Full wwPDB EM Validation Report ⓘ

Dec 18, 2022 – 01:35 pm GMT

PDB ID	:	7ALP
EMDB ID	:	EMD-0828
Title	:	Severe fever with thrombocytopenia syndrome virus (Phenuiviridae) L protein
Authors	:	Cusack, S.; Rosenthal, M.
Deposited on	:	2020-10-07
Resolution	:	3.40 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:

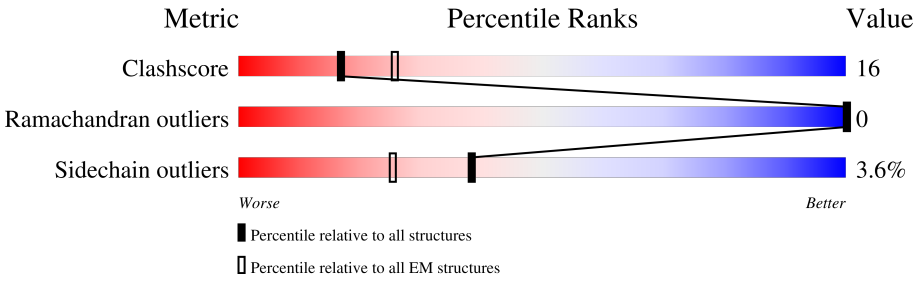
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

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 3.40 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
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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	U	2084	65% 26% 7%

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 15398 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Replicase.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	U	1935	15396	9759	2666	2877	94	0	0

- Molecule 2 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

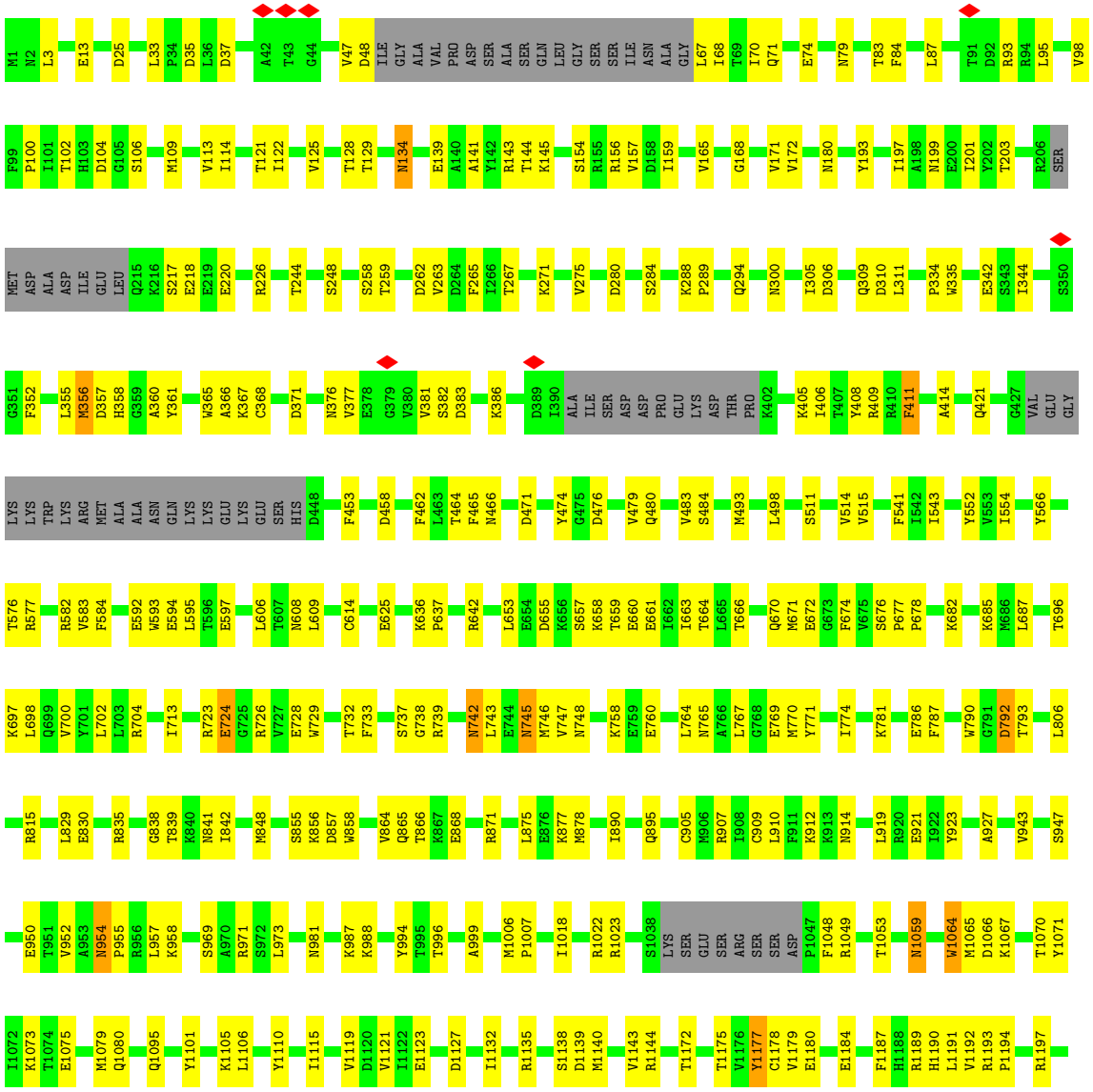
Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
2	U	2	2	2	0

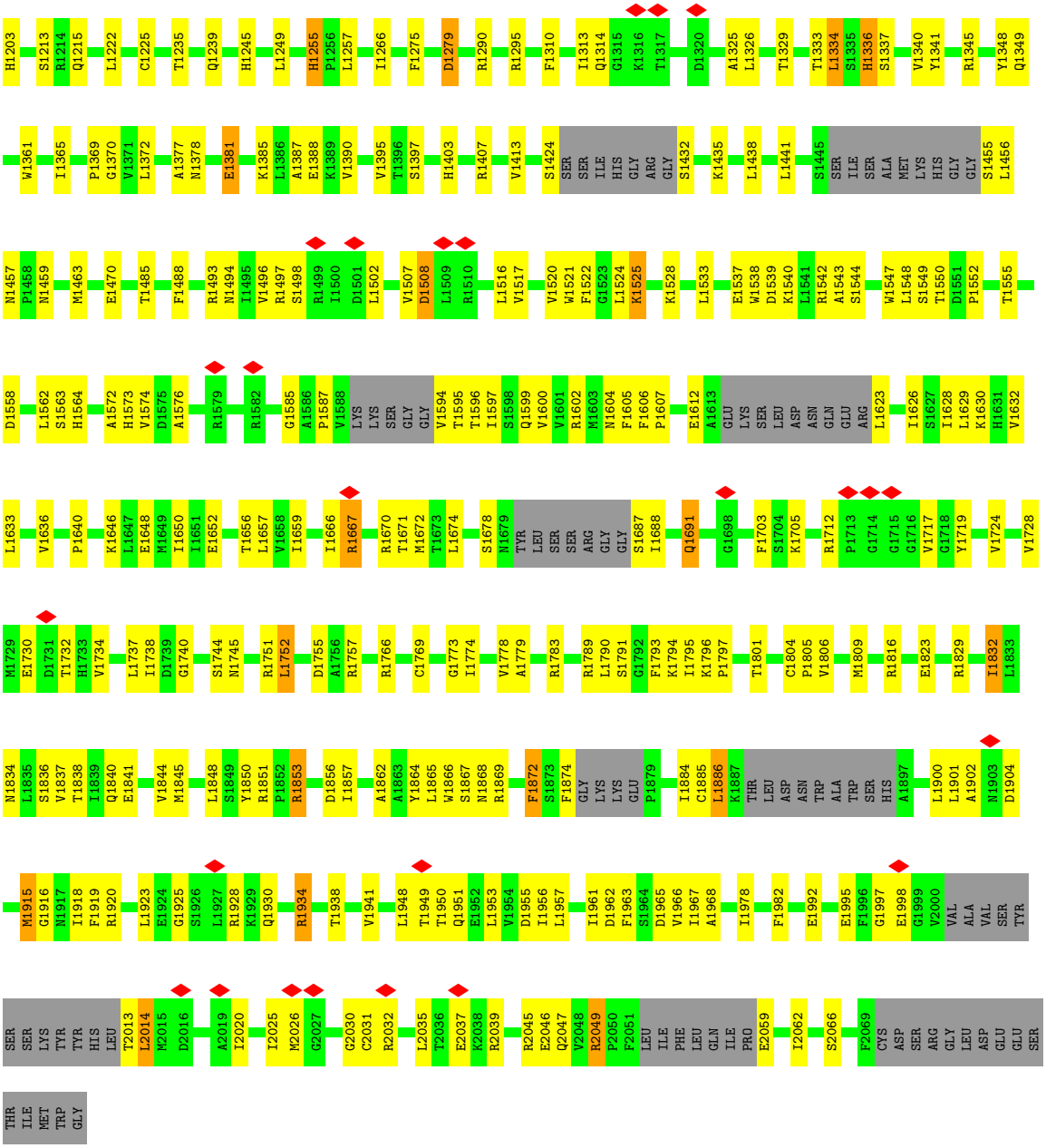
3 Residue-property plots (i)

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: Replicase

Chain U:




H1203 S1213 R1214 Q1215 L1222 C1225 T1235 Q1239 H1245 L1249 H1255 P1256 L1257 I1266 F1275 D1279 R1290 R1295 F1310 I1313 Q1314 G1315 K1316 T1317 D1320 A1325 L1326 T1329 T1333 L1334 S1335 H1336 S1337 V1340 Y1341 R1345 Y1348 Q1349
W1361 I1365 P1369 G1370 V1371 L1372 A1377 N1378 E1381 K1385 L1386 A1387 E1388 K1389 V1390 V1395 T1396 S1397 H1403 R1407 V1413 S1424 SER SER ILE HIS GLY ARG GLY S1432 K1435 L1438 L1441 S1445 SER ILE SER ALA MET LYS HIS GLY GLY S1455 L1456
N1457 P1458 N1459 M1463 E1470 T1485 F1488 R1493 N1494 I1495 V1496 R1497 S1498 R1499 I1500 D1501 L1502 V1507 D1508 L1509 R1510 L1516 V1517 V1520 W1521 F1522 G1523 L1524 K1525 K1528 L1533 E1537 W1538 D1539 K1540 L1541 R1542 A1543 S1544 W1547 L1548 S1549 T1550 D1551 P1552 T1555
D1558 L1562 S1563 H1564 A1572 H1573 V1574 D1575 A1576 R1579 R1582 G1585 A1586 P1587 V1588 LYS LYS SER GLY GLY V1594 T1595 T1596 I1597 S1598 Q1599 V1600 V1601 R1602 M1603 N1604 F1605 F1606 P1607 E1612 A1613 GLU LYS SER LEU ASP ASN GLN GLU ARG L1623 I1626 S1627 I1628 L1629 K1630 H1631 V1632
L1633 V1636 P1640 K1646 L1647 E1648 M1649 I1650 I1651 E1652 T1656 L1657 V1658 I1659 I1666 R1667 R1670 T1671 M1672 T1673 L1674 S1678 N1679 TYR LEU SER SER ARG GLY GLY S1687 I1688 Q1691 G1698 F1703 S1704 K1705 R1712 P1713 G1714 G1715 G1716 V1717 G1718 Y1719 V1724 V1728
M1729 E1730 D1731 T1732 H1733 V1734 L1737 I1738 D1739 G1740 S1744 N1745 R1751 L1752 D1755 A1756 R1757 R1766 C1769 G1773 I1774 V1778 A1779 R1783 R1789 L1790 S1791 G1792 F1793 K1794 I1795 K1796 P1797 T1801 C1804 P1805 V1806 M1809 R1816 E1823 R1829 I1832 L1833
N1834 L1835 S1836 V1837 T1838 I1839 Q1840 E1841 V1844 M1845 L1848 S1849 Y1850 R1851 P1852 R1853 D1856 I1857 A1862 A1863 Y1864 L1865 W1866 S1867 N1868 R1869 F1872 S1873 F1874 GLY LYS LYS GLU P1879 I1884 C1885 L1886 K1887 THR LEU ASP ASN TRP ALA TRP SER HIS A1897 L1900 L1901 A1902 N1903 D1904
M1915 G1916 N1917 I1918 F1919 R1920 L1923 E1924 G1925 S1926 L1927 R1928 K1929 Q1930 R1934 T1938 V1941 L1948 T1949 T1950 Q1951 E1952 L1953 V1954 D1955 I1956 L1957 I1961 D1962 F1963 S1964 D1965 V1966 I1967 A1968 I1978 F1982 E1992 E1995 F1996 G1997 E1998 G1999 V2000 VAL ALA VAL SER TYR
SER SER LYS TYR TYR HIS LEU T2013 L2014 M2015 D2016 A2019 I2020 I2025 M2026 G2027 G2030 C2031 R2032 L2035 T2036 E2037 K2038 R2039 R2045 E2046 Q2047 V2048 R2049 P2050 F2051 LEU ILE PHE LEU GLN ILE PRO E2059 I2062 S2066 F2069 CYS ASP SER ARG GLY LEU ASP GLU GLU SER
THR ILE MET TRP GLY

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	147344	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.061	Depositor
Minimum map value	-0.028	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.002	Depositor
Recommended contour level	0.0085	Depositor
Map size (Å)	237.6, 237.6, 237.6	wwPDB
Map dimensions	220, 220, 220	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.08, 1.08, 1.08	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG

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	U	0.27	0/15697	0.44	0/21173

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	U	15396	0	15401	478	0
2	U	2	0	0	0	0
All	All	15398	0	15401	478	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 16.

