Full wwPDB EM Validation Report ⓘ

Jun 15, 2026 – 01:07 am BST

PDB ID	:	9S3T / pdb_00009s3t
EMDB ID	:	EMD-54551
Title	:	Gephyrin dimer of dimers - combined CryoEM map
Authors	:	Ortiz-Lopez, D.; Hove, T.; Boettcher, B.; Schindelin, H.
Deposited on	:	2025-07-25
Resolution	:	3.48 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:

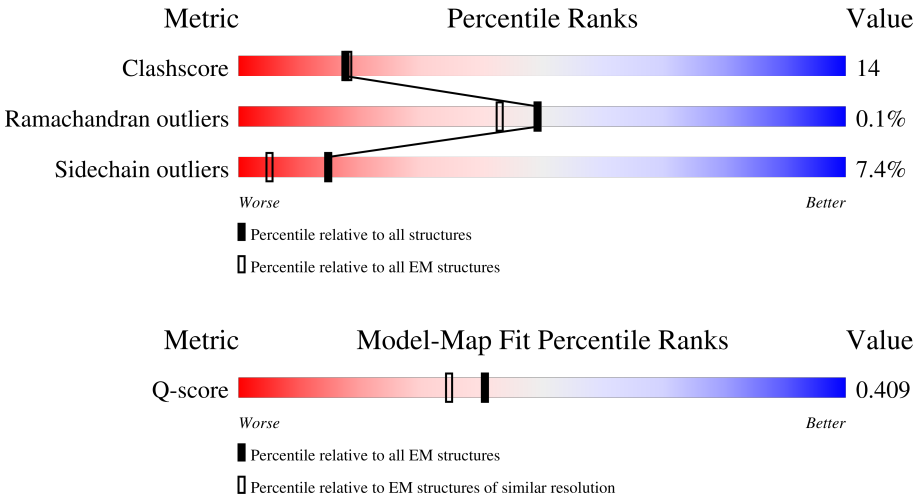
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

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 3.48 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	13672 (2.98 - 3.98)

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 <=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	754	6% 39% 16% • 45%
1	B	754	5% 36% 18% • 45%
1	C	754	• 35% 19% • 45%
1	D	754	• 36% 18% • 45%

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 12748 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 Isoform 5 of Gephyrin.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	418	Total 3187	C 2007	N 553	O 607	S 20	0	0
1	B	418	Total 3187	C 2007	N 553	O 607	S 20	0	0
1	C	418	Total 3187	C 2007	N 553	O 607	S 20	0	0
1	D	418	Total 3187	C 2007	N 553	O 607	S 20	0	0

There are 72 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-17	MET	-	initiating methionine	UNP Q03555
A	-16	ALA	-	expression tag	UNP Q03555
A	-15	HIS	-	expression tag	UNP Q03555
A	-14	HIS	-	expression tag	UNP Q03555
A	-13	HIS	-	expression tag	UNP Q03555
A	-12	HIS	-	expression tag	UNP Q03555
A	-11	HIS	-	expression tag	UNP Q03555
A	-10	HIS	-	expression tag	UNP Q03555
A	-9	GLY	-	expression tag	UNP Q03555
A	-8	GLY	-	expression tag	UNP Q03555
A	-7	SER	-	expression tag	UNP Q03555
A	-6	SER	-	expression tag	UNP Q03555
A	-5	GLY	-	expression tag	UNP Q03555
A	-4	GLY	-	expression tag	UNP Q03555
A	-3	SER	-	expression tag	UNP Q03555
A	-2	SER	-	expression tag	UNP Q03555
A	-1	GLU	-	expression tag	UNP Q03555
A	0	PHE	-	expression tag	UNP Q03555
B	-17	MET	-	initiating methionine	UNP Q03555
B	-16	ALA	-	expression tag	UNP Q03555
B	-15	HIS	-	expression tag	UNP Q03555
B	-14	HIS	-	expression tag	UNP Q03555

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Chain	Residue	Modelled	Actual	Comment	Reference
B	-13	HIS	-	expression tag	UNP Q03555
B	-12	HIS	-	expression tag	UNP Q03555
B	-11	HIS	-	expression tag	UNP Q03555
B	-10	HIS	-	expression tag	UNP Q03555
B	-9	GLY	-	expression tag	UNP Q03555
B	-8	GLY	-	expression tag	UNP Q03555
B	-7	SER	-	expression tag	UNP Q03555
B	-6	SER	-	expression tag	UNP Q03555
B	-5	GLY	-	expression tag	UNP Q03555
B	-4	GLY	-	expression tag	UNP Q03555
B	-3	SER	-	expression tag	UNP Q03555
B	-2	SER	-	expression tag	UNP Q03555
B	-1	GLU	-	expression tag	UNP Q03555
B	0	PHE	-	expression tag	UNP Q03555
C	-17	MET	-	initiating methionine	UNP Q03555
C	-16	ALA	-	expression tag	UNP Q03555
C	-15	HIS	-	expression tag	UNP Q03555
C	-14	HIS	-	expression tag	UNP Q03555
C	-13	HIS	-	expression tag	UNP Q03555
C	-12	HIS	-	expression tag	UNP Q03555
C	-11	HIS	-	expression tag	UNP Q03555
C	-10	HIS	-	expression tag	UNP Q03555
C	-9	GLY	-	expression tag	UNP Q03555
C	-8	GLY	-	expression tag	UNP Q03555
C	-7	SER	-	expression tag	UNP Q03555
C	-6	SER	-	expression tag	UNP Q03555
C	-5	GLY	-	expression tag	UNP Q03555
C	-4	GLY	-	expression tag	UNP Q03555
C	-3	SER	-	expression tag	UNP Q03555
C	-2	SER	-	expression tag	UNP Q03555
C	-1	GLU	-	expression tag	UNP Q03555
C	0	PHE	-	expression tag	UNP Q03555
D	-17	MET	-	initiating methionine	UNP Q03555
D	-16	ALA	-	expression tag	UNP Q03555
D	-15	HIS	-	expression tag	UNP Q03555
D	-14	HIS	-	expression tag	UNP Q03555
D	-13	HIS	-	expression tag	UNP Q03555
D	-12	HIS	-	expression tag	UNP Q03555
D	-11	HIS	-	expression tag	UNP Q03555
D	-10	HIS	-	expression tag	UNP Q03555
D	-9	GLY	-	expression tag	UNP Q03555
D	-8	GLY	-	expression tag	UNP Q03555

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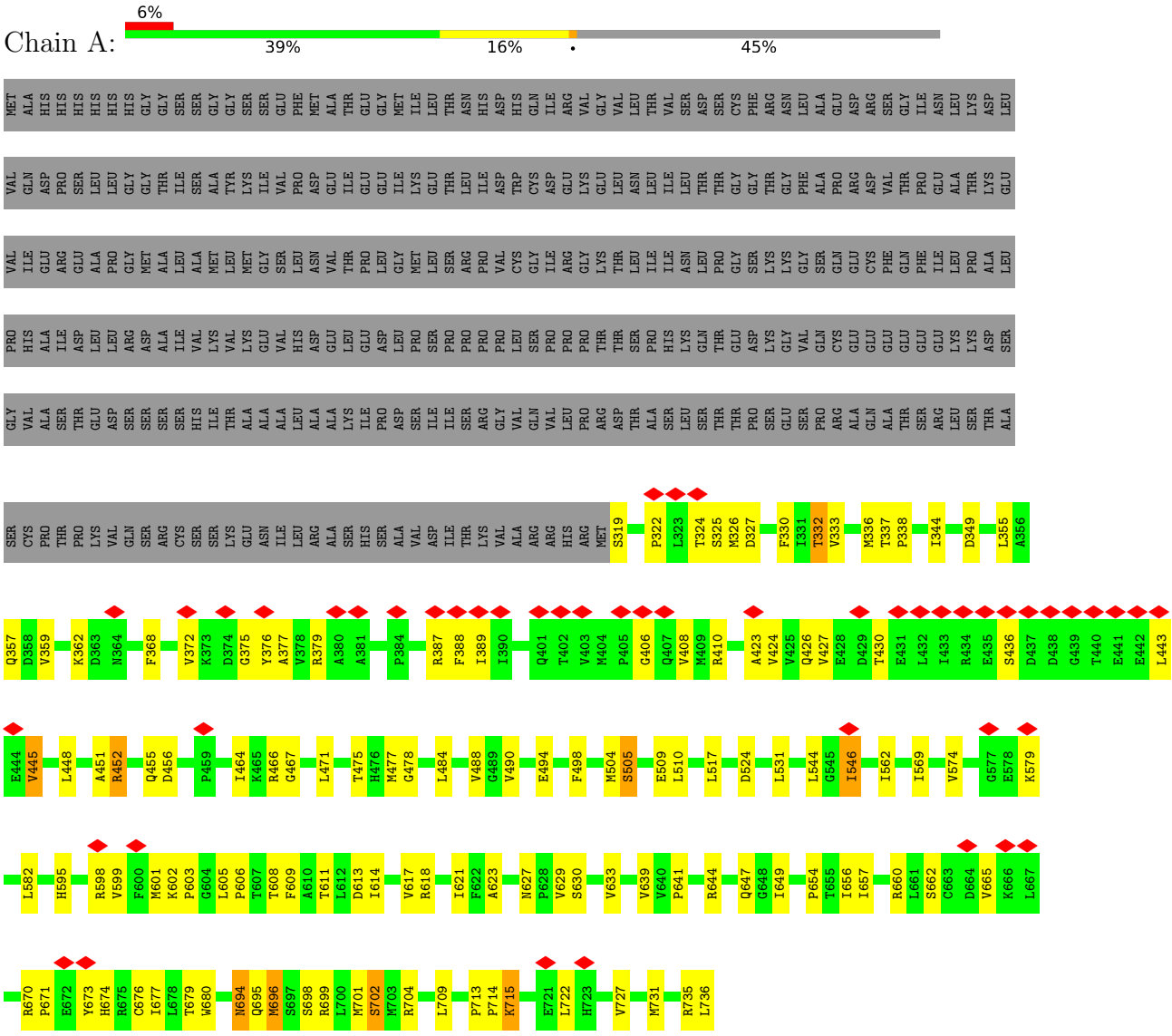
Chain	Residue	Modelled	Actual	Comment	Reference
D	-7	SER	-	expression tag	UNP Q03555
D	-6	SER	-	expression tag	UNP Q03555
D	-5	GLY	-	expression tag	UNP Q03555
D	-4	GLY	-	expression tag	UNP Q03555
D	-3	SER	-	expression tag	UNP Q03555
D	-2	SER	-	expression tag	UNP Q03555
D	-1	GLU	-	expression tag	UNP Q03555
D	0	PHE	-	expression tag	UNP Q03555

3 Residue-property plots (i)

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.

