



Full wwPDB EM Validation Report ⓘ

Aug 16, 2025 – 02:43 PM EDT

PDB ID : 9BM6 / pdb_00009bm6
EMDB ID : EMD-44689
Title : State-7a of motor domain from full-length human dynein-1 in 5 mM ATP
Authors : Chai, P.; Zhang, K.
Deposited on : 2024-05-02
Resolution : 3.22 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

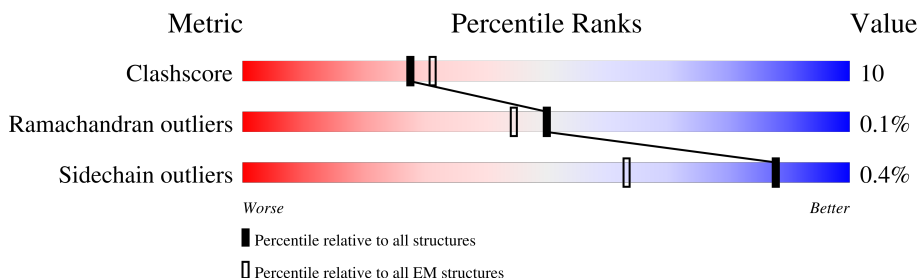
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.22 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 4 unique types of molecules in this entry. The entry contains 23111 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	2858	22994	14663	3967	4249	115	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

- 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).



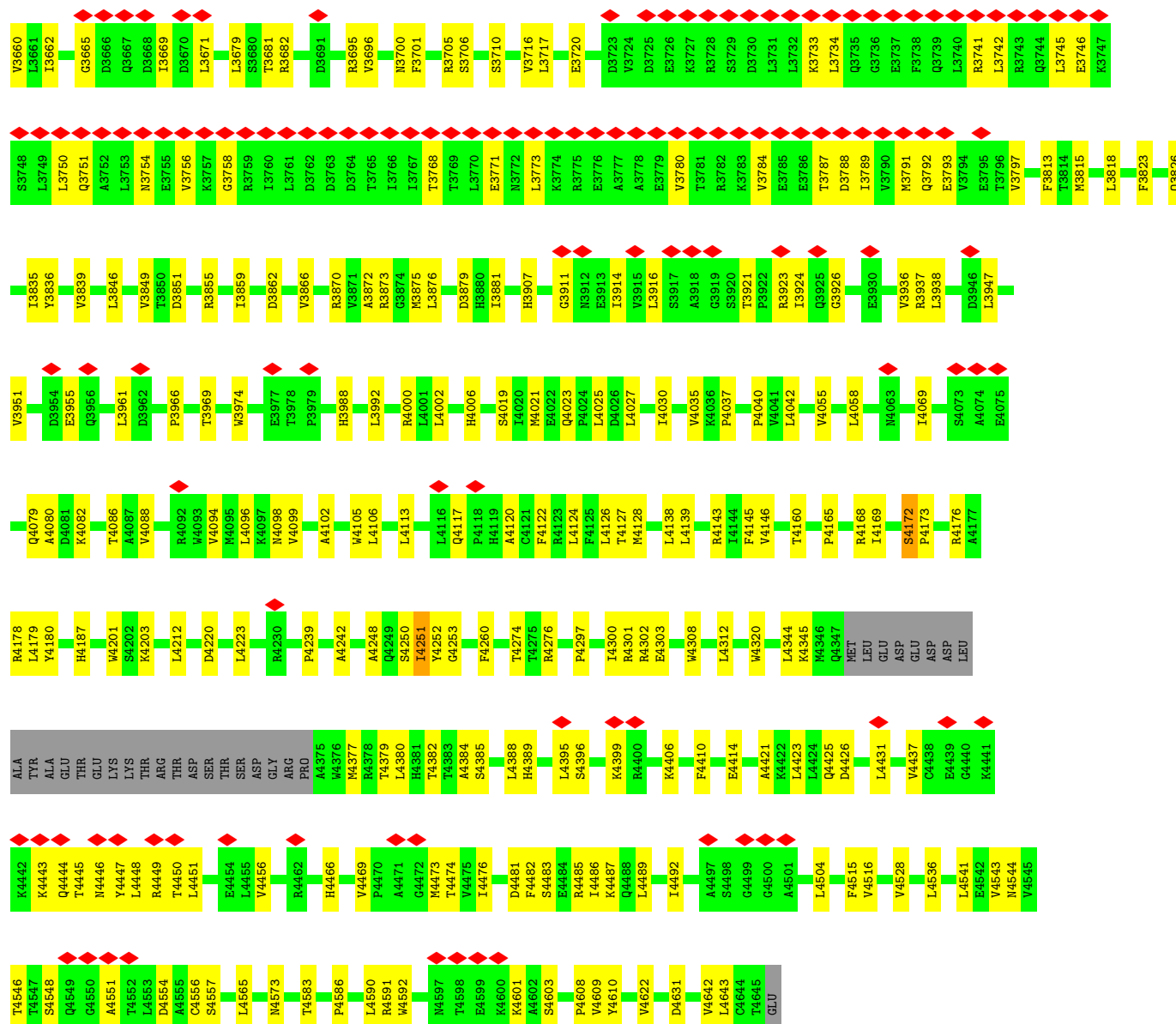
Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total 31	C 10	N 5	O 13	P 3	0
3	A	1	Total 31	C 10	N 5	O 13	P 3	0

- Molecule 4 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms	AltConf
4	A	1	Total Mg 1 1	0

L2028	F1936	I1756	E1622	L1561	I1501	VAL	TRP	ARG	GLU	ALA	ASN	GLU	ASN	PHE
P2029	D1937	A1757	R1623	P1562	N1502	ALA	GLU	PHE	PHE	LEU	LEU	LEU	LEU	PHE
N2031	F1938	G1770	R1628	V1563	S1503	GLU	THR	PHE	THR	VAL	THR	THR	ASP	GLN
T2042	Q1939	G1771	G1653	E1564	V1504	LEU	LYS	PRO	LYS	ILE	MET	ASN	GLY	LYS
V2052	A1940	G1772	D1636	Q1566	S1505	GLN	VAL	SER	VAL	ARG	PRO	GLN	ILE	VAL
M2053	M1941	G1773	L1637	Q1567	A1506	ASP	THR	TRP	THR	LYS	ASP	VAL	GLU	VAL
I1044	I1944	D1774	L1637	F1568	M1507	LEU	GLY	TYR	ASN	ARG	GLY	ILE	ILE	ASP
G1947	L1948	A1775	I1640	Q1569	K1508	LEU	VAL	TYR	LEU	VAL	VAL	GLY	LEU	LEU
L2065	A2066	L1782	I1644	S1570	L1509	VAL	ALA	ASN	ARG	PRO	LEU	ASN	GLY	ILE
I2069	F1957	L1789	K1645	I1571	P1511	GLN	GLY	ILE	GLU	ASP	GLU	PRO	ARG	GLU
V2070	D1958	V1796	N1646	S1572	Y1512	GLY	LYS	GLU	GLU	ASN	GLU	ILE	LEU	LYS
P2071	R1805	R1806	K1649	E1574	Y1513	GLU	LEU	ALA	ASP	THR	VAL	PRO	VAL	VAL
L2075	E1806	K1807	L1650	F1575	V1515	VAL	TRP	LEU	ALA	LYS	ARG	LEU	LEU	GLY
C2076	E1964	Q1851	Q1851	L1576	F1516	ILE	GLU	THR	ALA	GLU	MET	ALA	ALA	VAL
Q2079	E1965	I1812	H1653	A1577	E1517	GLU	GLY	THR	THR	PHE	GLY	THR	THR	ARG
L2080	M1967	T1813	F1654	L1578	E1518	ASP	ILE	ILE	SER	PRO	VAL	GLN	GLY	ASP
K2094	L1968	L1815	K1655	M1579	D1519	GLN	MET	ARG	ASP	VAL	GLY	VAL	VAL	LEU
L2097	E1980	L1816	K1656	K1580	A1520	MET	GLY	ARG	GLY	VAL	GLU	VAL	LEU	GLY
R2107	A1981	L1825	N1667	L1581	L1521	ALA	LYS	ARG	PHE	VAL	VAL	VAL	LEU	CYS
E2114	L1982	I1826	V1672	V1582	S1522	LEU	GLU	LYS	THR	ASP	GLY	ALA	ALA	MET
L2138	E1983	K1827	K1697	S1583	V1523	LYS	GLN	ASP	ARG	GLY	THR	GLN	GLY	THR
Q2134	E1984	S1828	I1698	K1584	E1524	ARG	TRP	LYS	LYS	VAL	THR	ASN	VAL	ASP
T2127	P1988	K1829	N1699	S1585	D1525	HIS	VAL	ASP	ASP	LYS	VAL	LYS	VAL	LYS
E2133	M1989	W1838	E1699	P1586	L1526	TRP	SER	ASP	GLY	GLY	VAL	GLN	VAL	THR
Q2134	Y1990	L1701	E1700	L1587	L1527	GLN	GLN	GLY	GLY	LEU	LEU	LEU	LEU	PHE
T2138	D1991	R1843	R1709	V1588	N1528	LEU	PRO	ALA	LYS	VAL	VAL	GLN	VAL	GLY
Q2134	K1992	V1853	R1710	M1589	R1529	LYS	ARG	ASN	LYS	ASN	TRP	GLN	ARG	ARG
L2149	T1993	L1854	A1711	L1590	T1530	ARG	LEU	LEU	LEU	LEU	ILE	ILE	ILE	ILE
L2157	S1994	Q1855	T1712	L1591	M1531	LEU	GLN	GLY	GLY	TRP	ASP	ASP	ASP	ASP
L2160	A1995	Q1856	L1713	L1592	A1532	HIS	GLN	LYS	LYS	ASP	LYS	GLY	HIS	GLY
V2168	P1996	L1714	A1714	N1593	L1533	ASN	ASN	GLY	GLY	TRP	ASP	GLY	VAL	LEU
	I1997	E1871	K1715	Q1595	D1535	TRP	ASP	ALA	ALA	GLY	VAL	LEU	VAL	LEU
	T1998	K1878	V1721	G1596	V1536	VAL	VAL	VAL	GLY	GLY	VAL	GLY	GLY	GLY
	Q2005	P1904	V1724	V1597	W1537	LEU	LEU	VAL	GLY	THR	GLY	THR	THR	THR
	K2007	P1907	G1728	R1599	D1539	LYS	LYS	GLY	LEU	LEU	LEU	GLY	GLY	GLY
	V2008	K1912	T1913	S1600	V1540	GLY	SER	GLY	LEU	LEU	LEU	GLY	GLY	GLY
	T2017	E1914	I1739	L1601	Q1541	ILE	PHE	ILE	GLN	GLY	GLY	GLY	GLY	GLY
	K2018	K1917	A1747	E1602	R1542	TRP	ALA	TRP	ALA	SER	THR	THR	THR	THR
	N2019	L1748	L1748	R1603	Y1543	ASP	ASP	ASP	ASP	GLY	GLY	GLY	GLY	GLY
	PRO	L1928	L1748	L1604	W1544	VAL	VAL	VAL	VAL	LEU	LEU	LEU	LEU	LEU
	GLY	V1750	V1750	A1605	V1545	LEU	LEU	LEU	LEU	ASP	ASP	ASP	ASP	ASP
	ALA	V1751	V1751	D1606	Y1546	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
	GLY	M1931	Q1755	L1607	L1547	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
	ARG	C1932		L1608	E1548	THR	THR	THR	THR	THR	THR	THR	THR	THR
	SER	D1933		K1609	G1549	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
				G1610	T1550	GLY	SER	SER	SER	SER	SER	SER	SER	SER
				I1611	F1551	ILE	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
				K1612	T1552	PRO	THR	THR	THR	THR	THR	THR	THR	THR
				K1613	G1553	ALA	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
				A1614	S1554	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG
				E1617	A1555	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU	LEU
				Y1618	D1556	ASP	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
				L1619	I1557	GLN	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
				E1620	K1558	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
				R1621	H1559	THR	THR	THR	THR	THR	THR	THR	THR	THR
					L1560	GLN	GLN	ASP	GLN	GLN	GLN	GLN	GLN	GLN

S3566	S3567	D3570	D3571	T3578	S3475	M3579	L3580	K3581	R3582	R3585	L3588	D3591	T3597	I3600	M3601	R3602	D3606	R3607	R3608	I3609	R3610	R3611	E3614	F3614	F3496	K3497	N3498	Q3499	M3500	S3501	L3634	Q3636	D3637	V3638	Y3641	L3645	L3649	E3652	V3653	R3654	R3655	T3656	G3657	R3658	R3659										
GLU	ALA	K3471	V3472	N3473	R3474	S3475	T3476	A3477	L3478	L3479	K3480	S3481	L3482	S3483	A3484	E3485	R3486	E3487	R3488	M3489	F3490	T3496	K3497	M3498	Q3499	M3500	S3501	T3502	S3510	Y3516	Y3519	F3520	Q3523	M3524	D3546	L3547	A3548	E3551	Y3552	S3553	S3554	N3555	E3558	R3559	L3560	R3561	V3562								
VAL	THR	ILE	VAL	ASN	PHE	ASN	ALA	GLU	ILE	ARG	ASP	GLY	GLY	VAL	MET	LYS	ALA	ASN	MET	THR	ALA	ASN	THR	MET	GLY	VAL	ASN	PRO	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN								
PRO	THR	ILE	VAL	ASN	PHE	ASN	ALA	GLU	ILE	ARG	ASP	GLY	GLY	VAL	MET	LYS	ALA	ASN	MET	THR	ALA	ASN	THR	MET	GLY	VAL	ASN	PRO	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN								
VAL	THR	ILE	VAL	ASN	PHE	ASN	ALA	GLU	ILE	ARG	ASP	GLY	GLY	VAL	MET	LYS	ALA	ASN	MET	THR	ALA	ASN	THR	MET	GLY	VAL	ASN	PRO	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN	GLN								
LEU	VAL	VAL	ASN	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA	ALA									
T3055	S3056	Q3057	V3058	R3059	R3060	V3064	V3065	F3066	T3067	M3068	M3069	P3070	SER	SER	SER	GLY	GLY	LEU	LYS	ASP	THR	S3082	L3085	Y2967	T2968	Q3197	R3087	R3088	D2971	F2972	D2973	E2974	D2975	L2976	R2977	N2987	R2862	R2863	E2864	K2865	A2866	M2867	S2868	R2869	P2870	L2871	L2872	Y2873	Y2881	L2889	K2898	V2899	F2900	Y2901	E2902
E2903	E2904	L2905	P2908	V2915	L2920	L2925	L2933	L2934	L2935	L2936	L2946	S2947	M2953	K2962	V2963	H2964	R2965	K2966	L3085	Y2967	T2968	Q3197	R3087	R3088	D2971	F2972	D2973	E2974	D2975	L2976	R2977	N2987	R2862	R2863	E2864	K2865	A2866	M2867	S2868	R2869	P2870	L2871	L2872	Y2873	Y2881	L2889	K2898	V2899	F2900	Y2901	E2902				
E2775	F2776	R2797	E2798	R2801	W2802	L2813	E2814	L2815	P2817	V2818	L2819	G2820	L2824	W2825	A2829	E2839	D2840	E2841	R2844	W2845	T2846	D2851	T2852	H2857	F2858	L2861	D2862	R2863	K2865	A2866	M2867	S2868	R2869	P2870	L2871	L2872	Y2873	Y2881	L2889	K2898	V2899	F2900	Y2901	E2902											
V2648	E2487	R2492	Y2493	L2494	V2495	V2496	A2497	T2498	S2501	L2502	V2524	P2525	P2533	T2534	T2535	E2538	W2548	K2551	V2557	E2558	T2559	H2560	V2569	T2570	T2571	T2574	V2575	R2576	L2580	R2728	R2729	H2730	V2731	P2732	V2733	S2743	I2747	N2752	R2757	T2770	A2771	A2772	M2773	V2774											
R2332	V2339	R2340	V2345	Q2346	D2347	R2358	W2361	L2369	L2382	D2388	GLU	GLY	GLY	ASP	ALA	GLN	ARG	ARG	ARG	L2344	GLY	LYS	GLY	GLU	GLU	GLU	ALA	S2410	P2411	H2412	L2413	A2419	A2420	T2421	L2422	M2423	I2446	L2449	T2450	R2451	L2452	R2453	C2454	A2465											
E2181	T2192	Y2193	E2197	V2204	Q2209	I2213	H2218	G2219	L2220	V2223	S2226	G2227	S2231	W2234	E2242	R2243	E2244	E2245	E2248	P2270	N2271	T2272	W2275	T2276	D2277	R2285	R2292	R2298	Q2299	D2308	W2311	D2320	L2324	P2328	N2329	G2330	E2331																		