All (478) 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:U:1900:LEU:HD22	1:U:2032:ARG:CG	1.54	1.37
1:U:1900:LEU:CD2	1:U:2032:ARG:HG2	1.62	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1900:LEU:HD22	1:U:2032:ARG:HG3	1.34	1.07
1:U:1886:LEU:H	1:U:1886:LEU:HD12	1.18	1.05
1:U:1900:LEU:HD22	1:U:2032:ARG:HG2	1.22	0.99
1:U:1670:ARG:O	1:U:1674:LEU:HD13	1.65	0.95
1:U:1900:LEU:HD21	1:U:2032:ARG:HG2	1.44	0.95
1:U:1900:LEU:HD13	1:U:2032:ARG:HD2	1.49	0.93
1:U:1900:LEU:CD2	1:U:2032:ARG:CG	2.32	0.92
1:U:128:THR:HG23	1:U:171:VAL:HG23	1.54	0.88
1:U:950:GLU:CD	1:U:952:VAL:HG12	1.94	0.88
1:U:732:THR:HG23	1:U:746:MET:SD	2.14	0.87
1:U:1521:TRP:HH2	1:U:1555:THR:HG21	1.40	0.87
1:U:696:THR:HG22	1:U:698:LEU:H	1.38	0.86
1:U:950:GLU:OE1	1:U:952:VAL:HG12	1.75	0.86
1:U:732:THR:CG2	1:U:746:MET:SD	2.63	0.85
1:U:1521:TRP:CH2	1:U:1555:THR:HG21	2.13	0.84
1:U:1507:VAL:HG23	1:U:1508:ASP:H	1.41	0.83
1:U:1874:PHE:HE1	1:U:1884:ILE:HG12	1.43	0.83
1:U:1919:PHE:CZ	1:U:1923:LEU:HD22	2.14	0.82
1:U:1539:ASP:OD1	1:U:1796:LYS:HD3	1.79	0.81
1:U:1728:VAL:HG11	1:U:1816:ARG:HH21	1.46	0.81
1:U:1525:LYS:H	1:U:1525:LYS:HD2	1.44	0.80
1:U:1874:PHE:CE1	1:U:1884:ILE:HG12	2.16	0.80
1:U:1521:TRP:CE3	1:U:1552:PRO:HB3	2.18	0.78
1:U:1766:ARG:HA	1:U:1793:PHE:CE1	2.18	0.78
1:U:1790:LEU:HD12	1:U:1790:LEU:O	1.83	0.78
1:U:1424:SER:HG	1:U:1432:SER:N	1.83	0.76
1:U:1179:VAL:HG12	1:U:1180:GLU:N	2.01	0.75
1:U:37:ASP:OD1	1:U:48:ASP:N	2.20	0.75
1:U:98:VAL:HG21	1:U:114:ILE:CD1	2.18	0.74
1:U:33:LEU:HB2	1:U:1948:LEU:HD21	1.70	0.72
1:U:1832:ILE:CG2	1:U:1834:ASN:HD21	2.02	0.72
1:U:726:ARG:NH1	1:U:1494:ASN:O	2.24	0.71
1:U:1671:THR:HB	1:U:1848:LEU:HD21	1.71	0.71
1:U:1640:PRO:HB2	1:U:1915:MET:HG3	1.72	0.71
1:U:1539:ASP:OD1	1:U:1796:LYS:HA	1.91	0.71
1:U:848:MET:SD	1:U:1395:VAL:HG13	2.30	0.71
1:U:1143:VAL:CG1	1:U:1978:ILE:HG22	2.21	0.70
1:U:37:ASP:OD2	1:U:48:ASP:HB2	1.91	0.70
1:U:1640:PRO:HA	1:U:1918:ILE:HG21	1.72	0.70
1:U:954:ASN:N	1:U:954:ASN:OD1	2.25	0.69
1:U:3:LEU:HD11	1:U:113:VAL:HG21	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1178:CYS:SG	1:U:1187:PHE:HD1	2.17	0.68
1:U:1832:ILE:HD11	1:U:1851:ARG:HG2	1.76	0.67
1:U:950:GLU:OE2	1:U:952:VAL:HG12	1.95	0.67
1:U:1190:HIS:CD2	1:U:1494:ASN:ND2	2.63	0.67
1:U:1633:LEU:HD11	1:U:1672:MET:HE1	1.76	0.67
1:U:1189:ARG:O	1:U:1998:GLU:HG2	1.94	0.67
1:U:1290:ARG:HE	1:U:1576:ALA:HB3	1.59	0.67
1:U:1194:PRO:HG2	1:U:1197:ARG:HH21	1.60	0.66
1:U:2059:GLU:HA	1:U:2059:GLU:OE1	1.95	0.66
1:U:37:ASP:OD2	1:U:48:ASP:CB	2.43	0.66
1:U:98:VAL:HG21	1:U:114:ILE:HD11	1.76	0.66
1:U:787:PHE:CZ	1:U:793:THR:OG1	2.49	0.66
1:U:1640:PRO:HB3	1:U:1918:ILE:HG22	1.79	0.65
1:U:981:ASN:HB3	1:U:1179:VAL:HG22	1.75	0.65
1:U:1874:PHE:CE1	1:U:1884:ILE:CG1	2.79	0.65
1:U:1829:ARG:HB2	1:U:1832:ILE:HG22	1.79	0.65
1:U:1640:PRO:HA	1:U:1918:ILE:CG2	2.27	0.65
1:U:973:LEU:O	1:U:1135:ARG:NH1	2.30	0.64
1:U:300:ASN:OD1	1:U:682:LYS:NZ	2.29	0.64
1:U:462:PHE:O	1:U:466:ASN:ND2	2.30	0.64
1:U:1857:ILE:HB	1:U:2020:ILE:HG12	1.78	0.64
1:U:1507:VAL:HG23	1:U:1508:ASP:N	2.09	0.64
1:U:987:LYS:HG2	1:U:988:LYS:HG3	1.80	0.64
1:U:1377:ALA:N	1:U:1381:GLU:OE2	2.28	0.63
1:U:742:ASN:OD1	1:U:742:ASN:N	2.18	0.63
1:U:248:SER:OG	1:U:1022:ARG:NH1	2.32	0.63
1:U:48:ASP:OD1	1:U:67:LEU:N	2.31	0.63
1:U:95:LEU:HD12	1:U:109:MET:HB2	1.78	0.63
1:U:1070:THR:HG23	1:U:1070:THR:O	1.97	0.63
1:U:1738:ILE:HD11	1:U:1774:ILE:HG21	1.81	0.62
1:U:1457:ASN:ND2	1:U:1459:ASN:HB3	2.14	0.62
1:U:1874:PHE:HE1	1:U:1884:ILE:CG1	2.10	0.62
1:U:856:LYS:HE3	1:U:907:ARG:HH22	1.65	0.62
1:U:999:ALA:HB2	1:U:1018:ILE:HG21	1.81	0.62
1:U:1191:LEU:C	1:U:1191:LEU:HD23	2.20	0.62
1:U:1844:VAL:HG12	1:U:1845:MET:N	2.14	0.62
1:U:1110:TYR:OH	1:U:1144:ARG:NH1	2.33	0.62
1:U:1740:GLY:HA3	1:U:1745:ASN:HA	1.80	0.62
1:U:732:THR:HG22	1:U:733:PHE:N	2.14	0.62
1:U:309:GLN:HA	1:U:309:GLN:NE2	2.15	0.61
1:U:1886:LEU:H	1:U:1886:LEU:CD1	1.97	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1521:TRP:CH2	1:U:1552:PRO:HA	2.36	0.61
1:U:1928:ARG:HE	1:U:2025:ILE:HG23	1.64	0.61
1:U:1310:PHE:HA	1:U:1547:TRP:HZ3	1.66	0.61
1:U:1387:ALA:O	1:U:1390:VAL:HG12	2.01	0.61
1:U:244:THR:O	1:U:1023:ARG:NH2	2.34	0.61
1:U:608:ASN:ND2	1:U:655:ASP:OD2	2.33	0.61
1:U:1670:ARG:O	1:U:1674:LEU:CD1	2.43	0.61
1:U:1919:PHE:CE2	1:U:1923:LEU:HD22	2.35	0.61
1:U:356:MET:SD	1:U:356:MET:N	2.74	0.60
1:U:1539:ASP:CG	1:U:1796:LYS:HD3	2.22	0.60
1:U:106:SER:OG	1:U:156:ARG:NH2	2.35	0.60
1:U:1966:VAL:HG23	1:U:1967:ILE:HD12	1.84	0.60
1:U:1688:ILE:O	1:U:1691:GLN:NE2	2.35	0.60
1:U:493:MET:SD	1:U:1295:ARG:NH1	2.74	0.60
1:U:1633:LEU:HD11	1:U:1672:MET:CE	2.32	0.60
1:U:1179:VAL:HG12	1:U:1180:GLU:H	1.65	0.59
1:U:815:ARG:NH1	1:U:1951:GLN:OE1	2.35	0.59
1:U:1648:GLU:O	1:U:1652:GLU:HG2	2.02	0.59
1:U:1734:VAL:HG12	1:U:1752:LEU:HG	1.85	0.59
1:U:1791:SER:O	1:U:1794:LYS:HB2	2.02	0.59
1:U:1336:HIS:CD2	1:U:1336:HIS:N	2.70	0.59
1:U:1095:GLN:HB3	1:U:1121:VAL:HG11	1.83	0.59
1:U:1930:GLN:OE1	1:U:1934:ARG:NH1	2.36	0.59
1:U:1179:VAL:CG1	1:U:1180:GLU:N	2.65	0.59
1:U:226:ARG:NH1	1:U:838:GLY:O	2.35	0.59
1:U:1249:LEU:O	1:U:1249:LEU:HG	2.03	0.59
1:U:1336:HIS:CD2	1:U:1336:HIS:H	2.18	0.58
1:U:1724:VAL:HG22	1:U:1737:LEU:HD22	1.86	0.58
1:U:128:THR:CG2	1:U:171:VAL:HG23	2.30	0.58
1:U:1751:ARG:HE	1:U:1783:ARG:HH12	1.51	0.58
1:U:841:ASN:OD1	1:U:842:ILE:N	2.37	0.58
1:U:1886:LEU:HD12	1:U:1886:LEU:N	2.03	0.58
1:U:1832:ILE:CD1	1:U:1851:ARG:HG2	2.34	0.58
1:U:1119:VAL:HG23	1:U:1132:ILE:HG12	1.87	0.57
1:U:2032:ARG:NH2	1:U:2066:SER:OG	2.34	0.57
1:U:1290:ARG:NH2	1:U:1574:VAL:O	2.37	0.57
1:U:1629:LEU:O	1:U:1633:LEU:HG	2.03	0.57
1:U:1717:VAL:HG23	1:U:1717:VAL:O	2.04	0.57
1:U:1864:TYR:O	1:U:1868:ASN:ND2	2.38	0.57
1:U:129:THR:HG22	1:U:172:VAL:HG22	1.86	0.56
1:U:309:GLN:HA	1:U:309:GLN:HE21	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1325:ALA:HB2	1:U:1336:HIS:ND1	2.20	0.56
1:U:1558:ASP:N	1:U:1558:ASP:OD1	2.35	0.56
1:U:1766:ARG:HA	1:U:1793:PHE:HE1	1.68	0.56
1:U:1369:PRO:HB3	1:U:1564:HIS:CD2	2.40	0.56
1:U:1533:LEU:O	1:U:1537:GLU:HG2	2.05	0.56
1:U:84:PHE:HD2	1:U:87:LEU:HD12	1.69	0.56
1:U:1177:TYR:O	1:U:1178:CYS:SG	2.64	0.56
1:U:1755:ASP:N	1:U:1755:ASP:OD1	2.39	0.56
1:U:1143:VAL:HG12	1:U:1978:ILE:HG22	1.86	0.56
1:U:2046:GLU:HG3	1:U:2049:ARG:H	1.71	0.56
1:U:93:ARG:HB2	1:U:114:ILE:HG21	1.88	0.56
1:U:855:SER:OG	1:U:856:LYS:N	2.39	0.56
1:U:1916:GLY:O	1:U:1920:ARG:NH1	2.38	0.56
1:U:1066:ASP:OD1	1:U:1067:LYS:N	2.39	0.56
1:U:981:ASN:CB	1:U:1179:VAL:HG22	2.36	0.55
1:U:1189:ARG:HG3	1:U:1997:GLY:O	2.06	0.55
1:U:1257:LEU:HD23	1:U:1257:LEU:H	1.72	0.55
1:U:1730:GLU:OE1	1:U:1757:ARG:NH1	2.39	0.55
1:U:865:GLN:HG3	1:U:866:THR:HG23	1.87	0.55
1:U:745:ASN:N	1:U:745:ASN:HD22	2.04	0.55
1:U:79:ASN:O	1:U:83:THR:OG1	2.24	0.55
1:U:464:THR:O	1:U:642:ARG:NH1	2.40	0.55
1:U:1900:LEU:CD1	1:U:2032:ARG:HD2	2.29	0.55
1:U:1326:LEU:CD1	1:U:1562:LEU:HD23	2.37	0.55
1:U:1143:VAL:HG12	1:U:1978:ILE:CG2	2.36	0.55
1:U:1521:TRP:CZ3	1:U:1552:PRO:HA	2.42	0.55
1:U:1179:VAL:CG1	1:U:1180:GLU:H	2.19	0.55
1:U:1934:ARG:HA	1:U:2045:ARG:HG2	1.87	0.55
1:U:168:GLY:HA2	1:U:180:ASN:HD21	1.72	0.54
1:U:217:SER:OG	1:U:218:GLU:N	2.40	0.54
1:U:1789:ARG:HA	1:U:1805:PRO:HA	1.89	0.54
1:U:1841:GLU:N	1:U:1841:GLU:OE1	2.40	0.54
1:U:792:ASP:OD1	1:U:792:ASP:N	2.41	0.54
1:U:143:ARG:NH2	1:U:1508:ASP:OD1	2.40	0.54
1:U:1856:ASP:OD1	1:U:1856:ASP:N	2.39	0.54
1:U:1744:SER:OG	1:U:1745:ASN:N	2.41	0.54
1:U:1766:ARG:HG2	1:U:1793:PHE:CZ	2.43	0.54
1:U:674:PHE:O	1:U:1175:THR:HG23	2.08	0.54
1:U:1222:LEU:HD11	1:U:1235:THR:HG23	1.89	0.54
1:U:583:VAL:HG23	1:U:583:VAL:O	2.08	0.53
1:U:1455:SER:OG	1:U:1456:LEU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1470:GLU:N	1:U:1470:GLU:OE1	2.40	0.53
1:U:1602:ARG:HE	1:U:1612:GLU:HG2	1.72	0.53
1:U:1838:THR:O	1:U:1838:THR:HG23	2.08	0.53
1:U:576:THR:HG22	1:U:577:ARG:HG3	1.90	0.53
1:U:1326:LEU:HD13	1:U:1562:LEU:HD23	1.90	0.53
1:U:760:GLU:OE1	1:U:871:ARG:NH2	2.33	0.53
1:U:723:ARG:HG3	1:U:724:GLU:H	1.74	0.53
1:U:1806:VAL:HG13	1:U:1806:VAL:O	2.08	0.53
1:U:663:ILE:O	1:U:666:THR:HG22	2.09	0.53
1:U:1215:GLN:NE2	1:U:1275:PHE:O	2.34	0.53
1:U:1095:GLN:HG3	1:U:1123:GLU:HG2	1.91	0.53
1:U:114:ILE:HG23	1:U:114:ILE:O	2.09	0.52
1:U:786:GLU:O	1:U:790:TRP:HB2	2.09	0.52
1:U:1688:ILE:HB	1:U:1691:GLN:HE21	1.73	0.52
1:U:969:SER:O	1:U:973:LEU:HB2	2.09	0.52
1:U:367:LYS:NZ	1:U:414:ALA:O	2.35	0.52
1:U:830:GLU:HB2	1:U:1007:PRO:HG2	1.91	0.52
1:U:1385:LYS:O	1:U:1388:GLU:HG3	2.10	0.52
1:U:1596:THR:OG1	1:U:1597:ILE:N	2.43	0.52
1:U:68:ILE:HD11	1:U:1941:VAL:HG11	1.91	0.52
1:U:98:VAL:HG21	1:U:114:ILE:HD13	1.92	0.52
1:U:2031:CYS:O	1:U:2035:LEU:HG	2.09	0.52
1:U:1507:VAL:CG2	1:U:1508:ASP:H	2.19	0.52
1:U:102:THR:OG1	1:U:104:ASP:OD1	2.27	0.51
1:U:355:LEU:HB3	1:U:366:ALA:HB2	1.92	0.51
1:U:729:TRP:CZ2	1:U:1178:CYS:SG	3.00	0.51
1:U:1189:ARG:HD3	1:U:1496:VAL:HG21	1.92	0.51
1:U:1766:ARG:CA	1:U:1793:PHE:CE1	2.92	0.51
1:U:1325:ALA:HB1	1:U:1336:HIS:CG	2.45	0.51
1:U:1542:ARG:NH1	1:U:1548:LEU:O	2.44	0.51
1:U:1728:VAL:HG21	1:U:1816:ARG:HE	1.75	0.51
1:U:1520:VAL:HG21	1:U:1538:TRP:CD2	2.46	0.51
1:U:1435:LYS:HB2	1:U:1438:LEU:HG	1.93	0.51
1:U:13:GLU:OE1	1:U:1853:ARG:NH2	2.44	0.51
1:U:1326:LEU:HB2	1:U:1337:SER:HB3	1.93	0.51
1:U:1325:ALA:CB	1:U:1336:HIS:ND1	2.73	0.51
1:U:1525:LYS:HD2	1:U:1525:LYS:N	2.19	0.51
1:U:1524:LEU:HD12	1:U:1524:LEU:N	2.26	0.50
1:U:1832:ILE:HG23	1:U:1834:ASN:HD21	1.75	0.50
1:U:1844:VAL:CG1	1:U:1845:MET:N	2.74	0.50
1:U:1606:PHE:CD1	1:U:1607:PRO:HD2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:365:TRP:CD1	1:U:595:LEU:HD13	2.46	0.50
1:U:1992:GLU:H	1:U:1992:GLU:CD	2.14	0.50
1:U:661:GLU:HA	1:U:664:THR:HG22	1.94	0.50
1:U:1751:ARG:HH11	1:U:1783:ARG:NH2	2.09	0.50
1:U:1778:VAL:HG12	1:U:1779:ALA:N	2.26	0.50
1:U:919:LEU:HD22	1:U:1080:GLN:HE22	1.77	0.49
1:U:1239:GLN:NE2	1:U:1279:ASP:OD1	2.44	0.49
1:U:1732:THR:HB	1:U:1752:LEU:HD23	1.94	0.49
1:U:1829:ARG:NH2	1:U:1834:ASN:OD1	2.45	0.49
1:U:1867:SER:HA	1:U:1869:ARG:HH21	1.76	0.49
1:U:35:ASP:N	1:U:35:ASP:OD1	2.45	0.49
1:U:220:GLU:OE2	1:U:835:ARG:NH1	2.45	0.49
1:U:371:ASP:OD2	1:U:376:ASN:ND2	2.41	0.49
1:U:1115:ILE:H	1:U:1115:ILE:HD12	1.76	0.49
1:U:84:PHE:CD2	1:U:87:LEU:HD12	2.47	0.49
1:U:122:ILE:HB	1:U:165:VAL:HG22	1.93	0.49
1:U:996:THR:HG22	1:U:1022:ARG:HH21	1.77	0.49
1:U:1463:MET:HG3	1:U:1544:SER:OG	2.12	0.49
1:U:37:ASP:OD2	1:U:48:ASP:HB3	2.13	0.49
1:U:382:SER:O	1:U:406:ILE:HG22	2.11	0.49
1:U:787:PHE:CE1	1:U:793:THR:OG1	2.65	0.49
1:U:1203:HIS:O	1:U:1203:HIS:ND1	2.41	0.49
1:U:1751:ARG:HD3	1:U:1809:MET:CE	2.43	0.49
1:U:280:ASP:O	1:U:284:SER:OG	2.29	0.49
1:U:636:LYS:HE2	1:U:637:PRO:HD2	1.95	0.49
1:U:1340:VAL:HG12	1:U:1340:VAL:O	2.12	0.49
1:U:1953:LEU:CD1	1:U:1961:ILE:HD13	2.42	0.49
1:U:25:ASP:OD1	1:U:25:ASP:N	2.43	0.49
1:U:113:VAL:CG1	1:U:125:VAL:HB	2.43	0.49
1:U:1497:ARG:NH1	1:U:1604:ASN:OD1	2.46	0.49
1:U:1336:HIS:H	1:U:1336:HIS:HD2	1.60	0.49
1:U:1390:VAL:HG22	1:U:1390:VAL:O	2.12	0.49
