Full wwPDB EM Validation Report ⓘ

Jul 28, 2025 – 01:29 pm BST

PDB ID	:	9G9L / pdb_00009g9l
EMDB ID	:	EMD-51156
Title	:	DNA-PK + Polymerase lambda
Authors	:	Chaplin, A.K.; Amin, H.; Zahid, S.; Hardwick, S.W.
Deposited on	:	2024-07-25
Resolution	:	4.63 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:

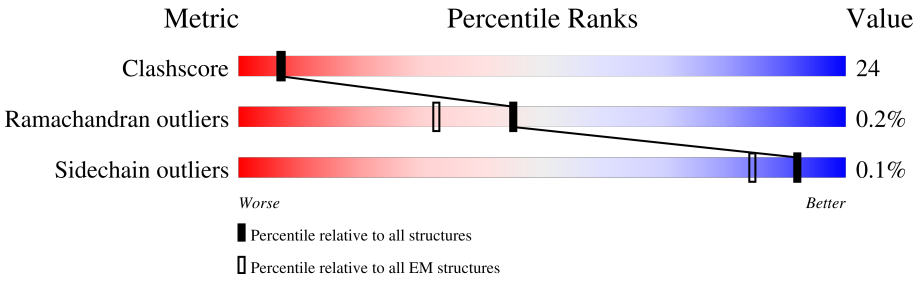
EMDB validation analysis	:	0.0.1.dev126
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.45.1

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 4.63 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	4128	47% 42% 11%
2	B	609	40% 39% 20%
3	C	732	13% 50% 39% 12%
4	F	575	8% 9% 83%
5	M	204	10% 89%
6	D	24	17% 83%
7	E	23	17% 83%

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 39800 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 DNA-dependent protein kinase catalytic subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3688	29010	18609	4895	5318	188	0	0

- Molecule 2 is a protein called X-ray repair cross-complementing protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	488	3825	2453	645	709	18	0	0

- Molecule 3 is a protein called X-ray repair cross-complementing protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	647	5093	3248	849	970	26	0	0

- Molecule 4 is a protein called DNA polymerase lambda.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	F	98	755	482	141	129	3	0	0

- Molecule 5 is a protein called Protein PAXX.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	M	23	155	99	25	30	1	0	0

- Molecule 6 is a DNA chain called DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	D	24	488	238	89	138	23	0	0

- Molecule 7 is a DNA chain called DNA.

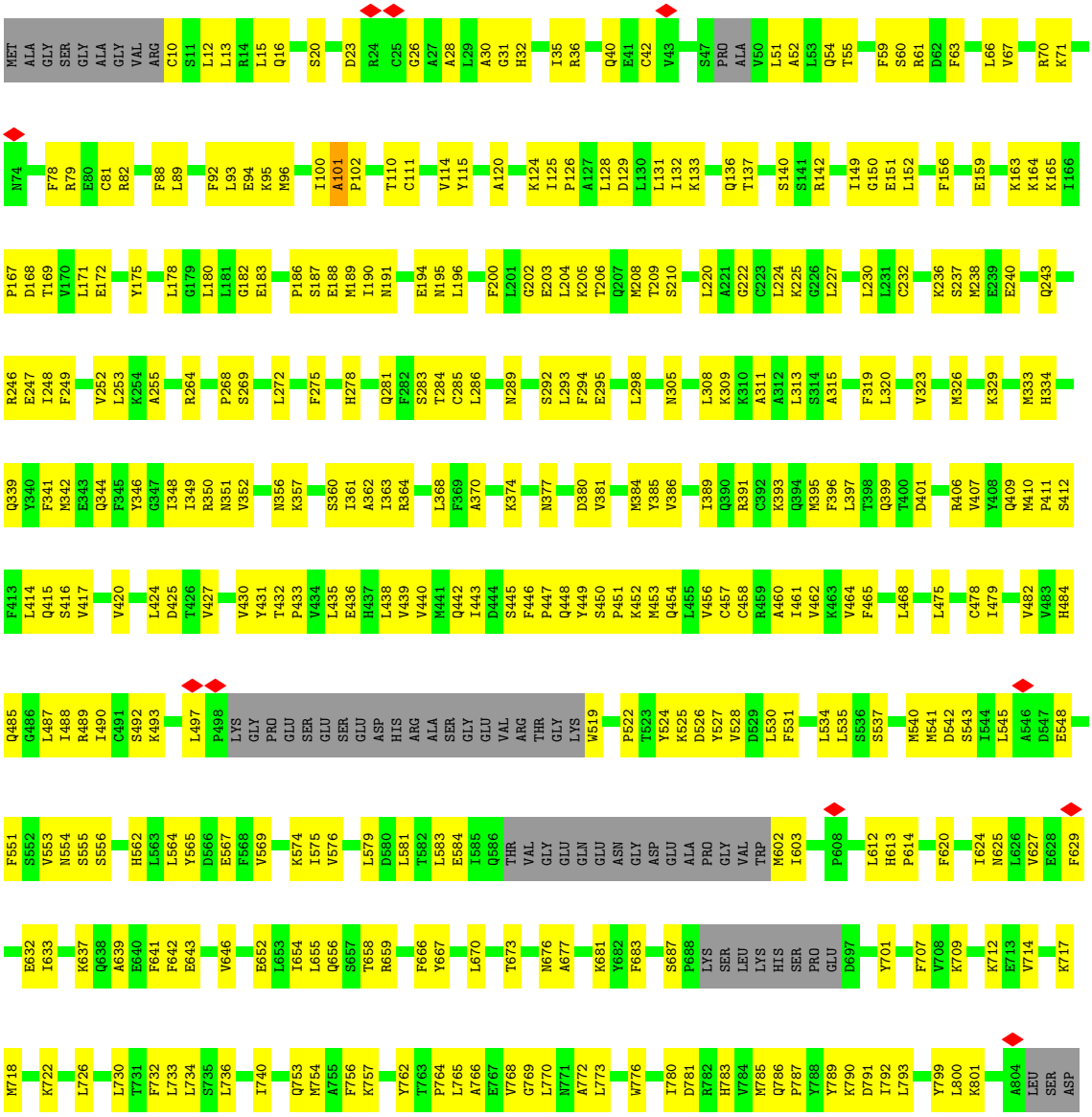
Mol	Chain	Residues	Atoms					AltConf	Trace
7	E	23	Total	C	N	O	P	0	0
			474	230	79	142	23		

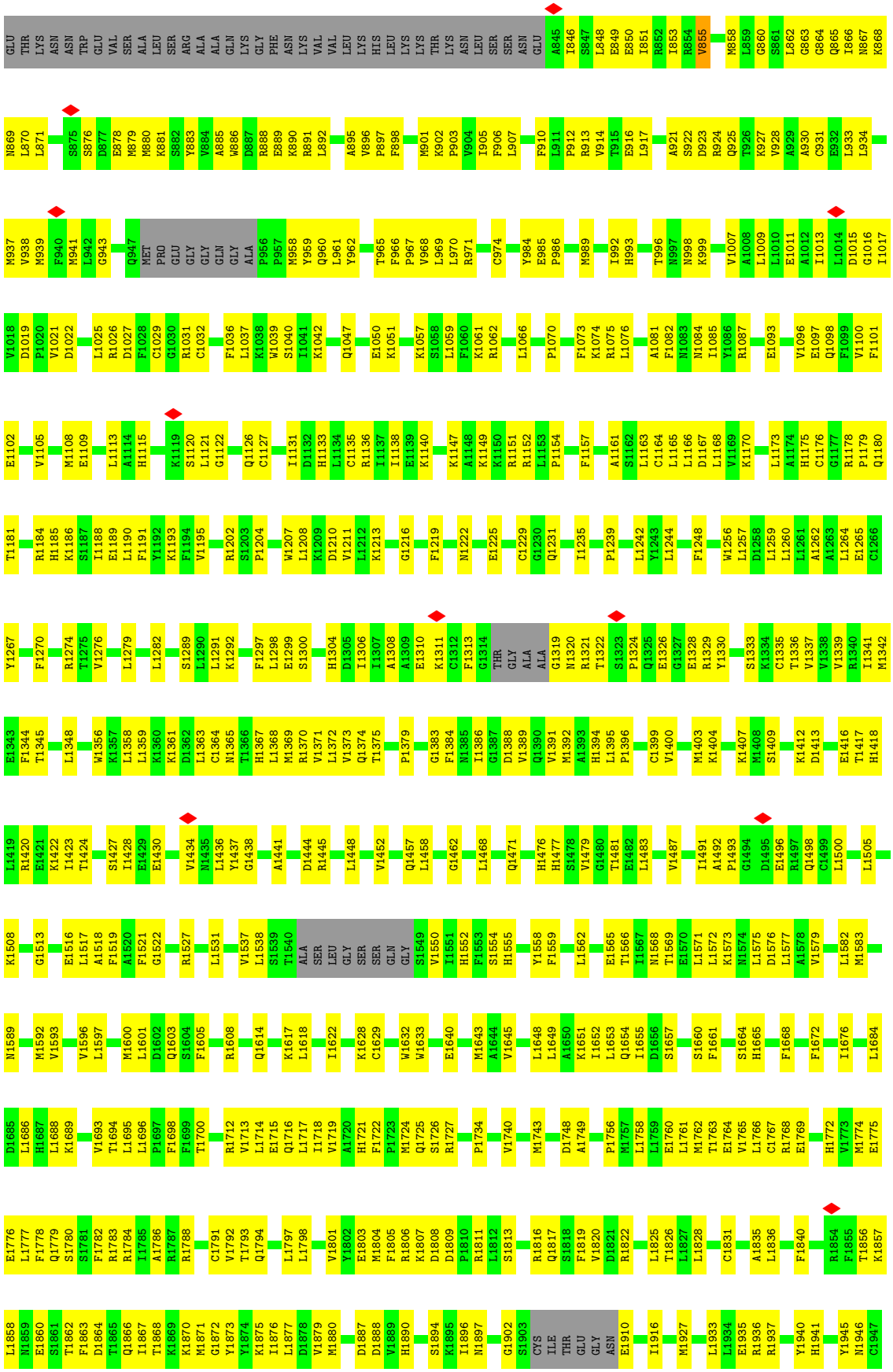
3 Residue-property plots (i)

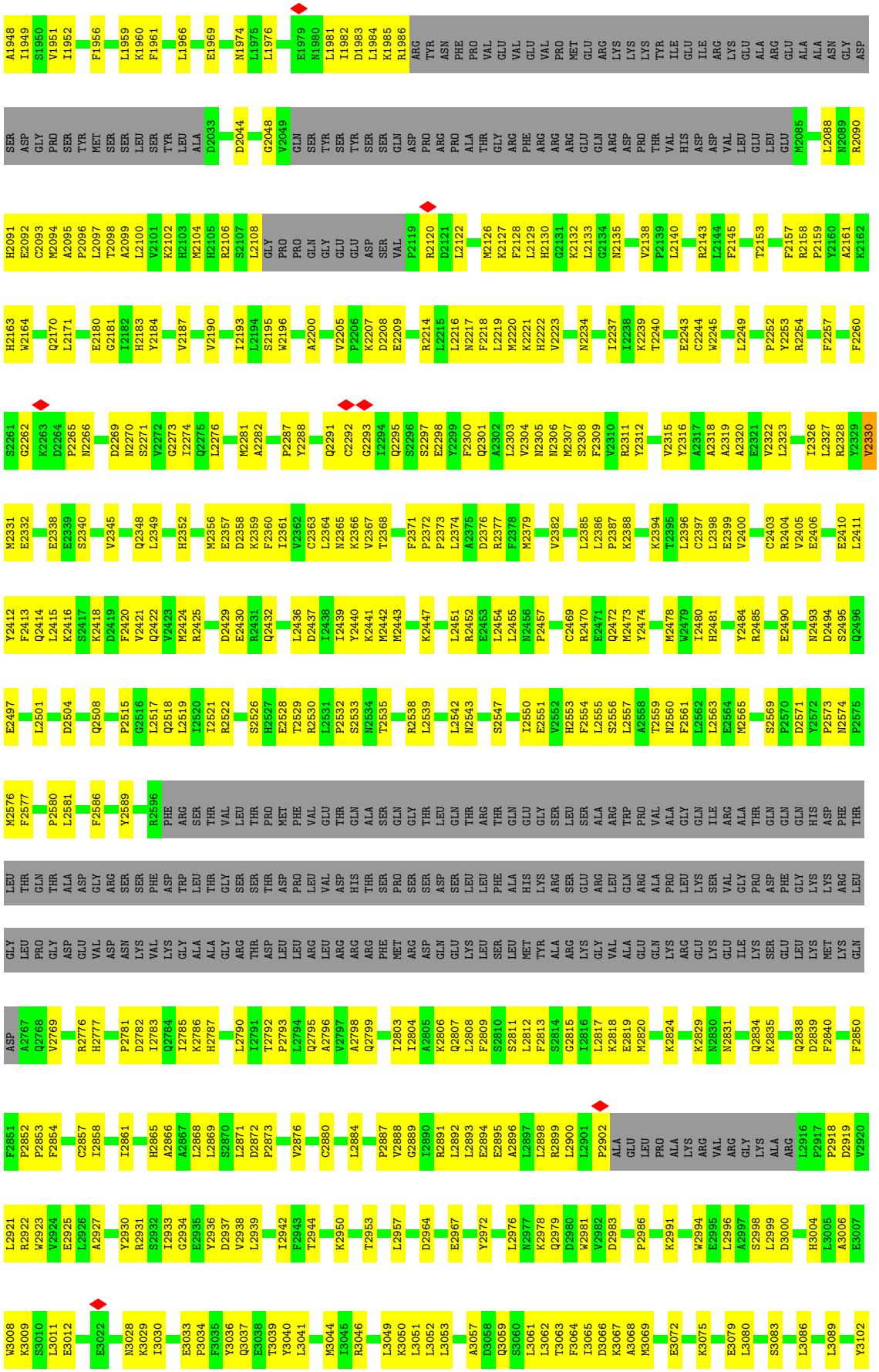
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

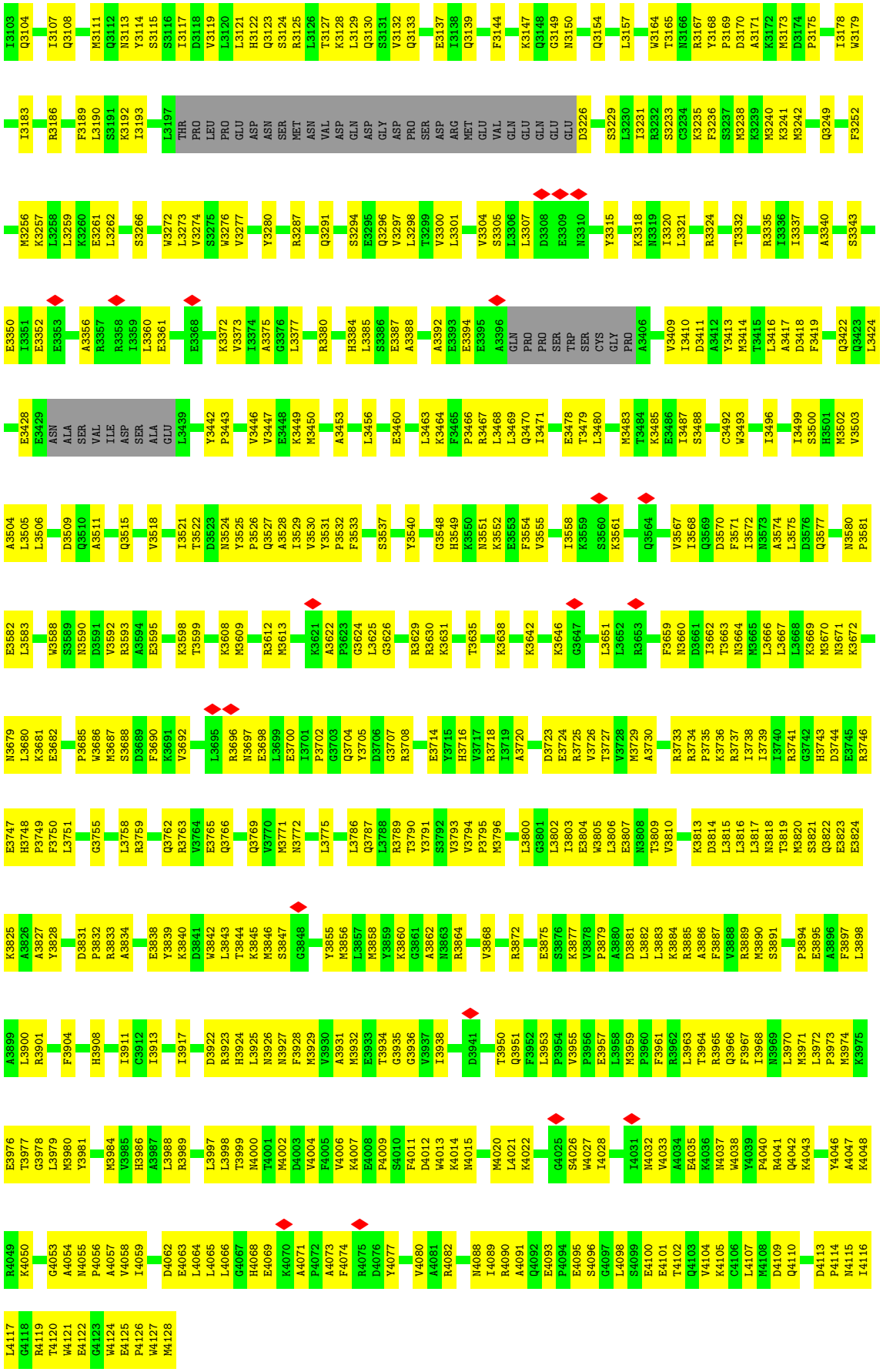
- Molecule 1: DNA-dependent protein kinase catalytic subunit

Chain A:



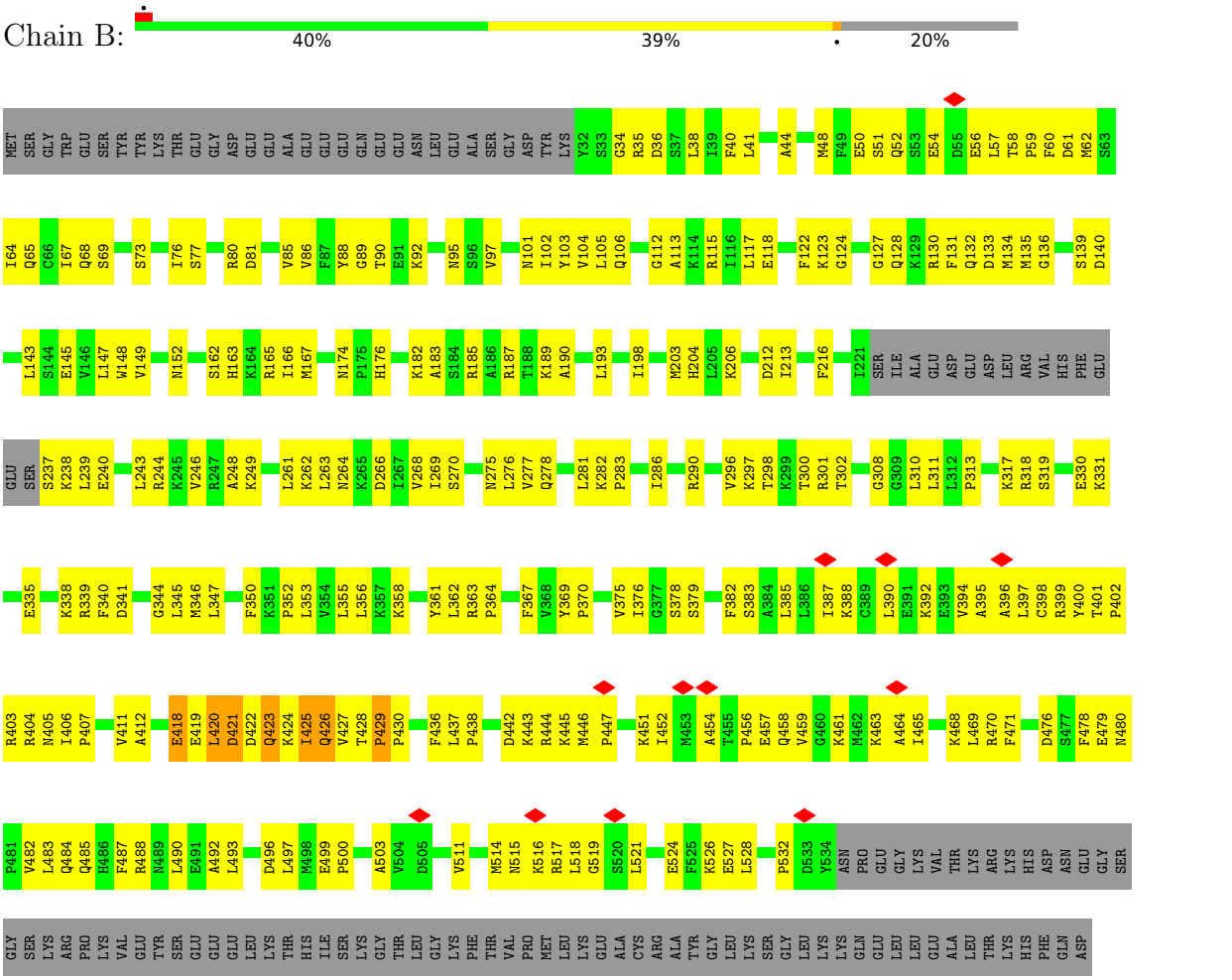






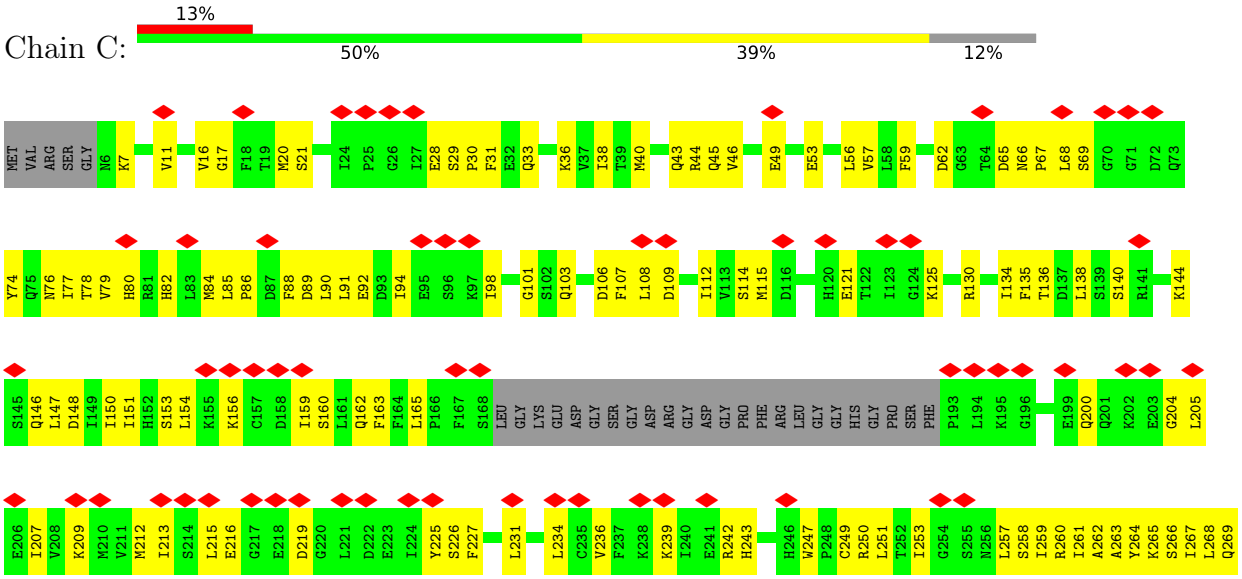
• Molecule 2: X-ray repair cross-complementing protein 6

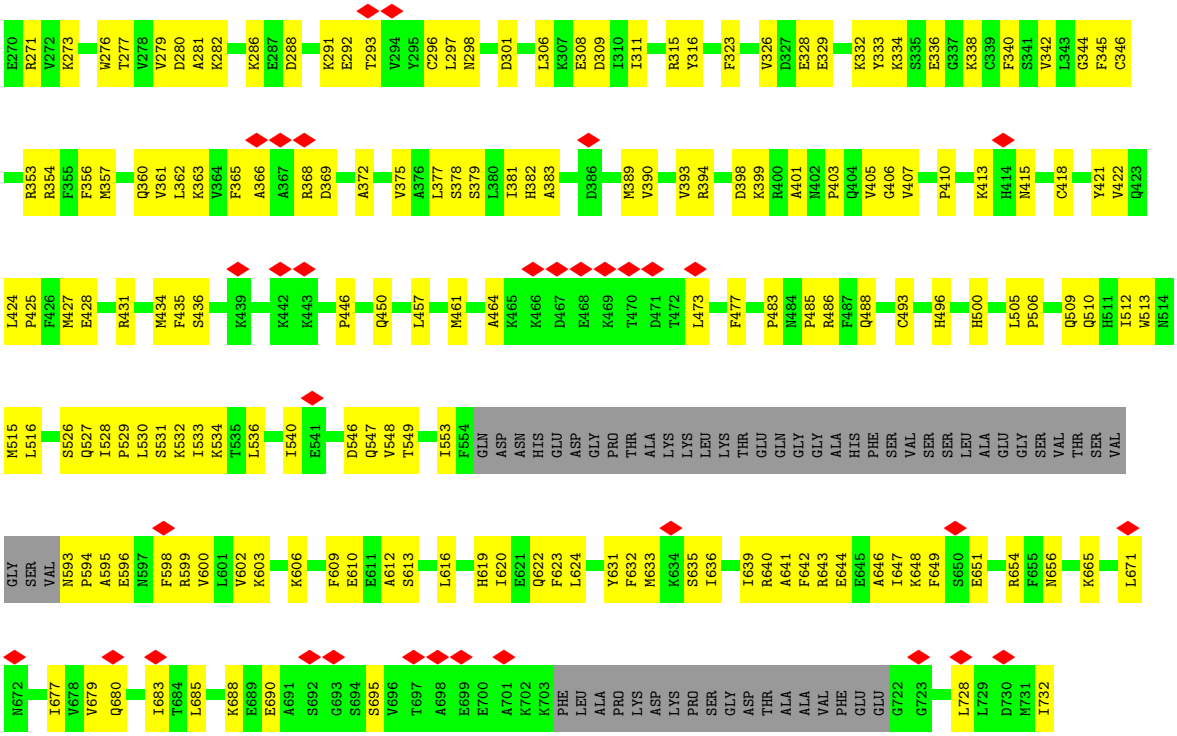
Chain B:



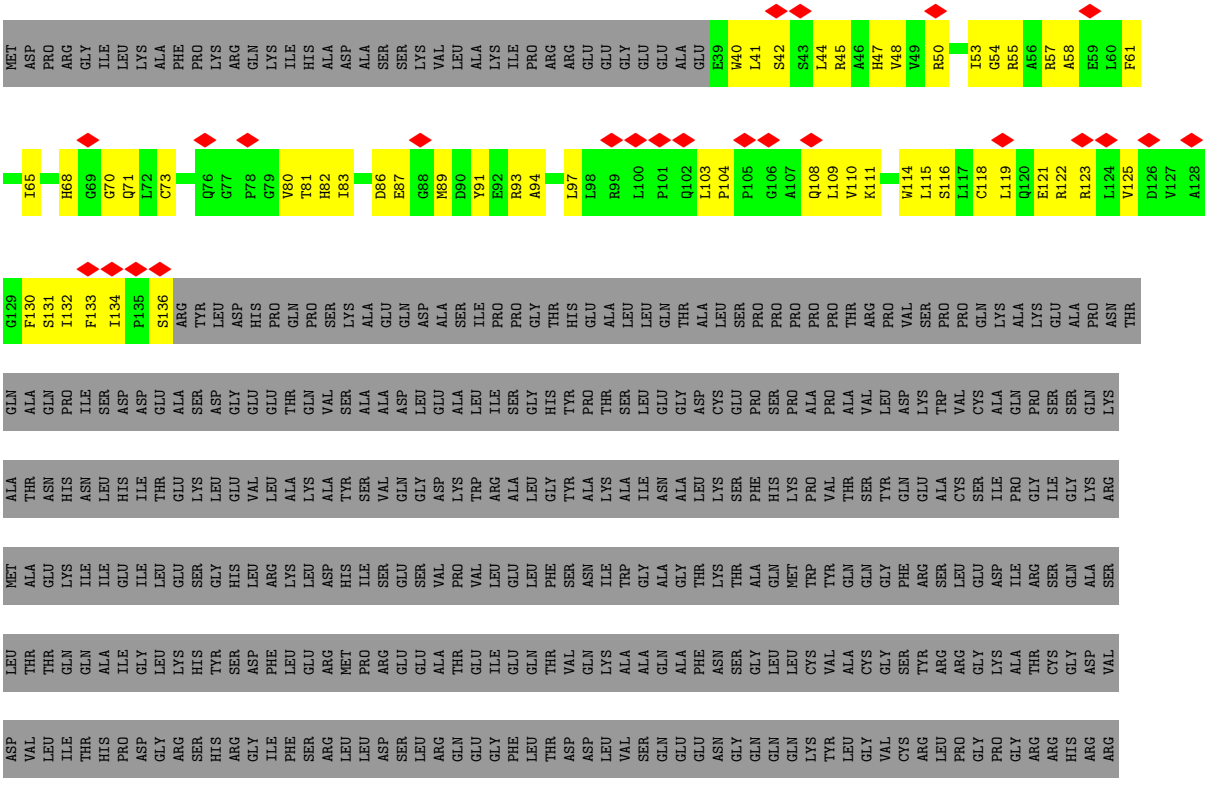
• Molecule 3: X-ray repair cross-complementing protein 5

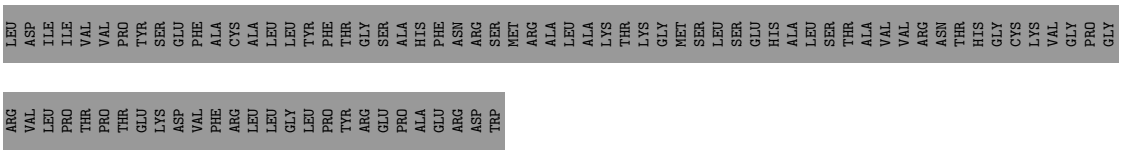
Chain C:



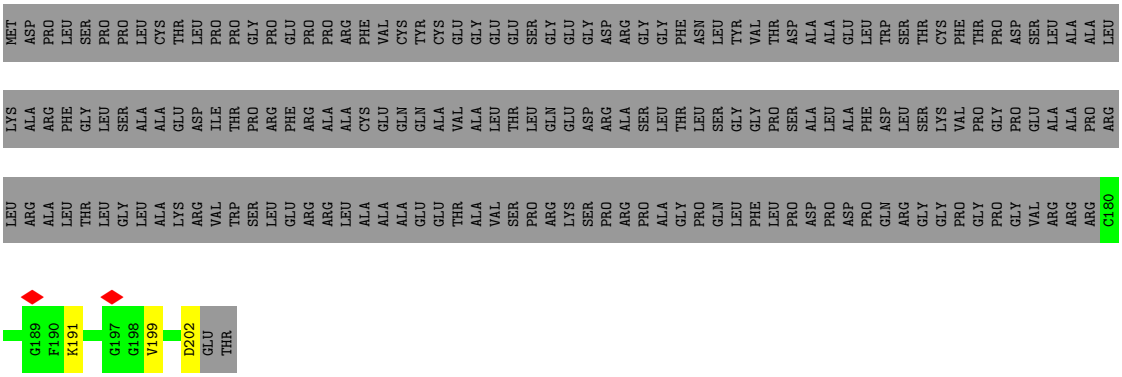


• Molecule 4: DNA polymerase lambda

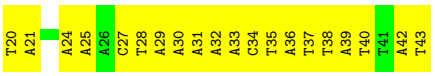




• Molecule 5: Protein PAXX



• Molecule 6: DNA



• Molecule 7: DNA

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	12656	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 ($e^-/Å^2$)	51.96	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	130000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.640	Depositor
Minimum map value	-0.137	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.033	Depositor
Recommended contour level	0.18	Depositor
Map size (Å)	417.28, 417.28, 417.28	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.304, 1.304, 1.304	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	0.18	0/29602	0.46	2/40074 (0.0%)
2	B	0.24	0/3900	0.49	2/5268 (0.0%)
3	C	0.15	0/5185	0.39	0/6998
4	F	0.27	0/771	0.50	0/1046
5	M	0.09	0/159	0.34	0/216
6	D	0.23	0/548	0.49	0/843
7	E	0.24	0/530	0.49	0/817
All	All	0.19	0/40695	0.46	4/55262 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	126	PRO	N-CA-CB	6.58	110.57	103.33
1	A	2297	SER	N-CA-C	-5.35	107.77	114.56
2	B	281	LEU	CA-C-N	5.24	130.90	120.94
2	B	281	LEU	C-N-CA	5.24	130.90	120.94

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	29010	0	28916	1364	0
2	B	3825	0	3813	248	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	C	5093	0	5039	247	0
4	F	755	0	767	54	0
5	M	155	0	135	3	0
6	D	488	0	275	39	0
7	E	474	0	266	29	0
All	All	39800	0	39211	1882	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 24.

