



Full wwPDB EM Validation Report ⓘ

Aug 16, 2025 – 03:10 PM EDT

PDB ID : 9BMN / pdb_00009bmn
EMDB ID : EMD-44704
Title : State-5 of motor domain from full-length human dynein-1 in 5mM AMPPNP
Authors : Chai, P.; Zhang, K.
Deposited on : 2024-05-02
Resolution : 3.80 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.dev126
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0rc1
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.45.1

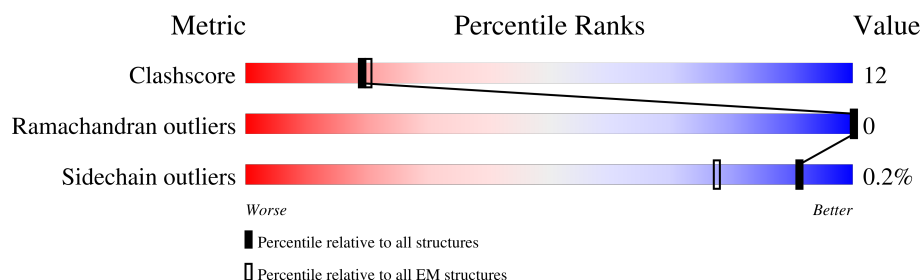
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 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	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	4646	

2 Entry composition [i](#)

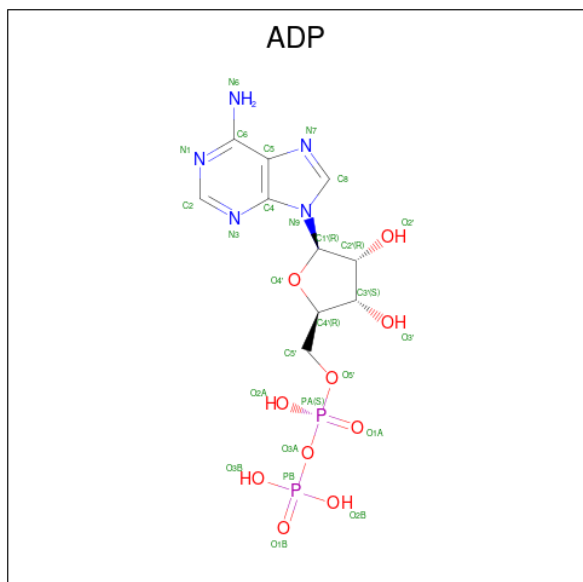
There are 3 unique types of molecules in this entry. The entry contains 21867 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 Cytoplasmic dynein 1 heavy chain 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	2711	21755	13852	3757	4035	111	0	0

- Molecule 2 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
2	A	1	27	10	5	10	2	0
2	A	1	27	10	5	10	2	0
2	A	1	27	10	5	10	2	0

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	C	N	O	P	0
			31	10	5	13	3	





L4565	Q4566	Q4567	L4577	W4578	N4579	P4586	L4587	T4588	W4592	N4597	T4598	E4599	W4600	P4608	Y4609	Y4610	L4611	L4618	L4619	T4628	K4629	Y4640	A4641	Y4642	L4643	C4644	T4645	GLU		
Y4456	K4457	G4458	I4459	L4460	P4461	R4462	H4466	H4467	M4473	T4474	Y4475	I4476	Q4477	W4478	Y4479	S4480	E4484	A4497	S4498	Q4499	Q4500	K4505	C4510	L4511	Q4512	F4515	C4644	Y4520	GLU	
Y4252	C4253	D4257	M4258	E4259	F4260	D4261	F4268	S4277	F4282	V4288	D4289	G4290	H4291	K4292	D4293	M4296	P4297	R4302	E4303	E4304	F4305	V4306	Q4307	W4308	V4309	E4310	L4311	P4318	S4319	
ASP	LEU	ALA	TYR	ALA	GLU	THR	GLU	LYS	LYS	THR	ARG	THR	ASP	THR	ASP	THR	ASP	THR	ASP	THR	ASP	THR	ASP	THR	ASP	THR	ASP	THR	ASP	THR
M4107	P4118	W4123	L4124	M4128	M4131	P4132	K4133	P4134	P4135	F4145	F4146	E4148	P4149	P4150	T4160	Y4166	S4167	R4168	K4171	S4172	P4173	R4176	A4177	R4178	L4179	F4186	E4192	R4195	Y4205	
P3971	T3972	L3973	W3974	S3975	E3976	E3977	A3980	T3983	T3987	L3992	F3996	R4000	T4011	N4012	L4013	F4017	L3914	M4021	F4022	Q4023	L4027	L4030	V4031	P4037	P4040	M4043	G4053	H4054	V4055	
Q3854	R3855	L3856	I3859	L3863	F3864	A3867	R3873	T3882	L3886	V3896	G3897	E3898	L3909	R3910	E3913	I3914	V3915	L3916	S3917	G3918	G3919	S3920	R3923	L3924	Q3925	V3929	E3933	A3934	V3935	
T3768	T3769	L3770	E3771	N3772	L3773	K3774	R3775	E3776	A3777	A3778	E3779	V3780	T3781	R3782	K3783	V3784	E3785	E3786	T3787	D3788	L3789	V3790	M3791	Q3792	E3793	G3794	E3795	T3796	V3797	
T3697	F3698	N3699	F3701	T3702	W3703	T3704	S3707	E3719	E3720	R3721	P3722	D3723	F3724	D3725	E3726	K3727	R3728	S3729	D3730	L3731	L3732	K3733	L3734	Q3735	G3736	E3737	F3738	Q3739	L3740	
L3615	D3616	D3617	R3620	R3628	F3629	L3634	V3635	V3638	E3639	S3640	Y3641	D3642	V3643	L3645	N3650	R3651	E3652	V3653	R3654	R3655	T3656	G3657	G3658	R3659	V3660	I3662	L3663	L3664	G3665	
K3500	S3501	T3502	D3506	L3509	S3510	Y3516	F3520	M3524	R3525	Q3526	F3529	W3532	R3544	T3545	D3546	R3549	L3553	E3558	D3570	N3576	R3579	L3580	R3581	R3582	F3583	N3584	L3588	P3592	E3598	
LEU	GLU	ALA	ILE	ALA	ARG	LYS	TYR	ALA	LEU	ILE	SER	ALA	ALA	GLN	ALA	ILE	LYS	ALA	ASP	LEU	ALA	VAL	GLU	VAL	GLU	GLY	PRO	LEU	ASP	THR
N3472	N3473	R3474	S3475	T3476	A3477	L3478	L3479	K3480	S3481	L3482	S3483	A3484	E3485	R3486	E3487	R3488	W3489	E3490	K3491	T3492	S3493	E3494	T3495	F3496	N3497	Q3499				

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	58149	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS GLACIOS	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	45000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.938	Depositor
Minimum map value	-0.536	Depositor
Average map value	-0.001	Depositor
Map value standard deviation	0.033	Depositor
Recommended contour level	0.2	Depositor
Map size ($\text{\AA}$)	333.312, 333.312, 333.312	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.302, 1.302, 1.302	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: ADP, ATP

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.15	0/22220	0.34	3/30121 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2812	PRO	CA-N-CD	-8.91	99.53	112.00
1	A	1848	PRO	CA-N-CD	-6.16	103.37	112.00
1	A	2020	PRO	CA-N-CD	-5.02	104.98	112.00

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	21755	0	21789	545	0
2	A	81	0	36	11	0
3	A	31	0	12	1	0
All	All	21867	0	21837	545	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 12.

