



Full wwPDB EM Validation Report ⓘ

May 12, 2024 – 12:12 pm BST

PDB ID : 8OVJ
EMDB ID : EMD-17216
Title : CRYO-EM STRUCTURE OF LEISHMANIA MAJOR 80S RIBOSOME :
PARENTAL STRAIN
Authors : Rajan, K.S.; Yonath, A.
Deposited on : 2023-04-26
Resolution : 2.40 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

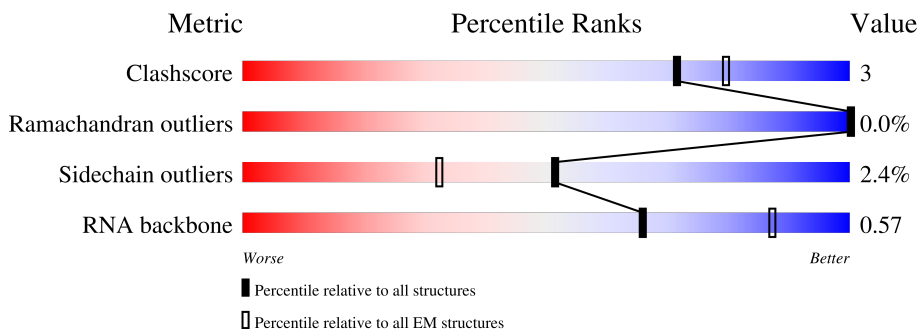
EMDB validation analysis : 0.0.1.dev92
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

1 Overall quality at a glance

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

The reported resolution of this entry is 2.40 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	1	1782	
2	3	216	
3	4	183	
4	5	135	
5	6	73	
6	7	171	
7	8	123	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
8	A	260	94%
9	B	419	90%
10	C	373	97%
11	D	188	81%
12	E	190	89%
13	F	195	68%
14	G	264	83%
15	H	222	94%
16	I	220	93%
17	J	139	96%
18	K	175	93%
19	L	145	94%
20	M	204	96%
21	N	213	77%
22	O	305	86%
23	P	198	95%
24	Q	254	71%
25	R	179	94%
26	S1	2204	51%
27	S4	20	50%
28	SA	264	73%
29	SB	246	73%
30	SC	219	85%
31	SD	190	81%
32	SE	273	84%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
33	SF	265	75% 7% 18%
34	SG	249	83% 10% 6%
35	SH	190	91% 5%
36	SI	200	82% 17%
37	SK	220	75% 6% 18%
38	SL	149	93%
39	SM	116	77% 10% 12%
40	SN	168	51% 8% 40%
41	SO	144	90% 6%
42	SP	143	90% 9%
43	SQ	141	47% 60% 11% 29%
44	SR	153	79% 9% 12%
45	SS	57	86% 9% 5%
46	ST	151	86% 8% 5%
47	SU	173	86% 9%
48	SV	143	46% 7% 46%
49	SW	152	5% 66% 10% 24%
50	SX	161	86% 9% 6%
51	SY	164	48% 48%
52	SZ	137	77% 15% 7%
53	S	159	97%
54	Sa	120	59% 41%
55	Sc	86	86% 12%
56	Sb	112	90% 8%
57	Sd	87	71% 25%




Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
58	Se	66	79% 18%
59	Sg	312	96%
60	Sh	235	21% 64% 33%
61	SJ	130	98%
62	T	166	87% 5% 8%
63	U	129	10% 78% 5% 17%
64	V	145	77% 5% 19%
65	W	143	79% 17%
66	X	124	48% 48%
67	Y	134	91% 7%
68	Z	147	93% 5%
69	a	127	95%
70	b	70	96%
71	c	252	90% 9%
72	d	104	82% 8% 11%
73	e	188	94%
74	f	133	93% 6%
75	g	144	98%
76	h	168	73% 24%
77	i	105	81% 18%
78	j	83	96%
79	k	83	82% 5% 13%
80	l	51	94%
81	m	128	38% 60%
82	n	34	91% 6%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
83	o	92	 91%
84	p	106	 91% 8%
85	2	1526	 47% 21% 28%

2 Entry composition [i](#)

There are 90 unique types of molecules in this entry. The entry contains 200822 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called LSUa_rRNA_chain_1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	1	1611	34587	15461	6344	11171	1611	1	0

There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	164	G	U	conflict	GB 321438308
1	165	U	C	conflict	GB 321438308
1	198	A	C	conflict	GB 321438308
1	523	A	G	conflict	GB 321438308
1	588	U	A	conflict	GB 321438308
1	593	C	U	conflict	GB 321438308
1	1428	A	C	conflict	GB 321438308

- Molecule 2 is a RNA chain called SR1_chain_3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	3	156	3312	1481	577	1098	156	0	0

- Molecule 3 is a RNA chain called SR2_chain_4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	4	183	3917	1747	710	1277	183	0	0

- Molecule 4 is a RNA chain called SR4_chain_5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
4	5	115	2456	1095	445	801	115	0	0

- Molecule 5 is a RNA chain called SR6_chain_6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
5	6	71	1506	675	271	489	71	0	0

- Molecule 6 is a RNA chain called 5.8S_rRNA_chain_7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
6	7	164	3485	1561	618	1143	163	0	0

- Molecule 7 is a RNA chain called 5S_rRNA_chain_8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
7	8	119	2531	1132	452	828	119	0	0

- Molecule 8 is a protein called Putative 60S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	A	255	1893	1179	387	317	10	1	0

- Molecule 9 is a protein called Putative ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	B	401	3035	1923	595	504	13	3	0

- Molecule 10 is a protein called Putative ribosomal protein L1a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	C	366	2664	1671	527	451	15	0	0

- Molecule 11 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	D	160	1025	641	205	173	6	0	0

- Molecule 12 is a protein called Putative 60S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	E	186	1337	851	254	228	4	0	0

- Molecule 13 is a protein called Putative 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	F	148	1049	671	200	176	2	0	0

- Molecule 14 is a protein called 60S ribosomal protein L7a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
14	G	226	1672	1061	328	276	7	0	0

- Molecule 15 is a protein called Putative 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
15	H	220	1652	1048	332	265	7	0	0

- Molecule 16 is a protein called Putative 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
16	I	208	1539	959	315	258	7	0	0

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	203	ARG	ASN	conflict	UNP E9AEA8

- Molecule 17 is a protein called Putative 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
17	J	137	979	616	185	172	6	0	0

- Molecule 18 is a protein called Putative 40S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	K	170	Total	C	N	O	S	0	0
			1229	771	244	207	7		

- Molecule 19 is a protein called Putative 60S ribosomal protein L27A/L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	L	144	Total	C	N	O	S	0	0
			1102	696	225	175	6		

- Molecule 20 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	M	203	Total	C	N	O	S	0	0
			1688	1065	359	256	8		

- Molecule 21 is a protein called Putative 60S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	N	199	Total	C	N	O	S	0	0
			1615	1019	322	260	14		

- Molecule 22 is a protein called Putative 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	O	276	Total	C	N	O	S	0	0
			1926	1226	370	327	3		

- Molecule 23 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	P	197	Total	C	N	O	S	0	0
			1500	943	300	251	6		

- Molecule 24 is a protein called Putative 60S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Q	190	Total	C	N	O	S	0	0
			1427	884	313	224	6		

- Molecule 25 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	R	178	Total	C	N	O	S	0	0
			1405	898	271	231	5		

- Molecule 26 is a RNA chain called SSU_rRNA_chain_S1.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	S1	1755	Total	C	N	O	P	0	0
			37536	16792	6770	12219	1755		

- Molecule 27 is a RNA chain called E-site_tRNA_chain_S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	S4	20	Total	C	N	O	P	0	0
			427	191	81	136	19		

- Molecule 28 is a protein called 40S ribosomal protein S3a.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	SA	225	Total	C	N	O	S	2	0
			1828	1146	349	321	12		

- Molecule 29 is a protein called 40S ribosomal protein SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	SB	208	Total	C	N	O	S	0	0
			1590	1011	285	282	12		

- Molecule 30 is a protein called Putative 40S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	SC	212	Total	C	N	O	S	1	0
			1609	1018	295	283	13		

- Molecule 31 is a protein called Putative 40S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	SD	175	Total	C	N	O	S	0	0
			1422	897	283	234	8		

- Molecule 32 is a protein called 40S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
32	SE	260	2050	1299	393	349	9	0	0

- Molecule 33 is a protein called 40S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
33	SF	218	1662	1063	297	293	9	0	0

- Molecule 34 is a protein called 40S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
34	SG	233	1826	1139	371	313	3	0	0

- Molecule 35 is a protein called 40S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
35	SH	182	1430	889	275	259	7	0	0

- Molecule 36 is a protein called 40S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
36	SI	199	1609	1024	311	267	7	0	0

- Molecule 37 is a protein called 40S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
37	SK	180	1430	898	303	227	2	0	0

- Molecule 38 is a protein called Putative 40S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
38	SL	143	1118	721	203	191	3	0	0

- Molecule 39 is a protein called Putative ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	SM	102	Total	C	N	O	S	0	0
			788	493	144	149	2		

- Molecule 40 is a protein called Putative 40S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	SN	100	Total	C	N	O	S	0	0
			807	518	142	140	7		

- Molecule 41 is a protein called 40S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	SO	136	Total	C	N	O	S	0	0
			995	615	195	178	7		

- Molecule 42 is a protein called Putative 40S ribosomal protein S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	SP	142	Total	C	N	O	S	2	0
			1117	704	223	187	3		

- Molecule 43 is a protein called 40S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	SQ	100	Total	C	N	O	S	0	0
			672	413	122	132	5		

- Molecule 44 is a protein called Putative 40S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	SR	135	Total	C	N	O	S	1	0
			1081	684	213	180	4		

- Molecule 45 is a protein called Putative ribosomal protein S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	SS	54	Total	C	N	O	S	0	0
			434	268	89	71	6		

- Molecule 46 is a protein called Putative 40S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
46	ST	143	1163	733	230	191	9	0	0

- Molecule 47 is a protein called Putative 40S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
47	SU	158	1260	799	248	208	5	0	0

- Molecule 48 is a protein called Putative 40S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
48	SV	77	636	403	121	110	2	0	0

- Molecule 49 is a protein called Putative 40S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
49	SW	115	909	578	172	155	4	0	0

- Molecule 50 is a protein called 40S ribosomal protein S19-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
50	SX	152	1202	764	237	197	4	0	0

- Molecule 51 is a protein called Putative 40S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
51	SY	85	621	383	116	118	4	0	0

- Molecule 52 is a protein called 40S ribosomal protein S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
52	SZ	127	1021	656	196	166	3	0	0

- Molecule 53 is a protein called Putative 60S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	S	157	Total	C	N	O	S	0	0
			1194	760	232	199	3		

- Molecule 54 is a protein called 40S ribosomal protein S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	Sa	71	Total	C	N	O	S	0	0
			558	356	99	100	3		

- Molecule 55 is a protein called Putative 40S ribosomal protein S27-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	Sc	76	Total	C	N	O	S	0	0
			586	366	110	106	4		

- Molecule 56 is a protein called 40S ribosomal protein S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	Sb	103	Total	C	N	O	S	0	0
			820	508	176	129	7		

- Molecule 57 is a protein called Putative 40S ribosomal protein S33.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	Sd	65	Total	C	N	O	S	0	0
			466	286	94	82	4		

- Molecule 58 is a protein called 40S ribosomal protein S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	Se	54	Total	C	N	O	S	0	0
			430	270	91	68	1		

- Molecule 59 is a protein called Guanine nucleotide-binding protein subunit beta-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	Sg	306	Total	C	N	O	S	0	0
			2313	1453	411	437	12		

- Molecule 60 is a protein called Putative RNA binding protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
60	Sh	157	1094	698	200	194	2	0	0

- Molecule 61 is a protein called Putative 40S ribosomal protein S15A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
61	SJ	129	1021	646	188	179	8	0	0

- Molecule 62 is a protein called Putative 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
62	T	152	1209	756	240	202	11	0	0

- Molecule 63 is a protein called Putative 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
63	U	107	688	440	126	120	2	0	0

- Molecule 64 is a protein called Putative 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
64	V	118	915	581	177	155	2	0	0

- Molecule 65 is a protein called Putative 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
65	W	118	925	579	194	148	4	0	0

- Molecule 66 is a protein called Putative ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
66	X	64	539	354	102	80	3	0	0

- Molecule 67 is a protein called 60S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
67	Y	132	997	641	197	157	2	0	0

- Molecule 68 is a protein called Putative 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
68	Z	145	1068	653	225	185	5	0	0

- Molecule 69 is a protein called Putative 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
69	a	123	995	623	210	159	3	0	0

- Molecule 70 is a protein called 60S ribosomal protein L29.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
70	b	68	546	335	125	86	0	0

- Molecule 71 is a protein called Putative 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
71	c	229	1866	1188	359	308	11	0	0

- Molecule 72 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
72	d	93	713	444	130	134	5	0	0

- Molecule 73 is a protein called Putative 60S ribosomal subunit protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
73	e	180	1414	889	287	234	4	0	0

- Molecule 74 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
74	f	125	1011	636	201	170	4	0	0

- Molecule 75 is a protein called Putative ribosomal protein l35a.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
75	g	142	1142	710	239	188	5	0	0

- Molecule 76 is a protein called Putative 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
76	h	127	1038	639	226	167	6	0	0

- Molecule 77 is a protein called Putative 60S Ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
77	i	86	660	421	133	104	2	0	0

- Molecule 78 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
78	j	81	668	407	154	101	6	0	0

- Molecule 79 is a protein called Putative ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
79	k	72	534	338	105	88	3	0	0

- Molecule 80 is a protein called Putative 60S ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
80	l	50	450	291	95	63	1	0	0

- Molecule 81 is a protein called Ubiquitin-60S ribosomal protein L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	m	51	Total	C	N	O	S	0	0
			375	236	74	59	6		

- Molecule 82 is a protein called 60S ribosomal protein L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	n	33	Total	C	N	O	S	0	0
			292	178	75	37	2		

- Molecule 83 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	o	88	Total	C	N	O	S	0	0
			686	427	142	111	6		

- Molecule 84 is a protein called Putative 60S ribosomal protein L44.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	p	97	Total	C	N	O	S	0	0
			780	494	158	123	5		

- Molecule 85 is a RNA chain called LSub_rRNA_chain_2.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	2	1105	Total	C	N	O	P	0	0
			23639	10583	4263	7688	1105		

- Molecule 86 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
86	1	106	Total	Mg	0
			106	106	
86	3	1	Total	Mg	0
			1	1	
86	4	8	Total	Mg	0
			8	8	
86	5	1	Total	Mg	0
			1	1	
86	6	2	Total	Mg	0
			2	2	
86	7	2	Total	Mg	0
			2	2	

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms		AltConf
86	8	2	Total 2	Mg 2	0
86	I	1	Total 1	Mg 1	0
86	J	1	Total 1	Mg 1	0
86	M	1	Total 1	Mg 1	0
86	S1	107	Total 107	Mg 107	0
86	SH	1	Total 1	Mg 1	0
86	SS	1	Total 1	Mg 1	0
86	SX	1	Total 1	Mg 1	0
86	T	1	Total 1	Mg 1	0
86	2	66	Total 66	Mg 66	0

- Molecule 87 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		AltConf
87	1	3	Total 3	K 3	0
87	5	2	Total 2	K 2	0
87	7	2	Total 2	K 2	0
87	A	2	Total 2	K 2	0
87	B	1	Total 1	K 1	0
87	H	1	Total 1	K 1	0
87	M	1	Total 1	K 1	0
87	S1	25	Total 25	K 25	0
87	SG	1	Total 1	K 1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms	AltConf
87	2	5	Total K 5 5	0

- Molecule 88 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	AltConf
88	1	5	Total Na 5 5	0
88	4	1	Total Na 1 1	0
88	A	1	Total Na 1 1	0
88	M	1	Total Na 1 1	0
88	S1	4	Total Na 4 4	0
88	Sb	1	Total Na 1 1	0
88	2	4	Total Na 4 4	0

- Molecule 89 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	AltConf
89	SS	1	Total Zn 1 1	0
89	Sb	1	Total Zn 1 1	0
89	j	1	Total Zn 1 1	0
89	o	1	Total Zn 1 1	0
89	p	1	Total Zn 1 1	0

- Molecule 90 is water.

Mol	Chain	Residues	Atoms	AltConf
90	1	9	Total O 9 9	0
90	5	1	Total O 1 1	0

Continued on next page...

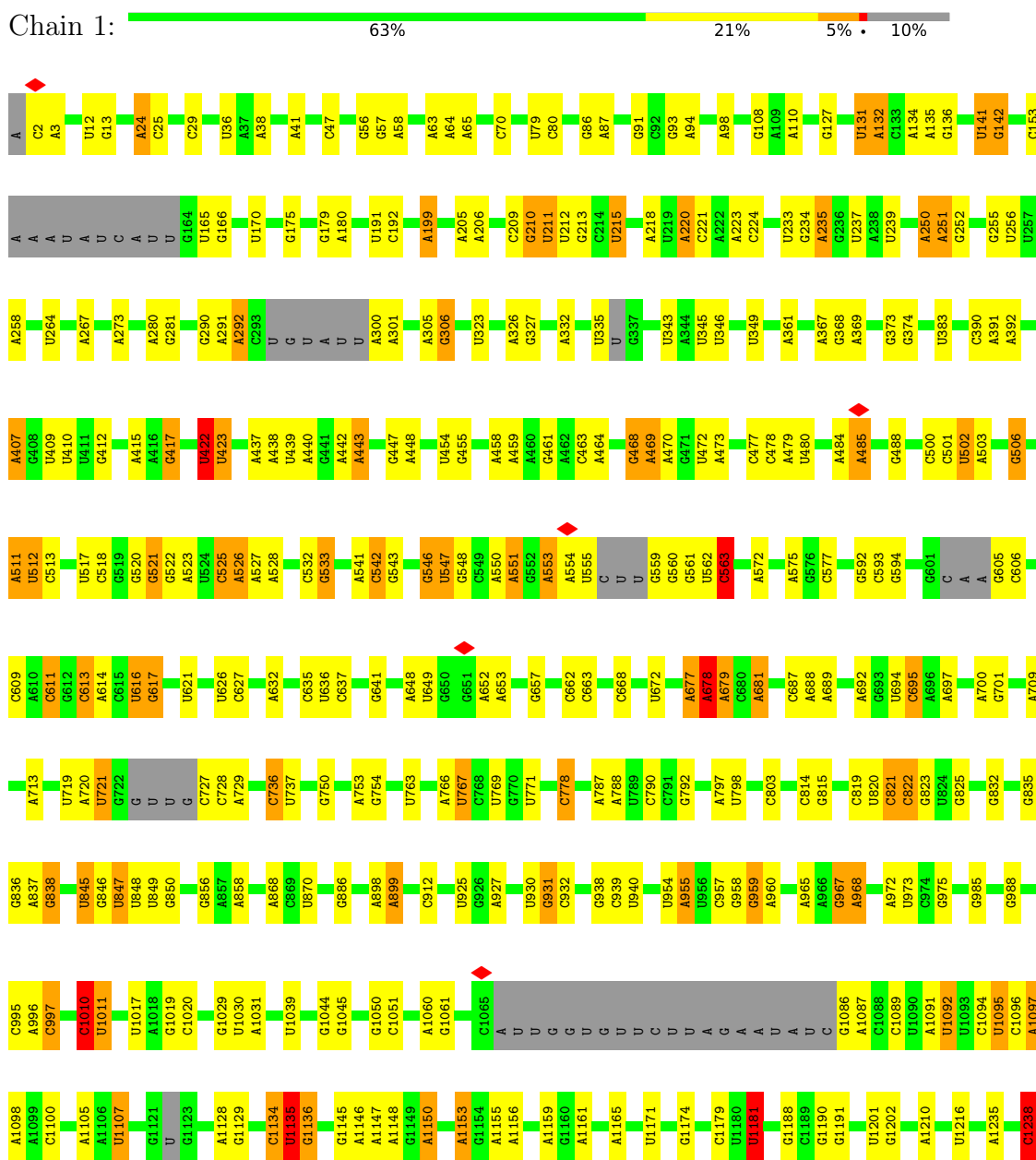
Continued from previous page...

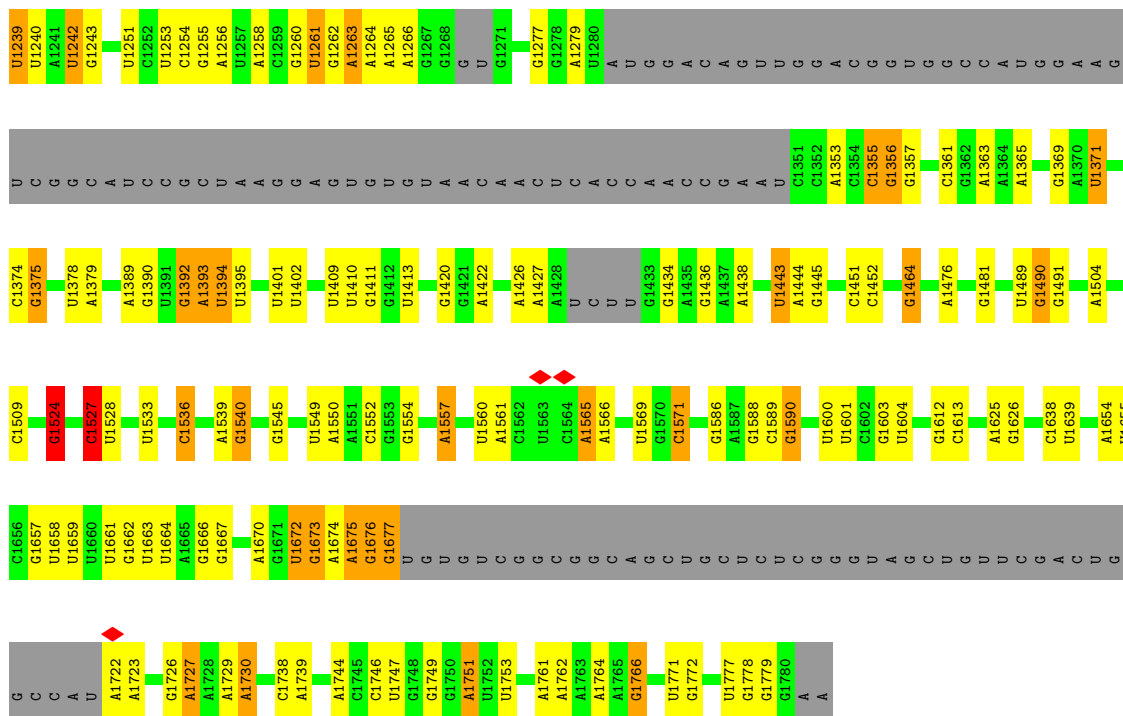
Mol	Chain	Residues	Atoms		AltConf
90	7	1	Total 1	O 1	0
90	A	1	Total 1	O 1	0
90	B	1	Total 1	O 1	0
90	H	1	Total 1	O 1	0
90	I	1	Total 1	O 1	0
90	M	4	Total 4	O 4	0
90	P	2	Total 2	O 2	0
90	S1	7	Total 7	O 7	0
90	SA	1	Total 1	O 1	0
90	S	1	Total 1	O 1	0
90	T	2	Total 2	O 2	0
90	2	17	Total 17	O 17	0

3 Residue-property plots

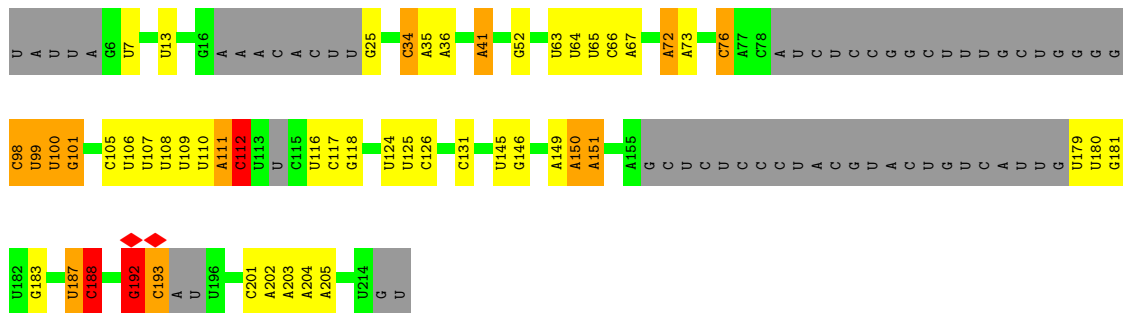
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: LSUa_rRNA_chain_1

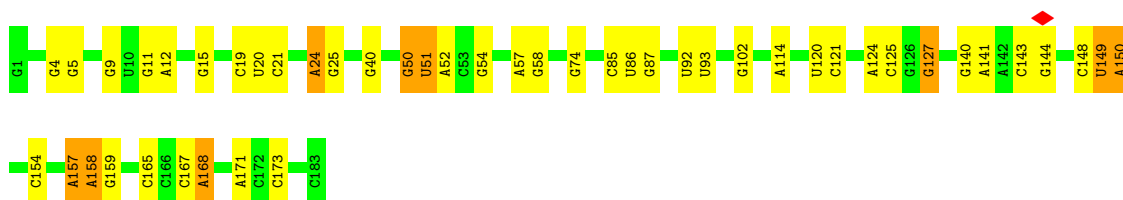
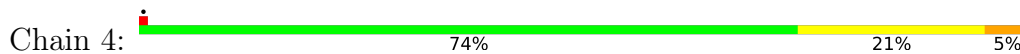




• Molecule 2: SR1_chain_3

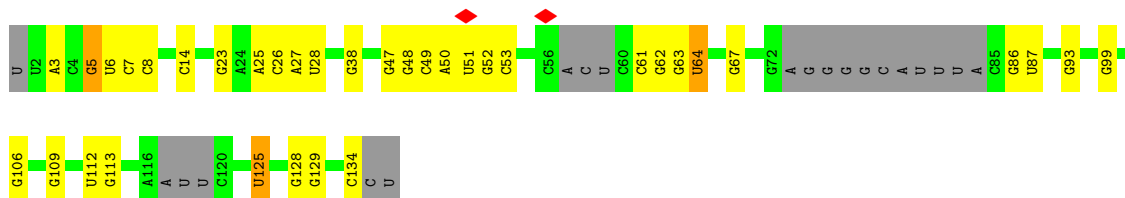


• Molecule 3: SR2_chain_4

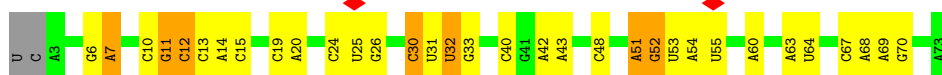


• Molecule 4: SR4_chain_5





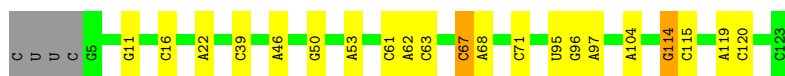
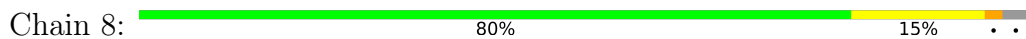
• Molecule 5: SR6_chain_6



• Molecule 6: 5.8S_rRNA_chain_7



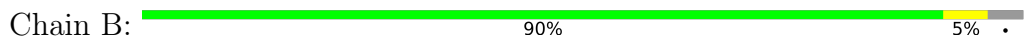
• Molecule 7: 5S_rRNA_chain_8



• Molecule 8: Putative 60S ribosomal protein L2



• Molecule 9: Putative ribosomal protein L3




• Molecule 10: Putative ribosomal protein L1a

Chain C:  97%




- Molecule 11: 60S ribosomal protein L11

Chain D:  81% 15%



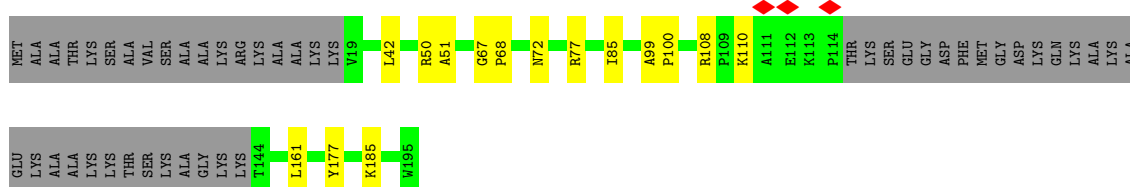
- Molecule 12: Putative 60S ribosomal protein L9

Chain E:  89% 9%




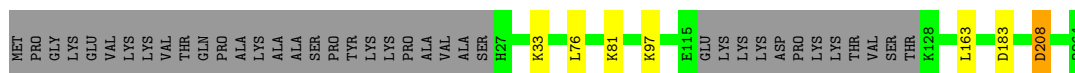
- Molecule 13: Putative 60S ribosomal protein L6

Chain F:  68% 8% 24%



- Molecule 14: 60S ribosomal protein L7a

Chain G:  83% 14%




- Molecule 15: Putative 60S ribosomal protein L13a

Chain H:  94% 5%

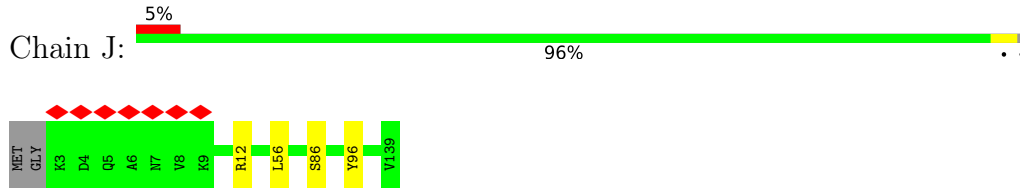


- Molecule 16: Putative 60S ribosomal protein L13

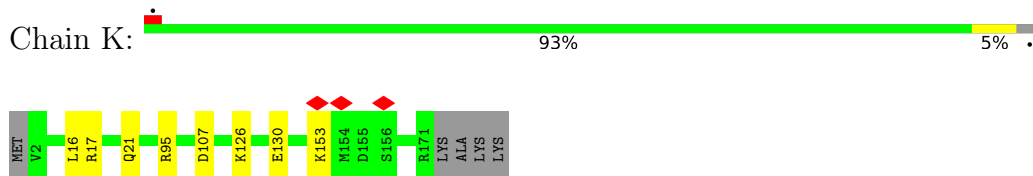
Chain I:  93% 5%



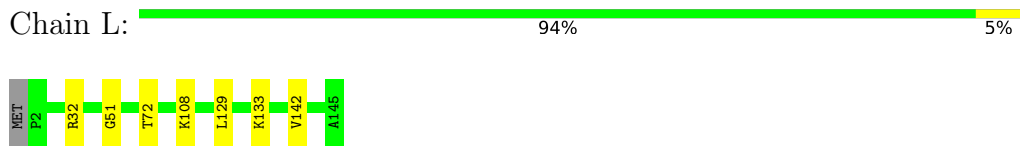
- Molecule 17: Putative 60S ribosomal protein L23



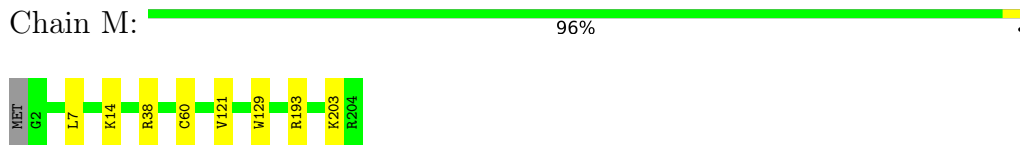
- Molecule 18: Putative 40S ribosomal protein L14



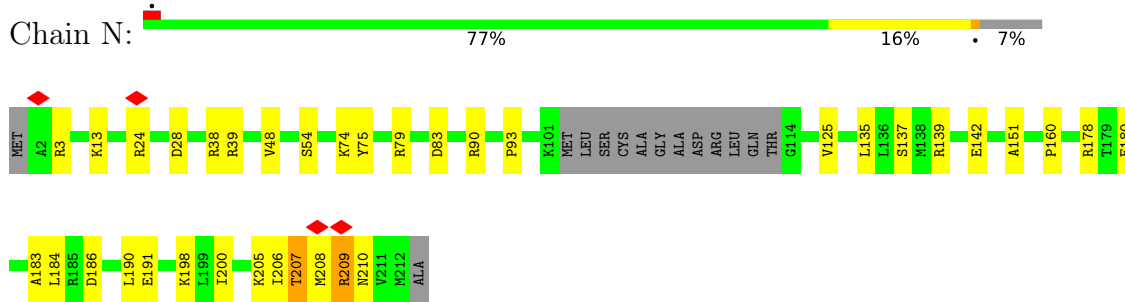
- Molecule 19: Putative 60S ribosomal protein L27A/L29



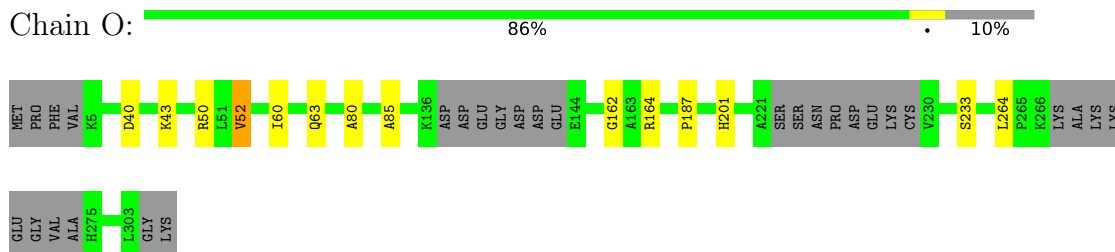
- Molecule 20: Ribosomal protein L15

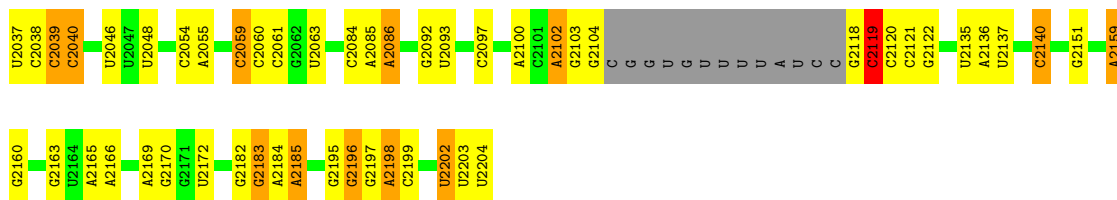


- Molecule 21: Putative 60S ribosomal protein L10

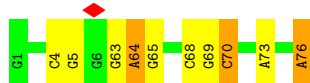


- Molecule 22: Putative 60S ribosomal protein L5

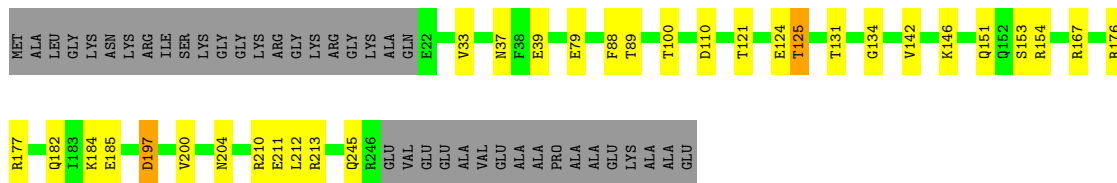
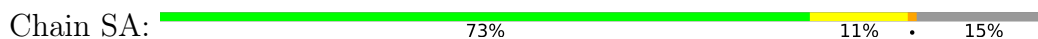




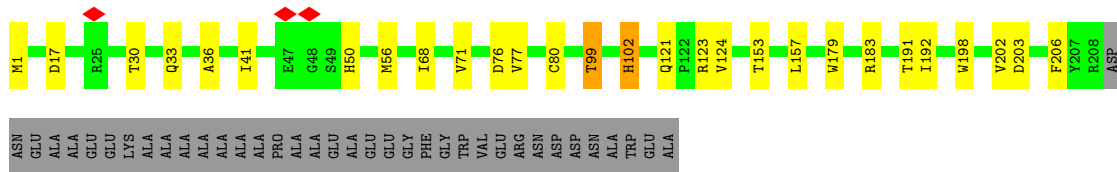
• Molecule 27: E-site_tRNA_chain_S4



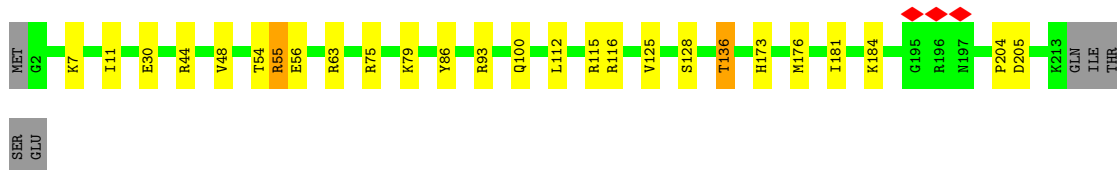
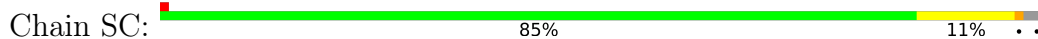
• Molecule 28: 40S ribosomal protein S3a



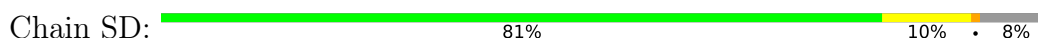
• Molecule 29: 40S ribosomal protein SA

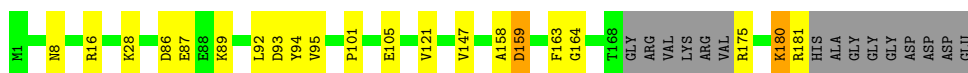


• Molecule 30: Putative 40S ribosomal protein S3

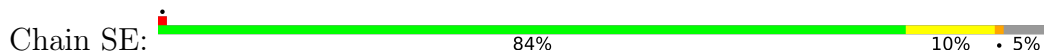


• Molecule 31: Putative 40S ribosomal protein S9

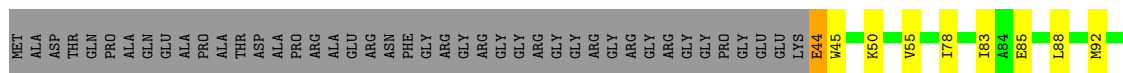
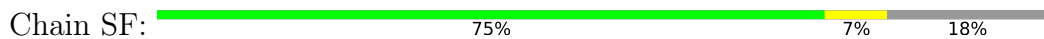




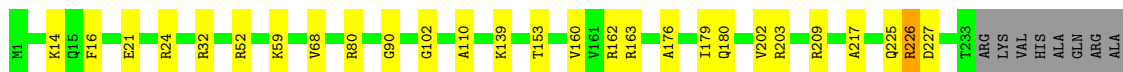
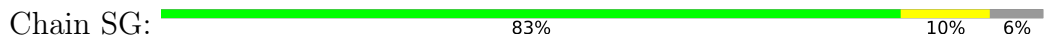
- Molecule 32: 40S ribosomal protein S4



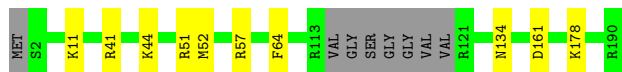
- Molecule 33: 40S ribosomal protein S2



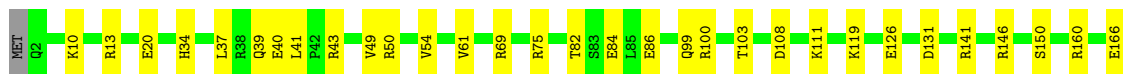
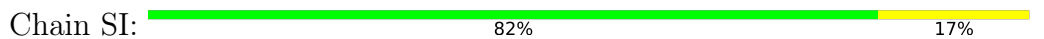
- Molecule 34: 40S ribosomal protein S6



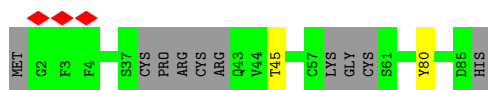
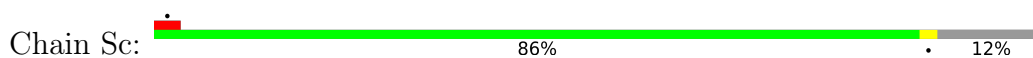
- Molecule 35: 40S ribosomal protein S5



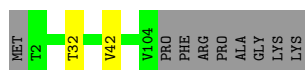
- Molecule 36: 40S ribosomal protein S7



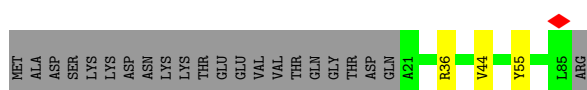
- Molecule 55: Putative 40S ribosomal protein S27-1



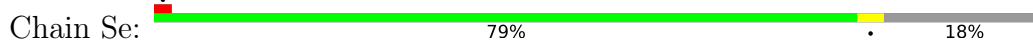
- Molecule 56: 40S ribosomal protein S26



- Molecule 57: Putative 40S ribosomal protein S33



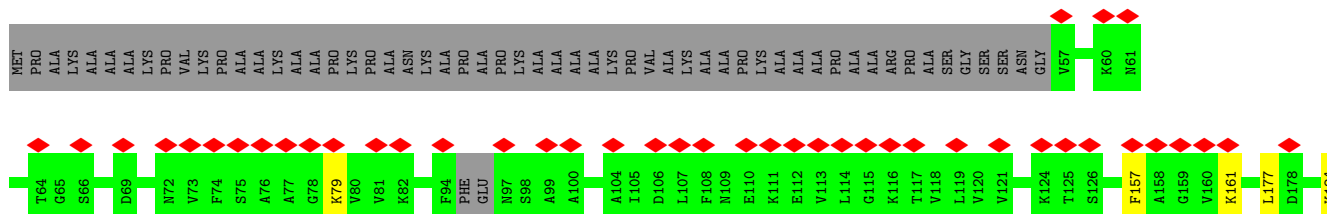
- Molecule 58: 40S ribosomal protein S30

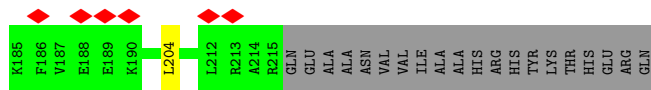


- Molecule 59: Guanine nucleotide-binding protein subunit beta-like protein

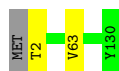


- Molecule 60: Putative RNA binding protein

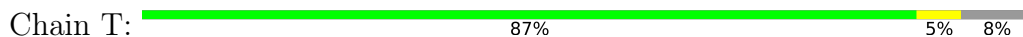




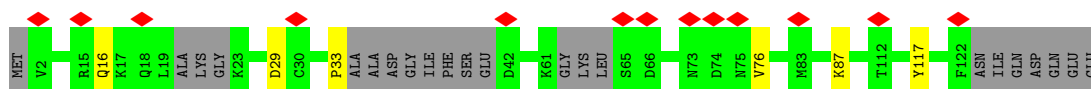
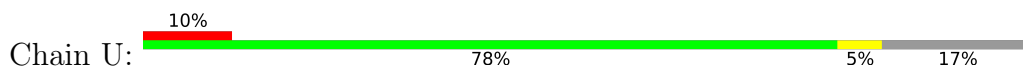
• Molecule 61: Putative 40S ribosomal protein S15A



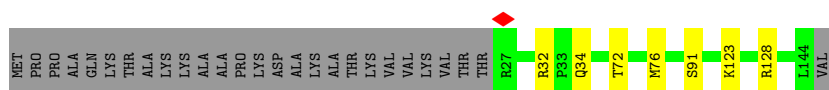
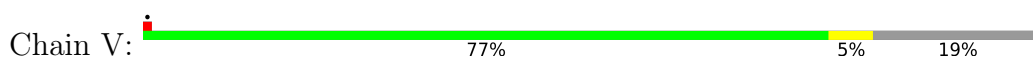
• Molecule 62: Putative 60S ribosomal protein L17



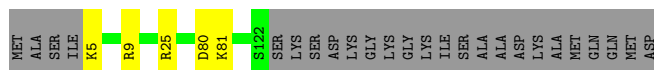
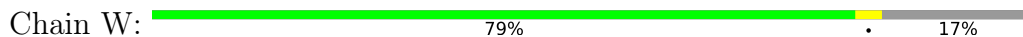
• Molecule 63: Putative 60S ribosomal protein L22



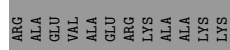
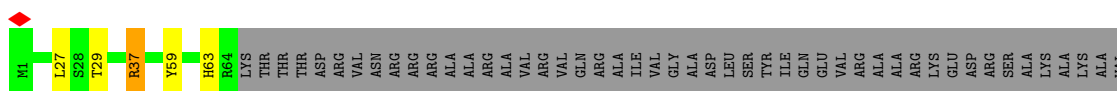
• Molecule 64: Putative 60S ribosomal protein L23a



• Molecule 65: Putative 60S ribosomal protein L26



• Molecule 66: Putative ribosomal protein L24



- Molecule 67: 60S ribosomal protein L27

Chain Y:  91% 7%



- Molecule 68: Putative 60S ribosomal protein L28

Chain Z:  93% 5%



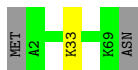
- Molecule 69: Putative 60S ribosomal protein L35

Chain a:  95%




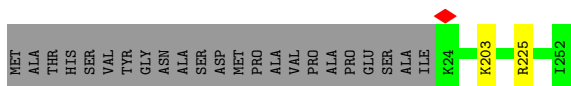
- Molecule 70: 60S ribosomal protein L29

Chain b:  96%




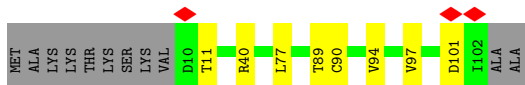
- Molecule 71: Putative 60S ribosomal protein L7

Chain c:  90% 9%



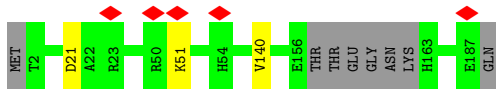
- Molecule 72: 60S ribosomal protein L30

Chain d:  82% 8% 11%

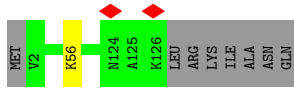
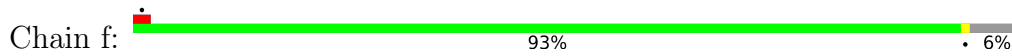


- Molecule 73: Putative 60S ribosomal subunit protein L31

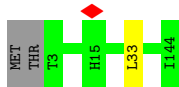
Chain e:  94%



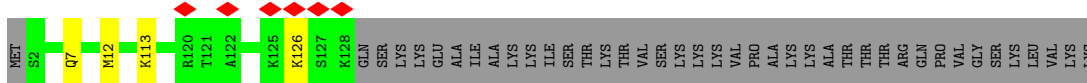
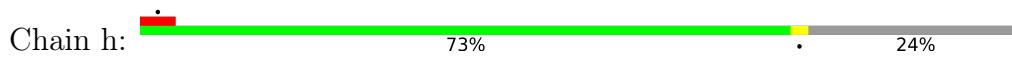
- Molecule 74: 60S ribosomal protein L32



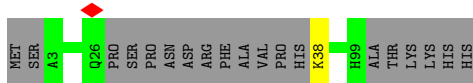
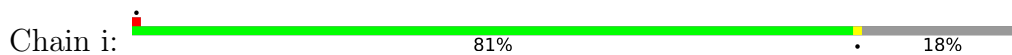
- Molecule 75: Putative ribosomal protein l35a



- Molecule 76: Putative 60S ribosomal protein L34



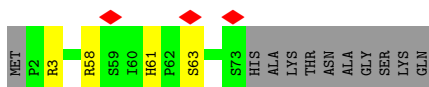
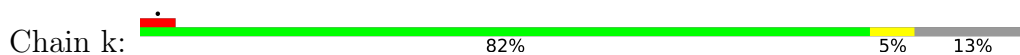
- Molecule 77: Putative 60S Ribosomal protein L36



- Molecule 78: Ribosomal protein L37



- Molecule 79: Putative ribosomal protein L38



- Molecule 80: Putative 60S ribosomal protein L39

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	212912	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	0.83	Depositor
Minimum defocus (nm)	700	Depositor
Maximum defocus (nm)	1300	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.162	Depositor
Minimum map value	-0.037	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.01	Depositor
Map size (Å)	408.0, 408.0, 408.0	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.85, 0.85, 0.85	Depositor

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, NA, PSU, K, C4J, 5MC, MA6, OMC, OMG, 1MA, MG, 7MG, A2M, OMU

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	1	0.41	0/37759	0.83	29/58867 (0.0%)
2	3	0.36	0/3671	0.86	12/5704 (0.2%)
3	4	0.37	0/4354	0.80	0/6788
4	5	0.38	0/2742	0.84	2/4266 (0.0%)
5	6	0.36	0/1683	0.86	0/2618
6	7	0.38	0/3748	0.80	0/5834
7	8	0.34	0/2829	0.82	1/4405 (0.0%)
8	A	0.28	0/1935	0.56	0/2606
9	B	0.27	0/3109	0.54	0/4214
10	C	0.26	0/2714	0.53	0/3679
11	D	0.25	0/1045	0.48	0/1423
12	E	0.25	0/1357	0.52	0/1850
13	F	0.27	0/1071	0.51	0/1466
14	G	0.26	0/1696	0.52	0/2303
15	H	0.28	0/1687	0.53	0/2291
16	I	0.26	0/1572	0.52	0/2129
17	J	0.28	0/996	0.53	0/1355
18	K	0.25	0/1248	0.49	0/1695
19	L	0.28	0/1129	0.53	0/1511
20	M	0.27	0/1728	0.58	0/2312
21	N	0.26	0/1647	0.55	0/2202
22	O	0.27	0/1963	0.49	0/2665
23	P	0.28	0/1524	0.55	0/2045
24	Q	0.27	0/1446	0.55	0/1940
25	R	0.27	0/1439	0.51	0/1949
26	S1	0.58	0/40844	0.85	37/63606 (0.1%)
27	S4	0.29	0/476	0.86	1/739 (0.1%)
28	SA	0.30	0/1859	0.55	0/2501
29	SB	0.29	0/1623	0.49	0/2204
30	SC	0.27	0/1636	0.50	0/2192
31	SD	0.30	0/1447	0.54	0/1942
32	SE	0.31	0/2088	0.53	0/2814

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	SF	0.32	0/1698	0.50	0/2301
34	SG	0.30	0/1849	0.56	0/2477
35	SH	0.27	0/1452	0.50	0/1948
36	SI	0.31	0/1639	0.53	0/2209
37	SK	0.30	0/1451	0.59	0/1944
38	SL	0.27	0/1139	0.47	0/1533
39	SM	0.25	0/798	0.51	0/1084
40	SN	0.26	0/830	0.47	0/1126
41	SO	0.33	0/1010	0.56	0/1362
42	SP	0.32	0/1143	0.53	0/1531
43	SQ	0.22	0/674	0.47	0/916
44	SR	0.27	0/1103	0.53	0/1481
45	SS	0.27	0/439	0.53	0/583
46	ST	0.34	0/1186	0.54	0/1590
47	SU	0.35	0/1290	0.52	0/1740
48	SV	0.28	0/643	0.50	0/854
49	SW	0.26	0/929	0.49	0/1255
50	SX	0.27	0/1233	0.49	0/1656
51	SY	0.27	0/630	0.51	0/858
52	SZ	0.30	0/1041	0.51	0/1388
53	S	0.27	0/1222	0.51	0/1656
54	Sa	0.27	0/563	0.50	0/757
55	Sc	0.32	0/596	0.55	0/801
56	Sb	0.36	0/837	0.58	0/1120
57	Sd	0.26	0/468	0.57	0/630
58	Se	0.29	0/436	0.53	0/577
59	Sg	0.25	0/2371	0.50	0/3233
60	Sh	0.24	0/1113	0.48	0/1514
61	SJ	0.34	0/1038	0.52	0/1391
62	T	0.26	0/1233	0.52	0/1656
63	U	0.26	0/695	0.45	0/939
64	V	0.26	0/930	0.51	0/1256
65	W	0.25	0/938	0.55	0/1254
66	X	0.28	0/560	0.52	0/757
67	Y	0.27	0/1018	0.52	0/1376
68	Z	0.25	0/1083	0.53	0/1461
69	a	0.25	0/1005	0.54	0/1339
70	b	0.25	0/557	0.50	0/743
71	c	0.27	0/1900	0.51	0/2544
72	d	0.28	0/723	0.47	0/979
73	e	0.25	0/1432	0.54	0/1904
74	f	0.27	0/1031	0.55	0/1380
75	g	0.28	0/1165	0.57	0/1563

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	h	0.25	0/1054	0.55	0/1399
77	i	0.25	0/668	0.51	0/889
78	j	0.27	0/682	0.62	0/910
79	k	0.25	0/542	0.51	0/733
80	l	0.27	0/463	0.54	0/617
81	m	0.24	0/381	0.53	0/515
82	n	0.28	0/296	0.66	0/386
83	o	0.29	0/698	0.57	0/930
84	p	0.27	0/793	0.50	0/1048
85	2	0.42	0/25035	0.84	27/39014 (0.1%)
All	All	0.40	0/211768	0.73	109/311222 (0.0%)

There are no bond length outliers.

