Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 03:39 PM UTC

PDB ID	:	9J3T / pdb_00009j3t
EMDB ID	:	EMD-61125
Title	:	Enterococcus faecalis ROOL RNA octamer
Authors	:	Wang, L.; Xie, J.H.; Shang, S.T.; Su, Z.M.
Deposited on	:	2024-08-08
Resolution	:	3.80 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

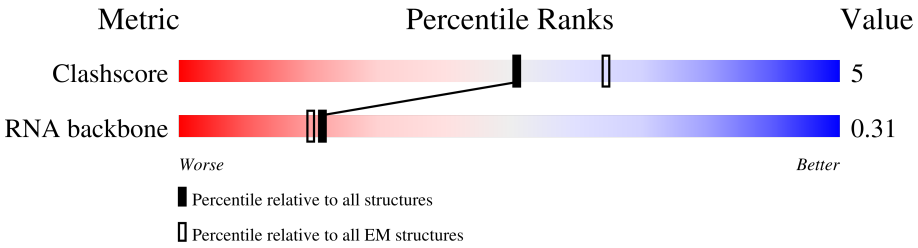
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

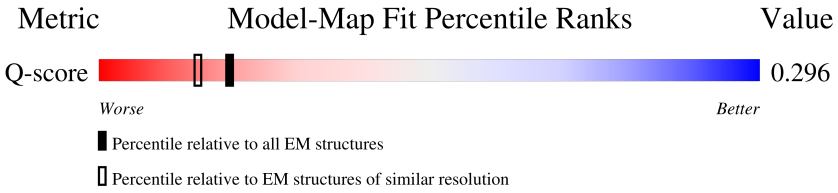
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.80 Å.

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





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
RNA backbone	8273	3508	-
Q-score	-	25397	10198 (3.30 - 4.30)

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	580	8% 45% 33% 11% 11%
1	B	580	8% 45% 34% 10% 11%
1	C	580	8% 45% 34% 10% 11%
1	D	580	8% 45% 34% 10% 11%
1	E	580	8% 45% 34% 10% 11%

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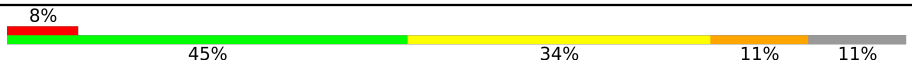
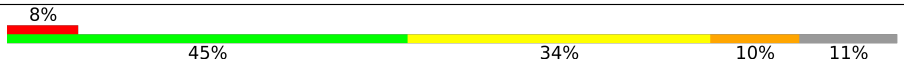
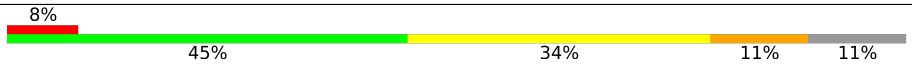
Mol	Chain	Length	Quality of chain
1	F	580	
1	G	580	
1	H	580	

2 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 89144 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 RNA chain called RNA (580-MER).

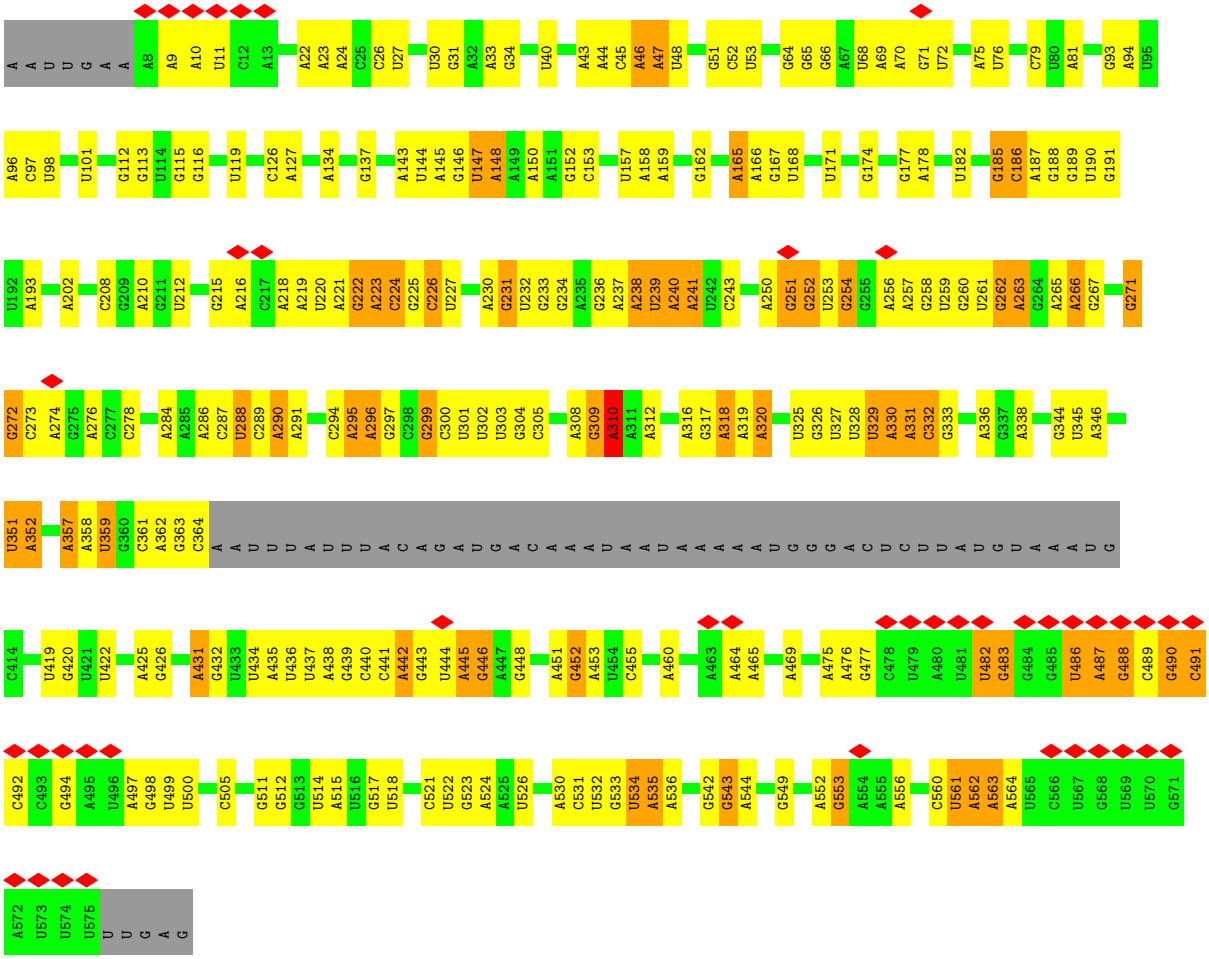
Mol	Chain	Residues	Atoms					AltConf	Trace
1	B	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	A	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	D	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	C	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	E	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	F	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	G	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		
1	H	519	Total	C	N	O	P	0	0
			11143	4988	2060	3576	519		

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.

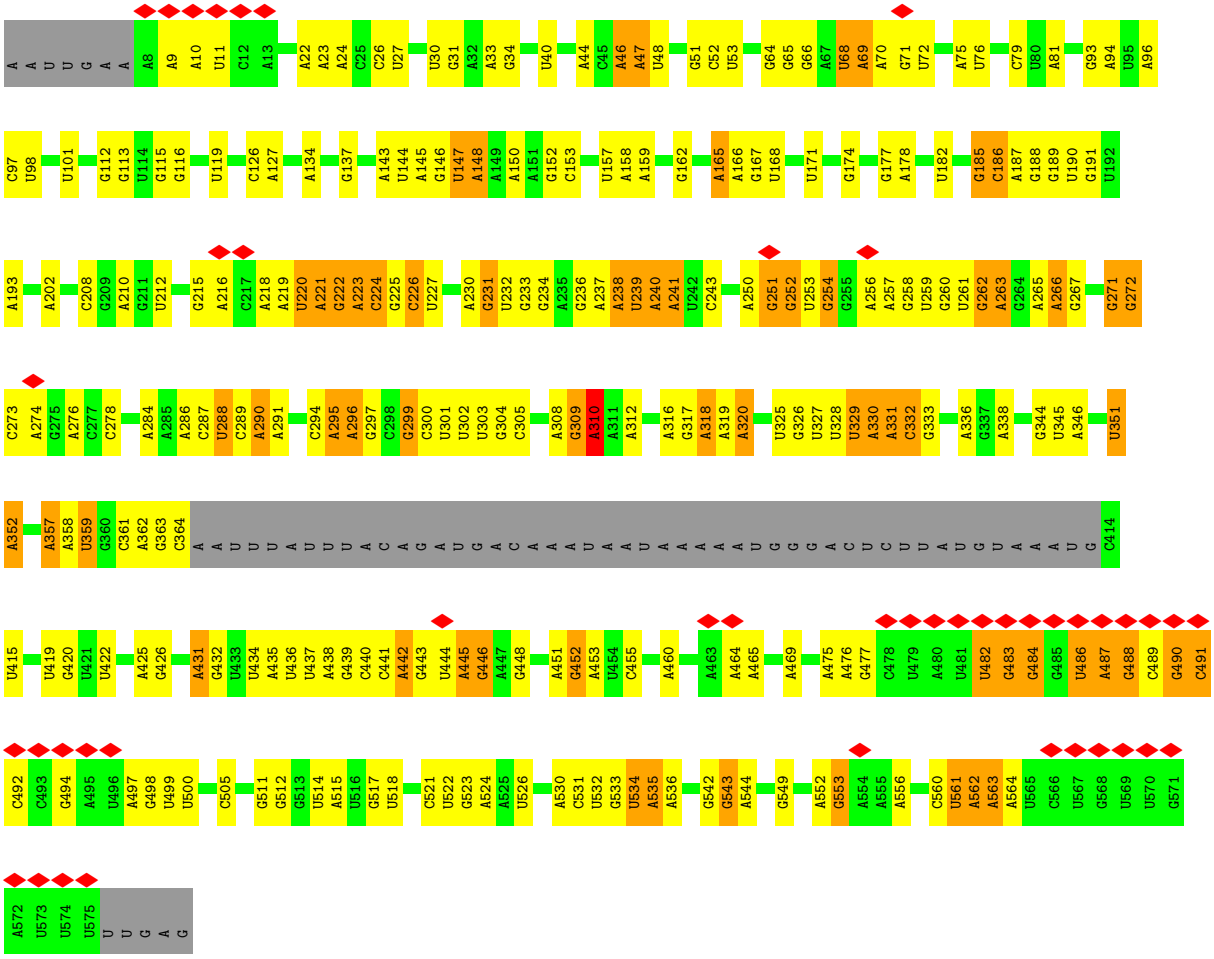
• Molecule 1: RNA (580-MER)

Chain B:



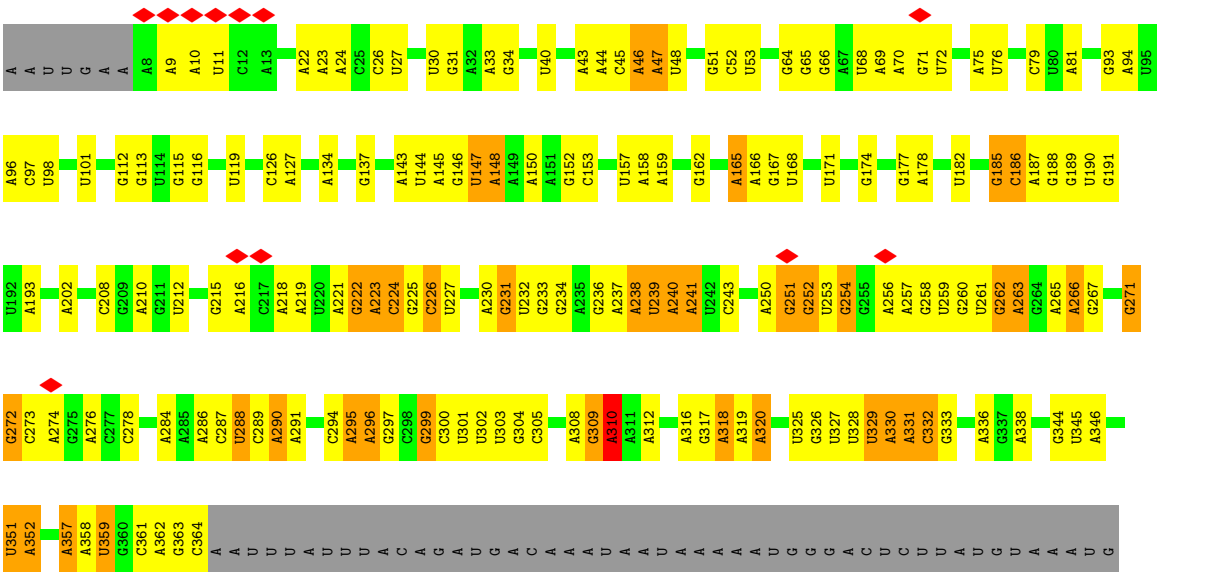
• Molecule 1: RNA (580-MER)

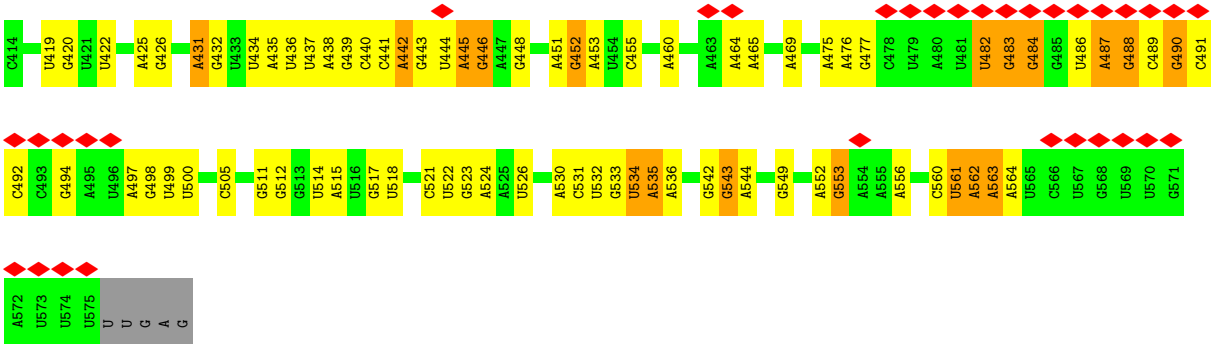
Chain A:



• Molecule 1: RNA (580-MER)

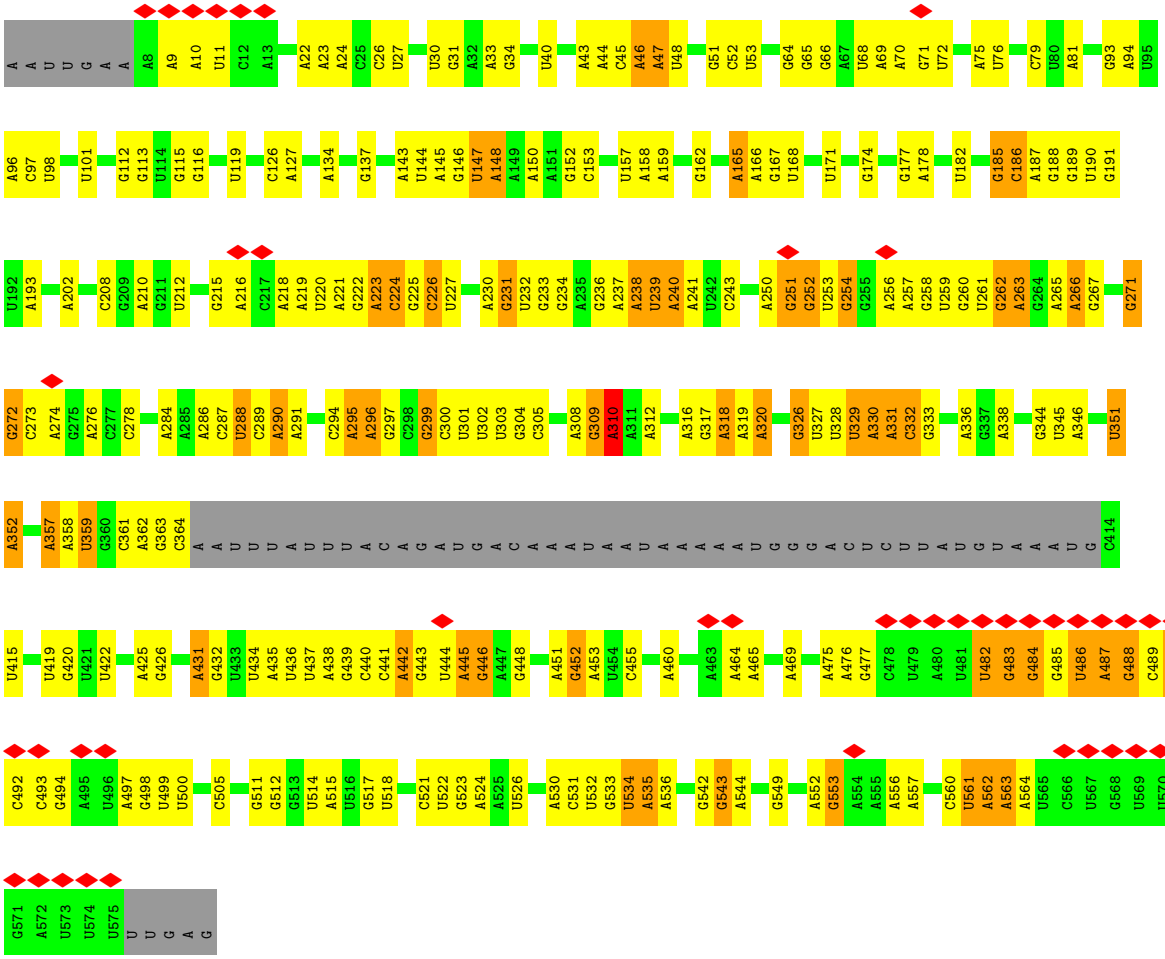
Chain D:





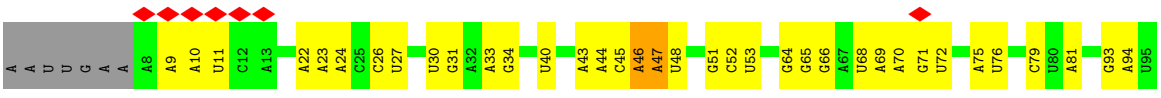
• Molecule 1: RNA (580-MER)