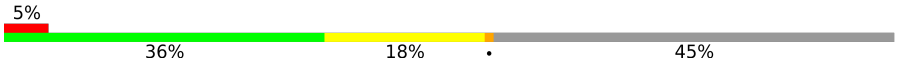
• Molecule 1: Isoform 5 of Gephyrin

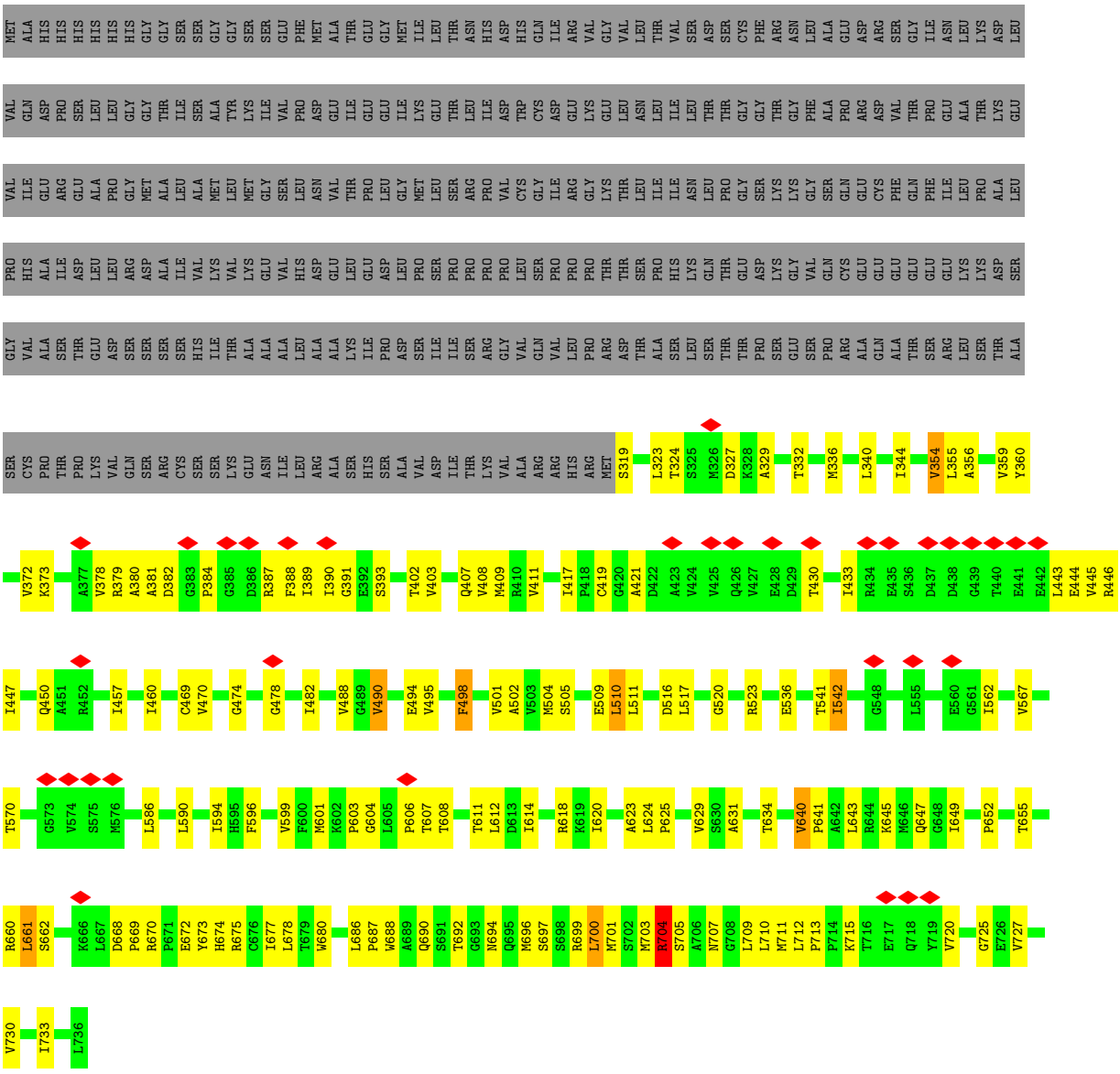
Chain A:



• Molecule 1: Isoform 5 of Gephyrin

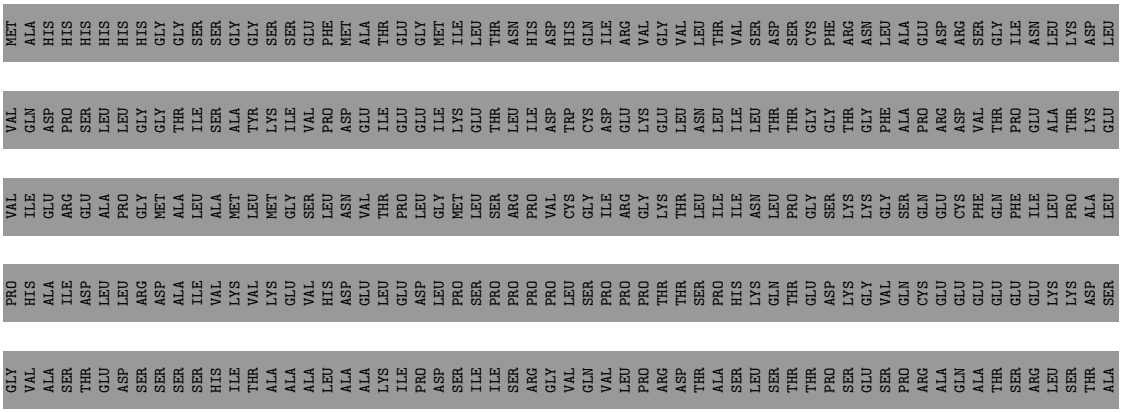
Chain B:

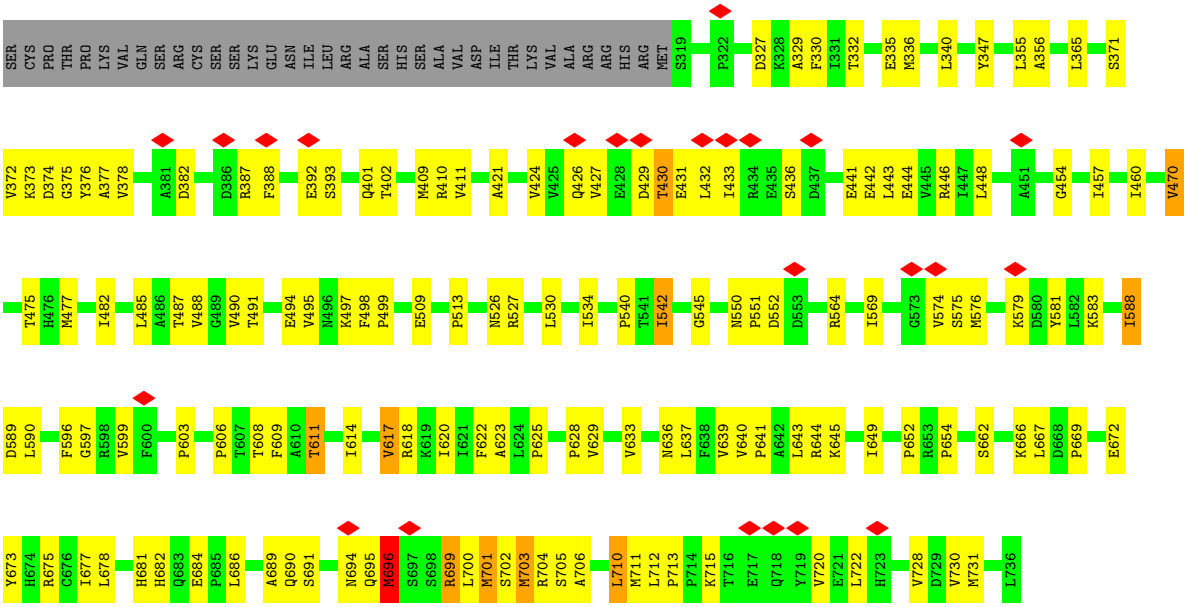


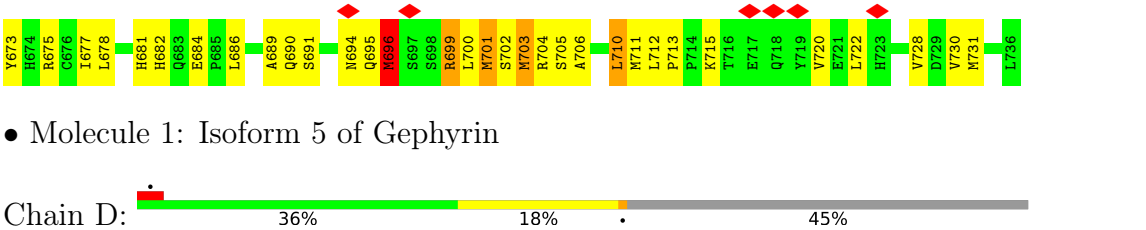


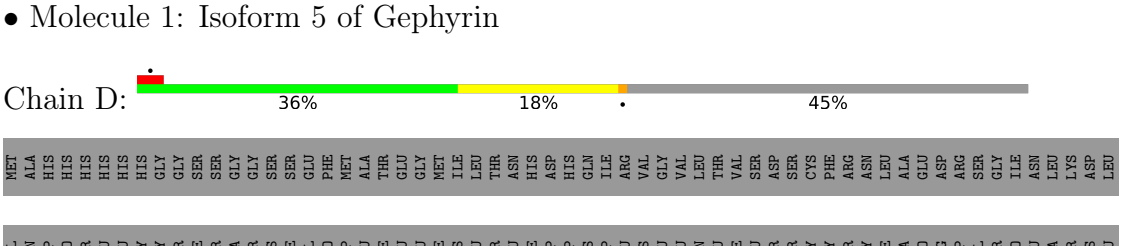
• Molecule 1: Isoform 5 of Gephyrin

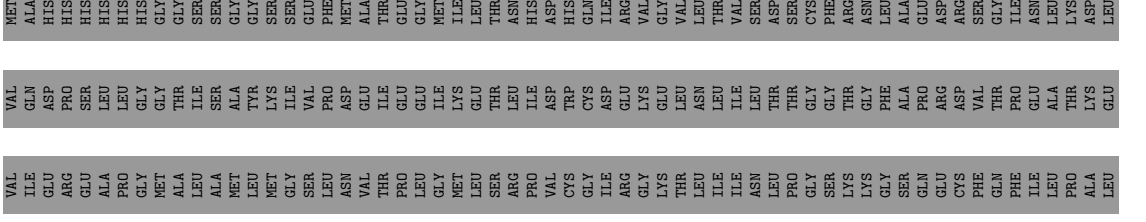
Chain C:

