WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Jun 26, 2024 – 05:29 PM JST

PDB ID	:	7XR3
EMDB ID	:	EMD-33404
Title	:	3.4 Angstrom cryoEM D5 reconstruction of mud crab reovirus
Authors	:	Zhang, Q.F.; Gao, Y.Z.
Deposited on	:	2022-05-09
Resolution	:	3.70 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 (i) 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 (i)) were used in the production of this report:
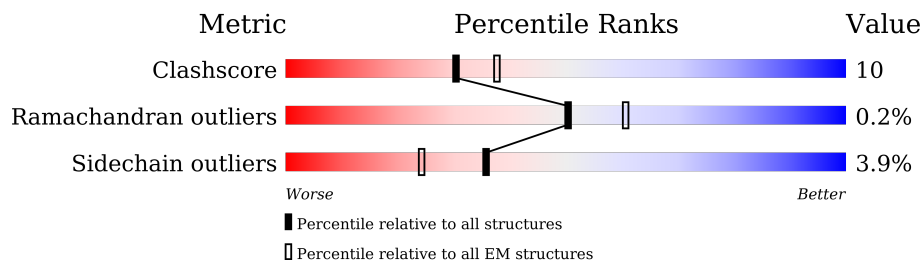
EMDB validation analysis	:	0.0.1.dev92
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

1 Overall quality at a glance ⓘ

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

The reported resolution of this entry is 3.70 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.
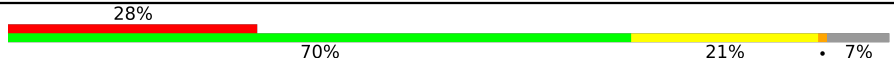
Metric	Percentile Ranks	Value
Clashscore		10
Ramachandran outliers		0.2%
Sidechain outliers		3.9%

Worse   *Better*

▮ Percentile relative to all structures
▯ Percentile relative to all EM structures

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	854	26% / 75% 19% • 5%
1	B	854	22% / 75% 23% ••
1	C	854	22% / 71% 21% • 7%
1	D	854	20% / 78% 20% ••
1	E	854	29% / 72% 19% • 7%
1	F	854	24% / 71% 26% ••
1	G	854	33% / 74% 18% 7%
1	H	854	30% / 76% 21% ••

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	I	854	28% 70% 21% 7%
1	J	854	29% 81% 17%
2	Z	1425	60% 60% 31% 7%

2 Entry composition ⓘ

There are 2 unique types of molecules in this entry. The entry contains 76250 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 VP3.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	815	Total	C	N	O	S	0	0
			6516	4128	1128	1232	28		
1	B	846	Total	C	N	O	S	0	0
			6746	4260	1175	1283	28		
1	C	794	Total	C	N	O	S	0	0
			6372	4043	1100	1201	28		
1	D	846	Total	C	N	O	S	0	0
			6746	4260	1175	1283	28		
1	E	794	Total	C	N	O	S	0	0
			6372	4043	1100	1201	28		
1	F	846	Total	C	N	O	S	0	0
			6746	4260	1175	1283	28		
1	G	794	Total	C	N	O	S	0	0
			6372	4043	1100	1201	28		
1	H	846	Total	C	N	O	S	0	0
			6746	4260	1175	1283	28		
1	I	794	Total	C	N	O	S	0	0
			6372	4043	1100	1201	28		
1	J	846	Total	C	N	O	S	0	0
			6746	4260	1175	1283	28		

- Molecule 2 is a protein called VP1.

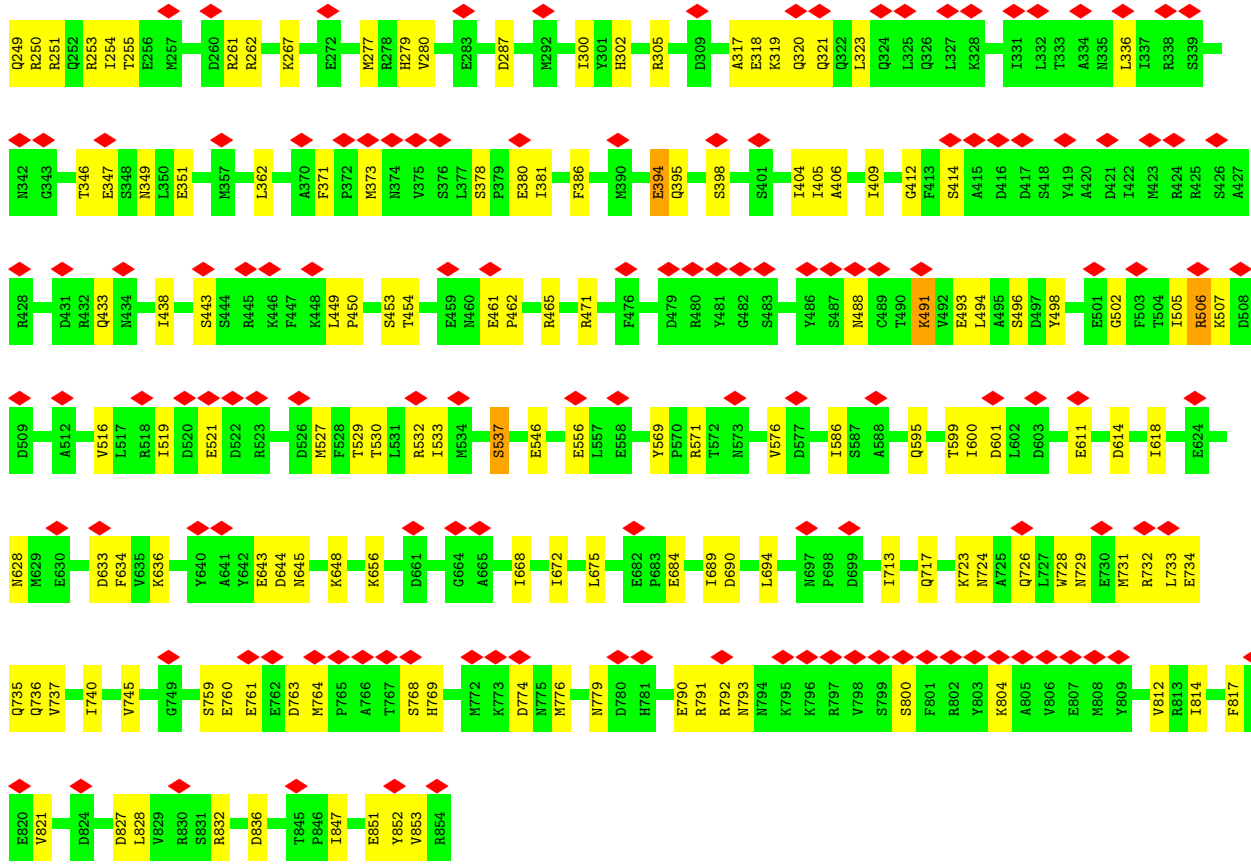| Mol	Chain	Residues	Atoms					AltConf	Trace
2	Z	1320	Total	C	N	O	S	0	0
			10516	6661	1799	2000	56		

3 Residue-property plots ⓘ

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.
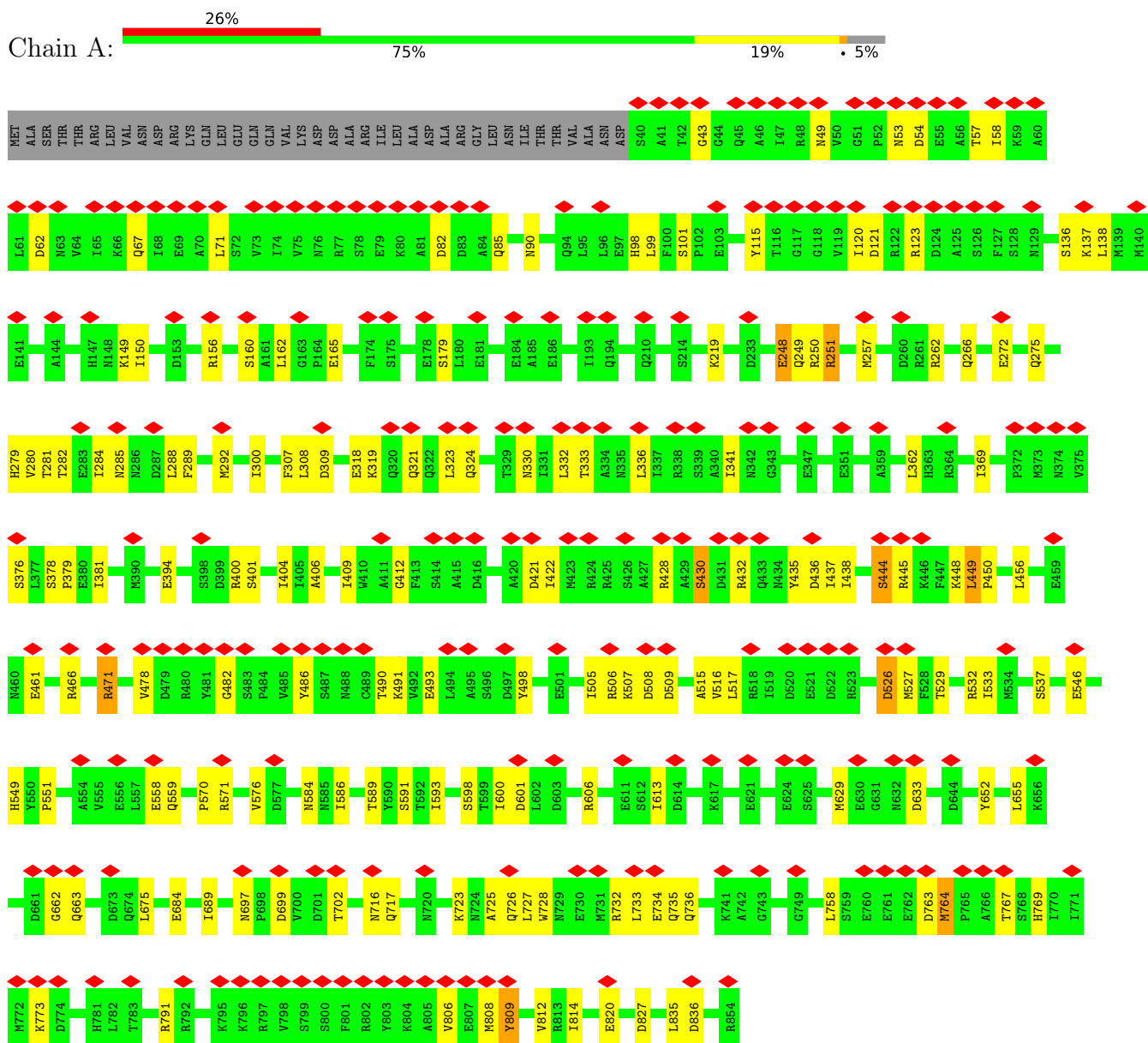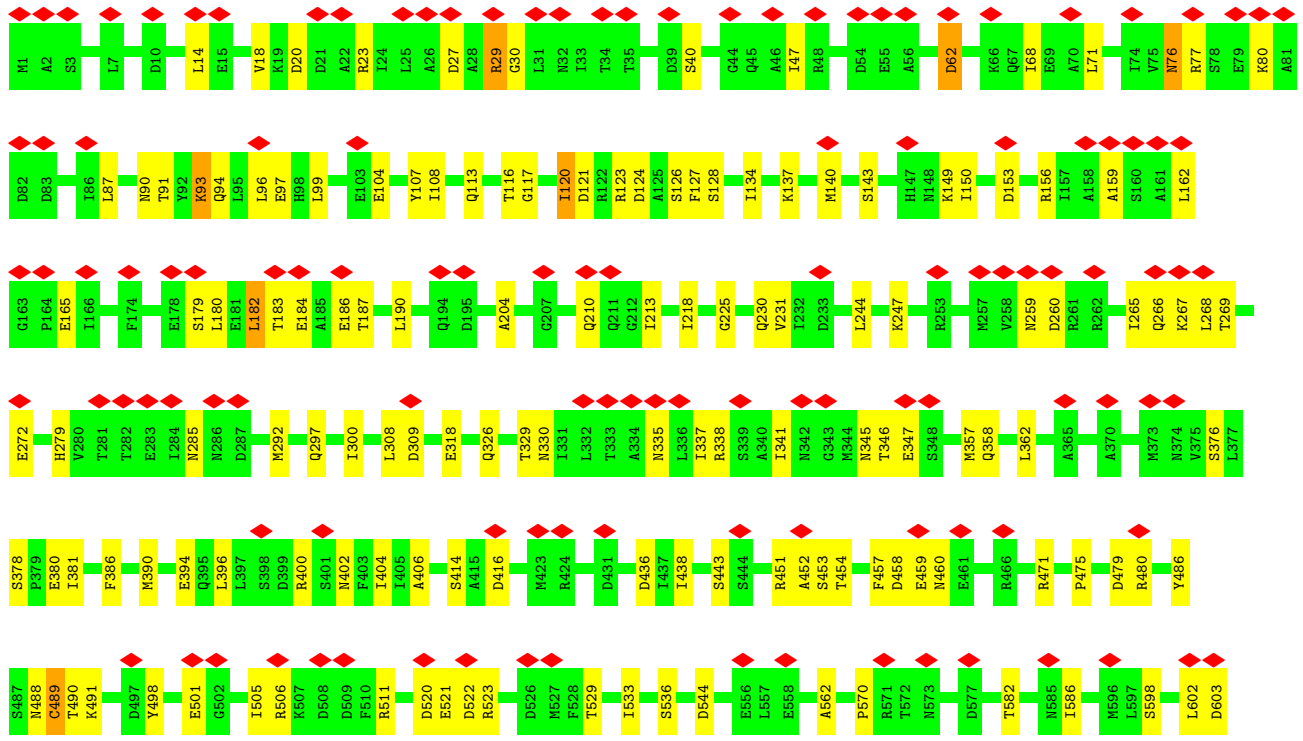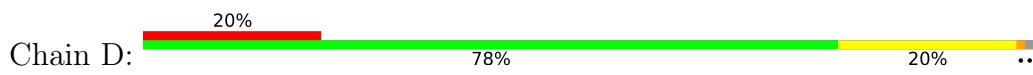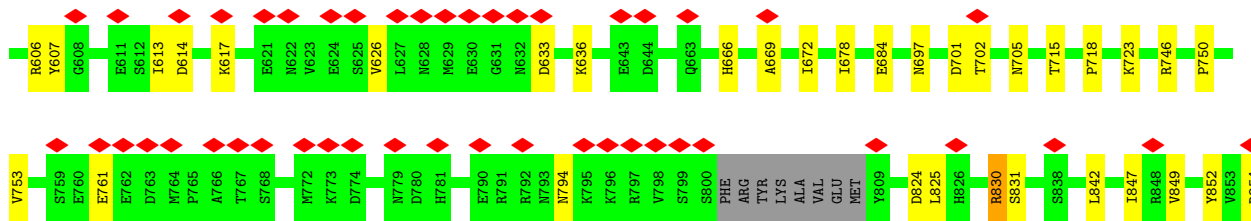
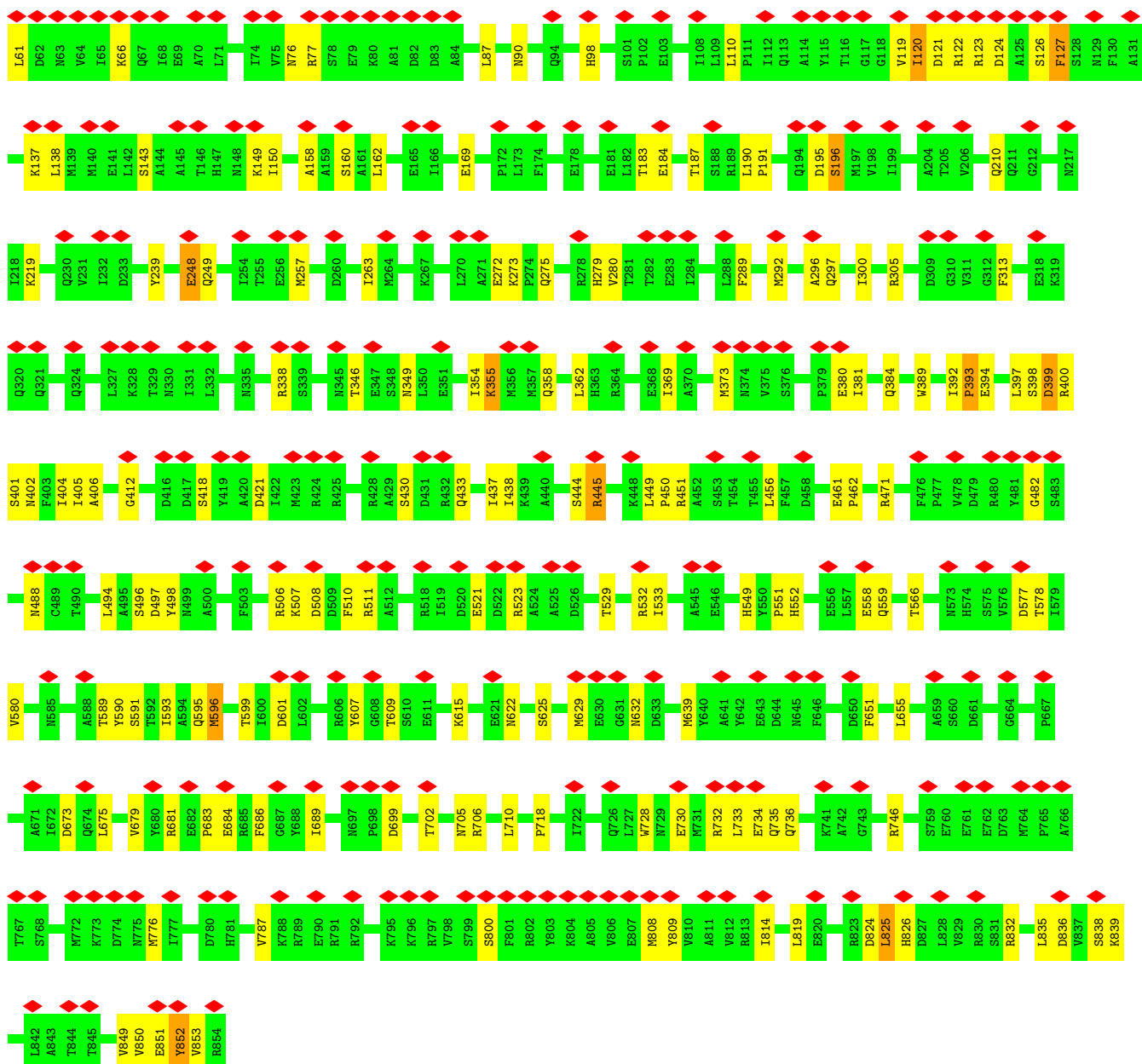- Molecule 1: VP3

- Molecule 1: VP3

Chain B:

• Molecule 1: VP3

Chain C:

• Molecule 1: VP3

R606 Y607 G608 E611 S612 I613 D614 K617 E621 N622 V623 E624 S625 V626 L627 N628 M629 E630 G631 N632 D633 K636 E643 D644 Q663 H666 A669 I672 I678 E684 N697 D701 T702 N705 T715 P718 K723 R746 P750

V753 S759 E760 E761 E762 D763 M764 P765 A766 T767 S768 M772 K773 D774 N779 D780 H781 E790 R791 R792 N793 N794 K795 K796 R797 V798 S799 S800 PHE ARG TYR LYS ALA VAL GLU MET Y809 D824 L825 H826 R830 S831 S838 L842 I847 R848 V849 Y852 V853 R854
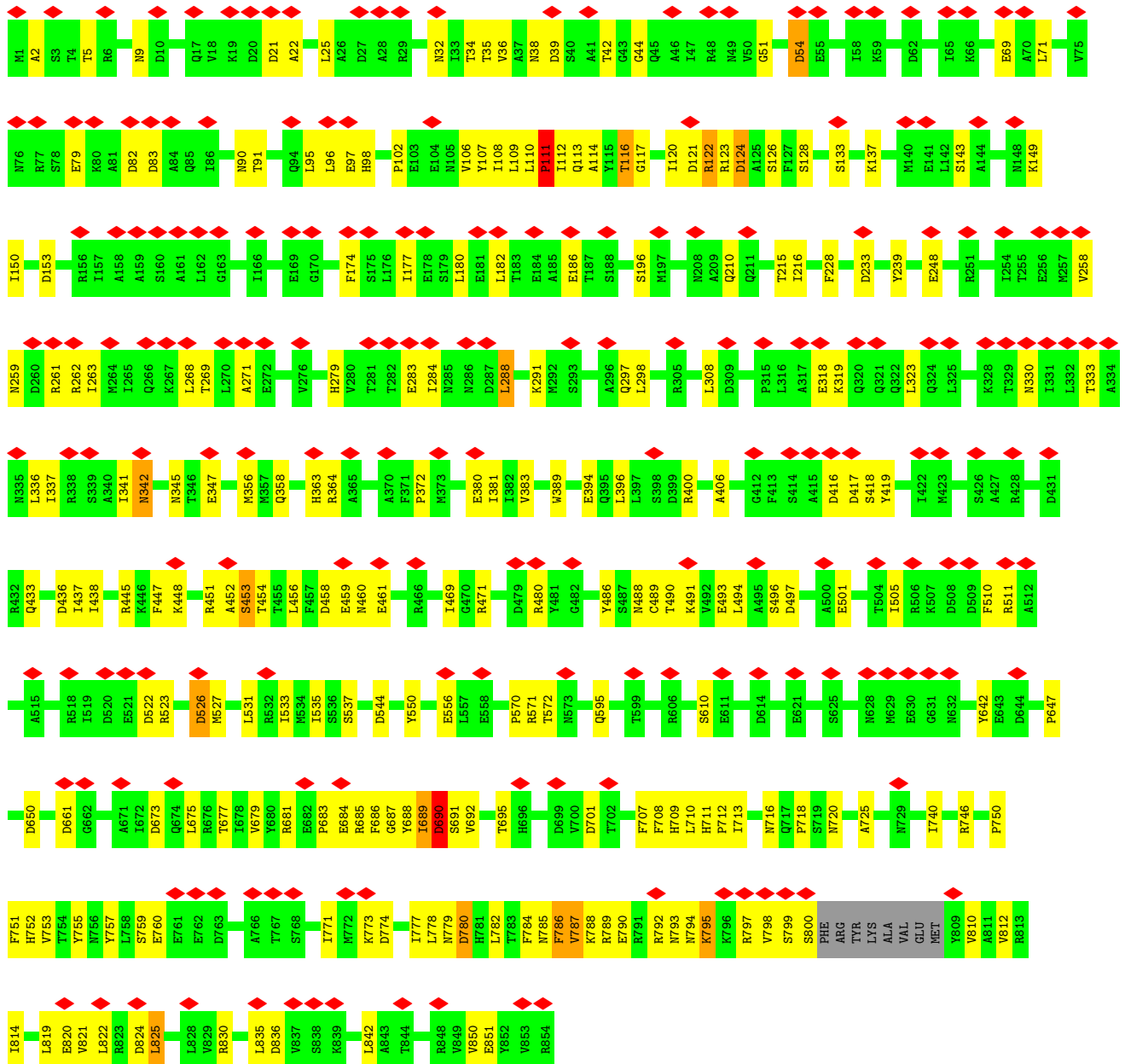
• Molecule 1: VP3

Chain E:
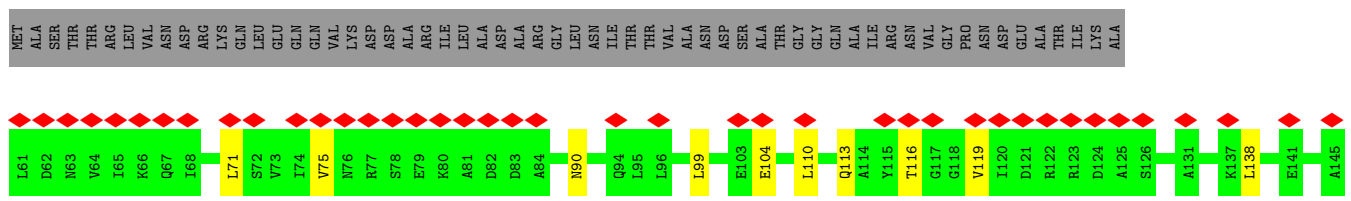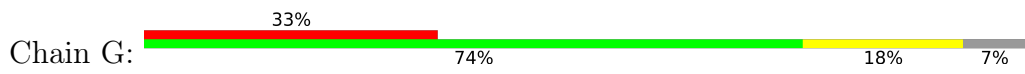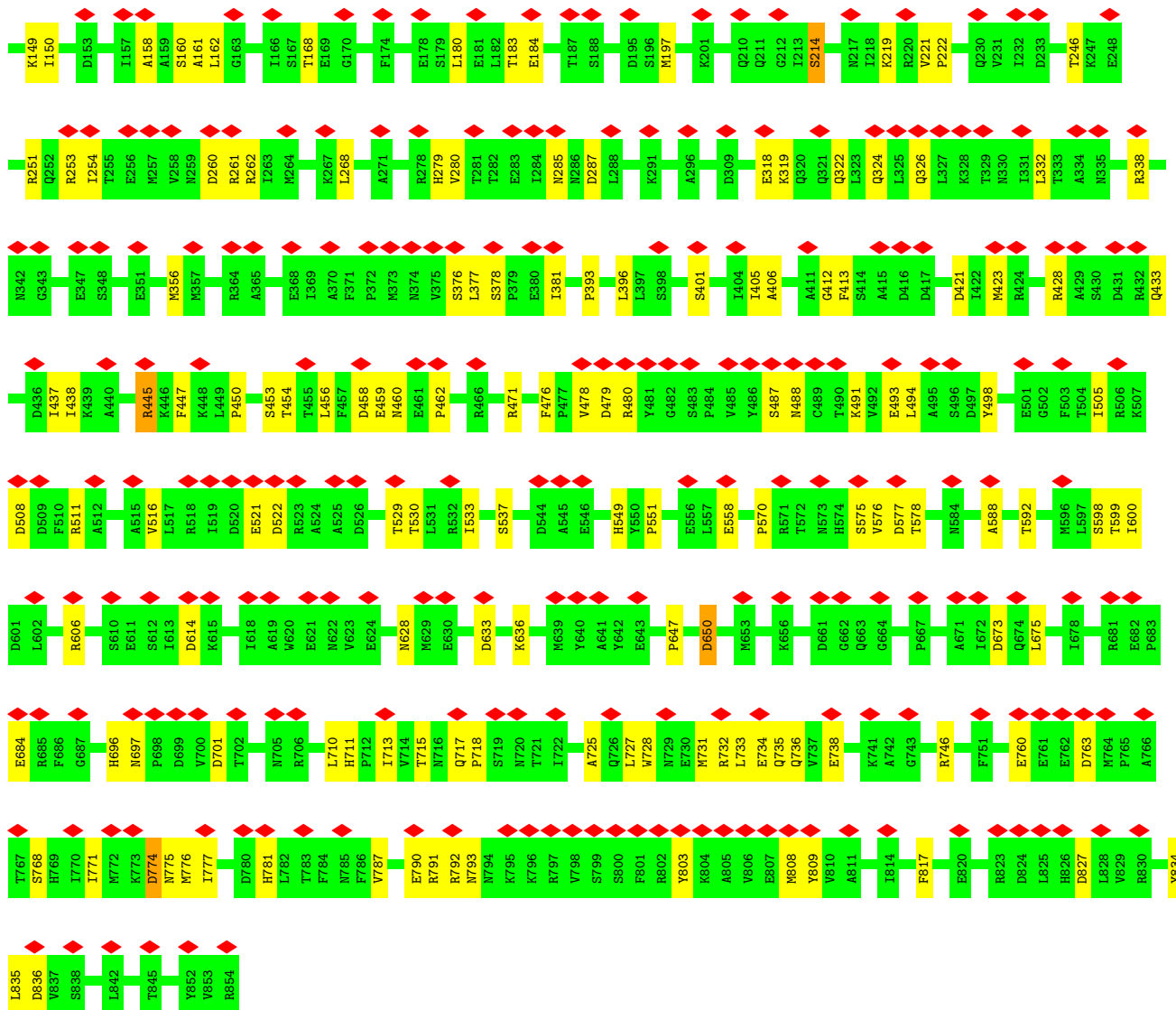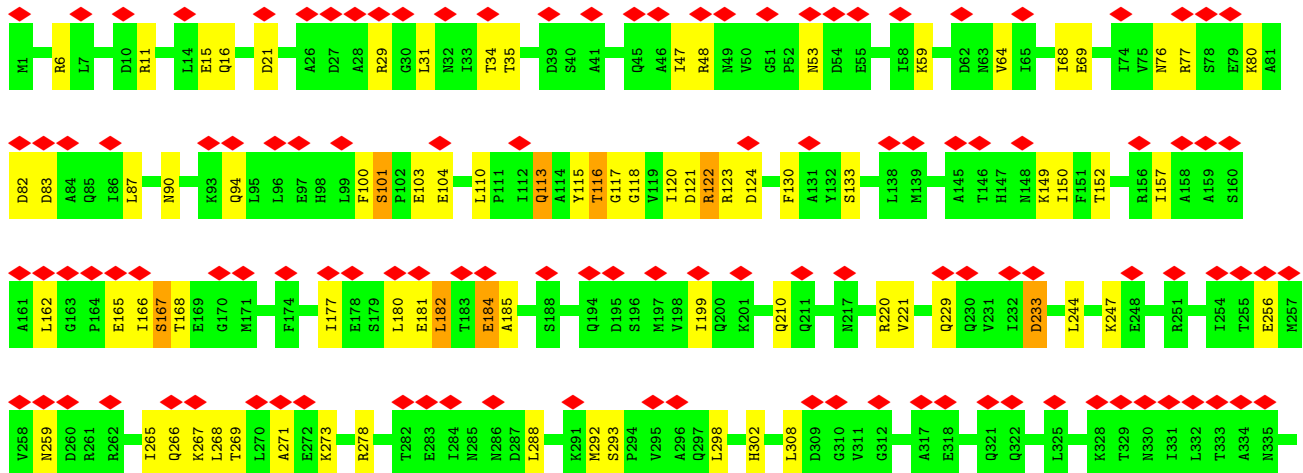
MET ALA SER THR ARG LEU VAL LEU ASN ASP ARG LYS GLN LEU GLU GLN GLN VAL LYS ASP ASP ALA ARG ILE LEU ALA ASP ALA ARG GLY LEU ASN ILE THR THR VAL ALA ASN ASP SER ALA THR GLY GLY GLN GLN ALA ILE ARG ASN VAL GLY PRO ASN ASP GLU ALA THR ILE LYS ALA

