Full wwPDB EM Validation Report ⓘ

Apr 29, 2024 – 05:50 pm BST

PDB ID	:	4ADX
EMDB ID	:	EMD-2012
Title	:	The Cryo-EM Structure of the Archaeal 50S Ribosomal Subunit in Complex with Initiation Factor 6
Authors	:	Greber, B.J.; Boehringer, D.; Godinic-Mikulcic, V.; Crnkovic, A.; Ibba, M.; Weygand-Durasevic, I.; Ban, N.
Deposited on	:	2012-01-04
Resolution	:	6.60 Å(reported)
Based on initial models	:	4A17, 4A19, 3CC2, 3O58

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:

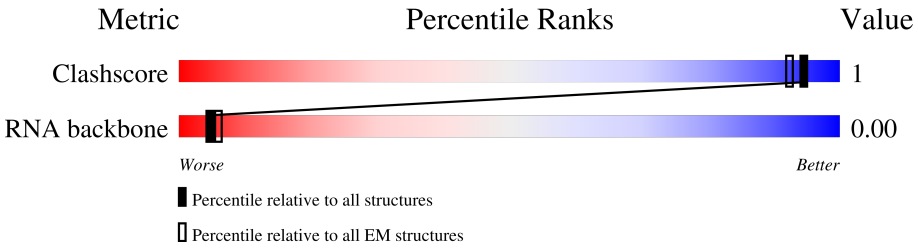
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36.2

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 6.60 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
RNA backbone	4643	859

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	0	2923	34% 92% 8%
2	1	57	42% 98% .
3	2	50	32% 92% 8%
4	3	92	34% 100%
5	4	123	29% 72% . 27%
6	5	129	26% 39% 61%
7	6	104	12% 91% . 8%
8	7	126	17% 61% 39%
9	8	133	48% 100%

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Mol	Chain	Length	Quality of chain
10	9	122	31% 99%
11	A	240	43% 99%
12	B	338	34% 99%
13	C	246	32% 99%
14	D	177	15% 79% 21%
15	E	178	31% 97%
16	F	120	14% 98%
17	G	78	32% 100%
18	H	177	32% 88% 12%
19	I	222	26% 99%
20	J	145	29% 96%
21	K	132	39% 100%
22	L	165	35% 85% 15%
23	M	196	42% 92% 7%
24	N	187	32% 99%
25	O	116	27% 99%
26	P	149	23% 95% 5%
27	Q	96	36% 99%
28	R	155	33% 97%
29	S	85	21% 95% 5%
30	T	120	21% 98%
31	U	67	13% 78% 22%
32	V	71	15% 90% 10%
33	W	154	39% 100%
34	X	92	29% 89% 11%

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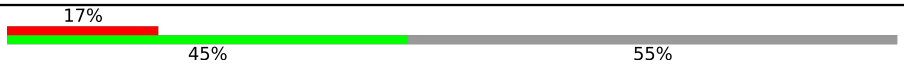
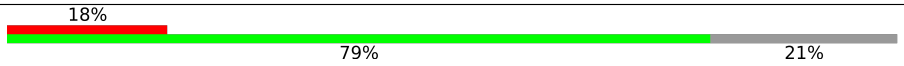
Mol	Chain	Length	Quality of chain
35	Y	241	
36	Z	92	

2 Entry composition (i)

There are 36 unique types of molecules in this entry. The entry contains 7164 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 23S ribosomal RNA.

Mol	Chain	Residues	Atoms	AltConf	Trace
1	0	2688	Total P 2688 2688	0	2688

- Molecule 2 is a protein called RPL37E.

Mol	Chain	Residues	Atoms	AltConf	Trace
2	1	56	Total C 56 56	0	56

- Molecule 3 is a protein called RPL39E.

Mol	Chain	Residues	Atoms	AltConf	Trace
3	2	46	Total C 46 46	0	46

- Molecule 4 is a protein called RPL44E.

Mol	Chain	Residues	Atoms	AltConf	Trace
4	3	92	Total C 92 92	0	92

- Molecule 5 is a protein called RPL34E.

Mol	Chain	Residues	Atoms	AltConf	Trace
5	4	90	Total C 90 90	0	90

- Molecule 6 is a protein called RPL40E.

Mol	Chain	Residues	Atoms	AltConf	Trace
6	5	50	Total C 50 50	0	50

- Molecule 7 is a protein called RPL30E.

Mol	Chain	Residues	Atoms	AltConf	Trace
7	6	96	Total C 96 96	0	96

- Molecule 8 is a protein called RPL14E.

Mol	Chain	Residues	Atoms	AltConf	Trace
8	7	77	Total C 77 77	0	77

- Molecule 9 is a RNA chain called 23S Ribosomal RNA EXPANSION SEGMENTS.

Mol	Chain	Residues	Atoms	AltConf	Trace
9	8	133	Total P 133 133	0	133

- Molecule 10 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms	AltConf	Trace
10	9	121	Total P 121 121	0	121

- Molecule 11 is a protein called RPL2.

Mol	Chain	Residues	Atoms	AltConf	Trace
11	A	237	Total C 237 237	0	237

- Molecule 12 is a protein called RPL3.

Mol	Chain	Residues	Atoms	AltConf	Trace
12	B	337	Total C 337 337	0	337

- Molecule 13 is a protein called RPL4.

Mol	Chain	Residues	Atoms	AltConf	Trace
13	C	246	Total C 246 246	0	246

- Molecule 14 is a protein called RPL5.

Mol	Chain	Residues	Atoms	AltConf	Trace
14	D	139	Total C 139 139	0	139

- Molecule 15 is a protein called RPL6.

Mol	Chain	Residues	Atoms	AltConf	Trace
15	E	172	Total C 172 172	0	172

- Molecule 16 is a protein called RPL7AE.

Mol	Chain	Residues	Atoms	AltConf	Trace
16	F	119	Total C 119 119	0	119

- Molecule 17 is a protein called RPLX.

Mol	Chain	Residues	Atoms	AltConf	Trace
17	G	78	Total C 78 78	0	78

- Molecule 18 is a protein called RPL10E.

Mol	Chain	Residues	Atoms	AltConf	Trace
18	H	156	Total C 156 156	0	156

- Molecule 19 is a protein called AIF6.

Mol	Chain	Residues	Atoms	AltConf	Trace
19	I	220	Total C 220 220	0	220

- Molecule 20 is a protein called RPL13.

Mol	Chain	Residues	Atoms	AltConf	Trace
20	J	139	Total C 139 139	0	139

- Molecule 21 is a protein called RPL14.

Mol	Chain	Residues	Atoms	AltConf	Trace
21	K	132	Total C 132 132	0	132

- Molecule 22 is a protein called RPL15.

Mol	Chain	Residues	Atoms	AltConf	Trace
22	L	140	Total C 140 140	0	140

- Molecule 23 is a protein called RPL15E.

Mol	Chain	Residues	Atoms	AltConf	Trace
23	M	182	Total C 182 182	0	182

- Molecule 24 is a protein called RPL18.

Mol	Chain	Residues	Atoms	AltConf	Trace
24	N	185	Total C 185 185	0	185

- Molecule 25 is a protein called RPL18E.

Mol	Chain	Residues	Atoms	AltConf	Trace
25	O	115	Total C 115 115	0	115

- Molecule 26 is a protein called RPL19E.

Mol	Chain	Residues	Atoms	AltConf	Trace
26	P	142	Total C 142 142	0	142

- Molecule 27 is a protein called RPL21E.

Mol	Chain	Residues	Atoms	AltConf	Trace
27	Q	95	Total C 95 95	0	95

- Molecule 28 is a protein called RPL22.

Mol	Chain	Residues	Atoms	AltConf	Trace
28	R	150	Total C 150 150	0	150

- Molecule 29 is a protein called RPL23.

Mol	Chain	Residues	Atoms	AltConf	Trace
29	S	81	Total C 81 81	0	81

- Molecule 30 is a protein called RPL24.

Mol	Chain	Residues	Atoms	AltConf	Trace
30	T	117	Total C 117 117	0	117

- Molecule 31 is a protein called RPL24E.

Mol	Chain	Residues	Atoms	AltConf	Trace
31	U	52	Total C 52 52	0	52

- Molecule 32 is a protein called RPL29.

Mol	Chain	Residues	Atoms	AltConf	Trace
32	V	64	Total C 64 64	0	64

- Molecule 33 is a protein called RPL30.

Mol	Chain	Residues	Atoms	AltConf	Trace
33	W	154	Total C 154 154	0	154

- Molecule 34 is a protein called RPL31E.

Mol	Chain	Residues	Atoms	AltConf	Trace
34	X	82	Total C 82 82	0	82

- Molecule 35 is a protein called RPL32E.

Mol	Chain	Residues	Atoms	AltConf	Trace
35	Y	108	Total C 108 108	0	108

- Molecule 36 is a protein called RPL37AE.

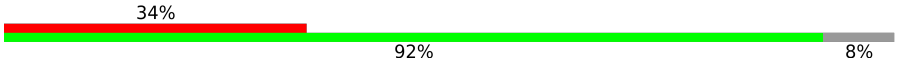
Mol	Chain	Residues	Atoms	AltConf	Trace
36	Z	73	Total C 73 73	0	73

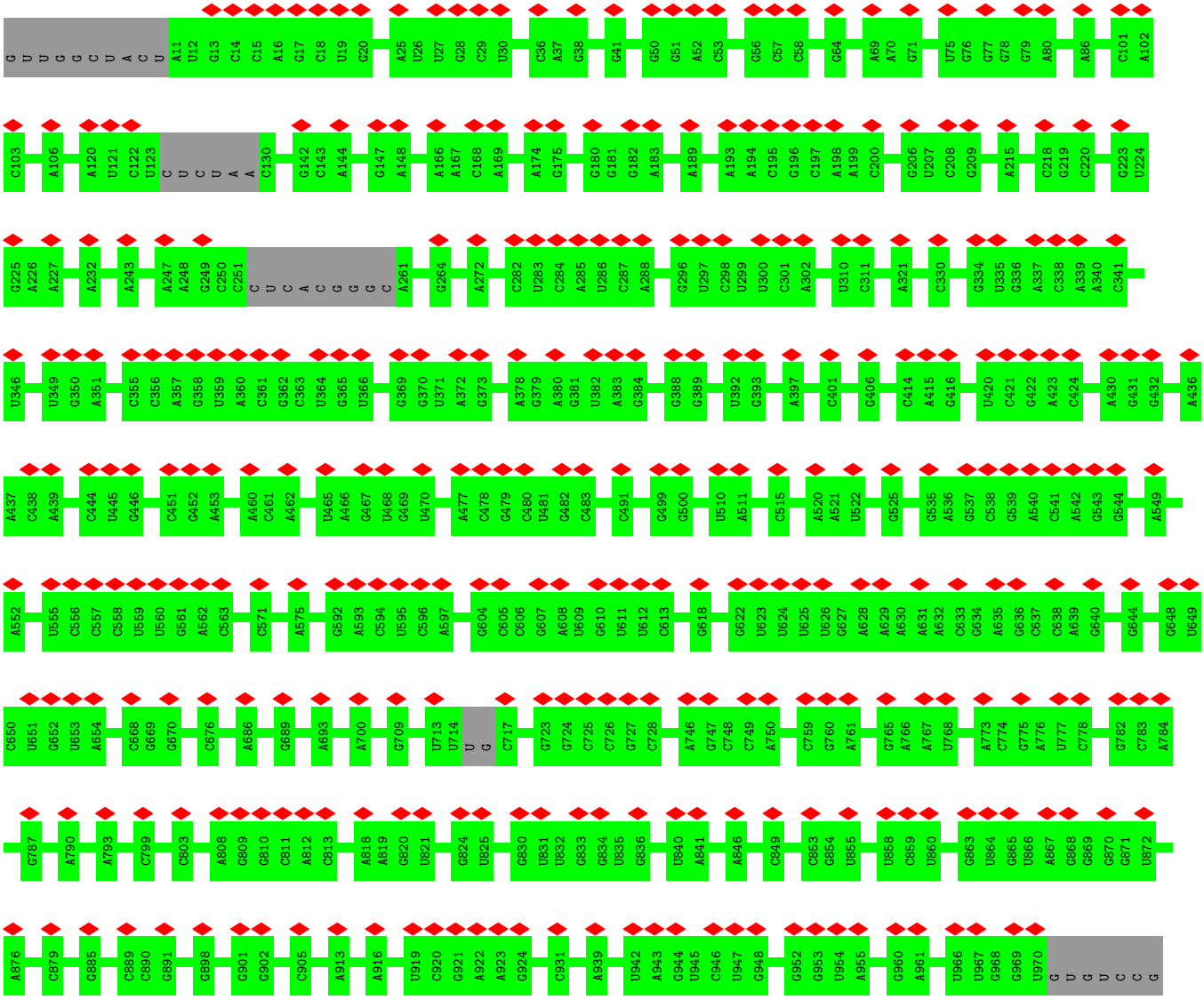
3 Residue-property plots (i)