All (1882) 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)
2:B:420:LEU:HA	2:B:426:GLN:CA	1.78	1.12
2:B:420:LEU:CA	2:B:426:GLN:HA	1.79	1.11
1:A:3226:ASP:N	1:A:3229:SER:HG	1.69	0.89
1:A:3868:VAL:HG12	1:A:3872:ARG:HE	1.38	0.88
2:B:407:PRO:HG2	3:C:486:ARG:HD2	1.54	0.88
1:A:2806:LYS:HG2	1:A:2857:CYS:HB3	1.54	0.87
3:C:362:LEU:H	3:C:421:TYR:HB3	1.39	0.87
1:A:924:ARG:HH12	1:A:2769:VAL:HG12	1.40	0.87
1:A:865:GLN:HB3	1:A:3170:ASP:HB2	1.56	0.87
1:A:252:VAL:HA	3:C:553:ILE:HD11	1.54	0.86
2:B:35:ARG:H	2:B:162:SER:H	1.23	0.84
2:B:457:GLU:HG3	2:B:458:GLN:HE21	1.44	0.83
1:A:1766:LEU:HD13	1:A:1778:PHE:HD2	1.43	0.82
3:C:690:GLU:H	3:C:695:SER:HB3	1.43	0.82
6:D:42:DA:H2'	7:E:16:DA:N3	1.95	0.82
1:A:1359:LEU:H	1:A:1361:LYS:HZ3	1.23	0.81
1:A:3999:THR:HA	1:A:4002:MET:HE2	1.62	0.81
1:A:3503:VAL:O	1:A:3506:LEU:HB2	1.81	0.80
1:A:3466:PRO:HB2	1:A:4004:VAL:HG11	1.64	0.80
1:A:3729:MET:HE1	1:A:3737:ARG:HG2	1.65	0.79
2:B:379:SER:HA	2:B:382:PHE:HB2	1.65	0.79
1:A:1179:PRO:HA	1:A:1262:ALA:HB2	1.65	0.79
1:A:60:SER:HA	1:A:63:PHE:HB3	1.66	0.78
1:A:2873:PRO:HB2	1:A:2925:GLU:HG3	1.66	0.78
1:A:3593:ARG:HD2	1:A:3660:ASN:HB2	1.66	0.78
2:B:345:LEU:HB3	2:B:400:TYR:HD1	1.50	0.77
3:C:361:VAL:HG13	3:C:421:TYR:H	1.49	0.77
2:B:261:LEU:HB3	2:B:269:ILE:HG22	1.65	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:406:GLY:HA2	3:C:424:LEU:HD23	1.67	0.77
1:A:447:PRO:HG3	1:A:522:PRO:HB3	1.67	0.77
1:A:2455:LEU:HD21	1:A:2501:LEU:HD23	1.67	0.77
1:A:1328:GLU:HG2	1:A:1329:ARG:HE	1.50	0.76
2:B:318:ARG:HD2	3:C:276:TRP:HB3	1.68	0.76
1:A:3503:VAL:HA	1:A:3506:LEU:HD23	1.66	0.76
4:F:45:ARG:HB2	4:F:81:THR:H	1.49	0.76
4:F:110:VAL:HA	4:F:131:SER:HA	1.69	0.75
2:B:51:SER:HA	2:B:58:THR:HG22	1.65	0.75
2:B:261:LEU:O	2:B:268:VAL:HA	1.86	0.75
1:A:1452:VAL:HA	1:A:1517:LEU:HD11	1.67	0.74
1:A:3235:LYS:HA	1:A:3238:MET:HE2	1.68	0.74
1:A:255:ALA:HB3	3:C:553:ILE:HD12	1.67	0.74
1:A:3130:GLN:HB3	1:A:3178:ILE:HG12	1.70	0.74
1:A:2405:VAL:HG21	1:A:2441:LYS:HG3	1.70	0.74
1:A:2538:ARG:NH1	1:A:2565:MET:SD	2.61	0.74
1:A:264:ARG:HB3	1:A:305:ASN:HB2	1.70	0.74
1:A:1976:LEU:HD13	1:A:2145:PHE:HD2	1.52	0.74
1:A:2891:ARG:HH22	1:A:3898:LEU:HB3	1.50	0.74
1:A:3240:MET:HE3	1:A:3262:LEU:HD22	1.69	0.74
1:A:1890:HIS:H	1:A:1894:SER:HB2	1.52	0.73
3:C:59:PHE:HB3	3:C:77:ILE:HD13	1.70	0.73
1:A:93:LEU:O	1:A:136:GLN:NE2	2.20	0.73
1:A:1070:PRO:HD3	1:A:3741:ARG:HH11	1.52	0.73
1:A:1384:PHE:HB2	1:A:1386:ILE:HG23	1.68	0.73
1:A:2411:LEU:HD21	1:A:2442:MET:HB2	1.70	0.73
1:A:551:PHE:HA	1:A:554:ASN:HB3	1.71	0.73
1:A:4082:ARG:HH12	1:A:4091:ALA:HA	1.54	0.73
3:C:493:CYS:HA	3:C:506:PRO:HD2	1.71	0.73
6:D:28:DT:O2	7:E:29:DG:N2	2.20	0.73
1:A:3104:GLN:O	1:A:3108:GLN:NE2	2.21	0.73
2:B:64:ILE:HG22	2:B:68:GLN:HE22	1.53	0.73
2:B:521:LEU:HA	2:B:524:GLU:HG2	1.70	0.73
1:A:714:VAL:HG13	1:A:733:LEU:HD11	1.69	0.73
1:A:3518:VAL:HA	1:A:3521:ILE:HG22	1.69	0.73
1:A:734:LEU:HD21	1:A:769:GLY:HA2	1.71	0.73
2:B:296:VAL:HA	3:C:298:ASN:H	1.54	0.73
1:A:1082:PHE:HA	1:A:1085:ILE:HG12	1.70	0.72
1:A:1872:GLY:HA2	1:A:1875:LYS:HE2	1.70	0.72
1:A:881:LYS:HG2	1:A:883:TYR:H	1.55	0.72
1:A:1222:ASN:O	1:A:1231:GLN:NE2	2.23	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:470:ARG:H	5:M:202:ASP:H	1.36	0.72
2:B:61:ASP:O	2:B:65:GLN:NE2	2.22	0.72
1:A:222:GLY:HA2	1:A:225:LYS:HD2	1.71	0.72
1:A:2411:LEU:HA	1:A:2414:GLN:NE2	2.05	0.72
1:A:2589:TYR:HB2	1:A:2777:HIS:HB2	1.70	0.72
3:C:602:VAL:O	3:C:606:LYS:N	2.21	0.72
3:C:251:LEU:HA	3:C:340:PHE:HB2	1.72	0.71
1:A:1981:LEU:HB3	1:A:1984:LEU:HD21	1.71	0.71
1:A:3380:ARG:O	1:A:3384:HIS:ND1	2.21	0.71
1:A:2547:SER:HB3	1:A:2550:ILE:HG12	1.73	0.71
1:A:2504:ASP:O	1:A:2508:GLN:NE2	2.24	0.71
1:A:3707:GLY:O	1:A:3708:ARG:NH1	2.23	0.71
1:A:1436:LEU:O	1:A:1445:ARG:NH2	2.23	0.71
1:A:2271:SER:HB3	1:A:2315:VAL:HG12	1.72	0.71
3:C:640:ARG:HG3	3:C:685:LEU:HD12	1.71	0.71
1:A:2432:GLN:NE2	1:A:2469:CYS:SG	2.64	0.70
1:A:2219:LEU:O	1:A:2223:VAL:N	2.24	0.70
1:A:4006:VAL:HG22	1:A:4040:PRO:HB3	1.72	0.70
1:A:2330:VAL:C	1:A:2332:GLU:H	1.99	0.70
1:A:3183:ILE:HG13	1:A:3242:MET:HE3	1.73	0.70
2:B:528:LEU:HB3	3:C:372:ALA:HB1	1.72	0.70
1:A:3502:MET:O	1:A:3505:LEU:HB3	1.91	0.70
1:A:1927:MET:HE1	1:A:1974:ASN:HB2	1.73	0.70
1:A:2896:ALA:O	1:A:2900:LEU:HB2	1.92	0.70
1:A:3028:ASN:OD1	1:A:3029:LYS:N	2.22	0.70
1:A:2869:LEU:HD23	1:A:2892:LEU:HD12	1.74	0.70
1:A:2895:GLU:HA	1:A:2898:LEU:HG	1.74	0.70
1:A:1239:PRO:HB2	1:A:1292:LYS:HD2	1.73	0.69
2:B:73:SER:HB3	2:B:244:ARG:HH22	1.57	0.69
1:A:4035:GLU:OE1	1:A:4038:TRP:N	2.22	0.69
1:A:4113:ASP:HB3	1:A:4116:ILE:HD13	1.74	0.69
1:A:1982:ILE:HG23	1:A:2090:ARG:HD3	1.74	0.69
1:A:2254:ARG:HH21	1:A:2293:GLY:H	1.38	0.69
1:A:1764:GLU:HA	1:A:1819:PHE:HE1	1.57	0.69
1:A:3817:LEU:HD22	1:A:3825:LYS:HG3	1.74	0.69
1:A:433:PRO:O	1:A:436:GLU:HG3	1.93	0.69
1:A:895:ALA:HB1	1:A:902:LYS:HB3	1.73	0.69
1:A:1022:ASP:HB3	1:A:1025:LEU:HB3	1.74	0.69
1:A:1101:PHE:HB3	1:A:1154:PRO:HG3	1.75	0.69
1:A:1441:ALA:O	1:A:1445:ARG:NH1	2.25	0.69
3:C:407:VAL:HG12	3:C:424:LEU:HD21	1.74	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:683:PHE:HZ	1:A:707:PHE:HD2	1.37	0.68
1:A:1765:VAL:HA	1:A:1768:ARG:HH21	1.59	0.68
2:B:86:VAL:HG23	2:B:104:VAL:HG12	1.74	0.68
1:A:2893:LEU:HD21	1:A:2922:ARG:HB3	1.74	0.68
1:A:2840:PHE:HB2	1:A:2871:LEU:HD11	1.74	0.68
1:A:4090:ARG:N	1:A:4109:ASP:OD2	2.26	0.68
1:A:528:VAL:HA	1:A:633:ILE:HD11	1.75	0.68
1:A:1313:PHE:O	1:A:1319:GLY:N	2.26	0.68
2:B:383:SER:HB2	3:C:446:PRO:HD3	1.75	0.68
1:A:180:LEU:HA	1:A:230:LEU:HG	1.75	0.68
1:A:2820:MET:HE1	1:A:2829:LYS:HG2	1.76	0.68
3:C:20:MET:HE2	3:C:30:PRO:HG2	1.75	0.68
1:A:1178:ARG:HG2	1:A:1180:GLN:H	1.59	0.68
1:A:3716:HIS:O	1:A:3718:ARG:NH1	2.26	0.68
1:A:1102:GLU:HG3	1:A:1154:PRO:HA	1.76	0.67
1:A:3924:HIS:HE1	1:A:3926:ASN:HB2	1.59	0.67
1:A:913:ARG:HE	1:A:2803:ILE:HD11	1.59	0.67
1:A:3443:PRO:HA	1:A:3446:VAL:HG12	1.75	0.67
1:A:3183:ILE:HG23	1:A:3238:MET:HG3	1.77	0.67
1:A:4082:ARG:NH1	1:A:4091:ALA:HA	2.08	0.67
1:A:3751:LEU:HB3	1:A:3803:ILE:HG23	1.77	0.67
1:A:205:LYS:O	1:A:209:THR:N	2.26	0.67
1:A:1368:LEU:HG	1:A:1372:LEU:HD23	1.76	0.67
6:D:42:DA:N3	7:E:16:DA:H2'	2.10	0.67
1:A:3588:TRP:CD1	1:A:3613:MET:HE3	2.30	0.67
1:A:3680:LEU:HD12	1:A:3682:GLU:HG2	1.76	0.67
1:A:3796:MET:HE1	1:A:3802:LEU:HD23	1.75	0.67
1:A:1766:LEU:HD13	1:A:1778:PHE:CD2	2.29	0.67
6:D:35:DT:H2'	6:D:36:DA:C8	2.30	0.67
1:A:2803:ILE:HG22	1:A:2806:LYS:HD3	1.77	0.66
2:B:76:ILE:HD12	2:B:248:ALA:H	1.58	0.66
1:A:1772:HIS:HD2	1:A:1822:ARG:HH22	1.41	0.66
1:A:3924:HIS:HB3	1:A:4125:GLU:OE2	1.94	0.66
1:A:2216:LEU:HD22	1:A:2249:LEU:HD23	1.77	0.66
2:B:421:ASP:HB3	2:B:425:ILE:O	1.95	0.66
1:A:753:GLN:NE2	1:A:791:ASP:O	2.29	0.66
1:A:1572:LEU:HD11	1:A:1603:GLN:HG2	1.78	0.66
1:A:4054:ALA:HA	1:A:4096:SER:HA	1.78	0.66
1:A:16:GLN:O	1:A:20:SER:N	2.24	0.66
1:A:1775:GLU:OE2	1:A:1822:ARG:NH2	2.29	0.66
2:B:456:PRO:HA	2:B:459:VAL:HG22	1.78	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:992:ILE:HG23	1:A:1036:PHE:HD1	1.61	0.66
1:A:1784:ARG:HB3	1:A:1788:ARG:HH21	1.60	0.66
1:A:1985:LYS:HZ3	1:A:2180:GLU:HG2	1.61	0.66
2:B:490:LEU:HB3	3:C:316:TYR:HE2	1.61	0.66
3:C:66:ASN:ND2	3:C:68:LEU:O	2.29	0.66
3:C:483:PRO:HG2	3:C:488:GLN:HE22	1.62	0.65
1:A:1373:VAL:HG11	1:A:1422:LYS:HE2	1.78	0.65
1:A:3583:LEU:HD13	1:A:3733:ARG:HD3	1.78	0.65
2:B:290:ARG:NH1	3:C:308:GLU:O	2.27	0.65
2:B:427:VAL:O	2:B:428:THR:C	2.40	0.65
7:E:31:DT:C6	7:E:32:DT:H72	2.30	0.65
3:C:279:VAL:HG12	3:C:286:LYS:HD3	1.79	0.65
1:A:3168:TYR:CZ	1:A:3241:LYS:HE2	2.32	0.65
1:A:2252:PRO:O	1:A:2291:GLN:NE2	2.30	0.65
4:F:87:GLU:HA	4:F:132:ILE:HD12	1.78	0.65
1:A:2260:PHE:O	1:A:2306:ASN:ND2	2.30	0.65
1:A:2410:GLU:OE2	1:A:2413:PHE:N	2.28	0.65
3:C:728:LEU:HA	3:C:732:ILE:HA	1.79	0.65
1:A:1933:LEU:HG	1:A:1937:ARG:HB2	1.78	0.65
2:B:77:SER:HB3	2:B:249:LYS:HG3	1.79	0.65
4:F:48:VAL:HG21	4:F:61:PHE:HB3	1.78	0.65
7:E:30:DT:H2'	7:E:31:DT:C6	2.32	0.65
1:A:3518:VAL:HG22	1:A:3522:THR:HB	1.77	0.64
1:A:3624:GLY:HA2	1:A:3686:TRP:H	1.62	0.64
2:B:263:LEU:HA	2:B:347:LEU:HB3	1.78	0.64
1:A:1371:VAL:O	1:A:1374:GLN:HG3	1.97	0.64
1:A:2404:ARG:HH21	1:A:2406:GLU:HB2	1.63	0.64
2:B:458:GLN:HA	2:B:461:LYS:HE3	1.79	0.64
1:A:989:MET:HG3	1:A:993:HIS:CE1	2.31	0.64
2:B:278:GLN:HG2	3:C:431:ARG:HH12	1.63	0.64
1:A:3879:PRO:O	1:A:3966:GLN:NE2	2.29	0.64
1:A:3922:ASP:O	1:A:3927:ASN:ND2	2.30	0.64
2:B:445:LYS:N	3:C:242:ARG:O	2.30	0.64
1:A:3492:CYS:SG	1:A:3524:ASN:ND2	2.70	0.64
1:A:4037:ASN:HD22	1:A:4066:LEU:HD22	1.62	0.64
4:F:45:ARG:NE	4:F:81:THR:OG1	2.28	0.64
1:A:238:MET:SD	1:A:284:THR:OG1	2.56	0.64
1:A:722:LYS:O	1:A:726:LEU:N	2.26	0.64
1:A:3700:GLU:HA	1:A:3718:ARG:HA	1.78	0.64
1:A:92:PHE:HD1	1:A:96:MET:HE3	1.63	0.64
2:B:290:ARG:HH21	3:C:311:ILE:HD13	1.63	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3891:SER:HB2	1:A:3900:LEU:HD21	1.78	0.64
1:A:4014:LYS:HZ2	1:A:4033:VAL:HG12	1.63	0.64
3:C:378:SER:O	3:C:382:HIS:ND1	2.30	0.63
2:B:350:PHE:HB2	3:C:461:MET:HG3	1.81	0.63
2:B:468:LYS:HE3	2:B:521:LEU:HD21	1.80	0.63
1:A:1767:CYS:HA	1:A:1822:ARG:HH11	1.63	0.63
1:A:2205:VAL:HG12	1:A:2207:LYS:H	1.63	0.63
1:A:2365:ASN:OD1	1:A:2366:LYS:NZ	2.29	0.63
2:B:35:ARG:HG3	2:B:80:ARG:HE	1.63	0.63
1:A:2437:ASP:O	1:A:2441:LYS:HG2	1.99	0.63
4:F:40:TRP:HZ2	4:F:119:LEU:HA	1.63	0.63
1:A:2978:LYS:HE2	1:A:2981:TRP:HA	1.81	0.63
1:A:1115:HIS:CD2	1:A:1181:THR:H	2.17	0.63
1:A:2161:ALA:HA	1:A:2164:TRP:HB2	1.80	0.63
1:A:2543:ASN:ND2	1:A:2839:ASP:OD2	2.31	0.63
1:A:3183:ILE:HD12	1:A:3238:MET:HB2	1.81	0.63
1:A:1860:GLU:HG2	1:A:1862:THR:H	1.63	0.63
1:A:2357:GLU:O	1:A:2361:ILE:N	2.32	0.63
1:A:286:LEU:HD12	1:A:319:PHE:HD1	1.64	0.63
1:A:1147:LYS:HZ2	1:A:1149:LYS:HG2	1.64	0.63
4:F:54:GLY:H	4:F:57:ARG:HE	1.45	0.63
4:F:83:ILE:HD11	4:F:104:PRO:HG2	1.81	0.63
1:A:187:SER:O	1:A:191:ASN:ND2	2.33	0.62
1:A:1519:PHE:HE2	1:A:1566:THR:HB	1.65	0.62
2:B:444:ARG:N	3:C:266:SER:O	2.31	0.62
1:A:524:TYR:HB2	1:A:629:PHE:HD1	1.65	0.62
2:B:128:GLN:HG2	2:B:132:GLN:HE21	1.64	0.62
1:A:3924:HIS:CE1	1:A:3926:ASN:HB2	2.33	0.62
1:A:1027:ASP:O	1:A:1031:ARG:HG2	2.00	0.62
1:A:1300:SER:HA	1:A:1304:HIS:HB2	1.82	0.62
1:A:1583:MET:HE1	1:A:1628:LYS:HB2	1.81	0.62
1:A:2140:LEU:HA	1:A:2143:ARG:HD3	1.82	0.62
2:B:301:ARG:NH2	2:B:311:LEU:O	2.33	0.62
1:A:2474:TYR:O	1:A:2478:MET:HG2	2.00	0.62
1:A:2586:PHE:CZ	1:A:2782:ASP:HB3	2.35	0.62
2:B:454:ALA:HB3	3:C:379:SER:HB2	1.81	0.62
1:A:3568:ILE:HD11	1:A:3697:ASN:HD21	1.65	0.62
1:A:3769:GLN:HA	1:A:3772:ASN:HD22	1.64	0.62
2:B:346:MET:N	2:B:399:ARG:O	2.32	0.62
1:A:488:ILE:HD11	1:A:575:ILE:HG12	1.82	0.62
1:A:2902:PRO:HG2	1:A:2919:ASP:HB3	1.82	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3499:ILE:HG12	1:A:3529:ILE:HG22	1.82	0.62
2:B:419:GLU:O	2:B:420:LEU:C	2.43	0.62
2:B:526:LYS:HE2	2:B:528:LEU:HD12	1.80	0.62
1:A:658:THR:HG21	1:A:1388:ASP:HB2	1.82	0.61
3:C:381:ILE:HB	3:C:410:PRO:HG3	1.82	0.61
6:D:37:DT:H2'	6:D:38:DT:C2	2.35	0.61
1:A:2411:LEU:HA	1:A:2414:GLN:HE21	1.64	0.61
1:A:3834:ALA:O	1:A:3838:GLU:N	2.23	0.61
3:C:21:SER:HA	3:C:31:PHE:HB3	1.80	0.61
3:C:595:ALA:HA	3:C:598:PHE:CE2	2.35	0.61
1:A:2571:ASP:O	1:A:2787:HIS:ND1	2.30	0.61
1:A:3796:MET:N	1:A:3796:MET:SD	2.73	0.61
4:F:89:MET:HB2	4:F:93:ARG:HG2	1.82	0.61
1:A:1868:THR:HA	1:A:1871:MET:HG3	1.83	0.61
1:A:3037:GLN:HA	1:A:3040:TYR:CD2	2.36	0.61
3:C:160:SER:HB2	3:C:239:LYS:HG2	1.82	0.61
1:A:2580:PRO:HA	1:A:2783:ILE:HG12	1.83	0.61
2:B:286:ILE:HD12	3:C:315:ARG:HB2	1.81	0.61
1:A:111:CYS:HA	1:A:114:VAL:HG22	1.82	0.61
1:A:1356:TRP:NE1	1:A:1358:LEU:O	2.34	0.61
1:A:3679:ASN:OD1	1:A:3726:VAL:N	2.27	0.61
1:A:602:MET:SD	1:A:1087:ARG:NH1	2.74	0.61
1:A:3758:LEU:HD21	1:A:3793:VAL:HB	1.81	0.61
1:A:939:MET:HE3	1:A:2783:ILE:HA	1.82	0.61
1:A:1363:LEU:HB3	1:A:1367:HIS:HE1	1.65	0.61
1:A:2551:GLU:OE2	1:A:2850:PHE:N	2.34	0.61
2:B:352:PRO:HA	2:B:394:VAL:HG22	1.83	0.61
2:B:421:ASP:H	2:B:427:VAL:H	1.47	0.61
3:C:450:GLN:NE2	3:C:536:LEU:O	2.30	0.61
1:A:564:LEU:O	1:A:567:GLU:HG2	2.01	0.60
1:A:790:LYS:HA	1:A:869:ASN:HB3	1.82	0.60
1:A:1686:LEU:HD12	1:A:1721:HIS:HB3	1.83	0.60
1:A:2550:ILE:HB	1:A:2553:HIS:CE1	2.36	0.60
1:A:3030:ILE:O	1:A:3037:GLN:NE2	2.34	0.60
7:E:23:DT:H2'	7:E:24:DT:H71	1.83	0.60
1:A:717:LYS:NZ	1:A:1120:SER:OG	2.31	0.60
1:A:3592:VAL:HA	1:A:3595:GLU:HG2	1.83	0.60
2:B:425:ILE:HG23	5:M:191:LYS:HE3	1.83	0.60
3:C:656:ASN:HB3	3:C:688:LYS:HB2	1.82	0.60
1:A:1476:HIS:ND1	1:A:1522:GLY:O	2.25	0.60
1:A:2253:TYR:HB2	1:A:2291:GLN:HE22	1.65	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:168:ASP:OD2	7:E:22:DG:H8	1.83	0.60
1:A:1101:PHE:HE2	1:A:1163:LEU:HB3	1.65	0.60
1:A:1108:MET:HE1	1:A:1178:ARG:HH22	1.67	0.60
3:C:108:LEU:HD13	3:C:150:ILE:HG21	1.81	0.60
1:A:2551:GLU:HA	1:A:2554:PHE:CD2	2.37	0.60
1:A:3500:SER:O	1:A:3504:ALA:N	2.30	0.60
3:C:280:ASP:OD1	3:C:281:ALA:N	2.34	0.60
1:A:79:ARG:O	1:A:82:ARG:HG2	2.02	0.60
1:A:399:GLN:HG3	1:A:401:ASP:H	1.66	0.60
1:A:439:VAL:HA	1:A:442:GLN:HG3	1.84	0.60
2:B:422:ASP:C	2:B:424:LYS:H	2.10	0.60
1:A:320:LEU:HG	1:A:368:LEU:HD22	1.81	0.60
1:A:1933:LEU:HB2	1:A:1936:ARG:HB2	1.83	0.60
1:A:2239:LYS:HZ3	1:A:2282:ALA:HB3	1.65	0.60
6:D:21:DA:H1'	7:E:36:DA:C2	2.35	0.60
1:A:542:ASP:OD1	1:A:543:SER:N	2.35	0.60
1:A:958:MET:HB3	1:A:961:LEU:HB3	1.84	0.60
1:A:1039:TRP:HA	1:A:1042:LYS:HG2	1.83	0.60
1:A:2820:MET:HE2	1:A:2824:LYS:HG3	1.82	0.60
1:A:3886:ALA:HA	1:A:3889:ARG:HD3	1.82	0.60
1:A:4062:ASP:HA	1:A:4065:LEU:HD12	1.84	0.60
1:A:718:MET:HE2	1:A:733:LEU:HD12	1.84	0.60
1:A:773:LEU:HA	1:A:776:TRP:NE1	2.17	0.60
1:A:3590:ASN:HB2	1:A:4022:LYS:HE3	1.84	0.60
2:B:458:GLN:NE2	2:B:527:GLU:OE1	2.34	0.60
3:C:328:GLU:O	3:C:332:LYS:N	2.34	0.60
1:A:3526:PRO:O	1:A:3527:GLN:HG3	2.01	0.59
2:B:485:GLN:HA	2:B:488:ARG:HE	1.65	0.59
2:B:353:LEU:HD13	2:B:395:ALA:HB2	1.83	0.59
1:A:584:GLU:N	1:A:613:HIS:O	2.32	0.59
1:A:1684:LEU:HA	1:A:1688:LEU:HD12	1.85	0.59
1:A:2529:THR:OG1	1:A:2530:ARG:NH1	2.35	0.59
1:A:3446:VAL:HA	1:A:3449:LYS:HG2	1.83	0.59
1:A:3883:LEU:HB2	1:A:3970:LEU:HD21	1.83	0.59
3:C:646:ALA:HA	3:C:651:GLU:HB3	1.85	0.59
1:A:3789:ARG:NH1	1:A:3790:THR:O	2.35	0.59
2:B:369:TYR:OH	3:C:436:SER:O	2.20	0.59
1:A:687:SER:HB3	1:A:701:TYR:HB2	1.83	0.59
1:A:3522:THR:HG23	1:A:3561:LYS:HE2	1.85	0.59
3:C:344:GLY:HA3	5:M:199:VAL:HG21	1.84	0.59
1:A:3642:LYS:O	1:A:3646:LYS:NZ	2.35	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3846:MET:HG2	1:A:3858:MET:SD	2.43	0.59
2:B:40:PHE:HD1	2:B:167:MET:HG2	1.67	0.59
2:B:73:SER:HB2	2:B:249:LYS:HD2	1.85	0.59
2:B:244:ARG:NH2	2:B:246:VAL:O	2.35	0.59
1:A:414:LEU:HB2	1:A:460:ALA:HB1	1.84	0.59
1:A:1359:LEU:H	1:A:1361:LYS:NZ	2.00	0.59
1:A:1651:LYS:O	1:A:1654:GLN:HG3	2.02	0.59
1:A:3496:ILE:HD12	1:A:3707:GLY:HA2	1.84	0.59
1:A:3856:MET:O	1:A:3860:LYS:NZ	2.36	0.59
3:C:66:ASN:HD21	3:C:69:SER:HA	1.67	0.59
1:A:28:ALA:O	1:A:32:HIS:ND1	2.36	0.59
1:A:531:PHE:O	1:A:535:LEU:N	2.31	0.59
1:A:652:GLU:O	1:A:655:LEU:HB2	2.02	0.59
1:A:2214:ARG:NH1	1:A:2214:ARG:O	2.36	0.59
1:A:2857:CYS:O	1:A:2861:ILE:HG12	2.03	0.59
1:A:247:GLU:HG2	1:A:285:CYS:HB3	1.85	0.58
1:A:1985:LYS:NZ	1:A:2180:GLU:O	2.36	0.58
1:A:3252:PHE:HB3	1:A:3256:MET:HE1	1.84	0.58
1:A:3509:ASP:CG	1:A:3548:GLY:H	2.11	0.58
1:A:204:LEU:O	1:A:208:MET:HB2	2.03	0.58
1:A:531:PHE:CD1	1:A:534:LEU:HD12	2.37	0.58
1:A:1793:THR:O	1:A:1797:LEU:HG	2.02	0.58
1:A:2813:PHE:HE2	1:A:2868:LEU:HD11	1.68	0.58
1:A:2815:GLY:O	1:A:2818:LYS:HG3	2.03	0.58
2:B:430:PRO:HD2	3:C:435:PHE:HB2	1.84	0.58
1:A:781:ASP:OD2	1:A:783:HIS:ND1	2.37	0.58
1:A:1876:ILE:HA	1:A:1879:VAL:HG12	1.84	0.58
1:A:2364:LEU:HA	1:A:2367:VAL:HG22	1.85	0.58
1:A:100:ILE:O	1:A:101:ALA:C	2.45	0.58
1:A:2181:GLY:HA3	1:A:2222:HIS:CD2	2.39	0.58
1:A:1505:LEU:HA	1:A:1508:LYS:HD2	1.86	0.58
1:A:3506:LEU:HD11	1:A:3554:PHE:HD2	1.69	0.58
1:A:323:VAL:HA	1:A:326:MET:HG2	1.86	0.58
1:A:2539:LEU:HA	1:A:2542:LEU:HD23	1.85	0.58
4:F:91:TYR:HE1	4:F:103:LEU:HD22	1.68	0.58
1:A:3468:LEU:HA	1:A:3471:ILE:HB	1.85	0.58
1:A:186:PRO:HG2	1:A:189:MET:HE1	1.85	0.58
1:A:934:LEU:HA	1:A:937:MET:HG3	1.85	0.58
1:A:998:ASN:OD1	1:A:999:LYS:N	2.37	0.58
1:A:3814:ASP:O	1:A:3818:ASN:ND2	2.36	0.58
1:A:449:TYR:HB3	1:A:453:MET:SD	2.44	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1057:LYS:HB3	1:A:1061:LYS:NZ	2.19	0.58
1:A:1274:ARG:NH2	1:A:1276:VAL:O	2.37	0.58
1:A:1409:SER:O	1:A:1412:LYS:NZ	2.33	0.58
1:A:3259:LEU:HG	1:A:3276:TRP:NE1	2.19	0.58
1:A:200:PHE:CE2	1:A:227:LEU:HD21	2.39	0.58
1:A:142:ARG:HE	1:A:182:GLY:HA3	1.69	0.57
1:A:4098:LEU:HB3	1:A:4102:THR:HG23	1.84	0.57
3:C:106:ASP:OD2	3:C:146:GLN:NE2	2.37	0.57
1:A:59:PHE:O	1:A:63:PHE:N	2.37	0.57
1:A:3029:LYS:O	1:A:3033:GLU:N	2.37	0.57
1:A:3008:TRP:O	1:A:3011:LEU:N	2.37	0.57
2:B:174:ASN:OD1	2:B:176:HIS:NE2	2.37	0.57
1:A:129:ASP:O	1:A:133:LYS:HG2	2.04	0.57
1:A:530:LEU:O	1:A:534:LEU:N	2.37	0.57
1:A:789:TYR:HA	1:A:792:ILE:HB	1.85	0.57
1:A:1727:ARG:HH22	1:A:1774:MET:H	1.53	0.57
2:B:471:PHE:HB3	3:C:346:CYS:HB3	1.86	0.57
1:A:395:MET:HG3	1:A:396:PHE:HD1	1.70	0.57
1:A:913:ARG:NE	1:A:2803:ILE:HD11	2.19	0.57
3:C:323:PHE:HE1	3:C:328:GLU:HG2	1.69	0.57
1:A:450:SER:O	1:A:454:GLN:N	2.36	0.57
1:A:1367:HIS:HA	1:A:1370:ARG:HG2	1.85	0.57
1:A:2157:PHE:O	1:A:2161:ALA:N	2.37	0.57
3:C:20:MET:O	3:C:29:SER:OG	2.20	0.57
1:A:3598:LYS:HG3	1:A:3599:THR:HG22	1.87	0.57
1:A:655:LEU:HD13	1:A:1388:ASP:HB3	1.86	0.57
1:A:2208:ASP:OD1	1:A:2209:GLU:N	2.37	0.57
1:A:2405:VAL:HG11	1:A:2441:LYS:HD3	1.86	0.57
1:A:3692:VAL:HG21	1:A:3720:ALA:HA	1.85	0.57
2:B:425:ILE:O	2:B:427:VAL:N	2.37	0.57
1:A:2866:ALA:HA	1:A:2869:LEU:HD12	1.87	0.57
1:A:3843:LEU:O	1:A:3847:SER:OG	2.22	0.57
2:B:362:LEU:HD21	2:B:438:PRO:HA	1.85	0.57
1:A:440:VAL:HG11	1:A:485:GLN:HB3	1.87	0.57
1:A:3450:MET:HE2	1:A:3468:LEU:HD21	1.86	0.57
1:A:3463:LEU:O	1:A:4000:ASN:ND2	2.38	0.57
2:B:296:VAL:HG12	3:C:297:LEU:HD12	1.87	0.57
1:A:754:MET:HA	1:A:757:LYS:HG2	1.87	0.56
1:A:801:LYS:NZ	1:A:3114:TYR:O	2.34	0.56
1:A:2921:LEU:O	1:A:2925:GLU:HG2	2.06	0.56
1:A:3483:MET:O	1:A:3487:ILE:HB	2.05	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:28:DT:H2'	6:D:29:DA:C8	2.40	0.56
6:D:33:DA:H2"	6:D:34:DC:C4	2.40	0.56
1:A:435:LEU:O	1:A:438:LEU:HB2	2.05	0.56
1:A:865:GLN:OE1	1:A:865:GLN:N	2.37	0.56
1:A:2528:GLU:HA	1:A:2532:PRO:HA	1.87	0.56
1:A:462:VAL:HG11	1:A:540:MET:SD	2.45	0.56
1:A:677:ALA:O	1:A:681:LYS:N	2.37	0.56
1:A:870:LEU:HD23	1:A:870:LEU:H	1.70	0.56
1:A:2386:LEU:O	1:A:2394:LYS:NZ	2.34	0.56
1:A:3361:GLU:HG3	1:A:3373:VAL:HG21	1.87	0.56
3:C:65:ASP:H	3:C:78:THR:HG22	1.70	0.56
6:D:39:DA:C2	7:E:19:DA:C6	2.94	0.56
1:A:849:GLU:O	1:A:853:ILE:HG23	2.05	0.56
1:A:1070:PRO:HD3	1:A:3741:ARG:NH1	2.21	0.56
1:A:3897:PHE:CZ	1:A:3901:ARG:HD2	2.41	0.56
2:B:60:PHE:O	2:B:64:ILE:HG12	2.05	0.56
2:B:101:ASN:ND2	2:B:140:ASP:OD1	2.38	0.56
1:A:734:LEU:HD21	1:A:769:GLY:CA	2.35	0.56
3:C:253:ILE:HB	3:C:257:LEU:HD12	1.86	0.56
3:C:394:ARG:NE	3:C:403:PRO:HB3	2.20	0.56
6:D:20:DT:H1'	7:E:36:DA:C8	2.41	0.56
1:A:208:MET:HE3	1:A:208:MET:O	2.06	0.56
1:A:1364:CYS:SG	1:A:1365:ASN:N	2.79	0.56
1:A:2257:PHE:HA	1:A:2260:PHE:CE1	2.40	0.56
1:A:3572:ILE:HA	1:A:3575:LEU:HD12	1.86	0.56
1:A:3868:VAL:O	1:A:3872:ARG:HG3	2.05	0.56
1:A:397:LEU:HD21	1:A:438:LEU:HD23	1.87	0.56
1:A:892:LEU:HB2	1:A:907:LEU:H	1.71	0.56
2:B:64:ILE:O	2:B:68:GLN:NE2	2.39	0.56
1:A:89:LEU:O	1:A:133:LYS:NZ	2.27	0.56
1:A:1154:PRO:HD3	1:A:1163:LEU:HD11	1.88	0.56
1:A:1202:ARG:NH2	1:A:1210:ASP:OD1	2.39	0.56
3:C:271:ARG:O	3:C:273:LYS:NZ	2.38	0.56
6:D:27:DC:H2"	6:D:28:DT:C5	2.41	0.56
1:A:172:GLU:HG3	1:A:220:LEU:HA	1.87	0.56
1:A:3831:ASP:O	1:A:3833:ARG:N	2.39	0.56
2:B:145:GLU:O	2:B:148:TRP:HB3	2.06	0.56
2:B:147:LEU:HD13	2:B:189:LYS:HB3	1.88	0.56
2:B:344:GLY:N	2:B:401:THR:O	2.39	0.56
3:C:216:GLU:HB3	3:C:219:ASP:HB2	1.86	0.56
3:C:323:PHE:CE1	3:C:328:GLU:HG2	2.40	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:94:GLU:HG2	1:A:96:MET:HG3	1.88	0.55
1:A:1946:ASN:HA	1:A:1949:ILE:HD12	1.88	0.55
1:A:3170:ASP:HB3	1:A:3173:MET:HB3	1.87	0.55
1:A:3931:ALA:O	1:A:3935:GLY:N	2.38	0.55
1:A:583:LEU:HD13	1:A:612:LEU:HD13	1.87	0.55
1:A:639:ALA:HB2	1:A:676:ASN:HB3	1.87	0.55
1:A:2320:ALA:HB1	1:A:2366:LYS:HB2	1.88	0.55
1:A:2365:ASN:ND2	1:A:2399:GLU:OE2	2.36	0.55
2:B:403:ARG:HB3	2:B:406:ILE:HG13	1.86	0.55
3:C:33:GLN:HE22	3:C:231:LEU:HD22	1.70	0.55
1:A:1190:LEU:HA	1:A:1193:LYS:HD3	1.88	0.55
1:A:1758:LEU:HD23	1:A:1761:LEU:HD12	1.88	0.55
1:A:1870:LYS:HA	1:A:1873:TYR:HD2	1.71	0.55
1:A:2501:LEU:HD12	1:A:2504:ASP:HB2	1.88	0.55
4:F:109:LEU:HG	4:F:132:ILE:HB	1.87	0.55
1:A:1575:LEU:HD21	1:A:1617:LYS:HD2	1.89	0.55
1:A:2891:ARG:NH2	1:A:3894:PRO:O	2.40	0.55
1:A:309:LYS:O	1:A:313:LEU:HG	2.07	0.55
1:A:2319:ALA:HA	1:A:2322:VAL:HG22	1.89	0.55
1:A:2410:GLU:O	1:A:2414:GLN:NE2	2.33	0.55
1:A:3352:GLU:HG3	1:A:3356:ALA:H	1.72	0.55
1:A:3686:TRP:O	1:A:3690:PHE:N	2.40	0.55
2:B:308:GLY:O	4:F:57:ARG:HD3	2.07	0.55
2:B:363:ARG:HB2	2:B:436:PHE:HD2	1.70	0.55
2:B:80:ARG:NH2	2:B:81:ASP:OD1	2.40	0.55
3:C:378:SER:O	3:C:381:ILE:HG12	2.07	0.55
3:C:613:SER:OG	3:C:654:ARG:NH2	2.39	0.55
4:F:121:GLU:HG3	4:F:123:ARG:HB2	1.88	0.55
1:A:292:SER:HA	1:A:295:GLU:CD	2.32	0.55
1:A:3506:LEU:HD11	1:A:3554:PHE:CD2	2.41	0.55
1:A:855:VAL:HA	1:A:858:MET:HG3	1.88	0.55
1:A:862:LEU:HD12	1:A:866:ILE:HG21	1.87	0.55
1:A:1202:ARG:NE	1:A:1210:ASP:OD2	2.40	0.55
3:C:165:LEU:H	3:C:226:SER:HA	1.70	0.55