All (545) 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:A:3662:ILE:HD11	1:A:3671:LEU:HB2	1.54	0.88
1:A:3790:VAL:HG13	1:A:3794:VAL:HB	1.56	0.86
1:A:3661:LEU:HD11	1:A:3668:ASP:HB3	1.61	0.83
1:A:3731:LEU:HD12	1:A:3790:VAL:HG21	1.66	0.78
1:A:2925:ILE:HG21	1:A:2933:LEU:HG	1.67	0.77
1:A:4176:ARG:NH1	1:A:4220:ASP:OD1	2.18	0.77
1:A:3169:MET:HE1	1:A:3688:PHE:HB2	1.68	0.76
1:A:4040:PRO:HB3	1:A:4124:LEU:HD23	1.67	0.76
1:A:3992:LEU:O	1:A:3996:PHE:HB2	1.87	0.74
1:A:2494:LEU:O	1:A:2498:ILE:HD12	1.90	0.72
1:A:1950:GLN:HG2	1:A:2006:VAL:HG13	1.71	0.71
1:A:1635:GLU:HB3	1:A:2273:ARG:HB3	1.71	0.71
1:A:2910:VAL:HG11	1:A:3105:VAL:HG22	1.71	0.70
1:A:2444:GLU:HG2	1:A:2510:MET:HE2	1.73	0.70
1:A:3198:GLN:HE22	1:A:3496:PHE:HD1	1.37	0.69
1:A:1960:PHE:HB3	1:A:2018:MET:HE3	1.75	0.69
1:A:4303:GLU:OE1	1:A:4303:GLU:N	2.26	0.68
1:A:1925:ARG:HH12	1:A:2011:ASP:HB3	1.57	0.68
1:A:2933:LEU:HB2	1:A:3065:VAL:HG23	1.74	0.68
1:A:3983:ILE:HG13	1:A:4011:THR:HG22	1.74	0.68
1:A:2053:MET:HE1	1:A:2094:LYS:HA	1.75	0.68
1:A:3733:LYS:O	1:A:3737:GLU:N	2.19	0.68
1:A:3496:PHE:HA	1:A:3499:GLN:OE1	1.94	0.67
1:A:2499:LEU:HD21	1:A:2518:ILE:HG21	1.75	0.67
1:A:2671:MET:HE2	1:A:2675:GLY:HA2	1.76	0.67
1:A:2287:ILE:HA	1:A:2294:GLU:HG3	1.78	0.66
1:A:2446:ILE:HD11	1:A:2714:PRO:HB3	1.78	0.66
1:A:3689:PRO:HG2	1:A:3692:LEU:HD23	1.78	0.66
1:A:1839:LEU:O	1:A:1843:ARG:NH1	2.29	0.66
1:A:1964:GLU:HG2	1:A:1967:MET:H	1.61	0.65
1:A:1679:ARG:HH21	1:A:2332:ARG:HH12	1.44	0.65
1:A:3526:GLN:OE1	1:A:3549:ARG:NH2	2.29	0.65
1:A:3113:MET:HE1	1:A:3184:ALA:HA	1.80	0.64
1:A:1961:ASN:ND2	1:A:2019:ASN:O	2.29	0.64
1:A:3691:ASP:O	1:A:3695:ARG:HG2	1.98	0.64
1:A:2615:MET:HG3	1:A:2658:TRP:HB2	1.80	0.64
1:A:1913:THR:O	1:A:1917:LYS:HG3	1.97	0.64
1:A:3576:ASN:ND2	1:A:3700:ASN:O	2.29	0.64
1:A:3520:PHE:HB3	1:A:3524:MET:HB3	1.80	0.64
1:A:2923:ASP:OD1	1:A:2954:ASN:ND2	2.31	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3510:SER:HB3	1:A:3553:LEU:HD21	1.79	0.63
1:A:4505:LYS:NZ	1:A:4554:ASP:O	2.32	0.63
1:A:1799:GLU:OE1	1:A:2109:GLN:NE2	2.32	0.62
1:A:2226:SER:HB2	1:A:2726:ARG:HG2	1.82	0.62
1:A:3010:THR:HG22	1:A:3017:VAL:HG22	1.82	0.62
1:A:2181:GLU:HG3	1:A:2244:LEU:HB2	1.80	0.62
1:A:2605:LEU:HD11	1:A:2709:VAL:HG11	1.80	0.62
1:A:2221:MET:HG2	1:A:2343:PHE:HB2	1.81	0.62
1:A:2073:PHE:HE2	1:A:2093:LEU:HA	1.64	0.62
1:A:1912:LYS:HE2	1:A:2017:THR:HB	1.82	0.61
1:A:2453:ARG:NH1	1:A:2505:ASP:OD2	2.32	0.61
1:A:3021:PHE:CE1	1:A:3029:LEU:HB2	2.36	0.61
1:A:4043:MET:HG2	1:A:4147:PHE:HE2	1.65	0.61
1:A:4297:PRO:HG3	1:A:4308:TRP:CG	2.35	0.61
1:A:4305:PHE:O	1:A:4309:VAL:HG23	2.00	0.61
1:A:1931:ASN:O	1:A:1931:ASN:ND2	2.32	0.61
1:A:2419:ALA:O	1:A:2423:MET:HG3	2.01	0.61
1:A:3650:ASN:OD1	1:A:3695:ARG:NH1	2.33	0.61
1:A:2776:PHE:HA	1:A:2779:MET:HE3	1.82	0.61
1:A:2107:ARG:NH2	1:A:2139:GLN:OE1	2.34	0.60
1:A:2893:VAL:HG13	1:A:2911:LEU:HD11	1.83	0.60
1:A:4043:MET:HE1	1:A:4055:VAL:HB	1.83	0.60
1:A:1755:GLN:HG2	1:A:1814:GLU:OE1	2.00	0.60
1:A:3580:LEU:HD13	1:A:3600:ILE:HD11	1.83	0.60
1:A:4027:LEU:HB3	1:A:4058:LEU:HD22	1.84	0.60
1:A:2888:GLU:N	1:A:2888:GLU:OE1	2.33	0.60
1:A:2220:LEU:HB2	1:A:2342:MET:HG2	1.83	0.59
1:A:2483:ILE:O	1:A:2487:GLU:HG3	2.03	0.59
1:A:3028:THR:HG22	1:A:3032:GLN:HE21	1.66	0.59
1:A:4178:ARG:HD2	1:A:4296:MET:HE1	1.85	0.59
1:A:1913:THR:OG1	2:A:4701:ADP:O1A	2.20	0.59
1:A:2826:ALA:HA	1:A:2850:ILE:HD11	1.84	0.59
1:A:2179:ARG:NH1	1:A:2195:ASP:OD1	2.35	0.59
1:A:3743:ARG:NH1	1:A:3743:ARG:O	2.35	0.59
1:A:2047:GLN:NE2	1:A:2067:ASN:OD1	2.36	0.59
1:A:3749:LEU:HD11	1:A:3770:LEU:HD23	1.85	0.58
1:A:1812:ILE:HG21	1:A:2056:SER:HA	1.86	0.58
1:A:2995:ASP:OD1	1:A:2996:GLU:N	2.37	0.58
1:A:3882:THR:HG22	1:A:4339:MET:HG3	1.85	0.58
1:A:3909:LEU:HD21	1:A:4343:MET:HE2	1.86	0.58
1:A:4400:ARG:NH1	1:A:4414:GLU:OE2	2.37	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2694:ARG:O	1:A:2698:GLN:HA	2.04	0.58
1:A:3733:LYS:HD3	1:A:3737:GLU:HG3	1.86	0.58
1:A:4543:VAL:HG13	1:A:4588:THR:HG23	1.86	0.58
1:A:4037:PRO:HB2	1:A:4118:PRO:HG2	1.86	0.58
1:A:3107:LYS:HG3	1:A:3144:VAL:HG21	1.85	0.58
1:A:2606:PHE:O	1:A:2610:ARG:HG2	2.04	0.57
1:A:3031:THR:O	1:A:3035:GLU:HG2	2.04	0.57
1:A:3835:ILE:HD13	1:A:3867:ALA:HA	1.86	0.57
1:A:4318:PRO:HG2	1:A:4325:ASN:HA	1.85	0.57
1:A:3947:LEU:HA	1:A:3950:LYS:HD2	1.85	0.57
1:A:3175:HIS:HB3	1:A:3516:TYR:HE1	1.69	0.57
1:A:2461:MET:HG2	1:A:2583:THR:HG21	1.87	0.57
1:A:3913:GLU:OE2	1:A:3913:GLU:N	2.38	0.57
1:A:3499:GLN:HA	1:A:3502:THR:HG22	1.86	0.57
1:A:3789:ILE:O	1:A:3793:GLU:N	2.32	0.56
1:A:3843:ASN:HB3	1:A:3846:LEU:HD12	1.87	0.56
1:A:1931:ASN:C	1:A:1931:ASN:HD22	2.12	0.56
1:A:2816:LEU:HD23	1:A:2817:PRO:O	2.06	0.56
1:A:3791:MET:HE3	1:A:3791:MET:O	2.04	0.56
1:A:3746:GLU:HG2	1:A:3773:LEU:HD13	1.87	0.56
1:A:3898:GLU:OE1	1:A:3983:ILE:HD13	2.06	0.56
1:A:3951:VAL:HG22	1:A:3957:PHE:HE2	1.69	0.56
1:A:2797:ARG:NH1	1:A:3087:ASN:OD1	2.37	0.56
1:A:3553:LEU:O	1:A:3582:ARG:NH1	2.37	0.56
1:A:1961:ASN:HD21	1:A:2019:ASN:HB3	1.70	0.56
1:A:2085:HIS:HB2	1:A:2361:MET:HG2	1.88	0.56
1:A:3654:ARG:HG3	1:A:3661:LEU:HB3	1.87	0.55
1:A:2612:LEU:HB3	1:A:2615:MET:CE	2.36	0.55
1:A:2840:ASP:OD1	1:A:2843:ARG:NH2	2.39	0.55
1:A:2936:ILE:HD11	1:A:3091:LEU:HD12	1.87	0.55
1:A:3654:ARG:HH11	1:A:3661:LEU:HG	1.71	0.55
1:A:3946:ASP:HB2	1:A:3950:LYS:HE2	1.87	0.55
1:A:1860:GLN:HG2	1:A:1865:LYS:HG2	1.88	0.55
1:A:2967:TYR:OH	1:A:2975:ASP:OD2	2.16	0.55
1:A:2321:ASP:OD2	1:A:2321:ASP:N	2.34	0.55
1:A:3729:SER:O	1:A:3733:LYS:HG2	2.05	0.55
1:A:1979:GLN:O	1:A:1983:ARG:HG3	2.06	0.55
1:A:1724:VAL:O	1:A:1728:GLY:N	2.38	0.55
1:A:2065:LEU:HD13	1:A:2137:LEU:HD22	1.88	0.55
1:A:3488:ARG:O	1:A:3491:LYS:HG3	2.05	0.55
1:A:3886:LEU:HD11	1:A:4346:MET:HG3	1.88	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4460:LEU:HD21	1:A:4478:TRP:CD1	2.41	0.55
1:A:3614:PHE:HZ	1:A:3645:LEU:HD11	1.72	0.55
1:A:4209:GLU:OE1	1:A:4213:ARG:NH2	2.40	0.55
1:A:2068:LYS:NZ	1:A:4535:SER:OG	2.40	0.54
1:A:3189:GLU:OE2	1:A:3582:ARG:NH2	2.39	0.54
1:A:2569:VAL:HG11	1:A:2747:ILE:HA	1.88	0.54
1:A:3113:MET:HG3	1:A:3115:LEU:HD11	1.88	0.54
1:A:3721:ARG:O	1:A:3725:ASP:N	2.34	0.54
1:A:1816:VAL:HG11	1:A:2052:VAL:HG22	1.90	0.54
1:A:2759:ILE:HD12	1:A:2762:LEU:HD23	1.89	0.54
1:A:3601:MET:HE1	1:A:3611:ARG:HB2	1.88	0.54
1:A:1687:LYS:HG2	1:A:1712:THR:HG22	1.89	0.54
1:A:3017:VAL:HB	1:A:3020:LEU:HD23	1.90	0.54
1:A:3030:MET:HG3	1:A:3047:HIS:CD2	2.43	0.54
1:A:1888:CYS:HB2	1:A:2041:MET:HE1	1.88	0.54
1:A:3021:PHE:CD1	1:A:3025:GLU:HG3	2.42	0.54
1:A:4192:GLU:OE1	1:A:4195:ARG:NH1	2.40	0.54
1:A:3655:ARG:NE	1:A:3660:VAL:HG22	2.22	0.54
1:A:3661:LEU:HD12	1:A:3662:ILE:H	1.72	0.54
1:A:3721:ARG:HB3	1:A:3724:VAL:HB	1.90	0.54
1:A:1631:PHE:HE2	1:A:1656:LYS:HB3	1.73	0.54
1:A:3759:ARG:HG3	1:A:3760:ILE:HG12	1.89	0.54
1:A:1647:VAL:HG11	1:A:1692:ILE:HD13	1.89	0.54
1:A:1685:MET:HE2	1:A:1685:MET:HA	1.90	0.54
1:A:2784:PHE:HB2	1:A:2794:TYR:HE2	1.72	0.54
1:A:1763:GLU:OE1	1:A:1845:TYR:OH	2.22	0.53
1:A:1788:THR:O	1:A:1791:VAL:HG12	2.08	0.53
1:A:1939:GLN:H	1:A:1939:GLN:CD	2.15	0.53
1:A:4475:VAL:O	1:A:4479:VAL:HG23	2.08	0.53
1:A:4512:GLY:HA3	1:A:4645:THR:HG23	1.89	0.53
1:A:2110:LYS:HA	1:A:2113:ARG:NH1	2.23	0.53
1:A:2445:HIS:CD2	1:A:2449:LEU:HD22	2.43	0.53
1:A:3929:VAL:O	1:A:3933:GLU:HG3	2.08	0.53
1:A:4205:TYR:OH	1:A:4261:ASP:OD2	2.25	0.53
1:A:4260:PHE:HE2	1:A:4618:LEU:HD11	1.74	0.53
1:A:2665:GLU:HB3	1:A:2668:LEU:HB2	1.90	0.53
1:A:4186:PHE:HE1	1:A:4268:PHE:HB3	1.73	0.53
1:A:4526:GLN:HA	1:A:4536:LEU:HD21	1.91	0.53
1:A:1900:LEU:HD21	1:A:2037:ARG:HH21	1.73	0.53
1:A:1713:LEU:HD22	1:A:1749:LEU:HD21	1.91	0.53
1:A:1769:MET:HE1	1:A:1777:PRO:HD2	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2757:ARG:HA	1:A:2763:ARG:HH21	1.74	0.53
1:A:4160:THR:HG23	1:A:4212:LEU:HD21	1.91	0.53
1:A:3588:LEU:HD23	1:A:3698:PHE:HE1	1.74	0.52
1:A:2569:VAL:HB	1:A:2747:ILE:HG13	1.91	0.52
1:A:3506:ASP:OD2	1:A:3544:ARG:HD2	2.09	0.52
1:A:3722:PRO:HA	1:A:3725:ASP:HB3	1.91	0.52
1:A:2469:VAL:HG22	1:A:2481:MET:HE1	1.91	0.52
1:A:2737:ASP:OD2	1:A:2738:TYR:N	2.40	0.52
1:A:2901:TYR:OH	1:A:2909:LEU:N	2.36	0.52
1:A:1945:PHE:HE1	1:A:1975:VAL:HG12	1.74	0.52
1:A:1972:SER:HB2	1:A:2031:ASN:HD21	1.74	0.52
1:A:2811:ARG:HB3	1:A:2812:PRO:HD2	1.92	0.52
1:A:4021:MET:HE3	1:A:4021:MET:HA	1.90	0.52
1:A:1628:ARG:HA	1:A:1951:VAL:HG22	1.91	0.52
1:A:2066:ALA:HA	1:A:2069:ILE:HG22	1.92	0.52
1:A:3495:THR:O	1:A:3498:ASN:HB3	2.10	0.52
1:A:2449:LEU:HA	1:A:2453:ARG:HH21	1.75	0.52
1:A:1630:TYR:HD1	1:A:1947:GLY:HA2	1.75	0.52
1:A:2992:PHE:HB3	1:A:3064:VAL:HA	1.92	0.52
1:A:4554:ASP:N	1:A:4557:SER:OG	2.43	0.52
1:A:1814:GLU:OE1	1:A:1818:GLN:NE2	2.39	0.52
1:A:1971:VAL:O	1:A:1975:VAL:HG13	2.10	0.52
1:A:1967:MET:HA	1:A:1967:MET:HE2	1.92	0.51
1:A:3971:PRO:HG2	1:A:3973:LEU:HD11	1.91	0.51
1:A:4444:GLN:O	1:A:4449:ARG:NH1	2.43	0.51
1:A:2481:MET:HG3	1:A:2485:GLN:NE2	2.26	0.51
1:A:2622:PHE:HZ	1:A:2631:LEU:HD21	1.75	0.51
1:A:3734:LEU:HD22	1:A:3783:LYS:HB3	1.91	0.51
1:A:3944:PHE:CE1	1:A:3974:TRP:HB3	2.45	0.51
1:A:2441:PHE:HA	1:A:2449:LEU:HD23	1.91	0.51
1:A:2623:SER:O	1:A:2626:THR:OG1	2.23	0.51
1:A:3839:VAL:HG21	1:A:3863:LEU:HA	1.92	0.51
1:A:1784:ASN:O	1:A:1787:VAL:HG12	2.11	0.51
1:A:3044:LEU:HB3	1:A:3049:GLU:HG3	1.92	0.51
1:A:1909:GLY:N	2:A:4701:ADP:O2B	2.43	0.51
1:A:2300:TRP:CD2	1:A:2342:MET:HE1	2.45	0.50
1:A:3114:ASP:OD2	1:A:3114:ASP:N	2.44	0.50
1:A:3796:THR:HA	1:A:3799:GLN:HG3	1.93	0.50
1:A:4068:SER:HA	1:A:4095:MET:HB3	1.93	0.50
1:A:2568:VAL:HG23	1:A:2603:MET:HE1	1.93	0.50
1:A:4311:LEU:O	1:A:4311:LEU:HD23	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4567:GLY:HA3	1:A:4640:VAL:HG22	1.92	0.50
1:A:4326:ASN:ND2	1:A:4579:ASN:O	2.44	0.50
1:A:1686:PHE:HA	1:A:1712:THR:HG21	1.93	0.50
1:A:2297:LYS:HB2	1:A:2299:GLN:HE22	1.77	0.50
1:A:4100:HIS:HB2	1:A:4131:ASN:HD21	1.76	0.50
1:A:1880:VAL:HG21	1:A:2049:ILE:HG12	1.93	0.50
1:A:3488:ARG:HH21	1:A:3489:TRP:CG	2.30	0.50
1:A:3690:PRO:HA	1:A:3693:CYS:SG	2.51	0.50
1:A:3783:LYS:O	1:A:3787:THR:HG23	2.11	0.50
1:A:4387:TRP:HZ3	1:A:4455:LEU:HD21	1.75	0.50
1:A:2461:MET:CE	1:A:2497:ALA:HA	2.42	0.50
1:A:4510:CYS:HG	1:A:4561:THR:HG1	1.56	0.50
1:A:2446:ILE:HG22	1:A:2505:ASP:O	2.11	0.50
1:A:4566:GLN:O	1:A:4640:VAL:HA	2.12	0.50
1:A:1853:VAL:HA	1:A:1856:GLN:HG3	1.94	0.50
1:A:3609:ILE:HD11	1:A:3634:LEU:HB2	1.94	0.50
1:A:3791:MET:O	1:A:3795:GLU:HG2	2.12	0.50
1:A:2518:ILE:HA	1:A:2521:ILE:HG12	1.94	0.50
1:A:2865:LYS:O	1:A:2865:LYS:NZ	2.40	0.50
1:A:2872:LEU:HD12	1:A:2920:LEU:HD12	1.93	0.50
1:A:3071:SER:O	1:A:3075:LEU:N	2.38	0.50
1:A:4179:LEU:HD12	1:A:4223:LEU:HD11	1.94	0.50
1:A:2049:ILE:HD11	2:A:4701:ADP:C6	2.47	0.49
1:A:2694:ARG:O	1:A:2698:GLN:CA	2.60	0.49
1:A:3161:LEU:HB3	1:A:3168:THR:HG22	1.95	0.49
1:A:4277:SER:HA	1:A:4282:PHE:CG	2.47	0.49
1:A:3030:MET:HA	1:A:3030:MET:HE3	1.93	0.49
1:A:3785:GLU:O	1:A:3789:ILE:HG13	2.12	0.49
1:A:3158:ASN:ND2	1:A:3169:MET:O	2.36	0.49
1:A:4171:LYS:HG3	1:A:4172:SER:H	1.76	0.49
1:A:4387:TRP:HZ2	1:A:4476:ILE:HG13	1.77	0.49
1:A:2191:LEU:HD11	1:A:2232:MET:HE2	1.94	0.49
1:A:2562:VAL:O	1:A:2804:ARG:NH1	2.46	0.49
1:A:3101:ALA:O	1:A:3105:VAL:HG23	2.12	0.49
1:A:3661:LEU:HD12	1:A:3662:ILE:N	2.27	0.49
1:A:2612:LEU:HB3	1:A:2615:MET:HE3	1.93	0.49
1:A:3040:GLU:OE1	1:A:3053:TRP:NE1	2.46	0.49
1:A:3043:MET:HE3	1:A:3043:MET:HA	1.94	0.49
1:A:4306:VAL:O	1:A:4310:GLU:HG2	2.13	0.49
1:A:4381:HIS:NE2	1:A:4439:GLU:OE2	2.45	0.49
1:A:1653:HIS:HA	1:A:1656:LYS:HD2	1.93	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4610:TYR:HB2	1:A:4643:LEU:HD22	1.95	0.49
1:A:4609:VAL:HG22	1:A:4642:VAL:HB	1.95	0.49
1:A:1722:THR:O	1:A:1726:ILE:HG12	2.12	0.48
1:A:2437:LEU:HD21	1:A:2451:ARG:HG3	1.95	0.48
1:A:2601:LYS:HG2	1:A:2736:VAL:HB	1.94	0.48
1:A:3974:TRP:NE1	1:A:3976:GLU:OE2	2.46	0.48
1:A:4336:GLY:O	1:A:4340:ILE:HG12	2.12	0.48
1:A:4528:VAL:HG11	1:A:4592:TRP:HB2	1.95	0.48
1:A:3771:GLU:O	1:A:3775:ARG:HG2	2.13	0.48
1:A:2123:ASP:O	1:A:2127:ILE:HG13	2.14	0.48
1:A:3021:PHE:CE1	1:A:3025:GLU:HG3	2.48	0.48
1:A:3115:LEU:HD22	1:A:3143:ILE:HG13	1.96	0.48
1:A:2511:ARG:HB3	1:A:2535:ILE:CD1	2.43	0.48
1:A:1844:PHE:HZ	1:A:1922:GLN:HE21	1.60	0.48
1:A:4013:LEU:HD23	1:A:4017:PHE:CZ	2.48	0.48
1:A:2228:SER:HB3	1:A:2364:PHE:HB3	1.94	0.48
1:A:2682:PHE:O	1:A:2686:MET:HE2	2.13	0.48
1:A:2694:ARG:O	1:A:2698:GLN:N	2.47	0.48
1:A:3916:LEU:HD21	1:A:3937:ARG:HG2	1.95	0.48
1:A:2312:VAL:HG21	1:A:2355:THR:HG21	1.95	0.48
1:A:2977:ARG:HG3	1:A:3020:LEU:HB3	1.95	0.48
1:A:2623:SER:HA	1:A:2668:LEU:HD23	1.95	0.48
1:A:2771:ALA:O	1:A:2775:GLU:N	2.38	0.48
1:A:2989:LYS:NZ	1:A:3061:ASN:OD1	2.47	0.48
1:A:3197:GLN:OE1	1:A:3496:PHE:HE1	1.97	0.48
1:A:2511:ARG:HB3	1:A:2535:ILE:HD13	1.96	0.48
1:A:2519:ARG:HG2	1:A:2526:LEU:HD13	1.96	0.48
1:A:2819:GLU:HA	1:A:2861:ILE:HD11	1.95	0.48
1:A:3154:LEU:HD21	1:A:3532:TRP:HZ2	1.77	0.47
