



wwPDB EM Validation Summary Report ⓘ

Oct 28, 2024 – 09:57 AM EDT

PDB ID : 8V6O
EMDB ID : EMD-42998
Title : Inactivated-state cryo-EM structure of human TRPV3 in presence of 2-APB in cNW30 nanodiscs
Authors : Nadezhdin, K.D.; Neuberger, A.; Sobolevsky, A.I.
Deposited on : 2023-12-01
Resolution : 2.83 Å(reported)

This is a wwPDB EM Validation Summary 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.dev113
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4.02b-467
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) : 2.39

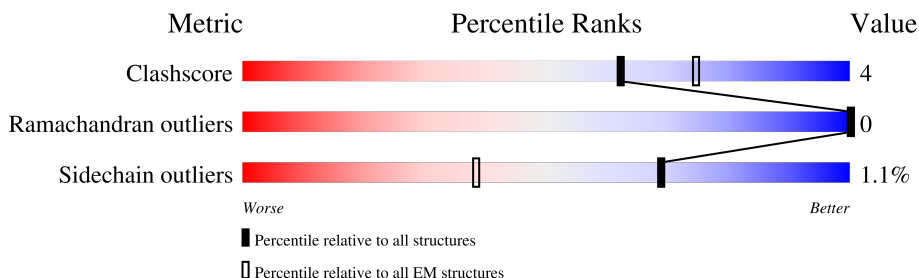
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 2.83 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	808	16% 73% 6% 21%
1	B	808	16% 72% 7% 21%
1	C	808	15% 72% 7% 21%
1	D	808	15% 72% 7% 21%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 22683 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 Transient receptor potential cation channel subfamily V member 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	640	Total	C	N	O	S	0	0
			5209	3386	864	927	32		
1	B	640	Total	C	N	O	S	0	0
			5209	3386	864	927	32		
1	C	640	Total	C	N	O	S	0	0
			5209	3386	864	927	32		
1	D	640	Total	C	N	O	S	0	0
			5209	3386	864	927	32		

There are 68 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	792	LEU	-	expression tag	UNP Q8NET8
A	793	VAL	-	expression tag	UNP Q8NET8
A	794	PRO	-	expression tag	UNP Q8NET8
A	795	ARG	-	expression tag	UNP Q8NET8
A	796	GLY	-	expression tag	UNP Q8NET8
A	797	SER	-	expression tag	UNP Q8NET8
A	798	ALA	-	expression tag	UNP Q8NET8
A	799	ALA	-	expression tag	UNP Q8NET8
A	800	ALA	-	expression tag	UNP Q8NET8
A	801	TRP	-	expression tag	UNP Q8NET8
A	802	SER	-	expression tag	UNP Q8NET8
A	803	HIS	-	expression tag	UNP Q8NET8
A	804	PRO	-	expression tag	UNP Q8NET8
A	805	GLN	-	expression tag	UNP Q8NET8
A	806	PHE	-	expression tag	UNP Q8NET8
A	807	GLU	-	expression tag	UNP Q8NET8
A	808	LYS	-	expression tag	UNP Q8NET8
B	792	LEU	-	expression tag	UNP Q8NET8
B	793	VAL	-	expression tag	UNP Q8NET8
B	794	PRO	-	expression tag	UNP Q8NET8
B	795	ARG	-	expression tag	UNP Q8NET8

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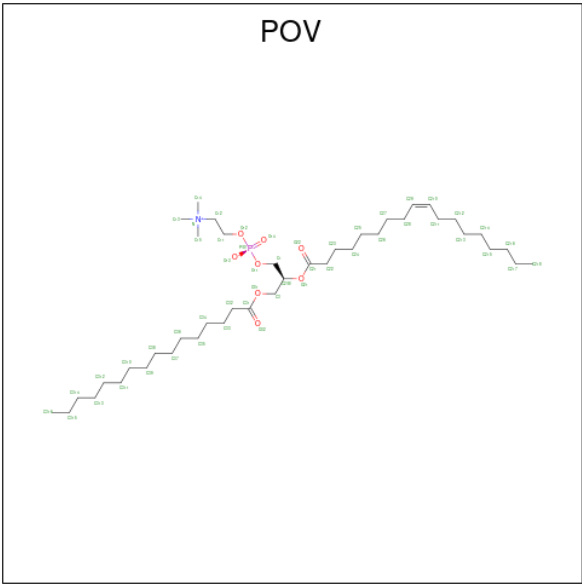
Chain	Residue	Modelled	Actual	Comment	Reference
B	796	GLY	-	expression tag	UNP Q8NET8
B	797	SER	-	expression tag	UNP Q8NET8
B	798	ALA	-	expression tag	UNP Q8NET8
B	799	ALA	-	expression tag	UNP Q8NET8
B	800	ALA	-	expression tag	UNP Q8NET8
B	801	TRP	-	expression tag	UNP Q8NET8
B	802	SER	-	expression tag	UNP Q8NET8
B	803	HIS	-	expression tag	UNP Q8NET8
B	804	PRO	-	expression tag	UNP Q8NET8
B	805	GLN	-	expression tag	UNP Q8NET8
B	806	PHE	-	expression tag	UNP Q8NET8
B	807	GLU	-	expression tag	UNP Q8NET8
B	808	LYS	-	expression tag	UNP Q8NET8
C	792	LEU	-	expression tag	UNP Q8NET8
C	793	VAL	-	expression tag	UNP Q8NET8
C	794	PRO	-	expression tag	UNP Q8NET8
C	795	ARG	-	expression tag	UNP Q8NET8
C	796	GLY	-	expression tag	UNP Q8NET8
C	797	SER	-	expression tag	UNP Q8NET8
C	798	ALA	-	expression tag	UNP Q8NET8
C	799	ALA	-	expression tag	UNP Q8NET8
C	800	ALA	-	expression tag	UNP Q8NET8
C	801	TRP	-	expression tag	UNP Q8NET8
C	802	SER	-	expression tag	UNP Q8NET8
C	803	HIS	-	expression tag	UNP Q8NET8
C	804	PRO	-	expression tag	UNP Q8NET8
C	805	GLN	-	expression tag	UNP Q8NET8
C	806	PHE	-	expression tag	UNP Q8NET8
C	807	GLU	-	expression tag	UNP Q8NET8
C	808	LYS	-	expression tag	UNP Q8NET8
D	792	LEU	-	expression tag	UNP Q8NET8
D	793	VAL	-	expression tag	UNP Q8NET8
D	794	PRO	-	expression tag	UNP Q8NET8
D	795	ARG	-	expression tag	UNP Q8NET8
D	796	GLY	-	expression tag	UNP Q8NET8
D	797	SER	-	expression tag	UNP Q8NET8
D	798	ALA	-	expression tag	UNP Q8NET8
D	799	ALA	-	expression tag	UNP Q8NET8
D	800	ALA	-	expression tag	UNP Q8NET8
D	801	TRP	-	expression tag	UNP Q8NET8
D	802	SER	-	expression tag	UNP Q8NET8
D	803	HIS	-	expression tag	UNP Q8NET8

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Chain	Residue	Modelled	Actual	Comment	Reference
D	804	PRO	-	expression tag	UNP Q8NET8
D	805	GLN	-	expression tag	UNP Q8NET8
D	806	PHE	-	expression tag	UNP Q8NET8
D	807	GLU	-	expression tag	UNP Q8NET8
D	808	LYS	-	expression tag	UNP Q8NET8

- Molecule 2 is (2S)-3-(hexadecanoyloxy)-2-[(9Z)-octadec-9-enoyloxy]propyl 2-(trimethylamm onio)ethyl phosphate (three-letter code: POV) (formula: C₄₂H₈₂NO₈P).



Mol	Chain	Residues	Atoms					AltConf
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	A	1	Total	C	N	O	P	0
			52	42	1	8	1	

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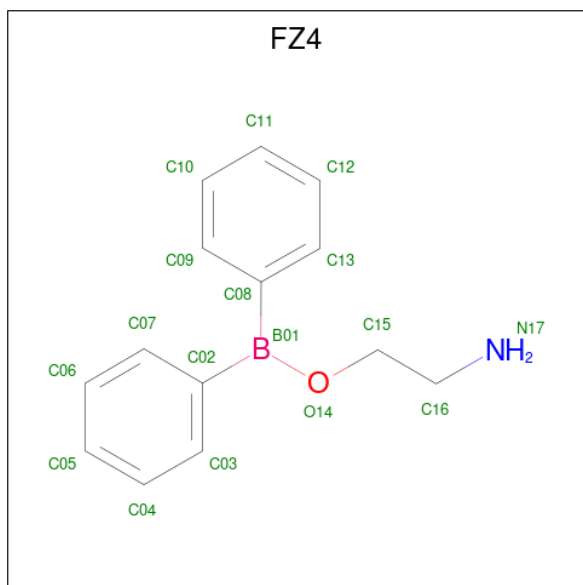
Mol	Chain	Residues	Atoms					AltConf
2	A	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	B	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	C	1	Total 52	C 42	N 1	O 8	P 1	0
2	D	1	Total 52	C 42	N 1	O 8	P 1	0
2	D	1	Total 52	C 42	N 1	O 8	P 1	0
2	D	1	Total 52	C 42	N 1	O 8	P 1	0
2	D	1	Total 52	C 42	N 1	O 8	P 1	0
2	D	1	Total 52	C 42	N 1	O 8	P 1	0

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Mol	Chain	Residues	Atoms					AltConf
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	
2	D	1	Total	C	N	O	P	0
			52	42	1	8	1	

- Molecule 3 is 2-aminoethyl diphenylborinate (three-letter code: FZ4) (formula: C₁₄H₁₆BNO).



Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	A	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	B	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	B	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	C	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	C	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	D	1	Total	B	C	N	O	0
			17	1	14	1	1	
3	D	1	Total	B	C	N	O	0
			17	1	14	1	1	

- Molecule 4 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms		AltConf
4	A	2	Total 2	Na 2	0
4	D	1	Total 1	Na 1	0

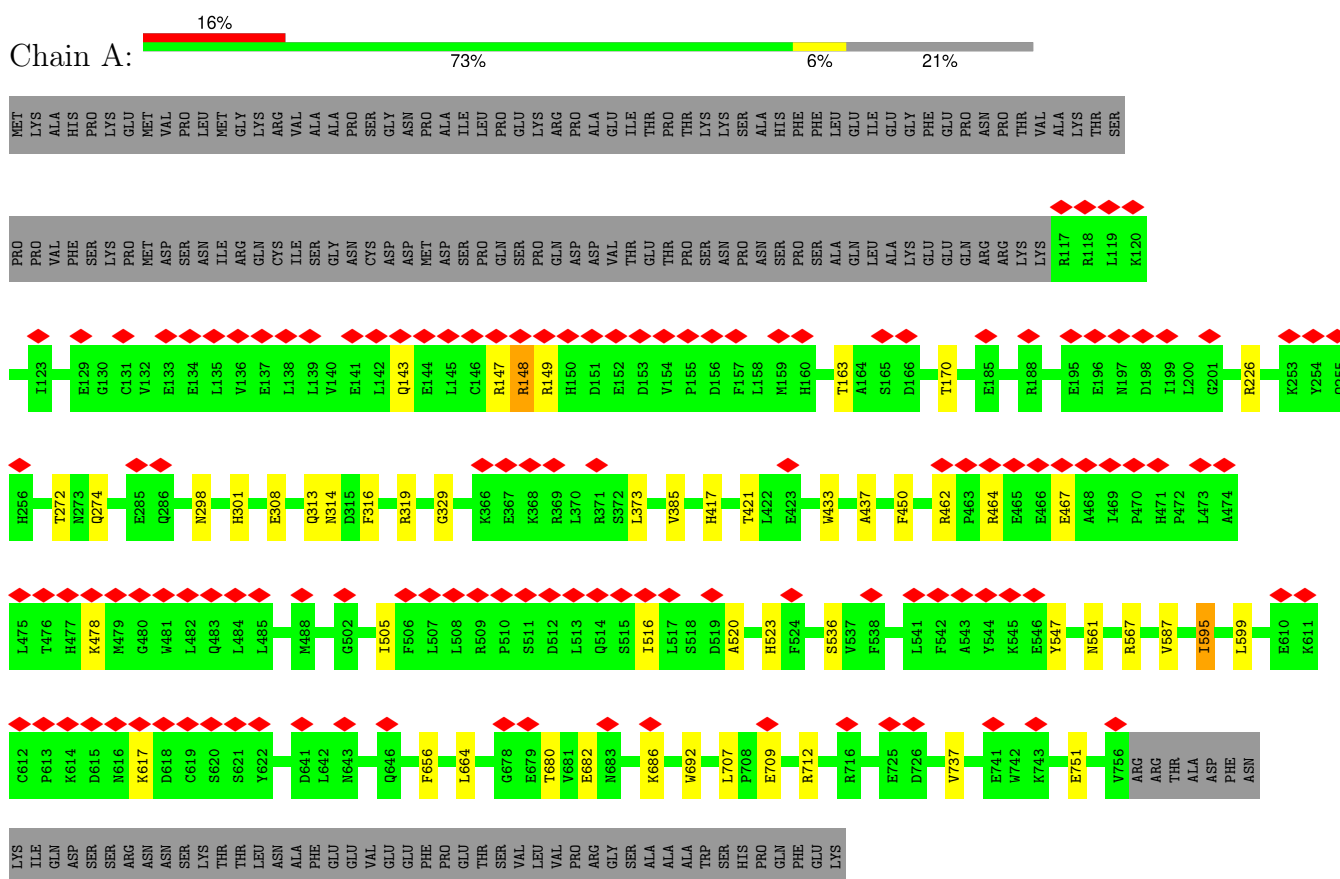
- Molecule 5 is water.