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	67951	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	40	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	105000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	0.933	Depositor
Minimum map value	-0.458	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.025	Depositor
Recommended contour level	0.13	Depositor
Map size ($\text{\AA}$)	332.80002, 332.80002, 332.80002	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.832, 0.832, 0.832	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, MG, 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	0.13	0/23487	0.30	1/31835 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	A	3045	ASP	CB-CA-C	-5.74	109.98	116.63

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	22994	0	23054	438	0
2	A	54	0	24	1	0
3	A	62	0	24	2	0
4	A	1	0	0	0	0
All	All	23111	0	23102	438	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 10.

All (438) 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:3151:HIS:HD1	1:A:3516:TYR:HH	1.13	0.95
1:A:2498:ILE:HG23	1:A:2502:LEU:HD22	1.63	0.80
1:A:2863:ARG:HH21	1:A:2866:ALA:HB1	1.46	0.79
1:A:2816:LEU:HD11	1:A:2820:GLY:HA3	1.65	0.79
1:A:2053:MET:HE1	1:A:2094:LYS:HG2	1.64	0.79
1:A:3005:LEU:HD11	1:A:3085:LEU:HD22	1.68	0.74
1:A:2816:LEU:HD12	1:A:2817:PRO:HD2	1.70	0.73
1:A:2814:GLU:HG3	1:A:2815:THR:HG23	1.72	0.72
1:A:2138:ILE:HD13	1:A:2168:VAL:HG12	1.73	0.70
1:A:3520:PHE:HB3	1:A:3524:MET:HB3	1.73	0.69
1:A:3966:PRO:HD2	1:A:4000:ARG:HG3	1.73	0.69
1:A:2813:LEU:HD21	1:A:2816:LEU:HB2	1.74	0.69
1:A:1537:TRP:HE1	1:A:1579:MET:HE1	1.58	0.69
1:A:2889:LEU:HD21	1:A:2920:LEU:HD21	1.75	0.68
1:A:3662:ILE:HG23	1:A:3669:ILE:HG23	1.75	0.68
1:A:3128:VAL:HG21	1:A:3149:PHE:HB2	1.75	0.67
1:A:2324:LEU:HD11	1:A:2332:ARG:HB3	1.77	0.67
1:A:4447:TYR:O	1:A:4451:LEU:HD12	1.94	0.67
1:A:1964:GLU:OE2	1:A:1965:GLU:N	2.24	0.66
1:A:3113:MET:O	1:A:3140:ARG:NH2	2.28	0.66
1:A:2107:ARG:NH2	1:A:2139:GLN:OE1	2.30	0.66
1:A:2419:ALA:O	1:A:2423:MET:HG2	1.96	0.66
1:A:1571:ILE:HG23	1:A:1604:LEU:HD22	1.79	0.65
1:A:3720:GLU:OE2	1:A:3855:ARG:NH1	2.29	0.65
1:A:1938:PHE:HD2	1:A:1967:MET:HE1	1.61	0.65
1:A:3134:PRO:HG2	1:A:3137:PRO:HA	1.79	0.65
1:A:4176:ARG:NH1	1:A:4220:ASP:OD1	2.30	0.65
1:A:2936:ILE:HD11	1:A:3091:LEU:HD23	1.78	0.65
1:A:4399:LYS:HD2	1:A:4414:GLU:HG2	1.78	0.64
1:A:4469:VAL:HG13	1:A:4473:MET:HE2	1.78	0.64
1:A:3158:ASN:ND2	1:A:3169:MET:O	2.31	0.63
1:A:3638:VAL:HG11	1:A:3679:LEU:HB3	1.81	0.63
1:A:2592:VAL:HB	1:A:2733:VAL:HG12	1.81	0.63
1:A:2925:ILE:HG13	1:A:2933:LEU:HD13	1.82	0.62
1:A:2329:ASN:ND2	1:A:2331:GLU:OE2	2.33	0.62
1:A:3510:SER:HB3	1:A:3553:LEU:HD21	1.82	0.62
1:A:4410:PHE:O	1:A:4414:GLU:HG3	2.00	0.61
1:A:3132:LYS:HZ1	1:A:3141:GLU:HB3	1.65	0.61
1:A:1931:ASN:ND2	1:A:1933:ASP:OD1	2.33	0.61
1:A:2534:ILE:HD12	1:A:2534:ILE:H	1.64	0.61
1:A:3580:LEU:HD13	1:A:3600:ILE:HD13	1.82	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4082:LYS:O	1:A:4086:THR:HG23	2.01	0.61
1:A:4172:SER:HB3	1:A:4173:PRO:HD2	1.82	0.61
1:A:1698:ILE:HD12	1:A:1701:TRP:HE1	1.66	0.61
1:A:2861:ILE:HD12	1:A:2865:LYS:HE2	1.82	0.61
1:A:2934:LEU:HD12	1:A:3066:PHE:HB3	1.83	0.61
1:A:2346:GLN:HB2	1:A:2726:ARG:HD2	1.82	0.60
1:A:2590:PRO:HB2	1:A:2731:VAL:HG12	1.82	0.60
1:A:3030:MET:HA	1:A:3030:MET:HE3	1.83	0.60
1:A:1509:LEU:O	1:A:3628:ARG:NH1	2.35	0.60
1:A:3570:ASP:OD1	1:A:3571:ASP:N	2.35	0.60
1:A:3652:GLU:OE1	1:A:3654:ARG:NH1	2.35	0.60
1:A:3835:ILE:HG12	1:A:3870:ARG:HD3	1.84	0.60
1:A:3609:ILE:HD11	1:A:3634:LEU:HB2	1.84	0.59
1:A:3873:ARG:HD3	1:A:4021:MET:HE1	1.84	0.59
1:A:1483:LYS:NZ	1:A:1548:GLU:OE2	2.35	0.59
1:A:4102:ALA:HB1	1:A:4105:TRP:HB3	1.83	0.59
1:A:2925:ILE:HG21	1:A:2933:LEU:HB2	1.83	0.59
1:A:3924:ILE:HG23	1:A:3926:GLY:H	1.67	0.59
1:A:4274:THR:HG23	1:A:4276:ARG:H	1.67	0.59
1:A:2320:ASP:HB3	1:A:2358:ARG:HD3	1.85	0.58
1:A:2245:GLU:OE1	1:A:2298:ARG:NH2	2.31	0.58
1:A:2492:ARG:HH12	1:A:2525:PRO:HB2	1.68	0.58
1:A:1941:MET:HA	1:A:1944:ILE:HB	1.86	0.58
1:A:3914:ILE:HG22	1:A:3937:ARG:HD3	1.85	0.58
1:A:2820:GLY:O	1:A:2824:ILE:HG13	2.04	0.57
1:A:2382:LEU:HD23	1:A:2420:ALA:HB2	1.87	0.57
1:A:2581:LEU:HD12	1:A:2591:LEU:HD11	1.85	0.57
1:A:4447:TYR:O	1:A:4450:THR:OG1	2.16	0.57
1:A:1507:MET:HE3	1:A:1507:MET:O	2.05	0.57
1:A:1509:LEU:HB3	1:A:3628:ARG:CZ	2.34	0.57
1:A:4476:ILE:HD12	1:A:4476:ILE:H	1.68	0.57
1:A:3043:MET:HE3	1:A:3043:MET:HA	1.86	0.57
1:A:4384:ALA:O	1:A:4388:LEU:HG	2.05	0.56
1:A:1649:LYS:O	1:A:1652:LYS:NZ	2.38	0.56
1:A:1751:VAL:O	1:A:1755:GLN:HG3	2.05	0.56
1:A:2798:GLU:OE1	1:A:2801:ARG:NH1	2.38	0.56
1:A:2935:LEU:HD22	1:A:3094:PHE:HD2	1.69	0.56
1:A:4021:MET:HE3	1:A:4021:MET:HA	1.86	0.56
1:A:3611:ARG:NH2	1:A:3636:GLN:OE1	2.39	0.56
1:A:3921:THR:OG1	1:A:3923:ARG:NE	2.38	0.56
1:A:4482:PHE:O	1:A:4486:ILE:HG12	2.05	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4544:ASN:HA	1:A:4573:ASN:HD21	1.71	0.55
1:A:3133:LEU:HB3	1:A:3134:PRO:HD3	1.87	0.55
1:A:3597:THR:O	1:A:3601:MET:HG2	2.06	0.55
1:A:4179:LEU:HD12	1:A:4223:LEU:HD22	1.89	0.55
1:A:4069:ILE:HD13	1:A:4080:ALA:HA	1.87	0.55
1:A:4099:VAL:HG22	1:A:4128:MET:HB3	1.89	0.55
1:A:2666:ILE:HG22	1:A:2712:CYS:HB3	1.89	0.55
1:A:2946:LEU:HD12	1:A:3094:PHE:HZ	1.72	0.55
1:A:2277:ASP:O	1:A:2698:GLN:NE2	2.39	0.55
1:A:2819:GLU:HG3	1:A:2865:LYS:HD2	1.89	0.55
1:A:2743:SER:O	1:A:2747:ILE:HG22	2.06	0.55
1:A:4601:LYS:HE2	1:A:4603:SER:HB3	1.89	0.54
1:A:4385:SER:O	1:A:4389:HIS:ND1	2.40	0.54
1:A:1998:THR:HG21	1:A:2005:GLN:HE21	1.72	0.54
1:A:2775:GLU:HG3	1:A:2857:HIS:HE1	1.73	0.54
1:A:1724:VAL:HG13	1:A:1757:ALA:HB2	1.88	0.54
1:A:2963:VAL:HG21	1:A:3000:LEU:HD21	1.89	0.54
1:A:2134:GLN:O	1:A:2138:ILE:HG23	2.07	0.54
1:A:2679:VAL:O	1:A:2683:ILE:HG13	2.08	0.54
1:A:2994:MET:SD	1:A:3008:MET:HE2	2.48	0.54
1:A:1628:ARG:NH1	1:A:1871:GLU:OE2	2.41	0.53
1:A:2987:ASN:OD1	1:A:3057:GLN:NE2	2.40	0.53
1:A:3955:GLU:OE2	1:A:3955:GLU:N	2.40	0.53
1:A:1789:LEU:HD13	1:A:1815:LEU:HB3	1.90	0.53
1:A:2775:GLU:HG3	1:A:2857:HIS:CE1	2.43	0.53
1:A:2965:ARG:NH2	1:A:3641:TYR:O	2.42	0.53
1:A:1509:LEU:HB3	1:A:3628:ARG:NH2	2.23	0.53
1:A:2773:MET:HG2	1:A:2825:TRP:HE1	1.74	0.53
1:A:3115:LEU:H	1:A:3140:ARG:HH21	1.57	0.53
1:A:3494:GLU:HA	1:A:3497:LYS:HE3	1.89	0.53
1:A:3585:ARG:NH1	1:A:3696:VAL:O	2.42	0.53
1:A:1936:PHE:CE1	1:A:1941:MET:HE1	2.43	0.53
1:A:2967:TYR:OH	1:A:2975:ASP:OD2	2.27	0.53
1:A:3872:ALA:HA	1:A:3875:MET:HB3	1.91	0.53
1:A:4169:ILE:HD12	1:A:4302:ARG:HH11	1.74	0.53
1:A:1814:GLU:HB2	1:A:1878:LYS:HE3	1.90	0.52
1:A:2697:ASP:OD1	1:A:2697:ASP:N	2.42	0.52
1:A:4446:ASN:HA	1:A:4449:ARG:HH11	1.73	0.52
1:A:4541:LEU:HD11	1:A:4590:LEU:HB3	1.92	0.52
1:A:4610:TYR:HB2	1:A:4643:LEU:HD23	1.91	0.52
1:A:1640:ILE:HG23	1:A:1650:LEU:HD11	1.89	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2149:LEU:HD11	1:A:2157:LEU:HD13	1.90	0.52
1:A:2696:SER:OG	1:A:2697:ASP:OD1	2.27	0.52
1:A:2665:GLU:OE1	1:A:2720:ARG:NH1	2.33	0.52
1:A:3553:LEU:O	1:A:3582:ARG:NH1	2.43	0.52
1:A:4042:LEU:HD22	1:A:4139:LEU:HD23	1.90	0.52
1:A:4187:HIS:ND1	1:A:4252:TYR:OH	2.41	0.52
1:A:3026:TYR:O	1:A:3030:MET:HG2	2.09	0.52
1:A:3103:TYR:HB2	1:A:3129:VAL:HG21	1.92	0.52