1:A:3629:PHE:CD1	1:A:3629:PHE:N	2.82	0.47
1:A:4176:ARG:NH2	1:A:4224:ASP:OD1	2.44	0.47
1:A:2963:VAL:HG21	1:A:2998:ASN:HB3	1.95	0.47
1:A:4013:LEU:HD23	1:A:4017:PHE:CE2	2.50	0.47
1:A:4387:TRP:CZ3	1:A:4455:LEU:HD21	2.50	0.47
1:A:4346:MET:HE3	1:A:4346:MET:HA	1.96	0.47
1:A:4381:HIS:HD2	1:A:4438:CYS:HB3	1.78	0.47
1:A:2448:ASP:O	1:A:2453:ARG:NH2	2.47	0.47
1:A:2644:THR:OG1	1:A:2647:GLY:O	2.24	0.47
1:A:2799:MET:HE3	1:A:2799:MET:HB3	1.79	0.47
1:A:4166:VAL:HG12	1:A:4302:ARG:HH12	1.79	0.47
1:A:2231:SER:OG	1:A:2344:GLU:OE2	2.31	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3206:ARG:O	1:A:3210:GLU:HG2	2.13	0.47
1:A:1632:VAL:HB	1:A:1636:ASP:HB2	1.96	0.47
1:A:1976:GLN:HG2	1:A:1980:GLU:OE2	2.15	0.47
1:A:2465:ALA:HB2	1:A:2493:TYR:CD1	2.49	0.47
1:A:2961:ILE:HD11	1:A:2994:MET:HE1	1.96	0.47
1:A:3499:GLN:HA	1:A:3502:THR:CG2	2.45	0.47
1:A:1631:PHE:HA	1:A:1947:GLY:HA3	1.96	0.47
1:A:4565:LEU:HD13	1:A:4642:VAL:HG22	1.97	0.47
1:A:2029:PRO:HG2	1:A:2032:LEU:HD12	1.96	0.47
1:A:2743:SER:O	1:A:2747:ILE:HG22	2.15	0.47
1:A:2956:LEU:HG	1:A:2989:LYS:HB2	1.96	0.47
1:A:3099:THR:HG23	1:A:3148:VAL:HG11	1.97	0.47
1:A:2445:HIS:ND1	1:A:2505:ASP:OD1	2.45	0.47
1:A:2564:ALA:HB3	1:A:2567:VAL:HG22	1.96	0.46
1:A:2964:HIS:HA	1:A:3643:PRO:HD2	1.97	0.46
1:A:3638:VAL:HG11	1:A:3679:LEU:HB3	1.97	0.46
1:A:4031:VAL:HG21	1:A:4058:LEU:HD21	1.95	0.46
1:A:4099:VAL:HB	1:A:4106:LEU:HD21	1.97	0.46
1:A:4178:ARG:NH1	1:A:4296:MET:HE1	2.30	0.46
1:A:3951:VAL:HG22	1:A:3957:PHE:CE2	2.48	0.46
1:A:2354:ALA:HB1	1:A:2358:ARG:HE	1.80	0.46
1:A:4446:ASN:OD1	1:A:4447:TYR:N	2.46	0.46
1:A:2337:PRO:O	1:A:2340:ARG:NH1	2.48	0.46
1:A:3002:SER:O	1:A:3006:GLU:HG2	2.16	0.46
1:A:1739:ILE:HG23	1:A:1804:ARG:HD3	1.96	0.46
1:A:2087:ASP:HB2	1:A:2356:VAL:HG12	1.97	0.46
1:A:4257:ASP:OD2	1:A:4258:ASN:N	2.49	0.46
1:A:2107:ARG:NH1	1:A:2135:GLU:OE1	2.48	0.46
1:A:2227:GLY:HA2	1:A:2452:LEU:HD12	1.97	0.46
1:A:2431:GLY:O	1:A:2435:LYS:HE2	2.16	0.46
1:A:2527:PRO:HD2	1:A:2534:ILE:HG22	1.97	0.46
1:A:2797:ARG:NH2	2:A:4703:ADP:O3A	2.48	0.46
1:A:3158:ASN:HD22	1:A:3171:ILE:HG13	1.80	0.46
1:A:3793:GLU:O	1:A:3797:VAL:HG23	2.15	0.46
1:A:4128:MET:SD	1:A:4134:VAL:HG21	2.56	0.46
1:A:3817:SER:HB2	1:A:4346:MET:HE1	1.98	0.46
1:A:1724:VAL:HA	1:A:1727:PHE:HD1	1.80	0.46
1:A:3492:THR:O	1:A:3496:PHE:HB2	2.16	0.46
1:A:3787:THR:O	1:A:3790:VAL:HB	2.16	0.46
1:A:3873:ARG:HD3	1:A:4021:MET:HE1	1.98	0.46
1:A:2498:ILE:HG23	1:A:2502:LEU:HD22	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3641:TYR:HD2	1:A:3692:LEU:HD21	1.81	0.45
1:A:1888:CYS:O	1:A:1892:MET:HG2	2.16	0.45
1:A:2615:MET:H	1:A:2615:MET:HE2	1.80	0.45
1:A:2890:ARG:NH1	1:A:2911:LEU:O	2.48	0.45
1:A:2939:SER:O	1:A:3172:THR:HB	2.15	0.45
1:A:1779:HIS:CE1	1:A:1826:ILE:HD12	2.52	0.45
1:A:1946:VAL:HG12	1:A:2001:LEU:HD13	1.98	0.45
1:A:2107:ARG:HH12	1:A:2135:GLU:CD	2.24	0.45
1:A:3030:MET:HA	1:A:3033:CYS:SG	2.57	0.45
1:A:3113:MET:HG3	1:A:3115:LEU:CD1	2.46	0.45
1:A:3851:ASP:HB3	1:A:3854:GLN:HG2	1.98	0.45
1:A:2461:MET:CG	1:A:2583:THR:HG21	2.46	0.45
1:A:2495:VAL:HG11	1:A:2526:LEU:HD21	1.99	0.45
1:A:4288:VAL:O	1:A:4319:SER:OG	2.23	0.45
1:A:2512:ALA:O	1:A:2516:GLU:HG2	2.16	0.45
1:A:2739:PRO:HD2	1:A:2796:PRO:HG2	1.99	0.45
1:A:3764:ASP:OD1	1:A:3764:ASP:N	2.48	0.45
1:A:3836:TYR:HE1	1:A:3840:LEU:HD11	1.81	0.45
1:A:3485:GLU:O	1:A:3489:TRP:HD1	1.99	0.45
1:A:3641:TYR:CD2	1:A:3692:LEU:HD21	2.52	0.45
1:A:4020:ILE:HA	1:A:4023:GLN:NE2	2.31	0.45
1:A:2307:VAL:HG23	1:A:2311:TRP:CZ2	2.52	0.45
1:A:2694:ARG:NE	1:A:2697:ASP:OD1	2.50	0.45
1:A:4547:THR:HA	1:A:4586:PRO:HB2	1.98	0.45
1:A:1985:HIS:NE2	1:A:2010:PRO:HB3	2.32	0.45
1:A:2648:VAL:HG13	1:A:2701:VAL:HG22	1.99	0.45
1:A:2802:TRP:CZ2	1:A:2829:ALA:HB2	2.52	0.45
1:A:2762:LEU:HD11	1:A:2821:LEU:HD22	1.99	0.44
1:A:2973:ASP:O	1:A:2977:ARG:HD3	2.17	0.44
1:A:3191:ARG:NE	1:A:3195:GLU:OE1	2.50	0.44
1:A:3194:LEU:O	1:A:3198:GLN:HG2	2.17	0.44
1:A:3833:LEU:HD13	1:A:3833:LEU:HA	1.88	0.44
1:A:1658:PHE:CG	1:A:1661:VAL:HB	2.53	0.44
1:A:2079:GLN:O	1:A:4415:ARG:NH2	2.50	0.44
1:A:1850:GLN:HB3	1:A:1856:GLN:HG2	1.99	0.44
1:A:2220:LEU:O	1:A:2342:MET:HA	2.17	0.44
1:A:2449:LEU:HA	1:A:2449:LEU:HD12	1.77	0.44
1:A:3789:ILE:HG22	1:A:3793:GLU:HG2	1.98	0.44
1:A:1879:LEU:HD11	2:A:4701:ADP:C5	2.53	0.44
1:A:4473:MET:HG3	1:A:4477:GLN:HB2	1.99	0.44
1:A:1659:ALA:O	1:A:1679:ARG:NH2	2.51	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1911:GLY:HA3	2:A:4701:ADP:C2	2.53	0.44
1:A:2913:ASN:OD1	1:A:2913:ASN:N	2.50	0.44
1:A:3126:MET:HE2	1:A:3126:MET:HA	1.99	0.44
1:A:3218:LEU:HD21	1:A:3760:ILE:O	2.17	0.44
1:A:3960:TRP:CZ3	1:A:3996:PHE:HD2	2.34	0.44
1:A:3983:ILE:HG12	1:A:4012:ASN:OD1	2.18	0.44
1:A:4178:ARG:HH11	1:A:4296:MET:HE1	1.83	0.44
1:A:4211:ASP:HB3	1:A:4252:TYR:CE2	2.53	0.44
1:A:3488:ARG:HE	1:A:3489:TRP:CD1	2.36	0.44
1:A:3767:ILE:HA	1:A:3770:LEU:HD12	1.99	0.44
1:A:4289:ASP:N	1:A:4289:ASP:OD1	2.50	0.44
1:A:2571:THR:H	1:A:2574:THR:HB	1.82	0.44
1:A:3780:VAL:O	1:A:3784:VAL:HG23	2.18	0.44
1:A:2873:TYR:CZ	1:A:2883:PRO:HD3	2.53	0.44
1:A:2926:PHE:HA	1:A:3063:HIS:CD2	2.52	0.44
1:A:3681:THR:HG21	1:A:3688:PHE:HZ	1.83	0.44
1:A:4260:PHE:CE2	1:A:4608:PRO:HB3	2.53	0.44
1:A:2325:LEU:O	1:A:2332:ARG:HA	2.17	0.44
1:A:3103:TYR:CE2	1:A:3107:LYS:HD2	2.53	0.44
1:A:3117:LYS:HE3	1:A:3119:ASN:ND2	2.32	0.44
1:A:3721:ARG:HH21	1:A:3724:VAL:HG11	1.82	0.44
1:A:4577:LEU:HD23	1:A:4577:LEU:HA	1.79	0.44
1:A:1751:VAL:O	1:A:1755:GLN:HG3	2.19	0.43
1:A:2181:GLU:OE1	1:A:2243:ARG:NH1	2.51	0.43
1:A:2503:SER:HB3	1:A:2514:LEU:HD22	1.99	0.43
1:A:2594:CYS:O	1:A:2735:TYR:HA	2.18	0.43
1:A:2964:HIS:H	1:A:2967:TYR:HB2	1.83	0.43
1:A:3529:PHE:CE2	1:A:3549:ARG:HD3	2.53	0.43
1:A:1779:HIS:ND1	1:A:1826:ILE:HD12	2.33	0.43
1:A:2239:LYS:HD2	1:A:2239:LYS:HA	1.76	0.43
1:A:2943:LYS:HG3	1:A:3094:PHE:CD2	2.53	0.43
1:A:2979:VAL:HG21	1:A:2992:PHE:CE2	2.53	0.43
1:A:3692:LEU:O	1:A:3696:VAL:HG22	2.18	0.43
1:A:1623:ARG:HB3	1:A:1630:TYR:HD2	1.84	0.43
1:A:2183:LYS:HB2	1:A:2183:LYS:HE2	1.86	0.43
1:A:2497:ALA:O	1:A:2501:SER:HB2	2.17	0.43
1:A:2762:LEU:HD21	1:A:2821:LEU:HB2	2.00	0.43
1:A:2831:ARG:HB3	1:A:2924:ARG:NH2	2.33	0.43
1:A:3655:ARG:HH21	1:A:3660:VAL:HG13	1.84	0.43
1:A:2449:LEU:HD11	1:A:2454:CYS:SG	2.58	0.43
1:A:2865:LYS:HA	1:A:2865:LYS:HD2	1.86	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3704:THR:H	1:A:3707:SER:HB3	1.83	0.43
1:A:4535:SER:O	1:A:4538:GLU:HG2	2.17	0.43
1:A:3113:MET:HE2	1:A:3113:MET:HB3	1.80	0.43
1:A:1925:ARG:HH22	1:A:2011:ASP:CG	2.27	0.43
1:A:2596:PRO:HB2	1:A:2738:TYR:CE1	2.54	0.43
1:A:2202:MET:HE2	1:A:2202:MET:HB3	1.73	0.43
1:A:2590:PRO:O	1:A:2732:PRO:HD2	2.19	0.43
1:A:2783:ARG:HH21	1:A:2845:TRP:CD1	2.37	0.43
1:A:3846:LEU:HD21	1:A:3859:ILE:HG13	2.00	0.43
1:A:4186:PHE:HE2	1:A:4252:TYR:CD1	2.36	0.43
1:A:1914:GLU:OE1	2:A:4701:ADP:H3'	2.19	0.43
1:A:2231:SER:HA	1:A:2234:TRP:CD1	2.53	0.43
1:A:4227:ALA:HB2	1:A:4233:ILE:HD12	2.00	0.43
1:A:4380:LEU:HA	1:A:4383:THR:HG22	2.00	0.43
1:A:1713:LEU:HD23	1:A:1713:LEU:HA	1.89	0.43
1:A:1929:VAL:HG22	1:A:1956:CYS:HB3	2.01	0.43
1:A:1945:PHE:CE1	1:A:1975:VAL:HG12	2.54	0.43
1:A:3056:SER:O	1:A:3059:ILE:HG22	2.18	0.43
1:A:1950:GLN:NE2	1:A:2007:LYS:H	2.17	0.43
1:A:2602:THR:HG23	1:A:2662:PHE:HE2	1.83	0.43
1:A:2762:LEU:HD12	1:A:2765:TYR:HB2	2.00	0.43
1:A:2779:MET:HA	1:A:2782:GLU:HB3	2.00	0.43
1:A:2873:TYR:CE2	1:A:2883:PRO:HD3	2.54	0.43
1:A:1843:ARG:NH2	1:A:1860:GLN:HB3	2.34	0.42
1:A:2790:PRO:HB3	1:A:3076:LYS:HG3	2.00	0.42
1:A:2943:LYS:HE2	1:A:2943:LYS:HB2	1.84	0.42
1:A:3966:PRO:HD2	1:A:4000:ARG:HG3	2.00	0.42
1:A:2387:LEU:HD23	1:A:2387:LEU:HA	1.93	0.42
1:A:2492:ARG:HG2	1:A:2545:TRP:NE1	2.34	0.42
1:A:2937:GLY:C	1:A:3070:PRO:HD3	2.43	0.42
1:A:3601:MET:HE3	1:A:3611:ARG:HE	1.84	0.42
1:A:3638:VAL:HG22	1:A:3681:THR:HG22	2.00	0.42
1:A:4168:ARG:NH1	1:A:4220:ASP:OD2	2.43	0.42
1:A:4628:THR:O	1:A:4629:LYS:HG2	2.19	0.42
1:A:2086:TYR:OH	1:A:2153:ASP:OD2	2.32	0.42
1:A:2286:LYS:NZ	1:A:2291:VAL:HB	2.35	0.42
1:A:2299:GLN:N	1:A:2299:GLN:OE1	2.53	0.42
1:A:2603:MET:HE3	2:A:4703:ADP:C4	2.54	0.42
1:A:3169:MET:SD	1:A:3693:CYS:HB3	2.59	0.42
1:A:4288:VAL:HG23	1:A:4289:ASP:OD1	2.19	0.42
1:A:1664:ILE:HD12	1:A:1666:LEU:HD11	2.01	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1985:HIS:CD2	1:A:2010:PRO:HB3	2.55	0.42
1:A:2012:MET:SD	1:A:2013:ALA:N	2.93	0.42
1:A:2228:SER:N	3:A:4702:ATP:O1B	2.51	0.42
1:A:2615:MET:SD	1:A:2615:MET:N	2.92	0.42
1:A:3935:VAL:HG13	1:A:3947:LEU:HD23	2.01	0.42
1:A:4234:SER:HB3	1:A:4237:LYS:HG2	2.01	0.42
1:A:1635:GLU:HG2	1:A:1636:ASP:H	1.85	0.42
1:A:2911:LEU:HD23	1:A:2911:LEU:HA	1.76	0.42
1:A:3181:ASN:ND2	1:A:3584:ASN:OD1	2.53	0.42
1:A:4149:PRO:HA	1:A:4150:PRO:HD3	1.94	0.42
1:A:1789:LEU:HD13	1:A:1815:LEU:HB3	2.02	0.42
1:A:1926:PHE:O	1:A:1953:ALA:HB1	2.19	0.42
1:A:1933:ASP:OD1	1:A:1933:ASP:N	2.49	0.42
1:A:2209:GLN:O	1:A:2213:ILE:HG12	2.20	0.42
1:A:2265:TYR:O	1:A:2281:THR:OG1	2.29	0.42
1:A:2652:PRO:HD2	1:A:2705:ARG:CZ	2.49	0.42
1:A:1628:ARG:HG3	1:A:1706:GLU:OE1	2.20	0.42
1:A:2206:LYS:HD3	1:A:2206:LYS:HA	1.82	0.42
1:A:2995:ASP:OD1	1:A:2995:ASP:C	2.62	0.42
1:A:3592:PRO:HG3	1:A:3702:THR:HG22	2.02	0.42
1:A:3115:LEU:HD22	1:A:3143:ILE:HG21	2.01	0.42
1:A:3719:ALA:HB3	1:A:3840:LEU:HD13	2.01	0.42
1:A:3747:LYS:O	1:A:3751:GLN:HG2	2.20	0.42
1:A:4173:PRO:HG2	1:A:4176:ARG:HB2	2.02	0.42
1:A:1769:MET:CE	1:A:1777:PRO:HD2	2.50	0.42
1:A:3766:ILE:HD12	1:A:3766:ILE:HA	1.91	0.42
1:A:3787:THR:HA	1:A:3790:VAL:HB	2.00	0.42
1:A:3811:ILE:HD11	1:A:3864:PHE:CE1	2.55	0.42
1:A:3924:ILE:HG23	1:A:3952:GLN:NE2	2.35	0.42
1:A:1944:ILE:HD12	1:A:1944:ILE:HA	1.93	0.42
1:A:4288:VAL:HG22	1:A:4293:ASP:HA	2.01	0.42
1:A:4611:LEU:HB2	1:A:4619:ILE:HD11	2.01	0.42
1:A:1724:VAL:HA	1:A:1727:PHE:CD1	2.54	0.41
1:A:1912:LYS:NZ	2:A:4701:ADP:O3B	2.45	0.41
1:A:2277:ASP:OD1	1:A:2277:ASP:N	2.53	0.41
1:A:2600:GLY:H	2:A:4703:ADP:H5'2	1.85	0.41
1:A:2992:PHE:HE1	1:A:2994:MET:SD	2.43	0.41
1:A:3801:TYR:CD1	1:A:3856:LEU:HD13	2.54	0.41
1:A:3808:CYS:SG	1:A:3836:TYR:HE2	2.43	0.41
1:A:2979:VAL:HG21	1:A:2992:PHE:HE2	1.86	0.41
1:A:3154:LEU:HD12	1:A:3171:ILE:HD13	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3607:ARG:O	1:A:3608:LYS:HG2	2.20	0.41
1:A:3801:TYR:HD1	1:A:3856:LEU:HD13	1.85	0.41
1:A:4467:TYR:HB3	1:A:4515:PHE:HD2	1.85	0.41
1:A:3606:ASP:N	1:A:3606:ASP:OD1	2.50	0.41
1:A:4031:VAL:O	1:A:4123:ARG:NH2	2.49	0.41
1:A:2527:PRO:HG3	1:A:2545:TRP:CG	2.55	0.41
1:A:2744:LEU:HA	1:A:2747:ILE:HG22	2.02	0.41
1:A:3110:THR:O	1:A:3140:ARG:NH1	2.53	0.41
1:A:3488:ARG:HD2	1:A:3746:GLU:OE1	2.20	0.41
1:A:3976:GLU:OE1	1:A:3980:ALA:HB2	2.20	0.41
1:A:4412:PHE:CZ	1:A:4520:TYR:HB2	2.55	0.41
1:A:3579:MET:HE3	1:A:3579:MET:HB2	1.84	0.41
1:A:4435:VAL:O	1:A:4439:GLU:HG2	2.20	0.41
1:A:1628:ARG:HD3	1:A:1951:VAL:HG13	2.03	0.41
1:A:2620:LEU:HD11	1:A:2634:THR:HG21	2.03	0.41
1:A:2747:ILE:HD12	2:A:4703:ADP:C6	2.56	0.41
1:A:2779:MET:O	1:A:2783:ARG:N	2.53	0.41
1:A:3076:LYS:HB2	1:A:3076:LYS:HE2	1.93	0.41
1:A:4480:SER:O	1:A:4484:GLU:HG2	2.21	0.41
1:A:2300:TRP:CE3	1:A:2342:MET:HE1	2.56	0.41
1:A:2570:PRO:O	1:A:2746:GLN:NE2	2.54	0.41
1:A:2822:ILE:HD11	1:A:2858:PHE:CD2	2.56	0.41
1:A:2855:LEU:HD13	1:A:2855:LEU:HA	1.87	0.41
1:A:3495:THR:HG23	1:A:3496:PHE:HD2	1.86	0.41
1:A:3509:LEU:HD23	1:A:3509:LEU:HA	1.88	0.41
1:A:4107:MET:HG2	1:A:4135:PRO:HB3	2.02	0.41
1:A:4399:LYS:HA	1:A:4399:LYS:HD3	1.82	0.41
1:A:4448:LEU:O	1:A:4452:ILE:HG12	2.21	0.41
1:A:1887:ARG:NH2	1:A:4253:GLY:O	2.53	0.41
1:A:2072:PHE:HA	1:A:2075:LEU:HD12	2.03	0.41
1:A:2311:TRP:H	1:A:2311:TRP:CD1	2.37	0.41
1:A:3612:THR:O	1:A:3635:VAL:HA	2.20	0.41
1:A:3788:ASP:O	1:A:3791:MET:HB3	2.21	0.41
1:A:1698:ILE:HD12	1:A:1701:TRP:NE1	2.36	0.40
1:A:3194:LEU:HD23	1:A:3500:MET:HE2	2.03	0.40
1:A:3841:TYR:O	1:A:3842:GLU:HG2	2.21	0.40
1:A:4095:MET:HE3	1:A:4095:MET:HB2	1.76	0.40
1:A:4297:PRO:HG3	1:A:4308:TRP:CD2	2.56	0.40
1:A:1623:ARG:HE	1:A:1637:LEU:HD22	1.86	0.40
1:A:2749:GLY:N	1:A:2770:THR:HG21	2.36	0.40
1:A:1675:GLY:HA3	1:A:1685:MET:HE2	2.04	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1931:ASN:ND2	1:A:1931:ASN:C	2.79	0.40
1:A:3819:LYS:HB2	1:A:3826:GLN:OE1	2.21	0.40
1:A:4030:ILE:HG21	1:A:4145:PHE:CZ	2.56	0.40
1:A:4460:LEU:HD12	1:A:4460:LEU:HA	1.88	0.40
1:A:2097:LEU:HD13	1:A:2097:LEU:HA	1.95	0.40
1:A:2286:LYS:HE2	1:A:2292:ARG:NH1	2.35	0.40
1:A:2453:ARG:HD3	1:A:2728:LEU:O	2.21	0.40
1:A:2596:PRO:O	1:A:2601:LYS:NZ	2.45	0.40
1:A:2704:GLU:HG3	1:A:2705:ARG:HG3	2.03	0.40
1:A:4510:CYS:SG	1:A:4561:THR:OG1	2.71	0.40
1:A:1846:PHE:CE2	1:A:1856:GLN:HB3	2.57	0.40
1:A:3666:ASP:OD1	1:A:3666:ASP:N	2.55	0.40
1:A:3983:ILE:O	1:A:3987:ILE:HG22	2.20	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	2699/4646 (58%)	2641 (98%)	58 (2%)	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	2407/4125 (58%)	2401 (100%)	6 (0%)	92 94