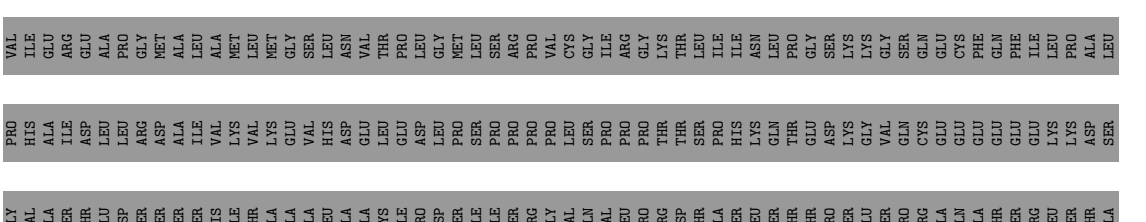


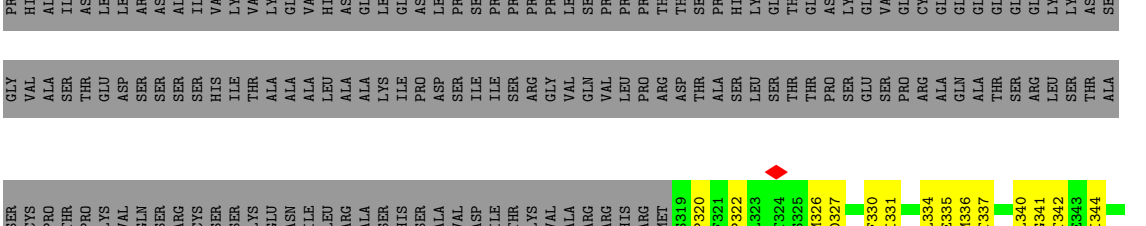


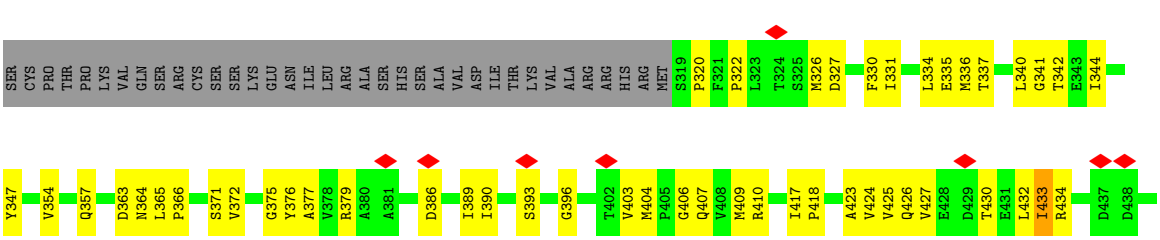


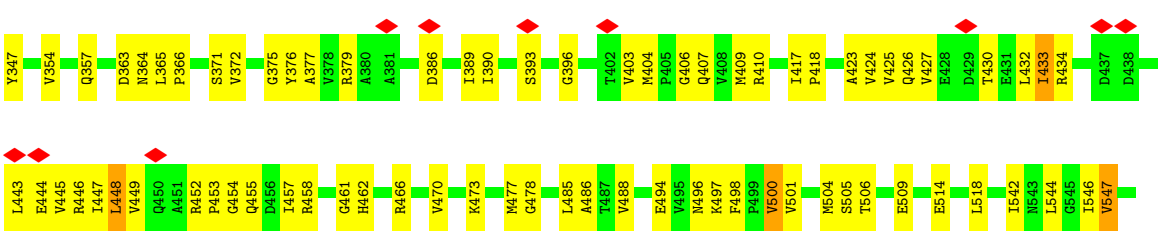


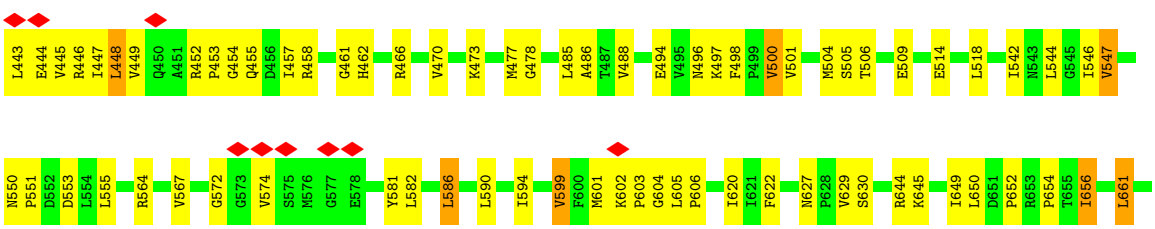


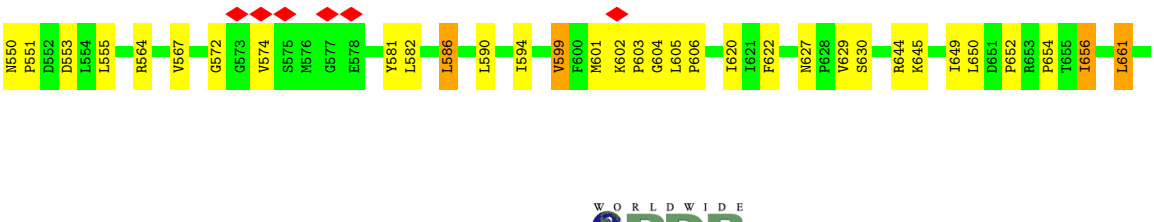






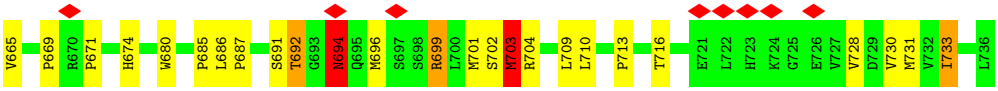






• Molecule 1: Isoform 5 of Gephyrin

Chain D:


V665
P669
R670
P671
H674
W680
P685
L686
P687
S691
T692
G693
N694
Q695
M696
S697
S698
R699
L700
M701
S702
M703
R704
L709
L710
P713
T716
E721
L722
H723
K724
G725
E726
V727
V728
D729
V730
M731
V732
I733
L736

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	283182	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	42.6	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	53.098	Depositor
Minimum map value	-25.855	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	1.000	Depositor
Recommended contour level	6.7	Depositor
Map size (Å)	337.91998, 337.91998, 337.91998	wwPDB
Map dimensions	240, 240, 240	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.4079999, 1.4079999, 1.4079999	Depositor

5 Model quality

5.1 Standard geometry

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	0.23	0/3248	0.42	1/4417 (0.0%)
1	B	0.23	0/3248	0.45	0/4417
1	C	0.25	0/3248	0.49	2/4417 (0.0%)
1	D	0.24	0/3248	0.48	2/4417 (0.0%)
All	All	0.24	0/12992	0.46	5/17668 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
1	B	0	1
1	D	0	1
All	All	0	3

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	D	692	THR	N-CA-C	-8.26	102.28	111.28
1	C	703	MET	N-CA-C	-6.33	104.09	113.72
1	C	696	MET	N-CA-C	-6.33	105.13	112.92
1	A	694	ASN	N-CA-C	-5.52	105.27	111.28
1	D	694	ASN	N-CA-C	-5.09	105.74	111.28

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	699	ARG	Sidechain

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Mol	Chain	Res	Type	Group
1	B	704	ARG	Sidechain
1	D	699	ARG	Sidechain

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	3187	0	3226	79	0
1	B	3187	0	3226	93	0
1	C	3187	0	3226	100	0
1	D	3187	0	3226	90	0
All	All	12748	0	12904	347	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 14.