I61 D62 N63 V64 I65 K66 Q67 I68 E69 A70 L71 I74 V75 N76 R77 S78 E79 K80 A81 D82 D83 A84 L87 N90 Q94 H98 S101 P102 E103 I108 L109 L110 P111 I112 Q113 A114 Y115 T116 G117 G118 V119 I120 D121 R122 R123 D124 A125 S126 F127 S128 N129 F130 A131

K137 L138 M139 M140 E141 L142 S143 A144 A145 T146 H147 N148 K149 I150 A158 A159 S160 A161 L162 E165 I166 E169 P172 L173 F174 E178 E181 L182 E184 T187 S188 R189 L190 P191 Q194 D195 S196 M197 V198 I199 A204 T205 V206 Q210 Q211 G212 N217

I218 K219 Q230 V231 I232 D233 Y239 E248 Q249 I254 T255 E256 M257 D260 I263 M264 K267 L270 A271 E272 K273 P274 Q275 R278 H279 V280 T281 T282 E283 I284 L288 F289 M292 A296 Q297 I300 R305 D309 G310 V311 G312 F313 E318 K319

Q320 Q321 Q324 L327 K328 T329 N330 I331 L332 N335 R338 S339 N345 T346 E347 S348 N349 L350 E351 I354 K355 M356 M357 Q358 L362 H363 R364 E368 I369 A370 M373 N374 V375 S376 P379 E380 I381 Q384 W389 I392 P393 E394 L397 S398 D399 R400

S401 N402 F403 I404 I405 A406 G412 D416 D417 S418 Y419 A420 D421 I422 M423 R424 R425 R428 A429 S430 D431 R432 Q433 I437 I438 K439 A440 S444 R445 K448 L449 P450 R451 A452 S453 T454 T455 L456 F457 D458 E461 P462 R471 F476 P477 V478 D479 R480 Y481 G482 S483

N488 C489 T490 L494 A495 S496 D497 Y498 N499 A500 F503 R506 K507 D508 D509 F510 R511 A512 R518 I519 D520 E521 D522 R523 A524 A525 D526 T529 R532 I533 A545 E546 H549 Y550 P551 H552 E556 L557 E558 Q559 T566 N573 H574 S575 V576 D577 T578 I579

V580 N585 A588 T589 Y590 S591 T592 I593 A594 Q595 M596 T599 I600 D601 L602 R606 Y607 G608 T609 S610 E611 K615 E621 N622 S625 M629 E630 G631 N632 D633 M639 Y640 A641 Y642 E643 D644 N645 F646 D650 F651 L655 A659 S660 D661 G664 P667

A671 I672 D673 Q674 L675 V679 Y680 R681 E682 P683 E684 R685 F686 G687 Y688 I689 N697 P698 D699 T702 N705 R706 L710 P718 I722 Q726 L727 W728 N729 E730 M731 R732 L733 E734 Q735 Q736 K741 A742 G743 R746 S759 E760 E761 E762 D763 M764 P765 A766

T767 S768 M772 K773 D774 N775 M776 I777 D780 H781 V787 K788 R789 E790 R791 R792 K795 K796 R797 V798 S799 S800 F801 R802 Y803 K804 A805 V806 E807 M808 Y809 V810 A811 V812 R813 I814 L819 E820 R823 D824 L825 H826 D827 L828 V829 R830 S831 R832 L835 D836 V837 S838 K839

L842 A843 T844 T845 V849 V850 E851 Y852 V853 R854

• Molecule 1: VP3

Chain F:

24%

71%　　　　　　　　26%

M1 A2 S3 T4 T5 R6 N9 D10 Q17 V18 K19 D20 D21 A22 L25 A26 D27 A28 R29 N32 I33 T34 T35 V36 A37 N38 D39 S40 A41 T42 G43 G44 Q45 A46 I47 R48 N49 V50 G51 D54 E55 I58 K59 D62 I65 K66 E69 A70 L71 V75

N76 R77 S78 E79 K80 A81 D82 D83 A84 Q85 I86 N90 T91 Q94 L95 L96 E97 H98 P102 E103 E104 N105 V106 Y107 I108 L109 L110 P111 I112 Q113 A114 Y115 T116 G117 I120 D121 R122 R123 D124 A125 S126 F127 S128 S133 K137 M140 E141 L142 S143 A144 N148 K149

I150 D153 R156 I157 A158 A159 S160 A161 L162 G163 I166 E169 G170 F174 S175 L176 I177 E178 S179 L180 E181 L182 T183 E184 A185 E186 T187 S188 S196 M197 N208 A209 Q210 Q211 T215 I216 F228 D233 Y239 E248 R251 I254 T255 E256 M257 V258

N259 D260 R261 R262 I263 M264 I265 Q266 K267 L268 T269 L270 A271 E272 V276 H279 V280 T281 T282 E283 I284 N285 N286 D287 L288 K291 M292 S293 A296 Q297 L298 R305 L308 D309 P315 L316 A317 E318 K319 Q320 Q321 Q322 L323 Q324 L325 K328 T329 N330 I331 L332 T333 A334

N335 L336 I337 R338 S339 A340 I341 N342 N345 T346 E347 M356 M357 Q358 H363 R364 A365 A370 F371 P372 M373 E380 I381 I382 V383 W389 E394 Q395 L396 L397 S398 D399 R400 A406 G412 F413 S414 A415 D416 D417 S418 Y419 I422 M423 S426 A427 R428 D431

R432 Q433 D436 I437 I438 R445 K446 F447 K448 R451 A452 S453 T454 T455 L456 F457 D458 E459 N460 E461 R466 I469 G470 R471 D479 R480 Y481 G482 Y486 S487 N488 C489 T490 K491 V492 E493 L494 A495 S496 D497 A500 E501 T504 I505 R506 K507 D508 D509 F510 R511 A512

A515 R518 I519 D520 E521 D522 R523 D526 M527 L531 R532 I533 M534 I535 S536 S537 D544 Y550 E556 L557 S558 P570 R571 T572 N573 Q595 T599 R606 S610 E611 D614 E621 S625 N628 M629 E630 G631 N632 Y642 E643 D644 P647

D650 D661 G662 A671 I672 D673 Q674 L675 R676 T677 I678 V679 Y680 R681 E682 P683 E684 R685 F686 G687 Y688 I689 D690 S691 V692 T695 H696 D699 V700 D701 T702 F707 F708 H709 L710 H711 P712 I713 N716 Q717 P718 S719 N720 A725 N729 I740 R746 P750

F751 H752 V753 T754 Y755 N756 Y757 L758 S759 E760 E761 E762 D763 A766 T767 S768 I771 M772 K773 D774 L777 L778 N779 D780 H781 L782 T783 F784 N785 F786 V787 K788 R789 E790 R791 R792 N793 N794 K795 K796 R797 V798 S799 S800 PHE ARG TYR LYS ALA VAL GLU MET Y809 V810 A811 V812 R813

I814 L819 E820 V821 I822 R823 D824 L825 L828 V829 R830 L835 D836 V837 S838 K839 L842 A843 T844 R848 V849 V850 E851 Y852 V853 R854

• Molecule 1: VP3

Chain G:

33%

74%　　　　18%　　　7%

MET ALA SER THR ARG VAL LEU VAL ASN ASP ARG LYS LEU GLU GLN GLN VAL LYS ASP ASP ALA ARG ILE LEU ALA ASP ALA ARG GLY LEU ASN ILE THR THR VAL ALA ASN ASP ALA THR SER ALA THR GLY GLY GLN GLN ILE ARG ASN VAL GLY PRO ASN ASP GLU ALA THR ILE LYS ALA

L61 D62 N63 V64 I65 K66 Q67 I68 L71 S72 V73 I74 V75 N76 R77 S78 E79 K80 A81 D82 D83 A84 N90 Q94 L95 L96 L99 E103 E104 L110 Q113 A114 Y115 T116 G117 G118 V119 I120 D121 R122 R123 D124 A125 S126 A131 K137 L138 E141 A145

• Molecule 1: VP3

Chain H:

• Molecule 1: VP3

Chain I:

• Molecule 1: VP3

Chain J:

• Molecule 2: VP1

Chain Z:

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	58095	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\text{Å}^2)$	25	Depositor
Minimum defocus (nm)	600	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	128440	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	33.537	Depositor
Minimum map value	-21.310	Depositor
Average map value	0.081	Depositor
Map value standard deviation	1.814	Depositor
Recommended contour level	6.0	Depositor
Map size (Å)	872.0, 872.0, 872.0	wwPDB
Map dimensions	800, 800, 800	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.09, 1.09, 1.09	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	0.32	0/6644	0.55	1/9015 (0.0%)
1	B	0.32	0/6871	0.56	1/9322 (0.0%)
1	C	0.31	0/6499	0.54	1/8818 (0.0%)
1	D	0.34	0/6871	0.55	0/9322
1	E	0.32	0/6499	0.56	2/8818 (0.0%)
1	F	0.34	0/6871	0.57	2/9322 (0.0%)
1	G	0.30	0/6499	0.53	1/8818 (0.0%)
1	H	0.32	0/6871	0.56	1/9322 (0.0%)
1	I	0.32	0/6499	0.55	1/8818 (0.0%)
1	J	0.32	0/6871	0.56	3/9322 (0.0%)
2	Z	0.40	0/10724	0.59	1/14518 (0.0%)
All	All	0.33	0/77719	0.56	14/105415 (0.0%)

There are no bond length outliers.

All (14) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	C	614	ASP	CB-CG-OD1	5.91	123.62	118.30
1	I	774	ASP	CB-CG-OD1	5.48	123.23	118.30
1	G	774	ASP	CB-CG-OD1	5.40	123.16	118.30
1	E	699	ASP	CB-CG-OD1	5.35	123.12	118.30
1	E	673	ASP	CB-CG-OD1	5.28	123.06	118.30
1	J	508	ASP	CB-CG-OD1	5.27	123.05	118.30
1	A	62	ASP	CB-CG-OD1	5.27	123.05	118.30
1	B	116	THR	CB-CA-C	-5.22	97.49	111.60
1	J	763	ASP	CB-CG-OD1	5.17	122.95	118.30
2	Z	894	ASP	CB-CA-C	-5.14	100.12	110.40
1	F	111	PRO	N-CA-CB	-5.12	96.97	102.60
1	J	458	ASP	CB-CG-OD1	5.08	122.87	118.30
1	H	458	ASP	CB-CG-OD1	5.03	122.83	118.30
1	F	786	PHE	CB-CA-C	-5.00	100.39	110.40

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	6516	0	6517	104	0
1	B	6746	0	6755	144	0
1	C	6372	0	6375	117	0
1	D	6746	0	6755	118	0
1	E	6372	0	6375	124	0
1	F	6746	0	6755	180	0
1	G	6372	0	6375	115	0
1	H	6746	0	6755	138	0
1	I	6372	0	6375	130	0
1	J	6746	0	6755	107	0
2	Z	10516	0	10497	329	0
All	All	76250	0	76289	1515	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 10.

All (1515) 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:Z:895:ASN:HB3	2:Z:905:GLN:OE1	1.66	0.96
1:F:98:HIS:HB2	1:F:112:ILE:HD11	1.44	0.96
2:Z:686:PRO:HG3	2:Z:717:LYS:HA	1.48	0.94
1:B:126:SER:HB3	1:B:129:ASN:OD1	1.68	0.93
1:E:119:VAL:HB	1:F:69:GLU:OE2	1.68	0.92
1:B:118:GLY:HA2	1:B:133:SER:OG	1.70	0.92
2:Z:462:LYS:HG3	2:Z:500:ILE:HD11	1.51	0.92
1:I:357:MET:HE2	1:I:534:MET:HG2	1.53	0.91
1:E:158:ALA:HB1	1:H:123:ARG:HH21	1.37	0.90
1:B:123:ARG:HB2	1:I:160:SER:CB	2.02	0.89
2:Z:459:LEU:HD23	2:Z:499:PRO:HD2	1.54	0.89
1:B:126:SER:C	1:B:128:SER:H	1.75	0.89
1:F:709:HIS:HB2	1:F:787:VAL:CG2	2.02	0.88