All (109) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	S1	2059	C	O4'-C1'-N1	8.29	114.83	108.20
1	1	1238	C	C2-N1-C1'	7.66	127.22	118.80
26	S1	2203	U	N1-C2-O2	7.66	128.16	122.80
85	2	1063	C	C2-N1-C1'	7.55	127.11	118.80
2	3	179	U	C2-N1-C1'	7.45	126.63	117.70
26	S1	589	U	C2-N1-C1'	7.37	126.55	117.70
85	2	61	C	C2-N1-C1'	7.37	126.90	118.80
1	1	563	C	N1-C2-O2	7.26	123.26	118.90
1	1	447	G	O4'-C1'-N9	7.21	113.97	108.20
1	1	1238	C	N1-C2-O2	7.17	123.20	118.90
85	2	957	C	N1-C2-O2	7.06	123.14	118.90
1	1	1600	U	C2-N1-C1'	6.92	126.01	117.70
26	S1	589	U	N1-C2-O2	6.89	127.62	122.80
1	1	437	A	OP1-P-OP2	-6.84	109.33	119.60
85	2	957	C	C2-N1-C1'	6.84	126.33	118.80
26	S1	509	G	OP1-P-OP2	-6.78	109.43	119.60
85	2	753	C	C2-N1-C1'	6.74	126.22	118.80
1	1	1552	C	OP1-P-OP2	-6.73	109.51	119.60
2	3	34	C	C2-N1-C1'	6.64	126.11	118.80
1	1	1135	U	C2-N1-C1'	6.58	125.59	117.70
26	S1	115	C	OP1-P-OP2	-6.51	109.83	119.60
85	2	1063	C	N1-C2-O2	6.45	122.77	118.90
26	S1	589	U	N3-C2-O2	-6.44	117.69	122.20
1	1	736	C	C2-N1-C1'	6.41	125.85	118.80
2	3	34	C	N1-C2-O2	6.32	122.69	118.90
26	S1	2119	C	N1-C2-O2	6.32	122.69	118.90

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	563	C	N3-C2-O2	-6.30	117.49	121.90
26	S1	2203	U	N3-C2-O2	-6.29	117.80	122.20
2	3	179	U	N1-C2-O2	6.28	127.19	122.80
2	3	112	C	O4'-C1'-N1	6.21	113.17	108.20
26	S1	2059	C	OP1-P-OP2	-6.16	110.36	119.60
1	1	1135	U	N1-C2-O2	6.16	127.11	122.80
1	1	973	U	C2-N1-C1'	6.15	125.08	117.70
85	2	957	C	N3-C2-O2	-6.11	117.62	121.90
26	S1	1788	U	C2-N1-C1'	6.11	125.03	117.70
85	2	61	C	N1-C2-O2	6.06	122.53	118.90
26	S1	1956	C	N1-C2-O2	6.03	122.52	118.90
2	3	188	C	C2-N1-C1'	6.00	125.40	118.80
85	2	965	C	N1-C2-O2	6.00	122.50	118.90
85	2	3	C	N1-C2-O2	5.97	122.48	118.90
26	S1	1510	C	N3-C2-O2	-5.95	117.73	121.90
1	1	563	C	C2-N1-C1'	5.90	125.29	118.80
26	S1	2119	C	C2-N1-C1'	5.89	125.28	118.80
85	2	1191	C	C2-N1-C1'	5.88	125.27	118.80
85	2	1191	C	N3-C2-O2	-5.81	117.83	121.90
1	1	886	G	O4'-C1'-N9	5.81	112.84	108.20
2	3	34	C	N3-C2-O2	-5.80	117.84	121.90
1	1	1238	C	N3-C2-O2	-5.78	117.85	121.90
2	3	192	G	O4'-C1'-N9	5.75	112.80	108.20
85	2	957	C	C6-N1-C2	-5.75	118.00	120.30
2	3	131	C	C2-N1-C1'	5.73	125.10	118.80
85	2	1190	U	N3-C2-O2	-5.69	118.22	122.20
26	S1	1212	C	C2-N1-C1'	5.66	125.03	118.80
4	5	112	U	C5-C4-O4	-5.64	122.52	125.90
85	2	91	C	N3-C2-O2	-5.62	117.97	121.90
85	2	3	C	C2-N1-C1'	5.61	124.97	118.80
85	2	479	C	N1-C2-O2	5.61	122.27	118.90
26	S1	354	C	C2-N1-C1'	5.56	124.92	118.80
1	1	547	U	OP1-P-O3'	5.55	117.42	105.20
85	2	1191	C	C6-N1-C2	-5.52	118.09	120.30
26	S1	558	U	C2-N1-C1'	5.51	124.31	117.70
1	1	778	C	C2-N1-C1'	5.50	124.85	118.80
26	S1	659	G	C4-N9-C1'	5.48	133.62	126.50
2	3	179	U	N3-C2-O2	-5.48	118.37	122.20
26	S1	1510	C	C6-N1-C2	-5.47	118.11	120.30
26	S1	2204	U	C5-C4-O4	5.46	129.17	125.90
85	2	91	C	C6-N1-C2	-5.45	118.12	120.30
1	1	1135	U	N3-C2-O2	-5.42	118.40	122.20

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1134	C	OP1-P-O3'	5.41	117.11	105.20
26	S1	2040	C	C2-N1-C1'	5.35	124.69	118.80
85	2	1063	C	C6-N1-C1'	-5.35	114.38	120.80
1	1	613	C	C2-N1-C1'	5.34	124.68	118.80
7	8	39	C	C2-N1-C1'	5.34	124.67	118.80
4	5	112	U	N3-C4-O4	5.32	123.12	119.40
85	2	479	C	N3-C2-O2	-5.30	118.19	121.90
26	S1	1016	G	N3-C4-N9	-5.30	122.82	126.00
1	1	1238	C	C6-N1-C1'	-5.28	114.46	120.80
26	S1	1956	C	C2-N1-C1'	5.28	124.60	118.80
85	2	61	C	C6-N1-C1'	-5.26	114.48	120.80
26	S1	1181	C	C2-N1-C1'	5.26	124.58	118.80
27	S4	70	C	C2-N1-C1'	5.25	124.58	118.80
26	S1	1271	C	C2-N1-C1'	5.24	124.56	118.80
1	1	973	U	N1-C2-O2	5.23	126.46	122.80
26	S1	1956	C	N3-C2-O2	-5.23	118.24	121.90
26	S1	433	G	O4'-C1'-N9	5.23	112.39	108.20
1	1	1134	C	P-O3'-C3'	5.22	125.97	119.70
85	2	965	C	N3-C2-O2	-5.22	118.25	121.90
85	2	479	C	C2-N1-C1'	5.21	124.53	118.80
26	S1	1036	G	N3-C2-N2	-5.21	116.25	119.90
26	S1	770	A	P-O3'-C3'	5.13	125.86	119.70
1	1	1601	U	C2-N1-C1'	5.13	123.86	117.70
26	S1	2119	C	N3-C2-O2	-5.13	118.31	121.90
85	2	972	C	N1-C2-O2	5.12	121.97	118.90
1	1	778	C	N1-C2-O2	5.11	121.97	118.90
2	3	112	C	C2-N1-C1'	5.11	124.42	118.80
26	S1	147	U	C2-N1-C1'	5.11	123.83	117.70
85	2	134	C	C2-N1-C1'	5.10	124.41	118.80
2	3	179	U	C6-N1-C1'	-5.10	114.06	121.20
26	S1	1510	C	C2-N1-C1'	5.08	124.39	118.80
1	1	736	C	C6-N1-C2	-5.08	118.27	120.30
85	2	1063	C	N3-C2-O2	-5.08	118.34	121.90
26	S1	1973	C	C2-N1-C1'	5.07	124.38	118.80
1	1	1600	U	N3-C2-O2	-5.07	118.65	122.20
26	S1	1426	U	C2-N1-C1'	5.07	123.78	117.70
1	1	1238	C	C6-N1-C2	-5.02	118.29	120.30
26	S1	2039	C	C2-N1-C1'	5.02	124.32	118.80
26	S1	2040	C	C6-N1-C2	-5.02	118.29	120.30
26	S1	1016	G	N3-C2-N2	-5.01	116.39	119.90
1	1	1571	C	C2-N1-C1'	5.00	124.31	118.80

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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	1	34587	0	17450	200	0
2	3	3312	0	1681	24	0
3	4	3917	0	1979	18	0
4	5	2456	0	1247	13	0
5	6	1506	0	768	12	0
6	7	3485	0	1770	13	0
7	8	2531	0	1283	11	0
8	A	1893	0	1905	6	0
9	B	3035	0	3004	15	0
10	C	2664	0	2626	4	0
11	D	1025	0	787	4	0
12	E	1337	0	1269	8	0
13	F	1049	0	1025	10	0
14	G	1672	0	1696	4	0
15	H	1652	0	1644	7	0
16	I	1539	0	1491	2	0
17	J	979	0	968	2	0
18	K	1229	0	1194	6	0
19	L	1102	0	1124	4	0
20	M	1688	0	1748	5	0
21	N	1615	0	1685	22	0
22	O	1926	0	1761	8	0
23	P	1500	0	1568	4	0
24	Q	1427	0	1383	4	0
25	R	1405	0	1411	6	0
26	S1	37536	0	18968	352	0
27	S4	427	0	222	7	0
28	SA	1828	0	1917	13	0
29	SB	1590	0	1570	16	0
30	SC	1609	0	1655	13	0
31	SD	1422	0	1467	15	0
32	SE	2050	0	2144	20	0
33	SF	1662	0	1708	12	0
34	SG	1826	0	1914	23	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	SH	1430	0	1456	5	0
36	SI	1609	0	1668	21	0
37	SK	1430	0	1512	7	0
38	SL	1118	0	1168	1	0
39	SM	788	0	823	9	0
40	SN	807	0	782	6	0
41	SO	995	0	997	4	0
42	SP	1117	0	1166	8	0
43	SQ	672	0	602	10	0
44	SR	1081	0	1126	8	0
45	SS	434	0	438	5	0
46	ST	1163	0	1232	10	0
47	SU	1260	0	1277	5	0
48	SV	636	0	687	8	0
49	SW	909	0	909	10	0
50	SX	1202	0	1227	16	0
51	SY	621	0	601	5	0
52	SZ	1021	0	1083	12	0
53	S	1194	0	1184	2	0
54	Sa	558	0	606	0	0
55	Sc	586	0	570	0	0
56	Sb	820	0	854	0	0
57	Sd	466	0	476	0	0
58	Se	430	0	473	0	0
59	Sg	2313	0	2189	0	0
60	Sh	1094	0	1005	0	0
61	SJ	1021	0	1050	1	0
62	T	1209	0	1236	6	0
63	U	688	0	536	3	0
64	V	915	0	956	4	0
65	W	925	0	991	8	0
66	X	539	0	535	2	0
67	Y	997	0	988	5	0
68	Z	1068	0	1057	4	0
69	a	995	0	1076	0	0
70	b	546	0	575	0	0
71	c	1866	0	1970	0	0
72	d	713	0	730	0	0
73	e	1414	0	1532	0	0
74	f	1011	0	1054	0	0
75	g	1142	0	1196	0	0
76	h	1038	0	1109	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
77	i	660	0	714	0	0
78	j	668	0	680	0	0
79	k	534	0	534	0	0
80	l	450	0	483	0	0
81	m	375	0	370	0	0
82	n	292	0	331	0	0
83	o	686	0	702	0	0
84	p	780	0	838	0	0
85	2	23639	0	11982	148	0
86	1	106	0	0	0	0
86	2	66	0	0	0	0
86	3	1	0	0	0	0
86	4	8	0	0	0	0
86	5	1	0	0	0	0
86	6	2	0	0	0	0
86	7	2	0	0	0	0
86	8	2	0	0	0	0
86	I	1	0	0	0	0
86	J	1	0	0	0	0
86	M	1	0	0	0	0
86	S1	107	0	0	0	0
86	SH	1	0	0	0	0
86	SS	1	0	0	0	0
86	SX	1	0	0	0	0
86	T	1	0	0	0	0
87	1	3	0	0	0	0
87	2	5	0	0	0	0
87	5	2	0	0	0	0
87	7	2	0	0	0	0
87	A	2	0	0	0	0
87	B	1	0	0	0	0
87	H	1	0	0	0	0
87	M	1	0	0	0	0
87	S1	25	0	0	0	0
87	SG	1	0	0	0	0
88	1	5	0	0	0	0
88	2	4	0	0	0	0
88	4	1	0	0	0	0
88	A	1	0	0	0	0
88	M	1	0	0	0	0
88	S1	4	0	0	0	0
88	Sb	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
89	SS	1	0	0	0	0
89	Sb	1	0	0	0	0
89	j	1	0	0	0	0
89	o	1	0	0	0	0
89	p	1	0	0	0	0
90	1	9	0	0	0	0
90	2	17	0	0	0	0
90	5	1	0	0	0	0
90	7	1	0	0	0	0
90	A	1	0	0	0	0
90	B	1	0	0	0	0
90	H	1	0	0	0	0
90	I	1	0	0	0	0
90	M	4	0	0	0	0
90	P	2	0	0	0	0
90	S	1	0	0	0	0
90	S1	7	0	0	0	0
90	SA	1	0	0	0	0
90	T	2	0	0	0	0
All	All	200822	0	145368	1052	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 3.

All (1052) 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)
26:S1:955:A:N6	26:S1:980:G:H1	1.53	1.06
26:S1:1366:A:N1	26:S1:1416:G:N2	2.05	1.04
26:S1:781:A:H2	26:S1:839:G:H1	1.03	0.97
85:2:984:G:H1	85:2:1000:U:H3	0.92	0.92
1:1:520:G:HO2'	1:1:521:G:H8	0.95	0.92
1:1:1676:G:H1	1:1:1723:A:H61	1.15	0.88
26:S1:781:A:C2	26:S1:839:G:N1	2.42	0.88
1:1:1676:G:H1	1:1:1723:A:N6	1.70	0.87
26:S1:999:A:N6	26:S1:1095:G:H1	1.72	0.86
85:2:1472:U:H3	85:2:1492:G:H1	1.24	0.86
26:S1:1019:U:H3	26:S1:1033:G:H1	0.92	0.85
26:S1:1912:A:H2	26:S1:1929:G:H1	1.25	0.83
26:S1:783:A:H2	26:S1:837:G:H22	1.23	0.82
26:S1:2085:A:HO2'	26:S1:2086:A:H8	1.28	0.82

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:559:G:H1	26:S1:592:C:H5	1.27	0.82
31:SD:158:ALA:O	31:SD:164:GLY:N	2.13	0.82
26:S1:781:A:H2	26:S1:839:G:N1	1.78	0.81
26:S1:275:A:H3'	26:S1:276:G:H21	1.46	0.81
26:S1:782:C:H42	26:S1:838:U:H3	1.29	0.81
4:5:53:C:H42	4:5:61:C:H42	1.31	0.79
26:S1:354:C:H5	26:S1:400:G:H1	1.31	0.79
1:1:503:A:N6	1:1:553:A:N7	2.32	0.78
26:S1:999:A:N6	26:S1:1095:G:N1	2.31	0.77
26:S1:996:C:N3	26:S1:1098:U:O4	2.18	0.76
5:6:10:C:H5	5:6:70:G:H1	1.34	0.76
1:1:1443:U:H5'	1:1:1464:G:H21	1.51	0.75
3:4:154:C:H4'	12:E:155:ARG:HE	1.52	0.75
26:S1:497:A:OP2	32:SE:63:ARG:NH1	2.20	0.74
26:S1:528:G:H1	26:S1:553:U:H3	1.30	0.74
26:S1:983:C:H2'	26:S1:984:G:H8	1.53	0.74
26:S1:955:A:N1	26:S1:980:G:N2	2.30	0.74
1:1:1239:U:OP1	15:H:141:ARG:NH1	2.21	0.74
33:SF:249:ARG:HH21	33:SF:254:GLU:HA	1.51	0.74
1:1:511:A:H4'	1:1:512:U:H5''	1.69	0.74
26:S1:958:G:H22	26:S1:977:G:H1	1.33	0.74
26:S1:756:C:N3	26:S1:773:A:N6	2.36	0.74
26:S1:955:A:H61	26:S1:980:G:H1	0.78	0.73
1:1:1051:C:H5	1:1:1097:A:H62	1.34	0.73
26:S1:691:G:H22	26:S1:754:G:H22	1.36	0.73
26:S1:790:U:H3	34:SG:226:ARG:HE	1.35	0.73
85:2:781:G:H1	85:2:808:C:H5	1.34	0.73
85:2:684:C:N4	85:2:755:U:O4	2.19	0.73
24:Q:174:ARG:NH2	26:S1:1102:G:OP2	2.21	0.73
26:S1:1645:U:H3	26:S1:1674:A:H62	1.37	0.73
26:S1:790:U:H3	34:SG:226:ARG:NE	1.87	0.73
26:S1:1142:G:H21	41:SO:45:THR:HG21	1.54	0.72
1:1:251:A:N1	65:W:5:LYS:N	2.36	0.72
26:S1:1035:G:H2'	26:S1:1036:G:C8	2.24	0.72
26:S1:771:G:N2	26:S1:772:A:N1	2.36	0.72
85:2:569:G:O2'	85:2:571:G:OP2	2.08	0.72
26:S1:1016:G:H22	26:S1:1036:G:N2	1.87	0.72
26:S1:951:U:O2	26:S1:984:G:N2	2.21	0.71
26:S1:1016:G:H22	26:S1:1036:G:H22	1.38	0.71
26:S1:2059:C:H5	26:S1:2166:A:H61	1.37	0.71
26:S1:780:A:H61	26:S1:840:A:H62	1.37	0.71