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1931	ASN
1	A	1964	GLU
1	A	3725	ASP
1	A	3795	GLU
1	A	4124	LEU
1	A	4628	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (29) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1850	GLN
1	A	1922	GLN
1	A	1973	GLN
1	A	2005	GLN
1	A	2109	GLN
1	A	2130	ASN
1	A	2169	GLN
1	A	2171	HIS
1	A	2314	ASN
1	A	2464	GLN
1	A	2482	GLN
1	A	2549	GLN
1	A	2789	GLN
1	A	3032	GLN
1	A	3047	HIS
1	A	3181	ASN
1	A	3214	GLN
1	A	3535	HIS
1	A	3744	GLN
1	A	3772	ASN
1	A	3800	GLN
1	A	3854	GLN
1	A	3952	GLN
1	A	4023	GLN
1	A	4114	HIS
1	A	4325	ASN
1	A	4397	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	4488	GLN
1	A	4490	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

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	ADP	A	4704	-	24,29,29	0.85	0	29,45,45	1.19	2 (6%)
2	ADP	A	4701	-	24,29,29	0.86	0	29,45,45	1.66	4 (13%)
2	ADP	A	4703	-	24,29,29	0.89	0	29,45,45	1.29	3 (10%)
3	ATP	A	4702	-	28,33,33	0.72	0	34,52,52	0.60	1 (2%)

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	ADP	A	4704	-	-	4/12/32/32	0/3/3/3
2	ADP	A	4701	-	-	0/12/32/32	0/3/3/3
2	ADP	A	4703	-	-	4/12/32/32	0/3/3/3
3	ATP	A	4702	-	-	3/18/38/38	0/3/3/3

There are no bond length outliers.