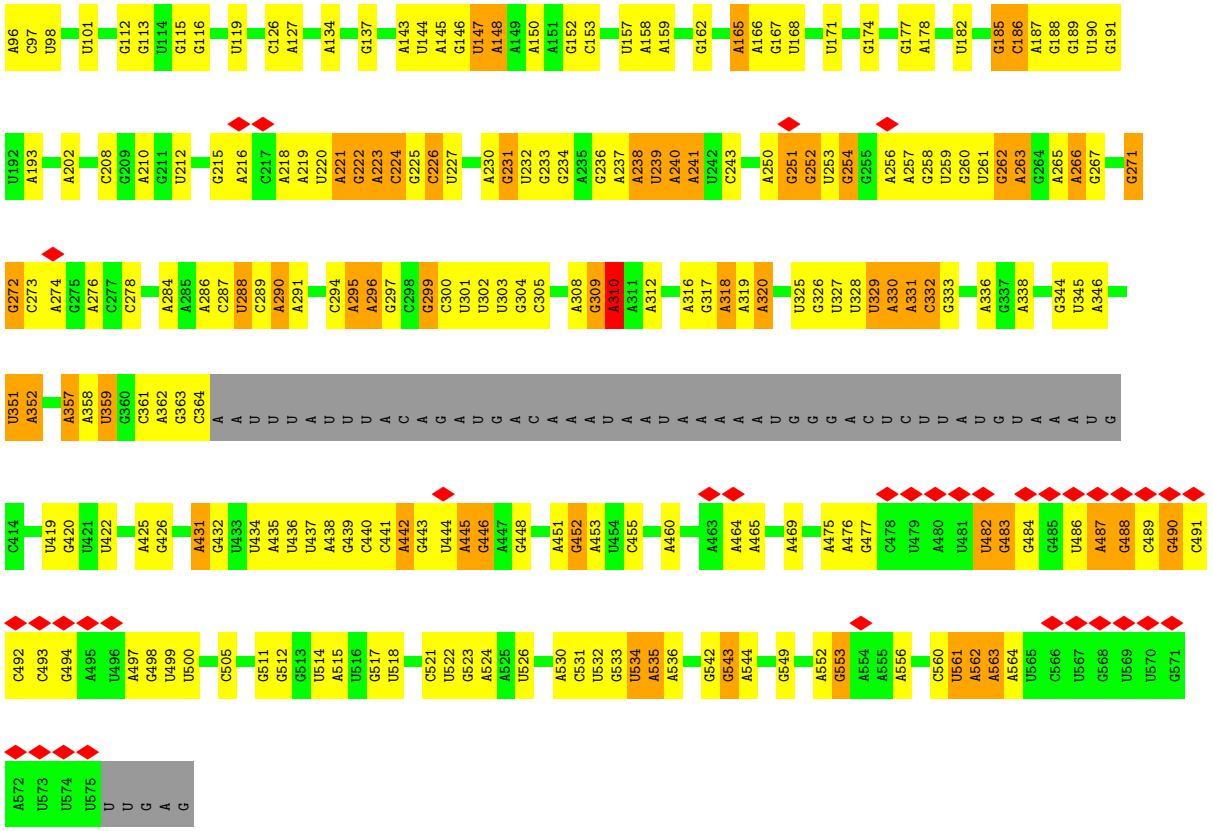
Chain C:



• Molecule 1: RNA (580-MER)

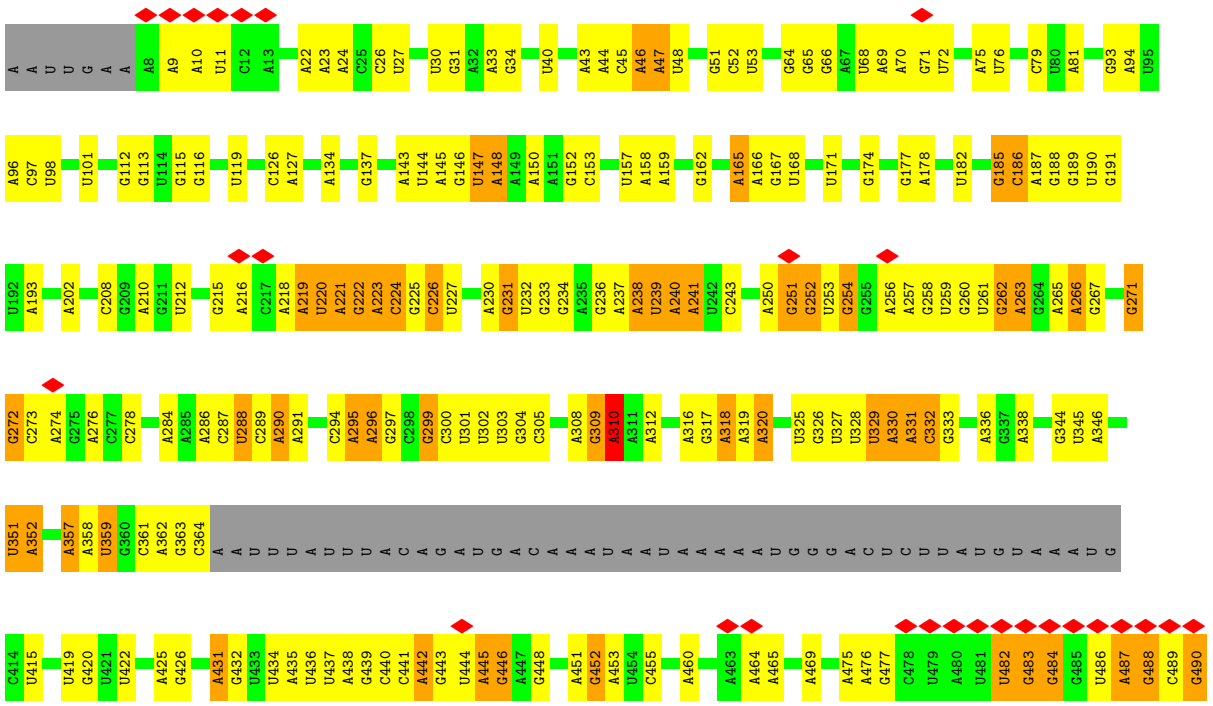
Chain E:

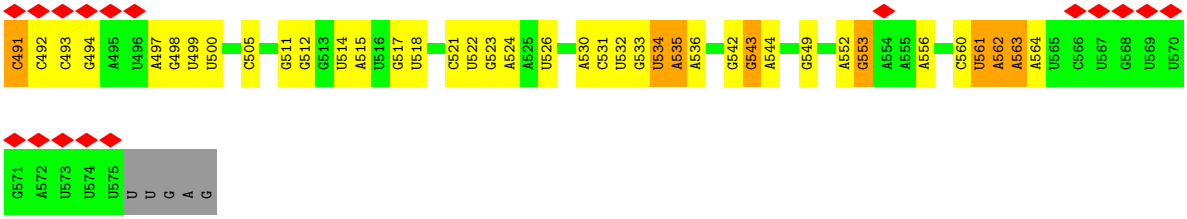




• Molecule 1: RNA (580-MER)

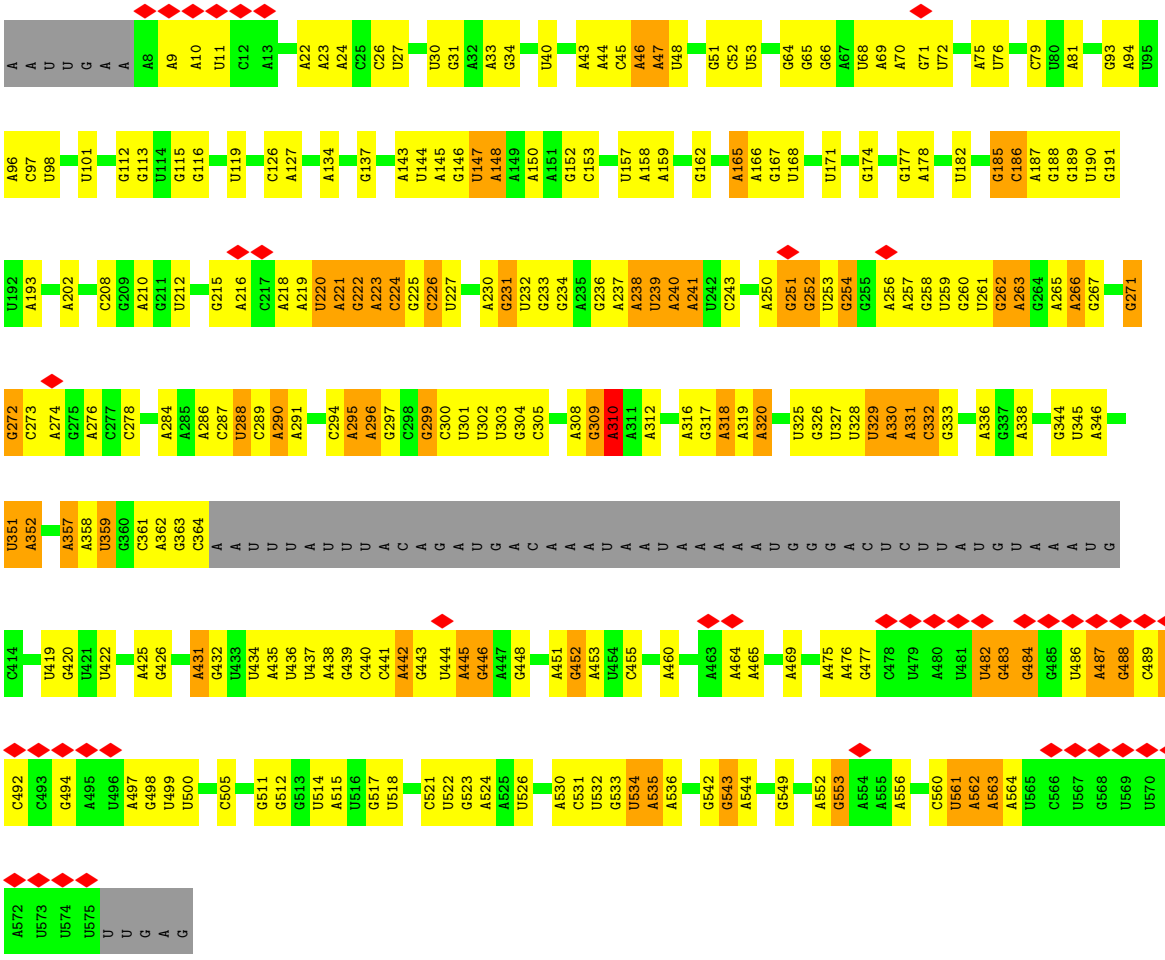
Chain F:





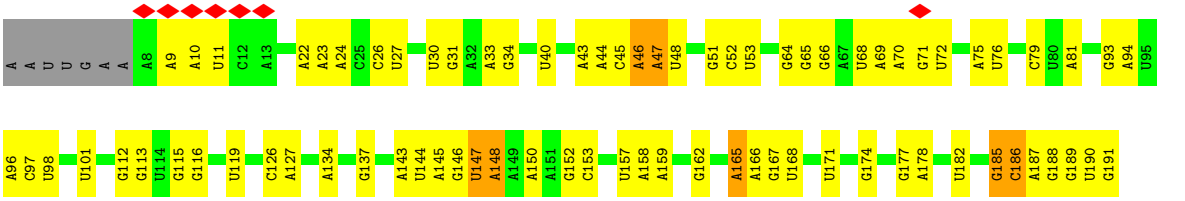
• Molecule 1: RNA (580-MER)

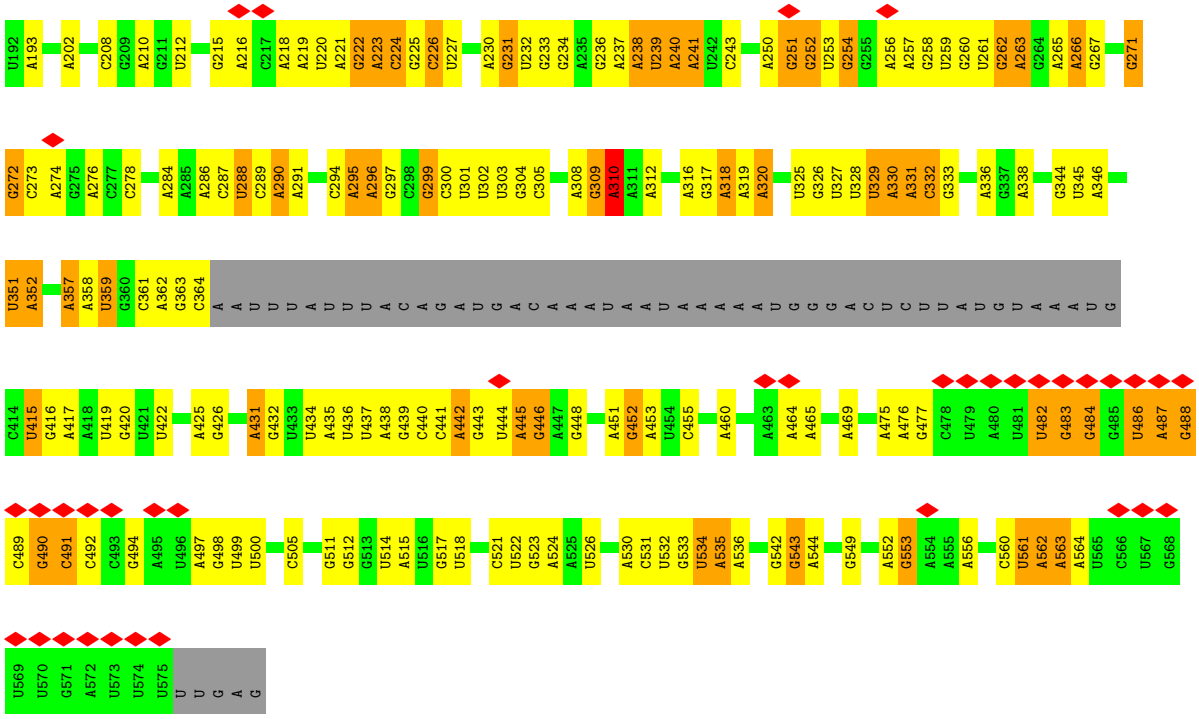
Chain G:



• Molecule 1: RNA (580-MER)

Chain H:




U192 A193 A202 C208 G209 A210 G211 U212 G215 A216 C217 A218 A219 U220 A221 G222 A223 C224 G225 C226 U227 A230 G231 U232 G233 G234 A235 G236 A237 A238 U239 A240 A241 U242 C243 A250 G251 G252 U253 G254 G255 A256 A257 G258 U259 G260 U261 G262 A263 G264 A265 A266 G267 G271
G272 C273 A274 G275 A276 C277 C278 A284 A285 A286 C287 U288 C289 A290 A291 C294 A295 A296 G297 C298 G299 C300 U301 U302 U303 G304 C305 A308 G309 A310 A311 A312 A316 G317 A318 A319 A320 U325 G326 U327 U328 U329 A330 A331 C332 G333 A336 G337 A338 G344 U345 A346
U351 A352 A357 A358 U359 G360 C361 A362 G363 C364
C414 U415 G416 A417 A418 U419 G420 U421 U422 A425 G426 A431 G432 U433 U434 A435 U436 U437 A438 G439 C440 C441 A442 G443 U444 A445 G446 A447 G448 A451 G452 A453 U454 C455 A460 A463 A464 A465 A469 A475 A476 G477 C478 U479 A480 U481 U482 G483 G484 G485 U486 A487 G488
C489 G490 C491 C492 C493 G494 A495 U496 A497 G498 U499 U500 C505 G511 G512 G513 U514 A515 U516 G517 U518 C521 U522 G523 A524 A525 U526 A530 C531 U532 G533 U534 A535 A536 G542 G543 A544 G549 A552 G553 A554 A555 A556 C560 U561 A562 A563 A564 U565 C566 U567 G568
U569 U570 G571 A572 U573 U574 U575 U U G A G

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	76703	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 ($e^-/Å^2$)	61	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.374	Depositor
Minimum map value	-0.127	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.014	Depositor
Recommended contour level	0.06	Depositor
Map size (Å)	422.40002, 422.40002, 422.40002	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1, 1.1, 1.1	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	0.38	0/12496	0.53	1/19481 (0.0%)
1	B	0.38	0/12496	0.53	1/19481 (0.0%)
1	C	0.38	0/12496	0.53	1/19481 (0.0%)
1	D	0.38	0/12496	0.53	1/19481 (0.0%)
1	E	0.38	0/12496	0.53	1/19481 (0.0%)
1	F	0.38	0/12496	0.53	1/19481 (0.0%)
1	G	0.38	0/12496	0.53	1/19481 (0.0%)
1	H	0.39	0/12496	0.53	1/19481 (0.0%)
All	All	0.38	0/99968	0.53	8/155848 (0.0%)

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	310	A	O3'-P-O5'	-5.81	95.28	104.00
1	E	310	A	O3'-P-O5'	-5.81	95.28	104.00
1	H	310	A	O3'-P-O5'	-5.81	95.29	104.00
1	B	310	A	O3'-P-O5'	-5.80	95.29	104.00
1	G	310	A	O3'-P-O5'	-5.80	95.29	104.00
1	C	310	A	O3'-P-O5'	-5.80	95.30	104.00
1	F	310	A	O3'-P-O5'	-5.80	95.30	104.00
1	D	310	A	O3'-P-O5'	-5.79	95.32	104.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	11143	0	5580	87	0
1	B	11143	0	5580	84	0
1	C	11143	0	5580	87	0
1	D	11143	0	5580	87	0
1	E	11143	0	5580	89	0
1	F	11143	0	5580	92	0
1	G	11143	0	5580	87	0
1	H	11143	0	5580	85	0
All	All	89144	0	44640	641	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 5.