All (347) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:699:ARG:NH1	1:B:701:MET:HG3	1.49	1.25
1:B:699:ARG:NH1	1:B:701:MET:CG	2.12	1.12
1:B:699:ARG:HH11	1:B:701:MET:HG3	1.19	0.94
1:A:375:GLY:HA2	1:A:427:VAL:HG23	1.58	0.86
1:A:674:HIS:CE1	1:A:695:GLN:HA	2.12	0.84
1:A:319:SER:HB2	1:A:713:PRO:HB3	1.64	0.80
1:B:697:SER:HB3	1:B:700:LEU:HD23	1.63	0.78
1:B:640:VAL:HG23	1:B:641:PRO:HD3	1.66	0.78
1:A:629:VAL:HB	1:A:696:MET:HB3	1.66	0.78
1:D:504:MET:HB3	1:D:544:LEU:HB2	1.65	0.77
1:D:702:SER:O	1:D:704:ARG:N	2.20	0.75
1:B:699:ARG:HH11	1:B:701:MET:CG	1.88	0.74
1:C:715:LYS:HG3	1:C:720:VAL:HA	1.69	0.73
1:D:433:ILE:HG23	1:D:446:ARG:HH21	1.54	0.73
1:C:678:LEU:HD23	1:C:689:ALA:HB2	1.68	0.73
1:C:336:MET:HE3	1:C:618:ARG:HH12	1.52	0.73
1:D:376:TYR:HB3	1:D:410:ARG:HD2	1.69	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:660:ARG:HA	1:A:727:VAL:HA	1.71	0.72
1:D:702:SER:C	1:D:704:ARG:H	1.98	0.72
1:B:699:ARG:HH12	1:B:701:MET:HG3	1.54	0.71
1:B:382:ASP:HB3	1:B:387:ARG:HH21	1.56	0.71
1:A:372:VAL:HB	1:A:456:ASP:HB2	1.71	0.71
1:B:677:ILE:HD11	1:B:704:ARG:HB3	1.72	0.70
1:A:475:THR:HA	1:B:703:MET:HB3	1.75	0.69
1:C:722:LEU:HD21	1:C:728:VAL:HG11	1.74	0.69
1:A:641:PRO:HG3	1:A:654:PRO:HD3	1.75	0.69
1:B:336:MET:HE3	1:B:618:ARG:HH12	1.57	0.68
1:C:662:SER:HB3	1:C:690:GLN:HA	1.75	0.68
1:C:436:SER:HB3	1:C:443:LEU:HB2	1.76	0.67
1:B:387:ARG:HB2	1:B:408:VAL:HG12	1.77	0.67
1:C:475:THR:HA	1:D:703:MET:HG3	1.76	0.67
1:C:699:ARG:HD3	1:C:701:MET:SD	2.36	0.66
1:B:662:SER:HB3	1:B:690:GLN:HB3	1.78	0.66
1:A:376:TYR:HA	1:A:410:ARG:HA	1.78	0.66
1:C:392:GLU:HA	1:C:410:ARG:HG2	1.78	0.66
1:B:672:GLU:HB3	1:B:712:LEU:HB3	1.78	0.66
1:A:377:ALA:HA	1:A:424:VAL:HA	1.77	0.65
1:B:677:ILE:HD11	1:B:704:ARG:HE	1.61	0.65
1:C:569:ILE:HG22	1:C:622:PHE:HB2	1.78	0.65
1:D:665:VAL:HG12	1:D:694:ASN:HA	1.77	0.65
1:B:645:LYS:HB2	1:B:652:PRO:HG3	1.78	0.65
1:C:477:MET:HE1	1:C:485:LEU:HD11	1.78	0.64
1:B:604:GLY:HA2	1:B:625:PRO:HG3	1.79	0.64
1:D:327:ASP:HA	1:D:330:PHE:HB3	1.80	0.64
1:A:436:SER:HB3	1:A:443:LEU:H	1.63	0.64
1:B:355:LEU:HA	1:B:495:VAL:HG12	1.79	0.63
1:D:375:GLY:HA3	1:D:426:GLN:HA	1.79	0.63
1:B:509:GLU:HG3	1:B:510:LEU:HD22	1.80	0.63
1:B:504:MET:HB2	1:B:570:THR:HG22	1.81	0.62
1:D:645:LYS:HB2	1:D:652:PRO:HG3	1.79	0.62
1:C:355:LEU:HA	1:C:495:VAL:HG12	1.81	0.62
1:D:434:ARG:HB3	1:D:444:GLU:HB2	1.81	0.62
1:C:667:LEU:HD21	1:C:712:LEU:HB3	1.82	0.61
1:D:375:GLY:HA2	1:D:427:VAL:HG23	1.82	0.61
1:C:645:LYS:HB2	1:C:652:PRO:HG3	1.82	0.61
1:C:609:PHE:HE1	1:C:620:ILE:HG23	1.65	0.61
1:C:488:VAL:HG23	1:C:490:VAL:HG12	1.81	0.61
1:D:434:ARG:HG2	1:D:443:LEU:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:417:ILE:HG13	1:B:457:ILE:HD11	1.83	0.61
1:C:641:PRO:HB3	1:C:654:PRO:HD3	1.83	0.60
1:A:510:LEU:HB3	1:A:524:ASP:HB3	1.84	0.60
1:D:417:ILE:HG13	1:D:457:ILE:HD11	1.83	0.60
1:A:478:GLY:HA3	1:B:705:SER:OG	2.01	0.60
1:B:372:VAL:HG12	1:B:373:LYS:HG3	1.83	0.59
1:A:332:THR:O	1:A:336:MET:HG2	2.02	0.59
1:B:324:THR:HA	1:B:327:ASP:HB2	1.84	0.58
1:B:430:THR:HG22	1:B:447:ILE:HA	1.84	0.58
1:C:454:GLY:HA2	1:C:457:ILE:HD11	1.84	0.58
1:A:325:SER:HB2	1:A:601:MET:HE2	1.86	0.58
1:A:674:HIS:NE2	1:A:694:ASN:O	2.36	0.58
1:A:327:ASP:HA	1:A:330:PHE:HB3	1.86	0.58
1:B:673:TYR:HB3	1:B:709:LEU:HD11	1.85	0.58
1:A:696:MET:SD	1:A:696:MET:N	2.69	0.58
1:C:365:LEU:HD13	1:C:487:THR:HG23	1.86	0.58
1:C:575:SER:HB2	1:C:579:LYS:HB3	1.84	0.57
1:C:576:MET:HE3	1:C:583:LYS:HD2	1.85	0.57
1:A:657:ILE:HG22	1:B:680:TRP:CD2	2.40	0.57
1:D:366:PRO:HD2	1:D:461:GLY:H	1.67	0.57
1:B:700:LEU:HD12	1:B:701:MET:H	1.69	0.57
1:B:611:THR:HG22	1:B:620:ILE:HG22	1.87	0.57
1:C:574:VAL:HA	1:C:606:PRO:HG3	1.87	0.57
1:B:393:SER:HB3	1:B:411:VAL:HA	1.87	0.56
1:A:505:SER:HB3	1:A:546:ILE:HG22	1.88	0.56
1:B:433:ILE:HD12	1:B:446:ARG:HD2	1.88	0.56
1:D:344:ILE:HG12	1:D:494:GLU:HG3	1.86	0.56
1:D:702:SER:C	1:D:704:ARG:N	2.59	0.56
1:C:356:ALA:HB3	1:C:494:GLU:HG3	1.87	0.56
1:C:608:THR:HB	1:C:623:ALA:HB3	1.87	0.56
1:C:702:SER:C	1:C:704:ARG:H	2.13	0.56
1:A:695:GLN:H	1:A:698:SER:HB2	1.71	0.55
1:B:660:ARG:HE	1:B:686:LEU:HD12	1.70	0.55
1:B:379:ARG:NH1	1:B:381:ALA:H	2.04	0.55
1:D:709:LEU:HB2	1:D:731:MET:HG3	1.88	0.55
1:B:408:VAL:HG11	1:B:447:ILE:HD11	1.88	0.55
1:A:452:ARG:HG2	1:A:455:GLN:HB2	1.89	0.55
1:D:547:VAL:HG12	1:D:553:ASP:HB3	1.89	0.55
1:A:379:ARG:H	1:A:408:VAL:HG22	1.70	0.55
1:D:432:LEU:HD13	1:D:445:VAL:HG12	1.88	0.55
1:C:491:THR:HG21	1:D:514:GLU:HB3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:475:THR:HG22	1:B:703:MET:HG2	1.88	0.54
1:A:562:ILE:HD11	1:A:621:ILE:HD11	1.88	0.54
1:A:630:SER:HA	1:A:633:VAL:HG12	1.88	0.54
1:D:423:ALA:HB2	1:D:454:GLY:H	1.72	0.54
1:A:333:VAL:HA	1:A:609:PHE:CZ	2.41	0.54
1:A:387:ARG:HH21	1:A:408:VAL:H	1.56	0.54
1:B:344:ILE:HG22	1:B:494:GLU:HB3	1.90	0.54
1:C:470:VAL:O	1:D:699:ARG:NH2	2.39	0.54
1:C:669:PRO:HA	1:C:715:LYS:HB3	1.90	0.54
1:D:322:PRO:O	1:D:326:MET:HG3	2.08	0.54
1:C:588:ILE:HG13	1:C:589:ASP:N	2.22	0.53
1:D:430:THR:HG21	1:D:447:ILE:HA	1.90	0.53
1:A:357:GLN:NE2	1:A:359:VAL:HG22	2.23	0.53
1:B:379:ARG:HH11	1:B:380:ALA:H	1.56	0.53
1:D:603:PRO:HG2	1:D:671:PRO:HG3	1.91	0.53
1:A:488:VAL:HG23	1:A:490:VAL:HG23	1.91	0.53
1:B:629:VAL:HG11	1:B:694:ASN:HB2	1.90	0.53
1:C:388:PHE:HA	1:C:444:GLU:HG2	1.91	0.53
1:C:629:VAL:CG1	1:C:673:TYR:O	2.57	0.53
1:D:337:THR:HG22	1:D:620:ILE:HD13	1.91	0.52
1:D:434:ARG:HE	1:D:443:LEU:HD13	1.73	0.52
1:B:661:LEU:HD12	1:B:725:GLY:H	1.75	0.52
1:C:551:PRO:HD3	1:C:581:TYR:CG	2.45	0.52
1:A:644:ARG:HH21	1:A:649:ILE:HD13	1.74	0.52
1:C:376:TYR:HE2	1:C:430:THR:HG21	1.75	0.52
1:C:526:ASN:OD1	1:C:628:PRO:HA	2.10	0.52
1:A:464:ILE:HD11	1:B:696:MET:HG3	1.92	0.51
1:C:633:VAL:HG11	1:C:673:TYR:HD2	1.74	0.51
1:D:709:LEU:HG	1:D:733:ILE:HD11	1.92	0.51
1:D:470:VAL:HG21	1:D:488:VAL:HG11	1.93	0.51
1:D:665:VAL:CG1	1:D:694:ASN:HA	2.41	0.51
1:D:710:LEU:HD12	1:D:730:VAL:HG22	1.92	0.51
1:C:644:ARG:HB3	1:C:649:ILE:HD12	1.91	0.51
1:B:601:MET:HE3	1:B:603:PRO:HB2	1.93	0.50
1:A:359:VAL:HB	1:A:471:LEU:HB2	1.92	0.50
1:C:388:PHE:HE1	1:C:443:LEU:HG	1.76	0.50
1:C:662:SER:H	1:C:691:SER:H	1.57	0.50
1:A:633:VAL:HG21	1:A:673:TYR:HB2	1.94	0.50
1:C:355:LEU:HD12	1:C:495:VAL:HG12	1.93	0.50
1:C:431:GLU:HB2	1:C:448:LEU:HG	1.93	0.50
1:D:377:ALA:HA	1:D:424:VAL:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:586:LEU:HD23	1:B:590:LEU:HD23	1.94	0.50
1:B:360:TYR:HE1	1:B:469:CYS:HB2	1.77	0.49
1:C:372:VAL:HG23	1:C:373:LYS:HG3	1.93	0.49
1:C:534:ILE:HD11	1:C:569:ILE:HD11	1.93	0.49
1:B:661:LEU:HD23	1:B:710:LEU:HD21	1.95	0.49
1:A:375:GLY:HA3	1:A:426:GLN:HA	1.95	0.49
1:B:389:ILE:HG12	1:B:409:MET:HA	1.94	0.49
1:D:340:LEU:HB3	1:D:497:LYS:HB3	1.95	0.49
1:A:338:PRO:HG3	1:A:618:ARG:HB3	1.94	0.49
1:B:354:VAL:HG13	1:B:474:GLY:HA2	1.94	0.49
1:B:319:SER:N	1:B:713:PRO:HG3	2.28	0.49
1:A:452:ARG:HG2	1:A:452:ARG:O	2.13	0.48
1:B:384:PRO:HD3	1:B:450:GLN:HB2	1.95	0.48
1:B:640:VAL:HA	1:B:643:LEU:HB2	1.94	0.48
1:A:677:ILE:HD13	1:A:704:ARG:HB2	1.95	0.48
1:D:403:VAL:HG21	1:D:418:PRO:HB2	1.95	0.48
1:C:542:ILE:HD12	1:C:564:ARG:HE	1.78	0.48
1:C:705:SER:OG	1:D:478:GLY:HA3	2.13	0.48
1:D:389:ILE:HG23	1:D:409:MET:HA	1.95	0.48
1:B:360:TYR:CE1	1:B:469:CYS:HB2	2.49	0.48
1:B:662:SER:HB2	1:B:688:TRP:HE1	1.78	0.48
1:D:661:LEU:HD11	1:D:710:LEU:HD21	1.94	0.48
1:B:403:VAL:HG12	1:B:419:CYS:O	2.14	0.48
1:A:368:PHE:CD2	1:B:520:GLY:HA2	2.47	0.48
1:A:376:TYR:CE2	1:A:427:VAL:HG22	2.49	0.48
1:B:356:ALA:HB3	1:B:494:GLU:HG3	1.95	0.48
1:D:386:ASP:OD2	1:D:447:ILE:HD11	2.13	0.48
1:D:432:LEU:HD22	1:D:445:VAL:HA	1.94	0.48
1:D:448:LEU:HD12	1:D:449:VAL:HG13	1.96	0.48
1:B:680:TRP:CZ2	1:B:687:PRO:HG3	2.48	0.48
1:C:639:VAL:O	1:C:643:LEU:HG	2.13	0.48
1:C:694:ASN:O	1:C:695:GLN:HB2	2.14	0.48
1:D:627:ASN:HB3	1:D:630:SER:HB2	1.96	0.48
1:B:699:ARG:NH1	1:B:701:MET:SD	2.86	0.47
1:A:423:ALA:HB3	1:A:451:ALA:HB1	1.95	0.47
1:A:670:ARG:HD2	1:A:671:PRO:HD2	1.95	0.47