1:U:659:THR:HG23	1:U:660:GLU:N	2.28	0.49
1:U:371:ASP:HB3	1:U:376:ASN:HB3	1.94	0.48
1:U:696:THR:HG22	1:U:697:LYS:N	2.28	0.48
1:U:724:GLU:HG2	1:U:726:ARG:H	1.78	0.48
1:U:765:ASN:O	1:U:769:GLU:HG2	2.13	0.48
1:U:139:GLU:HG3	1:U:1507:VAL:HG21	1.95	0.48
1:U:479:VAL:O	1:U:483:VAL:HG23	2.13	0.48
1:U:543:ILE:HD11	1:U:552:TYR:HB3	1.94	0.48
1:U:676:SER:OG	1:U:678:PRO:HD2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:134:ASN:HD22	1:U:134:ASN:C	2.17	0.48
1:U:732:THR:CG2	1:U:733:PHE:N	2.76	0.48
1:U:1539:ASP:OD2	1:U:1796:LYS:HD2	2.13	0.48
1:U:471:ASP:OD2	1:U:511:SER:OG	2.22	0.48
1:U:745:ASN:HD22	1:U:745:ASN:H	1.62	0.48
1:U:875:LEU:O	1:U:878:MET:HG2	2.14	0.48
1:U:1539:ASP:CG	1:U:1796:LYS:CD	2.82	0.48
1:U:1191:LEU:HD21	1:U:1193:ARG:HG3	1.95	0.48
1:U:955:PRO:O	1:U:958:LYS:HB2	2.13	0.47
1:U:305:ILE:O	1:U:309:GLN:HG2	2.14	0.47
1:U:1326:LEU:HD13	1:U:1562:LEU:CD2	2.43	0.47
1:U:1687:SER:OG	1:U:1688:ILE:N	2.47	0.47
1:U:1829:ARG:HB2	1:U:1832:ILE:CG2	2.43	0.47
1:U:84:PHE:HB3	1:U:87:LEU:HD12	1.96	0.47
1:U:476:ASP:OD1	1:U:476:ASP:N	2.46	0.47
1:U:764:LEU:HD12	1:U:764:LEU:H	1.79	0.47
1:U:1594:VAL:HG13	1:U:1595:THR:HG23	1.96	0.47
1:U:1178:CYS:SG	1:U:1187:PHE:CD1	3.05	0.47
1:U:743:LEU:O	1:U:747:VAL:HG23	2.14	0.47
1:U:1139:ASP:OD1	1:U:1140:MET:N	2.47	0.47
1:U:1525:LYS:H	1:U:1525:LYS:CD	2.10	0.47
1:U:1562:LEU:HD12	1:U:1563:SER:HB3	1.96	0.47
1:U:1836:SER:OG	1:U:1844:VAL:CG1	2.62	0.47
1:U:858:TRP:HA	1:U:864:VAL:HG11	1.96	0.47
1:U:294:GLN:OE1	1:U:294:GLN:N	2.44	0.47
1:U:914:ASN:OD1	1:U:914:ASN:N	2.47	0.47
1:U:1498:SER:OG	1:U:1595:THR:HG21	2.15	0.47
1:U:1540:LYS:HE3	1:U:1795:ILE:HG13	1.97	0.47
1:U:1737:LEU:HD11	1:U:1751:ARG:NH1	2.30	0.47
1:U:84:PHE:HD2	1:U:87:LEU:CD1	2.28	0.47
1:U:1239:GLN:NE2	1:U:1279:ASP:H	2.13	0.47
1:U:770:MET:O	1:U:774:ILE:HG12	2.15	0.46
1:U:1520:VAL:HG21	1:U:1538:TRP:CE3	2.50	0.46
1:U:2013:THR:O	1:U:2013:THR:OG1	2.33	0.46
1:U:1516:LEU:HD12	1:U:1516:LEU:H	1.80	0.46
1:U:1832:ILE:HD13	1:U:1850:TYR:O	2.15	0.46
1:U:1949:THR:OG1	1:U:1950:THR:N	2.48	0.46
1:U:265:PHE:CZ	1:U:792:ASP:HB3	2.50	0.46
1:U:1370:GLY:HA2	1:U:1522:PHE:CE2	2.50	0.46
1:U:1837:VAL:HG13	1:U:1845:MET:HE3	1.97	0.46
1:U:2014:LEU:H	1:U:2014:LEU:HD23	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:71:GLN:OE1	1:U:74:GLU:N	2.43	0.46
1:U:671:MET:HG3	1:U:1172:THR:HG21	1.97	0.46
1:U:1071:TYR:HE1	1:U:1073:LYS:HG3	1.79	0.46
1:U:921:GLU:OE2	1:U:921:GLU:N	2.49	0.46
1:U:1361:TRP:O	1:U:1365:ILE:N	2.49	0.46
1:U:1632:VAL:O	1:U:1636:VAL:HG23	2.16	0.46
1:U:1652:GLU:O	1:U:1656:THR:HG23	2.16	0.46
1:U:37:ASP:OD1	1:U:37:ASP:O	2.34	0.46
1:U:358:HIS:CE1	1:U:360:ALA:HB3	2.51	0.46
1:U:829:LEU:HD21	1:U:943:VAL:HG22	1.98	0.46
1:U:857:ASP:OD1	1:U:857:ASP:N	2.49	0.46
1:U:1596:THR:HG23	1:U:1599:GLN:H	1.81	0.46
1:U:1866:TRP:O	1:U:1869:ARG:NH2	2.49	0.46
1:U:614:CYS:SG	1:U:1245:HIS:HB2	2.56	0.46
1:U:770:MET:SD	1:U:912:LYS:HB2	2.55	0.46
1:U:1562:LEU:HD12	1:U:1562:LEU:C	2.36	0.46
1:U:1751:ARG:HE	1:U:1783:ARG:NH1	2.13	0.46
1:U:1836:SER:OG	1:U:1837:VAL:N	2.49	0.46
1:U:93:ARG:HB2	1:U:114:ILE:CG2	2.45	0.46
1:U:672:GLU:OE2	1:U:685:LYS:NZ	2.40	0.46
1:U:1517:VAL:O	1:U:1521:TRP:HB2	2.15	0.46
1:U:1572:ALA:O	1:U:1573:HIS:ND1	2.49	0.46
1:U:309:GLN:HE21	1:U:309:GLN:CA	2.26	0.46
1:U:1438:LEU:O	1:U:1441:LEU:HG	2.16	0.46
1:U:1705:LYS:HB2	1:U:1724:VAL:H	1.80	0.46
1:U:1789:ARG:NE	1:U:1801:THR:HA	2.31	0.46
1:U:479:VAL:HG13	1:U:480:GLN:N	2.31	0.45
1:U:1678:SER:O	1:U:1678:SER:OG	2.33	0.45
1:U:37:ASP:OD1	1:U:47:VAL:HA	2.17	0.45
1:U:739:ARG:HD3	1:U:739:ARG:HA	1.68	0.45
1:U:1369:PRO:HG2	1:U:1522:PHE:HZ	1.81	0.45
1:U:1485:THR:OG1	1:U:1612:GLU:O	2.31	0.45
1:U:262:ASP:OD1	1:U:263:VAL:N	2.49	0.45
1:U:1022:ARG:O	1:U:1075:GLU:HG2	2.16	0.45
1:U:1901:LEU:HD23	1:U:1902:ALA:H	1.81	0.45
1:U:1018:ILE:HD13	1:U:1018:ILE:HA	1.82	0.45
1:U:1333:THR:OG1	1:U:1334:LEU:N	2.50	0.45
1:U:1314:GLN:N	1:U:1558:ASP:O	2.45	0.45
1:U:1626:ILE:CG2	1:U:1630:LYS:HE3	2.47	0.45
1:U:1789:ARG:HG2	1:U:1805:PRO:HB3	1.99	0.45
1:U:1378:ASN:N	1:U:1381:GLU:OE2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:498:LEU:HD11	1:U:1605:PHE:CZ	2.52	0.45
1:U:806:LEU:HD23	1:U:806:LEU:HA	1.83	0.45
1:U:139:GLU:OE1	1:U:1507:VAL:HG11	2.17	0.44
1:U:1719:TYR:OH	1:U:1841:GLU:O	2.27	0.44
1:U:267:THR:HG22	1:U:1961:ILE:HG23	2.00	0.44
1:U:383:ASP:HB3	1:U:405:LYS:HD2	1.98	0.44
1:U:1101:TYR:HA	1:U:1953:LEU:HD23	1.99	0.44
1:U:1140:MET:O	1:U:1144:ARG:HG2	2.17	0.44
1:U:1769:CYS:O	1:U:1773:GLY:N	2.51	0.44
1:U:1865:LEU:HB3	1:U:1885:CYS:SG	2.57	0.44
1:U:835:ARG:O	1:U:839:THR:HG23	2.18	0.44
1:U:554:ILE:O	1:U:566:TYR:HA	2.18	0.44
1:U:663:ILE:HD11	1:U:702:LEU:HD13	1.99	0.44
1:U:1329:THR:HG22	1:U:1334:LEU:HB3	2.00	0.44
1:U:1403:HIS:O	1:U:1407:ARG:NH1	2.51	0.44
1:U:1666:ILE:O	1:U:1667:ARG:NH1	2.50	0.44
1:U:1751:ARG:HH11	1:U:1783:ARG:HH22	1.65	0.44
1:U:1766:ARG:CB	1:U:1793:PHE:CE1	3.01	0.44
1:U:747:VAL:HG21	1:U:1192:VAL:HG11	1.99	0.44
1:U:1105:LYS:HZ2	1:U:1963:PHE:HD1	1.64	0.44
1:U:877:LYS:HG2	1:U:927:ALA:HB1	1.99	0.44
1:U:1345:ARG:C	1:U:1349:GLN:HE21	2.21	0.44
1:U:1348:TYR:HB3	1:U:1390:VAL:HG21	2.00	0.44
1:U:1840:GLN:NE2	1:U:1841:GLU:OE1	2.51	0.44
1:U:128:THR:HB	1:U:145:LYS:HE3	2.00	0.43
1:U:677:PRO:N	1:U:678:PRO:HD2	2.33	0.43
1:U:1143:VAL:HG11	1:U:1978:ILE:HG22	1.99	0.43
1:U:1337:SER:O	1:U:1337:SER:OG	2.34	0.43
1:U:713:ILE:HG13	1:U:733:PHE:HZ	1.83	0.43
1:U:815:ARG:NH2	1:U:1955:ASP:OD2	2.51	0.43
1:U:1766:ARG:HG2	1:U:1793:PHE:CE1	2.53	0.43
1:U:2026:MET:HE3	1:U:2030:GLY:HA2	2.00	0.43
1:U:1191:LEU:CD2	1:U:1193:ARG:HG3	2.49	0.43
1:U:1640:PRO:CB	1:U:1918:ILE:HG22	2.47	0.43
1:U:1778:VAL:CG1	1:U:1779:ALA:N	2.81	0.43
1:U:1844:VAL:CG1	1:U:1845:MET:H	2.32	0.43
1:U:311:LEU:HD22	1:U:687:LEU:HD22	2.00	0.43
1:U:344:ILE:O	1:U:344:ILE:HG23	2.18	0.43
1:U:864:VAL:HG13	1:U:864:VAL:O	2.19	0.43
1:U:950:GLU:OE2	1:U:952:VAL:N	2.32	0.43
1:U:1049:ARG:O	1:U:1053:THR:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1191:LEU:HD23	1:U:1192:VAL:N	2.34	0.43
1:U:1666:ILE:HG22	1:U:1670:ARG:HB3	2.00	0.43
1:U:1666:ILE:HB	1:U:1670:ARG:HD3	1.99	0.43
1:U:2039:ARG:CZ	1:U:2059:GLU:HB3	2.49	0.43
1:U:592:GLU:HG3	1:U:593:TRP:CD1	2.53	0.43
1:U:1562:LEU:HD12	1:U:1563:SER:N	2.34	0.43
1:U:1862:ALA:HB1	1:U:1886:LEU:CD1	2.48	0.43
1:U:1915:MET:SD	1:U:1915:MET:N	2.92	0.43
1:U:377:VAL:HB	1:U:409:ARG:HB3	2.01	0.43
1:U:1106:LEU:HD23	1:U:1106:LEU:HA	1.87	0.43
1:U:1190:HIS:CD2	1:U:1494:ASN:HD22	2.37	0.43
1:U:100:PRO:HG2	1:U:159:ILE:HG13	2.00	0.43
1:U:678:PRO:HD3	1:U:1982:PHE:CE2	2.52	0.43
1:U:1549:SER:OG	1:U:1550:THR:N	2.51	0.43
1:U:1904:ASP:HB3	1:U:2062:ILE:HG21	2.01	0.43
1:U:141:ALA:HA	1:U:144:THR:HG22	2.00	0.43
1:U:653:LEU:HD23	1:U:653:LEU:HA	1.77	0.43
1:U:1184:GLU:OE2	1:U:1184:GLU:N	2.47	0.43
1:U:606:LEU:HD23	1:U:606:LEU:HA	1.87	0.42
1:U:700:VAL:O	1:U:704:ARG:HG2	2.18	0.42
1:U:1659:ILE:HD12	1:U:1659:ILE:HA	1.88	0.42
1:U:199:ASN:O	1:U:203:THR:HG22	2.19	0.42
1:U:381:VAL:O	1:U:386:LYS:NZ	2.51	0.42
1:U:868:GLU:N	1:U:868:GLU:OE2	2.53	0.42
1:U:1369:PRO:HB3	1:U:1564:HIS:HD2	1.84	0.42
1:U:2046:GLU:OE1	1:U:2047:GLN:N	2.51	0.42
1:U:1626:ILE:HG22	1:U:1630:LYS:HE3	2.01	0.42
1:U:154:SER:O	1:U:157:VAL:HG12	2.20	0.42
1:U:1313:ILE:HG23	1:U:1558:ASP:HB2	2.02	0.42
1:U:1372:LEU:HD23	1:U:1372:LEU:HA	1.83	0.42
1:U:1585:GLY:HA3	1:U:1600:VAL:HG22	2.00	0.42
1:U:71:GLN:HB3	1:U:74:GLU:HB2	2.02	0.42
1:U:288:LYS:HA	1:U:289:PRO:HA	1.67	0.42
1:U:514:VAL:HG13	1:U:515:VAL:N	2.35	0.42
1:U:609:LEU:HD13	1:U:609:LEU:HA	1.94	0.42
1:U:781:LYS:HE2	1:U:781:LYS:HB3	1.90	0.42
1:U:1349:GLN:H	1:U:1349:GLN:HG2	1.71	0.42
1:U:1457:ASN:HD21	1:U:1459:ASN:HB3	1.81	0.42
1:U:1953:LEU:HD13	1:U:1957:LEU:HD12	2.01	0.42
1:U:771:TYR:HE1	1:U:910:LEU:HD12	1.85	0.42
1:U:958:LYS:HE3	1:U:958:LYS:HB3	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1059:ASN:OD1	1:U:1059:ASN:N	2.52	0.42
1:U:1266:ILE:HD13	1:U:1266:ILE:HA	1.93	0.42
1:U:1628:ILE:HG13	1:U:1629:LEU:N	2.34	0.42
1:U:1956:ILE:HD12	1:U:1956:ILE:H	1.85	0.42
1:U:1587:PRO:HA	1:U:1595:THR:HG22	2.01	0.42
1:U:1872:PHE:O	1:U:1872:PHE:CG	2.72	0.42
1:U:411:PHE:HB2	1:U:541:PHE:O	2.19	0.42
1:U:657:SER:OG	1:U:658:LYS:N	2.52	0.42
1:U:923:TYR:HD2	1:U:1079:MET:HB3	1.84	0.42
1:U:381:VAL:HG23	1:U:386:LYS:HZ1	1.85	0.42
1:U:732:THR:CG2	1:U:733:PHE:H	2.33	0.42
1:U:890:ILE:HA	1:U:890:ILE:HD12	1.80	0.42
1:U:994:TYR:OH	1:U:1075:GLU:OE2	2.38	0.42
1:U:1633:LEU:CD1	1:U:1672:MET:CE	2.98	0.42
1:U:1646:LYS:O	1:U:1650:ILE:HG12	2.19	0.42
1:U:1666:ILE:O	1:U:1666:ILE:HG13	2.19	0.42
1:U:334:PRO:HD3	1:U:584:PHE:HB3	2.02	0.41
1:U:381:VAL:HG23	1:U:386:LYS:NZ	2.35	0.41
1:U:737:SER:OG	1:U:739:ARG:HG2	2.19	0.41
1:U:815:ARG:HB3	1:U:1951:GLN:HE22	1.85	0.41
1:U:1140:MET:HE1	1:U:1144:ARG:HH21	1.85	0.41
1:U:1502:LEU:HD23	1:U:1502:LEU:HA	1.91	0.41
1:U:1874:PHE:CD1	1:U:1884:ILE:HD13	2.55	0.41
1:U:732:THR:HG22	1:U:733:PHE:H	1.81	0.41
1:U:1667:ARG:HA	1:U:1667:ARG:HD3	1.93	0.41
1:U:361:TYR:CE2	1:U:597:GLU:HA	2.56	0.41
1:U:1524:LEU:N	1:U:1524:LEU:CD1	2.84	0.41
1:U:1925:GLY:HA3	1:U:1928:ARG:CZ	2.50	0.41
1:U:197:ILE:O	1:U:201:ILE:HG22	2.20	0.41
1:U:406:ILE:HG12	1:U:408:TYR:CE1	2.55	0.41
1:U:1064:TRP:CE3	1:U:1065:MET:HB2	2.55	0.41
1:U:1543:ALA:HA	1:U:1797:PRO:HB3	2.03	0.41
1:U:1965:ASP:HB2	1:U:1968:ALA:HB3	2.02	0.41
1:U:121:THR:O	1:U:121:THR:OG1	2.34	0.41
1:U:608:ASN:OD1	1:U:608:ASN:N	2.53	0.41
1:U:737:SER:OG	1:U:738:GLY:N	2.53	0.41
1:U:1934:ARG:HH22	1:U:2037:GLU:HG3	1.85	0.41
1:U:271:LYS:O	1:U:275:VAL:HG12	2.21	0.41
1:U:1521:TRP:HH2	1:U:1555:THR:CG2	2.21	0.41
1:U:973:LEU:HD23	1:U:973:LEU:HA	1.84	0.41
1:U:1348:TYR:CE2	1:U:1397:SER:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:U:1528:LYS:HE2	1:U:1528:LYS:HB2	1.88	0.41
1:U:1925:GLY:HA3	1:U:1928:ARG:NH1	2.36	0.41
1:U:37:ASP:OD1	1:U:47:VAL:C	2.59	0.41
1:U:70:ILE:HD11	1:U:1938:THR:HG21	2.02	0.41
1:U:368:CYS:HA	1:U:411:PHE:CZ	2.56	0.41
1:U:745:ASN:N	1:U:745:ASN:ND2	2.69	0.41
1:U:954:ASN:HB2	1:U:957:LEU:HG	2.02	0.41
1:U:1255:HIS:CE1	1:U:1413:VAL:HG11	2.55	0.41
1:U:1823:GLU:O	1:U:1837:VAL:HG23	2.21	0.41
1:U:1919:PHE:CZ	1:U:1923:LEU:CD2	2.96	0.41
1:U:335:TRP:NE1	1:U:594:GLU:OE2	2.48	0.41
1:U:1628:ILE:HD11	1:U:1657:LEU:HD21	2.02	0.41
1:U:1766:ARG:CG	1:U:1793:PHE:CE1	3.05	0.40
1:U:1962:ASP:N	1:U:1962:ASP:OD1	2.53	0.40
1:U:258:SER:OG	1:U:259:THR:N	2.54	0.40
1:U:357:ASP:N	1:U:357:ASP:OD1	2.54	0.40
1:U:1329:THR:HA	1:U:1334:LEU:HA	2.03	0.40
1:U:919:LEU:HD22	1:U:1080:GLN:NE2	2.36	0.40
1:U:1279:ASP:OD1	1:U:1279:ASP:N	2.54	0.40
1:U:1521:TRP:CH2	1:U:1555:THR:CG2	2.95	0.40
1:U:411:PHE:HD1	1:U:411:PHE:HA	1.64	0.40
1:U:758:LYS:HE2	1:U:758:LYS:HB2	1.92	0.40
1:U:1790:LEU:HD12	1:U:1790:LEU:C	2.39	0.40
1:U:458:ASP:OD2	1:U:582:ARG:HB2	2.22	0.40
1:U:767:LEU:HG	1:U:771:TYR:CE2	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	U	1905/2084 (91%)	1753 (92%)	152 (8%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	U	1701/1825 (93%)	1639 (96%)	62 (4%)	35 63