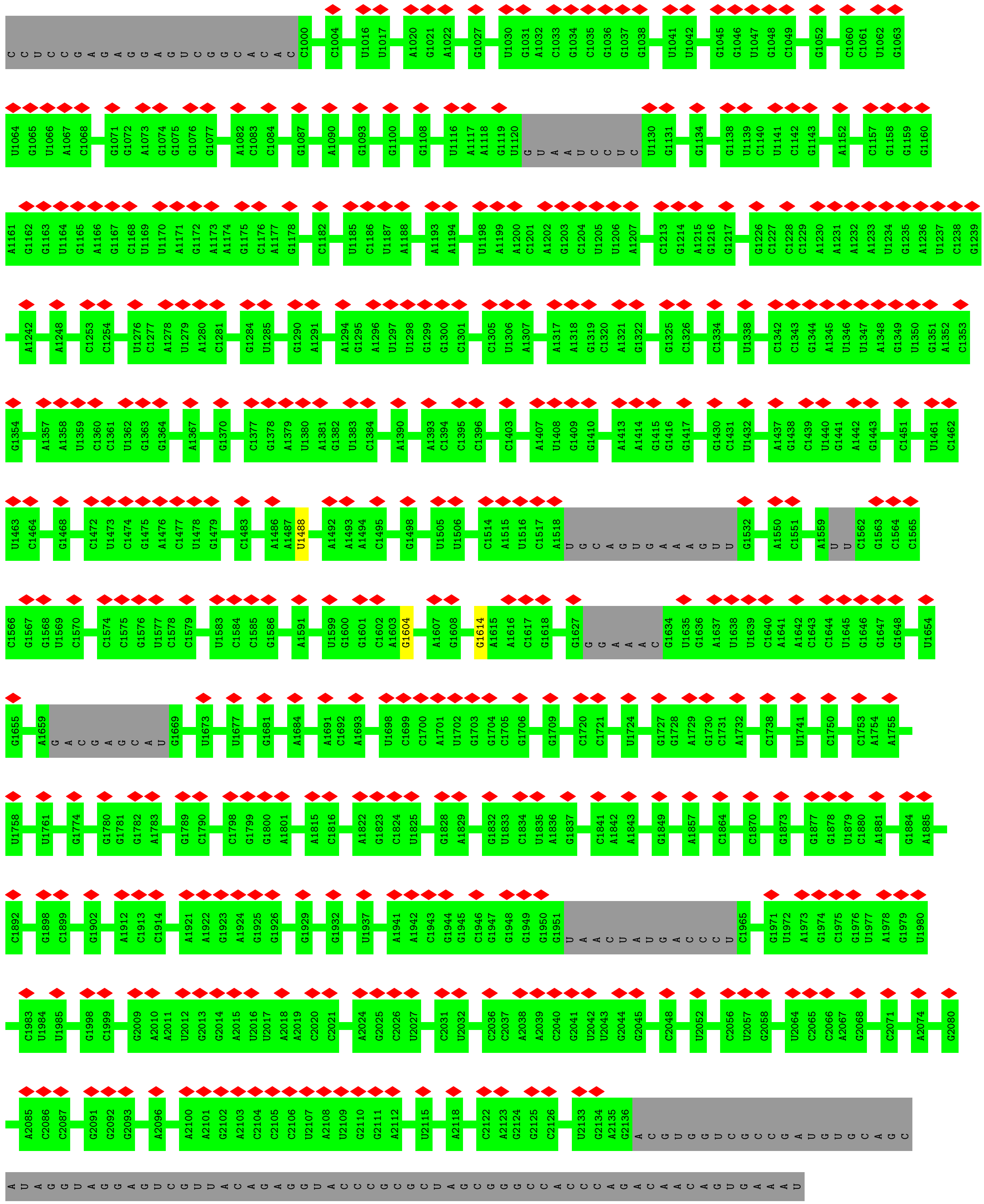
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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.

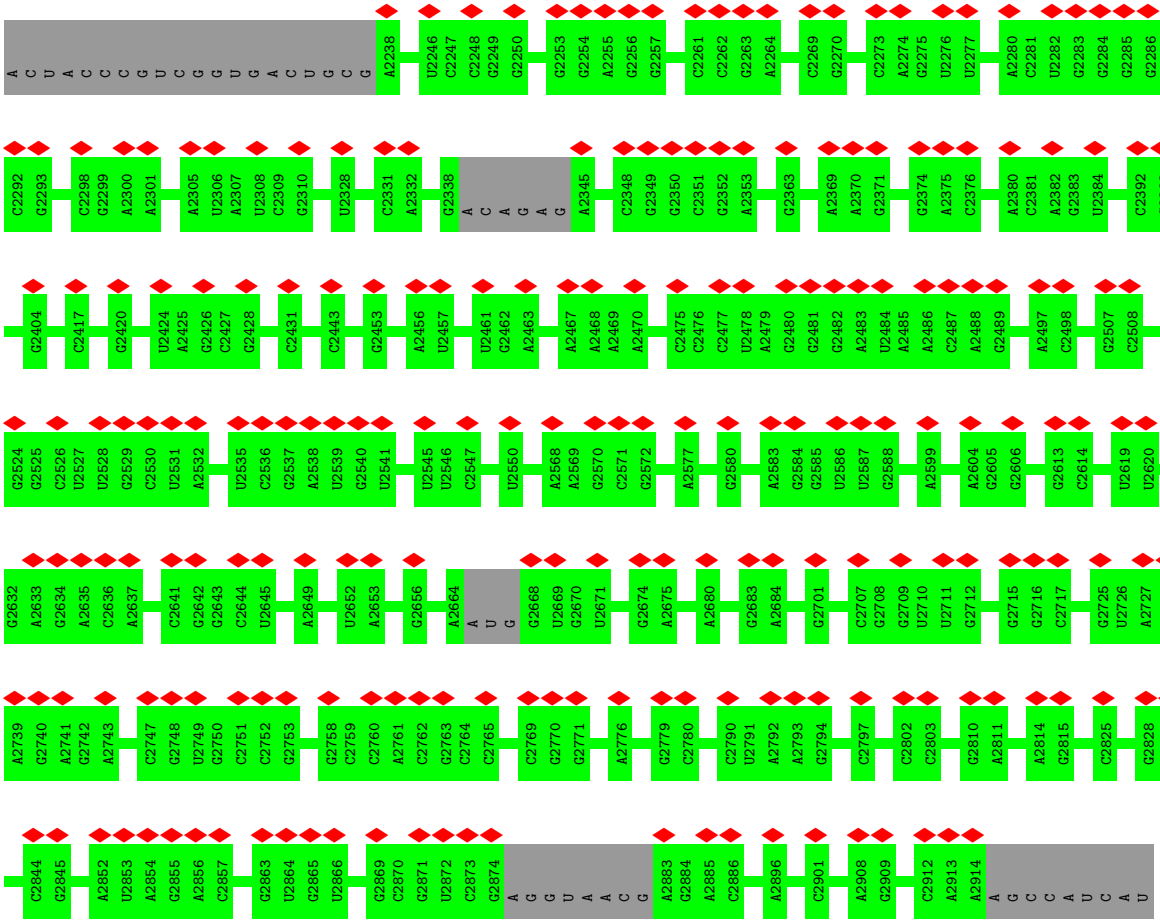
- Molecule 1: 23S ribosomal RNA

Chain 0:



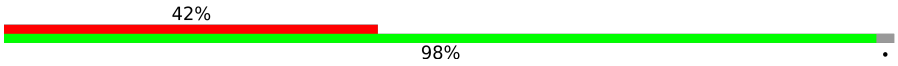


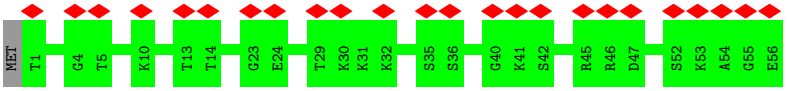

C C U C C G A G G A G U C G G C A C A C C1000 C1004 U1016 U1017 A1020 G1021 A1022 G1027 U1030 G1031 A1032 C1033 G1034 C1035 G1036 C1037 G1038 U1041 U1042 G1045 G1046 U1047 G1048 C1049 G1052 C1060 C1061 U1062 G1063
U1064 G1065 U1066 A1067 C1068 G1071 G1072 A1073 G1074 G1075 G1076 G1077 A1082 C1083 C1084 G1087 A1090 G1093 G1100 G1108 U1116 A1117 A1118 G1119 U1120 G U A A U C C U C U1130 G1131 G1134 G1138 U1139 C1140 U1141 C1142 G1143 A1152 C1157 G1158 G1159 G1160
A1161 G1162 G1163 U1164 G1165 A1166 G1167 C1168 U1169 U1170 A1171 G1172 A1173 A1174 G1175 C1176 A1177 G1178 C1182 U1185 C1186 U1187 A1188 A1193 A1194 U1198 A1199 A1200 C1201 A1202 G1203 C1204 U1205 U1206 A1207 C1213 G1214 A1215 G1216 G1217 G1226 C1227 C1228 C1229 A1230 A1231 A1232 A1233 U1234 G1235 A1236 U1237 C1238 G1239
A1242 A1248 C1253 C1254 U1276 C1277 A1278 U1279 A1280 C1281 G1284 U1285 G1290 A1291 A1294 G1295 A1296 U1297 U1298 G1299 G1300 C1301 C1305 U1306 A1307 A1317 A1318 G1319 C1320 A1321 G1322 G1325 C1326 C1334 U1338 C1342 C1343 G1344 A1345 U1346 U1347 A1348 G1349 U1350 G1351 A1352 C1353
G1354 A1357 A1358 U1359 C1360 C1361 U1362 G1363 G1364 A1367 G1370 C1377 G1378 A1379 U1380 A1381 G1382 U1383 C1384 A1390 A1393 C1394 C1395 C1396 C1403 A1407 U1408 G1409 G1410 A1413 A1414 G1415 G1416 G1417 G1430 C1431 U1432 A1437 G1438 C1439 U1440 G1441 A1442 G1443 C1451 U1461 C1462
U1463 C1464 G1468 C1472 U1473 C1474 G1475 A1476 C1477 U1478 G1479 C1483 A1486 A1487 U1488 A1492 A1493 A1494 C1495 G1498 U1505 U1506 C1514 A1515 U1516 C1517 A1518 U G C A G U G A A A G U U G1532 A1550 C1551 A1559 U U C1562 G1563 C1564 C1565
C1566 G1567 G1568 U1569 C1570 C1574 C1575 G1576 U1577 C1578 C1579 U1583 C1584 G1585 G1586 A1591 U1599 G1600 G1601 C1602 A1603 G1604 A1607 G1608 G1614 A1615 A1616 C1617 G1618 G1627 G G A A A C G1634 U1635 G1636 A1637 U1638 U1639 C1640 A1641 A1642 C1643 C1644 U1645 G1646 G1647 G1648 U1654
G1655 A1659 G A C G A G C A U G1669 U1673 U1677 G1681 A1684 A1691 C1692 A1693 U1698 C1699 C1700 A1701 U1702 G1703 G1704 C1705 G1706 G1709 C1720 C1721 U1724 G1727 G1728 A1729 G1730 C1731 A1732 C1738 U1741 C1750 C1753 A1754 A1755
U1758 U1761 G1774 G1780 G1781 G1782 A1783 G1789 C1790 C1798 G1799 G1800 A1801 A1815 C1816 A1822 G1823 C1824 U1825 G1828 A1829 G1832 U1833 C1834 U1835 A1836 G1837 C1841 A1842 A1843 G1849 A1857 C1864 C1870 G1873 G1877 G1878 U1879 C1880 A1881 G1884 A1885
C1892 G1898 C1899 G1902 A1912 C1913 C1914 A1921 A1922 G1923 A1924 G1925 G1926 G1929 G1932 U1937 A1941 A1942 C1943 G1944 G1945 C1946 G1947 G1948 G1949 G1950 G1951 U A A C U A U G A C C C U C1965 G1971 U1972 A1973 G1974 C1975 G1976 U1977 A1978 G1979 U1980
C1983 U1984 U1985 G1998 C1999 G2009 A2010 A2011 U2012 G2013 G2014 A2015 U2016 U2017 A2018 A2019 C2020 C2021 A2024 G2025 C2026 U2027 C2031 U2032 C2036 C2037 A2038 A2039 C2040 G2041 U2042 U2043 G2044 G2045 C2048 U2052 C2056 U2057 G2058 U2064 C2065 C2066 A2067 G2068 C2071 A2074 G2080
A2085 C2086 C2087 G2091 G2092 G2093 A2096 A2100 A2101 G2102 A2103 C2104 C2105 C2106 U2107 A2108 U2109 G2110 G2111 A2112 U2115 A2118 C2122 A2123 G2124 G2125 C2126 U2133 G2134 A2135 C2136 A C G U G G U C G C C G A U G G U G C A G C
A U A G G U A G G A G U C G G U U A C A G A G G U A C C C G C G C U A G C G G G C C A C C C A G A C A A C A G U G A A A U