1:A:4399:LYS:HG3	1:A:4414:GLU:HA	1.92	0.52
1:A:3947:LEU:O	1:A:3951:VAL:HG12	2.10	0.52
1:A:1646:ASN:HD21	1:A:1649:LYS:HG2	1.75	0.52
1:A:1962:ARG:HG3	1:A:1962:ARG:HH11	1.74	0.52
1:A:4444:GLN:HA	1:A:4448:LEU:HD23	1.92	0.51
1:A:1947:GLY:O	1:A:1951:VAL:HG12	2.11	0.51
1:A:3591:ASP:HB3	1:A:3701:PHE:HB2	1.93	0.51
1:A:3154:LEU:HG	1:A:3516:TYR:CD1	2.46	0.51
1:A:2277:ASP:OD1	1:A:2277:ASP:N	2.44	0.51
1:A:3055:THR:O	1:A:3059:ILE:HG23	2.10	0.51
1:A:2285:ARG:NH2	1:A:2331:GLU:OE1	2.43	0.51
1:A:3682:ARG:HH11	1:A:3682:ARG:HG3	1.75	0.51
1:A:3745:LEU:HB3	1:A:3773:LEU:HD21	1.93	0.51
1:A:3588:LEU:HD11	1:A:3638:VAL:HG21	1.93	0.50
1:A:4474:THR:HG22	1:A:4476:ILE:HD12	1.93	0.50
1:A:3614:PHE:HE2	1:A:3638:VAL:HG12	1.76	0.50
1:A:4094:VAL:HG13	1:A:4124:LEU:HG	1.92	0.50
1:A:1990:TYR:OH	1:A:1995:ALA:N	2.40	0.50
1:A:4201:TRP:O	1:A:4203:LYS:N	2.44	0.50
1:A:1711:VAL:O	1:A:1715:LYS:HG2	2.11	0.50
1:A:1747:ALA:HB2	1:A:1807:LYS:HG2	1.92	0.50
1:A:3104:GLN:O	1:A:3108:GLU:HG2	2.11	0.50
1:A:3566:SER:OG	1:A:3602:ASN:ND2	2.43	0.50
1:A:3787:THR:O	1:A:3791:MET:HG3	2.11	0.50
1:A:3789:ILE:O	1:A:3792:GLN:HG3	2.10	0.50
1:A:2776:PHE:HZ	1:A:2846:THR:HG23	1.76	0.50
1:A:4178:ARG:NH2	1:A:4297:PRO:O	2.44	0.50
1:A:1796:VAL:O	1:A:1805:ARG:NH2	2.44	0.50
1:A:1937:ASP:OD1	1:A:1937:ASP:N	2.41	0.50
1:A:3705:ARG:HA	1:A:3813:PHE:HE2	1.76	0.50
1:A:2605:LEU:HD23	1:A:2662:PHE:CE1	2.47	0.49
1:A:2192:THR:H	3:A:4702:ATP:HN61	1.59	0.49
1:A:3638:VAL:HG22	1:A:3681:THR:HB	1.94	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4025:LEU:HG	1:A:4027:LEU:HD23	1.94	0.49
1:A:4406:LYS:H	1:A:4406:LYS:HD2	1.78	0.49
1:A:2682:PHE:O	1:A:2686:MET:HG3	2.13	0.49
1:A:2623:SER:OG	1:A:2624:SER:N	2.44	0.49
1:A:2066:ALA:HA	1:A:2069:ILE:HG22	1.95	0.49
1:A:2227:GLY:HA2	1:A:2452:LEU:HD12	1.95	0.49
1:A:2299:GLN:HB2	1:A:2339:VAL:HG22	1.94	0.49
1:A:2864:GLU:HA	1:A:2867:MET:SD	2.53	0.49
1:A:4380:LEU:HD21	1:A:4456:VAL:HG12	1.94	0.49
1:A:4482:PHE:CE1	1:A:4486:ILE:HD11	2.48	0.49
1:A:2936:ILE:O	1:A:3094:PHE:N	2.45	0.49
1:A:2970:GLU:OE2	1:A:2970:GLU:N	2.41	0.48
1:A:3189:GLU:HG2	1:A:3190:LYS:HD3	1.94	0.48
1:A:3485:GLU:OE1	1:A:3486:ARG:NH1	2.45	0.48
1:A:2865:LYS:H	1:A:2865:LYS:HD3	1.78	0.48
1:A:3523:GLN:HB2	1:A:3706:SER:OG	2.14	0.48
1:A:4096:LEU:HB2	1:A:4126:LEU:HD23	1.95	0.48
1:A:2558:GLU:OE1	1:A:2560:HIS:NE2	2.47	0.48
1:A:3756:VAL:HG23	1:A:3758:GLY:H	1.77	0.48
1:A:3974:TRP:CG	1:A:3988:HIS:HD1	2.31	0.48
1:A:1667:ASN:HB2	1:A:1672:VAL:HG22	1.95	0.48
1:A:4421:ALA:O	1:A:4425:GLN:HG2	2.13	0.48
1:A:1643:ASN:HB3	1:A:1646:ASN:OD1	2.13	0.48
1:A:2223:VAL:HG13	1:A:2345:VAL:HG23	1.95	0.48
1:A:4099:VAL:HG23	1:A:4106:LEU:HD11	1.96	0.48
1:A:2075:LEU:HD11	1:A:4536:LEU:HD22	1.96	0.48
1:A:3660:VAL:HG22	1:A:3671:LEU:HB3	1.94	0.48
1:A:4301:ARG:NH1	1:A:4303:GLU:OE1	2.46	0.48
1:A:1511:PRO:HG3	1:A:3659:ARG:NH2	2.29	0.48
1:A:2079:GLN:HB2	1:A:2160:LEU:HD11	1.96	0.47
1:A:2969:GLY:HA2	1:A:3004:PHE:HE1	1.79	0.47
1:A:3823:PHE:O	1:A:3826:GLN:NE2	2.42	0.47
1:A:4160:THR:HG23	1:A:4212:LEU:HD21	1.96	0.47
1:A:3608:LYS:HB2	1:A:3608:LYS:HE3	1.59	0.47
1:A:1518:GLU:OE1	1:A:1518:GLU:N	2.40	0.47
1:A:1623:ARG:HH11	1:A:1637:LEU:HD22	1.79	0.47
1:A:3087:ASN:O	1:A:3088:ARG:HG2	2.14	0.47
1:A:3591:ASP:N	1:A:3591:ASP:OD1	2.47	0.47
1:A:3717:LEU:HD23	1:A:3717:LEU:HA	1.74	0.47
1:A:4025:LEU:HG	1:A:4027:LEU:HB3	1.94	0.47
1:A:2422:ILE:HD13	1:A:2487:GLU:HA	1.97	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1539:ASP:OD1	1:A:1543:ARG:NE	2.48	0.47
1:A:3793:GLU:O	1:A:3797:VAL:HG23	2.15	0.47
1:A:4481:ASP:OD1	1:A:4485:ARG:NE	2.48	0.47
1:A:1936:PHE:CE1	1:A:1963:LEU:HD21	2.50	0.47
1:A:3167:ARG:HG3	1:A:3519:TYR:OH	2.14	0.47
1:A:3923:ARG:HH12	1:A:3936:VAL:HG23	1.79	0.47
1:A:3551:GLU:CD	1:A:3551:GLU:H	2.23	0.46
1:A:3519:TYR:HA	1:A:3700:ASN:HB2	1.96	0.46
1:A:3835:ILE:HG23	1:A:3866:VAL:HG12	1.97	0.46
1:A:1721:VAL:HA	1:A:1724:VAL:HG12	1.97	0.46
1:A:3135:GLN:HB2	1:A:3136:PRO:HD3	1.96	0.46
1:A:4037:PRO:HG3	1:A:4120:ALA:HA	1.97	0.46
1:A:1917:LYS:HE2	1:A:1917:LYS:HB3	1.69	0.46
1:A:2497:ALA:O	1:A:2501:SER:OG	2.20	0.46
1:A:3849:VAL:HG12	1:A:3855:ARG:HG2	1.96	0.46
1:A:2271:ASN:OD1	1:A:2272:THR:N	2.49	0.46
1:A:2495:VAL:HG21	1:A:2524:VAL:HG11	1.97	0.46
1:A:2962:LYS:HB3	1:A:3665:GLY:HA2	1.97	0.46
1:A:4546:THR:O	1:A:4586:PRO:HB2	2.15	0.46
1:A:4609:VAL:HG22	1:A:4642:VAL:HB	1.98	0.46
1:A:2898:LYS:HA	1:A:2901:TYR:CE1	2.50	0.46
1:A:2242:GLU:HG3	1:A:2248:GLU:HA	1.96	0.46
1:A:3751:GLN:HA	1:A:3754:ASN:HD21	1.81	0.46
1:A:4395:LEU:HD12	1:A:4396:SER:N	2.30	0.46
1:A:1702:LEU:HD23	1:A:1702:LEU:HA	1.78	0.46
1:A:2446:ILE:HD11	1:A:2714:PRO:HG3	1.97	0.46
1:A:1619:LEU:HD22	1:A:1637:LEU:HD23	1.97	0.46
1:A:1698:ILE:HD12	1:A:1701:TRP:NE1	2.30	0.46
1:A:2590:PRO:O	1:A:2732:PRO:HD2	2.15	0.46
1:A:2861:ILE:HB	1:A:2865:LYS:HZ1	1.81	0.46
1:A:3207:LYS:HB3	1:A:3207:LYS:HE3	1.60	0.46
1:A:3649:LEU:HB3	1:A:3695:ARG:HB3	1.98	0.46
1:A:2227:GLY:O	1:A:2369:LEU:HD23	2.15	0.46
1:A:3734:LEU:HD21	1:A:3784:VAL:HG12	1.98	0.46
1:A:4543:VAL:HG21	1:A:4622:VAL:HG12	1.98	0.46
1:A:3876:LEU:HD23	1:A:4146:VAL:HG11	1.98	0.45
1:A:3741:ARG:HH21	1:A:3742:LEU:HD13	1.81	0.45
1:A:1608:LEU:HA	1:A:1611:ILE:HG22	1.99	0.45
1:A:1980:GLU:O	1:A:1984:GLU:HG2	2.17	0.45
1:A:2053:MET:HE3	1:A:2097:LEU:HD12	1.97	0.45
1:A:2197:GLU:CD	1:A:2197:GLU:H	2.24	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2947:SER:OG	1:A:2993:ILE:HD11	2.15	0.45
1:A:1656:LYS:HE2	1:A:1656:LYS:HB3	1.86	0.45
1:A:2070:VAL:HB	1:A:2071:PRO:HD3	1.97	0.45
1:A:2863:ARG:HE	1:A:2866:ALA:HB3	1.80	0.45
1:A:3846:LEU:HD11	1:A:3859:ILE:HG13	1.97	0.45
1:A:3555:ASN:OD1	1:A:3558:GLU:HG2	2.16	0.45
1:A:4035:VAL:HG22	1:A:4143:ARG:HG3	1.99	0.45
1:A:1816:VAL:HG11	1:A:2052:VAL:HG22	1.99	0.45
1:A:2569:VAL:HB	1:A:2747:ILE:HG13	1.98	0.45
1:A:3746:GLU:O	1:A:3750:LEU:HG	2.16	0.45
1:A:4040:PRO:HD3	1:A:4113:LEU:HD21	1.98	0.45
1:A:3158:ASN:ND2	1:A:3171:ILE:HG12	2.32	0.45
1:A:4165:PRO:HD2	1:A:4168:ARG:HD3	1.99	0.45
1:A:2019:ASN:OD1	1:A:2019:ASN:C	2.60	0.45
1:A:2974:GLU:OE1	1:A:2977:ARG:NH1	2.50	0.45
1:A:4445:THR:HG23	1:A:4448:LEU:H	1.81	0.45
1:A:3839:VAL:HG23	1:A:3862:ASP:HB3	1.99	0.45
1:A:3916:LEU:HD12	1:A:3937:ARG:HA	1.99	0.45
1:A:4042:LEU:HD21	1:A:4138:LEU:HG	1.98	0.45
1:A:1518:GLU:HG2	1:A:1519:ASP:N	2.31	0.45
1:A:2181:GLU:HG3	1:A:2244:LEU:HB2	1.99	0.45
1:A:2551:LYS:HE2	1:A:2551:LYS:HB3	1.83	0.45
1:A:2851:ASP:OD2	1:A:2852:THR:N	2.50	0.44
1:A:3209:LYS:HG2	1:A:3486:ARG:HH21	1.83	0.44
1:A:3733:LYS:HB2	1:A:3733:LYS:HE2	1.73	0.44
1:A:1755:GLN:HG2	1:A:1814:GLU:OE1	2.16	0.44
1:A:2992:PHE:HB3	1:A:3064:VAL:HG13	1.99	0.44
1:A:1931:ASN:HA	1:A:1958:ASP:HB2	1.98	0.44
1:A:4631:ASP:OD1	1:A:4631:ASP:N	2.48	0.44
1:A:1477:LEU:HB3	1:A:1485:ARG:HB3	2.00	0.44
1:A:1571:ILE:HD11	1:A:1607:LEU:HB3	1.99	0.44
1:A:2413:LEU:HD23	1:A:2413:LEU:HA	1.85	0.44
1:A:2933:LEU:O	1:A:3065:VAL:HA	2.17	0.44
1:A:3553:LEU:HB2	1:A:3578:ILE:HD13	1.99	0.44
1:A:4426:ASP:OD1	1:A:4426:ASP:C	2.61	0.44
1:A:4556:CYS:HB2	1:A:4591:ARG:HG3	2.00	0.44
1:A:3628:ARG:CZ	1:A:3628:ARG:HB2	2.47	0.44
1:A:3788:ASP:OD1	1:A:3788:ASP:N	2.48	0.44
1:A:4223:LEU:HD12	1:A:4223:LEU:HA	1.76	0.44
1:A:2226:SER:HB2	1:A:2726:ARG:HG2	2.00	0.44
