	S245	GLU
		K625				ASP
		K631	L519	Q387	I248	ARG
			V525	I388		PRO
		Q634	Q526		F258	ALA
		A635	E527	L392	P259	MET
		E528	E529		THR	GLY
		L637		F395	A260	ARG
		T638	R534	D397	L272	ASN
		V642		Q398	L273	THR
		W643		C399	L280	HIS
		L666	N540	I400	V285	ASN
		T669	S541	R401	E292	VAL
			V543	K402	K293	GLN
			K544	R403	N294	GLY
			F545	K404	L295	LEU
		L677	P546	K405	E296	ALA
		R679	R547	F405	K297	PRO
		W680		I408	V298	ASP
		G681	Y555	R409	Q299	ALA
		R683		I410	I302	ASN
		S684	N563		E303	GLN
			P564	D433	H304	ALA
		R698	S565		L305	ASN
		P703	A566	P436	L314	ASN
		W709	T567	W442		PRO
		H710	Q568	K446	T319	ALA
		L711	E569	R447	T320	ALA
		W715	F570	L448	L321	LEU
		M716	L571		Q322	GLY
			R572	G451	V323	GLY
		K723	N573	M456	P324	ALA
		Q727	V574	S457	E325	GLY
			E575	F461	A326	ALA
		H730	G576		H329	SER
		E731	L577	L465	S332	HIS
		K734	R578	Q474	Y333	PRO
		T735	H579	D476	R334	ARG
			P580	E475	L221	ALA
			R581		M336	ASN
					V225	PRO
					P337	THR
					I338	ASP
						TRP







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	258760	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	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)	1600	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.095	Depositor
Minimum map value	-0.448	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.018	Depositor
Recommended contour level	0.07	Depositor
Map size ($\text{\AA}$)	331.2, 331.2, 331.2	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.828, 0.828, 0.828	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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	0.18	0/10508	0.45	0/14189
1	B	0.24	0/10508	0.53	0/14189
1	C	0.18	0/10508	0.47	0/14189
1	D	0.22	0/10508	0.51	0/14189
1	E	0.19	0/1361	0.53	0/1836
1	F	0.19	0/1361	0.55	0/1836
All	All	0.21	0/44754	0.50	0/60428