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:710:LEU:HB3	1:F:787:VAL:HG13	1.56	0.87
1:J:124:ASP:HB2	1:J:607:TYR:OH	1.75	0.86
2:Z:438:ASP:HB2	2:Z:456:GLY:HA3	1.61	0.83
1:D:126:SER:C	1:D:128:SER:H	1.85	0.81
1:B:124:ASP:HB3	1:B:607:TYR:OH	1.80	0.80
2:Z:314:ARG:HA	2:Z:459:LEU:HD22	1.64	0.80
1:F:108:ILE:HD12	1:F:819:LEU:HD11	1.63	0.80
1:F:308:LEU:HD13	1:F:570:PRO:HB3	1.64	0.80
1:F:711:HIS:HD2	1:F:713:ILE:HB	1.48	0.79
1:J:479:ASP:OD1	1:J:480:ARG:N	2.16	0.79
1:E:120:ILE:HG22	1:E:121:ASP:H	1.47	0.78
1:F:689:ILE:HG13	1:F:691:SER:O	1.83	0.78
1:E:66:LYS:HD2	1:E:305:ARG:HE	1.48	0.78
1:B:479:ASP:OD1	1:B:480:ARG:N	2.16	0.78
2:Z:1153:ARG:HB2	2:Z:1309:GLN:HE22	1.49	0.78
1:J:34:THR:HG23	1:J:35:THR:HG23	1.66	0.78
1:G:733:LEU:HD12	1:G:734:GLU:H	1.49	0.77
1:I:357:MET:CE	1:I:534:MET:HG2	2.13	0.77
2:Z:390:GLU:HB3	2:Z:391:ILE:HD12	1.67	0.77
1:B:123:ARG:HB2	1:I:160:SER:HB3	1.65	0.76
1:F:712:PRO:HG3	1:F:784:PHE:HB3	1.67	0.76
1:H:469:ILE:HD11	1:H:536:SER:HA	1.67	0.76
1:F:108:ILE:HD13	1:F:821:VAL:HG12	1.67	0.76
2:Z:457:HIS:HB2	2:Z:460:ALA:HB2	1.68	0.76
1:D:117:GLY:O	1:D:134:ILE:HG12	1.84	0.76
2:Z:522:THR:OG1	2:Z:523:GLN:OE1	2.04	0.75
1:E:160:SER:HB3	1:H:123:ARG:HB3	1.69	0.75
1:B:34:THR:HG23	1:B:35:THR:HG23	1.67	0.75
1:B:126:SER:C	1:B:128:SER:N	2.36	0.74
1:F:710:LEU:H	1:F:787:VAL:HG22	1.52	0.74
1:G:717:GLN:OE1	1:G:717:GLN:N	2.19	0.74
1:H:521:GLU:N	1:H:521:GLU:OE1	2.21	0.74
2:Z:827:ASP:HA	2:Z:895:ASN:HD21	1.51	0.74
1:F:688:TYR:HA	1:F:751:PHE:O	1.88	0.74
1:G:592:THR:HG22	1:H:53:ASN:H	1.51	0.73
1:B:308:LEU:HD13	1:B:570:PRO:HB3	1.70	0.73
1:G:160:SER:HB2	1:J:123:ARG:HB3	1.71	0.73
2:Z:819:LEU:HB2	2:Z:954:PHE:HB3	1.68	0.73
1:B:181:GLU:HG3	1:B:791:ARG:HE	1.54	0.73
2:Z:304:LEU:HD21	2:Z:328:LEU:HD11	1.71	0.73
1:B:11:ARG:HH11	1:C:618:ILE:HG23	1.53	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:318:GLU:OE1	1:C:318:GLU:N	2.21	0.72
1:F:459:GLU:OE2	1:F:480:ARG:NH1	2.22	0.72
1:H:121:ASP:HB2	1:H:124:ASP:OD1	1.89	0.72
2:Z:342:TYR:HA	2:Z:345:SER:HB3	1.71	0.72
1:H:526:ASP:OD2	1:H:571:ARG:NH2	2.22	0.72
1:H:520:ASP:OD1	1:H:521:GLU:N	2.21	0.72
1:I:318:GLU:N	1:I:318:GLU:OE1	2.23	0.72
1:G:760:GLU:OE1	1:G:793:ASN:ND2	2.22	0.72
1:J:90:ASN:HB2	1:J:149:LYS:HB3	1.72	0.71
1:D:90:ASN:HB2	1:D:149:LYS:HB3	1.72	0.71
1:B:430:SER:HB3	1:B:433:GLN:HG3	1.72	0.71
1:G:790:GLU:OE1	1:G:792:ARG:NH2	2.23	0.71
2:Z:959:ASP:OD1	2:Z:960:GLU:N	2.24	0.71
1:C:347:GLU:OE1	2:Z:665:ARG:N	2.23	0.71
1:F:120:ILE:HD13	1:F:750:PRO:HD2	1.73	0.70
1:A:318:GLU:N	1:A:318:GLU:OE1	2.23	0.70
1:H:269:THR:HG22	1:H:271:ALA:H	1.54	0.70
1:F:108:ILE:HD11	1:F:707:PHE:CZ	2.27	0.70
2:Z:512:VAL:HG11	2:Z:568:ARG:HB3	1.74	0.70
2:Z:924:ARG:NH2	2:Z:976:GLU:OE1	2.24	0.70
1:D:126:SER:C	1:D:128:SER:N	2.44	0.70
1:D:318:GLU:N	1:D:318:GLU:OE2	2.25	0.70
1:G:262:ARG:HE	1:G:462:PRO:HG3	1.55	0.70
1:D:346:THR:HG22	1:D:562:ALA:HB1	1.73	0.70
2:Z:682:ALA:HB1	2:Z:758:PRO:HA	1.74	0.70
1:C:733:LEU:O	1:C:734:GLU:HG3	1.92	0.69
1:A:493:GLU:OE1	1:A:493:GLU:N	2.25	0.69
1:F:122:ARG:O	1:F:123:ARG:HB2	1.90	0.69
1:F:448:LYS:NZ	1:F:493:GLU:OE2	2.24	0.69
1:J:269:THR:HG22	1:J:271:ALA:H	1.55	0.69
1:C:90:ASN:HB2	1:C:149:LYS:HB3	1.73	0.69
1:F:34:THR:HG23	1:F:35:THR:HG23	1.73	0.69
1:I:297:GLN:HE21	1:I:358:GLN:HE22	1.37	0.69
1:A:219:LYS:HG3	1:A:836:ASP:HB2	1.73	0.69
1:B:126:SER:O	1:B:128:SER:N	2.26	0.69
1:H:210:GLN:N	1:H:210:GLN:OE1	2.20	0.69
1:B:24:ILE:HD11	1:D:260:ASP:HB3	1.74	0.69
1:G:219:LYS:HG3	1:G:836:ASP:HB2	1.73	0.69
1:F:180:LEU:HD23	1:F:182:LEU:HD21	1.73	0.69
1:J:378:SER:HB3	1:J:381:ILE:HG13	1.75	0.69
2:Z:418:GLU:OE2	2:Z:1057:ARG:NH2	2.24	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:309:ASP:HB2	2:Z:530:LYS:HD2	1.73	0.69
1:D:266:GLN:N	1:D:266:GLN:OE1	2.26	0.69
1:H:459:GLU:OE1	1:H:480:ARG:NH1	2.25	0.69
1:J:258:VAL:O	1:J:854:ARG:NH2	2.26	0.69
1:F:683:PRO:HA	1:F:688:TYR:CE1	2.28	0.68
1:C:506:ARG:HD3	1:C:507:LYS:H	1.58	0.68
1:I:355:LYS:NZ	1:I:554:ALA:O	2.25	0.68
1:G:260:ASP:OD1	1:G:262:ARG:N	2.27	0.68
2:Z:920:GLU:OE2	2:Z:924:ARG:NH1	2.26	0.68
1:F:688:TYR:O	1:F:689:ILE:C	2.32	0.68
1:C:689:ILE:HD13	1:C:814:ILE:HD12	1.76	0.68
1:C:790:GLU:OE1	1:C:792:ARG:NH2	2.27	0.68
1:D:210:GLN:OE1	1:D:210:GLN:N	2.27	0.68
1:D:120:ILE:HD11	1:D:750:PRO:HB2	1.74	0.67
1:G:459:GLU:OE1	1:G:459:GLU:N	2.28	0.67
1:B:123:ARG:HB2	1:I:160:SER:HB2	1.74	0.67
1:C:530:THR:HG21	1:C:571:ARG:HA	1.75	0.67
1:G:160:SER:CB	1:J:123:ARG:HB3	2.25	0.67
1:E:160:SER:CB	1:H:123:ARG:HB3	2.23	0.67
2:Z:129:HIS:HD2	2:Z:131:PRO:HD3	1.60	0.67
1:J:494:LEU:O	1:J:507:LYS:NZ	2.27	0.67
1:I:518:ARG:HG2	1:I:518:ARG:HH11	1.59	0.67
1:I:760:GLU:OE2	1:I:802:ARG:NH2	2.28	0.67
1:B:21:ASP:HA	1:B:24:ILE:HG22	1.76	0.67
1:C:319:LYS:NZ	1:C:516:VAL:O	2.28	0.67
1:F:107:TYR:HB2	1:F:822:LEU:HB2	1.77	0.67
2:Z:493:ARG:HH21	2:Z:582:ILE:HD11	1.60	0.67
2:Z:1362:ARG:HH21	2:Z:1366:PRO:HA	1.60	0.67
1:D:126:SER:O	1:D:128:SER:N	2.28	0.66
1:F:108:ILE:HD11	1:F:707:PHE:CE2	2.31	0.66
1:F:692:VAL:HG21	1:F:782:LEU:CD1	2.25	0.66
1:H:34:THR:HG23	1:H:35:THR:HG23	1.76	0.66
1:F:108:ILE:HG23	1:F:819:LEU:HD12	1.77	0.66
1:H:690:ASP:OD1	1:H:691:SER:N	2.29	0.66
1:J:851:GLU:N	1:J:851:GLU:OE1	2.28	0.66
1:D:14:LEU:O	1:D:18:VAL:HG12	1.95	0.66
1:E:272:GLU:N	1:E:272:GLU:OE2	2.28	0.66
1:G:261:ARG:NH1	1:J:431:ASP:OD2	2.28	0.66
1:B:269:THR:HG22	1:B:271:ALA:H	1.61	0.66
1:B:332:LEU:HD22	2:Z:1227:VAL:HG11	1.78	0.66
1:E:456:LEU:HD23	1:E:471:ARG:HD3	1.76	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:647:PRO:HG2	1:H:650:ASP:HB2	1.77	0.66
1:A:378:SER:HB3	1:A:381:ILE:HG12	1.76	0.65
1:C:851:GLU:OE2	1:C:852:TYR:N	2.30	0.65
2:Z:441:PHE:CZ	2:Z:461:HIS:HA	2.32	0.65
2:Z:1045:THR:O	2:Z:1049:ILE:HG13	1.97	0.65
1:F:690:ASP:OD1	1:F:691:SER:N	2.29	0.65
1:I:529:THR:O	1:I:533:ILE:HG23	1.97	0.65
1:D:116:THR:OG1	1:D:117:GLY:N	2.30	0.65
2:Z:387:PHE:HB2	2:Z:458:LEU:HD21	1.78	0.65
1:D:666:HIS:HD2	1:D:669:ALA:H	1.43	0.65
1:H:177:ILE:HD13	1:H:182:LEU:HD13	1.79	0.65
1:H:220:ARG:HG2	1:H:220:ARG:HH11	1.61	0.65
2:Z:259:PRO:HD2	2:Z:261:ARG:HH22	1.62	0.65
1:I:530:THR:HA	1:I:533:ILE:HG12	1.79	0.65
2:Z:554:THR:HG23	2:Z:998:ARG:HB3	1.79	0.65
1:F:711:HIS:CD2	1:F:713:ILE:HB	2.31	0.64
1:I:90:ASN:HB2	1:I:149:LYS:HB3	1.79	0.64
1:A:90:ASN:HB2	1:A:149:LYS:HB3	1.79	0.64
2:Z:61:PHE:HE2	2:Z:1060:LYS:HG2	1.61	0.64
1:A:532:ARG:NH1	1:D:501:GLU:OE1	2.30	0.64
2:Z:1021:PHE:HB3	2:Z:1044:ILE:HG21	1.79	0.64
1:G:732:ARG:NH1	1:H:267:LYS:O	2.30	0.64
1:A:733:LEU:O	1:A:734:GLU:HG3	1.98	0.64
1:C:768:SER:OG	1:C:779:ASN:ND2	2.31	0.64
1:B:760:GLU:HG2	1:B:793:ASN:HD21	1.62	0.64
2:Z:719:PRO:HB2	2:Z:721:LEU:HG	1.80	0.64
1:B:431:ASP:OD2	1:I:261:ARG:NH2	2.31	0.64
1:C:732:ARG:HG3	1:C:733:LEU:O	1.98	0.64
1:A:526:ASP:OD2	1:A:571:ARG:NH2	2.30	0.64
2:Z:129:HIS:CD2	2:Z:131:PRO:HD3	2.33	0.64
1:E:90:ASN:HB2	1:E:149:LYS:HB3	1.80	0.63
1:E:297:GLN:NE2	1:E:358:GLN:OE1	2.31	0.63
1:G:732:ARG:NH2	1:G:734:GLU:OE2	2.31	0.63
1:H:21:ASP:OD2	1:I:123:ARG:NH2	2.32	0.63
1:B:116:THR:OG1	1:B:137:LYS:NZ	2.31	0.63
1:I:713:ILE:HD11	1:I:817:PHE:HB3	1.80	0.63
2:Z:80:LEU:HD11	2:Z:1103:ILE:HD11	1.80	0.63
2:Z:1233:GLN:HA	2:Z:1248:ARG:HD2	1.80	0.63
2:Z:1126:ILE:HB	2:Z:1197:ASN:HD21	1.61	0.63
2:Z:1207:ASN:OD1	2:Z:1208:GLY:N	2.32	0.63
1:F:526:ASP:OD2	1:F:571:ARG:NH2	2.31	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:696:HIS:CD2	1:G:697:ASN:HD22	2.17	0.63
2:Z:1141:ILE:HG13	2:Z:1144:LEU:HD22	1.80	0.63
1:C:248:GLU:OE2	1:C:249:GLN:NE2	2.31	0.63
1:F:269:THR:HG22	1:F:271:ALA:H	1.63	0.63
2:Z:513:MET:HG3	2:Z:594:THR:HG21	1.79	0.63
2:Z:1116:ASP:N	2:Z:1116:ASP:OD1	2.31	0.63
1:B:682:GLU:OE1	1:B:818:GLN:NE2	2.26	0.63
1:I:824:ASP:OD1	1:I:825:LEU:N	2.31	0.63
1:J:122:ARG:HG2	1:J:726:GLN:HB2	1.80	0.63
1:H:122:ARG:HG2	1:H:726:GLN:HB2	1.79	0.63
2:Z:208:ARG:HG3	2:Z:209:VAL:HG23	1.80	0.63
1:B:103:GLU:O	1:B:791:ARG:NH1	2.32	0.62
1:G:90:ASN:HB2	1:G:149:LYS:HB3	1.81	0.62
2:Z:312:ARG:HE	2:Z:504:THR:HG21	1.64	0.62
1:B:250:ARG:O	1:B:254:ILE:HD12	1.99	0.62
1:C:251:ARG:O	1:C:255:THR:HG23	1.98	0.62
1:C:351:GLU:HA	2:Z:850:ILE:HG12	1.80	0.62
1:H:298:LEU:HD22	1:H:642:TYR:CE2	2.34	0.62
2:Z:799:ILE:HD12	2:Z:801:HIS:CE1	2.34	0.62
1:A:461:GLU:HG2	1:A:576:VAL:HG21	1.80	0.62
1:E:248:GLU:OE2	1:E:249:GLN:NE2	2.32	0.62
1:F:677:THR:O	1:F:681:ARG:HG2	1.99	0.62
1:H:29:ARG:NH1	1:H:29:ARG:HA	2.14	0.62
1:H:87:LEU:HD11	1:H:278:ARG:HB2	1.80	0.62
1:G:260:ASP:OD1	1:G:261:ARG:N	2.32	0.62
1:G:445:ARG:HD2	1:G:445:ARG:N	2.14	0.62
1:F:709:HIS:HB2	1:F:787:VAL:HG22	1.80	0.62
2:Z:396:MET:SD	2:Z:1029:SER:OG	2.57	0.62
1:A:689:ILE:HD13	1:A:814:ILE:HD12	1.80	0.62
2:Z:716:GLN:HB2	2:Z:1188:PRO:HD3	1.81	0.62
2:Z:733:THR:HG22	2:Z:762:PRO:HB2	1.80	0.62
1:D:406:ALA:HB1	1:D:438:ILE:HG21	1.81	0.61
1:G:508:ASP:HB3	1:G:511:ARG:HH21	1.64	0.61
2:Z:940:ASP:OD1	2:Z:940:ASP:N	2.34	0.61
1:B:288:LEU:O	1:B:291:LYS:NZ	2.33	0.61
1:A:123:ARG:HH22	1:J:17:GLN:NE2	1.99	0.61
2:Z:466:CYS:O	2:Z:470:ILE:HG13	2.01	0.61
1:C:169:GLU:HG3	1:C:832:ARG:HH21	1.64	0.61
1:D:308:LEU:HD13	1:D:570:PRO:HB3	1.82	0.61
1:A:323:LEU:HD23	1:A:341:ILE:HD13	1.81	0.61
2:Z:966:GLU:OE2	2:Z:966:GLU:N	2.31	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:31:LEU:HD23	1:B:31:LEU:H	1.66	0.61
1:G:733:LEU:O	1:G:734:GLU:HG3	2.01	0.61
1:F:792:ARG:HG3	1:F:792:ARG:HH11	1.65	0.61
2:Z:1043:ASP:OD1	2:Z:1044:ILE:N	2.34	0.61
1:A:506:ARG:NH2	1:I:328:LYS:HG3	2.15	0.60
1:G:445:ARG:HD2	1:G:445:ARG:H	1.66	0.60
1:B:378:SER:HB3	1:B:381:ILE:HG12	1.82	0.60
1:D:91:THR:HG22	1:D:153:ASP:HB3	1.83	0.60
2:Z:540:LYS:HD3	2:Z:1257:ASP:HB2	1.83	0.60
1:E:210:GLN:N	1:E:210:GLN:OE1	2.31	0.60
1:H:488:ASN:OD1	1:H:489:CYS:N	2.34	0.60
1:F:112:ILE:HG22	1:F:113:GLN:H	1.66	0.60
1:D:267:LYS:HZ2	1:D:269:THR:H	1.50	0.60
1:I:733:LEU:HD12	1:I:734:GLU:H	1.66	0.60
1:I:808:MET:SD	1:I:809:TYR:N	2.70	0.60
2:Z:73:ILE:HD12	2:Z:74:HIS:H	1.65	0.60
1:C:800:SER:O	1:C:804:LYS:NZ	2.34	0.60
1:F:210:GLN:N	1:F:210:GLN:OE1	2.33	0.60
1:F:692:VAL:HG21	1:F:782:LEU:HD13	1.83	0.60
1:B:406:ALA:HB1	1:B:438:ILE:HG21	1.82	0.60
1:I:250:ARG:HG2	1:I:847:ILE:HD12	1.81	0.60
1:I:798:VAL:HG12	1:I:800:SER:H	1.67	0.60
1:D:94:GLN:OE1	1:D:94:GLN:N	2.25	0.59
1:H:29:ARG:HA	1:H:29:ARG:HH11	1.67	0.59
1:I:330:ASN:OD1	1:I:331:ILE:N	2.35	0.59
1:E:121:ASP:O	1:E:122:ARG:HG2	2.01	0.59
1:E:401:SER:O	1:E:405:ILE:HG12	2.02	0.59
1:A:248:GLU:OE2	1:A:249:GLN:NE2	2.35	0.59
1:F:453:SER:OG	1:F:454:THR:N	2.34	0.59
1:H:181:GLU:O	1:H:791:ARG:NH1	2.35	0.59
1:A:699:ASP:OD2	1:A:716:ASN:ND2	2.35	0.59
1:C:494:LEU:HB2	1:C:507:LYS:HZ2	1.66	0.59
1:H:11:ARG:HE	1:I:618:ILE:HG23	1.68	0.59
1:C:733:LEU:HD12	1:C:734:GLU:H	1.66	0.59
1:G:104:GLU:HA	1:G:791:ARG:HH21	1.67	0.59
1:I:345:ASN:OD1	1:I:347:GLU:N	2.35	0.59
2:Z:801:HIS:CD2	2:Z:802:ILE:HG12	2.36	0.59
1:B:488:ASN:OD1	1:B:489:CYS:N	2.34	0.59
1:D:124:ASP:OD1	1:D:606:ARG:NH1	2.35	0.59
2:Z:311:SER:OG	2:Z:312:ARG:NH1	2.33	0.59
1:C:183:THR:HG23	1:C:185:ALA:H	1.67	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:406:ALA:HB1	1:G:438:ILE:HG21	1.84	0.59
1:G:138:LEU:HD23	1:G:675:LEU:HD21	1.84	0.58
1:H:165:GLU:OE1	1:H:165:GLU:N	2.35	0.58
1:A:150:ILE:HG21	1:A:835:LEU:HD22	1.85	0.58
1:H:822:LEU:HD23	1:H:828:LEU:HD22	1.85	0.58
1:E:595:GLN:O	1:E:599:THR:HG22	2.04	0.58
1:F:25:LEU:HD23	1:H:76:ASN:HB3	1.85	0.58
1:F:79:GLU:OE1	1:F:79:GLU:N	2.37	0.58
1:C:160:SER:OG	1:F:123:ARG:NH2	2.35	0.58
1:F:291:LYS:NZ	1:F:661:ASP:OD1	2.37	0.58
1:H:459:GLU:OE2	1:H:532:ARG:NH1	2.36	0.58
1:J:359:ALA:HB2	1:J:367:ILE:HD11	1.86	0.58
1:A:593:ILE:HG21	1:A:655:LEU:HD13	1.86	0.58
1:B:524:ALA:HA	1:B:527:MET:HG3	1.86	0.58
1:D:378:SER:HB3	1:D:381:ILE:HG12	1.85	0.58
1:F:113:GLN:HG3	1:F:686:PHE:O	2.04	0.58
2:Z:549:THR:HG22	2:Z:551:GLU:H	1.67	0.58
1:I:104:GLU:N	1:I:104:GLU:OE1	2.37	0.58
1:G:736:GLN:NE2	1:G:775:ASN:OD1	2.32	0.58
1:I:345:ASN:OD1	1:I:346:THR:N	2.36	0.58
1:F:36:VAL:HG23	1:H:302:HIS:CE1	2.39	0.58
1:F:710:LEU:O	1:F:787:VAL:N	2.34	0.58
2:Z:534:TYR:CE1	2:Z:810:VAL:HG12	2.39	0.58
1:B:71:LEU:HG	1:J:14:LEU:HG	1.87	0.57
1:E:143:SER:HG	1:E:239:TYR:HH	1.52	0.57
1:I:77:ARG:NE	1:I:77:ARG:HA	2.18	0.57
1:C:628:ASN:OD1	1:C:636:LYS:NZ	2.36	0.57
1:I:406:ALA:HB1	1:I:438:ILE:HG21	1.86	0.57
2:Z:1269:LEU:HD11	2:Z:1286:ILE:HD13	1.86	0.57
1:A:160:SER:OG	1:D:123:ARG:NH2	2.37	0.57
1:B:99:LEU:HD22	1:B:180:LEU:HD11	1.87	0.57
1:H:94:GLN:HA	1:H:229:GLN:HE22	1.70	0.57
1:E:183:THR:O	1:E:187:THR:OG1	2.20	0.57
1:J:488:ASN:OD1	1:J:489:CYS:N	2.36	0.57
2:Z:569:ILE:HD11	2:Z:588:ILE:HG22	1.86	0.57
2:Z:1417:GLN:HG2	2:Z:1418:LEU:HD23	1.86	0.57
1:A:406:ALA:HB1	1:A:438:ILE:HG21	1.85	0.57
1:A:478:VAL:HG13	1:A:482:GLY:HA2	1.87	0.57
1:B:762:GLU:OE1	1:B:762:GLU:N	2.38	0.57
1:H:406:ALA:HB1	1:H:438:ILE:HG21	1.86	0.57
2:Z:386:ARG:O	2:Z:390:GLU:HB2	2.04	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:438:ASP:CB	2:Z:456:GLY:HA3	2.34	0.57
1:I:251:ARG:NH1	1:I:266:GLN:O	2.34	0.57
1:C:380:GLU:CD	1:C:380:GLU:H	2.08	0.57
1:I:275:GLN:HG2	1:I:841:PRO:HG2	1.87	0.57
1:E:406:ALA:HB1	1:E:438:ILE:HG21	1.87	0.57
1:E:853:VAL:HG12	1:H:556:GLU:HG3	1.86	0.57
1:J:124:ASP:HA	1:J:606:ARG:HD3	1.87	0.57
1:D:633:ASP:HB3	1:D:636:LYS:HB3	1.86	0.57
1:J:116:THR:OG1	1:J:117:GLY:N	2.38	0.57
2:Z:210:VAL:HB	2:Z:1080:HIS:HB2	1.86	0.57
2:Z:483:THR:HA	2:Z:486:ASP:HB3	1.86	0.57
2:Z:661:SER:OG	2:Z:662:THR:N	2.38	0.57
1:D:23:ARG:NH1	1:F:461:GLU:OE1	2.28	0.56
1:D:479:ASP:OD1	1:D:480:ARG:N	2.27	0.56
1:F:108:ILE:HD13	1:F:821:VAL:CG1	2.35	0.56
2:Z:303:ASN:HA	2:Z:885:LEU:HD11	1.86	0.56
2:Z:827:ASP:HA	2:Z:895:ASN:ND2	2.20	0.56
2:Z:893:HIS:O	2:Z:894:ASP:HB3	2.04	0.56
1:B:96:LEU:HD23	1:B:96:LEU:H	1.70	0.56
1:B:267:LYS:HZ2	1:B:268:LEU:N	2.02	0.56
1:D:318:GLU:OE1	2:Z:645:LYS:NZ	2.31	0.56
1:F:263:ILE:HD13	1:F:851:GLU:HB3	1.85	0.56
1:B:7:LEU:HD12	1:D:68:ILE:HD12	1.87	0.56
1:C:262:ARG:HH21	1:C:462:PRO:HB3	1.71	0.56
1:F:120:ILE:HD11	1:F:122:ARG:NH1	2.20	0.56
1:G:319:LYS:NZ	1:G:516:VAL:O	2.38	0.56
1:J:102:PRO:HA	1:J:790:GLU:HA	1.86	0.56
2:Z:113:PRO:O	2:Z:114:GLN:NE2	2.34	0.56
1:D:718:PRO:HG3	1:D:746:ARG:HE	1.69	0.56
1:E:184:GLU:OE1	1:E:184:GLU:N	2.39	0.56
1:H:90:ASN:HB2	1:H:149:LYS:HB3	1.87	0.56
1:I:328:LYS:O	1:I:328:LYS:NZ	2.37	0.56
1:G:647:PRO:HG2	1:G:650:ASP:OD1	2.06	0.56
1:H:247:LYS:HG3	1:H:847:ILE:HD11	1.87	0.56
1:I:309:ASP:OD1	1:I:309:ASP:N	2.34	0.56
2:Z:211:LEU:HD22	2:Z:1205:ILE:HD11	1.86	0.56
2:Z:445:MET:SD	2:Z:445:MET:N	2.78	0.56
1:D:522:ASP:OD1	1:D:523:ARG:N	2.38	0.56
1:E:305:ARG:HG3	1:E:354:ILE:HD13	1.87	0.56
2:Z:194:LYS:HE3	2:Z:195:PRO:HD2	1.87	0.56
2:Z:894:ASP:CG	2:Z:896:ARG:H	2.08	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:319:LYS:NZ	1:A:516:VAL:O	2.38	0.56
1:F:122:ARG:CZ	1:F:725:ALA:HB3	2.36	0.56
1:A:49:ASN:O	1:A:53:ASN:ND2	2.39	0.56
1:B:416:ASP:OD1	1:B:416:ASP:N	2.38	0.56
1:E:300:ILE:HD12	1:E:362:LEU:HD11	1.86	0.56
1:C:759:SER:OG	1:C:761:GLU:OE2	2.24	0.56
1:F:689:ILE:HG23	1:F:689:ILE:O	2.06	0.56
1:I:373:MET:SD	1:I:381:ILE:HG21	2.45	0.56
1:G:378:SER:HB3	1:G:381:ILE:HG12	1.88	0.56
1:I:696:HIS:CD2	1:I:697:ASN:HD22	2.23	0.56
1:I:736:GLN:NE2	1:I:775:ASN:OD1	2.37	0.56
2:Z:286:LEU:HD22	2:Z:625:LEU:HD21	1.88	0.56
1:I:443:SER:O	1:I:443:SER:OG	2.24	0.55
2:Z:314:ARG:CA	2:Z:459:LEU:HD22	2.35	0.55
1:B:214:SER:OG	1:B:249:GLN:NE2	2.35	0.55
1:E:126:SER:O	1:E:127:PHE:HB2	2.06	0.55
1:E:169:GLU:HG3	1:E:832:ARG:HH21	1.71	0.55
1:F:713:ILE:HD11	1:F:786:PHE:CE2	2.41	0.55
1:G:433:GLN:N	1:G:433:GLN:OE1	2.39	0.55
1:H:402:ASN:OD1	1:H:451:ARG:NH2	2.39	0.55
1:J:684:GLU:CD	1:J:684:GLU:H	2.09	0.55
1:C:71:LEU:HA	1:C:74:ILE:HD12	1.87	0.55
1:E:577:ASP:OD1	1:E:578:THR:N	2.40	0.55
1:G:456:LEU:HD13	1:G:471:ARG:HD3	1.88	0.55
1:H:64:VAL:O	1:H:68:ILE:HG22	2.06	0.55
1:E:596:MET:HE1	1:E:622:ASN:HB3	1.87	0.55
1:F:710:LEU:HB3	1:F:787:VAL:CG1	2.33	0.55
1:G:577:ASP:OD1	1:G:578:THR:N	2.39	0.55
1:H:372:PRO:HG2	1:H:381:ILE:HD11	1.88	0.55
2:Z:1002:GLU:HG3	2:Z:1007:SER:HB3	1.87	0.55
1:C:219:LYS:HG3	1:C:836:ASP:HB2	1.89	0.55
1:J:124:ASP:OD1	1:J:125:ALA:N	2.40	0.55
2:Z:320:THR:OG1	2:Z:321:LEU:N	2.40	0.55
1:E:313:PHE:HB2	1:E:566:THR:HG21	1.89	0.55
1:E:733:LEU:O	1:E:734:GLU:HG3	2.07	0.55
1:I:529:THR:O	1:I:533:ILE:HG12	2.06	0.55
1:J:647:PRO:HG2	1:J:650:ASP:OD2	2.07	0.55
2:Z:798:ALA:HB1	2:Z:1341:TYR:CE1	2.42	0.55
1:E:532:ARG:NE	1:H:501:GLU:OE1	2.40	0.55
1:I:202:SER:OG	1:I:203:THR:N	2.39	0.55
1:J:453:SER:OG	1:J:454:THR:N	2.38	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:60:PRO:C	2:Z:62:THR:H	2.10	0.55
2:Z:286:LEU:HB3	2:Z:298:LEU:HD11	1.87	0.55
2:Z:508:ASP:OD2	2:Z:567:LYS:HE2	2.06	0.55
2:Z:1404:TRP:HA	2:Z:1407:ILE:HG22	1.88	0.55
1:B:123:ARG:NH2	1:I:160:SER:OG	2.40	0.55
1:B:318:GLU:O	1:B:322:GLN:HG3	2.07	0.55
1:F:406:ALA:HB1	1:F:438:ILE:HG21	1.89	0.55
1:H:116:THR:HG23	1:H:117:GLY:N	2.21	0.55
1:I:421:ASP:OD1	1:I:421:ASP:N	2.39	0.55
1:I:518:ARG:HG2	1:I:518:ARG:NH1	2.21	0.55
1:F:345:ASN:HD21	1:F:347:GLU:HB2	1.72	0.54
2:Z:1114:ASN:O	2:Z:1114:ASN:ND2	2.38	0.54
1:D:297:GLN:NE2	1:D:358:GLN:OE1	2.40	0.54
1:E:732:ARG:HG2	1:E:733:LEU:O	2.08	0.54
1:B:603:ASP:OD1	1:B:603:ASP:N	2.37	0.54
1:F:488:ASN:OD1	1:F:489:CYS:N	2.39	0.54
1:F:709:HIS:HB2	1:F:787:VAL:HG23	1.89	0.54
2:Z:807:ILE:O	2:Z:810:VAL:HG22	2.07	0.54
1:D:231:VAL:HG11	1:D:678:ILE:HD11	1.88	0.54
1:H:267:LYS:HZ2	1:H:269:THR:H	1.55	0.54
2:Z:1337:ASP:O	2:Z:1339:GLY:N	2.41	0.54
1:B:251:ARG:HD3	1:B:268:LEU:HD11	1.88	0.54
1:C:717:GLN:N	1:C:717:GLN:OE1	2.41	0.54
1:D:267:LYS:NZ	1:D:269:THR:H	2.06	0.54
1:F:108:ILE:CG2	1:F:819:LEU:HD12	2.36	0.54
1:G:376:SER:OG	1:G:377:LEU:N	2.41	0.54
1:J:523:ARG:O	1:J:527:MET:HG3	2.07	0.54
2:Z:1296:ALA:HB1	2:Z:1300:GLY:HA3	1.90	0.54
1:B:167:SER:HB2	1:B:221:VAL:HG12	1.89	0.54
1:C:611:GLU:OE1	1:C:611:GLU:N	2.41	0.54
2:Z:1411:ASN:O	2:Z:1415:ILE:HG12	2.08	0.54
1:B:372:PRO:HG2	1:B:381:ILE:HD11	1.90	0.54
1:B:709:HIS:CE1	1:B:789:ARG:HE	2.26	0.54
1:C:406:ALA:HB1	1:C:438:ILE:HG21	1.89	0.54
1:D:460:ASN:HB2	1:D:536:SER:HB3	1.89	0.54
1:G:633:ASP:N	1:G:633:ASP:OD1	2.40	0.54
1:H:101:SER:HB3	1:H:180:LEU:HD22	1.89	0.54
1:D:225:GLY:O	1:D:830:ARG:NH1	2.41	0.54
1:A:115:TYR:OH	1:A:137:LYS:HD2	2.08	0.53
1:C:65:ILE:HD11	2:Z:842:ARG:HE	1.72	0.53
1:E:160:SER:OG	1:H:123:ARG:NH2	2.41	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:67:SER:O	2:Z:71:GLN:NE2	2.40	0.53
2:Z:1300:GLY:O	2:Z:1304:VAL:HG23	2.08	0.53
2:Z:1311:PRO:HG2	2:Z:1314:LEU:HD21	1.89	0.53
1:A:808:MET:HG3	1:A:809:TYR:N	2.22	0.53
2:Z:568:ARG:NH1	2:Z:591:CYS:SG	2.81	0.53
1:G:728:TRP:CH2	1:G:736:GLN:HB2	2.42	0.53
1:J:266:GLN:OE1	1:J:266:GLN:N	2.41	0.53
2:Z:519:THR:OG1	2:Z:520:GLN:OE1	2.25	0.53
2:Z:687:LEU:HD23	2:Z:723:LYS:NZ	2.23	0.53
2:Z:1160:THR:HG22	2:Z:1161:SER:H	1.73	0.53
2:Z:1375:ASN:OD1	2:Z:1376:ARG:N	2.42	0.53
1:E:119:VAL:CB	1:F:69:GLU:OE2	2.50	0.53
1:F:102:PRO:HB3	1:F:789:ARG:O	2.09	0.53
1:H:442:LEU:HD22	1:H:449:LEU:HD12	1.90	0.53
2:Z:300:GLN:HG2	2:Z:886:GLY:HA3	1.89	0.53
2:Z:690:ARG:CG	2:Z:692:TYR:CE1	2.91	0.53
2:Z:739:ILE:HD13	2:Z:878:ARG:HB2	1.89	0.53
2:Z:1156:ARG:HB3	2:Z:1160:THR:HB	1.90	0.53
1:F:780:ASP:N	1:F:780:ASP:OD1	2.41	0.53
1:F:784:PHE:HE1	1:F:812:VAL:HG22	1.73	0.53
2:Z:546:GLU:OE2	2:Z:1236:TYR:HB3	2.09	0.53
2:Z:806:GLU:O	2:Z:810:VAL:HG13	2.09	0.53
2:Z:1198:ALA:O	2:Z:1202:VAL:HG23	2.08	0.53
1:H:82:ASP:OD1	1:H:83:ASP:N	2.42	0.53
2:Z:989:ILE:HD12	2:Z:990:ASN:H	1.74	0.53
2:Z:1025:GLU:OE1	2:Z:1026:LYS:HB2	2.08	0.53
1:E:689:ILE:HD13	1:E:814:ILE:HD12	1.89	0.53
1:F:364:ARG:NH2	1:F:544:ASP:OD1	2.42	0.53
1:F:688:TYR:O	1:F:690:ASP:N	2.42	0.53
1:G:701:ASP:HB3	1:G:715:THR:HG23	1.91	0.53
1:D:187:THR:HA	1:D:190:LEU:HD23	1.91	0.53
1:D:488:ASN:OD1	1:D:489:CYS:N	2.41	0.53
1:D:520:ASP:OD1	1:D:521:GLU:N	2.42	0.53
1:D:697:ASN:OD1	1:D:697:ASN:N	2.41	0.53
2:Z:401:ASP:O	2:Z:405:ASN:HB2	2.08	0.53
2:Z:637:PHE:HD1	2:Z:637:PHE:O	1.92	0.53
2:Z:1408:LEU:HD12	2:Z:1411:ASN:HD22	1.72	0.53
1:B:773:LYS:HE2	1:B:777:ILE:HD13	1.91	0.53
1:F:182:LEU:HB3	1:F:186:GLU:HB2	1.91	0.53
1:F:522:ASP:OD1	1:F:523:ARG:N	2.42	0.53
2:Z:1187:GLY:HA2	2:Z:1190:SER:HB2	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:76:ASN:HB3	1:J:25:LEU:HD22	1.90	0.53
1:B:127:PHE:CE2	1:B:680:TYR:HE1	2.27	0.53
1:E:433:GLN:O	1:E:437:ILE:HG12	2.08	0.53
1:E:683:PRO:HD2	1:E:684:GLU:OE2	2.08	0.53
1:F:21:ASP:OD1	1:F:22:ALA:N	2.41	0.53
1:G:412:GLY:HA3	1:G:498:TYR:CE1	2.44	0.53
1:G:733:LEU:HD12	1:G:734:GLU:N	2.21	0.53
1:J:250:ARG:HH22	1:J:279:HIS:CG	2.27	0.53
1:B:120:ILE:HD11	1:B:122:ARG:NH2	2.24	0.52
1:E:824:ASP:OD1	1:E:825:LEU:N	2.43	0.52
1:H:724:ASN:OD1	1:H:725:ALA:N	2.43	0.52
1:B:25:LEU:HD12	1:B:25:LEU:O	2.08	0.52
1:B:87:LEU:O	1:B:842:LEU:HD23	2.10	0.52
1:B:582:THR:O	1:B:586:ILE:HG23	2.10	0.52
1:C:491:LYS:HB3	1:C:493:GLU:OE1	2.09	0.52
1:F:108:ILE:CD1	1:F:821:VAL:HG12	2.36	0.52
1:G:736:GLN:HE22	1:G:776:MET:H	1.56	0.52
1:H:613:ILE:O	1:H:617:LYS:HG2	2.10	0.52
1:I:98:HIS:O	1:I:98:HIS:ND1	2.42	0.52
2:Z:326:ASN:OD1	2:Z:327:VAL:N	2.43	0.52
2:Z:411:TRP:O	2:Z:415:VAL:HG12	2.10	0.52
1:B:181:GLU:O	1:B:791:ARG:NH2	2.35	0.52
1:E:444:SER:OG	1:E:445:ARG:N	2.43	0.52
2:Z:441:PHE:HZ	2:Z:461:HIS:HA	1.73	0.52
2:Z:1371:ASP:OD2	2:Z:1406:ALA:HB1	2.09	0.52
1:C:461:GLU:HG2	1:C:576:VAL:HG21	1.92	0.52
1:C:759:SER:OG	1:C:760:GLU:N	2.42	0.52
1:I:530:THR:CA	1:I:533:ILE:HG12	2.40	0.52
2:Z:110:THR:HG22	2:Z:111:GLY:H	1.73	0.52
2:Z:462:LYS:HE3	2:Z:618:GLY:H	1.74	0.52
1:B:414:SER:OG	1:B:417:ASP:O	2.27	0.52
1:E:380:GLU:O	1:E:384:GLN:HG3	2.09	0.52
1:F:718:PRO:HG3	1:F:746:ARG:HH21	1.73	0.52
1:H:418:SER:OG	1:H:419:TYR:N	2.43	0.52
1:B:613:ILE:O	1:B:617:LYS:HG2	2.09	0.52
1:F:210:GLN:HB3	1:F:283:GLU:HG3	1.91	0.52
1:I:157:ILE:HG23	1:I:158:ALA:H	1.74	0.52
2:Z:598:ASP:N	2:Z:598:ASP:OD1	2.42	0.52
1:C:586:ILE:HD11	1:C:634:PHE:CE2	2.44	0.52
1:E:123:ARG:O	1:E:124:ASP:HB2	2.10	0.52
1:E:629:MET:HG2	1:E:632:ASN:ND2	2.24	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:372:PRO:HG2	1:F:381:ILE:HD11	1.91	0.52
1:I:297:GLN:HE21	1:I:358:GLN:NE2	2.07	0.52
1:A:461:GLU:OE2	1:A:532:ARG:HD2	2.10	0.52
1:A:808:MET:HG3	1:A:809:TYR:H	1.75	0.52
1:B:453:SER:OG	1:B:454:THR:N	2.41	0.52
1:G:279:HIS:ND1	1:G:280:VAL:O	2.43	0.52
1:H:265:ILE:HD11	1:H:849:VAL:HG23	1.91	0.52
1:H:267:LYS:NZ	1:H:269:THR:H	2.08	0.52
2:Z:1017:ASN:OD1	2:Z:1018:GLN:N	2.35	0.52
1:A:430:SER:O	1:A:430:SER:OG	2.27	0.51
1:G:628:ASN:OD1	1:G:636:LYS:NZ	2.43	0.51
1:J:790:GLU:OE2	1:J:792:ARG:NH1	2.43	0.51
2:Z:303:ASN:OD1	2:Z:304:LEU:N	2.43	0.51
1:F:712:PRO:HD3	1:F:785:ASN:O	2.10	0.51
1:J:202:SER:OG	1:J:203:THR:N	2.43	0.51
1:B:157:ILE:HB	1:B:166:ILE:HB	1.92	0.51
1:C:254:ILE:HD13	1:D:47:ILE:HD13	1.91	0.51
1:D:113:GLN:OE1	1:D:753:VAL:O	2.28	0.51
1:D:182:LEU:HB3	1:D:186:GLU:HB2	1.92	0.51
1:F:284:ILE:HD11	1:F:595:GLN:HE21	1.75	0.51
1:G:318:GLU:O	1:G:322:GLN:HG3	2.11	0.51
1:E:418:SER:OG	1:E:421:ASP:OD1	2.21	0.51
1:F:79:GLU:HA	1:F:850:VAL:HG12	1.92	0.51
1:F:91:THR:HG22	1:F:153:ASP:HB3	1.92	0.51
2:Z:1073:ARG:N	2:Z:1073:ARG:HD2	2.25	0.51
1:B:120:ILE:HD11	1:B:122:ARG:CZ	2.41	0.51
1:B:267:LYS:NZ	1:B:269:THR:H	2.09	0.51
1:C:65:ILE:HD12	1:C:66:LYS:H	1.75	0.51
1:C:279:HIS:ND1	1:C:280:VAL:O	2.44	0.51
1:D:269:THR:HB	1:D:272:GLU:HB2	1.92	0.51
1:F:460:ASN:N	1:F:460:ASN:OD1	2.43	0.51
1:G:478:VAL:HG12	1:G:479:ASP:O	2.11	0.51
1:I:717:GLN:OE1	1:I:717:GLN:N	2.34	0.51
2:Z:76:ILE:HG13	2:Z:76:ILE:O	2.10	0.51
1:A:506:ARG:HH21	1:I:328:LYS:HG3	1.73	0.51
1:B:250:ARG:HG3	1:B:254:ILE:HD11	1.92	0.51
1:C:336:LEU:HD11	1:C:505:ILE:HD11	1.92	0.51
1:D:458:ASP:HB3	1:D:471:ARG:HG2	1.93	0.51
1:E:138:LEU:HD23	1:E:675:LEU:HD21	1.91	0.51
1:H:104:GLU:HA	1:H:791:ARG:HH21	1.76	0.51
1:H:400:ARG:O	1:H:404:ILE:HG12	2.10	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:697:ASN:OD1	1:B:697:ASN:N	2.44	0.51
1:F:687:GLY:O	1:F:752:HIS:HA	2.10	0.51
1:G:421:ASP:OD1	1:G:421:ASP:N	2.43	0.51
1:H:118:GLY:HA3	1:H:130:PHE:CE1	2.46	0.51
2:Z:129:HIS:ND1	2:Z:192:PRO:HG3	2.26	0.51
2:Z:462:LYS:HB3	2:Z:499:PRO:HB2	1.91	0.51
2:Z:488:LEU:HD22	2:Z:613:LEU:HD13	1.92	0.51
2:Z:1319:LEU:O	2:Z:1323:VAL:HG12	2.10	0.51
1:D:416:ASP:OD1	1:D:416:ASP:N	2.44	0.51
1:F:112:ILE:HG22	1:F:113:GLN:N	2.26	0.51
1:F:523:ARG:O	1:F:527:MET:HG3	2.11	0.51
1:F:790:GLU:HG3	1:F:793:ASN:OD1	2.11	0.51
1:J:101:SER:HB3	1:J:180:LEU:HD22	1.92	0.51
2:Z:88:TYR:OH	2:Z:204:LYS:O	2.28	0.51
1:C:250:ARG:HH21	1:C:254:ILE:HD11	1.76	0.51
1:E:150:ILE:HG21	1:E:835:LEU:HD22	1.93	0.51
1:F:708:PHE:HA	1:F:788:LYS:HA	1.92	0.51
1:I:710:LEU:H	1:I:787:VAL:HG23	1.76	0.51
2:Z:1316:HIS:HB3	2:Z:1369:ILE:HD11	1.92	0.51
1:G:168:THR:O	1:G:168:THR:OG1	2.23	0.51
1:J:613:ILE:O	1:J:617:LYS:HG2	2.11	0.51
1:J:718:PRO:HG3	1:J:746:ARG:HH21	1.76	0.51
2:Z:403:LEU:HG	2:Z:464:LEU:HD11	1.93	0.51
2:Z:1117:ASP:OD1	2:Z:1117:ASP:N	2.44	0.51
1:E:736:GLN:NE2	1:E:776:MET:HB2	2.26	0.50
1:F:695:THR:HG21	1:F:716:ASN:ND2	2.26	0.50
1:G:119:VAL:HG13	1:H:69:GLU:OE2	2.11	0.50
1:G:262:ARG:NE	1:G:462:PRO:HG3	2.23	0.50
1:H:121:ASP:O	1:H:123:ARG:N	2.44	0.50
1:D:230:GLN:OE1	1:D:830:ARG:HG3	2.11	0.50
1:F:433:GLN:O	1:F:437:ILE:HD12	2.11	0.50
1:F:753:VAL:HG11	1:F:755:TYR:CZ	2.46	0.50
1:H:122:ARG:CG	1:H:726:GLN:HB2	2.41	0.50
1:I:736:GLN:HE22	1:I:776:MET:H	1.59	0.50
1:J:443:SER:O	1:J:443:SER:OG	2.29	0.50
2:Z:900:PRO:O	2:Z:901:TRP:HB3	2.10	0.50
1:D:458:ASP:OD2	1:D:471:ARG:NH1	2.44	0.50
2:Z:119:VAL:HG23	2:Z:123:TRP:CE3	2.47	0.50
2:Z:481:ASP:OD1	2:Z:482:GLU:N	2.44	0.50
1:A:138:LEU:HD23	1:A:675:LEU:HD21	1.93	0.50
1:A:529:THR:O	1:A:533:ILE:HG23	2.11	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:639:MET:HE3	1:I:651:PHE:CD2	2.47	0.50
2:Z:89:GLU:O	2:Z:92:THR:OG1	2.24	0.50
2:Z:494:LEU:HD21	2:Z:582:ILE:HG21	1.94	0.50
2:Z:556:LEU:HD11	2:Z:971:CYS:SG	2.52	0.50
1:B:90:ASN:HB2	1:B:149:LYS:HB3	1.93	0.50
1:C:87:LEU:HD22	1:C:150:ILE:HD11	1.94	0.50
1:D:300:ILE:HG21	1:D:362:LEU:HD21	1.92	0.50
1:D:613:ILE:O	1:D:617:LYS:HG2	2.11	0.50
1:F:533:ILE:HD11	1:F:572:THR:HG21	1.93	0.50
2:Z:288:GLN:HG2	2:Z:298:LEU:H	1.76	0.50
1:A:289:PHE:HA	1:A:292:MET:HE2	1.93	0.50
1:B:338:ARG:HG2	1:B:338:ARG:HH11	1.76	0.50
1:D:443:SER:OG	1:D:488:ASN:ND2	2.44	0.50
1:H:369:ILE:O	1:H:400:ARG:NH2	2.45	0.50
1:J:416:ASP:OD1	1:J:416:ASP:N	2.44	0.50
2:Z:876:PRO:HG2	2:Z:891:LEU:HD11	1.94	0.50
2:Z:1266:LYS:HE2	2:Z:1340:VAL:O	2.12	0.50
2:Z:1307:TYR:OH	2:Z:1420:GLU:OE2	2.30	0.50
1:C:267:LYS:HD2	1:F:550:TYR:CZ	2.47	0.50
1:D:184:GLU:HA	1:D:184:GLU:OE1	2.11	0.50
1:E:593:ILE:HG21	1:E:655:LEU:HD13	1.92	0.50
1:F:759:SER:OG	1:F:760:GLU:N	2.45	0.50
1:H:704:TYR:HD2	1:H:713:ILE:HG21	1.76	0.50
1:I:378:SER:HB3	1:I:381:ILE:HG12	1.92	0.50
2:Z:1362:ARG:NH2	2:Z:1367:LEU:H	2.10	0.50
2:Z:1371:ASP:OD1	2:Z:1371:ASP:N	2.42	0.50
1:B:116:THR:C	1:B:137:LYS:HZ3	2.14	0.50
1:E:397:LEU:HD22	1:E:401:SER:HB2	1.93	0.50
1:G:183:THR:OG1	1:G:184:GLU:N	2.45	0.50
1:I:562:ALA:O	1:I:566:THR:OG1	2.25	0.50
1:I:684:GLU:CD	1:I:684:GLU:H	2.15	0.50
1:J:389:TRP:HE1	1:J:449:LEU:HB3	1.76	0.50
1:J:533:ILE:HD11	1:J:572:THR:HG21	1.94	0.50
2:Z:810:VAL:HG11	2:Z:955:ILE:HD13	1.94	0.50
1:A:85:GLN:OE1	1:B:49:ASN:ND2	2.44	0.50
1:A:449:LEU:HD23	1:A:450:PRO:HD2	1.94	0.50
1:F:106:VAL:C	1:F:107:TYR:CG	2.85	0.50
1:G:99:LEU:HG	1:G:180:LEU:HD21	1.93	0.50
1:H:48:ARG:HG3	1:H:48:ARG:HH11	1.75	0.50
2:Z:1372:ARG:NH1	2:Z:1376:ARG:HH21	2.09	0.50
1:C:556:GLU:OE2	1:D:330:ASN:ND2	2.45	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:599:THR:HG23	1:C:600:ILE:HG12	1.94	0.49
1:E:494:LEU:HB2	1:E:507:LYS:HZ1	1.77	0.49
1:H:150:ILE:HD11	1:H:244:LEU:HD11	1.92	0.49
1:H:582:THR:O	1:H:586:ILE:HG23	2.11	0.49
1:J:639:MET:HE3	1:J:658:ILE:HD11	1.94	0.49
2:Z:668:LEU:HD12	2:Z:668:LEU:H	1.77	0.49
1:B:316:LEU:HD21	1:B:346:THR:HG23	1.94	0.49
1:B:731:MET:HG2	1:B:735:GLN:HB2	1.94	0.49
1:C:169:GLU:HG3	1:C:832:ARG:NH2	2.27	0.49
1:D:582:THR:O	1:D:586:ILE:HG23	2.12	0.49
1:E:98:HIS:O	1:E:98:HIS:ND1	2.45	0.49
1:E:338:ARG:HG2	1:E:338:ARG:HH11	1.77	0.49
1:E:850:VAL:HG12	1:F:42:THR:HG21	1.94	0.49
1:H:797:ARG:HD2	1:H:798:VAL:N	2.28	0.49
2:Z:1186:MET:SD	2:Z:1186:MET:N	2.85	0.49
1:A:300:ILE:HD12	1:A:362:LEU:HD21	1.94	0.49
1:H:346:THR:HB	1:H:349:ASN:ND2	2.28	0.49
1:I:767:THR:HG22	1:I:806:VAL:HB	1.93	0.49
2:Z:1087:THR:HG21	2:Z:1113:TRP:CG	2.47	0.49
2:Z:1186:MET:O	2:Z:1190:SER:N	2.44	0.49
1:A:606:ARG:HH21	1:J:9:ASN:HB2	1.77	0.49
1:B:79:GLU:O	1:B:848:ARG:NH1	2.45	0.49
1:G:214:SER:OG	1:G:246:THR:OG1	2.22	0.49
1:I:139:MET:HE1	1:I:675:LEU:HB2	1.94	0.49
2:Z:1285:ASP:O	2:Z:1289:VAL:HG23	2.10	0.49
1:D:457:PHE:CE1	1:D:459:GLU:HB2	2.48	0.49
1:E:219:LYS:HG3	1:E:836:ASP:HB2	1.94	0.49
2:Z:134:LEU:HB3	2:Z:698:TYR:HE2	1.77	0.49
2:Z:680:ALA:HB3	2:Z:683:SER:HB3	1.94	0.49
2:Z:1177:LEU:HA	2:Z:1180:ILE:HG12	1.94	0.49
1:A:279:HIS:ND1	1:A:280:VAL:O	2.46	0.49
1:B:633:ASP:HB3	1:B:636:LYS:HB3	1.95	0.49
1:C:138:LEU:HD22	1:C:675:LEU:HD21	1.94	0.49
1:F:297:GLN:NE2	1:F:358:GLN:OE1	2.43	0.49
1:F:712:PRO:CG	1:F:784:PHE:HB3	2.40	0.49
1:F:794:ASN:O	1:F:795:LYS:HG2	2.13	0.49
1:G:113:GLN:HE22	1:G:116:THR:HA	1.77	0.49
1:G:533:ILE:HB	1:G:576:VAL:HG22	1.94	0.49
2:Z:1066:LEU:HD23	2:Z:1083:CYS:HA	1.93	0.49
1:B:107:TYR:OH	1:B:186:GLU:OE2	2.29	0.49
1:F:710:LEU:N	1:F:787:VAL:HG22	2.23	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:774:ASP:OD1	1:H:774:ASP:N	2.46	0.49
1:I:418:SER:OG	1:I:419:TYR:N	2.46	0.49
1:A:600:ILE:HD11	1:B:61:LEU:HD13	1.94	0.49
1:D:453:SER:OG	1:D:454:THR:N	2.45	0.49
1:J:798:VAL:HG13	1:J:799:SER:H	1.78	0.49
2:Z:876:PRO:HG2	2:Z:891:LEU:CD1	2.42	0.49
2:Z:910:ASN:ND2	2:Z:950:ASP:O	2.46	0.49
2:Z:1126:ILE:HB	2:Z:1197:ASN:ND2	2.28	0.49
2:Z:1298:THR:HG23	2:Z:1299:MET:SD	2.53	0.49
1:D:529:THR:O	1:D:533:ILE:HG23	2.12	0.49
1:E:808:MET:HG3	1:E:809:TYR:H	1.77	0.49
1:J:138:LEU:HD23	1:J:675:LEU:HD22	1.95	0.49
1:B:824:ASP:OD1	1:B:825:LEU:N	2.44	0.49
1:C:726:GLN:HA	1:C:729:ASN:HB2	1.95	0.49
1:I:791:ARG:HA	1:I:794:ASN:ND2	2.28	0.49
1:A:262:ARG:HH22	1:D:376:SER:HA	1.77	0.48
1:A:369:ILE:HG13	1:A:401:SER:HB3	1.95	0.48
1:B:127:PHE:CE2	1:B:680:TYR:CE1	3.00	0.48
1:C:453:SER:OG	1:C:454:THR:N	2.45	0.48
1:D:347:GLU:HG3	2:Z:923:LYS:HB2	1.95	0.48
1:F:771:ILE:HB	1:F:777:ILE:HG22	1.95	0.48
1:F:784:PHE:CE1	1:F:812:VAL:HG22	2.48	0.48
1:G:401:SER:O	1:G:405:ILE:HG12	2.13	0.48
1:H:704:TYR:CD2	1:H:713:ILE:HG21	2.48	0.48
1:J:406:ALA:HB1	1:J:438:ILE:HG21	1.95	0.48
2:Z:61:PHE:CE2	2:Z:1060:LYS:HG2	2.45	0.48
2:Z:985:LEU:H	2:Z:985:LEU:HD23	1.77	0.48
1:A:412:GLY:HA3	1:A:498:TYR:CE1	2.48	0.48
1:B:116:THR:O	1:B:137:LYS:NZ	2.37	0.48
1:G:113:GLN:NE2	1:G:116:THR:HA	2.28	0.48
1:H:639:MET:SD	1:H:654:MET:HE1	2.53	0.48
1:C:378:SER:HB2	1:C:381:ILE:HG12	1.96	0.48
1:D:260:ASP:HA	1:D:854:ARG:HH21	1.78	0.48
1:F:799:SER:OG	1:F:800:SER:N	2.46	0.48
1:H:167:SER:OG	1:H:168:THR:N	2.46	0.48
1:H:401:SER:O	1:H:405:ILE:HG12	2.13	0.48
1:H:479:ASP:OD1	1:H:480:ARG:N	2.40	0.48
1:I:91:THR:HG22	1:I:153:ASP:HB3	1.95	0.48
1:J:490:THR:OG1	1:J:491:LYS:N	2.46	0.48
1:C:65:ILE:HD11	2:Z:842:ARG:HH21	1.79	0.48
1:C:305:ARG:HD2	2:Z:850:ILE:HD12	1.95	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:701:ASP:N	1:F:701:ASP:OD1	2.43	0.48
1:I:412:GLY:HA3	1:I:498:TYR:CE1	2.48	0.48
1:C:847:ILE:HD12	1:C:847:ILE:H	1.78	0.48
1:F:342:ASN:ND2	1:F:342:ASN:O	2.46	0.48
1:G:480:ARG:HG3	1:G:480:ARG:HH11	1.77	0.48
1:C:160:SER:C	1:C:162:LEU:H	2.16	0.48
1:G:558:GLU:OE1	1:G:558:GLU:N	2.44	0.48
1:G:808:MET:HG2	1:G:809:TYR:N	2.29	0.48
1:H:267:LYS:HZ2	1:H:268:LEU:N	2.11	0.48
1:B:115:TYR:CE2	1:B:138:LEU:HD11	2.49	0.48
1:C:668:ILE:O	1:C:672:ILE:HG13	2.14	0.48
1:D:77:ARG:NE	1:D:852:TYR:OH	2.37	0.48
1:H:269:THR:O	1:H:273:LYS:HG3	2.14	0.48
1:J:87:LEU:HD21	1:J:278:ARG:HB2	1.96	0.48
1:J:267:LYS:HZ2	1:J:268:LEU:H	1.61	0.48
2:Z:58:SER:O	2:Z:60:PRO:HD3	2.13	0.48
2:Z:188:LYS:HA	2:Z:704:ASN:HB3	1.95	0.48
2:Z:218:ASP:OD1	2:Z:218:ASP:N	2.46	0.48
2:Z:638:THR:O	2:Z:984:THR:OG1	2.31	0.48
2:Z:757:TYR:HB3	2:Z:879:TYR:CZ	2.48	0.48
2:Z:821:LEU:HB2	2:Z:989:ILE:CD1	2.43	0.48
2:Z:1013:ILE:O	2:Z:1014:LYS:HD2	2.13	0.48
2:Z:1233:GLN:HA	2:Z:1248:ARG:CD	2.43	0.48
2:Z:1363:ARG:HG2	2:Z:1363:ARG:HH11	1.79	0.48
1:B:100:PHE:HE1	1:B:110:LEU:HD21	1.79	0.48
1:F:318:GLU:N	1:F:318:GLU:OE1	2.45	0.48
1:H:122:ARG:HB3	1:H:726:GLN:HB2	1.95	0.48
1:I:711:HIS:ND1	1:I:713:ILE:HB	2.29	0.48
1:B:531:LEU:O	1:B:535:ILE:HG22	2.14	0.48
1:D:204:ALA:HB2	1:D:218:ILE:HD13	1.94	0.48
1:E:681:ARG:NE	1:E:681:ARG:HA	2.29	0.48
1:I:459:GLU:H	1:I:459:GLU:CD	2.17	0.48
2:Z:747:VAL:HG11	2:Z:751:LYS:HG3	1.96	0.48
1:B:254:ILE:HD12	1:B:254:ILE:H	1.78	0.48
1:I:725:ALA:C	1:I:727:LEU:H	2.17	0.48
2:Z:817:ILE:HG22	2:Z:998:ARG:HG3	1.96	0.48
1:A:478:VAL:CG1	1:A:482:GLY:HA2	2.44	0.47
1:B:93:LYS:HB2	1:B:93:LYS:HE2	1.68	0.47
1:B:318:GLU:H	1:B:318:GLU:CD	2.17	0.47
1:B:718:PRO:HG3	1:B:746:ARG:HE	1.79	0.47
1:E:120:ILE:HG22	1:E:121:ASP:N	2.24	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:25:LEU:HD12	1:F:25:LEU:O	2.14	0.47
1:F:835:LEU:HD12	1:F:836:ASP:H	1.79	0.47
1:G:460:ASN:HD21	1:J:424:ARG:HH12	1.62	0.47
2:Z:83:ILE:HD11	2:Z:1389:MET:SD	2.54	0.47
1:E:76:ASN:HB3	1:E:77:ARG:HH12	1.79	0.47
1:F:215:THR:C	1:F:216:ILE:HD13	2.34	0.47
1:F:713:ILE:HD11	1:F:786:PHE:CZ	2.49	0.47
2:Z:788:SER:O	2:Z:789:ASN:C	2.53	0.47
1:B:337:ILE:HD13	1:B:383:VAL:HG22	1.97	0.47
1:E:733:LEU:HD23	1:E:734:GLU:HB3	1.96	0.47
1:I:532:ARG:C	1:I:534:MET:H	2.17	0.47
2:Z:288:GLN:HE21	2:Z:297:THR:HA	1.78	0.47
2:Z:553:PRO:HB3	2:Z:1009:ILE:HD11	1.95	0.47
1:A:516:VAL:HG13	1:A:517:LEU:HD23	1.96	0.47
1:A:633:ASP:OD1	1:A:633:ASP:N	2.45	0.47
1:B:81:ALA:HB2	1:B:848:ARG:HH22	1.79	0.47
1:B:797:ARG:HD2	1:B:798:VAL:N	2.30	0.47
1:E:494:LEU:HB2	1:E:507:LYS:NZ	2.30	0.47
1:G:476:PHE:CD1	1:G:478:VAL:HB	2.50	0.47
1:H:704:TYR:CD2	1:H:713:ILE:HD13	2.49	0.47
1:I:445:ARG:HG3	1:I:446:LYS:HD3	1.97	0.47
1:C:713:ILE:HD11	1:C:817:PHE:CB	2.45	0.47
1:D:718:PRO:HG3	1:D:746:ARG:HH21	1.80	0.47
1:F:111:PRO:HD2	1:F:757:TYR:OH	2.15	0.47
1:G:71:LEU:O	1:G:75:VAL:HG22	2.14	0.47
1:I:77:ARG:HA	1:I:77:ARG:HE	1.78	0.47
1:I:138:LEU:HD22	1:I:675:LEU:HD21	1.96	0.47
1:I:400:ARG:O	1:I:404:ILE:HG12	2.14	0.47
2:Z:241:ASP:C	2:Z:243:LEU:H	2.17	0.47
2:Z:800:PRO:HG2	2:Z:1239:TYR:OH	2.15	0.47
2:Z:895:ASN:OD1	2:Z:895:ASN:N	2.48	0.47
1:A:98:HIS:O	1:A:98:HIS:ND1	2.48	0.47
1:B:454:THR:OG1	1:B:455:THR:N	2.47	0.47
1:F:54:ASP:N	1:F:54:ASP:OD1	2.48	0.47
1:F:288:LEU:HD23	1:F:288:LEU:H	1.80	0.47
1:G:732:ARG:HH21	1:G:735:GLN:HG2	1.79	0.47
1:H:31:LEU:H	1:H:31:LEU:HD23	1.80	0.47
2:Z:411:TRP:CD2	2:Z:425:LYS:HE3	2.50	0.47
2:Z:833:THR:HG21	2:Z:985:LEU:HD12	1.96	0.47
2:Z:916:MET:HG3	2:Z:981:THR:HG22	1.97	0.47
2:Z:1266:LYS:NZ	2:Z:1329:LEU:HD21	2.29	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:268:LEU:O	1:B:269:THR:OG1	2.27	0.47
1:B:460:ASN:HB2	1:B:536:SER:HB3	1.97	0.47
1:C:346:THR:HB	1:C:349:ASN:ND2	2.30	0.47
1:F:416:ASP:OD1	1:F:416:ASP:N	2.42	0.47
2:Z:203:TYR:CE1	2:Z:204:LYS:HG3	2.50	0.47
2:Z:298:LEU:HD22	2:Z:888:ILE:HD12	1.96	0.47
2:Z:516:LEU:O	2:Z:518:TYR:N	2.47	0.47
2:Z:1004:LEU:O	2:Z:1004:LEU:HD12	2.15	0.47
1:B:248:GLU:OE1	1:B:273:LYS:HB3	2.14	0.47
1:C:99:LEU:HG	1:C:180:LEU:HD11	1.97	0.47
1:C:300:ILE:HD12	1:C:362:LEU:HD11	1.96	0.47
1:C:733:LEU:C	1:C:735:GLN:H	2.17	0.47
1:F:298:LEU:HD21	1:F:642:TYR:CG	2.49	0.47
1:G:197:MET:HE3	1:G:222:PRO:HB2	1.96	0.47
1:I:327:LEU:HD23	1:I:327:LEU:HA	1.77	0.47
2:Z:690:ARG:HG3	2:Z:692:TYR:CD1	2.49	0.47
1:B:167:SER:OG	1:B:168:THR:N	2.47	0.47
1:E:160:SER:C	1:E:162:LEU:H	2.18	0.47
1:G:251:ARG:HD2	1:G:268:LEU:HG	1.95	0.47
1:A:558:GLU:HG2	1:A:559:GLN:N	2.29	0.47
1:B:115:TYR:CG	1:B:138:LEU:HD13	2.49	0.47
1:B:740:ILE:HD13	1:B:810:VAL:HG21	1.97	0.47
1:C:760:GLU:OE1	1:C:793:ASN:ND2	2.46	0.47
1:E:412:GLY:HA3	1:E:498:TYR:CE1	2.49	0.47
1:E:728:TRP:CH2	1:E:736:GLN:HB2	2.50	0.47
1:F:531:LEU:O	1:F:535:ILE:HG22	2.14	0.47
1:J:267:LYS:HZ2	1:J:268:LEU:N	2.13	0.47
2:Z:692:TYR:HA	2:Z:711:GLU:HG3	1.96	0.47
2:Z:1203:MET:HE3	2:Z:1203:MET:HB3	1.78	0.47
1:A:257:MET:HE3	1:A:466:ARG:HA	1.96	0.46
1:D:27:ASP:OD1	1:D:27:ASP:N	2.45	0.46
1:F:150:ILE:HG21	1:F:842:LEU:HD21	1.97	0.46
1:G:160:SER:HB2	1:J:123:ARG:O	2.14	0.46
1:G:537:SER:O	1:G:537:SER:OG	2.33	0.46
1:J:167:SER:OG	1:J:168:THR:N	2.47	0.46
1:D:347:GLU:CG	2:Z:923:LYS:HB2	2.46	0.46
1:E:196:SER:O	1:E:196:SER:OG	2.34	0.46
1:E:289:PHE:HA	1:E:292:MET:HE2	1.97	0.46
1:E:596:MET:CE	1:E:622:ASN:HB3	2.44	0.46
1:F:2:ALA:O	1:F:5:THR:OG1	2.22	0.46
1:G:450:PRO:HA	1:G:488:ASN:OD1	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:480:ARG:NH2	1:J:418:SER:OG	2.48	0.46
1:I:645:ASN:OD1	1:J:326:GLN:NE2	2.49	0.46
1:A:445:ARG:HD3	1:A:445:ARG:N	2.30	0.46
1:B:773:LYS:HG3	1:B:774:ASP:H	1.80	0.46
1:E:529:THR:O	1:E:533:ILE:HG23	2.16	0.46
1:J:251:ARG:NH2	1:J:265:ILE:O	2.49	0.46
1:J:269:THR:HG22	1:J:271:ALA:N	2.29	0.46
1:J:697:ASN:OD1	1:J:697:ASN:N	2.47	0.46
2:Z:259:PRO:O	2:Z:261:ARG:NH1	2.48	0.46
1:B:412:GLY:HA3	1:B:498:TYR:CE1	2.51	0.46
1:C:694:LEU:HB2	1:C:745:VAL:HG13	1.97	0.46
1:G:521:GLU:OE1	1:I:376:SER:OG	2.29	0.46
1:I:369:ILE:HG21	1:I:557:LEU:HD13	1.98	0.46
2:Z:206:LEU:HD23	2:Z:208:ARG:NH2	2.29	0.46
2:Z:907:ASP:OD1	2:Z:908:LEU:N	2.49	0.46
1:A:400:ARG:O	1:A:404:ILE:HG12	2.16	0.46
1:D:247:LYS:HG3	1:D:847:ILE:HD11	1.98	0.46
1:E:279:HIS:ND1	1:E:280:VAL:O	2.47	0.46
1:F:798:VAL:HG13	1:F:799:SER:H	1.80	0.46
1:G:150:ILE:HG21	1:G:835:LEU:HD22	1.97	0.46
2:Z:680:ALA:HB3	2:Z:683:SER:CB	2.46	0.46
1:B:116:THR:O	1:B:137:LYS:HD3	2.15	0.46
1:H:266:GLN:HE22	1:H:268:LEU:HA	1.81	0.46
1:H:453:SER:OG	1:H:454:THR:N	2.48	0.46
2:Z:578:ARG:NH2	2:Z:579:ALA:HA	2.30	0.46
1:B:2:ALA:H	1:B:5:THR:HG23	1.81	0.46
1:D:400:ARG:O	1:D:404:ILE:HG12	2.15	0.46
1:D:505:ILE:HD12	1:D:505:ILE:HA	1.76	0.46
1:G:161:ALA:HB3	1:J:123:ARG:O	2.16	0.46
1:I:183:THR:HG22	1:I:186:GLU:HG3	1.97	0.46
1:I:728:TRP:CH2	1:I:736:GLN:HB2	2.50	0.46
2:Z:138:LYS:HD2	2:Z:1129:ILE:HD13	1.97	0.46
2:Z:796:SER:C	2:Z:798:ALA:H	2.18	0.46
1:E:497:ASP:OD2	1:E:506:ARG:NH1	2.49	0.46
1:F:177:ILE:HD13	1:F:182:LEU:HD12	1.98	0.46
1:I:586:ILE:O	1:I:589:THR:HG22	2.16	0.46
1:J:732:ARG:O	1:J:736:GLN:HG3	2.15	0.46
2:Z:802:ILE:HD11	2:Z:1257:ASP:HA	1.97	0.46
2:Z:1118:ASN:HB3	2:Z:1210:LEU:HD22	1.98	0.46
1:B:798:VAL:HG23	1:B:799:SER:H	1.81	0.46
1:D:669:ALA:O	1:D:672:ILE:HG22	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:262:ARG:HB2	1:G:262:ARG:NH1	2.31	0.46
1:I:160:SER:C	1:I:162:LEU:H	2.19	0.46
1:J:494:LEU:HD21	1:J:510:PHE:CD2	2.50	0.46
1:J:823:ARG:HD2	1:J:823:ARG:HA	1.78	0.46
2:Z:920:GLU:O	2:Z:924:ARG:HG2	2.16	0.46
1:B:124:ASP:N	1:B:124:ASP:OD1	2.47	0.46
1:C:321:GLN:HA	1:C:321:GLN:OE1	2.16	0.46
1:E:400:ARG:O	1:E:404:ILE:HG12	2.16	0.46
1:F:124:ASP:C	1:F:126:SER:H	2.17	0.46
1:G:599:THR:HG23	1:G:600:ILE:HG12	1.96	0.46
1:H:709:HIS:HB2	1:H:787:VAL:HG23	1.96	0.46
1:J:114:ALA:O	1:J:115:TYR:O	2.34	0.46
1:J:736:GLN:O	1:J:740:ILE:HG13	2.15	0.46
2:Z:569:ILE:HD13	2:Z:592:ARG:HH21	1.80	0.46
1:A:763:ASP:OD1	1:A:764:MET:N	2.49	0.45
1:A:835:LEU:HD12	1:A:835:LEU:HA	1.79	0.45
1:B:684:GLU:H	1:B:684:GLU:CD	2.20	0.45
1:C:519:ILE:HG22	1:C:521:GLU:H	1.80	0.45
1:E:77:ARG:CZ	1:E:578:THR:HG23	2.46	0.45
1:F:380:GLU:OE1	1:F:380:GLU:N	2.49	0.45
1:F:490:THR:OG1	1:F:491:LYS:N	2.49	0.45
1:H:522:ASP:OD1	1:H:522:ASP:N	2.49	0.45
1:I:732:ARG:HG3	1:I:733:LEU:N	2.31	0.45
1:A:537:SER:O	1:A:537:SER:OG	2.32	0.45
1:A:767:THR:HG21	1:A:806:VAL:HG23	1.97	0.45
1:C:443:SER:O	1:C:443:SER:OG	2.27	0.45
1:E:122:ARG:C	1:E:124:ASP:H	2.18	0.45
1:F:647:PRO:HG2	1:F:650:ASP:OD2	2.17	0.45
1:G:160:SER:HB2	1:J:123:ARG:CB	2.45	0.45
2:Z:275:TRP:HE1	2:Z:310:ALA:HB2	1.81	0.45
1:B:104:GLU:OE1	1:B:104:GLU:N	2.47	0.45
1:B:794:ASN:OD1	1:B:795:LYS:N	2.49	0.45
1:E:851:GLU:OE2	1:E:852:TYR:N	2.48	0.45
1:H:121:ASP:C	1:H:123:ARG:N	2.69	0.45
1:I:189:ARG:O	1:I:193:ILE:HG12	2.16	0.45
2:Z:266:CYS:SG	2:Z:268:HIS:CE1	3.10	0.45
2:Z:1348:ILE:HG22	2:Z:1350:ILE:HG12	1.98	0.45
1:A:54:ASP:O	1:A:58:ILE:HG23	2.16	0.45
1:A:156:ARG:HD3	1:A:165:GLU:OE2	2.16	0.45
1:B:122:ARG:O	1:B:123:ARG:C	2.53	0.45
1:B:599:THR:HG21	1:B:672:ILE:HG21	1.97	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:737:VAL:O	1:C:740:ILE:HG13	2.16	0.45
1:D:329:THR:HB	1:D:338:ARG:HH12	1.81	0.45
1:E:369:ILE:HD12	1:E:401:SER:HB3	1.97	0.45
1:G:480:ARG:HG3	1:G:480:ARG:NH1	2.31	0.45
1:G:768:SER:O	1:G:768:SER:OG	2.29	0.45
1:H:490:THR:OG1	1:H:491:LYS:N	2.49	0.45
1:H:709:HIS:CE1	1:H:789:ARG:HE	2.35	0.45
1:I:497:ASP:OD2	1:I:506:ARG:NE	2.49	0.45
2:Z:1104:ALA:O	2:Z:1108:GLY:N	2.49	0.45
1:A:400:ARG:HG3	1:A:428:ARG:HD2	1.98	0.45
1:B:194:GLN:O	1:B:194:GLN:NE2	2.50	0.45
1:C:160:SER:HB3	1:F:123:ARG:HB3	1.99	0.45
1:I:449:LEU:HD23	1:I:449:LEU:HA	1.76	0.45
1:J:96:LEU:HD23	1:J:96:LEU:H	1.81	0.45
1:B:267:LYS:HZ2	1:B:268:LEU:H	1.65	0.45
1:B:283:GLU:C	1:B:284:ILE:HD12	2.37	0.45
1:C:684:GLU:CD	1:C:684:GLU:H	2.20	0.45
1:D:93:LYS:NZ	1:D:93:LYS:HB3	2.32	0.45
1:D:684:GLU:CD	1:D:684:GLU:H	2.15	0.45
1:E:389:TRP:O	1:E:451:ARG:NH1	2.49	0.45
1:F:336:LEU:HD21	1:F:505:ILE:HG22	1.99	0.45
1:F:456:LEU:HD13	1:F:471:ARG:HE	1.81	0.45
1:G:423:MET:HE1	1:G:428:ARG:HH22	1.80	0.45
1:I:219:LYS:HG3	1:I:836:ASP:HB2	1.98	0.45
1:I:791:ARG:HA	1:I:794:ASN:HD22	1.81	0.45
1:J:150:ILE:HD11	1:J:244:LEU:HD11	1.98	0.45
2:Z:257:ALA:C	2:Z:258:PHE:HD1	2.20	0.45
2:Z:259:PRO:N	2:Z:261:ARG:HH12	2.15	0.45
1:C:529:THR:O	1:C:533:ILE:HG23	2.17	0.45
1:D:701:ASP:HB3	1:D:715:THR:CG2	2.47	0.45
1:F:2:ALA:HB1	1:G:673:ASP:OD2	2.16	0.45
1:F:90:ASN:HB3	1:F:149:LYS:HB3	1.98	0.45
1:F:740:ILE:HD13	1:F:810:VAL:HG21	1.99	0.45
1:G:711:HIS:ND1	1:G:713:ILE:HB	2.31	0.45
1:H:199:ILE:HG12	1:H:221:VAL:HG22	1.99	0.45
1:H:378:SER:HB3	1:H:381:ILE:HG12	1.98	0.45
1:I:530:THR:HA	1:I:533:ILE:CG1	2.45	0.45
1:B:122:ARG:O	1:B:124:ASP:N	2.49	0.45
1:B:761:GLU:N	1:B:761:GLU:OE1	2.50	0.45
1:E:272:GLU:HA	1:E:275:GLN:HG3	1.99	0.45
1:E:482:GLY:HA2	1:E:521:GLU:HG3	1.99	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:418:SER:OG	1:F:419:TYR:N	2.48	0.45
1:F:708:PHE:HB3	1:F:787:VAL:O	2.16	0.45
1:H:244:LEU:HD23	1:H:244:LEU:HA	1.80	0.45
1:H:412:GLY:HA3	1:H:498:TYR:CE1	2.52	0.45
2:Z:687:LEU:HD23	2:Z:723:LYS:HZ1	1.79	0.45
2:Z:690:ARG:HG3	2:Z:692:TYR:CE1	2.51	0.45
2:Z:971:CYS:SG	2:Z:972:ALA:N	2.90	0.45
1:A:284:ILE:HG23	1:A:288:LEU:HD23	1.99	0.45
1:D:140:MET:HE1	1:D:626:VAL:HG13	1.98	0.45
1:F:121:ASP:N	1:F:121:ASP:OD1	2.50	0.45
1:H:157:ILE:HB	1:H:166:ILE:HB	1.98	0.45
1:J:210:GLN:N	1:J:210:GLN:OE1	2.50	0.45
1:D:259:ASN:N	1:D:259:ASN:OD1	2.49	0.45
1:D:265:ILE:HD11	1:D:849:VAL:HA	1.98	0.45
1:F:108:ILE:HD12	1:F:819:LEU:CD1	2.38	0.45
1:F:228:PHE:CE1	1:F:685:ARG:HG3	2.52	0.45
1:G:160:SER:C	1:G:162:LEU:H	2.20	0.45
1:G:588:ALA:O	1:G:592:THR:HG23	2.17	0.45
1:G:718:PRO:HG3	1:G:746:ARG:CZ	2.47	0.45
1:I:108:ILE:HD12	1:I:821:VAL:HG12	1.99	0.45
1:I:649:LYS:O	1:I:653:MET:HG2	2.17	0.45
2:Z:349:TYR:HB2	2:Z:370:ALA:O	2.17	0.45
2:Z:989:ILE:HD12	2:Z:990:ASN:N	2.32	0.45
2:Z:1187:GLY:N	2:Z:1188:PRO:HD2	2.31	0.45
2:Z:1189:LEU:H	2:Z:1189:LEU:HD23	1.82	0.45
1:B:18:VAL:HA	1:B:21:ASP:OD1	2.17	0.44
1:B:696:HIS:CE1	1:B:740:ILE:HG22	2.52	0.44
1:C:224:VAL:HG13	1:C:828:LEU:HG	1.98	0.44
1:C:261:ARG:HH21	1:F:400:ARG:HG3	1.82	0.44
1:D:452:ALA:HA	1:D:486:TYR:HD1	1.82	0.44
1:D:702:THR:HA	1:D:705:ASN:ND2	2.32	0.44
1:E:123:ARG:O	1:E:123:ARG:HD3	2.17	0.44
1:G:221:VAL:HG11	1:G:834:TYR:CE2	2.52	0.44
1:G:725:ALA:C	1:G:727:LEU:H	2.21	0.44
1:I:300:ILE:HD12	1:I:362:LEU:HD21	1.98	0.44
1:A:421:ASP:OD1	1:A:422:ILE:N	2.50	0.44
1:A:486:TYR:HD2	1:A:490:THR:HG22	1.81	0.44
1:C:177:ILE:HD12	1:C:187:THR:HG22	1.98	0.44
1:C:177:ILE:HD11	1:C:190:LEU:HD12	1.99	0.44
1:D:386:PHE:O	1:D:390:MET:HG2	2.16	0.44
1:D:490:THR:OG1	1:D:491:LYS:N	2.50	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:498:TYR:HB3	1:D:505:ILE:HG22	1.99	0.44
1:E:169:GLU:HG3	1:E:832:ARG:NH2	2.32	0.44
1:E:394:GLU:HG3	1:E:402:ASN:HD21	1.82	0.44
1:E:398:SER:OG	1:E:399:ASP:N	2.51	0.44
1:F:116:THR:OG1	1:F:117:GLY:N	2.44	0.44
1:G:447:PHE:HD1	1:G:494:LEU:HD12	1.82	0.44
1:G:710:LEU:HD13	1:G:803:TYR:CG	2.52	0.44
1:H:718:PRO:HG3	1:H:746:ARG:HE	1.83	0.44
1:I:148:ASN:N	1:I:148:ASN:OD1	2.50	0.44
2:Z:312:ARG:NE	2:Z:504:THR:HG21	2.32	0.44
2:Z:584:SER:O	2:Z:588:ILE:HG23	2.17	0.44
2:Z:1383:MET:HG3	2:Z:1393:ILE:HD11	1.98	0.44
1:A:507:LYS:HB2	1:A:507:LYS:NZ	2.32	0.44
1:B:79:GLU:HA	1:B:850:VAL:HG12	1.98	0.44
1:B:385:CYS:SG	1:B:408:VAL:HG11	2.58	0.44
1:C:136:SER:O	1:C:140:MET:HG3	2.18	0.44
1:C:690:ASP:OD1	1:C:690:ASP:N	2.50	0.44
1:D:267:LYS:HZ2	1:D:268:LEU:N	2.15	0.44
1:E:292:MET:HG2	1:E:590:TYR:CE2	2.53	0.44
1:G:529:THR:O	1:G:533:ILE:HG23	2.17	0.44
1:J:531:LEU:O	1:J:535:ILE:HG22	2.17	0.44
2:Z:486:ASP:O	2:Z:489:ILE:N	2.50	0.44
2:Z:735:ASN:ND2	2:Z:877:PRO:HD3	2.32	0.44
1:A:655:LEU:HD23	1:A:655:LEU:HA	1.77	0.44
1:D:701:ASP:HB3	1:D:715:THR:HG23	1.99	0.44
1:H:103:GLU:CD	1:H:104:GLU:H	2.21	0.44
2:Z:517:MET:HG3	2:Z:518:TYR:CD2	2.53	0.44
1:D:124:ASP:HB2	1:D:607:TYR:OH	2.17	0.44
1:E:392:ILE:O	1:E:393:PRO:O	2.35	0.44
1:H:6:ARG:HE	1:I:606:ARG:HH12	1.65	0.44
1:H:617:LYS:HD2	1:H:640:TYR:CZ	2.53	0.44
1:I:371:PHE:CE2	1:I:557:LEU:HD22	2.53	0.44
1:J:350:LEU:O	1:J:354:ILE:HG12	2.18	0.44
2:Z:273:GLU:H	2:Z:273:GLU:CD	2.20	0.44
2:Z:371:ASN:ND2	2:Z:373:ASP:HB3	2.32	0.44
2:Z:691:ILE:HG23	2:Z:713:SER:HA	1.99	0.44
2:Z:834:GLU:O	2:Z:838:GLU:HB2	2.18	0.44
1:A:394:GLU:OE1	1:A:435:TYR:OH	2.23	0.44
1:B:767:THR:HB	1:B:783:THR:HG23	1.99	0.44
1:C:160:SER:O	1:C:162:LEU:N	2.51	0.44
1:C:450:PRO:HA	1:C:488:ASN:OD1	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:150:ILE:HG21	1:D:842:LEU:HD21	1.98	0.44
1:D:506:ARG:HA	1:D:506:ARG:HD3	1.84	0.44
1:E:160:SER:HB2	1:H:123:ARG:HB3	2.00	0.44
1:E:733:LEU:C	1:E:735:GLN:H	2.21	0.44
1:F:137:LYS:HE2	1:F:137:LYS:HB2	1.88	0.44
1:F:711:HIS:HD2	1:F:713:ILE:CB	2.23	0.44
1:I:461:GLU:HG3	1:I:462:PRO:HD2	2.00	0.44
1:I:528:PHE:HD1	1:I:531:LEU:HD23	1.83	0.44
2:Z:206:LEU:HD23	2:Z:208:ARG:HH21	1.83	0.44
2:Z:356:GLU:OE2	2:Z:362:VAL:HG11	2.18	0.44
2:Z:1059:TRP:CE2	2:Z:1091:LYS:HE2	2.51	0.44
2:Z:1119:LEU:O	2:Z:1122:THR:HG22	2.18	0.44
1:A:549:HIS:CD2	1:A:551:PRO:HD2	2.53	0.44
1:A:613:ILE:HD11	1:B:481:TYR:C	2.38	0.44
1:A:769:HIS:HB3	1:A:812:VAL:HG21	2.00	0.44
1:E:496:SER:O	1:E:507:LYS:NZ	2.51	0.44
1:E:508:ASP:HB3	1:E:511:ARG:HH21	1.82	0.44
1:F:751:PHE:CD1	1:F:780:ASP:HA	2.53	0.44
1:H:603:ASP:OD1	1:H:603:ASP:N	2.38	0.44
2:Z:785:ARG:HD2	2:Z:785:ARG:HA	1.86	0.44
1:A:281:THR:OG1	1:A:282:THR:N	2.51	0.44
1:A:515:ALA:HB2	1:C:502:GLY:HA3	2.00	0.44
1:C:323:LEU:HD12	1:C:323:LEU:HA	1.85	0.44
1:D:723:LYS:HE3	1:D:723:LYS:HA	2.00	0.44
1:E:706:ARG:HG2	1:E:706:ARG:HH11	1.83	0.44
1:E:710:LEU:HG	1:E:787:VAL:HG21	1.98	0.44
1:F:9:ASN:ND2	1:G:606:ARG:O	2.50	0.44
1:F:96:LEU:HD23	1:F:97:GLU:N	2.32	0.44
1:G:549:HIS:CD2	1:G:551:PRO:HD2	2.53	0.44
1:H:113:GLN:OE1	1:H:116:THR:HB	2.17	0.44
1:H:531:LEU:O	1:H:535:ILE:HG22	2.17	0.44
1:H:798:VAL:HG13	1:H:799:SER:H	1.82	0.44
1:J:378:SER:H	1:J:381:ILE:HD12	1.83	0.44
2:Z:391:ILE:HD12	2:Z:391:ILE:N	2.33	0.44
2:Z:516:LEU:HB3	2:Z:519:THR:HG23	1.99	0.44
2:Z:884:ALA:O	2:Z:885:LEU:HG	2.18	0.44
2:Z:1266:LYS:HZ1	2:Z:1329:LEU:HD21	1.82	0.44
1:A:272:GLU:HG2	1:A:275:GLN:NE2	2.33	0.44
1:F:760:GLU:HB3	1:F:793:ASN:ND2	2.33	0.44
1:H:100:PHE:HE1	1:H:110:LEU:HD21	1.82	0.44
2:Z:87:GLU:OE1	2:Z:1093:TYR:N	2.50	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:690:ARG:HG2	2:Z:692:TYR:HE1	1.83	0.44
2:Z:802:ILE:HD11	2:Z:1256:ASN:O	2.18	0.44
2:Z:843:ASP:N	2:Z:843:ASP:OD1	2.50	0.44
2:Z:1156:ARG:HB2	2:Z:1161:SER:HB3	1.98	0.44
1:A:448:LYS:HD2	1:A:493:GLU:OE2	2.17	0.43
1:E:679:VAL:HA	1:E:686:PHE:CE2	2.53	0.43
1:F:824:ASP:OD1	1:F:825:LEU:N	2.51	0.43
1:H:59:LYS:HE3	1:H:59:LYS:HB3	1.92	0.43
1:H:496:SER:OG	1:H:497:ASP:N	2.51	0.43
1:J:32:ASN:OD1	1:J:33:ILE:N	2.51	0.43
2:Z:54:PRO:O	2:Z:56:LEU:N	2.48	0.43
2:Z:213:PHE:HB2	2:Z:1076:ALA:O	2.18	0.43
2:Z:1335:ALA:O	2:Z:1339:GLY:HA2	2.18	0.43
1:D:107:TYR:C	1:D:108:ILE:HD13	2.39	0.43
1:D:183:THR:N	1:D:186:GLU:OE1	2.49	0.43
1:H:80:LYS:HE2	1:H:80:LYS:HB3	1.93	0.43
1:H:538:ILE:HD13	1:H:538:ILE:HA	1.85	0.43
1:H:798:VAL:HG13	1:H:799:SER:N	2.33	0.43
1:I:736:GLN:NE2	1:I:776:MET:H	2.16	0.43
2:Z:188:LYS:HE3	2:Z:703:LEU:HG	2.00	0.43
2:Z:1189:LEU:O	2:Z:1192:ILE:HG13	2.18	0.43
1:A:684:GLU:CD	1:A:684:GLU:H	2.21	0.43
1:B:711:HIS:ND1	1:B:713:ILE:HB	2.33	0.43
1:C:644:ASP:OD1	1:C:644:ASP:N	2.50	0.43
1:D:87:LEU:HD23	1:D:87:LEU:HA	1.78	0.43
1:F:445:ARG:HE	1:F:445:ARG:HB3	1.61	0.43
1:G:458:ASP:OD2	1:G:471:ARG:NH2	2.51	0.43
1:G:701:ASP:HB3	1:G:715:THR:CG2	2.48	0.43
1:I:330:ASN:OD1	1:I:332:LEU:HG	2.18	0.43
1:I:405:ILE:O	1:I:409:ILE:HG12	2.18	0.43
1:J:157:ILE:HB	1:J:166:ILE:HB	2.01	0.43
2:Z:1228:MET:HG3	2:Z:1393:ILE:HG22	2.01	0.43
1:A:54:ASP:HA	1:A:57:THR:HG22	2.00	0.43
1:A:321:GLN:O	1:A:324:GLN:HG3	2.18	0.43
1:B:178:GLU:OE1	1:B:179:SER:N	2.50	0.43
1:B:346:THR:HB	1:B:349:ASN:ND2	2.33	0.43
1:B:491:LYS:HA	1:B:491:LYS:HD3	1.81	0.43
1:B:533:ILE:HB	1:B:576:VAL:HG22	2.01	0.43
1:C:190:LEU:N	1:C:191:PRO:HD2	2.33	0.43
1:C:394:GLU:OE2	1:C:395:GLN:NE2	2.51	0.43
1:E:263:ILE:HD11	1:H:373:MET:CE	2.49	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:394:GLU:HG3	1:E:402:ASN:ND2	2.34	0.43
1:E:639:MET:HE3	1:E:651:PHE:CD2	2.54	0.43
1:F:109:LEU:N	1:F:820:GLU:O	2.50	0.43
1:G:453:SER:OG	1:G:454:THR:N	2.51	0.43
1:G:479:ASP:CG	1:G:480:ARG:H	2.22	0.43
1:H:184:GLU:OE1	1:H:185:ALA:N	2.52	0.43
1:H:466:ARG:HG3	1:H:466:ARG:HH11	1.84	0.43
1:I:476:PHE:HD2	1:I:478:VAL:HB	1.82	0.43
1:J:110:LEU:HD13	1:J:757:TYR:CD1	2.53	0.43
1:J:606:ARG:HG2	1:J:607:TYR:CD2	2.54	0.43
2:Z:607:PHE:CD2	2:Z:1014:LYS:HB3	2.53	0.43
2:Z:1013:ILE:C	2:Z:1014:LYS:HD2	2.38	0.43
1:A:43:GLY:HA2	2:Z:75:SER:OG	2.18	0.43
1:A:437:ILE:HD13	1:A:437:ILE:HA	1.84	0.43
1:H:220:ARG:HG2	1:H:220:ARG:NH1	2.30	0.43
1:J:295:VAL:HG11	1:J:639:MET:HE1	2.01	0.43
2:Z:287:THR:O	2:Z:287:THR:OG1	2.35	0.43
2:Z:487:ILE:HD12	2:Z:590:ARG:HB3	2.00	0.43
1:A:160:SER:C	1:A:162:LEU:H	2.21	0.43
1:A:728:TRP:CH2	1:A:736:GLN:HB2	2.54	0.43
1:B:422:ILE:HD13	1:B:422:ILE:HA	1.93	0.43
1:C:253:ARG:HA	1:C:253:ARG:HD3	1.82	0.43
1:C:527:MET:HG3	1:C:569:TYR:CG	2.53	0.43
1:C:532:ARG:HE	1:F:501:GLU:CD	2.21	0.43
1:D:244:LEU:HD23	1:D:244:LEU:HA	1.83	0.43
1:F:795:LYS:HE3	1:F:795:LYS:HB3	1.79	0.43
1:G:221:VAL:HG11	1:G:834:TYR:HE2	1.83	0.43
1:G:763:ASP:OD1	1:G:763:ASP:N	2.45	0.43
1:H:182:LEU:HD12	1:H:182:LEU:H	1.83	0.43
1:H:233:ASP:OD1	1:H:233:ASP:N	2.52	0.43
1:I:323:LEU:HD13	1:I:341:ILE:HD13	2.01	0.43
1:J:451:ARG:HA	1:J:451:ARG:HD2	1.73	0.43
1:C:65:ILE:HD12	1:C:66:LYS:N	2.34	0.43
1:H:373:MET:HE2	1:H:374:ASN:H	1.84	0.43
1:I:253:ARG:HA	1:I:253:ARG:HD3	1.84	0.43
1:I:501:GLU:OE1	1:I:501:GLU:N	2.52	0.43
1:J:120:ILE:HG23	1:J:120:ILE:O	2.17	0.43
1:J:263:ILE:HD13	1:J:851:GLU:HB3	2.00	0.43
2:Z:273:GLU:O	2:Z:277:GLU:HG2	2.18	0.43
1:B:122:ARG:C	1:B:124:ASP:N	2.71	0.43
1:B:244:LEU:HD23	1:B:244:LEU:HA	1.76	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:490:THR:OG1	1:B:491:LYS:N	2.52	0.43
1:C:853:VAL:HG12	1:F:556:GLU:HG3	2.01	0.43
1:D:666:HIS:CD2	1:D:669:ALA:H	2.31	0.43
1:E:397:LEU:HD22	1:E:401:SER:CB	2.48	0.43
1:E:702:THR:HA	1:E:705:ASN:OD1	2.18	0.43
1:E:836:ASP:OD1	1:E:838:SER:OG	2.31	0.43
1:F:258:VAL:HG22	1:F:258:VAL:O	2.18	0.43
1:F:319:LYS:HD2	1:F:319:LYS:HA	1.81	0.43
1:I:533:ILE:HG13	1:I:533:ILE:O	2.18	0.43
2:Z:213:PHE:HE2	2:Z:215:PRO:HB3	1.84	0.43
2:Z:693:LYS:HB3	2:Z:710:VAL:O	2.19	0.43
2:Z:789:ASN:C	2:Z:789:ASN:HD22	2.22	0.43
1:A:308:LEU:HD13	1:A:570:PRO:HB3	2.00	0.43
1:A:444:SER:O	1:A:448:LYS:NZ	2.46	0.43
1:A:725:ALA:O	1:A:726:GLN:HB2	2.18	0.43
1:D:491:LYS:N	1:D:491:LYS:HD3	2.33	0.43
1:E:110:LEU:HD13	1:E:110:LEU:HA	1.91	0.43
1:E:373:MET:SD	1:E:381:ILE:HG21	2.58	0.43
1:H:498:TYR:HB3	1:H:505:ILE:HG13	2.00	0.43
1:I:528:PHE:CD1	1:I:531:LEU:HD23	2.54	0.43
1:J:27:ASP:OD1	1:J:28:ALA:N	2.52	0.43
1:J:533:ILE:HB	1:J:576:VAL:HG22	2.01	0.43
2:Z:133:PHE:C	2:Z:135:GLY:H	2.22	0.43
2:Z:764:HIS:HA	2:Z:900:PRO:HG3	1.99	0.43
2:Z:1305:MET:O	2:Z:1305:MET:HG3	2.18	0.43
2:Z:1394:ASP:N	2:Z:1394:ASP:OD1	2.52	0.43
1:A:257:MET:CE	1:A:466:ARG:HG3	2.49	0.43
1:A:733:LEU:C	1:A:735:GLN:H	2.22	0.43
1:C:73:VAL:HG12	1:C:77:ARG:HH21	1.84	0.43
1:C:287:ASP:N	1:C:287:ASP:OD1	2.51	0.43
1:E:549:HIS:CD2	1:E:551:PRO:HD2	2.54	0.43
1:F:496:SER:OG	1:F:497:ASP:N	2.51	0.43
1:G:437:ILE:HD13	1:G:437:ILE:HA	1.83	0.43
1:H:267:LYS:HZ2	1:H:269:THR:N	2.17	0.43
2:Z:472:GLU:O	2:Z:476:THR:HG22	2.19	0.43
1:A:99:LEU:HD23	1:A:99:LEU:H	1.84	0.42
1:C:108:ILE:HD12	1:C:821:VAL:HG12	2.01	0.42
1:E:397:LEU:HD23	1:E:397:LEU:HA	1.86	0.42
1:H:122:ARG:CB	1:H:726:GLN:HB2	2.49	0.42
1:H:617:LYS:HD2	1:H:640:TYR:OH	2.19	0.42
1:I:321:GLN:NE2	2:Z:1403:SER:OG	2.41	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:702:THR:HA	1:I:705:ASN:OD1	2.18	0.42
1:J:452:ALA:HA	1:J:486:TYR:HD1	1.84	0.42
2:Z:266:CYS:SG	2:Z:268:HIS:HE1	2.42	0.42
2:Z:470:ILE:HD13	2:Z:492:GLY:HA3	2.01	0.42
1:B:614:ASP:OD1	1:B:614:ASP:N	2.51	0.42
1:C:643:GLU:OE2	1:C:648:LYS:HE3	2.19	0.42
1:C:769:HIS:HB3	1:C:812:VAL:HG21	2.01	0.42
1:D:99:LEU:HG	1:D:180:LEU:HD11	2.00	0.42
1:E:851:GLU:OE2	1:E:852:TYR:CD1	2.73	0.42
1:F:120:ILE:HD12	1:F:121:ASP:N	2.33	0.42
1:F:261:ARG:HD2	1:F:851:GLU:HG3	2.01	0.42
1:G:771:ILE:HB	1:G:777:ILE:HG13	2.01	0.42
1:I:149:LYS:C	1:I:150:ILE:HD13	2.39	0.42
1:I:448:LYS:HB2	1:I:493:GLU:OE1	2.19	0.42
1:I:520:ASP:O	1:I:521:GLU:HB3	2.19	0.42
1:J:522:ASP:OD1	1:J:523:ARG:N	2.52	0.42
2:Z:183:VAL:HG13	2:Z:706:VAL:HG13	2.01	0.42
2:Z:276:LEU:O	2:Z:280:GLN:HB3	2.18	0.42
2:Z:570:ASP:HA	2:Z:573:ILE:HG22	2.01	0.42
2:Z:947:VAL:HG12	2:Z:952:SER:HB3	2.01	0.42
1:A:456:LEU:HD13	1:A:471:ARG:HD3	2.00	0.42
1:B:100:PHE:CE1	1:B:110:LEU:HD21	2.54	0.42
1:C:412:GLY:HA3	1:C:498:TYR:CE1	2.54	0.42
1:D:29:ARG:HD2	1:D:30:GLY:H	1.84	0.42
1:D:159:ALA:HB2	1:D:165:GLU:OE1	2.20	0.42
1:F:268:LEU:O	1:F:269:THR:OG1	2.29	0.42
2:Z:300:GLN:NE2	2:Z:887:ASP:H	2.17	0.42
1:A:120:ILE:HD12	1:A:121:ASP:H	1.84	0.42
1:A:432:ARG:HB3	1:A:432:ARG:CZ	2.49	0.42
1:B:126:SER:CB	1:B:129:ASN:OD1	2.54	0.42
1:B:712:PRO:HD2	1:B:786:PHE:CE1	2.55	0.42
1:C:371:PHE:CZ	1:C:404:ILE:HG21	2.54	0.42
1:D:137:LYS:HE3	1:D:137:LYS:HB2	1.80	0.42
1:H:120:ILE:HD11	1:H:122:ARG:NH1	2.34	0.42
1:H:775:ASN:OD1	1:H:775:ASN:N	2.53	0.42
1:I:101:SER:HB2	1:I:107:TYR:HD1	1.85	0.42
1:I:655:LEU:HD23	1:I:655:LEU:HA	1.74	0.42
1:J:740:ILE:HD13	1:J:810:VAL:HG21	2.00	0.42
2:Z:362:VAL:O	2:Z:363:ASN:C	2.57	0.42
2:Z:385:ARG:O	2:Z:389:GLN:HG3	2.19	0.42
2:Z:802:ILE:O	2:Z:805:PRO:HD3	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:821:LEU:HB2	2:Z:989:ILE:HD13	2.01	0.42
1:A:422:ILE:HD12	1:A:422:ILE:HA	1.87	0.42
1:C:96:LEU:H	1:C:96:LEU:HD12	1.85	0.42
1:C:449:LEU:HD23	1:C:449:LEU:HA	1.92	0.42
1:D:213:ILE:HD13	1:D:213:ILE:HA	1.83	0.42
1:E:558:GLU:HG2	1:E:559:GLN:N	2.34	0.42
1:F:505:ILE:HD11	1:F:510:PHE:CZ	2.54	0.42
1:G:253:ARG:HA	1:G:253:ARG:HD3	1.77	0.42
1:G:684:GLU:OE1	1:G:684:GLU:N	2.49	0.42
1:H:308:LEU:HD12	1:H:570:PRO:HB3	2.01	0.42
1:I:493:GLU:O	1:I:494:LEU:HD13	2.20	0.42
2:Z:107:THR:HG23	2:Z:112:SER:HA	2.02	0.42
2:Z:767:GLY:HA3	2:Z:900:PRO:HG2	2.01	0.42
1:A:115:TYR:CD2	1:A:138:LEU:HD13	2.54	0.42
1:C:494:LEU:HB2	1:C:507:LYS:NZ	2.34	0.42
1:D:104:GLU:OE1	1:D:104:GLU:N	2.52	0.42
1:E:77:ARG:NH2	1:E:578:THR:HG23	2.35	0.42
1:E:684:GLU:CD	1:E:684:GLU:H	2.23	0.42
1:F:126:SER:O	1:F:126:SER:OG	2.37	0.42
1:F:751:PHE:HD1	1:F:780:ASP:HA	1.85	0.42
1:F:798:VAL:HG13	1:F:799:SER:N	2.34	0.42
1:G:254:ILE:HD13	1:H:47:ILE:HD12	2.00	0.42
1:H:104:GLU:HA	1:H:791:ARG:NH2	2.34	0.42
1:I:61:LEU:HD23	1:J:321:GLN:HE22	1.84	0.42
1:J:154:TYR:HB3	1:J:834:TYR:CE2	2.55	0.42
2:Z:818:CYS:SG	2:Z:1001:SER:HB2	2.59	0.42
2:Z:1041:ILE:HD12	2:Z:1041:ILE:HA	1.86	0.42
1:A:101:SER:OG	1:A:791:ARG:NH2	2.53	0.42
1:C:405:ILE:O	1:C:409:ILE:HG12	2.20	0.42
1:D:182:LEU:HD12	1:D:182:LEU:H	1.85	0.42
1:D:521:GLU:N	1:D:521:GLU:OE1	2.44	0.42
1:F:38:ASN:HB2	1:H:642:TYR:HE1	1.85	0.42
1:H:268:LEU:O	1:H:269:THR:OG1	2.29	0.42
1:H:792:ARG:H	1:H:792:ARG:HG3	1.56	0.42
1:J:323:LEU:HD12	1:J:323:LEU:HA	1.91	0.42
2:Z:313:VAL:HG23	2:Z:459:LEU:HD13	2.01	0.42
2:Z:1066:LEU:HD12	2:Z:1066:LEU:HA	1.81	0.42
2:Z:1317:GLU:HA	2:Z:1369:ILE:HD12	2.02	0.42
1:A:330:ASN:OD1	1:A:332:LEU:HB2	2.19	0.42
1:A:584:ASN:HB3	1:B:50:VAL:HG11	2.01	0.42
1:A:732:ARG:HG2	1:A:733:LEU:O	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:537:SER:O	1:C:537:SER:OG	2.37	0.42
1:C:645:ASN:OD1	1:D:326:GLN:NE2	2.43	0.42
1:F:124:ASP:OD1	1:F:124:ASP:N	2.52	0.42
1:G:160:SER:HB2	1:J:123:ARG:C	2.39	0.42
1:H:825:LEU:HD23	1:H:825:LEU:HA	1.88	0.42
1:I:109:LEU:HD23	1:I:109:LEU:HA	1.87	0.42
1:I:713:ILE:HD11	1:I:817:PHE:CB	2.48	0.42
1:J:672:ILE:HD12	1:J:672:ILE:HA	1.87	0.42
2:Z:267:ILE:HD13	2:Z:497:ARG:HD3	2.02	0.42
2:Z:494:LEU:HD13	2:Z:494:LEU:HA	1.91	0.42
2:Z:1176:ILE:O	2:Z:1180:ILE:HG23	2.20	0.42
1:A:336:LEU:HD21	1:A:505:ILE:CD1	2.49	0.42
1:F:337:ILE:HD13	1:F:383:VAL:HG22	2.01	0.42
1:G:332:LEU:HD21	2:Z:1418:LEU:HB3	2.00	0.42
2:Z:273:GLU:OE1	2:Z:273:GLU:N	2.46	0.42
1:A:330:ASN:HB3	1:A:333:THR:HG22	2.02	0.42
1:B:346:THR:O	1:B:346:THR:OG1	2.35	0.42
1:F:111:PRO:HB2	1:F:684:GLU:HB3	2.01	0.42
1:F:778:LEU:C	1:F:779:ASN:O	2.56	0.42
1:I:369:ILE:HD12	1:I:401:SER:HB3	2.02	0.42
1:J:21:ASP:OD1	1:J:22:ALA:N	2.53	0.42
1:J:597:LEU:HD23	1:J:597:LEU:HA	1.84	0.42
2:Z:459:LEU:O	2:Z:463:VAL:HG23	2.20	0.42
2:Z:1372:ARG:CZ	2:Z:1376:ARG:HH21	2.33	0.42
1:A:251:ARG:NH1	1:A:266:GLN:O	2.52	0.41
1:B:172:PRO:O	1:B:175:SER:OG	2.34	0.41
1:D:267:LYS:HZ2	1:D:269:THR:N	2.15	0.41
1:G:376:SER:O	1:G:377:LEU:HD23	2.20	0.41
2:Z:430:LYS:O	2:Z:430:LYS:HD3	2.19	0.41
1:A:601:ASP:OD2	1:A:652:TYR:OH	2.35	0.41
1:B:259:ASN:OD1	1:B:259:ASN:N	2.52	0.41
1:C:85:GLN:NE2	1:C:277:MET:SD	2.93	0.41
1:C:181:GLU:O	1:C:791:ARG:NH1	2.53	0.41
1:C:433:GLN:OE1	1:C:433:GLN:N	2.53	0.41
1:C:496:SER:C	1:C:507:LYS:HZ3	2.22	0.41
1:D:140:MET:CE	1:D:626:VAL:HG13	2.49	0.41
1:E:87:LEU:HD13	1:E:150:ILE:HG13	2.03	0.41
1:J:29:ARG:HD3	1:J:29:ARG:HA	1.86	0.41
2:Z:105:PHE:CE1	2:Z:404:LEU:HD21	2.54	0.41
2:Z:655:ILE:HD11	2:Z:841:MET:HG2	2.02	0.41
2:Z:668:LEU:HA	2:Z:671:VAL:HG12	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Z:760:LYS:HB3	2:Z:762:PRO:HD2	2.02	0.41
1:B:121:ASP:OD1	1:B:121:ASP:N	2.49	0.41
1:C:233:ASP:OD2	1:C:832:ARG:HD3	2.21	0.41
1:D:268:LEU:O	1:D:269:THR:OG1	2.31	0.41
1:D:396:LEU:HD21	1:D:475:PRO:HA	2.02	0.41
1:D:402:ASN:OD1	1:D:451:ARG:NH2	2.54	0.41
1:D:511:ARG:H	1:D:511:ARG:HG2	1.59	0.41
1:E:449:LEU:HD23	1:E:449:LEU:HA	1.84	0.41
1:F:102:PRO:HA	1:F:790:GLU:HA	2.01	0.41
1:F:452:ALA:HA	1:F:486:TYR:HD1	1.84	0.41
1:G:413:PHE:HE1	1:G:498:TYR:HB2	1.85	0.41
1:I:357:MET:HE1	1:I:534:MET:HG2	2.00	0.41
1:J:77:ARG:HG3	1:J:852:TYR:CE1	2.55	0.41
1:J:508:ASP:OD1	1:J:508:ASP:C	2.59	0.41
1:J:654:MET:O	1:J:658:ILE:HG13	2.20	0.41
1:J:798:VAL:HG13	1:J:799:SER:N	2.35	0.41
2:Z:459:LEU:HD23	2:Z:499:PRO:CD	2.39	0.41
2:Z:629:ILE:HD13	2:Z:629:ILE:HA	1.89	0.41
2:Z:1049:ILE:HG13	2:Z:1049:ILE:H	1.70	0.41
2:Z:1376:ARG:HH11	2:Z:1376:ARG:HB3	1.86	0.41
1:B:159:ALA:HB2	1:B:165:GLU:OE1	2.20	0.41
1:E:190:LEU:N	1:E:191:PRO:HD2	2.35	0.41
1:F:469:ILE:HD13	1:F:469:ILE:HA	1.89	0.41
1:G:324:GLN:OE1	1:G:338:ARG:NH1	2.53	0.41
1:H:421:ASP:OD1	1:H:421:ASP:N	2.53	0.41
2:Z:315:ASN:HA	2:Z:459:LEU:HB2	2.03	0.41
2:Z:328:LEU:HB3	2:Z:375:TYR:HB3	2.03	0.41
2:Z:404:LEU:HD23	2:Z:405:ASN:N	2.35	0.41
1:A:67:GLN:OE1	1:A:71:LEU:HD21	2.20	0.41
1:B:798:VAL:HG23	1:B:799:SER:N	2.35	0.41
1:C:728:TRP:CH2	1:C:736:GLN:HB2	2.55	0.41
1:E:461:GLU:HG3	1:E:462:PRO:HD2	2.02	0.41
1:E:494:LEU:HD11	1:E:510:PHE:CD2	2.56	0.41
1:F:71:LEU:HD23	1:F:71:LEU:HA	1.74	0.41
1:F:259:ASN:OD1	1:F:259:ASN:N	2.53	0.41
1:G:326:GLN:HA	1:G:326:GLN:OE1	2.20	0.41
1:H:666:HIS:CD2	1:H:669:ALA:H	2.38	0.41
1:I:221:VAL:HG11	1:I:834:TYR:CE2	2.56	0.41
1:I:308:LEU:HD13	1:I:570:PRO:HB3	2.02	0.41
1:I:324:GLN:OE1	2:Z:1365:PRO:HG3	2.21	0.41
1:J:267:LYS:NZ	1:J:269:THR:H	2.19	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:550:TYR:N	1:J:551:PRO:HD2	2.35	0.41
2:Z:458:LEU:HD23	2:Z:458:LEU:O	2.21	0.41
1:C:644:ASP:HB2	1:D:326:GLN:HE21	1.85	0.41
1:D:71:LEU:HD23	1:D:71:LEU:HA	1.88	0.41
1:F:39:ASP:OD1	1:F:39:ASP:N	2.52	0.41
1:F:330:ASN:O	1:F:333:THR:OG1	2.27	0.41
1:F:447:PHE:HE1	1:F:496:SER:HB3	1.86	0.41
1:G:261:ARG:O	1:J:400:ARG:NH1	2.52	0.41
1:I:348:SER:O	1:I:352:VAL:HG23	2.19	0.41
1:I:581:LYS:HE2	1:I:581:LYS:HB2	1.75	0.41
1:J:367:ILE:N	1:J:367:ILE:HD13	2.34	0.41
1:J:456:LEU:HD23	1:J:456:LEU:HA	1.84	0.41
2:Z:440:THR:HG21	2:Z:455:ARG:HG3	2.03	0.41
1:C:851:GLU:OE2	1:C:852:TYR:CD1	2.73	0.41
1:D:378:SER:OG	1:D:380:GLU:OE1	2.33	0.41
1:E:61:LEU:HD13	1:E:61:LEU:HA	1.92	0.41
1:E:137:LYS:HE2	1:E:137:LYS:HB2	1.94	0.41
1:F:323:LEU:HD21	1:F:341:ILE:HD12	2.03	0.41
1:G:393:PRO:HG2	1:G:396:LEU:HD22	2.01	0.41
1:H:34:THR:OG1	1:H:35:THR:N	2.53	0.41
1:I:237:TRP:O	1:I:241:THR:HG23	2.21	0.41
1:I:453:SER:OG	1:I:454:THR:N	2.54	0.41
1:I:513:LEU:O	1:I:516:VAL:HG12	2.21	0.41
1:I:556:GLU:H	1:I:556:GLU:HG2	1.57	0.41
2:Z:119:VAL:HG22	2:Z:119:VAL:O	2.20	0.41
2:Z:187:HIS:NE2	2:Z:705:LEU:HD11	2.35	0.41
2:Z:527:ILE:HB	2:Z:1011:GLY:HA3	2.02	0.41
2:Z:1258:SER:C	2:Z:1259:ARG:HG3	2.41	0.41
1:A:409:ILE:HD13	1:A:409:ILE:HA	1.95	0.41
1:B:61:LEU:O	1:B:65:ILE:HG22	2.21	0.41
1:D:345:ASN:HB2	2:Z:919:ASP:OD1	2.21	0.41
1:F:111:PRO:HB2	1:F:684:GLU:CB	2.51	0.41
1:F:675:LEU:O	1:F:679:VAL:HG23	2.20	0.41
1:I:279:HIS:ND1	1:I:280:VAL:O	2.54	0.41
2:Z:208:ARG:NH1	2:Z:1115:PHE:HB3	2.35	0.41
2:Z:320:THR:O	2:Z:321:LEU:HD22	2.21	0.41
2:Z:428:LEU:HD23	2:Z:428:LEU:HA	1.83	0.41
2:Z:661:SER:OG	2:Z:663:VAL:HG23	2.21	0.41
2:Z:690:ARG:HA	2:Z:690:ARG:HD2	1.81	0.41
1:C:386:PHE:CE1	1:C:409:ILE:HD12	2.56	0.41
1:C:386:PHE:HE1	1:C:449:LEU:HD11	1.85	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:731:MET:HG2	1:C:732:ARG:N	2.36	0.41
1:E:280:VAL:HG21	1:F:51:GLY:HA3	2.02	0.41
1:F:32:ASN:OD1	1:F:32:ASN:N	2.40	0.41
1:F:291:LYS:HB2	1:F:291:LYS:HE2	1.81	0.41
1:F:389:TRP:CD2	1:F:451:ARG:HD3	2.55	0.41
1:G:713:ILE:HD11	1:G:817:PHE:CB	2.50	0.41
1:I:733:LEU:HG	1:I:734:GLU:OE2	2.21	0.41
1:I:778:LEU:HD23	1:I:778:LEU:HA	1.89	0.41
1:J:244:LEU:HD23	1:J:244:LEU:HA	1.87	0.41
1:J:373:MET:O	1:J:375:VAL:HG23	2.20	0.41
1:J:526:ASP:OD2	1:J:571:ARG:NH1	2.53	0.41
1:J:762:GLU:HG3	1:J:763:ASP:N	2.36	0.41
2:Z:404:LEU:HA	2:Z:408:PHE:HD1	1.86	0.41
2:Z:1130:SER:HB2	2:Z:1193:GLU:HG3	2.03	0.41
2:Z:1193:GLU:HA	2:Z:1196:VAL:HG12	2.02	0.41
2:Z:1256:ASN:OD1	2:Z:1257:ASP:N	2.54	0.41
2:Z:1400:PRO:HA	2:Z:1403:SER:HB3	2.02	0.41
1:A:586:ILE:O	1:A:589:THR:HG22	2.21	0.41
1:C:498:TYR:HB3	1:C:505:ILE:HB	2.03	0.41
1:E:369:ILE:CD1	1:E:397:LEU:HD21	2.51	0.41
1:E:718:PRO:HG3	1:E:746:ARG:CZ	2.51	0.41
1:F:531:LEU:O	1:F:531:LEU:HD12	2.21	0.41
1:G:158:ALA:HB1	1:J:123:ARG:NH2	2.36	0.41
1:G:530:THR:HG21	1:G:570:PRO:HB2	2.03	0.41
1:H:427:ALA:O	1:H:428:ARG:HG2	2.21	0.41
1:I:316:LEU:HD12	1:I:316:LEU:HA	1.88	0.41
2:Z:79:GLU:O	2:Z:83:ILE:HG13	2.21	0.41
1:B:268:LEU:H	1:B:268:LEU:HD12	1.86	0.40
1:B:320:GLN:OE1	1:B:342:ASN:ND2	2.54	0.40
1:B:517:LEU:HD23	1:B:517:LEU:HA	1.87	0.40
1:D:308:LEU:HD11	1:D:357:MET:HG2	2.04	0.40
1:E:126:SER:O	1:E:127:PHE:CB	2.67	0.40
1:E:450:PRO:HA	1:E:488:ASN:OD1	2.21	0.40
1:F:82:ASP:OD1	1:F:83:ASP:N	2.54	0.40
1:G:160:SER:C	1:J:123:ARG:O	2.60	0.40
1:H:452:ALA:HA	1:H:486:TYR:HD1	1.87	0.40
2:Z:139:LEU:HD11	2:Z:697:GLU:HA	2.03	0.40
2:Z:581:ASN:OD1	2:Z:581:ASN:N	2.54	0.40
2:Z:1098:LEU:HD23	2:Z:1384:LEU:HB3	2.03	0.40
2:Z:1154:ILE:HG22	2:Z:1173:LYS:HG2	2.02	0.40
2:Z:1206:LEU:HD12	2:Z:1206:LEU:HA	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:702:THR:HG22	1:A:702:THR:O	2.21	0.40
1:A:725:ALA:C	1:A:727:LEU:H	2.25	0.40
1:B:675:LEU:HD13	1:B:675:LEU:HA	1.95	0.40
1:C:736:GLN:NE2	1:C:776:MET:HB2	2.36	0.40
1:D:337:ILE:O	1:D:341:ILE:HG22	2.21	0.40
1:E:66:LYS:HE2	1:E:66:LYS:HB2	1.83	0.40
1:E:589:THR:OG1	1:E:632:ASN:OD1	2.34	0.40
1:E:733:LEU:HD23	1:E:734:GLU:N	2.36	0.40
1:F:122:ARG:O	1:F:123:ARG:CB	2.62	0.40
1:F:773:LYS:HG3	1:F:774:ASP:H	1.85	0.40
1:G:505:ILE:HD13	1:G:505:ILE:HA	1.80	0.40
1:H:180:LEU:HA	1:H:180:LEU:HD23	1.85	0.40
1:H:638:ILE:HD13	1:H:638:ILE:HA	1.93	0.40
1:I:599:THR:HG23	1:I:600:ILE:HG12	2.03	0.40
1:J:668:ILE:HD13	1:J:668:ILE:HA	1.97	0.40
2:Z:769:LEU:HD23	2:Z:769:LEU:HA	1.91	0.40
2:Z:1301:PHE:CD1	2:Z:1319:LEU:HD12	2.55	0.40
1:A:307:PHE:O	1:A:308:LEU:HD23	2.22	0.40
1:A:662:GLY:O	1:A:663:GLN:HG2	2.22	0.40
1:A:723:LYS:HE2	1:A:723:LYS:HB2	1.82	0.40
1:B:400:ARG:O	1:B:404:ILE:HG13	2.21	0.40
1:C:140:MET:HE1	1:D:62:ASP:OD1	2.22	0.40
1:C:142:LEU:HD23	1:C:142:LEU:HA	1.93	0.40
1:D:76:ASN:OD1	1:D:76:ASN:N	2.54	0.40
1:D:544:ASP:OD1	1:D:544:ASP:O	2.39	0.40
1:D:824:ASP:OD1	1:D:825:LEU:N	2.54	0.40
1:E:160:SER:OG	1:H:123:ARG:CZ	2.69	0.40
1:E:273:LYS:HE2	1:E:273:LYS:HB2	1.91	0.40
1:E:296:ALA:O	1:E:300:ILE:HG13	2.20	0.40
1:E:313:PHE:HB2	1:E:566:THR:CG2	2.52	0.40
1:E:355:LYS:HD3	1:E:552:HIS:O	2.20	0.40
1:F:451:ARG:HD2	1:F:451:ARG:HA	1.79	0.40
1:G:285:ASN:OD1	1:G:287:ASP:HB2	2.21	0.40
1:H:601:ASP:O	1:H:602:LEU:HD23	2.22	0.40
1:J:267:LYS:HZ2	1:J:269:THR:H	1.68	0.40
1:A:285:ASN:OD1	1:A:285:ASN:N	2.49	0.40
1:B:197:MET:HB3	1:B:222:PRO:HG2	2.03	0.40
1:B:232:ILE:HD13	1:B:232:ILE:HA	1.90	0.40
1:B:749:GLY:HA2	1:B:750:PRO:HD3	1.97	0.40
1:C:317:ALA:HA	1:C:320:GLN:OE1	2.21	0.40
1:C:763:ASP:OD1	1:C:764:MET:N	2.55	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:577:ASP:HA	1:E:580:VAL:HG22	2.02	0.40
1:E:849:VAL:O	1:F:44:GLY:HA3	2.21	0.40
1:F:110:LEU:CD2	1:F:708:PHE:HZ	2.34	0.40
1:F:356:MET:SD	1:F:396:LEU:HD23	2.62	0.40
1:F:511:ARG:H	1:F:511:ARG:HG2	1.69	0.40
1:F:755:TYR:CE1	1:F:814:ILE:HD13	2.55	0.40
1:G:110:LEU:HD23	1:G:110:LEU:HA	1.87	0.40
1:G:356:MET:HE3	1:G:356:MET:HB2	1.92	0.40
1:H:87:LEU:O	1:H:842:LEU:HD13	2.21	0.40
1:H:494:LEU:HD21	1:H:510:PHE:HD2	1.87	0.40
1:H:749:GLY:HA2	1:H:750:PRO:HD3	1.97	0.40
1:H:824:ASP:OD1	1:H:825:LEU:N	2.54	0.40
1:I:190:LEU:N	1:I:191:PRO:HD2	2.36	0.40
1:I:595:GLN:HG3	1:I:665:ALA:O	2.21	0.40
1:J:422:ILE:HD13	1:J:422:ILE:HA	1.95	0.40
2:Z:105:PHE:HE1	2:Z:404:LEU:HD21	1.86	0.40
2:Z:879:TYR:O	2:Z:889:ILE:HA	2.22	0.40
2:Z:1266:LYS:CE	2:Z:1340:VAL:O	2.69	0.40
1:B:538:ILE:HD13	1:B:538:ILE:HA	1.81	0.40
1:D:96:LEU:HD12	1:D:97:GLU:H	1.87	0.40
1:E:346:THR:HB	1:E:349:ASN:ND2	2.37	0.40
1:G:710:LEU:HG	1:G:787:VAL:HG21	2.04	0.40
1:H:259:ASN:OD1	1:H:259:ASN:N	2.52	0.40
1:H:711:HIS:ND1	1:H:713:ILE:HB	2.36	0.40
1:I:140:MET:HG2	1:J:62:ASP:OD1	2.22	0.40
2:Z:1398:ILE:HD12	2:Z:1398:ILE:HA	1.86	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	813/854 (95%)	741 (91%)	72 (9%)	0	100	100
1	B	842/854 (99%)	775 (92%)	65 (8%)	2 (0%)	47	78
1	C	792/854 (93%)	721 (91%)	71 (9%)	0	100	100
1	D	842/854 (99%)	785 (93%)	56 (7%)	1 (0%)	51	83
1	E	792/854 (93%)	719 (91%)	70 (9%)	3 (0%)	34	69
1	F	842/854 (99%)	761 (90%)	76 (9%)	5 (1%)	25	62
1	G	792/854 (93%)	726 (92%)	66 (8%)	0	100	100
1	H	842/854 (99%)	786 (93%)	55 (6%)	1 (0%)	51	83
1	I	792/854 (93%)	733 (93%)	58 (7%)	1 (0%)	51	83
1	J	842/854 (99%)	777 (92%)	64 (8%)	1 (0%)	51	83
2	Z	1314/1425 (92%)	1162 (88%)	144 (11%)	8 (1%)	25	62
All	All	9505/9965 (95%)	8686 (91%)	797 (8%)	22 (0%)	50	78

