



Full wwPDB X-ray Structure Validation Report ⓘ

Dec 15, 2024 – 08:23 PM EST

PDB ID : 4WQY
Title : Crystal structure of the *Thermus thermophilus* 70S ribosome in complex with elongation factor G in the post-translocational state (without fusitic acid)
Authors : Lin, J.; Gagnon, M.G.; Steitz, T.A.
Deposited on : 2014-10-22
Resolution : 2.80 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp>

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:

MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.21
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.004 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.40

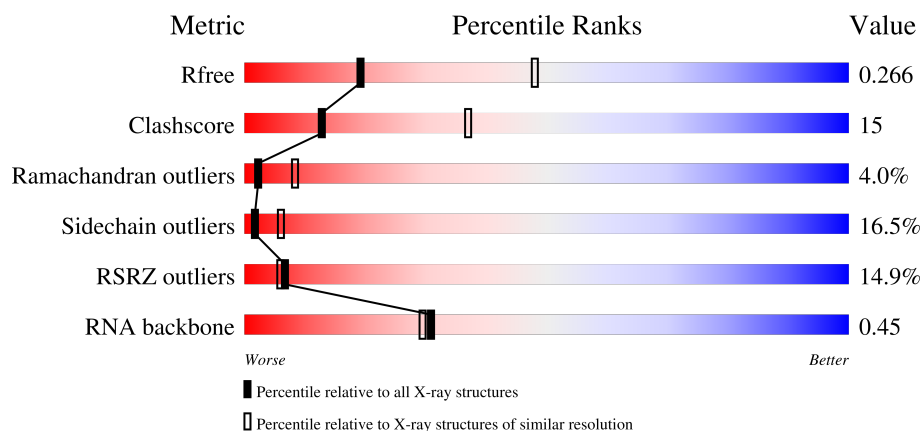
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 2.80 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	3657 (2.80-2.80)
Clashscore	180529	4123 (2.80-2.80)
Ramachandran outliers	177936	4071 (2.80-2.80)
Sidechain outliers	177891	4073 (2.80-2.80)
RSRZ outliers	164620	3659 (2.80-2.80)
RNA backbone	3690	1037 (3.00-2.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	2915	<div> <div>4%</div> <div>17% 47% 29% 5%</div> </div>
1	CA	2915	<div> <div>7%</div> <div>32% 44% 19%</div> </div>
2	AB	121	<div> <div>%</div> <div>25% 47% 24%</div> </div>
2	CB	121	<div> <div>6%</div> <div>42% 46% 10%</div> </div>

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Mol	Chain	Length	Quality of chain
3	AC	228	
3	CC	228	
4	AD	276	
4	CD	276	
5	AE	206	
5	CE	206	
6	AF	210	
6	CF	210	
7	AG	182	
7	CG	182	
8	AH	180	
8	CH	180	
9	AK	173	
9	CK	173	
10	AL	147	
10	CL	147	
11	AN	140	
11	CN	140	
12	AO	122	
12	CO	122	
13	AP	150	
13	CP	150	
14	AQ	141	
14	CQ	141	
15	AR	118	

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Mol	Chain	Length	Quality of chain
15	CR	118	
16	AS	112	
16	CS	112	
17	AT	146	
17	CT	146	
18	AU	118	
18	CU	118	
19	AV	101	
19	CV	101	
20	AW	113	
20	CW	113	
21	AX	96	
21	CX	96	
22	AY	110	
22	CY	110	
23	AZ	206	
23	CZ	206	
24	A0	85	
24	C0	85	
25	A1	98	
25	C1	98	
26	A2	72	
26	C2	72	
27	A3	60	
27	C3	60	

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Mol	Chain	Length	Quality of chain
28	A4	71	
28	C4	71	
29	A5	60	
29	C5	60	
30	A6	54	
30	C6	54	
31	A7	49	
31	C7	49	
32	A8	65	
32	C8	65	
33	A9	37	
33	C9	37	
34	BA	1521	
34	DA	1521	
35	BB	256	
35	DB	256	
36	BC	239	
36	DC	239	
37	BD	209	
37	DD	209	
38	BE	162	
38	DE	162	
39	BF	101	
39	DF	101	
40	BG	156	

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Mol	Chain	Length	Quality of chain
40	DG	156	
41	BH	138	
41	DH	138	
42	BI	128	
42	DI	128	
43	BJ	105	
43	DJ	105	
44	BK	129	
44	DK	129	
45	BL	132	
45	DL	132	
46	BM	126	
46	DM	126	
47	BN	61	
47	DN	61	
48	BO	89	
48	DO	89	
49	BP	88	
49	DP	88	
50	BQ	105	
50	DQ	105	
51	BR	88	
51	DR	88	
52	BS	93	
52	DS	93	

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Mol	Chain	Length	Quality of chain
53	BT	106	
53	DT	106	
54	BU	27	
54	DU	27	
55	BV	24	
55	DV	24	
56	BX	77	
56	DX	77	
57	BZ	758	
57	DZ	758	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
58	MG	AA	3109	-	-	-	X
58	MG	CA	3008	-	-	-	X
58	MG	CA	3071	-	-	-	X
58	MG	CA	3094	-	-	-	X

2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 305548 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 23S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	2852	Total	C	N	O	P	0	0	0
			61426	27339	11489	19747	2851			
1	CA	2848	Total	C	N	O	P	0	0	0
			61337	27299	11470	19721	2847			

- Molecule 2 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			
2	CB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

- Molecule 3 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	137	Total	C	N	O	S	0	0	0
			1063	669	201	192	1			
3	CC	137	Total	C	N	O	S	0	0	0
			1063	669	201	192	1			

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	275	Total	C	N	O	S	0	0	0
			2136	1349	423	361	3			
4	CD	275	Total	C	N	O	S	0	0	0
			2142	1352	426	361	3			

- Molecule 5 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			
5	CE	204	Total	C	N	O	S	0	0	0
			1559	985	298	270	6			

- Molecule 6 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	203	Total	C	N	O	S	0	0	1
			1584	1009	298	275	2			
6	CF	203	Total	C	N	O	S	0	0	1
			1580	1007	297	274	2			

- Molecule 7 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	181	Total	C	N	O	S	0	0	0
			1425	914	256	251	4			
7	CG	181	Total	C	N	O	S	0	0	0
			1424	911	258	251	4			

- Molecule 8 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			
8	CH	174	Total	C	N	O	S	0	0	0
			1330	845	248	236	1			

- Molecule 9 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AK	130	Total	C	N	O		0	0	0
			641	381	130	130				
9	CK	130	Total	C	N	O		0	0	0
			641	381	130	130				

- Molecule 10 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AL	139	Total	C	N	O	S	0	0	0
			1025	653	181	186	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CL	139	Total	C	N	O	S	0	0	0
			1025	653	181	186	5			

- Molecule 11 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			
11	CN	140	Total	C	N	O	S	0	0	0
			1117	719	207	187	4			

- Molecule 12 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			
12	CO	122	Total	C	N	O	S	0	0	0
			933	588	171	170	4			

- Molecule 13 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AP	149	Total	C	N	O	S	0	0	0
			1139	709	231	196	3			
13	CP	149	Total	C	N	O	S	0	0	0
			1135	706	230	196	3			

- Molecule 14 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			
14	CQ	141	Total	C	N	O	S	0	0	0
			1122	715	212	188	7			

- Molecule 15 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
15	CR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 16 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
16	AS	110	Total	C	N	O	0	0	0
			877	553	175	149			
16	CS	110	Total	C	N	O	0	0	0
			870	549	173	148			

- Molecule 17 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AT	131	Total	C	N	O	S	0	0	0
			1091	680	225	185	1			
17	CT	131	Total	C	N	O	S	0	0	0
			1083	675	224	183	1			

- Molecule 18 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			
18	CU	116	Total	C	N	O	S	0	0	0
			959	608	201	149	1			

- Molecule 19 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			
19	CV	101	Total	C	N	O	S	0	0	0
			771	495	140	135	1			

- Molecule 20 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			
20	CW	112	Total	C	N	O	S	0	0	0
			886	557	174	153	2			

- Molecule 21 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			
21	CX	95	Total	C	N	O	S	0	0	0
			750	488	135	126	1			

- Molecule 22 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			
22	CY	107	Total	C	N	O	S	0	0	0
			806	517	152	131	6			

- Molecule 23 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AZ	185	Total	C	N	O	S	0	0	0
			1451	927	258	264	2			
23	CZ	185	Total	C	N	O	S	0	0	0
			1451	927	258	264	2			

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	A0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			
24	C0	83	Total	C	N	O	S	0	0	0
			653	404	139	109	1			

- Molecule 25 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	A1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			
25	C1	97	Total	C	N	O	S	0	0	0
			755	475	148	131	1			

- Molecule 26 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	A2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	C2	70	Total	C	N	O	S	0	0	0
			588	365	118	103	2			

- Molecule 27 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	A3	59	Total	C	N	O		0	0	0
			469	298	90	81				
27	C3	59	Total	C	N	O		0	0	0
			464	296	90	78				

- Molecule 28 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	A4	69	Total	C	N	O	S	0	0	0
			558	352	102	99	5			
28	C4	69	Total	C	N	O	S	0	0	0
			532	339	97	91	5			

- Molecule 29 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	A5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			
29	C5	59	Total	C	N	O	S	0	0	0
			455	285	89	76	5			

- Molecule 30 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	A6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
30	C6	53	Total	C	N	O	S	0	0	0
			449	279	91	75	4			

- Molecule 31 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	A7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			
31	C7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 32 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	A8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
32	C8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 33 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	A9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
33	C9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 34 is a RNA chain called 16S Ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BA	1495	Total	C	N	O	P	0	0	0
			32141	14304	5958	10384	1495			
34	DA	1501	Total	C	N	O	P	0	0	0
			32268	14361	5980	10426	1501			

- Molecule 35 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BB	231	Total	C	N	O	S	0	0	0
			1846	1179	331	331	5			
35	DB	231	Total	C	N	O	S	0	0	0
			1825	1167	326	327	5			

- Molecule 36 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BC	206	Total	C	N	O	S	0	0	0
			1552	976	302	273	1			
36	DC	206	Total	C	N	O	S	0	0	0
			1544	970	300	273	1			

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BD	208	Total	C	N	O	S	0	0	0
			1659	1040	326	286	7			
37	DD	208	Total	C	N	O	S	0	0	0
			1678	1052	333	286	7			

- Molecule 38 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BE	148	Total	C	N	O	S	0	0	0
			1129	714	213	198	4			
38	DE	148	Total	C	N	O	S	0	0	0
			1133	716	214	199	4			

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BF	100	Total	C	N	O	S	0	0	0
			812	514	146	149	3			
39	DF	100	Total	C	N	O	S	0	0	0
			820	518	147	152	3			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BG	155	Total	C	N	O	S	0	0	0
			1231	766	243	216	6			
40	DG	155	Total	C	N	O	S	0	0	0
			1235	769	244	216	6			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			
41	DH	137	Total	C	N	O	S	0	0	0
			1088	689	206	191	2			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BI	127	Total	C	N	O	S	0	0	0
			986	626	193	167				

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	DI	127	Total	C	N	O	0	0	0
			978	619	190	169			

- Molecule 43 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
43	BJ	97	Total	C	N	O	0	0	0
			709	440	138	131			
43	DJ	96	Total	C	N	O	0	0	0
			714	445	138	131			

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BK	114	Total	C	N	O	S	0	0	0
			833	519	156	155	3			
44	DK	114	Total	C	N	O	S	0	0	0
			833	519	156	155	3			

- Molecule 45 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BL	122	Total	C	N	O	S	0	0	0
			930	585	185	159	1			
45	DL	122	Total	C	N	O	S	0	0	0
			930	585	185	159	1			

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BM	117	Total	C	N	O	S	0	0	0
			923	570	191	160	2			
46	DM	122	Total	C	N	O	S	0	0	0
			950	586	197	165	2			

- Molecule 47 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			
47	DN	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BO	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			
48	DO	88	Total	C	N	O	S	0	0	0
			728	456	144	126	2			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BP	82	Total	C	N	O	S	0	0	0
			681	433	134	113	1			
49	DP	82	Total	C	N	O	S	0	0	0
			677	430	133	113	1			

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			
50	DQ	99	Total	C	N	O	S	0	0	0
			823	528	151	142	2			

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BR	68	Total	C	N	O	0	0	0
			555	355	108	92			
51	DR	68	Total	C	N	O	0	0	0
			555	355	108	92			

- Molecule 52 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BS	84	Total	C	N	O	S	0	0	0
			661	423	122	114	2			
52	DS	83	Total	C	N	O	S	0	0	0
			646	412	119	113	2			

- Molecule 53 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BT	96	Total	C	N	O	S	0	0	0
			728	446	156	124	2			
53	DT	96	Total	C	N	O	S	0	0	0
			731	449	156	124	2			

- Molecule 54 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
54	BU	23	Total	C	N	O	0	0	0
			199	122	48	29			
54	DU	23	Total	C	N	O	0	0	0
			199	122	48	29			

- Molecule 55 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BV	13	Total	C	N	O	P	0	0	0
			277	125	51	88	13			
55	DV	6	Total	C	N	O	P	0	0	0
			128	59	27	37	5			

- Molecule 56 is a RNA chain called P-site tRNA.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
56	BX	76	Total	C	N	O	P	S	0	0	0
			1625	725	294	529	76	1			
56	DX	76	Total	C	N	O	P	S	0	0	0
			1621	723	292	529	76	1			

- Molecule 57 is a protein called 50S ribosomal protein L9,Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
57	BZ	730	Total	C	N	O	S	0	0	0
			4869	3031	886	942	10			
57	DZ	730	Total	C	N	O	S	0	0	0
			4867	3029	886	942	10			

- Molecule 58 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AA	820	Total	Mg	0	0
			820	820		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AB	23	Total 23	Mg 23	0	0
58	AD	12	Total 12	Mg 12	0	0
58	AE	5	Total 5	Mg 5	0	0
58	AF	8	Total 8	Mg 8	0	0
58	AG	2	Total 2	Mg 2	0	0
58	AH	2	Total 2	Mg 2	0	0
58	AN	3	Total 3	Mg 3	0	0
58	AO	1	Total 1	Mg 1	0	0
58	AP	3	Total 3	Mg 3	0	0
58	AQ	3	Total 3	Mg 3	0	0
58	AR	2	Total 2	Mg 2	0	0
58	AU	3	Total 3	Mg 3	0	0
58	AV	5	Total 5	Mg 5	0	0
58	AW	4	Total 4	Mg 4	0	0
58	AX	1	Total 1	Mg 1	0	0
58	AZ	2	Total 2	Mg 2	0	0
58	A0	5	Total 5	Mg 5	0	0
58	A1	1	Total 1	Mg 1	0	0
58	A2	1	Total 1	Mg 1	0	0
58	A4	1	Total 1	Mg 1	0	0
58	A5	3	Total 3	Mg 3	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	A6	1	Total 1	Mg 1	0	0
58	A7	5	Total 5	Mg 5	0	0
58	A8	2	Total 2	Mg 2	0	0
58	A9	1	Total 1	Mg 1	0	0
58	BA	212	Total 212	Mg 212	0	0
58	BB	1	Total 1	Mg 1	0	0
58	BD	1	Total 1	Mg 1	0	0
58	BE	1	Total 1	Mg 1	0	0
58	BF	1	Total 1	Mg 1	0	0
58	BK	1	Total 1	Mg 1	0	0
58	BL	4	Total 4	Mg 4	0	0
58	BN	2	Total 2	Mg 2	0	0
58	BT	1	Total 1	Mg 1	0	0
58	BV	1	Total 1	Mg 1	0	0
58	BX	10	Total 10	Mg 10	0	0
58	BZ	1	Total 1	Mg 1	0	0
58	CA	666	Total 666	Mg 666	0	0
58	CB	13	Total 13	Mg 13	0	0
58	CD	3	Total 3	Mg 3	0	0
58	CE	7	Total 7	Mg 7	0	0
58	CF	4	Total 4	Mg 4	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	CG	1	Total 1	Mg 1	0	0
58	CN	1	Total 1	Mg 1	0	0
58	CO	2	Total 2	Mg 2	0	0
58	CQ	4	Total 4	Mg 4	0	0
58	CR	1	Total 1	Mg 1	0	0
58	CU	2	Total 2	Mg 2	0	0
58	CV	2	Total 2	Mg 2	0	0
58	CY	1	Total 1	Mg 1	0	0
58	C0	1	Total 1	Mg 1	0	0
58	C1	1	Total 1	Mg 1	0	0
58	C3	1	Total 1	Mg 1	0	0
58	C7	1	Total 1	Mg 1	0	0
58	C8	1	Total 1	Mg 1	0	0
58	DA	166	Total 166	Mg 166	0	0
58	DD	1	Total 1	Mg 1	0	0
58	DE	2	Total 2	Mg 2	0	0
58	DF	1	Total 1	Mg 1	0	0
58	DJ	1	Total 1	Mg 1	0	0
58	DK	1	Total 1	Mg 1	0	0
58	DL	2	Total 2	Mg 2	0	0
58	DT	1	Total 1	Mg 1	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	DZ	3	Total	Mg	0	0
			3	3		

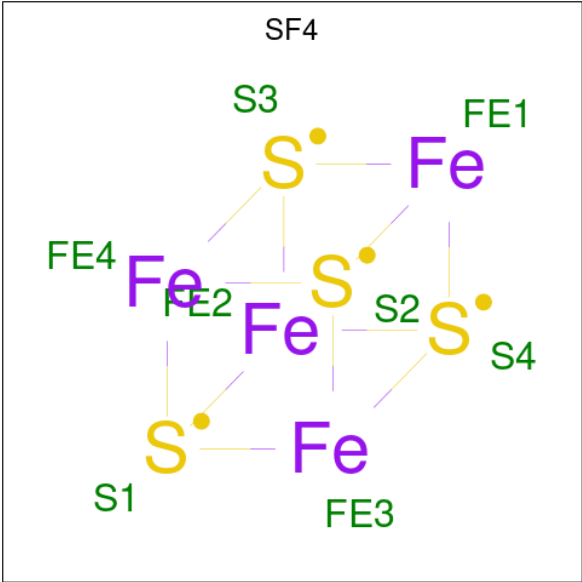
- Molecule 59 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	AA	1	Total	K	0	0
			1	1		

- Molecule 60 is ZINC ION (three-letter code: ZN) (formula: Zn).

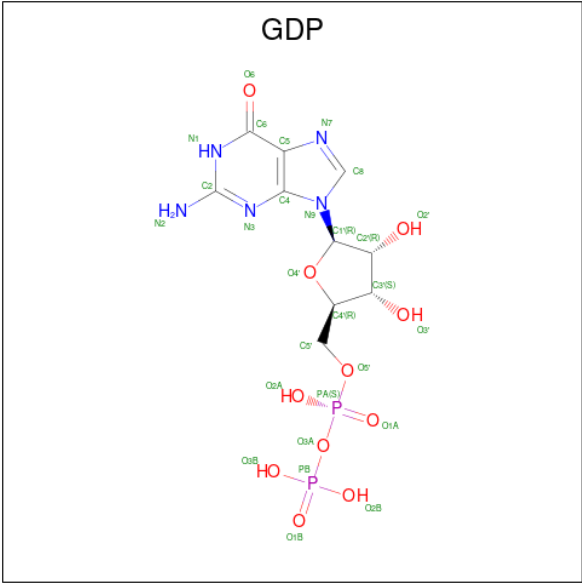
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	AY	1	Total	Zn	0	0
			1	1		
60	A4	1	Total	Zn	0	0
			1	1		
60	A5	1	Total	Zn	0	0
			1	1		
60	A6	1	Total	Zn	0	0
			1	1		
60	A9	1	Total	Zn	0	0
			1	1		
60	BN	1	Total	Zn	0	0
			1	1		
60	CY	1	Total	Zn	0	0
			1	1		
60	C4	1	Total	Zn	0	0
			1	1		
60	C5	1	Total	Zn	0	0
			1	1		
60	C6	1	Total	Zn	0	0
			1	1		
60	C9	1	Total	Zn	0	0
			1	1		
60	DN	1	Total	Zn	0	0
			1	1		

- Molecule 61 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
61	BD	1	Total	Fe	S	0	0
			8	4	4		
61	DD	1	Total	Fe	S	0	0
			8	4	4		

- Molecule 62 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
62	BZ	1	Total	C	N	O	P	0
			28	10	5	11	2	

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
62	DZ	1	Total	C	N	O	P	0	0
			28	10	5	11	2		

- Molecule 63 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	AA	1406	Total	O	0	0
			1406	1406		
63	AB	37	Total	O	0	0
			37	37		
63	AD	16	Total	O	0	0
			16	16		
63	AE	14	Total	O	0	0
			14	14		
63	AF	6	Total	O	0	0
			6	6		
63	AG	3	Total	O	0	0
			3	3		
63	AH	1	Total	O	0	0
			1	1		
63	AN	3	Total	O	0	0
			3	3		
63	AO	1	Total	O	0	0
			1	1		
63	AP	18	Total	O	0	0
			18	18		
63	AQ	5	Total	O	0	0
			5	5		
63	AR	2	Total	O	0	0
			2	2		
63	AS	1	Total	O	0	0
			1	1		
63	AT	3	Total	O	0	0
			3	3		
63	AU	4	Total	O	0	0
			4	4		
63	AV	1	Total	O	0	0
			1	1		
63	AW	1	Total	O	0	0
			1	1		
63	AX	4	Total	O	0	0
			4	4		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	AZ	1	Total	O	0	0
			1	1		
63	A0	9	Total	O	0	0
			9	9		
63	A1	2	Total	O	0	0
			2	2		
63	A2	1	Total	O	0	0
			1	1		
63	A3	2	Total	O	0	0
			2	2		
63	A5	4	Total	O	0	0
			4	4		
63	A7	4	Total	O	0	0
			4	4		
63	A8	9	Total	O	0	0
			9	9		
63	A9	1	Total	O	0	0
			1	1		
63	BA	203	Total	O	0	0
			203	203		
63	BD	3	Total	O	0	0
			3	3		
63	BE	2	Total	O	0	0
			2	2		
63	BG	1	Total	O	0	0
			1	1		
63	BJ	1	Total	O	0	0
			1	1		
63	BL	1	Total	O	0	0
			1	1		
63	BM	1	Total	O	0	0
			1	1		
63	BO	2	Total	O	0	0
			2	2		
63	BP	1	Total	O	0	0
			1	1		
63	BV	3	Total	O	0	0
			3	3		
63	BX	5	Total	O	0	0
			5	5		
63	BZ	2	Total	O	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	CA	974	Total 974	O 974	0	0
63	CB	9	Total 9	O 9	0	0
63	CD	17	Total 17	O 17	0	0
63	CE	14	Total 14	O 14	0	0
63	CF	6	Total 6	O 6	0	0
63	CN	2	Total 2	O 2	0	0
63	CP	12	Total 12	O 12	0	0
63	CQ	2	Total 2	O 2	0	0
63	CT	3	Total 3	O 3	0	0
63	CU	2	Total 2	O 2	0	0
63	CV	2	Total 2	O 2	0	0
63	CW	1	Total 1	O 1	0	0
63	CX	2	Total 2	O 2	0	0
63	CY	2	Total 2	O 2	0	0
63	C0	5	Total 5	O 5	0	0
63	C1	1	Total 1	O 1	0	0
63	C3	2	Total 2	O 2	0	0
63	C6	1	Total 1	O 1	0	0
63	C7	1	Total 1	O 1	0	0
63	C8	3	Total 3	O 3	0	0
63	DA	154	Total 154	O 154	0	0

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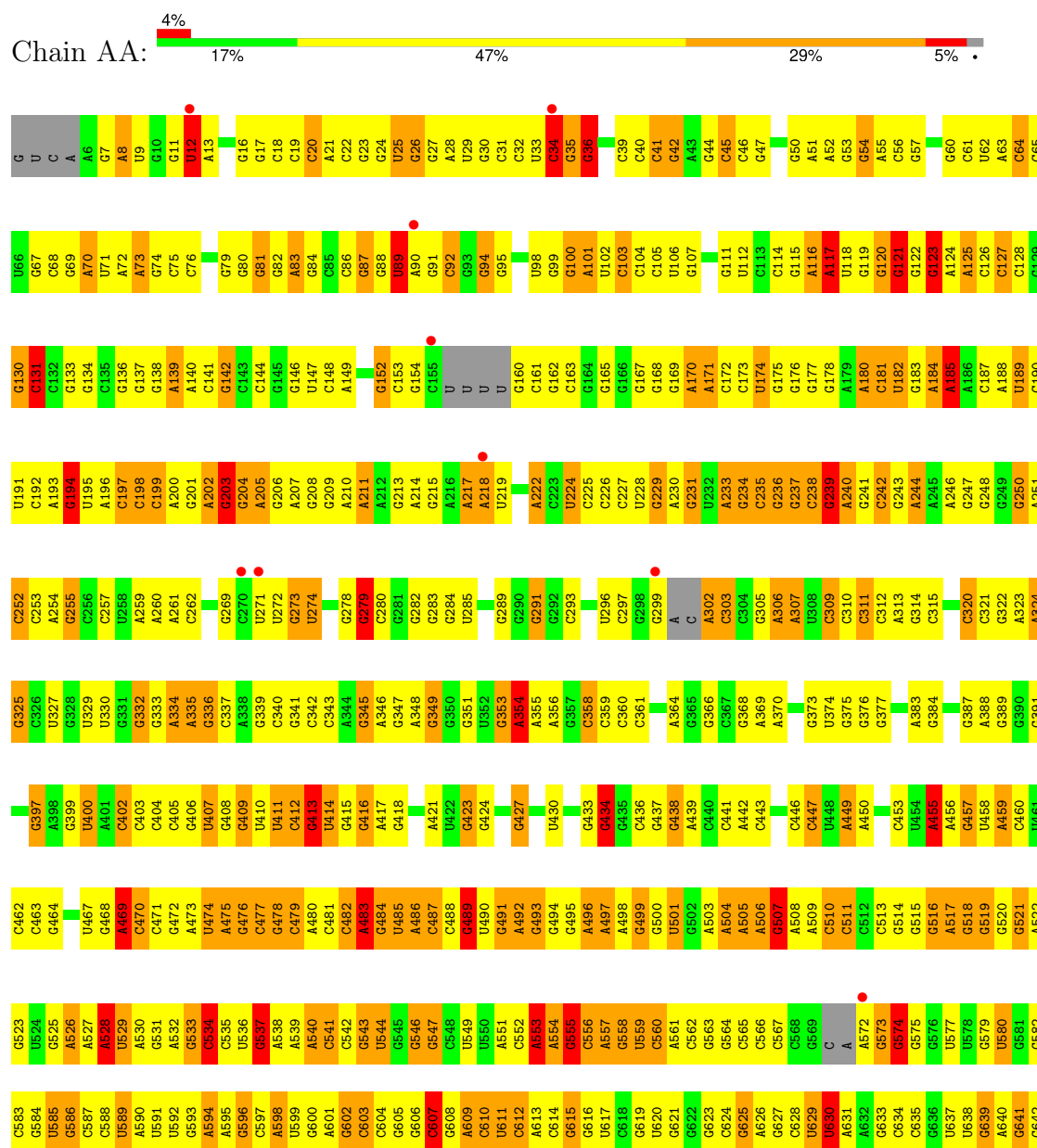
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	DE	3	Total	O	0	0
			3	3		
63	DH	1	Total	O	0	0
			1	1		
63	DJ	1	Total	O	0	0
			1	1		
63	DK	2	Total	O	0	0
			2	2		
63	DP	1	Total	O	0	0
			1	1		
63	DT	1	Total	O	0	0
			1	1		
63	DV	1	Total	O	0	0
			1	1		
63	DZ	1	Total	O	0	0
			1	1		

3 Residue-property plots

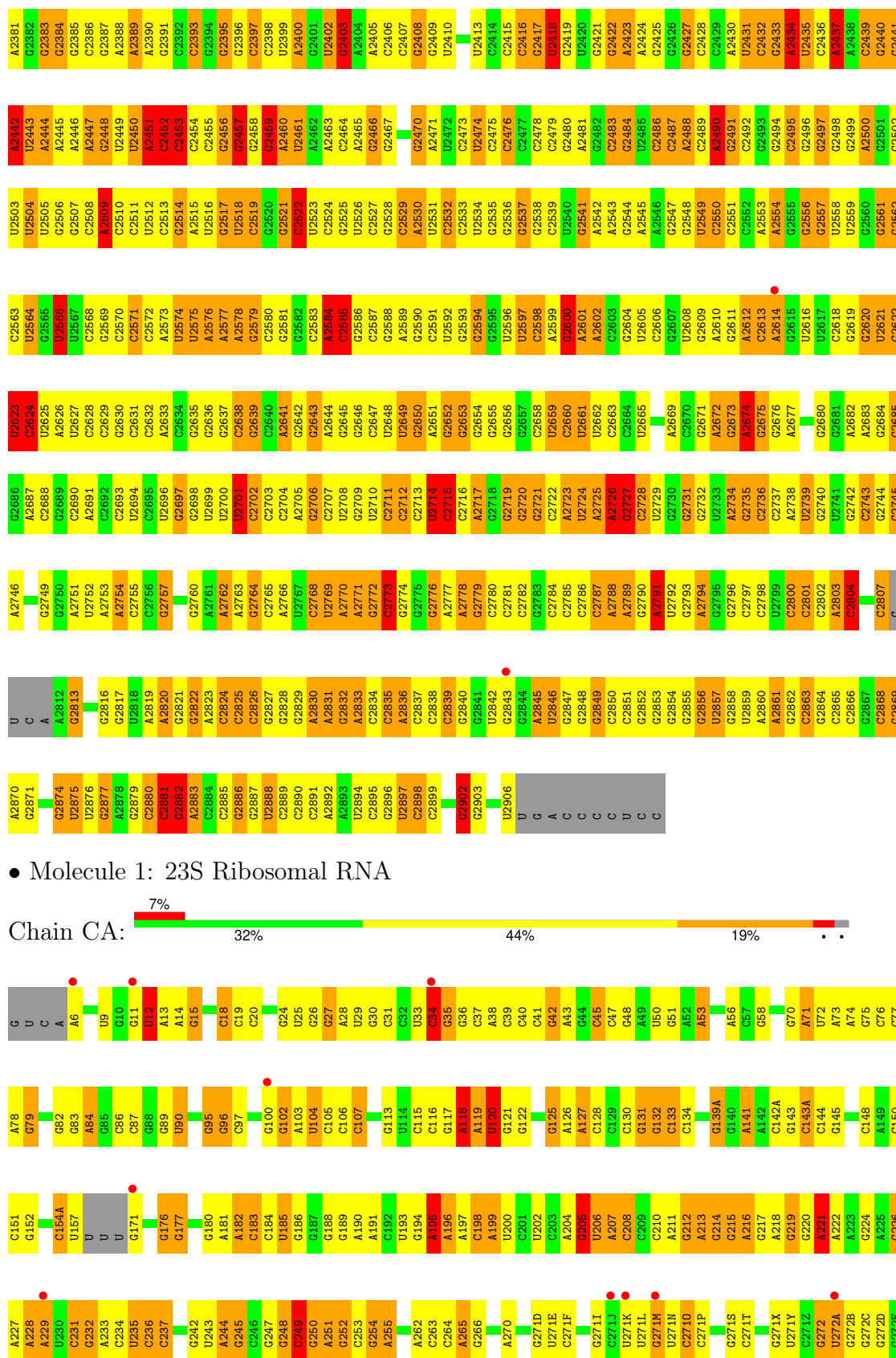
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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 dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 23S Ribosomal RNA



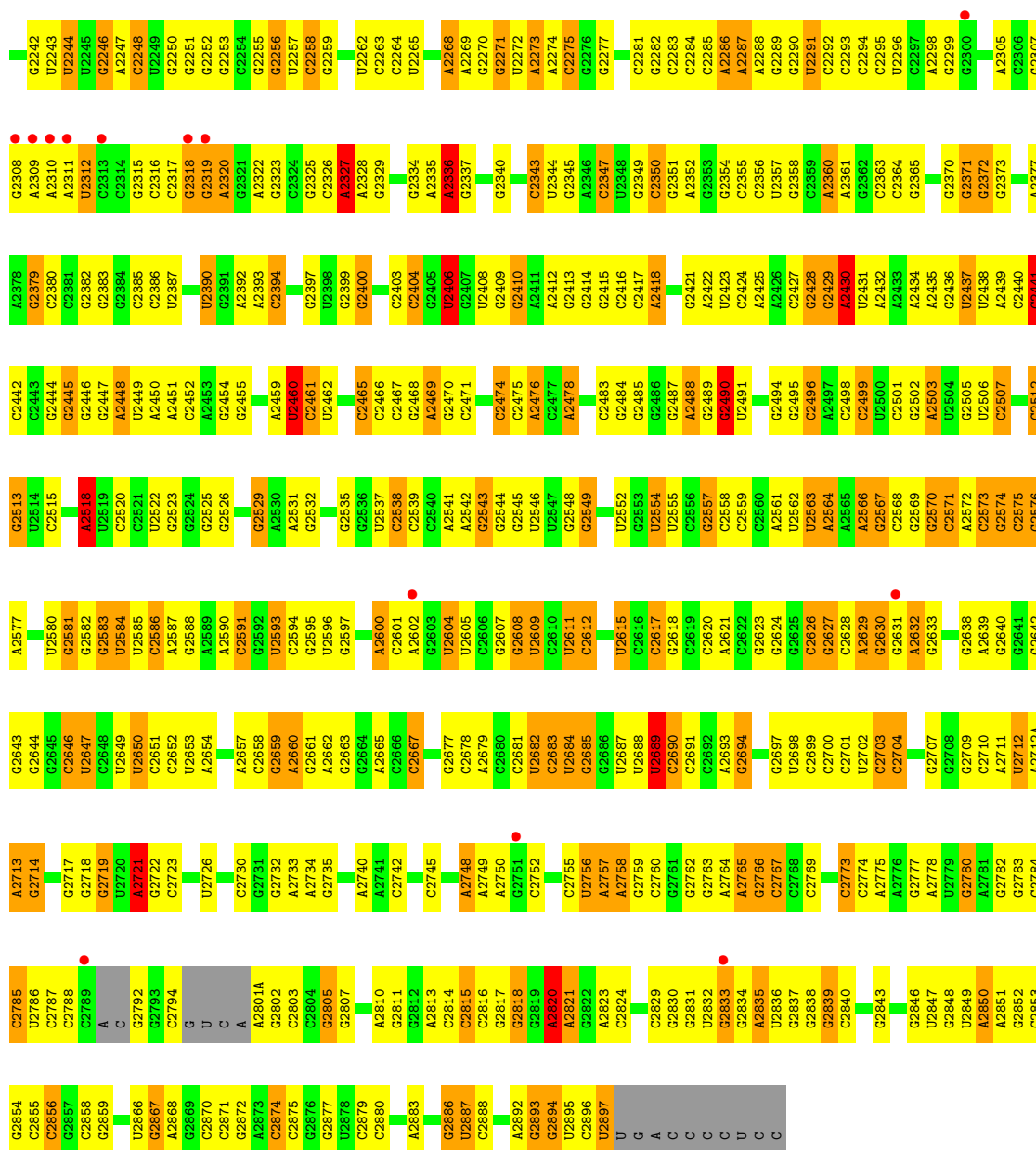


G2319	U2255	A2195	U2135	G2075	G2014	A1954	G1892	C1828	A1767	C1703	A1643	G1513
G2320	U2256	C2196	A2136	A2076	U2015	G1955	G1893	U1829	U1768	C1704	C1644	C1514
A2321	U2257	C2197	G2137	G2077	C2016	G1956	G1894	G1830	G1769	G1576	G1576	
A2322	G2258	A2198	G2138	G2078	U2017	G1957	U1895	A1831	A1770	C1577	C1645	G1517
A2323	A2259	C2199	A2139	A2079	C2018	G1958	G1896	G1832	G1771	C1578	C1646	
U2324	C2260	C2200	U2140	A2080	G2019	A1959	C1897	A1833	G1772	C1707	G1647	A1519
C2325	U2261	C2201	A2141	A2081	G2020	A1960	A1898	A1834	G1773	G1708	U1648	A1518
C2326	G2262	U2202	G2142	A2082	C2021	U1961	A1899	C1835	C1774	C1709	A1649	G1520
C2327	G2263	G2203	G2143	G2083	G2022	U1962	G1900	U1836	U1775	C1710	C1650	C1521
G2328	G2264	C2204	U2144	A2084	A2023	C1963	C1901	A1837	C1776	G1584	G1651	G1522
C2329	G2265	C2205	G2145	C2085	G2024	C1964	C1902	G1838		G1585	C1653	G1523
G2330	C2266	G2206	G2146	C2086	G2025	U1965	C1903	A1839	G1779	G1586	A1654	A1524
G2331	C2267	C2207	G2147	C2087	G2026	U1966	C1904	U1840	A1780	G1587	A1655	G1525
A2332	G2268	G2208	A2148	C2088	A2027	G1967	G1905	A1843	G1588	G1588	A1656	G1526
	U2269	G2209	G2149	C2089	C2028	U1968	A1906	A1844	G1781	C1657	C1657	G1529
G2335	C2270	C2210	C2150	U2090	C2029	C1969	A1907	G1844	C1782	C1658	C1658	G1530
C2336	G2271	U2211	C2151	C2091	C2030	G1970	C1908	G1845	G1783	C1590	G1659	G1531
G2337	C2272	G2212	U2152	G2092		G1971	C1909	A1846	G1784			A1532
C2338	C2273	G2213	G2153	C2093	U2033	G1972	G1910	G1847	A1786	G1599	A1660	G1533
A2339	U2274	G2214	U2154	C2094	G2034	U1973	A1911	G1848	G1787	A1801	C1661	G1534
C2340	C2275	G2215	C2155	C2095	A2035	A1974	A1912	U1849	U1788	G1602	A1662	U1535
	C2276	G2216	A2156	U2096	A2036	A1975	G1913	A1850	G1789	C1603	A1664	A1536
G2343	U2277	C2217	A2157	U2097	A2037	G1976	C1914	U1851	A1790	C1604	G1665	G1537
U2344	A2278	C2218	C2158	U2098	U2038	U1977		A1852	C1792	A1805	G1666	G1538
A2345	U2279	U2219	C2159	A2099	U2039	U1978	G1918	G1853	G1797	G1606	U1667	C1539
G2346	A2280	A2220	C2160	C2100	G2040	C1979	G1919	G1854	A1783	G1807	G1668	A1540
	A2281	A2221	C2161	U2101	A2041	G1980	U1920	G1855	G1794	G1608	G1669	A1541
A2348	C2282	C2222	C2162	G2102	A2042	G1981	U1921	A1856	G1795	A1609	G1670	A1542
G2349	G2283	C2223	C2163	C2103	G2043	A1982	A1922	G1857	C1796	C1610	G1671	U1543
G2350	U2284	C2224	C2164	A2104	U2044	G1983	A1923	C1858	U1797	C1611	G1672	C1544
A2351	A2285	U2225	G2165	G2105	G2045	G1984	C1924	G1859	C1798	C1612	G1673	C1545
G2352	A2286	C2226	U2166	C2106	G2046	U1985	G1925	A1860	U1799	A1613	G1674	G1546
	C2287	C2227	C2167	C2107	C2047	G1986	G1926	C1861	G1800	A1614	U1675	C1547
G2353	G2288	G2228	C2168	U2108	C2048	C1987	G1927	G1862	A1801	G1615	G1676	U1548
C2354	G2289	A2229	C2169	G2109	G2049	A1988	G1928	G1863	G1802	A1616	C1677	U1549
U2355	A2290	U2230	G2170	G2110	U2050	G1989	G1929	U1864	A1737			
G2357	G2291	G2231	G2171	U2111	G2051	G1990	C1930	U1865	A1617	A1618	A1678	C1550
C2358	G2292	G2232	U2172	G2112	A2052	A1991	G1931	G1866	A1804	A1619	C1551	C1551
C2359	C2293	G2233	G2173	U2113	A2053	A1992	G1932	C1867	C1805	G1620	A1552	
U2360	G2294	G2234	G2174	U2114	G2054	A1993	U1933	C1868	U1806	G1621	A1553	
C2361	C2295	G2235	G2175	G2115	A2055	A1994	A1934	C1869	U1807	C1622	C1554	
C2362	C2296	G2236	G2176	G2116	U2056	G1995	A1935	G1870	U1808	C1623	C1555	
G2363	C2297	A2237	G2177	G2117	G2057	C1996	G1936	G1871	A1809	G1624	A1556	
A2364	A2298	C2238	G2178	U2118	C2058	G1997	U1937		U1810	C1625	C1557	
G2365	A2299	A2239	G2179	C2119	G2059	U1998	A1938	G1874	A1811	U1686	G1558	
C2366	A2300	G2240	G2180	U2120	G2060	A1999	U1939		C1812	C1687	C1559	
G2367	C2301	C2241	G2181	U2121	C2061	A2000	A1940	A1878	A1748	G1628	U1560	
C2368	G2302	G2242	G2182	G2122	C2062	C2001	A1941	A1879	G1749	C1629	C1561	
U2369	C2303	C2243	C2183	G2123	U2063	G2002	C1942	G1880	G1750	A1630	U1562	
G2370	C2304	U2244	G2184	U2124	A2064	A2003	G1943	G1881	G1751	C1631	G1563	
		U2245	C2185	C2125	C2065	C2004	G1944	U1882	G1752	A1632	C1564	
A2371		G2246	C2186	G2126	C2066	C2005	U1945	U1883	U1753	A1633	G1565	
C2372		G2247	G2187	C2127	C2067	G2006	C1946	A1884	G1754	C1634	U1566	
G2373		C2248	G2188	G2128	C2068	G2007	C1947	A1885	C1755	C1635	G1567	
C2374	G2311	G2249	G2189	G2129	G2069	A2008	U1948	U1886	U1756	C1636	G1568	
C2375	G2312	U2250	U2190	C2130	U2070	G2009	A1949	G1887	C1757	G1637	U1569	
C2376		G2250	C2190	G2131	G2071	C2010	A1950	G1888	C1758	C1638	G1570	
G2377		G2251	A2191	U2131	G2072	C2011	G1951	G1889		A1699	G1571	
A2378	G2316	C2252	A2192	C2132	A2073	G2012	G1952	A1890	G1761	G1700	G1572	
G2379	A2317	A2253	A2193	C2133	A2074	C2013	G1953	A1891		A1701	G1573	
C2380	G2318	G2254	U2194	G2134	G2074	U2013	U1953	G1891		A1702	A1574	



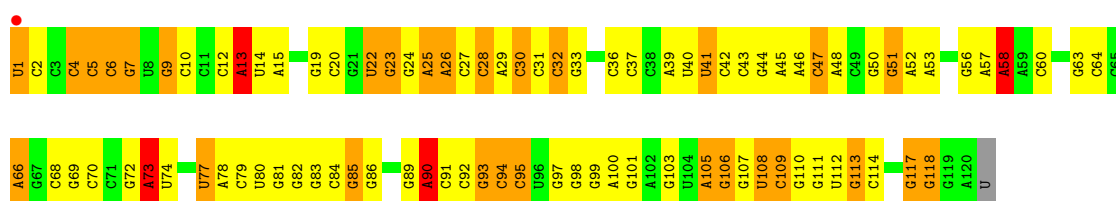
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U1165	A1095	G956	G883	C814	C749	C672	A627	U562	G489	C416	G341	G274
C1166	A1096	A957	C884	C815	A750	C673	G628	G563	G491	C419	A346	G275
U1167	U1097	U958	C885	A819	A751	A675	A831	C564	A492	A421	A347	A276
G1168	A1098	A959	C886	A820	A752	A676	A632	C565	G493	A422	G348	C277
G1169	C1038	C961	A887	G823	C753	A677	G635	U566	G494	A423	G352	A278
G1170	G1039	C962	C888	A824	C754	C678	C636	A567	G495	C426	C280	C281
G1171	C1040	U963	A889	G825	C755	C679	A637	U568	G496	U427	G282	G283
G1172	C1041	C964	A890	C826	C756	G680	G638	U569	A497	A428	A282	U284
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G1303	C1304	C1305	C1306	A1307	A1308	G1309	G1310	G1311	U1312	U1313	C1314	C1315	U1316	A1317	C1318	C1319	C1320	G1321	A1322	C1323	G1324	G1325		G1328		G1332	C1333	G1334	U1335	C1336	C1337	C1338	G1339	U1340	U1341		G1342	G1343	C1344	C1345	A1349	C1350	U1351	C1352	A1353	A1354	C1355	G1356	C1357	U1358	C1359	A1360	C1361	C1363	C1364	A1365	A1366	U1367	C1368	C1369																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	



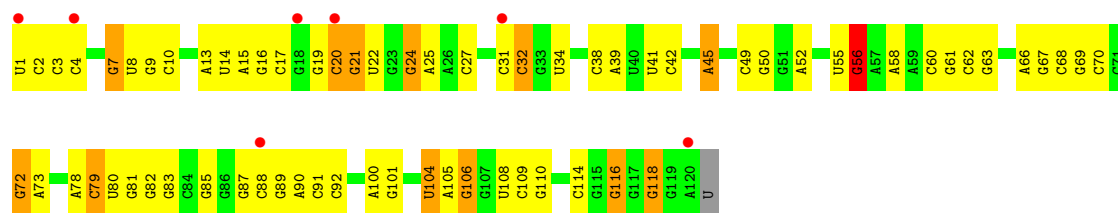
• Molecule 2: 5S Ribosomal RNA

Chain AB: 25% 47% 24%

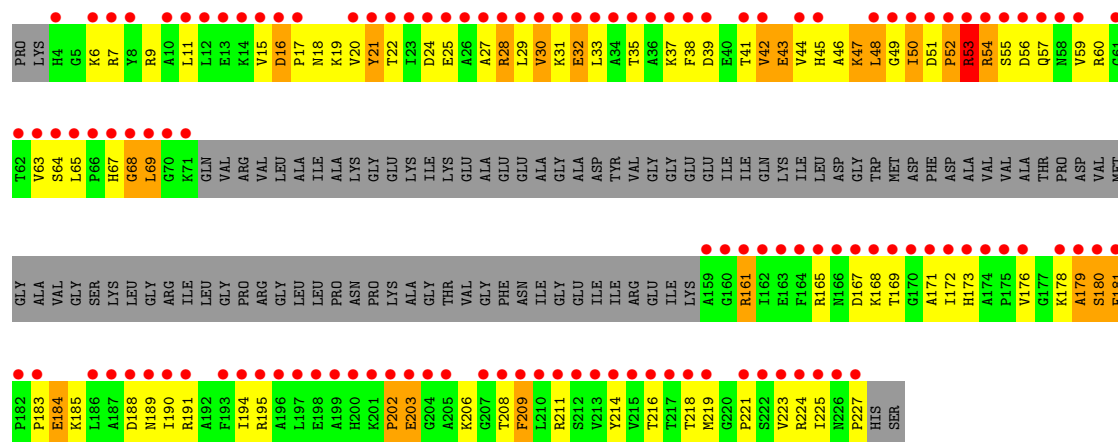
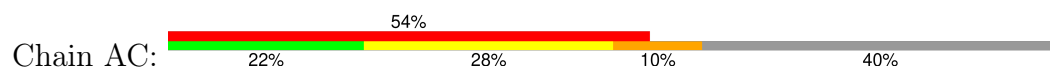


• Molecule 2: 5S Ribosomal RNA

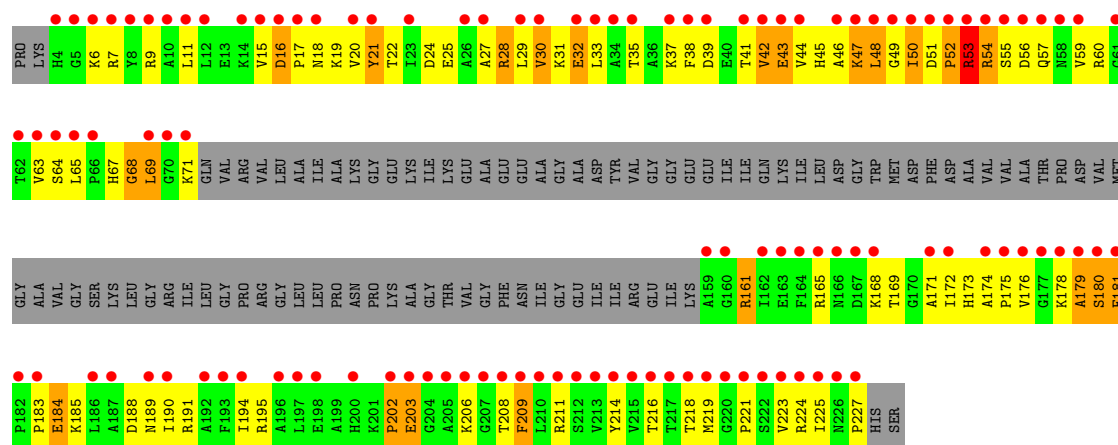
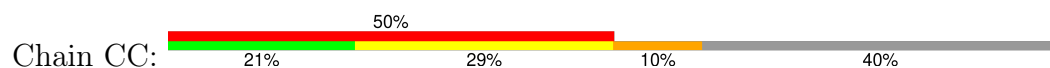
Chain CB: 6% 42% 46% 10%



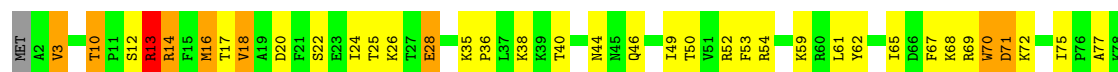
• Molecule 3: 50S ribosomal protein L1



• Molecule 3: 50S ribosomal protein L1



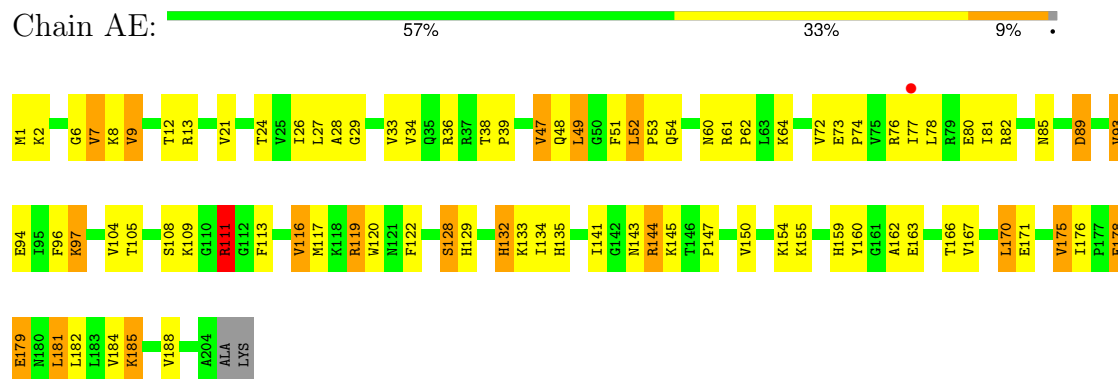
• Molecule 4: 50S ribosomal protein L2



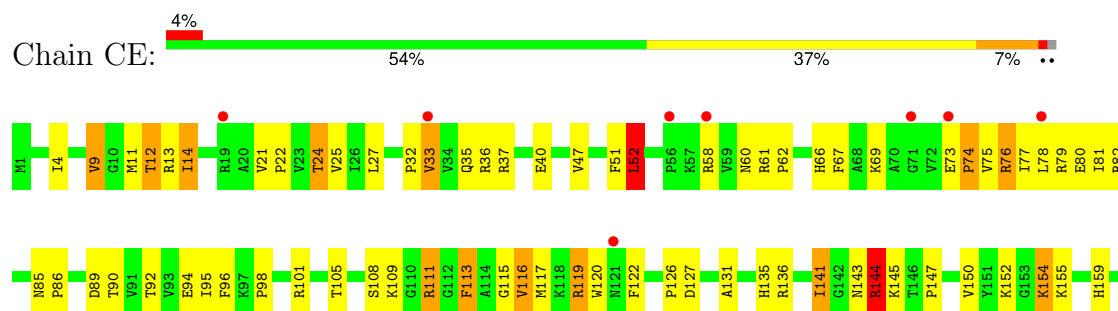
- Molecule 4: 50S ribosomal protein L2



- Molecule 5: 50S ribosomal protein L3



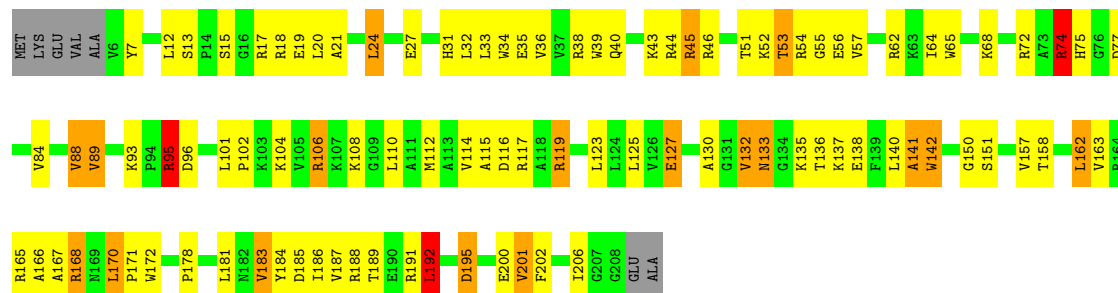
- Molecule 5: 50S ribosomal protein L3





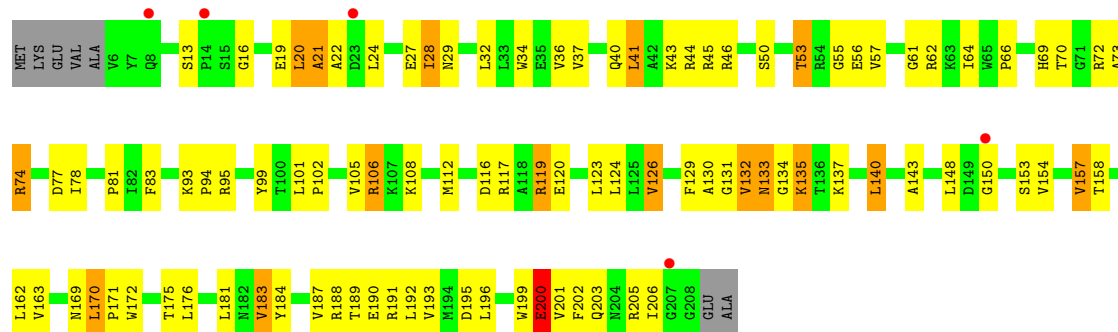
• Molecule 6: 50S ribosomal protein L4

Chain AF: 50% 37% 9% ..



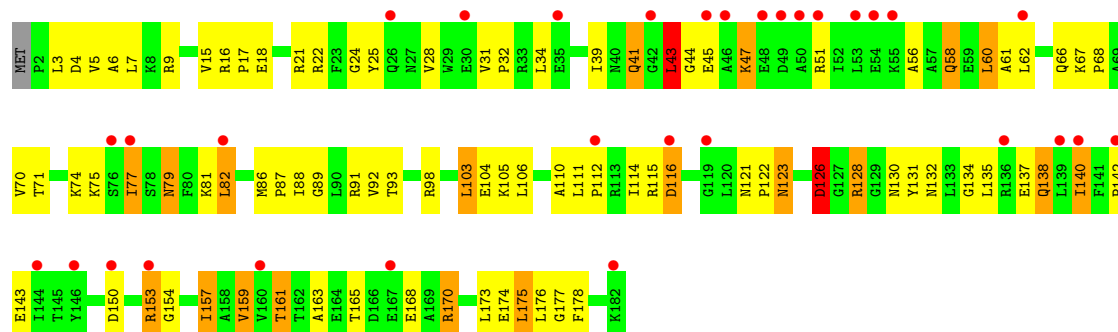
• Molecule 6: 50S ribosomal protein L4

Chain CF: 50% 39% 8% 2%



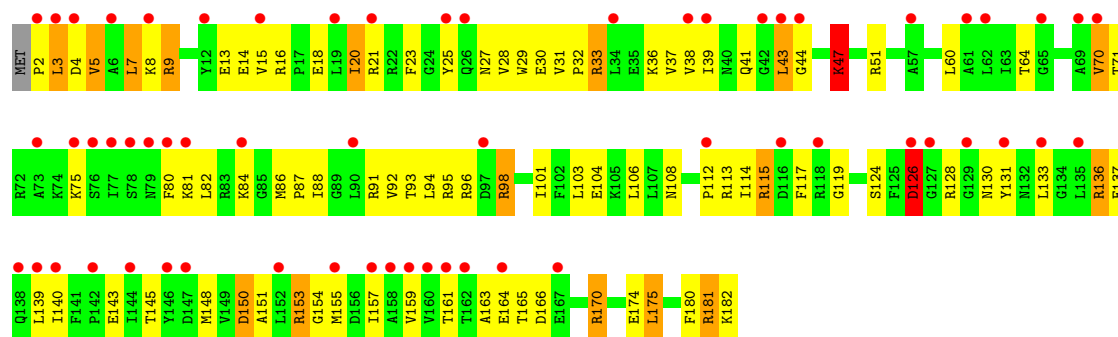
• Molecule 7: 50S ribosomal protein L5

Chain AG: 50% 38% 10% 17%

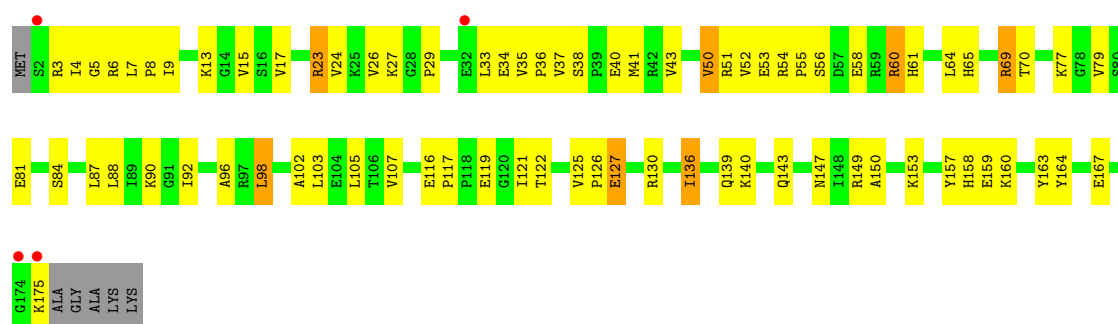


• Molecule 7: 50S ribosomal protein L5

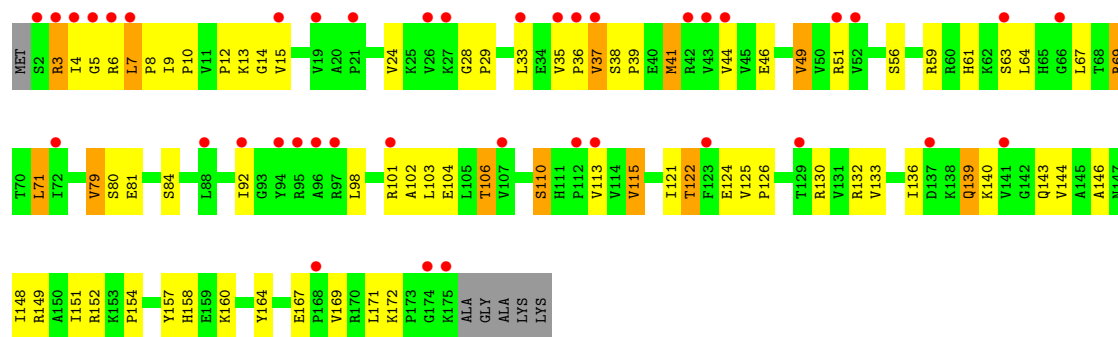
Chain CG: 48% 41% 9% 33%



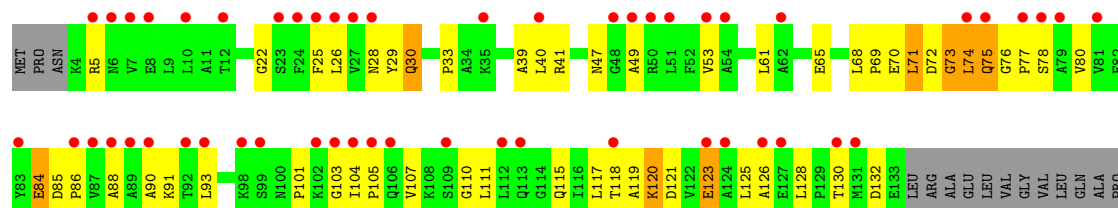
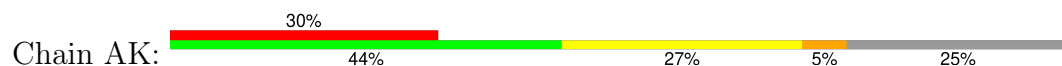
• Molecule 8: 50S ribosomal protein L6



• Molecule 8: 50S ribosomal protein L6



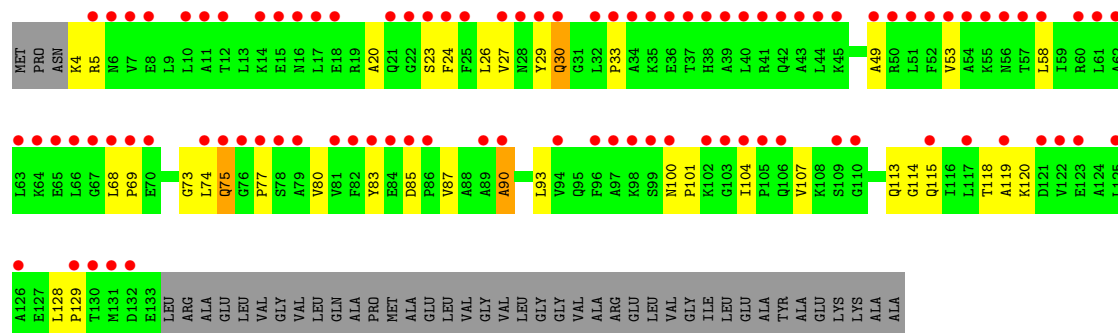
• Molecule 9: 50S ribosomal protein L10



MET
ALA
GLU
LEU
VAL
GLY
VAL
LEU
GLY
GLY
VAL
ALA
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LEU
VAL
GLY
TLE
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GLU
LYS
LYS
ALA

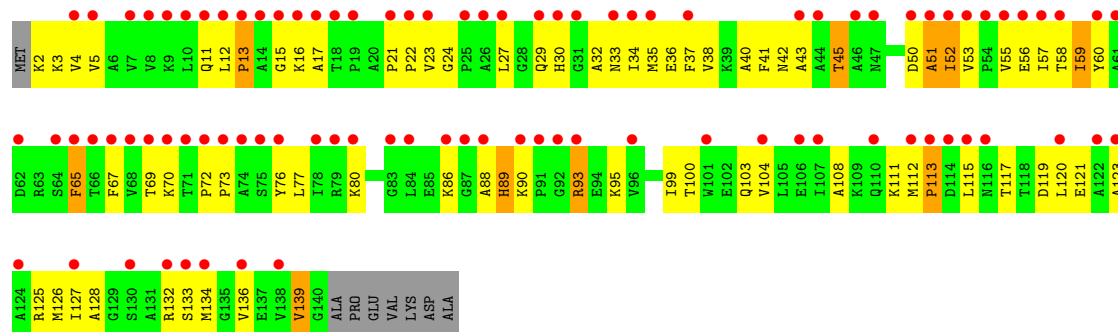
• Molecule 9: 50S ribosomal protein L10

Chain CK: 55%
54% 20% 25%



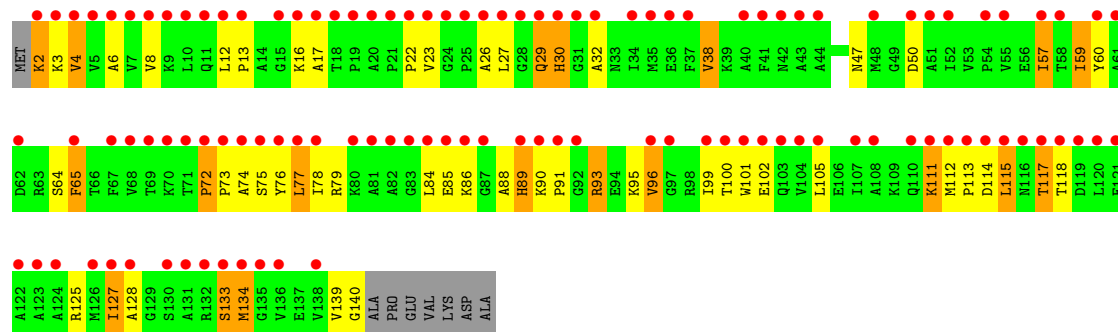
• Molecule 10: 50S ribosomal protein L11

Chain AL: 62%
42% 46% 7% 5%



• Molecule 10: 50S ribosomal protein L11

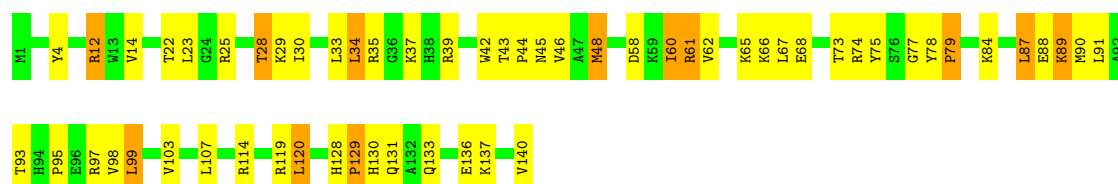
Chain CL: 76%
53% 29% 13% 5%



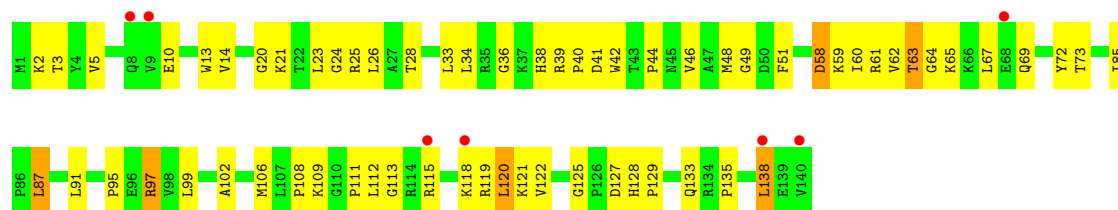
• Molecule 11: 50S ribosomal protein L13

Chain AN: 59% 33% 9%

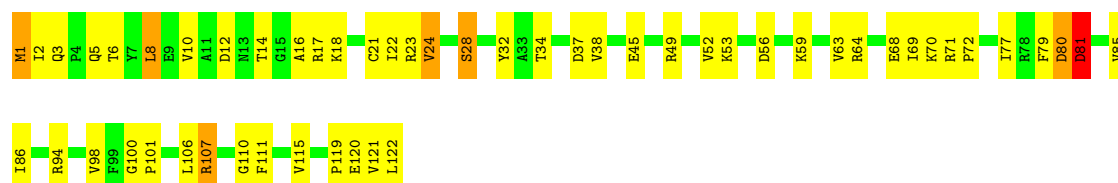




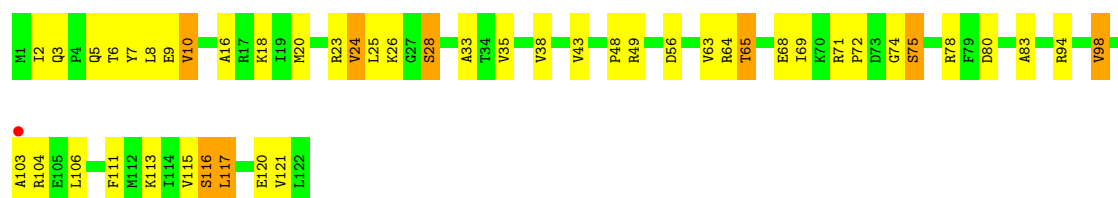
- Molecule 11: 50S ribosomal protein L13



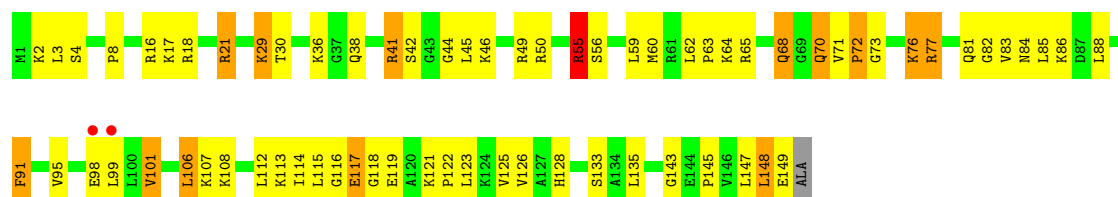
- Molecule 12: 50S ribosomal protein L14



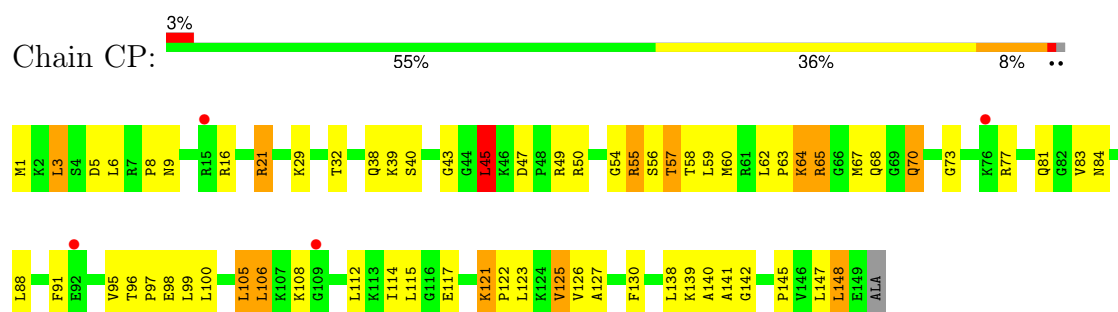
- Molecule 12: 50S ribosomal protein L14



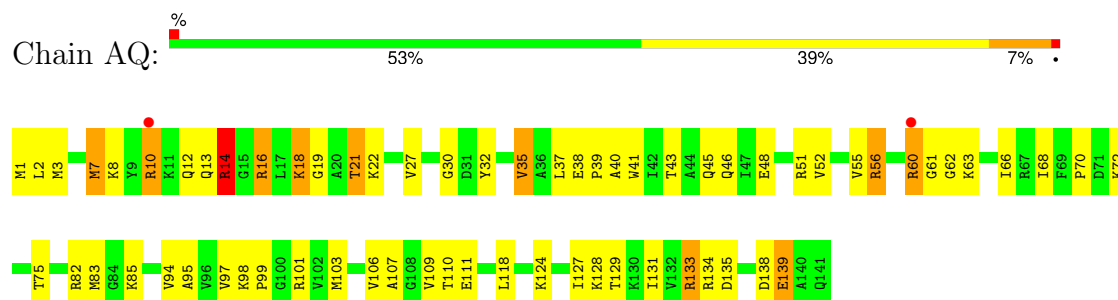
- Molecule 13: 50S ribosomal protein L15



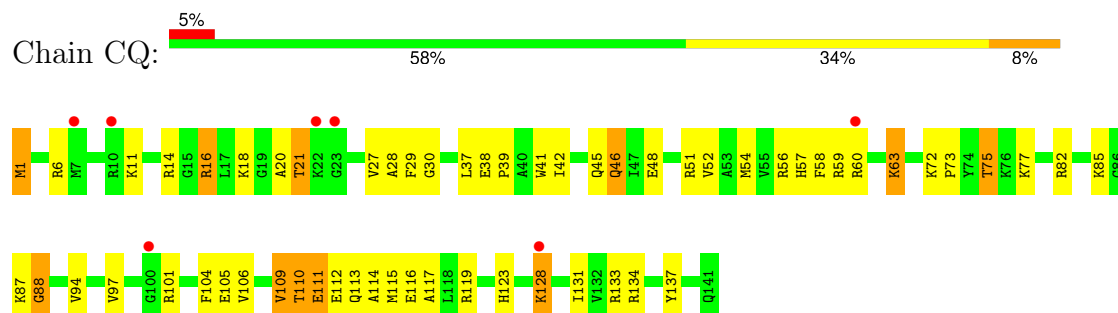
- Molecule 13: 50S ribosomal protein L15



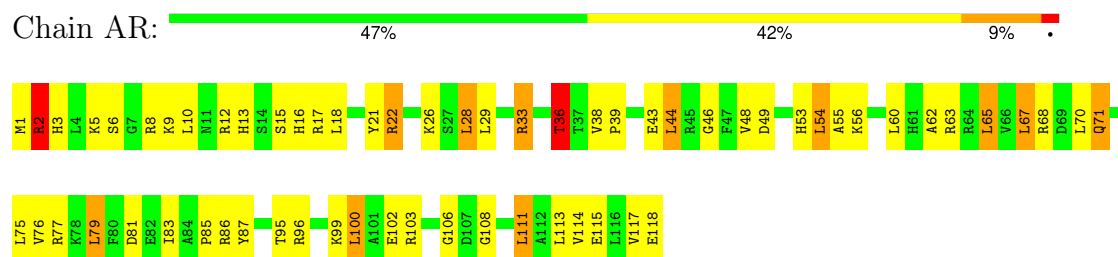
- Molecule 14: 50S ribosomal protein L16



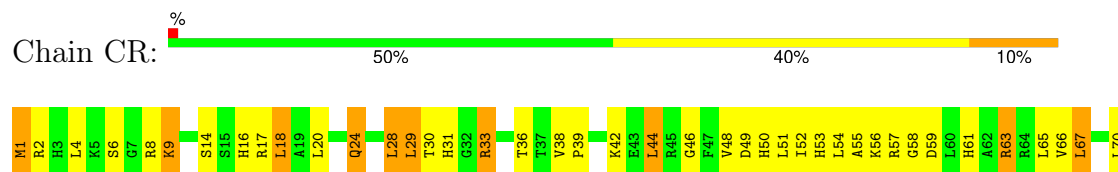
- Molecule 14: 50S ribosomal protein L16



- Molecule 15: 50S ribosomal protein L17



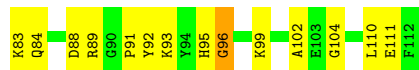
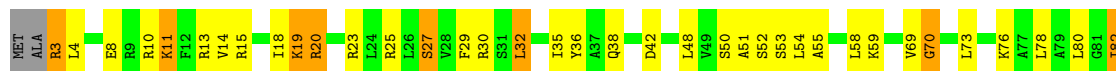
- Molecule 15: 50S ribosomal protein L17





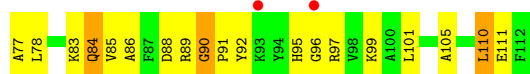
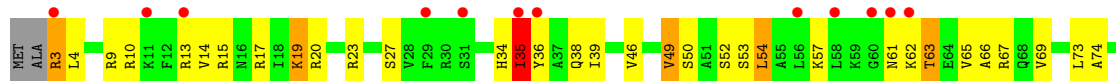
- Molecule 16: 50S ribosomal protein L18

Chain AS: 53% 38% 8%



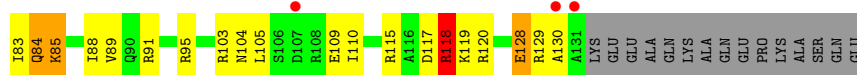
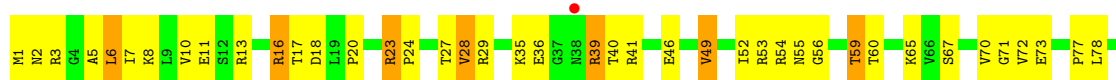
- Molecule 16: 50S ribosomal protein L18

Chain CS: 12% 52% 38% 7%



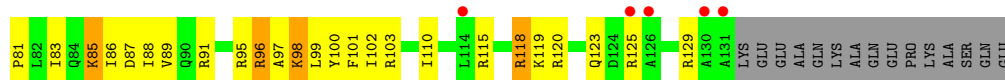
- Molecule 17: 50S ribosomal protein L19

Chain AT: 3% 48% 34% 7% 10%



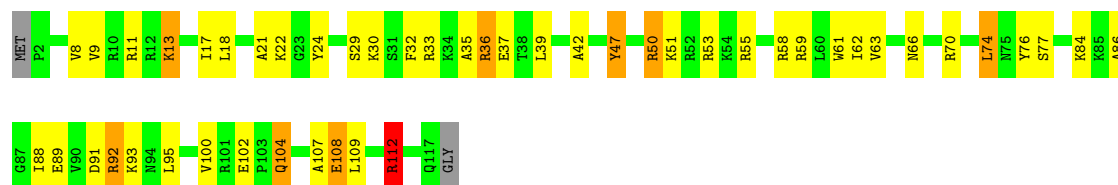
- Molecule 17: 50S ribosomal protein L19

Chain CT: 4% 45% 34% 10% 10%



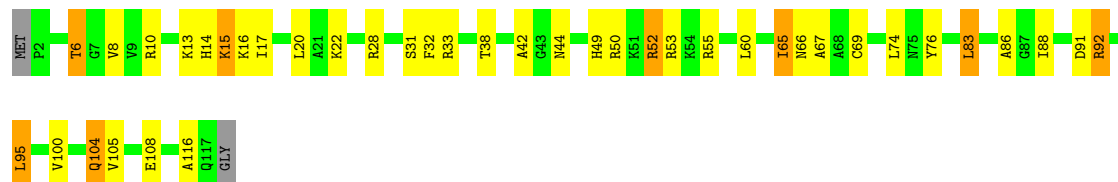
- Molecule 18: 50S ribosomal protein L20

Chain AU: 58% 33% 7% 2%



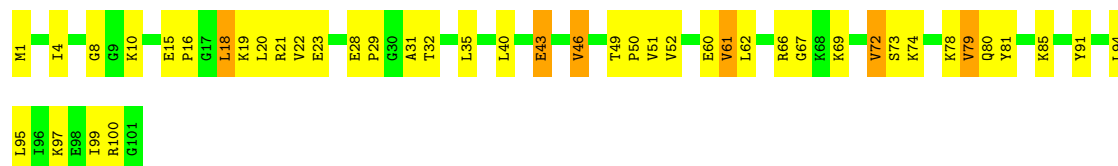
- Molecule 18: 50S ribosomal protein L20

Chain CU: 64% 27% 7% •



- Molecule 19: 50S ribosomal protein L21

Chain AV: 56% 38% 6% •



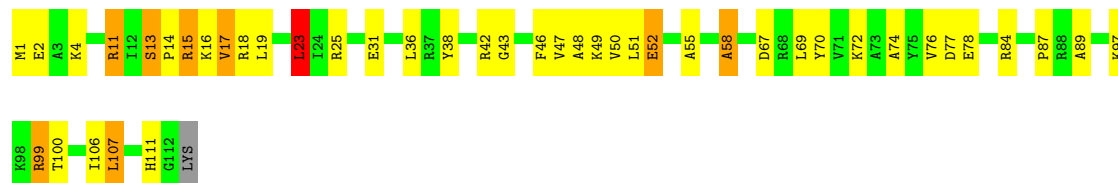
- Molecule 19: 50S ribosomal protein L21

Chain CV: 4% 57% 32% 10% •



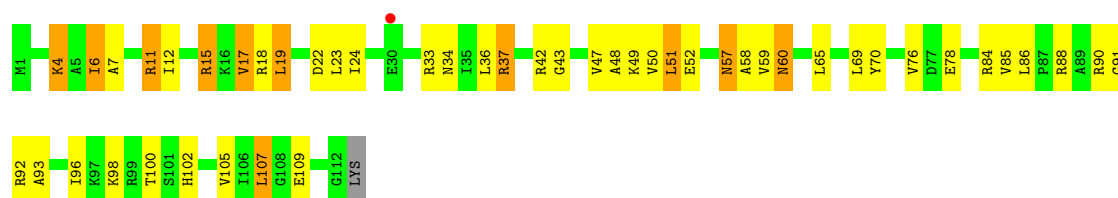
- Molecule 20: 50S ribosomal protein L22

Chain AW: 60% 31% 7% ••



- Molecule 20: 50S ribosomal protein L22

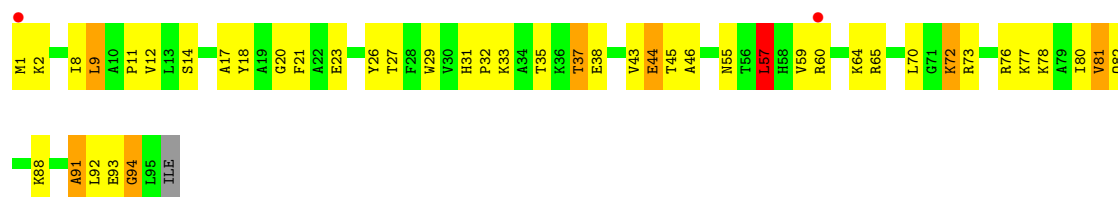
Chain CW: 57% 33% 10% •



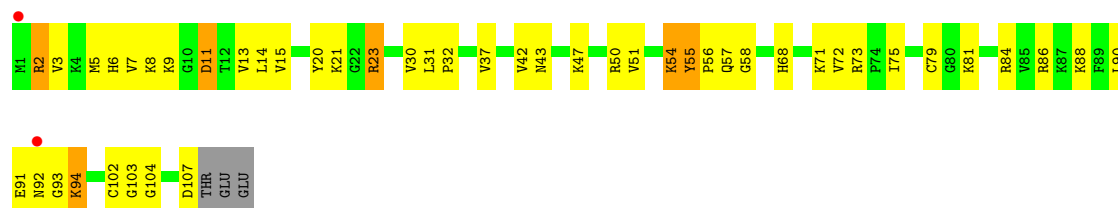
- Molecule 21: 50S ribosomal protein L23



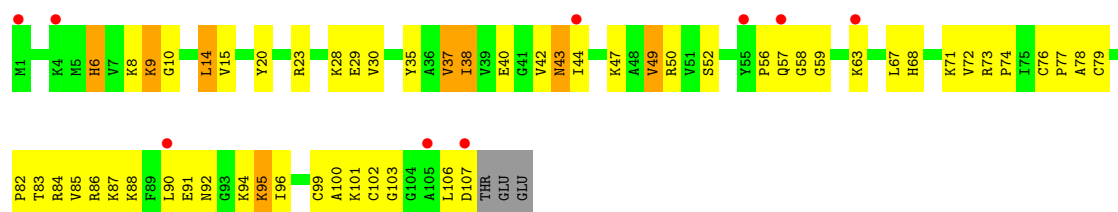
- Molecule 21: 50S ribosomal protein L23



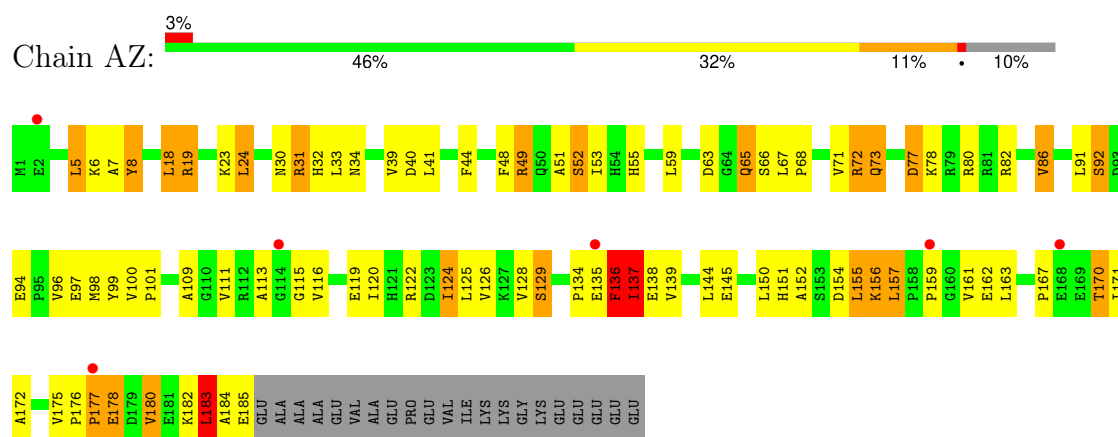
- Molecule 22: 50S ribosomal protein L24



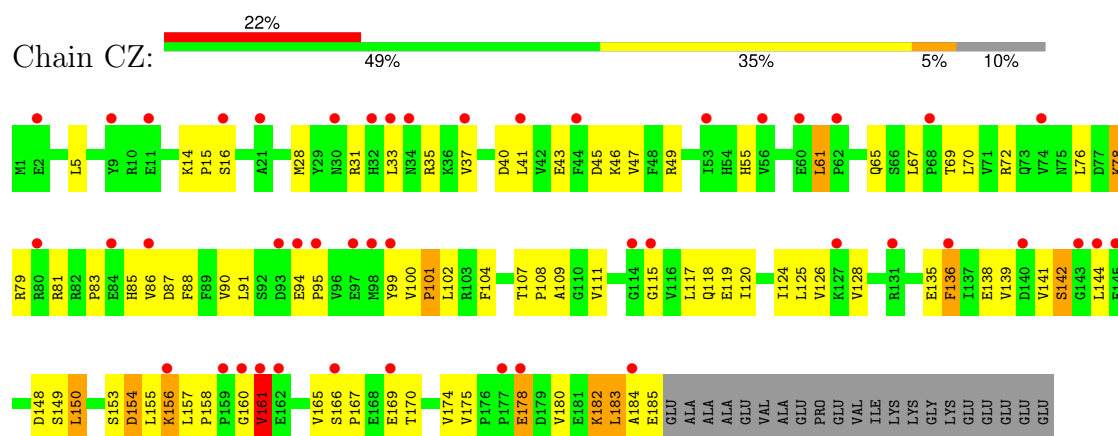
- Molecule 22: 50S ribosomal protein L24



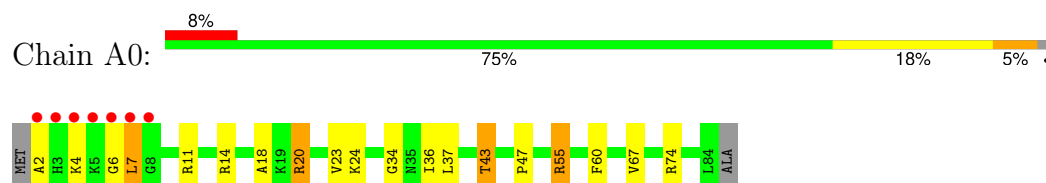
- Molecule 23: 50S ribosomal protein L25



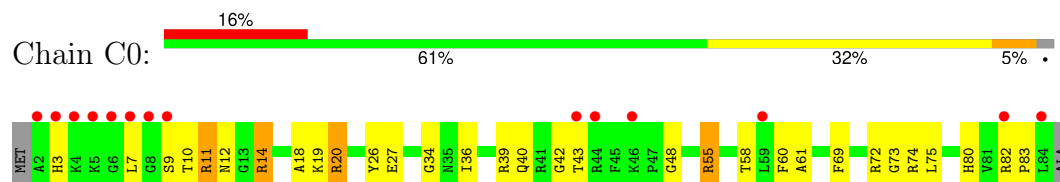
- Molecule 23: 50S ribosomal protein L25



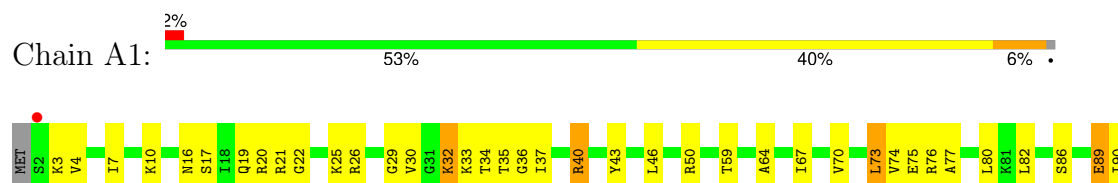
- Molecule 24: 50S ribosomal protein L27



- Molecule 24: 50S ribosomal protein L27

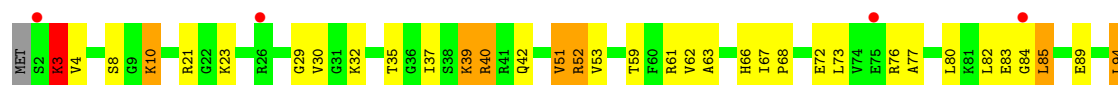


- Molecule 25: 50S ribosomal protein L28

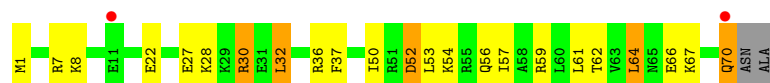




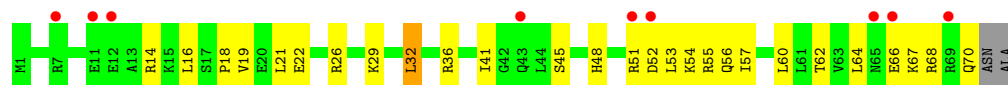
- Molecule 25: 50S ribosomal protein L28



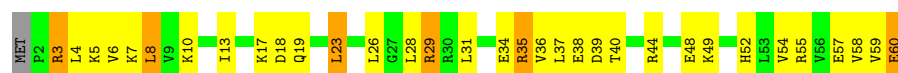
- Molecule 26: 50S ribosomal protein L29



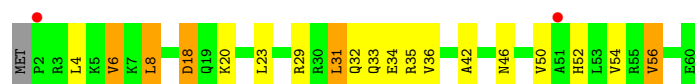
- Molecule 26: 50S ribosomal protein L29



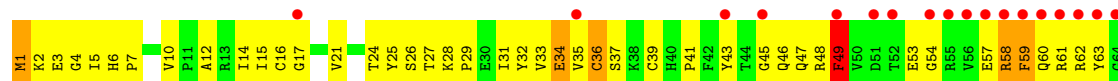
- Molecule 27: 50S ribosomal protein L30

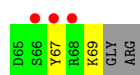


- Molecule 27: 50S ribosomal protein L30

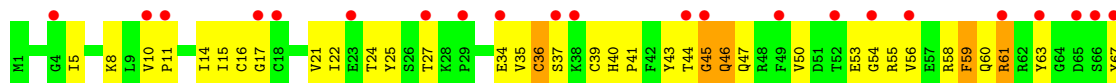


- Molecule 28: 50S ribosomal protein L31

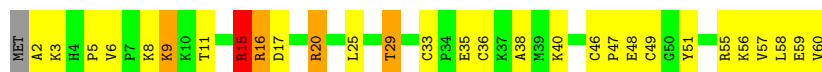




- Molecule 28: 50S ribosomal protein L31



- Molecule 29: 50S ribosomal protein L32



- Molecule 29: 50S ribosomal protein L32



- Molecule 30: 50S ribosomal protein L33



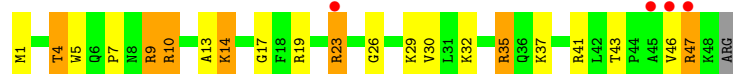
- Molecule 30: 50S ribosomal protein L33



- Molecule 31: 50S ribosomal protein L34



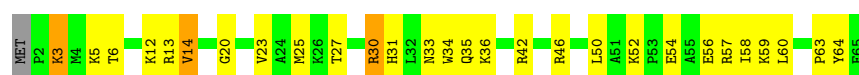
- Molecule 31: 50S ribosomal protein L34



- Molecule 32: 50S ribosomal protein L35



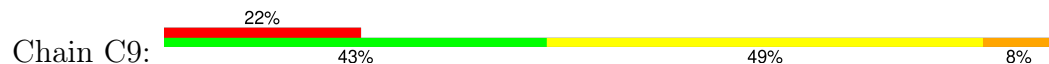
- Molecule 32: 50S ribosomal protein L35



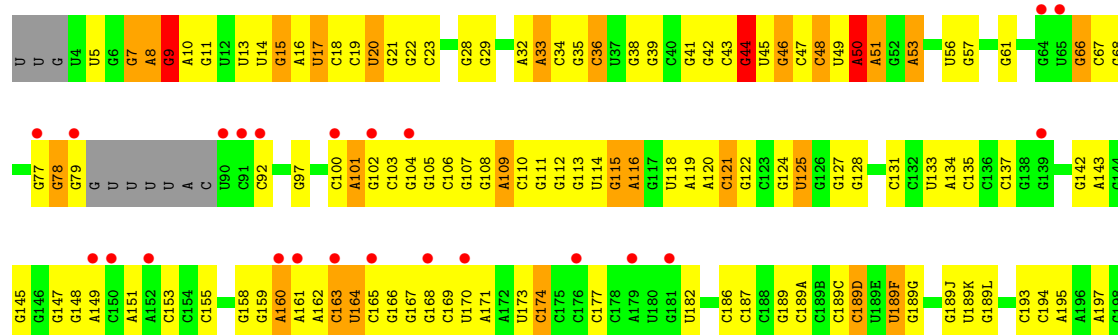
- Molecule 33: 50S ribosomal protein L36

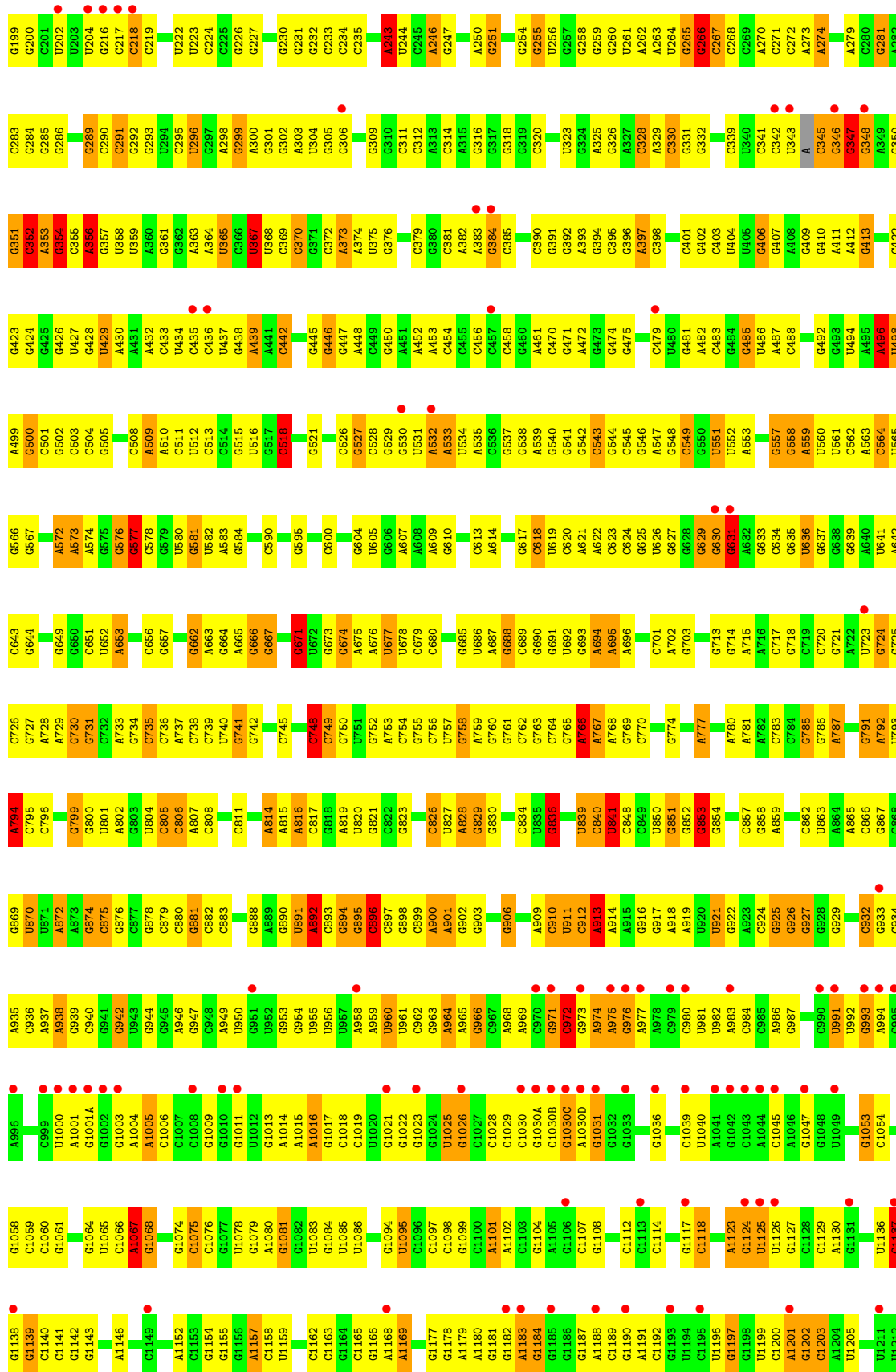


- Molecule 33: 50S ribosomal protein L36

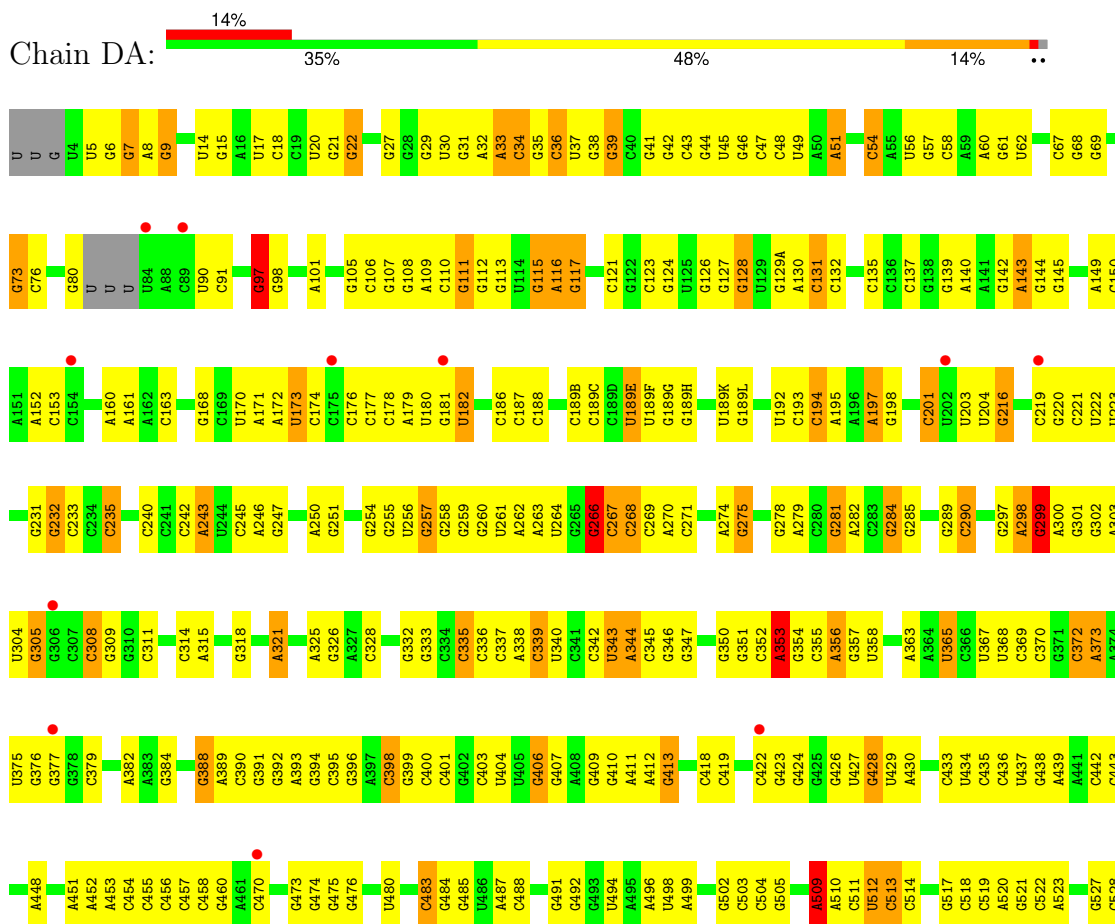


- Molecule 34: 16S Ribosomal RNA

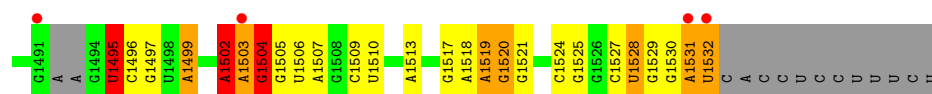




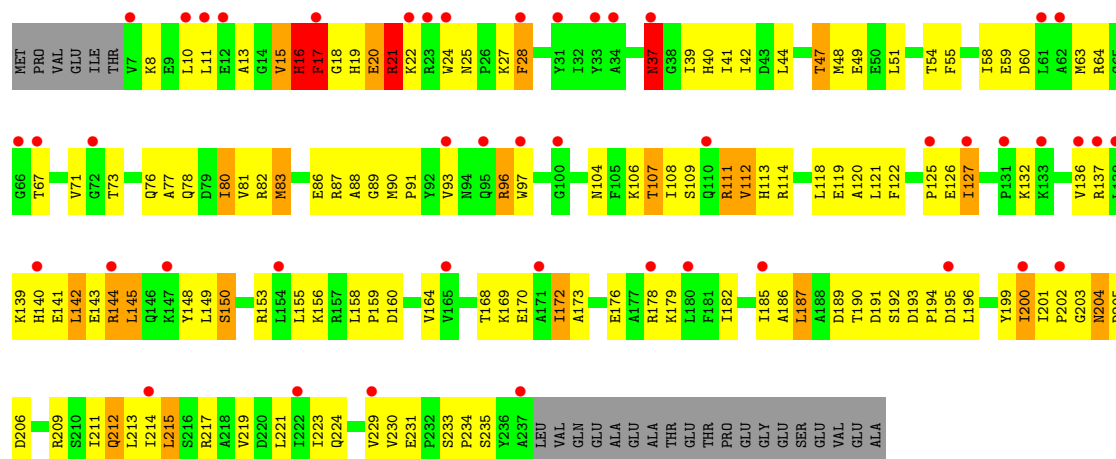
- Molecule 34: 16S Ribosomal RNA



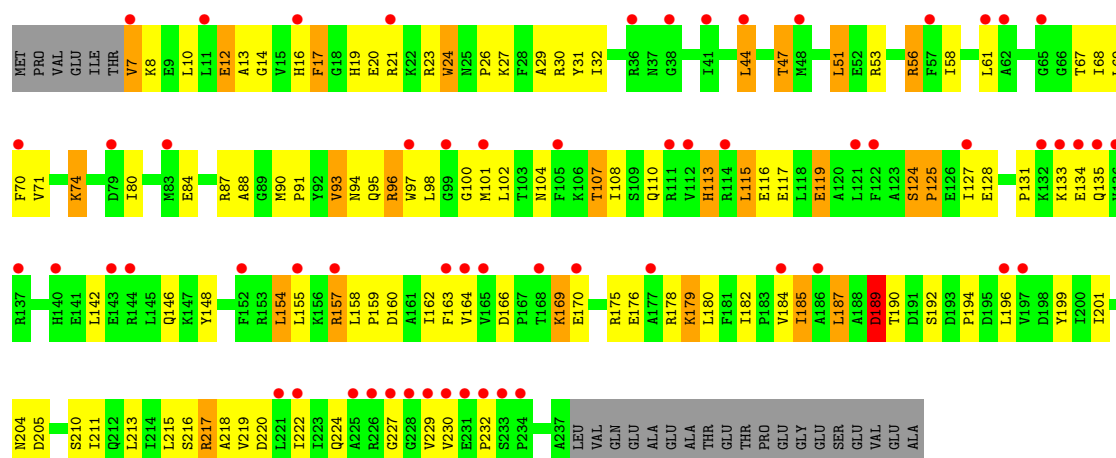




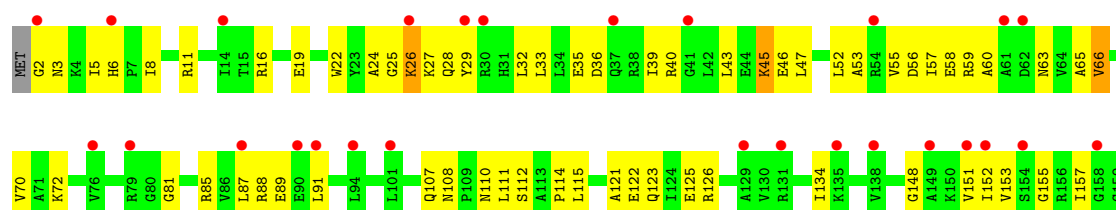
• Molecule 35: 30S ribosomal protein S2

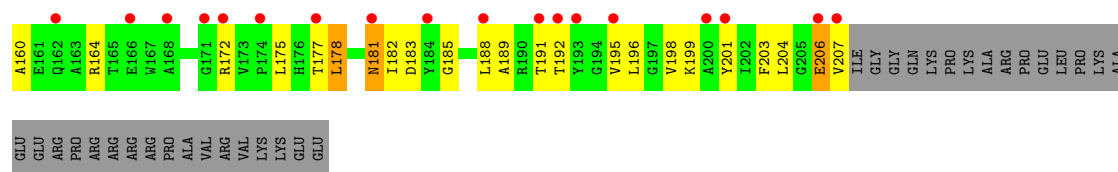


• Molecule 35: 30S ribosomal protein S2

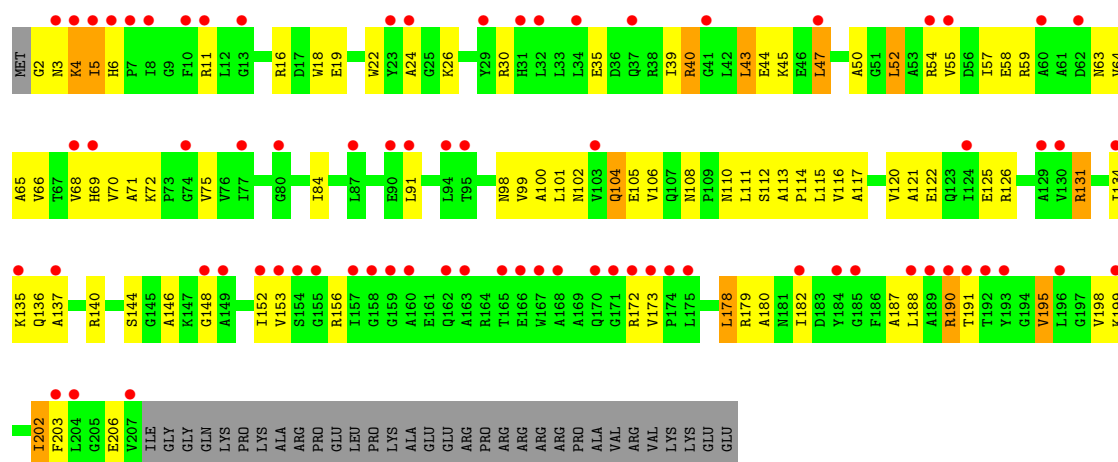


• Molecule 36: 30S ribosomal protein S3

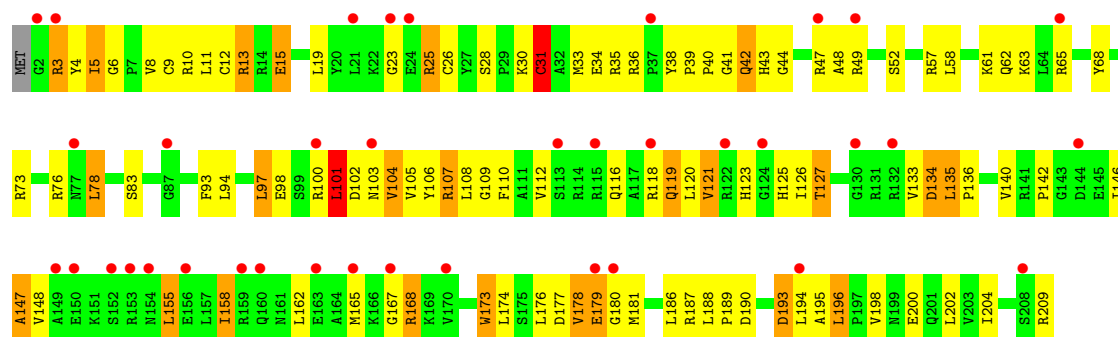




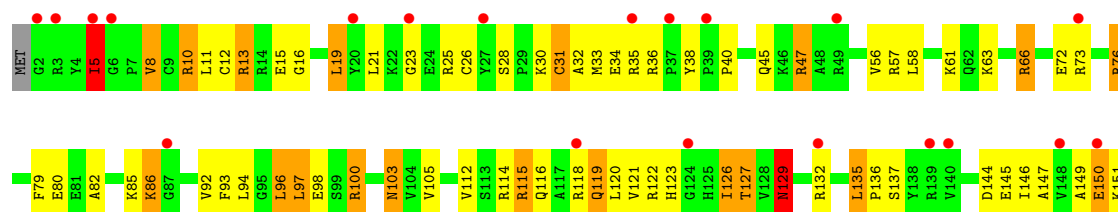
• Molecule 36: 30S ribosomal protein S3



• Molecule 37: 30S ribosomal protein S4

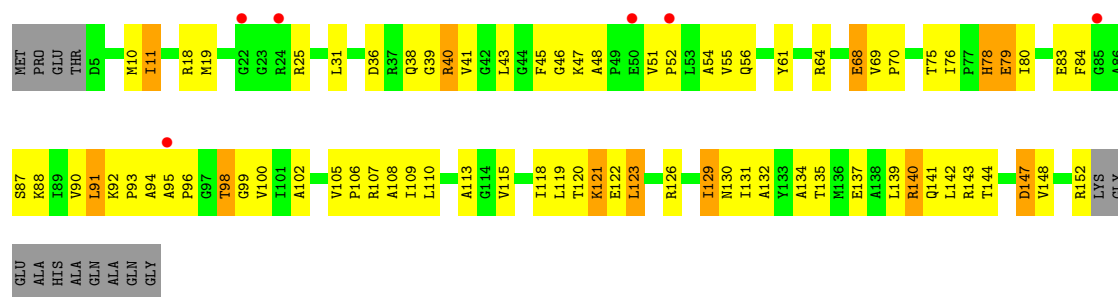
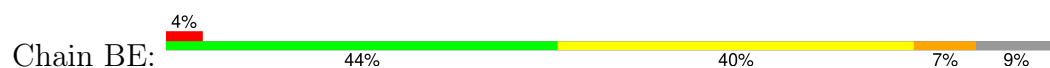


• Molecule 37: 30S ribosomal protein S4

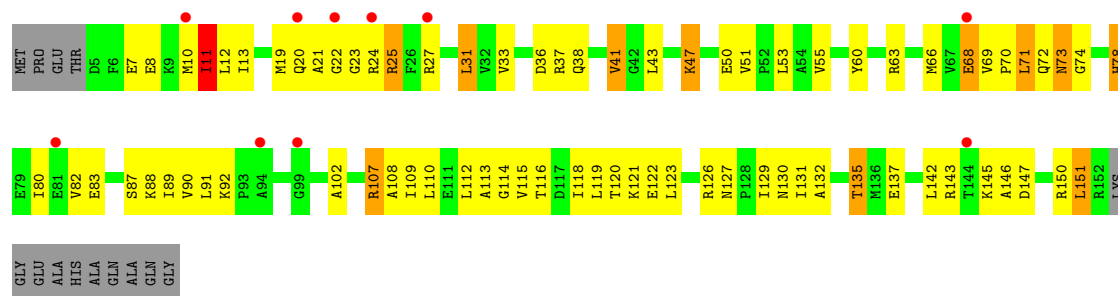
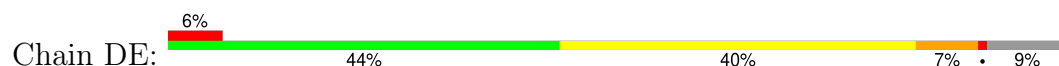




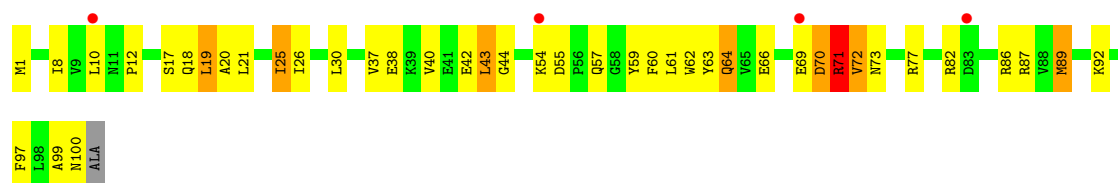
• Molecule 38: 30S ribosomal protein S5



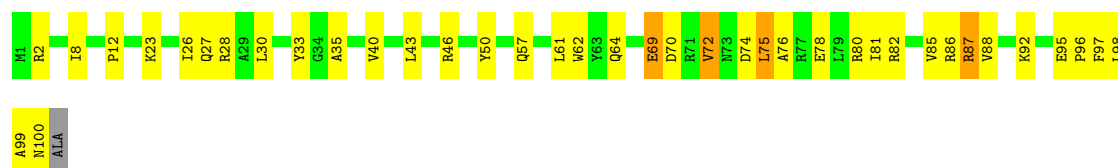
• Molecule 38: 30S ribosomal protein S5



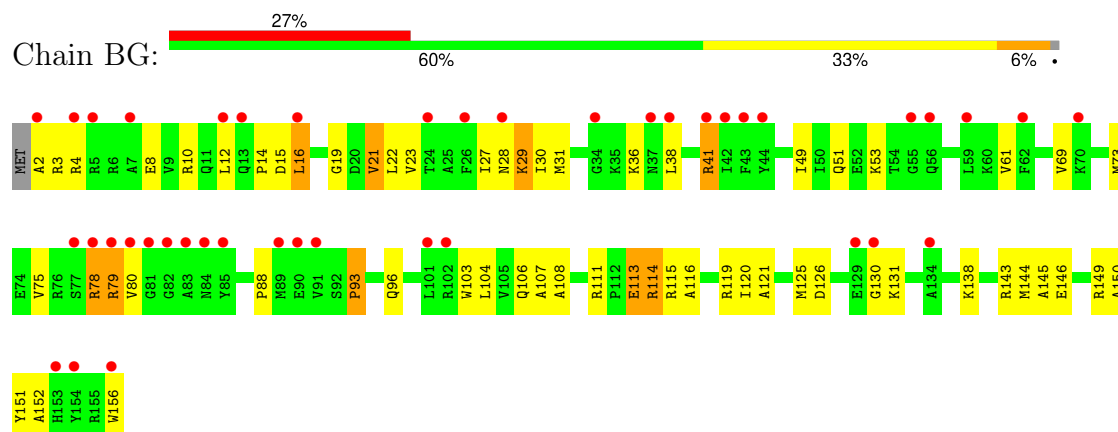
• Molecule 39: 30S ribosomal protein S6



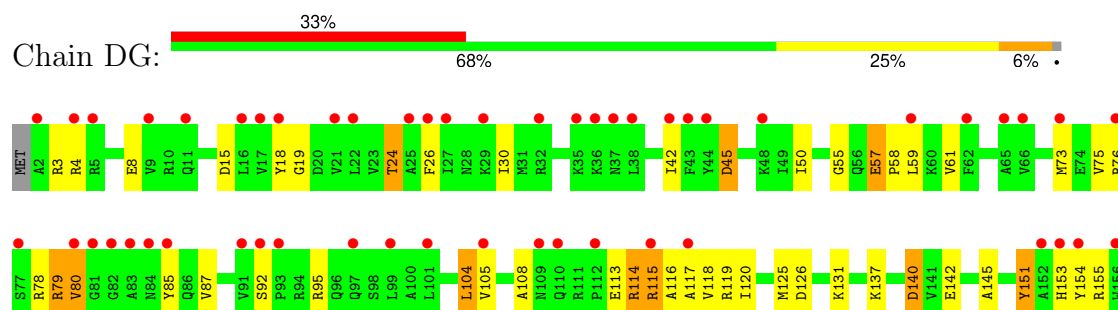
• Molecule 39: 30S ribosomal protein S6



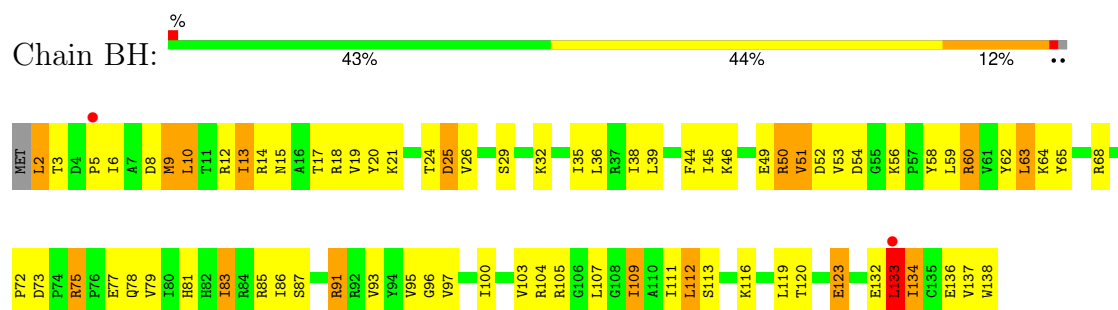
- Molecule 40: 30S ribosomal protein S7



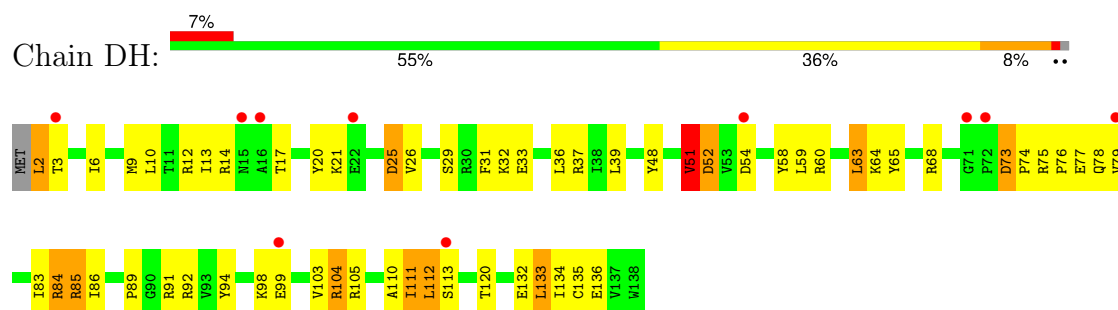
- Molecule 40: 30S ribosomal protein S7



- Molecule 41: 30S ribosomal protein S8

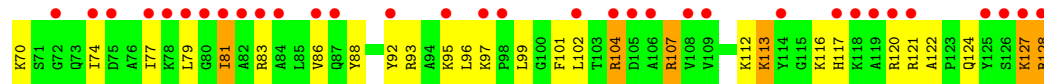
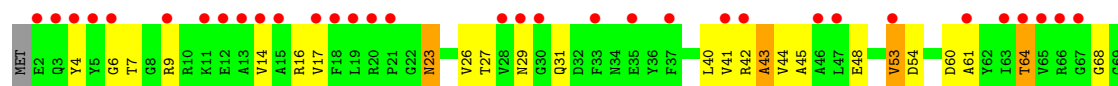


- Molecule 41: 30S ribosomal protein S8

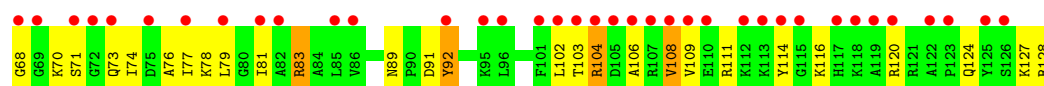
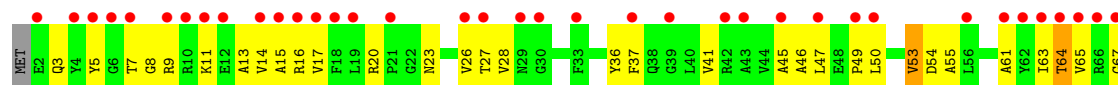


- Molecule 42: 30S ribosomal protein S9

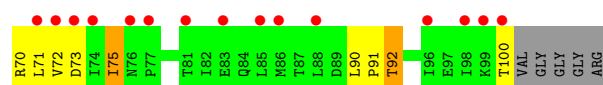
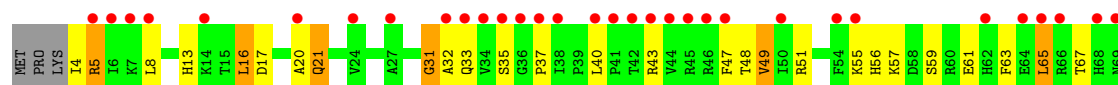




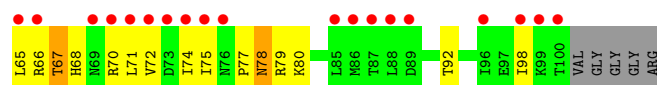
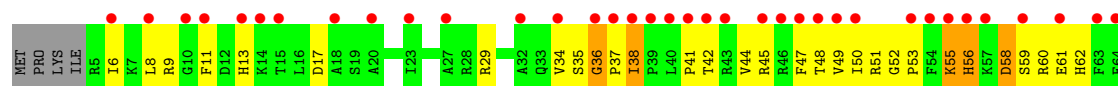
• Molecule 42: 30S ribosomal protein S9



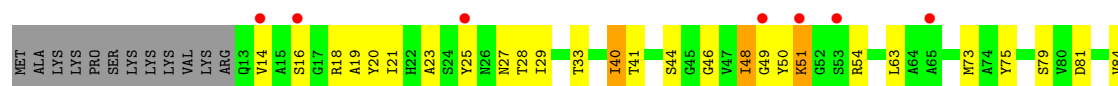
• Molecule 43: 30S ribosomal protein S10



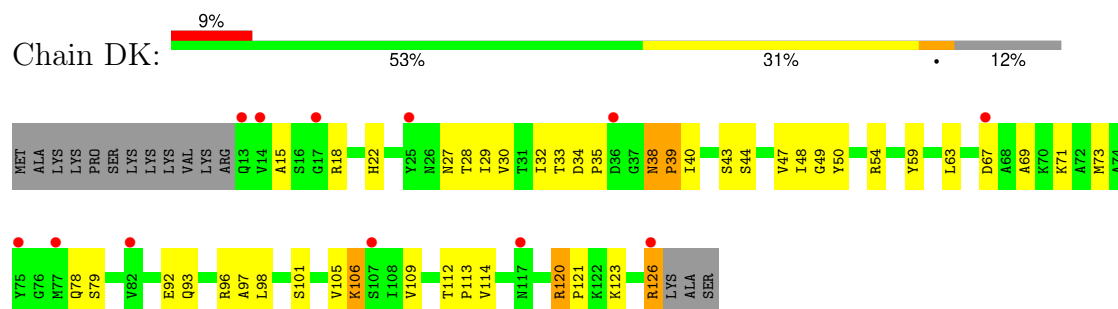
• Molecule 43: 30S ribosomal protein S10



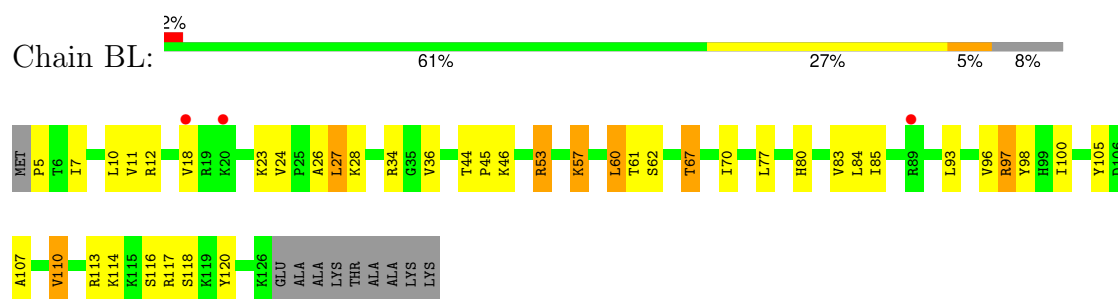
• Molecule 44: 30S ribosomal protein S11



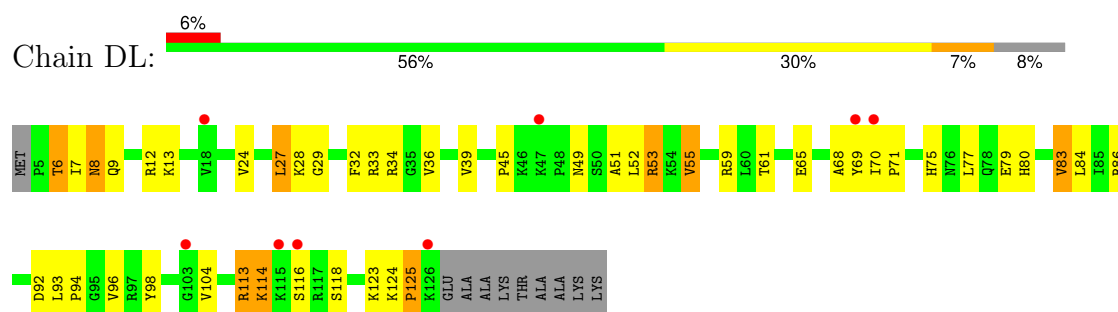
- Molecule 44: 30S ribosomal protein S11



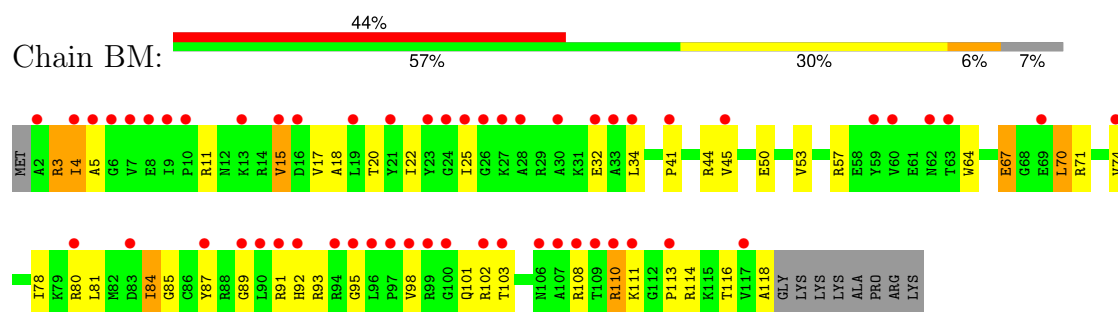
- Molecule 45: 30S ribosomal protein S12



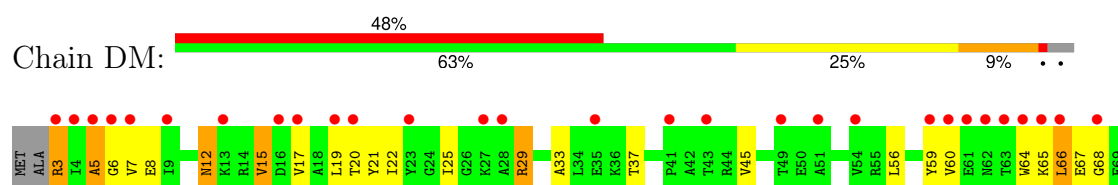
- Molecule 45: 30S ribosomal protein S12

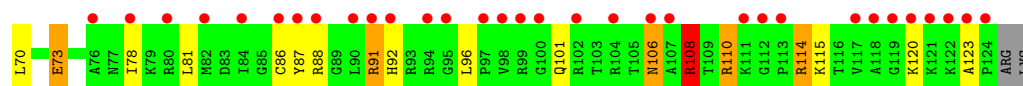


- Molecule 46: 30S ribosomal protein S13



- Molecule 46: 30S ribosomal protein S13

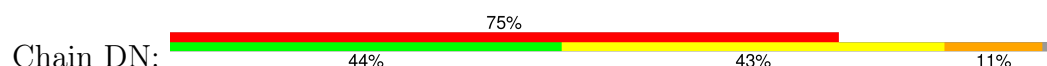




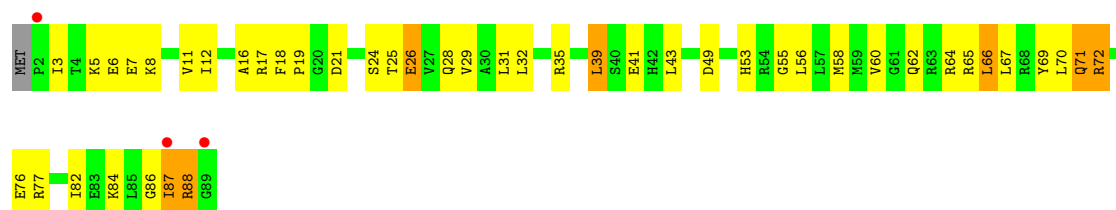
- Molecule 47: 30S ribosomal protein S14 type Z



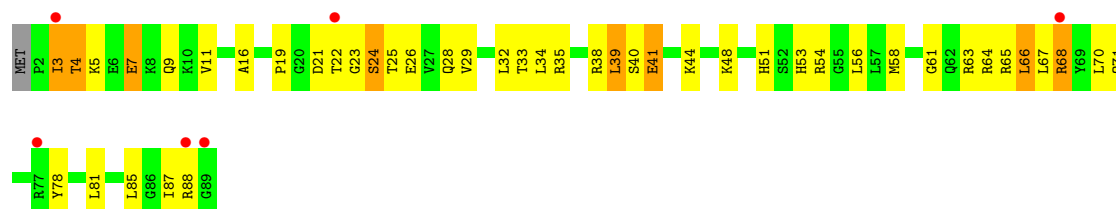
- Molecule 47: 30S ribosomal protein S14 type Z



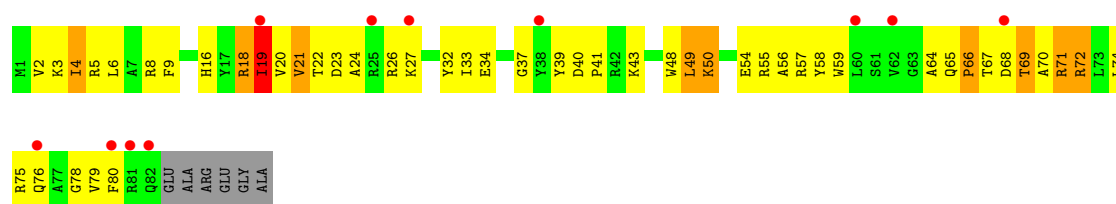
- Molecule 48: 30S ribosomal protein S15



- Molecule 48: 30S ribosomal protein S15

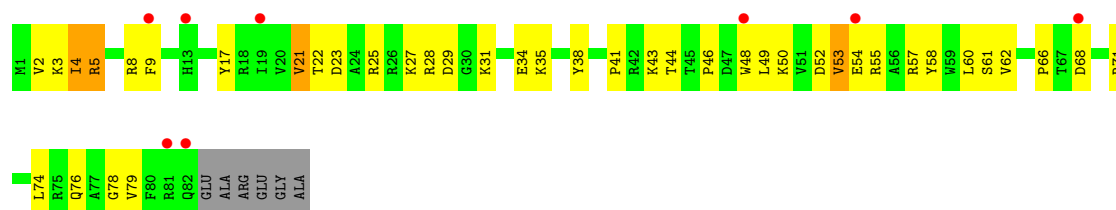


- Molecule 49: 30S ribosomal protein S16



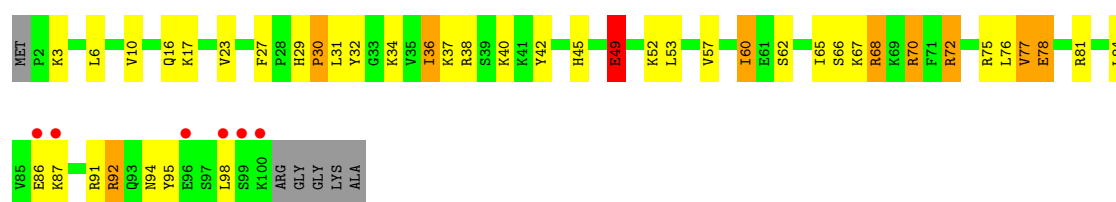
- Molecule 49: 30S ribosomal protein S16

Chain DP: 



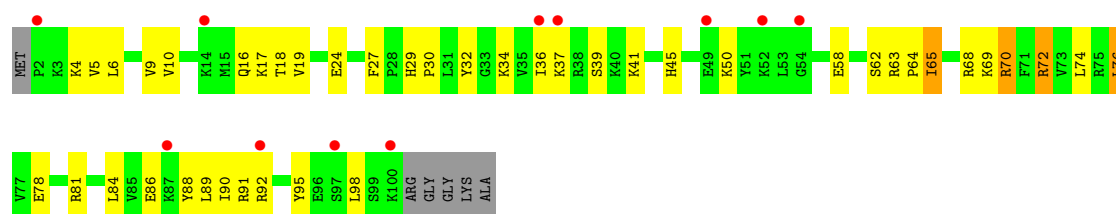
- Molecule 50: 30S ribosomal protein S17

Chain BQ: 



- Molecule 50: 30S ribosomal protein S17

Chain DQ: 



- Molecule 51: 30S ribosomal protein S18

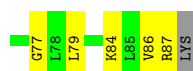
Chain BR: 



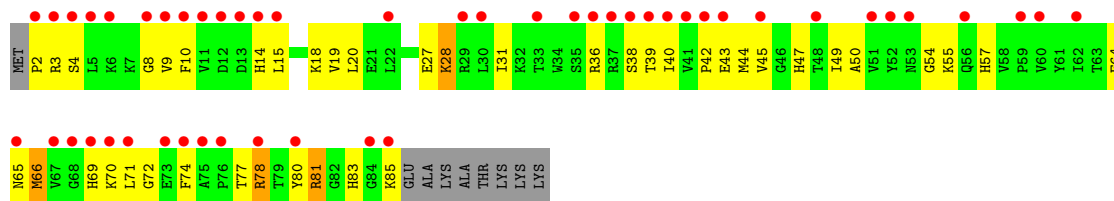
- Molecule 51: 30S ribosomal protein S18

Chain DR: 

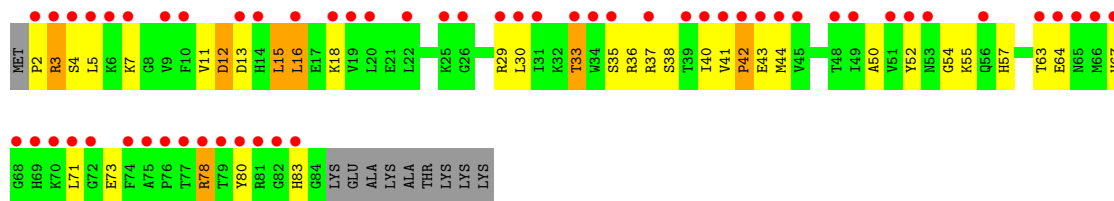




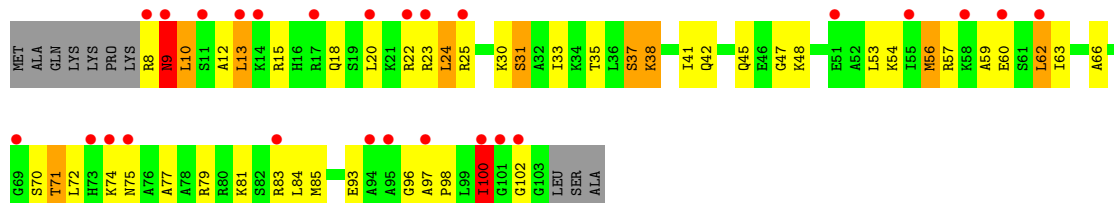
- Molecule 52: 30S ribosomal protein S19



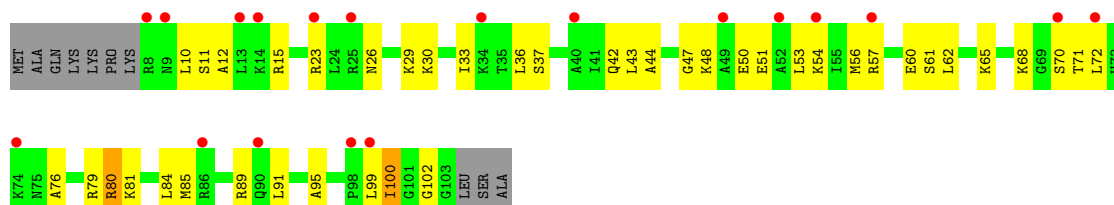
- Molecule 52: 30S ribosomal protein S19



- Molecule 53: 30S ribosomal protein S20

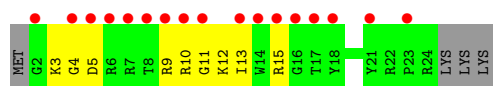


- Molecule 53: 30S ribosomal protein S20



- Molecule 54: 30S ribosomal protein Thx

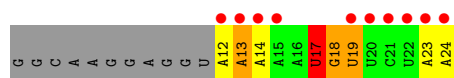
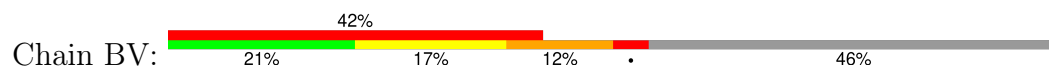




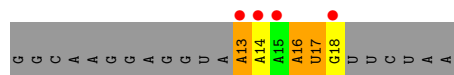
- Molecule 54: 30S ribosomal protein Thx



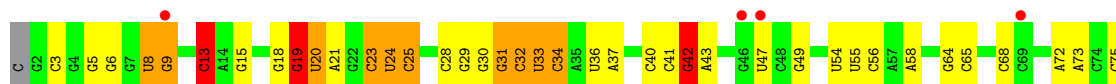
- Molecule 55: mRNA



- Molecule 55: mRNA



- Molecule 56: P-site tRNA

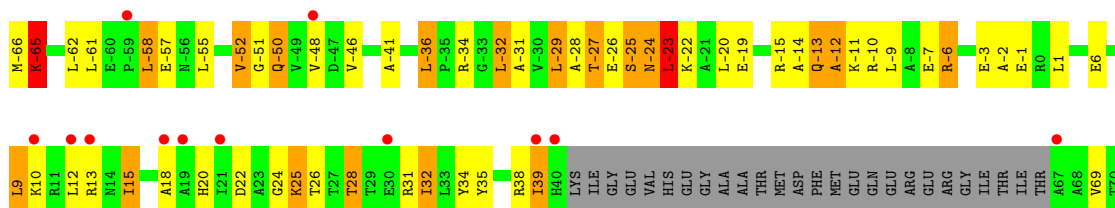
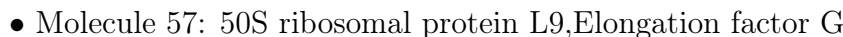


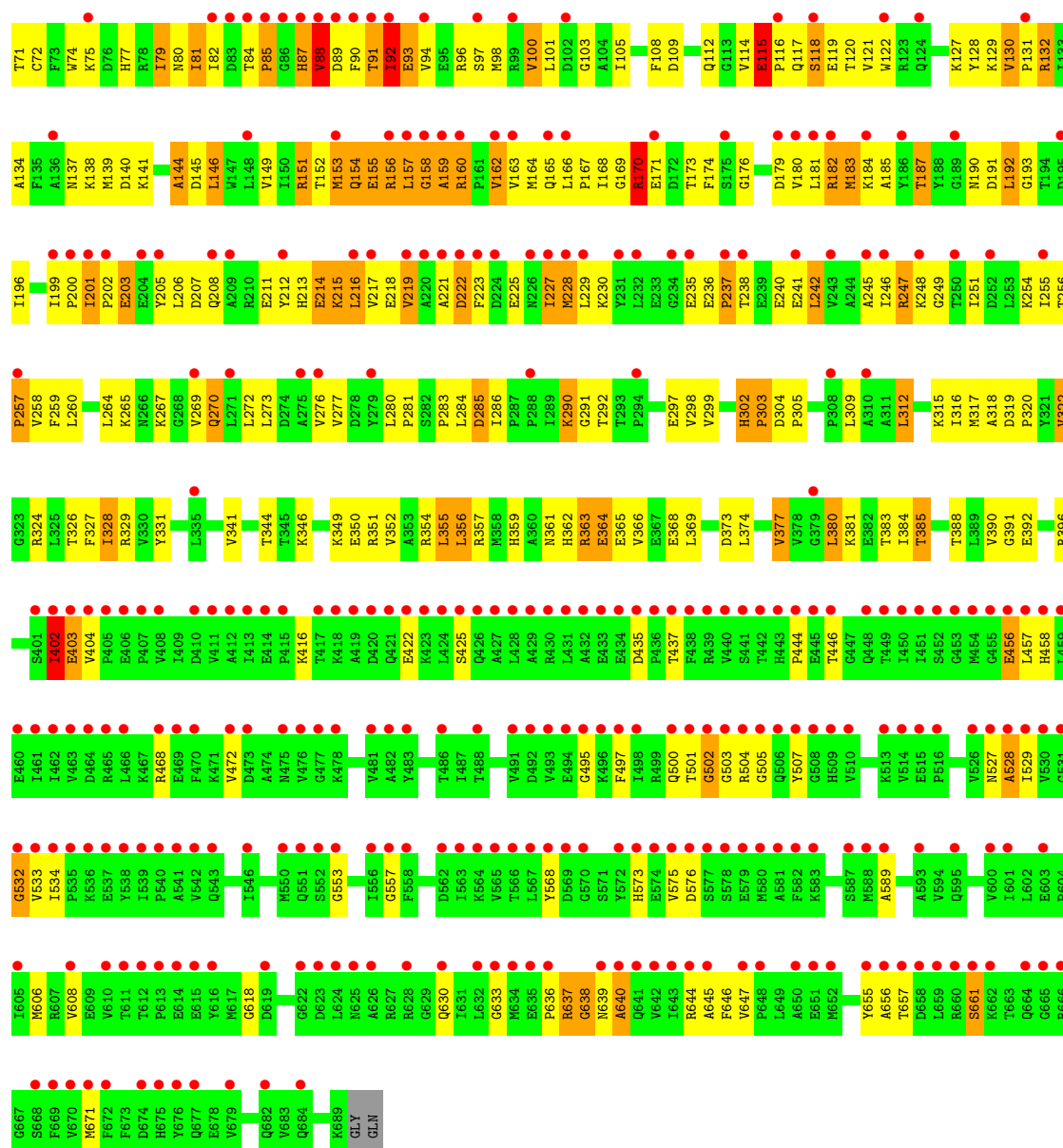
- Molecule 56: P-site tRNA



- Molecule 57: 50S ribosomal protein L9, Elongation factor G







4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.48Å 448.89Å 622.84Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.31 – 2.80 49.31 – 2.80	Depositor EDS
% Data completeness (in resolution range)	96.8 (49.31-2.80) 96.7 (49.31-2.80)	Depositor EDS
R_{merge}	0.16	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.37 (at 2.81Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE: 1.8.2_1309)	Depositor
R, R_{free}	0.221 , 0.266 0.222 , 0.266	Depositor DCC
R_{free} test set	69082 reflections (5.02%)	wwPDB-VP
Wilson B-factor (Å ²)	47.2	Xtriage
Anisotropy	0.111	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.30 , 77.8	EDS
L-test for twinning ²	$\langle L \rangle = 0.38$, $\langle L^2 \rangle = 0.20$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.89	EDS
Total number of atoms	305548	wwPDB-VP
Average B, all atoms (Å ²)	78.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.88% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: SF4, PSU, K, ZN, 5MU, GDP, MG, 5MC, 4SU

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	AA	1.44	524/68792 (0.8%)	2.20	4798/107377 (4.5%)
1	CA	1.00	54/68691 (0.1%)	1.63	1529/107219 (1.4%)
2	AB	1.20	7/2878 (0.2%)	2.00	147/4490 (3.3%)
2	CB	0.69	0/2878	1.28	12/4490 (0.3%)
3	AC	0.34	0/1083	0.65	0/1460
3	CC	0.34	0/1083	0.65	0/1460
4	AD	0.91	1/2186 (0.0%)	1.09	10/2944 (0.3%)
4	CD	0.75	0/2192	0.94	2/2951 (0.1%)
5	AE	0.99	0/1592	1.10	1/2149 (0.0%)
5	CE	0.65	0/1592	0.87	1/2149 (0.0%)
6	AF	0.92	1/1619 (0.1%)	1.06	11/2193 (0.5%)
6	CF	0.67	0/1615	0.84	1/2188 (0.0%)
7	AG	0.60	0/1450	0.80	0/1959
7	CG	0.41	0/1449	0.65	0/1958
8	AH	0.82	0/1356	0.95	0/1834
8	CH	0.40	0/1356	0.61	0/1834
9	AK	0.40	0/640	0.75	0/889
9	CK	0.31	0/640	0.64	0/889
10	AL	0.38	0/1044	0.58	0/1416
10	CL	0.39	0/1044	0.59	0/1416
11	AN	1.06	0/1144	1.09	4/1543 (0.3%)
11	CN	0.54	0/1144	0.74	0/1543
12	AO	0.91	2/943 (0.2%)	1.07	3/1269 (0.2%)
12	CO	0.71	0/943	0.81	0/1269
13	AP	0.87	0/1156	1.10	4/1537 (0.3%)
13	CP	0.60	0/1152	0.85	1/1533 (0.1%)
14	AQ	0.99	0/1143	1.05	2/1527 (0.1%)
14	CQ	0.64	0/1143	0.79	0/1527
15	AR	1.00	0/982	1.14	3/1312 (0.2%)
15	CR	0.62	0/982	0.85	0/1312
16	AS	0.77	0/887	0.90	0/1180
16	CS	0.53	0/880	0.76	0/1172

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AT	0.89	0/1105	1.08	3/1477 (0.2%)
17	CT	0.64	0/1097	0.88	0/1468
18	AU	1.17	1/977 (0.1%)	1.18	5/1301 (0.4%)
18	CU	0.65	0/977	0.78	0/1301
19	AV	1.13	0/782	1.15	1/1049 (0.1%)
19	CV	0.54	0/782	0.76	0/1049
20	AW	1.16	1/897 (0.1%)	1.23	8/1205 (0.7%)
20	CW	0.78	0/897	0.89	0/1205
21	AX	0.96	0/764	1.09	2/1025 (0.2%)
21	CX	0.68	0/764	0.88	1/1025 (0.1%)
22	AY	0.86	0/819	1.01	0/1095
22	CY	0.59	0/819	0.78	0/1095
23	AZ	0.74	0/1483	0.96	3/2017 (0.1%)
23	CZ	0.44	0/1483	0.71	0/2017
24	A0	0.92	0/662	1.01	0/881
24	C0	0.61	0/662	0.75	0/881
25	A1	0.84	0/762	1.00	1/1014 (0.1%)
25	C1	0.69	0/762	0.86	0/1014
26	A2	0.89	1/590 (0.2%)	0.96	0/781
26	C2	0.58	0/590	0.79	0/781
27	A3	0.97	0/474	1.17	0/635
27	C3	0.57	0/469	0.77	1/630 (0.2%)
28	A4	0.47	0/571	0.72	0/768
28	C4	0.36	0/545	0.57	0/737
29	A5	1.16	2/469 (0.4%)	1.21	3/635 (0.5%)
29	C5	0.73	0/469	0.93	2/635 (0.3%)
30	A6	0.93	0/460	1.01	2/613 (0.3%)
30	C6	0.68	0/456	0.86	0/608
31	A7	1.07	2/426 (0.5%)	1.21	3/561 (0.5%)
31	C7	0.79	0/426	0.92	2/561 (0.4%)
32	A8	0.99	0/525	1.07	1/691 (0.1%)
32	C8	0.68	0/525	0.85	0/691
33	A9	0.94	0/310	1.05	0/407
33	C9	0.59	0/310	0.78	0/407
34	BA	0.78	9/35976 (0.0%)	1.40	403/56145 (0.7%)
34	DA	0.70	5/36119 (0.0%)	1.30	246/56370 (0.4%)
35	BB	0.45	0/1881	0.72	0/2542
35	DB	0.39	0/1860	0.65	0/2518
36	BC	0.40	0/1576	0.58	0/2130
36	DC	0.37	0/1568	0.57	0/2122
37	BD	0.51	0/1689	0.74	0/2267
37	DD	0.49	0/1708	0.73	0/2289
38	BE	0.59	0/1145	0.81	1/1543 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	DE	0.54	0/1149	0.79	0/1548
39	BF	0.52	0/825	0.73	1/1118 (0.1%)
39	DF	0.56	0/833	0.74	1/1128 (0.1%)
40	BG	0.44	0/1250	0.57	0/1679
40	DG	0.35	0/1254	0.55	0/1683
41	BH	0.59	0/1108	0.80	0/1494
41	DH	0.50	0/1108	0.72	0/1494
42	BI	0.41	0/1005	0.63	0/1350
42	DI	0.37	0/997	0.55	0/1343
43	BJ	0.36	0/722	0.62	0/982
43	DJ	0.37	0/727	0.59	0/988
44	BK	0.50	0/848	0.71	0/1149
44	DK	0.52	0/848	0.68	0/1149
45	BL	0.68	0/946	0.82	0/1274
45	DL	0.56	0/946	0.78	0/1274
46	BM	0.36	0/933	0.61	0/1253
46	DM	0.33	0/961	0.56	0/1291
47	BN	0.44	0/501	0.70	1/664 (0.2%)
47	DN	0.39	0/501	0.56	1/664 (0.2%)
48	BO	0.58	0/739	0.81	0/985
48	DO	0.56	0/739	0.77	0/985
49	BP	0.55	0/697	0.79	0/939
49	DP	0.47	0/693	0.70	0/935
50	BQ	0.61	0/836	0.79	0/1117
50	DQ	0.57	0/836	0.72	0/1117
51	BR	0.53	0/560	0.77	0/746
51	DR	0.56	0/560	0.65	0/746
52	BS	0.33	0/676	0.56	0/911
52	DS	0.33	0/661	0.59	0/893
53	BT	0.52	0/730	0.75	0/965
53	DT	0.48	0/733	0.74	0/969
54	BU	0.38	0/203	0.67	0/266
54	DU	0.33	0/203	0.56	0/266
55	BV	1.23	1/310 (0.3%)	1.38	3/480 (0.6%)
55	DV	0.94	0/144	1.64	5/223 (2.2%)
56	BX	0.90	2/1725 (0.1%)	1.50	30/2689 (1.1%)
56	DX	0.80	5/1719 (0.3%)	1.31	15/2677 (0.6%)
57	BZ	0.62	0/4927	0.84	2/6727 (0.0%)
57	DZ	0.54	0/4925	0.77	3/6724 (0.0%)
All	All	0.97	618/325388 (0.2%)	1.54	7279/485060 (1.5%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected

by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
4	AD	0	3
5	AE	0	1
8	AH	0	1
12	AO	0	2
21	CX	0	1
23	AZ	0	1
37	BD	0	1
53	BT	0	1
57	BZ	0	1
57	DZ	0	4
All	All	0	16