1:A:3653:VAL:HG13	1:A:3660:VAL:HG23	1.98	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4250:SER:OG	1:A:4251:ILE:N	2.51	0.44
1:A:4528:VAL:HG11	1:A:4592:TRP:HB2	2.00	0.44
1:A:4260:PHE:CE2	1:A:4608:PRO:HB3	2.52	0.44
1:A:1698:ILE:HA	1:A:1701:TRP:CD1	2.53	0.44
1:A:2901:TYR:HA	1:A:2905:LEU:HB2	2.00	0.44
1:A:1907:PRO:HD2	1:A:2042:THR:HA	2.00	0.43
1:A:2873:TYR:HB3	1:A:2881:TYR:CD2	2.53	0.43
1:A:2465:ALA:HB2	1:A:2493:TYR:CD1	2.53	0.43
1:A:2576:ARG:O	1:A:2580:LEU:HG	2.17	0.43
1:A:3162:ALA:HA	1:A:3166:GLY:HA2	2.00	0.43
1:A:3502:THR:HG23	1:A:3502:THR:O	2.17	0.43
1:A:2065:LEU:HD11	1:A:2133:GLU:HB3	2.00	0.43
1:A:3682:ARG:HG3	1:A:3682:ARG:NH1	2.34	0.43
1:A:3768:THR:O	1:A:3771:GLU:HG3	2.18	0.43
1:A:4088:VAL:HG21	1:A:4117:GLN:NE2	2.33	0.43
1:A:4565:LEU:O	1:A:4583:THR:N	2.47	0.43
1:A:2452:LEU:HB3	1:A:2729:ARG:HG3	2.00	0.43
1:A:4030:ILE:HG21	1:A:4145:PHE:HZ	1.84	0.43
1:A:4399:LYS:HD3	1:A:4399:LYS:HA	1.86	0.43
1:A:4516:VAL:O	1:A:4516:VAL:HG23	2.18	0.43
1:A:1904:PRO:O	1:A:1912:LYS:HD2	2.17	0.43
1:A:2231:SER:OG	3:A:4702:ATP:O1B	2.20	0.43
1:A:2452:LEU:HD23	1:A:2452:LEU:HA	1.72	0.43
1:A:2533:PRO:HB2	1:A:2535:ILE:HG22	1.99	0.43
1:A:2557:VAL:O	1:A:2757:ARG:NH2	2.52	0.43
1:A:2802:TRP:CZ2	1:A:2829:ALA:HB2	2.53	0.43
1:A:4395:LEU:HD12	1:A:4396:SER:H	1.84	0.43
1:A:2218:HIS:HA	1:A:2340:ARG:HD2	2.01	0.43
1:A:2797:ARG:O	1:A:2801:ARG:HG3	2.18	0.43
1:A:3203:VAL:HG22	1:A:3206:ARG:HH21	1.83	0.43
1:A:2933:LEU:HB3	1:A:3065:VAL:HG12	2.00	0.43
1:A:4094:VAL:HG12	1:A:4122:PHE:HE1	1.83	0.43
1:A:4312:LEU:HD13	1:A:4320:TRP:HZ3	1.83	0.43
1:A:1990:TYR:HH	1:A:1995:ALA:N	2.17	0.42
1:A:2075:LEU:O	1:A:2079:GLN:N	2.45	0.42
1:A:2231:SER:HA	1:A:2234:TRP:NE1	2.33	0.42
1:A:3129:VAL:HG23	1:A:3148:VAL:HG21	2.01	0.42
1:A:1838:TRP:CZ2	1:A:1843:ARG:HG2	2.54	0.42
1:A:1928:LEU:HD12	1:A:1948:LEU:HD21	2.01	0.42
1:A:1962:ARG:HG3	1:A:1962:ARG:NH1	2.34	0.42
1:A:2369:LEU:O	1:A:2451:ARG:NH1	2.50	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2771:ALA:O	1:A:2774:VAL:HG22	2.20	0.42
1:A:2925:ILE:HD13	1:A:2925:ILE:HA	1.83	0.42
1:A:4179:LEU:HD23	1:A:4179:LEU:HA	1.87	0.42
1:A:4431:LEU:HD23	1:A:4431:LEU:HA	1.91	0.42
1:A:2635:PHE:CZ	1:A:2686:MET:HE1	2.54	0.42
1:A:2694:ARG:NH2	1:A:2697:ASP:OD2	2.52	0.42
1:A:2915:VAL:HG13	1:A:2946:LEU:HD11	2.01	0.42
1:A:4069:ILE:HG12	1:A:4079:GLN:HG2	2.02	0.42
1:A:4437:VAL:HG11	1:A:4448:LEU:HD21	2.02	0.42
1:A:4565:LEU:HD13	1:A:4642:VAL:HG22	2.00	0.42
1:A:2841:GLU:HA	1:A:2844:ARG:HG2	2.01	0.42
1:A:2865:LYS:HD3	1:A:2865:LYS:N	2.35	0.42
1:A:3471:LYS:HB3	1:A:3474:ARG:HG2	2.02	0.42
1:A:2308:ASP:OD1	1:A:2311:TRP:HD1	2.02	0.42
1:A:3207:LYS:HZ3	1:A:3750:LEU:HA	1.84	0.42
1:A:3659:ARG:HG2	1:A:3660:VAL:N	2.35	0.42
1:A:2571:THR:H	1:A:2574:THR:HB	1.85	0.42
1:A:3716:VAL:HB	1:A:3836:TYR:OH	2.20	0.42
1:A:3851:ASP:O	1:A:3855:ARG:HG3	2.20	0.42
1:A:4443:LYS:HA	1:A:4443:LYS:HD3	1.94	0.42
1:A:1739:ILE:HD13	1:A:1739:ILE:HA	1.95	0.42
1:A:1812:ILE:HG21	1:A:2056:SER:HA	2.01	0.42
1:A:2275:TRP:CH2	1:A:2328:PRO:HD2	2.55	0.42
1:A:2449:LEU:HA	1:A:2453:ARG:NH2	2.35	0.42
1:A:4345:LYS:HB2	1:A:4345:LYS:HE3	1.78	0.42
1:A:4481:ASP:O	1:A:4485:ARG:HG3	2.20	0.42
1:A:4504:LEU:HD23	1:A:4504:LEU:HA	1.83	0.42
1:A:4248:ALA:O	1:A:4253:GLY:HA3	2.20	0.42
1:A:4554:ASP:OD1	1:A:4557:SER:OG	2.37	0.42
1:A:3057:GLN:OE1	1:A:3060:ARG:NH2	2.44	0.41
1:A:4019:SER:O	1:A:4023:GLN:NE2	2.53	0.41
1:A:4098:ASN:N	1:A:4127:THR:O	2.53	0.41
1:A:4379:THR:HA	1:A:4382:THR:HG22	2.00	0.41
1:A:1968:LEU:HD21	1:A:2029:PRO:HG3	2.03	0.41
1:A:2453:ARG:HD3	1:A:2728:LEU:O	2.21	0.41
1:A:2752:ASN:OD1	1:A:2770:THR:OG1	2.24	0.41
1:A:2976:LEU:HD23	1:A:2976:LEU:HA	1.91	0.41
1:A:3205:LEU:HG	1:A:3489:TRP:HE3	1.85	0.41
1:A:4489:LEU:HD11	1:A:4515:PHE:HE2	1.84	0.41
1:A:2209:GLN:O	1:A:2213:ILE:HG12	2.20	0.41
1:A:2595:GLY:O	1:A:2714:PRO:HD3	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2858:PHE:O	1:A:2861:ILE:HG12	2.20	0.41
1:A:3548:ALA:HB3	1:A:3551:GLU:OE2	2.20	0.41
1:A:3562:TRP:HB3	1:A:3567:LEU:HD22	2.02	0.41
1:A:3780:VAL:O	1:A:3784:VAL:HG13	2.20	0.41
1:A:4239:PRO:HB2	1:A:4242:ALA:HB3	2.01	0.41
1:A:4344:LEU:HD23	1:A:4344:LEU:HA	1.89	0.41
1:A:4548:SER:HB3	1:A:4551:ALA:HB2	2.02	0.41
1:A:1957:PHE:O	1:A:2017:THR:HB	2.20	0.41
1:A:2361:MET:HE3	1:A:2361:MET:HB2	1.72	0.41
1:A:2901:TYR:CD2	1:A:2908:PRO:HA	2.56	0.41
1:A:3068:MET:HE3	1:A:3068:MET:HB2	1.87	0.41
1:A:3875:MET:HE2	1:A:3879:ASP:CB	2.50	0.41
1:A:3907:HIS:HA	1:A:3911:GLY:HA3	2.01	0.41
1:A:1914:GLU:HG3	2:A:4701:ADP:H3'	2.03	0.41
1:A:2292:ARG:HD2	1:A:2292:ARG:O	2.20	0.41
1:A:2648:VAL:HB	1:A:2701:VAL:HG12	2.03	0.41
1:A:2076:CYS:O	1:A:2080:LEU:HB2	2.21	0.41
1:A:3207:LYS:O	1:A:3211:THR:HG23	2.20	0.41
1:A:3705:ARG:HG2	1:A:3813:PHE:CE2	2.56	0.41
1:A:4002:LEU:HD23	1:A:4002:LEU:HA	1.92	0.41
1:A:4297:PRO:HB3	1:A:4308:TRP:CD1	2.56	0.41
1:A:4423:LEU:HD22	1:A:4466:HIS:HB2	2.03	0.41
1:A:2213:ILE:HB	1:A:2220:LEU:HD21	2.03	0.41
1:A:3005:LEU:HD12	1:A:3005:LEU:HA	1.81	0.41
1:A:3875:MET:HE2	1:A:3879:ASP:HB3	2.01	0.41
1:A:3938:LEU:HD21	1:A:3992:LEU:HD23	2.02	0.41
1:A:1645:LYS:HD3	1:A:1645:LYS:HA	1.75	0.41
1:A:1651:GLN:HA	1:A:1654:PHE:HD2	1.85	0.41
1:A:1782:LEU:HD22	1:A:1827:LYS:HE3	2.03	0.41
1:A:1982:LEU:HD12	1:A:1982:LEU:HA	1.87	0.41
1:A:2492:ARG:NH1	1:A:2525:PRO:HB2	2.35	0.41
1:A:2538:GLU:HB3	1:A:2548:TRP:CE2	2.55	0.41
1:A:2589:LYS:HB2	1:A:2589:LYS:HE2	1.84	0.41
1:A:2660:VAL:HG22	1:A:2707:GLN:HB3	2.03	0.41
1:A:2899:VAL:O	1:A:2903:GLU:HG2	2.21	0.41
1:A:2993:ILE:HD13	1:A:2993:ILE:HA	1.93	0.41
1:A:3815:MET:O	1:A:3818:LEU:HB2	2.21	0.41
1:A:4300:ILE:HD13	1:A:4300:ILE:HA	1.89	0.41
1:A:4446:ASN:OD1	1:A:4446:ASN:N	2.54	0.41
1:A:2728:LEU:HD23	1:A:2728:LEU:HA	1.91	0.41
1:A:3495:THR:O	1:A:3499:GLN:HG3	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4055:VAL:O	1:A:4058:LEU:HG	2.21	0.41
1:A:4492:ILE:HD13	1:A:4492:ILE:HA	1.89	0.41
1:A:1713:LEU:HD12	1:A:1749:LEU:HD21	2.02	0.40
1:A:1992:LYS:HA	1:A:1992:LYS:HD2	1.90	0.40
1:A:2193:TYR:CE2	1:A:2204:VAL:HG21	2.56	0.40
1:A:2626:THR:HB	1:A:2669:PRO:HG3	2.02	0.40
1:A:3560:LEU:HD23	1:A:3560:LEU:HA	1.88	0.40
1:A:4377:MET:H	1:A:4377:MET:HG3	1.66	0.40
1:A:1789:LEU:HD12	1:A:1789:LEU:HA	1.83	0.40
1:A:2677:GLN:HB2	1:A:2680:ILE:HB	2.03	0.40
1:A:2844:ARG:HG3	1:A:2845:TRP:N	2.35	0.40
1:A:3969:THR:O	1:A:3969:THR:OG1	2.28	0.40
1:A:4168:ARG:NH2	1:A:4220:ASP:OD2	2.54	0.40
1:A:4483:SER:O	1:A:4487:LYS:HG3	2.20	0.40
1:A:2007:LYS:HE2	1:A:2008:VAL:O	2.22	0.40
1:A:2581:LEU:O	1:A:2585:LEU:HG	2.21	0.40
1:A:2585:LEU:HD22	1:A:2707:GLN:OE1	2.21	0.40
1:A:4180:TYR:OH	1:A:4220:ASP:OD2	2.39	0.40
1:A:1697:LYS:HB2	1:A:1700:GLU:HG2	2.03	0.40
1:A:1709:MET:O	1:A:1713:LEU:HD23	2.22	0.40
1:A:2410:SER:N	1:A:2411:PRO:HD2	2.37	0.40
1:A:2972:PHE:HZ	1:A:3008:MET:HG2	1.86	0.40
1:A:4172:SER:HB3	1:A:4173:PRO:CD	2.50	0.40
1:A:1853:VAL:HA	1:A:1856:GLN:HG3	2.03	0.40
1:A:2324:LEU:CD1	1:A:2332:ARG:HB3	2.48	0.40
1:A:2908:PRO:HB2	1:A:3109:PHE:HE1	1.85	0.40
1:A:3623:LEU:HD11	1:A:3645:LEU:HD21	2.03	0.40
1:A:3881:ILE:HD13	1:A:4006:HIS:ND1	2.36	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	2844/4646 (61%)	2766 (97%)	75 (3%)	3 (0%)	48 79