All (22) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	E	127	PHE
1	F	689	ILE
1	J	115	TYR
2	Z	894	ASP
2	Z	901	TRP
1	B	115	TYR
1	D	127	PHE
1	F	114	ALA
2	Z	1338	MET
1	H	115	TYR
2	Z	61	PHE
2	Z	242	ASP
1	F	111	PRO
1	F	116	THR
2	Z	1343	SER
1	B	127	PHE
1	E	120	ILE
1	F	690	ASP
1	I	533	ILE
2	Z	134	LEU
2	Z	55	PHE
1	E	393	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	718/751 (96%)	688 (96%)	30 (4%)	30	59
1	B	744/751 (99%)	716 (96%)	28 (4%)	33	61
1	C	704/751 (94%)	679 (96%)	25 (4%)	35	63
1	D	744/751 (99%)	713 (96%)	31 (4%)	30	59
1	E	704/751 (94%)	681 (97%)	23 (3%)	38	64
1	F	744/751 (99%)	708 (95%)	36 (5%)	25	56
1	G	704/751 (94%)	689 (98%)	15 (2%)	53	74
1	H	744/751 (99%)	705 (95%)	39 (5%)	23	55
1	I	704/751 (94%)	676 (96%)	28 (4%)	31	60
1	J	744/751 (99%)	722 (97%)	22 (3%)	41	66
2	Z	1167/1263 (92%)	1117 (96%)	50 (4%)	29	58
All	All	8421/8773 (96%)	8094 (96%)	327 (4%)	36	60