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:1706:A:H62	26:S1:1766:G:H1	1.37	0.71
30:SC:63:ARG:HH21	40:SN:98:GLN:HE22	1.36	0.71
26:S1:951:U:H3	26:S1:984:G:H1	1.39	0.70
26:S1:836:C:H2'	26:S1:837:G:C8	2.26	0.70
26:S1:691:G:H22	26:S1:754:G:N2	1.90	0.70
2:3:41:A:H8	2:3:188:C:H42	1.39	0.70
1:1:1588:G:O2'	1:1:1590:G:OP2	2.10	0.70
26:S1:585:C:OP2	31:SD:181:ARG:NH1	2.25	0.70
25:R:173:THR:HG22	25:R:175:ARG:H	1.55	0.69
26:S1:253:U:H3	26:S1:974:G:H1	1.39	0.69
49:SW:35:LEU:HG	49:SW:39:GLU:HG3	1.74	0.69
26:S1:875:A:H62	26:S1:887:U:H5	1.39	0.69
26:S1:2102:A:OP2	34:SG:52:ARG:NH2	2.26	0.69
85:2:978:C:H5'	85:2:979:A:H5''	1.75	0.69
26:S1:1016:G:H1	26:S1:1036:G:H22	1.39	0.68
26:S1:1878:A:O2'	50:SX:60:PRO:O	2.11	0.68
26:S1:789:G:OP2	32:SE:173:ARG:NH1	2.25	0.68
85:2:134:C:H5	85:2:344:G:H1	1.42	0.68
1:1:593:C:H42	1:1:614:A:H61	1.42	0.67
28:SA:211:GLU:OE2	28:SA:213:ARG:NH1	2.27	0.67
33:SF:92:MET:SD	33:SF:114:ASN:ND2	2.66	0.67
26:S1:822:U:O2'	34:SG:226:ARG:NH1	2.23	0.67
36:SI:126:GLU:OE2	36:SI:141:ARG:NH1	2.26	0.67
85:2:818:U:H3	85:2:958:A:H61	1.43	0.67
3:4:4:G:H1	3:4:20:U:H3	1.43	0.67
26:S1:983:C:H2'	26:S1:984:G:C8	2.29	0.67
26:S1:1160:A:C8	85:2:452:G:H4'	2.29	0.67
36:SI:75:ARG:NH2	36:SI:131:ASP:OD1	2.25	0.67
26:S1:999:A:N1	26:S1:1095:G:N2	2.43	0.66
26:S1:558:U:H2'	26:S1:559:G:C8	2.30	0.66
26:S1:692:G:H22	26:S1:753:A:H2	1.42	0.66
26:S1:1138:G:H2'	26:S1:1139:G:C8	2.31	0.66
26:S1:1670:G:OP1	48:SV:67:ARG:NH1	2.18	0.66
2:3:7:U:OP1	67:Y:47:LYS:NZ	2.29	0.66
26:S1:65:A:OP1	34:SG:139:LYS:NZ	2.26	0.66
26:S1:1033:G:H2'	26:S1:1034:G:C8	2.31	0.66
32:SE:102:VAL:HG12	32:SE:239:GLN:HE21	1.60	0.66
44:SR:35:LYS:NZ	44:SR:105:ASP:OD1	2.28	0.65
9:B:374:HIS:O	66:X:37:ARG:NH2	2.30	0.65
26:S1:1881:G:OP1	50:SX:91:ARG:NH1	2.29	0.65
9:B:57:VAL:HG22	9:B:73:VAL:HG22	1.79	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:SQ:107:ASP:OD2	43:SQ:113:THR:OG1	2.14	0.65
1:1:700:A:N1	1:1:845:OMU:H5	2.12	0.65
1:1:1672:U:O2'	1:1:1673:G:N2	2.27	0.65
26:S1:148:G:H2'	26:S1:149:G:C8	2.32	0.64
21:N:74:LYS:HE2	85:2:1276:A:H4'	1.80	0.64
39:SM:23:SER:HB3	39:SM:29:VAL:HG22	1.80	0.64
1:1:521:G:H2'	1:1:522:G:C8	2.33	0.64
42:SP:11:ARG:NH2	47:SU:117:LYS:O	2.31	0.64
37:SK:160:ARG:HB3	37:SK:164:ARG:HH21	1.63	0.64
67:Y:126:MET:O	67:Y:130:GLN:NE2	2.30	0.64
26:S1:1578:G:N7	43:SQ:114:LYS:NZ	2.46	0.63
37:SK:34:ALA:HB2	37:SK:56:ARG:HD2	1.79	0.63
26:S1:661:OMU:OP2	42:SP:3:LYS:NZ	2.32	0.63
49:SW:69:GLU:OE2	49:SW:73:HIS:NE2	2.31	0.63
1:1:502:U:O4	1:1:553:A:N6	2.31	0.63
26:S1:1015:G:H1	26:S1:1037:U:H3	1.47	0.63
26:S1:1659:U:H3	26:S1:1670:G:H22	1.46	0.63
85:2:1024:U:H2'	85:2:1025:G:C8	2.33	0.63
26:S1:1017:U:H2'	26:S1:1018:G:C8	2.34	0.62
36:SI:146:ARG:NH1	36:SI:150:SER:OG	2.32	0.62
85:2:957:C:H3'	85:2:958:A:C8	2.34	0.62
24:Q:92:LYS:HG2	24:Q:96:MET:HE2	1.81	0.62
1:1:1095:U:OP1	21:N:90:ARG:NE	2.17	0.62
26:S1:285:A:H2'	26:S1:817:A:H2	1.65	0.62
1:1:199:A:N6	1:1:215:U:O2'	2.32	0.62
21:N:93:PRO:HB2	21:N:125:VAL:HG12	1.82	0.62
26:S1:2102:A:H61	26:S1:2121:C:H42	1.47	0.62
39:SM:77:PHE:HB3	45:SS:53:PHE:HB3	1.82	0.62
4:5:26:C:N3	4:5:125:U:O2'	2.28	0.62
39:SM:48:HIS:HB2	39:SM:87:ASP:HB2	1.82	0.62
85:2:984:G:O6	85:2:1000:U:O4	2.18	0.62
26:S1:259:C:H2'	26:S1:260:A:C8	2.35	0.61
85:2:451:U:H3	85:2:483:C:H42	1.47	0.61
85:2:459:A:H2'	85:2:460:A:C8	2.36	0.61
1:1:1730:A:O5'	64:V:32:ARG:NH2	2.33	0.61
26:S1:2085:A:O2'	26:S1:2086:A:H8	1.82	0.61
85:2:382:A2M:O5'	85:2:382:A2M:H8	2.01	0.61
32:SE:97:ARG:NH2	32:SE:118:ILE:O	2.33	0.61
63:U:29:ASP:HA	63:U:76:VAL:HG12	1.82	0.61
1:1:1672:U:H6	1:1:1727:A:H62	1.49	0.61
4:5:64:U:H3	4:5:93:G:H1	1.49	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:1035:G:H2'	26:S1:1036:G:H8	1.62	0.61
26:S1:1920:A:N7	50:SX:45:ASN:N	2.47	0.61
1:1:141:U:H1'	1:1:142:G:H5''	1.82	0.60
1:1:1264:A:H2'	1:1:1265:A:C8	2.36	0.60
26:S1:45:U:O2'	26:S1:46:U:H2'	2.01	0.60
30:SC:112:LEU:HD11	30:SC:116:ARG:HD2	1.82	0.60
26:S1:1114:G:H1	26:S1:1207:U:H3	1.47	0.60
26:S1:781:A:N1	26:S1:839:G:O6	2.34	0.60
26:S1:1881:G:H2'	26:S1:1882:A:C8	2.36	0.60
1:1:2:C:H5	6:7:169:A:H1'	1.64	0.60
26:S1:1670:G:O5'	48:SV:67:ARG:NH2	2.35	0.60
1:1:165:U:H3	1:1:290:G:H1	1.50	0.60
1:1:520:G:O2'	1:1:521:G:O5'	2.20	0.60
32:SE:228:ASP:OD1	32:SE:229:LEU:N	2.34	0.60
85:2:453:A:H1'	85:2:454:A:O4'	2.02	0.60
26:S1:1186:A:H2'	26:S1:1187:A:C8	2.36	0.60
26:S1:1511:C:N4	26:S1:1637:A:H5'	2.16	0.60
26:S1:1976:U:OP2	26:S1:1978:A:O2'	2.17	0.60
28:SA:37:ASN:OD1	28:SA:184:LYS:NZ	2.32	0.60
3:4:54:G:H21	3:4:57:A:H2	1.48	0.60
26:S1:1171:A:H2'	26:S1:1172:G:C8	2.36	0.60
44:SR:88:GLN:HA	44:SR:96:THR:HG23	1.82	0.60
1:1:846:G:H2'	1:1:847:OMU:H6	1.83	0.60
52:SZ:19:VAL:HG12	52:SZ:26:LYS:HG2	1.84	0.60
1:1:485:A:N3	13:F:110:LYS:NZ	2.47	0.59
26:S1:1016:G:N2	26:S1:1036:G:H22	1.99	0.59
33:SF:85:GLU:OE1	33:SF:85:GLU:N	2.31	0.59
4:5:25:A:H5''	9:B:123:LYS:HG3	1.84	0.59
26:S1:640:A:H2'	26:S1:641:A:C8	2.38	0.59
26:S1:822:U:H4'	34:SG:226:ARG:NH2	2.18	0.59
26:S1:1295:G:H1	26:S1:1420:U:H3	1.51	0.59
1:1:522:G:H2'	1:1:523:A:C8	2.38	0.59
26:S1:691:G:N2	26:S1:754:G:H22	2.01	0.59
26:S1:978:C:H2'	26:S1:979:U:H6	1.67	0.59
2:3:150:A:H8	2:3:151:A:HO2'	1.51	0.59
12:E:17:THR:OG1	12:E:28:THR:OG1	2.21	0.59
42:SP:32:THR:HG22	42:SP:34:SER:H	1.67	0.59
26:S1:1132:G:H2'	26:S1:1133:U:C6	2.38	0.59
85:2:1398:C:H2'	85:2:1399:G:C8	2.38	0.59
26:S1:975:G:H3'	26:S1:976:A:H8	1.68	0.58
26:S1:1113:G:OP1	46:ST:1:MET:N	2.35	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SZ:34:HIS:HB2	52:SZ:37:TRP:HB2	1.86	0.58
26:S1:87:G:N2	26:S1:495:A:OP1	2.37	0.58
26:S1:1988:C:H5''	26:S1:1989:A:H5''	1.83	0.58
36:SI:10:LYS:HA	36:SI:13:ARG:HG3	1.85	0.58
26:S1:3:U:O2	31:SD:16:ARG:NH1	2.36	0.58
26:S1:1580:G:N1	43:SQ:69:GLU:OE2	2.36	0.58
9:B:327:ASP:H	85:2:1510:A:H61	1.51	0.58
26:S1:1121:C:H2'	26:S1:1122:G:C8	2.38	0.58
1:1:12:U:H2'	1:1:13:G:H8	1.69	0.58
52:SZ:44:GLN:O	52:SZ:48:LYS:NZ	2.36	0.58
1:1:1029:G:N2	1:1:1030:U:O4	2.34	0.58
5:6:32:U:O2'	12:E:46:ARG:NH1	2.28	0.58
26:S1:759:U:O2	36:SI:99:GLN:NE2	2.34	0.58
26:S1:1292:U:H3	26:S1:1423:G:H1	1.51	0.58
1:1:417:G:O2'	1:1:442:A:N6	2.37	0.58
1:1:1779:G:H1	85:2:3:C:H5	1.51	0.58
3:4:149:U:H1'	3:4:150:A:H5''	1.84	0.58
6:7:153:C:OP1	20:M:38:ARG:NH1	2.36	0.58
1:1:291:A:H2'	1:1:292:A:H5''	1.85	0.57
26:S1:785:G:O4'	26:S1:787:G:N2	2.37	0.57
1:1:264:U:O2'	65:W:5:LYS:NZ	2.37	0.57
1:1:210:G:H4'	1:1:211:U:O5'	2.05	0.57
5:6:43:A:OP2	18:K:95:ARG:NH1	2.37	0.57
52:SZ:62:VAL:HG12	52:SZ:82:ILE:HG12	1.85	0.57
85:2:1398:C:H2'	85:2:1399:G:H8	1.70	0.57
1:1:472:U:H2'	1:1:473:A:H8	1.69	0.57
26:S1:750:U:H2'	26:S1:751:G:C8	2.39	0.57
26:S1:1594:A:OP1	49:SW:66:ARG:NH1	2.37	0.57
85:2:553:G:O2'	85:2:556:U:OP2	2.21	0.57
1:1:472:U:H2'	1:1:473:A:C8	2.40	0.57
29:SB:77:VAL:O	29:SB:99:THR:OG1	2.22	0.57
26:S1:1288:G:H1	26:S1:1427:U:H3	1.52	0.57
26:S1:1670:G:P	48:SV:67:ARG:HH22	2.28	0.57
85:2:453:A:H2	85:2:455:U:H5	1.52	0.57
1:1:1147:A:O2'	1:1:1150:A:N1	2.38	0.56
2:3:100:U:HO2'	2:3:101:G:H8	1.51	0.56
26:S1:185:A:OP1	34:SG:203:ARG:NH2	2.37	0.56
85:2:968:U:O4	85:2:969:A:N6	2.38	0.56
36:SI:39:GLN:OE1	36:SI:39:GLN:N	2.38	0.56
1:1:1060:A:H2'	1:1:1061:G:C8	2.41	0.56
3:4:92:U:H2'	3:4:93:U:C6	2.40	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:S4:76:A:HO2'	85:2:1191:C:H5	1.53	0.56
33:SF:83:ILE:HG21	33:SF:88:LEU:HD13	1.86	0.56
85:2:755:U:HO2'	85:2:756:C:H6	1.52	0.56
21:N:207:THR:HB	21:N:209:ARG:HD2	1.88	0.56
10:C:113:LYS:HG2	20:M:203:LYS:HB3	1.86	0.56
17:J:12:ARG:NH1	17:J:56:LEU:O	2.38	0.56
30:SC:56:GLU:OE1	30:SC:56:GLU:N	2.38	0.56
30:SC:54:THR:OG1	30:SC:55:ARG:NH1	2.39	0.56
85:2:558:A:OP1	85:2:560:OMU:H5	2.06	0.56
37:SK:57:ALA:HB2	37:SK:196:GLY:HA2	1.86	0.56
1:1:727:C:O2'	1:1:728:C:H2'	2.06	0.56
8:A:36:GLU:HG3	8:A:91:GLY:HA2	1.88	0.56
26:S1:978:C:H2'	26:S1:979:U:C6	2.40	0.56
85:2:454:A:O3'	85:2:455:U:H3'	2.06	0.56
85:2:1024:U:H2'	85:2:1025:G:H8	1.71	0.56
1:1:70:C:O2'	16:I:71:ASN:OD1	2.24	0.55
1:1:611:C:OP2	10:C:359:ARG:NH1	2.38	0.55
26:S1:1972:G:O6	49:SW:50:ARG:NH1	2.38	0.55
26:S1:259:C:H2'	26:S1:260:A:H8	1.69	0.55
26:S1:285:A:H62	26:S1:816:C:H2'	1.71	0.55
26:S1:1612:C:HO2'	26:S1:1613:C:H6	1.53	0.55
85:2:782:G:OP2	85:2:782:G:N2	2.32	0.55
85:2:1424:U:H2'	85:2:1425:A:H8	1.71	0.55
1:1:687:C:H2'	1:1:688:A:H8	1.71	0.55
2:3:204:A:H2'	2:3:205:A:C8	2.42	0.55
26:S1:450:A:H2'	26:S1:451:C:C6	2.42	0.55
26:S1:1033:G:H2'	26:S1:1034:G:H8	1.68	0.55
13:F:68:PRO:HG3	13:F:161:LEU:HD23	1.89	0.55
30:SC:48:VAL:HG12	30:SC:86:TYR:HB2	1.88	0.55
1:1:790:C:H5	10:C:305:LEU:H	1.55	0.55
26:S1:1278:U:H5	26:S1:1445:A:N7	2.04	0.55
51:SY:80:ARG:HB2	51:SY:82:ILE:HG12	1.89	0.55
26:S1:1918:U:H4'	26:S1:1919:C:H5'	1.89	0.55
85:2:622:G:H2'	85:2:623:A:C8	2.42	0.55
26:S1:1794:U:H2'	26:S1:1795:G:C8	2.42	0.54
26:S1:1982:G:OP1	50:SX:96:LYS:NZ	2.38	0.54
26:S1:691:G:H1	26:S1:754:G:H1	1.54	0.54
1:1:652:A:H2'	1:1:653:A:C8	2.43	0.54
1:1:1536:C:OP1	62:T:66:LYS:NZ	2.37	0.54
34:SG:160:VAL:HG21	34:SG:179:ILE:HD11	1.90	0.54
1:1:594:G:H1	1:1:613:C:H5	1.56	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1255:G:H2'	1:1:1256:A:C8	2.43	0.54
1:1:1571:C:H5	62:T:85:ARG:HH21	1.55	0.54
24:Q:105:LEU:HD23	24:Q:138:LEU:HD23	1.90	0.54
21:N:3:ARG:NH2	85:2:1292:U:OP2	2.39	0.54
85:2:1282:C:H5	85:2:1336:G:H1	1.56	0.54
26:S1:1117:A:H2'	26:S1:1118:G:C8	2.43	0.54
26:S1:992:C:H4'	26:S1:993:U:H5'	1.89	0.54
26:S1:1281:C:HO2'	61:SJ:2:THR:N	2.06	0.54
26:S1:1701:A:H2'	26:S1:1702:A:C8	2.43	0.54
40:SN:95:PRO:HD2	40:SN:98:GLN:HG3	1.90	0.54
26:S1:1207:U:H5'	46:ST:55:ARG:HD3	1.89	0.54
26:S1:1539:PSU:HN3	26:S1:1550:OMG:HN1	1.55	0.54
1:1:412:G:N1	1:1:415:A:OP2	2.36	0.54
22:O:40:ASP:OD1	53:S:70:ARG:NH1	2.40	0.54
26:S1:814:G:O2'	26:S1:817:A:N6	2.28	0.54
36:SI:20:GLU:HG3	36:SI:49:VAL:HG12	1.90	0.54
1:1:1251:U:O2	15:H:74:GLN:NE2	2.41	0.54
5:6:32:U:HO2'	12:E:46:ARG:HH11	1.55	0.54
26:S1:450:A:H2'	26:S1:451:C:H6	1.73	0.54
26:S1:750:U:H2'	26:S1:751:G:H8	1.73	0.54
1:1:898:A:H2'	1:1:899:A:C8	2.43	0.53
26:S1:979:U:H2'	26:S1:980:G:C8	2.42	0.53
1:1:179:G:H2'	1:1:180:A:H8	1.73	0.53
1:1:442:A:O3'	1:1:443:A:H4'	2.07	0.53
32:SE:88:GLU:HG2	32:SE:95:ARG:HG2	1.90	0.53
85:2:999:U:O2'	85:2:1000:U:O5'	2.22	0.53
1:1:1355:C:O2'	1:1:1356:G:H5''	2.09	0.53
26:S1:1038:U:O2'	36:SI:84:GLU:OE1	2.26	0.53
26:S1:1708:A:O3'	50:SX:138:ARG:NH1	2.41	0.53
26:S1:1971:U:OP2	49:SW:50:ARG:NH2	2.41	0.53
85:2:97:A:O2'	85:2:366:C:O2	2.22	0.53
26:S1:2160:G:H5'	85:2:502:A:C6	2.43	0.53
85:2:956:C:H2'	85:2:957:C:H4'	1.90	0.53
26:S1:964:U:H5'	26:S1:965:G:H5''	1.91	0.53
26:S1:1019:U:O2	26:S1:1033:G:N2	2.29	0.53
36:SI:39:GLN:O	36:SI:43:ARG:NH2	2.42	0.53
7:8:16:C:OP2	7:8:71:C:O2'	2.26	0.53
26:S1:971:U:H2'	26:S1:972:A:C8	2.43	0.53
51:SY:76:ILE:O	51:SY:80:ARG:HG2	2.09	0.53
33:SF:50:LYS:HD2	33:SF:259:LEU:HD13	1.90	0.53
68:Z:21:LYS:HG3	68:Z:26:ARG:HG2	1.91	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1181:PSU:HN1	1:1:1191:G:H1	1.56	0.53
26:S1:1890:A:C6	26:S1:1891:A:H1'	2.43	0.53
29:SB:33:GLN:HE21	29:SB:50:HIS:CE1	2.27	0.53
1:1:1675:A:H3'	1:1:1676:G:C8	2.44	0.53
26:S1:1100:U:H5''	26:S1:1101:A:OP1	2.08	0.53
26:S1:1133:U:O2'	41:SO:128:ILE:O	2.27	0.53
85:2:1124:A:H2'	85:2:1125:G:C8	2.44	0.53
1:1:1263:A:O2'	1:1:1264:A:OP2	2.21	0.53
39:SM:67:CYS:SG	39:SM:68:GLY:N	2.82	0.53
26:S1:1701:A:H2'	26:S1:1702:A:H8	1.73	0.52
25:R:153:LEU:HB3	25:R:156:ARG:HD2	1.92	0.52
26:S1:792:G:O6	26:S1:833:G:O6	2.27	0.52
26:S1:1795:G:H22	26:S1:1803:A:H2	1.57	0.52
1:1:700:A:C2	1:1:845:OMU:H5	2.43	0.52
21:N:191:GLU:HB2	21:N:200:ILE:HD11	1.90	0.52
21:N:207:THR:HG22	21:N:208:MET:H	1.74	0.52
32:SE:191:GLU:HG2	32:SE:229:LEU:HD13	1.92	0.52
26:S1:760:G:OP1	36:SI:50:ARG:NH1	2.38	0.52
26:S1:820:C:H3'	26:S1:821:A:H5'	1.91	0.52
26:S1:1523:A:H2'	26:S1:1524:G:C8	2.45	0.52
32:SE:138:THR:OG1	32:SE:140:ASP:OD1	2.20	0.52
1:1:235:A2M:O5'	1:1:235:A2M:H8	2.08	0.52
1:1:1153:A:H2'	1:1:1155:A:H62	1.74	0.52
26:S1:953:U:H3	26:S1:982:G:H1	1.56	0.52
26:S1:1911:U:H5	26:S1:1930:G:H1	1.57	0.52
31:SD:101:PRO:O	31:SD:105:GLU:HG2	2.10	0.52
1:1:1673:G:H2'	1:1:1674:A:O4'	2.09	0.52
30:SC:136:THR:HG23	30:SC:184:LYS:HB2	1.92	0.52
1:1:2:C:N4	6:7:169:A:O3'	2.43	0.52
1:1:1260:G:H4'	1:1:1261:U:H5'	1.91	0.52
6:7:71:A:OP1	65:W:25:ARG:NH1	2.42	0.52
1:1:250:A:C8	65:W:5:LYS:HG2	2.45	0.52
2:3:111:A:O2'	2:3:112:C:H5''	2.10	0.52
6:7:125:A:H3'	6:7:126:G:H8	1.73	0.52
26:S1:2026:U:H2'	26:S1:2027:G:C8	2.44	0.52
26:S1:1293:G:H1	26:S1:1422:U:H3	1.57	0.52
85:2:958:A:H2'	85:2:959:A:C8	2.44	0.52
85:2:1136:U:H2'	85:2:1137:G:C8	2.45	0.52
4:5:3:A:H62	4:5:134:C:H5	1.58	0.51
26:S1:1101:A:H2'	26:S1:1102:G:C5	2.45	0.51
29:SB:41:ILE:HD11	29:SB:153:THR:HG22	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:SM:104:GLU:N	39:SM:104:GLU:OE1	2.42	0.51
1:1:179:G:H2'	1:1:180:A:C8	2.44	0.51
26:S1:694:U:H3	26:S1:751:G:H22	1.56	0.51
1:1:736:C:H2'	1:1:737:U:O4'	2.11	0.51
26:S1:966:G:H2'	26:S1:967:A:C8	2.45	0.51
42:SP:84:PHE:CE2	42:SP:86:PRO:HA	2.45	0.51
1:1:594:G:H22	1:1:613:C:H5	1.57	0.51
1:1:938:G:H2'	1:1:939:C:C6	2.46	0.51
1:1:520:G:O2'	1:1:521:G:H8	1.76	0.51
6:7:128:U:H2'	6:7:129:C:C6	2.46	0.51
17:J:86:SER:HA	17:J:96:TYR:HB3	1.91	0.51
19:L:129:LEU:HG	19:L:133:LYS:HD2	1.93	0.51
26:S1:752:C:H2'	26:S1:753:A:C8	2.46	0.51
26:S1:1014:C:H2'	26:S1:1015:G:C8	2.45	0.51
26:S1:315:A:H5''	26:S1:333:G:H22	1.75	0.51
52:SZ:17:PHE:HZ	52:SZ:26:LYS:HD2	1.76	0.51
64:V:91:SER:HA	64:V:123:LYS:HD2	1.92	0.51
26:S1:1206:C:H5''	46:ST:14:SER:HB2	1.93	0.51
26:S1:1019:U:O4	26:S1:1033:G:O6	2.28	0.51
26:S1:1618:U:H2'	26:S1:1619:G:C8	2.46	0.51
26:S1:1000:U:H3	26:S1:1094:G:H1	1.59	0.51
1:1:300:A:O2'	1:1:301:A:O4'	2.23	0.50
21:N:184:LEU:HD23	21:N:190:LEU:HD21	1.93	0.50
26:S1:780:A:H2'	26:S1:781:A:C8	2.46	0.50
85:2:653:C:H2'	85:2:654:U:H6	1.76	0.50
2:3:105:C:H2'	2:3:106:U:C6	2.46	0.50
26:S1:580:A:OP2	31:SD:181:ARG:NH2	2.34	0.50
26:S1:779:A:H2'	26:S1:780:A:H8	1.77	0.50
32:SE:28:PRO:HG2	32:SE:35:LEU:HG	1.93	0.50
6:7:18:G:H2'	6:7:19:A:C8	2.46	0.50
9:B:326:ASN:HB3	85:2:1510:A:H61	1.75	0.50
85:2:603:A:H2'	85:2:604:A2M:H8	1.94	0.50
1:1:1778:G:H2'	1:1:1779:G:C8	2.47	0.50
26:S1:995:U:C4	26:S1:996:C:C4	3.00	0.50
36:SI:37:LEU:HB3	36:SI:41:LEU:HD23	1.94	0.50
85:2:406:G:H2'	85:2:407:C:C6	2.47	0.50
26:S1:106:A:H2'	26:S1:107:G:C8	2.45	0.50
26:S1:781:A:N1	26:S1:839:G:C6	2.80	0.50
26:S1:1940:G:N2	50:SX:91:ARG:HH21	2.09	0.50
1:1:93:G:H2'	1:1:94:A:C8	2.47	0.50
1:1:1726:G:OP2	1:1:1726:G:N2	2.20	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:320:GLY:O	9:B:340:ARG:NH1	2.44	0.50
25:R:70:LYS:O	25:R:74:ARG:NH2	2.44	0.50
26:S1:580:A:O2'	26:S1:583:A:OP2	2.22	0.50
85:2:619:A:N3	85:2:1262:G:O2'	2.36	0.50
1:1:532:C:H2'	1:1:533:G:H5''	1.94	0.50
13:F:42:LEU:HD11	13:F:85:ILE:HG13	1.94	0.50
26:S1:1645:U:H3	26:S1:1674:A:N6	2.07	0.50
85:2:83:G:O2'	85:2:580:U:O4	2.23	0.50
1:1:1060:A:H2'	1:1:1061:G:H8	1.76	0.50
1:1:1242:U:OP1	18:K:17:ARG:NH2	2.45	0.50
3:4:158:A:OP1	85:2:1330:A:O2'	2.26	0.50
26:S1:2092:G:H2'	26:S1:2093:U:C6	2.47	0.50
37:SK:76:VAL:HG12	37:SK:108:PRO:HG2	1.93	0.50
43:SQ:104:VAL:HG23	43:SQ:115:THR:HA	1.93	0.50
1:1:626:U:H2'	1:1:627:C:H6	1.76	0.50
9:B:327:ASP:H	85:2:1510:A:N6	2.09	0.50
33:SF:55:VAL:HG21	33:SF:78:ILE:HG23	1.94	0.50
85:2:68:A:O2'	85:2:69:A:OP1	2.28	0.50
26:S1:276:G:H2'	26:S1:277:U:O4'	2.12	0.49
26:S1:1421:C:H2'	26:S1:1422:U:C6	2.46	0.49
26:S1:2118:G:O2'	26:S1:2119:C:O4'	2.29	0.49
67:Y:67:GLN:HA	67:Y:117:GLN:NE2	2.27	0.49
1:1:719:U:O2'	1:1:720:A:H5''	2.13	0.49
1:1:1264:A:O2'	85:2:1294:G:OP1	2.21	0.49
14:G:163:LEU:HD23	20:M:7:LEU:HD21	1.94	0.49
22:O:85:ALA:HB2	22:O:264:LEU:HD23	1.93	0.49
26:S1:1016:G:H1	26:S1:1036:G:N2	2.09	0.49
43:SQ:110:GLY:O	43:SQ:113:THR:OG1	2.22	0.49
6:7:121:G:H2'	6:7:122:A:C8	2.48	0.49
7:8:96:G:H2'	7:8:97:A:C8	2.47	0.49
26:S1:2084:C:O2'	26:S1:2085:A:H5'	2.12	0.49
67:Y:76:ASN:OD1	67:Y:77:HIS:N	2.45	0.49
26:S1:996:C:H2'	26:S1:997:C:C6	2.47	0.49
26:S1:1170:A:H2'	26:S1:1171:A:C8	2.47	0.49
26:S1:1915:U:H3	26:S1:1926:G:H1	1.60	0.49
85:2:1470:C:H5	85:2:1600:C:H2'	1.77	0.49
26:S1:772:A:H1'	26:S1:773:A:H5'	1.95	0.49
26:S1:814:G:HO2'	26:S1:817:A:H62	1.54	0.49
85:2:525:A:N7	85:2:532:U:H5	2.11	0.49
85:2:957:C:H3'	85:2:958:A:H8	1.74	0.49
1:1:422:PSU:H2'	1:1:423:U:C6	2.48	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:746:C:H2'	26:S1:747:C:C6	2.47	0.49
26:S1:1968:G:OP1	44:SR:89:ARG:NH2	2.45	0.49
27:S4:68:C:H2'	27:S4:69:G:H8	1.76	0.49
85:2:1472:U:O4	85:2:1492:G:O6	2.30	0.49
1:1:512:U:N3	25:R:30:GLU:OE2	2.41	0.49
36:SI:108:ASP:HB3	36:SI:111:LYS:HG3	1.94	0.49
48:SV:41:ALA:HB3	48:SV:47:LYS:HE3	1.93	0.49
26:S1:99:U:O2	37:SK:21:HIS:HB2	2.13	0.49
26:S1:819:G:H5'	26:S1:820:C:H2'	1.95	0.49
26:S1:1415:C:H2'	26:S1:1416:G:C8	2.47	0.49
26:S1:1551:G:OP2	45:SS:41:ARG:NH1	2.42	0.49
46:ST:67:THR:O	46:ST:69:ARG:NH1	2.46	0.49
1:1:737:U:OP1	16:I:73:LYS:NZ	2.33	0.49
26:S1:822:U:H4'	34:SG:226:ARG:HH22	1.77	0.49
26:S1:2021:A2M:H5''	26:S1:2021:A2M:H8	1.95	0.49
12:E:135:ASP:OD2	12:E:137:SER:OG	2.31	0.49
26:S1:1296:G:H1	26:S1:1419:U:H3	1.61	0.49
34:SG:21:GLU:HA	34:SG:24:ARG:HH11	1.77	0.49
43:SQ:34:ILE:HG22	43:SQ:123:ILE:HD11	1.94	0.49
35:SH:57:ARG:NH2	35:SH:134:ASN:OD1	2.31	0.48
44:SR:91:PRO:HA	49:SW:25:ARG:HH11	1.78	0.48
51:SY:47:ASN:HD21	51:SY:49:VAL:HG22	1.77	0.48
26:S1:327:U:H2'	26:S1:328:C:C6	2.48	0.48
26:S1:1018:G:N2	26:S1:1034:G:H22	2.12	0.48
39:SM:65:THR:O	45:SS:41:ARG:NH2	2.46	0.48
85:2:984:G:H2'	85:2:985:A:C8	2.49	0.48
26:S1:790:U:H3	34:SG:226:ARG:CD	2.27	0.48
12:E:184:THR:OG1	12:E:185:ASN:N	2.46	0.48
26:S1:991:G:H21	36:SI:43:ARG:NH2	2.11	0.48
1:1:345:U:H2'	1:1:346:U:C6	2.48	0.48
1:1:1392:G:H2'	1:1:1392:G:N3	2.29	0.48
2:3:98:C:H2'	2:3:99:U:H6	1.77	0.48
14:G:97:LYS:NZ	14:G:208:ASP:OD2	2.40	0.48
26:S1:2185:MA6:H8	26:S1:2185:MA6:H5''	1.95	0.48
28:SA:146:LYS:HB3	28:SA:210:ARG:HB2	1.95	0.48
30:SC:93:ARG:O	30:SC:100:GLN:NE2	2.45	0.48
1:1:636:U:H2'	1:1:637:C:C6	2.47	0.48
13:F:50:ARG:O	13:F:72:ASN:ND2	2.47	0.48
26:S1:16:G:H2'	26:S1:17:C:C6	2.48	0.48
26:S1:1037:U:H2'	26:S1:1038:U:C6	2.48	0.48
26:S1:1037:U:H2'	26:S1:1038:U:H6	1.78	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:1366:A:N6	26:S1:1416:G:H22	2.11	0.48
32:SE:125:ASN:HB3	32:SE:137:VAL:HG13	1.95	0.48
85:2:1492:G:H2'	85:2:1493:C:C6	2.48	0.48
1:1:479:A:H2'	1:1:480:U:C6	2.49	0.48
1:1:636:U:H2'	1:1:637:C:H6	1.79	0.48
13:F:177:TYR:OH	18:K:107:ASP:OD2	2.24	0.48
22:O:162:GLY:HA2	22:O:187:PRO:HG3	1.96	0.48
26:S1:958:G:N2	26:S1:977:G:H22	2.12	0.48
26:S1:1672:C:O2'	26:S1:1673:A:OP1	2.29	0.48
26:S1:1891:A:H2	26:S1:1932:A:C5	2.31	0.48
85:2:94:A:H2'	85:2:95:A2M:H8	1.95	0.48
85:2:646:G:O2'	85:2:647:A:OP1	2.30	0.48
85:2:653:C:H2'	85:2:654:U:C6	2.49	0.48
4:5:64:U:O2	4:5:93:G:N2	2.39	0.48
26:S1:148:G:H2'	26:S1:149:G:H8	1.77	0.48
29:SB:179:TRP:CG	29:SB:202:VAL:HG12	2.49	0.48
32:SE:97:ARG:HB2	32:SE:111:LEU:HD11	1.96	0.48
1:1:252:G:OP1	65:W:9:ARG:NH1	2.45	0.48
26:S1:779:A:N6	26:S1:842:U:O4	2.46	0.48
26:S1:1969:A:OP2	49:SW:49:ARG:NH1	2.46	0.48
11:D:51:ARG:HA	11:D:66:LYS:HA	1.96	0.48
24:Q:7:GLN:NE2	24:Q:35:ALA:O	2.35	0.48
26:S1:1572:C:H2'	26:S1:1573:A:H8	1.79	0.48
66:X:59:TYR:CZ	66:X:63:HIS:HD2	2.32	0.48
1:1:1135:U:H4'	1:1:1136:G:O5'	2.13	0.47
26:S1:557:A:OP2	31:SD:175:ARG:N	2.47	0.47
26:S1:558:U:H2'	26:S1:559:G:H8	1.78	0.47
26:S1:1916:G:H22	50:SX:85:TYR:HE2	1.62	0.47
85:2:591:A2M:HM'3	85:2:591:A2M:H1'	1.72	0.47
1:1:213:G:O6	68:Z:143:ARG:NH2	2.47	0.47
1:1:454:U:H2'	1:1:455:G:C8	2.48	0.47
1:1:1092:U:O3'	21:N:198:LYS:NZ	2.44	0.47
1:1:1677:G:N2	1:1:1722:A:N7	2.63	0.47
4:5:6:U:H2'	4:5:7:C:C6	2.49	0.47
26:S1:2135:U:H2'	26:S1:2136:A:H8	1.79	0.47
1:1:1524:OMG:H5''	1:1:1527:OMC:H5	1.79	0.47
26:S1:491:G:OP1	32:SE:26:PRO:HD3	2.15	0.47
40:SN:10:ARG:NH1	40:SN:86:TYR:OH	2.46	0.47
85:2:615:G:H2'	85:2:616:G:C8	2.49	0.47
1:1:36:U:H4'	19:L:32:ARG:HD3	1.97	0.47
26:S1:1459:G:O2'	26:S1:1460:G:H5'	2.14	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:438:A:H4'	1:1:439:U:H3'	1.96	0.47
11:D:81:LEU:O	11:D:82:LEU:HB3	2.15	0.47
26:S1:1016:G:H1	26:S1:1036:G:H1	1.62	0.47
34:SG:68:VAL:HG23	34:SG:102:GLY:HA2	1.96	0.47
34:SG:225:GLN:O	34:SG:226:ARG:NH1	2.47	0.47
26:S1:817:A:C8	26:S1:819:G:H2'	2.50	0.47
26:S1:1656:G:H1'	26:S1:1674:A:C2	2.50	0.47
49:SW:102:ALA:HB1	49:SW:109:PHE:HB3	1.97	0.47
1:1:209:C:OP2	1:1:210:G:O2'	2.26	0.47
1:1:300:A:H2'	1:1:301:A:C8	2.50	0.47
1:1:687:C:H2'	1:1:688:A:C8	2.48	0.47
1:1:688:A:H2'	1:1:689:A:C8	2.50	0.47
1:1:814:C:H2'	1:1:815:G:H8	1.79	0.47
5:6:14:A:N6	85:2:1450:G:O2'	2.39	0.47
26:S1:254:A:H2'	26:S1:255:A:C8	2.50	0.47
26:S1:558:U:H5	26:S1:587:A:N7	2.13	0.47
26:S1:1368:C:H42	26:S1:1414:A:H61	1.63	0.47
46:ST:87:ASP:N	46:ST:87:ASP:OD1	2.48	0.47
85:2:1189:A:H2'	85:2:1190:U:O2	2.15	0.47
12:E:20:VAL:HG11	12:E:45:LEU:HB2	1.96	0.47
85:2:1334:C:O2'	85:2:1335:C:OP1	2.31	0.47
26:S1:67:C:H5	26:S1:81:G:H21	1.62	0.47
26:S1:1512:A:O2'	26:S1:2040:C:H5	1.98	0.47
28:SA:200:VAL:HG22	28:SA:212:LEU:HB3	1.97	0.47
30:SC:125:VAL:O	30:SC:128:SER:OG	2.28	0.47
85:2:665:A:H2'	85:2:666:C:C6	2.50	0.47
85:2:1183:C:H2'	85:2:1184:C:O4'	2.14	0.47
1:1:2:C:H2'	1:1:3:A:O4'	2.15	0.47
34:SG:162:ARG:HG2	34:SG:176:ALA:HB2	1.96	0.47
49:SW:57:ASP:OD1	49:SW:57:ASP:N	2.40	0.47
1:1:1778:G:H2'	1:1:1779:G:H8	1.80	0.46
26:S1:173:A:OP2	34:SG:139:LYS:HD2	2.16	0.46
26:S1:1765:C:H2'	26:S1:1766:G:C8	2.50	0.46
26:S1:2135:U:H2'	26:S1:2136:A:C8	2.50	0.46
46:ST:137:PRO:O	46:ST:138:THR:OG1	2.25	0.46
1:1:250:A:H8	65:W:5:LYS:HG2	1.81	0.46
1:1:819:C:H2'	1:1:820:U:O4'	2.15	0.46
1:1:1264:A:H2'	1:1:1265:A:H8	1.80	0.46
21:N:205:LYS:O	21:N:210:ASN:ND2	2.49	0.46
26:S1:864:G:OP1	32:SE:250:ARG:NH2	2.44	0.46
26:S1:1692:G:H2'	26:S1:1693:C:C6	2.50	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:SG:80:ARG:NH1	34:SG:90:GLY:O	2.48	0.46
48:SV:14:ARG:HG2	48:SV:69:ILE:HD11	1.97	0.46
62:T:42:ARG:NH1	62:T:99:GLU:OE2	2.49	0.46
7:8:62:A:H2'	7:8:63:C:C6	2.51	0.46
19:L:72:THR:HG22	19:L:108:LYS:HB3	1.97	0.46
85:2:1496:G:H2'	85:2:1497:C:C6	2.50	0.46
6:7:40:A:H2'	6:7:41:A:C8	2.50	0.46
26:S1:753:A:H2'	26:S1:754:G:C8	2.50	0.46
26:S1:1366:A:H2'	26:S1:1366:A:N3	2.30	0.46
28:SA:79:GLU:OE1	28:SA:79:GLU:N	2.45	0.46
85:2:1195:U:H2'	85:2:1196:G:H8	1.80	0.46
1:1:837:A:H4'	1:1:838:G:O5'	2.16	0.46
7:8:53:A:H5''	22:O:233:SER:HB3	1.98	0.46
26:S1:998:C:H2'	26:S1:999:A:O4'	2.16	0.46
85:2:1452:U:OP1	85:2:1454:A:N6	2.37	0.46
1:1:967:G:H5'	1:1:968:A:OP1	2.15	0.46
26:S1:93:G:HO2'	26:S1:508:A:HO2'	1.60	0.46
26:S1:306:U:H4'	37:SK:64:ASN:HD21	1.80	0.46
26:S1:1853:U:OP1	45:SS:10:ARG:NH2	2.46	0.46
26:S1:1966:A:N1	26:S1:1983:U:H5	2.14	0.46
29:SB:203:ASP:HA	29:SB:206:PHE:CD2	2.50	0.46
47:SU:3:VAL:HB	47:SU:4:ALA:H	1.58	0.46
85:2:1424:U:C2	85:2:1425:A:C8	3.04	0.46
1:1:468:G:H2'	1:1:469:A:C8	2.51	0.46
1:1:626:U:H2'	1:1:627:C:C6	2.51	0.46
2:3:72:A:H2'	2:3:73:A:C8	2.50	0.46
15:H:131:VAL:HG12	15:H:132:ARG:HG3	1.96	0.46
26:S1:286:G:H1'	34:SG:217:ALA:HB1	1.97	0.46
26:S1:1879:OMG:HM23	26:S1:1879:OMG:H1'	1.73	0.46
1:1:1549:U:H2'	1:1:1550:A:C8	2.50	0.46
2:3:105:C:H2'	2:3:106:U:H6	1.80	0.46
26:S1:954:A:H5'	26:S1:955:A:OP2	2.15	0.46
32:SE:94:ASP:HB3	32:SE:96:PHE:CZ	2.51	0.46
85:2:1343:A:O2'	85:2:1344:C:OP1	2.33	0.46
3:4:24:A:H5''	15:H:7:LYS:HB2	1.98	0.46
5:6:51:A:H4'	5:6:52:G:O5'	2.16	0.46
23:P:23:ASN:HB3	23:P:26:ILE:HB	1.97	0.46
26:S1:779:A:H2'	26:S1:780:A:C8	2.51	0.46
85:2:998:G:O2'	85:2:999:U:O5'	2.34	0.46
21:N:75:TYR:CZ	21:N:79:ARG:HG3	2.52	0.46
26:S1:363:G:H4'	26:S1:367:A:C8	2.50	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:988:A:OP2	36:SI:69:ARG:NH2	2.48	0.46
85:2:998:G:H1'	85:2:999:U:H5'	1.97	0.46
1:1:955:A2M:HM'3	1:1:955:A2M:H1'	1.79	0.45
1:1:959[A]:OMG:N1	85:2:660:G:OP1	2.36	0.45
1:1:1266:A:H61	1:1:1361:C:H42	1.62	0.45
18:K:153:LYS:HE2	18:K:153:LYS:HB2	1.80	0.45
26:S1:953:U:H3	26:S1:982:G:H22	1.63	0.45
26:S1:999:A:N6	26:S1:1095:G:C6	2.81	0.45
26:S1:1927:U:H2'	26:S1:1928:G:C8	2.51	0.45
36:SI:100:ARG:NH2	36:SI:131:ASP:OD2	2.49	0.45
1:1:954:U:H2'	1:1:955:A2M:H8	1.98	0.45
1:1:1365:A:H1'	85:2:1323:C:O2'	2.16	0.45
26:S1:997:C:H42	26:S1:1097:C:H42	1.64	0.45
85:2:816:G:H2'	85:2:817:U:H6	1.81	0.45
85:2:1320:U:H2'	85:2:1321:U:C6	2.51	0.45
1:1:1638:C:H2'	1:1:1639:U:C6	2.52	0.45
8:A:34:TYR:OH	85:2:965:C:OP1	2.24	0.45
15:H:185:ARG:NH1	85:2:1462:A:OP1	2.42	0.45
26:S1:1437:A:H2'	26:S1:1438:A:C8	2.51	0.45
26:S1:2005:U:H4'	38:SL:141:ARG:HD2	1.98	0.45
31:SD:92:LEU:O	31:SD:95:VAL:HG12	2.16	0.45
34:SG:59:LYS:HD3	34:SG:110:ALA:HB2	1.97	0.45
34:SG:227:ASP:OD1	34:SG:227:ASP:N	2.49	0.45
40:SN:34:THR:HB	40:SN:43:THR:HG22	1.98	0.45
85:2:478:A:H2'	85:2:479:C:O2	2.15	0.45
1:1:478:C:H2'	1:1:479:A:H8	1.81	0.45
1:1:845:OMU:H1'	1:1:845:OMU:HM23	1.77	0.45
1:1:1374:C:H2'	1:1:1375:G:O4'	2.16	0.45
1:1:1777:U:H2'	1:1:1778:G:H8	1.81	0.45
5:6:30:C:O2'	5:6:31:U:H2'	2.16	0.45
28:SA:151:GLN:HE21	28:SA:153:SER:HB2	1.80	0.45
85:2:1365:C:H2'	85:2:1366:C:C6	2.52	0.45
1:1:525:C:HO2'	1:1:526:A:H8	1.63	0.45
1:1:1050:G:H2'	1:1:1051:C:C2	2.52	0.45
1:1:1771:U:H2'	1:1:1772:G:H8	1.81	0.45
1:1:1779:G:H22	85:2:3:C:H5	1.63	0.45
26:S1:258:C:H42	26:S1:969:A:H61	1.64	0.45
26:S1:1702:A:H2'	26:S1:1703:U:C6	2.51	0.45
31:SD:163:PHE:C	31:SD:164:GLY:HA2	2.37	0.45
85:2:1170:U:H2'	85:2:1171:G:H8	1.82	0.45
1:1:1135:U:O2	1:1:1135:U:H2'	2.16	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3:76:C:H42	2:3:145:U:H3	1.64	0.45
2:3:204:A:H2'	2:3:205:A:H8	1.79	0.45
13:F:185:LYS:HB2	13:F:185:LYS:HE3	1.72	0.45
14:G:33:LYS:NZ	85:2:978:C:OP1	2.43	0.45
14:G:76:LEU:HD23	14:G:76:LEU:HA	1.82	0.45
26:S1:1912:A:H2	26:S1:1929:G:N1	2.03	0.45
1:1:563:C:H2'	1:1:563:C:O2	2.16	0.45
1:1:1409:U:H2'	1:1:1410:U:C6	2.51	0.45
21:N:90:ARG:NH1	21:N:137:SER:OG	2.49	0.45
52:SZ:8:ALA:HB1	52:SZ:37:TRP:CE3	2.52	0.45
1:1:326:A:H2'	1:1:327:G:C8	2.52	0.45
2:3:25:G:N2	85:2:978:C:O2	2.50	0.45
7:8:62:A:H2'	7:8:63:C:H6	1.81	0.45
21:N:38:ARG:HG3	21:N:83:ASP:HA	1.99	0.45
26:S1:958:G:N2	26:S1:977:G:H1	2.08	0.45
26:S1:1160:A:N7	85:2:452:G:H4'	2.31	0.45
26:S1:2136:A:H2'	26:S1:2137:U:C6	2.51	0.45
30:SC:176:MET:HG2	30:SC:181:ILE:HG13	1.99	0.45
43:SQ:67:ASP:OD1	43:SQ:67:ASP:N	2.49	0.45
2:3:192:G:H4'	2:3:193:C:OP1	2.16	0.45
29:SB:68:ILE:O	29:SB:71:VAL:HG12	2.17	0.45
85:2:95:A2M:HM'3	85:2:95:A2M:H1'	1.84	0.45
85:2:570:A2M:H8	85:2:570:A2M:H2'	1.81	0.45
85:2:958:A:H2'	85:2:959:A:H8	1.82	0.45
29:SB:1:MET:N	51:SY:82:ILE:HG22	2.32	0.45
85:2:451:U:H3	85:2:483:C:N4	2.13	0.45
1:1:652:A:H2'	1:1:653:A:H8	1.81	0.44
1:1:1238:C:H41	25:R:179:ALA:HB1	1.82	0.44
2:3:203:A:H2'	2:3:204:A:C8	2.52	0.44
4:5:47:G:O2'	4:5:48:G:H5'	2.17	0.44
23:P:153:ARG:O	23:P:157:ARG:HG2	2.17	0.44
26:S1:263:G:H2'	26:S1:264:C:C6	2.53	0.44
26:S1:1974:A:OP2	49:SW:54:ARG:NH2	2.49	0.44
36:SI:39:GLN:HG2	36:SI:40:GLU:OE1	2.16	0.44
36:SI:82:THR:O	36:SI:86:GLU:HG2	2.17	0.44
85:2:1492:G:H2'	85:2:1493:C:H6	1.82	0.44
3:4:167:C:H2'	3:4:168:A:O4'	2.17	0.44
26:S1:161:A:H2'	26:S1:162:A:O4'	2.18	0.44
26:S1:751:G:H2'	26:S1:752:C:H6	1.81	0.44
26:S1:1366:A:H61	26:S1:1416:G:H22	1.64	0.44
26:S1:2010:G:H1	26:S1:2026:U:H3	1.65	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SZ:45:LEU:O	52:SZ:49:LYS:HG2	2.18	0.44
85:2:1470:C:C5	85:2:1600:C:H2'	2.52	0.44
85:2:1525:C:H2'	85:2:1600:C:O4'	2.17	0.44
1:1:550:A:O2'	1:1:551:A:N3	2.48	0.44
1:1:1657:G:H2'	1:1:1658:U:H6	1.83	0.44
1:1:1749:G:H2'	1:1:1751:A:N7	2.33	0.44
3:4:50:G:H4'	3:4:51:U:O5'	2.18	0.44
26:S1:173:A:O4'	26:S1:173:A:P	2.76	0.44
26:S1:351:G:OP1	47:SU:118:ARG:NH1	2.46	0.44
30:SC:7:LYS:HG2	39:SM:58:LEU:HD21	1.99	0.44
85:2:957:C:H2'	85:2:957:C:O2	2.17	0.44
85:2:1412:U:H2'	85:2:1413:PSU:C6	2.51	0.44
1:1:517:U:H2'	1:1:518:C:C6	2.52	0.44
1:1:657:G:O2'	1:1:1491:G:OP2	2.35	0.44
1:1:821:C:H5''	1:1:822:C:H5	1.83	0.44
1:1:1746:C:H2'	1:1:1747:U:C6	2.52	0.44
4:5:53:C:H42	4:5:61:C:N4	2.09	0.44
6:7:161:C:H2'	6:7:162:A2M:H8	2.00	0.44
26:S1:582:U:OP2	52:SZ:5:LYS:HE2	2.17	0.44
62:T:137:THR:CG2	85:2:603:A:H5'	2.47	0.44
85:2:1082:U:H4'	85:2:1083:A:O4'	2.17	0.44
1:1:469:A:H2'	1:1:470:A:C8	2.52	0.44
2:3:64:U:H2'	2:3:65:U:C6	2.53	0.44
18:K:126:LYS:O	18:K:130:GLU:HG2	2.17	0.44
26:S1:2103:G:H2'	26:S1:2104:G:C8	2.53	0.44
32:SE:231:ASN:N	32:SE:231:ASN:OD1	2.50	0.44
85:2:1239:A:O2'	85:2:1240:A:H2'	2.18	0.44
1:1:541:A:H4'	1:1:542:C:H5''	2.00	0.44
4:5:5:G:H2'	4:5:6:U:C6	2.52	0.44
26:S1:1:G:N2	33:SF:190:ILE:O	2.50	0.44
26:S1:746:C:H4'	26:S1:747:C:OP1	2.17	0.44
35:SH:52:MET:HE3	35:SH:57:ARG:HD3	1.99	0.44
1:1:1086:G:H2'	1:1:1087:A:C8	2.52	0.44
26:S1:1830:G:H2'	26:S1:1831:U:C6	2.53	0.44
27:S4:76:A:O2'	85:2:1191:C:H5	2.00	0.44
30:SC:30:GLU:OE1	30:SC:30:GLU:N	2.44	0.44
85:2:1491:G:H2'	85:2:1492:G:C8	2.53	0.44
21:N:183:ALA:HA	21:N:186:ASP:OD2	2.18	0.44
26:S1:519:A:O2'	31:SD:8:ASN:O	2.29	0.44
26:S1:692:G:N2	26:S1:753:A:H2	2.14	0.44
26:S1:1093:C:H2'	26:S1:1094:G:C8	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:SR:25:ARG:HG3	44:SR:30:ALA:HB2	1.99	0.44
85:2:751:U:H2'	85:2:752:G:H8	1.83	0.44
85:2:1278:C:H2'	85:2:1279:G:O4'	2.18	0.44
1:1:662:C:H2'	1:1:663:C:C6	2.53	0.44
1:1:957:C:O2'	1:1:960:A:N3	2.49	0.44
26:S1:479:A2M:OP2	26:S1:479:A2M:H8	2.18	0.44
30:SC:205:ASP:N	30:SC:205:ASP:OD1	2.50	0.44
48:SV:72:LYS:HB3	48:SV:72:LYS:HE3	1.60	0.44
62:T:137:THR:HG23	85:2:603:A:H5'	2.00	0.44
1:1:700:A:H2'	1:1:701:G:C8	2.53	0.43
1:1:1263:A:O2'	1:1:1363:A:N6	2.48	0.43
1:1:1771:U:H2'	1:1:1772:G:C8	2.53	0.43
8:A:206:PRO:HG3	8:A:213:GLY:HA3	2.00	0.43
26:S1:992:C:H4'	26:S1:993:U:C5'	2.47	0.43
26:S1:2159:A:O2'	26:S1:2160:G:H8	2.01	0.43
32:SE:70:ASP:OD2	32:SE:119:LYS:NZ	2.38	0.43
41:SO:106:GLN:HE21	41:SO:106:GLN:HB2	1.59	0.43
42:SP:139:GLU:OE1	42:SP:139:GLU:N	2.51	0.43
26:S1:751:G:H2'	26:S1:752:C:C6	2.53	0.43
26:S1:989:A:N6	36:SI:119:LYS:HG2	2.33	0.43
26:S1:1708:A:H4'	50:SX:138:ARG:HH22	1.83	0.43
26:S1:1940:G:N2	50:SX:91:ARG:HE	2.16	0.43
26:S1:2037:U:H2'	26:S1:2038:C:C6	2.53	0.43
85:2:1492:G:O5'	85:2:1492:G:H8	2.01	0.43
1:1:677:1MA:H8	1:1:677:1MA:H2'	1.36	0.43
22:O:52:VAL:HG13	22:O:63:GLN:HB2	2.00	0.43
26:S1:1573:A:H2'	26:S1:1574:G:C8	2.54	0.43
26:S1:1712:G:N2	50:SX:8:ILE:O	2.41	0.43
43:SQ:67:ASP:OD1	43:SQ:94:ARG:HB2	2.19	0.43
50:SX:44:PRO:HG2	50:SX:47:THR:HG23	2.01	0.43
85:2:1399:G:H2'	85:2:1400:U:C6	2.53	0.43
1:1:79:U:H2'	1:1:80:C:C6	2.53	0.43
26:S1:1015:G:H2'	26:S1:1016:G:C8	2.53	0.43
26:S1:1512:A:HO2'	26:S1:2040:C:H5	1.65	0.43
26:S1:1601:U:H2'	26:S1:1602:U:C6	2.53	0.43
26:S1:1870:A:H2'	26:S1:1871:C:C6	2.53	0.43
26:S1:1915:U:OP1	50:SX:134:GLN:NE2	2.38	0.43
31:SD:28:LYS:HE2	31:SD:28:LYS:HB2	1.72	0.43
39:SM:25:ASN:O	39:SM:29:VAL:HG23	2.18	0.43
50:SX:29:LYS:HE3	50:SX:29:LYS:HB2	1.88	0.43
85:2:604:A2M:HM'3	85:2:604:A2M:H1'	1.82	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:2:1042:G:H2'	85:2:1043:C:H6	1.83	0.43
85:2:1253:OMG:HM21	85:2:1255:A:H2'	2.00	0.43
7:8:119:A:H2'	7:8:120:C:H6	1.83	0.43
7:8:119:A:H2'	7:8:120:C:C6	2.54	0.43
26:S1:285:A:H3'	26:S1:285:A:N3	2.33	0.43
26:S1:886:U:H3'	32:SE:238:LYS:NZ	2.34	0.43
28:SA:39:GLU:OE1	28:SA:39:GLU:N	2.50	0.43
29:SB:192:ILE:HG12	29:SB:198:TRP:CD1	2.53	0.43
35:SH:178:LYS:HE2	35:SH:178:LYS:HB2	1.82	0.43
37:SK:210:PHE:O	37:SK:214:ARG:HG2	2.19	0.43
50:SX:155:LYS:HD2	50:SX:155:LYS:HA	1.90	0.43
85:2:451:U:H2'	85:2:452:G:C2	2.53	0.43
85:2:652:C:H2'	85:2:653:C:C6	2.54	0.43
85:2:1151:U:H2'	85:2:1152:U:H6	1.83	0.43
1:1:448:A:C2	6:7:16:A:H1'	2.54	0.43
1:1:1722:A:N3	1:1:1722:A:H2'	2.34	0.43
2:3:63:U:N3	63:U:16:GLN:OE1	2.38	0.43
4:5:128:G:H2'	4:5:129:G:H8	1.83	0.43
7:8:67:C:C6	21:N:206:ILE:HG12	2.53	0.43
26:S1:232:C:H2'	26:S1:233:G:H8	1.83	0.43
26:S1:792:G:H5'	26:S1:792:G:N3	2.34	0.43
26:S1:1018:G:N2	26:S1:1034:G:H1	2.16	0.43
26:S1:1096:C:H2'	26:S1:1097:C:C6	2.53	0.43
36:SI:61:VAL:HG11	36:SI:175:VAL:HG21	1.99	0.43
85:2:625:U:H2'	85:2:626:PSU:C6	2.54	0.43
1:1:500:C:H2'	1:1:501:C:H6	1.83	0.43
1:1:1010:OMC:HM22	1:1:1010:OMC:H1'	1.61	0.43
3:4:127:G:C6	9:B:283:LEU:HD11	2.53	0.43
9:B:226:THR:HG22	9:B:336:SER:HB3	2.01	0.43
26:S1:1513:C:H2'	26:S1:1514:A:H8	1.84	0.43
48:SV:71:LEU:O	48:SV:72:LYS:HB3	2.19	0.43
1:1:500:C:H2'	1:1:501:C:C6	2.53	0.43
15:H:161:CYS:HA	15:H:164:VAL:HG22	2.00	0.43
21:N:38:ARG:HH11	21:N:83:ASP:HB3	1.83	0.43
26:S1:285:A:C8	26:S1:816:C:C2	3.07	0.43
26:S1:656:G:H5'	26:S1:662:G:N2	2.34	0.43
26:S1:976:A:C4	26:S1:977:G:C8	3.07	0.43
26:S1:1702:A:H2'	26:S1:1703:U:H6	1.83	0.43
26:S1:2012:A:H2'	26:S1:2013:G:H8	1.84	0.43
27:S4:63:G:H2'	27:S4:64:A:O4'	2.19	0.43
35:SH:11:LYS:HE3	35:SH:11:LYS:HB3	1.85	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:T:137:THR:HG23	62:T:138:PRO:HD2	2.00	0.43
85:2:755:U:O2'	85:2:756:C:H6	2.00	0.43
1:1:1764:A:H3'	1:1:1766:G:OP2	2.18	0.43
2:3:100:U:O2'	2:3:101:G:H8	2.01	0.43
8:A:130:SER:OG	8:A:174:ARG:NH1	2.52	0.43
21:N:48:VAL:O	21:N:139:ARG:HA	2.18	0.43
26:S1:114:U:H2'	26:S1:115:C:C6	2.54	0.43
41:SO:47:VAL:HG11	41:SO:77:ARG:HG2	2.01	0.43
42:SP:96:GLU:OE1	42:SP:96:GLU:N	2.49	0.43
85:2:1116:A:N3	85:2:1116:A:H2'	2.34	0.43
1:1:559:G:H2'	1:1:560:G:O4'	2.19	0.43
9:B:255:ALA:HB1	85:2:1385:G:C2	2.54	0.43
26:S1:282:C:H2'	26:S1:283:C:C6	2.54	0.43
26:S1:815:U:H5'	26:S1:816:C:OP1	2.19	0.43
26:S1:820:C:C3'	26:S1:821:A:H5'	2.49	0.43
26:S1:1115:G:H2'	26:S1:1116:U:C6	2.53	0.43
26:S1:1202:A:OP1	46:ST:2:VAL:HG12	2.19	0.43
26:S1:1496:U:H2'	26:S1:1497:U:C6	2.54	0.43
29:SB:80:CYS:HA	29:SB:102:HIS:O	2.19	0.43
47:SU:7:TYR:CZ	47:SU:36:PRO:HG3	2.53	0.43
85:2:80:A:H61	85:2:585:C:H42	1.66	0.43
85:2:590:U:H2'	85:2:591:A2M:H8	2.01	0.43
85:2:1453:U:H4'	85:2:1454:A:H5''	2.00	0.43
1:1:131:U:H3'	1:1:132:A:C8	2.54	0.42
1:1:766:A:H2'	1:1:767:U:C6	2.54	0.42
1:1:1019:G:H2'	1:1:1020:C:H6	1.84	0.42
26:S1:1510:C:H2'	26:S1:1510:C:O2	2.19	0.42
26:S1:1615:G:H2'	26:S1:1616:A:O4'	2.18	0.42
26:S1:2102:A:N6	26:S1:2121:C:H42	2.15	0.42
50:SX:19:LEU:HD12	50:SX:19:LEU:HA	1.90	0.42
1:1:24:A:H2'	1:1:25:C:H6	1.84	0.42
1:1:1443:U:O2'	1:1:1444:A:H3'	2.19	0.42
1:1:1451:C:H2'	1:1:1452:C:C6	2.53	0.42
8:A:68:LYS:HD3	8:A:70:ARG:NH2	2.34	0.42
26:S1:66:U:H6	34:SG:163:ARG:NH1	2.17	0.42
26:S1:629:A:O2'	26:S1:631:U:OP1	2.36	0.42
26:S1:789:G:H4'	26:S1:790:U:OP2	2.19	0.42
28:SA:197:ASP:OD1	28:SA:197:ASP:N	2.52	0.42
31:SD:159:ASP:OD1	31:SD:159:ASP:N	2.50	0.42
46:ST:43:LYS:HE2	46:ST:43:LYS:HB2	1.89	0.42
85:2:1454:A:O2'	85:2:1455:U:H2'	2.18	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:546:G:N3	1:1:546:G:H2'	2.34	0.42
1:1:1603:G:H2'	1:1:1604:U:C6	2.53	0.42
3:4:51:U:H2'	3:4:52:A:H8	1.84	0.42
4:5:7:C:H2'	4:5:8:C:H6	1.83	0.42
27:S4:68:C:C2	27:S4:69:G:C8	3.07	0.42
29:SB:36:ALA:HB1	29:SB:157:LEU:HD12	2.00	0.42
36:SI:34:HIS:HB3	36:SI:37:LEU:HB2	2.01	0.42
42:SP:109:GLY:O	42:SP:119:ARG:NE	2.42	0.42
85:2:1364:A:H2'	85:2:1365:C:C6	2.55	0.42
1:1:468:G:HO2'	1:1:469:A:P	2.42	0.42
1:1:678:A2M:O2'	1:1:679:A:C8	2.72	0.42
1:1:996:A:H2'	1:1:997:C:C6	2.53	0.42
5:6:48:C:C2	13:F:185:LYS:HD3	2.54	0.42
6:7:63:G:H22	6:7:96:A:H2	1.63	0.42
26:S1:285:A:N6	26:S1:816:C:H2'	2.33	0.42
26:S1:811:C:H2'	26:S1:812:A:H8	1.84	0.42
26:S1:977:G:N3	26:S1:977:G:H2'	2.35	0.42
26:S1:2182:G:H2'	26:S1:2183:G:H5'	2.01	0.42
27:S4:64:A:H2'	27:S4:65:G:C8	2.54	0.42
85:2:455:U:C2	85:2:482:G:N2	2.87	0.42
85:2:1175:A:H2'	85:2:1176:A:C8	2.55	0.42
85:2:1456:C:H5	85:2:1468:G:H1	1.68	0.42
1:1:220:A:H2'	1:1:221:C:C6	2.55	0.42
9:B:48:VAL:HG12	9:B:81:ALA:HB2	2.02	0.42
13:F:51:ALA:HA	13:F:67:GLY:HA2	2.01	0.42
26:S1:552:U:O2'	26:S1:553:U:H5''	2.20	0.42
26:S1:1018:G:H22	26:S1:1034:G:N2	2.18	0.42
26:S1:1367:U:H2'	26:S1:1368:C:C6	2.54	0.42
85:2:659:A:H2'	85:2:660:G:H8	1.83	0.42
85:2:748:C:H3'	85:2:749:G:H5''	2.02	0.42
1:1:458:A:H2'	1:1:459:A:O4'	2.20	0.42
1:1:1761:A:H2'	64:V:128:ARG:NH2	2.34	0.42
22:O:60:ILE:HG12	22:O:80:ALA:HB2	2.00	0.42
26:S1:838:U:H2'	26:S1:839:G:H8	1.84	0.42
26:S1:1368:C:H2'	26:S1:1369:U:C6	2.54	0.42
26:S1:1512:A:H2'	26:S1:1513:C:C6	2.54	0.42
26:S1:1670:G:P	48:SV:67:ARG:HH12	2.35	0.42
26:S1:1792:U:H2'	26:S1:1793:U:C6	2.55	0.42
44:SR:15:ARG:HA	44:SR:15:ARG:HD2	1.88	0.42
52:SZ:47:ARG:HB3	52:SZ:48:LYS:HZ2	1.85	0.42
1:1:787:A:H2'	1:1:788:A:C8	2.54	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1777:U:H2'	1:1:1778:G:C8	2.55	0.42
2:3:106:U:H2'	2:3:107:U:C6	2.55	0.42
18:K:16:LEU:O	18:K:21:GLN:HG3	2.19	0.42
26:S1:66:U:H6	34:SG:163:ARG:HH11	1.67	0.42
26:S1:668:A2M:H8	26:S1:668:A2M:H2'	1.91	0.42
26:S1:877:U:O2	32:SE:260:ARG:NH2	2.49	0.42
26:S1:1014:C:H2'	26:S1:1015:G:H8	1.85	0.42
26:S1:1036:G:C2	26:S1:1037:U:C5	3.07	0.42
85:2:459:A:H2'	85:2:460:A:H8	1.81	0.42
7:8:50:G:OP1	22:O:164:ARG:HG3	2.19	0.42
26:S1:671:G:HO2'	26:S1:1279:G:H5'	1.85	0.42
26:S1:1015:G:H22	26:S1:1037:U:H3	1.68	0.42
26:S1:1875:G:H2'	26:S1:1876:U:C6	2.53	0.42
27:S4:68:C:H2'	27:S4:69:G:C8	2.53	0.42
85:2:1323:C:O2'	85:2:1324:U:H5'	2.19	0.42
3:4:157:A:O2'	3:4:158:A:OP1	2.36	0.42
15:H:209:PRO:O	15:H:213:VAL:HG23	2.20	0.42
26:S1:997:C:O2'	26:S1:998:C:H5'	2.20	0.42
29:SB:76:ASP:OD1	29:SB:123:ARG:N	2.53	0.42
31:SD:86:ASP:OD1	31:SD:86:ASP:N	2.46	0.42
31:SD:180:LYS:NZ	31:SD:181:ARG:HE	2.17	0.42
85:2:527:A2M:H8	85:2:527:A2M:H2'	1.89	0.42
5:6:6:G:H5'	5:6:7:A:OP2	2.19	0.42
21:N:180:GLU:OE1	21:N:180:GLU:N	2.53	0.42
26:S1:230:G:H2'	26:S1:231:A:C8	2.55	0.42
26:S1:1836:G:O6	40:SN:71:TYR:OH	2.25	0.42
28:SA:88:PHE:HB3	28:SA:100:THR:HB	2.01	0.42
35:SH:44:LYS:HD2	35:SH:44:LYS:HA	1.94	0.42
85:2:464:G:H2'	85:2:465:A:H8	1.84	0.42
1:1:592:G:H2'	1:1:593:C:C6	2.55	0.41
1:1:720:A:C8	1:1:721:U:H2'	2.55	0.41
1:1:1019:G:H2'	1:1:1020:C:C6	2.55	0.41
1:1:1677:G:H8	1:1:1677:G:OP2	2.03	0.41
3:4:140:G:N1	3:4:149:U:OP1	2.40	0.41
7:8:114:G:H2'	7:8:115:C:C6	2.55	0.41
11:D:168:VAL:HG12	11:D:169:HIS:CE1	2.55	0.41
26:S1:315:A:H5''	26:S1:333:G:N2	2.34	0.41
26:S1:2059:C:H2'	26:S1:2060:C:O4'	2.19	0.41
26:S1:2102:A:H61	26:S1:2121:C:N4	2.16	0.41
29:SB:77:VAL:HG22	29:SB:124:VAL:HB	2.02	0.41
44:SR:52:ASP:O	44:SR:55:ARG:HG2	2.20	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:ST:100:LYS:O	46:ST:103:GLU:HG2	2.20	0.41
47:SU:42:ASN:HB2	47:SU:65:ASN:HB3	2.02	0.41
53:S:24:VAL:HB	53:S:25:PRO:HD2	2.01	0.41
63:U:87:LYS:HG2	63:U:117:TYR:CE2	2.55	0.41
85:2:1262:G:H2'	85:2:1263:C:H6	1.85	0.41
1:1:306:G:H5''	20:M:14:LYS:HE2	2.02	0.41
2:3:66:C:H2'	2:3:67:A:H8	1.85	0.41
3:4:157:A:H2'	3:4:158:A:H5''	2.02	0.41
5:6:19:C:H2'	5:6:20:A:C8	2.56	0.41
21:N:142:GLU:OE1	21:N:142:GLU:N	2.42	0.41
21:N:160:PRO:HG3	85:2:1292:U:H5''	2.02	0.41
26:S1:691:G:H1	26:S1:754:G:H22	1.68	0.41
26:S1:1890:A:H2'	26:S1:1891:A:O3'	2.20	0.41
28:SA:124:GLU:HG2	28:SA:142:VAL:HG23	2.02	0.41
29:SB:179:TRP:CD1	29:SB:202:VAL:HG12	2.55	0.41
85:2:349:C:H2'	85:2:350:U:C6	2.56	0.41
1:1:141:U:C1'	1:1:142:G:H5''	2.50	0.41
1:1:1436:G:OP2	68:Z:109:ARG:NH1	2.53	0.41
1:1:1676:G:N1	1:1:1723:A:N6	2.35	0.41
23:P:62:ILE:HG12	23:P:63:SER:H	1.84	0.41
26:S1:1099:C:H2'	26:S1:1100:U:O4'	2.19	0.41
26:S1:1683:A:H2	30:SC:204:PRO:HG2	1.84	0.41
26:S1:1911:U:H5	26:S1:1930:G:H22	1.66	0.41
43:SQ:104:VAL:HG21	43:SQ:111:GLU:HG2	2.02	0.41
1:1:694:U:H2'	1:1:695:OMC:C6	2.55	0.41
1:1:1201:U:H1'	1:1:1202:G:C8	2.55	0.41
2:3:41:A:N6	2:3:187:U:O2	2.50	0.41
3:4:165:C:H5''	9:B:281:THR:HG21	2.03	0.41
26:S1:52:U:H2'	26:S1:53:G:C8	2.55	0.41
26:S1:436:C:H2'	26:S1:437:C:C6	2.55	0.41
26:S1:1276:G:O2'	26:S1:1278:U:O2	2.38	0.41
26:S1:1809:U:H2'	26:S1:1810:G:O4'	2.20	0.41
40:SN:29:ARG:HD2	40:SN:29:ARG:HA	1.85	0.41
85:2:349:C:H2'	85:2:350:U:H6	1.86	0.41
85:2:749:G:H2'	85:2:750:U:C6	2.54	0.41
85:2:1038:U:H2'	85:2:1039:U:C6	2.55	0.41
1:1:1410:U:H2'	1:1:1411:G:C8	2.55	0.41
5:6:11:G:HO2'	5:6:12:C:H6	1.68	0.41
5:6:63:A:C6	13:F:108:ARG:HD3	2.55	0.41
11:D:126:GLY:HA3	85:2:1101:A:N1	2.36	0.41
21:N:75:TYR:HD2	21:N:151:ALA:HB2	1.86	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:1413:C:H2'	26:S1:1414:A:C8	2.56	0.41
26:S1:2196:G:HO2'	26:S1:2198:A:H2	1.68	0.41
85:2:1452:U:H4'	85:2:1453:U:O5'	2.19	0.41
3:4:19:C:H2'	3:4:20:U:C6	2.56	0.41
7:8:61:C:H2'	7:8:62:A:H8	1.85	0.41
19:L:51:GLY:O	23:P:179:GLU:HA	2.20	0.41
52:SZ:55:LYS:HE2	52:SZ:55:LYS:HB2	1.89	0.41
65:W:80:ASP:OD1	65:W:81:LYS:N	2.53	0.41
85:2:803:A:H2'	85:2:804:U:O4'	2.20	0.41
85:2:1424:U:H2'	85:2:1425:A:C8	2.52	0.41
26:S1:966:G:H2'	26:S1:967:A:H8	1.84	0.41
34:SG:14:LYS:HE2	34:SG:16:PHE:CZ	2.55	0.41
44:SR:24:LYS:O	44:SR:56:ARG:HD2	2.21	0.41
52:SZ:58:ASP:O	52:SZ:61:GLN:HG2	2.21	0.41
68:Z:81:THR:O	68:Z:81:THR:OG1	2.37	0.41
1:1:2:C:H5''	6:7:169:A:H2	1.86	0.41
1:1:821:C:O2'	1:1:823:G:N2	2.53	0.41
1:1:1657:G:H2'	1:1:1658:U:C6	2.55	0.41
2:3:117:C:H2'	2:3:118:G:C8	2.56	0.41
8:A:174:ARG:NH2	85:2:426:G:OP1	2.54	0.41
12:E:41:LEU:HD23	12:E:41:LEU:HA	1.85	0.41
29:SB:121:GLN:O	33:SF:50:LYS:NZ	2.54	0.41
33:SF:198:LYS:HE2	33:SF:198:LYS:HB2	1.92	0.41
39:SM:26:ALA:HB2	39:SM:82:TYR:CZ	2.55	0.41
85:2:1347:U:H2'	85:2:1348:A:O4'	2.20	0.41
1:1:56:G:H2'	1:1:57:G:C8	2.56	0.41
1:1:1145:G:H2'	1:1:1146:A:C8	2.56	0.41
1:1:1676:G:C6	1:1:1723:A:N6	2.85	0.41
26:S1:1882:A:H2'	26:S1:1883:G:O4'	2.21	0.41
29:SB:30:THR:HG22	29:SB:153:THR:OG1	2.21	0.41
31:SD:89:LYS:HG3	31:SD:94:TYR:CG	2.56	0.41
32:SE:41:LEU:HD23	32:SE:41:LEU:HA	1.86	0.41
33:SF:44:GLU:OE1	33:SF:45:TRP:N	2.53	0.41
36:SI:103:THR:HG23	36:SI:119:LYS:HB3	2.03	0.41
64:V:72:THR:O	64:V:76:MET:HG2	2.20	0.41
85:2:1510:A:H4'	85:2:1511:U:C5	2.55	0.41
1:1:506:G:OP2	10:C:349:ARG:NH1	2.53	0.41
1:1:517:U:H2'	1:1:518:C:H6	1.86	0.41
1:1:1554:G:N1	1:1:1557:A:OP1	2.52	0.41
2:3:72:A:H2'	2:3:73:A:H8	1.86	0.41
26:S1:328:C:HO2'	26:S1:329:C:H6	1.68	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:S1:694:U:H3	26:S1:751:G:H1	1.67	0.41
31:SD:87:GLU:OE1	31:SD:87:GLU:N	2.54	0.41
33:SF:195:VAL:HB	33:SF:196:PRO:HD3	2.02	0.41
85:2:1089:A:H2'	85:2:1090:G:C8	2.55	0.41
85:2:1195:U:H2'	85:2:1196:G:C8	2.55	0.41
1:1:848:U:H2'	1:1:849:U:C6	2.56	0.40
9:B:56:ILE:HD13	9:B:363:LEU:HD22	2.03	0.40
26:S1:185:A:H4'	26:S1:186:A:H5'	2.02	0.40
26:S1:814:G:N2	26:S1:819:G:O2'	2.49	0.40
26:S1:995:U:O2'	26:S1:996:C:OP1	2.36	0.40
28:SA:125:THR:HB	28:SA:167:ARG:HG3	2.02	0.40
67:Y:23:ALA:HA	67:Y:45:GLY:HA2	2.03	0.40
85:2:965:C:O2	85:2:965:C:H2'	2.21	0.40
1:1:415:A:N3	1:1:417:G:H5''	2.36	0.40
1:1:1044:G:N3	85:2:1064:A:H2'	2.36	0.40
1:1:1489:U:H2'	1:1:1490:G:C8	2.56	0.40
1:1:1722:A:H1'	1:1:1723:A:C8	2.56	0.40
3:4:20:U:H2'	3:4:21:C:C6	2.57	0.40
9:B:19:ARG:HB2	9:B:237:ARG:NH2	2.36	0.40
13:F:99:ALA:N	13:F:100:PRO:HD2	2.34	0.40
26:S1:639:C:H2'	26:S1:640:A:C8	2.56	0.40
26:S1:1692:G:H2'	26:S1:1693:C:H6	1.87	0.40
26:S1:1704:U:H2'	26:S1:1705:C:C6	2.57	0.40
28:SA:131:THR:OG1	28:SA:134:GLY:O	2.32	0.40
33:SF:88:LEU:HD12	33:SF:88:LEU:HA	1.90	0.40
42:SP:71[A]:ARG:HG2	42:SP:82:ILE:HG12	2.02	0.40
43:SQ:31:ARG:O	43:SQ:35:GLN:HG2	2.21	0.40
1:1:1565:A:H2'	1:1:1565:A:N3	2.37	0.40
26:S1:1852:C:OP1	45:SS:10:ARG:HB3	2.21	0.40
52:SZ:47:ARG:HG3	52:SZ:62:VAL:HG23	2.03	0.40
65:W:81:LYS:HD3	65:W:81:LYS:HA	1.84	0.40
85:2:689:A:H2'	85:2:690:C:C6	2.56	0.40
2:3:99:U:O2'	2:3:100:U:H5'	2.21	0.40
3:4:124:A:H2'	3:4:125:C:C6	2.57	0.40
4:5:48:G:OP2	4:5:48:G:N2	2.42	0.40
9:B:201:LYS:HE3	9:B:201:LYS:HB3	1.89	0.40
21:N:54:SER:HB3	21:N:135:LEU:HD11	2.02	0.40
22:O:40:ASP:HB2	22:O:43:LYS:HD2	2.03	0.40
26:S1:174:A:H5''	34:SG:180:GLN:HG2	2.03	0.40
32:SE:254:LEU:HD23	32:SE:254:LEU:HA	1.87	0.40
46:ST:2:VAL:HG23	46:ST:3:ARG:H	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:616:U:H4'	1:1:617:G:C5'	2.51	0.40
1:1:931:G:O2'	1:1:932:C:H3'	2.22	0.40
1:1:1393:A:H2'	1:1:1394:U:H5	1.86	0.40
20:M:121:VAL:HG12	20:M:129:TRP:O	2.21	0.40
25:R:19:GLU:OE1	25:R:19:GLU:N	2.53	0.40
26:S1:29:OMU:H1'	26:S1:29:OMU:HM23	1.79	0.40
26:S1:1108:A:H8	26:S1:1108:A:OP2	2.04	0.40
26:S1:1704:U:H2'	26:S1:1705:C:H6	1.87	0.40
26:S1:1916:G:N2	50:SX:85:TYR:HE2	2.20	0.40
26:S1:2012:A:H2'	26:S1:2013:G:C8	2.56	0.40
28:SA:182:GLN:HB2	28:SA:185:GLU:OE1	2.20	0.40
29:SB:192:ILE:HD12	29:SB:192:ILE:HA	1.96	0.40
51:SY:63:LEU:HD12	51:SY:63:LEU:HA	1.97	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	A	254/260 (98%)	248 (98%)	6 (2%)	0	100	100
9	B	402/419 (96%)	397 (99%)	5 (1%)	0	100	100
10	C	364/373 (98%)	353 (97%)	11 (3%)	0	100	100
11	D	156/188 (83%)	145 (93%)	11 (7%)	0	100	100
12	E	184/190 (97%)	176 (96%)	8 (4%)	0	100	100
13	F	144/195 (74%)	135 (94%)	9 (6%)	0	100	100
14	G	222/264 (84%)	218 (98%)	3 (1%)	1 (0%)	29	41
15	H	218/222 (98%)	218 (100%)	0	0	100	100
16	I	206/220 (94%)	202 (98%)	4 (2%)	0	100	100
17	J	135/139 (97%)	135 (100%)	0	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	K	168/175 (96%)	165 (98%)	3 (2%)	0	100	100
19	L	142/145 (98%)	135 (95%)	7 (5%)	0	100	100
20	M	201/204 (98%)	195 (97%)	6 (3%)	0	100	100
21	N	195/213 (92%)	193 (99%)	2 (1%)	0	100	100
22	O	268/305 (88%)	260 (97%)	8 (3%)	0	100	100
23	P	195/198 (98%)	188 (96%)	7 (4%)	0	100	100
24	Q	188/254 (74%)	185 (98%)	3 (2%)	0	100	100
25	R	176/179 (98%)	175 (99%)	1 (1%)	0	100	100
28	SA	225/264 (85%)	215 (96%)	10 (4%)	0	100	100
29	SB	206/246 (84%)	199 (97%)	7 (3%)	0	100	100
30	SC	211/219 (96%)	208 (99%)	3 (1%)	0	100	100
31	SD	169/190 (89%)	167 (99%)	2 (1%)	0	100	100
32	SE	258/273 (94%)	254 (98%)	4 (2%)	0	100	100
33	SF	216/265 (82%)	214 (99%)	2 (1%)	0	100	100
34	SG	231/249 (93%)	228 (99%)	3 (1%)	0	100	100
35	SH	178/190 (94%)	175 (98%)	3 (2%)	0	100	100
36	SI	197/200 (98%)	195 (99%)	2 (1%)	0	100	100
37	SK	176/220 (80%)	174 (99%)	2 (1%)	0	100	100
38	SL	141/149 (95%)	137 (97%)	4 (3%)	0	100	100
39	SM	100/116 (86%)	96 (96%)	4 (4%)	0	100	100
40	SN	98/168 (58%)	98 (100%)	0	0	100	100
41	SO	134/144 (93%)	131 (98%)	3 (2%)	0	100	100
42	SP	142/143 (99%)	139 (98%)	3 (2%)	0	100	100
43	SQ	96/141 (68%)	85 (88%)	11 (12%)	0	100	100
44	SR	134/153 (88%)	131 (98%)	3 (2%)	0	100	100
45	SS	52/57 (91%)	51 (98%)	1 (2%)	0	100	100
46	ST	141/151 (93%)	139 (99%)	2 (1%)	0	100	100
47	SU	156/173 (90%)	151 (97%)	5 (3%)	0	100	100
48	SV	75/143 (52%)	73 (97%)	2 (3%)	0	100	100
49	SW	113/152 (74%)	109 (96%)	4 (4%)	0	100	100
50	SX	150/161 (93%)	143 (95%)	7 (5%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	SY	83/164 (51%)	81 (98%)	2 (2%)	0	100	100
52	SZ	125/137 (91%)	124 (99%)	1 (1%)	0	100	100
53	S	155/159 (98%)	154 (99%)	1 (1%)	0	100	100
54	Sa	69/120 (58%)	68 (99%)	1 (1%)	0	100	100
55	Sc	70/86 (81%)	70 (100%)	0	0	100	100
56	Sb	101/112 (90%)	99 (98%)	2 (2%)	0	100	100
57	Sd	63/87 (72%)	62 (98%)	1 (2%)	0	100	100
58	Se	50/66 (76%)	48 (96%)	2 (4%)	0	100	100
59	Sg	302/312 (97%)	290 (96%)	12 (4%)	0	100	100
60	Sh	153/235 (65%)	146 (95%)	7 (5%)	0	100	100
61	SJ	127/130 (98%)	126 (99%)	1 (1%)	0	100	100
62	T	150/166 (90%)	148 (99%)	2 (1%)	0	100	100
63	U	99/129 (77%)	98 (99%)	1 (1%)	0	100	100
64	V	116/145 (80%)	115 (99%)	1 (1%)	0	100	100
65	W	116/143 (81%)	114 (98%)	2 (2%)	0	100	100
66	X	62/124 (50%)	61 (98%)	1 (2%)	0	100	100
67	Y	130/134 (97%)	129 (99%)	1 (1%)	0	100	100
68	Z	143/147 (97%)	140 (98%)	3 (2%)	0	100	100
69	a	121/127 (95%)	119 (98%)	2 (2%)	0	100	100
70	b	66/70 (94%)	66 (100%)	0	0	100	100
71	c	227/252 (90%)	220 (97%)	7 (3%)	0	100	100
72	d	91/104 (88%)	90 (99%)	1 (1%)	0	100	100
73	e	176/188 (94%)	172 (98%)	4 (2%)	0	100	100
74	f	123/133 (92%)	117 (95%)	6 (5%)	0	100	100
75	g	140/144 (97%)	138 (99%)	2 (1%)	0	100	100
76	h	125/168 (74%)	122 (98%)	3 (2%)	0	100	100
77	i	82/105 (78%)	81 (99%)	1 (1%)	0	100	100
78	j	79/83 (95%)	78 (99%)	1 (1%)	0	100	100
79	k	70/83 (84%)	70 (100%)	0	0	100	100
80	l	48/51 (94%)	47 (98%)	1 (2%)	0	100	100
81	m	49/128 (38%)	47 (96%)	2 (4%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
82	n	31/34 (91%)	30 (97%)	1 (3%)	0	100	100
83	o	86/92 (94%)	80 (93%)	6 (7%)	0	100	100
84	p	95/106 (90%)	93 (98%)	2 (2%)	0	100	100
All	All	11140/12774 (87%)	10878 (98%)	261 (2%)	1 (0%)	100	100