All (62) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	U	134	ASN
1	U	193	TYR
1	U	306	ASP
1	U	310	ASP
1	U	342	GLU
1	U	352	PHE
1	U	356	MET
1	U	411	PHE
1	U	421	GLN
1	U	453	PHE
1	U	465	PHE
1	U	474	TYR
1	U	484	SER
1	U	625	GLU
1	U	670	GLN
1	U	724	GLU
1	U	728	GLU
1	U	742	ASN
1	U	745	ASN
1	U	748	ASN
1	U	792	ASP
1	U	895	GLN
1	U	905	CYS
1	U	909	CYS
1	U	947	SER
1	U	954	ASN
1	U	971	ARG

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Mol	Chain	Res	Type
1	U	1006	MET
1	U	1048	PHE
1	U	1059	ASN
1	U	1064	TRP
1	U	1127	ASP
1	U	1138	SER
1	U	1177	TYR
1	U	1213	SER
1	U	1225	CYS
1	U	1255	HIS
1	U	1279	ASP
1	U	1334	LEU
1	U	1336	HIS
1	U	1341	TYR
1	U	1381	GLU
1	U	1488	PHE
1	U	1493	ARG
1	U	1508	ASP
1	U	1525	LYS
1	U	1623	LEU
1	U	1667	ARG
1	U	1691	GLN
1	U	1703	PHE
1	U	1712	ARG
1	U	1752	LEU
1	U	1804	CYS
1	U	1832	ILE
1	U	1853	ARG
1	U	1872	PHE
1	U	1886	LEU
1	U	1915	MET
1	U	1934	ARG
1	U	1995	GLU
1	U	2014	LEU
1	U	2049	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (17) such sidechains are listed below:

Mol	Chain	Res	Type
1	U	134	ASN
1	U	309	GLN
1	U	322	GLN

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Mol	Chain	Res	Type
1	U	644	GLN
1	U	745	ASN
1	U	799	HIS
1	U	993	HIS
1	U	1190	HIS
1	U	1239	GLN
1	U	1336	HIS
1	U	1349	GLN
1	U	1353	ASN
1	U	1457	ASN
1	U	1494	ASN
1	U	1564	HIS
1	U	1691	GLN
1	U	1733	HIS

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 2 ligands modelled in this entry, 2 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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.

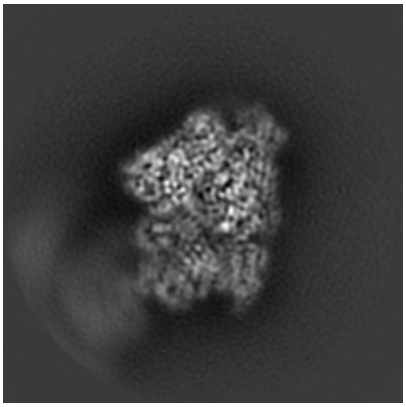
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-0828. These allow visual inspection of the internal detail of the map and identification of artifacts.

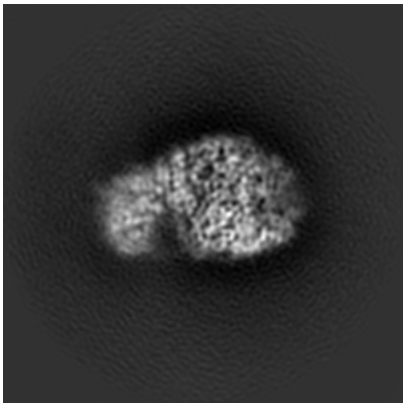
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

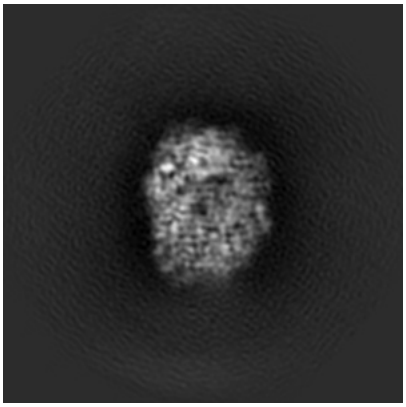
6.1.1 Primary map



X



Y

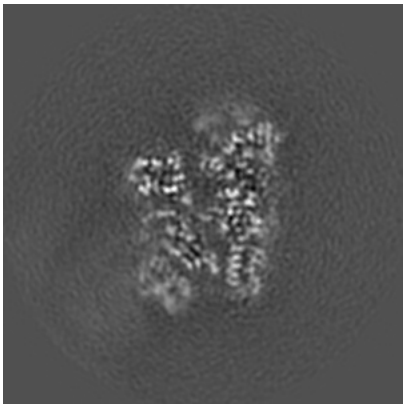


Z

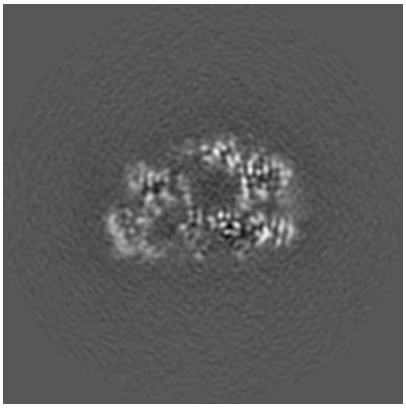
The images above show the map projected in three orthogonal directions.

6.2 Central slices

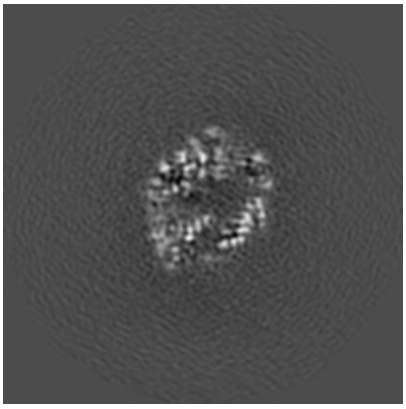
6.2.1 Primary map



X Index: 110



Y Index: 110

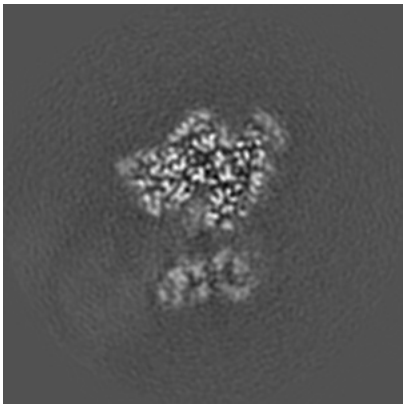


Z Index: 110

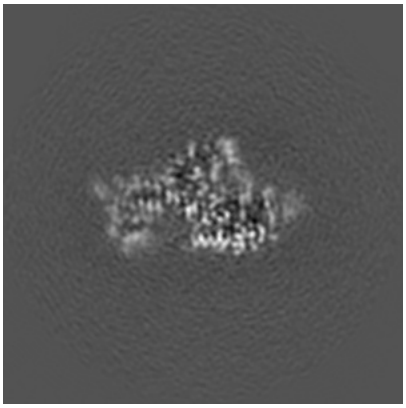
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

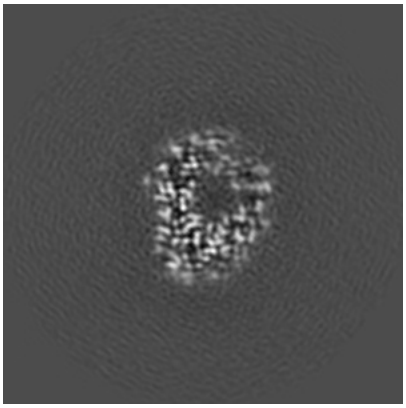
6.3.1 Primary map



X Index: 94



Y Index: 129



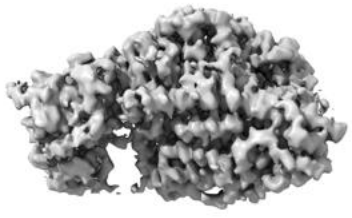
Z Index: 121

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

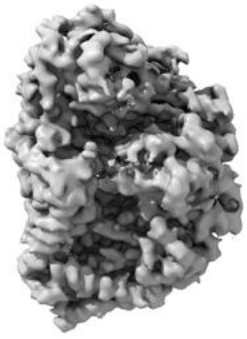
6.4 Orthogonal surface views (i)