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	10307	0	10368	158	0
1	B	10307	0	10368	198	0
1	C	10307	0	10368	174	0
1	D	10307	0	10368	224	0
1	E	1344	0	1417	36	0
1	F	1344	0	1417	27	0
2	A	31	0	12	5	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	B	31	0	12	1	0
2	C	31	0	12	2	0
2	D	31	0	12	8	0
All	All	44040	0	44354	809	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 (809) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:734:LYS:HE3	1:B:857:ASP:HA	1.39	0.99
1:D:621:PRO:HG3	1:D:1035:GLN:HE21	1.28	0.94
1:B:1200:VAL:HG13	1:B:1237:LEU:CD2	2.05	0.85
1:D:621:PRO:HG3	1:D:1035:GLN:NE2	1.93	0.84
1:C:1068:ARG:HH22	1:C:1090:ASP:H	1.27	0.82
1:D:1068:ARG:HH22	1:D:1089:GLN:H	1.27	0.81
1:A:1068:ARG:HH22	1:A:1090:ASP:H	1.27	0.79
1:C:554:ARG:HD2	1:C:581:ARG:HB3	1.65	0.78
1:D:621:PRO:CG	1:D:1035:GLN:HE21	1.97	0.77
1:A:911:MET:H	1:A:932:GLN:HE21	1.31	0.77
1:B:1200:VAL:HG13	1:B:1237:LEU:HD23	1.65	0.76
1:E:217:LEU:HA	1:E:221:LEU:HD23	1.67	0.76
1:D:654:VAL:HG12	1:D:1004:ILE:HG12	1.68	0.76
1:D:170:LEU:O	1:D:174:LEU:HB3	1.87	0.74
1:D:680:VAL:HG12	1:D:694:LEU:HD21	1.70	0.74
1:A:755:PRO:HA	1:A:758:TRP:HB3	1.68	0.74
1:C:410:ILE:HG22	1:C:506:VAL:HG12	1.71	0.73
1:A:850:LYS:O	1:A:854:SER:HB3	1.89	0.72
1:D:653:LEU:HB3	1:D:1003:VAL:HG12	1.72	0.72
1:A:534:ARG:HH22	1:A:544:LYS:HD3	1.55	0.72
1:D:709:MET:HA	1:D:712:ARG:HD3	1.71	0.71
1:C:709:MET:HE3	1:C:709:MET:H	1.53	0.71
1:C:260:ALA:HA	1:C:314:LEU:HD21	1.72	0.70
1:D:867:MET:HE1	1:D:901:VAL:HG11	1.72	0.70
1:B:380:PHE:HZ	1:B:519:LEU:HD11	1.57	0.69
1:D:884:THR:HG21	1:D:891:ARG:HG3	1.74	0.69
1:A:683:ARG:HG2	1:A:834:ALA:HB1	1.73	0.69
1:D:749:LEU:HD11	1:D:937:TRP:HB3	1.74	0.69
1:F:234:PRO:HA	1:F:237:ARG:HB2	1.74	0.69
1:C:544:LYS:HD3	1:C:547:ARG:HH12	1.57	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:984:THR:HG23	1:D:987:GLY:H	1.56	0.69
1:D:1224:ALA:HB2	1:D:1228:MET:HB2	1.75	0.69
1:A:897:MET:HB3	1:A:900:ARG:HH21	1.57	0.69
1:C:248:ILE:HD11	1:C:298:VAL:HG21	1.74	0.68
1:B:202:GLN:HE21	1:B:961:GLU:HB3	1.56	0.68
1:D:655:VAL:HB	1:D:1005:VAL:HG22	1.75	0.68
1:D:192:ARG:HH22	1:D:193:LYS:HE2	1.58	0.68
1:D:1130:ASN:HB2	1:D:1163:GLN:HE21	1.59	0.68
1:F:228:MET:HE3	1:F:240:TYR:HB3	1.76	0.67
1:C:345:VAL:HG13	1:C:388:ILE:HG21	1.75	0.67
1:C:1418:HIS:HA	1:C:1427:LEU:HD21	1.76	0.67
1:D:505:MET:HE1	1:D:507:GLU:HB3	1.77	0.66
1:A:476:ASP:HB3	1:A:481:ILE:HB	1.77	0.66
1:D:624:GLY:HA3	2:D:2000:AGS:H8	1.77	0.66
1:D:275:THR:HG21	1:E:271:SER:HB2	1.76	0.66
1:B:848:ARG:NE	1:B:853:GLU:HG3	2.11	0.66
1:D:1272:THR:HG21	1:D:1283:VAL:HG11	1.78	0.66
1:B:1200:VAL:CG1	1:B:1237:LEU:HD23	2.25	0.66
1:C:376:LEU:HB3	1:C:519:LEU:HD21	1.79	0.65
1:D:408:ILE:HD11	1:D:508:THR:HB	1.78	0.65
1:D:1122:ILE:HG23	1:D:1124:GLU:H	1.61	0.65
1:F:244:ILE:HA	1:F:247:ILE:HG22	1.77	0.65
1:A:636:LEU:HD13	1:A:1002:ILE:HD13	1.78	0.65
1:D:288:GLU:HG2	1:D:291:THR:H	1.61	0.65
1:D:338:ILE:HG21	1:D:516:ARG:HG2	1.78	0.65
1:B:365:THR:HG23	1:B:537:VAL:HG21	1.76	0.65
1:F:180:LYS:HE2	1:F:182:ASN:HB2	1.78	0.65
1:C:947:ARG:HH21	1:C:948:LYS:HG2	1.62	0.64
1:D:788:LEU:HB3	1:D:897:MET:HE2	1.80	0.64
1:C:887:TRP:CD1	1:C:891:ARG:HB2	2.33	0.64
1:D:302:ILE:HA	1:D:305:LEU:HG	1.78	0.64
1:D:636:LEU:HD13	1:D:1002:ILE:HD13	1.80	0.64
1:B:1234:MET:HE3	1:B:1247:ILE:HG21	1.78	0.64
1:A:945:THR:HA	1:A:948:LYS:HE3	1.79	0.63
1:D:270:VAL:HG21	1:D:302:ILE:HG21	1.79	0.63
1:D:1105:GLY:HA2	1:D:1263:CYS:O	1.99	0.63
1:B:1068:ARG:HH12	1:B:1089:GLN:HB3	1.63	0.63
1:A:1223:ARG:NH2	2:A:2000:AGS:O2G	2.30	0.63
1:B:1200:VAL:HG13	1:B:1237:LEU:HD21	1.80	0.63
1:F:298:VAL:HA	1:F:301:ILE:HD12	1.81	0.63
1:C:448:LEU:HD12	1:C:482:VAL:HG21	1.80	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:299:GLN:O	1:C:303:GLU:HG3	1.99	0.62
1:D:621:PRO:HB3	2:D:2000:AGS:O3G	1.99	0.62
1:D:1140:LEU:HG	1:D:1144:PHE:HE2	1.64	0.62
1:B:1053:VAL:HG13	1:B:1057:GLU:HB3	1.81	0.62
1:D:411:TYR:HB2	1:D:505:MET:HG3	1.82	0.62
1:D:624:GLY:HA2	2:D:2000:AGS:O5'	1.98	0.62
1:A:171:LYS:HE2	1:A:210:ILE:HG23	1.82	0.62
1:A:605:ALA:HA	1:A:1067:VAL:HG11	1.81	0.62
1:C:1322:CYS:HB2	1:C:1337:CYS:HA	1.82	0.62
1:B:554:ARG:HB3	1:B:581:ARG:HB3	1.82	0.62
1:D:868:ARG:O	1:D:898:LYS:HE2	2.00	0.61
1:C:442:TRP:HB2	1:C:474:GLN:HE22	1.65	0.61
1:D:1163:GLN:HE22	1:D:1200:VAL:HA	1.65	0.61
1:C:614:LEU:HD21	1:C:1059:LEU:HD21	1.82	0.61
1:A:456:MET:HG3	1:A:465:LEU:HB2	1.82	0.61
1:C:683:ARG:HG2	1:C:834:ALA:HB1	1.81	0.61
1:C:730:HIS:O	1:C:734:LYS:HG3	2.00	0.61
1:A:1351:THR:HA	1:A:1358:GLU:HA	1.81	0.61
1:C:848:ARG:HE	1:C:850:LYS:HE2	1.63	0.61
1:D:455:CYS:HA	1:D:465:LEU:O	1.99	0.61
1:B:857:ASP:O	1:B:861:ALA:N	2.28	0.61
1:C:938:LEU:O	1:C:942:GLN:HG2	2.01	0.61
1:C:945:THR:HA	1:C:948:LYS:HE2	1.83	0.60
1:D:1005:VAL:HG12	1:D:1008:ALA:HB2	1.83	0.60
1:A:887:TRP:HD1	1:A:891:ARG:HB2	1.66	0.60
1:B:654:VAL:HG13	1:B:982:GLY:HA2	1.83	0.60
1:D:488:GLU:HA	1:D:491:GLN:HB3	1.81	0.60
1:A:300:THR:O	1:A:304:HIS:CE1	2.54	0.60
1:A:780:SER:HB3	1:A:783:LEU:HG	1.84	0.60
1:C:1384:HIS:HB3	1:C:1400:GLU:HG3	1.83	0.60
1:B:265:GLU:HA	1:B:268:MET:HE2	1.84	0.60
1:B:653:LEU:HB3	1:B:1003:VAL:HG12	1.83	0.60
1:A:1250:LEU:HD12	1:A:1256:ILE:HD11	1.83	0.60
1:A:340:PRO:HA	1:A:377:ARG:HH22	1.65	0.60
1:C:708:PRO:HD2	1:C:711:LEU:HD12	1.84	0.60
1:B:536:ILE:HG13	1:B:537:VAL:HG23	1.84	0.59
1:B:731:GLU:O	1:B:735:THR:HG23	2.02	0.59
1:D:1134:ALA:O	1:D:1138:VAL:HG22	2.03	0.59
1:B:1388:HIS:CE1	1:B:1392:GLU:HB2	2.38	0.59
1:F:179:MET:HE1	1:F:184:LEU:HB3	1.84	0.59
1:C:273:LEU:HB3	1:C:295:LEU:HD11	1.85	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:745:ARG:HH22	1:C:866:ALA:H	1.50	0.59
1:F:174:LEU:HB2	1:F:214:SER:HB2	1.83	0.59
1:D:1068:ARG:HH12	1:D:1089:GLN:HB3	1.67	0.59
1:B:683:ARG:HG2	1:B:834:ALA:HB1	1.84	0.59
1:B:1068:ARG:HH22	1:B:1090:ASP:H	1.51	0.59
1:C:225:VAL:HG11	1:C:272:LEU:HB3	1.84	0.59
1:B:1193:ASP:HA	1:B:1225:LYS:HG2	1.84	0.59
1:D:305:LEU:HA	1:D:308:LYS:HE2	1.84	0.59
1:D:598:LEU:HB2	1:D:603:MET:HE1	1.85	0.58
1:B:849:ARG:O	1:B:853:GLU:HG2	2.02	0.58
1:A:1130:ASN:HB3	1:A:1133:GLU:OE1	2.02	0.58
1:B:345:VAL:HG12	1:B:385:ARG:HB2	1.85	0.58
1:B:556:ASP:H	1:B:639:ASN:HD21	1.50	0.58
1:A:761:LEU:HD12	1:A:781:MET:HG2	1.86	0.58
1:B:848:ARG:NH1	1:B:853:GLU:HB3	2.19	0.58
1:D:971:ASP:HA	1:D:974:ILE:HG12	1.84	0.58
1:A:512:PHE:O	1:A:516:ARG:HB2	2.04	0.58
1:A:1135:HIS:O	1:A:1139:GLU:HG3	2.03	0.58
1:D:1103:ILE:HD11	1:D:1226:LYS:HB3	1.86	0.58
1:E:186:LEU:HD12	1:E:189:GLN:HE21	1.67	0.58
1:A:554:ARG:HB3	1:A:581:ARG:HB3	1.86	0.58
1:B:649:LYS:HD2	1:B:979:GLN:HE22	1.69	0.58
1:D:610:LEU:HD21	1:D:636:LEU:HD21	1.85	0.58
1:A:225:VAL:HG11	1:A:272:LEU:HB3	1.84	0.58
1:A:1165:PHE:CZ	1:A:1169:LYS:HE3	2.39	0.58
1:B:647:LEU:HD23	1:B:647:LEU:H	1.69	0.58
1:C:574:VAL:HG11	1:C:580:PRO:HD3	1.84	0.58
1:C:731:GLU:O	1:C:735:THR:HG23	2.03	0.57
1:C:636:LEU:HD13	1:C:1002:ILE:HD13	1.85	0.57
1:C:928:SER:O	1:C:932:GLN:HG2	2.03	0.57
1:C:387:GLY:HA3	1:C:408:ILE:HD11	1.86	0.57
1:C:1165:PHE:HE2	1:C:1169:LYS:HE3	1.68	0.57
1:C:1401:MET:HE3	1:C:1402:VAL:N	2.20	0.57
1:D:408:ILE:HG12	1:D:507:GLU:O	2.04	0.57
1:D:823:ILE:HG23	1:D:825:ILE:HG23	1.86	0.57
1:D:457:SER:O	1:D:503:PHE:HA	2.05	0.57
1:B:574:VAL:HG21	1:B:580:PRO:HG3	1.86	0.57
1:D:999:GLU:HB3	1:D:1023:ALA:HB3	1.87	0.57
1:D:1062:VAL:HG23	1:D:1064:ILE:HG12	1.85	0.57
1:A:290:GLU:HA	1:A:293:LYS:HD2	1.85	0.56
1:D:321:LEU:HD12	1:D:324:PRO:HB3	1.86	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:893:GLN:O	1:A:897:MET:HG3	2.04	0.56
1:C:1134:ALA:O	1:C:1138:VAL:HG12	2.05	0.56
1:C:1259:MET:HG3	1:C:1273:LEU:HG	1.87	0.56
1:D:199:MET:HE1	1:D:993:GLN:HG3	1.87	0.56
1:D:582:ILE:HB	1:D:589:GLN:HG3	1.86	0.56
1:F:298:VAL:O	1:F:302:ILE:HG12	2.05	0.56
1:B:696:GLU:HA	1:B:699:ASN:HB3	1.87	0.56
1:B:708:PRO:HD2	1:B:711:LEU:HD12	1.87	0.56
1:E:211:LEU:HD11	1:E:217:LEU:HD21	1.86	0.56
1:C:534:ARG:HH22	1:C:542:HIS:HB3	1.70	0.56
1:C:1246:ILE:O	1:C:1250:LEU:HD12	2.06	0.56
1:A:1062:VAL:HG23	1:A:1064:ILE:HG12	1.87	0.56
1:D:292:GLU:HA	1:D:295:LEU:HG	1.88	0.56
1:B:634:GLN:HG3	1:B:673:GLN:HE22	1.71	0.56
1:B:1122:ILE:HG23	1:B:1124:GLU:H	1.72	0.55
1:C:1247:ILE:HG23	1:C:1256:ILE:HD13	1.88	0.55
1:C:1073:HIS:CD2	2:C:2000:AGS:C8	2.90	0.55
1:D:1240:VAL:HB	1:D:1243:TRP:HB2	1.88	0.55
1:A:666:LEU:HA	1:A:669:ILE:HG22	1.88	0.55
1:C:1042:VAL:HG12	1:C:1045:LEU:H	1.70	0.55
1:C:1141:CYS:O	1:C:1145:LEU:HD12	2.06	0.55
1:F:253:ASP:O	1:F:257:VAL:HG12	2.06	0.55
1:C:968:LEU:HG	1:C:994:ILE:HD11	1.89	0.55
1:D:1147:GLN:HA	1:D:1147:GLN:HE21	1.72	0.55
1:A:849:ARG:HG3	1:A:852:GLU:HB3	1.89	0.55
1:B:734:LYS:CE	1:B:857:ASP:HA	2.27	0.55
1:B:1103:ILE:HD11	1:B:1227:GLY:HA3	1.87	0.55
1:D:593:LYS:HB2	1:D:603:MET:HE3	1.88	0.55
1:E:229:ILE:HD11	1:E:276:SER:HA	1.88	0.55
1:A:363:ASP:HB2	1:A:367:ILE:HG21	1.88	0.55
1:A:625:LYS:HE2	2:A:2000:AGS:O2B	2.07	0.55
1:F:228:MET:SD	1:F:244:ILE:HD11	2.47	0.55
1:D:219:VAL:HG11	1:E:219:VAL:HG22	1.88	0.55
1:D:598:LEU:HD23	2:D:2000:AGS:N6	2.22	0.55
1:B:215:LYS:HA	1:B:218:LYS:HD2	1.88	0.54
1:B:270:VAL:HG21	1:B:302:ILE:HG21	1.89	0.54
1:B:704:ARG:HE	1:B:712:ARG:HD2	1.72	0.54
1:A:1304:ARG:HE	1:A:1307:HIS:CD2	2.26	0.54
1:C:158:SER:HB2	1:C:199:MET:HE3	1.88	0.54
1:C:456:MET:HA	1:C:504:LEU:O	2.07	0.54
1:D:448:LEU:HD21	1:D:482:VAL:HG11	1.90	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:457:SER:HB3	1:C:461:PHE:CD2	2.42	0.54
1:D:822:LEU:HD23	1:D:1168:ARG:HH12	1.72	0.54
1:D:972:LEU:HD12	1:D:994:ILE:HG12	1.90	0.54
1:E:240:TYR:O	1:E:244:ILE:HG12	2.08	0.54
1:B:191:LEU:HB3	1:B:250:LEU:HD11	1.90	0.54
1:A:1274:VAL:HG12	1:A:1279:ASP:HB3	1.90	0.54
1:D:1203:ASN:C	1:D:1203:ASN:HD22	2.12	0.54
1:C:735:THR:O	1:C:739:THR:HG23	2.07	0.54
1:D:823:ILE:HG22	1:D:1168:ARG:HD2	1.90	0.54
1:A:942:GLN:O	1:A:946:ARG:HG2	2.08	0.54
1:B:938:LEU:O	1:B:942:GLN:HG3	2.08	0.54
1:A:737:GLU:HA	1:A:740:MET:HE3	1.90	0.53
1:C:1142:LYS:HB3	1:C:1176:PHE:CZ	2.43	0.53
1:C:1165:PHE:CE2	1:C:1169:LYS:HE3	2.43	0.53
1:D:616:ILE:HD11	1:D:1059:LEU:HG	1.89	0.53
1:B:689:LEU:HD13	1:B:692:PHE:HD2	1.74	0.53
1:C:1138:VAL:HG11	1:C:1170:LEU:HG	1.90	0.53
1:D:943:ALA:O	1:D:947:ARG:HG2	2.08	0.53
1:B:614:LEU:HD21	1:B:1059:LEU:HD21	1.90	0.53
1:D:620:PRO:HD2	1:D:623:THR:HG21	1.91	0.53
1:D:654:VAL:HG23	1:D:982:GLY:HA2	1.91	0.53
1:C:244:ILE:HD12	1:C:273:LEU:HD11	1.91	0.53
1:C:1113:VAL:HG11	1:C:1260:LEU:HD23	1.91	0.53
1:D:929:SER:HA	1:D:932:GLN:HG2	1.90	0.53
1:F:305:LEU:O	1:F:309:ARG:HG2	2.09	0.53
1:D:621:PRO:CD	1:D:1035:GLN:HE21	2.21	0.53
1:D:719:MET:HE3	1:D:719:MET:HA	1.90	0.53
1:F:149:LEU:HD23	1:F:152:LEU:HD12	1.90	0.53
1:B:624:GLY:HA2	2:B:2000:AGS:H5'2	1.91	0.53
1:D:259:PRO:HD2	1:D:317:ASP:HB3	1.91	0.53
1:D:560:LEU:HD11	1:D:635:ALA:HB2	1.91	0.53
1:D:1006:GLU:HA	1:D:1030:ILE:HB	1.89	0.53
1:B:785:TRP:HE1	1:B:922:VAL:HG23	1.74	0.53
1:B:935:ARG:O	1:B:939:GLN:HG3	2.09	0.53
1:A:1213:ILE:HD12	1:A:1213:ILE:H	1.74	0.52
1:C:369:LEU:HD21	1:C:525:VAL:HG12	1.91	0.52
1:B:1154:ILE:HD12	1:B:1194:ILE:HB	1.91	0.52
1:D:408:ILE:HG23	1:D:507:GLU:O	2.09	0.52
1:A:971:ASP:HA	1:A:974:ILE:HD12	1.92	0.52
1:A:1216:ARG:HA	1:A:1219:VAL:HG12	1.90	0.52
1:D:248:ILE:HA	1:D:251:LEU:HG	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:384:LEU:N	1:D:408:ILE:HD12	2.24	0.52
1:A:1087:ILE:HG23	1:A:1088:TYR:HD1	1.74	0.52
1:C:1112:PHE:HD2	1:C:1234:MET:HE2	1.74	0.52
1:A:582:ILE:HG21	1:A:590:TRP:HD1	1.74	0.52
1:B:943:ALA:O	1:B:947:ARG:HG2	2.10	0.52
1:B:995:LEU:HA	1:B:998:VAL:HG22	1.92	0.52
1:C:666:LEU:HA	1:C:669:ILE:HG22	1.90	0.52
1:C:1078:GLU:HA	1:C:1081:ARG:HH12	1.75	0.52
1:A:1082:LEU:HD11	1:A:1250:LEU:HD21	1.91	0.52
1:B:456:MET:HA	1:B:504:LEU:O	2.09	0.52
1:B:652:ILE:HD12	1:B:1002:ILE:HB	1.92	0.52
1:D:378:GLU:HA	1:D:381:VAL:HG22	1.92	0.52
1:E:240:TYR:HA	1:E:243:HIS:NE2	2.24	0.52
1:E:306:GLN:O	1:E:310:ARG:HG2	2.10	0.52
1:D:408:ILE:HG12	1:D:508:THR:HA	1.92	0.52
1:A:385:ARG:HA	1:A:388:ILE:HG22	1.92	0.52
1:C:388:ILE:HG12	1:C:461:PHE:CE1	2.45	0.52
1:C:1171:MET:HB2	1:C:1176:PHE:CD1	2.44	0.52
1:A:1250:LEU:HB2	1:A:1256:ILE:HG12	1.91	0.52
1:C:546:PRO:HD3	1:C:613:GLU:HB3	1.92	0.52
1:D:416:ILE:HD11	1:D:456:MET:HE1	1.91	0.52
1:D:707:LEU:HB3	1:D:711:LEU:HD11	1.92	0.52
1:C:512:PHE:O	1:C:516:ARG:HB2	2.10	0.52
1:B:1083:LEU:HD12	1:B:1091:LEU:HG	1.92	0.51
1:D:557:PHE:HB3	1:D:560:LEU:HD12	1.92	0.51
1:D:1279:ASP:HA	1:D:1282:LYS:HD3	1.92	0.51
1:B:771:TRP:CZ2	1:B:781:MET:HE1	2.45	0.51
1:C:1168:ARG:HG2	1:C:1168:ARG:HH11	1.76	0.51
1:D:1079:ILE:HG12	1:D:1110:LEU:HD13	1.92	0.51
1:F:173:LEU:HD23	1:F:183:PHE:HZ	1.76	0.51
1:C:534:ARG:HH11	1:C:544:LYS:NZ	2.08	0.51
1:D:764:GLY:HA3	1:D:771:TRP:CD1	2.46	0.51
1:B:1084:THR:HA	1:B:1091:LEU:HD23	1.92	0.51
1:B:1200:VAL:HG11	1:B:1233:ASN:H	1.75	0.51
1:C:555:TYR:CE2	1:C:642:VAL:HG11	2.46	0.51
1:B:378:GLU:HA	1:B:381:VAL:HG22	1.93	0.51
1:D:418:THR:HG23	1:D:420:MET:HE1	1.92	0.51
1:D:1213:ILE:HD11	1:D:1215:ASN:HD21	1.75	0.51
1:C:1288:CYS:H	1:C:1306:CYS:HB3	1.76	0.51
1:A:173:LEU:HD21	1:A:187:ILE:HD11	1.92	0.50
1:B:1131:GLN:HB3	1:B:1135:HIS:HE1	1.75	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:849:ARG:HG3	1:C:852:GLU:HB3	1.92	0.50
1:B:584:VAL:HG11	1:B:610:LEU:HB3	1.93	0.50
1:C:611:THR:HG22	1:C:612:ARG:HD3	1.92	0.50
1:C:1102:LYS:HZ1	1:C:1105:GLY:H	1.59	0.50
1:A:549:LEU:HD11	1:A:585:LEU:HD11	1.93	0.50
1:A:681:GLY:HA3	1:A:984:THR:HG23	1.92	0.50
1:A:1158:THR:HG22	1:A:1198:SER:HB3	1.93	0.50
1:D:838:ILE:HD13	1:D:990:LYS:HE3	1.93	0.50
1:D:1378:LYS:HD3	1:D:1379:SER:H	1.76	0.50
1:E:297:LYS:O	1:E:301:ILE:HG12	2.12	0.50
1:E:170:LEU:O	1:E:174:LEU:HB3	2.11	0.50
1:A:735:THR:O	1:A:739:THR:HG23	2.12	0.50
1:B:858:GLN:O	1:B:862:LYS:HG2	2.12	0.50
1:D:160:VAL:O	1:D:164:LEU:HG	2.11	0.50
1:D:598:LEU:HB3	1:D:602:GLN:OE1	2.12	0.50
1:D:987:GLY:O	1:D:991:TYR:HB2	2.11	0.50
1:B:700:LYS:HG2	1:B:703:PHE:HB2	1.92	0.50
1:C:392:LEU:HA	1:C:395:PHE:HD2	1.77	0.50
1:F:244:ILE:O	1:F:248:ILE:HG22	2.11	0.50
1:A:653:LEU:HD11	1:A:983:MET:HE2	1.94	0.50
1:D:230:THR:HG23	1:E:309:ARG:HH12	1.75	0.50
1:D:1035:GLN:NE2	2:D:2000:AGS:S1G	2.85	0.50
1:B:161:VAL:HG23	1:B:194:ALA:HB1	1.93	0.50
1:B:1335:LEU:HD12	1:B:1339:GLN:HB2	1.93	0.50
1:C:971:ASP:HA	1:C:974:ILE:HD12	1.93	0.50
1:B:1278:SER:O	1:B:1281:GLN:HB2	2.12	0.49
1:B:1237:LEU:HD12	1:B:1243:TRP:CD1	2.46	0.49
1:C:958:THR:O	1:C:962:ARG:HG3	2.12	0.49
1:D:144:LEU:HD13	1:D:148:PHE:HE1	1.77	0.49
1:D:1352:ILE:HG22	1:D:1354:ARG:H	1.76	0.49
1:B:743:VAL:HG23	1:B:934:TYR:CE1	2.47	0.49
1:C:1150:LEU:HD12	1:C:1150:LEU:H	1.77	0.49
1:C:1351:THR:HA	1:C:1358:GLU:HA	1.94	0.49
1:D:543:VAL:HG21	1:D:612:ARG:HB3	1.94	0.49
1:F:222:PRO:HA	1:F:225:VAL:HG12	1.93	0.49
1:C:1128:HIS:CD2	1:C:1201:ARG:HE	2.31	0.49
1:A:300:THR:C	1:A:304:HIS:CE1	2.90	0.49
1:A:345:VAL:HG13	1:A:388:ILE:HG21	1.94	0.49
1:A:1246:ILE:O	1:A:1250:LEU:HG	2.13	0.49
1:C:679:ARG:NH1	1:C:684:SER:HB2	2.28	0.49
1:D:273:LEU:O	1:D:277:LEU:HG	2.12	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1276:LYS:HE2	1:D:1277:ALA:H	1.78	0.49
1:A:640:GLU:HG2	1:A:644:GLN:HG3	1.95	0.49
1:C:409:ARG:HD3	1:C:447:ARG:HG2	1.94	0.49
1:C:994:ILE:O	1:C:998:VAL:HG23	2.13	0.49
1:B:375:LEU:HD21	1:B:1051:LEU:HD12	1.94	0.49
1:D:1205:GLU:HG3	1:D:1207:LYS:H	1.76	0.49
1:E:251:LEU:HA	1:E:254:LEU:HG	1.94	0.49
1:C:838:ILE:HG23	1:C:840:GLU:OE1	2.13	0.49
1:B:962:ARG:O	1:B:965:GLU:HG3	2.12	0.49
1:A:1159:THR:HG23	1:A:1216:ARG:HH21	1.78	0.49
1:A:1193:ASP:HA	1:A:1225:LYS:HB2	1.94	0.49
1:B:472:ARG:HB2	1:B:477:LEU:HD11	1.95	0.49
1:C:1193:ASP:HA	1:C:1225:LYS:HB2	1.94	0.49
1:D:309:ARG:HH12	1:E:232:PRO:HG3	1.78	0.49
1:A:1087:ILE:HD13	1:A:1242:LEU:HD11	1.95	0.48
1:B:1035:GLN:HB3	1:B:1188:GLN:HE21	1.77	0.48
1:A:1134:ALA:O	1:A:1138:VAL:HG23	2.12	0.48
1:C:831:LEU:HD13	1:C:1186:LYS:HG3	1.95	0.48
1:D:1130:ASN:H	1:D:1163:GLN:HG3	1.77	0.48
1:F:182:ASN:O	1:F:186:LEU:HG	2.13	0.48
1:A:749:LEU:HD21	1:A:937:TRP:HB3	1.95	0.48
1:C:681:GLY:HA3	1:C:984:THR:HG23	1.93	0.48
1:C:860:LEU:HD12	1:C:863:MET:SD	2.54	0.48
1:D:429:LYS:NZ	1:D:481:ILE:HD12	2.28	0.48
1:E:187:ILE:HA	1:E:190:VAL:HG22	1.94	0.48
1:A:488:GLU:HA	1:A:491:GLN:HE21	1.78	0.48
1:B:678:VAL:HB	1:B:981:VAL:HG12	1.95	0.48
1:C:1055:LEU:O	1:C:1059:LEU:HB2	2.13	0.48
1:D:554:ARG:HB3	1:D:581:ARG:HB3	1.96	0.48
1:D:1352:ILE:HD13	1:D:1372:CYS:SG	2.54	0.48
1:B:1001:ARG:HA	1:B:1024:CYS:HA	1.95	0.48
1:B:1352:ILE:HD11	1:B:1370:PHE:HD2	1.78	0.48
1:D:1036:LEU:HD12	1:D:1188:GLN:HB2	1.95	0.48
1:D:1150:LEU:HB2	1:D:1153:GLN:HG3	1.95	0.48
1:A:758:TRP:HE3	1:A:761:LEU:HD23	1.78	0.48
1:B:293:LYS:HA	1:B:296:GLU:HG3	1.95	0.48
1:B:391:LEU:HD12	1:B:400:LEU:HD11	1.96	0.48
1:A:1261:ARG:HH22	1:A:1271:HIS:CE1	2.32	0.48
1:B:160:VAL:O	1:B:164:LEU:HG	2.14	0.48
1:B:1087:ILE:HD11	1:B:1242:LEU:HD21	1.95	0.48
1:B:1200:VAL:CG1	1:B:1233:ASN:H	2.27	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:236:ILE:HD12	1:C:239:GLN:HG3	1.94	0.48
1:C:634:GLN:O	1:C:638:THR:HG23	2.14	0.48
1:D:183:PHE:O	1:D:187:ILE:HG12	2.13	0.48
1:F:152:LEU:HD22	1:F:160:VAL:HG12	1.95	0.48
1:A:1359:GLN:HE21	1:A:1374:GLU:HG3	1.78	0.48
1:B:1415:LYS:HD3	1:B:1418:HIS:NE2	2.29	0.48
1:C:280:LEU:HD22	1:C:285:VAL:HG11	1.96	0.48
1:C:878:ALA:HB1	1:C:891:ARG:HD2	1.96	0.48
1:C:1139:GLU:HA	1:C:1142:LYS:HG2	1.96	0.48
1:C:1291:PRO:HA	1:C:1305:ALA:HA	1.96	0.48
1:C:1318:CYS:HB3	1:C:1337:CYS:HB3	1.96	0.48
1:C:292:GLU:O	1:C:296:GLU:HG2	2.13	0.48
1:C:1248:HIS:O	1:C:1252:GLU:HG3	2.14	0.48
1:D:779:HIS:CE1	1:D:783:LEU:HD23	2.49	0.48
1:D:1163:GLN:OE1	1:D:1200:VAL:HG22	2.13	0.48
1:B:1353:PRO:HB2	1:C:176:HIS:CD2	2.49	0.47
1:A:609:ALA:HB2	1:A:617:ILE:HD11	1.96	0.47
1:A:1075:MET:HB2	1:A:1080:ALA:HB2	1.97	0.47
1:B:1157:LEU:HD23	1:B:1195:ILE:HG23	1.96	0.47
1:C:1014:ALA:HA	1:C:1017:ILE:HG22	1.96	0.47
1:D:584:VAL:HG11	1:D:610:LEU:HB3	1.95	0.47
1:A:301:ILE:HA	1:A:304:HIS:ND1	2.28	0.47
1:A:1291:PRO:HA	1:A:1305:ALA:HA	1.95	0.47
1:A:1302:CYS:HA	1:A:1316:PHE:HE1	1.78	0.47
1:D:363:ASP:HB2	1:D:367:ILE:HG21	1.96	0.47
1:D:762:MET:HE3	1:D:762:MET:O	2.14	0.47
1:B:707:LEU:HB2	1:B:712:ARG:HD3	1.96	0.47
1:B:823:ILE:HG22	1:B:1168:ARG:HG3	1.96	0.47
1:C:608:PHE:HE1	1:C:616:ILE:H	1.62	0.47
1:D:252:GLN:HA	1:D:255:VAL:HG12	1.97	0.47
1:D:1251:ARG:HH21	1:D:1256:ILE:HD13	1.79	0.47
1:A:604:GLU:O	1:A:607:GLN:HG2	2.15	0.47
1:A:605:ALA:HB1	1:A:617:ILE:HD13	1.96	0.47
1:A:1099:LYS:N	1:A:1099:LYS:HD3	2.29	0.47
1:A:1150:LEU:HD12	1:A:1150:LEU:H	1.79	0.47
1:B:304:HIS:CE1	1:B:308:LYS:HD2	2.50	0.47
1:B:411:TYR:CE1	1:B:448:LEU:HD21	2.48	0.47
1:B:960:ALA:HA	1:B:963:MET:HG3	1.95	0.47
1:C:605:ALA:HB1	1:C:617:ILE:HD13	1.96	0.47
1:C:779:HIS:CE1	1:C:790:VAL:HG23	2.49	0.47
2:C:2000:AGS:O2A	2:C:2000:AGS:O3'	2.33	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:679:ARG:NH1	1:D:684:SER:HB3	2.29	0.47
1:D:715:TYR:HD2	1:D:716:MET:HE2	1.79	0.47
1:A:180:LYS:HG3	1:D:1355:CYS:HB3	1.97	0.47
1:A:236:ILE:HA	1:A:239:GLN:HG2	1.95	0.47
1:B:1055:LEU:O	1:B:1059:LEU:HB2	2.14	0.47
1:C:476:ASP:HB3	1:C:481:ILE:HB	1.97	0.47