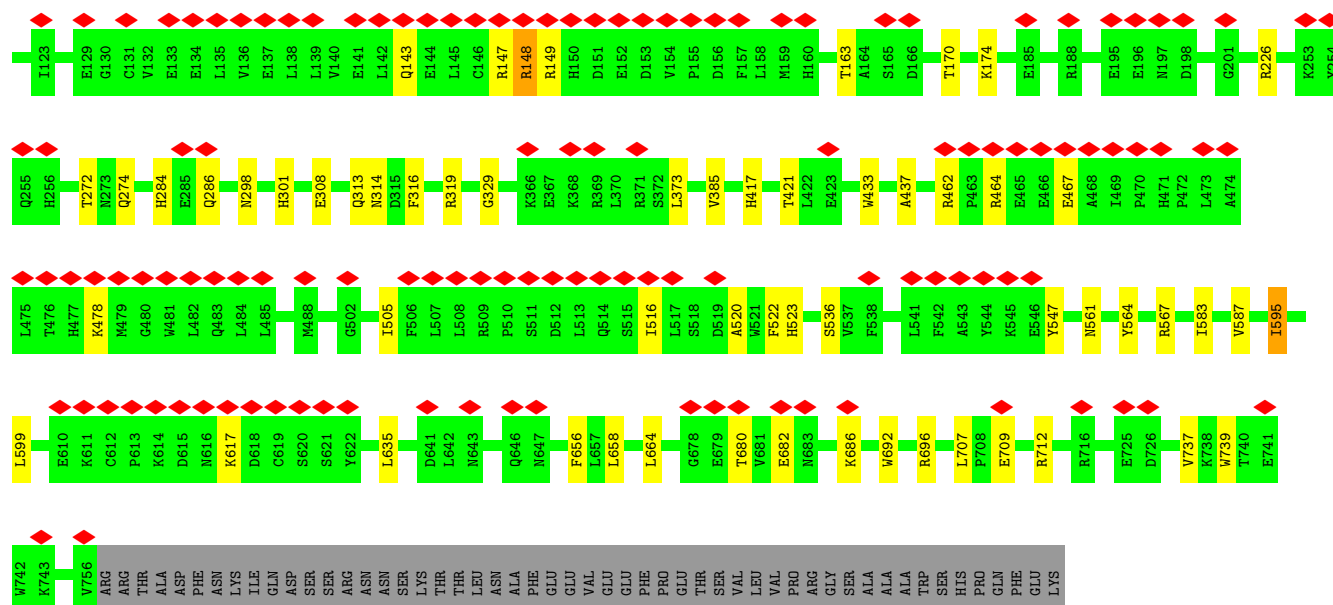
Mol	Chain	Residues	Atoms		AltConf
5	A	12	Total 12	O 12	0
5	B	10	Total 10	O 10	0
5	C	9	Total 9	O 9	0
5	D	13	Total 13	O 13	0

3 Residue-property plots

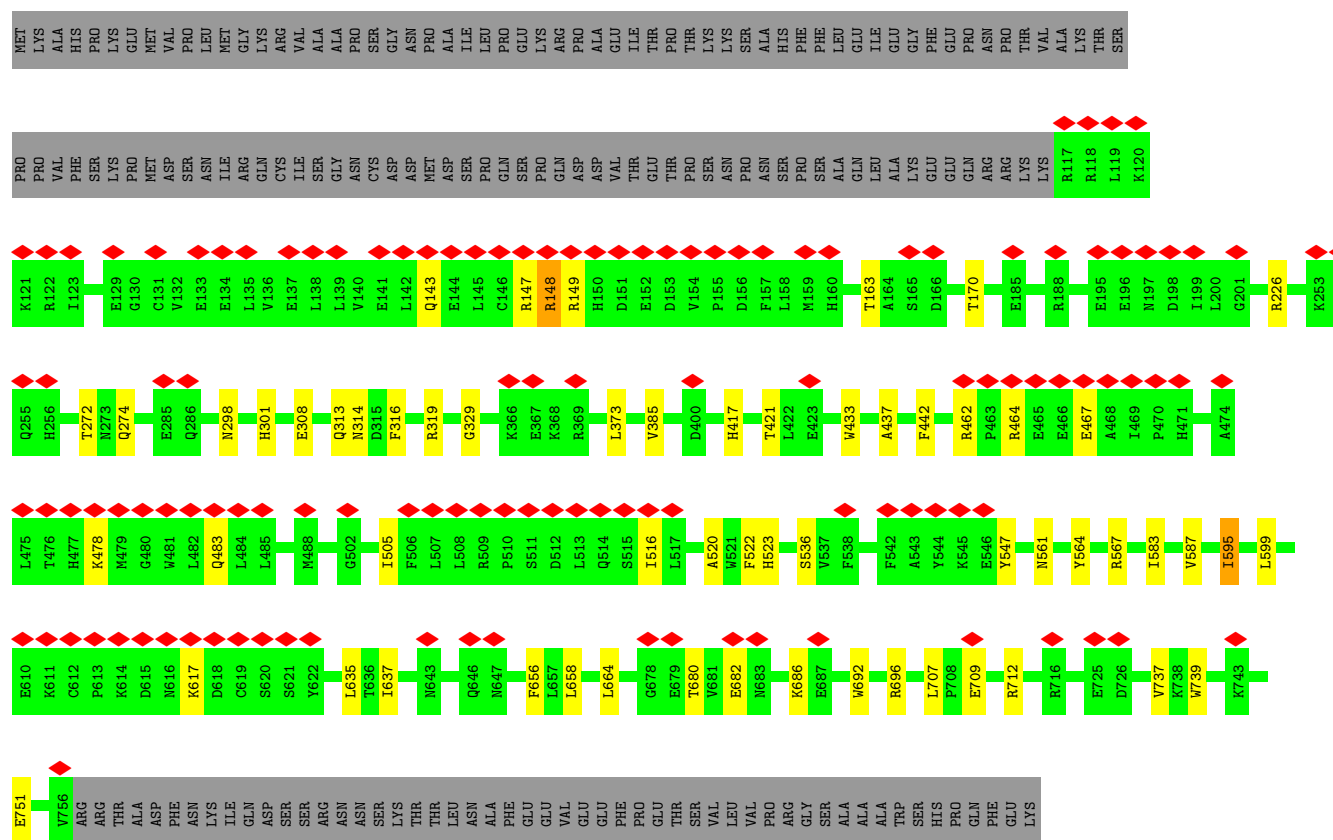
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: Transient receptor potential cation channel subfamily V member 3





- Molecule 1: Transient receptor potential cation channel subfamily V member 3



- Molecule 1: Transient receptor potential cation channel subfamily V member 3



K743	V756	ARG	THR	ALA	ASP	PHE	ASN	LYS	ILE	GLN	ASP	SER	SER	ARG	ARG	ASN	ASN	SER	LYS	THR	THR	THR	LEU	ASN	ALA	ALA	GLU	GLU	VAL	GLU	GLU	PHE	PRO	GLN	GLU	LYS	PHE	THR	VAL	ALA	LYS	SER	PRO	VAL	PHE	SER	PRO	LYS	GLU	GLY	MET	VAL	ASP	SER	ASN	LEU	ASN	ILE	MET	GLY	LYS	ARG	LYS	THR	GLN	CYS	VAL	ILE	ASN	SER	GLY	ALA	ALA	PRO	ASN	CYS	ASP	ASP	MET	PRO	ALA	ALA	SER	ILE	LEU	PRO	GLN	SER	GLU	PRO	GLY	LEU	PRO	LEU	SER	C146	L145	E144	Q143	L142	E141	V140	L139	L138	E137	V136	E134	E133	V132	C131	G130	E129	R122	K121	H256	E257	T272	R273	Q274	E295	Q286	N298	H301	E308	Q313	R314	F315	F316	R319	G329	K386	E387	K388	R389	L373	V385	D400	D414	H417	T421	L422	E423	W433	A437	F450	R462	P463	R464	E465	E466	E467	A468	I469	P470	H471	Y564	R567	Y547	L553	A556	N561	F542	A543	Y544	K545	E546	Y522	H523	K636	W632	R696	L707	P708	E709	R712	R716	E725	D726	V737	K738	W739	E679	T680	V681	E682	N683	V662	L658	F656	L653	Q646	N643	L635	Y622	S620	S621	D618	K617	N616	K614	P613	C612	K611	E610	L599	I595	F524	H524	F538	V537	S536	F534	A520	N521	F522	H523	D519	A520	S518	L517	I516	S515	Q514	L513	D512	S511	P510	R509	L508	L507	F506	I505	Q502	H498	L485	L484	Q483	L482	W481	C480	M479	K478	H477	T476	L475	A474	L473	P472	R117	R118	K120	D198	N197	E196	E195	R189	K184	K174	GLU	GLN	ARG	ASN	PRO	PRO	THR	LYS	LYS	ALA	ALA	LEU	LEU	GLN	ALA	LYS	LYS	GLY	GLY	PHE	GLU	GLU	GLY	ALA	ALA	LEU	PHE	SER	PRO	SER	HIS	ALA	SER	ASN	PRO	THR	ILE	THR	GLU	VAL	ASP	ASP	GLN	ARG	GLN	CYS	ASN	GLY	ALA	ALA	SER	ILE	LEU	PRO	SER	C147	R148	R149	H150	ASP	VAL	D151	E152	D153	V154	THR	THR	PRO	PRO	SER	D156	F157	L158	M159	H160	H160	M159	L158	F157	SER	ASN	PRO	PRO	SER	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D166	T163	ALA	ALA	SER	SER	PRO	PHE	HIS	ALA	ALA	SER	ASN	PRO	SER	THR	THR	PRO	THR	GLU	THR	ILE	GLU	VAL	ASP	ASP	GLN	ARG	PRO	LYS	LYS	GLU	GLY	GLY	ILE	GLU	GLN	ALA	ALA	LEU	LEU	T170	GLU	GLY	LYS	LYS	ALA	ALA	LEU	GLN	ALA	ALA	LEU	LEU	D1
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	73263	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	60	Depositor
Minimum defocus (nm)	750	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	1.231	Depositor
Minimum map value	-0.725	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.050	Depositor
Recommended contour level	0.182	Depositor
Map size ($\text{\AA}$)	204.8, 204.8, 204.8	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	0.8, 0.8, 0.8	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: FZ4, POV, NA

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	0.25	0/5325	0.50	0/7206
1	B	0.25	0/5325	0.50	0/7206
1	C	0.25	0/5325	0.50	0/7206
1	D	0.25	0/5325	0.50	0/7206
All	All	0.25	0/21300	0.50	0/28824

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	5209	0	5274	29	0
1	B	5209	0	5274	34	0
1	C	5209	0	5274	37	0
1	D	5209	0	5274	36	0
2	A	468	0	738	23	0
2	B	416	0	656	18	0
2	C	364	0	574	23	0
2	D	416	0	656	26	0
3	A	34	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	B	34	0	0	1	0
3	C	34	0	0	1	0
3	D	34	0	0	1	0
4	A	2	0	0	0	0
4	D	1	0	0	0	0
5	A	12	0	0	0	0
5	B	10	0	0	0	0
5	C	9	0	0	0	0
5	D	13	0	0	0	0
All	All	22683	0	23720	189	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 4.

The worst 5 of 189 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:D:680:THR:HG22	1:D:682:GLU:H	1.54	0.73
1:A:680:THR:HG22	1:A:682:GLU:H	1.54	0.72
1:C:680:THR:HG22	1:C:682:GLU:H	1.54	0.72
1:B:680:THR:HG22	1:B:682:GLU:H	1.54	0.71
1:A:433:TRP:HA	1:A:437:ALA:HB3	1.83	0.61

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	638/808 (79%)	603 (94%)	35 (6%)	0	100	100
1	B	638/808 (79%)	603 (94%)	35 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	638/808 (79%)	603 (94%)	35 (6%)	0	100	100
1	D	638/808 (79%)	603 (94%)	35 (6%)	0	100	100
All	All	2552/3232 (79%)	2412 (94%)	140 (6%)	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	567/716 (79%)	561 (99%)	6 (1%)	70	86
1	B	567/716 (79%)	561 (99%)	6 (1%)	70	86
1	C	567/716 (79%)	561 (99%)	6 (1%)	70	86
1	D	567/716 (79%)	561 (99%)	6 (1%)	70	86
All	All	2268/2864 (79%)	2244 (99%)	24 (1%)	69	86

5 of 24 residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	462	ARG
1	C	617	LYS
1	C	595	ILE
1	D	148	ARG
1	B	148	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. 5 of 16 such sidechains are listed below:

Mol	Chain	Res	Type
1	D	286	GLN
1	D	284	HIS
1	C	227	GLN
1	D	227	GLN
1	B	314	ASN

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 ⓘ

Of 43 ligands modelled in this entry, 3 are monoatomic - leaving 40 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	POV	D	901	-	51,51,51	1.13	3 (5%)	57,59,59	0.94	3 (5%)
2	POV	A	909	-	51,51,51	1.14	3 (5%)	57,59,59	0.97	3 (5%)
2	POV	C	904	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	D	905	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	C	905	-	51,51,51	1.14	4 (7%)	57,59,59	1.02	4 (7%)
2	POV	A	904	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	A	903	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	B	909	-	51,51,51	1.14	3 (5%)	57,59,59	0.94	3 (5%)
2	POV	B	902	-	51,51,51	1.14	3 (5%)	57,59,59	0.92	3 (5%)
2	POV	C	909	-	51,51,51	1.14	3 (5%)	57,59,59	0.98	3 (5%)
2	POV	C	903	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	B	905	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	D	906	-	51,51,51	1.15	3 (5%)	57,59,59	0.92	3 (5%)
3	FZ4	A	906	-	17,18,18	0.53	0	18,22,22	1.28	2 (11%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	POV	A	901	-	51,51,51	1.15	3 (5%)	57,59,59	0.93	3 (5%)
2	POV	D	904	-	51,51,51	1.13	2 (3%)	57,59,59	1.01	3 (5%)
2	POV	C	901	-	51,51,51	1.14	2 (3%)	57,59,59	1.01	4 (7%)
3	FZ4	B	907	-	17,18,18	0.52	0	18,22,22	1.27	2 (11%)
2	POV	B	906	-	51,51,51	1.14	5 (9%)	57,59,59	1.04	3 (5%)
2	POV	B	904	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
3	FZ4	B	908	-	17,18,18	0.50	0	18,22,22	1.18	3 (16%)
2	POV	D	902	-	51,51,51	1.13	3 (5%)	57,59,59	0.97	3 (5%)
2	POV	B	903	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
3	FZ4	C	906	-	17,18,18	0.52	0	18,22,22	1.29	2 (11%)
2	POV	A	910	-	51,51,51	1.14	3 (5%)	57,59,59	0.92	3 (5%)
2	POV	D	903	-	51,51,51	1.14	3 (5%)	57,59,59	0.90	3 (5%)
3	FZ4	C	907	-	17,18,18	0.52	0	18,22,22	1.17	3 (16%)
2	POV	B	910	-	51,51,51	1.14	3 (5%)	57,59,59	0.97	3 (5%)
3	FZ4	D	910	-	17,18,18	0.51	0	18,22,22	1.17	3 (16%)
3	FZ4	D	909	-	17,18,18	0.50	0	18,22,22	1.26	2 (11%)
2	POV	D	908	-	51,51,51	1.15	4 (7%)	57,59,59	1.02	4 (7%)
2	POV	D	907	-	51,51,51	1.14	3 (5%)	57,59,59	0.91	3 (5%)
3	FZ4	A	907	-	17,18,18	0.49	0	18,22,22	1.17	3 (16%)
2	POV	A	905	-	51,51,51	1.16	4 (7%)	57,59,59	1.05	4 (7%)
2	POV	A	902	-	51,51,51	1.14	2 (3%)	57,59,59	1.00	3 (5%)
2	POV	B	901	-	51,51,51	1.14	3 (5%)	57,59,59	0.92	3 (5%)
2	POV	A	908	-	51,51,51	1.13	3 (5%)	57,59,59	0.93	3 (5%)
2	POV	C	902	-	51,51,51	1.15	3 (5%)	57,59,59	0.91	3 (5%)
2	POV	A	911	-	51,51,51	1.14	2 (3%)	57,59,59	1.00	3 (5%)
2	POV	C	908	-	51,51,51	1.14	3 (5%)	57,59,59	0.93	3 (5%)