All (327) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	82	ASP
1	A	136	SER
1	A	179	SER
1	A	248	GLU
1	A	250	ARG
1	A	251	ARG
1	A	376	SER
1	A	379	PRO
1	A	430	SER
1	A	436	ASP
1	A	444	SER
1	A	449	LEU
1	A	471	ARG
1	A	491	LYS
1	A	508	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	A	509	ASP
1	A	526	ASP
1	A	527	MET
1	A	546	GLU
1	A	591	SER
1	A	598	SER
1	A	629	MET
1	A	697	ASN
1	A	717	GLN
1	A	758	LEU
1	A	764	MET
1	A	773	LYS
1	A	809	TYR
1	A	820	GLU
1	A	827	ASP
1	B	19	LYS
1	B	27	ASP
1	B	48	ARG
1	B	54	ASP
1	B	113	GLN
1	B	120	ILE
1	B	153	ASP
1	B	162	LEU
1	B	167	SER
1	B	174	PHE
1	B	195	ASP
1	B	247	LYS
1	B	386	PHE
1	B	417	ASP
1	B	476	PHE
1	B	487	SER
1	B	520	ASP
1	B	591	SER
1	B	598	SER
1	B	603	ASP
1	B	614	ASP
1	B	629	MET
1	B	643	GLU
1	B	688	TYR
1	B	735	GLN
1	B	764	MET
1	B	820	GLU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	B	831	SER
1	C	72	SER
1	C	104	GLU
1	C	171	MET
1	C	184	GLU
1	C	196	SER
1	C	248	GLU
1	C	302	HIS
1	C	373	MET
1	C	394	GLU
1	C	398	SER
1	C	414	SER
1	C	465	ARG
1	C	471	ARG
1	C	491	LYS
1	C	506	ARG
1	C	537	SER
1	C	546	GLU
1	C	595	GLN
1	C	601	ASP
1	C	633	ASP
1	C	656	LYS
1	C	723	LYS
1	C	724	ASN
1	C	774	ASP
1	C	827	ASP
1	D	20	ASP
1	D	29	ARG
1	D	40	SER
1	D	62	ASP
1	D	76	ASN
1	D	80	LYS
1	D	93	LYS
1	D	120	ILE
1	D	121	ASP
1	D	143	SER
1	D	156	ARG
1	D	162	LEU
1	D	179	SER
1	D	182	LEU
1	D	279	HIS
1	D	285	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	D	292	MET
1	D	309	ASP
1	D	335	ASN
1	D	394	GLU
1	D	414	SER
1	D	436	ASP
1	D	489	CYS
1	D	598	SER
1	D	602	LEU
1	D	603	ASP
1	D	614	ASP
1	D	761	GLU
1	D	794	ASN
1	D	830	ARG
1	D	831	SER
1	E	195	ASP
1	E	196	SER
1	E	248	GLU
1	E	257	MET
1	E	355	LYS
1	E	399	ASP
1	E	430	SER
1	E	445	ARG
1	E	523	ARG
1	E	591	SER
1	E	596	MET
1	E	601	ASP
1	E	607	TYR
1	E	609	THR
1	E	615	LYS
1	E	625	SER
1	E	730	GLU
1	E	800	SER
1	E	819	LEU
1	E	825	LEU
1	E	826	HIS
1	E	839	LYS
1	E	852	TYR
1	F	54	ASP
1	F	95	LEU
1	F	111	PRO
1	F	122	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	F	124	ASP
1	F	128	SER
1	F	133	SER
1	F	143	SER
1	F	174	PHE
1	F	196	SER
1	F	233	ASP
1	F	239	TYR
1	F	248	GLU
1	F	262	ARG
1	F	279	HIS
1	F	288	LEU
1	F	342	ASN
1	F	363	HIS
1	F	394	GLU
1	F	417	ASP
1	F	436	ASP
1	F	453	SER
1	F	458	ASP
1	F	494	LEU
1	F	526	ASP
1	F	537	SER
1	F	610	SER
1	F	673	ASP
1	F	690	ASP
1	F	720	ASN
1	F	780	ASP
1	F	787	VAL
1	F	795	LYS
1	F	797	ARG
1	F	825	LEU
1	F	830	ARG
1	G	214	SER
1	G	445	ARG
1	G	487	SER
1	G	491	LYS
1	G	493	GLU
1	G	522	ASP
1	G	575	SER
1	G	598	SER
1	G	614	ASP
1	G	650	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	G	731	MET
1	G	738	GLU
1	G	774	ASP
1	G	781	HIS
1	G	827	ASP
1	H	15	GLU
1	H	16	GLN
1	H	77	ARG
1	H	101	SER
1	H	113	GLN
1	H	116	THR
1	H	122	ARG
1	H	133	SER
1	H	152	THR
1	H	162	LEU
1	H	167	SER
1	H	182	LEU
1	H	184	GLU
1	H	233	ASP
1	H	256	GLU
1	H	288	LEU
1	H	292	MET
1	H	293	SER
1	H	342	ASN
1	H	394	GLU
1	H	418	SER
1	H	421	ASP
1	H	426	SER
1	H	443	SER
1	H	458	ASP
1	H	494	LEU
1	H	497	ASP
1	H	499	ASN
1	H	526	ASP
1	H	598	SER
1	H	603	ASP
1	H	614	ASP
1	H	643	GLU
1	H	690	ASP
1	H	760	GLU
1	H	776	MET
1	H	792	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	H	809	TYR
1	H	839	LYS
1	I	77	ARG
1	I	101	SER
1	I	202	SER
1	I	248	GLU
1	I	251	ARG
1	I	259	ASN
1	I	419	TYR
1	I	426	SER
1	I	431	ASP
1	I	459	GLU
1	I	476	PHE
1	I	487	SER
1	I	491	LYS
1	I	497	ASP
1	I	536	SER
1	I	537	SER
1	I	544	ASP
1	I	546	GLU
1	I	601	ASP
1	I	646	PHE
1	I	660	SER
1	I	724	ASN
1	I	741	LYS
1	I	774	ASP
1	I	808	MET
1	I	815	SER
1	I	838	SER
1	I	852	TYR
1	J	95	LEU
1	J	122	ARG
1	J	124	ASP
1	J	162	LEU
1	J	184	GLU
1	J	196	SER
1	J	253	ARG
1	J	288	LEU
1	J	304	ASP
1	J	419	TYR
1	J	426	SER
1	J	443	SER