All (1) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
14	G	183	ASP

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	A	186/204 (91%)	185 (100%)	1 (0%)	88	95
9	B	294/351 (84%)	292 (99%)	2 (1%)	84	92
10	C	250/301 (83%)	248 (99%)	2 (1%)	81	91
11	D	62/162 (38%)	61 (98%)	1 (2%)	62	79
12	E	122/172 (71%)	116 (95%)	6 (5%)	25	40
13	F	94/153 (61%)	93 (99%)	1 (1%)	73	87
14	G	156/221 (71%)	154 (99%)	2 (1%)	69	84
15	H	155/188 (82%)	154 (99%)	1 (1%)	86	94
16	I	145/183 (79%)	143 (99%)	2 (1%)	67	82
17	J	95/111 (86%)	95 (100%)	0	100	100
18	K	109/145 (75%)	109 (100%)	0	100	100
19	L	107/114 (94%)	106 (99%)	1 (1%)	78	90
20	M	172/180 (96%)	170 (99%)	2 (1%)	71	85
21	N	168/179 (94%)	161 (96%)	7 (4%)	30	47
22	O	148/242 (61%)	145 (98%)	3 (2%)	55	74

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
23	P	152/164 (93%)	151 (99%)	1 (1%)	84	92
24	Q	120/198 (61%)	116 (97%)	4 (3%)	38	57
25	R	144/159 (91%)	144 (100%)	0	100	100
28	SA	198/222 (89%)	187 (94%)	11 (6%)	21	34
29	SB	165/202 (82%)	159 (96%)	6 (4%)	35	54
30	SC	167/184 (91%)	159 (95%)	8 (5%)	25	41
31	SD	148/164 (90%)	143 (97%)	5 (3%)	37	56
32	SE	215/225 (96%)	209 (97%)	6 (3%)	43	63
33	SF	174/208 (84%)	170 (98%)	4 (2%)	50	70
34	SG	186/208 (89%)	181 (97%)	5 (3%)	44	65
35	SH	150/159 (94%)	146 (97%)	4 (3%)	44	65
36	SI	172/186 (92%)	167 (97%)	5 (3%)	42	62
37	SK	139/176 (79%)	135 (97%)	4 (3%)	42	62
38	SL	112/120 (93%)	109 (97%)	3 (3%)	44	65
39	SM	90/104 (86%)	89 (99%)	1 (1%)	73	87
40	SN	84/128 (66%)	77 (92%)	7 (8%)	11	17
41	SO	97/113 (86%)	92 (95%)	5 (5%)	23	38
42	SP	115/117 (98%)	114 (99%)	1 (1%)	78	90
43	SQ	57/120 (48%)	55 (96%)	2 (4%)	36	55
44	SR	112/130 (86%)	111 (99%)	1 (1%)	78	90
45	SS	45/49 (92%)	43 (96%)	2 (4%)	28	45
46	ST	125/132 (95%)	124 (99%)	1 (1%)	81	91
47	SU	132/152 (87%)	129 (98%)	3 (2%)	50	70
48	SV	69/126 (55%)	64 (93%)	5 (7%)	14	23
49	SW	93/130 (72%)	90 (97%)	3 (3%)	39	59
50	SX	121/131 (92%)	120 (99%)	1 (1%)	81	91
51	SY	64/116 (55%)	63 (98%)	1 (2%)	62	79
52	SZ	107/118 (91%)	102 (95%)	5 (5%)	26	42
53	S	116/134 (87%)	116 (100%)	0	100	100
54	Sa	63/95 (66%)	63 (100%)	0	100	100
55	Sc	62/76 (82%)	60 (97%)	2 (3%)	39	59

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
56	Sb	85/93 (91%)	83 (98%)	2 (2%)	49	68
57	Sd	46/75 (61%)	43 (94%)	3 (6%)	17	27
58	Se	45/54 (83%)	43 (96%)	2 (4%)	28	45
59	Sg	246/265 (93%)	240 (98%)	6 (2%)	49	68
60	Sh	91/177 (51%)	85 (93%)	6 (7%)	16	26
61	SJ	110/111 (99%)	109 (99%)	1 (1%)	78	90
62	T	125/143 (87%)	123 (98%)	2 (2%)	62	79
63	U	41/114 (36%)	40 (98%)	1 (2%)	49	68
64	V	93/124 (75%)	92 (99%)	1 (1%)	73	87
65	W	96/122 (79%)	96 (100%)	0	100	100
66	X	56/104 (54%)	53 (95%)	3 (5%)	22	36
67	Y	93/116 (80%)	92 (99%)	1 (1%)	73	87
68	Z	102/118 (86%)	98 (96%)	4 (4%)	32	50
69	a	103/118 (87%)	101 (98%)	2 (2%)	57	75
70	b	56/58 (97%)	55 (98%)	1 (2%)	59	76
71	c	192/209 (92%)	190 (99%)	2 (1%)	76	88
72	d	81/89 (91%)	73 (90%)	8 (10%)	8	11
73	e	146/158 (92%)	143 (98%)	3 (2%)	53	72
74	f	106/115 (92%)	105 (99%)	1 (1%)	78	90
75	g	119/121 (98%)	118 (99%)	1 (1%)	81	91
76	h	110/146 (75%)	106 (96%)	4 (4%)	35	54
77	i	64/88 (73%)	63 (98%)	1 (2%)	62	79
78	j	67/70 (96%)	66 (98%)	1 (2%)	65	80
79	k	52/74 (70%)	48 (92%)	4 (8%)	13	20
80	l	46/47 (98%)	44 (96%)	2 (4%)	29	46
81	m	36/113 (32%)	34 (94%)	2 (6%)	21	34
82	n	30/32 (94%)	28 (93%)	2 (7%)	16	26
83	o	68/74 (92%)	64 (94%)	4 (6%)	19	32
84	p	82/92 (89%)	81 (99%)	1 (1%)	71	85
All	All	8644/10672 (81%)	8436 (98%)	208 (2%)	51	68

All (208) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
8	A	76	MET
9	B	26	ARG
9	B	120	LYS
10	C	121	PHE
10	C	324	ARG
11	D	131	VAL
12	E	8	CYS
12	E	25	VAL
12	E	55	THR
12	E	83	VAL
12	E	122	ARG
12	E	175	LEU
13	F	77	ARG
14	G	81	LYS
14	G	208	ASP
15	H	155	THR
16	I	116	VAL
16	I	175	ARG
19	L	142	VAL
20	M	60	CYS
20	M	193	ARG
21	N	13	LYS
21	N	24	ARG
21	N	28	ASP
21	N	39	ARG
21	N	178	ARG
21	N	207	THR
21	N	209	ARG
22	O	50	ARG
22	O	52	VAL
22	O	201	HIS
23	P	144	TYR
24	Q	55	VAL
24	Q	174	ARG
24	Q	181	ARG
24	Q	185	ARG
28	SA	33	VAL
28	SA	89	THR
28	SA	110	ASP
28	SA	121	THR
28	SA	125	THR
28	SA	154	ARG
28	SA	176	ARG

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
28	SA	177	ARG
28	SA	197	ASP
28	SA	204	ASN
28	SA	245	GLN
29	SB	17	ASP
29	SB	56	MET
29	SB	99	THR
29	SB	102	HIS
29	SB	183	ARG
29	SB	191	THR
30	SC	11	ILE
30	SC	44	ARG
30	SC	55	ARG
30	SC	75	ARG
30	SC	79	LYS
30	SC	115	ARG
30	SC	136	THR
30	SC	173	HIS
31	SD	93	ASP
31	SD	121	VAL
31	SD	147	VAL
31	SD	159	ASP
31	SD	180	LYS
32	SE	48	ARG
32	SE	63	ARG
32	SE	96	PHE
32	SE	137	VAL
32	SE	167	VAL
32	SE	239	GLN
33	SF	44	GLU
33	SF	205	VAL
33	SF	210	THR
33	SF	238	THR
34	SG	32	ARG
34	SG	153	THR
34	SG	202	VAL
34	SG	209	ARG
34	SG	226	ARG
35	SH	41	ARG
35	SH	51	ARG
35	SH	64	PHE
35	SH	161	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
36	SI	54	VAL
36	SI	160	ARG
36	SI	166	GLU
36	SI	169	LEU
36	SI	183	ARG
37	SK	38	LEU
37	SK	69	SER
37	SK	79	LEU
37	SK	160	ARG
38	SL	37	VAL
38	SL	108	LYS
38	SL	123	LEU
39	SM	67	CYS
40	SN	4	TYR
40	SN	17	PHE
40	SN	32	THR
40	SN	34	THR
40	SN	36	THR
40	SN	40	ASN
40	SN	60	ASN
41	SO	47	VAL
41	SO	77	ARG
41	SO	97	ARG
41	SO	106	GLN
41	SO	144	LEU
42	SP	105	PHE
43	SQ	70	ASP
43	SQ	87	ASP
44	SR	26	LYS
45	SS	4	LEU
45	SS	57	ARG
46	ST	69	ARG
47	SU	3	VAL
47	SU	65	ASN
47	SU	82	ARG
48	SV	3	LYS
48	SV	5	ARG
48	SV	34	VAL
48	SV	63	ARG
48	SV	72	LYS
49	SW	22	PHE
49	SW	76	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
49	SW	107	HIS
50	SX	105	THR
51	SY	55	THR
52	SZ	32	VAL
52	SZ	44	GLN
52	SZ	50	LEU
52	SZ	60	SER
52	SZ	103	PHE
55	Sc	45	THR
55	Sc	80	TYR
56	Sb	32	THR
56	Sb	42	VAL
57	Sd	36	ARG
57	Sd	44	VAL
57	Sd	55	TYR
58	Se	46	SER
58	Se	64	LYS
59	Sg	2	ASN
59	Sg	87	ARG
59	Sg	115	PHE
59	Sg	128	ASP
59	Sg	158	PHE
59	Sg	249	TRP
60	Sh	79	LYS
60	Sh	157	PHE
60	Sh	161	LYS
60	Sh	177	LEU
60	Sh	184	LYS
60	Sh	204	LEU
61	SJ	63	VAL
62	T	13	LYS
62	T	128	ARG
63	U	33	PRO
64	V	34	GLN
66	X	27	LEU
66	X	29	THR
66	X	37	ARG
67	Y	40	ARG
68	Z	17	ARG
68	Z	35	ASN
68	Z	81	THR
68	Z	99	VAL

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
69	a	77	ARG
69	a	92	THR
70	b	33	LYS
71	c	203	LYS
71	c	225	ARG
72	d	11	THR
72	d	40	ARG
72	d	77	LEU
72	d	89	THR
72	d	90	CYS
72	d	94	VAL
72	d	97	VAL
72	d	101	ASP
73	e	21	ASP
73	e	51	LYS
73	e	140	VAL
74	f	56	LYS
75	g	33	LEU
76	h	7	GLN
76	h	12	MET
76	h	113	LYS
76	h	126	LYS
77	i	38	LYS
78	j	33	ARG
79	k	3	ARG
79	k	58	ARG
79	k	61	HIS
79	k	63	SER
80	l	5	LYS
80	l	37	TRP
81	m	96	CYS
81	m	117	HIS
82	n	4	VAL
82	n	5	SER
83	o	30	GLU
83	o	41	PHE
83	o	42	CYS
83	o	47	PHE
84	p	2	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
10	C	345	ASN
32	SE	239	GLN
40	SN	65	GLN
59	Sg	180	ASN
66	X	63	HIS
67	Y	130	GLN
69	a	31	GLN
71	c	30	GLN
74	f	50	GLN
76	h	7	GLN
76	h	101	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	1598/1782 (89%)	281 (17%)	16 (1%)
2	3	151/216 (69%)	32 (21%)	4 (2%)
26	S1	1726/2204 (78%)	310 (17%)	12 (0%)
27	S4	18/20 (90%)	6 (33%)	0
3	4	182/183 (99%)	31 (17%)	3 (1%)
4	5	111/135 (82%)	21 (18%)	0
5	6	70/73 (95%)	22 (31%)	2 (2%)
6	7	161/171 (94%)	24 (14%)	0
7	8	118/123 (95%)	8 (6%)	0
85	2	1097/1526 (71%)	207 (18%)	13 (1%)
All	All	5232/6433 (81%)	942 (18%)	50 (0%)

All (942) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	24	A
1	1	29	C
1	1	38	A
1	1	41	A
1	1	47	C
1	1	58	A
1	1	63	A
1	1	64	A
1	1	65	A
1	1	86	G
1	1	87	A
1	1	91	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	98	A
1	1	108	G
1	1	110	A
1	1	127	G
1	1	131	U
1	1	132	A
1	1	134	A
1	1	135	A
1	1	136	G
1	1	141	U
1	1	142	G
1	1	153	C
1	1	166	G
1	1	170	U
1	1	175	G
1	1	191	U
1	1	192	C
1	1	199	A
1	1	205	A
1	1	206	A
1	1	211	U
1	1	212	U
1	1	215	U
1	1	218	A
1	1	220	A
1	1	223	A
1	1	224	C
1	1	233	U
1	1	234	G
1	1	237	U
1	1	250	A
1	1	251	A
1	1	255	G
1	1	256	U
1	1	258	A
1	1	267	A
1	1	273	A
1	1	280	A
1	1	281	G
1	1	292	A
1	1	306	G
1	1	323	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	332	A
1	1	335	U
1	1	343	U
1	1	349	U
1	1	361	A
1	1	367	A
1	1	368	G
1	1	369	A
1	1	373	G
1	1	374	G
1	1	383	U
1	1	390	C
1	1	391	A
1	1	392	A
1	1	407	A2M
1	1	409	U
1	1	410	U
1	1	417	G
1	1	423	U
1	1	440	A
1	1	443	A
1	1	461	G
1	1	463	C
1	1	464	A
1	1	469	A
1	1	477	C
1	1	484	A
1	1	485	A
1	1	488	G
1	1	502	U
1	1	506	G
1	1	511	A
1	1	512	U
1	1	513	C
1	1	521	G
1	1	525	C
1	1	526	A
1	1	527	A
1	1	528	A
1	1	533	G
1	1	542	C
1	1	543	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	546	G
1	1	547	U
1	1	548	G
1	1	551	A
1	1	553	A
1	1	554	A
1	1	555	U
1	1	561	G
1	1	562	U
1	1	563	C
1	1	572	A
1	1	575	A
1	1	577	C
1	1	606	C
1	1	609	C
1	1	611	C
1	1	616	U
1	1	617	G
1	1	621	U
1	1	632	A
1	1	635	C
1	1	641	G
1	1	648	A
1	1	649	U
1	1	668	C
1	1	678	A2M
1	1	679	A
1	1	681	A2M
1	1	692	A
1	1	709	A
1	1	713	A
1	1	721	U
1	1	729	A
1	1	750	G
1	1	753	A
1	1	754	G
1	1	763	U
1	1	767	U
1	1	769	U
1	1	771	U
1	1	778	C
1	1	792	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	797	A
1	1	798	U
1	1	803	C
1	1	821	C
1	1	822	C
1	1	825	G
1	1	832	G
1	1	835	G
1	1	836	G
1	1	838	G
1	1	850	G
1	1	868	A
1	1	899	A
1	1	912	C
1	1	925	U
1	1	930	U
1	1	931	G
1	1	958	G
1	1	965	A
1	1	967	G
1	1	968	A
1	1	972	A
1	1	975	G
1	1	985	G
1	1	988	G
1	1	995	C
1	1	997	C
1	1	1010	OMC
1	1	1011	PSU
1	1	1031	A
1	1	1045	G
1	1	1089	C
1	1	1091	A
1	1	1092	U
1	1	1094	C
1	1	1095	U
1	1	1097	A
1	1	1098	A
1	1	1100	C
1	1	1105	A
1	1	1107	OMU
1	1	1128	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	1129	G
1	1	1135	U
1	1	1136	G
1	1	1148	A
1	1	1150	A
1	1	1153	A
1	1	1156	A
1	1	1159	A
1	1	1161	A
1	1	1165	A
1	1	1174	G
1	1	1179	C
1	1	1181	PSU
1	1	1188	G
1	1	1210	A
1	1	1216	U
1	1	1235	A
1	1	1238	C
1	1	1239	U
1	1	1240	U
1	1	1242	U
1	1	1243	G
1	1	1253	U
1	1	1254	C
1	1	1258	A
1	1	1261	U
1	1	1262	G
1	1	1263	A
1	1	1277	G
1	1	1279	A
1	1	1353	A
1	1	1355	C
1	1	1356	G
1	1	1357	G
1	1	1369	G
1	1	1371	OMU
1	1	1375	G
1	1	1378	U
1	1	1379	A
1	1	1389	A
1	1	1390	G
1	1	1392	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	1393	A
1	1	1394	U
1	1	1395	U
1	1	1401	U
1	1	1413	U
1	1	1420	G
1	1	1422	A
1	1	1426	A
1	1	1427	A
1	1	1434	G
1	1	1438	A
1	1	1443	U
1	1	1445	G
1	1	1464	G
1	1	1476	A
1	1	1481	G
1	1	1490	G
1	1	1504	A
1	1	1509	C
1	1	1524	OMG
1	1	1527	OMC
1	1	1536	C
1	1	1540	OMG
1	1	1545	G
1	1	1557	A
1	1	1560	U
1	1	1561	A
1	1	1565	A
1	1	1566	A
1	1	1569	U
1	1	1586	G
1	1	1589	C
1	1	1590	G
1	1	1612	G
1	1	1613	C
1	1	1625	A
1	1	1654	A
1	1	1655	U
1	1	1661	U
1	1	1662	G
1	1	1663	U
1	1	1666	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	1	1667	G
1	1	1670	A
1	1	1672	U
1	1	1673	G
1	1	1675	A
1	1	1676	G
1	1	1677	G
1	1	1727	A
1	1	1729	A
1	1	1730	A
1	1	1738	C
1	1	1739	A
1	1	1744	A
1	1	1751	A
1	1	1753	U
1	1	1762	A
1	1	1766	G
2	3	34	C
2	3	35	A
2	3	36	A
2	3	41	A
2	3	52	G
2	3	72	A
2	3	76	C
2	3	99	U
2	3	100	U
2	3	101	G
2	3	108	U
2	3	109	U
2	3	110	U
2	3	111	A
2	3	112	C
2	3	116	U
2	3	124	U
2	3	125	U
2	3	126	C
2	3	146	G
2	3	149	A
2	3	150	A
2	3	151	A
2	3	180	U
2	3	181	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	3	183	G
2	3	187	U
2	3	188	C
2	3	192	G
2	3	193	C
2	3	201	C
2	3	202	A
3	4	5	G
3	4	9	G
3	4	11	G
3	4	12	A
3	4	15	G
3	4	24	A
3	4	25	G
3	4	40	G
3	4	50	G
3	4	51	U
3	4	58	G
3	4	85	C
3	4	86	U
3	4	87	G
3	4	102	G
3	4	114	A
3	4	120	U
3	4	121	C
3	4	127	G
3	4	141	A
3	4	143	C
3	4	144	G
3	4	148	C
3	4	149	U
3	4	150	A
3	4	157	A
3	4	158	A
3	4	159	G
3	4	168	A
3	4	171	A
3	4	173	C
4	5	5	G
4	5	14	C
4	5	23	G
4	5	27	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
4	5	28	U
4	5	38	G
4	5	49	C
4	5	50	A
4	5	51	U
4	5	52	G
4	5	62	G
4	5	63	G
4	5	64	U
4	5	67	G
4	5	86	G
4	5	87	U
4	5	99	G
4	5	106	G
4	5	109	G
4	5	113	G
4	5	125	U
5	6	7	A
5	6	11	G
5	6	12	C
5	6	13	C
5	6	15	C
5	6	24	C
5	6	25	U
5	6	26	G
5	6	30	C
5	6	32	U
5	6	33	G
5	6	40	C
5	6	42	A
5	6	52	G
5	6	53	U
5	6	54	A
5	6	55	U
5	6	60	A
5	6	64	U
5	6	67	C
5	6	68	A
5	6	69	A
6	7	22	U
6	7	48	A
6	7	52	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
6	7	59	A
6	7	62	A
6	7	63	G
6	7	75	OMG
6	7	84	U
6	7	85	U
6	7	87	A
6	7	88	A
6	7	90	U
6	7	94	G
6	7	103	A
6	7	105	C
6	7	110	A
6	7	120	G
6	7	124	A
6	7	125	A
6	7	126	G
6	7	135	U
6	7	136	G
6	7	157	U
6	7	158	U
7	8	11	G
7	8	22	A
7	8	46	A
7	8	67	C
7	8	68	A
7	8	95	U
7	8	104	A
7	8	114	G
26	S1	3	U
26	S1	4	C
26	S1	17	C
26	S1	26	A
26	S1	33	PSU
26	S1	34	G
26	S1	42	G
26	S1	45	U
26	S1	47	A
26	S1	65	A
26	S1	73	A
26	S1	98	A2M
26	S1	102	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	103	A
26	S1	104	PSU
26	S1	112	A
26	S1	114	U
26	S1	117	G
26	S1	128	C
26	S1	145	A
26	S1	146	U
26	S1	150	A
26	S1	151	U
26	S1	152	A
26	S1	158	G
26	S1	164	C
26	S1	165	G
26	S1	171	C
26	S1	173	A
26	S1	174	A
26	S1	176	A
26	S1	181	A
26	S1	184	C
26	S1	193	G
26	S1	197	U
26	S1	198	C
26	S1	235	C
26	S1	249	A
26	S1	252	G
26	S1	253	U
26	S1	257	A
26	S1	275	A
26	S1	278	A
26	S1	281	A
26	S1	282	C
26	S1	284	C
26	S1	286	G
26	S1	288	A
26	S1	313	G
26	S1	316	A
26	S1	320	G
26	S1	329	C
26	S1	356	A
26	S1	358	C
26	S1	360	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	364	G
26	S1	381	G
26	S1	382	A
26	S1	404	C
26	S1	413	A
26	S1	443	A
26	S1	444	A
26	S1	445	U
26	S1	447	G
26	S1	462	G
26	S1	467	C
26	S1	469	G
26	S1	473	G
26	S1	477	G
26	S1	479	A2M
26	S1	480	A
26	S1	481	A
26	S1	482	U
26	S1	483	U
26	S1	487	C
26	S1	488	A
26	S1	495	A
26	S1	499	A
26	S1	501	A
26	S1	503	C
26	S1	516	A
26	S1	523	A
26	S1	553	U
26	S1	554	U
26	S1	556	A
26	S1	580	A
26	S1	581	A
26	S1	585	C
26	S1	588	G
26	S1	591	A
26	S1	600	OMG
26	S1	606	G
26	S1	614	C
26	S1	628	A
26	S1	631	U
26	S1	636	C
26	S1	643	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	660	U
26	S1	668	A2M
26	S1	669	A
26	S1	671	G
26	S1	672	G
26	S1	673	G
26	S1	688	G
26	S1	689	U
26	S1	693	C
26	S1	694	U
26	S1	747	C
26	S1	754	G
26	S1	757	C
26	S1	758	G
26	S1	771	G
26	S1	773	A
26	S1	774	A
26	S1	782	C
26	S1	787	G
26	S1	788	A
26	S1	789	G
26	S1	790	U
26	S1	791	G
26	S1	792	G
26	S1	793	G
26	S1	810	G
26	S1	811	C
26	S1	814	G
26	S1	815	U
26	S1	816	C
26	S1	819	G
26	S1	820	C
26	S1	821	A
26	S1	823	G
26	S1	835	C
26	S1	843	U
26	S1	856	A
26	S1	866	G
26	S1	867	A
26	S1	875	A
26	S1	876	G
26	S1	879	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	883	G
26	S1	884	A
26	S1	886	U
26	S1	887	U
26	S1	895	A
26	S1	916	G
26	S1	917	C
26	S1	954	A
26	S1	955	A
26	S1	956	A
26	S1	957	G
26	S1	974	G
26	S1	977	G
26	S1	978	C
26	S1	982	G
26	S1	990	U
26	S1	992	C
26	S1	993	U
26	S1	994	U
26	S1	996	C
26	S1	997	C
26	S1	998	C
26	S1	999	A
26	S1	1015	G
26	S1	1098	U
26	S1	1101	A
26	S1	1102	G
26	S1	1105	A
26	S1	1109	A
26	S1	1119	U
26	S1	1123	G
26	S1	1130	A
26	S1	1133	U
26	S1	1139	G
26	S1	1142	G
26	S1	1155	U
26	S1	1168	C
26	S1	1180	A
26	S1	1181	C
26	S1	1182	A
26	S1	1199	A
26	S1	1207	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	1213	A
26	S1	1235	A
26	S1	1239	A
26	S1	1245	A
26	S1	1252	A
26	S1	1273	A
26	S1	1275	C
26	S1	1290	A
26	S1	1414	A
26	S1	1443	U
26	S1	1444	G
26	S1	1449	U
26	S1	1452	A
26	S1	1466	G
26	S1	1490	A
26	S1	1502	G
26	S1	1503	A
26	S1	1510	C
26	S1	1537	U
26	S1	1542	C
26	S1	1546	A
26	S1	1548	A
26	S1	1551	G
26	S1	1552	G
26	S1	1554	A
26	S1	1566	PSU
26	S1	1569	G
26	S1	1570	G
26	S1	1573	A
26	S1	1580	G
26	S1	1582	A
26	S1	1583	U
26	S1	1595	G
26	S1	1597	G
26	S1	1598	U
26	S1	1602	U
26	S1	1603	U
26	S1	1608	A
26	S1	1613	C
26	S1	1616	A
26	S1	1625	G
26	S1	1637	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	1638	U
26	S1	1643	G
26	S1	1651	G
26	S1	1653	U
26	S1	1658	U
26	S1	1659	U
26	S1	1666	U
26	S1	1667	U
26	S1	1673	A
26	S1	1674	A
26	S1	1677	G
26	S1	1699	A
26	S1	1706	A
26	S1	1712	G
26	S1	1713	C
26	S1	1719	G
26	S1	1725	C
26	S1	1762	A
26	S1	1773	U
26	S1	1774	U
26	S1	1782	G
26	S1	1788	U
26	S1	1789	U
26	S1	1796	U
26	S1	1797	A
26	S1	1807	G
26	S1	1816	U
26	S1	1822	A
26	S1	1825	A
26	S1	1826	G
26	S1	1828	A
26	S1	1829	OMG
26	S1	1833	OMU
26	S1	1836	G
26	S1	1846	A
26	S1	1847	A
26	S1	1848	U
26	S1	1849	G
26	S1	1861	A
26	S1	1872	A
26	S1	1890	A
26	S1	1891	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	1919	C
26	S1	1921	A
26	S1	1924	G
26	S1	1932	A
26	S1	1933	A
26	S1	1939	G
26	S1	1944	C
26	S1	1948	U
26	S1	1949	A
26	S1	1950	G
26	S1	1955	A
26	S1	1956	C
26	S1	1976	U
26	S1	1977	U
26	S1	1978	A
26	S1	1988	C
26	S1	1989	A
26	S1	2004	G
26	S1	2010	G
26	S1	2021	A2M
26	S1	2039	C
26	S1	2054	C
26	S1	2055	A
26	S1	2063	U
26	S1	2086	A
26	S1	2097	C
26	S1	2100	A
26	S1	2102	A
26	S1	2119	C
26	S1	2120	C
26	S1	2122	G
26	S1	2140	OMC
26	S1	2159	A
26	S1	2163	G
26	S1	2165	A
26	S1	2169	A
26	S1	2170	G
26	S1	2172	U
26	S1	2183	G
26	S1	2195	G
26	S1	2196	G
26	S1	2197	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	2198	A
26	S1	2199	C
26	S1	2202	PSU
27	S4	4	C
27	S4	5	G
27	S4	64	A
27	S4	70	C
27	S4	73	A
27	S4	76	A
85	2	5	A
85	2	6	A
85	2	7	C
85	2	22	A
85	2	25	A
85	2	29	C
85	2	33	A
85	2	62	A
85	2	63	U
85	2	68	A
85	2	69	A
85	2	75	C
85	2	90	G
85	2	91	C
85	2	136	A
85	2	340	A
85	2	344	G
85	2	363	C
85	2	368	G
85	2	377	A
85	2	386	U
85	2	388	A
85	2	404	A
85	2	415	U
85	2	443	OMC
85	2	444	A
85	2	450	C
85	2	452	G
85	2	453	A
85	2	454	A
85	2	455	U
85	2	457	U
85	2	460	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
85	2	469	G
85	2	490	A
85	2	495	G
85	2	498	A
85	2	502	A
85	2	503	C
85	2	505	A
85	2	508	A
85	2	518	G
85	2	519	G
85	2	527	A2M
85	2	529	G
85	2	530	C
85	2	534	OMG
85	2	544	U
85	2	552	C
85	2	553	G
85	2	554	C
85	2	556	U
85	2	559	A
85	2	561	G
85	2	570	A2M
85	2	571	G
85	2	580	U
85	2	582	U
85	2	602	A
85	2	618	A
85	2	619	A
85	2	620	C
85	2	621	G
85	2	639	G
85	2	643	A
85	2	647	A
85	2	648	A
85	2	649	G
85	2	650	A
85	2	657	U
85	2	658	G
85	2	675	G
85	2	681	G
85	2	685	G
85	2	749	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
85	2	750	U
85	2	751	U
85	2	752	G
85	2	753	C
85	2	754	U
85	2	755	U
85	2	756	C
85	2	760	U
85	2	761	A
85	2	768	G
85	2	769	A
85	2	777	A
85	2	778	A
85	2	779	U
85	2	780	G
85	2	783	U
85	2	784	U
85	2	797	C
85	2	799	G
85	2	805	G
85	2	810	G
85	2	811	U
85	2	812	C
85	2	950	G
85	2	955	C
85	2	957	C
85	2	958	A
85	2	959	A
85	2	960	C
85	2	964	G
85	2	965	C
85	2	966	U
85	2	970	A
85	2	979	A
85	2	980	A
85	2	999	U
85	2	1000	U
85	2	1001	C
85	2	1010	U
85	2	1011	G
85	2	1012	U
85	2	1017	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
85	2	1019	A
85	2	1023	C
85	2	1033	G
85	2	1034	G
85	2	1041	G
85	2	1045	G
85	2	1046	OMG
85	2	1053	A
85	2	1055	A
85	2	1064	A
85	2	1075	G
85	2	1079	U
85	2	1083	A
85	2	1093	C
85	2	1099	G
85	2	1116	A
85	2	1118	A
85	2	1120	C
85	2	1123	A
85	2	1131	A
85	2	1132	A
85	2	1141	G
85	2	1146	A
85	2	1147	C
85	2	1156	G
85	2	1181	G
85	2	1189	A
85	2	1198	G
85	2	1199	A
85	2	1200	A
85	2	1201	G
85	2	1202	A
85	2	1203	A
85	2	1204	U
85	2	1207	G
85	2	1215	A
85	2	1237	A
85	2	1238	G
85	2	1239	A
85	2	1241	U
85	2	1248	OMC
85	2	1252	G

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
85	2	1255	A
85	2	1271	G
85	2	1276	A
85	2	1280	U
85	2	1281	U
85	2	1283	A
85	2	1294	G
85	2	1309	G
85	2	1314	C
85	2	1325	A
85	2	1332	C
85	2	1335	C
85	2	1336	G
85	2	1337	C
85	2	1344	C
85	2	1368	A
85	2	1373	C
85	2	1374	A
85	2	1379	A
85	2	1380	C
85	2	1381	G
85	2	1385	G
85	2	1409	A
85	2	1416	U
85	2	1421	C
85	2	1428	U
85	2	1433	G
85	2	1436	A
85	2	1438	U
85	2	1441	C
85	2	1443	A
85	2	1448	A
85	2	1452	U
85	2	1453	U
85	2	1454	A
85	2	1456	C
85	2	1463	A
85	2	1470	C
85	2	1502	G
85	2	1503	G
85	2	1504	U
85	2	1505	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
85	2	1510	A
85	2	1511	U
85	2	1512	G
85	2	1513	G
85	2	1514	U
85	2	1516	C

All (50) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	1	141	U
1	1	191	U
1	1	210	G
1	1	422	PSU
1	1	468	G
1	1	546	G
1	1	547	U
1	1	605	G
1	1	616	U
1	1	967	G
1	1	1011	PSU
1	1	1094	C
1	1	1096	C
1	1	1134	C
1	1	1135	U
1	1	1394	U
2	3	98	C
2	3	150	A
2	3	180	U
2	3	192	G
3	4	11	G
3	4	50	G
3	4	157	A
5	6	24	C
5	6	51	A
26	S1	72	C
26	S1	234	C
26	S1	252	G
26	S1	277	U
26	S1	494	A
26	S1	746	C
26	S1	770	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
26	S1	790	U
26	S1	916	G
26	S1	992	C
26	S1	995	U
26	S1	1672	C
85	2	68	A
85	2	443	OMC
85	2	454	A
85	2	646	G
85	2	749	G
85	2	750	U
85	2	783	U
85	2	1022	U
85	2	1092	U
85	2	1293	C
85	2	1334	C
85	2	1343	A
85	2	1452	U

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

154 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
85	PSU	2	1413	85	18,21,22	4.38	7 (38%)	22,30,33	1.79	5 (22%)
26	A2M	S1	98	86,26	18,25,26	4.26	7 (38%)	18,36,39	2.56	3 (16%)
1	PSU	1	940	1	18,21,22	4.44	7 (38%)	22,30,33	1.82	5 (22%)
85	PSU	2	626	85	18,21,22	4.40	7 (38%)	22,30,33	1.77	4 (18%)
85	PSU	2	1361	85	18,21,22	4.44	7 (38%)	22,30,33	1.80	5 (22%)
1	A2M	1	927	1	18,25,26	4.20	6 (33%)	18,36,39	2.74	3 (16%)
1	PSU	1	1181	1	18,21,22	4.43	8 (44%)	22,30,33	1.73	4 (18%)
85	PSU	2	593	85	18,21,22	4.38	7 (38%)	22,30,33	1.71	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
26	PSU	S1	2048	26	18,21,22	4.25	8 (44%)	22,30,33	1.85	5 (22%)
1	OMU	1	1371	1	19,22,23	3.04	8 (42%)	26,31,34	1.88	5 (19%)
26	PSU	S1	1657	26	18,21,22	4.33	7 (38%)	22,30,33	1.81	5 (22%)
26	PSU	S1	1533	26	18,21,22	4.42	7 (38%)	22,30,33	1.75	5 (22%)
85	PSU	2	437	85	18,21,22	4.38	7 (38%)	22,30,33	1.83	5 (22%)
1	A2M	1	678	85,1	18,25,26	4.24	6 (33%)	18,36,39	3.59	7 (38%)
85	PSU	2	597	85	18,21,22	4.42	7 (38%)	22,30,33	1.81	5 (22%)
85	5MC	2	524	85,86	18,22,23	3.44	7 (38%)	26,32,35	1.04	2 (7%)
1	OMC	1	695	1	19,22,23	2.94	8 (42%)	26,31,34	0.70	0
1	PSU	1	422	1	18,21,22	4.47	7 (38%)	22,30,33	1.86	4 (18%)
1	OMG	1	856	1	18,26,27	2.50	8 (44%)	19,38,41	1.55	4 (21%)
26	OMU	S1	29	86,26	19,22,23	2.93	8 (42%)	26,31,34	1.79	5 (19%)
26	OMC	S1	2140	26	19,22,23	2.94	8 (42%)	26,31,34	0.86	0
6	OMU	7	7	6,1	19,22,23	2.97	8 (42%)	26,31,34	1.72	5 (19%)
1	PSU	1	672	86,1	18,21,22	4.39	7 (38%)	22,30,33	1.85	6 (27%)
26	OMU	S1	8	26	19,22,23	2.86	8 (42%)	26,31,34	1.82	5 (19%)
26	PSU	S1	104	26	18,21,22	4.37	7 (38%)	22,30,33	1.75	5 (22%)
85	OMC	2	443	85,87	19,22,23	2.94	8 (42%)	26,31,34	0.80	0
1	OMG	1	1540	85,1	18,26,27	2.47	8 (44%)	19,38,41	1.54	5 (26%)
85	OMU	2	73	85	19,22,23	2.96	8 (42%)	26,31,34	1.69	5 (19%)
26	PSU	S1	1566	86,26	18,21,22	4.43	8 (44%)	22,30,33	1.72	4 (18%)
1	OMG	1	1190	86,1	18,26,27	2.50	8 (44%)	19,38,41	1.64	4 (21%)
1	PSU	1	1039	1	18,21,22	4.44	7 (38%)	22,30,33	1.87	5 (22%)
85	OMG	2	1229	85	18,26,27	2.52	8 (44%)	19,38,41	1.59	5 (26%)
26	OMU	S1	1833	86,26	19,22,23	2.99	8 (42%)	26,31,34	1.77	5 (19%)
6	A2M	7	43	6	18,25,26	4.25	6 (33%)	18,36,39	2.62	3 (16%)
26	OMG	S1	1550	26	18,26,27	2.53	8 (44%)	19,38,41	1.55	4 (21%)
85	OMG	2	1046	85	18,26,27	2.52	8 (44%)	19,38,41	1.54	4 (21%)
85	A2M	2	527	85	18,25,26	3.98	7 (38%)	18,36,39	2.69	3 (16%)
85	PSU	2	662	85,86	18,21,22	4.40	7 (38%)	22,30,33	1.82	5 (22%)
85	PSU	2	1058	85	18,21,22	4.45	7 (38%)	22,30,33	1.85	5 (22%)
26	PSU	S1	2046	26	18,21,22	4.30	7 (38%)	22,30,33	1.91	5 (22%)
1	PSU	1	1528	1	18,21,22	4.44	7 (38%)	22,30,33	1.82	5 (22%)
85	OMU	2	560	85	19,22,23	2.98	8 (42%)	26,31,34	1.76	5 (19%)
6	PSU	7	74	6	18,21,22	4.45	7 (38%)	22,30,33	1.81	5 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	PSU	1	239	1	18,21,22	4.47	7 (38%)	22,30,33	1.81	5 (22%)
85	OMU	2	56	85,1	19,22,23	2.98	8 (42%)	26,31,34	1.76	4 (15%)
85	OMG	2	534	85	18,26,27	2.51	8 (44%)	19,38,41	1.56	4 (21%)
85	OMG	2	1253	85	18,26,27	2.47	8 (44%)	19,38,41	1.52	4 (21%)
85	OMU	2	667	85	19,22,23	2.98	8 (42%)	26,31,34	1.71	4 (15%)
1	PSU	1	1664	1	18,21,22	4.44	7 (38%)	22,30,33	1.84	6 (27%)
26	PSU	S1	1539	26	18,21,22	4.41	7 (38%)	22,30,33	1.78	5 (22%)
1	A2M	1	858	1	18,25,26	4.15	7 (38%)	18,36,39	2.78	4 (22%)
85	A2M	2	604	85,1	18,25,26	4.22	6 (33%)	18,36,39	2.66	3 (16%)
85	OMU	2	1419	85	19,22,23	2.99	8 (42%)	26,31,34	1.72	4 (15%)
26	OMG	S1	1647	26	18,26,27	2.44	8 (44%)	19,38,41	1.66	4 (21%)
85	OMG	2	71	85,86	18,26,27	2.54	8 (44%)	19,38,41	1.58	4 (21%)
26	PSU	S1	33	26	18,21,22	4.42	8 (44%)	22,30,33	1.75	4 (18%)
26	PSU	S1	1156	26	18,21,22	4.35	7 (38%)	22,30,33	1.85	5 (22%)
85	A2M	2	591	85	18,25,26	4.23	6 (33%)	18,36,39	2.71	3 (16%)
26	A2M	S1	479	26	18,25,26	4.21	7 (38%)	18,36,39	2.68	5 (27%)
85	OMC	2	359	85	19,22,23	2.98	8 (42%)	26,31,34	0.69	0
85	A2M	2	570	85,1	18,25,26	4.15	7 (38%)	18,36,39	2.85	5 (27%)
6	OMG	7	75	6	18,26,27	2.54	8 (44%)	19,38,41	1.56	4 (21%)
1	OMG	1	959[A]	1	18,26,27	2.58	8 (44%)	19,38,41	1.65	5 (26%)
26	OMG	S1	600	26	18,26,27	2.48	8 (44%)	19,38,41	1.55	4 (21%)
1	OMG	1	1524	1	18,26,27	2.53	8 (44%)	19,38,41	1.65	4 (21%)
85	OMU	2	1359	85	19,22,23	2.98	8 (42%)	26,31,34	1.70	5 (19%)
85	PSU	2	1354	85	18,21,22	4.43	7 (38%)	22,30,33	1.84	5 (22%)
26	PSU	S1	1192	26	18,21,22	4.34	7 (38%)	22,30,33	1.72	4 (18%)
26	OMG	S1	1829	86,26	18,26,27	2.50	8 (44%)	19,38,41	1.53	4 (21%)
85	A2M	2	95	85	18,25,26	4.22	6 (33%)	18,36,39	2.68	3 (16%)
1	1MA	1	677	86,1	16,25,26	3.94	4 (25%)	18,37,40	1.83	3 (16%)
1	OMG	1	1626	1	18,26,27	2.53	8 (44%)	19,38,41	1.58	5 (26%)
1	OMU	1	1107	1	19,22,23	2.99	8 (42%)	26,31,34	1.76	5 (19%)
85	PSU	2	1303	85	18,21,22	4.42	8 (44%)	22,30,33	1.86	6 (27%)
85	PSU	2	1265	85,88	18,21,22	4.45	7 (38%)	22,30,33	1.91	5 (22%)
85	PSU	2	1144	85	18,21,22	4.43	7 (38%)	22,30,33	1.85	5 (22%)
85	A2M	2	1185	85	18,25,26	4.18	7 (38%)	18,36,39	2.63	4 (22%)
1	OMU	1	845	1	19,22,23	2.96	8 (42%)	26,31,34	2.05	6 (23%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
85	A2M	2	628	85	18,25,26	4.22	6 (33%)	18,36,39	2.60	3 (16%)
26	C4J	S1	1543	26	24,29,30	2.97	9 (37%)	29,42,45	1.37	3 (10%)
3	OMG	4	74	3	18,26,27	2.50	8 (44%)	19,38,41	1.52	5 (26%)
1	A2M	1	955	1	18,25,26	4.25	6 (33%)	18,36,39	2.67	3 (16%)
26	5MC	S1	1544	26	18,22,23	3.47	7 (38%)	26,32,35	1.05	1 (3%)
1	A2M	1	407	1	18,25,26	4.37	7 (38%)	18,36,39	2.54	4 (22%)
85	A2M	2	572	85	18,25,26	4.22	6 (33%)	18,36,39	2.66	3 (16%)
85	A2M	2	382	85	18,25,26	4.28	6 (33%)	18,36,39	2.78	3 (16%)
1	PSU	1	1533	85,1	18,21,22	4.43	7 (38%)	22,30,33	1.92	6 (27%)
1	A2M	1	1539	85,86,1	18,25,26	4.24	6 (33%)	18,36,39	2.58	3 (16%)
85	OMC	2	1248	85	19,22,23	2.92	8 (42%)	26,31,34	0.82	0
26	OMC	S1	18	26	19,22,23	2.81	8 (42%)	26,31,34	0.78	0
85	A2M	2	1384	85,86	18,25,26	4.23	6 (33%)	18,36,39	2.60	3 (16%)
1	A2M	1	305	1	18,25,26	4.18	6 (33%)	18,36,39	2.73	3 (16%)
1	A2M	1	697	1	18,25,26	4.22	6 (33%)	18,36,39	2.65	3 (16%)
26	PSU	S1	1841	26,87	18,21,22	4.37	7 (38%)	22,30,33	1.93	5 (22%)
26	PSU	S1	455	26	18,21,22	4.38	7 (38%)	22,30,33	1.90	5 (22%)
1	PSU	1	1171	86,1	18,21,22	4.43	7 (38%)	22,30,33	1.83	6 (27%)
26	OMG	S1	2151	26	18,26,27	2.50	8 (44%)	19,38,41	1.61	4 (21%)
85	OMC	2	1317	85	19,22,23	2.92	8 (42%)	26,31,34	0.77	0
85	PSU	2	1318	85	18,21,22	4.40	7 (38%)	22,30,33	1.78	6 (27%)
26	PSU	S1	1246	86,26	18,21,22	4.33	7 (38%)	22,30,33	1.92	5 (22%)
6	PSU	7	69	6	18,21,22	4.44	9 (50%)	22,30,33	1.75	5 (22%)
1	PSU	1	1402	1	18,21,22	4.41	7 (38%)	22,30,33	1.68	4 (18%)
26	MA6	S1	2185	26	18,26,27	1.18	1 (5%)	19,38,41	3.00	2 (10%)
26	OMU	S1	1621	86,26	19,22,23	2.99	8 (42%)	26,31,34	1.72	4 (15%)
85	OMG	2	1231	85	18,26,27	2.52	8 (44%)	19,38,41	1.52	4 (21%)
85	PSU	2	1264	85,87	18,21,22	4.44	8 (44%)	22,30,33	1.88	6 (27%)
85	OMU	2	1077	85	19,22,23	3.00	8 (42%)	26,31,34	1.75	5 (19%)
26	PSU	S1	607	26	18,21,22	4.54	7 (38%)	22,30,33	1.74	6 (27%)
26	PSU	S1	12	26	18,21,22	4.26	8 (44%)	22,30,33	1.83	5 (22%)
26	OMU	S1	1979	26	19,22,23	2.98	8 (42%)	26,31,34	1.73	4 (15%)
85	OMC	2	1159	85	19,22,23	2.93	8 (42%)	26,31,34	0.79	0
85	OMG	2	655	85	18,26,27	2.50	8 (44%)	19,38,41	1.59	4 (21%)
1	PSU	1	1011	1	18,21,22	4.45	9 (50%)	22,30,33	1.77	5 (22%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
26	OMU	S1	661	26	19,22,23	2.88	8 (42%)	26,31,34	1.77	5 (19%)
1	PSU	1	870	1	18,21,22	4.41	7 (38%)	22,30,33	1.85	5 (22%)
1	A2M	1	235	1	18,25,26	4.33	7 (38%)	18,36,39	2.60	3 (16%)
26	MA6	S1	2184	26	18,26,27	1.18	1 (5%)	19,38,41	2.95	2 (10%)
85	PSU	2	1194	85	18,21,22	4.45	7 (38%)	22,30,33	1.78	5 (22%)
26	PSU	S1	609	26	18,21,22	4.42	7 (38%)	22,30,33	1.89	5 (22%)
1	OMU	1	1659	86,1	19,22,23	2.98	8 (42%)	26,31,34	1.73	5 (19%)
6	A2M	7	162	6,1	18,25,26	4.22	6 (33%)	18,36,39	2.80	3 (16%)
85	PSU	2	510	85	18,21,22	4.47	7 (38%)	22,30,33	1.78	5 (22%)
85	5MC	2	1308	85,86	18,21,23	4.64	12 (66%)	25,30,35	1.30	2 (8%)
1	PSU	1	1017	86,1	18,21,22	4.36	7 (38%)	22,30,33	1.83	5 (22%)
26	7MG	S1	1995	26	22,26,27	4.13	10 (45%)	29,39,42	2.05	9 (31%)
1	A2M	1	681	1	18,25,26	4.19	6 (33%)	18,36,39	2.79	3 (16%)
85	OMG	2	1078	85	18,26,27	2.51	8 (44%)	19,38,41	1.65	5 (26%)
85	PSU	2	78	85	18,21,22	4.41	7 (38%)	22,30,33	1.84	5 (22%)
26	A2M	S1	2021	26	18,25,26	4.10	7 (38%)	18,36,39	2.77	3 (16%)
85	PSU	2	512	85	18,21,22	4.47	7 (38%)	22,30,33	1.83	5 (22%)
26	A2M	S1	512	86,26	18,25,26	4.24	7 (38%)	18,36,39	2.55	3 (16%)
85	PSU	2	472	85	18,21,22	4.45	7 (38%)	22,30,33	1.86	5 (22%)
85	OMC	2	583	85	19,22,23	2.92	8 (42%)	26,31,34	0.69	0
85	OMG	2	1360	85	18,26,27	2.52	8 (44%)	19,38,41	1.52	4 (21%)
85	OMC	2	1397	85	19,22,23	2.91	8 (42%)	26,31,34	0.77	0
2	OMU	3	13	2	19,22,23	2.99	8 (42%)	26,31,34	1.73	5 (19%)
26	OMG	S1	1623	26	18,26,27	2.51	8 (44%)	19,38,41	1.54	4 (21%)
1	OMC	1	1527	1	19,22,23	2.94	8 (42%)	26,31,34	0.99	2 (7%)
1	OMC	1	1010	86,1,88	19,22,23	2.94	8 (42%)	26,31,34	0.83	0
26	OMG	S1	1865	26	18,26,27	2.49	8 (44%)	19,38,41	1.57	4 (21%)
26	PSU	S1	2202	26	18,21,22	4.29	8 (44%)	22,30,33	1.65	4 (18%)
26	OMG	S1	1879	26	18,26,27	2.51	8 (44%)	19,38,41	1.56	4 (21%)
26	A2M	S1	668	86,26	18,25,26	4.04	7 (38%)	18,36,39	2.85	4 (22%)
26	5MC	S1	2061	26	18,22,23	3.35	7 (38%)	26,32,35	0.99	2 (7%)
85	PSU	2	1060	85	18,21,22	4.40	7 (38%)	22,30,33	1.91	5 (22%)
85	A2M	2	1372	85	18,25,26	4.15	6 (33%)	18,36,39	2.73	4 (22%)
85	PSU	2	1403	85	18,21,22	4.43	7 (38%)	22,30,33	1.86	6 (27%)
85	OMG	2	641	85	18,26,27	2.51	8 (44%)	19,38,41	1.59	5 (26%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	OMU	1	847	1	19,22,23	2.94	8 (42%)	26,31,34	1.76	5 (19%)
1	OMG	1	959[B]	1	18,26,27	2.56	8 (44%)	19,38,41	1.51	4 (21%)
26	OMC	S1	38	26	19,22,23	2.88	8 (42%)	26,31,34	0.79	0
26	OMG	S1	1478	26	18,26,27	2.43	8 (44%)	19,38,41	1.58	5 (26%)
85	PSU	2	1382	85	18,21,22	4.42	7 (38%)	22,30,33	1.89	6 (27%)
26	OMC	S1	1866	26	19,22,23	2.90	8 (42%)	26,31,34	0.74	0