4:F:116:SER:HA	4:F:119:LEU:HD12	1.88	0.55
1:A:2373:PRO:O	1:A:2377:ARG:NH1	2.40	0.55
1:A:2944:THR:HG22	1:A:2957:LEU:HD13	1.89	0.55
1:A:3233:SER:HA	1:A:3272:TRP:HZ2	1.71	0.55
1:A:3739:ILE:HG22	1:A:3747:GLU:OE2	2.07	0.55
1:A:3748:HIS:HB2	1:A:3750:PHE:HE1	1.71	0.55
2:B:59:PRO:HA	2:B:62:MET:HG2	1.87	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:278:GLN:HG2	3:C:431:ARG:NH1	2.22	0.55
2:B:492:ALA:HB2	2:B:500:PRO:HD3	1.88	0.55
1:A:2835:LYS:HD2	1:A:2838:GLN:HE21	1.72	0.55
1:A:3065:ILE:HA	1:A:3068:ALA:HB3	1.89	0.55
2:B:362:LEU:HD11	2:B:438:PRO:HB3	1.89	0.55
1:A:1537:VAL:HA	1:A:1554:SER:HA	1.89	0.54
2:B:41:LEU:HB3	2:B:88:TYR:HE1	1.72	0.54
4:F:111:LYS:HB2	4:F:130:PHE:HB3	1.89	0.54
1:A:489:ARG:O	1:A:492:SER:OG	2.23	0.54
1:A:1328:GLU:OE1	1:A:1328:GLU:N	2.41	0.54
1:A:3974:MET:HE2	1:A:3977:THR:C	2.33	0.54
2:B:446:MET:HG3	3:C:363:LYS:HG3	1.89	0.54
1:A:1760:GLU:HA	1:A:1763:THR:HG22	1.89	0.54
1:A:3123:GLN:O	1:A:3127:THR:HG23	2.06	0.54
1:A:3509:ASP:O	1:A:3551:ASN:ND2	2.41	0.54
1:A:2120:ARG:HD2	1:A:2163:HIS:NE2	2.22	0.54
1:A:2919:ASP:O	1:A:2923:TRP:N	2.39	0.54
1:A:3664:ASN:O	1:A:3667:LEU:HB3	2.07	0.54
3:C:144:LYS:HB3	3:C:207:ILE:HG21	1.89	0.54
3:C:363:LYS:HD2	3:C:418:CYS:HB2	1.88	0.54
1:A:1096:VAL:HA	1:A:1100:VAL:HG13	1.89	0.54
1:A:1400:VAL:HG23	1:A:1457:GLN:HE21	1.72	0.54
1:A:3274:VAL:HA	1:A:3277:VAL:HG22	1.90	0.54
3:C:112:ILE:HA	3:C:115:MET:HE2	1.90	0.54
1:A:272:LEU:HB2	1:A:311:ALA:HB1	1.89	0.54
1:A:1877:LEU:HA	1:A:1880:MET:SD	2.48	0.54
1:A:3041:LEU:HA	1:A:3044:MET:HE2	1.88	0.54
1:A:3122:HIS:HA	1:A:3125:ARG:HE	1.73	0.54
3:C:271:ARG:HH12	7:E:29:DG:H2'	1.72	0.54
1:A:1098:GLN:OE1	1:A:1152:ARG:N	2.40	0.54
1:A:1178:ARG:NH2	1:A:1229:CYS:SG	2.80	0.54
1:A:1391:VAL:HA	1:A:1394:HIS:CE1	2.43	0.54
1:A:3165:THR:HA	1:A:3168:TYR:CZ	2.42	0.54
1:A:3518:VAL:O	1:A:3522:THR:N	2.28	0.54
2:B:319:SER:N	3:C:277:THR:O	2.37	0.54
3:C:527:GLN:HA	3:C:530:LEU:HB2	1.89	0.54
1:A:381:VAL:HG23	1:A:424:LEU:HD13	1.89	0.54
1:A:396:PHE:CE1	1:A:406:ARG:HB2	2.43	0.54
1:A:2385:LEU:HD13	1:A:2388:LYS:HD2	1.90	0.54
1:A:3226:ASP:N	1:A:3229:SER:OG	2.38	0.54
2:B:89:GLY:O	2:B:139:SER:N	2.40	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4065:LEU:HD23	1:A:4074:PHE:CZ	2.42	0.54
2:B:296:VAL:HA	3:C:297:LEU:HA	1.89	0.54
1:A:417:VAL:HA	1:A:420:VAL:HG22	1.90	0.53
1:A:864:GLY:H	1:A:3169:PRO:HA	1.73	0.53
4:F:41:LEU:HD21	4:F:115:LEU:HD11	1.89	0.53
1:A:232:CYS:HB2	1:A:278:HIS:CE1	2.44	0.53
1:A:1019:ASP:O	1:A:1026:ARG:NH1	2.41	0.53
1:A:2254:ARG:HH12	1:A:2288:TYR:HE1	1.56	0.53
1:A:3724:GLU:HG3	1:A:3725:ARG:HH21	1.72	0.53
1:A:4002:MET:HE1	1:A:4048:LYS:HE3	1.88	0.53
2:B:276:LEU:HG	2:B:277:VAL:HG13	1.90	0.53
1:A:527:TYR:HB2	1:A:629:PHE:HE1	1.73	0.53
1:A:553:VAL:HB	1:A:1550:VAL:HG12	1.91	0.53
1:A:1184:ARG:HE	1:A:1265:GLU:HB2	1.73	0.53
1:A:2312:TYR:O	1:A:2315:VAL:HG22	2.09	0.53
1:A:2330:VAL:C	1:A:2332:GLU:N	2.66	0.53
1:A:3108:GLN:HA	1:A:3111:MET:HG2	1.89	0.53
1:A:4065:LEU:HD23	1:A:4074:PHE:HZ	1.74	0.53
3:C:162:GLN:NE2	3:C:163:PHE:O	2.41	0.53
3:C:215:LEU:HG	3:C:216:GLU:HG2	1.91	0.53
4:F:50:ARG:O	4:F:55:ARG:NH1	2.41	0.53
1:A:370:ALA:O	1:A:374:LYS:N	2.35	0.53
1:A:1149:LYS:H	1:A:1151:ARG:HH21	1.56	0.53
1:A:2519:LEU:O	1:A:2522:ARG:HG3	2.09	0.53
1:A:4065:LEU:O	1:A:4069:GLU:HG2	2.07	0.53
2:B:269:ILE:HA	2:B:375:VAL:HG11	1.90	0.53
1:A:465:PHE:HE2	1:A:564:LEU:HD21	1.74	0.53
1:A:1811:ARG:HD3	1:A:1819:PHE:CE2	2.44	0.53
1:A:2352:HIS:HB2	1:A:2356:MET:HG3	1.91	0.53
1:A:2429:ASP:OD1	1:A:2430:GLU:N	2.42	0.53
1:A:3580:ASN:HD21	1:A:3582:GLU:HB2	1.74	0.53
2:B:418:GLU:C	2:B:420:LEU:H	2.16	0.53
1:A:203:GLU:HG3	1:A:224:LEU:HD11	1.91	0.53
1:A:770:LEU:HD11	1:A:858:MET:HG2	1.91	0.53
1:A:776:TRP:CZ3	1:A:785:MET:HG2	2.44	0.53
1:A:1717:LEU:O	1:A:1721:HIS:ND1	2.40	0.53
1:A:3179:TRP:HB3	1:A:3242:MET:HE1	1.91	0.53
2:B:204:HIS:ND1	2:B:212:ASP:OD1	2.37	0.53
3:C:66:ASN:HB3	3:C:77:ILE:HG22	1.90	0.53
1:A:3864:ARG:HG3	1:A:4115:ASN:HB2	1.90	0.53
1:A:4009:PRO:O	1:A:4015:ASN:ND2	2.42	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:151:ILE:HD12	3:C:154:LEU:HD21	1.89	0.53
3:C:644:GLU:HA	3:C:647:ILE:HD12	1.91	0.53
1:A:389:ILE:HG22	1:A:393:LYS:NZ	2.24	0.53
1:A:962:TYR:HD2	1:A:1007:VAL:HG11	1.73	0.53
1:A:1291:LEU:HG	1:A:1363:LEU:HD11	1.90	0.53
1:A:1345:THR:HA	1:A:1348:LEU:HD12	1.90	0.53
1:A:2323:LEU:HA	1:A:2326:ILE:HG22	1.91	0.53
1:A:3744:ASP:O	1:A:3746:ARG:NH1	2.42	0.53
2:B:57:LEU:HD23	2:B:65:GLN:HE21	1.72	0.53
1:A:26:GLY:HA2	1:A:30:ALA:HB3	1.90	0.53
1:A:3154:GLN:HG2	1:A:3157:LEU:HD12	1.90	0.53
1:A:3443:PRO:O	1:A:3447:VAL:HG12	2.09	0.53
1:A:3595:GLU:HA	1:A:3598:LYS:HG2	1.91	0.53
1:A:3886:ALA:HA	1:A:3889:ARG:HH11	1.74	0.53
1:A:3966:GLN:O	1:A:3970:LEU:N	2.39	0.53
3:C:651:GLU:HG3	3:C:654:ARG:HD3	1.91	0.53
1:A:391:ARG:HH21	1:A:395:MET:HB3	1.73	0.53
1:A:667:TYR:HB3	1:A:732:PHE:HB2	1.90	0.53
1:A:855:VAL:HA	1:A:858:MET:CG	2.39	0.53
1:A:1115:HIS:HD2	1:A:1181:THR:HG22	1.74	0.53
1:A:1565:GLU:HA	1:A:1568:ASN:ND2	2.24	0.53
1:A:1760:GLU:OE1	1:A:1801:VAL:HA	2.09	0.53
1:A:3700:GLU:HG2	1:A:3718:ARG:HG3	1.89	0.53
1:A:3887:PHE:HA	1:A:3890:MET:SD	2.49	0.53
2:B:302:THR:HG23	2:B:311:LEU:HB2	1.91	0.53
2:B:341:ASP:OD2	2:B:346:MET:HE3	2.09	0.53
2:B:421:ASP:N	2:B:427:VAL:H	2.07	0.53
4:F:108:GLN:HE22	4:F:110:VAL:HB	1.74	0.53
1:A:391:ARG:HG3	1:A:395:MET:HE3	1.91	0.52
1:A:443:ILE:O	1:A:527:TYR:OH	2.20	0.52
1:A:959:TYR:CE1	1:A:1007:VAL:HB	2.44	0.52
1:A:1235:ILE:HG23	1:A:1259:LEU:HD11	1.91	0.52
1:A:4122:GLU:HG3	1:A:4127:TRP:HZ3	1.73	0.52
2:B:297:LYS:N	3:C:296:CYS:O	2.42	0.52
3:C:368:ARG:HE	3:C:369:ASP:H	1.56	0.52
1:A:128:LEU:O	1:A:132:ILE:HD12	2.09	0.52
1:A:407:VAL:HA	1:A:410:MET:HG2	1.91	0.52
1:A:938:VAL:HA	1:A:941:MET:HG3	1.91	0.52
1:A:4011:PHE:O	1:A:4038:TRP:NE1	2.32	0.52
2:B:122:PHE:HB3	2:B:131:PHE:HB2	1.92	0.52
3:C:624:LEU:HA	3:C:671:LEU:HD13	1.90	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:61:ARG:NH2	1:A:102:PRO:HB2	2.24	0.52
1:A:1298:LEU:HG	1:A:1367:HIS:HB3	1.91	0.52
1:A:1719:VAL:HB	3:C:631:TYR:HB2	1.92	0.52
1:A:2560:ASN:OD1	1:A:2561:PHE:N	2.43	0.52
1:A:3659:PHE:HA	1:A:3662:ILE:HD13	1.92	0.52
1:A:3934:THR:HG23	1:A:3936:GLY:H	1.73	0.52
1:A:4053:GLY:O	1:A:4098:LEU:N	2.38	0.52
2:B:443:LYS:HE3	2:B:445:LYS:HA	1.90	0.52
1:A:1976:LEU:HB3	1:A:2145:PHE:HE2	1.75	0.52
2:B:424:LYS:O	2:B:426:GLN:N	2.43	0.52
4:F:118:CYS:HB3	4:F:123:ARG:O	2.08	0.52
1:A:163:LYS:HD3	1:A:164:LYS:HB2	1.92	0.52
1:A:764:PRO:HG3	1:A:846:ILE:HG21	1.90	0.52
1:A:801:LYS:HA	1:A:3115:SER:HA	1.92	0.52
1:A:2866:ALA:O	1:A:2899:ARG:NH2	2.43	0.52
1:A:3332:THR:HA	1:A:3335:ARG:HG2	1.91	0.52
1:A:3588:TRP:CE2	1:A:3609:MET:HE3	2.45	0.52
1:A:3750:PHE:HA	1:A:3805:TRP:H	1.75	0.52
2:B:204:HIS:HA	2:B:213:ILE:HG13	1.91	0.52
4:F:41:LEU:HB2	4:F:68:HIS:HB2	1.92	0.52
1:A:1242:LEU:O	1:A:1311:LYS:NZ	2.42	0.52
6:D:30:DA:H2"	6:D:31:DA:N7	2.24	0.52
1:A:1576:ASP:OD1	1:A:1577:LEU:N	2.42	0.52
1:A:1871:MET:HE2	1:A:1940:TYR:HB2	1.92	0.52
1:A:2422:GLN:HA	1:A:2425:ARG:HE	1.75	0.52
2:B:166:ILE:HG12	2:B:198:ILE:HD11	1.92	0.52
2:B:298:THR:OG1	2:B:300:THR:OG1	2.20	0.52
2:B:300:THR:HA	3:C:293:THR:HB	1.92	0.52
2:B:463:LYS:HG3	3:C:383:ALA:HB1	1.91	0.52
1:A:475:LEU:O	1:A:479:ILE:HD12	2.10	0.52
1:A:2556:SER:HB2	1:A:2799:GLN:HA	1.92	0.52
1:A:2891:ARG:HH22	1:A:3898:LEU:HD23	1.74	0.52
1:A:4068:HIS:HB3	1:A:4071:ALA:HB3	1.92	0.52
2:B:511:VAL:HA	2:B:514:MET:HB3	1.92	0.52
1:A:63:PHE:HA	1:A:66:LEU:HD12	1.91	0.52
1:A:992:ILE:O	1:A:996:THR:HG22	2.10	0.52
1:A:1173:LEU:HA	1:A:1176:CYS:SG	2.50	0.52
1:A:1210:ASP:O	1:A:1213:LYS:NZ	2.37	0.52
1:A:1805:PHE:O	1:A:1816:ARG:NH1	2.43	0.52
1:A:2220:MET:HA	1:A:2223:VAL:HG12	1.91	0.52
1:A:3881:ASP:OD1	1:A:3884:LYS:HB3	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:493:CYS:O	3:C:505:LEU:HD22	2.10	0.52
3:C:602:VAL:HG21	3:C:642:PHE:HE1	1.75	0.52
4:F:42:SER:HA	4:F:70:GLY:HA2	1.91	0.52
1:A:412:SER:O	1:A:415:GLN:HG3	2.10	0.52
1:A:1863:PHE:HA	1:A:1866:GLN:HG2	1.91	0.52
1:A:2793:PRO:HA	1:A:2796:ALA:HB3	1.92	0.52
2:B:385:LEU:HA	2:B:392:LYS:HD3	1.92	0.52
1:A:16:GLN:HG2	1:A:59:PHE:HE1	1.75	0.51
1:A:1949:ILE:HG21	1:A:2096:PRO:HB3	1.92	0.51
1:A:2088:LEU:HA	1:A:2094:MET:HE2	1.93	0.51
1:A:2437:ASP:OD1	1:A:2472:GLN:HG2	2.09	0.51
1:A:2930:TYR:HB2	1:A:2939:LEU:HD22	1.91	0.51
1:A:2936:TYR:HA	1:A:2939:LEU:HB3	1.92	0.51
1:A:3000:ASP:O	1:A:3004:HIS:ND1	2.43	0.51
3:C:40:MET:O	3:C:43:GLN:HG3	2.09	0.51
3:C:262:ALA:N	3:C:365:PHE:O	2.38	0.51
3:C:596:GLU:HA	3:C:599:ARG:HE	1.75	0.51
1:A:1716:GLN:HA	1:A:1719:VAL:HG22	1.92	0.51
1:A:2143:ARG:NH2	1:A:2170:GLN:OE1	2.43	0.51
1:A:2991:LYS:HA	1:A:2994:TRP:CE3	2.44	0.51
1:A:3385:LEU:HB3	1:A:3416:LEU:HD21	1.92	0.51
1:A:3608:LYS:O	1:A:3612:ARG:HG2	2.11	0.51
4:F:50:ARG:NH2	4:F:55:ARG:O	2.43	0.51
1:A:167:PRO:HD2	1:A:171:LEU:HD13	1.92	0.51
1:A:1279:LEU:HD13	1:A:1282:LEU:HD11	1.93	0.51
1:A:1368:LEU:HA	1:A:1371:VAL:HG22	1.91	0.51
1:A:3061:LEU:O	1:A:3065:ILE:HG12	2.10	0.51
1:A:3259:LEU:HG	1:A:3276:TRP:CE2	2.45	0.51
2:B:92:LYS:NZ	2:B:133:ASP:O	2.40	0.51
3:C:140:SER:O	3:C:200:GLN:HG2	2.11	0.51
4:F:89:MET:HE1	4:F:94:ALA:HA	1.91	0.51
1:A:110:THR:O	1:A:114:VAL:HG13	2.10	0.51
1:A:446:PHE:HA	1:A:449:TYR:CD2	2.45	0.51
1:A:2413:PHE:HA	1:A:2416:LYS:HG2	1.92	0.51
1:A:3660:ASN:O	1:A:3663:THR:HB	2.10	0.51
1:A:3967:PHE:HA	1:A:3970:LEU:HG	1.92	0.51
2:B:469:LEU:HD22	3:C:345:PHE:H	1.75	0.51
1:A:537:SER:O	1:A:541:MET:HE3	2.11	0.51
1:A:1059:LEU:HD23	1:A:1062:ARG:HH21	1.74	0.51
1:A:2891:ARG:NH2	1:A:3898:LEU:HB3	2.22	0.51
1:A:2937:ASP:HB3	1:A:3979:LEU:HA	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3986:HIS:O	1:A:3989:ARG:HD3	2.11	0.51
1:A:971:ARG:NH1	1:A:1022:ASP:OD2	2.44	0.51
1:A:1257:LEU:HD23	1:A:1260:LEU:HD12	1.92	0.51
1:A:2376:ASP:HB2	1:A:2377:ARG:HH11	1.75	0.51
1:A:3809:THR:HG22	1:A:3931:ALA:HA	1.93	0.51
1:A:3908:HIS:HA	1:A:3911:ILE:HG12	1.93	0.51
3:C:616:LEU:O	3:C:620:ILE:HG12	2.11	0.51
1:A:445:SER:OG	1:A:448:GLN:NE2	2.36	0.51
1:A:786:GLN:HA	1:A:789:TYR:CG	2.46	0.51
1:A:3955:VAL:HG21	1:A:4121:TRP:CD2	2.45	0.51
3:C:531:SER:HA	3:C:534:LYS:HG2	1.92	0.51
4:F:87:GLU:OE1	4:F:87:GLU:N	2.44	0.51
1:A:1807:LYS:NZ	1:A:1808:ASP:OD1	2.39	0.51
1:A:3064:PHE:O	1:A:3068:ALA:N	2.44	0.51
1:A:3659:PHE:O	1:A:3663:THR:N	2.36	0.51
3:C:74:TYR:HB3	3:C:77:ILE:HG13	1.92	0.51
1:A:448:GLN:HB3	1:A:519:TRP:CD1	2.46	0.51
1:A:1689:LYS:O	1:A:1693:VAL:HG13	2.11	0.51
1:A:2327:LEU:O	1:A:2328:ARG:C	2.54	0.51
1:A:3904:PHE:O	1:A:3908:HIS:HB2	2.10	0.51
1:A:850:GLU:O	1:A:853:ILE:HG12	2.11	0.51
1:A:1047:GLN:O	1:A:1051:LYS:HG2	2.11	0.51
1:A:1070:PRO:O	1:A:1075:ARG:NH1	2.44	0.51
1:A:1694:THR:HG23	1:A:1695:LEU:HD22	1.92	0.51
1:A:1764:GLU:O	1:A:1768:ARG:NH2	2.44	0.51
1:A:3626:GLY:O	1:A:3630:ARG:HG2	2.11	0.51
1:A:3978:GLY:N	1:A:3980:MET:SD	2.83	0.51
1:A:4089:ILE:N	1:A:4109:ASP:OD2	2.44	0.51
3:C:134:ILE:HB	3:C:163:PHE:HA	1.93	0.51
3:C:247:TRP:HE3	3:C:263:ALA:HB3	1.76	0.51
3:C:529:PRO:HA	3:C:532:LYS:HG2	1.93	0.51
1:A:1310:GLU:O	1:A:1311:LYS:HG2	2.12	0.50
1:A:1379:PRO:HB2	1:A:1383:GLY:O	2.10	0.50
1:A:1396:PRO:HA	1:A:1457:GLN:HE22	1.74	0.50
1:A:2887:PRO:HG2	1:A:3895:GLU:HB3	1.93	0.50
2:B:425:ILE:O	2:B:426:GLN:C	2.55	0.50
1:A:736:LEU:HD12	1:A:740:ILE:HB	1.92	0.50
1:A:1195:VAL:HG11	1:A:1204:PRO:HA	1.94	0.50
1:A:2876:VAL:HG21	1:A:2892:LEU:HD23	1.91	0.50
2:B:76:ILE:HD12	2:B:248:ALA:N	2.26	0.50
2:B:412:ALA:HB2	2:B:437:LEU:HD11	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:187:SER:HA	1:A:190:ILE:HB	1.91	0.50
1:A:346:TYR:HA	1:A:349:ILE:HG12	1.92	0.50
1:A:709:LYS:HA	1:A:712:LYS:HG2	1.94	0.50
1:A:1154:PRO:HD2	1:A:1157:PHE:HB2	1.92	0.50
1:A:1339:VAL:HG12	1:A:1395:LEU:HD21	1.94	0.50
1:A:2129:LEU:HA	1:A:2132:LYS:HB3	1.93	0.50
1:A:2838:GLN:NE2	1:A:2839:ASP:OD1	2.44	0.50
2:B:276:LEU:HD21	3:C:354:ARG:NH1	2.26	0.50
1:A:1257:LEU:HA	1:A:1260:LEU:HD12	1.93	0.50
1:A:3759:ARG:N	1:A:3795:PRO:HG3	2.26	0.50
1:A:3955:VAL:HG21	1:A:4121:TRP:CG	2.46	0.50
3:C:165:LEU:N	3:C:226:SER:HA	2.26	0.50
3:C:633:MET:HA	3:C:636:ILE:HG12	1.92	0.50
1:A:2217:ASN:HA	1:A:2220:MET:HG2	1.92	0.50
1:A:2835:LYS:O	1:A:2838:GLN:HG3	2.11	0.50
1:A:3464:LYS:HE3	1:A:3997:LEU:HD23	1.93	0.50
1:A:3485:LYS:O	1:A:3488:SER:OG	2.20	0.50
2:B:40:PHE:CD1	2:B:167:MET:HG2	2.47	0.50
2:B:183:ALA:HB1	2:B:187:ARG:HH12	1.76	0.50
2:B:276:LEU:HD22	2:B:367:PHE:HB2	1.93	0.50
3:C:332:LYS:HG2	3:C:334:LYS:HZ3	1.76	0.50
1:A:800:LEU:O	1:A:3115:SER:OG	2.26	0.50
1:A:1208:LEU:HA	1:A:1211:VAL:HG22	1.94	0.50
1:A:1519:PHE:HB3	1:A:1573:LYS:HE3	1.94	0.50
1:A:2120:ARG:NH1	1:A:2159:PRO:O	2.45	0.50
1:A:2581:LEU:HD12	1:A:2781:PRO:HD2	1.94	0.50
1:A:3337:ILE:HG23	1:A:3377:LEU:HD21	1.94	0.50
1:A:3924:HIS:HB3	1:A:4125:GLU:CD	2.37	0.50
2:B:145:GLU:O	2:B:149:VAL:HG13	2.12	0.50
2:B:492:ALA:HA	2:B:497:LEU:HB2	1.94	0.50
3:C:251:LEU:HD23	3:C:261:ILE:HD13	1.93	0.50
4:F:82:HIS:HA	4:F:108:GLN:H	1.77	0.50
1:A:348:ILE:HG13	1:A:362:ALA:HB2	1.92	0.50
1:A:1597:LEU:HD21	1:A:1648:LEU:HD22	1.92	0.50
1:A:1605:PHE:O	1:A:1608:ARG:NH1	2.38	0.50
1:A:1767:CYS:SG	1:A:1819:PHE:HA	2.51	0.50
1:A:2470:ARG:HA	1:A:2473:MET:HE2	1.94	0.50
1:A:3301:LEU:O	1:A:3305:SER:HB3	2.12	0.50
2:B:64:ILE:O	2:B:67:ILE:HG22	2.12	0.50
2:B:276:LEU:HD23	2:B:276:LEU:H	1.76	0.50
2:B:402:PRO:HD2	2:B:406:ILE:HG21	1.94	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:404:ARG:NH1	6:D:32:DA:OP2	2.45	0.50
2:B:468:LYS:HB2	2:B:518:LEU:HG	1.93	0.50
1:A:554:ASN:ND2	1:A:556:SER:O	2.45	0.50
1:A:683:PHE:HZ	1:A:707:PHE:CD2	2.25	0.50
1:A:4007:LYS:NZ	1:A:4040:PRO:HB2	2.26	0.50
2:B:282:LYS:NZ	2:B:283:PRO:O	2.38	0.50
2:B:310:LEU:HD11	3:C:292:GLU:HB3	1.93	0.50
4:F:111:LYS:HA	4:F:132:ILE:HD11	1.94	0.50
1:A:801:LYS:HD3	1:A:3115:SER:HA	1.94	0.50
1:A:3009:LYS:HA	1:A:3012:GLU:OE2	2.12	0.50
1:A:3049:LEU:HA	1:A:3052:LEU:HD12	1.94	0.50
1:A:3671:ASN:OD1	1:A:3672:LYS:N	2.43	0.50
1:A:965:THR:O	1:A:968:VAL:HG12	2.12	0.49
1:A:1448:LEU:O	1:A:1452:VAL:HG13	2.12	0.49
1:A:1956:PHE:HE2	1:A:1961:PHE:HA	1.76	0.49
1:A:3117:ILE:HD11	1:A:3124:SER:HB2	1.94	0.49
1:A:3714:GLU:O	1:A:3718:ARG:NH2	2.42	0.49
2:B:345:LEU:HB3	2:B:400:TYR:CD1	2.39	0.49
3:C:165:LEU:O	3:C:227:PHE:N	2.38	0.49
3:C:357:MET:HG2	3:C:425:PRO:HB3	1.93	0.49
3:C:457:LEU:HD23	3:C:529:PRO:HB2	1.92	0.49
6:D:43:DT:H3	7:E:15:DA:H4'	1.76	0.49
1:A:240:GLU:OE2	1:A:246:ARG:NH1	2.44	0.49
1:A:381:VAL:HA	1:A:384:MET:HG3	1.93	0.49
1:A:3262:LEU:HD23	1:A:3276:TRP:HD1	1.76	0.49
2:B:397:LEU:HD21	3:C:477:PHE:HD2	1.76	0.49
3:C:17:GLY:O	3:C:101:GLY:N	2.45	0.49
1:A:210:SER:O	3:C:549:THR:N	2.31	0.49
1:A:430:VAL:O	1:A:433:PRO:HD2	2.11	0.49
1:A:1391:VAL:HG23	1:A:1392:MET:SD	2.52	0.49
1:A:1476:HIS:HB3	1:A:1479:VAL:HG12	1.94	0.49
1:A:2494:ASP:O	1:A:2497:GLU:HG2	2.12	0.49
2:B:69:SER:O	2:B:244:ARG:NH1	2.46	0.49
2:B:290:ARG:NH2	3:C:311:ILE:HD13	2.25	0.49
2:B:311:LEU:HD21	3:C:288:ASP:O	2.13	0.49
3:C:45:GLN:O	3:C:49:GLU:N	2.45	0.49
3:C:679:VAL:HG13	3:C:683:ILE:HD11	1.94	0.49
1:A:175:TYR:O	1:A:227:LEU:HD13	2.13	0.49
1:A:545:LEU:HA	1:A:548:GLU:HG2	1.93	0.49
1:A:620:PHE:O	1:A:624:ILE:HG12	2.12	0.49
1:A:1225:GLU:HB3	1:A:1231:GLN:HE22	1.76	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1645:VAL:HA	1:A:1648:LEU:HG	1.93	0.49
1:A:1725:GLN:OE1	1:A:1726:SER:N	2.45	0.49
1:A:2357:GLU:HG3	1:A:2358:ASP:H	1.77	0.49
1:A:3114:TYR:O	1:A:3117:ILE:HG22	2.12	0.49
1:A:396:PHE:HE1	1:A:406:ARG:HB2	1.76	0.49
1:A:1335:CYS:O	1:A:1339:VAL:HG13	2.12	0.49
1:A:1714:LEU:O	1:A:1718:ILE:HG12	2.13	0.49
1:A:3033:GLU:HB2	1:A:3034:PRO:HD3	1.92	0.49
1:A:3775:LEU:HD13	1:A:3786:LEU:HB3	1.92	0.49
1:A:4047:ALA:O	1:A:4050:LYS:HG2	2.12	0.49
1:A:385:TYR:CE2	1:A:427:VAL:HG23	2.47	0.49
1:A:876:SER:HB2	1:A:879:MET:HB2	1.95	0.49
1:A:1166:LEU:HB3	1:A:1170:LYS:NZ	2.27	0.49
1:A:1458:LEU:O	1:A:1462:GLY:N	2.42	0.49
1:A:2270:ASN:HD22	1:A:2309:PHE:HE2	1.61	0.49
1:A:4012:ASP:H	1:A:4015:ASN:HB2	1.78	0.49
2:B:355:LEU:HB2	3:C:473:LEU:HD13	1.95	0.49
3:C:136:THR:HG22	3:C:138:LEU:H	1.77	0.49
3:C:622:GLN:NE2	3:C:623:PHE:HB2	2.28	0.49
4:F:86:ASP:HB2	4:F:89:MET:HG2	1.95	0.49
1:A:966:PHE:HB2	1:A:1011:GLU:CD	2.38	0.49
1:A:1115:HIS:CD2	1:A:1181:THR:HG22	2.46	0.49
1:A:1817:GLN:HA	1:A:1820:VAL:HG22	1.93	0.49
1:A:1949:ILE:HG12	1:A:2100:LEU:HD11	1.95	0.49
1:A:2429:ASP:O	1:A:2432:GLN:HG2	2.13	0.49
1:A:4020:MET:SD	1:A:4027:TRP:HB3	2.52	0.49
3:C:394:ARG:HE	3:C:403:PRO:HB3	1.78	0.49
1:A:487:LEU:O	1:A:490:ILE:HG22	2.12	0.49
1:A:603:ILE:HD11	1:A:1031:ARG:HD2	1.95	0.49
1:A:683:PHE:HE2	1:A:740:ILE:HD11	1.77	0.49
1:A:974:CYS:SG	1:A:1025:LEU:HB2	2.52	0.49
1:A:1582:LEU:HD11	1:A:1593:VAL:HG22	1.94	0.49
1:A:2266:ASN:HA	1:A:2311:ARG:HG2	1.94	0.49
1:A:2573:PRO:HA	1:A:2786:LYS:HD3	1.94	0.49
1:A:2976:LEU:O	1:A:2979:GLN:NE2	2.45	0.49
1:A:4088:ASN:HD21	1:A:4113:ASP:HB2	1.77	0.49
2:B:90:THR:HG21	2:B:103:TYR:HB2	1.95	0.49
3:C:265:LYS:HB3	3:C:268:LEU:HD11	1.94	0.49
4:F:121:GLU:O	4:F:123:ARG:NH1	2.46	0.49
6:D:36:DA:H2'	6:D:37:DT:H1'	1.94	0.49
6:D:43:DT:C4	7:E:16:DA:C5	3.00	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:356:ASN:O	1:A:409:GLN:NE2	2.45	0.49
1:A:914:VAL:HA	1:A:917:LEU:HG	1.93	0.49
1:A:1493:PRO:HB3	1:A:1500:LEU:H	1.78	0.49
1:A:2254:ARG:HH21	1:A:2293:GLY:N	2.09	0.49
2:B:369:TYR:CD1	2:B:370:PRO:HD2	2.48	0.49
4:F:54:GLY:H	4:F:57:ARG:NE	2.10	0.49
1:A:31:GLY:O	1:A:35:ILE:HG12	2.13	0.49
1:A:150:GLY:HA2	1:A:188:GLU:OE2	2.13	0.49
1:A:2135:ASN:O	1:A:2138:VAL:HG22	2.13	0.49
1:A:2135:ASN:O	1:A:2143:ARG:NH1	2.45	0.49
1:A:2559:THR:OG1	1:A:2795:GLN:NE2	2.46	0.49
1:A:3144:PHE:HA	1:A:3150:ASN:HD22	1.77	0.49
1:A:3588:TRP:NE1	1:A:3613:MET:HE3	2.28	0.49
1:A:756:PHE:O	1:A:799:TYR:OH	2.26	0.48
1:A:1887:ASP:OD1	1:A:1888:ASP:N	2.44	0.48
1:A:2157:PHE:HB3	1:A:2164:TRP:CD1	2.48	0.48
1:A:2318:ALA:O	1:A:2322:VAL:HG13	2.13	0.48
1:A:2376:ASP:OD1	1:A:2404:ARG:HD3	2.13	0.48
2:B:297:LYS:HE3	3:C:296:CYS:SG	2.53	0.48
3:C:280:ASP:OD2	3:C:282:LYS:NZ	2.46	0.48
3:C:649:PHE:CE2	3:C:651:GLU:HB2	2.48	0.48
4:F:91:TYR:HB2	4:F:134:ILE:HA	1.95	0.48
1:A:111:CYS:O	1:A:114:VAL:HG22	2.13	0.48
1:A:200:PHE:CZ	1:A:227:LEU:HD21	2.48	0.48
1:A:205:LYS:HA	1:A:208:MET:HB3	1.95	0.48
1:A:210:SER:OG	2:B:339:ARG:NH1	2.28	0.48
1:A:1057:LYS:HB3	1:A:1061:LYS:HZ1	1.78	0.48
2:B:446:MET:HE2	3:C:363:LYS:HB2	1.94	0.48
6:D:36:DA:H2'	6:D:37:DT:C1'	2.43	0.48
1:A:360:SER:HA	1:A:363:ILE:HG12	1.95	0.48
1:A:734:LEU:HD22	1:A:768:VAL:HG13	1.95	0.48
1:A:2269:ASP:N	1:A:2269:ASP:OD1	2.46	0.48
1:A:4114:PRO:HA	1:A:4117:LEU:HD12	1.94	0.48
7:E:26:DT:H2'	7:E:27:DT:H73	1.96	0.48
1:A:171:LEU:HD23	1:A:171:LEU:H	1.79	0.48
1:A:1986:ARG:HD2	1:A:2184:TYR:HA	1.94	0.48
1:A:2338:GLU:OE2	1:A:2340:SER:OG	2.32	0.48
1:A:3424:LEU:O	1:A:3428:GLU:N	2.36	0.48
1:A:1093:GLU:OE1	1:A:1093:GLU:N	2.46	0.48
1:A:1333:SER:O	1:A:1337:VAL:HG13	2.13	0.48
1:A:2397:CYS:HA	1:A:2400:VAL:HG22	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2421:VAL:O	1:A:2425:ARG:HG3	2.14	0.48
1:A:3809:THR:OG1	1:A:3929:MET:SD	2.64	0.48
1:A:4064:LEU:HD13	1:A:4077:TYR:HB3	1.96	0.48
2:B:490:LEU:HB3	3:C:316:TYR:CE2	2.44	0.48
3:C:94:ILE:HG23	3:C:98:ILE:HG13	1.95	0.48
4:F:44:LEU:HG	4:F:82:HIS:CD2	2.48	0.48
1:A:12:LEU:HD23	1:A:15:LEU:HD12	1.95	0.48
1:A:208:MET:HG2	1:A:249:PHE:HD1	1.77	0.48
1:A:898:PHE:CD1	1:A:2535:THR:HG21	2.49	0.48
1:A:1575:LEU:HD12	1:A:1576:ASP:N	2.28	0.48
1:A:1816:ARG:HA	1:A:1819:PHE:HD2	1.78	0.48
1:A:1966:LEU:H	1:A:1969:GLU:CD	2.20	0.48
1:A:2158:ARG:NH2	1:A:2195:SER:O	2.46	0.48
1:A:2205:VAL:HG12	1:A:2207:LYS:N	2.29	0.48
1:A:2262:GLY:HA3	1:A:2270:ASN:ND2	2.27	0.48
1:A:2420:PHE:CE1	1:A:2424:MET:HB3	2.49	0.48
1:A:3261:GLU:OE1	1:A:3261:GLU:N	2.32	0.48
1:A:3702:PRO:HB2	1:A:3794:VAL:HG11	1.96	0.48
2:B:130:ARG:HA	2:B:133:ASP:OD2	2.14	0.48
3:C:526:SER:O	3:C:530:LEU:N	2.39	0.48
3:C:610:GLU:OE2	3:C:654:ARG:NE	2.36	0.48
1:A:461:ILE:HA	1:A:464:VAL:HG22	1.95	0.48
1:A:1244:LEU:HD11	1:A:1310:GLU:HB2	1.96	0.48
1:A:1740:VAL:HA	1:A:1743:MET:HG2	1.95	0.48
1:A:1791:CYS:SG	1:A:1792:VAL:N	2.87	0.48
1:A:1894:SER:HB3	1:A:1910:GLU:N	2.29	0.48
1:A:2365:ASN:HB2	1:A:2396:LEU:HD23	1.94	0.48
1:A:2891:ARG:HA	1:A:2894:GLU:HG2	1.96	0.48
2:B:112:GLY:H	2:B:115:ARG:HG3	1.77	0.48
4:F:71:GLN:HE22	4:F:73:CYS:HB3	1.78	0.48
6:D:31:DA:H2"	6:D:32:DA:C8	2.48	0.48
1:A:151:GLU:HA	4:F:133:PHE:CE2	2.49	0.48
1:A:451:PRO:HA	1:A:454:GLN:HB2	1.96	0.48
1:A:734:LEU:HD23	1:A:734:LEU:O	2.13	0.48
1:A:1037:LEU:O	1:A:1040:SER:OG	2.29	0.48
1:A:1399:CYS:SG	1:A:1403:MET:HE1	2.54	0.48
1:A:1804:MET:O	1:A:1811:ARG:NH2	2.47	0.48
1:A:2561:PHE:HB3	1:A:2565:MET:HE1	1.96	0.48
1:A:3086:LEU:HD23	1:A:3089:LEU:HD21	1.96	0.48
1:A:3511:ALA:O	1:A:3515:GLN:N	2.42	0.48
2:B:103:TYR:CD1	2:B:135:MET:HG2	2.48	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:411:VAL:HG12	2:B:436:PHE:HD1	1.79	0.48
2:B:492:ALA:HB2	2:B:499:GLU:HA	1.96	0.48
3:C:11:VAL:HG21	3:C:114:SER:HB2	1.95	0.48
1:A:562:HIS:HB2	1:A:641:PHE:CE1	2.48	0.48
1:A:1565:GLU:H	1:A:1565:GLU:CD	2.21	0.48
1:A:2104:MET:O	1:A:2108:LEU:HG	2.13	0.48
1:A:2122:LEU:HB3	1:A:2127:LYS:HD3	1.95	0.48
1:A:2345:VAL:HA	1:A:2348:GLN:HG3	1.95	0.48
1:A:2358:ASP:N	1:A:2358:ASP:OD1	2.45	0.48
1:A:3467:ARG:O	1:A:3470:GLN:HG2	2.14	0.48
1:A:3911:ILE:HD12	1:A:3928:PHE:CE1	2.49	0.48
3:C:377:LEU:O	3:C:381:ILE:HG23	2.14	0.48
1:A:910:PHE:CE1	1:A:2807:GLN:HG3	2.49	0.48
1:A:1527:ARG:O	1:A:1531:LEU:HG	2.14	0.48