• Molecule 2: RPL37E

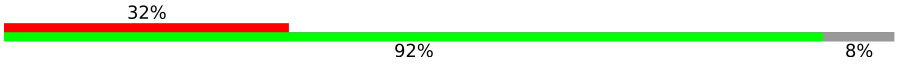
Chain 1:

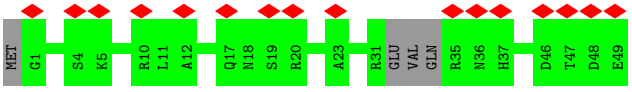




• Molecule 3: RPL39E

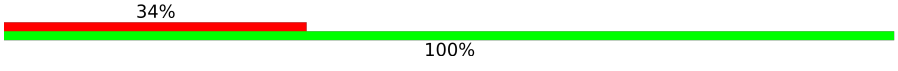
Chain 2:

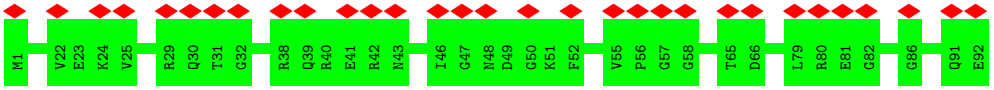




• Molecule 4: RPL44E

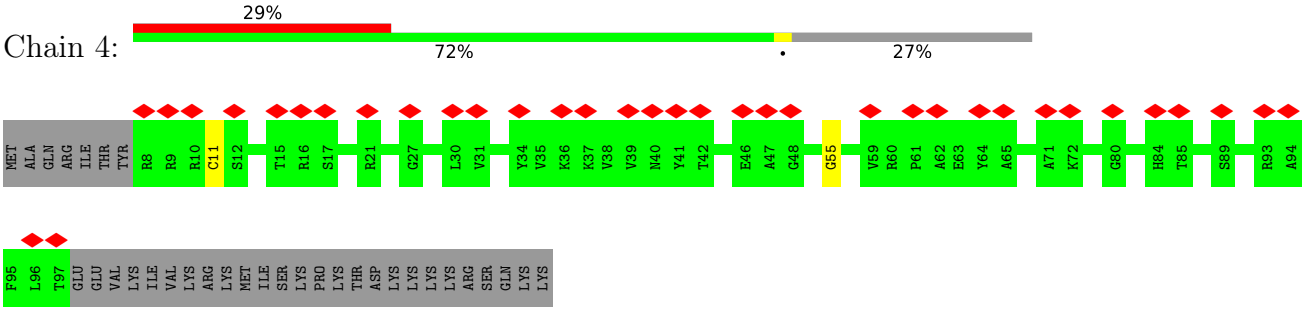
Chain 3:





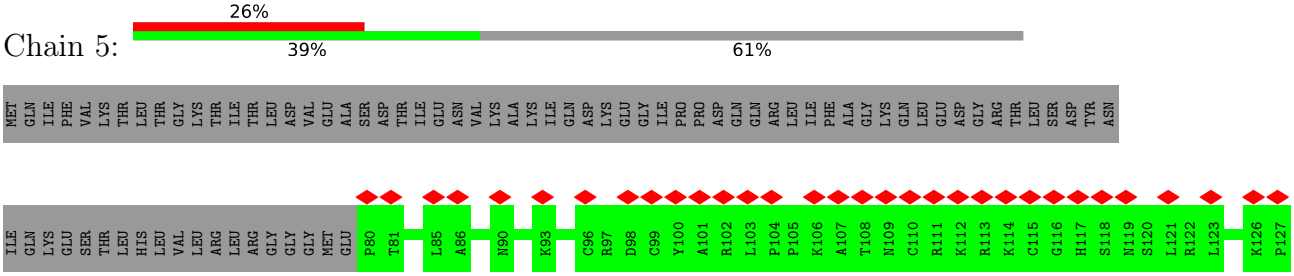
• Molecule 5: RPL34E

Chain 4:



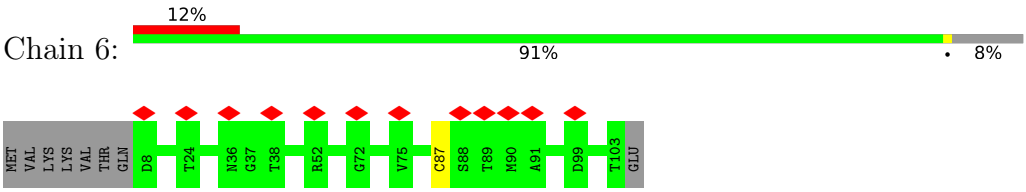
- Molecule 6: RPL40E

Chain 5:



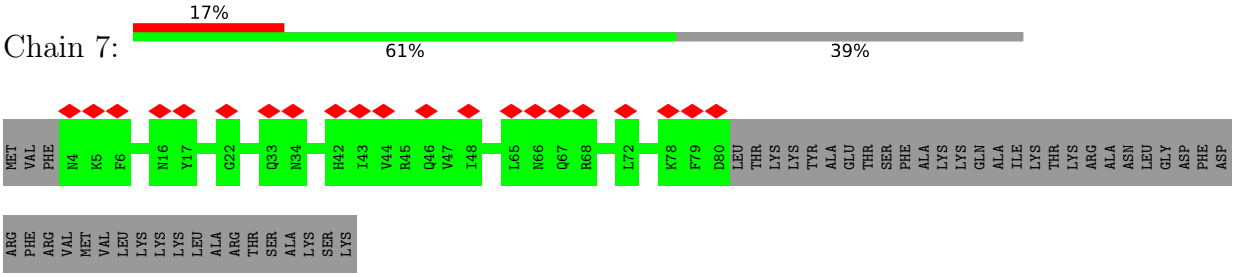
- Molecule 7: RPL30E

Chain 6:



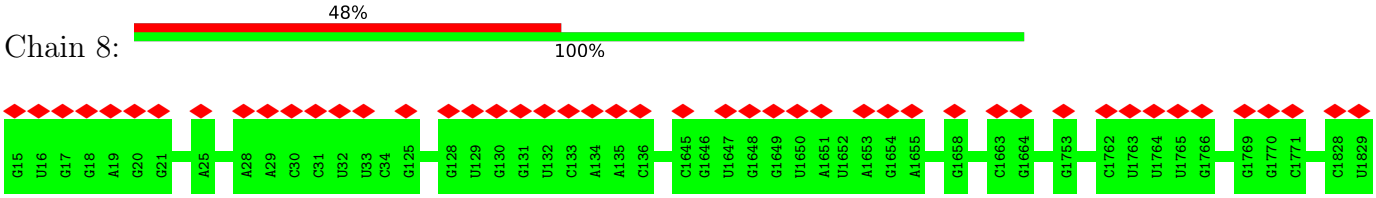
- Molecule 8: RPL14E

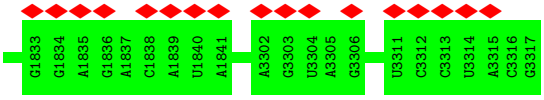
Chain 7:



- Molecule 9: 23S Ribosomal RNA EXPANSION SEGMENTS

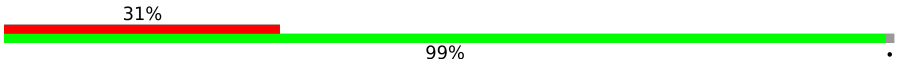
Chain 8:

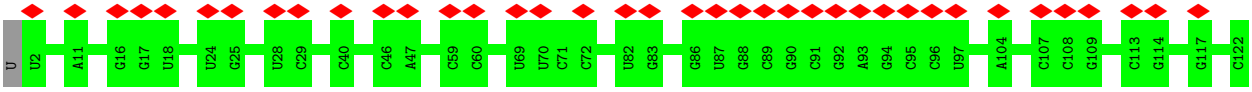




• Molecule 10: 5S Ribosomal RNA

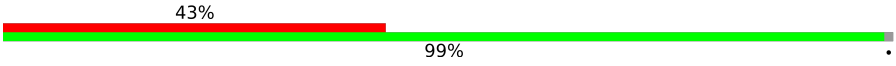
Chain 9:

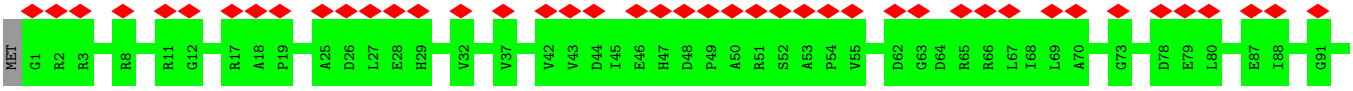


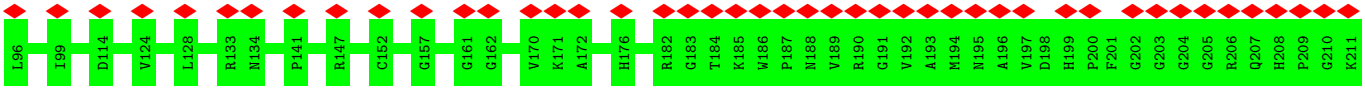


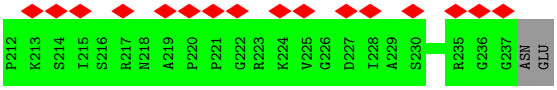
• Molecule 11: RPL2

Chain A:



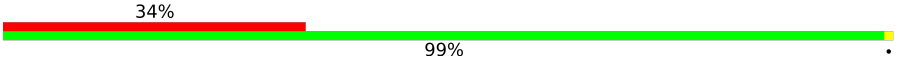


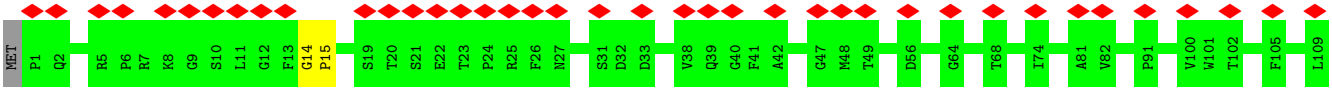


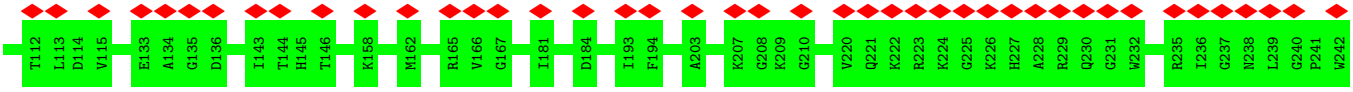


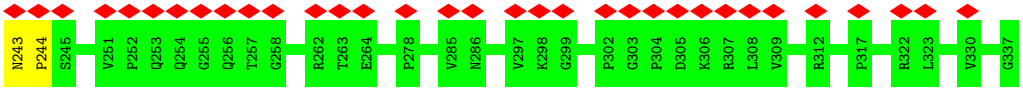
• Molecule 12: RPL3

Chain B:



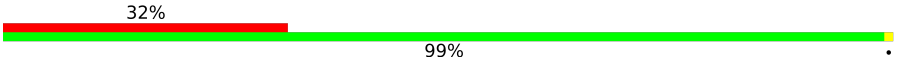


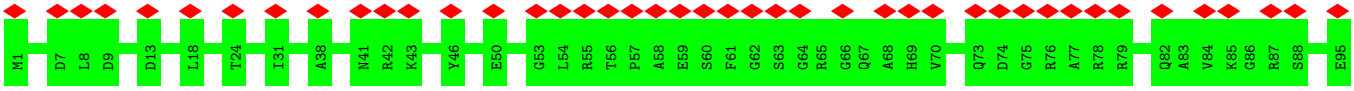


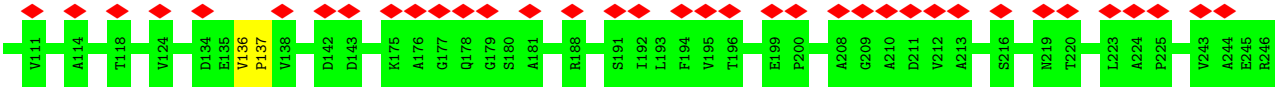


• Molecule 13: RPL4

Chain C:

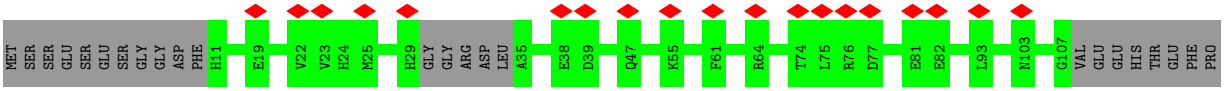


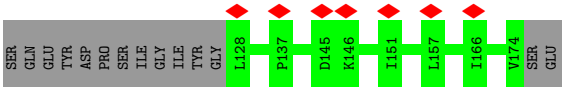




• Molecule 14: RPL5

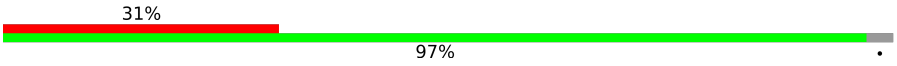
Chain D:

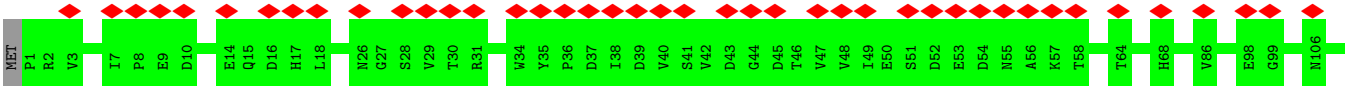


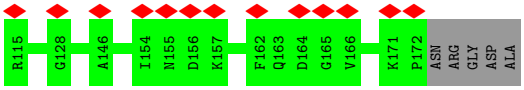


• Molecule 15: RPL6

Chain E:

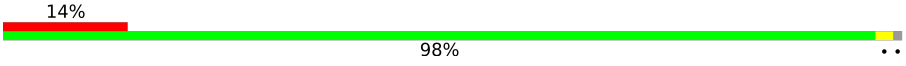


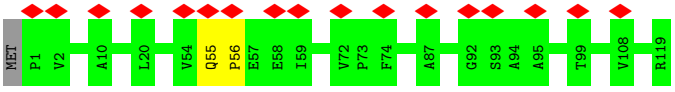




• Molecule 16: RPL7AE

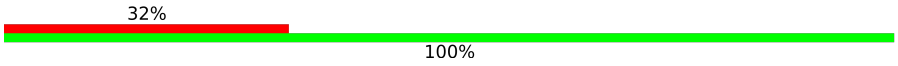
Chain F:

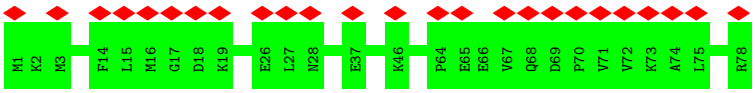




• Molecule 17: RPLX

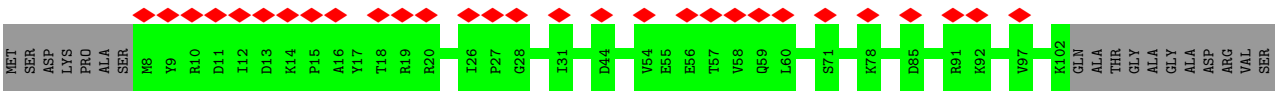
Chain G:

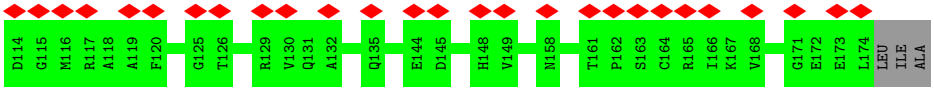




• Molecule 18: RPL10E

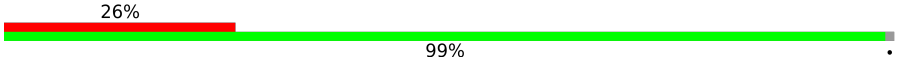
Chain H:

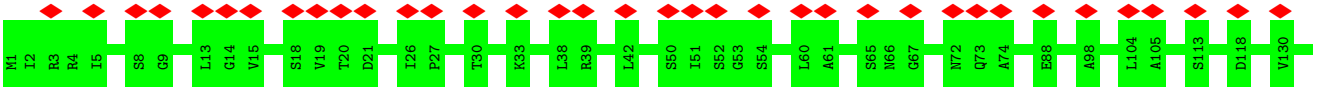


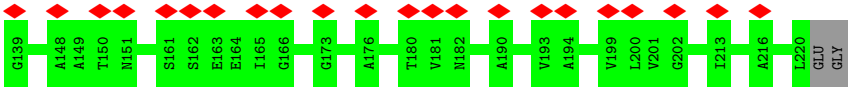


• Molecule 19: AIF6

Chain I:

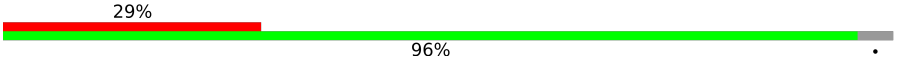


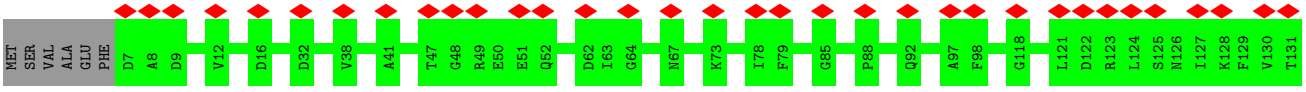


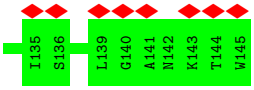


• Molecule 20: RPL13

Chain J:

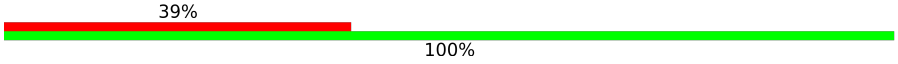


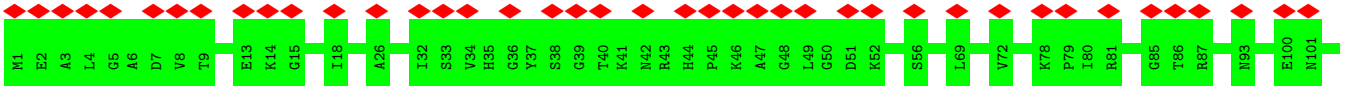


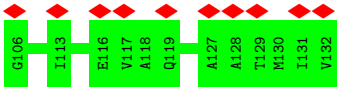


• Molecule 21: RPL14

Chain K:

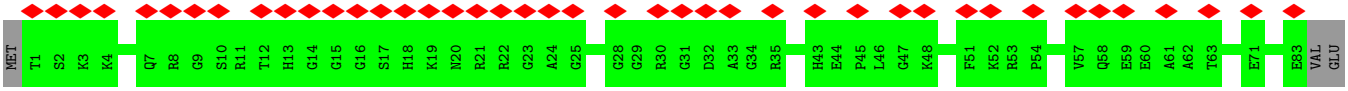


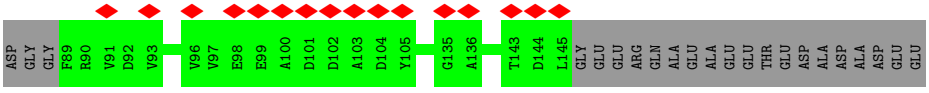




• Molecule 22: RPL15

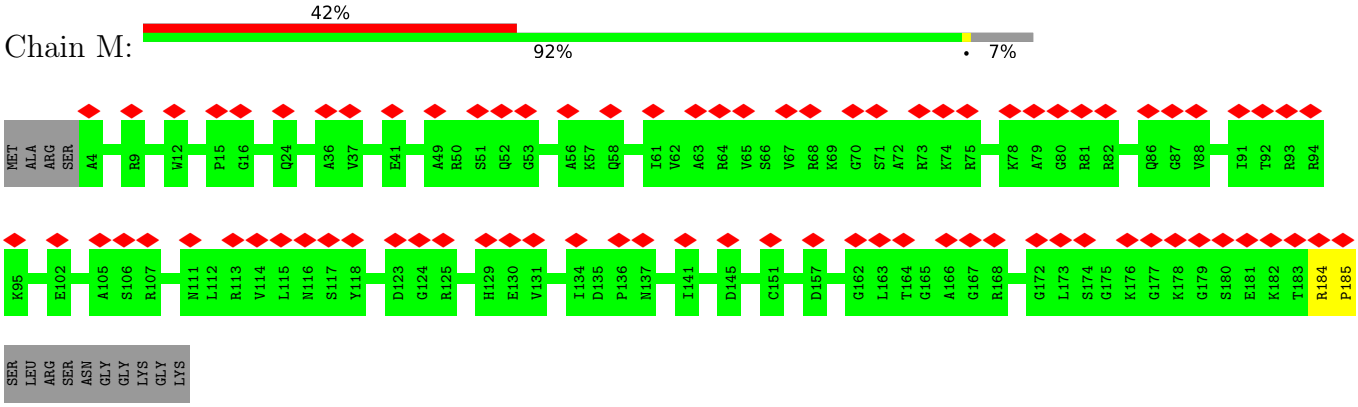
Chain L:





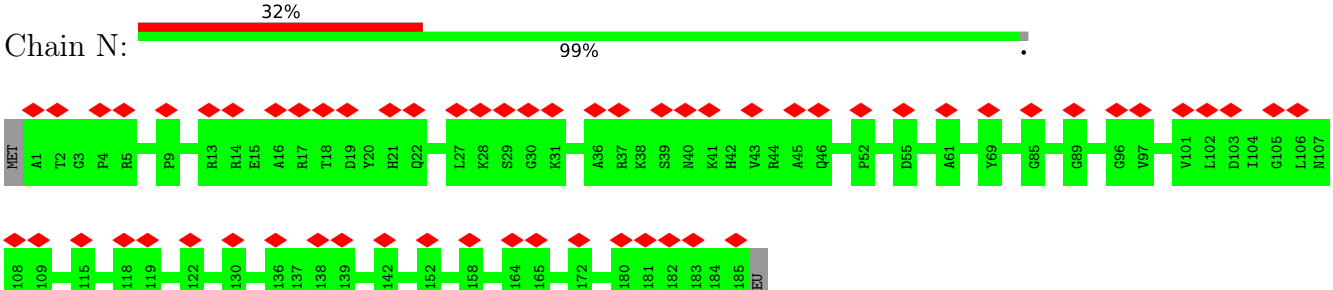
• Molecule 23: RPL15E

Chain M:



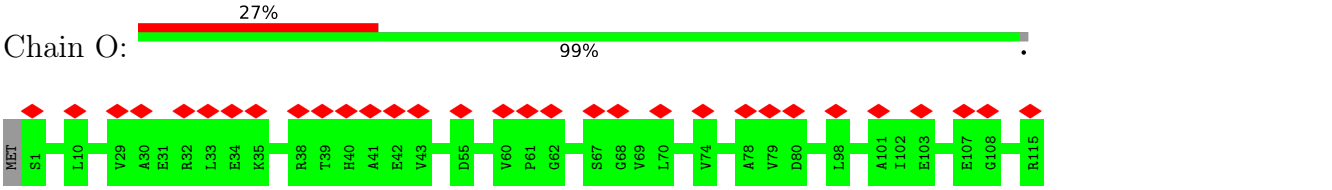
• Molecule 24: RPL18

Chain N:



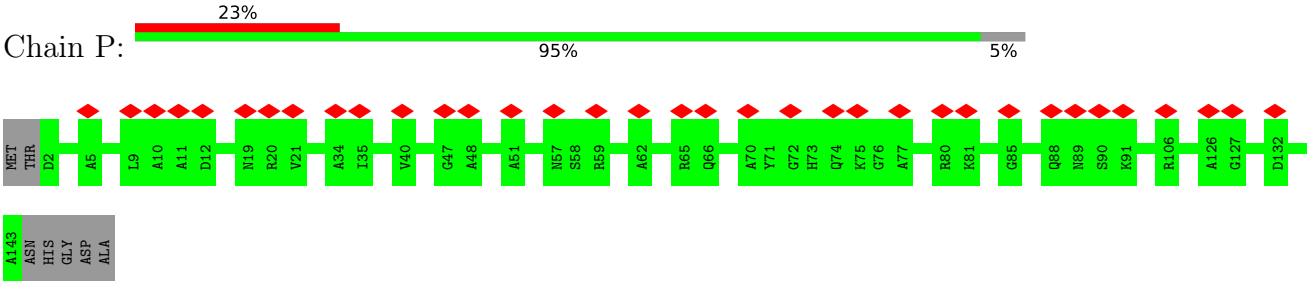
• Molecule 25: RPL18E

Chain O:



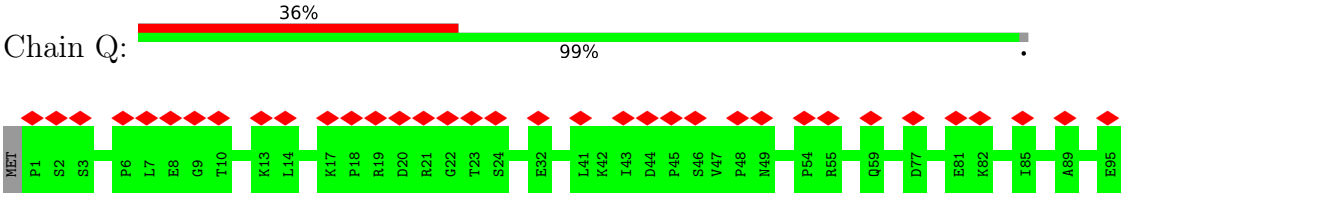
• Molecule 26: RPL19E

Chain P:



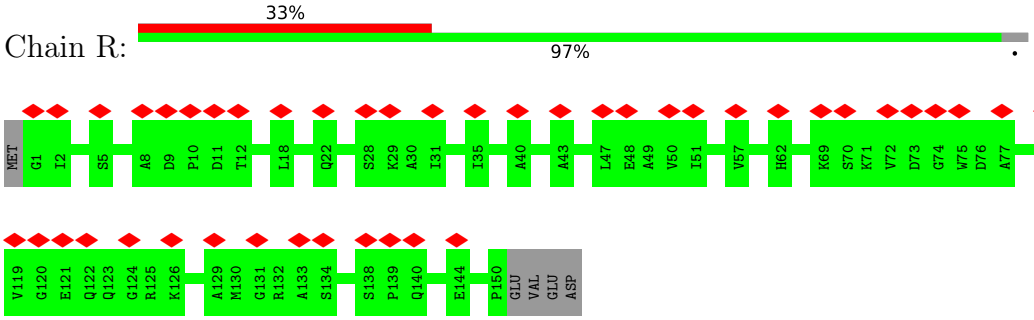
• Molecule 27: RPL21E

Chain Q:



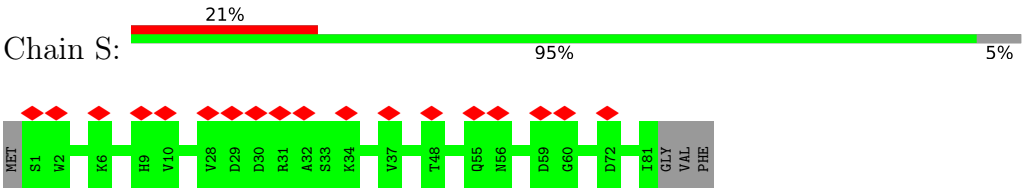
• Molecule 28: RPL22

Chain R:



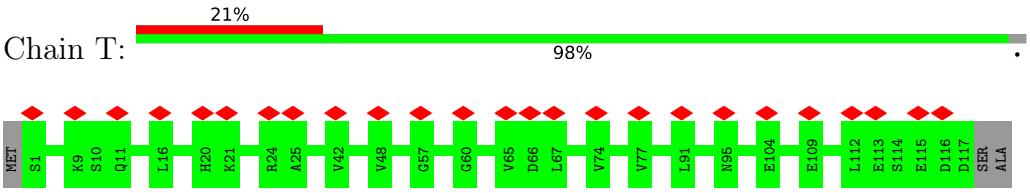
• Molecule 29: RPL23

Chain S:



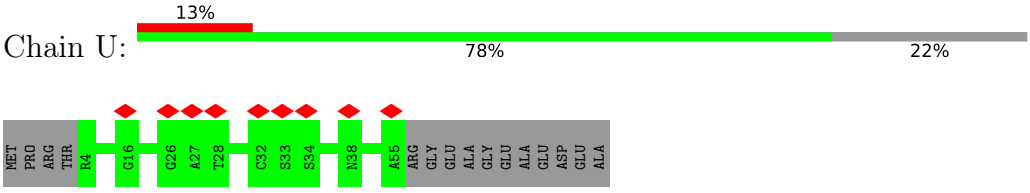
• Molecule 30: RPL24

Chain T:



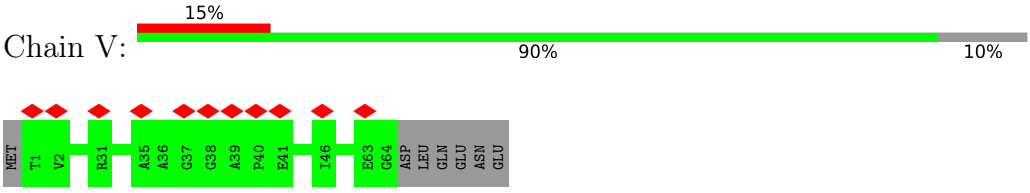
• Molecule 31: RPL24E

Chain U:



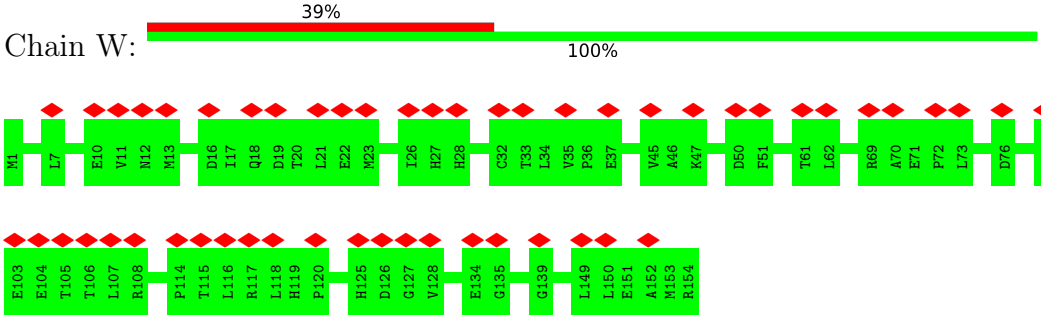
• Molecule 32: RPL29

Chain V:



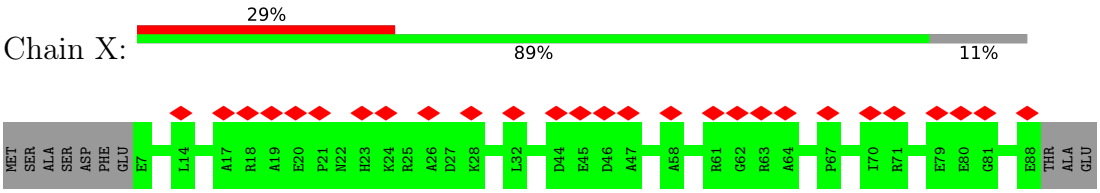
• Molecule 33: RPL30

Chain W:



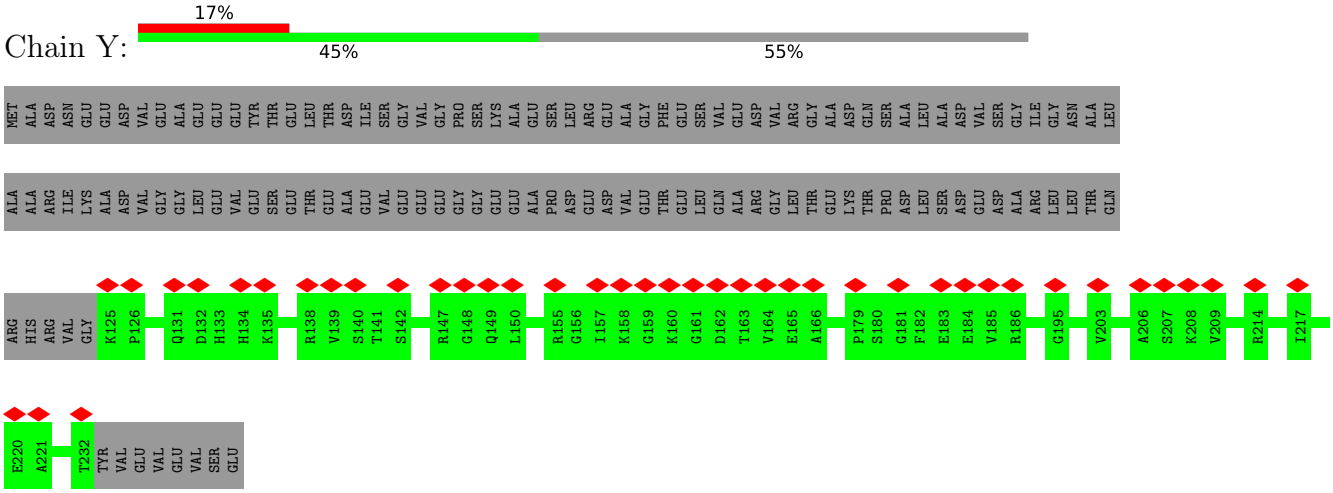
• Molecule 34: RPL31E

Chain X:



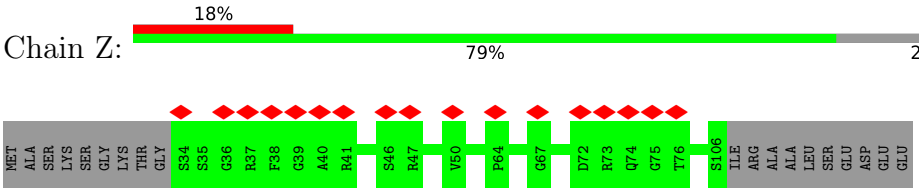
• Molecule 35: RPL32E

Chain Y:



• Molecule 36: RPL37AE

Chain Z:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	70364	Depositor
Resolution determination method	Not provided	
CTF correction method	BY CCD FRAME	Depositor
Microscope	FEI TECNAI 20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	4500	Depositor
Magnification	83000	Depositor
Image detector	GATAN ULTRASCAN 4000 (4k x 4k)	Depositor
Maximum map value	276.055	Depositor
Minimum map value	-201.716	Depositor
Average map value	-10.795	Depositor
Map value standard deviation	22.579	Depositor
Recommended contour level	30.0	Depositor
Map size (Å)	325.8, 325.8, 325.8	wwPDB
Map dimensions	180, 180, 180	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.81, 1.81, 1.81	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).

There are no protein, RNA or DNA chains available to summarize Z scores of covalent bonds and angles.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	0	2688	0	0	3	0
2	1	56	0	0	0	0
3	2	46	0	0	0	0
4	3	92	0	0	0	0
5	4	90	0	0	2	0
6	5	50	0	0	0	0
7	6	96	0	0	1	0
8	7	77	0	0	0	0
9	8	133	0	0	0	0
10	9	121	0	0	0	0
11	A	237	0	0	0	0
12	B	337	0	0	2	0
13	C	246	0	0	1	0
14	D	139	0	0	0	0
15	E	172	0	0	0	0
16	F	119	0	0	1	0
17	G	78	0	0	0	0
18	H	156	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	I	220	0	0	0	0
20	J	139	0	0	0	0
21	K	132	0	0	0	0
22	L	140	0	0	0	0
23	M	182	0	0	1	0
24	N	185	0	0	0	0
25	O	115	0	0	0	0
26	P	142	0	0	0	0
27	Q	95	0	0	0	0
28	R	150	0	0	0	0
29	S	81	0	0	0	0
30	T	117	0	0	0	0
31	U	52	0	0	0	0
32	V	64	0	0	0	0
33	W	154	0	0	0	0
34	X	82	0	0	0	0
35	Y	108	0	0	0	0
36	Z	73	0	0	0	0
All	All	7164	0	0	8	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 1.

All (8) 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)
1:0:1488:U:P	5:4:11:CYS:CA	2.82	0.67
1:0:1614:G:P	5:4:55:GLY:CA	2.88	0.61
12:B:14:GLY:CA	12:B:15:PRO:CA	2.80	0.59
1:0:1604:G:P	7:6:87:CYS:CA	2.92	0.58
12:B:243:ASN:CA	12:B:244:PRO:CA	2.93	0.47
23:M:184:ARG:CA	23:M:185:PRO:CA	2.94	0.46
16:F:55:GLN:CA	16:F:56:PRO:CA	2.96	0.44
13:C:136:VAL:CA	13:C:137:PRO:CA	2.99	0.41

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	0/2923	-	-
10	9	0/122	-	-
9	8	0/133	-	-
All	All	0/3178	-	-

There are no RNA backbone outliers to report.

There are no RNA pucker outliers to report.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

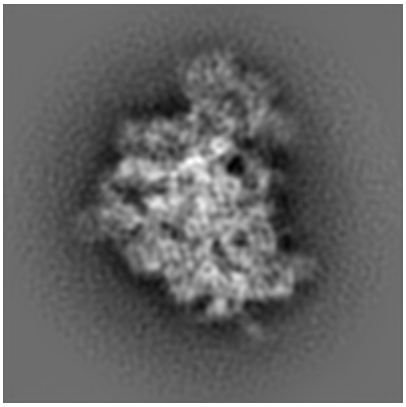
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2012. These allow visual inspection of the internal detail of the map and identification of artifacts.

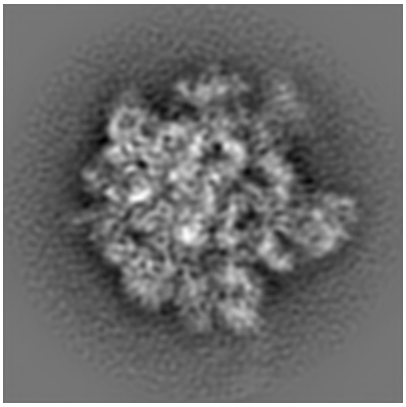
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

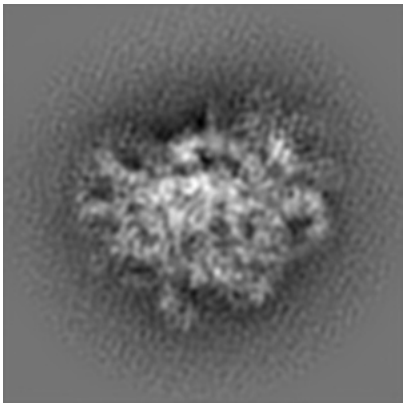
6.1.1 Primary map



X



Y

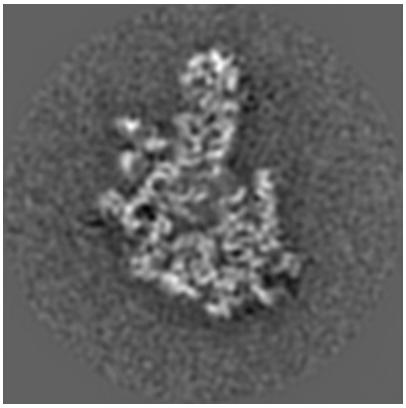


Z

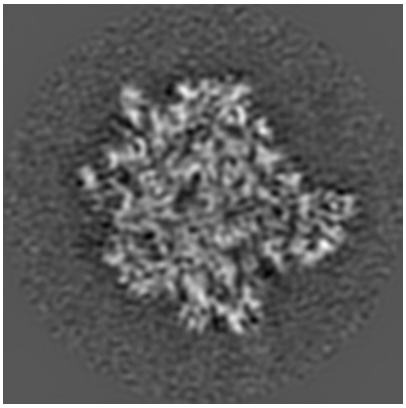
The images above show the map projected in three orthogonal directions.

6.2 Central slices

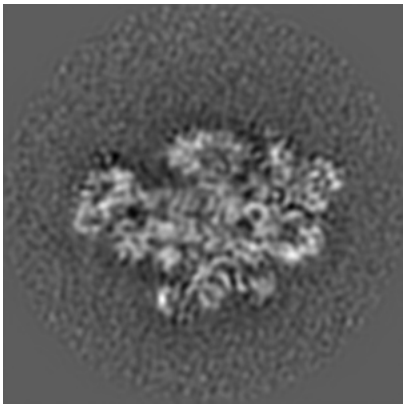
6.2.1 Primary map



X Index: 90



Y Index: 90

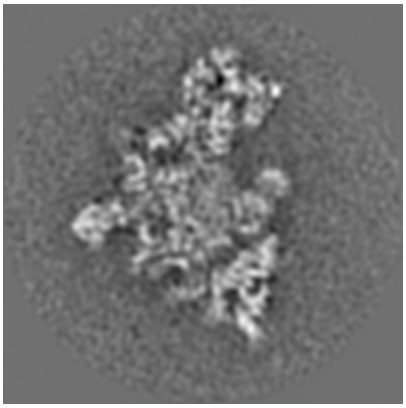


Z Index: 90

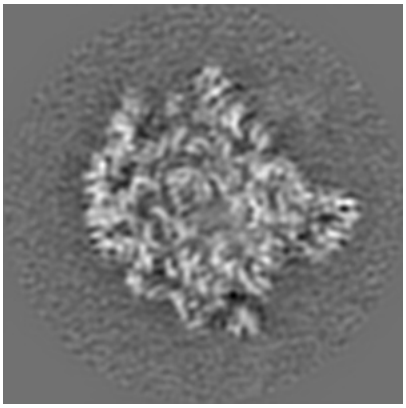
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

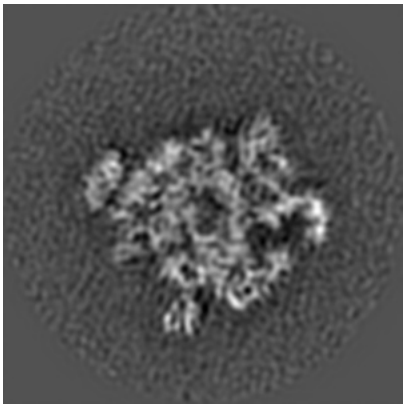
6.3.1 Primary map



X Index: 83



Y Index: 96

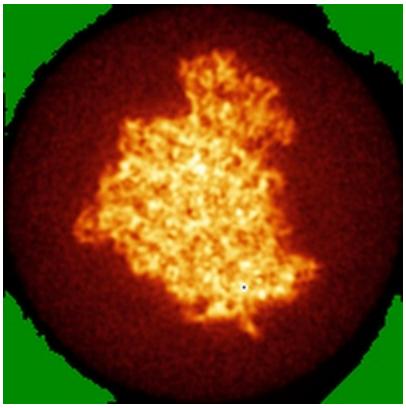


Z Index: 81

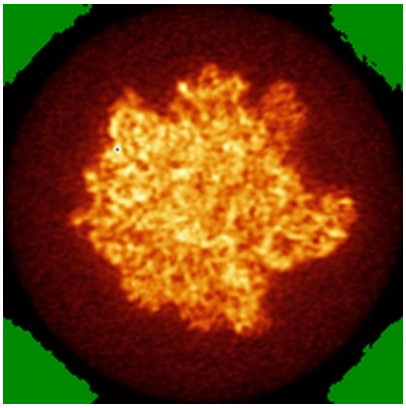
The images above show the largest variance slices of the map in three orthogonal directions.