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	POV	D	901	-	-	30/55/55/55	-
2	POV	A	909	-	-	31/55/55/55	-
2	POV	C	904	-	-	34/55/55/55	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	POV	D	905	-	-	29/55/55/55	-
2	POV	C	905	-	-	23/55/55/55	-
2	POV	A	904	-	-	35/55/55/55	-
2	POV	A	903	-	-	25/55/55/55	-
2	POV	B	909	-	-	31/55/55/55	-
2	POV	B	902	-	-	33/55/55/55	-
2	POV	C	909	-	-	32/55/55/55	-
2	POV	C	903	-	-	27/55/55/55	-
2	POV	B	905	-	-	35/55/55/55	-
2	POV	D	906	-	-	20/55/55/55	-
3	FZ4	A	906	-	-	6/12/12/12	0/2/2/2
2	POV	A	901	-	-	32/55/55/55	-
2	POV	D	904	-	-	27/55/55/55	-
2	POV	C	901	-	-	29/55/55/55	-
3	FZ4	B	907	-	-	6/12/12/12	0/2/2/2
2	POV	B	906	-	-	22/55/55/55	-
2	POV	B	904	-	-	25/55/55/55	-
3	FZ4	B	908	-	-	6/12/12/12	0/2/2/2
2	POV	D	902	-	-	30/55/55/55	-
2	POV	B	903	-	-	27/55/55/55	-
3	FZ4	C	906	-	-	6/12/12/12	0/2/2/2
2	POV	A	910	-	-	26/55/55/55	-
2	POV	D	903	-	-	23/55/55/55	-
3	FZ4	C	907	-	-	6/12/12/12	0/2/2/2
2	POV	B	910	-	-	31/55/55/55	-
3	FZ4	D	910	-	-	6/12/12/12	0/2/2/2
3	FZ4	D	909	-	-	6/12/12/12	0/2/2/2
2	POV	D	908	-	-	20/55/55/55	-
2	POV	D	907	-	-	35/55/55/55	-
3	FZ4	A	907	-	-	6/12/12/12	0/2/2/2
2	POV	A	905	-	-	29/55/55/55	-
2	POV	A	902	-	-	28/55/55/55	-
2	POV	B	901	-	-	24/55/55/55	-
2	POV	A	908	-	-	30/55/55/55	-

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	POV	C	902	-	-	30/55/55/55	-
2	POV	A	911	-	-	28/55/55/55	-
2	POV	C	908	-	-	30/55/55/55	-

The worst 5 of 97 bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	D	904	POV	O21-C21	3.27	1.43	1.34
2	A	902	POV	O21-C21	3.25	1.43	1.34
2	A	911	POV	O21-C21	3.22	1.43	1.34
2	C	901	POV	O21-C21	3.22	1.43	1.34
2	A	905	POV	O21-C21	3.11	1.43	1.34

The worst 5 of 120 bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	A	905	POV	O21-C21-C22	4.30	120.78	111.48
2	D	904	POV	O21-C21-C22	4.28	120.74	111.48
2	A	902	POV	O21-C21-C22	4.25	120.67	111.48
2	C	901	POV	O21-C21-C22	4.25	120.67	111.48
2	B	906	POV	O21-C21-C22	4.24	120.66	111.48

There are no chirality outliers.

5 of 959 torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	A	901	POV	C1-O11-P-O14
2	A	901	POV	C11-O12-P-O11
2	A	901	POV	C11-O12-P-O14
2	A	901	POV	O12-C11-C12-N
2	A	901	POV	C22-C21-O21-C2

There are no ring outliers.

36 monomers are involved in 91 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	D	901	POV	3	0
2	A	909	POV	2	0
2	C	904	POV	2	0
2	D	905	POV	4	0

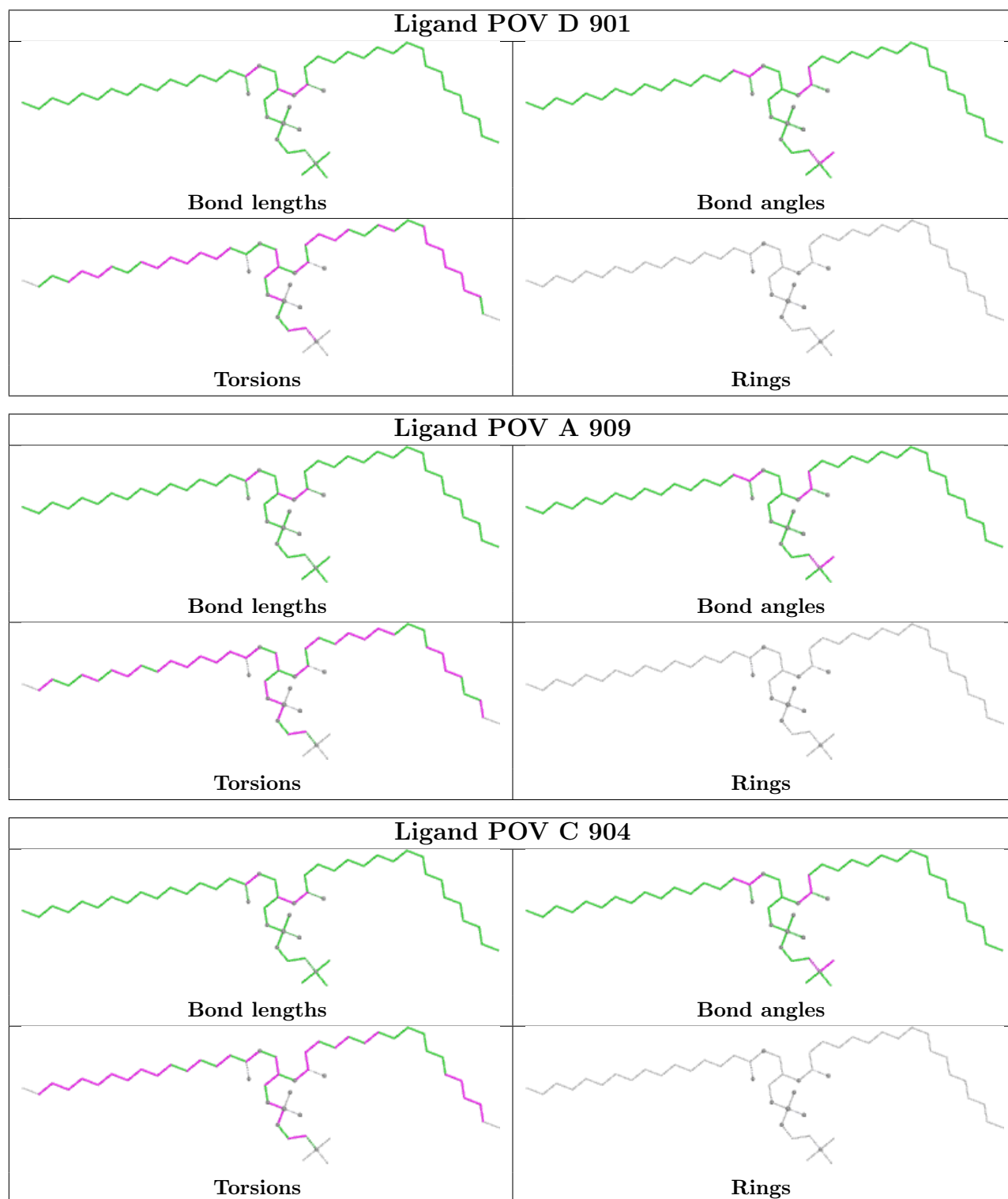
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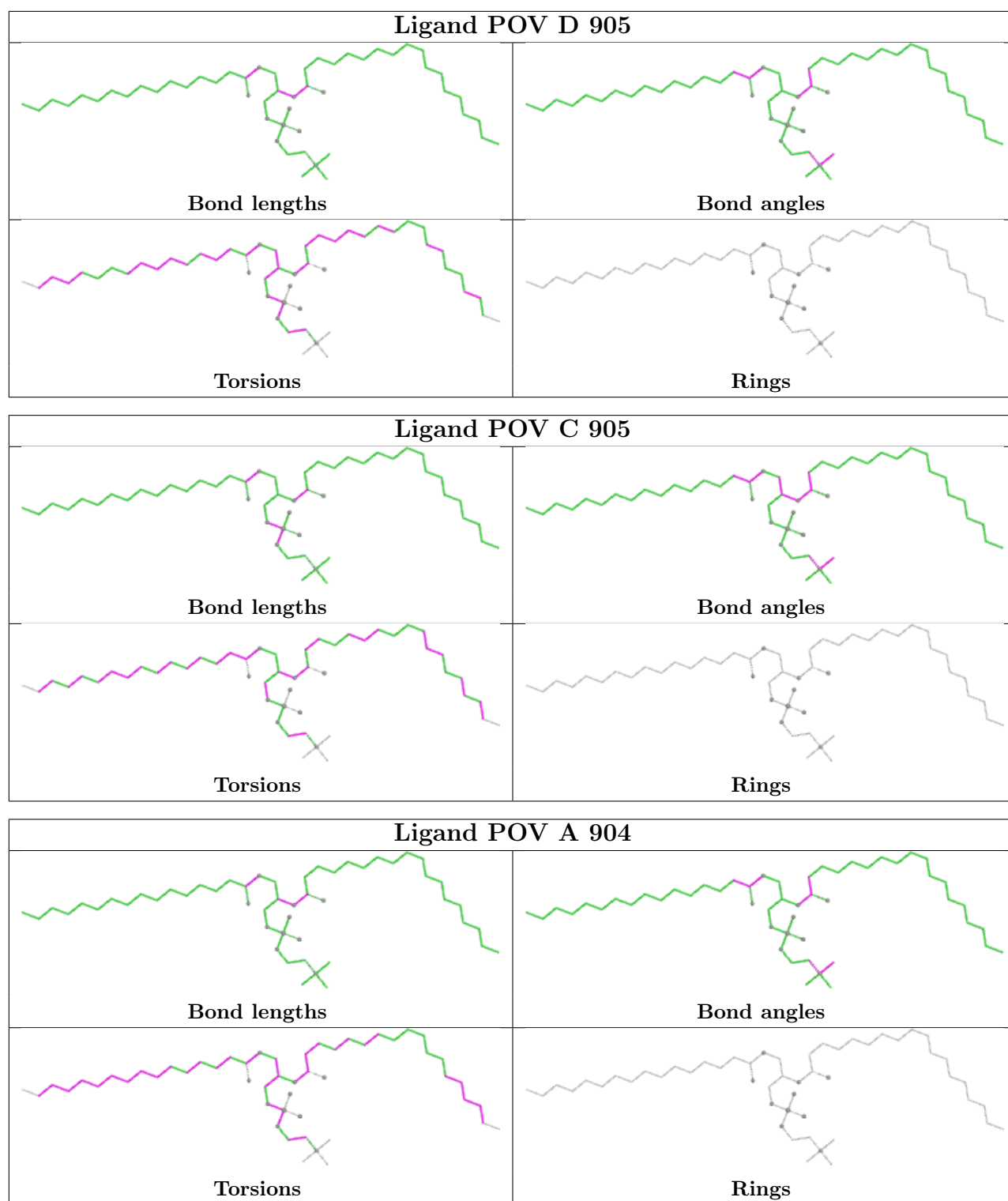
Continued from previous page...

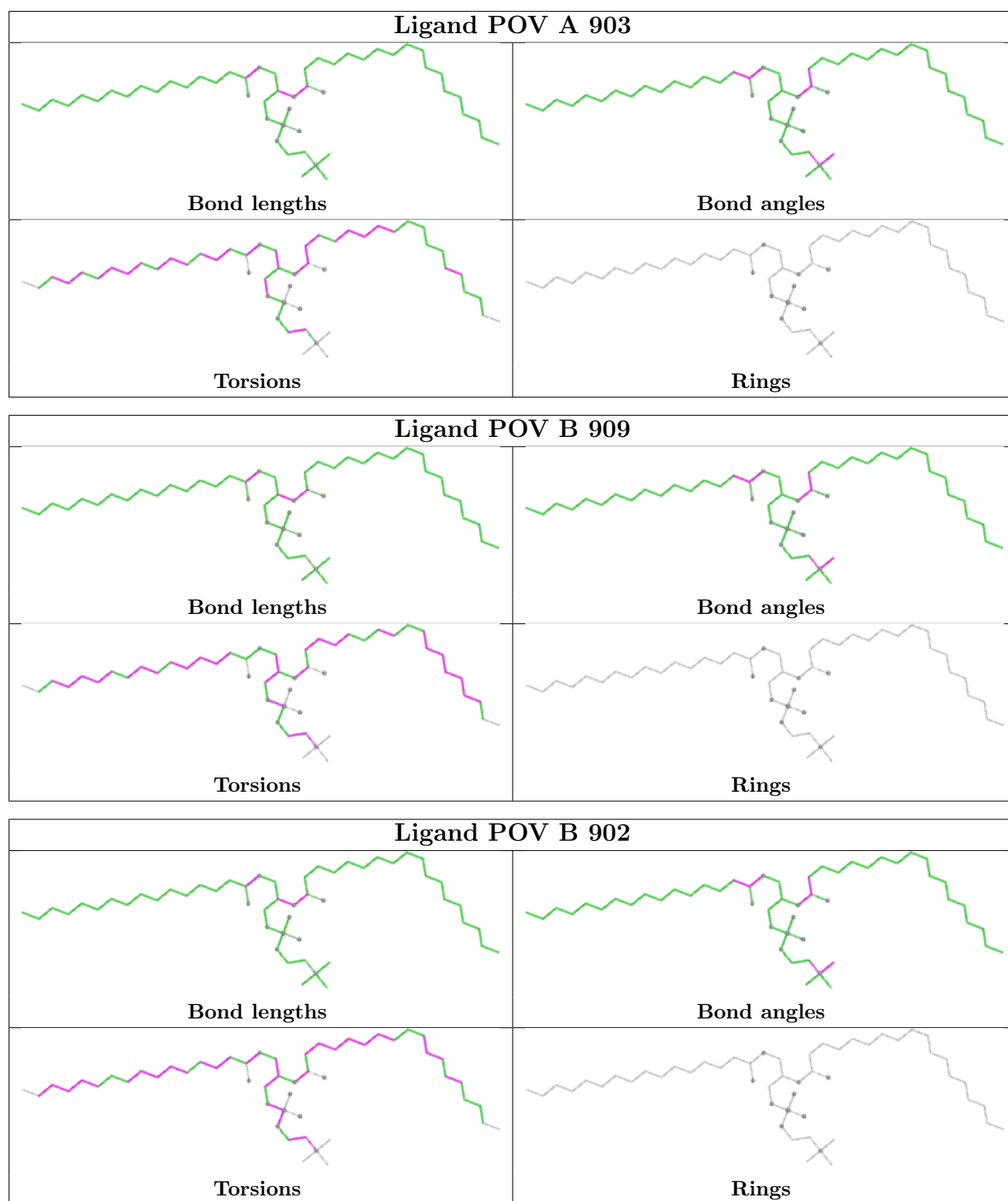
Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	C	905	POV	3	0
2	A	904	POV	2	0
2	A	903	POV	4	0
2	B	909	POV	2	0
2	B	902	POV	2	0
2	C	909	POV	4	0
2	C	903	POV	3	0
2	B	905	POV	2	0
2	D	906	POV	2	0
3	A	906	FZ4	1	0
2	A	901	POV	2	0
2	D	904	POV	5	0
2	C	901	POV	4	0
3	B	907	FZ4	1	0
2	B	906	POV	5	0
2	B	904	POV	3	0
2	D	902	POV	2	0
2	B	903	POV	1	0
3	C	906	FZ4	1	0
2	A	910	POV	3	0
2	D	903	POV	2	0
2	B	910	POV	1	0
3	D	909	FZ4	1	0
2	D	908	POV	6	0
2	D	907	POV	2	0
2	A	905	POV	2	0
2	A	902	POV	4	0
2	B	901	POV	2	0
2	A	908	POV	1	0
2	C	902	POV	5	0
2	A	911	POV	4	0
2	C	908	POV	2	0