All (641) 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:C:253:U:H3	1:C:272:G:H1	1.26	0.82
1:F:253:U:H3	1:F:272:G:H1	1.26	0.82
1:B:253:U:H3	1:B:272:G:H1	1.26	0.81
1:D:253:U:H3	1:D:272:G:H1	1.26	0.81
1:G:253:U:H3	1:G:272:G:H1	1.26	0.81
1:E:253:U:H3	1:E:272:G:H1	1.26	0.81
1:A:253:U:H3	1:A:272:G:H1	1.26	0.80
1:H:253:U:H3	1:H:272:G:H1	1.26	0.79
1:D:259:U:H3	1:D:267:G:H1	1.33	0.77
1:E:259:U:H3	1:E:267:G:H1	1.33	0.77
1:F:259:U:H3	1:F:267:G:H1	1.33	0.76
1:C:259:U:H3	1:C:267:G:H1	1.34	0.76
1:G:259:U:H3	1:G:267:G:H1	1.33	0.76
1:B:259:U:H3	1:B:267:G:H1	1.33	0.76
1:D:212:U:H3	1:D:299:G:H22	1.34	0.76
1:D:329:U:H3	1:D:333:G:H1'	1.50	0.76
1:E:329:U:H3	1:E:333:G:H1'	1.50	0.75
1:E:212:U:H3	1:E:299:G:H22	1.34	0.75
1:F:329:U:H3	1:F:333:G:H1'	1.50	0.75
1:A:259:U:H3	1:A:267:G:H1	1.33	0.75
1:C:329:U:H3	1:C:333:G:H1'	1.50	0.75
1:A:329:U:H3	1:A:333:G:H1'	1.50	0.75
1:H:329:U:H3	1:H:333:G:H1'	1.50	0.75
1:B:329:U:H3	1:B:333:G:H1'	1.50	0.75
1:E:167:G:N2	1:H:320:A:N3	2.35	0.75
1:G:329:U:H3	1:G:333:G:H1'	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:259:U:H3	1:H:267:G:H1	1.34	0.75
1:C:212:U:H3	1:C:299:G:H22	1.34	0.75
1:F:212:U:H3	1:F:299:G:H22	1.34	0.74
1:A:212:U:H3	1:A:299:G:H22	1.34	0.74
1:H:212:U:H3	1:H:299:G:H22	1.34	0.74
1:E:220:U:H2'	1:E:221:A:H4'	1.68	0.74
1:A:320:A:N3	1:D:167:G:N2	2.37	0.73
1:D:490:G:H4'	1:D:492:C:H41	1.53	0.73
1:B:212:U:H3	1:B:299:G:H22	1.34	0.73
1:C:490:G:H4'	1:C:492:C:H41	1.52	0.73
1:G:212:U:H3	1:G:299:G:H22	1.34	0.73
1:G:220:U:C4	1:G:221:A:H1'	2.24	0.72
1:G:490:G:H4'	1:G:492:C:H41	1.53	0.72
1:C:557:A:H4'	1:H:415:U:H4'	1.71	0.72
1:B:167:G:N2	1:C:320:A:N3	2.35	0.71
1:E:490:G:H4'	1:E:492:C:H41	1.56	0.71
1:B:490:G:H4'	1:B:492:C:H41	1.56	0.70
1:A:265:A:H3'	1:A:266:A:C8	2.27	0.69
1:F:320:A:N3	1:G:167:G:N2	2.37	0.69
1:H:265:A:H3'	1:H:266:A:C8	2.27	0.69
1:A:185:G:H3'	1:A:534:U:H3	1.57	0.69
1:D:185:G:H3'	1:D:534:U:H3	1.57	0.69
1:H:185:G:H3'	1:H:534:U:H3	1.57	0.69
1:E:185:G:H3'	1:E:534:U:H3	1.57	0.69
1:C:185:G:H3'	1:C:534:U:H3	1.57	0.69
1:D:265:A:H3'	1:D:266:A:C8	2.28	0.69
1:C:265:A:H3'	1:C:266:A:C8	2.28	0.69
1:F:185:G:H3'	1:F:534:U:H3	1.57	0.69
1:F:147:U:O2'	1:F:148:A:O3'	2.10	0.69
1:F:265:A:H3'	1:F:266:A:C8	2.28	0.69
1:F:490:G:H4'	1:F:492:C:H41	1.57	0.69
1:B:265:A:H3'	1:B:266:A:C8	2.28	0.68
1:D:431:A:H3'	1:D:432:G:H8	1.59	0.68
1:G:265:A:H3'	1:G:266:A:C8	2.28	0.68
1:E:431:A:H3'	1:E:432:G:H8	1.59	0.68
1:C:431:A:H3'	1:C:432:G:H8	1.59	0.68
1:B:265:A:H3'	1:B:266:A:H8	1.59	0.68
1:E:320:A:N3	1:F:167:G:N2	2.41	0.68
1:G:265:A:H3'	1:G:266:A:H8	1.59	0.68
1:B:431:A:H3'	1:B:432:G:H8	1.59	0.68
1:D:320:A:N3	1:C:167:G:N2	2.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:431:A:H3'	1:F:432:G:H8	1.59	0.68
1:H:431:A:H3'	1:H:432:G:H8	1.59	0.68
1:A:431:A:H3'	1:A:432:G:H8	1.59	0.67
1:B:320:A:N3	1:A:167:G:N2	2.41	0.67
1:G:320:A:N3	1:H:167:G:N2	2.41	0.67
1:G:431:A:H3'	1:G:432:G:H8	1.59	0.67
1:C:326:G:OP2	1:C:326:G:C8	2.47	0.67
1:D:265:A:H3'	1:D:266:A:H8	1.59	0.67
1:G:185:G:H3'	1:G:534:U:H3	1.57	0.67
1:B:185:G:H3'	1:B:534:U:H3	1.57	0.67
1:A:265:A:H3'	1:A:266:A:H8	1.59	0.66
1:B:224:C:H41	1:B:238:A:H2	1.44	0.66
1:H:265:A:H3'	1:H:266:A:H8	1.59	0.66
1:G:224:C:H41	1:G:238:A:H2	1.44	0.66
1:C:224:C:H41	1:C:238:A:H2	1.44	0.66
1:B:147:U:O2'	1:B:148:A:O3'	2.10	0.66
1:C:147:U:O2'	1:C:148:A:O3'	2.10	0.66
1:F:224:C:H41	1:F:238:A:H2	1.44	0.66
1:G:147:U:O2'	1:G:148:A:O3'	2.10	0.66
1:H:224:C:H41	1:H:238:A:H2	1.44	0.66
1:A:224:C:H41	1:A:238:A:H2	1.44	0.65
1:D:224:C:H41	1:D:238:A:H2	1.44	0.65
1:E:224:C:H41	1:E:238:A:H2	1.44	0.65
1:F:265:A:H3'	1:F:266:A:H8	1.59	0.64
1:G:222:G:H1'	1:G:240:A:N6	2.12	0.64
1:C:265:A:H3'	1:C:266:A:H8	1.59	0.64
1:A:147:U:O2'	1:A:148:A:O3'	2.10	0.64
1:H:490:G:H4'	1:H:492:C:H41	1.63	0.64
1:H:147:U:O2'	1:H:148:A:O3'	2.10	0.63
1:A:490:G:H4'	1:A:492:C:H41	1.63	0.63
1:F:310:A:H5"	1:F:326:G:H1	1.64	0.63
1:F:351:U:H2'	1:F:352:A:H8	1.62	0.63
1:D:147:U:O2'	1:D:148:A:O3'	2.10	0.63
1:G:310:A:H5"	1:G:326:G:H1	1.64	0.63
1:C:351:U:H2'	1:C:352:A:H8	1.62	0.63
1:E:262:G:H22	1:H:289:C:H42	1.47	0.63
1:H:351:U:H2'	1:H:352:A:H8	1.62	0.63
1:B:310:A:H5"	1:B:326:G:H1	1.64	0.63
1:A:351:U:H2'	1:A:352:A:H8	1.62	0.63
1:E:147:U:O2'	1:E:148:A:O3'	2.10	0.63
1:E:351:U:H2'	1:E:352:A:H8	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:289:C:H42	1:A:262:G:H22	1.47	0.62
1:G:289:C:H42	1:H:262:G:H22	1.47	0.62
1:A:289:C:H42	1:D:262:G:H22	1.48	0.62
1:D:310:A:H5"	1:D:326:G:H1	1.64	0.62
1:D:351:U:H2'	1:D:352:A:H8	1.62	0.62
1:E:310:A:H5"	1:E:326:G:H1	1.64	0.62
1:F:289:C:H42	1:G:262:G:H22	1.47	0.62
1:E:289:C:H42	1:F:262:G:H22	1.47	0.62
1:B:351:U:H2'	1:B:352:A:H8	1.62	0.62
1:C:326:G:OP2	1:C:326:G:H8	1.83	0.62
1:E:265:A:H3'	1:E:266:A:C8	2.35	0.62
1:F:178:A:OP2	1:F:543:G:N2	2.28	0.62
1:G:351:U:H2'	1:G:352:A:H8	1.62	0.62
1:B:487:A:H3'	1:B:488:G:H8	1.64	0.61
1:D:289:C:H42	1:C:262:G:H22	1.47	0.61
1:A:310:A:H5"	1:A:326:G:H1	1.64	0.61
1:G:309:G:H21	1:G:330:A:H62	1.49	0.61
1:B:309:G:H21	1:B:330:A:H62	1.49	0.61
1:D:178:A:OP2	1:D:543:G:N2	2.28	0.61
1:E:265:A:H3'	1:E:266:A:H8	1.64	0.61
1:H:310:A:H5"	1:H:326:G:H1	1.64	0.61
1:A:178:A:OP2	1:A:543:G:N2	2.28	0.61
1:E:178:A:OP2	1:E:543:G:N2	2.28	0.61
1:F:309:G:H21	1:F:330:A:H62	1.49	0.61
1:B:262:G:H22	1:C:289:C:H42	1.49	0.61
1:H:178:A:OP2	1:H:543:G:N2	2.28	0.61
1:C:309:G:H21	1:C:330:A:H62	1.49	0.60
1:A:317:G:N2	1:A:320:A:OP2	2.34	0.60
1:B:178:A:OP2	1:B:543:G:N2	2.28	0.60
1:H:317:G:N2	1:H:320:A:OP2	2.34	0.60
1:B:488:G:H1	1:F:489:C:H42	1.49	0.60
1:A:309:G:H21	1:A:330:A:H62	1.49	0.60
1:H:309:G:H21	1:H:330:A:H62	1.49	0.60
1:E:309:G:H21	1:E:330:A:H62	1.49	0.60
1:F:220:U:H2'	1:F:221:A:H4'	1.84	0.60
1:G:178:A:OP2	1:G:543:G:N2	2.28	0.60
1:D:309:G:H21	1:D:330:A:H62	1.49	0.60
1:B:553:G:O2'	1:B:556:A:N6	2.36	0.59
1:G:553:G:O2'	1:G:556:A:N6	2.36	0.59
1:E:263:A:H61	1:H:288:U:H3	1.50	0.59
1:B:452:G:H1'	1:B:511:G:H2'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:452:G:H1'	1:G:511:G:H2'	1.85	0.59
1:C:553:G:O2'	1:C:556:A:N6	2.36	0.59
1:F:553:G:O2'	1:F:556:A:N6	2.36	0.59
1:A:236:G:H2'	1:A:237:A:C8	2.38	0.59
1:D:553:G:O2'	1:D:556:A:N6	2.36	0.59
1:E:553:G:O2'	1:E:556:A:N6	2.36	0.59
1:F:236:G:H2'	1:F:237:A:C8	2.38	0.59
1:H:236:G:H2'	1:H:237:A:C8	2.38	0.59
1:D:236:G:H2'	1:D:237:A:C8	2.38	0.58
1:C:236:G:H2'	1:C:237:A:C8	2.38	0.58
1:E:236:G:H2'	1:E:237:A:C8	2.38	0.58
1:A:452:G:H1'	1:A:511:G:H2'	1.85	0.58
1:F:437:U:O4	1:F:438:A:N6	2.37	0.58
1:D:317:G:N2	1:D:320:A:OP2	2.34	0.58
1:C:437:U:O4	1:C:438:A:N6	2.37	0.58
1:H:452:G:H1'	1:H:511:G:H2'	1.85	0.58
1:H:437:U:O4	1:H:438:A:N6	2.37	0.58
1:B:236:G:H2'	1:B:237:A:C8	2.38	0.58
1:A:437:U:O4	1:A:438:A:N6	2.37	0.58
1:D:288:U:H3	1:C:263:A:H61	1.51	0.58
1:D:486:U:H3	1:D:488:G:H3'	1.69	0.58
1:C:317:G:N2	1:C:320:A:OP2	2.34	0.58
1:F:317:G:N2	1:F:320:A:OP2	2.34	0.58
1:E:317:G:N2	1:E:320:A:OP2	2.34	0.58
1:G:236:G:H2'	1:G:237:A:C8	2.38	0.58
1:G:482:U:H2'	1:G:483:G:O4'	2.03	0.58
1:A:288:U:H3	1:D:263:A:H61	1.52	0.58
1:E:288:U:H3	1:F:263:A:H61	1.51	0.58
1:G:288:U:H3	1:H:263:A:H61	1.51	0.58
1:G:437:U:O4	1:G:438:A:N6	2.37	0.58
1:B:288:U:H3	1:A:263:A:H61	1.52	0.58
1:B:317:G:N2	1:B:320:A:OP2	2.34	0.58
1:B:437:U:O4	1:B:438:A:N6	2.37	0.58
1:F:220:U:C4	1:F:221:A:H1'	2.38	0.58
1:G:317:G:N2	1:G:320:A:OP2	2.34	0.57
1:A:553:G:O2'	1:A:556:A:N6	2.36	0.57
1:F:288:U:H3	1:G:263:A:H61	1.52	0.57
1:D:452:G:H1'	1:D:511:G:H2'	1.85	0.57
1:E:437:U:O4	1:E:438:A:N6	2.37	0.57
1:E:452:G:H1'	1:E:511:G:H2'	1.85	0.57
1:E:486:U:H3	1:E:488:G:H3'	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:351:U:H2'	1:H:352:A:C8	2.39	0.57
1:H:553:G:O2'	1:H:556:A:N6	2.36	0.57
1:A:351:U:H2'	1:A:352:A:C8	2.40	0.57
1:D:437:U:O4	1:D:438:A:N6	2.37	0.57
1:C:452:G:H1'	1:C:511:G:H2'	1.85	0.57
1:A:220:U:H2'	1:A:221:A:H4'	1.85	0.57
1:E:351:U:H2'	1:E:352:A:C8	2.40	0.57
1:F:442:A:C8	1:F:445:A:H2'	2.40	0.57
1:D:351:U:H2'	1:D:352:A:C8	2.39	0.57
1:C:442:A:C8	1:C:445:A:H2'	2.40	0.56
1:F:452:G:H1'	1:F:511:G:H2'	1.85	0.56
1:B:442:A:C8	1:B:445:A:H2'	2.40	0.56
1:C:310:A:H4'	1:C:326:G:H22	1.69	0.56
1:G:442:A:C8	1:G:445:A:H2'	2.40	0.56
1:B:263:A:H61	1:C:288:U:H3	1.53	0.56
1:B:351:U:H2'	1:B:352:A:C8	2.40	0.56
1:D:442:A:C8	1:D:445:A:H2'	2.40	0.56
1:C:290:A:H3'	1:C:291:A:H8	1.71	0.56
1:C:351:U:H2'	1:C:352:A:C8	2.39	0.56
1:E:442:A:C8	1:E:445:A:H2'	2.40	0.56
1:F:290:A:H3'	1:F:291:A:H8	1.71	0.56
1:F:351:U:H2'	1:F:352:A:C8	2.39	0.56
1:G:351:U:H2'	1:G:352:A:C8	2.40	0.56
1:C:146:G:O2'	1:C:147:U:O5'	2.23	0.56
1:B:482:U:H2'	1:B:483:G:O4'	2.05	0.56
1:D:290:A:H3'	1:D:291:A:H8	1.71	0.56
1:E:290:A:H3'	1:E:291:A:H8	1.71	0.56
1:A:290:A:H3'	1:A:291:A:H8	1.71	0.55
1:D:146:G:O2'	1:D:147:U:O5'	2.23	0.55
1:H:290:A:H3'	1:H:291:A:H8	1.71	0.55
1:B:290:A:H3'	1:B:291:A:H8	1.71	0.55
1:A:442:A:C8	1:A:445:A:H2'	2.40	0.55
1:E:146:G:O2'	1:E:147:U:O5'	2.23	0.55
1:B:489:C:H42	1:F:488:G:H1	1.53	0.55
1:G:290:A:H3'	1:G:291:A:H8	1.71	0.55
1:H:482:U:H2'	1:H:483:G:O4'	2.06	0.55
1:H:442:A:C8	1:H:445:A:H2'	2.40	0.55
1:A:222:G:H1'	1:A:240:A:N7	2.21	0.55
1:D:210:A:O2'	1:D:331:A:N6	2.40	0.55
1:E:210:A:O2'	1:E:331:A:N6	2.40	0.55
1:G:486:U:H3	1:G:488:G:H3'	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:210:A:O2'	1:H:331:A:N6	2.40	0.55
1:A:146:G:O2'	1:A:147:U:O5'	2.23	0.55
1:A:210:A:O2'	1:A:331:A:N6	2.40	0.55
1:D:482:U:H2'	1:D:483:G:O4'	2.06	0.55
1:G:146:G:O2'	1:G:147:U:O5'	2.23	0.55
1:B:146:G:O2'	1:B:147:U:O5'	2.23	0.55
1:H:146:G:O2'	1:H:147:U:O5'	2.23	0.55
1:C:210:A:O2'	1:C:331:A:N6	2.40	0.54
1:F:210:A:O2'	1:F:331:A:N6	2.40	0.54
1:E:225:G:H1'	1:H:231:G:N1	2.23	0.54
1:A:231:G:N1	1:D:225:G:H1'	2.23	0.54
1:F:222:G:H1'	1:F:240:A:N6	2.22	0.54
1:H:254:G:H1	1:H:271:G:H22	1.55	0.54
1:A:254:G:H1	1:A:271:G:H22	1.56	0.54
1:A:482:U:H2'	1:A:483:G:O4'	2.08	0.54
1:D:489:C:H42	1:H:488:G:H1	1.56	0.54
1:C:487:A:H3'	1:C:488:G:H8	1.72	0.54
1:B:210:A:O2'	1:B:331:A:N6	2.40	0.54
1:D:222:G:H21	1:D:241:A:H62	1.55	0.54
1:F:482:U:H2'	1:F:483:G:O4'	2.07	0.54
1:G:210:A:O2'	1:G:331:A:N6	2.40	0.54
1:E:482:U:H2'	1:E:483:G:O4'	2.07	0.54
1:F:26:C:O2'	1:F:127:A:N3	2.36	0.54
1:C:26:C:O2'	1:C:127:A:N3	2.36	0.53
1:F:231:G:N1	1:G:225:G:H1'	2.23	0.53
1:B:225:G:H1'	1:C:231:G:N1	2.23	0.53
1:D:254:G:H1	1:D:271:G:H22	1.56	0.53
1:C:223:A:N7	1:C:239:U:O2'	2.42	0.53
1:C:310:A:H5"	1:C:326:G:H1	1.74	0.53
1:D:222:G:H1'	1:D:240:A:H62	1.72	0.53
1:E:254:G:H1	1:E:271:G:H22	1.55	0.53
1:C:484:G:H3'	1:C:485:G:H8	1.74	0.53
1:E:222:G:H1'	1:E:240:A:N7	2.24	0.53
1:B:254:G:H1	1:B:271:G:H22	1.55	0.52
1:G:487:A:H3'	1:G:488:G:H8	1.75	0.52
1:D:310:A:C5'	1:D:326:G:H1	2.22	0.52
1:F:146:G:O2'	1:F:147:U:O5'	2.23	0.52
1:G:254:G:H1	1:G:271:G:H22	1.55	0.52
1:A:487:A:H3'	1:A:488:G:H8	1.74	0.52
1:E:310:A:H4'	1:E:326:G:H22	1.75	0.52
1:F:310:A:H4'	1:F:326:G:H22	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:222:G:H1'	1:G:240:A:H62	1.74	0.52
1:D:310:A:H4'	1:D:326:G:H22	1.75	0.52
1:E:310:A:C5'	1:E:326:G:H1	2.22	0.52
1:H:222:G:H1'	1:H:240:A:H62	1.75	0.52
1:E:26:C:O2'	1:E:127:A:N3	2.36	0.52
1:F:310:A:C5'	1:F:326:G:H1	2.22	0.52
1:B:310:A:H4'	1:B:326:G:H22	1.75	0.52
1:A:250:A:N6	1:A:251:G:O6	2.43	0.52
1:C:254:G:H1	1:C:271:G:H22	1.55	0.52
1:F:254:G:H1	1:F:271:G:H22	1.55	0.52
1:F:486:U:H3	1:F:488:G:H3'	1.74	0.52
1:G:310:A:H4'	1:G:326:G:H22	1.75	0.52
1:H:250:A:N6	1:H:251:G:O6	2.43	0.52
1:H:487:A:H3'	1:H:488:G:H8	1.74	0.52
1:D:26:C:O2'	1:D:127:A:N3	2.36	0.52
1:E:250:A:N6	1:E:251:G:O6	2.43	0.52
1:G:310:A:C5'	1:G:326:G:H1	2.22	0.52
1:B:310:A:C5'	1:B:326:G:H1	2.22	0.52
1:D:250:A:N6	1:D:251:G:O6	2.43	0.52
1:G:223:A:N7	1:G:239:U:O2'	2.42	0.51
1:A:310:A:C5'	1:A:326:G:H1	2.22	0.51
1:H:310:A:C5'	1:H:326:G:H1	2.22	0.51
1:C:178:A:OP2	1:C:543:G:N2	2.28	0.51
1:B:250:A:N6	1:B:251:G:O6	2.43	0.51
1:G:490:G:H4'	1:G:492:C:N4	2.23	0.51
1:H:222:G:H21	1:H:241:A:H62	1.57	0.51
1:C:483:G:H3'	1:C:484:G:H8	1.75	0.51
1:G:250:A:N6	1:G:251:G:O6	2.43	0.51
1:C:431:A:H3'	1:C:432:G:C8	2.44	0.51
1:F:250:A:N6	1:F:251:G:O6	2.43	0.50
1:D:431:A:H3'	1:D:432:G:C8	2.44	0.50
1:C:250:A:N6	1:C:251:G:O6	2.43	0.50
1:F:431:A:H3'	1:F:432:G:C8	2.44	0.50
1:H:310:A:H4'	1:H:326:G:H22	1.75	0.50
1:B:222:G:H1'	1:B:240:A:N7	2.26	0.50
1:B:445:A:H1'	1:B:446:G:C5	2.46	0.50
1:A:310:A:H4'	1:A:326:G:H22	1.75	0.50
1:G:26:C:O2'	1:G:127:A:N3	2.36	0.50
1:G:445:A:H1'	1:G:446:G:C5	2.46	0.50
1:A:488:G:H2'	1:A:489:C:C6	2.46	0.50
1:D:441:C:H2'	1:D:445:A:N7	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:441:C:H2'	1:E:445:A:N7	2.27	0.50
1:H:488:G:H2'	1:H:489:C:C6	2.46	0.50
1:E:431:A:H3'	1:E:432:G:C8	2.44	0.50
1:B:26:C:O2'	1:B:127:A:N3	2.36	0.50
1:A:441:C:H2'	1:A:445:A:N7	2.27	0.50
1:C:226:C:H2'	1:C:227:U:C6	2.47	0.50
1:E:489:C:H2'	1:E:491:C:C5	2.46	0.50