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	4701	ADP	O4'-C1'-N9	4.63	114.88	108.75
2	A	4701	ADP	C4'-O4'-C1'	-4.25	106.03	109.92
2	A	4703	ADP	N3-C2-N1	-4.00	123.24	128.67
2	A	4704	ADP	N3-C2-N1	-3.63	123.74	128.67
2	A	4701	ADP	N3-C2-N1	-3.47	123.97	128.67
2	A	4704	ADP	C4-C5-N7	-2.45	106.75	109.34
2	A	4701	ADP	C4-C5-N7	-2.39	106.81	109.34
3	A	4702	ATP	C5-C6-N6	2.34	123.88	120.31
2	A	4703	ADP	C4-C5-N7	-2.29	106.92	109.34
2	A	4703	ADP	C4'-O4'-C1'	2.18	111.93	109.92

There are no chirality outliers.

All (11) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	4703	ADP	C5'-O5'-PA-O1A
2	A	4703	ADP	C5'-O5'-PA-O2A
2	A	4703	ADP	C5'-O5'-PA-O3A
2	A	4704	ADP	PA-O3A-PB-O2B
2	A	4704	ADP	PA-O3A-PB-O3B
2	A	4704	ADP	C5'-O5'-PA-O1A
3	A	4702	ATP	O4'-C4'-C5'-O5'
3	A	4702	ATP	C3'-C4'-C5'-O5'
2	A	4704	ADP	C3'-C4'-C5'-O5'
2	A	4703	ADP	O4'-C4'-C5'-O5'
3	A	4702	ATP	PA-O3A-PB-O1B

There are no ring outliers.

3 monomers are involved in 12 short contacts:

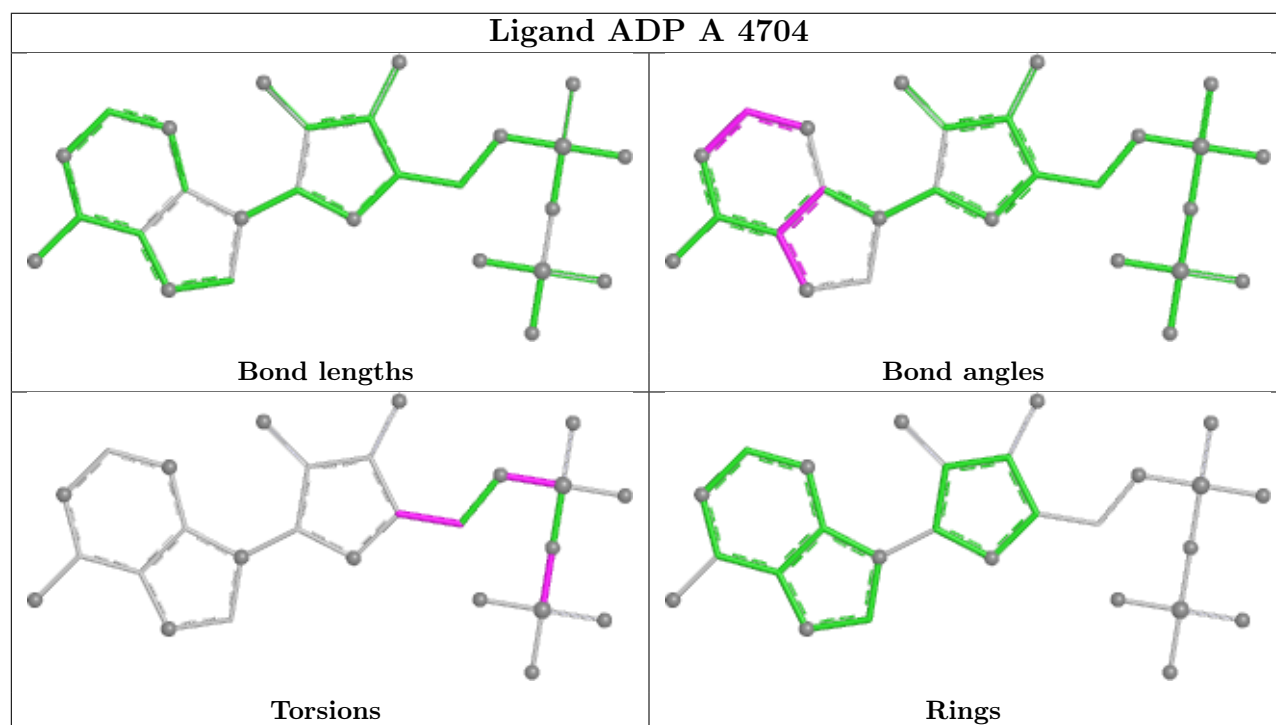
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	4701	ADP	7	0

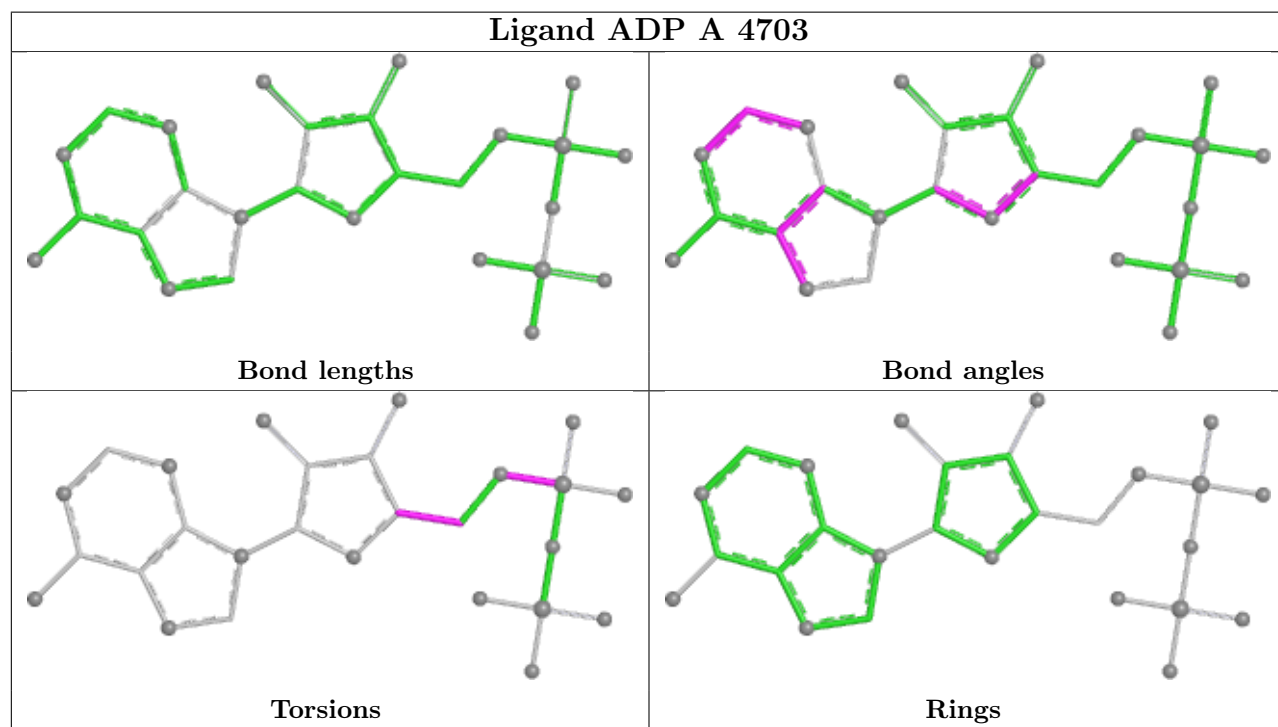
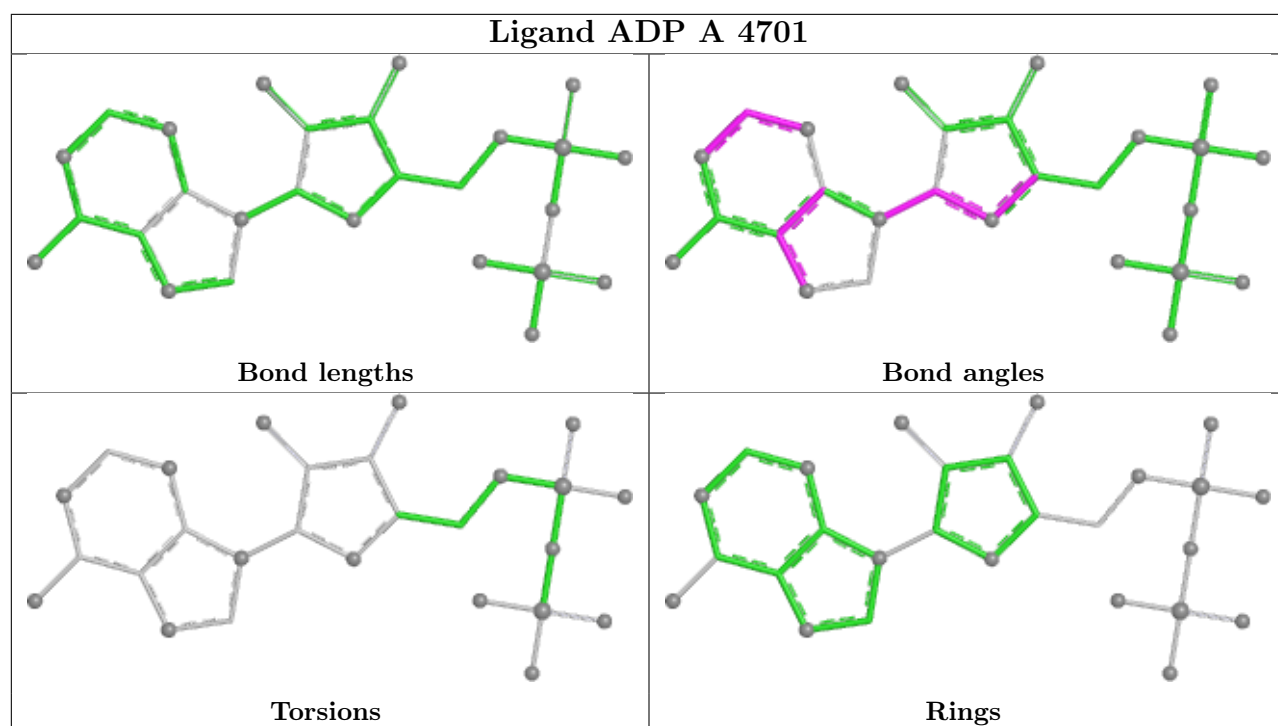
Continued on next page...

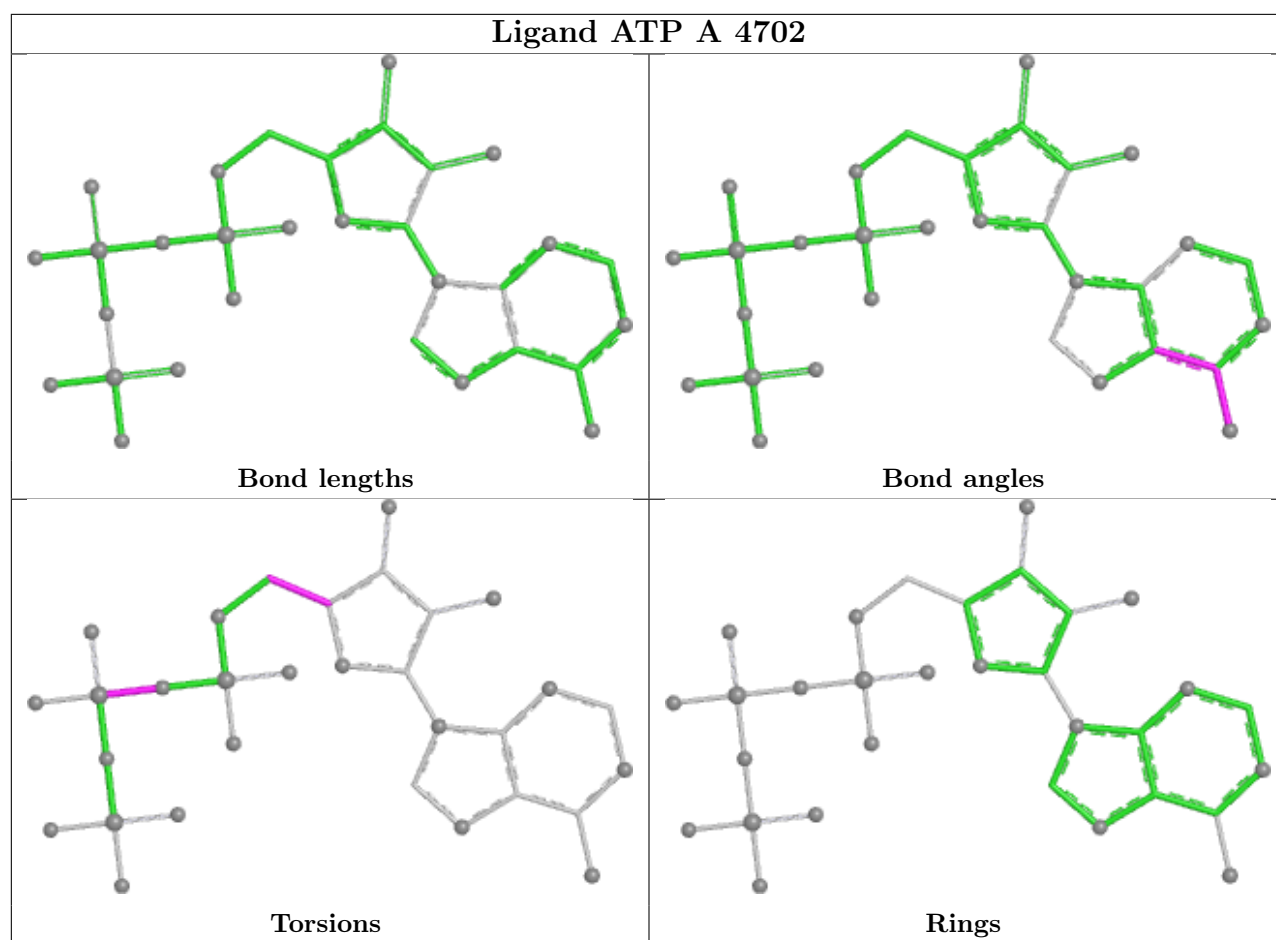
Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	4703	ADP	4	0
3	A	4702	ATP	1	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.

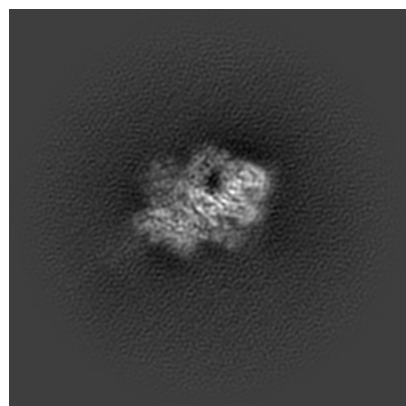
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-44704. These allow visual inspection of the internal detail of the map and identification of artifacts.