1:A:735:ARG:HH22	1:B:536:GLU:CD	2.22	0.47
1:B:379:ARG:HH11	1:B:380:ALA:N	2.13	0.47
1:B:608:THR:H	1:B:623:ALA:HB3	1.79	0.47
1:C:682:HIS:CE1	1:D:656:ILE:HG21	2.49	0.47
1:A:326:MET:HE1	1:A:602:LYS:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:691:SER:O	1:D:692:THR:C	2.57	0.47
1:A:569:ILE:HD11	1:A:639:VAL:HG11	1.97	0.47
1:B:699:ARG:NH1	1:B:701:MET:HG2	2.20	0.47
1:C:599:VAL:O	1:C:603:PRO:HA	2.14	0.47
1:C:662:SER:CB	1:C:690:GLN:HA	2.45	0.47
1:C:681:HIS:ND1	1:C:684:GLU:HB2	2.30	0.47
1:A:695:GLN:HG2	1:A:698:SER:H	1.80	0.47
1:D:393:SER:HB3	1:D:410:ARG:O	2.15	0.46
1:D:586:LEU:HD23	1:D:594:ILE:HG12	1.96	0.46
1:B:675:ARG:HE	1:B:675:ARG:HB2	1.46	0.46
1:B:710:LEU:HD12	1:B:730:VAL:HG22	1.96	0.46
1:C:597:GLY:HA2	1:C:608:THR:HG23	1.96	0.46
1:D:685:PRO:HB2	1:D:686:LEU:HD12	1.97	0.46
1:A:336:MET:HG3	1:A:595:HIS:NE2	2.30	0.46
1:C:696:MET:SD	1:C:696:MET:N	2.87	0.46
1:B:488:VAL:HG23	1:B:490:VAL:HG12	1.98	0.46
1:A:574:VAL:HA	1:A:606:PRO:HB3	1.96	0.46
1:B:329:ALA:HB1	1:B:596:PHE:CZ	2.51	0.46
1:C:340:LEU:HB3	1:C:497:LYS:HB2	1.98	0.46
1:D:500:VAL:HG11	1:D:564:ARG:HH12	1.81	0.46
1:D:601:MET:HE3	1:D:602:LYS:HE3	1.96	0.46
1:A:608:THR:HB	1:A:623:ALA:HB3	1.98	0.46
1:D:458:ARG:CZ	1:D:462:HIS:HB3	2.45	0.46
1:D:574:VAL:HG13	1:D:606:PRO:HG3	1.98	0.46
1:D:500:VAL:HG11	1:D:564:ARG:NH1	2.31	0.46
1:B:606:PRO:HG2	1:B:625:PRO:HA	1.98	0.46
1:C:427:VAL:O	1:C:430:THR:HG22	2.15	0.45
1:D:629:VAL:HG21	1:D:696:MET:SD	2.56	0.45
1:A:627:ASN:HD22	1:A:696:MET:HE3	1.81	0.45
1:B:344:ILE:HA	1:B:494:GLU:HA	1.97	0.45
1:C:527:ARG:NH1	1:C:545:GLY:HA2	2.31	0.45
1:D:347:TYR:HB2	1:D:485:LEU:HD12	1.99	0.45
1:C:699:ARG:HD3	1:C:701:MET:CE	2.46	0.45
1:D:551:PRO:HD3	1:D:581:TYR:CD2	2.51	0.45
1:C:327:ASP:HA	1:C:330:PHE:HB3	1.98	0.45
1:C:669:PRO:HG3	1:C:715:LYS:NZ	2.31	0.45
1:D:341:GLY:O	1:D:497:LYS:HB2	2.17	0.45
1:D:404:MET:HE2	1:D:407:GLN:HG3	1.98	0.45
1:B:599:VAL:HG23	1:B:607:THR:OG1	2.17	0.45
1:D:710:LEU:HG	1:D:728:VAL:HG11	1.99	0.45
1:A:614:ILE:O	1:A:617:VAL:HG22	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:611:THR:HG21	1:C:618:ARG:NH1	2.32	0.45
1:D:669:PRO:HA	1:D:716:THR:HA	1.98	0.45
1:B:443:LEU:HD23	1:B:443:LEU:HA	1.82	0.45
1:B:478:GLY:O	1:B:482:ILE:HG12	2.16	0.44
1:D:620:ILE:HD12	1:D:622:PHE:HE1	1.82	0.44
1:A:613:ASP:CG	1:A:618:ARG:HE	2.26	0.44
1:B:612:LEU:HG	1:B:614:ILE:HD11	1.98	0.44
1:B:678:LEU:HB2	1:B:707:ASN:OD1	2.17	0.44
1:B:680:TRP:CE2	1:B:687:PRO:HG3	2.52	0.44
1:D:680:TRP:NE1	1:D:687:PRO:HB3	2.32	0.44
1:C:432:LEU:HG	1:C:442:GLU:CD	2.41	0.44
1:C:499:PRO:O	1:C:540:PRO:HD2	2.18	0.44
1:C:606:PRO:HG2	1:C:625:PRO:HA	2.00	0.44
1:B:387:ARG:HB3	1:B:407:GLN:HA	2.00	0.44
1:B:516:ASP:HA	1:B:523:ARG:HH21	1.83	0.44
1:D:599:VAL:O	1:D:603:PRO:HA	2.18	0.44
1:D:680:TRP:CE2	1:D:687:PRO:HB3	2.52	0.44
1:A:679:THR:HG22	1:A:704:ARG:NH2	2.33	0.44
1:D:366:PRO:HD3	1:D:458:ARG:HH21	1.82	0.44
1:D:366:PRO:HD3	1:D:458:ARG:NH2	2.32	0.44
1:B:624:LEU:HD22	1:B:634:THR:OG1	2.18	0.44
1:C:629:VAL:HG11	1:C:673:TYR:O	2.17	0.44
1:B:501:VAL:HG13	1:B:567:VAL:HG13	2.00	0.43
1:C:636:ASN:HB3	1:C:731:MET:CE	2.48	0.43
1:C:675:ARG:HE	1:C:675:ARG:HB2	1.72	0.43
1:D:379:ARG:HH12	1:D:406:GLY:H	1.65	0.43
1:A:389:ILE:HD13	1:A:410:ARG:HB3	2.00	0.43
1:B:669:PRO:HA	1:B:715:LYS:H	1.83	0.43
1:C:699:ARG:HD3	1:C:701:MET:HE1	2.01	0.43
1:C:711:MET:HE3	1:C:711:MET:HA	1.99	0.43
1:D:331:ILE:O	1:D:335:GLU:HG2	2.19	0.43
1:A:709:LEU:HB2	1:A:731:MET:HB2	2.01	0.43
1:B:700:LEU:H	1:B:700:LEU:HG	1.56	0.43
1:A:644:ARG:O	1:A:649:ILE:HG22	2.19	0.43
1:D:336:MET:HE3	1:D:336:MET:HB3	1.74	0.43
1:D:357:GLN:N	1:D:473:LYS:HG3	2.34	0.43
1:D:518:LEU:HD23	1:D:518:LEU:HA	1.86	0.43
1:B:700:LEU:O	1:B:701:MET:HB2	2.18	0.43
1:D:342:THR:HG22	1:D:496:ASN:HA	1.99	0.43
1:A:430:THR:HG21	1:A:448:LEU:H	1.83	0.43
1:A:618:ARG:HA	1:A:618:ARG:HD3	1.74	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:375:GLY:HA2	1:C:427:VAL:HG22	2.00	0.43
1:C:433:ILE:HD12	1:C:446:ARG:HE	1.84	0.43
1:C:509:GLU:HB3	1:D:396:GLY:HA2	2.01	0.43
1:A:627:ASN:OD1	1:A:630:SER:HB2	2.19	0.43
1:C:611:THR:HG21	1:C:618:ARG:CZ	2.49	0.43
1:D:644:ARG:HH22	1:D:654:PRO:HA	1.84	0.43
1:A:680:TRP:HD1	1:A:736:LEU:HD21	1.84	0.42
1:B:502:ALA:HA	1:B:542:ILE:O	2.19	0.42
1:C:666:LYS:HE3	1:C:666:LYS:HB3	1.70	0.42
1:D:656:ILE:HD12	1:D:656:ILE:HA	1.91	0.42
1:A:368:PHE:HD2	1:B:520:GLY:HA2	1.84	0.42
1:C:636:ASN:O	1:C:731:MET:HE1	2.20	0.42
1:D:452:ARG:HE	1:D:455:GLN:HA	1.83	0.42
1:A:484:LEU:O	1:A:488:VAL:HG22	2.19	0.42
1:C:696:MET:O	1:C:699:ARG:HG2	2.18	0.42
1:D:644:ARG:O	1:D:649:ILE:HG22	2.19	0.42
1:B:403:VAL:HG11	1:B:421:ALA:HB2	2.01	0.42
1:A:344:ILE:HA	1:A:494:GLU:HA	2.01	0.42
1:A:517:LEU:HD23	1:A:517:LEU:HA	1.78	0.42
1:C:526:ASN:O	1:C:530:LEU:HG	2.20	0.42
1:C:677:ILE:HG13	1:C:706:ALA:HA	2.02	0.42
1:D:334:LEU:HD23	1:D:334:LEU:HA	1.88	0.42
1:D:661:LEU:HD22	1:D:728:VAL:HG21	2.00	0.42
1:B:332:THR:O	1:B:336:MET:HG2	2.19	0.42
1:B:498:PHE:HE1	1:B:647:GLN:HE21	1.67	0.42
1:C:377:ALA:HB1	1:C:421:ALA:HB1	2.02	0.42
1:C:641:PRO:HA	1:C:644:ARG:HD3	2.02	0.42
1:A:355:LEU:HD23	1:A:355:LEU:HA	1.81	0.41
1:A:362:LYS:C	1:A:466:ARG:HH22	2.27	0.41
1:B:389:ILE:HG13	1:B:391:GLY:H	1.85	0.41
1:C:702:SER:C	1:C:704:ARG:N	2.73	0.41
1:A:602:LYS:O	1:A:602:LYS:HG3	2.21	0.41
1:A:665:VAL:HG12	1:A:722:LEU:HD22	2.01	0.41
1:C:542:ILE:HD12	1:C:564:ARG:HH21	1.85	0.41
1:A:466:ARG:HE	1:A:467:GLY:N	2.19	0.41
1:B:388:PHE:HB3	1:B:444:GLU:HG2	2.03	0.41
1:D:506:THR:O	1:D:572:GLY:HA3	2.20	0.41
1:A:338:PRO:HD3	1:A:618:ARG:HG3	2.02	0.41
1:A:579:LYS:HE3	1:A:579:LYS:HB3	1.88	0.41
1:C:637:LEU:HD23	1:C:637:LEU:HA	1.84	0.41
1:A:715:LYS:HA	1:A:715:LYS:HD3	1.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:625:PRO:HD2	1:B:631:ALA:HA	2.03	0.41
1:C:513:PRO:HB3	1:D:486:ALA:O	2.21	0.41
1:C:347:TYR:O	1:C:482:ILE:HD12	2.20	0.41
1:C:672:GLU:O	1:C:712:LEU:HD13	2.21	0.41
1:D:364:ASN:HB3	1:D:466:ARG:N	2.35	0.41
1:C:443:LEU:HD12	1:C:443:LEU:HA	1.92	0.41
1:C:712:LEU:HA	1:C:713:PRO:HD3	1.95	0.41
1:D:550:ASN:HA	1:D:581:TYR:HD2	1.86	0.41
1:A:379:ARG:HD3	1:A:379:ARG:HA	1.82	0.41
1:A:379:ARG:NH1	1:A:406:GLY:H	2.19	0.41
1:A:701:MET:O	1:A:702:SER:C	2.64	0.41
1:B:517:LEU:HD23	1:B:517:LEU:HA	1.87	0.41
1:B:594:ILE:HG23	1:B:608:THR:HG23	2.02	0.41
1:B:670:ARG:NH2	1:B:672:GLU:HA	2.36	0.41
1:C:329:ALA:HB1	1:C:596:PHE:CZ	2.55	0.41
1:C:550:ASN:HD22	1:C:552:ASP:CG	2.28	0.41
1:C:614:ILE:O	1:C:617:VAL:HG22	2.21	0.41
1:B:674:HIS:ND1	1:B:694:ASN:HB3	2.36	0.41
1:C:579:LYS:HB2	1:C:579:LYS:HE2	1.86	0.41
1:A:388:PHE:HA	1:A:445:VAL:HG23	2.03	0.40
1:C:596:PHE:CE2	1:C:609:PHE:HB3	2.56	0.40
1:C:609:PHE:CE1	1:C:620:ILE:HG23	2.50	0.40
1:D:452:ARG:HG2	1:D:453:PRO:HD2	2.04	0.40
1:D:567:VAL:HG13	1:D:620:ILE:HG13	2.02	0.40
1:C:401:GLN:O	1:C:409:MET:HE1	2.22	0.40
1:D:590:LEU:HD23	1:D:590:LEU:HA	1.89	0.40
1:A:598:ARG:HE	1:A:603:PRO:HB2	1.85	0.40
1:C:382:ASP:HB3	1:C:387:ARG:HH21	1.86	0.40
1:C:641:PRO:O	1:C:652:PRO:HB2	2.21	0.40
1:C:702:SER:O	1:C:703:MET:HB2	2.20	0.40
1:D:602:LYS:O	1:D:603:PRO:C	2.64	0.40
1:D:603:PRO:O	1:D:604:GLY:C	2.65	0.40
1:D:674:HIS:NE2	1:D:694:ASN:O	2.54	0.40
1:A:574:VAL:HG13	1:A:605:LEU:HB2	2.02	0.40
1:B:696:MET:HE3	1:B:696:MET:HB3	1.94	0.40
1:C:374:ASP:O	1:C:426:GLN:HA	2.21	0.40
1:C:393:SER:HB3	1:C:411:VAL:HG12	2.02	0.40
1:C:710:LEU:HD12	1:C:730:VAL:HG22	2.03	0.40
1:A:322:PRO:HG3	1:A:714:PRO:HD3	2.02	0.40
1:B:390:ILE:HD12	1:B:390:ILE:HA	1.95	0.40
1:C:426:GLN:HG2	1:C:429:ASP:H	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:320:PRO:HG3	1:D:713:PRO:HG3	2.02	0.40
1:D:661:LEU:HD12	1:D:661:LEU:HA	1.85	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	416/754 (55%)	404 (97%)	11 (3%)	1 (0%)	43 74
1	B	416/754 (55%)	406 (98%)	10 (2%)	0	100 100
1	C	416/754 (55%)	404 (97%)	12 (3%)	0	100 100
1	D	416/754 (55%)	405 (97%)	10 (2%)	1 (0%)	43 74
All	All	1664/3016 (55%)	1619 (97%)	43 (3%)	2 (0%)	49 79