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	PSU	2	1413	85	-	0/7/25/26	0/2/2/2
26	A2M	S1	98	86,26	-	2/5/27/28	0/3/3/3
1	PSU	1	940	1	-	0/7/25/26	0/2/2/2
85	PSU	2	626	85	-	0/7/25/26	0/2/2/2
85	PSU	2	1361	85	-	1/7/25/26	0/2/2/2
1	A2M	1	927	1	-	1/5/27/28	0/3/3/3
1	PSU	1	1181	1	-	4/7/25/26	0/2/2/2
85	PSU	2	593	85	-	0/7/25/26	0/2/2/2
26	PSU	S1	2048	26	-	0/7/25/26	0/2/2/2
1	OMU	1	1371	1	-	4/9/27/28	0/2/2/2
26	PSU	S1	1657	26	-	2/7/25/26	0/2/2/2
26	PSU	S1	1533	26	-	2/7/25/26	0/2/2/2
85	PSU	2	437	85	-	0/7/25/26	0/2/2/2
1	A2M	1	678	85,1	-	3/5/27/28	0/3/3/3
85	PSU	2	597	85	-	0/7/25/26	0/2/2/2
85	5MC	2	524	85,86	-	0/7/25/26	0/2/2/2
1	OMC	1	695	1	-	0/9/27/28	0/2/2/2
1	PSU	1	422	1	-	0/7/25/26	0/2/2/2
1	OMG	1	856	1	-	0/5/27/28	0/3/3/3
26	OMU	S1	29	86,26	-	0/9/27/28	0/2/2/2
26	OMC	S1	2140	26	-	2/9/27/28	0/2/2/2
6	OMU	7	7	6,1	-	1/9/27/28	0/2/2/2
1	PSU	1	672	86,1	-	0/7/25/26	0/2/2/2
26	OMU	S1	8	26	-	6/9/27/28	0/2/2/2
26	PSU	S1	104	26	-	2/7/25/26	0/2/2/2
85	OMC	2	443	85,87	-	4/9/27/28	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMG	1	1540	85,1	-	2/5/27/28	0/3/3/3
85	OMU	2	73	85	-	0/9/27/28	0/2/2/2
26	PSU	S1	1566	86,26	-	2/7/25/26	0/2/2/2
1	OMG	1	1190	86,1	-	0/5/27/28	0/3/3/3
1	PSU	1	1039	1	-	0/7/25/26	0/2/2/2
85	OMG	2	1229	85	-	0/5/27/28	0/3/3/3
26	OMU	S1	1833	86,26	-	2/9/27/28	0/2/2/2
6	A2M	7	43	6	-	0/5/27/28	0/3/3/3
26	OMG	S1	1550	26	-	3/5/27/28	0/3/3/3
85	OMG	2	1046	85	-	2/5/27/28	0/3/3/3
85	A2M	2	527	85	-	2/5/27/28	0/3/3/3
85	PSU	2	662	85,86	-	0/7/25/26	0/2/2/2
85	PSU	2	1058	85	-	0/7/25/26	0/2/2/2
26	PSU	S1	2046	26	-	0/7/25/26	0/2/2/2
1	PSU	1	1528	1	-	0/7/25/26	0/2/2/2
85	OMU	2	560	85	-	1/9/27/28	0/2/2/2
6	PSU	7	74	6	-	2/7/25/26	0/2/2/2
1	PSU	1	239	1	-	0/7/25/26	0/2/2/2
85	OMU	2	56	85,1	-	0/9/27/28	0/2/2/2
85	OMG	2	534	85	-	2/5/27/28	0/3/3/3
85	OMG	2	1253	85	-	0/5/27/28	0/3/3/3
85	OMU	2	667	85	-	1/9/27/28	0/2/2/2
1	PSU	1	1664	1	-	0/7/25/26	0/2/2/2
26	PSU	S1	1539	26	-	2/7/25/26	0/2/2/2
1	A2M	1	858	1	-	0/5/27/28	0/3/3/3
85	A2M	2	604	85,1	-	0/5/27/28	0/3/3/3
85	OMU	2	1419	85	-	0/9/27/28	0/2/2/2
26	OMG	S1	1647	26	-	0/5/27/28	0/3/3/3
85	OMG	2	71	85,86	-	0/5/27/28	0/3/3/3
26	PSU	S1	33	26	-	2/7/25/26	0/2/2/2
26	PSU	S1	1156	26	-	0/7/25/26	0/2/2/2
85	A2M	2	591	85	-	1/5/27/28	0/3/3/3
26	A2M	S1	479	26	-	2/5/27/28	0/3/3/3
85	OMC	2	359	85	-	0/9/27/28	0/2/2/2
85	A2M	2	570	85,1	-	3/5/27/28	0/3/3/3
6	OMG	7	75	6	-	2/5/27/28	0/3/3/3
1	OMG	1	959[A]	1	-	2/5/27/28	0/3/3/3
26	OMG	S1	600	26	-	2/5/27/28	0/3/3/3
1	OMG	1	1524	1	-	1/5/27/28	0/3/3/3

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	OMU	2	1359	85	-	0/9/27/28	0/2/2/2
85	PSU	2	1354	85	-	0/7/25/26	0/2/2/2
26	PSU	S1	1192	26	-	0/7/25/26	0/2/2/2
26	OMG	S1	1829	86,26	-	0/5/27/28	0/3/3/3
85	A2M	2	95	85	-	0/5/27/28	0/3/3/3
1	1MA	1	677	86,1	-	0/3/25/26	0/3/3/3
1	OMG	1	1626	1	-	0/5/27/28	0/3/3/3
1	OMU	1	1107	1	-	3/9/27/28	0/2/2/2
85	PSU	2	1303	85	-	0/7/25/26	0/2/2/2
85	PSU	2	1265	85,88	-	1/7/25/26	0/2/2/2
85	PSU	2	1144	85	-	0/7/25/26	0/2/2/2
85	A2M	2	1185	85	-	2/5/27/28	0/3/3/3
1	OMU	1	845	1	-	3/9/27/28	0/2/2/2
85	A2M	2	628	85	-	0/5/27/28	0/3/3/3
26	C4J	S1	1543	26	-	6/16/34/35	0/2/2/2
3	OMG	4	74	3	-	0/5/27/28	0/3/3/3
1	A2M	1	955	1	-	0/5/27/28	0/3/3/3
26	5MC	S1	1544	26	-	0/7/25/26	0/2/2/2
1	A2M	1	407	1	-	4/5/27/28	0/3/3/3
85	A2M	2	572	85	-	0/5/27/28	0/3/3/3
85	A2M	2	382	85	-	1/5/27/28	0/3/3/3
1	PSU	1	1533	85,1	-	0/7/25/26	0/2/2/2
1	A2M	1	1539	85,86,1	-	0/5/27/28	0/3/3/3
85	OMC	2	1248	85	-	1/9/27/28	0/2/2/2
26	OMC	S1	18	26	-	0/9/27/28	0/2/2/2
85	A2M	2	1384	85,86	-	0/5/27/28	0/3/3/3
1	A2M	1	305	1	-	2/5/27/28	0/3/3/3
1	A2M	1	697	1	-	0/5/27/28	0/3/3/3
26	PSU	S1	1841	26,87	-	1/7/25/26	0/2/2/2
26	PSU	S1	455	26	-	0/7/25/26	0/2/2/2
1	PSU	1	1171	86,1	-	0/7/25/26	0/2/2/2
26	OMG	S1	2151	26	-	0/5/27/28	0/3/3/3
85	OMC	2	1317	85	-	0/9/27/28	0/2/2/2
85	PSU	2	1318	85	-	0/7/25/26	0/2/2/2
26	PSU	S1	1246	86,26	-	0/7/25/26	0/2/2/2
6	PSU	7	69	6	-	4/7/25/26	0/2/2/2
1	PSU	1	1402	1	-	2/7/25/26	0/2/2/2
26	MA6	S1	2185	26	-	1/7/29/30	0/3/3/3
26	OMU	S1	1621	86,26	-	0/9/27/28	0/2/2/2
85	OMG	2	1231	85	-	0/5/27/28	0/3/3/3

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	PSU	2	1264	85,87	-	0/7/25/26	0/2/2/2
85	OMU	2	1077	85	-	0/9/27/28	0/2/2/2
26	PSU	S1	607	26	-	2/7/25/26	0/2/2/2
26	PSU	S1	12	26	-	0/7/25/26	0/2/2/2
26	OMU	S1	1979	26	-	1/9/27/28	0/2/2/2
85	OMC	2	1159	85	-	0/9/27/28	0/2/2/2
85	OMG	2	655	85	-	1/5/27/28	0/3/3/3
1	PSU	1	1011	1	-	0/7/25/26	0/2/2/2
26	OMU	S1	661	26	-	0/9/27/28	0/2/2/2
1	PSU	1	870	1	-	0/7/25/26	0/2/2/2
1	A2M	1	235	1	-	0/5/27/28	0/3/3/3
26	MA6	S1	2184	26	-	0/7/29/30	0/3/3/3
85	PSU	2	1194	85	-	0/7/25/26	0/2/2/2
26	PSU	S1	609	26	-	0/7/25/26	0/2/2/2
1	OMU	1	1659	86,1	-	0/9/27/28	0/2/2/2
6	A2M	7	162	6,1	-	1/5/27/28	0/3/3/3
85	PSU	2	510	85	-	0/7/25/26	0/2/2/2
85	5MC	2	1308	85,86	-	4/6/24/26	0/2/2/2
1	PSU	1	1017	86,1	-	0/7/25/26	0/2/2/2
26	7MG	S1	1995	26	-	2/7/37/38	0/3/3/3
1	A2M	1	681	1	-	3/5/27/28	0/3/3/3
85	OMG	2	1078	85	-	0/5/27/28	0/3/3/3
85	PSU	2	78	85	-	0/7/25/26	0/2/2/2
26	A2M	S1	2021	26	-	2/5/27/28	0/3/3/3
85	PSU	2	512	85	-	0/7/25/26	0/2/2/2
26	A2M	S1	512	86,26	-	2/5/27/28	0/3/3/3
85	PSU	2	472	85	-	0/7/25/26	0/2/2/2
85	OMC	2	583	85	-	0/9/27/28	0/2/2/2
85	OMG	2	1360	85	-	0/5/27/28	0/3/3/3
85	OMC	2	1397	85	-	0/9/27/28	0/2/2/2
2	OMU	3	13	2	-	0/9/27/28	0/2/2/2
26	OMG	S1	1623	26	-	2/5/27/28	0/3/3/3
1	OMC	1	1527	1	-	3/9/27/28	0/2/2/2
1	OMC	1	1010	86,1,88	-	1/9/27/28	0/2/2/2
26	OMG	S1	1865	26	-	0/5/27/28	0/3/3/3
26	PSU	S1	2202	26	-	1/7/25/26	0/2/2/2
26	OMG	S1	1879	26	-	1/5/27/28	0/3/3/3
26	A2M	S1	668	86,26	-	2/5/27/28	0/3/3/3
26	5MC	S1	2061	26	-	0/7/25/26	0/2/2/2
85	PSU	2	1060	85	-	0/7/25/26	0/2/2/2

Continued on next page...

Continued from previous page...

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
85	A2M	2	1372	85	-	0/5/27/28	0/3/3/3
85	PSU	2	1403	85	-	0/7/25/26	0/2/2/2
85	OMG	2	641	85	-	0/5/27/28	0/3/3/3
1	OMU	1	847	1	-	0/9/27/28	0/2/2/2
1	OMG	1	959[B]	1	-	0/5/27/28	0/3/3/3
26	OMC	S1	38	26	-	0/9/27/28	0/2/2/2
26	OMG	S1	1478	26	-	0/5/27/28	0/3/3/3
85	PSU	2	1382	85	-	0/7/25/26	0/2/2/2
26	OMC	S1	1866	26	-	0/9/27/28	0/2/2/2

All (1130) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	407	A2M	O4'-C1'	15.76	1.63	1.41
1	1	235	A2M	O4'-C1'	15.63	1.62	1.41
85	2	382	A2M	O4'-C1'	15.49	1.62	1.41
1	1	678	A2M	O4'-C1'	15.43	1.62	1.41
6	7	43	A2M	O4'-C1'	15.30	1.62	1.41
26	S1	98	A2M	O4'-C1'	15.27	1.62	1.41
1	1	955	A2M	O4'-C1'	15.26	1.62	1.41
1	1	697	A2M	O4'-C1'	15.23	1.62	1.41
85	2	572	A2M	O4'-C1'	15.23	1.62	1.41
85	2	1384	A2M	O4'-C1'	15.21	1.62	1.41
85	2	591	A2M	O4'-C1'	15.19	1.62	1.41
85	2	628	A2M	O4'-C1'	15.18	1.62	1.41
6	7	162	A2M	O4'-C1'	15.17	1.62	1.41
1	1	1539	A2M	O4'-C1'	15.17	1.62	1.41
85	2	604	A2M	O4'-C1'	15.17	1.62	1.41
85	2	95	A2M	O4'-C1'	15.08	1.62	1.41
1	1	927	A2M	O4'-C1'	15.06	1.62	1.41
1	1	681	A2M	O4'-C1'	15.04	1.62	1.41
26	S1	512	A2M	O4'-C1'	15.03	1.62	1.41
1	1	305	A2M	O4'-C1'	14.98	1.62	1.41
26	S1	479	A2M	O4'-C1'	14.97	1.62	1.41
85	2	1185	A2M	O4'-C1'	14.88	1.61	1.41
85	2	1372	A2M	O4'-C1'	14.88	1.61	1.41
85	2	570	A2M	O4'-C1'	14.75	1.61	1.41
1	1	858	A2M	O4'-C1'	14.70	1.61	1.41
26	S1	2021	A2M	O4'-C1'	14.51	1.61	1.41
85	2	527	A2M	O4'-C1'	14.02	1.60	1.41
26	S1	668	A2M	O4'-C1'	14.00	1.60	1.41
1	1	677	1MA	C2-N3	13.92	1.45	1.29

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	422	PSU	C6-C5	11.90	1.49	1.35
26	S1	607	PSU	C6-C5	11.73	1.49	1.35
85	2	1194	PSU	C6-C5	11.62	1.48	1.35
85	2	510	PSU	C6-C5	11.54	1.48	1.35
26	S1	33	PSU	C6-C5	11.54	1.48	1.35
6	7	69	PSU	C6-C5	11.53	1.48	1.35
1	1	1402	PSU	C6-C5	11.53	1.48	1.35
85	2	512	PSU	C6-C5	11.52	1.48	1.35
26	S1	1566	PSU	C6-C5	11.52	1.48	1.35
1	1	1171	PSU	C6-C5	11.51	1.48	1.35
1	1	239	PSU	C6-C5	11.51	1.48	1.35
1	1	1664	PSU	C6-C5	11.50	1.48	1.35
85	2	1058	PSU	C6-C5	11.49	1.48	1.35
85	2	472	PSU	C6-C5	11.48	1.48	1.35
1	1	1181	PSU	C6-C5	11.47	1.48	1.35
6	7	74	PSU	C6-C5	11.47	1.48	1.35
1	1	1528	PSU	C6-C5	11.47	1.48	1.35
1	1	1039	PSU	C6-C5	11.47	1.48	1.35
1	1	1011	PSU	C6-C5	11.45	1.48	1.35
26	S1	609	PSU	C6-C5	11.45	1.48	1.35
1	1	940	PSU	C6-C5	11.45	1.48	1.35
85	2	1144	PSU	C6-C5	11.45	1.48	1.35
85	2	1264	PSU	C6-C5	11.44	1.48	1.35
85	2	1354	PSU	C6-C5	11.44	1.48	1.35
26	S1	1539	PSU	C6-C5	11.41	1.48	1.35
85	2	1303	PSU	C6-C5	11.40	1.48	1.35
85	2	626	PSU	C6-C5	11.40	1.48	1.35
85	2	597	PSU	C6-C5	11.39	1.48	1.35
26	S1	1533	PSU	C6-C5	11.38	1.48	1.35
85	2	1361	PSU	C6-C5	11.37	1.48	1.35
85	2	593	PSU	C6-C5	11.37	1.48	1.35
1	1	870	PSU	C6-C5	11.37	1.48	1.35
85	2	1318	PSU	C6-C5	11.35	1.48	1.35
1	1	1533	PSU	C6-C5	11.35	1.48	1.35
85	2	1413	PSU	C6-C5	11.35	1.48	1.35
85	2	78	PSU	C6-C5	11.35	1.48	1.35
85	2	1382	PSU	C6-C5	11.35	1.48	1.35
85	2	662	PSU	C6-C5	11.35	1.48	1.35
1	1	672	PSU	C6-C5	11.33	1.48	1.35
85	2	1403	PSU	C6-C5	11.33	1.48	1.35
85	2	1060	PSU	C6-C5	11.32	1.48	1.35
85	2	1265	PSU	C6-C5	11.32	1.48	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	1017	PSU	C6-C5	11.29	1.48	1.35
26	S1	1192	PSU	C6-C5	11.26	1.48	1.35
26	S1	455	PSU	C6-C5	11.26	1.48	1.35
26	S1	104	PSU	C6-C5	11.25	1.48	1.35
85	2	437	PSU	C6-C5	11.24	1.48	1.35
26	S1	1841	PSU	C6-C5	11.22	1.48	1.35
26	S1	1156	PSU	C6-C5	11.18	1.48	1.35
26	S1	1657	PSU	C6-C5	11.06	1.48	1.35
26	S1	1246	PSU	C6-C5	11.04	1.48	1.35
26	S1	2202	PSU	C6-C5	11.03	1.48	1.35
26	S1	2046	PSU	C6-C5	10.95	1.48	1.35
26	S1	12	PSU	C6-C5	10.89	1.48	1.35
26	S1	2048	PSU	C6-C5	10.87	1.48	1.35
26	S1	1995	7MG	C8-N9	10.69	1.51	1.46
26	S1	1543	C4J	C6-C5	9.87	1.48	1.34
26	S1	607	PSU	C2-N1	9.82	1.50	1.36
85	2	1265	PSU	C2-N1	9.73	1.49	1.36
1	1	239	PSU	C2-N1	9.60	1.49	1.36
85	2	1361	PSU	C2-N1	9.60	1.49	1.36
85	2	512	PSU	C2-N1	9.57	1.49	1.36
1	1	940	PSU	C2-N1	9.57	1.49	1.36
6	7	69	PSU	C2-N1	9.57	1.49	1.36
1	1	1181	PSU	C2-N1	9.55	1.49	1.36
85	2	1354	PSU	C2-N1	9.55	1.49	1.36
85	2	1403	PSU	C2-N1	9.55	1.49	1.36
85	2	472	PSU	C2-N1	9.54	1.49	1.36
85	2	510	PSU	C2-N1	9.54	1.49	1.36
85	2	1144	PSU	C2-N1	9.53	1.49	1.36
6	7	74	PSU	C2-N1	9.53	1.49	1.36
1	1	1039	PSU	C2-N1	9.53	1.49	1.36
1	1	870	PSU	C2-N1	9.52	1.49	1.36
1	1	1011	PSU	C2-N1	9.51	1.49	1.36
85	2	1058	PSU	C2-N1	9.51	1.49	1.36
1	1	1533	PSU	C2-N1	9.50	1.49	1.36
26	S1	1566	PSU	C2-N1	9.50	1.49	1.36
1	1	1528	PSU	C2-N1	9.50	1.49	1.36
85	2	597	PSU	C2-N1	9.50	1.49	1.36
26	S1	1533	PSU	C2-N1	9.49	1.49	1.36
85	2	1264	PSU	C2-N1	9.49	1.49	1.36
26	S1	455	PSU	C2-N1	9.49	1.49	1.36
1	1	1664	PSU	C2-N1	9.48	1.49	1.36
85	2	78	PSU	C2-N1	9.47	1.49	1.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	1318	PSU	C2-N1	9.47	1.49	1.36
1	1	1171	PSU	C2-N1	9.47	1.49	1.36
26	S1	104	PSU	C2-N1	9.47	1.49	1.36
85	2	1382	PSU	C2-N1	9.46	1.49	1.36
85	2	1303	PSU	C2-N1	9.46	1.49	1.36
85	2	1060	PSU	C2-N1	9.45	1.49	1.36
85	2	437	PSU	C2-N1	9.45	1.49	1.36
85	2	1194	PSU	C2-N1	9.44	1.49	1.36
26	S1	1539	PSU	C2-N1	9.43	1.49	1.36
85	2	662	PSU	C2-N1	9.41	1.49	1.36
1	1	422	PSU	C2-N1	9.40	1.49	1.36
26	S1	609	PSU	C2-N1	9.38	1.49	1.36
26	S1	1841	PSU	C2-N1	9.37	1.49	1.36
1	1	672	PSU	C2-N1	9.37	1.49	1.36
85	2	626	PSU	C2-N1	9.37	1.49	1.36
26	S1	1156	PSU	C2-N1	9.34	1.49	1.36
85	2	1413	PSU	C2-N1	9.33	1.49	1.36
26	S1	33	PSU	C2-N1	9.31	1.49	1.36
85	2	593	PSU	C2-N1	9.31	1.49	1.36
1	1	1017	PSU	C2-N1	9.29	1.49	1.36
1	1	1402	PSU	C2-N1	9.29	1.49	1.36
26	S1	1657	PSU	C2-N1	9.27	1.49	1.36
26	S1	1246	PSU	C2-N1	9.26	1.49	1.36
26	S1	2046	PSU	C2-N1	9.20	1.49	1.36
26	S1	1995	7MG	C5-N7	9.18	1.46	1.35
26	S1	1192	PSU	C2-N1	9.12	1.49	1.36
26	S1	12	PSU	C2-N1	9.12	1.49	1.36
85	2	1308	5MC	C6-C5	9.10	1.49	1.34
26	S1	2202	PSU	C2-N1	9.10	1.49	1.36
26	S1	2048	PSU	C2-N1	8.99	1.48	1.36
26	S1	1544	5MC	C6-C5	8.95	1.49	1.34
85	2	524	5MC	C6-C5	8.87	1.49	1.34
85	2	1308	5MC	C3'-C4'	-8.60	1.31	1.53
26	S1	2061	5MC	C6-C5	8.52	1.48	1.34
85	2	512	PSU	C2-N3	7.54	1.50	1.37
26	S1	607	PSU	C2-N3	7.50	1.50	1.37
85	2	472	PSU	C2-N3	7.48	1.50	1.37
1	1	1533	PSU	C2-N3	7.45	1.50	1.37
6	7	74	PSU	C2-N3	7.44	1.50	1.37
85	2	510	PSU	C2-N3	7.43	1.50	1.37
1	1	422	PSU	C2-N3	7.42	1.50	1.37
1	1	239	PSU	C2-N3	7.41	1.50	1.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	1403	PSU	C2-N3	7.41	1.50	1.37
26	S1	33	PSU	C2-N3	7.41	1.50	1.37
1	1	1371	OMU	C2-N1	7.41	1.50	1.38
1	1	1011	PSU	C2-N3	7.40	1.50	1.37
26	S1	609	PSU	C2-N3	7.40	1.50	1.37
1	1	1664	PSU	C2-N3	7.39	1.50	1.37
85	2	1264	PSU	C2-N3	7.39	1.50	1.37
85	2	1361	PSU	C2-N3	7.39	1.50	1.37
85	2	1194	PSU	C2-N3	7.38	1.50	1.37
1	1	1039	PSU	C2-N3	7.38	1.50	1.37
85	2	1058	PSU	C2-N3	7.38	1.50	1.37
1	1	1528	PSU	C2-N3	7.37	1.50	1.37
1	1	940	PSU	C2-N3	7.36	1.50	1.37
1	1	1402	PSU	C2-N3	7.36	1.50	1.37
26	S1	1533	PSU	C2-N3	7.35	1.50	1.37
85	2	1308	5MC	O4'-C4'	7.35	1.61	1.45
85	2	1354	PSU	C2-N3	7.35	1.50	1.37
85	2	1060	PSU	C2-N3	7.34	1.50	1.37
85	2	1144	PSU	C2-N3	7.34	1.50	1.37
1	1	1181	PSU	C2-N3	7.34	1.50	1.37
85	2	1303	PSU	C2-N3	7.33	1.50	1.37
85	2	1382	PSU	C2-N3	7.33	1.50	1.37
85	2	1265	PSU	C2-N3	7.30	1.50	1.37
1	1	672	PSU	C2-N3	7.30	1.50	1.37
85	2	597	PSU	C2-N3	7.30	1.50	1.37
26	S1	1841	PSU	C2-N3	7.29	1.50	1.37
85	2	78	PSU	C2-N3	7.29	1.50	1.37
26	S1	1539	PSU	C2-N3	7.29	1.50	1.37
1	1	1017	PSU	C2-N3	7.29	1.50	1.37
85	2	593	PSU	C2-N3	7.28	1.50	1.37
26	S1	1566	PSU	C2-N3	7.27	1.50	1.37
85	2	626	PSU	C2-N3	7.26	1.49	1.37
85	2	1318	PSU	C2-N3	7.26	1.49	1.37
85	2	662	PSU	C2-N3	7.25	1.49	1.37
6	7	69	PSU	C2-N3	7.25	1.49	1.37
85	2	437	PSU	C2-N3	7.24	1.49	1.37
85	2	1413	PSU	C2-N3	7.24	1.49	1.37
1	1	845	OMU	C2-N1	7.23	1.50	1.38
1	1	870	PSU	C2-N3	7.23	1.49	1.37
1	1	1171	PSU	C2-N3	7.23	1.49	1.37
26	S1	455	PSU	C2-N3	7.21	1.49	1.37
26	S1	1192	PSU	C2-N3	7.14	1.49	1.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	1246	PSU	C2-N3	7.14	1.49	1.37
26	S1	2046	PSU	C2-N3	7.14	1.49	1.37
26	S1	1657	PSU	C2-N3	7.12	1.49	1.37
26	S1	104	PSU	C2-N3	7.11	1.49	1.37
26	S1	2202	PSU	C2-N3	7.09	1.49	1.37
26	S1	1156	PSU	C2-N3	7.08	1.49	1.37
26	S1	1995	7MG	C4-N9	7.07	1.45	1.37
85	2	56	OMU	C2-N1	6.97	1.49	1.38
26	S1	2048	PSU	C2-N3	6.96	1.49	1.37
26	S1	1833	OMU	C2-N1	6.94	1.49	1.38
85	2	560	OMU	C2-N1	6.92	1.49	1.38
85	2	667	OMU	C2-N1	6.92	1.49	1.38
26	S1	12	PSU	C2-N3	6.90	1.49	1.37
85	2	1077	OMU	C2-N1	6.90	1.49	1.38
26	S1	1621	OMU	C2-N1	6.88	1.49	1.38
85	2	1419	OMU	C2-N1	6.87	1.49	1.38
2	3	13	OMU	C2-N1	6.85	1.49	1.38
26	S1	1979	OMU	C2-N1	6.84	1.49	1.38
1	1	1659	OMU	C2-N1	6.84	1.49	1.38
85	2	1359	OMU	C2-N1	6.83	1.49	1.38
6	7	7	OMU	C2-N1	6.82	1.49	1.38
26	S1	668	A2M	O4'-C4'	-6.79	1.29	1.45
1	1	1107	OMU	C2-N1	6.79	1.49	1.38
85	2	73	OMU	C2-N1	6.77	1.49	1.38
26	S1	29	OMU	C2-N1	6.73	1.49	1.38
2	3	13	OMU	C2-N3	6.73	1.50	1.38
1	1	1107	OMU	C2-N3	6.72	1.50	1.38
26	S1	1621	OMU	C2-N3	6.72	1.50	1.38
1	1	847	OMU	C2-N1	6.69	1.49	1.38
85	2	1077	OMU	C2-N3	6.68	1.49	1.38
85	2	560	OMU	C2-N3	6.67	1.49	1.38
26	S1	1979	OMU	C2-N3	6.66	1.49	1.38
85	2	1419	OMU	C2-N3	6.66	1.49	1.38
1	1	858	A2M	O4'-C4'	-6.65	1.30	1.45
85	2	73	OMU	C2-N3	6.65	1.49	1.38
6	7	7	OMU	C2-N3	6.65	1.49	1.38
26	S1	1833	OMU	C2-N3	6.65	1.49	1.38
85	2	1359	OMU	C2-N3	6.65	1.49	1.38
1	1	1371	OMU	C2-N3	6.64	1.49	1.38
1	1	1659	OMU	C2-N3	6.63	1.49	1.38
26	S1	479	A2M	O4'-C4'	-6.62	1.30	1.45
85	2	667	OMU	C2-N3	6.62	1.49	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	56	OMU	C2-N3	6.59	1.49	1.38
1	1	847	OMU	C2-N3	6.57	1.49	1.38
1	1	407	A2M	O4'-C4'	-6.55	1.30	1.45
26	S1	29	OMU	C2-N3	6.54	1.49	1.38
26	S1	661	OMU	C2-N1	6.50	1.48	1.38
26	S1	512	A2M	O4'-C4'	-6.47	1.30	1.45
1	1	845	OMU	C2-N3	6.46	1.49	1.38
85	2	1185	A2M	O4'-C4'	-6.43	1.30	1.45
1	1	955	A2M	O4'-C4'	-6.41	1.30	1.45
85	2	628	A2M	O4'-C4'	-6.40	1.30	1.45
1	1	1539	A2M	O4'-C4'	-6.39	1.30	1.45
1	1	235	A2M	O4'-C4'	-6.39	1.30	1.45
26	S1	8	OMU	C2-N1	6.39	1.48	1.38
6	7	162	A2M	O4'-C4'	-6.38	1.30	1.45
26	S1	661	OMU	C2-N3	6.34	1.49	1.38
26	S1	8	OMU	C2-N3	6.34	1.49	1.38
26	S1	98	A2M	O4'-C4'	-6.32	1.30	1.45
26	S1	2021	A2M	O4'-C4'	-6.32	1.30	1.45
85	2	1384	A2M	O4'-C4'	-6.31	1.30	1.45
85	2	604	A2M	O4'-C4'	-6.30	1.30	1.45
1	1	927	A2M	O4'-C4'	-6.30	1.30	1.45
85	2	1372	A2M	O4'-C4'	-6.29	1.30	1.45
85	2	95	A2M	O4'-C4'	-6.29	1.30	1.45
85	2	570	A2M	O4'-C4'	-6.29	1.30	1.45
85	2	591	A2M	O4'-C4'	-6.28	1.31	1.45
1	1	697	A2M	O4'-C4'	-6.27	1.31	1.45
85	2	359	OMC	C2-N3	6.27	1.49	1.36
1	1	681	A2M	O4'-C4'	-6.24	1.31	1.45
6	7	43	A2M	O4'-C4'	-6.24	1.31	1.45
26	S1	1544	5MC	C4-N3	6.24	1.44	1.34
85	2	1159	OMC	C2-N3	6.22	1.49	1.36
1	1	1010	OMC	C2-N3	6.22	1.49	1.36
26	S1	1995	7MG	C2-N3	6.20	1.48	1.33
85	2	572	A2M	O4'-C4'	-6.20	1.31	1.45
85	2	527	A2M	O4'-C4'	-6.19	1.31	1.45
85	2	382	A2M	O4'-C4'	-6.19	1.31	1.45
1	1	695	OMC	C2-N3	6.18	1.48	1.36
26	S1	2140	OMC	C2-N3	6.17	1.48	1.36
1	1	1527	OMC	C2-N3	6.17	1.48	1.36
85	2	524	5MC	C4-N3	6.15	1.44	1.34
85	2	443	OMC	C2-N3	6.14	1.48	1.36
85	2	583	OMC	C2-N3	6.13	1.48	1.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	1317	OMC	C2-N3	6.09	1.48	1.36
1	1	305	A2M	O4'-C4'	-6.09	1.31	1.45
85	2	1397	OMC	C2-N3	6.07	1.48	1.36
26	S1	2061	5MC	C4-N3	6.04	1.44	1.34
85	2	1248	OMC	C2-N3	6.04	1.48	1.36
26	S1	1866	OMC	C2-N3	6.04	1.48	1.36
26	S1	38	OMC	C2-N3	6.00	1.48	1.36
85	2	1308	5MC	C4-N3	6.00	1.44	1.34
26	S1	1544	5MC	C2-N3	5.96	1.48	1.36
85	2	359	OMC	C6-C5	5.96	1.48	1.35
26	S1	18	OMC	C2-N3	5.93	1.48	1.36
85	2	1248	OMC	C6-C5	5.93	1.48	1.35
26	S1	1866	OMC	C6-C5	5.90	1.48	1.35
85	2	1397	OMC	C6-C5	5.90	1.48	1.35
85	2	443	OMC	C6-C5	5.89	1.48	1.35
85	2	1317	OMC	C6-C5	5.88	1.48	1.35
85	2	583	OMC	C6-C5	5.86	1.48	1.35
85	2	524	5MC	C2-N3	5.86	1.48	1.36
1	1	695	OMC	C6-C5	5.83	1.48	1.35
85	2	1159	OMC	C6-C5	5.83	1.48	1.35
26	S1	38	OMC	C6-C5	5.83	1.48	1.35
1	1	1010	OMC	C6-C5	5.81	1.48	1.35
1	1	1527	OMC	C6-C5	5.81	1.48	1.35
26	S1	2140	OMC	C6-C5	5.80	1.48	1.35
1	1	678	A2M	O4'-C4'	-5.77	1.32	1.45
85	2	1308	5MC	C2-N3	5.76	1.48	1.36
26	S1	2061	5MC	C2-N3	5.76	1.48	1.36
26	S1	1543	C4J	C2-N3	5.73	1.48	1.38
26	S1	1833	OMU	C6-C5	5.68	1.48	1.35
85	2	1077	OMU	C6-C5	5.66	1.48	1.35
26	S1	18	OMC	C6-C5	5.64	1.48	1.35
1	1	1107	OMU	C6-C5	5.63	1.48	1.35
85	2	1359	OMU	C6-C5	5.62	1.48	1.35
26	S1	1621	OMU	C6-C5	5.61	1.48	1.35
1	1	847	OMU	C6-C5	5.61	1.48	1.35
1	1	1659	OMU	C6-C5	5.61	1.48	1.35
2	3	13	OMU	C6-C5	5.61	1.48	1.35
85	2	1419	OMU	C6-C5	5.60	1.48	1.35
85	2	667	OMU	C6-C5	5.59	1.48	1.35
85	2	73	OMU	C6-C5	5.58	1.48	1.35
26	S1	1979	OMU	C6-C5	5.58	1.48	1.35
85	2	56	OMU	C6-C5	5.58	1.48	1.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	7	7	OMU	C6-C5	5.58	1.48	1.35
1	1	1371	OMU	C6-C5	5.56	1.48	1.35
85	2	560	OMU	C6-C5	5.55	1.48	1.35
26	S1	29	OMU	C6-C5	5.54	1.47	1.35
26	S1	8	OMU	C6-C5	5.50	1.47	1.35
26	S1	661	OMU	C6-C5	5.48	1.47	1.35
26	S1	607	PSU	C6-N1	5.44	1.45	1.36
1	1	959[A]	OMG	C2-N3	5.38	1.46	1.33
1	1	959[B]	OMG	C2-N3	5.34	1.46	1.33
85	2	1361	PSU	C6-N1	5.32	1.45	1.36
85	2	512	PSU	C6-N1	5.31	1.45	1.36
1	1	239	PSU	C6-N1	5.31	1.45	1.36
85	2	510	PSU	C6-N1	5.31	1.45	1.36
1	1	845	OMU	C6-C5	5.30	1.47	1.35
6	7	69	PSU	C6-N1	5.29	1.45	1.36
85	2	1058	PSU	C6-N1	5.28	1.45	1.36
26	S1	1566	PSU	C6-N1	5.28	1.45	1.36
26	S1	1550	OMG	C2-N3	5.28	1.46	1.33
85	2	1265	PSU	C6-N1	5.27	1.45	1.36
26	S1	1995	7MG	C4-N3	5.27	1.46	1.34
6	7	74	PSU	C6-N1	5.27	1.45	1.36
85	2	1360	OMG	C2-N3	5.25	1.46	1.33
85	2	1194	PSU	C6-N1	5.25	1.45	1.36
1	1	1171	PSU	C6-N1	5.25	1.44	1.36
1	1	1664	PSU	C6-N1	5.25	1.44	1.36
26	S1	1533	PSU	C6-N1	5.24	1.44	1.36
85	2	78	PSU	C6-N1	5.24	1.44	1.36
85	2	472	PSU	C6-N1	5.23	1.44	1.36
85	2	71	OMG	C2-N3	5.22	1.45	1.33
1	1	1528	PSU	C6-N1	5.22	1.44	1.36
1	1	1039	PSU	C6-N1	5.22	1.44	1.36
1	1	1524	OMG	C2-N3	5.21	1.45	1.33
6	7	75	OMG	C2-N3	5.21	1.45	1.33
26	S1	1623	OMG	C2-N3	5.21	1.45	1.33
85	2	597	PSU	C6-N1	5.21	1.44	1.36
1	1	940	PSU	C6-N1	5.20	1.44	1.36
85	2	1354	PSU	C6-N1	5.20	1.44	1.36
85	2	1403	PSU	C6-N1	5.20	1.44	1.36
85	2	1046	OMG	C2-N3	5.20	1.45	1.33
85	2	1303	PSU	C6-N1	5.20	1.44	1.36
85	2	1231	OMG	C2-N3	5.19	1.45	1.33
85	2	1144	PSU	C6-N1	5.19	1.44	1.36

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	870	PSU	C6-N1	5.19	1.44	1.36
1	1	422	PSU	C6-N1	5.18	1.44	1.36
85	2	1318	PSU	C6-N1	5.17	1.44	1.36
26	S1	1879	OMG	C2-N3	5.17	1.45	1.33
85	2	626	PSU	C6-N1	5.17	1.44	1.36
1	1	1533	PSU	C6-N1	5.17	1.44	1.36
1	1	1011	PSU	C6-N1	5.17	1.44	1.36
85	2	359	OMC	C4-N3	5.16	1.44	1.34
85	2	1264	PSU	C6-N1	5.16	1.44	1.36
1	1	1402	PSU	C6-N1	5.16	1.44	1.36
85	2	593	PSU	C6-N1	5.16	1.44	1.36
85	2	1382	PSU	C6-N1	5.16	1.44	1.36
85	2	662	PSU	C6-N1	5.15	1.44	1.36
26	S1	600	OMG	C2-N3	5.15	1.45	1.33
1	1	672	PSU	C6-N1	5.15	1.44	1.36
1	1	1181	PSU	C6-N1	5.15	1.44	1.36
1	1	1626	OMG	C2-N3	5.14	1.45	1.33
26	S1	1156	PSU	C6-N1	5.13	1.44	1.36
26	S1	1539	PSU	C6-N1	5.13	1.44	1.36
26	S1	455	PSU	C6-N1	5.13	1.44	1.36
26	S1	1829	OMG	C2-N3	5.12	1.45	1.33
26	S1	2151	OMG	C2-N3	5.10	1.45	1.33
85	2	1060	PSU	C6-N1	5.10	1.44	1.36
26	S1	609	PSU	C6-N1	5.10	1.44	1.36
26	S1	104	PSU	C6-N1	5.09	1.44	1.36
26	S1	1865	OMG	C2-N3	5.09	1.45	1.33
85	2	437	PSU	C6-N1	5.09	1.44	1.36
85	2	655	OMG	C2-N3	5.09	1.45	1.33
85	2	1229	OMG	C2-N3	5.08	1.45	1.33
1	1	1010	OMC	C4-N3	5.08	1.44	1.34
26	S1	1192	PSU	C6-N1	5.07	1.44	1.36
85	2	534	OMG	C2-N3	5.07	1.45	1.33
26	S1	1657	PSU	C6-N1	5.07	1.44	1.36
1	1	856	OMG	C2-N3	5.06	1.45	1.33
26	S1	1841	PSU	C6-N1	5.06	1.44	1.36
85	2	1253	OMG	C2-N3	5.05	1.45	1.33
85	2	1413	PSU	C6-N1	5.04	1.44	1.36
1	1	695	OMC	C4-N3	5.03	1.44	1.34
26	S1	33	PSU	C6-N1	5.03	1.44	1.36
3	4	74	OMG	C2-N3	5.03	1.45	1.33
26	S1	1246	PSU	C6-N1	5.02	1.44	1.36
85	2	583	OMC	C4-N3	5.02	1.44	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	2046	PSU	C6-N1	5.01	1.44	1.36
26	S1	2140	OMC	C4-N3	5.01	1.44	1.34
85	2	1159	OMC	C4-N3	5.00	1.44	1.34
85	2	443	OMC	C4-N3	4.99	1.44	1.34
85	2	1308	5MC	O4'-C1'	-4.99	1.30	1.42
1	1	1017	PSU	C6-N1	4.99	1.44	1.36
85	2	641	OMG	C2-N3	4.98	1.45	1.33
85	2	1078	OMG	C2-N3	4.95	1.45	1.33
26	S1	1866	OMC	C4-N3	4.95	1.44	1.34
1	1	1190	OMG	C2-N3	4.94	1.45	1.33
1	1	959[B]	OMG	C4-N3	4.92	1.49	1.37
1	1	1527	OMC	C4-N3	4.91	1.44	1.34
1	1	1540	OMG	C2-N3	4.91	1.45	1.33
26	S1	12	PSU	C6-N1	4.89	1.44	1.36
26	S1	1647	OMG	C2-N3	4.88	1.45	1.33
1	1	959[A]	OMG	C4-N3	4.88	1.49	1.37
85	2	1317	OMC	C4-N3	4.88	1.44	1.34
85	2	1248	OMC	C4-N3	4.87	1.44	1.34
85	2	1397	OMC	C4-N3	4.86	1.44	1.34
26	S1	2202	PSU	C6-N1	4.86	1.44	1.36
26	S1	2048	PSU	C6-N1	4.83	1.44	1.36
26	S1	38	OMC	C4-N3	4.83	1.44	1.34
85	2	359	OMC	C4-N4	4.81	1.45	1.33
85	2	71	OMG	C4-N3	4.80	1.49	1.37
6	7	75	OMG	C4-N3	4.80	1.49	1.37
85	2	1360	OMG	C4-N3	4.79	1.49	1.37
85	2	1231	OMG	C4-N3	4.78	1.49	1.37
1	1	1524	OMG	C4-N3	4.78	1.49	1.37
26	S1	1623	OMG	C4-N3	4.77	1.48	1.37
26	S1	1550	OMG	C4-N3	4.77	1.48	1.37
85	2	1046	OMG	C4-N3	4.77	1.48	1.37
26	S1	1478	OMG	C2-N3	4.76	1.44	1.33
1	1	1626	OMG	C4-N3	4.76	1.48	1.37
26	S1	1829	OMG	C4-N3	4.75	1.48	1.37
26	S1	600	OMG	C4-N3	4.74	1.48	1.37
26	S1	1865	OMG	C4-N3	4.74	1.48	1.37
85	2	583	OMC	C4-N4	4.74	1.45	1.33
26	S1	1879	OMG	C4-N3	4.74	1.48	1.37
85	2	1159	OMC	C4-N4	4.73	1.45	1.33
85	2	534	OMG	C4-N3	4.72	1.48	1.37
1	1	1010	OMC	C4-N4	4.72	1.45	1.33
85	2	443	OMC	C4-N4	4.72	1.45	1.33