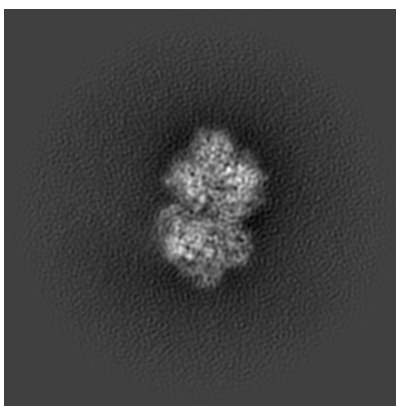
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

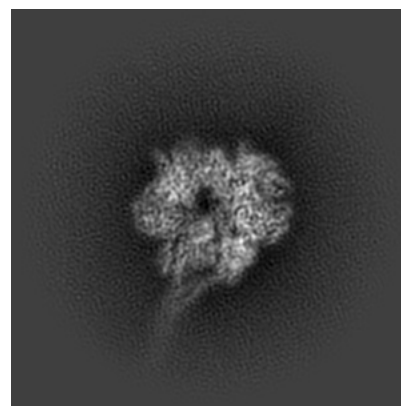
6.1.1 Primary map



X

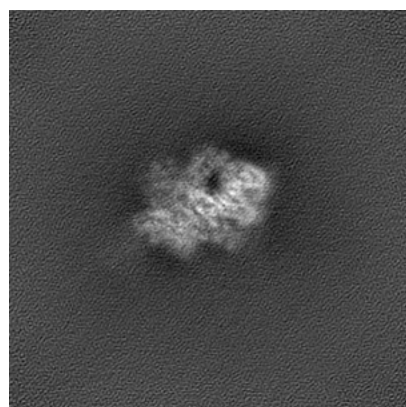


Y

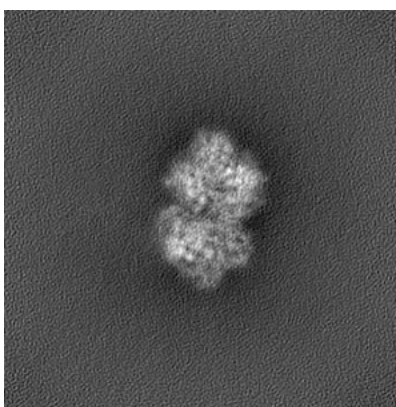


Z

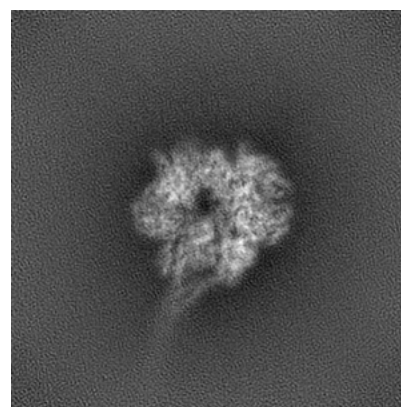
6.1.2 Raw map



X



Y

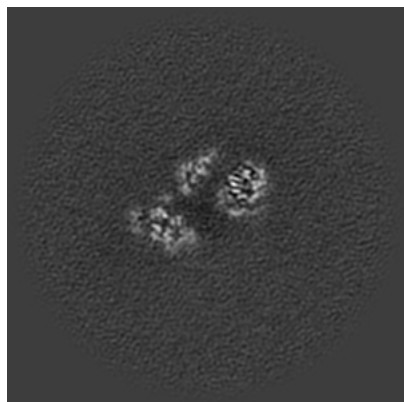


Z

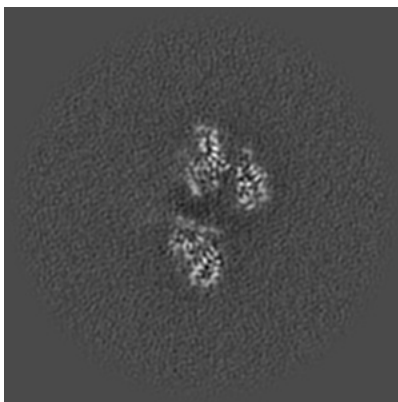
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

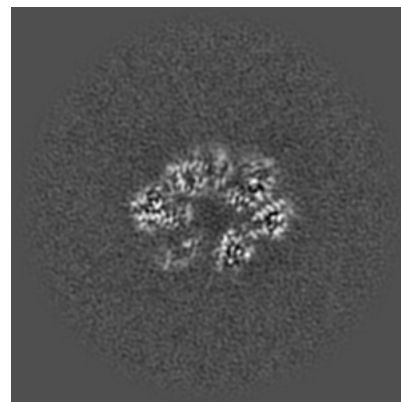
6.2.1 Primary map



X Index: 128

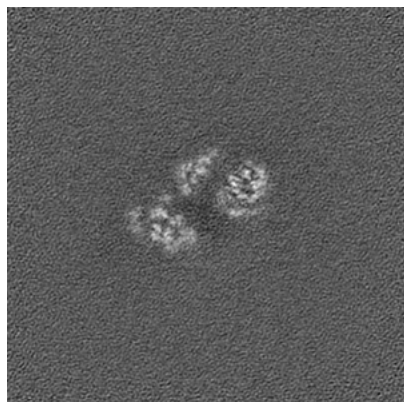


Y Index: 128

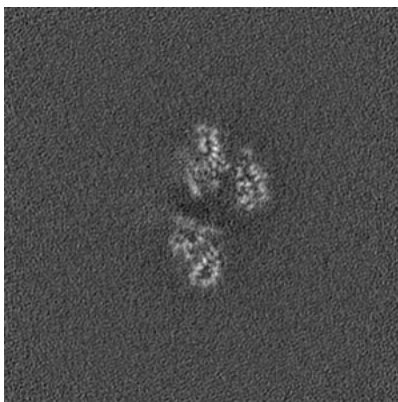


Z Index: 128

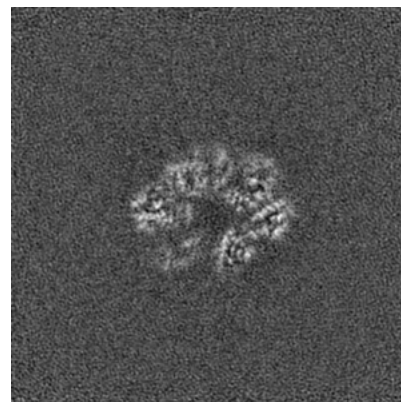
6.2.2 Raw map



X Index: 128



Y Index: 128

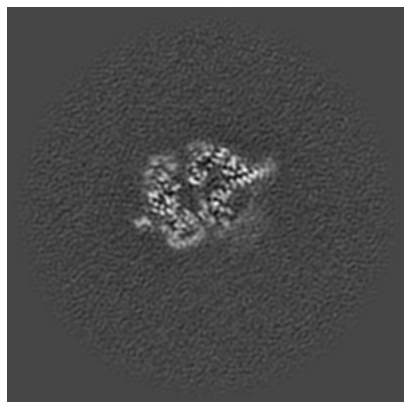


Z Index: 128

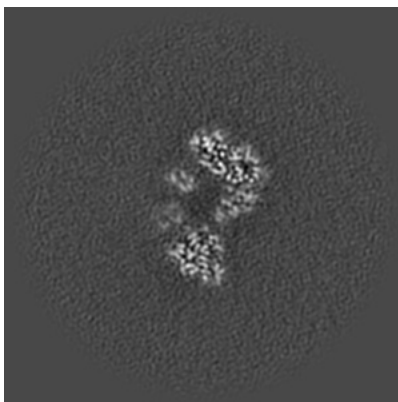
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

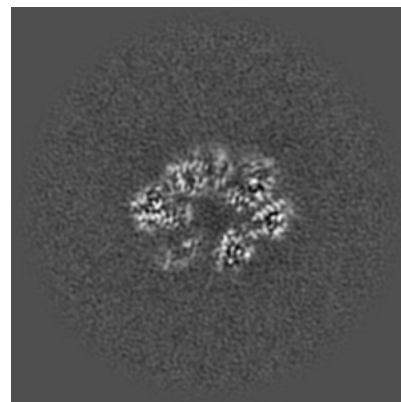
6.3.1 Primary map



X Index: 146

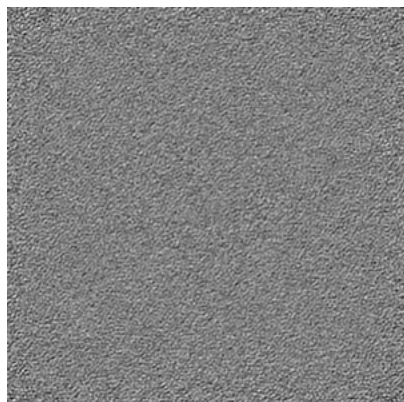


Y Index: 120

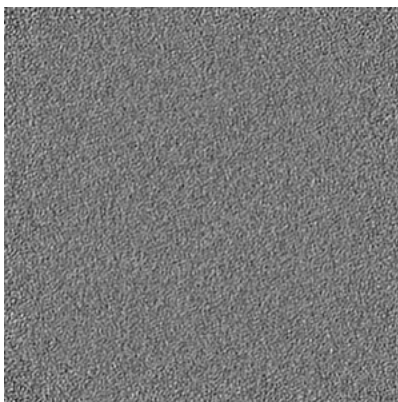


Z Index: 128

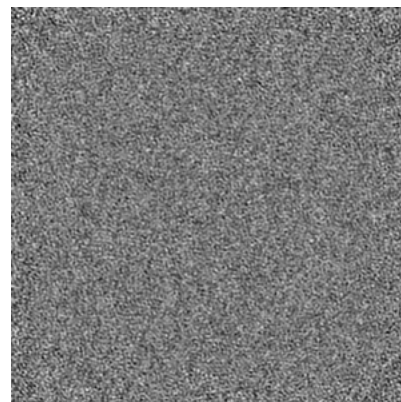
6.3.2 Raw map



X Index: 0



Y Index: 0

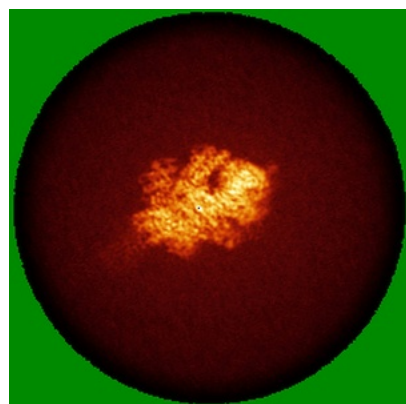


Z Index: 0

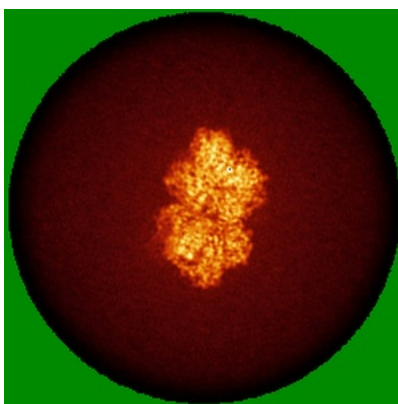
The images above show the largest variance slices of the map in three orthogonal directions.