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

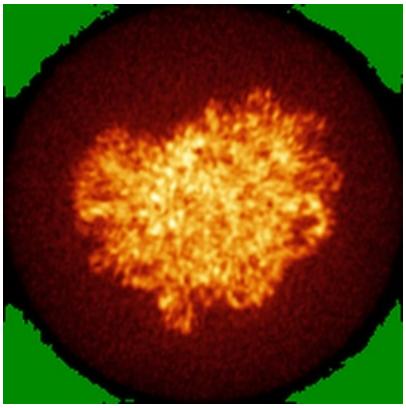
6.4.1 Primary map



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 30.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

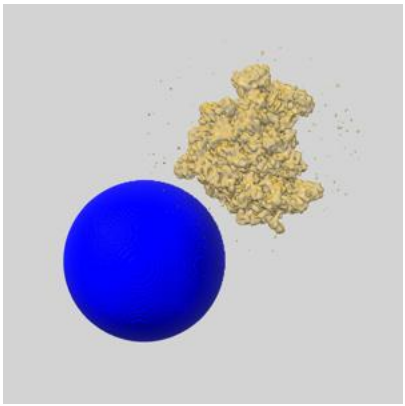
6.6 Mask visualisation (i)

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

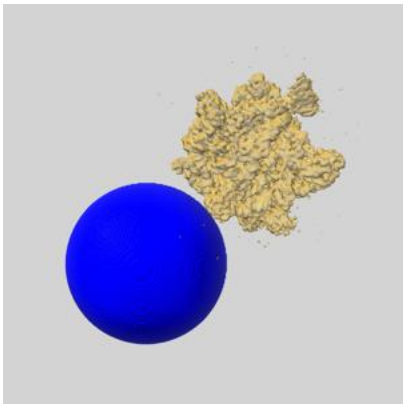
A mask typically either:

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

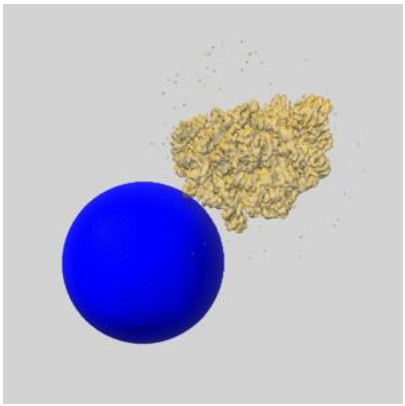
6.6.1 emd_2012_msk_1.map (i)



X



Y

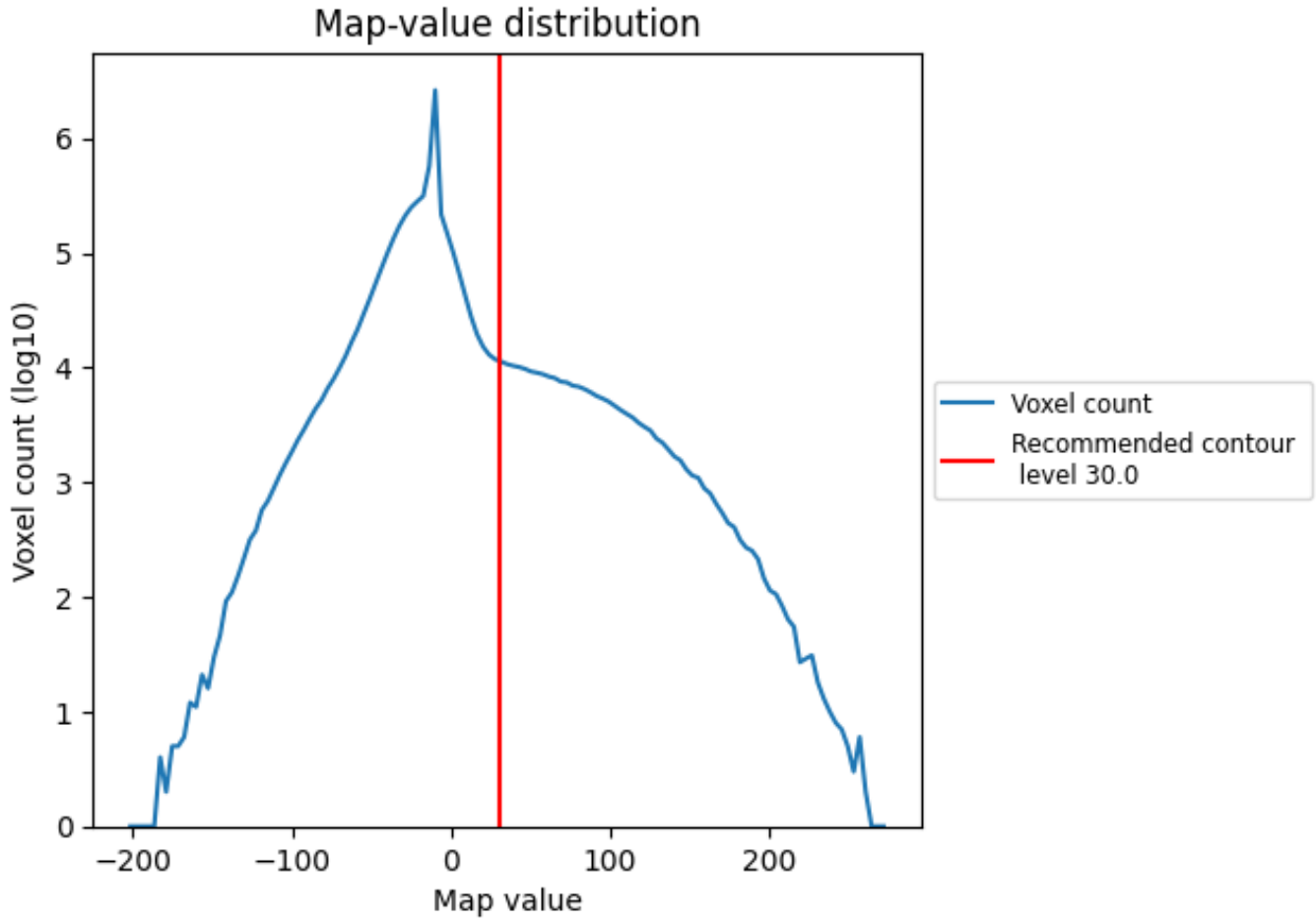


Z

7 Map analysis

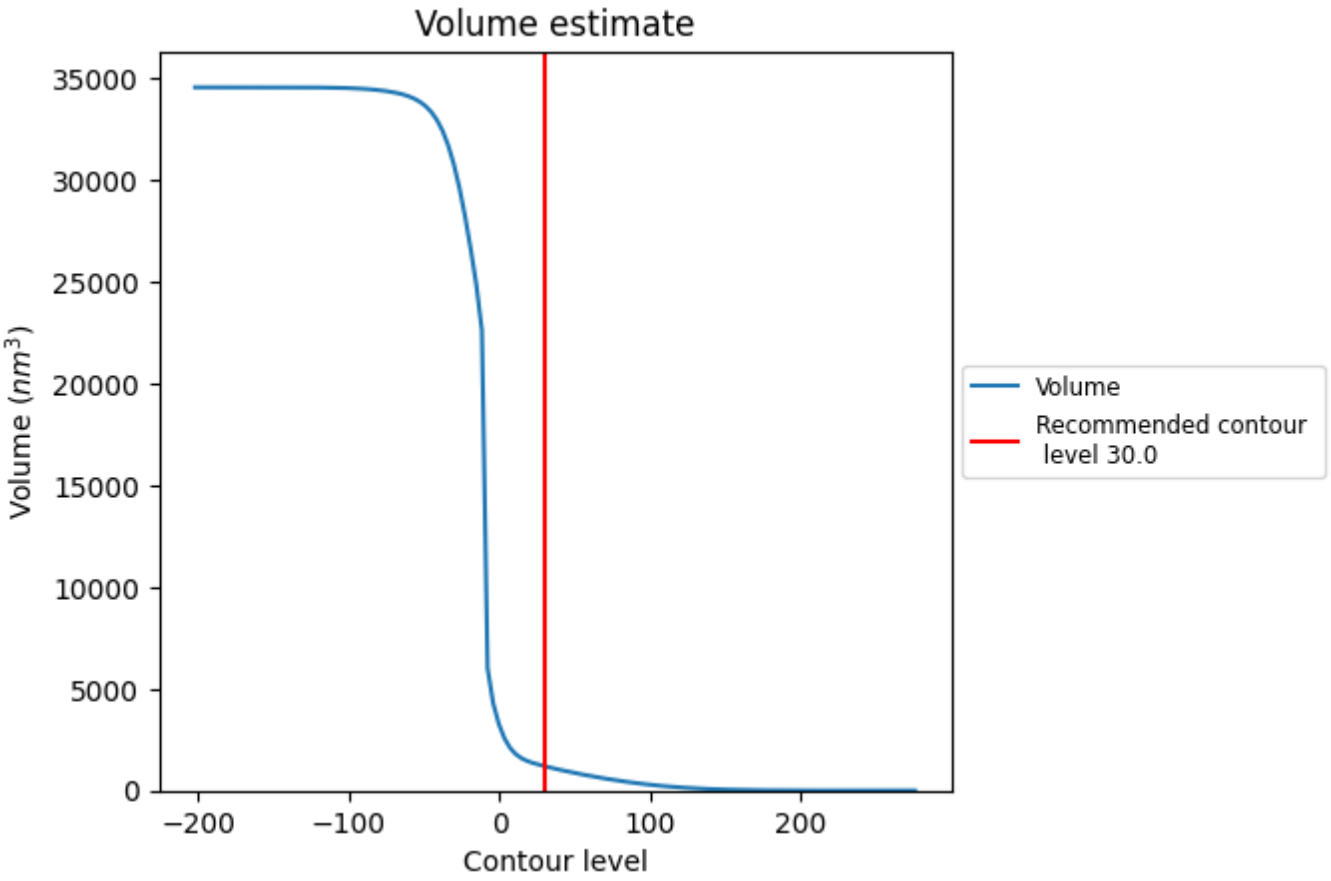
This section contains the results of statistical analysis of the map.

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.

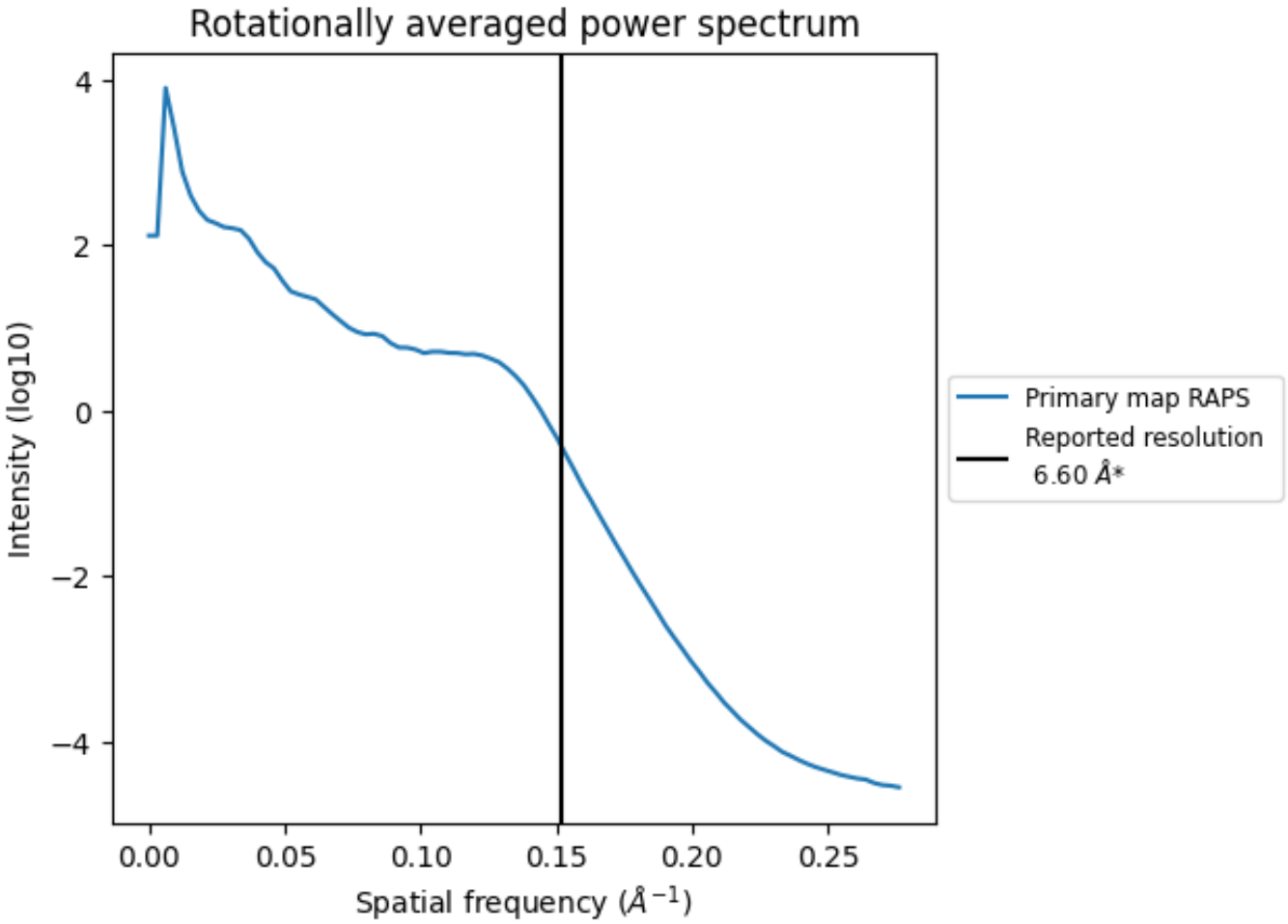
7.2 Volume estimate



The volume at the recommended contour level is 1203 nm^3; this corresponds to an approximate mass of 1087 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 0.152 Å^{-1}