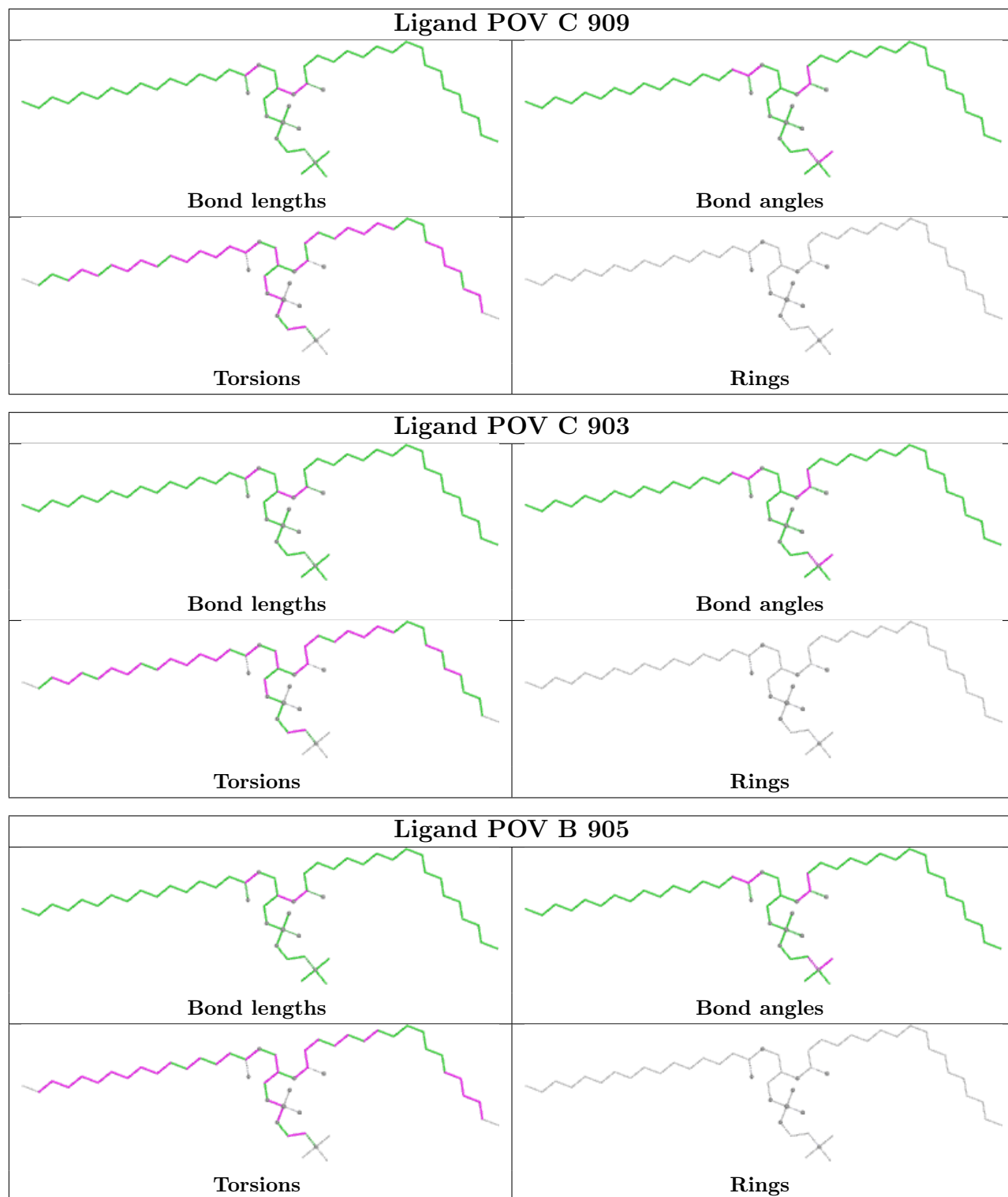
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. 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.

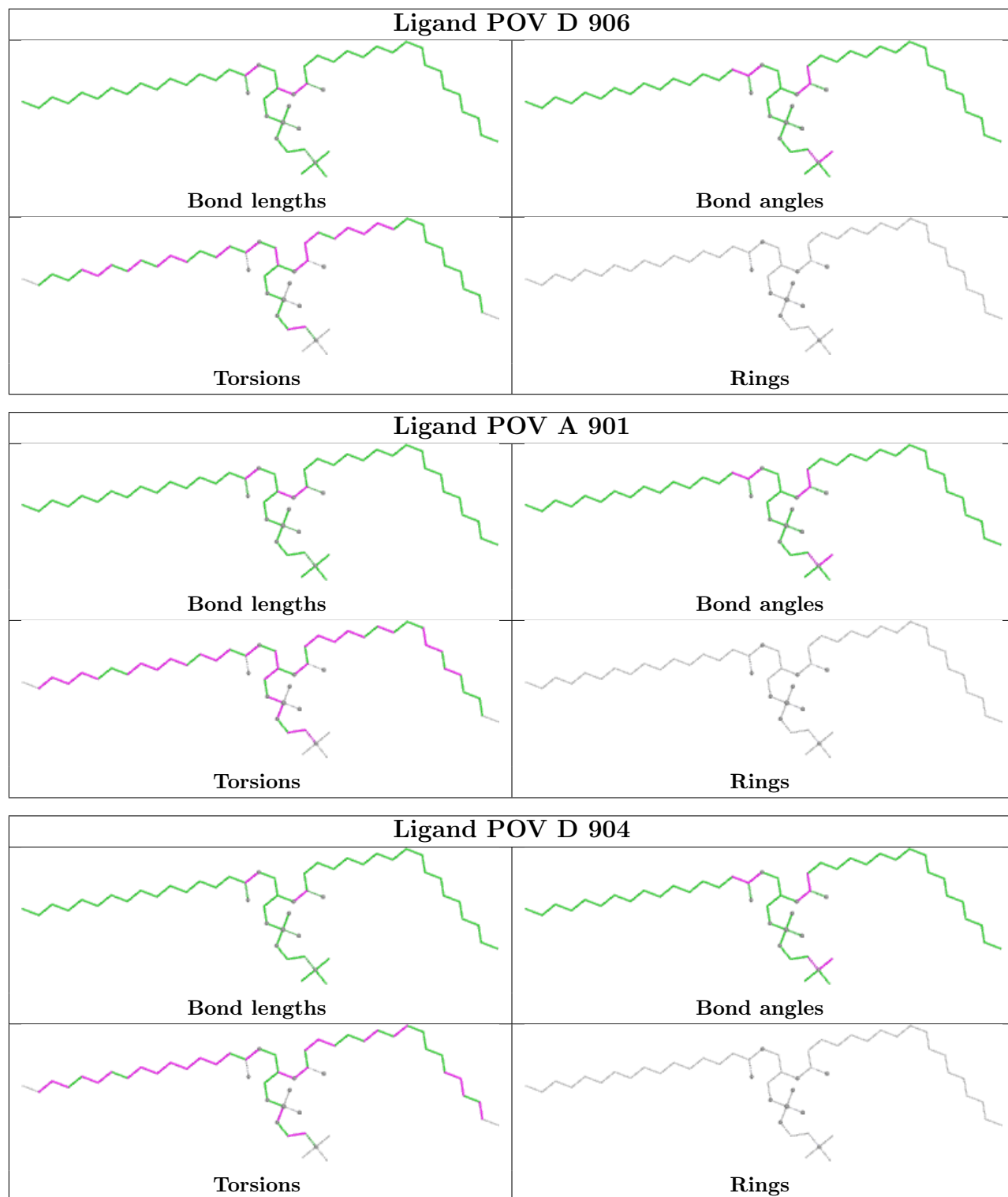
The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