All (618) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	990	A	N9-C4	-14.73	1.29	1.37
1	AA	1188	A	N9-C4	-13.98	1.29	1.37
1	AA	2065	C	N3-C4	-12.04	1.25	1.33
1	AA	354	A	N9-C4	-11.71	1.30	1.37
1	AA	2517	G	N3-C4	-11.66	1.27	1.35
1	AA	1067	A	N9-C4	-11.49	1.30	1.37
1	AA	978	A	N9-C4	-11.00	1.31	1.37
1	AA	2299	A	N9-C4	-10.60	1.31	1.37
1	AA	1234	A	N9-C4	-10.23	1.31	1.37
1	AA	990	A	N3-C4	-10.18	1.28	1.34
1	AA	978	A	N3-C4	-10.14	1.28	1.34
56	BX	18	G	O3'-P	9.99	1.73	1.61
56	BX	15	G	O3'-P	-9.85	1.49	1.61
1	AA	828	A	N3-C4	-9.71	1.29	1.34
1	AA	2366	G	N3-C4	-9.56	1.28	1.35
56	DX	19	G	O3'-P	-9.47	1.49	1.61
1	AA	587	C	N1-C6	9.35	1.42	1.37
1	AA	2366	G	N9-C4	-9.29	1.30	1.38
1	AA	1249	A	N7-C5	-9.25	1.33	1.39
1	CA	528	A	N9-C4	-9.21	1.32	1.37
1	AA	887	C	N3-C4	-8.74	1.27	1.33
1	AA	2559	U	C2-N3	-8.74	1.31	1.37
1	AA	1026	A	N9-C4	-8.69	1.32	1.37
1	CA	1142(A)	A	N9-C4	-8.63	1.32	1.37
1	AA	2601	A	C8-N7	8.58	1.37	1.31
1	AA	2065	C	N1-C6	-8.49	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	590	A	N9-C4	-8.40	1.32	1.37
1	AA	990	A	N7-C5	-8.40	1.34	1.39
1	AA	593	G	N7-C5	-8.33	1.34	1.39
56	DX	76	A	C8-N7	8.33	1.37	1.31
1	AA	2052	A	C6-N1	-8.28	1.29	1.35
1	AA	2573	A	N9-C4	-8.20	1.32	1.37
1	AA	492	A	C6-N6	-8.15	1.27	1.33
1	AA	1303	C	N1-C6	-8.07	1.32	1.37
1	AA	2751	A	N9-C4	-8.06	1.33	1.37
1	AA	1312	G	C6-N1	8.06	1.45	1.39
1	CA	945	A	C5-C6	-7.99	1.33	1.41
1	AA	2286	A	C6-N6	7.99	1.40	1.33
1	AA	1025	G	C6-N1	-7.96	1.33	1.39
56	DX	76	A	C5-C6	-7.92	1.33	1.41
1	AA	828	A	C5-C4	-7.91	1.33	1.38
1	AA	2052	A	N3-C4	-7.90	1.30	1.34
1	AA	579	G	N9-C8	7.88	1.43	1.37
1	AA	1324	A	N3-C4	-7.84	1.30	1.34
1	AA	990	A	C5-C4	7.79	1.44	1.38
1	AA	1068	G	C6-N1	-7.77	1.34	1.39
1	AA	2738	A	N3-C4	-7.74	1.30	1.34
1	AA	1660	A	N9-C4	-7.72	1.33	1.37
1	AA	868	A	C6-N6	-7.70	1.27	1.33
1	AA	2376	C	N3-C4	-7.69	1.28	1.33
1	AA	1307	C	C4-N4	-7.67	1.27	1.33
1	AA	2825	C	N1-C6	-7.67	1.32	1.37
1	AA	254	A	N9-C4	-7.65	1.33	1.37
1	AA	1037	C	N1-C2	-7.63	1.32	1.40
1	AA	830	A	N7-C5	-7.63	1.34	1.39
2	AB	93	G	N3-C4	-7.62	1.30	1.35
56	DX	76	A	N9-C8	7.61	1.43	1.37
2	AB	100	A	N3-C4	-7.57	1.30	1.34
1	AA	1605	A	N9-C4	-7.56	1.33	1.37
1	AA	1053	C	N1-C6	-7.56	1.32	1.37
1	AA	2586	G	C2-N3	-7.54	1.26	1.32
1	AA	2738	A	N7-C5	7.53	1.43	1.39
1	AA	2041	A	N3-C4	7.52	1.39	1.34
1	AA	990	A	C5-C6	-7.52	1.34	1.41
1	AA	1068	G	N9-C4	-7.51	1.31	1.38
1	AA	739	C	N1-C6	-7.46	1.32	1.37
20	AW	52	GLU	CG-CD	7.43	1.63	1.51
1	AA	29	U	C4-O4	-7.36	1.17	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1809	U	N1-C2	-7.35	1.31	1.38
1	AA	790	G	C8-N7	7.31	1.35	1.30
1	AA	978	A	C5-C6	-7.30	1.34	1.41
1	AA	956	A	N9-C4	-7.26	1.33	1.37
29	A5	16	ARG	CG-CD	7.26	1.70	1.51
1	AA	790	G	N7-C5	7.25	1.43	1.39
1	AA	882	A	C5-C6	7.25	1.47	1.41
1	AA	1234	A	N3-C4	-7.23	1.30	1.34
1	AA	125	A	C6-N6	-7.20	1.28	1.33
1	AA	1035	G	N3-C4	-7.18	1.30	1.35
1	AA	1010	C	N3-C4	-7.16	1.28	1.33
2	AB	82	G	C8-N7	7.16	1.35	1.30
1	AA	168	G	N3-C4	-7.12	1.30	1.35
1	CA	781	A	N9-C4	-7.10	1.33	1.37
1	AA	185	A	C8-N7	-7.08	1.26	1.31
1	AA	1348	A	N7-C5	-7.08	1.35	1.39
1	AA	180	A	N3-C4	-7.07	1.30	1.34
1	AA	1272	A	C5-C6	-7.05	1.34	1.41
1	AA	808	A	N7-C5	-7.02	1.35	1.39
1	AA	56	C	C4-C5	-7.00	1.37	1.43
1	AA	2446	A	C6-N1	-7.00	1.30	1.35
2	AB	100	A	N7-C5	7.00	1.43	1.39
1	AA	1700	G	N1-C2	-6.99	1.32	1.37
1	AA	1249	A	N9-C4	-6.97	1.33	1.37
1	AA	496	A	C6-N1	-6.97	1.30	1.35
1	AA	2738	A	N9-C4	-6.97	1.33	1.37
1	AA	1157	A	N9-C4	-6.96	1.33	1.37
1	AA	847	A	N3-C4	-6.95	1.30	1.34
1	AA	2291	G	C6-N1	6.94	1.44	1.39
1	AA	1261	G	C5-C6	-6.93	1.35	1.42
1	AA	177	G	C8-N7	-6.93	1.26	1.30
1	AA	553	A	N3-C4	-6.92	1.30	1.34
1	AA	1233	U	C2-N3	-6.91	1.32	1.37
1	AA	2611	G	C5-C4	-6.89	1.33	1.38
1	AA	2343	G	C5-C4	-6.82	1.33	1.38
1	AA	553	A	C5-C6	-6.81	1.34	1.41
1	AA	2431	U	C2-N3	-6.81	1.32	1.37
1	AA	555	G	C2-N3	-6.79	1.27	1.32
1	AA	839	G	N1-C2	-6.79	1.32	1.37
1	AA	2255	U	C4-C5	-6.78	1.37	1.43
1	AA	496	A	N9-C4	-6.74	1.33	1.37
1	AA	764	G	N9-C4	-6.72	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	BA	1512	U	C2-N3	-6.69	1.33	1.37
1	AA	557	A	C6-N1	-6.68	1.30	1.35
1	AA	335	A	N9-C4	6.67	1.41	1.37
1	AA	1269	G	C8-N7	6.67	1.34	1.30
1	AA	553	A	N9-C8	6.65	1.43	1.37
1	AA	1231	G	N1-C2	-6.64	1.32	1.37
1	AA	1025	G	C5-C4	-6.62	1.33	1.38
1	AA	881	C	C2-O2	-6.62	1.18	1.24
1	AA	625	G	C6-N1	-6.59	1.34	1.39
1	AA	605	G	C6-N1	-6.57	1.34	1.39
1	AA	2627	U	C2-N3	-6.56	1.33	1.37
1	AA	593	G	C5-C4	-6.55	1.33	1.38
1	AA	830	A	N9-C8	-6.54	1.32	1.37
1	AA	1297	C	N1-C6	-6.54	1.33	1.37
1	CA	1570	A	N9-C4	6.54	1.41	1.37
1	AA	843	C	N1-C6	6.53	1.41	1.37
1	AA	1197	G	C6-N1	-6.53	1.34	1.39
1	AA	1001	G	C6-O6	6.52	1.30	1.24
1	AA	1365	G	C6-N1	-6.51	1.34	1.39
1	AA	2355	C	N3-C4	-6.50	1.29	1.33
1	AA	2645	G	C8-N7	6.50	1.34	1.30
1	AA	2836	A	N9-C4	-6.50	1.33	1.37
1	AA	2706	G	N7-C5	6.49	1.43	1.39
1	AA	1376	C	C4-C5	6.49	1.48	1.43
1	AA	1656	A	N9-C4	-6.49	1.33	1.37
1	AA	2285	A	C5-C4	-6.48	1.34	1.38
1	CA	945	A	N9-C4	-6.48	1.33	1.37
1	AA	358	C	N1-C2	-6.47	1.33	1.40
1	AA	2836	A	N7-C5	-6.47	1.35	1.39
1	AA	2014	G	N9-C4	6.46	1.43	1.38
1	AA	1745	A	N9-C4	-6.45	1.33	1.37
1	AA	851	A	N9-C4	-6.44	1.33	1.37
1	AA	73	A	N3-C4	-6.44	1.30	1.34
1	AA	2637	G	C8-N7	6.44	1.34	1.30
1	AA	1659	G	C5-C4	-6.43	1.33	1.38
1	AA	2282	G	C5-C4	-6.42	1.33	1.38
1	AA	1073	A	N9-C4	-6.42	1.34	1.37
1	AA	1741	C	N1-C6	-6.42	1.33	1.37
1	AA	1431	G	N9-C4	-6.41	1.32	1.38
1	AA	2020	G	C6-N1	-6.41	1.35	1.39
1	AA	790	G	N9-C8	6.37	1.42	1.37
1	AA	1037	C	N3-C4	-6.35	1.29	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	2573	C	N3-C4	-6.35	1.29	1.33
1	AA	2562	G	C8-N7	-6.34	1.27	1.30
1	AA	1803	G	C5-C4	-6.34	1.33	1.38
1	AA	957	A	C6-N1	-6.34	1.31	1.35
1	AA	746	A	N3-C4	-6.33	1.31	1.34
1	AA	2287	C	N1-C6	-6.32	1.33	1.37
1	AA	1715	A	N9-C4	6.31	1.41	1.37
1	CA	1353	A	N3-C4	-6.31	1.31	1.34
1	AA	2653	G	C8-N7	-6.29	1.27	1.30
1	AA	887	C	N1-C6	-6.27	1.33	1.37
1	AA	476	G	C6-N1	-6.26	1.35	1.39
1	AA	527	A	N3-C4	-6.26	1.31	1.34
1	AA	1073	A	N9-C8	-6.26	1.32	1.37
1	AA	868	A	C6-N1	-6.25	1.31	1.35
1	CA	384	U	C2-N3	-6.25	1.33	1.37
1	AA	2509	A	N9-C8	-6.22	1.32	1.37
1	AA	476	G	N9-C4	-6.22	1.32	1.38
1	AA	254	A	C5-C6	-6.21	1.35	1.41
1	AA	2339	A	C6-N1	-6.20	1.31	1.35
1	AA	708	C	C4-N4	-6.19	1.28	1.33
1	AA	2068	G	N9-C4	-6.18	1.33	1.38
1	AA	1660	A	N7-C5	-6.18	1.35	1.39
1	AA	1438	A	N9-C4	6.14	1.41	1.37
1	AA	2376	C	N1-C6	-6.13	1.33	1.37
1	AA	1814	A	N7-C5	-6.13	1.35	1.39
1	AA	2061	C	N3-C4	-6.13	1.29	1.33
1	AA	993	G	N9-C4	-6.13	1.33	1.38
1	CA	330	A	C5-C6	-6.13	1.35	1.41
1	AA	1312	G	C2-N3	-6.11	1.27	1.32
1	AA	2734	A	N9-C8	-6.11	1.32	1.37
1	AA	1439	A	N7-C5	-6.11	1.35	1.39
1	AA	1038	C	N3-C4	6.10	1.38	1.33
1	AA	846	G	N9-C8	-6.10	1.33	1.37
1	AA	2055	A	N9-C4	-6.09	1.34	1.37
1	AA	798	A	N9-C4	-6.09	1.34	1.37
1	AA	1613	A	N3-C4	6.08	1.38	1.34
1	AA	2298	A	N7-C5	-6.08	1.35	1.39
1	AA	2514	G	C2-N3	-6.08	1.27	1.32
1	AA	1302	G	C8-N7	-6.07	1.27	1.30
1	AA	555	G	C6-N1	-6.06	1.35	1.39
1	AA	2573	A	N7-C5	-6.06	1.35	1.39
1	AA	1717	C	N1-C6	-6.05	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2223	C	C2-N3	-6.05	1.30	1.35
1	AA	991	G	N7-C5	-6.04	1.35	1.39
1	AA	1229	G	N9-C8	6.04	1.42	1.37
1	CA	497	A	N3-C4	-6.04	1.31	1.34
1	CA	2531	A	N9-C4	-6.04	1.34	1.37
1	CA	2045	C	N1-C6	-6.03	1.33	1.37
1	AA	613	A	C5-C6	-6.03	1.35	1.41
1	AA	547	G	N7-C5	6.02	1.42	1.39
1	AA	2608	U	C2-N3	-6.01	1.33	1.37
1	AA	2517	G	N9-C4	-6.01	1.33	1.38
1	AA	553	A	N9-C4	-6.00	1.34	1.37
1	AA	1303	C	C4-C5	-6.00	1.38	1.43
1	AA	1321	A	N9-C4	6.00	1.41	1.37
1	AA	2264	G	C8-N7	5.99	1.34	1.30
34	BA	780	A	N9-C4	-5.99	1.34	1.37
1	AA	2625	U	C4-O4	-5.99	1.18	1.23
1	AA	2523	U	C4-O4	-5.99	1.18	1.23
1	AA	1249	A	N1-C2	5.98	1.39	1.34
1	AA	563	G	C8-N7	5.98	1.34	1.30
1	AA	593	G	C6-O6	-5.97	1.18	1.24
1	AA	1197	G	N7-C5	5.97	1.42	1.39
1	AA	2717	A	N7-C5	-5.97	1.35	1.39
1	AA	1082	G	C5-C4	5.96	1.42	1.38
1	AA	2687	A	N7-C5	-5.96	1.35	1.39
1	AA	356	A	N3-C4	5.95	1.38	1.34
1	AA	2039	U	N1-C6	-5.95	1.32	1.38
1	AA	231	G	N7-C5	-5.94	1.35	1.39
34	DA	250	A	N9-C4	5.94	1.41	1.37
1	AA	2833	A	N9-C4	-5.93	1.34	1.37
1	AA	1068	G	N3-C4	-5.92	1.31	1.35
1	AA	324	A	C6-N6	-5.92	1.29	1.33
1	AA	2876	U	N3-C4	-5.92	1.33	1.38
1	AA	307	A	N9-C4	-5.91	1.34	1.37
1	AA	500	G	C8-N7	5.91	1.34	1.30
1	AA	1188	A	N3-C4	-5.91	1.31	1.34
1	AA	1278	G	C2-N3	-5.90	1.28	1.32
1	AA	2586	G	N9-C8	-5.90	1.33	1.37
1	AA	585	U	C4-O4	-5.89	1.19	1.23
1	CA	466	A	N9-C4	5.89	1.41	1.37
1	AA	2522	C	N1-C6	5.89	1.40	1.37
1	AA	1829	U	C2-N3	-5.89	1.33	1.37
1	AA	727	G	C5-C4	-5.88	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2397	C	N1-C2	-5.87	1.34	1.40
1	AA	1431	G	N9-C8	-5.87	1.33	1.37
1	AA	1686	U	C2-O2	-5.87	1.17	1.22
1	AA	1723	A	N9-C4	-5.87	1.34	1.37
1	AA	2737	C	N1-C6	-5.87	1.33	1.37
1	AA	369	A	N3-C4	5.87	1.38	1.34
1	AA	1725	G	C2-N3	-5.87	1.28	1.32
1	AA	2374	G	N3-C4	-5.86	1.31	1.35
1	AA	1878	A	N9-C4	5.86	1.41	1.37
1	AA	2343	G	C5-C6	-5.86	1.36	1.42
1	AA	2298	A	N3-C4	-5.86	1.31	1.34
1	CA	248	G	N3-C4	5.85	1.39	1.35
1	AA	1070	G	N7-C5	-5.85	1.35	1.39
1	AA	2517	G	N1-C2	-5.85	1.33	1.37
1	AA	795	G	N7-C5	5.85	1.42	1.39
1	AA	1475	G	N7-C5	-5.85	1.35	1.39
1	AA	2068	G	N7-C5	-5.84	1.35	1.39
1	AA	240	A	C5-C6	5.84	1.46	1.41
1	AA	2068	G	N3-C4	-5.84	1.31	1.35
1	AA	475	A	N9-C4	-5.83	1.34	1.37
34	BA	1530	G	N9-C4	-5.83	1.33	1.38
1	AA	2056	U	C4-O4	5.82	1.28	1.23
1	AA	2374	G	C8-N7	5.82	1.34	1.30
1	AA	177	G	N9-C8	-5.82	1.33	1.37
2	AB	106	G	C5-C4	-5.82	1.34	1.38
1	CA	2049	G	N3-C4	-5.81	1.31	1.35
31	A7	32	LYS	CE-NZ	5.81	1.63	1.49
1	AA	1230	C	N1-C6	5.80	1.40	1.37
1	AA	2586	G	C5-C4	-5.80	1.34	1.38
1	AA	1013	G	N1-C2	-5.79	1.33	1.37
1	AA	1201	A	N9-C4	-5.79	1.34	1.37
1	AA	2082	A	C6-N1	-5.79	1.31	1.35
1	AA	1834	A	N9-C4	-5.78	1.34	1.37
1	AA	1920	U	C4-O4	-5.78	1.19	1.23
1	CA	2059	A	N9-C4	-5.78	1.34	1.37
1	AA	2453	C	N1-C6	-5.77	1.33	1.37
1	AA	2372	A	N3-C4	-5.77	1.31	1.34
1	AA	2489	C	C2-N3	5.77	1.40	1.35
1	AA	1056	A	N1-C2	-5.76	1.29	1.34
1	AA	613	A	C6-N1	-5.76	1.31	1.35
1	AA	851	A	N9-C8	-5.76	1.33	1.37
1	AA	2639	G	C8-N7	-5.75	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2643	G	C6-N1	-5.75	1.35	1.39
1	AA	2521	G	C5-C4	-5.75	1.34	1.38
1	AA	1240	G	C5-C4	-5.75	1.34	1.38
1	AA	1724	A	N3-C4	-5.75	1.31	1.34
1	AA	2291	G	C8-N7	-5.74	1.27	1.30
1	AA	1659	G	C6-O6	-5.74	1.19	1.24
1	AA	1283	A	N7-C5	-5.73	1.35	1.39
1	AA	2446	A	N7-C5	-5.73	1.35	1.39
1	AA	2400	A	N9-C4	-5.73	1.34	1.37
6	AF	84	VAL	CA-CB	-5.73	1.42	1.54
1	CA	190	A	C6-N1	-5.73	1.31	1.35
1	AA	1665	G	N1-C2	-5.72	1.33	1.37
1	CA	676	A	N9-C4	-5.72	1.34	1.37
1	AA	1616	A	C2-N3	-5.72	1.28	1.33
1	AA	1988	A	N7-C5	-5.72	1.35	1.39
1	CA	532	A	N9-C4	5.72	1.41	1.37
1	AA	846	G	N3-C4	5.71	1.39	1.35
18	AU	63	VAL	CB-CG2	5.71	1.64	1.52
1	AA	594	A	C5-C6	-5.71	1.35	1.41
1	AA	1452	U	C4-O4	-5.71	1.19	1.23
1	AA	796	C	C5-C6	-5.71	1.29	1.34
1	CA	1677	A	N3-C4	-5.70	1.31	1.34
1	AA	1068	G	C5-C4	-5.69	1.34	1.38
1	AA	731	G	N7-C5	-5.69	1.35	1.39
1	AA	2015	U	C4-O4	-5.69	1.19	1.23
1	AA	1803	G	N7-C5	-5.68	1.35	1.39
1	AA	322	G	N7-C5	-5.68	1.35	1.39
1	AA	2496	G	N9-C8	-5.68	1.33	1.37
1	CA	1822	G	N3-C4	-5.68	1.31	1.35
1	AA	592	U	C4-O4	5.68	1.28	1.23
1	AA	769	A	N9-C4	5.67	1.41	1.37
1	AA	613	A	C6-N6	-5.67	1.29	1.33
1	AA	462	C	N3-C4	-5.67	1.29	1.33
1	AA	1199	C	N1-C2	-5.64	1.34	1.40
1	AA	2641	A	C5-C4	5.64	1.42	1.38
1	AA	64	C	C4-C5	-5.64	1.38	1.43
1	AA	1236	G	C6-O6	-5.64	1.19	1.24
4	AD	28	GLU	CG-CD	5.64	1.60	1.51
1	AA	2669	A	N3-C4	5.64	1.38	1.34
1	AA	1283	A	N3-C4	-5.63	1.31	1.34
1	AA	1055	A	C5-C6	-5.63	1.35	1.41
1	CA	2062	A	N3-C4	5.63	1.38	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	974	G	C6-N1	-5.63	1.35	1.39
1	AA	2101	U	N1-C2	5.63	1.43	1.38
1	AA	2470	G	N3-C4	-5.62	1.31	1.35
1	AA	591	U	C4-O4	-5.62	1.19	1.23
29	A5	16	ARG	CB-CG	5.61	1.67	1.52
1	AA	2630	G	C6-N1	-5.61	1.35	1.39
1	AA	830	A	N9-C4	5.59	1.41	1.37
1	AA	2073	A	N3-C4	-5.59	1.31	1.34
1	AA	2534	U	C4-O4	-5.59	1.19	1.23
1	CA	959	A	N3-C4	-5.59	1.31	1.34
1	AA	848	G	C6-O6	5.59	1.29	1.24
1	AA	1375	U	C2-O2	-5.59	1.17	1.22
1	AA	353	G	C8-N7	-5.59	1.27	1.30
1	AA	1233	U	N3-C4	-5.58	1.33	1.38
1	AA	2001	C	N1-C6	5.58	1.40	1.37
1	AA	2223	C	N3-C4	-5.58	1.30	1.33
1	AA	1056	A	N9-C4	5.57	1.41	1.37
1	AA	1619	A	N9-C4	-5.57	1.34	1.37
1	AA	2239	A	N9-C4	5.57	1.41	1.37
1	CA	2455	G	N7-C5	-5.57	1.35	1.39
1	AA	669	A	N7-C5	-5.57	1.35	1.39
1	AA	254	A	N7-C5	-5.56	1.35	1.39
1	AA	2653	G	N9-C8	-5.56	1.33	1.37
1	CA	2418	A	N9-C4	5.55	1.41	1.37
1	AA	882	A	N7-C5	5.55	1.42	1.39
1	AA	798	A	N7-C5	-5.55	1.35	1.39
1	CA	1022	G	N9-C4	-5.55	1.33	1.38
1	AA	1260	G	C5-C4	-5.54	1.34	1.38
1	AA	1964	C	N1-C6	5.54	1.40	1.37
1	AA	418	G	C6-O6	-5.52	1.19	1.24
1	AA	1807	G	C8-N7	-5.52	1.27	1.30
1	AA	2035	A	C5-C4	5.52	1.42	1.38
1	CA	56	A	N3-C4	5.52	1.38	1.34
1	CA	1671	U	C2-N3	5.50	1.41	1.37
1	AA	1472	G	C5-C6	-5.50	1.36	1.42
1	AA	1402	G	C6-O6	-5.50	1.19	1.24
2	AB	99	G	C2-N3	5.49	1.37	1.32
1	AA	120	G	N1-C2	-5.49	1.33	1.37
1	AA	503	A	N9-C4	5.49	1.41	1.37
1	AA	553	A	C5-C4	5.49	1.42	1.38
1	AA	1669	G	N3-C4	-5.49	1.31	1.35
34	BA	802	A	N9-C4	-5.48	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1199	C	N1-C6	-5.48	1.33	1.37
1	AA	2529	C	C2-O2	-5.48	1.19	1.24
1	AA	2499	G	N1-C2	-5.47	1.33	1.37
1	AA	826	U	P-O5'	-5.47	1.54	1.59
1	AA	1701	A	C8-N7	-5.47	1.27	1.31
1	AA	1814	A	N9-C8	-5.47	1.33	1.37
1	AA	1262	C	N3-C4	5.46	1.37	1.33
1	AA	2237	A	N3-C4	-5.46	1.31	1.34
1	CA	1815	A	N3-C4	-5.46	1.31	1.34
1	AA	1314	A	N1-C2	-5.46	1.29	1.34
1	AA	1037	C	C2-O2	-5.46	1.19	1.24
1	CA	2336	A	N7-C5	-5.46	1.35	1.39
1	AA	1745	A	N3-C4	-5.45	1.31	1.34
31	A7	32	LYS	CD-CE	5.45	1.64	1.51
1	AA	2089	G	N3-C4	-5.45	1.31	1.35
1	AA	2723	A	C6-N1	5.44	1.39	1.35
1	AA	534	C	C5-C6	-5.44	1.29	1.34
1	CA	1672	C	N1-C6	5.44	1.40	1.37
34	BA	577	G	C2-N3	-5.44	1.28	1.32
1	CA	1698	A	N3-C4	-5.44	1.31	1.34
1	AA	1696	G	C8-N7	5.44	1.34	1.30
1	AA	737	G	C8-N7	5.43	1.34	1.30
1	AA	1743	G	C6-N1	-5.43	1.35	1.39
1	AA	582	G	C2-N3	-5.43	1.28	1.32
1	AA	1228	G	C2-N3	-5.43	1.28	1.32
1	AA	1242	G	N1-C2	-5.43	1.33	1.37
1	AA	175	G	N3-C4	-5.43	1.31	1.35
1	AA	2279	A	C6-N1	-5.43	1.31	1.35
1	AA	853	C	C2-N3	-5.42	1.31	1.35
1	AA	649	C	N1-C6	-5.42	1.33	1.37
1	AA	590	A	C6-N6	-5.41	1.29	1.33
1	AA	1082	G	C2-N3	5.41	1.37	1.32
1	AA	176	G	C8-N7	5.41	1.34	1.30
1	AA	518	G	C8-N7	-5.41	1.27	1.30
1	AA	1027	A	C6-N1	5.41	1.39	1.35
34	BA	794	A	N3-C4	-5.41	1.31	1.34
1	AA	356	A	C6-N6	-5.41	1.29	1.33
1	AA	2516	U	N3-C4	-5.41	1.33	1.38
12	AO	21	CYS	CB-SG	-5.41	1.73	1.81
1	AA	1803	G	N9-C8	-5.41	1.34	1.37
1	AA	2083	G	P-OP2	-5.41	1.39	1.49
1	AA	2498	G	C8-N7	-5.41	1.27	1.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2745	G	C2-N3	-5.41	1.28	1.32
34	BA	770	C	N1-C2	-5.41	1.34	1.40
1	AA	1283	A	N9-C8	-5.40	1.33	1.37
1	AA	2869	G	C5-C4	-5.40	1.34	1.38
1	AA	28	A	N3-C4	-5.40	1.31	1.34
1	AA	2093	A	N7-C5	-5.40	1.36	1.39
1	AA	2502	G	C6-N1	-5.40	1.35	1.39
1	AA	2778	A	N7-C5	-5.40	1.36	1.39
1	AA	1644	C	N3-C4	5.40	1.37	1.33
1	AA	1233	U	N1-C6	-5.40	1.33	1.38
1	AA	978	A	N7-C5	-5.39	1.36	1.39
1	AA	225	C	C2-N3	-5.39	1.31	1.35
1	CA	792	G	N9-C8	-5.39	1.34	1.37
1	AA	2046	G	C2-N2	-5.39	1.29	1.34
1	AA	2291	G	N9-C8	-5.38	1.34	1.37
1	AA	2551	C	C2-O2	-5.38	1.19	1.24
1	AA	731	G	C6-O6	-5.38	1.19	1.24
1	AA	739	C	C4-C5	-5.38	1.38	1.43
1	CA	468	G	N9-C8	-5.37	1.34	1.37
1	AA	2035	A	N9-C8	5.37	1.42	1.37
34	DA	1499	A	N9-C4	-5.37	1.34	1.37
12	AO	111	PHE	CE1-CZ	5.36	1.47	1.37
1	AA	583	C	N1-C6	-5.35	1.33	1.37
1	AA	795	G	N9-C4	5.35	1.42	1.38
1	AA	1073	A	C5-C4	-5.35	1.35	1.38
1	AA	2024	G	C8-N7	-5.35	1.27	1.30
1	AA	2099	A	N3-C4	-5.35	1.31	1.34
34	BA	1517	G	N9-C4	-5.35	1.33	1.38
1	AA	2020	G	N9-C4	5.34	1.42	1.38
1	AA	2768	C	C2-N3	-5.34	1.31	1.35
34	DA	771	G	N9-C4	-5.34	1.33	1.38
1	AA	1082	G	N3-C4	5.34	1.39	1.35
1	AA	2623	U	N1-C2	-5.34	1.33	1.38
1	AA	2279	A	N9-C8	-5.33	1.33	1.37
1	AA	1240	G	C6-O6	-5.33	1.19	1.24
1	AA	586	G	C2-N3	-5.33	1.28	1.32
1	AA	1665	G	C6-N1	-5.33	1.35	1.39
1	AA	238	C	N1-C6	-5.32	1.33	1.37
1	AA	1020	C	C4-N4	5.32	1.38	1.33
1	AA	1067	A	C2-N3	-5.32	1.28	1.33
1	AA	1239	A	C8-N7	5.32	1.35	1.31
1	AA	2861	A	C6-N1	5.32	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	1037	C	C2-N3	-5.32	1.31	1.35
1	AA	1040	C	N1-C6	-5.32	1.33	1.37
1	AA	2573	A	N3-C4	-5.32	1.31	1.34
1	AA	2059	G	N7-C5	-5.31	1.36	1.39
1	AA	2340	A	N7-C5	-5.31	1.36	1.39
1	AA	2081	A	N3-C4	-5.31	1.31	1.34
1	AA	1667	U	N1-C6	-5.31	1.33	1.38
1	AA	2052	A	C2-N3	-5.31	1.28	1.33
1	AA	2653	G	C5-C4	-5.31	1.34	1.38
1	AA	2858	G	C2-N3	-5.31	1.28	1.32
1	AA	846	G	C2-N3	5.31	1.36	1.32
1	AA	2244	U	N3-C4	-5.30	1.33	1.38
1	AA	2561	G	C6-N1	-5.30	1.35	1.39
1	CA	2074	U	C2-N3	5.29	1.41	1.37
1	AA	2654	G	N1-C2	-5.29	1.33	1.37
1	AA	1082	G	C6-O6	5.29	1.28	1.24
1	AA	2600	G	C6-N1	-5.28	1.35	1.39
1	AA	180	A	N9-C4	-5.28	1.34	1.37
1	AA	348	A	N9-C4	-5.28	1.34	1.37
1	AA	446	C	C4-C5	-5.28	1.38	1.43
1	AA	226	C	C2-N3	-5.28	1.31	1.35
1	AA	750	U	N1-C6	-5.28	1.33	1.38
1	AA	1270	C	N1-C6	-5.27	1.33	1.37
1	CA	218	A	N9-C4	-5.27	1.34	1.37
1	AA	1802	C	C2-N3	-5.27	1.31	1.35
1	AA	2869	G	C5-C6	-5.27	1.37	1.42
1	CA	1698	A	C5-C6	-5.27	1.36	1.41
1	AA	2465	A	N3-C4	5.26	1.38	1.34
1	AA	2528	G	C2-N2	-5.26	1.29	1.34
1	AA	2576	A	N9-C4	5.25	1.41	1.37
1	AA	2794	A	N7-C5	-5.25	1.36	1.39
1	AA	1259	A	N7-C5	-5.25	1.36	1.39
1	AA	2861	A	C6-N6	5.25	1.38	1.33
1	AA	476	G	N3-C4	-5.24	1.31	1.35
1	AA	2523	U	C2-O2	-5.24	1.17	1.22
1	AA	251	A	N9-C4	-5.24	1.34	1.37
1	AA	805	C	N1-C6	-5.24	1.34	1.37
1	AA	1301	U	C4-C5	-5.24	1.38	1.43
1	AA	2063	U	C2-O2	-5.24	1.17	1.22
1	AA	2511	C	N1-C6	5.24	1.40	1.37
1	AA	2069	U	C4-O4	-5.23	1.19	1.23
1	AA	2556	G	C6-O6	-5.23	1.19	1.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	553	A	C6-N6	-5.23	1.29	1.33
1	CA	804	A	N9-C4	-5.23	1.34	1.37
1	AA	198	C	N3-C4	-5.22	1.30	1.33
1	AA	1321	A	N3-C4	5.22	1.38	1.34
1	AA	1710	C	N3-C4	5.22	1.37	1.33
1	AA	2255	U	C2-N3	5.22	1.41	1.37
1	AA	1299	A	N9-C4	5.21	1.41	1.37
1	AA	2549	U	C2-O2	-5.21	1.17	1.22
1	AA	521	G	N9-C8	-5.21	1.34	1.37
1	AA	561	A	N7-C5	5.21	1.42	1.39
1	AA	18	C	C2-O2	-5.21	1.19	1.24
1	AA	2777	A	C6-N1	5.21	1.39	1.35
1	AA	727	G	N9-C8	-5.20	1.34	1.37
1	AA	123	G	N9-C8	-5.19	1.34	1.37
1	AA	2790	G	C5-C4	-5.19	1.34	1.38
1	AA	2620	G	N7-C5	5.19	1.42	1.39
1	AA	348	A	C5-C4	-5.19	1.35	1.38
1	AA	21	A	N3-C4	-5.18	1.31	1.34
1	AA	1365	G	N1-C2	-5.18	1.33	1.37
1	CA	1652	A	N9-C4	-5.18	1.34	1.37
1	AA	732	A	N9-C4	-5.18	1.34	1.37
1	AA	1685	C	C2-O2	-5.18	1.19	1.24
34	DA	769	G	N3-C4	-5.18	1.31	1.35
1	AA	2830	A	P-O5'	-5.17	1.54	1.59
1	AA	2852	G	N7-C5	-5.17	1.36	1.39
1	AA	1833	A	N7-C5	-5.17	1.36	1.39
1	AA	55	A	N9-C4	5.17	1.41	1.37
1	AA	247	G	C6-O6	-5.16	1.19	1.24
1	AA	255	G	C5-C6	-5.16	1.37	1.42
1	AA	474	U	N1-C2	5.16	1.43	1.38
1	AA	710	G	N7-C5	-5.16	1.36	1.39
1	AA	832	G	C5-C4	-5.16	1.34	1.38
1	AA	992	G	N7-C5	-5.16	1.36	1.39
1	AA	1249	A	C5-C6	-5.16	1.36	1.41
1	AA	1344	C	P-OP2	-5.16	1.40	1.49
1	AA	2612	A	N3-C4	-5.16	1.31	1.34
1	AA	555	G	N9-C8	5.16	1.41	1.37
1	AA	2514	G	C5-C4	-5.16	1.34	1.38
1	AA	2043	C	C2-O2	5.15	1.29	1.24
1	AA	1055	A	C5-C4	-5.14	1.35	1.38
1	AA	1001	G	N1-C2	5.14	1.41	1.37
1	AA	868	A	C5-C6	-5.14	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	251	A	N7-C5	-5.14	1.36	1.39
1	AA	2381	A	N3-C4	-5.14	1.31	1.34
1	CA	1823	G	N3-C4	-5.14	1.31	1.35
1	AA	29	U	N1-C2	5.13	1.43	1.38
1	AA	1412	A	N7-C5	5.13	1.42	1.39
1	AA	1816	A	C6-N1	-5.13	1.31	1.35
1	AA	506	A	N3-C4	-5.12	1.31	1.34
1	AA	2693	C	C4-C5	-5.12	1.38	1.43
1	AA	609	A	N9-C4	-5.12	1.34	1.37
1	AA	73	A	N9-C4	-5.12	1.34	1.37
1	AA	2078	G	C6-N1	-5.12	1.35	1.39
1	AA	1438	A	N3-C4	5.11	1.38	1.34
55	BV	19	U	C2-N3	5.11	1.41	1.37
1	AA	534	C	N1-C6	-5.11	1.34	1.37
1	AA	1992	A	N3-C4	-5.11	1.31	1.34
34	BA	900	A	C5-C6	-5.11	1.36	1.41
1	AA	1327	G	N7-C5	-5.11	1.36	1.39
1	AA	1035	G	C8-N7	5.10	1.34	1.30
1	AA	1076	G	C5-C6	-5.10	1.37	1.42
1	CA	911	A	C6-N1	-5.10	1.31	1.35
1	AA	111	G	N9-C4	-5.10	1.33	1.38
1	AA	1255	A	N7-C5	-5.10	1.36	1.39
1	AA	496	A	C8-N7	-5.10	1.27	1.31
1	AA	874	U	P-OP1	-5.10	1.40	1.49
1	AA	2388	A	N7-C5	-5.09	1.36	1.39
1	CA	783	A	N9-C4	5.09	1.41	1.37
1	AA	2717	A	N3-C4	5.09	1.38	1.34
1	CA	2225	A	N9-C4	-5.09	1.34	1.37
1	AA	739	C	N3-C4	-5.09	1.30	1.33
1	AA	1231	G	C2-N2	-5.09	1.29	1.34
1	CA	798	G	N3-C4	-5.09	1.31	1.35
1	AA	2405	A	N9-C4	-5.08	1.34	1.37
1	AA	2672	A	N9-C4	-5.08	1.34	1.37
1	AA	531	G	C6-N1	-5.08	1.35	1.39
1	AA	1018	A	C8-N7	5.08	1.35	1.31
1	AA	1037	C	N1-C6	-5.08	1.34	1.37
1	AA	2716	C	N1-C6	-5.07	1.34	1.37
1	AA	1712	A	N9-C4	5.07	1.40	1.37
1	AA	2043	C	N1-C6	-5.07	1.34	1.37
1	CA	1855	G	C2-N3	5.07	1.36	1.32
1	AA	254	A	N3-C4	-5.07	1.31	1.34
1	AA	2793	G	N3-C4	5.07	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	CA	800	A	N3-C4	-5.07	1.31	1.34
1	AA	1705	C	C2-O2	-5.06	1.19	1.24
1	CA	699	A	N9-C4	-5.06	1.34	1.37
1	AA	2707	C	C4-C5	5.06	1.47	1.43
1	AA	2820	A	N7-C5	-5.06	1.36	1.39
1	AA	2691	A	N3-C4	-5.05	1.31	1.34
1	CA	572	A	N7-C5	-5.05	1.36	1.39
1	AA	136	G	C8-N7	-5.05	1.27	1.30
1	AA	532	A	N3-C4	5.05	1.37	1.34
1	CA	957	A	N9-C4	-5.05	1.34	1.37
1	AA	64	C	N3-C4	-5.04	1.30	1.33
34	DA	733	A	N9-C4	-5.04	1.34	1.37
56	DX	15	G	O3'-P	-5.04	1.55	1.61
1	AA	2467	G	C6-N1	-5.04	1.36	1.39
1	AA	740	C	N3-C4	-5.04	1.30	1.33
1	AA	1258	A	C6-N1	-5.04	1.32	1.35
1	AA	2446	A	C2-N3	-5.04	1.29	1.33
1	AA	796	C	N1-C6	-5.03	1.34	1.37
1	AA	486	A	N7-C5	-5.03	1.36	1.39
1	AA	1721	G	N9-C4	5.03	1.42	1.38
1	AA	61	C	N1-C6	-5.03	1.34	1.37
1	AA	1072	U	C2-N3	5.03	1.41	1.37
1	AA	1834	A	C8-N7	-5.03	1.28	1.31
1	AA	2641	A	N7-C5	-5.03	1.36	1.39
1	AA	633	G	C6-N1	-5.02	1.36	1.39
1	AA	1427	G	N7-C5	-5.02	1.36	1.39
1	AA	1660	A	N9-C8	-5.02	1.33	1.37
1	CA	2048	G	N3-C4	5.02	1.39	1.35
1	AA	851	A	N3-C4	-5.02	1.31	1.34
1	AA	2092	G	C2-N3	5.02	1.36	1.32
1	AA	2698	G	C5-C4	-5.02	1.34	1.38
2	AB	97	G	C8-N7	5.02	1.33	1.30
26	A2	27	GLU	CG-CD	5.02	1.59	1.51
1	AA	35	G	C6-O6	-5.02	1.19	1.24
1	CA	1457	A	N9-C4	-5.02	1.34	1.37
1	CA	1258	C	N3-C4	-5.02	1.30	1.33
1	AA	1307	C	N3-C4	-5.01	1.30	1.33
1	AA	1377	A	N9-C4	-5.01	1.34	1.37
1	AA	2456	G	C2-N3	-5.01	1.28	1.32
1	AA	2620	G	N3-C4	-5.01	1.31	1.35
1	AA	2521	G	N1-C2	-5.01	1.33	1.37
1	AA	831	A	C5-C4	-5.01	1.35	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	2536	G	N9-C4	-5.01	1.33	1.38
1	AA	1053	C	N1-C2	-5.01	1.35	1.40
1	AA	1605	A	N3-C4	-5.01	1.31	1.34
1	AA	201	G	C5-C4	-5.00	1.34	1.38