All (3) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	4172	SER
1	A	4251	ILE
1	A	2871	ILE

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	2544/4125 (62%)	2535 (100%)	9 (0%)	89 93

All (9) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1589	MET
1	A	1854	LEU
1	A	2031	ASN
1	A	2276	THR
1	A	2454	CYS
1	A	2953	MET
1	A	3154	LEU
1	A	3710	SER
1	A	3961	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (25) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	1646	ASN
1	A	1779	HIS
1	A	1784	ASN
1	A	1867	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	1922	GLN
1	A	1973	GLN
1	A	1974	GLN
1	A	2005	GLN
1	A	2130	ASN
1	A	2296	GLN
1	A	2677	GLN
1	A	3202	ASN
1	A	3526	GLN
1	A	3602	ASN
1	A	3622	ASN
1	A	3667	GLN
1	A	3709	GLN
1	A	3772	ASN
1	A	3822	HIS
1	A	3877	HIS
1	A	3968	GLN
1	A	4326	ASN
1	A	4444	GLN
1	A	4530	GLN
1	A	4549	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 5 ligands modelled in this entry, 1 is monoatomic - leaving 4 for Mogul analysis.

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	0.88	0	29,45,45	1.26	3 (10%)
3	ATP	A	4703	4	28,33,33	0.66	0	34,52,52	0.60	1 (2%)
2	ADP	A	4701	-	24,29,29	0.87	0	29,45,45	1.23	2 (6%)
3	ATP	A	4702	-	28,33,33	0.67	0	34,52,52	0.59	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	-	-	5/12/32/32	0/3/3/3
3	ATP	A	4703	4	-	5/18/38/38	0/3/3/3
2	ADP	A	4701	-	-	3/12/32/32	0/3/3/3
3	ATP	A	4702	-	-	7/18/38/38	0/3/3/3

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	4704	ADP	N3-C2-N1	-3.67	123.69	128.67
2	A	4701	ADP	N3-C2-N1	-3.65	123.72	128.67
2	A	4704	ADP	C4-C5-N7	-2.65	106.53	109.34
2	A	4701	ADP	C4-C5-N7	-2.55	106.64	109.34
3	A	4703	ATP	C5-C6-N6	2.35	123.89	120.31
3	A	4702	ATP	C5-C6-N6	2.29	123.81	120.31
2	A	4704	ADP	O4'-C1'-N9	2.17	111.62	108.75

There are no chirality outliers.

All (20) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	4701	ADP	C5'-O5'-PA-O2A
2	A	4704	ADP	C5'-O5'-PA-O1A

Continued on next page...

Continued from previous page...

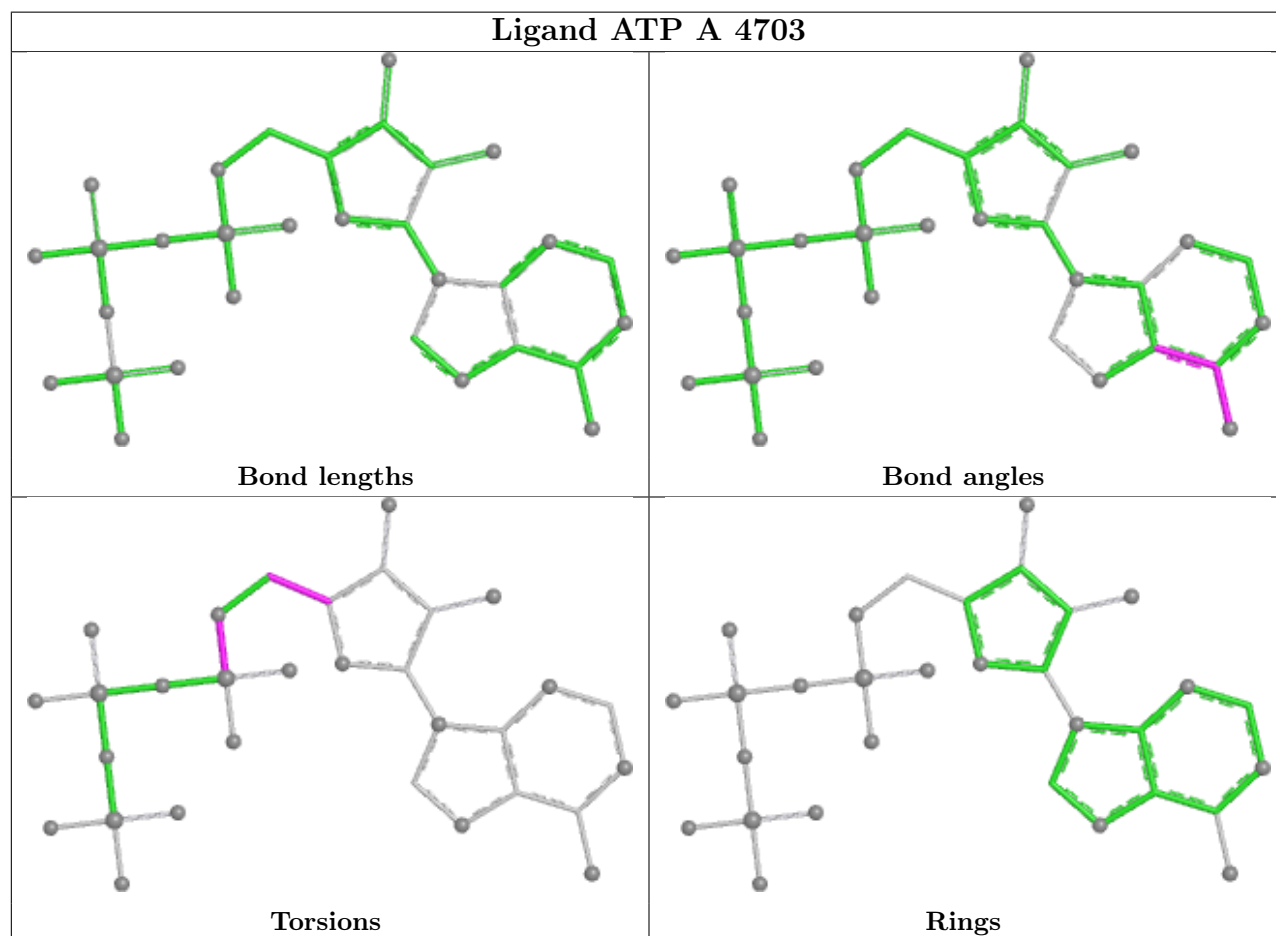
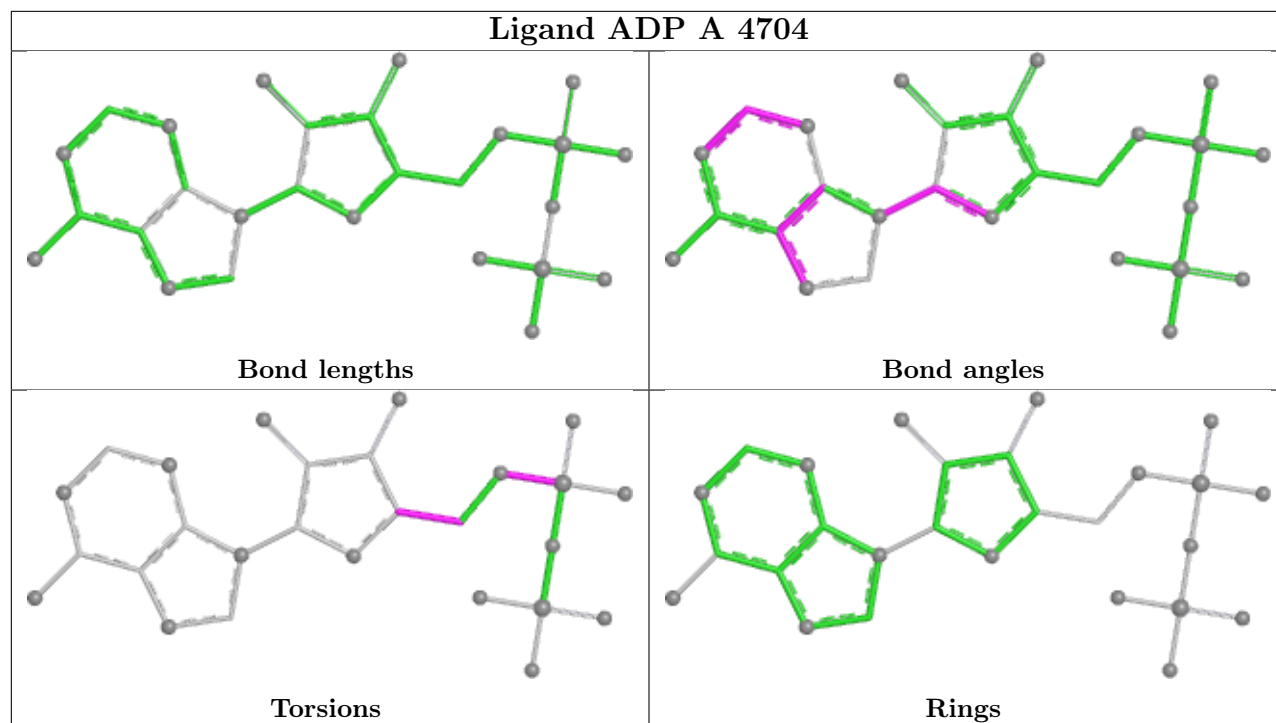
Mol	Chain	Res	Type	Atoms
2	A	4704	ADP	C5'-O5'-PA-O2A
2	A	4704	ADP	C5'-O5'-PA-O3A
2	A	4704	ADP	O4'-C4'-C5'-O5'
3	A	4702	ATP	PB-O3B-PG-O3G
3	A	4702	ATP	C5'-O5'-PA-O1A
3	A	4702	ATP	C5'-O5'-PA-O2A
3	A	4702	ATP	C5'-O5'-PA-O3A
2	A	4704	ADP	C3'-C4'-C5'-O5'
3	A	4703	ATP	O4'-C4'-C5'-O5'
3	A	4703	ATP	C3'-C4'-C5'-O5'
2	A	4701	ADP	C5'-O5'-PA-O1A
2	A	4701	ADP	C5'-O5'-PA-O3A
3	A	4703	ATP	C5'-O5'-PA-O1A
3	A	4703	ATP	C5'-O5'-PA-O2A
3	A	4703	ATP	C5'-O5'-PA-O3A
3	A	4702	ATP	PA-O3A-PB-O1B
3	A	4702	ATP	PB-O3B-PG-O1G
3	A	4702	ATP	PA-O3A-PB-O2B

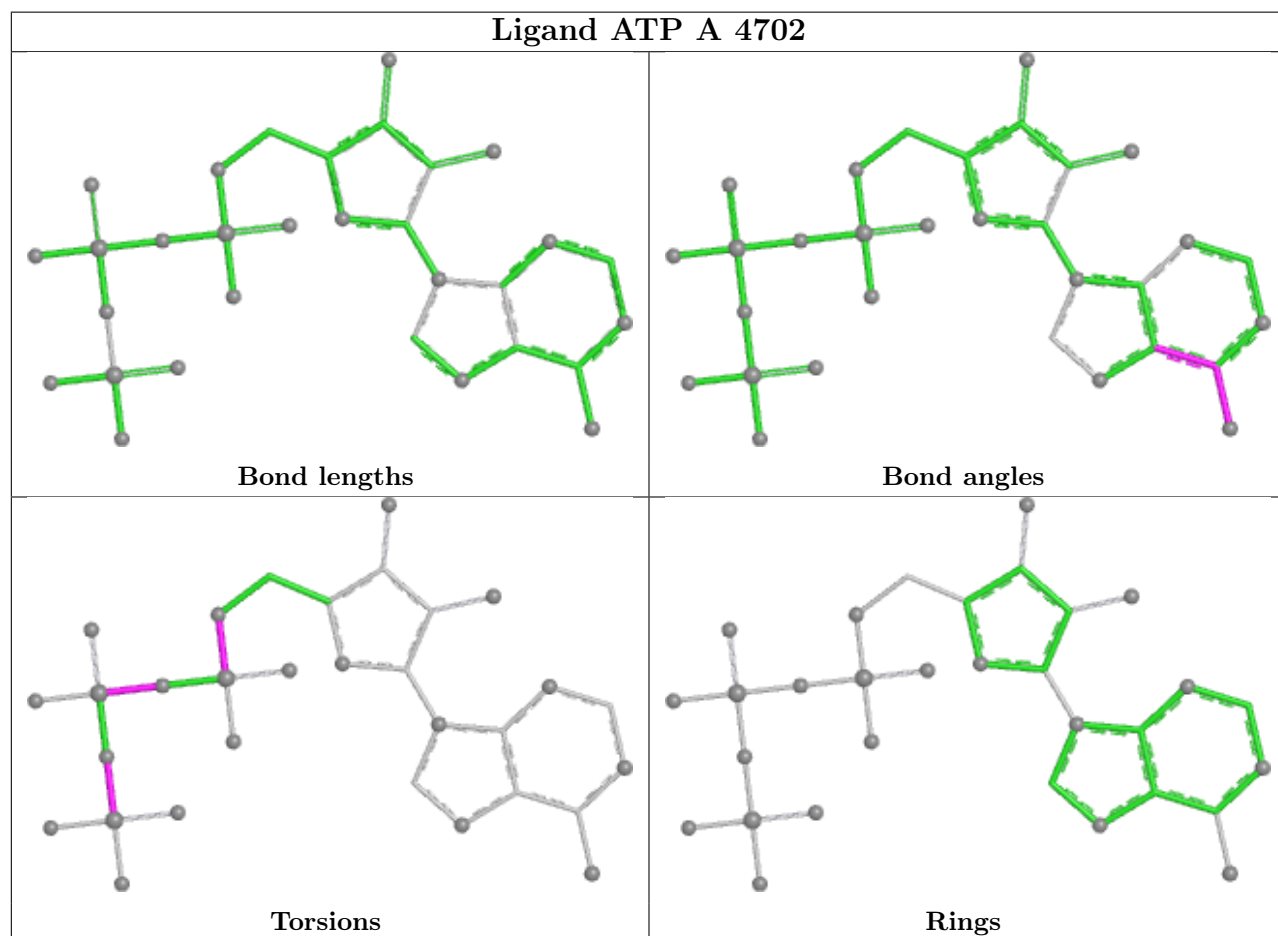
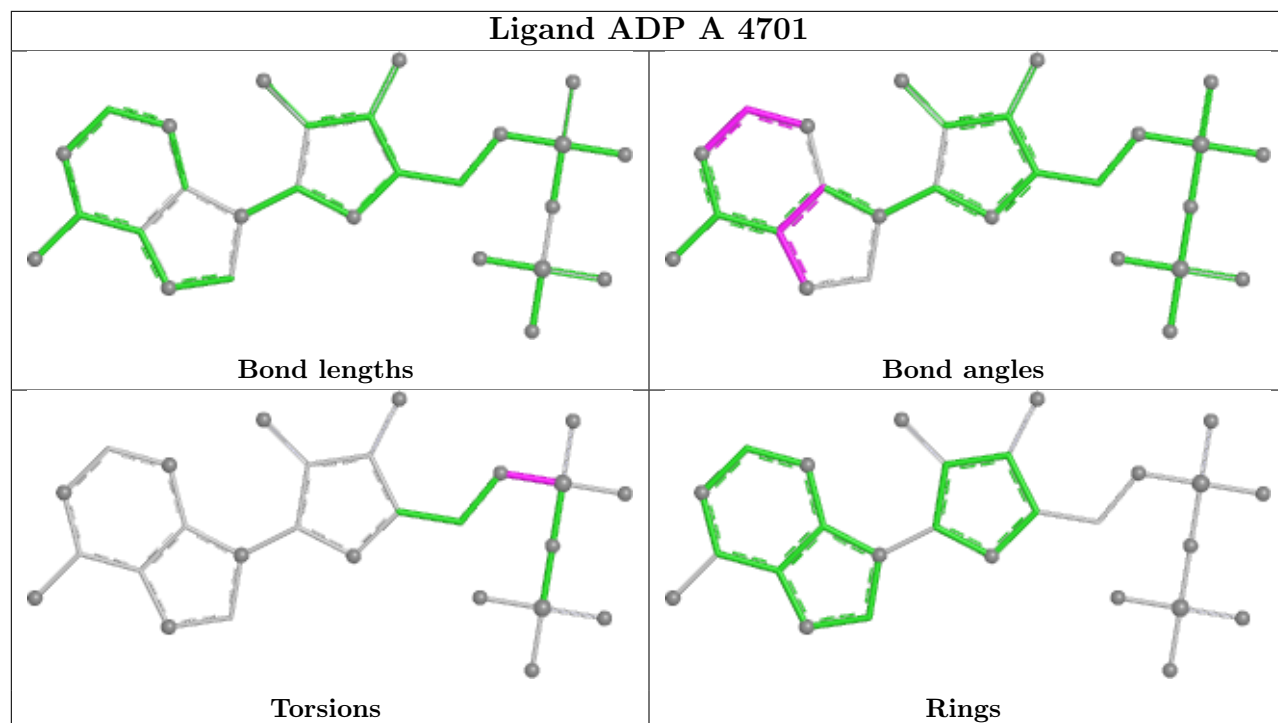
There are no ring outliers.