1:F:226:C:H2'	1:F:227:U:C6	2.47	0.50
1:H:441:C:H2'	1:H:445:A:N7	2.27	0.50
1:D:489:C:H2'	1:D:491:C:C5	2.46	0.50
1:C:441:C:H2'	1:C:445:A:N7	2.27	0.50
1:D:186:C:H5"	1:D:533:G:H22	1.77	0.50
1:D:223:A:C5	1:D:240:A:H1'	2.47	0.50
1:E:222:G:H21	1:E:241:A:H62	1.59	0.50
1:F:445:A:H1'	1:F:446:G:C5	2.47	0.50
1:C:445:A:H1'	1:C:446:G:C5	2.46	0.49
1:E:186:C:H5"	1:E:533:G:H22	1.77	0.49
1:F:223:A:N7	1:F:239:U:O2'	2.42	0.49
1:F:441:C:H2'	1:F:445:A:N7	2.27	0.49
1:H:329:U:H1'	1:H:331:A:C2	2.47	0.49
1:B:226:C:H2'	1:B:227:U:C6	2.47	0.49
1:A:329:U:H1'	1:A:331:A:C2	2.47	0.49
1:D:490:G:H4'	1:D:492:C:N4	2.23	0.49
1:G:226:C:H2'	1:G:227:U:C6	2.47	0.49
1:B:490:G:H4'	1:B:492:C:N4	2.24	0.49
1:E:562:A:H2'	1:E:563:A:C8	2.47	0.49
1:F:489:C:H2'	1:F:491:C:C5	2.47	0.49
1:H:445:A:H1'	1:H:446:G:C5	2.47	0.49
1:B:231:G:N1	1:A:225:G:H1'	2.28	0.49
1:A:445:A:H1'	1:A:446:G:C5	2.46	0.49
1:F:562:A:H2'	1:F:563:A:C8	2.47	0.49
1:G:231:G:N1	1:H:225:G:H1'	2.28	0.49
1:D:226:C:H2'	1:D:227:U:C6	2.47	0.49
1:D:445:A:H1'	1:D:446:G:C5	2.47	0.49
1:D:562:A:H2'	1:D:563:A:C8	2.47	0.49
1:E:445:A:H1'	1:E:446:G:C5	2.47	0.49
1:A:562:A:H2'	1:A:563:A:C8	2.47	0.49
1:C:329:U:H1'	1:C:331:A:C2	2.47	0.49
1:C:562:A:H2'	1:C:563:A:C8	2.47	0.49
1:E:223:A:N7	1:E:239:U:O2'	2.45	0.49
1:E:226:C:H2'	1:E:227:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:329:U:H1'	1:F:331:A:C2	2.47	0.49
1:G:329:U:H1'	1:G:331:A:C2	2.47	0.49
1:G:441:C:H2'	1:G:445:A:N7	2.27	0.49
1:B:441:C:H2'	1:B:445:A:N7	2.27	0.49
1:B:562:A:H2'	1:B:563:A:C8	2.47	0.49
1:A:488:G:H1	1:E:489:C:H42	1.60	0.49
1:B:329:U:H1'	1:B:331:A:C2	2.47	0.49
1:A:186:C:H5"	1:A:533:G:H22	1.77	0.49
1:G:186:C:H5"	1:G:533:G:H22	1.77	0.49
1:H:562:A:H2'	1:H:563:A:C8	2.47	0.49
1:B:186:C:H5"	1:B:533:G:H22	1.77	0.49
1:E:231:G:N1	1:F:225:G:H1'	2.28	0.49
1:G:562:A:H2'	1:G:563:A:C8	2.47	0.49
1:H:186:C:H5"	1:H:533:G:H22	1.77	0.49
1:A:431:A:H3'	1:A:432:G:C8	2.44	0.48
1:E:65:G:H1'	1:H:318:A:N1	2.28	0.48
1:H:489:C:H2'	1:H:491:C:C5	2.49	0.48
1:B:186:C:H1'	1:B:535:A:C6	2.49	0.48
1:A:489:C:H2'	1:A:491:C:C5	2.49	0.48
1:D:231:G:N1	1:C:225:G:H1'	2.28	0.48
1:C:489:C:H42	1:G:488:G:H1	1.62	0.48
1:G:186:C:H1'	1:G:535:A:C6	2.49	0.48
1:A:226:C:H2'	1:A:227:U:C6	2.47	0.48
1:D:46:A:H3'	1:D:47:A:H8	1.79	0.48
1:D:329:U:H1'	1:D:331:A:C2	2.47	0.48
1:F:186:C:H5"	1:F:533:G:H22	1.77	0.48
1:H:186:C:H1'	1:H:535:A:C6	2.49	0.48
1:H:226:C:H2'	1:H:227:U:C6	2.47	0.48
1:H:431:A:H3'	1:H:432:G:C8	2.44	0.48
1:A:186:C:H1'	1:A:535:A:C6	2.49	0.48
1:D:223:A:N7	1:D:239:U:O2'	2.44	0.48
1:C:482:U:OP2	1:C:490:G:N1	2.46	0.48
1:E:46:A:H3'	1:E:47:A:H8	1.79	0.48
1:E:329:U:H1'	1:E:331:A:C2	2.47	0.48
1:G:489:C:H2'	1:G:491:C:C5	2.48	0.48
1:H:26:C:O2'	1:H:127:A:N3	2.36	0.48
1:C:186:C:H1'	1:C:535:A:C6	2.49	0.48
1:C:186:C:H5"	1:C:533:G:H22	1.77	0.48
1:F:186:C:H1'	1:F:535:A:C6	2.49	0.48
1:B:482:U:OP2	1:B:490:G:N1	2.46	0.48
1:A:318:A:N1	1:D:65:G:H1'	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:46:A:H3'	1:F:47:A:H8	1.79	0.48
1:C:46:A:H3'	1:C:47:A:H8	1.79	0.48
1:C:310:A:C5'	1:C:326:G:H1	2.26	0.48
1:D:488:G:H2'	1:D:489:C:C6	2.49	0.48
1:A:26:C:O2'	1:A:127:A:N3	2.36	0.48
1:H:290:A:H3'	1:H:291:A:C8	2.49	0.48
1:A:290:A:H3'	1:A:291:A:C8	2.49	0.48
1:A:46:A:H3'	1:A:47:A:H8	1.79	0.47
1:B:65:G:H1'	1:C:318:A:N1	2.28	0.47
1:D:290:A:H3'	1:D:291:A:C8	2.49	0.47
1:C:488:G:H2'	1:C:489:C:C6	2.49	0.47
1:E:290:A:H3'	1:E:291:A:C8	2.49	0.47
1:F:318:A:N1	1:G:65:G:H1'	2.29	0.47
1:F:487:A:H3'	1:F:488:G:H8	1.79	0.47
1:H:46:A:H3'	1:H:47:A:H8	1.79	0.47
1:B:146:G:HO2'	1:B:147:U:P	2.37	0.47
1:E:221:A:C8	1:E:221:A:H5"	2.48	0.47
1:C:488:G:H1	1:G:489:C:H42	1.63	0.47
1:G:146:G:HO2'	1:G:147:U:P	2.37	0.47
1:B:290:A:H3'	1:B:291:A:C8	2.49	0.47
1:A:185:G:H21	1:A:536:A:H62	1.63	0.47
1:A:186:C:H3'	1:A:187:A:H8	1.80	0.47
1:F:222:G:N2	1:F:241:A:N7	2.61	0.47
1:F:482:U:OP2	1:F:490:G:N1	2.47	0.47
1:H:186:C:H3'	1:H:187:A:H8	1.80	0.47
1:D:186:C:H1'	1:D:535:A:C6	2.49	0.47
1:E:482:U:OP2	1:E:490:G:N1	2.48	0.47
1:G:290:A:H3'	1:G:291:A:C8	2.49	0.47
1:H:185:G:H21	1:H:536:A:H62	1.63	0.47
1:B:186:C:H3'	1:B:187:A:H8	1.80	0.47
1:C:486:U:O2	1:C:489:C:H5	1.97	0.47
1:E:186:C:H1'	1:E:535:A:C6	2.49	0.47
1:F:290:A:H3'	1:F:291:A:C8	2.49	0.47
1:G:186:C:H3'	1:G:187:A:H8	1.80	0.47
1:H:288:U:H2'	1:H:289:C:C6	2.50	0.47
1:B:223:A:N7	1:B:239:U:O2'	2.47	0.47
1:A:288:U:H2'	1:A:289:C:C6	2.50	0.47
1:C:290:A:H3'	1:C:291:A:C8	2.49	0.47
1:B:66:G:N1	1:B:165:A:N7	2.63	0.47
1:B:288:U:H2'	1:B:289:C:C6	2.50	0.47
1:G:66:G:N1	1:G:165:A:N7	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:46:A:H3'	1:B:47:A:H8	1.79	0.46
1:D:185:G:H21	1:D:536:A:H62	1.63	0.46
1:E:288:U:H2'	1:E:289:C:C6	2.50	0.46
1:F:146:G:HO2'	1:F:147:U:P	2.38	0.46
1:G:288:U:H2'	1:G:289:C:C6	2.50	0.46
1:D:288:U:H2'	1:D:289:C:C6	2.50	0.46
1:D:482:U:OP2	1:D:490:G:N1	2.49	0.46
1:E:186:C:H3'	1:E:187:A:H8	1.80	0.46
1:G:46:A:H3'	1:G:47:A:H8	1.79	0.46
1:H:66:G:N1	1:H:165:A:N7	2.63	0.46
1:B:185:G:H21	1:B:536:A:H62	1.63	0.46
1:A:66:G:N1	1:A:165:A:N7	2.63	0.46
1:G:185:G:H21	1:G:536:A:H62	1.63	0.46
1:H:329:U:H3	1:H:333:G:C1'	2.25	0.46
1:C:66:G:N1	1:C:165:A:N7	2.63	0.46
1:E:185:G:H21	1:E:536:A:H62	1.63	0.46
1:F:66:G:N1	1:F:165:A:N7	2.63	0.46
1:A:482:U:OP2	1:A:490:G:N1	2.48	0.46
1:D:186:C:H3'	1:D:187:A:H8	1.80	0.46
1:C:186:C:H3'	1:C:187:A:H8	1.80	0.46
1:E:488:G:H2'	1:E:489:C:C6	2.51	0.46
1:F:219:A:H2'	1:F:220:U:H5"	1.98	0.46
1:F:186:C:H3'	1:F:187:A:H8	1.80	0.46
1:A:329:U:H3	1:A:333:G:C1'	2.25	0.46
1:H:482:U:OP2	1:H:490:G:N1	2.48	0.46
1:D:66:G:N1	1:D:165:A:N7	2.63	0.46
1:C:415:U:C2'	1:H:556:A:HO2'	2.26	0.46
1:F:185:G:H21	1:F:536:A:H62	1.63	0.46
1:G:223:A:C5	1:G:240:A:H1'	2.51	0.46
1:C:185:G:H21	1:C:536:A:H62	1.63	0.46
1:E:66:G:N1	1:E:165:A:N7	2.63	0.46
1:G:488:G:H2'	1:G:489:C:C6	2.50	0.46
1:A:223:A:N7	1:A:239:U:O2'	2.49	0.46
1:C:223:A:C5	1:C:240:A:H1'	2.51	0.46
1:F:223:A:C5	1:F:240:A:H1'	2.51	0.46
1:F:222:G:H1'	1:F:240:A:H62	1.80	0.45
1:A:308:A:H2'	1:A:309:G:O4'	2.16	0.45
1:C:288:U:H2'	1:C:289:C:C6	2.50	0.45
1:C:329:U:H1'	1:C:331:A:H2	1.82	0.45
1:F:288:U:H2'	1:F:289:C:C6	2.50	0.45
1:B:357:A:H1'	1:B:359:U:O2'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:357:A:H1'	1:D:359:U:O2'	2.16	0.45
1:C:489:C:H2'	1:C:491:C:C5	2.50	0.45
1:F:329:U:H1'	1:F:331:A:H2	1.82	0.45
1:G:357:A:H1'	1:G:359:U:O2'	2.16	0.45
1:G:482:U:OP2	1:G:490:G:N1	2.48	0.45
1:H:308:A:H2'	1:H:309:G:O4'	2.16	0.45
1:E:329:U:H3	1:E:333:G:C1'	2.25	0.45
1:E:490:G:H4'	1:E:492:C:N4	2.28	0.45
1:C:357:A:H1'	1:C:359:U:O2'	2.16	0.45
1:E:357:A:H1'	1:E:359:U:O2'	2.16	0.45
1:C:308:A:H2'	1:C:309:G:O4'	2.16	0.45
1:F:308:A:H2'	1:F:309:G:O4'	2.16	0.45
1:F:357:A:H1'	1:F:359:U:O2'	2.16	0.45
1:H:295:A:H1'	1:H:296:A:H2	1.82	0.45
1:B:431:A:H3'	1:B:432:G:C8	2.44	0.45
1:A:222:G:H21	1:A:241:A:H62	1.63	0.45
1:A:329:U:H1'	1:A:331:A:H2	1.82	0.45
1:D:329:U:H3	1:D:333:G:C1'	2.25	0.45
1:E:329:U:H1'	1:E:331:A:H2	1.82	0.45
1:F:295:A:H1'	1:F:296:A:H2	1.82	0.45
1:G:431:A:H3'	1:G:432:G:C8	2.44	0.45
1:B:222:G:H21	1:B:241:A:H62	1.64	0.45
1:A:295:A:H1'	1:A:296:A:H2	1.82	0.45
1:D:329:U:H1'	1:D:331:A:H2	1.82	0.45
1:E:295:A:H1'	1:E:296:A:H2	1.82	0.45
1:G:308:A:H2'	1:G:309:G:O4'	2.16	0.45
1:H:329:U:H1'	1:H:331:A:H2	1.82	0.45
1:B:308:A:H2'	1:B:309:G:O4'	2.16	0.45
1:D:295:A:H1'	1:D:296:A:H2	1.82	0.45
1:C:295:A:H1'	1:C:296:A:H2	1.82	0.45
1:G:295:A:H1'	1:G:296:A:H2	1.82	0.45
1:B:295:A:H1'	1:B:296:A:H2	1.82	0.45
1:A:357:A:H1'	1:A:359:U:O2'	2.16	0.45
1:B:489:C:H2'	1:B:491:C:C5	2.52	0.44
1:G:487:A:H5'	1:G:488:G:C8	2.52	0.44
1:H:357:A:H1'	1:H:359:U:O2'	2.16	0.44
1:D:308:A:H2'	1:D:309:G:O4'	2.16	0.44
1:G:329:U:H1'	1:G:331:A:H2	1.82	0.44
1:B:329:U:H1'	1:B:331:A:H2	1.82	0.44
1:E:308:A:H2'	1:E:309:G:O4'	2.16	0.44
1:B:223:A:C5	1:B:240:A:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:223:A:C5	1:H:240:A:H1'	2.53	0.44
1:B:318:A:N1	1:A:65:G:H1'	2.33	0.44
1:E:223:A:C5	1:E:240:A:H1'	2.53	0.44
1:E:318:A:N1	1:F:65:G:H1'	2.33	0.44
1:E:487:A:H3'	1:E:488:G:H8	1.82	0.44
1:G:318:A:N1	1:H:65:G:H1'	2.33	0.44
1:D:318:A:N1	1:C:65:G:H1'	2.33	0.44
1:A:146:G:HO2'	1:A:147:U:P	2.41	0.43
1:E:146:G:HO2'	1:E:147:U:P	2.40	0.43
1:B:329:U:H3	1:B:333:G:C1'	2.25	0.43
1:A:486:U:H3	1:A:488:G:H3'	1.82	0.43
1:C:440:C:H2'	1:C:441:C:C6	2.53	0.43
1:F:488:G:H2'	1:F:489:C:C6	2.52	0.43
1:G:329:U:H3	1:G:333:G:C1'	2.25	0.43
1:F:440:C:H2'	1:F:441:C:C6	2.53	0.43
1:A:223:A:C5	1:A:240:A:H1'	2.54	0.43
1:H:486:U:H3	1:H:488:G:H3'	1.82	0.43
1:A:415:U:C2'	1:F:556:A:HO2'	2.27	0.43
1:C:310:A:C1'	1:C:312:A:H62	2.32	0.43
1:G:325:U:H2'	1:G:326:G:C8	2.53	0.43
1:B:325:U:H2'	1:B:326:G:C8	2.53	0.43
1:F:310:A:C1'	1:F:312:A:H62	2.32	0.43
1:B:440:C:H2'	1:B:441:C:C6	2.53	0.43
1:C:302:U:H2'	1:C:332:C:C5	2.54	0.43
1:F:302:U:H2'	1:F:332:C:C5	2.54	0.43
1:F:490:G:H4'	1:F:492:C:N4	2.31	0.43
1:G:440:C:H2'	1:G:441:C:C6	2.53	0.43
1:A:302:U:H2'	1:A:332:C:C5	2.54	0.43
1:D:302:U:H2'	1:D:332:C:C5	2.54	0.43
1:G:222:G:N2	1:G:241:A:N7	2.66	0.43
1:H:302:U:H2'	1:H:332:C:C5	2.54	0.43
1:A:556:A:HO2'	1:F:415:U:C2'	2.29	0.43
1:D:440:C:H2'	1:D:441:C:C6	2.53	0.43
1:E:302:U:H2'	1:E:332:C:C5	2.54	0.43
1:H:223:A:N7	1:H:239:U:O2'	2.45	0.43
1:A:440:C:H2'	1:A:441:C:C6	2.53	0.43
1:E:440:C:H2'	1:E:441:C:C6	2.53	0.43
1:H:440:C:H2'	1:H:441:C:C6	2.53	0.42
1:H:310:A:C1'	1:H:312:A:H62	2.32	0.42
1:H:484:G:O6	1:H:491:C:N4	2.53	0.42
1:A:310:A:C1'	1:A:312:A:H62	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:484:G:O6	1:A:491:C:N4	2.53	0.42
1:C:329:U:H3	1:C:333:G:C1'	2.25	0.42
1:F:329:U:H3	1:F:333:G:C1'	2.25	0.42
1:F:484:G:O6	1:F:491:C:N4	2.52	0.42
1:B:487:A:H3'	1:B:488:G:C8	2.49	0.42
1:B:302:U:H2'	1:B:332:C:C5	2.54	0.42
1:A:325:U:H2'	1:A:326:G:C8	2.54	0.42
1:H:325:U:H2'	1:H:326:G:C8	2.54	0.42
1:C:491:C:H1'	1:G:488:G:N2	2.35	0.42
1:G:302:U:H2'	1:G:332:C:C5	2.54	0.42
1:B:310:A:C1'	1:B:312:A:H62	2.32	0.42
1:D:486:U:H4'	1:H:487:A:P	2.60	0.42
1:G:310:A:C1'	1:G:312:A:H62	2.32	0.42
1:B:488:G:H2'	1:B:489:C:C6	2.54	0.41
1:A:68:U:O2'	1:A:69:A:OP2	2.36	0.41
1:D:302:U:H2'	1:D:332:C:C6	2.55	0.41
1:C:302:U:H2'	1:C:332:C:C6	2.55	0.41
1:E:302:U:H2'	1:E:332:C:C6	2.55	0.41
1:G:302:U:H2'	1:G:332:C:C6	2.55	0.41
1:H:146:G:HO2'	1:H:147:U:P	2.43	0.41
1:B:302:U:H2'	1:B:332:C:C6	2.55	0.41
1:D:329:U:H5'	1:D:332:C:O2'	2.20	0.41
1:C:146:G:HO2'	1:C:147:U:P	2.43	0.41
1:E:329:U:H5'	1:E:332:C:O2'	2.20	0.41
1:F:302:U:H2'	1:F:332:C:C6	2.55	0.41
1:A:302:U:H2'	1:A:332:C:C6	2.55	0.41
1:E:310:A:O4'	1:E:312:A:N6	2.53	0.41
1:B:310:A:O4'	1:B:312:A:N6	2.53	0.41
1:D:310:A:O4'	1:D:312:A:N6	2.53	0.41
1:F:325:U:H2'	1:F:326:G:C8	2.54	0.41
1:H:302:U:H2'	1:H:332:C:C6	2.55	0.41
1:H:329:U:H5'	1:H:332:C:O2'	2.21	0.41
1:B:329:U:H5'	1:B:332:C:O2'	2.20	0.41
1:B:486:U:O2	1:B:489:C:H5	2.02	0.41
1:A:329:U:H5'	1:A:332:C:O2'	2.21	0.41
1:D:325:U:H2'	1:D:326:G:C8	2.54	0.41
1:D:483:G:H3'	1:D:484:G:H8	1.85	0.41
1:D:484:G:O6	1:D:491:C:N4	2.53	0.41
1:C:491:C:H2'	1:C:492:C:C6	2.55	0.41
1:G:329:U:H5'	1:G:332:C:O2'	2.20	0.41
1:D:310:A:C1'	1:D:312:A:H62	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:325:U:H2'	1:E:326:G:C8	2.54	0.41
1:F:490:G:O2'	1:F:493:C:N4	2.53	0.41
1:D:146:G:HO2'	1:D:147:U:P	2.43	0.41
1:F:250:A:N6	1:F:252:G:N3	2.68	0.41
1:G:484:G:O6	1:G:491:C:N4	2.54	0.41
1:C:561:U:H2'	1:C:562:A:C8	2.56	0.41
1:E:225:G:H1'	1:H:231:G:H1	1.85	0.41
1:E:310:A:C1'	1:E:312:A:H62	2.32	0.41
1:F:561:U:H2'	1:F:562:A:C8	2.56	0.41
1:B:225:G:H1'	1:C:231:G:H1	1.85	0.41
1:A:250:A:N6	1:A:252:G:N3	2.68	0.41
1:D:487:A:H3'	1:D:488:G:H8	1.85	0.41
1:D:561:U:H2'	1:D:562:A:C8	2.55	0.41
1:C:250:A:N6	1:C:252:G:N3	2.68	0.41
1:C:329:U:H5'	1:C:332:C:O2'	2.21	0.41
1:E:487:A:H5'	1:E:488:G:C8	2.56	0.41
1:E:490:G:O2'	1:E:493:C:N4	2.54	0.41
1:G:561:U:H2'	1:G:562:A:C8	2.55	0.41
1:H:185:G:H3'	1:H:534:U:N3	2.32	0.41
1:H:250:A:N6	1:H:252:G:N3	2.68	0.41
1:A:231:G:H1	1:D:225:G:H1'	1.86	0.41
1:E:561:U:H2'	1:E:562:A:C8	2.56	0.41
1:F:329:U:H5'	1:F:332:C:O2'	2.21	0.41
1:B:561:U:H2'	1:B:562:A:C8	2.56	0.40
1:E:250:A:N6	1:E:252:G:N3	2.68	0.40
1:F:483:G:H3'	1:F:484:G:H8	1.86	0.40
1:D:185:G:H3'	1:D:534:U:N3	2.32	0.40
1:D:250:A:N6	1:D:252:G:N3	2.68	0.40
1:E:222:G:N2	1:E:241:A:H62	2.20	0.40
1:F:310:A:O4'	1:F:312:A:N6	2.53	0.40
1:A:490:G:H4'	1:A:492:C:N4	2.35	0.40
1:A:561:U:H2'	1:A:562:A:C8	2.56	0.40
1:C:310:A:O4'	1:C:312:A:N6	2.53	0.40
1:C:492:C:H2'	1:C:493:C:O4'	2.21	0.40
1:F:231:G:H1	1:G:225:G:H1'	1.86	0.40
1:H:561:U:H2'	1:H:562:A:C8	2.55	0.40
1:G:250:A:N6	1:G:252:G:N3	2.68	0.40
1:B:250:A:N6	1:B:252:G:N3	2.68	0.40
1:A:489:C:H42	1:E:488:G:H1	1.69	0.40
1:D:222:G:N2	1:D:241:A:H62	2.19	0.40
1:E:185:G:H3'	1:E:534:U:N3	2.32	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein molecules in this entry.