1:C:1321:PRO:HA	1:C:1336:VAL:HA	1.96	0.47
1:A:234:PRO:HA	1:A:237:ARG:HB2	1.95	0.47
1:B:743:VAL:HG23	1:B:934:TYR:CZ	2.50	0.47
1:B:1082:LEU:HD13	1:B:1246:ILE:HG23	1.97	0.47
1:B:1197:LEU:HD11	1:B:1199:LEU:HD22	1.97	0.47
1:B:1200:VAL:HG11	1:B:1233:ASN:O	2.15	0.47
1:C:1296:LEU:HD21	1:C:1302:CYS:HB2	1.96	0.47
1:D:704:ARG:HH12	1:D:712:ARG:CZ	2.28	0.47
1:D:887:TRP:HB3	1:D:891:ARG:HG2	1.97	0.47
1:D:1115:HIS:HB2	1:D:1132:HIS:HE1	1.79	0.47
1:B:761:LEU:O	1:B:781:MET:HE3	2.15	0.47
1:C:555:TYR:HE2	1:C:642:VAL:HG11	1.80	0.47
1:C:824:GLU:HA	1:C:1168:ARG:CZ	2.45	0.47
1:D:715:TYR:O	1:D:719:MET:HG2	2.15	0.47
1:B:838:ILE:HD12	1:B:839:GLU:H	1.80	0.47
1:C:237:ARG:HA	1:C:240:TYR:CD2	2.49	0.47
1:C:351:PRO:HG2	1:C:353:LEU:HD21	1.97	0.47
1:C:1403:THR:HA	1:C:1413:PRO:HA	1.96	0.47
1:D:1130:ASN:HB2	1:D:1163:GLN:NE2	2.27	0.47
1:D:1143:TYR:CE1	1:D:1262:LEU:HD13	2.49	0.47
1:E:228:MET:HB2	1:E:280:LEU:HD21	1.97	0.47
1:E:224:TYR:HE2	1:E:247:ILE:HG21	1.80	0.47
1:A:1095:PRO:HA	1:A:1098:LEU:HG	1.97	0.46
1:B:157:PRO:HG3	1:B:193:LYS:HE2	1.97	0.46
1:B:660:HIS:HB3	1:B:1190:GLU:HG2	1.97	0.46
1:B:1335:LEU:CD1	1:B:1339:GLN:HB2	2.45	0.46
1:D:240:TYR:O	1:D:244:ILE:HG12	2.15	0.46
1:B:765:PRO:HG2	1:B:768:ASP:HB2	1.98	0.46
1:C:534:ARG:HH21	1:C:540:ASN:CG	2.24	0.46
1:D:896:LYS:HA	1:D:899:LYS:HE3	1.96	0.46
1:B:353:LEU:HD11	1:B:378:GLU:HG2	1.97	0.46
1:B:637:LEU:HD11	1:B:675:THR:HG21	1.97	0.46
1:D:410:ILE:HG12	1:D:506:VAL:HG12	1.98	0.46
1:F:181:SER:O	1:F:184:LEU:HG	2.15	0.46
1:A:377:ARG:HG2	1:A:377:ARG:HH11	1.81	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:891:ARG:HH12	1:A:895:LYS:HD3	1.80	0.46
1:A:1165:PHE:HZ	1:A:1169:LYS:HE3	1.77	0.46
1:B:919:ILE:HD13	1:B:925:LEU:HD11	1.97	0.46
1:D:384:LEU:HD13	1:D:408:ILE:HD13	1.98	0.46
1:D:409:ARG:HB2	1:D:507:GLU:CG	2.46	0.46
1:D:678:VAL:HB	1:D:981:VAL:HG12	1.97	0.46
1:B:341:THR:O	1:B:345:VAL:HG22	2.16	0.46
1:B:587:PRO:HA	1:B:590:TRP:HE1	1.81	0.46
1:B:1003:VAL:HG23	1:B:1027:LEU:HA	1.98	0.46
1:D:721:GLN:HA	1:D:724:GLU:OE1	2.15	0.46
1:B:919:ILE:HG21	1:B:925:LEU:HD11	1.98	0.46
1:D:332:SER:O	1:D:334:ARG:HG3	2.16	0.46
1:D:548:TYR:HA	1:D:551:MET:HE1	1.97	0.46
1:D:660:HIS:CD2	1:D:1190:GLU:HG3	2.50	0.46
1:D:737:GLU:HA	1:D:740:MET:HG3	1.96	0.46
1:E:298:VAL:O	1:E:302:ILE:HG12	2.16	0.46
1:A:608:PHE:HE2	1:A:616:ILE:H	1.64	0.46
1:B:270:VAL:O	1:B:274:PRO:HD3	2.16	0.46
1:B:1151:PRO:HB3	1:B:1179:VAL:HG23	1.97	0.46
1:C:723:LYS:HE3	1:C:723:LYS:HA	1.98	0.46
1:F:184:LEU:HD21	1:F:224:TYR:HB2	1.97	0.46
1:B:338:ILE:HA	1:B:377:ARG:HH12	1.81	0.46
1:B:898:LYS:HA	1:B:901:VAL:HG12	1.98	0.46
1:E:211:LEU:HG	1:E:217:LEU:HD11	1.98	0.46
1:A:585:LEU:H	1:A:585:LEU:HD12	1.81	0.46
1:A:1086:HIS:HD2	1:A:1245:LYS:HD2	1.80	0.46
1:B:252:GLN:HA	1:B:255:VAL:HG12	1.97	0.46
1:E:244:ILE:O	1:E:248:ILE:HG22	2.16	0.46
1:A:377:ARG:NH1	1:A:381:VAL:HG11	2.31	0.45
1:C:442:TRP:HB2	1:C:474:GLN:NE2	2.32	0.45
1:A:779:HIS:CE1	1:A:790:VAL:HG23	2.51	0.45
1:C:745:ARG:HG3	1:C:747:GLN:H	1.80	0.45
1:D:147:LYS:HD2	1:D:147:LYS:C	2.41	0.45
1:D:329:HIS:ND1	1:D:329:HIS:O	2.48	0.45
1:C:712:ARG:O	1:C:716:MET:HG3	2.15	0.45
1:D:744:LEU:HD11	1:D:749:LEU:HB2	1.98	0.45
1:D:1251:ARG:HE	1:D:1256:ILE:HG23	1.80	0.45
1:B:321:LEU:HD12	1:B:324:PRO:HA	1.96	0.45
1:B:610:LEU:HD21	1:B:636:LEU:HD21	1.98	0.45
1:D:860:LEU:HA	1:D:863:MET:HG3	1.99	0.45
1:E:267:SER:HA	1:E:270:VAL:HG12	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:229:ILE:HD11	1:F:275:THR:HB	1.98	0.45
1:B:1040:ALA:HB2	1:B:1051:LEU:HD22	1.97	0.45
1:D:351:PRO:HG2	1:D:353:LEU:HD21	1.98	0.45
1:B:290:GLU:HA	1:B:293:LYS:HG2	1.99	0.45
1:B:309:ARG:HG2	1:B:309:ARG:HH11	1.81	0.45
1:B:1090:ASP:O	1:B:1091:LEU:HD13	2.16	0.45
1:E:212:LYS:HD2	1:E:262:SER:HB3	1.97	0.45
1:B:192:ARG:HH12	1:B:193:LYS:HD2	1.82	0.45
1:B:1057:GLU:O	1:B:1061:LYS:HB2	2.17	0.45
1:D:385:ARG:O	1:D:388:ILE:HG22	2.17	0.45
1:D:687:GLU:HA	1:D:690:LYS:HG2	1.99	0.45
1:D:897:MET:HB3	1:D:900:ARG:HH21	1.81	0.45
1:B:878:ALA:HB1	1:B:891:ARG:HD2	1.98	0.45
1:C:338:ILE:HG21	1:C:516:ARG:HG2	1.98	0.45
1:A:708:PRO:HD2	1:A:711:LEU:HD12	1.99	0.45
1:A:1156:ILE:HB	1:A:1181:VAL:HG13	1.99	0.45
1:B:264:GLN:H	1:B:264:GLN:HG2	1.54	0.45
1:B:1156:ILE:HG21	1:B:1167:LEU:HD11	1.99	0.45
1:C:727:GLN:O	1:C:731:GLU:HG2	2.17	0.45
1:C:902:LYS:O	1:C:906:ARG:HG3	2.17	0.45
1:D:272:LEU:HD21	1:E:268:MET:HG2	1.99	0.45
1:D:293:LYS:HA	1:D:296:GLU:OE1	2.17	0.45
1:D:599:ASP:O	1:D:603:MET:HE2	2.17	0.45
1:D:1189:GLY:HA2	2:D:2000:AGS:O2G	2.16	0.45
1:A:1241:PRO:O	1:A:1245:LYS:HG3	2.16	0.44
1:D:1105:GLY:HA3	1:D:1147:GLN:OE1	2.17	0.44
1:D:1416:CYS:O	1:D:1419:VAL:HB	2.16	0.44
1:A:273:LEU:HA	1:A:273:LEU:HD23	1.81	0.44
1:A:617:ILE:HA	1:A:1067:VAL:HG12	1.99	0.44
1:B:511:TYR:HB2	1:B:836:ARG:HH21	1.82	0.44
1:D:1380:LEU:HD13	1:D:1398:CYS:HA	2.00	0.44
1:F:255:VAL:HG13	1:F:266:THR:HG21	1.99	0.44
1:A:862:LYS:HA	1:A:868:ARG:HH22	1.83	0.44
1:A:1059:LEU:HD13	1:A:1064:ILE:HG13	1.99	0.44
1:A:1171:MET:HB2	1:A:1176:PHE:CD2	2.53	0.44
1:B:388:ILE:HG12	1:B:461:PHE:CE2	2.52	0.44
1:B:1114:GLU:CG	1:B:1234:MET:HG3	2.48	0.44
1:C:199:MET:H	1:C:199:MET:HG2	1.59	0.44
1:C:928:SER:HA	1:C:931:TRP:CE3	2.52	0.44
1:D:305:LEU:HA	1:D:308:LYS:CE	2.47	0.44
1:D:1009:ALA:O	1:D:1038:PRO:HD3	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:342:TYR:O	1:B:346:HIS:HB2	2.17	0.44
1:A:649:LYS:HD3	1:A:649:LYS:N	2.32	0.44
1:B:1143:TYR:HE2	1:B:1262:LEU:HD22	1.82	0.44
1:D:881:GLU:HG2	1:D:882:GLN:HG2	1.99	0.44
1:D:1112:PHE:HE1	1:D:1228:MET:HE1	1.82	0.44
1:D:1199:LEU:HD13	1:D:1237:LEU:HD22	1.99	0.44
1:A:1095:PRO:O	1:A:1098:LEU:HB2	2.17	0.44
1:A:1276:LYS:HA	1:A:1276:LYS:HD2	1.88	0.44
1:B:1133:GLU:HA	1:B:1136:PHE:HB2	2.00	0.44
1:C:195:CYS:SG	1:C:208:LEU:HD21	2.57	0.44
1:C:208:LEU:HB3	1:C:258:PHE:HE2	1.82	0.44
1:C:1197:LEU:O	1:C:1230:CYS:HA	2.18	0.44
1:D:1096:SER:HA	1:D:1099:LYS:HZ3	1.83	0.44
1:B:437:LEU:HB2	1:B:440:VAL:HB	1.99	0.44
1:B:836:ARG:HA	1:B:986:THR:HG21	1.99	0.44
1:B:1156:ILE:HD13	1:B:1181:VAL:HG12	2.00	0.44
1:C:711:LEU:O	1:C:715:TYR:HB2	2.18	0.44
1:C:942:GLN:HB2	1:C:946:ARG:NH2	2.33	0.44
1:D:249:SER:O	1:D:252:GLN:HG2	2.17	0.44
1:D:291:THR:O	1:D:295:LEU:HG	2.17	0.44
1:D:1078:GLU:HA	1:D:1081:ARG:HH11	1.83	0.44
1:A:761:LEU:O	1:A:781:MET:HE3	2.18	0.44
1:A:1074:ARG:HE	1:A:1074:ARG:HB3	1.52	0.44
1:B:693:THR:HG23	1:B:695:ARG:H	1.83	0.44
1:B:848:ARG:CG	1:B:853:GLU:HG3	2.47	0.44
1:D:648:GLN:HB2	1:D:650:PHE:CE1	2.53	0.44
1:B:590:TRP:H	1:B:590:TRP:CD1	2.35	0.44
1:D:628:VAL:HA	1:D:631:LYS:HZ2	1.83	0.44
1:F:293:LYS:O	1:F:297:LYS:HG3	2.17	0.44
1:B:249:SER:O	1:B:252:GLN:HG3	2.18	0.43
1:B:413:ASP:HB2	1:B:433:ASP:HB2	1.99	0.43
1:B:838:ILE:HG21	1:B:990:LYS:HE3	2.00	0.43
1:B:946:ARG:HB2	1:B:947:ARG:NH1	2.32	0.43
1:B:949:ILE:HA	1:B:952:TYR:CD2	2.53	0.43
1:C:1298:CYS:HB2	1:C:1337:CYS:SG	2.58	0.43
1:D:688:ILE:HD12	1:D:688:ILE:H	1.83	0.43
1:D:1074:ARG:NH1	2:D:2000:AGS:O3G	2.51	0.43
1:A:863:MET:SD	1:A:864:LEU:HG	2.58	0.43
1:B:744:LEU:HD12	1:B:864:LEU:HD11	1.99	0.43
1:B:838:ILE:HG23	1:B:840:GLU:OE1	2.17	0.43
1:B:1135:HIS:HA	1:B:1138:VAL:HG22	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1144:PHE:HA	1:A:1147:GLN:HB2	2.00	0.43
1:B:187:ILE:HA	1:B:190:VAL:HG12	2.00	0.43
1:B:1273:LEU:HD12	1:B:1273:LEU:HA	1.88	0.43
1:E:161:VAL:HB	1:E:194:ALA:HB1	2.00	0.43
1:E:184:LEU:HD13	1:E:224:TYR:HB2	2.00	0.43
1:A:1010:GLU:OE1	1:A:1188:GLN:HG3	2.17	0.43
1:A:1300:HIS:CG	1:A:1320:LYS:HD2	2.54	0.43
1:C:433:ASP:OD2	1:C:436:PRO:HD2	2.19	0.43
1:E:193:LYS:HB3	1:E:193:LYS:HE3	1.73	0.43
1:B:1360:MET:HE3	1:B:1360:MET:HA	2.00	0.43
1:C:248:ILE:HG12	1:C:295:LEU:HD22	1.99	0.43
1:C:388:ILE:HG12	1:C:461:PHE:HE1	1.84	0.43
1:C:1218:CYS:O	1:C:1222:SER:HB3	2.19	0.43
1:D:179:MET:HE2	1:D:179:MET:HA	2.00	0.43
1:D:870:ASP:N	1:D:898:LYS:HD3	2.33	0.43
1:B:455:CYS:HA	1:B:465:LEU:O	2.18	0.43
1:B:712:ARG:O	1:B:716:MET:HG2	2.19	0.43
1:B:1197:LEU:O	1:B:1230:CYS:HA	2.18	0.43
1:A:488:GLU:HA	1:A:491:GLN:HB3	2.01	0.43
1:B:781:MET:O	1:B:785:TRP:HB2	2.19	0.43
1:C:244:ILE:HD13	1:C:244:ILE:HA	1.76	0.43
1:C:643:TRP:H	1:C:643:TRP:CD1	2.36	0.43
1:D:1095:PRO:HA	1:D:1098:LEU:HG	2.00	0.43
1:A:840:GLU:HG2	1:A:841:GLU:N	2.34	0.43
1:A:1086:HIS:CD2	1:A:1245:LYS:HB2	2.54	0.43
1:D:1378:LYS:HD3	1:D:1379:SER:N	2.32	0.43
1:E:212:LYS:HA	1:E:217:LEU:HD12	2.00	0.43
1:B:353:LEU:HB2	1:B:1049:PHE:CE1	2.54	0.43
1:B:755:PRO:HA	1:B:758:TRP:HB3	2.01	0.43
1:C:161:VAL:HG22	1:C:203:SER:OG	2.19	0.43
1:C:609:ALA:HB2	1:C:617:ILE:HD11	2.00	0.43
1:C:849:ARG:HD2	1:C:849:ARG:HA	1.79	0.43
1:C:884:THR:HG21	1:C:891:ARG:HB3	1.99	0.43
1:D:1203:ASN:C	1:D:1203:ASN:ND2	2.76	0.43
1:A:338:ILE:HD12	1:A:516:ARG:HD2	2.01	0.43
1:A:898:LYS:HA	1:A:901:VAL:HG12	2.00	0.43
1:A:910:THR:HB	1:A:932:GLN:NE2	2.33	0.43
1:A:1212:GLN:HA	1:A:1240:VAL:HG21	2.01	0.43
1:B:253:ASP:O	1:B:257:VAL:HG12	2.18	0.43
1:B:299:GLN:HA	1:B:302:ILE:HG22	2.01	0.43
1:D:745:ARG:HD2	1:D:747:GLN:OE1	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:157:PRO:O	1:A:161:VAL:HG12	2.18	0.42
1:A:741:ARG:NH2	1:A:868:ARG:HH11	2.17	0.42
1:B:1380:LEU:HD21	1:B:1386:CYS:HA	2.01	0.42
1:D:298:VAL:HA	1:D:301:ILE:HG12	2.01	0.42
1:D:693:THR:O	1:D:697:LEU:HD13	2.19	0.42
1:D:976:LYS:HG2	1:D:998:VAL:HG12	2.01	0.42
1:A:144:LEU:HB2	1:A:173:LEU:HD22	2.01	0.42
1:A:698:ARG:HB2	1:A:974:ILE:HD11	2.01	0.42
1:B:741:ARG:NH2	1:B:871:HIS:HE1	2.17	0.42
1:B:1159:THR:OG1	1:B:1199:LEU:HB2	2.19	0.42
1:B:1397:LEU:HD13	1:B:1415:LYS:HE3	2.01	0.42
1:D:267:SER:HA	1:D:270:VAL:HG22	2.00	0.42
1:D:435:LYS:HA	1:D:438:LYS:HE3	2.00	0.42
1:D:758:TRP:CE3	1:D:761:LEU:HB3	2.54	0.42
1:F:231:GLU:HB3	1:F:237:ARG:HE	1.84	0.42
1:B:936:LEU:O	1:B:940:LEU:HG	2.19	0.42
1:C:1073:HIS:HD1	1:C:1094:HIS:HB2	1.84	0.42
1:D:423:SER:HB3	1:D:842:GLU:OE2	2.19	0.42
1:D:1077:PRO:HA	1:D:1080:ALA:HB3	2.01	0.42
1:A:466:PHE:HB2	1:A:487:ASN:HD21	1.84	0.42
1:B:411:TYR:HB2	1:B:505:MET:HG2	2.02	0.42
1:B:518:VAL:O	1:B:522:LEU:HG	2.20	0.42
1:B:872:CYS:SG	1:B:873:GLY:N	2.92	0.42
1:C:149:LEU:HD12	1:C:190:VAL:HG11	2.01	0.42
1:C:332:SER:O	1:C:334:ARG:HG2	2.19	0.42
1:C:679:ARG:HH12	1:C:684:SER:HB2	1.84	0.42
1:C:945:THR:O	1:C:949:ILE:HG22	2.19	0.42
1:D:557:PHE:CE2	1:D:582:ILE:HD11	2.53	0.42
1:D:1145:LEU:HD21	1:D:1151:PRO:HA	2.00	0.42
1:D:1385:ARG:HA	1:D:1385:ARG:HD3	1.82	0.42
1:F:270:VAL:O	1:F:274:PRO:HD3	2.19	0.42
1:A:1184:VAL:HG12	1:A:1219:VAL:HG13	2.01	0.42
1:C:1113:VAL:HA	1:C:1257:GLY:O	2.19	0.42
1:D:422:SER:OG	1:D:423:SER:N	2.52	0.42
1:D:624:GLY:CA	2:D:2000:AGS:H8	2.48	0.42
1:D:881:GLU:HG2	1:D:882:GLN:H	1.84	0.42
1:A:1055:LEU:HD12	1:A:1055:LEU:HA	1.87	0.42
1:C:1208:VAL:HB	1:C:1212:GLN:HG3	2.00	0.42
1:E:177:SER:HB2	1:E:219:VAL:HG11	2.02	0.42
1:B:410:ILE:HG22	1:B:506:VAL:HG12	2.02	0.42
1:C:451:GLY:HA3	1:C:511:TYR:CE1	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:961:GLU:O	1:C:965:GLU:HG2	2.19	0.42
1:C:1110:LEU:HD11	1:C:1112:PHE:HE1	1.84	0.42
1:D:610:LEU:HD23	1:D:610:LEU:HA	1.87	0.42
1:D:679:ARG:HH12	1:D:684:SER:HB3	1.84	0.42
1:D:1097:VAL:HG23	1:D:1100:TYR:CE2	2.54	0.42
1:A:738:CYS:SG	1:A:865:LEU:HD13	2.60	0.42
1:B:183:PHE:O	1:B:187:ILE:HG12	2.20	0.42
1:B:1203:ASN:ND2	1:B:1236:MET:HE1	2.35	0.42
1:C:336:MET:HE2	1:C:377:ARG:HE	1.85	0.42
1:C:677:ILE:HD12	1:C:980:VAL:HB	2.01	0.42
1:D:579:HIS:HB3	1:D:581:ARG:HH22	1.85	0.42
1:D:891:ARG:HD3	1:D:891:ARG:HA	1.77	0.42
1:A:694:LEU:HD23	1:A:694:LEU:HA	1.79	0.42
1:A:758:TRP:CE3	1:A:761:LEU:HD23	2.55	0.42
1:A:887:TRP:CD1	1:A:891:ARG:HB2	2.52	0.42
1:A:1073:HIS:CE1	2:A:2000:AGS:C8	3.03	0.42
1:B:364:SER:OG	1:B:367:ILE:HG22	2.19	0.42
1:B:409:ARG:HB2	1:B:507:GLU:HG3	2.02	0.42
1:B:704:ARG:HH21	1:B:712:ARG:HB3	1.85	0.42
1:C:934:TYR:CZ	1:C:938:LEU:HD21	2.54	0.42
1:D:444:ASN:HA	1:D:827:GLU:OE2	2.20	0.42
1:D:1103:ILE:HB	1:D:1106:VAL:HG21	2.01	0.42
1:A:388:ILE:HD12	1:A:388:ILE:HA	1.89	0.42
1:A:922:VAL:HG11	1:A:933:LEU:HD11	2.01	0.42
1:B:158:SER:HA	1:B:161:VAL:HG12	2.01	0.42
1:C:491:GLN:HE21	1:C:957:ARG:HD2	1.85	0.42
1:C:899:LYS:HD3	1:D:880:GLN:HG3	2.01	0.42
1:C:944:ASP:O	1:C:948:LYS:HG3	2.20	0.42
1:D:1036:LEU:HD23	1:D:1036:LEU:HA	1.81	0.42
1:A:376:LEU:HB3	1:A:519:LEU:HD21	2.02	0.41
1:A:849:ARG:HA	1:A:849:ARG:HD2	1.75	0.41
1:A:1376:CYS:HB3	1:A:1386:CYS:HB3	2.02	0.41
1:B:189:GLN:HG3	1:B:192:ARG:HH21	1.84	0.41
1:B:1127:SER:HB2	1:B:1162:GLY:H	1.85	0.41
1:B:1381:ARG:HG2	1:B:1381:ARG:HH11	1.84	0.41
1:D:1157:LEU:HD23	1:D:1195:ILE:HG23	2.02	0.41
1:A:741:ARG:HG3	1:A:869:LEU:HD12	2.02	0.41
1:A:961:GLU:O	1:A:965:GLU:HG2	2.19	0.41
1:B:1197:LEU:HD12	1:B:1198:SER:N	2.35	0.41
1:C:217:LEU:HD12	1:C:221:LEU:HD12	2.02	0.41
1:E:208:LEU:HA	1:E:211:LEU:HB3	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:248:ILE:HG13	1:A:295:LEU:HD22	2.02	0.41
1:A:453:LEU:HD12	1:A:512:PHE:CD1	2.55	0.41
1:B:606:LEU:HB3	1:B:631:LYS:NZ	2.36	0.41
1:B:658:THR:HG22	1:B:1007:GLU:OE1	2.20	0.41
1:B:848:ARG:HG2	1:B:853:GLU:HG3	2.03	0.41
1:C:302:ILE:HA	1:C:305:LEU:HG	2.02	0.41
1:C:1213:ILE:HD12	1:C:1213:ILE:H	1.84	0.41
1:D:179:MET:SD	1:D:183:PHE:HB3	2.60	0.41
1:D:231:GLU:HG3	1:D:233:ILE:HG12	2.01	0.41
1:A:379:ASP:OD1	1:A:1051:LEU:HD21	2.20	0.41
1:B:1234:MET:HG2	1:B:1256:ILE:HD11	2.03	0.41
1:D:446:LYS:HB3	1:D:446:LYS:HE2	1.81	0.41
1:D:719:MET:O	1:D:723:LYS:HG3	2.21	0.41
1:D:723:LYS:O	1:D:726:GLU:HG2	2.19	0.41
1:A:301:ILE:HA	1:A:304:HIS:CE1	2.55	0.41
1:B:1012:LEU:HD12	1:B:1013:GLU:H	1.84	0.41
1:C:698:ARG:HB2	1:C:974:ILE:HD11	2.01	0.41
1:C:1110:LEU:HD11	1:C:1112:PHE:CE1	2.55	0.41
1:D:293:LYS:HA	1:D:293:LYS:HD2	1.86	0.41
1:D:587:PRO:HA	1:D:590:TRP:CE2	2.56	0.41
1:D:749:LEU:HA	1:D:941:TYR:HE2	1.85	0.41
1:D:1103:ILE:HB	1:D:1106:VAL:CG2	2.50	0.41
1:D:1267:HIS:HB2	1:D:1270:THR:OG1	2.21	0.41
1:A:780:SER:O	1:A:783:LEU:HB2	2.21	0.41
1:A:821:SER:C	1:A:822:LEU:HD23	2.46	0.41
1:C:170:LEU:HD12	1:C:173:LEU:HD23	2.02	0.41
1:C:992:ARG:NH2	1:C:993:GLN:HG3	2.36	0.41
1:C:1380:LEU:HD21	1:C:1386:CYS:HB2	2.02	0.41
1:D:457:SER:HB2	1:D:461:PHE:CE1	2.55	0.41
1:F:206:HIS:O	1:F:210:ILE:HG12	2.21	0.41
1:A:1078:GLU:HA	1:A:1081:ARG:NH1	2.36	0.41
1:A:1154:ILE:HD13	1:A:1194:ILE:HB	2.03	0.41
1:B:603:MET:HA	1:B:606:LEU:HG	2.02	0.41
1:B:1158:THR:HG21	1:B:1164:LEU:HB2	2.02	0.41
1:C:152:LEU:HD23	1:C:152:LEU:HA	1.90	0.41
1:C:221:LEU:HD23	1:C:221:LEU:HA	1.81	0.41
1:C:446:LYS:H	1:C:446:LYS:HG2	1.77	0.41
1:D:761:LEU:HD13	1:D:785:TRP:HZ3	1.85	0.41
1:A:597:LYS:HB2	1:A:597:LYS:HE2	1.78	0.41
1:A:850:LYS:HA	1:A:850:LYS:HD3	1.74	0.41
1:B:217:LEU:HD13	1:B:254:LEU:HD21	2.03	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:543:VAL:HG21	1:B:612:ARG:HB3	2.02	0.41
1:B:653:LEU:HA	1:B:981:VAL:HG23	2.02	0.41
1:D:587:PRO:HA	1:D:590:TRP:CD2	2.55	0.41
1:E:184:LEU:HD21	1:E:221:LEU:HD13	2.03	0.41
1:E:254:LEU:HA	1:E:257:VAL:HG12	2.03	0.41
1:A:461:PHE:HB3	1:A:464:PHE:HE1	1.86	0.41
1:A:532:PHE:O	1:A:536:ILE:HG22	2.20	0.41
1:A:1010:GLU:C	1:A:1038:PRO:HG3	2.46	0.41
1:A:1086:HIS:H	1:A:1086:HIS:HD1	1.68	0.41
1:A:1217:ILE:HD12	1:A:1243:TRP:CZ2	2.55	0.41
1:B:516:ARG:HA	1:B:519:LEU:HD12	2.02	0.41
1:B:643:TRP:HE3	1:B:1001:ARG:HD2	1.86	0.41
1:B:891:ARG:HH22	1:B:895:LYS:HD3	1.84	0.41
1:C:173:LEU:HD21	1:C:187:ILE:HD11	2.02	0.41
1:C:245:SER:HA	1:C:248:ILE:HG22	2.03	0.41
1:C:293:LYS:HE2	1:C:293:LYS:HB2	1.92	0.41
1:C:761:LEU:HA	1:C:923:TRP:HE1	1.85	0.41
1:C:779:HIS:HE1	1:C:790:VAL:HG23	1.86	0.41
1:C:838:ILE:HG13	1:C:839:GLU:H	1.86	0.41
1:C:1189:GLY:H	1:C:1223:ARG:HH12	1.68	0.41
1:D:308:LYS:HE3	1:D:322:VAL:HG21	2.02	0.41
1:D:881:GLU:HG2	1:D:882:GLN:N	2.36	0.41
1:D:1096:SER:HA	1:D:1099:LYS:NZ	2.36	0.41
1:D:1145:LEU:HD23	1:D:1145:LEU:HA	1.83	0.41
1:E:157:PRO:HB3	1:E:194:ALA:HA	2.03	0.41
1:E:183:PHE:O	1:E:187:ILE:HG22	2.21	0.41
1:A:201:ARG:HE	1:A:205:LEU:HD23	1.86	0.41
1:A:270:VAL:HG11	1:A:302:ILE:HD12	2.02	0.41
1:A:624:GLY:HA2	2:A:2000:AGS:O1A	2.21	0.41
1:B:823:ILE:HD12	1:B:823:ILE:HA	1.88	0.41
1:B:983:MET:HE1	1:B:991:TYR:HB2	2.03	0.41
1:B:1002:ILE:HG12	1:B:1026:HIS:HB3	2.02	0.41
1:B:1172:PRO:O	1:B:1176:PHE:HB2	2.21	0.41
1:D:704:ARG:HH12	1:D:712:ARG:NE	2.19	0.41
1:D:1009:ALA:O	1:D:1037:ARG:HA	2.21	0.41
1:D:1158:THR:HG22	1:D:1198:SER:HB3	2.03	0.41
1:E:219:VAL:C	1:E:222:PRO:HD2	2.47	0.41
1:A:828:GLU:O	1:A:832:ILE:HG22	2.20	0.40
1:A:848:ARG:HE	1:A:850:LYS:HE2	1.86	0.40
1:A:1403:THR:HA	1:A:1413:PRO:HA	2.03	0.40
1:B:346:HIS:NE2	1:B:461:PHE:HB3	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:456:MET:O	1:C:465:LEU:HB2	2.22	0.40
1:C:1171:MET:HB2	1:C:1176:PHE:CE1	2.56	0.40
1:D:202:GLN:HG2	1:D:961:GLU:HB2	2.03	0.40
1:A:238:ASN:O	1:A:241:PRO:HD2	2.22	0.40
1:A:421:CYS:HB3	1:A:956:TYR:CE2	2.57	0.40
1:A:636:LEU:HD23	1:A:636:LEU:HA	1.86	0.40
1:A:1139:GLU:O	1:A:1142:LYS:HG2	2.22	0.40
1:B:627:TYR:HA	1:B:630:LEU:HG	2.04	0.40
1:B:976:LYS:HE3	1:B:976:LYS:HB3	1.97	0.40
1:B:1087:ILE:HD13	1:B:1087:ILE:HA	1.91	0.40
1:B:1234:MET:HE2	1:B:1247:ILE:HD13	2.03	0.40
1:C:1273:LEU:HD12	1:C:1273:LEU:HA	1.97	0.40
1:D:230:THR:HA	1:E:309:ARG:NH1	2.36	0.40
1:D:1037:ARG:HD2	1:D:1215:ASN:HD21	1.86	0.40
1:A:1189:GLY:HA2	2:A:2000:AGS:O3G	2.21	0.40
1:B:743:VAL:O	1:B:865:LEU:HD12	2.22	0.40
1:C:233:ILE:HA	1:C:234:PRO:HD3	1.97	0.40
1:C:1168:ARG:HG2	1:C:1168:ARG:NH1	2.36	0.40
1:C:1208:VAL:HG12	1:C:1211:LEU:HB2	2.03	0.40
1:D:299:GLN:HA	1:D:302:ILE:HG22	2.03	0.40
1:E:152:LEU:HD22	1:E:160:VAL:HG12	2.04	0.40
1:B:305:LEU:HA	1:B:308:LYS:HD3	2.02	0.40
1:B:338:ILE:HG13	1:B:339:TYR:N	2.37	0.40
1:B:704:ARG:HH21	1:B:712:ARG:HE	1.68	0.40
1:C:615:ALA:HB3	1:C:1028:ILE:HG12	2.03	0.40
1:C:637:LEU:HA	1:C:637:LEU:HD23	1.90	0.40
1:C:902:LYS:O	1:C:902:LYS:HD3	2.21	0.40
1:D:156:ASP:O	1:D:160:VAL:HG13	2.21	0.40
1:D:174:LEU:HD12	1:D:216:PHE:HB2	2.03	0.40
1:D:849:ARG:HD2	1:D:849:ARG:HA	1.78	0.40
1:D:1149:TYR:HD2	1:D:1149:TYR:HA	1.79	0.40
1:F:290:GLU:HG3	1:F:293:LYS:HE3	2.02	0.40
1:A:560:LEU:HD21	1:A:635:ALA:HA	2.04	0.40
1:A:782:MET:HA	1:A:785:TRP:HB3	2.04	0.40
1:A:904:GLU:HG3	1:A:931:TRP:CZ2	2.57	0.40
1:B:216:PHE:HA	1:B:220:CYS:HB2	2.04	0.40
1:B:632:ILE:O	1:B:636:LEU:HG	2.22	0.40
1:B:895:LYS:O	1:B:899:LYS:HG3	2.21	0.40
1:C:625:LYS:HE3	1:C:1031:GLY:HA2	2.04	0.40
1:D:655:VAL:HA	1:D:983:MET:O	2.21	0.40
1:F:270:VAL:HA	1:F:273:LEU:HG	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	1278/1918 (67%)	1224 (96%)	54 (4%)	0	100	100
1	B	1278/1918 (67%)	1215 (95%)	63 (5%)	0	100	100
1	C	1278/1918 (67%)	1221 (96%)	57 (4%)	0	100	100
1	D	1278/1918 (67%)	1233 (96%)	45 (4%)	0	100	100
1	E	170/1918 (9%)	163 (96%)	7 (4%)	0	100	100
1	F	170/1918 (9%)	168 (99%)	2 (1%)	0	100	100
All	All	5452/11508 (47%)	5224 (96%)	228 (4%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	1162/1726 (67%)	1136 (98%)	26 (2%)	45	63
1	B	1162/1726 (67%)	1136 (98%)	26 (2%)	45	63
1	C	1162/1726 (67%)	1139 (98%)	23 (2%)	48	64
1	D	1162/1726 (67%)	1134 (98%)	28 (2%)	43	62
1	E	159/1726 (9%)	157 (99%)	2 (1%)	61	71
1	F	159/1726 (9%)	157 (99%)	2 (1%)	61	71