2 monomers are involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	A	4701	ADP	1	0
3	A	4702	ATP	2	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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

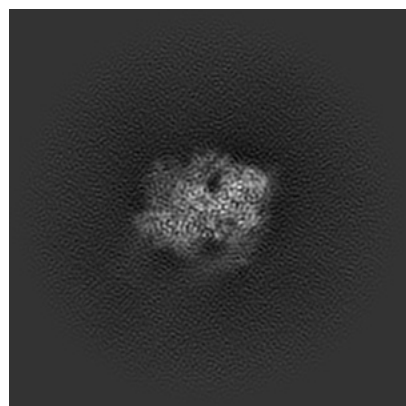
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-44689. These allow visual inspection of the internal detail of the map and identification of artifacts.

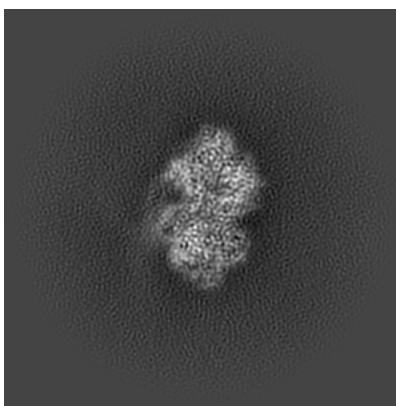
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

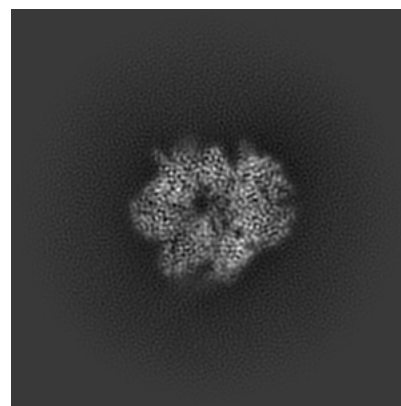
6.1.1 Primary map



X

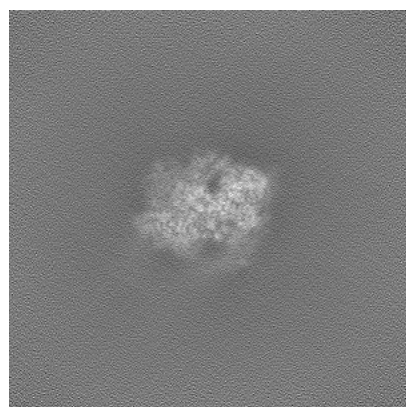


Y

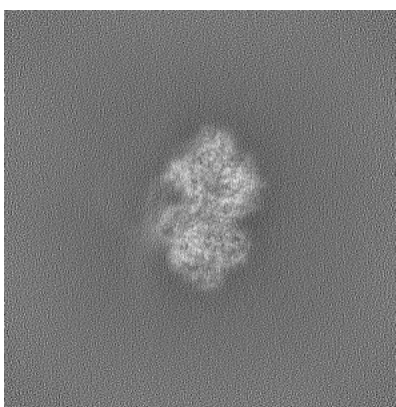


Z

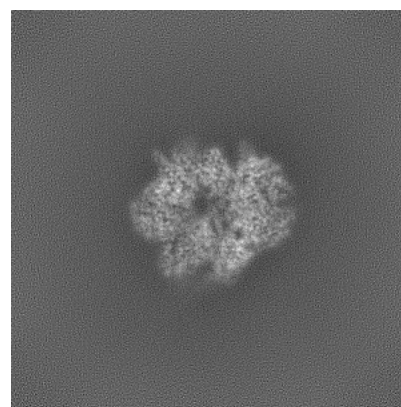
6.1.2 Raw map



X



Y

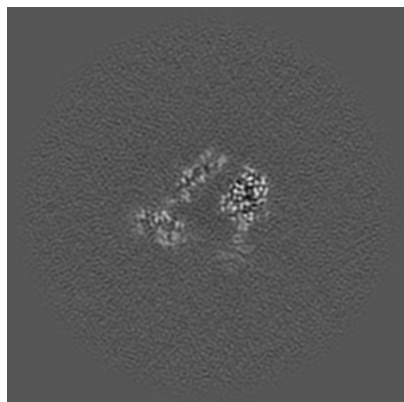


Z

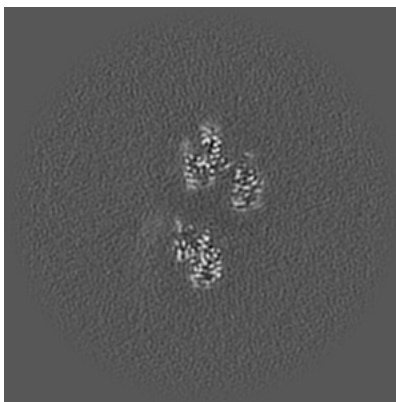
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

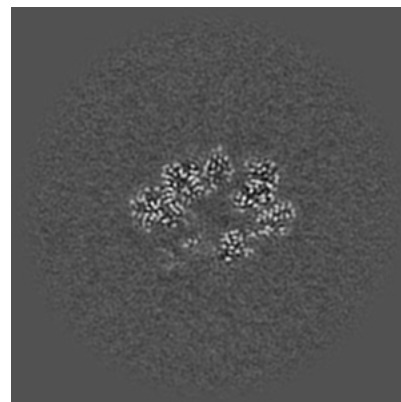
6.2.1 Primary map



X Index: 200

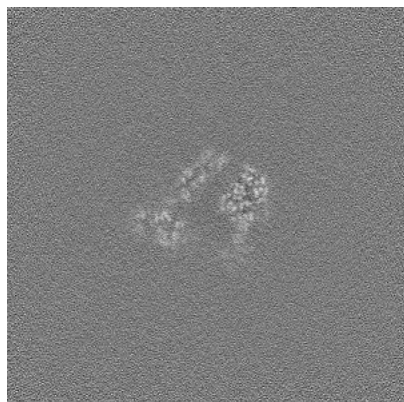


Y Index: 200

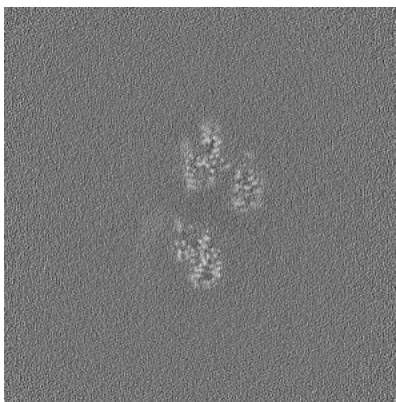


Z Index: 200

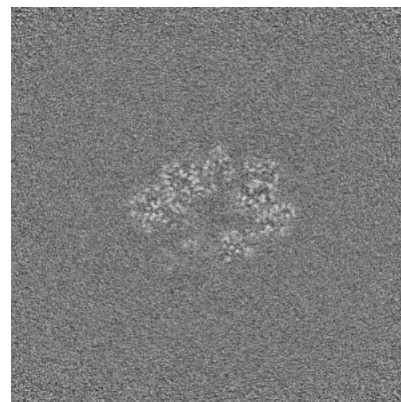
6.2.2 Raw map



X Index: 200



Y Index: 200

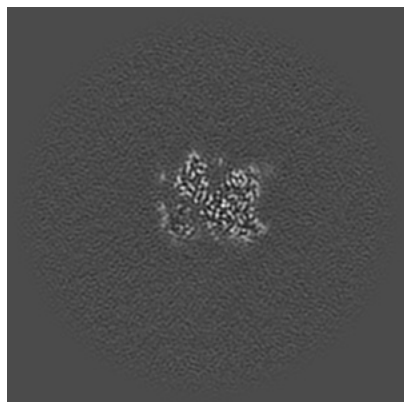


Z Index: 200

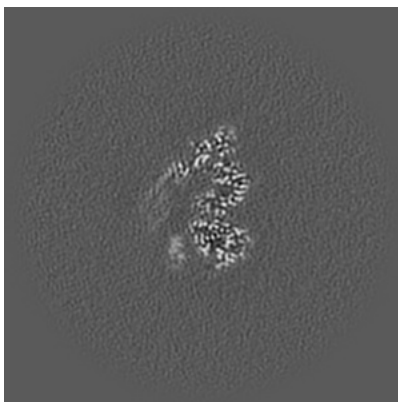
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

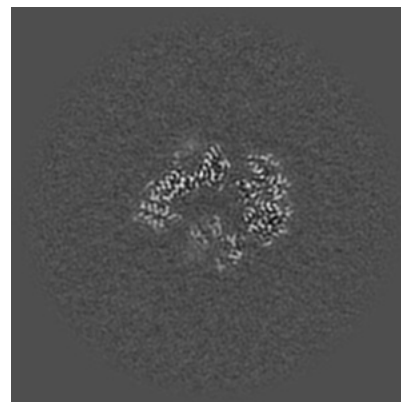
6.3.1 Primary map



X Index: 240

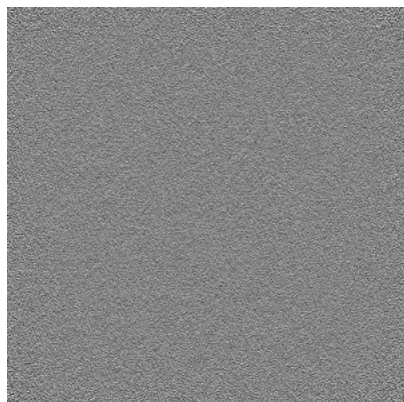


Y Index: 224

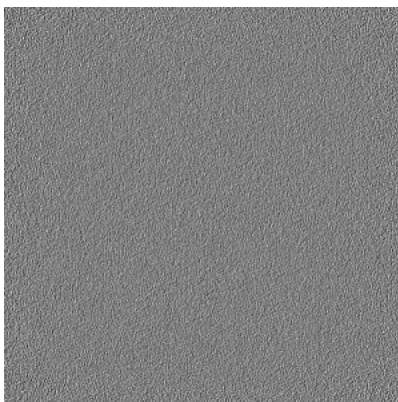


Z Index: 214

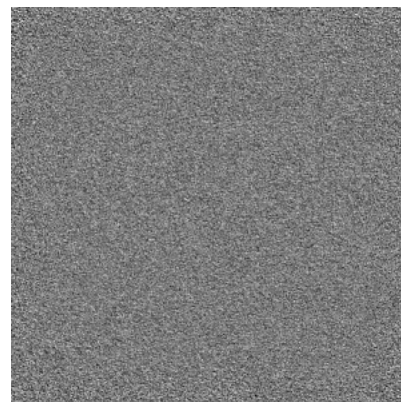
6.3.2 Raw map



X Index: 0



Y Index: 0

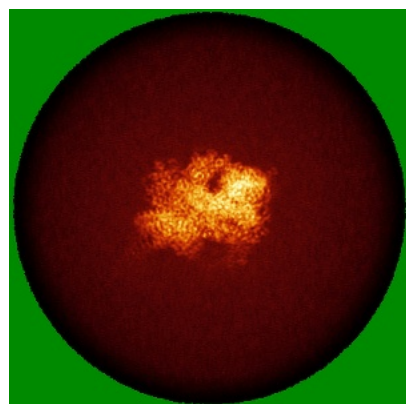


Z Index: 0

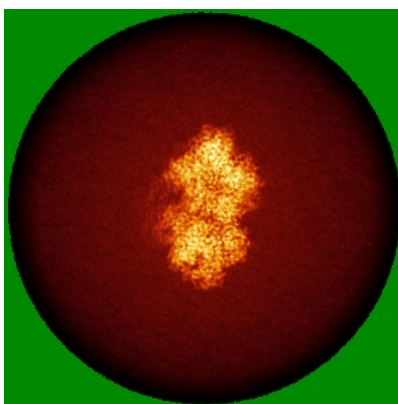
The images above show the largest variance slices of the map in three orthogonal directions.