All (7279) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	990	A	C5-N7-C8	-26.49	90.66	103.90
1	AA	990	A	N7-C8-N9	22.72	125.16	113.80
1	AA	990	A	N1-C6-N6	21.81	131.68	118.60
1	AA	991	G	O5'-P-OP1	-21.27	85.17	110.70
1	AA	990	A	C6-C5-N7	-21.06	117.56	132.30
1	AA	990	A	C2-N3-C4	-18.76	101.22	110.60
1	AA	1078	A	O5'-P-OP1	-18.17	88.90	110.70
1	AA	2697	G	N1-C6-O6	-17.65	109.31	119.90
1	AA	990	A	C4-C5-N7	17.54	119.47	110.70
1	AA	354	A	C2-N3-C4	-17.14	102.03	110.60
1	AA	978	A	C5-N7-C8	-16.98	95.41	103.90
1	AA	1317	G	O5'-P-OP2	-16.89	90.43	110.70
1	AA	1249	A	C2-N3-C4	-16.74	102.23	110.60
1	AA	990	A	N1-C2-N3	16.62	137.61	129.30
1	AA	553	A	C5-N7-C8	-16.52	95.64	103.90
1	AA	1185	C	O5'-P-OP1	-16.24	91.09	105.70
1	AA	2299	A	C2-N3-C4	-15.70	102.75	110.60
1	AA	1807	G	O5'-P-OP2	-15.43	91.81	105.70
1	AA	2515	A	N1-C2-N3	-15.38	121.61	129.30
1	AA	534	C	C6-N1-C2	15.34	126.44	120.30
1	AA	1660	A	O5'-P-OP1	-15.27	91.96	105.70
1	AA	2045	G	O5'-P-OP1	-15.21	92.01	105.70
1	AA	1605	A	C2-N3-C4	-15.20	103.00	110.60
1	AA	1067	A	C2-N3-C4	-14.89	103.16	110.60
1	AA	1860	A	O5'-P-OP1	-14.86	92.33	105.70
1	AA	1686	U	O5'-P-OP2	-14.72	92.45	105.70
1	AA	990	A	C8-N9-C4	-14.70	99.92	105.80
1	AA	1073	A	C8-N9-C4	14.58	111.63	105.80
1	AA	2638	C	C6-N1-C2	14.52	126.11	120.30
1	AA	856	G	N1-C6-O6	-14.50	111.20	119.90
1	AA	553	A	N7-C8-N9	14.38	120.99	113.80
34	BA	880	C	O5'-P-OP2	-14.36	92.78	105.70
1	CA	945	A	C4-C5-N7	14.35	117.88	110.70
1	AA	1261	G	C5-C6-O6	-14.32	120.01	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	986	A	O5'-P-OP1	-14.22	92.90	105.70
1	AA	1188	A	C2-N3-C4	-14.21	103.50	110.60
1	AA	2622	C	C6-N1-C2	14.12	125.95	120.30
1	AA	2068	G	C5-C6-O6	14.02	137.01	128.60
1	AA	595	A	O5'-P-OP1	-13.99	93.11	105.70
1	AA	1802	C	N3-C4-C5	13.87	127.45	121.90
1	AA	1301	U	N1-C2-O2	13.83	132.48	122.80
1	AA	1188	A	N3-C4-N9	-13.81	116.35	127.40
1	AA	1006	C	O5'-P-OP2	-13.77	93.31	105.70
1	CA	2390	U	O5'-P-OP1	-13.67	93.39	105.70
1	AA	2358	A	O5'-P-OP1	-13.43	93.61	105.70
1	AA	205	A	O5'-P-OP1	-13.38	93.66	105.70
1	AA	2736	C	C5-C4-N4	-13.25	110.93	120.20
1	AA	2509	A	C8-N9-C4	13.20	111.08	105.80
1	AA	2403	G	C8-N9-C4	-13.18	101.13	106.40
1	CA	264	C	C6-N1-C2	13.14	125.56	120.30
1	AA	2530	A	OP1-P-OP2	-13.07	99.99	119.60
1	AA	978	A	N7-C8-N9	13.04	120.32	113.80
1	CA	945	A	N1-C6-N6	12.99	126.40	118.60
1	AA	1444	C	C2-N3-C4	-12.99	113.40	119.90
1	AA	2020	G	C5-C6-O6	12.97	136.38	128.60
1	AA	2266	C	N1-C2-O2	-12.90	111.16	118.90
1	AA	1830	G	O5'-P-OP2	-12.86	94.12	105.70
1	AA	254	A	N1-C6-N6	12.76	126.25	118.60
1	AA	2091	G	O5'-P-OP1	-12.67	94.30	105.70
1	AA	1067	A	C5-N7-C8	-12.66	97.57	103.90
1	AA	1745	A	C2-N3-C4	-12.64	104.28	110.60
1	CA	945	A	C5-N7-C8	-12.63	97.58	103.90
1	AA	2641	A	N1-C2-N3	12.58	135.59	129.30
1	AA	2786	C	C6-N1-C2	12.55	125.32	120.30
1	AA	354	A	N3-C4-N9	-12.50	117.40	127.40
1	AA	2837	C	N1-C2-O2	-12.49	111.41	118.90
1	AA	2077	C	N1-C2-O2	-12.47	111.42	118.90
1	AA	354	A	N3-C4-C5	12.47	135.53	126.80
1	AA	348	A	O5'-P-OP2	-12.43	94.52	105.70
1	AA	708	C	N3-C4-C5	12.41	126.86	121.90
1	AA	2622	C	O5'-P-OP1	-12.40	94.54	105.70
1	AA	783	C	O5'-P-OP1	-12.35	94.59	105.70
1	AA	1683	C	N3-C4-C5	-12.25	117.00	121.90
1	AA	2331	G	N3-C4-N9	-12.24	118.66	126.00
1	AA	2464	C	N1-C2-O2	-12.19	111.59	118.90
1	AA	1067	A	N3-C4-N9	-12.17	117.66	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	553	A	N1-C6-N6	12.17	125.90	118.60
1	AA	1188	A	N3-C4-C5	12.16	135.31	126.80
1	AA	254	A	C5-N7-C8	-12.13	97.83	103.90
1	AA	2444	A	O5'-P-OP2	-12.12	94.79	105.70
1	AA	1314	A	N7-C8-N9	-12.12	107.74	113.80
1	AA	1694	G	C5-C6-O6	-12.11	121.33	128.60
1	AA	553	A	C4-C5-N7	11.98	116.69	110.70
1	AA	552	C	N3-C2-O2	-11.98	113.51	121.90
1	AA	2062	C	C6-N1-C2	11.98	125.09	120.30
1	AA	1076	G	C5-C6-O6	-11.97	121.42	128.60
1	AA	1324	A	N9-C4-C5	11.97	110.59	105.80
1	AA	1067	A	N3-C4-C5	11.95	135.16	126.80
1	AA	990	A	C4-C5-C6	11.94	122.97	117.00
1	CA	2437	U	O5'-P-OP2	-11.92	94.97	105.70
1	AA	1474	C	N3-C4-C5	-11.91	117.14	121.90
1	AA	2834	C	N3-C4-N4	11.90	126.33	118.00
1	AA	735	U	C2-N3-C4	-11.90	119.86	127.00
1	AA	853	C	N3-C4-C5	11.83	126.63	121.90
1	AA	1249	A	C5-N7-C8	-11.83	97.98	103.90
1	AA	615	G	O5'-P-OP2	-11.81	95.07	105.70
1	AA	978	A	C4-C5-N7	11.77	116.59	110.70
1	AA	735	U	C5-C6-N1	-11.76	116.82	122.70
1	AA	978	A	C2-N3-C4	-11.73	104.73	110.60
1	AA	991	G	O5'-P-OP2	11.71	124.76	110.70
1	AA	2713	C	N3-C4-C5	-11.62	117.25	121.90
1	CA	569	U	C5-C4-O4	-11.62	118.93	125.90
1	AA	2058	C	N1-C2-O2	-11.62	111.93	118.90
1	AA	1644	C	C5-C4-N4	-11.62	112.07	120.20
1	AA	2697	G	C5-C6-O6	11.61	135.56	128.60
1	AA	2882	G	N1-C6-O6	-11.60	112.94	119.90
1	AA	1266	C	C2-N3-C4	-11.59	114.11	119.90
1	AA	1249	A	C4-C5-N7	11.49	116.44	110.70
1	AA	32	C	C4-C5-C6	11.46	123.13	117.40
1	AA	1235	G	C5-N7-C8	11.42	110.01	104.30
1	AA	797	A	O5'-P-OP2	-11.42	95.42	105.70
1	CA	528	A	C2-N3-C4	-11.41	104.89	110.60
1	AA	2876	U	C5-C4-O4	11.40	132.74	125.90
1	AA	2465	A	C5-C6-N1	11.39	123.40	117.70
1	AA	2023	A	C8-N9-C4	-11.33	101.27	105.80
56	BX	76	A	C2-N3-C4	-11.31	104.94	110.60
1	AA	1374	G	N9-C4-C5	-11.29	100.89	105.40
1	AA	2467	G	N1-C6-O6	-11.26	113.14	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1058	U	C5-C4-O4	-11.24	119.15	125.90
1	AA	536	U	C5-C4-O4	-11.24	119.16	125.90
1	AA	2876	U	C5-C6-N1	-11.21	117.09	122.70
1	AA	1076	G	C4-C5-N7	11.21	115.28	110.80
1	AA	2298	A	C2-N3-C4	-11.20	105.00	110.60
1	AA	1314	A	C5-N7-C8	11.17	109.49	103.90
1	AA	806	G	N7-C8-N9	-11.16	107.52	113.10
1	AA	956	A	C8-N9-C4	11.16	110.26	105.80
1	CA	2427	C	C6-N1-C2	-11.15	115.84	120.30
1	CA	2821	A	O5'-P-OP1	-11.14	95.67	105.70
1	AA	2020	G	N1-C6-O6	-11.12	113.22	119.90
1	AA	856	G	C5-C6-O6	11.12	135.27	128.60
1	AA	2726	A	C2-N3-C4	-11.08	105.06	110.60
1	AA	2375	C	C6-N1-C2	11.08	124.73	120.30
1	AA	2627	U	N3-C4-C5	11.05	121.23	114.60
1	AA	2833	A	N1-C6-N6	-11.05	111.97	118.60
1	CA	1275	A	C8-N9-C4	11.03	110.21	105.80
1	AA	2082	A	C2-N3-C4	-11.02	105.09	110.60
1	AA	818	G	C5-C6-O6	11.02	135.21	128.60
1	AA	1011	G	N1-C6-O6	-10.99	113.31	119.90
1	AA	704	U	O5'-P-OP2	-10.99	95.81	105.70
1	AA	2777	A	N1-C6-N6	10.98	125.19	118.60
1	AA	2522	C	O5'-P-OP1	-10.97	95.83	105.70
1	AA	1233	U	N3-C2-O2	-10.96	114.53	122.20
1	AA	2719	G	C5-C6-O6	-10.93	122.04	128.60
1	AA	1307	C	N3-C4-C5	10.92	126.27	121.90
1	AA	2298	A	N7-C8-N9	10.91	119.25	113.80
1	CA	803	U	N3-C2-O2	-10.88	114.58	122.20
1	AA	1249	A	C6-C5-N7	-10.87	124.69	132.30
1	AA	830	A	C4-C5-C6	10.86	122.43	117.00
1	AA	2455	C	C4-C5-C6	10.84	122.82	117.40
1	AA	868	A	O5'-P-OP2	-10.81	95.97	105.70
1	AA	470	C	O5'-P-OP1	10.80	123.66	110.70
1	AA	2736	C	N3-C4-C5	10.80	126.22	121.90
1	AA	1809	U	N3-C2-O2	10.79	129.75	122.20
1	AA	2065	C	C4-C5-C6	10.78	122.79	117.40
1	AA	2858	G	O4'-C1'-N9	10.76	116.81	108.20
34	BA	1502	A	N1-C2-N3	10.76	134.68	129.30
1	AA	2622	C	C5-C6-N1	-10.75	115.63	121.00
1	AA	139	A	C5-N7-C8	-10.74	98.53	103.90
1	AA	2548	G	N1-C6-O6	-10.72	113.47	119.90
1	AA	992	G	O5'-P-OP1	-10.72	96.05	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	531	C	O5'-P-OP1	-10.71	96.06	105.70
2	AB	73	A	O5'-P-OP2	-10.70	96.07	105.70
1	AA	797	A	O5'-P-OP1	10.69	123.53	110.70
1	CA	2503	A	N1-C6-N6	10.67	125.00	118.60
1	AA	254	A	C2-N3-C4	-10.66	105.27	110.60
1	AA	2299	A	N3-C4-N9	-10.65	118.88	127.40
1	AA	2605	U	N3-C4-O4	-10.62	111.96	119.40
1	AA	553	A	C8-N9-C4	-10.62	101.55	105.80
1	AA	1659	G	N1-C6-O6	-10.62	113.53	119.90
1	AA	2719	G	N1-C6-O6	10.61	126.27	119.90
1	AA	1411	A	C8-N9-C4	10.59	110.04	105.80
1	AA	1329	G	N3-C4-C5	-10.59	123.30	128.60
1	CA	243	U	O5'-P-OP2	-10.58	96.18	105.70
1	AA	1429	C	O5'-P-OP1	-10.58	96.18	105.70
1	AA	139	A	N7-C8-N9	10.56	119.08	113.80
1	AA	1080	G	O5'-P-OP2	-10.56	96.19	105.70
1	AA	1702	A	C2-N3-C4	10.56	115.88	110.60
1	AA	1278	G	O5'-P-OP2	10.55	123.37	110.70
1	AA	2641	A	N7-C8-N9	10.55	119.08	113.80
34	BA	33	A	O5'-P-OP2	-10.55	96.21	105.70
1	AA	2685	G	N1-C6-O6	10.54	126.22	119.90
1	AA	2078	G	N1-C6-O6	-10.54	113.58	119.90
1	AA	2782	C	O5'-P-OP2	-10.51	96.24	105.70
34	BA	509	A	C8-N9-C4	-10.50	101.60	105.80
1	CA	694	U	O5'-P-OP2	-10.50	96.25	105.70
1	AA	2299	A	N3-C4-C5	10.48	134.13	126.80
1	AA	64	C	C6-N1-C2	-10.42	116.13	120.30
1	AA	2403	G	N9-C4-C5	10.42	109.57	105.40
1	AA	2738	A	C8-N9-C4	10.41	109.97	105.80
1	AA	786	G	C5-C6-O6	-10.41	122.35	128.60
1	AA	806	G	C8-N9-C4	10.37	110.55	106.40
1	AA	1625	U	O5'-P-OP2	-10.37	96.37	105.70
1	AA	2465	A	C5-C6-N6	-10.36	115.41	123.70
1	AA	2641	A	C2-N3-C4	-10.36	105.42	110.60
1	AA	1237	G	C4-C5-N7	-10.36	106.66	110.80
1	AA	795	G	C2-N3-C4	10.35	117.08	111.90
1	AA	2463	A	N1-C6-N6	-10.35	112.39	118.60
1	AA	1357	G	C5-C6-O6	10.35	134.81	128.60
1	AA	1068	G	C8-N9-C4	10.35	110.54	106.40
1	CA	2697	G	C5-C6-O6	-10.35	122.39	128.60
1	AA	1472	G	N9-C4-C5	-10.32	101.27	105.40
1	CA	1698	A	C5-N7-C8	-10.32	98.74	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	986	A	O5'-P-OP2	10.32	123.08	110.70
1	CA	1275	A	N9-C4-C5	-10.32	101.67	105.80
1	AA	1242	G	N3-C2-N2	10.32	127.12	119.90
1	AA	990	A	C5-C6-N6	-10.31	115.45	123.70
1	AA	2362	C	O5'-P-OP2	-10.30	96.43	105.70
1	AA	978	A	N1-C6-N6	10.29	124.78	118.60
1	AA	254	A	C6-C5-N7	-10.27	125.11	132.30
1	AA	2630	G	C5-C6-O6	10.26	134.76	128.60
1	AA	846	G	N1-C6-O6	-10.24	113.75	119.90
1	AA	1986	G	O5'-P-OP1	-10.24	96.48	105.70
1	CA	1777	U	C5-C6-N1	-10.24	117.58	122.70
1	AA	496	A	C2-N3-C4	-10.23	105.48	110.60
1	AA	553	A	C2-N3-C4	-10.23	105.48	110.60
1	AA	2389	A	O5'-P-OP1	-10.22	96.50	105.70
1	AA	978	A	C8-N9-C4	-10.22	101.71	105.80
1	AA	2060	G	C5-C6-O6	10.22	134.73	128.60
1	AA	1296	G	O5'-P-OP1	-10.21	96.51	105.70
1	AA	2627	U	N3-C4-O4	-10.22	112.25	119.40
1	AA	2052	A	N1-C6-N6	-10.21	112.47	118.60
1	CA	1394	U	O5'-P-OP1	-10.21	96.51	105.70
1	AA	2331	G	N3-C4-C5	10.21	133.71	128.60
1	AA	1321	A	N1-C6-N6	10.20	124.72	118.60
1	AA	851	A	C8-N9-C4	10.19	109.87	105.80
1	AA	1852	A	N1-C6-N6	-10.18	112.49	118.60
1	CA	130	C	C6-N1-C2	10.18	124.37	120.30
1	AA	2067	C	C4-C5-C6	10.18	122.49	117.40
1	AA	1301	U	N3-C2-O2	-10.17	115.08	122.20
1	AA	2255	U	N3-C4-O4	10.17	126.52	119.40
1	CA	2007	C	C6-N1-C2	10.17	124.37	120.30
1	AA	1745	A	N1-C2-N3	10.17	134.38	129.30
1	AA	2285	A	C8-N9-C4	10.16	109.86	105.80
1	AA	2034	G	C4-C5-N7	10.16	114.86	110.80
1	AA	1700	G	C8-N9-C4	-10.15	102.34	106.40
1	AA	735	U	N1-C2-O2	-10.15	115.69	122.80
1	AA	506	A	C8-N9-C4	-10.15	101.74	105.80
1	AA	2047	C	C5-C6-N1	-10.14	115.93	121.00
1	AA	894	U	C5-C4-O4	10.13	131.98	125.90
1	CA	528	A	N3-C4-C5	10.13	133.89	126.80
1	AA	430	U	N3-C2-O2	-10.11	115.12	122.20
1	AA	957	A	N1-C6-N6	-10.10	112.54	118.60
1	AA	1676	G	O5'-P-OP1	-10.10	96.61	105.70
1	AA	1237	G	C5-N7-C8	10.10	109.35	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1329	G	N3-C4-N9	10.09	132.06	126.00
1	AA	1664	A	N1-C6-N6	-10.09	112.54	118.60
1	AA	584	G	C8-N9-C4	10.09	110.44	106.40
1	AA	2533	C	C4-C5-C6	10.09	122.44	117.40
1	CA	2070	G	C5-C6-O6	10.09	134.65	128.60
34	BA	299	G	O5'-P-OP1	-10.08	96.63	105.70
1	AA	2428	C	N3-C2-O2	-10.07	114.85	121.90
1	CA	2452	C	C6-N1-C2	-10.07	116.27	120.30
1	AA	31	C	O5'-P-OP1	-10.06	96.65	105.70
1	AA	2527	C	N1-C2-O2	-10.06	112.86	118.90
1	AA	1356	G	O5'-P-OP1	-10.05	96.66	105.70
1	AA	1655	A	C8-N9-C4	10.03	109.81	105.80
1	AA	963	A	N1-C2-N3	-10.03	124.29	129.30
1	AA	69	G	N1-C6-O6	-10.01	113.89	119.90
1	AA	1030	A	O5'-P-OP1	-10.00	96.70	105.70
34	BA	1395	C	C6-N1-C2	-10.00	116.30	120.30
1	AA	1235	G	N7-C8-N9	-10.00	108.10	113.10
1	CA	1658	C	C6-N1-C2	-10.00	116.30	120.30
1	AA	2298	A	C5-N7-C8	-9.99	98.90	103.90
34	BA	1426	C	C6-N1-C2	-9.99	116.31	120.30
1	AA	537	G	O4'-C1'-N9	9.98	116.19	108.20
1	AA	903	C	C6-N1-C2	-9.98	116.31	120.30
1	AA	2451	A	O5'-P-OP2	-9.98	96.72	105.70
1	AA	1665	G	N1-C6-O6	-9.97	113.92	119.90
1	AA	2255	U	C5-C6-N1	9.97	127.69	122.70
1	AA	1000	C	N1-C2-O2	-9.96	112.92	118.90
1	AA	2641	A	C6-C5-N7	-9.96	125.33	132.30
1	AA	850	U	N3-C2-O2	-9.96	115.23	122.20
1	AA	2486	C	C6-N1-C2	9.95	124.28	120.30
1	AA	30	G	N7-C8-N9	-9.93	108.13	113.10
1	AA	40	C	N1-C2-O2	-9.93	112.94	118.90
34	BA	1530	G	N3-C4-C5	9.92	133.56	128.60
1	AA	630	U	N1-C2-O2	-9.92	115.86	122.80
1	AA	905	U	O5'-P-OP2	-9.91	96.78	105.70
1	AA	2298	A	C8-N9-C4	-9.91	101.83	105.80
1	AA	2400	A	O5'-P-OP1	9.91	122.59	110.70
1	AA	1261	G	N1-C6-O6	9.91	125.84	119.90
1	AA	2517	G	N9-C4-C5	9.90	109.36	105.40
1	AA	41	C	O5'-P-OP2	-9.88	96.81	105.70
1	AA	2641	A	C8-N9-C4	-9.88	101.85	105.80
1	AA	1656	A	C8-N9-C4	9.87	109.75	105.80
1	AA	898	U	C5-C6-N1	-9.87	117.76	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	625	G	O5'-P-OP1	-9.86	96.83	105.70
1	AA	1874	C	N3-C4-C5	9.86	125.84	121.90
1	CA	440	G	C8-N9-C4	9.86	110.34	106.40
1	CA	2084	C	C6-N1-C2	9.86	124.24	120.30
2	AB	92	C	C6-N1-C2	-9.84	116.36	120.30
1	CA	945	A	N9-C4-C5	-9.84	101.86	105.80
1	AA	593	G	C8-N9-C4	-9.83	102.47	106.40
1	AA	2366	G	N3-C4-C5	9.83	133.51	128.60
1	AA	2298	A	N1-C2-N3	9.82	134.21	129.30
1	AA	846	G	C5-N7-C8	9.81	109.21	104.30
1	AA	254	A	C4-C5-N7	9.81	115.61	110.70
1	AA	806	G	C5-N7-C8	9.81	109.20	104.30
1	AA	1203	G	N1-C6-O6	-9.81	114.02	119.90
1	AA	1233	U	C5-C4-O4	9.80	131.78	125.90
1	AA	2713	C	C6-N1-C2	-9.80	116.38	120.30
1	CA	1672	C	N3-C4-C5	9.76	125.80	121.90
1	AA	2449	U	C5-C6-N1	-9.76	117.82	122.70
1	AA	859	C	N1-C2-O2	-9.75	113.05	118.90
1	AA	1067	A	N7-C8-N9	9.74	118.67	113.80
1	CA	528	A	N3-C4-N9	-9.74	119.61	127.40
1	AA	990	A	C5-C6-N1	-9.73	112.83	117.70
1	AA	122	G	N1-C6-O6	9.73	125.74	119.90
1	AA	1802	C	C2-N3-C4	-9.73	115.04	119.90
2	AB	41	U	C5-C6-N1	-9.73	117.84	122.70
1	AA	2270	C	C6-N1-C2	-9.72	116.41	120.30
1	AA	2697	G	C6-C5-N7	9.71	136.23	130.40
1	AA	2109	G	N1-C6-O6	9.71	125.73	119.90
1	AA	2051	G	N3-C2-N2	-9.71	113.10	119.90
1	AA	861	C	N3-C4-C5	9.70	125.78	121.90
1	AA	123	G	C5-N7-C8	9.69	109.15	104.30
1	AA	1261	G	C4-C5-N7	9.70	114.68	110.80
1	AA	561	A	C8-N9-C4	9.69	109.68	105.80
1	AA	894	U	C5-C6-N1	-9.69	117.86	122.70
1	AA	840	A	O5'-P-OP2	-9.69	96.98	105.70
1	CA	563	G	C8-N9-C4	-9.68	102.53	106.40
1	AA	1249	A	O4'-C1'-N9	9.66	115.93	108.20
1	AA	2473	C	O5'-P-OP2	-9.66	97.01	105.70
1	AA	1998	U	O5'-P-OP2	-9.65	97.01	105.70
1	AA	1486	G	O5'-P-OP2	-9.65	97.02	105.70
1	CA	1022	G	N3-C4-N9	-9.65	120.21	126.00
1	CA	1914	C	C6-N1-C2	-9.65	116.44	120.30
1	AA	552	C	C5-C6-N1	-9.64	116.18	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1076	G	N9-C4-C5	-9.64	101.54	105.40
1	AA	1422	C	N3-C4-C5	9.64	125.76	121.90
1	AA	2282	G	C8-N9-C4	9.63	110.25	106.40
1	AA	208	G	N1-C6-O6	-9.62	114.12	119.90
1	CA	1142(A)	A	C2-N3-C4	-9.62	105.79	110.60
1	AA	2608	U	N3-C4-O4	-9.61	112.67	119.40
1	AA	553	A	C6-C5-N7	-9.61	125.58	132.30
1	AA	1374	G	C4-C5-N7	9.60	114.64	110.80
1	AA	2876	U	N3-C4-O4	-9.60	112.68	119.40
1	AA	2068	G	N1-C6-O6	-9.59	114.14	119.90
1	AA	1188	A	C5-N7-C8	-9.57	99.11	103.90
1	AA	2361	G	O5'-P-OP1	-9.57	97.08	105.70
1	AA	1231	G	O5'-P-OP2	-9.57	97.09	105.70
1	AA	2794	A	N1-C6-N6	-9.56	112.86	118.60
1	AA	1644	C	N3-C4-N4	9.55	124.69	118.00
34	DA	733	A	C8-N9-C4	9.55	109.62	105.80
1	AA	2034	G	N9-C4-C5	-9.55	101.58	105.40
1	AA	1722	C	C5-C6-N1	-9.53	116.23	121.00
1	AA	2489	C	C5-C6-N1	9.53	125.77	121.00
1	AA	2713	C	N1-C2-O2	-9.53	113.18	118.90
1	AA	56	C	N1-C2-O2	9.52	124.61	118.90
1	AA	2467	G	C5-C6-O6	9.52	134.31	128.60
1	AA	1663	C	N1-C2-O2	9.51	124.61	118.90
1	AA	2366	G	N3-C4-N9	-9.50	120.30	126.00
1	AA	1249	A	N7-C8-N9	9.50	118.55	113.80
1	AA	2109	G	C5-C6-O6	-9.49	122.90	128.60
1	AA	964	A	C2-N3-C4	-9.49	105.86	110.60
34	BA	1426	C	N3-C2-O2	-9.49	115.26	121.90
1	AA	589	U	N1-C2-O2	-9.48	116.16	122.80
1	AA	1199	C	N1-C2-O2	-9.48	113.21	118.90
1	AA	2512	U	C5-C6-N1	-9.48	117.96	122.70
1	CA	945	A	C2-N3-C4	-9.47	105.86	110.60
1	AA	1783	C	C6-N1-C2	9.47	124.09	120.30
34	BA	910	C	O5'-P-OP2	-9.47	97.18	105.70
1	CA	2503	A	C5-C6-N6	-9.46	116.13	123.70
1	AA	1659	G	N3-C2-N2	9.45	126.52	119.90
1	AA	2458	G	C2-N3-C4	9.45	116.62	111.90
1	CA	2591	C	N1-C2-O2	-9.45	113.23	118.90
1	AA	1654	A	O5'-P-OP1	-9.45	97.20	105.70
1	AA	2455	C	N1-C2-O2	-9.44	113.23	118.90
1	CA	772	C	C6-N1-C2	9.44	124.08	120.30
1	AA	1308	A	N1-C6-N6	-9.42	112.95	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1813	C	N1-C2-O2	9.42	124.55	118.90
56	DX	76	A	C4-C5-N7	9.42	115.41	110.70
1	AA	2364	A	O5'-P-OP1	-9.41	97.23	105.70
1	CA	819	A	O5'-P-OP1	-9.41	97.23	105.70
1	AA	30	G	C5-N7-C8	9.40	109.00	104.30
1	AA	1605	A	C5-C6-N1	-9.39	113.00	117.70
1	AA	828	A	N7-C8-N9	-9.38	109.11	113.80
1	AA	1067	A	C5-C6-N1	-9.38	113.01	117.70
1	AA	600	G	C2-N3-C4	9.38	116.59	111.90
1	AA	1310	G	N1-C2-N3	-9.37	118.28	123.90
1	AA	853	C	N3-C4-N4	-9.36	111.45	118.00
1	AA	241	G	O5'-P-OP1	-9.35	97.28	105.70
1	AA	2548	G	C5-C6-O6	9.35	134.21	128.60
1	AA	2734	A	C8-N9-C4	9.35	109.54	105.80
1	AA	2533	C	N3-C4-C5	-9.34	118.16	121.90
1	AA	2633	A	C8-N9-C4	9.34	109.54	105.80
1	CA	1675	C	N3-C4-C5	-9.34	118.16	121.90
1	AA	2386	C	C2-N3-C4	-9.34	115.23	119.90
1	AA	2397	C	N1-C2-O2	-9.33	113.30	118.90
1	AA	838	C	N3-C4-C5	-9.32	118.17	121.90
1	AA	1725	G	N3-C2-N2	-9.32	113.37	119.90
1	AA	2631	C	O5'-P-OP2	9.32	121.89	110.70
1	AA	1032	C	N1-C2-O2	-9.32	113.31	118.90
1	AA	185	A	N9-C4-C5	-9.32	102.07	105.80
1	AA	405	C	N3-C4-N4	9.32	124.52	118.00
1	AA	1298	G	C6-N1-C2	-9.31	119.51	125.10
1	CA	1698	A	C6-C5-N7	-9.31	125.78	132.30
1	AA	790	G	N1-C6-O6	-9.31	114.31	119.90
1	CA	2230	G	C8-N9-C4	-9.30	102.68	106.40
1	CA	2397	G	O5'-P-OP1	-9.30	97.33	105.70
1	CA	2593	U	O5'-P-OP2	-9.30	97.33	105.70
1	AA	2113	U	C5-C6-N1	-9.29	118.05	122.70
1	AA	853	C	C2-N3-C4	-9.29	115.25	119.90
1	AA	745	C	O5'-P-OP2	-9.28	97.35	105.70
1	AA	830	A	C5-N7-C8	9.27	108.54	103.90
1	AA	2051	G	N9-C4-C5	9.27	109.11	105.40
1	AA	894	U	N1-C2-N3	9.27	120.46	114.90
1	CA	1813	G	C8-N9-C4	9.26	110.11	106.40
1	AA	2512	U	C2-N3-C4	-9.26	121.45	127.00
1	AA	2624	C	O5'-P-OP2	-9.26	97.37	105.70
1	AA	1073	A	N7-C8-N9	-9.25	109.17	113.80
1	AA	2608	U	C5-C6-N1	-9.25	118.08	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2694	U	O5'-P-OP2	-9.25	97.38	105.70
1	AA	881	C	N1-C2-O2	-9.24	113.35	118.90
1	AA	1026	A	C5-N7-C8	-9.24	99.28	103.90
1	AA	2707	C	O5'-P-OP1	-9.24	97.38	105.70
1	AA	2902	G	P-O3'-C3'	9.24	130.79	119.70
55	DV	17	U	N3-C2-O2	-9.24	115.73	122.20
1	CA	945	A	N3-C4-C5	9.23	133.26	126.80
1	AA	726	C	N3-C4-C5	9.23	125.59	121.90
1	AA	2035	A	N1-C6-N6	9.23	124.14	118.60
1	AA	2054	G	C5-N7-C8	9.23	108.92	104.30
1	CA	236	C	C6-N1-C2	9.23	123.99	120.30
1	AA	2734	A	N7-C8-N9	-9.23	109.19	113.80
1	CA	2084	C	C5-C6-N1	-9.23	116.39	121.00
1	AA	231	G	C8-N9-C4	-9.22	102.71	106.40
1	AA	980	C	N1-C2-O2	-9.21	113.37	118.90
1	CA	2626	C	C6-N1-C2	9.21	123.98	120.30
1	AA	2455	C	C5-C6-N1	-9.21	116.39	121.00
1	CA	1698	A	N7-C8-N9	9.21	118.41	113.80
1	AA	2238	C	C6-N1-C2	9.21	123.98	120.30
1	AA	978	A	C6-C5-N7	-9.19	125.86	132.30
1	AA	194	G	C8-N9-C4	9.19	110.08	106.40
1	CA	1698	A	C4-C5-N7	9.19	115.30	110.70
1	AA	1623	U	N3-C2-O2	-9.19	115.77	122.20
1	CA	151	C	C6-N1-C2	9.18	123.97	120.30
1	CA	1672	C	C4-C5-C6	-9.18	112.81	117.40
34	BA	365	U	C5-C6-N1	-9.17	118.11	122.70
1	AA	254	A	N7-C8-N9	9.17	118.39	113.80
34	BA	1502	A	N7-C8-N9	9.17	118.39	113.80
1	AA	812	G	O5'-P-OP2	-9.16	97.45	105.70
1	AA	1571	G	O5'-P-OP2	-9.16	97.46	105.70
1	AA	2001	C	N1-C2-O2	-9.15	113.41	118.90
1	AA	2454	C	N1-C2-O2	-9.14	113.42	118.90
1	AA	2684	G	C5-C6-O6	-9.13	123.12	128.60
34	BA	754	C	N1-C2-O2	9.14	124.38	118.90
1	AA	2009	G	N3-C2-N2	-9.13	113.51	119.90
1	AA	2427	G	C5-C6-O6	-9.13	123.12	128.60
1	AA	2601	A	N9-C4-C5	9.12	109.45	105.80
1	AA	1010	C	N3-C4-N4	-9.12	111.62	118.00
1	AA	625	G	C5-C6-O6	9.12	134.07	128.60
1	AA	891	C	C6-N1-C2	9.12	123.95	120.30
1	AA	1864	U	O5'-P-OP2	-9.11	97.50	105.70
1	AA	1814	A	O4'-C1'-N9	-9.11	100.91	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	609	A	N1-C2-N3	-9.10	124.75	129.30
1	AA	1203	G	C5-C6-O6	9.10	134.06	128.60
1	AA	2509	A	N7-C8-N9	-9.10	109.25	113.80
1	CA	985	C	C6-N1-C2	9.10	123.94	120.30
1	AA	2641	A	O4'-C1'-N9	9.09	115.47	108.20
1	AA	2858	G	C8-N9-C4	-9.09	102.76	106.40
1	AA	796	C	N1-C2-O2	-9.09	113.45	118.90
1	AA	2253	A	C8-N9-C4	-9.09	102.17	105.80
1	AA	539	A	O5'-P-OP2	-9.09	97.52	105.70
1	AA	1855	G	N1-C6-O6	-9.09	114.45	119.90
1	AA	2052	A	N1-C2-N3	9.08	133.84	129.30
1	AA	496	A	O5'-P-OP2	-9.08	97.53	105.70
1	CA	563	G	N7-C8-N9	9.08	117.64	113.10
1	AA	625	G	N1-C6-O6	-9.08	114.45	119.90
1	CA	2824	C	C6-N1-C2	9.08	123.93	120.30
1	AA	2287	C	O5'-P-OP2	-9.07	97.53	105.70
1	CA	790	C	C5-C4-N4	-9.07	113.85	120.20
1	CA	330	A	N1-C6-N6	9.06	124.04	118.60
1	CA	1352	U	O5'-P-OP2	-9.06	97.54	105.70
1	AA	2464	C	C5-C6-N1	-9.05	116.48	121.00
1	AA	2791	A	O5'-P-OP2	-9.04	97.56	105.70
1	AA	764	G	N3-C4-C5	9.04	133.12	128.60
1	AA	1472	G	N1-C6-O6	9.04	125.32	119.90
1	CA	1269	A	O5'-P-OP2	-9.03	97.58	105.70
1	AA	2528	G	N1-C6-O6	-9.02	114.49	119.90
1	AA	123	G	N3-C2-N2	-9.02	113.59	119.90
1	AA	1599	G	C5-C6-O6	-9.02	123.19	128.60
1	AA	1232	G	N1-C6-O6	-9.01	114.49	119.90
1	AA	1394	G	N1-C6-O6	-9.01	114.49	119.90
1	AA	735	U	C6-N1-C2	9.01	126.41	121.00
2	AB	27	C	OP2-P-O3'	9.01	125.02	105.20
1	CA	527	C	N3-C4-N4	-9.01	111.69	118.00
1	AA	899	G	C5-C6-O6	9.00	134.00	128.60
1	AA	1233	U	N1-C2-O2	9.00	129.10	122.80
1	CA	1275	A	N1-C6-N6	9.00	124.00	118.60
1	AA	1457	C	N1-C2-O2	9.00	124.30	118.90
1	AA	600	G	N3-C4-C5	-8.99	124.10	128.60
2	AB	91	C	C6-N1-C2	8.99	123.90	120.30
34	BA	1502	A	C8-N9-C4	-8.98	102.21	105.80
1	AA	1472	G	C8-N9-C4	8.98	109.99	106.40
1	AA	2255	U	C5-C4-O4	-8.97	120.52	125.90
1	AA	1962	U	O5'-P-OP1	8.97	121.47	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2445	A	O5'-P-OP1	-8.97	97.62	105.70
2	AB	33	G	C8-N9-C4	8.97	109.99	106.40
34	DA	893	C	C6-N1-C2	8.97	123.89	120.30
1	AA	2528	G	C5-C6-O6	8.96	133.98	128.60
1	AA	555	G	C5-N7-C8	-8.96	99.82	104.30
1	AA	1330	A	C8-N9-C4	-8.96	102.22	105.80
1	AA	1398	U	O5'-P-OP1	-8.96	97.63	105.70
1	AA	2777	A	C8-N9-C4	8.96	109.38	105.80
34	BA	1502	A	C2-N3-C4	-8.96	106.12	110.60
1	AA	2833	A	C8-N9-C4	8.95	109.38	105.80
1	AA	1802	C	C6-N1-C2	8.95	123.88	120.30
1	CA	248	G	N1-C6-O6	-8.95	114.53	119.90
34	BA	841	U	C5-C6-N1	8.95	127.17	122.70
1	AA	335	A	C2-N3-C4	8.94	115.07	110.60
1	AA	1978	U	O5'-P-OP2	-8.94	97.65	105.70
1	AA	123	G	C4-C5-N7	-8.94	107.22	110.80
1	AA	1620	G	C8-N9-C4	8.94	109.97	106.40
1	AA	53	G	N1-C6-O6	8.94	125.26	119.90
1	AA	2601	A	C5-C6-N6	8.93	130.85	123.70
1	AA	2626	A	OP1-P-OP2	-8.93	106.20	119.60
1	AA	1472	G	C5-C6-O6	-8.93	123.24	128.60
1	AA	906	G	C4-N9-C1'	-8.93	114.90	126.50
1	CA	2512	C	C5-C4-N4	-8.93	113.95	120.20
1	AA	1343	C	N1-C2-O2	8.92	124.25	118.90
1	AA	1248	G	C8-N9-C4	-8.92	102.83	106.40
1	CA	2043	C	C6-N1-C2	-8.91	116.73	120.30
1	AA	2564	U	C5-C6-N1	-8.91	118.24	122.70
1	AA	2264	G	O5'-P-OP1	-8.91	97.68	105.70
1	AA	2644	A	O5'-P-OP1	-8.90	97.69	105.70
2	AB	107	G	N1-C6-O6	8.90	125.24	119.90
1	AA	1648	U	O5'-P-OP1	-8.90	97.69	105.70
1	CA	1021	A	C2-N3-C4	-8.90	106.15	110.60
56	BX	76	A	N1-C6-N6	8.90	123.94	118.60
1	AA	1242	G	C8-N9-C4	8.89	109.96	106.40
1	AA	1589	A	C8-N9-C4	-8.89	102.25	105.80
34	BA	290	C	C6-N1-C2	8.89	123.86	120.30
1	AA	1700	G	N1-C6-O6	-8.89	114.57	119.90
1	AA	1801	G	O5'-P-OP1	-8.89	97.70	105.70
1	AA	2250	G	N3-C4-C5	-8.89	124.16	128.60
34	BA	567	G	O5'-P-OP1	-8.89	97.70	105.70
1	CA	205	G	C8-N9-C4	8.88	109.95	106.40
1	CA	1663	C	N3-C2-O2	-8.88	115.69	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1951	G	O5'-P-OP1	-8.88	97.71	105.70
1	AA	2829	G	O5'-P-OP1	-8.88	97.71	105.70
1	AA	24	G	O5'-P-OP1	-8.87	97.71	105.70
1	CA	2026	C	N1-C2-O2	-8.87	113.58	118.90
1	AA	2285	A	N7-C8-N9	-8.87	109.37	113.80
1	AA	2630	G	N1-C6-O6	-8.87	114.58	119.90
1	AA	994	C	C5-C6-N1	8.86	125.43	121.00
1	AA	358	C	N1-C2-O2	-8.85	113.59	118.90
1	AA	1019	G	N1-C6-O6	8.84	125.20	119.90
1	AA	418	G	C8-N9-C4	8.84	109.93	106.40
1	AA	2307	C	O5'-P-OP1	-8.83	97.75	105.70
1	AA	978	A	N3-C4-C5	8.83	132.98	126.80
1	AA	2020	G	C4-C5-N7	-8.83	107.27	110.80
1	AA	2057	G	C4-C5-N7	8.82	114.33	110.80
1	AA	2641	A	C5-N7-C8	-8.82	99.49	103.90
1	AA	2078	G	N3-C2-N2	8.82	126.08	119.90
1	CA	805	G	C8-N9-C4	8.82	109.93	106.40
1	AA	411	U	O5'-P-OP2	-8.82	97.77	105.70
1	AA	1020	C	O5'-P-OP2	8.81	121.28	110.70
1	AA	2703	C	N3-C4-C5	8.81	125.42	121.90
1	AA	73	A	N1-C2-N3	8.81	133.70	129.30
1	AA	649	C	O5'-P-OP1	-8.81	97.77	105.70
1	AA	776	G	C5-C6-O6	-8.80	123.32	128.60
1	AA	2023	A	N9-C4-C5	8.80	109.32	105.80
1	AA	467	U	N3-C4-C5	8.80	119.88	114.60
1	AA	2709	G	N9-C4-C5	-8.80	101.88	105.40
1	AA	1358	U	C5-C4-O4	8.79	131.17	125.90
1	AA	776	G	C4-C5-N7	8.78	114.31	110.80
1	AA	335	A	N9-C4-C5	8.78	109.31	105.80
1	AA	606	G	C2-N3-C4	8.78	116.29	111.90
1	AA	413	G	N1-C6-O6	8.77	125.16	119.90
1	AA	1093	G	N1-C6-O6	-8.77	114.64	119.90
1	AA	894	U	N3-C2-O2	-8.77	116.06	122.20
1	AA	2762	A	C8-N9-C4	8.77	109.31	105.80
1	AA	2857	U	C5-C4-O4	-8.77	120.64	125.90
1	AA	2047	C	C4-C5-C6	8.76	121.78	117.40
1	AA	2366	G	N1-C6-O6	8.76	125.16	119.90
1	AA	169	G	C8-N9-C4	8.76	109.90	106.40
1	AA	994	C	C6-N1-C2	-8.76	116.80	120.30
1	AA	563	G	C5-C6-O6	8.75	133.85	128.60
1	AA	846	G	N3-C2-N2	8.75	126.03	119.90
1	AA	358	C	N3-C4-C5	-8.74	118.40	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1605	A	C5-N7-C8	-8.74	99.53	103.90
34	BA	770	C	O5'-P-OP1	-8.74	97.83	105.70
1	CA	450	G	N7-C8-N9	-8.73	108.73	113.10
1	AA	1728	G	C4-C5-N7	8.73	114.29	110.80
1	AA	1806	U	O5'-P-OP2	-8.72	97.85	105.70
1	CA	915	C	C6-N1-C2	-8.72	116.81	120.30
1	AA	2248	C	C6-N1-C2	8.72	123.79	120.30
1	CA	2248	C	C6-N1-C2	8.72	123.79	120.30
1	AA	728	G	O5'-P-OP1	-8.71	97.86	105.70
1	AA	2428	C	C6-N1-C2	-8.71	116.82	120.30
1	CA	1997	G	O5'-P-OP2	-8.71	97.86	105.70
2	AB	36	C	C6-N1-C2	-8.71	116.82	120.30
1	CA	987	G	C8-N9-C4	8.70	109.88	106.40
1	AA	1653	C	C6-N1-C1'	-8.70	110.36	120.80
1	AA	2425	G	O5'-P-OP2	-8.70	97.87	105.70
1	AA	1207	C	C2-N3-C4	-8.70	115.55	119.90
1	AA	1301	U	C5-C6-N1	8.70	127.05	122.70
1	AA	1745	A	N1-C6-N6	8.70	123.82	118.60
1	AA	2441	G	OP1-P-OP2	-8.70	106.55	119.60
1	CA	2036	C	N3-C4-C5	8.70	125.38	121.90
34	DA	568	G	N1-C6-O6	-8.70	114.68	119.90
34	BA	836	G	C5-C6-O6	-8.68	123.39	128.60
1	CA	493	G	N1-C6-O6	-8.68	114.69	119.90
34	DA	107	G	C8-N9-C4	8.68	109.87	106.40
1	AA	413	G	C5-C6-O6	-8.68	123.39	128.60
1	AA	1709	C	N1-C2-O2	8.67	124.10	118.90
1	AA	2397	C	C4-C5-C6	-8.67	113.06	117.40
1	AA	199	C	N3-C4-C5	8.67	125.37	121.90
1	AA	1543	U	C5-C6-N1	-8.67	118.37	122.70
1	AA	2335	G	N1-C6-O6	8.67	125.10	119.90
1	AA	2786	C	C5-C6-N1	-8.67	116.67	121.00
1	AA	1790	A	N1-C6-N6	8.66	123.80	118.60
1	CA	569	U	N3-C4-O4	8.66	125.46	119.40
1	AA	2684	G	N1-C6-O6	8.66	125.09	119.90
1	CA	176	G	C5-C6-O6	-8.65	123.41	128.60
1	CA	330	A	C4-C5-N7	8.65	115.02	110.70
1	AA	563	G	C5-C6-N1	-8.65	107.18	111.50
1	AA	1299	A	C2-N3-C4	8.64	114.92	110.60
1	AA	593	G	C2-N3-C4	8.64	116.22	111.90
1	AA	2057	G	C5-N7-C8	-8.64	99.98	104.30
1	AA	1478	C	C6-N1-C2	-8.64	116.84	120.30
1	AA	1806	U	N3-C2-O2	-8.64	116.15	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	814	A	N1-C6-N6	8.64	123.78	118.60
1	AA	1303	C	C6-N1-C2	-8.63	116.85	120.30
1	AA	1444	C	N3-C4-C5	8.63	125.35	121.90
34	BA	283	C	N3-C4-C5	-8.63	118.45	121.90
1	CA	2242	G	C8-N9-C4	8.63	109.85	106.40
1	AA	731	G	N7-C8-N9	8.62	117.41	113.10
1	AA	853	C	C6-N1-C2	8.62	123.75	120.30
1	AA	1357	G	C4-C5-N7	-8.62	107.35	110.80
1	AA	1503	G	C5-C6-O6	-8.63	123.42	128.60
1	AA	629	U	N3-C2-O2	-8.62	116.16	122.20
1	AA	1970	G	O5'-P-OP1	-8.62	97.94	105.70
1	AA	1027	A	O5'-P-OP1	-8.62	97.94	105.70
1	AA	1745	A	C6-C5-N7	-8.62	126.27	132.30
34	BA	819	A	O5'-P-OP1	-8.62	97.94	105.70
1	CA	96	G	C8-N9-C4	8.62	109.85	106.40
1	CA	1610	A	N1-C6-N6	8.62	123.77	118.60
1	CA	1639	U	N1-C2-O2	8.62	128.83	122.80
1	AA	579	G	C5-C6-O6	8.61	133.76	128.60
1	AA	1026	A	N1-C6-N6	8.61	123.76	118.60
1	AA	479	C	N3-C4-N4	-8.60	111.98	118.00
1	AA	531	G	C5-C6-O6	8.60	133.76	128.60
1	AA	587	C	C4-C5-C6	-8.60	113.10	117.40
1	AA	880	U	C5-C4-O4	-8.60	120.74	125.90
1	AA	2515	A	C2-N3-C4	8.59	114.89	110.60
1	AA	1008	U	C5-C6-N1	-8.59	118.41	122.70
1	AA	2089	G	C8-N9-C4	-8.58	102.97	106.40
1	CA	2730	C	C6-N1-C2	-8.58	116.87	120.30
1	AA	828	A	C8-N9-C4	8.57	109.23	105.80
1	CA	1663	C	C6-N1-C2	-8.57	116.87	120.30
1	CA	1698	A	C2-N3-C4	-8.56	106.32	110.60
1	AA	1444	C	C5-C4-N4	-8.56	114.21	120.20
1	AA	842	C	N3-C2-O2	-8.56	115.91	121.90
1	AA	2828	G	N3-C2-N2	-8.56	113.91	119.90
2	AB	47	C	C6-N1-C2	8.56	123.72	120.30
1	CA	314	A	O5'-P-OP2	-8.56	98.00	105.70
1	AA	1242	G	N1-C6-O6	-8.55	114.77	119.90
1	AA	1663	C	N3-C2-O2	-8.55	115.91	121.90
1	AA	336	G	N3-C4-N9	8.55	131.13	126.00
1	CA	141	A	C8-N9-C4	-8.55	102.38	105.80
1	AA	479	C	C5-C4-N4	8.55	126.18	120.20
1	AA	2535	G	N3-C2-N2	8.54	125.88	119.90
1	CA	787	U	O5'-P-OP1	-8.54	98.01	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2512	U	N3-C4-C5	8.54	119.72	114.60
1	AA	2089	G	N9-C4-C5	8.54	108.81	105.40
1	AA	2620	G	C8-N9-C4	8.54	109.81	106.40
1	CA	433	C	C6-N1-C2	8.54	123.72	120.30
1	CA	148	C	C6-N1-C2	8.53	123.71	120.30
1	AA	1864	U	C5-C6-N1	-8.53	118.44	122.70
1	AA	467	U	C5-C6-N1	-8.53	118.44	122.70
1	AA	1228	G	N3-C4-N9	-8.53	120.88	126.00
1	AA	2594	G	O5'-P-OP2	-8.52	98.03	105.70
1	AA	2895	C	N1-C2-O2	-8.52	113.79	118.90
1	AA	552	C	C4-C5-C6	8.51	121.66	117.40
1	AA	2000	A	N1-C6-N6	8.51	123.71	118.60
1	AA	2386	C	C4-C5-C6	8.51	121.66	117.40
1	AA	2715	C	C6-N1-C2	-8.50	116.90	120.30
1	AA	2454	C	OP1-P-OP2	-8.50	106.85	119.60
1	AA	802	C	N3-C2-O2	-8.49	115.95	121.90
1	AA	112	U	C5-C4-O4	-8.49	120.80	125.90
34	BA	1518	A	N1-C6-N6	8.49	123.70	118.60
1	AA	1307	C	C2-N3-C4	-8.49	115.66	119.90
1	AA	481	C	O5'-P-OP2	-8.48	98.06	105.70
1	AA	2643	G	N1-C6-O6	-8.48	114.81	119.90
1	AA	147	U	C5-C6-N1	-8.47	118.46	122.70
1	AA	2335	G	C5-C6-O6	-8.47	123.52	128.60
1	AA	1717	C	C6-N1-C2	8.47	123.69	120.30
1	AA	2882	G	O5'-P-OP1	-8.46	98.08	105.70
1	CA	2083	G	C5-C6-O6	8.47	133.68	128.60
1	AA	1264	G	O5'-P-OP2	-8.46	98.09	105.70
1	AA	239	G	N3-C4-C5	-8.46	124.37	128.60
1	AA	1054	C	N3-C4-C5	8.46	125.28	121.90
1	AA	899	G	N1-C6-O6	-8.45	114.83	119.90
1	AA	853	C	C5-C6-N1	-8.45	116.78	121.00
1	AA	903	C	N1-C2-O2	-8.45	113.83	118.90
1	AA	1314	A	N1-C6-N6	-8.45	113.53	118.60
1	AA	2260	C	N3-C4-N4	-8.45	112.09	118.00
1	CA	1615	C	C6-N1-C2	-8.45	116.92	120.30
1	AA	1207	C	N3-C4-C5	8.45	125.28	121.90
1	AA	1921	G	C5-C6-O6	-8.45	123.53	128.60
1	AA	795	G	N3-C4-C5	-8.44	124.38	128.60
34	DA	1487	G	C8-N9-C4	-8.44	103.02	106.40
1	AA	2536	G	OP2-P-O3'	8.44	123.76	105.20
1	AA	764	G	N3-C4-N9	-8.44	120.94	126.00
1	AA	894	U	N3-C4-O4	-8.44	113.49	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1659	G	N7-C8-N9	-8.43	108.88	113.10
1	AA	1236	G	C8-N9-C4	8.43	109.77	106.40
1	AA	32	C	C5-C6-N1	-8.43	116.79	121.00
1	AA	2020	G	C5-N7-C8	8.42	108.51	104.30
1	AA	2281	A	O5'-P-OP1	-8.42	98.12	105.70
1	AA	2551	C	N1-C2-O2	-8.42	113.85	118.90
1	CA	133	C	C6-N1-C2	8.42	123.67	120.30
1	AA	2455	C	C2-N3-C4	-8.42	115.69	119.90
1	AA	778	C	N3-C4-C5	8.42	125.27	121.90
1	AA	45	C	O5'-P-OP1	-8.42	98.12	105.70
1	AA	2780	C	N3-C4-N4	-8.41	112.11	118.00
1	AA	343	C	N3-C2-O2	-8.41	116.01	121.90
1	AA	2067	C	C5-C6-N1	-8.41	116.80	121.00
1	AA	2625	U	N1-C2-O2	8.41	128.69	122.80
1	AA	1011	G	C4-C5-N7	-8.41	107.44	110.80
1	AA	1709	C	N3-C4-C5	8.40	125.26	121.90
1	AA	500	G	C8-N9-C4	-8.40	103.04	106.40
1	AA	846	G	N3-C4-N9	8.40	131.04	126.00
1	AA	1472	G	C4-C5-N7	8.39	114.16	110.80
1	AA	1725	G	N1-C6-O6	8.39	124.94	119.90
1	AA	2845	A	C8-N9-C4	-8.39	102.44	105.80
1	AA	2557	G	C8-N9-C4	-8.39	103.04	106.40
1	AA	543	G	N3-C2-N2	8.39	125.77	119.90
1	AA	587	C	N3-C4-C5	8.39	125.25	121.90
1	AA	1441	A	C8-N9-C4	8.39	109.16	105.80
1	CA	772	C	C5-C6-N1	-8.39	116.81	121.00
1	CA	277	C	N1-C2-O2	8.39	123.93	118.90
56	DX	76	A	N1-C6-N6	8.38	123.63	118.60
34	BA	1506	U	O5'-P-OP2	-8.38	98.16	105.70
1	AA	886	U	N3-C4-C5	8.38	119.63	114.60
1	AA	1228	G	N3-C4-C5	8.38	132.79	128.60
1	AA	887	C	C5-C6-N1	-8.38	116.81	121.00
1	CA	448	U	O5'-P-OP1	-8.38	98.16	105.70
1	AA	1001	G	N1-C6-O6	8.37	124.92	119.90
1	AA	1816	A	O5'-P-OP2	-8.37	98.16	105.70
1	AA	2639	G	C8-N9-C4	8.37	109.75	106.40
1	AA	2778	A	N1-C6-N6	8.37	123.62	118.60
1	AA	851	A	O5'-P-OP2	8.37	120.75	110.70
1	CA	673	C	N1-C2-O2	-8.37	113.88	118.90
1	AA	1259	A	N1-C6-N6	-8.37	113.58	118.60
1	CA	1987	G	C8-N9-C4	8.37	109.75	106.40
1	AA	1299	A	C5-N7-C8	8.37	108.08	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1274	G	C6-N1-C2	8.36	130.12	125.10
1	AA	1962	U	O5'-P-OP2	-8.37	98.17	105.70
1	CA	635	C	C6-N1-C2	-8.37	116.95	120.30
1	AA	2065	C	C5-C4-N4	8.36	126.06	120.20
34	BA	674	G	N1-C6-O6	8.36	124.92	119.90
1	AA	818	G	N1-C6-O6	-8.36	114.88	119.90
1	AA	954	C	N3-C4-C5	8.36	125.25	121.90
34	BA	1525	G	O5'-P-OP2	8.36	120.73	110.70
1	AA	614	C	C2-N3-C4	-8.35	115.72	119.90
1	AA	2102	G	O5'-P-OP2	-8.35	98.18	105.70
1	AA	553	A	O4'-C1'-N9	-8.35	101.52	108.20
1	AA	1082	G	N3-C2-N2	8.35	125.75	119.90
13	AP	55	ARG	NE-CZ-NH1	8.35	124.47	120.30
1	AA	614	C	N3-C4-N4	-8.35	112.16	118.00
1	AA	1049	G	C6-N1-C2	-8.35	120.09	125.10
1	AA	1197	G	N1-C6-O6	-8.35	114.89	119.90
1	AA	579	G	N1-C6-O6	-8.34	114.89	119.90
1	AA	880	U	N3-C4-O4	8.34	125.24	119.40
1	AA	2061	C	N3-C4-C5	8.34	125.24	121.90
1	AA	831	A	OP1-P-OP2	-8.34	107.09	119.60
1	AA	2015	U	O5'-P-OP1	-8.34	98.19	105.70
1	AA	291	G	C4-C5-N7	8.34	114.14	110.80
1	AA	1685	C	N3-C2-O2	-8.34	116.06	121.90
1	AA	1788	U	C6-N1-C2	8.34	126.00	121.00
1	AA	963	A	N1-C6-N6	8.33	123.60	118.60
1	AA	1298	G	N3-C2-N2	-8.33	114.07	119.90
1	AA	539	A	C6-N1-C2	-8.33	113.60	118.60
1	AA	2465	A	C2-N3-C4	8.33	114.76	110.60
4	AD	260	ARG	NE-CZ-NH1	8.33	124.46	120.30
1	AA	2521	G	N1-C6-O6	-8.33	114.91	119.90
1	AA	1683	C	C6-N1-C2	-8.32	116.97	120.30
1	AA	1715	A	C2-N3-C4	8.32	114.76	110.60
1	AA	1962	U	N3-C2-O2	8.32	128.03	122.20
1	AA	2030	C	C5-C4-N4	-8.32	114.37	120.20
1	AA	1652	G	C5-C6-N1	8.32	115.66	111.50
1	AA	868	A	C8-N9-C4	-8.32	102.47	105.80
1	AA	1665	G	C5-C6-O6	8.31	133.59	128.60
1	CA	2059	A	O5'-P-OP2	-8.31	98.22	105.70
1	AA	778	C	C5-C6-N1	-8.31	116.85	121.00
1	AA	891	C	N3-C4-C5	8.31	125.22	121.90
1	AA	2383	G	N1-C2-N3	-8.30	118.92	123.90
1	AA	555	G	C4-C5-N7	8.30	114.12	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2723	A	N1-C2-N3	-8.30	125.15	129.30
1	CA	2576	G	O5'-P-OP1	-8.30	98.23	105.70
1	AA	1011	G	C5-C6-O6	8.30	133.58	128.60
1	AA	1242	G	C5-C6-N1	8.30	115.65	111.50
1	CA	2007	C	C5-C6-N1	-8.30	116.85	121.00
1	AA	1031	C	C6-N1-C2	-8.29	116.98	120.30
34	BA	1030(B)	C	C2-N1-C1'	8.29	127.92	118.80
1	AA	1490	G	O5'-P-OP2	-8.29	98.24	105.70
1	AA	123	G	N7-C8-N9	-8.29	108.96	113.10
1	AA	335	A	C8-N9-C4	-8.29	102.49	105.80
1	AA	846	G	N3-C4-C5	-8.28	124.46	128.60
1	AA	205	A	C8-N9-C4	8.27	109.11	105.80
1	AA	2285	A	C5-C6-N6	-8.27	117.08	123.70
1	AA	2286	A	C5-C6-N1	-8.27	113.56	117.70
1	AA	1660	A	O5'-P-OP2	8.27	120.62	110.70
1	AA	494	G	C5-C6-O6	8.27	133.56	128.60
2	AB	103	G	C8-N9-C4	-8.27	103.09	106.40
1	AA	906	G	O4'-C1'-N9	-8.27	101.59	108.20
1	AA	2434	A	O5'-P-OP1	-8.26	98.26	105.70
1	CA	2512	C	N3-C4-C5	8.26	125.20	121.90
1	AA	1963	C	C2-N1-C1'	8.26	127.88	118.80
1	AA	2834	C	C6-N1-C2	-8.25	117.00	120.30
1	AA	1310	G	C2-N3-C4	8.25	116.02	111.90
1	AA	2077	C	N3-C2-O2	8.25	127.67	121.90
1	AA	1056	A	N7-C8-N9	-8.24	109.68	113.80
34	BA	1426	C	C2-N1-C1'	8.24	127.87	118.80
1	AA	1230	C	C6-N1-C2	-8.24	117.00	120.30
1	AA	1235	G	C5-C6-N1	-8.24	107.38	111.50
1	CA	574	C	N1-C2-O2	-8.24	113.96	118.90
1	AA	1809	U	O5'-P-OP1	-8.23	98.29	105.70
1	AA	2244	U	N3-C4-O4	-8.23	113.64	119.40
1	CA	2070	G	N1-C6-O6	-8.23	114.96	119.90
1	AA	1265	A	N9-C4-C5	-8.23	102.51	105.80
1	AA	409	G	C5-C6-O6	8.23	133.54	128.60
1	AA	2375	C	C2-N1-C1'	-8.22	109.75	118.80
34	BA	339	C	C6-N1-C2	-8.22	117.01	120.30
1	AA	1261	G	N9-C4-C5	-8.22	102.11	105.40
1	CA	2507	C	C6-N1-C2	-8.22	117.01	120.30
34	DA	689	C	C6-N1-C2	-8.22	117.01	120.30
1	AA	2636	G	C4-C5-N7	-8.21	107.52	110.80
1	AA	591	U	C4-C5-C6	-8.20	114.78	119.70
1	AA	2005	C	N3-C4-C5	8.20	125.18	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1793	A	N9-C4-C5	8.20	109.08	105.80
1	CA	1368	G	O5'-P-OP2	-8.19	98.33	105.70
1	AA	1605	A	N1-C2-N3	8.19	133.39	129.30
1	AA	1083	G	C4-C5-N7	8.18	114.07	110.80
1	AA	1320	A	N1-C6-N6	8.18	123.51	118.60
1	CA	1279	G	C8-N9-C4	-8.18	103.13	106.40
1	AA	2294	G	N9-C4-C5	-8.18	102.13	105.40
1	AA	2605	U	C5-C4-O4	8.18	130.81	125.90
1	AA	1237	G	C5-C6-O6	8.17	133.50	128.60
1	AA	1807	G	N9-C4-C5	-8.17	102.13	105.40
1	AA	1021	G	O5'-P-OP2	-8.16	98.35	105.70
1	AA	478	G	C5-C6-N1	8.16	115.58	111.50
1	AA	2223	C	N1-C2-O2	8.16	123.80	118.90
1	AA	1700	G	N3-C4-C5	-8.16	124.52	128.60
1	AA	1741	C	C6-N1-C2	8.16	123.56	120.30
1	AA	1431	G	C5-C6-O6	-8.15	123.71	128.60
1	AA	2068	G	N3-C4-N9	-8.15	121.11	126.00
1	AA	126	C	N1-C2-O2	-8.15	114.01	118.90
1	AA	914	C	N1-C2-O2	-8.14	114.01	118.90
1	AA	2249	G	N1-C6-O6	-8.14	115.02	119.90
1	AA	1240	G	C5-C6-N1	8.14	115.57	111.50
1	AA	2093	A	C5-N7-C8	8.14	107.97	103.90
1	AA	2383	G	N3-C2-N2	8.14	125.59	119.90
1	AA	2456	G	C5-C6-O6	-8.13	123.72	128.60
1	AA	978	A	C5-C6-N1	-8.13	113.63	117.70
1	AA	2442	A	C2-N3-C4	-8.13	106.53	110.60
1	AA	2703	C	N3-C4-N4	-8.13	112.31	118.00
1	AA	2092	G	N1-C6-O6	-8.13	115.02	119.90
1	AA	2624	C	C6-N1-C2	8.13	123.55	120.30
34	DA	881	G	C8-N9-C4	8.13	109.65	106.40
1	AA	1962	U	N1-C2-O2	-8.13	117.11	122.80
1	AA	815	G	C5-C6-O6	8.12	133.47	128.60
1	AA	1814	A	C6-N1-C2	8.12	123.47	118.60
1	AA	2834	C	C5-C4-N4	-8.12	114.52	120.20
1	AA	990	A	OP1-P-OP2	-8.12	107.42	119.60
1	CA	450	G	N1-C6-O6	-8.12	115.03	119.90
1	AA	33	U	O5'-P-OP2	8.11	120.44	110.70
56	BX	13	C	C6-N1-C2	-8.11	117.06	120.30
1	AA	1023	G	C8-N9-C4	-8.10	103.16	106.40
1	AA	1321	A	C5-C6-N1	-8.10	113.65	117.70
1	AA	1343	C	O5'-P-OP2	-8.10	98.41	105.70
1	AA	1398	U	O5'-P-OP2	8.10	120.42	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1799	U	N3-C2-O2	-8.10	116.53	122.20
1	AA	1250	U	C5-C4-O4	-8.09	121.05	125.90
1	AA	1266	C	C5-C6-N1	-8.09	116.95	121.00
1	AA	2058	C	C2-N3-C4	-8.09	115.86	119.90
1	CA	1258	C	N3-C4-N4	-8.09	112.34	118.00
1	AA	882	A	C4-C5-N7	-8.09	106.66	110.70
34	BA	23	C	C6-N1-C2	-8.09	117.06	120.30
1	AA	2298	A	C6-C5-N7	-8.08	126.64	132.30
1	AA	979	G	N1-C6-O6	-8.08	115.05	119.90
1	AA	1706	U	N1-C2-N3	8.08	119.75	114.90
1	CA	42	G	O5'-P-OP1	-8.08	98.43	105.70
1	AA	863	C	N1-C2-O2	-8.08	114.05	118.90
1	AA	1299	A	N7-C8-N9	-8.08	109.76	113.80
34	DA	567	G	O5'-P-OP1	-8.08	98.43	105.70
1	AA	500	G	N9-C4-C5	8.07	108.63	105.40
1	AA	2258	G	N1-C6-O6	8.07	124.75	119.90
1	AA	2291	G	N1-C6-O6	8.07	124.75	119.90
1	CA	221	A	O5'-P-OP1	-8.07	98.43	105.70
1	CA	1997	G	C8-N9-C4	8.07	109.63	106.40
1	CA	45	C	O5'-P-OP1	-8.07	98.44	105.70
34	DA	699	C	C6-N1-C2	-8.07	117.07	120.30
1	AA	1070	G	N1-C6-O6	8.07	124.74	119.90
1	CA	1022	G	N3-C4-C5	8.07	132.63	128.60
1	AA	88	G	C8-N9-C4	-8.06	103.18	106.40
1	AA	2237	A	N1-C2-N3	8.06	133.33	129.30
1	AA	963	A	C4-C5-N7	8.06	114.73	110.70
1	AA	167	G	O5'-P-OP2	-8.06	98.45	105.70
1	AA	605	G	N1-C6-O6	-8.05	115.07	119.90
1	AA	474	U	N3-C4-C5	8.05	119.43	114.60
1	AA	1788	U	C5-C6-N1	-8.05	118.68	122.70
1	AA	2465	A	N1-C2-N3	-8.05	125.28	129.30
1	AA	2523	U	N3-C4-O4	-8.05	113.77	119.40
1	CA	1596	A	N1-C6-N6	-8.05	113.77	118.60
1	AA	1316	C	OP2-P-O3'	8.04	122.90	105.20
1	AA	201	G	N3-C4-C5	8.04	132.62	128.60
1	AA	1874	C	C6-N1-C2	8.04	123.52	120.30
1	AA	1001	G	C5-C6-N1	-8.04	107.48	111.50
1	AA	1419	A	N7-C8-N9	-8.04	109.78	113.80
1	AA	1659	G	C8-N9-C4	8.04	109.61	106.40
1	AA	433	G	C8-N9-C4	-8.04	103.19	106.40
1	AA	1806	U	N3-C4-O4	-8.03	113.78	119.40
1	CA	513	A	N7-C8-N9	8.03	117.81	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	81	G	C5-C6-N1	-8.03	107.49	111.50
1	CA	330	A	N9-C4-C5	-8.02	102.59	105.80
1	AA	531	G	N1-C6-O6	-8.02	115.09	119.90
1	AA	807	G	C8-N9-C4	8.02	109.61	106.40
1	AA	2427	G	N1-C6-O6	8.02	124.72	119.90
1	AA	2717	A	N9-C4-C5	-8.02	102.59	105.80
1	AA	913	A	N1-C6-N6	8.02	123.41	118.60
1	AA	2601	A	OP1-P-OP2	-8.02	107.57	119.60
1	AA	2732	G	N1-C6-O6	8.02	124.71	119.90
1	AA	559	U	O5'-P-OP1	-8.02	98.48	105.70
34	BA	785	G	N1-C6-O6	8.02	124.71	119.90
1	AA	853	C	O5'-P-OP2	8.02	120.32	110.70
1	AA	2437	A	N1-C6-N6	8.02	123.41	118.60
1	AA	2638	C	N3-C2-O2	8.02	127.51	121.90
1	AA	112	U	C2-N1-C1'	8.01	127.32	117.70
1	AA	121	G	C5-C6-O6	-8.01	123.79	128.60
1	AA	1290	G	C5-C6-O6	8.01	133.41	128.60
1	AA	215	G	O4'-C1'-N9	8.01	114.61	108.20
1	AA	1605	A	O4'-C1'-N9	8.01	114.61	108.20
1	CA	945	A	C6-C5-N7	-8.01	126.70	132.30
1	AA	1342	G	N1-C6-O6	-8.00	115.10	119.90
1	CA	116	C	C6-N1-C2	-8.00	117.10	120.30
1	AA	1157	A	C2-N3-C4	-8.00	106.60	110.60
1	AA	1457	C	N3-C2-O2	-8.00	116.30	121.90
1	AA	2464	C	C2-N3-C4	-8.00	115.90	119.90
1	CA	2070	G	N1-C2-N2	-8.00	109.00	116.20
1	AA	1822	A	O5'-P-OP1	-8.00	98.50	105.70
1	AA	2024	G	N1-C6-O6	7.99	124.70	119.90
1	CA	2444	G	C8-N9-C4	7.99	109.60	106.40
56	DX	19	G	OP2-P-O3'	7.99	122.79	105.20
1	AA	1702	A	N1-C2-N3	-7.99	125.30	129.30
1	AA	1886	G	N1-C6-O6	-7.99	115.11	119.90
1	AA	2055	A	O5'-P-OP1	-7.99	98.51	105.70
1	AA	2343	G	C5-C6-O6	-7.99	123.81	128.60
1	AA	2043	C	C6-N1-C2	7.99	123.50	120.30
1	AA	2351	G	O5'-P-OP2	-7.99	98.51	105.70
1	AA	1802	C	N3-C4-N4	-7.98	112.41	118.00
1	AA	467	U	C2-N3-C4	-7.98	122.21	127.00
1	AA	1653	C	C2-N1-C1'	7.98	127.58	118.80
1	CA	2554	U	O5'-P-OP1	-7.98	98.52	105.70
1	AA	503	A	O5'-P-OP2	-7.98	98.52	105.70
1	AA	966	G	N1-C6-O6	7.98	124.69	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2508	C	C2-N3-C4	7.98	123.89	119.90
1	AA	1927	C	N1-C2-O2	7.98	123.69	118.90
1	AA	2265	G	C4-C5-N7	-7.97	107.61	110.80
1	AA	2466	G	N3-C4-C5	-7.97	124.61	128.60
1	AA	2533	C	C5-C6-N1	-7.97	117.01	121.00
34	BA	901	A	N1-C2-N3	7.97	133.29	129.30
1	AA	30	G	C4-C5-N7	-7.97	107.61	110.80
2	AB	106	G	O5'-P-OP2	-7.97	98.53	105.70
34	BA	365	U	C2-N1-C1'	-7.97	108.14	117.70
1	AA	1718	U	N1-C2-O2	-7.96	117.23	122.80
1	AA	1236	G	N9-C4-C5	-7.96	102.22	105.40
1	AA	222	A	O5'-P-OP1	-7.96	98.54	105.70
1	AA	1802	C	C5-C6-N1	-7.96	117.02	121.00
1	AA	1388	A	N1-C2-N3	7.96	133.28	129.30
1	AA	2791	A	N1-C2-N3	7.96	133.28	129.30
1	CA	1761	C	C2-N3-C4	-7.96	115.92	119.90
1	AA	170	A	O5'-P-OP2	7.96	120.25	110.70
1	AA	1486	G	N1-C6-O6	-7.96	115.13	119.90
1	AA	2745	G	C5-C6-O6	7.96	133.37	128.60
1	CA	1204	A	C2-N3-C4	-7.96	106.62	110.60
1	AA	1423	G	C5-C6-O6	-7.95	123.83	128.60
1	CA	2270	G	C8-N9-C4	7.95	109.58	106.40
1	AA	1259	A	C5-C6-N6	7.95	130.06	123.70
1	AA	44	G	C4-C5-N7	-7.95	107.62	110.80
1	AA	1058	U	C2-N3-C4	-7.95	122.23	127.00
1	AA	2576	A	N1-C6-N6	-7.95	113.83	118.60
1	AA	2265	G	C5-N7-C8	7.95	108.27	104.30
1	AA	786	G	C5-C6-N1	7.94	115.47	111.50
1	AA	583	C	N1-C2-O2	7.93	123.66	118.90
1	AA	2006	G	O5'-P-OP1	-7.93	98.56	105.70
1	AA	2509	A	N9-C4-C5	-7.92	102.63	105.80
1	AA	1645	C	N1-C2-O2	-7.92	114.15	118.90
1	AA	2641	A	C4-C5-C6	7.92	120.96	117.00
1	CA	766	C	C6-N1-C2	7.92	123.47	120.30
1	AA	833	C	O5'-P-OP1	-7.91	98.58	105.70
1	AA	50	G	C8-N9-C4	-7.91	103.24	106.40
1	AA	978	A	N3-C4-N9	-7.91	121.08	127.40
1	AA	2250	G	O5'-P-OP1	-7.90	98.59	105.70
1	AA	1249	A	C5-C6-N1	-7.90	113.75	117.70
1	AA	2587	C	C6-N1-C2	7.90	123.46	120.30
1	AA	2463	A	C2-N3-C4	7.90	114.55	110.60
1	AA	2628	C	C6-N1-C2	-7.90	117.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	194	G	N3-C4-C5	7.89	132.55	128.60
1	AA	2639	G	N7-C8-N9	-7.89	109.15	113.10
1	AA	1886	G	C5-C6-N1	7.89	115.45	111.50
1	CA	130	C	C5-C6-N1	-7.89	117.05	121.00
34	DA	568	G	C5-C6-O6	7.89	133.34	128.60
1	CA	1204	A	N1-C6-N6	7.89	123.33	118.60
1	AA	45	C	N3-C4-C5	7.88	125.05	121.90
1	AA	1416	C	O5'-P-OP2	-7.88	98.61	105.70
1	AA	555	G	C8-N9-C4	-7.88	103.25	106.40
1	AA	1093	G	C5-C6-O6	7.88	133.33	128.60
1	AA	896	A	C8-N9-C4	7.88	108.95	105.80
1	AA	1721	G	N3-C4-C5	-7.88	124.66	128.60
1	AA	2721	G	O5'-P-OP2	7.88	120.16	110.70
1	AA	204	G	C2-N3-C4	-7.87	107.97	111.90
1	AA	1297	C	C4-C5-C6	7.87	121.33	117.40
2	AB	6	C	O5'-P-OP1	7.87	120.14	110.70
1	CA	1904	G	C5-C6-O6	7.87	133.32	128.60
1	AA	1034	A	C8-N9-C4	-7.86	102.66	105.80
1	AA	1249	A	N1-C2-N3	7.86	133.23	129.30
1	AA	2601	A	N1-C6-N6	-7.86	113.88	118.60
1	AA	1078	A	N7-C8-N9	-7.85	109.87	113.80
1	AA	2832	G	C5-C6-O6	-7.85	123.89	128.60
1	AA	2000	A	C8-N9-C4	7.85	108.94	105.80
1	AA	2638	C	C5-C4-N4	-7.85	114.71	120.20
34	BA	900	A	O5'-P-OP2	7.85	120.12	110.70
1	AA	2045	G	O5'-P-OP2	7.85	120.11	110.70
2	AB	101	G	C8-N9-C4	7.85	109.54	106.40
1	AA	2383	G	N9-C4-C5	-7.84	102.26	105.40
1	AA	1010	C	C5-C4-N4	7.84	125.69	120.20
1	CA	746	A	O4'-C1'-N9	7.84	114.47	108.20
1	AA	584	G	N7-C8-N9	-7.83	109.18	113.10
1	AA	851	A	N7-C8-N9	-7.83	109.88	113.80
1	AA	2400	A	O4'-C1'-N9	7.83	114.47	108.20
1	AA	2366	G	C5-N7-C8	-7.83	100.39	104.30
34	BA	299	G	C5-C6-O6	-7.83	123.90	128.60
2	AB	99	G	C8-N9-C4	7.83	109.53	106.40
1	AA	1732	C	N1-C2-O2	7.82	123.59	118.90
1	AA	2535	G	N1-C6-O6	-7.82	115.21	119.90
1	AA	735	U	C5-C4-O4	-7.82	121.21	125.90
1	AA	1357	G	N1-C6-O6	-7.82	115.21	119.90
20	AW	15	ARG	NE-CZ-NH1	7.82	124.21	120.30
1	AA	1852	A	C5-C6-N1	7.82	121.61	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1852	A	N9-C4-C5	7.82	108.93	105.80
1	AA	1155	C	C5-C6-N1	7.81	124.91	121.00
1	CA	421	U	C6-N1-C2	7.81	125.69	121.00
1	AA	1246	C	C6-N1-C2	7.81	123.42	120.30
1	AA	2622	C	O4'-C1'-N1	-7.81	101.95	108.20
1	AA	532	A	O5'-P-OP2	-7.81	98.67	105.70
1	AA	1230	C	C5-C6-N1	7.81	124.90	121.00
1	AA	1700	G	C5-C6-N1	7.81	115.40	111.50
2	AB	51	G	O5'-P-OP2	-7.81	98.67	105.70
1	AA	1287	A	C5-N7-C8	7.80	107.80	103.90
1	AA	2510	C	C4-C5-C6	7.80	121.30	117.40
1	AA	851	A	C2-N3-C4	-7.80	106.70	110.60
1	AA	2051	G	C6-N1-C2	-7.80	120.42	125.10
1	CA	2253	G	O5'-P-OP2	-7.80	98.68	105.70
1	AA	2442	A	O5'-P-OP1	7.80	120.06	110.70
1	AA	1314	A	C4-C5-N7	-7.79	106.80	110.70
56	BX	76	A	C4-C5-N7	7.79	114.60	110.70
1	CA	460	A	C8-N9-C4	7.79	108.92	105.80
1	CA	2441	C	O5'-P-OP1	-7.79	98.69	105.70
1	AA	1068	G	C2-N3-C4	-7.79	108.01	111.90
1	AA	1314	A	C8-N9-C4	7.79	108.91	105.80
1	AA	457	G	C8-N9-C4	7.78	109.51	106.40
1	AA	1728	G	N3-C2-N2	7.78	125.35	119.90
1	AA	2902	G	N7-C8-N9	7.78	116.99	113.10
1	AA	2802	C	C2-N1-C1'	-7.78	110.24	118.80
1	AA	2294	G	C8-N9-C4	7.78	109.51	106.40
34	DA	881	G	N7-C8-N9	-7.78	109.21	113.10
1	AA	600	G	C6-N1-C2	-7.78	120.44	125.10
34	DA	266	G	C5-N7-C8	-7.78	100.41	104.30
1	CA	311	A	N1-C6-N6	7.77	123.26	118.60
1	AA	2709	G	C8-N9-C4	7.77	109.51	106.40
1	CA	814	C	O5'-P-OP1	-7.77	98.71	105.70
1	AA	1237	G	N1-C6-O6	-7.77	115.24	119.90
1	CA	2532	G	C5-C6-O6	-7.77	123.94	128.60
1	AA	751	G	N1-C6-O6	-7.76	115.24	119.90
1	AA	2287	C	C5-C6-N1	7.76	124.88	121.00
1	CA	697	C	C6-N1-C2	-7.76	117.19	120.30
1	AA	978	A	O4'-C1'-N9	7.76	114.41	108.20
1	AA	506	A	N7-C8-N9	7.76	117.68	113.80
1	AA	2470	G	N3-C4-C5	-7.76	124.72	128.60
1	CA	2818	G	C8-N9-C4	7.76	109.50	106.40
1	AA	56	C	O5'-P-OP2	-7.75	98.72	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2888	U	N1-C2-O2	7.75	128.22	122.80
1	AA	537	G	N1-C6-O6	7.75	124.55	119.90
1	AA	555	G	N7-C8-N9	7.75	116.97	113.10
1	AA	841	G	C5-C6-O6	7.75	133.25	128.60
1	AA	334	A	C8-N9-C4	7.75	108.90	105.80
1	AA	1966	U	C5-C4-O4	-7.75	121.25	125.90
1	AA	2483	C	C6-N1-C2	-7.75	117.20	120.30
1	AA	2654	G	N3-C2-N2	7.75	125.32	119.90
1	CA	1663	C	N1-C2-O2	7.75	123.55	118.90
1	AA	882	A	N1-C6-N6	-7.75	113.95	118.60
1	AA	2067	C	C2-N3-C4	-7.75	116.03	119.90
1	AA	1290	G	C6-N1-C2	7.74	129.75	125.10
1	CA	2060	A	C5-N7-C8	-7.74	100.03	103.90
1	AA	1007	G	N3-C4-C5	-7.74	124.73	128.60
1	CA	12	U	C2-N1-C1'	7.74	126.99	117.70
1	CA	2447	G	O5'-P-OP2	-7.74	98.73	105.70
1	AA	1755	C	C6-N1-C2	7.74	123.40	120.30
1	AA	2057	G	N1-C6-O6	7.74	124.54	119.90
1	CA	1617	C	C6-N1-C2	-7.74	117.20	120.30
1	AA	2374	G	N9-C4-C5	7.74	108.50	105.40
1	AA	2697	G	C4-C5-N7	-7.74	107.70	110.80
1	AA	147	U	O5'-P-OP1	-7.74	98.74	105.70
1	AA	1745	A	O4'-C1'-N9	7.74	114.39	108.20
1	CA	2286	A	N1-C6-N6	7.74	123.24	118.60
1	CA	2870	C	C6-N1-C2	-7.74	117.21	120.30
1	AA	722	A	O5'-P-OP1	-7.73	98.74	105.70
1	CA	2083	G	C4-C5-N7	-7.73	107.71	110.80
1	CA	2237	G	N1-C6-O6	-7.73	115.26	119.90
1	AA	2408	G	N1-C6-O6	-7.73	115.26	119.90
1	AA	968	U	C5-C4-O4	-7.72	121.27	125.90
1	AA	1787	G	C5-C6-O6	7.72	133.23	128.60
1	AA	2794	A	C8-N9-C4	-7.72	102.71	105.80
1	CA	2284	C	C2-N3-C4	-7.72	116.04	119.90
1	AA	846	G	N7-C8-N9	-7.72	109.24	113.10
1	AA	1278	G	O5'-P-OP1	-7.72	98.75	105.70
1	AA	1848	G	C8-N9-C4	7.72	109.49	106.40
34	BA	299	G	O5'-P-OP2	7.72	119.96	110.70
34	BA	801	U	N3-C4-O4	-7.72	114.00	119.40
34	BA	1426	C	N1-C2-O2	7.72	123.53	118.90
1	AA	1041	C	OP1-P-OP2	7.72	131.18	119.60
1	AA	2250	G	C2-N3-C4	7.72	115.76	111.90
18	AU	91	ASP	CB-CG-OD2	-7.72	111.36	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2045	G	N3-C2-N2	-7.71	114.50	119.90
1	AA	2047	C	C2-N3-C4	-7.71	116.04	119.90
1	AA	2479	C	C6-N1-C2	-7.71	117.21	120.30
1	AA	2882	G	C6-C5-N7	7.71	135.03	130.40
2	AB	82	G	C5-C6-O6	7.71	133.23	128.60
1	AA	1684	A	C8-N9-C4	7.71	108.88	105.80
2	AB	107	G	C6-C5-N7	-7.71	125.77	130.40
1	AA	587	C	C5-C6-N1	7.71	124.85	121.00
1	AA	1687	C	N3-C2-O2	-7.71	116.50	121.90
1	CA	2026	C	N3-C2-O2	7.71	127.30	121.90
1	AA	2530	A	O5'-P-OP2	7.71	119.95	110.70
1	AA	1025	G	N1-C6-O6	-7.70	115.28	119.90
1	AA	2428	C	N1-C2-O2	7.70	123.52	118.90
1	AA	611	U	C4-C5-C6	-7.70	115.08	119.70
1	AA	100	G	C8-N9-C4	7.70	109.48	106.40
1	AA	1001	G	C8-N9-C4	7.70	109.48	106.40
1	AA	1308	A	OP1-P-OP2	-7.70	108.06	119.60
56	DX	76	A	C5-C6-N6	-7.70	117.54	123.70
19	AV	18	LEU	CA-CB-CG	7.69	132.99	115.30
1	AA	1436	U	C5-C4-O4	-7.69	121.29	125.90
1	AA	1251	G	N1-C6-O6	-7.69	115.29	119.90
1	AA	1431	G	N1-C6-O6	7.69	124.51	119.90
1	AA	2834	C	C5-C6-N1	7.69	124.84	121.00
1	AA	1319	U	N3-C4-O4	-7.69	114.02	119.40
1	AA	112	U	C6-N1-C1'	-7.68	110.44	121.20
23	AZ	49	ARG	NE-CZ-NH2	-7.68	116.46	120.30
1	CA	1674	G	C5-C6-O6	-7.68	123.99	128.60
1	AA	2622	C	N3-C4-C5	7.68	124.97	121.90
1	AA	2707	C	C6-N1-C2	7.68	123.37	120.30
1	AA	2786	C	C2-N1-C1'	-7.68	110.35	118.80
1	AA	513	C	C5-C4-N4	-7.68	114.82	120.20
1	AA	2522	C	N3-C4-N4	-7.68	112.62	118.00
1	AA	194	G	C5-C6-N1	-7.68	107.66	111.50
1	AA	676	G	C5-C6-O6	-7.68	124.00	128.60
1	AA	62	U	C5-C6-N1	-7.67	118.86	122.70
1	AA	103	C	O5'-P-OP1	-7.67	98.79	105.70
34	BA	1203	C	C6-N1-C2	-7.67	117.23	120.30
1	AA	1739	U	C5-C6-N1	-7.67	118.86	122.70
1	AA	2612	A	O5'-P-OP2	-7.67	98.80	105.70
1	AA	637	U	N3-C2-O2	-7.67	116.83	122.20
1	AA	2255	U	C6-N1-C2	-7.67	116.40	121.00
34	DA	895	G	N1-C6-O6	7.66	124.50	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1318	A	O5'-P-OP2	-7.66	98.80	105.70
1	AA	508	A	N9-C4-C5	-7.66	102.74	105.80
1	AA	873	U	C5-C6-N1	-7.66	118.87	122.70
1	CA	2503	A	O5'-P-OP1	-7.66	98.81	105.70
1	AA	1717	C	C4-C5-C6	7.66	121.23	117.40
1	AA	2286	A	C5-N7-C8	7.66	107.73	103.90
1	CA	933	A	C8-N9-C4	-7.66	102.74	105.80
34	BA	1512	U	C5-C6-N1	-7.66	118.87	122.70
1	CA	2590	A	O5'-P-OP1	-7.66	98.81	105.70
1	AA	555	G	C5-C6-O6	7.65	133.19	128.60
1	AA	2716	C	OP2-P-O3'	-7.65	88.37	105.20
1	AA	146	G	C8-N9-C4	7.65	109.46	106.40
1	AA	1069	U	N3-C2-O2	-7.65	116.84	122.20
1	CA	1674	G	C4-C5-N7	7.65	113.86	110.80
1	AA	1020	C	C6-N1-C1'	7.65	129.98	120.80
1	AA	490	U	C5-C4-O4	-7.64	121.31	125.90
1	AA	1274	G	C5-C6-N1	-7.64	107.68	111.50
1	AA	2000	A	N1-C2-N3	-7.64	125.48	129.30
1	CA	2593	U	N3-C4-O4	-7.64	114.05	119.40
1	AA	208	G	C5-C6-O6	7.64	133.19	128.60
34	BA	892	A	N1-C6-N6	7.64	123.19	118.60
1	AA	413	G	C6-C5-N7	-7.64	125.81	130.40
1	AA	2440	G	O5'-P-OP2	-7.64	98.82	105.70
38	BE	123	LEU	CA-CB-CG	-7.64	97.73	115.30
1	AA	1851	U	C2-N3-C4	-7.64	122.42	127.00
1	AA	2585	C	N3-C4-C5	7.64	124.96	121.90
1	CA	2326	C	C6-N1-C2	-7.64	117.25	120.30
1	AA	2550	C	C6-N1-C2	7.64	123.35	120.30
1	CA	749	C	C6-N1-C2	7.64	123.36	120.30
1	AA	340	C	N3-C4-N4	-7.63	112.66	118.00
1	AA	2016	C	C4-C5-C6	7.63	121.22	117.40
56	BX	76	A	N3-C4-C5	7.63	132.14	126.80
1	CA	337	C	C6-N1-C2	7.63	123.35	120.30
1	CA	141	A	N7-C8-N9	7.63	117.61	113.80
1	AA	792	G	N3-C2-N2	-7.63	114.56	119.90
1	AA	2777	A	N9-C4-C5	-7.62	102.75	105.80
1	AA	353	G	C8-N9-C4	7.62	109.45	106.40
1	AA	1045	U	O5'-P-OP2	-7.62	98.84	105.70
1	CA	264	C	N1-C2-O2	7.62	123.47	118.90
1	AA	332	G	O5'-P-OP2	-7.62	98.84	105.70
1	AA	2453	C	C2-N3-C4	-7.62	116.09	119.90
34	DA	817	C	C6-N1-C2	7.62	123.35	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1069	U	C2-N3-C4	-7.61	122.43	127.00
1	AA	1866	G	C8-N9-C4	7.61	109.44	106.40
1	AA	740	C	C5-C4-N4	7.61	125.53	120.20
1	CA	1682	G	O5'-P-OP2	-7.61	98.85	105.70
1	AA	2616	U	O5'-P-OP2	-7.61	98.85	105.70
1	AA	561	A	N7-C8-N9	-7.61	110.00	113.80
1	AA	740	C	N3-C4-N4	-7.61	112.67	118.00
1	AA	2794	A	N9-C4-C5	7.61	108.84	105.80
1	CA	1795	C	C5-C6-N1	-7.61	117.20	121.00
1	CA	577	G	C8-N9-C4	7.61	109.44	106.40
1	CA	2617	C	C6-N1-C2	7.61	123.34	120.30
2	AB	107	G	C4-C5-N7	7.60	113.84	110.80
1	AA	1054	C	C6-N1-C2	7.60	123.34	120.30
1	AA	505	A	O4'-C1'-N9	7.60	114.28	108.20
1	AA	1800	G	C8-N9-C4	7.60	109.44	106.40
1	CA	2588	G	N3-C4-N9	-7.60	121.44	126.00
1	AA	591	U	N3-C4-C5	7.60	119.16	114.60
1	AA	1002	A	N1-C2-N3	7.60	133.10	129.30
1	CA	1229	G	C5-C6-O6	7.60	133.16	128.60
1	AA	2418	U	C5-C4-O4	-7.60	121.34	125.90
1	AA	562	C	N3-C2-O2	-7.59	116.58	121.90
1	AA	676	G	N1-C6-O6	7.59	124.46	119.90
1	AA	356	A	N1-C2-N3	-7.59	125.50	129.30
1	AA	2054	G	N7-C8-N9	-7.59	109.30	113.10
1	AA	2510	C	N3-C4-C5	-7.59	118.86	121.90
1	AA	240	A	N1-C6-N6	-7.59	114.05	118.60
1	CA	2418	A	C8-N9-C4	-7.59	102.76	105.80
1	AA	1921	G	C4-C5-N7	7.59	113.84	110.80
1	AA	2452	C	OP1-P-OP2	7.59	130.98	119.60
1	CA	2444	G	C5-N7-C8	7.59	108.09	104.30
1	AA	407	U	N3-C4-O4	-7.59	114.09	119.40
1	AA	1321	A	N9-C4-C5	-7.59	102.77	105.80
1	AA	1330	A	C5-C6-N6	7.59	129.77	123.70
1	AA	2226	C	O5'-P-OP1	-7.59	98.87	105.70
1	AA	404	C	C6-N1-C2	7.58	123.33	120.30
1	AA	1442	U	N3-C2-O2	-7.58	116.89	122.20
34	BA	551	U	C5-C6-N1	-7.58	118.91	122.70
1	AA	743	G	N1-C6-O6	-7.58	115.35	119.90
1	AA	2065	C	C5-C6-N1	-7.58	117.21	121.00
34	BA	1030(B)	C	N1-C2-O2	7.58	123.45	118.90
1	CA	2050	C	C5-C4-N4	-7.58	114.89	120.20
1	AA	2238	C	C5-C6-N1	-7.58	117.21	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	264	C	C5-C6-N1	-7.58	117.21	121.00
1	AA	497	A	C2-N3-C4	7.58	114.39	110.60
1	AA	1717	C	N3-C4-C5	-7.58	118.87	121.90
1	CA	1644	C	N1-C2-O2	7.58	123.45	118.90
1	CA	668	G	C2-N3-C4	-7.57	108.11	111.90
1	AA	2030	C	N3-C4-C5	7.57	124.93	121.90
1	AA	1330	A	O5'-P-OP2	-7.56	98.89	105.70
1	AA	918	U	C6-N1-C2	7.56	125.54	121.00
1	AA	1685	C	C6-N1-C2	-7.56	117.28	120.30
1	AA	518	G	C2-N3-C4	7.56	115.68	111.90
1	AA	1711	A	C6-N1-C2	7.56	123.14	118.60
1	AA	2453	C	N3-C4-C5	7.56	124.92	121.90
1	CA	792	G	C8-N9-C4	7.56	109.42	106.40
34	DA	33	A	C8-N9-C4	7.56	108.82	105.80
1	AA	1747	A	O5'-P-OP1	-7.55	98.90	105.70
1	AA	1278	G	C8-N9-C4	-7.55	103.38	106.40
34	BA	562	C	N1-C2-O2	7.55	123.43	118.90
1	CA	1789	A	N1-C2-N3	7.55	133.08	129.30
1	AA	813	C	C5-C6-N1	-7.55	117.22	121.00
1	AA	1229	G	C8-N9-C4	-7.55	103.38	106.40
1	AA	2383	G	C8-N9-C4	7.55	109.42	106.40
1	CA	792	G	N9-C4-C5	-7.55	102.38	105.40
1	AA	546	G	O5'-P-OP1	-7.55	98.91	105.70
1	AA	2768	C	N1-C2-O2	7.55	123.43	118.90
1	AA	2857	U	N3-C2-O2	7.55	127.48	122.20
1	AA	1864	U	C2-N3-C4	-7.54	122.47	127.00
1	CA	2573	C	N3-C4-N4	-7.54	112.72	118.00
1	CA	801	G	O5'-P-OP2	-7.54	98.91	105.70
1	CA	1500	G	N1-C6-O6	7.54	124.42	119.90
1	AA	2527	C	C2-N3-C4	-7.54	116.13	119.90
34	BA	823	G	C8-N9-C4	7.54	109.42	106.40
1	AA	1076	G	N1-C6-O6	7.54	124.42	119.90
1	AA	2035	A	C5-C6-N6	-7.54	117.67	123.70
1	AA	1011	G	C5-N7-C8	7.53	108.07	104.30
1	AA	1067	A	C6-N1-C2	7.53	123.12	118.60
2	AB	97	G	C8-N9-C4	-7.53	103.39	106.40
1	CA	440	G	N7-C8-N9	-7.53	109.33	113.10
1	CA	493	G	C5-C6-O6	7.53	133.12	128.60
1	CA	790	C	C2-N1-C1'	7.53	127.09	118.80
1	CA	1268	A	C8-N9-C4	-7.53	102.79	105.80
1	AA	2374	G	N1-C6-O6	-7.53	115.38	119.90
1	CA	1998	G	C8-N9-C4	7.53	109.41	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1320	A	C5-C6-N6	-7.53	117.68	123.70
1	AA	1458	A	O5'-P-OP1	-7.53	98.92	105.70
1	AA	1745	A	C5-N7-C8	-7.53	100.14	103.90
1	AA	1614	A	OP1-P-O3'	7.52	121.75	105.20
1	AA	438	G	N3-C4-C5	-7.52	124.84	128.60
1	AA	1035	G	N9-C4-C5	7.52	108.41	105.40
1	AA	2009	G	N1-C2-N2	7.52	122.97	116.20
1	AA	2367	C	N3-C4-C5	7.52	124.91	121.90
1	CA	277	C	C2-N1-C1'	7.52	127.08	118.80
1	CA	1653	G	P-O3'-C3'	7.52	128.73	119.70
1	CA	2679	A	O5'-P-OP2	-7.52	98.93	105.70
1	AA	793	A	N1-C2-N3	-7.52	125.54	129.30
1	AA	2036	A	O5'-P-OP1	-7.52	98.93	105.70
1	AA	2257	U	C5-C6-N1	-7.52	118.94	122.70
1	CA	380	U	C5-C6-N1	7.52	126.46	122.70
1	AA	1543	U	N3-C4-O4	-7.52	114.14	119.40
1	CA	2512	C	C6-N1-C2	7.52	123.31	120.30
1	CA	2390	U	O5'-P-OP2	7.52	119.72	110.70
1	AA	1724	A	O5'-P-OP2	-7.51	98.94	105.70
13	AP	41	ARG	NE-CZ-NH1	-7.51	116.55	120.30
1	AA	2387	G	C5-C6-N1	7.51	115.25	111.50
1	AA	2487	C	C6-N1-C2	-7.51	117.30	120.30
1	AA	2300	A	C8-N9-C4	7.51	108.80	105.80
34	BA	1465	C	C6-N1-C2	-7.51	117.30	120.30
1	AA	1624	C	O5'-P-OP2	-7.50	98.94	105.70
1	AA	1049	G	C5-C6-N1	7.50	115.25	111.50
1	CA	115	C	C6-N1-C2	7.50	123.30	120.30
1	AA	529	U	C5-C4-O4	7.50	130.40	125.90
1	CA	2023	G	O5'-P-OP1	-7.50	98.95	105.70
1	AA	514	G	C8-N9-C4	7.50	109.40	106.40
1	AA	2081	A	OP1-P-OP2	-7.50	108.35	119.60
1	AA	2738	A	O5'-P-OP1	-7.50	98.95	105.70
1	AA	358	C	C2-N1-C1'	-7.49	110.56	118.80
1	AA	1338	U	N3-C2-O2	-7.49	116.95	122.20
1	AA	547	G	N1-C6-O6	-7.49	115.41	119.90
2	AB	97	G	N1-C2-N2	7.49	122.94	116.20
1	AA	1411	A	N9-C4-C5	-7.49	102.80	105.80
1	AA	1443	U	O5'-P-OP2	-7.49	98.96	105.70
1	AA	404	C	C5-C6-N1	-7.49	117.26	121.00
2	AB	101	G	N7-C8-N9	-7.49	109.36	113.10
1	CA	2843	G	N3-C4-C5	-7.49	124.86	128.60
1	AA	2609	G	C6-N1-C2	-7.48	120.61	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1652	G	N7-C8-N9	-7.48	109.36	113.10
1	AA	2902	G	C8-N9-C4	-7.48	103.41	106.40
34	DA	7	G	N3-C4-N9	-7.48	121.51	126.00
1	AA	2282	G	N3-C4-C5	7.48	132.34	128.60
1	AA	1249	A	N3-C4-C5	7.47	132.03	126.80
1	AA	2693	C	C5-C4-N4	-7.47	114.97	120.20
1	AA	1233	U	N3-C4-O4	-7.47	114.17	119.40
1	AA	121	G	C8-N9-C4	7.47	109.39	106.40
1	AA	1811	A	C8-N9-C4	-7.47	102.81	105.80
1	AA	421	A	C4-C5-C6	-7.47	113.27	117.00
1	AA	810	G	C5-C6-O6	7.47	133.08	128.60
1	AA	1923	A	N1-C6-N6	-7.47	114.12	118.60
1	AA	2057	G	C5-C6-O6	-7.47	124.12	128.60
1	AA	2791	A	C5-C6-N6	7.46	129.67	123.70
34	BA	1525	G	C5-C6-O6	7.46	133.08	128.60
1	CA	1670	C	N3-C4-C5	-7.46	118.91	121.90
1	AA	587	C	C6-N1-C2	-7.46	117.31	120.30
1	AA	861	C	C2-N3-C4	-7.46	116.17	119.90
1	AA	1694	G	N1-C6-O6	7.46	124.38	119.90
1	AA	1703	C	C2-N3-C4	-7.46	116.17	119.90
1	AA	2025	G	C4-C5-N7	-7.46	107.81	110.80
1	AA	2476	C	C5-C6-N1	-7.46	117.27	121.00
1	CA	1698	A	C8-N9-C4	-7.46	102.81	105.80
34	DA	817	C	N3-C4-C5	7.46	124.88	121.90
1	AA	653	G	O5'-P-OP2	-7.46	98.99	105.70
1	AA	1837	C	N1-C2-O2	-7.46	114.43	118.90
1	AA	517	A	OP1-P-OP2	-7.45	108.42	119.60
1	AA	963	A	C5-N7-C8	-7.45	100.17	103.90
1	AA	963	A	N9-C4-C5	-7.45	102.82	105.80
1	AA	1864	U	N1-C2-N3	7.45	119.37	114.90
56	BX	15	G	P-O3'-C3'	7.45	128.64	119.70
1	AA	499	G	N1-C2-N2	-7.45	109.50	116.20
1	AA	876	A	O5'-P-OP1	-7.45	99.00	105.70
1	AA	506	A	O5'-P-OP2	-7.45	99.00	105.70
1	AA	2655	G	C8-N9-C4	7.45	109.38	106.40
34	DA	290	C	N1-C2-O2	7.45	123.37	118.90
1	AA	1544	C	O5'-P-OP1	-7.45	99.00	105.70
1	AA	2476	C	C6-N1-C2	7.45	123.28	120.30
1	AA	1858	C	C5-C6-N1	-7.44	117.28	121.00
1	CA	915	C	C2-N1-C1'	7.44	126.98	118.80
1	AA	862	C	N1-C2-O2	7.44	123.36	118.90
1	CA	265	A	O4'-C1'-N9	7.44	114.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	1502	A	O5'-P-OP2	-7.44	99.00	105.70
1	CA	2256	G	O5'-P-OP2	-7.44	99.01	105.70
1	AA	2370	G	N3-C2-N2	-7.44	114.69	119.90
1	CA	766	C	C5-C6-N1	-7.44	117.28	121.00
1	AA	1444	C	C5-C6-N1	-7.43	117.28	121.00
1	AA	2571	C	C2-N3-C4	-7.43	116.18	119.90
1	AA	2632	C	OP1-P-OP2	7.43	130.75	119.60
1	CA	1775	U	C2-N3-C4	-7.43	122.54	127.00
1	AA	540	A	C6-N1-C2	-7.43	114.14	118.60
1	CA	1350	C	N1-C2-O2	-7.43	114.44	118.90
1	AA	2633	A	N7-C8-N9	-7.43	110.08	113.80
1	AA	364	A	O5'-P-OP2	-7.43	99.02	105.70
1	AA	1921	G	C5-C6-N1	7.43	115.21	111.50
1	AA	2053	A	C8-N9-C4	-7.43	102.83	105.80
1	AA	457	G	N9-C4-C5	-7.42	102.43	105.40
1	AA	587	C	O4'-C1'-N1	7.42	114.14	108.20
1	AA	2706	G	N1-C6-O6	-7.42	115.44	119.90
1	CA	1210	A	O5'-P-OP2	-7.42	99.02	105.70
1	AA	1265	A	N1-C6-N6	7.42	123.05	118.60
1	AA	1314	A	C6-C5-N7	7.42	137.50	132.30
1	AA	2261	U	C5-C6-N1	-7.42	118.99	122.70
1	AA	848	G	C5-C6-N1	-7.42	107.79	111.50
1	AA	1075	A	C8-N9-C4	7.42	108.77	105.80
1	AA	2720	G	C8-N9-C4	7.42	109.37	106.40
1	AA	1324	A	C4-C5-N7	-7.42	106.99	110.70
1	AA	1098	C	C6-N1-C2	-7.42	117.33	120.30
1	AA	1970	G	OP1-P-O3'	7.41	121.51	105.20
1	CA	1352	U	O5'-P-OP1	7.41	119.60	110.70
1	AA	2882	G	N9-C4-C5	7.41	108.36	105.40
1	AA	115	G	C6-N1-C2	-7.41	120.65	125.10
1	AA	595	A	N1-C6-N6	-7.41	114.15	118.60
1	AA	1157	A	O4'-C1'-N9	7.41	114.13	108.20
1	AA	587	C	C6-N1-C1'	7.41	129.69	120.80
1	AA	1900	G	N3-C4-C5	-7.41	124.90	128.60
1	AA	2048	C	N1-C2-O2	-7.41	114.45	118.90
1	AA	2101	U	C2-N3-C4	-7.41	122.56	127.00
1	AA	2461	U	N1-C2-O2	7.41	127.99	122.80
1	CA	1963	U	C2-N1-C1'	7.41	126.59	117.70
1	AA	983	G	N1-C6-O6	-7.40	115.46	119.90
1	AA	1798	C	O5'-P-OP1	-7.40	99.04	105.70
1	AA	2063	U	OP2-P-O3'	7.40	121.48	105.20
1	CA	208	C	C5-C4-N4	-7.40	115.02	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1715	A	O5'-P-OP2	-7.40	99.04	105.70
1	AA	2577	A	N1-C6-N6	7.40	123.04	118.60
1	AA	796	C	C2-N3-C4	-7.39	116.20	119.90
1	AA	887	C	C4-C5-C6	7.39	121.10	117.40
1	AA	2297	C	N1-C2-O2	-7.39	114.46	118.90
1	AA	1369	U	N3-C4-C5	7.39	119.03	114.60
1	CA	1295	C	C6-N1-C2	-7.39	117.34	120.30
1	CA	1370	C	N3-C4-C5	-7.39	118.94	121.90
1	AA	2402	U	N3-C2-O2	-7.39	117.03	122.20
1	AA	2459	G	N3-C2-N2	7.39	125.07	119.90
1	AA	2486	C	C2-N1-C1'	-7.39	110.67	118.80
1	AA	2515	A	C6-N1-C2	7.39	123.03	118.60
1	AA	650	G	OP1-P-OP2	7.39	130.68	119.60
1	CA	1904	G	N1-C6-O6	-7.39	115.47	119.90
1	AA	984	G	C5-C6-O6	7.38	133.03	128.60
1	AA	885	C	N1-C2-O2	7.38	123.33	118.90
1	AA	1007	G	C2-N3-C4	7.38	115.59	111.90
1	AA	192	C	N3-C4-C5	7.38	124.85	121.90
1	CA	1656	C	O5'-P-OP2	-7.38	99.06	105.70
1	AA	2516	U	C5-C6-N1	-7.38	119.01	122.70
1	AA	1855	G	C5-C6-O6	7.37	133.02	128.60
1	AA	2415	C	N3-C4-C5	-7.37	118.95	121.90
1	AA	2495	C	N3-C4-C5	-7.37	118.95	121.90
1	AA	999	G	N1-C6-O6	-7.37	115.48	119.90
1	AA	2372	A	O5'-P-OP2	-7.37	99.07	105.70
1	AA	2383	G	C4-C5-N7	7.37	113.75	110.80
1	AA	2754	A	C5-C6-N6	7.37	129.60	123.70
1	AA	1035	G	C5-C6-O6	7.37	133.02	128.60
34	DA	509	A	C8-N9-C4	-7.37	102.85	105.80
1	AA	1448	C	N3-C4-N4	7.37	123.16	118.00
1	AA	731	G	C5-N7-C8	-7.36	100.62	104.30
1	AA	838	C	C5-C4-N4	7.36	125.35	120.20
1	AA	169	G	C5-C6-O6	-7.36	124.18	128.60
1	AA	537	G	OP2-P-O3'	7.36	121.39	105.20
1	AA	339	G	O5'-P-OP2	-7.36	99.08	105.70
1	AA	2517	G	N3-C4-N9	-7.36	121.58	126.00
1	AA	2743	C	C2-N1-C1'	-7.36	110.71	118.80
1	CA	1633	G	N1-C6-O6	-7.36	115.49	119.90
1	AA	1809	U	N1-C2-O2	-7.35	117.65	122.80
1	AA	1982	A	C2-N3-C4	-7.35	106.92	110.60
1	AA	2089	G	N3-C4-C5	-7.35	124.92	128.60
1	AA	2028	C	C6-N1-C2	-7.35	117.36	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	552	C	C2-N3-C4	-7.35	116.23	119.90
34	BA	1107	C	C6-N1-C2	-7.35	117.36	120.30
1	AA	593	G	C5-C6-N1	7.34	115.17	111.50
1	CA	659	C	C6-N1-C2	7.34	123.24	120.30
1	CA	803	U	C2-N1-C1'	7.34	126.51	117.70
1	AA	418	G	C5-C6-O6	-7.34	124.19	128.60
1	AA	1068	G	N1-C6-O6	-7.34	115.50	119.90
1	AA	2437	A	C5-N7-C8	-7.34	100.23	103.90
1	AA	2620	G	C4-N9-C1'	-7.34	116.95	126.50
1	AA	1231	G	N1-C6-O6	-7.34	115.50	119.90
2	AB	9	G	N1-C6-O6	-7.34	115.50	119.90
1	AA	322	G	C5-C6-O6	-7.34	124.20	128.60
2	AB	111	G	C4-C5-N7	-7.34	107.86	110.80
1	AA	543	G	O5'-P-OP2	-7.33	99.10	105.70
1	AA	1345	G	OP1-P-OP2	-7.33	108.60	119.60
1	AA	2026	G	C5-N7-C8	7.33	107.97	104.30
34	DA	1502	A	C2-N3-C4	-7.33	106.93	110.60
1	AA	546	G	N3-C2-N2	7.33	125.03	119.90
1	AA	792	G	C8-N9-C4	7.33	109.33	106.40
1	AA	1655	A	OP2-P-O3'	7.33	121.33	105.20
1	AA	1664	A	C2-N3-C4	7.33	114.27	110.60
1	CA	79	G	N3-C4-C5	7.33	132.27	128.60
1	AA	2528	G	C8-N9-C4	-7.33	103.47	106.40
1	AA	608	G	O5'-P-OP2	7.33	119.49	110.70
1	AA	898	U	C6-N1-C2	7.33	125.40	121.00
1	AA	2264	G	N9-C4-C5	7.33	108.33	105.40
34	DA	268	C	N1-C2-O2	7.33	123.30	118.90
34	BA	1517	G	N3-C4-C5	7.33	132.26	128.60
1	CA	678	C	C6-N1-C2	-7.33	117.37	120.30
1	AA	1409	C	C6-N1-C2	-7.33	117.37	120.30
1	AA	2028	C	C2-N1-C1'	7.33	126.86	118.80
1	AA	1076	G	C8-N9-C4	7.32	109.33	106.40
1	AA	1383	G	C5-C6-N1	7.32	115.16	111.50
1	AA	2366	G	N3-C2-N2	-7.32	114.77	119.90
1	AA	1687	C	N1-C2-O2	7.32	123.29	118.90
34	BA	1513	A	N1-C6-N6	7.32	122.99	118.60
1	AA	1056	A	C8-N9-C4	7.32	108.73	105.80
1	AA	2596	U	C2-N3-C4	-7.32	122.61	127.00
1	AA	609	A	C2-N3-C4	7.32	114.26	110.60
1	AA	2454	C	C5-C6-N1	-7.32	117.34	121.00
1	AA	1237	G	N7-C8-N9	-7.32	109.44	113.10
1	CA	528	A	C5-C6-N1	-7.31	114.04	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2089	G	C6-N1-C2	-7.31	120.71	125.10
1	AA	64	C	C5-C6-N1	7.31	124.66	121.00
1	AA	2290	A	C8-N9-C4	-7.31	102.88	105.80
1	AA	2716	C	C4-C5-C6	7.31	121.06	117.40
1	AA	1742	G	O5'-P-OP1	-7.30	99.13	105.70
1	CA	1773	A	N9-C4-C5	-7.30	102.88	105.80
1	AA	2248	C	C5-C6-N1	-7.30	117.35	121.00
1	CA	70	G	C8-N9-C4	-7.30	103.48	106.40
34	DA	720	C	N1-C2-O2	7.30	123.28	118.90
1	AA	2486	C	C5-C6-N1	-7.30	117.35	121.00
1	AA	2734	A	C5-N7-C8	7.30	107.55	103.90
1	AA	335	A	N1-C6-N6	-7.30	114.22	118.60
1	AA	471	C	N1-C2-O2	-7.30	114.52	118.90
1	AA	2026	G	N7-C8-N9	-7.30	109.45	113.10
1	AA	881	C	N1-C2-N3	7.29	124.31	119.20
1	AA	1411	A	N1-C6-N6	7.29	122.98	118.60
1	AA	1885	A	C2-N3-C4	7.29	114.25	110.60
1	AA	2222	C	O5'-P-OP2	-7.29	99.14	105.70
34	DA	841	U	C5-C6-N1	7.29	126.35	122.70
1	AA	1721	G	N3-C4-N9	7.29	130.38	126.00
1	AA	2361	G	C8-N9-C4	7.29	109.32	106.40
1	AA	2092	G	N1-C2-N2	-7.29	109.64	116.20
34	DA	880	C	C2-N1-C1'	-7.29	110.78	118.80
1	AA	2044	U	C4-C5-C6	7.29	124.07	119.70
1	AA	2434	A	C5-N7-C8	-7.29	100.26	103.90
1	AA	2564	U	C6-N1-C2	7.28	125.37	121.00
1	AA	2830	A	O5'-P-OP2	-7.28	99.14	105.70
1	AA	2857	U	C6-N1-C2	7.28	125.37	121.00
1	CA	51	G	C8-N9-C4	-7.28	103.49	106.40
1	AA	1374	G	N1-C2-N2	-7.28	109.65	116.20
1	AA	2521	G	C5-C6-N1	7.28	115.14	111.50
1	CA	2045	C	N3-C4-C5	-7.28	118.99	121.90
34	BA	900	A	C4-C5-N7	7.28	114.34	110.70
1	AA	1203	G	N1-C2-N2	-7.28	109.65	116.20
2	AB	73	A	C5-C6-N6	7.28	129.52	123.70
1	AA	56	C	C2-N1-C1'	7.28	126.80	118.80
1	CA	463	G	N1-C6-O6	-7.28	115.53	119.90
1	AA	2437	A	C4-C5-N7	7.27	114.34	110.70
1	CA	1266	G	N1-C2-N3	-7.27	119.54	123.90
1	AA	492	A	C5-C6-N1	7.27	121.34	117.70
1	AA	615	G	OP2-P-O3'	7.27	121.20	105.20
1	AA	2531	U	C6-N1-C2	7.27	125.36	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	650	G	O5'-P-OP1	-7.27	99.16	105.70
1	AA	2431	U	C6-N1-C2	7.27	125.36	121.00
1	CA	2055	C	N1-C2-O2	-7.27	114.54	118.90
1	AA	2504	U	O5'-P-OP1	-7.27	99.16	105.70
1	AA	875	U	OP2-P-O3'	7.26	121.18	105.20
1	AA	1348	A	OP1-P-OP2	7.26	130.49	119.60
1	AA	2518	U	OP2-P-O3'	7.26	121.18	105.20
1	AA	2403	G	C5-C6-O6	7.26	132.96	128.60
1	AA	855	G	N7-C8-N9	-7.26	109.47	113.10
1	CA	2372	G	N3-C4-C5	-7.26	124.97	128.60
1	AA	1718	U	N1-C2-N3	7.26	119.25	114.90
1	AA	61	C	N1-C2-O2	-7.26	114.55	118.90
1	AA	892	G	O4'-C1'-N9	7.26	114.00	108.20
1	AA	2383	G	C5-C6-N1	7.26	115.13	111.50
1	AA	2685	G	C6-C5-N7	-7.26	126.05	130.40
1	AA	2764	G	O5'-P-OP2	-7.26	99.17	105.70
1	CA	2499	C	N1-C2-O2	-7.26	114.55	118.90
1	AA	407	U	N3-C2-O2	-7.25	117.12	122.20
1	AA	918	U	C5-C4-O4	-7.25	121.55	125.90
1	AA	1783	C	N3-C4-C5	7.25	124.80	121.90
1	AA	2434	A	N7-C8-N9	7.25	117.43	113.80
1	CA	1837	C	O5'-P-OP1	-7.25	99.17	105.70
1	AA	1342	G	C5-C6-N1	7.25	115.12	111.50
1	AA	2049	G	N3-C4-C5	-7.25	124.97	128.60
1	AA	2534	U	N3-C4-C5	7.25	118.95	114.60
34	BA	807	A	O5'-P-OP1	-7.25	99.17	105.70
34	DA	363	A	C8-N9-C4	7.25	108.70	105.80
34	DA	275	G	N1-C6-O6	7.25	124.25	119.90
1	AA	906	G	C8-N9-C1'	7.25	136.42	127.00
1	AA	1972	G	C2-N3-C4	-7.25	108.28	111.90
1	CA	2607	G	N1-C6-O6	-7.25	115.55	119.90
1	AA	603	C	C5-C4-N4	7.24	125.27	120.20
1	AA	1020	C	C2-N1-C1'	-7.24	110.83	118.80
1	AA	354	A	N1-C2-N3	7.24	132.92	129.30
1	AA	963	A	C6-N1-C2	7.24	122.94	118.60
34	BA	1502	A	C5-N7-C8	-7.24	100.28	103.90
1	AA	789	G	C5-C6-N1	-7.24	107.88	111.50
1	AA	918	U	N3-C2-O2	7.24	127.27	122.20
1	AA	2500	A	N1-C2-N3	-7.24	125.68	129.30
1	CA	716	A	N9-C4-C5	7.24	108.70	105.80
1	AA	1411	A	C5-C6-N6	-7.24	117.91	123.70
1	CA	2025	C	O5'-P-OP2	-7.24	99.19	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	88	G	N7-C8-N9	7.23	116.72	113.10
1	AA	1718	U	C5-C4-O4	-7.23	121.56	125.90
1	AA	2475	C	N3-C4-C5	7.23	124.79	121.90
1	AA	1813	C	N3-C4-C5	7.23	124.79	121.90
34	BA	267	C	O5'-P-OP1	-7.23	99.19	105.70
1	AA	1067	A	C8-N9-C4	-7.23	102.91	105.80
1	AA	2856	G	C4-C5-N7	-7.23	107.91	110.80
1	CA	2023	G	O5'-P-OP2	7.23	119.37	110.70
1	CA	2721	A	C2-N3-C4	-7.23	106.99	110.60
1	AA	2762	A	N7-C8-N9	-7.23	110.19	113.80
34	BA	1395	C	C5-C6-N1	7.23	124.61	121.00
1	AA	406	G	C4-C5-N7	-7.22	107.91	110.80
1	AA	1722	C	C4-C5-C6	7.22	121.01	117.40
1	AA	2713	C	C4-C5-C6	7.22	121.01	117.40
1	CA	1350	C	C5-C6-N1	-7.22	117.39	121.00
1	AA	51	A	C8-N9-C4	-7.22	102.91	105.80
1	AA	400	U	C2-N3-C4	-7.22	122.67	127.00
1	AA	2019	G	C5-N7-C8	7.22	107.91	104.30
1	CA	2624	G	N1-C6-O6	-7.22	115.57	119.90
1	AA	196	A	N1-C6-N6	7.22	122.93	118.60
1	AA	876	A	C8-N9-C4	-7.22	102.91	105.80
1	AA	1655	A	N9-C4-C5	-7.22	102.91	105.80
1	AA	2882	G	C5-C6-O6	7.22	132.93	128.60
1	AA	735	U	C2-N1-C1'	-7.21	109.04	117.70
1	AA	2712	C	N3-C4-C5	7.21	124.79	121.90
1	AA	2798	C	N3-C4-C5	-7.21	119.01	121.90
1	AA	1976	G	N1-C6-O6	7.21	124.23	119.90
1	CA	1674	G	C6-C5-N7	-7.21	126.07	130.40
1	AA	990	A	C4-N9-C1'	7.21	139.27	126.30
1	AA	2014	G	N3-C2-N2	7.21	124.95	119.90
1	AA	120	G	C4-N9-C1'	7.21	135.87	126.50
1	AA	1651	C	C4-C5-C6	7.21	121.00	117.40
1	AA	1793	A	C8-N9-C4	-7.20	102.92	105.80
1	AA	2049	G	C5-N7-C8	7.20	107.90	104.30
1	AA	1273	G	C6-C5-N7	7.20	134.72	130.40
1	AA	1869	C	C6-N1-C2	7.20	123.18	120.30
1	CA	277	C	N3-C2-O2	-7.20	116.86	121.90
1	CA	1558	A	N1-C2-N3	7.20	132.90	129.30
1	AA	405	C	C5-C4-N4	-7.20	115.16	120.20
1	AA	846	G	C4-C5-N7	-7.20	107.92	110.80
1	AA	2697	G	C5-C6-N1	7.20	115.10	111.50
1	CA	2689	U	P-O3'-C3'	7.20	128.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	407	U	N1-C2-N3	7.20	119.22	114.90
1	AA	605	G	N1-C2-N2	-7.20	109.72	116.20
1	AA	2513	C	C2-N3-C4	-7.20	116.30	119.90
1	AA	434	G	N3-C4-C5	-7.20	125.00	128.60
1	AA	236	G	C5-C6-O6	-7.20	124.28	128.60
1	CA	2286	A	C5-N7-C8	-7.20	100.30	103.90
1	AA	2302	G	N3-C4-N9	-7.19	121.68	126.00
1	AA	2425	G	N1-C6-O6	7.19	124.22	119.90
1	AA	1813	C	N3-C2-O2	-7.19	116.86	121.90
1	AA	952	G	N9-C4-C5	7.19	108.28	105.40
1	AA	2002	G	C5-C6-N1	-7.19	107.91	111.50
1	AA	2053	A	N7-C8-N9	7.19	117.39	113.80
1	AA	2723	A	O5'-P-OP1	-7.19	99.23	105.70
15	AR	22	ARG	NE-CZ-NH2	-7.19	116.70	120.30
1	CA	527	C	C5-C4-N4	7.19	125.23	120.20
1	AA	50	G	N7-C8-N9	7.19	116.69	113.10
1	AA	731	G	C8-N9-C4	-7.19	103.52	106.40
1	AA	1251	G	OP1-P-O3'	7.19	121.02	105.20
1	AA	2551	C	C2-N3-C4	-7.19	116.31	119.90
1	AA	2581	G	OP1-P-OP2	7.19	130.38	119.60
1	AA	2652	G	C5-C6-O6	7.19	132.91	128.60
1	AA	600	G	C5-C6-O6	-7.18	124.29	128.60
1	AA	1026	A	N1-C2-N3	-7.18	125.71	129.30
1	CA	786	C	C6-N1-C2	7.18	123.17	120.30
1	CA	1785	A	C8-N9-C4	-7.18	102.93	105.80
1	AA	122	G	C5-C6-O6	-7.18	124.29	128.60
1	AA	1728	G	C5-N7-C8	-7.18	100.71	104.30
1	AA	1330	A	N1-C6-N6	-7.18	114.29	118.60
1	AA	28	A	N1-C2-N3	7.17	132.89	129.30
1	AA	309	C	C5-C6-N1	-7.17	117.41	121.00
1	AA	315	C	C6-N1-C2	7.17	123.17	120.30
1	AA	409	G	N3-C2-N2	7.17	124.92	119.90
1	AA	1204	C	N1-C2-O2	-7.17	114.60	118.90
1	AA	1854	G	N1-C6-O6	-7.17	115.60	119.90
34	BA	367	U	N1-C2-O2	-7.17	117.78	122.80
1	AA	823	G	C5-C6-O6	7.17	132.90	128.60
1	AA	2331	G	O4'-C1'-N9	7.17	113.94	108.20
1	AA	2641	A	C4-N9-C1'	7.17	139.20	126.30
1	AA	235	C	O5'-P-OP1	-7.17	99.25	105.70
1	AA	712	C	C5-C6-N1	-7.17	117.42	121.00
1	AA	1035	G	C4-C5-N7	-7.17	107.93	110.80
1	AA	2043	C	C5-C4-N4	-7.17	115.18	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2545	A	N7-C8-N9	-7.17	110.22	113.80
1	CA	673	C	N3-C2-O2	7.17	126.92	121.90
1	AA	1896	G	N1-C6-O6	7.16	124.20	119.90
1	AA	2611	G	N7-C8-N9	-7.16	109.52	113.10
1	AA	2655	G	N9-C4-C5	-7.16	102.53	105.40
1	CA	380	U	C6-N1-C2	-7.16	116.70	121.00
1	CA	587	C	O5'-P-OP2	-7.16	99.25	105.70
1	CA	1405	U	O5'-P-OP2	-7.16	99.25	105.70
1	AA	123	G	O5'-P-OP2	-7.16	99.25	105.70
1	AA	1635	C	O5'-P-OP1	-7.16	99.25	105.70
1	AA	2521	G	C6-N1-C2	-7.16	120.80	125.10
1	CA	1997	G	N9-C4-C5	-7.16	102.54	105.40
1	AA	589	U	N1-C2-N3	7.16	119.19	114.90
1	AA	1235	G	C4-C5-N7	-7.16	107.94	110.80
1	CA	1864	U	C5-C4-O4	-7.16	121.61	125.90
1	CA	1674	G	N1-C6-O6	7.16	124.19	119.90
1	AA	2260	C	N3-C2-O2	-7.15	116.89	121.90
1	AA	2278	A	C2-N3-C4	7.15	114.18	110.60
1	AA	952	G	C5-C6-O6	7.15	132.89	128.60
1	AA	2078	G	C4-C5-N7	7.15	113.66	110.80
1	CA	337	C	C2-N1-C1'	-7.15	110.93	118.80
6	AF	54	ARG	NE-CZ-NH1	7.15	123.87	120.30
1	AA	1979	C	C5-C6-N1	7.15	124.57	121.00
34	BA	805	C	O5'-P-OP1	7.15	119.28	110.70
1	AA	1958	A	OP1-P-OP2	-7.14	108.88	119.60
1	AA	174	U	C5-C6-N1	-7.14	119.13	122.70
1	AA	905	U	N3-C4-O4	-7.14	114.40	119.40
1	AA	1574	A	C8-N9-C4	7.14	108.66	105.80
34	BA	910	C	C6-N1-C2	7.14	123.16	120.30
1	CA	803	U	C6-N1-C2	-7.14	116.72	121.00
1	AA	29	U	N3-C4-C5	7.14	118.88	114.60
1	AA	778	C	N3-C4-N4	-7.14	113.00	118.00
1	CA	815	C	N3-C4-C5	7.14	124.75	121.90
1	AA	171	A	C5-C6-N1	-7.13	114.13	117.70
1	AA	2518	U	P-O3'-C3'	7.13	128.26	119.70
1	AA	2405	A	C8-N9-C4	7.13	108.65	105.80
1	AA	2384	G	N3-C4-C5	7.13	132.17	128.60
1	AA	837	C	N3-C4-C5	7.13	124.75	121.90
1	CA	577	G	N3-C4-C5	7.13	132.16	128.60
1	AA	822	G	O5'-P-OP2	-7.12	99.29	105.70
1	AA	2719	G	C4-C5-N7	7.12	113.65	110.80
1	AA	2883	A	C8-N9-C4	-7.12	102.95	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	259	A	C8-N9-C4	-7.12	102.95	105.80
1	AA	1083	G	N9-C4-C5	-7.12	102.55	105.40
1	AA	2551	C	C4-C5-C6	7.12	120.96	117.40
1	AA	1812	C	N3-C4-N4	7.12	122.98	118.00
1	CA	730	C	N1-C2-O2	7.12	123.17	118.90
1	AA	36	G	O5'-P-OP1	7.12	119.24	110.70
1	AA	199	C	N3-C4-N4	-7.12	113.02	118.00
1	AA	473	A	C4-C5-C6	-7.12	113.44	117.00
1	AA	797	A	C5-N7-C8	-7.12	100.34	103.90
1	AA	2041	A	C6-N1-C2	7.12	122.87	118.60
1	AA	1043	G	C2-N3-C4	7.12	115.46	111.90
2	AB	91	C	N3-C4-C5	7.12	124.75	121.90
1	AA	2409	G	N1-C6-O6	-7.12	115.63	119.90
1	CA	205	G	N7-C8-N9	-7.12	109.54	113.10
1	CA	803	U	N1-C2-O2	7.12	127.78	122.80
1	AA	2060	G	N1-C6-O6	-7.11	115.63	119.90
1	AA	2071	G	C5-C6-O6	-7.11	124.33	128.60
1	AA	2358	A	C5-C6-N1	-7.11	114.14	117.70
1	AA	2882	G	C4-C5-N7	-7.11	107.95	110.80
1	CA	2379	G	N1-C6-O6	7.11	124.17	119.90
1	AA	1450	C	O5'-P-OP2	-7.11	99.30	105.70
1	AA	1418	U	C5-C4-O4	-7.11	121.64	125.90
1	AA	584	G	N3-C2-N2	7.11	124.87	119.90
1	AA	776	G	N1-C6-O6	7.11	124.16	119.90
1	AA	887	C	C2-N3-C4	-7.11	116.35	119.90
1	AA	1792	C	C6-N1-C2	7.11	123.14	120.30
1	AA	2442	A	O5'-P-OP2	-7.11	99.30	105.70
1	CA	2286	A	C6-C5-N7	-7.11	127.33	132.30
1	AA	645	G	C5-C6-N1	7.10	115.05	111.50
1	AA	1451	U	N1-C2-N3	-7.10	110.64	114.90
1	CA	2262	U	O5'-P-OP1	-7.10	99.31	105.70
1	CA	2697	G	C4-C5-N7	7.10	113.64	110.80
34	BA	1517	G	N3-C4-N9	-7.10	121.74	126.00
1	CA	1258	C	N3-C2-O2	-7.10	116.93	121.90
1	AA	1358	U	N3-C4-O4	-7.10	114.43	119.40
1	AA	2335	G	C4-C5-N7	7.10	113.64	110.80
1	AA	2403	G	N3-C4-N9	-7.10	121.74	126.00
1	AA	2045	G	C5-C6-N1	7.10	115.05	111.50
1	AA	2280	A	O5'-P-OP1	7.10	119.22	110.70
1	CA	2712	U	O4'-C1'-N1	7.10	113.88	108.20
1	AA	787	U	O5'-P-OP2	-7.09	99.31	105.70
1	AA	2034	G	N3-C2-N2	7.09	124.87	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	801	U	N3-C4-C5	7.09	118.86	114.60
1	AA	2025	G	C5-N7-C8	7.09	107.85	104.30
1	AA	33	U	N3-C2-O2	-7.09	117.24	122.20
1	AA	1976	G	C5-C6-O6	-7.09	124.34	128.60
1	AA	2731	G	C2-N3-C4	7.09	115.45	111.90
1	AA	2235	G	C5-C6-O6	7.09	132.85	128.60
1	AA	1718	U	N3-C4-O4	7.09	124.36	119.40
1	AA	2418	U	O5'-P-OP1	-7.09	99.32	105.70
1	CA	582	G	C5-C6-O6	7.09	132.85	128.60
1	CA	933	A	N7-C8-N9	7.09	117.34	113.80
1	AA	1291	G	C5-C6-O6	7.08	132.85	128.60
1	AA	2056	U	N3-C4-C5	-7.08	110.35	114.60
1	AA	2057	G	N9-C4-C5	-7.08	102.57	105.40
1	AA	2749	G	C8-N9-C4	7.08	109.23	106.40
56	BX	34	C	C5-C6-N1	7.08	124.54	121.00
1	AA	1282	G	C8-N9-C4	7.08	109.23	106.40
1	AA	1706	U	N1-C2-O2	-7.08	117.84	122.80
1	AA	2522	C	C5-C4-N4	7.08	125.16	120.20
1	AA	138	G	C5-N7-C8	7.08	107.84	104.30
1	AA	1068	G	C5-C6-O6	7.08	132.84	128.60
1	AA	1425	A	N1-C6-N6	7.08	122.85	118.60
1	AA	2834	C	O5'-P-OP2	7.08	119.19	110.70
1	CA	150	C	O5'-P-OP2	-7.08	99.33	105.70
34	DA	555	C	O5'-P-OP1	-7.08	99.33	105.70
2	AB	98	G	N1-C2-N2	-7.07	109.83	116.20
1	AA	1912	A	C8-N9-C4	7.07	108.63	105.80
1	AA	710	G	C8-N9-C4	-7.07	103.57	106.40
1	AA	1799	U	N1-C2-O2	7.07	127.75	122.80
1	AA	2282	G	C4-C5-C6	-7.07	114.56	118.80
1	CA	2887	U	O5'-P-OP1	-7.07	99.34	105.70
1	AA	1019	G	C6-C5-N7	-7.07	126.16	130.40
1	AA	1210	G	C5-N7-C8	7.07	107.83	104.30
1	AA	2053	A	C5-N7-C8	-7.07	100.36	103.90
1	AA	1333	A	C8-N9-C4	-7.07	102.97	105.80
1	AA	606	G	N3-C4-C5	-7.07	125.07	128.60
1	AA	1720	U	C2-N1-C1'	-7.07	109.22	117.70
1	AA	2610	A	O5'-P-OP1	-7.07	99.34	105.70
1	AA	1623	U	N1-C2-O2	7.06	127.74	122.80
1	CA	2230	G	N9-C4-C5	7.06	108.22	105.40
34	BA	802	A	C8-N9-C4	7.06	108.62	105.80
1	AA	184	A	P-O3'-C3'	7.06	128.17	119.70
1	AA	340	C	C5-C4-N4	7.06	125.14	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2352	A	O5'-P-OP1	-7.06	99.35	105.70
1	CA	2763	G	N3-C4-C5	-7.06	125.07	128.60
1	AA	1648	U	C5-C4-O4	-7.06	121.67	125.90
1	AA	1301	U	O4'-C1'-N1	7.05	113.84	108.20
1	AA	2888	U	N3-C2-O2	-7.05	117.26	122.20
1	AA	1273	G	C4-C5-N7	-7.05	107.98	110.80
34	BA	500	G	N3-C4-C5	7.05	132.13	128.60
1	AA	1831	C	C4-C5-C6	7.05	120.92	117.40
1	AA	487	C	O5'-P-OP1	-7.05	99.36	105.70
1	AA	490	U	OP1-P-OP2	-7.05	109.03	119.60
1	AA	975	U	C6-N1-C2	-7.05	116.77	121.00
1	AA	1423	G	N1-C6-O6	7.05	124.13	119.90
1	AA	2655	G	N3-C4-C5	7.05	132.12	128.60
34	DA	754	C	N1-C2-O2	7.04	123.13	118.90
1	AA	2393	C	C6-N1-C2	-7.04	117.48	120.30
1	AA	2578	A	C8-N9-C4	-7.04	102.98	105.80
1	CA	2442	C	C6-N1-C2	-7.04	117.48	120.30
1	AA	1605	A	N7-C8-N9	7.04	117.32	113.80
1	AA	2000	A	C5-C6-N6	-7.04	118.07	123.70
1	CA	837	C	N3-C4-C5	-7.04	119.08	121.90
1	AA	590	A	C4-C5-C6	-7.04	113.48	117.00
1	AA	1652	G	C8-N9-C4	7.04	109.22	106.40
1	AA	2656	G	C8-N9-C4	7.04	109.22	106.40
1	AA	2068	G	C6-N1-C2	7.04	129.32	125.10
23	AZ	86	VAL	CB-CA-C	-7.04	98.03	111.40
1	AA	29	U	N3-C2-O2	-7.03	117.28	122.20
1	AA	2618	C	C5-C6-N1	-7.03	117.48	121.00
20	AW	84	ARG	NE-CZ-NH2	-7.03	116.78	120.30
34	BA	46	G	C5-C6-N1	-7.03	107.98	111.50
1	CA	519	U	O5'-P-OP2	-7.03	99.37	105.70
1	AA	850	U	C2-N3-C4	-7.03	122.78	127.00
1	AA	780	G	C5-N7-C8	7.03	107.81	104.30
1	AA	2479	C	OP2-P-O3'	7.03	120.67	105.20
1	CA	195	A	P-O3'-C3'	7.03	128.14	119.70
1	AA	778	C	C2-N3-C4	-7.03	116.39	119.90
1	AA	2089	G	N3-C2-N2	-7.03	114.98	119.90
1	AA	2343	G	N1-C6-O6	7.03	124.12	119.90
1	AA	2288	G	N3-C4-C5	-7.03	125.09	128.60
1	AA	2577	A	C5-N7-C8	-7.03	100.39	103.90
34	BA	741	G	C8-N9-C4	-7.03	103.59	106.40
1	AA	2464	C	C6-N1-C2	7.02	123.11	120.30
1	AA	1643	A	N1-C6-N6	-7.02	114.39	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2621	U	OP2-P-O3'	7.02	120.65	105.20
1	AA	2542	A	C8-N9-C4	7.02	108.61	105.80
1	AA	1871	G	O5'-P-OP1	-7.02	99.38	105.70
1	AA	2879	G	C4-C5-N7	-7.02	107.99	110.80
1	CA	459	U	N1-C2-N3	7.01	119.11	114.90
1	CA	2064	C	C5-C6-N1	7.01	124.51	121.00
34	DA	246	A	O4'-C1'-N9	7.01	113.81	108.20
1	AA	244	A	N1-C2-N3	7.01	132.81	129.30
1	AA	1729	G	N9-C4-C5	-7.01	102.59	105.40
1	AA	851	A	N1-C2-N3	7.01	132.81	129.30
1	AA	2391	G	OP2-P-O3'	7.01	120.62	105.20
1	AA	2625	U	N3-C4-C5	7.01	118.81	114.60
30	A6	6	ARG	NE-CZ-NH2	-7.01	116.80	120.30
1	AA	801	C	C2-N3-C4	-7.01	116.40	119.90
1	AA	73	A	C6-N1-C2	-7.01	114.40	118.60
1	AA	600	G	C5-C6-N1	7.01	115.00	111.50
1	AA	2523	U	C5-C4-O4	7.01	130.10	125.90
1	AA	610	C	OP1-P-OP2	-7.00	109.09	119.60
34	BA	115	G	P-O3'-C3'	7.00	128.10	119.70
34	DA	754	C	C2-N1-C1'	7.00	126.50	118.80
1	AA	614	C	N1-C2-N3	7.00	124.10	119.20
1	AA	1652	G	OP1-P-OP2	-7.00	109.10	119.60
1	AA	1960	A	N7-C8-N9	7.00	117.30	113.80
34	BA	529	G	N1-C6-O6	7.00	124.10	119.90
1	AA	1833	A	N1-C6-N6	7.00	122.80	118.60
1	CA	1890	A	C8-N9-C4	7.00	108.60	105.80
1	AA	1260	G	C5-N7-C8	7.00	107.80	104.30
1	AA	2559	U	N3-C2-O2	-7.00	117.30	122.20
1	AA	2766	A	OP2-P-O3'	7.00	120.59	105.20
2	AB	111	G	N9-C4-C5	7.00	108.20	105.40
34	DA	718	G	C8-N9-C4	-7.00	103.60	106.40
1	AA	799	A	N1-C6-N6	7.00	122.80	118.60
1	AA	1959	A	O5'-P-OP1	7.00	119.09	110.70
1	AA	2447	A	C8-N9-C4	7.00	108.60	105.80
1	AA	975	U	C2-N1-C1'	6.99	126.09	117.70
1	CA	750	A	C8-N9-C4	-6.99	103.00	105.80
1	CA	1292	U	N1-C2-O2	-6.99	117.90	122.80
1	AA	73	A	N1-C6-N6	-6.99	114.41	118.60
1	AA	126	C	C2-N3-C4	-6.99	116.40	119.90
1	AA	2625	U	OP2-P-O3'	6.99	120.58	105.20
2	AB	82	G	OP1-P-OP2	-6.99	109.11	119.60
34	DA	266	G	N7-C8-N9	6.99	116.60	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	29	U	N1-C2-O2	6.99	127.69	122.80
1	AA	599	U	OP1-P-OP2	-6.99	109.12	119.60
1	AA	1343	C	OP1-P-O3'	6.99	120.58	105.20
1	CA	190	A	N1-C6-N6	-6.99	114.41	118.60
1	CA	2048	G	N9-C4-C5	-6.99	102.61	105.40
1	AA	794	U	N3-C4-O4	-6.99	114.51	119.40
1	AA	1241	C	OP2-P-O3'	6.99	120.57	105.20
1	AA	1374	G	N3-C2-N2	6.99	124.79	119.90
2	AB	30	C	O5'-P-OP1	-6.98	99.42	105.70
1	AA	2564	U	C2-N3-C4	-6.98	122.81	127.00
1	AA	1957	G	OP1-P-O3'	6.98	120.56	105.20
1	CA	1979	C	C6-N1-C2	-6.98	117.51	120.30
1	AA	1684	A	N7-C8-N9	-6.98	110.31	113.80
1	AA	2866	C	N1-C2-O2	6.98	123.09	118.90
1	AA	593	G	C5-C6-O6	-6.97	124.42	128.60
1	AA	645	G	C2-N3-C4	6.97	115.39	111.90
1	AA	842	C	N1-C2-O2	6.97	123.08	118.90
1	AA	1859	G	C5-C6-O6	6.97	132.78	128.60
1	AA	513	C	N3-C4-C5	6.97	124.69	121.90
1	AA	1824	C	N3-C2-O2	-6.97	117.02	121.90
1	CA	330	A	C2-N3-C4	-6.97	107.11	110.60
1	AA	1242	G	N1-C2-N2	-6.97	109.93	116.20
1	AA	2044	U	N3-C4-O4	6.97	124.28	119.40
1	AA	2639	G	C5-N7-C8	6.97	107.78	104.30
20	AW	15	ARG	NE-CZ-NH2	-6.97	116.82	120.30
1	AA	127	C	O5'-P-OP1	-6.96	99.43	105.70
1	AA	1230	C	C4-C5-C6	-6.96	113.92	117.40
1	AA	2451	A	C6-N1-C2	6.96	122.78	118.60
1	AA	2804	C	C6-N1-C2	-6.96	117.52	120.30
1	AA	2484	G	N7-C8-N9	-6.96	109.62	113.10
1	CA	792	G	O4'-C1'-N9	-6.96	102.63	108.20
1	CA	2618	G	C6-N1-C2	-6.96	120.92	125.10
1	AA	2548	G	C4-C5-N7	-6.96	108.02	110.80
1	AA	2627	U	N3-C2-O2	-6.96	117.33	122.20
34	BA	770	C	N1-C2-O2	-6.96	114.72	118.90
1	AA	358	C	N3-C2-O2	6.96	126.77	121.90
1	AA	1695	C	O5'-P-OP1	-6.96	99.44	105.70
1	CA	790	C	C6-N1-C1'	-6.96	112.45	120.80
1	AA	713	G	C8-N9-C4	6.95	109.18	106.40
1	CA	2709	G	N1-C6-O6	-6.95	115.73	119.90
1	CA	716	A	N1-C6-N6	-6.95	114.43	118.60
1	AA	1355	G	C5-C6-O6	-6.95	124.43	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	78	A	C5-N7-C8	6.95	107.37	103.90
1	AA	2260	C	N1-C2-O2	6.95	123.07	118.90
34	BA	352	C	O5'-P-OP2	-6.95	99.45	105.70
1	CA	746	A	N1-C6-N6	-6.94	114.43	118.60
1	AA	2262	G	OP1-P-OP2	6.94	130.01	119.60
1	AA	2488	A	C8-N9-C4	6.94	108.58	105.80
1	AA	886	U	C6-N1-C2	6.94	125.16	121.00
1	CA	265	A	C8-N9-C4	-6.94	103.02	105.80
1	AA	1157	A	N3-C4-C5	6.94	131.66	126.80
1	AA	480	A	C8-N9-C4	-6.94	103.03	105.80
34	BA	528	C	C6-N1-C2	6.94	123.08	120.30
1	CA	1250	G	N3-C4-N9	-6.94	121.84	126.00
1	AA	193	A	C5-C6-N1	6.93	121.17	117.70
1	AA	1809	U	C2-N1-C1'	-6.93	109.38	117.70
1	AA	599	U	O5'-P-OP1	6.93	119.02	110.70
1	AA	2478	C	C5-C6-N1	6.93	124.47	121.00
1	AA	2550	C	O5'-P-OP2	-6.93	99.46	105.70
1	AA	749	G	C5-N7-C8	6.93	107.77	104.30
1	AA	1231	G	C5-C6-N1	6.93	114.97	111.50
1	CA	2697	G	C5-C6-N1	6.93	114.97	111.50
1	AA	2674	A	C5-C6-N1	-6.93	114.24	117.70
34	BA	1444	C	C6-N1-C2	6.93	123.07	120.30
1	CA	2647	U	C6-N1-C2	6.93	125.16	121.00
1	AA	201	G	N3-C4-N9	-6.93	121.84	126.00
1	AA	964	A	N1-C2-N3	6.93	132.76	129.30
1	AA	1034	A	N7-C8-N9	6.93	117.26	113.80
1	CA	575	A	N1-C2-N3	-6.93	125.84	129.30
1	CA	2010	G	OP1-P-OP2	-6.93	109.21	119.60
1	AA	617	U	OP2-P-O3'	6.92	120.43	105.20
1	AA	1329	G	C5-N7-C8	6.92	107.76	104.30
1	AA	1807	G	C8-N9-C4	6.92	109.17	106.40
1	AA	2078	G	C5-C6-O6	6.92	132.75	128.60
1	CA	2009	G	C8-N9-C4	-6.92	103.63	106.40
1	AA	32	C	C2-N3-C4	-6.92	116.44	119.90
1	CA	1894	C	C6-N1-C2	-6.92	117.53	120.30
34	DA	821	G	O5'-P-OP1	-6.92	99.47	105.70
1	AA	1249	A	C8-N9-C4	-6.92	103.03	105.80
1	AA	1440	U	O5'-P-OP1	-6.92	99.47	105.70
1	AA	206	G	C4-C5-N7	-6.92	108.03	110.80
1	AA	1602	G	C8-N9-C1'	-6.92	118.00	127.00
1	AA	1729	G	N3-C4-C5	6.92	132.06	128.60
1	AA	206	G	C5-N7-C8	6.92	107.76	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1329	G	C6-N1-C2	-6.92	120.95	125.10
1	AA	2736	C	N3-C4-N4	6.92	122.84	118.00
1	CA	681	G	C5-C6-O6	6.92	132.75	128.60
1	AA	1605	A	N3-C4-C5	6.92	131.64	126.80
1	CA	370	G	N3-C4-C5	-6.92	125.14	128.60
1	AA	2511	C	O5'-P-OP2	-6.91	99.48	105.70
34	BA	365	U	O5'-P-OP2	-6.91	99.48	105.70
1	AA	291	G	C5-C6-O6	-6.91	124.45	128.60
2	AB	97	G	C5-C6-O6	-6.91	124.45	128.60
1	CA	204	A	N1-C6-N6	6.91	122.75	118.60
1	CA	450	G	C5-N7-C8	6.91	107.75	104.30
1	CA	1704	G	N3-C4-C5	-6.91	125.15	128.60
1	AA	1812	C	C5-C4-N4	-6.91	115.36	120.20
1	AA	1154	U	C5-C6-N1	6.91	126.15	122.70
1	AA	2014	G	N3-C4-C5	-6.91	125.15	128.60
34	BA	339	C	O5'-P-OP2	-6.91	99.48	105.70
1	CA	2060	A	C4-C5-C6	-6.91	113.55	117.00
6	AF	74	ARG	NE-CZ-NH1	6.90	123.75	120.30
34	DA	550	G	C5-C6-O6	-6.90	124.46	128.60
34	DA	906	G	N1-C6-O6	6.90	124.04	119.90
1	AA	2026	G	C5-C6-O6	-6.90	124.46	128.60
1	CA	2591	C	N3-C2-O2	6.90	126.73	121.90
1	AA	254	A	O4'-C1'-N9	6.90	113.72	108.20
1	AA	1255	A	C4-C5-C6	6.90	120.45	117.00
1	CA	198	C	N3-C4-N4	-6.90	113.17	118.00
1	AA	1383	G	C6-N1-C2	-6.90	120.96	125.10
56	DX	76	A	C2-N3-C4	-6.90	107.15	110.60
1	AA	2467	G	N3-C2-N2	6.89	124.73	119.90
1	AA	2736	C	C6-N1-C2	6.89	123.06	120.30
34	BA	769	G	O4'-C1'-N9	6.89	113.72	108.20
1	CA	248	G	C5-C6-N1	6.89	114.95	111.50
2	AB	97	G	N9-C4-C5	6.89	108.16	105.40
55	DV	17	U	N1-C2-N3	6.89	119.03	114.90
1	AA	46	C	N1-C2-O2	6.89	123.03	118.90
1	AA	1387	U	C6-N1-C2	6.89	125.13	121.00
34	BA	557	G	N3-C2-N2	6.89	124.72	119.90
1	AA	1296	G	C8-N9-C4	-6.89	103.64	106.40
1	AA	2105	G	N3-C2-N2	-6.89	115.08	119.90
1	AA	468	G	N1-C6-O6	-6.88	115.77	119.90
1	AA	1333	A	N9-C4-C5	6.88	108.55	105.80
1	AA	1900	G	O5'-P-OP2	-6.88	99.50	105.70
1	AA	2384	G	C2-N3-C4	-6.88	108.46	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	95	C	C2-N3-C4	-6.88	116.46	119.90
1	AA	754	G	N1-C6-O6	6.88	124.03	119.90
56	BX	34	C	C6-N1-C2	-6.88	117.55	120.30
1	AA	2406	C	OP1-P-OP2	6.88	129.92	119.60
1	AA	1366	C	C6-N1-C2	-6.88	117.55	120.30
1	AA	369	A	O5'-P-OP2	-6.88	99.51	105.70
1	AA	908	A	N9-C4-C5	-6.88	103.05	105.80
1	AA	791	G	C4-C5-N7	-6.87	108.05	110.80
1	AA	2282	G	N7-C8-N9	-6.87	109.66	113.10
1	AA	2834	C	N3-C4-C5	-6.87	119.15	121.90
1	AA	345	G	C5-C6-O6	-6.87	124.48	128.60
1	CA	767	U	C5-C6-N1	6.87	126.14	122.70
1	CA	2766	G	C4-C5-N7	6.87	113.55	110.80
1	AA	175	G	C4-C5-N7	-6.87	108.05	110.80
1	AA	921	G	N3-C2-N2	-6.87	115.09	119.90
1	AA	1667	U	C4-C5-C6	6.87	123.82	119.70
1	AA	430	U	N1-C2-O2	6.87	127.61	122.80
1	AA	2268	G	C5-C6-O6	-6.87	124.48	128.60
1	AA	2643	G	N9-C4-C5	6.87	108.15	105.40
1	CA	2070	G	N1-C2-N3	6.87	128.02	123.90
1	AA	2403	G	N7-C8-N9	6.86	116.53	113.10
34	BA	543	C	C6-N1-C2	-6.86	117.56	120.30
34	DA	1183	A	P-O3'-C3'	6.86	127.94	119.70
1	AA	421	A	N1-C2-N3	-6.86	125.87	129.30
34	BA	1502	A	C6-C5-N7	-6.86	127.50	132.30
1	AA	470	C	C4-C5-C6	6.86	120.83	117.40
1	AA	612	C	N3-C4-C5	-6.86	119.16	121.90
1	AA	623	G	O5'-P-OP2	-6.86	99.53	105.70
1	AA	715	G	N7-C8-N9	6.86	116.53	113.10
1	AA	802	C	N1-C2-O2	6.86	123.02	118.90
1	AA	2627	U	C4-C5-C6	-6.86	115.58	119.70
1	CA	2586	C	C6-N1-C2	-6.86	117.56	120.30
1	AA	953	U	OP2-P-O3'	6.86	120.29	105.20
1	CA	2036	C	C2-N3-C4	-6.86	116.47	119.90
1	AA	1621	C	OP2-P-O3'	6.86	120.29	105.20
1	AA	861	C	N1-C2-O2	-6.86	114.79	118.90
1	AA	895	G	OP1-P-OP2	6.86	129.88	119.60
1	AA	2497	G	C5-N7-C8	6.86	107.73	104.30
1	AA	791	G	C5-N7-C8	6.85	107.73	104.30
1	AA	957	A	N9-C4-C5	6.85	108.54	105.80
1	AA	1960	A	C5-N7-C8	-6.85	100.47	103.90
1	AA	2079	A	C4-C5-C6	-6.85	113.57	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	520	G	C8-N9-C4	-6.85	103.66	106.40
1	CA	2850	A	C8-N9-C4	-6.85	103.06	105.80
1	AA	139	A	C4-C5-N7	6.85	114.13	110.70
1	AA	2627	U	N1-C2-O2	6.85	127.60	122.80
1	AA	2837	C	N3-C2-O2	6.85	126.69	121.90
1	AA	409	G	N3-C4-C5	-6.85	125.17	128.60
1	AA	2448	G	C8-N9-C4	-6.85	103.66	106.40
1	AA	2782	C	C5-C6-N1	-6.85	117.58	121.00
56	BX	25	C	N1-C2-O2	6.85	123.01	118.90
1	CA	2626	C	N3-C2-O2	6.85	126.69	121.90
34	DA	1495	U	N1-C2-N3	6.85	119.01	114.90
1	AA	826	U	N3-C4-O4	6.85	124.19	119.40
34	BA	1067	A	P-O3'-C3'	6.85	127.92	119.70
1	AA	1350	C	C6-N1-C2	-6.84	117.56	120.30
1	AA	345	G	C6-N1-C2	-6.84	120.99	125.10
34	BA	1424	C	N1-C2-O2	6.84	123.01	118.90
1	AA	200	A	N1-C6-N6	6.84	122.70	118.60
1	AA	721	G	C6-N1-C2	6.84	129.20	125.10
1	AA	1950	A	O5'-P-OP1	-6.84	99.54	105.70
1	CA	679	C	N1-C2-O2	-6.84	114.80	118.90
34	DA	1502	A	N1-C2-N3	6.84	132.72	129.30
1	AA	2738	A	N3-C4-C5	6.84	131.59	126.80
56	BX	33	U	N1-C2-O2	6.84	127.59	122.80
1	AA	588	C	N3-C4-C5	6.84	124.64	121.90
1	AA	1524	A	O5'-P-OP2	-6.84	99.55	105.70
1	AA	1814	A	N1-C2-N3	-6.84	125.88	129.30
1	AA	1827	U	C5-C6-N1	-6.84	119.28	122.70
1	AA	2489	C	C6-N1-C2	-6.84	117.56	120.30
1	AA	2745	G	C5-N7-C8	6.84	107.72	104.30
1	CA	2444	G	N7-C8-N9	-6.84	109.68	113.10
1	AA	2000	A	N7-C8-N9	-6.83	110.38	113.80
1	AA	846	G	C8-N9-C4	6.83	109.13	106.40
1	AA	1399	A	C6-N1-C2	6.83	122.70	118.60
1	CA	513	A	C8-N9-C4	-6.83	103.07	105.80
1	CA	668	G	N3-C4-C5	6.83	132.02	128.60
1	CA	1887	C	C6-N1-C2	6.83	123.03	120.30
1	AA	399	G	O4'-C1'-N9	6.83	113.67	108.20
1	AA	1075	A	N9-C4-C5	-6.83	103.07	105.80
1	AA	2793	G	N3-C4-N9	6.83	130.10	126.00
2	AB	99	G	C5-C6-N1	6.83	114.92	111.50
1	CA	122	G	C8-N9-C4	-6.83	103.67	106.40
1	AA	200	A	O5'-P-OP2	-6.83	99.55	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	427	G	C5-C6-O6	-6.83	124.50	128.60
1	CA	130	C	C2-N1-C1'	-6.83	111.29	118.80
1	CA	1325	G	O5'-P-OP1	-6.83	99.55	105.70
1	AA	1035	G	O5'-P-OP2	-6.83	99.56	105.70
1	AA	2048	C	OP1-P-OP2	6.83	129.84	119.60
1	AA	615	G	OP1-P-OP2	6.83	129.84	119.60
1	AA	1002	A	C4-C5-C6	6.82	120.41	117.00
1	AA	1442	U	C6-N1-C2	-6.82	116.91	121.00
34	DA	356	A	C8-N9-C4	6.82	108.53	105.80
2	AB	78	A	N7-C8-N9	-6.82	110.39	113.80
1	CA	176	G	N1-C6-O6	6.82	123.99	119.90
1	AA	474	U	N1-C2-O2	6.82	127.57	122.80
1	AA	579	G	N3-C2-N2	6.82	124.67	119.90
1	AA	2791	A	N1-C6-N6	-6.82	114.51	118.60
1	AA	427	G	N1-C6-O6	6.82	123.99	119.90
1	AA	2533	C	C5-C4-N4	6.82	124.97	120.20
1	CA	1214	A	C8-N9-C4	6.82	108.53	105.80
1	CA	2630	G	C5-C6-O6	-6.81	124.51	128.60
1	AA	374	U	N1-C2-N3	-6.81	110.81	114.90
1	AA	751	G	C4-C5-N7	-6.81	108.08	110.80
1	AA	1679	A	C8-N9-C4	6.81	108.53	105.80
1	AA	2437	A	C5-C6-N6	-6.81	118.25	123.70
1	AA	2467	G	O5'-P-OP2	6.81	118.88	110.70
1	CA	1395	A	O4'-C1'-N9	6.81	113.65	108.20
1	CA	2647	U	C5-C6-N1	-6.81	119.29	122.70
1	AA	225	C	N3-C2-O2	-6.81	117.13	121.90
1	AA	1319	U	C5-C4-O4	6.81	129.99	125.90
1	AA	1449	C	OP2-P-O3'	6.81	120.18	105.20
1	AA	126	C	C5-C4-N4	-6.81	115.43	120.20
1	AA	551	A	N1-C6-N6	-6.81	114.51	118.60
1	AA	663	G	C8-N9-C4	6.81	109.12	106.40
1	AA	2056	U	C2-N3-C4	6.81	131.09	127.00
1	AA	566	C	N1-C2-O2	6.81	122.98	118.90
1	AA	1817	A	N1-C2-N3	6.81	132.70	129.30
1	AA	2724	U	N1-C2-N3	-6.81	110.81	114.90
1	CA	1781	C	C5-C4-N4	-6.81	115.44	120.20
1	AA	615	G	N1-C6-O6	-6.81	115.82	119.90
1	AA	2652	G	N3-C4-C5	-6.80	125.20	128.60
34	DA	290	C	N3-C2-O2	-6.80	117.14	121.90
1	AA	982	U	N3-C2-O2	6.80	126.96	122.20
1	AA	674	G	N1-C6-O6	-6.80	115.82	119.90
1	AA	975	U	C5-C4-O4	-6.80	121.82	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2041	A	N1-C2-N3	-6.80	125.90	129.30
1	AA	2528	G	N9-C4-C5	6.80	108.12	105.40
1	AA	2782	C	O5'-P-OP1	6.80	118.86	110.70
34	BA	1458	G	O5'-P-OP1	-6.80	99.58	105.70
1	AA	2035	A	N1-C2-N3	-6.80	125.90	129.30
1	AA	2237	A	C6-N1-C2	-6.80	114.52	118.60
1	AA	1026	A	C4-C5-N7	6.80	114.10	110.70
2	AB	73	A	N1-C6-N6	-6.80	114.52	118.60
1	CA	1100	C	C2-N1-C1'	6.80	126.28	118.80
1	CA	1698	A	O4'-C1'-N9	6.80	113.64	108.20
34	DA	962	C	C6-N1-C2	-6.80	117.58	120.30
1	AA	53	G	C5-C6-O6	-6.79	124.52	128.60
1	AA	552	C	N1-C2-O2	6.79	122.98	118.90
1	AA	33	U	N1-C2-O2	6.79	127.56	122.80
1	AA	826	U	N3-C2-O2	6.79	126.96	122.20
1	AA	81	G	N7-C8-N9	-6.79	109.70	113.10
1	AA	2039	U	N3-C2-O2	-6.79	117.45	122.20
1	AA	2355	C	N1-C2-N3	6.79	123.95	119.20
1	AA	406	G	C5-N7-C8	6.79	107.69	104.30
2	AB	81	G	O5'-P-OP1	-6.79	99.59	105.70
1	AA	2736	C	C2-N3-C4	-6.79	116.51	119.90
34	BA	1519	A	C5-C6-N6	6.79	129.13	123.70
1	AA	2779	G	C5-C6-O6	6.79	132.67	128.60
1	AA	985	G	OP1-P-O3'	-6.79	90.27	105.20
1	AA	2610	A	C4-C5-C6	6.79	120.39	117.00
1	CA	915	C	N3-C2-O2	-6.79	117.15	121.90
1	CA	1612	C	C5-C6-N1	6.79	124.39	121.00
1	CA	2608	G	C5-C6-O6	6.78	132.67	128.60
1	CA	2629	A	O4'-C1'-N9	6.78	113.63	108.20
1	CA	915	C	N1-C2-O2	6.78	122.97	118.90
1	AA	1474	C	C4-C5-C6	6.78	120.79	117.40
1	AA	2039	U	C2-N1-C1'	6.78	125.83	117.70
1	AA	2352	G	N1-C6-O6	6.78	123.97	119.90
1	CA	37	C	C5-C6-N1	-6.78	117.61	121.00
1	AA	611	U	N3-C2-O2	6.78	126.94	122.20
1	AA	1992	A	C6-N1-C2	-6.78	114.53	118.60
1	CA	215	G	OP1-P-OP2	-6.78	109.43	119.60
1	AA	795	G	C5-C6-N1	6.78	114.89	111.50
1	AA	1419	A	C8-N9-C4	6.78	108.51	105.80
1	AA	1663	C	N3-C4-N4	-6.78	113.26	118.00
1	CA	790	C	N3-C4-C5	6.78	124.61	121.90
1	AA	2772	G	O5'-P-OP1	-6.77	99.61	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1605	A	N3-C4-N9	-6.77	121.98	127.40
18	AU	112	ARG	NE-CZ-NH2	-6.77	116.92	120.30
1	AA	637	U	N1-C2-O2	6.77	127.54	122.80
1	CA	495	G	N9-C4-C5	6.77	108.11	105.40
1	AA	724	A	C4-C5-N7	-6.77	107.32	110.70
1	AA	850	U	N1-C2-N3	6.77	118.96	114.90
1	CA	2820	A	N9-C4-C5	-6.77	103.09	105.80
1	AA	986	A	C2-N3-C4	6.76	113.98	110.60
1	AA	2062	C	C5-C6-N1	-6.76	117.62	121.00
1	AA	2773	C	C2-N1-C1'	-6.76	111.36	118.80
1	AA	2249	G	C5-C6-O6	6.76	132.66	128.60
1	AA	2285	A	N9-C4-C5	-6.76	103.09	105.80
1	CA	1677	A	C8-N9-C4	-6.76	103.09	105.80
1	AA	1649	A	C5-N7-C8	-6.76	100.52	103.90
34	BA	769	G	C4-C5-N7	-6.76	108.09	110.80
1	AA	139	A	C8-N9-C4	-6.76	103.10	105.80
1	CA	27	G	O5'-P-OP2	-6.76	99.62	105.70
1	AA	1191	C	N1-C2-O2	-6.76	114.84	118.90
1	AA	2043	C	N1-C2-O2	-6.76	114.84	118.90
1	CA	2782	G	C6-C5-N7	-6.76	126.34	130.40
1	AA	21	A	OP2-P-O3'	6.76	120.06	105.20
1	AA	2577	A	C5-C6-N6	-6.76	118.30	123.70
1	AA	2881	C	N3-C4-C5	6.76	124.60	121.90
34	BA	785	G	N3-C2-N2	-6.76	115.17	119.90
1	AA	2856	G	N3-C2-N2	-6.75	115.17	119.90
1	CA	1773	A	N1-C6-N6	6.75	122.65	118.60
1	AA	2286	A	C4-C5-N7	-6.75	107.33	110.70
1	AA	2551	C	N1-C2-N3	6.75	123.93	119.20
1	AA	1728	G	C6-C5-N7	-6.75	126.35	130.40
1	AA	2772	G	N1-C2-N2	6.75	122.27	116.20
1	AA	1816	A	C5-N7-C8	-6.75	100.53	103.90
1	AA	2260	C	O5'-P-OP1	-6.75	99.63	105.70
1	AA	1374	G	N3-C4-N9	6.75	130.05	126.00
1	AA	2035	A	N9-C4-C5	-6.75	103.10	105.80
1	AA	2802	C	C6-N1-C1'	6.75	128.89	120.80
1	CA	945	A	C6-N1-C2	6.75	122.65	118.60
1	AA	552	C	N3-C4-N4	-6.74	113.28	118.00
1	AA	1086	C	N1-C2-O2	6.74	122.95	118.90
1	AA	2757	G	N7-C8-N9	-6.74	109.73	113.10
1	AA	2028	C	C2-N3-C4	-6.74	116.53	119.90
1	AA	2757	G	C5-N7-C8	6.74	107.67	104.30
1	CA	2588	G	C5-C6-O6	6.74	132.64	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1339	C	N3-C4-N4	-6.74	113.28	118.00
1	AA	1649	A	C2-N3-C4	6.74	113.97	110.60
1	AA	1675	U	O5'-P-OP1	-6.74	99.64	105.70
1	AA	2449	U	C2-N3-C4	-6.74	122.96	127.00
1	AA	204	G	C5-C6-N1	-6.74	108.13	111.50
1	AA	478	G	C2-N3-C4	6.74	115.27	111.90
1	AA	2089	G	C2-N3-C4	6.73	115.27	111.90
1	AA	479	C	C5-C6-N1	-6.73	117.63	121.00
1	AA	2080	A	C5-N7-C8	6.73	107.27	103.90
1	AA	2830	A	C2-N3-C4	-6.73	107.23	110.60
1	CA	748	G	C6-C5-N7	6.73	134.44	130.40
1	AA	34	C	OP1-P-O3'	6.73	120.00	105.20
1	AA	590	A	C5-N7-C8	-6.73	100.54	103.90
1	AA	789	G	N1-C2-N2	-6.73	110.14	116.20
1	AA	1602	G	C4-N9-C1'	6.73	135.25	126.50
1	AA	1818	A	N9-C4-C5	-6.73	103.11	105.80
1	AA	2375	C	C5-C6-N1	-6.72	117.64	121.00
1	AA	2551	C	C5-C6-N1	-6.72	117.64	121.00
1	CA	469	G	N3-C4-C5	-6.72	125.24	128.60
1	AA	30	G	C8-N9-C4	6.72	109.09	106.40
1	AA	2499	G	N1-C6-O6	-6.72	115.87	119.90
2	AB	82	G	C4-C5-N7	-6.72	108.11	110.80
1	AA	1017	G	C5-C6-N1	6.72	114.86	111.50
1	CA	2076	U	O5'-P-OP2	-6.72	99.65	105.70
1	AA	1021	G	C6-N1-C2	6.72	129.13	125.10
1	AA	2456	G	C4-C5-N7	6.72	113.49	110.80
34	BA	1505	G	C6-N1-C2	6.72	129.13	125.10
1	AA	414	U	N3-C4-C5	-6.72	110.57	114.60
1	AA	2079	A	N1-C6-N6	-6.72	114.57	118.60
1	CA	216	A	O5'-P-OP2	-6.72	99.66	105.70
1	CA	613	G	N1-C6-O6	-6.72	115.87	119.90
1	CA	747	U	C2-N3-C4	-6.72	122.97	127.00
1	AA	1384	G	C6-N1-C2	-6.71	121.07	125.10
1	CA	2286	A	C2-N3-C4	-6.71	107.24	110.60
1	AA	1210	G	C4-C5-N7	-6.71	108.11	110.80
1	AA	1060	U	C6-N1-C2	-6.71	116.97	121.00
1	AA	2061	C	C5-C6-N1	-6.71	117.64	121.00
1	AA	194	G	C2-N3-C4	-6.71	108.55	111.90
1	AA	412	C	N1-C2-O2	-6.71	114.88	118.90
1	AA	424	G	C8-N9-C4	6.71	109.08	106.40
1	AA	786	G	N3-C2-N2	-6.71	115.20	119.90
1	AA	2023	A	N1-C6-N6	-6.71	114.58	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2802	C	C5-C6-N1	-6.71	117.65	121.00
1	AA	1462	G	O5'-P-OP2	-6.71	99.66	105.70
1	AA	2874	G	O5'-P-OP2	-6.71	99.67	105.70
1	AA	71	U	C2-N1-C1'	-6.70	109.66	117.70
1	AA	2001	C	C2-N3-C4	-6.70	116.55	119.90
1	AA	2227	G	C4-N9-C1'	-6.70	117.78	126.50
1	CA	2263	C	C6-N1-C2	6.70	122.98	120.30
1	CA	2659	G	N1-C6-O6	-6.70	115.88	119.90
1	CA	528	A	C5-N7-C8	-6.70	100.55	103.90
1	AA	2857	U	OP2-P-O3'	6.70	119.94	105.20
1	CA	1615	C	C5-C6-N1	6.70	124.35	121.00
1	AA	790	G	N1-C2-N2	-6.70	110.17	116.20
1	AA	2227	G	N3-C4-C5	6.70	131.95	128.60
1	CA	421	U	N3-C2-O2	6.70	126.89	122.20
1	CA	2235	G	C8-N9-C4	-6.70	103.72	106.40
1	AA	724	A	N9-C4-C5	6.70	108.48	105.80
1	AA	793	A	O4'-C1'-N9	6.70	113.56	108.20
1	AA	1641	G	N3-C2-N2	-6.70	115.21	119.90
1	CA	133	C	N3-C4-C5	6.69	124.58	121.90
1	AA	827	G	C6-N1-C2	-6.69	121.09	125.10
34	BA	1397	C	N3-C2-O2	-6.69	117.22	121.90
1	CA	568	U	C5-C4-O4	-6.69	121.89	125.90
1	CA	1903	G	C5-N7-C8	-6.69	100.95	104.30
1	AA	2655	G	N1-C6-O6	6.69	123.91	119.90
1	AA	575	G	C8-N9-C4	6.69	109.08	106.40
1	AA	750	U	N3-C2-O2	-6.69	117.52	122.20
1	AA	1946	C	N3-C4-C5	-6.69	119.22	121.90
1	AA	2265	G	N3-C4-C5	-6.69	125.26	128.60
34	BA	1429	C	C6-N1-C2	-6.69	117.63	120.30
1	CA	2048	G	C8-N9-C4	6.69	109.07	106.40
1	AA	868	A	N1-C6-N6	-6.68	114.59	118.60
1	AA	2839	C	OP2-P-O3'	6.68	119.91	105.20
1	AA	2035	A	C4-C5-N7	6.68	114.04	110.70
1	AA	2853	G	N9-C4-C5	-6.68	102.73	105.40
34	DA	884	U	C5-C6-N1	-6.68	119.36	122.70
1	AA	1076	G	OP1-P-OP2	6.68	129.62	119.60
1	AA	1658	C	C5-C4-N4	-6.68	115.53	120.20
1	AA	534	C	C5-C6-N1	-6.68	117.66	121.00
1	AA	2068	G	N3-C4-C5	6.68	131.94	128.60
2	AB	106	G	C5-C6-N1	6.68	114.84	111.50
1	AA	1345	G	N3-C2-N2	6.67	124.57	119.90
1	AA	1328	U	N1-C2-O2	-6.67	118.13	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2071	G	N1-C6-O6	6.67	123.90	119.90
1	AA	2608	U	C6-N1-C2	6.67	125.00	121.00
1	AA	2652	G	N1-C6-O6	-6.67	115.90	119.90
1	AA	712	C	C2-N3-C4	-6.67	116.56	119.90
1	AA	1635	C	N3-C4-C5	-6.67	119.23	121.90
1	CA	798	G	N3-C4-N9	-6.67	122.00	126.00
1	CA	824	A	N1-C6-N6	-6.67	114.60	118.60
1	AA	2355	C	C5-C4-N4	6.67	124.87	120.20
1	AA	531	G	C6-N1-C2	6.67	129.10	125.10
1	AA	869	U	OP1-P-OP2	-6.67	109.60	119.60
34	BA	1397	C	C6-N1-C2	-6.67	117.63	120.30
1	CA	1596	A	C5-C6-N6	6.67	129.03	123.70
1	AA	950	C	C6-N1-C2	-6.66	117.64	120.30
1	AA	1055	A	C5-C6-N6	-6.66	118.37	123.70
1	CA	1558	A	C2-N3-C4	-6.66	107.27	110.60
1	CA	2755	C	C5-C6-N1	6.66	124.33	121.00
1	AA	56	C	C5-C6-N1	6.66	124.33	121.00
1	AA	2749	G	N7-C8-N9	-6.66	109.77	113.10
1	AA	2835	C	N3-C2-O2	-6.66	117.24	121.90
1	CA	1394	U	O5'-P-OP2	6.66	118.69	110.70
1	CA	2630	G	C4-C5-N7	6.66	113.46	110.80
34	BA	898	G	C5-C6-O6	-6.66	124.61	128.60
1	CA	97	C	C6-N1-C2	6.66	122.96	120.30
1	AA	1057	G	O5'-P-OP2	-6.66	99.71	105.70
6	AF	54	ARG	NE-CZ-NH2	-6.66	116.97	120.30
1	AA	776	G	C5-N7-C8	-6.65	100.97	104.30
1	AA	2571	C	N3-C4-N4	-6.65	113.34	118.00
1	AA	1081	U	C2-N3-C4	-6.65	123.01	127.00
1	AA	1319	U	C5-C6-N1	6.65	126.03	122.70
1	AA	2470	G	C4-C5-N7	-6.65	108.14	110.80
1	AA	2826	C	C6-N1-C2	-6.65	117.64	120.30
1	CA	2596	U	C5-C4-O4	6.65	129.89	125.90
1	AA	2288	G	C4-C5-N7	-6.65	108.14	110.80
1	AA	2791	A	O5'-P-OP1	6.65	118.68	110.70
1	CA	2552	U	C2-N1-C1'	-6.65	109.72	117.70
1	AA	1006	C	C2-N1-C1'	-6.65	111.49	118.80
1	AA	1790	A	N9-C4-C5	-6.65	103.14	105.80
1	AA	2060	G	O4'-C1'-N9	6.65	113.52	108.20
1	CA	307	G	O5'-P-OP2	-6.65	99.72	105.70
1	CA	672	C	N3-C4-N4	-6.65	113.35	118.00
1	CA	1789	A	C6-N1-C2	-6.65	114.61	118.60
1	AA	886	U	N3-C4-O4	-6.65	114.75	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2026	G	C8-N9-C4	6.65	109.06	106.40
1	AA	2609	G	C5-C6-O6	-6.65	124.61	128.60
1	AA	2475	C	N1-C2-O2	6.64	122.89	118.90
1	CA	1646	C	N1-C2-O2	6.64	122.89	118.90
34	DA	1383	C	C6-N1-C2	-6.64	117.64	120.30
1	AA	718	C	OP2-P-O3'	6.64	119.81	105.20
1	AA	819	C	N1-C2-O2	-6.64	114.91	118.90
1	AA	1623	U	OP2-P-O3'	6.64	119.81	105.20
34	DA	282	A	O5'-P-OP1	-6.64	99.72	105.70
1	AA	305	G	N3-C4-N9	-6.64	122.02	126.00
1	CA	809	G	N3-C4-N9	-6.64	122.02	126.00
1	CA	676	A	C2-N3-C4	-6.64	107.28	110.60
1	AA	1790	A	C8-N9-C4	6.64	108.45	105.80
1	AA	456	A	C4-C5-N7	6.63	114.02	110.70
1	AA	709	G	OP2-P-O3'	6.63	119.79	105.20
1	AA	1232	G	N3-C2-N2	6.63	124.54	119.90
1	AA	2354	C	OP1-P-OP2	-6.63	109.65	119.60
1	AA	2717	A	C5-C6-N6	-6.63	118.39	123.70
1	CA	832	G	N1-C6-O6	6.63	123.88	119.90
1	CA	2829	C	C6-N1-C2	6.63	122.95	120.30
1	AA	239	G	C2-N3-C4	6.63	115.22	111.90
34	DA	266	G	C4-C5-N7	6.63	113.45	110.80
1	AA	884	C	N1-C2-O2	6.63	122.88	118.90
1	AA	1235	G	C8-N9-C4	6.63	109.05	106.40
1	AA	1526	G	N3-C4-C5	6.63	131.91	128.60
34	DA	231	G	C5-C6-N1	-6.63	108.18	111.50
1	AA	239	G	C5-C6-N1	6.63	114.81	111.50
1	CA	2247	A	C8-N9-C4	6.63	108.45	105.80
1	AA	12	U	N3-C2-O2	-6.63	117.56	122.20
1	AA	888	A	O5'-P-OP2	-6.63	99.73	105.70
1	AA	2534	U	C5-C4-O4	-6.63	121.92	125.90
1	AA	2641	A	N1-C6-N6	6.63	122.58	118.60
1	AA	434	G	C4-N9-C1'	6.63	135.12	126.50
1	AA	2393	C	N3-C2-O2	-6.63	117.26	121.90
1	AA	1057	G	C5-C6-O6	-6.62	124.62	128.60
1	AA	2833	A	N7-C8-N9	-6.62	110.49	113.80
1	AA	1388	A	C6-N1-C2	-6.62	114.62	118.60
1	AA	1473	A	N1-C6-N6	-6.62	114.63	118.60
1	AA	2653	G	O5'-P-OP1	-6.62	99.74	105.70
34	BA	801	U	C5-C6-N1	-6.62	119.39	122.70
1	CA	577	G	N9-C4-C5	-6.62	102.75	105.40
1	AA	738	C	N1-C2-O2	6.62	122.87	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2358	A	N1-C6-N6	6.62	122.57	118.60
1	AA	2709	G	N1-C6-O6	6.62	123.87	119.90
1	AA	411	U	OP1-P-OP2	6.62	129.53	119.60
1	AA	2358	A	C6-N1-C2	6.62	122.57	118.60
34	BA	1406	U	C5-C6-N1	-6.62	119.39	122.70
1	AA	1278	G	N3-C4-N9	-6.62	122.03	126.00
1	AA	1599	G	N1-C6-O6	6.62	123.87	119.90
34	BA	1384	C	C6-N1-C2	-6.62	117.65	120.30
34	DA	556	C	C6-N1-C2	6.62	122.95	120.30
1	AA	1684	A	C5-C6-N1	-6.62	114.39	117.70
1	AA	2009	G	N1-C6-O6	6.62	123.87	119.90
1	AA	2557	G	C5-C6-O6	6.62	132.57	128.60
1	CA	2824	C	O5'-P-OP2	-6.62	99.75	105.70
1	CA	1761	C	C5-C6-N1	-6.61	117.69	121.00
1	AA	1335	C	C2-N3-C4	-6.61	116.59	119.90
1	AA	517	A	N1-C6-N6	-6.61	114.63	118.60
1	AA	555	G	C6-N1-C2	6.61	129.07	125.10
1	AA	773	G	C8-N9-C4	6.61	109.04	106.40
1	AA	856	G	N3-C2-N2	6.61	124.53	119.90
1	AA	2017	U	C5-C6-N1	-6.61	119.39	122.70
1	AA	2703	C	C2-N3-C4	-6.61	116.59	119.90
2	AB	22	U	N1-C2-O2	6.61	127.43	122.80
1	AA	1757	C	N1-C2-O2	-6.61	114.94	118.90
1	AA	1819	C	O5'-P-OP1	-6.61	99.75	105.70
2	AB	100	A	N1-C2-N3	6.61	132.60	129.30
1	AA	1989	C	N3-C4-N4	-6.61	113.38	118.00
1	AA	2026	G	N1-C6-O6	6.61	123.86	119.90
1	AA	2688	C	N1-C2-O2	6.60	122.86	118.90
1	CA	2062	A	C8-N9-C4	-6.60	103.16	105.80
1	CA	2064	C	C6-N1-C2	-6.60	117.66	120.30
1	AA	2033	U	OP1-P-OP2	-6.60	109.70	119.60
1	AA	2258	G	C5-C6-O6	-6.60	124.64	128.60
1	AA	2852	G	C8-N9-C4	-6.60	103.76	106.40
1	AA	2272	C	C4-C5-C6	6.60	120.70	117.40
1	CA	2437	U	OP2-P-O3'	6.60	119.72	105.20
1	AA	1440	U	N3-C2-O2	-6.60	117.58	122.20
1	AA	821	A	C8-N9-C4	-6.59	103.16	105.80
1	AA	204	G	N1-C6-O6	6.59	123.86	119.90
1	AA	421	A	N1-C6-N6	-6.59	114.64	118.60