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	655	OMG	C4-N3	4.71	1.48	1.37
85	2	1248	OMC	C4-N4	4.71	1.45	1.33
26	S1	2140	OMC	C4-N4	4.71	1.45	1.33
1	1	856	OMG	C4-N3	4.70	1.48	1.37
85	2	1229	OMG	C4-N3	4.69	1.48	1.37
85	2	1317	OMC	C4-N4	4.69	1.45	1.33
1	1	959[A]	OMG	C2-N2	4.68	1.45	1.34
26	S1	2151	OMG	C4-N3	4.68	1.48	1.37
1	1	695	OMC	C4-N4	4.68	1.44	1.33
26	S1	1866	OMC	C4-N4	4.68	1.44	1.33
1	1	677	1MA	C4-N3	4.66	1.51	1.37
1	1	1527	OMC	C4-N4	4.66	1.44	1.33
26	S1	18	OMC	C4-N3	4.66	1.43	1.34
26	S1	38	OMC	C4-N4	4.66	1.44	1.33
85	2	1253	OMG	C4-N3	4.66	1.48	1.37
3	4	74	OMG	C4-N3	4.66	1.48	1.37
85	2	1397	OMC	C4-N4	4.65	1.44	1.33
1	1	1190	OMG	C4-N3	4.65	1.48	1.37
26	S1	2048	PSU	C1'-C5	-4.65	1.39	1.50
85	2	641	OMG	C4-N3	4.64	1.48	1.37
1	1	959[B]	OMG	C2-N2	4.63	1.45	1.34
85	2	1360	OMG	C2-N2	4.63	1.45	1.34
26	S1	1246	PSU	C1'-C5	-4.63	1.39	1.50
6	7	75	OMG	C2-N2	4.63	1.45	1.34
85	2	1078	OMG	C4-N3	4.63	1.48	1.37
1	1	1540	OMG	C4-N3	4.62	1.48	1.37
26	S1	1550	OMG	C2-N2	4.61	1.45	1.34
85	2	1231	OMG	C2-N2	4.60	1.45	1.34
1	1	1626	OMG	C2-N2	4.59	1.45	1.34
85	2	1229	OMG	C2-N2	4.59	1.45	1.34
85	2	71	OMG	C2-N2	4.59	1.45	1.34
26	S1	1879	OMG	C2-N2	4.58	1.45	1.34
26	S1	1623	OMG	C2-N2	4.57	1.45	1.34
1	1	1524	OMG	C2-N2	4.57	1.45	1.34
3	4	74	OMG	C2-N2	4.56	1.45	1.34
85	2	1046	OMG	C2-N2	4.56	1.45	1.34
26	S1	18	OMC	C4-N4	4.55	1.44	1.33
85	2	641	OMG	C2-N2	4.55	1.45	1.34
85	2	655	OMG	C2-N2	4.54	1.45	1.34
85	2	534	OMG	C2-N2	4.53	1.45	1.34
26	S1	455	PSU	C1'-C5	-4.53	1.39	1.50
1	1	1527	OMC	C2-N1	4.53	1.49	1.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	1829	OMG	C2-N2	4.53	1.45	1.34
26	S1	1865	OMG	C2-N2	4.53	1.45	1.34
26	S1	1478	OMG	C4-N3	4.52	1.48	1.37
1	1	856	OMG	C2-N2	4.52	1.44	1.34
26	S1	600	OMG	C2-N2	4.52	1.44	1.34
1	1	1190	OMG	C2-N2	4.51	1.44	1.34
26	S1	2151	OMG	C2-N2	4.51	1.44	1.34
26	S1	1841	PSU	C1 ² -C5	-4.51	1.39	1.50
26	S1	2046	PSU	C1 ² -C5	-4.51	1.39	1.50
26	S1	1657	PSU	C1 ² -C5	-4.50	1.39	1.50
26	S1	12	PSU	C1 ² -C5	-4.50	1.39	1.50
85	2	1078	OMG	C2-N2	4.50	1.44	1.34
85	2	78	PSU	C1 ² -C5	-4.49	1.39	1.50
1	1	1533	PSU	C1 ² -C5	-4.48	1.39	1.50
26	S1	1647	OMG	C4-N3	4.48	1.48	1.37
26	S1	2140	OMC	C2-N1	4.48	1.49	1.40
1	1	1540	OMG	C2-N2	4.47	1.44	1.34
85	2	1253	OMG	C2-N2	4.47	1.44	1.34
85	2	1060	PSU	C1 ² -C5	-4.46	1.40	1.50
26	S1	1647	OMG	C2-N2	4.46	1.44	1.34
85	2	1382	PSU	C1 ² -C5	-4.46	1.40	1.50
26	S1	609	PSU	C1 ² -C5	-4.46	1.40	1.50
1	1	1039	PSU	C1 ² -C5	-4.45	1.40	1.50
85	2	1058	PSU	C1 ² -C5	-4.45	1.40	1.50
85	2	1265	PSU	C1 ² -C5	-4.44	1.40	1.50
26	S1	1156	PSU	C1 ² -C5	-4.44	1.40	1.50
85	2	1354	PSU	C1 ² -C5	-4.44	1.40	1.50
1	1	940	PSU	C1 ² -C5	-4.43	1.40	1.50
85	2	472	PSU	C1 ² -C5	-4.42	1.40	1.50
85	2	1144	PSU	C1 ² -C5	-4.41	1.40	1.50
26	S1	1478	OMG	C2-N2	4.40	1.44	1.34
6	7	74	PSU	C1 ² -C5	-4.40	1.40	1.50
85	2	1248	OMC	C2-N1	4.39	1.49	1.40
85	2	510	PSU	C1 ² -C5	-4.39	1.40	1.50
1	1	870	PSU	C1 ² -C5	-4.39	1.40	1.50
85	2	1308	5MC	C6-N1	4.38	1.45	1.38
85	2	1403	PSU	C1 ² -C5	-4.37	1.40	1.50
1	1	1017	PSU	C1 ² -C5	-4.37	1.40	1.50
1	1	239	PSU	C1 ² -C5	-4.36	1.40	1.50
85	2	512	PSU	C1 ² -C5	-4.36	1.40	1.50
26	S1	104	PSU	C1 ² -C5	-4.36	1.40	1.50
1	1	672	PSU	C1 ² -C5	-4.36	1.40	1.50

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	597	PSU	C1 ² -C5	-4.35	1.40	1.50
85	2	1317	OMC	C2-N1	4.35	1.49	1.40
26	S1	1192	PSU	C1 ² -C5	-4.34	1.40	1.50
85	2	1361	PSU	C1 ² -C5	-4.34	1.40	1.50
26	S1	1544	5MC	C6-N1	4.34	1.45	1.38
85	2	437	PSU	C1 ² -C5	-4.33	1.40	1.50
85	2	1413	PSU	C1 ² -C5	-4.33	1.40	1.50
85	2	1264	PSU	C1 ² -C5	-4.33	1.40	1.50
1	1	1528	PSU	C1 ² -C5	-4.33	1.40	1.50
1	1	1664	PSU	C1 ² -C5	-4.33	1.40	1.50
85	2	662	PSU	C1 ² -C5	-4.32	1.40	1.50
85	2	1194	PSU	C1 ² -C5	-4.31	1.40	1.50
1	1	1171	PSU	C1 ² -C5	-4.31	1.40	1.50
26	S1	1539	PSU	C1 ² -C5	-4.30	1.40	1.50
85	2	1303	PSU	C1 ² -C5	-4.30	1.40	1.50
85	2	626	PSU	C1 ² -C5	-4.30	1.40	1.50
26	S1	1533	PSU	C1 ² -C5	-4.30	1.40	1.50
85	2	1159	OMC	C2-N1	4.29	1.49	1.40
85	2	359	OMC	C2-N1	4.29	1.49	1.40
1	1	695	OMC	C2-N1	4.28	1.49	1.40
85	2	524	5MC	C6-N1	4.28	1.45	1.38
85	2	1397	OMC	C2-N1	4.28	1.49	1.40
85	2	443	OMC	C2-N1	4.27	1.49	1.40
26	S1	2202	PSU	C1 ² -C5	-4.27	1.40	1.50
85	2	1318	PSU	C1 ² -C5	-4.25	1.40	1.50
26	S1	1544	5MC	C4-N4	4.24	1.45	1.34
85	2	593	PSU	C1 ² -C5	-4.22	1.40	1.50
26	S1	607	PSU	C1 ² -C5	-4.19	1.40	1.50
26	S1	33	PSU	C1 ² -C5	-4.18	1.40	1.50
85	2	1308	5MC	C4-N4	4.18	1.45	1.34
85	2	524	5MC	C4-N4	4.18	1.45	1.34
1	1	1010	OMC	C2-N1	4.17	1.49	1.40
1	1	1181	PSU	C1 ² -C5	-4.17	1.40	1.50
85	2	583	OMC	C2-N1	4.15	1.49	1.40
1	1	1011	PSU	C1 ² -C5	-4.14	1.40	1.50
26	S1	1566	PSU	C1 ² -C5	-4.12	1.40	1.50
26	S1	2061	5MC	C4-N4	4.12	1.44	1.34
1	1	422	PSU	C1 ² -C5	-4.11	1.40	1.50
26	S1	1866	OMC	C2-N1	4.09	1.48	1.40
26	S1	2061	5MC	C6-N1	4.09	1.45	1.38
2	3	13	OMU	C4-N3	4.05	1.45	1.38
26	S1	1979	OMU	C4-N3	4.04	1.45	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	1621	OMU	C4-N3	4.04	1.45	1.38
1	1	1402	PSU	C1'-C5	-4.03	1.41	1.50
85	2	1077	OMU	C4-N3	4.02	1.45	1.38
1	1	677	1MA	C2-N1	4.01	1.43	1.35
26	S1	38	OMC	C2-N1	4.01	1.48	1.40
6	7	7	OMU	C4-N3	4.01	1.45	1.38
26	S1	1543	C4J	C6-N1	4.00	1.46	1.36
85	2	524	5MC	C2-N1	3.98	1.48	1.40
85	2	1359	OMU	C4-N3	3.98	1.45	1.38
1	1	1107	OMU	C4-N3	3.98	1.45	1.38
6	7	69	PSU	C1'-C5	-3.95	1.41	1.50
26	S1	1833	OMU	C4-N3	3.95	1.45	1.38
1	1	1659	OMU	C4-N3	3.95	1.45	1.38
85	2	1419	OMU	C4-N3	3.94	1.45	1.38
26	S1	1544	5MC	C2-N1	3.94	1.48	1.40
26	S1	18	OMC	C2-N1	3.93	1.48	1.40
85	2	73	OMU	C4-N3	3.91	1.45	1.38
26	S1	607	PSU	C4-N3	3.91	1.46	1.38
85	2	560	OMU	C4-N3	3.91	1.45	1.38
85	2	56	OMU	C4-N3	3.90	1.45	1.38
85	2	512	PSU	C4-N3	3.90	1.46	1.38
1	1	1011	PSU	C4-N3	3.87	1.46	1.38
26	S1	29	OMU	C4-N3	3.86	1.45	1.38
85	2	667	OMU	C4-N3	3.86	1.45	1.38
85	2	1308	5MC	C2-N1	3.85	1.48	1.40
1	1	847	OMU	C4-N3	3.84	1.45	1.38
1	1	422	PSU	C4-N3	3.83	1.45	1.38
6	7	74	PSU	C4-N3	3.82	1.45	1.38
1	1	239	PSU	C4-N3	3.81	1.45	1.38
85	2	510	PSU	C4-N3	3.80	1.45	1.38
26	S1	1566	PSU	C4-N3	3.80	1.45	1.38
85	2	472	PSU	C4-N3	3.79	1.45	1.38
1	1	1371	OMU	C4-N3	3.79	1.45	1.38
26	S1	33	PSU	C4-N3	3.78	1.45	1.38
1	1	1402	PSU	C4-N3	3.78	1.45	1.38
1	1	1533	PSU	C4-N3	3.77	1.45	1.38
85	2	1058	PSU	C4-N3	3.77	1.45	1.38
1	1	1664	PSU	C4-N3	3.76	1.45	1.38
26	S1	1533	PSU	C4-N3	3.76	1.45	1.38
1	1	1181	PSU	C4-N3	3.76	1.45	1.38
85	2	1403	PSU	C4-N3	3.76	1.45	1.38
85	2	593	PSU	C4-N3	3.76	1.45	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	1078	OMG	C6-N1	3.76	1.43	1.37
85	2	1361	PSU	C4-N3	3.75	1.45	1.38
85	2	1318	PSU	C4-N3	3.75	1.45	1.38
85	2	1264	PSU	C4-N3	3.74	1.45	1.38
85	2	1194	PSU	C4-N3	3.74	1.45	1.38
85	2	1303	PSU	C4-N3	3.74	1.45	1.38
26	S1	609	PSU	C4-N3	3.74	1.45	1.38
6	7	69	PSU	C4-N3	3.74	1.45	1.38
26	S1	1539	PSU	C4-N3	3.74	1.45	1.38
1	1	959[A]	OMG	C6-N1	3.73	1.43	1.37
1	1	1039	PSU	C4-N3	3.73	1.45	1.38
1	1	1528	PSU	C4-N3	3.72	1.45	1.38
85	2	1265	PSU	C4-N3	3.71	1.45	1.38
85	2	597	PSU	C4-N3	3.71	1.45	1.38
85	2	626	PSU	C4-N3	3.71	1.45	1.38
85	2	1144	PSU	C4-N3	3.71	1.45	1.38
85	2	1060	PSU	C4-N3	3.71	1.45	1.38
26	S1	661	OMU	C4-N3	3.70	1.45	1.38
85	2	1413	PSU	C4-N3	3.70	1.45	1.38
1	1	940	PSU	C4-N3	3.69	1.45	1.38
85	2	662	PSU	C4-N3	3.69	1.45	1.38
26	S1	2061	5MC	C2-N1	3.68	1.48	1.40
85	2	1382	PSU	C4-N3	3.68	1.45	1.38
1	1	1626	OMG	C6-N1	3.67	1.43	1.37
1	1	870	PSU	C4-N3	3.66	1.45	1.38
85	2	1354	PSU	C4-N3	3.66	1.45	1.38
85	2	78	PSU	C4-N3	3.65	1.45	1.38
1	1	672	PSU	C4-N3	3.65	1.45	1.38
85	2	437	PSU	C4-N3	3.65	1.45	1.38
85	2	1229	OMG	C6-N1	3.64	1.43	1.37
1	1	1017	PSU	C4-N3	3.64	1.45	1.38
6	7	75	OMG	C6-N1	3.62	1.43	1.37
1	1	1171	PSU	C4-N3	3.62	1.45	1.38
26	S1	104	PSU	C4-N3	3.62	1.45	1.38
3	4	74	OMG	C6-N1	3.62	1.43	1.37
1	1	959[B]	OMG	C6-N1	3.61	1.43	1.37
26	S1	8	OMU	C4-N3	3.60	1.45	1.38
26	S1	1192	PSU	C4-N3	3.59	1.45	1.38
1	1	1524	OMG	C6-N1	3.58	1.43	1.37
85	2	641	OMG	C6-N1	3.58	1.43	1.37
26	S1	1841	PSU	C4-N3	3.58	1.45	1.38
26	S1	1156	PSU	C4-N3	3.57	1.45	1.38

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	2046	PSU	C4-N3	3.57	1.45	1.38
85	2	534	OMG	C6-N1	3.54	1.43	1.37
1	1	677	1MA	C5-C4	-3.52	1.34	1.43
26	S1	1550	OMG	C6-N1	3.52	1.43	1.37
26	S1	1657	PSU	C4-N3	3.51	1.45	1.38
26	S1	1246	PSU	C4-N3	3.51	1.45	1.38
1	1	1190	OMG	C6-N1	3.51	1.43	1.37
26	S1	455	PSU	C4-N3	3.51	1.45	1.38
26	S1	1879	OMG	C6-N1	3.51	1.43	1.37
85	2	1360	OMG	C6-N1	3.51	1.43	1.37
85	2	1046	OMG	C6-N1	3.50	1.43	1.37
1	1	856	OMG	C6-N1	3.49	1.43	1.37
85	2	71	OMG	C6-N1	3.49	1.43	1.37
85	2	655	OMG	C6-N1	3.48	1.43	1.37
85	2	1231	OMG	C6-N1	3.48	1.43	1.37
26	S1	1829	OMG	C6-N1	3.48	1.43	1.37
26	S1	1995	7MG	C6-N1	3.47	1.45	1.38
26	S1	2151	OMG	C6-N1	3.47	1.43	1.37
1	1	1540	OMG	C6-N1	3.47	1.43	1.37
1	1	845	OMU	C4-N3	3.44	1.44	1.38
26	S1	1623	OMG	C6-N1	3.43	1.43	1.37
26	S1	1995	7MG	C2-N1	3.42	1.46	1.37
26	S1	1865	OMG	C6-N1	3.41	1.42	1.37
26	S1	2048	PSU	C4-N3	3.40	1.45	1.38
26	S1	12	PSU	C4-N3	3.38	1.45	1.38
26	S1	2202	PSU	C4-N3	3.37	1.45	1.38
26	S1	512	A2M	O3'-C3'	-3.35	1.35	1.43
26	S1	661	OMU	O4-C4	-3.34	1.18	1.24
26	S1	1478	OMG	C6-N1	3.34	1.42	1.37
85	2	1253	OMG	C6-N1	3.32	1.42	1.37
26	S1	1995	7MG	C5-C6	3.29	1.52	1.43
26	S1	8	OMU	O4-C4	-3.28	1.18	1.24
26	S1	1995	7MG	C2-N2	3.25	1.41	1.34
26	S1	600	OMG	C6-N1	3.24	1.42	1.37
26	S1	1995	7MG	O6-C6	-3.24	1.17	1.23
85	2	359	OMC	C6-N1	3.23	1.45	1.38
26	S1	1647	OMG	C5-C4	-3.22	1.34	1.43
26	S1	18	OMC	O2-C2	-3.20	1.17	1.23
1	1	695	OMC	C6-N1	3.19	1.45	1.38
26	S1	29	OMU	O4-C4	-3.18	1.18	1.24
1	1	845	OMU	O4-C4	-3.17	1.18	1.24
1	1	847	OMU	O4-C4	-3.16	1.18	1.24

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	56	OMU	O4-C4	-3.16	1.18	1.24
85	2	1419	OMU	O4-C4	-3.16	1.18	1.24
26	S1	1543	C4J	C31-C3	3.15	1.59	1.52
85	2	73	OMU	O4-C4	-3.14	1.18	1.24
26	S1	2202	PSU	O4-C4	-3.13	1.17	1.23
26	S1	1647	OMG	C6-N1	3.13	1.42	1.37
26	S1	1478	OMG	C5-C4	-3.13	1.35	1.43
26	S1	38	OMC	O2-C2	-3.13	1.17	1.23
85	2	667	OMU	O4-C4	-3.12	1.18	1.24
85	2	1372	A2M	C6-N6	3.12	1.45	1.34
26	S1	1543	C4J	C2-N1	3.12	1.48	1.39
1	1	1371	OMU	O4-C4	-3.12	1.18	1.24
85	2	560	OMU	O4-C4	-3.12	1.18	1.24
1	1	1010	OMC	C6-N1	3.11	1.45	1.38
6	7	43	A2M	O3'-C3'	-3.11	1.35	1.43
1	1	1539	A2M	O3'-C3'	-3.11	1.35	1.43
85	2	1317	OMC	C6-N1	3.11	1.45	1.38
85	2	1248	OMC	C6-N1	3.10	1.45	1.38
26	S1	2140	OMC	C6-N1	3.10	1.45	1.38
85	2	443	OMC	C6-N1	3.10	1.45	1.38
85	2	583	OMC	C6-N1	3.10	1.45	1.38
85	2	1078	OMG	C5-C6	3.10	1.53	1.47
85	2	95	A2M	O3'-C3'	-3.09	1.35	1.43
26	S1	1543	C4J	O4'-C1'	-3.09	1.39	1.43
1	1	407	A2M	O3'-C3'	-3.09	1.35	1.43
85	2	1359	OMU	O4-C4	-3.08	1.18	1.24
1	1	1527	OMC	C6-N1	3.08	1.45	1.38
1	1	681	A2M	O3'-C3'	-3.08	1.35	1.43
85	2	655	OMG	C5-C6	3.08	1.53	1.47
1	1	305	A2M	O3'-C3'	-3.08	1.35	1.43
1	1	959[B]	OMG	C5-C6	3.08	1.53	1.47
85	2	1185	A2M	C6-N6	3.08	1.45	1.34
6	7	7	OMU	O4-C4	-3.08	1.18	1.24
1	1	1659	OMU	O4-C4	-3.07	1.18	1.24
85	2	1397	OMC	C6-N1	3.07	1.45	1.38
1	1	845	OMU	O2-C2	-3.07	1.17	1.23
2	3	13	OMU	O4-C4	-3.07	1.18	1.24
1	1	1107	OMU	O4-C4	-3.07	1.18	1.24
1	1	235	A2M	C6-N6	3.07	1.45	1.34
85	2	95	A2M	C6-N6	3.06	1.45	1.34
85	2	1308	5MC	O2'-C2'	-3.06	1.35	1.43
26	S1	1543	C4J	C4-N3	3.06	1.45	1.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	858	A2M	C6-N6	3.06	1.45	1.34
85	2	604	A2M	C6-N6	3.06	1.45	1.34
85	2	71	OMG	C5-C6	3.05	1.53	1.47
26	S1	2061	5MC	O2-C2	-3.05	1.18	1.23
26	S1	1543	C4J	O4-C4	-3.05	1.16	1.23
1	1	959[A]	OMG	C5-C6	3.05	1.53	1.47
1	1	1524	OMG	C5-C6	3.04	1.53	1.47
26	S1	1866	OMC	C6-N1	3.04	1.45	1.38
26	S1	1833	OMU	O4-C4	-3.04	1.18	1.24
26	S1	668	A2M	C5-C4	-3.03	1.32	1.40
1	1	955	A2M	O3'-C3'	-3.03	1.35	1.43
85	2	1077	OMU	O4-C4	-3.03	1.18	1.24
26	S1	2021	A2M	C6-N6	3.02	1.45	1.34
26	S1	1621	OMU	O4-C4	-3.02	1.18	1.24
26	S1	1979	OMU	O4-C4	-3.02	1.18	1.24
85	2	1159	OMC	C6-N1	3.02	1.45	1.38
6	7	162	A2M	C6-N6	3.02	1.45	1.34
1	1	235	A2M	O3'-C3'	-3.02	1.35	1.43
1	1	1527	OMC	O2-C2	-3.02	1.18	1.23
85	2	591	A2M	C6-N6	3.02	1.45	1.34
6	7	43	A2M	C6-N6	3.02	1.45	1.34
85	2	641	OMG	C5-C6	3.02	1.53	1.47
1	1	1539	A2M	C6-N6	3.02	1.45	1.34
1	1	955	A2M	C6-N6	3.02	1.45	1.34
1	1	305	A2M	C6-N6	3.01	1.45	1.34
6	7	75	OMG	C5-C6	3.01	1.53	1.47
1	1	697	A2M	C6-N6	3.01	1.45	1.34
1	1	927	A2M	O3'-C3'	-3.01	1.35	1.43
1	1	1190	OMG	C5-C6	3.01	1.53	1.47
85	2	534	OMG	C5-C6	3.00	1.53	1.47
85	2	1231	OMG	C5-C6	3.00	1.53	1.47
85	2	382	A2M	C6-N6	3.00	1.45	1.34
85	2	1229	OMG	C5-C6	3.00	1.53	1.47
85	2	1384	A2M	C6-N6	3.00	1.45	1.34
1	1	927	A2M	C6-N6	3.00	1.45	1.34
85	2	382	A2M	O3'-C3'	-3.00	1.35	1.43
1	1	681	A2M	C6-N6	3.00	1.45	1.34
26	S1	98	A2M	O3'-C3'	-3.00	1.35	1.43
26	S1	479	A2M	C6-N6	3.00	1.45	1.34
26	S1	2185	MA6	C5-C4	-2.99	1.33	1.40
1	1	407	A2M	C6-N6	2.99	1.45	1.34
85	2	572	A2M	C6-N6	2.99	1.45	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	2048	PSU	O4-C4	-2.99	1.17	1.23
26	S1	1866	OMC	O2-C2	-2.99	1.18	1.23
1	1	678	A2M	C6-N6	2.99	1.44	1.34
26	S1	512	A2M	C6-N6	2.98	1.44	1.34
1	1	856	OMG	C5-C6	2.98	1.53	1.47
26	S1	2151	OMG	C5-C4	-2.98	1.35	1.43
1	1	678	A2M	C5-C4	-2.98	1.33	1.40
85	2	1253	OMG	C5-C6	2.98	1.53	1.47
26	S1	98	A2M	C6-N6	2.98	1.44	1.34
85	2	628	A2M	C6-N6	2.98	1.44	1.34
85	2	1046	OMG	C5-C6	2.98	1.53	1.47
26	S1	668	A2M	C6-N6	2.97	1.44	1.34
1	1	1540	OMG	C5-C6	2.97	1.53	1.47
85	2	570	A2M	C6-N6	2.97	1.44	1.34
85	2	583	OMC	O2-C2	-2.97	1.18	1.23
1	1	1190	OMG	C5-C4	-2.97	1.35	1.43
85	2	591	A2M	O3'-C3'	-2.97	1.36	1.43
26	S1	38	OMC	C6-N1	2.96	1.45	1.38
26	S1	12	PSU	O4-C4	-2.96	1.18	1.23
1	1	678	A2M	O3'-C3'	-2.96	1.36	1.43
85	2	527	A2M	C5-C4	-2.96	1.33	1.40
85	2	1384	A2M	O3'-C3'	-2.95	1.36	1.43
85	2	604	A2M	O3'-C3'	-2.94	1.36	1.43
85	2	1308	5MC	O3'-C3'	2.94	1.49	1.43
1	1	1540	OMG	C5-C4	-2.94	1.35	1.43
85	2	1308	5MC	O2-C2	-2.94	1.18	1.23
85	2	572	A2M	O3'-C3'	-2.93	1.36	1.43
85	2	1360	OMG	C5-C6	2.93	1.53	1.47
6	7	162	A2M	O3'-C3'	-2.93	1.36	1.43
26	S1	512	A2M	C5-C4	-2.93	1.33	1.40
26	S1	2151	OMG	C5-C6	2.93	1.53	1.47
85	2	641	OMG	C5-C4	-2.92	1.35	1.43
26	S1	600	OMG	C5-C4	-2.92	1.35	1.43
85	2	1159	OMC	O2-C2	-2.91	1.18	1.23
26	S1	1550	OMG	C5-C6	2.91	1.53	1.47
85	2	1078	OMG	C5-C4	-2.91	1.35	1.43
85	2	1397	OMC	O2-C2	-2.91	1.18	1.23
26	S1	1623	OMG	C5-C6	2.91	1.53	1.47
85	2	1185	A2M	O3'-C3'	-2.91	1.36	1.43
3	4	74	OMG	C5-C6	2.90	1.53	1.47
1	1	1626	OMG	C5-C6	2.90	1.53	1.47
85	2	527	A2M	C6-N6	2.90	1.44	1.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	1865	OMG	C5-C4	-2.90	1.35	1.43
1	1	697	A2M	O3'-C3'	-2.90	1.36	1.43
1	1	1010	OMC	O2-C2	-2.90	1.18	1.23
1	1	695	OMC	O2-C2	-2.90	1.18	1.23
26	S1	1865	OMG	C5-C6	2.90	1.53	1.47
85	2	1317	OMC	O2-C2	-2.90	1.18	1.23
85	2	1229	OMG	C5-C4	-2.89	1.35	1.43
26	S1	1657	PSU	O4-C4	-2.89	1.18	1.23
3	4	74	OMG	C5-C4	-2.89	1.35	1.43
26	S1	1879	OMG	C5-C4	-2.89	1.35	1.43
1	1	858	A2M	O3'-C3'	-2.89	1.36	1.43
85	2	1248	OMC	O2-C2	-2.88	1.18	1.23
26	S1	2184	MA6	C5-C4	-2.88	1.33	1.40
85	2	534	OMG	C5-C4	-2.88	1.35	1.43
26	S1	2021	A2M	O2'-C2'	2.88	1.50	1.42
85	2	443	OMC	O2-C2	-2.87	1.18	1.23
1	1	1171	PSU	O4-C4	-2.87	1.18	1.23
1	1	1626	OMG	C5-C4	-2.87	1.35	1.43
26	S1	1246	PSU	O4-C4	-2.86	1.18	1.23
26	S1	98	A2M	C5-C4	-2.86	1.33	1.40
1	1	407	A2M	C5-C4	-2.86	1.33	1.40
85	2	437	PSU	O4-C4	-2.86	1.18	1.23
26	S1	479	A2M	C5-C4	-2.86	1.33	1.40
26	S1	2021	A2M	O3'-C3'	-2.86	1.36	1.43
26	S1	1829	OMG	C5-C4	-2.85	1.35	1.43
85	2	628	A2M	O3'-C3'	-2.85	1.36	1.43
1	1	856	OMG	C5-C4	-2.85	1.35	1.43
1	1	1524	OMG	C5-C4	-2.85	1.35	1.43
85	2	662	PSU	O4-C4	-2.85	1.18	1.23
26	S1	1829	OMG	C5-C6	2.85	1.53	1.47
26	S1	1544	5MC	O2-C2	-2.85	1.18	1.23
85	2	1253	OMG	C5-C4	-2.84	1.35	1.43
1	1	1371	OMU	C6-N1	2.84	1.44	1.38
85	2	570	A2M	O2'-C2'	2.84	1.49	1.42
26	S1	2046	PSU	O4-C4	-2.83	1.18	1.23
26	S1	1156	PSU	O4-C4	-2.83	1.18	1.23
1	1	672	PSU	O4-C4	-2.83	1.18	1.23
26	S1	18	OMC	C6-N1	2.83	1.44	1.38
85	2	1359	OMU	C6-N1	2.83	1.44	1.38
26	S1	1550	OMG	C5-C4	-2.83	1.35	1.43
26	S1	1879	OMG	C5-C6	2.83	1.53	1.47
85	2	570	A2M	C5-C4	-2.83	1.33	1.40

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1	955	A2M	C5-C4	-2.82	1.33	1.40
85	2	524	5MC	O2-C2	-2.82	1.18	1.23
1	1	235	A2M	C5-C4	-2.82	1.33	1.40
85	2	71	OMG	C5-C4	-2.82	1.35	1.43
1	1	1017	PSU	O4-C4	-2.82	1.18	1.23
85	2	626	PSU	O4-C4	-2.82	1.18	1.23
85	2	1419	OMU	C6-N1	2.82	1.44	1.38
1	1	870	PSU	O4-C4	-2.81	1.18	1.23
1	1	305	A2M	C5-C4	-2.81	1.33	1.40
85	2	572	A2M	C5-C4	-2.81	1.33	1.40
85	2	1077	OMU	C6-N1	2.81	1.44	1.38
85	2	1265	PSU	O4-C4	-2.81	1.18	1.23
26	S1	1623	OMG	C5-C4	-2.81	1.35	1.43
26	S1	2021	A2M	C5-C4	-2.80	1.33	1.40
85	2	628	A2M	C5-C4	-2.80	1.33	1.40
85	2	1382	PSU	O4-C4	-2.80	1.18	1.23
26	S1	600	OMG	C5-C6	2.80	1.53	1.47
1	1	1539	A2M	C5-C4	-2.80	1.33	1.40
85	2	78	PSU	O4-C4	-2.80	1.18	1.23
85	2	1264	PSU	O4-C4	-2.80	1.18	1.23
26	S1	455	PSU	O4-C4	-2.80	1.18	1.23
85	2	1318	PSU	O4-C4	-2.79	1.18	1.23
85	2	1413	PSU	O4-C4	-2.79	1.18	1.23
2	3	13	OMU	C6-N1	2.79	1.44	1.38
6	7	75	OMG	C5-C4	-2.79	1.36	1.43
26	S1	2140	OMC	O2-C2	-2.78	1.18	1.23
85	2	1046	OMG	C5-C4	-2.78	1.36	1.43
85	2	655	OMG	C5-C4	-2.78	1.36	1.43
85	2	1231	OMG	C5-C4	-2.78	1.36	1.43
85	2	667	OMU	C6-N1	2.78	1.44	1.38
1	1	305	A2M	O2'-C2'	2.78	1.49	1.42
85	2	591	A2M	C5-C4	-2.78	1.33	1.40
85	2	359	OMC	O2-C2	-2.78	1.18	1.23
85	2	597	PSU	O4-C4	-2.78	1.18	1.23
1	1	927	A2M	C5-C4	-2.78	1.33	1.40
85	2	1372	A2M	C5-C4	-2.77	1.33	1.40
1	1	1659	OMU	C6-N1	2.77	1.44	1.38
6	7	162	A2M	C5-C4	-2.77	1.33	1.40
1	1	940	PSU	O4-C4	-2.77	1.18	1.23
6	7	7	OMU	C6-N1	2.77	1.44	1.38
85	2	73	OMU	C6-N1	2.77	1.44	1.38
1	1	1528	PSU	O4-C4	-2.76	1.18	1.23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	S1	1979	OMU	C6-N1	2.76	1.44	1.38
26	S1	1833	OMU	C6-N1	2.76	1.44	1.38
6	7	43	A2M	C5-C4	-2.76	1.33	1.40
1	1	1107	OMU	C6-N1	2.76	1.44	1.38
85	2	95	A2M	C5-C4	-2.76	1.33	1.40
26	S1	1621	OMU	C6-N1	2.76	1.44	1.38
26	S1	104	PSU	O4-C4	-2.75	1.18	1.23
1	1	697	A2M	C5-C4	-2.75	1.33	1.40
1	1	1181	PSU	O4-C4	-2.75	1.18	1.23
85	2	604	A2M	C5-C4	-2.75	1.33	1.40
85	2	1303	PSU	O4-C4	-2.74	1.18	1.23
1	1	858	A2M	C5-C4	-2.74	1.33	1.40
85	2	56	OMU	C6-N1	2.74	1.44	1.38
1	1	959[A]	OMG	C5-C4	-2.74	1.36	1.43
85	2	1058	PSU	O4-C4	-2.74	1.18	1.23
85	2	570	A2M	O3'-C3'	-2.74	1.36	1.43
6	7	69	PSU	O4-C4	-2.74	1.18	1.23
26	S1	609	PSU	O4-C4	-2.74	1.18	1.23
85	2	1060	PSU	O4-C4	-2.74	1.18	1.23
1	1	847	OMU	C6-N1	2.73	1.44	1.38
26	S1	1192	PSU	O4-C4	-2.73	1.18	1.23
85	2	1403	PSU	O4-C4	-2.73	1.18	1.23
1	1	1402	PSU	O4-C4	-2.73	1.18	1.23
1	1	1664	PSU	O4-C4	-2.73	1.18	1.23
85	2	1194	PSU	O4-C4	-2.73	1.18	1.23
85	2	1185	A2M	C5-C4	-2.73	1.33	1.40
85	2	1354	PSU	O4-C4	-2.73	1.18	1.23
85	2	382	A2M	C5-C4	-2.72	1.33	1.40
1	1	959[A]	OMG	C2-N1	2.72	1.44	1.37
85	2	1360	OMG	C5-C4	-2.72	1.36	1.43
1	1	1039	PSU	O4-C4	-2.72	1.18	1.23
26	S1	1539	PSU	O4-C4	-2.72	1.18	1.23
1	1	681	A2M	C5-C4	-2.72	1.33	1.40
26	S1	8	OMU	O2-C2	-2.71	1.18	1.23
85	2	560	OMU	C6-N1	2.71	1.44	1.38
26	S1	1478	OMG	C5-C6	2.71	1.52	1.47
1	1	1533	PSU	O4-C4	-2.71	1.18	1.23
26	S1	1841	PSU	O4-C4	-2.71	1.18	1.23
85	2	1384	A2M	C5-C4	-2.70	1.33	1.40
1	1	239	PSU	O4-C4	-2.70	1.18	1.23
26	S1	1647	OMG	C5-C6	2.70	1.52	1.47
85	2	593	PSU	O4-C4	-2.70	1.18	1.23

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	1078	OMG	C2-N1	2.70	1.44	1.37
85	2	1372	A2M	O3'-C3'	-2.70	1.36	1.43
26	S1	1533	PSU	O4-C4	-2.70	1.18	1.23
85	2	510	PSU	O4-C4	-2.69	1.18	1.23
1	1	959[B]	OMG	C2-N1	2.69	1.44	1.37
1	1	1626	OMG	C2-N1	2.69	1.44	1.37
6	7	75	OMG	C2-N1	2.69	1.44	1.37
85	2	1229	OMG	C2-N1	2.68	1.44	1.37
85	2	1144	PSU	O4-C4	-2.68	1.18	1.23
1	1	422	PSU	O4-C4	-2.68	1.18	1.23
26	S1	1478	OMG	O6-C6	-2.67	1.17	1.23
26	S1	661	OMU	O2-C2	-2.67	1.18	1.23
85	2	1360	OMG	C2-N1	2.66	1.44	1.37
85	2	641	OMG	C2-N1	2.66	1.44	1.37
26	S1	33	PSU	O4-C4	-2.65	1.18	1.23
3	4	74	OMG	C2-N1	2.65	1.44	1.37
6	7	74	PSU	O4-C4	-2.65	1.18	1.23
1	1	1011	PSU	O4-C4	-2.64	1.18	1.23
85	2	1046	OMG	C2-N1	2.64	1.44	1.37
26	S1	1566	PSU	O4-C4	-2.64	1.18	1.23
1	1	1524	OMG	C2-N1	2.63	1.44	1.37
85	2	1361	PSU	O4-C4	-2.63	1.18	1.23
26	S1	1550	OMG	C2-N1	2.62	1.44	1.37
26	S1	607	PSU	O4-C4	-2.62	1.18	1.23
85	2	655	OMG	C2-N1	2.62	1.44	1.37
85	2	1231	OMG	C2-N1	2.62	1.44	1.37
1	1	681	A2M	O2'-C2'	2.62	1.49	1.42
85	2	472	PSU	O4-C4	-2.62	1.18	1.23
1	1	1190	OMG	C2-N1	2.62	1.44	1.37
26	S1	668	A2M	O3'-C3'	-2.62	1.36	1.43
26	S1	1829	OMG	C2-N1	2.61	1.44	1.37
85	2	527	A2M	O3'-C3'	-2.61	1.36	1.43
85	2	1185	A2M	O2'-C2'	2.61	1.49	1.42
26	S1	1879	OMG	C2-N1	2.60	1.44	1.37
26	S1	1543	C4J	O2-C2	-2.60	1.17	1.22
26	S1	1623	OMG	C2-N1	2.60	1.44	1.37
26	S1	1865	OMG	C2-N1	2.60	1.44	1.37
85	2	534	OMG	C2-N1	2.60	1.44	1.37
26	S1	661	OMU	C6-N1	2.60	1.44	1.38
85	2	71	OMG	C2-N1	2.60	1.44	1.37
26	S1	29	OMU	C6-N1	2.60	1.44	1.38
1	1	1540	OMG	C2-N1	2.60	1.44	1.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	7	162	A2M	O2'-C2'	2.59	1.49	1.42
1	1	856	OMG	C2-N1	2.58	1.44	1.37
1	1	678	A2M	O2'-C2'	2.58	1.49	1.42
26	S1	29	OMU	O2-C2	-2.58	1.18	1.23
1	1	235	A2M	O2'-C2'	2.58	1.49	1.42
1	1	959[B]	OMG	C5-C4	-2.57	1.36	1.43
85	2	512	PSU	O4-C4	-2.57	1.18	1.23
26	S1	479	A2M	O3'-C3'	-2.57	1.36	1.43
85	2	95	A2M	O2'-C2'	2.56	1.49	1.42
85	2	1384	A2M	O2'-C2'	2.56	1.49	1.42
1	1	1539	A2M	O2'-C2'	2.56	1.49	1.42
85	2	1253	OMG	O6-C6	-2.56	1.18	1.23
85	2	527	A2M	O2'-C2'	2.55	1.49	1.42
26	S1	1478	OMG	C2-N1	2.55	1.44	1.37
85	2	1253	OMG	C2-N1	2.55	1.44	1.37
26	S1	8	OMU	C6-N1	2.55	1.44	1.38
26	S1	1647	OMG	O6-C6	-2.55	1.18	1.23
26	S1	512	A2M	O2'-C2'	2.55	1.49	1.42
85	2	591	A2M	O2'-C2'	2.54	1.49	1.42
85	2	1419	OMU	O2-C2	-2.54	1.18	1.23
6	7	43	A2M	O2'-C2'	2.54	1.49	1.42
1	1	858	A2M	O2'-C2'	2.54	1.49	1.42
85	2	572	A2M	O2'-C2'	2.53	1.49	1.42
26	S1	479	A2M	O2'-C2'	2.52	1.49	1.42
26	S1	600	OMG	O6-C6	-2.52	1.18	1.23
1	1	845	OMU	C6-N1	2.52	1.44	1.38
1	1	407	A2M	O2'-C2'	2.52	1.49	1.42
1	1	1371	OMU	O2-C2	-2.52	1.18	1.23
85	2	667	OMU	O2-C2	-2.52	1.18	1.23
1	1	1659	OMU	O2-C2	-2.52	1.18	1.23
26	S1	2151	OMG	C2-N1	2.51	1.43	1.37
85	2	56	OMU	O2-C2	-2.51	1.18	1.23
85	2	382	A2M	O2'-C2'	2.50	1.49	1.42
85	2	604	A2M	O2'-C2'	2.50	1.49	1.42
1	1	955	A2M	O2'-C2'	2.50	1.49	1.42
1	1	847	OMU	O2-C2	-2.50	1.18	1.23
1	1	1540	OMG	O6-C6	-2.50	1.18	1.23
85	2	73	OMU	O2-C2	-2.49	1.18	1.23
1	1	927	A2M	O2'-C2'	2.48	1.49	1.42
85	2	655	OMG	O6-C6	-2.47	1.18	1.23
26	S1	668	A2M	O2'-C2'	2.47	1.49	1.42
26	S1	600	OMG	C2-N1	2.47	1.43	1.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	7	7	OMU	O2-C2	-2.47	1.18	1.23
85	2	359	OMC	C5-C4	2.47	1.48	1.42
1	1	1190	OMG	O6-C6	-2.46	1.18	1.23
26	S1	1979	OMU	O2-C2	-2.46	1.18	1.23
85	2	628	A2M	O2'-C2'	2.46	1.48	1.42
85	2	1372	A2M	O2'-C2'	2.46	1.48	1.42
26	S1	98	A2M	O2'-C2'	2.45	1.48	1.42
26	S1	1647	OMG	C2-N1	2.45	1.43	1.37
1	1	697	A2M	O2'-C2'	2.45	1.48	1.42
85	2	1359	OMU	O2-C2	-2.44	1.18	1.23
85	2	534	OMG	O6-C6	-2.44	1.18	1.23
85	2	560	OMU	O2-C2	-2.44	1.18	1.23
26	S1	2151	OMG	O6-C6	-2.44	1.18	1.23
85	2	1077	OMU	O2-C2	-2.43	1.18	1.23
26	S1	1829	OMG	O6-C6	-2.43	1.18	1.23
1	1	856	OMG	O6-C6	-2.43	1.18	1.23
26	S1	1621	OMU	O2-C2	-2.43	1.18	1.23
1	1	1626	OMG	O6-C6	-2.42	1.18	1.23
26	S1	1879	OMG	O6-C6	-2.42	1.18	1.23
26	S1	1833	OMU	O2-C2	-2.42	1.18	1.23
85	2	1229	OMG	O6-C6	-2.42	1.18	1.23
85	2	641	OMG	O6-C6	-2.41	1.18	1.23
85	2	71	OMG	O6-C6	-2.41	1.18	1.23
2	3	13	OMU	O2-C2	-2.41	1.18	1.23
26	S1	479	A2M	O5'-C5'	-2.40	1.38	1.44
1	1	1107	OMU	O2-C2	-2.40	1.18	1.23
85	2	1248	OMC	C5-C4	2.40	1.48	1.42
85	2	1046	OMG	O6-C6	-2.39	1.18	1.23
26	S1	1623	OMG	O6-C6	-2.39	1.18	1.23
85	2	1077	OMU	C5-C4	2.38	1.48	1.43
3	4	74	OMG	O6-C6	-2.38	1.18	1.23
26	S1	1865	OMG	O6-C6	-2.38	1.18	1.23
1	1	1010	OMC	C5-C4	2.37	1.48	1.42
85	2	1397	OMC	C5-C4	2.37	1.48	1.42
85	2	443	OMC	C5-C4	2.37	1.48	1.42
85	2	1231	OMG	O6-C6	-2.37	1.18	1.23
85	2	1078	OMG	O6-C6	-2.36	1.18	1.23
1	1	695	OMC	C5-C4	2.36	1.48	1.42
26	S1	1833	OMU	C5-C4	2.35	1.48	1.43
85	2	1360	OMG	O6-C6	-2.34	1.18	1.23
85	2	1159	OMC	C5-C4	2.33	1.48	1.42
1	1	407	A2M	O5'-C5'	-2.32	1.39	1.44

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	583	OMC	C5-C4	2.32	1.48	1.42
26	S1	1866	OMC	C5-C4	2.32	1.48	1.42
85	2	1317	OMC	C5-C4	2.32	1.48	1.42
1	1	959[B]	OMG	O6-C6	-2.32	1.18	1.23
6	7	75	OMG	O6-C6	-2.32	1.18	1.23
1	1	1107	OMU	C5-C4	2.30	1.48	1.43
26	S1	1979	OMU	C5-C4	2.29	1.48	1.43
2	3	13	OMU	C5-C4	2.29	1.48	1.43
85	2	1359	OMU	C5-C4	2.29	1.48	1.43
26	S1	1621	OMU	C5-C4	2.28	1.48	1.43
85	2	56	OMU	C5-C4	2.28	1.48	1.43
85	2	667	OMU	C5-C4	2.28	1.48	1.43
1	1	1524	OMG	O6-C6	-2.28	1.18	1.23
1	1	1659	OMU	C5-C4	2.28	1.48	1.43
26	S1	1550	OMG	O6-C6	-2.27	1.18	1.23
26	S1	2140	OMC	C5-C4	2.27	1.48	1.42
6	7	7	OMU	C5-C4	2.26	1.48	1.43
85	2	570	A2M	O5'-C5'	-2.26	1.39	1.44
26	S1	38	OMC	C5-C4	2.26	1.48	1.42
85	2	1419	OMU	C5-C4	2.24	1.48	1.43
1	1	1527	OMC	C5-C4	2.23	1.48	1.42
1	1	1011	PSU	O4'-C1'	-2.23	1.40	1.43
1	1	959[A]	OMG	O6-C6	-2.22	1.18	1.23
1	1	1371	OMU	C5-C4	2.22	1.48	1.43
1	1	847	OMU	C5-C4	2.21	1.48	1.43
85	2	73	OMU	C5-C4	2.20	1.48	1.43
26	S1	8	OMU	C5-C4	2.19	1.48	1.43
6	7	69	PSU	O4'-C1'	-2.19	1.40	1.43
85	2	560	OMU	C5-C4	2.17	1.48	1.43
1	1	845	OMU	C5-C4	2.15	1.48	1.43
26	S1	512	A2M	O5'-C5'	-2.15	1.39	1.44
26	S1	29	OMU	C5-C4	2.13	1.48	1.43
26	S1	668	A2M	O5'-C5'	-2.11	1.39	1.44
26	S1	2021	A2M	C2-N3	2.11	1.35	1.32
26	S1	33	PSU	O4'-C1'	-2.08	1.40	1.43
26	S1	1566	PSU	C4-C5	2.08	1.50	1.44
26	S1	18	OMC	C5-C4	2.07	1.47	1.42
85	2	1264	PSU	O4'-C1'	-2.06	1.41	1.43
85	2	1303	PSU	O4'-C1'	-2.06	1.41	1.43
26	S1	98	A2M	O5'-C5'	-2.06	1.39	1.44
6	7	69	PSU	C4-C5	2.05	1.50	1.44
26	S1	661	OMU	C5-C4	2.05	1.48	1.43

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
85	2	1185	A2M	O5'-C5'	-2.04	1.39	1.44
1	1	858	A2M	O5'-C5'	-2.04	1.39	1.44
26	S1	2202	PSU	O4'-C1'	-2.03	1.41	1.43
26	S1	2048	PSU	O2-C2	-2.03	1.19	1.23
1	1	1181	PSU	C4-C5	2.02	1.49	1.44
1	1	235	A2M	C2-N3	2.02	1.35	1.32
1	1	1011	PSU	C4-C5	2.01	1.49	1.44
26	S1	12	PSU	O2-C2	-2.01	1.19	1.23
85	2	527	A2M	O5'-C5'	-2.00	1.39	1.44

All (617) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	S1	2185	MA6	N1-C6-N6	-11.63	104.81	117.06
26	S1	2184	MA6	N1-C6-N6	-11.39	105.07	117.06
1	1	681	A2M	C5-C6-N6	8.44	133.18	120.35
85	2	382	A2M	C5-C6-N6	8.37	133.08	120.35
26	S1	668	A2M	C5-C6-N6	8.33	133.01	120.35
1	1	927	A2M	C5-C6-N6	8.28	132.94	120.35
6	7	162	A2M	C5-C6-N6	8.25	132.88	120.35
26	S1	2021	A2M	C5-C6-N6	8.23	132.85	120.35
1	1	858	A2M	C5-C6-N6	8.22	132.84	120.35
85	2	591	A2M	C5-C6-N6	8.19	132.80	120.35
1	1	305	A2M	C5-C6-N6	8.14	132.72	120.35
85	2	604	A2M	C5-C6-N6	8.05	132.59	120.35
85	2	572	A2M	C5-C6-N6	8.04	132.58	120.35
85	2	95	A2M	C5-C6-N6	8.04	132.57	120.35
1	1	955	A2M	C5-C6-N6	8.03	132.56	120.35
85	2	570	A2M	C5-C6-N6	7.97	132.46	120.35
1	1	697	A2M	C5-C6-N6	7.91	132.37	120.35
85	2	1372	A2M	C5-C6-N6	7.89	132.35	120.35
6	7	43	A2M	C5-C6-N6	7.89	132.34	120.35
85	2	527	A2M	C5-C6-N6	7.86	132.30	120.35
26	S1	479	A2M	C5-C6-N6	7.81	132.22	120.35
85	2	1384	A2M	C5-C6-N6	7.75	132.12	120.35
85	2	628	A2M	C5-C6-N6	7.71	132.06	120.35
1	1	678	A2M	C5-C6-N6	7.70	132.06	120.35
26	S1	98	A2M	C5-C6-N6	7.69	132.04	120.35
26	S1	512	A2M	C5-C6-N6	7.69	132.04	120.35
85	2	1185	A2M	C5-C6-N6	7.68	132.03	120.35
1	1	1539	A2M	C5-C6-N6	7.66	131.99	120.35
1	1	235	A2M	C5-C6-N6	7.38	131.56	120.35