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	J	458	ASP
1	J	471	ARG
1	J	494	LEU
1	J	506	ARG
1	J	508	ASP
1	J	596	MET
1	J	772	MET
1	J	825	LEU
1	J	830	ARG
1	J	846	PRO
2	Z	75	SER
2	Z	133	PHE
2	Z	201	TYR
2	Z	274	GLU
2	Z	278	GLU
2	Z	330	HIS
2	Z	333	LEU
2	Z	344	ARG
2	Z	353	ARG
2	Z	384	LEU
2	Z	390	GLU
2	Z	401	ASP
2	Z	404	LEU
2	Z	453	VAL
2	Z	459	LEU
2	Z	486	ASP
2	Z	490	ASP
2	Z	523	GLN
2	Z	537	PHE
2	Z	543	LEU
2	Z	566	LYS
2	Z	578	ARG
2	Z	581	ASN
2	Z	591	CYS
2	Z	608	SER
2	Z	637	PHE
2	Z	731	THR
2	Z	751	LYS
2	Z	789	ASN
2	Z	804	VAL
2	Z	806	GLU
2	Z	818	CYS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	Z	821	LEU
2	Z	836	ASP
2	Z	881	TYR
2	Z	892	GLN
2	Z	899	VAL
2	Z	907	ASP
2	Z	919	ASP
2	Z	940	ASP
2	Z	1021	PHE
2	Z	1039	SER
2	Z	1046	ASP
2	Z	1114	ASN
2	Z	1116	ASP
2	Z	1263	PHE
2	Z	1308	TYR
2	Z	1316	HIS
2	Z	1382	TYR
2	Z	1394	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (44) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	53	ASN
1	B	342	ASN
1	B	674	GLN
1	B	696	HIS
1	B	709	HIS
1	C	468	GLN
1	D	129	ASN
1	D	297	GLN
1	D	335	ASN
1	D	358	GLN
1	D	666	HIS
1	D	696	HIS
1	F	113	GLN
1	F	709	HIS
1	F	711	HIS
1	F	752	HIS
1	F	769	HIS
1	F	818	GLN
1	G	468	GLN
1	G	696	HIS