1:A:2044:ASP:O	1:A:2048:GLY:N	2.47	0.48
1:A:2576:MET:SD	1:A:2576:MET:N	2.87	0.48
1:A:3493:TRP:HA	1:A:3521:ILE:HD11	1.96	0.48
1:A:3531:TYR:HB3	1:A:3796:MET:HA	1.95	0.48
2:B:41:LEU:HD13	2:B:86:VAL:HG13	1.96	0.48
2:B:375:VAL:HG13	2:B:378:SER:OG	2.13	0.48
3:C:263:ALA:HB1	3:C:362:LEU:HD11	1.95	0.48
3:C:457:LEU:CD1	3:C:533:ILE:HG13	2.44	0.48
2:B:143:LEU:H	2:B:182:LYS:HD3	1.79	0.47
2:B:388:LYS:HB3	2:B:390:LEU:HD23	1.95	0.47
1:A:1718:ILE:HA	1:A:1722:PHE:HD1	1.79	0.47
1:A:1762:MET:HE1	1:A:1782:PHE:HE1	1.78	0.47
1:A:1809:ASP:O	1:A:1811:ARG:N	2.44	0.47
1:A:2576:MET:HE1	1:A:2785:ILE:HG13	1.96	0.47
1:A:3008:TRP:CE2	1:A:3050:LYS:HG3	2.49	0.47
1:A:3577:GLN:OE1	1:A:3629:ARG:NE	2.43	0.47
1:A:3750:PHE:HA	1:A:3804:GLU:HA	1.96	0.47
1:A:3772:ASN:OD1	1:A:3787:GLN:HB2	2.14	0.47
1:A:3806:LEU:O	1:A:3807:GLU:HG3	2.14	0.47
1:A:4057:ALA:HB2	1:A:4090:ARG:HD2	1.96	0.47
2:B:341:ASP:CG	2:B:346:MET:HE3	2.39	0.47
4:F:40:TRP:HZ2	4:F:119:LEU:CA	2.25	0.47
6:D:43:DT:N3	7:E:15:DA:H4'	2.29	0.47
1:A:897:PRO:HB2	1:A:2569:SER:OG	2.14	0.47
1:A:3083:SER:O	1:A:3102:TYR:HB3	2.14	0.47
1:A:3923:ARG:HD3	1:A:3928:PHE:CZ	2.48	0.47
2:B:375:VAL:HA	3:C:540:ILE:HG13	1.96	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:20:DT:O2	7:E:36:DA:H5"	2.14	0.47
1:A:531:PHE:HD1	1:A:534:LEU:HD12	1.76	0.47
1:A:1468:LEU:HD13	1:A:1521:PHE:HE2	1.80	0.47
1:A:2519:LEU:HD11	1:A:2522:ARG:HH21	1.79	0.47
1:A:3549:HIS:HA	1:A:3552:LYS:HB2	1.94	0.47
1:A:3718:ARG:H	1:A:3743:HIS:CE1	2.31	0.47
1:A:3828:TYR:HH	1:A:4127:TRP:CD1	2.33	0.47
2:B:345:LEU:HB2	2:B:398:CYS:SG	2.54	0.47
2:B:355:LEU:HD13	3:C:473:LEU:HB2	1.95	0.47
2:B:442:ASP:OD1	3:C:269:GLN:HG2	2.15	0.47
3:C:33:GLN:HA	3:C:36:LYS:HG2	1.97	0.47
3:C:148:ASP:O	3:C:151:ILE:HG22	2.14	0.47
1:A:237:SER:HB2	1:A:283:SER:OG	2.14	0.47
1:A:1175:HIS:CG	1:A:1229:CYS:HA	2.49	0.47
1:A:1395:LEU:O	1:A:1399:CYS:HB2	2.15	0.47
1:A:1825:LEU:HD12	1:A:1826:THR:N	2.30	0.47
1:A:1828:LEU:HD11	1:A:1879:VAL:HG13	1.96	0.47
1:A:3050:LYS:HD3	1:A:3053:LEU:HD21	1.95	0.47
1:A:3168:TYR:CE1	1:A:3241:LYS:HE2	2.50	0.47
1:A:3190:LEU:HD22	1:A:3231:ILE:HG12	1.96	0.47
1:A:3479:THR:O	1:A:3480:LEU:HD22	2.14	0.47
1:A:3839:TYR:HE2	1:A:4122:GLU:HB2	1.80	0.47
1:A:3951:GLN:HE21	1:A:4063:GLU:HB3	1.78	0.47
1:A:4013:TRP:CD1	1:A:4035:GLU:HB3	2.49	0.47
2:B:203:MET:HG2	2:B:239:LEU:HB3	1.96	0.47
3:C:106:ASP:OD1	3:C:107:PHE:N	2.46	0.47
1:A:320:LEU:HA	1:A:323:VAL:HG22	1.95	0.47
1:A:1029:CYS:HA	1:A:1032:CYS:SG	2.53	0.47
1:A:1178:ARG:HD3	1:A:1180:GLN:HB2	1.95	0.47
1:A:2415:LEU:HB3	1:A:2420:PHE:HB2	1.95	0.47
1:A:2555:LEU:HD12	1:A:2555:LEU:HA	1.76	0.47
2:B:488:ARG:NH1	2:B:503:ALA:O	2.48	0.47
1:A:848:LEU:O	1:A:851:ILE:HB	2.14	0.47
1:A:921:ALA:HB3	1:A:927:LYS:HG3	1.96	0.47
1:A:1076:LEU:HD23	1:A:1121:LEU:HD21	1.97	0.47
1:A:1235:ILE:HG22	1:A:1256:TRP:NE1	2.30	0.47
1:A:1513:GLY:O	1:A:1516:GLU:HG3	2.14	0.47
1:A:3759:ARG:O	1:A:3762:GLN:HG3	2.15	0.47
1:A:3820:MET:HB3	1:A:3882:LEU:HD11	1.96	0.47
2:B:105:LEU:HD21	2:B:131:PHE:HE1	1.79	0.47
2:B:275:ASN:O	3:C:431:ARG:NH2	2.47	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:532:PRO:HG2	3:C:259:ILE:HD12	1.97	0.47
3:C:7:LYS:NZ	3:C:121:GLU:O	2.46	0.47
3:C:413:LYS:HG3	3:C:415:ASN:H	1.80	0.47
3:C:496:HIS:O	3:C:500:HIS:N	2.29	0.47
1:A:286:LEU:HD12	1:A:319:PHE:CD1	2.47	0.47
1:A:1948:ALA:HA	1:A:1951:VAL:HG12	1.96	0.47
1:A:2964:ASP:O	1:A:2967:GLU:N	2.48	0.47
1:A:3567:VAL:O	1:A:3571:PHE:HB2	2.14	0.47
3:C:457:LEU:HD11	3:C:533:ILE:HG13	1.96	0.47
1:A:349:ILE:HG13	1:A:350:ARG:N	2.29	0.47
1:A:374:LYS:NZ	1:A:425:ASP:OD1	2.47	0.47
1:A:632:GLU:OE1	1:A:632:GLU:N	2.48	0.47
1:A:1031:ARG:NH1	1:A:1084:ASN:OD1	2.48	0.47
1:A:1601:LEU:HG	1:A:1655:ILE:HD12	1.96	0.47
1:A:1959:LEU:HG	1:A:1960:LYS:H	1.80	0.47
1:A:2576:MET:HG3	1:A:2787:HIS:CD2	2.49	0.47
1:A:3466:PRO:HA	1:A:3469:LEU:HB3	1.97	0.47
1:A:3571:PHE:CE2	1:A:3575:LEU:HD11	2.50	0.47
1:A:3965:ARG:HA	1:A:3968:ILE:HG12	1.97	0.47
2:B:276:LEU:O	3:C:431:ARG:N	2.44	0.47
2:B:344:GLY:O	2:B:401:THR:N	2.39	0.47
2:B:370:PRO:HB3	2:B:382:PHE:HB3	1.97	0.47
2:B:458:GLN:HB2	3:C:379:SER:OG	2.15	0.47
1:A:248:ILE:O	1:A:252:VAL:HG23	2.15	0.47
1:A:1105:VAL:O	1:A:1108:MET:HG3	2.15	0.47
1:A:2517:LEU:O	1:A:2521:ILE:HG12	2.14	0.47
1:A:3052:LEU:HD23	1:A:3057:ALA:HA	1.96	0.47
1:A:3072:GLU:OE2	1:A:3075:LYS:NZ	2.47	0.47
1:A:3868:VAL:HG13	1:A:4114:PRO:HB2	1.97	0.47
1:A:128:LEU:O	1:A:131:LEU:HG	2.15	0.46
1:A:1714:LEU:HD11	1:A:1761:LEU:HD22	1.97	0.46
1:A:2365:ASN:HD22	1:A:2399:GLU:CD	2.23	0.46
1:A:2854:PHE:CE2	1:A:2858:ILE:HD11	2.49	0.46
1:A:3981:TYR:HA	1:A:3984:MET:HE2	1.97	0.46
2:B:345:LEU:HA	2:B:400:TYR:HA	1.97	0.46
2:B:468:LYS:O	2:B:517:ARG:NH1	2.44	0.46
3:C:250:ARG:HG2	3:C:260:ARG:HA	1.97	0.46
3:C:389:MET:HE2	3:C:389:MET:HA	1.97	0.46
3:C:598:PHE:CZ	3:C:616:LEU:HB3	2.50	0.46
4:F:54:GLY:N	4:F:57:ARG:HE	2.12	0.46
6:D:24:DA:H1'	6:D:25:DA:H5'	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:639:ALA:HB1	1:A:642:PHE:HB3	1.96	0.46
1:A:1761:LEU:HD23	1:A:1764:GLU:OE2	2.15	0.46
1:A:2133:LEU:O	1:A:2143:ARG:NH2	2.49	0.46
1:A:2891:ARG:HG3	1:A:3894:PRO:HB3	1.97	0.46
1:A:3692:VAL:HA	1:A:3696:ARG:HH21	1.80	0.46
1:A:3842:TRP:HA	1:A:3845:LYS:HG2	1.98	0.46
1:A:3988:LEU:HD23	1:A:4100:GLU:HB2	1.97	0.46
2:B:203:MET:HE2	2:B:237:SER:HB2	1.97	0.46
2:B:206:LYS:HB3	2:B:212:ASP:OD2	2.15	0.46
3:C:261:ILE:HG22	3:C:366:ALA:HA	1.96	0.46
1:A:36:ARG:HE	1:A:40:GLN:HG2	1.80	0.46
1:A:527:TYR:HB2	1:A:629:PHE:CE1	2.51	0.46
1:A:1856:THR:OG1	1:A:1857:LYS:N	2.48	0.46
1:A:2782:ASP:O	1:A:2785:ILE:HG23	2.15	0.46
4:F:111:LYS:N	4:F:130:PHE:O	2.43	0.46
1:A:447:PRO:HB3	1:A:526:ASP:HB3	1.97	0.46
1:A:762:TYR:HD2	1:A:765:LEU:HG	1.81	0.46
1:A:786:GLN:N	1:A:787:PRO:HD2	2.30	0.46
1:A:1339:VAL:HA	1:A:1342:MET:HG3	1.96	0.46
1:A:1400:VAL:HG23	1:A:1457:GLN:NE2	2.30	0.46
1:A:2265:PRO:HB3	1:A:2309:PHE:HA	1.96	0.46
1:A:2320:ALA:HB2	1:A:2363:CYS:HA	1.98	0.46
1:A:2372:PRO:HB2	1:A:2404:ARG:NH1	2.31	0.46
1:A:2413:PHE:CB	2:B:148:TRP:HH2	2.28	0.46
1:A:2978:LYS:O	1:A:2981:TRP:NE1	2.48	0.46
1:A:3236:PHE:CD2	1:A:3262:LEU:HD11	2.49	0.46
1:A:3266:SER:OG	1:A:3273:LEU:HA	2.16	0.46
1:A:3646:LYS:HB3	1:A:3651:LEU:HD23	1.98	0.46
2:B:352:PRO:HD2	3:C:464:ALA:H	1.81	0.46
3:C:249:CYS:SG	3:C:250:ARG:N	2.88	0.46
3:C:368:ARG:HG3	3:C:369:ASP:H	1.79	0.46
1:A:989:MET:O	1:A:993:HIS:ND1	2.49	0.46
1:A:1122:GLY:O	1:A:1126:GLN:HG2	2.16	0.46
1:A:1161:ALA:O	1:A:1163:LEU:HD22	2.16	0.46
1:A:1640:GLU:HA	1:A:1643:MET:HE2	1.97	0.46
1:A:3029:LYS:HB3	1:A:3033:GLU:HG3	1.98	0.46
1:A:3256:MET:HE3	1:A:3287:ARG:NH1	2.31	0.46
1:A:3460:GLU:O	1:A:3464:LYS:HG2	2.16	0.46
1:A:3666:LEU:HD23	1:A:3669:LYS:HD3	1.98	0.46
1:A:3736:LYS:O	1:A:3751:LEU:HD12	2.15	0.46
3:C:89:ASP:O	3:C:92:GLU:HG2	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:115:MET:HA	3:C:130:ARG:HH12	1.80	0.46
6:D:20:DT:C5	7:E:35:DT:H72	2.51	0.46
1:A:876:SER:O	1:A:880:MET:HE3	2.16	0.46
1:A:1015:ASP:OD1	1:A:1016:GLY:N	2.49	0.46
1:A:2234:ASN:HA	1:A:2237:ILE:HG12	1.97	0.46
1:A:2386:LEU:HB2	1:A:2387:PRO:HD3	1.98	0.46
1:A:2533:SER:HA	1:A:2538:ARG:HH21	1.81	0.46
1:A:2554:PHE:O	1:A:2557:LEU:HG	2.16	0.46
1:A:2803:ILE:HA	1:A:2806:LYS:HD3	1.97	0.46
1:A:3384:HIS:O	1:A:3387:GLU:HG2	2.16	0.46
2:B:362:LEU:HD23	2:B:363:ARG:NH1	2.31	0.46
2:B:387:ILE:HG13	2:B:388:LYS:HG3	1.97	0.46
3:C:265:LYS:NZ	3:C:360:GLN:HG3	2.30	0.46
1:A:1952:ILE:HD11	1:A:1956:PHE:HD2	1.80	0.46
1:A:2364:LEU:CD1	1:A:2400:VAL:HG11	2.45	0.46
1:A:2439:ILE:HA	1:A:2442:MET:HG3	1.98	0.46
1:A:3356:ALA:HB1	1:A:3360:LEU:HB2	1.97	0.46
1:A:3413:TYR:HB2	1:A:3453:ALA:HB2	1.98	0.46
1:A:4046:TYR:CZ	1:A:4066:LEU:HD11	2.51	0.46
2:B:452:ILE:HG12	3:C:375:VAL:HG12	1.97	0.46
3:C:512:ILE:HA	3:C:515:MET:HE2	1.97	0.46
1:A:1428:ILE:H	1:A:1428:ILE:HD12	1.81	0.46
1:A:1569:THR:HA	1:A:1572:LEU:HD12	1.97	0.46
1:A:1649:LEU:HA	1:A:1652:ILE:HG22	1.98	0.46
1:A:2122:LEU:HD21	1:A:2163:HIS:CD2	2.51	0.46
1:A:2422:GLN:HB2	1:A:2425:ARG:HH21	1.81	0.46
1:A:2776:ARG:NH2	1:A:2782:ASP:OD2	2.49	0.46
1:A:3133:GLN:O	1:A:3137:GLU:HG3	2.16	0.46
1:A:3179:TRP:CE3	1:A:3242:MET:HE1	2.51	0.46
1:A:3294:SER:HA	1:A:3297:VAL:HG22	1.97	0.46
1:A:3881:ASP:O	1:A:3885:ARG:HG3	2.16	0.46
1:A:4089:ILE:H	1:A:4089:ILE:HD12	1.81	0.46
2:B:36:ASP:HA	2:B:163:HIS:O	2.16	0.46
2:B:38:LEU:HD12	2:B:167:MET:CE	2.46	0.46
1:A:656:GLN:HG3	1:A:666:PHE:CZ	2.51	0.46
1:A:931:CYS:HA	1:A:934:LEU:HG	1.98	0.46
1:A:1756:PRO:O	1:A:1760:GLU:HG2	2.16	0.46
1:A:1762:MET:HA	1:A:1765:VAL:HG22	1.98	0.46
1:A:2410:GLU:OE2	1:A:2412:TYR:N	2.49	0.46
1:A:2817:LEU:HD12	1:A:2865:HIS:CE1	2.51	0.46
1:A:3012:GLU:OE2	1:A:3051:LEU:HD11	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3493:TRP:CZ3	1:A:3525:TYR:HB2	2.50	0.46
2:B:338:LYS:NZ	2:B:405:ASN:O	2.48	0.46
2:B:447:PRO:HD3	3:C:243:HIS:CE1	2.50	0.46
3:C:53:GLU:HG2	3:C:85:LEU:HD22	1.98	0.46
3:C:356:PHE:O	3:C:357:MET:HE2	2.16	0.46
4:F:41:LEU:H	4:F:68:HIS:HB3	1.81	0.46
1:A:525:LYS:O	1:A:528:VAL:HG22	2.16	0.46
1:A:1758:LEU:HA	1:A:1761:LEU:HD12	1.97	0.46
1:A:1976:LEU:HB3	1:A:2145:PHE:CE2	2.51	0.46
1:A:2128:PHE:O	1:A:2132:LYS:N	2.28	0.46
1:A:3515:GLN:O	1:A:3518:VAL:HG12	2.16	0.46
2:B:493:LEU:HD22	3:C:323:PHE:HD2	1.81	0.46
4:F:114:TRP:HB2	4:F:130:PHE:CG	2.50	0.46
7:E:32:DT:H2"	7:E:33:DA:N7	2.31	0.46
1:A:435:LEU:HA	1:A:438:LEU:HD12	1.97	0.45
1:A:903:PRO:HB3	1:A:2815:GLY:C	2.41	0.45
1:A:922:SER:C	1:A:924:ARG:H	2.23	0.45
1:A:996:THR:HB	1:A:1036:PHE:CE1	2.51	0.45
1:A:1487:VAL:HB	1:A:1559:PHE:CE1	2.51	0.45
1:A:2300:PHE:HA	1:A:2303:LEU:HD12	1.97	0.45
1:A:2371:PHE:HD2	1:A:2374:LEU:HG	1.81	0.45
1:A:2470:ARG:HA	1:A:2473:MET:HG2	1.98	0.45
1:A:3291:GLN:OE1	1:A:3343:SER:OG	2.32	0.45
1:A:3567:VAL:O	1:A:3571:PHE:CB	2.64	0.45
3:C:62:ASP:OD1	3:C:62:ASP:N	2.45	0.45
7:E:27:DT:H2"	7:E:28:DA:H5'	1.99	0.45
1:A:196:LEU:HB3	1:A:200:PHE:CZ	2.51	0.45
1:A:497:LEU:HD23	1:A:497:LEU:H	1.80	0.45
1:A:1308:ALA:H	1:A:1319:GLY:N	2.15	0.45
1:A:1369:MET:HE2	1:A:1418:HIS:ND1	2.31	0.45
1:A:1696:LEU:HG	1:A:1749:ALA:HB1	1.97	0.45
1:A:3164:TRP:HA	1:A:3167:ARG:HG2	1.97	0.45
2:B:350:PHE:HA	2:B:396:ALA:HA	1.97	0.45
2:B:452:ILE:HG23	3:C:378:SER:HB3	1.97	0.45
6:D:21:DA:H1'	7:E:36:DA:C4	2.51	0.45
1:A:194:GLU:HG2	1:A:195:ASN:N	2.31	0.45
1:A:283:SER:C	1:A:285:CYS:H	2.25	0.45
1:A:895:ALA:HA	1:A:903:PRO:O	2.15	0.45
1:A:913:ARG:O	1:A:917:LEU:HG	2.15	0.45
1:A:1135:CYS:O	1:A:1138:ILE:N	2.49	0.45
1:A:1157:PHE:HZ	1:A:1167:ASP:O	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1364:CYS:HA	1:A:1368:LEU:HB3	1.98	0.45
1:A:1653:LEU:HG	1:A:1698:PHE:HD2	1.82	0.45
1:A:1664:SER:HA	1:A:1668:PHE:CD2	2.51	0.45
1:A:2526:SER:O	1:A:2538:ARG:NH2	2.48	0.45
1:A:3493:TRP:HB2	1:A:3524:ASN:ND2	2.31	0.45
2:B:41:LEU:HD12	2:B:88:TYR:HD1	1.81	0.45
2:B:480:ASN:HB2	3:C:428:GLU:OE2	2.16	0.45
1:A:71:LYS:HG2	1:A:78:PHE:CG	2.51	0.45
1:A:111:CYS:O	1:A:115:TYR:HD1	1.98	0.45
1:A:236:LYS:N	1:A:281:GLN:OE1	2.36	0.45
1:A:238:MET:SD	1:A:243:GLN:NE2	2.89	0.45
1:A:1493:PRO:HB3	1:A:1500:LEU:HD22	1.99	0.45
1:A:1579:VAL:O	1:A:1583:MET:HG3	2.16	0.45
1:A:2218:PHE:HA	1:A:2221:LYS:NZ	2.32	0.45
1:A:3961:PHE:CE2	1:A:3963:LEU:HB2	2.52	0.45
2:B:515:ASN:OD1	2:B:516:LYS:N	2.49	0.45
3:C:147:LEU:HA	3:C:150:ILE:HG12	1.98	0.45
4:F:47:HIS:HB2	4:F:73:CYS:O	2.16	0.45
1:A:61:ARG:HH22	1:A:102:PRO:HB2	1.81	0.45
1:A:152:LEU:HB3	1:A:156:PHE:HE2	1.81	0.45
1:A:654:ILE:HD11	1:A:707:PHE:HE1	1.82	0.45
1:A:801:LYS:HE3	1:A:3119:VAL:HG12	1.98	0.45
1:A:878:GLU:HA	1:A:881:LYS:HE2	1.97	0.45
1:A:1538:LEU:HD11	1:A:1555:HIS:CG	2.52	0.45
1:A:1803:GLU:O	1:A:1806:ARG:NH1	2.49	0.45
1:A:2273:GLY:O	1:A:2276:LEU:HG	2.17	0.45
1:A:2330:VAL:O	1:A:2332:GLU:N	2.46	0.45
1:A:2382:VAL:HB	1:A:2397:CYS:SG	2.56	0.45
1:A:2888:VAL:HB	1:A:3894:PRO:HG2	1.98	0.45
1:A:3178:ILE:H	1:A:3178:ILE:HD12	1.81	0.45
1:A:3411:ASP:HA	1:A:3414:MET:HG2	1.99	0.45
1:A:3549:HIS:HA	1:A:3552:LYS:HD3	1.98	0.45
1:A:3749:PRO:O	1:A:3805:TRP:N	2.50	0.45
1:A:3813:LYS:N	1:A:3925:LEU:HB3	2.32	0.45
2:B:444:ARG:HD3	3:C:265:LYS:O	2.16	0.45
2:B:458:GLN:HE22	2:B:527:GLU:HB2	1.81	0.45
3:C:138:LEU:HD22	3:C:204:GLY:HA3	1.98	0.45
3:C:225:TYR:CD2	3:C:236:VAL:HG12	2.52	0.45
3:C:336:GLU:O	3:C:399:LYS:HD3	2.17	0.45
1:A:78:PHE:O	1:A:81:CYS:HB2	2.17	0.45
1:A:124:LYS:HA	1:A:169:THR:HG21	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:576:VAL:HA	1:A:579:LEU:HG	1.98	0.45
1:A:863:GLY:H	1:A:866:ILE:HD12	1.80	0.45
1:A:886:TRP:HE1	1:A:912:PRO:HG3	1.81	0.45
1:A:1135:CYS:SG	1:A:1136:ARG:N	2.90	0.45
1:A:1202:ARG:HB2	1:A:1207:TRP:HB2	1.99	0.45
1:A:2257:PHE:HA	1:A:2260:PHE:HE1	1.80	0.45
1:A:3107:ILE:HD11	1:A:3139:GLN:NE2	2.31	0.45
1:A:3864:ARG:O	1:A:3868:VAL:HG23	2.17	0.45
6:D:33:DA:H2"	6:D:34:DC:C5	2.52	0.45
1:A:903:PRO:HB2	1:A:905:ILE:HD11	1.97	0.45
1:A:1313:PHE:CZ	1:A:1321:ARG:HD2	2.52	0.45
1:A:1672:PHE:O	1:A:1676:ILE:HG12	2.17	0.45
1:A:2364:LEU:O	1:A:2368:THR:HG22	2.17	0.45
1:A:2422:GLN:HA	1:A:2425:ARG:NE	2.32	0.45
1:A:3240:MET:HE3	1:A:3262:LEU:CD2	2.44	0.45
1:A:4080:VAL:HG13	1:A:4116:ILE:HG13	1.98	0.45
3:C:28:GLU:OE1	3:C:36:LYS:NZ	2.49	0.45
1:A:289:ASN:OD1	1:A:292:SER:HB3	2.17	0.45
1:A:776:TRP:O	1:A:780:ILE:N	2.45	0.45
1:A:890:LYS:HB3	1:A:906:PHE:CG	2.51	0.45
1:A:1416:GLU:HG3	1:A:1420:ARG:HH22	1.81	0.45
1:A:1583:MET:CE	1:A:1628:LYS:HB2	2.44	0.45
1:A:2122:LEU:HD13	1:A:2127:LYS:HD3	1.98	0.45
1:A:2265:PRO:HA	1:A:2309:PHE:CG	2.52	0.45
1:A:2880:CYS:SG	1:A:2889:GLY:HA3	2.57	0.45
1:A:2884:LEU:HD13	1:A:3117:ILE:HA	1.97	0.45
1:A:3113:ASN:HB3	1:A:3128:LYS:NZ	2.32	0.45
1:A:3372:LYS:HA	1:A:3375:ALA:HB3	1.98	0.45
2:B:390:LEU:HD23	2:B:390:LEU:H	1.82	0.45
3:C:43:GLN:HA	3:C:46:VAL:HG22	1.98	0.45
1:A:493:LYS:O	1:A:625:ASN:ND2	2.50	0.45
1:A:913:ARG:HD2	1:A:916:GLU:OE2	2.17	0.45
3:C:88:PHE:HA	3:C:91:LEU:HG	1.99	0.45
3:C:600:VAL:HA	3:C:603:LYS:HG2	1.99	0.45
1:A:92:PHE:O	1:A:133:LYS:NZ	2.50	0.45
1:A:885:ALA:HB3	1:A:888:ARG:HA	1.99	0.45
1:A:2193:ILE:HA	1:A:2196:TRP:NE1	2.32	0.45
1:A:3419:PHE:O	1:A:3422:GLN:HG2	2.18	0.45
1:A:3622:ALA:O	1:A:3625:LEU:HD22	2.17	0.45
1:A:3638:LYS:O	1:A:3642:LYS:N	2.44	0.45
1:A:3976:GLU:CD	1:A:3977:THR:HG23	2.42	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4104:VAL:HA	1:A:4107:LEU:HD12	1.98	0.45
2:B:282:LYS:HD2	2:B:283:PRO:HD2	1.99	0.45
2:B:526:LYS:C	2:B:528:LEU:H	2.25	0.45
3:C:306:LEU:HG	3:C:308:GLU:H	1.81	0.45
1:A:289:ASN:HD21	1:A:292:SER:HB3	1.81	0.44
1:A:450:SER:OG	1:A:453:MET:HG3	2.17	0.44
1:A:969:LEU:HB3	1:A:984:TYR:OH	2.17	0.44
1:A:1070:PRO:HD2	1:A:3741:ARG:HD2	1.99	0.44
1:A:3335:ARG:HH22	1:A:3418:ASP:HB3	1.82	0.44
2:B:44:ALA:HB3	2:B:89:GLY:O	2.17	0.44
2:B:193:LEU:HB2	2:B:198:ILE:CG2	2.48	0.44
1:A:851:ILE:O	1:A:855:VAL:HG23	2.17	0.44
1:A:1021:VAL:O	1:A:1026:ARG:NH1	2.50	0.44
1:A:1216:GLY:HA2	1:A:1219:PHE:HB3	1.97	0.44
1:A:1492:ALA:HB2	1:A:1555:HIS:HE1	1.81	0.44
1:A:1714:LEU:HA	1:A:1717:LEU:HD12	1.99	0.44
1:A:1776:GLU:HA	1:A:1779:GLN:HG2	1.99	0.44
1:A:2214:ARG:HH22	1:A:2221:LYS:HZ3	1.65	0.44
1:A:3479:THR:C	1:A:3480:LEU:HD22	2.41	0.44
1:A:3530:VAL:HA	1:A:3533:PHE:HB3	2.00	0.44
1:A:3819:THR:HG21	1:A:3886:ALA:HB2	2.00	0.44
2:B:54:GLU:HB3	2:B:56:GLU:HG2	1.99	0.44
3:C:413:LYS:HG3	3:C:415:ASN:N	2.32	0.44
1:A:264:ARG:HD3	1:A:305:ASN:HB2	2.00	0.44
1:A:493:LYS:HA	1:A:493:LYS:HD3	1.78	0.44
1:A:535:LEU:HD13	1:A:637:LYS:HB2	1.99	0.44
1:A:1248:PHE:HB3	1:A:1319:GLY:HA2	1.98	0.44
1:A:1496:GLU:HG3	1:A:1498:GLN:HB2	1.99	0.44
1:A:2493:ASN:OD1	1:A:2494:ASP:N	2.51	0.44
1:A:3526:PRO:C	1:A:3528:ALA:H	2.24	0.44
2:B:464:ALA:O	2:B:468:LYS:HG3	2.17	0.44
4:F:114:TRP:HE1	4:F:125:VAL:C	2.26	0.44
1:A:850:GLU:HA	1:A:853:ILE:HG12	1.99	0.44
1:A:2430:GLU:N	1:A:2430:GLU:OE1	2.48	0.44
1:A:3296:GLN:O	1:A:3300:VAL:HG23	2.18	0.44
1:A:3350:GLU:OE1	1:A:3350:GLU:N	2.43	0.44
1:A:3730:ALA:HA	1:A:3734:ARG:HA	1.98	0.44
2:B:364:PRO:HG3	3:C:357:MET:HA	1.99	0.44
4:F:53:ILE:N	4:F:86:ASP:OD1	2.51	0.44
1:A:432:THR:O	1:A:435:LEU:HG	2.17	0.44
1:A:1661:PHE:HA	1:A:1665:HIS:HE1	1.81	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1777:LEU:O	1:A:1780:SER:OG	2.29	0.44
1:A:1786:ALA:HB1	1:A:1831:CYS:HA	1.99	0.44
1:A:1811:ARG:HG3	1:A:1816:ARG:HH21	1.82	0.44
1:A:2220:MET:SD	1:A:2252:PRO:HG3	2.58	0.44
1:A:2559:THR:HG22	1:A:2808:LEU:HD11	2.00	0.44
1:A:2563:LEU:HD13	1:A:2795:GLN:CB	2.47	0.44
1:A:3839:TYR:OH	1:A:4120:THR:O	2.30	0.44
3:C:44:ARG:NH2	3:C:234:LEU:HD13	2.32	0.44
3:C:86:PRO:HA	3:C:90:LEU:HD21	1.99	0.44
3:C:363:LYS:NZ	3:C:418:CYS:SG	2.75	0.44
3:C:665:LYS:HD2	3:C:665:LYS:HA	1.85	0.44
4:F:45:ARG:H	4:F:81:THR:HB	1.83	0.44
6:D:27:DC:H1'	6:D:28:DT:C2	2.53	0.44
6:D:30:DA:C4	6:D:31:DA:C6	3.06	0.44
6:D:39:DA:C2	7:E:19:DA:C5	3.05	0.44
1:A:1017:ILE:HA	1:A:1026:ARG:HG2	1.98	0.44
1:A:1097:GLU:O	1:A:1151:ARG:HD3	2.17	0.44
1:A:1185:HIS:HA	1:A:1188:ILE:HG12	1.99	0.44
1:A:1267:TYR:HA	1:A:1270:PHE:HB2	1.99	0.44
1:A:1306:ILE:O	1:A:1320:ASN:HB2	2.17	0.44
1:A:1375:THR:HA	1:A:1379:PRO:HA	1.99	0.44
1:A:1945:TYR:HE2	1:A:2097:LEU:HD11	1.82	0.44
1:A:3478:GLU:HG2	1:A:3483:MET:HE3	2.00	0.44
1:A:3660:ASN:O	1:A:3664:ASN:N	2.45	0.44
1:A:3856:MET:HG2	1:A:4077:TYR:OH	2.17	0.44
2:B:376:ILE:HG12	3:C:540:ILE:HG12	2.00	0.44
1:A:63:PHE:O	1:A:67:VAL:HG23	2.18	0.44
1:A:208:MET:SD	1:A:253:LEU:HG	2.58	0.44
1:A:210:SER:HB2	3:C:548:VAL:HG23	2.00	0.44
1:A:865:GLN:HA	1:A:868:LYS:HG2	2.00	0.44
1:A:1413:ASP:O	1:A:1417:THR:HG23	2.18	0.44
1:A:1424:THR:HG1	1:A:1427:SER:H	1.65	0.44
1:A:2326:ILE:C	1:A:2328:ARG:H	2.25	0.44
1:A:2899:ARG:HD2	1:A:2900:LEU:N	2.33	0.44
1:A:3079:GLU:HG2	1:A:3080:LEU:N	2.33	0.44
1:A:3320:ILE:HG21	1:A:3394:GLU:OE1	2.18	0.44
2:B:50:GLU:HG3	2:B:52:GLN:H	1.81	0.44
2:B:131:PHE:HA	2:B:134:MET:HG3	1.99	0.44
1:A:101:ALA:HB3	1:A:102:PRO:CD	2.48	0.44
1:A:364:ARG:HA	1:A:415:GLN:HE22	1.83	0.44
1:A:535:LEU:HD23	1:A:535:LEU:HA	1.80	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:659:ARG:HH22	1:A:1389:VAL:HA	1.83	0.44
1:A:1326:GLU:O	1:A:1330:TYR:N	2.49	0.44
1:A:2490:GLU:O	1:A:2495:SER:OG	2.31	0.44
1:A:3059:GLN:HE22	1:A:3062:LEU:HD23	1.82	0.44
1:A:3555:VAL:HA	1:A:3558:ILE:HG22	1.99	0.44
1:A:3726:VAL:HG23	1:A:3738:ILE:HG13	2.00	0.44
1:A:3809:THR:HG21	1:A:3938:ILE:HD13	2.00	0.44
2:B:174:ASN:CB	2:B:216:PHE:HB3	2.48	0.44
2:B:190:ALA:HA	2:B:193:LEU:HG	1.99	0.44
2:B:317:LYS:HD3	2:B:330:GLU:OE1	2.18	0.44
2:B:335:GLU:OE2	2:B:405:ASN:ND2	2.50	0.44
2:B:422:ASP:C	2:B:424:LYS:N	2.75	0.44
2:B:478:PHE:C	3:C:427:MET:HE1	2.43	0.44
3:C:67:PRO:HD3	3:C:79:VAL:HG11	2.00	0.44
7:E:19:DA:H2'	7:E:20:DT:O4'	2.17	0.44
1:A:484:HIS:CE1	1:A:574:LYS:HG3	2.53	0.44
1:A:793:LEU:HD21	1:A:867:ASN:HA	1.99	0.44
1:A:989:MET:HG3	1:A:993:HIS:HE1	1.80	0.44
1:A:1712:ARG:HE	1:A:1712:ARG:HB2	1.56	0.44
1:A:1713:VAL:O	1:A:1716:GLN:HG3	2.18	0.44
1:A:1718:ILE:HA	1:A:1722:PHE:CD1	2.53	0.44
1:A:2872:ASP:OD1	1:A:2872:ASP:N	2.51	0.44
1:A:3631:LYS:O	1:A:3635:THR:HG22	2.17	0.44
2:B:353:LEU:H	2:B:394:VAL:HA	1.82	0.44
1:A:411:PRO:HB3	1:A:456:VAL:HG12	2.00	0.43
1:A:1073:PHE:O	1:A:1076:LEU:HG	2.17	0.43
1:A:2095:ALA:HB3	1:A:2096:PRO:HD3	2.00	0.43
1:A:3413:TYR:CD1	1:A:3449:LYS:HB2	2.53	0.43
1:A:3735:PRO:HB3	1:A:3751:LEU:HD11	1.98	0.43
1:A:3847:SER:HA	1:A:3858:MET:HE1	2.00	0.43
1:A:3986:HIS:O	1:A:3989:ARG:NH1	2.51	0.43
2:B:97:VAL:HG11	2:B:149:VAL:HG12	2.00	0.43
2:B:358:LYS:HA	3:C:353:ARG:HH22	1.82	0.43
2:B:480:ASN:HB3	2:B:483:LEU:HB2	1.99	0.43
3:C:115:MET:SD	3:C:130:ARG:NH2	2.91	0.43
3:C:130:ARG:HG2	3:C:159:ILE:HG23	2.00	0.43
3:C:599:ARG:HH11	3:C:641:ALA:HB3	1.83	0.43
4:F:119:LEU:O	4:F:122:ARG:HD2	2.18	0.43
1:A:478:CYS:O	1:A:482:VAL:HG13	2.19	0.43
1:A:1941:HIS:HB2	1:A:1974:ASN:O	2.19	0.43
1:A:2099:ALA:HA	1:A:2102:LYS:HG2	2.00	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2574:ASN:O	1:A:2787:HIS:ND1	2.52	0.43
1:A:2938:VAL:O	1:A:2942:ILE:HG12	2.18	0.43
1:A:3321:LEU:O	1:A:3324:ARG:HG2	2.18	0.43
1:A:3765:GLU:OE2	1:A:3791:TYR:N	2.34	0.43
1:A:3815:LEU:HA	1:A:3818:ASN:HD21	1.83	0.43
2:B:34:GLY:HA3	2:B:162:SER:HB3	2.01	0.43
2:B:85:VAL:HB	2:B:106:GLN:HB2	1.99	0.43
2:B:246:VAL:O	2:B:249:LYS:NZ	2.49	0.43
2:B:484:GLN:HA	2:B:487:PHE:HD2	1.82	0.43
3:C:250:ARG:HE	3:C:260:ARG:HG2	1.83	0.43
1:A:159:GLU:O	1:A:165:LYS:HG3	2.18	0.43
1:A:172:GLU:O	1:A:175:TYR:HB2	2.18	0.43
1:A:583:LEU:HD22	1:A:612:LEU:HB3	2.00	0.43
1:A:889:GLU:HG3	1:A:891:ARG:HG2	1.99	0.43
1:A:943:GLY:HA3	1:A:2577:PHE:CE2	2.54	0.43
1:A:1344:PHE:CE2	1:A:1348:LEU:HD11	2.53	0.43
1:A:1363:LEU:HB3	1:A:1367:HIS:CE1	2.47	0.43
1:A:1400:VAL:O	1:A:1404:LYS:HG2	2.19	0.43
1:A:1740:VAL:HA	1:A:1743:MET:HE3	2.01	0.43
1:A:1780:SER:HA	1:A:1783:ARG:HG2	2.00	0.43
1:A:1857:LYS:O	1:A:1858:LEU:HD22	2.19	0.43
1:A:2098:THR:HG22	1:A:2153:THR:HG23	2.01	0.43
1:A:2418:LYS:NZ	2:B:152:ASN:HA	2.33	0.43
1:A:2809:PHE:HA	1:A:2812:LEU:HG	2.01	0.43
1:A:2972:TYR:HB2	1:A:2998:SER:HB2	2.00	0.43
1:A:2986:PRO:HG3	1:A:2994:TRP:CH2	2.53	0.43
1:A:3113:ASN:HB3	1:A:3128:LYS:HZ1	1.83	0.43
1:A:3681:LYS:HE3	1:A:3723:ASP:O	2.17	0.43
1:A:3806:LEU:HG	1:A:3938:ILE:HG21	1.99	0.43
1:A:3833:ARG:CZ	1:A:3877:LYS:HZ1	2.30	0.43
1:A:4058:VAL:HG21	1:A:4095:GLU:HB3	2.00	0.43
3:C:135:PHE:HD1	3:C:227:PHE:HE1	1.67	0.43
1:A:133:LYS:O	1:A:137:THR:HG23	2.18	0.43
1:A:415:GLN:NE2	1:A:416:SER:OG	2.51	0.43
1:A:531:PHE:HA	1:A:534:LEU:HB2	2.00	0.43
1:A:643:GLU:HA	1:A:646:VAL:HG13	1.98	0.43