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	407	A2M	C5-C6-N6	7.32	131.47	120.35
1	1	678	A2M	O2'-C2'-C1'	6.98	122.94	109.09
1	1	845	OMU	C4-N3-C2	-5.80	118.92	126.58
1	1	677	1MA	N1-C2-N3	-5.70	119.37	126.02
26	S1	8	OMU	C4-N3-C2	-5.69	119.07	126.58
1	1	235	A2M	N3-C2-N1	-5.66	119.84	128.68
26	S1	668	A2M	N6-C6-N1	-5.64	106.86	118.57
85	2	1372	A2M	N3-C2-N1	-5.63	119.88	128.68
1	1	681	A2M	N6-C6-N1	-5.63	106.90	118.57
1	1	858	A2M	N6-C6-N1	-5.60	106.95	118.57
85	2	527	A2M	N6-C6-N1	-5.57	107.02	118.57
26	S1	2021	A2M	N6-C6-N1	-5.54	107.07	118.57
85	2	570	A2M	N3-C2-N1	-5.50	120.07	128.68
85	2	570	A2M	N6-C6-N1	-5.50	107.15	118.57
26	S1	1833	OMU	C4-N3-C2	-5.50	119.33	126.58
26	S1	661	OMU	C4-N3-C2	-5.50	119.33	126.58
1	1	927	A2M	N6-C6-N1	-5.49	107.18	118.57
26	S1	29	OMU	C4-N3-C2	-5.48	119.35	126.58
1	1	697	A2M	N3-C2-N1	-5.48	120.12	128.68
6	7	162	A2M	N6-C6-N1	-5.47	107.22	118.57
85	2	1077	OMU	C4-N3-C2	-5.47	119.37	126.58
85	2	382	A2M	N6-C6-N1	-5.47	107.23	118.57
85	2	56	OMU	C4-N3-C2	-5.46	119.37	126.58
85	2	382	A2M	N3-C2-N1	-5.46	120.14	128.68
1	1	858	A2M	N3-C2-N1	-5.44	120.17	128.68
26	S1	668	A2M	N3-C2-N1	-5.44	120.17	128.68
26	S1	2185	MA6	N3-C2-N1	-5.43	120.19	128.68
85	2	560	OMU	C4-N3-C2	-5.43	119.42	126.58
26	S1	2184	MA6	N3-C2-N1	-5.43	120.20	128.68
6	7	162	A2M	N3-C2-N1	-5.42	120.20	128.68
1	1	305	A2M	N6-C6-N1	-5.41	107.34	118.57
85	2	1185	A2M	N3-C2-N1	-5.41	120.22	128.68
1	1	847	OMU	C4-N3-C2	-5.41	119.45	126.58
1	1	1107	OMU	C4-N3-C2	-5.39	119.48	126.58
26	S1	479	A2M	N3-C2-N1	-5.37	120.29	128.68
26	S1	1979	OMU	C4-N3-C2	-5.36	119.50	126.58
1	1	1539	A2M	N3-C2-N1	-5.36	120.30	128.68
85	2	1384	A2M	N3-C2-N1	-5.34	120.33	128.68
2	3	13	OMU	C4-N3-C2	-5.34	119.54	126.58
1	1	1659	OMU	C4-N3-C2	-5.33	119.54	126.58
85	2	591	A2M	N6-C6-N1	-5.33	107.50	118.57
85	2	591	A2M	N3-C2-N1	-5.33	120.35	128.68

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	7	7	OMU	C4-N3-C2	-5.33	119.55	126.58
26	S1	2021	A2M	N3-C2-N1	-5.32	120.36	128.68
1	1	955	A2M	N3-C2-N1	-5.31	120.39	128.68
1	1	681	A2M	N3-C2-N1	-5.30	120.39	128.68
6	7	43	A2M	N3-C2-N1	-5.30	120.40	128.68
85	2	628	A2M	N3-C2-N1	-5.30	120.40	128.68
1	1	407	A2M	N3-C2-N1	-5.29	120.40	128.68
85	2	572	A2M	N3-C2-N1	-5.29	120.41	128.68
26	S1	1621	OMU	C4-N3-C2	-5.29	119.60	126.58
85	2	1419	OMU	C4-N3-C2	-5.29	119.60	126.58
85	2	667	OMU	C4-N3-C2	-5.29	119.61	126.58
1	1	927	A2M	N3-C2-N1	-5.29	120.42	128.68
85	2	527	A2M	N3-C2-N1	-5.27	120.44	128.68
85	2	604	A2M	N3-C2-N1	-5.26	120.46	128.68
85	2	572	A2M	N6-C6-N1	-5.26	107.66	118.57
85	2	1359	OMU	C4-N3-C2	-5.25	119.66	126.58
1	1	955	A2M	N6-C6-N1	-5.24	107.70	118.57
85	2	604	A2M	N6-C6-N1	-5.22	107.75	118.57
85	2	73	OMU	C4-N3-C2	-5.20	119.72	126.58
26	S1	98	A2M	N3-C2-N1	-5.19	120.57	128.68
26	S1	479	A2M	N6-C6-N1	-5.18	107.82	118.57
85	2	95	A2M	N6-C6-N1	-5.17	107.84	118.57
1	1	678	A2M	N3-C2-N1	-5.15	120.63	128.68
85	2	1265	PSU	C4-N3-C2	-5.14	118.94	126.34
1	1	697	A2M	N6-C6-N1	-5.13	107.92	118.57
6	7	43	A2M	N6-C6-N1	-5.12	107.94	118.57
1	1	305	A2M	N3-C2-N1	-5.11	120.69	128.68
85	2	1372	A2M	N6-C6-N1	-5.10	108.00	118.57
85	2	95	A2M	N3-C2-N1	-5.08	120.73	128.68
26	S1	512	A2M	N3-C2-N1	-5.06	120.76	128.68
1	1	1371	OMU	C4-N3-C2	-5.05	119.92	126.58
85	2	628	A2M	N6-C6-N1	-5.04	108.10	118.57
26	S1	1995	7MG	C5-C6-N1	5.03	119.85	110.99
1	1	678	A2M	O4'-C1'-C2'	-5.03	97.87	106.59
26	S1	98	A2M	N6-C6-N1	-5.02	108.15	118.57
26	S1	512	A2M	N6-C6-N1	-5.00	108.20	118.57
1	1	678	A2M	N6-C6-N1	-5.00	108.20	118.57
85	2	1185	A2M	N6-C6-N1	-5.00	108.20	118.57
85	2	1384	A2M	N6-C6-N1	-4.98	108.23	118.57
1	1	1539	A2M	N6-C6-N1	-4.97	108.26	118.57
1	1	235	A2M	N6-C6-N1	-4.92	108.36	118.57
26	S1	2046	PSU	C4-N3-C2	-4.89	119.29	126.34

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	407	A2M	N6-C6-N1	-4.89	108.43	118.57
1	1	845	OMU	N3-C2-N1	4.87	121.35	114.89
1	1	870	PSU	C4-N3-C2	-4.79	119.44	126.34
26	S1	1657	PSU	C4-N3-C2	-4.78	119.44	126.34
26	S1	455	PSU	C4-N3-C2	-4.76	119.48	126.34
85	2	437	PSU	C4-N3-C2	-4.75	119.49	126.34
26	S1	1246	PSU	C4-N3-C2	-4.75	119.49	126.34
85	2	1060	PSU	C4-N3-C2	-4.74	119.51	126.34
26	S1	1156	PSU	C4-N3-C2	-4.74	119.51	126.34
1	1	1171	PSU	C4-N3-C2	-4.71	119.55	126.34
85	2	1382	PSU	C4-N3-C2	-4.71	119.55	126.34
26	S1	609	PSU	C4-N3-C2	-4.70	119.57	126.34
26	S1	2048	PSU	C4-N3-C2	-4.69	119.58	126.34
1	1	1533	PSU	C4-N3-C2	-4.67	119.62	126.34
85	2	78	PSU	C4-N3-C2	-4.65	119.64	126.34
26	S1	12	PSU	C4-N3-C2	-4.64	119.65	126.34
85	2	597	PSU	C4-N3-C2	-4.64	119.66	126.34
85	2	1354	PSU	C4-N3-C2	-4.63	119.66	126.34
85	2	1058	PSU	C4-N3-C2	-4.63	119.67	126.34
1	1	1039	PSU	C4-N3-C2	-4.62	119.68	126.34
85	2	662	PSU	C4-N3-C2	-4.62	119.68	126.34
85	2	1264	PSU	C4-N3-C2	-4.62	119.68	126.34
85	2	1144	PSU	C4-N3-C2	-4.62	119.69	126.34
26	S1	1841	PSU	N1-C2-N3	4.62	120.36	115.13
85	2	1403	PSU	C4-N3-C2	-4.61	119.69	126.34
1	1	672	PSU	C4-N3-C2	-4.60	119.70	126.34
85	2	626	PSU	C4-N3-C2	-4.60	119.72	126.34
85	2	1318	PSU	C4-N3-C2	-4.59	119.72	126.34
26	S1	104	PSU	C4-N3-C2	-4.59	119.73	126.34
1	1	940	PSU	C4-N3-C2	-4.58	119.74	126.34
1	1	1017	PSU	C4-N3-C2	-4.57	119.75	126.34
6	7	74	PSU	C4-N3-C2	-4.56	119.77	126.34
85	2	1413	PSU	C4-N3-C2	-4.55	119.78	126.34
85	2	1303	PSU	C4-N3-C2	-4.55	119.78	126.34
1	1	1528	PSU	C4-N3-C2	-4.54	119.79	126.34
85	2	512	PSU	C4-N3-C2	-4.54	119.80	126.34
1	1	239	PSU	C4-N3-C2	-4.54	119.80	126.34
1	1	1664	PSU	C4-N3-C2	-4.54	119.80	126.34
85	2	1361	PSU	C4-N3-C2	-4.53	119.81	126.34
85	2	472	PSU	C4-N3-C2	-4.51	119.83	126.34
85	2	1194	PSU	C4-N3-C2	-4.51	119.84	126.34
26	S1	2046	PSU	N1-C2-N3	4.51	120.24	115.13

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	S1	1841	PSU	C4-N3-C2	-4.48	119.88	126.34
85	2	510	PSU	C4-N3-C2	-4.47	119.90	126.34
26	S1	1533	PSU	C4-N3-C2	-4.47	119.90	126.34
26	S1	1539	PSU	C4-N3-C2	-4.46	119.92	126.34
26	S1	455	PSU	N1-C2-N3	4.45	120.17	115.13
26	S1	1246	PSU	N1-C2-N3	4.44	120.16	115.13
1	1	1181	PSU	C4-N3-C2	-4.44	119.94	126.34
26	S1	2202	PSU	C4-N3-C2	-4.43	119.95	126.34
1	1	422	PSU	C4-N3-C2	-4.42	119.98	126.34
6	7	69	PSU	C4-N3-C2	-4.41	119.98	126.34
26	S1	609	PSU	N1-C2-N3	4.41	120.13	115.13
85	2	1060	PSU	N1-C2-N3	4.40	120.11	115.13
85	2	1265	PSU	N1-C2-N3	4.40	120.11	115.13
26	S1	2048	PSU	N1-C2-N3	4.39	120.11	115.13
1	1	1533	PSU	N1-C2-N3	4.38	120.09	115.13
26	S1	1566	PSU	C4-N3-C2	-4.38	120.03	126.34
26	S1	607	PSU	C4-N3-C2	-4.38	120.03	126.34
1	1	1011	PSU	C4-N3-C2	-4.37	120.05	126.34
85	2	1144	PSU	N1-C2-N3	4.36	120.07	115.13
85	2	472	PSU	N1-C2-N3	4.35	120.06	115.13
26	S1	1995	7MG	C2-N3-C4	4.33	120.01	112.30
85	2	1382	PSU	N1-C2-N3	4.32	120.03	115.13
26	S1	1156	PSU	N1-C2-N3	4.32	120.03	115.13
1	1	1017	PSU	N1-C2-N3	4.31	120.02	115.13
85	2	1303	PSU	N1-C2-N3	4.31	120.02	115.13
85	2	1354	PSU	N1-C2-N3	4.30	120.00	115.13
26	S1	12	PSU	N1-C2-N3	4.29	119.99	115.13
1	1	870	PSU	N1-C2-N3	4.29	119.99	115.13
1	1	1039	PSU	N1-C2-N3	4.29	119.98	115.13
85	2	1264	PSU	N1-C2-N3	4.28	119.98	115.13
85	2	593	PSU	C4-N3-C2	-4.28	120.17	126.34
26	S1	1192	PSU	C4-N3-C2	-4.28	120.18	126.34
85	2	1058	PSU	N1-C2-N3	4.27	119.97	115.13
26	S1	1657	PSU	N1-C2-N3	4.26	119.96	115.13
26	S1	1539	PSU	N1-C2-N3	4.25	119.95	115.13
1	1	672	PSU	N1-C2-N3	4.25	119.94	115.13
1	1	1171	PSU	N1-C2-N3	4.24	119.94	115.13
26	S1	33	PSU	C4-N3-C2	-4.24	120.24	126.34
85	2	1403	PSU	N1-C2-N3	4.23	119.93	115.13
85	2	437	PSU	N1-C2-N3	4.23	119.92	115.13
85	2	78	PSU	N1-C2-N3	4.23	119.92	115.13
85	2	597	PSU	N1-C2-N3	4.22	119.92	115.13

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1664	PSU	N1-C2-N3	4.22	119.91	115.13
1	1	678	A2M	C3'-C2'-C1'	-4.21	94.97	102.89
1	1	1528	PSU	N1-C2-N3	4.21	119.90	115.13
6	7	74	PSU	N1-C2-N3	4.20	119.89	115.13
26	S1	33	PSU	N1-C2-N3	4.20	119.89	115.13
85	2	662	PSU	N1-C2-N3	4.20	119.89	115.13
85	2	1413	PSU	N1-C2-N3	4.19	119.88	115.13
26	S1	8	OMU	N3-C2-N1	4.19	120.45	114.89
85	2	512	PSU	N1-C2-N3	4.17	119.86	115.13
85	2	1194	PSU	N1-C2-N3	4.17	119.86	115.13
1	1	940	PSU	N1-C2-N3	4.17	119.86	115.13
1	1	239	PSU	N1-C2-N3	4.15	119.83	115.13
85	2	1361	PSU	N1-C2-N3	4.15	119.83	115.13
1	1	1402	PSU	C4-N3-C2	-4.14	120.37	126.34
1	1	1011	PSU	N1-C2-N3	4.13	119.81	115.13
26	S1	1192	PSU	N1-C2-N3	4.11	119.79	115.13
1	1	677	1MA	C5-C6-N1	4.10	120.01	113.90
1	1	1181	PSU	N1-C2-N3	4.10	119.78	115.13
85	2	510	PSU	N1-C2-N3	4.09	119.77	115.13
85	2	626	PSU	N1-C2-N3	4.09	119.77	115.13
6	7	69	PSU	N1-C2-N3	4.08	119.76	115.13
26	S1	661	OMU	N3-C2-N1	4.08	120.31	114.89
26	S1	1533	PSU	N1-C2-N3	4.08	119.75	115.13
85	2	1318	PSU	N1-C2-N3	4.08	119.75	115.13
26	S1	1833	OMU	N3-C2-N1	4.07	120.29	114.89
26	S1	1995	7MG	C5-C4-N3	-4.06	120.39	128.13
26	S1	104	PSU	N1-C2-N3	4.05	119.72	115.13
26	S1	1566	PSU	N1-C2-N3	4.04	119.71	115.13
26	S1	607	PSU	N1-C2-N3	4.03	119.70	115.13
1	1	422	PSU	N1-C2-N3	4.02	119.69	115.13
85	2	593	PSU	N1-C2-N3	4.02	119.68	115.13
1	1	847	OMU	N3-C2-N1	4.00	120.20	114.89
1	1	1402	PSU	N1-C2-N3	3.98	119.64	115.13
26	S1	29	OMU	N3-C2-N1	3.98	120.17	114.89
1	1	1659	OMU	N3-C2-N1	3.94	120.12	114.89
85	2	1077	OMU	N3-C2-N1	3.94	120.12	114.89
26	S1	2202	PSU	N1-C2-N3	3.94	119.59	115.13
1	1	1371	OMU	N3-C2-N1	3.93	120.11	114.89
85	2	1419	OMU	N3-C2-N1	3.92	120.10	114.89
85	2	56	OMU	N3-C2-N1	3.91	120.08	114.89
85	2	560	OMU	N3-C2-N1	3.88	120.04	114.89
85	2	667	OMU	N3-C2-N1	3.87	120.03	114.89

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	S1	1543	C4J	C4-N3-C2	-3.86	120.58	125.46
1	1	1107	OMU	N3-C2-N1	3.85	120.00	114.89
26	S1	1979	OMU	N3-C2-N1	3.80	119.94	114.89
85	2	1359	OMU	N3-C2-N1	3.79	119.92	114.89
1	1	1371	OMU	C1'-N1-C2	3.78	124.41	117.57
6	7	7	OMU	N3-C2-N1	3.77	119.90	114.89
85	2	1308	5MC	C5-C6-N1	-3.76	119.47	123.34
26	S1	1621	OMU	N3-C2-N1	3.75	119.86	114.89
85	2	73	OMU	N3-C2-N1	3.74	119.86	114.89
2	3	13	OMU	N3-C2-N1	3.72	119.83	114.89
26	S1	2151	OMG	C5-C6-N1	3.68	120.44	113.95
1	1	845	OMU	C1'-N1-C2	3.64	124.15	117.57
26	S1	1478	OMG	C5-C6-N1	3.63	120.36	113.95
26	S1	600	OMG	C5-C6-N1	3.62	120.35	113.95
26	S1	1879	OMG	C5-C6-N1	3.61	120.33	113.95
26	S1	33	PSU	C6-N1-C2	-3.61	118.99	122.68
85	2	534	OMG	C5-C6-N1	3.61	120.32	113.95
26	S1	1647	OMG	C5-C6-N1	3.60	120.31	113.95
26	S1	1544	5MC	C5-C6-N1	-3.58	119.65	123.34
26	S1	1841	PSU	C6-N1-C2	-3.58	119.02	122.68
85	2	1229	OMG	C5-C6-N1	3.58	120.27	113.95
85	2	71	OMG	C5-C6-N1	3.57	120.26	113.95
26	S1	1550	OMG	C5-C6-N1	3.57	120.25	113.95
85	2	1046	OMG	C5-C6-N1	3.56	120.23	113.95
1	1	1626	OMG	C5-C6-N1	3.55	120.23	113.95
26	S1	1623	OMG	C5-C6-N1	3.55	120.22	113.95
85	2	655	OMG	C5-C6-N1	3.54	120.21	113.95
26	S1	8	OMU	C5-C4-N3	3.54	120.13	114.84
26	S1	1865	OMG	C5-C6-N1	3.53	120.19	113.95
1	1	1524	OMG	C5-C6-N1	3.53	120.18	113.95
26	S1	661	OMU	C5-C4-N3	3.52	120.11	114.84
6	7	75	OMG	C5-C6-N1	3.52	120.16	113.95
1	1	856	OMG	C5-C6-N1	3.51	120.15	113.95
1	1	1190	OMG	C5-C6-N1	3.51	120.14	113.95
26	S1	1829	OMG	C5-C6-N1	3.50	120.14	113.95
85	2	1253	OMG	C5-C6-N1	3.50	120.13	113.95
85	2	1078	OMG	C5-C6-N1	3.46	120.07	113.95
1	1	1540	OMG	C5-C6-N1	3.46	120.06	113.95
85	2	1231	OMG	C5-C6-N1	3.46	120.06	113.95
85	2	1077	OMU	C5-C4-N3	3.45	120.01	114.84
85	2	641	OMG	C5-C6-N1	3.45	120.05	113.95
6	7	7	OMU	C5-C4-N3	3.45	120.00	114.84

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
85	2	56	OMU	C5-C4-N3	3.44	119.99	114.84
2	3	13	OMU	C5-C4-N3	3.44	119.99	114.84
85	2	1360	OMG	C5-C6-N1	3.43	120.02	113.95
1	1	959[B]	OMG	C5-C6-N1	3.43	120.02	113.95
1	1	1107	OMU	C5-C4-N3	3.43	119.97	114.84
26	S1	29	OMU	C5-C4-N3	3.42	119.96	114.84
1	1	959[A]	OMG	C5-C6-N1	3.42	119.99	113.95
85	2	73	OMU	C5-C4-N3	3.42	119.96	114.84
26	S1	1979	OMU	C5-C4-N3	3.42	119.95	114.84
85	2	1359	OMU	C5-C4-N3	3.41	119.95	114.84
3	4	74	OMG	C5-C6-N1	3.41	119.97	113.95
85	2	667	OMU	C5-C4-N3	3.40	119.93	114.84
26	S1	1621	OMU	C5-C4-N3	3.40	119.93	114.84
26	S1	1833	OMU	C5-C4-N3	3.37	119.88	114.84
1	1	1659	OMU	C5-C4-N3	3.37	119.88	114.84
85	2	1419	OMU	C5-C4-N3	3.36	119.87	114.84
1	1	847	OMU	C5-C4-N3	3.35	119.85	114.84
85	2	560	OMU	C5-C4-N3	3.34	119.83	114.84
85	2	524	5MC	C5-C6-N1	-3.32	119.92	123.34
1	1	1371	OMU	C5-C4-N3	3.28	119.75	114.84
1	1	1402	PSU	C6-N1-C2	-3.28	119.33	122.68
26	S1	1995	7MG	C4-C5-N7	3.28	110.09	105.53
1	1	678	A2M	C2'-C3'-C4'	-3.19	95.06	101.99
85	2	472	PSU	C6-N1-C2	-3.16	119.45	122.68
26	S1	1192	PSU	C6-N1-C2	-3.15	119.46	122.68
26	S1	1647	OMG	C2-N1-C6	-3.13	119.34	125.10
26	S1	1246	PSU	C6-C5-C4	3.13	120.38	118.20
26	S1	1995	7MG	C5-C4-N9	3.12	110.40	106.35
26	S1	2061	5MC	C5-C6-N1	-3.10	120.15	123.34
85	2	1265	PSU	C6-C5-C4	3.09	120.36	118.20
26	S1	2048	PSU	C6-N1-C2	-3.09	119.52	122.68
26	S1	1550	OMG	C2-N1-C6	-3.08	119.43	125.10
26	S1	1539	PSU	C6-N1-C2	-3.07	119.54	122.68
26	S1	1623	OMG	C2-N1-C6	-3.06	119.46	125.10
26	S1	609	PSU	C6-N1-C2	-3.06	119.56	122.68
1	1	1533	PSU	C6-N1-C2	-3.05	119.57	122.68
1	1	1017	PSU	C6-N1-C2	-3.04	119.58	122.68
85	2	1303	PSU	C6-N1-C2	-3.03	119.58	122.68
26	S1	2151	OMG	C2-N1-C6	-3.03	119.52	125.10
1	1	422	PSU	C6-N1-C2	-3.03	119.58	122.68
1	1	1011	PSU	C6-N1-C2	-3.02	119.60	122.68
1	1	1039	PSU	C6-N1-C2	-3.02	119.60	122.68

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	S1	29	OMU	O4-C4-C5	-3.01	119.86	125.16
26	S1	600	OMG	C2-N1-C6	-3.01	119.56	125.10
26	S1	1995	7MG	C2-N1-C6	-3.00	119.62	125.10
1	1	1524	OMG	C2-N1-C6	-3.00	119.56	125.10
85	2	1194	PSU	C6-N1-C2	-2.99	119.63	122.68
26	S1	1621	OMU	O4-C4-C5	-2.99	119.91	125.16
26	S1	1829	OMG	C2-N1-C6	-2.99	119.60	125.10
26	S1	1879	OMG	C2-N1-C6	-2.98	119.60	125.10
1	1	1533	PSU	C6-C5-C4	2.98	120.28	118.20
26	S1	668	A2M	C3'-C2'-C1'	2.98	108.48	102.89
85	2	593	PSU	C6-N1-C2	-2.97	119.64	122.68
85	2	1144	PSU	C6-N1-C2	-2.97	119.65	122.68
85	2	1060	PSU	C6-C5-C4	2.97	120.27	118.20
26	S1	1647	OMG	C8-N7-C5	2.97	108.64	102.99
85	2	1413	PSU	C6-N1-C2	-2.96	119.65	122.68
2	3	13	OMU	O4-C4-C5	-2.96	119.95	125.16
1	1	1528	PSU	C6-N1-C2	-2.96	119.66	122.68
85	2	534	OMG	C2-N1-C6	-2.95	119.66	125.10
6	7	7	OMU	O4-C4-C5	-2.95	119.97	125.16
26	S1	1841	PSU	C6-C5-C4	2.95	120.26	118.20
85	2	1058	PSU	C6-N1-C2	-2.95	119.67	122.68
85	2	1046	OMG	C2-N1-C6	-2.95	119.67	125.10
26	S1	2046	PSU	C6-N1-C2	-2.95	119.67	122.68
1	1	672	PSU	C6-N1-C2	-2.95	119.67	122.68
85	2	1354	PSU	C6-N1-C2	-2.94	119.67	122.68
26	S1	1865	OMG	C2-N1-C6	-2.94	119.68	125.10
1	1	959[B]	OMG	C2-N1-C6	-2.94	119.68	125.10
26	S1	1979	OMU	O4-C4-C5	-2.94	119.99	125.16
1	1	1190	OMG	C8-N7-C5	2.94	108.59	102.99
26	S1	455	PSU	C6-N1-C2	-2.94	119.68	122.68
1	1	845	OMU	C5-C4-N3	2.94	119.23	114.84
26	S1	1478	OMG	C2-N1-C6	-2.93	119.69	125.10
85	2	510	PSU	C6-N1-C2	-2.93	119.68	122.68
26	S1	661	OMU	O4-C4-C5	-2.93	120.00	125.16
85	2	1253	OMG	C2-N1-C6	-2.93	119.70	125.10
1	1	1524	OMG	C8-N7-C5	2.93	108.58	102.99
85	2	56	OMU	O4-C4-C5	-2.93	120.01	125.16
85	2	71	OMG	C2-N1-C6	-2.93	119.71	125.10
6	7	74	PSU	C6-N1-C2	-2.93	119.69	122.68
1	1	1664	PSU	C6-N1-C2	-2.92	119.70	122.68
26	S1	1246	PSU	C6-N1-C2	-2.92	119.70	122.68
85	2	1360	OMG	C2-N1-C6	-2.92	119.73	125.10

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
85	2	655	OMG	C2-N1-C6	-2.92	119.73	125.10
85	2	1264	PSU	C6-N1-C2	-2.91	119.70	122.68
85	2	1229	OMG	C2-N1-C6	-2.91	119.74	125.10
1	1	959[A]	OMG	C8-N7-C5	2.91	108.53	102.99
6	7	75	OMG	C2-N1-C6	-2.91	119.74	125.10
1	1	1626	OMG	C2-N1-C6	-2.90	119.75	125.10
85	2	1361	PSU	C6-N1-C2	-2.90	119.72	122.68
85	2	560	OMU	O4-C4-C5	-2.90	120.06	125.16
26	S1	455	PSU	C6-C5-C4	2.90	120.22	118.20
26	S1	12	PSU	C6-N1-C2	-2.90	119.72	122.68
85	2	1403	PSU	C6-N1-C2	-2.90	119.72	122.68
85	2	1078	OMG	C8-N7-C5	2.89	108.50	102.99
85	2	655	OMG	C8-N7-C5	2.89	108.50	102.99
85	2	1060	PSU	C6-N1-C2	-2.89	119.73	122.68
85	2	1078	OMG	C2-N1-C6	-2.89	119.78	125.10
1	1	1107	OMU	O4-C4-C5	-2.89	120.08	125.16
85	2	1419	OMU	O4-C4-C5	-2.88	120.09	125.16
1	1	1659	OMU	O4-C4-C5	-2.88	120.09	125.16
85	2	1359	OMU	O4-C4-C5	-2.88	120.09	125.16
85	2	512	PSU	C6-N1-C2	-2.88	119.74	122.68
85	2	1382	PSU	C6-N1-C2	-2.88	119.74	122.68
1	1	847	OMU	O4-C4-C5	-2.88	120.10	125.16
6	7	69	PSU	C6-N1-C2	-2.87	119.74	122.68
85	2	73	OMU	O4-C4-C5	-2.87	120.11	125.16
26	S1	600	OMG	C8-N7-C5	2.87	108.45	102.99
1	1	239	PSU	C6-N1-C2	-2.87	119.75	122.68
1	1	940	PSU	C6-N1-C2	-2.87	119.75	122.68
1	1	856	OMG	C2-N1-C6	-2.86	119.83	125.10
85	2	597	PSU	C6-N1-C2	-2.86	119.76	122.68
85	2	641	OMG	C8-N7-C5	2.86	108.44	102.99
26	S1	2151	OMG	C8-N7-C5	2.86	108.44	102.99
1	1	1181	PSU	C6-N1-C2	-2.86	119.76	122.68
26	S1	1156	PSU	C6-N1-C2	-2.85	119.76	122.68
85	2	1231	OMG	C2-N1-C6	-2.85	119.84	125.10
26	S1	607	PSU	C6-N1-C2	-2.85	119.77	122.68
85	2	1229	OMG	C8-N7-C5	2.85	108.42	102.99
26	S1	1533	PSU	C6-N1-C2	-2.85	119.77	122.68
1	1	1190	OMG	C2-N1-C6	-2.85	119.86	125.10
85	2	71	OMG	C8-N7-C5	2.84	108.40	102.99
1	1	1540	OMG	C2-N1-C6	-2.83	119.88	125.10
1	1	1540	OMG	C8-N7-C5	2.83	108.39	102.99
85	2	662	PSU	C6-N1-C2	-2.83	119.79	122.68

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
85	2	667	OMU	O4-C4-C5	-2.83	120.19	125.16
26	S1	1995	7MG	O6-C6-C5	-2.83	120.60	127.54
1	1	856	OMG	C8-N7-C5	2.83	108.37	102.99
85	2	641	OMG	C2-N1-C6	-2.82	119.90	125.10
3	4	74	OMG	C2-N1-C6	-2.82	119.91	125.10
85	2	1382	PSU	C6-C5-C4	2.82	120.17	118.20
6	7	75	OMG	C8-N7-C5	2.82	108.36	102.99
85	2	626	PSU	C6-N1-C2	-2.82	119.80	122.68
26	S1	1833	OMU	O4-C4-C5	-2.81	120.22	125.16
26	S1	1623	OMG	C8-N7-C5	2.81	108.34	102.99
85	2	1077	OMU	O4-C4-C5	-2.81	120.22	125.16
85	2	1231	OMG	C8-N7-C5	2.81	108.34	102.99
85	2	1046	OMG	C8-N7-C5	2.80	108.33	102.99
1	1	1171	PSU	C6-N1-C2	-2.80	119.82	122.68
85	2	1253	OMG	C8-N7-C5	2.80	108.33	102.99
85	2	437	PSU	C6-N1-C2	-2.80	119.82	122.68
26	S1	1879	OMG	C8-N7-C5	2.80	108.32	102.99
3	4	74	OMG	C8-N7-C5	2.79	108.31	102.99
85	2	78	PSU	C6-N1-C2	-2.79	119.83	122.68
26	S1	2202	PSU	C6-N1-C2	-2.78	119.84	122.68
1	1	1626	OMG	C8-N7-C5	2.78	108.29	102.99
26	S1	1550	OMG	C8-N7-C5	2.78	108.28	102.99
85	2	534	OMG	C8-N7-C5	2.78	108.28	102.99
85	2	1403	PSU	C6-C5-C4	2.78	120.14	118.20
1	1	959[A]	OMG	C2-N1-C6	-2.77	119.99	125.10
26	S1	1865	OMG	C8-N7-C5	2.77	108.27	102.99
85	2	512	PSU	C6-C5-C4	2.77	120.14	118.20
26	S1	1657	PSU	C6-N1-C2	-2.77	119.85	122.68
1	1	1039	PSU	C6-C5-C4	2.75	120.12	118.20
85	2	472	PSU	C6-C5-C4	2.75	120.12	118.20
85	2	1318	PSU	C6-N1-C2	-2.75	119.88	122.68
85	2	1360	OMG	C8-N7-C5	2.74	108.21	102.99
85	2	78	PSU	C6-C5-C4	2.74	120.11	118.20
26	S1	1829	OMG	C8-N7-C5	2.74	108.20	102.99
26	S1	609	PSU	O2-C2-N1	-2.73	119.78	122.79
26	S1	1566	PSU	C6-N1-C2	-2.72	119.90	122.68
26	S1	609	PSU	C6-C5-C4	2.71	120.10	118.20
85	2	1264	PSU	C6-C5-C4	2.70	120.09	118.20
1	1	1533	PSU	O2-C2-N1	-2.70	119.82	122.79
26	S1	1478	OMG	C8-N7-C5	2.69	108.12	102.99
1	1	1371	OMU	O4-C4-C5	-2.69	120.44	125.16
85	2	1308	5MC	C4'-O4'-C1'	-2.69	103.55	109.47

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	940	PSU	C6-C5-C4	2.68	120.07	118.20
26	S1	8	OMU	O4-C4-C5	-2.67	120.46	125.16
85	2	1144	PSU	C6-C5-C4	2.67	120.06	118.20
85	2	570	A2M	C3'-C2'-C1'	2.65	107.86	102.89
1	1	1017	PSU	O2-C2-N1	-2.64	119.88	122.79
26	S1	1841	PSU	O2-C2-N1	-2.64	119.89	122.79
1	1	1664	PSU	C6-C5-C4	2.64	120.04	118.20
85	2	1354	PSU	C6-C5-C4	2.63	120.04	118.20
85	2	472	PSU	O2-C2-N1	-2.63	119.89	122.79
85	2	1058	PSU	C6-C5-C4	2.63	120.04	118.20
1	1	870	PSU	C6-N1-C2	-2.63	120.00	122.68
1	1	870	PSU	C6-C5-C4	2.62	120.03	118.20
26	S1	104	PSU	C6-N1-C2	-2.62	120.01	122.68
1	1	239	PSU	C6-C5-C4	2.62	120.03	118.20
1	1	1528	PSU	C6-C5-C4	2.61	120.02	118.20
85	2	1303	PSU	C6-C5-C4	2.59	120.01	118.20
1	1	672	PSU	C6-C5-C4	2.58	120.00	118.20
85	2	1382	PSU	O2-C2-N1	-2.58	119.95	122.79
1	1	672	PSU	O2-C2-N1	-2.57	119.96	122.79
85	2	1060	PSU	O2-C2-N1	-2.57	119.97	122.79
26	S1	33	PSU	O2-C2-N1	-2.56	119.97	122.79
26	S1	1657	PSU	C6-C5-C4	2.54	119.98	118.20
26	S1	2046	PSU	O2-C2-N1	-2.54	119.99	122.79
6	7	74	PSU	C6-C5-C4	2.54	119.97	118.20
1	1	1664	PSU	O2-C2-N1	-2.53	120.00	122.79
85	2	512	PSU	O2-C2-N1	-2.53	120.00	122.79
1	1	422	PSU	O2-C2-N1	-2.52	120.02	122.79
85	2	1372	A2M	C3'-C2'-C1'	2.52	107.63	102.89
1	1	1011	PSU	O2-C2-N1	-2.52	120.02	122.79
85	2	1264	PSU	O2-C2-N1	-2.51	120.02	122.79
26	S1	2046	PSU	C6-C5-C4	2.51	119.96	118.20
1	1	1527	OMC	C1'-N1-C2	2.51	124.02	118.42
26	S1	1995	7MG	N9-C4-N3	2.50	129.21	125.47
85	2	593	PSU	O2-C2-N1	-2.50	120.04	122.79
85	2	662	PSU	O2-C2-N1	-2.50	120.04	122.79
26	S1	1156	PSU	C6-C5-C4	2.50	119.94	118.20
85	2	1144	PSU	O2-C2-N1	-2.50	120.04	122.79
26	S1	1246	PSU	O2-C2-N1	-2.48	120.06	122.79
85	2	1413	PSU	O2-C2-N1	-2.48	120.06	122.79
1	1	959[B]	OMG	C8-N7-C5	2.47	107.70	102.99
26	S1	1539	PSU	O2-C2-N1	-2.47	120.07	122.79
26	S1	8	OMU	O2-C2-N1	-2.47	119.51	122.79

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1039	PSU	O2-C2-N1	-2.46	120.08	122.79
85	2	510	PSU	C6-C5-C4	2.46	119.92	118.20
1	1	677	1MA	C8-N7-C5	2.45	107.67	102.99
1	1	1527	OMC	O2-C2-N3	-2.45	118.34	122.33
6	7	74	PSU	O2-C2-N1	-2.45	120.09	122.79
85	2	1403	PSU	O2-C2-N1	-2.45	120.09	122.79
26	S1	1657	PSU	O2-C2-N1	-2.45	120.10	122.79
1	1	239	PSU	O2-C2-N1	-2.45	120.10	122.79
85	2	1058	PSU	O2-C2-N1	-2.44	120.11	122.79
85	2	1185	A2M	C3'-C2'-C1'	2.44	107.47	102.89
85	2	1303	PSU	O2-C2-N1	-2.43	120.11	122.79
85	2	510	PSU	O2-C2-N1	-2.42	120.12	122.79
26	S1	1995	7MG	N9-C8-N7	2.42	106.84	103.38
85	2	1361	PSU	C6-C5-C4	2.41	119.89	118.20
1	1	1528	PSU	O2-C2-N1	-2.41	120.14	122.79
85	2	626	PSU	O2-C2-N1	-2.40	120.15	122.79
85	2	437	PSU	O2-C2-N1	-2.40	120.15	122.79
26	S1	1533	PSU	O2-C2-N1	-2.39	120.16	122.79
85	2	1265	PSU	C6-N1-C2	-2.39	120.24	122.68
1	1	845	OMU	O4-C4-C5	-2.39	120.97	125.16
26	S1	2048	PSU	O2-C2-N1	-2.38	120.17	122.79
26	S1	2048	PSU	C6-C5-C4	2.37	119.86	118.20
26	S1	2202	PSU	O2-C2-N1	-2.37	120.18	122.79
1	1	1402	PSU	O2-C2-N1	-2.37	120.19	122.79
26	S1	1156	PSU	O2-C2-N1	-2.36	120.19	122.79
1	1	940	PSU	O2-C2-N1	-2.36	120.20	122.79
26	S1	1879	OMG	O6-C6-C5	-2.35	119.78	124.37
85	2	1354	PSU	O2-C2-N1	-2.35	120.21	122.79
85	2	1264	PSU	O4'-C1'-C2'	2.34	108.45	105.14
85	2	1194	PSU	O2-C2-N1	-2.34	120.21	122.79
85	2	597	PSU	C6-C5-C4	2.34	119.83	118.20
85	2	1265	PSU	O2-C2-N1	-2.33	120.22	122.79
1	1	1017	PSU	C6-C5-C4	2.33	119.83	118.20
1	1	870	PSU	O2-C2-N1	-2.33	120.23	122.79
1	1	847	OMU	O2-C2-N1	-2.33	119.69	122.79
85	2	662	PSU	C6-C5-C4	2.32	119.82	118.20
85	2	78	PSU	O2-C2-N1	-2.32	120.23	122.79
85	2	1318	PSU	C6-C5-C4	2.32	119.82	118.20
85	2	437	PSU	C6-C5-C4	2.31	119.82	118.20
85	2	1078	OMG	N2-C2-N1	2.31	121.64	116.71
1	1	1171	PSU	C6-C5-C4	2.31	119.81	118.20
1	1	1626	OMG	O6-C6-C5	-2.31	119.86	124.37

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	S1	455	PSU	O2-C2-N1	-2.31	120.25	122.79
26	S1	12	PSU	O2-C2-N1	-2.31	120.25	122.79
26	S1	1192	PSU	O2-C2-N1	-2.31	120.25	122.79
85	2	597	PSU	O2-C2-N1	-2.30	120.26	122.79
85	2	1318	PSU	O2-C2-N1	-2.29	120.27	122.79
26	S1	1543	C4J	N3-C2-N1	2.28	119.97	116.76
26	S1	1550	OMG	O6-C6-C5	-2.27	119.94	124.37
85	2	1303	PSU	O4'-C1'-C2'	2.27	108.34	105.14
26	S1	607	PSU	C6-C5-C4	2.26	119.78	118.20
85	2	524	5MC	CM5-C5-C6	-2.26	119.83	122.85
1	1	1107	OMU	O2-C2-N1	-2.26	119.78	122.79
26	S1	12	PSU	C6-C5-C4	2.26	119.78	118.20
1	1	845	OMU	O2-C2-N3	-2.26	117.29	121.50
1	1	1181	PSU	O2-C2-N1	-2.26	120.30	122.79
26	S1	1829	OMG	O6-C6-C5	-2.26	119.96	124.37
26	S1	661	OMU	O2-C2-N1	-2.25	119.79	122.79
85	2	1229	OMG	O6-C6-C5	-2.25	119.98	124.37
85	2	1361	PSU	O2-C2-N1	-2.24	120.32	122.79
85	2	1194	PSU	C6-C5-C4	2.23	119.76	118.20
26	S1	1623	OMG	O6-C6-C5	-2.23	120.01	124.37
26	S1	1478	OMG	O6-C6-C5	-2.22	120.03	124.37
26	S1	1833	OMU	O2-C2-N1	-2.22	119.83	122.79
85	2	1403	PSU	O4'-C1'-C2'	2.22	108.27	105.14
6	7	69	PSU	O4'-C1'-C2'	2.22	108.27	105.14
3	4	74	OMG	O6-C6-C5	-2.21	120.05	124.37
26	S1	2151	OMG	O6-C6-C5	-2.21	120.06	124.37
6	7	75	OMG	O6-C6-C5	-2.21	120.06	124.37
26	S1	607	PSU	O2-C2-N1	-2.20	120.37	122.79
85	2	1077	OMU	O2-C2-N1	-2.20	119.86	122.79
26	S1	1647	OMG	O6-C6-C5	-2.20	120.08	124.37
85	2	1382	PSU	O4'-C1'-C2'	2.19	108.23	105.14
1	1	959[A]	OMG	O6-C6-C5	-2.19	120.10	124.37
85	2	1360	OMG	O6-C6-C5	-2.18	120.11	124.37
26	S1	1533	PSU	C6-C5-C4	2.18	119.72	118.20
85	2	570	A2M	O2'-C2'-C1'	2.18	113.42	109.09
1	1	1524	OMG	O6-C6-C5	-2.18	120.12	124.37
1	1	1171	PSU	O2-C2-N1	-2.18	120.39	122.79
1	1	1540	OMG	N2-C2-N1	2.17	121.34	116.71
26	S1	600	OMG	O6-C6-C5	-2.17	120.13	124.37
1	1	959[B]	OMG	O6-C6-C5	-2.16	120.14	124.37
85	2	1046	OMG	O6-C6-C5	-2.16	120.15	124.37
1	1	1664	PSU	O4'-C1'-C2'	2.16	108.19	105.14

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	1	1190	OMG	N2-C2-N1	2.16	121.31	116.71
85	2	534	OMG	O6-C6-C5	-2.16	120.16	124.37
85	2	73	OMU	O2-C2-N1	-2.15	119.92	122.79
1	1	1533	PSU	O4'-C1'-C2'	2.15	108.18	105.14
26	S1	1566	PSU	O2-C2-N1	-2.15	120.42	122.79
26	S1	1539	PSU	C6-C5-C4	2.15	119.70	118.20
85	2	641	OMG	N2-C2-N1	2.15	121.29	116.71
26	S1	1478	OMG	N2-C2-N1	2.14	121.28	116.71
26	S1	104	PSU	C6-C5-C4	2.14	119.69	118.20
1	1	1171	PSU	O4'-C1'-C2'	2.14	108.16	105.14
1	1	1540	OMG	O6-C6-C5	-2.14	120.19	124.37
85	2	1078	OMG	O6-C6-C5	-2.14	120.20	124.37
26	S1	29	OMU	O2-C2-N1	-2.14	119.94	122.79
6	7	7	OMU	O2-C2-N1	-2.13	119.95	122.79
26	S1	1865	OMG	O6-C6-C5	-2.12	120.22	124.37
1	1	672	PSU	O4'-C1'-C2'	2.12	108.13	105.14
1	1	959[A]	OMG	C3'-C2'-C1'	-2.11	98.92	102.89
26	S1	2061	5MC	CM5-C5-C6	-2.11	120.03	122.85
85	2	1359	OMU	O2-C2-N1	-2.11	119.98	122.79
85	2	1413	PSU	C6-C5-C4	2.11	119.67	118.20
1	1	407	A2M	C5'-C4'-C3'	-2.11	107.28	115.18
26	S1	1543	C4J	C5-C4-N3	2.09	120.04	116.17
85	2	71	OMG	O6-C6-C5	-2.08	120.32	124.37
1	1	856	OMG	O6-C6-C5	-2.07	120.32	124.37
2	3	13	OMU	O2-C2-N1	-2.06	120.04	122.79
1	1	1659	OMU	O2-C2-N1	-2.06	120.05	122.79
85	2	560	OMU	O2-C2-N1	-2.06	120.05	122.79
1	1	1011	PSU	O4'-C1'-C2'	2.05	108.04	105.14
26	S1	479	A2M	C3'-C2'-C1'	2.05	106.75	102.89
85	2	655	OMG	O6-C6-C5	-2.05	120.37	124.37
85	2	641	OMG	O6-C6-C5	-2.04	120.38	124.37
26	S1	607	PSU	O4'-C1'-C2'	2.04	108.03	105.14
85	2	1231	OMG	O6-C6-C5	-2.04	120.39	124.37
3	4	74	OMG	N2-C2-N1	2.04	121.05	116.71
26	S1	104	PSU	O2-C2-N1	-2.04	120.55	122.79
1	1	1626	OMG	N2-C2-N1	2.03	121.03	116.71
1	1	858	A2M	C3'-C2'-C1'	2.02	106.69	102.89
85	2	1253	OMG	O6-C6-C5	-2.02	120.42	124.37
85	2	1229	OMG	N2-C2-N1	2.02	121.02	116.71
26	S1	479	A2M	C5'-C4'-C3'	-2.02	107.62	115.18
85	2	1318	PSU	O4'-C1'-C2'	2.02	107.99	105.14
6	7	69	PSU	O2-C2-N1	-2.01	120.58	122.79

There are no chirality outliers.