5.3.2 Protein sidechains (i)

There are no protein molecules in this entry.

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	517/580 (89%)	213 (41%)	12 (2%)
1	B	517/580 (89%)	214 (41%)	10 (1%)
1	C	517/580 (89%)	216 (41%)	11 (2%)
1	D	517/580 (89%)	212 (41%)	11 (2%)
1	E	517/580 (89%)	212 (41%)	11 (2%)
1	F	517/580 (89%)	214 (41%)	11 (2%)
1	G	517/580 (89%)	213 (41%)	10 (1%)
1	H	517/580 (89%)	218 (42%)	12 (2%)
All	All	4136/4640 (89%)	1712 (41%)	88 (2%)

All (1712) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	B	9	A
1	B	10	A
1	B	11	U
1	B	22	A
1	B	23	A
1	B	24	A
1	B	27	U
1	B	30	U
1	B	31	G
1	B	33	A
1	B	34	G
1	B	40	U
1	B	43	A
1	B	44	A

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Mol	Chain	Res	Type
1	B	45	C
1	B	46	A
1	B	47	A
1	B	48	U
1	B	51	G
1	B	52	C
1	B	53	U
1	B	64	G
1	B	68	U
1	B	69	A
1	B	70	A
1	B	71	G
1	B	72	U
1	B	75	A
1	B	76	U
1	B	79	C
1	B	81	A
1	B	93	G
1	B	94	A
1	B	96	A
1	B	97	C
1	B	98	U
1	B	101	U
1	B	112	G
1	B	113	G
1	B	115	G
1	B	116	G
1	B	119	U
1	B	126	C
1	B	134	A
1	B	137	G
1	B	143	A
1	B	144	U
1	B	145	A
1	B	147	U
1	B	148	A
1	B	150	A
1	B	152	G
1	B	153	C
1	B	157	U
1	B	158	A
1	B	159	A

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Mol	Chain	Res	Type
1	B	162	G
1	B	165	A
1	B	166	A
1	B	168	U
1	B	171	U
1	B	174	G
1	B	177	G
1	B	182	U
1	B	185	G
1	B	186	C
1	B	188	G
1	B	189	G
1	B	190	U
1	B	191	G
1	B	193	A
1	B	202	A
1	B	208	C
1	B	215	G
1	B	216	A
1	B	218	A
1	B	219	A
1	B	220	U
1	B	221	A
1	B	222	G
1	B	223	A
1	B	224	C
1	B	226	C
1	B	230	A
1	B	231	G
1	B	232	U
1	B	233	G
1	B	234	G
1	B	238	A
1	B	239	U
1	B	240	A
1	B	241	A
1	B	243	C
1	B	251	G
1	B	252	G
1	B	254	G
1	B	256	A
1	B	257	A

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Mol	Chain	Res	Type
1	B	258	G
1	B	260	G
1	B	261	U
1	B	262	G
1	B	263	A
1	B	266	A
1	B	271	G
1	B	272	G
1	B	273	C
1	B	274	A
1	B	276	A
1	B	278	C
1	B	284	A
1	B	286	A
1	B	287	C
1	B	288	U
1	B	290	A
1	B	294	C
1	B	295	A
1	B	296	A
1	B	297	G
1	B	299	G
1	B	300	C
1	B	301	U
1	B	303	U
1	B	304	G
1	B	305	C
1	B	309	G
1	B	310	A
1	B	316	A
1	B	318	A
1	B	319	A
1	B	320	A
1	B	327	U
1	B	329	U
1	B	330	A
1	B	331	A
1	B	332	C
1	B	336	A
1	B	338	A
1	B	344	G
1	B	345	U

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Mol	Chain	Res	Type
1	B	346	A
1	B	351	U
1	B	352	A
1	B	357	A
1	B	358	A
1	B	359	U
1	B	361	C
1	B	362	A
1	B	363	G
1	B	364	C
1	B	419	U
1	B	420	G
1	B	422	U
1	B	425	A
1	B	426	G
1	B	431	A
1	B	434	U
1	B	436	U
1	B	439	G
1	B	442	A
1	B	443	G
1	B	444	U
1	B	445	A
1	B	446	G
1	B	448	G
1	B	451	A
1	B	452	G
1	B	453	A
1	B	455	C
1	B	460	A
1	B	464	A
1	B	465	A
1	B	469	A
1	B	475	A
1	B	476	A
1	B	477	G
1	B	482	U
1	B	483	G
1	B	486	U
1	B	487	A
1	B	488	G
1	B	490	G

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Mol	Chain	Res	Type
1	B	491	C
1	B	494	G
1	B	497	A
1	B	498	G
1	B	499	U
1	B	500	U
1	B	505	C
1	B	512	G
1	B	514	U
1	B	515	A
1	B	517	G
1	B	518	U
1	B	521	C
1	B	522	U
1	B	523	G
1	B	524	A
1	B	526	U
1	B	530	A
1	B	531	C
1	B	532	U
1	B	534	U
1	B	535	A
1	B	542	G
1	B	543	G
1	B	544	A
1	B	549	G
1	B	552	A
1	B	553	G
1	B	560	C
1	B	562	A
1	B	563	A
1	B	564	A
1	A	9	A
1	A	10	A
1	A	11	U
1	A	22	A
1	A	23	A
1	A	24	A
1	A	27	U
1	A	30	U
1	A	31	G
1	A	33	A

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Mol	Chain	Res	Type
1	A	34	G
1	A	40	U
1	A	44	A
1	A	46	A
1	A	47	A
1	A	48	U
1	A	51	G
1	A	52	C
1	A	53	U
1	A	64	G
1	A	68	U
1	A	69	A
1	A	70	A
1	A	71	G
1	A	72	U
1	A	75	A
1	A	76	U
1	A	79	C
1	A	81	A
1	A	93	G
1	A	94	A
1	A	96	A
1	A	97	C
1	A	98	U
1	A	101	U
1	A	112	G
1	A	113	G
1	A	115	G
1	A	116	G
1	A	119	U
1	A	126	C
1	A	134	A
1	A	137	G
1	A	143	A
1	A	144	U
1	A	145	A
1	A	147	U
1	A	148	A
1	A	150	A
1	A	152	G
1	A	153	C
1	A	157	U

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Mol	Chain	Res	Type
1	A	158	A
1	A	159	A
1	A	162	G
1	A	165	A
1	A	166	A
1	A	168	U
1	A	171	U
1	A	174	G
1	A	177	G
1	A	182	U
1	A	185	G
1	A	186	C
1	A	188	G
1	A	189	G
1	A	190	U
1	A	191	G
1	A	193	A
1	A	202	A
1	A	208	C
1	A	215	G
1	A	216	A
1	A	218	A
1	A	219	A
1	A	220	U
1	A	221	A
1	A	222	G
1	A	223	A
1	A	224	C
1	A	226	C
1	A	230	A
1	A	231	G
1	A	232	U
1	A	233	G
1	A	234	G
1	A	238	A
1	A	239	U
1	A	240	A
1	A	241	A
1	A	243	C
1	A	251	G
1	A	252	G
1	A	254	G

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Mol	Chain	Res	Type
1	A	256	A
1	A	257	A
1	A	258	G
1	A	260	G
1	A	261	U
1	A	262	G
1	A	263	A
1	A	266	A
1	A	271	G
1	A	272	G
1	A	273	C
1	A	274	A
1	A	276	A
1	A	278	C
1	A	284	A
1	A	286	A
1	A	287	C
1	A	288	U
1	A	290	A
1	A	294	C
1	A	295	A
1	A	296	A
1	A	297	G
1	A	299	G
1	A	300	C
1	A	301	U
1	A	303	U
1	A	304	G
1	A	305	C
1	A	309	G
1	A	310	A
1	A	316	A
1	A	318	A
1	A	319	A
1	A	320	A
1	A	327	U
1	A	329	U
1	A	330	A
1	A	331	A
1	A	332	C
1	A	336	A
1	A	338	A

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Mol	Chain	Res	Type
1	A	344	G
1	A	345	U
1	A	346	A
1	A	351	U
1	A	352	A
1	A	357	A
1	A	358	A
1	A	359	U
1	A	361	C
1	A	362	A
1	A	363	G
1	A	364	C
1	A	419	U
1	A	420	G
1	A	422	U
1	A	425	A
1	A	426	G
1	A	431	A
1	A	434	U
1	A	436	U
1	A	439	G
1	A	442	A
1	A	443	G
1	A	444	U
1	A	445	A
1	A	446	G
1	A	448	G
1	A	451	A
1	A	452	G
1	A	453	A
1	A	455	C
1	A	460	A
1	A	464	A
1	A	465	A
1	A	469	A
1	A	475	A
1	A	476	A
1	A	477	G
1	A	482	U
1	A	483	G
1	A	484	G
1	A	486	U

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Mol	Chain	Res	Type
1	A	487	A
1	A	488	G
1	A	490	G
1	A	491	C
1	A	494	G
1	A	497	A
1	A	498	G
1	A	499	U
1	A	500	U
1	A	505	C
1	A	512	G
1	A	514	U
1	A	515	A
1	A	517	G
1	A	518	U
1	A	521	C
1	A	522	U
1	A	523	G
1	A	524	A
1	A	526	U
1	A	530	A
1	A	531	C
1	A	532	U
1	A	534	U
1	A	535	A
1	A	542	G
1	A	543	G
1	A	544	A
1	A	549	G
1	A	552	A
1	A	553	G
1	A	560	C
1	A	562	A
1	A	563	A
1	A	564	A
1	D	9	A
1	D	10	A
1	D	11	U
1	D	22	A
1	D	23	A
1	D	24	A
1	D	27	U

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Mol	Chain	Res	Type
1	D	30	U
1	D	31	G
1	D	33	A
1	D	34	G
1	D	40	U
1	D	43	A
1	D	44	A
1	D	45	C
1	D	46	A
1	D	47	A
1	D	48	U
1	D	51	G
1	D	52	C
1	D	53	U
1	D	64	G
1	D	68	U
1	D	69	A
1	D	70	A
1	D	71	G
1	D	72	U
1	D	75	A
1	D	76	U
1	D	79	C
1	D	81	A
1	D	93	G
1	D	94	A
1	D	96	A
1	D	97	C
1	D	98	U
1	D	101	U
1	D	112	G
1	D	113	G
1	D	115	G
1	D	116	G
1	D	119	U
1	D	126	C
1	D	134	A
1	D	137	G
1	D	143	A
1	D	144	U
1	D	145	A
1	D	147	U

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Mol	Chain	Res	Type
1	D	148	A
1	D	150	A
1	D	152	G
1	D	153	C
1	D	157	U
1	D	158	A
1	D	159	A
1	D	162	G
1	D	165	A
1	D	166	A
1	D	168	U
1	D	171	U
1	D	174	G
1	D	177	G
1	D	182	U
1	D	185	G
1	D	186	C
1	D	188	G
1	D	189	G
1	D	190	U
1	D	191	G
1	D	193	A
1	D	202	A
1	D	208	C
1	D	215	G
1	D	216	A
1	D	218	A
1	D	219	A
1	D	221	A
1	D	222	G
1	D	223	A
1	D	224	C
1	D	226	C
1	D	230	A
1	D	231	G
1	D	232	U
1	D	233	G
1	D	234	G
1	D	238	A
1	D	239	U
1	D	240	A
1	D	241	A

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Mol	Chain	Res	Type
1	D	243	C
1	D	251	G
1	D	252	G
1	D	254	G
1	D	256	A
1	D	257	A
1	D	258	G
1	D	260	G
1	D	261	U
1	D	262	G
1	D	263	A
1	D	266	A
1	D	271	G
1	D	272	G
1	D	273	C
1	D	274	A
1	D	276	A
1	D	278	C
1	D	284	A
1	D	286	A
1	D	287	C
1	D	288	U
1	D	290	A
1	D	294	C
1	D	295	A
1	D	296	A
1	D	297	G
1	D	299	G
1	D	300	C
1	D	301	U
1	D	303	U
1	D	304	G
1	D	305	C
1	D	309	G
1	D	310	A
1	D	316	A
1	D	318	A
1	D	319	A
1	D	320	A
1	D	327	U
1	D	329	U
1	D	330	A

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Mol	Chain	Res	Type
1	D	331	A
1	D	332	C
1	D	336	A
1	D	338	A
1	D	344	G
1	D	345	U
1	D	346	A
1	D	351	U
1	D	352	A
1	D	357	A
1	D	358	A
1	D	359	U
1	D	361	C
1	D	362	A
1	D	363	G
1	D	364	C
1	D	419	U
1	D	420	G
1	D	422	U
1	D	425	A
1	D	426	G
1	D	431	A
1	D	434	U
1	D	436	U
1	D	439	G
1	D	442	A
1	D	443	G
1	D	444	U
1	D	445	A
1	D	446	G
1	D	448	G
1	D	451	A
1	D	452	G
1	D	453	A
1	D	455	C
1	D	460	A
1	D	464	A
1	D	465	A
1	D	469	A
1	D	475	A
1	D	476	A
1	D	477	G

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Mol	Chain	Res	Type
1	D	482	U
1	D	483	G
1	D	484	G
1	D	487	A
1	D	488	G
1	D	490	G
1	D	494	G
1	D	497	A
1	D	498	G
1	D	499	U
1	D	500	U
1	D	505	C
1	D	512	G
1	D	514	U
1	D	515	A
1	D	517	G
1	D	518	U
1	D	521	C
1	D	522	U
1	D	523	G
1	D	524	A
1	D	526	U
1	D	530	A
1	D	531	C
1	D	532	U
1	D	534	U
1	D	535	A
1	D	542	G
1	D	543	G
1	D	544	A
1	D	549	G
1	D	552	A
1	D	553	G
1	D	560	C
1	D	562	A
1	D	563	A
1	D	564	A
1	C	9	A
1	C	10	A
1	C	11	U
1	C	22	A
1	C	23	A

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Mol	Chain	Res	Type
1	C	24	A
1	C	27	U
1	C	30	U
1	C	31	G
1	C	33	A
1	C	34	G
1	C	40	U
1	C	43	A
1	C	44	A
1	C	45	C
1	C	46	A
1	C	47	A
1	C	48	U
1	C	51	G
1	C	52	C
1	C	53	U
1	C	64	G
1	C	68	U
1	C	69	A
1	C	70	A
1	C	71	G
1	C	72	U
1	C	75	A
1	C	76	U
1	C	79	C
1	C	81	A
1	C	93	G
1	C	94	A
1	C	96	A
1	C	97	C
1	C	98	U
1	C	101	U
1	C	112	G
1	C	113	G
1	C	115	G
1	C	116	G
1	C	119	U
1	C	126	C
1	C	134	A
1	C	137	G
1	C	143	A
1	C	144	U

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Mol	Chain	Res	Type
1	C	145	A
1	C	147	U
1	C	148	A
1	C	150	A
1	C	152	G
1	C	153	C
1	C	157	U
1	C	158	A
1	C	159	A
1	C	162	G
1	C	165	A
1	C	166	A
1	C	168	U
1	C	171	U
1	C	174	G
1	C	177	G
1	C	182	U
1	C	185	G
1	C	186	C
1	C	188	G
1	C	189	G
1	C	190	U
1	C	191	G
1	C	193	A
1	C	202	A
1	C	208	C
1	C	215	G
1	C	216	A
1	C	218	A
1	C	219	A
1	C	220	U
1	C	221	A
1	C	222	G
1	C	223	A
1	C	224	C
1	C	226	C
1	C	230	A
1	C	231	G
1	C	232	U
1	C	233	G
1	C	234	G
1	C	238	A