6.4.1 Primary map

X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0085. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

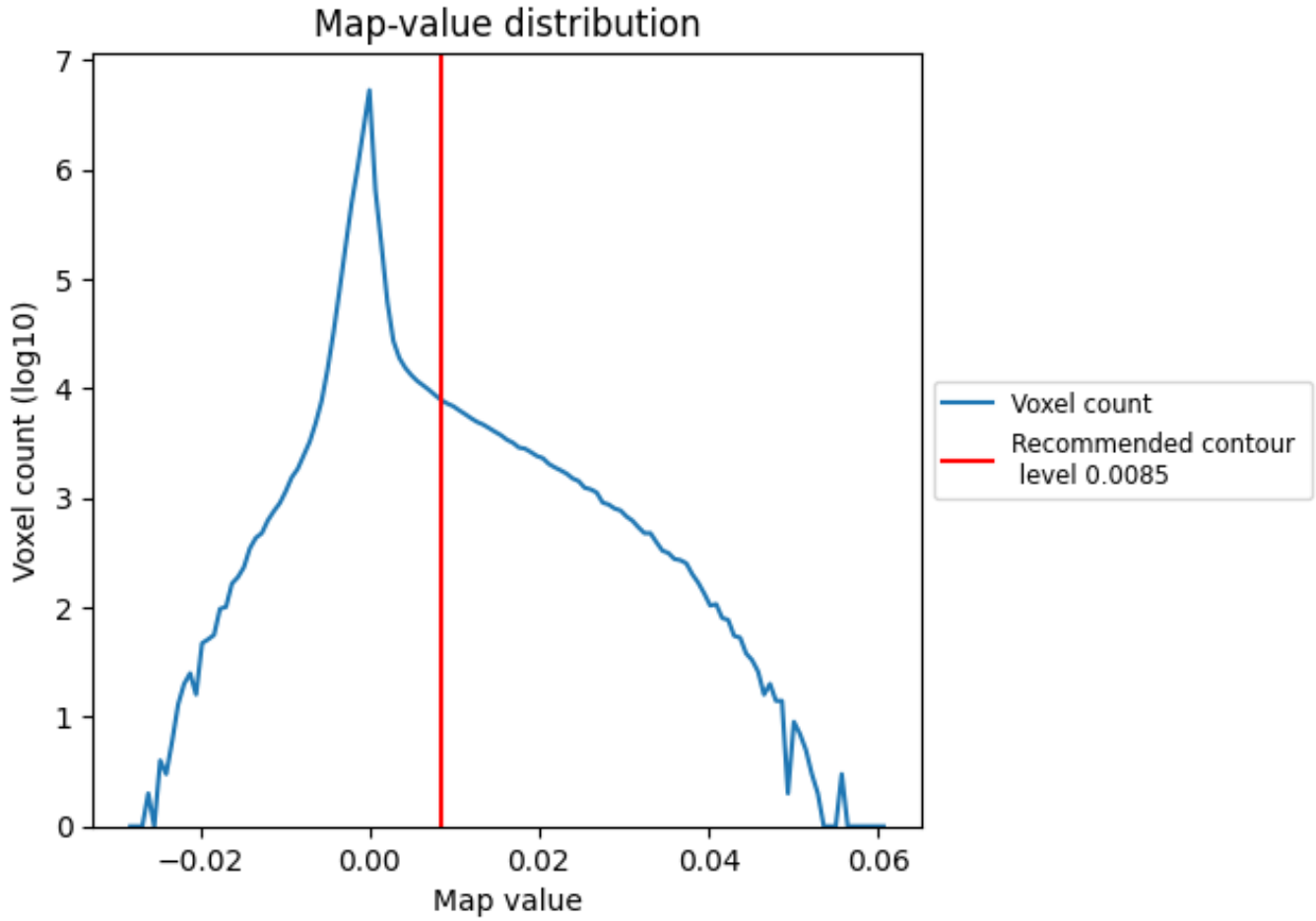
6.5 Mask visualisation (i)

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

7 Map analysis

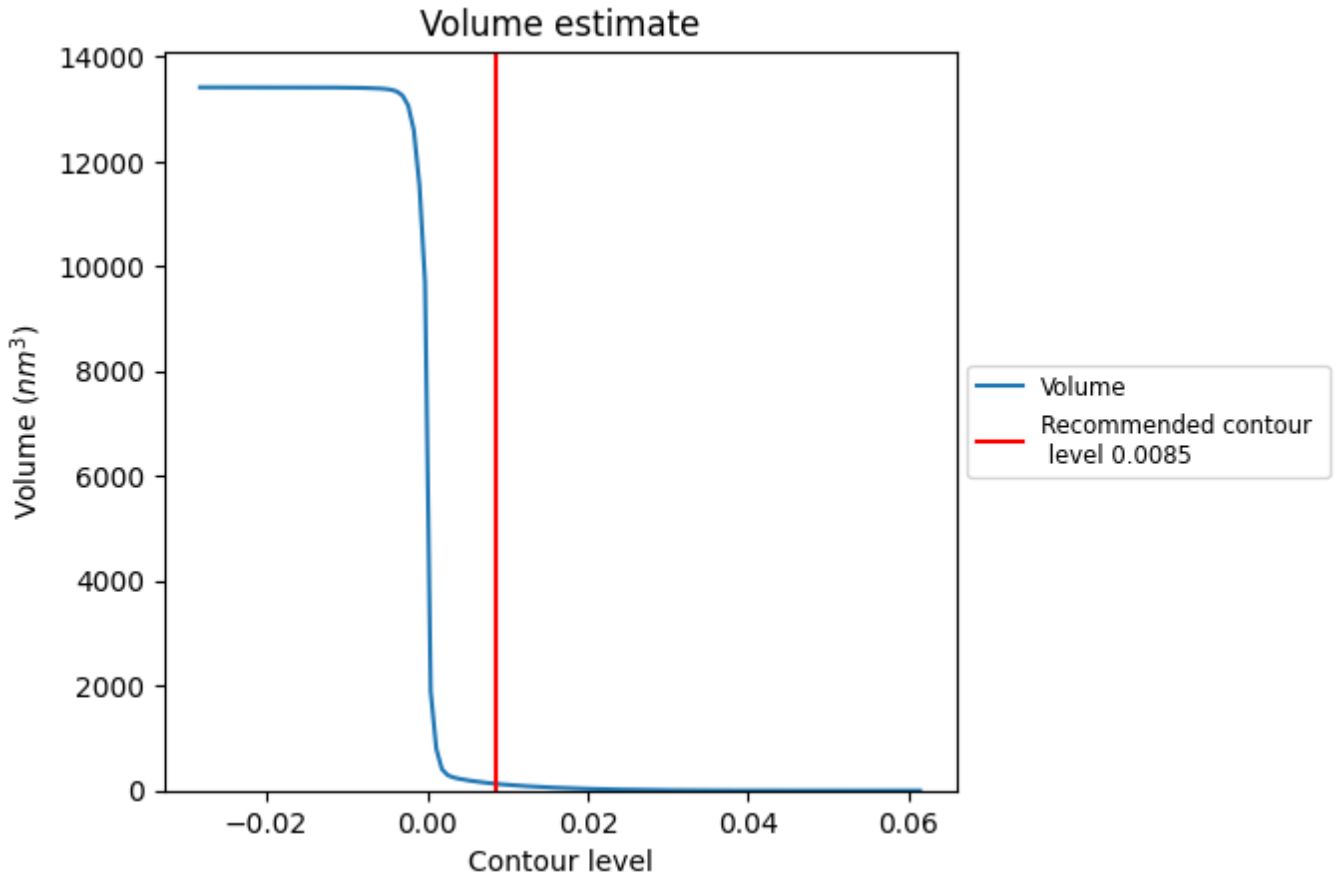
This section contains the results of statistical analysis of the map.

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.

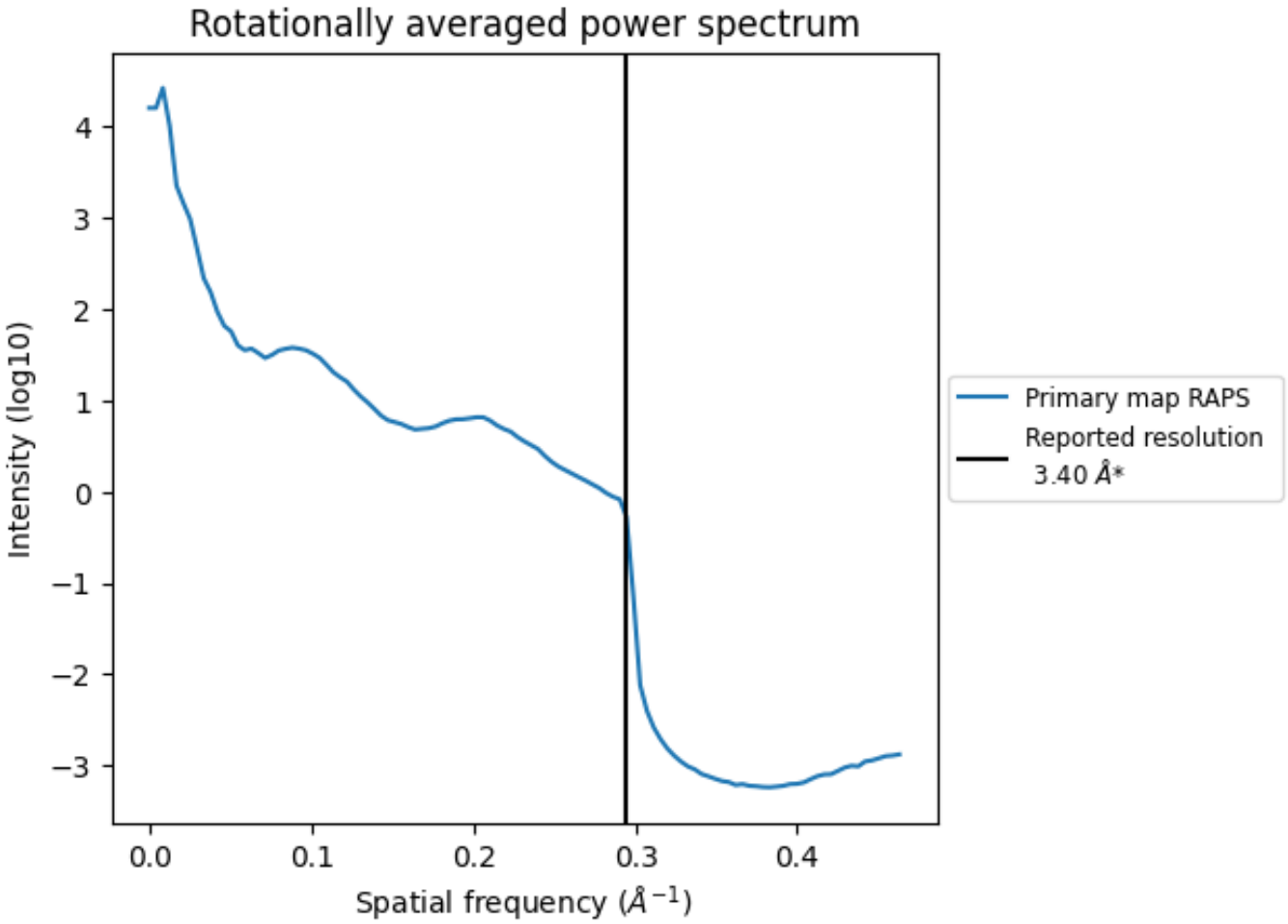
7.2 Volume estimate (i)