1	AA	1869	C	O5'-P-OP2	-6.59	99.77	105.70
1	AA	2895	C	C5-C4-N4	-6.59	115.59	120.20
2	AB	1	U	N1-C2-O2	6.59	127.41	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1058	U	C6-N1-C2	6.59	124.95	121.00
1	AA	111	G	N3-C4-N9	-6.59	122.05	126.00
1	AA	1745	A	N9-C1'-C2'	6.59	122.56	114.00
1	AA	2578	A	O5'-P-OP2	-6.59	99.77	105.70
1	AA	1295	U	O5'-P-OP1	-6.59	99.77	105.70
1	AA	2092	G	N7-C8-N9	-6.59	109.81	113.10
1	AA	2355	C	N1-C2-O2	-6.59	114.95	118.90
1	AA	2738	A	C2-N3-C4	-6.59	107.31	110.60
34	BA	1081	G	N1-C6-O6	-6.59	115.95	119.90
1	CA	515	A	O5'-P-OP2	-6.59	99.77	105.70
1	AA	1474	C	C6-N1-C2	-6.58	117.67	120.30
34	BA	1527	C	N1-C2-O2	-6.58	114.95	118.90
1	CA	330	A	C5-N7-C8	-6.58	100.61	103.90
1	AA	194	G	N1-C6-O6	6.58	123.85	119.90
1	AA	446	C	N3-C4-C5	6.58	124.53	121.90
1	AA	526	A	C8-N9-C4	-6.58	103.17	105.80
1	AA	2428	C	C2-N1-C1'	6.58	126.04	118.80
2	AB	4	C	N1-C2-O2	-6.58	114.95	118.90
1	CA	50	U	C5-C4-O4	-6.58	121.95	125.90
1	AA	1729	G	OP1-P-O3'	-6.58	90.73	105.20
1	AA	2623	U	N3-C2-O2	6.58	126.81	122.20
1	AA	2643	G	C4-C5-N7	-6.58	108.17	110.80
34	BA	311	C	N1-C2-O2	6.58	122.85	118.90
1	AA	202	A	N1-C6-N6	-6.58	114.66	118.60
1	AA	1021	G	OP1-P-OP2	6.58	129.46	119.60
1	AA	1392	G	C5-C6-O6	6.58	132.55	128.60
1	CA	1668	A	N1-C6-N6	6.58	122.55	118.60
1	CA	1772	G	O5'-P-OP1	-6.58	99.78	105.70
1	AA	19	C	N1-C2-O2	6.57	122.84	118.90
1	AA	979	G	C4-C5-N7	-6.57	108.17	110.80
1	AA	1660	A	N1-C2-N3	-6.57	126.01	129.30
1	CA	150	C	N3-C2-O2	-6.57	117.30	121.90
1	CA	512	G	C5-C6-O6	6.57	132.54	128.60
1	AA	1620	G	N3-C4-N9	6.57	129.94	126.00
1	CA	448	U	OP1-P-O3'	-6.57	90.75	105.20
1	CA	671	C	N3-C4-C5	-6.57	119.27	121.90
1	AA	830	A	N3-C4-N9	6.57	132.66	127.40
1	AA	1075	A	OP1-P-OP2	-6.57	109.75	119.60
1	AA	1855	G	N9-C4-C5	6.57	108.03	105.40
1	AA	2842	U	C6-N1-C2	6.57	124.94	121.00
1	AA	407	U	C5-C4-O4	6.57	129.84	125.90
1	CA	1987	G	N7-C8-N9	-6.57	109.82	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	24	G	N1-C6-O6	6.57	123.84	119.90
1	AA	2013	U	C5-C4-O4	-6.57	121.96	125.90
1	CA	51	G	N9-C4-C5	6.57	108.03	105.40
1	CA	2360	A	C8-N9-C4	6.56	108.43	105.80
1	AA	354	A	C5-N7-C8	-6.56	100.62	103.90
1	AA	2099	A	C6-N1-C2	-6.56	114.66	118.60
1	AA	2464	C	N3-C2-O2	6.56	126.49	121.90
2	AB	94	C	C5-C4-N4	6.56	124.79	120.20
1	AA	1487	G	N1-C2-N2	6.56	122.11	116.20
1	CA	2452	C	N3-C4-C5	-6.56	119.28	121.90
1	AA	1249	A	N1-C6-N6	6.56	122.53	118.60
1	AA	1616	A	C6-N1-C2	6.56	122.54	118.60
34	BA	836	G	N1-C6-O6	6.56	123.84	119.90
1	AA	602	G	C2-N3-C4	6.56	115.18	111.90
1	AA	603	C	C4-C5-C6	6.56	120.68	117.40
1	AA	2092	G	C8-N9-C4	6.56	109.02	106.40
2	AB	82	G	N1-C6-O6	-6.56	115.97	119.90
1	CA	2289	G	C5-C6-O6	-6.56	124.67	128.60
1	CA	463	G	C5-C6-O6	6.56	132.53	128.60
1	AA	255	G	N1-C6-O6	6.55	123.83	119.90
1	AA	1077	G	N1-C6-O6	-6.55	115.97	119.90
1	AA	1317	G	N1-C6-O6	6.55	123.83	119.90
34	BA	558	G	O5'-P-OP1	-6.55	99.80	105.70
1	CA	588	U	O5'-P-OP2	-6.55	99.80	105.70
1	AA	255	G	N9-C4-C5	-6.55	102.78	105.40
1	AA	1365	G	N7-C8-N9	6.55	116.38	113.10
1	AA	2092	G	N3-C2-N2	6.55	124.48	119.90
21	AX	57	LEU	CA-CB-CG	6.55	130.37	115.30
1	AA	1741	C	C5-C6-N1	-6.55	117.72	121.00
1	AA	1655	A	N7-C8-N9	-6.55	110.53	113.80
1	AA	2731	G	N1-C2-N3	-6.55	119.97	123.90
1	AA	44	G	N9-C4-C5	6.55	108.02	105.40
1	AA	856	G	C6-C5-N7	6.55	134.33	130.40
1	AA	862	C	C2-N3-C4	6.55	123.17	119.90
1	AA	2090	U	OP1-P-OP2	6.55	129.42	119.60
1	AA	2434	A	C8-N9-C4	-6.54	103.18	105.80
1	CA	390	A	N9-C4-C5	-6.54	103.18	105.80
1	AA	1848	G	N9-C4-C5	-6.54	102.78	105.40
1	AA	2102	G	C8-N9-C4	6.54	109.02	106.40
1	AA	2282	G	N1-C2-N3	-6.54	119.97	123.90
1	AA	2386	C	C5-C6-N1	-6.54	117.73	121.00
1	AA	2715	C	N3-C4-C5	-6.54	119.28	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2732	G	C8-N9-C4	6.54	109.02	106.40
1	CA	2058	A	OP2-P-O3'	6.54	119.60	105.20
1	AA	1037	C	C2-N3-C4	-6.54	116.63	119.90
1	AA	1658	C	N3-C4-N4	6.54	122.58	118.00
1	AA	2550	C	C5-C4-N4	-6.54	115.62	120.20
1	AA	1863	C	N1-C2-O2	-6.54	114.98	118.90
1	AA	2579	G	N1-C6-O6	-6.54	115.98	119.90
2	AB	80	U	O5'-P-OP1	-6.54	99.81	105.70
1	AA	630	U	N3-C2-O2	6.54	126.78	122.20
1	AA	726	C	C4-C5-C6	-6.54	114.13	117.40
1	AA	870	G	C5-C6-O6	6.54	132.52	128.60
1	AA	1924	C	C4-C5-C6	6.54	120.67	117.40
1	AA	1314	A	OP1-P-OP2	-6.54	109.79	119.60
34	DA	1485	U	N3-C4-O4	-6.54	114.82	119.40
1	AA	790	G	C5-C6-O6	6.54	132.52	128.60
1	CA	33	U	N3-C2-O2	-6.54	117.63	122.20
1	AA	1700	G	C6-N1-C2	-6.53	121.18	125.10
1	AA	2848	G	N3-C4-C5	-6.53	125.33	128.60
1	AA	984	G	C8-N9-C4	-6.53	103.79	106.40
1	AA	1729	G	C4-C5-N7	6.53	113.41	110.80
1	AA	335	A	N3-C4-C5	-6.53	122.23	126.80
1	AA	972	A	C8-N9-C4	6.53	108.41	105.80
1	AA	1294	G	OP1-P-O3'	6.53	119.57	105.20
1	AA	1442	U	N1-C2-O2	6.53	127.37	122.80
1	AA	792	G	N7-C8-N9	-6.53	109.84	113.10
1	AA	1862	G	OP2-P-O3'	6.53	119.56	105.20
1	CA	1258	C	C5-C4-N4	6.53	124.77	120.20
1	AA	775	G	N1-C6-O6	6.53	123.81	119.90
1	CA	1648	C	N1-C2-O2	-6.53	114.98	118.90
34	BA	900	A	N1-C6-N6	6.52	122.51	118.60
1	CA	1380	G	O5'-P-OP2	-6.52	99.83	105.70
1	AA	348	A	O5'-P-OP1	6.52	118.52	110.70
1	AA	407	U	C2-N3-C4	-6.52	123.09	127.00
1	AA	2512	U	N1-C2-O2	-6.52	118.24	122.80
1	AA	1605	A	C6-C5-N7	-6.52	127.74	132.30
1	AA	2796	G	N3-C2-N2	6.52	124.46	119.90
34	BA	564	C	C2-N3-C4	6.52	123.16	119.90
34	DA	667	G	O5'-P-OP2	-6.52	99.83	105.70
1	AA	340	C	C2-N1-C1'	-6.52	111.63	118.80
1	AA	355	A	C8-N9-C4	6.52	108.41	105.80
1	AA	2732	G	C5-C6-O6	-6.52	124.69	128.60
1	CA	1794	U	N1-C2-N3	6.52	118.81	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	33	U	O5'-P-OP1	-6.51	99.84	105.70
1	AA	2045	G	C6-N1-C2	-6.51	121.19	125.10
1	AA	2380	C	N3-C2-O2	-6.51	117.34	121.90
23	AZ	49	ARG	NE-CZ-NH1	6.51	123.56	120.30
34	DA	739	C	N3-C4-C5	-6.51	119.29	121.90
1	AA	2016	C	O5'-P-OP2	-6.51	99.84	105.70
1	AA	2445	A	N1-C6-N6	-6.51	114.69	118.60
1	AA	735	U	N3-C2-O2	6.51	126.76	122.20
1	AA	1432	C	O5'-P-OP2	-6.51	99.84	105.70
1	AA	2052	A	C6-N1-C2	-6.51	114.69	118.60
1	AA	2797	C	N3-C2-O2	-6.51	117.34	121.90
1	CA	79	G	N3-C4-N9	-6.51	122.09	126.00
1	CA	2095	C	C6-N1-C2	-6.51	117.70	120.30
1	AA	2574	U	N1-C2-N3	6.51	118.81	114.90
1	AA	2728	C	C6-N1-C2	-6.51	117.70	120.30
1	CA	2773	C	N1-C2-O2	-6.51	114.99	118.90
34	DA	1417	G	C8-N9-C4	6.51	109.00	106.40
1	AA	974	G	C6-C5-N7	-6.51	126.50	130.40
1	AA	2564	U	N3-C4-C5	6.51	118.50	114.60
1	AA	24	G	C4-C5-N7	6.51	113.40	110.80
1	AA	556	C	N1-C2-O2	-6.51	115.00	118.90
1	AA	2005	C	C4-C5-C6	-6.51	114.15	117.40
1	AA	2066	C	C2-N3-C4	-6.51	116.65	119.90
1	AA	2255	U	O4'-C1'-N1	6.51	113.41	108.20
1	AA	291	G	N9-C4-C5	-6.50	102.80	105.40
1	AA	2101	U	C5-C6-N1	-6.50	119.45	122.70
1	AA	28	A	C5-N7-C8	6.50	107.15	103.90
1	AA	552	C	C5-C4-N4	6.50	124.75	120.20
1	AA	608	G	C5-C6-N1	6.50	114.75	111.50
1	AA	1294	G	C8-N9-C4	6.50	109.00	106.40
1	AA	1808	U	N3-C4-O4	-6.50	114.85	119.40
1	AA	2077	C	OP1-P-O3'	6.50	119.51	105.20
1	AA	2244	U	C5-C4-O4	6.50	129.80	125.90
34	BA	304	U	C5-C4-O4	6.50	129.80	125.90
1	CA	2633	G	C8-N9-C4	6.50	109.00	106.40
1	AA	463	C	C6-N1-C2	-6.50	117.70	120.30
1	CA	1202	C	C6-N1-C2	6.50	122.90	120.30
1	CA	1214	A	N7-C8-N9	-6.50	110.55	113.80
34	DA	1415	G	N1-C6-O6	-6.50	116.00	119.90
1	AA	494	G	N1-C2-N2	-6.50	110.35	116.20
1	AA	591	U	N3-C4-O4	-6.50	114.85	119.40
1	AA	1329	G	N1-C2-N2	-6.50	110.35	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	881	C	C2-N3-C4	-6.50	116.65	119.90
34	DA	115	G	O5'-P-OP2	-6.50	99.85	105.70
34	DA	913	A	P-O3'-C3'	6.50	127.50	119.70
1	AA	742	G	N1-C6-O6	-6.49	116.00	119.90
1	AA	1398	U	OP1-P-OP2	-6.49	109.86	119.60
1	AA	2743	C	N1-C2-O2	-6.49	115.00	118.90
34	DA	818	G	C8-N9-C4	-6.49	103.80	106.40
34	DA	1486	G	C5-C6-O6	-6.49	124.70	128.60
1	CA	1384	A	C8-N9-C4	-6.49	103.20	105.80
1	AA	496	A	OP1-P-OP2	6.49	129.34	119.60
1	AA	1298	G	C5-C6-N1	6.49	114.75	111.50
1	AA	1605	A	C8-N9-C4	-6.49	103.20	105.80
1	AA	2716	C	N3-C4-C5	-6.49	119.30	121.90
34	DA	832	C	C6-N1-C2	-6.49	117.70	120.30
1	AA	507	G	O5'-P-OP2	-6.49	99.86	105.70
1	AA	914	C	N3-C2-O2	6.49	126.44	121.90
1	AA	2731	G	OP1-P-OP2	6.49	129.33	119.60
1	CA	2627	G	O5'-P-OP2	6.49	118.48	110.70
1	AA	877	G	N1-C6-O6	6.49	123.79	119.90
1	AA	988	U	C5-C6-N1	-6.49	119.46	122.70
1	AA	1920	U	N1-C2-O2	6.49	127.34	122.80
1	AA	2302	G	N3-C4-C5	6.49	131.84	128.60
1	AA	8	A	O5'-P-OP2	6.49	118.48	110.70
1	AA	467	U	C6-N1-C2	6.49	124.89	121.00
1	AA	894	U	C4-C5-C6	6.49	123.59	119.70
1	CA	1030	G	C6-C5-N7	-6.49	126.51	130.40
1	AA	1869	C	N3-C2-O2	6.48	126.44	121.90
1	AA	2585	C	N3-C4-N4	-6.48	113.46	118.00
34	BA	365	U	C5-C4-O4	6.48	129.79	125.90
1	CA	482	A	C8-N9-C4	6.48	108.39	105.80
1	AA	993	G	N3-C4-C5	6.48	131.84	128.60
1	AA	1195	G	N7-C8-N9	6.48	116.34	113.10
2	AB	105	A	C8-N9-C4	-6.48	103.21	105.80
34	BA	528	C	N3-C4-C5	6.48	124.49	121.90
34	BA	895	G	O5'-P-OP2	-6.48	99.87	105.70
1	AA	345	G	C5-C6-N1	6.48	114.74	111.50
1	AA	1343	C	O5'-P-OP1	6.48	118.48	110.70
1	AA	69	G	N3-C2-N2	6.48	124.44	119.90
1	AA	139	A	C6-C5-N7	-6.48	127.77	132.30
1	AA	483	A	C5-C6-N1	6.48	120.94	117.70
1	AA	751	G	N9-C4-C5	6.48	107.99	105.40
1	AA	1060	U	C5-C4-O4	6.48	129.79	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2591	C	C5-C4-N4	-6.48	115.67	120.20
1	CA	254	G	C5-C6-O6	6.48	132.49	128.60
1	CA	987	G	N3-C4-C5	6.48	131.84	128.60
1	CA	2785	C	C6-N1-C2	-6.48	117.71	120.30
1	AA	2065	C	O5'-P-OP2	6.48	118.47	110.70
34	DA	284	G	O5'-P-OP2	-6.48	99.87	105.70
1	AA	802	C	C2-N3-C4	-6.47	116.66	119.90
1	AA	878	G	C2-N3-C4	-6.47	108.66	111.90
1	AA	1370	G	OP1-P-O3'	6.47	119.44	105.20
1	AA	1544	C	C6-N1-C2	-6.47	117.71	120.30
1	AA	2393	C	C2-N1-C1'	6.47	125.92	118.80
2	AB	95	C	C5-C6-N1	-6.47	117.76	121.00
1	AA	783	C	N3-C4-C5	6.47	124.49	121.90
1	AA	909	G	N3-C4-C5	-6.47	125.36	128.60
1	AA	1722	C	C6-N1-C2	6.47	122.89	120.30
1	AA	2098	U	O5'-P-OP2	-6.47	99.87	105.70
17	AT	118	ARG	NE-CZ-NH1	6.47	123.54	120.30
1	CA	972	G	N1-C6-O6	-6.47	116.02	119.90
34	DA	903	G	C2-N3-C4	-6.47	108.66	111.90
1	AA	1745	A	C4-C5-N7	6.47	113.94	110.70
1	AA	1824	C	N1-C2-O2	6.47	122.78	118.90
1	AA	2427	G	C4-C5-N7	6.47	113.39	110.80
2	AB	111	G	N3-C4-C5	-6.47	125.36	128.60
34	BA	328	C	C2-N1-C1'	-6.47	111.68	118.80
1	AA	2045	G	C5-C6-O6	-6.47	124.72	128.60
1	CA	25	U	N1-C2-O2	-6.47	118.27	122.80
1	AA	985	G	N3-C2-N2	6.47	124.43	119.90
1	AA	1431	G	N3-C2-N2	-6.47	115.37	119.90
1	AA	1700	G	N9-C4-C5	6.47	107.99	105.40
1	AA	1939	U	N3-C2-O2	-6.47	117.67	122.20
1	CA	582	G	N1-C6-O6	-6.47	116.02	119.90
1	AA	1814	A	C5-C6-N1	-6.46	114.47	117.70
1	AA	1978	U	N3-C4-C5	6.46	118.48	114.60
1	AA	2656	G	N3-C4-C5	6.46	131.83	128.60
1	CA	2351	G	N3-C4-C5	-6.46	125.37	128.60
1	AA	2049	G	C4-C5-N7	-6.46	108.22	110.80
1	CA	208	C	O5'-P-OP2	-6.46	99.88	105.70
1	AA	755	C	C5-C6-N1	6.46	124.23	121.00
1	AA	1378	G	O5'-P-OP1	-6.46	99.88	105.70
1	AA	2494	G	N1-C6-O6	6.46	123.78	119.90
1	CA	1204	A	O4'-C1'-N9	6.46	113.37	108.20
1	AA	483	A	C2-N3-C4	6.46	113.83	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1654	A	C8-N9-C4	6.46	108.38	105.80
1	AA	2466	G	C6-N1-C2	-6.46	121.22	125.10
1	AA	2778	A	N9-C4-C5	-6.46	103.22	105.80
1	CA	2559	C	C6-N1-C2	6.46	122.88	120.30
1	AA	704	U	N3-C4-C5	6.46	118.47	114.60
1	AA	2298	A	C4-C5-N7	6.46	113.93	110.70
1	AA	2743	C	C5-C6-N1	-6.46	117.77	121.00
1	CA	2689	U	C6-N1-C2	-6.46	117.12	121.00
1	AA	1068	G	N3-C4-C5	6.46	131.83	128.60
1	AA	1375	U	C5-C4-O4	6.46	129.77	125.90
1	AA	1636	U	C5-C6-N1	-6.46	119.47	122.70
1	CA	152	G	N3-C4-C5	6.46	131.83	128.60
1	CA	716	A	C8-N9-C4	-6.46	103.22	105.80
1	AA	976	G	C4-C5-N7	-6.46	108.22	110.80
1	AA	2698	G	OP1-P-OP2	6.46	129.28	119.60
1	AA	616	G	N3-C2-N2	6.45	124.42	119.90
1	AA	796	C	C5-C4-N4	-6.45	115.68	120.20
1	AA	2391	G	N3-C4-C5	-6.45	125.37	128.60
1	AA	1469	G	C5-C6-O6	-6.45	124.73	128.60
34	BA	770	C	N3-C4-C5	-6.45	119.32	121.90
1	AA	206	G	C5-C6-N1	-6.45	108.28	111.50
1	AA	1268	C	C6-N1-C2	-6.45	117.72	120.30
1	AA	2253	A	N9-C4-C5	6.45	108.38	105.80
1	AA	2641	A	N9-C1'-C2'	6.45	122.38	114.00
1	AA	2875	U	O5'-P-OP1	-6.45	99.89	105.70
1	AA	1377	A	OP2-P-O3'	6.45	119.39	105.20
1	AA	1746	G	O4'-C1'-N9	-6.45	103.04	108.20
1	CA	393	C	N1-C2-O2	-6.45	115.03	118.90
1	CA	2265	U	N1-C2-N3	6.45	118.77	114.90
1	AA	508	A	N1-C6-N6	6.45	122.47	118.60
1	AA	957	A	C5-C6-N6	6.45	128.86	123.70
1	AA	1370	G	N1-C2-N3	6.45	127.77	123.90
1	AA	2265	G	N7-C8-N9	-6.45	109.88	113.10
34	BA	913	A	P-O3'-C3'	6.45	127.44	119.70
1	CA	330	A	C5-C6-N6	-6.45	118.54	123.70
1	CA	2050	C	N3-C4-N4	6.45	122.51	118.00
1	CA	2465	C	C6-N1-C2	6.45	122.88	120.30
1	AA	1029	A	C6-N1-C2	6.44	122.47	118.60
1	AA	2743	C	C6-N1-C2	6.44	122.88	120.30
1	AA	485	U	C5-C6-N1	6.44	125.92	122.70
34	BA	283	C	C2-N3-C4	6.44	123.12	119.90
1	CA	1798	U	C5-C6-N1	-6.44	119.48	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2275	C	OP1-P-O3'	6.44	119.37	105.20
1	AA	2266	C	C2-N3-C4	-6.44	116.68	119.90
34	BA	876	G	C6-C5-N7	-6.44	126.54	130.40
1	AA	496	A	O5'-P-OP1	-6.44	99.91	105.70
1	AA	1414	G	C8-N9-C4	6.44	108.97	106.40
1	AA	2731	G	N1-C6-O6	-6.44	116.04	119.90
1	AA	2858	G	N9-C4-C5	6.44	107.97	105.40
1	CA	1614	A	O5'-P-OP1	-6.44	99.91	105.70
1	AA	64	C	N1-C2-O2	6.44	122.76	118.90
1	AA	494	G	OP2-P-O3'	6.44	119.36	105.20
1	AA	1020	C	O5'-P-OP1	-6.43	99.91	105.70
1	AA	1418	U	N3-C4-O4	6.43	123.90	119.40
1	AA	536	U	C6-N1-C1'	-6.43	112.19	121.20
1	CA	433	C	N3-C4-C5	6.43	124.47	121.90
1	AA	2516	U	N1-C2-N3	6.43	118.76	114.90
1	CA	316	C	O5'-P-OP2	6.43	118.42	110.70
34	DA	365	U	C2-N1-C1'	-6.43	109.98	117.70
34	DA	618	C	C6-N1-C2	-6.43	117.73	120.30
1	AA	2883	A	N9-C4-C5	6.43	108.37	105.80
1	AA	560	C	C6-N1-C2	6.42	122.87	120.30
1	AA	1383	G	C2-N3-C4	6.42	115.11	111.90
1	AA	1620	G	N9-C4-C5	-6.42	102.83	105.40
1	AA	2655	G	C2-N3-C4	-6.42	108.69	111.90
1	CA	1969	A	O5'-P-OP1	6.42	118.41	110.70
34	DA	733	A	N9-C4-C5	-6.42	103.23	105.80
1	AA	2777	A	C5-C6-N6	-6.42	118.56	123.70
34	BA	644	G	C4-N9-C1'	-6.42	118.15	126.50
1	CA	2244	U	N1-C2-N3	6.42	118.75	114.90
1	AA	1054	C	C2-N3-C4	-6.42	116.69	119.90
1	AA	593	G	C4-C5-N7	6.42	113.37	110.80
1	AA	2573	A	C2-N3-C4	-6.42	107.39	110.60
31	A7	33	ARG	NE-CZ-NH1	-6.42	117.09	120.30
34	BA	811	C	N3-C4-C5	6.42	124.47	121.90
1	AA	1992	A	C8-N9-C4	6.42	108.37	105.80
1	CA	945	A	C5-C6-N6	-6.42	118.57	123.70
1	CA	2054	A	N9-C4-C5	6.42	108.37	105.80
1	AA	1206	G	O5'-P-OP2	6.41	118.40	110.70
1	CA	2018	G	C6-N1-C2	6.41	128.95	125.10
1	AA	1385	G	N7-C8-N9	-6.41	109.89	113.10
34	DA	914	A	O5'-P-OP1	-6.41	99.93	105.70
1	AA	115	G	C5-C6-N1	6.41	114.70	111.50
1	AA	130	G	C4-C5-N7	-6.41	108.23	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	812	G	C6-N1-C2	6.41	128.95	125.10
1	AA	2065	C	N3-C4-N4	-6.41	113.51	118.00
1	AA	2082	A	C5-C6-N6	6.41	128.83	123.70
1	AA	2466	G	C4-C5-N7	-6.41	108.24	110.80
1	CA	1795	C	C6-N1-C2	6.41	122.86	120.30
1	AA	123	G	N1-C2-N2	6.41	121.97	116.20
1	AA	803	C	C4-C5-C6	6.41	120.61	117.40
1	AA	2064	A	O5'-P-OP2	-6.41	99.93	105.70
1	AA	2366	G	C5-C6-N1	-6.41	108.30	111.50
56	BX	40	C	N1-C2-O2	-6.41	115.05	118.90
1	CA	1460	A	O4'-C1'-N9	6.41	113.33	108.20
1	AA	815	G	N1-C6-O6	-6.41	116.06	119.90
1	CA	1841	U	C5-C6-N1	-6.41	119.50	122.70
1	AA	2261	U	C5-C4-O4	-6.40	122.06	125.90
1	AA	2572	C	N1-C2-O2	-6.40	115.06	118.90
1	AA	2739	U	C5-C6-N1	-6.40	119.50	122.70
1	AA	2099	A	C8-N9-C4	-6.40	103.24	105.80
1	CA	453	C	OP1-P-O3'	6.40	119.28	105.20
1	CA	2650	U	N3-C2-O2	-6.40	117.72	122.20
1	AA	2431	U	C2-N3-C4	-6.40	123.16	127.00
1	AA	1071	G	N3-C4-C5	-6.40	125.40	128.60
1	AA	2019	G	N7-C8-N9	-6.40	109.90	113.10
1	AA	2620	G	C5-C6-O6	-6.40	124.76	128.60
1	AA	549	U	C5-C6-N1	-6.39	119.50	122.70
1	AA	614	C	N3-C4-C5	6.39	124.46	121.90
1	AA	736	A	C5-N7-C8	6.39	107.10	103.90
1	AA	1625	U	O5'-P-OP1	6.39	118.37	110.70
1	AA	2601	A	N3-C4-N9	-6.39	122.28	127.40
1	AA	2654	G	C5-C6-O6	6.39	132.44	128.60
1	AA	2684	G	C4-C5-N7	6.39	113.36	110.80
1	CA	1968	G	N3-C2-N2	-6.39	115.42	119.90
1	AA	482	C	C6-N1-C2	6.39	122.86	120.30
1	AA	2249	G	N3-C2-N2	6.39	124.37	119.90
1	CA	1187	G	C5-C6-N1	6.39	114.70	111.50
1	AA	634	C	N3-C4-N4	-6.39	113.53	118.00
1	AA	1336	C	OP2-P-O3'	6.39	119.26	105.20
1	AA	2261	U	C6-N1-C2	6.39	124.83	121.00
1	AA	2282	G	C5-C6-N1	6.39	114.69	111.50
1	AA	2628	C	C5-C6-N1	6.39	124.19	121.00
1	CA	150	C	N1-C2-O2	6.39	122.73	118.90
1	CA	1671	U	C5-C6-N1	6.39	125.89	122.70
1	CA	2054	A	C8-N9-C4	-6.39	103.25	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2685	G	N1-C6-O6	-6.39	116.07	119.90
1	AA	829	A	C5-N7-C8	6.38	107.09	103.90
1	AA	1058	U	N3-C4-O4	6.38	123.87	119.40
1	CA	277	C	C6-N1-C2	-6.38	117.75	120.30
1	AA	168	G	O5'-P-OP1	6.38	118.36	110.70
1	AA	418	G	C6-N1-C2	-6.38	121.27	125.10
1	AA	1026	A	N3-C4-C5	6.38	131.27	126.80
1	AA	1589	A	N7-C8-N9	6.38	116.99	113.80
1	AA	1994	A	OP2-P-O3'	6.38	119.24	105.20
1	AA	2654	G	N1-C6-O6	-6.38	116.07	119.90
34	DA	1504	G	N3-C4-C5	6.38	131.79	128.60
1	AA	2776	G	C4-C5-N7	6.38	113.35	110.80
1	AA	197	C	N1-C2-O2	-6.38	115.07	118.90
1	AA	565	C	O5'-P-OP1	-6.38	99.96	105.70
1	AA	1700	G	C2-N3-C4	6.38	115.09	111.90
1	CA	2246	G	C8-N9-C4	6.38	108.95	106.40
34	DA	834	C	C6-N1-C2	6.38	122.85	120.30
1	AA	2653	G	C8-N9-C4	6.38	108.95	106.40
1	CA	2446	G	N3-C2-N2	6.38	124.36	119.90
1	AA	427	G	C6-C5-N7	-6.38	126.58	130.40
12	AO	81	ASP	CB-CG-OD2	6.38	124.04	118.30
1	AA	2654	G	N9-C1'-C2'	-6.37	104.99	112.00
1	CA	2057	A	C8-N9-C4	6.37	108.35	105.80
1	AA	885	C	N3-C2-O2	-6.37	117.44	121.90
1	AA	2729	U	N3-C2-O2	6.37	126.66	122.20
34	BA	291	C	C5-C6-N1	-6.37	117.81	121.00
34	DA	814	A	C4-C5-C6	6.37	120.19	117.00
1	CA	472	A	C8-N9-C4	-6.37	103.25	105.80
1	AA	127	C	OP1-P-OP2	6.37	129.15	119.60
1	AA	144	C	C6-N1-C2	-6.37	117.75	120.30
1	AA	1262	C	N3-C2-O2	6.37	126.36	121.90
1	AA	1700	G	P-O3'-C3'	6.37	127.34	119.70
1	AA	1818	A	C8-N9-C4	6.37	108.35	105.80
1	AA	2858	G	O5'-P-OP1	6.37	118.34	110.70
1	CA	70	G	N7-C8-N9	6.37	116.28	113.10
1	AA	539	A	N7-C8-N9	-6.37	110.62	113.80
1	AA	2335	G	C8-N9-C4	-6.37	103.85	106.40
1	AA	1711	A	C2-N3-C4	-6.37	107.42	110.60
1	AA	1979	C	C4-C5-C6	-6.37	114.22	117.40
20	AW	17	VAL	CB-CA-C	-6.37	99.31	111.40
34	DA	231	G	N1-C6-O6	6.37	123.72	119.90
1	AA	829	A	N7-C8-N9	-6.36	110.62	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1720	U	O4'-C1'-N1	6.36	113.29	108.20
1	AA	916	G	C5-C6-O6	6.36	132.42	128.60
1	AA	1660	A	C6-N1-C2	6.36	122.42	118.60
1	AA	1749	G	N1-C6-O6	-6.36	116.08	119.90
1	AA	517	A	C2-N3-C4	6.36	113.78	110.60
1	AA	908	A	C6-N1-C2	6.36	122.42	118.60
1	CA	2821	A	C2-N3-C4	-6.36	107.42	110.60
1	AA	336	G	N3-C4-C5	-6.36	125.42	128.60
1	AA	859	C	C5-C4-N4	-6.36	115.75	120.20
1	AA	874	U	O5'-P-OP2	-6.36	99.98	105.70
1	AA	2014	G	C2'-C3'-O3'	6.36	123.87	113.70
56	BX	9	G	N3-C4-C5	-6.36	125.42	128.60
1	AA	846	G	N1-C2-N2	-6.36	110.48	116.20
1	AA	2299	A	N9-C1'-C2'	-6.36	105.01	112.00
1	AA	2335	G	N3-C2-N2	-6.36	115.45	119.90
1	AA	2386	C	N1-C2-N3	6.36	123.65	119.20
1	CA	2630	G	N1-C6-O6	6.36	123.71	119.90
1	AA	583	C	C5-C4-N4	6.35	124.65	120.20
1	AA	1016	C	N1-C2-O2	-6.35	115.09	118.90
1	CA	392	C	N3-C4-C5	6.35	124.44	121.90
1	AA	910	A	C6-N1-C2	-6.35	114.79	118.60
1	AA	1735	U	OP2-P-O3'	6.35	119.17	105.20
34	BA	1517	G	N3-C2-N2	-6.35	115.45	119.90
1	CA	2580	U	O5'-P-OP1	-6.35	99.98	105.70
1	AA	64	C	C2-N1-C1'	6.35	125.78	118.80
1	AA	194	G	C6-N1-C2	6.35	128.91	125.10
1	AA	476	G	C5-N7-C8	-6.35	101.13	104.30
1	AA	1431	G	C8-N9-C4	6.35	108.94	106.40
1	AA	2630	G	O5'-P-OP2	-6.35	99.99	105.70
34	DA	596	C	N1-C2-O2	6.34	122.71	118.90
1	AA	1639	G	C5-N7-C8	6.34	107.47	104.30
34	BA	804	U	N3-C2-O2	6.34	126.64	122.20
1	AA	736	A	N7-C8-N9	-6.34	110.63	113.80
1	AA	2895	C	N3-C2-O2	6.34	126.34	121.90
1	CA	480	A	O5'-P-OP2	-6.34	99.99	105.70
1	AA	1262	C	N1-C2-O2	-6.34	115.10	118.90
1	AA	1299	A	C8-N9-C4	6.34	108.34	105.80
1	AA	602	G	C5-C6-N1	6.34	114.67	111.50
1	AA	1509	C	N3-C4-C5	-6.34	119.36	121.90
1	AA	715	G	C6-N1-C2	6.34	128.90	125.10
1	AA	1978	U	C6-N1-C2	6.34	124.80	121.00
34	BA	29	G	C5-C6-N1	-6.34	108.33	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	47	C	O5'-P-OP1	-6.34	100.00	105.70
1	CA	1267	U	C5-C6-N1	6.34	125.87	122.70
1	AA	1009	C	N3-C2-O2	6.33	126.33	121.90
1	AA	1456	G	OP2-P-O3'	6.33	119.14	105.20
1	AA	1639	G	C4-C5-N7	-6.33	108.27	110.80
1	AA	1702	A	N1-C6-N6	-6.33	114.80	118.60
1	AA	536	U	C2-N3-C4	-6.33	123.20	127.00
1	AA	2431	U	O5'-P-OP1	-6.33	100.00	105.70
1	AA	830	A	N1-C2-N3	6.33	132.47	129.30
1	AA	1390	G	N3-C2-N2	-6.33	115.47	119.90
1	AA	2835	C	C6-N1-C2	-6.33	117.77	120.30
1	CA	1895	C	C6-N1-C2	-6.33	117.77	120.30
1	CA	1972	A	O5'-P-OP2	-6.33	100.00	105.70
55	DV	13	A	C8-N9-C4	6.33	108.33	105.80
1	CA	132	G	C2-N3-C4	-6.33	108.73	111.90
1	CA	249	C	C6-N1-C2	6.33	122.83	120.30
1	AA	20	C	N1-C2-O2	6.33	122.70	118.90
1	AA	229	G	N1-C2-N3	6.33	127.70	123.90
1	AA	899	G	N1-C2-N2	-6.33	110.50	116.20
1	AA	1251	G	O5'-P-OP2	6.33	118.30	110.70
1	AA	1509	C	C4-C5-C6	6.33	120.56	117.40
1	AA	1830	G	OP1-P-OP2	6.33	129.09	119.60
1	AA	2261	U	C2-N3-C4	-6.33	123.20	127.00
1	AA	2646	G	O5'-P-OP2	-6.33	100.00	105.70
1	CA	676	A	C8-N9-C4	6.33	108.33	105.80
1	CA	792	G	C5-C6-O6	-6.33	124.80	128.60
1	CA	814	C	O5'-P-OP2	6.33	118.29	110.70
1	AA	1317	G	O5'-P-OP1	6.33	118.29	110.70
1	AA	1741	C	C2-N3-C4	-6.33	116.74	119.90
1	AA	2023	A	C2-N3-C4	6.33	113.76	110.60
34	BA	1482	G	C2-N3-C4	6.33	115.06	111.90
1	CA	1759	A	N1-C6-N6	-6.33	114.81	118.60
34	DA	290	C	C2-N1-C1'	6.33	125.76	118.80
1	AA	335	A	C4-C5-N7	-6.32	107.54	110.70
1	AA	2735	G	N1-C2-N3	-6.32	120.11	123.90
1	CA	1310	G	O5'-P-OP1	-6.32	100.01	105.70
1	CA	2618	G	N1-C6-O6	-6.32	116.11	119.90
1	AA	1060	U	N3-C2-O2	-6.32	117.78	122.20
1	AA	1237	G	C6-C5-N7	6.32	134.19	130.40
1	CA	1895	C	C2-N1-C1'	6.32	125.75	118.80
1	AA	23	G	C5-N7-C8	6.32	107.46	104.30
1	AA	2285	A	N1-C6-N6	6.32	122.39	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2516	U	N3-C4-O4	-6.32	114.97	119.40
1	CA	2507	C	C5-C6-N1	6.32	124.16	121.00
34	BA	518	C	N3-C2-O2	-6.32	117.48	121.90
1	AA	2454	C	C4-C5-C6	6.32	120.56	117.40
1	CA	1573	G	C4-N9-C1'	-6.32	118.29	126.50
1	AA	418	G	C5-C6-N1	6.32	114.66	111.50
1	AA	2367	C	C6-N1-C2	6.32	122.83	120.30
1	CA	185	U	C6-N1-C2	6.32	124.79	121.00
1	CA	2659	G	C5-C6-O6	6.32	132.39	128.60
1	CA	2665	A	N1-C6-N6	6.32	122.39	118.60
34	DA	887	G	N3-C4-N9	6.32	129.79	126.00
1	AA	1740	U	N1-C2-O2	-6.31	118.38	122.80
34	DA	107	G	N7-C8-N9	-6.31	109.94	113.10
1	AA	854	U	C2-N3-C4	-6.31	123.21	127.00
1	AA	2000	A	N9-C4-C5	-6.31	103.28	105.80
1	AA	2326	C	C2-N1-C1'	-6.31	111.86	118.80
1	AA	2433	G	C8-N9-C4	6.31	108.92	106.40
1	AA	22	C	N3-C4-N4	-6.31	113.58	118.00
1	AA	94	G	O5'-P-OP2	-6.31	100.02	105.70
1	AA	175	G	N3-C4-C5	-6.31	125.44	128.60
1	AA	639	G	C4-C5-N7	-6.31	108.28	110.80
1	AA	1820	A	C2-N3-C4	-6.31	107.44	110.60
1	AA	1821	C	O5'-P-OP1	6.31	118.27	110.70
1	AA	2597	U	O4'-C1'-N1	-6.31	103.15	108.20
34	BA	912	C	O5'-P-OP1	-6.31	100.02	105.70
1	AA	655	G	OP1-P-OP2	6.31	129.06	119.60
1	AA	955	A	N1-C2-N3	6.31	132.45	129.30
1	CA	400	G	N1-C6-O6	6.31	123.68	119.90
1	CA	506	G	O5'-P-OP1	-6.31	100.02	105.70
1	CA	1777	U	C2-N3-C4	-6.31	123.22	127.00
34	DA	667	G	O5'-P-OP1	6.31	118.27	110.70
1	AA	1312	G	C4-N9-C1'	-6.31	118.30	126.50
1	AA	2531	U	C5-C6-N1	-6.31	119.55	122.70
1	AA	717	A	C8-N9-C4	6.30	108.32	105.80
1	AA	1324	A	C8-N9-C4	-6.30	103.28	105.80
1	CA	2503	A	N9-C4-C5	-6.30	103.28	105.80
1	AA	136	G	N9-C4-C5	-6.30	102.88	105.40
1	CA	2224	G	N9-C4-C5	-6.30	102.88	105.40
1	AA	29	U	C2-N1-C1'	6.30	125.26	117.70
1	AA	705	C	N3-C2-O2	-6.30	117.49	121.90
1	AA	1282	G	N7-C8-N9	-6.30	109.95	113.10
1	AA	1851	U	C5-C6-N1	-6.30	119.55	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2400	A	OP1-P-OP2	-6.30	110.15	119.60
1	AA	2043	C	N3-C2-O2	6.30	126.31	121.90
1	AA	836	A	O5'-P-OP2	6.30	118.26	110.70
1	AA	1188	A	N9-C4-C5	6.30	108.32	105.80
1	AA	2731	G	C4-C5-N7	-6.30	108.28	110.80
29	A5	16	ARG	NE-CZ-NH2	6.30	123.45	120.30
1	CA	130	C	C2-N3-C4	-6.30	116.75	119.90
2	CB	55	U	C6-N1-C2	-6.30	117.22	121.00
1	AA	1320	A	C5-N7-C8	-6.29	100.75	103.90
1	CA	34	C	C5-C6-N1	6.29	124.15	121.00
1	AA	1281	G	C5-C6-O6	-6.29	124.82	128.60
1	AA	1806	U	N1-C2-O2	6.29	127.21	122.80
1	AA	2059	G	N1-C6-O6	-6.29	116.12	119.90
1	AA	137	G	O5'-P-OP1	-6.29	100.04	105.70
1	AA	1294	G	C5-C6-N1	-6.29	108.35	111.50
1	AA	1299	A	N3-C4-N9	6.29	132.43	127.40
1	AA	2459	G	OP1-P-O3'	-6.29	91.36	105.20
34	BA	785	G	C8-N9-C4	-6.29	103.88	106.40
1	AA	136	G	N1-C6-O6	6.29	123.67	119.90
1	AA	1958	A	N1-C6-N6	6.29	122.37	118.60
1	AA	2302	G	C5-C6-N1	-6.29	108.36	111.50
1	AA	2702	C	N1-C2-O2	6.29	122.67	118.90
2	AB	93	G	OP2-P-O3'	6.29	119.03	105.20
1	AA	2604	G	O5'-P-OP1	-6.29	100.04	105.70
1	CA	933	A	O4'-C1'-N9	6.29	113.23	108.20
1	AA	139	A	O5'-P-OP1	6.29	118.24	110.70
1	CA	2018	G	C5-C6-N1	-6.29	108.36	111.50
1	AA	1659	G	C5-C6-N1	6.28	114.64	111.50
1	AA	2476	C	N3-C4-C5	6.28	124.41	121.90
34	BA	720	C	N1-C2-O2	6.28	122.67	118.90
1	CA	848	G	N3-C4-C5	-6.28	125.46	128.60
1	CA	1998	G	N7-C8-N9	-6.28	109.96	113.10
1	AA	642	G	N1-C6-O6	-6.28	116.13	119.90
1	AA	847	A	C8-N9-C4	6.28	108.31	105.80
1	AA	2839	C	O5'-P-OP2	-6.28	100.05	105.70
1	CA	827	U	N3-C4-C5	6.28	118.37	114.60
34	DA	791	G	N1-C6-O6	6.28	123.67	119.90
1	AA	131	C	N3-C4-C5	6.28	124.41	121.90
1	AA	1188	A	C8-N9-C4	-6.28	103.29	105.80
1	AA	1896	G	C4-C5-N7	6.28	113.31	110.80
1	AA	2065	C	N3-C2-O2	-6.28	117.51	121.90
1	AA	2547	G	N7-C8-N9	6.28	116.24	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2638	C	N3-C4-C5	6.28	124.41	121.90
1	AA	2696	U	N3-C4-O4	6.28	123.80	119.40
1	AA	1692	G	OP1-P-O3'	6.28	119.01	105.20
1	AA	2068	G	N3-C2-N2	6.28	124.29	119.90
1	AA	2648	U	OP1-P-OP2	-6.28	110.19	119.60
1	CA	532	A	C8-N9-C4	-6.28	103.29	105.80
34	DA	365	U	C5-C4-O4	6.28	129.66	125.90
1	AA	1539	C	N3-C2-O2	-6.27	117.51	121.90
1	AA	2223	C	N3-C4-N4	-6.27	113.61	118.00
6	AF	192	LEU	CA-CB-CG	6.27	129.73	115.30
1	CA	2465	C	C5-C6-N1	-6.27	117.86	121.00
1	AA	356	A	C5-N7-C8	-6.27	100.76	103.90
1	AA	807	G	N7-C8-N9	-6.27	109.96	113.10
1	AA	884	C	OP2-P-O3'	6.27	119.00	105.20
1	AA	891	C	C2-N3-C4	-6.27	116.76	119.90
1	AA	2528	G	N7-C8-N9	6.27	116.24	113.10
1	AA	829	A	C6-N1-C2	-6.27	114.84	118.60
1	AA	1260	G	C4-C5-N7	-6.27	108.29	110.80
1	AA	2059	G	N3-C2-N2	6.27	124.29	119.90
1	AA	2355	C	O5'-P-OP2	-6.27	100.06	105.70
1	AA	2415	C	C6-N1-C2	-6.27	117.79	120.30
1	CA	2546	U	C5-C4-O4	-6.27	122.14	125.90
1	AA	1792	C	N3-C2-O2	6.27	126.29	121.90
1	AA	2538	G	N3-C4-C5	6.27	131.74	128.60
1	CA	298	G	N3-C4-C5	-6.27	125.47	128.60
1	CA	1794	U	C2-N1-C1'	-6.27	110.18	117.70
34	DA	550	G	O5'-P-OP1	-6.27	100.06	105.70
1	AA	193	A	C6-N1-C2	-6.27	114.84	118.60
1	AA	1234	A	N1-C2-N3	6.27	132.43	129.30
1	AA	1992	A	N1-C2-N3	6.27	132.43	129.30
1	AA	2782	C	C4-C5-C6	6.27	120.53	117.40
56	BX	76	A	C5-C6-N1	-6.27	114.57	117.70
1	CA	1626	G	C8-N9-C4	-6.27	103.89	106.40
34	DA	1383	C	C5-C6-N1	6.27	124.13	121.00
1	AA	607	C	C6-N1-C2	6.26	122.81	120.30
1	AA	1189	A	C8-N9-C4	-6.26	103.29	105.80
1	AA	1320	A	C4-C5-N7	6.26	113.83	110.70
1	AA	1755	C	C4-C5-C6	-6.26	114.27	117.40
17	AT	118	ARG	NE-CZ-NH2	-6.26	117.17	120.30
34	BA	1081	G	C5-C6-O6	6.26	132.36	128.60
1	CA	120	U	N3-C2-O2	6.26	126.58	122.20
1	AA	1936	C	C6-N1-C2	-6.26	117.80	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2082	A	C8-N9-C4	6.26	108.31	105.80
1	AA	2882	G	C8-N9-C1'	6.26	135.14	127.00
1	AA	224	U	O5'-P-OP1	-6.26	100.06	105.70
1	AA	674	G	N3-C4-C5	-6.26	125.47	128.60
1	AA	1002	A	C6-N1-C2	-6.26	114.84	118.60
1	AA	2868	C	N3-C2-O2	-6.26	117.52	121.90
1	CA	130	C	N1-C2-O2	-6.26	115.14	118.90
1	CA	2066	C	C4-C5-C6	6.26	120.53	117.40
1	AA	1267	C	N1-C2-O2	6.26	122.66	118.90
1	AA	1290	G	C5-C6-N1	-6.26	108.37	111.50
1	AA	1785	C	N1-C2-O2	-6.26	115.14	118.90
1	AA	2257	U	C2-N3-C4	-6.26	123.24	127.00
1	AA	2366	G	C4-C5-N7	6.26	113.30	110.80
1	AA	2620	G	N7-C8-N9	-6.26	109.97	113.10
2	AB	107	G	C2-N3-C4	-6.26	108.77	111.90
1	CA	2032	G	C5-C6-N1	6.26	114.63	111.50
34	DA	509	A	N7-C8-N9	6.26	116.93	113.80
1	AA	438	G	N3-C4-N9	6.26	129.75	126.00
34	BA	291	C	C6-N1-C2	6.26	122.80	120.30
1	AA	24	G	N1-C2-N3	-6.26	120.15	123.90
1	AA	2035	A	O5'-P-OP1	6.26	118.21	110.70
1	AA	2162	C	C2-N1-C1'	6.26	125.68	118.80
1	AA	2423	A	C8-N9-C4	6.26	108.30	105.80
2	AB	106	G	C2-N3-C4	6.25	115.03	111.90
34	BA	1402	C	C6-N1-C2	-6.25	117.80	120.30
1	AA	592	U	C6-N1-C2	6.25	124.75	121.00
1	AA	1128	U	C5-C6-N1	6.25	125.83	122.70
1	CA	1441	G	C4-C5-N7	-6.25	108.30	110.80
1	CA	2766	G	C4-N9-C1'	6.25	134.63	126.50
1	AA	211	A	C8-N9-C4	6.25	108.30	105.80
1	AA	2794	A	OP1-P-O3'	6.25	118.95	105.20
1	AA	231	G	N9-C4-C5	6.25	107.90	105.40
1	AA	1037	C	N3-C4-C5	6.25	124.40	121.90
1	AA	115	G	N3-C4-C5	-6.25	125.48	128.60
1	AA	2551	C	O5'-P-OP2	-6.25	100.08	105.70
1	CA	1984	G	C8-N9-C4	6.25	108.90	106.40
1	AA	169	G	C4-N9-C1'	-6.25	118.38	126.50
1	AA	739	C	C5-C6-N1	6.25	124.12	121.00
1	AA	1673	G	C4-N9-C1'	6.25	134.62	126.50
1	CA	2025	C	N3-C2-O2	6.25	126.27	121.90
1	AA	612	C	O5'-P-OP2	-6.24	100.08	105.70
1	AA	877	G	C5-C6-O6	-6.24	124.85	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1310	G	C4-C5-C6	-6.24	115.05	118.80
1	AA	2711	C	O5'-P-OP1	-6.24	100.08	105.70
1	AA	2824	C	N3-C4-C5	6.24	124.40	121.90
1	AA	356	A	C6-N1-C2	6.24	122.34	118.60
1	AA	1019	G	C2-N3-C4	-6.24	108.78	111.90
1	AA	1229	G	N3-C4-N9	-6.24	122.26	126.00
1	AA	2227	G	C8-N9-C1'	6.24	135.11	127.00
34	BA	189(G)	G	N3-C4-C5	6.24	131.72	128.60
34	BA	1458	G	C5-C6-O6	-6.24	124.86	128.60
55	BV	17	U	N3-C2-O2	-6.24	117.83	122.20
1	CA	1270	C	C5-C6-N1	-6.24	117.88	121.00
34	DA	1480	G	N1-C6-O6	6.24	123.64	119.90
34	DA	1524	C	O5'-P-OP1	-6.24	100.08	105.70
1	AA	2373	A	C6-N1-C2	6.24	122.34	118.60
1	AA	2473	C	N3-C4-C5	-6.24	119.41	121.90
34	BA	354	G	O5'-P-OP2	-6.24	100.09	105.70
1	AA	829	A	N1-C2-N3	6.24	132.42	129.30
1	AA	834	U	O5'-P-OP1	-6.24	100.09	105.70
34	BA	290	C	N3-C4-C5	6.24	124.39	121.90
1	AA	883	G	OP2-P-O3'	6.24	118.92	105.20
1	AA	2402	U	N1-C2-O2	6.24	127.16	122.80
1	CA	199	A	O5'-P-OP1	-6.24	100.09	105.70
1	AA	606	G	C4-C5-N7	-6.23	108.31	110.80
1	AA	1303	C	C2-N1-C1'	6.23	125.66	118.80
1	AA	2663	C	O5'-P-OP1	6.23	118.18	110.70
1	AA	2623	U	N1-C2-O2	-6.23	118.44	122.80
1	AA	2863	C	C6-N1-C2	6.23	122.79	120.30
2	AB	92	C	N3-C2-O2	-6.23	117.54	121.90
1	AA	2034	G	N1-C2-N2	-6.23	110.59	116.20
1	AA	2638	C	C5-C6-N1	-6.23	117.89	121.00
1	CA	989	G	C5-C6-O6	6.23	132.34	128.60
1	AA	2331	G	C2-N3-C4	-6.23	108.79	111.90
1	AA	2362	C	C5-C6-N1	-6.23	117.89	121.00
47	BN	44	LEU	CA-CB-CG	6.23	129.63	115.30
1	AA	325	G	N3-C4-N9	-6.23	122.26	126.00
1	AA	2227	G	N3-C4-N9	-6.23	122.26	126.00
34	BA	15	G	N3-C4-N9	6.23	129.74	126.00
1	CA	141	A	C5-N7-C8	-6.23	100.79	103.90
1	AA	575	G	N3-C4-C5	6.23	131.71	128.60
1	CA	827	U	O5'-P-OP1	6.23	118.17	110.70
1	AA	1546	G	C4-C5-N7	6.22	113.29	110.80
34	BA	1483	A	C8-N9-C4	-6.22	103.31	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	15	G	OP1-P-OP2	6.22	128.94	119.60
1	CA	1963	U	C5-C6-N1	6.22	125.81	122.70
1	AA	183	G	N1-C6-O6	-6.22	116.17	119.90
1	AA	1684	A	C6-N1-C2	6.22	122.33	118.60
1	AA	2727	G	O5'-P-OP2	-6.22	100.10	105.70
1	CA	512	G	O4'-C1'-N9	6.22	113.18	108.20
34	DA	796	C	C5-C6-N1	6.22	124.11	121.00
1	AA	2244	U	O5'-P-OP2	-6.22	100.10	105.70
56	BX	15	G	O3'-P-O5'	-6.22	92.18	104.00
1	CA	2608	G	N1-C6-O6	-6.22	116.17	119.90
1	AA	1082	G	N9-C4-C5	-6.22	102.91	105.40
1	AA	2038	U	N1-C2-O2	-6.22	118.45	122.80
1	AA	2682	A	O5'-P-OP2	-6.22	100.10	105.70
1	AA	2879	G	N9-C4-C5	6.22	107.89	105.40
13	AP	41	ARG	NE-CZ-NH2	6.22	123.41	120.30
1	CA	1612	C	C2-N3-C4	6.22	123.01	119.90
34	DA	245	C	C6-N1-C2	6.22	122.79	120.30
1	AA	197	C	C5-C6-N1	-6.22	117.89	121.00
1	AA	2544	G	C8-N9-C4	-6.22	103.91	106.40
1	CA	28	A	C2-N3-C4	6.22	113.71	110.60
29	A5	20	ARG	NE-CZ-NH2	-6.22	117.19	120.30
1	AA	99	G	N3-C4-C5	6.21	131.71	128.60
1	AA	556	C	N3-C4-C5	6.21	124.39	121.90
1	AA	1242	G	N9-C4-C5	-6.21	102.91	105.40
1	AA	1266	C	C4-C5-C6	6.21	120.51	117.40
1	AA	2509	A	N1-C2-N3	6.21	132.41	129.30
1	AA	2734	A	C2-N3-C4	-6.21	107.49	110.60
1	AA	1837	C	O5'-P-OP1	-6.21	100.11	105.70
1	AA	2450	U	C5-C4-O4	-6.21	122.17	125.90
1	CA	1189	A	O5'-P-OP2	-6.21	100.11	105.70
1	AA	583	C	N3-C4-C5	-6.21	119.42	121.90
1	AA	1420	G	O5'-P-OP2	6.21	118.15	110.70
1	AA	1426	G	O5'-P-OP2	-6.21	100.11	105.70
1	AA	1683	C	C4-C5-C6	6.21	120.51	117.40
2	AB	97	G	C2-N3-C4	6.21	115.01	111.90
31	A7	33	ARG	NE-CZ-NH2	6.21	123.41	120.30
1	CA	2552	U	N3-C2-O2	6.21	126.55	122.20
1	AA	2536	G	N3-C4-N9	-6.21	122.27	126.00
1	CA	1898	U	C5-C6-N1	-6.21	119.59	122.70
1	AA	348	A	N1-C2-N3	-6.21	126.20	129.30
1	AA	992	G	C5-C6-O6	-6.21	124.88	128.60
1	CA	42	G	C8-N9-C4	-6.21	103.92	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	531	C	C6-N1-C2	6.21	122.78	120.30
1	CA	2503	A	C4-C5-N7	6.21	113.80	110.70
1	AA	1636	U	O5'-P-OP1	-6.21	100.11	105.70
1	AA	1798	C	N3-C4-C5	6.21	124.38	121.90
1	AA	2294	G	N3-C4-C5	6.21	131.70	128.60
34	BA	48	C	O5'-P-OP2	-6.21	100.11	105.70
34	DA	365	U	C5-C6-N1	-6.21	119.60	122.70
1	CA	2265	U	C6-N1-C2	-6.21	117.28	121.00
1	AA	434	G	N3-C4-N9	6.20	129.72	126.00
1	AA	1202	A	C6-N1-C2	-6.20	114.88	118.60
1	AA	1236	G	C2-N3-C4	-6.20	108.80	111.90
1	AA	1374	G	C8-N9-C4	6.20	108.88	106.40
1	AA	2059	G	C5-C6-O6	6.20	132.32	128.60
1	AA	2698	G	C5-C6-N1	6.20	114.60	111.50
34	BA	29	G	N1-C6-O6	6.20	123.62	119.90
1	AA	2067	C	N3-C2-O2	-6.20	117.56	121.90
1	AA	2780	C	C5-C4-N4	6.20	124.54	120.20
34	BA	1458	G	N1-C6-O6	6.20	123.62	119.90
56	BX	3	C	C6-N1-C2	-6.20	117.82	120.30
1	AA	197	C	C2-N3-C4	-6.20	116.80	119.90
34	BA	1530	G	N3-C4-N9	-6.20	122.28	126.00
1	CA	1677	A	C5-C6-N1	-6.20	114.60	117.70
1	AA	409	G	N1-C2-N2	-6.20	110.62	116.20
1	AA	790	G	N3-C2-N2	6.20	124.24	119.90
1	AA	2451	A	C5-C6-N1	-6.20	114.60	117.70
1	AA	2685	G	C5-C6-O6	-6.20	124.88	128.60
34	DA	679	C	C6-N1-C2	6.20	122.78	120.30
1	AA	255	G	C5-C6-O6	-6.20	124.88	128.60
1	AA	916	G	N1-C2-N3	6.20	127.62	123.90
1	AA	2833	A	C6-C5-N7	6.20	136.64	132.30
1	CA	2031	A	N9-C4-C5	6.20	108.28	105.80
1	AA	2702	C	C5-C6-N1	6.19	124.10	121.00
1	AA	140	A	C2-N3-C4	-6.19	107.50	110.60
1	AA	775	G	C8-N9-C4	6.19	108.88	106.40
1	AA	2645	G	N1-C6-O6	-6.19	116.18	119.90
1	AA	185	A	N1-C6-N6	6.19	122.31	118.60
1	AA	1037	C	N1-C2-O2	-6.19	115.19	118.90
34	BA	804	U	C2-N1-C1'	-6.19	110.27	117.70
1	CA	513	A	C5-N7-C8	-6.19	100.81	103.90
1	CA	1792	G	C8-N9-C4	6.19	108.88	106.40
1	AA	611	U	OP2-P-O3'	6.19	118.81	105.20
1	AA	1638	C	O5'-P-OP1	-6.19	100.13	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2331	G	N3-C2-N2	-6.19	115.57	119.90
1	CA	2272	U	N3-C2-O2	-6.19	117.87	122.20
1	AA	1811	A	C5-C6-N1	-6.19	114.61	117.70
1	AA	2601	A	C6-C5-N7	6.19	136.63	132.30
1	CA	509	C	C5-C6-N1	-6.19	117.91	121.00
34	DA	246	A	O5'-P-OP2	-6.19	100.13	105.70
1	AA	829	A	C8-N9-C4	6.18	108.27	105.80
1	AA	909	G	C8-N9-C4	-6.18	103.93	106.40
1	AA	1005	A	C8-N9-C4	-6.18	103.33	105.80
1	AA	1243	U	N1-C2-O2	-6.18	118.47	122.80
1	AA	2113	U	C4-C5-C6	6.18	123.41	119.70
2	AB	93	G	N9-C4-C5	6.18	107.87	105.40
1	CA	2431	U	C6-N1-C2	6.18	124.71	121.00
1	CA	2709	G	C5-C6-O6	6.18	132.31	128.60
1	AA	816	G	C5-C6-N1	-6.18	108.41	111.50
1	AA	2268	G	C4-C5-N7	6.18	113.27	110.80
1	AA	2578	A	N7-C8-N9	6.18	116.89	113.80
34	BA	295	C	C6-N1-C2	6.18	122.77	120.30
1	CA	1366	A	C8-N9-C4	6.18	108.27	105.80
34	DA	1480	G	C5-C6-O6	-6.18	124.89	128.60
1	AA	546	G	C5-C6-N1	6.18	114.59	111.50
1	AA	1039	G	C8-N9-C4	-6.18	103.93	106.40
1	AA	1854	G	C2-N3-C4	6.18	114.99	111.90
1	CA	1315	C	O5'-P-OP1	-6.18	100.14	105.70
1	CA	2286	A	C4-C5-N7	6.18	113.79	110.70
34	DA	1502	A	C4-C5-N7	6.18	113.79	110.70
1	AA	2580	C	C6-N1-C2	-6.18	117.83	120.30
34	DA	556	C	C5-C4-N4	-6.18	115.88	120.20
1	AA	69	G	N1-C2-N2	-6.18	110.64	116.20
1	AA	1232	G	C5-C6-O6	6.18	132.31	128.60
1	AA	1920	U	N3-C4-C5	6.18	118.31	114.60
1	AA	2432	C	N3-C4-C5	-6.18	119.43	121.90
1	AA	2616	U	N3-C4-C5	6.18	118.31	114.60
1	AA	2726	A	N1-C2-N3	6.18	132.39	129.30
1	AA	1414	G	N7-C8-N9	-6.17	110.01	113.10
1	CA	479	A	C8-N9-C4	6.17	108.27	105.80
1	AA	769	A	C8-N9-C4	-6.17	103.33	105.80
1	AA	1542	A	O5'-P-OP1	-6.17	100.14	105.70
1	AA	1545	C	C6-N1-C2	6.17	122.77	120.30
1	CA	1914	C	C2-N1-C1'	6.17	125.59	118.80
1	AA	1420	G	C8-N9-C4	6.17	108.87	106.40
1	AA	2335	G	C5-N7-C8	-6.17	101.21	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2403	G	N1-C6-O6	-6.17	116.20	119.90
1	AA	2734	A	O5'-P-OP1	-6.17	100.15	105.70
34	BA	802	A	N9-C4-C5	-6.17	103.33	105.80
1	AA	1717	C	C5-C6-N1	-6.17	117.92	121.00
1	AA	2366	G	C2-N3-C4	-6.17	108.82	111.90
1	AA	2828	G	OP1-P-OP2	6.17	128.85	119.60
1	CA	941	A	O5'-P-OP2	-6.17	100.15	105.70
1	CA	2541	A	C8-N9-C4	6.17	108.27	105.80
1	AA	32	C	N1-C2-N3	6.17	123.52	119.20
1	AA	1989	C	N3-C4-C5	6.17	124.37	121.90
1	CA	1313	U	N3-C2-O2	-6.17	117.88	122.20
1	CA	2020	A	OP1-P-OP2	-6.17	110.35	119.60
34	DA	1064	G	P-O3'-C3'	6.17	127.10	119.70
1	CA	1250	G	N3-C4-C5	6.17	131.68	128.60
1	AA	2384	G	N3-C2-N2	-6.16	115.59	119.90
1	AA	590	A	N1-C2-N3	-6.16	126.22	129.30
1	AA	621	G	N1-C6-O6	-6.16	116.20	119.90
1	AA	995	G	C5-N7-C8	-6.16	101.22	104.30
1	AA	1270	C	C6-N1-C2	-6.16	117.84	120.30
1	AA	1298	G	OP2-P-O3'	6.16	118.75	105.20
1	AA	1307	C	N3-C2-O2	-6.16	117.59	121.90
1	AA	1688	A	C8-N9-C4	-6.16	103.34	105.80
1	AA	2093	A	C4-C5-N7	-6.16	107.62	110.70
1	AA	2239	A	N3-C4-C5	-6.16	122.49	126.80
2	AB	97	G	N1-C6-O6	6.16	123.60	119.90
34	BA	8	A	N1-C6-N6	6.16	122.30	118.60
1	CA	1782	C	N3-C4-N4	-6.16	113.69	118.00
1	CA	2327	A	N1-C6-N6	-6.16	114.90	118.60
1	AA	424	G	C6-N1-C2	6.16	128.79	125.10
1	AA	959	U	O5'-P-OP2	-6.16	100.16	105.70
1	AA	991	G	N9-C4-C5	-6.16	102.94	105.40
1	AA	1015	C	C5-C6-N1	-6.16	117.92	121.00
1	AA	1347	A	N7-C8-N9	6.16	116.88	113.80
1	AA	2028	C	N1-C2-N3	6.16	123.51	119.20
1	AA	2522	C	C5-C6-N1	-6.16	117.92	121.00
34	DA	895	G	C5-C6-O6	-6.16	124.91	128.60
1	AA	754	G	C6-C5-N7	-6.16	126.71	130.40
1	CA	2704	C	C6-N1-C2	-6.16	117.84	120.30
1	AA	208	G	C4-C5-N7	-6.16	108.34	110.80
1	AA	561	A	C5-N7-C8	6.16	106.98	103.90
1	CA	1365	A	C8-N9-C4	-6.16	103.34	105.80
1	CA	1660	C	O5'-P-OP2	-6.16	100.16	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1795	G	C5-C6-O6	6.15	132.29	128.60
1	AA	2511	C	C6-N1-C2	-6.15	117.84	120.30
1	AA	1392	G	N1-C2-N2	-6.15	110.66	116.20
1	AA	40	C	C2-N3-C4	-6.15	116.82	119.90
1	AA	122	G	N3-C4-C5	6.15	131.68	128.60
1	AA	768	C	N1-C2-O2	-6.15	115.21	118.90
34	BA	9	G	C2-N3-C4	6.15	114.97	111.90
56	BX	13	C	N3-C4-C5	-6.15	119.44	121.90
1	AA	826	U	N3-C4-C5	-6.15	110.91	114.60
1	AA	1325	G	C2-N3-C4	-6.15	108.83	111.90
1	AA	1392	G	OP1-P-OP2	6.15	128.82	119.60
1	CA	2523	G	N3-C4-C5	-6.15	125.53	128.60
1	CA	469	G	C4-C5-N7	-6.15	108.34	110.80
1	AA	1620	G	N3-C2-N2	6.14	124.20	119.90
1	AA	1871	G	N3-C2-N2	-6.14	115.60	119.90
1	AA	2894	U	N1-C2-O2	-6.14	118.50	122.80
1	AA	238	C	C6-N1-C2	6.14	122.76	120.30
1	AA	468	G	C5-C6-N1	6.14	114.57	111.50
1	AA	2680	G	C8-N9-C4	-6.14	103.94	106.40
1	AA	2729	U	N3-C4-O4	6.14	123.70	119.40
34	BA	853	G	C4-C5-N7	6.14	113.26	110.80
34	DA	1404	C	C5-C6-N1	6.14	124.07	121.00
1	AA	206	G	N3-C2-N2	-6.14	115.60	119.90
1	AA	2450	U	C6-N1-C2	6.14	124.68	121.00
1	CA	2224	G	C8-N9-C4	6.14	108.86	106.40
1	AA	995	G	O5'-P-OP2	6.14	118.07	110.70
1	AA	2189	U	C2-N1-C1'	6.14	125.07	117.70
1	AA	434	G	C8-N9-C1'	-6.14	119.02	127.00
1	AA	2574	U	C2-N3-C4	-6.14	123.32	127.00
1	AA	147	U	C6-N1-C2	6.14	124.68	121.00
1	AA	552	C	N1-C2-N3	6.14	123.50	119.20
1	AA	621	G	C4-C5-N7	-6.14	108.35	110.80
1	AA	1015	C	C4-C5-C6	6.14	120.47	117.40
1	AA	1411	A	N7-C8-N9	-6.14	110.73	113.80
1	CA	35	G	O5'-P-OP2	-6.14	100.18	105.70
34	DA	576	G	C4-C5-N7	6.14	113.25	110.80
1	AA	1414	G	C5-N7-C8	6.13	107.37	104.30
34	BA	500	G	C4-N9-C1'	-6.13	118.53	126.50
1	CA	391	G	C8-N9-C4	6.13	108.85	106.40
1	AA	610	C	C2-N1-C1'	6.13	125.55	118.80
34	DA	499	A	C8-N9-C4	6.13	108.25	105.80
1	AA	353	G	C5-C6-N1	6.13	114.57	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2506	G	C5-N7-C8	-6.13	101.23	104.30
1	CA	682	G	N3-C4-N9	6.13	129.68	126.00
1	AA	1007	G	C8-N9-C4	-6.13	103.95	106.40
1	AA	1385	G	C5-N7-C8	6.13	107.36	104.30
1	AA	2221	A	C8-N9-C4	-6.13	103.35	105.80
1	CA	2586	C	OP1-P-OP2	-6.13	110.41	119.60
1	CA	2012	G	N1-C2-N3	6.13	127.58	123.90
1	CA	2055	C	N3-C4-C5	-6.13	119.45	121.90
1	CA	2685	G	C8-N9-C4	6.13	108.85	106.40
1	AA	254	A	C5-C6-N6	-6.13	118.80	123.70
1	AA	556	C	C6-N1-C2	6.13	122.75	120.30
1	AA	825	G	N1-C2-N2	-6.13	110.69	116.20
1	AA	1073	A	N9-C4-C5	-6.13	103.35	105.80
1	AA	1305	G	N1-C6-O6	-6.13	116.22	119.90
34	BA	911	U	N1-C2-N3	6.13	118.58	114.90
1	CA	1142(A)	A	N3-C4-N9	-6.13	122.50	127.40
1	AA	546	G	O5'-P-OP2	6.12	118.05	110.70
1	AA	1457	C	O5'-P-OP2	-6.12	100.19	105.70
1	CA	1776	G	N3-C4-N9	6.12	129.67	126.00
1	AA	31	C	C5-C6-N1	-6.12	117.94	121.00
1	AA	458	U	N1-C2-O2	6.12	127.08	122.80
1	CA	2515	C	O5'-P-OP2	-6.12	100.19	105.70
1	AA	54	G	N7-C8-N9	6.12	116.16	113.10
1	AA	2473	C	C6-N1-C2	-6.12	117.85	120.30
1	AA	2836	A	C5-C6-N6	-6.12	118.80	123.70
1	CA	191	A	OP1-P-O3'	-6.12	91.74	105.20
1	CA	1965	C	N3-C4-N4	6.12	122.28	118.00
1	AA	120	G	N3-C4-C5	-6.12	125.54	128.60
1	AA	540	A	OP2-P-O3'	6.12	118.66	105.20
1	AA	855	G	C5-N7-C8	6.12	107.36	104.30
1	AA	2059	G	N1-C2-N2	-6.12	110.69	116.20
1	CA	2032	G	C6-N1-C2	-6.12	121.43	125.10
1	AA	1649	A	N7-C8-N9	6.12	116.86	113.80
1	AA	1864	U	C4-C5-C6	6.12	123.37	119.70
2	AB	82	G	N9-C4-C5	6.12	107.85	105.40
1	CA	517	C	N1-C2-O2	-6.12	115.23	118.90
1	AA	44	G	C2-N3-C4	6.11	114.96	111.90
1	AA	859	C	C2-N3-C4	-6.11	116.84	119.90
1	AA	1090	G	O5'-P-OP1	-6.11	100.20	105.70
1	AA	2351	G	N1-C2-N2	-6.11	110.70	116.20
2	AB	28	C	C5-C6-N1	-6.11	117.94	121.00
1	AA	514	G	N7-C8-N9	-6.11	110.05	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	732	A	N7-C8-N9	6.11	116.86	113.80
1	AA	1019	G	C5-C6-O6	-6.11	124.93	128.60
1	AA	2022	G	C5-C6-N1	6.11	114.56	111.50
1	AA	1725	G	C5-C6-O6	-6.11	124.93	128.60
1	AA	60	G	N3-C2-N2	-6.11	115.62	119.90
1	AA	1830	G	OP2-P-O3'	6.11	118.64	105.20
34	DA	1502	A	C6-C5-N7	-6.11	128.02	132.30
1	AA	482	C	N1-C2-O2	-6.11	115.24	118.90
1	AA	1252	C	N1-C2-O2	-6.11	115.24	118.90
1	AA	1792	C	C5-C4-N4	-6.11	115.93	120.20
1	AA	1796	C	OP2-P-O3'	6.11	118.63	105.20
1	AA	2547	G	C8-N9-C4	-6.11	103.96	106.40
1	AA	563	G	N9-C4-C5	6.10	107.84	105.40
1	CA	987	G	C4-N9-C1'	-6.10	118.57	126.50
1	CA	2050	C	O5'-P-OP2	6.10	118.02	110.70
1	AA	1514	C	O5'-P-OP1	-6.10	100.21	105.70
1	AA	467	U	C5-C4-O4	-6.10	122.24	125.90
13	AP	21	ARG	NE-CZ-NH2	-6.10	117.25	120.30
1	AA	81	G	C8-N9-C4	6.10	108.84	106.40
1	AA	490	U	O5'-P-OP1	6.10	118.02	110.70
1	CA	1268	A	N9-C4-C5	6.10	108.24	105.80
1	CA	1834	U	N1-C2-O2	-6.10	118.53	122.80
1	AA	199	C	OP2-P-O3'	6.10	118.61	105.20
1	AA	325	G	C4-C5-N7	-6.10	108.36	110.80
1	AA	613	A	C5-C6-N1	6.10	120.75	117.70
1	CA	1798	U	C2-N3-C4	-6.10	123.34	127.00
1	AA	1651	C	C2-N3-C4	-6.09	116.85	119.90
1	AA	2721	G	C5-C6-O6	6.09	132.26	128.60
18	AU	91	ASP	CB-CG-OD1	6.09	123.79	118.30
34	DA	1521	G	N1-C6-O6	-6.09	116.24	119.90
1	AA	905	U	N3-C4-C5	6.09	118.26	114.60
1	AA	2529	C	N1-C2-N3	6.09	123.47	119.20
1	AA	2709	G	C5-C6-O6	-6.09	124.94	128.60
1	CA	2444	G	C5-C6-O6	6.09	132.26	128.60
2	CB	118	G	C8-N9-C4	-6.09	103.96	106.40
1	AA	427	G	C4-C5-N7	6.09	113.23	110.80
1	AA	470	C	OP1-P-OP2	-6.09	110.47	119.60
1	AA	1266	C	N1-C2-N3	6.09	123.46	119.20
1	AA	1330	A	N9-C4-C5	6.09	108.24	105.80
34	BA	518	C	N1-C2-O2	6.09	122.55	118.90
1	CA	2270	G	N7-C8-N9	-6.09	110.06	113.10
34	DA	1518	A	O5'-P-OP2	-6.09	100.22	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2074	G	OP1-P-O3'	6.09	118.59	105.20
1	AA	2537	G	OP2-P-O3'	6.09	118.59	105.20
1	AA	2720	G	N3-C4-C5	6.09	131.64	128.60
1	CA	509	C	N3-C4-C5	6.09	124.33	121.90
1	CA	2805	G	O4'-C1'-N9	6.09	113.07	108.20
1	AA	1790	A	C2-N3-C4	-6.08	107.56	110.60
1	AA	1969	C	C6-N1-C2	-6.08	117.87	120.30
1	CA	1234	U	N1-C2-O2	6.08	127.06	122.80
1	AA	35	G	C5-C6-N1	6.08	114.54	111.50
1	AA	526	A	C6-N1-C2	-6.08	114.95	118.60
1	AA	970	C	N3-C4-N4	-6.08	113.74	118.00
1	AA	2331	G	C8-N9-C4	-6.08	103.97	106.40
4	CD	14	ARG	NE-CZ-NH2	-6.08	117.26	120.30
1	AA	2768	C	C6-N1-C2	6.08	122.73	120.30
1	CA	183	C	C4-C5-C6	-6.08	114.36	117.40
1	CA	563	G	C5-N7-C8	-6.08	101.26	104.30
1	CA	827	U	C6-N1-C2	6.08	124.65	121.00
1	CA	2202	C	N3-C2-O2	-6.08	117.64	121.90
1	AA	861	C	C5-C6-N1	-6.08	117.96	121.00
1	AA	1683	C	C2-N1-C1'	6.08	125.49	118.80
1	AA	2597	U	N1-C2-N3	-6.08	111.25	114.90
1	AA	2793	G	N3-C2-N2	6.08	124.16	119.90
6	AF	95	ARG	NE-CZ-NH1	-6.08	117.26	120.30
34	BA	539	A	N7-C8-N9	-6.08	110.76	113.80
1	CA	217	G	N9-C4-C5	-6.08	102.97	105.40
1	CA	614	U	N3-C2-O2	-6.08	117.94	122.20
1	CA	762	U	C5-C6-N1	6.08	125.74	122.70
1	AA	2299	A	C5-C6-N1	-6.08	114.66	117.70
1	CA	786	C	C2-N1-C1'	-6.08	112.11	118.80
1	AA	255	G	C8-N9-C4	6.08	108.83	106.40
1	AA	615	G	C6-C5-N7	6.08	134.05	130.40
1	AA	841	G	C8-N9-C4	6.08	108.83	106.40
1	CA	1893	C	N3-C2-O2	-6.08	117.65	121.90
1	AA	122	G	N9-C4-C5	-6.07	102.97	105.40
1	AA	788	G	C2-N3-C4	-6.07	108.86	111.90
1	AA	1020	C	N1-C2-O2	-6.07	115.26	118.90
1	AA	1901	C	C6-N1-C2	-6.07	117.87	120.30
1	CA	2782	G	N1-C6-O6	6.07	123.55	119.90
6	AF	45	ARG	NE-CZ-NH2	6.07	123.34	120.30
1	AA	351	G	N1-C6-O6	-6.07	116.26	119.90
1	AA	516	G	N3-C2-N2	6.07	124.15	119.90
1	AA	1055	A	N1-C6-N6	6.07	122.24	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2355	C	C5-C6-N1	-6.07	117.97	121.00
1	CA	748	G	C4-N9-C1'	-6.07	118.61	126.50
1	AA	835	A	C8-N9-C4	6.07	108.23	105.80
1	AA	892	G	N3-C2-N2	-6.07	115.65	119.90
1	AA	994	C	C2-N3-C4	6.07	122.93	119.90
34	BA	644	G	N9-C1'-C2'	-6.07	105.33	112.00
1	AA	719	C	O5'-P-OP1	6.07	117.98	110.70
1	AA	1360	C	C2-N3-C4	-6.07	116.87	119.90
1	AA	2162	C	N1-C2-O2	6.07	122.54	118.90
2	AB	58	A	OP1-P-OP2	-6.07	110.50	119.60
34	BA	852	G	N3-C4-C5	6.07	131.63	128.60
1	AA	972	A	N7-C8-N9	-6.06	110.77	113.80
1	AA	1401	G	C8-N9-C4	-6.06	103.97	106.40
1	AA	1647	G	C5-C6-O6	6.06	132.24	128.60
1	AA	1845	G	N9-C4-C5	-6.06	102.97	105.40
1	AA	24	G	C5-C6-O6	-6.06	124.96	128.60
1	AA	80	G	N1-C2-N2	-6.06	110.74	116.20
1	CA	721	C	C6-N1-C2	6.06	122.72	120.30
1	CA	2351	G	N1-C6-O6	-6.06	116.26	119.90
1	AA	1273	G	C5-C6-O6	6.06	132.24	128.60
1	AA	1347	A	C8-N9-C4	-6.06	103.38	105.80
1	AA	1730	C	C6-N1-C2	-6.06	117.88	120.30
34	BA	878	G	O5'-P-OP1	-6.06	100.25	105.70
34	BA	1499	A	N1-C6-N6	6.06	122.23	118.60
1	CA	390	A	C4-C5-N7	6.06	113.73	110.70
1	CA	1898	U	O5'-P-OP2	-6.06	100.25	105.70
1	CA	1902	C	N3-C2-O2	6.06	126.14	121.90
34	DA	887	G	N3-C4-C5	-6.06	125.57	128.60
1	AA	227	C	N1-C2-O2	-6.06	115.27	118.90
1	AA	2649	U	OP1-P-O3'	6.06	118.53	105.20
34	BA	826	C	N1-C2-O2	6.06	122.53	118.90
1	CA	1107	G	O5'-P-OP1	-6.06	100.25	105.70
1	CA	1397	U	C5-C4-O4	6.06	129.53	125.90
1	AA	203	G	O4'-C1'-N9	6.06	113.05	108.20
1	CA	2496	C	C6-N1-C2	-6.06	117.88	120.30
1	AA	185	A	N3-C4-N9	6.05	132.24	127.40
1	AA	433	G	N7-C8-N9	6.05	116.13	113.10
1	AA	2387	G	C6-N1-C2	-6.05	121.47	125.10
1	AA	2822	G	N3-C4-C5	6.05	131.63	128.60
1	CA	217	G	C8-N9-C4	6.05	108.82	106.40
1	AA	655	G	N9-C1'-C2'	-6.05	105.34	112.00
1	AA	1078	A	N1-C6-N6	6.05	122.23	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1244	U	C2-N3-C4	-6.05	123.37	127.00
1	AA	2329	C	C6-N1-C2	-6.05	117.88	120.30
1	CA	1624	G	C5-C6-O6	6.05	132.23	128.60
34	DA	1404	C	C6-N1-C2	-6.05	117.88	120.30
1	AA	194	G	OP1-P-OP2	6.05	128.68	119.60
1	AA	257	C	C6-N1-C2	6.05	122.72	120.30
1	AA	968	U	N3-C4-C5	6.05	118.23	114.60
1	AA	2708	U	C5-C4-O4	-6.05	122.27	125.90
1	CA	2707	G	N3-C4-C5	6.05	131.62	128.60
1	AA	117	A	N1-C2-N3	6.05	132.32	129.30
1	AA	919	A	O5'-P-OP1	-6.05	100.26	105.70
1	AA	2665	U	N3-C4-O4	6.05	123.64	119.40
34	BA	906	G	C6-C5-N7	-6.05	126.77	130.40
1	CA	28	A	N1-C2-N3	-6.05	126.28	129.30
1	AA	560	C	N3-C4-C5	6.05	124.32	121.90
2	AB	97	G	N3-C2-N2	-6.05	115.67	119.90
1	CA	1297	C	N3-C4-C5	-6.05	119.48	121.90
1	AA	409	G	N1-C6-O6	-6.05	116.27	119.90
1	CA	2512	C	N3-C2-O2	6.05	126.13	121.90
1	CA	2549	G	C5-C6-O6	-6.05	124.97	128.60
34	DA	798	G	N9-C4-C5	6.05	107.82	105.40
56	BX	76	A	C6-C5-N7	-6.04	128.07	132.30
34	DA	809	G	N3-C2-N2	-6.04	115.67	119.90
1	AA	2335	G	C6-C5-N7	-6.04	126.77	130.40
1	CA	912	C	N1-C2-O2	6.04	122.53	118.90
1	CA	2088	G	N1-C6-O6	6.04	123.53	119.90
1	AA	178	G	O5'-P-OP1	-6.04	100.26	105.70
1	AA	715	G	C5-N7-C8	-6.04	101.28	104.30
1	AA	1048	G	C8-N9-C4	-6.04	103.98	106.40
1	CA	2033	A	N1-C6-N6	-6.04	114.97	118.60
1	AA	1193	C	N3-C4-C5	-6.04	119.48	121.90
1	AA	2361	G	N9-C4-C5	-6.04	102.98	105.40
1	AA	343	C	N1-C2-O2	6.04	122.52	118.90
1	AA	1056	A	C6-C5-N7	6.04	136.53	132.30
1	AA	1201	A	C5-N7-C8	-6.04	100.88	103.90
1	AA	1207	C	N1-C2-O2	-6.04	115.28	118.90
1	AA	2028	C	N3-C2-O2	-6.04	117.67	121.90
1	AA	2455	C	N1-C2-N3	6.04	123.43	119.20
1	CA	777	A	N7-C8-N9	6.04	116.82	113.80
1	CA	1838	C	N3-C4-C5	-6.04	119.48	121.90
1	AA	114	C	C4-C5-C6	6.04	120.42	117.40
1	AA	1367	A	C2-N3-C4	6.04	113.62	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1646	C	C4-C5-C6	6.04	120.42	117.40
1	AA	2243	C	N1-C2-O2	-6.04	115.28	118.90
2	AB	107	G	C5-N7-C8	-6.04	101.28	104.30
15	AR	36	THR	CB-CA-C	-6.04	95.30	111.60
1	CA	2562	U	N1-C2-N3	6.04	118.52	114.90
34	DA	771	G	N3-C4-C5	6.04	131.62	128.60
1	AA	2290	A	OP1-P-OP2	-6.03	110.55	119.60
56	BX	76	A	N9-C4-C5	-6.03	103.39	105.80
1	CA	1142(A)	A	N3-C4-C5	6.03	131.02	126.80
1	CA	2050	C	C2-N1-C1'	6.03	125.44	118.80
1	CA	2440	C	O5'-P-OP2	-6.03	100.27	105.70
1	CA	2835	A	C8-N9-C4	-6.03	103.39	105.80
34	DA	1075	C	N1-C2-O2	-6.03	115.28	118.90
1	AA	305	G	N3-C4-C5	6.03	131.62	128.60
1	AA	830	A	N7-C8-N9	-6.03	110.78	113.80
1	AA	1489	G	OP2-P-O3'	6.03	118.47	105.20
1	AA	704	U	N1-C2-O2	6.03	127.02	122.80
1	AA	738	C	C2-N3-C4	6.03	122.92	119.90
1	AA	2876	U	C6-N1-C2	6.03	124.62	121.00
34	BA	1482	G	N3-C4-N9	6.03	129.62	126.00
1	AA	35	G	OP1-P-OP2	-6.03	110.56	119.60
1	AA	2832	G	N3-C4-N9	6.03	129.62	126.00
1	AA	22	C	C2-N3-C4	-6.03	116.89	119.90
1	AA	860	U	O5'-P-OP1	-6.03	100.28	105.70
1	AA	874	U	N3-C2-O2	6.03	126.42	122.20
1	AA	1611	C	C5-C4-N4	6.03	124.42	120.20
1	AA	2641	A	C4-C5-N7	6.03	113.71	110.70
34	BA	23	C	C5-C6-N1	6.03	124.01	121.00
1	CA	2023	G	C5-C6-O6	-6.03	124.98	128.60
1	AA	764	G	C2-N3-C4	-6.03	108.89	111.90
1	AA	1471	G	C5-C6-O6	-6.03	124.98	128.60
34	BA	780	A	N3-C4-C5	6.03	131.02	126.80
1	CA	37	C	C2-N3-C4	-6.03	116.89	119.90
1	AA	717	A	N9-C4-C5	-6.02	103.39	105.80
1	AA	2109	G	C6-C5-N7	-6.02	126.79	130.40
1	AA	202	A	N9-C4-C5	6.02	108.21	105.80
1	AA	583	C	C6-N1-C2	6.02	122.71	120.30
1	AA	1383	G	N3-C4-C5	-6.02	125.59	128.60
1	AA	2475	C	N3-C4-N4	-6.02	113.78	118.00
1	AA	2713	C	N1-C2-N3	6.02	123.42	119.20
34	BA	879	C	N1-C2-O2	-6.02	115.29	118.90
1	CA	53	A	N7-C8-N9	-6.02	110.79	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	574	C	N3-C2-O2	6.02	126.12	121.90
1	CA	1079	C	C6-N1-C2	-6.02	117.89	120.30
1	AA	2018	C	C2-N3-C4	-6.02	116.89	119.90
1	CA	2074	U	O5'-P-OP1	-6.02	100.28	105.70
1	CA	2532	G	N1-C6-O6	6.02	123.51	119.90
1	AA	747	G	N1-C6-O6	-6.02	116.29	119.90
1	AA	1834	A	C8-N9-C4	6.02	108.21	105.80
1	AA	2259	A	C2-N3-C4	-6.02	107.59	110.60
1	AA	2541	G	O4'-C1'-N9	-6.02	103.38	108.20
1	AA	2738	A	N1-C2-N3	6.02	132.31	129.30
1	AA	792	G	C2-N3-C4	-6.02	108.89	111.90
1	AA	2511	C	C2-N3-C4	6.02	122.91	119.90
34	BA	900	A	C5-C6-N6	-6.02	118.89	123.70
34	BA	1083	U	C5-C4-O4	6.02	129.51	125.90
1	CA	1838	C	C6-N1-C2	-6.02	117.89	120.30
1	AA	1192	C	N3-C4-C5	-6.01	119.49	121.90
1	AA	2561	G	C5-C6-N1	6.01	114.51	111.50
20	AW	77	ASP	CB-CG-OD2	6.01	123.71	118.30
1	CA	217	G	C8-N9-C1'	-6.01	119.18	127.00
1	CA	265	A	N7-C8-N9	6.01	116.81	113.80
1	CA	1266	G	C4-C5-C6	-6.01	115.19	118.80
1	CA	1781	C	C6-N1-C2	6.01	122.71	120.30
34	DA	576	G	C5-N7-C8	-6.01	101.29	104.30
1	CA	1030	G	N9-C4-C5	-6.01	103.00	105.40
1	AA	40	C	N3-C2-O2	6.01	126.11	121.90
1	AA	513	C	OP1-P-O3'	6.01	118.42	105.20
1	AA	1709	C	O5'-P-OP1	-6.01	100.29	105.70
1	AA	2050	U	N3-C4-C5	6.01	118.21	114.60
1	AA	718	C	C5-C4-N4	6.01	124.41	120.20
1	AA	1308	A	C5-C6-N6	6.01	128.51	123.70
1	AA	2593	G	N1-C6-O6	-6.01	116.29	119.90
34	BA	509	A	N7-C8-N9	6.01	116.81	113.80
1	CA	458	G	N3-C2-N2	-6.01	115.69	119.90
1	AA	2559	U	N3-C4-O4	-6.01	115.19	119.40
1	AA	2874	G	C5-C6-O6	6.01	132.21	128.60
1	CA	749	C	C5-C4-N4	-6.01	115.99	120.20
1	AA	26	G	N3-C2-N2	6.01	124.10	119.90
1	AA	731	G	C4-C5-N7	6.01	113.20	110.80
1	AA	2535	G	N1-C2-N2	-6.01	110.79	116.20
1	CA	2850	A	N7-C8-N9	6.01	116.80	113.80
1	CA	762	U	N1-C2-N3	-6.00	111.30	114.90
1	CA	1370	C	N3-C4-N4	6.00	122.20	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	494	G	N3-C2-N2	6.00	124.10	119.90
1	AA	836	A	C5-C6-N1	-6.00	114.70	117.70
1	AA	979	G	C5-N7-C8	6.00	107.30	104.30
1	AA	1155	C	C6-N1-C2	-6.00	117.90	120.30
1	AA	2080	A	C8-N9-C4	6.00	108.20	105.80
1	CA	691	C	C5-C6-N1	-6.00	118.00	121.00
1	AA	951	U	C5-C6-N1	-6.00	119.70	122.70
1	AA	1318	A	O4'-C1'-N9	6.00	113.00	108.20
1	AA	2576	A	C4-C5-N7	-6.00	107.70	110.70
1	AA	2591	C	C2-N3-C4	-6.00	116.90	119.90
1	AA	16	G	C5-C6-N1	6.00	114.50	111.50
1	AA	500	G	C2-N3-C4	6.00	114.90	111.90
1	AA	1499	C	O5'-P-OP1	-6.00	100.30	105.70
1	AA	1652	G	C5-N7-C8	6.00	107.30	104.30
1	AA	1845	G	C5-C6-O6	-6.00	125.00	128.60
1	AA	2439	C	C6-N1-C2	6.00	122.70	120.30
11	AN	120	LEU	CA-CB-CG	6.00	129.09	115.30
1	CA	399	G	OP2-P-O3'	6.00	118.39	105.20
1	CA	2442	C	N3-C4-C5	-6.00	119.50	121.90
1	AA	811	A	C8-N9-C4	-6.00	103.40	105.80
1	AA	1700	G	OP1-P-O3'	6.00	118.39	105.20
1	AA	2241	C	C4-C5-C6	6.00	120.40	117.40
14	AQ	14	ARG	NE-CZ-NH2	-6.00	117.30	120.30
1	AA	1392	G	N1-C6-O6	-5.99	116.30	119.90
1	AA	2041	A	O5'-P-OP2	-5.99	100.31	105.70
1	CA	372	G	C5-C6-O6	-5.99	125.00	128.60
1	CA	2252	G	C5-C6-O6	5.99	132.20	128.60
1	CA	2563	U	N3-C2-O2	-5.99	118.00	122.20
1	AA	2802	C	O4'-C1'-N1	5.99	112.99	108.20
1	AA	353	G	O5'-P-OP2	-5.99	100.31	105.70
1	AA	674	G	C5-C6-O6	5.99	132.19	128.60
1	AA	831	A	O5'-P-OP2	5.99	117.89	110.70
1	AA	979	G	C5-C6-N1	5.99	114.50	111.50
1	AA	1720	U	C5-C4-O4	5.99	129.50	125.90
1	AA	2091	G	N9-C4-C5	5.99	107.80	105.40
1	AA	2289	G	C2-N3-C4	-5.99	108.91	111.90
1	AA	2418	U	N1-C2-N3	-5.99	111.31	114.90
1	AA	910	A	C2-N3-C4	5.99	113.59	110.60
1	AA	1378	G	N1-C2-N2	-5.99	110.81	116.20
1	AA	1446	G	C8-N9-C4	-5.99	104.00	106.40
1	AA	2573	A	O5'-P-OP1	-5.99	100.31	105.70
1	AA	2665	U	C5-C4-O4	-5.99	122.31	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1672	C	O5'-P-OP2	5.99	117.89	110.70
1	AA	120	G	C8-N9-C1'	-5.99	119.22	127.00
1	AA	1056	A	C5-N7-C8	5.99	106.89	103.90
34	BA	1491	G	N3-C4-C5	-5.99	125.61	128.60
1	AA	714	U	OP1-P-OP2	-5.99	110.62	119.60
1	AA	2717	A	N1-C6-N6	5.99	122.19	118.60
12	AO	81	ASP	CB-CG-OD1	-5.99	112.91	118.30
1	CA	1624	G	N1-C6-O6	-5.99	116.31	119.90
1	AA	1483	C	C4-C5-C6	5.98	120.39	117.40
1	AA	2005	C	C5-C4-N4	-5.98	116.01	120.20
1	AA	2729	U	C5-C4-O4	-5.98	122.31	125.90
4	AD	71	ASP	N-CA-C	-5.98	94.84	111.00
1	AA	1006	C	C6-N1-C1'	5.98	127.98	120.80
1	AA	1271	G	O5'-P-OP2	5.98	117.88	110.70
1	AA	2274	U	N1-C2-N3	5.98	118.49	114.90
1	CA	1215	G	N1-C6-O6	-5.98	116.31	119.90
1	AA	2511	C	OP1-P-OP2	5.98	128.57	119.60
1	AA	2856	G	C5-N7-C8	5.98	107.29	104.30
1	AA	98	U	C6-N1-C2	5.98	124.59	121.00
1	AA	1310	G	C6-C5-N7	5.98	133.99	130.40
1	AA	469	A	N3-C4-C5	-5.98	122.61	126.80
1	AA	728	G	C4-C5-N7	-5.98	108.41	110.80
1	AA	797	A	N7-C8-N9	5.98	116.79	113.80
1	AA	861	C	C5-C4-N4	-5.98	116.02	120.20
1	AA	1012	C	C5-C6-N1	5.98	123.99	121.00
34	BA	296	U	C6-N1-C2	5.98	124.59	121.00
34	BA	906	G	N3-C4-N9	5.98	129.59	126.00
1	AA	1154	U	C2-N1-C1'	5.98	124.87	117.70
1	AA	1327	G	N1-C2-N3	-5.98	120.31	123.90
1	CA	1952	A	N9-C4-C5	-5.98	103.41	105.80
1	CA	2469	A	C8-N9-C4	5.98	108.19	105.80
1	AA	1014	U	C4-C5-C6	-5.97	116.11	119.70
1	AA	2902	G	C5-N7-C8	-5.97	101.31	104.30
34	BA	243	A	OP2-P-O3'	5.97	118.35	105.20
1	CA	1904	G	C4-C5-N7	-5.97	108.41	110.80
1	AA	1246	C	N3-C4-C5	5.97	124.29	121.90
1	AA	1693	C	OP1-P-O3'	5.97	118.34	105.20
1	AA	2388	A	C6-N1-C2	-5.97	115.02	118.60
2	AB	81	G	N3-C4-N9	-5.97	122.42	126.00
1	CA	456	C	O5'-P-OP2	-5.97	100.32	105.70
1	AA	165	G	C2-N3-C4	-5.97	108.91	111.90
1	AA	827	G	C5-C6-O6	-5.97	125.02	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1268	C	C4-C5-C6	5.97	120.39	117.40
1	AA	1315	A	O5'-P-OP2	-5.97	100.33	105.70
1	AA	2397	C	N3-C4-C5	5.97	124.29	121.90
1	CA	1266	G	N3-C4-C5	5.97	131.59	128.60
1	CA	2083	G	N9-C4-C5	5.97	107.79	105.40
1	AA	1731	C	C6-N1-C2	5.97	122.69	120.30
34	BA	900	A	N9-C4-C5	-5.97	103.41	105.80
34	BA	1406	U	C4-C5-C6	5.97	123.28	119.70
1	AA	285	U	O4'-C1'-N1	5.97	112.97	108.20
1	AA	478	G	N1-C6-O6	-5.97	116.32	119.90
1	AA	2453	C	C5-C6-N1	-5.97	118.02	121.00
1	AA	2516	U	C2-N3-C4	-5.97	123.42	127.00
1	AA	209	G	C8-N9-C4	5.97	108.79	106.40
1	AA	2102	G	N9-C4-C5	-5.97	103.01	105.40
1	AA	2702	C	C2-N3-C4	5.97	122.88	119.90
1	AA	2732	G	N3-C4-C5	5.97	131.58	128.60
2	AB	111	G	C8-N9-C4	-5.97	104.01	106.40
1	AA	354	A	C4-C5-C6	-5.96	114.02	117.00
1	AA	615	G	C5-C6-N1	5.96	114.48	111.50
1	AA	1299	A	N3-C4-C5	-5.96	122.62	126.80
1	AA	2625	U	C6-N1-C2	5.96	124.58	121.00
1	AA	675	C	N1-C2-O2	5.96	122.48	118.90
1	AA	1412	A	C5-C6-N1	5.96	120.68	117.70
1	AA	252	C	N1-C2-O2	5.96	122.48	118.90
1	AA	859	C	N3-C4-C5	5.96	124.28	121.90
1	AA	976	G	N3-C2-N2	-5.96	115.73	119.90
34	BA	808	C	C6-N1-C2	-5.96	117.92	120.30
1	CA	2496	C	C5-C6-N1	5.96	123.98	121.00
1	AA	2897	U	OP2-P-O3'	5.96	118.31	105.20
1	CA	1668	A	C5-C6-N6	-5.96	118.93	123.70
1	AA	456	A	C5-N7-C8	-5.96	100.92	103.90
1	AA	956	A	O5'-P-OP2	-5.96	100.34	105.70
1	AA	1501	U	N3-C2-O2	5.96	126.37	122.20
1	AA	2789	A	C5-N7-C8	-5.96	100.92	103.90
1	CA	2036	C	C6-N1-C2	5.96	122.68	120.30
1	CA	2289	G	N1-C6-O6	5.96	123.47	119.90
1	AA	473	A	N1-C2-N3	-5.96	126.32	129.30
1	AA	1298	G	C5-C6-O6	-5.96	125.03	128.60
1	CA	329	G	N3-C4-N9	5.96	129.57	126.00
25	A1	37	ILE	CB-CA-C	-5.96	99.69	111.60
1	AA	1231	G	N1-C2-N2	-5.95	110.84	116.20
1	AA	2298	A	C5-C6-N1	-5.95	114.72	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	206	U	C5-C4-O4	-5.95	122.33	125.90
1	CA	330	A	C6-C5-N7	-5.95	128.13	132.30
1	CA	2049	G	N9-C4-C5	5.95	107.78	105.40
1	CA	2065	C	OP2-P-O3'	5.95	118.30	105.20
34	BA	509	A	N9-C4-C5	5.95	108.18	105.80
1	AA	493	G	C8-N9-C4	-5.95	104.02	106.40
1	AA	1574	A	N9-C4-C5	-5.95	103.42	105.80
1	AA	2593	G	O4'-C1'-N9	5.95	112.96	108.20
1	AA	2608	U	C2-N3-C4	-5.95	123.43	127.00
1	CA	531	C	C5-C6-N1	-5.95	118.02	121.00
34	DA	281	G	O5'-P-OP1	-5.95	100.34	105.70
34	DA	698	G	C8-N9-C4	-5.95	104.02	106.40
34	DA	884	U	C2-N1-C1'	-5.95	110.56	117.70
1	AA	88	G	C6-C5-N7	-5.95	126.83	130.40
1	AA	139	A	O4'-C1'-N9	5.95	112.96	108.20
1	AA	242	C	C6-N1-C2	5.95	122.68	120.30
1	AA	722	A	C5-C6-N1	-5.95	114.73	117.70
1	AA	1448	C	C5-C4-N4	-5.95	116.04	120.20
1	AA	2057	G	C8-N9-C4	5.95	108.78	106.40
1	AA	2287	C	O5'-P-OP1	5.95	117.84	110.70
1	AA	2648	U	N1-C2-O2	5.95	126.96	122.80
1	AA	2714	U	N3-C4-O4	-5.95	115.24	119.40
2	AB	109	C	O4'-C1'-N1	5.95	112.96	108.20
1	CA	1939	U	O5'-P-OP2	-5.95	100.35	105.70
1	AA	1055	A	C8-N9-C4	5.95	108.18	105.80
1	CA	320	A	O5'-P-OP2	-5.95	100.35	105.70
1	CA	1820	U	C5-C6-N1	-5.95	119.73	122.70
1	CA	2755	C	C2-N1-C1'	5.95	125.34	118.80
1	AA	279	G	N1-C6-O6	5.95	123.47	119.90
1	AA	709	G	N1-C2-N2	-5.95	110.85	116.20
1	AA	986	A	N1-C2-N3	-5.95	126.33	129.30
1	AA	2424	A	N1-C6-N6	5.95	122.17	118.60
1	AA	2665	U	N1-C2-O2	-5.95	118.64	122.80
1	CA	18	C	C6-N1-C2	5.95	122.68	120.30
1	CA	208	C	N3-C4-N4	5.95	122.16	118.00
1	CA	2262	U	N1-C2-O2	-5.95	118.64	122.80
34	DA	1420	C	C6-N1-C2	-5.95	117.92	120.30
1	AA	418	G	N7-C8-N9	-5.94	110.13	113.10
1	AA	2545	A	C5-N7-C8	5.94	106.87	103.90
1	CA	176	G	N9-C4-C5	-5.94	103.02	105.40
1	AA	23	G	N7-C8-N9	-5.94	110.13	113.10
1	AA	534	C	N1-C2-N3	-5.94	115.04	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	916	G	N1-C6-O6	-5.94	116.33	119.90
1	AA	1425	A	C5-C6-N6	-5.94	118.95	123.70
1	AA	1481	G	N1-C6-O6	-5.94	116.33	119.90
1	AA	2446	A	N1-C6-N6	-5.94	115.03	118.60
1	AA	2564	U	OP1-P-OP2	-5.94	110.69	119.60
1	AA	2719	G	N9-C4-C5	-5.94	103.02	105.40
1	AA	1251	G	C5-C6-O6	5.94	132.16	128.60
1	AA	1815	A	C5-C6-N1	5.94	120.67	117.70
1	AA	2403	G	OP1-P-OP2	5.94	128.51	119.60
1	AA	2479	C	C2-N3-C4	5.94	122.87	119.90
34	BA	912	C	C6-N1-C2	5.94	122.68	120.30
1	AA	122	G	C2-N3-C4	-5.94	108.93	111.90
1	AA	476	G	O5'-P-OP1	-5.94	100.36	105.70
1	AA	793	A	O5'-P-OP2	5.94	117.83	110.70
1	AA	1440	U	C6-N1-C2	-5.94	117.44	121.00
1	AA	1649	A	N1-C2-N3	-5.94	126.33	129.30
1	AA	2550	C	C2-N3-C4	-5.94	116.93	119.90
1	AA	2568	C	C2-N3-C4	5.94	122.87	119.90
34	BA	1030(B)	C	N3-C2-O2	-5.94	117.74	121.90
1	CA	188	G	C8-N9-C1'	5.94	134.72	127.00
1	CA	2444	G	C8-N9-C1'	-5.94	119.28	127.00
34	DA	924	C	C6-N1-C2	-5.94	117.92	120.30
34	BA	735	C	N3-C4-N4	-5.94	113.84	118.00
1	CA	736	C	C2-N3-C4	5.94	122.87	119.90
1	AA	663	G	O5'-P-OP2	-5.93	100.36	105.70
1	AA	2727	G	N1-C2-N3	-5.93	120.34	123.90
1	CA	2782	G	N3-C4-N9	5.93	129.56	126.00
1	AA	755	C	C2-N3-C4	5.93	122.87	119.90
1	AA	1267	C	C6-N1-C2	5.93	122.67	120.30
34	BA	121	C	N3-C4-N4	5.93	122.15	118.00
1	AA	1200	G	N1-C6-O6	-5.93	116.34	119.90
1	AA	1643	A	C5-C6-N6	5.93	128.44	123.70
1	AA	2754	A	N3-C4-N9	-5.93	122.66	127.40
1	CA	1799	G	C4-C5-N7	-5.93	108.43	110.80
1	CA	2088	G	N3-C2-N2	-5.93	115.75	119.90
1	AA	504	A	O5'-P-OP1	-5.93	100.36	105.70
1	AA	2508	C	N3-C4-C5	-5.93	119.53	121.90
1	AA	2863	C	O5'-P-OP1	5.93	117.82	110.70
34	BA	356	A	C8-N9-C4	-5.93	103.43	105.80
1	CA	90	U	C6-N1-C2	-5.93	117.44	121.00
1	AA	2291	G	C5-N7-C8	5.93	107.26	104.30
1	AA	2512	U	C6-N1-C2	5.93	124.56	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	19	C	OP1-P-O3'	5.93	118.24	105.20
1	CA	774	A	C8-N9-C4	-5.93	103.43	105.80
1	AA	460	C	P-O3'-C3'	5.93	126.81	119.70
1	AA	601	A	C2-N3-C4	5.93	113.56	110.60
1	AA	2311	G	C8-N9-C4	-5.93	104.03	106.40
1	AA	2704	C	C2-N3-C4	-5.93	116.94	119.90
1	AA	2892	A	O5'-P-OP2	-5.93	100.37	105.70
1	AA	795	G	N3-C4-N9	5.92	129.56	126.00
1	AA	1195	G	C5-N7-C8	-5.92	101.34	104.30
1	AA	1726	U	C5-C4-O4	5.92	129.45	125.90
1	AA	2797	C	N1-C2-O2	5.92	122.45	118.90
1	CA	1325	G	C8-N9-C4	5.92	108.77	106.40
1	AA	343	C	OP2-P-O3'	5.92	118.23	105.20
1	AA	1454	C	N3-C2-O2	5.92	126.05	121.90
1	CA	1248	G	C5-C6-N1	5.92	114.46	111.50
1	AA	235	C	N1-C2-O2	-5.92	115.35	118.90
1	AA	2456	G	N1-C6-O6	5.92	123.45	119.90
1	CA	608	A	O5'-P-OP1	-5.92	100.37	105.70
1	CA	1956	U	N3-C4-C5	5.92	118.15	114.60
1	AA	1010	C	N3-C2-O2	-5.92	117.76	121.90
1	AA	1290	G	N3-C2-N2	5.92	124.04	119.90
1	AA	2220	A	N1-C6-N6	-5.92	115.05	118.60
1	AA	1843	A	OP1-P-OP2	5.92	128.48	119.60
1	AA	2300	A	N7-C8-N9	-5.92	110.84	113.80
2	AB	94	C	N3-C4-C5	-5.92	119.53	121.90
1	CA	1275	A	N7-C8-N9	-5.92	110.84	113.80
1	CA	1690	A	C8-N9-C4	5.92	108.17	105.80
1	AA	600	G	N3-C4-N9	5.92	129.55	126.00
1	AA	808	A	C8-N9-C4	-5.92	103.43	105.80
1	AA	952	G	N3-C4-N9	-5.92	122.45	126.00
1	AA	1690	G	N1-C6-O6	-5.92	116.35	119.90
2	AB	106	G	C6-C5-N7	5.92	133.95	130.40
1	AA	87	G	N3-C4-N9	-5.92	122.45	126.00
1	AA	499	G	N1-C2-N3	5.91	127.45	123.90
1	AA	791	G	N3-C4-C5	-5.91	125.64	128.60
1	AA	1721	G	C4-N9-C1'	5.91	134.19	126.50
1	AA	1804	A	OP2-P-O3'	5.91	118.21	105.20
1	AA	2509	A	C5-N7-C8	5.91	106.86	103.90
34	BA	836	G	C4-C5-N7	5.91	113.17	110.80
34	BA	1506	U	O5'-P-OP1	5.91	117.80	110.70
1	CA	1615	C	C2-N3-C4	5.91	122.86	119.90
1	CA	2575	C	C6-N1-C2	5.91	122.67	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	861	C	C6-N1-C2	5.91	122.67	120.30
1	AA	1425	A	O4'-C1'-N9	-5.91	103.47	108.20
1	AA	306	A	O5'-P-OP1	-5.91	100.38	105.70
1	AA	831	A	N1-C2-N3	-5.91	126.34	129.30
1	AA	1200	G	P-O3'-C3'	5.91	126.79	119.70
1	AA	1737	A	O5'-P-OP1	-5.91	100.38	105.70
1	AA	1771	G	C8-N9-C4	5.91	108.76	106.40
1	CA	132	G	N1-C6-O6	5.91	123.45	119.90
1	AA	1265	A	C5-C6-N6	-5.91	118.97	123.70
1	AA	2357	G	O5'-P-OP1	-5.91	100.38	105.70
1	CA	206	U	OP2-P-O3'	5.91	118.20	105.20
1	CA	1647	G	O4'-C1'-N9	-5.91	103.47	108.20
1	AA	2275	C	C6-N1-C2	5.91	122.66	120.30
1	AA	148	C	O5'-P-OP2	-5.91	100.39	105.70
1	AA	1077	G	O5'-P-OP2	-5.91	100.39	105.70
34	BA	15	G	C8-N9-C1'	-5.91	119.32	127.00
1	CA	2815	C	N1-C2-O2	5.91	122.44	118.90
56	DX	15	G	OP2-P-O3'	5.91	118.19	105.20
1	AA	2585	C	OP2-P-O3'	5.90	118.19	105.20
1	AA	71	U	C5-C4-O4	5.90	129.44	125.90
1	AA	962	G	C4-C5-N7	5.90	113.16	110.80
1	AA	1619	A	C8-N9-C4	5.90	108.16	105.80
1	AA	2376	C	C5-C4-N4	5.90	124.33	120.20
1	CA	1428	C	O5'-P-OP2	5.90	117.78	110.70
1	AA	1240	G	C2-N3-C4	5.90	114.85	111.90
1	AA	1862	G	C5-C6-N1	-5.90	108.55	111.50
1	CA	122	G	N3-C2-N2	-5.90	115.77	119.90
34	DA	257	G	C8-N9-C4	5.90	108.76	106.40
1	AA	970	C	OP1-P-O3'	5.90	118.18	105.20
1	AA	1029	A	C4-C5-C6	-5.90	114.05	117.00
1	AA	1852	A	C2-N3-C4	5.90	113.55	110.60
1	CA	1776	G	C5-C6-O6	-5.90	125.06	128.60
1	AA	798	A	C5-N7-C8	-5.90	100.95	103.90
1	AA	1867	C	C5-C6-N1	5.90	123.95	121.00
1	AA	1971	G	O5'-P-OP1	-5.90	100.39	105.70
1	AA	2387	G	N9-C1'-C2'	-5.90	105.51	112.00
56	BX	9	G	N3-C4-N9	5.90	129.54	126.00
1	CA	856	C	C6-N1-C2	-5.90	117.94	120.30
1	CA	1997	G	N1-C6-O6	5.90	123.44	119.90
1	AA	901	G	N3-C4-N9	-5.90	122.46	126.00
1	AA	2584	A	C8-N9-C4	5.90	108.16	105.80
1	AA	1239	A	C8-N9-C4	5.89	108.16	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2112	G	C8-N9-C4	5.89	108.76	106.40
1	AA	2536	G	OP1-P-O3'	-5.89	92.23	105.20
1	CA	1688	U	C5-C6-N1	-5.89	119.75	122.70
1	AA	543	G	N1-C2-N2	-5.89	110.90	116.20
1	AA	2443	U	C5-C4-O4	-5.89	122.36	125.90
1	CA	1353	A	C4-C5-C6	5.89	119.95	117.00
1	CA	2532	G	C4-C5-N7	5.89	113.16	110.80
1	AA	1024	G	C4-C5-N7	-5.89	108.44	110.80
1	AA	35	G	N1-C6-O6	-5.89	116.37	119.90
1	AA	229	G	C5-C6-O6	-5.89	125.07	128.60
1	AA	1382	A	C5-N7-C8	5.89	106.84	103.90
1	AA	1791	A	OP2-P-O3'	5.89	118.16	105.20
1	CA	51	G	C2-N3-C4	5.89	114.84	111.90
1	AA	28	A	C5-C6-N6	5.89	128.41	123.70
1	AA	855	G	N3-C2-N2	5.89	124.02	119.90
1	AA	1794	G	N1-C6-O6	-5.89	116.37	119.90
1	AA	2110	G	OP2-P-O3'	5.89	118.15	105.20
1	AA	2592	U	O5'-P-OP1	-5.89	100.40	105.70
1	AA	187	C	C5-C4-N4	-5.89	116.08	120.20
1	AA	1188	A	N7-C8-N9	5.89	116.74	113.80
1	AA	1357	G	C5-N7-C8	5.89	107.24	104.30
1	AA	727	G	O5'-P-OP1	-5.88	100.40	105.70
1	AA	2610	A	OP2-P-O3'	5.88	118.15	105.20
1	AA	2757	G	C4-C5-N7	-5.88	108.45	110.80
1	AA	2906	U	C6-N1-C2	-5.88	117.47	121.00
34	BA	1400	C	C6-N1-C2	-5.88	117.95	120.30
1	CA	500	G	C4-C5-N7	-5.88	108.45	110.80
2	AB	107	G	N9-C4-C5	-5.88	103.05	105.40
56	DX	75	C	C6-N1-C2	-5.88	117.95	120.30
1	CA	2044	C	C6-N1-C2	-5.88	117.95	120.30
1	AA	494	G	O5'-P-OP1	-5.88	100.41	105.70
1	AA	591	U	N1-C2-N3	-5.88	111.37	114.90
1	AA	603	C	C5-C6-N1	-5.88	118.06	121.00
1	AA	2266	C	N3-C2-O2	5.88	126.02	121.90
1	AA	2447	A	N9-C4-C5	-5.88	103.45	105.80
34	BA	109	A	C8-N9-C4	5.88	108.15	105.80
1	AA	719	C	OP1-P-OP2	-5.88	110.78	119.60
1	AA	1311	A	C6-N1-C2	5.88	122.13	118.60
1	AA	2081	A	C5-C6-N1	-5.88	114.76	117.70
1	CA	1937	A	O4'-C1'-N9	5.88	112.90	108.20
1	AA	1503	G	N1-C6-O6	5.88	123.43	119.90
1	AA	2282	G	C5-C6-O6	-5.88	125.07	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2400	A	O5'-P-OP2	-5.88	100.41	105.70
1	AA	2536	G	N3-C4-C5	5.88	131.54	128.60
1	AA	794	U	C5-C4-O4	5.88	129.43	125.90
1	AA	2034	G	C2-N3-C4	-5.88	108.96	111.90
1	AA	133	G	C5-C6-N1	5.87	114.44	111.50
1	AA	606	G	N1-C6-O6	-5.87	116.38	119.90
1	AA	1069	U	C5-C6-N1	-5.87	119.76	122.70
1	AA	2450	U	N3-C4-C5	5.87	118.12	114.60
1	AA	2553	A	OP1-P-OP2	5.87	128.41	119.60
34	BA	1524	C	N3-C4-C5	-5.87	119.55	121.90
1	CA	764	A	O4'-C1'-N9	5.87	112.90	108.20
1	CA	2074	U	OP1-P-OP2	5.87	128.41	119.60
34	DA	807	A	C8-N9-C4	-5.87	103.45	105.80
1	AA	98	U	C6-N1-C1'	-5.87	112.98	121.20
1	AA	356	A	N7-C8-N9	5.87	116.73	113.80
1	AA	732	A	C5-N7-C8	-5.87	100.97	103.90
1	AA	1245	C	C6-N1-C2	-5.87	117.95	120.30
1	AA	1454	C	C2-N1-C1'	-5.87	112.34	118.80
1	AA	1891	G	C4-C5-N7	5.87	113.15	110.80
1	AA	2645	G	N9-C4-C5	5.87	107.75	105.40
56	BX	42	G	N1-C6-O6	-5.87	116.38	119.90
1	CA	1269	A	N1-C6-N6	5.87	122.12	118.60
34	DA	1441	G	N3-C4-C5	-5.87	125.66	128.60
1	AA	44	G	C5-C6-O6	5.87	132.12	128.60
1	AA	374	U	N3-C2-O2	5.87	126.31	122.20
1	AA	1042	A	OP2-P-O3'	5.87	118.11	105.20
1	AA	1511	C	C6-N1-C2	-5.87	117.95	120.30
1	CA	1996	C	N3-C4-C5	5.87	124.25	121.90
1	CA	2595	G	C8-N9-C4	5.87	108.75	106.40
1	AA	42	G	OP2-P-O3'	5.87	118.11	105.20
1	AA	351	G	C5-C6-O6	5.87	132.12	128.60
1	AA	721	G	C5-C6-N1	-5.87	108.57	111.50
1	AA	1401	G	N1-C6-O6	-5.87	116.38	119.90
1	AA	1402	G	C5-C6-N1	5.87	114.43	111.50
1	AA	2065	C	N1-C2-O2	5.87	122.42	118.90
34	BA	806	C	N1-C2-O2	5.87	122.42	118.90
1	AA	194	G	N9-C4-C5	-5.86	103.06	105.40
1	AA	443	C	N3-C2-O2	-5.86	117.80	121.90
1	AA	1991	A	C2-N3-C4	-5.86	107.67	110.60
2	AB	106	G	C4-N9-C1'	-5.86	118.88	126.50
34	BA	802	A	C2-N3-C4	-5.86	107.67	110.60
1	CA	478	A	C8-N9-C4	-5.86	103.45	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1001	G	C5-N7-C8	5.86	107.23	104.30
1	AA	964	A	C5-C6-N1	-5.86	114.77	117.70
1	AA	1019	G	N9-C4-C5	-5.86	103.06	105.40
1	AA	2399	U	OP2-P-O3'	5.86	118.09	105.20
34	BA	553	A	C8-N9-C4	-5.86	103.46	105.80
34	DA	897	C	O5'-P-OP2	-5.86	100.43	105.70
1	AA	12	U	C2-N1-C1'	5.86	124.73	117.70
1	AA	2091	G	N3-C2-N2	-5.86	115.80	119.90
34	BA	1500	A	C6-N1-C2	5.86	122.11	118.60
1	CA	1914	C	N3-C2-O2	-5.86	117.80	121.90
1	CA	1963	U	N1-C2-O2	5.86	126.90	122.80
1	AA	531	G	C6-C5-N7	5.86	133.91	130.40
1	AA	1414	G	N3-C4-N9	5.86	129.51	126.00
1	AA	2020	G	O5'-P-OP1	-5.86	100.43	105.70
1	CA	2685	G	OP1-P-O3'	5.86	118.08	105.20
1	AA	921	G	N3-C4-N9	-5.85	122.49	126.00
1	AA	990	A	N9-C1'-C2'	5.85	121.61	114.00
1	AA	1112	U	N3-C2-O2	-5.85	118.10	122.20
34	BA	365	U	C6-N1-C1'	5.85	129.40	121.20
1	AA	488	C	N1-C2-O2	-5.85	115.39	118.90
1	AA	801	C	N1-C2-O2	-5.85	115.39	118.90
1	AA	2474	U	N3-C4-O4	-5.85	115.30	119.40
1	AA	2549	U	C5-C4-O4	5.85	129.41	125.90
1	AA	2652	G	N3-C2-N2	5.85	124.00	119.90
1	AA	2754	A	C5-C6-N1	-5.85	114.77	117.70
1	CA	531	C	N3-C4-C5	-5.85	119.56	121.90
1	CA	793	A	O5'-P-OP2	-5.85	100.43	105.70
1	CA	1610	A	C8-N9-C4	5.85	108.14	105.80
1	AA	556	C	C2-N3-C4	-5.85	116.97	119.90
1	AA	2633	A	OP2-P-O3'	5.85	118.07	105.20
34	BA	816	A	O5'-P-OP2	-5.85	100.43	105.70
1	AA	377	G	C5-C6-O6	-5.85	125.09	128.60
1	AA	601	A	O4'-C1'-N9	5.85	112.88	108.20
1	AA	1390	G	N1-C6-O6	5.85	123.41	119.90
1	AA	1709	C	C6-N1-C1'	-5.85	113.78	120.80
1	AA	2250	G	OP1-P-OP2	5.85	128.38	119.60
1	CA	255	A	C4-C5-C6	5.85	119.92	117.00
1	CA	2406	U	O4'-C1'-N1	-5.85	103.52	108.20
1	CA	2436	G	O5'-P-OP1	-5.85	100.44	105.70
1	AA	2022	G	N9-C1'-C2'	-5.85	105.57	112.00
1	AA	2594	G	N9-C4-C5	-5.85	103.06	105.40
1	AA	2796	G	N1-C2-N2	-5.85	110.94	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	350	G	C4-C5-N7	-5.85	108.46	110.80
1	AA	837	C	O4'-C1'-N1	5.85	112.88	108.20
1	AA	1646	C	C5-C6-N1	-5.85	118.08	121.00
1	AA	2789	A	N1-C6-N6	5.85	122.11	118.60
1	CA	2587	A	C2-N3-C4	-5.85	107.68	110.60
1	AA	180	A	C2-N3-C4	-5.84	107.68	110.60
1	AA	348	A	OP1-P-O3'	5.84	118.06	105.20
1	AA	649	C	C2-N3-C4	-5.84	116.98	119.90
1	AA	2367	C	C5-C4-N4	-5.84	116.11	120.20
1	CA	668	G	C4-C5-N7	5.84	113.14	110.80
1	AA	244	A	C6-N1-C2	-5.84	115.09	118.60
1	AA	1031	C	N3-C4-N4	-5.84	113.91	118.00
1	CA	34	C	C6-N1-C2	-5.84	117.96	120.30
1	CA	1021	A	N3-C4-N9	-5.84	122.73	127.40
1	CA	2541	A	N9-C4-C5	-5.84	103.46	105.80
1	AA	50	G	N3-C4-C5	-5.84	125.68	128.60
1	AA	620	U	C5-C6-N1	-5.84	119.78	122.70
1	AA	906	G	C6-C5-N7	5.84	133.90	130.40
1	AA	1616	A	N1-C2-N3	-5.84	126.38	129.30
1	AA	2263	G	C5-C6-O6	5.84	132.10	128.60
34	BA	644	G	C8-N9-C4	5.84	108.74	106.40
34	BA	879	C	C6-N1-C2	5.84	122.64	120.30
1	CA	2573	C	C5-C4-N4	5.84	124.29	120.20
1	AA	1680	G	OP1-P-O3'	-5.84	92.36	105.20
34	DA	512	U	N3-C2-O2	-5.84	118.11	122.20
1	AA	125	A	C5-C6-N1	5.84	120.62	117.70
1	AA	996	C	N3-C4-C5	5.84	124.23	121.90
1	AA	1067	A	C4-C5-N7	5.84	113.62	110.70
1	CA	739	G	C2-N3-C4	5.84	114.82	111.90
1	CA	945	A	N7-C8-N9	5.84	116.72	113.80
1	CA	1599	C	N3-C4-N4	-5.84	113.92	118.00
1	CA	2418	A	N9-C4-C5	5.84	108.14	105.80
1	AA	966	G	C5-C6-O6	-5.83	125.10	128.60
1	AA	1543	U	O4'-C1'-N1	5.83	112.87	108.20
1	AA	1093	G	N3-C4-C5	-5.83	125.68	128.60
1	AA	1686	U	OP2-P-O3'	5.83	118.03	105.20
1	AA	2060	G	N9-C4-C5	5.83	107.73	105.40
1	CA	531	C	C2-N1-C1'	-5.83	112.38	118.80
1	AA	808	A	C4-C5-C6	5.83	119.92	117.00
1	AA	1720	U	C6-N1-C1'	5.83	129.36	121.20
1	AA	2297	C	C6-N1-C2	-5.83	117.97	120.30
15	AR	2	ARG	NE-CZ-NH1	-5.83	117.39	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	130	C	N3-C4-C5	5.83	124.23	121.90
1	CA	1465	G	C8-N9-C4	-5.83	104.07	106.40
1	AA	2351	G	N3-C2-N2	5.83	123.98	119.90
55	BV	17	U	N1-C2-N3	5.83	118.40	114.90
1	CA	794	G	C5-C6-N1	5.83	114.42	111.50
1	CA	2824	C	C5-C6-N1	-5.83	118.08	121.00
1	AA	553	A	C5-C6-N1	-5.83	114.79	117.70
1	AA	1436	U	N1-C2-O2	-5.83	118.72	122.80
1	AA	1815	A	OP1-P-O3'	5.83	118.02	105.20
1	AA	1851	U	N3-C2-O2	-5.83	118.12	122.20
1	AA	1866	G	N9-C4-C5	-5.83	103.07	105.40
1	AA	2278	A	N1-C2-N3	-5.83	126.39	129.30
1	CA	142(A)	C	OP1-P-OP2	5.83	128.34	119.60
1	CA	1297	C	C5-C4-N4	5.83	124.28	120.20
1	CA	1297	C	C6-N1-C2	-5.83	117.97	120.30
1	CA	1497	U	O4'-C1'-N1	5.83	112.86	108.20
1	AA	1010	C	N1-C2-O2	5.83	122.40	118.90
1	AA	1807	G	N1-C6-O6	5.83	123.40	119.90
1	AA	416	G	C6-N1-C2	-5.83	121.61	125.10
1	AA	416	G	O5'-P-OP2	5.83	117.69	110.70
1	AA	1742	G	OP1-P-OP2	5.83	128.34	119.60
1	AA	1854	G	C5-C6-N1	5.83	114.41	111.50
1	AA	2403	G	C8-N9-C1'	5.83	134.57	127.00
1	CA	1451	C	O5'-P-OP2	-5.83	100.46	105.70
1	AA	539	A	C5-C6-N1	5.82	120.61	117.70
1	AA	990	A	O5'-P-OP2	5.82	117.69	110.70
1	AA	2709	G	N7-C8-N9	-5.82	110.19	113.10
1	AA	1644	C	C6-N1-C1'	-5.82	113.81	120.80
1	AA	2282	G	N1-C2-N2	5.82	121.44	116.20
1	CA	1903	G	N7-C8-N9	5.82	116.01	113.10
1	AA	2241	C	C5-C6-N1	-5.82	118.09	121.00
1	AA	2834	C	N1-C2-O2	-5.82	115.41	118.90
1	CA	1864	U	N3-C4-O4	5.82	123.47	119.40
1	CA	2689	U	N3-C2-O2	-5.82	118.13	122.20
1	AA	1268	C	N3-C4-N4	5.82	122.07	118.00
1	AA	1607	G	O5'-P-OP1	-5.82	100.46	105.70
1	CA	1968	G	N1-C2-N2	5.82	121.44	116.20
1	AA	1210	G	N7-C8-N9	-5.82	110.19	113.10
1	AA	1648	U	O5'-P-OP2	5.82	117.68	110.70
1	AA	2465	A	N9-C4-C5	-5.82	103.47	105.80
34	BA	631	G	C8-N9-C4	-5.82	104.07	106.40
34	BA	830	G	N3-C4-C5	5.82	131.51	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	139	A	C2-N3-C4	-5.82	107.69	110.60
1	AA	574	G	N3-C4-N9	5.82	129.49	126.00
1	AA	731	G	OP2-P-O3'	5.82	118.00	105.20
1	CA	448	U	N3-C2-O2	-5.82	118.13	122.20
1	CA	950	G	N9-C4-C5	5.82	107.73	105.40
1	CA	2062	A	N7-C8-N9	5.82	116.71	113.80
1	CA	2561	A	OP1-P-OP2	5.82	128.32	119.60
1	CA	1820	U	C6-N1-C2	5.81	124.49	121.00
1	AA	744	C	O5'-P-OP2	-5.81	100.47	105.70
1	AA	1365	G	C5-C6-O6	5.81	132.09	128.60
1	AA	1783	C	N1-C2-N3	-5.81	115.13	119.20
1	CA	959	A	O5'-P-OP2	-5.81	100.47	105.70
34	DA	896	C	N3-C4-C5	5.81	124.22	121.90
1	AA	2082	A	N3-C4-C5	5.81	130.87	126.80
1	AA	2782	C	C6-N1-C2	5.81	122.62	120.30
1	AA	40	C	C5-C4-N4	-5.81	116.13	120.20
1	AA	165	G	N1-C2-N3	5.81	127.39	123.90
1	AA	462	C	C5-C6-N1	-5.81	118.09	121.00
1	AA	895	G	C5-C6-N1	5.81	114.41	111.50
1	AA	1454	C	O5'-P-OP2	5.81	117.67	110.70
1	AA	2246	G	C8-N9-C4	-5.81	104.08	106.40
1	AA	2268	G	N9-C4-C5	-5.81	103.08	105.40
1	AA	2393	C	N1-C2-O2	5.81	122.39	118.90
1	AA	2802	C	N3-C4-N4	-5.81	113.93	118.00
1	CA	798	G	C5-C6-N1	-5.81	108.59	111.50
1	CA	2431	U	C5-C6-N1	-5.81	119.80	122.70
1	AA	1278	G	N9-C4-C5	5.81	107.72	105.40
1	AA	2676	G	N1-C6-O6	5.81	123.38	119.90
34	BA	1030(B)	C	C6-N1-C2	-5.81	117.98	120.30
1	CA	188	G	C4-N9-C1'	-5.81	118.95	126.50
1	CA	2564	A	N9-C4-C5	5.81	108.12	105.80
1	AA	69	G	C5-C6-O6	5.81	132.08	128.60
1	AA	122	G	C8-N9-C4	5.81	108.72	106.40
1	AA	1070	G	C6-C5-N7	-5.81	126.92	130.40
34	DA	798	G	C8-N9-C4	-5.81	104.08	106.40
1	AA	174	U	C4-C5-C6	5.80	123.18	119.70
1	CA	1997	G	N7-C8-N9	-5.80	110.20	113.10
1	CA	2445	G	OP1-P-OP2	5.80	128.31	119.60
1	AA	2491	G	C4-C5-N7	5.80	113.12	110.80
1	CA	2394	C	C6-N1-C2	5.80	122.62	120.30
34	DA	117	G	N3-C4-C5	-5.80	125.70	128.60
1	AA	64	C	N3-C2-O2	-5.80	117.84	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	491	G	C8-N9-C1'	-5.80	119.46	127.00
1	AA	592	U	OP1-P-OP2	5.80	128.30	119.60
1	AA	894	U	C2-N3-C4	-5.80	123.52	127.00
1	AA	1574	A	N1-C6-N6	5.80	122.08	118.60
34	BA	17	U	N3-C2-O2	-5.80	118.14	122.20
1	CA	118	A	O5'-P-OP2	5.80	117.66	110.70
1	CA	531	C	C4-C5-C6	5.80	120.30	117.40
1	CA	1270	C	C6-N1-C2	5.80	122.62	120.30
1	AA	177	G	N1-C2-N3	5.80	127.38	123.90
1	AA	1159	U	C5-C4-O4	5.80	129.38	125.90
1	AA	1324	A	C5-C6-N6	5.80	128.34	123.70
1	AA	1641	G	C5-C6-N1	-5.80	108.60	111.50
2	AB	27	C	OP1-P-O3'	-5.80	92.44	105.20
2	AB	33	G	N7-C8-N9	-5.80	110.20	113.10
34	BA	780	A	C4-C5-N7	5.80	113.60	110.70
34	BA	801	U	C6-N1-C2	5.80	124.48	121.00
1	CA	1622	G	C4-C5-N7	-5.80	108.48	110.80
34	DA	1502	A	N1-C6-N6	5.80	122.08	118.60
1	AA	539	A	C8-N9-C4	5.80	108.12	105.80
1	AA	776	G	C6-C5-N7	-5.80	126.92	130.40
1	AA	984	G	N9-C4-C5	5.80	107.72	105.40
1	AA	2492	C	N3-C4-C5	-5.80	119.58	121.90
1	AA	2850	C	OP2-P-O3'	5.80	117.96	105.20
1	AA	112	U	N3-C4-O4	5.80	123.46	119.40
1	AA	612	C	C4-C5-C6	5.80	120.30	117.40
1	AA	899	G	N3-C2-N2	5.80	123.96	119.90
1	CA	2859	G	C8-N9-C4	-5.80	104.08	106.40
34	DA	266	G	C6-C5-N7	-5.80	126.92	130.40
1	AA	2437	A	N7-C8-N9	5.79	116.70	113.80
1	AA	2883	A	N1-C6-N6	-5.79	115.12	118.60
1	CA	959	A	N1-C2-N3	5.79	132.20	129.30
1	CA	1355	G	C8-N9-C4	-5.79	104.08	106.40
1	CA	2538	C	C6-N1-C2	5.79	122.62	120.30
1	AA	513	C	C2-N1-C1'	5.79	125.17	118.80
1	AA	1264	G	N7-C8-N9	5.79	116.00	113.10
34	BA	218	C	C6-N1-C2	-5.79	117.98	120.30
34	BA	816	A	O5'-P-OP1	5.79	117.65	110.70
1	CA	1891	G	OP2-P-O3'	5.79	117.94	105.20
34	DA	7	G	N9-C4-C5	5.79	107.72	105.40
1	AA	111	G	N3-C4-C5	5.79	131.50	128.60
1	AA	2045	G	N1-C2-N2	5.79	121.41	116.20
1	AA	2234	G	C6-C5-N7	5.79	133.88	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2731	G	C6-C5-N7	5.79	133.88	130.40
1	AA	2745	G	C4-C5-N7	-5.79	108.48	110.80
1	AA	2891	C	O5'-P-OP1	-5.79	100.49	105.70
34	DA	7	G	C8-N9-C1'	5.79	134.53	127.00
1	AA	583	C	C5-C6-N1	-5.79	118.11	121.00
1	AA	583	C	N3-C2-O2	-5.79	117.85	121.90
1	AA	2079	A	C6-C5-N7	5.79	136.35	132.30
1	AA	2432	C	C4-C5-C6	5.79	120.29	117.40
34	BA	46	G	N1-C6-O6	5.79	123.37	119.90
34	BA	863	U	C2-N1-C1'	-5.79	110.75	117.70
1	CA	87	C	N3-C2-O2	-5.79	117.85	121.90
1	CA	1397	U	N1-C2-N3	5.79	118.37	114.90
1	AA	1001	G	N3-C2-N2	-5.79	115.85	119.90
1	AA	1272	A	N1-C6-N6	5.79	122.07	118.60
1	AA	1962	U	OP1-P-OP2	-5.79	110.92	119.60
34	BA	741	G	N7-C8-N9	5.79	115.99	113.10
1	AA	520	G	C5-C6-O6	5.79	132.07	128.60
1	AA	2511	C	C5-C6-N1	5.79	123.89	121.00
2	AB	60	C	N3-C4-N4	5.79	122.05	118.00
1	CA	2623	G	C8-N9-C4	-5.79	104.09	106.40
1	AA	580	U	C2-N1-C1'	-5.78	110.76	117.70
1	AA	1783	C	C2-N1-C1'	-5.78	112.44	118.80
1	CA	1281	G	N3-C2-N2	-5.78	115.85	119.90
1	CA	1651	G	C2-N3-C4	5.78	114.79	111.90
1	CA	1698	A	N1-C6-N6	5.78	122.07	118.60
1	AA	751	G	C5-C6-O6	5.78	132.07	128.60
34	BA	740	U	N1-C2-N3	5.78	118.37	114.90
1	AA	121	G	C2-N3-C4	5.78	114.79	111.90
1	AA	975	U	N1-C2-N3	5.78	118.37	114.90
1	AA	2016	C	C2-N3-C4	-5.78	117.01	119.90
1	AA	2082	A	N3-C4-N9	-5.78	122.78	127.40
1	AA	2763	A	N1-C6-N6	5.78	122.07	118.60
2	AB	26	A	N1-C6-N6	5.78	122.07	118.60
1	CA	1897	G	C8-N9-C4	5.78	108.71	106.40
1	AA	51	A	N7-C8-N9	5.78	116.69	113.80
1	AA	1045	U	N3-C2-O2	5.78	126.25	122.20
34	BA	938	A	N1-C6-N6	5.78	122.07	118.60
1	AA	818	G	C4-C5-N7	-5.78	108.49	110.80
1	AA	1294	G	N7-C8-N9	-5.78	110.21	113.10
1	AA	2043	C	C2-N3-C4	-5.78	117.01	119.90
1	AA	2793	G	N1-C2-N2	-5.78	111.00	116.20
1	CA	1759	A	C5-C6-N6	5.78	128.32	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2563	U	N1-C2-O2	5.78	126.84	122.80
1	AA	1325	G	OP1-P-O3'	5.78	117.91	105.20
1	CA	1885	A	C8-N9-C4	5.78	108.11	105.80
1	CA	2277	G	N9-C4-C5	5.78	107.71	105.40
1	AA	614	C	N3-C2-O2	-5.77	117.86	121.90
1	AA	747	G	C5-C6-N1	5.77	114.39	111.50
1	AA	1041	C	C6-N1-C2	5.77	122.61	120.30
1	AA	2506	G	C4-C5-N7	5.77	113.11	110.80
1	AA	564	G	OP1-P-OP2	-5.77	110.94	119.60
1	AA	642	G	OP2-P-O3'	5.77	117.90	105.20
1	AA	727	G	C4-N9-C1'	5.77	134.00	126.50
1	AA	1098	C	P-O3'-C3'	5.77	126.63	119.70
1	AA	1333	A	N1-C6-N6	-5.77	115.14	118.60
1	AA	1641	G	C4-C5-N7	-5.77	108.49	110.80
1	AA	1651	C	N3-C2-O2	-5.77	117.86	121.90
1	CA	777	A	C5-N7-C8	-5.77	101.01	103.90
1	CA	2488	A	C8-N9-C4	5.77	108.11	105.80
1	AA	805	C	N3-C4-C5	5.77	124.21	121.90
1	CA	96	G	N9-C4-C5	-5.77	103.09	105.40
1	CA	1997	G	C5-C6-O6	-5.77	125.14	128.60
1	AA	175	G	OP1-P-O3'	5.77	117.89	105.20
1	AA	2101	U	N3-C2-O2	-5.77	118.16	122.20
1	CA	809	G	N3-C4-C5	5.77	131.48	128.60
1	CA	1977	A	N1-C6-N6	-5.77	115.14	118.60
34	DA	370	C	N3-C4-N4	-5.77	113.96	118.00
1	AA	882	A	C6-N1-C2	-5.77	115.14	118.60
1	AA	1068	G	N7-C8-N9	-5.77	110.22	113.10
2	AB	77	U	C2-N3-C4	-5.77	123.54	127.00
1	AA	424	G	N9-C4-C5	-5.77	103.09	105.40
1	AA	443	C	N1-C2-O2	5.77	122.36	118.90
1	AA	1029	A	OP1-P-OP2	-5.77	110.95	119.60
1	AA	2539	C	C4-C5-C6	-5.77	114.52	117.40
1	CA	402	A	C8-N9-C4	5.77	108.11	105.80
1	AA	79	G	N1-C6-O6	-5.76	116.44	119.90
1	AA	172	C	C5-C4-N4	-5.76	116.17	120.20
1	AA	1333	A	C2-N3-C4	5.76	113.48	110.60
1	AA	2584	A	N9-C4-C5	-5.76	103.49	105.80
34	BA	1117	G	N3-C4-N9	-5.76	122.54	126.00
1	AA	1076	G	C6-C5-N7	-5.76	126.94	130.40
1	AA	1526	G	N3-C4-N9	-5.76	122.54	126.00
1	AA	414	U	C6-N1-C2	-5.76	117.54	121.00
1	AA	815	G	C4-C5-N7	-5.76	108.50	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1055	A	N9-C4-C5	-5.76	103.50	105.80
1	AA	1075	A	N1-C2-N3	-5.76	126.42	129.30
1	AA	1301	U	C4-C5-C6	-5.76	116.24	119.70
1	AA	1805	C	C6-N1-C2	-5.76	118.00	120.30
1	CA	469	G	C6-N1-C2	-5.76	121.64	125.10
1	CA	2347	C	N1-C2-O2	5.76	122.36	118.90
34	DA	779	C	N3-C4-C5	5.76	124.20	121.90
1	AA	849	A	N9-C4-C5	5.76	108.10	105.80
1	AA	1215	G	N3-C4-C5	5.76	131.48	128.60
1	AA	2601	A	C4-C5-N7	-5.76	107.82	110.70
34	BA	651	C	C2-N1-C1'	5.76	125.14	118.80
1	CA	1428	C	C5-C4-N4	5.76	124.23	120.20
1	CA	1795	C	N3-C4-C5	5.76	124.20	121.90
34	DA	1395	C	O5'-P-OP1	-5.76	100.52	105.70
1	AA	410	U	C5-C6-N1	-5.76	119.82	122.70
1	AA	1384	G	N3-C4-C5	-5.76	125.72	128.60
1	AA	2049	G	N3-C4-N9	5.76	129.46	126.00
1	AA	2374	G	N3-C4-N9	-5.76	122.55	126.00
1	CA	2627	G	C4-N9-C1'	5.76	133.99	126.50
1	AA	846	G	C5-C6-O6	5.76	132.05	128.60
1	AA	1674	G	OP1-P-O3'	5.76	117.86	105.20
1	AA	2028	C	C5-C4-N4	-5.76	116.17	120.20
1	AA	2548	G	C5-N7-C8	5.76	107.18	104.30
6	AF	74	ARG	NE-CZ-NH2	-5.76	117.42	120.30
1	AA	802	C	N3-C4-N4	-5.75	113.97	118.00
1	CA	211	A	C8-N9-C4	-5.75	103.50	105.80
1	AA	2899	C	N3-C2-O2	-5.75	117.87	121.90
4	AD	10	THR	C-N-CD	5.75	140.48	128.40
1	AA	19	C	N3-C2-O2	-5.75	117.87	121.90
1	AA	862	C	C5-C4-N4	5.75	124.23	120.20
1	CA	1596	A	C4-C5-N7	-5.75	107.83	110.70
1	AA	661	G	OP2-P-O3'	5.75	117.85	105.20
1	AA	882	A	C6-C5-N7	5.75	136.32	132.30
1	AA	2745	G	N7-C8-N9	-5.75	110.22	113.10
1	CA	682	G	N9-C4-C5	-5.75	103.10	105.40
1	AA	104	C	N1-C2-O2	5.75	122.35	118.90
1	AA	133	G	C4-N9-C1'	-5.75	119.03	126.50
1	AA	713	G	O5'-P-OP1	5.75	117.60	110.70
1	AA	852	G	N3-C2-N2	5.75	123.92	119.90
1	AA	1026	A	C6-N1-C2	5.75	122.05	118.60
1	AA	1228	G	N1-C2-N2	5.75	121.37	116.20
1	AA	1700	G	C4-N9-C1'	5.75	133.97	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2220	A	O4'-C1'-N9	5.75	112.80	108.20
1	AA	2779	G	N1-C6-O6	-5.75	116.45	119.90
34	DA	886	G	N9-C4-C5	-5.75	103.10	105.40
1	AA	101	A	C5-C6-N1	-5.75	114.83	117.70
1	AA	349	G	N3-C2-N2	-5.75	115.88	119.90
1	AA	980	C	N3-C2-O2	5.75	125.92	121.90
1	AA	1059	C	N3-C2-O2	5.75	125.92	121.90
1	AA	1605	A	C4-C5-N7	5.75	113.57	110.70
1	AA	1821	C	OP1-P-O3'	5.75	117.84	105.20
1	AA	2234	G	N3-C4-N9	-5.75	122.55	126.00
34	BA	1482	G	N3-C4-C5	-5.75	125.73	128.60
1	CA	53	A	O5'-P-OP1	-5.75	100.53	105.70
1	CA	748	G	C5-C6-O6	5.75	132.05	128.60
34	DA	232	G	N3-C4-C5	5.75	131.47	128.60
1	AA	1047	A	OP1-P-O3'	5.75	117.84	105.20
1	AA	2011	G	C8-N9-C4	5.75	108.70	106.40
1	AA	32	C	OP2-P-O3'	5.74	117.84	105.20
1	AA	254	A	C8-N9-C4	-5.74	103.50	105.80
1	AA	415	G	O5'-P-OP2	-5.74	100.53	105.70
1	AA	1047	A	N1-C2-N3	5.74	132.17	129.30
1	AA	2368	C	N1-C2-O2	-5.74	115.45	118.90
34	BA	674	G	C6-C5-N7	-5.74	126.95	130.40
1	CA	118	A	N1-C2-N3	-5.74	126.43	129.30
1	CA	573	G	C8-N9-C4	5.74	108.70	106.40
1	CA	1956	U	N3-C4-O4	-5.74	115.38	119.40
1	AA	1303	C	C2-N3-C4	-5.74	117.03	119.90
1	AA	2466	G	C4-C5-C6	5.74	122.25	118.80
1	CA	390	A	N1-C6-N6	5.74	122.05	118.60
1	CA	2562	U	C5-C6-N1	-5.74	119.83	122.70
1	AA	244	A	OP2-P-O3'	5.74	117.83	105.20
34	DA	1461	G	O5'-P-OP1	-5.74	100.53	105.70
1	AA	637	U	N3-C4-O4	-5.74	115.38	119.40
1	AA	2097	U	N1-C2-O2	-5.74	118.78	122.80
1	AA	2470	G	C6-N1-C2	-5.74	121.66	125.10
1	CA	205	G	N3-C4-C5	5.74	131.47	128.60
1	CA	529	A	O4'-C1'-N9	5.74	112.79	108.20
1	CA	1321	A	C8-N9-C4	5.74	108.09	105.80
1	AA	867	A	C8-N9-C4	-5.74	103.50	105.80
1	CA	693	C	N3-C4-C5	5.74	124.19	121.90
1	AA	405	C	N3-C2-O2	5.74	125.91	121.90
1	AA	918	U	N3-C4-C5	5.74	118.04	114.60
1	AA	1653	C	O4'-C1'-N1	-5.74	103.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2592	U	C5-C6-N1	-5.74	119.83	122.70
2	AB	68	C	OP2-P-O3'	5.74	117.82	105.20
1	CA	90	U	N3-C2-O2	-5.74	118.19	122.20
1	CA	1393	A	O4'-C1'-N9	5.74	112.79	108.20
1	CA	2515	C	C2-N3-C4	-5.74	117.03	119.90
1	CA	2607	G	C5-N7-C8	5.74	107.17	104.30
1	AA	1474	C	C5-C4-N4	5.73	124.21	120.20
34	DA	557	G	O5'-P-OP2	-5.73	100.54	105.70
1	AA	1013	G	C5-C6-N1	5.73	114.37	111.50
1	AA	1729	G	C2-N3-C4	-5.73	109.03	111.90
1	AA	2049	G	N1-C2-N3	5.73	127.34	123.90
1	AA	2863	C	C5-C6-N1	-5.73	118.13	121.00
2	AB	117	G	O5'-P-OP2	-5.73	100.54	105.70
34	BA	256	U	C6-N1-C2	-5.73	117.56	121.00
1	CA	1023	U	N3-C2-O2	-5.73	118.19	122.20
34	DA	124	G	O5'-P-OP1	-5.73	100.54	105.70
1	AA	780	G	N3-C4-C5	-5.73	125.73	128.60
1	AA	960	C	OP1-P-O3'	5.73	117.81	105.20
1	AA	991	G	N3-C4-C5	5.73	131.47	128.60
1	AA	2608	U	C5-C4-O4	5.73	129.34	125.90
1	CA	387	U	C6-N1-C2	-5.73	117.56	121.00
1	CA	2275	C	N3-C4-C5	-5.73	119.61	121.90
1	AA	101	A	C6-N1-C2	5.73	122.04	118.60
1	AA	528	A	C5-N7-C8	5.73	106.77	103.90
1	AA	1455	C	N3-C4-C5	5.73	124.19	121.90
34	BA	1474	G	C8-N9-C4	5.73	108.69	106.40
1	CA	131	G	C5-C6-O6	-5.73	125.16	128.60
1	AA	497	A	N1-C2-N3	-5.73	126.44	129.30
1	AA	547	G	C5-C6-O6	5.73	132.04	128.60
1	AA	984	G	N1-C6-O6	-5.73	116.46	119.90
1	AA	1069	U	N3-C4-C5	5.73	118.04	114.60
1	AA	1709	C	C2-N1-C1'	5.73	125.10	118.80
6	AF	162	LEU	CA-CB-CG	5.73	128.47	115.30
34	BA	921	U	C5-C4-O4	-5.73	122.46	125.90
1	CA	792	G	N3-C4-N9	5.73	129.44	126.00
1	CA	2618	G	C5-C6-N1	5.73	114.36	111.50
1	CA	2867	G	N1-C6-O6	-5.73	116.46	119.90
27	C3	31	LEU	CA-CB-CG	5.73	128.47	115.30
34	DA	891	U	N3-C4-C5	5.73	118.04	114.60
1	AA	2289	G	C5-C6-N1	-5.73	108.64	111.50
34	BA	365	U	N3-C4-O4	-5.73	115.39	119.40
34	BA	881	G	OP1-P-O3'	5.73	117.80	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	340	C	C6-N1-C1'	5.72	127.67	120.80
1	AA	979	G	C6-C5-N7	5.72	133.84	130.40
1	AA	1228	G	C5-C6-N1	-5.72	108.64	111.50
1	AA	2500	A	C8-N9-C4	5.72	108.09	105.80
34	BA	219	C	C6-N1-C2	-5.72	118.01	120.30
1	CA	975	C	N1-C2-O2	5.72	122.33	118.90
1	CA	1030	G	C4-C5-N7	5.72	113.09	110.80
1	CA	1570	A	C8-N9-C4	-5.72	103.51	105.80
1	CA	1674	G	C5-N7-C8	-5.72	101.44	104.30
1	CA	1775	U	N1-C2-N3	5.72	118.33	114.90
1	AA	477	C	N1-C2-O2	-5.72	115.47	118.90
1	AA	742	G	N3-C2-N2	5.72	123.91	119.90
1	AA	607	C	N3-C4-C5	5.72	124.19	121.90
1	AA	54	G	C5-N7-C8	-5.72	101.44	104.30
1	AA	956	A	N9-C4-C5	-5.72	103.51	105.80
1	AA	1653	C	N1-C2-O2	5.72	122.33	118.90
32	A8	30	ARG	NE-CZ-NH1	5.72	123.16	120.30
34	BA	1421	G	C8-N9-C4	-5.72	104.11	106.40
1	CA	1755	A	C8-N9-C4	5.72	108.09	105.80
1	CA	2642	G	C5-C6-N1	5.72	114.36	111.50
2	AB	94	C	OP2-P-O3'	5.72	117.78	105.20
1	AA	325	G	C5-C6-O6	5.72	132.03	128.60
2	AB	10	C	OP2-P-O3'	5.72	117.78	105.20
1	AA	1339	C	C5-C4-N4	5.71	124.20	120.20
1	AA	1396	C	N1-C2-O2	5.71	122.33	118.90
1	AA	1503	G	OP1-P-OP2	-5.71	111.03	119.60
1	AA	1923	A	C5-C6-N6	5.71	128.27	123.70
1	AA	2671	G	N3-C4-C5	5.71	131.46	128.60
2	AB	103	G	N7-C8-N9	5.71	115.96	113.10
1	CA	1604	C	C5-C6-N1	5.71	123.86	121.00
1	CA	1828	G	N9-C4-C5	5.71	107.69	105.40
55	DV	17	U	C6-N1-C2	-5.71	117.57	121.00
1	AA	250	G	C5-C6-O6	5.71	132.03	128.60
1	AA	2241	C	N1-C2-O2	5.71	122.33	118.90
1	AA	2374	G	C6-N1-C2	-5.71	121.67	125.10
1	AA	336	G	C5-C6-O6	-5.71	125.17	128.60
1	AA	474	U	N3-C4-O4	-5.71	115.40	119.40
1	AA	529	U	C2-N1-C1'	-5.71	110.84	117.70
1	AA	997	G	N1-C6-O6	-5.71	116.47	119.90
1	AA	1049	G	C2-N3-C4	5.71	114.75	111.90
1	AA	1370	G	OP1-P-OP2	-5.71	111.03	119.60
1	AA	1713	G	OP1-P-O3'	5.71	117.77	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2863	C	N3-C4-C5	5.71	124.19	121.90
1	AA	235	C	N3-C2-O2	5.71	125.90	121.90
1	AA	605	G	N3-C2-N2	5.71	123.90	119.90
1	AA	1255	A	P-O3'-C3'	5.71	126.55	119.70
1	AA	1669	G	C8-N9-C4	5.71	108.68	106.40
1	AA	2043	C	C5-C6-N1	-5.71	118.14	121.00
2	CB	79	C	N3-C4-C5	-5.71	119.62	121.90
1	AA	1321	A	C6-N1-C2	5.71	122.03	118.60
1	AA	1710	C	OP2-P-O3'	5.71	117.76	105.20
34	BA	267	C	N3-C4-C5	5.71	124.18	121.90
56	BX	34	C	C2-N1-C1'	5.71	125.08	118.80
1	CA	1674	G	N7-C8-N9	5.71	115.95	113.10
1	AA	138	G	N7-C8-N9	-5.71	110.25	113.10
1	AA	536	U	C2-N1-C1'	5.71	124.55	117.70
1	AA	812	G	N1-C2-N3	-5.71	120.48	123.90
1	AA	916	G	C4-C5-N7	-5.71	108.52	110.80
1	AA	921	G	C4-N9-C1'	-5.71	119.08	126.50
1	AA	2853	G	N1-C6-O6	5.71	123.32	119.90
34	BA	1431	C	C5-C6-N1	5.71	123.85	121.00
1	AA	469	A	C2-N3-C4	5.71	113.45	110.60
1	AA	523	G	OP1-P-OP2	-5.71	111.04	119.60
1	AA	580	U	OP2-P-O3'	5.71	117.75	105.20
1	AA	821	A	OP2-P-O3'	5.71	117.75	105.20
1	AA	2706	G	C6-C5-N7	5.71	133.82	130.40
1	AA	225	C	C5-C6-N1	-5.70	118.15	121.00
1	AA	601	A	N1-C2-N3	-5.70	126.45	129.30
1	AA	847	A	N7-C8-N9	-5.70	110.95	113.80
1	AA	1032	C	C2-N3-C4	-5.70	117.05	119.90
1	AA	1963	C	C6-N1-C1'	-5.70	113.96	120.80
1	AA	2029	C	N3-C2-O2	-5.70	117.91	121.90
1	AA	2896	G	N1-C6-O6	5.70	123.32	119.90
34	BA	1466	C	N1-C2-O2	-5.70	115.48	118.90
1	CA	865	C	C6-N1-C2	5.70	122.58	120.30
1	AA	1232	G	P-O3'-C3'	5.70	126.54	119.70
1	AA	2265	G	C8-N9-C4	5.70	108.68	106.40
1	CA	1500	G	C5-C6-O6	-5.70	125.18	128.60
1	AA	358	C	C6-N1-C1'	5.70	127.64	120.80
1	AA	1659	G	N1-C2-N2	-5.70	111.07	116.20
1	AA	2763	A	N9-C4-C5	-5.70	103.52	105.80
34	BA	674	G	C5-C6-O6	-5.70	125.18	128.60
1	AA	120	G	N3-C4-N9	5.70	129.42	126.00
1	AA	629	U	N1-C2-O2	5.70	126.79	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	1	U	N3-C2-O2	-5.70	118.21	122.20
1	CA	532	A	N1-C6-N6	-5.70	115.18	118.60
1	CA	2618	G	C8-N9-C4	5.70	108.68	106.40
1	AA	2250	G	C8-N9-C4	-5.70	104.12	106.40
1	AA	449	A	OP1-P-OP2	-5.70	111.06	119.60
1	AA	1727	U	C2-N1-C1'	-5.70	110.87	117.70
1	AA	2409	G	C5-C6-O6	5.70	132.02	128.60
1	AA	2506	G	N7-C8-N9	5.70	115.95	113.10
1	AA	2576	A	N9-C4-C5	5.70	108.08	105.80
2	AB	100	A	OP1-P-OP2	5.70	128.15	119.60
1	CA	1274	A	O5'-P-OP2	-5.70	100.58	105.70
34	DA	1502	A	C5-N7-C8	-5.70	101.05	103.90
1	AA	355	A	N9-C4-C5	-5.69	103.52	105.80
1	AA	777	C	N3-C2-O2	-5.69	117.92	121.90
1	AA	1280	U	C5-C6-N1	-5.69	119.85	122.70
1	AA	1822	A	O5'-P-OP2	5.69	117.53	110.70
34	BA	155	C	N1-C2-O2	5.69	122.31	118.90
34	BA	311	C	N3-C2-O2	-5.69	117.92	121.90
1	CA	763	G	C5-C6-O6	5.69	132.02	128.60
1	CA	814	C	C5-C4-N4	-5.69	116.22	120.20
1	CA	2618	G	N7-C8-N9	-5.69	110.25	113.10
1	AA	732	A	C8-N9-C4	-5.69	103.52	105.80
1	AA	1305	G	N3-C2-N2	5.69	123.88	119.90
1	AA	2889	C	O5'-P-OP2	-5.69	100.58	105.70
34	BA	814	A	C5-C6-N6	-5.69	119.15	123.70
34	BA	1518	A	N9-C4-C5	-5.69	103.52	105.80
1	CA	1648	C	N3-C2-O2	5.69	125.88	121.90
1	AA	2772	G	N3-C2-N2	-5.69	115.92	119.90
1	CA	2449	U	N3-C4-O4	5.69	123.38	119.40
1	AA	777	C	N1-C2-O2	5.69	122.31	118.90
1	AA	2497	G	C5-C6-O6	5.69	132.01	128.60
1	AA	2744	G	OP2-P-O3'	5.69	117.71	105.20
2	AB	9	G	C5-C6-O6	5.69	132.01	128.60
1	CA	2627	G	N3-C4-C5	-5.69	125.76	128.60
1	AA	79	G	C5-C6-O6	5.69	132.01	128.60
1	AA	1737	A	C8-N9-C4	5.69	108.07	105.80
29	C5	16	ARG	NE-CZ-NH1	5.69	123.14	120.30
1	AA	839	G	O4'-C1'-N9	-5.68	103.65	108.20
1	AA	1273	G	N1-C6-O6	-5.68	116.49	119.90
1	AA	1643	A	C6-C5-N7	5.68	136.28	132.30
1	AA	2106	C	C6-N1-C2	-5.68	118.03	120.30
1	AA	2331	G	C5-N7-C8	-5.68	101.46	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2577	A	N7-C8-N9	5.68	116.64	113.80
1	AA	2675	G	C4-C5-N7	-5.68	108.53	110.80
1	AA	1306	G	C5-N7-C8	5.68	107.14	104.30
1	AA	1330	A	N7-C8-N9	5.68	116.64	113.80
1	AA	2236	G	O5'-P-OP2	-5.68	100.59	105.70
1	AA	2631	C	C5-C6-N1	-5.68	118.16	121.00
1	CA	587	C	C4-C5-C6	5.68	120.24	117.40
1	CA	1376	C	O5'-P-OP1	-5.68	100.59	105.70
1	AA	849	A	N1-C2-N3	-5.68	126.46	129.30
1	AA	1368	A	O5'-P-OP1	-5.68	100.59	105.70
55	BV	19	U	N1-C2-N3	-5.68	111.49	114.90
1	CA	1813	G	N9-C4-C5	-5.68	103.13	105.40
2	CB	79	C	C6-N1-C2	-5.68	118.03	120.30
1	AA	1540	A	C8-N9-C4	-5.68	103.53	105.80
1	AA	1960	A	C8-N9-C4	-5.68	103.53	105.80
1	AA	583	C	C4-C5-C6	5.68	120.24	117.40
2	AB	118	G	OP2-P-O3'	5.68	117.69	105.20
34	DA	904	C	N3-C4-C5	5.68	124.17	121.90
1	AA	718	C	C2-N1-C1'	-5.68	112.56	118.80
1	AA	1333	A	O5'-P-OP1	-5.68	100.59	105.70
1	AA	1345	G	N3-C4-C5	-5.68	125.76	128.60
1	AA	1356	G	C8-N9-C4	-5.68	104.13	106.40
1	AA	2416	C	C2-N1-C1'	-5.68	112.56	118.80
1	CA	421	U	C5-C6-N1	-5.68	119.86	122.70
1	CA	463	G	OP1-P-O3'	5.68	117.69	105.20
1	AA	1274	G	OP1-P-OP2	-5.67	111.09	119.60
1	AA	1606	G	N3-C4-N9	5.67	129.41	126.00
1	AA	1697	G	N1-C6-O6	-5.67	116.50	119.90
1	CA	2745	C	C5-C6-N1	5.67	123.84	121.00
1	AA	2682	A	N9-C4-C5	5.67	108.07	105.80
1	CA	1864	U	N3-C2-O2	5.67	126.17	122.20
1	AA	1197	G	C5-C6-N1	5.67	114.34	111.50
1	AA	1234	A	C8-N9-C4	5.67	108.07	105.80
1	AA	2049	G	C8-N9-C1'	-5.67	119.63	127.00
1	AA	2292	G	C4-C5-N7	-5.67	108.53	110.80
1	AA	2335	G	N7-C8-N9	5.67	115.94	113.10
34	BA	1512	U	O5'-P-OP1	5.67	117.51	110.70
1	AA	952	G	C4-C5-N7	-5.67	108.53	110.80
1	AA	1156	G	P-O3'-C3'	-5.67	112.90	119.70
1	AA	2646	G	N1-C6-O6	5.67	123.30	119.90
1	AA	2833	A	C5-C6-N6	5.67	128.24	123.70
1	AA	720	C	N1-C2-O2	5.67	122.30	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1543	U	C2-N3-C4	-5.67	123.60	127.00
1	AA	1702	A	C6-C5-N7	5.67	136.27	132.30
1	AA	2616	U	C2-N3-C4	-5.67	123.60	127.00
1	CA	182	A	C2-N3-C4	-5.67	107.77	110.60
1	CA	460	A	N7-C8-N9	-5.67	110.97	113.80
1	CA	664	C	N3-C2-O2	-5.67	117.93	121.90
1	CA	2030	A	C8-N9-C4	5.67	108.07	105.80
34	DA	910	C	N1-C2-O2	-5.67	115.50	118.90
1	AA	1478	C	N1-C2-N3	5.67	123.17	119.20
1	AA	1728	G	C6-N1-C2	5.67	128.50	125.10
34	BA	128	G	N3-C2-N2	-5.67	115.93	119.90
1	CA	1021	A	C8-N9-C4	-5.67	103.53	105.80
1	CA	1769	G	N3-C4-N9	5.67	129.40	126.00
1	AA	836	A	C6-N1-C2	5.67	122.00	118.60
1	AA	1031	C	C5-C4-N4	5.67	124.17	120.20
1	CA	1649	G	N3-C2-N2	5.67	123.87	119.90
1	CA	2272	U	N1-C2-O2	5.67	126.77	122.80
1	AA	315	C	C5-C6-N1	-5.66	118.17	121.00
1	AA	1724	A	N1-C2-N3	5.66	132.13	129.30
1	CA	587	C	C5-C6-N1	-5.66	118.17	121.00
1	CA	1462	C	C6-N1-C2	-5.66	118.03	120.30
1	AA	1268	C	N1-C2-O2	-5.66	115.50	118.90
1	AA	562	C	C5-C4-N4	5.66	124.16	120.20
1	AA	975	U	C5-C6-N1	5.66	125.53	122.70
1	AA	1001	G	N7-C8-N9	-5.66	110.27	113.10
1	AA	606	G	C6-N1-C2	-5.66	121.70	125.10
1	AA	965	G	N1-C6-O6	-5.66	116.50	119.90
1	AA	2869	G	C4-C5-N7	5.66	113.06	110.80
2	AB	79	C	N3-C4-N4	5.66	121.96	118.00
34	BA	1030(B)	C	C6-N1-C1'	-5.66	114.01	120.80
1	AA	918	U	C2-N3-C4	-5.66	123.61	127.00
1	AA	1029	A	C5-N7-C8	-5.66	101.07	103.90
1	AA	1260	G	N3-C4-C5	-5.66	125.77	128.60
1	AA	825	G	N3-C2-N2	5.66	123.86	119.90
1	AA	2038	U	C5-C4-O4	5.66	129.29	125.90
1	AA	2721	G	C4-C5-N7	-5.66	108.54	110.80
34	BA	971	G	O4'-C1'-N9	5.66	112.72	108.20
1	CA	219	G	N3-C4-C5	-5.66	125.77	128.60
1	CA	440	G	N3-C4-C5	5.66	131.43	128.60
1	CA	531	C	OP1-P-O3'	5.66	117.64	105.20
1	AA	1273	G	N3-C4-N9	-5.65	122.61	126.00
4	AD	95	LEU	CA-CB-CG	5.65	128.30	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	506	A	C5-N7-C8	-5.65	101.07	103.90
1	AA	621	G	C5-C6-O6	5.65	131.99	128.60
1	AA	960	C	C5-C6-N1	-5.65	118.17	121.00
1	AA	1652	G	C6-N1-C2	-5.65	121.71	125.10
1	AA	2046	G	C4-C5-N7	-5.65	108.54	110.80
1	AA	337	C	N3-C4-C5	5.65	124.16	121.90
1	AA	493	G	N3-C2-N2	-5.65	115.94	119.90
1	AA	825	G	C5-C6-O6	5.65	131.99	128.60
1	AA	842	C	C6-N1-C2	-5.65	118.04	120.30
1	AA	1264	G	C5-C6-N1	-5.65	108.67	111.50
1	AA	1790	A	C5-C6-N6	-5.65	119.18	123.70
1	AA	1854	G	N3-C2-N2	5.65	123.86	119.90
1	AA	2285	A	C5-C6-N1	5.65	120.53	117.70
1	AA	2416	C	N1-C2-O2	-5.65	115.51	118.90
34	BA	636	U	C5-C4-O4	-5.65	122.51	125.90
1	CA	1385	G	C8-N9-C4	5.65	108.66	106.40
5	AE	111	ARG	NE-CZ-NH1	-5.65	117.48	120.30
1	CA	1698	A	C4-N9-C1'	5.65	136.47	126.30
1	CA	2242	G	N9-C4-C5	-5.65	103.14	105.40
1	AA	28	A	C5-C6-N1	-5.65	114.88	117.70
1	AA	413	G	C4-C5-N7	5.65	113.06	110.80
1	AA	1701	A	C5-C6-N1	-5.65	114.88	117.70
1	AA	1867	C	C2-N3-C4	5.65	122.72	119.90
1	AA	2263	G	N1-C6-O6	-5.65	116.51	119.90
1	AA	2608	U	N3-C4-C5	5.65	117.99	114.60
34	DA	906	G	C5-C6-O6	-5.65	125.21	128.60
57	DZ	-36	LEU	CB-CG-CD2	-5.65	101.40	111.00
1	AA	513	C	C5-C6-N1	5.65	123.82	121.00
1	AA	1713	G	N1-C6-O6	-5.65	116.51	119.90
2	AB	112	U	O5'-P-OP1	-5.65	100.62	105.70
1	CA	2010	G	OP1-P-O3'	5.65	117.62	105.20
34	DA	771	G	C8-N9-C4	5.65	108.66	106.40
1	AA	279	G	C6-C5-N7	-5.64	127.01	130.40
1	AA	309	C	N3-C2-O2	-5.64	117.95	121.90
1	AA	491	G	N3-C2-N2	5.64	123.85	119.90
1	AA	551	A	C5-C6-N6	5.64	128.22	123.70
1	AA	813	C	C6-N1-C2	5.64	122.56	120.30
1	AA	1807	G	C5-C6-O6	-5.64	125.21	128.60
1	AA	2656	G	C5-C6-O6	-5.64	125.21	128.60
2	AB	53	A	N1-C6-N6	5.64	121.99	118.60
2	AB	73	A	N9-C4-C5	5.64	108.06	105.80
34	BA	806	C	N3-C2-O2	-5.64	117.95	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	1528	U	C6-N1-C2	5.64	124.39	121.00
1	AA	913	A	O5'-P-OP1	-5.64	100.62	105.70
1	AA	1709	C	C5-C4-N4	-5.64	116.25	120.20
34	BA	816	A	C8-N9-C4	5.64	108.06	105.80
1	CA	1992	G	P-O3'-C3'	5.64	126.47	119.70
1	CA	2252	G	C4-C5-N7	-5.64	108.54	110.80
1	CA	2281	C	C5-C6-N1	-5.64	118.18	121.00
1	AA	2026	G	OP2-P-O3'	5.64	117.61	105.20
1	CA	1964	G	N3-C4-C5	-5.64	125.78	128.60
1	AA	999	G	N1-C2-N3	5.64	127.28	123.90
1	AA	2257	U	C6-N1-C2	5.64	124.38	121.00
1	CA	1605	C	N3-C4-C5	-5.64	119.64	121.90
1	CA	2626	C	N3-C4-C5	5.64	124.16	121.90
1	CA	2766	G	C6-C5-N7	-5.64	127.02	130.40
34	DA	39	G	C8-N9-C4	-5.64	104.14	106.40
34	DA	610	G	C8-N9-C4	-5.64	104.14	106.40
1	AA	106	U	N1-C2-O2	5.64	126.75	122.80
1	AA	807	G	N9-C4-C5	-5.64	103.14	105.40
1	AA	1502	G	OP1-P-O3'	5.64	117.60	105.20
1	AA	2465	A	N3-C4-N9	5.64	131.91	127.40
1	AA	2825	C	N3-C2-O2	-5.64	117.95	121.90
1	CA	1204	A	C5-N7-C8	-5.64	101.08	103.90
1	AA	858	U	N3-C4-O4	-5.64	115.45	119.40
1	AA	1454	C	C6-N1-C2	5.64	122.56	120.30
1	AA	2576	A	C5-N7-C8	5.64	106.72	103.90
1	AA	2625	U	N3-C4-O4	-5.64	115.45	119.40
34	BA	758	G	C5-C6-O6	-5.64	125.22	128.60
1	CA	76	C	C6-N1-C2	-5.64	118.05	120.30
1	CA	1321	A	N7-C8-N9	-5.64	110.98	113.80
1	CA	2069	G	O5'-P-OP2	-5.64	100.63	105.70
1	AA	799	A	C4-C5-C6	5.63	119.82	117.00
1	AA	1000	C	N3-C2-O2	5.63	125.84	121.90
1	AA	1312	G	C8-N9-C1'	5.63	134.32	127.00
1	AA	1611	C	N3-C4-N4	-5.63	114.06	118.00
1	CA	438	G	C8-N9-C4	-5.63	104.15	106.40
1	CA	1310	G	C5-C6-O6	-5.63	125.22	128.60
1	AA	559	U	N3-C4-O4	5.63	123.34	119.40
1	AA	672	G	N1-C6-O6	5.63	123.28	119.90
1	AA	887	C	N3-C4-N4	-5.63	114.06	118.00
1	AA	1291	G	N9-C4-C5	5.63	107.65	105.40
1	AA	1311	A	C5-C6-N1	-5.63	114.88	117.70
34	DA	1463	C	C6-N1-C2	5.63	122.55	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	400	U	N1-C2-N3	5.63	118.28	114.90
1	AA	1664	A	C5-C6-N1	5.63	120.52	117.70
1	CA	2595	G	O5'-P-OP2	-5.63	100.63	105.70
34	DA	904	C	C2-N1-C1'	5.63	125.00	118.80
34	BA	897	C	N3-C4-C5	5.63	124.15	121.90
1	CA	2552	U	C6-N1-C2	5.63	124.38	121.00
1	AA	517	A	C8-N9-C4	-5.63	103.55	105.80
1	AA	2465	A	C8-N9-C4	5.63	108.05	105.80
1	AA	2483	C	C2-N1-C1'	5.63	124.99	118.80
1	CA	1212	G	N9-C4-C5	-5.63	103.15	105.40
1	AA	187	C	N3-C4-N4	5.63	121.94	118.00
1	AA	752	A	N1-C6-N6	5.63	121.98	118.60
1	AA	1704	C	OP1-P-OP2	-5.63	111.16	119.60
1	AA	1965	U	C2-N3-C4	-5.63	123.62	127.00
1	AA	2618	C	C4-C5-C6	5.63	120.21	117.40
1	CA	2059	A	O5'-P-OP1	5.63	117.45	110.70
1	AA	1361	C	O5'-P-OP2	-5.62	100.64	105.70
1	CA	748	G	N3-C4-N9	-5.62	122.62	126.00
1	AA	727	G	C8-N9-C1'	-5.62	119.69	127.00
1	AA	2107	C	OP2-P-O3'	5.62	117.57	105.20
1	CA	390	A	C2-N3-C4	-5.62	107.79	110.60
1	CA	1895	C	N3-C2-O2	-5.62	117.96	121.90
1	CA	2053	G	N1-C6-O6	5.62	123.27	119.90
1	AA	805	C	C2-N3-C4	-5.62	117.09	119.90
1	AA	819	C	C2-N3-C4	-5.62	117.09	119.90
1	AA	1005	A	N9-C4-C5	5.62	108.05	105.80
1	AA	1255	A	C6-C5-N7	-5.62	128.36	132.30
1	AA	2510	C	N1-C2-O2	-5.62	115.53	118.90
34	DA	887	G	C5-C6-N1	5.62	114.31	111.50
1	AA	1426	G	O5'-P-OP1	5.62	117.44	110.70
2	AB	13	A	N1-C6-N6	-5.62	115.23	118.60
1	CA	1420	U	P-O3'-C3'	5.62	126.44	119.70
1	CA	1965	C	C2-N3-C4	5.62	122.71	119.90
1	AA	84	G	C4-C5-N7	-5.62	108.55	110.80
1	AA	196	A	C5-C6-N1	-5.62	114.89	117.70
34	DA	712	A	O5'-P-OP1	-5.62	100.64	105.70
1	AA	723	A	C6-N1-C2	5.62	121.97	118.60
1	AA	813	C	C4-C5-C6	5.62	120.21	117.40
1	AA	1845	G	N1-C6-O6	5.62	123.27	119.90
1	AA	1894	G	C8-N9-C4	5.62	108.65	106.40
1	AA	476	G	C4-C5-N7	5.62	113.05	110.80
1	AA	499	G	N3-C4-N9	5.62	129.37	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2449	U	N3-C4-O4	-5.62	115.47	119.40
34	BA	1463	C	C6-N1-C2	-5.62	118.05	120.30
1	CA	436	C	N1-C2-O2	5.62	122.27	118.90
1	AA	191	U	N3-C4-O4	-5.61	115.47	119.40
1	AA	2632	C	O5'-P-OP1	-5.61	100.65	105.70
34	BA	15	G	N9-C4-C5	-5.61	103.16	105.40
1	CA	685	A	N1-C6-N6	-5.61	115.23	118.60
1	CA	2785	C	N1-C2-O2	5.61	122.27	118.90
1	AA	28	A	C4-C5-N7	-5.61	107.89	110.70
1	AA	183	G	C5-C6-O6	5.61	131.97	128.60
1	AA	246	A	C8-N9-C4	-5.61	103.56	105.80
1	AA	1238	G	N3-C4-N9	-5.61	122.63	126.00
1	CA	51	G	N1-C6-O6	-5.61	116.53	119.90
1	AA	104	C	N3-C2-O2	-5.61	117.97	121.90
1	AA	610	C	N3-C4-C5	-5.61	119.66	121.90
34	BA	777	A	C2-N3-C4	5.61	113.40	110.60
1	CA	1389	G	N1-C6-O6	5.61	123.26	119.90
1	CA	1951	U	O5'-P-OP2	-5.61	100.65	105.70
1	CA	1955	U	C2-N3-C4	-5.61	123.64	127.00
1	AA	185	A	C5-C6-N6	-5.61	119.22	123.70
1	AA	407	U	C5-C6-N1	-5.61	119.90	122.70
1	AA	500	G	N3-C4-C5	-5.61	125.80	128.60
1	AA	562	C	C4-C5-C6	5.61	120.20	117.40
1	AA	903	C	C5-C6-N1	5.61	123.80	121.00
1	AA	1363	A	OP2-P-O3'	5.61	117.53	105.20
1	AA	1621	C	O5'-P-OP1	5.61	117.43	110.70
1	AA	2080	A	OP1-P-O3'	5.61	117.53	105.20
1	AA	516	G	N9-C4-C5	-5.60	103.16	105.40
1	CA	2080	G	O5'-P-OP2	-5.60	100.66	105.70
1	AA	1273	G	N7-C8-N9	-5.60	110.30	113.10
1	AA	1644	C	C2-N1-C1'	5.60	124.96	118.80
1	AA	2863	C	C2-N3-C4	-5.60	117.10	119.90
1	CA	2020	A	C6-N1-C2	-5.60	115.24	118.60
1	CA	2638	G	C8-N9-C4	-5.60	104.16	106.40
1	AA	56	C	C6-N1-C1'	-5.60	114.08	120.80
1	AA	65	C	N1-C2-O2	5.60	122.26	118.90
1	AA	1152	G	OP1-P-O3'	5.60	117.52	105.20
1	AA	26	G	N1-C2-N2	-5.60	111.16	116.20
1	AA	510	C	N3-C4-C5	-5.60	119.66	121.90
1	AA	544	U	OP1-P-OP2	-5.60	111.20	119.60
1	AA	875	U	OP1-P-O3'	-5.60	92.88	105.20
1	AA	1009	C	N1-C2-O2	-5.60	115.54	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1802	C	N3-C2-O2	-5.60	117.98	121.90
1	AA	1821	C	P-O3'-C3'	5.60	126.42	119.70
1	AA	1989	C	C4-C5-C6	-5.60	114.60	117.40
1	AA	2030	C	OP1-P-O3'	5.60	117.52	105.20
1	AA	2350	G	N1-C6-O6	-5.60	116.54	119.90
1	AA	2677	A	N1-C6-N6	5.60	121.96	118.60
1	AA	2827	G	C5-C6-O6	-5.60	125.24	128.60
1	CA	496	G	C8-N9-C1'	-5.60	119.72	127.00
1	CA	1286	A	C5-C6-N1	-5.60	114.90	117.70
1	CA	2501	C	C6-N1-C2	5.60	122.54	120.30
1	AA	1717	C	O5'-P-OP2	5.60	117.42	110.70
1	AA	1745	A	C4-C5-C6	5.60	119.80	117.00
34	BA	1117	G	N3-C4-C5	5.60	131.40	128.60
1	CA	2618	G	C5-N7-C8	5.60	107.10	104.30
34	BA	841	U	C2-N1-C1'	5.60	124.42	117.70
1	AA	421	A	C6-C5-N7	5.59	136.22	132.30
1	AA	528	A	C5-C6-N1	-5.59	114.90	117.70
1	AA	563	G	N3-C2-N2	5.59	123.82	119.90
1	AA	639	G	C5-C6-O6	5.59	131.96	128.60
1	AA	1260	G	N9-C4-C5	5.59	107.64	105.40
1	AA	1688	A	N9-C4-C5	5.59	108.04	105.80
1	AA	1718	U	C2-N3-C4	-5.59	123.64	127.00
1	AA	2665	U	N3-C2-O2	5.59	126.12	122.20
2	AB	106	G	N7-C8-N9	-5.59	110.30	113.10
1	AA	2478	C	C6-N1-C2	-5.59	118.06	120.30
34	BA	900	A	N1-C2-N3	-5.59	126.50	129.30
1	CA	151	C	C2-N1-C1'	-5.59	112.65	118.80
1	AA	1293	A	N1-C2-N3	5.59	132.10	129.30
1	AA	2557	G	N7-C8-N9	5.59	115.90	113.10
1	CA	1192	G	C4-C5-N7	-5.59	108.56	110.80
1	AA	1410	G	C2-N3-C4	5.59	114.69	111.90
1	AA	1622	C	OP2-P-O3'	5.59	117.50	105.20
1	AA	1767	A	O5'-P-OP2	-5.59	100.67	105.70