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	4966/10356 (48%)	4859 (98%)	107 (2%)	45 63

All (107) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	153	LEU
1	A	187	ILE
1	A	200	ASP
1	A	205	LEU
1	A	236	ILE
1	A	248	ILE
1	A	264	GLN
1	A	309	ARG
1	A	456	MET
1	A	522	LEU
1	A	558	THR
1	A	697	LEU
1	A	730	HIS
1	A	748	TYR
1	A	819	GLU
1	A	995	LEU
1	A	1017	ILE
1	A	1020	LEU
1	A	1041	ASN
1	A	1076	CYS
1	A	1091	LEU
1	A	1103	ILE
1	A	1120	GLN
1	A	1142	LYS
1	A	1148	GLU
1	A	1215	ASN
1	B	210	ILE
1	B	280	LEU
1	B	295	LEU
1	B	303	GLU
1	B	336	MET
1	B	418	THR
1	B	427	VAL
1	B	543	VAL
1	B	584	VAL
1	B	644	GLN
1	B	654	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	675	THR
1	B	694	LEU
1	B	718	ILE
1	B	992	ARG
1	B	1003	VAL
1	B	1041	ASN
1	B	1056	PHE
1	B	1083	LEU
1	B	1136	PHE
1	B	1154	ILE
1	B	1181	VAL
1	B	1230	CYS
1	B	1231	ILE
1	B	1272	THR
1	B	1296	LEU
1	C	149	LEU
1	C	179	MET
1	C	205	LEU
1	C	273	LEU
1	C	295	LEU
1	C	322	VAL
1	C	364	SER
1	C	494	LEU
1	C	504	LEU
1	C	527	GLU
1	C	544	LYS
1	C	598	LEU
1	C	631	LYS
1	C	730	HIS
1	C	897	MET
1	C	932	GLN
1	C	968	LEU
1	C	1020	LEU
1	C	1175	THR
1	C	1213	ILE
1	C	1219	VAL
1	C	1274	VAL
1	C	1319	MET
1	D	211	LEU
1	D	329	HIS
1	D	380	PHE
1	D	408	ILE