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Mol	Chain	Res	Type
1	C	239	U
1	C	240	A
1	C	241	A
1	C	243	C
1	C	251	G
1	C	252	G
1	C	254	G
1	C	256	A
1	C	257	A
1	C	258	G
1	C	260	G
1	C	261	U
1	C	262	G
1	C	263	A
1	C	266	A
1	C	271	G
1	C	272	G
1	C	273	C
1	C	274	A
1	C	276	A
1	C	278	C
1	C	284	A
1	C	286	A
1	C	287	C
1	C	288	U
1	C	290	A
1	C	294	C
1	C	295	A
1	C	296	A
1	C	297	G
1	C	299	G
1	C	300	C
1	C	301	U
1	C	303	U
1	C	304	G
1	C	305	C
1	C	309	G
1	C	310	A
1	C	316	A
1	C	318	A
1	C	319	A
1	C	320	A

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Mol	Chain	Res	Type
1	C	326	G
1	C	327	U
1	C	329	U
1	C	330	A
1	C	331	A
1	C	332	C
1	C	336	A
1	C	338	A
1	C	344	G
1	C	345	U
1	C	346	A
1	C	351	U
1	C	352	A
1	C	357	A
1	C	358	A
1	C	359	U
1	C	361	C
1	C	362	A
1	C	363	G
1	C	364	C
1	C	419	U
1	C	420	G
1	C	422	U
1	C	425	A
1	C	426	G
1	C	431	A
1	C	434	U
1	C	436	U
1	C	439	G
1	C	442	A
1	C	443	G
1	C	444	U
1	C	445	A
1	C	446	G
1	C	448	G
1	C	451	A
1	C	452	G
1	C	453	A
1	C	455	C
1	C	460	A
1	C	464	A
1	C	465	A

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Mol	Chain	Res	Type
1	C	469	A
1	C	475	A
1	C	476	A
1	C	477	G
1	C	482	U
1	C	483	G
1	C	484	G
1	C	486	U
1	C	487	A
1	C	488	G
1	C	490	G
1	C	491	C
1	C	494	G
1	C	497	A
1	C	498	G
1	C	499	U
1	C	500	U
1	C	505	C
1	C	512	G
1	C	514	U
1	C	515	A
1	C	517	G
1	C	518	U
1	C	521	C
1	C	522	U
1	C	523	G
1	C	524	A
1	C	526	U
1	C	530	A
1	C	531	C
1	C	532	U
1	C	534	U
1	C	535	A
1	C	542	G
1	C	543	G
1	C	544	A
1	C	549	G
1	C	552	A
1	C	553	G
1	C	560	C
1	C	562	A
1	C	563	A

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Mol	Chain	Res	Type
1	C	564	A
1	E	9	A
1	E	10	A
1	E	11	U
1	E	22	A
1	E	23	A
1	E	24	A
1	E	27	U
1	E	30	U
1	E	31	G
1	E	33	A
1	E	34	G
1	E	40	U
1	E	43	A
1	E	44	A
1	E	45	C
1	E	46	A
1	E	47	A
1	E	48	U
1	E	51	G
1	E	52	C
1	E	53	U
1	E	64	G
1	E	68	U
1	E	69	A
1	E	70	A
1	E	71	G
1	E	72	U
1	E	75	A
1	E	76	U
1	E	79	C
1	E	81	A
1	E	93	G
1	E	94	A
1	E	96	A
1	E	97	C
1	E	98	U
1	E	101	U
1	E	112	G
1	E	113	G
1	E	115	G
1	E	116	G

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Mol	Chain	Res	Type
1	E	119	U
1	E	126	C
1	E	134	A
1	E	137	G
1	E	143	A
1	E	144	U
1	E	145	A
1	E	147	U
1	E	148	A
1	E	150	A
1	E	152	G
1	E	153	C
1	E	157	U
1	E	158	A
1	E	159	A
1	E	162	G
1	E	165	A
1	E	166	A
1	E	168	U
1	E	171	U
1	E	174	G
1	E	177	G
1	E	182	U
1	E	185	G
1	E	186	C
1	E	188	G
1	E	189	G
1	E	190	U
1	E	191	G
1	E	193	A
1	E	202	A
1	E	208	C
1	E	215	G
1	E	216	A
1	E	218	A
1	E	219	A
1	E	221	A
1	E	222	G
1	E	223	A
1	E	224	C
1	E	226	C
1	E	230	A

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Mol	Chain	Res	Type
1	E	231	G
1	E	232	U
1	E	233	G
1	E	234	G
1	E	238	A
1	E	239	U
1	E	240	A
1	E	241	A
1	E	243	C
1	E	251	G
1	E	252	G
1	E	254	G
1	E	256	A
1	E	257	A
1	E	258	G
1	E	260	G
1	E	261	U
1	E	262	G
1	E	263	A
1	E	266	A
1	E	271	G
1	E	272	G
1	E	273	C
1	E	274	A
1	E	276	A
1	E	278	C
1	E	284	A
1	E	286	A
1	E	287	C
1	E	288	U
1	E	290	A
1	E	294	C
1	E	295	A
1	E	296	A
1	E	297	G
1	E	299	G
1	E	300	C
1	E	301	U
1	E	303	U
1	E	304	G
1	E	305	C
1	E	309	G

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Mol	Chain	Res	Type
1	E	310	A
1	E	316	A
1	E	318	A
1	E	319	A
1	E	320	A
1	E	327	U
1	E	329	U
1	E	330	A
1	E	331	A
1	E	332	C
1	E	336	A
1	E	338	A
1	E	344	G
1	E	345	U
1	E	346	A
1	E	351	U
1	E	352	A
1	E	357	A
1	E	358	A
1	E	359	U
1	E	361	C
1	E	362	A
1	E	363	G
1	E	364	C
1	E	419	U
1	E	420	G
1	E	422	U
1	E	425	A
1	E	426	G
1	E	431	A
1	E	434	U
1	E	436	U
1	E	439	G
1	E	442	A
1	E	443	G
1	E	444	U
1	E	445	A
1	E	446	G
1	E	448	G
1	E	451	A
1	E	452	G
1	E	453	A

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Mol	Chain	Res	Type
1	E	455	C
1	E	460	A
1	E	464	A
1	E	465	A
1	E	469	A
1	E	475	A
1	E	476	A
1	E	477	G
1	E	482	U
1	E	483	G
1	E	484	G
1	E	487	A
1	E	488	G
1	E	490	G
1	E	494	G
1	E	497	A
1	E	498	G
1	E	499	U
1	E	500	U
1	E	505	C
1	E	512	G
1	E	514	U
1	E	515	A
1	E	517	G
1	E	518	U
1	E	521	C
1	E	522	U
1	E	523	G
1	E	524	A
1	E	526	U
1	E	530	A
1	E	531	C
1	E	532	U
1	E	534	U
1	E	535	A
1	E	542	G
1	E	543	G
1	E	544	A
1	E	549	G
1	E	552	A
1	E	553	G
1	E	560	C

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Mol	Chain	Res	Type
1	E	562	A
1	E	563	A
1	E	564	A
1	F	9	A
1	F	10	A
1	F	11	U
1	F	22	A
1	F	23	A
1	F	24	A
1	F	27	U
1	F	30	U
1	F	31	G
1	F	33	A
1	F	34	G
1	F	40	U
1	F	43	A
1	F	44	A
1	F	45	C
1	F	46	A
1	F	47	A
1	F	48	U
1	F	51	G
1	F	52	C
1	F	53	U
1	F	64	G
1	F	68	U
1	F	69	A
1	F	70	A
1	F	71	G
1	F	72	U
1	F	75	A
1	F	76	U
1	F	79	C
1	F	81	A
1	F	93	G
1	F	94	A
1	F	96	A
1	F	97	C
1	F	98	U
1	F	101	U
1	F	112	G
1	F	113	G

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Mol	Chain	Res	Type
1	F	115	G
1	F	116	G
1	F	119	U
1	F	126	C
1	F	134	A
1	F	137	G
1	F	143	A
1	F	144	U
1	F	145	A
1	F	147	U
1	F	148	A
1	F	150	A
1	F	152	G
1	F	153	C
1	F	157	U
1	F	158	A
1	F	159	A
1	F	162	G
1	F	165	A
1	F	166	A
1	F	168	U
1	F	171	U
1	F	174	G
1	F	177	G
1	F	182	U
1	F	185	G
1	F	186	C
1	F	188	G
1	F	189	G
1	F	190	U
1	F	191	G
1	F	193	A
1	F	202	A
1	F	208	C
1	F	215	G
1	F	216	A
1	F	218	A
1	F	219	A
1	F	220	U
1	F	221	A
1	F	222	G
1	F	223	A

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Mol	Chain	Res	Type
1	F	224	C
1	F	226	C
1	F	230	A
1	F	231	G
1	F	232	U
1	F	233	G
1	F	234	G
1	F	238	A
1	F	239	U
1	F	240	A
1	F	241	A
1	F	243	C
1	F	251	G
1	F	252	G
1	F	254	G
1	F	256	A
1	F	257	A
1	F	258	G
1	F	260	G
1	F	261	U
1	F	262	G
1	F	263	A
1	F	266	A
1	F	271	G
1	F	272	G
1	F	273	C
1	F	274	A
1	F	276	A
1	F	278	C
1	F	284	A
1	F	286	A
1	F	287	C
1	F	288	U
1	F	290	A
1	F	294	C
1	F	295	A
1	F	296	A
1	F	297	G
1	F	299	G
1	F	300	C
1	F	301	U
1	F	303	U

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Mol	Chain	Res	Type
1	F	304	G
1	F	305	C
1	F	309	G
1	F	310	A
1	F	316	A
1	F	318	A
1	F	319	A
1	F	320	A
1	F	327	U
1	F	329	U
1	F	330	A
1	F	331	A
1	F	332	C
1	F	336	A
1	F	338	A
1	F	344	G
1	F	345	U
1	F	346	A
1	F	351	U
1	F	352	A
1	F	357	A
1	F	358	A
1	F	359	U
1	F	361	C
1	F	362	A
1	F	363	G
1	F	364	C
1	F	419	U
1	F	420	G
1	F	422	U
1	F	425	A
1	F	426	G
1	F	431	A
1	F	434	U
1	F	436	U
1	F	439	G
1	F	442	A
1	F	443	G
1	F	444	U
1	F	445	A
1	F	446	G
1	F	448	G

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Mol	Chain	Res	Type
1	F	451	A
1	F	452	G
1	F	453	A
1	F	455	C
1	F	460	A
1	F	464	A
1	F	465	A
1	F	469	A
1	F	475	A
1	F	476	A
1	F	477	G
1	F	482	U
1	F	483	G
1	F	484	G
1	F	487	A
1	F	488	G
1	F	490	G
1	F	491	C
1	F	494	G
1	F	497	A
1	F	498	G
1	F	499	U
1	F	500	U
1	F	505	C
1	F	512	G
1	F	514	U
1	F	515	A
1	F	517	G
1	F	518	U
1	F	521	C
1	F	522	U
1	F	523	G
1	F	524	A
1	F	526	U
1	F	530	A
1	F	531	C
1	F	532	U
1	F	534	U
1	F	535	A
1	F	542	G
1	F	543	G
1	F	544	A

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Mol	Chain	Res	Type
1	F	549	G
1	F	552	A
1	F	553	G
1	F	560	C
1	F	562	A
1	F	563	A
1	F	564	A
1	G	9	A
1	G	10	A
1	G	11	U
1	G	22	A
1	G	23	A
1	G	24	A
1	G	27	U
1	G	30	U
1	G	31	G
1	G	33	A
1	G	34	G
1	G	40	U
1	G	43	A
1	G	44	A
1	G	45	C
1	G	46	A
1	G	47	A
1	G	48	U
1	G	51	G
1	G	52	C
1	G	53	U
1	G	64	G
1	G	68	U
1	G	69	A
1	G	70	A
1	G	71	G
1	G	72	U
1	G	75	A
1	G	76	U
1	G	79	C
1	G	81	A
1	G	93	G
1	G	94	A
1	G	96	A
1	G	97	C

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Mol	Chain	Res	Type
1	G	98	U
1	G	101	U
1	G	112	G
1	G	113	G
1	G	115	G
1	G	116	G
1	G	119	U
1	G	126	C
1	G	134	A
1	G	137	G
1	G	143	A
1	G	144	U
1	G	145	A
1	G	147	U
1	G	148	A
1	G	150	A
1	G	152	G
1	G	153	C
1	G	157	U
1	G	158	A
1	G	159	A
1	G	162	G
1	G	165	A
1	G	166	A
1	G	168	U
1	G	171	U
1	G	174	G
1	G	177	G
1	G	182	U
1	G	185	G
1	G	186	C
1	G	188	G
1	G	189	G
1	G	190	U
1	G	191	G
1	G	193	A
1	G	202	A
1	G	208	C
1	G	215	G
1	G	216	A
1	G	218	A
1	G	219	A

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Mol	Chain	Res	Type
1	G	220	U
1	G	221	A
1	G	222	G
1	G	223	A
1	G	224	C
1	G	226	C
1	G	230	A
1	G	231	G
1	G	232	U
1	G	233	G
1	G	234	G
1	G	238	A
1	G	239	U
1	G	240	A
1	G	241	A
1	G	243	C
1	G	251	G
1	G	252	G
1	G	254	G
1	G	256	A
1	G	257	A
1	G	258	G
1	G	260	G
1	G	261	U
1	G	262	G
1	G	263	A
1	G	266	A
1	G	271	G
1	G	272	G
1	G	273	C
1	G	274	A
1	G	276	A
1	G	278	C
1	G	284	A
1	G	286	A
1	G	287	C
1	G	288	U
1	G	290	A
1	G	294	C
1	G	295	A
1	G	296	A
1	G	297	G

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Mol	Chain	Res	Type
1	G	299	G
1	G	300	C
1	G	301	U
1	G	303	U
1	G	304	G
1	G	305	C
1	G	309	G
1	G	310	A
1	G	316	A
1	G	318	A
1	G	319	A
1	G	320	A
1	G	327	U
1	G	329	U
1	G	330	A
1	G	331	A
1	G	332	C
1	G	336	A
1	G	338	A
1	G	344	G
1	G	345	U
1	G	346	A
1	G	351	U
1	G	352	A
1	G	357	A
1	G	358	A
1	G	359	U
1	G	361	C
1	G	362	A
1	G	363	G
1	G	364	C
1	G	419	U
1	G	420	G
1	G	422	U
1	G	425	A
1	G	426	G
1	G	431	A
1	G	434	U
1	G	436	U
1	G	439	G
1	G	442	A
1	G	443	G

Continued on next page...

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Mol	Chain	Res	Type
1	G	444	U
1	G	445	A
1	G	446	G
1	G	448	G
1	G	451	A
1	G	452	G
1	G	453	A
1	G	455	C
1	G	460	A
1	G	464	A
1	G	465	A
1	G	469	A
1	G	475	A
1	G	476	A
1	G	477	G
1	G	482	U
1	G	483	G
1	G	484	G
1	G	487	A
1	G	488	G
1	G	490	G
1	G	494	G
1	G	497	A
1	G	498	G
1	G	499	U
1	G	500	U
1	G	505	C
1	G	512	G
1	G	514	U
1	G	515	A
1	G	517	G
1	G	518	U
1	G	521	C
1	G	522	U
1	G	523	G
1	G	524	A
1	G	526	U
1	G	530	A
1	G	531	C
1	G	532	U
1	G	534	U
1	G	535	A

Continued on next page...

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Mol	Chain	Res	Type
1	G	542	G
1	G	543	G
1	G	544	A
1	G	549	G
1	G	552	A
1	G	553	G
1	G	560	C
1	G	562	A
1	G	563	A
1	G	564	A
1	H	9	A
1	H	10	A
1	H	11	U
1	H	22	A
1	H	23	A
1	H	24	A
1	H	27	U
1	H	30	U
1	H	31	G
1	H	33	A
1	H	34	G
1	H	40	U
1	H	43	A
1	H	44	A
1	H	45	C
1	H	46	A
1	H	47	A
1	H	48	U
1	H	51	G
1	H	52	C
1	H	53	U
1	H	64	G
1	H	68	U
1	H	69	A
1	H	70	A
1	H	71	G
1	H	72	U
1	H	75	A
1	H	76	U
1	H	79	C
1	H	81	A
1	H	93	G

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Mol	Chain	Res	Type
1	H	94	A
1	H	96	A
1	H	97	C
1	H	98	U
1	H	101	U
1	H	112	G
1	H	113	G
1	H	115	G
1	H	116	G
1	H	119	U
1	H	126	C
1	H	134	A
1	H	137	G
1	H	143	A
1	H	144	U
1	H	145	A
1	H	147	U
1	H	148	A
1	H	150	A
1	H	152	G
1	H	153	C
1	H	157	U
1	H	158	A
1	H	159	A
1	H	162	G
1	H	165	A
1	H	166	A
1	H	168	U
1	H	171	U
1	H	174	G
1	H	177	G
1	H	182	U
1	H	185	G
1	H	186	C
1	H	188	G
1	H	189	G
1	H	190	U
1	H	191	G
1	H	193	A
1	H	202	A
1	H	208	C
1	H	215	G

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Mol	Chain	Res	Type
1	H	216	A
1	H	218	A
1	H	219	A
1	H	220	U
1	H	221	A
1	H	222	G
1	H	223	A
1	H	224	C
1	H	226	C
1	H	230	A
1	H	231	G
1	H	232	U
1	H	233	G
1	H	234	G
1	H	238	A
1	H	239	U
1	H	240	A
1	H	241	A
1	H	243	C
1	H	251	G
1	H	252	G
1	H	254	G
1	H	256	A
1	H	257	A
1	H	258	G
1	H	260	G
1	H	261	U
1	H	262	G
1	H	263	A
1	H	266	A
1	H	271	G
1	H	272	G
1	H	273	C
1	H	274	A
1	H	276	A
1	H	278	C
1	H	284	A
1	H	286	A
1	H	287	C
1	H	288	U
1	H	290	A
1	H	294	C

Continued on next page...

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Mol	Chain	Res	Type
1	H	295	A
1	H	296	A
1	H	297	G
1	H	299	G
1	H	300	C
1	H	301	U
1	H	303	U
1	H	304	G
1	H	305	C
1	H	309	G
1	H	310	A
1	H	316	A
1	H	318	A
1	H	319	A
1	H	320	A
1	H	327	U
1	H	329	U
1	H	330	A
1	H	331	A
1	H	332	C
1	H	336	A
1	H	338	A
1	H	344	G
1	H	345	U
1	H	346	A
1	H	351	U
1	H	352	A
1	H	357	A
1	H	358	A
1	H	359	U
1	H	361	C
1	H	362	A
1	H	363	G
1	H	364	C
1	H	415	U
1	H	416	G
1	H	417	A
1	H	419	U
1	H	420	G
1	H	422	U
1	H	425	A
1	H	426	G

Continued on next page...