1	AA	2431	U	C5-C6-N1	-5.59	119.91	122.70
34	BA	667	G	C5-C6-N1	5.59	114.30	111.50
1	CA	1020	A	O5'-P-OP2	-5.59	100.67	105.70
1	CA	1209	G	OP2-P-O3'	5.59	117.50	105.20
1	CA	1855	G	N3-C2-N2	5.59	123.81	119.90
1	CA	2045	C	C4-C5-C6	5.59	120.19	117.40
1	CA	2588	G	N3-C4-C5	5.59	131.39	128.60
34	DA	881	G	C5-N7-C8	5.59	107.09	104.30
1	AA	474	U	C5'-C4'-O4'	5.59	115.80	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	604	C	N3-C4-C5	-5.59	119.67	121.90
1	AA	840	A	OP1-P-O3'	5.59	117.49	105.20
1	AA	1019	G	C4-C5-N7	5.59	113.03	110.80
1	AA	1649	A	C4-C5-N7	5.59	113.49	110.70
1	AA	1702	A	N7-C8-N9	-5.59	111.01	113.80
1	AA	2048	C	O5'-P-OP2	-5.59	100.67	105.70
1	AA	2331	G	N9-C4-C5	5.59	107.64	105.40
1	AA	2526	U	C5-C4-O4	5.59	129.25	125.90
1	AA	2773	C	C6-N1-C1'	5.59	127.50	120.80
1	AA	520	G	N9-C4-C5	5.58	107.63	105.40
1	AA	991	G	C2-N3-C4	-5.58	109.11	111.90
1	CA	578	A	O5'-P-OP1	-5.58	100.67	105.70
1	AA	50	G	C2-N3-C4	5.58	114.69	111.90
1	AA	593	G	N7-C8-N9	5.58	115.89	113.10
1	AA	1038	C	C4-C5-C6	-5.58	114.61	117.40
1	AA	1052	C	C5-C4-N4	5.58	124.11	120.20
1	AA	1673	G	C8-N9-C1'	-5.58	119.74	127.00
1	AA	1810	U	C6-N1-C2	5.58	124.35	121.00
2	AB	77	U	C4-C5-C6	5.58	123.05	119.70
34	BA	766	A	C5-C6-N6	-5.58	119.23	123.70
34	DA	550	G	N3-C2-N2	-5.58	115.99	119.90
1	AA	121	G	N3-C4-N9	5.58	129.35	126.00
1	AA	291	G	N1-C6-O6	5.58	123.25	119.90
1	AA	595	A	C5-N7-C8	5.58	106.69	103.90
34	BA	1529	G	C8-N9-C4	-5.58	104.17	106.40
1	CA	764	A	N7-C8-N9	5.58	116.59	113.80
1	CA	871	U	O5'-P-OP1	-5.58	100.68	105.70
1	CA	1832	C	N3-C4-C5	5.58	124.13	121.90
1	AA	53	G	C6-C5-N7	-5.58	127.05	130.40
1	AA	1021	G	C5-C6-O6	5.58	131.95	128.60
1	AA	1356	G	OP2-P-O3'	5.58	117.48	105.20
1	AA	1620	G	N7-C8-N9	-5.58	110.31	113.10
1	CA	431	U	C6-N1-C2	5.58	124.35	121.00
1	CA	1349	A	O4'-C1'-N9	5.58	112.66	108.20
1	CA	2541	A	N1-C6-N6	5.58	121.95	118.60
34	DA	54	C	O5'-P-OP2	-5.58	100.68	105.70
1	AA	749	G	C8-N9-C4	5.58	108.63	106.40
1	AA	2790	G	N1-C6-O6	-5.58	116.55	119.90
2	AB	37	C	N3-C4-C5	-5.58	119.67	121.90
2	AB	99	G	N7-C8-N9	-5.58	110.31	113.10
34	BA	352	C	N3-C2-O2	-5.58	118.00	121.90
34	BA	780	A	N9-C4-C5	-5.58	103.57	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	DA	582	U	C5-C6-N1	-5.58	119.91	122.70
34	DA	731	G	OP2-P-O3'	5.58	117.47	105.20
1	AA	500	G	N1-C6-O6	-5.58	116.55	119.90
1	AA	749	G	O5'-P-OP2	-5.58	100.68	105.70
1	AA	1310	G	N1-C6-O6	-5.58	116.55	119.90
1	AA	1694	G	C5-C6-N1	5.58	114.29	111.50
1	CA	214	G	O4'-C1'-N9	5.58	112.66	108.20
1	CA	518	G	C8-N9-C4	5.58	108.63	106.40
1	AA	957	A	OP1-P-OP2	5.58	127.96	119.60
1	AA	2621	U	O5'-P-OP2	5.58	117.39	110.70
6	CF	41	LEU	CA-CB-CG	-5.58	102.48	115.30
1	AA	2421	G	C4-C5-N7	-5.57	108.57	110.80
1	AA	2698	G	N1-C6-O6	-5.57	116.56	119.90
34	BA	728	A	C2-N3-C4	5.57	113.39	110.60
1	CA	1899	G	N3-C2-N2	-5.57	116.00	119.90
1	CA	2084	C	N3-C4-N4	-5.57	114.10	118.00
1	AA	355	A	N3-C4-N9	5.57	131.86	127.40
1	AA	1686	U	OP1-P-OP2	5.57	127.96	119.60
1	AA	2528	G	OP1-P-OP2	5.57	127.95	119.60
2	AB	99	G	O5'-P-OP1	5.57	117.38	110.70
1	CA	1328	G	O4'-C1'-N9	-5.57	103.74	108.20
1	CA	2886	G	C8-N9-C4	-5.57	104.17	106.40
1	AA	1806	U	C5-C4-O4	5.57	129.24	125.90
1	CA	1549	C	N1-C2-O2	-5.57	115.56	118.90
1	AA	334	A	OP1-P-O3'	5.57	117.45	105.20
1	AA	1190	G	OP2-P-O3'	5.57	117.45	105.20
1	AA	1255	A	C8-N9-C4	-5.57	103.57	105.80
1	AA	2060	G	C4-C5-N7	-5.57	108.57	110.80
1	AA	2727	G	C6-N1-C2	5.57	128.44	125.10
31	A7	39	ARG	NE-CZ-NH1	5.57	123.08	120.30
1	CA	1794	U	C6-N1-C1'	5.57	128.99	121.20
1	AA	106	U	N3-C4-C5	5.57	117.94	114.60
1	AA	453	C	O5'-P-OP1	-5.57	100.69	105.70
1	AA	528	A	C4-C5-C6	5.57	119.78	117.00
1	AA	1215	G	C4-N9-C1'	-5.57	119.27	126.50
1	AA	1892	G	O5'-P-OP2	-5.57	100.69	105.70
1	CA	383	U	O4'-C1'-N1	5.57	112.65	108.20
1	CA	1824	G	O5'-P-OP2	-5.57	100.69	105.70
34	DA	575	G	C6-C5-N7	5.57	133.74	130.40
1	AA	896	A	C5-C6-N1	-5.56	114.92	117.70
1	AA	965	G	C5-C6-O6	5.56	131.94	128.60
1	AA	1306	G	C4-C5-N7	-5.56	108.58	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	CB	56	G	N3-C4-C5	-5.56	125.82	128.60
1	AA	222	A	OP1-P-OP2	5.56	127.94	119.60
1	AA	2025	G	N3-C2-N2	-5.56	116.01	119.90
1	CA	1772	G	OP1-P-OP2	5.56	127.94	119.60
1	AA	100	G	N9-C4-C5	-5.56	103.18	105.40
1	AA	735	U	N3-C4-C5	5.56	117.94	114.60
1	AA	958	C	OP2-P-O3'	5.56	117.43	105.20
1	AA	1946	C	C6-N1-C2	-5.56	118.08	120.30
1	AA	2013	U	C6-N1-C2	5.56	124.34	121.00
1	AA	2379	G	OP1-P-OP2	-5.56	111.26	119.60
1	AA	2563	C	N3-C4-C5	5.56	124.12	121.90
1	AA	2690	C	N1-C2-O2	5.56	122.24	118.90
1	AA	126	C	OP1-P-OP2	5.56	127.94	119.60
1	AA	402	C	N1-C2-O2	-5.56	115.57	118.90
1	AA	856	G	C4-C5-N7	-5.56	108.58	110.80
1	AA	2024	G	N9-C4-C5	-5.56	103.18	105.40
1	CA	105	C	C6-N1-C2	-5.56	118.08	120.30
34	DA	802	A	O5'-P-OP1	-5.56	100.70	105.70
1	CA	2001	A	OP2-P-O3'	5.56	117.42	105.20
1	AA	98	U	N1-C2-O2	5.55	126.69	122.80
1	AA	882	A	N9-C4-C5	5.55	108.02	105.80
1	AA	1303	C	OP1-P-OP2	5.55	127.93	119.60
1	AA	2588	G	C2-N3-C4	5.55	114.68	111.90
1	AA	2778	A	C6-C5-N7	-5.55	128.41	132.30
1	CA	1340	U	C5-C6-N1	-5.55	119.92	122.70
1	AA	332	G	N1-C6-O6	5.55	123.23	119.90
1	AA	539	A	O5'-P-OP1	-5.55	100.70	105.70
1	AA	2001	C	N1-C2-N3	5.55	123.08	119.20
1	AA	2516	U	C5-C4-O4	5.55	129.23	125.90
1	AA	2575	U	N3-C4-C5	5.55	117.93	114.60
34	BA	363	A	O5'-P-OP2	-5.55	100.70	105.70
34	BA	1203	C	N3-C4-C5	-5.55	119.68	121.90
1	CA	2056	G	C4-C5-N7	5.55	113.02	110.80
1	CA	2859	G	N3-C4-C5	-5.55	125.82	128.60
1	AA	12	U	O4'-C1'-N1	-5.55	103.76	108.20
1	AA	84	G	N9-C4-C5	5.55	107.62	105.40
1	AA	2051	G	C8-N9-C4	-5.55	104.18	106.40
34	BA	879	C	C2-N1-C1'	-5.55	112.69	118.80
1	AA	2105	G	C2-N3-C4	-5.55	109.13	111.90
1	CA	616	G	C5-C6-O6	5.55	131.93	128.60
1	AA	246	A	C2-N3-C4	-5.55	107.83	110.60
1	AA	1074	A	N1-C2-N3	-5.55	126.53	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	227	A	O5'-P-OP1	-5.55	100.71	105.70
1	CA	244	A	C8-N9-C4	5.55	108.02	105.80
1	CA	1767	C	OP2-P-O3'	5.55	117.40	105.20
1	CA	2335	A	O4'-C1'-N9	5.55	112.64	108.20
1	CA	2630	G	C6-C5-N7	-5.55	127.07	130.40
1	AA	1715	A	N1-C2-N3	-5.54	126.53	129.30
1	AA	2025	G	C6-N1-C2	-5.54	121.77	125.10
56	BX	13	C	C5-C6-N1	5.54	123.77	121.00
1	AA	121	G	N9-C4-C5	-5.54	103.18	105.40
1	AA	1015	C	O5'-P-OP1	-5.54	100.71	105.70
1	AA	1252	C	C5-C6-N1	-5.54	118.23	121.00
1	AA	1461	U	O5'-P-OP2	-5.54	100.71	105.70
1	AA	2234	G	C8-N9-C1'	5.54	134.21	127.00
1	CA	206	U	N3-C4-O4	5.54	123.28	119.40
1	AA	169	G	N9-C4-C5	-5.54	103.18	105.40
1	AA	891	C	C5-C6-N1	-5.54	118.23	121.00
1	AA	2073	A	C8-N9-C4	-5.54	103.58	105.80
1	AA	2092	G	C5-C6-O6	5.54	131.93	128.60
2	AB	57	A	N1-C2-N3	-5.54	126.53	129.30
2	AB	101	G	C5-N7-C8	5.54	107.07	104.30
1	CA	689	A	N1-C6-N6	-5.54	115.28	118.60
1	CA	961	C	O5'-P-OP2	-5.54	100.71	105.70
1	CA	1597	A	O5'-P-OP2	-5.54	100.71	105.70
1	CA	2055	C	C2-N1-C1'	-5.54	112.70	118.80
34	DA	698	G	N9-C4-C5	5.54	107.62	105.40
1	AA	2363	G	C5-C6-O6	-5.54	125.28	128.60
34	BA	125	U	N1-C2-N3	5.54	118.22	114.90
34	DA	903	G	C8-N9-C1'	-5.54	119.80	127.00
1	AA	46	C	N3-C4-N4	-5.54	114.12	118.00
1	AA	830	A	C6-C5-N7	-5.54	128.42	132.30
1	AA	1819	C	N3-C4-C5	5.54	124.12	121.90
1	AA	1838	G	N1-C2-N2	5.54	121.19	116.20
1	AA	2221	A	N7-C8-N9	5.54	116.57	113.80
34	BA	29	G	N3-C4-N9	-5.54	122.68	126.00
1	CA	420	C	N1-C2-O2	5.54	122.22	118.90
1	CA	1431	U	N3-C2-O2	5.54	126.08	122.20
1	AA	2085	C	C6-N1-C2	-5.54	118.08	120.30
1	AA	2101	U	C4-C5-C6	5.54	123.02	119.70
1	AA	2542	A	N7-C8-N9	-5.54	111.03	113.80
1	CA	2573	C	C5-C6-N1	-5.54	118.23	121.00
1	AA	498	A	C5-C6-N1	-5.54	114.93	117.70
1	AA	896	A	C2-N3-C4	-5.54	107.83	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	518	G	OP1-P-OP2	5.54	127.90	119.60
1	CA	1268	A	OP1-P-O3'	5.54	117.38	105.20
1	CA	2618	G	N3-C4-N9	5.54	129.32	126.00
1	AA	21	A	C8-N9-C4	-5.53	103.59	105.80
1	AA	490	U	N3-C2-O2	5.53	126.07	122.20
1	AA	704	U	C5-C4-O4	-5.53	122.58	125.90
1	AA	2091	G	C4-C5-N7	-5.53	108.59	110.80
6	AF	62	ARG	NE-CZ-NH1	5.53	123.07	120.30
1	CA	1258	C	N1-C2-O2	5.53	122.22	118.90
1	CA	1611	C	C6-N1-C2	-5.53	118.09	120.30
1	CA	1633	G	C5-C6-O6	5.53	131.92	128.60
1	CA	1684	C	N3-C4-C5	-5.53	119.69	121.90
1	AA	608	G	C2-N3-C4	5.53	114.67	111.90
1	AA	749	G	C4-C5-N7	-5.53	108.59	110.80
1	AA	208	G	N9-C4-C5	5.53	107.61	105.40
1	AA	489	G	C5-N7-C8	5.53	107.07	104.30
1	AA	499	G	C8-N9-C4	5.53	108.61	106.40
1	AA	1370	G	N3-C4-C5	-5.53	125.83	128.60
1	AA	1487	G	N3-C2-N2	-5.53	116.03	119.90
1	AA	1637	G	N3-C2-N2	5.53	123.77	119.90
1	AA	2044	U	N3-C4-C5	-5.53	111.28	114.60
1	AA	2373	A	C5-C6-N1	-5.53	114.94	117.70
2	AB	73	A	C6-N1-C2	5.53	121.92	118.60
34	BA	578	C	O5'-P-OP1	-5.53	100.72	105.70
34	BA	879	C	N3-C2-O2	5.53	125.77	121.90
1	CA	121	G	N3-C4-N9	5.53	129.32	126.00
1	CA	762	U	C4-C5-C6	-5.53	116.38	119.70
1	CA	1266	G	C4-N9-C1'	-5.53	119.31	126.50
1	AA	709	G	C8-N9-C4	-5.53	104.19	106.40
1	AA	1750	G	C5-N7-C8	-5.53	101.54	104.30
34	BA	805	C	O5'-P-OP2	-5.53	100.72	105.70
1	CA	116	C	O5'-P-OP2	-5.53	100.72	105.70
1	CA	450	G	C6-C5-N7	5.53	133.72	130.40
1	AA	599	U	N3-C2-O2	-5.53	118.33	122.20
1	AA	1308	A	C4-C5-N7	-5.53	107.94	110.70
1	AA	1637	G	N3-C4-N9	5.53	129.32	126.00
1	AA	1694	G	N3-C2-N2	-5.53	116.03	119.90
1	AA	555	G	N1-C6-O6	-5.52	116.59	119.90
1	AA	824	A	OP1-P-OP2	5.52	127.89	119.60
1	AA	858	U	N3-C4-C5	5.52	117.92	114.60
1	AA	1265	A	C8-N9-C4	5.52	108.01	105.80
1	AA	1312	G	C2-N3-C4	5.52	114.66	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1371	G	OP1-P-OP2	-5.52	111.31	119.60
1	AA	1859	G	O5'-P-OP1	-5.52	100.73	105.70
1	AA	2545	A	C8-N9-C4	5.52	108.01	105.80
1	AA	484	G	C8-N9-C4	5.52	108.61	106.40
1	AA	585	U	OP1-P-OP2	5.52	127.88	119.60
1	AA	705	C	N1-C2-O2	5.52	122.21	118.90
1	AA	1230	C	O5'-P-OP2	-5.52	100.73	105.70
1	AA	1539	C	N1-C2-O2	5.52	122.21	118.90
1	AA	2424	A	C5-N7-C8	-5.52	101.14	103.90
1	AA	2662	U	C4-C5-C6	-5.52	116.39	119.70
34	BA	913	A	C8-N9-C4	-5.52	103.59	105.80
1	CA	2291	U	N1-C2-N3	5.52	118.21	114.90
1	CA	2546	U	N3-C4-O4	5.52	123.27	119.40
1	CA	309	G	C4-C5-N7	-5.52	108.59	110.80
1	CA	569	U	C2-N3-C4	-5.52	123.69	127.00
1	AA	764	G	N3-C2-N2	-5.52	116.04	119.90
1	AA	1385	G	C2-N3-C4	5.52	114.66	111.90
1	AA	1834	A	N1-C6-N6	-5.52	115.29	118.60
1	AA	2437	A	N9-C4-C5	-5.52	103.59	105.80
1	AA	2544	G	N1-C6-O6	5.52	123.21	119.90
1	AA	2825	C	N1-C2-O2	5.52	122.21	118.90
2	CB	82	G	C5-C6-O6	5.52	131.91	128.60
34	DA	221	C	N3-C2-O2	-5.52	118.04	121.90
34	DA	583	A	C8-N9-C4	5.52	108.01	105.80
1	AA	841	G	C2-N3-C4	-5.52	109.14	111.90
1	AA	908	A	C8-N9-C4	5.52	108.01	105.80
1	AA	1756	U	C5-C4-O4	5.52	129.21	125.90
1	AA	1878	A	C8-N9-C4	-5.52	103.59	105.80
1	AA	2094	G	C5-N7-C8	5.52	107.06	104.30
1	AA	2357	G	OP1-P-O3'	5.52	117.34	105.20
1	AA	2654	G	N1-C2-N2	-5.52	111.23	116.20
2	AB	109	C	C4-C5-C6	5.52	120.16	117.40
34	BA	781	A	N1-C2-N3	-5.52	126.54	129.30
1	CA	578	A	N1-C2-N3	5.52	132.06	129.30
1	CA	588	U	N3-C2-O2	-5.52	118.34	122.20
1	CA	842	G	C8-N9-C4	-5.52	104.19	106.40
1	CA	1763	G	C8-N9-C4	5.52	108.61	106.40
1	AA	229	G	C6-N1-C2	-5.52	121.79	125.10
1	AA	1197	G	OP2-P-O3'	5.52	117.33	105.20
1	AA	2114	U	N1-C2-O2	5.52	126.66	122.80
1	AA	2376	C	C2-N1-C1'	-5.52	112.73	118.80
34	BA	1502	A	C4-C5-C6	5.52	119.76	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	495	G	OP1-P-OP2	-5.51	111.33	119.60
1	AA	887	C	N1-C2-N3	5.51	123.06	119.20
1	AA	957	A	C8-N9-C4	-5.51	103.59	105.80
1	AA	1921	G	C5-N7-C8	-5.51	101.54	104.30
56	BX	9	G	C4-N9-C1'	5.51	133.67	126.50
1	CA	826	U	C5-C6-N1	-5.51	119.94	122.70
1	CA	1261	C	C6-N1-C2	5.51	122.51	120.30
1	AA	606	G	N9-C4-C5	5.51	107.61	105.40
1	AA	2315	G	N3-C4-C5	5.51	131.36	128.60
1	AA	579	G	C2-N3-C4	-5.51	109.14	111.90
1	AA	2223	C	N3-C2-O2	-5.51	118.04	121.90
1	AA	2348	A	C8-N9-C4	5.51	108.00	105.80
1	AA	2433	G	N3-C4-N9	5.51	129.31	126.00
1	AA	2572	C	C6-N1-C1'	5.51	127.41	120.80
34	BA	678	U	O5'-P-OP2	-5.51	100.74	105.70
34	BA	780	A	N1-C6-N6	5.51	121.91	118.60
1	AA	789	G	C4-C5-C6	5.51	122.11	118.80
1	AA	859	C	N3-C2-O2	5.51	125.76	121.90
1	AA	1321	A	OP2-P-O3'	5.51	117.32	105.20
1	AA	2484	G	C8-N9-C4	5.51	108.60	106.40
1	CA	25	U	N3-C2-O2	5.51	126.06	122.20
34	DA	704	A	OP1-P-O3'	5.51	117.32	105.20
57	DZ	216	LEU	CA-CB-CG	5.51	127.97	115.30
1	AA	332	G	C4-C5-N7	5.51	113.00	110.80
1	AA	1399	A	C5-C6-N1	-5.51	114.95	117.70
1	AA	1978	U	C4-C5-C6	-5.51	116.39	119.70
1	CA	982	C	N3-C4-N4	-5.51	114.14	118.00
1	AA	1317	G	C5-C6-O6	-5.51	125.30	128.60
1	AA	1486	G	C6-C5-N7	5.51	133.70	130.40
1	AA	1706	U	C6-N1-C2	-5.51	117.70	121.00
34	BA	1499	A	N9-C4-C5	-5.51	103.60	105.80
1	CA	527	C	N3-C2-O2	-5.51	118.05	121.90
34	DA	31	G	C8-N9-C4	5.51	108.60	106.40
1	AA	254	A	C5-C6-N1	-5.50	114.95	117.70
1	AA	455	A	C5'-C4'-C3'	-5.50	107.19	116.00
1	AA	1306	G	OP1-P-OP2	-5.50	111.34	119.60
1	AA	1394	G	C5-C6-N1	5.50	114.25	111.50
1	CA	1683	C	C4-C5-C6	5.50	120.15	117.40
1	AA	65	C	N3-C2-O2	-5.50	118.05	121.90
1	AA	170	A	OP1-P-O3'	5.50	117.31	105.20
1	AA	239	G	C6-N1-C2	-5.50	121.80	125.10
1	AA	544	U	C5-C4-O4	5.50	129.20	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	999	G	C5-C6-O6	5.50	131.90	128.60
1	AA	1264	G	C6-N1-C2	5.50	128.40	125.10
1	AA	2019	G	OP1-P-O3'	5.50	117.31	105.20
1	AA	2606	C	O5'-P-OP2	-5.50	100.75	105.70
2	AB	90	A	N1-C6-N6	-5.50	115.30	118.60
34	BA	44	G	C8-N9-C4	-5.50	104.20	106.40
1	CA	1354	A	OP1-P-OP2	-5.50	111.34	119.60
1	CA	1770	G	N3-C2-N2	5.50	123.75	119.90
13	CP	105	LEU	CA-CB-CG	-5.50	102.64	115.30
34	DA	920	U	O5'-P-OP2	-5.50	100.75	105.70
1	AA	2437	A	C6-C5-N7	-5.50	128.45	132.30
1	CA	1397	U	C2-N1-C1'	-5.50	111.10	117.70
1	CA	2584	U	N3-C2-O2	5.50	126.05	122.20
34	DA	36	C	C5-C6-N1	-5.50	118.25	121.00
1	AA	1349	G	N3-C4-N9	5.50	129.30	126.00
1	AA	1663	C	N3-C4-C5	5.50	124.10	121.90
2	AB	78	A	C8-N9-C4	5.50	108.00	105.80
1	CA	528	A	C6-N1-C2	5.50	121.90	118.60
1	CA	1700	A	C2-N3-C4	-5.50	107.85	110.60
1	CA	1982	C	N3-C4-C5	-5.50	119.70	121.90
1	AA	485	U	N3-C4-C5	-5.50	111.30	114.60
1	AA	1234	A	C2-N3-C4	-5.50	107.85	110.60
1	AA	2356	U	O4'-C1'-N1	-5.50	103.80	108.20
1	CA	1617	C	N3-C2-O2	-5.50	118.05	121.90
1	CA	1969	A	OP1-P-O3'	5.50	117.30	105.20
1	AA	234	G	N3-C4-N9	-5.50	122.70	126.00
1	AA	348	A	C8-N9-C4	5.50	108.00	105.80
1	AA	989	G	OP2-P-O3'	5.50	117.29	105.20
1	AA	1038	C	N1-C2-O2	-5.50	115.60	118.90
1	AA	1450	C	OP2-P-O3'	5.50	117.29	105.20
1	AA	1809	U	C6-N1-C2	5.50	124.30	121.00
1	AA	2355	C	C4-C5-C6	5.50	120.15	117.40
34	BA	339	C	N3-C4-C5	-5.50	119.70	121.90
1	CA	301	G	C6-C5-N7	5.50	133.70	130.40
1	CA	1203	G	O5'-P-OP2	5.50	117.30	110.70
1	CA	1355	G	N7-C8-N9	5.50	115.85	113.10
1	CA	2856	C	C6-N1-C2	-5.50	118.10	120.30
1	AA	1956	C	N3-C4-N4	-5.50	114.15	118.00
1	AA	2346	G	C4-N9-C1'	5.50	133.64	126.50
2	AB	107	G	C5-C6-O6	-5.50	125.30	128.60
34	BA	1201	A	P-O3'-C3'	5.50	126.30	119.70
1	CA	150	C	OP2-P-O3'	5.50	117.29	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	573	G	C5-C6-O6	-5.50	125.30	128.60
1	AA	579	G	N1-C2-N2	-5.49	111.26	116.20
1	AA	918	U	N1-C2-O2	-5.49	118.95	122.80
1	AA	1827	U	C4-C5-C6	5.49	123.00	119.70
1	CA	735	A	N1-C2-N3	-5.49	126.55	129.30
34	DA	512	U	N1-C2-O2	5.49	126.64	122.80
1	AA	575	G	N7-C8-N9	-5.49	110.35	113.10
1	AA	1832	G	OP2-P-O3'	5.49	117.28	105.20
1	AA	2824	C	C4-C5-C6	-5.49	114.65	117.40
1	AA	2554	A	O5'-P-OP2	-5.49	100.76	105.70
1	AA	2602	A	C8-N9-C4	5.49	108.00	105.80
1	AA	2719	G	C6-C5-N7	-5.49	127.11	130.40
1	AA	2877	G	O5'-P-OP2	-5.49	100.76	105.70
4	AD	155	LEU	CB-CG-CD2	-5.49	101.67	111.00
1	CA	248	G	N3-C2-N2	5.49	123.74	119.90
1	CA	827	U	C5-C6-N1	-5.49	119.95	122.70
1	CA	1204	A	C4-C5-N7	5.49	113.44	110.70
34	DA	550	G	N1-C6-O6	5.49	123.19	119.90
34	DA	710	G	N1-C6-O6	5.49	123.19	119.90
1	AA	511	C	C6-N1-C2	-5.49	118.11	120.30
1	AA	1273	G	C5-N7-C8	5.49	107.04	104.30
1	AA	2253	A	N1-C2-N3	5.49	132.04	129.30
1	CA	509	C	C2-N3-C4	-5.49	117.16	119.90
1	CA	1385	G	C4-N9-C1'	-5.49	119.37	126.50
1	AA	2355	C	N3-C4-N4	-5.49	114.16	118.00
4	CD	229	VAL	CB-CA-C	-5.49	100.97	111.40
1	AA	1287	A	C4-C5-N7	-5.49	107.96	110.70
1	AA	2298	A	N1-C6-N6	5.49	121.89	118.60
1	AA	2303	U	OP2-P-O3'	5.49	117.27	105.20
1	AA	2621	U	OP1-P-OP2	-5.49	111.37	119.60
4	AD	13	ARG	NE-CZ-NH1	5.49	123.04	120.30
1	CA	2694	G	C8-N9-C4	-5.49	104.21	106.40
29	C5	19	ARG	NE-CZ-NH1	-5.49	117.56	120.30
1	AA	2389	A	OP1-P-OP2	5.48	127.83	119.60
1	AA	2403	G	O4'-C1'-N9	5.48	112.59	108.20
1	AA	2511	C	OP1-P-O3'	5.48	117.27	105.20
34	BA	15	G	C4-N9-C1'	5.48	133.63	126.50
1	AA	175	G	N1-C2-N3	5.48	127.19	123.90
1	AA	507	G	C8-N9-C4	-5.48	104.21	106.40
1	AA	531	G	O4'-C1'-N9	5.48	112.59	108.20
1	AA	553	A	C5-C6-N6	-5.48	119.31	123.70
1	AA	2039	U	C4-C5-C6	5.48	122.99	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2338	C	C6-N1-C2	-5.48	118.11	120.30
1	CA	1831	G	C6-C5-N7	-5.48	127.11	130.40
1	AA	1525	G	O4'-C1'-N9	5.48	112.58	108.20
1	AA	1800	G	N7-C8-N9	-5.48	110.36	113.10
1	AA	1808	U	C5-C4-O4	5.48	129.19	125.90
2	AB	26	A	N9-C4-C5	-5.48	103.61	105.80
6	AF	89	VAL	C-N-CA	-5.48	108.00	121.70
1	CA	2251	G	N1-C6-O6	-5.48	116.61	119.90
1	AA	134	G	OP1-P-O3'	5.48	117.25	105.20
1	AA	478	G	N1-C2-N3	-5.48	120.61	123.90
1	AA	817	G	C5-C6-O6	5.48	131.89	128.60
1	AA	1783	C	N3-C2-O2	5.48	125.73	121.90
1	AA	2441	G	C8-N9-C1'	5.48	134.12	127.00
1	AA	2479	C	N3-C4-C5	-5.48	119.71	121.90
1	AA	64	C	C2-N3-C4	5.48	122.64	119.90
1	AA	1229	G	N9-C4-C5	5.48	107.59	105.40
1	AA	1413	A	C8-N9-C4	5.48	107.99	105.80
1	AA	1845	G	C4-C5-N7	5.48	112.99	110.80
1	AA	2627	U	C2-N3-C4	-5.48	123.71	127.00
1	CA	1670	C	C6-N1-C2	-5.48	118.11	120.30
1	CA	2059	A	C8-N9-C4	5.48	107.99	105.80
1	AA	233	A	N1-C6-N6	5.48	121.89	118.60
1	AA	516	G	C5-C6-N1	5.48	114.24	111.50
1	AA	797	A	C6-N1-C2	5.48	121.89	118.60
1	AA	1037	C	N3-C4-N4	-5.48	114.17	118.00
1	AA	2271	G	O5'-P-OP2	5.48	117.27	110.70
34	BA	246	A	O4'-C1'-N9	5.48	112.58	108.20
1	CA	40	C	C6-N1-C2	5.48	122.49	120.30
1	AA	474	U	O5'-P-OP1	-5.47	100.77	105.70
1	AA	616	G	C5-C6-O6	5.47	131.88	128.60
1	AA	806	G	C2-N3-C4	5.47	114.64	111.90
1	AA	1269	G	O5'-P-OP1	-5.47	100.77	105.70
1	AA	1397	C	C6-N1-C2	-5.47	118.11	120.30
1	AA	1561	C	C6-N1-C2	5.47	122.49	120.30
1	AA	1794	G	C5-C6-O6	5.47	131.88	128.60
1	AA	2267	G	O4'-C1'-N9	5.47	112.58	108.20
2	AB	6	C	N3-C4-C5	5.47	124.09	121.90
2	AB	77	U	N1-C2-N3	5.47	118.19	114.90
1	CA	53	A	C8-N9-C4	5.47	107.99	105.80
1	CA	764	A	C5-N7-C8	-5.47	101.16	103.90
1	AA	1053	C	C2-N3-C4	-5.47	117.16	119.90
1	AA	1700	G	N7-C8-N9	5.47	115.84	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	799	G	O5'-P-OP1	-5.47	100.77	105.70
34	BA	1514	C	C2-N3-C4	-5.47	117.16	119.90
1	AA	1303	C	N1-C2-N3	5.47	123.03	119.20
1	AA	1854	G	OP1-P-OP2	-5.47	111.39	119.60
1	AA	2058	C	N1-C2-N3	5.47	123.03	119.20
2	AB	93	G	O5'-P-OP1	-5.47	100.78	105.70
1	CA	202	U	N1-C2-O2	5.47	126.63	122.80
1	CA	1207	C	N1-C2-O2	-5.47	115.62	118.90
1	AA	2024	G	C5-C6-O6	-5.47	125.32	128.60
34	BA	1525	G	C4-C5-N7	-5.47	108.61	110.80
1	CA	2596	U	O5'-P-OP2	-5.47	100.78	105.70
1	CA	613	G	C4-C5-N7	-5.47	108.61	110.80
1	CA	2410	G	O5'-P-OP1	5.47	117.26	110.70
34	DA	760	G	C8-N9-C4	5.47	108.59	106.40
1	AA	492	A	N1-C6-N6	-5.47	115.32	118.60
1	AA	898	U	OP1-P-OP2	-5.47	111.40	119.60
1	AA	1666	G	N9-C4-C5	5.47	107.59	105.40
1	AA	2398	C	C2-N3-C4	5.47	122.63	119.90
1	AA	2453	C	O5'-P-OP1	-5.47	100.78	105.70
1	AA	2832	G	C6-C5-N7	-5.47	127.12	130.40
1	AA	2838	C	OP2-P-O3'	5.47	117.22	105.20
1	CA	132	G	N3-C4-C5	5.47	131.33	128.60
1	CA	1832	C	C6-N1-C2	5.47	122.49	120.30
1	AA	1858	C	N1-C2-O2	5.46	122.18	118.90
1	AA	2585	C	OP1-P-O3'	-5.46	93.18	105.20
34	BA	770	C	C5-C6-N1	5.46	123.73	121.00
1	AA	1324	A	N1-C6-N6	-5.46	115.32	118.60
1	CA	12	U	C6-N1-C1'	-5.46	113.55	121.20
1	AA	594	A	C5-C6-N6	-5.46	119.33	123.70
1	AA	1069	U	N3-C4-O4	-5.46	115.58	119.40
1	AA	1259	A	N9-C4-C5	5.46	107.98	105.80
1	AA	1273	G	N3-C2-N2	-5.46	116.08	119.90
1	AA	1675	U	C5-C4-O4	5.46	129.18	125.90
1	AA	2798	C	C2-N3-C4	5.46	122.63	119.90
1	CA	682	G	C8-N9-C1'	-5.46	119.90	127.00
1	AA	1197	G	O5'-P-OP2	-5.46	100.79	105.70
1	AA	2448	G	N9-C4-C5	5.46	107.58	105.40
1	CA	79	G	C5-C6-O6	5.46	131.88	128.60
1	CA	1719	G	C8-N9-C4	-5.46	104.22	106.40
1	AA	369	A	C2-N3-C4	5.46	113.33	110.60
1	AA	489	G	C4-C5-N7	-5.46	108.62	110.80
1	AA	845	G	N3-C4-C5	-5.46	125.87	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2113	U	OP1-P-O3'	5.46	117.21	105.20
1	AA	2624	C	C5-C6-N1	-5.46	118.27	121.00
1	AA	2757	G	C6-C5-N7	5.46	133.68	130.40
1	CA	2029	G	N3-C2-N2	-5.46	116.08	119.90
1	AA	517	A	C5-N7-C8	5.46	106.63	103.90
1	AA	718	C	C6-N1-C1'	5.46	127.35	120.80
1	AA	997	G	C4-C5-C6	-5.46	115.53	118.80
1	AA	2457	G	N1-C6-O6	-5.46	116.63	119.90
1	CA	126	A	C5-C6-N1	-5.46	114.97	117.70
1	CA	2549	G	O5'-P-OP2	-5.46	100.79	105.70
1	AA	246	A	N1-C2-N3	5.46	132.03	129.30
1	AA	1782	C	OP2-P-O3'	5.45	117.20	105.20
1	AA	2656	G	C4-N9-C1'	-5.45	119.41	126.50
1	CA	1776	G	O5'-P-OP2	-5.45	100.79	105.70
1	CA	2406	U	O5'-P-OP2	5.45	117.24	110.70
1	AA	710	G	N9-C4-C5	5.45	107.58	105.40
1	AA	1669	G	N3-C4-C5	5.45	131.33	128.60
1	CA	79	G	C6-N1-C2	5.45	128.37	125.10
1	CA	1893	C	N1-C2-O2	5.45	122.17	118.90
1	AA	672	G	C5-C6-O6	-5.45	125.33	128.60
1	AA	885	C	C2-N1-C1'	5.45	124.80	118.80
1	AA	896	A	N3-C4-C5	5.45	130.62	126.80
1	AA	1017	G	C6-N1-C2	-5.45	121.83	125.10
1	AA	2301	G	N3-C4-C5	5.45	131.32	128.60
1	CA	377	C	N1-C2-N3	5.45	123.02	119.20
1	CA	794	G	O5'-P-OP2	-5.45	100.79	105.70
34	DA	513	C	C6-N1-C2	-5.45	118.12	120.30
1	AA	593	G	N3-C4-C5	-5.45	125.88	128.60
1	AA	831	A	OP1-P-O3'	5.45	117.19	105.20
1	AA	882	A	C5-N7-C8	5.45	106.62	103.90
1	AA	1610	G	OP2-P-O3'	5.45	117.19	105.20
1	AA	1620	G	C8-N9-C1'	-5.45	119.92	127.00
1	AA	2484	G	C5-N7-C8	5.45	107.02	104.30
34	BA	1506	U	N3-C2-O2	5.45	126.01	122.20
34	DA	266	G	C2-N3-C4	-5.45	109.18	111.90
1	AA	211	A	N7-C8-N9	-5.45	111.08	113.80
1	AA	262	C	N3-C2-O2	-5.45	118.09	121.90
1	AA	1259	A	OP2-P-O3'	5.45	117.18	105.20
1	AA	1507	A	O4'-C1'-N9	5.45	112.56	108.20
1	AA	1787	G	C5-C6-N1	-5.45	108.78	111.50
34	BA	1395	C	C2-N3-C4	5.45	122.62	119.90
1	CA	1433	U	C5-C4-O4	5.45	129.17	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2513	G	C4-N9-C1'	5.45	133.58	126.50
34	DA	880	C	C6-N1-C2	5.45	122.48	120.30
1	AA	710	G	N3-C2-N2	-5.45	116.09	119.90
1	AA	1263	C	N3-C4-C5	5.45	124.08	121.90
1	AA	1305	G	N1-C2-N2	-5.45	111.30	116.20
1	AA	1308	A	C5-N7-C8	5.45	106.62	103.90
1	AA	1789	G	O5'-P-OP1	-5.45	100.80	105.70
1	AA	2474	U	N3-C4-C5	5.45	117.87	114.60
1	AA	2874	G	OP1-P-OP2	5.45	127.77	119.60
1	CA	1389	G	N9-C4-C5	-5.45	103.22	105.40
1	CA	2591	C	N3-C4-N4	5.45	121.81	118.00
34	DA	221	C	N1-C2-O2	5.45	122.17	118.90
1	AA	742	G	C5-C6-O6	5.44	131.87	128.60
1	AA	1664	A	C6-C5-N7	5.44	136.11	132.30
1	CA	1308	A	N1-C2-N3	5.44	132.02	129.30
1	AA	107	G	C5-C6-O6	5.44	131.87	128.60
1	AA	794	U	O5'-P-OP2	-5.44	100.80	105.70
1	AA	909	G	C2-N3-C4	5.44	114.62	111.90
1	AA	1069	U	N1-C2-N3	5.44	118.17	114.90
1	AA	1294	G	C5-N7-C8	5.44	107.02	104.30
1	AA	2512	U	N3-C2-O2	5.44	126.01	122.20
1	AA	2712	C	C4-C5-C6	-5.44	114.68	117.40
4	AD	222	ARG	NE-CZ-NH1	-5.44	117.58	120.30
34	BA	281	G	C5-C6-O6	5.44	131.87	128.60
34	BA	972	C	C6-N1-C2	-5.44	118.12	120.30
1	CA	1835	G	C4-N9-C1'	5.44	133.58	126.50
1	AA	18	C	N3-C4-N4	-5.44	114.19	118.00
1	AA	656	A	N1-C6-N6	-5.44	115.34	118.60
1	AA	895	G	C8-N9-C4	-5.44	104.22	106.40
1	AA	896	A	N7-C8-N9	-5.44	111.08	113.80
1	AA	1420	G	OP1-P-OP2	-5.44	111.44	119.60
1	AA	1862	G	OP1-P-O3'	-5.44	93.23	105.20
1	AA	2015	U	OP2-P-O3'	5.44	117.17	105.20
1	AA	2531	U	C2-N3-C4	-5.44	123.74	127.00
1	AA	2541	G	N1-C6-O6	5.44	123.17	119.90
34	BA	119	A	OP1-P-O3'	5.44	117.17	105.20
1	CA	143(A)	C	N3-C4-C5	5.44	124.08	121.90
1	CA	306	U	OP2-P-O3'	5.44	117.17	105.20
1	CA	372	G	OP1-P-O3'	5.44	117.17	105.20
1	CA	1305	C	C5-C6-N1	-5.44	118.28	121.00
1	AA	2358	A	O5'-P-OP2	5.44	117.23	110.70
1	AA	2458	G	N3-C4-C5	-5.44	125.88	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2032	G	N3-C4-C5	-5.44	125.88	128.60
1	AA	71	U	C6-N1-C1'	5.44	128.81	121.20
1	CA	106	C	N3-C4-C5	5.44	124.08	121.90
1	CA	668	G	N9-C4-C5	-5.44	103.22	105.40
1	CA	2088	G	N1-C2-N2	5.44	121.09	116.20
1	CA	2605	U	C5-C6-N1	5.44	125.42	122.70
34	BA	1465	C	N3-C2-O2	-5.44	118.09	121.90
1	CA	1833	U	O5'-P-OP2	-5.44	100.81	105.70
1	CA	2372	G	N3-C4-N9	5.44	129.26	126.00
1	CA	2584	U	N1-C2-O2	-5.44	119.00	122.80
1	AA	655	G	C8-N9-C4	5.43	108.57	106.40
1	AA	1023	G	N9-C4-C5	5.43	107.57	105.40
1	AA	1233	U	OP2-P-O3'	5.43	117.16	105.20
1	AA	1298	G	N9-C4-C5	5.43	107.57	105.40
1	AA	1446	G	N9-C4-C5	5.43	107.57	105.40
1	AA	1673	G	C5-C6-N1	-5.43	108.78	111.50
1	AA	1840	A	C5-C6-N6	5.43	128.05	123.70
1	AA	2443	U	O5'-P-OP2	-5.43	100.81	105.70
34	BA	1471	G	N1-C6-O6	-5.43	116.64	119.90
56	BX	5	G	C8-N9-C4	5.43	108.57	106.40
1	CA	139(A)	G	N3-C4-N9	5.43	129.26	126.00
1	CA	150	C	N3-C4-C5	5.43	124.07	121.90
1	CA	664	C	O5'-P-OP1	-5.43	100.81	105.70
1	CA	2630	G	N9-C4-C5	-5.43	103.23	105.40
34	DA	335	C	C5-C4-N4	-5.43	116.40	120.20
1	AA	979	G	C6-N1-C2	-5.43	121.84	125.10
1	AA	1283	A	N9-C4-C5	5.43	107.97	105.80
1	AA	2387	G	C5-C6-O6	-5.43	125.34	128.60
1	AA	2697	G	C5-N7-C8	5.43	107.02	104.30
1	CA	2065	C	N1-C2-O2	5.43	122.16	118.90
1	CA	2444	G	N1-C2-N2	-5.43	111.31	116.20
1	AA	2754	A	C6-N1-C2	5.43	121.86	118.60
1	CA	2535	G	N3-C2-N2	-5.43	116.10	119.90
1	AA	1502	G	C5-C6-O6	5.43	131.86	128.60
1	AA	1683	C	N3-C4-N4	5.43	121.80	118.00
2	AB	79	C	C5-C4-N4	-5.43	116.40	120.20
1	CA	1240	U	O5'-P-OP1	-5.43	100.81	105.70
1	AA	1264	G	N3-C4-C5	5.43	131.31	128.60
1	AA	1285	G	OP1-P-OP2	-5.43	111.46	119.60
1	AA	101	A	N9-C4-C5	-5.43	103.63	105.80
1	AA	333	G	N1-C6-O6	-5.43	116.64	119.90
1	AA	1314	A	N1-C2-N3	5.43	132.01	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2391	G	C6-N1-C2	-5.43	121.84	125.10
34	BA	819	A	N1-C6-N6	5.43	121.86	118.60
1	CA	942	G	N9-C4-C5	-5.43	103.23	105.40
1	CA	1914	C	C5-C6-N1	5.43	123.71	121.00
1	CA	2618	G	N3-C4-C5	-5.43	125.89	128.60
34	DA	1395	C	C5-C6-N1	5.43	123.71	121.00
1	AA	635	C	OP2-P-O3'	5.42	117.14	105.20
1	AA	1365	G	C8-N9-C4	-5.42	104.23	106.40
1	AA	1662	A	C5-N7-C8	-5.42	101.19	103.90
1	AA	2007	G	N3-C4-C5	5.42	131.31	128.60
1	AA	2580	C	OP2-P-O3'	5.42	117.13	105.20
1	AA	2731	G	C5-C6-N1	5.42	114.21	111.50
1	AA	980	C	C4-C5-C6	5.42	120.11	117.40
1	AA	1038	C	N3-C2-O2	5.42	125.69	121.90
1	AA	1038	C	O5'-P-OP1	5.42	117.20	110.70
1	CA	193	U	N1-C2-N3	-5.42	111.65	114.90
1	CA	465	G	O5'-P-OP1	-5.42	100.82	105.70
1	CA	2604	U	N1-C2-O2	5.42	126.59	122.80
1	AA	2531	U	N3-C4-C5	5.42	117.85	114.60
1	CA	1838	C	O4'-C1'-N1	5.42	112.54	108.20
1	AA	608	G	O5'-P-OP1	-5.42	100.82	105.70
1	AA	1307	C	C5-C6-N1	-5.42	118.29	121.00
1	AA	1430	A	C5'-C4'-O4'	5.42	115.60	109.10
1	AA	1544	C	C5-C4-N4	5.42	123.99	120.20
1	AA	2504	U	N1-C2-O2	-5.42	119.01	122.80
1	AA	2512	U	C2-N1-C1'	-5.42	111.20	117.70
1	CA	1248	G	C6-N1-C2	-5.42	121.85	125.10
1	CA	1698	A	N1-C2-N3	5.42	132.01	129.30
1	CA	2496	C	C2-N3-C4	5.42	122.61	119.90
1	AA	421	A	C2-N3-C4	5.42	113.31	110.60
1	AA	1757	C	N3-C2-O2	5.42	125.69	121.90
1	AA	2476	C	C2-N3-C4	-5.42	117.19	119.90
1	AA	2478	C	C4-C5-C6	-5.42	114.69	117.40
1	AA	2688	C	O5'-P-OP2	-5.42	100.83	105.70
1	AA	2781	C	C2-N3-C4	-5.42	117.19	119.90
1	CA	2034	U	C6-N1-C2	-5.42	117.75	121.00
1	AA	417	A	O5'-P-OP1	-5.42	100.83	105.70
1	AA	1069	U	OP1-P-OP2	5.42	127.72	119.60
34	BA	529	G	C5-C6-O6	-5.42	125.35	128.60
34	DA	563	A	O4'-C1'-N9	5.42	112.53	108.20
1	AA	471	C	C2-N3-C4	-5.41	117.19	119.90
1	AA	537	G	C4-C5-C6	5.41	122.05	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	639	G	N1-C6-O6	-5.41	116.65	119.90
1	AA	2488	A	N9-C4-C5	-5.41	103.63	105.80
1	AA	2731	G	C5-N7-C8	5.41	107.01	104.30
1	AA	2781	C	N1-C2-N3	5.41	122.99	119.20
1	CA	2817	G	N9-C4-C5	5.41	107.56	105.40
34	DA	1259	C	C6-N1-C2	-5.41	118.14	120.30
1	AA	1057	G	C4-C5-N7	5.41	112.97	110.80
1	AA	1154	U	OP1-P-O3'	5.41	117.11	105.20
1	AA	1417	G	C5-C6-N1	-5.41	108.79	111.50
1	AA	2274	U	C6-N1-C1'	5.41	128.78	121.20
39	BF	19	LEU	CA-CB-CG	5.41	127.75	115.30
1	CA	2064	C	OP2-P-O3'	5.41	117.11	105.20
34	DA	290	C	C6-N1-C1'	-5.41	114.31	120.80
1	AA	206	G	N7-C8-N9	-5.41	110.39	113.10
1	AA	2789	A	C5-C6-N6	-5.41	119.37	123.70
34	BA	876	G	N1-C6-O6	5.41	123.15	119.90
1	CA	1799	G	N7-C8-N9	-5.41	110.39	113.10
1	CA	1807	G	N9-C1'-C2'	-5.41	106.05	112.00
1	AA	215	G	O5'-P-OP1	-5.41	100.83	105.70
1	AA	579	G	O4'-C1'-N9	-5.41	103.87	108.20
17	AT	95	ARG	NE-CZ-NH1	-5.41	117.60	120.30
34	BA	563	A	C8-N9-C4	5.41	107.96	105.80
34	BA	1496	C	C6-N1-C2	5.41	122.46	120.30
1	CA	935	C	N3-C2-O2	-5.41	118.11	121.90
34	DA	748	C	C6-N1-C2	-5.41	118.14	120.30
1	AA	201	G	C4-N9-C1'	-5.41	119.47	126.50
1	AA	1862	G	N1-C6-O6	5.41	123.14	119.90
1	CA	448	U	OP2-P-O3'	5.41	117.10	105.20
1	CA	1967	C	C6-N1-C2	-5.41	118.14	120.30
1	AA	416	G	O5'-P-OP1	-5.41	100.83	105.70
1	AA	1492	C	OP2-P-O3'	5.41	117.09	105.20
1	AA	2069	U	N3-C4-C5	5.41	117.84	114.60
1	AA	2566	U	C5-C4-O4	-5.41	122.66	125.90
1	CA	2023	G	C8-N9-C4	-5.41	104.24	106.40
1	CA	1340	U	C6-N1-C2	5.40	124.24	121.00
1	AA	873	U	N3-C4-O4	-5.40	115.62	119.40
1	AA	1020	C	N3-C4-C5	-5.40	119.74	121.90
1	AA	2646	G	C4-C5-N7	5.40	112.96	110.80
1	CA	51	G	N3-C4-C5	-5.40	125.90	128.60
1	CA	2832	U	C5-C6-N1	-5.40	120.00	122.70
34	DA	305	G	N3-C4-N9	5.40	129.24	126.00
1	AA	146	G	N7-C8-N9	-5.40	110.40	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1652	G	C2-N3-C4	5.40	114.60	111.90
1	CA	1215	G	O5'-P-OP2	-5.40	100.84	105.70
1	AA	1244	U	OP2-P-O3'	5.40	117.08	105.20
1	AA	1735	U	N3-C4-O4	-5.40	115.62	119.40
1	CA	1903	G	OP2-P-O3'	5.40	117.08	105.20
1	AA	871	A	N7-C8-N9	-5.40	111.10	113.80
1	AA	1820	A	N3-C4-N9	-5.40	123.08	127.40
1	AA	1963	C	C6-N1-C2	-5.40	118.14	120.30
1	AA	2347	A	O4'-C1'-N9	5.40	112.52	108.20
1	CA	76	C	O5'-P-OP1	-5.40	100.84	105.70
1	CA	632	A	O5'-P-OP2	5.40	117.18	110.70
1	CA	1617	C	N3-C4-C5	5.40	124.06	121.90
34	DA	552	U	C2-N1-C1'	-5.40	111.22	117.70
1	AA	517	A	C4-C5-N7	-5.39	108.00	110.70
1	AA	1721	G	C8-N9-C1'	-5.39	119.99	127.00
1	AA	1803	G	C6-N1-C2	-5.39	121.86	125.10
1	AA	2294	G	O5'-P-OP2	5.39	117.17	110.70
1	CA	472	A	C6-N1-C2	-5.39	115.36	118.60
1	CA	1578	U	N1-C2-O2	5.39	126.58	122.80
1	CA	1831	G	N3-C4-N9	5.39	129.24	126.00
34	DA	34	C	C6-N1-C2	5.39	122.46	120.30
34	DA	693	G	C8-N9-C4	-5.39	104.24	106.40
1	AA	309	C	C4-C5-C6	5.39	120.10	117.40
1	AA	1312	G	OP1-P-O3'	5.39	117.06	105.20
1	AA	1380	G	O5'-P-OP2	-5.39	100.85	105.70
1	AA	2043	C	N3-C4-C5	5.39	124.06	121.90
34	BA	730	G	N1-C6-O6	-5.39	116.66	119.90
1	CA	1533	G	C4-N9-C1'	5.39	133.51	126.50
55	DV	16	A	C8-N9-C4	5.39	107.96	105.80
1	AA	1639	G	N1-C2-N3	5.39	127.13	123.90
1	AA	1653	C	C5-C4-N4	-5.39	116.43	120.20
1	AA	2299	A	C5-N7-C8	-5.39	101.20	103.90
1	AA	567	C	C2-N3-C4	-5.39	117.21	119.90
1	AA	620	U	N1-C2-O2	5.39	126.57	122.80
1	AA	1198	C	C2-N3-C4	-5.39	117.21	119.90
1	AA	1690	G	N3-C2-N2	5.39	123.67	119.90
1	AA	2458	G	P-O3'-C3'	5.39	126.17	119.70
1	AA	2500	A	C4-C5-C6	-5.39	114.31	117.00
1	AA	2562	G	C6-C5-N7	-5.39	127.17	130.40
34	BA	53	A	N1-C6-N6	5.39	121.83	118.60
34	BA	740	U	N3-C2-O2	-5.39	118.43	122.20
34	BA	1137	C	C6-N1-C2	-5.39	118.14	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	764	A	C8-N9-C4	-5.39	103.64	105.80
1	CA	1771	C	C2-N1-C1'	-5.39	112.87	118.80
1	AA	231	G	C8-N9-C1'	5.39	134.00	127.00
1	AA	1306	G	C5-C6-N1	-5.39	108.81	111.50
1	AA	2464	C	C4-C5-C6	5.39	120.09	117.40
1	AA	2762	A	C5-N7-C8	5.39	106.59	103.90
14	AQ	14	ARG	NE-CZ-NH1	5.39	122.99	120.30
34	DA	687	A	P-O3'-C3'	5.39	126.17	119.70
1	AA	293	C	N3-C2-O2	-5.39	118.13	121.90
1	AA	708	C	C6-N1-C2	5.39	122.45	120.30
1	AA	1034	A	C2-N3-C4	5.39	113.29	110.60
1	AA	2362	C	N3-C4-C5	5.39	124.06	121.90
1	AA	2698	G	N1-C2-N3	-5.39	120.67	123.90
1	AA	2882	G	C4-N9-C1'	-5.39	119.50	126.50
34	DA	720	C	N3-C2-O2	-5.39	118.13	121.90
1	AA	1666	G	C5-C6-O6	5.38	131.83	128.60
1	AA	2066	C	C4-C5-C6	5.38	120.09	117.40
1	AA	2621	U	C5-C6-N1	-5.38	120.01	122.70
1	AA	2646	G	C6-C5-N7	-5.38	127.17	130.40
34	BA	841	U	C6-N1-C2	-5.38	117.77	121.00
1	CA	534	U	N3-C2-O2	-5.38	118.43	122.20
1	AA	1011	G	N7-C8-N9	-5.38	110.41	113.10
1	AA	1728	G	N7-C8-N9	5.38	115.79	113.10
1	CA	1988	C	N3-C4-C5	5.38	124.05	121.90
1	AA	1278	G	C6-N1-C2	5.38	128.33	125.10
1	AA	1450	C	OP1-P-OP2	5.38	127.67	119.60
1	AA	2433	G	N7-C8-N9	-5.38	110.41	113.10
1	AA	2636	G	C8-N9-C4	5.38	108.55	106.40
1	AA	2726	A	C5-C6-N1	-5.38	115.01	117.70
1	CA	255	A	N1-C2-N3	5.38	131.99	129.30
39	DF	75	LEU	CA-CB-CG	5.38	127.68	115.30
1	AA	131	C	N1-C2-O2	5.38	122.13	118.90
1	AA	1083	G	C5-N7-C8	-5.38	101.61	104.30
1	AA	1469	G	O5'-P-OP2	-5.38	100.86	105.70
1	AA	848	G	C5-N7-C8	-5.38	101.61	104.30
1	AA	1608	G	C8-N9-C4	-5.38	104.25	106.40
1	AA	1664	A	C4-C5-C6	-5.38	114.31	117.00
1	AA	2788	A	C2-N3-C4	5.38	113.29	110.60
2	AB	93	G	N1-C2-N3	5.38	127.13	123.90
34	BA	906	G	C4-N9-C1'	5.38	133.49	126.50
1	CA	670	A	O4'-C1'-N9	-5.38	103.90	108.20
1	CA	748	G	C8-N9-C1'	5.38	133.99	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2072	G	O5'-P-OP2	5.38	117.15	110.70
1	CA	2273	A	C2-N3-C4	5.38	113.29	110.60
1	CA	2581	G	O4'-C1'-N9	5.38	112.50	108.20
1	CA	2583	G	N9-C4-C5	-5.38	103.25	105.40
1	CA	2626	C	C2-N1-C1'	-5.38	112.88	118.80
1	AA	846	G	C5-C6-N1	5.38	114.19	111.50
1	AA	1478	C	N3-C4-C5	-5.38	119.75	121.90
1	AA	25	U	C2-N3-C4	-5.37	123.78	127.00
1	AA	575	G	N3-C4-N9	-5.37	122.78	126.00
1	AA	1359	U	O5'-P-OP1	5.37	117.15	110.70
1	AA	1871	G	N1-C6-O6	5.37	123.12	119.90
1	AA	2268	G	N1-C6-O6	5.37	123.12	119.90
18	AU	47	TYR	CB-CA-C	-5.37	99.65	110.40
1	CA	1617	C	O4'-C1'-N1	5.37	112.50	108.20
1	CA	1995	U	C6-N1-C2	5.37	124.22	121.00
1	CA	2372	G	N1-C6-O6	-5.37	116.68	119.90
1	AA	615	G	OP1-P-O3'	-5.37	93.38	105.20
1	AA	619	G	OP1-P-OP2	5.37	127.66	119.60
1	AA	1188	A	C4-C5-C6	-5.37	114.31	117.00
1	CA	27	G	N1-C2-N3	-5.37	120.68	123.90
1	CA	2442	C	OP2-P-O3'	5.37	117.02	105.20
34	DA	308	C	C6-N1-C2	5.37	122.45	120.30
34	DA	787	A	C8-N9-C4	5.37	107.95	105.80
1	AA	724	A	C5-N7-C8	5.37	106.58	103.90
34	BA	534	U	C5-C4-O4	5.37	129.12	125.90
1	AA	567	C	N1-C2-O2	-5.37	115.68	118.90
1	AA	746	A	C8-N9-C4	5.37	107.95	105.80
1	AA	823	G	N1-C6-O6	-5.37	116.68	119.90
1	AA	866	A	OP2-P-O3'	5.37	117.01	105.20
1	AA	1036	A	C4-C5-N7	5.37	113.38	110.70
1	AA	1295	U	OP1-P-O3'	5.37	117.01	105.20
1	AA	1859	G	OP1-P-OP2	5.37	127.65	119.60
2	AB	28	C	O5'-P-OP1	5.37	117.14	110.70
20	AW	84	ARG	NE-CZ-NH1	5.37	122.98	120.30
34	BA	36	C	C6-N1-C2	-5.37	118.15	120.30
34	BA	553	A	N9-C4-C5	5.37	107.95	105.80
34	BA	730	G	O5'-P-OP2	-5.37	100.87	105.70
1	CA	1615	C	N3-C4-C5	-5.37	119.75	121.90
1	CA	1639	U	N3-C2-O2	-5.37	118.44	122.20
56	DX	3	C	C6-N1-C2	-5.37	118.15	120.30
1	AA	115	G	N3-C4-N9	5.37	129.22	126.00
1	AA	177	G	N9-C4-C5	-5.37	103.25	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1659	G	C5-N7-C8	5.37	106.98	104.30
1	AA	2028	C	C5-C6-N1	5.37	123.68	121.00
1	CA	2600	A	O5'-P-OP2	-5.37	100.87	105.70
1	AA	773	G	N7-C8-N9	-5.37	110.42	113.10
1	AA	1740	U	C2-N3-C4	-5.37	123.78	127.00
1	AA	2577	A	C6-C5-N7	-5.37	128.54	132.30
2	AB	25	A	OP1-P-OP2	5.37	127.65	119.60
34	BA	345	C	C5-C6-N1	5.37	123.68	121.00
1	CA	134	C	N1-C2-O2	-5.37	115.68	118.90
1	CA	2421	G	C5-C6-O6	-5.37	125.38	128.60
1	AA	89	U	N3-C2-O2	-5.36	118.45	122.20
1	AA	722	A	O5'-P-OP2	5.36	117.14	110.70
1	AA	1060	U	N3-C4-O4	-5.36	115.65	119.40
1	AA	1739	U	C2-N3-C4	-5.36	123.78	127.00
1	AA	345	G	C4-C5-N7	5.36	112.94	110.80
1	AA	603	C	N3-C2-O2	-5.36	118.15	121.90
1	AA	1058	U	C5-C6-N1	-5.36	120.02	122.70
1	AA	1360	C	N3-C2-O2	-5.36	118.15	121.90
1	AA	2831	A	N1-C6-N6	5.36	121.82	118.60
57	DZ	229	LEU	CA-CB-CG	5.36	127.63	115.30
1	AA	1263	C	C5-C4-N4	-5.36	116.45	120.20
1	AA	1838	G	N3-C2-N2	-5.36	116.15	119.90
1	AA	2532	C	C6-N1-C2	5.36	122.44	120.30
2	AB	28	C	C2-N3-C4	-5.36	117.22	119.90
1	CA	587	C	N3-C2-O2	-5.36	118.15	121.90
1	CA	2030	A	N9-C4-C5	-5.36	103.66	105.80
1	AA	407	U	O5'-P-OP2	-5.36	100.88	105.70
1	AA	2007	G	OP1-P-OP2	-5.36	111.56	119.60
34	BA	15	G	N1-C6-O6	5.36	123.11	119.90
1	AA	62	U	C6-N1-C2	5.36	124.22	121.00
1	AA	2292	G	C5-N7-C8	5.36	106.98	104.30
1	AA	2431	U	N3-C4-C5	5.36	117.81	114.60
1	CA	529	A	C5-N7-C8	-5.36	101.22	103.90
1	CA	2224	G	N3-C2-N2	5.36	123.65	119.90
34	DA	730	G	C4-C5-N7	-5.36	108.66	110.80
1	AA	44	G	N1-C6-O6	-5.36	116.69	119.90
1	AA	80	G	C5-C6-O6	5.36	131.81	128.60
1	AA	748	G	C8-N9-C4	5.36	108.54	106.40
1	AA	1003	U	C5-C4-O4	5.36	129.11	125.90
1	AA	2879	G	C5-C6-N1	-5.36	108.82	111.50
1	CA	207	A	O5'-P-OP2	-5.36	100.88	105.70
1	CA	694	U	OP2-P-O3'	5.36	116.98	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2258	C	C6-N1-C2	-5.36	118.16	120.30
1	AA	954	C	O5'-P-OP2	-5.35	100.88	105.70
1	CA	1677	A	N7-C8-N9	5.35	116.48	113.80
1	CA	2031	A	N1-C2-N3	5.35	131.98	129.30
1	AA	1698	G	OP2-P-O3'	5.35	116.97	105.20
1	AA	2332	A	O5'-P-OP2	-5.35	100.88	105.70
2	AB	20	C	N1-C2-O2	5.35	122.11	118.90
34	BA	754	C	N3-C2-O2	-5.35	118.15	121.90
1	CA	213	A	OP2-P-O3'	5.35	116.98	105.20
1	CA	2570	G	C8-N9-C4	-5.35	104.26	106.40
1	CA	2679	A	N1-C6-N6	-5.35	115.39	118.60
1	AA	517	A	N3-C4-C5	-5.35	123.06	126.80
1	AA	891	C	O5'-P-OP2	-5.35	100.88	105.70
2	AB	64	C	C6-N1-C2	5.35	122.44	120.30
1	AA	1513	G	OP2-P-O3'	5.35	116.97	105.20
1	AA	2222	C	O5'-P-OP1	5.35	117.12	110.70
1	AA	2499	G	N3-C2-N2	5.35	123.64	119.90
1	AA	2732	G	N1-C2-N2	5.35	121.01	116.20
57	BZ	25	LYS	CD-CE-NZ	5.35	124.00	111.70
1	CA	1573	G	C8-N9-C1'	5.35	133.96	127.00
1	AA	520	G	C8-N9-C4	-5.35	104.26	106.40
1	AA	1544	C	N3-C4-C5	-5.35	119.76	121.90
1	AA	1972	G	C4-C5-N7	5.35	112.94	110.80
1	CA	1672	C	N3-C2-O2	5.35	125.64	121.90
1	CA	1698	A	C5-C6-N1	-5.35	115.03	117.70
1	AA	76	C	OP1-P-OP2	5.35	127.62	119.60
1	AA	1006	C	O5'-P-OP1	5.35	117.11	110.70
1	AA	821	A	N7-C8-N9	5.34	116.47	113.80
1	AA	1659	G	C5-C6-O6	5.34	131.81	128.60
1	AA	414	U	N1-C2-N3	5.34	118.11	114.90
1	AA	1706	U	C4-C5-C6	5.34	122.91	119.70
34	BA	295	C	C5-C6-N1	-5.34	118.33	121.00
1	CA	2197	U	C5-C6-N1	-5.34	120.03	122.70
1	AA	753	A	O5'-P-OP1	5.34	117.11	110.70
1	AA	1242	G	N7-C8-N9	-5.34	110.43	113.10
1	AA	1742	G	N3-C2-N2	5.34	123.64	119.90
1	AA	2568	C	N3-C4-N4	5.34	121.74	118.00
2	AB	101	G	N9-C4-C5	-5.34	103.26	105.40
1	CA	1594	G	C8-N9-C4	-5.34	104.26	106.40
1	AA	373	G	C5-C6-O6	-5.34	125.40	128.60
1	AA	865	G	C8-N9-C4	-5.34	104.26	106.40
1	AA	975	U	N3-C4-O4	5.34	123.14	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2080	A	N7-C8-N9	-5.34	111.13	113.80
1	AA	2355	C	OP1-P-OP2	5.34	127.61	119.60
1	AA	2406	C	O4'-C1'-N1	-5.34	103.93	108.20
2	AB	13	A	OP1-P-OP2	5.34	127.61	119.60
1	CA	454	A	C8-N9-C4	-5.34	103.67	105.80
1	CA	465	G	N1-C2-N2	-5.34	111.39	116.20
1	CA	824	A	C4-C5-N7	-5.34	108.03	110.70
34	BA	767	A	N1-C6-N6	-5.34	115.40	118.60
1	CA	2404	C	C6-N1-C2	5.34	122.44	120.30
34	DA	686	U	C2-N1-C1'	-5.34	111.29	117.70
1	AA	47	G	N3-C2-N2	5.34	123.64	119.90
1	AA	182	U	N3-C4-C5	-5.34	111.40	114.60
1	AA	194	G	N7-C8-N9	-5.34	110.43	113.10
1	AA	500	G	N7-C8-N9	5.34	115.77	113.10
1	AA	546	G	N1-C2-N2	-5.34	111.40	116.20
1	AA	835	A	O5'-P-OP2	-5.34	100.90	105.70
1	AA	845	G	N9-C4-C5	5.34	107.53	105.40
1	AA	862	C	N3-C4-N4	-5.34	114.26	118.00
1	AA	1675	U	O5'-P-OP2	5.34	117.10	110.70
1	AA	2082	A	C5-C6-N1	-5.34	115.03	117.70
1	AA	2245	U	N1-C2-N3	5.34	118.10	114.90
34	BA	50	A	O5'-P-OP2	-5.34	100.90	105.70
1	CA	945	A	C5-C6-N1	-5.34	115.03	117.70
1	CA	1891	G	C8-N9-C4	-5.34	104.27	106.40
1	CA	2327	A	N9-C4-C5	5.34	107.94	105.80
1	CA	2499	C	N3-C2-O2	5.34	125.64	121.90
56	DX	15	G	P-O3'-C3'	-5.34	113.30	119.70
1	AA	1239	A	N7-C8-N9	-5.33	111.13	113.80
1	AA	2033	U	N1-C2-N3	5.33	118.10	114.90
1	AA	2379	G	O5'-P-OP2	5.33	117.10	110.70
1	CA	1212	G	N3-C4-N9	5.33	129.20	126.00
1	CA	1820	U	N3-C4-C5	5.33	117.80	114.60
1	CA	2441	C	OP1-P-O3'	5.33	116.94	105.20
1	AA	33	U	N3-C4-O4	-5.33	115.67	119.40
1	AA	770	G	C8-N9-C4	5.33	108.53	106.40
1	AA	982	U	C6-N1-C2	5.33	124.20	121.00
1	AA	1660	A	C5-C6-N1	-5.33	115.03	117.70
1	AA	2013	U	N3-C2-O2	5.33	125.93	122.20
1	AA	2350	G	C5-C6-O6	5.33	131.80	128.60
1	AA	2854	G	O5'-P-OP1	-5.33	100.90	105.70
4	AD	229	VAL	CB-CA-C	-5.33	101.27	111.40
1	CA	1787	A	O5'-P-OP1	-5.33	100.90	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2605	U	C6-N1-C2	-5.33	117.80	121.00
1	AA	971	C	OP2-P-O3'	5.33	116.93	105.20
1	AA	1220	U	P-O3'-C3'	5.33	126.10	119.70
1	AA	1362	U	OP2-P-O3'	5.33	116.93	105.20
1	AA	2674	A	C6-N1-C2	5.33	121.80	118.60
2	AB	73	A	O5'-P-OP1	5.33	117.10	110.70
1	CA	574	C	C2-N1-C1'	-5.33	112.94	118.80
1	CA	786	C	N3-C4-N4	-5.33	114.27	118.00
1	CA	987	G	N9-C4-C5	-5.33	103.27	105.40
1	AA	196	A	C6-N1-C2	5.33	121.80	118.60
1	AA	2237	A	C8-N9-C4	-5.33	103.67	105.80
1	AA	2562	G	N1-C2-N2	-5.33	111.40	116.20
1	CA	2020	A	C5-C6-N6	-5.33	119.44	123.70
1	AA	553	A	N3-C4-C5	5.33	130.53	126.80
1	AA	1601	A	OP1-P-O3'	5.33	116.92	105.20
1	AA	1656	A	N7-C8-N9	-5.33	111.14	113.80
1	AA	2648	U	OP1-P-O3'	5.33	116.92	105.20
2	AB	81	G	OP1-P-OP2	5.33	127.59	119.60
34	BA	802	A	N1-C6-N6	5.33	121.80	118.60
1	CA	12	U	N1-C2-O2	5.33	126.53	122.80
1	CA	420	C	C6-N1-C2	5.33	122.43	120.30
1	CA	2008	C	C6-N1-C1'	5.33	127.19	120.80
1	AA	1076	G	C5-C6-N1	5.33	114.16	111.50
1	AA	2698	G	C2-N3-C4	5.33	114.56	111.90
34	BA	1509	C	C2-N3-C4	-5.33	117.24	119.90
1	AA	202	A	OP2-P-O3'	5.33	116.92	105.20
1	AA	1156	G	C4-C5-N7	-5.33	108.67	110.80
1	AA	1668	G	C4-C5-N7	-5.33	108.67	110.80
1	AA	2693	C	N3-C4-C5	5.33	124.03	121.90
34	BA	312	C	OP2-P-O3'	5.33	116.92	105.20
1	CA	1573	G	N9-C1'-C2'	-5.33	106.14	112.00
1	CA	1676	A	C4-C5-N7	5.33	113.36	110.70
1	AA	104	C	O5'-P-OP1	-5.32	100.91	105.70
1	AA	198	C	N1-C2-O2	5.32	122.09	118.90
1	AA	898	U	C2-N3-C4	-5.32	123.81	127.00
1	AA	1679	A	C5-C6-N1	-5.32	115.04	117.70
1	AA	1986	G	O5'-P-OP2	5.32	117.09	110.70
1	AA	2536	G	C6-N1-C2	-5.32	121.91	125.10
34	BA	729	A	OP1-P-O3'	5.32	116.91	105.20
1	CA	860	U	N3-C2-O2	-5.32	118.47	122.20
1	CA	941	A	C2-N3-C4	-5.32	107.94	110.60
1	CA	1155	A	OP1-P-O3'	5.32	116.91	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2082	A	C8-N9-C4	-5.32	103.67	105.80
1	AA	563	G	OP1-P-O3'	5.32	116.91	105.20
1	AA	2229	A	N1-C6-N6	5.32	121.79	118.60
1	CA	1860	G	N1-C6-O6	5.32	123.09	119.90
1	AA	1539	C	C4-C5-C6	5.32	120.06	117.40
1	AA	2527	C	C5-C4-N4	-5.32	116.47	120.20
2	AB	43	C	N3-C4-C5	5.32	124.03	121.90
1	AA	2504	U	OP2-P-O3'	5.32	116.90	105.20
1	CA	672	C	O5'-P-OP2	-5.32	100.91	105.70
56	DX	17	C	C2-N1-C1'	5.32	124.65	118.80
1	AA	546	G	N1-C6-O6	-5.32	116.71	119.90
1	AA	2262	G	C2-N3-C4	5.32	114.56	111.90
1	AA	2801	C	C6-N1-C2	-5.32	118.17	120.30
2	AB	26	A	C8-N9-C4	5.32	107.93	105.80
34	BA	1114	C	C6-N1-C2	-5.32	118.17	120.30
1	AA	458	U	N3-C2-O2	-5.32	118.48	122.20
1	AA	722	A	N7-C8-N9	5.32	116.46	113.80
1	AA	956	A	C4-C5-C6	-5.32	114.34	117.00
1	AA	1637	G	N3-C4-C5	-5.32	125.94	128.60
1	AA	2497	G	N1-C6-O6	-5.32	116.71	119.90
1	AA	2571	C	C5-C6-N1	-5.32	118.34	121.00
34	BA	852	G	C8-N9-C4	5.32	108.53	106.40
1	AA	713	G	N7-C8-N9	-5.31	110.44	113.10
1	AA	786	G	N1-C2-N2	5.31	120.98	116.20
1	AA	2297	C	N3-C4-N4	5.31	121.72	118.00
1	CA	1296	G	OP2-P-O3'	5.31	116.89	105.20
1	CA	1533	G	N3-C4-C5	-5.31	125.94	128.60
1	AA	639	G	N9-C4-C5	5.31	107.53	105.40
1	AA	1350	C	N1-C2-N3	5.31	122.92	119.20
1	AA	2789	A	C4-C5-N7	5.31	113.36	110.70
1	CA	416	C	N1-C2-O2	5.31	122.09	118.90
1	CA	2336	A	C8-N9-C4	-5.31	103.67	105.80
1	CA	2488	A	N1-C2-N3	-5.31	126.64	129.30
1	AA	2265	G	N3-C4-N9	5.31	129.19	126.00
1	CA	845	G	O4'-C1'-N9	5.31	112.45	108.20
1	CA	1979	C	N1-C2-N3	5.31	122.92	119.20
1	AA	181	C	N1-C2-O2	-5.31	115.71	118.90
1	AA	472	G	C5-C6-O6	-5.31	125.42	128.60
1	AA	587	C	C2-N1-C1'	-5.31	112.96	118.80
1	AA	836	A	N7-C8-N9	5.31	116.45	113.80
1	AA	869	U	N1-C2-N3	5.31	118.09	114.90
1	AA	887	C	N3-C2-O2	-5.31	118.18	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2771	A	C5-N7-C8	-5.31	101.25	103.90
34	BA	662	G	C4-C5-N7	5.31	112.92	110.80
1	CA	1622	G	N9-C4-C5	5.31	107.52	105.40
1	CA	2766	G	N7-C8-N9	5.31	115.75	113.10
1	AA	22	C	C5-C6-N1	-5.31	118.35	121.00
1	AA	1392	G	N3-C2-N2	5.31	123.61	119.90
1	AA	2068	G	C5-C6-N1	-5.31	108.85	111.50
1	AA	2636	G	N7-C8-N9	-5.31	110.45	113.10
34	BA	557	G	N3-C4-N9	5.31	129.18	126.00
34	BA	1067	A	C8-N9-C4	-5.31	103.68	105.80
1	CA	954	G	C4-C5-N7	-5.31	108.68	110.80
34	BA	898	G	N1-C6-O6	5.31	123.08	119.90
1	CA	224	G	C8-N9-C4	5.31	108.52	106.40
34	DA	1503	A	OP1-P-O3'	5.31	116.87	105.20
1	AA	1413	A	C4-C5-C6	-5.30	114.35	117.00
1	AA	2046	G	OP2-P-O3'	5.30	116.87	105.20
1	AA	2397	C	N3-C2-O2	5.30	125.61	121.90
1	AA	2677	A	C2-N3-C4	-5.30	107.95	110.60
34	BA	1485	U	N1-C2-N3	5.30	118.08	114.90
1	CA	775	G	O4'-C1'-N9	5.30	112.44	108.20
1	CA	2337	G	N1-C6-O6	5.30	123.08	119.90
1	AA	803	C	OP1-P-OP2	5.30	127.55	119.60
34	BA	890	G	N1-C2-N2	-5.30	111.43	116.20
1	AA	1007	G	C6-N1-C2	-5.30	121.92	125.10
1	AA	1201	A	N7-C8-N9	5.30	116.45	113.80
1	AA	1483	C	N3-C2-O2	-5.30	118.19	121.90
1	AA	2521	G	N3-C4-C5	-5.30	125.95	128.60
1	AA	2601	A	C6-N1-C2	5.30	121.78	118.60
1	CA	14	A	N1-C6-N6	-5.30	115.42	118.60
1	CA	466	A	N1-C6-N6	5.30	121.78	118.60
1	CA	827	U	OP1-P-OP2	-5.30	111.65	119.60
1	CA	1378	A	N1-C2-N3	-5.30	126.65	129.30
1	CA	2271	G	C4-C5-N7	5.30	112.92	110.80
34	DA	97	G	O4'-C1'-N9	5.30	112.44	108.20
34	DA	894	G	N3-C2-N2	-5.30	116.19	119.90
1	AA	2836	A	N1-C6-N6	5.30	121.78	118.60
34	BA	266	G	P-O3'-C3'	5.30	126.06	119.70
1	CA	505	A	C5-N7-C8	-5.30	101.25	103.90
1	CA	797	C	O5'-P-OP2	-5.30	100.93	105.70
1	AA	2787	C	C5-C4-N4	5.30	123.91	120.20
34	BA	791	G	N1-C6-O6	5.30	123.08	119.90
1	CA	2562	U	N1-C2-O2	-5.30	119.09	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	142	G	C8-N9-C4	5.30	108.52	106.40
1	AA	489	G	O5'-P-OP1	5.30	117.06	110.70
1	AA	590	A	N3-C4-C5	5.30	130.51	126.80
1	AA	1845	G	N3-C4-N9	5.30	129.18	126.00
1	AA	2244	U	C2-N1-C1'	-5.30	111.34	117.70
1	AA	2573	A	N3-C4-N9	-5.30	123.16	127.40
1	AA	2723	A	C6-N1-C2	5.30	121.78	118.60
1	CA	497	A	C8-N9-C4	-5.30	103.68	105.80
1	CA	2087	G	N3-C4-N9	-5.30	122.82	126.00
1	CA	2478	A	OP2-P-O3'	5.30	116.85	105.20
1	CA	2719	G	C8-N9-C4	-5.30	104.28	106.40
34	DA	128	G	N7-C8-N9	-5.30	110.45	113.10
34	DA	308	C	N1-C2-O2	5.30	122.08	118.90
1	AA	202	A	O5'-P-OP1	-5.29	100.93	105.70
1	AA	540	A	OP1-P-OP2	-5.29	111.66	119.60
1	AA	1056	A	C4-C5-C6	-5.29	114.35	117.00
1	AA	1275	G	C4-C5-N7	5.29	112.92	110.80
1	AA	1452	U	C2-N3-C4	-5.29	123.82	127.00
34	DA	1441	G	C4-C5-C6	5.29	121.98	118.80
1	AA	780	G	C2-N3-C4	5.29	114.55	111.90
1	AA	1260	G	C5-C6-N1	5.29	114.15	111.50
1	AA	2277	U	N1-C2-O2	-5.29	119.09	122.80
1	CA	450	G	C5-C6-N1	5.29	114.15	111.50
1	CA	669	G	C5-C6-N1	5.29	114.15	111.50
1	CA	1987	G	C4-N9-C1'	-5.29	119.62	126.50
34	DA	235	C	C6-N1-C2	5.29	122.42	120.30
34	DA	1232	U	C5-C6-N1	5.29	125.35	122.70
1	AA	409	G	N3-C4-N9	5.29	129.17	126.00
1	AA	475	A	N1-C6-N6	-5.29	115.42	118.60
1	AA	756	U	C5-C4-O4	-5.29	122.72	125.90
1	AA	1082	G	C6-N1-C2	5.29	128.28	125.10
1	AA	2597	U	OP1-P-O3'	5.29	116.84	105.20
1	AA	2682	A	N1-C6-N6	-5.29	115.42	118.60
1	AA	2874	G	C5-N7-C8	5.29	106.95	104.30
34	BA	299	G	N9-C4-C5	-5.29	103.28	105.40
1	CA	390	A	C6-N1-C2	5.29	121.78	118.60
1	CA	1770	G	O5'-P-OP2	5.29	117.05	110.70
1	AA	1261	G	C5-C6-N1	5.29	114.14	111.50
34	DA	1108	G	C8-N9-C1'	-5.29	120.12	127.00
1	AA	1737	A	N7-C8-N9	-5.29	111.16	113.80
1	AA	1869	C	C2-N1-C1'	-5.29	112.98	118.80
1	AA	1969	C	N3-C4-C5	-5.29	119.78	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2260	C	C5-C4-N4	5.29	123.90	120.20
1	AA	2383	G	C5-C6-O6	-5.29	125.43	128.60
1	CA	679	C	OP1-P-OP2	-5.29	111.67	119.60
1	CA	1782	C	OP1-P-OP2	5.29	127.53	119.60
1	CA	2072	G	N7-C8-N9	5.29	115.74	113.10
1	CA	2286	A	C5-C6-N1	-5.29	115.06	117.70
1	CA	2679	A	OP2-P-O3'	5.29	116.83	105.20
1	AA	876	A	OP1-P-OP2	5.29	127.53	119.60
1	AA	1803	G	N1-C2-N3	5.29	127.07	123.90
1	CA	1379	A	N1-C6-N6	5.29	121.77	118.60
1	AA	248	G	O5'-P-OP2	-5.29	100.94	105.70
1	AA	483	A	O5'-P-OP2	-5.29	100.94	105.70
1	AA	815	G	N9-C4-C5	5.29	107.52	105.40
1	AA	1666	G	C4-C5-N7	-5.29	108.69	110.80
1	AA	2529	C	O5'-P-OP2	-5.29	100.94	105.70
1	CA	255	A	N3-C4-N9	5.29	131.63	127.40
1	CA	620	G	N1-C6-O6	-5.29	116.73	119.90
1	CA	1610	A	C5-C6-N6	-5.29	119.47	123.70
1	CA	1984	G	OP2-P-O3'	5.29	116.83	105.20
1	AA	1078	A	C8-N9-C4	5.28	107.91	105.80
1	AA	1674	G	O5'-P-OP2	5.28	117.04	110.70
1	AA	1838	G	C6-C5-N7	5.28	133.57	130.40
1	CA	1208	C	C6-N1-C2	-5.28	118.19	120.30
1	CA	1328	G	N9-C4-C5	-5.28	103.29	105.40
1	CA	1822	G	N3-C4-N9	-5.28	122.83	126.00
34	DA	115	G	P-O3'-C3'	5.28	126.04	119.70
34	DA	752	G	N3-C4-C5	-5.28	125.96	128.60
34	DA	762	C	N1-C2-O2	5.28	122.07	118.90
1	AA	130	G	C5-N7-C8	5.28	106.94	104.30
1	AA	1259	A	C4-C5-N7	-5.28	108.06	110.70
1	AA	1946	C	C4-C5-C6	5.28	120.04	117.40
1	AA	80	G	N1-C6-O6	-5.28	116.73	119.90
1	AA	368	G	C8-N9-C4	5.28	108.51	106.40
1	AA	400	U	N3-C4-C5	5.28	117.77	114.60
1	AA	616	G	N1-C6-O6	-5.28	116.73	119.90
1	AA	974	G	N1-C2-N2	-5.28	111.45	116.20
1	AA	2220	A	N9-C4-C5	5.28	107.91	105.80
1	AA	2299	A	OP2-P-O3'	5.28	116.82	105.20
1	AA	2659	U	OP2-P-O3'	5.28	116.82	105.20
1	CA	656	G	C8-N9-C4	-5.28	104.29	106.40
1	AA	831	A	O4'-C1'-N9	5.28	112.42	108.20
34	DA	1417	G	N7-C8-N9	-5.28	110.46	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	447	C	C5-C4-N4	-5.28	116.51	120.20
1	AA	499	G	C6-N1-C2	-5.28	121.93	125.10
1	AA	1034	A	N1-C2-N3	-5.28	126.66	129.30
1	AA	2633	A	C2-N3-C4	-5.28	107.96	110.60
34	BA	1491	G	C8-N9-C4	-5.28	104.29	106.40
1	CA	2682	U	C6-N1-C2	-5.28	117.83	121.00
1	AA	137	G	N1-C6-O6	5.28	123.06	119.90
1	AA	411	U	C6-N1-C2	5.28	124.17	121.00
1	AA	1274	G	N7-C8-N9	-5.28	110.46	113.10
1	AA	1723	A	C5-C6-N6	5.28	127.92	123.70
1	AA	2899	C	C2-N1-C1'	5.28	124.60	118.80
1	CA	496	G	C4-N9-C1'	5.28	133.36	126.50
1	CA	2701	C	N3-C4-C5	5.28	124.01	121.90
1	AA	574	G	C6-C5-N7	-5.27	127.23	130.40
1	AA	1264	G	C5-N7-C8	-5.27	101.66	104.30
1	AA	2542	A	OP2-P-O3'	5.27	116.80	105.20
34	DA	275	G	C6-C5-N7	-5.27	127.23	130.40
1	AA	531	G	C8-N9-C4	-5.27	104.29	106.40
1	AA	750	U	C2-N3-C4	-5.27	123.84	127.00
1	AA	1112	U	C6-N1-C2	-5.27	117.84	121.00
1	AA	1322	A	N9-C4-C5	-5.27	103.69	105.80
1	AA	1707	C	O5'-P-OP2	-5.27	100.96	105.70
1	AA	1753	U	N1-C2-O2	5.27	126.49	122.80
1	AA	2014	G	N3-C4-N9	5.27	129.16	126.00
1	AA	2355	C	C6-N1-C1'	5.27	127.13	120.80
1	AA	2890	C	C2-N3-C4	-5.27	117.26	119.90
2	AB	74	U	C4-C5-C6	5.27	122.86	119.70
34	BA	14	U	N3-C4-O4	5.27	123.09	119.40
34	BA	546	G	C4-C5-N7	-5.27	108.69	110.80
34	BA	1431	C	C2-N3-C4	5.27	122.54	119.90
34	BA	1470	G	N9-C4-C5	5.27	107.51	105.40
1	AA	117	A	N9-C1'-C2'	5.27	120.85	114.00
1	AA	199	C	C2-N3-C4	-5.27	117.27	119.90
1	AA	1269	G	P-O3'-C3'	5.27	126.03	119.70
1	AA	1442	U	O5'-P-OP1	-5.27	100.96	105.70
1	AA	2450	U	C6-N1-C1'	-5.27	113.82	121.20
34	BA	15	G	C5-C6-O6	-5.27	125.44	128.60
1	AA	533	G	C5-N7-C8	5.27	106.94	104.30
1	AA	1314	A	C6-N1-C2	-5.27	115.44	118.60
1	AA	1466	U	O5'-P-OP2	-5.27	100.96	105.70
1	AA	2848	G	C6-N1-C2	-5.27	121.94	125.10
1	AA	2851	C	C4-C5-C6	5.27	120.03	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	A5	15	ARG	NE-CZ-NH1	-5.27	117.67	120.30
1	CA	70	G	C5-N7-C8	-5.27	101.67	104.30
1	CA	182	A	C8-N9-C4	5.27	107.91	105.80
1	CA	870	A	O5'-P-OP2	-5.27	100.96	105.70
1	CA	2206	G	C8-N9-C4	5.27	108.51	106.40
34	DA	372	C	C6-N1-C2	5.27	122.41	120.30
1	AA	1357	G	C6-C5-N7	5.27	133.56	130.40
1	AA	2162	C	N3-C2-O2	-5.27	118.21	121.90
1	AA	2450	U	C5-C6-N1	-5.27	120.07	122.70
1	AA	2452	C	C4-C5-C6	5.27	120.03	117.40
1	AA	2773	C	N3-C4-C5	5.27	124.01	121.90
1	CA	384	U	N3-C2-O2	-5.27	118.51	122.20
1	CA	801	G	N9-C4-C5	5.27	107.51	105.40
1	CA	1775	U	C5-C6-N1	-5.27	120.07	122.70
1	CA	1923	U	C5-C4-O4	5.27	129.06	125.90
34	DA	135	C	C2-N1-C1'	-5.27	113.01	118.80
1	AA	1803	G	N7-C8-N9	-5.27	110.47	113.10
34	BA	917	G	N1-C6-O6	5.27	123.06	119.90
1	CA	1952	A	N1-C6-N6	5.27	121.76	118.60
1	AA	471	C	O5'-P-OP2	-5.26	100.96	105.70
1	AA	1085	G	C6-C5-N7	5.26	133.56	130.40
1	AA	1274	G	N1-C2-N3	-5.26	120.74	123.90
1	AA	1378	G	N3-C2-N2	5.26	123.59	119.90
1	AA	1588	G	N3-C4-C5	-5.26	125.97	128.60
1	CA	762	U	C5-C4-O4	-5.26	122.74	125.90
1	CA	2066	C	N3-C4-C5	-5.26	119.79	121.90
34	DA	572	A	C8-N9-C4	5.26	107.91	105.80
1	AA	107	G	N1-C6-O6	-5.26	116.74	119.90
1	AA	905	U	N3-C2-O2	-5.26	118.52	122.20
1	AA	1977	U	C2-N1-C1'	-5.26	111.39	117.70
1	CA	339	U	N3-C2-O2	5.26	125.88	122.20
1	AA	1858	C	C6-N1-C2	5.26	122.41	120.30
1	AA	2494	G	N3-C4-C5	5.26	131.23	128.60
1	AA	2653	G	OP1-P-OP2	5.26	127.49	119.60
34	BA	819	A	O4'-C1'-N9	-5.26	103.99	108.20
34	BA	1485	U	C6-N1-C2	-5.26	117.84	121.00
1	CA	774	A	O5'-P-OP2	-5.26	100.96	105.70
1	CA	2591	C	N3-C4-C5	-5.26	119.80	121.90
34	DA	791	G	C5-C6-O6	-5.26	125.44	128.60
1	AA	56	C	OP1-P-OP2	5.26	127.49	119.60
1	AA	577	U	N3-C4-C5	5.26	117.76	114.60
1	AA	796	C	N3-C2-O2	5.26	125.58	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	848	G	N7-C8-N9	5.26	115.73	113.10
1	AA	1310	G	C5-C6-N1	5.26	114.13	111.50
1	AA	1926	G	N1-C6-O6	-5.26	116.75	119.90
1	AA	1953	U	OP1-P-O3'	5.26	116.77	105.20
1	AA	2497	G	N7-C8-N9	-5.26	110.47	113.10
1	AA	2760	G	C5-C6-N1	5.26	114.13	111.50
1	AA	2800	C	C4-C5-C6	5.26	120.03	117.40
2	AB	4	C	C2-N1-C1'	-5.26	113.02	118.80
4	AD	244	ARG	NE-CZ-NH1	-5.26	117.67	120.30
34	BA	770	C	C2-N3-C4	5.26	122.53	119.90
34	BA	785	G	C5-C6-N1	-5.26	108.87	111.50
1	CA	427	U	C6-N1-C2	5.26	124.16	121.00
1	CA	568	U	C2-N1-C1'	5.26	124.01	117.70
1	CA	1759	A	C6-C5-N7	5.26	135.98	132.30
1	CA	2238	G	N1-C6-O6	-5.26	116.74	119.90
1	AA	1035	G	C5-N7-C8	5.26	106.93	104.30
1	AA	2383	G	C2-N3-C4	5.26	114.53	111.90
1	AA	177	G	C8-N9-C4	5.26	108.50	106.40
1	AA	771	U	OP1-P-O3'	5.26	116.76	105.20
1	AA	792	G	C5-N7-C8	5.26	106.93	104.30
1	AA	1436	U	N3-C4-O4	5.26	123.08	119.40
1	AA	1852	A	C6-N1-C2	-5.26	115.45	118.60
1	AA	2458	G	N1-C6-O6	-5.26	116.75	119.90
34	BA	890	G	N3-C2-N2	5.26	123.58	119.90
1	AA	358	C	C5-C4-N4	5.25	123.88	120.20
1	AA	599	U	C2-N1-C1'	5.25	124.01	117.70
1	AA	601	A	C6-C5-N7	5.25	135.98	132.30
1	AA	787	U	OP2-P-O3'	5.25	116.76	105.20
1	AA	2848	G	C4-C5-C6	5.25	121.95	118.80
1	AA	356	A	P-O3'-C3'	5.25	126.00	119.70
1	AA	872	C	C5-C6-N1	-5.25	118.37	121.00
1	AA	1374	G	C5-C6-N1	5.25	114.13	111.50
1	AA	1403	U	C5-C4-O4	-5.25	122.75	125.90
1	AA	1416	C	C6-N1-C2	-5.25	118.20	120.30
1	AA	2017	U	OP1-P-O3'	5.25	116.76	105.20
1	AA	2882	G	C5-C6-N1	5.25	114.13	111.50
2	AB	84	C	C5-C4-N4	-5.25	116.52	120.20
34	BA	1470	G	C5-C6-N1	-5.25	108.87	111.50
1	CA	25	U	C2-N1-C1'	-5.25	111.40	117.70
1	CA	915	C	C5-C6-N1	5.25	123.63	121.00
1	CA	1612	C	C6-N1-C2	-5.25	118.20	120.30
1	AA	806	G	N3-C4-N9	5.25	129.15	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1744	G	OP1-P-OP2	-5.25	111.72	119.60
1	AA	1750	G	N7-C8-N9	5.25	115.72	113.10
1	AA	1855	G	C4-C5-N7	-5.25	108.70	110.80
1	AA	2466	G	C5-N7-C8	5.25	106.93	104.30
1	AA	2583	C	C5-C6-N1	-5.25	118.37	121.00
1	AA	2886	G	N3-C2-N2	-5.25	116.22	119.90
1	CA	252	G	C5-C6-O6	5.25	131.75	128.60
1	AA	464	G	N3-C4-C5	-5.25	125.97	128.60
1	AA	2465	A	N7-C8-N9	-5.25	111.17	113.80
1	CA	97	C	C2-N1-C1'	-5.25	113.03	118.80
1	CA	1774	C	C6-N1-C2	-5.25	118.20	120.30
1	CA	2501	C	C2-N3-C4	-5.25	117.28	119.90
1	AA	259	A	N7-C8-N9	5.25	116.42	113.80
1	AA	1042	A	C5-N7-C8	5.25	106.52	103.90
1	AA	1694	G	N1-C2-N2	5.25	120.92	116.20
34	BA	1067	A	O4'-C1'-N9	-5.25	104.00	108.20
34	BA	1485	U	N3-C2-O2	-5.25	118.53	122.20
1	AA	147	U	C2-N3-C4	-5.25	123.85	127.00
1	AA	536	U	N3-C4-O4	5.25	123.07	119.40
1	AA	731	G	O5'-P-OP1	-5.25	100.98	105.70
1	AA	1038	C	C5-C6-N1	5.25	123.62	121.00
1	AA	1056	A	C5-C6-N1	5.25	120.32	117.70
1	AA	1280	U	N3-C4-C5	5.25	117.75	114.60
1	AA	2109	G	O5'-P-OP2	-5.25	100.98	105.70
1	AA	2519	C	C6-N1-C2	-5.25	118.20	120.30
1	AA	2832	G	N1-C6-O6	5.25	123.05	119.90
2	AB	5	C	O5'-P-OP2	-5.25	100.98	105.70
1	CA	400	G	C5-C6-O6	-5.25	125.45	128.60
1	CA	2055	C	C6-N1-C1'	5.25	127.09	120.80
1	CA	2856	C	C5-C6-N1	5.25	123.62	121.00
1	AA	500	G	O4'-C1'-N9	5.25	112.40	108.20
1	AA	533	G	N3-C4-N9	5.25	129.15	126.00
1	AA	609	A	C8-N9-C4	5.25	107.90	105.80
1	AA	656	A	O5'-P-OP1	-5.25	100.98	105.70
1	AA	2777	A	O5'-P-OP2	-5.25	100.98	105.70
1	CA	2584	U	C6-N1-C2	5.25	124.15	121.00
1	AA	847	A	C5-C6-N1	-5.24	115.08	117.70
1	AA	1963	C	N3-C2-O2	-5.24	118.23	121.90
1	AA	2725	A	C4-C5-C6	5.24	119.62	117.00
1	AA	2790	G	C5-C6-N1	5.24	114.12	111.50
34	BA	266	G	C4-C5-N7	5.24	112.90	110.80
34	BA	354	G	C4-N9-C1'	5.24	133.31	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	1502	A	O5'-P-OP2	-5.24	100.98	105.70
1	CA	469	G	C4-C5-C6	5.24	121.95	118.80
1	CA	2053	G	C5-C6-N1	-5.24	108.88	111.50
1	AA	2023	A	N7-C8-N9	5.24	116.42	113.80
1	AA	1008	U	C2-N3-C4	-5.24	123.86	127.00
1	AA	2506	G	N1-C2-N3	-5.24	120.76	123.90
1	AA	2861	A	N1-C6-N6	5.24	121.74	118.60
1	CA	426	C	C6-N1-C2	-5.24	118.20	120.30
1	CA	2256	G	C4-C5-N7	-5.24	108.70	110.80
1	CA	2620	C	C6-N1-C2	5.24	122.40	120.30
1	CA	2633	G	N3-C4-C5	5.24	131.22	128.60
34	DA	886	G	N3-C2-N2	5.24	123.57	119.90
1	AA	152	G	N1-C6-O6	5.24	123.04	119.90
1	AA	1793	A	O5'-P-OP1	-5.24	100.98	105.70
1	AA	2038	U	N1-C2-N3	5.24	118.04	114.90
1	AA	2896	G	N9-C4-C5	-5.24	103.31	105.40
2	AB	6	C	C5-C4-N4	-5.24	116.53	120.20
56	BX	23	C	N3-C2-O2	-5.24	118.23	121.90
1	CA	942	G	C8-N9-C4	5.24	108.50	106.40
1	CA	2062	A	OP2-P-O3'	5.24	116.72	105.20
1	CA	2633	G	N9-C4-C5	-5.24	103.30	105.40
56	DX	27	U	N1-C2-O2	5.24	126.47	122.80
1	AA	1793	A	N9-C1'-C2'	5.24	120.81	114.00
1	AA	447	C	C6-N1-C2	5.24	122.39	120.30
1	AA	536	U	N3-C4-C5	5.24	117.74	114.60
1	AA	810	G	C4-C5-N7	-5.24	108.71	110.80
1	AA	1026	A	C5-C6-N6	-5.24	119.51	123.70
1	AA	1286	U	O5'-P-OP2	5.24	116.98	110.70
1	AA	2892	A	OP1-P-O3'	5.24	116.72	105.20
1	CA	148	C	C2-N1-C1'	-5.24	113.04	118.80
1	CA	248	G	N3-C4-N9	5.24	129.14	126.00
1	CA	1962	C	C5-C6-N1	5.24	123.62	121.00
34	DA	115	G	N3-C4-C5	-5.24	125.98	128.60
1	AA	789	G	C5-C6-O6	5.23	131.74	128.60
1	AA	797	A	N1-C2-N3	-5.23	126.68	129.30
1	AA	2114	U	C2-N1-C1'	5.23	123.98	117.70
1	CA	95	G	C2-N3-C4	-5.23	109.28	111.90
1	CA	2244	U	C4-C5-C6	5.23	122.84	119.70
1	CA	2815	C	N3-C2-O2	-5.23	118.24	121.90
1	AA	724	A	C4-C5-C6	5.23	119.62	117.00
1	AA	1056	A	C2-N3-C4	5.23	113.22	110.60
1	AA	1059	C	N1-C2-O2	-5.23	115.76	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1187	U	C2-N3-C4	-5.23	123.86	127.00
1	AA	1752	G	C5-N7-C8	5.23	106.92	104.30
1	AA	2026	G	N9-C4-C5	-5.23	103.31	105.40
34	BA	301	G	N3-C2-N2	-5.23	116.24	119.90
34	BA	906	G	OP1-P-OP2	5.23	127.45	119.60
1	CA	500	G	N9-C4-C5	5.23	107.49	105.40
1	CA	2732	G	C4-C5-N7	5.23	112.89	110.80
1	AA	105	C	OP1-P-O3'	5.23	116.71	105.20
1	AA	204	G	N3-C4-C5	5.23	131.22	128.60
1	AA	1342	G	C6-N1-C2	-5.23	121.96	125.10
1	AA	1391	C	C4-C5-C6	5.23	120.02	117.40
1	AA	2703	C	C2-N1-C1'	-5.23	113.05	118.80
1	AA	2897	U	N1-C2-O2	5.23	126.46	122.80
1	CA	312	G	O5'-P-OP1	-5.23	100.99	105.70
1	AA	517	A	N9-C4-C5	5.23	107.89	105.80
1	AA	1296	G	N1-C2-N2	-5.23	111.49	116.20
1	AA	2077	C	C2-N1-C1'	-5.23	113.05	118.80
1	AA	2441	G	C4-N9-C1'	-5.23	119.70	126.50
1	AA	2507	G	N1-C2-N2	-5.23	111.49	116.20
1	AA	1353	A	N9-C4-C5	-5.23	103.71	105.80
1	CA	283	A	N1-C6-N6	5.23	121.74	118.60
1	AA	446	C	C4-C5-C6	-5.23	114.79	117.40
1	AA	1698	G	OP1-P-OP2	-5.23	111.76	119.60
1	AA	2780	C	OP2-P-O3'	5.23	116.70	105.20
34	BA	862	C	N3-C4-C5	-5.23	119.81	121.90
1	CA	1365	A	OP2-P-O3'	5.23	116.70	105.20
1	AA	1023	G	O5'-P-OP2	-5.22	101.00	105.70
1	AA	1543	U	OP1-P-O3'	5.22	116.70	105.20
1	AA	1843	A	O5'-P-OP1	-5.22	101.00	105.70
1	AA	2585	C	C2-N3-C4	-5.22	117.29	119.90
34	BA	590	C	N1-C2-O2	5.22	122.03	118.90
1	CA	716	A	C5-C6-N6	5.22	127.88	123.70
1	CA	2604	U	N3-C2-O2	-5.22	118.54	122.20
1	CA	2785	C	N3-C2-O2	-5.22	118.24	121.90
1	AA	240	A	C6-C5-N7	5.22	135.96	132.30
1	AA	1359	U	C2-N1-C1'	5.22	123.97	117.70
1	AA	1727	U	C6-N1-C1'	5.22	128.51	121.20
1	AA	1912	A	N9-C4-C5	-5.22	103.71	105.80
1	AA	2483	C	C5-C6-N1	5.22	123.61	121.00
34	BA	1479	C	N3-C2-O2	5.22	125.56	121.90
1	CA	1777	U	N3-C2-O2	-5.22	118.54	122.20
1	CA	2337	G	O5'-P-OP2	5.22	116.97	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2371	G	N9-C4-C5	-5.22	103.31	105.40
21	CX	57	LEU	CA-CB-CG	5.22	127.31	115.30
1	AA	1442	U	C5-C6-N1	5.22	125.31	122.70
1	AA	756	U	N3-C4-O4	5.22	123.05	119.40
1	AA	970	C	N3-C2-O2	-5.22	118.25	121.90
1	AA	1343	C	C2-N3-C4	5.22	122.51	119.90
1	AA	1885	A	N1-C2-N3	-5.22	126.69	129.30
1	AA	2081	A	N9-C4-C5	5.22	107.89	105.80
1	AA	2287	C	C5'-C4'-O4'	-5.22	102.84	109.10
1	AA	2448	G	N1-C6-O6	-5.22	116.77	119.90
1	AA	2596	U	N3-C4-C5	5.22	117.73	114.60
1	AA	2853	G	C5-C6-O6	-5.22	125.47	128.60
1	CA	1492	G	C8-N9-C4	-5.22	104.31	106.40
1	CA	1796	U	N1-C2-N3	5.22	118.03	114.90
1	CA	2513	G	C8-N9-C1'	-5.22	120.22	127.00
1	CA	2782	G	N9-C4-C5	-5.22	103.31	105.40
1	CA	2835	A	C6-N1-C2	-5.22	115.47	118.60
1	AA	585	U	O5'-P-OP1	-5.22	101.00	105.70
1	CA	197	A	O5'-P-OP1	-5.22	101.00	105.70
1	AA	716	G	OP2-P-O3'	5.22	116.68	105.20
1	AA	852	G	OP1-P-OP2	-5.22	111.78	119.60
1	AA	882	A	C2-N3-C4	5.22	113.21	110.60
1	AA	2289	G	N1-C2-N3	5.22	127.03	123.90
1	AA	2431	U	OP1-P-O3'	5.22	116.68	105.20
1	AA	2650	G	N1-C2-N2	-5.22	111.50	116.20
1	AA	2685	G	C5-C6-N1	-5.22	108.89	111.50
1	CA	572	A	N1-C2-N3	5.22	131.91	129.30
1	CA	1428	C	N3-C4-C5	-5.22	119.81	121.90
1	CA	1800	C	N3-C4-C5	5.22	123.99	121.90
1	AA	471	C	C5-C6-N1	-5.21	118.39	121.00
1	AA	1154	U	N1-C2-N3	-5.21	111.77	114.90
1	AA	1350	C	C4-C5-C6	5.21	120.01	117.40
1	AA	1356	G	N9-C4-C5	5.21	107.49	105.40
1	AA	1499	C	N3-C4-C5	5.21	123.99	121.90
1	AA	2856	G	OP1-P-O3'	5.21	116.67	105.20
2	AB	74	U	N1-C2-N3	5.21	118.03	114.90
34	BA	1514	C	C4-C5-C6	5.21	120.01	117.40
1	CA	121	G	N9-C4-C5	-5.21	103.31	105.40
1	CA	1604	C	OP1-P-OP2	-5.21	111.78	119.60
1	AA	1866	G	C2-N3-C4	-5.21	109.29	111.90
1	AA	2054	G	N3-C4-C5	-5.21	125.99	128.60
1	AA	2294	G	C4-C5-C6	-5.21	115.67	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2344	U	P-O3'-C3'	5.21	125.96	119.70
1	AA	2371	C	C2-N1-C1'	5.21	124.53	118.80
1	AA	368	G	OP2-P-O3'	5.21	116.67	105.20
1	AA	669	A	C2-N3-C4	-5.21	108.00	110.60
1	AA	775	G	N7-C8-N9	-5.21	110.49	113.10
1	AA	1354	A	C5-C6-N6	5.21	127.87	123.70
34	BA	500	G	N3-C4-N9	-5.21	122.87	126.00
34	DA	796	C	O5'-P-OP1	-5.21	101.01	105.70
1	AA	136	G	C4-C5-N7	5.21	112.88	110.80
1	AA	2078	G	O5'-P-OP1	5.21	116.95	110.70
1	AA	2091	G	C4-N9-C1'	5.21	133.27	126.50
1	AA	408	G	C5-C6-N1	5.21	114.11	111.50
1	AA	954	C	N3-C4-N4	-5.21	114.35	118.00
1	AA	2112	G	N9-C4-C5	-5.21	103.32	105.40
1	AA	2539	C	N3-C4-C5	5.21	123.98	121.90
2	AB	23	G	OP2-P-O3'	5.21	116.66	105.20
2	AB	97	G	OP2-P-O3'	5.21	116.66	105.20
34	BA	1064	G	C4-N9-C1'	-5.21	119.73	126.50
34	BA	1486	G	N1-C6-O6	5.21	123.03	119.90
1	CA	387	U	OP1-P-O3'	5.21	116.66	105.20
1	CA	569	U	C2-N1-C1'	5.21	123.95	117.70
1	CA	848	G	O5'-P-OP1	5.21	116.95	110.70
1	CA	2336	A	C4-C5-C6	5.21	119.61	117.00
34	DA	512	U	C2-N1-C1'	5.21	123.95	117.70
34	DA	1125	U	C2-N1-C1'	5.21	123.95	117.70
1	AA	485	U	C6-N1-C2	-5.21	117.88	121.00
1	AA	528	A	C4-C5-N7	-5.21	108.10	110.70
1	AA	747	G	C6-N1-C2	-5.21	121.98	125.10
1	AA	996	C	O4'-C1'-N1	5.21	112.37	108.20
1	AA	1749	G	N3-C4-N9	-5.21	122.88	126.00
1	AA	2078	G	N1-C2-N2	-5.21	111.51	116.20
1	CA	122	G	N7-C8-N9	5.21	115.70	113.10
1	CA	2238	G	P-O3'-C3'	5.21	125.95	119.70
1	CA	2566	A	C2-N3-C4	5.21	113.20	110.60
47	DN	44	LEU	CA-CB-CG	5.21	127.28	115.30
1	AA	873	U	C5-C4-O4	5.21	129.02	125.90
1	AA	1342	G	C2-N3-C4	5.21	114.50	111.90
1	AA	2235	G	N1-C6-O6	-5.21	116.78	119.90
1	AA	2635	G	C2-N3-C4	-5.21	109.30	111.90
34	BA	1431	C	C4-C5-C6	-5.21	114.80	117.40
1	CA	2050	C	C6-N1-C1'	-5.21	114.55	120.80
1	CA	2523	G	N3-C4-N9	5.21	129.12	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	405	C	N1-C2-O2	-5.20	115.78	118.90
1	AA	881	C	C5-C6-N1	-5.20	118.40	121.00
1	AA	1299	A	O4'-C1'-N9	-5.20	104.04	108.20
1	AA	2052	A	C5-C6-N6	5.20	127.86	123.70
1	AA	2075	G	N3-C2-N2	5.20	123.54	119.90
1	AA	2260	C	N3-C4-C5	5.20	123.98	121.90
2	AB	33	G	C5-C6-O6	-5.20	125.48	128.60
34	BA	753	A	OP1-P-O3'	5.20	116.65	105.20
1	CA	436	C	N3-C2-O2	-5.20	118.26	121.90
1	CA	975	C	N3-C2-O2	-5.20	118.26	121.90
34	DA	1409	C	O5'-P-OP2	-5.20	101.02	105.70
1	AA	534	C	O5'-P-OP2	-5.20	101.02	105.70
1	AA	549	U	C6-N1-C2	5.20	124.12	121.00
1	AA	880	U	N1-C2-O2	-5.20	119.16	122.80
1	AA	982	U	N3-C4-O4	5.20	123.04	119.40
1	AA	1613	A	N1-C2-N3	-5.20	126.70	129.30
34	DA	832	C	N3-C2-O2	-5.20	118.26	121.90
1	AA	1475	G	N1-C2-N2	-5.20	111.52	116.20
1	AA	1544	C	C2-N3-C4	5.20	122.50	119.90
1	AA	1696	G	C5-C6-O6	5.20	131.72	128.60
1	AA	1740	U	C5-C4-O4	-5.20	122.78	125.90
1	AA	1851	U	N3-C4-O4	-5.20	115.76	119.40
1	AA	2073	A	C5-C6-N6	5.20	127.86	123.70
1	AA	2834	C	OP1-P-OP2	-5.20	111.80	119.60
34	BA	50	A	N1-C6-N6	-5.20	115.48	118.60
1	CA	832	G	C5-C6-O6	-5.20	125.48	128.60
1	CA	950	G	C4-C5-N7	-5.20	108.72	110.80
1	AA	406	G	N7-C8-N9	-5.20	110.50	113.10
1	AA	864	C	C6-N1-C2	-5.20	118.22	120.30
1	AA	1098	C	C2'-C3'-O3'	5.20	122.02	113.70
1	CA	272(F)	C	C6-N1-C2	5.20	122.38	120.30
1	CA	819	A	C2-N3-C4	-5.20	108.00	110.60
1	CA	1209	G	C8-N9-C4	-5.20	104.32	106.40
1	AA	1786	A	C5-C6-N6	5.20	127.86	123.70
34	BA	1030(B)	C	C5-C6-N1	5.20	123.60	121.00
34	DA	885	G	C5-C6-O6	5.20	131.72	128.60
1	AA	489	G	O4'-C1'-N9	5.20	112.36	108.20
1	AA	786	G	C6-N1-C2	-5.20	121.98	125.10
34	BA	347	G	N3-C4-C5	-5.20	126.00	128.60
34	BA	1413	A	N1-C6-N6	5.20	121.72	118.60
1	CA	224	G	N7-C8-N9	-5.20	110.50	113.10
1	CA	430	G	C5-C6-O6	-5.20	125.48	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1573	G	N3-C4-N9	-5.20	122.88	126.00
1	AA	868	A	N9-C4-C5	5.19	107.88	105.80
1	AA	983	G	C6-C5-N7	5.19	133.52	130.40
1	AA	1718	U	C6-N1-C2	-5.19	117.88	121.00
1	CA	183	C	N1-C2-N3	-5.19	115.56	119.20
1	CA	656	G	N9-C4-C5	5.19	107.48	105.40
1	CA	1184	G	OP2-P-O3'	5.19	116.63	105.20
1	AA	541	C	C5-C4-N4	-5.19	116.57	120.20
1	AA	1369	U	OP1-P-O3'	5.19	116.62	105.20
1	AA	2631	C	C2-N3-C4	-5.19	117.30	119.90
34	BA	1513	A	C5-C6-N6	-5.19	119.55	123.70
1	CA	1321	A	C5-N7-C8	5.19	106.50	103.90
1	CA	2583	G	C5-C6-O6	-5.19	125.48	128.60
1	CA	2667	C	N3-C4-C5	-5.19	119.82	121.90
56	DX	76	A	C5-N7-C8	-5.19	101.30	103.90
1	AA	30	G	C6-N1-C2	-5.19	121.99	125.10
1	AA	1030	A	P-O3'-C3'	5.19	125.93	119.70
1	AA	1686	U	C6-N1-C2	-5.19	117.89	121.00
1	AA	2883	A	O4'-C1'-N9	5.19	112.35	108.20
34	BA	8	A	N9-C4-C5	-5.19	103.72	105.80
1	CA	370	G	C8-N9-C4	-5.19	104.32	106.40
1	AA	407	U	OP1-P-OP2	5.19	127.38	119.60
1	AA	2662	U	N3-C4-C5	5.19	117.71	114.60
34	BA	1387	G	N1-C6-O6	-5.19	116.79	119.90
1	CA	1295	C	N3-C2-O2	-5.19	118.27	121.90
1	CA	1344	G	C8-N9-C4	-5.19	104.33	106.40
1	AA	516	G	C4-C5-N7	5.19	112.88	110.80
1	AA	555	G	N3-C4-C5	5.19	131.19	128.60
1	AA	1154	U	C2-N3-C4	5.19	130.11	127.00
1	AA	1469	G	C4-C5-N7	5.19	112.88	110.80
1	AA	1909	C	N3-C4-N4	5.19	121.63	118.00
1	AA	2264	G	N1-C6-O6	-5.19	116.79	119.90
1	AA	2440	G	O4'-C1'-N9	5.19	112.35	108.20
1	AA	2454	C	C2-N3-C4	-5.19	117.31	119.90
1	AA	2574	U	N3-C2-O2	-5.19	118.57	122.20
1	AA	2643	G	C8-N9-C4	-5.19	104.33	106.40
2	AB	83	G	O5'-P-OP2	-5.19	101.03	105.70
34	BA	770	C	C6-N1-C2	-5.19	118.22	120.30
56	BX	24	U	C5-C4-O4	5.19	129.01	125.90
1	CA	495	G	C4-C5-N7	-5.19	108.72	110.80
34	BA	1464	G	N1-C6-O6	5.19	123.01	119.90
1	CA	2028	U	N3-C2-O2	-5.19	118.57	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2679	A	N9-C4-C5	5.19	107.88	105.80
34	DA	483	C	C6-N1-C2	5.19	122.37	120.30
1	AA	1245	C	C2-N3-C4	5.18	122.49	119.90
1	AA	2054	G	O4'-C1'-N9	-5.18	104.05	108.20
1	CA	450	G	C4-C5-N7	-5.18	108.73	110.80
1	CA	747	U	N3-C4-C5	5.18	117.71	114.60
1	CA	1683	C	OP2-P-O3'	5.18	116.61	105.20
34	DA	823	G	N1-C6-O6	5.18	123.01	119.90
34	DA	1107	C	C6-N1-C2	-5.18	118.23	120.30
34	DA	1441	G	N3-C4-N9	5.18	129.11	126.00
1	AA	484	G	N1-C6-O6	5.18	123.01	119.90
1	AA	1010	C	C6-N1-C2	-5.18	118.23	120.30
1	AA	1023	G	N3-C2-N2	-5.18	116.27	119.90
1	AA	1228	G	C6-N1-C2	5.18	128.21	125.10
2	AB	4	C	C6-N1-C1'	5.18	127.02	120.80
34	BA	671	G	N1-C6-O6	-5.18	116.79	119.90
1	CA	1786	A	N1-C6-N6	-5.18	115.49	118.60
1	CA	2018	G	C5-C6-O6	5.18	131.71	128.60
34	DA	299	G	N3-C4-C5	5.18	131.19	128.60
1	AA	754	G	C5-C6-N1	-5.18	108.91	111.50
1	AA	1300	A	C8-N9-C4	-5.18	103.73	105.80
34	DA	1487	G	N7-C8-N9	5.18	115.69	113.10
1	AA	53	G	N9-C4-C5	-5.18	103.33	105.40
1	AA	841	G	OP2-P-O3'	5.18	116.59	105.20
1	AA	1973	U	N1-C2-O2	5.18	126.42	122.80
1	AA	2906	U	N3-C2-O2	-5.18	118.57	122.20
1	CA	559	G	O5'-P-OP2	-5.18	101.04	105.70
1	CA	1781	C	N3-C4-C5	5.18	123.97	121.90
1	AA	1918	G	N7-C8-N9	5.18	115.69	113.10
1	AA	1375	U	N3-C4-O4	-5.18	115.78	119.40
1	AA	2290	A	N9-C4-C5	5.18	107.87	105.80
1	AA	2854	G	C5-C6-N1	5.18	114.09	111.50
30	A6	18	ARG	NE-CZ-NH1	-5.18	117.71	120.30
34	BA	265	G	N1-C6-O6	-5.18	116.79	119.90
1	CA	89	G	C5-C6-N1	-5.18	108.91	111.50
1	AA	437	G	N9-C4-C5	-5.17	103.33	105.40
1	AA	675	C	N3-C2-O2	-5.17	118.28	121.90
1	AA	2283	G	N1-C2-N2	-5.17	111.54	116.20
11	AN	107	LEU	CA-CB-CG	-5.17	103.40	115.30
56	BX	49	G	N9-C4-C5	5.17	107.47	105.40
1	CA	348	G	C8-N9-C4	5.17	108.47	106.40
1	CA	1161	C	O4'-C1'-N1	5.17	112.34	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2060	A	C4-C5-N7	5.17	113.29	110.70
1	CA	2597	G	C6-N1-C2	-5.17	122.00	125.10
1	AA	354	A	C5-C6-N1	-5.17	115.11	117.70
1	AA	672	G	C6-C5-N7	-5.17	127.30	130.40
1	AA	1792	C	N1-C2-O2	-5.17	115.80	118.90
1	AA	2082	A	O5'-P-OP1	5.17	116.91	110.70
1	AA	2832	G	C4-C5-N7	5.17	112.87	110.80
1	CA	255	A	N3-C4-C5	-5.17	123.18	126.80
1	CA	613	G	C5-C6-O6	5.17	131.70	128.60
1	CA	783	A	O5'-P-OP2	-5.17	101.04	105.70
1	CA	1428	C	O5'-P-OP1	-5.17	101.04	105.70
1	AA	478	G	C6-C5-N7	5.17	133.50	130.40
1	AA	645	G	N3-C4-C5	-5.17	126.02	128.60
1	AA	846	G	OP2-P-O3'	5.17	116.58	105.20
1	AA	2020	G	N7-C8-N9	-5.17	110.52	113.10
1	AA	2571	C	N3-C4-C5	5.17	123.97	121.90
1	AA	2876	U	N3-C2-O2	-5.17	118.58	122.20
1	CA	311	A	N9-C4-C5	-5.17	103.73	105.80
1	CA	673	C	C2-N1-C1'	-5.17	113.11	118.80
1	CA	2054	A	C2-N3-C4	5.17	113.19	110.60
1	CA	2286	A	N7-C8-N9	5.17	116.39	113.80
1	AA	1834	A	OP1-P-OP2	-5.17	111.84	119.60
1	AA	2009	G	OP2-P-O3'	5.17	116.57	105.20
1	CA	825	C	C2-N3-C4	-5.17	117.31	119.90
1	CA	1266	G	C4-C5-N7	5.17	112.87	110.80
1	CA	2460	U	N3-C4-C5	-5.17	111.50	114.60
1	AA	105	C	N3-C4-N4	5.17	121.62	118.00
1	AA	757	G	OP2-P-O3'	5.17	116.57	105.20
1	AA	2674	A	OP1-P-O3'	5.17	116.57	105.20
2	AB	72	G	C8-N9-C4	5.17	108.47	106.40
34	BA	894	G	OP2-P-O3'	5.17	116.57	105.20
1	CA	1416	G	O4'-C1'-N9	5.17	112.33	108.20
1	CA	1610	A	N9-C4-C5	-5.17	103.73	105.80
1	CA	2003	G	C5-C6-O6	5.17	131.70	128.60
34	DA	365	U	C6-N1-C1'	5.17	128.44	121.20
1	AA	1189	A	C5-C6-N6	5.17	127.83	123.70
1	AA	1256	U	O5'-P-OP1	-5.17	101.05	105.70
1	AA	1410	G	C5-C6-N1	5.17	114.08	111.50
1	AA	1431	G	N1-C2-N2	5.17	120.85	116.20
1	AA	2876	U	N1-C2-O2	5.17	126.42	122.80
34	BA	367	U	N3-C2-O2	5.17	125.82	122.20
34	BA	1408	A	C4-C5-N7	5.17	113.28	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	1525	G	N1-C6-O6	-5.17	116.80	119.90
1	CA	1684	C	C6-N1-C2	-5.17	118.23	120.30
1	CA	2520	C	C2-N1-C1'	-5.17	113.12	118.80
5	CE	81	ILE	CB-CA-C	-5.17	101.27	111.60
1	AA	996	C	N1-C2-O2	5.17	122.00	118.90
1	AA	1831	C	N3-C2-O2	-5.17	118.28	121.90
2	AB	101	G	N3-C4-N9	5.17	129.10	126.00
18	AU	92	ARG	NE-CZ-NH2	-5.17	117.72	120.30
34	BA	888	G	C8-N9-C4	5.17	108.47	106.40
1	AA	196	A	N9-C4-C5	-5.16	103.73	105.80
1	AA	989	G	C6-C5-N7	-5.16	127.30	130.40
1	AA	1261	G	N3-C4-N9	5.16	129.10	126.00
1	AA	1639	G	C4-C5-C6	5.16	121.90	118.80
1	AA	1850	A	N1-C6-N6	5.16	121.70	118.60
1	AA	2367	C	C2-N3-C4	-5.16	117.32	119.90
1	AA	2655	G	C4-C5-N7	5.16	112.86	110.80
1	CA	1322	A	C6-N1-C2	5.16	121.70	118.60
1	CA	1996	C	OP1-P-O3'	5.16	116.56	105.20
1	CA	2643	G	N3-C2-N2	-5.16	116.29	119.90
34	DA	353	A	C5-N7-C8	-5.16	101.32	103.90
1	AA	55	A	N1-C6-N6	-5.16	115.50	118.60
1	AA	869	U	N1-C2-O2	-5.16	119.19	122.80
1	AA	2235	G	C8-N9-C4	-5.16	104.33	106.40
1	AA	991	G	N3-C2-N2	5.16	123.51	119.90
1	AA	1369	U	C5-C4-O4	-5.16	122.80	125.90
1	AA	2388	A	C4-C5-C6	5.16	119.58	117.00
1	CA	838	C	N3-C2-O2	-5.16	118.29	121.90
1	AA	2095	C	C4-C5-C6	5.16	119.98	117.40
2	AB	77	U	C5-C6-N1	-5.16	120.12	122.70
11	AN	43	THR	N-CA-C	-5.16	97.07	111.00
1	CA	1333	C	N1-C2-O2	-5.16	115.80	118.90
1	CA	1533	G	N3-C4-N9	5.16	129.09	126.00
1	CA	1642	G	C5-C6-N1	5.16	114.08	111.50
1	CA	2087	G	N3-C4-C5	5.16	131.18	128.60
1	CA	2576	G	O5'-P-OP2	5.16	116.89	110.70
1	AA	280	C	N1-C2-O2	-5.16	115.81	118.90
1	AA	1231	G	N1-C2-N3	5.16	126.99	123.90
1	CA	2282	G	O4'-C1'-N9	5.16	112.33	108.20
2	CB	7	G	N1-C6-O6	5.16	122.99	119.90
1	AA	36	G	OP1-P-OP2	-5.16	111.87	119.60
1	AA	732	A	C2-N3-C4	-5.16	108.02	110.60
1	AA	1419	A	C5-N7-C8	5.16	106.48	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1665	G	N3-C4-C5	-5.16	126.02	128.60
1	AA	1751	G	C5-C6-O6	5.16	131.69	128.60
1	AA	2025	G	N1-C2-N3	5.16	126.99	123.90
1	AA	2358	A	OP2-P-O3'	5.16	116.54	105.20
2	AB	92	C	C2-N1-C1'	5.16	124.47	118.80
34	BA	576	G	N3-C4-C5	-5.16	126.02	128.60
1	CA	750	A	N7-C8-N9	5.16	116.38	113.80
1	CA	1252	G	O4'-C1'-N9	-5.16	104.08	108.20
1	CA	1672	C	OP1-P-OP2	-5.16	111.87	119.60
1	AA	655	G	N7-C8-N9	-5.15	110.52	113.10
1	AA	2261	U	N3-C4-C5	5.15	117.69	114.60
56	DX	39	C	C5-C6-N1	5.15	123.58	121.00
1	AA	563	G	C4-C5-C6	5.15	121.89	118.80
1	AA	770	G	N3-C2-N2	5.15	123.51	119.90
1	AA	1441	A	N1-C2-N3	-5.15	126.72	129.30
1	AA	1617	A	O5'-P-OP2	5.15	116.88	110.70
1	AA	1787	G	N9-C4-C5	5.15	107.46	105.40
1	AA	2312	G	N3-C2-N2	-5.15	116.29	119.90
2	AB	30	C	C2-N3-C4	-5.15	117.32	119.90
34	BA	255	G	N1-C6-O6	-5.15	116.81	119.90
34	BA	1117	G	C4-N9-C1'	-5.15	119.80	126.50
1	CA	571	A	N1-C2-N3	-5.15	126.72	129.30
1	CA	1286	A	O5'-P-OP2	-5.15	101.06	105.70
1	CA	1471	A	O4'-C1'-N9	-5.15	104.08	108.20
1	CA	1782	C	O5'-P-OP1	-5.15	101.06	105.70
1	CA	2548	G	N9-C4-C5	5.15	107.46	105.40
1	CA	2549	G	N3-C4-N9	5.15	129.09	126.00
1	CA	2769	C	N3-C4-C5	-5.15	119.84	121.90
1	AA	749	G	N7-C8-N9	-5.15	110.52	113.10
1	AA	838	C	C2-N3-C4	5.15	122.47	119.90
1	AA	2395	G	C6-N1-C2	-5.15	122.01	125.10
1	AA	2577	A	C4-C5-N7	5.15	113.28	110.70
34	BA	9	G	N3-C4-C5	-5.15	126.03	128.60
1	CA	409	C	N3-C4-C5	-5.15	119.84	121.90
1	CA	1207	C	N3-C4-C5	-5.15	119.84	121.90
1	CA	1350	C	C4-C5-C6	5.15	119.97	117.40
1	CA	1945	G	C4-C5-N7	-5.15	108.74	110.80
1	CA	2258	C	O4'-C1'-N1	5.15	112.32	108.20
31	C7	23	ARG	NE-CZ-NH1	5.15	122.88	120.30
1	AA	708	C	C4-C5-C6	-5.15	114.83	117.40
1	AA	1711	A	C5-C6-N1	-5.15	115.13	117.70
1	CA	1397	U	N1-C2-O2	-5.15	119.20	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	227	C	N3-C2-O2	5.15	125.50	121.90
1	AA	336	G	N1-C2-N2	-5.15	111.57	116.20
1	AA	342	C	N3-C4-N4	-5.15	114.40	118.00
1	AA	526	A	N1-C2-N3	5.15	131.87	129.30
1	AA	794	U	C5-C6-N1	5.15	125.27	122.70
1	AA	1365	G	N1-C6-O6	-5.15	116.81	119.90
1	AA	1656	A	OP1-P-O3'	5.15	116.52	105.20
1	AA	1990	G	OP1-P-O3'	5.15	116.52	105.20
1	AA	2757	G	N1-C6-O6	-5.15	116.81	119.90
2	AB	93	G	C5-C6-O6	5.15	131.69	128.60
1	CA	497	A	N9-C4-C5	5.15	107.86	105.80
1	CA	528	A	C4-C5-C6	-5.15	114.43	117.00
1	CA	775	G	C8-N9-C4	-5.15	104.34	106.40
1	CA	1309	G	OP1-P-OP2	-5.15	111.88	119.60
1	CA	1599	C	C5-C6-N1	-5.15	118.43	121.00
1	CA	1914	C	N1-C2-O2	5.15	121.99	118.90
1	CA	1963	U	C6-N1-C1'	-5.15	113.99	121.20
1	CA	1993	U	C5-C4-O4	5.15	128.99	125.90
1	AA	489	G	C5-C6-O6	5.15	131.69	128.60
1	AA	772	G	N7-C8-N9	-5.15	110.53	113.10
1	AA	909	G	OP1-P-OP2	5.15	127.32	119.60
1	AA	1024	G	N9-C4-C5	5.15	107.46	105.40
1	CA	628	G	C5-C6-O6	-5.15	125.51	128.60
1	CA	1625	C	N3-C4-N4	-5.15	114.40	118.00
1	CA	2584	U	C2-N3-C4	-5.15	123.91	127.00
1	AA	1383	G	N7-C8-N9	-5.14	110.53	113.10
1	AA	1816	A	C4-C5-N7	5.14	113.27	110.70
1	AA	2495	C	N3-C4-N4	5.14	121.60	118.00
1	AA	2496	G	C5-C6-O6	5.14	131.69	128.60
1	AA	2735	G	C2-N3-C4	5.14	114.47	111.90
2	AB	19	G	N1-C6-O6	5.14	122.99	119.90
2	AB	98	G	N1-C2-N3	5.14	126.99	123.90
34	BA	667	G	C2-N3-C4	5.14	114.47	111.90
1	CA	127	A	OP1-P-O3'	5.14	116.52	105.20
1	CA	377	C	C4-C5-C6	5.14	119.97	117.40
1	CA	1277	G	C5-N7-C8	5.14	106.87	104.30
1	CA	2461	C	N1-C2-O2	5.14	121.99	118.90
34	DA	117	G	N3-C4-N9	5.14	129.09	126.00
34	DA	1525	G	C8-N9-C4	-5.14	104.34	106.40
1	AA	30	G	C6-C5-N7	5.14	133.49	130.40
1	AA	580	U	C6-N1-C2	5.14	124.08	121.00
1	AA	714	U	N3-C4-O4	5.14	123.00	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1068	G	N1-C2-N2	-5.14	111.57	116.20
1	AA	1275	G	OP2-P-O3'	5.14	116.51	105.20
1	AA	2660	C	N1-C2-O2	-5.14	115.81	118.90
1	CA	702	G	O5'-P-OP2	-5.14	101.07	105.70
1	CA	1606	G	C4-C5-N7	-5.14	108.74	110.80
1	CA	2646	C	C6-N1-C2	-5.14	118.24	120.30
2	CB	104	U	C6-N1-C2	5.14	124.09	121.00
1	AA	333	G	N3-C2-N2	5.14	123.50	119.90
1	AA	718	C	C4-C5-C6	5.14	119.97	117.40
1	AA	1340	U	OP1-P-OP2	-5.14	111.89	119.60
1	AA	2701	U	OP1-P-O3'	5.14	116.51	105.20
34	BA	666	G	N3-C4-N9	-5.14	122.92	126.00
1	CA	1604	C	C6-N1-C2	-5.14	118.24	120.30
1	CA	1794	U	C5-C4-O4	5.14	128.98	125.90
1	CA	2570	G	N9-C4-C5	5.14	107.46	105.40
1	AA	531	G	OP2-P-O3'	5.14	116.50	105.20
1	AA	884	C	O4'-C1'-N1	5.14	112.31	108.20
1	AA	1712	A	N1-C6-N6	-5.14	115.52	118.60
1	AA	1845	G	C6-C5-N7	-5.14	127.32	130.40
1	AA	1857	G	C5-C6-N1	-5.14	108.93	111.50
2	AB	105	A	N9-C4-C5	5.14	107.86	105.80
1	CA	2068	U	C6-N1-C2	-5.14	117.92	121.00
1	AA	1312	G	N1-C6-O6	5.14	122.98	119.90
1	AA	2895	C	N3-C4-N4	5.14	121.60	118.00
2	AB	46	A	OP2-P-O3'	5.14	116.50	105.20
1	AA	172	C	OP2-P-O3'	5.14	116.50	105.20
1	AA	1654	A	N9-C4-C5	-5.14	103.75	105.80
1	AA	2248	C	C2-N3-C4	-5.14	117.33	119.90
1	AA	2523	U	N3-C2-O2	-5.14	118.61	122.20
1	CA	377	C	N1-C2-O2	-5.14	115.82	118.90
1	CA	2023	G	C6-C5-N7	-5.14	127.32	130.40
34	DA	717	C	C6-N1-C2	5.14	122.36	120.30
34	DA	822	C	N3-C2-O2	-5.14	118.31	121.90
1	AA	630	U	C2-N1-C1'	-5.13	111.54	117.70
1	AA	736	A	N1-C6-N6	-5.13	115.52	118.60
1	AA	1250	U	C6-N1-C1'	-5.13	114.01	121.20
1	AA	1260	G	C6-N1-C2	-5.13	122.02	125.10
1	AA	2646	G	C5-C6-O6	-5.13	125.52	128.60
1	CA	1370	C	C6-N1-C2	-5.13	118.25	120.30
1	CA	1762	A	N9-C4-C5	5.13	107.85	105.80
34	DA	568	G	N9-C4-C5	5.13	107.45	105.40
1	AA	86	C	OP1-P-O3'	5.13	116.49	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	309	C	N1-C2-O2	5.13	121.98	118.90
1	AA	2351	G	N3-C4-C5	-5.13	126.03	128.60
1	AA	2554	A	C8-N9-C4	5.13	107.85	105.80
1	AA	2618	C	C6-N1-C2	5.13	122.35	120.30
1	CA	107	C	C6-N1-C2	-5.13	118.25	120.30
1	CA	188	G	N3-C4-C5	5.13	131.17	128.60
1	CA	1819	A	C8-N9-C4	-5.13	103.75	105.80
1	AA	139	A	N1-C2-N3	5.13	131.87	129.30
1	AA	1486	G	N7-C8-N9	-5.13	110.53	113.10
1	AA	2594	G	C4-C5-N7	5.13	112.85	110.80
1	CA	2392	A	N7-C8-N9	5.13	116.36	113.80
1	AA	171	A	C6-N1-C2	5.13	121.68	118.60
1	AA	459	A	C5-N7-C8	-5.13	101.33	103.90
1	AA	2601	A	O5'-P-OP1	5.13	116.85	110.70
1	AA	2842	U	C5-C6-N1	-5.13	120.14	122.70
2	AB	66	A	C4-C5-C6	-5.13	114.44	117.00
2	AB	95	C	OP2-P-O3'	5.13	116.48	105.20
34	BA	20	U	C2-N3-C4	-5.13	123.92	127.00
34	BA	991	U	P-O3'-C3'	5.13	125.85	119.70
1	CA	569	U	N1-C2-O2	-5.13	119.21	122.80
1	CA	652	C	C6-N1-C2	-5.13	118.25	120.30
1	CA	1368	G	N3-C2-N2	-5.13	116.31	119.90
1	CA	2607	G	N7-C8-N9	-5.13	110.54	113.10
34	DA	824	C	N1-C2-O2	-5.13	115.82	118.90
1	AA	29	U	C5-C4-O4	-5.13	122.82	125.90
1	AA	1832	G	C5-C6-O6	-5.13	125.52	128.60
1	AA	2541	G	C6-C5-N7	-5.13	127.32	130.40
56	BX	19	G	OP2-P-O3'	5.13	116.48	105.20
1	CA	456	C	N3-C2-O2	-5.13	118.31	121.90
34	DA	1441	G	C6-C5-N7	-5.13	127.33	130.40
1	AA	714	U	C5-C4-O4	-5.12	122.83	125.90
1	AA	793	A	C6-N1-C2	5.12	121.67	118.60
1	AA	1694	G	N3-C4-N9	5.12	129.07	126.00
1	AA	2460	A	C5-N7-C8	-5.12	101.34	103.90
1	CA	48	G	N3-C4-N9	-5.12	122.92	126.00
1	AA	442	A	O5'-P-OP2	-5.12	101.09	105.70
1	AA	1449	C	N3-C2-O2	-5.12	118.31	121.90
1	AA	2266	C	N1-C2-N3	5.12	122.79	119.20
1	AA	2286	A	N7-C8-N9	-5.12	111.24	113.80
1	AA	2712	C	N3-C4-N4	-5.12	114.41	118.00
1	CA	125	G	O4'-C1'-N9	-5.12	104.10	108.20
1	CA	139(A)	G	N9-C4-C5	-5.12	103.35	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	824	A	C5-N7-C8	5.12	106.46	103.90
1	CA	1363	C	O5'-P-OP2	-5.12	101.09	105.70
1	AA	732	A	O4'-C1'-N9	5.12	112.30	108.20
1	AA	893	C	N3-C4-C5	5.12	123.95	121.90
1	AA	1997	G	N1-C6-O6	5.12	122.97	119.90
2	AB	7	G	O4'-C1'-N9	5.12	112.30	108.20
1	CA	386	G	C5-C6-N1	5.12	114.06	111.50
1	CA	1777	U	N3-C4-C5	5.12	117.67	114.60
1	CA	1830	C	N1-C2-O2	5.12	121.97	118.90
1	CA	1945	G	C5-N7-C8	5.12	106.86	104.30
1	CA	2238	G	C2-N3-C4	5.12	114.46	111.90
56	DX	20	U	C2-N1-C1'	5.12	123.84	117.70
1	AA	1228	G	N3-C2-N2	-5.12	116.32	119.90
1	AA	1400	A	N1-C6-N6	-5.12	115.53	118.60
34	BA	1104	G	C8-N9-C4	-5.12	104.35	106.40
1	AA	134	G	C5-C6-O6	5.12	131.67	128.60
1	AA	240	A	C5-C6-N6	5.12	127.79	123.70
1	AA	400	U	N3-C4-O4	-5.12	115.82	119.40
1	AA	855	G	N1-C6-O6	-5.12	116.83	119.90
1	AA	1157	A	C5-N7-C8	-5.12	101.34	103.90
1	AA	1296	G	N3-C4-C5	-5.12	126.04	128.60
1	AA	2557	G	OP2-P-O3'	5.12	116.46	105.20
1	CA	777	A	N1-C6-N6	5.12	121.67	118.60
1	CA	986	C	OP2-P-O3'	5.12	116.46	105.20
1	CA	2423	U	N1-C2-O2	-5.12	119.22	122.80
1	CA	2628	C	N3-C2-O2	-5.12	118.32	121.90
34	DA	903	G	C6-C5-N7	-5.12	127.33	130.40
1	AA	28	A	C4-C5-C6	5.12	119.56	117.00
1	AA	1294	G	C4-C5-N7	-5.12	108.75	110.80
1	AA	2019	G	OP1-P-OP2	-5.12	111.92	119.60
1	AA	2108	U	N3-C4-C5	5.12	117.67	114.60
1	AA	2162	C	C6-N1-C2	-5.12	118.25	120.30
4	AD	71	ASP	N-CA-CB	-5.12	101.39	110.60
1	AA	1240	G	C5-C6-O6	-5.12	125.53	128.60
1	AA	1311	A	OP1-P-OP2	5.12	127.27	119.60
1	AA	2049	G	C4-N9-C1'	5.12	133.15	126.50
1	AA	2402	U	C5-C6-N1	-5.12	120.14	122.70
1	AA	2796	G	C5-C6-O6	5.12	131.67	128.60
1	CA	481	G	O5'-P-OP2	-5.12	101.10	105.70
1	CA	580	C	N1-C2-O2	-5.12	115.83	118.90
1	CA	1397	U	C6-N1-C1'	5.12	128.36	121.20
1	AA	1535	U	C6-N1-C1'	5.11	128.36	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	569	U	C6-N1-C1'	-5.11	114.04	121.20
1	CA	779	U	N1-C2-N3	5.11	117.97	114.90
1	CA	1923	U	N3-C2-O2	-5.11	118.62	122.20
1	AA	231	G	N1-C6-O6	-5.11	116.83	119.90
1	AA	1001	G	C4-C5-N7	-5.11	108.75	110.80
1	AA	1834	A	OP2-P-O3'	5.11	116.45	105.20
1	AA	2793	G	N9-C4-C5	-5.11	103.36	105.40
1	CA	824	A	C6-N1-C2	-5.11	115.53	118.60
1	CA	997	G	O5'-P-OP1	-5.11	101.10	105.70
1	AA	84	G	N3-C2-N2	-5.11	116.32	119.90
1	AA	320	C	C5-C6-N1	-5.11	118.44	121.00
1	AA	555	G	O5'-P-OP2	5.11	116.83	110.70
1	AA	857	U	C5-C4-O4	5.11	128.97	125.90
1	AA	903	C	C6-N1-C1'	5.11	126.93	120.80
1	AA	1433	C	N3-C2-O2	-5.11	118.32	121.90
1	AA	1454	C	N1-C2-O2	-5.11	115.83	118.90
1	AA	2346	G	OP2-P-O3'	5.11	116.44	105.20
1	AA	2518	U	N3-C2-O2	-5.11	118.62	122.20
34	BA	769	G	C5-N7-C8	5.11	106.86	104.30
34	BA	802	A	N1-C2-N3	5.11	131.85	129.30
34	BA	891	U	OP2-P-O3'	5.11	116.44	105.20
1	CA	51	G	C4-C5-N7	-5.11	108.76	110.80
1	CA	758	C	N3-C4-N4	5.11	121.58	118.00
1	CA	1782	C	N3-C4-C5	5.11	123.94	121.90
1	CA	1979	C	N3-C4-C5	-5.11	119.86	121.90
1	CA	2372	G	C8-N9-C4	-5.11	104.36	106.40
1	AA	603	C	N3-C4-N4	-5.11	114.42	118.00
1	AA	662	A	C8-N9-C4	5.11	107.84	105.80
1	CA	534	U	N1-C2-O2	5.11	126.38	122.80
34	DA	541	G	C4-N9-C1'	-5.11	119.86	126.50
1	AA	865	G	C4-C5-N7	5.11	112.84	110.80
1	AA	1371	G	N9-C4-C5	5.11	107.44	105.40
1	AA	1871	G	N1-C2-N2	5.11	120.80	116.20
1	AA	2367	C	N3-C2-O2	5.11	125.47	121.90
1	AA	2439	C	C5-C6-N1	-5.11	118.45	121.00
56	BX	5	G	N9-C4-C5	-5.11	103.36	105.40
1	CA	798	G	N7-C8-N9	-5.11	110.55	113.10
34	DA	365	U	N3-C4-O4	-5.11	115.83	119.40
34	DA	1430	C	N1-C2-O2	5.11	121.97	118.90
1	AA	893	C	C6-N1-C2	5.11	122.34	120.30
1	AA	1211	U	N1-C2-N3	5.11	117.96	114.90
1	AA	1387	U	O5'-P-OP1	-5.11	101.11	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1412	A	C6-N1-C2	-5.11	115.54	118.60
1	AA	1703	C	N3-C4-C5	5.11	123.94	121.90
1	AA	1811	A	OP1-P-OP2	-5.11	111.94	119.60
1	AA	2030	C	C2-N3-C4	-5.11	117.35	119.90
1	AA	2597	U	C6-N1-C2	5.11	124.06	121.00
1	AA	2880	C	N1-C2-N3	5.11	122.77	119.20
34	BA	1518	A	C5-C6-N1	-5.11	115.15	117.70
1	CA	2588	G	C6-N1-C2	5.11	128.16	125.10
1	AA	2066	C	N1-C2-N3	5.10	122.77	119.20
1	CA	2843	G	N3-C4-N9	5.10	129.06	126.00
1	AA	75	C	C5-C4-N4	-5.10	116.63	120.20
1	AA	849	A	C8-N9-C4	-5.10	103.76	105.80
1	AA	1239	A	O4'-C1'-N9	-5.10	104.12	108.20
21	AX	76	ARG	NE-CZ-NH2	-5.10	117.75	120.30
1	CA	1305	C	C2-N3-C4	-5.10	117.35	119.90
1	AA	844	C	N3-C2-O2	-5.10	118.33	121.90
1	AA	982	U	N1-C2-N3	-5.10	111.84	114.90
1	AA	2109	G	O5'-P-OP1	5.10	116.82	110.70
1	AA	2847	G	C5-C6-N1	-5.10	108.95	111.50
2	AB	79	C	N1-C2-O2	-5.10	115.84	118.90
1	CA	1907	G	OP2-P-O3'	5.10	116.42	105.20
34	DA	817	C	C2-N3-C4	-5.10	117.35	119.90
1	AA	473	A	C6-C5-N7	5.10	135.87	132.30
1	AA	708	C	C5-C4-N4	-5.10	116.63	120.20
1	AA	1382	A	N7-C8-N9	-5.10	111.25	113.80
1	AA	2821	G	C5-C6-O6	5.10	131.66	128.60
1	CA	507	A	C8-N9-C4	5.10	107.84	105.80
1	CA	1228	G	N1-C6-O6	-5.10	116.84	119.90
1	CA	1611	C	C5-C6-N1	5.10	123.55	121.00
1	AA	52	A	N1-C2-N3	5.10	131.85	129.30
1	AA	1203	G	N1-C2-N3	5.10	126.96	123.90
1	AA	1274	G	N3-C2-N2	5.10	123.47	119.90
1	AA	2400	A	N3-C4-N9	-5.10	123.32	127.40
1	AA	2621	U	N3-C2-O2	5.10	125.77	122.20
2	AB	22	U	C6-N1-C1'	-5.10	114.06	121.20
2	AB	100	A	C6-N1-C2	-5.10	115.54	118.60
34	BA	1499	A	C4-C5-N7	5.10	113.25	110.70
1	CA	121	G	C5-C6-O6	-5.10	125.54	128.60
1	CA	186	G	N3-C4-C5	-5.10	126.05	128.60
1	CA	1206	G	N1-C6-O6	5.10	122.96	119.90
1	CA	1823	G	N1-C6-O6	-5.10	116.84	119.90
1	CA	1954	G	N1-C6-O6	5.10	122.96	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2600	A	N1-C2-N3	5.10	131.85	129.30
1	CA	2717	G	C4-C5-N7	-5.10	108.76	110.80
1	CA	1164	G	C5-C6-O6	5.10	131.66	128.60
1	CA	2762	G	C4-N9-C1'	-5.10	119.88	126.50
1	AA	238	C	OP1-P-O3'	5.09	116.41	105.20
1	AA	1623	U	C6-N1-C2	-5.09	117.94	121.00
1	AA	1921	G	N7-C8-N9	5.09	115.65	113.10
1	AA	2036	A	O5'-P-OP2	5.09	116.81	110.70
34	BA	718	G	N9-C4-C5	-5.09	103.36	105.40
1	CA	113	G	C8-N9-C1'	5.09	133.62	127.00
1	CA	428	A	OP2-P-O3'	5.09	116.41	105.20
1	CA	721	C	N3-C2-O2	5.09	125.47	121.90
1	CA	1560	G	N3-C4-C5	5.09	131.15	128.60
1	CA	2377	A	C5-C6-N1	-5.09	115.15	117.70
1	AA	1793	A	OP1-P-O3'	5.09	116.40	105.20
1	AA	1967	G	N1-C2-N3	5.09	126.96	123.90
1	AA	2033	U	C4-C5-C6	5.09	122.76	119.70
1	AA	2410	U	C5-C6-N1	5.09	125.25	122.70
34	BA	135	C	N1-C2-O2	-5.09	115.84	118.90
34	BA	562	C	N3-C4-C5	5.09	123.94	121.90
1	CA	469	G	C5-N7-C8	5.09	106.85	104.30
2	CB	82	G	C4-C5-N7	-5.09	108.76	110.80
1	AA	806	G	C4-C5-N7	-5.09	108.76	110.80
1	AA	985	G	OP2-P-O3'	5.09	116.40	105.20
1	AA	1337	C	N3-C4-C5	5.09	123.94	121.90
1	AA	2641	A	C6-N1-C2	-5.09	115.55	118.60
1	CA	1154	G	OP2-P-O3'	5.09	116.40	105.20
1	CA	2557	G	N3-C4-C5	-5.09	126.05	128.60
1	AA	595	A	C4-C5-N7	-5.09	108.16	110.70
1	AA	1052	C	N1-C2-O2	5.09	121.95	118.90
1	AA	1402	G	C5-C6-O6	-5.09	125.55	128.60
1	AA	2055	A	P-O3'-C3'	5.09	125.81	119.70
1	AA	2457	G	C5-C6-O6	5.09	131.65	128.60
2	AB	95	C	N3-C4-C5	5.09	123.94	121.90
1	CA	206	U	C2-N1-C1'	5.09	123.81	117.70
1	CA	530	G	C8-N9-C4	-5.09	104.36	106.40
1	CA	1283	G	C2-N3-C4	5.09	114.44	111.90
1	CA	2083	G	N1-C6-O6	-5.09	116.85	119.90
1	AA	1355	G	C4-C5-N7	5.09	112.83	110.80
1	AA	1408	C	N3-C4-N4	-5.09	114.44	118.00
1	CA	2070	G	C2-N3-C4	-5.09	109.36	111.90
34	DA	808	C	N3-C4-C5	5.09	123.94	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	20	C	C5-C6-N1	-5.09	118.46	121.00
1	AA	974	G	C2-N3-C4	-5.09	109.36	111.90
1	AA	1351	C	C6-N1-C2	-5.09	118.27	120.30
1	AA	1639	G	C6-N1-C2	-5.09	122.05	125.10
1	AA	1745	A	N7-C8-N9	5.09	116.34	113.80
1	AA	1761	G	N9-C4-C5	-5.09	103.37	105.40
1	AA	2034	G	C5-N7-C8	-5.09	101.76	104.30
1	AA	2706	G	C5-C6-N1	5.09	114.04	111.50
1	AA	2743	C	C2-N3-C4	-5.09	117.36	119.90
1	CA	915	C	N3-C4-C5	-5.09	119.86	121.90
1	CA	1828	G	C5-C6-O6	5.09	131.65	128.60
1	CA	2642	G	C2-N3-C4	5.09	114.44	111.90
1	CA	2646	C	C5-C6-N1	5.09	123.54	121.00
1	AA	65	C	N3-C4-N4	-5.08	114.44	118.00
1	AA	574	G	OP1-P-OP2	-5.08	111.97	119.60
1	AA	2625	U	N3-C2-O2	-5.08	118.64	122.20
1	AA	491	G	N1-C2-N2	-5.08	111.62	116.20
1	AA	1076	G	N3-C2-N2	5.08	123.46	119.90
1	AA	2622	C	N3-C4-N4	-5.08	114.44	118.00
1	CA	1440	G	O5'-P-OP2	-5.08	101.12	105.70
1	CA	2644	G	C5-C6-N1	-5.08	108.96	111.50
1	AA	423	G	C6-N1-C2	-5.08	122.05	125.10
1	AA	2788	A	C8-N9-C4	5.08	107.83	105.80
2	CB	72	G	C8-N9-C4	5.08	108.43	106.40
1	CA	427	U	C2-N3-C4	-5.08	123.95	127.00
1	CA	450	G	C4-N9-C1'	-5.08	119.90	126.50
1	AA	847	A	O5'-P-OP1	-5.08	101.13	105.70
1	AA	993	G	C4-C5-N7	5.08	112.83	110.80
1	AA	1978	U	N1-C2-N3	-5.08	111.85	114.90
1	AA	2449	U	C6-N1-C2	5.08	124.05	121.00
6	AF	96	ASP	CB-CG-OD1	5.08	122.87	118.30
34	BA	1107	C	N3-C4-C5	-5.08	119.87	121.90
1	CA	255	A	C4-N9-C1'	5.08	135.44	126.30
1	CA	1945	G	OP2-P-O3'	5.08	116.37	105.20
1	CA	2518	A	OP1-P-O3'	5.08	116.37	105.20
1	CA	2831	G	C8-N9-C4	5.08	108.43	106.40
34	DA	578	C	N3-C4-N4	-5.08	114.45	118.00
34	DA	718	G	N7-C8-N9	5.08	115.64	113.10
34	DA	733	A	N1-C6-N6	5.08	121.65	118.60
1	AA	2332	A	O4'-C1'-N9	5.08	112.26	108.20
1	CA	180	G	N3-C4-C5	-5.08	126.06	128.60
1	CA	2608	G	O5'-P-OP2	-5.08	101.13	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DX	76	A	N9-C4-C5	-5.08	103.77	105.80
1	AA	703	G	OP2-P-O3'	5.08	116.36	105.20
1	AA	1948	U	C5-C4-O4	5.08	128.95	125.90
34	DA	754	C	C6-N1-C1'	-5.08	114.71	120.80
34	DA	1502	A	N7-C8-N9	5.08	116.34	113.80
1	AA	354	A	C8-N9-C1'	5.07	136.83	127.70
1	AA	921	G	N3-C4-C5	5.07	131.14	128.60
1	AA	1079	U	C5-C6-N1	-5.07	120.16	122.70
1	AA	1438	A	N1-C6-N6	5.07	121.64	118.60
1	AA	2241	C	N3-C2-O2	-5.07	118.35	121.90
1	AA	2586	G	OP1-P-O3'	5.07	116.36	105.20
1	CA	1025	G	N1-C6-O6	-5.07	116.86	119.90
1	CA	1799	G	C5-N7-C8	5.07	106.84	104.30
1	CA	2034	U	C5-C6-N1	5.07	125.24	122.70
1	AA	1645	C	C2-N3-C4	-5.07	117.36	119.90
1	AA	1930	C	N1-C2-O2	5.07	121.94	118.90
1	CA	1769	G	N3-C4-C5	-5.07	126.06	128.60
34	DA	784	C	O5'-P-OP1	-5.07	101.14	105.70
1	AA	579	G	OP2-P-O3'	5.07	116.36	105.20
1	AA	1074	A	O5'-P-OP1	5.07	116.78	110.70
1	AA	1349	G	OP1-P-OP2	-5.07	112.00	119.60
1	AA	1820	A	N3-C4-C5	5.07	130.35	126.80
1	AA	2091	G	OP2-P-O3'	5.07	116.36	105.20
34	BA	532	A	OP1-P-O3'	5.07	116.35	105.20
34	BA	795	C	N1-C2-O2	-5.07	115.86	118.90
1	CA	2499	C	N3-C4-N4	5.07	121.55	118.00
34	DA	1519	A	N1-C2-N3	5.07	131.84	129.30
1	AA	1189	A	O4'-C1'-N9	-5.07	104.14	108.20
34	BA	576	G	N3-C4-N9	5.07	129.04	126.00
1	CA	104	U	C6-N1-C2	5.07	124.04	121.00
1	CA	1761	C	C4-C5-C6	5.07	119.93	117.40
1	AA	798	A	C6-C5-N7	-5.07	128.75	132.30
1	AA	1471	G	C5-C6-N1	5.07	114.03	111.50
34	BA	804	U	N1-C2-O2	-5.07	119.25	122.80
1	CA	1021	A	N3-C4-C5	5.07	130.35	126.80
1	CA	2615	U	O5'-P-OP2	-5.07	101.14	105.70
1	CA	2694	G	N3-C4-C5	-5.07	126.07	128.60
34	DA	1232	U	C6-N1-C2	-5.07	117.96	121.00
34	DA	1486	G	N1-C6-O6	5.07	122.94	119.90
1	AA	148	C	N3-C4-C5	5.07	123.93	121.90
1	AA	522	A	N7-C8-N9	-5.07	111.27	113.80
1	AA	2380	C	N1-C2-O2	5.07	121.94	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	2435	U	OP1-P-OP2	5.07	127.20	119.60
1	AA	2683	A	C5-N7-C8	-5.07	101.37	103.90
1	AA	2898	C	OP2-P-O3'	5.07	116.35	105.20
34	BA	677	U	C6-N1-C2	-5.07	117.96	121.00
1	CA	212	G	C5-C6-N1	5.07	114.03	111.50
1	CA	283	A	C8-N9-C4	5.07	107.83	105.80
1	CA	1567	A	OP1-P-O3'	5.07	116.34	105.20
1	CA	2055	C	N3-C2-O2	5.07	125.45	121.90
1	AA	591	U	O4'-C1'-N1	-5.06	104.15	108.20
1	AA	1156	G	O4'-C1'-N9	5.06	112.25	108.20
34	BA	347	G	C8-N9-C4	-5.06	104.37	106.40
1	CA	2295	C	C6-N1-C2	-5.06	118.27	120.30
1	AA	579	G	N3-C4-C5	5.06	131.13	128.60
1	AA	595	A	C5-C6-N6	5.06	127.75	123.70
1	AA	641	G	N1-C6-O6	-5.06	116.86	119.90
1	AA	1302	G	C4-N9-C1'	5.06	133.08	126.50
1	AA	1378	G	OP1-P-OP2	5.06	127.19	119.60
1	AA	1667	U	C5-C6-N1	-5.06	120.17	122.70
1	AA	1700	G	C2'-C3'-O3'	5.06	121.80	113.70
1	AA	2571	C	N3-C2-O2	-5.06	118.36	121.90
1	CA	15	G	O5'-P-OP1	-5.06	101.14	105.70
1	CA	465	G	C6-C5-N7	-5.06	127.36	130.40
1	CA	571	A	OP2-P-O3'	5.06	116.34	105.20
1	CA	771	G	N1-C2-N3	-5.06	120.86	123.90
1	CA	1385	G	N3-C4-C5	5.06	131.13	128.60
1	CA	2428	G	N9-C4-C5	-5.06	103.38	105.40
34	DA	22	G	N1-C6-O6	5.06	122.94	119.90
34	DA	356	A	N7-C8-N9	-5.06	111.27	113.80
1	AA	913	A	O4'-C1'-N9	-5.06	104.15	108.20
1	AA	966	G	C6-C5-N7	-5.06	127.36	130.40
1	AA	1315	A	N1-C6-N6	-5.06	115.56	118.60
1	AA	2291	G	C5-C6-O6	-5.06	125.56	128.60
1	AA	2417	G	C6-C5-N7	-5.06	127.36	130.40
11	AN	12	ARG	NE-CZ-NH1	-5.06	117.77	120.30
1	CA	747	U	C5-C6-N1	-5.06	120.17	122.70
1	CA	1215	G	C5-C6-N1	5.06	114.03	111.50
34	DA	194	C	C5-C4-N4	-5.06	116.66	120.20
1	AA	228	U	O5'-P-OP2	5.06	116.77	110.70
1	AA	1241	C	N3-C4-N4	-5.06	114.46	118.00
1	AA	1248	G	N3-C4-C5	-5.06	126.07	128.60
1	AA	1924	C	OP2-P-O3'	5.06	116.33	105.20
34	BA	1519	A	C5-C6-N1	-5.06	115.17	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	1381	G	C5-C6-N1	5.06	114.03	111.50
1	CA	2380	C	N1-C2-O2	-5.06	115.86	118.90
1	CA	2490	G	N1-C6-O6	-5.06	116.86	119.90
1	AA	73	A	C2-N3-C4	-5.06	108.07	110.60
1	AA	519	G	N3-C2-N2	5.06	123.44	119.90
1	AA	573	G	N3-C4-C5	-5.06	126.07	128.60
1	AA	866	A	C8-N9-C4	-5.06	103.78	105.80
1	AA	1259	A	C5-N7-C8	5.06	106.43	103.90
1	AA	2459	G	OP2-P-O3'	5.06	116.33	105.20
34	BA	1397	C	N1-C2-O2	5.06	121.94	118.90
1	CA	933	A	C4-N9-C1'	5.06	135.41	126.30
1	CA	1234	U	N3-C4-C5	5.06	117.64	114.60
1	CA	2068	U	N3-C4-C5	-5.06	111.56	114.60
2	CB	10	C	C6-N1-C2	-5.06	118.28	120.30
34	DA	748	C	P-O3'-C3'	5.06	125.77	119.70
1	AA	457	G	N1-C6-O6	5.06	122.93	119.90
1	CA	598	G	N1-C6-O6	5.06	122.93	119.90
1	CA	906	G	N9-C4-C5	5.06	107.42	105.40
1	CA	2874	C	C2-N1-C1'	5.06	124.36	118.80
1	AA	315	C	C2-N3-C4	-5.05	117.37	119.90
1	AA	537	G	N3-C4-N9	5.05	129.03	126.00
1	AA	1053	C	N3-C4-C5	5.05	123.92	121.90
1	AA	1803	G	C5-N7-C8	5.05	106.83	104.30
1	AA	2066	C	N3-C2-O2	-5.05	118.36	121.90
1	AA	2356	U	C5-C6-N1	-5.05	120.17	122.70
1	AA	2490	A	N1-C2-N3	5.05	131.83	129.30
1	AA	2558	U	C6-N1-C2	-5.05	117.97	121.00
34	BA	274	A	O4'-C1'-N9	5.05	112.24	108.20
34	BA	1458	G	O5'-P-OP2	5.05	116.77	110.70
1	CA	790	C	N3-C4-N4	5.05	121.54	118.00
1	CA	1008	C	N3-C2-O2	-5.05	118.36	121.90
1	CA	1192	G	C5-N7-C8	5.05	106.83	104.30
34	DA	1230	C	C5-C6-N1	5.05	123.53	121.00
1	AA	600	G	C8-N9-C4	-5.05	104.38	106.40
1	AA	1347	A	N1-C6-N6	-5.05	115.57	118.60
1	AA	1478	C	N1-C2-O2	-5.05	115.87	118.90
1	AA	2463	A	N9-C4-C5	5.05	107.82	105.80
1	AA	2661	U	C2-N1-C1'	5.05	123.76	117.70
1	CA	177	G	O4'-C1'-N9	5.05	112.24	108.20
1	CA	226	G	C8-N9-C4	-5.05	104.38	106.40
1	CA	440	G	C4-N9-C1'	-5.05	119.93	126.50
1	CA	748	G	N3-C4-C5	5.05	131.13	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2888	C	C6-N1-C2	-5.05	118.28	120.30
1	AA	56	C	N3-C2-O2	-5.05	118.36	121.90
1	AA	92	C	C6-N1-C2	-5.05	118.28	120.30
1	AA	1085	G	C4-N9-C1'	-5.05	119.93	126.50
1	AA	1316	C	N1-C2-O2	-5.05	115.87	118.90
1	AA	1588	G	OP1-P-O3'	5.05	116.31	105.20
1	AA	2301	G	C5-C6-O6	-5.05	125.57	128.60
1	CA	1794	U	C5-C6-N1	-5.05	120.17	122.70
1	AA	138	G	C4-C5-N7	-5.05	108.78	110.80
1	AA	538	A	OP2-P-O3'	5.05	116.31	105.20
1	AA	1254	G	N9-C4-C5	5.05	107.42	105.40
1	AA	1613	A	C5-C6-N1	5.05	120.22	117.70
1	AA	2830	A	N9-C4-C5	-5.05	103.78	105.80
1	AA	2845	A	N9-C4-C5	5.05	107.82	105.80
20	AW	107	LEU	CB-CG-CD1	5.05	119.59	111.00
34	BA	527	G	C5-N7-C8	-5.05	101.78	104.30
34	BA	644	G	N7-C8-N9	-5.05	110.58	113.10
34	BA	901	A	C6-N1-C2	-5.05	115.57	118.60
1	CA	1274	A	C2-N3-C4	5.05	113.12	110.60
1	CA	1307	A	N1-C6-N6	5.05	121.63	118.60
34	DA	739	C	C6-N1-C2	-5.05	118.28	120.30
1	AA	2239	A	C8-N9-C4	-5.05	103.78	105.80
1	AA	2645	G	C8-N9-C4	-5.05	104.38	106.40
2	AB	106	G	O4'-C1'-N9	5.05	112.24	108.20
1	CA	2253	G	N3-C2-N2	-5.05	116.37	119.90
1	CA	2523	G	C4-N9-C1'	5.05	133.06	126.50
1	CA	2769	C	N1-C2-O2	-5.05	115.87	118.90
1	AA	69	G	C5-C6-N1	5.05	114.02	111.50
1	AA	526	A	N9-C4-C5	5.05	107.82	105.80
1	AA	1859	G	N1-C6-O6	-5.05	116.87	119.90
1	AA	2353	G	N1-C6-O6	5.05	122.93	119.90
1	AA	2499	G	C2-N3-C4	5.05	114.42	111.90
1	AA	2650	G	C2-N3-C4	-5.05	109.38	111.90
1	CA	798	G	N3-C4-C5	5.05	131.12	128.60
1	CA	2255	G	OP2-P-O3'	5.05	116.30	105.20
1	AA	1401	G	N9-C4-C5	5.04	107.42	105.40
34	BA	352	C	C6-N1-C2	-5.04	118.28	120.30
34	BA	605	U	C5-C4-O4	5.04	128.93	125.90
1	AA	175	G	C5-C6-O6	5.04	131.63	128.60
1	AA	191	U	N3-C4-C5	5.04	117.63	114.60
1	AA	506	A	N9-C4-C5	5.04	107.82	105.80
1	AA	719	C	C4-C5-C6	5.04	119.92	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	827	G	C5-C6-N1	5.04	114.02	111.50
1	AA	959	U	OP1-P-O3'	5.04	116.30	105.20
1	AA	1365	G	N3-C2-N2	5.04	123.43	119.90
34	BA	1525	G	N7-C8-N9	-5.04	110.58	113.10
1	CA	986	C	N3-C4-C5	5.04	123.92	121.90
1	CA	1030	G	C5-C6-O6	-5.04	125.57	128.60
1	CA	1281	G	N9-C4-C5	5.04	107.42	105.40
1	CA	2659	G	C4-C5-N7	-5.04	108.78	110.80
34	DA	878	G	N3-C4-N9	-5.04	122.97	126.00
1	AA	508	A	C8-N9-C4	5.04	107.82	105.80
1	AA	995	G	C4-C5-N7	5.04	112.82	110.80
1	AA	1510	C	C5-C6-N1	5.04	123.52	121.00
1	AA	1567	G	N3-C4-C5	-5.04	126.08	128.60
1	AA	2089	G	N1-C6-O6	-5.04	116.88	119.90
1	AA	2550	C	N3-C4-C5	5.04	123.92	121.90
34	BA	23	C	C2-N1-C1'	5.04	124.35	118.80
34	BA	748	C	P-O3'-C3'	5.04	125.75	119.70
1	CA	1773	A	C8-N9-C4	5.04	107.82	105.80
1	AA	1343	C	C5-C4-N4	5.04	123.73	120.20
1	AA	1662	A	C2-N3-C4	-5.04	108.08	110.60
1	AA	1966	U	N3-C4-C5	5.04	117.62	114.60
1	AA	2038	U	OP2-P-O3'	5.04	116.29	105.20
1	CA	577	G	C2-N3-C4	-5.04	109.38	111.90
1	AA	555	G	N3-C4-N9	-5.04	122.98	126.00
1	AA	637	U	C5-C6-N1	-5.04	120.18	122.70
1	AA	989	G	C5-N7-C8	-5.04	101.78	104.30
1	AA	1469	G	N1-C6-O6	5.04	122.92	119.90
1	AA	1694	G	O4'-C1'-N9	-5.04	104.17	108.20
20	AW	23	LEU	CB-CG-CD2	-5.04	102.43	111.00
34	BA	1530	G	C6-N1-C2	5.04	128.12	125.10
1	CA	1895	C	N1-C2-O2	5.04	121.92	118.90
1	AA	203	G	N1-C6-O6	-5.04	116.88	119.90
1	AA	2386	C	O4'-C1'-N1	5.04	112.23	108.20
34	BA	539	A	C5-N7-C8	5.04	106.42	103.90
1	AA	1369	U	C4-C5-C6	-5.04	116.68	119.70
34	BA	758	G	N1-C6-O6	5.04	122.92	119.90
1	CA	2286	A	N9-C1'-C2'	5.04	120.55	114.00
1	CA	2621	A	N1-C6-N6	-5.04	115.58	118.60
1	CA	2745	C	C6-N1-C2	-5.04	118.29	120.30
1	AA	1005	A	N1-C2-N3	5.03	131.82	129.30
1	AA	1067	A	C8-N9-C1'	5.03	136.76	127.70
1	AA	1384	G	C5-C6-N1	5.03	114.02	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1390	G	O4'-C1'-N9	5.03	112.23	108.20
1	AA	100	G	N3-C2-N2	5.03	123.42	119.90
1	AA	148	C	C5-C4-N4	-5.03	116.68	120.20
1	AA	2724	U	N1-C2-O2	5.03	126.32	122.80
1	AA	2885	C	OP2-P-O3'	5.03	116.27	105.20
34	DA	33	A	N9-C4-C5	-5.03	103.79	105.80
1	AA	876	A	N7-C8-N9	5.03	116.32	113.80
1	AA	1302	G	C8-N9-C1'	-5.03	120.46	127.00
1	AA	1306	G	OP2-P-O3'	5.03	116.27	105.20
1	AA	1658	C	OP1-P-O3'	5.03	116.27	105.20
1	AA	1834	A	O5'-P-OP1	5.03	116.74	110.70
1	AA	1985	U	OP1-P-O3'	5.03	116.27	105.20
1	AA	2274	U	C2-N1-C1'	-5.03	111.66	117.70
1	AA	2409	G	C8-N9-C4	-5.03	104.39	106.40
1	AA	2792	U	O4'-C1'-N1	5.03	112.22	108.20
1	AA	2856	G	N7-C8-N9	-5.03	110.58	113.10
1	AA	2874	G	C4-C5-N7	-5.03	108.79	110.80
34	BA	189(D)	C	C6-N1-C2	-5.03	118.29	120.30
57	BZ	206	LEU	CA-CB-CG	5.03	126.87	115.30
1	CA	339	U	N3-C4-O4	5.03	122.92	119.40
1	AA	2407	C	C2-N3-C4	-5.03	117.39	119.90
34	BA	980	C	C6-N1-C2	-5.03	118.29	120.30
1	CA	810	U	N1-C2-O2	-5.03	119.28	122.80
1	AA	24	G	OP2-P-O3'	5.03	116.26	105.20
1	AA	871	A	C8-N9-C4	5.03	107.81	105.80
1	AA	1275	G	C5-C6-N1	5.03	114.01	111.50
1	AA	1385	G	C4-C5-N7	-5.03	108.79	110.80
1	AA	1390	G	C5-C6-O6	-5.03	125.58	128.60
1	AA	1612	C	OP2-P-O3'	5.03	116.26	105.20
1	AA	1749	G	C6-C5-N7	5.03	133.41	130.40
1	AA	2256	U	OP1-P-O3'	5.03	116.25	105.20
1	AA	2702	C	C2-N1-C1'	5.03	124.33	118.80
34	BA	543	C	N3-C4-C5	-5.03	119.89	121.90
1	CA	2379	G	C5-C6-N1	-5.03	108.99	111.50
1	CA	2515	C	C4-C5-C6	5.03	119.91	117.40
1	AA	604	C	N1-C2-O2	-5.02	115.89	118.90
1	AA	1264	G	N3-C4-N9	-5.02	122.98	126.00
1	AA	2548	G	C6-C5-N7	5.02	133.41	130.40
1	CA	298	G	N3-C4-N9	5.02	129.01	126.00
1	AA	1740	U	N1-C2-N3	5.02	117.91	114.90
1	AA	2422	G	OP1-P-OP2	-5.02	112.06	119.60
1	AA	2586	G	N3-C4-C5	5.02	131.11	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	2638	G	N9-C4-C5	5.02	107.41	105.40
34	DA	796	C	C6-N1-C2	-5.02	118.29	120.30
1	AA	514	G	O5'-P-OP2	-5.02	101.18	105.70
1	AA	1923	A	N9-C4-C5	5.02	107.81	105.80
1	AA	2254	G	N1-C6-O6	-5.02	116.89	119.90
1	AA	2822	G	N3-C4-N9	-5.02	122.99	126.00
1	CA	671	C	C6-N1-C2	-5.02	118.29	120.30
1	AA	117	A	O5'-P-OP1	-5.02	101.18	105.70
1	AA	1004	A	C5-N7-C8	-5.02	101.39	103.90
1	AA	1050	C	N1-C2-O2	-5.02	115.89	118.90
1	AA	1080	G	OP2-P-O3'	5.02	116.24	105.20
1	AA	1410	G	C5-N7-C8	5.02	106.81	104.30
1	AA	2846	U	N3-C2-O2	-5.02	118.69	122.20
12	AO	38	VAL	CB-CA-C	-5.02	101.86	111.40
1	CA	808	G	O5'-P-OP2	-5.02	101.18	105.70
1	CA	1672	C	C5-C6-N1	5.02	123.51	121.00
1	CA	2334	G	OP2-P-O3'	5.02	116.24	105.20
1	AA	962	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	2612	A	C2-N3-C4	5.02	113.11	110.60
1	AA	2630	G	C5-N7-C8	5.02	106.81	104.30
1	AA	2652	G	C4-C5-N7	-5.02	108.79	110.80
34	BA	629	G	C8-N9-C4	-5.02	104.39	106.40
34	BA	906	G	N3-C4-C5	-5.02	126.09	128.60
1	CA	582	G	N9-C4-C5	5.02	107.41	105.40
1	CA	1776	G	O5'-P-OP1	5.02	116.72	110.70
1	CA	1828	G	C8-N9-C4	-5.02	104.39	106.40
34	DA	733	A	N7-C8-N9	-5.02	111.29	113.80
1	AA	807	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	1521	C	OP1-P-O3'	5.02	116.23	105.20
1	AA	2294	G	O5'-P-OP1	-5.02	101.19	105.70
1	AA	2335	G	N1-C2-N2	5.02	120.72	116.20
1	AA	733	G	N1-C6-O6	-5.01	116.89	119.90
1	AA	802	C	N3-C4-C5	5.01	123.91	121.90
1	AA	2685	G	C4-N9-C1'	5.01	133.02	126.50
1	AA	2774	G	C5-C6-O6	-5.01	125.59	128.60
34	BA	800	G	C4-N9-C1'	5.01	133.02	126.50
34	BA	896	C	O5'-P-OP2	-5.01	101.19	105.70
34	BA	925	G	N3-C2-N2	-5.01	116.39	119.90
34	BA	1326	C	C6-N1-C2	-5.01	118.30	120.30
1	CA	96	G	N7-C8-N9	-5.01	110.59	113.10
1	CA	2237	G	C5-C6-O6	5.01	131.61	128.60
1	CA	2523	G	C8-N9-C4	-5.01	104.39	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	193	A	O4'-C1'-N9	5.01	112.21	108.20
1	AA	2677	A	C5-C6-N1	-5.01	115.19	117.70
2	AB	41	U	C2-N3-C4	-5.01	123.99	127.00
1	CA	2379	G	C6-C5-N7	-5.01	127.39	130.40
1	AA	494	G	N1-C6-O6	-5.01	116.89	119.90
1	AA	495	G	O3'-P-O5'	5.01	113.52	104.00
1	AA	2513	C	C5-C6-N1	-5.01	118.50	121.00
1	AA	2587	C	OP1-P-O3'	5.01	116.22	105.20
1	CA	1212	G	C8-N9-C1'	-5.01	120.48	127.00
1	CA	1658	C	N3-C4-C5	-5.01	119.89	121.90
1	AA	55	A	N3-C4-C5	-5.01	123.29	126.80
1	AA	239	G	C8-N9-C4	-5.01	104.40	106.40
1	AA	1057	G	C5-C6-N1	5.01	114.00	111.50
1	AA	1192	C	N1-C2-O2	-5.01	115.89	118.90
1	AA	1689	G	C5-C6-O6	-5.01	125.59	128.60
1	AA	1891	G	N1-C6-O6	5.01	122.91	119.90
1	AA	2035	A	C5-N7-C8	-5.01	101.39	103.90
1	AA	2114	U	N3-C4-C5	5.01	117.61	114.60
1	AA	2470	G	C2-N3-C4	5.01	114.41	111.90
34	BA	718	G	C4-C5-N7	5.01	112.80	110.80
1	CA	2430	A	O5'-P-OP2	5.01	116.71	110.70
1	CA	2571	C	O5'-P-OP2	-5.01	101.19	105.70
1	AA	807	G	N3-C4-N9	5.01	129.00	126.00
1	AA	1004	A	N7-C8-N9	5.01	116.30	113.80
1	AA	1298	G	N1-C2-N3	5.01	126.91	123.90
1	AA	2708	U	N3-C4-C5	5.01	117.61	114.60
34	BA	1503	A	O5'-P-OP1	-5.01	101.19	105.70
1	AA	25	U	N1-C2-N3	5.01	117.90	114.90
1	AA	1014	U	N1-C2-O2	5.01	126.31	122.80
1	AA	1068	G	N1-C2-N3	5.01	126.90	123.90
1	AA	1250	U	C6-N1-C2	5.01	124.00	121.00
1	AA	1813	C	C6-N1-C2	5.01	122.30	120.30
1	AA	2021	C	OP2-P-O3'	5.01	116.22	105.20
1	AA	2496	G	O5'-P-OP1	5.01	116.71	110.70
34	BA	1494	G	N1-C6-O6	5.01	122.90	119.90
56	BX	49	G	C8-N9-C4	-5.01	104.40	106.40
1	CA	1952	A	C5-C6-N6	-5.01	119.69	123.70
1	CA	2277	G	C8-N9-C4	-5.01	104.40	106.40
1	CA	2766	G	C8-N9-C1'	-5.01	120.49	127.00
31	C7	23	ARG	NE-CZ-NH2	-5.01	117.80	120.30
1	AA	610	C	C6-N1-C2	-5.00	118.30	120.30
1	AA	2103	C	C5-C6-N1	-5.00	118.50	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	BA	233	C	N3-C4-N4	5.00	121.50	118.00
34	BA	1397	C	N3-C4-N4	-5.00	114.50	118.00
1	CA	312	G	N3-C2-N2	-5.00	116.40	119.90
1	AA	652	A	N1-C6-N6	5.00	121.60	118.60
1	AA	1072	U	N1-C2-N3	-5.00	111.90	114.90
1	AA	1080	G	OP1-P-OP2	5.00	127.11	119.60
1	AA	1414	G	N3-C2-N2	5.00	123.40	119.90
1	AA	1546	G	N1-C6-O6	5.00	122.90	119.90
1	AA	2645	G	N3-C4-C5	-5.00	126.10	128.60
34	BA	631	G	N7-C8-N9	5.00	115.60	113.10
1	CA	670	A	N1-C6-N6	-5.00	115.60	118.60
1	CA	1279	G	N7-C8-N9	5.00	115.60	113.10
1	CA	2531	A	C2-N3-C4	-5.00	108.10	110.60
1	AA	1274	G	C5-C6-O6	5.00	131.60	128.60
1	AA	1896	G	C5-C6-O6	-5.00	125.60	128.60
1	AA	2014	G	C2-N3-C4	5.00	114.40	111.90
1	AA	2312	G	O5'-P-OP1	-5.00	101.20	105.70
1	AA	2760	G	C4-C5-N7	5.00	112.80	110.80
34	BA	496	A	C8-N9-C4	-5.00	103.80	105.80
34	BA	892	A	C5-C6-N6	-5.00	119.70	123.70
2	CB	1	U	C2-N1-C1'	5.00	123.70	117.70