All (129) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
1	1	407	A2M	O4'-C4'-C5'-O5'
1	1	407	A2M	C3'-C4'-C5'-O5'
1	1	678	A2M	O4'-C4'-C5'-O5'
1	1	681	A2M	O4'-C4'-C5'-O5'
1	1	845	OMU	O4'-C1'-N1-C2
1	1	845	OMU	O4'-C1'-N1-C6
1	1	845	OMU	C1'-C2'-O2'-CM2
1	1	959[A]	OMG	O4'-C4'-C5'-O5'
1	1	959[A]	OMG	C3'-C4'-C5'-O5'
1	1	1010	OMC	C1'-C2'-O2'-CM2
1	1	1107	OMU	C3'-C4'-C5'-O5'
1	1	1107	OMU	O4'-C4'-C5'-O5'
1	1	1181	PSU	O4'-C1'-C5-C4
1	1	1181	PSU	O4'-C1'-C5-C6
1	1	1371	OMU	O4'-C1'-N1-C2
1	1	1371	OMU	O4'-C1'-N1-C6
1	1	1371	OMU	C3'-C4'-C5'-O5'
1	1	1540	OMG	O4'-C4'-C5'-O5'
1	1	1540	OMG	C3'-C4'-C5'-O5'
6	7	7	OMU	C1'-C2'-O2'-CM2
6	7	69	PSU	O4'-C1'-C5-C4
6	7	69	PSU	C2'-C1'-C5-C6
6	7	69	PSU	O4'-C1'-C5-C6
6	7	74	PSU	C3'-C4'-C5'-O5'
6	7	75	OMG	O4'-C4'-C5'-O5'
6	7	75	OMG	C3'-C4'-C5'-O5'
6	7	162	A2M	C1'-C2'-O2'-CM'
26	S1	33	PSU	C3'-C4'-C5'-O5'
26	S1	104	PSU	C3'-C4'-C5'-O5'
26	S1	104	PSU	O4'-C4'-C5'-O5'
26	S1	479	A2M	O4'-C4'-C5'-O5'
26	S1	479	A2M	C3'-C4'-C5'-O5'
26	S1	512	A2M	C3'-C4'-C5'-O5'
26	S1	600	OMG	O4'-C4'-C5'-O5'
26	S1	607	PSU	O4'-C1'-C5-C4
26	S1	607	PSU	O4'-C1'-C5-C6
26	S1	1543	C4J	N33-C32-C34-O36
26	S1	1566	PSU	O4'-C4'-C5'-O5'
26	S1	1623	OMG	C1'-C2'-O2'-CM2
26	S1	1879	OMG	C1'-C2'-O2'-CM2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
26	S1	2021	A2M	C1'-C2'-O2'-CM'
26	S1	2140	OMC	C3'-C4'-C5'-O5'
26	S1	2202	PSU	O4'-C1'-C5-C6
85	2	382	A2M	C1'-C2'-O2'-CM'
85	2	534	OMG	O4'-C4'-C5'-O5'
85	2	534	OMG	C3'-C4'-C5'-O5'
85	2	570	A2M	O4'-C4'-C5'-O5'
85	2	570	A2M	C1'-C2'-O2'-CM'
85	2	591	A2M	C1'-C2'-O2'-CM'
85	2	667	OMU	C1'-C2'-O2'-CM2
85	2	1046	OMG	O4'-C4'-C5'-O5'
1	1	678	A2M	C3'-C4'-C5'-O5'
1	1	681	A2M	C3'-C4'-C5'-O5'
6	7	74	PSU	O4'-C4'-C5'-O5'
26	S1	512	A2M	O4'-C4'-C5'-O5'
26	S1	600	OMG	C3'-C4'-C5'-O5'
26	S1	668	A2M	O4'-C4'-C5'-O5'
26	S1	668	A2M	C3'-C4'-C5'-O5'
26	S1	1550	OMG	C3'-C4'-C5'-O5'
26	S1	1566	PSU	C3'-C4'-C5'-O5'
26	S1	2140	OMC	O4'-C4'-C5'-O5'
85	2	1046	OMG	C3'-C4'-C5'-O5'
1	1	1371	OMU	O4'-C4'-C5'-O5'
26	S1	33	PSU	O4'-C4'-C5'-O5'
26	S1	98	A2M	O4'-C4'-C5'-O5'
26	S1	1550	OMG	O4'-C4'-C5'-O5'
85	2	443	OMC	C2'-C1'-N1-C6
1	1	1402	PSU	O4'-C4'-C5'-O5'
26	S1	1543	C4J	C31-C32-C34-O35
85	2	1308	5MC	C2'-C1'-N1-C6
85	2	443	OMC	C2'-C1'-N1-C2
1	1	1181	PSU	C3'-C4'-C5'-O5'
26	S1	1533	PSU	C3'-C4'-C5'-O5'
26	S1	1543	C4J	C31-C32-C34-O36
1	1	1181	PSU	O4'-C4'-C5'-O5'
26	S1	1995	7MG	O4'-C4'-C5'-O5'
85	2	1185	A2M	C3'-C4'-C5'-O5'
1	1	678	A2M	C3'-C2'-O2'-CM'
26	S1	1543	C4J	N33-C32-C34-O35
26	S1	98	A2M	C3'-C4'-C5'-O5'
26	S1	8	OMU	C2'-C1'-N1-C6
1	1	305	A2M	O4'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
26	S1	1533	PSU	O4'-C4'-C5'-O5'
26	S1	1995	7MG	C3'-C4'-C5'-O5'
1	1	1402	PSU	C3'-C4'-C5'-O5'
1	1	927	A2M	C1'-C2'-O2'-CM'
85	2	443	OMC	O4'-C1'-N1-C6
1	1	681	A2M	C4'-C5'-O5'-P
85	2	560	OMU	C4'-C5'-O5'-P
85	2	443	OMC	O4'-C1'-N1-C2
1	1	407	A2M	C3'-C2'-O2'-CM'
1	1	1107	OMU	C3'-C2'-O2'-CM2
85	2	1308	5MC	O4'-C1'-N1-C6
85	2	1361	PSU	C4'-C5'-O5'-P
26	S1	1539	PSU	C3'-C4'-C5'-O5'
85	2	1185	A2M	O4'-C4'-C5'-O5'
85	2	1308	5MC	C2'-C1'-N1-C2
26	S1	1543	C4J	C4'-C5'-O5'-P
85	2	527	A2M	O4'-C4'-C5'-O5'
26	S1	8	OMU	O4'-C1'-N1-C6
26	S1	8	OMU	C3'-C2'-O2'-CM2
1	1	1527	OMC	C2'-C1'-N1-C6
26	S1	2185	MA6	C4'-C5'-O5'-P
85	2	1248	OMC	C4'-C5'-O5'-P
85	2	1308	5MC	O4'-C1'-N1-C2
26	S1	1657	PSU	O4'-C1'-C5-C4
1	1	1524	OMG	C3'-C2'-O2'-CM2
26	S1	1550	OMG	C3'-C2'-O2'-CM2
85	2	655	OMG	C3'-C2'-O2'-CM2
26	S1	1841	PSU	O4'-C4'-C5'-O5'
26	S1	8	OMU	O4'-C1'-N1-C2
26	S1	1539	PSU	O4'-C4'-C5'-O5'
26	S1	1623	OMG	O4'-C4'-C5'-O5'
26	S1	2021	A2M	C3'-C4'-C5'-O5'
1	1	407	A2M	C1'-C2'-O2'-CM'
26	S1	8	OMU	C2'-C1'-N1-C2
1	1	305	A2M	C3'-C4'-C5'-O5'
85	2	570	A2M	C3'-C4'-C5'-O5'
26	S1	1543	C4J	C3-C31-C32-N33
26	S1	1657	PSU	O4'-C1'-C5-C6
85	2	1265	PSU	O4'-C1'-C5-C6
1	1	1527	OMC	C2'-C1'-N1-C2
1	1	1527	OMC	O4'-C4'-C5'-O5'
6	7	69	PSU	O4'-C4'-C5'-O5'

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
26	S1	8	OMU	O4'-C4'-C5'-O5'
26	S1	1833	OMU	O4'-C4'-C5'-O5'
85	2	527	A2M	C3'-C4'-C5'-O5'
26	S1	1979	OMU	C2'-C1'-N1-C2
26	S1	1833	OMU	C4'-C5'-O5'-P

There are no ring outliers.

33 monomers are involved in 37 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
85	2	1413	PSU	1	0
85	2	626	PSU	1	0
1	1	1181	PSU	1	0
1	1	678	A2M	1	0
1	1	695	OMC	1	0
1	1	422	PSU	1	0
26	S1	29	OMU	1	0
26	S1	1550	OMG	1	0
85	2	527	A2M	1	0
85	2	560	OMU	1	0
85	2	1253	OMG	1	0
26	S1	1539	PSU	1	0
85	2	604	A2M	2	0
85	2	591	A2M	2	0
26	S1	479	A2M	1	0
85	2	570	A2M	1	0
1	1	959[A]	OMG	1	0
1	1	1524	OMG	1	0
85	2	95	A2M	2	0
1	1	677	1MA	1	0
1	1	845	OMU	3	0
1	1	955	A2M	2	0
85	2	382	A2M	1	0
26	S1	2185	MA6	1	0
26	S1	661	OMU	1	0
1	1	235	A2M	1	0
6	7	162	A2M	1	0
26	S1	2021	A2M	1	0
1	1	1527	OMC	1	0
1	1	1010	OMC	1	0
26	S1	1879	OMG	1	0
26	S1	668	A2M	1	0

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	1	847	OMU	1	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 367 ligands modelled in this entry, 367 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
27	S4	1
31	SD	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S4	6:G	O3'	63:G	P	19.63
1	SD	163:PHE	C	164:GLY	N	4.10

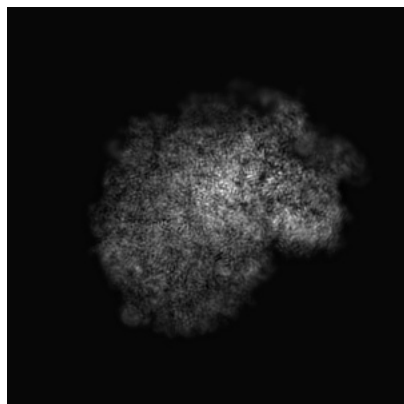
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-17216. These allow visual inspection of the internal detail of the map and identification of artifacts.

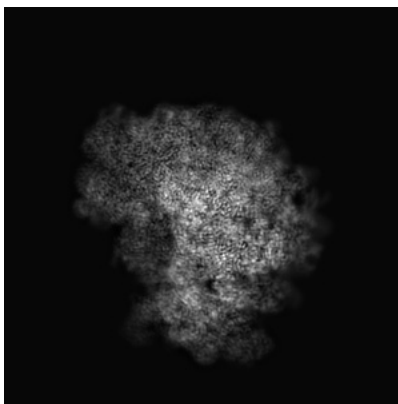
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

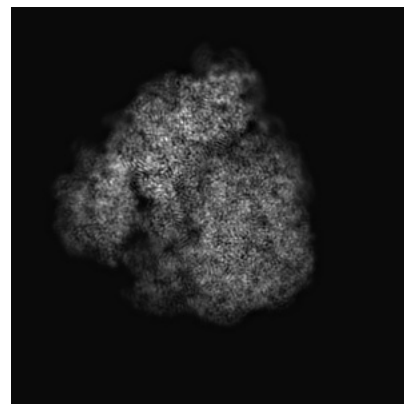
6.1.1 Primary map



X

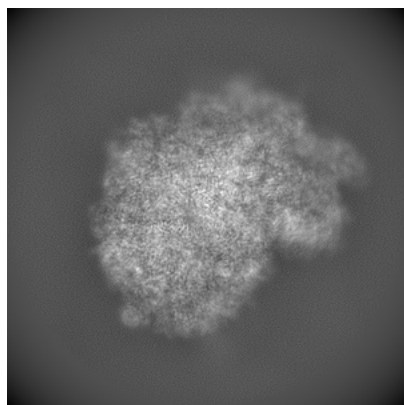


Y

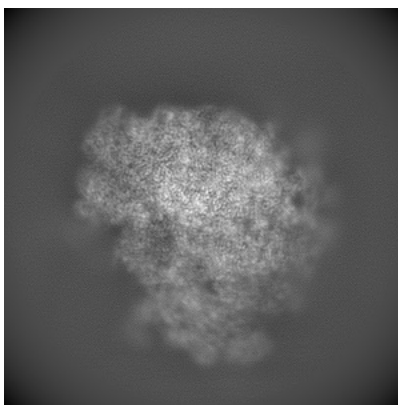


Z

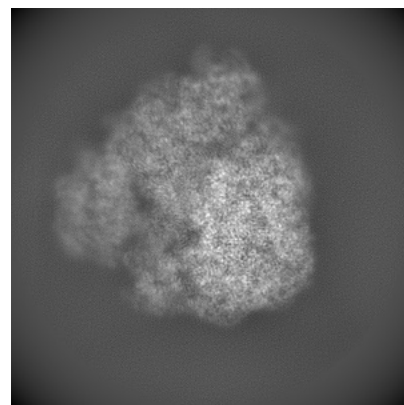
6.1.2 Raw map



X



Y

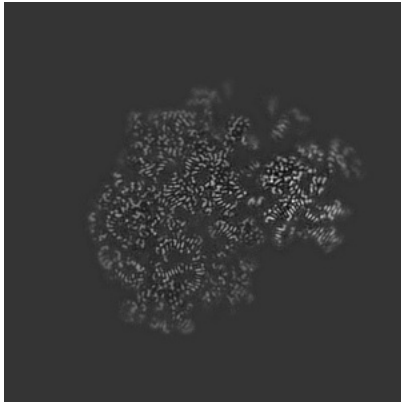


Z

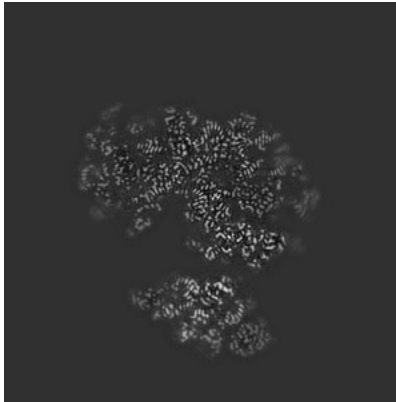
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

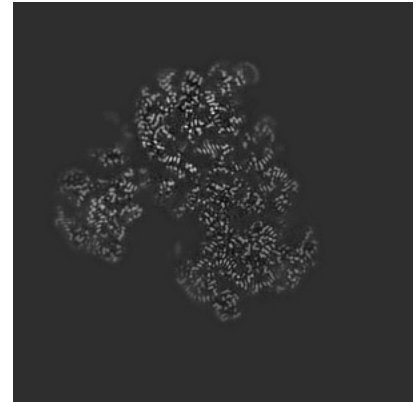
6.2.1 Primary map



X Index: 240

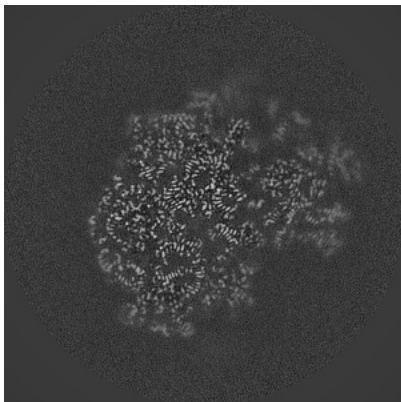


Y Index: 240

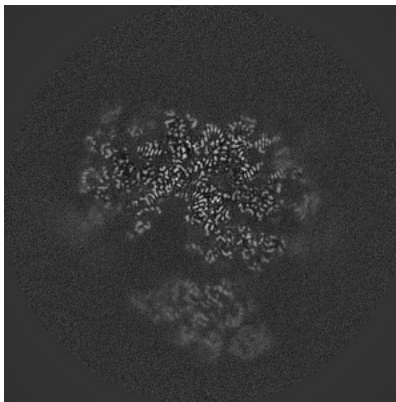


Z Index: 240

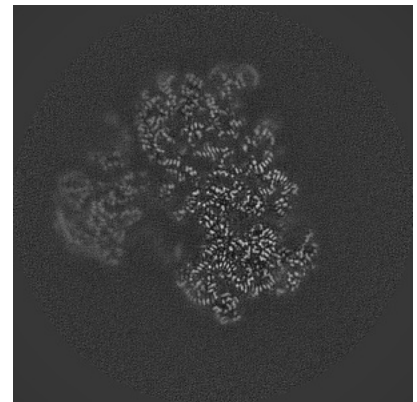
6.2.2 Raw map



X Index: 240



Y Index: 240

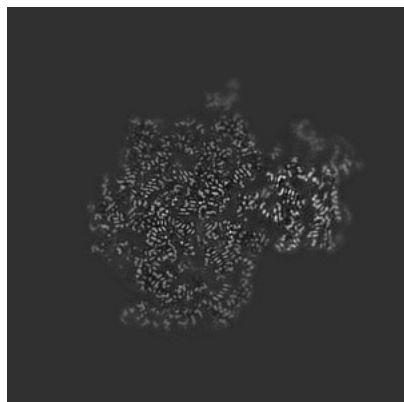


Z Index: 240

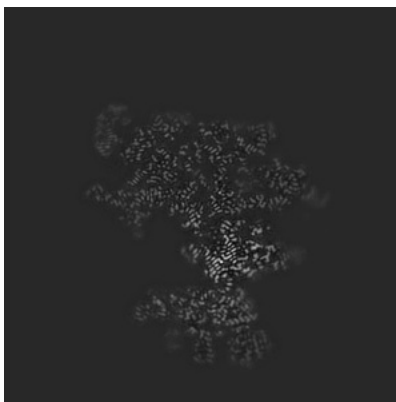
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

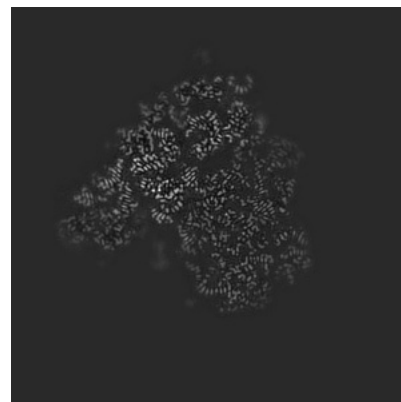
6.3.1 Primary map



X Index: 252

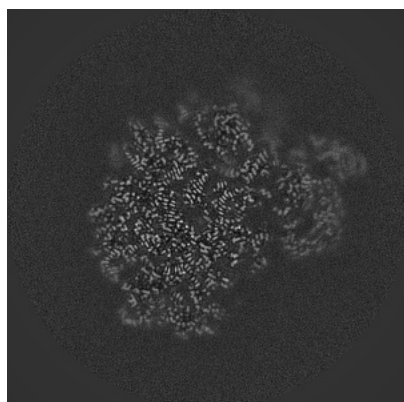


Y Index: 265

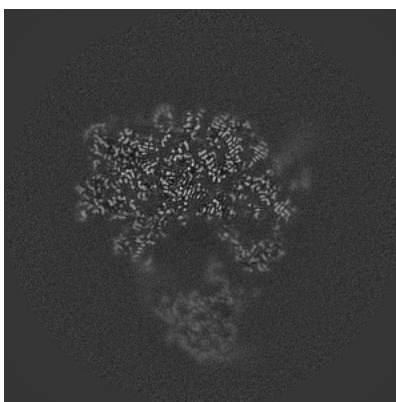


Z Index: 264

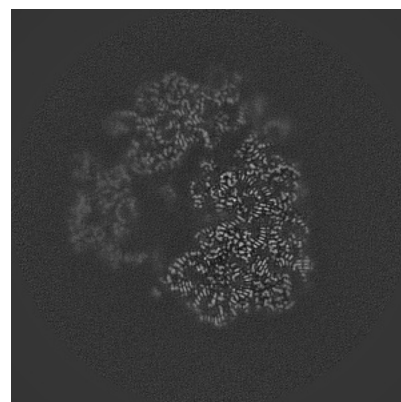
6.3.2 Raw map



X Index: 267



Y Index: 207

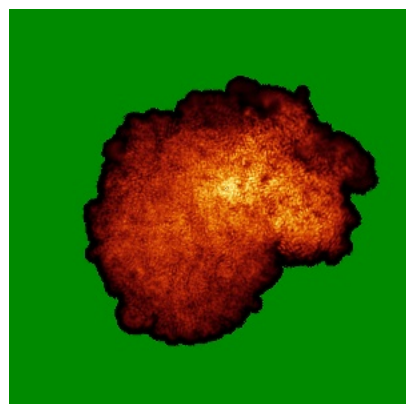


Z Index: 216

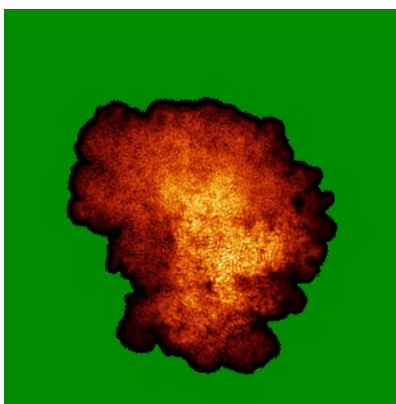
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

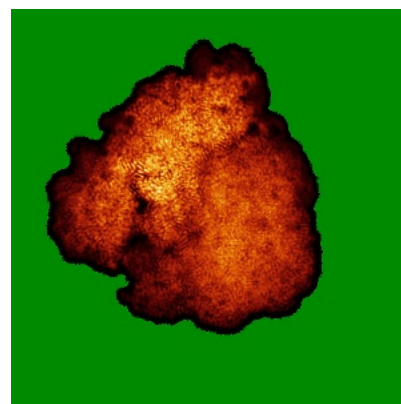
6.4.1 Primary map



X

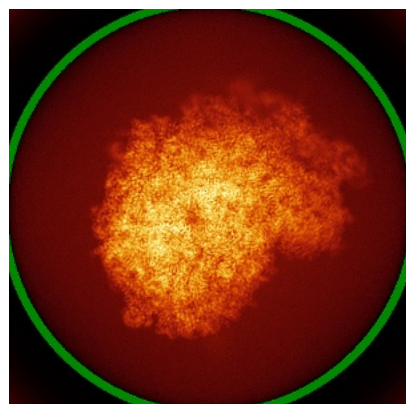


Y

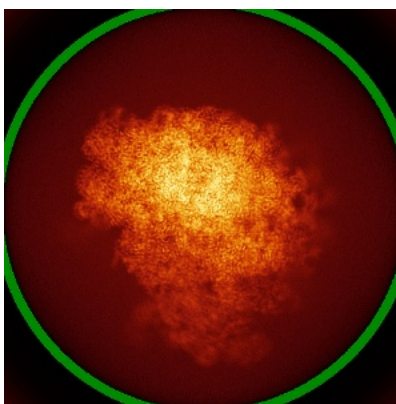


Z

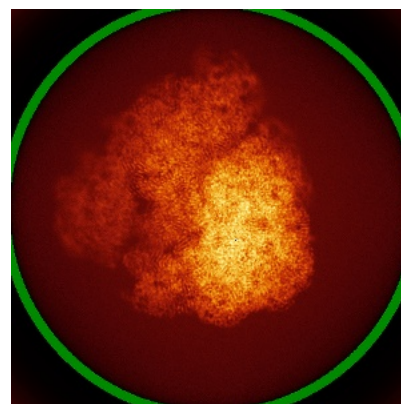
6.4.2 Raw map



X



Y

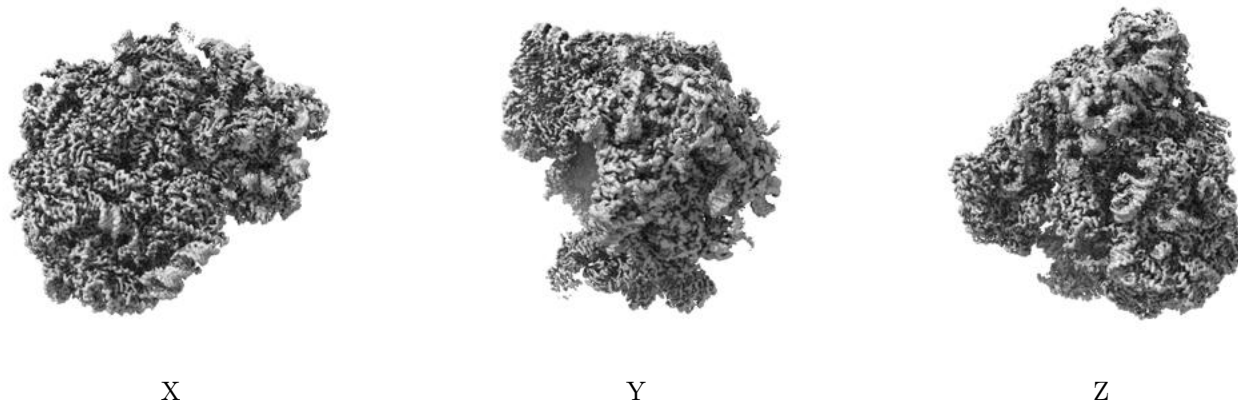


Z

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

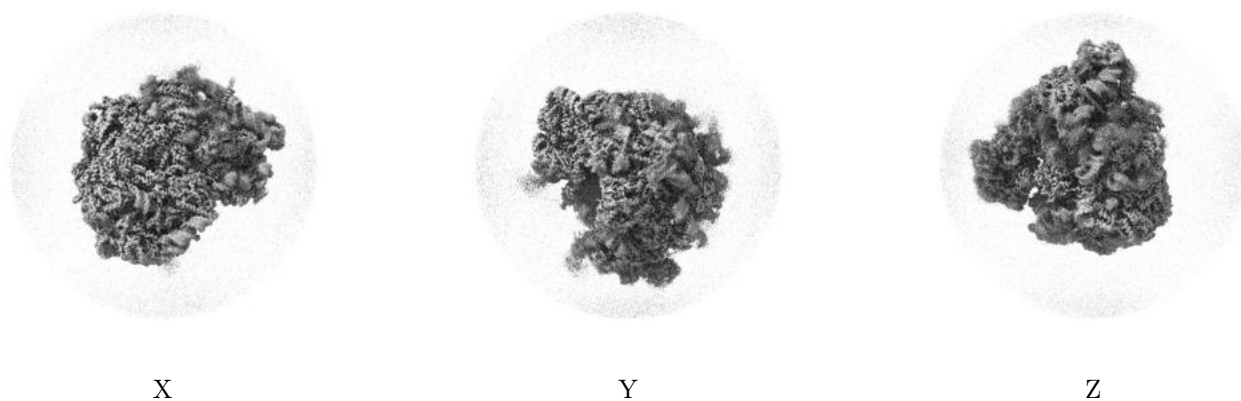
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.01. 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



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

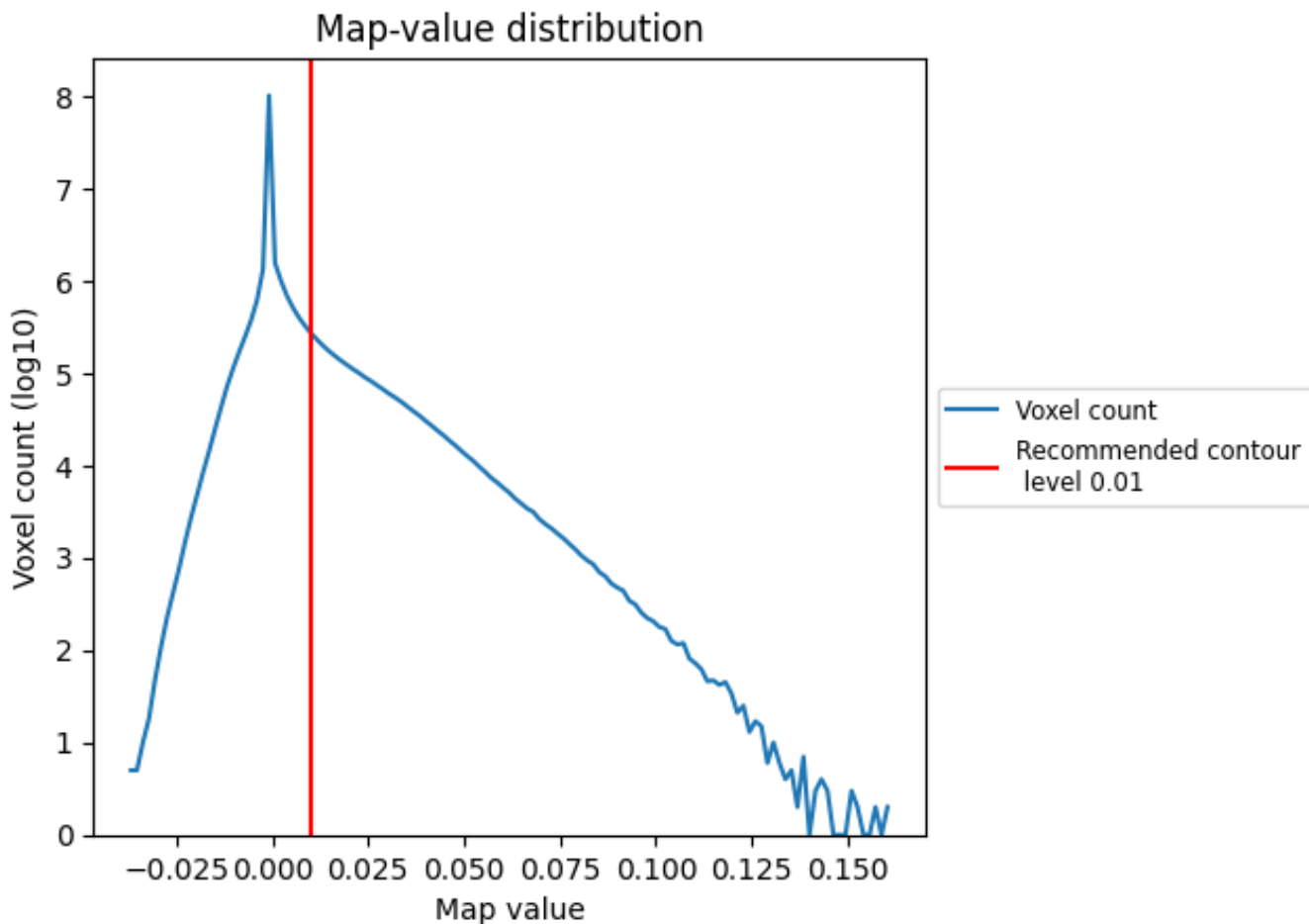
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

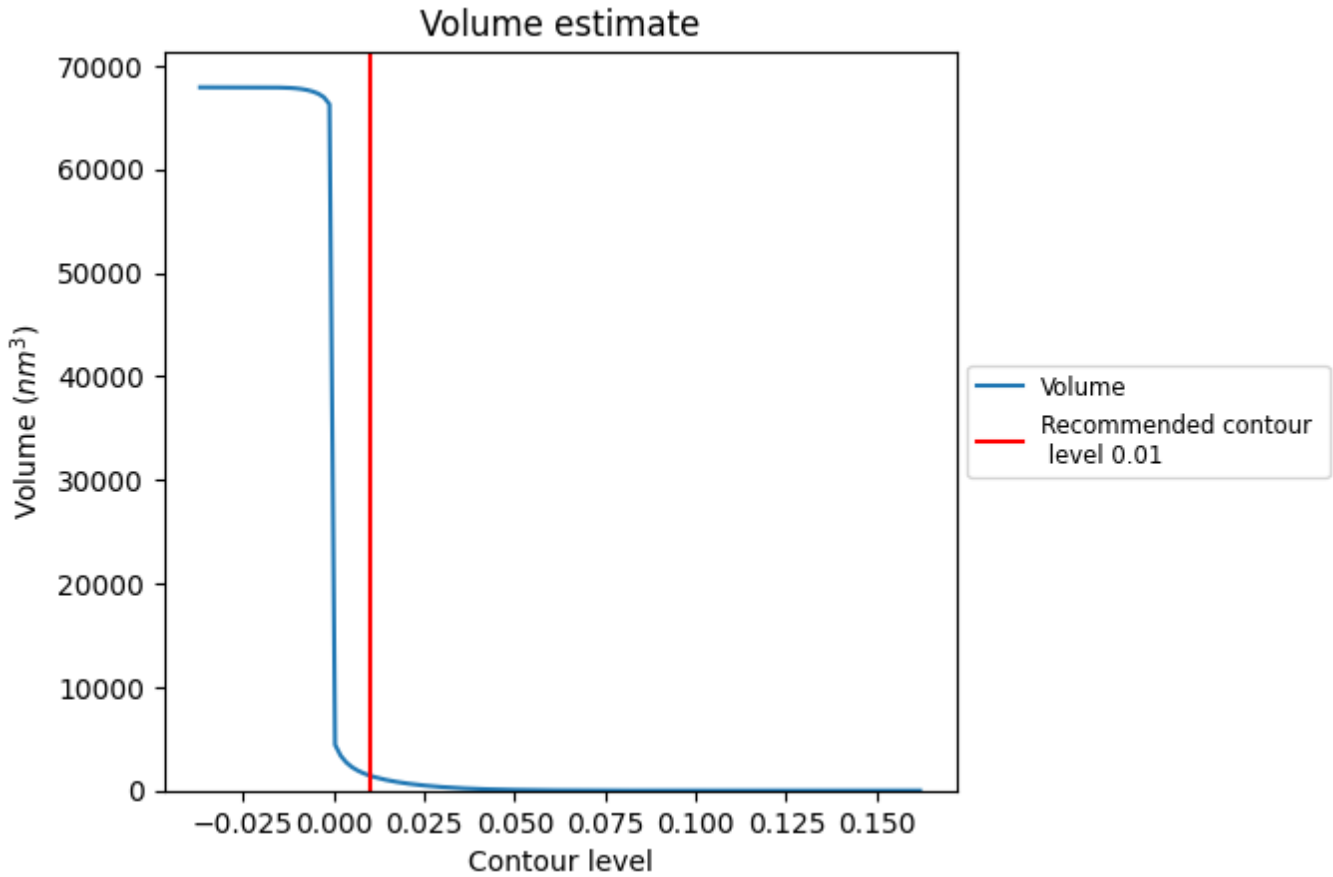
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

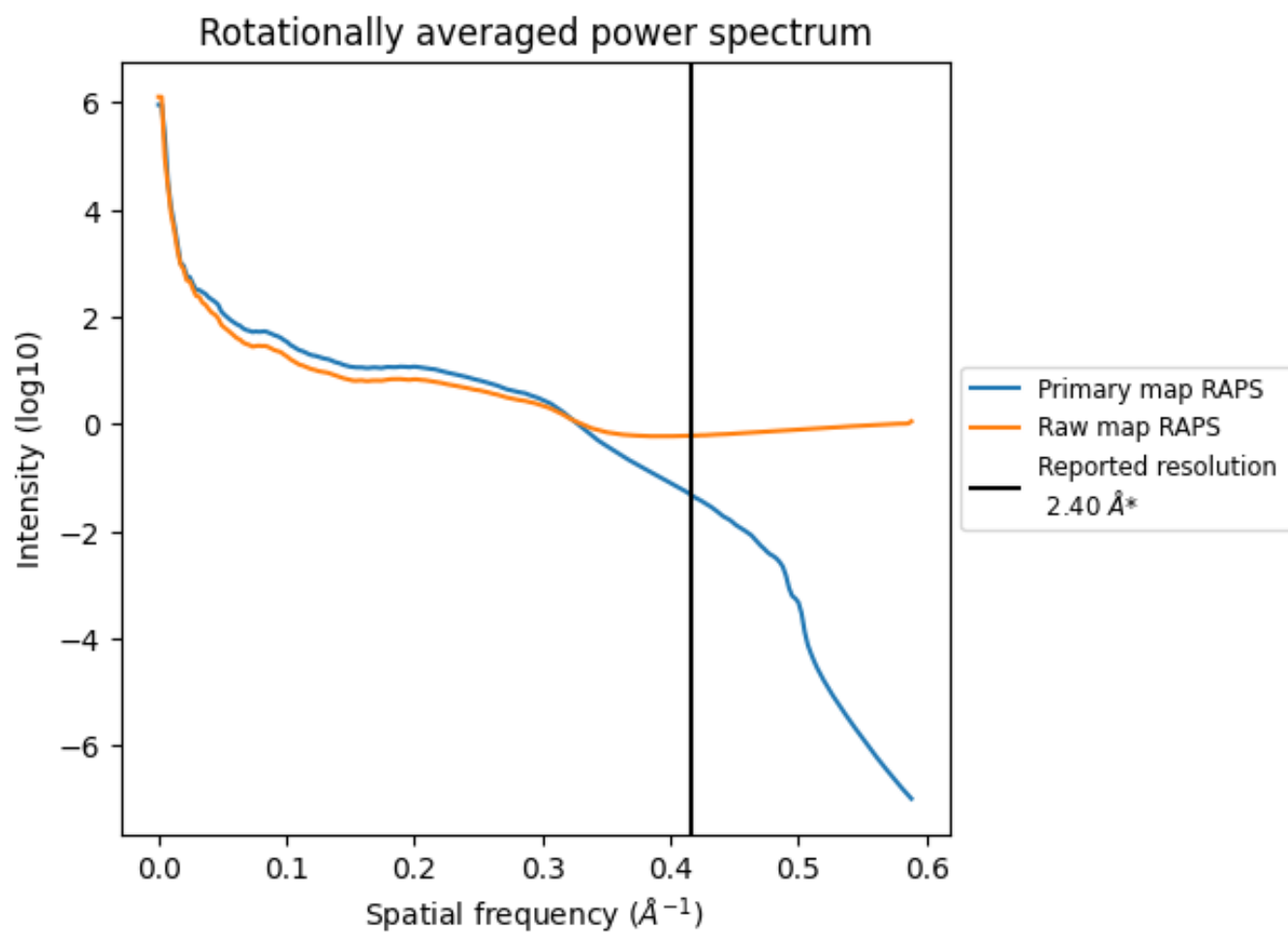
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1449 nm³; this corresponds to an approximate mass of 1309 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](#)

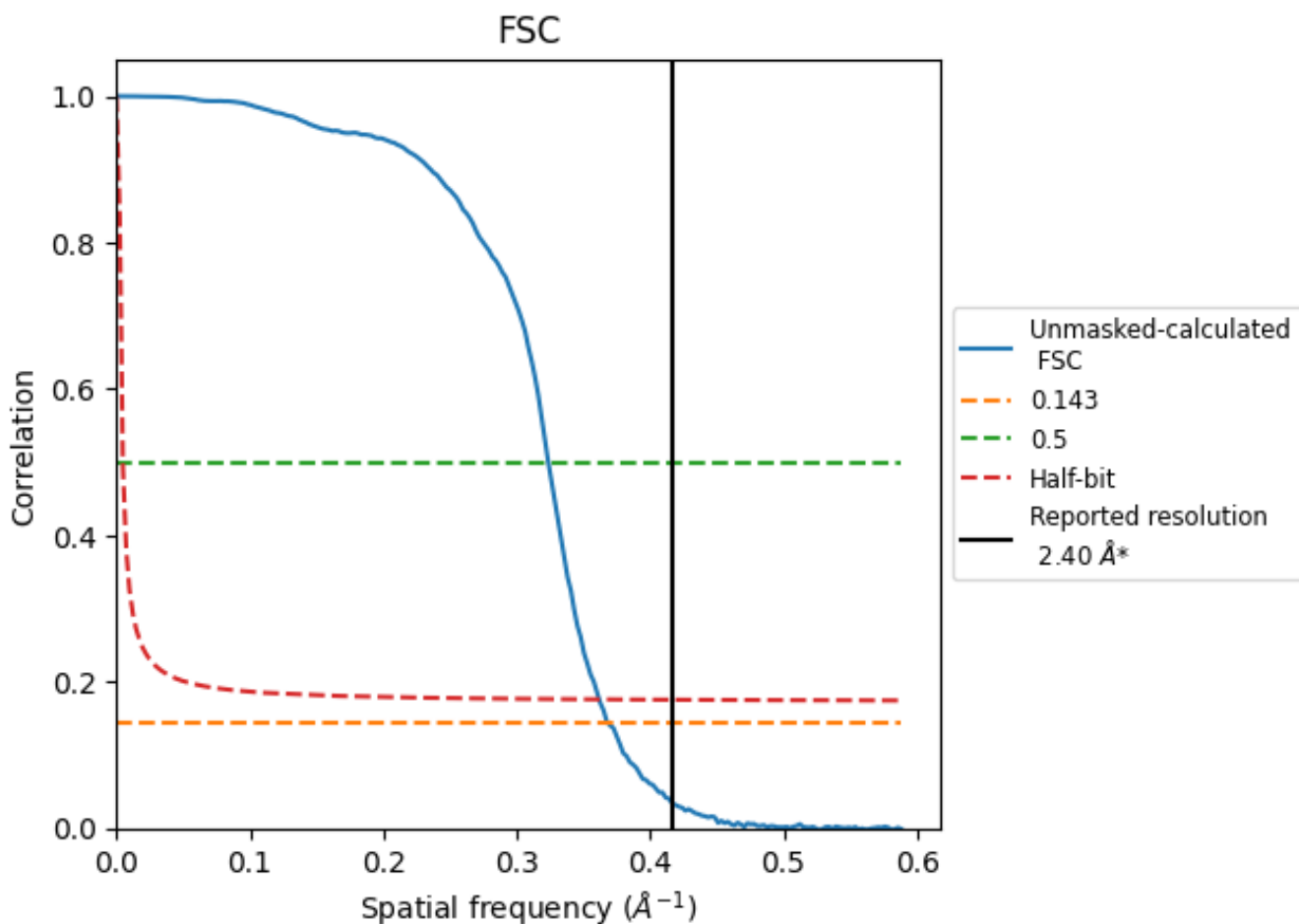


*Reported resolution corresponds to spatial frequency of 0.417 Å⁻¹

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.417 Å⁻¹

8.2 Resolution estimates [i](#)

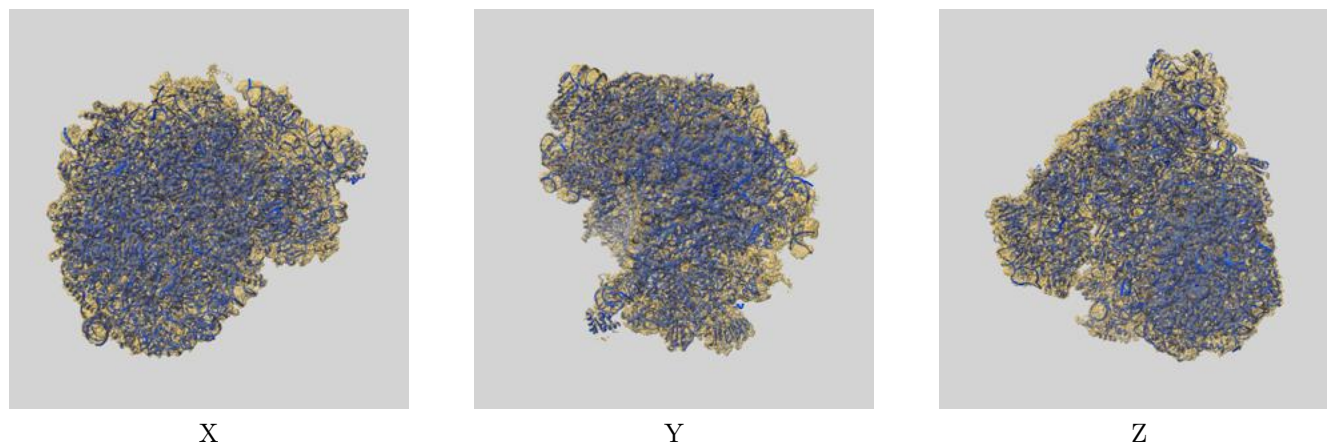
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	2.40	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	2.71	3.09	2.76

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 2.71 differs from the reported value 2.4 by more than 10 %

9 Map-model fit [i](#)

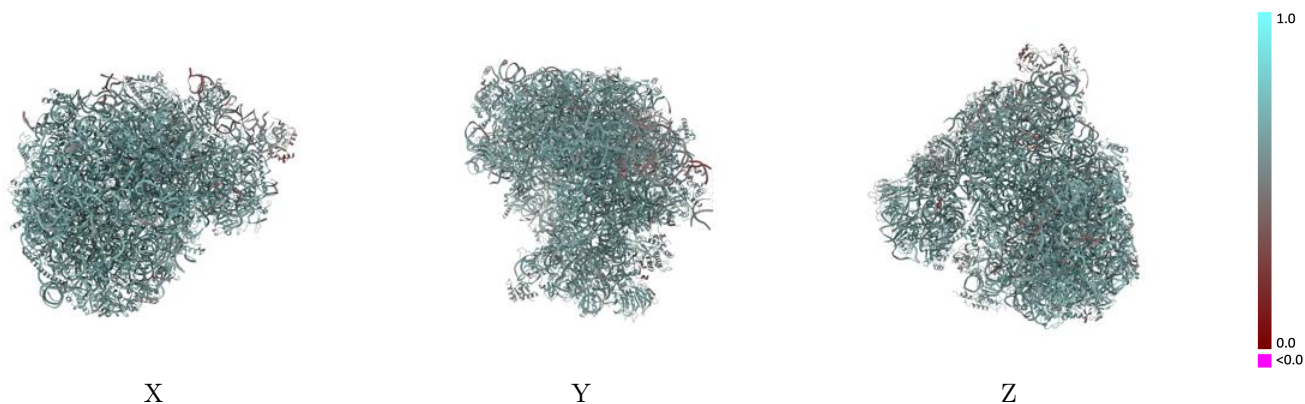
This section contains information regarding the fit between EMDB map EMD-17216 and PDB model 8OVJ. Per-residue inclusion information can be found in section 3 on page 23.

9.1 Map-model overlay [i](#)



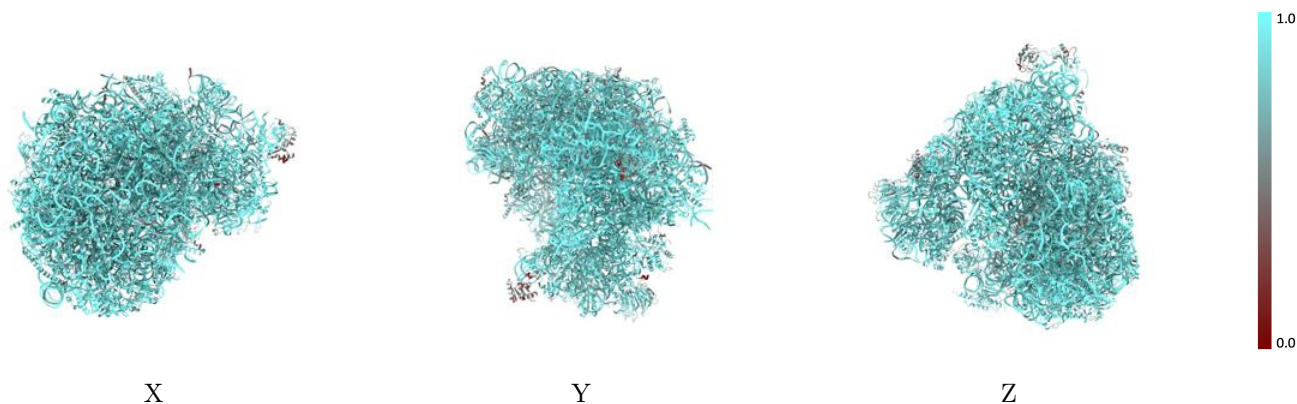
The images above show the 3D surface view of the map at the recommended contour level 0.01 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



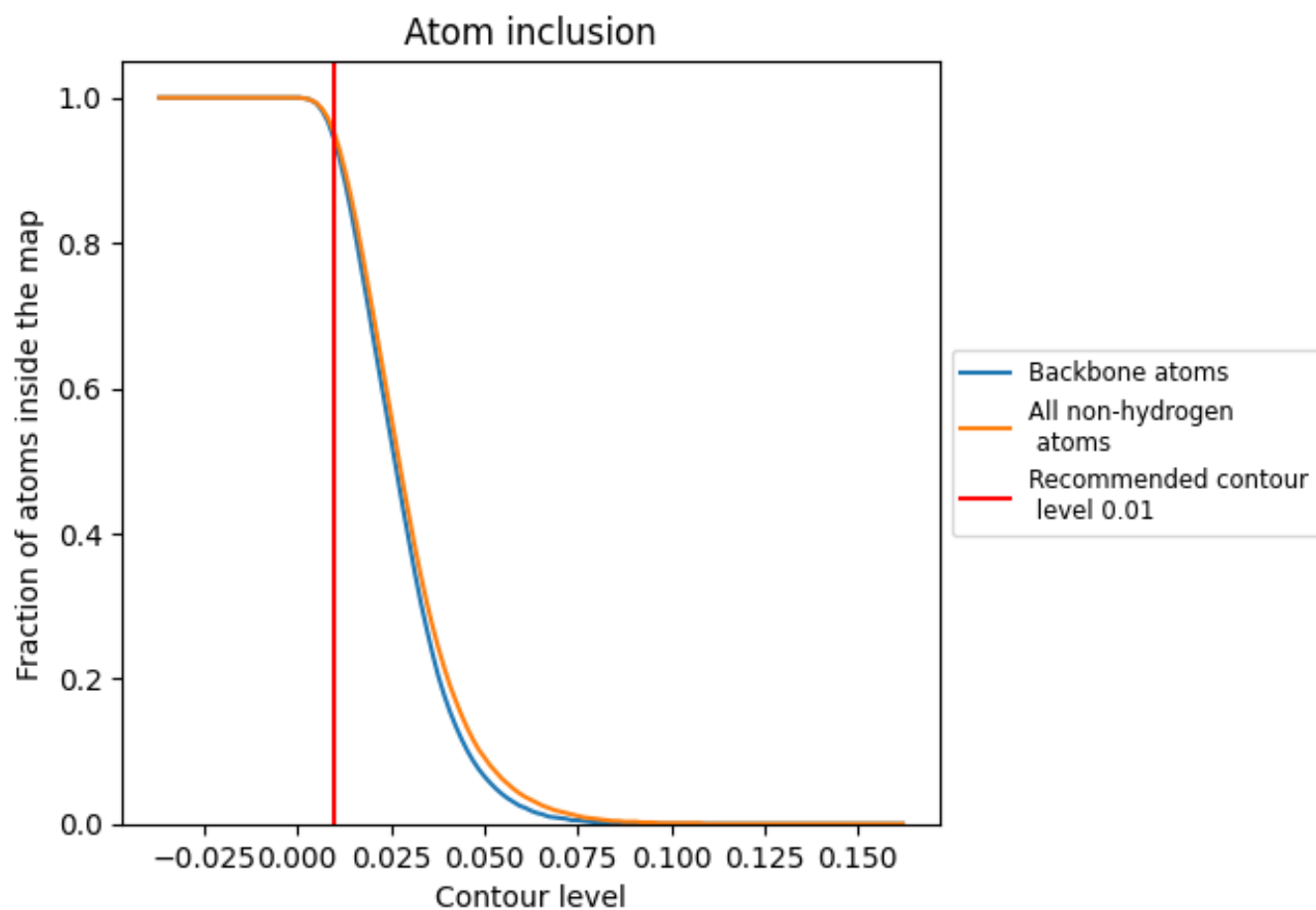
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.01).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 95% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary





















































































The table lists the average atom inclusion at the recommended contour level (0.01) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9500	 0.6300
1	 0.9760	 0.6460
2	 0.9730	 0.6410
3	 0.9530	 0.6210
4	 0.9780	 0.6420
5	 0.9610	 0.6280
6	 0.9320	 0.5920
7	 0.9750	 0.6410
8	 0.9880	 0.6130
A	 0.9740	 0.6870
B	 0.9720	 0.6620
C	 0.9710	 0.6600
D	 0.8890	 0.5650
E	 0.9170	 0.6220
F	 0.9300	 0.6190
G	 0.9510	 0.6370
H	 0.9740	 0.6590
I	 0.9360	 0.6530
J	 0.9310	 0.6600
K	 0.9080	 0.6100
L	 0.9720	 0.6820
M	 0.9870	 0.6890
N	 0.8480	 0.6160
O	 0.9190	 0.6020
P	 0.9680	 0.6760
Q	 0.9550	 0.6320
R	 0.9640	 0.6550
S	 0.9290	 0.6460
S1	 0.9800	 0.6180
S4	 0.7190	 0.5120
SA	 0.9690	 0.6230
SB	 0.9180	 0.5410
SC	 0.8590	 0.5970
SD	 0.9630	 0.6070
SE	 0.9530	 0.6210





















Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
SF	 0.9700	 0.6120
SG	 0.9400	 0.5980
SH	 0.9370	 0.6230
SI	 0.9780	 0.5940
SJ	 0.9780	 0.6440
SK	 0.9520	 0.6260
SL	 0.9500	 0.6350
SM	 0.8380	 0.6040
SN	 0.8430	 0.6080
SO	 0.9830	 0.6400
SP	 0.9720	 0.6380
SQ	 0.3390	 0.4980
SR	 0.8580	 0.6170
SS	 0.9690	 0.6400
ST	 0.9710	 0.6440
SU	 0.9630	 0.6440
SV	 0.8560	 0.5720
SW	 0.8410	 0.6140
SX	 0.9520	 0.6330
SY	 0.9430	 0.5800
SZ	 0.9670	 0.6030
Sa	 0.9190	 0.6070
Sb	 0.9900	 0.6450
Sc	 0.9450	 0.6090
Sd	 0.9380	 0.6000
Se	 0.9470	 0.5860
Sg	 0.8060	 0.5900
Sh	 0.5700	 0.4520
T	 0.9670	 0.6780
U	 0.6730	 0.5720
V	 0.9380	 0.6530
W	 0.9390	 0.6420
X	 0.9400	 0.6510
Y	 0.9190	 0.6200
Z	 0.9370	 0.6470
a	 0.9160	 0.6270
b	 0.9320	 0.6620
c	 0.9450	 0.6620
d	 0.8940	 0.6260
e	 0.8630	 0.6180
f	 0.9530	 0.6730
g	 0.9270	 0.6550

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
h	 0.8590	 0.6190
i	 0.8860	 0.6240
j	 0.9890	 0.6850
k	 0.8240	 0.6040
l	 0.9580	 0.6720
m	 0.8210	 0.6060
n	 0.9630	 0.6610
o	 0.9470	 0.6630
p	 0.9050	 0.6450