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

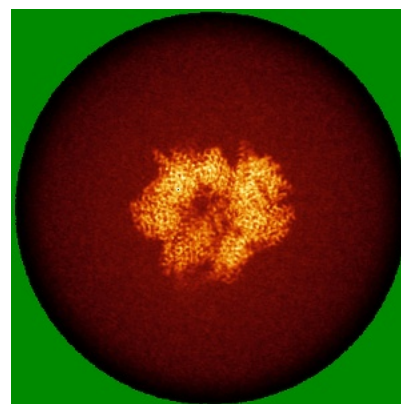
6.4.1 Primary map



X

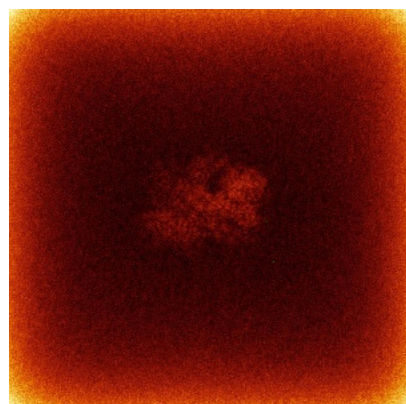


Y

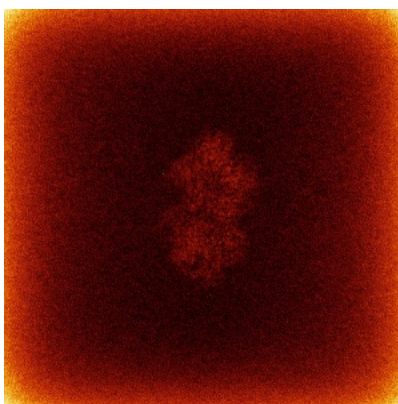


Z

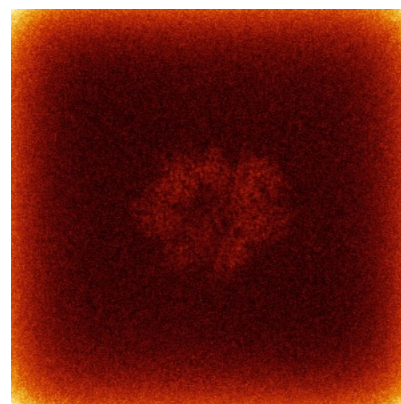
6.4.2 Raw map



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](#)

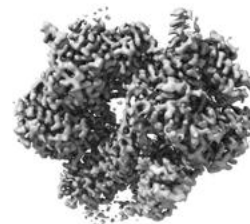
6.5.1 Primary map



X



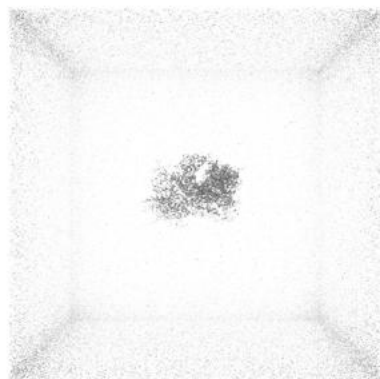
Y



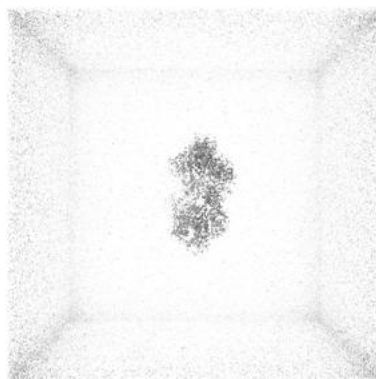
Z

The images above show the 3D surface view of the map at the recommended contour level 0.13. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

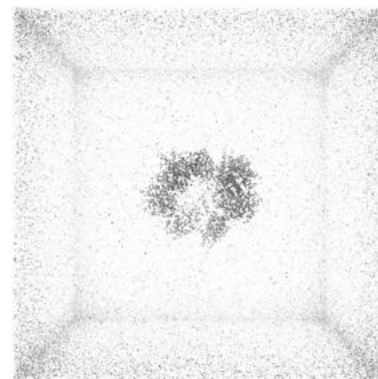
6.5.2 Raw map



X



Y



Z

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.

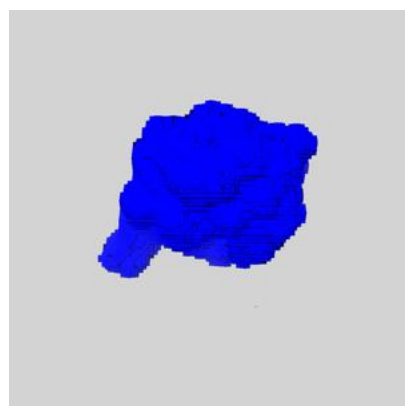
6.6 Mask visualisation [i](#)

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

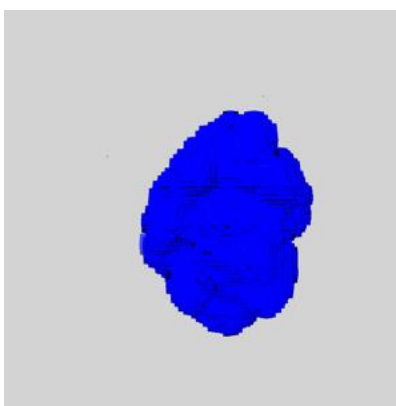
A mask typically either:

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

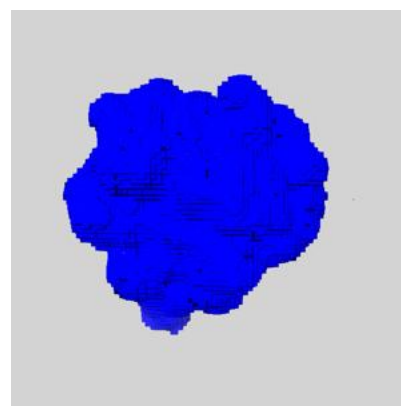
6.6.1 emd_44689_msk_1.map [i](#)



X



Y

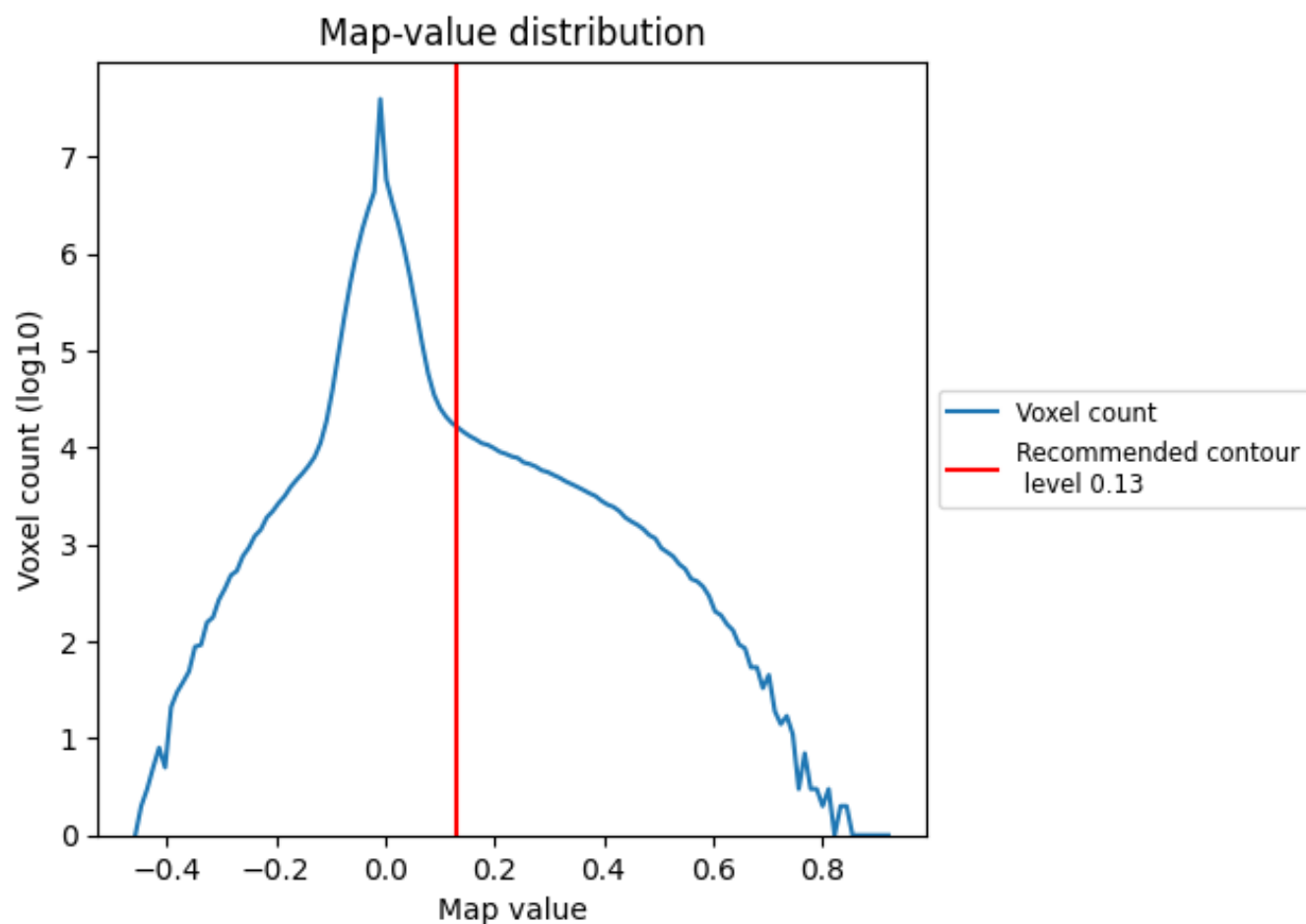


Z

7 Map analysis [i](#)

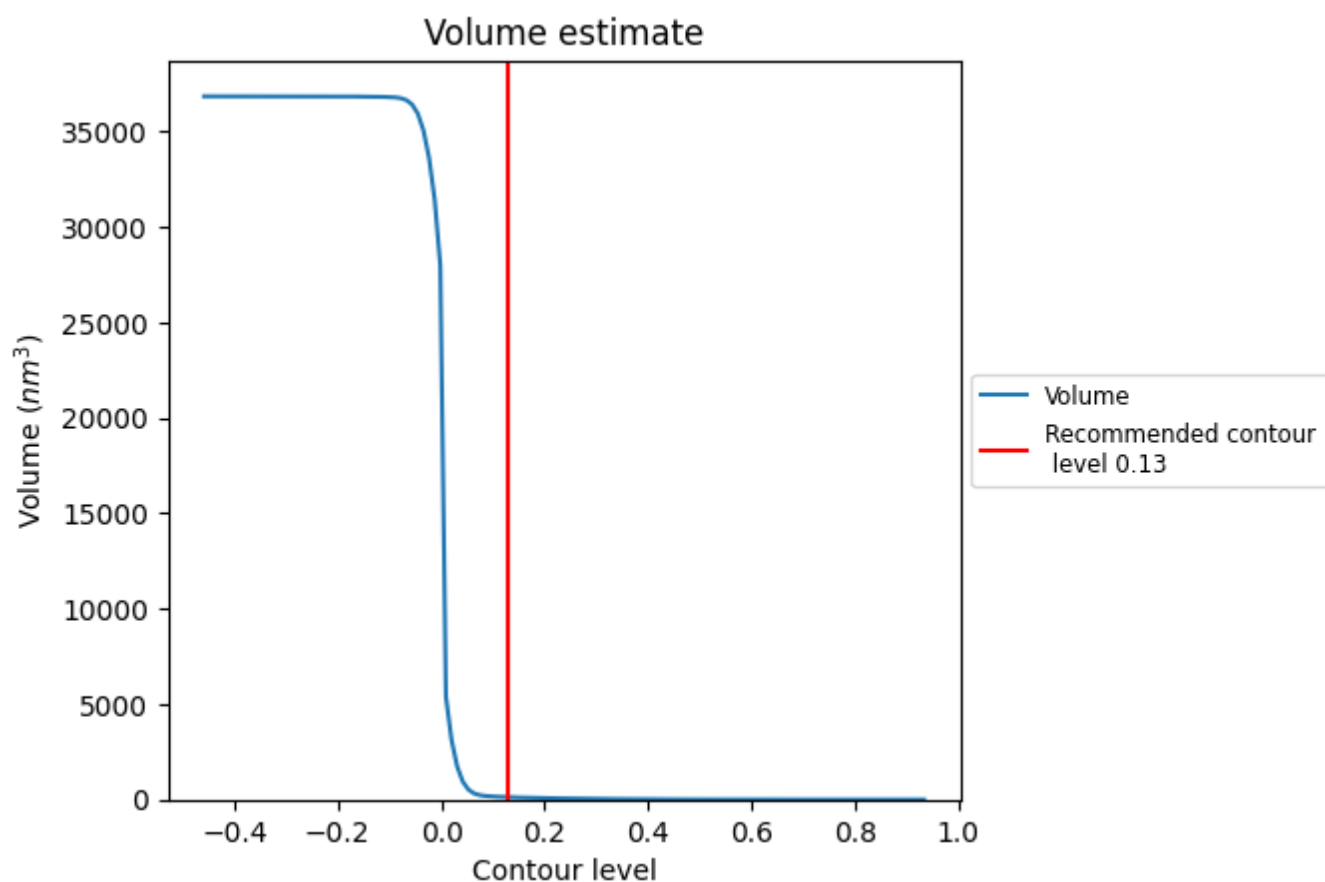
This section contains the results of statistical analysis of the map.

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.

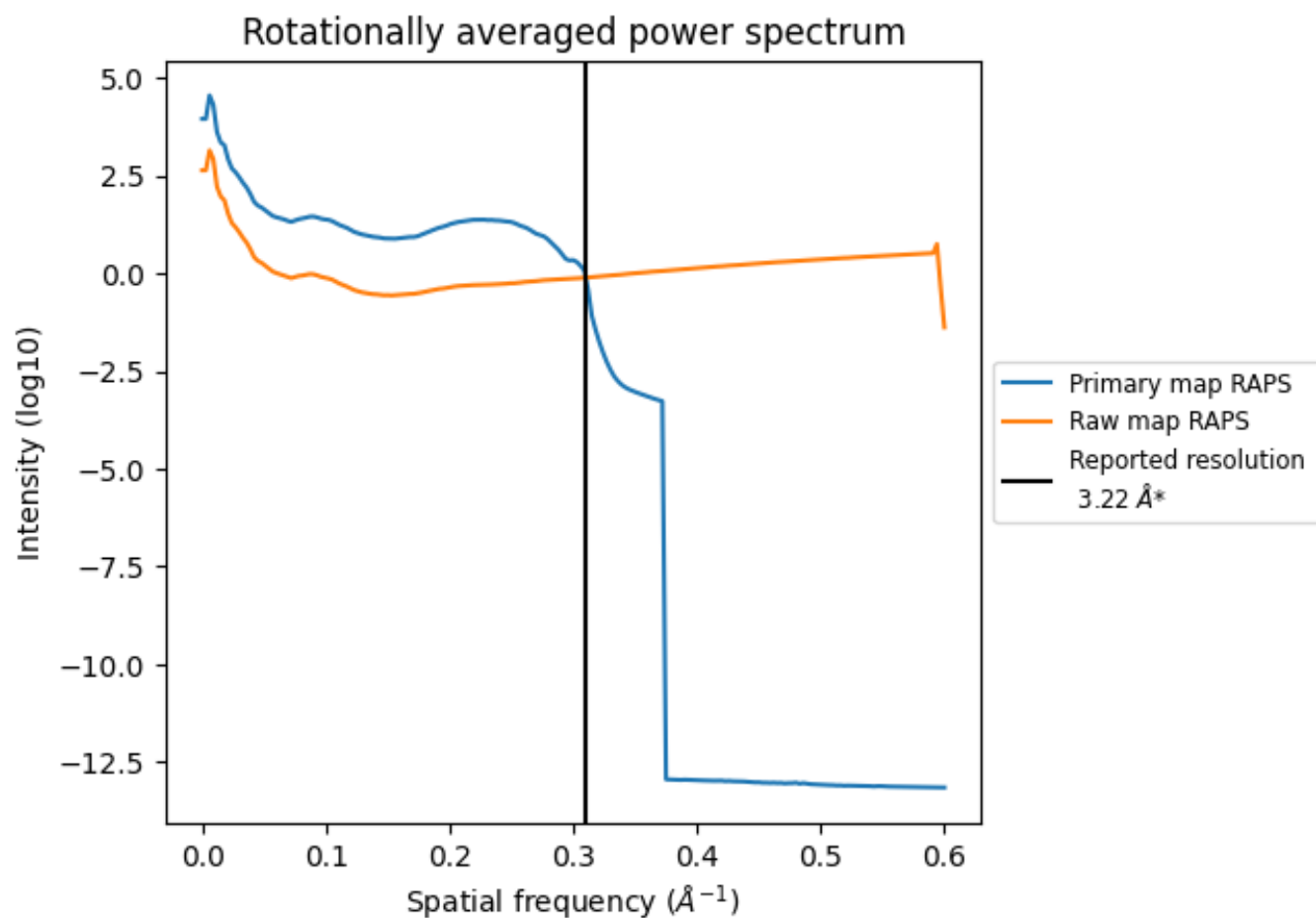
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 124 nm³; this corresponds to an approximate mass of 112 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 ⓘ