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	G	697	ASN
1	G	818	GLN
1	H	266	GLN
1	H	663	GLN
1	H	666	HIS
1	I	358	GLN
1	I	697	ASN
1	J	17	GLN
1	J	736	GLN
2	Z	268	HIS
2	Z	389	GLN
2	Z	405	ASN
2	Z	410	HIS
2	Z	515	GLN
2	Z	538	ASN
2	Z	704	ASN
2	Z	736	GLN
2	Z	748	GLN
2	Z	789	ASN
2	Z	1151	GLN
2	Z	1191	GLN
2	Z	1197	ASN
2	Z	1331	ASN
2	Z	1411	ASN

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 monosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-33404. 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 ⓘ
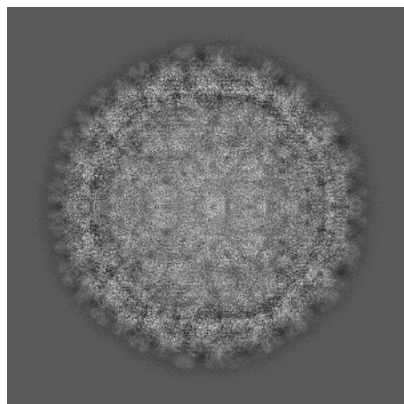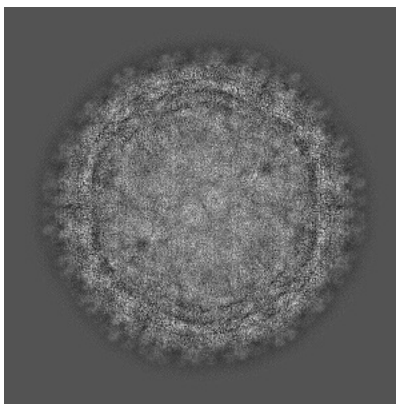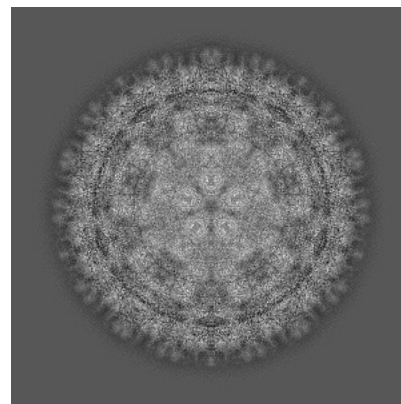
6.1.1 Primary map

| X | Y | Z |

6.1.2 Raw map

| X | Y | Z |
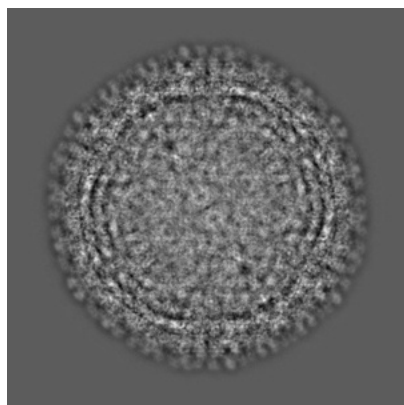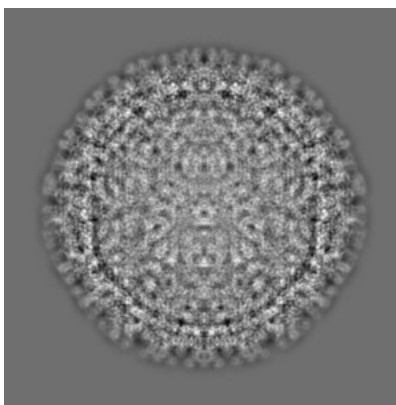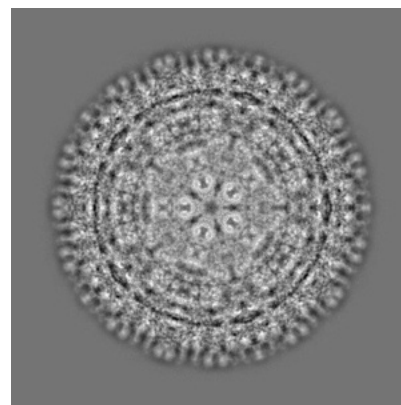
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ
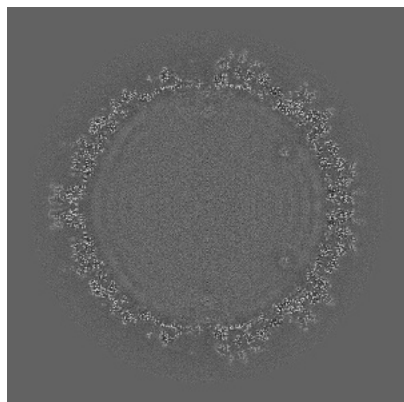
6.2.1 Primary map
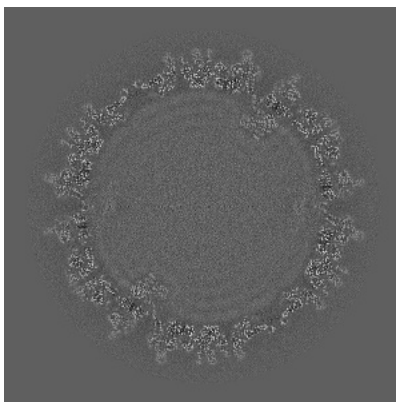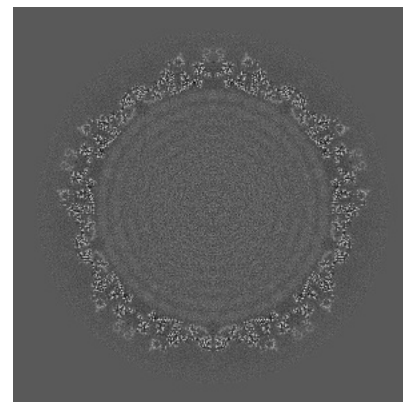
X Index: 400   Y Index: 400   Z Index: 400

6.2.2 Raw map
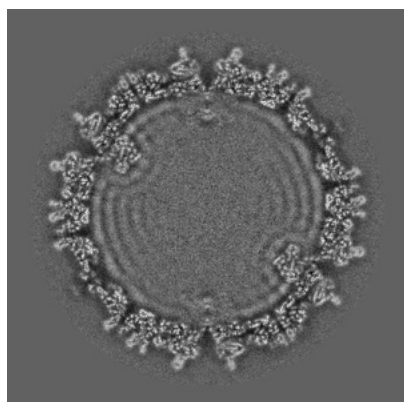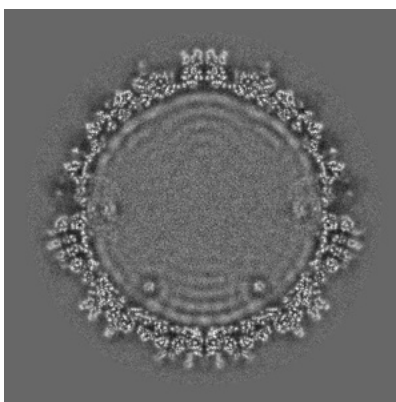
X Index: 400   Y Index: 400   Z Index: 400
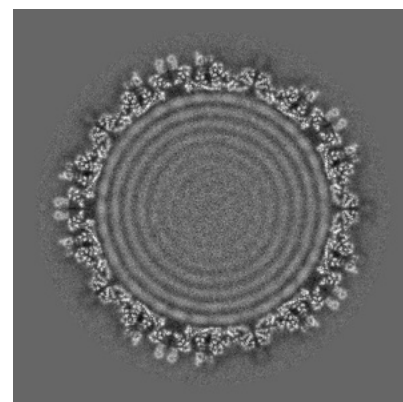
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

6.3.1 Primary map
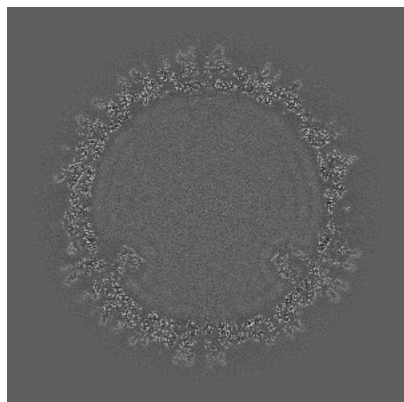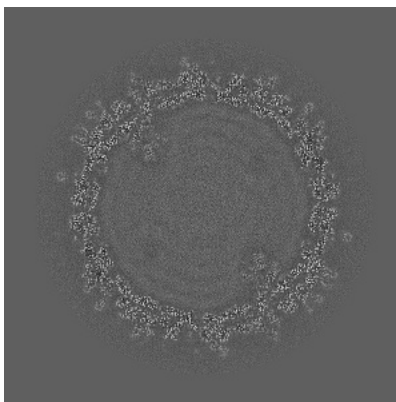
| X Index: 358 | Y Index: 292 | Z Index: 336 |
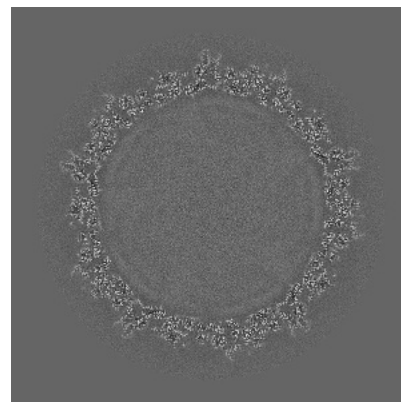
6.3.2 Raw map
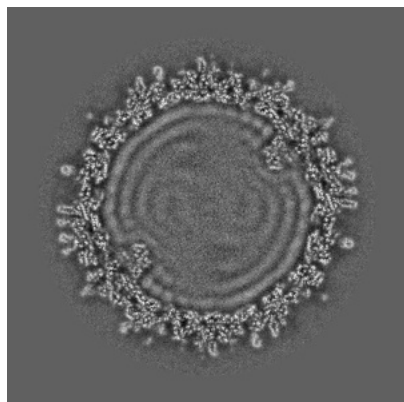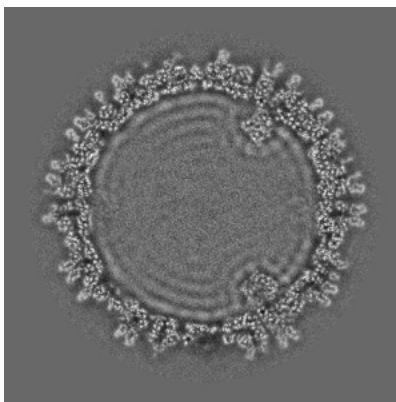
| X Index: 293 | Y Index: 354 | Z Index: 400 |
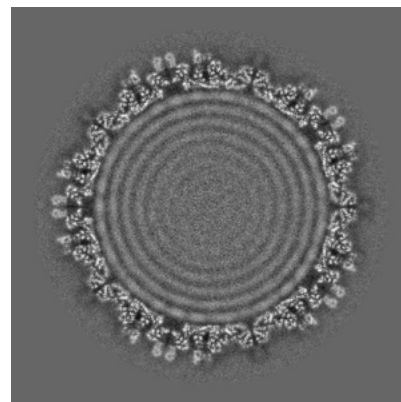
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1   Primary map
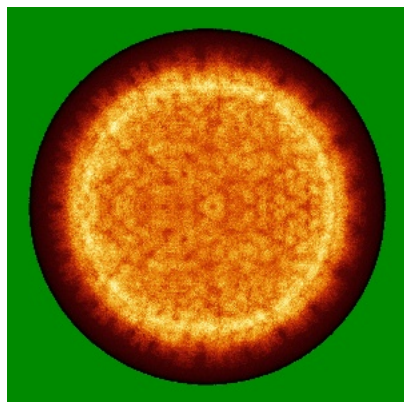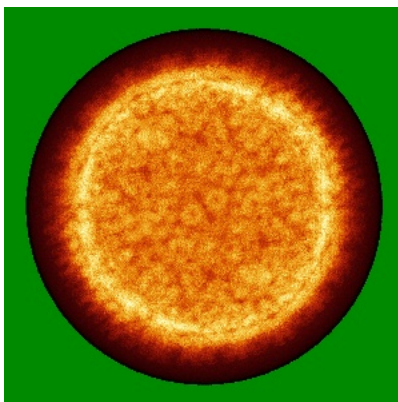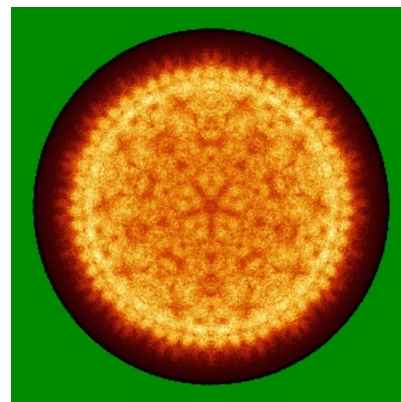
| X | Y | Z |

6.4.2   Raw map

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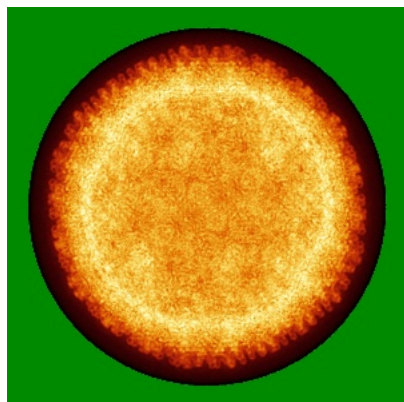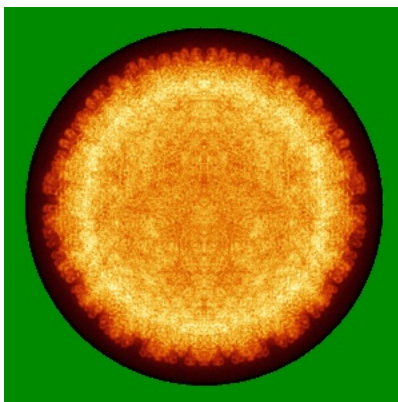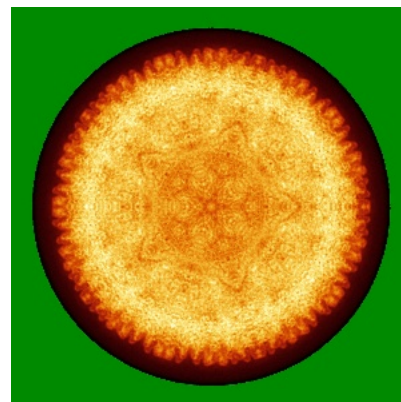
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views ⓘ

6.5.1 Primary map

| X | Y | Z |
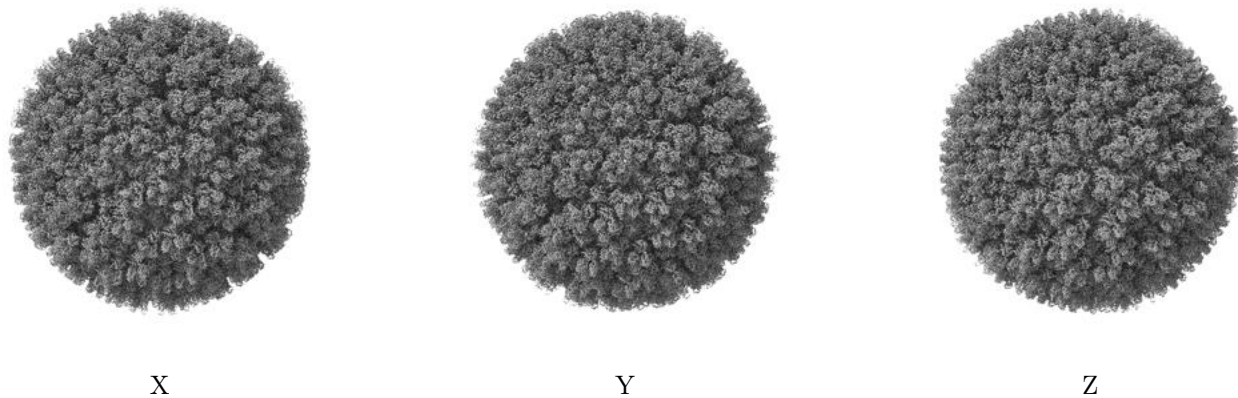
The images above show the 3D surface view of the map at the recommended contour level 6.0. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

| X | Y | Z |
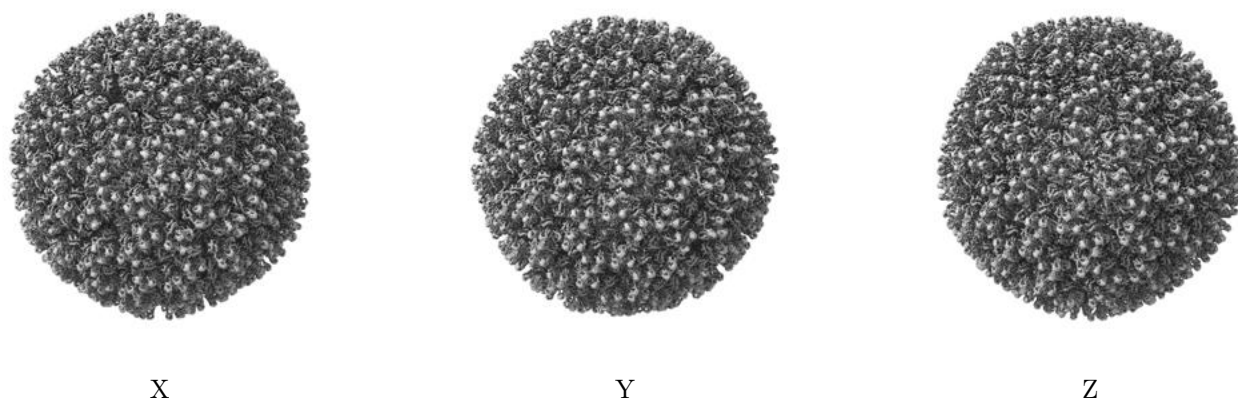
These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