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

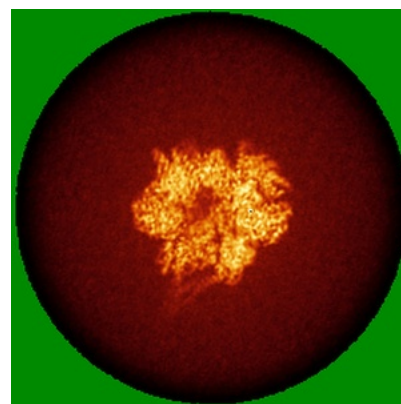
6.4.1 Primary map



X

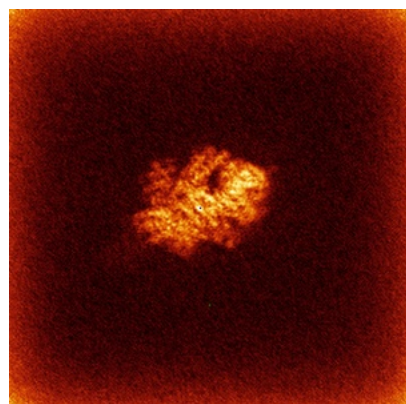


Y

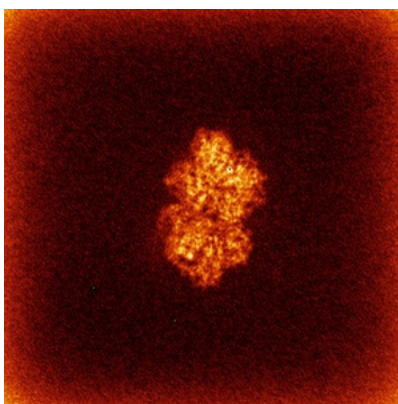


Z

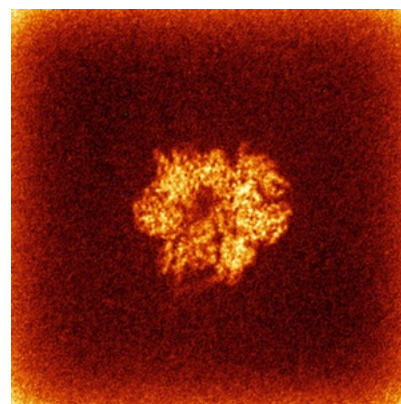
6.4.2 Raw map



X



Y

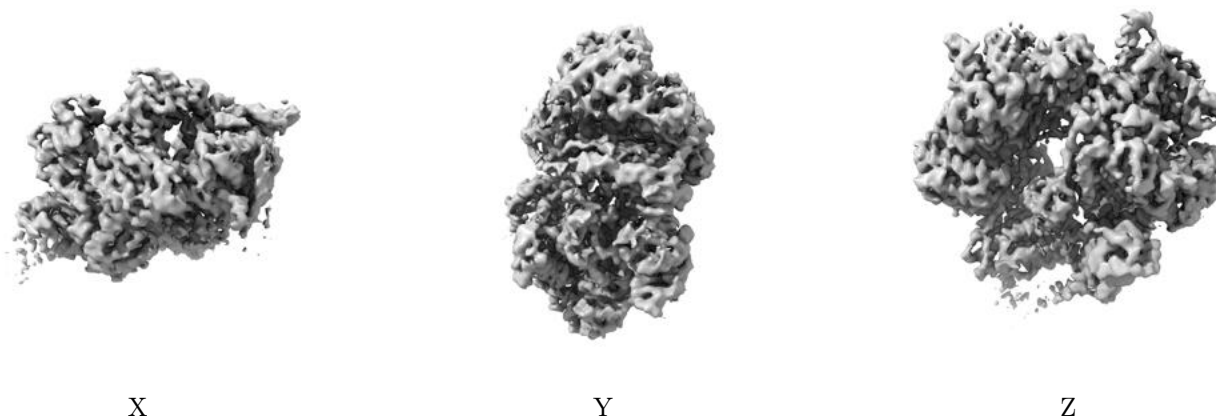


Z

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

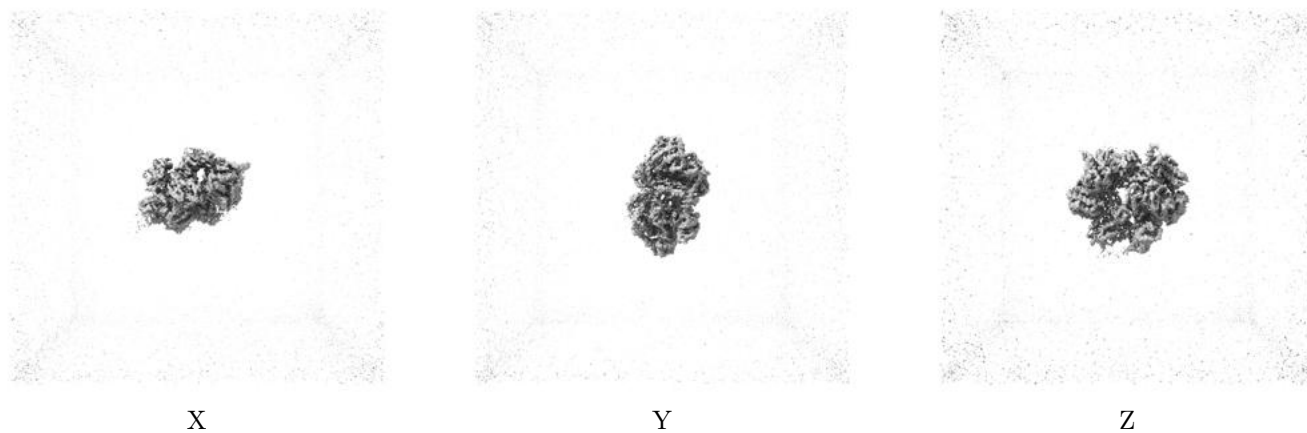
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.2. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

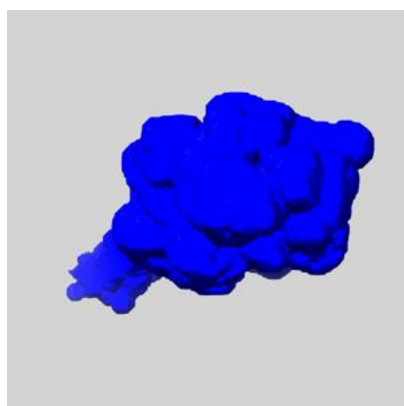
6.6 Mask visualisation [i](#)

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

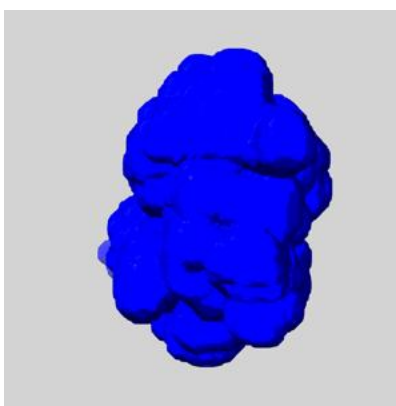
A mask typically either:

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

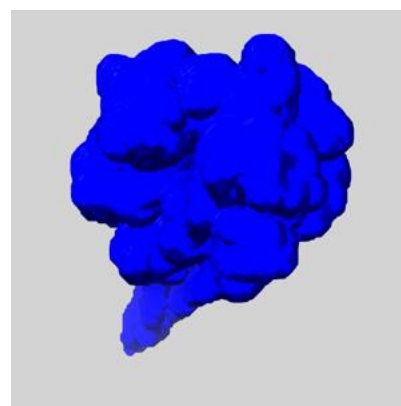
6.6.1 emd_44704_msk_1.map [i](#)



X



Y

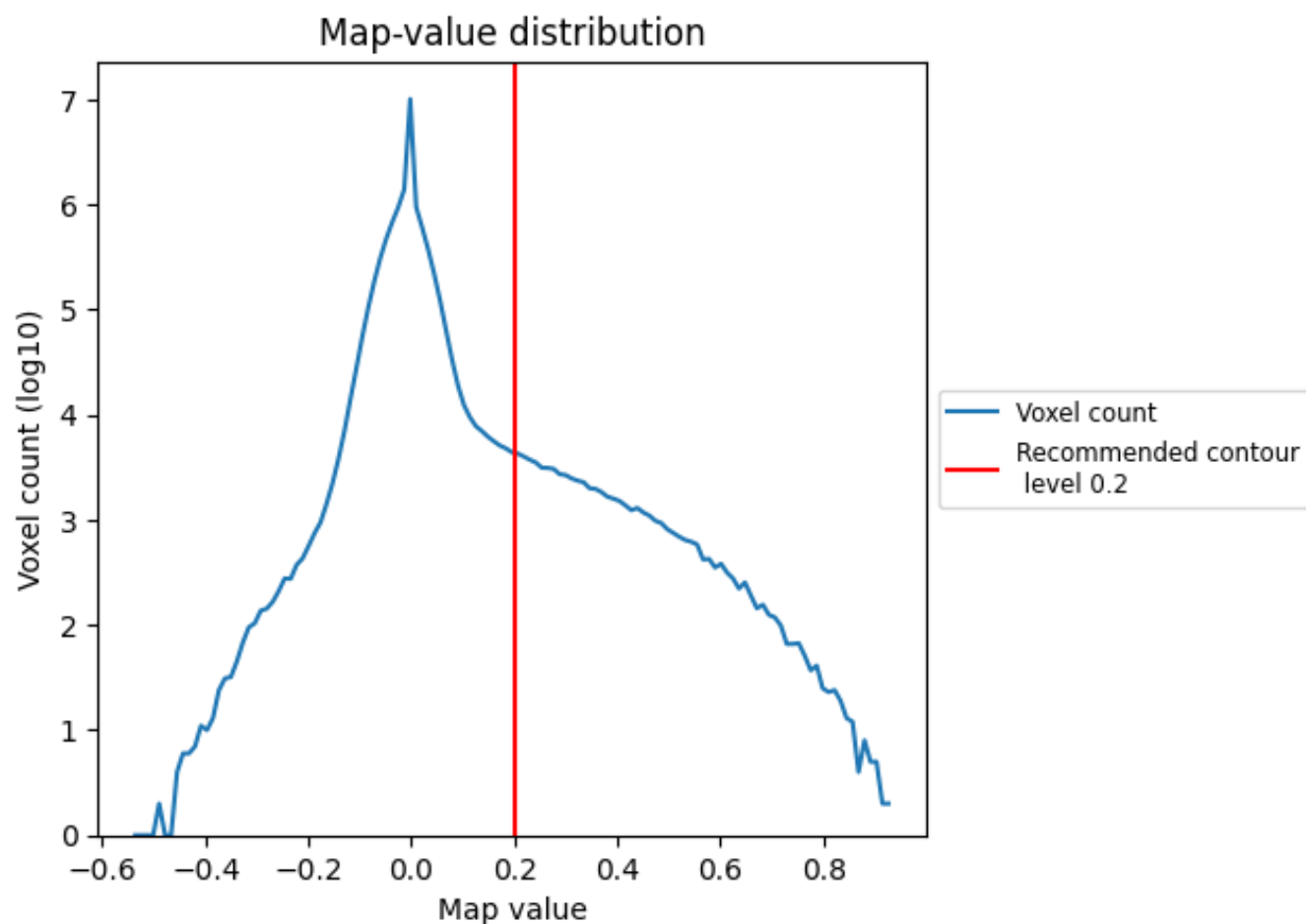


Z

7 Map analysis [i](#)

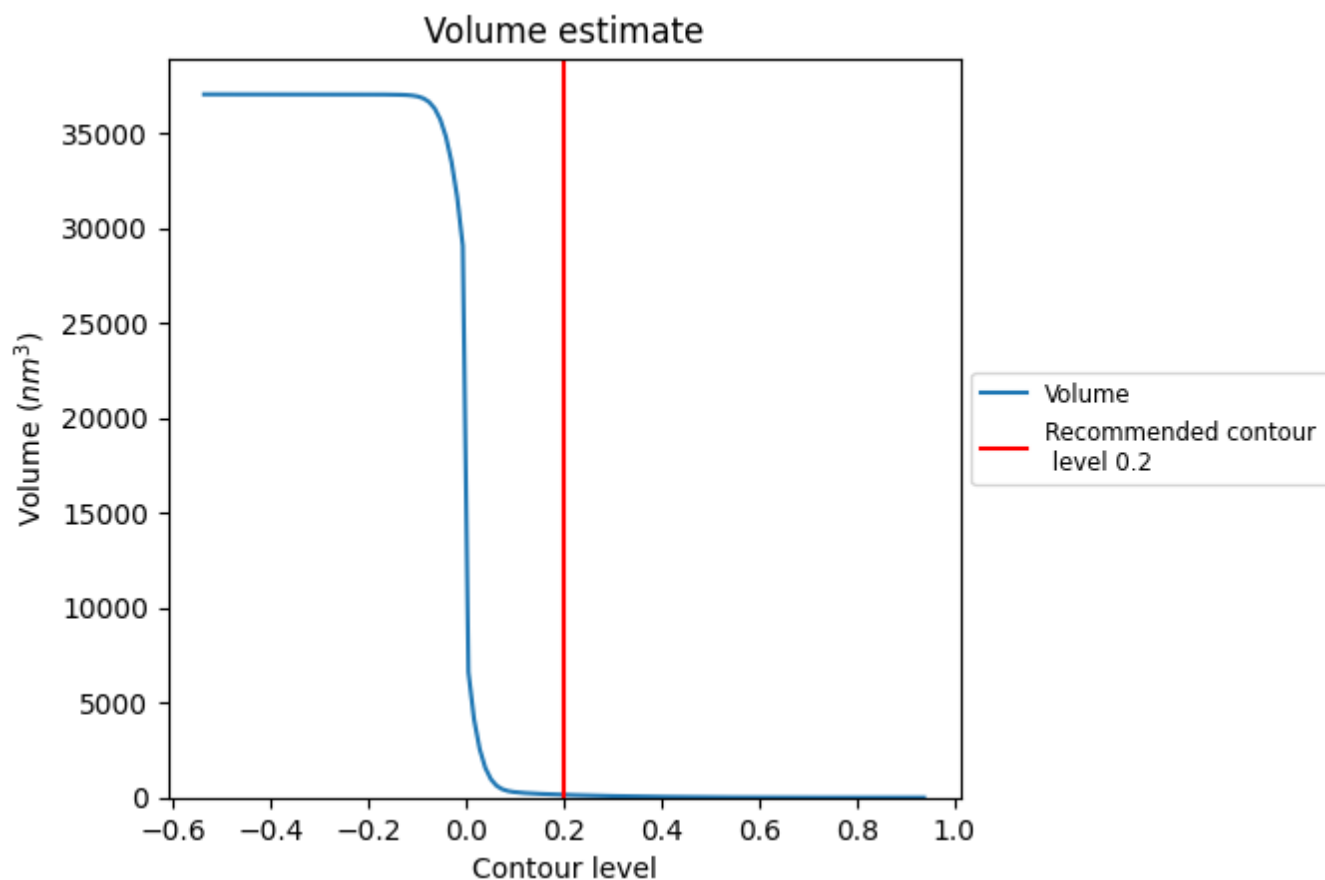
This section contains the results of statistical analysis of the map.

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.

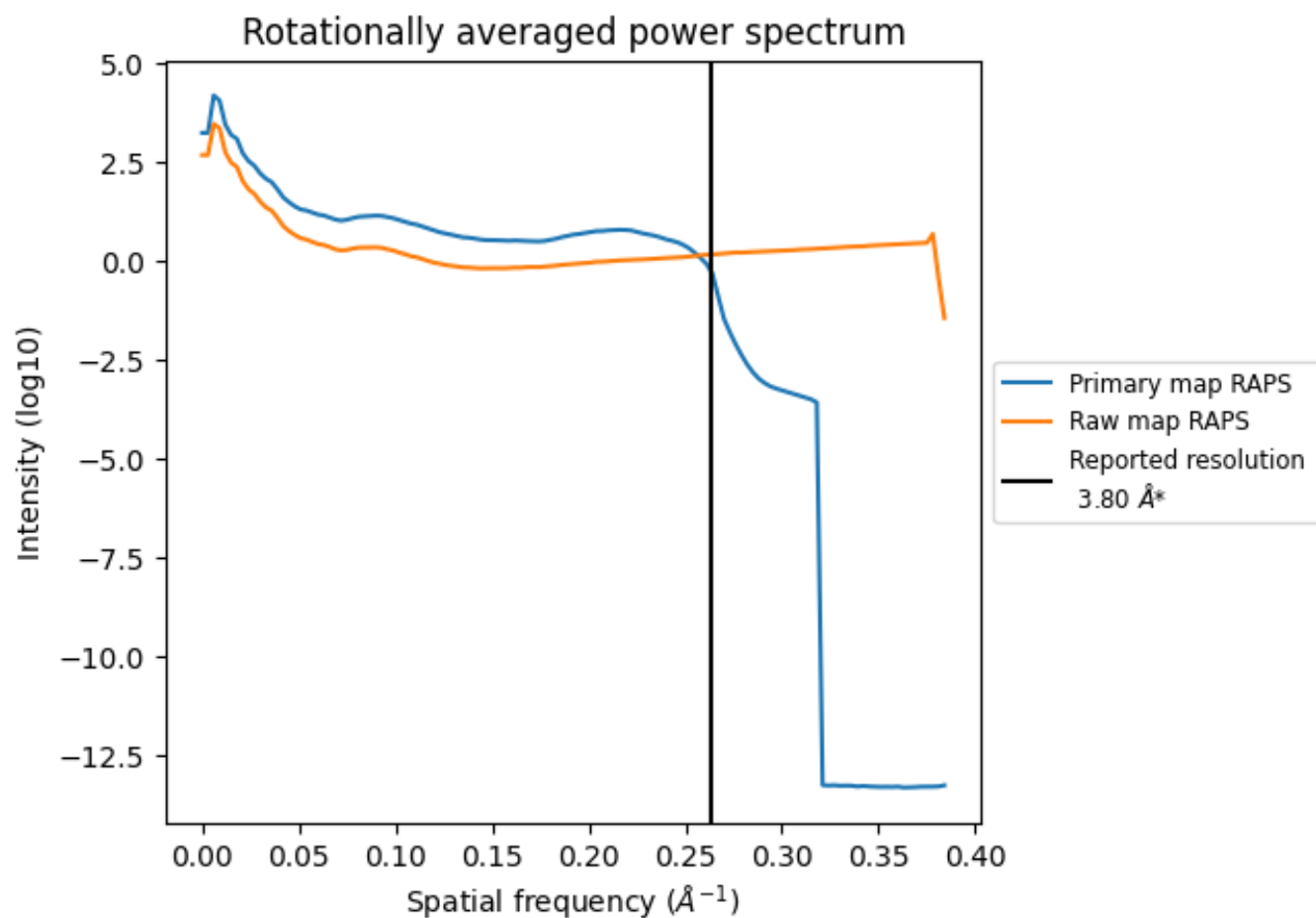
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 147 nm³; this corresponds to an approximate mass of 133 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 ⓘ