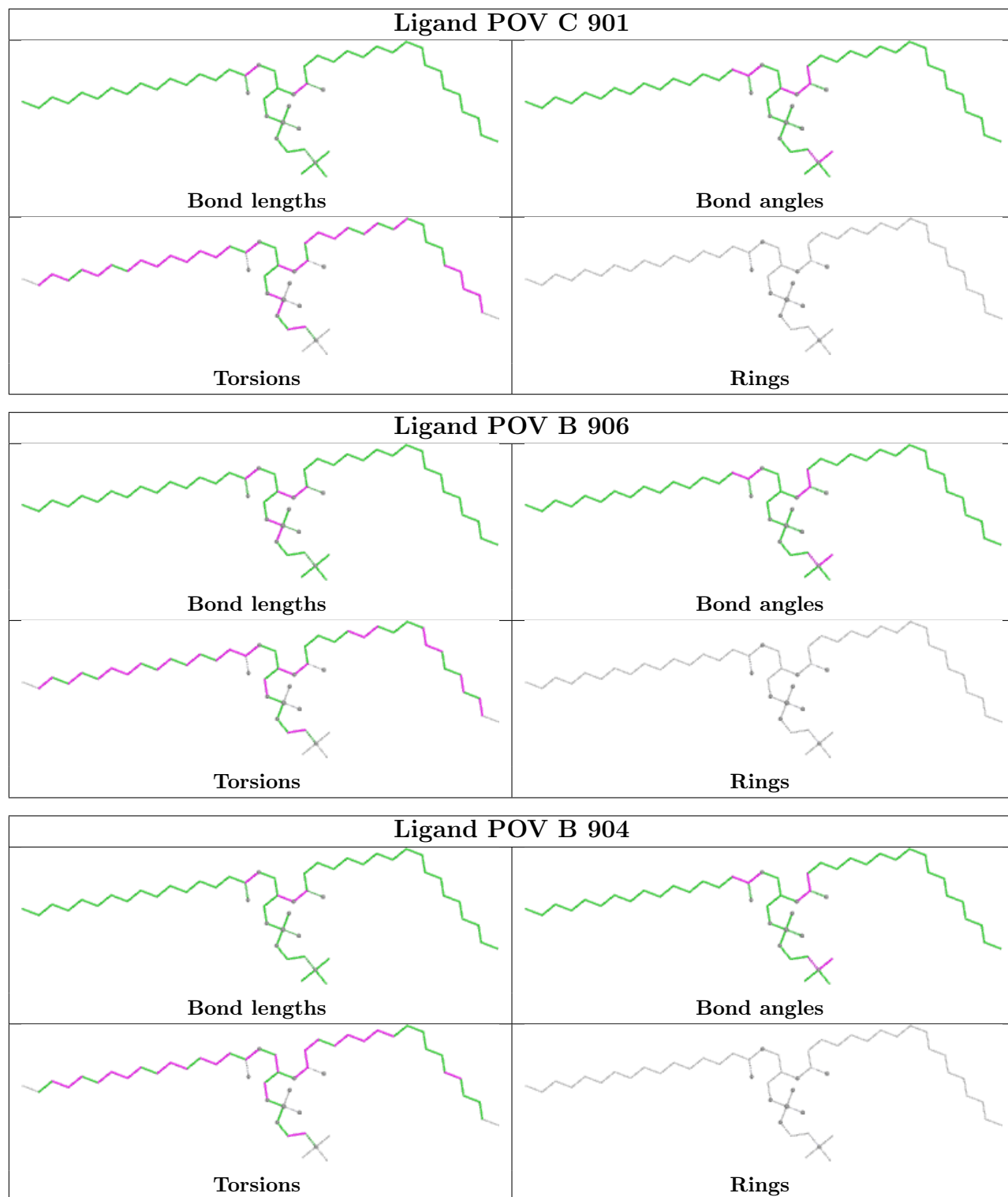


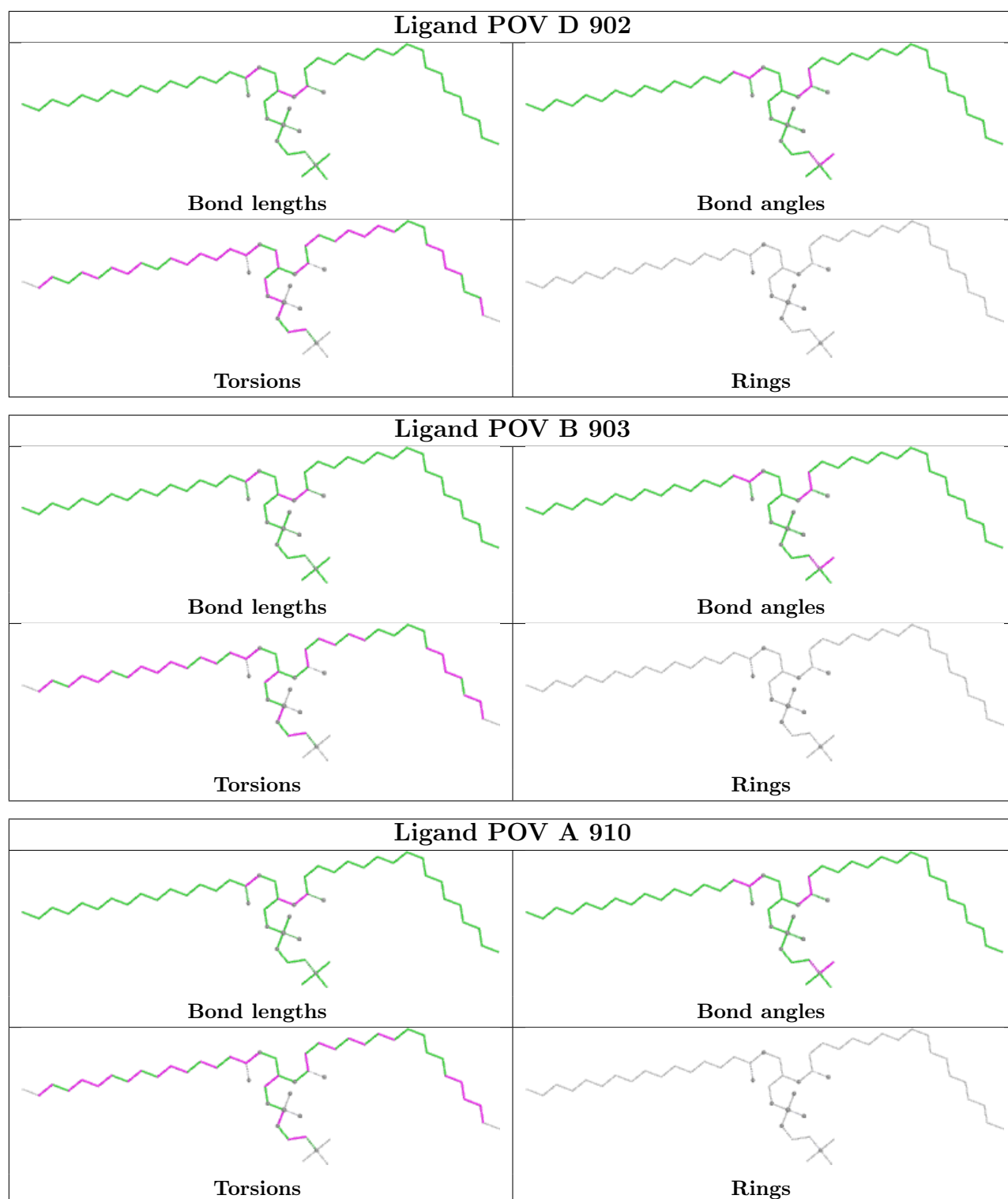


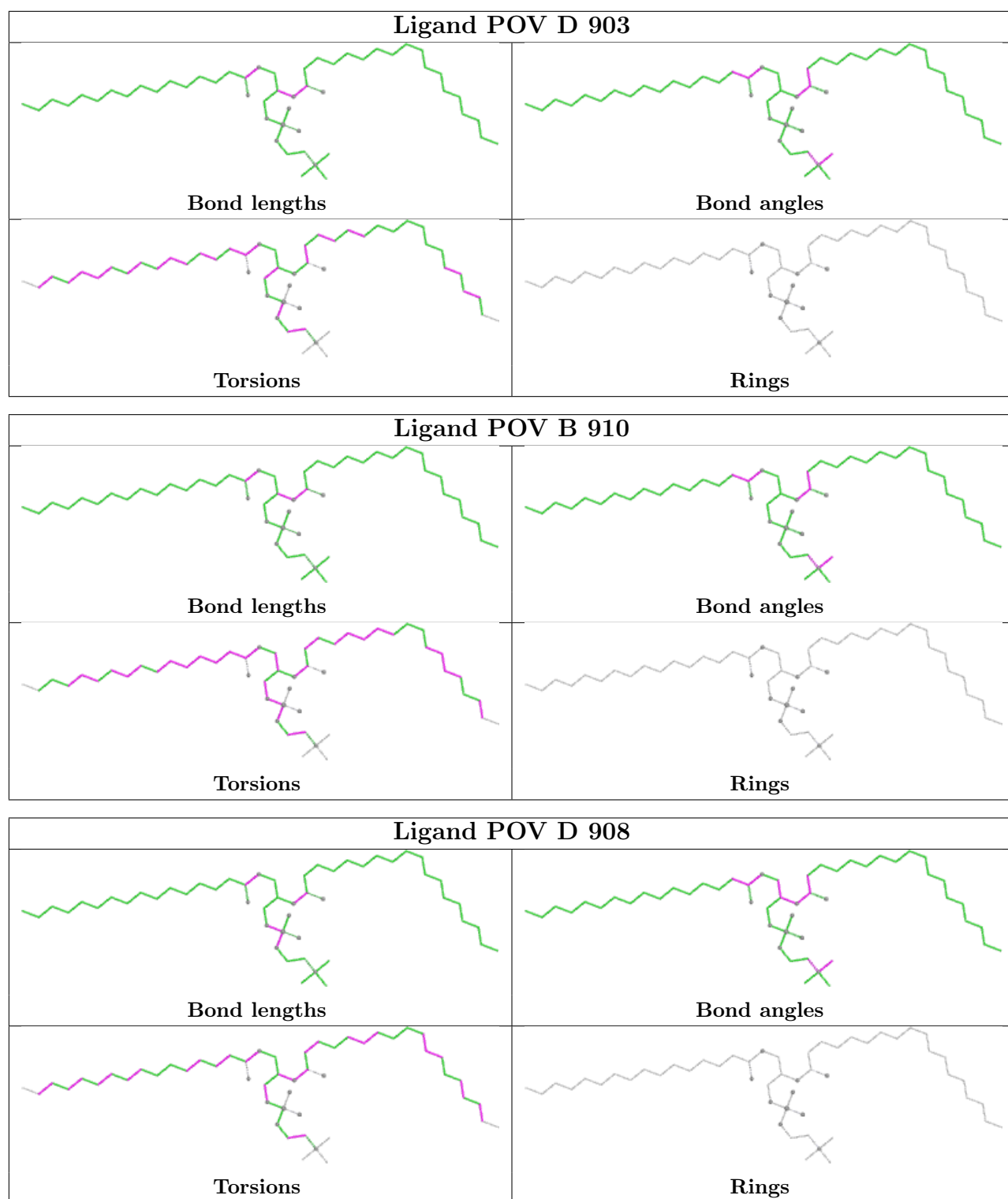


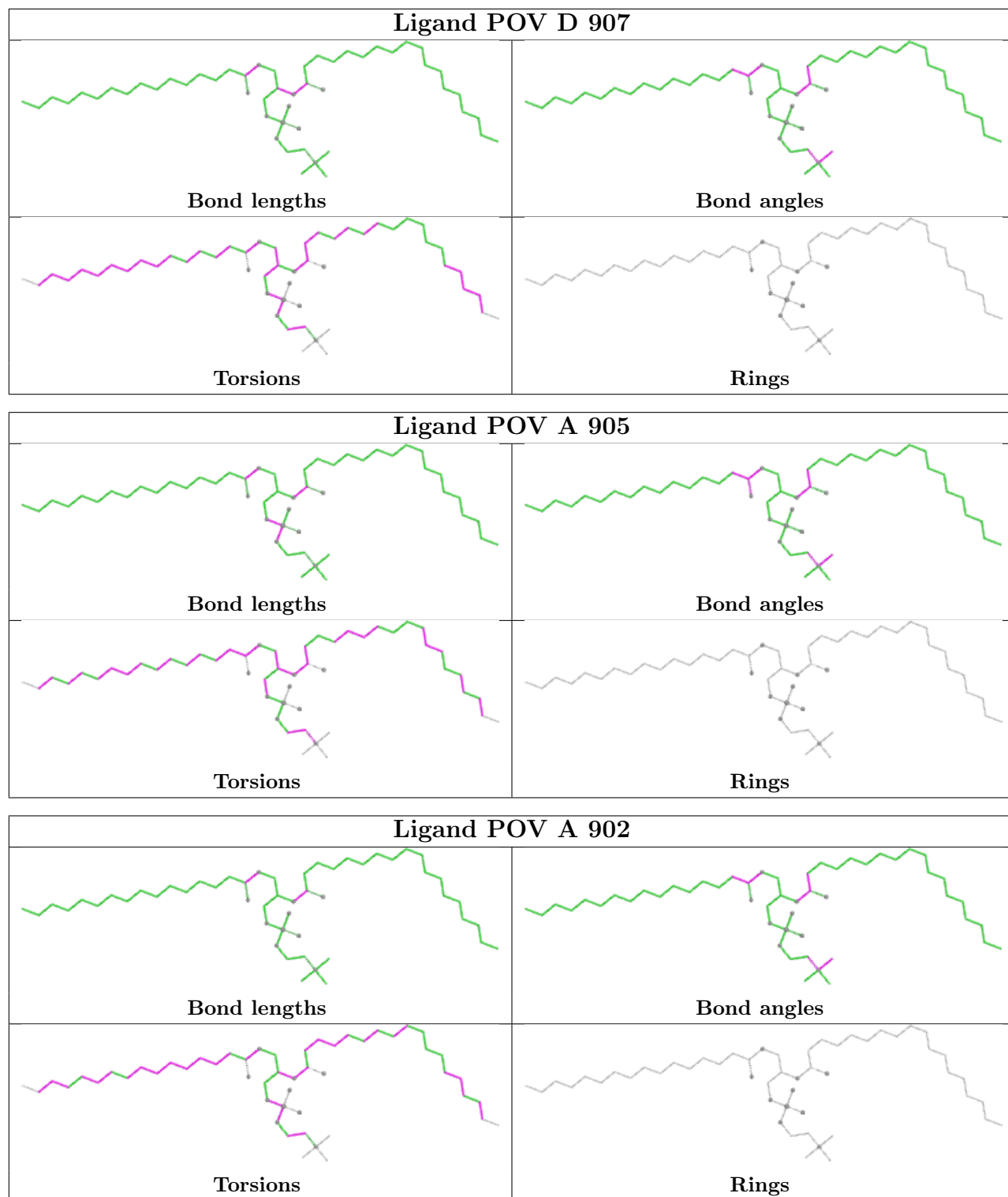


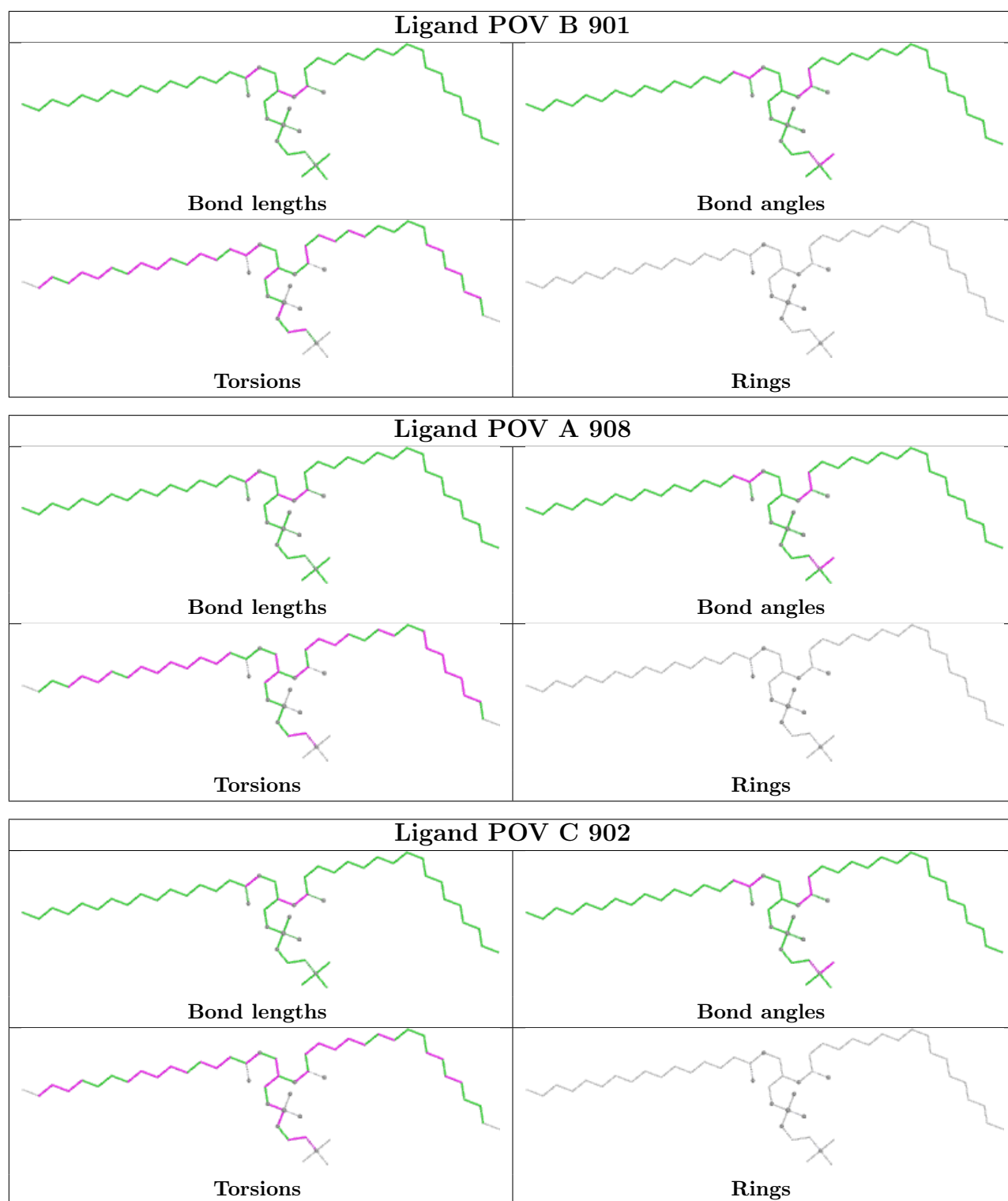


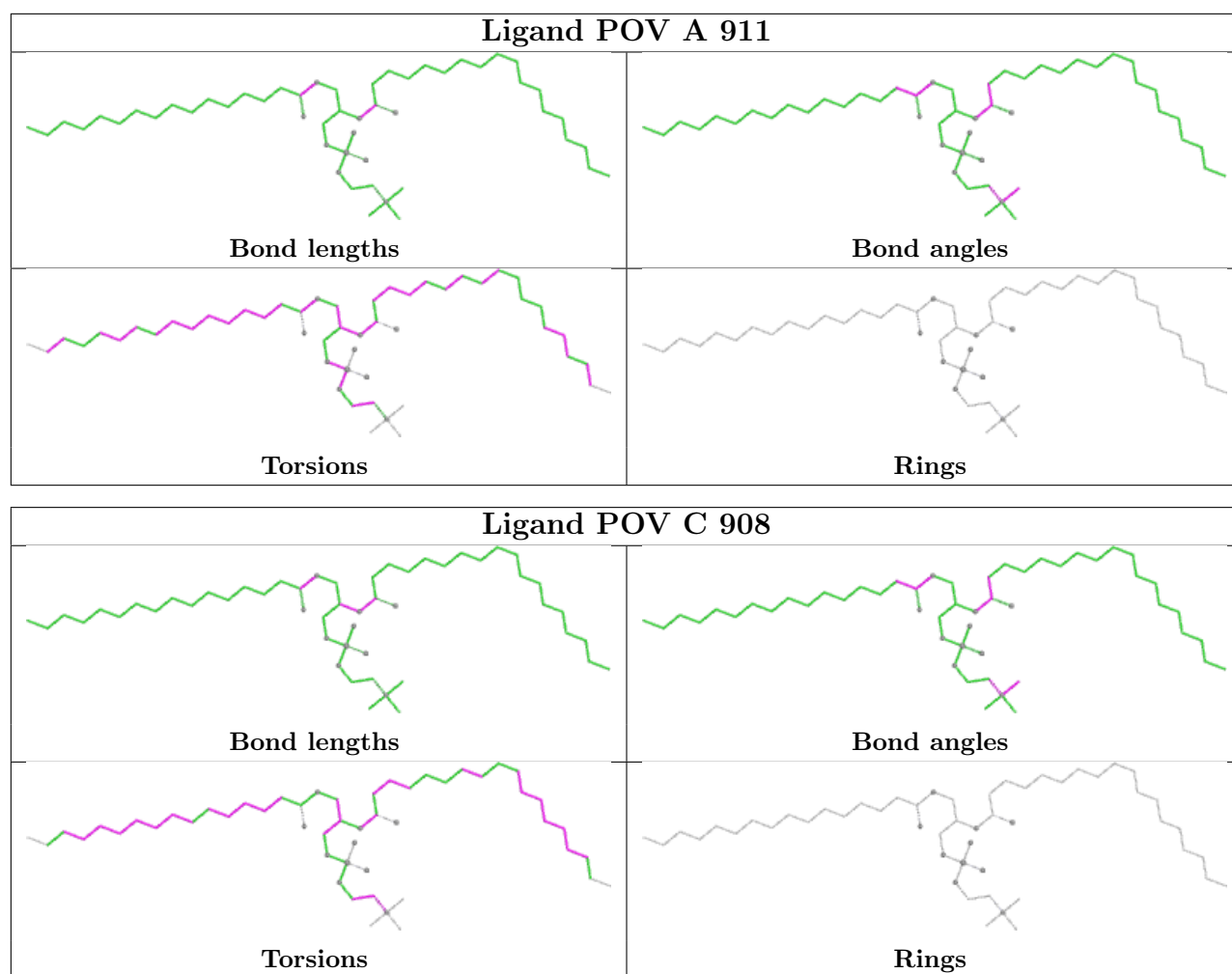












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

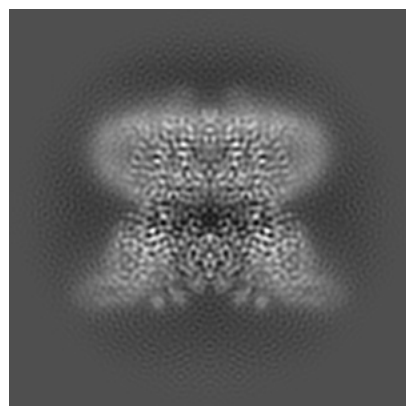
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-42998. These allow visual inspection of the internal detail of the map and identification of artifacts.

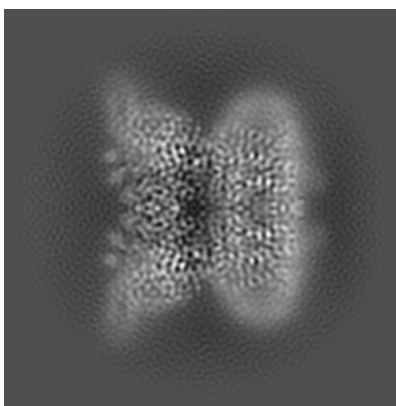
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

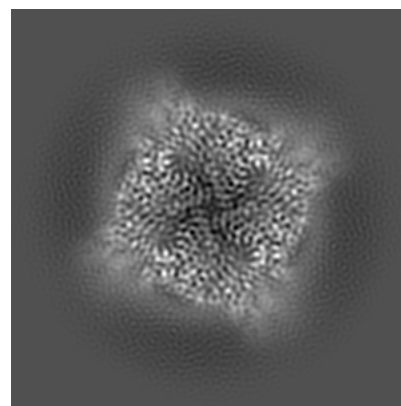
6.1.1 Primary map



X

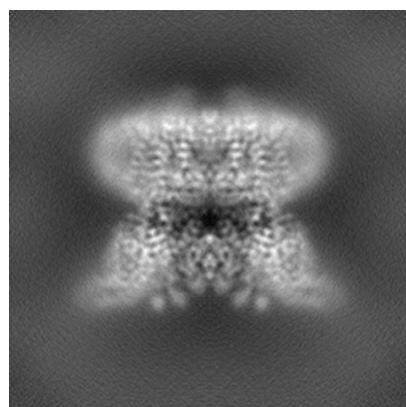


Y

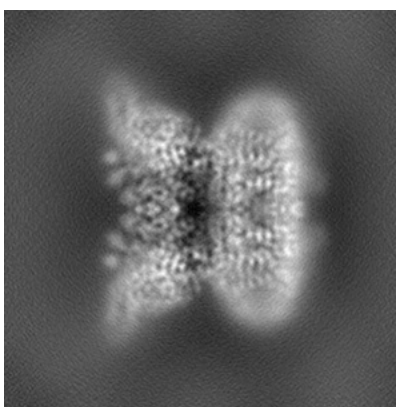


Z

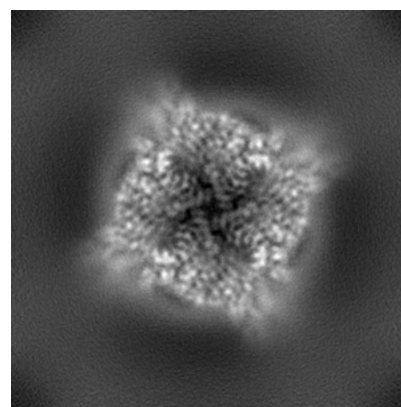
6.1.2 Raw map



X



Y

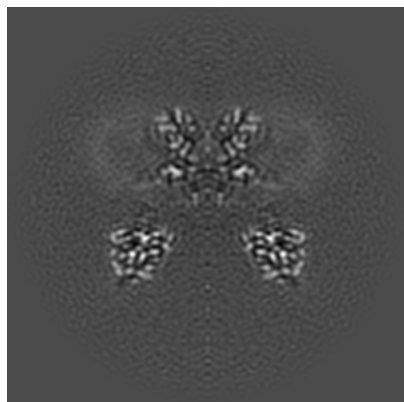


Z

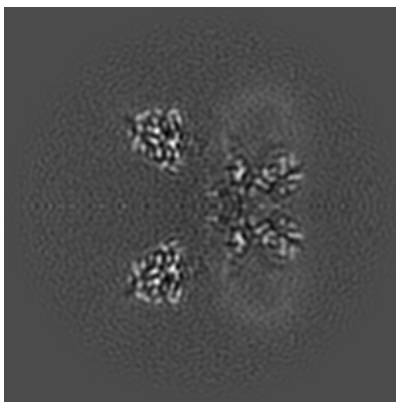