6.6 Mask visualisation ⓘ

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 ⓘ
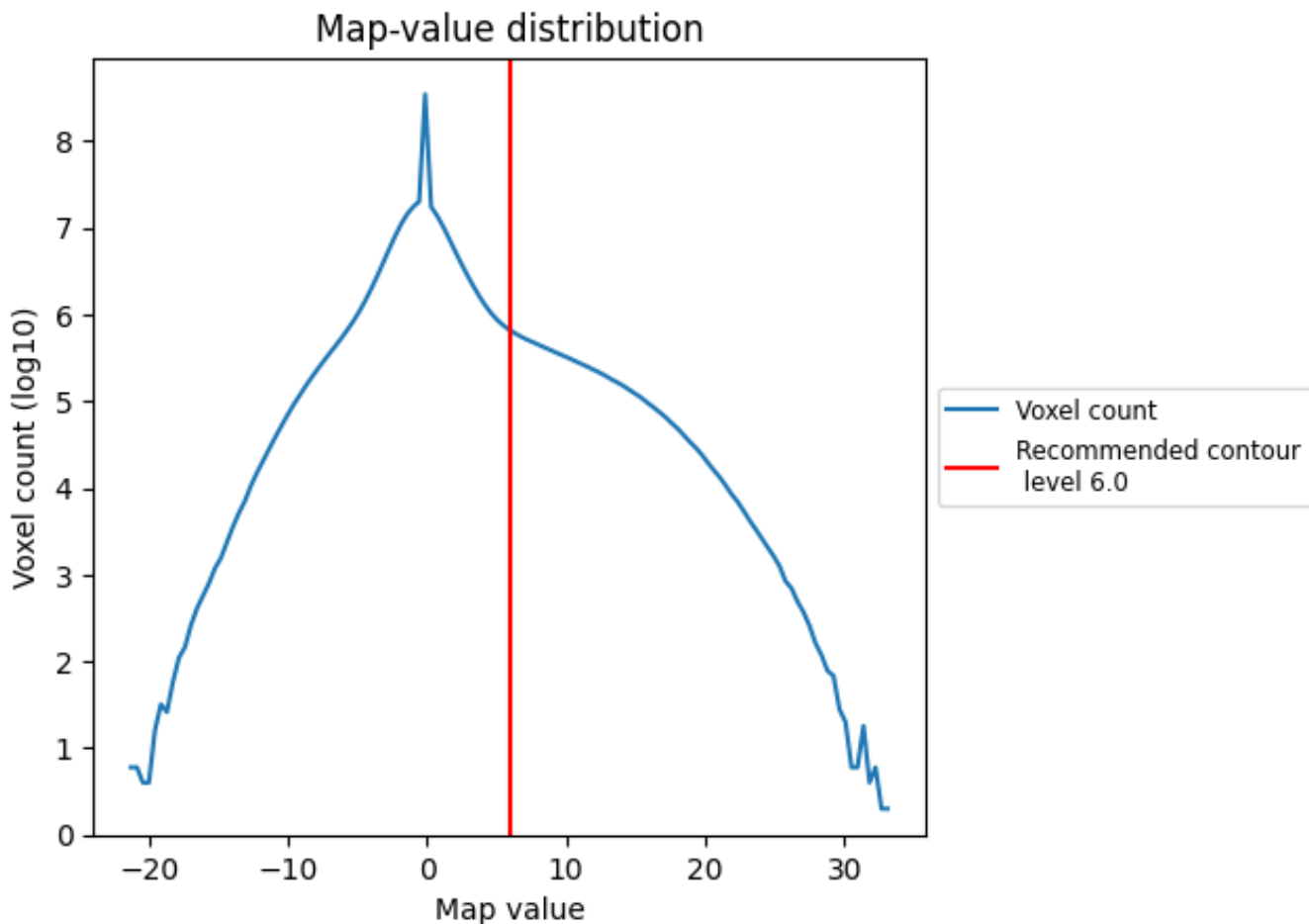
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate ⓘ
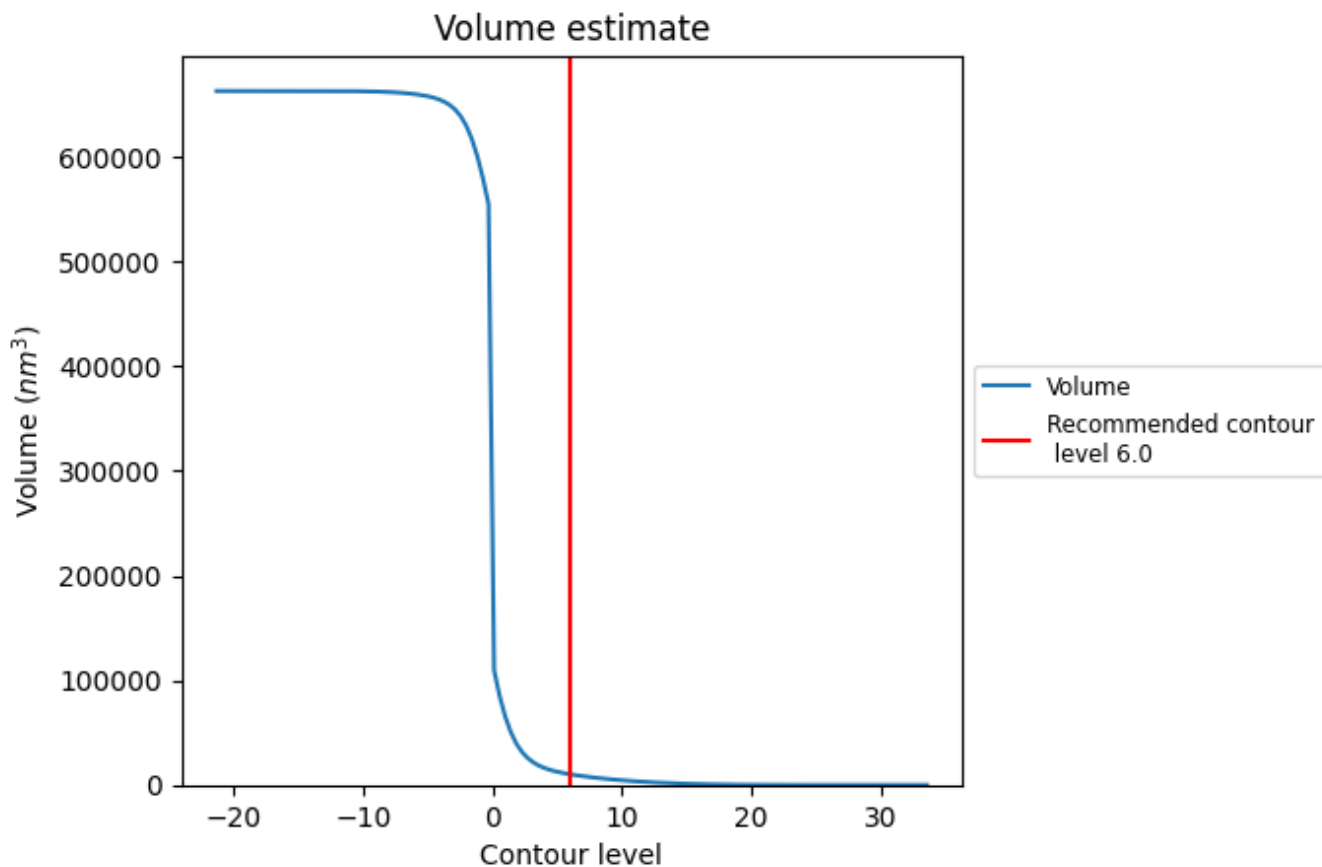
The volume at the recommended contour level is 10162 nm³; this corresponds to an approximate mass of 9180 kDa.

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)
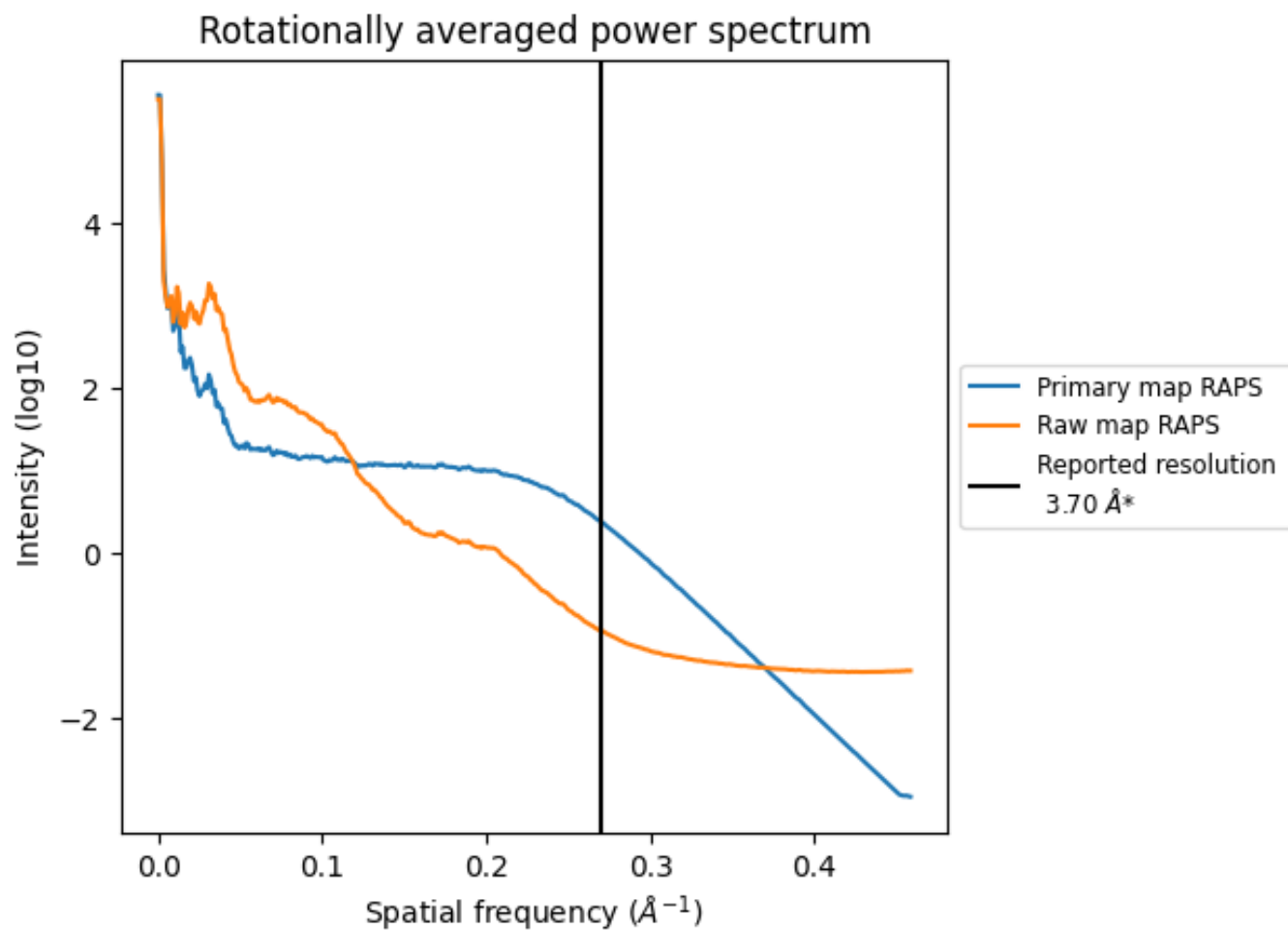
*Reported resolution corresponds to spatial frequency of 0.270 Å^{-1}

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 ⓘ
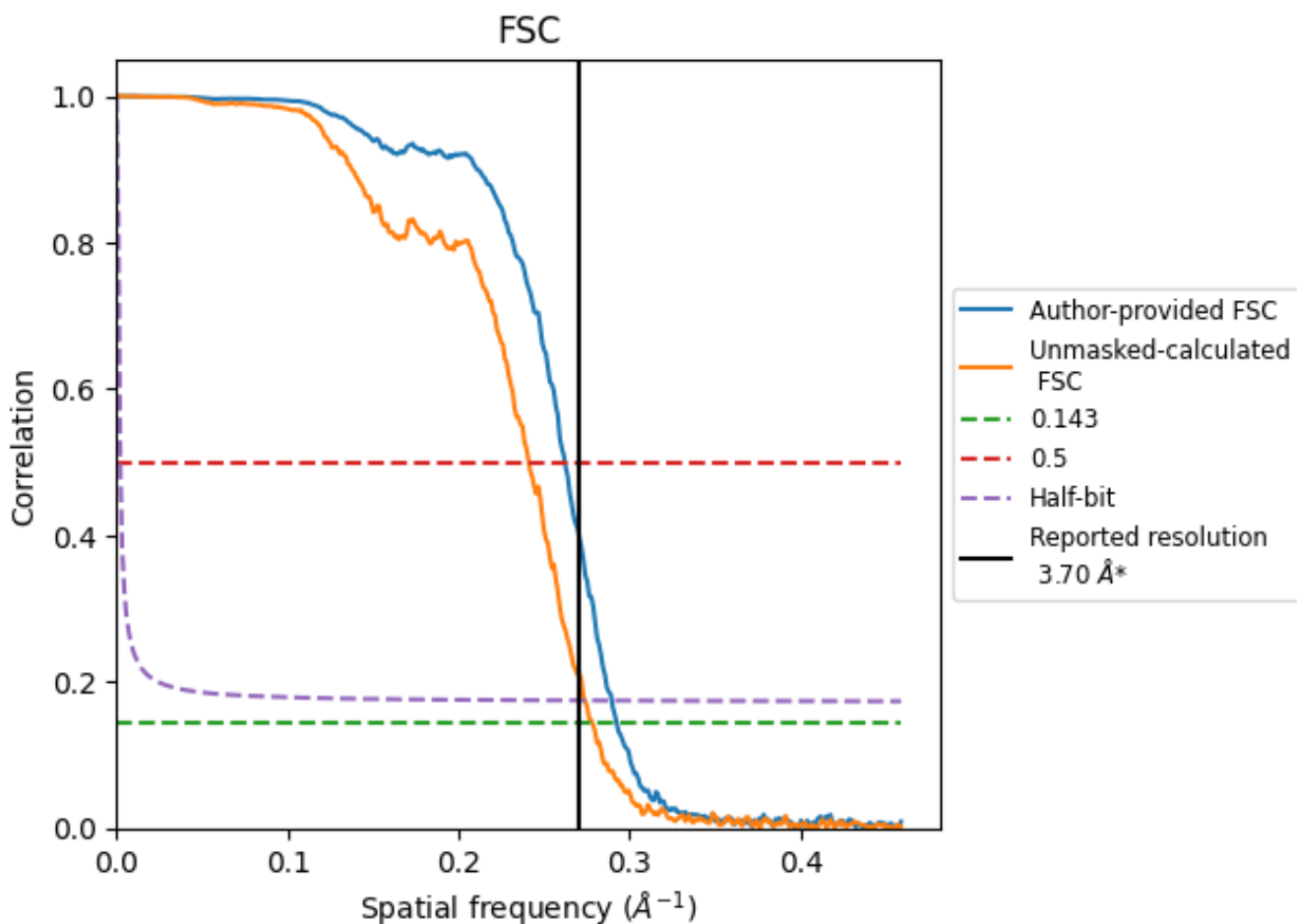
*Reported resolution corresponds to spatial frequency of 0.270 Å^{-1}

8.2   Resolution estimates ⓘ

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.70	-	-
Author-provided FSC curve	3.42	3.82	3.45
Unmasked-calculated*	3.59	4.15	3.65

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.
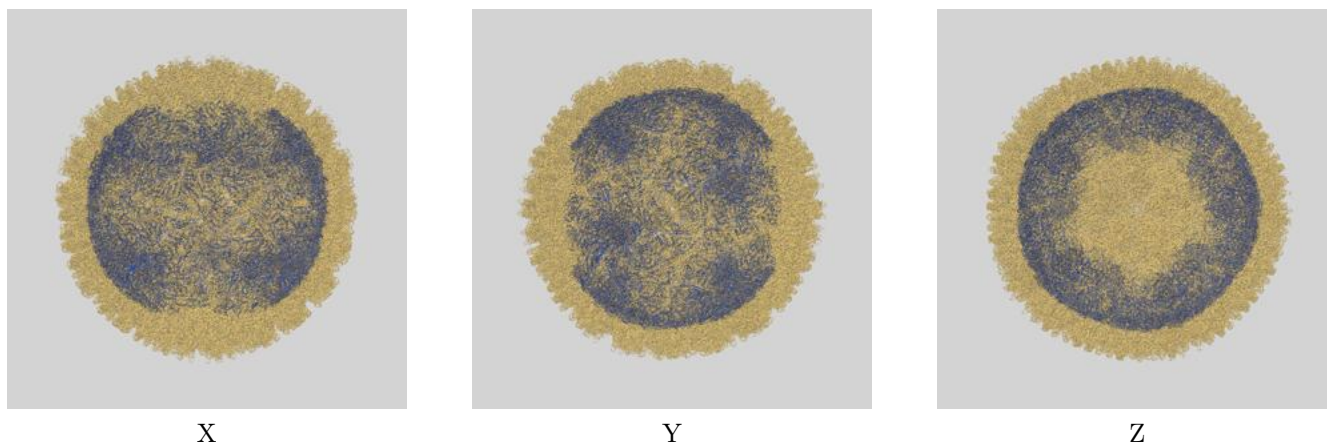
9 Map-model fit (i)

This section contains information regarding the fit between EMDB map EMD-33404 and PDB model 7XR3. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlays

9.1.1 Map-model overlay (i)

| X | Y | Z |
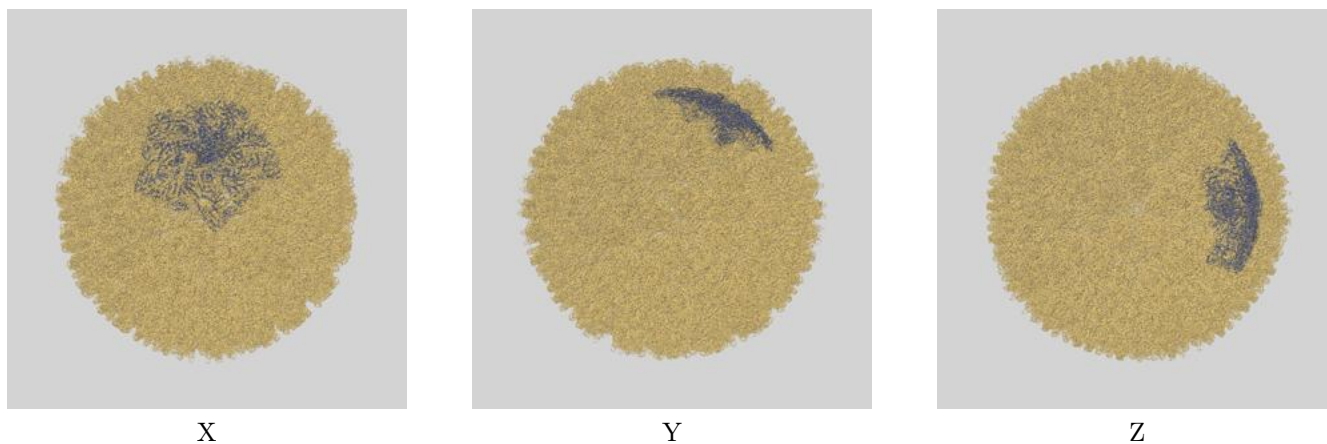
### 9.1.2 Map-model assembly overlay (i)

| X | Y | Z |

The images above show the 3D surface view of the map at the recommended contour level 6.0 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model ⓘ

X Y Z
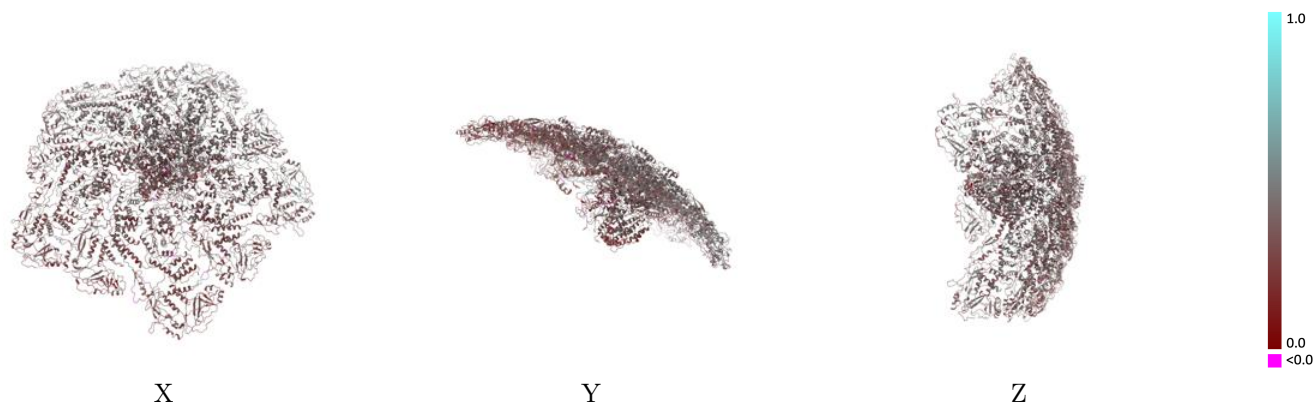
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model ⓘ

X Y Z
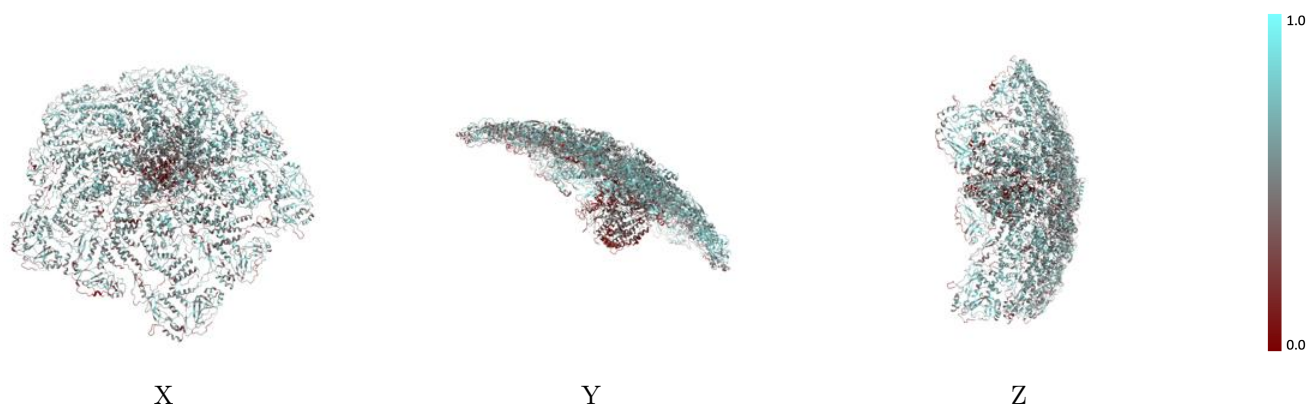
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (6.0).

9.4　Atom inclusion ⓘ
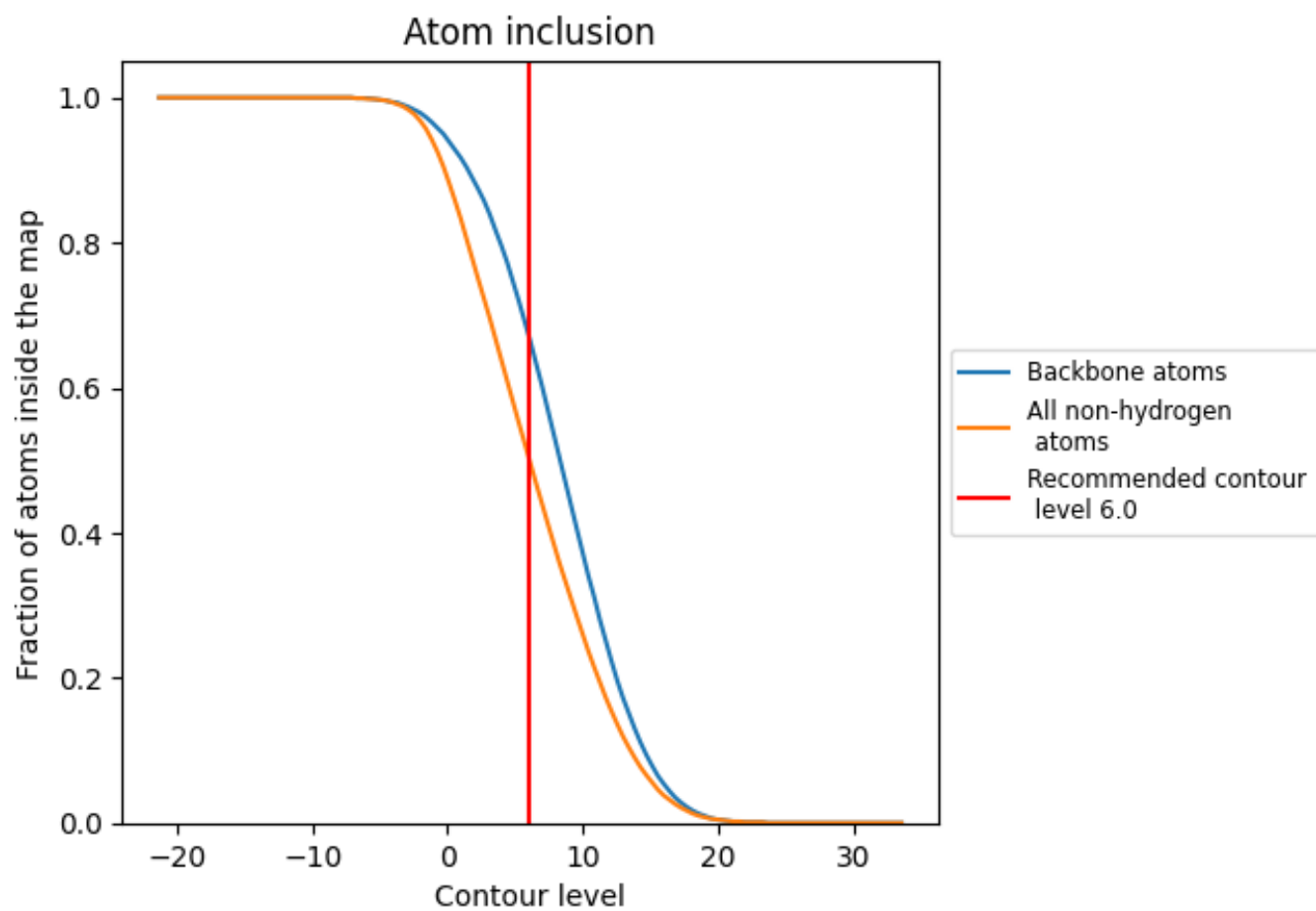
At the recommended contour level, 67% of all backbone atoms, 50% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (6.0) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5040	0.3580
A	0.5410	0.3990
B	0.5700	0.3920
C	0.5580	0.3950
D	0.5790	0.4090
E	0.5080	0.3430
F	0.5540	0.3670
G	0.4850	0.3300
H	0.5060	0.3160
I	0.5160	0.3590
J	0.5180	0.3340
Z	0.3130	0.3130

1.0

0.0
<0.0