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	703	MET
1	A	702	SER

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	355/644 (55%)	332 (94%)	23 (6%)	15	42
1	B	355/644 (55%)	326 (92%)	29 (8%)	10	35
1	C	355/644 (55%)	332 (94%)	23 (6%)	15	42
1	D	355/644 (55%)	325 (92%)	30 (8%)	10	34
All	All	1420/2576 (55%)	1315 (93%)	105 (7%)	15	38

All (105) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	324	THR
1	A	332	THR
1	A	337	THR
1	A	349	ASP
1	A	445	VAL
1	A	452	ARG
1	A	477	MET
1	A	498	PHE
1	A	504	MET
1	A	505	SER
1	A	509	GLU
1	A	531	LEU
1	A	544	LEU
1	A	546	ILE
1	A	582	LEU
1	A	599	VAL
1	A	611	THR
1	A	647	GLN
1	A	656	ILE
1	A	662	SER
1	A	676	CYS
1	A	696	MET
1	A	715	LYS
1	B	323	LEU
1	B	340	LEU
1	B	354	VAL
1	B	359	VAL
1	B	378	VAL
1	B	402	THR
1	B	445	VAL
1	B	460	ILE
1	B	470	VAL
1	B	490	VAL

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Mol	Chain	Res	Type
1	B	498	PHE
1	B	505	SER
1	B	510	LEU
1	B	511	LEU
1	B	541	THR
1	B	542	ILE
1	B	562	ILE
1	B	640	VAL
1	B	649	ILE
1	B	655	THR
1	B	661	LEU
1	B	668	ASP
1	B	692	THR
1	B	700	LEU
1	B	704	ARG
1	B	711	MET
1	B	720	VAL
1	B	727	VAL
1	B	733	ILE
1	C	332	THR
1	C	335	GLU
1	C	371	SER
1	C	378	VAL
1	C	402	THR
1	C	424	VAL
1	C	430	THR
1	C	441	GLU
1	C	460	ILE
1	C	470	VAL
1	C	498	PHE
1	C	542	ILE
1	C	588	ILE
1	C	590	LEU
1	C	611	THR
1	C	617	VAL
1	C	640	VAL
1	C	686	LEU
1	C	696	MET
1	C	699	ARG
1	C	700	LEU
1	C	701	MET
1	C	710	LEU

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Mol	Chain	Res	Type
1	D	354	VAL
1	D	363	ASP
1	D	365	LEU
1	D	371	SER
1	D	372	VAL
1	D	390	ILE
1	D	425	VAL
1	D	433	ILE
1	D	448	LEU
1	D	477	MET
1	D	498	PHE
1	D	500	VAL
1	D	501	VAL
1	D	505	SER
1	D	509	GLU
1	D	542	ILE
1	D	546	ILE
1	D	547	VAL
1	D	555	LEU
1	D	582	LEU
1	D	586	LEU
1	D	599	VAL
1	D	605	LEU
1	D	650	LEU
1	D	656	ILE
1	D	661	LEU
1	D	694	ASN
1	D	701	MET
1	D	703	MET
1	D	733	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (10) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	401	GLN
1	A	556	ASN
1	A	694	ASN
1	A	695	GLN
1	B	647	GLN
1	C	512	ASN
1	C	535	GLN
1	C	593	GLN

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Mol	Chain	Res	Type
1	C	695	GLN
1	D	683	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)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

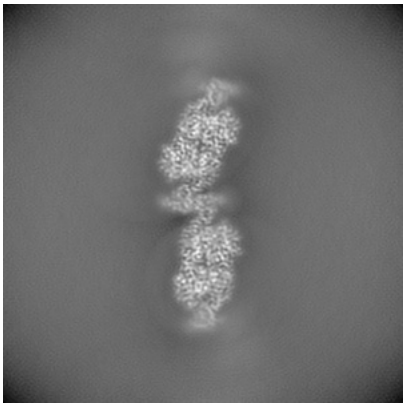
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-54551. These allow visual inspection of the internal detail of the map and identification of artifacts.

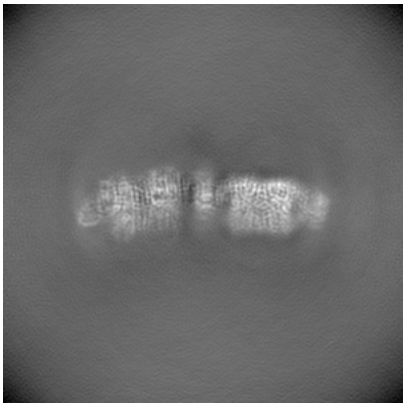
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

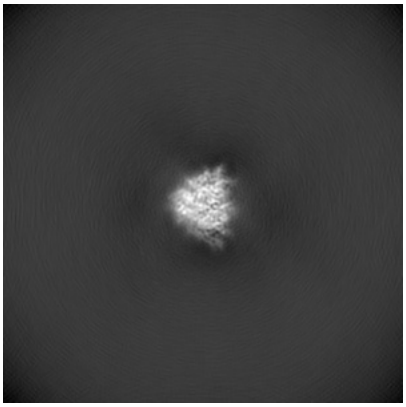
6.1.1 Primary map



X



Y

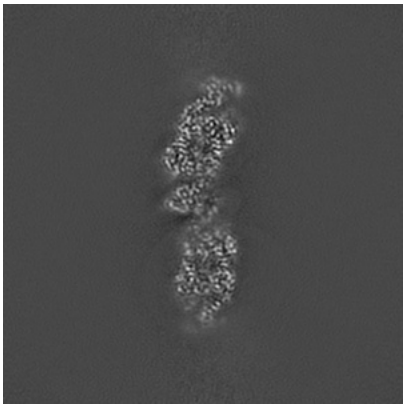


Z

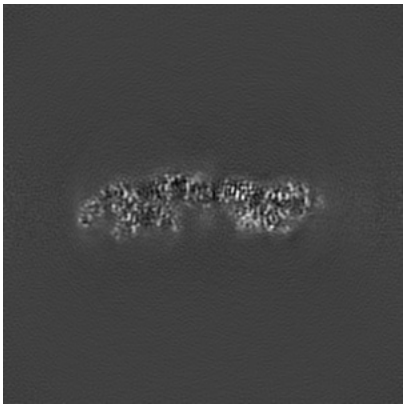
The images above show the map projected in three orthogonal directions.