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

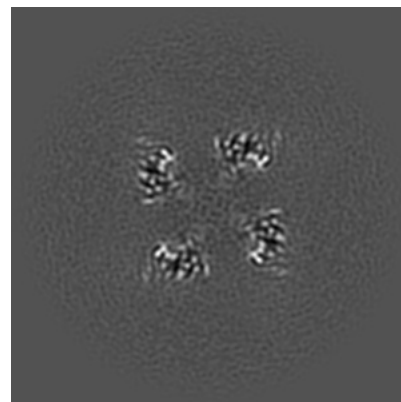
6.2.1 Primary map



X Index: 128

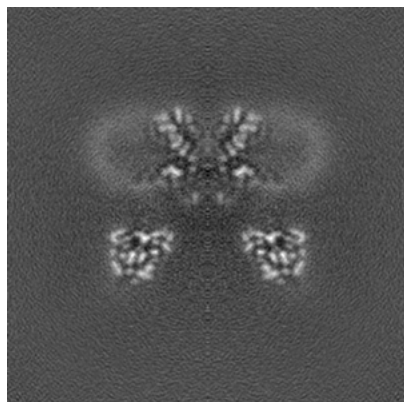


Y Index: 128

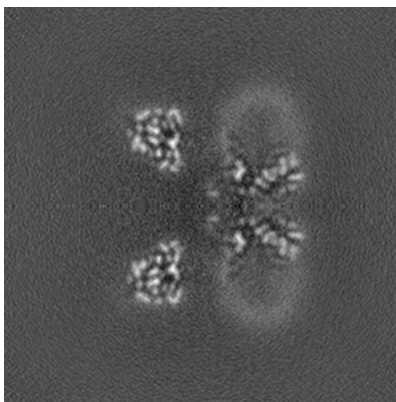


Z Index: 128

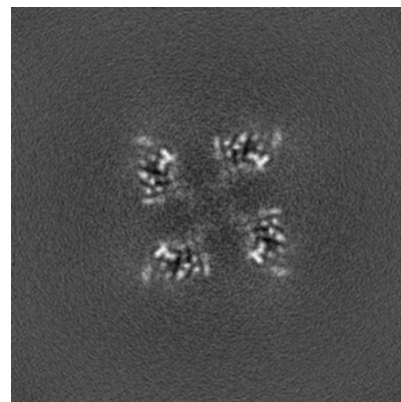
6.2.2 Raw map



X Index: 128



Y Index: 128

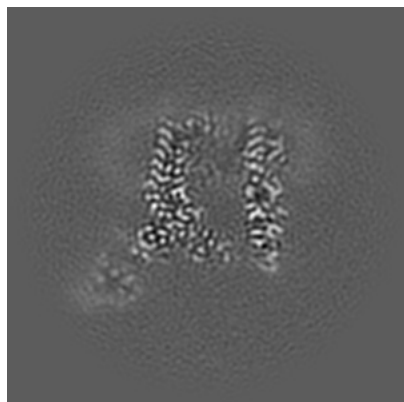


Z Index: 128

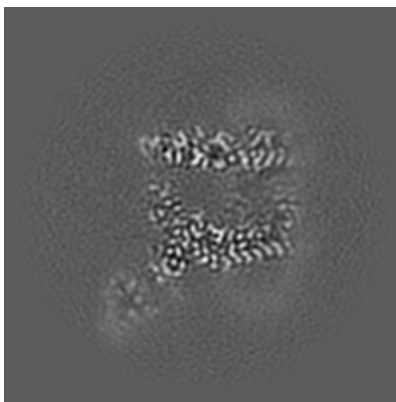
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

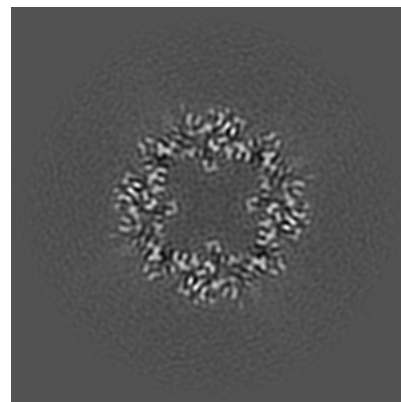
6.3.1 Primary map



X Index: 158

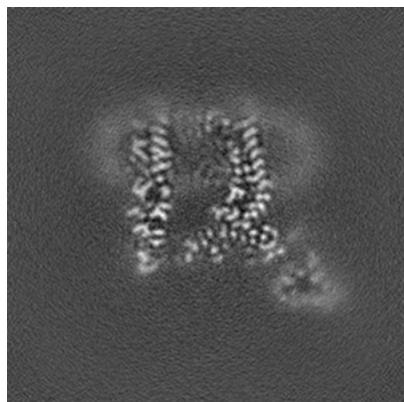


Y Index: 98

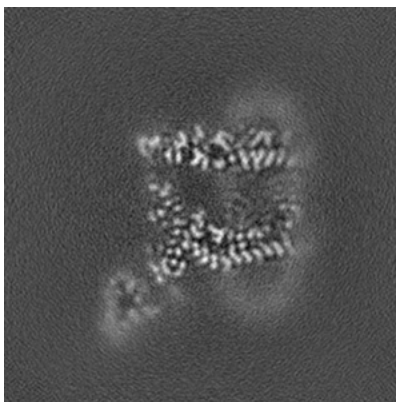


Z Index: 108

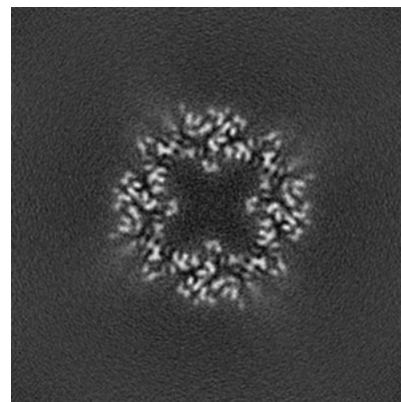
6.3.2 Raw map



X Index: 98



Y Index: 98

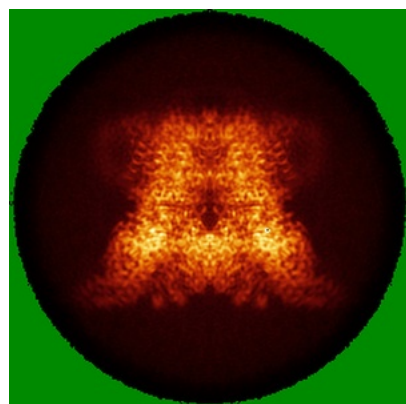


Z Index: 108

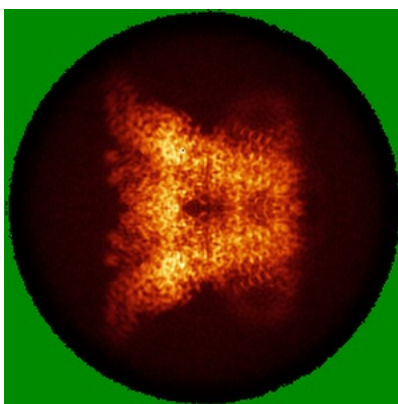
The images above show the largest variance slices of the map in three orthogonal directions.