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	418	THR
1	D	427	VAL
1	D	477	LEU
1	D	517	HIS
1	D	522	LEU
1	D	543	VAL
1	D	584	VAL
1	D	627	TYR
1	D	744	LEU
1	D	819	GLU
1	D	838	ILE
1	D	868	ARG
1	D	1004	ILE
1	D	1028	ILE
1	D	1043	TYR
1	D	1110	LEU
1	D	1132	HIS
1	D	1147	GLN
1	D	1181	VAL
1	D	1203	ASN
1	D	1230	CYS
1	D	1252	GLU
1	D	1260	LEU
1	D	1348	VAL
1	E	263	VAL
1	E	291	THR
1	F	219	VAL
1	F	291	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (61) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	154	GLN
1	A	264	GLN
1	A	306	GLN
1	A	323	GLN
1	A	443	GLN
1	A	535	ASN
1	A	644	GLN
1	A	685	ASN
1	A	747	GLN
1	A	757	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	932	GLN
1	A	996	GLN
1	A	1073	HIS
1	A	1129	GLN
1	A	1203	ASN
1	A	1307	HIS
1	A	1359	GLN
1	B	372	HIS
1	B	523	GLN
1	B	659	ASN
1	B	721	GLN
1	B	750	GLN
1	B	871	HIS
1	B	979	GLN
1	B	1147	GLN
1	B	1253	ASN
1	B	1265	GLN
1	B	1317	GLN
1	C	474	GLN
1	C	483	GLN
1	C	491	GLN
1	C	535	ASN
1	C	659	ASN
1	C	660	HIS
1	C	664	GLN
1	C	685	ASN
1	C	747	GLN
1	C	779	HIS
1	C	847	GLN
1	C	996	GLN
1	C	1089	GLN
1	C	1203	ASN
1	C	1235	GLN
1	C	1253	ASN
1	C	1265	GLN
1	C	1345	GLN
1	C	1359	GLN
1	C	1412	GLN
1	D	579	HIS
1	D	589	GLN
1	D	634	GLN
1	D	660	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	685	ASN
1	D	847	GLN
1	D	1035	GLN
1	D	1147	GLN
1	D	1163	GLN
1	D	1317	GLN
1	E	189	GLN
1	F	243	HIS
1	F	304	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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

4 ligands are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	AGS	A	2000	-	32,33,33	0.71	0	45,52,52	0.78	0
2	AGS	B	2000	-	32,33,33	0.46	1 (3%)	45,52,52	0.67	1 (2%)
2	AGS	C	2000	-	32,33,33	0.64	0	45,52,52	0.76	1 (2%)
2	AGS	D	2000	-	32,33,33	0.68	1 (3%)	45,52,52	0.56	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	AGS	A	2000	-	-	5/21/38/38	0/3/3/3
2	AGS	B	2000	-	-	5/21/38/38	0/3/3/3
2	AGS	C	2000	-	-	5/21/38/38	0/3/3/3
2	AGS	D	2000	-	-	2/21/38/38	0/3/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2000	AGS	PG-S1G	2.14	1.95	1.90
2	D	2000	AGS	PG-S1G	2.01	1.95	1.90

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2000	AGS	PB-O3B-PG	-3.39	120.76	133.17
2	C	2000	AGS	PB-O3B-PG	-2.75	123.12	133.17

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	2000	AGS	C5'-O5'-PA-O1A
2	A	2000	AGS	C5'-O5'-PA-O2A
2	A	2000	AGS	C5'-O5'-PA-O3A
2	B	2000	AGS	C5'-O5'-PA-O1A
2	B	2000	AGS	C5'-O5'-PA-O3A
2	B	2000	AGS	C3'-C4'-C5'-O5'
2	C	2000	AGS	C5'-O5'-PA-O2A
2	C	2000	AGS	C5'-O5'-PA-O3A
2	C	2000	AGS	C4'-C5'-O5'-PA
2	B	2000	AGS	O4'-C4'-C5'-O5'
2	C	2000	AGS	C3'-C4'-C5'-O5'
2	C	2000	AGS	O4'-C4'-C5'-O5'
2	D	2000	AGS	O4'-C4'-C5'-O5'
2	D	2000	AGS	C3'-C4'-C5'-O5'
2	A	2000	AGS	C3'-C4'-C5'-O5'
2	A	2000	AGS	O4'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