1:A:898:PHE:H	1:A:902:LYS:HE3	1.83	0.43
1:A:1186:LYS:O	1:A:1190:LEU:HB2	2.19	0.43
1:A:2424:MET:SD	1:A:2457:PRO:HB2	2.58	0.43
1:A:2519:LEU:HD12	1:A:2522:ARG:HE	1.84	0.43
1:A:2933:ILE:HG23	1:A:3121:LEU:HD11	2.01	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3410:ILE:HG22	1:A:3453:ALA:HA	1.99	0.43
1:A:3531:TYR:HB2	1:A:3532:PRO:HD3	1.99	0.43
1:A:3737:ARG:HD2	1:A:3805:TRP:CG	2.53	0.43
2:B:318:ARG:HH21	2:B:331:LYS:HD2	1.84	0.43
2:B:442:ASP:HB3	3:C:267:ILE:HG23	2.00	0.43
2:B:496:ASP:OD1	2:B:497:LEU:HD22	2.18	0.43
1:A:624:ILE:O	1:A:627:VAL:HG22	2.18	0.43
1:A:860:GLY:HA2	1:A:3132:VAL:HG13	2.00	0.43
1:A:885:ALA:HB3	1:A:888:ARG:HE	1.82	0.43
1:A:930:ALA:O	1:A:933:LEU:HG	2.18	0.43
1:A:1050:GLU:OE2	1:A:1057:LYS:NZ	2.49	0.43
1:A:1696:LEU:O	1:A:1700:THR:HG23	2.18	0.43
1:A:1813:SER:HB3	1:A:1936:ARG:HH21	1.82	0.43
1:A:3727:THR:O	1:A:3736:LYS:HA	2.19	0.43
1:A:4020:MET:HE2	1:A:4027:TRP:HD1	1.84	0.43
2:B:41:LEU:HD12	2:B:88:TYR:CD1	2.53	0.43
2:B:451:LYS:HE3	2:B:451:LYS:HB2	1.81	0.43
2:B:479:GLU:HA	3:C:427:MET:SD	2.58	0.43
3:C:74:TYR:CD1	3:C:109:ASP:HB3	2.54	0.43
3:C:394:ARG:HA	3:C:405:VAL:HG12	1.99	0.43
3:C:512:ILE:O	3:C:516:LEU:HG	2.18	0.43
3:C:594:PRO:HB2	3:C:619:HIS:CE1	2.53	0.43
4:F:73:CYS:SG	4:F:80:VAL:HG22	2.59	0.43
6:D:20:DT:H6	6:D:20:DT:H2'	1.71	0.43
6:D:35:DT:C2	7:E:22:DG:N2	2.86	0.43
1:A:374:LYS:HD3	1:A:381:VAL:HG21	2.01	0.43
1:A:870:LEU:HD21	1:A:3129:LEU:HD11	2.00	0.43
1:A:1423:ILE:HD11	1:A:1428:ILE:HD11	2.00	0.43
1:A:1657:SER:O	1:A:1660:SER:OG	2.34	0.43
1:A:2126:MET:CE	1:A:2130:HIS:HE1	2.30	0.43
1:A:2239:LYS:NZ	1:A:2282:ALA:HB3	2.32	0.43
1:A:2305:ASN:O	1:A:2308:SER:OG	2.23	0.43
1:A:2382:VAL:O	1:A:2386:LEU:HG	2.18	0.43
1:A:2447:LYS:O	1:A:2451:LEU:HG	2.19	0.43
1:A:2515:PRO:HA	1:A:2518:GLN:HE21	1.84	0.43
1:A:3046:ARG:O	1:A:3050:LYS:HG2	2.19	0.43
1:A:3320:ILE:HG22	1:A:3324:ARG:HH21	1.83	0.43
1:A:3568:ILE:H	1:A:3568:ILE:HD12	1.84	0.43
1:A:3762:GLN:NE2	1:A:3763:ARG:HD2	2.34	0.43
1:A:4090:ARG:NH1	1:A:4110:GLN:HA	2.34	0.43
3:C:677:ILE:O	3:C:680:GLN:HG2	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:967:PRO:HA	1:A:970:LEU:HG	2.00	0.43
1:A:1322:THR:HG22	1:A:1324:PRO:HD2	2.01	0.43
1:A:1618:LEU:O	1:A:1622:ILE:HG12	2.19	0.43
1:A:2143:ARG:HH21	1:A:2171:LEU:HB3	1.83	0.43
1:A:2349:LEU:HB3	1:A:2360:PHE:CE1	2.53	0.43
1:A:2563:LEU:HD11	1:A:2792:THR:HA	2.00	0.43
1:A:3179:TRP:O	1:A:3183:ILE:HG12	2.18	0.43
2:B:240:GLU:HA	2:B:243:LEU:HD12	2.01	0.43
2:B:264:ASN:HD21	2:B:266:ASP:HB2	1.84	0.43
2:B:376:ILE:HG23	3:C:540:ILE:HG12	2.01	0.43
3:C:7:LYS:HB2	3:C:125:LYS:HG3	1.99	0.43
3:C:261:ILE:HA	3:C:366:ALA:HA	2.00	0.43
1:A:922:SER:OG	1:A:923:ASP:N	2.49	0.43
1:A:2403:CYS:SG	1:A:2404:ARG:N	2.92	0.43
1:A:3500:SER:HB3	1:A:3532:PRO:HB3	1.99	0.43
1:A:3663:THR:O	1:A:3667:LEU:N	2.41	0.43
1:A:3759:ARG:O	1:A:3763:ARG:HD3	2.18	0.43
1:A:3828:TYR:O	1:A:3834:ALA:HB1	2.18	0.43
1:A:3913:ILE:O	1:A:3917:ILE:HG12	2.19	0.43
2:B:182:LYS:HA	2:B:185:ARG:HG2	2.01	0.43
1:A:52:ALA:O	1:A:55:THR:OG1	2.35	0.43
1:A:293:LEU:HD12	1:A:294:PHE:N	2.34	0.43
1:A:452:LYS:HG3	1:A:453:MET:H	1.83	0.43
1:A:479:ILE:HG21	1:A:567:GLU:OE1	2.17	0.43
1:A:624:ILE:O	1:A:625:ASN:C	2.61	0.43
1:A:1471:GLN:HA	1:A:1477:HIS:NE2	2.34	0.43
1:A:1986:ARG:HB2	1:A:2183:HIS:C	2.43	0.43
1:A:2824:LYS:HB3	1:A:2824:LYS:HE2	1.76	0.43
1:A:3974:MET:HG2	1:A:3978:GLY:HA3	2.01	0.43
1:A:3980:MET:SD	1:A:3980:MET:N	2.90	0.43
2:B:187:ARG:HH11	2:B:187:ARG:HG3	1.84	0.43
3:C:209:LYS:HA	3:C:212:MET:HE2	2.00	0.43
3:C:596:GLU:HB3	3:C:599:ARG:HH21	1.84	0.43
1:A:351:ASN:OD1	1:A:352:VAL:N	2.51	0.43
1:A:1299:GLU:HG3	1:A:1304:HIS:CD2	2.54	0.43
1:A:1558:TYR:O	1:A:1562:LEU:HG	2.19	0.43
1:A:1592:MET:SD	1:A:1592:MET:N	2.92	0.43
1:A:1632:TRP:CD1	1:A:1645:VAL:HB	2.53	0.43
1:A:2950:LYS:HE3	1:A:2986:PRO:HB3	2.01	0.43
1:A:3266:SER:OG	1:A:3273:LEU:HD12	2.19	0.43
1:A:3737:ARG:NH1	1:A:3751:LEU:HD13	2.33	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:369:TYR:CE1	3:C:435:PHE:HB3	2.54	0.43
2:B:476:ASP:HA	3:C:427:MET:HE3	2.01	0.43
1:A:151:GLU:HG3	1:A:152:LEU:HD22	2.00	0.42
1:A:326:MET:HA	1:A:329:LYS:HE2	1.99	0.42
1:A:339:GLN:HA	1:A:342:MET:HE3	2.00	0.42
1:A:1248:PHE:CE1	1:A:1321:ARG:HD3	2.54	0.42
1:A:1298:LEU:HA	1:A:1367:HIS:CG	2.54	0.42
1:A:1339:VAL:O	1:A:1342:MET:HG3	2.19	0.42
1:A:1372:LEU:HA	1:A:1375:THR:HG22	2.00	0.42
1:A:1438:GLY:O	1:A:1445:ARG:NH2	2.51	0.42
1:A:1444:ASP:N	1:A:1444:ASP:OD1	2.51	0.42
1:A:1491:ILE:HD12	1:A:1558:TYR:HD2	1.84	0.42
1:A:1629:CYS:HB3	1:A:1633:TRP:HE1	1.84	0.42
1:A:2950:LYS:NZ	1:A:2983:ASP:O	2.47	0.42
1:A:3810:VAL:HG12	1:A:3932:MET:HE3	2.00	0.42
3:C:265:LYS:HD2	3:C:362:LEU:HD13	2.01	0.42
6:D:40:DT:C4	7:E:17:DT:O4	2.72	0.42
6:D:43:DT:C4	7:E:16:DA:C6	3.07	0.42
1:A:275:PHE:HD2	1:A:315:ALA:HB1	1.83	0.42
1:A:465:PHE:CE2	1:A:564:LEU:HD21	2.52	0.42
1:A:1098:GLN:O	1:A:1152:ARG:HB2	2.19	0.42
1:A:1157:PHE:HE2	1:A:1168:LEU:HD13	1.84	0.42
1:A:1571:LEU:HD23	1:A:1600:MET:HE3	2.00	0.42
1:A:1614:GLN:O	1:A:1618:LEU:HG	2.19	0.42
1:A:2295:GLN:OE1	1:A:2298:GLU:N	2.50	0.42
1:A:2440:TYR:O	1:A:2443:MET:HG3	2.19	0.42
1:A:2931:ARG:HG2	1:A:2936:TYR:CE1	2.54	0.42
1:A:3189:PHE:O	1:A:3193:ILE:HG12	2.19	0.42
1:A:4064:LEU:HD23	1:A:4068:HIS:CE1	2.54	0.42
3:C:205:LEU:O	3:C:209:LYS:HB2	2.19	0.42
4:F:50:ARG:HH21	4:F:55:ARG:HA	1.85	0.42
6:D:34:DC:C6	6:D:35:DT:C4	3.07	0.42
1:A:465:PHE:HA	1:A:468:LEU:HG	2.02	0.42
1:A:1175:HIS:HB3	1:A:1178:ARG:NH1	2.34	0.42
1:A:2093:CYS:C	1:A:2096:PRO:HD2	2.45	0.42
1:A:2563:LEU:HD13	1:A:2795:GLN:HB3	2.02	0.42
1:A:2804:ILE:HG22	1:A:2808:LEU:HD23	2.01	0.42
1:A:3175:PRO:HA	1:A:3249:GLN:HE22	1.84	0.42
1:A:3862:ALA:O	1:A:4119:ARG:NH2	2.38	0.42
2:B:48:MET:N	2:B:48:MET:SD	2.91	0.42
2:B:420:LEU:HA	2:B:426:GLN:HA	0.82	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:292:GLU:HG3	4:F:54:GLY:HA3	2.01	0.42
1:A:896:VAL:HG12	1:A:903:PRO:HG2	2.02	0.42
1:A:933:LEU:HD12	1:A:934:LEU:N	2.34	0.42
1:A:1149:LYS:N	1:A:1163:LEU:O	2.52	0.42
1:A:1565:GLU:OE1	1:A:1565:GLU:N	2.40	0.42
1:A:3067:LYS:HB2	1:A:3067:LYS:HE2	1.80	0.42
1:A:3442:TYR:N	1:A:3443:PRO:HD2	2.34	0.42
1:A:3581:PRO:HD3	1:A:3629:ARG:HH11	1.85	0.42
1:A:3696:ARG:NH1	1:A:3698:GLU:HA	2.34	0.42
1:A:3924:HIS:H	1:A:3927:ASN:HD22	1.67	0.42
2:B:361:TYR:C	2:B:362:LEU:HD12	2.44	0.42
3:C:33:GLN:NE2	3:C:231:LEU:HD22	2.34	0.42
1:A:656:GLN:HG3	1:A:666:PHE:HZ	1.84	0.42
1:A:901:MET:HA	1:A:2819:GLU:HG2	2.01	0.42
1:A:1264:LEU:HD11	1:A:1341:ILE:HB	2.02	0.42
1:A:1632:TRP:HB3	1:A:1645:VAL:HG11	2.01	0.42
1:A:2200:ALA:O	1:A:2245:TRP:NE1	2.48	0.42
1:A:2852:PRO:HB2	1:A:2853:PRO:HD3	2.01	0.42
1:A:3063:THR:HA	1:A:3066:ASP:OD2	2.19	0.42
1:A:3066:ASP:HA	1:A:3069:MET:HE1	2.01	0.42
1:A:3171:ALA:HA	1:A:3179:TRP:HE1	1.84	0.42
1:A:3755:GLY:HA2	1:A:3800:LEU:HA	2.00	0.42
1:A:3950:THR:HG22	1:A:3957:GLU:O	2.19	0.42
3:C:593:ASN:HB2	3:C:594:PRO:HD3	2.01	0.42
1:A:172:GLU:HG3	1:A:220:LEU:CA	2.50	0.42
1:A:1066:LEU:O	1:A:1074:LYS:HB3	2.19	0.42
1:A:1897:ASN:O	1:A:1902:GLY:N	2.41	0.42
1:A:1952:ILE:HD12	1:A:1956:PHE:HB3	2.01	0.42
1:A:2092:GLU:OE1	1:A:2092:GLU:N	2.53	0.42
1:A:3816:LEU:O	1:A:3820:MET:HG3	2.19	0.42
1:A:3953:LEU:HD22	1:A:4026:SER:HB3	2.01	0.42
1:A:4014:LYS:NZ	1:A:4032:ASN:O	2.52	0.42
2:B:124:GLY:O	2:B:128:GLN:HB2	2.20	0.42
6:D:43:DT:H3	7:E:15:DA:C4'	2.32	0.42
1:A:289:ASN:ND2	1:A:292:SER:HB3	2.34	0.42
1:A:1794:GLN:O	1:A:1798:LEU:HG	2.20	0.42
1:A:2316:TYR:CZ	1:A:2359:LYS:HG2	2.55	0.42
1:A:2320:ALA:CB	1:A:2363:CYS:HA	2.49	0.42
1:A:3006:ALA:HB3	1:A:3257:LYS:HD2	2.02	0.42
1:A:3959:MET:HE2	1:A:4124:TRP:CE3	2.54	0.42
1:A:3964:THR:HG22	1:A:4128:MET:C	2.44	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:95:ASN:OD1	2:B:95:ASN:N	2.53	0.42
2:B:301:ARG:HH22	2:B:313:PRO:HD3	1.85	0.42
2:B:401:THR:HG23	2:B:406:ILE:HB	2.02	0.42
3:C:434:MET:SD	3:C:435:PHE:N	2.93	0.42
3:C:635:SER:O	3:C:639:ILE:HG12	2.19	0.42
1:A:224:LEU:HD23	1:A:224:LEU:HA	1.89	0.42
1:A:269:SER:HB2	1:A:308:LEU:HD23	2.02	0.42
1:A:357:LYS:O	1:A:361:ILE:HG12	2.18	0.42
1:A:905:ILE:HG23	1:A:2811:SER:HB2	2.01	0.42
1:A:1154:PRO:HG2	1:A:1157:PHE:HD2	1.84	0.42
1:A:1164:CYS:SG	1:A:1165:LEU:N	2.92	0.42
1:A:1715:GLU:O	1:A:1719:VAL:HG13	2.20	0.42
1:A:2304:VAL:HA	1:A:2307:MET:HG3	2.02	0.42
1:A:2481:HIS:O	1:A:2485:ARG:HB3	2.20	0.42
1:A:2918:PRO:HA	1:A:2921:LEU:HB3	2.01	0.42
1:A:3154:GLN:HA	1:A:3157:LEU:HD12	2.02	0.42
1:A:3669:LYS:HE2	1:A:3669:LYS:HB3	1.77	0.42
1:A:3875:GLU:CB	1:A:3965:ARG:HD2	2.49	0.42
1:A:4042:GLN:OE1	1:A:4042:GLN:N	2.53	0.42
3:C:57:VAL:HA	3:C:79:VAL:HA	2.02	0.42
3:C:346:CYS:SG	3:C:390:VAL:HG23	2.59	0.42
3:C:510:GLN:HA	3:C:513:TRP:HD1	1.84	0.42
3:C:644:GLU:O	3:C:648:LYS:HG3	2.19	0.42
6:D:37:DT:H2'	6:D:38:DT:N1	2.33	0.42
1:A:89:LEU:HB3	1:A:133:LYS:HE2	2.02	0.42
1:A:386:VAL:HG12	1:A:431:TYR:HE2	1.83	0.42
1:A:414:LEU:HA	1:A:417:VAL:HG12	2.00	0.42
1:A:764:PRO:O	1:A:768:VAL:HG12	2.20	0.42
1:A:1326:GLU:HA	1:A:1329:ARG:HB2	2.02	0.42
1:A:1565:GLU:HG2	1:A:1566:THR:H	1.85	0.42
1:A:2394:LYS:O	1:A:2398:LEU:HG	2.20	0.42
1:A:3820:MET:HE1	1:A:3824:GLU:C	2.45	0.42
1:A:3843:LEU:HD13	1:A:3855:TYR:CE1	2.55	0.42
2:B:95:ASN:ND2	2:B:102:ILE:HB	2.34	0.42
3:C:66:ASN:OD1	3:C:66:ASN:N	2.53	0.42
4:F:93:ARG:HE	4:F:97:LEU:HG	1.85	0.42
1:A:565:TYR:O	1:A:569:VAL:HG23	2.20	0.42
1:A:1769:GLU:HB3	1:A:1772:HIS:CG	2.55	0.42
1:A:2126:MET:O	1:A:2130:HIS:ND1	2.49	0.42
1:A:2240:THR:O	1:A:2243:GLU:HG3	2.20	0.42
1:A:2891:ARG:O	1:A:2892:LEU:C	2.63	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3169:PRO:HD2	1:A:3179:TRP:CZ3	2.55	0.42
1:A:3409:VAL:HG22	1:A:3413:TYR:CE2	2.54	0.42
1:A:3574:ALA:HB1	1:A:3686:TRP:HB3	2.01	0.42
1:A:3971:MET:HE2	1:A:3980:MET:HE2	2.02	0.42
1:A:4055:ASN:HB2	1:A:4095:GLU:HA	2.02	0.42
3:C:16:VAL:HG12	3:C:59:PHE:O	2.20	0.42
1:A:323:VAL:HA	1:A:326:MET:CG	2.49	0.41
1:A:722:LYS:HD3	1:A:722:LYS:HA	1.78	0.41
1:A:907:LEU:HA	1:A:910:PHE:CE2	2.55	0.41
1:A:1477:HIS:O	1:A:1481:THR:OG1	2.24	0.41
1:A:1803:GLU:OE2	1:A:1804:MET:HE3	2.20	0.41
1:A:1945:TYR:CE2	1:A:1949:ILE:HD11	2.54	0.41
1:A:3537:SER:HA	1:A:3540:TYR:CG	2.55	0.41
1:A:3574:ALA:HB3	1:A:3687:MET:HE3	2.02	0.41
1:A:3959:MET:HG3	1:A:4124:TRP:CH2	2.55	0.41
1:A:4089:ILE:O	1:A:4093:GLU:N	2.53	0.41
1:A:4115:ASN:OD1	1:A:4119:ARG:NH2	2.53	0.41
2:B:89:GLY:HA2	2:B:140:ASP:O	2.20	0.41
3:C:209:LYS:O	3:C:213:ILE:HG23	2.20	0.41
1:A:136:GLN:O	1:A:140:SER:N	2.53	0.41
1:A:156:PHE:HA	1:A:159:GLU:OE1	2.20	0.41
1:A:202:GLY:O	1:A:206:THR:HG23	2.20	0.41
1:A:389:ILE:HG22	1:A:393:LYS:HZ1	1.83	0.41
1:A:411:PRO:HG3	1:A:457:CYS:SG	2.60	0.41
1:A:1188:ILE:HG13	1:A:1189:GLU:N	2.35	0.41
1:A:1407:LYS:HA	1:A:1412:LYS:HD3	2.01	0.41
1:A:1436:LEU:HG	1:A:1437:TYR:H	1.84	0.41
1:A:2260:PHE:HA	1:A:2273:GLY:HA3	2.01	0.41
1:A:2274:ILE:HG23	1:A:2306:ASN:ND2	2.36	0.41
1:A:2281:MET:HE2	1:A:2326:ILE:CD1	2.50	0.41
1:A:2813:PHE:CE2	1:A:2868:LEU:HD11	2.51	0.41
1:A:2927:ALA:HB1	1:A:2931:ARG:HH12	1.84	0.41
1:A:3631:LYS:HB3	1:A:3631:LYS:HE3	1.87	0.41
1:A:3704:GLN:CD	1:A:3716:HIS:HB3	2.45	0.41
1:A:3806:LEU:C	1:A:3807:GLU:HG3	2.45	0.41
1:A:3967:PHE:O	1:A:3970:LEU:N	2.54	0.41
1:A:4114:PRO:HA	1:A:4117:LEU:HB2	2.01	0.41
2:B:64:ILE:HG21	2:B:123:LYS:HB3	2.02	0.41
2:B:86:VAL:HA	2:B:104:VAL:HA	2.00	0.41
3:C:632:PHE:O	3:C:636:ILE:HG23	2.20	0.41
4:F:50:ARG:NH2	4:F:58:ALA:HB3	2.35	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:114:VAL:O	1:A:120:ALA:HA	2.20	0.41
1:A:333:MET:HG3	1:A:334:HIS:N	2.35	0.41
1:A:1297:PHE:HA	1:A:1300:SER:OG	2.20	0.41
1:A:2244:CYS:SG	1:A:2245:TRP:N	2.93	0.41
1:A:2551:GLU:HA	1:A:2554:PHE:HD2	1.83	0.41
1:A:2953:THR:OG1	1:A:2994:TRP:NE1	2.47	0.41
1:A:2978:LYS:HG2	1:A:2981:TRP:CE2	2.55	0.41
1:A:3840:LYS:HD2	1:A:3840:LYS:HA	1.92	0.41
2:B:113:ALA:O	2:B:117:LEU:HG	2.19	0.41
2:B:262:LYS:HA	2:B:268:VAL:HG12	2.01	0.41
2:B:347:LEU:HA	2:B:398:CYS:SG	2.60	0.41
2:B:356:LEU:HG	2:B:358:LYS:NZ	2.35	0.41
2:B:404:ARG:CZ	6:D:31:DA:H3'	2.50	0.41
2:B:484:GLN:HG2	2:B:488:ARG:CZ	2.50	0.41
3:C:338:LYS:HG3	3:C:398:ASP:HA	2.02	0.41
3:C:609:PHE:O	3:C:612:ALA:N	2.42	0.41
1:A:416:SER:O	1:A:420:VAL:HG13	2.20	0.41
1:A:3147:LYS:NZ	1:A:3149:GLY:H	2.19	0.41
1:A:3192:LYS:HA	1:A:3192:LYS:HD2	1.87	0.41
1:A:3570:ASP:N	1:A:3570:ASP:OD1	2.53	0.41
2:B:482:VAL:HG22	3:C:333:TYR:CD2	2.55	0.41
2:B:515:ASN:O	2:B:519:GLY:N	2.54	0.41
3:C:56:LEU:HD23	3:C:80:HIS:ND1	2.35	0.41
3:C:342:VAL:HG22	3:C:393:VAL:HG22	2.02	0.41
3:C:528:ILE:HB	3:C:529:PRO:HD3	2.03	0.41
4:F:80:VAL:HG11	4:F:83:ILE:HG13	2.02	0.41
1:A:42:CYS:HB2	1:A:88:PHE:CG	2.55	0.41
1:A:51:LEU:O	1:A:54:GLN:NE2	2.48	0.41
1:A:70:ARG:HB2	1:A:78:PHE:HD2	1.86	0.41
1:A:294:PHE:CE2	1:A:298:LEU:HD11	2.55	0.41
1:A:581:LEU:HD22	1:A:620:PHE:HD1	1.85	0.41
1:A:766:ALA:HB3	1:A:851:ILE:HD12	2.02	0.41
1:A:876:SER:C	1:A:880:MET:HE3	2.46	0.41
1:A:1983:ASP:H	1:A:2090:ARG:CZ	2.34	0.41
1:A:2218:PHE:HA	1:A:2221:LYS:HZ3	1.86	0.41
1:A:2411:LEU:O	1:A:2415:LEU:HG	2.21	0.41
1:A:2436:LEU:HD12	1:A:2469:CYS:HB2	2.03	0.41
1:A:3036:TYR:O	1:A:3039:THR:OG1	2.32	0.41
1:A:3298:LEU:HD23	1:A:3337:ILE:HB	2.03	0.41
1:A:3388:ALA:O	1:A:3392:ALA:N	2.45	0.41
1:A:3681:LYS:C	1:A:3688:SER:HB3	2.45	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3749:PRO:HB3	1:A:3805:TRP:HD1	1.86	0.41
2:B:65:GLN:HA	2:B:68:GLN:NE2	2.36	0.41
2:B:90:THR:OG1	2:B:136:GLY:HA3	2.20	0.41
2:B:290:ARG:HG2	3:C:309:ASP:C	2.45	0.41
6:D:39:DA:H2'	6:D:40:DT:C5	2.55	0.41
7:E:33:DA:C4	7:E:34:DT:C4	3.09	0.41
1:A:1724:MET:HG2	1:A:1768:ARG:HD3	2.03	0.41
1:A:1864:ASP:HA	1:A:1867:ILE:HG22	2.01	0.41
1:A:3028:ASN:O	1:A:3029:LYS:HD2	2.20	0.41
1:A:3340:ALA:O	1:A:3343:SER:OG	2.38	0.41
1:A:3705:TYR:OH	1:A:3714:GLU:OE1	2.38	0.41
1:A:3762:GLN:HB3	1:A:3793:VAL:HG23	2.02	0.41
1:A:3821:SER:OG	1:A:3823:GLU:OE1	2.31	0.41
1:A:3875:GLU:HB3	1:A:3965:ARG:HD2	2.02	0.41
1:A:4056:PRO:HA	1:A:4059:ILE:HG12	2.02	0.41
2:B:340:PHE:HE2	3:C:485:PRO:HB2	1.86	0.41
3:C:251:LEU:O	3:C:258:SER:HA	2.20	0.41
3:C:546:ASP:OD1	3:C:547:GLN:N	2.54	0.41
1:A:95:LYS:NZ	1:A:140:SER:OG	2.28	0.41
1:A:268:PRO:HG2	1:A:308:LEU:HD21	2.03	0.41
1:A:985:GLU:N	1:A:986:PRO:HD2	2.36	0.41
1:A:1483:LEU:HD11	1:A:1518:ALA:HB1	2.01	0.41
1:A:1653:LEU:HD23	1:A:1695:LEU:HD12	2.02	0.41
1:A:1791:CYS:HB2	1:A:1835:ALA:HB2	2.02	0.41
1:A:2927:ALA:HB1	1:A:2931:ARG:NH1	2.36	0.41
1:A:3667:LEU:HA	1:A:3670:MET:HG3	2.02	0.41
1:A:4040:PRO:HA	1:A:4043:LYS:HD2	2.02	0.41
1:A:4048:LYS:HE2	1:A:4048:LYS:HA	2.01	0.41
1:A:4101:GLU:O	1:A:4105:LYS:HG2	2.20	0.41
2:B:446:MET:HE1	3:C:264:TYR:CG	2.56	0.41
3:C:11:VAL:HG21	3:C:114:SER:CB	2.51	0.41
4:F:111:LYS:HG3	4:F:132:ILE:HD13	2.03	0.41
1:A:20:SER:HA	1:A:23:ASP:CB	2.51	0.41
1:A:196:LEU:HB3	1:A:200:PHE:CE2	2.56	0.41
1:A:581:LEU:HD22	1:A:620:PHE:CD1	2.55	0.41
1:A:583:LEU:HA	1:A:614:PRO:HA	2.03	0.41
1:A:726:LEU:O	1:A:730:LEU:HG	2.21	0.41
1:A:871:LEU:HD21	1:A:3122:HIS:HB2	2.03	0.41
1:A:1235:ILE:HD12	1:A:1289:SER:HB2	2.03	0.41
1:A:2452:ARG:HD3	1:A:2494:ASP:HA	2.02	0.41
1:A:3164:TRP:HB3	1:A:3186:ARG:CZ	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4073:ALA:O	1:A:4077:TYR:N	2.42	0.41
2:B:38:LEU:HD13	2:B:165:ARG:O	2.21	0.41
2:B:269:ILE:HG13	2:B:270:SER:H	1.85	0.41
2:B:429:PRO:HB3	3:C:435:PHE:CD2	2.56	0.41
3:C:301:ASP:OD1	3:C:301:ASP:N	2.52	0.41
3:C:643:ARG:HH21	3:C:647:ILE:HG13	1.86	0.41
6:D:29:DA:N1	7:E:28:DA:C2	2.89	0.41
1:A:10:CYS:N	1:A:13:LEU:HD12	2.36	0.41
1:A:149:ILE:HG21	1:A:183:GLU:HB2	2.02	0.41
1:A:165:LYS:HA	1:A:165:LYS:HD3	1.82	0.41
1:A:734:LEU:HD21	1:A:769:GLY:N	2.36	0.41
1:A:925:GLN:HA	1:A:928:VAL:HG22	2.03	0.41
1:A:960:GLN:CD	1:A:960:GLN:H	2.28	0.41
1:A:1070:PRO:HA	1:A:1075:ARG:NH2	2.36	0.41
1:A:1076:LEU:HD22	1:A:1121:LEU:HD11	2.03	0.41
1:A:1081:ALA:O	1:A:1085:ILE:HG23	2.21	0.41
1:A:1191:PHE:O	1:A:1195:VAL:HG23	2.21	0.41
1:A:1430:GLU:O	1:A:1434:VAL:HG13	2.21	0.41
1:A:1748:ASP:OD1	1:A:1749:ALA:N	2.54	0.41
1:A:1836:LEU:HB3	1:A:1840:PHE:CZ	2.56	0.41
1:A:1888:ASP:HB2	1:A:1896:ILE:HG12	2.02	0.41
1:A:1986:ARG:H	1:A:2183:HIS:HA	1.86	0.41
1:A:2126:MET:HB2	1:A:2164:TRP:CZ2	2.56	0.41
1:A:2281:MET:SD	1:A:2287:PRO:HA	2.61	0.41
1:A:2379:MET:HA	1:A:2382:VAL:HG22	2.03	0.41
1:A:2571:ASP:HA	1:A:2574:ASN:HB2	2.03	0.41
1:A:2795:GLN:HA	1:A:2798:ALA:HB3	2.03	0.41
1:A:2831:ASN:HD22	1:A:2834:GLN:NE2	2.18	0.41
1:A:2891:ARG:HH21	1:A:3897:PHE:HD2	1.69	0.41
1:A:3315:TYR:HD1	1:A:3318:LYS:HE3	1.86	0.41
1:A:3320:ILE:CG2	1:A:3324:ARG:HH21	2.34	0.41
1:A:3763:ARG:O	1:A:3766:GLN:HG3	2.20	0.41
1:A:3840:LYS:O	1:A:3844:THR:HG23	2.20	0.41
1:A:3972:LEU:N	1:A:3973:PRO:HD2	2.36	0.41
1:A:4021:LEU:HA	1:A:4028:ILE:HG22	2.02	0.41
2:B:302:THR:HA	3:C:291:LYS:HA	2.03	0.41
2:B:465:ILE:O	2:B:518:LEU:HD11	2.21	0.41
3:C:65:ASP:N	3:C:78:THR:HG22	2.35	0.41
3:C:82:HIS:CE1	3:C:84:MET:HG2	2.56	0.41
3:C:368:ARG:HG3	3:C:369:ASP:N	2.36	0.41
3:C:622:GLN:NE2	3:C:631:TYR:HD2	2.18	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:65:ILE:HG23	4:F:70:GLY:HA3	2.02	0.41
6:D:20:DT:H2"	6:D:21:DA:OP2	2.21	0.41
7:E:19:DA:C6	7:E:20:DT:C2	3.09	0.41
1:A:178:LEU:HB2	1:A:227:LEU:HD13	2.03	0.41
1:A:458:CYS:HA	1:A:461:ILE:HG12	2.02	0.41
1:A:1336:THR:O	1:A:1339:VAL:HG22	2.21	0.41
1:A:2102:LYS:O	1:A:2106:ARG:HD3	2.21	0.41
1:A:2414:GLN:O	1:A:2418:LYS:HG2	2.21	0.41
1:A:2421:VAL:HG23	1:A:2457:PRO:HG3	2.03	0.41
1:A:3410:ILE:HG21	1:A:3456:LEU:HB2	2.02	0.41
1:A:3493:TRP:H	1:A:3521:ILE:HD11	1.85	0.41
1:A:3771:MET:HE1	1:A:3998:LEU:HD21	2.02	0.41
1:A:3821:SER:O	1:A:3825:LYS:N	2.48	0.41
1:A:3839:TYR:CE2	1:A:4122:GLU:HB2	2.56	0.41
2:B:127:GLY:HA2	2:B:130:ARG:HG2	2.03	0.41
3:C:153:SER:HA	3:C:156:LYS:HE2	2.03	0.41
3:C:553:ILE:HD13	3:C:553:ILE:HA	1.90	0.41
1:A:453:MET:HA	1:A:456:VAL:HB	2.03	0.40
1:A:554:ASN:OD1	1:A:555:SER:N	2.54	0.40
1:A:1109:GLU:O	1:A:1113:LEU:HG	2.21	0.40
1:A:1133:HIS:O	1:A:1136:ARG:HG2	2.21	0.40
1:A:1140:LYS:HB3	1:A:1140:LYS:HE2	1.89	0.40
1:A:1554:SER:OG	1:A:1555:HIS:N	2.54	0.40
1:A:1935:GLU:OE1	1:A:1935:GLU:N	2.51	0.40
1:A:2298:GLU:HA	1:A:2301:GLN:HB3	2.02	0.40
1:A:2454:LEU:C	1:A:2457:PRO:HD2	2.47	0.40
1:A:3280:TYR:CE1	1:A:3304:VAL:HG21	2.56	0.40
2:B:203:MET:SD	2:B:238:LYS:HB2	2.61	0.40
3:C:59:PHE:HA	3:C:76:ASN:O	2.20	0.40
4:F:109:LEU:CG	4:F:132:ILE:HB	2.51	0.40
1:A:670:LEU:HA	1:A:673:THR:HB	2.03	0.40
1:A:772:ALA:O	1:A:776:TRP:CD1	2.75	0.40
1:A:1244:LEU:HD21	1:A:1310:GLU:HB2	2.02	0.40
1:A:1537:VAL:CG2	1:A:1552:HIS:HB3	2.51	0.40
1:A:1596:VAL:O	1:A:1600:MET:HG2	2.21	0.40
1:A:1916:ILE:HD12	1:A:1916:ILE:H	1.85	0.40
1:A:2091:HIS:CG	1:A:2092:GLU:H	2.39	0.40
1:A:2364:LEU:HD13	1:A:2400:VAL:HG11	2.03	0.40
1:A:2930:TYR:O	1:A:2934:GLY:N	2.54	0.40
1:A:3273:LEU:HD21	1:A:3307:LEU:HD21	2.03	0.40
1:A:3822:GLN:HA	1:A:3825:LYS:HE3	2.03	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:115:ARG:O	2:B:118:GLU:HG2	2.21	0.40
3:C:326:VAL:O	3:C:329:GLU:HG2	2.22	0.40
3:C:427:MET:SD	3:C:427:MET:N	2.92	0.40
4:F:111:LYS:HG3	4:F:132:ILE:CD1	2.51	0.40
1:A:333:MET:HG3	1:A:334:HIS:H	1.86	0.40
1:A:452:LYS:HG3	1:A:453:MET:N	2.35	0.40
1:A:1009:LEU:O	1:A:1013:ILE:HG12	2.22	0.40
1:A:1127:CYS:O	1:A:1131:ILE:HG12	2.21	0.40
1:A:2187:VAL:HA	1:A:2190:VAL:HG22	2.02	0.40
1:A:2787:HIS:O	1:A:2790:LEU:HG	2.21	0.40
1:A:2806:LYS:HD2	1:A:2853:PRO:O	2.22	0.40
1:A:3685:PRO:O	1:A:3688:SER:OG	2.31	0.40
1:A:3840:LYS:HG2	1:A:4122:GLU:OE2	2.21	0.40
1:A:4040:PRO:HD2	1:A:4041:ARG:NH1	2.36	0.40
1:A:4093:GLU:HG3	1:A:4098:LEU:HD22	2.04	0.40
2:B:148:TRP:O	2:B:152:ASN:ND2	2.55	0.40
2:B:276:LEU:HD11	3:C:354:ARG:HD3	2.03	0.40
2:B:331:LYS:N	2:B:331:LYS:HD3	2.35	0.40
2:B:446:MET:HE2	3:C:363:LYS:CB	2.52	0.40
3:C:356:PHE:CG	3:C:422:VAL:HG21	2.56	0.40
4:F:91:TYR:CD2	4:F:136:SER:HB2	2.56	0.40
1:A:209:THR:O	1:A:210:SER:C	2.64	0.40
1:A:439:VAL:HG23	1:A:440:VAL:HG13	2.03	0.40
1:A:762:TYR:CZ	1:A:764:PRO:HG2	2.57	0.40
1:A:1184:ARG:O	1:A:1188:ILE:HG12	2.21	0.40
1:A:1279:LEU:HA	1:A:1282:LEU:HG	2.03	0.40
1:A:1392:MET:HA	1:A:1395:LEU:HD12	2.04	0.40
1:A:2480:ILE:HG23	1:A:2484:TYR:HD2	1.87	0.40
1:A:2996:LEU:HA	1:A:2999:LEU:HD12	2.02	0.40
1:A:3417:ALA:HA	1:A:3446:VAL:HG21	2.03	0.40
1:A:3558:ILE:HD12	1:A:3558:ILE:HA	1.93	0.40
1:A:3682:GLU:HA	1:A:3685:PRO:HA	2.04	0.40
1:A:3827:ALA:HA	1:A:3831:ASP:HB2	2.03	0.40
1:A:4121:TRP:O	1:A:4126:PRO:HD3	2.22	0.40
2:B:58:THR:OG1	2:B:61:ASP:N	2.43	0.40
3:C:38:ILE:HD12	3:C:38:ILE:HA	1.96	0.40
3:C:62:ASP:HA	3:C:103:GLN:HE22	1.86	0.40
3:C:398:ASP:H	3:C:401:ALA:HB3	1.85	0.40
1:A:283:SER:O	1:A:284:THR:OG1	2.39	0.40
1:A:341:PHE:HD1	1:A:344:GLN:NE2	2.20	0.40
1:A:377:ASN:HB3	1:A:380:ASP:HB2	2.02	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:391:ARG:NH1	1:A:1734:PRO:HA	2.36	0.40
1:A:670:LEU:HB3	1:A:732:PHE:HE1	1.87	0.40
1:A:1589:ASN:OD1	1:A:1592:MET:HE1	2.22	0.40
1:A:1876:ILE:O	1:A:1879:VAL:HG12	2.22	0.40
1:A:2254:ARG:HE	1:A:2292:CYS:HG	1.66	0.40
1:A:2376:ASP:HB2	1:A:2377:ARG:HD3	2.04	0.40
1:A:3443:PRO:HA	1:A:3446:VAL:CG1	2.49	0.40
1:A:4002:MET:O	1:A:4006:VAL:HG12	2.22	0.40
6:D:33:DA:C8	6:D:34:DC:N3	2.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	3652/4128 (88%)	3389 (93%)	258 (7%)	5 (0%)	48 83
2	B	484/609 (80%)	434 (90%)	44 (9%)	6 (1%)	11 44
3	C	639/732 (87%)	586 (92%)	52 (8%)	1 (0%)	44 78
4	F	96/575 (17%)	91 (95%)	5 (5%)	0	100 100
5	M	21/204 (10%)	21 (100%)	0	0	100 100
All	All	4892/6248 (78%)	4521 (92%)	359 (7%)	12 (0%)	45 78