There are no chirality outliers.

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	AD	141	VAL	Peptide
4	AD	70	TRP	Peptide
4	AD	98	VAL	Peptide
5	AE	132	HIS	Sidechain
8	AH	23	ARG	Peptide
12	AO	80	ASP	Peptide
12	AO	81	ASP	Peptide
23	AZ	176	PRO	Peptide
37	BD	147	ALA	Peptide
53	BT	9	ASN	Peptide
57	BZ	404	VAL	Peptide
21	CX	93	GLU	Peptide
57	DZ	159	ALA	Peptide
57	DZ	87	HIS	Peptide
57	DZ	88	VAL	Peptide
57	DZ	91	THR	Peptide

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	61426	0	30938	1072	0
1	CA	61337	0	30928	1176	0
2	AB	2573	0	1306	32	0
2	CB	2573	0	1306	44	0
3	AC	1063	0	1089	151	0
3	CC	1063	0	1091	214	0
4	AD	2136	0	2218	104	0
4	CD	2142	0	2229	84	0
5	AE	1559	0	1618	65	0
5	CE	1559	0	1618	59	0
6	AF	1584	0	1625	68	0
6	CF	1580	0	1619	78	0
7	AG	1425	0	1443	63	0
7	CG	1424	0	1434	61	0
8	AH	1330	0	1407	47	0
8	CH	1330	0	1407	48	0
9	AK	641	0	309	20	0
9	CK	641	0	309	11	0
10	AL	1025	0	1066	52	0
10	CL	1025	0	1066	46	0
11	AN	1117	0	1184	35	0
11	CN	1117	0	1184	40	0
12	AO	933	0	996	36	0
12	CO	933	0	996	26	0
13	AP	1139	0	1223	50	0
13	CP	1135	0	1212	53	0
14	AQ	1122	0	1179	57	0
14	CQ	1122	0	1179	52	0
15	AR	968	0	1033	49	0
15	CR	968	0	1033	48	0
16	AS	877	0	938	47	0
16	CS	870	0	923	36	0
17	AT	1091	0	1151	53	0
17	CT	1083	0	1136	45	0
18	AU	959	0	1019	37	0
18	CU	959	0	1018	31	0
19	AV	771	0	829	21	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	CV	771	0	830	30	0
20	AW	886	0	940	23	0
20	CW	886	0	940	35	0
21	AX	750	0	814	31	0
21	CX	750	0	814	36	0
22	AY	806	0	881	26	0
22	CY	806	0	881	33	0
23	AZ	1451	0	1457	61	0
23	CZ	1451	0	1457	50	0
24	A0	653	0	674	21	0
24	C0	653	0	674	25	0
25	A1	755	0	826	33	0
25	C1	755	0	826	25	0
26	A2	588	0	643	14	0
26	C2	588	0	643	18	0
27	A3	469	0	518	26	0
27	C3	464	0	514	12	0
28	A4	558	0	545	28	0
28	C4	532	0	504	19	0
29	A5	455	0	466	20	0
29	C5	455	0	465	12	0
30	A6	453	0	473	20	0
30	C6	449	0	469	15	0
31	A7	418	0	467	23	0
31	C7	418	0	467	20	0
32	A8	517	0	582	28	0
32	C8	517	0	582	26	0
33	A9	307	0	335	15	0
33	C9	307	0	335	15	0
34	BA	32141	0	16222	662	0
34	DA	32268	0	16287	689	0
35	BB	1846	0	1867	96	0
35	DB	1825	0	1828	89	0
36	BC	1552	0	1546	51	0
36	DC	1544	0	1524	52	0
37	BD	1659	0	1677	95	0
37	DD	1678	0	1719	68	0
38	BE	1129	0	1185	52	0
38	DE	1133	0	1191	61	0
39	BF	812	0	804	28	0
39	DF	820	0	814	29	0
40	BG	1231	0	1238	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	DG	1235	0	1249	23	0
41	BH	1088	0	1126	54	0
41	DH	1088	0	1126	46	0
42	BI	986	0	995	37	0
42	DI	978	0	966	42	0
43	BJ	709	0	650	31	0
43	DJ	714	0	672	38	0
44	BK	833	0	836	31	0
44	DK	833	0	836	25	0
45	BL	930	0	980	24	0
45	DL	930	0	980	42	0
46	BM	923	0	970	31	0
46	DM	950	0	988	31	0
47	BN	492	0	529	19	0
47	DN	492	0	531	34	0
48	BO	728	0	760	33	0
48	DO	728	0	760	32	0
49	BP	681	0	697	34	0
49	DP	677	0	686	28	0
50	BQ	823	0	891	27	0
50	DQ	823	0	891	37	0
51	BR	555	0	618	19	0
51	DR	555	0	618	25	0
52	BS	661	0	675	31	0
52	DS	646	0	644	27	0
53	BT	728	0	798	34	0
53	DT	731	0	807	29	0
54	BU	199	0	208	5	0
54	DU	199	0	208	7	0
55	BV	277	0	140	4	0
55	DV	128	0	67	5	0
56	BX	1625	0	829	24	0
56	DX	1621	0	826	21	0
57	BZ	4869	0	4164	253	0
57	DZ	4867	0	4166	237	0
58	A0	5	0	0	0	0
58	A1	1	0	0	0	0
58	A2	1	0	0	0	0
58	A4	1	0	0	0	0
58	A5	3	0	0	0	0
58	A6	1	0	0	0	0
58	A7	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	A8	2	0	0	0	0
58	A9	1	0	0	0	0
58	AA	820	0	0	0	0
58	AB	23	0	0	0	0
58	AD	12	0	0	0	0
58	AE	5	0	0	0	0
58	AF	8	0	0	0	0
58	AG	2	0	0	0	0
58	AH	2	0	0	0	0
58	AN	3	0	0	0	0
58	AO	1	0	0	0	0
58	AP	3	0	0	0	0
58	AQ	3	0	0	0	0
58	AR	2	0	0	0	0
58	AU	3	0	0	0	0
58	AV	5	0	0	0	0
58	AW	4	0	0	0	0
58	AX	1	0	0	0	0
58	AZ	2	0	0	0	0
58	BA	212	0	0	0	0
58	BB	1	0	0	0	0
58	BD	1	0	0	0	0
58	BE	1	0	0	0	0
58	BF	1	0	0	0	0
58	BK	1	0	0	0	0
58	BL	4	0	0	0	0
58	BN	2	0	0	0	0
58	BT	1	0	0	0	0
58	BV	1	0	0	0	0
58	BX	10	0	0	0	0
58	BZ	1	0	0	0	0
58	C0	1	0	0	0	0
58	C1	1	0	0	0	0
58	C3	1	0	0	0	0
58	C7	1	0	0	0	0
58	C8	1	0	0	0	0
58	CA	666	0	0	0	0
58	CB	13	0	0	0	0
58	CD	3	0	0	0	0
58	CE	7	0	0	0	0
58	CF	4	0	0	0	0
58	CG	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	CN	1	0	0	0	0
58	CO	2	0	0	0	0
58	CQ	4	0	0	0	0
58	CR	1	0	0	0	0
58	CU	2	0	0	0	0
58	CV	2	0	0	0	0
58	CY	1	0	0	0	0
58	DA	166	0	0	0	0
58	DD	1	0	0	0	0
58	DE	2	0	0	0	0
58	DF	1	0	0	0	0
58	DJ	1	0	0	0	0
58	DK	1	0	0	0	0
58	DL	2	0	0	0	0
58	DT	1	0	0	0	0
58	DZ	3	0	0	0	0
59	AA	1	0	0	0	0
60	A4	1	0	0	0	0
60	A5	1	0	0	0	0
60	A6	1	0	0	0	0
60	A9	1	0	0	0	0
60	AY	1	0	0	0	0
60	BN	1	0	0	0	0
60	C4	1	0	0	0	0
60	C5	1	0	0	0	0
60	C6	1	0	0	0	0
60	C9	1	0	0	0	0
60	CY	1	0	0	0	0
60	DN	1	0	0	0	0
61	BD	8	0	0	0	0
61	DD	8	0	0	0	0
62	BZ	28	0	12	4	0
62	DZ	28	0	12	7	0
63	A0	9	0	0	2	0
63	A1	2	0	0	1	0
63	A2	1	0	0	0	0
63	A3	2	0	0	0	0
63	A5	4	0	0	1	0
63	A7	4	0	0	2	0
63	A8	9	0	0	3	0
63	A9	1	0	0	0	0
63	AA	1406	0	0	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	AB	37	0	0	3	0
63	AD	16	0	0	0	0
63	AE	14	0	0	3	0
63	AF	6	0	0	2	0
63	AG	3	0	0	0	0
63	AH	1	0	0	0	0
63	AN	3	0	0	0	0
63	AO	1	0	0	0	0
63	AP	18	0	0	0	0
63	AQ	5	0	0	1	0
63	AR	2	0	0	0	0
63	AS	1	0	0	0	0
63	AT	3	0	0	0	0
63	AU	4	0	0	0	0
63	AV	1	0	0	0	0
63	AW	1	0	0	0	0
63	AX	4	0	0	0	0
63	AZ	1	0	0	0	0
63	BA	203	0	0	15	0
63	BD	3	0	0	0	0
63	BE	2	0	0	0	0
63	BG	1	0	0	0	0
63	BJ	1	0	0	0	0
63	BL	1	0	0	0	0
63	BM	1	0	0	0	0
63	BO	2	0	0	0	0
63	BP	1	0	0	0	0
63	BV	3	0	0	0	0
63	BX	5	0	0	0	0
63	BZ	2	0	0	0	0
63	C0	5	0	0	0	0
63	C1	1	0	0	0	0
63	C3	2	0	0	0	0
63	C6	1	0	0	1	0
63	C7	1	0	0	0	0
63	C8	3	0	0	0	0
63	CA	974	0	0	87	0
63	CB	9	0	0	0	0
63	CD	17	0	0	0	0
63	CE	14	0	0	3	0
63	CF	6	0	0	0	0
63	CN	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	CP	12	0	0	2	0
63	CQ	2	0	0	1	0
63	CT	3	0	0	0	0
63	CU	2	0	0	1	0
63	CV	2	0	0	0	0
63	CW	1	0	0	0	0
63	CX	2	0	0	0	0
63	CY	2	0	0	1	0
63	DA	154	0	0	11	0
63	DE	3	0	0	0	0
63	DH	1	0	0	0	0
63	DJ	1	0	0	0	0
63	DK	2	0	0	0	0
63	DP	1	0	0	0	0
63	DT	1	0	0	0	0
63	DV	1	0	0	0	0
63	DZ	1	0	0	0	0
All	All	305548	0	205094	7281	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 15.