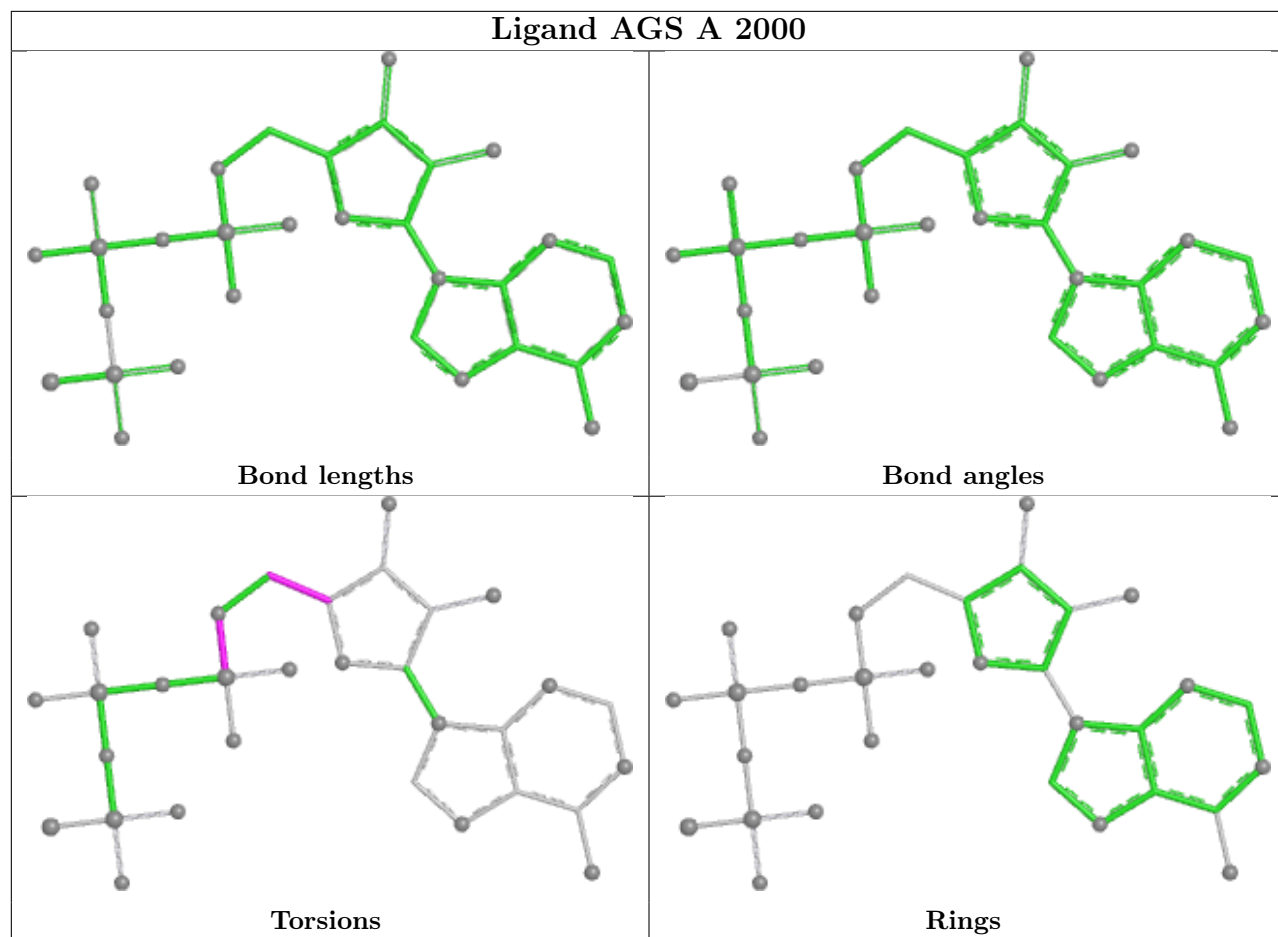
Mol	Chain	Res	Type	Atoms
2	B	2000	AGS	PA-O3A-PB-O2B

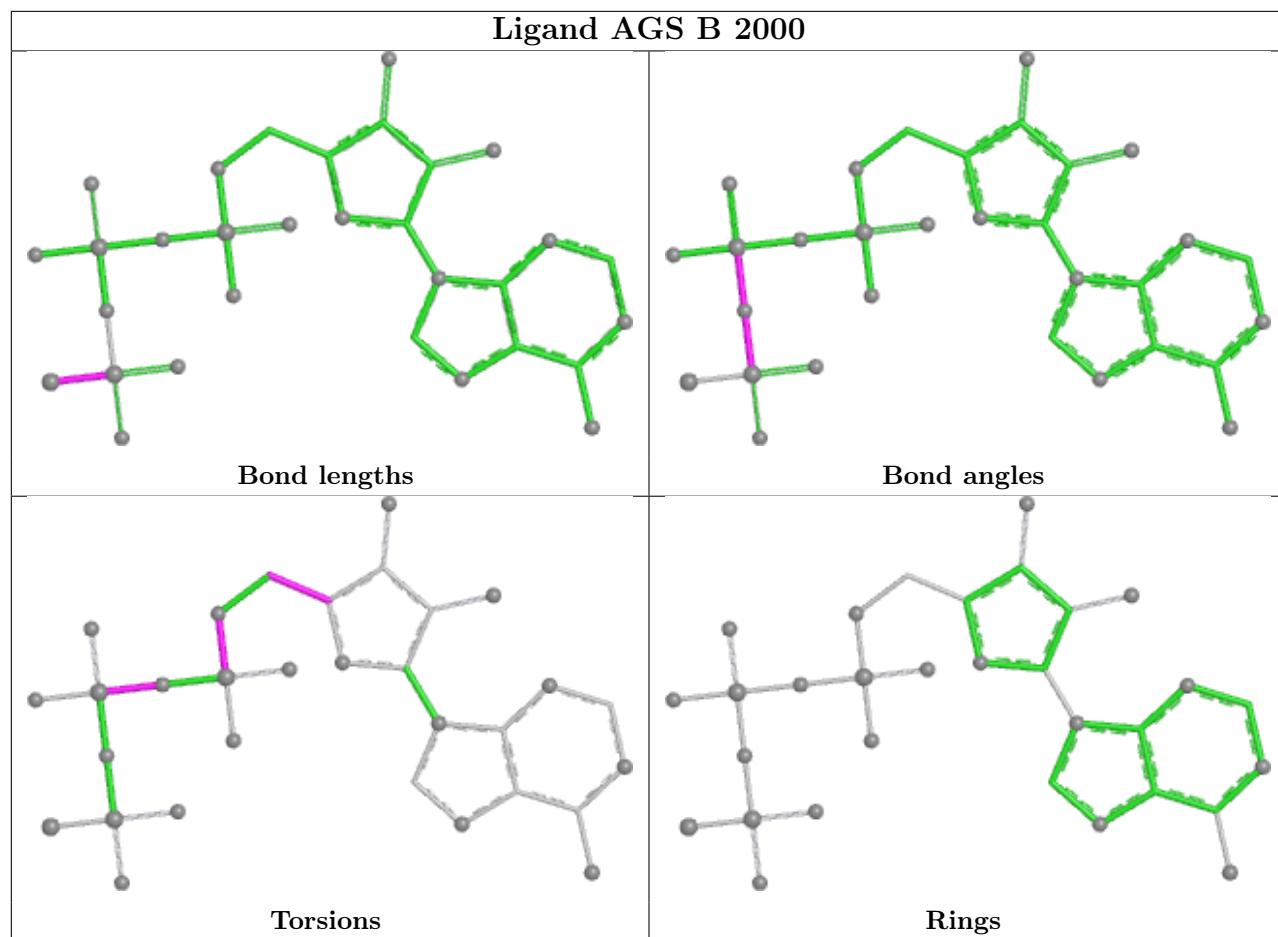
There are no ring outliers.

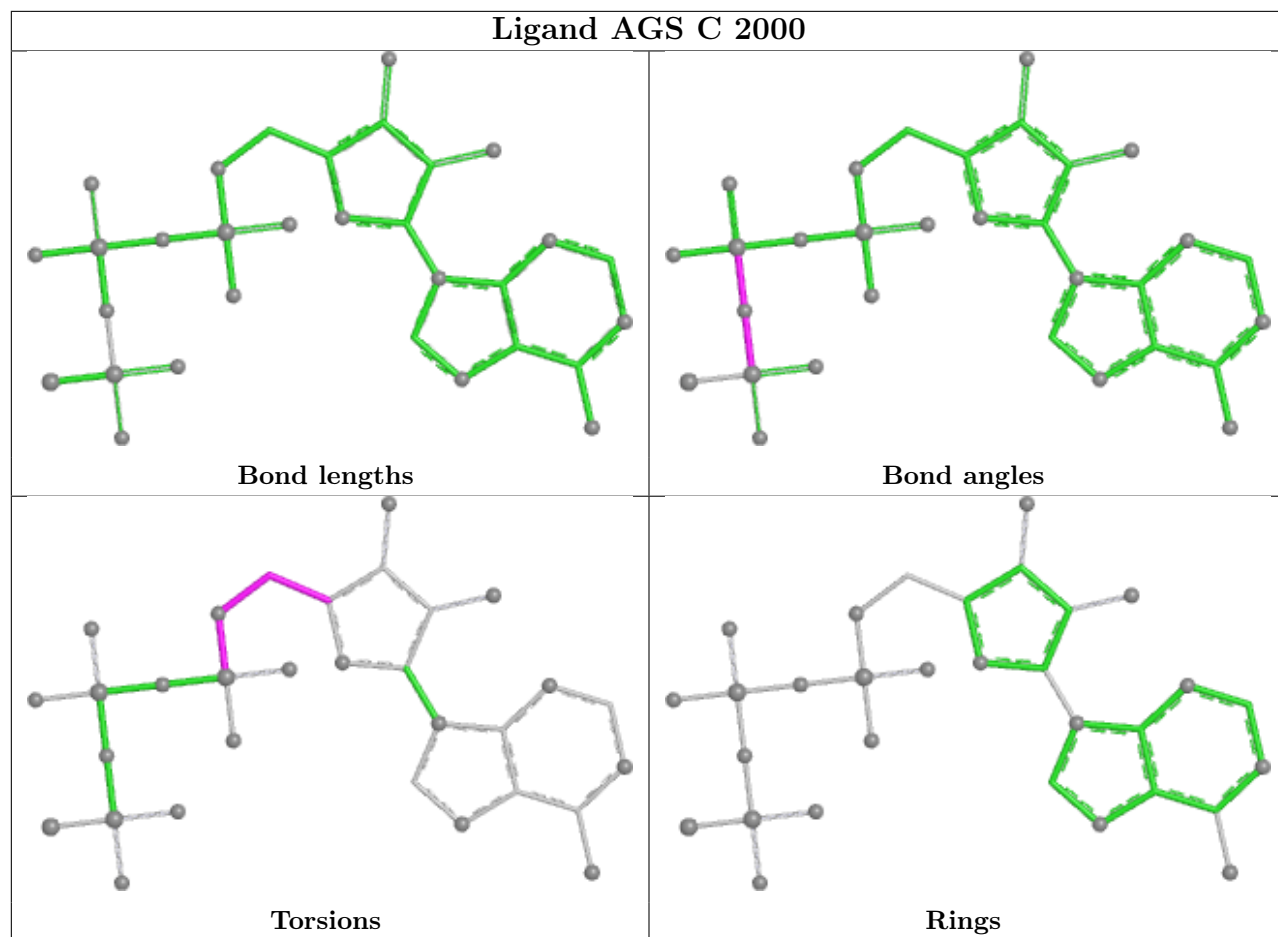
4 monomers are involved in 16 short contacts:

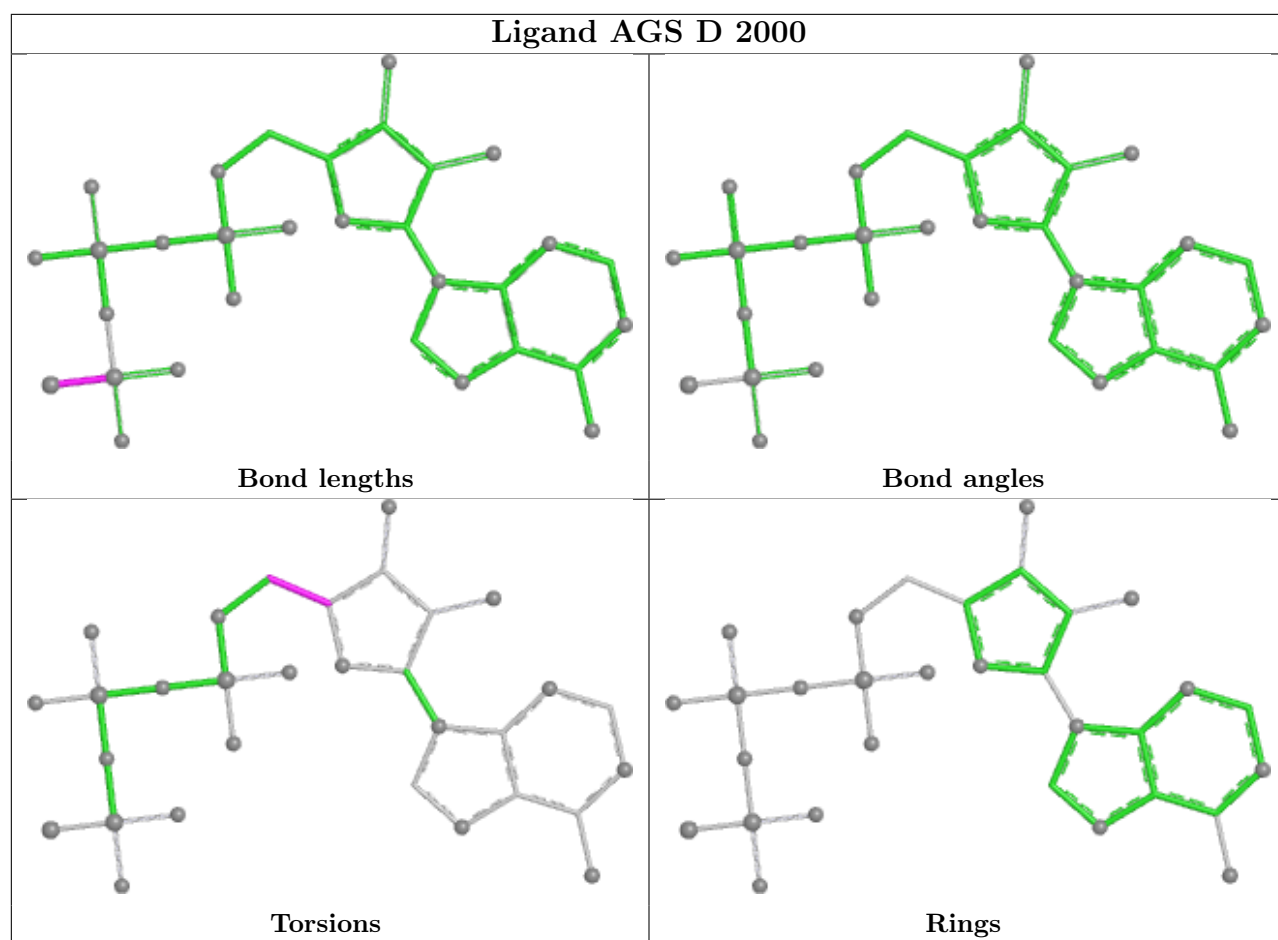
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	2000	AGS	5	0
2	B	2000	AGS	1	0
2	C	2000	AGS	2	0
2	D	2000	AGS	8	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.









5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

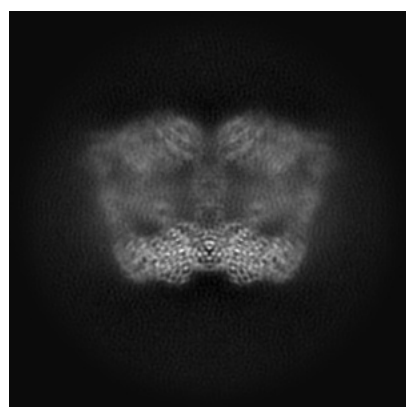
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-75702. These allow visual inspection of the internal detail of the map and identification of artifacts.