6.2 Central slices

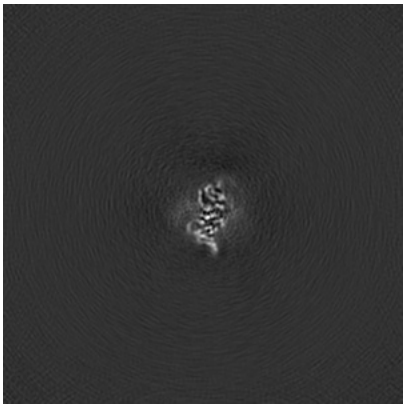
6.2.1 Primary map



X Index: 120



Y Index: 120

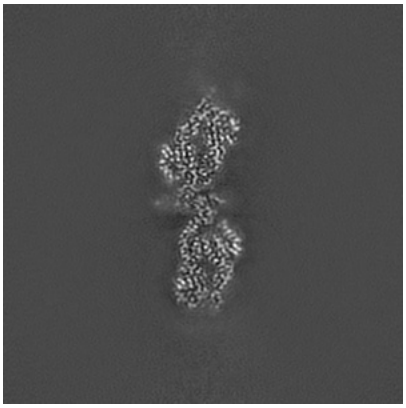


Z Index: 120

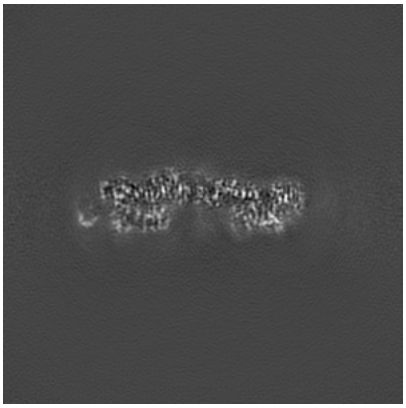
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

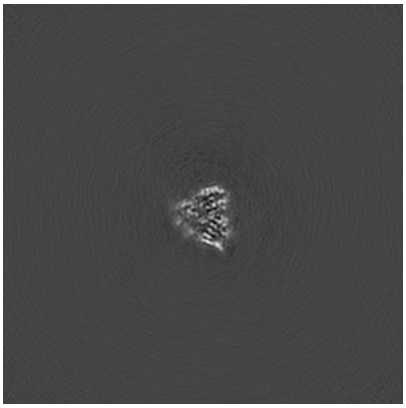
6.3.1 Primary map



X Index: 128



Y Index: 115

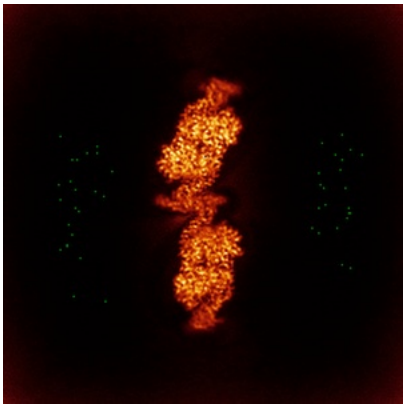


Z Index: 145

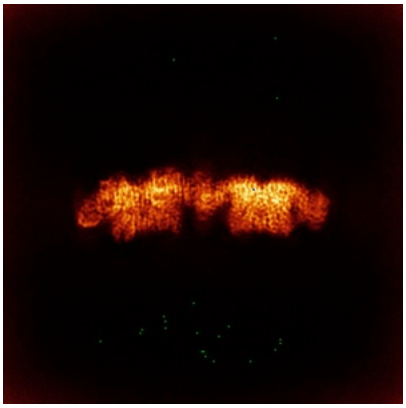
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

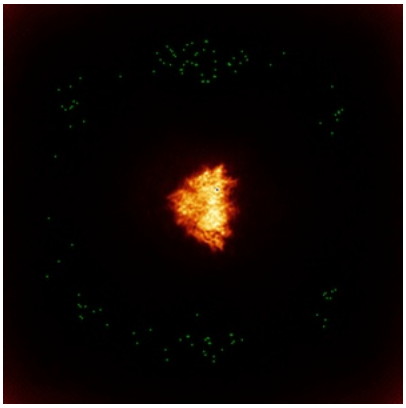
6.4.1 Primary map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map

X Y Z

The images above show the 3D surface view of the map at the recommended contour level 6.7. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

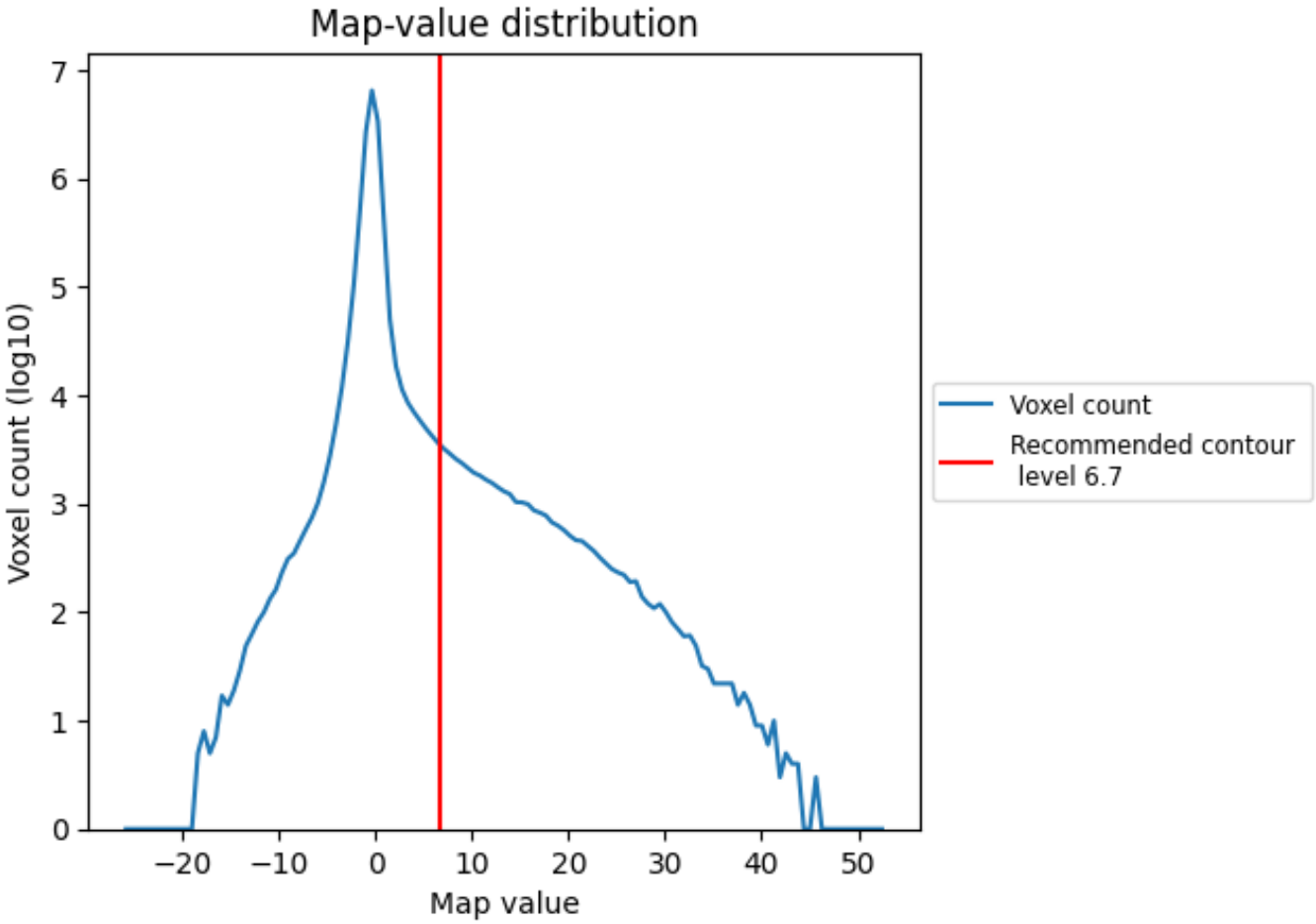
6.6 Mask visualisation (i)

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

7 Map analysis

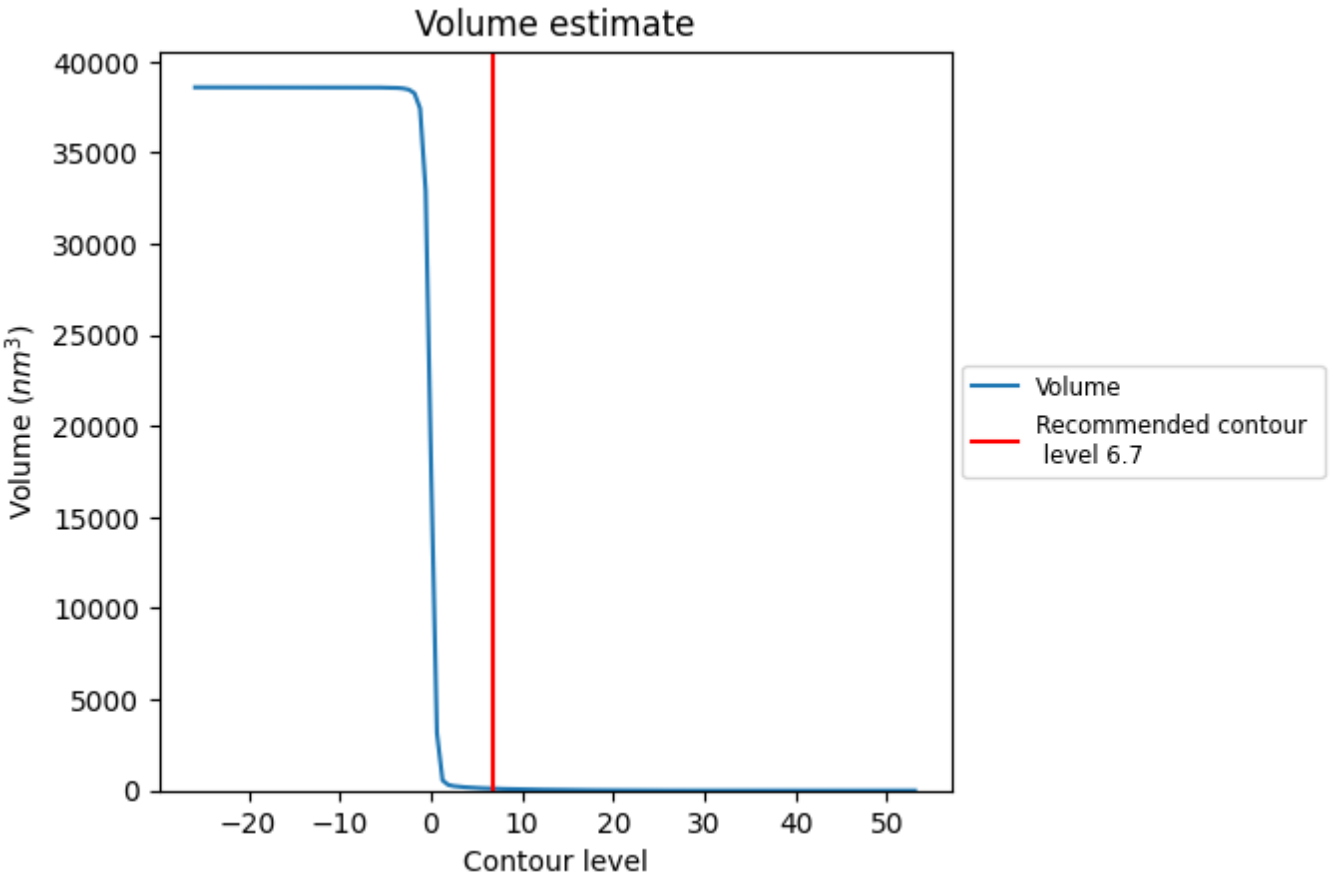
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