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	426	GLN
2	B	418	GLU
2	B	420	LEU
2	B	425	ILE
2	B	429	PRO

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	101	ALA
1	A	125	ILE
1	A	2330	VAL
1	A	2331	MET
2	B	423	GLN
3	C	509	GLN
1	A	3832	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	3158/3671 (86%)	3157 (100%)	1 (0%)	100 100
2	B	414/548 (76%)	412 (100%)	2 (0%)	86 89
3	C	559/649 (86%)	559 (100%)	0	100 100
4	F	78/480 (16%)	78 (100%)	0	100 100
5	M	15/160 (9%)	15 (100%)	0	100 100
All	All	4224/5508 (77%)	4221 (100%)	3 (0%)	92 95

All (3) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	855	VAL
2	B	421	ASP
2	B	423	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (70) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	191	ASN
1	A	250	ASN
1	A	278	HIS
1	A	322	GLN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	330	ASN
1	A	415	GLN
1	A	448	GLN
1	A	738	HIS
1	A	739	ASN
1	A	753	GLN
1	A	990	GLN
1	A	1048	GLN
1	A	1125	GLN
1	A	1238	GLN
1	A	1304	HIS
1	A	1320	ASN
1	A	1367	HIS
1	A	1390	GLN
1	A	1457	GLN
1	A	1603	GLN
1	A	1610	ASN
1	A	1687	HIS
1	A	1738	ASN
1	A	1771	GLN
1	A	1941	HIS
1	A	1957	ASN
1	A	2176	ASN
1	A	2213	ASN
1	A	2270	ASN
1	A	2306	ASN
1	A	2351	GLN
1	A	2352	HIS
1	A	2432	GLN
1	A	2475	ASN
1	A	2496	GLN
1	A	2518	GLN
1	A	2768	GLN
1	A	2807	GLN
1	A	2830	ASN
1	A	2831	ASN
1	A	2838	GLN
1	A	2977	ASN
1	A	3108	GLN
1	A	3150	ASN
1	A	3250	ASN
1	A	3311	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	3524	ASN
1	A	3580	ASN
1	A	3643	HIS
1	A	3660	ASN
1	A	3697	ASN
1	A	3772	ASN
1	A	3818	ASN
1	A	3927	ASN
1	A	3951	GLN
1	A	4037	ASN
2	B	65	GLN
2	B	68	GLN
2	B	132	GLN
2	B	458	GLN
2	B	485	GLN
2	B	489	ASN
3	C	50	ASN
3	C	131	HIS
3	C	352	GLN
3	C	359	ASN
3	C	411	HIS
3	C	547	GLN
3	C	622	GLN
4	F	108	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