The volume at the recommended contour level is 130 nm^3; this corresponds to an approximate mass of 118 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 0.294 Å^{-1}

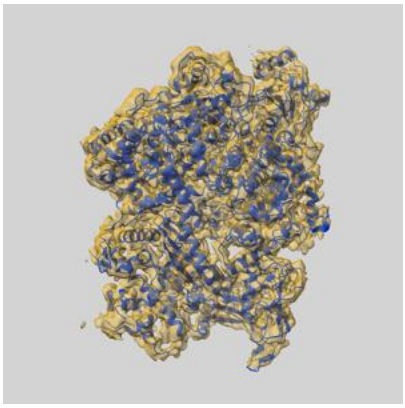
8 Fourier-Shell correlation

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

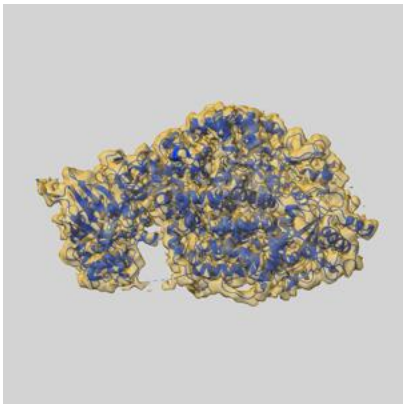
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-0828 and PDB model 7ALP. Per-residue inclusion information can be found in section 3 on page 4.

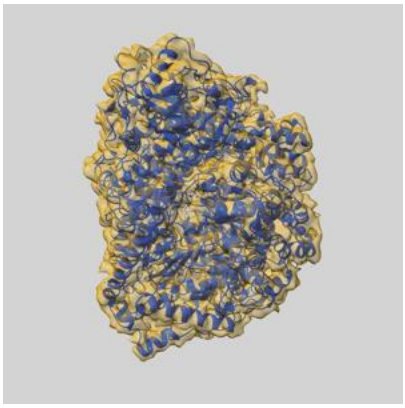
9.1 Map-model overlay



X



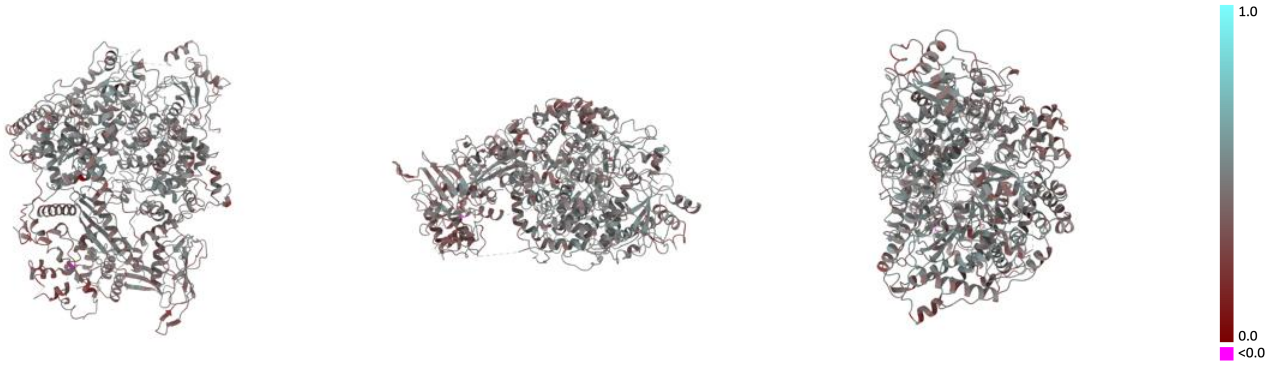
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0085 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.

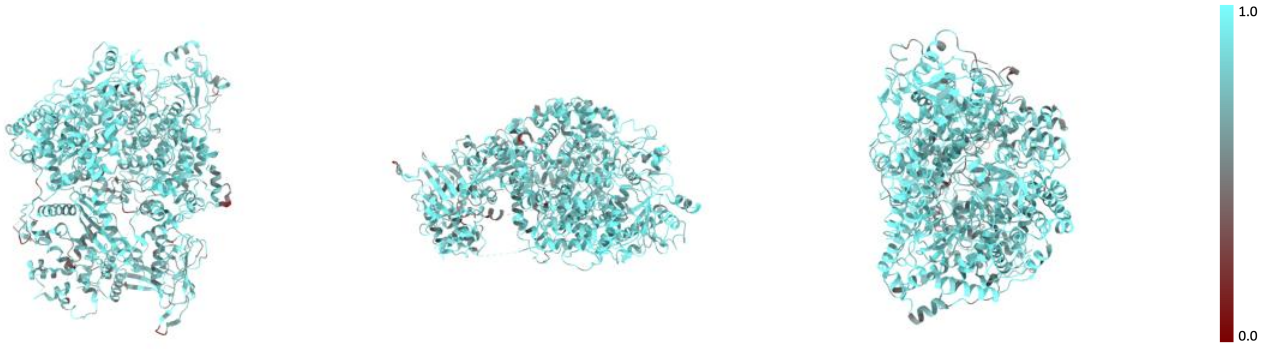
9.2 Q-score mapped to coordinate model (i)



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.

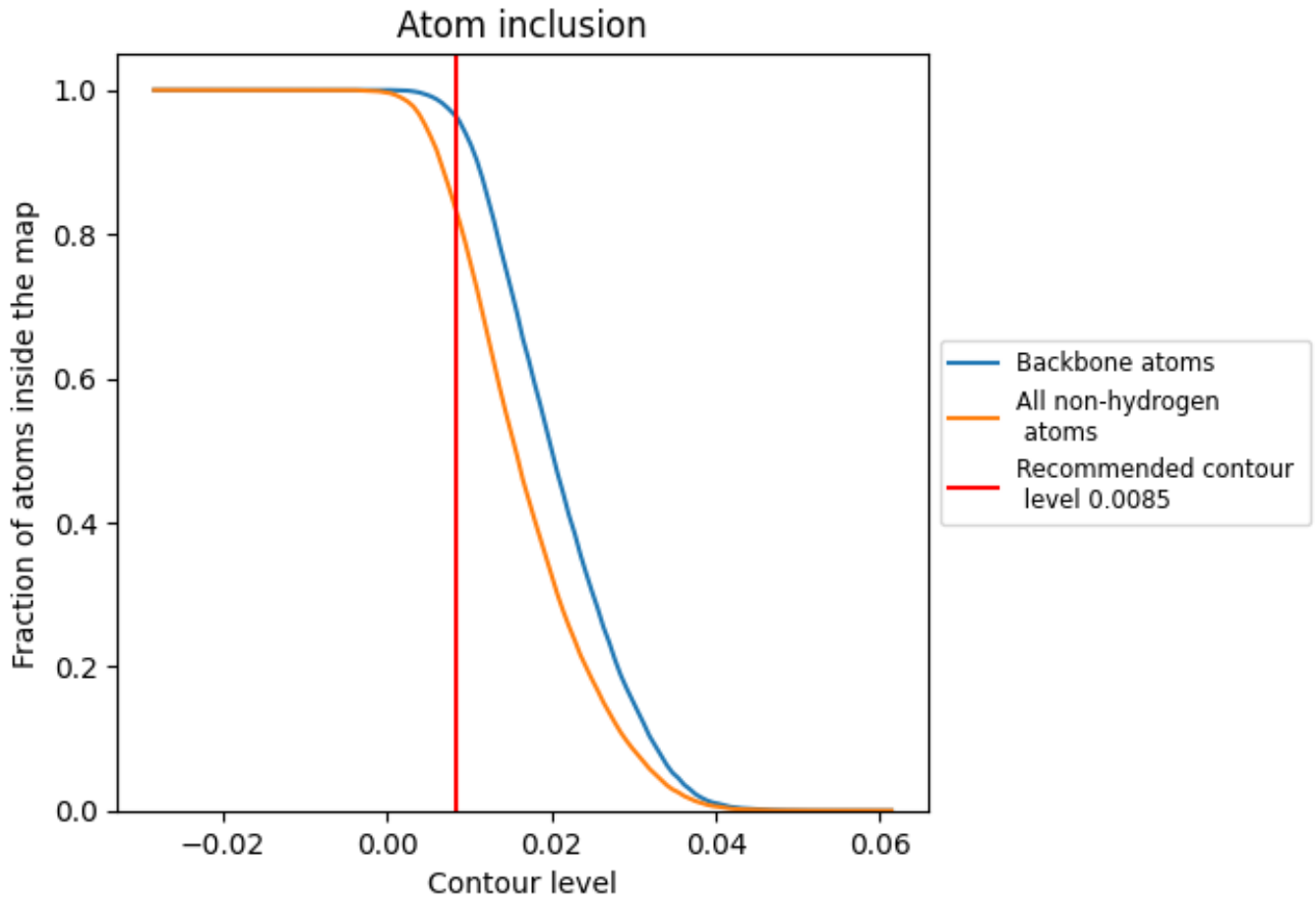
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.0085).

9.4 Atom inclusion (i)



At the recommended contour level, 96% of all backbone atoms, 83% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

The table lists the average atom inclusion at the recommended contour level (0.0085) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8300	0.4460
U	0.8300	0.4460