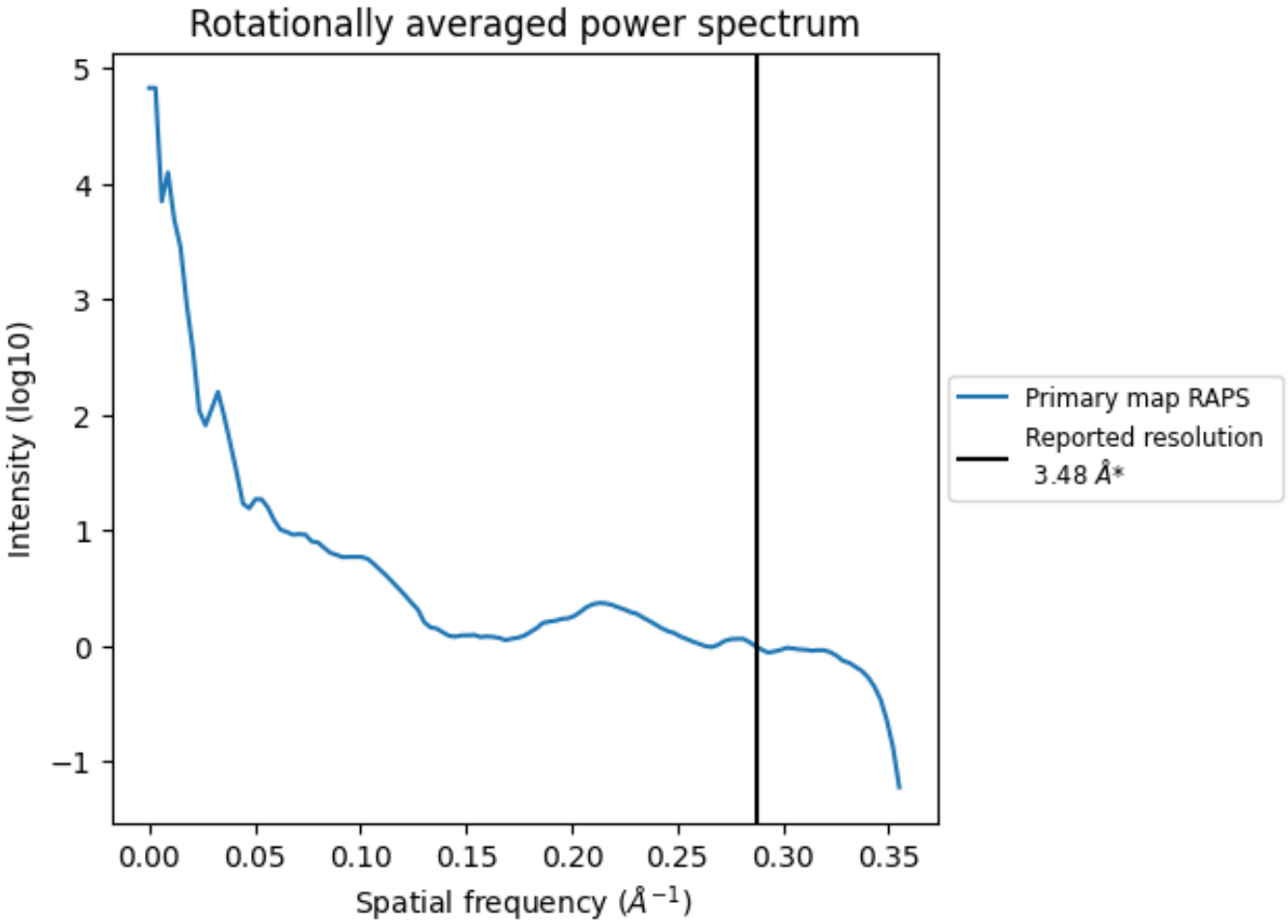
7.2 Volume estimate



The volume at the recommended contour level is 109 nm^3; this corresponds to an approximate mass of 98 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.287 Å^{-1}

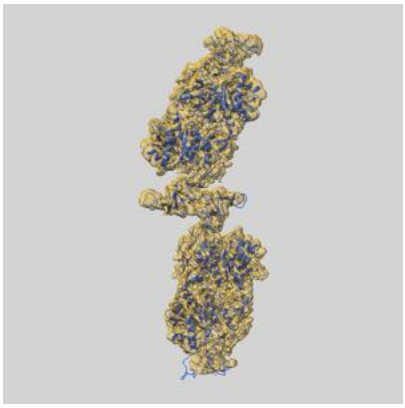
8 Fourier-Shell correlation (i)

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

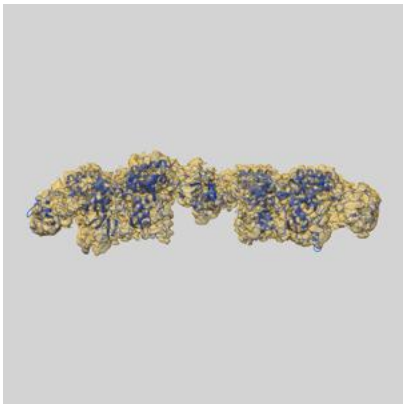
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-54551 and PDB model 9S3T. Per-residue inclusion information can be found in section 3 on page 6.

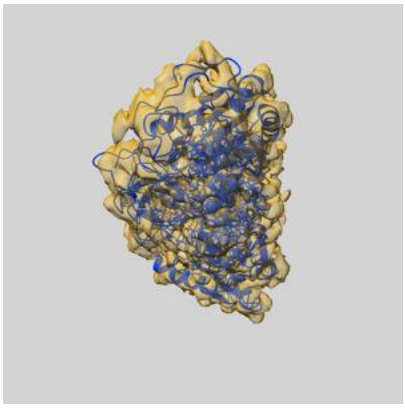
9.1 Map-model overlay



X



Y



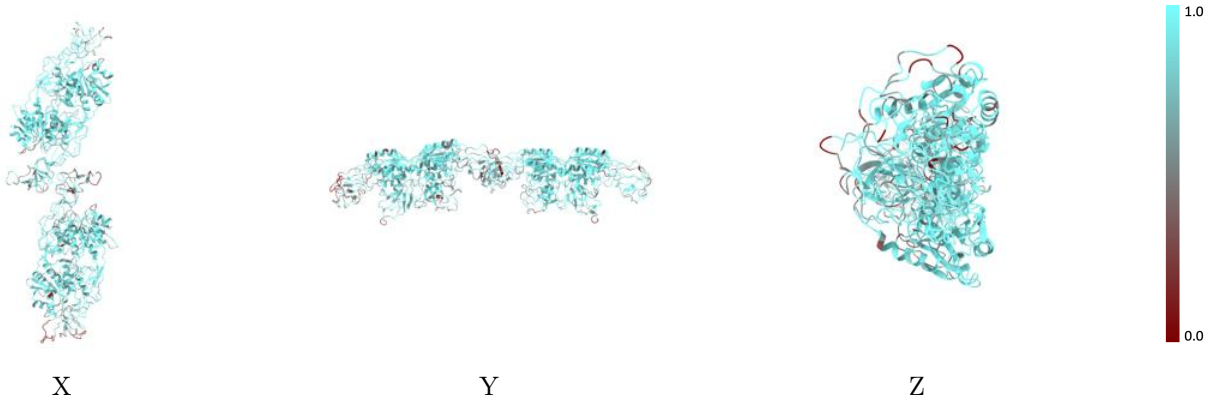
Z

The images above show the 3D surface view of the map at the recommended contour level 6.7 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)

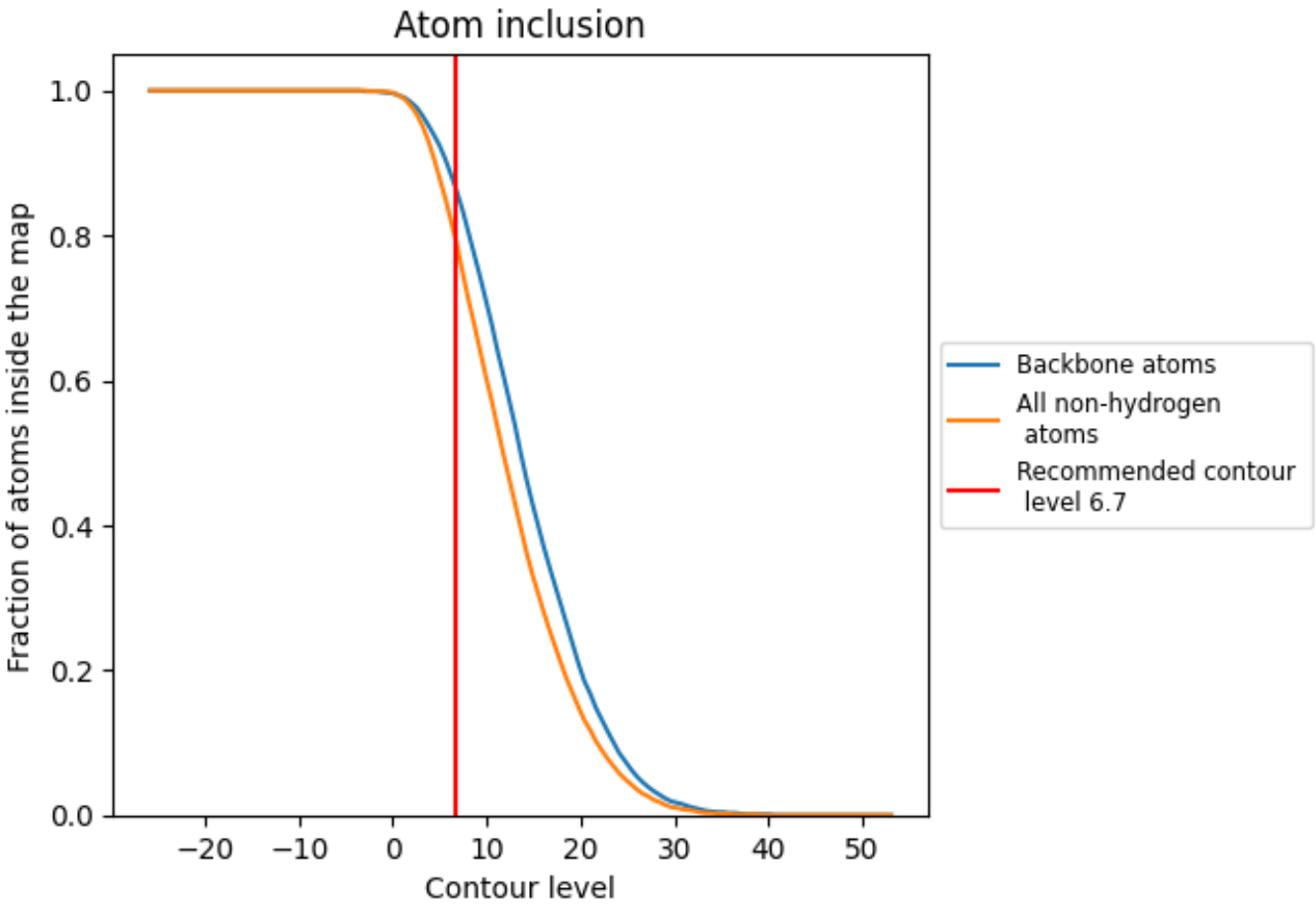
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (6.7).

9.4 Atom inclusion (i)



At the recommended contour level, 87% of all backbone atoms, 79% 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 (6.7) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7940	0.4090
A	0.7300	0.3810
B	0.7760	0.4190
C	0.8350	0.4260
D	0.8330	0.4110