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.

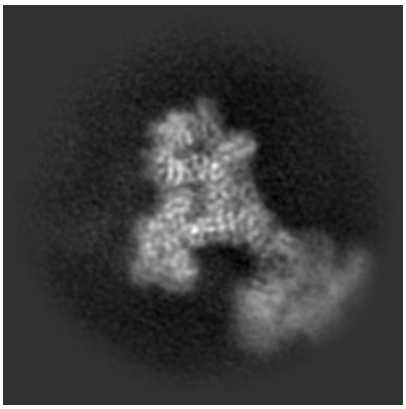
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-51156. These allow visual inspection of the internal detail of the map and identification of artifacts.

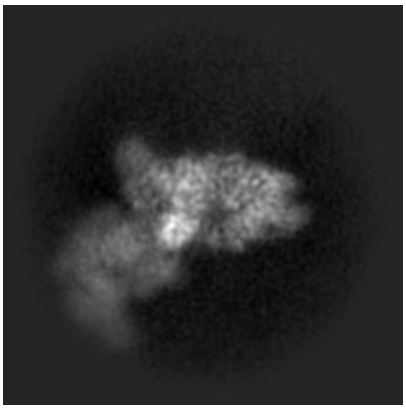
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

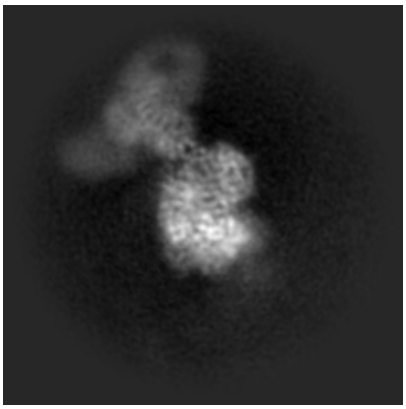
6.1.1 Primary map



X

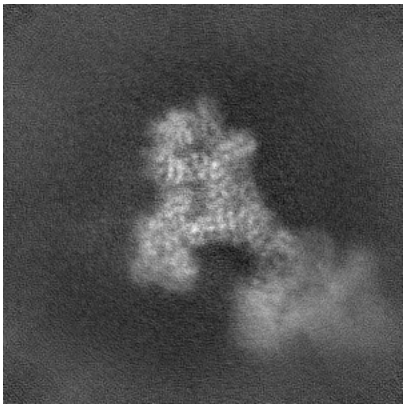


Y

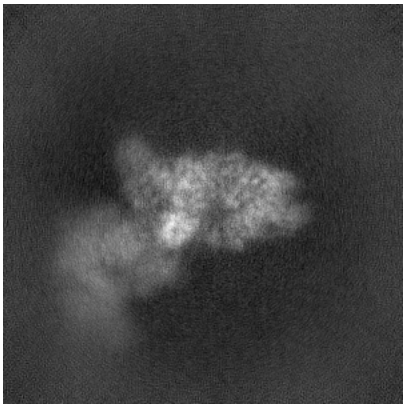


Z

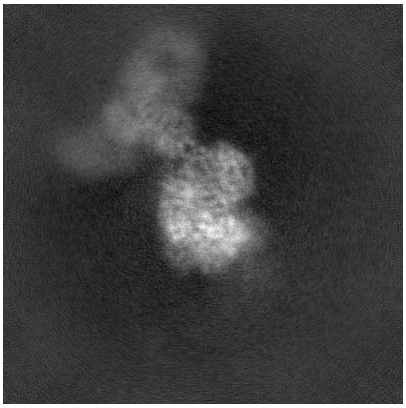
6.1.2 Raw map



X



Y

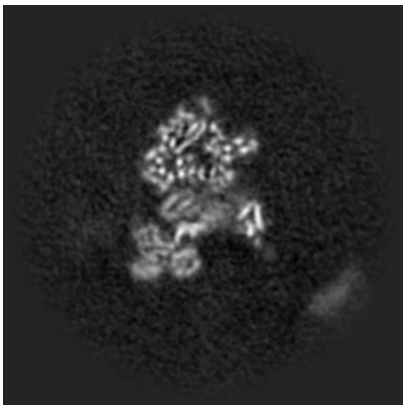


Z

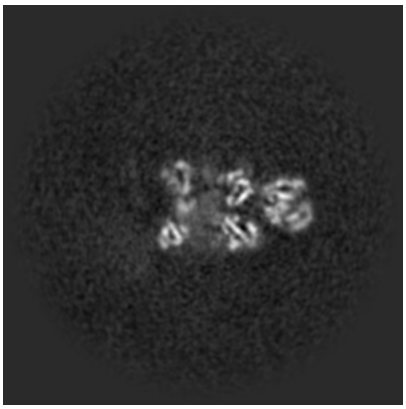
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

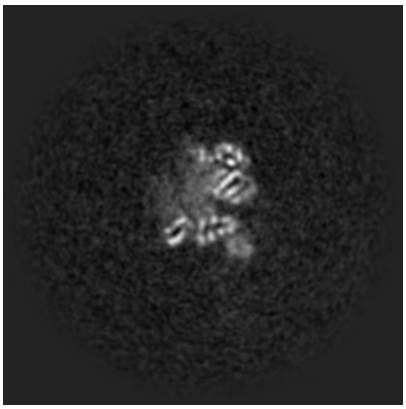
6.2.1 Primary map



X Index: 160

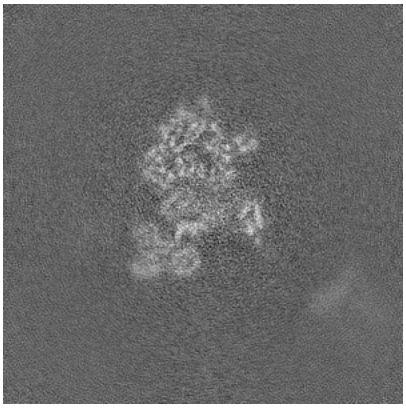


Y Index: 160

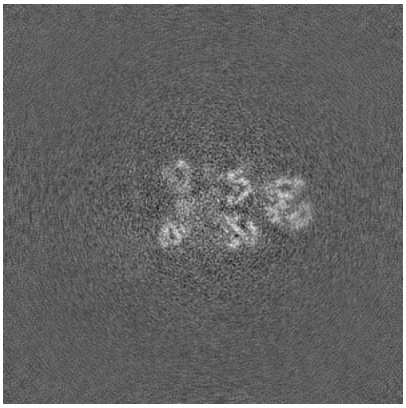


Z Index: 160

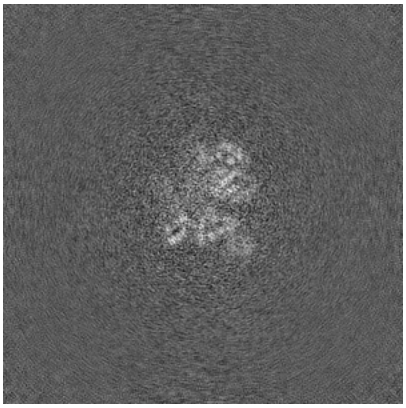
6.2.2 Raw map



X Index: 160



Y Index: 160

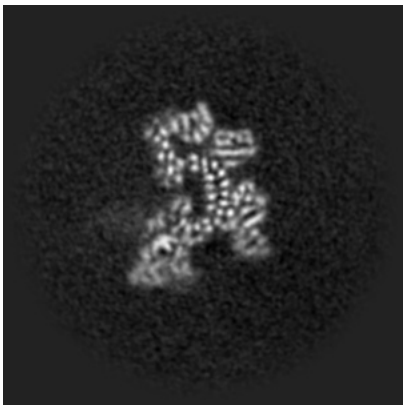


Z Index: 160

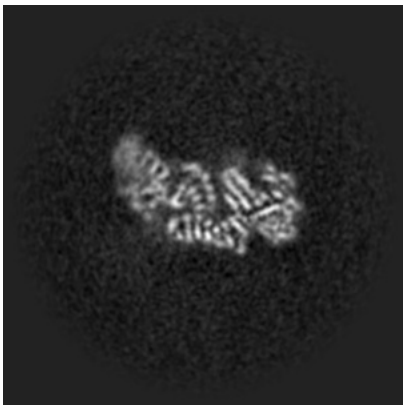
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

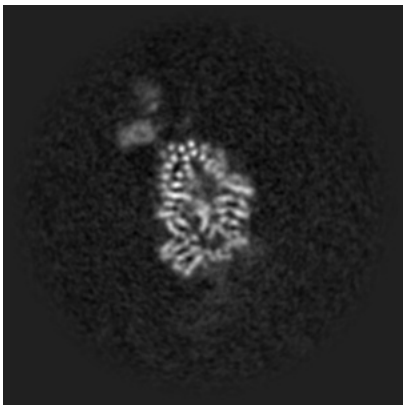
6.3.1 Primary map



X Index: 176

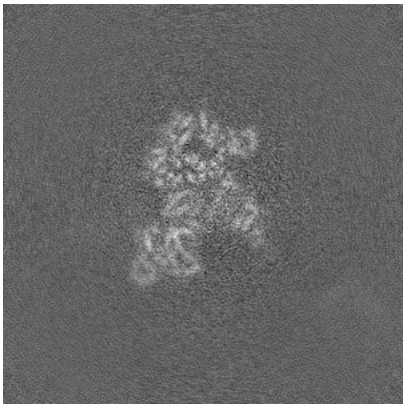


Y Index: 141

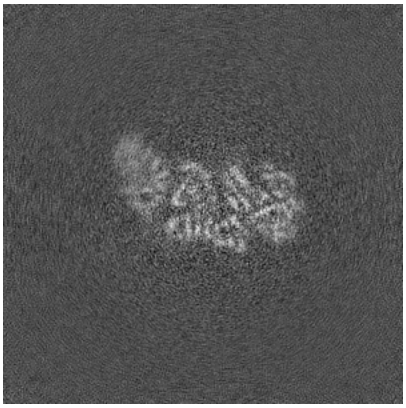


Z Index: 141

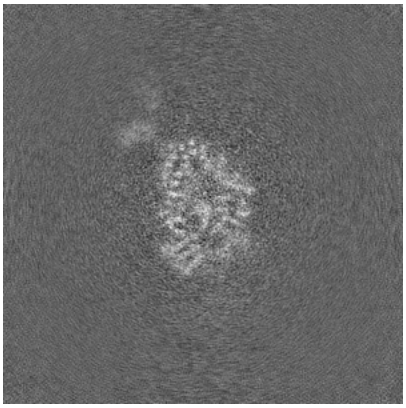
6.3.2 Raw map



X Index: 165



Y Index: 142

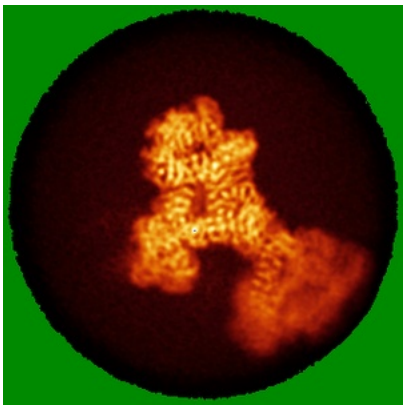


Z Index: 142

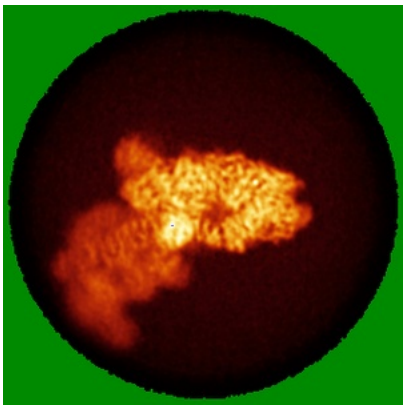
The images above show the largest variance slices of the map in three orthogonal directions.