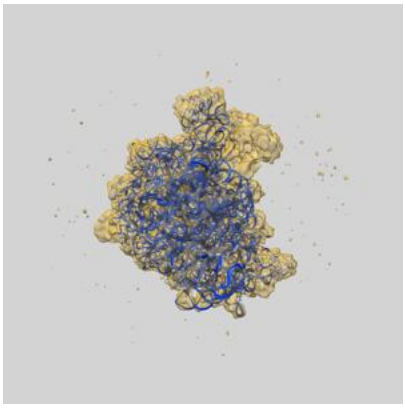
8 Fourier-Shell correlation (i)

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

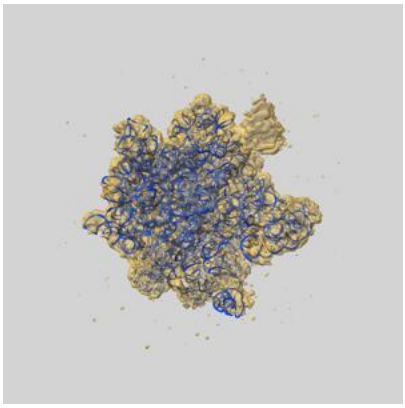
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2012 and PDB model 4ADX. Per-residue inclusion information can be found in section 3 on page 11.

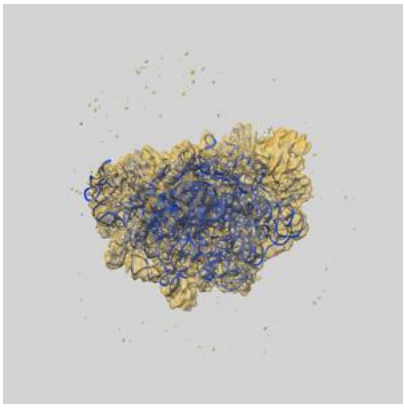
9.1 Map-model overlay



X



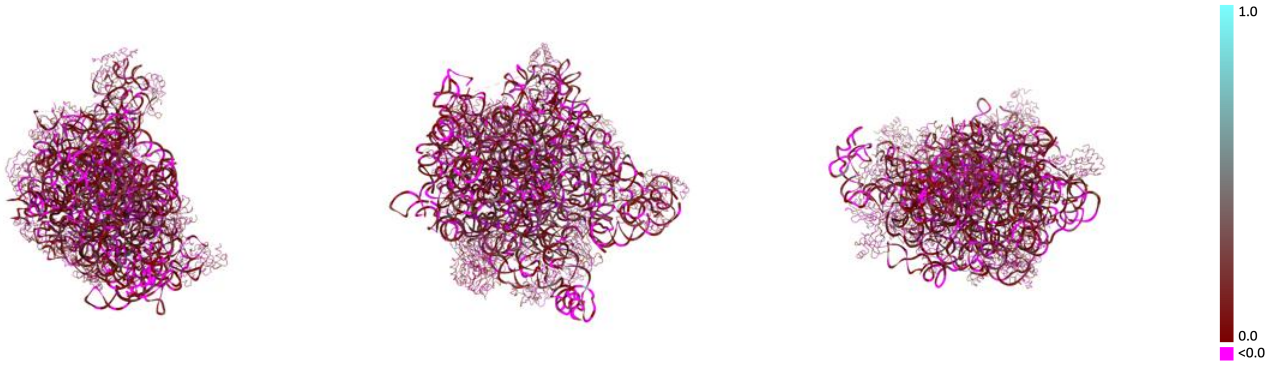
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 30.0 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.

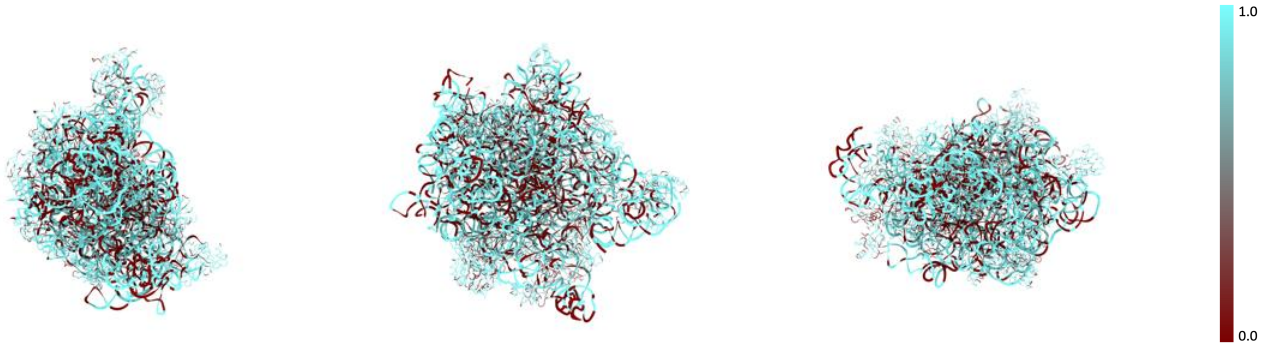
9.2 Q-score mapped to coordinate model



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.

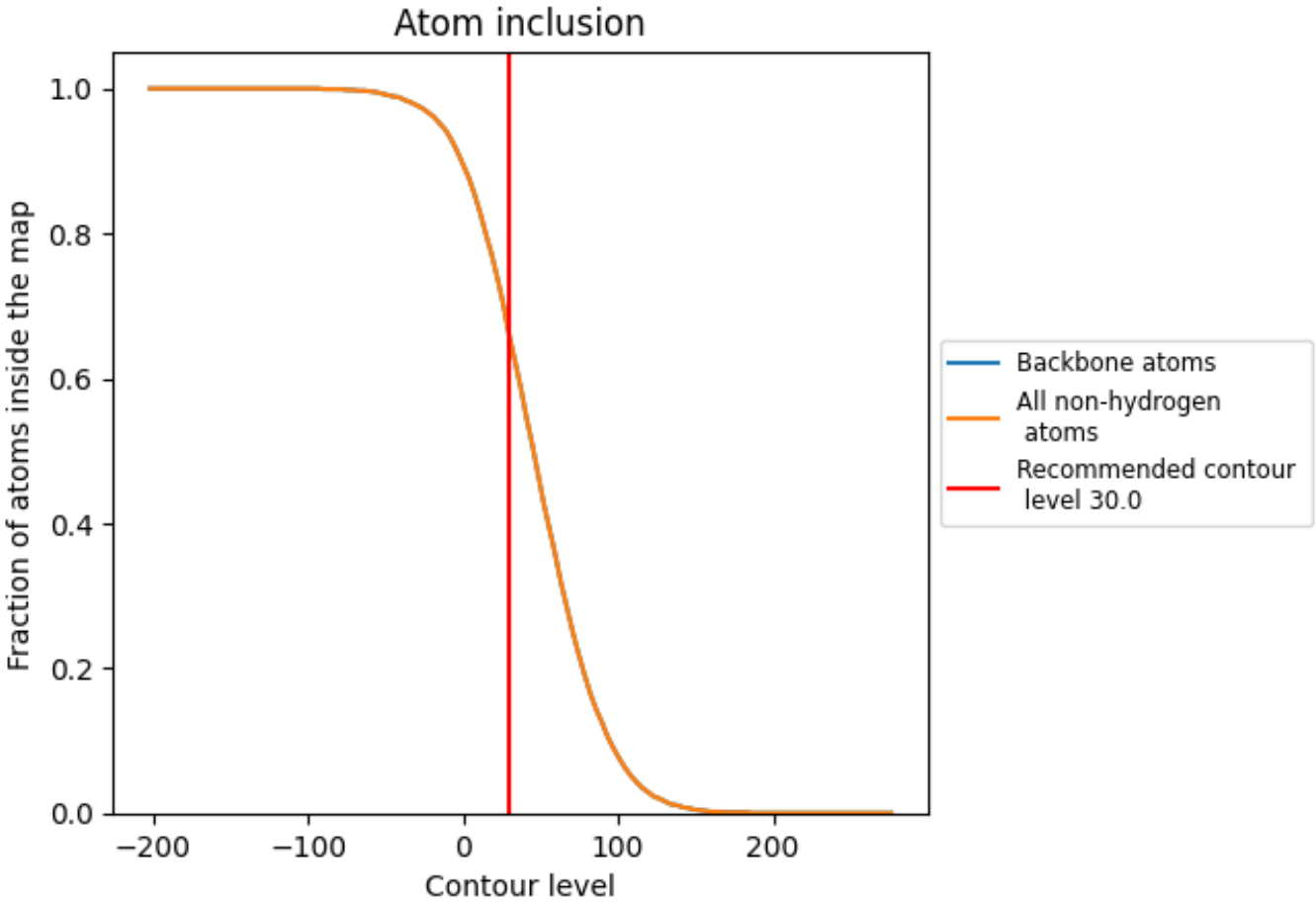
9.3 Atom inclusion mapped to coordinate model



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 (30.0).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 66% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (30.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6570	0.0950
0	0.6320	0.0820
1	0.5710	0.0930
2	0.6520	0.1330
3	0.6630	0.1020
4	0.6000	0.1000
5	0.3400	0.0530
6	0.8750	0.1210
7	0.7270	0.0840
8	0.5190	0.0250
9	0.6860	0.0800
A	0.5610	0.1080
B	0.6590	0.0970
C	0.6790	0.1090
D	0.8130	0.0850
E	0.6800	0.1050
F	0.8570	0.1210
G	0.6790	0.0710
H	0.6410	0.1070
I	0.7360	0.1100
J	0.6980	0.1100
K	0.6140	0.1120
L	0.5860	0.0990
M	0.5490	0.1180
N	0.6760	0.0940
O	0.7300	0.1160
P	0.7530	0.1080
Q	0.6320	0.1260
R	0.6600	0.1160
S	0.7780	0.1240
T	0.7860	0.1240
U	0.8270	0.1310
V	0.8280	0.1100
W	0.6100	0.0800
X	0.6710	0.0980

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Chain	Atom inclusion	Q-score
Y	0.6110	0.1050
Z	0.7670	0.1120