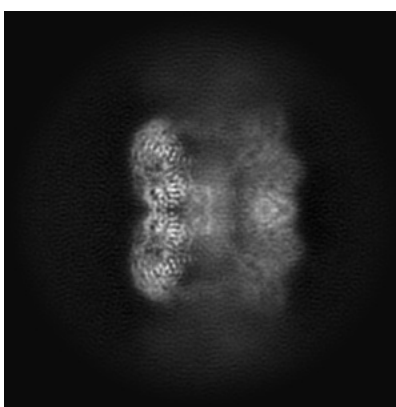
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

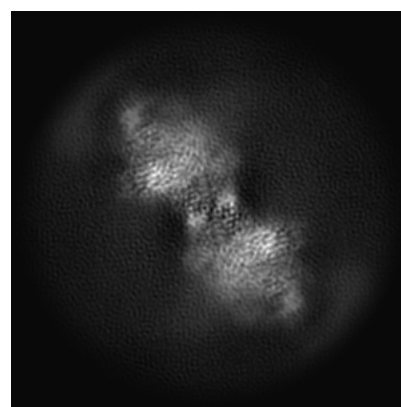
6.1.1 Primary map



X



Y

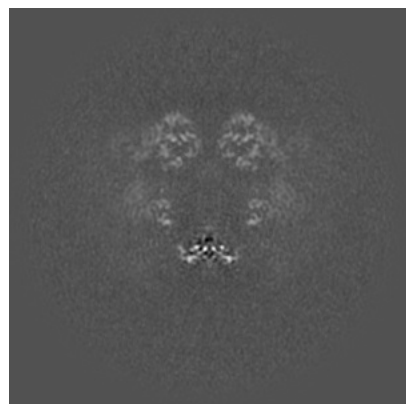


Z

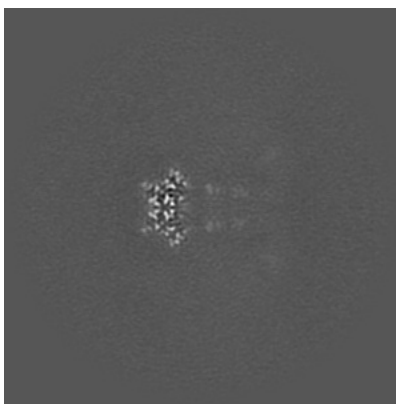
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

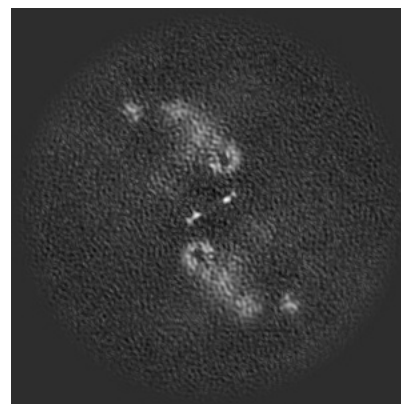
6.2.1 Primary map



X Index: 200



Y Index: 200

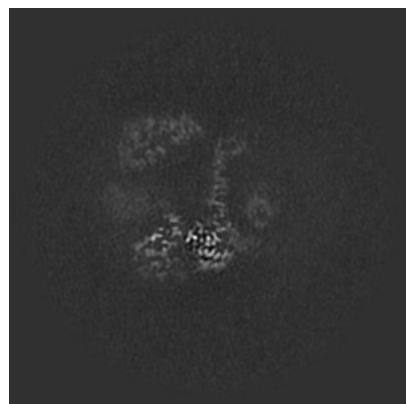


Z Index: 200

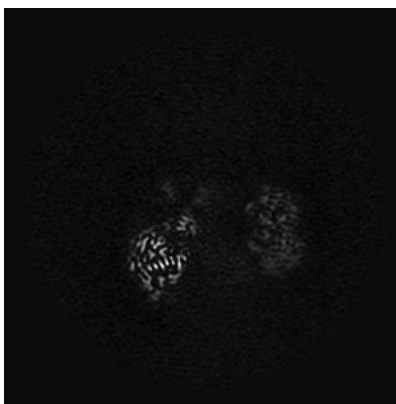
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

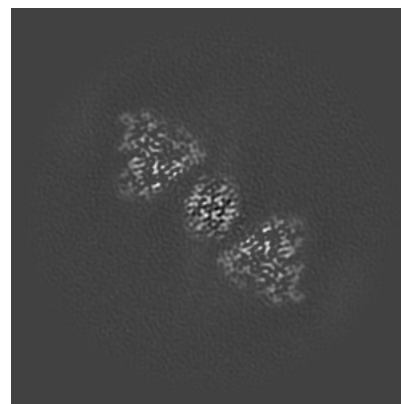
6.3.1 Primary map



X Index: 220



Y Index: 235

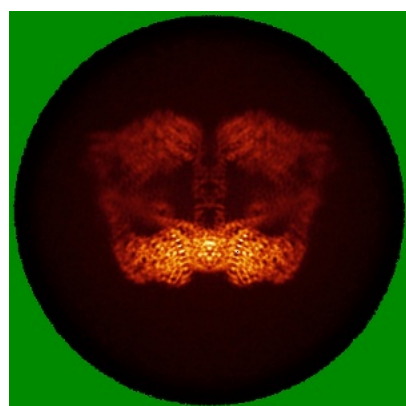


Z Index: 156

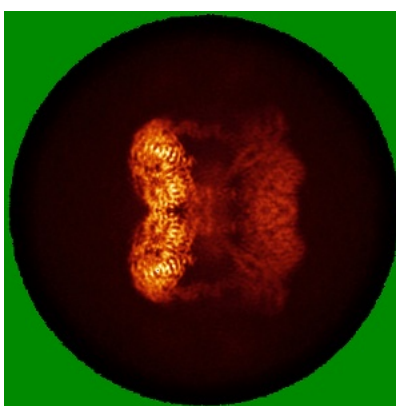
The images above show the largest variance slices of the map in three orthogonal directions.

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

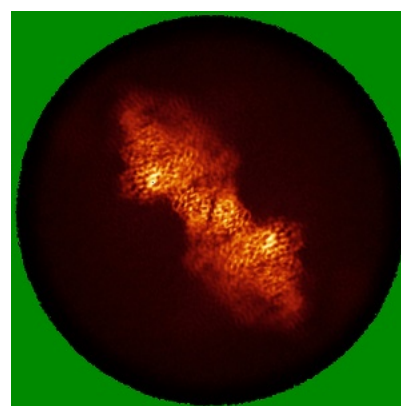
6.4.1 Primary map



X



Y

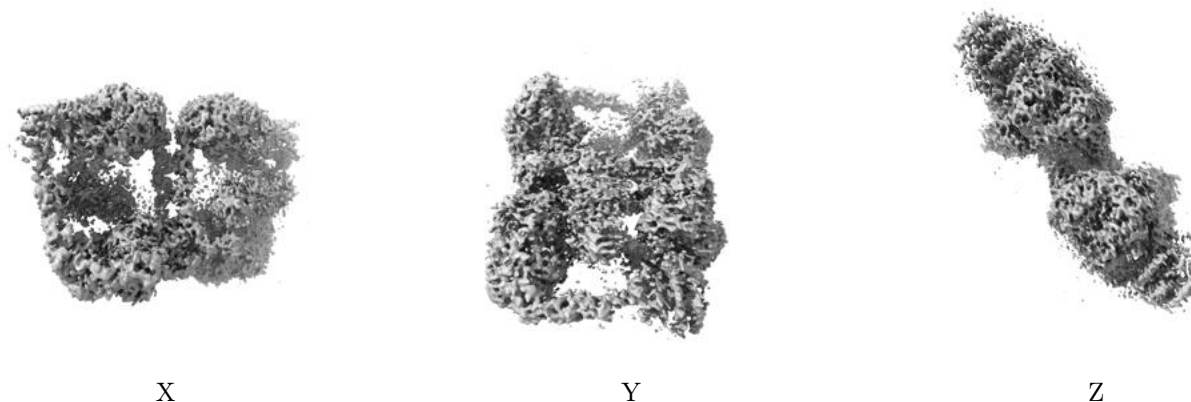


Z

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

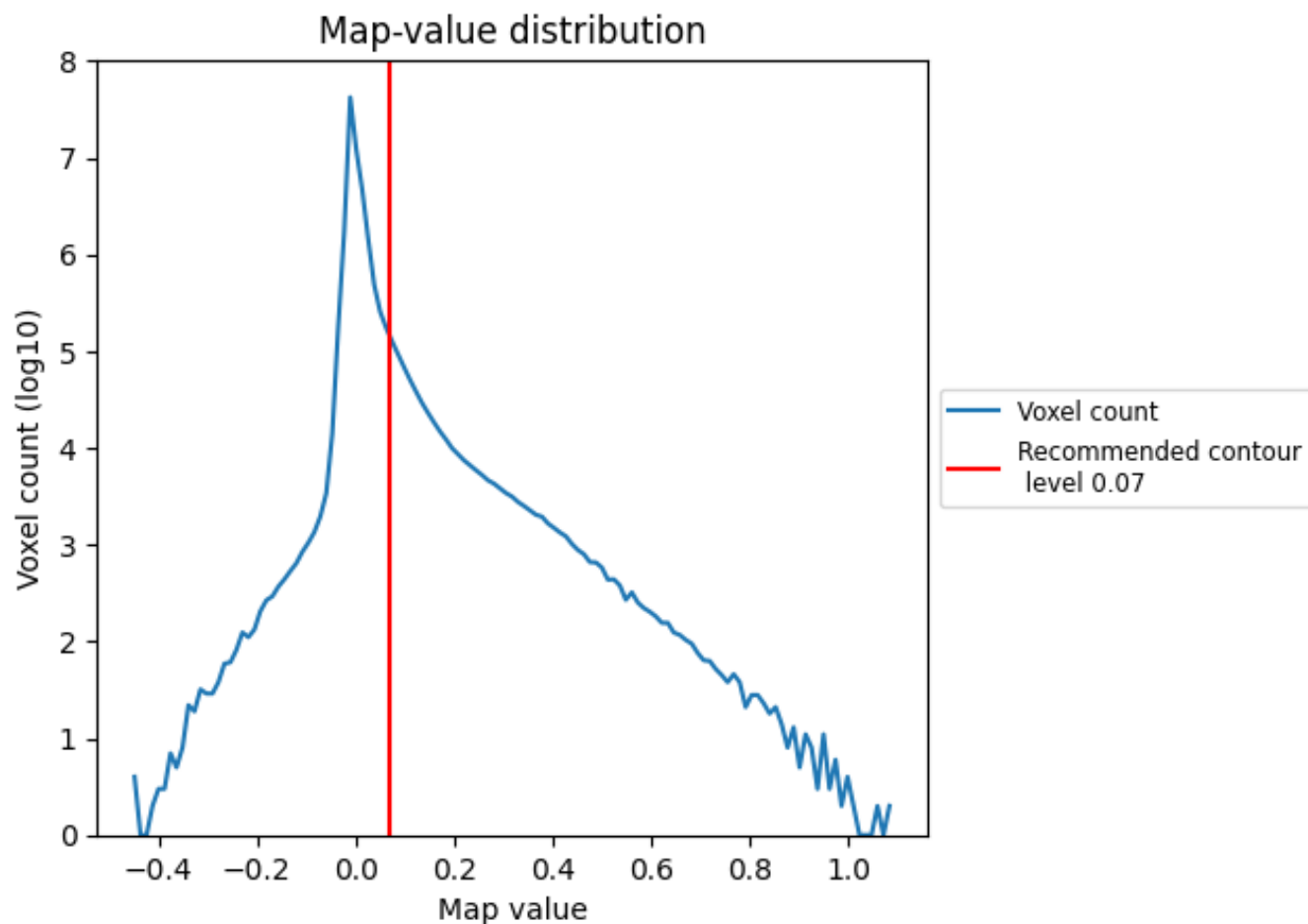
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

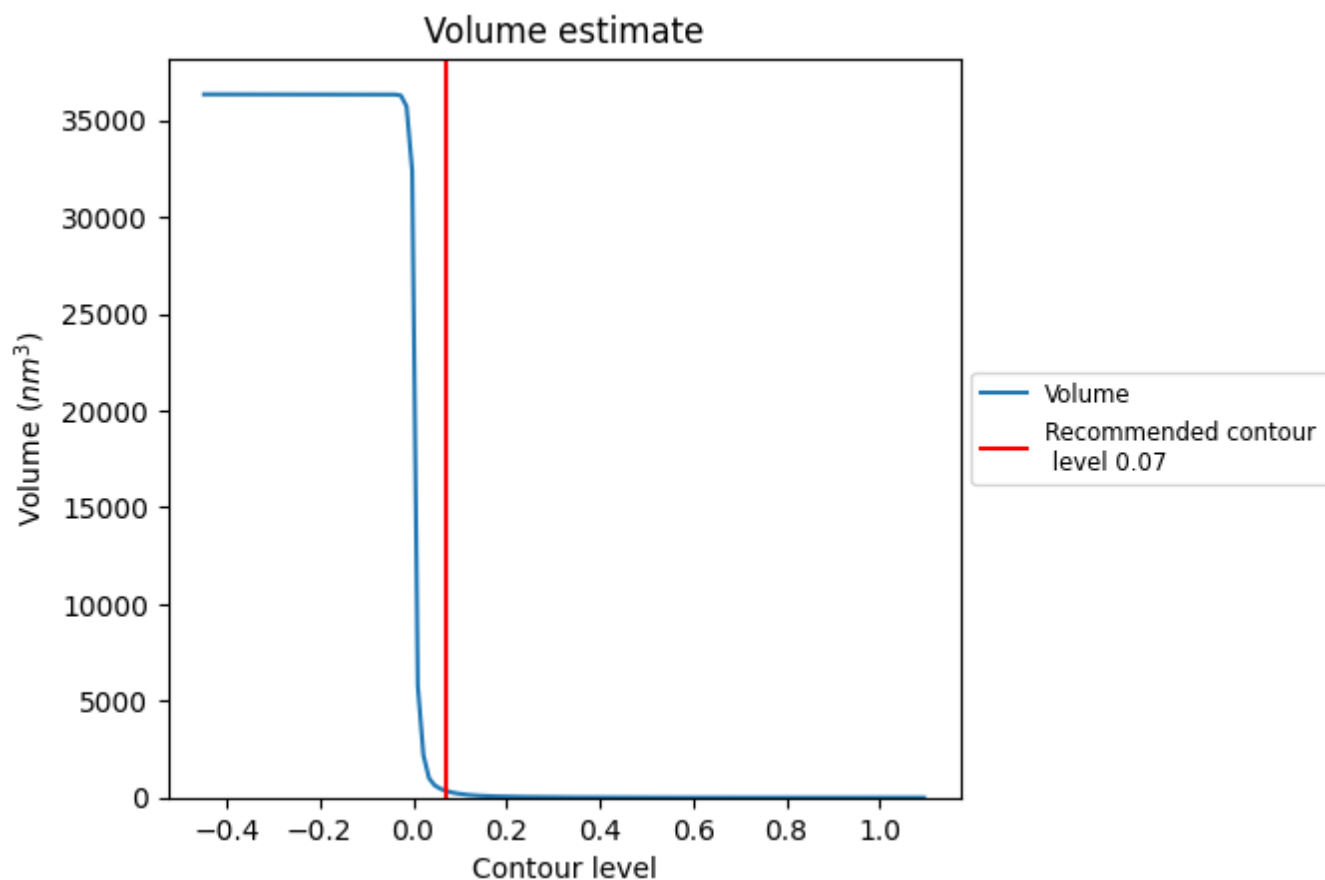
This section contains the results of statistical analysis of the map.

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.