All (7281) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2128:C:H5''	3:CC:219:MET:CE	1.49	1.42
1:CA:2132:U:O2	3:CC:6:LYS:CB	1.64	1.41
1:CA:2128:C:OP1	3:CC:219:MET:CE	1.71	1.39
1:CA:2176:A:H4'	3:CC:45:HIS:CD2	1.60	1.37
1:AA:2143:G:N2	3:AC:169:THR:OG1	1.58	1.36
1:AA:2143:G:O4'	3:AC:168:LYS:NZ	1.59	1.35
1:CA:2121:G:N2	3:CC:169:THR:OG1	1.64	1.28
1:CA:2177:C:H1'	3:CC:171:ALA:CB	1.62	1.27
1:CA:2132:U:C2	3:CC:6:LYS:HB2	1.69	1.24
1:AA:2154:U:C5	3:AC:6:LYS:HB2	1.74	1.23
1:AA:2143:G:C1'	3:AC:168:LYS:HD3	1.67	1.23
1:CA:2121:G:O2'	3:CC:168:LYS:HB3	1.31	1.22
1:AA:2143:G:O4'	3:AC:168:LYS:CE	1.88	1.20
1:AA:2143:G:H1'	3:AC:168:LYS:CD	1.71	1.20
1:AA:2143:G:C1'	3:AC:168:LYS:CD	2.20	1.19
1:CA:2132:U:O2	3:CC:6:LYS:HB2	1.23	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2128:C:OP1	3:CC:219:MET:HE2	1.36	1.17
1:CA:2132:U:O2	3:CC:6:LYS:CA	1.92	1.15
1:CA:2177:C:H1'	3:CC:171:ALA:HB1	1.28	1.14
1:CA:2177:C:H4'	3:CC:46:ALA:O	1.48	1.13
1:CA:2128:C:H5''	3:CC:219:MET:HE3	1.26	1.13
1:CA:2124:G:H4'	3:CC:175:PRO:HG3	1.30	1.13
1:AA:2143:G:C1'	3:AC:168:LYS:CE	2.28	1.11
1:CA:2176:A:O2'	3:CC:45:HIS:ND1	1.85	1.09
57:BZ:210:ARG:HB2	57:BZ:210:ARG:HH11	1.16	1.08
34:DA:396:G:OP1	57:DZ:349:LYS:NZ	1.84	1.08
1:CA:2121:G:H1'	3:CC:168:LYS:CD	1.85	1.06
1:AA:2143:G:O2'	3:AC:168:LYS:HB3	1.55	1.06
1:CA:2128:C:OP1	3:CC:219:MET:HE1	1.48	1.06
1:CA:2132:U:H1'	3:CC:6:LYS:HB3	1.38	1.06
57:BZ:160:ARG:NH1	57:BZ:256:THR:OG1	1.90	1.04
1:CA:2128:C:H5''	3:CC:219:MET:HE1	1.21	1.04
1:CA:2128:C:C5'	3:CC:219:MET:HE1	1.88	1.03
1:AA:535:C:OP1	63:AA:3901:HOH:O	1.75	1.03
1:CA:2121:G:C1'	3:CC:168:LYS:HD3	1.87	1.03
1:CA:2177:C:H1'	3:CC:171:ALA:HB2	1.37	1.03
1:CA:2124:G:H4'	3:CC:175:PRO:CG	1.91	1.01
1:CA:1860:G:O4'	3:CC:206:LYS:HD3	1.56	1.00
1:CA:1860:G:O4'	3:CC:206:LYS:CD	2.01	1.00
1:AA:525:G:H22	1:AA:528:A:H5'	1.28	0.99
1:CA:1798:U:H5'	4:CD:259:THR:HG22	1.45	0.99
1:AA:2143:G:C1'	3:AC:168:LYS:HE2	1.92	0.99
34:BA:1502:A:H2	34:BA:1505:G:H1	1.02	0.99
39:DF:87:ARG:HH11	39:DF:87:ARG:HG3	1.27	0.98
1:AA:656:A:OP1	13:AP:65:ARG:NH1	1.96	0.98
1:AA:2154:U:C5	3:AC:6:LYS:CB	2.47	0.98
35:DB:185:ILE:HG22	35:DB:199:TYR:HB2	1.46	0.97
4:CD:60:ARG:HD3	4:CD:86:PRO:HB2	1.45	0.97
34:DA:1502:A:H2	34:DA:1505:G:H1	1.07	0.96
1:AA:2143:G:C2'	3:AC:168:LYS:HD3	1.96	0.96
1:CA:2176:A:O2'	3:CC:45:HIS:CG	2.17	0.96
1:CA:2128:C:C5'	3:CC:219:MET:CE	2.41	0.95
1:CA:2176:A:C4'	3:CC:45:HIS:CD2	2.49	0.95
45:DL:36:VAL:HG11	57:DZ:425:SER:HB3	1.46	0.95
57:DZ:92:ILE:HG23	57:DZ:93:GLU:HG2	1.49	0.94
1:AA:1829:U:H5'	4:AD:259:THR:HG22	1.49	0.94
1:CA:2177:C:O2	3:CC:171:ALA:HB3	1.68	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2206:G:H3'	1:CA:2207:G:C8	2.02	0.94
1:AA:542:C:OP1	29:A5:16:ARG:NH2	2.00	0.93
1:CA:1056:G:HO2'	1:CA:1086:A:H8	1.00	0.93
1:CA:1332:G:OP1	63:CA:3702:HOH:O	1.86	0.93
1:AA:1740:U:O2'	4:AD:14:ARG:NH2	2.01	0.93
1:CA:731:C:OP2	63:CA:3701:HOH:O	1.85	0.93
34:DA:922:G:H4'	38:DE:20:GLN:HA	1.49	0.93
1:AA:1219:A:H1'	1:AA:1220:U:H5''	1.50	0.93
34:BA:78:G:H22	34:BA:92:C:H42	1.17	0.93
12:AO:49:ARG:NH2	34:BA:1423:G:OP1	2.02	0.93
1:CA:2120:G:H21	3:CC:168:LYS:HE2	1.34	0.92
1:CA:2121:G:O2'	3:CC:168:LYS:CB	2.17	0.92
34:BA:559:A:OP1	38:BE:126:ARG:NH2	2.01	0.92
34:BA:1158:C:H5	34:BA:1181:G:H1	1.17	0.92
1:CA:400:G:N7	63:CA:3712:HOH:O	2.01	0.92
50:BQ:66:SER:O	50:BQ:70:ARG:NH1	2.01	0.92
7:AG:41:GLN:HG3	7:AG:60:LEU:HD21	1.49	0.91
1:CA:2124:G:C4'	3:CC:175:PRO:HG3	2.01	0.91
1:CA:1859:A:O2'	3:CC:206:LYS:HE3	1.68	0.91
1:CA:2176:A:O2'	3:CC:45:HIS:CE1	2.23	0.91
57:DZ:169:GLY:H	57:DZ:170:ARG:HH12	1.07	0.91
1:CA:1859:A:H2'	3:CC:206:LYS:CD	2.00	0.91
1:AA:2143:G:H1'	3:AC:168:LYS:CE	1.96	0.91
1:AA:2199:C:O2	3:AC:173:HIS:CE1	2.24	0.91
1:CA:1859:A:C2'	3:CC:206:LYS:CD	2.48	0.91
15:CR:97:VAL:HG22	15:CR:114:VAL:HG13	1.53	0.91
1:CA:1359:A:N1	1:CA:1372:U:N3	2.17	0.91
1:CA:1798:U:OP2	4:CD:274:ARG:NH2	2.03	0.90
1:CA:2177:C:O2	3:CC:171:ALA:CB	2.18	0.90
1:CA:2137:C:H42	1:CA:2154:G:H1	1.19	0.90
1:CA:631:A:OP1	13:CP:65:ARG:NH1	2.05	0.90
1:AA:894:U:OP2	63:AA:3903:HOH:O	1.90	0.90
1:CA:2132:U:O2	3:CC:6:LYS:HA	1.68	0.89
41:DH:51:VAL:HG11	41:DH:60:ARG:HH11	1.36	0.89
34:BA:167:G:H2'	34:BA:168:G:H8	1.36	0.89
57:DZ:357:ARG:NH1	57:DZ:373:ASP:OD1	2.06	0.89
34:BA:1182:G:H4'	34:BA:1183:A:H5'	1.54	0.89
1:CA:2177:C:C1'	3:CC:171:ALA:HB2	2.02	0.89
1:AA:1716:A:OP2	63:AA:3904:HOH:O	1.91	0.88
1:CA:1782:C:OP1	63:CA:3703:HOH:O	1.89	0.88
1:AA:1249:A:H2	1:AA:1287:A:H62	1.22	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:839:G:O6	63:AA:3902:HOH:O	1.90	0.88
3:CC:31:LYS:NZ	3:CC:181:PHE:O	2.06	0.88
53:DT:57:ARG:HH22	53:DT:100:ILE:HD12	1.36	0.88
34:BA:1125:U:H4'	43:BJ:5:ARG:HH22	1.39	0.88
1:CA:2849:U:O4	17:CT:23:ARG:NH2	2.06	0.87
57:DZ:92:ILE:HD13	57:DZ:93:GLU:H	1.37	0.87
7:AG:41:GLN:NE2	7:AG:154:GLY:O	2.07	0.87
57:BZ:87:HIS:O	57:BZ:90:PHE:N	2.06	0.87
1:CA:1153:C:OP1	18:CU:92:ARG:NH1	2.07	0.87
1:AA:2143:G:O4'	3:AC:168:LYS:CD	2.21	0.87
20:CW:34:ASN:OD1	20:CW:37:ARG:NH2	2.08	0.87
1:AA:2143:G:H1'	3:AC:168:LYS:CG	2.03	0.87
15:AR:33:ARG:NH1	15:AR:115:GLU:OE2	2.06	0.87
1:CA:1021:A:H62	1:CA:1141:U:H3	1.22	0.87
1:AA:1100:A:H62	1:AA:1151:U:H3	1.22	0.87
14:AQ:14:ARG:HG2	14:AQ:41:TRP:HH2	1.38	0.87
3:AC:31:LYS:NZ	3:AC:181:PHE:O	2.06	0.87
1:AA:2154:U:C6	3:AC:6:LYS:HB3	2.10	0.86
15:AR:86:ARG:NH1	15:AR:87:TYR:OH	2.08	0.86
1:CA:2714:G:OP2	63:CA:3704:HOH:O	1.93	0.86
34:DA:1307:U:OP1	46:DM:101:GLN:NE2	2.08	0.86
1:AA:2198:A:O2'	3:AC:45:HIS:CD2	2.29	0.86
1:CA:2121:G:C1'	3:CC:168:LYS:CD	2.51	0.86
34:BA:1375:A:H4'	40:BG:29:LYS:HE2	1.55	0.86
4:AD:85:ASP:OD2	4:AD:88:ARG:NH1	2.08	0.86
4:AD:206:LEU:HD22	4:AD:211:ARG:HG2	1.58	0.86
57:BZ:275:ALA:HA	57:BZ:278:ASP:HB2	1.57	0.86
38:DE:122:GLU:O	38:DE:126:ARG:NH1	2.09	0.86
34:BA:937:A:OP2	63:BA:3301:HOH:O	1.94	0.85
37:BD:98:GLU:OE1	37:BD:103:ASN:ND2	2.10	0.85
34:DA:881:G:OP2	45:DL:12:ARG:NH2	2.09	0.85
3:AC:52:PRO:HG2	3:AC:53:ARG:HD3	1.57	0.85
13:CP:38:GLN:HG2	13:CP:45:LEU:H	1.39	0.85
15:CR:38:VAL:HG12	15:CR:42:LYS:HD2	1.58	0.85
1:AA:2143:G:O2'	3:AC:168:LYS:HD3	1.76	0.85
24:A0:11:ARG:O	24:A0:14:ARG:NH2	2.08	0.85
1:AA:1099:C:H2'	1:AA:1100:A:H5''	1.58	0.85
36:BC:58:GLU:HB3	43:BJ:92:THR:HG21	1.58	0.85
37:BD:13:ARG:NH1	37:BD:38:TYR:O	2.09	0.85
3:CC:52:PRO:HG2	3:CC:53:ARG:HD3	1.57	0.85
1:AA:2444:A:OP1	63:AA:3905:HOH:O	1.94	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CL:101:TRP:HE1	10:CL:140:GLY:HA3	1.42	0.85
1:CA:195:A:N7	63:CA:3716:HOH:O	2.10	0.84
37:BD:107:ARG:HH22	37:BD:194:LEU:HD11	1.42	0.84
1:CA:1022:G:H22	1:CA:1142(A):A:H2	1.21	0.84
7:CG:38:VAL:HG22	7:CG:93:THR:HG23	1.59	0.84
1:AA:2459:G:OP2	63:AA:3907:HOH:O	1.94	0.84
7:AG:126:ASP:HB3	7:AG:128:ARG:H	1.41	0.84
41:BH:86:ILE:HG21	41:BH:133:LEU:HD13	1.57	0.84
57:BZ:191:ASP:O	57:BZ:266:ASN:ND2	2.09	0.84
1:CA:1859:A:N6	1:CA:1883:G:O2'	2.11	0.84
1:CA:2121:G:H1'	3:CC:168:LYS:CE	2.07	0.84
34:DA:812:C:N3	63:DA:1806:HOH:O	2.09	0.84
1:CA:1648:C:OP1	63:CA:3705:HOH:O	1.95	0.84
1:CA:1913:A:H4'	1:CA:1914:C:H5'	1.60	0.84
45:DL:75:HIS:HD2	45:DL:77:LEU:H	1.20	0.84
1:CA:9:U:H3	1:CA:2629:A:H2	1.22	0.83
34:BA:1326:C:OP1	54:BU:12:LYS:NZ	2.10	0.83
1:CA:1859:A:C2'	3:CC:206:LYS:HE3	2.09	0.83
1:CA:2176:A:H4'	3:CC:45:HIS:NE2	1.93	0.83
1:CA:1310:G:OP2	31:C7:9:ARG:NH1	2.11	0.83
52:DS:15:LEU:HD22	52:DS:33:THR:HB	1.59	0.83
57:DZ:373:ASP:OD2	57:DZ:374:LEU:N	2.11	0.83
1:AA:327:U:O4	63:AA:3908:HOH:O	1.95	0.83
1:AA:615:G:O6	63:AA:3906:HOH:O	1.94	0.83
1:CA:2046:G:H5'	29:C5:19:ARG:HA	1.61	0.83
21:CX:35:THR:HG22	21:CX:37:THR:H	1.42	0.83
34:BA:200:G:H1	34:BA:217:C:H42	1.24	0.83
34:BA:429:U:OP2	37:BD:36:ARG:NH2	2.12	0.83
37:DD:13:ARG:NH1	37:DD:38:TYR:O	2.12	0.83
34:BA:456:C:H42	34:BA:475:G:H1	1.22	0.82
57:DZ:-66:MET:N	57:DZ:-46:VAL:O	2.12	0.82
35:BB:77:ALA:HB2	35:BB:211:ILE:HD13	1.60	0.82
57:BZ:210:ARG:HH11	57:BZ:210:ARG:CB	1.91	0.82
34:BA:1047:G:O2'	34:BA:1215:G:O2'	1.96	0.82
37:BD:187:ARG:NH2	37:BD:193:ASP:OD1	2.11	0.82
57:DZ:553:GLY:H	57:DZ:557:GLY:HA2	1.42	0.82
34:BA:881:G:OP2	45:BL:12:ARG:NH2	2.12	0.82
44:BK:99:GLN:HG2	44:BK:105:VAL:HG21	1.60	0.82
21:AX:31:HIS:HD2	21:AX:33:LYS:H	1.25	0.82
1:CA:2287:A:H62	1:CA:2344:U:H3	1.23	0.82
5:CE:127:ASP:OD2	63:CE:401:HOH:O	1.97	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2495:C:N3	14:AQ:124:LYS:NZ	2.27	0.82
1:CA:2660:A:N6	57:DZ:661:SER:OG	2.13	0.82
34:BA:167:G:H2'	34:BA:168:G:C8	2.14	0.82
14:AQ:38:GLU:HA	14:AQ:99:PRO:HG3	1.59	0.82
22:AY:92:ASN:HB2	22:AY:94:LYS:H	1.45	0.82
1:CA:1268:A:OP1	63:CA:3706:HOH:O	1.97	0.82
1:CA:2177:C:C1'	3:CC:171:ALA:CB	2.53	0.82
1:CA:2128:C:P	3:CC:219:MET:HE1	2.19	0.81
30:C6:10:LEU:HD23	30:C6:22:ALA:HB2	1.62	0.81
3:AC:54:ARG:NH2	3:AC:56:ASP:HB3	1.95	0.81
13:CP:95:VAL:HG23	13:CP:99:LEU:HD11	1.62	0.81
34:BA:437:U:H5'	37:BD:155:LEU:HD21	1.63	0.81
1:CA:526:A:OP1	63:CA:3707:HOH:O	1.98	0.81
2:CB:66:A:H61	2:CB:109:C:H5''	1.42	0.81
46:DM:15:VAL:HG13	46:DM:45:VAL:HG22	1.62	0.81
30:A6:13:CYS:SG	30:A6:47:THR:HG21	2.21	0.81
1:AA:39:C:O2	6:AF:46:ARG:NH2	2.14	0.81
2:AB:14:U:OP2	2:AB:70:C:O2'	1.98	0.81
3:CC:54:ARG:NH2	3:CC:56:ASP:HB3	1.95	0.81
1:AA:2154:U:C6	3:AC:6:LYS:CB	2.64	0.81
1:CA:861:A:N3	2:CB:79:C:O2'	2.14	0.81
16:AS:52:SER:HB2	16:AS:55:ALA:H	1.44	0.81
20:AW:14:PRO:HG2	20:AW:78:GLU:HG2	1.61	0.81
1:CA:2847:U:O4	63:CA:3708:HOH:O	1.98	0.81
1:AA:818:G:OP1	31:A7:10:ARG:NH1	2.14	0.81
57:DZ:182:ARG:O	57:DZ:184:LYS:N	2.14	0.81
17:AT:118:ARG:HG3	17:AT:118:ARG:HH11	1.46	0.80
1:CA:2124:G:O3'	3:CC:175:PRO:CG	2.28	0.80
1:AA:9:U:H3	1:AA:2641:A:H2	1.28	0.80
1:AA:2349:G:OP1	63:AA:3911:HOH:O	1.99	0.80
13:AP:38:GLN:HG2	13:AP:45:LEU:HD23	1.62	0.80
1:CA:95:G:HO2'	26:C2:48:HIS:HD1	0.83	0.80
34:DA:1238:A:OP2	63:DA:1801:HOH:O	1.98	0.80
57:DZ:169:GLY:N	57:DZ:170:ARG:HH12	1.78	0.80
1:CA:2518:A:OP2	63:CA:3709:HOH:O	1.99	0.80
49:BP:71:ARG:O	49:BP:75:ARG:N	2.13	0.80
1:CA:1817:G:OP1	4:CD:88:ARG:NH2	2.14	0.80
1:AA:553:A:H2'	1:AA:554:A:H5'	1.63	0.80
34:BA:946:A:O2'	34:BA:1333:A:N3	2.14	0.80
1:CA:1627:G:OP1	63:CA:3710:HOH:O	2.00	0.80
1:CA:2121:G:HO2'	3:CC:168:LYS:HB3	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:187:ARG:NH1	37:BD:190:ASP:OD1	2.14	0.80
57:DZ:165:GLN:HA	57:DZ:180:VAL:HG13	1.64	0.80
1:AA:64:C:O2	1:AA:482:C:N4	2.16	0.79
1:AA:2143:G:C4'	3:AC:168:LYS:NZ	2.45	0.79
1:AA:2442:A:OP2	63:AA:3910:HOH:O	1.99	0.79
6:AF:31:HIS:NE2	6:AF:35:GLU:OE2	2.16	0.79
34:BA:664:G:H22	34:BA:741:G:H1	1.30	0.79
44:BK:79:SER:HA	44:BK:104:GLN:HB2	1.63	0.79
34:DA:839:U:H5''	34:DA:840:C:H5	1.47	0.79
34:DA:1320:C:N3	52:DS:36:ARG:NH2	2.30	0.79
37:DD:187:ARG:NH2	37:DD:193:ASP:OD2	2.14	0.79
36:BC:19:GLU:HB3	36:BC:40:ARG:HH22	1.47	0.79
1:CA:1093:G:H1'	1:CA:1099:G:H22	1.47	0.79
1:CA:2357:U:OP1	24:C0:20:ARG:NH1	2.16	0.79
14:CQ:21:THR:HG21	14:CQ:101:ARG:HD3	1.64	0.79
37:DD:121:VAL:HG22	37:DD:126:ILE:HG13	1.65	0.79
57:BZ:246:ILE:HG23	57:BZ:255:ILE:HD11	1.63	0.79
34:DA:656:C:O2'	48:DO:28:GLN:NE2	2.16	0.79
1:AA:2143:G:O4'	3:AC:168:LYS:HD3	1.81	0.79
22:AY:54:LYS:HA	22:AY:56:PRO:HD3	1.63	0.79
36:BC:153:VAL:HG22	36:BC:198:VAL:HG22	1.65	0.79
49:BP:67:THR:HG22	49:BP:69:THR:H	1.47	0.79
1:CA:555:U:O2'	1:CA:556:G:N7	2.14	0.79
34:DA:1129:C:H42	34:DA:1143:G:H1	1.31	0.79
14:AQ:10:ARG:NH1	63:AQ:301:HOH:O	2.05	0.79
23:AZ:53:ILE:HG22	23:AZ:71:VAL:HG12	1.65	0.79
57:BZ:-53:ASP:H	57:BZ:-50:GLN:HE21	1.30	0.79
1:AA:1117:G:O2'	1:AA:1135:G:OP2	2.01	0.79
1:AA:2418:U:OP1	63:AA:3909:HOH:O	1.99	0.79
1:AA:1657:C:OP1	63:AA:3912:HOH:O	2.01	0.79
57:BZ:91:THR:OG1	57:BZ:124:GLN:NE2	2.16	0.79
1:AA:1135:G:N2	1:AA:1147:U:O4	2.15	0.79
34:BA:166:G:H2'	34:BA:167:G:H8	1.47	0.79
34:BA:564:C:O2'	41:BH:91:ARG:NH2	2.16	0.79
34:BA:1304:G:OP2	63:BA:3302:HOH:O	1.99	0.79
1:AA:1848:G:OP1	4:AD:62:TYR:OH	1.99	0.78
1:AA:2199:C:O2	3:AC:173:HIS:HE1	1.66	0.78
17:CT:55:ASN:H	17:CT:59:THR:HG22	1.47	0.78
34:DA:1224:G:OP1	63:DA:1802:HOH:O	2.01	0.78
34:BA:1458:G:H5''	53:BT:31:SER:HB3	1.65	0.78
37:BD:167:GLY:H	37:BD:168:ARG:HH12	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BQ:6:LEU:HD23	50:BQ:23:VAL:HG11	1.63	0.78
1:AA:1151:U:H2'	1:AA:1152:G:H8	1.48	0.78
14:AQ:111:GLU:OE1	14:AQ:133:ARG:NH2	2.16	0.78
34:DA:512:U:H2'	34:DA:513:C:H6	1.48	0.78
57:BZ:264:LEU:HB2	62:BZ:801:GDP:C6	2.19	0.78
34:DA:891:U:OP2	63:DA:1803:HOH:O	2.02	0.78
15:AR:100:LEU:HB2	15:AR:111:LEU:O	1.84	0.78
34:DA:590:C:H2'	34:DA:591:U:H6	1.48	0.78
1:AA:553:A:C8	1:AA:553:A:H3'	2.18	0.78
1:AA:1831:C:OP1	4:AD:260:ARG:NH2	2.17	0.78
57:BZ:247:ARG:HG3	57:BZ:279:TYR:HA	1.65	0.78
1:CA:184:C:H2'	1:CA:185:U:C6	2.18	0.78
57:DZ:170:ARG:N	57:DZ:170:ARG:HH11	1.82	0.78
63:AA:3928:HOH:O	15:AR:3:HIS:NE2	2.17	0.78
57:BZ:14:ASN:HB2	57:BZ:102:ASP:OD2	1.84	0.78
1:CA:1019:U:H3	1:CA:1142(A):A:H62	1.29	0.78
1:CA:847:U:OP2	63:CA:3711:HOH:O	2.00	0.78
3:CC:20:VAL:O	3:CC:21:TYR:HB2	1.83	0.78
34:DA:1004:A:H62	34:DA:1037:C:H2'	1.48	0.78
1:AA:153:C:OP2	25:A1:92:LYS:NZ	2.16	0.77
20:CW:33:ARG:NH2	20:CW:52:GLU:OE1	2.17	0.77
48:DO:4:THR:OG1	48:DO:7:GLU:OE1	2.01	0.77
1:AA:11:G:H2'	1:AA:12:U:H5''	1.66	0.77
1:AA:1094:A:OP2	1:AA:1155:C:N4	2.16	0.77
7:AG:161:THR:HG23	7:AG:163:ALA:H	1.49	0.77
43:BJ:35:SER:HB3	43:BJ:73:ASP:HB2	1.64	0.77
1:CA:302:C:N4	1:CA:315:G:O6	2.17	0.77
34:DA:278:G:OP2	50:DQ:41:LYS:NZ	2.18	0.77
1:AA:1087:C:H42	1:AA:1160:G:H1	1.33	0.77
18:CU:50:ARG:NH1	19:CV:71:LEU:O	2.18	0.77
34:DA:266:G:H5''	34:DA:268:C:H41	1.49	0.77
1:AA:482:C:O2'	21:AX:68:ARG:NH1	2.16	0.77
1:AA:868:A:H2'	1:AA:991:G:H5''	1.66	0.77
23:AZ:119:GLU:OE1	23:AZ:122:ARG:NH1	2.17	0.77
11:CN:21:LYS:HD3	11:CN:26:LEU:HD13	1.67	0.77
57:BZ:114:VAL:HG23	57:BZ:152:THR:HB	1.66	0.77
22:AY:102:CYS:SG	22:AY:103:GLY:N	2.56	0.77
33:A9:2:LYS:HE2	33:A9:31:LYS:O	1.85	0.77
20:CW:12:ILE:HD13	20:CW:17:VAL:HG13	1.67	0.77
3:AC:20:VAL:O	3:AC:21:TYR:HB2	1.83	0.77
3:AC:24:ASP:O	3:AC:28:ARG:HG3	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1423:G:N7	63:CA:3746:HOH:O	2.17	0.77
37:DD:129:ASN:HD21	37:DD:144:ASP:HA	1.47	0.77
37:BD:127:THR:HG23	37:BD:147:ALA:HB3	1.66	0.77
37:BD:167:GLY:H	37:BD:168:ARG:NH1	1.82	0.77
1:AA:434:G:N2	1:AA:447:C:O2	2.17	0.77
1:AA:1718:U:O4	63:AA:3904:HOH:O	2.02	0.77
34:BA:504:C:OP1	63:BA:3303:HOH:O	2.02	0.77
1:AA:1001:G:OP2	14:AQ:14:ARG:NH2	2.18	0.76
16:AS:11:LYS:HG3	16:AS:91:PRO:HD3	1.66	0.76
34:BA:164:U:H2'	34:BA:165:C:C6	2.20	0.76
1:CA:309:G:N3	1:CA:329:G:O2'	2.18	0.76
1:CA:397:G:N7	63:CA:3745:HOH:O	2.17	0.76
1:CA:2499:C:OP2	63:CA:3713:HOH:O	2.03	0.76
18:CU:76:TYR:OH	18:CU:92:ARG:NH1	2.18	0.76
1:AA:2143:G:H1'	3:AC:168:LYS:HE2	1.60	0.76
15:AR:67:LEU:HD13	15:AR:76:VAL:HG21	1.67	0.76
34:BA:881:G:P	45:BL:12:ARG:HH22	2.08	0.76
1:AA:1462:G:N2	1:AA:1629:C:O2	2.16	0.76
9:AK:73:GLY:O	9:AK:75:GLN:N	2.18	0.76
1:CA:601:C:OP1	6:CF:108:LYS:NZ	2.18	0.76
3:CC:24:ASP:O	3:CC:28:ARG:HG3	1.85	0.76
36:DC:122:GLU:O	36:DC:126:ARG:NH1	2.18	0.76
3:AC:27:ALA:O	3:AC:30:VAL:HG22	1.85	0.76
1:CA:11:G:H2'	1:CA:12:U:H5''	1.67	0.76
3:CC:27:ALA:O	3:CC:30:VAL:HG22	1.85	0.76
1:AA:2390:A:H4'	16:AS:23:ARG:NH1	2.00	0.76
1:AA:2643:G:N2	1:AA:2800:C:O2	2.15	0.76
37:BD:41:GLY:O	37:BD:43:HIS:N	2.15	0.76
1:CA:1689:A:H62	1:CA:1698:A:H2	1.34	0.76
1:CA:2317:C:N4	1:CA:2318:G:O6	2.19	0.76
1:AA:9:U:N3	1:AA:2641:A:H2	1.84	0.76
1:AA:1090:G:O2'	1:AA:1157:A:N6	2.19	0.76
57:BZ:210:ARG:HB2	57:BZ:210:ARG:NH1	2.00	0.76
34:DA:117:G:OP2	63:DA:1804:HOH:O	2.04	0.76
21:CX:60:ARG:HH22	31:C7:47:ARG:HH22	1.33	0.76
24:C0:11:ARG:O	24:C0:14:ARG:NH2	2.19	0.76
1:AA:2287:C:H6	1:AA:2287:C:H5'	1.50	0.75
14:AQ:14:ARG:HG2	14:AQ:41:TRP:CH2	2.22	0.75
25:A1:34:THR:HG22	25:A1:36:GLY:H	1.49	0.75
1:CA:1336:A:OP2	21:CX:64:LYS:NZ	2.19	0.75
10:CL:100:THR:HA	10:CL:139:VAL:HB	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DK:22:HIS:HB3	44:DK:29:ILE:HB	1.68	0.75
40:BG:111:ARG:NH2	40:BG:126:ASP:OD2	2.19	0.75
57:BZ:182:ARG:O	57:BZ:184:LYS:N	2.19	0.75
1:CA:1754:C:OP1	17:CT:96:ARG:NH1	2.20	0.75
27:A3:39:ASP:OD2	27:A3:44:ARG:NH2	2.18	0.75
1:CA:1056:G:H4'	1:CA:1086:A:N7	2.02	0.75
4:CD:206:LEU:HD22	4:CD:211:ARG:HG2	1.69	0.75
7:CG:113:ARG:NH1	7:CG:139:LEU:O	2.19	0.75
44:DK:48:ILE:O	44:DK:50:TYR:N	2.19	0.75
8:AH:7:LEU:HD12	8:AH:8:PRO:HD2	1.68	0.75
37:DD:57:ARG:NH2	37:DD:205:GLU:OE2	2.15	0.75
1:AA:185:A:H62	13:AP:38:GLN:HE22	1.33	0.75
1:AA:2007:G:OP2	63:AA:3913:HOH:O	2.02	0.75
12:AO:64:ARG:NH1	12:AO:81:ASP:OD1	2.19	0.75
1:CA:370:G:N7	63:CA:3749:HOH:O	2.19	0.75
1:CA:2022:U:OP1	63:CA:3714:HOH:O	2.04	0.75
13:CP:39:LYS:HA	13:CP:45:LEU:HG	1.68	0.75
17:AT:54:ARG:HA	17:AT:59:THR:HB	1.66	0.75
57:BZ:13:ARG:NH1	57:BZ:280:LEU:O	2.19	0.75
1:CA:2850:A:N7	1:CA:2868:A:O2'	2.20	0.75
1:AA:403:C:OP1	63:AA:3914:HOH:O	2.04	0.75
1:CA:528:A:N1	1:CA:2042:A:H2'	2.02	0.75
6:CF:157:VAL:HG13	6:CF:176:LEU:HB3	1.69	0.75
7:AG:138:GLN:HE22	7:AG:153:ARG:HH21	1.35	0.75
17:CT:18:ASP:N	17:CT:18:ASP:OD1	2.20	0.74
34:DA:979:C:O2	47:DN:19:ARG:NE	2.15	0.74
6:AF:18:ARG:NH2	6:AF:127:GLU:OE1	2.20	0.74
34:BA:738:C:H2'	34:BA:739:C:H6	1.52	0.74
1:CA:2178:C:OP1	3:CC:47:LYS:HG2	1.87	0.74
43:BJ:61:GLU:OE2	47:BN:45:ARG:NE	2.19	0.74
56:BX:36:U:H1'	57:BZ:503:GLY:H	1.52	0.74
1:CA:1315:C:OP2	63:CA:3702:HOH:O	2.04	0.74
1:CA:1446:C:H42	1:CA:1465:G:H1	1.33	0.74
34:DA:1417:G:O6	63:DA:1805:HOH:O	2.05	0.74
34:BA:148:G:H1	34:BA:174:C:H42	1.35	0.74
34:DA:959:A:O2'	34:DA:984:C:O2'	2.06	0.74
40:DG:151:TYR:OH	44:DK:54:ARG:NH1	2.20	0.74
1:CA:2120:G:N2	3:CC:168:LYS:HE2	2.02	0.74
7:CG:136:ARG:HH11	7:CG:137:GLU:H	1.34	0.74
28:C4:40:HIS:HB3	28:C4:43:TYR:HB2	1.69	0.74
1:AA:121:G:OP2	63:AA:3916:HOH:O	2.06	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:16:HIS:HB2	35:BB:204:ASN:HB3	1.70	0.74
47:BN:48:ALA:HB2	47:BN:53:LEU:HD12	1.70	0.74
35:DB:69:LEU:HB3	35:DB:162:ILE:HG22	1.68	0.74
1:AA:717:A:O2'	63:AA:3915:HOH:O	2.05	0.74
34:BA:1417:G:H22	34:BA:1482:G:H2'	1.53	0.74
34:BA:1502:A:H2	34:BA:1505:G:N1	1.83	0.74
12:CO:63:VAL:HG12	12:CO:106:LEU:HD11	1.69	0.74
34:BA:1303:C:OP1	63:BA:3302:HOH:O	2.05	0.74
37:DD:165:MET:SD	37:DD:168:ARG:NH1	2.57	0.74
3:CC:48:LEU:HB3	3:CC:50:ILE:HD12	1.70	0.73
14:CQ:58:PHE:O	14:CQ:60:ARG:N	2.21	0.73
6:AF:75:HIS:ND1	63:AF:402:HOH:O	2.20	0.73
57:BZ:225:GLU:HA	57:BZ:228:MET:HB3	1.69	0.73
35:DB:16:HIS:CG	35:DB:17:PHE:H	2.06	0.73
36:DC:180:ALA:HB1	36:DC:182:ILE:HG13	1.70	0.73
1:AA:1065:U:HO2'	1:AA:1067:A:H2	1.35	0.73
57:BZ:169:GLY:O	57:BZ:173:THR:OG1	2.05	0.73
1:CA:2121:G:H1'	3:CC:168:LYS:HE2	1.68	0.73
10:CL:76:TYR:HD1	10:CL:79:ARG:HH21	1.36	0.73
41:DH:10:LEU:HD22	41:DH:83:ILE:HD11	1.70	0.73
20:AW:18:ARG:NH1	20:AW:76:VAL:O	2.20	0.73
1:CA:1434:A:H61	1:CA:1558:A:H62	1.36	0.73
34:DA:44:G:N2	34:DA:398:C:O2	2.18	0.73
6:AF:89:VAL:O	63:AF:401:HOH:O	2.07	0.73
57:BZ:329:ARG:HB2	57:BZ:374:LEU:HG	1.69	0.73
1:CA:2107:C:H42	1:CA:2182:G:H1	1.35	0.73
1:AA:607:C:O2	1:AA:1302:G:N2	2.19	0.73
1:CA:198:C:OP2	63:CA:3716:HOH:O	2.07	0.73
46:DM:33:ALA:HA	46:DM:59:TYR:HE2	1.53	0.73
57:BZ:388:THR:OG1	57:BZ:399:LEU:N	2.13	0.73
1:CA:2120:G:H21	3:CC:168:LYS:CE	2.00	0.73
1:CA:2132:U:H1'	3:CC:6:LYS:CB	2.18	0.73
3:CC:55:SER:O	3:CC:57:GLN:N	2.22	0.73
1:AA:2143:G:H1'	3:AC:168:LYS:HG2	1.69	0.73
34:BA:1503:A:O2'	55:BV:13:A:N1	2.21	0.73
1:CA:2132:U:O2	3:CC:6:LYS:HB3	1.86	0.73
5:CE:9:VAL:HG23	17:CT:3:ARG:HG2	1.71	0.73
9:CK:73:GLY:O	9:CK:75:GLN:N	2.18	0.73
35:BB:16:HIS:O	35:BB:18:GLY:N	2.20	0.73
34:DA:1189:C:OP1	43:DJ:51:ARG:NH2	2.22	0.73
1:AA:345:G:OP1	6:AF:135:LYS:NZ	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:611:U:H2'	1:AA:612:C:C6	2.24	0.73
24:A0:18:ALA:HB3	24:A0:20:ARG:HH21	1.53	0.73
1:CA:530:G:N1	63:CA:3714:HOH:O	2.22	0.73
1:CA:1054:A:O2'	9:CK:30:GLN:O	2.05	0.73
1:CA:1062:G:N3	10:CL:133:SER:OG	2.17	0.73
1:CA:2206:G:H3'	1:CA:2207:G:H8	1.53	0.73
10:CL:88:ALA:O	10:CL:90:LYS:N	2.22	0.73
24:C0:10:THR:HG22	24:C0:12:ASN:H	1.54	0.73
39:DF:50:TYR:CE2	51:DR:77:GLY:HA2	2.24	0.73
3:AC:48:LEU:HB3	3:AC:50:ILE:HD12	1.70	0.72
17:CT:97:ALA:O	17:CT:98:LYS:NZ	2.21	0.72
22:CY:87:LYS:HD2	22:CY:95:LYS:HD2	1.70	0.72
1:AA:2143:G:C4'	3:AC:168:LYS:HD3	2.19	0.72
1:CA:1237:A:OP1	63:CA:3719:HOH:O	2.08	0.72
17:AT:55:ASN:H	17:AT:59:THR:HG22	1.54	0.72
34:DA:976:G:OP2	34:DA:1358:U:O2'	2.05	0.72
38:DE:131:ILE:O	38:DE:135:THR:OG1	2.05	0.72
57:DZ:187:THR:HB	57:DZ:199:ILE:HD11	1.71	0.72
1:AA:1480:A:H61	1:AA:1605:A:H62	1.34	0.72
1:AA:1533:G:N2	1:AA:1548:C:O2	2.19	0.72
1:AA:2476:C:H1'	63:AA:4446:HOH:O	1.89	0.72
2:AB:13:A:N1	2:AB:69:G:O2'	2.23	0.72
1:CA:2615:U:OP2	63:CA:3715:HOH:O	2.06	0.72
34:DA:1137:C:O2'	34:DA:1138:G:N2	2.22	0.72
35:DB:16:HIS:CD2	35:DB:17:PHE:H	2.07	0.72
57:BZ:-34:ARG:HG3	57:BZ:-32:LEU:HG	1.70	0.72
1:CA:2124:G:O3'	3:CC:175:PRO:HG3	1.89	0.72
1:AA:1055:A:OP2	11:AN:37:LYS:NZ	2.23	0.72
34:BA:1296:C:OP1	46:BM:44:ARG:NH2	2.21	0.72
34:BA:1320:C:OP1	52:BS:70:LYS:NZ	2.22	0.72
57:BZ:122:TRP:HH2	57:BZ:256:THR:HG1	1.36	0.72
1:CA:2307:G:N1	7:CG:43:LEU:O	2.23	0.72
22:CY:29:GLU:HB3	22:CY:38:ILE:HG13	1.69	0.72
34:DA:473:G:H2'	34:DA:474:G:H8	1.55	0.72
1:AA:2448:G:O6	63:AA:3918:HOH:O	2.07	0.72
36:BC:45:LYS:HD3	36:BC:46:GLU:HG2	1.71	0.72
1:CA:1064:C:H4'	10:CL:89:HIS:HA	1.72	0.72
1:CA:1095:A:O4'	57:DZ:618:GLY:HA2	1.90	0.72
57:DZ:88:VAL:O	57:DZ:91:THR:N	2.23	0.72
1:AA:2859:U:O4	17:AT:23:ARG:NH2	2.22	0.72
1:CA:1056:G:H4'	1:CA:1086:A:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:167:PRO:O	57:DZ:170:ARG:NH2	2.23	0.72
1:AA:629:U:OP1	63:AA:3919:HOH:O	2.08	0.72
1:AA:2154:U:C4	3:AC:6:LYS:HB2	2.25	0.72
1:CA:1183:G:O2'	27:C3:29:ARG:NH1	2.23	0.72
1:CA:2286:A:H4'	1:CA:2287:A:O4'	1.90	0.72
6:CF:53:THR:HB	6:CF:56:GLU:OE2	1.89	0.72
1:AA:931:C:N4	1:AA:938:G:O6	2.19	0.72
57:BZ:-53:ASP:H	57:BZ:-50:GLN:NE2	1.88	0.72
23:CZ:45:ASP:OD1	23:CZ:49:ARG:NH1	2.23	0.72
57:DZ:92:ILE:O	57:DZ:94:VAL:N	2.23	0.72
32:A8:29:LYS:HB2	32:A8:33:ASN:HD21	1.55	0.71
34:BA:735:C:H2'	34:BA:736:C:H6	1.55	0.71
34:DA:838:G:H1	34:DA:848:C:H42	1.37	0.71
35:BB:201:ILE:HG21	35:BB:214:ILE:HG21	1.71	0.71
34:DA:687:A:O2'	34:DA:701:C:N4	2.23	0.71
1:AA:1549:U:H2'	1:AA:1550:C:H6	1.54	0.71
21:AX:31:HIS:CD2	21:AX:33:LYS:H	2.07	0.71
35:DB:189:ASP:OD1	35:DB:189:ASP:N	2.23	0.71
57:DZ:97:SER:HA	57:DZ:100:VAL:HG12	1.73	0.71
1:CA:2124:G:C3'	3:CC:175:PRO:HG3	2.21	0.71
1:CA:2132:U:C1'	3:CC:6:LYS:HB3	2.16	0.71
16:CS:27:SER:HA	16:CS:88:ASP:HB3	1.72	0.71
34:DA:596:C:O2	34:DA:644:G:N2	2.18	0.71
1:AA:560:C:O3'	18:AU:53:ARG:NH1	2.22	0.71
10:AL:17:ALA:HB3	10:AL:38:VAL:HG13	1.71	0.71
1:CA:1859:A:C2'	3:CC:206:LYS:CE	2.68	0.71
3:CC:51:ASP:HB3	3:CC:57:GLN:OE1	1.91	0.71
57:DZ:285:ASP:OD2	57:DZ:285:ASP:N	2.17	0.71
1:AA:920:G:O6	1:AA:950:C:N4	2.19	0.71
25:A1:3:LYS:HG2	25:A1:4:VAL:HG23	1.72	0.71
1:CA:1300:U:H4'	1:CA:1301:A:H5'	1.72	0.71
12:CO:2:ILE:HD12	12:CO:6:THR:HG21	1.72	0.71
34:DA:1502:A:H2	34:DA:1505:G:N1	1.87	0.71
46:DM:25:ILE:HG13	46:DM:29:ARG:HG2	1.70	0.71
34:BA:826:C:O2	41:BH:15:ASN:ND2	2.23	0.71
48:BO:26:GLU:OE2	48:BO:77:ARG:NE	2.18	0.71
56:BX:37:A:H5'	57:BZ:500:GLN:O	1.91	0.71
1:CA:855:G:O2'	24:C0:27:GLU:OE2	2.09	0.71
45:DL:75:HIS:CD2	45:DL:77:LEU:H	2.07	0.71
7:AG:15:VAL:HG22	7:AG:175:LEU:HB3	1.73	0.71
34:BA:1305:G:H22	34:BA:1331:G:H1'	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BG:111:ARG:NH1	40:BG:113:GLU:OE2	2.22	0.71
8:CH:113:VAL:HG11	8:CH:151:ILE:HG21	1.72	0.71
21:CX:35:THR:HB	21:CX:38:GLU:HB2	1.70	0.71
1:AA:1426:G:OP2	63:AA:3917:HOH:O	2.07	0.71
2:AB:22:U:O4	63:AB:3101:HOH:O	2.09	0.71
4:AD:69:ARG:NH2	4:AD:128:GLY:O	2.24	0.71
1:CA:1333:C:OP2	63:CA:3720:HOH:O	2.08	0.71
8:CH:38:SER:HB3	8:CH:41:MET:HG2	1.73	0.71
34:DA:932:C:H2'	34:DA:933:G:H8	1.55	0.71
7:AG:41:GLN:HE22	7:AG:153:ARG:HB3	1.57	0.70
1:CA:2038:G:O6	63:CA:3721:HOH:O	2.09	0.70
52:DS:15:LEU:HG	52:DS:18:LYS:HD3	1.72	0.70
1:AA:1749:G:N7	63:AA:3954:HOH:O	2.25	0.70
32:A8:6:THR:HB	32:A8:8:LYS:HE2	1.73	0.70
10:CL:78:ILE:HD12	10:CL:127:ILE:HG22	1.74	0.70
34:DA:590:C:H2'	34:DA:591:U:C6	2.26	0.70
34:DA:986:A:N3	52:DS:52:TYR:OH	2.22	0.70
40:DG:113:GLU:HB2	40:DG:119:ARG:HG2	1.74	0.70
1:AA:427:G:N7	63:AA:3952:HOH:O	2.24	0.70
5:AE:179:GLU:HB3	5:AE:181:LEU:HD22	1.72	0.70
7:AG:143:GLU:O	28:A4:28:LYS:NZ	2.23	0.70
1:CA:2839:G:O2'	15:CR:49:ASP:OD2	2.08	0.70
2:CB:62:C:H2'	2:CB:63:G:H8	1.55	0.70
34:DA:369:C:OP2	34:DA:388:G:N2	2.23	0.70
34:BA:406:G:N3	37:BD:119:GLN:NE2	2.40	0.70
34:BA:1289:A:N1	34:BA:1371:G:O2'	2.21	0.70
35:BB:212:GLN:NE2	35:BB:234:PRO:O	2.24	0.70
34:DA:691:G:H2'	34:DA:692:U:C6	2.26	0.70
1:AA:2143:G:O2'	3:AC:168:LYS:CB	2.38	0.70
1:AA:2735:G:OP2	63:AA:3920:HOH:O	2.09	0.70
34:BA:933:G:O6	40:BG:3:ARG:NH2	2.25	0.70
1:CA:1637:A:OP2	63:CA:3717:HOH:O	2.07	0.70
1:CA:2448:A:N1	63:CA:3768:HOH:O	2.24	0.70
57:DZ:222:ASP:OD2	57:DZ:222:ASP:N	2.21	0.70
12:AO:16:ALA:HB2	12:AO:52:VAL:HG21	1.74	0.70
1:CA:1670:C:OP1	63:CA:3718:HOH:O	2.08	0.70
1:CA:2121:G:C1'	3:CC:168:LYS:CE	2.70	0.70
7:CG:9:ARG:NH1	7:CG:13:GLU:OE1	2.24	0.70
34:DA:62:U:N3	34:DA:105:G:O6	2.14	0.70
34:BA:406:G:OP2	63:BA:3304:HOH:O	2.10	0.70
3:AC:51:ASP:HB3	3:AC:57:GLN:OE1	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AL:134:MET:HG3	10:AL:136:VAL:HG12	1.72	0.70
53:BT:10:LEU:HB3	53:BT:12:ALA:H	1.57	0.70
1:CA:441:U:O2	6:CF:46:ARG:NH2	2.25	0.70
1:CA:1665:A:OP2	63:CA:3722:HOH:O	2.09	0.70
30:C6:6:ARG:NH1	30:C6:26:ASN:HB2	2.07	0.70
57:DZ:183:MET:SD	57:DZ:213:HIS:HD2	2.14	0.70
1:CA:6:A:N6	1:CA:2897:U:O4	2.19	0.70
1:CA:323:G:O2'	1:CA:1205:U:N3	2.24	0.70
1:CA:1842:G:O3'	4:CD:253:GLN:NE2	2.25	0.70
8:CH:15:VAL:HG23	8:CH:28:GLY:HA3	1.73	0.70
1:AA:2013:U:H2'	1:AA:2014:G:H5''	1.73	0.70
34:BA:671:G:H5'	39:BF:77:ARG:HH22	1.57	0.70
1:CA:2466:C:H5''	33:C9:6:SER:HB2	1.72	0.70
34:DA:1075:C:OP1	35:DB:179:LYS:NZ	2.24	0.70
17:AT:16:ARG:NH2	17:AT:83:ILE:O	2.25	0.69
38:DE:12:LEU:HB3	38:DE:31:LEU:HB2	1.72	0.69
41:DH:36:LEU:HA	41:DH:39:LEU:HD23	1.73	0.69
1:AA:2285:A:H2'	1:AA:2286:A:C8	2.26	0.69
1:AA:2564:U:OP2	63:AA:3921:HOH:O	2.10	0.69
29:A5:11:THR:HG22	29:A5:15:ARG:HB3	1.73	0.69
34:BA:1053:G:O2'	34:BA:1199:U:OP2	2.08	0.69
1:CA:300:A:OP1	22:CY:86:ARG:NH2	2.25	0.69
1:CA:2125:G:OP1	3:CC:71:LYS:NZ	2.25	0.69
13:CP:54:GLY:O	63:CP:201:HOH:O	2.10	0.69
2:AB:4:C:H42	2:AB:117:G:H1	1.37	0.69
23:AZ:48:PHE:CE2	23:AZ:71:VAL:HG11	2.27	0.69
34:BA:44:G:H2'	34:BA:45:U:O4'	1.93	0.69
42:BI:40:LEU:O	42:BI:42:ARG:N	2.25	0.69
57:BZ:148:LEU:O	57:BZ:152:THR:OG1	2.09	0.69
36:DC:134:ILE:HD11	36:DC:153:VAL:HG23	1.73	0.69
1:AA:868:A:C2'	1:AA:991:G:H5''	2.21	0.69
3:AC:183:PRO:HG2	3:AC:184:GLU:OE2	1.92	0.69
34:BA:972:C:O2'	43:BJ:55:LYS:O	2.09	0.69
57:BZ:13:ARG:HH12	57:BZ:247:ARG:HH12	1.41	0.69
57:BZ:324:ARG:HG3	57:BZ:324:ARG:HH11	1.57	0.69
14:CQ:85:LYS:HG2	24:C0:7:LEU:HB3	1.73	0.69
34:DA:27:G:N2	34:DA:557:G:H1'	2.07	0.69
3:AC:57:GLN:HG3	3:AC:57:GLN:O	1.93	0.69
42:BI:17:VAL:HG21	42:BI:81:ILE:HG22	1.74	0.69
7:CG:28:VAL:O	7:CG:31:VAL:HG12	1.91	0.69
25:C1:3:LYS:HB2	25:C1:61:ARG:NH1	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:801:C:H2'	1:AA:802:C:C6	2.28	0.69
3:CC:46:ALA:HB3	3:CC:172:ILE:HG22	1.75	0.69
18:CU:65:ILE:HD11	18:CU:95:LEU:HB3	1.72	0.69
34:DA:984:C:H2'	34:DA:985:C:C6	2.27	0.69
1:AA:2291:G:N7	24:A0:14:ARG:NH1	2.41	0.69
34:BA:1445:C:O2'	34:BA:1447:A:N6	2.25	0.69
1:CA:437:G:N7	63:CA:3780:HOH:O	2.26	0.69
34:DA:978:A:O2'	34:DA:1322:C:N3	2.26	0.69
35:DB:27:LYS:HG3	35:DB:194:PRO:HD2	1.75	0.69
43:DJ:6:ILE:HG12	43:DJ:98:ILE:HG12	1.74	0.69
1:AA:1444:C:OP1	21:AX:53:LYS:NZ	2.23	0.69
1:AA:1499:C:H42	1:AA:1506:G:H1	1.38	0.69
3:AC:55:SER:O	3:AC:57:GLN:N	2.22	0.69
34:BA:903:G:OP1	63:BA:3305:HOH:O	2.10	0.69
37:BD:13:ARG:HB3	37:BD:13:ARG:HH11	1.57	0.69
1:CA:403:U:H4'	1:CA:404:C:H5'	1.74	0.69
1:CA:1815:A:OP2	4:CD:54:ARG:NH2	2.26	0.69
1:CA:1840:G:OP2	63:CA:3723:HOH:O	2.09	0.69
1:CA:2470:G:O6	1:CA:2476:A:O2'	2.11	0.69
8:CH:98:LEU:HD22	8:CH:125:VAL:HG23	1.75	0.69
12:CO:35:VAL:HG13	12:CO:65:THR:HG23	1.75	0.69
36:DC:47:LEU:HB3	36:DC:52:LEU:HB3	1.74	0.69
57:DZ:117:GLN:NE2	57:DZ:120:THR:OG1	2.25	0.69
57:DZ:160:ARG:NH1	57:DZ:256:THR:OG1	2.26	0.69
1:AA:2497:G:OP1	14:AQ:46:GLN:NE2	2.23	0.69
30:C6:11:LEU:HB2	30:C6:21:TYR:HB2	1.74	0.69
1:AA:1410:G:N7	25:A1:3:LYS:HE2	2.07	0.69
5:AE:29:GLY:HA3	63:AE:406:HOH:O	1.92	0.69
8:AH:41:MET:HE1	8:AH:65:HIS:HA	1.75	0.69
57:BZ:18:ALA:HB1	57:BZ:121:VAL:HG21	1.75	0.69
1:CA:1843:C:H5'	4:CD:253:GLN:NE2	2.07	0.69
1:CA:1859:A:H2'	3:CC:206:LYS:HD3	1.74	0.69
1:CA:2631:G:O2'	1:CA:2810:A:N1	2.23	0.69
29:A5:5:PRO:O	63:A5:201:HOH:O	2.10	0.68
41:BH:113:SER:HB2	41:BH:134:ILE:HD11	1.74	0.68
1:CA:848:G:H2'	1:CA:849:A:C8	2.27	0.68
1:CA:1062:G:H21	10:CL:133:SER:HA	1.57	0.68
28:C4:14:ILE:HG22	28:C4:22:ILE:HB	1.74	0.68
51:DR:56:THR:HB	51:DR:58:LEU:HD23	1.75	0.68
3:CC:57:GLN:O	3:CC:57:GLN:HG3	1.93	0.68
1:AA:1604:C:OP2	1:AA:1605:A:O2'	2.12	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:677:U:H3	34:BA:713:G:H22	1.39	0.68
42:BI:45:ALA:HA	42:BI:48:GLU:HB2	1.75	0.68
57:BZ:357:ARG:NH1	57:BZ:373:ASP:OD1	2.27	0.68
3:CC:15:VAL:O	3:CC:16:ASP:HB3	1.92	0.68
3:CC:30:VAL:HG23	3:CC:31:LYS:H	1.58	0.68
27:C3:6:VAL:HG13	27:C3:56:VAL:HG13	1.73	0.68
34:DA:677:U:H3	34:DA:713:G:H22	1.39	0.68
34:DA:932:C:H2'	34:DA:933:G:C8	2.28	0.68
43:DJ:52:GLY:O	47:DN:41:ARG:NH2	2.27	0.68
49:DP:52:ASP:O	49:DP:54:GLU:N	2.27	0.68
53:DT:65:LYS:HA	53:DT:68:LYS:HD3	1.75	0.68
8:AH:51:ARG:NH2	8:AH:53:GLU:OE1	2.26	0.68
34:BA:1498:U:O2'	55:BV:17:U:OP1	2.08	0.68
14:CQ:27:VAL:O	14:CQ:29:PHE:N	2.23	0.68
30:C6:6:ARG:NH2	63:C6:4001:HOH:O	2.26	0.68
38:DE:43:LEU:HD21	38:DE:132:ALA:HB1	1.75	0.68
3:AC:25:GLU:HA	3:AC:28:ARG:HD2	1.74	0.68
34:BA:656:C:O2'	48:BO:28:GLN:NE2	2.26	0.68
34:BA:765:G:H5''	34:BA:766:A:OP1	1.93	0.68
1:CA:1412:A:H2'	1:CA:1413:G:H8	1.59	0.68
1:CA:2121:G:O2'	3:CC:168:LYS:HD3	1.93	0.68
3:CC:183:PRO:HG2	3:CC:184:GLU:OE2	1.92	0.68
15:CR:33:ARG:HG3	15:CR:115:GLU:HB3	1.76	0.68
24:C0:27:GLU:HB2	24:C0:69:PHE:HD1	1.58	0.68
7:AG:131:TYR:HB3	7:AG:159:VAL:HG12	1.74	0.68
39:BF:97:PHE:HB2	51:BR:32:ARG:HH11	1.58	0.68
1:CA:997:G:OP1	18:CU:92:ARG:HG2	1.94	0.68
1:CA:1647:G:OP1	63:CA:3705:HOH:O	2.10	0.68
8:CH:3:ARG:NH2	8:CH:5:GLY:H	1.91	0.68
15:CR:33:ARG:HE	15:CR:113:LEU:HD22	1.58	0.68
34:DA:878:G:H5'	41:DH:89:PRO:HG2	1.75	0.68
34:DA:1137:C:HO2'	34:DA:1138:G:N2	1.91	0.68
39:DF:8:ILE:HD13	39:DF:26:ILE:HD13	1.76	0.68
41:DH:6:ILE:O	41:DH:10:LEU:HG	1.93	0.68
1:AA:553:A:H3'	1:AA:553:A:H8	1.57	0.68
23:AZ:52:SER:OG	23:AZ:53:ILE:N	2.19	0.68
31:A7:24:THR:HG22	31:A7:27:GLY:H	1.58	0.68
57:BZ:21:ILE:HD13	57:BZ:21:ILE:H	1.58	0.68
57:BZ:202:PRO:O	57:BZ:206:LEU:HB2	1.94	0.68
3:CC:30:VAL:HG23	3:CC:31:LYS:N	2.09	0.68
6:CF:101:LEU:HD12	6:CF:102:PRO:HD2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:512:U:H2'	34:DA:513:C:C6	2.29	0.68
1:AA:2291:G:O6	24:A0:14:ARG:HD2	1.93	0.68
3:AC:15:VAL:O	3:AC:16:ASP:HB3	1.92	0.68
6:AF:53:THR:CG2	6:AF:55:GLY:H	2.07	0.68
1:CA:987:G:O2'	1:CA:1000:A:N3	2.24	0.68
1:CA:1412:A:H2'	1:CA:1413:G:C8	2.28	0.68
1:CA:2499:C:OP2	63:CA:3725:HOH:O	2.11	0.68
3:CC:25:GLU:HA	3:CC:28:ARG:HD2	1.74	0.68
39:DF:2:ARG:NE	39:DF:69:GLU:HG2	2.09	0.68
1:AA:1940:A:O2'	1:AA:1942:C:N4	2.25	0.68
9:AK:39:ALA:O	9:AK:41:ARG:N	2.26	0.68
34:DA:578:C:OP1	63:DA:1807:HOH:O	2.12	0.68
1:AA:553:A:OP2	11:AN:114:ARG:NH1	2.26	0.68
1:AA:1800:G:O2'	1:AA:1980:C:OP1	2.11	0.68
1:AA:2326:C:H2'	1:AA:2327:G:H8	1.59	0.68
3:AC:46:ALA:HB3	3:AC:172:ILE:CG2	2.23	0.68
11:AN:129:PRO:HD2	11:AN:130:HIS:CD2	2.28	0.68
53:BT:33:ILE:O	53:BT:37:SER:OG	2.10	0.68
1:CA:1309:G:H4'	31:C7:7:PRO:HB2	1.75	0.68
1:CA:2177:C:C2'	3:CC:171:ALA:HB2	2.24	0.68
36:DC:113:ALA:HB2	36:DC:202:ILE:HG13	1.76	0.68
1:AA:1338:U:H2'	1:AA:1339:C:C6	2.29	0.67
1:AA:2152:U:H4'	1:AA:2155:G:H4'	1.74	0.67
3:AC:46:ALA:HB3	3:AC:172:ILE:HG22	1.75	0.67
47:BN:51:GLY:O	47:BN:53:LEU:N	2.26	0.67
1:CA:2327:A:H2'	1:CA:2328:A:C8	2.29	0.67
3:CC:46:ALA:HB3	3:CC:172:ILE:CG2	2.23	0.67
19:CV:21:ARG:NH2	19:CV:91:TYR:OH	2.26	0.67
41:DH:73:ASP:OD2	41:DH:75:ARG:NH1	2.28	0.67
46:DM:17:VAL:O	46:DM:20:THR:OG1	2.12	0.67
1:AA:237:G:OP1	63:AA:3923:HOH:O	2.12	0.67
1:AA:1834:A:O2'	4:AD:259:THR:HG21	1.94	0.67
30:A6:18:ARG:HD3	30:A6:42:TRP:NE1	2.09	0.67
34:BA:453:A:O2'	49:BP:68:ASP:O	2.11	0.67
34:BA:542:G:OP1	37:BD:10:ARG:NH2	2.16	0.67
38:BE:40:ARG:NH2	38:BE:68:GLU:HA	2.10	0.67
1:CA:2886:G:H2'	1:CA:2887:U:H6	1.57	0.67
7:CG:180:PHE:O	7:CG:182:LYS:N	2.28	0.67
19:CV:74:LYS:HB2	19:CV:83:ARG:HB2	1.77	0.67
33:C9:22:ARG:HB2	33:C9:24:TYR:CE1	2.29	0.67
42:DI:13:ALA:HB2	42:DI:68:GLY:HA3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2162:C:O2	1:AA:2173:G:N2	2.28	0.67
9:AK:28:ASN:O	9:AK:30:GLN:N	2.27	0.67
34:DA:1078:U:H1'	38:DE:130:ASN:HD21	1.58	0.67
34:DA:1279:A:O2'	34:DA:1282:C:N4	2.26	0.67
34:BA:942:G:H21	42:BI:124:GLN:NE2	1.93	0.67
3:CC:41:THR:O	3:CC:42:VAL:HB	1.94	0.67
34:BA:714:G:H2'	34:BA:715:A:C8	2.29	0.67
37:BD:178:VAL:O	37:BD:180:GLY:N	2.27	0.67
1:CA:2345:G:OP2	30:C6:38:LYS:NZ	2.22	0.67
34:DA:376:G:H5''	49:DP:5:ARG:HD3	1.77	0.67
34:DA:1132:C:H2'	34:DA:1133:G:C8	2.29	0.67
34:DA:1251:A:H2'	34:DA:1252:A:C8	2.29	0.67
1:AA:801:C:H2'	1:AA:802:C:H6	1.60	0.67
1:AA:1935:A:H4'	1:AA:1936:C:H5''	1.76	0.67
1:AA:1993:A:OP2	4:AD:242:ARG:NH2	2.27	0.67
3:AC:30:VAL:HG23	3:AC:31:LYS:H	1.58	0.67
3:AC:30:VAL:HG23	3:AC:31:LYS:N	2.09	0.67
34:BA:279:A:OP2	50:BQ:95:TYR:OH	2.09	0.67
1:CA:2124:G:O3'	3:CC:175:PRO:HG2	1.94	0.67
35:DB:178:ARG:HH22	41:DH:68:ARG:HH22	1.42	0.67
17:AT:24:PRO:HA	17:AT:49:VAL:HG22	1.76	0.67
26:A2:1:MET:N	26:A2:52:ASP:OD1	2.26	0.67
34:BA:486:U:H2'	34:BA:487:A:H8	1.59	0.67
34:BA:538:G:H5''	45:BL:114:LYS:HB2	1.77	0.67
1:CA:922:U:H2'	1:CA:923:C:C6	2.30	0.67
1:CA:1783:A:OP1	63:CA:3728:HOH:O	2.13	0.67
23:CZ:108:PRO:HG2	23:CZ:117:LEU:HD13	1.76	0.67
34:DA:920:U:H2'	34:DA:921:U:C6	2.30	0.67
37:DD:23:GLY:N	37:DD:26:CYS:SG	2.60	0.67
57:DZ:363:ARG:HG2	57:DZ:363:ARG:HH11	1.58	0.67
1:AA:1151:U:H2'	1:AA:1152:G:C8	2.30	0.67
16:AS:15:ARG:O	16:AS:19:LYS:HG2	1.95	0.67
35:BB:204:ASN:OD1	35:BB:205:ASP:N	2.27	0.67
1:CA:1270:C:O2'	1:CA:1648:C:OP2	2.09	0.67
1:CA:2123:G:H21	3:CC:45:HIS:HE1	1.42	0.67
1:AA:868:A:N1	63:AA:3962:HOH:O	2.27	0.67
14:AQ:37:LEU:HB2	14:AQ:128:LYS:HB2	1.75	0.67
44:BK:27:ASN:OD1	44:BK:28:THR:N	2.26	0.67
1:CA:299:A:N3	1:CA:319:C:O2'	2.28	0.67
1:CA:1899:G:H2'	1:CA:1899:G:N3	2.10	0.67
10:CL:6:ALA:HB3	10:CL:30:HIS:HE1	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:630:U:OP1	6:AF:102:PRO:HA	1.93	0.67
1:AA:2787:C:OP2	63:AA:3922:HOH:O	2.11	0.67
34:BA:406:G:H21	37:BD:119:GLN:HE22	1.43	0.67
37:BD:108:LEU:HD11	37:BD:174:LEU:HD22	1.76	0.67
1:CA:991:C:OP2	63:CA:3730:HOH:O	2.13	0.67
23:AZ:152:ALA:HB1	23:AZ:163:LEU:HD21	1.78	0.66
36:BC:152:ILE:HB	36:BC:199:LYS:HB2	1.78	0.66
1:CA:1971:A:OP1	63:CA:3726:HOH:O	2.11	0.66
2:CB:106:G:H5'	23:CZ:31:ARG:HG2	1.76	0.66
17:CT:85:LYS:NZ	17:CT:87:ASP:OD2	2.28	0.66
34:DA:1499:A:H1'	34:DA:1520:G:H5'	1.77	0.66
57:DZ:115:GLU:O	57:DZ:118:SER:HB2	1.95	0.66
57:DZ:214:GLU:OE2	57:DZ:218:GLU:OE2	2.12	0.66
1:AA:482:C:H4'	63:AA:4405:HOH:O	1.95	0.66
1:AA:1525:G:H2'	1:AA:1526:G:H8	1.60	0.66
3:AC:176:VAL:HG11	3:AC:190:ILE:HD13	1.76	0.66
6:AF:132:VAL:HG22	6:AF:163:VAL:HG22	1.77	0.66
3:CC:31:LYS:NZ	3:CC:180:SER:O	2.28	0.66
3:CC:42:VAL:HG13	3:CC:43:GLU:N	2.10	0.66
17:CT:39:ARG:NH2	34:DA:345:C:OP2	2.28	0.66
35:DB:101:MET:HA	35:DB:108:ILE:HG13	1.77	0.66
21:AX:5:TYR:CZ	26:A2:30:ARG:HD2	2.30	0.66
33:A9:11:CYS:HB3	33:A9:32:HIS:HE1	1.61	0.66
1:CA:2582:G:OP2	63:CA:3727:HOH:O	2.13	0.66
5:CE:11:MET:HG2	5:CE:24:THR:HG22	1.78	0.66
3:AC:65:LEU:HB3	3:AC:189:ASN:ND2	2.11	0.66
4:AD:16:MET:HG3	4:AD:211:ARG:HH21	1.59	0.66
3:AC:41:THR:O	3:AC:42:VAL:HB	1.94	0.66
3:AC:42:VAL:HG13	3:AC:43:GLU:N	2.10	0.66
10:AL:72:PRO:O	10:AL:111:LYS:NZ	2.28	0.66
11:AN:65:LYS:HZ2	11:AN:65:LYS:HB2	1.61	0.66
34:BA:1305:G:N2	34:BA:1331:G:H1'	2.10	0.66
34:BA:1347:G:N2	34:BA:1373:G:H2'	2.10	0.66
1:CA:2682:U:O2'	17:CT:58:ASN:ND2	2.28	0.66
7:CG:126:ASP:HB3	7:CG:128:ARG:H	1.60	0.66
13:CP:126:VAL:HG12	13:CP:148:LEU:HD22	1.77	0.66
25:C1:67:ILE:N	25:C1:68:PRO:HD2	2.10	0.66
5:AE:93:VAL:HG22	63:AE:406:HOH:O	1.94	0.66
17:AT:105:LEU:HD13	17:AT:109:GLU:HB3	1.77	0.66
34:BA:1355:G:H2'	34:BA:1356:G:C8	2.30	0.66
37:BD:78:LEU:HB3	37:BD:93:PHE:HE1	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1429:G:H2'	1:CA:1430:C:C6	2.30	0.66
1:CA:1688:U:O2	1:CA:1700:A:H5'	1.96	0.66
38:DE:53:LEU:H	38:DE:53:LEU:HD12	1.59	0.66
1:AA:1157:A:H8	1:AA:1158:G:H1'	1.60	0.66
1:AA:1995:G:H2'	1:AA:1996:C:C6	2.30	0.66
8:AH:61:HIS:HA	8:AH:64:LEU:HD12	1.76	0.66
25:A1:86:SER:O	25:A1:90:ILE:HG13	1.96	0.66
1:CA:120:U:OP2	63:CA:3735:HOH:O	2.14	0.66
1:CA:1466:G:HO2'	1:CA:1546:C:HO2'	1.42	0.66
16:CS:34:HIS:O	16:CS:97:ARG:NH2	2.27	0.66
37:DD:13:ARG:HB2	37:DD:40:PRO:HD3	1.77	0.66
1:AA:2299:A:H62	1:AA:2356:U:H3	1.44	0.66
4:AD:77:ALA:O	4:AD:116:GLN:HG3	1.96	0.66
35:BB:179:LYS:HA	41:BH:72:PRO:HG3	1.78	0.66
4:CD:17:THR:O	4:CD:211:ARG:NH2	2.28	0.66
34:DA:67:C:H2'	34:DA:68:G:C8	2.31	0.66
57:DZ:75:LYS:O	57:DZ:77:HIS:HD2	1.79	0.66
32:A8:38:GLY:O	32:A8:42:ARG:HB2	1.96	0.66
34:BA:653:A:OP1	41:BH:56:LYS:NZ	2.27	0.66
34:BA:738:C:H2'	34:BA:739:C:C6	2.31	0.66
57:BZ:-38:TYR:O	57:BZ:-35:PRO:HD2	1.96	0.66
1:CA:775:G:O3'	63:CA:3729:HOH:O	2.13	0.66
1:CA:2292:C:OP1	16:CS:17:ARG:NH2	2.23	0.66
1:CA:2611:U:C4	29:C5:3:LYS:HG3	2.31	0.66
1:CA:2823:A:OP1	5:CE:159:HIS:NE2	2.20	0.66
21:CX:31:HIS:HD2	21:CX:33:LYS:H	1.43	0.66
34:DA:728:A:H2'	34:DA:729:A:C8	2.31	0.66
14:AQ:21:THR:HG21	14:AQ:101:ARG:HD3	1.78	0.66
19:AV:29:PRO:HA	19:AV:61:VAL:HG22	1.78	0.66
1:CA:301:G:N7	63:CA:3793:HOH:O	2.28	0.66
1:CA:2880:C:O3'	15:CR:90:ARG:NH1	2.29	0.66
3:CC:65:LEU:HB3	3:CC:189:ASN:ND2	2.11	0.66
4:CD:110:GLY:O	4:CD:112:GLN:NE2	2.29	0.66
6:CF:53:THR:HG23	6:CF:55:GLY:H	1.61	0.66
34:DA:339:C:H2'	34:DA:340:U:C6	2.31	0.66
34:DA:807:A:H2'	34:DA:808:C:C6	2.31	0.66
57:DZ:169:GLY:H	57:DZ:170:ARG:NH1	1.87	0.66
19:AV:72:VAL:HG13	19:AV:85:LYS:HB3	1.78	0.65
34:BA:193:C:H2'	34:BA:194:C:C6	2.31	0.65
57:BZ:166:LEU:HB3	57:BZ:178:ILE:HD12	1.78	0.65
1:CA:1045:A:H4'	1:CA:1046:A:H5''	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2006:C:OP2	63:CA:3734:HOH:O	2.14	0.65
1:CA:2121:G:H1'	3:CC:168:LYS:CG	2.26	0.65
1:CA:2124:G:H4'	3:CC:175:PRO:CD	2.25	0.65
11:CN:49:GLY:O	11:CN:119:ARG:NH1	2.29	0.65
34:DA:503:C:H2'	34:DA:504:C:H6	1.61	0.65
1:AA:1529:G:O6	1:AA:1553:A:N6	2.29	0.65
3:AC:31:LYS:NZ	3:AC:180:SER:O	2.28	0.65
23:AZ:115:GLY:HA2	23:AZ:177:PRO:HB3	1.78	0.65
37:BD:162:LEU:O	37:BD:165:MET:N	2.29	0.65
41:BH:83:ILE:HB	41:BH:137:VAL:HG13	1.78	0.65
1:CA:1780:A:OP1	63:CA:3703:HOH:O	2.13	0.65
8:CH:80:SER:OG	8:CH:81:GLU:N	2.26	0.65
17:CT:23:ARG:HG3	17:CT:120:ARG:NH1	2.11	0.65
20:CW:18:ARG:NH1	20:CW:76:VAL:O	2.29	0.65
28:C4:24:THR:OG1	28:C4:25:TYR:N	2.29	0.65
1:AA:455:A:OP2	1:AA:455:A:H8	1.80	0.65
1:AA:1355:G:OP1	31:A7:9:ARG:HB2	1.97	0.65
34:BA:356:A:N3	34:BA:368:U:O2'	2.27	0.65
35:BB:88:ALA:HB2	35:BB:219:VAL:HG13	1.79	0.65
1:CA:938:G:OP1	32:C8:52:LYS:NZ	2.30	0.65
1:CA:1364:G:N7	25:C1:3:LYS:HE2	2.11	0.65
3:CC:176:VAL:HG11	3:CC:190:ILE:HD13	1.76	0.65
4:CD:238:GLY:O	4:CD:239:ARG:HB2	1.95	0.65
22:CY:23:ARG:HG2	22:CY:42:VAL:HG22	1.78	0.65
34:DA:1016:A:O2'	34:DA:1217:C:O2'	2.13	0.65
39:DF:30:LEU:HB3	39:DF:35:ALA:HB3	1.78	0.65
57:DZ:169:GLY:O	57:DZ:173:THR:OG1	2.09	0.65
1:AA:2430:A:H2'	1:AA:2431:U:C6	2.31	0.65
3:AC:63:VAL:O	3:AC:161:ARG:HA	1.96	0.65
7:AG:131:TYR:HB3	7:AG:159:VAL:CG1	2.26	0.65
50:BQ:45:HIS:HB2	50:BQ:65:ILE:HD13	1.78	0.65
1:CA:53:A:OP2	63:CA:3736:HOH:O	2.14	0.65
1:CA:658:C:H2'	1:CA:659:C:C6	2.31	0.65
3:CC:63:VAL:O	3:CC:161:ARG:HA	1.96	0.65
20:CW:51:LEU:HD23	20:CW:105:VAL:HG11	1.78	0.65
34:DA:189(F):U:O2	50:DQ:63:ARG:NH2	2.29	0.65
46:DM:5:ALA:HB3	46:DM:22:ILE:HD12	1.77	0.65
1:AA:1342:G:OP1	1:AA:2721:G:O2'	2.12	0.65
45:DL:59:ARG:NH1	45:DL:65:GLU:OE1	2.30	0.65
49:DP:43:LYS:HG2	49:DP:48:TRP:CD2	2.32	0.65
1:AA:661:G:N7	13:AP:113:LYS:NZ	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1154:U:O2'	1:AA:1155:C:O4'	2.15	0.65
6:AF:184:TYR:O	6:AF:188:ARG:HG3	1.96	0.65
34:DA:921:U:O2'	38:DE:19:MET:O	2.13	0.65
1:AA:2262:G:OP1	14:AQ:85:LYS:NZ	2.22	0.65
1:AA:2365:G:N7	63:AA:3974:HOH:O	2.29	0.65
34:BA:411:A:OP1	37:BD:30:LYS:NZ	2.26	0.65
1:CA:2124:G:C4'	3:CC:175:PRO:CG	2.69	0.65
1:CA:2150:U:H2'	1:CA:2151:G:H8	1.62	0.65
8:CH:164:TYR:N	8:CH:167:GLU:OE1	2.24	0.65
34:DA:116:A:OP1	63:DA:1804:HOH:O	2.15	0.65
57:DZ:168:ILE:HG23	57:DZ:205:TYR:HE2	1.61	0.65
1:AA:1736:A:H62	1:AA:1745:A:H2	1.45	0.65
3:AC:206:LYS:HB3	3:AC:206:LYS:NZ	2.12	0.65
6:AF:101:LEU:HD12	6:AF:102:PRO:HD2	1.78	0.65
40:BG:78:ARG:HH21	40:BG:156:TRP:HB3	1.60	0.65
57:BZ:264:LEU:HB2	62:BZ:801:GDP:C5	2.32	0.65
57:BZ:355:LEU:HD23	57:BZ:369:LEU:HD13	1.79	0.65
1:CA:778:G:OP2	63:CA:3732:HOH:O	2.14	0.65
6:CF:131:GLY:O	6:CF:133:ASN:N	2.21	0.65
7:CG:166:ASP:O	7:CG:170:ARG:N	2.29	0.65
19:CV:21:ARG:HG2	19:CV:91:TYR:CE2	2.32	0.65
34:DA:404:U:H5'	37:DD:122:ARG:HE	1.61	0.65
35:DB:84:GLU:HB3	35:DB:219:VAL:HG21	1.79	0.65
35:DB:178:ARG:HH21	41:DH:74:PRO:HB3	1.62	0.65
50:DQ:86:GLU:HG3	50:DQ:90:ILE:HD11	1.79	0.65
57:DZ:169:GLY:N	57:DZ:170:ARG:NH1	2.45	0.65
1:AA:1154:U:O2'	1:AA:1155:C:H5''	1.97	0.65
1:AA:2207:C:H2'	1:AA:2208:G:H8	1.62	0.65
1:AA:2864:G:H2'	1:AA:2865:C:C6	2.32	0.65
10:AL:99:ILE:O	10:AL:139:VAL:N	2.30	0.65
34:BA:690:G:C6	34:BA:691:G:C6	2.84	0.65
38:BE:78:HIS:HD1	41:BH:104:ARG:HD2	1.61	0.65
1:CA:2032:G:O2'	5:CE:145:LYS:HE2	1.97	0.65
1:CA:2758:A:C2	1:CA:2759:G:H1'	2.32	0.65
1:CA:2850:A:OP2	1:CA:2866:U:H5	1.80	0.65
3:CC:206:LYS:NZ	3:CC:206:LYS:HB3	2.12	0.65
17:CT:16:ARG:HD2	17:CT:19:LEU:HD11	1.78	0.65
47:DN:24:CYS:HB3	47:DN:28:GLY:H	1.61	0.65
1:AA:1154:U:O2'	1:AA:1155:C:H6	1.80	0.65
28:A4:53:GLU:HB3	28:A4:54:GLY:HA2	1.79	0.65
32:A8:39:LYS:O	32:A8:43:GLN:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1188:U:H4'	19:CV:79:VAL:HG22	1.79	0.65
17:CT:11:GLU:O	17:CT:15:VAL:HG23	1.97	0.65
35:DB:155:LEU:HD11	35:DB:159:PRO:HD3	1.79	0.65
57:DZ:24:GLY:HA2	62:DZ:704:GDP:O2A	1.97	0.65
57:DZ:151:ARG:O	57:DZ:155:GLU:HB2	1.97	0.65
1:CA:1090:U:H2'	1:CA:1091:G:C8	2.31	0.64
1:CA:2176:A:H4'	3:CC:45:HIS:HD2	1.48	0.64
10:CL:27:LEU:HD11	10:CL:57:ILE:HD13	1.78	0.64
10:CL:101:TRP:NE1	10:CL:140:GLY:HA3	2.10	0.64
34:DA:222:U:H2'	34:DA:223:U:C6	2.32	0.64
34:DA:982:U:H5''	47:DN:6:LEU:HD21	1.78	0.64
45:DL:79:GLU:HB3	45:DL:80:HIS:CD2	2.32	0.64
3:AC:69:LEU:O	3:AC:178:LYS:HG3	1.98	0.64
8:AH:54:ARG:HD3	8:AH:65:HIS:ND1	2.12	0.64
40:BG:93:PRO:HA	40:BG:96:GLN:HB2	1.79	0.64
3:CC:69:LEU:O	3:CC:178:LYS:HG3	1.97	0.64
10:CL:8:VAL:HG21	10:CL:26:ALA:HB1	1.77	0.64
34:DA:1101:A:H4'	34:DA:1102:A:O5'	1.97	0.64
34:DA:1387:G:H2'	34:DA:1388:C:C6	2.32	0.64
35:DB:88:ALA:HB2	35:DB:219:VAL:HG13	1.79	0.64
57:DZ:363:ARG:HG2	57:DZ:363:ARG:NH1	2.10	0.64
6:AF:123:LEU:HD13	6:AF:192:LEU:HD13	1.78	0.64
10:AL:41:PHE:HE1	10:AL:53:VAL:HB	1.60	0.64
20:AW:43:GLY:O	20:AW:47:VAL:HG23	1.97	0.64
21:AX:43:VAL:HG21	21:AX:81:VAL:HG11	1.78	0.64
34:BA:503:C:H2'	34:BA:504:C:H6	1.62	0.64
37:BD:57:ARG:HG2	37:BD:202:LEU:HD22	1.79	0.64
25:C1:8:SER:HB3	25:C1:66:HIS:CD2	2.33	0.64
34:DA:1071:C:H2'	34:DA:1072:G:H8	1.62	0.64
41:DH:13:ILE:O	41:DH:17:THR:HG23	1.97	0.64
50:DQ:18:THR:OG1	50:DQ:69:LYS:NZ	2.20	0.64
1:AA:354:A:H2	1:AA:1255:A:HO2'	1.41	0.64
1:AA:1249:A:H61	1:AA:1286:U:H2'	1.63	0.64
1:AA:2023:A:H2'	1:AA:2024:G:C8	2.31	0.64
1:AA:2457:G:OP1	6:AF:74:ARG:NH2	2.29	0.64
4:AD:273:ARG:HB3	4:AD:273:ARG:HH11	1.63	0.64
5:AE:49:LEU:HD22	5:AE:81:ILE:HD13	1.80	0.64
34:BA:166:G:H2'	34:BA:167:G:C8	2.30	0.64
35:BB:109:SER:HA	35:BB:112:VAL:HG13	1.78	0.64
35:BB:111:ARG:HG2	35:BB:111:ARG:HH11	1.62	0.64
44:BK:23:ALA:HB1	44:BK:88:GLY:HA3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2022:U:O2'	1:CA:2617:C:H5'	1.97	0.64
1:CA:2430:A:OP2	63:CA:3737:HOH:O	2.14	0.64
6:CF:170:LEU:HG	6:CF:172:TRP:NE1	2.12	0.64
7:CG:64:THR:HB	7:CG:94:LEU:HD21	1.78	0.64
34:DA:407:G:H5''	37:DD:115:ARG:HD2	1.78	0.64
34:DA:663:A:H5''	51:DR:61:LYS:HE3	1.78	0.64
36:DC:58:GLU:HB3	43:DJ:92:THR:HG21	1.80	0.64
1:AA:786:G:OP1	63:AA:3924:HOH:O	2.14	0.64
1:AA:2137:G:H21	1:AA:2193:A:H61	1.45	0.64
16:AS:48:LEU:HD23	16:AS:82:ILE:HD11	1.78	0.64
29:A5:16:ARG:HD2	29:A5:17:ASP:OD1	1.97	0.64
57:BZ:223:PHE:HB3	57:BZ:248:LYS:HD3	1.80	0.64
1:CA:2177:C:H5'	3:CC:45:HIS:HB3	1.80	0.64
1:CA:2287:A:N6	1:CA:2344:U:H3	1.94	0.64
7:CG:126:ASP:HB2	7:CG:130:ASN:H	1.63	0.64
57:DZ:532:GLY:O	57:DZ:534:ILE:N	2.31	0.64
1:AA:1452:U:H2'	1:AA:1453:C:C6	2.32	0.64
6:AF:53:THR:HG23	6:AF:55:GLY:H	1.61	0.64
22:AY:20:TYR:CE1	22:AY:43:ASN:HA	2.32	0.64
1:CA:271(E):U:H2'	1:CA:271(F):C:C6	2.33	0.64
1:CA:2837:G:N7	63:CA:3800:HOH:O	2.30	0.64
5:CE:115:GLY:O	5:CE:119:ARG:HB2	1.98	0.64
15:CR:52:ILE:O	15:CR:55:ALA:N	2.31	0.64
34:BA:148:G:H2'	34:BA:149:A:H8	1.63	0.64
34:BA:1510:U:H2'	34:BA:1511:G:C8	2.33	0.64
1:CA:253:C:OP2	32:C8:5:LYS:NZ	2.24	0.64
1:CA:2033:A:OP1	63:CA:3741:HOH:O	2.15	0.64
53:DT:56:MET:HE1	53:DT:85:MET:HG2	1.79	0.64
1:AA:957:A:OP1	63:AA:3926:HOH:O	2.15	0.64
2:AB:29:A:O2'	2:AB:58:A:N1	2.29	0.64
5:AE:141:ILE:HD12	5:AE:150:VAL:HG21	1.80	0.64
57:BZ:184:LYS:NZ	57:BZ:198:GLU:OE1	2.27	0.64
34:DA:427:U:OP1	37:DD:13:ARG:NH2	2.30	0.64
57:DZ:159:ALA:HB1	57:DZ:160:ARG:HG3	1.80	0.64
1:AA:325:G:OP2	22:AY:84:ARG:NH2	2.31	0.64
1:AA:2157:A:N6	1:AA:2178:G:O2'	2.25	0.64
1:AA:2623:U:H6	1:AA:2623:U:H5'	1.63	0.64
8:AH:69:ARG:HG3	8:AH:70:THR:N	2.12	0.64
23:AZ:151:HIS:HA	23:AZ:170:THR:HA	1.79	0.64
37:BD:23:GLY:N	37:BD:26:CYS:SG	2.69	0.64
57:BZ:402:ILE:HG23	57:BZ:403:GLU:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2032:G:N7	63:CA:3802:HOH:O	2.30	0.64
1:CA:2296:U:OP2	16:CS:9:ARG:NH2	2.31	0.64
1:CA:2788:C:OP1	5:CE:61:ARG:NH2	2.26	0.64
34:DA:7:G:O2'	38:DE:120:THR:O	2.16	0.64
36:DC:173:VAL:HG13	36:DC:182:ILE:HD13	1.78	0.64
49:DP:53:VAL:HG22	49:DP:79:VAL:HG22	1.79	0.64
3:AC:68:GLY:N	3:AC:189:ASN:HD21	1.96	0.64
1:CA:1996:C:H4'	1:CA:1997:G:OP1	1.98	0.64
3:CC:44:VAL:CG2	3:CC:176:VAL:HG21	2.28	0.64
4:CD:38:LYS:NZ	4:CD:39:LYS:O	2.27	0.64
4:CD:276:LYS:H	4:CD:276:LYS:HD3	1.63	0.64
12:CO:120:GLU:OE1	17:CT:67:SER:OG	2.15	0.64
39:DF:100:ASN:HD21	51:DR:23:LYS:HE3	1.63	0.64
41:DH:85:ARG:HH21	41:DH:134:ILE:HG23	1.62	0.64
47:DN:27:CYS:SG	47:DN:28:GLY:N	2.71	0.64
57:DZ:169:GLY:HA3	57:DZ:174:PHE:HA	1.80	0.64
1:AA:516:G:H2'	1:AA:517:A:C8	2.33	0.63
1:AA:732:A:H1'	1:AA:735:U:O4	1.98	0.63
1:AA:1410:G:OP2	25:A1:3:LYS:HD2	1.97	0.63
44:BK:48:ILE:O	44:BK:50:TYR:N	2.30	0.63
1:CA:528:A:O2'	1:CA:529:A:H5''	1.97	0.63
1:CA:1029:A:N1	1:CA:2465:C:O2'	2.31	0.63
3:CC:29:LEU:O	3:CC:32:GLU:N	2.31	0.63
10:CL:30:HIS:HA	10:CL:59:ILE:HD12	1.78	0.63
33:C9:9:ARG:HG2	33:C9:14:CYS:HB2	1.80	0.63
34:DA:474:G:H2'	34:DA:475:G:H8	1.63	0.63
1:AA:553:A:C2'	1:AA:554:A:H5'	2.26	0.63
1:AA:1633:A:H2'	1:AA:1634:C:C6	2.34	0.63
3:AC:44:VAL:CG2	3:AC:176:VAL:HG21	2.28	0.63
57:BZ:-38:TYR:O	57:BZ:-34:ARG:HG2	1.97	0.63
57:BZ:19:ALA:HB3	57:BZ:25:LYS:HE3	1.79	0.63
1:CA:2162:G:OP1	1:CA:2172:U:O2'	2.16	0.63
34:DA:1086:U:H3	34:DA:1099:G:H22	1.46	0.63
42:DI:16:ARG:HB2	42:DI:64:THR:HG23	1.80	0.63
1:AA:2717:A:O2'	1:AA:2862:G:OP1	2.08	0.63
3:AC:7:ARG:O	3:AC:11:LEU:HD23	1.99	0.63
3:AC:29:LEU:O	3:AC:32:GLU:N	2.32	0.63
38:BE:51:VAL:O	38:BE:55:VAL:HG23	1.98	0.63
7:CG:161:THR:HG22	7:CG:163:ALA:H	1.63	0.63
37:DD:76:ARG:NH2	37:DD:80:GLU:OE1	2.26	0.63
46:DM:65:LYS:NZ	46:DM:73:GLU:OE2	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:A3:8:LEU:HD13	27:A3:31:LEU:HD23	1.79	0.63
34:BA:1239:A:H4'	34:BA:1240:U:H5''	1.81	0.63
36:BC:157:ILE:HD13	36:BC:164:ARG:HB3	1.80	0.63
57:BZ:20:HIS:ND1	57:BZ:116:PRO:O	2.32	0.63
57:BZ:273:LEU:O	57:BZ:276:VAL:N	2.30	0.63
1:CA:2722:G:OP2	63:CA:3740:HOH:O	2.15	0.63
48:DO:16:ALA:HB1	48:DO:21:ASP:HB3	1.80	0.63
57:DZ:402:ILE:HG23	57:DZ:403:GLU:H	1.62	0.63
5:AE:111:ARG:HG3	5:AE:160:TYR:CD2	2.33	0.63
5:AE:120:TRP:CE3	5:AE:155:LYS:HE2	2.34	0.63
21:AX:57:LEU:HD13	21:AX:78:LYS:HB2	1.80	0.63
38:BE:93:PRO:HG2	41:BH:105:ARG:HG3	1.81	0.63
57:BZ:273:LEU:HA	57:BZ:276:VAL:HG23	1.81	0.63
1:CA:2871:C:N4	63:CA:3804:HOH:O	2.30	0.63
3:CC:7:ARG:O	3:CC:11:LEU:HD23	1.99	0.63
3:CC:68:GLY:N	3:CC:189:ASN:HD21	1.96	0.63
1:AA:2096:U:H2'	1:AA:2097:U:C6	2.33	0.63
11:AN:46:VAL:HG23	11:AN:48:MET:HG2	1.79	0.63
34:BA:1125:U:H4'	43:BJ:5:ARG:NH2	2.14	0.63
44:BK:18:ARG:NH1	44:BK:20:TYR:OH	2.31	0.63
7:CG:41:GLN:NE2	7:CG:154:GLY:O	2.27	0.63
35:DB:74:LYS:NZ	35:DB:205:ASP:O	2.32	0.63
40:BG:113:GLU:HB2	40:BG:119:ARG:HG2	1.80	0.63
57:BZ:329:ARG:HD3	57:BZ:331:TYR:CZ	2.34	0.63
1:CA:2121:G:C2'	3:CC:168:LYS:HD3	2.28	0.63
16:CS:39:ILE:HB	16:CS:49:VAL:HG12	1.81	0.63
34:DA:646:U:H2'	34:DA:647:C:C6	2.34	0.63
34:DA:1003:G:N2	34:DA:1025:U:O4	2.31	0.63
36:DC:187:ALA:HB3	36:DC:198:VAL:HB	1.81	0.63
24:A0:18:ALA:HB3	24:A0:20:ARG:NH2	2.13	0.63
1:CA:2150:U:H2'	1:CA:2151:G:C8	2.34	0.63
3:CC:6:LYS:HG3	3:CC:7:ARG:N	2.14	0.63
19:CV:21:ARG:HG2	19:CV:91:TYR:CD2	2.34	0.63
55:DV:18:G:H4'	57:DZ:504:ARG:HA	1.80	0.63
1:AA:2034:G:OP1	20:AW:11:ARG:NH2	2.32	0.62
3:AC:6:LYS:HG3	3:AC:7:ARG:N	2.14	0.62
46:BM:92:HIS:CE1	46:BM:98:VAL:HG21	2.34	0.62
1:CA:1044:G:H21	1:CA:1111:A:H2	1.45	0.62
1:CA:1786:A:H1'	1:CA:1938:A:N6	2.13	0.62
1:CA:2640:G:OP1	11:CN:97:ARG:NH2	2.32	0.62
10:CL:125:ARG:HA	10:CL:128:ALA:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:60:A:H4'	34:DA:61:G:O5'	1.99	0.62
34:DA:1353:G:H2'	34:DA:1354:C:H6	1.64	0.62
57:DZ:211:GLU:O	57:DZ:215:LYS:HE2	1.99	0.62
1:AA:2886:G:H4'	17:AT:2:ASN:ND2	2.14	0.62
38:BE:78:HIS:CD2	38:BE:142:LEU:HD23	2.34	0.62
1:CA:1040:C:H2'	1:CA:1041:C:O4'	1.99	0.62
5:CE:111:ARG:HA	15:CR:1:MET:HE3	1.80	0.62
34:DA:1251:A:N1	34:DA:1354:C:O2'	2.32	0.62
57:DZ:82:ILE:HD12	57:DZ:101:LEU:HD23	1.81	0.62
57:DZ:264:LEU:HB2	62:DZ:704:GDP:C5	2.34	0.62
1:AA:2324:U:H5'	7:AG:88:ILE:HD11	1.81	0.62
16:AS:27:SER:HA	16:AS:88:ASP:HB3	1.81	0.62
34:BA:735:C:H2'	34:BA:736:C:C6	2.34	0.62
48:BO:25:THR:HG21	48:BO:70:LEU:HB2	1.81	0.62
57:BZ:508:GLY:HA3	57:BZ:581:ALA:O	1.98	0.62
1:CA:854:G:O6	63:CA:3733:HOH:O	2.14	0.62
10:CL:84:LEU:HD21	10:CL:96:VAL:HB	1.81	0.62
34:DA:176:C:OP1	53:DT:29:LYS:NZ	2.23	0.62
34:DA:1095:U:H5'	34:DA:1109:C:O2	2.00	0.62
35:DB:178:ARG:NH2	41:DH:68:ARG:HH22	1.98	0.62
1:AA:650:G:N7	13:AP:107:LYS:NZ	2.47	0.62
1:AA:2319:G:N1	7:AG:43:LEU:O	2.28	0.62
1:CA:898:C:H2'	1:CA:899:A:O4'	2.00	0.62
1:CA:1820:U:H4'	1:CA:1821:A:OP2	1.98	0.62
34:DA:875:C:O2'	41:DH:14:ARG:NH1	2.32	0.62
57:DZ:-61:LEU:HG	57:DZ:-31:ALA:HA	1.81	0.62
57:DZ:363:ARG:HH11	57:DZ:363:ARG:CG	2.12	0.62
57:DZ:497:PHE:O	57:DZ:507:TYR:HA	1.98	0.62
3:AC:68:GLY:H	3:AC:189:ASN:HD21	1.47	0.62
10:AL:100:THR:HA	10:AL:139:VAL:HB	1.82	0.62
29:A5:8:LYS:O	29:A5:9:LYS:HG2	1.98	0.62
32:A8:33:ASN:HA	32:A8:36:LYS:HD2	1.82	0.62
34:BA:1355:G:H2'	34:BA:1356:G:H8	1.63	0.62
43:BJ:16:LEU:HD21	43:BJ:70:ARG:HG2	1.81	0.62
13:CP:84:ASN:HA	13:CP:115:LEU:O	2.00	0.62
34:DA:438:G:O2'	34:DA:494:U:O4	2.16	0.62
1:AA:667:G:N2	1:AA:670:C:OP2	2.27	0.62
1:AA:965:G:N2	1:AA:2281:A:OP2	2.32	0.62
1:AA:1775:C:H5'	1:AA:1776:G:OP2	2.00	0.62
9:AK:118:THR:O	9:AK:120:LYS:N	2.33	0.62
34:BA:255:G:H1'	50:BQ:16:GLN:HE21	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:BP:34:GLU:OE2	49:BP:59:TRP:NE1	2.30	0.62
57:BZ:330:VAL:HG12	57:BZ:371:ALA:HA	1.81	0.62
34:DA:1260:C:O5'	34:DA:1284:C:H4'	2.00	0.62
34:DA:1387:G:H2'	34:DA:1388:C:H6	1.65	0.62
39:DF:43:LEU:HD22	39:DF:46:ARG:HH12	1.63	0.62
43:DJ:34:VAL:HG12	43:DJ:74:ILE:HG12	1.82	0.62
49:DP:5:ARG:HH12	49:DP:28:ARG:HA	1.64	0.62
1:AA:261:A:N7	1:AA:283:G:N2	2.48	0.62
45:BL:34:ARG:O	45:BL:61:THR:HG23	1.99	0.62
46:BM:84:ILE:HB	52:BS:74:PHE:HE1	1.64	0.62
48:BO:17:ARG:HG3	48:BO:17:ARG:HH11	1.63	0.62
48:BO:62:GLN:HA	48:BO:65:ARG:NH1	2.15	0.62
49:BP:43:LYS:HG2	49:BP:48:TRP:CD2	2.35	0.62
1:CA:2298:A:H2'	1:CA:2299:G:O4'	2.00	0.62
3:CC:53:ARG:HD3	3:CC:53:ARG:H	1.65	0.62
41:DH:25:ASP:HB3	41:DH:58:TYR:HD2	1.65	0.62
1:AA:2456:G:OP2	6:AF:68:LYS:NZ	2.26	0.62
3:AC:53:ARG:HD3	3:AC:53:ARG:H	1.65	0.62
34:BA:624:C:H2'	34:BA:625:G:H8	1.65	0.62
34:BA:742:G:OP2	48:BO:35:ARG:NH2	2.33	0.62
36:BC:53:ALA:HB2	36:BC:115:LEU:HD13	1.81	0.62
1:CA:1341:U:OP2	1:CA:1394:U:O2'	2.16	0.62
10:CL:99:ILE:O	10:CL:139:VAL:N	2.25	0.62
34:DA:1226:C:OP2	46:DM:91:ARG:NH1	2.32	0.62
38:DE:110:LEU:HD13	38:DE:118:ILE:HG21	1.81	0.62
1:AA:1199:C:OP1	18:AU:92:ARG:NH1	2.33	0.62
1:AA:1549:U:H2'	1:AA:1550:C:C6	2.34	0.62
17:AT:88:ILE:HD12	17:AT:91:ARG:HH12	1.64	0.62
34:BA:406:G:N2	37:BD:119:GLN:HE22	1.97	0.62
37:BD:194:LEU:HD12	37:BD:195:ALA:H	1.64	0.62
39:BF:70:ASP:O	39:BF:72:VAL:N	2.33	0.62
1:CA:1082:U:H5'	10:CL:117:THR:HA	1.81	0.62
1:CA:2177:C:H5'	3:CC:45:HIS:CB	2.30	0.62
1:CA:2218:U:O4'	25:C1:52:ARG:NH2	2.33	0.62
1:CA:2689:U:P	1:CA:2719:G:H22	2.22	0.62
12:CO:24:VAL:HB	12:CO:33:ALA:HB2	1.82	0.62
27:A3:29:ARG:HG2	27:A3:29:ARG:HH11	1.65	0.62
34:BA:1425:U:H2'	34:BA:1426:C:H6	1.64	0.62
38:BE:102:ALA:HB1	38:BE:106:PRO:HB2	1.81	0.62
1:CA:1557:C:OP2	1:CA:1558:A:O2'	2.13	0.62
1:CA:2285:C:OP2	30:C6:6:ARG:NH1	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:104:U:O3'	23:CZ:72:ARG:NH1	2.32	0.62
15:CR:9:LYS:HA	15:CR:17:ARG:HE	1.63	0.62
51:DR:25:THR:O	51:DR:25:THR:OG1	2.16	0.62
1:AA:1117:G:H1'	1:AA:1135:G:C8	2.34	0.61
1:AA:2490:A:OP2	33:A9:2:LYS:NZ	2.30	0.61
10:AL:13:PRO:HA	10:AL:52:ILE:HG12	1.81	0.61
34:BA:1307:U:OP1	46:BM:101:GLN:NE2	2.32	0.61
35:BB:213:LEU:HD22	35:BB:214:ILE:HD13	1.82	0.61
3:CC:11:LEU:HD12	3:CC:33:LEU:HA	1.82	0.61
3:CC:68:GLY:H	3:CC:189:ASN:HD21	1.47	0.61
11:CN:72:TYR:N	11:CN:85:ILE:O	2.32	0.61
36:DC:65:ALA:HA	36:DC:100:ALA:HB3	1.81	0.61
53:DT:10:LEU:HG	53:DT:11:SER:H	1.65	0.61
1:AA:202:A:H2'	1:AA:203:G:O4'	2.00	0.61
16:AS:52:SER:HB2	16:AS:55:ALA:N	2.13	0.61
39:BF:99:ALA:HB3	51:BR:29:PHE:HE2	1.65	0.61
21:CX:9:LEU:HB2	21:CX:29:TRP:O	2.00	0.61
23:CZ:104:PHE:HA	23:CZ:139:VAL:HG22	1.83	0.61
36:DC:55:VAL:HG13	36:DC:68:VAL:HG22	1.81	0.61
36:DC:111:LEU:HD22	36:DC:146:ALA:HB2	1.82	0.61
36:DC:136:GLN:O	36:DC:140:ARG:N	2.30	0.61
1:AA:1099:C:C2'	1:AA:1100:A:H5''	2.30	0.61
1:AA:2316:G:O6	63:AA:3927:HOH:O	2.15	0.61
1:AA:2331:G:H22	16:AS:3:ARG:HG2	1.64	0.61
6:AF:32:LEU:HB3	6:AF:112:MET:HE1	1.81	0.61
34:BA:688:G:H2'	34:BA:689:C:H6	1.64	0.61
38:BE:48:ALA:H	38:BE:54:ALA:HB2	1.66	0.61
38:BE:92:LYS:HB3	38:BE:119:LEU:HB2	1.83	0.61
1:CA:271(O):C:H2'	1:CA:271(P):C:C6	2.35	0.61
1:CA:2612:C:OP2	29:C5:2:ALA:N	2.33	0.61
30:C6:6:ARG:HH12	30:C6:26:ASN:HB2	1.64	0.61
34:DA:368:U:P	57:DZ:351:ARG:HH11	2.23	0.61
34:DA:473:G:H2'	34:DA:474:G:C8	2.35	0.61
7:AG:18:GLU:O	7:AG:21:ARG:HB2	2.00	0.61
16:AS:95:HIS:CG	16:AS:96:GLY:H	2.19	0.61
37:BD:30:LYS:HA	37:BD:35:ARG:HH11	1.65	0.61
57:BZ:187:THR:HB	57:BZ:199:ILE:HD11	1.83	0.61
1:CA:1021:A:C8	1:CA:1021:A:H3'	2.36	0.61
7:CG:108:ASN:HB3	28:C4:22:ILE:HD13	1.82	0.61
13:CP:97:PRO:HD3	13:CP:126:VAL:O	2.01	0.61
34:DA:664:G:H22	34:DA:741:G:H1	1.47	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:828:A:N6	34:DA:858:G:O2'	2.34	0.61
34:DA:1353:G:H2'	34:DA:1354:C:C6	2.34	0.61
1:AA:1201:A:OP1	18:AU:55:ARG:HD3	2.00	0.61
17:AT:105:LEU:HB2	17:AT:110:ILE:HG13	1.81	0.61
34:BA:783:C:OP1	34:BA:1515:C:O2'	2.18	0.61
34:BA:975:A:N1	43:BJ:48:THR:HB	2.16	0.61
35:BB:48:MET:HA	35:BB:51:LEU:HD12	1.83	0.61
1:CA:360:G:H2'	1:CA:361:G:O4'	2.01	0.61
49:DP:23:ASP:OD1	49:DP:25:ARG:HD3	2.01	0.61
6:AF:183:VAL:O	6:AF:187:VAL:HG23	2.01	0.61
17:AT:7:ILE:O	17:AT:11:GLU:HG3	2.00	0.61
57:BZ:319:ASP:HB3	57:BZ:323:GLY:O	2.00	0.61
1:CA:2132:U:C2	3:CC:6:LYS:CB	2.47	0.61
34:DA:1279:A:OP2	43:DJ:9:ARG:NH1	2.33	0.61
35:BB:83:MET:O	35:BB:87:ARG:HB2	2.00	0.61
47:BN:34:TYR:N	47:BN:39:LEU:O	2.31	0.61
1:CA:1800:C:OP2	4:CD:183:ARG:NH2	2.34	0.61
4:CD:68:LYS:HD2	4:CD:70:TRP:CZ2	2.36	0.61
34:DA:976:G:H5'	34:DA:1358:U:O2'	2.00	0.61
52:DS:33:THR:HG21	52:DS:71:LEU:HD21	1.82	0.61
24:A0:20:ARG:NH2	63:A0:201:HOH:O	2.33	0.61
32:A8:30:ARG:O	63:A8:5101:HOH:O	2.15	0.61
34:BA:1425:U:H2'	34:BA:1426:C:C6	2.36	0.61
49:BP:55:ARG:O	49:BP:58:TYR:N	2.34	0.61
1:CA:340:A:H2'	1:CA:341:G:O4'	2.01	0.61
14:CQ:57:HIS:CD2	14:CQ:117:ALA:HB2	2.35	0.61
15:CR:24:GLN:HE22	15:CR:36:THR:HG21	1.65	0.61
38:DE:78:HIS:HA	41:DH:105:ARG:HG3	1.82	0.61
1:AA:843:C:H2'	1:AA:844:C:C6	2.36	0.61
1:AA:1210:G:H2'	1:AA:1211:U:C6	2.34	0.61
1:AA:1221:G:H1'	1:AA:1222:A:H5'	1.83	0.61
1:AA:2576:A:C2	1:AA:2659:U:H4'	2.35	0.61
1:CA:323:G:HO2'	1:CA:1205:U:H3	1.47	0.61
1:CA:2037:G:O6	63:CA:3738:HOH:O	2.15	0.61
23:CZ:144:LEU:HD22	23:CZ:148:ASP:HB3	1.83	0.61
57:DZ:184:LYS:HB2	57:DZ:184:LYS:NZ	2.16	0.61
57:DZ:346:LYS:NZ	57:DZ:384:ILE:HG12	2.15	0.61
1:AA:1106:U:H4'	1:AA:1107:U:H5'	1.81	0.61
17:AT:56:GLY:O	17:AT:59:THR:HG23	2.01	0.61
52:BS:3:ARG:NH1	52:BS:8:GLY:O	2.34	0.61
57:BZ:181:LEU:O	57:BZ:183:MET:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:62:C:H2'	2:CB:63:G:C8	2.36	0.61
17:CT:56:GLY:O	17:CT:59:THR:HG23	2.00	0.61
57:DZ:-14:ALA:O	57:DZ:-12:ALA:N	2.31	0.61
1:AA:1062:G:N7	63:AA:3981:HOH:O	2.31	0.60
34:BA:1118:C:OP1	42:BI:104:ARG:NH1	2.34	0.60
1:CA:1203:G:H2'	1:CA:1204:A:H2	1.65	0.60
1:CA:2393:A:H5''	13:CP:63:PRO:HB3	1.83	0.60
6:CF:34:TRP:CZ2	13:CP:8:PRO:HG3	2.35	0.60
20:CW:18:ARG:HG3	20:CW:76:VAL:HB	1.82	0.60
41:DH:64:LYS:HG2	41:DH:79:VAL:HG21	1.83	0.60
57:DZ:322:VAL:HG22	57:DZ:363:ARG:HH21	1.66	0.60
1:AA:776:G:C6	4:AD:208:LYS:HB2	2.36	0.60
1:AA:794:U:O2	1:AA:2036:A:H1'	2.01	0.60
1:AA:1553:A:O2'	1:AA:1554:A:O5'	2.19	0.60
1:CA:2121:G:O4'	3:CC:168:LYS:HD3	2.00	0.60
1:CA:2128:C:P	3:CC:219:MET:CE	2.81	0.60
11:CN:62:VAL:HG21	11:CN:87:LEU:HD11	1.83	0.60
32:C8:6:THR:HG22	32:C8:63:PRO:HD2	1.81	0.60
34:DA:1123:A:H4'	43:DJ:36:GLY:HA3	1.83	0.60
1:AA:1466:U:O2'	1:AA:1467:G:OP1	2.18	0.60
6:AF:135:LYS:HB2	6:AF:138:GLU:HG3	1.83	0.60
17:AT:6:LEU:O	17:AT:10:VAL:HG23	2.01	0.60
34:BA:1224:G:N2	63:BA:3323:HOH:O	2.33	0.60
37:BD:13:ARG:NH1	37:BD:13:ARG:HB3	2.17	0.60
37:BD:101:LEU:HG	37:BD:121:VAL:HG11	1.83	0.60
41:BH:116:LYS:O	41:BH:119:LEU:HD21	1.99	0.60
1:CA:910:A:N3	1:CA:2264:C:O2'	2.29	0.60
1:CA:2658:C:O3'	8:CH:158:HIS:HE1	1.83	0.60
28:C4:59:PHE:HA	28:C4:61:ARG:N	2.16	0.60
34:DA:1063:C:OP2	34:DA:1064:G:O2'	2.17	0.60
57:DZ:199:ILE:HB	57:DZ:200:PRO:HD2	1.82	0.60
1:AA:1068:G:OP2	11:AN:65:LYS:NZ	2.30	0.60
1:AA:1296:G:N7	13:AP:18:ARG:NH2	2.49	0.60
9:AK:70:GLU:O	9:AK:72:ASP:N	2.34	0.60
20:AW:18:ARG:HG3	20:AW:76:VAL:HB	1.82	0.60
34:BA:875:C:O2'	41:BH:14:ARG:NH1	2.34	0.60
34:BA:953:G:H5'	34:BA:965:A:H61	1.66	0.60
1:CA:2583:G:OP2	63:CA:3727:HOH:O	2.16	0.60
3:CC:194:ILE:HD11	3:CC:227:PRO:CB	2.32	0.60
16:CS:23:ARG:HH21	16:CS:84:GLN:HB3	1.67	0.60
35:DB:13:ALA:N	35:DB:14:GLY:HA3	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DB:93:VAL:HG21	35:DB:97:TRP:CD1	2.36	0.60
57:DZ:223:PHE:HB3	57:DZ:248:LYS:HD3	1.82	0.60
4:AD:180:GLY:HA3	4:AD:275:LYS:HD3	1.83	0.60
8:AH:149:ARG:NH1	8:AH:167:GLU:OE2	2.34	0.60
34:BA:662:G:H2'	34:BA:663:A:C8	2.35	0.60
57:BZ:257:PRO:HB2	57:BZ:259:PHE:HE1	1.66	0.60
1:CA:315:G:H2'	1:CA:316:C:C6	2.37	0.60
1:CA:889:C:O2'	1:CA:890:A:O4'	2.18	0.60
4:CD:127:VAL:HA	4:CD:193:VAL:HG22	1.83	0.60
1:AA:956:A:C5	14:AQ:13:GLN:HG3	2.35	0.60
1:AA:2832:G:OP2	63:AA:3928:HOH:O	2.16	0.60
11:AN:30:ILE:HG22	11:AN:34:LEU:HD22	1.83	0.60
35:BB:73:THR:OG1	35:BB:170:GLU:OE2	2.15	0.60
39:BF:18:GLN:HA	39:BF:21:LEU:HD12	1.84	0.60
57:BZ:184:LYS:HE3	57:BZ:186:TYR:OH	2.01	0.60
1:CA:570:G:H5''	63:CA:4298:HOH:O	2.01	0.60
1:CA:614(B):G:H2'	6:CF:44:ARG:HH11	1.65	0.60
1:CA:2576:G:H8	1:CA:2581:G:O6	1.84	0.60
22:CY:56:PRO:O	22:CY:58:GLY:N	2.31	0.60
34:DA:587:G:N2	34:DA:754:C:OP2	2.27	0.60
34:DA:688:G:H2'	34:DA:689:C:H6	1.67	0.60
57:DZ:637:ARG:C	57:DZ:639:ASN:H	2.05	0.60
1:AA:469:A:C5	6:AF:45:ARG:HD2	2.37	0.60
1:AA:483:A:H5''	63:AA:4405:HOH:O	2.00	0.60
4:AD:10:THR:OG1	4:AD:13:ARG:HB2	2.01	0.60
10:AL:53:VAL:HG12	10:AL:69:THR:HB	1.84	0.60
34:BA:148:G:H2'	34:BA:149:A:C8	2.37	0.60
38:BE:135:THR:O	38:BE:139:LEU:HG	2.01	0.60
57:BZ:96:ARG:O	57:BZ:100:VAL:HG23	2.00	0.60
1:CA:592:G:H4'	32:C8:3:LYS:HB3	1.83	0.60
1:CA:1116:C:H2'	1:CA:1117:G:H8	1.66	0.60
1:CA:2168:G:H2'	1:CA:2169:A:C8	2.37	0.60
12:CO:49:ARG:NH1	34:DA:1423:G:OP1	2.35	0.60
1:AA:1388:A:OP2	63:AA:3930:HOH:O	2.16	0.60
1:AA:2044:U:O2'	1:AA:2629:C:H5'	2.02	0.60
7:AG:105:LYS:HG2	28:A4:24:THR:HG21	1.83	0.60
20:AW:14:PRO:HG2	20:AW:78:GLU:CG	2.30	0.60
23:AZ:152:ALA:HB3	23:AZ:167:PRO:HA	1.84	0.60
34:BA:673:G:H2'	34:BA:674:G:C8	2.36	0.60
57:BZ:14:ASN:HD22	57:BZ:329:ARG:NH2	2.00	0.60
1:CA:443:A:C6	6:CF:45:ARG:HD2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2478:A:OP2	33:C9:2:LYS:NZ	2.27	0.60
6:CF:53:THR:HG22	6:CF:56:GLU:HG3	1.84	0.60
37:DD:162:LEU:HD13	37:DD:181:MET:HG2	1.83	0.60
1:AA:863:C:H4'	63:AA:4360:HOH:O	2.01	0.60
1:AA:1189:A:OP1	11:AN:25:ARG:NH2	2.35	0.60
1:AA:1937:U:OP2	63:AA:3932:HOH:O	2.17	0.60
23:AZ:98:MET:O	23:AZ:125:LEU:HD12	2.02	0.60
34:BA:1486:G:O6	63:BA:3306:HOH:O	2.15	0.60
35:BB:195:ASP:O	41:BH:68:ARG:NH2	2.34	0.60
1:CA:422:A:H2'	1:CA:423:A:C8	2.36	0.60
1:CA:1271:G:N2	1:CA:1617:C:O4'	2.35	0.60
1:CA:1523:U:H2'	1:CA:1524:G:H8	1.67	0.60
1:CA:1611:C:OP1	63:CA:3743:HOH:O	2.16	0.60
6:CF:108:LYS:O	6:CF:112:MET:HG3	2.02	0.60
34:DA:235:C:H5'	50:DQ:70:ARG:HG2	1.83	0.60
34:DA:674:G:H2'	34:DA:675:A:H8	1.67	0.60
1:AA:1945:U:H5''	56:BX:24:U:O2	2.02	0.60
3:AC:214:TYR:CE2	3:AC:224:ARG:HG2	2.36	0.60
13:AP:62:LEU:O	32:A8:13:ARG:HD3	2.02	0.60
34:BA:222:U:H2'	34:BA:223:U:C6	2.36	0.60
6:CF:28:ILE:HA	6:CF:112:MET:HE2	1.84	0.60
34:DA:1281:U:P	34:DA:1282:C:H41	2.25	0.60
3:AC:194:ILE:HD11	3:AC:227:PRO:CB	2.32	0.59
50:BQ:57:VAL:HG12	50:BQ:76:LEU:HA	1.84	0.59
57:BZ:-7:GLU:O	57:BZ:-6:ARG:NH1	2.34	0.59
1:CA:657:U:H2'	1:CA:658:C:C6	2.37	0.59
1:CA:740:U:OP2	63:CA:3728:HOH:O	2.17	0.59
1:CA:2291:U:H2'	1:CA:2292:C:C6	2.37	0.59
20:CW:4:LYS:HE2	20:CW:6:ILE:HD11	1.84	0.59
34:DA:392:G:H2'	34:DA:393:A:C8	2.36	0.59
34:DA:701:C:OP1	34:DA:702:A:O2'	2.14	0.59
35:DB:210:SER:OG	35:DB:211:ILE:N	2.35	0.59
36:DC:22:TRP:HZ3	36:DC:24:ALA:HB2	1.67	0.59
37:DD:127:THR:HG23	37:DD:147:ALA:HB3	1.84	0.59
49:DP:53:VAL:HG13	49:DP:79:VAL:HG13	1.84	0.59
1:AA:310:C:H2'	1:AA:311:C:C6	2.37	0.59
1:AA:1825:U:H2'	1:AA:1826:C:C6	2.37	0.59
1:AA:2101:U:O3'	25:A1:35:THR:OG1	2.19	0.59
1:AA:2207:C:H2'	1:AA:2208:G:C8	2.37	0.59
1:AA:2255:U:H2'	1:AA:2256:U:H6	1.65	0.59
1:AA:2287:C:H5'	1:AA:2287:C:C6	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:189(C):C:H2'	34:BA:189(D):C:O4'	2.03	0.59
34:BA:230:G:OP1	49:BP:33:ILE:HD11	2.02	0.59
34:BA:1118:C:H1'	34:BA:1179:A:C4	2.37	0.59
44:BK:46:GLY:HA2	44:BK:50:TYR:O	2.02	0.59
56:BX:36:U:O2	57:BZ:502:GLY:HA2	2.02	0.59
1:CA:386:G:H5'	63:CA:4468:HOH:O	2.00	0.59
1:CA:881:G:H1	1:CA:895:U:H3	1.48	0.59
1:CA:1157:G:O6	63:CA:3742:HOH:O	2.16	0.59
1:CA:2176:A:C4'	3:CC:45:HIS:NE2	2.61	0.59
34:DA:35:G:O2'	45:DL:118:SER:O	2.19	0.59
57:DZ:630:GLN:O	57:DZ:646:PHE:N	2.34	0.59
1:AA:116:A:O5'	1:AA:117:A:H5''	2.02	0.59
1:AA:597:C:H4'	1:AA:598:A:O5'	2.02	0.59
1:AA:2317:A:H5''	7:AG:134:GLY:HA3	1.83	0.59
6:AF:17:ARG:HG2	6:AF:18:ARG:H	1.67	0.59
29:A5:49:CYS:SG	29:A5:51:TYR:HB2	2.42	0.59
34:BA:165:C:H2'	34:BA:166:G:C8	2.37	0.59
34:BA:401:C:OP2	37:BD:73:ARG:NH1	2.36	0.59
34:BA:966:G:H21	42:BI:127:LYS:NZ	1.99	0.59
37:BD:107:ARG:HH22	37:BD:194:LEU:CD1	2.15	0.59
1:CA:2132:U:C1'	3:CC:6:LYS:CB	2.77	0.59
1:CA:2723:C:OP2	5:CE:109:LYS:NZ	2.35	0.59
31:C7:26:GLY:O	31:C7:30:VAL:HG23	2.02	0.59
34:DA:392:G:H2'	34:DA:393:A:H8	1.66	0.59
48:DO:61:GLY:O	48:DO:64:ARG:N	2.35	0.59
1:AA:310:C:H2'	1:AA:311:C:H6	1.67	0.59
1:AA:1480:A:H61	1:AA:1605:A:N6	2.00	0.59
3:AC:11:LEU:HD12	3:AC:33:LEU:HA	1.82	0.59
4:AD:101:GLU:OE1	4:AD:103:ARG:NH1	2.27	0.59
16:AS:84:GLN:HA	16:AS:111:GLU:HB2	1.83	0.59
34:BA:67:C:H2'	34:BA:68:G:C8	2.37	0.59
57:BZ:88:VAL:HG13	57:BZ:117:GLN:NE2	2.16	0.59
57:BZ:639:ASN:HA	57:BZ:640:ALA:O	2.02	0.59
1:CA:2096:U:H2'	1:CA:2097:C:C6	2.37	0.59
1:CA:2113:U:H2'	1:CA:2114:A:H8	1.66	0.59
34:DA:742:G:OP2	48:DO:35:ARG:NH2	2.36	0.59
34:DA:776:G:N2	34:DA:802:A:OP2	2.33	0.59
34:DA:1352:C:OP1	54:DU:3:LYS:NZ	2.30	0.59
37:DD:15:GLU:OE2	37:DD:66:ARG:NH1	2.35	0.59
56:DX:47:U:N3	56:DX:50:U:OP1	2.35	0.59
1:AA:1476:C:H2'	1:AA:1477:U:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:214:TYR:CZ	3:AC:224:ARG:HG2	2.37	0.59
17:AT:117:ASP:O	17:AT:120:ARG:N	2.36	0.59
34:BA:572:A:H5'	34:BA:573:A:OP2	2.02	0.59
34:BA:630:G:O2'	34:BA:631:G:H5'	2.03	0.59
1:CA:718:A:H3'	1:CA:719:C:H6	1.67	0.59
2:CB:105:A:P	23:CZ:72:ARG:HH12	2.25	0.59
17:CT:99:LEU:O	17:CT:101:PHE:N	2.35	0.59
34:DA:857:C:H2'	34:DA:858:G:O4'	2.03	0.59
39:DF:62:TRP:CH2	39:DF:64:GLN:HB2	2.37	0.59
1:AA:2365:G:H1'	24:A0:34:GLY:HA3	1.83	0.59
5:AE:27:LEU:HD22	17:AT:1:MET:SD	2.43	0.59
18:AU:32:PHE:O	18:AU:35:ALA:HB3	2.02	0.59
23:AZ:171:ILE:HD12	23:AZ:172:ALA:N	2.16	0.59
35:BB:158:LEU:HG	35:BB:182:ILE:HD11	1.85	0.59
57:BZ:21:ILE:H	57:BZ:21:ILE:CD1	2.15	0.59
1:CA:2168:G:H2'	1:CA:2169:A:H8	1.67	0.59
10:CL:73:PRO:O	10:CL:77:LEU:HG	2.02	0.59
1:AA:123:G:H5''	31:A7:19:ARG:HD3	1.83	0.59
1:AA:174:U:H4'	1:AA:207:A:H4'	1.85	0.59
34:BA:49:U:O4	34:BA:365:U:H5	1.85	0.59
50:BQ:78:GLU:OE1	50:BQ:81:ARG:NH1	2.36	0.59
57:BZ:19:ALA:HB1	57:BZ:23:ALA:HB3	1.84	0.59
1:CA:994:C:OP1	18:CU:53:ARG:NH2	2.36	0.59
3:CC:41:THR:HG22	3:CC:42:VAL:N	2.17	0.59
3:CC:214:TYR:CE2	3:CC:224:ARG:HG2	2.37	0.59
14:CQ:109:VAL:HG13	14:CQ:113:GLN:HB3	1.84	0.59
23:CZ:183:LEU:O	23:CZ:185:GLU:N	2.36	0.59
25:C1:62:VAL:HG22	25:C1:63:ALA:O	2.03	0.59
34:DA:336:C:H2'	34:DA:337:C:H6	1.68	0.59
34:DA:338:A:H2'	34:DA:339:C:O4'	2.03	0.59
1:AA:733:G:P	31:A7:11:LYS:HZ3	2.25	0.59
1:AA:1229:G:OP1	27:A3:29:ARG:HD2	2.01	0.59
1:AA:2259:A:H2'	1:AA:2260:C:H6	1.67	0.59
1:AA:2525:G:O6	63:AA:3925:HOH:O	2.14	0.59
34:BA:679:C:H2'	34:BA:680:C:H6	1.67	0.59
34:BA:975:A:N6	34:BA:1367:C:O4'	2.36	0.59
38:BE:43:LEU:HD21	38:BE:132:ALA:HB1	1.84	0.59
1:CA:558:G:OP1	11:CN:111:PRO:HD2	2.03	0.59
1:CA:1102:C:H2'	1:CA:1103:A:C8	2.37	0.59
1:CA:2807:G:N1	1:CA:2893:G:O6	2.32	0.59
3:CC:214:TYR:CZ	3:CC:224:ARG:HG2	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:144:VAL:O	8:CH:148:ILE:HG12	2.03	0.59
34:DA:409:G:H1	34:DA:433:C:H42	1.51	0.59
37:DD:10:ARG:HA	37:DD:13:ARG:HG3	1.83	0.59
1:AA:1219:A:H4'	1:AA:1220:U:OP1	2.00	0.59
1:AA:1817:A:H8	63:AA:4147:HOH:O	1.86	0.59
1:AA:2158:C:H42	1:AA:2177:G:H1	1.50	0.59
36:BC:43:LEU:HD22	36:BC:47:LEU:HD11	1.83	0.59
1:CA:2572:A:N7	5:CE:144:ARG:HD2	2.18	0.59
17:CT:88:ILE:HG13	17:CT:91:ARG:NH2	2.17	0.59
34:DA:503:C:H2'	34:DA:504:C:C6	2.37	0.59
34:DA:1187:G:H4'	42:DI:111:ARG:HH11	1.67	0.59
52:DS:33:THR:OG1	52:DS:35:SER:O	2.21	0.59
1:AA:1039:G:OP1	18:AU:50:ARG:NH2	2.35	0.59
1:AA:2150:C:H4'	3:AC:219:MET:HE3	1.84	0.59
1:AA:2504:U:H2'	1:AA:2505:U:C6	2.38	0.59
4:AD:137:PRO:O	4:AD:140:THR:HG23	2.03	0.59
38:BE:110:LEU:HD13	38:BE:118:ILE:HG21	1.84	0.59
57:BZ:309:LEU:HA	57:BZ:333:GLY:HA3	1.85	0.59
1:CA:1063:G:H1'	10:CL:134:MET:HA	1.84	0.59
1:CA:1827:C:OP2	4:CD:222:ARG:NH1	2.36	0.59
1:CA:2356:C:O3'	24:C0:20:ARG:HD3	2.02	0.59
1:CA:2567:G:H2'	1:CA:2568:C:C6	2.38	0.59
2:CB:56:G:H5'	7:CG:27:ASN:ND2	2.18	0.59
16:CS:84:GLN:HA	16:CS:111:GLU:HB2	1.83	0.59
34:DA:1107:C:C4	34:DA:1108:G:C8	2.91	0.59
34:DA:1227:A:N3	52:DS:83:HIS:HB3	2.18	0.59
1:AA:1134:A:N6	10:AL:133:SER:OG	2.36	0.58
1:AA:1586:G:H2'	1:AA:1587:U:O4'	2.03	0.58
1:AA:1828:C:H4'	4:AD:257:LEU:O	2.03	0.58
4:AD:133:LEU:HB3	4:AD:173:VAL:HG11	1.84	0.58
13:AP:88:LEU:HD11	13:AP:114:ILE:HD12	1.85	0.58
32:A8:26:LYS:HD3	63:A8:5105:HOH:O	2.02	0.58
34:BA:551:U:H2'	34:BA:552:U:C6	2.37	0.58
34:BA:975:A:H5'	34:BA:975:A:H8	1.68	0.58
34:BA:1274:G:N2	34:BA:1275:A:N7	2.51	0.58
34:BA:1347:G:H22	34:BA:1373:G:H2'	1.68	0.58
48:BO:32:LEU:O	48:BO:35:ARG:N	2.36	0.58
57:BZ:146:LEU:HG	57:BZ:260:LEU:HD22	1.85	0.58
1:CA:528:A:C2	1:CA:2043:C:H4'	2.38	0.58
1:CA:1049:C:H3'	1:CA:1050:A:H8	1.67	0.58
6:CF:36:VAL:HG11	6:CF:183:VAL:CG1	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:858:G:O6	34:DA:869:G:H3'	2.03	0.58
57:DZ:164:MET:O	57:DZ:180:VAL:HG22	2.03	0.58
57:DZ:221:ALA:HB1	57:DZ:228:MET:HB2	1.84	0.58
1:AA:1683:C:OP2	63:AA:3931:HOH:O	2.17	0.58
1:AA:1825:U:H2'	1:AA:1826:C:H6	1.68	0.58
1:AA:1993:A:P	4:AD:242:ARG:HH22	2.26	0.58
1:AA:2357:G:H4'	1:AA:2358:A:O5'	2.03	0.58
52:BS:36:ARG:NH2	52:BS:72:GLY:O	2.37	0.58
57:BZ:99:ARG:CZ	57:BZ:312:LEU:HD11	2.33	0.58
1:CA:1803:A:H4'	4:CD:259:THR:CG2	2.32	0.58
1:CA:2886:G:H2'	1:CA:2887:U:C6	2.37	0.58
4:CD:83:GLU:OE1	4:CD:104:TYR:OH	2.19	0.58
5:CE:78:LEU:O	5:CE:79:ARG:HG2	2.02	0.58
34:DA:201:C:H42	34:DA:216:G:H1	1.50	0.58
53:DT:10:LEU:HB3	53:DT:12:ALA:H	1.68	0.58
1:AA:1517:G:N7	63:AA:3987:HOH:O	2.32	0.58
1:AA:1520:G:C6	1:AA:1521:C:C4	2.90	0.58
8:AH:164:TYR:HB2	8:AH:167:GLU:HB2	1.84	0.58
34:BA:234:C:H2'	34:BA:235:C:H6	1.68	0.58
34:BA:396:G:OP1	57:BZ:349:LYS:NZ	2.32	0.58
57:BZ:-23:LEU:HA	57:BZ:-20:LEU:HB2	1.85	0.58
1:CA:194:G:H3'	63:CA:3965:HOH:O	2.02	0.58
1:CA:1109:C:H5'	1:CA:1110:G:OP2	2.03	0.58
1:CA:2713:A:OP2	1:CA:2713:A:H4'	2.04	0.58
1:AA:354:A:H2	1:AA:1255:A:O2'	1.87	0.58
1:AA:455:A:OP2	1:AA:455:A:C8	2.55	0.58
1:AA:1636:U:H2'	1:AA:1637:G:C8	2.39	0.58
1:AA:2762:A:OP1	8:AH:3:ARG:NH2	2.31	0.58
3:AC:41:THR:HG22	3:AC:42:VAL:N	2.17	0.58
18:AU:8:VAL:HG23	18:AU:11:ARG:HH21	1.69	0.58
18:AU:104:GLN:CD	18:AU:104:GLN:H	2.05	0.58
34:BA:1467:G:O6	63:BA:3307:HOH:O	2.16	0.58
35:BB:19:HIS:HE1	35:BB:189:ASP:HB3	1.67	0.58
6:CF:32:LEU:HD11	6:CF:105:VAL:HG13	1.84	0.58
34:DA:528:C:H41	45:DL:49:ASN:ND2	2.01	0.58
34:DA:1203:C:OP1	47:DN:3:ARG:HG3	2.02	0.58
34:DA:1241:G:H2'	34:DA:1242:C:C6	2.38	0.58
34:DA:1251:A:N6	34:DA:1285:A:N1	2.51	0.58
1:AA:1563:G:H2'	1:AA:1564:C:H6	1.69	0.58
1:AA:2658:C:H2'	1:AA:2659:U:O4'	2.03	0.58
34:BA:966:G:H21	42:BI:127:LYS:HZ1	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:182:ARG:HH11	57:BZ:182:ARG:HG3	1.67	0.58
1:CA:1063:G:N3	10:CL:91:PRO:HG2	2.18	0.58
1:CA:1379:A:H4'	1:CA:1380:G:OP2	2.02	0.58
21:CX:59:VAL:N	21:CX:76:ARG:O	2.28	0.58
1:AA:831:A:C6	4:AD:229:VAL:HG11	2.38	0.58
1:AA:864:C:H4'	1:AA:977:G:C5	2.39	0.58
1:AA:1834:A:H4'	4:AD:259:THR:HG23	1.85	0.58
10:AL:23:VAL:HA	10:AL:27:LEU:HD22	1.85	0.58
34:BA:749:C:H2'	34:BA:750:G:H8	1.69	0.58
34:BA:1277:C:O2'	34:BA:1279:A:H1'	2.03	0.58
35:BB:192:SER:O	35:BB:194:PRO:HD3	2.03	0.58
36:BC:33:LEU:O	36:BC:36:ASP:HB2	2.04	0.58
57:BZ:637:ARG:C	57:BZ:639:ASN:H	2.06	0.58
1:CA:1859:A:H2'	3:CC:206:LYS:HD2	1.71	0.58
1:CA:2148:G:H2'	1:CA:2149:G:C8	2.38	0.58
2:CB:22:U:H3	2:CB:61:G:H1	1.50	0.58
14:CQ:57:HIS:HD2	14:CQ:117:ALA:HB2	1.68	0.58
15:CR:29:LEU:HD23	15:CR:70:LEU:HD11	1.86	0.58
20:CW:59:VAL:HG12	20:CW:60:ASN:HD22	1.68	0.58
34:DA:509:A:C8	34:DA:509:A:H3'	2.38	0.58
34:DA:922:G:H2'	34:DA:923:A:C8	2.38	0.58
4:AD:108:PRO:HD2	4:AD:111:LEU:HG	1.85	0.58
24:A0:43:THR:O	24:A0:43:THR:HG23	2.03	0.58
27:A3:3:ARG:NH1	27:A3:60:GLU:OE2	2.36	0.58
42:BI:23:ASN:N	42:BI:60:ASP:OD1	2.35	0.58
1:CA:1021:A:H3'	1:CA:1021:A:H8	1.68	0.58
1:CA:1967:C:H2'	1:CA:1968:G:H5'	1.86	0.58
34:DA:56:U:H2'	34:DA:57:G:H8	1.68	0.58
36:DC:57:ILE:HG13	36:DC:66:VAL:HG22	1.84	0.58
1:AA:153:C:H2'	1:AA:154:G:O4'	2.04	0.58
1:AA:2279:A:H5''	1:AA:2280:A:H5'	1.86	0.58
21:AX:88:LYS:NZ	21:AX:90:GLU:OE1	2.27	0.58
27:A3:7:LYS:HG3	27:A3:34:GLU:HG3	1.86	0.58
27:A3:19:GLN:OE1	27:A3:52:HIS:NE2	2.32	0.58
34:BA:1435:G:H2'	34:BA:1436:U:C6	2.39	0.58
57:BZ:343:ASN:HA	57:BZ:389:LEU:HD12	1.85	0.58
7:CG:37:VAL:O	7:CG:94:LEU:N	2.22	0.58
21:CX:35:THR:HG22	21:CX:37:THR:N	2.16	0.58
21:CX:57:LEU:HD13	21:CX:78:LYS:HB3	1.86	0.58
34:DA:1119:C:H2'	34:DA:1120:G:C8	2.38	0.58
38:DE:80:ILE:HD13	41:DH:104:ARG:HH21	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:170:ARG:NH1	7:AG:174:GLU:OE1	2.37	0.58
17:AT:2:ASN:O	17:AT:6:LEU:HD22	2.03	0.58
34:BA:394:G:H2'	34:BA:395:C:H6	1.68	0.58
40:BG:108:ALA:HA	40:BG:111:ARG:HD2	1.85	0.58
57:BZ:32:ILE:HG23	57:BZ:273:LEU:HD21	1.85	0.58
1:CA:1047:G:O2'	1:CA:1110:G:O6	2.22	0.58
1:CA:1453:U:O2'	1:CA:1455:G:N7	2.35	0.58
1:CA:1612:C:O2'	31:C7:5:TRP:O	2.21	0.58
1:CA:2121:G:C1'	3:CC:168:LYS:HE2	2.32	0.58
8:CH:3:ARG:HH22	8:CH:5:GLY:H	1.51	0.58
12:CO:115:VAL:HG13	12:CO:121:VAL:HG21	1.86	0.58
17:CT:13:ARG:HB3	17:CT:13:ARG:HH11	1.68	0.58
34:DA:1292:U:H2'	34:DA:1293:G:H8	1.69	0.58
1:AA:733:G:O5'	31:A7:11:LYS:NZ	2.37	0.58
1:AA:1079:U:OP1	33:A9:9:ARG:NH2	2.37	0.58
1:AA:2430:A:H2'	1:AA:2431:U:H6	1.69	0.58
2:AB:4:C:N4	2:AB:117:G:H1	2.01	0.58
13:AP:70:GLN:O	13:AP:73:GLY:N	2.26	0.58
17:AT:60:THR:HG22	17:AT:77:PRO:HA	1.86	0.58
30:A6:34:LEU:HB2	30:A6:51:GLU:HB2	1.86	0.58
57:BZ:399:LEU:O	57:BZ:401:SER:N	2.35	0.58
7:CG:136:ARG:HD2	7:CG:137:GLU:N	2.18	0.58
34:DA:1029:C:H2'	34:DA:1030:C:H5''	1.86	0.58
35:DB:162:ILE:HD11	35:DB:184:VAL:HG22	1.85	0.58
57:DZ:20:HIS:HB2	57:DZ:118:SER:OG	2.04	0.58
57:DZ:170:ARG:N	57:DZ:170:ARG:NH1	2.51	0.58
1:AA:1904:C:H2'	1:AA:1905:G:O4'	2.04	0.57
5:AE:128:SER:OG	5:AE:129:HIS:N	2.35	0.57
17:AT:53:ARG:HB3	17:AT:53:ARG:CZ	2.33	0.57
19:AV:49:THR:HG22	19:AV:49:THR:O	2.02	0.57
21:AX:11:PRO:HD3	26:A2:37:PHE:CE1	2.39	0.57
34:BA:258:G:H2'	34:BA:259:G:H8	1.69	0.57
34:BA:1137:C:H4'	34:BA:1138:G:C2	2.38	0.57
37:BD:178:VAL:HG12	37:BD:179:GLU:H	1.67	0.57
41:BH:65:TYR:HA	41:BH:79:VAL:HG23	1.85	0.57
56:BX:36:U:H1'	57:BZ:503:GLY:N	2.18	0.57
1:CA:699:A:H2'	1:CA:700:G:O4'	2.03	0.57
1:CA:1167:U:H2'	1:CA:1168:G:C8	2.39	0.57
1:CA:1653:G:C6	15:CR:9:LYS:HG3	2.39	0.57
10:CL:2:LYS:HD3	57:DZ:154:GLN:HE22	1.69	0.57
27:C3:29:ARG:HB3	27:C3:33:GLN:HE22	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:457:C:H2'	34:DA:458:C:H6	1.68	0.57
37:DD:31:CYS:SG	37:DD:33:MET:N	2.77	0.57
1:AA:1314:A:H2'	1:AA:1315:A:O4'	2.04	0.57
1:AA:1735:U:O2	1:AA:1747:A:H5'	2.03	0.57
7:AG:165:THR:OG1	7:AG:168:GLU:HG3	2.04	0.57
34:BA:642:A:H2'	34:BA:643:C:C6	2.40	0.57
34:BA:1086:U:H3	34:BA:1099:G:H22	1.50	0.57
57:BZ:119:GLU:OE1	57:BZ:156:ARG:NH1	2.36	0.57
1:CA:298:G:H5''	1:CA:299:A:OP1	2.04	0.57
4:CD:7:LYS:O	4:CD:9:TYR:N	2.37	0.57
32:C8:33:ASN:HA	32:C8:36:LYS:HG3	1.86	0.57
33:C9:29:ASN:HD22	33:C9:32:HIS:CE1	2.22	0.57
34:DA:858:G:N1	34:DA:870:U:OP2	2.30	0.57
34:DA:1050:G:N2	34:DA:1208:C:O2	2.18	0.57
34:DA:1143:G:H2'	34:DA:1144:G:H8	1.69	0.57
34:DA:1304:G:O2'	34:DA:1333:A:N6	2.37	0.57
57:DZ:24:GLY:O	57:DZ:28:THR:OG1	2.19	0.57
1:AA:173:C:H2'	1:AA:174:U:C6	2.39	0.57
1:AA:1700:G:H3'	15:AR:2:ARG:HD3	1.86	0.57
1:AA:2360:U:OP2	32:A8:42:ARG:NH2	2.36	0.57
1:AA:2776:G:N7	63:AA:3984:HOH:O	2.32	0.57
10:AL:73:PRO:O	10:AL:77:LEU:HG	2.02	0.57
28:A4:58:ARG:O	28:A4:60:GLN:N	2.37	0.57
34:BA:56:U:H2'	34:BA:57:G:C8	2.38	0.57
34:BA:1345:U:OP1	42:BI:120:ARG:NH1	2.33	0.57
50:DQ:95:TYR:HA	50:DQ:98:LEU:HD12	1.84	0.57
57:DZ:344:THR:OG1	57:DZ:388:THR:HB	2.05	0.57
1:AA:821:A:H2'	1:AA:821:A:N3	2.18	0.57
1:AA:2589:A:O2'	29:A5:2:ALA:HB1	2.03	0.57
1:AA:2769:U:H1'	1:AA:2770:A:H5''	1.85	0.57
13:AP:63:PRO:HG2	32:A8:25:MET:HB2	1.87	0.57
19:AV:40:LEU:HB2	19:AV:46:VAL:HG13	1.87	0.57
34:BA:381:C:H2'	34:BA:382:A:O4'	2.04	0.57
34:BA:1221:G:H4'	52:BS:77:THR:HG21	1.86	0.57
34:BA:1326:C:H2'	34:BA:1327:C:C6	2.39	0.57
35:BB:170:GLU:HB3	35:BB:173:ALA:HB3	1.85	0.57
1:CA:336:C:H5''	22:CY:6:HIS:ND1	2.20	0.57
34:DA:1314:C:OP2	52:DS:4:SER:OG	2.16	0.57
38:DE:33:VAL:HG13	38:DE:112:LEU:HD12	1.87	0.57
46:DM:3:ARG:N	46:DM:7:VAL:O	2.37	0.57
56:DX:72:A:H2'	56:DX:73:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:553:A:C8	1:AA:553:A:C3'	2.86	0.57
1:AA:935:C:N3	1:AA:936:C:N4	2.52	0.57
1:AA:1136:U:O2	1:AA:1148:C:H1'	2.05	0.57
1:AA:1255:A:H5''	1:AA:1257:G:O4'	2.04	0.57
1:AA:2585:C:OP1	63:AA:3934:HOH:O	2.18	0.57
8:AH:150:ALA:HA	8:AH:153:LYS:HD3	1.87	0.57
21:AX:53:LYS:NZ	21:AX:55:ASN:OD1	2.36	0.57
36:BC:110:ASN:O	36:BC:111:LEU:HD23	2.05	0.57
37:BD:104:VAL:HG11	37:BD:146:ILE:HD13	1.87	0.57
38:BE:11:ILE:HD11	38:BE:108:ALA:HB3	1.85	0.57
57:BZ:13:ARG:NH1	57:BZ:247:ARG:HH12	2.02	0.57
1:CA:322:A:C5	1:CA:340:A:C2	2.92	0.57
6:CF:20:LEU:HD13	6:CF:21:ALA:H	1.69	0.57
56:DX:19:G:H4'	56:DX:20:U:OP2	2.03	0.57
1:AA:197:C:H2'	1:AA:198:C:H6	1.70	0.57
1:AA:1100:A:N6	1:AA:1151:U:H3	1.99	0.57
1:AA:1104:G:N2	1:AA:1127:U:H1'	2.19	0.57
1:AA:1968:U:H2'	1:AA:1969:C:C6	2.40	0.57
7:AG:68:PRO:HB3	7:AG:92:VAL:HB	1.87	0.57
16:AS:3:ARG:HD3	16:AS:4:LEU:N	2.19	0.57
33:A9:15:LYS:HG2	33:A9:17:ILE:HD13	1.86	0.57
49:BP:19:ILE:HG23	49:BP:37:GLY:O	2.04	0.57
57:BZ:165:GLN:NE2	57:BZ:260:LEU:H	2.03	0.57
57:BZ:324:ARG:HG3	57:BZ:324:ARG:NH1	2.18	0.57
1:CA:1204:A:H2	1:CA:1241:A:H62	1.52	0.57
1:CA:2577:A:H5'	29:C5:3:LYS:HD3	1.85	0.57
4:CD:10:THR:OG1	4:CD:13:ARG:HG2	2.04	0.57
14:CQ:38:GLU:OE2	14:CQ:128:LYS:N	2.30	0.57
42:DI:47:LEU:HB3	42:DI:50:LEU:HD12	1.85	0.57
53:DT:42:GLN:O	53:DT:42:GLN:NE2	2.38	0.57
57:DZ:114:VAL:HG21	57:DZ:156:ARG:HB2	1.86	0.57
1:AA:54:G:O2'	1:AA:125:A:N1	2.29	0.57
1:AA:1356:G:OP2	31:A7:9:ARG:NH1	2.38	0.57
1:AA:1496:A:H5'	1:AA:1497:G:OP2	2.05	0.57
1:AA:2264:G:N7	24:A0:4:LYS:NZ	2.52	0.57
2:AB:24:G:H3'	63:AB:3102:HOH:O	2.05	0.57
6:AF:53:THR:HB	6:AF:56:GLU:OE2	2.05	0.57
10:AL:12:LEU:HD11	10:AL:23:VAL:HG22	1.85	0.57
10:AL:112:MET:HG3	10:AL:113:PRO:HD3	1.86	0.57
15:AR:44:LEU:HD22	15:AR:48:VAL:HG23	1.84	0.57
23:AZ:138:GLU:H	23:AZ:156:LYS:HE3	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:A9:11:CYS:HB3	33:A9:32:HIS:CE1	2.39	0.57
34:BA:501:C:H2'	34:BA:502:G:C8	2.40	0.57
36:BC:19:GLU:HB3	36:BC:40:ARG:NH2	2.18	0.57
42:BI:4:TYR:CE1	42:BI:88:TYR:HA	2.40	0.57
1:CA:195:A:H61	1:CA:198:C:H3'	1.69	0.57
1:CA:747:U:O2'	20:CW:92:ARG:NH2	2.38	0.57
1:CA:1071:G:O2'	1:CA:1089:G:OP2	2.19	0.57
1:CA:1462:C:H4'	1:CA:2703:C:H5'	1.86	0.57
10:CL:74:ALA:HB1	10:CL:127:ILE:HD12	1.84	0.57
10:CL:112:MET:HG3	10:CL:113:PRO:HD3	1.86	0.57
34:DA:403:C:H2'	34:DA:404:U:H6	1.69	0.57
34:DA:513:C:H2'	34:DA:514:C:H6	1.70	0.57
35:DB:24:TRP:CZ3	35:DB:26:PRO:HA	2.39	0.57
39:DF:87:ARG:HG3	39:DF:87:ARG:NH1	2.05	0.57
57:DZ:-65:LYS:HB3	57:DZ:-28:ALA:HB3	1.86	0.57
1:AA:836:A:N1	63:AA:3988:HOH:O	2.32	0.57
9:AK:39:ALA:C	9:AK:41:ARG:H	2.07	0.57
34:BA:828:A:H2'	34:BA:829:G:O4'	2.04	0.57
34:BA:1187:G:H5''	42:BI:113:LYS:HD3	1.85	0.57
34:BA:1376:U:H2'	34:BA:1377:A:C8	2.39	0.57
37:BD:4:TYR:O	37:BD:6:GLY:N	2.35	0.57
1:CA:1247:A:OP1	6:CF:95:ARG:NH2	2.37	0.57
1:CA:1860:G:C8	3:CC:206:LYS:HG3	2.39	0.57
34:DA:254:G:OP1	50:DQ:68:ARG:N	2.30	0.57
34:DA:837:G:H1	34:DA:849:C:H42	1.52	0.57
42:DI:28:VAL:HG22	42:DI:63:ILE:HB	1.87	0.57
1:AA:997:G:OP1	14:AQ:16:ARG:NH2	2.38	0.57
1:AA:1499:C:N4	1:AA:1506:G:H1	2.03	0.57
1:AA:2326:C:H2'	1:AA:2327:G:C8	2.38	0.57
1:AA:2658:C:OP2	1:AA:2745:G:O2'	2.23	0.57
17:AT:24:PRO:HD3	17:AT:52:ILE:HD12	1.86	0.57
23:AZ:48:PHE:HE2	23:AZ:71:VAL:HG11	1.70	0.57
34:BA:895:G:H2'	34:BA:896:C:C6	2.39	0.57
38:BE:90:VAL:O	38:BE:120:THR:HA	2.05	0.57
1:CA:776:G:H4'	1:CA:777:A:O5'	2.05	0.57
1:CA:1803:A:H4'	4:CD:259:THR:HG23	1.85	0.57
2:CB:60:C:H2'	2:CB:61:G:H8	1.68	0.57
11:CN:67:LEU:HD13	11:CN:87:LEU:HD13	1.87	0.57
34:DA:737:A:H2'	34:DA:738:C:C6	2.40	0.57
46:DM:25:ILE:HG23	46:DM:29:ARG:HB3	1.87	0.57
57:DZ:32:ILE:HG23	57:DZ:273:LEU:HD21	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:409:G:OP2	63:AA:3933:HOH:O	2.18	0.57
1:AA:479:C:O2	1:AA:483:A:O2'	2.23	0.57
1:AA:574:G:O2'	1:AA:1265:A:N3	2.28	0.57
1:AA:2268:G:H2'	1:AA:2269:U:O4'	2.05	0.57
13:AP:121:LYS:O	13:AP:123:LEU:N	2.38	0.57
17:AT:27:THR:HB	17:AT:89:VAL:HG23	1.87	0.57
34:BA:376:G:OP2	49:BP:67:THR:HG21	2.04	0.57
34:BA:679:C:H2'	34:BA:680:C:C6	2.39	0.57
34:BA:1373:G:H4'	40:BG:31:MET:SD	2.44	0.57
53:BT:22:ARG:O	53:BT:25:ARG:N	2.38	0.57
1:CA:795:C:H2'	1:CA:796:C:C6	2.39	0.57
1:CA:1334:G:O6	63:CA:3744:HOH:O	2.16	0.57
1:CA:1766:U:H2'	1:CA:1767:C:H6	1.70	0.57
15:CR:56:LYS:NZ	15:CR:90:ARG:O	2.38	0.57
34:DA:1118:C:OP1	42:DI:104:ARG:NH1	2.37	0.57
1:AA:934:A:OP1	1:AA:935:C:N4	2.36	0.56
1:AA:1093:G:N2	1:AA:1156:G:O2'	2.37	0.56
6:AF:34:TRP:NE1	13:AP:8:PRO:HD3	2.20	0.56
18:AU:74:LEU:HD12	18:AU:74:LEU:H	1.70	0.56
21:AX:57:LEU:CD1	21:AX:78:LYS:HB2	2.34	0.56
23:AZ:138:GLU:N	23:AZ:156:LYS:HE3	2.20	0.56
57:BZ:74:TRP:CD1	57:BZ:273:LEU:HB3	2.39	0.56
57:BZ:93:GLU:HA	57:BZ:93:GLU:OE2	2.04	0.56
1:CA:307:G:N1	1:CA:310:A:OP2	2.37	0.56
1:CA:746:A:H2'	1:CA:2612:C:H5''	1.87	0.56
5:CE:101:ARG:HD2	5:CE:169:ASN:OD1	2.04	0.56
13:CP:138:LEU:HD23	13:CP:145:PRO:HG3	1.86	0.56
34:DA:839:U:H5''	34:DA:840:C:C5	2.35	0.56
34:DA:1248:A:H2'	34:DA:1249:C:C6	2.40	0.56
57:DZ:242:LEU:HD23	57:DZ:245:ALA:HB3	1.86	0.56
1:AA:839:G:H5''	1:AA:840:A:H5'	1.86	0.56
1:AA:1120:G:H2'	1:AA:1121:C:C6	2.39	0.56
1:AA:2556:G:H1'	1:AA:2658:C:H4'	1.88	0.56
11:AN:23:LEU:HD13	11:AN:98:VAL:HG12	1.87	0.56
23:AZ:7:ALA:HB2	23:AZ:59:LEU:HD22	1.87	0.56
34:BA:193:C:H2'	34:BA:194:C:H6	1.69	0.56
34:BA:1202:G:H2'	34:BA:1203:C:O4'	2.05	0.56
35:BB:55:PHE:CD1	35:BB:58:ILE:HD12	2.40	0.56
40:BG:28:ASN:HD21	40:BG:36:LYS:HE3	1.70	0.56
44:BK:21:ILE:HB	44:BK:84:VAL:HG22	1.87	0.56
4:CD:95:LEU:HD11	4:CD:105:ILE:HG23	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:44:GLY:O	7:CG:47:LYS:HB2	2.06	0.56
14:CQ:54:MET:HG2	14:CQ:117:ALA:O	2.05	0.56
21:CX:91:ALA:O	21:CX:92:LEU:HD23	2.05	0.56
34:DA:585:G:H4'	45:DL:8:ASN:OD1	2.04	0.56
42:DI:53:VAL:O	42:DI:55:ALA:N	2.38	0.56
1:AA:347:G:C8	6:AF:171:PRO:HG3	2.40	0.56
1:AA:1836:U:OP1	4:AD:252:TRP:NE1	2.37	0.56
1:AA:1907:A:H2'	1:AA:1908:C:O4'	2.05	0.56
1:AA:2143:G:O2'	3:AC:168:LYS:CD	2.52	0.56
1:AA:2897:U:H2'	1:AA:2898:C:C6	2.40	0.56
3:AC:6:LYS:HG3	3:AC:7:ARG:H	1.69	0.56
5:AE:105:THR:OG1	5:AE:166:THR:OG1	2.23	0.56
12:AO:2:ILE:HD12	12:AO:6:THR:HG21	1.86	0.56
15:AR:49:ASP:OD1	15:AR:95:THR:OG1	2.18	0.56
17:AT:39:ARG:NH1	17:AT:41:ARG:HD3	2.20	0.56
17:AT:65:LYS:HE2	17:AT:67:SER:HB2	1.87	0.56
19:AV:18:LEU:HD13	19:AV:20:LEU:HB2	1.88	0.56
29:A5:16:ARG:HD3	29:A5:20:ARG:NH1	2.20	0.56
34:BA:503:C:H2'	34:BA:504:C:C6	2.40	0.56
34:BA:1158:C:H5	34:BA:1181:G:N1	1.96	0.56
34:BA:1183:A:O2'	34:BA:1184:G:OP1	2.19	0.56
34:BA:1441:G:H5''	34:BA:1442:G:H5'	1.86	0.56
57:BZ:278:ASP:HB3	57:BZ:279:TYR:CD2	2.40	0.56
1:CA:1203:G:H2'	1:CA:1204:A:C2	2.39	0.56
1:CA:1240:U:O4	63:CA:3739:HOH:O	2.15	0.56
1:CA:1420:U:O2'	1:CA:1421:G:OP1	2.22	0.56
1:CA:2312:U:H5'	7:CG:88:ILE:HD11	1.86	0.56
13:CP:81:GLN:NE2	13:CP:105:LEU:O	2.38	0.56
25:C1:73:LEU:HB3	25:C1:94:LEU:HD23	1.87	0.56
34:DA:475:G:H2'	34:DA:476:G:H8	1.70	0.56
34:DA:978:A:OP2	34:DA:1363:C:N4	2.38	0.56
34:DA:1150:U:O4	34:DA:1151:A:N6	2.39	0.56
34:DA:1255:G:OP1	43:DJ:45:ARG:NH2	2.38	0.56
34:DA:1256:A:H61	34:DA:1278:U:H1'	1.70	0.56
34:DA:1292:U:H2'	34:DA:1293:G:C8	2.40	0.56
35:DB:29:ALA:HA	35:DB:32:ILE:HD12	1.87	0.56
45:DL:93:LEU:HB3	45:DL:96:VAL:HG21	1.87	0.56
49:DP:68:ASP:O	49:DP:71:ARG:HG2	2.06	0.56
57:DZ:215:LYS:HD3	57:DZ:215:LYS:N	2.20	0.56
1:AA:397:G:OP2	1:AA:397:G:H8	1.88	0.56
1:AA:791:G:O6	63:AA:3929:HOH:O	2.16	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2481:A:O2'	14:AQ:56:ARG:HD2	2.04	0.56
1:AA:2784:C:H2'	1:AA:2785:C:C6	2.39	0.56
10:AL:51:ALA:HB1	10:AL:72:PRO:HB3	1.88	0.56
34:BA:959:A:HO2'	34:BA:984:C:HO2'	1.30	0.56
37:BD:78:LEU:HB3	37:BD:93:PHE:CE1	2.41	0.56
3:CC:6:LYS:HG3	3:CC:7:ARG:H	1.69	0.56
19:CV:69:LYS:HA	19:CV:87:HIS:O	2.05	0.56
30:C6:13:CYS:SG	30:C6:47:THR:HG21	2.46	0.56
34:DA:1401:G:C2	34:DA:1402:C:H1'	2.41	0.56
38:DE:92:LYS:HB3	38:DE:119:LEU:HB2	1.88	0.56
57:DZ:237:PRO:HB3	57:DZ:241:GLU:OE1	2.05	0.56
57:DZ:265:LYS:O	57:DZ:267:LYS:HG3	2.06	0.56
1:AA:244:A:O2'	1:AA:411:U:OP1	2.23	0.56
1:AA:296:U:H2'	1:AA:297:C:C6	2.40	0.56
1:AA:313:A:N6	1:AA:375:G:H1'	2.21	0.56
9:AK:117:LEU:HA	9:AK:123:GLU:H	1.70	0.56
13:AP:29:LYS:HG2	13:AP:30:THR:HG23	1.86	0.56
23:AZ:134:PRO:O	23:AZ:136:PHE:N	2.38	0.56
34:BA:946:A:H2'	34:BA:947:G:C8	2.40	0.56
34:BA:975:A:H4'	34:BA:976:G:H5''	1.87	0.56
57:BZ:184:LYS:HD2	57:BZ:198:GLU:OE2	2.06	0.56
1:CA:1069:A:N7	1:CA:1073:A:N6	2.54	0.56
1:CA:2758:A:H2'	1:CA:2759:G:O4'	2.04	0.56
13:CP:99:LEU:HD12	13:CP:100:LEU:HD23	1.88	0.56
23:CZ:102:LEU:HD11	23:CZ:124:ILE:HB	1.85	0.56
26:C2:16:LEU:O	26:C2:67:LYS:NZ	2.22	0.56
26:C2:32:LEU:HD13	26:C2:36:ARG:NH1	2.21	0.56
30:C6:9:LEU:HD13	30:C6:51:GLU:HG3	1.86	0.56
34:DA:35:G:N3	45:DL:118:SER:HB2	2.20	0.56
49:DP:53:VAL:O	49:DP:57:ARG:N	2.38	0.56
1:AA:152:G:H2'	1:AA:153:C:C6	2.40	0.56
1:AA:886:U:H1'	1:AA:1236:G:H1'	1.87	0.56
1:AA:1004:A:N6	14:AQ:83:MET:HE3	2.21	0.56
1:AA:1298:G:O6	18:AU:36:ARG:HG2	2.05	0.56
1:AA:1817:A:H1'	1:AA:1960:A:N6	2.21	0.56
1:AA:2624:C:OP2	29:A5:2:ALA:N	2.38	0.56
15:AR:63:ARG:O	15:AR:67:LEU:HB2	2.05	0.56
28:A4:10:VAL:HG21	28:A4:29:PRO:HG3	1.86	0.56
34:BA:347:G:H2'	34:BA:348:G:O4'	2.05	0.56
34:BA:674:G:H2'	34:BA:675:A:H8	1.70	0.56
1:CA:336:C:HO2'	22:CY:35:TYR:HH	1.45	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:660:G:H5'	6:CF:99:TYR:CE2	2.41	0.56
1:CA:996:A:H4'	18:CU:91:ASP:OD2	2.06	0.56
3:CC:49:GLY:N	3:CC:209:PHE:O	2.39	0.56
34:DA:418:C:H2'	34:DA:419:C:C6	2.40	0.56
34:DA:937:A:N6	34:DA:1345:U:O4	2.38	0.56
34:DA:1218:C:OP1	47:DN:12:ARG:NH2	2.39	0.56
1:AA:1882:U:C4	1:AA:1883:C:C4	2.94	0.56
1:AA:2255:U:H2'	1:AA:2256:U:C6	2.40	0.56
4:AD:98:VAL:HG23	4:AD:99:ASP:H	1.70	0.56
23:AZ:51:ALA:HA	23:AZ:55:HIS:HD2	1.70	0.56
27:A3:18:ASP:OD1	27:A3:18:ASP:N	2.39	0.56
27:A3:44:ARG:O	27:A3:48:GLU:HG3	2.06	0.56
30:A6:25:LYS:HE3	30:A6:30:THR:O	2.06	0.56
36:BC:11:ARG:NH2	36:BC:177:THR:O	2.39	0.56
49:BP:74:LEU:HG	49:BP:79:VAL:HG21	1.88	0.56
57:BZ:149:VAL:O	57:BZ:153:MET:HG3	2.04	0.56
57:BZ:215:LYS:O	57:BZ:219:VAL:HG13	2.06	0.56
1:CA:2512:C:H2'	1:CA:2513:G:O4'	2.06	0.56
5:CE:14:ILE:HG13	5:CE:21:VAL:HG13	1.86	0.56
21:CX:8:ILE:HD11	21:CX:43:VAL:HG23	1.87	0.56
34:DA:325:A:OP2	53:DT:70:SER:OG	2.18	0.56
34:DA:1114:C:H42	34:DA:1186:G:H1	1.53	0.56
37:DD:129:ASN:ND2	37:DD:145:GLU:H	2.02	0.56
40:DG:18:TYR:CD2	40:DG:59:LEU:HB2	2.40	0.56
57:DZ:13:ARG:HH12	57:DZ:77:HIS:CE1	2.24	0.56
57:DZ:15:ILE:HA	57:DZ:103:GLY:O	2.06	0.56
1:AA:329:U:H2'	1:AA:330:U:C6	2.41	0.56
1:AA:1660:A:N1	20:AW:87:PRO:HB3	2.20	0.56
4:AD:72:LYS:HD3	4:AD:97:TYR:CE2	2.41	0.56
20:AW:70:TYR:OH	20:AW:72:LYS:HG3	2.06	0.56
29:A5:57:VAL:HG12	29:A5:58:LEU:HB2	1.87	0.56
34:BA:787:A:H8	34:BA:787:A:H5''	1.71	0.56
37:BD:31:CYS:SG	37:BD:33:MET:N	2.79	0.56
57:BZ:99:ARG:NH1	57:BZ:401:SER:O	2.38	0.56
1:CA:1977:A:N3	63:CA:3813:HOH:O	2.32	0.56
5:CE:37:ARG:NE	5:CE:80:GLU:OE1	2.35	0.56
34:DA:1040:U:N3	34:DA:1041:A:N7	2.54	0.56
34:DA:1228:C:OP1	46:DM:115:LYS:N	2.31	0.56
49:DP:5:ARG:CZ	49:DP:22:THR:HG21	2.36	0.56
1:AA:546:G:H2'	1:AA:547:G:C8	2.41	0.56
1:AA:1126:C:O2'	10:AL:126:MET:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AN:75:TYR:CE2	11:AN:77:GLY:HA2	2.41	0.56
13:AP:50:ARG:HD3	32:A8:7:HIS:CD2	2.41	0.56
15:AR:28:LEU:HD12	15:AR:48:VAL:HG21	1.87	0.56
20:AW:23:LEU:CD2	29:A5:25:LEU:HD12	2.36	0.56
23:AZ:135:GLU:O	23:AZ:136:PHE:HB2	2.05	0.56
43:BJ:47:PHE:HB2	43:BJ:63:PHE:HB2	1.87	0.56
49:BP:20:VAL:HG21	49:BP:32:TYR:CG	2.41	0.56
1:CA:2166:G:H3'	1:CA:2167:U:H5''	1.88	0.56
5:CE:36:ARG:HD3	5:CE:47:VAL:HG12	1.88	0.56
7:CG:15:VAL:HA	7:CG:175:LEU:HD23	1.87	0.56
34:DA:502:G:C6	34:DA:503:C:N3	2.74	0.56
35:DB:12:GLU:C	35:DB:14:GLY:HA3	2.26	0.56
48:DO:33:THR:HG21	48:DO:85:LEU:HD22	1.88	0.56
48:DO:40:SER:O	48:DO:44:LYS:HG3	2.05	0.56
1:AA:927:G:N2	1:AA:944:C:N3	2.53	0.56
1:AA:2221:A:OP2	1:AA:2222:C:H5	1.89	0.56
1:AA:2474:U:H1'	1:AA:2503:U:O4	2.06	0.56
5:AE:108:SER:O	5:AE:162:ALA:HA	2.06	0.56
5:AE:117:MET:HG3	63:AE:402:HOH:O	2.06	0.56
6:AF:53:THR:HG22	6:AF:56:GLU:HG3	1.88	0.56
23:AZ:77:ASP:OD2	23:AZ:80:ARG:HB2	2.05	0.56
25:A1:89:GLU:HA	25:A1:92:LYS:HB2	1.86	0.56
34:BA:44:G:C2	34:BA:45:U:H1'	2.41	0.56
34:BA:921:U:O2	38:BE:19:MET:HB2	2.06	0.56
34:BA:1191:A:H2'	34:BA:1192:C:C6	2.41	0.56
35:BB:60:ASP:OD2	35:BB:64:ARG:NH2	2.37	0.56
57:BZ:20:HIS:HD1	57:BZ:117:GLN:HB2	1.71	0.56
57:BZ:147:TRP:O	57:BZ:151:ARG:HB2	2.06	0.56
1:CA:1292:U:H2'	1:CA:1293:C:C6	2.41	0.56
1:CA:2424:C:O2	1:CA:2429:G:O2'	2.19	0.56
1:CA:2677:G:H2'	1:CA:2678:C:C6	2.41	0.56
3:CC:42:VAL:O	3:CC:216:THR:O	2.24	0.56
17:CT:19:LEU:HD22	17:CT:86:ILE:HD12	1.86	0.56
20:CW:43:GLY:O	20:CW:47:VAL:HG23	2.06	0.56
34:DA:957:U:H2'	34:DA:959:A:OP2	2.06	0.56
34:DA:1012:U:H2'	34:DA:1013:G:C8	2.40	0.56
1:AA:436:C:OP1	63:AA:3936:HOH:O	2.18	0.55
30:A6:18:ARG:HD3	30:A6:42:TRP:CE2	2.42	0.55
34:BA:1525:G:P	44:BK:120:ARG:HH22	2.29	0.55
36:BC:35:GLU:OE2	36:BC:59:ARG:NH2	2.23	0.55
42:BI:116:LYS:HD2	42:BI:122:ALA:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2572:A:C8	5:CE:144:ARG:HD2	2.41	0.55
13:CP:100:LEU:HB3	13:CP:106:LEU:HB2	1.88	0.55
26:C2:64:LEU:HD11	26:C2:68:ARG:HH21	1.72	0.55
34:DA:297:G:N2	34:DA:300:A:OP2	2.39	0.55
34:DA:1435:G:H2'	34:DA:1436:U:C6	2.41	0.55
35:DB:142:LEU:HG	35:DB:146:GLN:NE2	2.20	0.55
36:DC:110:ASN:ND2	36:DC:144:SER:OG	2.40	0.55
36:DC:179:ARG:HD2	36:DC:206:GLU:HB2	1.87	0.55
44:DK:79:SER:HB2	44:DK:106:LYS:HE3	1.89	0.55
50:DQ:81:ARG:HH21	50:DQ:84:LEU:HD21	1.69	0.55
1:AA:886:U:H2'	1:AA:887:C:C6	2.41	0.55
1:AA:1154:U:HO2'	1:AA:1155:C:H6	1.53	0.55
6:AF:132:VAL:CG2	6:AF:163:VAL:HG22	2.35	0.55
10:AL:115:LEU:HD22	10:AL:126:MET:HE1	1.89	0.55
13:AP:86:LYS:HB3	13:AP:118:GLY:HA3	1.87	0.55
17:AT:118:ARG:HG3	17:AT:118:ARG:NH1	2.15	0.55
34:BA:17:U:H2'	34:BA:18:C:C6	2.41	0.55
34:BA:911:U:H2'	34:BA:912:C:C6	2.41	0.55
36:BC:70:VAL:HG22	36:BC:72:LYS:H	1.71	0.55
36:BC:125:GLU:HA	36:BC:191:THR:HG22	1.87	0.55
42:BI:16:ARG:HH11	42:BI:64:THR:HG21	1.71	0.55
1:CA:96:G:H4'	26:C2:48:HIS:CD2	2.40	0.55
1:CA:800:A:H8	1:CA:800:A:OP1	1.89	0.55
1:CA:1385:G:O2'	1:CA:1396:U:O2	2.24	0.55
1:CA:1856:G:H1	1:CA:1886:C:N4	2.03	0.55
1:CA:2336:A:H61	24:C0:43:THR:CG2	2.19	0.55
8:CH:56:SER:HB3	8:CH:61:HIS:ND1	2.21	0.55
15:CR:51:LEU:HD13	15:CR:70:LEU:HD21	1.88	0.55
34:DA:671:G:H2'	34:DA:672:U:O4'	2.06	0.55
42:DI:8:GLY:O	42:DI:15:ALA:N	2.32	0.55
45:DL:75:HIS:HD2	45:DL:77:LEU:N	1.99	0.55
1:AA:236:G:H4'	1:AA:413:G:C5	2.41	0.55
1:AA:672:G:H2'	1:AA:673:G:O4'	2.06	0.55
10:AL:55:VAL:HG13	10:AL:57:ILE:HD11	1.89	0.55
34:BA:685:G:O2'	34:BA:686:U:H5'	2.06	0.55
1:CA:771:G:OP1	31:C7:10:ARG:NH1	2.39	0.55
16:CS:105:ALA:O	16:CS:110:LEU:HB2	2.06	0.55
34:DA:433:C:H2'	34:DA:434:U:H6	1.70	0.55
34:DA:517:G:N1	34:DA:533:A:OP2	2.39	0.55
50:DQ:64:PRO:HB3	50:DQ:70:ARG:HH11	1.70	0.55
21:AX:50:LYS:HG2	21:AX:84:ALA:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:537:C:OP1	1:CA:995:C:N4	2.39	0.55
1:CA:774:A:H2'	1:CA:774:A:N3	2.19	0.55
1:CA:1814:G:O6	63:CA:3724:HOH:O	2.09	0.55
1:CA:1842:G:O2'	4:CD:253:GLN:NE2	2.40	0.55
34:DA:409:G:H1	34:DA:433:C:N4	2.03	0.55
34:DA:411:A:H62	34:DA:413:G:H21	1.54	0.55
37:DD:103:ASN:OD1	37:DD:114:ARG:NH2	2.37	0.55
45:DL:69:TYR:CE2	45:DL:71:PRO:HA	2.41	0.55
1:AA:821:A:HO2'	1:AA:822:G:H8	1.54	0.55
1:AA:834:U:H5''	1:AA:835:A:H5'	1.88	0.55
34:BA:1015:A:H2'	34:BA:1016:A:C8	2.42	0.55
34:BA:1394:A:C5	34:BA:1501:C:H4'	2.42	0.55
35:BB:91:PRO:HG2	35:BB:155:LEU:HD13	1.89	0.55
36:BC:172:ARG:NH2	36:BC:206:GLU:OE2	2.37	0.55
43:BJ:17:ASP:OD1	43:BJ:70:ARG:NH1	2.40	0.55
53:BT:33:ILE:HG13	53:BT:62:LEU:HD22	1.88	0.55
57:BZ:127:LYS:HZ3	57:BZ:128:TYR:HE2	1.50	0.55
1:CA:1932:A:H2'	1:CA:1933:G:O4'	2.06	0.55
6:CF:116:ASP:OD2	6:CF:117:ARG:NH1	2.40	0.55
6:CF:126:VAL:HG21	6:CF:129:PHE:CZ	2.42	0.55
16:CS:49:VAL:HG11	16:CS:77:ALA:HB2	1.87	0.55
34:DA:1142:G:H3'	34:DA:1143:G:C8	2.41	0.55
35:DB:93:VAL:HG21	35:DB:97:TRP:HD1	1.70	0.55
1:AA:81:G:N2	1:AA:101:A:OP2	2.28	0.55
1:AA:923:C:H2'	1:AA:924:U:O4'	2.06	0.55
1:AA:1405:A:N1	1:AA:1418:U:C4	2.74	0.55
1:AA:2720:G:H1'	15:AR:71:GLN:HE22	1.72	0.55
25:A1:64:ALA:HA	25:A1:67:ILE:HG13	1.88	0.55
34:BA:937:A:N6	34:BA:1345:U:O4	2.38	0.55
57:BZ:-10:ARG:HB2	57:BZ:-10:ARG:HH11	1.72	0.55
1:CA:38:A:H2'	1:CA:39:C:C6	2.41	0.55
1:CA:1095:A:N7	1:CA:1096:A:N6	2.55	0.55
1:CA:2483:C:H2'	1:CA:2484:G:O4'	2.07	0.55
2:CB:41:U:C4	7:CG:70:VAL:HG23	2.41	0.55
34:DA:987:G:N2	34:DA:1219:U:O2	2.39	0.55
45:DL:53:ARG:HH12	45:DL:92:ASP:HB2	1.72	0.55
1:AA:469:A:C6	6:AF:45:ARG:HD2	2.42	0.55
1:AA:504:A:N1	1:AA:525:G:H4'	2.22	0.55
1:AA:510:C:H2'	1:AA:511:C:C6	2.42	0.55
1:AA:1220:U:O3'	1:AA:1221:G:H4'	2.06	0.55
2:AB:66:A:N6	2:AB:108:U:H2'	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:458:C:N4	34:BA:474:G:O6	2.40	0.55
1:CA:674:G:O2'	6:CF:74:ARG:HD3	2.06	0.55
1:CA:856:C:H2'	1:CA:857:C:C6	2.42	0.55
1:CA:1107:G:OP1	9:CK:58:LEU:HA	2.06	0.55
1:CA:2474:C:H5''	1:CA:2475:C:OP2	2.06	0.55
1:CA:2721:A:H5''	63:CA:3740:HOH:O	2.06	0.55
4:CD:108:PRO:HD2	4:CD:111:LEU:HG	1.88	0.55
34:DA:1429:C:H2'	34:DA:1430:C:C6	2.41	0.55
38:DE:71:LEU:HD21	38:DE:113:ALA:O	2.07	0.55
1:AA:239:G:OP2	32:A8:13:ARG:NH2	2.40	0.55
1:AA:546:G:H2'	1:AA:547:G:H8	1.72	0.55
1:AA:1923:A:OP2	4:AD:255:LYS:HE3	2.06	0.55
1:AA:2575:U:H4'	12:AO:28:SER:HA	1.89	0.55
23:AZ:156:LYS:HG2	23:AZ:157:LEU:N	2.22	0.55
35:BB:16:HIS:CG	35:BB:17:PHE:N	2.75	0.55
36:BC:25:GLY:O	36:BC:27:LYS:N	2.40	0.55
38:BE:83:GLU:HG2	38:BE:88:LYS:HD2	1.89	0.55
57:BZ:-58:LEU:HD11	57:BZ:-32:LEU:HD13	1.87	0.55
57:BZ:-23:LEU:H	57:BZ:-21:ALA:H	1.55	0.55
57:BZ:116:PRO:HA	57:BZ:119:GLU:HG3	1.87	0.55
57:BZ:289:ILE:HD11	57:BZ:331:TYR:CG	2.42	0.55
1:CA:184:C:H2'	1:CA:185:U:H6	1.71	0.55
1:CA:338:G:N7	63:CA:3819:HOH:O	2.33	0.55
1:CA:956:G:OP2	14:CQ:14:ARG:NH2	2.35	0.55
1:CA:1058:G:O2'	10:CL:115:LEU:O	2.25	0.55
1:CA:1860:G:C5'	3:CC:206:LYS:C	2.48	0.55
1:CA:2364:C:OP1	24:C0:55:ARG:NH1	2.38	0.55
26:C2:32:LEU:HD13	26:C2:36:ARG:HH11	1.72	0.55
35:DB:142:LEU:HG	35:DB:146:GLN:HE21	1.72	0.55
57:DZ:13:ARG:NH1	57:DZ:77:HIS:ND1	2.55	0.55
1:AA:559:U:H2'	1:AA:560:C:C6	2.42	0.55
1:AA:865:G:H5'	1:AA:886:U:OP1	2.07	0.55
3:AC:194:ILE:HD11	3:AC:227:PRO:HB3	1.89	0.55
4:AD:71:ASP:OD2	4:AD:103:ARG:NH2	2.40	0.55
32:A8:11:LYS:HG3	32:A8:11:LYS:O	2.07	0.55
34:BA:200:G:H1	34:BA:217:C:N4	1.98	0.55
34:BA:486:U:H2'	34:BA:487:A:C8	2.41	0.55
34:BA:826:C:H4'	41:BH:12:ARG:HD3	1.89	0.55
34:BA:1404:C:O2	34:BA:1519:A:O2'	2.20	0.55
35:BB:20:GLU:HA	35:BB:21:ARG:HH21	1.72	0.55
36:BC:16:ARG:NH1	36:BC:183:ASP:OD1	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:154(A):C:H42	1:CA:171:G:H1	1.55	0.55
1:CA:614(B):G:N2	6:CF:44:ARG:O	2.36	0.55
1:CA:1466:G:O2'	1:CA:1546:C:O2'	2.16	0.55
1:CA:2507:C:C2	1:CA:2583:G:C2	2.95	0.55
5:CE:120:TRP:CE3	5:CE:155:LYS:HD3	2.41	0.55
10:CL:6:ALA:HB3	10:CL:30:HIS:CE1	2.40	0.55
19:CV:6:LYS:HB2	19:CV:38:LEU:HD21	1.88	0.55
22:CY:20:TYR:CE1	22:CY:43:ASN:HA	2.42	0.55
34:DA:254:G:O3'	50:DQ:69:LYS:NZ	2.40	0.55
34:DA:673:G:H2'	34:DA:674:G:C8	2.42	0.55
35:DB:215:LEU:O	35:DB:219:VAL:HG23	2.07	0.55
1:AA:388:A:H2'	1:AA:389:G:H8	1.72	0.55
3:AC:52:PRO:HB2	3:AC:168:LYS:O	2.07	0.55
21:AX:35:THR:HG22	21:AX:38:GLU:H	1.71	0.55
34:BA:619:U:N3	37:BD:134:ASP:OD2	2.23	0.55
37:BD:168:ARG:HH11	37:BD:168:ARG:H	1.55	0.55
41:BH:120:THR:OG1	41:BH:123:GLU:HB2	2.07	0.55
1:CA:2526:G:H5'	1:CA:2742:C:O2'	2.06	0.55
2:CB:45:A:OP2	7:CG:96:ARG:NH2	2.40	0.55
14:CQ:85:LYS:HB2	24:C0:7:LEU:HD12	1.87	0.55
34:DA:869:G:H8	34:DA:869:G:O5'	1.90	0.55
34:DA:986:A:O2'	52:DS:55:LYS:O	2.25	0.55
51:DR:73:ALA:HB3	51:DR:79:LEU:HD12	1.88	0.55
1:AA:139:A:H8	1:AA:1454:C:HO2'	1.53	0.54
1:AA:1558:G:H2'	1:AA:1559:C:C6	2.42	0.54
1:AA:2787:C:H2'	1:AA:2788:A:O4'	2.06	0.54
2:AB:41:U:C5	7:AG:70:VAL:HB	2.43	0.54
3:AC:42:VAL:O	3:AC:216:THR:O	2.24	0.54
3:AC:54:ARG:CZ	3:AC:56:ASP:HB3	2.38	0.54
1:CA:236:C:H2'	1:CA:237:C:H6	1.71	0.54
1:CA:1046:A:H3'	1:CA:1047:G:H5'	1.88	0.54
1:CA:1374:G:H2'	1:CA:1375:C:C6	2.43	0.54
3:CC:6:LYS:HA	3:CC:9:ARG:HH11	1.73	0.54
20:CW:12:ILE:HG13	20:CW:42:ARG:NH1	2.21	0.54
23:CZ:100:VAL:O	23:CZ:124:ILE:N	2.40	0.54
29:C5:16:ARG:HG2	29:C5:17:ASP:OD1	2.06	0.54
34:DA:8:A:N6	37:DD:209:ARG:HB2	2.21	0.54
34:DA:373:A:H61	34:DA:391:G:H1'	1.72	0.54
34:DA:687:A:H4'	34:DA:688:G:O5'	2.07	0.54
34:DA:1143:G:H2'	34:DA:1144:G:C8	2.42	0.54
45:DL:55:VAL:HG22	45:DL:68:ALA:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:108:PHE:O	57:DZ:137:ASN:N	2.36	0.54
57:DZ:316:ILE:HG12	57:DZ:385:THR:HG22	1.88	0.54
1:AA:1587:U:H2'	1:AA:1588:G:O4'	2.07	0.54
1:AA:2705:A:H2'	1:AA:2706:G:C8	2.41	0.54
9:AK:26:LEU:HA	9:AK:84:GLU:HA	1.89	0.54
9:AK:103:GLY:HA3	9:AK:111:LEU:H	1.73	0.54
10:AL:11:GLN:O	10:AL:52:ILE:HD13	2.08	0.54
14:AQ:60:ARG:HA	23:AZ:178:GLU:O	2.06	0.54
28:A4:26:SER:OG	28:A4:27:THR:N	2.40	0.54
34:BA:189(K):U:H2'	34:BA:189(L):G:C8	2.42	0.54
34:BA:1000:U:H2'	34:BA:1001:A:H8	1.72	0.54
34:BA:1369:C:H2'	34:BA:1370:G:C8	2.42	0.54
43:BJ:65:LEU:HB2	47:BN:56:VAL:HG22	1.88	0.54
53:BT:9:ASN:O	53:BT:10:LEU:HB2	2.07	0.54
1:CA:996:A:C2	1:CA:997:G:C8	2.95	0.54
1:CA:2846:G:H2'	1:CA:2847:U:O4'	2.07	0.54
3:CC:52:PRO:HB2	3:CC:168:LYS:O	2.07	0.54
10:CL:12:LEU:HD11	10:CL:23:VAL:HG21	1.90	0.54
13:CP:68:GLN:OE1	13:CP:68:GLN:HA	2.07	0.54
14:CQ:38:GLU:HB2	14:CQ:39:PRO:HD2	1.89	0.54
34:DA:460:G:O6	34:DA:470:C:H5''	2.08	0.54
34:DA:1097:C:O2'	34:DA:1169:A:N3	2.39	0.54
34:DA:1129:C:H2'	34:DA:1139:G:N7	2.22	0.54
1:AA:197:C:H2'	1:AA:198:C:C6	2.43	0.54
1:AA:1141:A:H2'	1:AA:1142:A:C8	2.42	0.54
1:AA:1525:G:O2'	1:AA:1605:A:H2	1.90	0.54
4:AD:155:LEU:HD23	4:AD:177:LEU:HD22	1.90	0.54
10:AL:15:GLY:O	10:AL:17:ALA:N	2.40	0.54
20:AW:14:PRO:CG	20:AW:78:GLU:HG2	2.35	0.54
34:BA:382:A:H2'	34:BA:383:A:H8	1.72	0.54
38:BE:122:GLU:O	38:BE:126:ARG:NH1	2.40	0.54
52:BS:3:ARG:HG2	52:BS:4:SER:H	1.73	0.54
1:CA:1141:U:H2'	11:CN:63:THR:HG21	1.89	0.54
1:CA:2121:G:O4'	3:CC:168:LYS:NZ	2.36	0.54
6:CF:28:ILE:HD11	6:CF:116:ASP:HB2	1.89	0.54
7:CG:170:ARG:NH1	7:CG:174:GLU:OE2	2.40	0.54
34:DA:1000:U:H2'	34:DA:1001:A:C8	2.41	0.54
35:DB:16:HIS:CG	35:DB:17:PHE:N	2.74	0.54
1:AA:2396:G:OP2	24:A0:55:ARG:NH1	2.40	0.54
14:AQ:43:THR:HA	14:AQ:94:VAL:HG12	1.90	0.54
34:BA:551:U:H2'	34:BA:552:U:H6	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:134:ASP:O	37:BD:136:PRO:HD3	2.07	0.54
37:BD:155:LEU:HD13	37:BD:158:ILE:HD11	1.88	0.54
44:BK:81:ASP:OD2	44:BK:107:SER:OG	2.25	0.54
57:BZ:39:ILE:HD12	57:BZ:40:HIS:H	1.72	0.54
1:CA:491:G:H2'	1:CA:492:A:C8	2.42	0.54
1:CA:932:G:H4'	1:CA:933:A:O5'	2.05	0.54
1:CA:1653:G:H3'	15:CR:2:ARG:HD3	1.88	0.54
10:CL:74:ALA:HA	10:CL:77:LEU:CD1	2.37	0.54
21:CX:55:ASN:HB2	21:CX:80:ILE:HB	1.88	0.54
34:DA:583:A:H2'	34:DA:584:G:O4'	2.07	0.54
35:DB:44:LEU:HD22	35:DB:44:LEU:H	1.72	0.54
35:DB:71:VAL:HG23	35:DB:164:VAL:HA	1.89	0.54
50:DQ:27:PHE:CE2	50:DQ:36:ILE:HD11	2.42	0.54
56:DX:76:A:H3'	56:DX:76:A:OP2	2.08	0.54
1:AA:1102:G:H5''	1:AA:1103:A:O4'	2.07	0.54
1:AA:2638:C:H2'	1:AA:2639:G:C8	2.42	0.54
3:AC:49:GLY:N	3:AC:209:PHE:O	2.39	0.54
10:AL:33:ASN:HB3	10:AL:36:GLU:HB2	1.90	0.54
12:AO:53:LYS:HG2	12:AO:56:ASP:OD2	2.08	0.54
13:AP:85:LEU:HD12	13:AP:116:GLY:HA2	1.89	0.54
14:AQ:32:TYR:HB2	14:AQ:106:VAL:HG23	1.90	0.54
27:A3:5:LYS:HD3	27:A3:59:VAL:HG11	1.90	0.54
34:BA:1030(D):A:H62	34:BA:1031:G:H21	1.56	0.54
57:BZ:21:ILE:HD13	57:BZ:21:ILE:N	2.23	0.54
1:CA:2683:C:H5''	17:CT:53:ARG:HH12	1.72	0.54
3:CC:44:VAL:HG23	3:CC:176:VAL:HG21	1.89	0.54
7:CG:5:VAL:HG13	7:CG:8:LYS:HB2	1.90	0.54
13:CP:63:PRO:HG2	32:C8:25:MET:HB2	1.90	0.54
22:CY:28:LYS:N	22:CY:38:ILE:O	2.40	0.54
34:DA:435:C:H2'	34:DA:436:C:C6	2.42	0.54
34:DA:539:A:H2'	34:DA:540:G:H8	1.72	0.54
35:DB:71:VAL:HA	35:DB:93:VAL:HG22	1.89	0.54
38:DE:83:GLU:HA	38:DE:88:LYS:HA	1.88	0.54
57:DZ:168:ILE:N	57:DZ:176:GLY:O	2.41	0.54
57:DZ:264:LEU:HD12	62:DZ:704:GDP:C4	2.43	0.54
1:AA:624:C:OP1	6:AF:108:LYS:HE3	2.08	0.54
16:AS:25:ARG:HD3	16:AS:42:ASP:OD2	2.08	0.54
34:BA:1521:G:H2'	34:BA:1522:U:O4'	2.08	0.54
1:CA:1058:G:O2'	10:CL:114:ASP:O	2.16	0.54
3:CC:194:ILE:HD11	3:CC:227:PRO:HB3	1.89	0.54
4:CD:68:LYS:HD2	4:CD:70:TRP:CH2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CP:59:LEU:O	32:C8:13:ARG:HD2	2.08	0.54
21:CX:43:VAL:HG11	21:CX:81:VAL:HG21	1.90	0.54
34:DA:757:U:O2'	34:DA:879:C:O2	2.24	0.54
34:DA:982:U:O2	34:DA:1222:G:N1	2.37	0.54
53:DT:50:GLU:H	53:DT:99:LEU:HD12	1.73	0.54
1:AA:2714:U:H4'	1:AA:2715:C:OP1	2.06	0.54
1:AA:2789:A:C6	1:AA:2791:A:C6	2.95	0.54
22:AY:55:TYR:N	22:AY:55:TYR:CD1	2.75	0.54
34:BA:33:A:H2'	34:BA:34:C:C6	2.42	0.54
34:BA:345:C:O5'	34:BA:345:C:H6	1.91	0.54
34:BA:1013:G:N2	34:BA:1015:A:H3'	2.22	0.54
37:BD:23:GLY:HA3	37:BD:112:VAL:HG12	1.89	0.54
57:BZ:252:ASP:O	57:BZ:253:LEU:HB2	2.06	0.54
1:CA:1063:G:H4'	10:CL:134:MET:HB3	1.88	0.54
34:DA:193:C:H2'	34:DA:194:C:C6	2.43	0.54
34:DA:1306:A:H1'	34:DA:1332:A:N1	2.23	0.54
34:DA:1372:U:H5''	42:DI:71:SER:HB3	1.88	0.54
42:DI:79:LEU:HG	42:DI:83:ARG:HD2	1.88	0.54
43:DJ:8:LEU:HB2	43:DJ:70:ARG:HB2	1.89	0.54
49:DP:5:ARG:NH1	49:DP:28:ARG:HA	2.22	0.54
57:DZ:94:VAL:O	57:DZ:98:MET:HG2	2.08	0.54
1:AA:1067:A:C8	1:AA:1067:A:H3'	2.43	0.54
1:AA:2250:G:N3	1:AA:2250:G:H2'	2.22	0.54
1:AA:2298:A:H4'	1:AA:2299:A:O4'	2.08	0.54
1:AA:2874:G:OP1	17:AT:119:LYS:HD2	2.08	0.54
20:AW:25:ARG:NH2	20:AW:74:ALA:O	2.34	0.54
28:A4:15:ILE:HD13	28:A4:21:VAL:HG22	1.89	0.54
34:BA:664:G:N2	34:BA:741:G:H1	2.04	0.54
35:BB:111:ARG:HH21	35:BB:114:ARG:HG2	1.73	0.54
35:BB:204:ASN:OD1	35:BB:206:ASP:N	2.40	0.54
51:BR:66:LEU:HD11	51:BR:70:ILE:HD11	1.89	0.54
1:CA:2102:U:H2'	1:CA:2103:C:C6	2.43	0.54
22:CY:74:PRO:O	22:CY:82:PRO:HA	2.08	0.54
30:C6:14:THR:OG1	30:C6:48:VAL:O	2.24	0.54
34:DA:1132:C:H2'	34:DA:1133:G:H8	1.73	0.54
35:DB:128:GLU:HG3	35:DB:135:GLN:HE22	1.72	0.54
50:DQ:18:THR:HG23	50:DQ:69:LYS:HD3	1.89	0.54
1:AA:1405:A:C2	1:AA:1418:U:O4	2.61	0.54
1:AA:1563:G:H2'	1:AA:1564:C:C6	2.43	0.54
1:AA:1566:U:H2'	1:AA:1567:G:O4'	2.08	0.54
5:AE:176:ILE:HG22	5:AE:178:GLU:HG2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:36:C:O2'	45:BL:117:ARG:NH2	2.39	0.54
34:BA:757:U:H2'	34:BA:758:G:O4'	2.08	0.54
41:BH:81:HIS:N	41:BH:138:TRP:O	2.36	0.54
42:BI:26:VAL:HG13	42:BI:61:ALA:HB3	1.90	0.54
57:BZ:87:HIS:O	57:BZ:89:ASP:N	2.40	0.54
57:BZ:127:LYS:NZ	57:BZ:128:TYR:HE2	2.06	0.54
57:BZ:357:ARG:NH1	57:BZ:373:ASP:CG	2.61	0.54
1:CA:971:C:H2'	1:CA:972:G:O4'	2.08	0.54
1:CA:1514:U:H2'	1:CA:1515:G:H8	1.72	0.54
1:CA:1784:A:O2'	63:CA:3747:HOH:O	2.19	0.54
1:CA:2469:A:O3'	14:CQ:56:ARG:NH2	2.41	0.54
22:CY:49:VAL:N	22:CY:59:GLY:O	2.30	0.54
28:C4:44:THR:O	28:C4:46:GLN:N	2.40	0.54
34:DA:1004:A:H8	34:DA:1005:A:H4'	1.72	0.54
50:DQ:45:HIS:HB2	50:DQ:65:ILE:HD12	1.90	0.54
1:AA:1525:G:N2	1:AA:1562:U:C2	2.76	0.54
1:AA:1895:U:OP1	1:AA:2422:G:O2'	2.21	0.54
1:AA:2228:G:O2'	1:AA:2229:A:OP1	2.24	0.54
34:BA:1442:G:H1	34:BA:1461:G:H21	1.56	0.54
34:BA:1507:A:H2'	34:BA:1508:G:C8	2.42	0.54
35:BB:47:THR:HA	35:BB:202:PRO:HG2	1.89	0.54
56:BX:30:G:N2	56:BX:41:C:C2	2.76	0.54
57:BZ:183:MET:SD	57:BZ:213:HIS:HD2	2.31	0.54
57:BZ:230:LYS:HD2	57:BZ:235:GLU:HB3	1.88	0.54
57:BZ:344:THR:OG1	57:BZ:388:THR:HB	2.08	0.54
57:BZ:503:GLY:O	57:BZ:505:GLY:N	2.41	0.54
1:CA:952:G:OP1	14:CQ:16:ARG:NH2	2.40	0.54
1:CA:1824:G:OP1	4:CD:52:ARG:NH1	2.40	0.54
1:CA:1971:A:OP2	4:CD:242:ARG:NH2	2.40	0.54
1:CA:2118:U:N3	1:CA:2149:G:H1'	2.23	0.54
5:CE:27:LEU:HD13	17:CT:1:MET:SD	2.48	0.54
5:CE:175:VAL:O	5:CE:177:PRO:HD3	2.07	0.54
6:CF:116:ASP:OD1	6:CF:119:ARG:NH2	2.41	0.54
11:CN:40:PRO:HA	18:CU:67:ALA:HB3	1.90	0.54
20:CW:60:ASN:HD22	20:CW:60:ASN:N	2.05	0.54
25:C1:23:LYS:HB3	25:C1:29:GLY:HA3	1.89	0.54
34:DA:1145:C:H4'	34:DA:1146:A:H5'	1.90	0.54
46:DM:108:ARG:HD2	46:DM:114:ARG:HD2	1.90	0.54
1:AA:309:C:H2'	1:AA:310:C:C6	2.43	0.53
1:AA:1043:G:OP2	18:AU:58:ARG:NH1	2.35	0.53
1:AA:1551:C:H2'	1:AA:1552:C:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1552:C:N4	1:AA:1553:A:H62	2.05	0.53
3:AC:52:PRO:HG2	3:AC:53:ARG:H	1.73	0.53
34:BA:45:U:H2'	34:BA:46:G:C8	2.43	0.53
34:BA:820:U:H4'	34:BA:821:G:OP2	2.07	0.53
38:BE:68:GLU:HG2	38:BE:70:PRO:HD3	1.90	0.53
44:BK:40:ILE:HG23	44:BK:75:TYR:HD2	1.73	0.53
1:CA:2117:A:N6	1:CA:2171:A:N1	2.55	0.53
3:CC:30:VAL:HG23	3:CC:31:LYS:HG2	1.89	0.53
4:CD:26:LYS:NZ	4:CD:30:GLU:HG2	2.22	0.53
7:CG:29:TRP:O	7:CG:33:ARG:NH1	2.41	0.53
34:DA:537:G:OP1	45:DL:113:ARG:NH1	2.34	0.53
34:DA:859:A:H2'	34:DA:860:A:O4'	2.08	0.53
34:DA:967:C:H2'	34:DA:968:A:N7	2.23	0.53
49:DP:74:LEU:O	49:DP:79:VAL:HG23	2.08	0.53
1:AA:721:G:H1'	6:AF:74:ARG:HD3	1.90	0.53
1:AA:2154:U:C4	3:AC:6:LYS:CB	2.89	0.53
1:AA:2450:U:O2'	1:AA:2452:C:OP1	2.26	0.53
1:AA:2856:G:H2'	1:AA:2857:U:O4'	2.07	0.53
3:AC:44:VAL:HG23	3:AC:176:VAL:HG21	1.89	0.53
4:AD:102:LYS:C	4:AD:103:ARG:HG2	2.29	0.53
8:AH:87:LEU:HA	8:AH:163:TYR:O	2.08	0.53
49:BP:55:ARG:O	49:BP:57:ARG:N	2.41	0.53
57:BZ:-9:LEU:O	57:BZ:-6:ARG:N	2.33	0.53
1:CA:1154:G:H8	1:CA:1154:G:O5'	1.90	0.53
1:CA:2080:G:H2'	1:CA:2081:C:H6	1.72	0.53
1:CA:2432:A:N1	25:C1:35:THR:HG22	2.23	0.53
1:CA:2469:A:H2'	1:CA:2470:G:O4'	2.07	0.53
3:CC:52:PRO:HG2	3:CC:53:ARG:H	1.73	0.53
3:CC:54:ARG:CZ	3:CC:56:ASP:HB3	2.37	0.53
7:CG:7:LEU:HD13	7:CG:104:GLU:HA	1.89	0.53
14:CQ:30:GLY:O	14:CQ:134:ARG:HD3	2.08	0.53
22:CY:102:CYS:SG	22:CY:103:GLY:N	2.81	0.53
23:CZ:138:GLU:H	23:CZ:156:LYS:HZ1	1.56	0.53
29:C5:45:VAL:HG11	29:C5:58:LEU:HD13	1.91	0.53
34:DA:106:C:O2'	34:DA:379:C:OP1	2.25	0.53
34:DA:1317:C:OP1	47:DN:16:PHE:HB3	2.09	0.53
50:DQ:10:VAL:HG13	50:DQ:19:VAL:HB	1.89	0.53
57:DZ:350:GLU:OE2	57:DZ:383:THR:OG1	2.26	0.53
1:AA:2045:G:H5'	1:AA:2629:C:H4'	1.90	0.53
34:BA:1352:C:OP1	54:BU:3:LYS:NZ	2.34	0.53
1:CA:1070:A:H2'	1:CA:1097:U:OP1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2413:G:N2	1:CA:2414:G:H1'	2.22	0.53
1:CA:2659:G:N2	1:CA:2662:A:OP2	2.42	0.53
11:CN:42:TRP:CH2	11:CN:44:PRO:HB3	2.44	0.53
16:CS:35:ILE:HD12	16:CS:101:LEU:HD12	1.91	0.53
18:CU:76:TYR:HH	18:CU:92:ARG:NH1	2.05	0.53
34:DA:355:C:C4	34:DA:356:A:N7	2.77	0.53
34:DA:921:U:O2	38:DE:19:MET:HB2	2.08	0.53
34:DA:1119:C:H2'	34:DA:1120:G:H8	1.73	0.53
34:DA:1392:G:H21	34:DA:1502:A:H8	1.55	0.53
53:DT:33:ILE:O	53:DT:37:SER:OG	2.16	0.53
57:DZ:264:LEU:HB2	62:DZ:704:GDP:C6	2.43	0.53
1:AA:1160:G:H2'	1:AA:1161:G:C8	2.43	0.53
1:AA:2118:U:H2'	1:AA:2119:C:C6	2.44	0.53
3:AC:171:ALA:HB1	3:AC:173:HIS:CE1	2.44	0.53
4:AD:13:ARG:HD2	4:AD:16:MET:HE3	1.89	0.53
16:AS:70:GLY:HA3	16:AS:104:GLY:HA3	1.91	0.53
18:AU:61:TRP:CH2	18:AU:93:LYS:HB2	2.43	0.53
34:BA:435:C:H2'	34:BA:436:C:H6	1.73	0.53
34:BA:1507:A:H2'	34:BA:1508:G:H8	1.73	0.53
37:BD:31:CYS:SG	37:BD:34:GLU:HG2	2.48	0.53
37:BD:68:TYR:OH	37:BD:98:GLU:OE2	2.26	0.53
57:BZ:216:LEU:O	57:BZ:219:VAL:HG22	2.08	0.53
1:CA:125:G:C6	31:C7:10:ARG:HG3	2.44	0.53
1:CA:250:G:H2'	1:CA:251:A:C8	2.44	0.53
5:CE:24:THR:HG23	5:CE:186:GLY:O	2.09	0.53
7:CG:37:VAL:HB	7:CG:94:LEU:HB2	1.89	0.53
22:CY:94:LYS:NZ	63:CY:601:HOH:O	2.40	0.53
25:C1:77:ALA:O	25:C1:80:LEU:HB2	2.08	0.53
35:DB:84:GLU:OE1	35:DB:87:ARG:NH1	2.41	0.53
43:DJ:11:PHE:HE1	43:DJ:67:THR:HB	1.73	0.53
57:DZ:201:ILE:HG21	57:DZ:206:LEU:HD13	1.90	0.53
1:AA:980:C:H2'	1:AA:981:C:H6	1.74	0.53
1:AA:1417:G:H2'	1:AA:1418:U:H5	1.73	0.53
1:AA:2660:C:H2'	1:AA:2661:U:C6	2.43	0.53
8:AH:17:VAL:HG22	8:AH:26:VAL:HG22	1.91	0.53
8:AH:102:ALA:HB2	8:AH:116:GLU:OE1	2.08	0.53
33:A9:27:CYS:SG	33:A9:28:GLU:N	2.82	0.53
34:BA:186:C:H2'	34:BA:187:C:H6	1.73	0.53
34:BA:1399:C:H4'	34:BA:1400:C:H5''	1.90	0.53
34:BA:1412:C:H2'	34:BA:1413:A:C8	2.43	0.53
41:BH:87:SER:HA	41:BH:93:VAL:HG23	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:247:G:H4'	1:CA:386:G:C5	2.43	0.53
1:CA:300:A:P	22:CY:86:ARG:HH21	2.31	0.53
1:CA:792:G:O6	63:CA:3731:HOH:O	2.13	0.53
1:CA:2012:G:OP1	20:CW:11:ARG:NH2	2.42	0.53
6:CF:124:LEU:HB3	6:CF:193:VAL:HG22	1.88	0.53
7:CG:20:ILE:HA	7:CG:25:TYR:HD1	1.73	0.53
12:CO:98:VAL:HG13	12:CO:117:LEU:HB3	1.91	0.53
22:CY:99:CYS:SG	22:CY:100:ALA:N	2.82	0.53
34:DA:73:G:C6	34:DA:76:C:C4	2.97	0.53
34:DA:1070:U:H2'	34:DA:1071:C:H6	1.73	0.53
34:DA:1312:G:N7	52:DS:2:PRO:HD2	2.23	0.53
44:DK:67:ASP:O	44:DK:71:LYS:HG3	2.08	0.53
56:DX:53:G:H1	56:DX:61:C:H42	1.55	0.53
57:DZ:132:ARG:H	57:DZ:132:ARG:HD2	1.73	0.53
57:DZ:225:GLU:HA	57:DZ:228:MET:HB3	1.90	0.53
1:AA:1701:A:OP1	15:AR:1:MET:N	2.42	0.53
1:AA:1846:A:P	4:AD:54:ARG:HH22	2.31	0.53
1:AA:1885:A:H2'	1:AA:1886:G:O4'	2.08	0.53
1:AA:1913:G:C6	1:AA:1914:C:C4	2.97	0.53
3:AC:30:VAL:HG23	3:AC:31:LYS:HG2	1.90	0.53
3:AC:42:VAL:HG13	3:AC:43:GLU:H	1.73	0.53
14:AQ:19:GLY:O	14:AQ:98:LYS:HE3	2.08	0.53
18:AU:9:VAL:O	18:AU:13:LYS:HG2	2.07	0.53
23:AZ:72:ARG:NH2	23:AZ:97:GLU:O	2.42	0.53
40:BG:23:VAL:O	40:BG:27:ILE:HG12	2.08	0.53
1:CA:1059:G:H5''	1:CA:1060:U:H2'	1.89	0.53
1:CA:1095:A:H3'	1:CA:1096:A:C8	2.43	0.53
1:CA:2542:A:H4'	1:CA:2543:G:H8	1.72	0.53
1:CA:2667:C:N3	8:CH:110:SER:OG	2.42	0.53
3:CC:171:ALA:HB1	3:CC:173:HIS:CE1	2.43	0.53
7:CG:43:LEU:HB3	7:CG:88:ILE:O	2.09	0.53
7:CG:114:ILE:HG23	7:CG:136:ARG:NH2	2.24	0.53
17:CT:102:ILE:HB	17:CT:110:ILE:HD13	1.90	0.53
20:CW:7:ALA:O	20:CW:102:HIS:HA	2.09	0.53
34:DA:406:G:H5'	37:DD:5:ILE:HG12	1.90	0.53
34:DA:422:C:H5'	34:DA:423:G:C5	2.44	0.53
34:DA:1044:A:C6	34:DA:1045:C:H1'	2.44	0.53
34:DA:1255:G:P	43:DJ:45:ARG:HH22	2.30	0.53
35:DB:162:ILE:O	35:DB:185:ILE:HG12	2.09	0.53
40:DG:15:ASP:HB3	40:DG:24:THR:HG23	1.91	0.53
46:DM:66:LEU:O	46:DM:68:GLY:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1893:G:H2'	1:AA:1894:G:H8	1.73	0.53
2:AB:39:A:H2'	2:AB:40:U:C6	2.44	0.53
3:AC:6:LYS:HA	3:AC:9:ARG:HH11	1.72	0.53
3:AC:48:LEU:CB	3:AC:50:ILE:HD12	2.38	0.53
8:AH:98:LEU:HD22	8:AH:125:VAL:HG23	1.91	0.53
34:BA:266:G:H5''	34:BA:268:C:H41	1.74	0.53
34:BA:721:G:C6	34:BA:733:A:C2	2.96	0.53
35:BB:59:GLU:O	35:BB:63:MET:HB2	2.09	0.53
57:BZ:206:LEU:O	57:BZ:210:ARG:NH1	2.42	0.53
1:CA:144:C:H5'	21:CX:2:LYS:HE2	1.90	0.53
1:CA:440:G:H2'	1:CA:441:U:C6	2.43	0.53
1:CA:483:A:H5''	22:CY:50:ARG:NH1	2.23	0.53
1:CA:899:A:O2'	1:CA:900:A:H5'	2.08	0.53
1:CA:1325:G:OP1	1:CA:1647:G:O2'	2.19	0.53
24:C0:48:GLY:HA3	24:C0:80:HIS:ND1	2.23	0.53
34:DA:596:C:N3	34:DA:644:G:N1	2.48	0.53
49:DP:28:ARG:HG3	49:DP:29:ASP:OD1	2.09	0.53
1:AA:123:G:H4'	1:AA:124:A:OP2	2.09	0.53
1:AA:1285:G:H2'	1:AA:1286:U:O4'	2.09	0.53
11:AN:68:GLU:HG3	11:AN:88:GLU:OE2	2.08	0.53
34:BA:35:G:N3	45:BL:118:SER:OG	2.42	0.53
35:BB:25:ASN:H	35:BB:191:ASP:HA	1.73	0.53
40:BG:151:TYR:OH	44:BK:54:ARG:HG2	2.09	0.53
41:BH:119:LEU:HB3	41:BH:123:GLU:HB3	1.90	0.53
56:BX:19:G:H4'	56:BX:20:U:OP2	2.08	0.53
56:BX:31:G:N7	56:BX:32:5MC:HM52	2.23	0.53
1:CA:1523:U:H2'	1:CA:1524:G:C8	2.43	0.53
1:CA:2086:U:H2'	1:CA:2087:G:C8	2.43	0.53
1:CA:2233:U:H2'	1:CA:2234:G:C8	2.44	0.53
6:CF:132:VAL:HG21	6:CF:163:VAL:HG22	1.91	0.53
34:DA:108:G:OP1	34:DA:326:G:N2	2.30	0.53
34:DA:1106:G:H5''	36:DC:172:ARG:HG2	1.90	0.53
34:DA:1239:A:H4'	34:DA:1240:U:H5''	1.89	0.53
35:DB:16:HIS:HB2	35:DB:204:ASN:CB	2.38	0.53
53:DT:57:ARG:NH2	53:DT:100:ILE:HD12	2.16	0.53
1:AA:2752:U:O2'	1:AA:2753:A:H5'	2.09	0.53
4:AD:52:ARG:HB2	4:AD:53:PHE:CE2	2.44	0.53
16:AS:54:LEU:O	16:AS:54:LEU:HG	2.08	0.53
16:AS:93:LYS:HG2	16:AS:95:HIS:HB2	1.91	0.53
19:AV:8:GLY:O	19:AV:10:LYS:HE2	2.09	0.53
23:AZ:39:VAL:HG21	23:AZ:44:PHE:HB2	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:865:A:H5'	34:BA:1078:U:O4	2.09	0.53
38:BE:137:GLU:O	38:BE:141:GLN:HG3	2.09	0.53
38:BE:147:ASP:OD1	38:BE:147:ASP:N	2.20	0.53
1:CA:1107:G:P	9:CK:58:LEU:HA	2.48	0.53
10:CL:17:ALA:HB3	10:CL:38:VAL:HG13	1.91	0.53
34:DA:451:A:N6	34:DA:480:U:H2'	2.24	0.53
34:DA:924:C:O2'	34:DA:1502:A:N6	2.41	0.53
34:DA:954:G:H21	34:DA:1227:A:H62	1.57	0.53
34:DA:1065:U:OP2	34:DA:1190:G:N2	2.42	0.53
57:DZ:96:ARG:HH11	57:DZ:96:ARG:HB2	1.74	0.53
1:AA:553:A:H2	1:AA:2065:C:H5'	1.73	0.53
1:AA:782:A:N7	1:AA:808:A:H2	2.07	0.53
1:AA:2402:U:P	32:A8:35:GLN:HE22	2.32	0.53
20:AW:13:SER:HB3	20:AW:16:LYS:HG3	1.91	0.53
21:AX:36:LYS:HG2	21:AX:54:VAL:HG12	1.91	0.53
24:A0:37:LEU:HG	24:A0:60:PHE:HA	1.91	0.53
34:BA:368:U:P	57:BZ:351:ARG:HH11	2.32	0.53
34:BA:1189:C:P	43:BJ:51:ARG:HH22	2.32	0.53
35:BB:55:PHE:HD1	35:BB:58:ILE:HD12	1.74	0.53
36:BC:40:ARG:HG2	36:BC:55:VAL:HG11	1.90	0.53
46:BM:80:ARG:NH2	52:BS:69:HIS:HE1	2.07	0.53
57:BZ:350:GLU:OE1	57:BZ:382:GLU:N	2.42	0.53
1:CA:271(D):G:C6	1:CA:271(E):U:C4	2.97	0.53
1:CA:2128:C:H5'	1:CA:2173:A:N3	2.24	0.53
3:CC:51:ASP:OD2	3:CC:54:ARG:HB2	2.09	0.53
8:CH:106:THR:O	8:CH:106:THR:OG1	2.24	0.53
10:CL:79:ARG:NH1	10:CL:85:GLU:O	2.42	0.53
14:CQ:20:ALA:HB2	23:CZ:79:ARG:HB2	1.90	0.53
21:CX:18:TYR:HA	21:CX:21:PHE:CE2	2.44	0.53
38:DE:107:ARG:HG2	38:DE:108:ALA:N	2.23	0.53
42:DI:8:GLY:HA3	42:DI:76:ALA:O	2.08	0.53
1:AA:704:U:H2'	1:AA:705:C:C6	2.44	0.52
1:AA:869:U:O4	1:AA:989:G:H1'	2.08	0.52
1:AA:1141:A:H2'	1:AA:1142:A:H8	1.74	0.52
1:AA:1847:G:O6	4:AD:35:LYS:NZ	2.41	0.52
1:AA:2013:U:C2'	1:AA:2014:G:H5''	2.37	0.52
1:AA:2390:A:H4'	16:AS:23:ARG:HH11	1.71	0.52
3:AC:51:ASP:OD2	3:AC:54:ARG:HB2	2.09	0.52
3:AC:64:SER:HA	3:AC:161:ARG:H	1.74	0.52
7:AG:47:LYS:O	7:AG:51:ARG:HG2	2.09	0.52
7:AG:135:LEU:HD13	7:AG:157:ILE:HG13	1.89	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AZ:63:ASP:OD1	23:AZ:65:GLN:HB2	2.09	0.52
42:BI:77:ILE:O	42:BI:81:ILE:HG23	2.10	0.52
46:BM:87:TYR:O	46:BM:91:ARG:HG2	2.09	0.52
1:CA:1059:G:OP2	1:CA:1060:U:H3'	2.08	0.52
1:CA:1067:A:H2'	1:CA:1068:G:C8	2.44	0.52
1:CA:1615:C:O2'	1:CA:1616:A:H5''	2.10	0.52
1:CA:1939:U:OP1	1:CA:2604:U:O2'	2.22	0.52
39:DF:2:ARG:CZ	39:DF:69:GLU:HG2	2.39	0.52
52:DS:41:VAL:HG12	52:DS:43:GLU:H	1.73	0.52
57:DZ:165:GLN:O	57:DZ:166:LEU:HD12	2.09	0.52
1:AA:180:A:H2'	1:AA:181:C:C6	2.44	0.52
1:AA:1964:C:OP2	1:AA:1965:U:O2'	2.18	0.52
1:AA:1995:G:H2'	1:AA:1996:C:H6	1.72	0.52
1:AA:2200:C:O2'	3:AC:169:THR:HB	2.10	0.52
6:AF:7:TYR:O	6:AF:21:ALA:HA	2.09	0.52
22:AY:92:ASN:N	22:AY:93:GLY:HA2	2.24	0.52
34:BA:1205:U:O2'	36:BC:195:VAL:HG23	2.09	0.52
57:BZ:328:ILE:HD12	57:BZ:377:VAL:HG12	1.90	0.52
1:CA:795:C:H2'	1:CA:796:C:H6	1.74	0.52
1:CA:2064:C:OP2	63:CA:3748:HOH:O	2.19	0.52
1:CA:2316:C:O2'	7:CG:128:ARG:NH2	2.42	0.52
34:DA:796:C:O5'	34:DA:796:C:H6	1.92	0.52
34:DA:994:A:N7	34:DA:1216:G:H4'	2.24	0.52
35:DB:98:LEU:HB2	35:DB:101:MET:SD	2.50	0.52
37:DD:187:ARG:HG2	37:DD:188:LEU:O	2.10	0.52
42:DI:9:ARG:HG2	42:DI:14:VAL:HG12	1.90	0.52
44:DK:27:ASN:OD1	44:DK:28:THR:N	2.41	0.52
57:DZ:329:ARG:HD3	57:DZ:331:TYR:CZ	2.45	0.52
1:AA:185:A:C4	1:AA:852:G:C6	2.97	0.52
1:AA:1218:G:O2'	1:AA:1219:A:O4'	2.25	0.52
1:AA:1946:C:H4'	56:BX:13:C:H4'	1.92	0.52
2:AB:105:A:H2'	2:AB:106:G:O4'	2.08	0.52
6:AF:185:ASP:HA	6:AF:188:ARG:HD3	1.90	0.52
10:AL:119:ASP:OD1	10:AL:120:LEU:N	2.39	0.52
33:A9:7:VAL:HG12	33:A9:34:GLN:HB3	1.91	0.52
1:CA:636:G:O2'	1:CA:638:G:O2'	2.25	0.52
21:CX:8:ILE:O	26:C2:36:ARG:NH2	2.42	0.52
23:CZ:101:PRO:O	23:CZ:102:LEU:HD12	2.10	0.52
50:DQ:64:PRO:HB3	50:DQ:70:ARG:NH1	2.25	0.52
53:DT:10:LEU:HD23	53:DT:12:ALA:HB2	1.91	0.52
57:DZ:-29:LEU:HB3	57:DZ:-27:THR:HG22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:41:C:H2'	1:AA:42:G:O4'	2.09	0.52
1:AA:1038:C:OP1	18:AU:47:TYR:OH	2.14	0.52
1:AA:1073:A:C2	1:AA:2500:A:H5'	2.45	0.52
1:AA:1478:C:H2'	1:AA:1479:U:O4'	2.09	0.52
1:AA:1766:G:H3'	1:AA:1767:A:H5''	1.91	0.52
1:AA:2102:G:OP1	25:A1:35:THR:HG21	2.09	0.52
15:AR:2:ARG:O	15:AR:5:LYS:HB2	2.09	0.52
16:AS:14:VAL:O	16:AS:18:ILE:HG12	2.09	0.52
23:AZ:111:VAL:C	23:AZ:113:ALA:H	2.11	0.52
34:BA:145:G:H1	34:BA:177:C:H42	1.56	0.52
34:BA:533:A:O2'	34:BA:535:A:OP2	2.20	0.52
34:BA:761:G:C6	34:BA:762:C:C4	2.97	0.52
34:BA:872:A:C4	34:BA:874:G:N7	2.78	0.52
34:BA:1068:G:H8	34:BA:1068:G:OP2	1.93	0.52
47:BN:4:LYS:HA	47:BN:7:ILE:HG23	1.91	0.52
57:BZ:357:ARG:NH1	57:BZ:373:ASP:OD2	2.43	0.52
1:CA:219:G:C6	1:CA:220:G:C6	2.98	0.52
1:CA:1095:A:C5	1:CA:1096:A:C6	2.98	0.52
1:CA:1803:A:O2'	4:CD:259:THR:HG21	2.09	0.52
1:CA:2292:C:H42	1:CA:2340:G:H1	1.57	0.52
15:CR:9:LYS:HA	15:CR:17:ARG:NE	2.24	0.52
32:C8:54:GLU:O	32:C8:58:ILE:HG13	2.09	0.52
34:DA:390:C:O3'	49:DP:28:ARG:NH2	2.42	0.52
34:DA:659:U:OP1	48:DO:9:GLN:NE2	2.41	0.52
34:DA:1052:U:O4	34:DA:1200:C:O2'	2.18	0.52
34:DA:1258:G:H2'	34:DA:1259:C:C6	2.45	0.52
50:DQ:6:LEU:O	50:DQ:58:GLU:HA	2.08	0.52
57:DZ:166:LEU:HD13	57:DZ:180:VAL:HG11	1.91	0.52
57:DZ:357:ARG:HG3	57:DZ:364:GLU:HB3	1.90	0.52
1:AA:493:G:OP1	31:A7:33:ARG:NH1	2.43	0.52
1:AA:911:G:OP2	14:AQ:22:LYS:HE2	2.09	0.52
1:AA:1636:U:H2'	1:AA:1637:G:H8	1.74	0.52
2:AB:89:G:H2'	2:AB:90:A:C8	2.45	0.52
3:AC:67:HIS:CG	3:AC:185:LYS:HD2	2.45	0.52
6:AF:51:THR:HB	6:AF:88:VAL:HG11	1.91	0.52
6:AF:64:ILE:HD12	6:AF:65:TRP:CZ3	2.44	0.52
10:AL:22:PRO:O	10:AL:27:LEU:HD13	2.09	0.52
34:BA:1250:A:H4'	42:BI:68:GLY:N	2.24	0.52
37:BD:196:LEU:O	37:BD:198:VAL:N	2.37	0.52
41:BH:35:ILE:O	41:BH:38:ILE:HB	2.10	0.52
1:CA:729:G:H4'	1:CA:763:G:H5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1301:A:C8	1:CA:1303:G:C8	2.98	0.52
1:CA:1474:C:H2'	1:CA:1475:G:C8	2.45	0.52
1:CA:1638:C:H5''	1:CA:2710:C:O2'	2.09	0.52
3:CC:64:SER:HA	3:CC:161:ARG:H	1.74	0.52
16:CS:83:LYS:HB2	16:CS:111:GLU:HG3	1.91	0.52
17:CT:17:THR:O	17:CT:17:THR:OG1	2.25	0.52
34:DA:1437:C:H42	34:DA:1464:G:H1	1.58	0.52
37:DD:175:SER:HB3	37:DD:186:LEU:HD11	1.92	0.52
38:DE:126:ARG:HA	38:DE:131:ILE:HD11	1.92	0.52
41:DH:86:ILE:HG21	41:DH:133:LEU:HD13	1.91	0.52
57:DZ:149:VAL:O	57:DZ:152:THR:OG1	2.28	0.52
57:DZ:272:LEU:O	57:DZ:276:VAL:HG23	2.09	0.52
1:AA:1068:G:N2	1:AA:1188:A:C2	2.76	0.52
1:AA:2331:G:H22	16:AS:3:ARG:CG	2.22	0.52
3:AC:65:LEU:HD22	3:AC:189:ASN:HB3	1.91	0.52
4:AD:26:LYS:HE2	4:AD:28:GLU:O	2.09	0.52
11:AN:67:LEU:HD13	11:AN:87:LEU:HD13	1.91	0.52
12:AO:100:GLY:H	12:AO:119:PRO:HG2	1.74	0.52
13:AP:68:GLN:HA	13:AP:68:GLN:OE1	2.09	0.52
34:BA:21:G:H2'	34:BA:22:G:C8	2.44	0.52
35:BB:54:THR:O	35:BB:58:ILE:HG13	2.09	0.52
1:CA:914:C:C4	1:CA:915:C:C6	2.97	0.52
3:CC:29:LEU:O	3:CC:30:VAL:C	2.48	0.52
34:DA:1239:A:H62	34:DA:1299:A:N6	2.07	0.52
37:DD:112:VAL:HG22	37:DD:116:GLN:OE1	2.10	0.52
57:DZ:71:THR:HG22	57:DZ:80:ASN:OD1	2.10	0.52
1:AA:1720:U:C2'	1:AA:1721:G:H5'	2.40	0.52
1:AA:2504:U:H2'	1:AA:2505:U:H6	1.73	0.52
18:AU:76:TYR:OH	18:AU:92:ARG:HD3	2.10	0.52
34:BA:537:G:H2'	34:BA:538:G:H8	1.74	0.52
37:BD:104:VAL:O	37:BD:106:TYR:N	2.43	0.52
40:BG:38:LEU:HA	40:BG:41:ARG:HB2	1.91	0.52
1:CA:322:A:H5'	1:CA:340:A:H1'	1.92	0.52
1:CA:1110:G:H2'	1:CA:1110:G:N3	2.25	0.52
1:CA:1798:U:C5'	4:CD:259:THR:HG22	2.31	0.52
1:CA:2203:U:O4'	4:CD:151:LYS:HE2	2.10	0.52
3:CC:48:LEU:CB	3:CC:50:ILE:HD12	2.38	0.52
3:CC:65:LEU:HD22	3:CC:189:ASN:HB3	1.91	0.52
3:CC:67:HIS:CG	3:CC:185:LYS:HD2	2.45	0.52
7:CG:38:VAL:HA	7:CG:93:THR:HA	1.91	0.52
34:DA:49:U:O4	34:DA:365:U:H5	1.93	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1347:G:N2	34:DA:1373:G:H2'	2.25	0.52
36:DC:113:ALA:HA	36:DC:116:VAL:HG23	1.91	0.52
38:DE:33:VAL:HG21	38:DE:109:ILE:HA	1.91	0.52
57:DZ:-13:GLN:HA	57:DZ:-10:ARG:HG2	1.91	0.52
1:AA:1154:U:H1'	1:AA:1155:C:OP1	2.10	0.52
1:AA:2200:C:H4'	3:AC:47:LYS:NZ	2.25	0.52
1:AA:2259:A:H2'	1:AA:2260:C:C6	2.45	0.52
1:AA:2887:G:O2'	1:AA:2888:U:H5'	2.10	0.52
3:AC:29:LEU:O	3:AC:30:VAL:C	2.48	0.52
10:AL:123:ALA:O	10:AL:126:MET:HB2	2.10	0.52
17:AT:29:ARG:HB2	17:AT:46:GLU:HG3	1.91	0.52
27:A3:55:ARG:NH2	27:A3:57:GLU:OE1	2.42	0.52
34:BA:1392:G:N2	34:BA:1502:A:C8	2.76	0.52
34:BA:1458:G:OP1	53:BT:35:THR:OG1	2.18	0.52
44:BK:84:VAL:HG21	44:BK:95:ILE:HD11	1.90	0.52
48:BO:67:LEU:O	48:BO:71:GLN:HB2	2.10	0.52
57:BZ:257:PRO:HB2	57:BZ:259:PHE:CE1	2.44	0.52
1:CA:585:G:H2'	1:CA:1251:C:H42	1.75	0.52
1:CA:641:C:O2'	1:CA:2350:C:OP1	2.19	0.52
1:CA:2124:G:H4'	3:CC:175:PRO:HD3	1.91	0.52
5:CE:52:LEU:O	5:CE:76:ARG:N	2.40	0.52
34:DA:1149:C:OP2	42:DI:9:ARG:NH2	2.42	0.52
38:DE:129:ILE:O	38:DE:132:ALA:HB3	2.09	0.52
51:DR:53:ARG:HA	51:DR:56:THR:OG1	2.10	0.52
57:DZ:-27:THR:HG23	57:DZ:-24:ASN:OD1	2.09	0.52
12:AO:101:PRO:HB3	12:AO:120:GLU:HB3	1.92	0.52
25:A1:19:GLN:O	25:A1:35:THR:HG22	2.09	0.52
34:BA:518:C:O2'	34:BA:530:G:N2	2.43	0.52
39:BF:97:PHE:HD1	51:BR:31:LEU:HD21	1.75	0.52
45:BL:57:LYS:HA	45:BL:67:THR:HA	1.91	0.52
47:BN:37:PHE:CE1	47:BN:53:LEU:HD13	2.44	0.52
57:BZ:160:ARG:HD3	57:BZ:160:ARG:H	1.75	0.52
1:CA:1859:A:C2	1:CA:1884:A:H1'	2.45	0.52
9:CK:26:LEU:N	9:CK:115:GLN:O	2.43	0.52
34:DA:368:U:C2	57:DZ:354:ARG:NH1	2.77	0.52
35:DB:69:LEU:HD12	35:DB:70:PHE:N	2.25	0.52
38:DE:10:MET:HB3	38:DE:13:ILE:HD11	1.91	0.52
57:DZ:528:ALA:O	57:DZ:568:TYR:HA	2.10	0.52
7:AG:110:ALA:HB1	7:AG:140:ILE:HG22	1.92	0.52
10:AL:45:THR:O	10:AL:45:THR:OG1	2.19	0.52
10:AL:56:GLU:O	10:AL:67:PHE:HA	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AS:83:LYS:O	16:AS:111:GLU:N	2.40	0.52
30:A6:18:ARG:HD3	30:A6:42:TRP:CD1	2.44	0.52
34:BA:1154:G:H2'	34:BA:1155:G:H8	1.75	0.52
37:BD:121:VAL:O	37:BD:134:ASP:HA	2.10	0.52
40:BG:103:TRP:HA	40:BG:106:GLN:HB2	1.92	0.52
41:BH:113:SER:CB	41:BH:134:ILE:HD11	2.40	0.52
57:BZ:80:ASN:ND2	57:BZ:374:LEU:HB2	2.25	0.52
57:BZ:177:ILE:HD12	57:BZ:188:TYR:OH	2.10	0.52
57:BZ:273:LEU:O	57:BZ:275:ALA:N	2.43	0.52
1:CA:587:C:C6	1:CA:671:C:H1'	2.45	0.52
1:CA:1865:G:N2	1:CA:1878:G:C5	2.78	0.52
1:CA:2441:C:OP2	1:CA:2586:C:O2'	2.28	0.52
34:DA:649:G:H2'	34:DA:650:G:H8	1.75	0.52
35:DB:163:PHE:HD1	35:DB:185:ILE:HG13	1.75	0.52
57:DZ:72:CYS:SG	57:DZ:79:ILE:HB	2.50	0.52
1:AA:516:G:H2'	1:AA:517:A:H8	1.74	0.51
1:AA:929:G:H1	1:AA:940:C:H42	1.58	0.51
3:AC:218:THR:HG22	3:AC:219:MET:SD	2.50	0.51
5:AE:116:VAL:HG13	5:AE:122:PHE:CD2	2.44	0.51
16:AS:93:LYS:HE2	16:AS:95:HIS:HB2	1.92	0.51
26:A2:50:ILE:O	26:A2:54:LYS:HG3	2.11	0.51
34:BA:1469:G:H2'	34:BA:1470:G:C8	2.44	0.51
35:BB:21:ARG:HB3	35:BB:39:ILE:HG12	1.91	0.51
42:BI:127:LYS:O	42:BI:128:ARG:HG2	2.09	0.51
48:BO:29:VAL:HG11	48:BO:67:LEU:HD21	1.91	0.51
1:CA:687:C:H5'	31:C7:4:THR:O	2.10	0.51
1:CA:2394:C:OP1	13:CP:64:LYS:HB2	2.10	0.51
1:CA:2484:G:C2	1:CA:2485:G:C8	2.99	0.51
1:CA:2786:U:O2'	5:CE:62:PRO:O	2.20	0.51
3:CC:42:VAL:CG1	3:CC:43:GLU:N	2.73	0.51
4:CD:148:GLU:HB2	4:CD:151:LYS:HD2	1.91	0.51
23:CZ:125:LEU:HB3	23:CZ:165:VAL:HG13	1.92	0.51
34:DA:630:G:H2'	34:DA:631:G:H8	1.75	0.51
34:DA:1359:C:OP1	47:DN:22:THR:OG1	2.29	0.51
36:DC:55:VAL:HG22	36:DC:68:VAL:HG13	1.91	0.51
38:DE:36:ASP:C	38:DE:38:GLN:H	2.14	0.51
57:DZ:131:PRO:HG2	57:DZ:281:PRO:HG3	1.92	0.51
1:AA:1065:U:O2'	1:AA:1067:A:H2	1.90	0.51
1:AA:2198:A:H2'	1:AA:2199:C:C6	2.45	0.51
1:AA:2764:G:H4'	8:AH:4:ILE:HD11	1.92	0.51
3:AC:54:ARG:HH22	3:AC:56:ASP:HB3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AQ:38:GLU:HG2	14:AQ:127:ILE:HB	1.91	0.51
34:BA:112:G:HO2'	34:BA:354:G:HO2'	1.54	0.51
34:BA:515:G:H2'	34:BA:516:U:O4'	2.10	0.51
36:BC:88:ARG:HA	36:BC:91:LEU:HB3	1.92	0.51
36:BC:108:ASN:HB3	36:BC:111:LEU:HG	1.92	0.51
37:BD:101:LEU:O	37:BD:104:VAL:N	2.43	0.51
37:BD:110:PHE:HE2	37:BD:148:VAL:HG23	1.75	0.51
57:BZ:14:ASN:OD1	57:BZ:80:ASN:HB2	2.10	0.51
57:BZ:388:THR:HG23	57:BZ:399:LEU:HD22	1.92	0.51
1:CA:11:G:C2'	1:CA:12:U:H5''	2.39	0.51
1:CA:2177:C:O3'	3:CC:47:LYS:HB2	2.10	0.51
2:CB:50:G:OP1	16:CS:63:THR:HG22	2.10	0.51
17:CT:26:ASP:O	17:CT:49:VAL:HG12	2.10	0.51
24:C0:36:ILE:HD12	24:C0:58:THR:HG21	1.92	0.51
32:C8:52:LYS:O	32:C8:56:GLU:HG3	2.11	0.51
34:DA:502:G:OP2	45:DL:116:SER:HA	2.11	0.51
34:DA:939:G:H1	34:DA:1344:C:H42	1.57	0.51
34:DA:1039:C:H2'	34:DA:1040:U:O4'	2.10	0.51
34:DA:1071:C:H2'	34:DA:1072:G:C8	2.44	0.51
34:DA:1222:G:H5''	52:DS:78:ARG:NH2	2.25	0.51
37:DD:92:VAL:O	37:DD:96:LEU:HD13	2.10	0.51
37:DD:100:ARG:NH2	37:DD:118:ARG:HH12	2.08	0.51
1:AA:1405:A:N6	1:AA:1418:U:H3	2.08	0.51
1:AA:1423:G:H5''	1:AA:1424:A:OP2	2.11	0.51
1:AA:1556:A:H3'	1:AA:1557:A:H8	1.74	0.51
4:AD:16:MET:HG3	4:AD:211:ARG:NH2	2.25	0.51
4:AD:77:ALA:O	4:AD:116:GLN:HA	2.10	0.51
15:AR:118:GLU:H	15:AR:118:GLU:CD	2.14	0.51
16:AS:11:LYS:O	16:AS:15:ARG:HB2	2.11	0.51
19:AV:16:PRO:HD3	19:AV:99:ILE:HD11	1.92	0.51
27:A3:3:ARG:HD3	27:A3:60:GLU:OE2	2.11	0.51
48:BO:8:LYS:O	48:BO:12:ILE:HG13	2.11	0.51
57:BZ:129:LYS:HD2	57:BZ:253:LEU:CD2	2.40	0.51
57:BZ:140:ASP:OD2	57:BZ:140:ASP:N	2.42	0.51
1:CA:307:G:H2'	1:CA:309:G:OP2	2.11	0.51
1:CA:996:A:O3'	18:CU:91:ASP:HB2	2.09	0.51
1:CA:2218:U:O2	25:C1:52:ARG:NH2	2.42	0.51
1:CA:2235:G:H2'	1:CA:2236:C:C6	2.45	0.51
3:CC:68:GLY:H	3:CC:189:ASN:ND2	2.08	0.51
14:CQ:106:VAL:HG21	14:CQ:114:ALA:HB1	1.92	0.51
34:DA:475:G:H2'	34:DA:476:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:121:ALA:HB2	36:DC:187:ALA:HB1	1.93	0.51
1:AA:388:A:H2'	1:AA:389:G:C8	2.46	0.51
63:AA:4286:HOH:O	15:AR:15:SER:HB3	2.09	0.51
7:AG:79:ASN:OD1	7:AG:79:ASN:N	2.42	0.51
8:AH:5:GLY:HA3	8:AH:65:HIS:CD2	2.46	0.51
16:AS:91:PRO:HG2	16:AS:92:TYR:CE1	2.45	0.51
25:A1:50:ARG:HG2	25:A1:59:THR:HB	1.91	0.51
35:BB:97:TRP:HZ3	35:BB:176:GLU:OE2	1.93	0.51
38:BE:78:HIS:NE2	38:BE:142:LEU:HA	2.25	0.51
42:BI:43:ALA:HA	42:BI:74:ILE:HD13	1.91	0.51
1:CA:301:G:OP2	22:CY:84:ARG:NH2	2.43	0.51
3:CC:6:LYS:N	3:CC:9:ARG:NH1	2.58	0.51
10:CL:75:SER:HA	10:CL:78:ILE:HG22	1.93	0.51
13:CP:88:LEU:HD11	13:CP:114:ILE:HD12	1.91	0.51
15:CR:38:VAL:CG1	15:CR:42:LYS:HD2	2.36	0.51
34:DA:556:C:C4	34:DA:557:G:N7	2.79	0.51
34:DA:975:A:H61	43:DJ:48:THR:HB	1.75	0.51
39:DF:82:ARG:HB2	39:DF:85:VAL:HG23	1.91	0.51
51:DR:44:LEU:HD21	51:DR:70:ILE:HD13	1.91	0.51
52:DS:13:ASP:HA	52:DS:16:LEU:HB3	1.93	0.51
1:AA:714:U:O2	32:A8:2:PRO:HD2	2.10	0.51
1:AA:1398:U:OP1	63:AA:3937:HOH:O	2.19	0.51
1:AA:1624:C:H2'	1:AA:1625:U:O4'	2.11	0.51
1:AA:1634:C:H2'	1:AA:1635:C:C6	2.46	0.51
1:AA:1809:U:H2'	1:AA:1815:A:N6	2.24	0.51
17:AT:118:ARG:HG2	34:BA:1442(A):G:C8	2.44	0.51
34:BA:1030(C):G:H2'	34:BA:1030(D):A:H8	1.76	0.51
44:BK:48:ILE:HG21	44:BK:63:LEU:HB3	1.93	0.51
49:BP:69:THR:O	49:BP:69:THR:OG1	2.29	0.51
57:BZ:160:ARG:HE	57:BZ:254:LYS:C	2.14	0.51
1:CA:252:G:P	13:CP:50:ARG:HH12	2.33	0.51
1:CA:477:A:H2'	1:CA:478:A:C8	2.45	0.51
1:CA:1973:G:H2'	1:CA:1974:C:C6	2.45	0.51
1:CA:2336:A:H61	24:C0:43:THR:HG22	1.75	0.51
3:CC:50:ILE:H	3:CC:50:ILE:HD13	1.76	0.51
6:CF:29:ASN:ND2	6:CF:32:LEU:HB2	2.25	0.51
14:CQ:63:LYS:HA	23:CZ:178:GLU:HG3	1.91	0.51
34:DA:909:A:H2'	34:DA:910:C:O4'	2.10	0.51
34:DA:995:C:H1'	47:DN:4:LYS:HE2	1.93	0.51
43:DJ:61:GLU:OE2	47:DN:49:HIS:NE2	2.36	0.51
44:DK:48:ILE:C	44:DK:50:TYR:H	2.12	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DL:80:HIS:HA	57:DZ:425:SER:OG	2.11	0.51
57:DZ:302:HIS:O	57:DZ:304:ASP:N	2.40	0.51
1:AA:711:C:OP1	13:AP:17:LYS:HE2	2.11	0.51
1:AA:1343:C:OP1	1:AA:2722:C:H4'	2.11	0.51
1:AA:2524:C:O2'	5:AE:154:LYS:HE2	2.10	0.51
3:AC:6:LYS:N	3:AC:9:ARG:NH1	2.58	0.51
3:AC:42:VAL:CG1	3:AC:43:GLU:N	2.73	0.51
3:AC:44:VAL:HG21	3:AC:176:VAL:HG21	1.92	0.51
5:AE:24:THR:HG21	5:AE:188:VAL:HB	1.92	0.51
8:AH:43:VAL:HG22	8:AH:52:VAL:HG22	1.92	0.51
34:BA:839:U:H4'	34:BA:840:C:OP2	2.11	0.51
38:BE:143:ARG:NH1	41:BH:77:GLU:OE2	2.42	0.51
53:BT:12:ALA:O	53:BT:15:ARG:HB2	2.11	0.51
1:CA:2177:C:O2'	3:CC:171:ALA:HB2	2.10	0.51
3:CC:57:GLN:HB2	3:CC:202:PRO:HG2	1.93	0.51
3:CC:218:THR:HG22	3:CC:219:MET:SD	2.50	0.51
7:CG:98:ARG:HA	7:CG:101:ILE:HB	1.92	0.51
16:CS:34:HIS:CE1	16:CS:54:LEU:HA	2.46	0.51
17:CT:6:LEU:O	17:CT:9:LEU:HB3	2.10	0.51
26:C2:18:PRO:O	26:C2:22:GLU:HG2	2.10	0.51
34:DA:113:G:N3	34:DA:353:A:O2'	2.33	0.51
39:DF:23:LYS:HG2	39:DF:61:LEU:HD21	1.93	0.51
47:DN:14:PRO:HB2	47:DN:16:PHE:O	2.10	0.51
56:DX:8:4SU:O5'	56:DX:8:4SU:H6	2.09	0.51
57:DZ:122:TRP:CE2	57:DZ:132:ARG:NH1	2.79	0.51
57:DZ:193:GLY:O	57:DZ:196:ILE:HG22	2.11	0.51
1:AA:439:A:O5'	1:AA:439:A:H8	1.94	0.51
1:AA:1249:A:N6	1:AA:1286:U:H2'	2.24	0.51
1:AA:2331:G:N1	16:AS:3:ARG:HA	2.25	0.51
3:AC:54:ARG:HD2	3:AC:55:SER:H	1.76	0.51
3:AC:68:GLY:H	3:AC:189:ASN:ND2	2.09	0.51
6:AF:39:TRP:O	6:AF:43:LYS:HG2	2.10	0.51
6:AF:114:VAL:HG21	6:AF:202:PHE:CZ	2.45	0.51
6:AF:202:PHE:CZ	6:AF:206:ILE:HD13	2.46	0.51
23:AZ:59:LEU:N	23:AZ:67:LEU:O	2.30	0.51
34:BA:1017:G:H2'	34:BA:1018:C:C6	2.46	0.51
37:BD:120:LEU:HB3	37:BD:126:ILE:HD11	1.93	0.51
43:BJ:33:GLN:O	43:BJ:75:ILE:N	2.43	0.51
45:BL:77:LEU:HD21	45:BL:107:ALA:HA	1.92	0.51
1:CA:1045:A:N6	1:CA:1111:A:H2'	2.26	0.51
1:CA:1960:A:H8	1:CA:1960:A:H5''	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2476:A:H2'	1:CA:2476:A:N3	2.24	0.51
14:CQ:116:GLU:O	14:CQ:119:ARG:N	2.43	0.51
22:CY:14:LEU:HG	22:CY:15:VAL:N	2.25	0.51
34:DA:176:C:H2'	34:DA:177:C:H6	1.76	0.51
34:DA:189(B):C:H2'	34:DA:189(C):C:C6	2.46	0.51
34:DA:1256:A:N6	34:DA:1278:U:O2	2.43	0.51
39:DF:99:ALA:HB3	51:DR:29:PHE:CE1	2.46	0.51
39:DF:100:ASN:ND2	51:DR:23:LYS:HE3	2.25	0.51
1:AA:662:A:H4'	1:AA:663:G:O5'	2.11	0.51
1:AA:771:U:O4	1:AA:772:G:C6	2.64	0.51
1:AA:1532:A:H2'	1:AA:1533:G:H8	1.76	0.51
1:AA:2120:U:H2'	1:AA:2121:U:O4'	2.11	0.51
7:AG:112:PRO:HG3	28:A4:43:TYR:CE1	2.46	0.51
7:AG:115:ARG:HG3	7:AG:116:ASP:CG	2.31	0.51
8:AH:4:ILE:O	8:AH:69:ARG:HG2	2.10	0.51
27:A3:5:LYS:HB3	27:A3:57:GLU:HG2	1.92	0.51
34:BA:111:G:H5''	49:BP:27:LYS:HG2	1.91	0.51
34:BA:153:C:H42	34:BA:169:C:H42	1.56	0.51
34:BA:358:U:O2'	34:BA:359:U:H5'	2.10	0.51
47:BN:3:ARG:O	47:BN:5:ALA:N	2.44	0.51
57:BZ:107:VAL:HG22	57:BZ:135:PHE:HD2	1.74	0.51
57:BZ:639:ASN:N	57:BZ:640:ALA:HB3	2.26	0.51
1:CA:607:U:OP1	6:CF:102:PRO:HA	2.10	0.51
3:CC:42:VAL:HG13	3:CC:43:GLU:H	1.73	0.51
7:CG:151:ALA:HB3	7:CG:153:ARG:HH11	1.76	0.51
12:CO:103:ALA:O	12:CO:106:LEU:HB2	2.11	0.51
30:C6:30:THR:O	30:C6:30:THR:HG22	2.11	0.51
34:DA:410:G:OP1	37:DD:30:LYS:NZ	2.34	0.51
34:DA:618:C:N4	34:DA:621:A:N7	2.59	0.51
34:DA:677:U:O2	34:DA:777:A:O2'	2.23	0.51
34:DA:693:G:O4'	55:DV:13:A:H5''	2.11	0.51
34:DA:1312:G:H5'	52:DS:5:LEU:HD11	1.92	0.51
41:DH:51:VAL:HG22	41:DH:60:ARG:HB2	1.92	0.51
42:DI:45:ALA:O	42:DI:78:LYS:HG3	2.09	0.51
44:DK:15:ALA:HB1	44:DK:78:GLN:HG3	1.91	0.51
1:AA:2198:A:O2'	3:AC:45:HIS:CG	2.64	0.51
7:AG:16:ARG:HB2	7:AG:17:PRO:HD3	1.93	0.51
15:AR:103:ARG:HD3	15:AR:108:GLY:O	2.10	0.51
16:AS:10:ARG:O	16:AS:14:VAL:HG13	2.10	0.51
17:AT:73:GLU:OE1	17:AT:103:ARG:NE	2.41	0.51
34:BA:1234:C:H2'	34:BA:1235:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1315:U:H2'	34:BA:1316:G:O4'	2.11	0.51
34:BA:1323:G:H4'	34:BA:1363:C:N3	2.26	0.51
38:BE:36:ASP:OD1	38:BE:39:GLY:N	2.39	0.51
40:BG:28:ASN:ND2	40:BG:36:LYS:HE3	2.26	0.51
41:BH:6:ILE:HG22	41:BH:10:LEU:HD21	1.93	0.51
1:CA:272:G:H4'	1:CA:272(A):U:H5''	1.91	0.51
1:CA:1810:A:H2'	1:CA:1811:G:O4'	2.11	0.51
1:CA:2365:G:H4'	24:C0:60:PHE:CZ	2.46	0.51
1:CA:2850:A:OP2	1:CA:2866:U:C5	2.63	0.51
3:CC:44:VAL:HG21	3:CC:176:VAL:HG21	1.93	0.51
13:CP:59:LEU:HD23	32:C8:58:ILE:HD13	1.92	0.51
23:CZ:69:THR:HG22	23:CZ:90:VAL:HG22	1.91	0.51
26:C2:29:LYS:HG2	26:C2:57:ILE:HD13	1.92	0.51
34:DA:803:G:OP1	63:DA:1808:HOH:O	2.19	0.51
37:DD:93:PHE:O	37:DD:97:LEU:HB2	2.11	0.51
42:DI:8:GLY:HA2	42:DI:79:LEU:HD23	1.93	0.51
43:DJ:13:HIS:HB3	43:DJ:68:HIS:CE1	2.45	0.51
44:DK:38:ASN:OD1	44:DK:38:ASN:N	2.43	0.51
57:DZ:35:TYR:HE2	57:DZ:269:VAL:HB	1.76	0.51
57:DZ:359:HIS:HB2	57:DZ:362:HIS:O	2.11	0.51
11:AN:42:TRP:CH2	11:AN:44:PRO:HB3	2.45	0.51
14:AQ:62:GLY:O	23:AZ:178:GLU:HG2	2.11	0.51
34:BA:102:G:O2'	34:BA:151:A:N3	2.43	0.51
34:BA:186:C:H2'	34:BA:187:C:C6	2.46	0.51
35:BB:141:GLU:O	35:BB:145:LEU:HB2	2.11	0.51
36:BC:172:ARG:HB2	36:BC:203:PHE:CD2	2.46	0.51
42:BI:23:ASN:ND2	42:BI:60:ASP:OD2	2.44	0.51
1:CA:1859:A:C2'	3:CC:206:LYS:HD2	1.99	0.51
1:CA:2121:G:H1'	3:CC:168:LYS:HG2	1.92	0.51
1:CA:2328:A:H2'	1:CA:2329:G:C8	2.46	0.51
1:CA:2773:C:H2'	1:CA:2774:C:H6	1.76	0.51
1:CA:2823:A:P	5:CE:159:HIS:HE2	2.31	0.51
6:CF:29:ASN:HD22	6:CF:32:LEU:HB2	1.75	0.51
8:CH:98:LEU:HD12	8:CH:102:ALA:O	2.11	0.51
32:C8:20:GLY:O	32:C8:59:LYS:HE2	2.11	0.51
34:DA:58:C:O2'	34:DA:388:G:N7	2.37	0.51
34:DA:1399:C:C2	34:DA:1502:A:N6	2.79	0.51
1:AA:1301:U:O5'	1:AA:1302:G:H5''	2.10	0.50
3:AC:50:ILE:H	3:AC:50:ILE:HD13	1.76	0.50
3:AC:57:GLN:HB2	3:AC:202:PRO:HG2	1.93	0.50
6:AF:133:ASN:N	6:AF:138:GLU:OE1	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:41:GLN:O	7:AG:43:LEU:HB2	2.12	0.50
7:AG:58:GLN:O	7:AG:62:LEU:HG	2.10	0.50
10:AL:93:ARG:CZ	10:AL:93:ARG:HB3	2.39	0.50
10:AL:119:ASP:CG	10:AL:120:LEU:H	2.14	0.50
16:AS:20:ARG:NH2	24:A0:47:PRO:HB2	2.26	0.50
20:AW:69:LEU:HD13	20:AW:107:LEU:HD23	1.92	0.50
21:AX:32:PRO:HA	21:AX:77:LYS:HB2	1.91	0.50
34:BA:309:G:O2'	34:BA:607:A:N1	2.44	0.50
34:BA:892:A:H2'	34:BA:893:C:C6	2.46	0.50
34:BA:976:G:OP1	47:BN:32:SER:N	2.44	0.50
35:BB:150:SER:O	35:BB:153:ARG:NH1	2.44	0.50
43:BJ:4:ILE:HA	43:BJ:100:THR:HA	1.93	0.50
49:BP:57:ARG:HE	49:BP:79:VAL:HG12	1.76	0.50
56:BX:31:G:C8	56:BX:32:5MC:HM52	2.47	0.50
57:BZ:93:GLU:O	57:BZ:96:ARG:N	2.45	0.50
57:BZ:164:MET:O	57:BZ:180:VAL:HG13	2.11	0.50
1:CA:2316:C:H2'	1:CA:2317:C:C6	2.45	0.50
1:CA:2400:G:N2	1:CA:2417:C:C2	2.79	0.50
1:CA:2684:U:H2'	1:CA:2685:G:O4'	2.11	0.50
6:CF:157:VAL:HG11	6:CF:181:LEU:HD12	1.92	0.50
14:CQ:11:LYS:NZ	14:CQ:88:GLY:O	2.26	0.50
15:CR:57:ARG:O	15:CR:59:ASP:N	2.43	0.50
16:CS:15:ARG:HG2	16:CS:88:ASP:OD1	2.11	0.50
16:CS:66:ALA:HA	16:CS:69:VAL:HG12	1.91	0.50
34:DA:67:C:H2'	34:DA:68:G:H8	1.75	0.50
34:DA:667:G:H4'	48:DO:51:HIS:ND1	2.26	0.50
37:DD:25:ARG:HG2	37:DD:25:ARG:O	2.11	0.50
46:DM:81:LEU:HD11	46:DM:88:ARG:HH21	1.76	0.50
1:AA:491:G:H2'	1:AA:492:A:C8	2.46	0.50
1:AA:897:C:O3'	27:A3:49:LYS:HE2	2.12	0.50
1:AA:2143:G:C4'	3:AC:168:LYS:CD	2.88	0.50
2:AB:15:A:OP2	2:AB:69:G:N2	2.36	0.50
11:AN:28:THR:HG22	11:AN:29:LYS:N	2.25	0.50
34:BA:67:C:H2'	34:BA:68:G:H8	1.76	0.50
34:BA:791:G:C2'	34:BA:792:A:H5'	2.41	0.50
34:BA:1060:C:C5	36:BC:2:GLY:HA3	2.46	0.50
43:BJ:49:VAL:HG23	47:BN:41:ARG:HB2	1.93	0.50
57:BZ:15:ILE:HA	57:BZ:103:GLY:O	2.12	0.50
1:CA:479:A:N3	1:CA:481:G:H5''	2.26	0.50
1:CA:646:A:H2'	1:CA:647:G:O4'	2.10	0.50
1:CA:1861:G:OP2	3:CC:206:LYS:HA	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2318:G:H4'	1:CA:2319:G:OP2	2.11	0.50
4:CD:69:ARG:NH2	4:CD:128:GLY:O	2.45	0.50
4:CD:71:ASP:CG	4:CD:103:ARG:HH22	2.13	0.50
16:CS:83:LYS:HD3	16:CS:111:GLU:OE1	2.11	0.50
34:DA:1051:C:H2'	34:DA:1052:U:H6	1.77	0.50
41:DH:25:ASP:HB3	41:DH:58:TYR:CD2	2.44	0.50
47:DN:37:PHE:HB3	47:DN:39:LEU:HD12	1.92	0.50
1:AA:1336:C:O2'	1:AA:1337:C:H5'	2.11	0.50
1:AA:2294:G:OP1	1:AA:2295:C:H1'	2.11	0.50
1:AA:2408:G:H4'	25:A1:29:GLY:O	2.11	0.50
1:AA:2600:G:OP1	63:AA:3938:HOH:O	2.19	0.50
1:AA:2673:G:C6	1:AA:2674:A:C2	3.00	0.50
8:AH:33:LEU:HD11	8:AH:136:ILE:HG13	1.93	0.50
16:AS:89:ARG:HD2	16:AS:92:TYR:O	2.12	0.50
21:AX:11:PRO:HD3	26:A2:37:PHE:CZ	2.47	0.50
23:AZ:109:ALA:HB3	23:AZ:145:GLU:HG3	1.94	0.50
34:BA:767:A:H2'	34:BA:768:A:O4'	2.12	0.50
34:BA:899:C:O5'	34:BA:899:C:H6	1.95	0.50
38:BE:105:VAL:HB	38:BE:106:PRO:HD3	1.94	0.50
53:BT:63:ILE:HD12	53:BT:81:LYS:HG2	1.92	0.50
57:BZ:182:ARG:HG3	57:BZ:182:ARG:NH1	2.26	0.50
1:CA:1050:A:O2'	1:CA:2752:C:H1'	2.10	0.50
1:CA:1143:A:OP1	11:CN:25:ARG:NH2	2.44	0.50
1:CA:1557:C:H5''	1:CA:1558:A:OP2	2.11	0.50
1:CA:2322:A:H2'	1:CA:2323:G:O4'	2.11	0.50
1:CA:2820:A:OP2	15:CR:2:ARG:NH2	2.44	0.50
34:DA:519:C:H2'	34:DA:520:A:O4'	2.12	0.50
34:DA:1133:G:H2'	34:DA:1134:G:H8	1.75	0.50
1:AA:1645:C:OP2	21:AX:36:LYS:HD2	2.12	0.50
3:AC:65:LEU:HB3	3:AC:189:ASN:HD22	1.75	0.50
23:AZ:24:LEU:HD22	23:AZ:41:LEU:HD23	1.93	0.50
34:BA:364:A:H2'	34:BA:365:U:C6	2.47	0.50
34:BA:545:C:OP2	37:BD:65:ARG:NH2	2.44	0.50
34:BA:853:G:C6	34:BA:854:G:C5	3.00	0.50
34:BA:1417:G:N2	34:BA:1482:G:H2'	2.23	0.50
36:BC:40:ARG:NH2	36:BC:55:VAL:O	2.44	0.50
39:BF:37:VAL:HG12	39:BF:38:GLU:H	1.77	0.50
41:BH:58:TYR:O	41:BH:59:LEU:HD23	2.12	0.50
42:BI:9:ARG:H	42:BI:79:LEU:HD23	1.75	0.50
57:BZ:-36:LEU:HD11	57:BZ:-29:LEU:HD22	1.92	0.50
57:BZ:291:GLY:HA3	57:BZ:301:ILE:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:71:A:N7	21:CX:31:HIS:HE1	2.09	0.50
1:CA:876:C:H2'	1:CA:877:U:O4'	2.10	0.50
1:CA:2394:C:OP1	32:C8:30:ARG:NH1	2.44	0.50
1:CA:2748:A:H5'	8:CH:4:ILE:HD12	1.94	0.50
1:CA:2787:C:H2'	1:CA:2788:C:H6	1.77	0.50
1:CA:2850:A:C2	1:CA:2851:A:C4	2.99	0.50
4:CD:44:ASN:ND2	4:CD:46:GLN:HG3	2.26	0.50
8:CH:103:LEU:HB3	8:CH:115:VAL:HG22	1.93	0.50
12:CO:10:VAL:HG11	12:CO:16:ALA:HB1	1.93	0.50
26:C2:22:GLU:OE2	26:C2:68:ARG:NH2	2.44	0.50
34:DA:143:A:OP2	34:DA:143:A:H8	1.94	0.50
34:DA:1325:C:H4'	54:DU:17:THR:HG21	1.92	0.50
38:DE:69:VAL:HG22	38:DE:71:LEU:HD13	1.94	0.50
43:DJ:11:PHE:CE1	43:DJ:67:THR:HB	2.47	0.50
46:DM:20:THR:HA	46:DM:25:ILE:O	2.11	0.50
57:DZ:103:GLY:H	57:DZ:130:VAL:HG23	1.75	0.50
1:AA:89:U:H1'	1:AA:90:A:N7	2.27	0.50
1:AA:313:A:H61	1:AA:375:G:H1'	1.77	0.50
1:AA:596:G:O2'	1:AA:597:C:H3'	2.12	0.50
1:AA:1211:U:H2'	1:AA:1212:C:C6	2.46	0.50
1:AA:1818:A:O4'	1:AA:2601:A:H4'	2.12	0.50
1:AA:2735:G:H2'	1:AA:2736:C:C6	2.46	0.50
34:BA:413:G:H1'	34:BA:428:G:H21	1.76	0.50
35:BB:111:ARG:HG2	35:BB:111:ARG:NH1	2.26	0.50
57:BZ:122:TRP:O	57:BZ:122:TRP:CD1	2.65	0.50
1:CA:489:G:N7	20:CW:49:LYS:NZ	2.56	0.50
1:CA:491:G:H2'	1:CA:492:A:H8	1.76	0.50
1:CA:1856:G:C2	1:CA:1887:C:N3	2.80	0.50
1:CA:2570:G:H2'	1:CA:2571:C:O4'	2.12	0.50
3:CC:54:ARG:HD2	3:CC:55:SER:H	1.76	0.50
34:DA:43:C:H2'	34:DA:44:G:O4'	2.12	0.50
34:DA:791:G:C6	34:DA:792:A:N7	2.80	0.50
34:DA:994:A:C2	47:DN:5:ALA:HA	2.47	0.50
34:DA:1060:C:H4'	43:DJ:51:ARG:HB3	1.92	0.50
35:DB:87:ARG:NH2	35:DB:220:ASP:OD1	2.41	0.50
46:DM:86:CYS:SG	46:DM:88:ARG:HB2	2.51	0.50
57:DZ:139:MET:HA	57:DZ:144:ALA:HB1	1.93	0.50
1:AA:181:C:H2'	1:AA:182:U:H5'	1.94	0.50
1:AA:2357:G:N3	1:AA:2393:C:H2'	2.27	0.50
1:AA:2705:A:H2'	1:AA:2706:G:H8	1.77	0.50
10:AL:51:ALA:HB2	10:AL:76:TYR:CZ	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:56:PRO:C	22:AY:58:GLY:H	2.15	0.50
34:BA:158:G:H2'	34:BA:159:G:H8	1.77	0.50
34:BA:316:G:OP2	34:BA:351:G:O2'	2.30	0.50
34:BA:1298:C:H2'	40:BG:114:ARG:NH1	2.27	0.50
53:BT:30:LYS:HA	53:BT:33:ILE:HD12	1.93	0.50
1:CA:1141:U:OP1	11:CN:25:ARG:HD2	2.11	0.50
1:CA:1843:C:H5'	4:CD:253:GLN:HE21	1.74	0.50
1:CA:2238:G:H2'	1:CA:2238:G:N3	2.27	0.50
9:CK:118:THR:O	9:CK:120:LYS:N	2.45	0.50
15:CR:33:ARG:NH2	29:C5:57:VAL:O	2.45	0.50
19:CV:72:VAL:HG13	19:CV:85:LYS:HB3	1.93	0.50
33:C9:14:CYS:HA	33:C9:27:CYS:HB2	1.93	0.50
34:DA:181:G:H4'	34:DA:182:U:H5'	1.93	0.50
34:DA:579:G:H2'	34:DA:580:U:H6	1.76	0.50
34:DA:1142:G:H2'	34:DA:1143:G:O4'	2.11	0.50
34:DA:1224:G:O2'	34:DA:1322:C:OP1	2.29	0.50
34:DA:1248:A:H2'	34:DA:1249:C:H6	1.77	0.50
34:DA:1388:C:H2'	34:DA:1389:C:C6	2.47	0.50
36:DC:70:VAL:HG22	36:DC:72:LYS:H	1.77	0.50
37:DD:171:GLY:HA3	37:DD:174:LEU:HB2	1.93	0.50
1:AA:423:G:O2'	25:A1:43:TYR:O	2.30	0.50
1:AA:1100:A:H2'	1:AA:1101:G:O4'	2.11	0.50
1:AA:1714:G:O2'	1:AA:2013:U:O4	2.19	0.50
3:AC:191:ARG:O	3:AC:194:ILE:HG22	2.12	0.50
3:AC:191:ARG:O	3:AC:195:ARG:HG2	2.11	0.50
4:AD:261:LYS:HZ1	4:AD:263:ARG:NH2	2.10	0.50
14:AQ:16:ARG:HG2	14:AQ:18:LYS:HE2	1.93	0.50
14:AQ:21:THR:CG2	14:AQ:101:ARG:HD3	2.42	0.50
15:AR:81:ASP:O	15:AR:85:PRO:HG2	2.12	0.50
34:BA:1036:G:H2'	34:BA:1036:G:N3	2.27	0.50
57:BZ:-34:ARG:O	57:BZ:-32:LEU:N	2.44	0.50
57:BZ:276:VAL:HG13	57:BZ:280:LEU:HD12	1.92	0.50
1:CA:189:G:H2'	1:CA:205:G:N2	2.26	0.50
1:CA:1386:C:H2'	1:CA:1387:C:H6	1.77	0.50
1:CA:1564:C:H2'	1:CA:1565:C:C6	2.47	0.50
1:CA:2567:G:H2'	1:CA:2568:C:H6	1.76	0.50
1:CA:2712:U:H2'	1:CA:2714:G:H5''	1.94	0.50
3:CC:65:LEU:HB3	3:CC:189:ASN:HD22	1.75	0.50
8:CH:3:ARG:CZ	8:CH:5:GLY:H	2.24	0.50
12:CO:104:ARG:HE	17:CT:36:GLU:HG3	1.77	0.50