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Mol	Chain	Res	Type
1	H	431	A
1	H	434	U
1	H	436	U
1	H	439	G
1	H	442	A
1	H	443	G
1	H	444	U
1	H	445	A
1	H	446	G
1	H	448	G
1	H	451	A
1	H	452	G
1	H	453	A
1	H	455	C
1	H	460	A
1	H	464	A
1	H	465	A
1	H	469	A
1	H	475	A
1	H	476	A
1	H	477	G
1	H	482	U
1	H	483	G
1	H	484	G
1	H	486	U
1	H	487	A
1	H	488	G
1	H	490	G
1	H	491	C
1	H	494	G
1	H	497	A
1	H	498	G
1	H	499	U
1	H	500	U
1	H	505	C
1	H	512	G
1	H	514	U
1	H	515	A
1	H	517	G
1	H	518	U
1	H	521	C
1	H	522	U

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Mol	Chain	Res	Type
1	H	523	G
1	H	524	A
1	H	526	U
1	H	530	A
1	H	531	C
1	H	532	U
1	H	534	U
1	H	535	A
1	H	542	G
1	H	543	G
1	H	544	A
1	H	549	G
1	H	552	A
1	H	553	G
1	H	560	C
1	H	562	A
1	H	563	A
1	H	564	A

All (88) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	B	97	C
1	B	286	A
1	B	295	A
1	B	328	U
1	B	329	U
1	B	419	U
1	B	435	A
1	B	451	A
1	B	452	G
1	B	561	U
1	A	97	C
1	A	221	A
1	A	222	G
1	A	286	A
1	A	295	A
1	A	328	U
1	A	329	U
1	A	419	U
1	A	435	A
1	A	451	A

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Mol	Chain	Res	Type
1	A	452	G
1	A	561	U
1	D	97	C
1	D	222	G
1	D	286	A
1	D	295	A
1	D	328	U
1	D	329	U
1	D	419	U
1	D	435	A
1	D	451	A
1	D	452	G
1	D	561	U
1	C	97	C
1	C	221	A
1	C	286	A
1	C	295	A
1	C	328	U
1	C	329	U
1	C	419	U
1	C	435	A
1	C	451	A
1	C	452	G
1	C	561	U
1	E	97	C
1	E	221	A
1	E	286	A
1	E	295	A
1	E	328	U
1	E	329	U
1	E	419	U
1	E	435	A
1	E	451	A
1	E	452	G
1	E	561	U
1	F	97	C
1	F	221	A
1	F	286	A
1	F	295	A
1	F	328	U
1	F	329	U
1	F	419	U

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Mol	Chain	Res	Type
1	F	435	A
1	F	451	A
1	F	452	G
1	F	561	U
1	G	97	C
1	G	286	A
1	G	295	A
1	G	328	U
1	G	329	U
1	G	419	U
1	G	435	A
1	G	451	A
1	G	452	G
1	G	561	U
1	H	97	C
1	H	221	A
1	H	222	G
1	H	286	A
1	H	295	A
1	H	328	U
1	H	329	U
1	H	419	U
1	H	435	A
1	H	451	A
1	H	452	G
1	H	561	U

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.

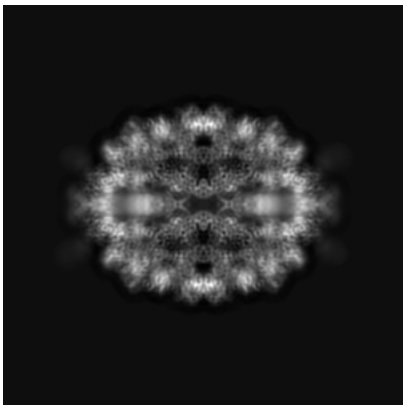
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-61125. These allow visual inspection of the internal detail of the map and identification of artifacts.

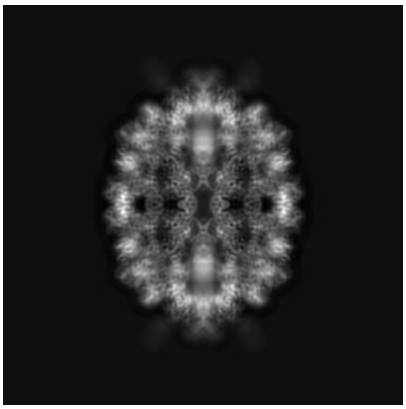
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

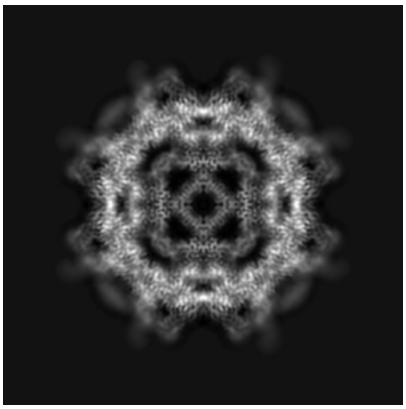
6.1.1 Primary map



X

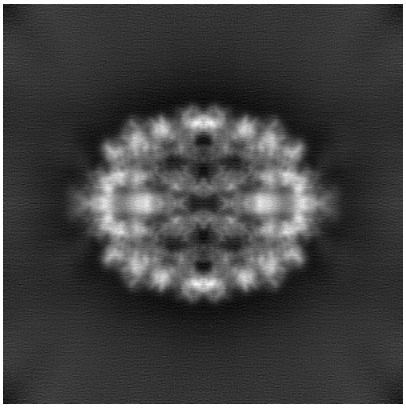


Y

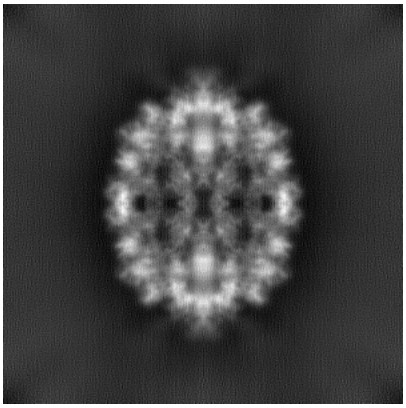


Z

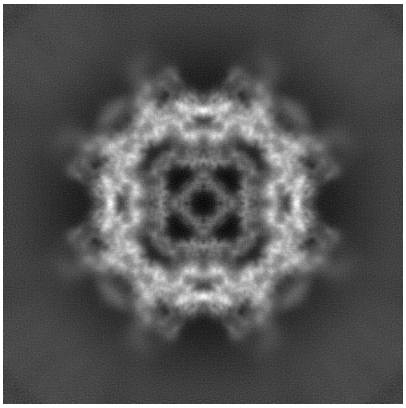
6.1.2 Raw map



X



Y

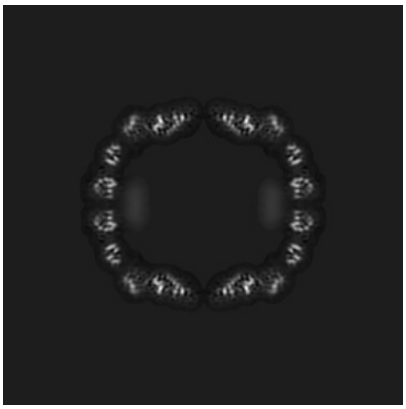


Z

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

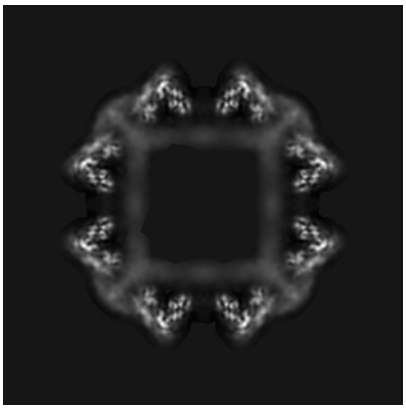
6.2 Central slices (i)

6.2.1 Primary map



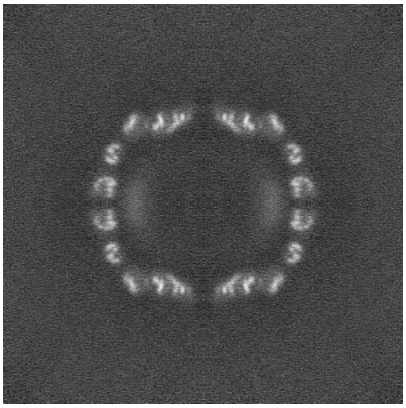
X Index: 192

Y Index: 192

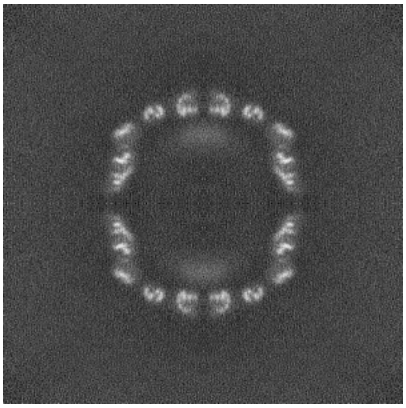


Z Index: 192

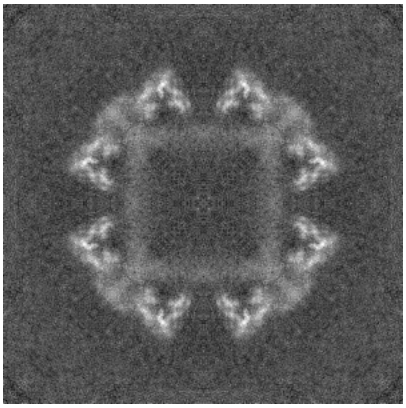
6.2.2 Raw map



X Index: 192



Y Index: 192

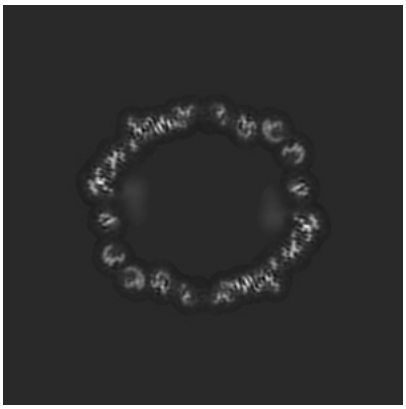


Z Index: 192

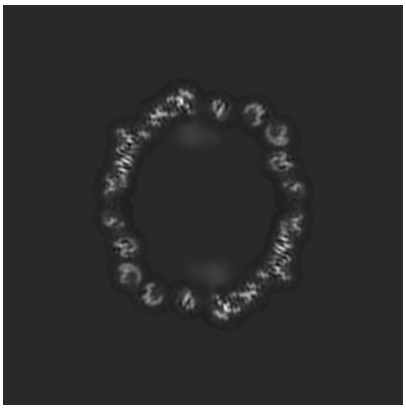
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

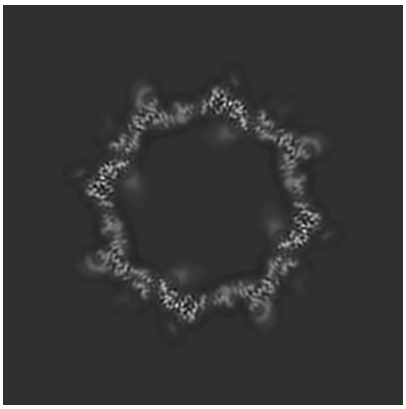
6.3.1 Primary map



X Index: 200

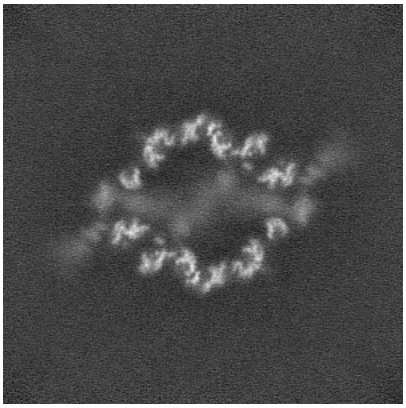


Y Index: 184

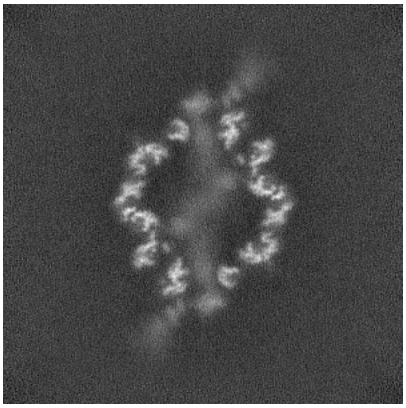


Z Index: 168

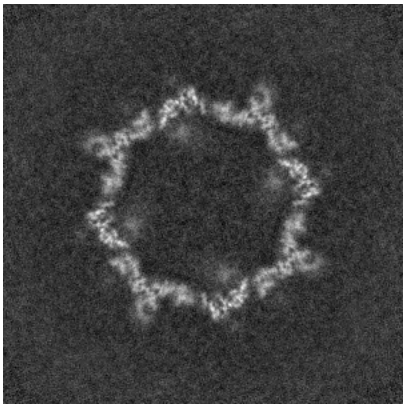
6.3.2 Raw map



X Index: 257



Y Index: 127

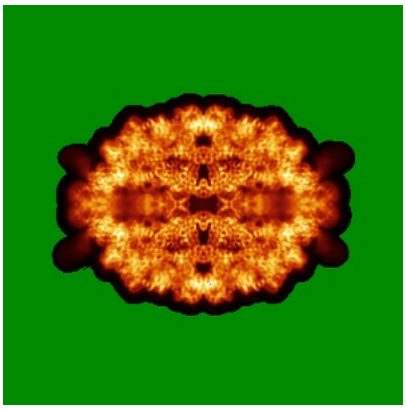


Z Index: 216

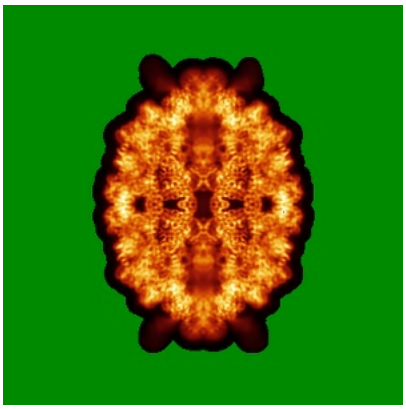
The images above show the largest variance slices of the map in three orthogonal directions.

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

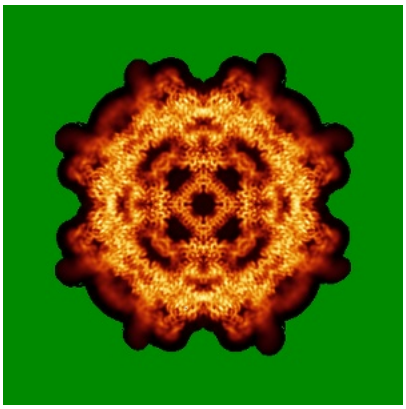
6.4.1 Primary map



X

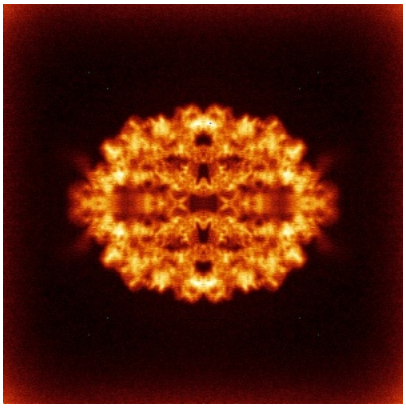


Y

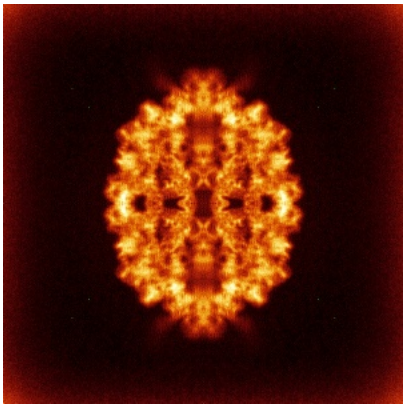


Z

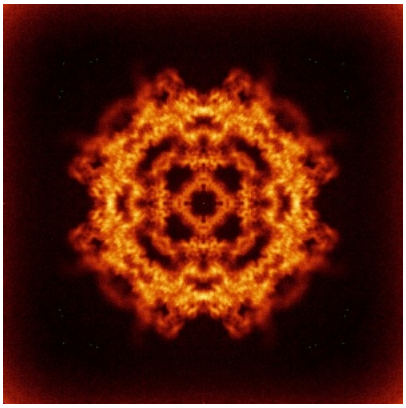
6.4.2 Raw map



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 0.06. 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.

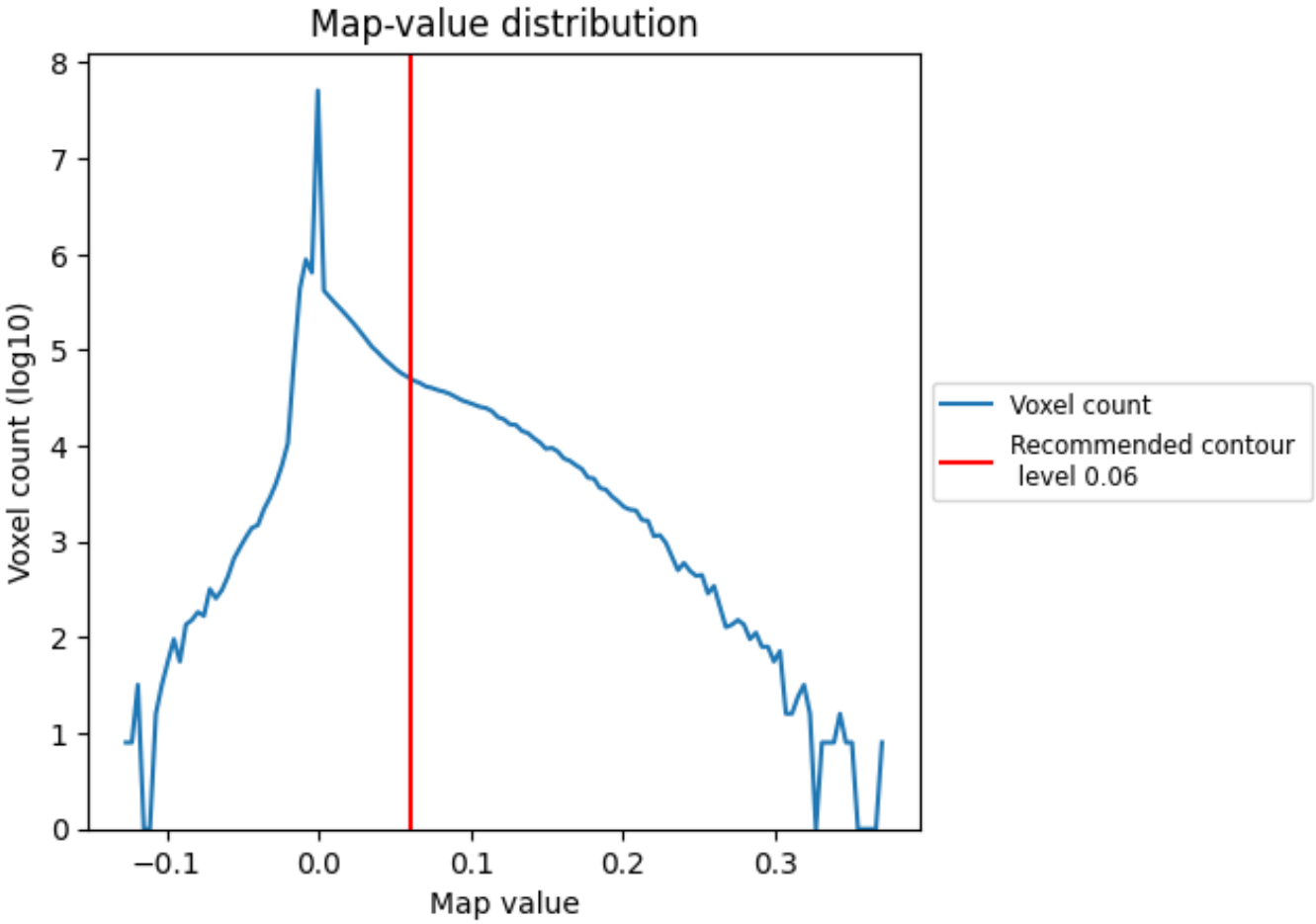
6.6 Mask visualisation (i)

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

7 Map analysis

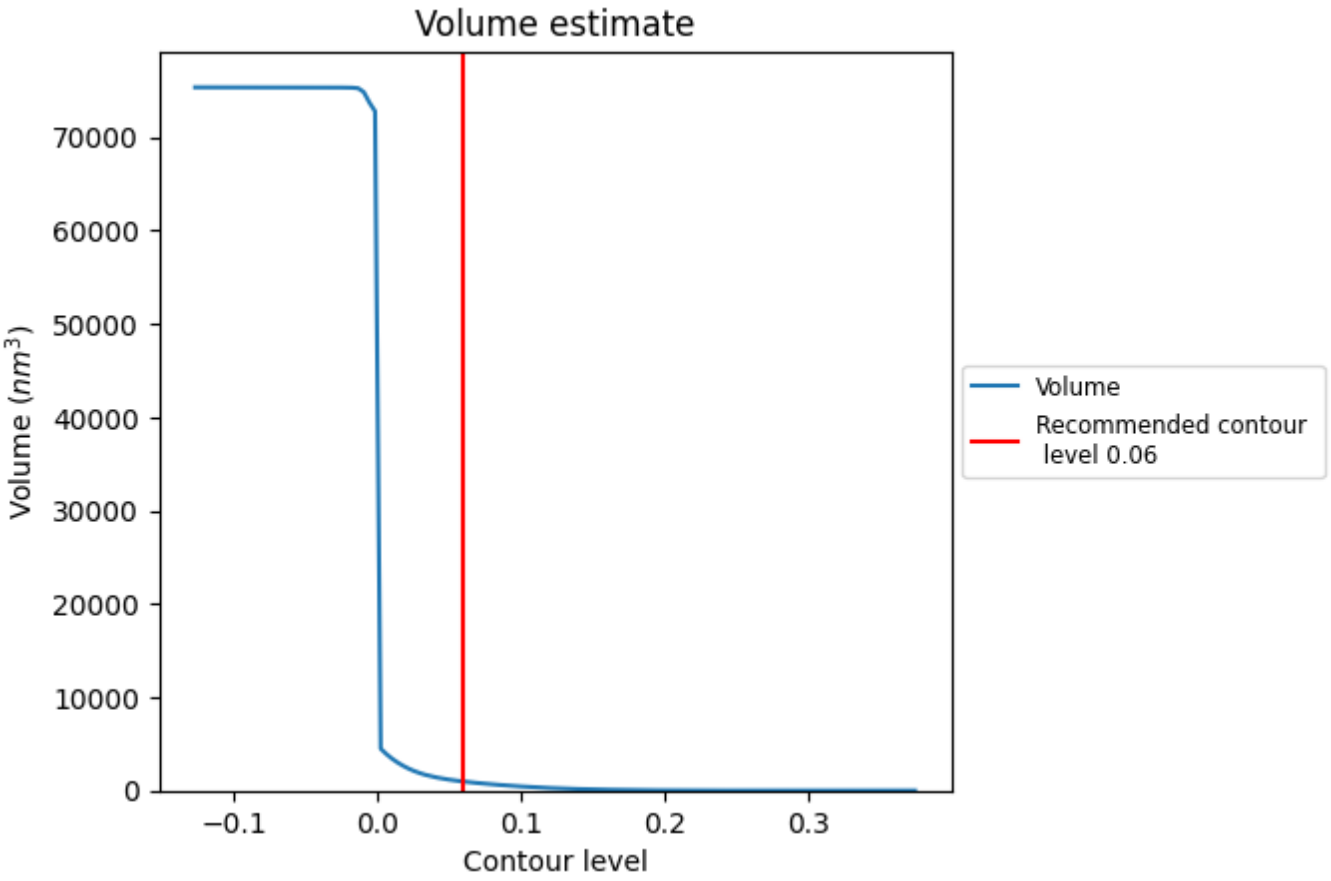
This section contains the results of statistical analysis of the map.