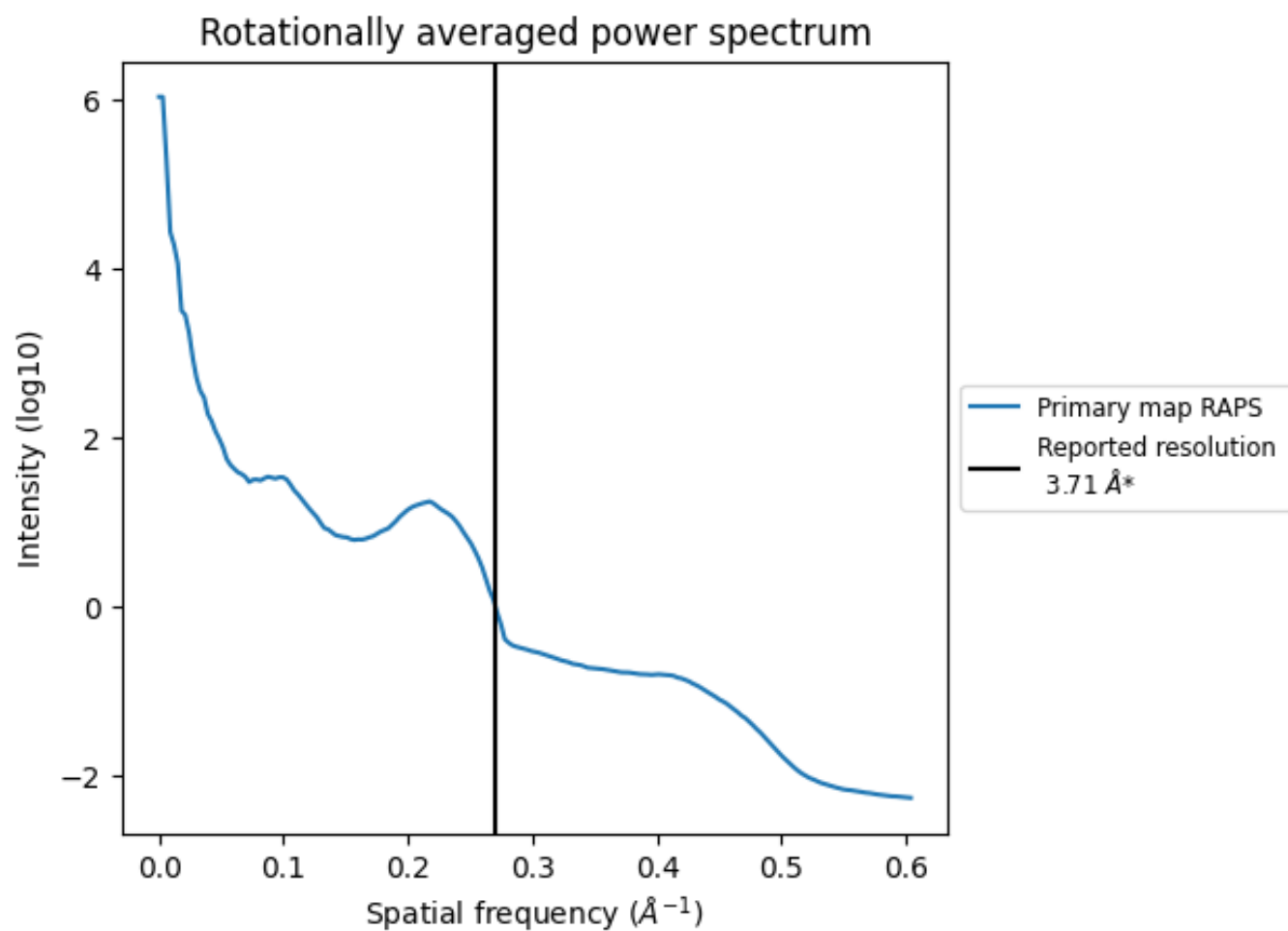
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 351 nm^3 ; this corresponds to an approximate mass of 317 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 ⓘ

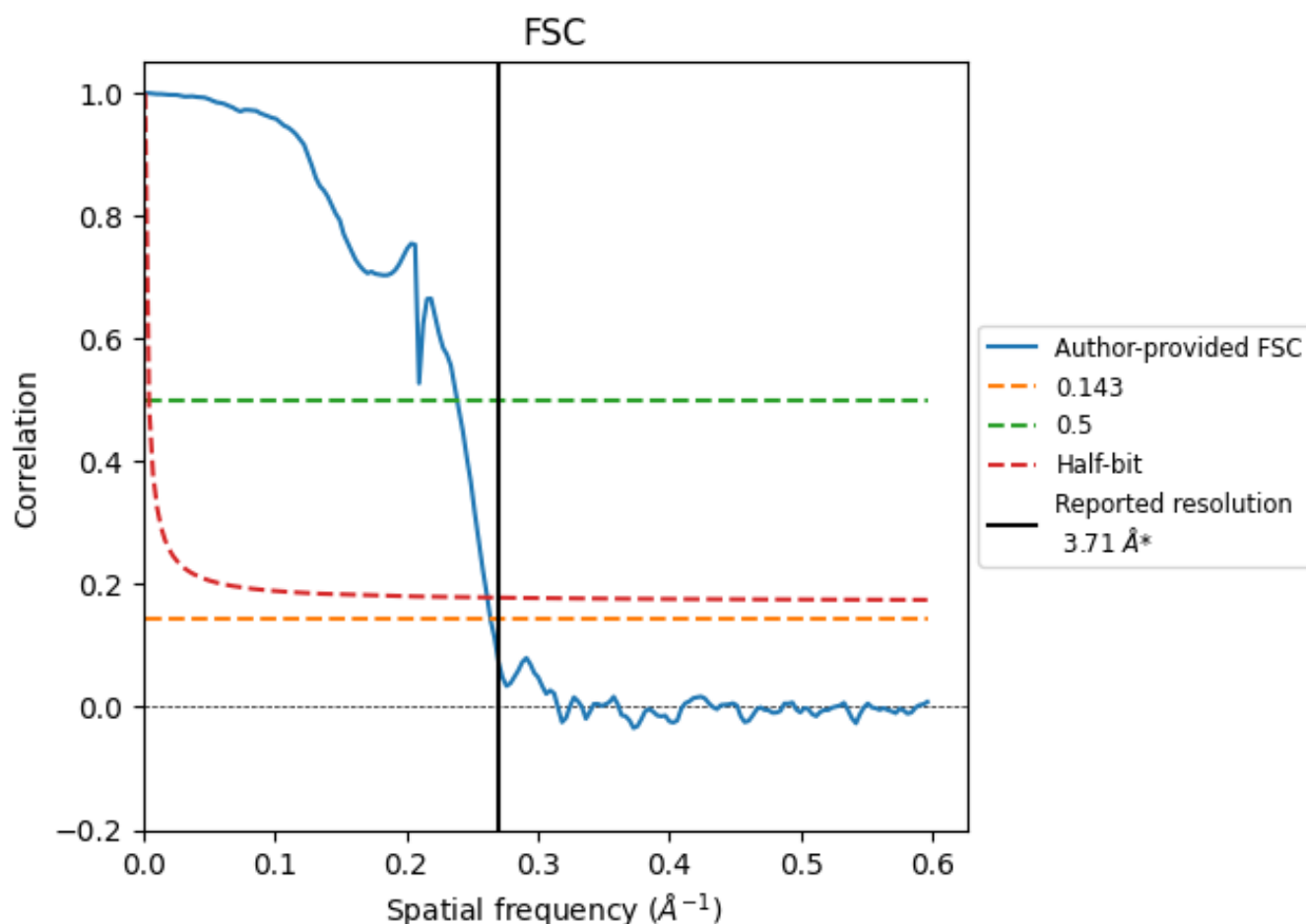


*Reported resolution corresponds to spatial frequency of 0.270 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



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

8.2 Resolution estimates [i](#)

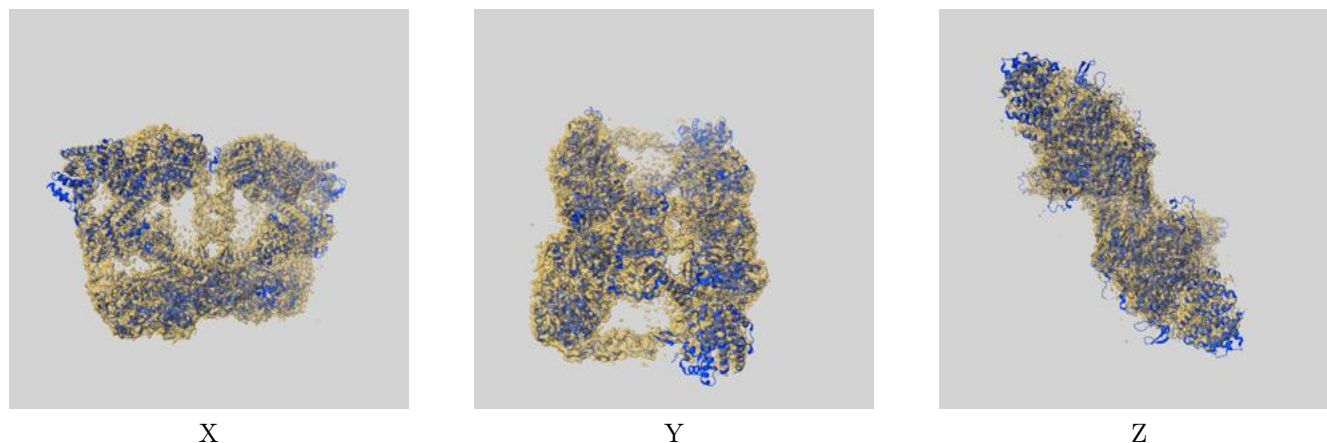
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.71	-	-
Author-provided FSC curve	3.79	4.19	3.82
Unmasked-calculated*	-	-	-

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

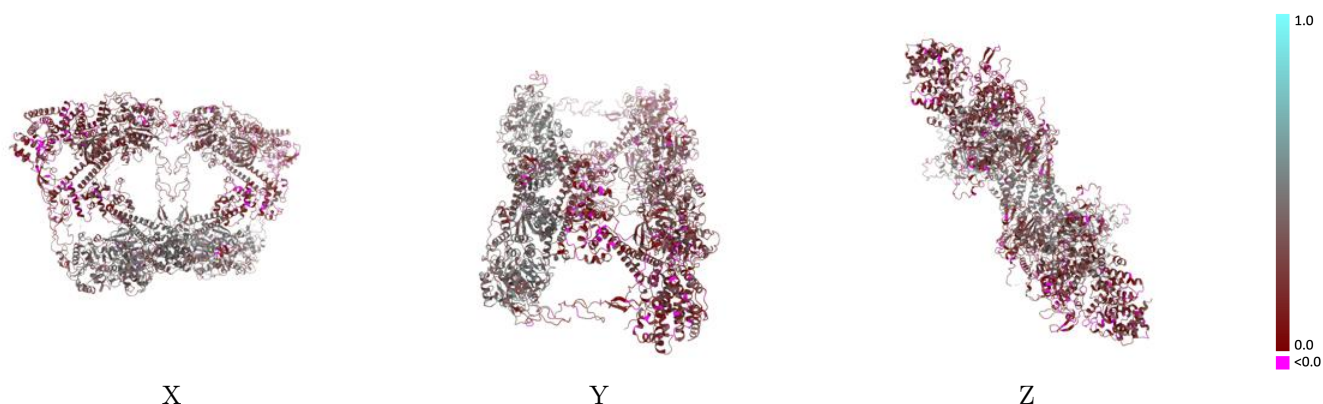
This section contains information regarding the fit between EMDB map EMD-75702 and PDB model 11HT. Per-residue inclusion information can be found in section [3](#) on page [6](#).

9.1 Map-model overlay [i](#)



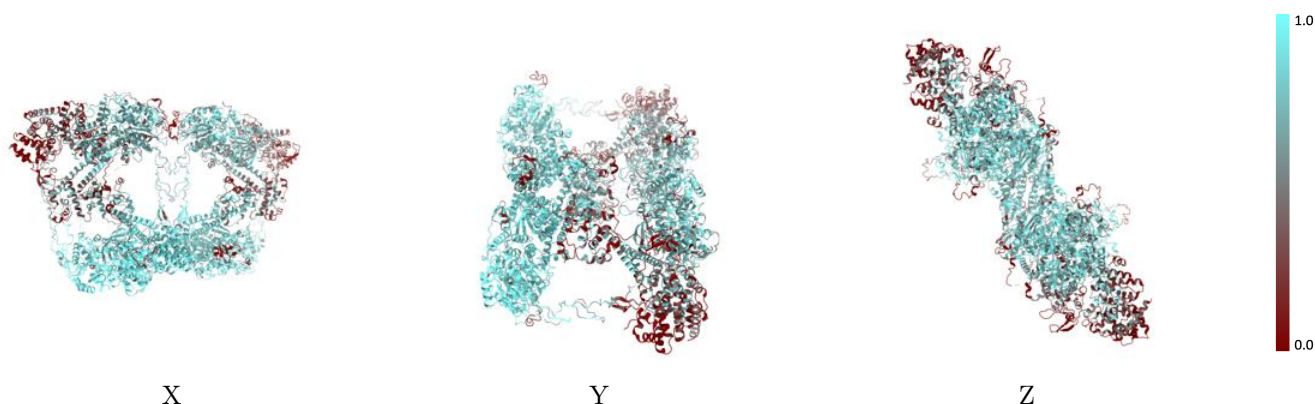
The images above show the 3D surface view of the map at the recommended contour level 0.07 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



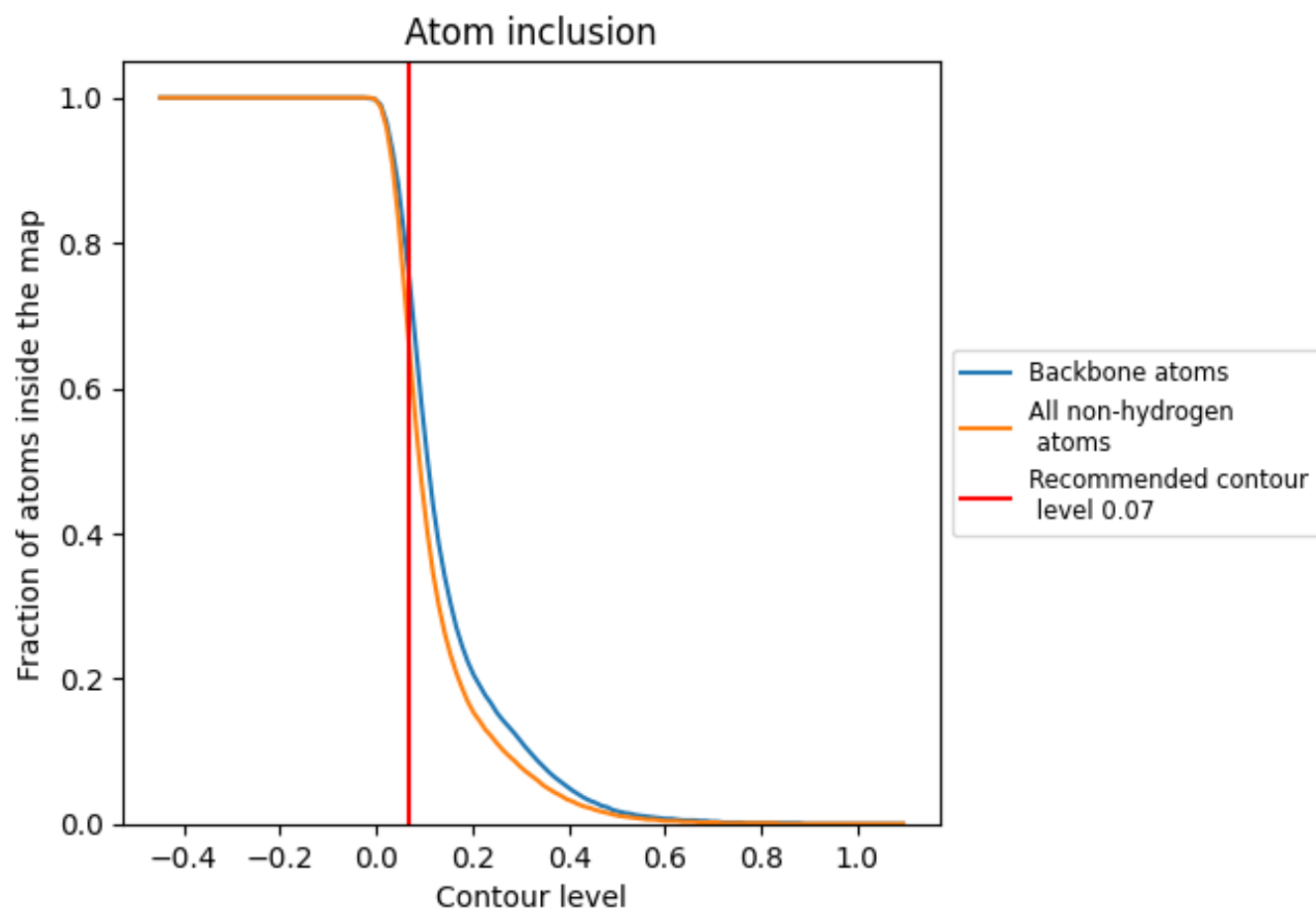
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.07).

9.4 Atom inclusion ⓘ



At the recommended contour level, 75% of all backbone atoms, 65% 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 (0.07) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6480	0.2930
A	0.7720	0.3580
B	0.5880	0.2450
C	0.7710	0.3560
D	0.5720	0.2360
E	0.2280	0.1950
F	0.2340	0.2060

1.0

0.0

<0.0