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

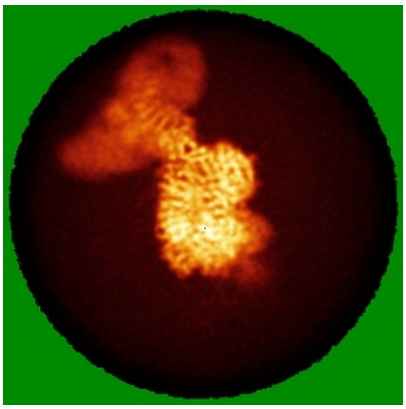
6.4.1 Primary map



X

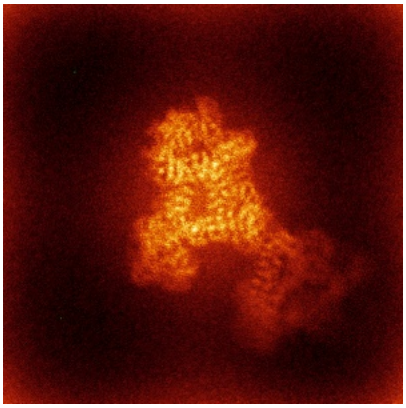


Y

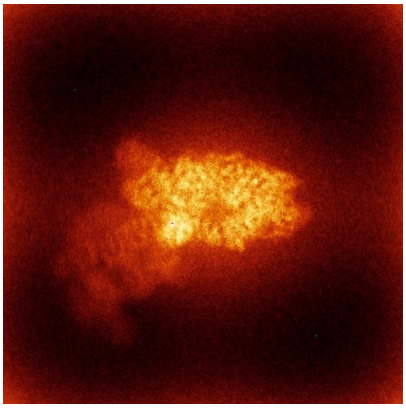


Z

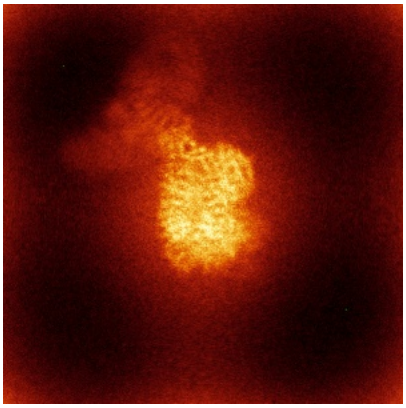
6.4.2 Raw map



X



Y

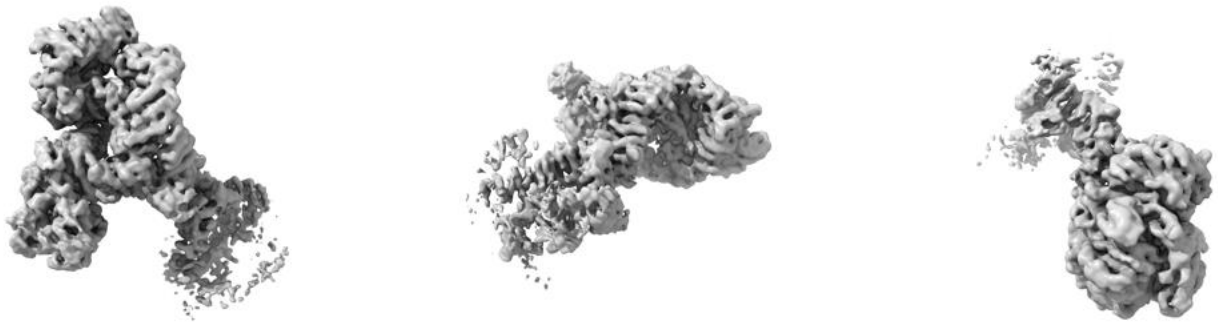


Z

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)

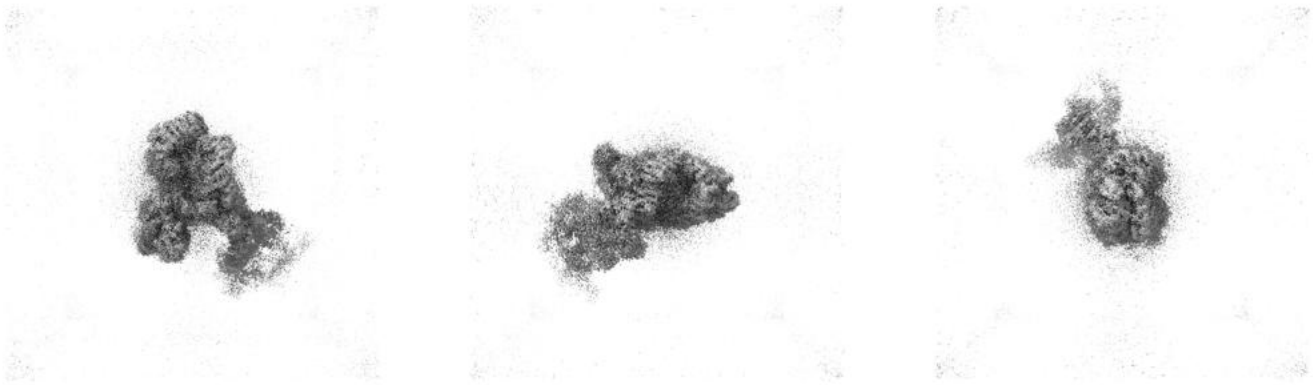
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.18. 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.

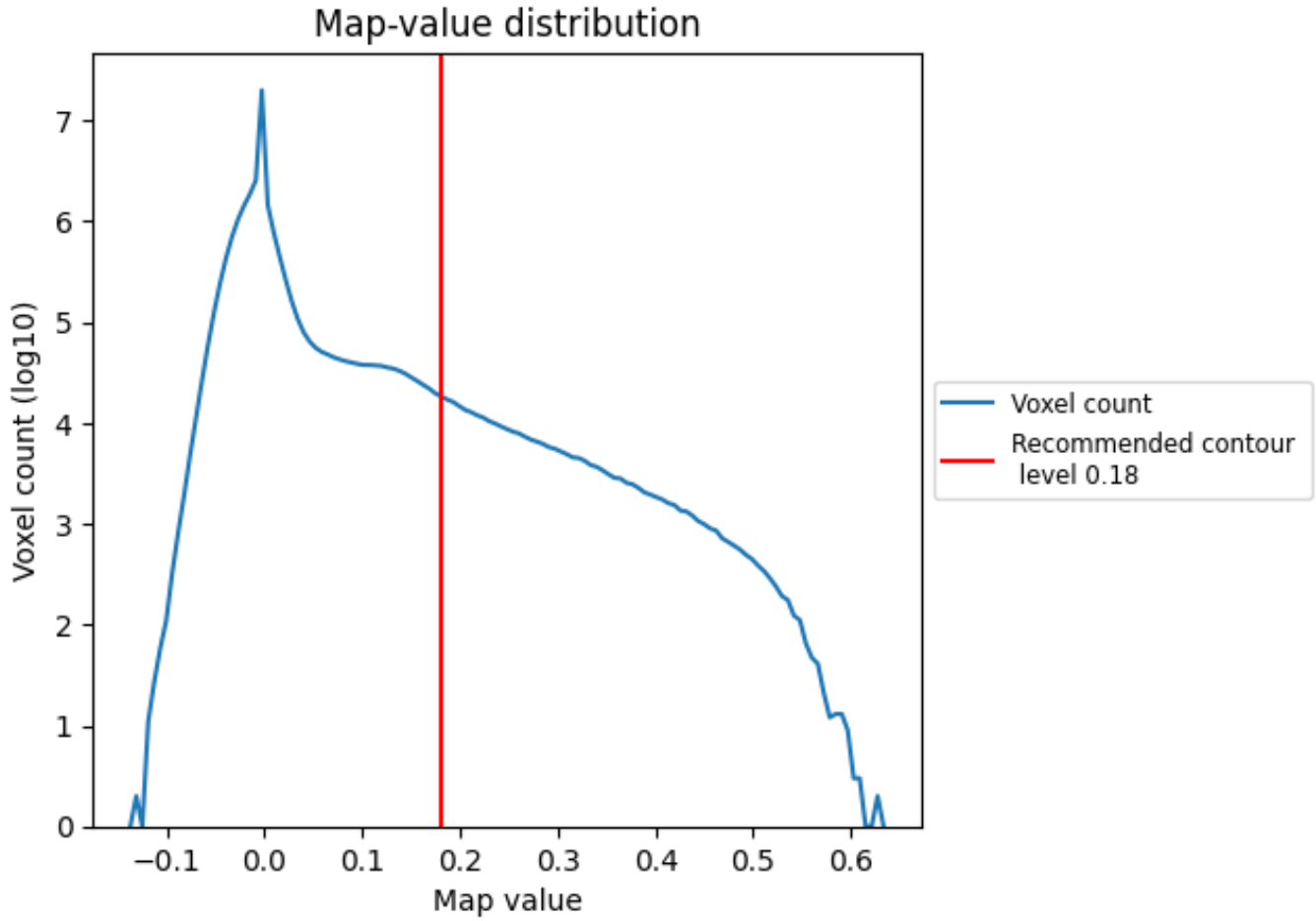
6.6 Mask visualisation (i)

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

7 Map analysis

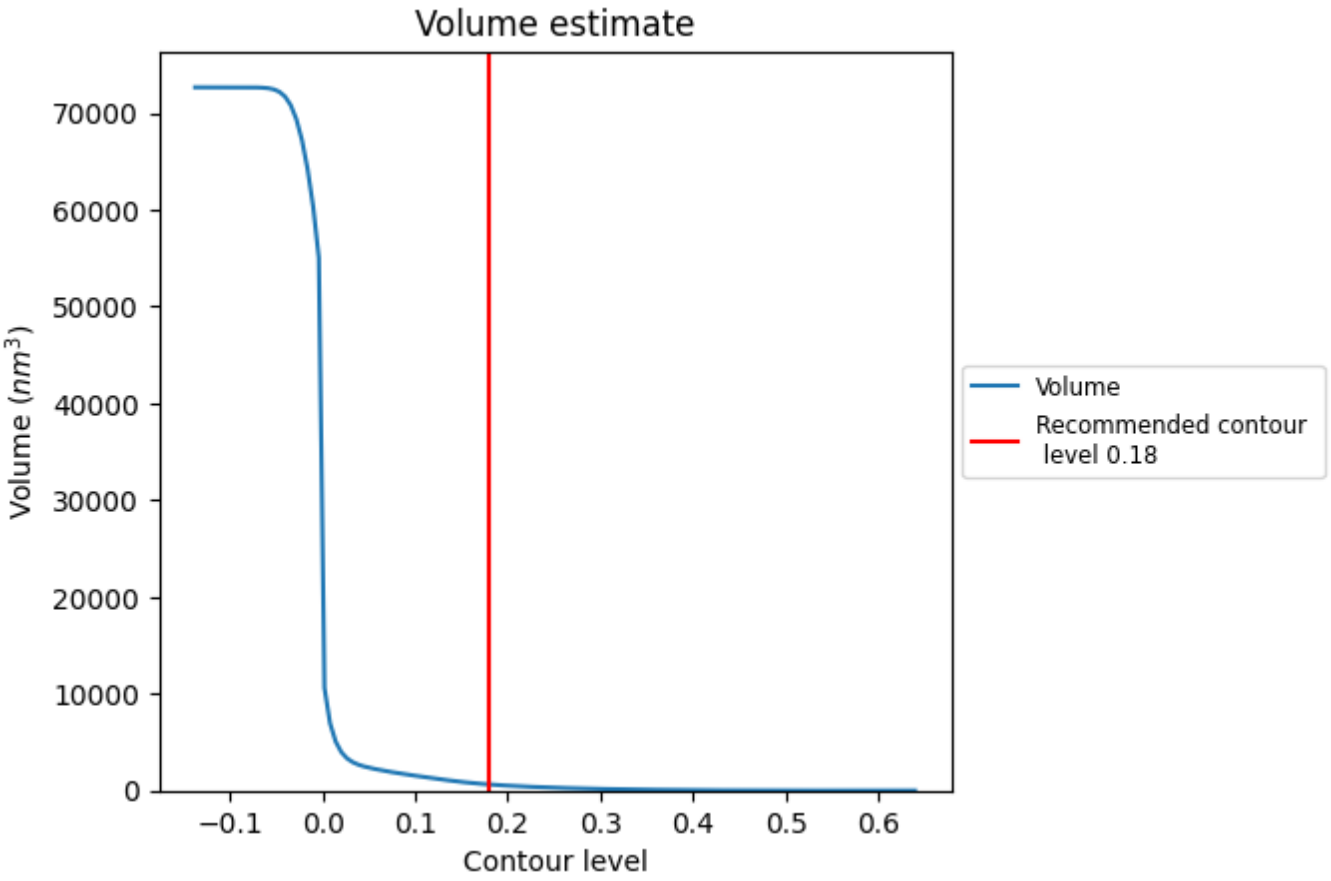
This section contains the results of statistical analysis of the map.

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.

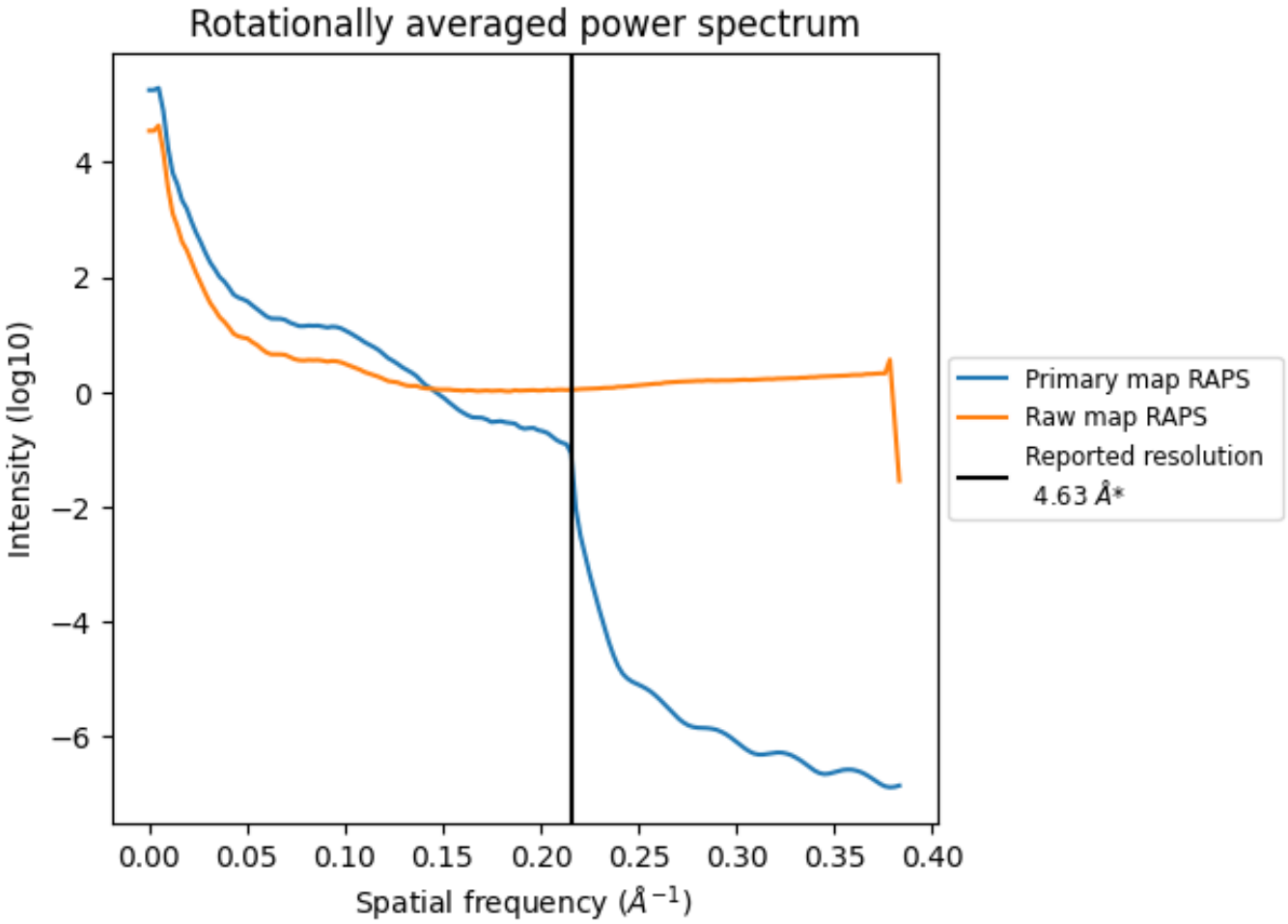
7.2 Volume estimate



The volume at the recommended contour level is 632 nm^3; this corresponds to an approximate mass of 570 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)

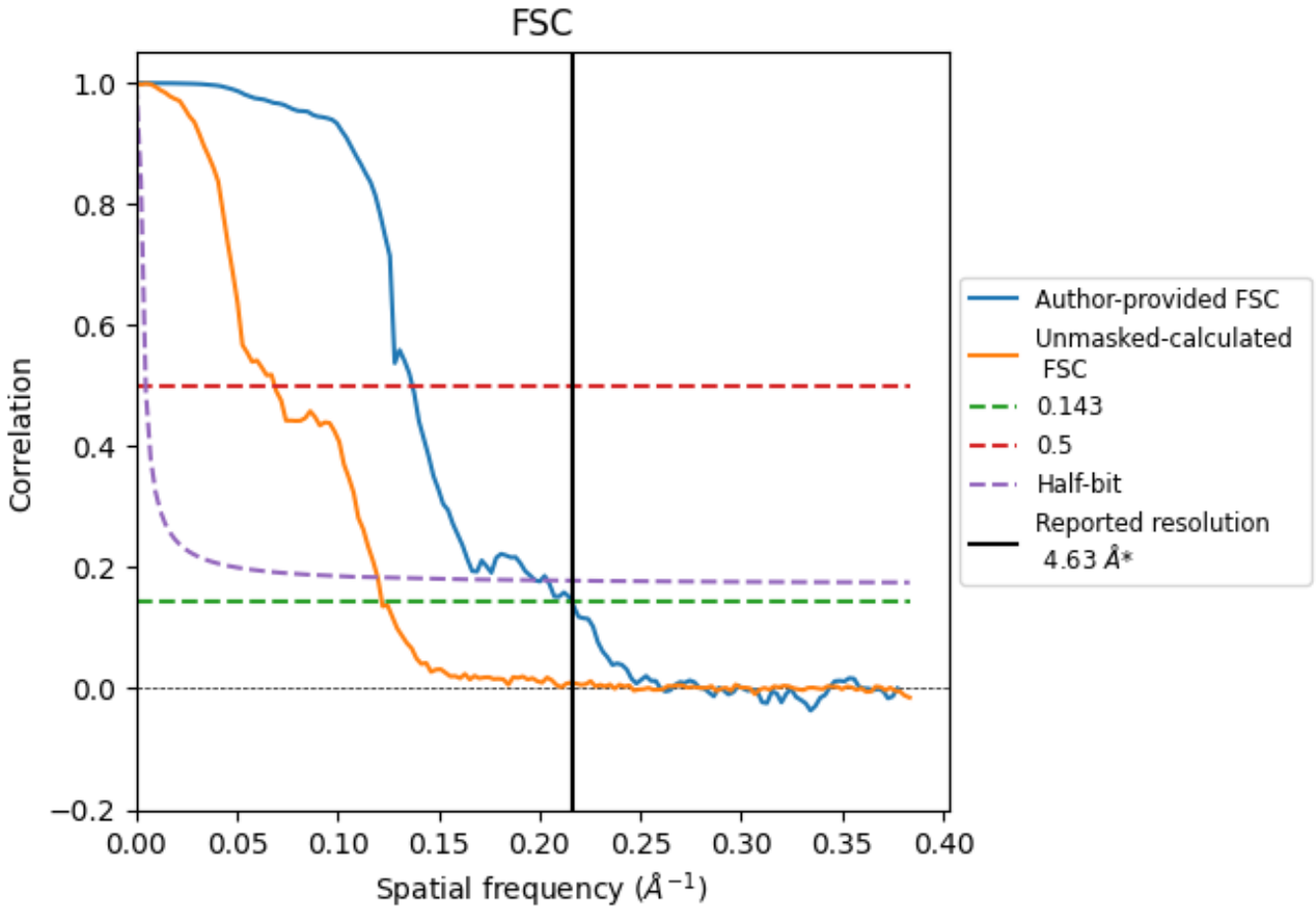


*Reported resolution corresponds to spatial frequency of 0.216 Å^{-1}

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 0.216 Å^{-1}

8.2 Resolution estimates (i)

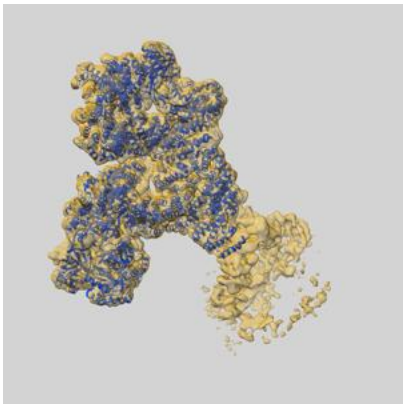
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.63	-	-
Author-provided FSC curve	4.63	7.30	5.05
Unmasked-calculated*	8.20	14.56	8.35

*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 8.20 differs from the reported value 4.63 by more than 10 %

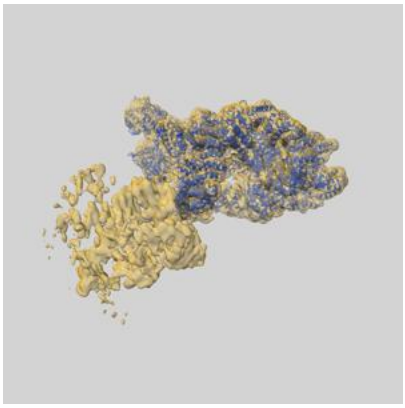
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-51156 and PDB model 9G9L. Per-residue inclusion information can be found in section 3 on page 5.

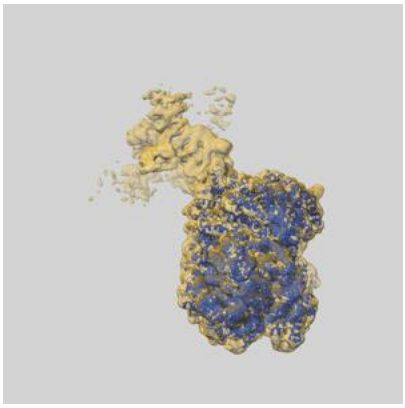
9.1 Map-model overlay



X



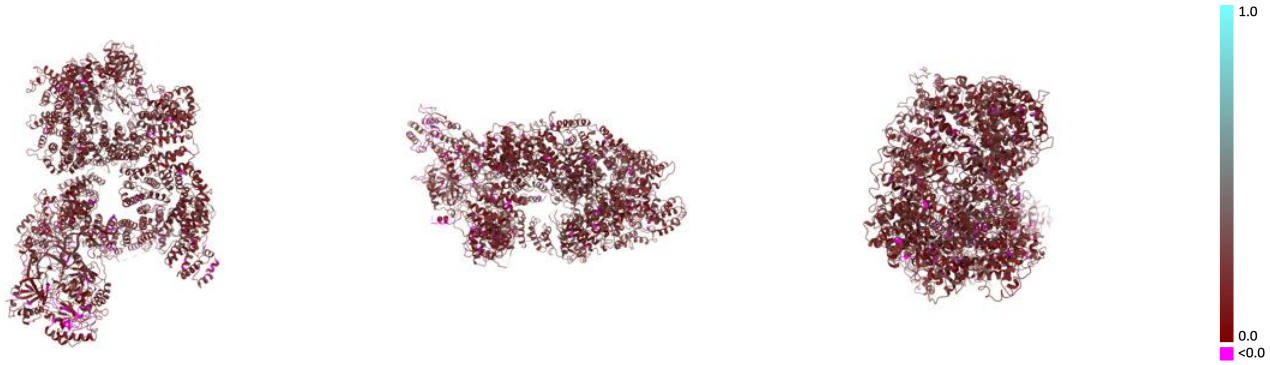
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.18 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.

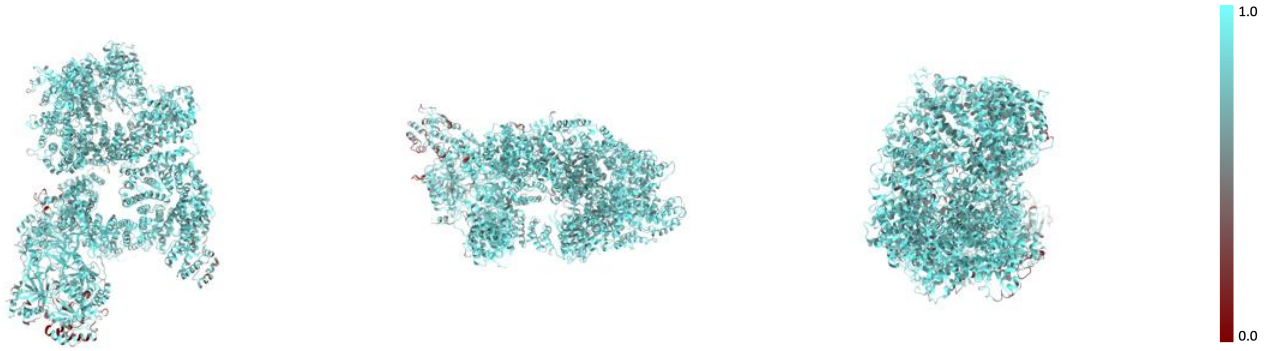
9.2 Q-score mapped to coordinate model (i)



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.

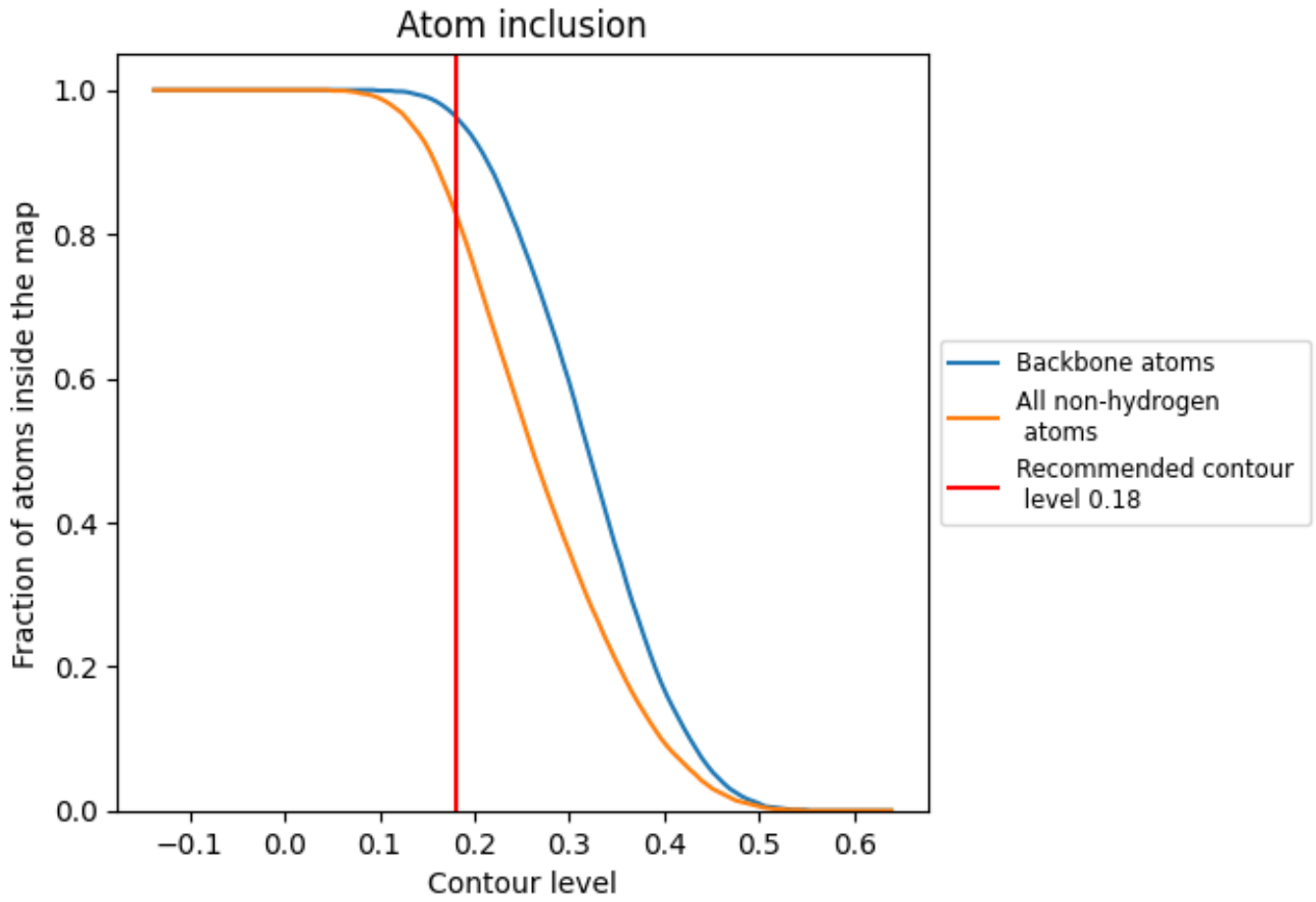
9.3 Atom inclusion mapped to coordinate model (i)



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 (0.18).

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

The table lists the average atom inclusion at the recommended contour level (0.18) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8300	0.1880
A	0.8470	0.1930
B	0.8470	0.1870
C	0.7270	0.1580
D	0.9570	0.2320
E	0.9410	0.2140
F	0.6190	0.1540
M	0.8520	0.2220