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.

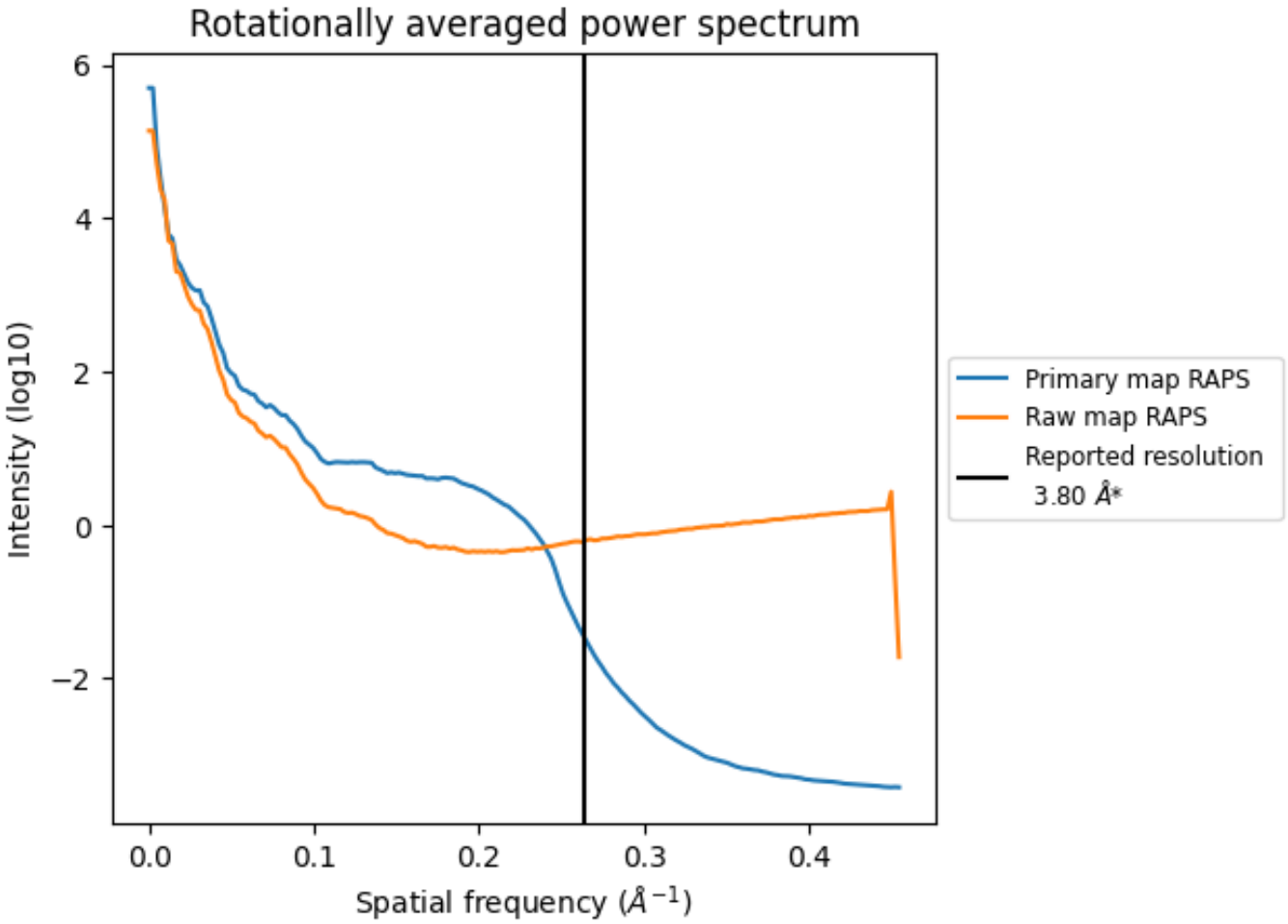
7.2 Volume estimate (i)



The volume at the recommended contour level is 964 nm^3; this corresponds to an approximate mass of 871 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)

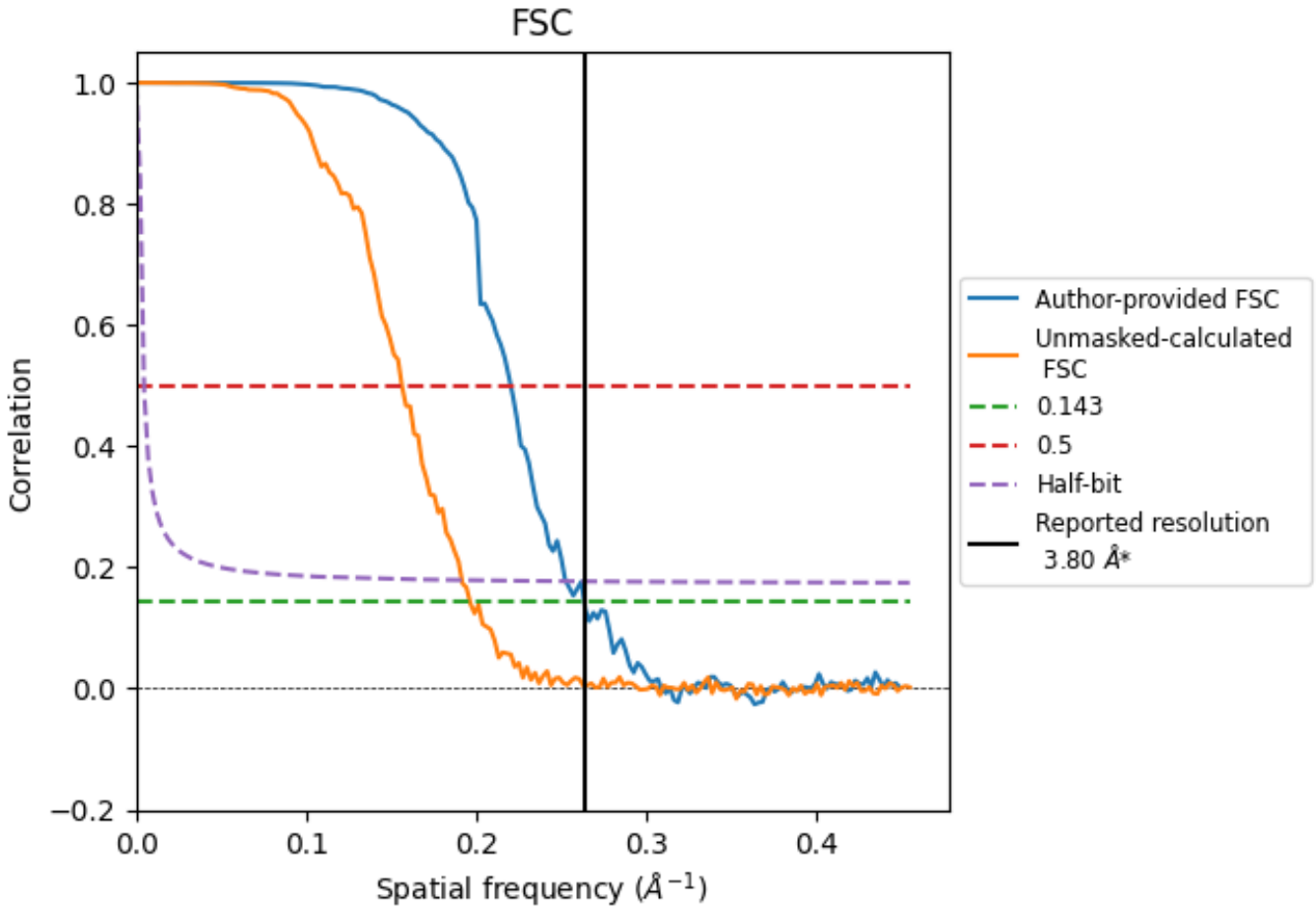


*Reported resolution corresponds to spatial frequency of 0.263 $Å^{-1}$

8 Fourier-Shell correlation

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



*Reported resolution corresponds to spatial frequency of 0.263 Å^{-1}

8.2 Resolution estimates (i)

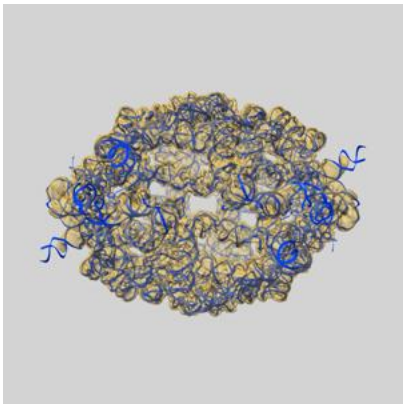
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.80	-	-
Author-provided FSC curve	3.80	4.54	3.96
Unmasked-calculated*	5.10	6.40	5.22

*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 5.10 differs from the reported value 3.8 by more than 10 %

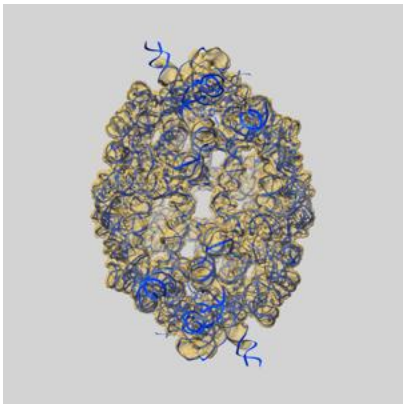
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-61125 and PDB model 9J3T. Per-residue inclusion information can be found in section 3 on page 5.

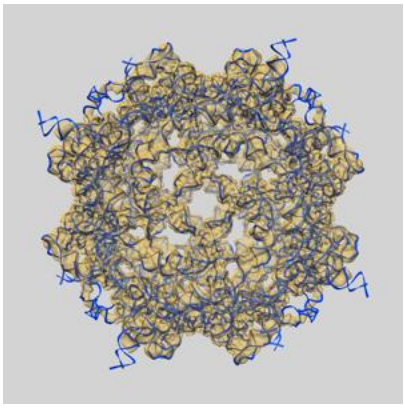
9.1 Map-model overlay



X



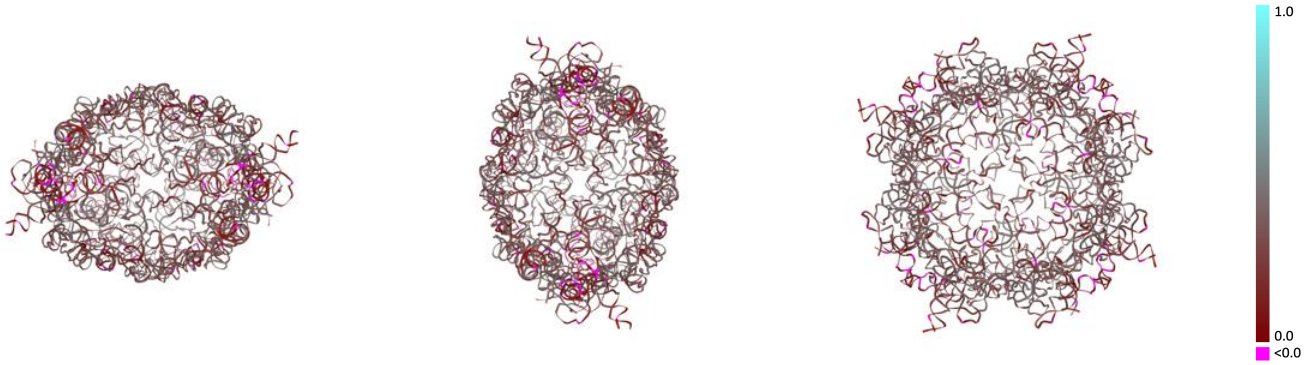
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.06 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.

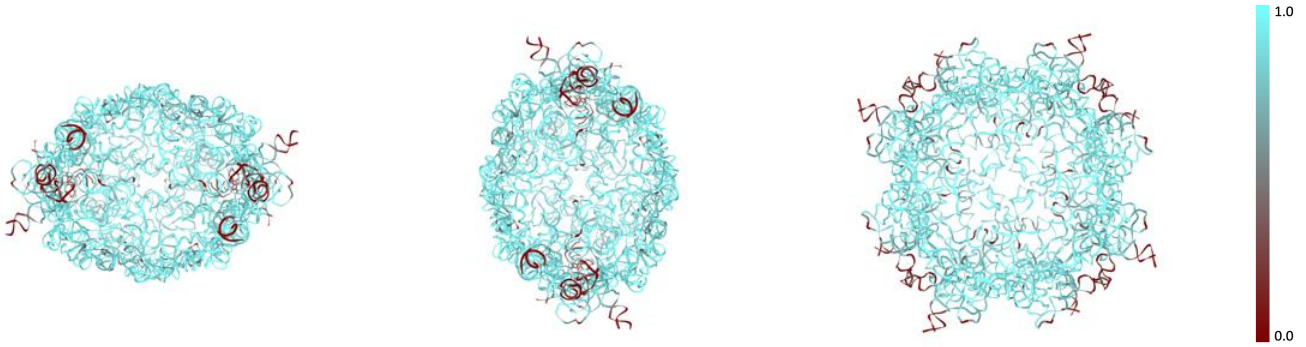
9.2 Q-score mapped to coordinate model (i)



X Y Z

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.

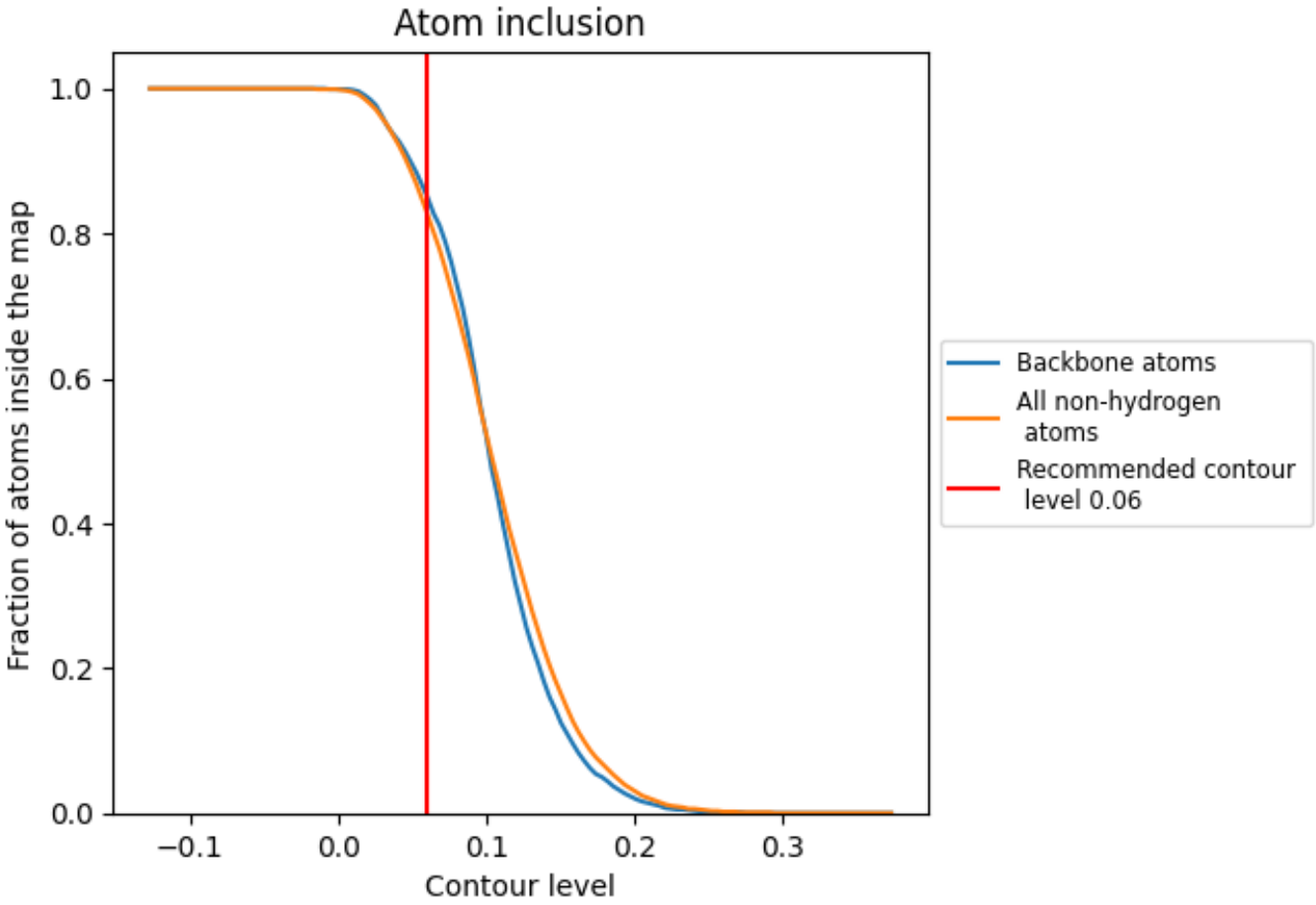
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.06).

9.4 Atom inclusion (i)



At the recommended contour level, 85% of all backbone atoms, 83% 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 (0.06) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8300	0.2960
A	0.8300	0.2970
B	0.8300	0.2960
C	0.8290	0.2960
D	0.8300	0.2960
E	0.8300	0.2960
F	0.8300	0.2960
G	0.8300	0.2950
H	0.8300	0.2960