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

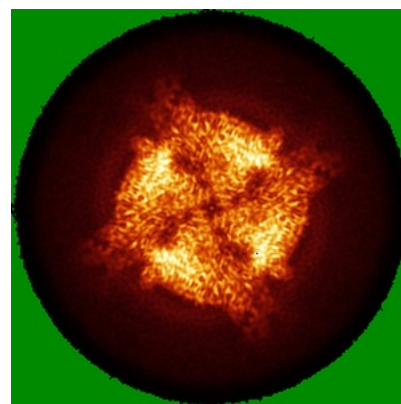
6.4.1 Primary map



X

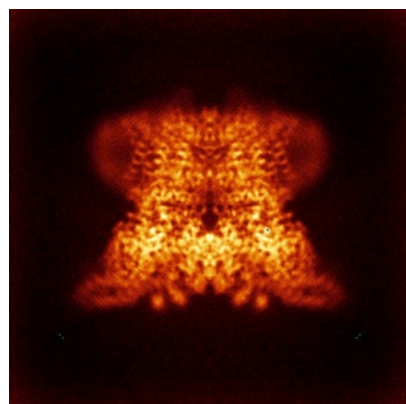


Y

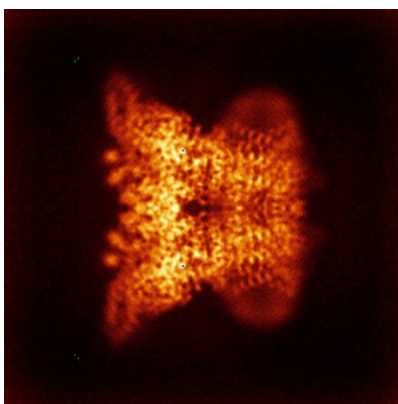


Z

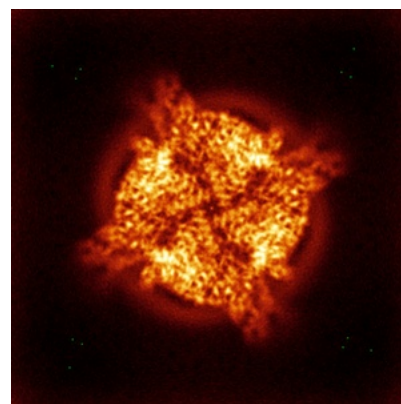
6.4.2 Raw map



X



Y

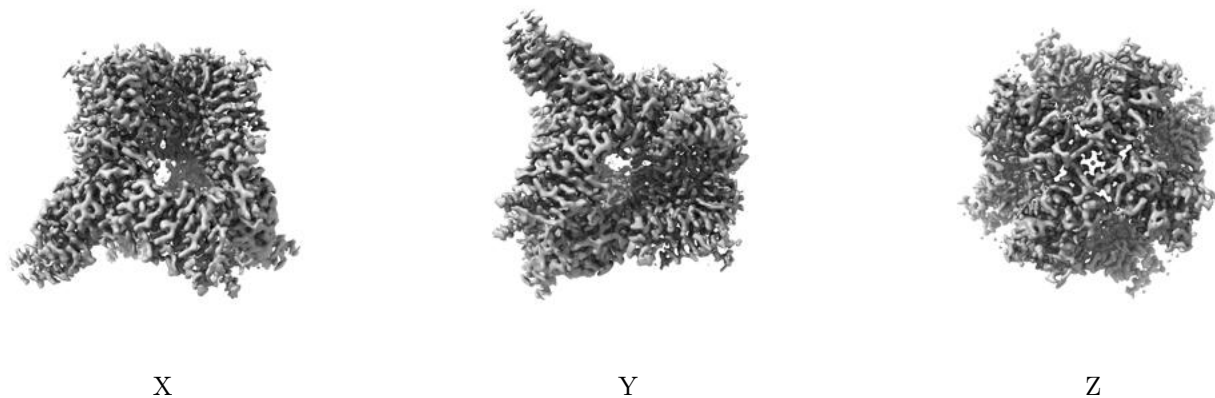


Z

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.

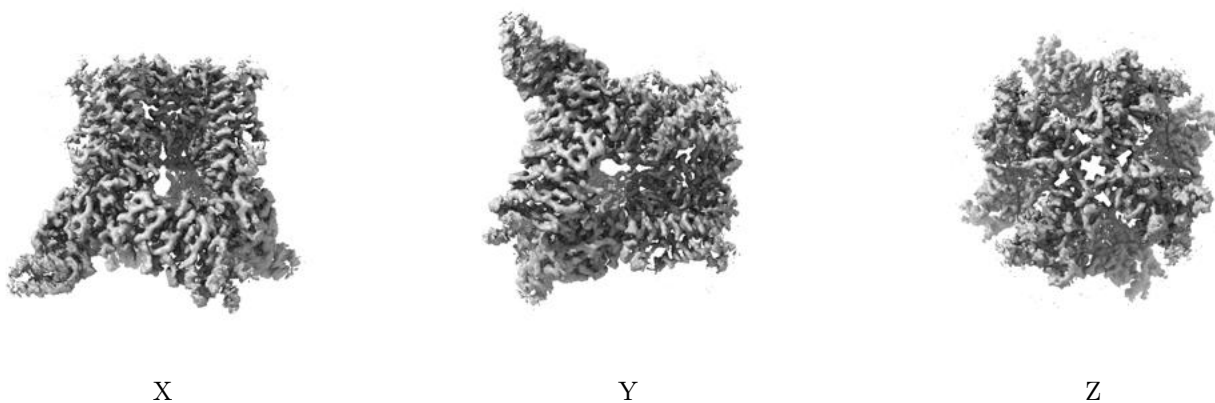
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.182. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

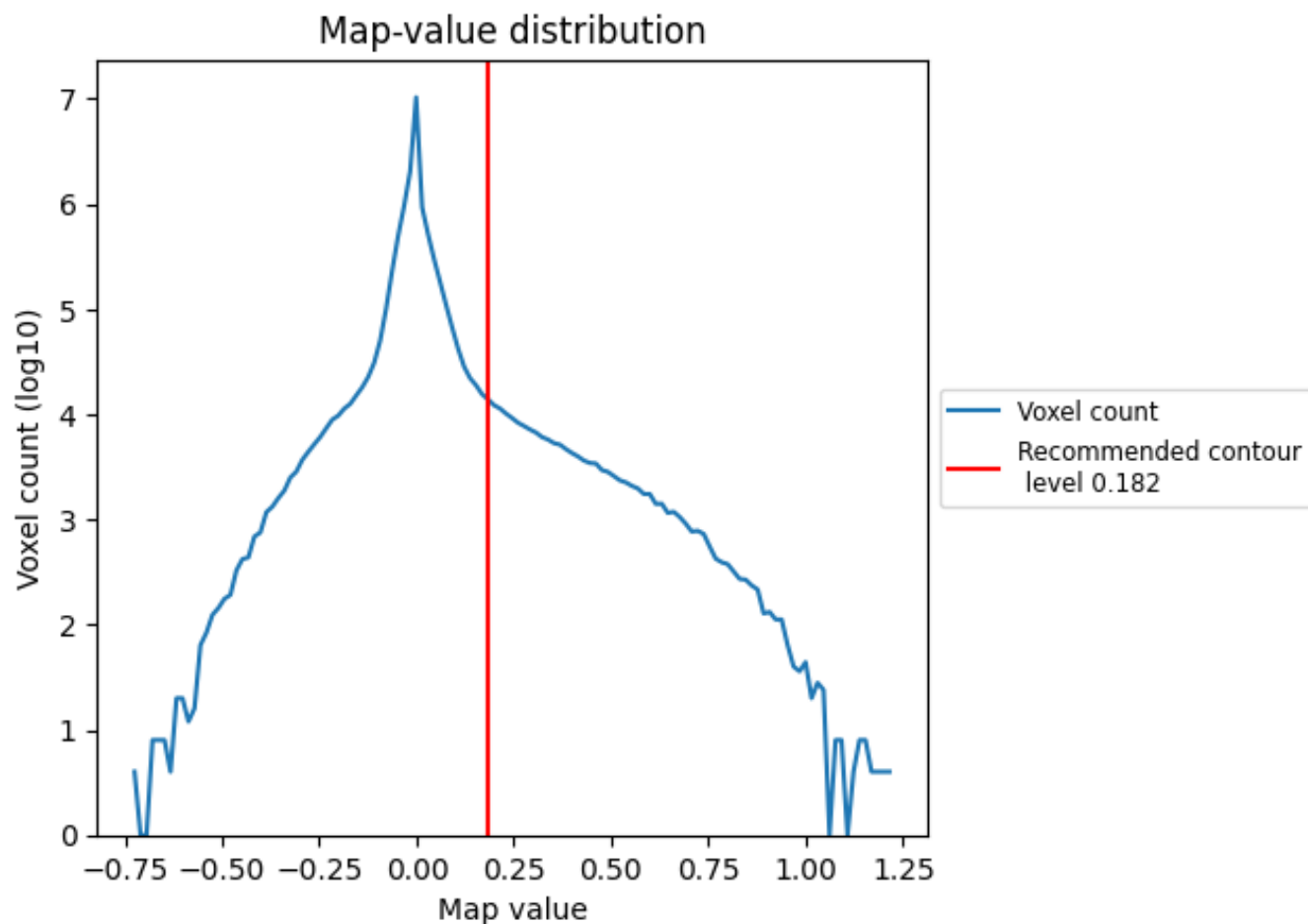
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

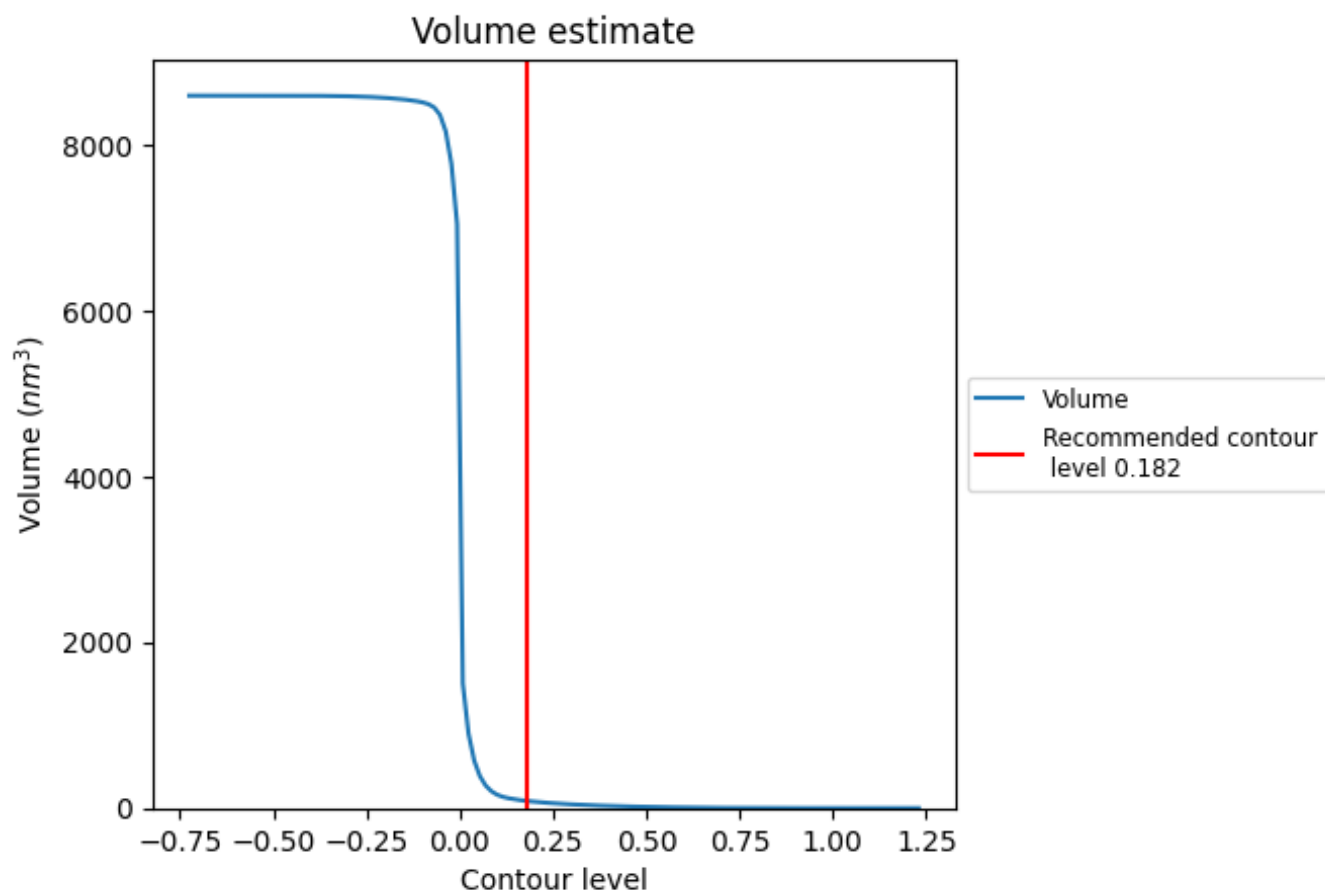
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

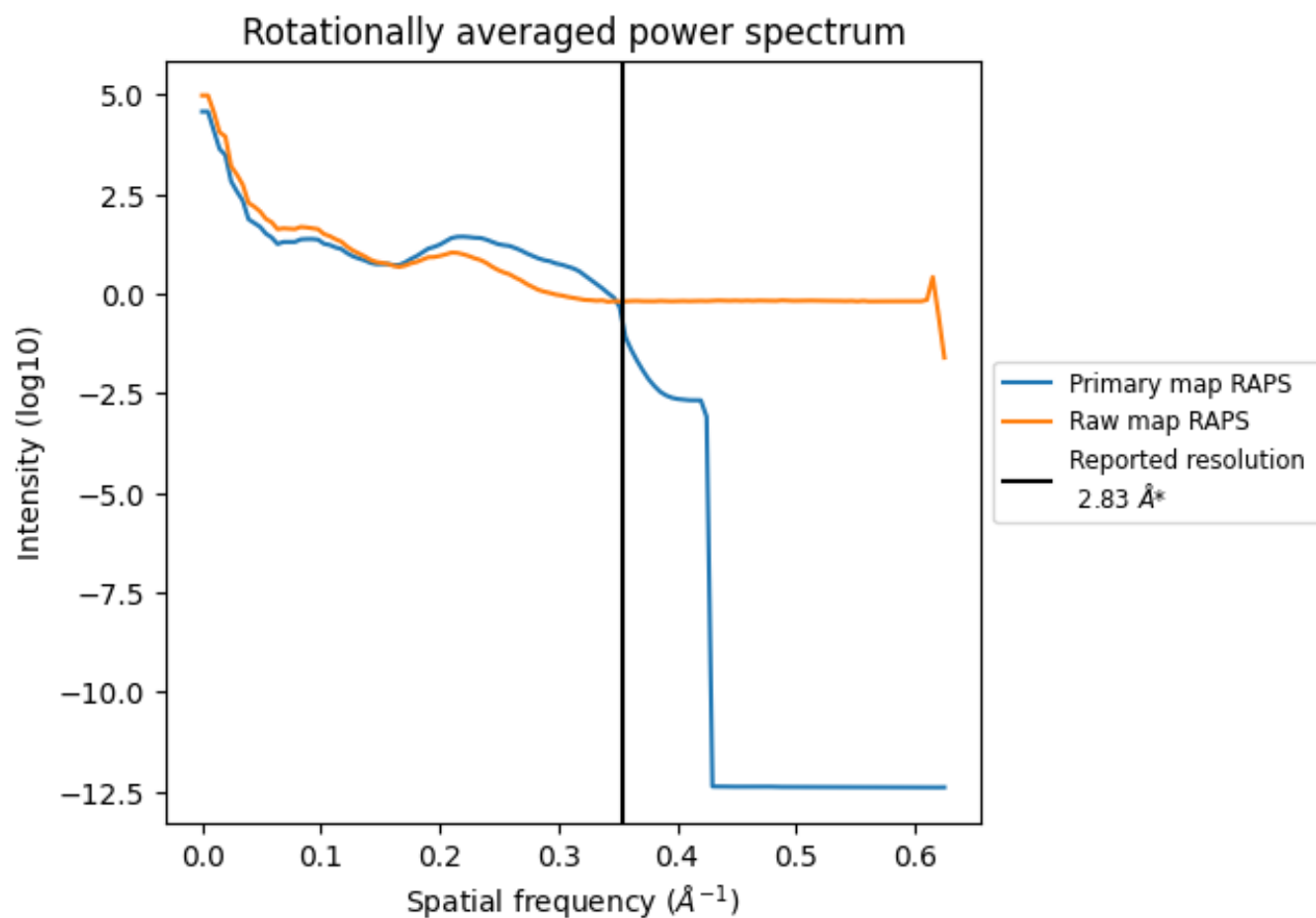
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 86 nm³; this corresponds to an approximate mass of 78 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 ⓘ