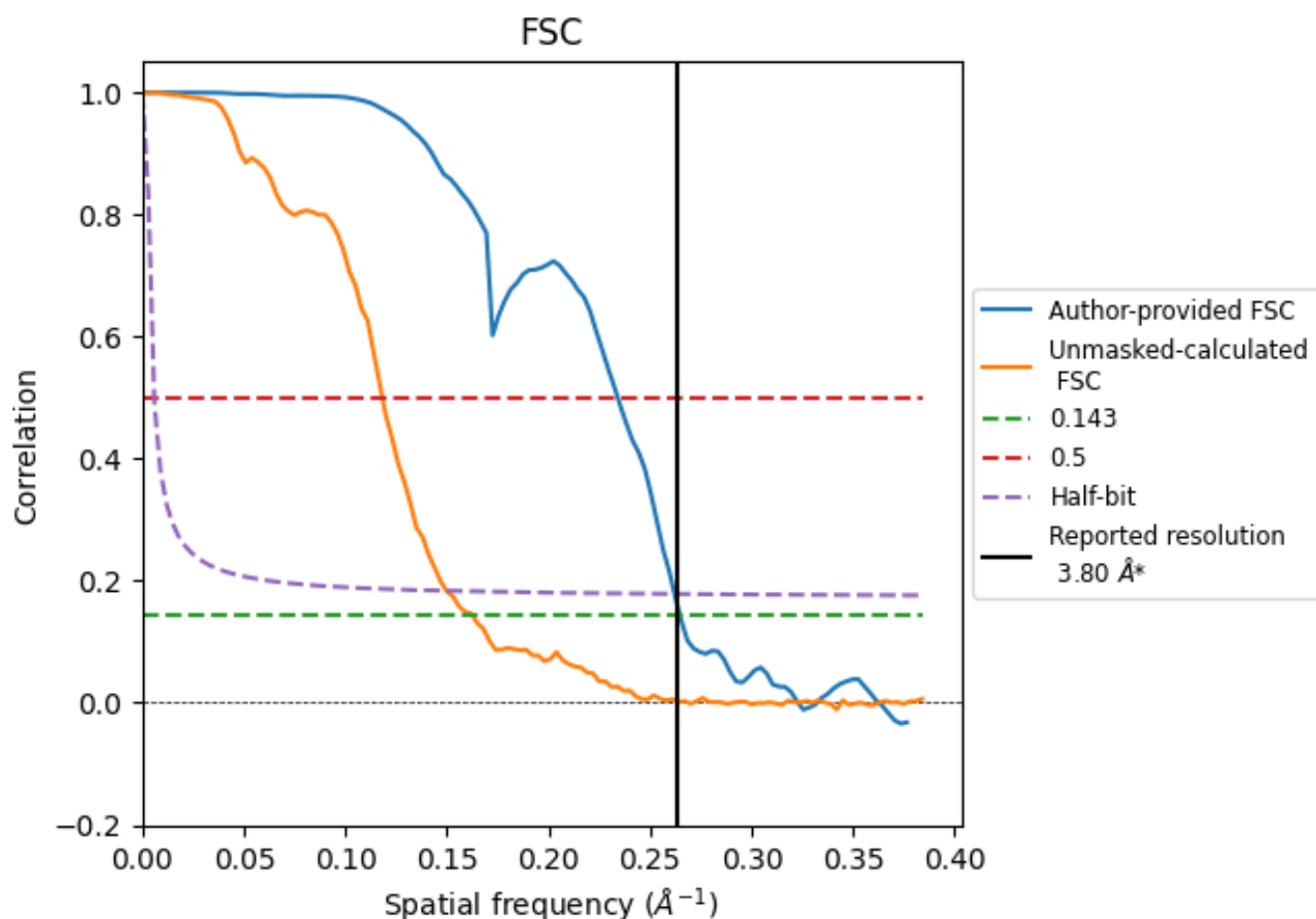


*Reported resolution corresponds to spatial frequency of 0.263 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of $0.263 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

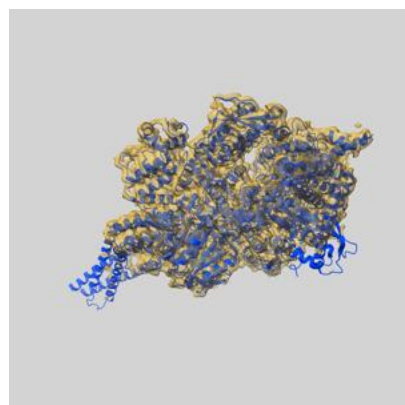
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	3.78	4.27	3.82
Unmasked-calculated*	6.15	8.45	6.67

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 6.15 differs from the reported value 3.8 by more than 10 %

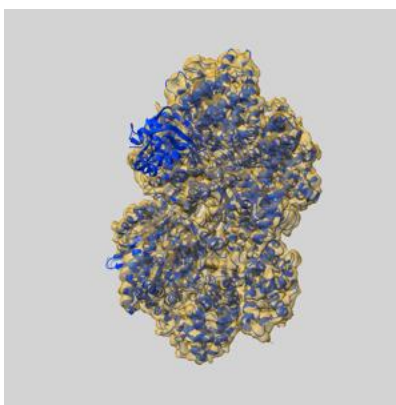
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-44704 and PDB model 9BMN. Per-residue inclusion information can be found in section [3](#) on page [5](#).

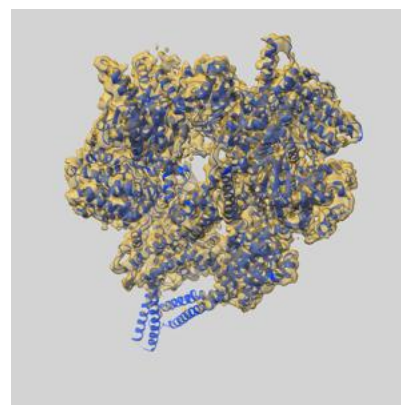
9.1 Map-model overlay [i](#)



X



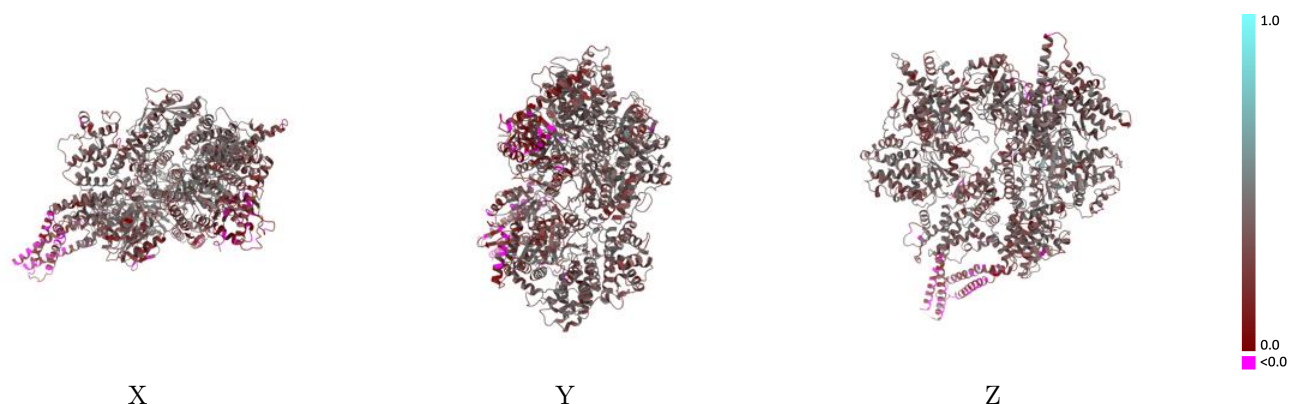
Y



Z

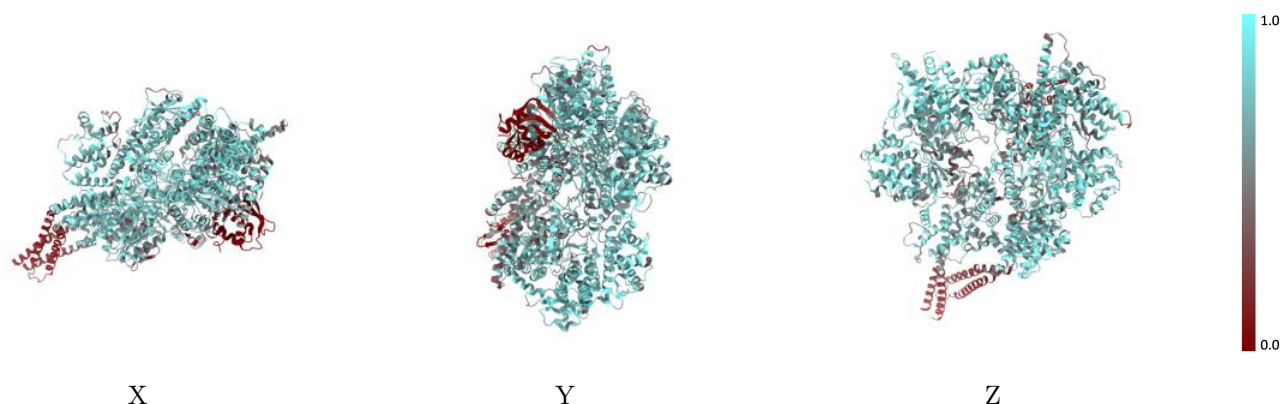
The images above show the 3D surface view of the map at the recommended contour level 0.2 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



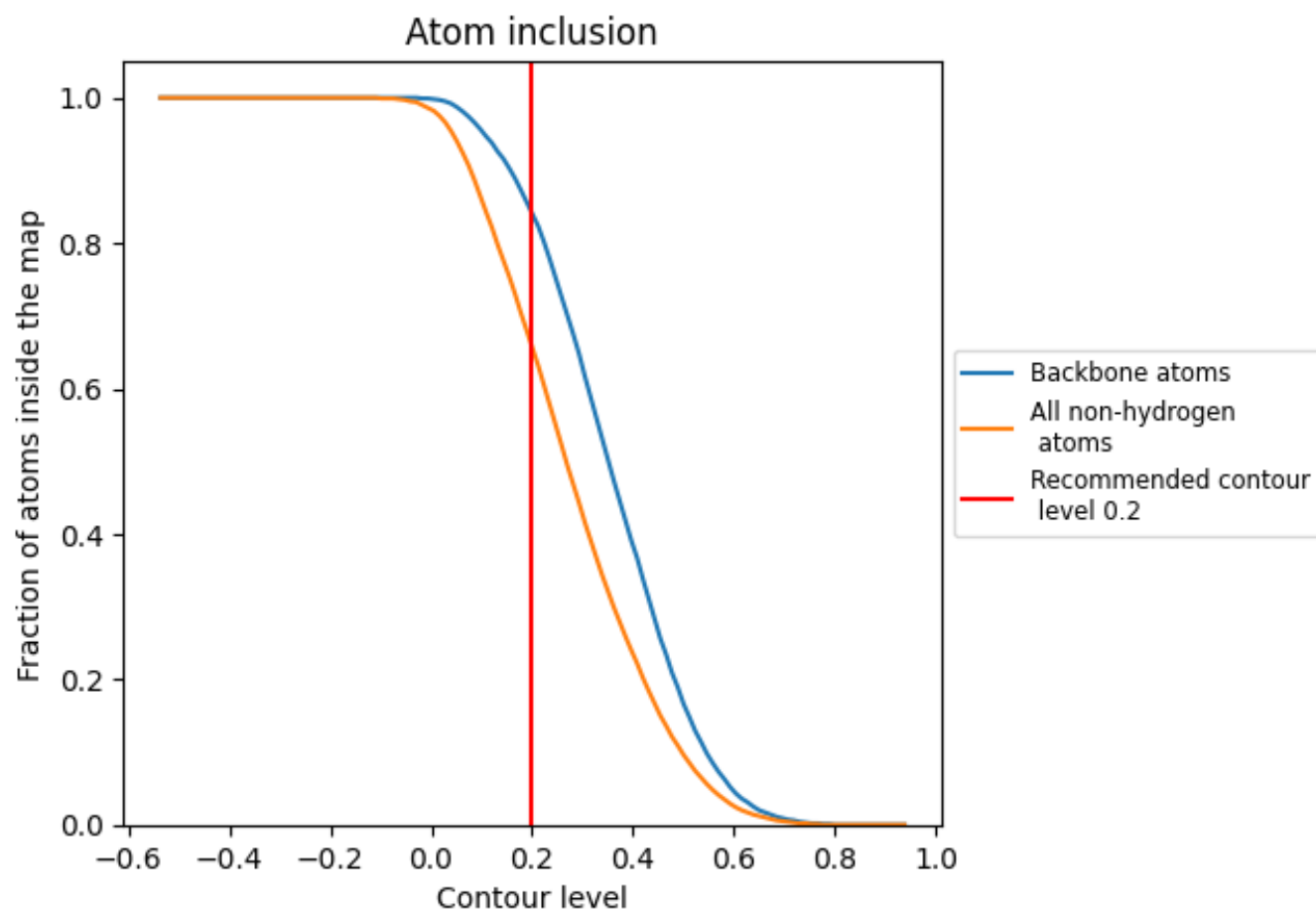
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.2).

9.4 Atom inclusion ⓘ



At the recommended contour level, 84% of all backbone atoms, 66% 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 (0.2) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6570	0.3320
A	0.6570	0.3320