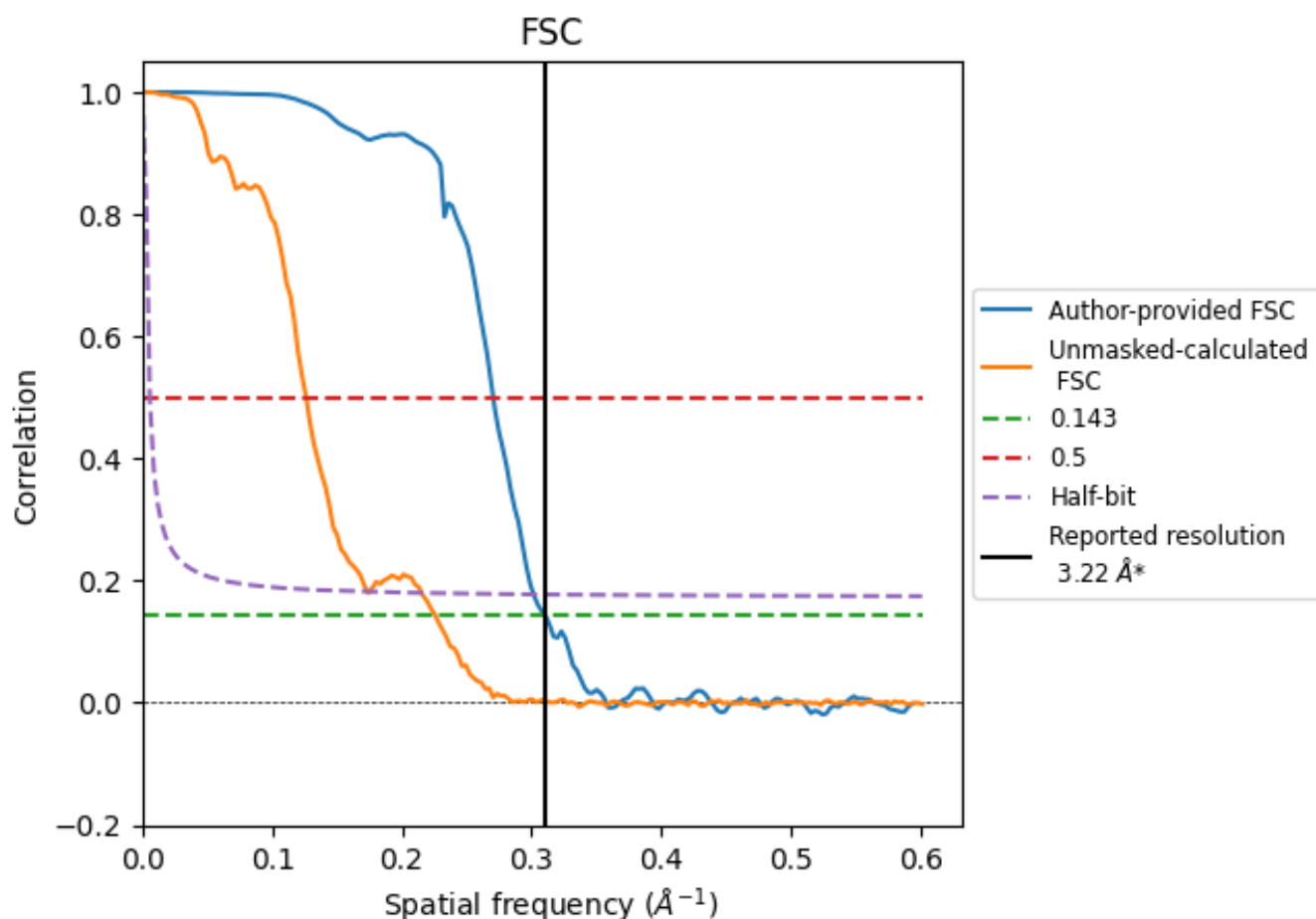


*Reported resolution corresponds to spatial frequency of 0.311 Å⁻¹

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 0.311 $\text{\AA}^{-1}$

8.2 Resolution estimates

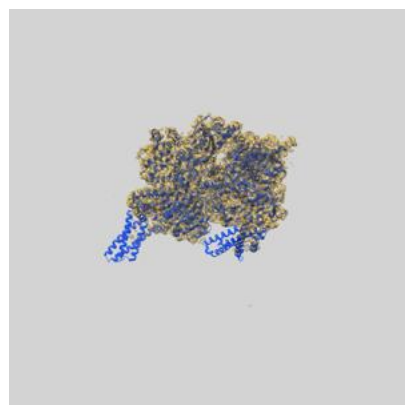
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.22	-	-
Author-provided FSC curve	3.22	3.70	3.32
Unmasked-calculated*	4.43	7.92	5.76

*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 4.43 differs from the reported value 3.22 by more than 10 %

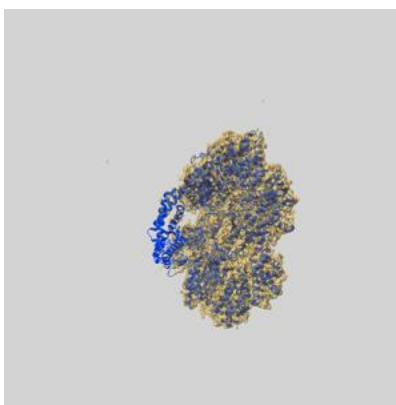
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-44689 and PDB model 9BM6. Per-residue inclusion information can be found in section [3](#) on page [5](#).

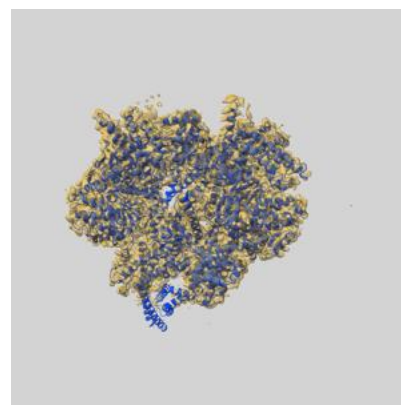
9.1 Map-model overlay [i](#)



X



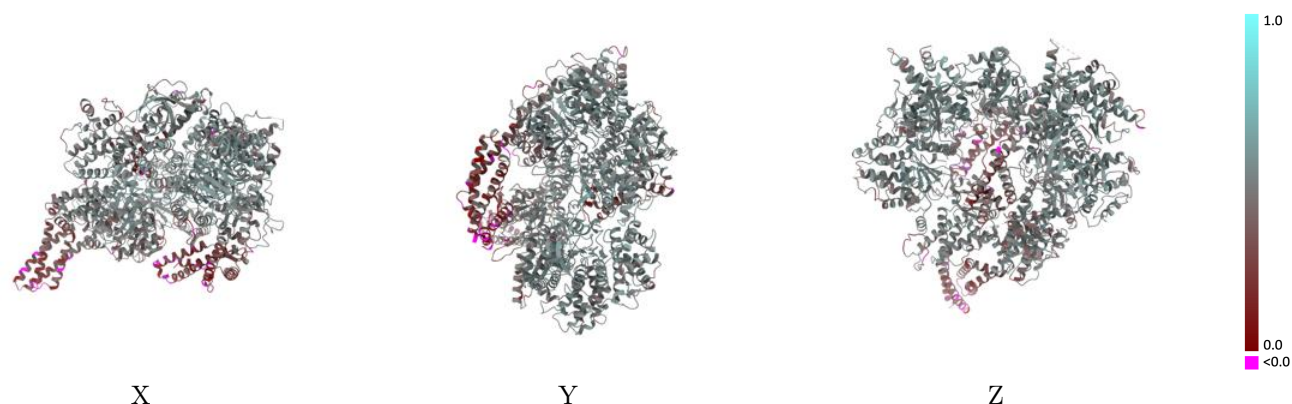
Y



Z

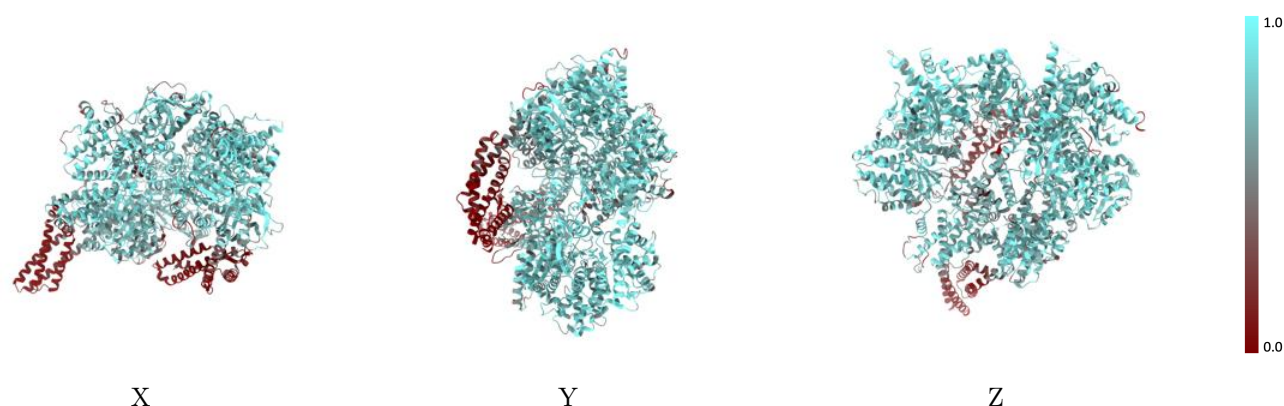
The images above show the 3D surface view of the map at the recommended contour level 0.13 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



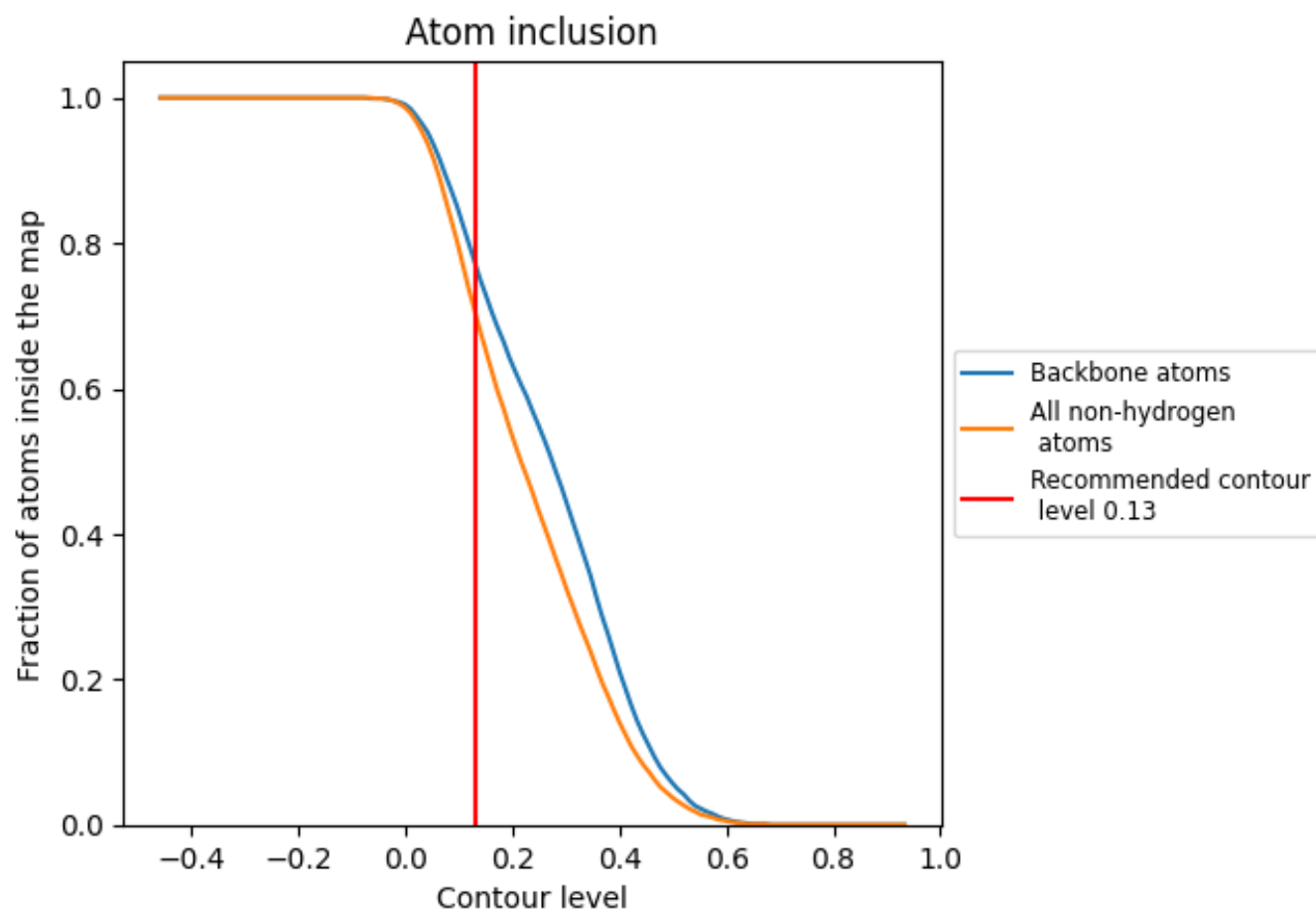
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.13).

9.4 Atom inclusion [i](#)



At the recommended contour level, 77% of all backbone atoms, 70% 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 (0.13) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7040	0.4690
A	0.7050	0.4690