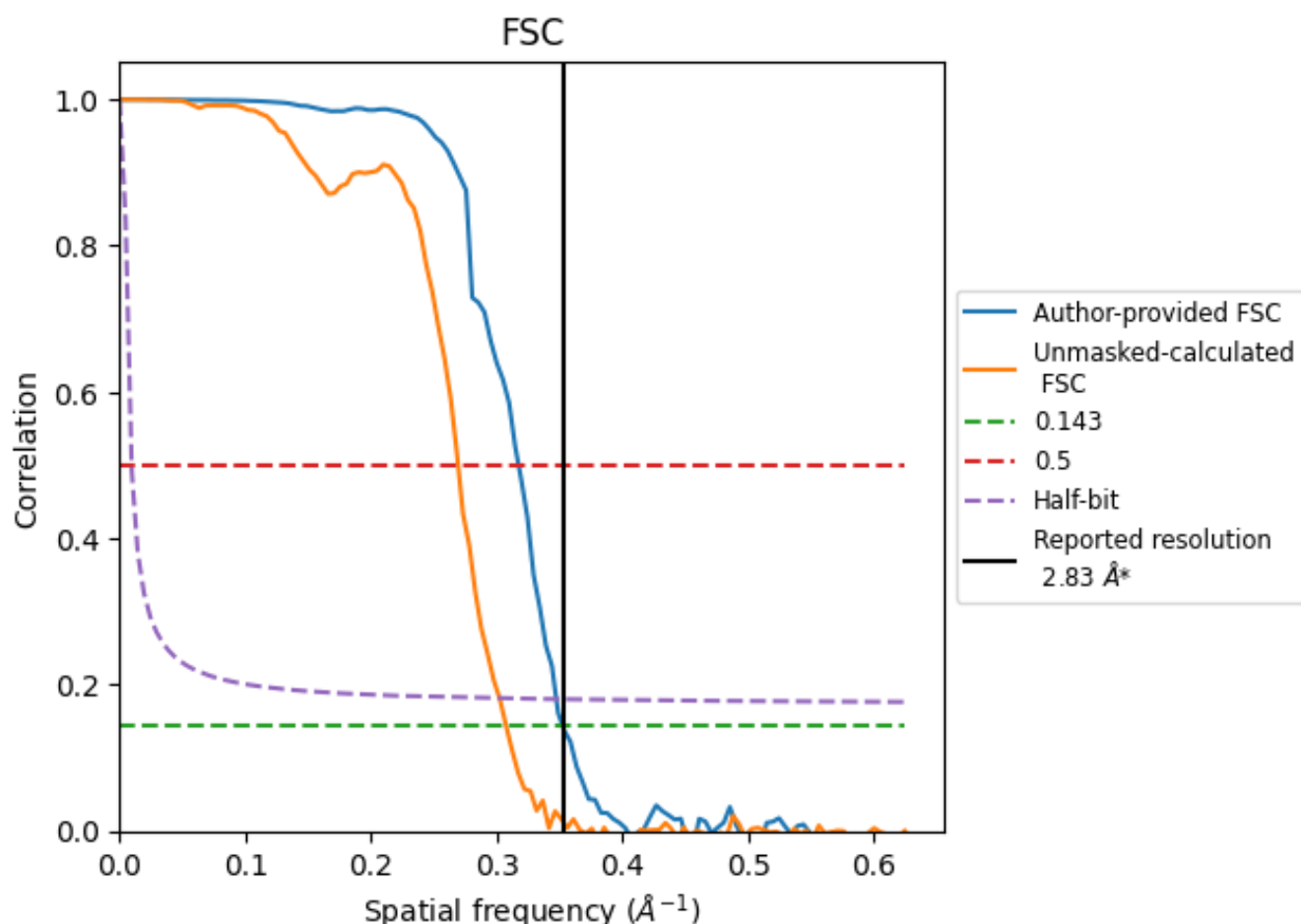


*Reported resolution corresponds to spatial frequency of 0.353 Å⁻¹

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 $0.353 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

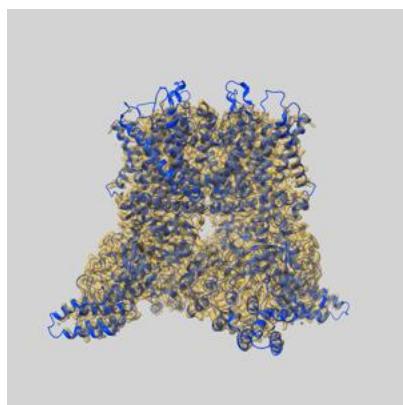
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.83	-	-
Author-provided FSC curve	2.83	3.15	2.88
Unmasked-calculated*	3.25	3.71	3.30

*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 3.25 differs from the reported value 2.83 by more than 10 %

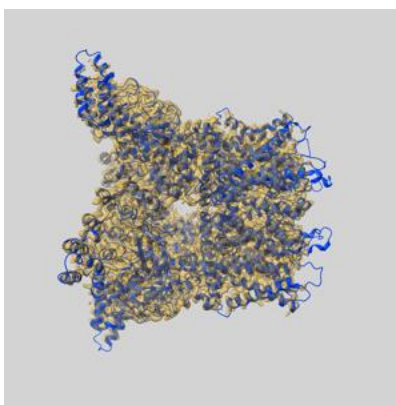
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-42998 and PDB model 8V6O. Per-residue inclusion information can be found in section [3](#) on page [9](#).

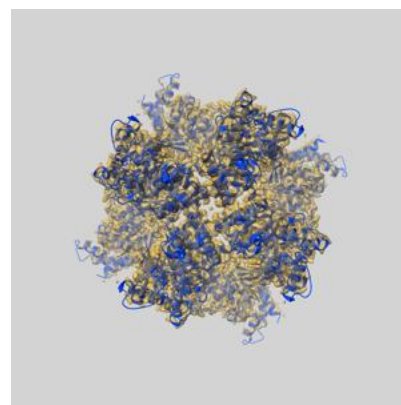
9.1 Map-model overlay [i](#)



X



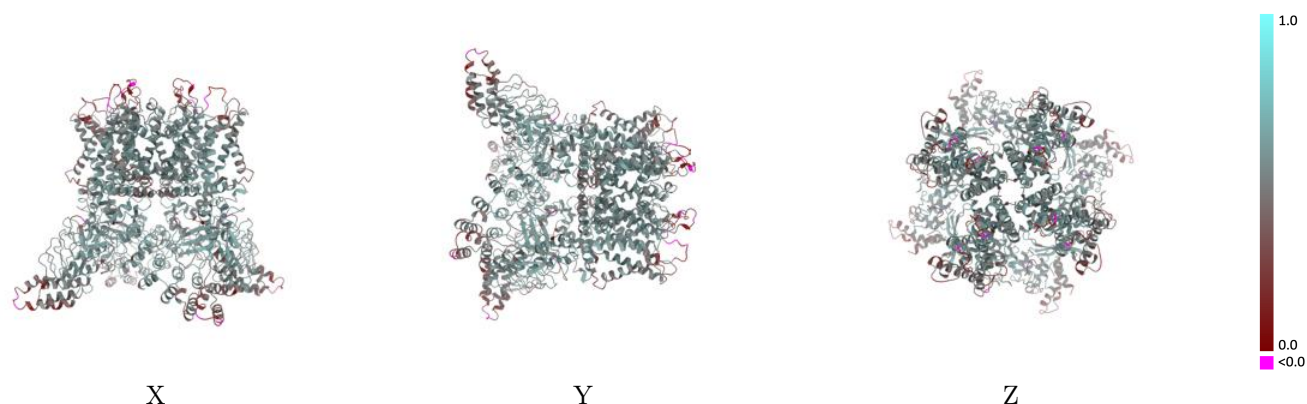
Y



Z

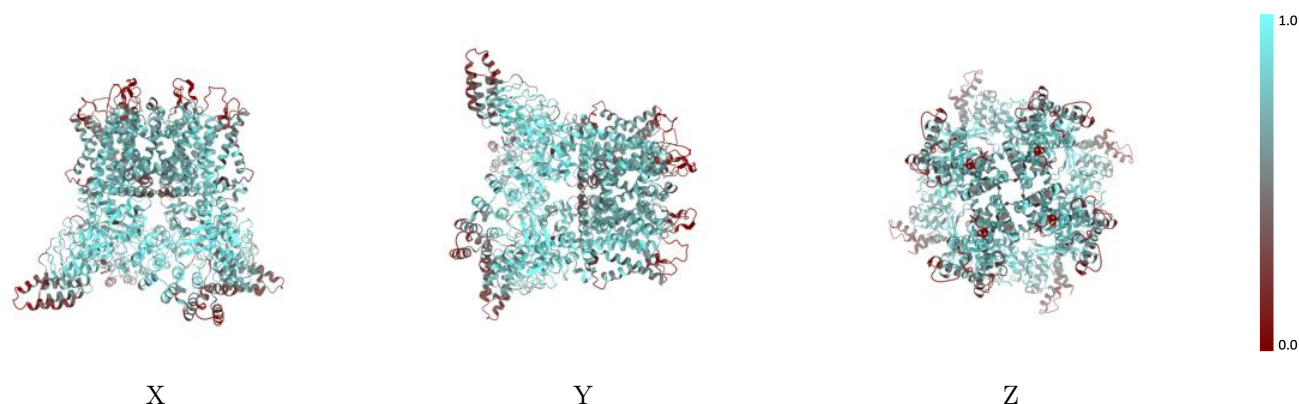
The images above show the 3D surface view of the map at the recommended contour level 0.182 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



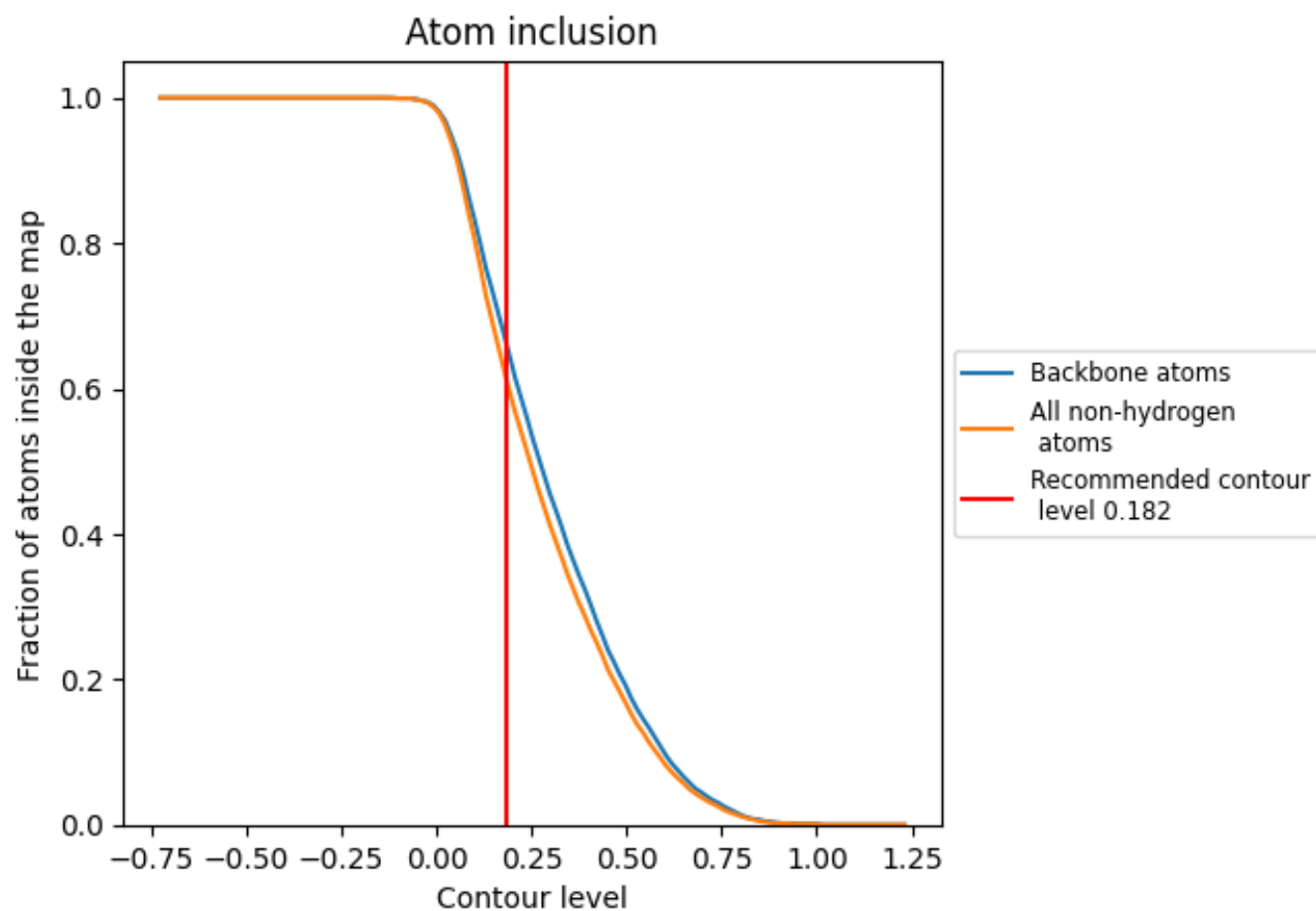
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.182).

9.4 Atom inclusion [i](#)



At the recommended contour level, 67% of all backbone atoms, 62% 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 (0.182) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6170	0.4990
A	0.6180	0.4950
B	0.6200	0.4960
C	0.6260	0.4980
D	0.6240	0.5070