13:CP:1:MET:HG3	13:CP:5:ASP:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:186:C:H2'	34:DA:187:C:H6	1.77	0.50
34:DA:403:C:O2'	37:DD:122:ARG:NH2	2.36	0.50
35:DB:71:VAL:HG12	35:DB:93:VAL:HG22	1.93	0.50
37:DD:205:GLU:HA	37:DD:208:SER:HB2	1.94	0.50
40:DG:115:ARG:HB3	40:DG:115:ARG:NH1	2.27	0.50
41:DH:94:TYR:HE1	41:DH:132:GLU:HB2	1.76	0.50
43:DJ:78:ASN:O	43:DJ:80:LYS:N	2.43	0.50
44:DK:98:LEU:O	44:DK:101:SER:OG	2.13	0.50
57:DZ:117:GLN:NE2	57:DZ:120:THR:HG1	2.08	0.50
57:DZ:257:PRO:O	57:DZ:259:PHE:HD1	1.95	0.50
57:DZ:355:LEU:HB3	57:DZ:366:VAL:HG23	1.94	0.50
1:AA:1093:G:H21	1:AA:1157:A:H2	1.60	0.50
1:AA:1681:A:H5''	63:AA:4094:HOH:O	2.12	0.50
1:AA:1686:U:O2'	1:AA:1687:C:H5'	2.11	0.50
1:AA:1716:A:H5''	1:AA:2562:G:OP1	2.12	0.50
1:AA:1993:A:H5'	1:AA:1994:A:H5''	1.92	0.50
1:AA:2132:G:P	1:AA:2140:U:H3	2.35	0.50
4:AD:13:ARG:HD2	4:AD:16:MET:CE	2.42	0.50
4:AD:25:THR:HG21	4:AD:113:VAL:HG11	1.94	0.50
4:AD:162:SER:HB3	4:AD:195:ALA:HB2	1.94	0.50
6:AF:7:TYR:OH	6:AF:119:ARG:HG3	2.12	0.50
6:AF:184:TYR:CE2	6:AF:188:ARG:HD2	2.47	0.50
8:AH:77:LYS:HE2	8:AH:81:GLU:OE2	2.12	0.50
50:BQ:37:LYS:O	50:BQ:38:ARG:NH2	2.45	0.50
1:CA:658:C:H2'	1:CA:659:C:H6	1.74	0.50
1:CA:700:G:O2'	1:CA:1632:A:N3	2.29	0.50
1:CA:1422:G:C6	1:CA:1423:G:C5	3.00	0.50
1:CA:1488:G:C6	1:CA:1489:U:N3	2.80	0.50
1:CA:1608:A:H1'	1:CA:1610:A:OP2	2.11	0.50
1:CA:2193:G:H2'	1:CA:2194:G:O4'	2.11	0.50
1:CA:2537:U:H2'	1:CA:2538:C:C6	2.47	0.50
6:CF:36:VAL:HG11	6:CF:183:VAL:HG11	1.94	0.50
6:CF:117:ARG:NH2	6:CF:189:THR:O	2.31	0.50
8:CH:12:PRO:O	8:CH:15:VAL:HG12	2.11	0.50
13:CP:70:GLN:O	13:CP:73:GLY:N	2.34	0.50
34:DA:9:G:N7	34:DA:558:G:O2'	2.44	0.50
34:DA:179:A:H2'	34:DA:180:U:C6	2.47	0.50
34:DA:968:A:C8	34:DA:1062:U:H4'	2.47	0.50
34:DA:1429:C:H2'	34:DA:1430:C:H6	1.76	0.50
48:DO:64:ARG:HH11	48:DO:68:ARG:HH12	1.60	0.50
52:DS:11:VAL:O	52:DS:13:ASP:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:-52:VAL:O	57:DZ:-50:GLN:N	2.45	0.50
1:AA:239:G:H5'	13:AP:60:MET:SD	2.52	0.50
1:AA:509:A:C8	1:AA:510:C:C5	3.00	0.50
1:AA:1007:G:H2'	1:AA:1008:U:C6	2.47	0.50
1:AA:2509:A:H5''	63:AA:4234:HOH:O	2.12	0.50
2:AB:7:G:H5'	16:AS:29:PHE:CE2	2.47	0.50
2:AB:42:C:OP2	28:A4:2:LYS:NZ	2.36	0.50
6:AF:13:SER:HA	6:AF:127:GLU:HG3	1.93	0.50
7:AG:61:ALA:HB1	28:A4:7:PRO:HG2	1.94	0.50
12:AO:23:ARG:HG3	12:AO:24:VAL:N	2.26	0.50
34:BA:113:G:H2'	34:BA:114:U:H6	1.77	0.50
34:BA:730:G:C5	34:BA:731:G:H1'	2.47	0.50
34:BA:1465:C:H2'	34:BA:1466:C:O4'	2.11	0.50
37:BD:8:VAL:HA	37:BD:11:LEU:HD13	1.94	0.50
41:BH:9:MET:O	41:BH:12:ARG:N	2.44	0.50
41:BH:112:LEU:HA	41:BH:134:ILE:HG12	1.94	0.50
44:BK:99:GLN:NE2	44:BK:108:ILE:HD11	2.27	0.50
53:BT:37:SER:O	53:BT:41:ILE:HG13	2.12	0.50
56:BX:23:C:H2'	56:BX:24:U:C6	2.47	0.50
57:BZ:226:ASN:O	57:BZ:230:LYS:HG3	2.12	0.50
57:BZ:467:LYS:O	57:BZ:469:GLU:N	2.38	0.50
1:CA:84:A:H5''	22:CY:8:LYS:HE3	1.93	0.50
1:CA:228:A:H8	1:CA:229:A:H5'	1.76	0.50
1:CA:493:G:H2'	1:CA:494:G:O4'	2.11	0.50
1:CA:608:A:H2'	1:CA:609:A:C8	2.47	0.50
1:CA:729:G:H5'	1:CA:730:C:H5''	1.94	0.50
1:CA:2690:C:OP2	15:CR:14:SER:HB2	2.12	0.50
4:CD:2:ALA:O	4:CD:3:VAL:HB	2.11	0.50
20:CW:70:TYR:O	20:CW:107:LEU:HD12	2.12	0.50
22:CY:99:CYS:SG	22:CY:102:CYS:N	2.85	0.50
34:DA:528:C:H41	45:DL:49:ASN:HD21	1.60	0.50
34:DA:975:A:H4'	34:DA:976:G:H5''	1.93	0.50
34:DA:1003:G:H2'	34:DA:1004:A:O4'	2.12	0.50
35:DB:192:SER:O	35:DB:194:PRO:HD3	2.12	0.50
53:DT:47:GLY:HA2	53:DT:48:LYS:O	2.12	0.50
54:DU:12:LYS:HE3	54:DU:19:GLY:HA3	1.94	0.50
1:AA:771:U:C4	1:AA:772:G:C5	3.00	0.49
1:AA:921:G:H5''	23:AZ:175:VAL:HG11	1.94	0.49
1:AA:2660:C:H2'	1:AA:2661:U:H6	1.77	0.49
14:AQ:39:PRO:HA	14:AQ:97:VAL:O	2.12	0.49
34:BA:102:G:H2'	34:BA:103:C:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:715:A:H5''	34:BA:805:C:H1'	1.94	0.49
34:BA:1058:G:H2'	34:BA:1059:C:O4'	2.12	0.49
38:BE:51:VAL:HB	38:BE:52:PRO:HD3	1.94	0.49
38:BE:110:LEU:HD13	38:BE:118:ILE:HD13	1.94	0.49
45:BL:7:ILE:O	45:BL:11:VAL:HG23	2.12	0.49
45:BL:85:ILE:HG22	45:BL:100:ILE:HG13	1.93	0.49
46:BM:84:ILE:HG21	52:BS:66:MET:HB3	1.94	0.49
53:BT:79:ARG:HD2	53:BT:83:ARG:NH1	2.26	0.49
1:CA:587:C:C5	1:CA:671:C:H1'	2.47	0.49
1:CA:958:U:H5''	14:CQ:14:ARG:HD3	1.94	0.49
1:CA:1374:G:C5	1:CA:1375:C:C4	3.00	0.49
1:CA:1406:U:H2'	1:CA:1407:C:C6	2.47	0.49
4:CD:143:HIS:CD2	4:CD:196:VAL:HG22	2.47	0.49
8:CH:64:LEU:HD23	8:CH:67:LEU:HD23	1.94	0.49
10:CL:30:HIS:HB3	10:CL:32:ALA:H	1.76	0.49
11:CN:36:GLY:HA2	11:CN:38:HIS:CE1	2.47	0.49
27:C3:18:ASP:OD1	27:C3:18:ASP:N	2.34	0.49
28:C4:59:PHE:HA	28:C4:61:ARG:HB2	1.94	0.49
31:C7:19:ARG:HG2	31:C7:19:ARG:HH11	1.76	0.49
33:C9:22:ARG:HD3	33:C9:35:ARG:HD2	1.92	0.49
34:DA:14:U:O2	34:DA:17:U:H5	1.94	0.49
34:DA:560:U:O2'	34:DA:561:U:OP2	2.27	0.49
48:DO:11:VAL:HG21	48:DO:34:LEU:HD22	1.93	0.49
57:DZ:74:TRP:CD1	57:DZ:273:LEU:HB3	2.46	0.49
1:AA:602:G:H2'	1:AA:603:C:C6	2.46	0.49
1:AA:2328:C:H1'	7:AG:128:ARG:NH2	2.27	0.49
3:AC:183:PRO:C	3:AC:185:LYS:H	2.16	0.49
15:AR:54:LEU:O	15:AR:62:ALA:HB1	2.12	0.49
34:BA:685:G:C2	34:BA:686:U:C4	3.00	0.49
34:BA:963:G:C2'	34:BA:964:A:H5'	2.42	0.49
53:BT:38:LYS:HA	53:BT:41:ILE:HD12	1.94	0.49
1:CA:236:C:H2'	1:CA:237:C:C6	2.47	0.49
1:CA:253:C:O3'	63:CA:3750:HOH:O	2.19	0.49
1:CA:751:A:H5'	20:CW:90:ARG:HA	1.93	0.49
1:CA:796:C:H2'	1:CA:797:C:C6	2.47	0.49
1:CA:2563:U:H4'	12:CO:28:SER:HA	1.94	0.49
5:CE:36:ARG:HD3	5:CE:47:VAL:CG1	2.42	0.49
7:CG:36:LYS:HD3	7:CG:95:ARG:CZ	2.41	0.49
14:CQ:51:ARG:O	14:CQ:54:MET:N	2.45	0.49
16:CS:49:VAL:HG13	16:CS:73:LEU:HD11	1.94	0.49
17:CT:61:PHE:CE1	17:CT:76:PHE:HB2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:750:G:O2'	48:DO:21:ASP:OD1	2.30	0.49
34:DA:853:G:C6	34:DA:854:G:N7	2.80	0.49
34:DA:1281:U:H5''	34:DA:1282:C:H5	1.77	0.49
34:DA:1402:C:H2'	34:DA:1403:C:O4'	2.12	0.49
1:AA:510:C:OP1	22:AY:51:VAL:HG12	2.12	0.49
1:AA:703:G:H2'	1:AA:704:U:O4'	2.13	0.49
1:AA:2175:G:H2'	1:AA:2176:G:H8	1.77	0.49
1:AA:2742:G:H2'	1:AA:2743:C:O4'	2.12	0.49
12:AO:120:GLU:OE1	17:AT:67:SER:OG	2.28	0.49
22:AY:14:LEU:HD12	22:AY:15:VAL:N	2.28	0.49
34:BA:1399:C:C2	34:BA:1502:A:N6	2.80	0.49
44:BK:40:ILE:HG22	44:BK:41:THR:HG22	1.93	0.49
44:BK:115:PRO:HB2	44:BK:118:GLY:H	1.77	0.49
57:BZ:278:ASP:HB3	57:BZ:279:TYR:CE2	2.47	0.49
1:CA:83:G:O2'	1:CA:102:G:N2	2.45	0.49
1:CA:990:A:OP2	63:CA:3730:HOH:O	2.20	0.49
1:CA:1713:U:H2'	1:CA:1714:G:H8	1.77	0.49
1:CA:2293:C:H2'	1:CA:2294:C:C6	2.47	0.49
1:CA:2740:A:C6	1:CA:2764:A:C8	3.00	0.49
1:CA:2823:A:OP1	5:CE:113:PHE:HB2	2.12	0.49
11:CN:14:VAL:HG11	11:CN:138:LEU:HD12	1.94	0.49
13:CP:43:GLY:HA3	63:CP:203:HOH:O	2.12	0.49
18:CU:66:ASN:HB3	63:CU:3101:HOH:O	2.13	0.49
34:DA:559:A:OP1	38:DE:126:ARG:NH2	2.46	0.49
34:DA:1142:G:H3'	34:DA:1143:G:H8	1.76	0.49
47:DN:40:CYS:SG	47:DN:43:CYS:HB2	2.52	0.49
1:AA:260:A:N6	1:AA:284:G:H1'	2.28	0.49
1:AA:1699:A:C2'	1:AA:1700:G:H5'	2.42	0.49
7:AG:110:ALA:HB1	7:AG:140:ILE:CG2	2.41	0.49
8:AH:41:MET:CE	8:AH:65:HIS:HA	2.41	0.49
18:AU:86:ALA:CB	18:AU:88:ILE:HD12	2.42	0.49
22:AY:13:VAL:HB	22:AY:72:VAL:HG13	1.94	0.49
26:A2:22:GLU:HG2	26:A2:64:LEU:HD11	1.95	0.49
34:BA:624:C:H2'	34:BA:625:G:C8	2.46	0.49
35:BB:81:VAL:HG12	35:BB:215:LEU:HD11	1.95	0.49
44:BK:18:ARG:HA	44:BK:81:ASP:H	1.76	0.49
49:BP:71:ARG:O	49:BP:74:LEU:N	2.46	0.49
57:BZ:13:ARG:HH21	57:BZ:77:HIS:CE1	2.30	0.49
1:CA:724:U:H2'	1:CA:725:G:O4'	2.12	0.49
1:CA:1278:A:OP1	15:CR:36:THR:HG22	2.13	0.49
3:CC:183:PRO:C	3:CC:185:LYS:H	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:12:THR:HG22	5:CE:13:ARG:H	1.78	0.49
10:CL:74:ALA:HB2	10:CL:111:LYS:HE2	1.94	0.49
11:CN:112:LEU:O	11:CN:115:ARG:N	2.44	0.49
14:CQ:16:ARG:HG2	14:CQ:16:ARG:HH11	1.77	0.49
34:DA:1044:A:C5	34:DA:1045:C:H1'	2.46	0.49
34:DA:1060:C:C5	36:DC:2:GLY:HA3	2.48	0.49
34:DA:1124:G:H5''	43:DJ:35:SER:OG	2.12	0.49
35:DB:7:VAL:HG12	35:DB:8:LYS:H	1.77	0.49
37:DD:135:LEU:C	37:DD:137:SER:H	2.16	0.49
1:AA:70:A:N7	21:AX:31:HIS:HE1	2.10	0.49
1:AA:491:G:C6	1:AA:492:A:N6	2.80	0.49
1:AA:2262:G:C6	14:AQ:83:MET:HB3	2.48	0.49
1:AA:2822:G:C2	1:AA:2823:A:C4	3.00	0.49
7:AG:18:GLU:OE2	7:AG:21:ARG:NH1	2.45	0.49
25:A1:17:SER:HB2	25:A1:40:ARG:HG2	1.95	0.49
27:A3:26:LEU:O	27:A3:35:ARG:NE	2.37	0.49
28:A4:41:PRO:HG3	28:A4:49:PHE:CE2	2.48	0.49
36:BC:114:PRO:HA	36:BC:185:GLY:HA3	1.95	0.49
41:BH:5:PRO:O	41:BH:8:ASP:HB3	2.13	0.49
1:CA:1421:G:C2	1:CA:1422:G:C8	3.01	0.49
1:CA:1925:C:C2'	1:CA:1926:U:H5'	2.42	0.49
1:CA:2801(A):A:H1'	1:CA:2895:U:H1'	1.93	0.49
9:CK:27:VAL:HA	9:CK:113:GLN:HA	1.95	0.49
25:C1:21:ARG:HD3	25:C1:35:THR:HG21	1.93	0.49
34:DA:391:G:C6	34:DA:392:G:C5	3.00	0.49
34:DA:935:A:H61	40:DG:3:ARG:HG3	1.78	0.49
34:DA:1227:A:OP1	52:DS:80:TYR:OH	2.27	0.49
34:DA:1356:G:N2	34:DA:1367:C:O2	2.46	0.49
1:AA:139:A:H8	1:AA:1454:C:O2'	1.96	0.49
1:AA:1003:U:OP2	14:AQ:14:ARG:HD3	2.11	0.49
1:AA:1827:U:H2'	1:AA:1828:C:C6	2.48	0.49
4:AD:20:ASP:C	4:AD:22:SER:H	2.16	0.49
4:AD:68:LYS:HD2	4:AD:70:TRP:CZ2	2.48	0.49
8:AH:38:SER:HB2	8:AH:64:LEU:HD22	1.95	0.49
9:AK:61:LEU:O	9:AK:65:GLU:N	2.46	0.49
13:AP:84:ASN:OD1	13:AP:117:GLU:HB2	2.12	0.49
25:A1:89:GLU:O	25:A1:93:GLU:HG2	2.12	0.49
28:A4:69:LYS:HE2	52:BS:20:LEU:HD13	1.94	0.49
34:BA:102:G:H2'	34:BA:103:C:C6	2.47	0.49
34:BA:284:G:H2'	34:BA:285:G:H8	1.78	0.49
34:BA:826:C:H5'	41:BH:12:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:108:ILE:O	35:BB:111:ARG:HB2	2.13	0.49
36:BC:87:LEU:O	36:BC:91:LEU:N	2.45	0.49
39:BF:70:ASP:HB2	39:BF:71:ARG:HG2	1.94	0.49
46:BM:4:ILE:HB	46:BM:57:ARG:HG3	1.94	0.49
1:CA:34:C:OP1	1:CA:34:C:H6	1.96	0.49
1:CA:848:G:C4	1:CA:933:A:H8	2.31	0.49
3:CC:191:ARG:O	3:CC:195:ARG:HG2	2.11	0.49
6:CF:61:GLY:HA2	6:CF:77:ASP:HB3	1.94	0.49
7:CG:124:SER:HB2	7:CG:131:TYR:CE1	2.48	0.49
34:DA:767:A:H2'	34:DA:768:A:O4'	2.13	0.49
34:DA:900:A:H2'	34:DA:901:A:C8	2.47	0.49
34:DA:1391:U:H2'	34:DA:1392:G:C8	2.48	0.49
35:DB:163:PHE:HA	35:DB:185:ILE:O	2.12	0.49
37:DD:129:ASN:H	37:DD:129:ASN:HD22	1.61	0.49
43:DJ:38:ILE:HG13	43:DJ:71:LEU:HB3	1.95	0.49
46:DM:12:ASN:OD1	46:DM:12:ASN:N	2.46	0.49
56:DX:15:G:H2'	56:DX:59:A:N1	2.28	0.49
1:AA:100:G:OP1	26:A2:7:ARG:NH2	2.46	0.49
1:AA:185:A:H2'	1:AA:185:A:N3	2.27	0.49
1:AA:1007:G:H2'	1:AA:1008:U:H6	1.76	0.49
4:AD:52:ARG:HB2	4:AD:53:PHE:CD2	2.47	0.49
7:AG:25:TYR:OH	7:AG:168:GLU:OE1	2.24	0.49
8:AH:98:LEU:HD12	8:AH:102:ALA:O	2.12	0.49
34:BA:51:A:H61	34:BA:314:C:H1'	1.77	0.49
34:BA:78:G:H22	34:BA:92:C:N4	1.99	0.49
1:CA:443:A:H1'	1:CA:1201:C:O4'	2.13	0.49
1:CA:1337:G:H2'	1:CA:1338:G:O4'	2.12	0.49
1:CA:1400:G:H2'	1:CA:1401:G:C8	2.47	0.49
1:CA:1857:G:C6	1:CA:1858:G:N1	2.81	0.49
3:CC:191:ARG:O	3:CC:194:ILE:HG22	2.12	0.49
5:CE:47:VAL:HG11	5:CE:86:PRO:HD2	1.94	0.49
34:DA:1004:A:H5'	34:DA:1024:G:H22	1.78	0.49
37:DD:149:ALA:O	37:DD:152:SER:N	2.40	0.49
38:DE:143:ARG:HD2	41:DH:77:GLU:OE2	2.12	0.49
49:DP:4:ILE:O	49:DP:66:PRO:HA	2.12	0.49
57:DZ:246:ILE:O	57:DZ:249:GLY:N	2.44	0.49
1:AA:2451:A:C5'	1:AA:2451:A:C8	2.95	0.49
6:AF:34:TRP:CE2	13:AP:8:PRO:HD3	2.48	0.49
29:A5:33:CYS:N	29:A5:38:ALA:O	2.46	0.49
29:A5:46:CYS:SG	29:A5:48:GLU:HB2	2.52	0.49
34:BA:66:G:O4'	34:BA:173:U:C4	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:107:G:OP1	34:BA:325:A:N6	2.43	0.49
34:BA:250:A:H4'	34:BA:251:G:O5'	2.11	0.49
34:BA:1347:G:C8	42:BI:107:ARG:HB2	2.48	0.49
36:BC:181:ASN:HB3	36:BC:204:LEU:HB2	1.94	0.49
39:BF:89:MET:CE	51:BR:76:LEU:HD22	2.42	0.49
45:BL:53:ARG:HG3	45:BL:93:LEU:HD21	1.95	0.49
48:BO:18:PHE:HB2	48:BO:19:PRO:HD2	1.94	0.49
57:BZ:310:ALA:O	57:BZ:331:TYR:N	2.43	0.49
1:CA:1461:G:H2'	1:CA:1462:C:C6	2.47	0.49
4:CD:71:ASP:OD2	4:CD:103:ARG:NH2	2.46	0.49
11:CN:128:HIS:CE1	11:CN:135:PRO:HG2	2.48	0.49
17:CT:13:ARG:HB2	17:CT:14:TYR:CD2	2.47	0.49
17:CT:118:ARG:HG2	34:DA:1442(A):G:C8	2.47	0.49
34:DA:314:C:O2'	34:DA:315:A:H5'	2.13	0.49
34:DA:938:A:H2'	34:DA:939:G:O4'	2.13	0.49
34:DA:1153:C:H2'	34:DA:1154:G:H5''	1.93	0.49
37:DD:31:CYS:SG	37:DD:32:ALA:N	2.82	0.49
46:DM:33:ALA:HA	46:DM:59:TYR:CE2	2.42	0.49
57:DZ:168:ILE:HG12	57:DZ:205:TYR:CD2	2.48	0.49
1:AA:469:A:H1'	1:AA:1246:C:O4'	2.13	0.49
1:AA:2451:A:C8	1:AA:2451:A:H5''	2.48	0.49
14:AQ:62:GLY:HA2	23:AZ:116:VAL:HG21	1.94	0.49
18:AU:108:GLU:OE2	18:AU:112:ARG:NH1	2.38	0.49
26:A2:32:LEU:HD13	26:A2:36:ARG:NH1	2.28	0.49
34:BA:41:G:C2	34:BA:42:G:C5	3.01	0.49
34:BA:109:A:C6	34:BA:326:G:C6	3.00	0.49
34:BA:160:A:N6	34:BA:345:C:OP2	2.42	0.49
35:BB:21:ARG:HA	35:BB:39:ILE:HA	1.95	0.49
35:BB:54:THR:HG22	35:BB:58:ILE:HD11	1.95	0.49
36:BC:148:GLY:HA3	36:BC:172:ARG:O	2.13	0.49
37:BD:13:ARG:HB2	37:BD:40:PRO:HD3	1.94	0.49
42:BI:112:LYS:HE2	42:BI:117:HIS:O	2.13	0.49
44:BK:29:ILE:HG13	44:BK:44:SER:HB3	1.93	0.49
53:BT:57:ARG:HH22	53:BT:100:ILE:HD11	1.78	0.49
1:CA:26:G:H1'	1:CA:514:A:N6	2.28	0.49
1:CA:649:G:C4'	32:C8:46:ARG:HH12	2.25	0.49
1:CA:1225:G:O3'	19:CV:84:LYS:HE2	2.13	0.49
1:CA:2293:C:H2'	1:CA:2294:C:H6	1.78	0.49
1:CA:2538:C:H2'	1:CA:2539:C:H6	1.77	0.49
1:CA:2722:G:H5'	15:CR:4:LEU:HD12	1.93	0.49
6:CF:184:TYR:CE1	13:CP:3:LEU:HD21	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CR:55:ALA:HB2	15:CR:79:LEU:HD13	1.95	0.49
34:DA:137:C:O2'	49:DP:61:SER:O	2.30	0.49
34:DA:714:G:H2'	34:DA:715:A:C8	2.48	0.49
35:DB:67:THR:HG22	35:DB:90:MET:HG2	1.94	0.49
45:DL:45:PRO:HG3	45:DL:51:ALA:HB3	1.95	0.49
57:DZ:181:LEU:HD23	57:DZ:182:ARG:HG3	1.95	0.49
57:DZ:639:ASN:N	57:DZ:640:ALA:HB3	2.27	0.49
1:AA:242:C:O2'	63:AA:3940:HOH:O	2.20	0.49
1:AA:611:U:O4	1:AA:717:A:H1'	2.13	0.49
1:AA:1700:G:H3'	15:AR:2:ARG:CD	2.43	0.49
1:AA:2247:G:H2'	1:AA:2248:C:C6	2.48	0.49
1:AA:2874:G:H2'	1:AA:2875:U:O4'	2.13	0.49
12:AO:14:THR:HG21	12:AO:86:ILE:HB	1.95	0.49
33:A9:15:LYS:HE2	33:A9:17:ILE:HD11	1.94	0.49
34:BA:691:G:H2'	34:BA:692:U:C6	2.48	0.49
56:BX:75:C:H2'	56:BX:76:A:C2	2.48	0.49
57:BZ:20:HIS:CD2	57:BZ:115:GLU:OE1	2.66	0.49
57:BZ:356:LEU:N	57:BZ:376:ALA:O	2.40	0.49
1:CA:143:G:H2'	1:CA:143(A):C:C6	2.48	0.49
1:CA:621:A:H5'	13:CP:108:LYS:NZ	2.28	0.49
1:CA:1514:U:H2'	1:CA:1515:G:C8	2.47	0.49
1:CA:2121:G:O2'	3:CC:168:LYS:CD	2.61	0.49
1:CA:2123:G:N2	3:CC:45:HIS:HE1	2.10	0.49
34:DA:586:C:H42	34:DA:755:G:H1	1.60	0.49
36:DC:44:GLU:HG3	36:DC:52:LEU:HD11	1.94	0.49
43:DJ:42:THR:HG21	43:DJ:66:ARG:HB3	1.94	0.49
46:DM:60:VAL:HG23	46:DM:64:TRP:CE3	2.48	0.49
56:DX:67:C:C2'	56:DX:68:C:H5'	2.42	0.49
57:DZ:184:LYS:HG2	57:DZ:185:ALA:H	1.78	0.49
1:AA:116:A:C8	1:AA:117:A:C8	3.01	0.48
1:AA:828:A:H2	1:AA:1807:G:N3	2.11	0.48
1:AA:1900:G:H2'	1:AA:1901:C:C6	2.48	0.48
1:AA:2653:G:H5''	1:AA:2653:G:H8	1.78	0.48
12:AO:64:ARG:HG2	12:AO:79:PHE:CG	2.48	0.48
15:AR:10:LEU:O	15:AR:12:ARG:HG3	2.13	0.48
15:AR:16:HIS:HD2	15:AR:16:HIS:O	1.96	0.48
34:BA:110:C:H2'	34:BA:111:G:O4'	2.13	0.48
34:BA:565:U:H3'	34:BA:566:G:H2'	1.95	0.48
35:BB:17:PHE:HB2	35:BB:44:LEU:HD21	1.94	0.48
56:BX:37:A:H4'	57:BZ:501:THR:HA	1.95	0.48
1:CA:1152:C:H2'	1:CA:1153:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2783:G:H2'	1:CA:2784:C:C6	2.48	0.48
3:CC:42:VAL:HA	3:CC:216:THR:O	2.13	0.48
6:CF:132:VAL:O	6:CF:134:GLY:N	2.45	0.48
14:CQ:104:PHE:O	14:CQ:105:GLU:HG3	2.12	0.48
22:CY:77:PRO:HD3	22:CY:106:LEU:HD23	1.95	0.48
25:C1:85:LEU:HD23	25:C1:89:GLU:HB3	1.95	0.48
34:DA:90:U:H2'	34:DA:91:C:C6	2.48	0.48
34:DA:97:G:O2'	34:DA:98:G:OP2	2.26	0.48
34:DA:259:G:H2'	34:DA:260:G:C8	2.48	0.48
34:DA:683:G:C6	34:DA:684:A:C6	3.01	0.48
43:DJ:78:ASN:C	43:DJ:80:LYS:H	2.16	0.48
1:AA:1112:U:N3	1:AA:1114:G:OP2	2.45	0.48
1:AA:2564:U:H2'	1:AA:2566:U:OP2	2.13	0.48
1:AA:2800:C:H1'	5:AE:62:PRO:HB3	1.93	0.48
4:AD:67:PHE:CD1	4:AD:153:ALA:HB3	2.48	0.48
4:AD:133:LEU:N	4:AD:189:CYS:O	2.46	0.48
6:AF:181:LEU:HG	6:AF:186:ILE:HD11	1.95	0.48
17:AT:16:ARG:NH1	17:AT:18:ASP:OD1	2.47	0.48
17:AT:35:LYS:HB2	17:AT:40:THR:HG22	1.95	0.48
34:BA:142:G:H2'	34:BA:143:A:H8	1.78	0.48
34:BA:222:U:H2'	34:BA:223:U:H6	1.77	0.48
34:BA:390:C:H2'	34:BA:391:G:C8	2.48	0.48
34:BA:938:A:C6	34:BA:939:G:N7	2.81	0.48
34:BA:974:A:OP2	47:BN:41:ARG:NH1	2.46	0.48
34:BA:1005:A:H1'	34:BA:1036:G:H22	1.78	0.48
1:CA:86:C:H4'	1:CA:104:U:H1'	1.95	0.48
1:CA:308:G:C8	1:CA:501:A:O4'	2.67	0.48
1:CA:310:A:O2'	1:CA:312:G:N7	2.39	0.48
1:CA:819:A:C4	1:CA:1189:A:C2	3.01	0.48
1:CA:1097:U:O2	10:CL:22:PRO:HG3	2.13	0.48
1:CA:1865:G:C2	1:CA:1878:G:C6	3.01	0.48
1:CA:2855:C:H2'	1:CA:2856:C:C6	2.48	0.48
3:CC:184:GLU:O	3:CC:188:ASP:OD2	2.31	0.48
5:CE:126:PRO:HB2	5:CE:131:ALA:HB2	1.94	0.48
5:CE:168:MET:O	5:CE:170:LEU:HD12	2.12	0.48
11:CN:102:ALA:O	11:CN:106:MET:HG3	2.13	0.48
28:C4:36:CYS:SG	28:C4:37:SER:N	2.86	0.48
34:DA:1072:G:H21	35:DB:107:THR:HG21	1.77	0.48
34:DA:1304:G:OP2	63:DA:1810:HOH:O	2.20	0.48
37:DD:98:GLU:OE1	37:DD:103:ASN:ND2	2.46	0.48
57:DZ:456:GLU:C	57:DZ:458:HIS:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:238:C:O2'	13:AP:64:LYS:HE3	2.13	0.48
1:AA:485:U:OP2	31:A7:39:ARG:NH1	2.47	0.48
1:AA:543:G:H2'	1:AA:544:U:C6	2.48	0.48
1:AA:938:G:C6	1:AA:939:C:C4	3.02	0.48
1:AA:1739:U:H2'	1:AA:1741:C:C5	2.48	0.48
1:AA:1952:G:O2'	1:AA:1990:G:O6	2.29	0.48
1:AA:2183:C:O2'	1:AA:2195:A:H4'	2.12	0.48
1:AA:2651:A:H2'	1:AA:2652:G:O4'	2.13	0.48
4:AD:147:LEU:HD22	4:AD:155:LEU:HD11	1.96	0.48
34:BA:263:A:OP1	53:BT:79:ARG:NH1	2.46	0.48
34:BA:292:G:N7	34:BA:293:G:H1'	2.29	0.48
34:BA:794:A:OP2	63:BA:3308:HOH:O	2.19	0.48
34:BA:938:A:C6	34:BA:939:G:C5	3.01	0.48
34:BA:1061:G:OP1	43:BJ:59:SER:OG	2.31	0.48
34:BA:1392:G:H21	34:BA:1502:A:H8	1.61	0.48
34:BA:1394:A:C6	34:BA:1501:C:H4'	2.48	0.48
39:BF:97:PHE:CD1	51:BR:31:LEU:HD21	2.48	0.48
57:BZ:160:ARG:HE	57:BZ:254:LYS:CA	2.25	0.48
1:CA:328:U:H4'	22:CY:68:HIS:CE1	2.48	0.48
1:CA:848:G:N9	1:CA:933:A:H8	2.11	0.48
1:CA:914:C:H2'	1:CA:915:C:O5'	2.14	0.48
1:CA:1400:G:H2'	1:CA:1401:G:H8	1.78	0.48
1:CA:1837:C:OP1	34:DA:784:C:H4'	2.13	0.48
1:CA:2646:C:H2'	1:CA:2647:U:O4'	2.13	0.48
2:CB:66:A:N6	2:CB:109:C:H5''	2.18	0.48
4:CD:134:ARG:HD2	4:CD:135:PHE:CZ	2.48	0.48
21:CX:26:TYR:HB3	21:CX:92:LEU:HD12	1.94	0.48
21:CX:60:ARG:HH22	31:C7:47:ARG:NH2	2.04	0.48
28:C4:15:ILE:HD13	28:C4:21:VAL:HG13	1.94	0.48
33:C9:19:ARG:HB3	33:C9:24:TYR:CE1	2.48	0.48
34:DA:17:U:H2'	34:DA:18:C:C6	2.48	0.48
39:DF:70:ASP:OD1	39:DF:70:ASP:N	2.46	0.48
41:DH:51:VAL:HB	41:DH:52:ASP:H	1.41	0.48
43:DJ:13:HIS:HB3	43:DJ:68:HIS:HE1	1.78	0.48
57:DZ:503:GLY:C	57:DZ:505:GLY:H	2.17	0.48
1:AA:311:C:H2'	1:AA:312:C:H6	1.77	0.48
1:AA:558:G:H5'	18:AU:24:TYR:CE1	2.48	0.48
1:AA:1249:A:H2	1:AA:1287:A:N6	2.02	0.48
22:AY:102:CYS:SG	22:AY:104:GLY:N	2.81	0.48
23:AZ:23:LYS:HD2	23:AZ:40:ASP:HA	1.95	0.48
34:BA:676:A:H1'	44:BK:115:PRO:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:932:C:C2	34:BA:1386:G:N2	2.82	0.48
39:BF:17:SER:O	39:BF:20:ALA:HB3	2.13	0.48
41:BH:73:ASP:OD1	41:BH:75:ARG:HD3	2.13	0.48
50:BQ:31:LEU:HD23	50:BQ:32:TYR:CZ	2.49	0.48
1:CA:118:A:H3'	1:CA:119:A:H5''	1.96	0.48
1:CA:981:A:H3'	1:CA:982:C:C6	2.48	0.48
1:CA:1101:U:H2'	1:CA:1102:C:C6	2.48	0.48
1:CA:2394:C:P	32:C8:30:ARG:HH11	2.36	0.48
1:CA:2689:U:OP2	1:CA:2719:G:N2	2.46	0.48
1:CA:2839:G:H5'	15:CR:46:GLY:HA2	1.94	0.48
4:CD:5:LYS:HG2	4:CD:17:THR:HG22	1.95	0.48
4:CD:73:VAL:HG13	4:CD:120:GLY:HA3	1.94	0.48
28:C4:53:GLU:O	28:C4:55:ARG:N	2.46	0.48
34:DA:109:A:C6	34:DA:326:G:C6	3.01	0.48
34:DA:255:G:H2'	34:DA:256:U:H6	1.78	0.48
34:DA:426:G:OP1	37:DD:36:ARG:NH1	2.39	0.48
34:DA:502:G:P	45:DL:116:SER:HA	2.54	0.48
34:DA:719:C:N4	51:DR:71:LYS:HE2	2.29	0.48
34:DA:1053:G:O5'	34:DA:1054:C:H5'	2.14	0.48
40:DG:42:ILE:HG22	40:DG:120:ILE:HD12	1.94	0.48
46:DM:29:ARG:HD3	46:DM:64:TRP:CD2	2.49	0.48
57:DZ:184:LYS:HB2	57:DZ:184:LYS:HZ2	1.77	0.48
57:DZ:495:GLY:HA3	57:DZ:589:ALA:HB2	1.95	0.48
1:AA:189:U:O2	1:AA:413:G:N2	2.46	0.48
1:AA:1065:U:O2'	1:AA:1067:A:C2	2.65	0.48
1:AA:1110:C:H4'	10:AL:89:HIS:HA	1.94	0.48
1:AA:2131:U:H5'	1:AA:2171:G:H21	1.77	0.48
4:AD:230:ASP:O	4:AD:231:HIS:HB2	2.12	0.48
4:AD:242:ARG:N	4:AD:242:ARG:HD3	2.28	0.48
7:AG:103:LEU:HD23	7:AG:106:LEU:HD23	1.96	0.48
10:AL:125:ARG:HA	10:AL:128:ALA:HB3	1.96	0.48
13:AP:143:GLY:O	13:AP:145:PRO:HD3	2.12	0.48
34:BA:302:G:C6	34:BA:303:A:C5	3.01	0.48
34:BA:392:G:H2'	34:BA:393:A:H8	1.77	0.48
34:BA:1226:C:H4'	52:BS:80:TYR:OH	2.13	0.48
41:BH:17:THR:HG22	41:BH:63:LEU:HG	1.95	0.48
45:BL:5:PRO:HB2	45:BL:10:LEU:HD21	1.94	0.48
57:BZ:12:LEU:HG	57:BZ:13:ARG:N	2.28	0.48
1:CA:1607:C:N4	1:CA:1622:G:OP2	2.40	0.48
7:CG:112:PRO:HG3	28:C4:43:TYR:CE2	2.49	0.48
18:CU:49:HIS:HA	18:CU:52:ARG:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CX:72:LYS:HG3	21:CX:73:ARG:O	2.12	0.48
34:DA:868:C:H2'	34:DA:869:G:O4'	2.12	0.48
34:DA:1118:C:H1'	34:DA:1179:A:C4	2.48	0.48
35:DB:69:LEU:HD12	35:DB:70:PHE:H	1.79	0.48
38:DE:11:ILE:HD11	38:DE:108:ALA:HB3	1.94	0.48
1:AA:1067:A:H8	1:AA:1068:G:H5''	1.78	0.48
1:AA:1501:U:OP1	15:AR:77:ARG:NH1	2.44	0.48
1:AA:1857:G:H4'	4:AD:242:ARG:CZ	2.43	0.48
1:AA:2299:A:C4	1:AA:2301:G:C8	3.01	0.48
1:AA:2368:C:OP1	24:A0:24:LYS:HE3	2.13	0.48
4:AD:218:ARG:HB3	4:AD:219:PRO:HD2	1.94	0.48
5:AE:60:ASN:O	5:AE:64:LYS:HG3	2.14	0.48
7:AG:3:LEU:HD12	7:AG:5:VAL:HG12	1.95	0.48
9:AK:76:GLY:HA3	9:AK:115:GLN:CB	2.44	0.48
11:AN:12:ARG:HE	11:AN:14:VAL:CG2	2.26	0.48
15:AR:13:HIS:CE1	15:AR:16:HIS:HB2	2.49	0.48
25:A1:95:LEU:HD12	25:A1:98:LEU:HD11	1.95	0.48
28:A4:10:VAL:CG2	28:A4:29:PRO:HG3	2.43	0.48
34:BA:46:G:H1'	34:BA:396:G:N2	2.29	0.48
34:BA:78:G:N2	34:BA:92:C:H42	1.98	0.48
34:BA:1388:C:H2'	34:BA:1389:C:C6	2.49	0.48
34:BA:1437:C:H2'	34:BA:1438:G:C8	2.48	0.48
36:BC:112:SER:HB3	36:BC:115:LEU:HD22	1.96	0.48
37:BD:30:LYS:HA	37:BD:35:ARG:NH1	2.28	0.48
40:BG:143:ARG:O	40:BG:146:GLU:N	2.46	0.48
57:BZ:183:MET:SD	57:BZ:213:HIS:CD2	3.06	0.48
1:CA:1061:U:H4'	1:CA:1070:A:H1'	1.96	0.48
1:CA:1192:G:OP2	63:CA:3753:HOH:O	2.20	0.48
1:CA:1386:C:H2'	1:CA:1387:C:C6	2.49	0.48
1:CA:1448:G:H5''	1:CA:1542:A:OP2	2.13	0.48
1:CA:2218:U:O2	25:C1:52:ARG:NE	2.45	0.48
1:CA:2649:U:H2'	1:CA:2650:U:C6	2.49	0.48
3:CC:17:PRO:HG2	3:CC:18:ASN:H	1.79	0.48
5:CE:67:PHE:CE2	5:CE:74:PRO:HA	2.49	0.48
24:C0:48:GLY:HA3	24:C0:80:HIS:CE1	2.48	0.48
27:C3:46:ASN:O	27:C3:50:VAL:HG22	2.13	0.48
34:DA:652:U:O4	34:DA:752:G:O2'	2.22	0.48
34:DA:1279:A:O2'	34:DA:1281:U:OP2	2.17	0.48
41:DH:112:LEU:HB3	41:DH:133:LEU:HA	1.96	0.48
48:DO:65:ARG:O	48:DO:68:ARG:HB3	2.14	0.48
56:DX:75:C:H2'	56:DX:76:A:C2	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:-9:LEU:O	57:DZ:-6:ARG:N	2.46	0.48
1:AA:139:A:C8	1:AA:1454:C:O2'	2.65	0.48
1:AA:229:G:OP2	1:AA:230:A:O2'	2.27	0.48
7:AG:56:ALA:O	7:AG:60:LEU:HD22	2.14	0.48
7:AG:105:LYS:HD3	28:A4:25:TYR:O	2.12	0.48
18:AU:102:GLU:HA	18:AU:104:GLN:HE22	1.79	0.48
34:BA:189(F):U:C4	50:BQ:72:ARG:NH1	2.82	0.48
34:BA:410:G:C2	34:BA:429:U:C2	3.01	0.48
34:BA:763:G:H2'	34:BA:764:C:H6	1.79	0.48
34:BA:1324:A:H2'	34:BA:1325:C:C6	2.48	0.48
46:BM:74:VAL:O	46:BM:78:ILE:HG13	2.14	0.48
53:BT:56:MET:HE1	53:BT:85:MET:HA	1.96	0.48
1:CA:154(A):C:N4	1:CA:171:G:H1	2.11	0.48
1:CA:652(E):G:H8	1:CA:652(E):G:O5'	1.97	0.48
1:CA:1266:G:O4'	20:CW:15:ARG:NH2	2.46	0.48
1:CA:1686:C:H2'	1:CA:1687:G:O4'	2.13	0.48
1:CA:1839:G:C8	1:CA:1927:A:H1'	2.48	0.48
1:CA:2125:G:O5'	3:CC:71:LYS:NZ	2.44	0.48
1:CA:2315:G:H2'	1:CA:2316:C:C6	2.49	0.48
4:CD:242:ARG:HD3	4:CD:242:ARG:N	2.28	0.48
11:CN:24:GLY:O	11:CN:28:THR:HG23	2.13	0.48
34:DA:586:C:N3	34:DA:755:G:N2	2.57	0.48
34:DA:620:C:C2	37:DD:135:LEU:HG	2.49	0.48
34:DA:814:A:H2'	34:DA:816:A:C5'	2.42	0.48
34:DA:881:G:P	45:DL:12:ARG:HH22	2.36	0.48
34:DA:883:C:C2'	34:DA:884:U:H5'	2.44	0.48
39:DF:80:ARG:NH1	39:DF:88:VAL:O	2.46	0.48
57:DZ:138:LYS:HG2	62:DZ:704:GDP:C6	2.49	0.48
1:AA:306:A:C4	1:AA:383:A:C2	3.02	0.48
1:AA:1162:C:H2'	1:AA:1163:G:C8	2.49	0.48
1:AA:1314:A:C2	1:AA:2035:A:C4	3.02	0.48
1:AA:1320:A:N3	1:AA:1343:C:H1'	2.28	0.48
1:AA:1540:A:H2'	1:AA:1541:A:C8	2.49	0.48
1:AA:2050:U:O4	63:AA:3935:HOH:O	2.18	0.48
1:AA:2209:G:O2'	1:AA:2210:C:OP1	2.27	0.48
1:AA:2612:A:H2'	1:AA:2613:C:C6	2.49	0.48
1:AA:2647:C:H4'	5:AE:48:GLN:HE21	1.79	0.48
3:AC:42:VAL:HA	3:AC:216:THR:O	2.13	0.48
15:AR:83:ILE:O	15:AR:86:ARG:HB2	2.13	0.48
20:AW:2:GLU:OE2	20:AW:72:LYS:NZ	2.33	0.48
30:A6:35:GLU:OE2	30:A6:50:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:9:G:H2'	34:BA:10:A:H8	1.78	0.48
34:BA:487:A:H2'	34:BA:488:C:O4'	2.13	0.48
34:BA:955:U:H2'	34:BA:956:U:H6	1.79	0.48
34:BA:1516:G:H2'	34:BA:1518:A:OP2	2.13	0.48
42:BI:6:GLY:O	42:BI:17:VAL:HG12	2.13	0.48
57:BZ:445:GLU:O	57:BZ:447:GLY:N	2.42	0.48
1:CA:300:A:H1'	1:CA:319:C:O4'	2.14	0.48
1:CA:597:U:H2'	1:CA:598:G:C8	2.49	0.48
8:CH:7:LEU:HB3	8:CH:69:ARG:HH11	1.79	0.48
16:CS:74:ALA:O	16:CS:78:LEU:HG	2.14	0.48
20:CW:70:TYR:O	20:CW:107:LEU:HA	2.13	0.48
33:C9:17:ILE:HG21	33:C9:19:ARG:HH21	1.79	0.48
34:DA:171:A:H2'	34:DA:172:A:C8	2.48	0.48
34:DA:255:G:H1'	50:DQ:16:GLN:NE2	2.28	0.48
34:DA:920:U:N3	34:DA:921:U:C4	2.81	0.48
34:DA:1222:G:C2	34:DA:1223:C:C2	3.02	0.48
35:DB:218:ALA:O	35:DB:222:ILE:HG23	2.13	0.48
42:DI:26:VAL:HG22	42:DI:61:ALA:HB3	1.96	0.48
42:DI:127:LYS:O	42:DI:128:ARG:HB3	2.13	0.48
43:DJ:44:VAL:HG13	43:DJ:66:ARG:HG2	1.95	0.48
50:DQ:63:ARG:HG2	50:DQ:64:PRO:HD2	1.96	0.48
50:DQ:76:LEU:HD12	50:DQ:78:GLU:H	1.77	0.48
51:DR:53:ARG:HD2	51:DR:63:GLN:HB2	1.95	0.48
1:AA:412:C:O2	13:AP:71:VAL:HG21	2.14	0.48
1:AA:511:C:C2	1:AA:521:G:N2	2.82	0.48
1:AA:2569:G:H2'	1:AA:2570:C:C6	2.48	0.48
1:AA:2833:A:OP1	5:AE:159:HIS:NE2	2.40	0.48
2:AB:77:U:OP1	23:AZ:19:ARG:NH2	2.47	0.48
15:AR:77:ARG:O	15:AR:81:ASP:N	2.40	0.48
20:AW:46:PHE:O	20:AW:50:VAL:HG23	2.14	0.48
20:AW:52:GLU:O	20:AW:55:ALA:HB3	2.13	0.48
28:A4:36:CYS:SG	28:A4:37:SER:N	2.87	0.48
34:BA:234:C:H2'	34:BA:235:C:C6	2.47	0.48
34:BA:394:G:H2'	34:BA:395:C:C6	2.49	0.48
34:BA:976:G:H5'	34:BA:1358:U:O2'	2.14	0.48
34:BA:994:A:N1	34:BA:1047:G:H4'	2.29	0.48
34:BA:1402:C:O2	34:BA:1500:A:N1	2.47	0.48
39:BF:60:PHE:CE2	51:BR:78:LEU:HD21	2.49	0.48
50:BQ:75:ARG:NH1	50:BQ:77:VAL:HG23	2.28	0.48
53:BT:54:LYS:HA	53:BT:57:ARG:CZ	2.43	0.48
57:BZ:99:ARG:NH1	57:BZ:312:LEU:HD11	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1859:A:C3'	3:CC:206:LYS:HE3	2.27	0.48
1:CA:2382:G:H21	32:C8:42:ARG:NH1	2.12	0.48
1:CA:2639:A:OP2	63:CA:3752:HOH:O	2.20	0.48
2:CB:14:U:H1'	2:CB:108:U:O2'	2.13	0.48
6:CF:21:ALA:HB3	6:CF:22:ALA:HA	1.95	0.48
13:CP:64:LYS:HE2	32:C8:12:LYS:HG2	1.96	0.48
14:CQ:63:LYS:HD3	23:CZ:175:VAL:HG21	1.96	0.48
15:CR:44:LEU:HD22	15:CR:48:VAL:HG23	1.96	0.48
23:CZ:28:MET:HA	23:CZ:88:PHE:O	2.14	0.48
23:CZ:78:LYS:HB3	23:CZ:78:LYS:NZ	2.29	0.48
34:DA:834:C:C4	34:DA:835:U:C5	3.02	0.48
34:DA:882:C:OP2	45:DL:13:LYS:NZ	2.46	0.48
34:DA:919:A:O5'	34:DA:919:A:H8	1.96	0.48
34:DA:1002:G:N3	34:DA:1003:G:H8	2.12	0.48
34:DA:1289:A:N1	34:DA:1371:G:O2'	2.38	0.48
35:DB:16:HIS:HD2	35:DB:204:ASN:H	1.62	0.48
37:DD:129:ASN:HD22	37:DD:129:ASN:N	2.12	0.48
38:DE:122:GLU:O	38:DE:123:LEU:HD23	2.14	0.48
43:DJ:50:ILE:HB	47:DN:41:ARG:NH2	2.29	0.48
56:DX:37:A:H4'	57:DZ:501:THR:HA	1.96	0.48
1:AA:664:U:H2'	1:AA:665:C:C6	2.48	0.48
1:AA:721:G:OP2	63:AA:3939:HOH:O	2.20	0.48
1:AA:1815:A:H4'	1:AA:1816:A:O5'	2.14	0.48
1:AA:2816:G:C2	1:AA:2817:G:C5	3.02	0.48
6:AF:158:THR:OG1	6:AF:195:ASP:OD2	2.31	0.48
12:AO:18:LYS:HB2	12:AO:45:GLU:HB3	1.96	0.48
15:AR:96:ARG:HD2	15:AR:115:GLU:OE1	2.14	0.48
18:AU:74:LEU:HD12	18:AU:74:LEU:N	2.28	0.48
34:BA:13:U:OP1	63:BA:3309:HOH:O	2.20	0.48
34:BA:44:G:C6	34:BA:45:U:C2	3.02	0.48
34:BA:109:A:H2'	34:BA:326:G:N2	2.29	0.48
34:BA:430:A:OP2	37:BD:8:VAL:HG12	2.13	0.48
34:BA:622:A:C8	34:BA:623:C:C6	3.02	0.48
36:BC:22:TRP:HZ3	36:BC:24:ALA:HB2	1.78	0.48
44:BK:93:GLN:HA	44:BK:93:GLN:HE21	1.78	0.48
45:BL:24:VAL:HB	45:BL:27:LEU:HD22	1.95	0.48
57:BZ:24:GLY:HA2	62:BZ:801:GDP:O2A	2.12	0.48
57:BZ:210:ARG:HH11	57:BZ:210:ARG:CG	2.26	0.48
57:BZ:249:GLY:HA2	57:BZ:252:ASP:HB2	1.96	0.48
1:CA:1259:G:O2'	1:CA:1260:G:H5'	2.14	0.48
1:CA:1356:G:H2'	1:CA:1357:U:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1607:C:H4'	1:CA:1608:A:O5'	2.14	0.48
1:CA:2113:U:H3	1:CA:2169:A:H62	1.59	0.48
1:CA:2176:A:O2'	3:CC:45:HIS:CD2	2.64	0.48
1:CA:2183:C:H2'	1:CA:2184:G:H8	1.79	0.48
1:CA:2495:G:O2'	1:CA:2496:C:H5'	2.13	0.48
6:CF:37:VAL:HG21	13:CP:6:LEU:HD13	1.96	0.48
21:CX:57:LEU:CD1	21:CX:78:LYS:HB3	2.44	0.48
23:CZ:160:GLY:HA2	23:CZ:161:VAL:HG12	1.95	0.48
34:DA:176:C:H2'	34:DA:177:C:C6	2.49	0.48
34:DA:179:A:H2'	34:DA:180:U:H6	1.79	0.48
34:DA:530:G:O2'	34:DA:531:U:OP1	2.27	0.48
34:DA:1151:A:H5'	43:DJ:41:PRO:HA	1.96	0.48
35:DB:166:ASP:OD2	35:DB:169:LYS:N	2.43	0.48
38:DE:71:LEU:O	38:DE:72:GLN:HG2	2.14	0.48
47:DN:23:ARG:HD2	47:DN:28:GLY:O	2.14	0.48
53:DT:50:GLU:HG3	53:DT:100:ILE:HD13	1.96	0.48
57:DZ:190:ASN:ND2	57:DZ:192:LEU:HB2	2.29	0.48
1:AA:185:A:O2'	1:AA:852:G:O6	2.25	0.47
1:AA:1112:U:H2'	1:AA:1113:A:C8	2.49	0.47
1:AA:1451:U:H2'	1:AA:1452:U:C6	2.49	0.47
1:AA:1851:U:C4	4:AD:160:GLY:HA3	2.49	0.47
1:AA:2840:G:OP1	5:AE:76:ARG:NH2	2.47	0.47
2:AB:73:A:N1	23:AZ:34:ASN:ND2	2.61	0.47
5:AE:34:VAL:HG23	5:AE:34:VAL:O	2.14	0.47
6:AF:64:ILE:HD12	6:AF:65:TRP:CE3	2.49	0.47
7:AG:173:LEU:HA	7:AG:176:LEU:HD12	1.96	0.47
7:AG:174:GLU:O	7:AG:177:GLY:N	2.42	0.47
23:AZ:128:VAL:HG22	23:AZ:129:SER:O	2.13	0.47
28:A4:16:CYS:SG	28:A4:17:GLY:N	2.86	0.47
34:BA:540:G:H2'	34:BA:541:G:O4'	2.14	0.47
34:BA:652:U:O4	34:BA:752:G:O2'	2.21	0.47
34:BA:1095:U:P	34:BA:1108:G:H1	2.36	0.47
34:BA:1413:A:C6	34:BA:1414:U:C4	3.02	0.47
34:BA:1469:G:H2'	34:BA:1470:G:H8	1.79	0.47
45:BL:96:VAL:C	45:BL:97:ARG:HG2	2.34	0.47
49:BP:3:LYS:O	49:BP:21:VAL:HA	2.14	0.47
52:BS:39:THR:HA	52:BS:70:LYS:HD3	1.96	0.47
57:BZ:655:TYR:O	57:BZ:657:THR:N	2.47	0.47
1:CA:528:A:C2	1:CA:2042:A:H2'	2.48	0.47
1:CA:820:A:H1'	1:CA:943:U:H1'	1.95	0.47
1:CA:1024:G:C6	1:CA:1025:G:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2177:C:O2'	3:CC:47:LYS:HD3	2.14	0.47
1:CA:2750:A:H8	1:CA:2750:A:OP1	1.96	0.47
3:CC:68:GLY:N	3:CC:189:ASN:ND2	2.62	0.47
19:CV:32:THR:HA	19:CV:59:ALA:O	2.14	0.47
20:CW:57:ASN:O	20:CW:58:ALA:C	2.53	0.47
34:DA:266:G:O2'	34:DA:267:C:OP2	2.21	0.47
36:DC:47:LEU:HG	36:DC:68:VAL:HG11	1.96	0.47
36:DC:131:ARG:HH12	36:DC:135:LYS:HZ3	1.61	0.47
37:DD:135:LEU:O	37:DD:137:SER:N	2.41	0.47
57:DZ:154:GLN:O	57:DZ:158:GLY:HA2	2.14	0.47
1:AA:152:G:H1	1:AA:163:C:H42	1.61	0.47
1:AA:1229:G:N7	63:AA:3995:HOH:O	2.35	0.47
1:AA:1454:C:C2	1:AA:1641:G:N2	2.82	0.47
1:AA:2141:A:O2'	1:AA:2142:G:H5'	2.14	0.47
1:AA:2172:U:H2'	1:AA:2173:G:C8	2.49	0.47
1:AA:2389:A:H2'	1:AA:2390:A:C8	2.49	0.47
1:AA:2413:U:OP1	30:A6:18:ARG:NH2	2.48	0.47
1:AA:2416:C:O3'	13:AP:77:ARG:NH2	2.46	0.47
1:AA:2886:G:H4'	17:AT:2:ASN:HD22	1.79	0.47
2:AB:48:A:H4'	16:AS:95:HIS:HD2	1.80	0.47
3:AC:184:GLU:O	3:AC:188:ASP:OD2	2.31	0.47
21:AX:53:LYS:HB3	21:AX:82:GLN:HB3	1.96	0.47
28:A4:14:ILE:HG12	28:A4:31:ILE:HB	1.96	0.47
34:BA:369:C:O2'	34:BA:370:C:H5'	2.14	0.47
36:BC:134:ILE:HD11	36:BC:153:VAL:HB	1.95	0.47
41:BH:113:SER:H	41:BH:134:ILE:HD11	1.79	0.47
43:BJ:37:PRO:HA	43:BJ:72:VAL:HG12	1.96	0.47
45:BL:84:LEU:HB2	45:BL:105:TYR:CD2	2.49	0.47
53:BT:59:ALA:O	53:BT:63:ILE:HG13	2.14	0.47
53:BT:63:ILE:O	53:BT:66:ALA:HB3	2.14	0.47
1:CA:26:G:C6	1:CA:27:G:N1	2.82	0.47
1:CA:839:U:H2'	1:CA:840:C:C6	2.48	0.47
1:CA:1041:C:H5'	1:CA:1042:G:OP2	2.14	0.47
1:CA:1766:U:H2'	1:CA:1767:C:C6	2.48	0.47
1:CA:2243:U:H2'	1:CA:2244:U:C6	2.49	0.47
34:DA:186:C:C2	34:DA:187:C:C5	3.02	0.47
34:DA:474:G:H2'	34:DA:475:G:C8	2.47	0.47
34:DA:841:U:H6	34:DA:841:U:P	2.37	0.47
34:DA:902:G:O2'	34:DA:903:G:H5'	2.14	0.47
34:DA:1263:C:H2'	34:DA:1264:C:C6	2.49	0.47
35:DB:219:VAL:O	35:DB:222:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:49:G:N2	56:DX:66:C:C2	2.82	0.47
57:DZ:116:PRO:O	57:DZ:117:GLN:HB3	2.15	0.47
1:AA:990:A:H2	63:AA:4053:HOH:O	1.97	0.47
1:AA:1389:G:N3	1:AA:1430:A:H2	2.12	0.47
1:AA:2674:A:H5''	1:AA:2675:G:OP2	2.14	0.47
5:AE:33:VAL:HG13	5:AE:89:ASP:O	2.15	0.47
6:AF:117:ARG:NH2	6:AF:189:THR:O	2.46	0.47
7:AG:22:ARG:HH12	7:AG:175:LEU:HD11	1.79	0.47
12:AO:79:PHE:CE2	17:AT:72:VAL:HG13	2.50	0.47
22:AY:30:VAL:O	22:AY:32:PRO:HD3	2.13	0.47
34:BA:1241:G:H2'	34:BA:1242:C:C6	2.49	0.47
49:BP:75:ARG:HH11	49:BP:75:ARG:HG3	1.79	0.47
1:CA:58:G:O2'	1:CA:73:A:N1	2.37	0.47
1:CA:271(E):U:H2'	1:CA:271(F):C:H6	1.78	0.47
1:CA:565:C:H2'	1:CA:566:U:O4'	2.13	0.47
1:CA:784:A:C6	4:CD:229:VAL:HG11	2.48	0.47
1:CA:849:A:H3'	1:CA:850:C:C6	2.49	0.47
1:CA:955:C:OP1	14:CQ:87:LYS:HE2	2.14	0.47
1:CA:981:A:OP1	63:CA:3756:HOH:O	2.20	0.47
23:CZ:14:LYS:HA	23:CZ:15:PRO:HD3	1.75	0.47
36:DC:116:VAL:HG21	36:DC:202:ILE:HD11	1.97	0.47
50:DQ:88:TYR:O	50:DQ:91:ARG:HB3	2.13	0.47
57:DZ:-58:LEU:HD21	57:DZ:-32:LEU:HB3	1.96	0.47
1:AA:1123:A:C6	1:AA:1124:U:C2	3.03	0.47
1:AA:1699:A:OP1	15:AR:8:ARG:NH1	2.47	0.47
1:AA:1911:A:N1	1:AA:2246:G:H1'	2.28	0.47
1:AA:2211:U:H2'	1:AA:2212:G:C8	2.49	0.47
12:AO:80:ASP:OD2	17:AT:71:GLY:HA3	2.14	0.47
34:BA:666:G:H5'	34:BA:726:C:H1'	1.96	0.47
34:BA:814:A:N7	34:BA:816:A:C4	2.82	0.47
34:BA:1162:C:H2'	34:BA:1163:C:C6	2.49	0.47
34:BA:1221:G:OP1	34:BA:1320:C:N4	2.42	0.47
43:BJ:8:LEU:HB2	43:BJ:70:ARG:HB2	1.96	0.47
57:BZ:11:ARG:HD3	57:BZ:76:ASP:O	2.14	0.47
1:CA:695:G:OP1	1:CA:1380:G:O2'	2.20	0.47
1:CA:2112:G:C5	1:CA:2113:U:H1'	2.49	0.47
1:CA:2849:U:H4'	1:CA:2868:A:C2	2.49	0.47
13:CP:62:LEU:HD11	32:C8:50:LEU:HD11	1.97	0.47
25:C1:3:LYS:HB2	25:C1:61:ARG:HH12	1.78	0.47
34:DA:509:A:H3'	34:DA:509:A:H8	1.77	0.47
57:DZ:247:ARG:NH2	57:DZ:285:ASP:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:283:PRO:HA	57:DZ:286:ILE:HD11	1.97	0.47
57:DZ:326:THR:HB	57:DZ:377:VAL:HG13	1.97	0.47
1:AA:722:A:C8	1:AA:851:A:C6	3.03	0.47
1:AA:889:G:N2	1:AA:982:U:C2	2.83	0.47
1:AA:2199:C:H1'	3:AC:173:HIS:HE1	1.80	0.47
2:AB:25:A:OP1	63:AB:3102:HOH:O	2.20	0.47
9:AK:118:THR:O	9:AK:121:ASP:N	2.46	0.47
22:AY:2:ARG:HG3	22:AY:3:VAL:O	2.15	0.47
23:AZ:100:VAL:HG11	23:AZ:137:ILE:HG13	1.96	0.47
34:BA:106:C:O2	34:BA:379:C:H4'	2.14	0.47
34:BA:1030(C):G:N7	34:BA:1031:G:N2	2.60	0.47
41:BH:2:LEU:HD13	41:BH:3:THR:H	1.80	0.47
41:BH:20:TYR:HA	41:BH:65:TYR:OH	2.15	0.47
52:BS:31:ILE:HB	52:BS:49:ILE:HG23	1.95	0.47
57:BZ:14:ASN:HB2	57:BZ:102:ASP:CG	2.34	0.47
57:BZ:25:LYS:HB3	57:BZ:83:ASP:OD2	2.14	0.47
57:BZ:84:THR:HG22	57:BZ:97:SER:HB2	1.96	0.47
57:BZ:181:LEU:HD12	57:BZ:216:LEU:HD21	1.95	0.47
57:BZ:417:THR:HA	57:BZ:418:LYS:CB	2.45	0.47
1:CA:588:U:H2'	1:CA:589:C:C6	2.49	0.47
1:CA:2594:C:C2	1:CA:2600:A:C2	3.03	0.47
1:CA:2780:G:OP1	11:CN:118:LYS:HE2	2.15	0.47
2:CB:100:A:H3'	2:CB:101:G:H8	1.80	0.47
3:CC:6:LYS:HA	3:CC:9:ARG:NH1	2.30	0.47
6:CF:202:PHE:CZ	6:CF:206:ILE:HD13	2.49	0.47
15:CR:51:LEU:HD23	15:CR:66:VAL:HG22	1.97	0.47
15:CR:117:VAL:HG12	15:CR:118:GLU:H	1.79	0.47
23:CZ:128:VAL:HB	23:CZ:161:VAL:HG23	1.96	0.47
24:C0:34:GLY:N	24:C0:61:ALA:O	2.38	0.47
34:DA:955:U:OP1	46:DM:120:LYS:HE3	2.15	0.47
34:DA:1118:C:H1'	34:DA:1179:A:C5	2.50	0.47
34:DA:1431:C:H2'	34:DA:1432:G:O4'	2.14	0.47
49:DP:17:TYR:HE2	49:DP:41:PRO:HG3	1.79	0.47
51:DR:69:THR:HA	51:DR:72:ARG:HB2	1.95	0.47
57:DZ:153:MET:HA	57:DZ:157:LEU:HD11	1.95	0.47
57:DZ:505:GLY:HA2	57:DZ:576:ASP:CB	2.45	0.47
1:AA:693:G:H1	1:AA:697:C:H42	1.62	0.47
1:AA:719:C:C2	1:AA:856:G:N2	2.82	0.47
1:AA:1222:A:H2'	1:AA:1222:A:N3	2.28	0.47
1:AA:2652:G:C6	1:AA:2788:A:C2	3.02	0.47
3:AC:180:SER:O	3:AC:181:PHE:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:26:LYS:HD3	4:AD:83:GLU:OE2	2.15	0.47
10:AL:30:HIS:CG	10:AL:59:ILE:HB	2.50	0.47
11:AN:128:HIS:O	11:AN:131:GLN:NE2	2.47	0.47
31:A7:31:LEU:HD22	31:A7:42:LEU:HB3	1.95	0.47
35:BB:20:GLU:HA	35:BB:21:ARG:NH2	2.28	0.47
35:BB:132:LYS:O	35:BB:136:VAL:HG23	2.15	0.47
38:BE:84:PHE:HB3	38:BE:134:ALA:HB2	1.95	0.47
42:BI:83:ARG:HA	42:BI:86:VAL:HG22	1.95	0.47
50:BQ:67:LYS:O	50:BQ:68:ARG:HG2	2.15	0.47
1:CA:271(X):G:C2	1:CA:271(Y):U:O4	2.67	0.47
1:CA:500:G:N1	1:CA:503:A:OP2	2.43	0.47
1:CA:639:U:H2'	1:CA:640:C:C6	2.50	0.47
1:CA:1202:C:N4	1:CA:1203:G:C6	2.83	0.47
1:CA:1494:A:C6	1:CA:1495:A:C6	3.02	0.47
1:CA:1745(A):C:H5'	1:CA:1746:G:OP2	2.14	0.47
1:CA:2023:G:H5'	1:CA:2617:C:H4'	1.97	0.47
1:CA:2404:C:O3'	13:CP:77:ARG:NH2	2.48	0.47
1:CA:2758:A:N3	1:CA:2759:G:H1'	2.29	0.47
5:CE:150:VAL:HG13	5:CE:154:LYS:HG3	1.95	0.47
12:CO:7:TYR:HE1	12:CO:20:MET:CE	2.27	0.47
15:CR:38:VAL:HB	15:CR:39:PRO:HD3	1.97	0.47
16:CS:95:HIS:CG	16:CS:96:GLY:N	2.83	0.47
19:CV:66:ARG:HB3	19:CV:88:ARG:HE	1.79	0.47
21:CX:32:PRO:HA	21:CX:77:LYS:HD2	1.96	0.47
31:C7:5:TRP:CD1	31:C7:7:PRO:HD3	2.49	0.47
34:DA:160:A:H2'	34:DA:161:A:O4'	2.15	0.47
34:DA:998:G:H1	34:DA:1043:C:H42	1.62	0.47
34:DA:1107:C:C4	34:DA:1108:G:N7	2.82	0.47
40:DG:18:TYR:OH	40:DG:58:PRO:HB2	2.15	0.47
41:DH:63:LEU:HD23	41:DH:65:TYR:OH	2.14	0.47
42:DI:127:LYS:O	42:DI:127:LYS:HG3	2.14	0.47
43:DJ:38:ILE:HG12	43:DJ:71:LEU:O	2.15	0.47
56:DX:47:U:H3'	56:DX:48:C:C5'	2.44	0.47
56:DX:55:PSU:O2'	56:DX:57:A:N7	2.26	0.47
57:DZ:-11:LYS:O	57:DZ:-7:GLU:HG3	2.15	0.47
57:DZ:20:HIS:CE1	57:DZ:117:GLN:HB3	2.49	0.47
57:DZ:312:LEU:O	57:DZ:328:ILE:HA	2.14	0.47
1:AA:130:G:H2'	1:AA:131:C:H6	1.79	0.47
1:AA:999:G:H5''	14:AQ:13:GLN:HB3	1.97	0.47
1:AA:1067:A:H3'	1:AA:1067:A:H8	1.79	0.47
1:AA:1474:C:C5	1:AA:1616:A:H5''	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1501:U:O2'	1:AA:1502:G:N7	2.41	0.47
1:AA:1634:C:H2'	1:AA:1635:C:H6	1.79	0.47
1:AA:1944:G:H2'	1:AA:1945:U:O4'	2.15	0.47
1:AA:2602:A:OP2	4:AD:238:GLY:HA2	2.15	0.47
1:AA:2772:G:O2'	1:AA:2773:C:H5'	2.15	0.47
2:AB:66:A:H61	2:AB:108:U:H2'	1.79	0.47
3:AC:6:LYS:HA	3:AC:9:ARG:NH1	2.30	0.47
3:AC:17:PRO:HG2	3:AC:18:ASN:H	1.79	0.47
3:AC:30:VAL:CG2	3:AC:31:LYS:H	2.27	0.47
3:AC:68:GLY:N	3:AC:189:ASN:ND2	2.62	0.47
5:AE:54:GLN:HE21	5:AE:76:ARG:HG2	1.78	0.47
6:AF:7:TYR:CD1	6:AF:24:LEU:HB2	2.50	0.47
7:AG:67:LYS:H	28:A4:6:HIS:CE1	2.33	0.47
12:AO:107:ARG:NE	17:AT:36:GLU:HG2	2.29	0.47
13:AP:98:GLU:O	13:AP:101:VAL:HG12	2.15	0.47
21:AX:5:TYR:CE1	26:A2:30:ARG:HD2	2.49	0.47
22:AY:37:VAL:HG21	22:AY:72:VAL:HG21	1.97	0.47
27:A3:4:LEU:O	27:A3:36:VAL:HA	2.15	0.47
32:A8:14:VAL:HG11	32:A8:58:ILE:HG21	1.95	0.47
34:BA:447:G:H2'	34:BA:485:G:N2	2.29	0.47
34:BA:724:G:C2	34:BA:725:G:C8	3.03	0.47
34:BA:973:G:H3'	34:BA:974:A:H5''	1.97	0.47
39:BF:44:GLY:HA2	39:BF:59:TYR:CZ	2.49	0.47
43:BJ:8:LEU:HD12	43:BJ:20:ALA:HB2	1.96	0.47
48:BO:7:GLU:O	48:BO:11:VAL:HG23	2.14	0.47
57:BZ:68:ALA:HB3	57:BZ:327:PHE:CG	2.50	0.47
57:BZ:145:ASP:O	57:BZ:148:LEU:HB3	2.15	0.47
57:BZ:168:ILE:HG12	57:BZ:205:TYR:CD2	2.50	0.47
57:BZ:169:GLY:HA3	57:BZ:173:THR:O	2.14	0.47
57:BZ:373:ASP:OD2	57:BZ:374:LEU:N	2.48	0.47
1:CA:144:C:H2'	1:CA:145:G:H8	1.79	0.47
1:CA:207:A:H2'	1:CA:208:C:O4'	2.15	0.47
1:CA:253:C:O2'	63:CA:3755:HOH:O	2.20	0.47
1:CA:271(S):G:C6	1:CA:271(T):C:C4	3.03	0.47
1:CA:827:U:H1'	1:CA:2246:G:O2'	2.14	0.47
1:CA:1075:C:H5'	1:CA:1076:C:OP2	2.15	0.47
1:CA:1178:C:H2'	1:CA:1179:C:C6	2.49	0.47
1:CA:1270:C:H5''	1:CA:1271:G:O5'	2.15	0.47
1:CA:1310:G:H1'	1:CA:1611:C:H5'	1.96	0.47
1:CA:1466:G:H2'	1:CA:1547:C:H41	1.80	0.47
1:CA:1479:G:H5'	1:CA:1558:A:C2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1588:C:H2'	1:CA:1589:C:C6	2.50	0.47
1:CA:1639:U:C2'	1:CA:1640:C:H5''	2.45	0.47
1:CA:1709:U:H2'	1:CA:1710:C:C6	2.50	0.47
1:CA:1778:U:H2'	1:CA:1784:A:N6	2.30	0.47
1:CA:2049:G:OP2	63:CA:3757:HOH:O	2.20	0.47
1:CA:2749:A:O4'	8:CH:63:SER:HA	2.14	0.47
2:CB:116:G:H8	2:CB:116:G:OP2	1.98	0.47
7:CG:119:GLY:HA3	7:CG:181:ARG:HB2	1.96	0.47
12:CO:80:ASP:OD2	17:CT:64:ARG:NH2	2.47	0.47
14:CQ:37:LEU:HA	14:CQ:37:LEU:HD23	1.53	0.47
14:CQ:111:GLU:O	14:CQ:115:MET:HG2	2.15	0.47
16:CS:3:ARG:NE	16:CS:4:LEU:O	2.43	0.47
20:CW:85:VAL:HG13	20:CW:93:ALA:HB1	1.96	0.47
34:DA:7:G:H5'	34:DA:298:A:O4'	2.14	0.47
34:DA:97:G:C4	34:DA:98:G:C8	3.02	0.47
34:DA:539:A:OP1	45:DL:114:LYS:HG2	2.14	0.47
34:DA:922:G:C2	34:DA:923:A:C4	3.02	0.47
34:DA:938:A:C6	34:DA:939:G:C5	3.03	0.47
34:DA:1165:C:H2'	34:DA:1166:G:O4'	2.14	0.47
34:DA:1363(A):A:H1'	34:DA:1365:G:N7	2.29	0.47
35:DB:95:GLN:HB2	35:DB:96:ARG:H	1.46	0.47
38:DE:78:HIS:CD2	38:DE:142:LEU:HD23	2.50	0.47
45:DL:6:THR:OG1	45:DL:9:GLN:HG3	2.15	0.47
50:DQ:62:SER:CB	50:DQ:72:ARG:HD3	2.44	0.47
57:DZ:-55:LEU:HD22	57:DZ:-48:VAL:HG21	1.96	0.47
57:DZ:230:LYS:HB3	57:DZ:235:GLU:HB3	1.97	0.47
57:DZ:527:ASN:O	57:DZ:529:ILE:N	2.48	0.47
1:AA:217:A:H2'	1:AA:219:U:O4'	2.15	0.47
1:AA:986:A:H2'	1:AA:987:G:C8	2.50	0.47
1:AA:2431:U:H2'	1:AA:2432:C:C6	2.50	0.47
1:AA:2574:U:O2'	12:AO:23:ARG:HD3	2.15	0.47
7:AG:103:LEU:HD23	7:AG:103:LEU:HA	1.82	0.47
34:BA:9:G:H2'	34:BA:10:A:C8	2.49	0.47
34:BA:53:A:H8	34:BA:53:A:O5'	1.98	0.47
34:BA:299:G:H2'	34:BA:300:A:C8	2.49	0.47
34:BA:512:U:H2'	34:BA:513:C:C6	2.50	0.47
34:BA:841:U:H6	34:BA:841:U:OP2	1.97	0.47
35:BB:67:THR:HA	35:BB:90:MET:SD	2.55	0.47
35:BB:205:ASP:N	35:BB:205:ASP:OD1	2.47	0.47
41:BH:85:ARG:O	41:BH:86:ILE:HD13	2.15	0.47
57:BZ:271:LEU:HD12	57:BZ:271:LEU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:329:G:N7	22:CY:71:LYS:NZ	2.62	0.47
1:CA:1095:A:OP1	57:DZ:618:GLY:HA3	2.15	0.47
1:CA:1292:U:H2'	1:CA:1293:C:H6	1.79	0.47
1:CA:1575:C:H2'	1:CA:1576:U:H6	1.80	0.47
1:CA:1963:U:H2'	1:CA:1963:U:O2	2.15	0.47
3:CC:180:SER:O	3:CC:181:PHE:O	2.33	0.47
5:CE:33:VAL:HG13	5:CE:89:ASP:HA	1.96	0.47
6:CF:36:VAL:HG11	6:CF:183:VAL:HG13	1.97	0.47
16:CS:14:VAL:HG23	16:CS:15:ARG:N	2.30	0.47
31:C7:13:ALA:O	31:C7:17:GLY:HA3	2.15	0.47
34:DA:110:C:H2'	34:DA:111:G:O4'	2.15	0.47
34:DA:433:C:H2'	34:DA:434:U:C6	2.48	0.47
34:DA:457:C:H2'	34:DA:458:C:C6	2.48	0.47
34:DA:664:G:N2	34:DA:741:G:H1	2.12	0.47
34:DA:953:G:H5'	34:DA:965:A:H61	1.79	0.47
34:DA:1327:C:OP1	54:DU:20:LYS:N	2.47	0.47
34:DA:1366:C:O2'	43:DJ:60:ARG:NH2	2.47	0.47
36:DC:18:TRP:CD1	47:DN:54:PRO:HA	2.50	0.47
39:DF:40:VAL:HG23	39:DF:62:TRP:O	2.15	0.47
41:DH:33:GLU:OE2	41:DH:48:TYR:OH	2.28	0.47
49:DP:21:VAL:HG13	49:DP:34:GLU:O	2.15	0.47
53:DT:54:LYS:HA	53:DT:57:ARG:NH2	2.30	0.47
56:DX:47:U:C2	56:DX:50:U:OP1	2.68	0.47
57:DZ:238:THR:HG22	57:DZ:241:GLU:OE2	2.15	0.47
57:DZ:346:LYS:HZ1	57:DZ:384:ILE:HG12	1.79	0.47
1:AA:1529:G:C6	1:AA:1553:A:C6	3.03	0.47
1:AA:1698:G:C5'	15:AR:39:PRO:HG2	2.45	0.47
1:AA:2331:G:C2	16:AS:3:ARG:HA	2.50	0.47
3:AC:223:VAL:HG23	3:AC:223:VAL:O	2.15	0.47
8:AH:58:GLU:OE2	8:AH:60:ARG:NH2	2.48	0.47
13:AP:82:GLY:HA2	13:AP:113:LYS:O	2.15	0.47
14:AQ:7:MET:HE3	14:AQ:7:MET:HB2	1.85	0.47
22:AY:54:LYS:CA	22:AY:56:PRO:HD3	2.41	0.47
25:A1:20:ARG:HD3	63:A1:201:HOH:O	2.15	0.47
34:BA:445:G:C6	34:BA:446:G:C5	3.03	0.47
34:BA:1223:C:OP1	52:BS:78:ARG:NH2	2.48	0.47
34:BA:1525:G:P	44:BK:120:ARG:NH2	2.88	0.47
35:BB:164:VAL:HB	35:BB:186:ALA:HB2	1.97	0.47
41:BH:97:VAL:HA	41:BH:100:ILE:HG13	1.96	0.47
48:BO:16:ALA:HB1	48:BO:21:ASP:HB3	1.97	0.47
49:BP:6:LEU:HA	49:BP:19:ILE:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:BT:77:ALA:O	53:BT:81:LYS:HG3	2.15	0.47
1:CA:20:C:OP1	18:CU:22:LYS:NZ	2.44	0.47
1:CA:656:G:O6	63:CA:3754:HOH:O	2.20	0.47
1:CA:851:U:O2'	27:C3:42:ALA:O	2.33	0.47
1:CA:1055:G:H3'	1:CA:1056:G:H8	1.80	0.47
1:CA:1604:C:P	63:CA:3761:HOH:O	2.73	0.47
1:CA:1637:A:H4'	1:CA:2711:A:O2'	2.15	0.47
1:CA:1847:A:H3'	1:CA:1848:A:H5'	1.96	0.47
1:CA:2489:G:O2'	1:CA:2490:G:H5'	2.15	0.47
18:CU:86:ALA:HB2	18:CU:116:ALA:HB2	1.97	0.47
23:CZ:40:ASP:OD1	23:CZ:43:GLU:HG3	2.15	0.47
34:DA:15:G:C5	34:DA:1396:A:C2	3.03	0.47
34:DA:427:U:H3'	34:DA:428:G:H2'	1.97	0.47
34:DA:487:A:H2'	34:DA:488:C:O4'	2.15	0.47
34:DA:1022:G:H2'	34:DA:1023:G:H8	1.79	0.47
34:DA:1201:A:H1'	34:DA:1202:G:OP2	2.15	0.47
35:DB:98:LEU:HA	35:DB:98:LEU:HD13	1.67	0.47
37:DD:38:TYR:CE1	37:DD:45:GLN:HG3	2.50	0.47
38:DE:69:VAL:HG11	38:DE:113:ALA:HB1	1.97	0.47
38:DE:82:VAL:HG11	38:DE:137:GLU:HB3	1.96	0.47
43:DJ:49:VAL:HG23	47:DN:41:ARG:HB2	1.96	0.47
56:DX:10:G:N2	56:DX:26:G:H1'	2.29	0.47
57:DZ:191:ASP:HA	57:DZ:267:LYS:NZ	2.29	0.47
1:AA:360:C:O2'	1:AA:361:C:H5'	2.15	0.47
1:AA:895:G:O6	1:AA:974:G:H2'	2.15	0.47
1:AA:1293:A:OP1	6:AF:95:ARG:NH2	2.43	0.47
1:AA:1340:U:O2'	15:AR:26:LYS:NZ	2.42	0.47
1:AA:1403:U:H2'	1:AA:1404:G:O4'	2.15	0.47
1:AA:1831:C:OP1	4:AD:264:LYS:NZ	2.46	0.47
1:AA:2150:C:H4'	3:AC:219:MET:CE	2.43	0.47
1:AA:2643:G:O2'	1:AA:2820:A:N1	2.37	0.47
8:AH:40:GLU:OE1	8:AH:60:ARG:NH1	2.48	0.47
20:AW:38:TYR:OH	29:A5:47:PRO:HG3	2.14	0.47
34:BA:273:A:N7	63:BA:3325:HOH:O	2.36	0.47
34:BA:953:G:H2'	34:BA:954:G:O4'	2.15	0.47
34:BA:1305:G:H5''	54:BU:4:GLY:HA3	1.97	0.47
34:BA:1311:G:N2	34:BA:1327:C:C2	2.83	0.47
36:BC:5:ILE:HG12	36:BC:6:HIS:H	1.79	0.47
41:BH:39:LEU:HB3	41:BH:45:ILE:HG12	1.96	0.47
1:CA:189:G:OP2	25:C1:39:LYS:NZ	2.47	0.47
1:CA:622:G:H2'	1:CA:623:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:901:A:H5''	1:CA:902:C:OP2	2.14	0.47
1:CA:1474:C:H2'	1:CA:1475:G:H8	1.79	0.47
1:CA:1788:C:H2'	1:CA:1789:A:O4'	2.15	0.47
1:CA:2061:G:H5''	1:CA:2503:A:C2	2.50	0.47
2:CB:24:G:N2	2:CB:27:C:N3	2.61	0.47
3:CC:223:VAL:HG23	3:CC:223:VAL:O	2.15	0.47
10:CL:64:SER:OG	10:CL:65:PHE:N	2.47	0.47
12:CO:68:GLU:HG2	12:CO:68:GLU:O	2.15	0.47
14:CQ:63:LYS:HB3	14:CQ:63:LYS:HE2	1.71	0.47
22:CY:79:CYS:SG	22:CY:102:CYS:HB3	2.55	0.47
31:C7:19:ARG:HG2	31:C7:19:ARG:NH1	2.31	0.47
34:DA:192:U:O2'	53:DT:60:GLU:OE2	2.17	0.47
34:DA:396:G:O2'	34:DA:398:C:OP1	2.27	0.47
34:DA:892:A:O2'	34:DA:1415:G:H4'	2.14	0.47
34:DA:981:U:H5'	47:DN:21:TYR:CE2	2.50	0.47
34:DA:1130:A:O2'	42:DI:3:GLN:OE1	2.23	0.47
34:DA:1139:G:N2	34:DA:1142:G:O6	2.39	0.47
39:DF:43:LEU:HD22	39:DF:46:ARG:NH1	2.30	0.47
1:AA:181:C:O2'	1:AA:849:A:N3	2.43	0.46
1:AA:1209:G:C2'	1:AA:1210:G:H5'	2.45	0.46
1:AA:1879:A:H2'	1:AA:1880:G:H8	1.80	0.46
1:AA:2024:G:P	15:AR:9:LYS:HE3	2.55	0.46
1:AA:2349:G:C2	1:AA:2350:G:C8	3.03	0.46
1:AA:2649:U:C2'	1:AA:2650:G:H5'	2.45	0.46
5:AE:9:VAL:HB	17:AT:3:ARG:HG2	1.98	0.46
5:AE:60:ASN:OD1	5:AE:62:PRO:HD2	2.16	0.46
5:AE:73:GLU:HA	5:AE:74:PRO:HD3	1.74	0.46
5:AE:116:VAL:HG13	5:AE:122:PHE:HB2	1.97	0.46
6:AF:101:LEU:O	6:AF:106:ARG:HD3	2.14	0.46
10:AL:30:HIS:HD2	10:AL:65:PHE:HB2	1.80	0.46
17:AT:105:LEU:CB	17:AT:110:ILE:HG13	2.45	0.46
34:BA:38:G:N7	63:BA:3324:HOH:O	2.35	0.46
34:BA:397:A:C6	34:BA:548:G:N7	2.83	0.46
37:BD:140:VAL:HG11	37:BD:146:ILE:HD11	1.96	0.46
37:BD:162:LEU:HD13	37:BD:181:MET:HG2	1.97	0.46
51:BR:29:PHE:CD2	51:BR:29:PHE:N	2.78	0.46
1:CA:534:U:H5'	18:CU:42:ALA:HB1	1.96	0.46
1:CA:602:G:O2'	1:CA:655:A:N6	2.47	0.46
1:CA:718:A:H2'	1:CA:719:C:O4'	2.15	0.46
1:CA:889:C:O2'	1:CA:890:A:O5'	2.31	0.46
1:CA:921:G:H4'	1:CA:2269:A:C5	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:993:G:H1'	19:CV:89:GLN:OE1	2.15	0.46
1:CA:1227:G:OP1	18:CU:13:LYS:NZ	2.37	0.46
1:CA:2652:C:H2'	1:CA:2653:U:O4'	2.16	0.46
1:CA:2734:A:H2'	1:CA:2735:G:O4'	2.15	0.46
3:CC:176:VAL:O	3:CC:176:VAL:HG12	2.15	0.46
6:CF:64:ILE:HG21	6:CF:78:ILE:HG23	1.98	0.46
8:CH:140:LYS:O	8:CH:144:VAL:HG23	2.15	0.46
16:CS:23:ARG:HD3	16:CS:86:ALA:HB2	1.96	0.46
34:DA:177:C:H2'	34:DA:178:C:C6	2.50	0.46
34:DA:605:U:H2'	34:DA:606:G:O4'	2.15	0.46
34:DA:748:C:H4'	34:DA:749:C:O5'	2.15	0.46
35:DB:58:ILE:HG23	35:DB:68:ILE:HD11	1.96	0.46
37:DD:36:ARG:HG3	37:DD:38:TYR:CE2	2.49	0.46
45:DL:69:TYR:HE2	45:DL:71:PRO:HA	1.80	0.46
1:AA:662:A:H8	13:AP:117:GLU:HG3	1.80	0.46
1:AA:704:U:H2'	1:AA:705:C:H6	1.80	0.46
1:AA:795:G:C8	20:AW:89:ALA:HB1	2.49	0.46
4:AD:261:LYS:NZ	4:AD:263:ARG:NH2	2.62	0.46
13:AP:55:ARG:HG2	13:AP:56:SER:N	2.29	0.46
17:AT:20:PRO:HB2	17:AT:88:ILE:HD11	1.96	0.46
23:AZ:99:TYR:CE2	23:AZ:125:LEU:HD13	2.50	0.46
34:BA:1227:A:OP2	46:BM:111:LYS:HD2	2.14	0.46
35:BB:51:LEU:HD21	35:BB:201:ILE:HG23	1.96	0.46
43:BJ:63:PHE:HZ	47:BN:45:ARG:HG3	1.80	0.46
45:BL:28:LYS:HE2	45:BL:62:SER:HB2	1.96	0.46
1:CA:24:G:O2'	20:CW:78:GLU:O	2.23	0.46
1:CA:244:A:C2	1:CA:255:A:C4	3.04	0.46
1:CA:297:C:H2'	1:CA:298:G:O4'	2.15	0.46
1:CA:307:G:H22	1:CA:310:A:P	2.38	0.46
1:CA:324:A:N6	1:CA:338:G:O2'	2.45	0.46
1:CA:964:C:O2'	1:CA:2273:A:N3	2.38	0.46
1:CA:1188:U:C4'	19:CV:79:VAL:HG22	2.43	0.46
1:CA:1860:G:H8	3:CC:206:LYS:HG3	1.81	0.46
1:CA:2155:G:C6	1:CA:2156:G:H1'	2.50	0.46
2:CB:31:C:H2'	2:CB:32:C:H5'	1.97	0.46
3:CC:46:ALA:O	3:CC:47:LYS:HB2	2.15	0.46
6:CF:34:TRP:CE2	13:CP:8:PRO:HG3	2.50	0.46
8:CH:84:SER:HA	8:CH:133:VAL:O	2.16	0.46
34:DA:56:U:H2'	34:DA:57:G:C8	2.49	0.46
34:DA:513:C:H2'	34:DA:514:C:C6	2.48	0.46
34:DA:617:G:H4'	49:DP:44:THR:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:642:A:N3	41:DH:113:SER:OG	2.46	0.46
34:DA:731:G:C6	34:DA:732:C:C4	3.03	0.46
34:DA:1306:A:H1'	34:DA:1332:A:C2	2.50	0.46
34:DA:1348:U:H4'	42:DI:120:ARG:HD3	1.96	0.46
36:DC:5:ILE:HG12	36:DC:6:HIS:H	1.81	0.46
38:DE:78:HIS:HA	41:DH:105:ARG:CG	2.44	0.46
40:DG:18:TYR:CE2	40:DG:59:LEU:HB2	2.49	0.46
42:DI:70:LYS:O	42:DI:74:ILE:HG13	2.15	0.46
44:DK:123:LYS:O	44:DK:126:ARG:HG3	2.16	0.46
57:DZ:109:ASP:OD2	57:DZ:138:LYS:HD2	2.15	0.46
57:DZ:214:GLU:O	57:DZ:218:GLU:HB2	2.15	0.46
57:DZ:630:GLN:O	57:DZ:645:ALA:HB1	2.15	0.46
1:AA:198:C:C2'	1:AA:199:C:H5'	2.46	0.46
1:AA:560:C:O2'	18:AU:53:ARG:HD3	2.16	0.46
1:AA:713:G:O2'	1:AA:714:U:H5'	2.14	0.46
1:AA:1551:C:H2'	1:AA:1552:C:C6	2.50	0.46
1:AA:1771:G:H8	1:AA:1771:G:O5'	1.99	0.46
1:AA:2124:U:H2'	1:AA:2125:C:C6	2.49	0.46
1:AA:2801:C:O2'	1:AA:2819:A:N3	2.39	0.46
2:AB:28:C:OP1	16:AS:36:TYR:OH	2.29	0.46
3:AC:42:VAL:CG1	3:AC:43:GLU:H	2.27	0.46
3:AC:46:ALA:O	3:AC:47:LYS:HB2	2.15	0.46
8:AH:105:LEU:HD12	8:AH:105:LEU:HA	1.80	0.46
34:BA:292:G:C5	34:BA:293:G:H1'	2.50	0.46
34:BA:357:G:N1	34:BA:358:U:C4	2.84	0.46
34:BA:406:G:C2	34:BA:407:G:C8	3.03	0.46
34:BA:1217:C:H2'	34:BA:1218:C:O4'	2.15	0.46
36:BC:22:TRP:CH2	36:BC:32:LEU:HB2	2.51	0.46
36:BC:134:ILE:HG23	36:BC:151:VAL:HB	1.96	0.46
1:CA:1210:A:C2	1:CA:1237:A:C6	3.04	0.46
1:CA:1257:C:H4'	6:CF:83:PHE:CD1	2.50	0.46
1:CA:1300:U:H4'	1:CA:1301:A:C5'	2.44	0.46
1:CA:1668:A:H4'	1:CA:1669:A:O5'	2.15	0.46
1:CA:2196:C:O2'	1:CA:2197:U:H5'	2.16	0.46
1:CA:2459:A:C6	1:CA:2460:U:C2	3.03	0.46
1:CA:2830:G:N3	1:CA:2883:A:H2	2.14	0.46
4:CD:44:ASN:HD21	4:CD:46:GLN:HG3	1.79	0.46
7:CG:23:PHE:HB2	7:CG:25:TYR:CE1	2.50	0.46
34:DA:112:G:H5'	34:DA:389:A:O2'	2.15	0.46
34:DA:153:C:H42	34:DA:168:G:H1	1.62	0.46
34:DA:1173:G:H2'	34:DA:1174:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:51:VAL:O	38:DE:55:VAL:HG23	2.16	0.46
46:DM:96:LEU:C	46:DM:110:ARG:HG2	2.36	0.46
53:DT:47:GLY:HA2	53:DT:48:LYS:C	2.35	0.46
57:DZ:15:ILE:O	57:DZ:81:ILE:HA	2.15	0.46
57:DZ:639:ASN:HA	57:DZ:640:ALA:O	2.15	0.46
1:AA:142:G:H1'	21:AX:37:THR:HG21	1.97	0.46
1:AA:555:G:N3	1:AA:555:G:O4'	2.47	0.46
1:AA:1160:G:H2'	1:AA:1161:G:H8	1.80	0.46
1:AA:1574:A:O2'	1:AA:1575:A:H5'	2.14	0.46
1:AA:1898:A:H8	1:AA:1898:A:OP2	1.98	0.46
1:AA:1903:C:H2'	1:AA:1904:C:H6	1.81	0.46
1:AA:2724:U:O2'	1:AA:2726:A:H5'	2.16	0.46
1:AA:2823:A:O2'	1:AA:2824:C:H5'	2.15	0.46
3:AC:176:VAL:O	3:AC:176:VAL:HG12	2.15	0.46
9:AK:25:PHE:O	9:AK:84:GLU:HA	2.16	0.46
18:AU:89:GLU:HB2	19:AV:50:PRO:HB3	1.96	0.46
34:BA:159:G:N2	34:BA:161:A:O5'	2.48	0.46
34:BA:620:C:C2	37:BD:135:LEU:HG	2.51	0.46
34:BA:1222:G:OP1	34:BA:1321:C:O2'	2.22	0.46
38:BE:61:TYR:HA	38:BE:64:ARG:HB2	1.98	0.46
57:BZ:140:ASP:HA	57:BZ:172:ASP:H	1.80	0.46
1:CA:71:A:C8	21:CX:31:HIS:HE1	2.34	0.46
1:CA:1420:U:HO2'	1:CA:1421:G:P	2.37	0.46
1:CA:1503:U:H2'	1:CA:1504:C:C6	2.50	0.46
1:CA:1695:G:H1'	4:CD:8:PRO:O	2.16	0.46
1:CA:2360:A:O5'	1:CA:2360:A:H8	1.98	0.46
1:CA:2591:C:OP1	4:CD:239:ARG:HD2	2.16	0.46
3:CC:42:VAL:CG1	3:CC:43:GLU:H	2.28	0.46
5:CE:116:VAL:HG13	5:CE:122:PHE:HB2	1.98	0.46
6:CF:21:ALA:CB	6:CF:22:ALA:HA	2.46	0.46
7:CG:33:ARG:HB2	7:CG:33:ARG:CZ	2.45	0.46
13:CP:96:THR:OG1	13:CP:98:GLU:HG2	2.16	0.46
23:CZ:182:LYS:HB3	23:CZ:183:LEU:H	1.47	0.46
30:C6:14:THR:OG1	30:C6:48:VAL:HG13	2.15	0.46
34:DA:1024:G:H2'	34:DA:1025:U:H5''	1.97	0.46
34:DA:1323:G:H2'	34:DA:1324:A:C8	2.50	0.46
38:DE:7:GLU:OE1	38:DE:37:ARG:NH2	2.44	0.46
38:DE:37:ARG:O	38:DE:114:GLY:HA3	2.16	0.46
57:DZ:302:HIS:HA	57:DZ:303:PRO:HD2	1.63	0.46
1:AA:141:C:H2'	1:AA:142:G:O4'	2.16	0.46
1:AA:1014:U:H2'	1:AA:1015:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1021:G:O2'	1:AA:1202:A:N1	2.37	0.46
1:AA:1485:A:H2'	1:AA:1486:G:O4'	2.16	0.46
1:AA:2274:U:H4'	1:AA:2340:A:C2	2.51	0.46
1:AA:2731:G:O2'	1:AA:2857:U:OP1	2.33	0.46
11:AN:12:ARG:HE	11:AN:14:VAL:HG21	1.81	0.46
21:AX:5:TYR:CE2	26:A2:30:ARG:HB2	2.51	0.46
34:BA:112:G:C2	34:BA:330:C:N4	2.84	0.46
34:BA:271:C:H2'	34:BA:272:C:C6	2.51	0.46
34:BA:382:A:H2'	34:BA:383:A:C8	2.49	0.46
34:BA:936:C:H2'	34:BA:937:A:O4'	2.15	0.46
34:BA:1225:A:OP1	46:BM:103:THR:N	2.44	0.46
34:BA:1366:C:H2'	34:BA:1367:C:C6	2.51	0.46
34:BA:1434:A:H2'	34:BA:1435:G:O4'	2.14	0.46
38:BE:80:ILE:HG23	38:BE:91:LEU:HD23	1.98	0.46
46:BM:20:THR:HA	46:BM:25:ILE:O	2.15	0.46
49:BP:5:ARG:O	49:BP:20:VAL:N	2.47	0.46
57:BZ:100:VAL:O	57:BZ:100:VAL:HG12	2.15	0.46
1:CA:1213:A:N3	1:CA:1238:G:O2'	2.46	0.46
10:CL:93:ARG:HE	10:CL:93:ARG:HB3	1.54	0.46
23:CZ:118:GLN:O	23:CZ:120:ILE:N	2.48	0.46
34:DA:126:G:OP1	34:DA:605:U:O2'	2.32	0.46
34:DA:263:A:OP1	53:DT:79:ARG:NH1	2.48	0.46
34:DA:284:G:H2'	34:DA:285:G:H8	1.81	0.46
34:DA:375:U:C2	34:DA:376:G:C8	3.04	0.46
34:DA:918:A:H2'	34:DA:919:A:C8	2.51	0.46
34:DA:1189:C:O5'	34:DA:1189:C:H6	1.98	0.46
34:DA:1289:A:C8	34:DA:1290:G:C8	3.03	0.46
35:DB:91:PRO:HD3	35:DB:154:LEU:HD12	1.96	0.46
38:DE:21:ALA:O	38:DE:23:GLY:N	2.44	0.46
41:DH:20:TYR:HA	41:DH:65:TYR:CZ	2.50	0.46
46:DM:33:ALA:O	46:DM:37:THR:OG1	2.21	0.46
57:DZ:227:ILE:HG23	57:DZ:241:GLU:OE1	2.15	0.46
57:DZ:319:ASP:HA	57:DZ:320:PRO:HD2	1.65	0.46
57:DZ:355:LEU:HD13	57:DZ:355:LEU:HA	1.77	0.46
1:AA:11:G:H2'	1:AA:12:U:C5'	2.42	0.46
1:AA:1616:A:O4'	4:AD:59:LYS:NZ	2.49	0.46
1:AA:1757:C:H2'	1:AA:1758:C:C6	2.50	0.46
1:AA:2191:A:H2'	1:AA:2191:A:N3	2.31	0.46
1:AA:2529:C:C2	1:AA:2554:A:N6	2.83	0.46
4:AD:223:GLY:HA3	4:AD:231:HIS:CE1	2.50	0.46
6:AF:116:ASP:OD1	6:AF:119:ARG:NH2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:188:ARG:HA	13:AP:3:LEU:HD13	1.97	0.46
12:AO:122:LEU:HD23	12:AO:122:LEU:HA	1.64	0.46
22:AY:68:HIS:H	22:AY:71:LYS:HD3	1.80	0.46
31:A7:34:ARG:NH1	31:A7:39:ARG:HG3	2.31	0.46
34:BA:972:C:OP1	63:BA:3310:HOH:O	2.21	0.46
37:BD:39:PRO:HD2	37:BD:44:GLY:HA2	1.98	0.46
37:BD:108:LEU:HB3	37:BD:110:PHE:CE1	2.50	0.46
37:BD:110:PHE:CE2	37:BD:148:VAL:HG23	2.50	0.46
1:CA:182:A:H2'	1:CA:183:C:C6	2.50	0.46
1:CA:387:U:H3'	25:C1:32:LYS:HB2	1.98	0.46
1:CA:676:A:H2	1:CA:2069:G:N3	2.13	0.46
1:CA:1071:G:C8	1:CA:1089:G:C6	3.04	0.46
1:CA:1168:G:C2	1:CA:1182:A:C2	3.03	0.46
1:CA:1239:G:H2'	1:CA:1240:U:O4'	2.15	0.46
1:CA:1962:C:O2'	1:CA:1964:G:OP2	2.30	0.46
1:CA:2191:G:H2'	1:CA:2192:G:O4'	2.15	0.46
1:CA:2399:G:C6	1:CA:2400:G:C5	3.03	0.46
1:CA:2564:A:C2	1:CA:2647:U:H4'	2.50	0.46
2:CB:78:A:H2'	2:CB:79:C:O4'	2.16	0.46
3:CC:54:ARG:HH22	3:CC:56:ASP:HB3	1.75	0.46
8:CH:101:ARG:HH22	8:CH:122:THR:HG23	1.80	0.46
11:CN:65:LYS:HD2	11:CN:69:GLN:NE2	2.31	0.46
14:CQ:75:THR:HG21	14:CQ:87:LYS:NZ	2.31	0.46
16:CS:35:ILE:HG12	16:CS:97:ARG:HH21	1.80	0.46
23:CZ:5:LEU:HD23	23:CZ:47:VAL:HG21	1.98	0.46
34:DA:576:G:N1	34:DA:759:A:OP1	2.46	0.46
34:DA:938:A:N6	34:DA:939:G:C6	2.83	0.46
34:DA:1131:G:P	42:DI:20:ARG:HH22	2.37	0.46
35:DB:16:HIS:HB2	35:DB:204:ASN:HB3	1.96	0.46
37:DD:150:GLU:OE2	37:DD:151:LYS:N	2.48	0.46
46:DM:25:ILE:HD11	46:DM:66:LEU:HD23	1.97	0.46
57:DZ:280:LEU:CD2	57:DZ:281:PRO:HD2	2.45	0.46
1:AA:7:G:H2'	1:AA:8:A:C8	2.51	0.46
1:AA:589:U:P	19:AV:80:GLN:HE21	2.39	0.46
1:AA:671:A:H2'	1:AA:672:G:O4'	2.15	0.46
1:AA:1221:G:H1'	1:AA:1222:A:C5'	2.46	0.46
1:AA:1405:A:N3	1:AA:1405:A:O4'	2.48	0.46
1:AA:1414:G:C2	1:AA:1415:G:C8	3.03	0.46
1:AA:1452:U:H2'	1:AA:1453:C:H6	1.79	0.46
1:AA:1957:G:H1'	1:AA:1986:G:N2	2.31	0.46
7:AG:98:ARG:CZ	28:A4:1:MET:HE3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AK:103:GLY:HA2	9:AK:110:GLY:HA3	1.98	0.46
27:A3:7:LYS:HG3	27:A3:34:GLU:CG	2.44	0.46
27:A3:29:ARG:HG2	27:A3:29:ARG:NH1	2.29	0.46
34:BA:482:A:H3'	34:BA:483:C:H6	1.81	0.46
34:BA:498:U:N3	34:BA:499:A:N7	2.64	0.46
34:BA:688:G:H2'	34:BA:689:C:C6	2.47	0.46
34:BA:1368:G:OP2	42:BI:112:LYS:HG3	2.16	0.46
35:BB:17:PHE:HA	35:BB:44:LEU:HD11	1.98	0.46
35:BB:71:VAL:HG22	35:BB:93:VAL:CG2	2.45	0.46
36:BC:56:ASP:O	36:BC:66:VAL:HA	2.15	0.46
37:BD:93:PHE:O	37:BD:97:LEU:HB2	2.16	0.46
40:BG:121:ALA:O	40:BG:125:MET:HB2	2.16	0.46
41:BH:83:ILE:HA	41:BH:136:GLU:O	2.16	0.46
47:BN:27:CYS:SG	47:BN:28:GLY:N	2.88	0.46
48:BO:66:LEU:HD12	48:BO:66:LEU:HA	1.83	0.46
48:BO:69:TYR:HA	48:BO:72:ARG:HH11	1.81	0.46
57:BZ:227:ILE:HA	57:BZ:230:LYS:HG3	1.97	0.46
57:BZ:238:THR:HG23	57:BZ:241:GLU:OE1	2.15	0.46
1:CA:374:A:C2	1:CA:401:A:C4	3.04	0.46
1:CA:749:C:O2	1:CA:1618:A:H2'	2.14	0.46
1:CA:1247:A:O2'	1:CA:1248:G:H5''	2.16	0.46
1:CA:1353:A:H2'	1:CA:1354:A:C8	2.50	0.46
1:CA:1480:G:C6	1:CA:1481:U:C4	3.04	0.46
1:CA:1494:A:H2'	1:CA:1495:A:C8	2.51	0.46
1:CA:2050:C:C4	1:CA:2051:A:C6	3.03	0.46
1:CA:2108:C:H2'	1:CA:2109:U:C6	2.51	0.46
3:CC:20:VAL:O	3:CC:224:ARG:O	2.33	0.46
5:CE:35:GLN:OE1	5:CE:66:HIS:HE1	1.99	0.46
10:CL:59:ILE:HG12	10:CL:60:TYR:N	2.31	0.46
14:CQ:72:LYS:HA	14:CQ:73:PRO:HD3	1.81	0.46
20:CW:48:ALA:O	20:CW:52:GLU:N	2.43	0.46
25:C1:40:ARG:NH2	25:C1:42:GLN:HG2	2.30	0.46
34:DA:139:G:H2'	34:DA:140:A:H8	1.80	0.46
34:DA:177:C:H2'	34:DA:178:C:H6	1.80	0.46
34:DA:488:C:O5'	34:DA:488:C:H6	1.99	0.46
34:DA:908:A:O2'	34:DA:909:A:H5'	2.16	0.46
34:DA:1288:A:N1	34:DA:1371:G:H1'	2.30	0.46
35:DB:47:THR:O	35:DB:51:LEU:HD22	2.16	0.46
35:DB:58:ILE:HA	35:DB:61:LEU:HB3	1.98	0.46
57:DZ:637:ARG:O	57:DZ:639:ASN:N	2.47	0.46
1:AA:34:C:H5''	1:AA:35:G:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:68:C:O2	1:AA:72:A:O2'	2.34	0.46
1:AA:1133:G:O6	1:AA:1135:G:C2	2.69	0.46
1:AA:1367:A:H2'	1:AA:1368:A:O4'	2.15	0.46
1:AA:2451:A:H5''	1:AA:2451:A:H8	1.81	0.46
1:AA:2849:G:H5'	15:AR:46:GLY:HA2	1.97	0.46
2:AB:29:A:OP2	16:AS:32:LEU:HD12	2.16	0.46
3:AC:206:LYS:HB3	3:AC:206:LYS:HZ3	1.79	0.46
4:AD:70:TRP:HB3	4:AD:190:TYR:CE2	2.50	0.46
4:AD:70:TRP:HB3	4:AD:190:TYR:CZ	2.51	0.46
4:AD:101:GLU:OE1	4:AD:103:ARG:HD3	2.16	0.46
4:AD:253:GLN:HE21	4:AD:253:GLN:HB3	1.47	0.46
5:AE:12:THR:HG22	5:AE:13:ARG:H	1.80	0.46
13:AP:95:VAL:HG22	13:AP:125:VAL:HB	1.98	0.46
16:AS:51:ALA:CB	16:AS:73:LEU:HB2	2.45	0.46
18:AU:86:ALA:HB3	18:AU:88:ILE:HD12	1.96	0.46
26:A2:54:LYS:O	26:A2:57:ILE:HB	2.15	0.46
34:BA:411:A:P	37:BD:30:LYS:HZ2	2.38	0.46
34:BA:674:G:H2'	34:BA:675:A:C8	2.49	0.46
34:BA:1014:A:H4'	52:BS:14:HIS:CE1	2.51	0.46
34:BA:1429:C:H2'	34:BA:1430:C:C6	2.51	0.46
35:BB:22:LYS:HA	35:BB:40:HIS:CE1	2.51	0.46
35:BB:42:ILE:HG21	35:BB:202:PRO:O	2.16	0.46
35:BB:200:ILE:HB	35:BB:202:PRO:HD3	1.98	0.46
45:BL:83:VAL:HG21	45:BL:100:ILE:HG12	1.98	0.46
57:BZ:127:LYS:NZ	57:BZ:128:TYR:CE2	2.80	0.46
1:CA:235:U:H2'	1:CA:236:C:C6	2.51	0.46
1:CA:392:C:H5''	1:CA:409:C:H5''	1.96	0.46
1:CA:1084:A:C8	1:CA:1085:A:C8	3.04	0.46
1:CA:1593:G:H2'	1:CA:1594:G:C8	2.51	0.46
8:CH:13:LYS:HA	8:CH:14:GLY:HA2	1.67	0.46
15:CR:24:GLN:NE2	15:CR:36:THR:HG21	2.30	0.46
21:CX:64:LYS:HE3	21:CX:73:ARG:NH2	2.31	0.46
34:DA:129(A):G:C6	34:DA:189(E):U:H4'	2.50	0.46
34:DA:731:G:H5'	34:DA:766:A:H4'	1.97	0.46
34:DA:1202:G:O4'	47:DN:29:ARG:NH1	2.48	0.46
34:DA:1415:G:C6	34:DA:1486:G:C6	3.04	0.46
57:DZ:606:MET:N	57:DZ:647:VAL:O	2.46	0.46
1:AA:719:C:H4'	6:AF:89:VAL:HG21	1.98	0.46
1:AA:2403:G:O6	1:AA:2437:A:H8	1.98	0.46
1:AA:2697:G:H5'	12:AO:68:GLU:OE1	2.14	0.46
25:A1:76:ARG:NH1	25:A1:97:LEU:HB3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:A6:11:LEU:HB2	30:A6:21:TYR:HB2	1.97	0.46
34:BA:448:A:P	34:BA:485:G:H22	2.39	0.46
34:BA:537:G:H5'	45:BL:113:ARG:HH12	1.80	0.46
34:BA:629:G:H2'	34:BA:630:G:O4'	2.15	0.46
34:BA:836:G:C6	34:BA:851:G:C6	3.04	0.46
37:BD:25:ARG:NH1	37:BD:30:LYS:O	2.45	0.46
57:BZ:-9:LEU:O	57:BZ:-6:ARG:HB2	2.16	0.46
57:BZ:201:ILE:HG21	57:BZ:206:LEU:HA	1.98	0.46
1:CA:521:G:H2'	1:CA:522:G:C8	2.51	0.46
1:CA:1323:U:H2'	1:CA:1324:G:H5'	1.97	0.46
1:CA:2121:G:O2'	3:CC:168:LYS:CG	2.62	0.46
1:CA:2437:U:O2'	1:CA:2438:U:H5'	2.16	0.46
1:CA:2749:A:H1'	8:CH:63:SER:HB3	1.97	0.46
2:CB:31:C:H4'	7:CG:29:TRP:CZ2	2.51	0.46
4:CD:138:VAL:HB	4:CD:166:GLN:O	2.14	0.46
19:CV:76:LYS:HD2	19:CV:81:TYR:CD2	2.51	0.46
28:C4:35:VAL:HA	28:C4:39:CYS:SG	2.55	0.46
34:DA:674:G:H2'	34:DA:675:A:C8	2.49	0.46
34:DA:730:G:C6	34:DA:731:G:H1'	2.51	0.46
34:DA:807:A:C5	34:DA:808:C:C4	3.04	0.46
35:DB:113:HIS:HA	35:DB:116:GLU:HG2	1.97	0.46
36:DC:71:ALA:HB2	36:DC:106:VAL:HB	1.97	0.46
42:DI:9:ARG:HA	42:DI:13:ALA:O	2.15	0.46
42:DI:77:ILE:O	42:DI:81:ILE:HG22	2.15	0.46
57:DZ:154:GLN:C	57:DZ:158:GLY:HA2	2.37	0.46
1:AA:217:A:H3'	1:AA:218:A:C5'	2.41	0.46
1:AA:324:A:OP1	22:AY:86:ARG:NH2	2.47	0.46
1:AA:897:C:O5'	1:AA:897:C:H6	1.99	0.46
1:AA:1913:G:C5	1:AA:1914:C:C4	3.04	0.46
1:AA:2649:U:O2'	1:AA:2650:G:H5'	2.16	0.46
7:AG:4:ASP:CG	7:AG:9:ARG:HH21	2.20	0.46
15:AR:21:TYR:OH	15:AR:43:GLU:HG2	2.15	0.46
34:BA:232:G:H1'	34:BA:262:A:N1	2.31	0.46
34:BA:577:G:H1'	34:BA:816:A:C4	2.51	0.46
34:BA:690:G:O6	44:BK:51:LYS:HE2	2.17	0.46
34:BA:1075:C:OP1	35:BB:179:LYS:HE3	2.14	0.46
34:BA:1098:C:C2	34:BA:1099:G:C8	3.04	0.46
36:BC:45:LYS:HE3	36:BC:45:LYS:HB2	1.80	0.46
40:BG:16:LEU:HD22	40:BG:16:LEU:H	1.80	0.46
41:BH:25:ASP:OD1	41:BH:60:ARG:HG3	2.15	0.46
42:BI:9:ARG:HB3	42:BI:104:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BX:37:A:C4'	57:BZ:501:THR:HA	2.46	0.46
1:CA:1547:C:H2'	1:CA:1548:C:C6	2.51	0.46
1:CA:1743:C:H2'	1:CA:1744:C:C6	2.51	0.46
1:CA:2107:C:N3	1:CA:2182:G:N2	2.46	0.46
1:CA:2343:C:HO2'	1:CA:2373:G:HO2'	1.61	0.46
2:CB:60:C:H2'	2:CB:61:G:C8	2.47	0.46
13:CP:47:ASP:OD1	13:CP:49:ARG:HB2	2.16	0.46
19:CV:52:VAL:HG22	19:CV:55:ALA:HB3	1.97	0.46
34:DA:257:G:C2	34:DA:270:A:C2	3.03	0.46
34:DA:448:A:C4	34:DA:487:A:C2	3.04	0.46
34:DA:1240:U:H5'	34:DA:1241:G:C8	2.51	0.46
34:DA:1412:C:C2	34:DA:1413:A:C8	3.04	0.46
34:DA:1439:C:H6	34:DA:1439:C:O5'	1.99	0.46
38:DE:72:GLN:C	38:DE:73:ASN:HD22	2.19	0.46
38:DE:89:ILE:HD12	38:DE:121:LYS:O	2.16	0.46
44:DK:92:GLU:OE2	51:DR:87:ARG:NH1	2.48	0.46
53:DT:36:LEU:HA	53:DT:36:LEU:HD13	1.57	0.46
1:AA:831:A:C8	1:AA:839:G:C5	3.04	0.45
1:AA:1149:A:C8	1:AA:1150:C:C5	3.04	0.45
1:AA:1356:G:OP2	31:A7:9:ARG:HD2	2.16	0.45
3:AC:211:ARG:HG2	3:AC:211:ARG:HH11	1.81	0.45
5:AE:34:VAL:HG13	5:AE:48:GLN:O	2.16	0.45
8:AH:69:ARG:HG3	8:AH:70:THR:H	1.81	0.45
32:A8:26:LYS:HB2	32:A8:44:LYS:O	2.15	0.45
34:BA:499:A:H4'	34:BA:500:G:H5'	1.98	0.45
34:BA:1314:C:OP2	52:BS:4:SER:OG	2.13	0.45
44:BK:120:ARG:HA	44:BK:121:PRO:HD3	1.63	0.45
52:BS:3:ARG:NH1	52:BS:10:PHE:HB2	2.31	0.45
57:BZ:127:LYS:HD3	57:BZ:128:TYR:HE2	1.81	0.45
1:CA:833:U:O2	13:CP:55:ARG:NH2	2.49	0.45
1:CA:1019:U:HO2'	1:CA:1021:A:H2	1.63	0.45
1:CA:1252:G:N3	18:CU:33:ARG:HG2	2.31	0.45
1:CA:1860:G:H8	1:CA:1860:G:OP2	1.99	0.45
1:CA:2256:G:C2'	1:CA:2257:U:H5'	2.46	0.45
3:CC:37:LYS:O	3:CC:38:PHE:HB3	2.17	0.45
6:CF:41:LEU:HD23	6:CF:41:LEU:HA	1.56	0.45
6:CF:56:GLU:CD	6:CF:93:LYS:HZ3	2.18	0.45
8:CH:15:VAL:HG23	8:CH:28:GLY:CA	2.43	0.45
10:CL:90:LYS:HE3	10:CL:90:LYS:HB3	1.84	0.45
34:DA:198:G:H1	34:DA:219:C:H42	1.64	0.45
34:DA:335:C:H2'	34:DA:336:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:833:U:H2'	34:DA:834:C:C6	2.51	0.45
34:DA:1205:U:H4'	36:DC:195:VAL:HG23	1.98	0.45
35:DB:104:ASN:O	35:DB:108:ILE:HG12	2.15	0.45
36:DC:63:ASN:HB2	36:DC:98:ASN:HB2	1.97	0.45
38:DE:19:MET:SD	38:DE:24:ARG:HB3	2.56	0.45
42:DI:116:LYS:NZ	42:DI:120:ARG:O	2.47	0.45
43:DJ:58:ASP:N	43:DJ:58:ASP:OD1	2.49	0.45
50:DQ:89:LEU:HA	50:DQ:89:LEU:HD23	1.64	0.45
57:DZ:-26:GLU:HA	57:DZ:-23:LEU:HD22	1.97	0.45
1:AA:354:A:H2	1:AA:1255:A:C2'	2.29	0.45
1:AA:441:C:O2	1:AA:1895:U:O2'	2.24	0.45
1:AA:2734:A:C2	1:AA:2883:A:C5	3.04	0.45
2:AB:4:C:H2'	2:AB:5:C:O4'	2.16	0.45
4:AD:79:VAL:HG12	4:AD:113:VAL:HA	1.98	0.45
4:AD:159:ALA:HB1	4:AD:198:ASN:O	2.15	0.45
12:AO:34:THR:N	12:AO:37:ASP:OD2	2.45	0.45
22:AY:5:MET:HE3	22:AY:5:MET:HB2	1.87	0.45
25:A1:74:VAL:O	25:A1:77:ALA:N	2.47	0.45
34:BA:107:G:H2'	34:BA:108:G:O4'	2.16	0.45
34:BA:406:G:N3	34:BA:407:G:C8	2.84	0.45
34:BA:1234:C:H1'	34:BA:1364:U:O2	2.16	0.45
34:BA:1279:A:H5''	34:BA:1280:A:OP1	2.17	0.45
34:BA:1530:G:H4'	34:BA:1530:G:OP1	2.15	0.45
35:BB:145:LEU:O	35:BB:149:LEU:HB2	2.16	0.45
36:BC:11:ARG:NH2	36:BC:182:ILE:HD12	2.31	0.45
37:BD:127:THR:O	37:BD:147:ALA:N	2.48	0.45
37:BD:204:ILE:HG21	38:BE:98:THR:O	2.16	0.45
38:BE:144:THR:O	38:BE:148:VAL:HG23	2.16	0.45
40:BG:78:ARG:HD3	40:BG:79:ARG:H	1.81	0.45
46:BM:84:ILE:HG13	46:BM:85:GLY:HA2	1.97	0.45
50:BQ:10:VAL:HG12	50:BQ:53:LEU:HD12	1.97	0.45
51:BR:33:ASP:OD2	51:BR:36:ASN:HB2	2.16	0.45
1:CA:272(C):G:H2'	1:CA:272(D):G:O4'	2.16	0.45
1:CA:445:C:H2'	1:CA:446:G:O4'	2.16	0.45
1:CA:580:C:H2'	1:CA:581:C:C6	2.51	0.45
1:CA:657:U:H2'	1:CA:658:C:H6	1.79	0.45
1:CA:718:A:H3'	1:CA:719:C:C6	2.49	0.45
1:CA:2128:C:O4'	1:CA:2173:A:O2'	2.29	0.45
1:CA:2593:U:H2'	1:CA:2594:C:C6	2.51	0.45
2:CB:49:C:H2'	2:CB:50:G:C8	2.51	0.45
5:CE:60:ASN:OD1	5:CE:62:PRO:HD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:46:GLU:HB2	8:CH:49:VAL:HG12	1.97	0.45
8:CH:121:ILE:HG12	8:CH:140:LYS:HD2	1.97	0.45
14:CQ:16:ARG:HG2	14:CQ:16:ARG:NH1	2.32	0.45
17:CT:96:ARG:CZ	17:CT:96:ARG:HB3	2.47	0.45
30:C6:10:LEU:HA	30:C6:22:ALA:HA	1.98	0.45
34:DA:142:G:C2	34:DA:143:A:C4	3.04	0.45
34:DA:403:C:H2'	34:DA:404:U:C6	2.49	0.45
34:DA:1107:C:N4	34:DA:1108:G:N7	2.64	0.45
35:DB:24:TRP:HZ3	35:DB:29:ALA:HB2	1.81	0.45
38:DE:68:GLU:HG2	38:DE:70:PRO:HD3	1.97	0.45
42:DI:11:LYS:HA	42:DI:108:VAL:HG13	1.97	0.45
57:DZ:31:ARG:HA	57:DZ:31:ARG:NE	2.31	0.45
57:DZ:326:THR:O	57:DZ:377:VAL:N	2.42	0.45
1:AA:651:U:O4	13:AP:81:GLN:NE2	2.47	0.45
1:AA:1249:A:N6	63:AA:4112:HOH:O	2.50	0.45
1:AA:1334:U:O4	15:AR:106:GLY:HA3	2.15	0.45
1:AA:1615:G:H4'	4:AD:59:LYS:HB3	1.99	0.45
1:AA:1660:A:P	1:AA:1660:A:H8	2.40	0.45
1:AA:2221:A:H5''	1:AA:2222:C:OP2	2.17	0.45
1:AA:2303:U:H2'	1:AA:2304:C:C6	2.52	0.45
1:AA:2383:G:O2'	30:A6:46:HIS:ND1	2.40	0.45
3:AC:20:VAL:O	3:AC:224:ARG:O	2.34	0.45
7:AG:44:GLY:HA2	7:AG:88:ILE:HG22	1.98	0.45
9:AK:69:PRO:C	9:AK:71:LEU:H	2.20	0.45
15:AR:55:ALA:HB2	15:AR:79:LEU:HD13	1.98	0.45
34:BA:395:C:O3'	57:BZ:349:LYS:NZ	2.49	0.45
34:BA:410:G:N2	34:BA:429:U:O2	2.50	0.45
34:BA:745:C:H1'	34:BA:836:G:O2'	2.16	0.45
34:BA:1112:C:C2	36:BC:178:LEU:HB2	2.52	0.45
34:BA:1236:A:H2'	34:BA:1237:C:C6	2.51	0.45
34:BA:1468:A:O5'	34:BA:1468:A:H8	1.99	0.45
39:BF:12:PRO:HG3	39:BF:57:GLN:O	2.16	0.45
1:CA:305:U:H6	1:CA:305:U:O5'	1.99	0.45
1:CA:500:G:N2	1:CA:502:A:H3'	2.31	0.45
1:CA:1214:A:H2'	1:CA:1215:G:O4'	2.17	0.45
1:CA:1488:G:H5'	1:CA:1489:U:OP2	2.15	0.45
1:CA:2125:G:P	3:CC:71:LYS:NZ	2.89	0.45
1:CA:2271:G:OP1	24:C0:18:ALA:HB1	2.16	0.45
1:CA:2412:A:H2'	1:CA:2413:G:O4'	2.16	0.45
2:CB:83:G:H5''	27:C3:52:HIS:CE1	2.52	0.45
2:CB:87:G:C2	2:CB:91:C:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:30:VAL:CG2	3:CC:31:LYS:N	2.78	0.45
8:CH:139:GLN:HG3	8:CH:140:LYS:N	2.32	0.45
34:DA:57:G:C2	34:DA:58:C:C2	3.05	0.45
34:DA:73:G:C6	34:DA:97:G:C6	3.04	0.45
34:DA:454:C:H3'	34:DA:455:C:C6	2.52	0.45
34:DA:623:C:C4	34:DA:624:C:C5	3.05	0.45
34:DA:824:C:HO2'	41:DH:2:LEU:N	2.14	0.45
34:DA:945:G:C2	34:DA:1337:G:C2	3.04	0.45
34:DA:1168:A:H8	34:DA:1168:A:OP1	1.98	0.45
35:DB:71:VAL:HG12	35:DB:93:VAL:CG2	2.46	0.45
51:DR:56:THR:HB	51:DR:58:LEU:CD2	2.44	0.45
53:DT:43:LEU:HD13	53:DT:51:GLU:HB3	1.98	0.45
1:AA:646:A:OP2	13:AP:108:LYS:NZ	2.50	0.45
1:AA:1000:C:OP1	14:AQ:13:GLN:HA	2.17	0.45
1:AA:1044:C:P	18:AU:92:ARG:HH22	2.39	0.45
1:AA:1444:C:H2'	1:AA:1445:C:H6	1.82	0.45
1:AA:2298:A:OP1	30:A6:29:ASN:HB3	2.17	0.45
1:AA:2348:A:H61	24:A0:43:THR:CG2	2.29	0.45
3:AC:37:LYS:O	3:AC:38:PHE:HB3	2.17	0.45
5:AE:36:ARG:HH11	5:AE:85:ASN:ND2	2.14	0.45
16:AS:76:LYS:O	16:AS:80:LEU:HD13	2.17	0.45
18:AU:33:ARG:O	18:AU:37:GLU:HG3	2.16	0.45
31:A7:16:HIS:HB3	31:A7:44:PRO:HG2	1.97	0.45
33:A9:15:LYS:HD3	33:A9:26:ILE:HD11	1.98	0.45
34:BA:262:A:H2'	34:BA:263:A:C8	2.51	0.45
34:BA:373:A:C2	34:BA:482:A:C6	3.04	0.45
34:BA:604:G:C2	34:BA:635:G:C5	3.04	0.45
34:BA:891:U:C2'	34:BA:892:A:H5'	2.45	0.45
34:BA:1026:G:H2'	34:BA:1026:G:N3	2.31	0.45
34:BA:1401:G:C2	34:BA:1402:C:H1'	2.51	0.45
35:BB:18:GLY:O	35:BB:19:HIS:HB3	2.15	0.45
42:BI:121:ARG:NH1	42:BI:122:ALA:O	2.49	0.45
46:BM:3:ARG:HG3	46:BM:4:ILE:H	1.81	0.45
51:BR:59:SER:H	51:BR:62:GLU:HG3	1.82	0.45
57:BZ:115:GLU:O	57:BZ:118:SER:HB2	2.17	0.45
1:CA:723:G:H2'	1:CA:724:U:O4'	2.16	0.45
1:CA:1141:U:OP2	11:CN:63:THR:OG1	2.33	0.45
1:CA:1301:A:H2	1:CA:1626:G:N3	2.15	0.45
1:CA:2611:U:N3	29:C5:3:LYS:HG3	2.32	0.45
6:CF:123:LEU:HD12	6:CF:124:LEU:N	2.31	0.45
7:CG:2:PRO:HB2	7:CG:3:LEU:H	1.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:64:THR:HG21	7:CG:92:VAL:HG11	1.97	0.45
7:CG:115:ARG:HB3	7:CG:115:ARG:CZ	2.47	0.45
7:CG:150:ASP:OD2	7:CG:153:ARG:NH1	2.49	0.45
10:CL:3:LYS:HE3	10:CL:29:GLN:HB3	1.99	0.45
10:CL:3:LYS:HE3	10:CL:3:LYS:HB3	1.78	0.45
22:CY:40:GLU:O	22:CY:42:VAL:HG23	2.17	0.45
22:CY:44:ILE:HA	22:CY:63:LYS:O	2.17	0.45
23:CZ:35:ARG:HA	23:CZ:35:ARG:HD2	1.69	0.45
34:DA:123:C:OP1	34:DA:311:C:O2'	2.30	0.45
34:DA:422:C:H4'	34:DA:423:G:C4	2.50	0.45
34:DA:878:G:C5'	41:DH:89:PRO:HG2	2.45	0.45
34:DA:1192:C:OP2	36:DC:4:LYS:NZ	2.44	0.45
34:DA:1473:A:H2'	34:DA:1474:G:C8	2.51	0.45
38:DE:110:LEU:HB3	38:DE:115:VAL:HB	1.98	0.45
1:AA:273:G:O2'	1:AA:274:U:H5''	2.17	0.45
1:AA:1474:C:O2'	1:AA:1475:G:H5'	2.16	0.45
1:AA:2074:G:H4'	5:AE:143:ASN:O	2.17	0.45
1:AA:2408:G:OP1	25:A1:25:LYS:NZ	2.26	0.45
3:AC:16:ASP:OD2	3:AC:19:LYS:HB2	2.17	0.45
14:AQ:43:THR:O	14:AQ:46:GLN:HB2	2.17	0.45
18:AU:104:GLN:O	18:AU:107:ALA:HB3	2.16	0.45
22:AY:6:HIS:H	22:AY:6:HIS:CD2	2.34	0.45
34:BA:49:U:O2'	34:BA:50:A:H2'	2.17	0.45
34:BA:100:C:H2'	34:BA:101:A:O4'	2.16	0.45
34:BA:153:C:N4	34:BA:169:C:H42	2.14	0.45
34:BA:453:A:C6	34:BA:454:C:C4	3.05	0.45
34:BA:738:C:C2	34:BA:739:C:C5	3.04	0.45
34:BA:1255:G:H2'	34:BA:1279:A:H62	1.82	0.45
34:BA:1260:C:O5'	34:BA:1284:C:H4'	2.16	0.45
34:BA:1316:G:O2'	47:BN:18:VAL:HG11	2.17	0.45
34:BA:1346:A:N6	34:BA:1375:A:OP2	2.45	0.45
34:BA:1346:A:C8	40:BG:10:ARG:NH2	2.84	0.45
34:BA:1392:G:N2	34:BA:1502:A:H8	2.14	0.45
35:BB:86:GLU:C	35:BB:89:GLY:H	2.19	0.45
37:BD:134:ASP:OD2	37:BD:135:LEU:HD13	2.16	0.45
39:BF:42:GLU:O	39:BF:44:GLY:N	2.49	0.45
42:BI:16:ARG:O	42:BI:64:THR:N	2.40	0.45
57:BZ:75:LYS:O	57:BZ:77:HIS:HD2	1.99	0.45
57:BZ:160:ARG:HD3	57:BZ:160:ARG:N	2.31	0.45
1:CA:118:A:O5'	1:CA:119:A:H5''	2.17	0.45
1:CA:1389:G:O2'	1:CA:1390:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1641:A:H2'	1:CA:1642:G:O4'	2.16	0.45
1:CA:2066:C:C2'	1:CA:2067:G:H5'	2.47	0.45
1:CA:2097:C:H2'	1:CA:2098:U:O4'	2.16	0.45
1:CA:2166:G:H3'	1:CA:2167:U:C5'	2.47	0.45
2:CB:114:C:H4'	16:CS:46:VAL:HG22	1.98	0.45
5:CE:135:HIS:NE2	63:CE:403:HOH:O	2.23	0.45
12:CO:25:LEU:HD12	12:CO:38:VAL:HG12	1.98	0.45
12:CO:111:PHE:O	12:CO:115:VAL:HG23	2.16	0.45
14:CQ:110:THR:HG23	14:CQ:113:GLN:HB2	1.98	0.45
19:CV:97:LYS:HD3	19:CV:97:LYS:HA	1.77	0.45
34:DA:303:A:H2'	34:DA:304:U:O4'	2.17	0.45
34:DA:690:G:H2'	34:DA:691:G:O4'	2.17	0.45
34:DA:939:G:H2'	34:DA:940:C:C6	2.52	0.45
34:DA:1059:C:OP2	36:DC:199:LYS:NZ	2.42	0.45
48:DO:41:GLU:HA	48:DO:44:LYS:HD2	1.99	0.45
51:DR:33:ASP:OD2	51:DR:36:ASN:HB2	2.16	0.45
1:AA:102:U:H3'	1:AA:103:C:H6	1.81	0.45
1:AA:459:A:N6	63:AA:4114:HOH:O	2.50	0.45
1:AA:669:A:H4'	1:AA:670:C:H5	1.82	0.45
1:AA:1322:A:C8	1:AA:1322:A:H5''	2.52	0.45
1:AA:2094:G:H2'	1:AA:2095:C:O4'	2.16	0.45
1:AA:2227:G:O2'	1:AA:2228:G:OP1	2.31	0.45
1:AA:2283:G:OP1	24:A0:18:ALA:HB1	2.15	0.45
3:AC:7:ARG:HH22	3:AC:219:MET:HB2	1.82	0.45
5:AE:171:GLU:OE1	5:AE:185:LYS:NZ	2.47	0.45
7:AG:18:GLU:OE1	7:AG:22:ARG:HD3	2.17	0.45
16:AS:3:ARG:HD3	16:AS:4:LEU:H	1.81	0.45
16:AS:58:LEU:HD23	16:AS:58:LEU:HA	1.69	0.45
27:A3:5:LYS:HE3	27:A3:57:GLU:OE2	2.16	0.45
29:A5:58:LEU:HD23	29:A5:59:GLU:O	2.16	0.45
34:BA:402:G:C6	34:BA:403:C:C4	3.05	0.45
34:BA:432:A:C8	34:BA:433:C:C5	3.04	0.45
34:BA:944:G:C6	34:BA:1337:G:H2'	2.51	0.45
34:BA:1277:C:HO2'	34:BA:1279:A:H8	1.63	0.45
34:BA:1280:A:H5'	43:BJ:40:LEU:HD22	1.99	0.45
36:BC:60:ALA:HB3	36:BC:63:ASN:OD1	2.16	0.45
37:BD:12:CYS:SG	37:BD:19:LEU:HB2	2.57	0.45
57:BZ:103:GLY:HA3	57:BZ:280:LEU:HD13	1.98	0.45
57:BZ:109:ASP:HB3	57:BZ:112:GLN:HB3	1.98	0.45
1:CA:385:C:O2'	1:CA:388:G:N2	2.49	0.45
1:CA:464:U:C2	1:CA:788:A:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1449:A:N7	1:CA:1450:G:C8	2.84	0.45
1:CA:1851:U:C4	1:CA:1852:C:C4	3.05	0.45
1:CA:2544:G:H2'	1:CA:2545:G:O4'	2.16	0.45
1:CA:2718:G:C6	1:CA:2719:G:C5	3.05	0.45
3:CC:48:LEU:HD23	3:CC:59:VAL:HG21	1.98	0.45
8:CH:164:TYR:HB2	8:CH:167:GLU:HB2	1.99	0.45
23:CZ:144:LEU:HD11	23:CZ:150:LEU:HD23	1.99	0.45
34:DA:36:C:OP1	45:DL:123:LYS:NZ	2.49	0.45
34:DA:975:A:N6	43:DJ:48:THR:HB	2.32	0.45
34:DA:1316:G:N7	52:DS:7:LYS:NZ	2.65	0.45
38:DE:127:ASN:O	38:DE:131:ILE:HG12	2.16	0.45
44:DK:44:SER:H	44:DK:47:VAL:HB	1.82	0.45
47:DN:23:ARG:CZ	47:DN:30:ALA:HB2	2.47	0.45
50:DQ:9:VAL:HG21	50:DQ:84:LEU:HD13	1.98	0.45
57:DZ:-6:ARG:O	57:DZ:-2:ALA:HB3	2.16	0.45
1:AA:831:A:OP2	63:AA:3943:HOH:O	2.21	0.45
1:AA:1462:G:N1	1:AA:1629:C:N3	2.38	0.45
1:AA:1604:C:H2'	1:AA:1605:A:C2	2.52	0.45
1:AA:1839:U:O5'	1:AA:1839:U:H6	1.99	0.45
1:AA:2036:A:H2'	1:AA:2037:A:C8	2.51	0.45
1:AA:2356:U:OP1	30:A6:37:ARG:HD3	2.17	0.45
1:AA:2444:A:C2	25:A1:33:LYS:HB3	2.52	0.45
1:AA:2619:G:H4'	63:AA:4509:HOH:O	2.16	0.45
4:AD:127:VAL:HA	4:AD:193:VAL:HG22	1.98	0.45
4:AD:260:ARG:CZ	4:AD:264:LYS:HD3	2.47	0.45
7:AG:3:LEU:HD13	28:A4:25:TYR:CZ	2.51	0.45
15:AR:36:THR:O	15:AR:111:LEU:HA	2.15	0.45
23:AZ:99:TYR:CZ	23:AZ:125:LEU:HD13	2.52	0.45
26:A2:56:GLN:O	26:A2:59:ARG:N	2.49	0.45
34:BA:243:A:C2	34:BA:246:A:C8	3.05	0.45
34:BA:438:G:H4'	37:BD:123:HIS:ND1	2.32	0.45
34:BA:900:A:H2'	34:BA:901:A:C8	2.52	0.45
34:BA:1005:A:N1	34:BA:1025:U:H1'	2.31	0.45
34:BA:1288:A:N1	34:BA:1371:G:H1'	2.32	0.45
35:BB:118:LEU:HD13	35:BB:142:LEU:HB2	1.99	0.45
35:BB:126:GLU:HB3	35:BB:127:ILE:H	1.63	0.45
40:BG:88:PRO:HG2	40:BG:152:ALA:HB2	1.98	0.45
42:BI:99:LEU:HB3	42:BI:101:PHE:CE1	2.52	0.45
43:BJ:31:GLY:HA2	43:BJ:32:ALA:HA	1.60	0.45
46:BM:95:GLY:O	46:BM:110:ARG:HG3	2.17	0.45
52:BS:50:ALA:HB1	52:BS:57:HIS:HB3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:12:LEU:O	57:BZ:282:SER:HA	2.17	0.45
1:CA:242:G:N2	1:CA:254:G:H2'	2.31	0.45
1:CA:288:C:O2'	1:CA:289:A:H5'	2.17	0.45
1:CA:842:G:H2'	1:CA:843:G:O4'	2.17	0.45
1:CA:938:G:P	32:C8:52:LYS:HZ2	2.40	0.45
1:CA:1384:A:N3	1:CA:1405:U:H1'	2.32	0.45
1:CA:2121:G:O4'	3:CC:168:LYS:CE	2.64	0.45
1:CA:2557:G:H2'	1:CA:2558:C:C6	2.52	0.45
1:CA:2698:U:H2'	1:CA:2699:C:C6	2.51	0.45
5:CE:32:PRO:HA	5:CE:90:THR:HA	1.98	0.45
6:CF:117:ARG:HD3	6:CF:117:ARG:HA	1.76	0.45
12:CO:71:ARG:HB2	12:CO:75:SER:O	2.16	0.45
13:CP:91:PHE:O	13:CP:121:LYS:NZ	2.49	0.45
34:DA:321:A:C2	34:DA:333:G:C2	3.05	0.45
34:DA:1316:G:H4'	47:DN:18:VAL:HG11	1.98	0.45
34:DA:1321:C:H4'	46:DM:87:TYR:CE2	2.51	0.45
35:DB:127:ILE:HG12	35:DB:128:GLU:H	1.82	0.45
37:DD:155:LEU:HD23	37:DD:156:GLU:H	1.82	0.45
40:DG:104:LEU:HD13	40:DG:104:LEU:HA	1.85	0.45
47:DN:26:ARG:HD3	47:DN:43:CYS:SG	2.56	0.45
57:DZ:28:THR:O	57:DZ:32:ILE:HG13	2.17	0.45
57:DZ:238:THR:O	57:DZ:241:GLU:HG2	2.16	0.45
1:AA:580:U:O2	11:AN:45:ASN:HB2	2.17	0.45
1:AA:2614:A:N6	63:AA:3996:HOH:O	2.35	0.45
1:AA:2711:C:O2'	1:AA:2712:C:H5'	2.17	0.45
1:AA:2765:C:O5'	1:AA:2765:C:H6	2.00	0.45
1:AA:2826:C:O3'	15:AR:99:LYS:NZ	2.50	0.45
4:AD:180:GLY:CA	4:AD:275:LYS:HD3	2.46	0.45
8:AH:9:ILE:HD12	8:AH:50:VAL:HG12	1.98	0.45
17:AT:128:GLU:O	17:AT:130:ALA:N	2.50	0.45
20:AW:55:ALA:O	20:AW:58:ALA:HB3	2.17	0.45
27:A3:23:LEU:HD12	27:A3:28:LEU:HD12	1.98	0.45
27:A3:28:LEU:HD21	27:A3:35:ARG:HB2	1.99	0.45
32:A8:34:TRP:CG	32:A8:35:GLN:N	2.84	0.45
34:BA:300:A:H1'	34:BA:565:U:O2	2.17	0.45
34:BA:582:U:C2	34:BA:760:G:C6	3.04	0.45
34:BA:626:U:C2	34:BA:627:G:C8	3.05	0.45
34:BA:983:A:H5'	34:BA:984:C:OP2	2.17	0.45
34:BA:1276:G:H8	34:BA:1276:G:O5'	1.99	0.45
34:BA:1323:G:H4'	34:BA:1363:C:C2	2.52	0.45
35:BB:18:GLY:HA3	35:BB:41:ILE:HA	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:37:ASN:N	35:BB:37:ASN:OD1	2.50	0.45
35:BB:189:ASP:OD1	35:BB:189:ASP:N	2.45	0.45
37:BD:102:ASP:HB3	37:BD:121:VAL:HG21	1.98	0.45
38:BE:110:LEU:CD1	38:BE:118:ILE:HD13	2.46	0.45
42:BI:53:VAL:HG21	42:BI:92:TYR:CE1	2.52	0.45
43:BJ:17:ASP:O	43:BJ:21:GLN:HB2	2.17	0.45
51:BR:39:VAL:O	51:BR:42:ARG:HB2	2.16	0.45
57:BZ:181:LEU:HD23	57:BZ:182:ARG:HG3	1.98	0.45
1:CA:42:G:C2	1:CA:43:A:H1'	2.52	0.45
1:CA:588:U:O4	1:CA:670:A:H1'	2.17	0.45
1:CA:954:G:O2'	1:CA:2274:A:N1	2.43	0.45
1:CA:1140:C:OP1	11:CN:24:GLY:N	2.45	0.45
1:CA:1428:C:C5	1:CA:1569:A:H5''	2.51	0.45
1:CA:1659:U:C4	1:CA:1660:C:C5	3.05	0.45
1:CA:2445:G:OP1	6:CF:74:ARG:NH2	2.48	0.45
3:CC:30:VAL:CG2	3:CC:31:LYS:H	2.27	0.45
14:CQ:75:THR:HG21	14:CQ:87:LYS:HZ2	1.82	0.45
18:CU:65:ILE:HG22	18:CU:76:TYR:HD2	1.82	0.45
19:CV:24:LYS:HA	19:CV:92:THR:OG1	2.16	0.45
23:CZ:99:TYR:CE1	23:CZ:125:LEU:HB2	2.51	0.45
33:C9:4:ARG:O	33:C9:36:GLN:HA	2.17	0.45
34:DA:401:C:OP2	37:DD:73:ARG:NH2	2.50	0.45
34:DA:547:A:N3	34:DA:548:G:H1'	2.32	0.45
34:DA:584:G:OP1	50:DQ:91:ARG:NH2	2.50	0.45
34:DA:1003:G:H2'	34:DA:1004:A:C4'	2.47	0.45
34:DA:1427:U:H2'	34:DA:1428:A:H8	1.80	0.45
35:DB:27:LYS:HG3	35:DB:194:PRO:CD	2.45	0.45
35:DB:133:LYS:C	35:DB:135:GLN:H	2.19	0.45
37:DD:72:GLU:O	37:DD:76:ARG:HB3	2.17	0.45
38:DE:50:GLU:HB2	38:DE:53:LEU:HD13	1.99	0.45
43:DJ:55:LYS:HE3	43:DJ:56:HIS:NE2	2.31	0.45
44:DK:59:TYR:CE2	44:DK:63:LEU:HD11	2.52	0.45
47:DN:29:ARG:NH1	47:DN:42:ILE:HD11	2.31	0.45
53:DT:44:ALA:HB3	53:DT:91:LEU:HD12	1.98	0.45
57:DZ:256:THR:O	57:DZ:258:VAL:HG23	2.17	0.45
57:DZ:608:VAL:O	57:DZ:644:ARG:HA	2.17	0.45
1:AA:762:G:C2	48:BO:56:LEU:HD21	2.52	0.45
1:AA:1888:G:O5'	1:AA:1888:G:H8	2.00	0.45
1:AA:1921:G:H2'	1:AA:1921:G:N3	2.32	0.45
1:AA:2098:U:OP2	1:AA:2250:G:N2	2.44	0.45
3:AC:48:LEU:HD23	3:AC:59:VAL:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:65:ILE:HB	4:AD:67:PHE:CE2	2.52	0.45
9:AK:25:PHE:O	9:AK:85:ASP:N	2.46	0.45
10:AL:17:ALA:HB1	10:AL:38:VAL:HG22	1.99	0.45
10:AL:88:ALA:O	10:AL:90:LYS:N	2.50	0.45
23:AZ:5:LEU:HD22	23:AZ:6:LYS:O	2.17	0.45
25:A1:95:LEU:HD12	25:A1:98:LEU:CD1	2.47	0.45
34:BA:158:G:H2'	34:BA:159:G:C8	2.52	0.45
34:BA:357:G:C2	34:BA:358:U:C5	3.05	0.45
34:BA:918:A:H2'	34:BA:919:A:O4'	2.16	0.45
34:BA:1240:U:P	40:BG:116:ALA:H	2.40	0.45
36:BC:175:LEU:HD21	36:BC:201:TYR:CD2	2.52	0.45
43:BJ:47:PHE:CE1	47:BN:37:PHE:HE2	2.35	0.45
49:BP:69:THR:HA	49:BP:72:ARG:HB2	1.98	0.45
50:BQ:87:LYS:HD3	50:BQ:87:LYS:HA	1.70	0.45
56:BX:29:G:C2	56:BX:42:G:N3	2.85	0.45
56:BX:72:A:H2'	56:BX:73:A:O4'	2.17	0.45
57:BZ:-66:MET:N	57:BZ:-46:VAL:O	2.42	0.45
1:CA:82:G:N1	1:CA:103:A:OP2	2.36	0.45
1:CA:1591:G:C6	1:CA:1592:C:C4	3.05	0.45
1:CA:1813:G:H1'	4:CD:50:THR:OG1	2.17	0.45
1:CA:2177:C:H5'	3:CC:45:HIS:HB2	1.99	0.45
3:CC:203:GLU:CD	3:CC:203:GLU:N	2.70	0.45
5:CE:108:SER:O	5:CE:162:ALA:HA	2.17	0.45
11:CN:39:ARG:HB3	11:CN:41:ASP:OD1	2.17	0.45
15:CR:18:LEU:O	15:CR:18:LEU:HD22	2.17	0.45
16:CS:61:ASN:O	16:CS:65:VAL:HG23	2.17	0.45
28:C4:41:PRO:HA	28:C4:44:THR:HG22	1.98	0.45
34:DA:394:G:H2'	34:DA:395:C:C6	2.52	0.45
34:DA:608:A:H2'	34:DA:609:A:O4'	2.16	0.45
34:DA:1289:A:H3'	34:DA:1290:G:H8	1.82	0.45
35:DB:116:GLU:HA	35:DB:119:GLU:HB2	1.99	0.45
38:DE:78:HIS:HE2	38:DE:142:LEU:HD23	1.82	0.45
57:DZ:92:ILE:HG21	57:DZ:437:THR:CB	2.46	0.45
57:DZ:160:ARG:HG2	57:DZ:254:LYS:O	2.17	0.45
1:AA:81:G:H8	1:AA:81:G:O5'	2.00	0.45
1:AA:261:A:N1	1:AA:291:G:O2'	2.47	0.45
1:AA:475:A:H2'	1:AA:476:G:H5'	1.99	0.45
1:AA:880:U:O2	13:AP:55:ARG:NH2	2.50	0.45
1:AA:905:U:O2	1:AA:2280:A:H2'	2.17	0.45
1:AA:927:G:H8	1:AA:927:G:OP2	2.00	0.45
1:AA:2228:G:H2'	1:AA:2229:A:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2331:G:N2	16:AS:3:ARG:HG2	2.32	0.45
3:AC:203:GLU:CD	3:AC:203:GLU:N	2.70	0.45
4:AD:3:VAL:HG13	4:AD:17:THR:HB	1.99	0.45
5:AE:119:ARG:HG2	5:AE:160:TYR:CG	2.52	0.45
10:AL:55:VAL:CG2	10:AL:67:PHE:HB2	2.47	0.45
34:BA:345:C:H4'	34:BA:346:G:C2	2.52	0.45
34:BA:960:U:C5	34:BA:1225:A:C8	3.04	0.45
34:BA:1316:G:H4'	47:BN:18:VAL:HG13	1.97	0.45
37:BD:3:ARG:HH21	37:BD:118:ARG:HD3	1.82	0.45
37:BD:167:GLY:N	37:BD:168:ARG:HH12	2.07	0.45
48:BO:39:LEU:HD13	48:BO:56:LEU:HB2	1.98	0.45
49:BP:40:ASP:HA	49:BP:41:PRO:HD2	1.64	0.45
55:BV:17:U:O2'	55:BV:18:G:H5'	2.17	0.45
1:CA:183:C:H1'	1:CA:433:C:H1'	1.98	0.45
1:CA:554:U:C4	1:CA:555:U:C4	3.05	0.45
1:CA:1046:A:H3'	1:CA:1047:G:C5'	2.46	0.45
1:CA:1465:G:N1	1:CA:1466:G:C5	2.85	0.45
1:CA:2290:G:C2	1:CA:2343:C:O2	2.70	0.45
3:CC:22:THR:HG23	3:CC:25:GLU:OE1	2.17	0.45
4:CD:125:ILE:HB	39:DF:81:ILE:HD11	1.99	0.45
7:CG:80:PHE:O	7:CG:82:LEU:N	2.50	0.45
11:CN:58:ASP:OD1	11:CN:125:GLY:N	2.48	0.45
15:CR:17:ARG:O	15:CR:20:LEU:HB3	2.17	0.45
26:C2:21:LEU:HB3	26:C2:64:LEU:HD23	1.99	0.45
34:DA:860:A:N6	34:DA:861:G:C2	2.85	0.45
34:DA:1065:U:H4'	34:DA:1066:C:H5'	1.99	0.45
34:DA:1183:A:H1'	34:DA:1184:G:OP1	2.17	0.45
34:DA:1252:A:H2'	34:DA:1253:G:O4'	2.16	0.45
41:DH:20:TYR:HD2	41:DH:65:TYR:CD2	2.35	0.45
43:DJ:6:ILE:HB	43:DJ:72:VAL:HG23	1.99	0.45
45:DL:28:LYS:N	45:DL:29:GLY:HA2	2.31	0.45
45:DL:114:LYS:NZ	45:DL:125:PRO:HG2	2.32	0.45
48:DO:53:HIS:O	48:DO:56:LEU:N	2.49	0.45
49:DP:66:PRO:HB2	49:DP:71:ARG:HB3	1.98	0.45
57:DZ:-52:VAL:C	57:DZ:-50:GLN:H	2.20	0.45
1:AA:610:C:OP2	13:AP:21:ARG:NH2	2.50	0.44
1:AA:973:G:H2'	1:AA:974:G:O4'	2.17	0.44
1:AA:1508:G:C5	1:AA:1509:C:C5	3.05	0.44
1:AA:1754:G:H2'	1:AA:1755:C:C6	2.52	0.44
1:AA:2149:G:H2'	1:AA:2150:C:C6	2.52	0.44
1:AA:2376:C:H2'	1:AA:2377:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:116:VAL:HG13	5:AE:122:PHE:CB	2.47	0.44
6:AF:136:THR:HA	6:AF:166:ALA:O	2.17	0.44
6:AF:178:PRO:HB2	6:AF:201:VAL:CG2	2.47	0.44
8:AH:56:SER:OG	8:AH:61:HIS:ND1	2.49	0.44
10:AL:108:ALA:HB2	10:AL:127:ILE:HG13	2.00	0.44
12:AO:64:ARG:HD3	17:AT:70:VAL:HG11	1.99	0.44
13:AP:128:HIS:CD2	13:AP:148:LEU:HD21	2.52	0.44
34:BA:461:A:C5	34:BA:471:G:C6	3.04	0.44
34:BA:1015:A:H2'	34:BA:1016:A:H8	1.81	0.44
34:BA:1183:A:H3'	34:BA:1184:G:C5'	2.47	0.44
34:BA:1226:C:H2'	46:BM:103:THR:HB	1.97	0.44
35:BB:140:HIS:O	35:BB:144:ARG:HB3	2.17	0.44
38:BE:76:ILE:HD12	38:BE:93:PRO:HG3	1.97	0.44
41:BH:36:LEU:HD23	41:BH:36:LEU:HA	1.71	0.44
48:BO:31:LEU:HD23	48:BO:31:LEU:HA	1.66	0.44
57:BZ:-10:ARG:HB2	57:BZ:-10:ARG:NH1	2.31	0.44
57:BZ:2:LYS:O	57:BZ:6:GLU:HG3	2.16	0.44
1:CA:301:G:C4	1:CA:302:C:C5	3.05	0.44
1:CA:1312:U:H4'	1:CA:1313:U:O5'	2.16	0.44
1:CA:2056:G:H1	29:C5:3:LYS:HB3	1.82	0.44
1:CA:2584:U:H2'	1:CA:2585:U:H2'	1.99	0.44
1:CA:2632:A:O2'	1:CA:2811:G:O2'	2.15	0.44
1:CA:2815:C:H2'	1:CA:2816:C:O4'	2.17	0.44
2:CB:3:C:H2'	2:CB:4:C:C6	2.52	0.44
4:CD:8:PRO:HB3	4:CD:14:ARG:HB2	1.98	0.44
4:CD:158:ALA:O	4:CD:161:THR:HG23	2.17	0.44
5:CE:170:LEU:HD23	5:CE:184:VAL:HG22	1.99	0.44
11:CN:128:HIS:HA	11:CN:129:PRO:HD3	1.69	0.44
17:CT:83:ILE:HD13	17:CT:86:ILE:HD11	1.98	0.44
17:CT:125:ARG:O	17:CT:129:ARG:HG3	2.17	0.44
34:DA:644:G:H4'	41:DH:92:ARG:NH2	2.32	0.44
34:DA:1095:U:OP1	34:DA:1108:G:N2	2.29	0.44
34:DA:1188:A:OP1	42:DI:114:TYR:HE2	2.00	0.44
36:DC:43:LEU:HD21	36:DC:91:LEU:HD13	1.98	0.44
42:DI:67:GLY:O	42:DI:73:GLN:NE2	2.37	0.44
42:DI:71:SER:HA	42:DI:74:ILE:HD12	1.98	0.44
50:DQ:29:HIS:CD2	50:DQ:30:PRO:HD2	2.52	0.44
50:DQ:45:HIS:HB3	50:DQ:72:ARG:HG3	2.00	0.44
57:DZ:356:LEU:HD12	57:DZ:365:GLU:HA	2.00	0.44
1:AA:25:U:H2'	1:AA:26:G:O4'	2.17	0.44
1:AA:1232:G:H5''	19:AV:81:TYR:CE1	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:39:ASP:O	3:AC:178:LYS:HE3	2.17	0.44
5:AE:143:ASN:HD22	5:AE:147:PRO:CD	2.31	0.44
7:AG:116:ASP:N	7:AG:116:ASP:OD1	2.51	0.44
13:AP:114:ILE:O	13:AP:115:LEU:HD23	2.17	0.44
17:AT:28:VAL:O	17:AT:46:GLU:HA	2.17	0.44
27:A3:3:ARG:HD3	27:A3:60:GLU:CD	2.38	0.44
27:A3:38:GLU:HB3	27:A3:40:THR:HG23	1.98	0.44
28:A4:59:PHE:HE1	52:BS:64:GLU:HB3	1.82	0.44
34:BA:108:G:C6	53:BT:15:ARG:HD2	2.52	0.44
34:BA:273:A:H2'	34:BA:274:A:O4'	2.17	0.44
34:BA:429:U:H3'	37:BD:9:CYS:SG	2.56	0.44
34:BA:515:G:C6	34:BA:516:U:N3	2.85	0.44
34:BA:692:U:O2'	34:BA:694:A:N7	2.43	0.44
37:BD:15:GLU:HG3	37:BD:63:LYS:HD3	1.99	0.44
38:BE:79:GLU:H	38:BE:79:GLU:HG3	1.50	0.44
41:BH:81:HIS:HB2	41:BH:138:TRP:OXT	2.18	0.44
49:BP:43:LYS:HG2	49:BP:48:TRP:CE2	2.52	0.44
57:BZ:132:ARG:H	57:BZ:132:ARG:HD2	1.82	0.44
57:BZ:165:GLN:HE21	57:BZ:260:LEU:HG	1.82	0.44
1:CA:72:U:OP2	21:CX:1:MET:N	2.50	0.44
1:CA:1143:A:N6	11:CN:28:THR:HG21	2.32	0.44
1:CA:1461:G:H2'	1:CA:1462:C:H6	1.82	0.44
1:CA:2228:G:C5	1:CA:2229:C:C4	3.05	0.44
1:CA:2461:C:C4	1:CA:2462:U:C4	3.06	0.44
1:CA:2522:U:C2	1:CA:2765:A:N7	2.86	0.44
2:CB:89:G:C6	2:CB:90:A:N6	2.86	0.44
3:CC:16:ASP:OD2	3:CC:19:LYS:HB2	2.17	0.44
5:CE:92:THR:O	5:CE:95:ILE:HG23	2.16	0.44
10:CL:72:PRO:HA	10:CL:73:PRO:HD3	1.88	0.44
15:CR:63:ARG:HA	15:CR:80:PHE:CZ	2.52	0.44
20:CW:34:ASN:ND2	29:C5:39:MET:HG3	2.33	0.44
21:CX:17:ALA:O	21:CX:20:GLY:N	2.37	0.44
32:C8:14:VAL:HG11	32:C8:58:ILE:HG21	1.99	0.44
34:DA:401:C:H1'	34:DA:622:A:H1'	1.98	0.44
34:DA:434:U:H2'	34:DA:435:C:C6	2.52	0.44
34:DA:920:U:C2	34:DA:921:U:C5	3.04	0.44
34:DA:1273:G:H3'	34:DA:1274:G:C8	2.52	0.44
38:DE:87:SER:HB3	38:DE:131:ILE:HD13	1.99	0.44
44:DK:34:ASP:HB2	44:DK:35:PRO:HD2	2.00	0.44
44:DK:93:GLN:O	44:DK:93:GLN:HG3	2.17	0.44
44:DK:120:ARG:HA	44:DK:121:PRO:HD3	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:DO:71:GLN:HB2	48:DO:78:TYR:CD2	2.52	0.44
51:DR:45:SER:HA	51:DR:51:LEU:HD21	2.00	0.44
53:DT:76:ALA:O	53:DT:80:ARG:HB2	2.17	0.44
57:DZ:31:ARG:O	57:DZ:34:TYR:HB3	2.17	0.44
1:AA:313:A:H2'	1:AA:314:G:O4'	2.17	0.44
1:AA:854:U:OP2	13:AP:41:ARG:NH2	2.50	0.44
1:AA:970:C:H2'	1:AA:971:C:C6	2.52	0.44
1:AA:1604:C:P	1:AA:1605:A:HO2'	2.36	0.44
1:AA:1713:G:O2'	1:AA:1714:G:H5'	2.17	0.44
1:AA:2143:G:N2	3:AC:169:THR:CB	2.72	0.44
1:AA:2298:A:H2	30:A6:25:LYS:HB2	1.82	0.44
1:AA:2316:G:H22	1:AA:2324:U:H3	1.66	0.44
1:AA:2483:C:H5'	1:AA:2484:G:OP2	2.17	0.44
11:AN:60:ILE:C	11:AN:61:ARG:HD2	2.38	0.44
14:AQ:37:LEU:HD23	14:AQ:37:LEU:HA	1.75	0.44
27:A3:59:VAL:O	27:A3:60:GLU:HG2	2.17	0.44
29:A5:35:GLU:HG3	29:A5:51:TYR:CD2	2.53	0.44
32:A8:42:ARG:HD2	63:A8:5107:HOH:O	2.17	0.44
34:BA:189:G:H2'	34:BA:189(A):C:O4'	2.17	0.44
34:BA:397:A:H3'	34:BA:397:A:N3	2.32	0.44
34:BA:501:C:H1'	34:BA:549:C:H1'	1.99	0.44
34:BA:894:G:C6	34:BA:895:G:C5	3.05	0.44
34:BA:1127:G:H1'	34:BA:1280:A:C6	2.52	0.44
35:BB:81:VAL:HG12	35:BB:215:LEU:CD1	2.47	0.44
35:BB:185:ILE:HG23	35:BB:199:TYR:HB2	1.99	0.44
49:BP:49:LEU:HD12	49:BP:50:LYS:N	2.32	0.44
51:BR:38:GLU:OE2	51:BR:41:LYS:HD3	2.16	0.44
57:BZ:-38:TYR:C	57:BZ:-35:PRO:HD2	2.38	0.44
57:BZ:201:ILE:HG22	57:BZ:202:PRO:O	2.17	0.44
1:CA:2178:C:O2	3:CC:169:THR:HG21	2.18	0.44
1:CA:2839:G:C6	1:CA:2840:C:N3	2.85	0.44
3:CC:24:ASP:C	3:CC:24:ASP:OD1	2.55	0.44
3:CC:179:ALA:O	3:CC:180:SER:O	2.35	0.44
10:CL:3:LYS:HB3	10:CL:4:VAL:H	1.71	0.44
17:CT:6:LEU:HA	17:CT:6:LEU:HD13	1.68	0.44
17:CT:13:ARG:HB3	17:CT:13:ARG:NH1	2.32	0.44
21:CX:29:TRP:CZ3	21:CX:78:LYS:HD3	2.52	0.44
22:CY:76:CYS:SG	22:CY:99:CYS:HB2	2.58	0.44
23:CZ:109:ALA:N	23:CZ:144:LEU:O	2.51	0.44
25:C1:3:LYS:HB2	25:C1:61:ARG:HH11	1.82	0.44
34:DA:411:A:C5	34:DA:413:G:N3	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:707:C:H2'	34:DA:708:C:C6	2.52	0.44
34:DA:1303:C:N4	34:DA:1304:G:C6	2.86	0.44
36:DC:182:ILE:HG12	36:DC:203:PHE:HD1	1.82	0.44
37:DD:146:ILE:N	37:DD:146:ILE:HD12	2.33	0.44
41:DH:26:VAL:HG22	41:DH:59:LEU:HB2	2.00	0.44
57:DZ:20:HIS:CE1	57:DZ:116:PRO:O	2.71	0.44
1:AA:594:A:O2'	19:AV:78:LYS:HE2	2.17	0.44
1:AA:2054:G:O2'	5:AE:145:LYS:HE2	2.16	0.44
1:AA:2377:G:O6	32:A8:39:LYS:HE3	2.17	0.44
1:AA:2880:C:H2'	1:AA:2881:C:O4'	2.18	0.44
3:AC:179:ALA:O	3:AC:180:SER:O	2.35	0.44
5:AE:54:GLN:NE2	5:AE:76:ARG:HG2	2.32	0.44
8:AH:140:LYS:HB2	8:AH:140:LYS:HE3	1.69	0.44
11:AN:22:THR:O	11:AN:23:LEU:C	2.55	0.44
13:AP:81:GLN:OE1	13:AP:106:LEU:HD23	2.17	0.44
34:BA:542:G:P	37:BD:10:ARG:HH22	2.34	0.44
34:BA:580:U:H5''	48:BO:58:MET:HG2	1.99	0.44
34:BA:1277:C:HO2'	34:BA:1279:A:HI'	1.81	0.44
38:BE:113:ALA:HB3	38:BE:115:VAL:HG23	1.99	0.44
42:BI:95:LYS:O	42:BI:96:LEU:HD23	2.17	0.44
48:BO:87:ILE:HG22	48:BO:88:ARG:N	2.32	0.44
57:BZ:24:GLY:HA2	62:BZ:801:GDP:PA	2.57	0.44
57:BZ:251:ILE:HG12	57:BZ:281:PRO:HG3	1.98	0.44
57:BZ:303:PRO:O	57:BZ:305:PRO:HD3	2.17	0.44
1:CA:963:U:H6	1:CA:963:U:O5'	2.00	0.44
1:CA:972:G:C6	1:CA:973:A:C6	3.06	0.44
1:CA:1471:A:H5'	1:CA:1472:A:OP2	2.17	0.44
1:CA:2792:G:C6	1:CA:2805:G:C6	3.05	0.44
2:CB:91:C:OP1	14:CQ:16:ARG:HG2	2.17	0.44
3:CC:55:SER:C	3:CC:57:GLN:N	2.71	0.44
4:CD:37:LEU:HD13	4:CD:87:ASN:ND2	2.32	0.44
6:CF:196:LEU:HD23	6:CF:196:LEU:HA	1.83	0.44
7:CG:114:ILE:HG12	7:CG:136:ARG:HH22	1.82	0.44
19:CV:82:ARG:O	19:CV:83:ARG:HD3	2.17	0.44
20:CW:19:LEU:HB3	29:C5:25:LEU:HD11	2.00	0.44
20:CW:86:LEU:HD13	20:CW:96:ILE:HD11	2.00	0.44
23:CZ:117:LEU:HD12	23:CZ:174:VAL:HG22	1.99	0.44
34:DA:242:C:H2'	34:DA:243:A:H5'	2.00	0.44
37:DD:94:LEU:HD23	37:DD:94:LEU:HA	1.85	0.44
44:DK:32:ILE:O	44:DK:40:ILE:N	2.48	0.44
57:DZ:179:ASP:OD2	57:DZ:182:ARG:HD2	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:501:U:H1'	1:AA:534:C:C2	2.52	0.44
1:AA:611:U:H2'	1:AA:612:C:H6	1.76	0.44
1:AA:756:U:H2'	1:AA:757:G:C8	2.53	0.44
1:AA:1446:G:H2'	1:AA:1447:G:C8	2.52	0.44
1:AA:2108:U:H2'	1:AA:2109:G:C8	2.53	0.44
5:AE:96:PHE:O	5:AE:175:VAL:HG11	2.18	0.44
5:AE:144:ARG:HB3	5:AE:145:LYS:H	1.26	0.44
8:AH:15:VAL:HB	8:AH:27:LYS:O	2.17	0.44
10:AL:30:HIS:HB2	10:AL:32:ALA:HB2	1.99	0.44
31:A7:16:HIS:CB	31:A7:44:PRO:HG2	2.48	0.44
34:BA:153:C:H42	34:BA:169:C:N4	2.15	0.44
34:BA:973:G:OP1	43:BJ:57:LYS:HE3	2.16	0.44
34:BA:1286:A:H2'	34:BA:1287:A:H4'	1.99	0.44
36:BC:157:ILE:HG21	36:BC:164:ARG:HH12	1.83	0.44
39:BF:10:LEU:HD21	39:BF:26:ILE:HD11	1.98	0.44
45:BL:70:ILE:HG12	45:BL:100:ILE:HD13	1.98	0.44
47:BN:27:CYS:HB3	47:BN:43:CYS:SG	2.57	0.44
49:BP:8:ARG:HG2	49:BP:9:PHE:N	2.31	0.44
52:BS:18:LYS:NZ	52:BS:31:ILE:HG23	2.32	0.44
57:BZ:-6:ARG:N	57:BZ:-6:ARG:HD2	2.32	0.44
57:BZ:637:ARG:C	57:BZ:639:ASN:N	2.70	0.44
1:CA:196:A:H2'	1:CA:196:A:N3	2.32	0.44
1:CA:307:G:N2	1:CA:310:A:O5'	2.48	0.44
1:CA:322:A:H5'	1:CA:340:A:C1'	2.48	0.44
1:CA:574:C:N3	5:CE:145:LYS:NZ	2.59	0.44
1:CA:747:U:O2	1:CA:2014:A:H1'	2.16	0.44
1:CA:1319:G:C6	1:CA:1320:C:N4	2.85	0.44
1:CA:2394:C:OP2	32:C8:30:ARG:HD2	2.16	0.44
1:CA:2574:G:H2'	1:CA:2575:C:C6	2.52	0.44
5:CE:167:VAL:HG13	5:CE:170:LEU:HD13	1.99	0.44
19:CV:61:VAL:HA	19:CV:94:LEU:HD23	2.00	0.44
28:C4:59:PHE:N	28:C4:60:GLN:HB2	2.32	0.44
34:DA:33:A:N3	45:DL:32:PHE:HE2	2.16	0.44
34:DA:517:G:N3	34:DA:531:U:H5'	2.33	0.44
34:DA:949:A:H2'	34:DA:950:U:O4'	2.16	0.44
34:DA:1170:A:H8	34:DA:1170:A:O5'	2.00	0.44
36:DC:84:ILE:O	36:DC:101:LEU:HD23	2.17	0.44
39:DF:78:GLU:O	39:DF:81:ILE:HG22	2.17	0.44
45:DL:7:ILE:HG22	50:DQ:34:LYS:HD2	1.99	0.44
53:DT:26:ASN:O	53:DT:30:LYS:HB2	2.18	0.44
57:DZ:138:LYS:HG2	62:DZ:704:GDP:C5	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:145:ASP:OD2	57:DZ:146:LEU:N	2.51	0.44
57:DZ:349:LYS:HB2	57:DZ:349:LYS:HE3	1.77	0.44
1:AA:603:C:OP1	1:AA:2040:G:H4'	2.17	0.44
1:AA:1128:U:O5'	1:AA:1128:U:H6	2.00	0.44
1:AA:2549:U:H2'	1:AA:2550:C:C6	2.53	0.44
1:AA:2589:A:H5'	29:A5:3:LYS:HD2	1.99	0.44
3:AC:55:SER:C	3:AC:57:GLN:N	2.71	0.44
5:AE:143:ASN:HD22	5:AE:147:PRO:HD2	1.82	0.44
7:AG:39:ILE:HB	7:AG:92:VAL:HG12	1.99	0.44
8:AH:103:LEU:HD12	8:AH:103:LEU:HA	1.58	0.44
21:AX:35:THR:O	21:AX:39:ILE:HG13	2.18	0.44
23:AZ:183:LEU:HD12	23:AZ:183:LEU:HA	1.50	0.44
24:A0:2:ALA:N	63:A0:204:HOH:O	2.51	0.44
34:BA:384:G:H2'	34:BA:385:C:C6	2.53	0.44
34:BA:426:G:C6	34:BA:427:U:C4	3.06	0.44
34:BA:472:A:H4'	49:BP:80:PHE:O	2.17	0.44
34:BA:924:C:H2'	34:BA:925:G:C8	2.53	0.44
46:BM:50:GLU:HA	46:BM:53:VAL:HB	1.99	0.44
46:BM:67:GLU:OE2	46:BM:71:ARG:NH2	2.51	0.44
53:BT:24:LEU:HD13	53:BT:24:LEU:HA	1.76	0.44
57:BZ:19:ALA:O	57:BZ:25:LYS:HE2	2.17	0.44
57:BZ:29:THR:OG1	57:BZ:83:ASP:OD1	2.22	0.44
57:BZ:309:LEU:HD22	57:BZ:334:THR:O	2.18	0.44
1:CA:506:G:O3'	1:CA:507:A:H8	2.01	0.44
1:CA:881:G:C2	1:CA:897:C:N3	2.85	0.44
1:CA:1003:G:N2	1:CA:1153:C:C2	2.85	0.44
1:CA:1477:A:H2'	1:CA:1478:G:O4'	2.17	0.44
1:CA:1916:A:H2'	1:CA:1917:U:O4'	2.18	0.44
3:CC:39:ASP:O	3:CC:178:LYS:HE3	2.18	0.44
3:CC:194:ILE:HD11	3:CC:227:PRO:HB2	1.99	0.44
6:CF:170:LEU:HA	6:CF:171:PRO:HD3	1.84	0.44
7:CG:126:ASP:OD2	7:CG:130:ASN:ND2	2.26	0.44
21:CX:32:PRO:O	21:CX:77:LYS:NZ	2.42	0.44
32:C8:50:LEU:HD23	32:C8:50:LEU:HA	1.55	0.44
34:DA:188:C:N4	34:DA:189(L):G:H1	2.15	0.44
34:DA:399:G:H2'	34:DA:400:C:C6	2.53	0.44
34:DA:741:G:H5'	48:DO:39:LEU:HD11	2.00	0.44
35:DB:7:VAL:HG12	35:DB:8:LYS:HG2	2.00	0.44
35:DB:210:SER:OG	35:DB:211:ILE:HG13	2.18	0.44
38:DE:78:HIS:NE2	38:DE:142:LEU:HD23	2.32	0.44
38:DE:145:LYS:HB3	38:DE:145:LYS:HE2	1.67	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DH:51:VAL:HG11	41:DH:60:ARG:NH1	2.18	0.44
41:DH:84:ARG:HH11	41:DH:86:ILE:HD11	1.82	0.44
55:DV:16:A:C6	55:DV:17:U:C4	3.06	0.44
57:DZ:116:PRO:HA	57:DZ:119:GLU:HG3	1.99	0.44
1:AA:153:C:P	25:A1:92:LYS:HZ2	2.38	0.44
1:AA:278:G:H2'	1:AA:279:G:H5''	1.99	0.44
1:AA:505:A:N3	1:AA:507:G:H5''	2.32	0.44
1:AA:656:A:H1'	1:AA:2427:G:O2'	2.18	0.44
1:AA:2658:C:O5'	1:AA:2658:C:H6	2.00	0.44
1:AA:2736:C:OP2	5:AE:109:LYS:HE2	2.16	0.44
3:AC:22:THR:HG23	3:AC:25:GLU:OE1	2.17	0.44
4:AD:44:ASN:OD1	4:AD:46:GLN:HB2	2.17	0.44
4:AD:96:HIS:CD2	4:AD:102:LYS:HD3	2.52	0.44
5:AE:6:GLY:HA3	5:AE:28:ALA:HA	1.99	0.44
6:AF:106:ARG:H	6:AF:106:ARG:HG2	1.38	0.44
16:AS:8:GLU:O	16:AS:11:LYS:N	2.50	0.44
20:AW:106:ILE:HD13	20:AW:106:ILE:HG21	1.63	0.44
21:AX:72:LYS:HE2	21:AX:73:ARG:O	2.17	0.44
34:BA:49:U:C2	34:BA:361:G:N2	2.85	0.44
34:BA:450:G:N7	34:BA:481:G:C6	2.86	0.44
34:BA:701:C:O2	34:BA:703:G:N1	2.50	0.44
34:BA:857:C:H2'	34:BA:858:G:O4'	2.18	0.44
34:BA:1502:A:H5''	34:BA:1504:G:N7	2.31	0.44
35:BB:137:ARG:HB3	35:BB:137:ARG:NH1	2.32	0.44
42:BI:4:TYR:CE2	42:BI:88:TYR:HD1	2.35	0.44
48:BO:62:GLN:HA	48:BO:65:ARG:HH12	1.83	0.44
49:BP:26:ARG:HB3	49:BP:27:LYS:O	2.16	0.44
50:BQ:17:LYS:HA	50:BQ:49:GLU:HG2	2.00	0.44
53:BT:97:ALA:N	53:BT:98:PRO:HD3	2.32	0.44
57:BZ:335:LEU:HD13	57:BZ:335:LEU:HA	1.78	0.44
1:CA:249:C:O2'	13:CP:64:LYS:HE3	2.17	0.44
1:CA:271(M):G:H4'	1:CA:271(N):U:OP1	2.17	0.44
1:CA:284:U:H2'	1:CA:285:C:C6	2.52	0.44
1:CA:459:U:C5	1:CA:469:G:N2	2.86	0.44
1:CA:1021:A:C8	1:CA:1021:A:C3'	3.00	0.44
1:CA:1651:G:C5'	15:CR:39:PRO:HG2	2.48	0.44
1:CA:2177:C:O2	3:CC:171:ALA:HB2	2.10	0.44
1:CA:2415:G:O4'	13:CP:67:MET:HG2	2.18	0.44
1:CA:2543:G:H21	1:CA:2646:C:H5''	1.81	0.44
1:CA:2840:C:H4'	15:CR:53:HIS:CE1	2.53	0.44
17:CT:24:PRO:HG3	17:CT:52:ILE:HG13	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CY:30:VAL:HG22	22:CY:37:VAL:HG12	2.00	0.44
27:C3:8:LEU:HD23	27:C3:54:VAL:HG23	1.99	0.44
34:DA:20:U:H2'	34:DA:21:G:O4'	2.18	0.44
34:DA:529:G:HO2'	34:DA:533:A:N6	2.16	0.44
34:DA:1057:G:H2'	34:DA:1058:G:O4'	2.18	0.44
34:DA:1333:A:H3'	34:DA:1334:G:H8	1.82	0.44
35:DB:155:LEU:HA	35:DB:155:LEU:HD23	1.67	0.44
37:DD:160:GLN:O	37:DD:163:GLU:N	2.46	0.44
44:DK:43:SER:OG	44:DK:44:SER:N	2.51	0.44
1:AA:383:A:H2'	1:AA:384:G:O4'	2.18	0.44
1:AA:517:A:H2'	1:AA:518:G:O4'	2.17	0.44
1:AA:1068:G:N7	11:AN:66:LYS:HE2	2.33	0.44
1:AA:1088:G:H1	1:AA:1159:U:H3	1.65	0.44
1:AA:1969:C:HO2'	34:BA:1483:A:HO2'	1.66	0.44
1:AA:2803:A:H2'	1:AA:2803:A:N3	2.32	0.44
3:AC:194:ILE:HD11	3:AC:227:PRO:HB2	1.99	0.44
4:AD:164:GLN:NE2	4:AD:166:GLN:OE1	2.50	0.44
12:AO:71:ARG:HA	12:AO:72:PRO:HD3	1.85	0.44
14:AQ:12:GLN:HG3	14:AQ:72:LYS:HZ2	1.82	0.44
14:AQ:133:ARG:HG2	14:AQ:134:ARG:N	2.30	0.44
17:AT:18:ASP:OD2	17:AT:18:ASP:N	2.51	0.44
17:AT:105:LEU:HB2	17:AT:110:ILE:CG1	2.45	0.44
34:BA:352:C:H42	34:BA:357:G:N2	2.16	0.44
34:BA:374:A:C6	34:BA:375:U:C4	3.06	0.44
34:BA:442:C:H42	34:BA:492:G:H1	1.66	0.44
34:BA:448:A:OP2	34:BA:485:G:N1	2.37	0.44
34:BA:595:G:H22	34:BA:643:C:N4	2.16	0.44
34:BA:600:C:N3	34:BA:639:G:C2	2.86	0.44
34:BA:1225:A:H2'	34:BA:1226:C:C5	2.53	0.44
34:BA:1239:A:O2'	34:BA:1298:C:N4	2.44	0.44
36:BC:85:ARG:O	36:BC:89:GLU:HG2	2.18	0.44
44:BK:73:MET:HG2	44:BK:103:LEU:HD21	1.99	0.44
46:BM:53:VAL:HG12	46:BM:57:ARG:HH12	1.82	0.44
48:BO:26:GLU:H	48:BO:26:GLU:HG2	1.45	0.44
1:CA:515:A:H1'	1:CA:581:C:H1'	1.99	0.44
1:CA:608:A:H2'	1:CA:609:A:O4'	2.18	0.44
1:CA:1190:G:OP1	13:CP:32:THR:HA	2.17	0.44
1:CA:1834:U:H4'	1:CA:1969:A:C6	2.53	0.44
1:CA:1858:G:O6	63:CA:3751:HOH:O	2.19	0.44
1:CA:1902:C:H5'	4:CD:246:PRO:HD3	2.00	0.44
1:CA:2256:G:C5	1:CA:2257:U:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2703:C:H2'	1:CA:2704:C:H6	1.83	0.44
63:CA:3912:HOH:O	6:CF:55:GLY:HA2	2.17	0.44
3:CC:211:ARG:HG2	3:CC:211:ARG:HH11	1.81	0.44
5:CE:9:VAL:CG2	17:CT:3:ARG:HG2	2.45	0.44
11:CN:91:LEU:HA	11:CN:95:PRO:HA	1.99	0.44
34:DA:357:G:N2	34:DA:358:U:C2	2.86	0.44
34:DA:517:G:C2	34:DA:531:U:H5'	2.53	0.44
34:DA:789:U:H2'	34:DA:791:G:OP2	2.18	0.44
34:DA:1076:C:C2	34:DA:1082:G:N2	2.86	0.44
34:DA:1153:C:N3	34:DA:1154:G:N2	2.66	0.44
34:DA:1318:A:O2'	52:DS:37:ARG:HB3	2.18	0.44
34:DA:1326:C:H5''	54:DU:18:TYR:O	2.17	0.44
34:DA:1413:A:C2	34:DA:1414:U:C2	3.06	0.44
34:DA:1466:C:H2'	34:DA:1467:G:O4'	2.17	0.44
41:DH:31:PHE:HZ	41:DH:134:ILE:CD1	2.30	0.44
48:DO:32:LEU:HD23	48:DO:32:LEU:HA	1.82	0.44
1:AA:207:A:C2	1:AA:224:U:H4'	2.53	0.44
1:AA:731:G:OP1	31:A7:16:HIS:ND1	2.46	0.44
1:AA:769:A:H2'	1:AA:770:G:O4'	2.18	0.44
1:AA:904:C:H4'	24:A0:23:VAL:HG21	2.00	0.44
1:AA:1733:C:H2'	1:AA:1734:G:O4'	2.17	0.44
1:AA:1836:U:O2	4:AD:50:THR:HB	2.18	0.44
1:AA:2368:C:H2'	1:AA:2369:U:O4'	2.17	0.44
1:AA:2418:U:C2	13:AP:72:PRO:HG2	2.52	0.44
3:AC:24:ASP:C	3:AC:24:ASP:OD1	2.55	0.44
8:AH:90:LYS:HD2	8:AH:163:TYR:CD1	2.53	0.44
9:AK:74:LEU:O	9:AK:76:GLY:N	2.46	0.44
13:AP:68:GLN:HG3	32:A8:12:LYS:HG2	1.99	0.44
13:AP:91:PHE:O	13:AP:123:LEU:HD21	2.17	0.44
18:AU:58:ARG:O	18:AU:62:ILE:HG13	2.18	0.44
34:BA:67:C:O2'	34:BA:171:A:H1'	2.18	0.44
34:BA:737:A:H2'	34:BA:738:C:C6	2.53	0.44
48:BO:60:VAL:O	48:BO:64:ARG:HB2	2.18	0.44
1:CA:143:G:H4'	21:CX:35:THR:HG21	1.99	0.44
1:CA:205:G:O2'	1:CA:206:U:P	2.76	0.44
1:CA:212:G:H2'	1:CA:213:A:O4'	2.17	0.44
1:CA:226:G:H21	1:CA:228:A:H62	1.66	0.44
1:CA:412:A:C8	1:CA:413:C:C5	3.05	0.44
1:CA:1011:G:C2	1:CA:1013:C:C2	3.06	0.44
1:CA:1344:G:H4'	1:CA:1384:A:N7	2.33	0.44
1:CA:1572:A:H2'	1:CA:1573:G:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1714:G:C2	1:CA:1717:G:C8	3.06	0.44
1:CA:1967:C:C2'	1:CA:1968:G:H5'	2.47	0.44
1:CA:2137:C:N4	1:CA:2154:G:H1	2.01	0.44
1:CA:2408:U:H2'	1:CA:2409:G:C8	2.53	0.44
1:CA:2693:A:H2'	1:CA:2694:G:H8	1.83	0.44
3:CC:7:ARG:HH22	3:CC:219:MET:HB2	1.81	0.44
5:CE:51:PHE:O	5:CE:77:ILE:HG22	2.18	0.44
7:CG:117:PHE:HE1	7:CG:119:GLY:HA2	1.82	0.44
8:CH:44:VAL:HB	8:CH:51:ARG:HB2	1.99	0.44
11:CN:14:VAL:CG1	11:CN:138:LEU:HB2	2.47	0.44
12:CO:64:ARG:HB2	12:CO:83:ALA:HB3	1.98	0.44
14:CQ:109:VAL:HG22	14:CQ:113:GLN:OE1	2.18	0.44
16:CS:34:HIS:HB3	16:CS:35:ILE:H	1.43	0.44
20:CW:65:LEU:N	20:CW:109:GLU:OE1	2.41	0.44
34:DA:51:A:C6	34:DA:353:A:C2	3.06	0.44
34:DA:139:G:H2'	34:DA:140:A:C8	2.53	0.44
34:DA:818:G:O2'	34:DA:819:A:H5'	2.18	0.44
34:DA:1240:U:OP2	40:DG:116:ALA:N	2.49	0.44
34:DA:1427:U:H2'	34:DA:1428:A:C8	2.53	0.44
35:DB:158:LEU:HD23	35:DB:182:ILE:HD11	2.00	0.44
36:DC:50:ALA:HB2	36:DC:75:VAL:CB	2.48	0.44
37:DD:31:CYS:O	37:DD:35:ARG:HG3	2.18	0.44
39:DF:33:TYR:HB2	39:DF:75:LEU:HD23	2.00	0.44
42:DI:89:ASN:O	42:DI:92:TYR:HB2	2.18	0.44
52:DS:63:THR:OG1	52:DS:64:GLU:N	2.50	0.44
53:DT:10:LEU:HD12	53:DT:10:LEU:HA	1.69	0.44
54:DU:12:LYS:HB3	54:DU:17:THR:O	2.18	0.44
57:DZ:341:VAL:HG12	57:DZ:391:GLY:HA2	2.00	0.44
1:AA:515:G:C6	1:AA:516:G:C5	3.06	0.43
1:AA:1891:G:H4'	3:AC:206:LYS:HD3	1.07	0.43
1:AA:2132:G:OP1	1:AA:2140:U:N3	2.51	0.43
1:AA:2439:C:H5''	1:AA:2440:G:OP1	2.17	0.43
1:AA:2701:U:C4	1:AA:2726:A:C2	3.06	0.43
3:AC:60:ARG:HG3	3:AC:165:ARG:HB2	2.01	0.43
4:AD:3:VAL:HG22	4:AD:18:VAL:O	2.17	0.43
4:AD:98:VAL:HG23	4:AD:99:ASP:N	2.33	0.43
5:AE:141:ILE:O	5:AE:150:VAL:HG22	2.17	0.43
7:AG:173:LEU:HD22	7:AG:178:PHE:CE1	2.52	0.43
11:AN:89:LYS:O	11:AN:93:THR:HG23	2.18	0.43
14:AQ:68:ILE:HD13	14:AQ:103:MET:HB3	1.99	0.43
17:AT:23:ARG:HG3	17:AT:120:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:882:C:O2'	34:BA:883:C:H5'	2.17	0.43
34:BA:1437:C:H2'	34:BA:1438:G:H8	1.83	0.43
36:BC:175:LEU:HD21	36:BC:201:TYR:HD2	1.83	0.43
37:BD:94:LEU:HD23	37:BD:94:LEU:HA	1.89	0.43
37:BD:173:TRP:HB2	37:BD:187:ARG:O	2.18	0.43
40:BG:107:ALA:O	40:BG:111:ARG:HG3	2.18	0.43
41:BH:39:LEU:HD13	41:BH:39:LEU:HA	1.65	0.43
46:BM:4:ILE:HA	46:BM:5:ALA:HA	1.70	0.43
49:BP:70:ALA:O	49:BP:74:LEU:HB2	2.17	0.43
57:BZ:160:ARG:HE	57:BZ:254:LYS:HA	1.82	0.43
1:CA:265:A:H1'	1:CA:266:G:O4'	2.18	0.43
1:CA:321:G:OP1	6:CF:135:LYS:NZ	2.40	0.43
1:CA:847:U:H5'	63:CA:3711:HOH:O	2.17	0.43
1:CA:869:G:H5'	14:CQ:6:ARG:NH2	2.32	0.43
1:CA:1045:A:H62	1:CA:1111:A:H2'	1.81	0.43
1:CA:1155:A:OP1	18:CU:55:ARG:HD3	2.18	0.43
1:CA:2852:G:H2'	1:CA:2853:C:O4'	2.18	0.43
4:CD:244:ARG:HB2	4:CD:245:PRO:HD2	2.00	0.43
5:CE:4:ILE:HG22	5:CE:96:PHE:HE2	1.83	0.43
6:CF:13:SER:OG	6:CF:16:GLY:O	2.21	0.43
7:CG:39:ILE:N	7:CG:92:VAL:O	2.49	0.43
13:CP:55:ARG:HG2	13:CP:56:SER:O	2.17	0.43
14:CQ:42:ILE:HD13	14:CQ:97:VAL:HB	1.99	0.43
23:CZ:70:LEU:HD23	23:CZ:70:LEU:HA	1.66	0.43
34:DA:827:U:H5'	34:DA:828:A:OP2	2.18	0.43
34:DA:1274:G:N2	34:DA:1275:A:H62	2.16	0.43
36:DC:39:ILE:O	36:DC:43:LEU:HG	2.17	0.43
37:DD:105:VAL:HG21	37:DD:126:ILE:HD12	1.99	0.43
50:DQ:81:ARG:HE	50:DQ:84:LEU:HD11	1.83	0.43
57:DZ:85:PRO:HB2	57:DZ:90:PHE:HB3	2.00	0.43
1:AA:236:G:H4'	1:AA:413:G:C6	2.52	0.43
1:AA:933:C:H4'	1:AA:933:C:OP1	2.17	0.43
1:AA:2087:C:H2'	1:AA:2088:C:C6	2.53	0.43
1:AA:2417:G:O2'	1:AA:2418:U:OP1	2.28	0.43
4:AD:16:MET:HB2	4:AD:207:GLY:HA3	2.00	0.43
6:AF:36:VAL:HA	6:AF:101:LEU:CD2	2.48	0.43
8:AH:33:LEU:HD23	8:AH:33:LEU:HA	1.76	0.43
9:AK:25:PHE:C	9:AK:85:ASP:H	2.20	0.43
10:AL:29:GLN:HE21	10:AL:29:GLN:HB3	1.60	0.43
12:AO:12:ASP:OD2	12:AO:85:VAL:HG13	2.19	0.43
18:AU:29:SER:O	18:AU:30:LYS:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AY:79:CYS:SG	22:AY:81:LYS:HG3	2.59	0.43
23:AZ:8:TYR:CD1	23:AZ:8:TYR:N	2.85	0.43
34:BA:104:G:C2	34:BA:105:G:C8	3.06	0.43
34:BA:482:A:H3'	34:BA:483:C:C6	2.53	0.43
34:BA:909:A:H2'	34:BA:910:C:O4'	2.17	0.43
34:BA:926:G:H5''	34:BA:927:G:O5'	2.19	0.43
37:BD:104:VAL:O	37:BD:107:ARG:N	2.51	0.43
38:BE:129:ILE:HG22	38:BE:130:ASN:N	2.32	0.43
38:BE:152:ARG:HA	41:BH:64:LYS:NZ	2.33	0.43
40:BG:14:PRO:HB3	40:BG:19:GLY:O	2.18	0.43
41:BH:13:ILE:O	41:BH:17:THR:HG23	2.18	0.43
57:BZ:97:SER:O	57:BZ:101:LEU:HD12	2.18	0.43
1:CA:1487:G:N2	1:CA:1503:U:O2	2.51	0.43
1:CA:2011:U:OP1	20:CW:42:ARG:NH1	2.51	0.43
1:CA:2038:G:H2'	1:CA:2039:C:O4'	2.17	0.43
1:CA:2356:C:H2'	1:CA:2357:U:O4'	2.17	0.43
1:CA:2657:A:O3'	8:CH:160:LYS:NZ	2.52	0.43
4:CD:85:ASP:OD2	4:CD:88:ARG:NH1	2.48	0.43
5:CE:152:LYS:HB3	5:CE:152:LYS:HE3	1.68	0.43
8:CH:24:VAL:HG13	8:CH:37:VAL:HG21	2.00	0.43
12:CO:72:PRO:C	12:CO:74:GLY:H	2.22	0.43
14:CQ:21:THR:HG21	14:CQ:101:ARG:HH11	1.83	0.43
15:CR:30:THR:HG22	15:CR:31:HIS:CD2	2.53	0.43
16:CS:10:ARG:NE	16:CS:91:PRO:O	2.35	0.43
21:CX:44:GLU:O	21:CX:46:ALA:N	2.48	0.43
32:C8:63:PRO:HG2	32:C8:64:TYR:CD2	2.53	0.43
34:DA:255:G:H2'	34:DA:256:U:C6	2.53	0.43
34:DA:960:U:C4	34:DA:1225:A:C8	3.06	0.43
34:DA:1305:G:N2	34:DA:1331:G:H1'	2.32	0.43
34:DA:1446:U:N3	34:DA:1452:C:O2	2.51	0.43
40:DG:45:ASP:O	40:DG:117:ALA:HB1	2.18	0.43
41:DH:9:MET:SD	41:DH:26:VAL:HG21	2.58	0.43
41:DH:29:SER:HB3	41:DH:32:LYS:HE3	1.99	0.43
50:DQ:4:LYS:HD2	50:DQ:5:VAL:H	1.83	0.43
57:DZ:-34:ARG:C	57:DZ:-32:LEU:H	2.21	0.43
57:DZ:183:MET:SD	57:DZ:213:HIS:CD2	3.03	0.43
57:DZ:638:GLY:C	57:DZ:640:ALA:HB3	2.38	0.43
1:AA:476:G:O6	63:AA:3941:HOH:O	2.21	0.43
1:AA:1548:C:H2'	1:AA:1549:U:C6	2.53	0.43
1:AA:2383:G:H1'	30:A6:39:TYR:CD1	2.53	0.43
1:AA:2863:C:H2'	1:AA:2864:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:16:MET:HE3	4:AD:16:MET:HB3	1.79	0.43
10:AL:30:HIS:HA	10:AL:59:ILE:HG13	2.00	0.43
11:AN:65:LYS:HB2	11:AN:65:LYS:NZ	2.27	0.43
11:AN:75:TYR:CZ	11:AN:77:GLY:HA2	2.54	0.43
32:A8:62:LEU:HB3	32:A8:65:GLU:HG2	1.98	0.43
34:BA:620:C:H2'	34:BA:621:A:O4'	2.18	0.43
34:BA:865:A:C2	34:BA:918:A:H4'	2.52	0.43
34:BA:1142:G:H2'	34:BA:1143:G:O4'	2.18	0.43
34:BA:1343:G:H4'	42:BI:122:ALA:HB3	2.01	0.43
38:BE:95:ALA:HB1	38:BE:96:PRO:HD2	1.99	0.43
38:BE:131:ILE:HD13	38:BE:131:ILE:HA	1.70	0.43
45:BL:110:VAL:HG23	45:BL:120:TYR:HB3	2.00	0.43
50:BQ:53:LEU:HD12	50:BQ:53:LEU:HA	1.91	0.43
1:CA:521:G:H2'	1:CA:522:G:H8	1.83	0.43
1:CA:622:G:H2'	1:CA:623:G:C8	2.53	0.43
1:CA:720:C:H2'	1:CA:721:C:C6	2.54	0.43
1:CA:919:G:C6	1:CA:920:G:C5	3.06	0.43
1:CA:1153:C:H2'	1:CA:1154:G:C8	2.53	0.43
1:CA:1288:U:O2'	1:CA:1647:G:N2	2.52	0.43
1:CA:1317:A:H2'	1:CA:1318:C:C6	2.52	0.43
1:CA:1575:C:H2'	1:CA:1576:U:C6	2.53	0.43
1:CA:2386:C:H2'	1:CA:2387:U:C6	2.52	0.43
1:CA:2467:C:H4'	14:CQ:123:HIS:CG	2.53	0.43
1:CA:2626:C:H2'	1:CA:2627:G:C8	2.53	0.43
1:CA:2646:C:H6	1:CA:2646:C:O5'	2.01	0.43
1:CA:2848:G:N2	1:CA:2867:G:H1'	2.33	0.43
3:CC:31:LYS:H	3:CC:31:LYS:HG2	1.57	0.43
4:CD:164:GLN:NE2	4:CD:176:ARG:HH22	2.16	0.43
5:CE:187:ALA:O	63:CE:402:HOH:O	2.21	0.43
6:CF:187:VAL:HG13	13:CP:1:MET:O	2.19	0.43
7:CG:103:LEU:HA	7:CG:106:LEU:HB3	2.01	0.43
14:CQ:111:GLU:HG3	14:CQ:112:GLU:N	2.33	0.43
17:CT:119:LYS:O	17:CT:123:GLN:HG3	2.18	0.43
19:CV:18:LEU:O	19:CV:95:LEU:HD23	2.18	0.43
19:CV:25:LEU:HD23	19:CV:25:LEU:HA	1.49	0.43
21:CX:32:PRO:HA	21:CX:77:LYS:HB2	2.00	0.43
24:C0:40:GLN:HG3	24:C0:42:GLY:O	2.19	0.43
34:DA:264:U:H4'	50:DQ:63:ARG:HD3	1.99	0.43
34:DA:620:C:H2'	34:DA:621:A:O4'	2.18	0.43
34:DA:1022:G:H2'	34:DA:1023:G:C8	2.52	0.43
34:DA:1063:C:P	34:DA:1064:G:HO2'	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1124:G:N7	34:DA:1145:C:O2'	2.44	0.43
35:DB:16:HIS:CD2	35:DB:17:PHE:N	2.82	0.43
35:DB:97:TRP:HZ3	35:DB:176:GLU:OE2	2.01	0.43
38:DE:123:LEU:HD23	38:DE:123:LEU:HA	1.60	0.43
41:DH:111:ILE:HG23	41:DH:135:CYS:SG	2.58	0.43
42:DI:50:LEU:HG	42:DI:81:ILE:HD11	2.00	0.43
45:DL:34:ARG:O	45:DL:61:THR:HG23	2.19	0.43
57:DZ:162:VAL:HG12	57:DZ:164:MET:SD	2.59	0.43
1:AA:540:A:C8	1:AA:541:C:C6	3.06	0.43
1:AA:925:A:H2'	1:AA:926:G:H5'	2.01	0.43
1:AA:1220:U:H1'	1:AA:1221:G:OP1	2.17	0.43
1:AA:2299:A:N3	1:AA:2301:G:C8	2.86	0.43
1:AA:2331:G:H1	16:AS:3:ARG:HA	1.84	0.43
1:AA:2868:C:H2'	1:AA:2869:G:O4'	2.18	0.43
5:AE:94:GLU:H	5:AE:94:GLU:HG2	1.57	0.43
13:AP:147:LEU:HD13	13:AP:148:LEU:O	2.18	0.43
14:AQ:82:ARG:H	24:A0:7:LEU:HD21	1.84	0.43
18:AU:18:LEU:O	18:AU:21:ALA:N	2.40	0.43
18:AU:66:ASN:O	18:AU:70:ARG:HG3	2.18	0.43
22:AY:6:HIS:HE1	22:AY:72:VAL:O	2.01	0.43
34:BA:106:C:H2'	34:BA:107:G:O4'	2.19	0.43
34:BA:147:G:C2	34:BA:148:G:C8	3.06	0.43
34:BA:439:A:C4	34:BA:496:A:C2	3.06	0.43
34:BA:613:C:H42	34:BA:627:G:H1	1.66	0.43
34:BA:918:A:H2'	34:BA:919:A:C8	2.53	0.43
34:BA:927:G:H4'	34:BA:927:G:OP2	2.17	0.43
34:BA:986:A:H1'	52:BS:55:LYS:HA	2.01	0.43
34:BA:1039:C:H2'	34:BA:1040:U:C6	2.52	0.43
34:BA:1226:C:O2'	46:BM:111:LYS:NZ	2.51	0.43
35:BB:108:ILE:HD13	35:BB:108:ILE:HA	1.86	0.43
37:BD:25:ARG:O	37:BD:28:SER:HB3	2.18	0.43
39:BF:61:LEU:HD12	39:BF:63:TYR:CZ	2.54	0.43
40:BG:150:ALA:HB2	44:BK:50:TYR:HE2	1.83	0.43
41:BH:49:GLU:HG2	41:BH:62:TYR:HE1	1.83	0.43
46:BM:108:ARG:HD3	46:BM:108:ARG:HA	1.82	0.43
57:BZ:88:VAL:HG23	57:BZ:89:ASP:OD2	2.18	0.43
1:CA:210:C:OP2	31:C7:29:LYS:HE3	2.18	0.43
1:CA:234:C:H2'	1:CA:235:U:C6	2.53	0.43
1:CA:443:A:C5	6:CF:45:ARG:HD2	2.52	0.43
1:CA:753:C:H2'	1:CA:754:C:C6	2.52	0.43
1:CA:811:U:O3'	1:CA:1251:C:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1422:G:C4	1:CA:1423:G:C8	3.05	0.43
1:CA:1718:G:C2	1:CA:1719:G:C8	3.06	0.43
1:CA:1919:A:N1	34:DA:1495:U:O2'	2.50	0.43
1:CA:2037:G:C6	1:CA:2038:G:C6	3.07	0.43
1:CA:2059:A:O2'	6:CF:69:HIS:HD2	2.02	0.43
1:CA:2328:A:H2'	1:CA:2329:G:H8	1.83	0.43
1:CA:2774:C:H2'	1:CA:2775:A:O4'	2.18	0.43
2:CB:19:G:H2'	2:CB:20:C:O4'	2.19	0.43
3:CC:54:ARG:HE	3:CC:57:GLN:HG2	1.83	0.43
13:CP:21:ARG:HD3	13:CP:21:ARG:HA	1.85	0.43
18:CU:17:ILE:HD13	18:CU:20:LEU:HD12	2.01	0.43
30:C6:30:THR:O	30:C6:32:ASN:N	2.52	0.43
33:C9:19:ARG:HG2	33:C9:20:HIS:ND1	2.34	0.43
34:DA:456:C:H42	34:DA:475:G:H1	1.65	0.43
34:DA:586:C:N4	34:DA:755:G:H1	2.16	0.43
34:DA:586:C:O2'	34:DA:878:G:H4'	2.19	0.43
34:DA:1032:G:H2'	34:DA:1033:G:C8	2.53	0.43
35:DB:189:ASP:HB2	35:DB:190:THR:H	1.72	0.43
36:DC:35:GLU:O	36:DC:39:ILE:HG13	2.18	0.43
37:DD:8:VAL:O	37:DD:11:LEU:HB2	2.18	0.43
38:DE:8:GLU:OE2	38:DE:63:ARG:NH2	2.52	0.43
38:DE:47:LYS:HE2	38:DE:47:LYS:HB2	1.77	0.43
44:DK:47:VAL:HG12	44:DK:48:ILE:HD13	1.99	0.43
45:DL:27:LEU:HD13	45:DL:98:TYR:CE1	2.53	0.43
45:DL:59:ARG:HH21	57:DZ:422:GLU:H	1.66	0.43
57:DZ:-15:ARG:O	57:DZ:-12:ALA:HB3	2.19	0.43
1:AA:234:G:H2'	1:AA:235:C:H6	1.84	0.43
1:AA:1125:C:H4'	10:AL:132:ARG:HH22	1.83	0.43
1:AA:1321:A:H4'	1:AA:1322:A:OP1	2.18	0.43
1:AA:1679:A:C6	1:AA:1680:G:C6	3.07	0.43
1:AA:1706:U:H2'	1:AA:1707:C:O4'	2.18	0.43
1:AA:1807:G:N3	1:AA:1807:G:H2'	2.33	0.43
1:AA:2158:C:N4	1:AA:2177:G:H1	2.15	0.43
1:AA:2273:C:H1'	1:AA:2400:A:N3	2.34	0.43
1:AA:2402:U:O2'	1:AA:2403:G:H5'	2.18	0.43
4:AD:92:ILE:HD12	4:AD:104:TYR:CD1	2.53	0.43
5:AE:48:GLN:NE2	5:AE:78:LEU:HG	2.33	0.43
6:AF:167:ALA:O	6:AF:170:LEU:HD22	2.19	0.43
11:AN:91:LEU:HA	11:AN:91:LEU:HD23	1.53	0.43
12:AO:63:VAL:HG12	12:AO:106:LEU:HD11	1.99	0.43
14:AQ:30:GLY:HA2	14:AQ:107:ALA:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:22:ARG:O	15:AR:26:LYS:HG3	2.18	0.43
20:AW:36:LEU:HD12	20:AW:48:ALA:HA	2.00	0.43
23:AZ:96:VAL:N	23:AZ:128:VAL:O	2.47	0.43
34:BA:264:U:H2'	34:BA:265:G:O4'	2.18	0.43
34:BA:413:G:H21	34:BA:428:G:H1'	1.83	0.43
34:BA:453:A:H62	34:BA:479:C:H42	1.65	0.43
34:BA:501:C:H2'	34:BA:502:G:H8	1.83	0.43
34:BA:663:A:H2'	34:BA:664:G:O4'	2.18	0.43
34:BA:727:G:N2	34:BA:731:G:C4	2.86	0.43
34:BA:1074:G:O2'	34:BA:1101:A:N1	2.37	0.43
34:BA:1285:A:H4'	34:BA:1286:A:O5'	2.18	0.43
35:BB:28:PHE:CD1	35:BB:190:THR:HG22	2.53	0.43
37:BD:62:GLN:OE1	37:BD:62:GLN:HA	2.18	0.43
37:BD:202:LEU:HA	37:BD:202:LEU:HD23	1.55	0.43
43:BJ:13:HIS:HA	43:BJ:16:LEU:HB3	2.01	0.43
45:BL:60:LEU:HD13	45:BL:60:LEU:HA	1.79	0.43
50:BQ:92:ARG:HD3	50:BQ:92:ARG:HA	1.57	0.43
54:BU:9:ARG:O	54:BU:13:ILE:HG13	2.19	0.43
1:CA:483:A:N7	1:CA:497:A:H2	2.17	0.43
1:CA:1053:C:C2	1:CA:1107:G:N2	2.87	0.43
1:CA:1095:A:N7	1:CA:1096:A:C6	2.87	0.43
1:CA:1165:U:H2'	1:CA:1166:C:C6	2.53	0.43
3:CC:60:ARG:HG3	3:CC:165:ARG:HB2	2.01	0.43
11:CN:128:HIS:HE1	11:CN:135:PRO:HG2	1.83	0.43
17:CT:80:SER:HA	17:CT:81:PRO:HD2	1.78	0.43
22:CY:9:LYS:HA	22:CY:10:GLY:HA2	1.71	0.43
22:CY:99:CYS:SG	22:CY:101:LYS:N	2.91	0.43
28:C4:14:ILE:O	28:C4:21:VAL:HA	2.18	0.43
34:DA:418:C:H2'	34:DA:419:C:H6	1.82	0.43
34:DA:575:G:C6	34:DA:821:G:N7	2.86	0.43
34:DA:601:C:C2	34:DA:638:G:N2	2.86	0.43
34:DA:757:U:H2'	34:DA:758:G:O4'	2.18	0.43
34:DA:922:G:N1	34:DA:923:A:C2	2.86	0.43
34:DA:1040:U:O5'	34:DA:1040:U:H6	2.02	0.43
34:DA:1303:C:C4	34:DA:1304:G:C5	3.06	0.43
35:DB:30:ARG:HG3	35:DB:31:TYR:CD1	2.53	0.43
39:DF:76:ALA:O	39:DF:80:ARG:HG3	2.19	0.43
39:DF:98:LEU:HD23	51:DR:30:ASP:HA	1.99	0.43
47:DN:27:CYS:SG	47:DN:29:ARG:N	2.91	0.43
49:DP:76:GLN:O	49:DP:76:GLN:HG3	2.16	0.43
50:DQ:92:ARG:HD3	50:DQ:92:ARG:HA	1.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:DS:50:ALA:HB1	52:DS:57:HIS:HB3	2.00	0.43
56:DX:18:G:C6	56:DX:57:A:C6	3.07	0.43
57:DZ:187:THR:HB	57:DZ:199:ILE:CD1	2.44	0.43
57:DZ:655:TYR:C	57:DZ:657:THR:H	2.22	0.43
1:AA:489:G:N2	1:AA:492:A:OP2	2.49	0.43
1:AA:829:A:C2	4:AD:226:MET:HG2	2.54	0.43
1:AA:1676:G:H2'	1:AA:1677:C:C6	2.54	0.43
1:AA:1766:G:H5''	1:AA:1767:A:OP2	2.18	0.43
6:AF:36:VAL:O	6:AF:40:GLN:HG3	2.18	0.43
14:AQ:70:PRO:HA	14:AQ:95:ALA:HB2	2.00	0.43
16:AS:51:ALA:HB2	16:AS:73:LEU:HB2	2.01	0.43
34:BA:7:G:H5'	34:BA:298:A:O4'	2.18	0.43
34:BA:226:G:H2'	34:BA:227:G:O4'	2.17	0.43
34:BA:243:A:H4'	34:BA:244:U:O5'	2.18	0.43
34:BA:1316:G:N1	34:BA:1319:A:OP2	2.50	0.43
39:BF:19:LEU:HD11	39:BF:59:TYR:CE2	2.53	0.43
40:BG:30:ILE:HD13	40:BG:120:ILE:HD13	1.99	0.43
52:BS:15:LEU:O	52:BS:19:VAL:HG23	2.19	0.43
1:CA:252:G:OP1	13:CP:50:ARG:NH1	2.51	0.43
1:CA:994:C:H1'	19:CV:10:LYS:HE3	2.01	0.43
1:CA:1051:G:C2	1:CA:1052:C:C2	3.06	0.43
1:CA:1076:C:H2'	1:CA:1077:A:O4'	2.18	0.43
1:CA:1341:U:OP1	1:CA:1397:U:N3	2.31	0.43
1:CA:1666:G:C2'	1:CA:1667:G:H5'	2.49	0.43
1:CA:1882:C:H2'	1:CA:1883:G:O4'	2.19	0.43
1:CA:1967:C:C4	1:CA:1968:G:C5	3.07	0.43
1:CA:2070:G:OP2	63:CA:3759:HOH:O	2.21	0.43
1:CA:2756:U:H1'	1:CA:2757:A:H5''	2.01	0.43
2:CB:88:C:H2'	2:CB:89:G:O4'	2.19	0.43
4:CD:73:VAL:HG13	4:CD:120:GLY:CA	2.48	0.43
6:CF:154:VAL:HA	6:CF:191:ARG:HB2	2.00	0.43
13:CP:95:VAL:HA	13:CP:99:LEU:HD21	2.00	0.43
13:CP:127:ALA:HB3	13:CP:130:PHE:CE1	2.54	0.43
30:C6:34:LEU:HB2	30:C6:51:GLU:HB2	2.01	0.43
31:C7:10:ARG:O	31:C7:14:LYS:HB2	2.19	0.43
34:DA:9:G:H5'	38:DE:122:GLU:OE2	2.19	0.43
34:DA:300:A:H1'	34:DA:565:U:O2	2.19	0.43
34:DA:512:U:C2	34:DA:513:C:C5	3.06	0.43
34:DA:769:G:H4'	34:DA:1513:A:H4'	2.01	0.43
34:DA:1102:A:H5''	34:DA:1102:A:H8	1.83	0.43
34:DA:1168:A:C6	34:DA:1169:A:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:79:PHE:O	37:DD:82:ALA:HB3	2.19	0.43
37:DD:200:GLU:O	37:DD:204:ILE:HG12	2.18	0.43
40:DG:78:ARG:NH2	40:DG:79:ARG:HH22	2.17	0.43
52:DS:3:ARG:HH11	52:DS:7:LYS:HE2	1.84	0.43
57:DZ:-9:LEU:O	57:DZ:-6:ARG:HB2	2.18	0.43
57:DZ:13:ARG:NH1	57:DZ:77:HIS:CE1	2.85	0.43
1:AA:36:G:O2'	1:AA:476:G:H2'	2.19	0.43
1:AA:478:G:C4	1:AA:484:G:C6	3.06	0.43
1:AA:653:G:C6	1:AA:661:G:C2	3.06	0.43
1:AA:1698:G:H5'	15:AR:39:PRO:HG2	1.99	0.43
1:AA:2315:G:O2'	7:AG:132:ASN:HB2	2.19	0.43
4:AD:70:TRP:O	4:AD:70:TRP:HE3	2.02	0.43
5:AE:33:VAL:HG13	5:AE:89:ASP:C	2.39	0.43
7:AG:71:THR:N	7:AG:89:GLY:O	2.48	0.43
12:AO:120:GLU:OE2	17:AT:65:LYS:NZ	2.48	0.43
17:AT:46:GLU:OE2	17:AT:89:VAL:HG11	2.18	0.43
18:AU:39:LEU:O	18:AU:42:ALA:HB3	2.18	0.43
20:AW:97:LYS:HE3	20:AW:99:ARG:NH2	2.34	0.43
25:A1:22:GLY:O	25:A1:32:LYS:NZ	2.52	0.43
33:A9:24:TYR:CE2	33:A9:35:ARG:HG3	2.53	0.43
34:BA:367:U:C6	34:BA:394:G:N2	2.86	0.43
34:BA:508:C:OP1	37:BD:209:ARG:NH2	2.52	0.43
34:BA:617:G:C6	34:BA:618:C:C5	3.07	0.43
34:BA:841:U:H6	34:BA:841:U:P	2.42	0.43
35:BB:83:MET:H	35:BB:83:MET:HG2	1.50	0.43
48:BO:82:ILE:O	48:BO:86:GLY:N	2.47	0.43
57:BZ:18:ALA:O	57:BZ:106:VAL:HA	2.19	0.43
1:CA:221:A:C4	1:CA:266:G:N7	2.86	0.43
1:CA:824:A:H1'	1:CA:2358:G:N7	2.34	0.43
1:CA:2454:G:H1'	63:CA:3802:HOH:O	2.18	0.43
3:CC:206:LYS:HB3	3:CC:206:LYS:HZ3	1.82	0.43
4:CD:52:ARG:HH11	4:CD:52:ARG:HD3	1.67	0.43
6:CF:153:SER:OG	6:CF:190:GLU:N	2.52	0.43
18:CU:28:ARG:HD3	18:CU:38:THR:OG1	2.18	0.43
34:DA:152:A:N6	34:DA:170:U:C2	2.87	0.43
34:DA:539:A:H2'	34:DA:540:G:C8	2.52	0.43
34:DA:602:A:H2'	34:DA:603:U:O4'	2.19	0.43
34:DA:697:U:C5	34:DA:698:G:C8	3.06	0.43
34:DA:1193:G:O2'	38:DE:25:ARG:NH2	2.50	0.43
36:DC:104:GLN:HE21	36:DC:104:GLN:HB3	1.72	0.43
37:DD:8:VAL:HG22	37:DD:21:LEU:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DI:89:ASN:ND2	42:DI:91:ASP:H	2.17	0.43
1:AA:7:G:H2'	1:AA:8:A:O4'	2.18	0.43
1:AA:233:A:C2	1:AA:244:A:C4	3.07	0.43
1:AA:921:G:N2	1:AA:950:C:C2	2.86	0.43
1:AA:1913:G:C6	1:AA:1914:C:N3	2.87	0.43
1:AA:2054:G:OP2	1:AA:2466:G:O2'	2.29	0.43
6:AF:53:THR:N	6:AF:56:GLU:OE2	2.47	0.43
7:AG:126:ASP:HB2	7:AG:130:ASN:H	1.83	0.43
12:AO:115:VAL:HG13	12:AO:121:VAL:HG21	2.01	0.43
14:AQ:56:ARG:HA	23:AZ:180:VAL:CG2	2.48	0.43
21:AX:35:THR:O	21:AX:38:GLU:HB3	2.18	0.43
24:A0:20:ARG:O	24:A0:24:LYS:NZ	2.44	0.43
31:A7:33:ARG:NH2	63:A7:202:HOH:O	2.50	0.43
34:BA:33:A:H2'	34:BA:34:C:H6	1.83	0.43
34:BA:840:C:H4'	34:BA:841:U:OP1	2.19	0.43
43:BJ:43:ARG:HB2	43:BJ:67:THR:OG1	2.18	0.43
46:BM:70:LEU:O	46:BM:74:VAL:HG23	2.19	0.43
52:BS:44:MET:O	52:BS:47:HIS:HB2	2.18	0.43
57:BZ:127:LYS:O	57:BZ:128:TYR:CD2	2.71	0.43
1:CA:127:A:H5''	1:CA:128:C:C6	2.54	0.43
1:CA:543:C:H6	1:CA:543:C:O5'	2.01	0.43
1:CA:599:G:OP1	13:CP:9:ASN:ND2	2.52	0.43
1:CA:1614:A:P	1:CA:1614:A:H8	2.42	0.43
1:CA:2080:G:H2'	1:CA:2081:C:C6	2.52	0.43
1:CA:2461:C:N4	1:CA:2462:U:O4	2.51	0.43
4:CD:155:LEU:HD12	4:CD:155:LEU:HA	1.58	0.43
5:CE:21:VAL:HA	5:CE:22:PRO:HD2	1.87	0.43
17:CT:41:ARG:NH2	34:DA:345:C:H3'	2.33	0.43
21:CX:11:PRO:HB3	21:CX:92:LEU:HD21	2.01	0.43
34:DA:90:U:H2'	34:DA:91:C:H6	1.84	0.43
34:DA:270:A:H2'	34:DA:271:C:C6	2.53	0.43
34:DA:325:A:H2'	34:DA:326:G:O4'	2.18	0.43
34:DA:410:G:H5''	34:DA:411:A:OP1	2.19	0.43
34:DA:453:A:C5	34:DA:454:C:C4	3.06	0.43
34:DA:692:U:O2'	34:DA:694:A:N7	2.34	0.43
34:DA:730:G:C5	34:DA:731:G:H1'	2.53	0.43
34:DA:883:C:O2'	34:DA:884:U:H5'	2.19	0.43
34:DA:1103:C:C2	34:DA:1104:G:C8	3.06	0.43
34:DA:1203:C:H2'	34:DA:1204:A:C8	2.54	0.43
34:DA:1262:C:H42	34:DA:1273:G:H1	1.64	0.43
34:DA:1298:C:H4'	34:DA:1299:A:C4	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1481:U:H2'	34:DA:1482:G:C8	2.54	0.43
35:DB:95:GLN:HB2	35:DB:148:TYR:HD1	1.84	0.43
35:DB:124:SER:OG	35:DB:125:PRO:HD3	2.18	0.43
44:DK:38:ASN:HA	44:DK:39:PRO:HD3	1.92	0.43
46:DM:19:LEU:HD13	46:DM:19:LEU:HA	1.76	0.43
56:DX:43:A:C2	56:DX:44:A:C5	3.07	0.43
57:DZ:-25:SER:O	57:DZ:-23:LEU:N	2.51	0.43
57:DZ:380:LEU:HA	57:DZ:380:LEU:HD12	1.61	0.43
1:AA:239:G:C6	1:AA:240:A:C6	3.07	0.43
1:AA:302:A:O2'	1:AA:303:C:OP1	2.28	0.43
1:AA:863:C:H2'	1:AA:864:C:O4'	2.18	0.43
1:AA:866:A:C4	1:AA:1234:A:C2	3.06	0.43
1:AA:1077:G:H21	33:A9:36:GLN:HE22	1.66	0.43
1:AA:1336:C:H2'	1:AA:1337:C:C6	2.54	0.43
1:AA:1781:G:N3	1:AA:2870:A:H2	2.17	0.43
1:AA:2584:A:N7	5:AE:144:ARG:HD2	2.34	0.43
1:AA:2860:A:C2	1:AA:2861:A:C4	3.07	0.43
8:AH:116:GLU:HG3	8:AH:117:PRO:HD2	2.01	0.43
16:AS:53:SER:OG	16:AS:54:LEU:N	2.52	0.43
21:AX:25:LYS:NZ	21:AX:82:GLN:HE21	2.17	0.43
23:AZ:183:LEU:O	23:AZ:185:GLU:N	2.51	0.43
25:A1:40:ARG:HE	25:A1:40:ARG:HB2	1.56	0.43
30:A6:26:ASN:C	30:A6:26:ASN:OD1	2.57	0.43
34:BA:116:A:C8	34:BA:116:A:OP2	2.72	0.43
34:BA:748:C:O5'	34:BA:748:C:H6	2.02	0.43
34:BA:912:C:O2'	34:BA:913:A:H5'	2.19	0.43
35:BB:54:THR:HG21	35:BB:201:ILE:HD11	2.00	0.43
38:BE:148:VAL:HG21	41:BH:107:LEU:HB3	2.00	0.43
57:BZ:87:HIS:HB3	57:BZ:90:PHE:HB2	2.01	0.43
1:CA:30:G:H2'	1:CA:31:C:C6	2.53	0.43
1:CA:300:A:H1'	1:CA:319:C:C1'	2.49	0.43
1:CA:1049:C:H3'	1:CA:1050:A:C8	2.51	0.43
1:CA:1082:U:C4	1:CA:1083:U:H1'	2.54	0.43
1:CA:1364:G:OP2	25:C1:3:LYS:HG3	2.19	0.43
1:CA:2469:A:C2	1:CA:2470:G:H1'	2.54	0.43
3:CC:11:LEU:HD11	3:CC:35:THR:HG23	2.01	0.43
4:CD:275:LYS:HD3	4:CD:276:LYS:O	2.19	0.43
6:CF:56:GLU:OE1	6:CF:93:LYS:NZ	2.51	0.43
12:CO:9:GLU:O	12:CO:83:ALA:HA	2.19	0.43
14:CQ:137:TYR:CZ	23:CZ:83:PRO:HG3	2.54	0.43
16:CS:95:HIS:HA	16:CS:99:LYS:HD2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:C9:7:VAL:HG12	33:C9:34:GLN:HB3	2.00	0.43
34:DA:279:A:N7	50:DQ:98:LEU:HD22	2.34	0.43
34:DA:666:G:H5'	34:DA:726:C:H1'	2.01	0.43
34:DA:814:A:H2'	34:DA:816:A:H5''	2.00	0.43
34:DA:931:C:H1'	34:DA:1387:G:N2	2.34	0.43
34:DA:1150:U:C4	34:DA:1151:A:N6	2.87	0.43
34:DA:1250:A:H2	34:DA:1370:G:H1'	1.83	0.43
34:DA:1263:C:H2'	34:DA:1264:C:H6	1.84	0.43
36:DC:148:GLY:HA3	36:DC:172:ARG:O	2.18	0.43
39:DF:33:TYR:CD1	39:DF:75:LEU:HD23	2.54	0.43
41:DH:75:ARG:HA	41:DH:76:PRO:HD2	1.65	0.43
48:DO:25:THR:CG2	48:DO:70:LEU:HD13	2.49	0.43
50:DQ:24:GLU:HB3	50:DQ:39:SER:HB3	2.00	0.43
50:DQ:29:HIS:CE1	50:DQ:32:TYR:CD2	3.07	0.43
57:DZ:-52:VAL:HG13	57:DZ:-51:GLY:N	2.34	0.43
57:DZ:18:ALA:HB1	57:DZ:121:VAL:HG21	2.00	0.43
57:DZ:168:ILE:HD13	57:DZ:202:PRO:HG3	1.99	0.43
1:AA:8:A:H2'	1:AA:9:U:H6	1.84	0.43
1:AA:12:U:O2	1:AA:12:U:H2'	2.19	0.43
1:AA:27:G:C2	1:AA:537:G:N3	2.87	0.43
1:AA:1640:G:H5'	63:AA:5196:HOH:O	2.18	0.43
3:AC:31:LYS:H	3:AC:31:LYS:HG2	1.57	0.43
4:AD:68:LYS:O	4:AD:69:ARG:HB2	2.19	0.43
5:AE:52:LEU:HA	5:AE:53:PRO:HD2	1.67	0.43
7:AG:62:LEU:O	7:AG:143:GLU:HG3	2.18	0.43
17:AT:119:LYS:HB2	34:BA:1442(A):G:N2	2.34	0.43
22:AY:75:ILE:HD13	22:AY:75:ILE:HA	1.78	0.43
32:A8:62:LEU:HB3	32:A8:65:GLU:CG	2.49	0.43
34:BA:924:C:H2'	34:BA:925:G:H8	1.83	0.43
34:BA:1268:A:C6	34:BA:1269:A:C6	3.07	0.43
35:BB:20:GLU:OE2	35:BB:21:ARG:NH2	2.51	0.43
35:BB:27:LYS:HE2	35:BB:193:ASP:OD1	2.19	0.43
38:BE:18:ARG:HG2	38:BE:25:ARG:O	2.19	0.43
39:BF:55:ASP:OD2	39:BF:86:ARG:NH1	2.52	0.43
48:BO:43:LEU:HD23	48:BO:43:LEU:HA	1.87	0.43
57:BZ:299:VAL:HG22	57:BZ:300:GLU:O	2.19	0.43
1:CA:221:A:N1	1:CA:265:A:O2'	2.51	0.43
1:CA:854:G:H2'	1:CA:855:G:H8	1.84	0.43
1:CA:1171:G:N2	1:CA:1179:C:C2	2.81	0.43
1:CA:1266:G:O2'	1:CA:2012:G:O6	2.25	0.43
1:CA:1622:G:C2	1:CA:1623:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1653:G:H4'	1:CA:1654:A:O5'	2.19	0.43
1:CA:1889:A:N1	1:CA:2234:G:H1'	2.34	0.43
1:CA:1913:A:H4'	1:CA:1914:C:C5'	2.38	0.43
1:CA:1956:U:C4	1:CA:1957:C:C5	3.07	0.43
1:CA:2256:G:C6	1:CA:2257:U:C4	3.06	0.43
1:CA:2543:G:H5'	1:CA:2767:C:OP1	2.19	0.43
5:CE:98:PRO:HG3	5:CE:174:ASP:HA	1.99	0.43
8:CH:29:PRO:HG2	8:CH:79:VAL:O	2.19	0.43
16:CS:3:ARG:CZ	16:CS:3:ARG:HB2	2.48	0.43
18:CU:17:ILE:HD13	18:CU:17:ILE:HA	1.79	0.43
19:CV:89:GLN:HA	19:CV:90:PRO:HD3	1.71	0.43
32:C8:54:GLU:OE1	32:C8:57:ARG:NH1	2.49	0.43
34:DA:130:A:H1'	34:DA:263:A:O2'	2.19	0.43
36:DC:112:SER:HB3	36:DC:115:LEU:HD22	2.01	0.43
39:DF:12:PRO:HG3	39:DF:57:GLN:O	2.19	0.43
40:DG:142:GLU:O	40:DG:145:ALA:HB3	2.19	0.43
46:DM:123:ALA:HB3	57:DZ:573:HIS:CB	2.49	0.43
49:DP:55:ARG:O	49:DP:58:TYR:HB3	2.19	0.43
57:DZ:-50:GLN:HE21	57:DZ:-50:GLN:HB3	1.60	0.43
57:DZ:25:LYS:HE2	57:DZ:25:LYS:HB2	1.75	0.43
57:DZ:134:ALA:HB3	57:DZ:153:MET:HE1	2.00	0.43
1:AA:91:G:H2'	1:AA:92:C:C6	2.54	0.42
1:AA:359:C:H2'	1:AA:360:C:H6	1.84	0.42
1:AA:755:C:O5'	1:AA:755:C:H6	2.01	0.42
1:AA:826:U:OP1	4:AD:49:ILE:HG13	2.19	0.42
1:AA:831:A:N6	4:AD:229:VAL:HG11	2.34	0.42
1:AA:1253:C:C4	1:AA:1254:G:N7	2.87	0.42
1:AA:1477:U:H2'	1:AA:1478:C:O4'	2.19	0.42
1:AA:1712:A:H2'	1:AA:1713:G:O4'	2.18	0.42
1:AA:1735:U:O2	1:AA:1747:A:H8	2.01	0.42
1:AA:1939:U:O2'	1:AA:1940:A:H5'	2.18	0.42
3:AC:195:ARG:HG3	3:AC:195:ARG:NH1	2.34	0.42
10:AL:55:VAL:HG22	10:AL:67:PHE:HB2	1.99	0.42
18:AU:17:ILE:HG13	18:AU:32:PHE:HE1	1.84	0.42
19:AV:22:VAL:HG23	19:AV:23:GLU:O	2.19	0.42
20:AW:1:MET:HE3	20:AW:2:GLU:H	1.83	0.42
23:AZ:100:VAL:HG12	23:AZ:101:PRO:O	2.19	0.42
34:BA:41:G:N2	34:BA:42:G:C4	2.87	0.42
34:BA:302:G:C6	34:BA:303:A:C6	3.07	0.42
34:BA:302:G:O6	34:BA:303:A:C6	2.72	0.42
34:BA:1067:A:N3	34:BA:1068:G:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1097:C:H2'	34:BA:1098:C:H6	1.84	0.42
34:BA:1177:G:H2'	34:BA:1178:G:O4'	2.19	0.42
34:BA:1416:G:H2'	34:BA:1417:G:O4'	2.19	0.42
34:BA:1478:C:H2'	34:BA:1479:C:C6	2.54	0.42
35:BB:229:VAL:HG12	35:BB:230:VAL:H	1.83	0.42
41:BH:29:SER:OG	41:BH:32:LYS:HD2	2.18	0.42
41:BH:50:ARG:HA	41:BH:59:LEU:HD23	2.01	0.42
1:CA:79:G:O2'	1:CA:346:A:N3	2.46	0.42
1:CA:511:U:H5''	1:CA:512:G:OP2	2.19	0.42
1:CA:647:G:H2'	1:CA:648:G:O4'	2.19	0.42
1:CA:788:A:OP1	1:CA:791:C:N4	2.44	0.42
1:CA:1588:C:H2'	1:CA:1589:C:H6	1.84	0.42
1:CA:1668:A:OP1	12:CO:5:GLN:HG2	2.19	0.42
1:CA:2256:G:O2'	1:CA:2257:U:H5'	2.18	0.42
3:CC:6:LYS:N	3:CC:9:ARG:HH12	2.17	0.42
4:CD:72:LYS:HG3	4:CD:103:ARG:NH2	2.33	0.42
4:CD:231:HIS:ND1	4:CD:232:PRO:HD2	2.34	0.42
6:CF:196:LEU:O	6:CF:199:TRP:HB3	2.19	0.42
23:CZ:28:MET:HE2	23:CZ:61:LEU:HD11	2.01	0.42
34:DA:232:G:H1'	34:DA:262:A:N1	2.33	0.42
34:DA:509:A:C8	34:DA:509:A:C3'	3.01	0.42
34:DA:837:G:H1	34:DA:849:C:N4	2.16	0.42
34:DA:1057:G:C5	34:DA:1204:A:C2	3.07	0.42
34:DA:1072:G:C6	34:DA:1073:U:C4	3.06	0.42
34:DA:1171:G:H8	34:DA:1171:G:OP2	2.00	0.42
34:DA:1317:C:O2	52:DS:37:ARG:NH1	2.52	0.42
34:DA:1338:G:C6	34:DA:1339:A:C6	3.07	0.42
39:DF:95:GLU:HA	39:DF:96:PRO:HD3	1.93	0.42
44:DK:69:ALA:O	44:DK:73:MET:HG2	2.19	0.42
51:DR:55:ARG:HE	51:DR:55:ARG:HB3	1.58	0.42
1:AA:1530:G:C2	1:AA:1552:C:C2	3.07	0.42
1:AA:1833:A:N1	1:AA:1853:G:H1'	2.34	0.42
1:AA:1864:U:H2'	1:AA:1865:U:H6	1.83	0.42
1:AA:2146:G:H2'	1:AA:2147:G:O4'	2.18	0.42
1:AA:2353:G:H2'	1:AA:2354:C:C6	2.53	0.42
1:AA:2710:U:H2'	1:AA:2711:C:C6	2.54	0.42
2:AB:6:C:H2'	2:AB:7:G:O4'	2.19	0.42
2:AB:29:A:C2	2:AB:30:C:C2	3.07	0.42
2:AB:85:G:H2'	2:AB:86:G:H5'	2.01	0.42
5:AE:134:ILE:C	5:AE:134:ILE:HD12	2.40	0.42
5:AE:170:LEU:HA	5:AE:170:LEU:HD12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:127:GLU:HG3	8:AH:130:ARG:HB2	2.01	0.42
12:AO:107:ARG:O	12:AO:110:GLY:N	2.44	0.42
12:AO:107:ARG:CZ	17:AT:36:GLU:HG2	2.49	0.42
13:AP:38:GLN:O	13:AP:44:GLY:HA2	2.19	0.42
14:AQ:7:MET:HE2	14:AQ:7:MET:N	2.34	0.42
14:AQ:48:GLU:O	14:AQ:52:VAL:HG23	2.19	0.42
17:AT:84:GLN:HG2	17:AT:85:LYS:HD3	2.01	0.42
34:BA:368:U:C4	57:BZ:354:ARG:NH1	2.79	0.42
34:BA:595:G:H22	34:BA:643:C:H41	1.66	0.42
34:BA:1527:C:O5'	34:BA:1527:C:H6	2.03	0.42
35:BB:44:LEU:HA	35:BB:47:THR:OG1	2.19	0.42
37:BD:162:LEU:CD1	37:BD:181:MET:HG2	2.49	0.42
53:BT:56:MET:CE	53:BT:85:MET:HA	2.48	0.42
57:BZ:93:GLU:O	57:BZ:95:GLU:N	2.52	0.42
57:BZ:153:MET:C	57:BZ:155:GLU:H	2.21	0.42
1:CA:275:G:H2'	1:CA:276:A:O4'	2.20	0.42
1:CA:706:A:H2'	1:CA:707:G:O4'	2.19	0.42
1:CA:754:C:H2'	1:CA:755:C:C6	2.54	0.42
1:CA:757:U:H2'	1:CA:758:C:O4'	2.19	0.42
1:CA:1021:A:OP2	11:CN:65:LYS:NZ	2.51	0.42
1:CA:1448:G:H1'	1:CA:1528:A:N1	2.33	0.42
1:CA:1857:G:O6	1:CA:1858:G:N1	2.52	0.42
1:CA:2370:G:C6	1:CA:2371:G:C6	3.07	0.42
1:CA:2406:U:H2'	1:CA:2406:U:OP2	2.19	0.42
1:CA:2600:A:H2'	1:CA:2601:C:C6	2.53	0.42
3:CC:195:ARG:HH11	3:CC:195:ARG:HG3	1.83	0.42
4:CD:29:PRO:HA	4:CD:83:GLU:OE1	2.19	0.42
4:CD:164:GLN:NE2	4:CD:176:ARG:HH12	2.17	0.42
5:CE:113:PHE:HA	5:CE:159:HIS:HD2	1.83	0.42
7:CG:43:LEU:HB3	7:CG:44:GLY:H	1.38	0.42
8:CH:7:LEU:HA	8:CH:8:PRO:HD3	1.90	0.42
11:CN:108:PRO:O	11:CN:113:GLY:HA3	2.19	0.42
17:CT:14:TYR:CD2	17:CT:14:TYR:N	2.87	0.42
18:CU:104:GLN:NE2	18:CU:105:VAL:HG23	2.34	0.42
32:C8:60:LEU:HD23	32:C8:60:LEU:HA	1.82	0.42
34:DA:622:A:C8	34:DA:623:C:C6	3.07	0.42
34:DA:904:C:H2'	34:DA:905:U:O4'	2.19	0.42
34:DA:1287:A:H2'	34:DA:1288:A:C8	2.54	0.42
34:DA:1318:A:H1'	52:DS:37:ARG:HD3	2.01	0.42
35:DB:175:ARG:HB3	35:DB:175:ARG:NH1	2.34	0.42
37:DD:129:ASN:ND2	37:DD:144:ASP:HA	2.24	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:31:LEU:HD23	38:DE:31:LEU:HA	1.76	0.42
45:DL:93:LEU:HB3	45:DL:96:VAL:CG2	2.48	0.42
46:DM:108:ARG:HD3	46:DM:108:ARG:HA	1.75	0.42
48:DO:29:VAL:HG11	48:DO:81:LEU:HD21	2.01	0.42
54:DU:6:ARG:HG2	54:DU:15:ARG:HD2	2.01	0.42
1:AA:400:U:O2	1:AA:450:A:H2	2.01	0.42
1:AA:820:U:H2'	1:AA:821:A:H5'	2.01	0.42
1:AA:891:C:C2'	1:AA:892:G:H5'	2.49	0.42
1:AA:1053:C:H5''	11:AN:35:ARG:HH11	1.84	0.42
1:AA:1389:G:H2'	1:AA:1430:A:C2	2.54	0.42
1:AA:1893:G:C2	1:AA:1903:C:C2	3.07	0.42
1:AA:2092:G:H2'	1:AA:2093:A:O4'	2.20	0.42
1:AA:2115:G:C6	1:AA:2237:A:C8	3.08	0.42
1:AA:2321:A:H8	1:AA:2321:A:O5'	2.02	0.42
1:AA:2720:G:OP1	15:AR:68:ARG:HD3	2.19	0.42
2:AB:113:G:H2'	2:AB:114:C:C6	2.54	0.42
6:AF:53:THR:HG22	6:AF:55:GLY:H	1.82	0.42
11:AN:46:VAL:CG2	11:AN:48:MET:HG2	2.48	0.42
30:A6:10:LEU:HD23	30:A6:22:ALA:HB2	2.00	0.42
34:BA:406:G:H21	37:BD:119:GLN:NE2	2.15	0.42
34:BA:557:G:C6	34:BA:558:G:C6	3.07	0.42
34:BA:958:A:H8	34:BA:958:A:OP1	2.02	0.42
34:BA:1244:C:O2	34:BA:1294:G:N2	2.52	0.42
34:BA:1253:G:H2'	34:BA:1254:C:C6	2.54	0.42
35:BB:164:VAL:HB	35:BB:186:ALA:CB	2.49	0.42
48:BO:67:LEU:H	48:BO:67:LEU:HG	1.70	0.42
57:BZ:80:ASN:HD22	57:BZ:374:LEU:HB2	1.84	0.42
57:BZ:309:LEU:HG	57:BZ:391:GLY:H	1.84	0.42
1:CA:132:G:H2'	1:CA:133:C:C6	2.54	0.42
1:CA:627:A:C6	1:CA:637:A:C8	3.06	0.42
1:CA:1260:G:H2'	1:CA:1261:C:O4'	2.20	0.42
1:CA:1540:U:H2'	1:CA:1541:G:O4'	2.19	0.42
1:CA:1586:A:N6	1:CA:1587:A:C2	2.87	0.42
1:CA:2176:A:C3'	3:CC:45:HIS:CD2	3.02	0.42
1:CA:2470:G:C2	1:CA:2471:C:C6	3.07	0.42
2:CB:61:G:C6	2:CB:62:C:C4	3.07	0.42
6:CF:170:LEU:HA	6:CF:170:LEU:HD12	1.90	0.42
7:CG:117:PHE:CE1	7:CG:119:GLY:HA2	2.55	0.42
17:CT:118:ARG:HB3	34:DA:1442(A):G:C5	2.54	0.42
18:CU:44:ASN:ND2	19:CV:75:PHE:O	2.51	0.42
18:CU:92:ARG:HG2	18:CU:92:ARG:H	1.74	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CZ:139:VAL:HG23	23:CZ:141:VAL:HG13	2.01	0.42
34:DA:131:C:H2'	34:DA:132:C:C6	2.54	0.42
34:DA:855:G:C2	34:DA:856:C:C2	3.06	0.42
34:DA:1198:G:H2'	34:DA:1199:U:C6	2.54	0.42
34:DA:1499:A:C1'	34:DA:1520:G:H5'	2.47	0.42
37:DD:12:CYS:O	37:DD:16:GLY:N	2.51	0.42
37:DD:86:LYS:HE3	37:DD:86:LYS:HB3	1.79	0.42
37:DD:200:GLU:OE2	37:DD:200:GLU:N	2.52	0.42
41:DH:33:GLU:HA	41:DH:36:LEU:HD12	2.00	0.42
45:DL:70:ILE:HD13	45:DL:77:LEU:HD12	2.01	0.42
49:DP:43:LYS:HG2	49:DP:48:TRP:CG	2.54	0.42
53:DT:81:LYS:HB2	53:DT:81:LYS:HE2	1.76	0.42
57:DZ:134:ALA:O	57:DZ:258:VAL:HA	2.17	0.42
57:DZ:341:VAL:HB	57:DZ:390:VAL:O	2.19	0.42
57:DZ:553:GLY:H	57:DZ:557:GLY:CA	2.24	0.42
1:AA:67:G:H2'	1:AA:68:C:O4'	2.20	0.42
1:AA:81:G:O2'	1:AA:82:G:H5'	2.19	0.42
1:AA:414:U:OP2	25:A1:20:ARG:NH1	2.48	0.42
1:AA:501:U:C4	1:AA:507:G:O6	2.72	0.42
1:AA:877:G:H5''	63:AA:4500:HOH:O	2.18	0.42
1:AA:1128:U:H5''	1:AA:1129:U:OP2	2.19	0.42
1:AA:1157:A:H2'	1:AA:1158:G:C1'	2.50	0.42
1:AA:1343:C:OP2	63:AA:3942:HOH:O	2.21	0.42
1:AA:1576:G:H2'	1:AA:1577:C:O4'	2.18	0.42
1:AA:1748:A:H2'	1:AA:1749:G:H5'	2.00	0.42
1:AA:1862:G:H1'	63:AA:5033:HOH:O	2.18	0.42
1:AA:2116:G:C2	1:AA:2218:C:C2	3.08	0.42
1:AA:2638:C:H2'	1:AA:2639:G:H8	1.83	0.42
1:AA:2825:C:H2'	1:AA:2826:C:H6	1.84	0.42
2:AB:106:G:C5'	23:AZ:31:ARG:HB3	2.50	0.42
3:AC:20:VAL:O	3:AC:21:TYR:CB	2.58	0.42
4:AD:260:ARG:NH2	4:AD:264:LYS:HD3	2.35	0.42
5:AE:132:HIS:O	5:AE:133:LYS:HB2	2.20	0.42
8:AH:96:ALA:HB2	8:AH:105:LEU:HD12	2.00	0.42
10:AL:99:ILE:HG23	10:AL:103:GLN:HB3	2.00	0.42
23:AZ:124:ILE:HG12	23:AZ:125:LEU:H	1.85	0.42
23:AZ:180:VAL:O	23:AZ:183:LEU:HB2	2.19	0.42
28:A4:12:ALA:HA	28:A4:29:PRO:HA	2.01	0.42
34:BA:284:G:H2'	34:BA:285:G:C8	2.53	0.42
34:BA:396:G:P	57:BZ:349:LYS:HZ1	2.41	0.42
34:BA:619:U:O2	37:BD:133:VAL:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1381:U:O4'	40:BG:79:ARG:NE	2.48	0.42
36:BC:6:HIS:CD2	36:BC:8:ILE:H	2.37	0.42
38:BE:31:LEU:HD23	38:BE:45:PHE:HB2	2.01	0.42
40:BG:16:LEU:HD12	42:BI:45:ALA:HB2	2.00	0.42
40:BG:73:MET:HG2	40:BG:145:ALA:HB1	2.00	0.42
41:BH:95:VAL:CG2	41:BH:100:ILE:HG12	2.49	0.42
50:BQ:45:HIS:HB3	50:BQ:72:ARG:HB3	2.01	0.42
1:CA:117:G:OP2	1:CA:119:A:O2'	2.26	0.42
1:CA:471:A:H8	1:CA:471:A:O5'	2.02	0.42
1:CA:829:A:N7	1:CA:2248:C:H5'	2.35	0.42
1:CA:995:C:O2	11:CN:3:THR:OG1	2.14	0.42
1:CA:2364:C:H2'	1:CA:2365:G:O4'	2.20	0.42
1:CA:2415:G:C6	1:CA:2416:C:C4	3.07	0.42
2:CB:72:G:O2'	2:CB:105:A:N6	2.52	0.42
3:CC:16:ASP:HA	3:CC:17:PRO:HD2	1.90	0.42
5:CE:117:MET:HB2	5:CE:136:ARG:HH21	1.84	0.42
6:CF:36:VAL:O	6:CF:40:GLN:HG3	2.18	0.42
13:CP:121:LYS:O	13:CP:123:LEU:N	2.53	0.42
16:CS:84:GLN:CA	16:CS:111:GLU:HB2	2.49	0.42
21:CX:57:LEU:HD11	21:CX:78:LYS:HE2	2.01	0.42
25:C1:8:SER:OG	25:C1:10:LYS:HB2	2.20	0.42
31:C7:35:ARG:HH11	31:C7:35:ARG:HD3	1.72	0.42
34:DA:633:G:H2'	34:DA:634:C:C6	2.54	0.42
34:DA:794:A:C5	34:DA:795:C:C4	3.08	0.42
34:DA:1103:C:H2'	34:DA:1104:G:O4'	2.18	0.42
34:DA:1126:U:H4'	34:DA:1281:U:H1'	2.02	0.42
34:DA:1315:U:H2'	34:DA:1316:G:O4'	2.19	0.42
37:DD:155:LEU:HD23	37:DD:156:GLU:N	2.34	0.42
43:DJ:45:ARG:HB3	43:DJ:65:LEU:HB3	2.01	0.42
57:DZ:303:PRO:O	57:DZ:305:PRO:HD3	2.18	0.42
1:AA:751:G:N3	1:AA:773:G:C2	2.88	0.42
1:AA:1018:A:O4'	1:AA:1233:U:C6	2.72	0.42
1:AA:1035:G:N7	27:A3:13:ILE:HG12	2.34	0.42
1:AA:1114:G:O2'	1:AA:1142:A:O2'	2.35	0.42
1:AA:1445:C:OP1	21:AX:25:LYS:NZ	2.53	0.42
1:AA:2143:G:C5'	3:AC:168:LYS:NZ	2.83	0.42
2:AB:9:G:OP1	16:AS:15:ARG:HD3	2.19	0.42
4:AD:221:VAL:HG22	4:AD:226:MET:CE	2.50	0.42
10:AL:38:VAL:O	10:AL:42:ASN:HB2	2.20	0.42
12:AO:63:VAL:HG23	12:AO:64:ARG:HB2	2.01	0.42
14:AQ:61:GLY:HA3	23:AZ:177:PRO:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AR:17:ARG:HH11	15:AR:17:ARG:HD2	1.71	0.42
34:BA:15:G:C6	34:BA:16:A:C5	3.08	0.42
34:BA:20:U:O2	34:BA:916:G:C2	2.72	0.42
34:BA:325:A:H2'	34:BA:326:G:O4'	2.19	0.42
34:BA:993:G:N3	34:BA:993:G:H2'	2.35	0.42
34:BA:1079:G:C6	34:BA:1080:A:N6	2.87	0.42
34:BA:1101:A:H4'	34:BA:1102:A:O5'	2.19	0.42
35:BB:15:VAL:O	35:BB:16:HIS:ND1	2.52	0.42
35:BB:82:ARG:NH1	35:BB:86:GLU:OE1	2.52	0.42
44:BK:40:ILE:HA	44:BK:40:ILE:HD13	1.74	0.42
49:BP:49:LEU:HD12	49:BP:50:LYS:H	1.83	0.42
52:BS:20:LEU:HD21	52:BS:43:GLU:OE2	2.18	0.42
57:BZ:-63:ILE:HB	57:BZ:-30:VAL:HG12	2.00	0.42
57:BZ:227:ILE:HG12	57:BZ:237:PRO:HB3	2.00	0.42
1:CA:84:A:H5'	22:CY:8:LYS:HG2	2.01	0.42
1:CA:228:A:C8	1:CA:229:A:H5'	2.54	0.42
1:CA:231:C:H2'	1:CA:232:G:O4'	2.19	0.42
1:CA:448:U:O4	1:CA:583:G:H1'	2.19	0.42
1:CA:1446:C:N4	1:CA:1465:G:H1	2.07	0.42
1:CA:1906:G:C2	1:CA:1907:G:C8	3.08	0.42
1:CA:1908:C:O2	56:DX:12:G:H4'	2.19	0.42
1:CA:2349:G:OP1	63:CA:3758:HOH:O	2.21	0.42
1:CA:2813:A:C6	1:CA:2814:C:C4	3.08	0.42
2:CB:16:G:H2'	2:CB:17:C:C6	2.55	0.42
3:CC:225:ILE:O	3:CC:227:PRO:HD3	2.19	0.42
4:CD:77:ALA:HB2	4:CD:97:TYR:CD2	2.55	0.42
8:CH:124:GLU:HB2	8:CH:132:ARG:HB3	2.02	0.42
16:CS:19:LYS:H	16:CS:19:LYS:HG2	1.46	0.42
26:C2:62:THR:O	26:C2:66:GLU:HB2	2.20	0.42
34:DA:607:A:C2	49:DP:31:LYS:HG3	2.54	0.42
34:DA:1062:U:H2'	34:DA:1063:C:C6	2.55	0.42
36:DC:59:ARG:HG2	36:DC:64:VAL:HG13	2.02	0.42
41:DH:84:ARG:HG3	41:DH:136:GLU:HG2	2.00	0.42
48:DO:21:ASP:OD2	48:DO:24:SER:HB3	2.19	0.42
48:DO:63:ARG:O	48:DO:67:LEU:HB2	2.19	0.42
57:DZ:96:ARG:HB2	57:DZ:96:ARG:NH1	2.34	0.42
57:DZ:168:ILE:HB	57:DZ:176:GLY:CA	2.50	0.42
57:DZ:180:VAL:HG23	57:DZ:216:LEU:HD22	2.01	0.42
1:AA:20:C:OP1	18:AU:22:LYS:HE2	2.20	0.42
1:AA:127:C:H2'	1:AA:128:C:C6	2.54	0.42
1:AA:173:C:H2'	1:AA:174:U:H6	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:311:C:H2'	1:AA:312:C:C6	2.53	0.42
1:AA:585:U:C4	1:AA:2058:C:O4'	2.73	0.42
1:AA:1127:U:O3'	10:AL:117:THR:HB	2.20	0.42
1:AA:1731:C:H2'	1:AA:1732:C:C6	2.55	0.42
1:AA:1748:A:C2'	1:AA:1749:G:H5'	2.50	0.42
1:AA:1828:C:C4	1:AA:1829:U:C5	3.07	0.42
1:AA:2216:G:H2'	1:AA:2217:C:O4'	2.19	0.42
1:AA:2330:G:H8	1:AA:2330:G:O5'	2.02	0.42
1:AA:2864:G:C2	1:AA:2865:C:C2	3.07	0.42
1:AA:2882:G:O2'	1:AA:2883:A:H5'	2.19	0.42
3:AC:195:ARG:HG3	3:AC:195:ARG:HH11	1.83	0.42
4:AD:13:ARG:HA	4:AD:16:MET:HE3	2.02	0.42
4:AD:213:ARG:HD2	4:AD:217:ARG:O	2.20	0.42
7:AG:142:PRO:HG2	7:AG:143:GLU:OE1	2.19	0.42
10:AL:5:VAL:HG12	10:AL:60:TYR:HA	2.00	0.42
10:AL:37:PHE:O	10:AL:41:PHE:HB3	2.18	0.42
12:AO:49:ARG:HH22	34:BA:1423:G:P	2.32	0.42
18:AU:109:LEU:HD23	18:AU:109:LEU:HA	1.68	0.42
21:AX:61:GLY:HA3	21:AX:73:ARG:O	2.20	0.42
22:AY:23:ARG:HG2	22:AY:42:VAL:HG22	2.00	0.42
23:AZ:18:LEU:HD12	23:AZ:18:LEU:HA	1.88	0.42
23:AZ:128:VAL:HG22	23:AZ:129:SER:N	2.35	0.42
29:A5:36:CYS:HB3	29:A5:49:CYS:HB3	2.02	0.42
34:BA:162:A:H3'	34:BA:163:C:O4'	2.19	0.42
34:BA:168:G:N2	34:BA:169:C:N3	2.67	0.42
34:BA:986:A:H1'	52:BS:54:GLY:O	2.20	0.42
34:BA:1197:G:OP2	63:BA:3311:HOH:O	2.22	0.42
34:BA:1323:G:H2'	34:BA:1324:A:C8	2.55	0.42
34:BA:1385:G:C6	34:BA:1386:G:C5	3.08	0.42
35:BB:87:ARG:CZ	35:BB:233:SER:HB3	2.50	0.42
35:BB:187:LEU:HA	35:BB:201:ILE:HB	2.01	0.42
39:BF:97:PHE:O	51:BR:31:LEU:HD23	2.19	0.42
40:BG:49:ILE:O	40:BG:53:LYS:HB3	2.20	0.42
52:BS:40:ILE:HG13	52:BS:69:HIS:O	2.20	0.42
53:BT:42:GLN:NE2	53:BT:42:GLN:O	2.53	0.42
57:BZ:273:LEU:C	57:BZ:275:ALA:N	2.73	0.42
57:BZ:276:VAL:O	57:BZ:280:LEU:HB2	2.19	0.42
1:CA:319:C:H2'	1:CA:320:A:O4'	2.20	0.42
1:CA:593:G:N2	1:CA:665:C:C2	2.88	0.42
1:CA:1071:G:C5	1:CA:1089:G:C2	3.07	0.42
1:CA:1274:A:N3	1:CA:1297:C:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2050:C:H2'	1:CA:2051:A:O4'	2.19	0.42
1:CA:2677:G:H2'	1:CA:2678:C:H6	1.84	0.42
1:CA:2787:C:H2'	1:CA:2788:C:C6	2.55	0.42
3:CC:195:ARG:HG3	3:CC:195:ARG:NH1	2.35	0.42
4:CD:148:GLU:CB	4:CD:151:LYS:HD2	2.48	0.42
4:CD:275:LYS:HA	4:CD:276:LYS:C	2.40	0.42
5:CE:143:ASN:HD22	5:CE:147:PRO:HD3	1.84	0.42
8:CH:121:ILE:HD13	8:CH:121:ILE:HA	1.91	0.42
13:CP:57:THR:HG23	13:CP:60:MET:HB2	2.00	0.42
17:CT:65:LYS:O	17:CT:71:GLY:HA2	2.20	0.42
17:CT:99:LEU:C	17:CT:101:PHE:N	2.73	0.42
28:C4:59:PHE:HA	28:C4:60:GLN:C	2.40	0.42
29:C5:51:TYR:CE1	29:C5:56:LYS:HD2	2.55	0.42
34:DA:409:G:H2'	34:DA:410:G:O4'	2.19	0.42
34:DA:592:G:C2	34:DA:648:A:C2	3.08	0.42
34:DA:986:A:H1'	52:DS:54:GLY:O	2.20	0.42
35:DB:98:LEU:HB2	35:DB:101:MET:HG3	2.02	0.42
35:DB:142:LEU:HD12	35:DB:142:LEU:HA	1.84	0.42
35:DB:187:LEU:HA	35:DB:201:ILE:HB	2.01	0.42
41:DH:20:TYR:HA	41:DH:65:TYR:CE2	2.54	0.42
42:DI:28:VAL:HA	42:DI:63:ILE:O	2.19	0.42
57:DZ:146:LEU:HG	57:DZ:260:LEU:HD23	2.01	0.42
1:AA:653:G:H2'	1:AA:654:G:C8	2.54	0.42
1:AA:1649:A:H5''	1:AA:1650:C:OP2	2.18	0.42
1:AA:1885:A:N1	1:AA:2109:G:O2'	2.37	0.42
1:AA:2073:A:H4'	5:AE:141:ILE:HG12	2.02	0.42
1:AA:2123:G:H1	1:AA:2210:C:H42	1.66	0.42
1:AA:2226:C:O2	1:AA:2232:G:C2	2.73	0.42
1:AA:2543:A:H5'	8:AH:157:TYR:CE1	2.54	0.42
1:AA:2576:A:H2'	1:AA:2577:A:C8	2.55	0.42
3:AC:11:LEU:HD11	3:AC:35:THR:HG23	2.01	0.42
5:AE:26:ILE:HB	5:AE:182:LEU:HB3	2.02	0.42
14:AQ:35:VAL:O	14:AQ:129:THR:HA	2.19	0.42
16:AS:99:LYS:O	16:AS:102:ALA:HB3	2.19	0.42
26:A2:61:LEU:HA	26:A2:61:LEU:HD23	1.65	0.42
26:A2:70:GLN:H	26:A2:70:GLN:HG3	1.61	0.42
34:BA:159:G:H2'	34:BA:161:A:OP2	2.19	0.42
34:BA:255:G:H1'	50:BQ:16:GLN:NE2	2.31	0.42
34:BA:260:G:H2'	34:BA:261:U:C6	2.54	0.42
34:BA:353:A:H5'	34:BA:353:A:H8	1.84	0.42
34:BA:827:U:H2'	34:BA:870:U:O4	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:858:G:O6	34:BA:869:G:H3'	2.19	0.42
34:BA:929:G:N2	34:BA:1389:C:C2	2.88	0.42
34:BA:981:U:H2'	34:BA:982:U:C5	2.54	0.42
36:BC:122:GLU:O	36:BC:126:ARG:NH1	2.42	0.42
37:BD:108:LEU:HB3	37:BD:110:PHE:HE1	1.85	0.42
39:BF:71:ARG:HG2	39:BF:71:ARG:H	1.36	0.42
39:BF:100:ASN:HB2	51:BR:28:GLU:HA	2.01	0.42
46:BM:4:ILE:O	46:BM:22:ILE:HD11	2.20	0.42
57:BZ:99:ARG:HE	57:BZ:402:ILE:HD13	1.85	0.42
57:BZ:269:VAL:O	57:BZ:272:LEU:HB3	2.20	0.42
1:CA:1280:G:N2	1:CA:1291:C:C2	2.88	0.42
1:CA:1555:G:C2	1:CA:1556:C:C6	3.07	0.42
1:CA:2320:A:H2'	1:CA:2320:A:N3	2.34	0.42
1:CA:2748:A:H2'	1:CA:2749:A:C8	2.55	0.42
1:CA:2893:G:H5''	1:CA:2894:G:O4'	2.19	0.42
2:CB:21:G:H2'	2:CB:22:U:O4'	2.20	0.42
2:CB:89:G:C6	2:CB:90:A:C6	3.07	0.42
4:CD:133:LEU:HD23	4:CD:133:LEU:HA	1.88	0.42
14:CQ:77:LYS:HE3	14:CQ:82:ARG:O	2.20	0.42
14:CQ:85:LYS:NZ	63:CQ:301:HOH:O	2.52	0.42
17:CT:20:PRO:HB2	17:CT:21:GLU:H	1.44	0.42
21:CX:88:LYS:HB2	21:CX:88:LYS:HE2	1.89	0.42
28:C4:45:GLY:O	28:C4:47:GLN:N	2.52	0.42
34:DA:22:G:H4'	34:DA:885:G:C8	2.55	0.42
34:DA:1457:G:H2'	34:DA:1458:G:H8	1.84	0.42
38:DE:11:ILE:HG22	38:DE:31:LEU:HB3	2.01	0.42
38:DE:102:ALA:HB2	38:DE:120:THR:HG21	2.01	0.42
40:DG:92:SER:O	40:DG:95:ARG:N	2.53	0.42
52:DS:41:VAL:HB	52:DS:44:MET:HG3	2.00	0.42
57:DZ:215:LYS:HA	57:DZ:218:GLU:CB	2.50	0.42
1:AA:858:U:C2	1:AA:1297:C:C5	3.08	0.42
1:AA:1358:U:H4'	1:AA:1359:U:O5'	2.20	0.42
1:AA:1522:G:H2'	1:AA:1523:C:H6	1.85	0.42
1:AA:2021:C:H2'	1:AA:2022:G:H8	1.85	0.42
1:AA:2086:C:H2'	1:AA:2087:C:C6	2.54	0.42
1:AA:2556:G:H1'	1:AA:2658:C:C4'	2.50	0.42
3:AC:6:LYS:N	3:AC:9:ARG:HH12	2.17	0.42
4:AD:181:GLU:HG3	4:AD:272:ALA:O	2.20	0.42
5:AE:7:VAL:HG23	5:AE:8:LYS:O	2.19	0.42
7:AG:77:ILE:N	7:AG:82:LEU:O	2.49	0.42
25:A1:70:VAL:O	25:A1:73:LEU:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:A7:23:ARG:O	31:A7:28:ARG:NH1	2.52	0.42
34:BA:323:U:O3'	53:BT:22:ARG:HD3	2.19	0.42
34:BA:396:G:P	57:BZ:349:LYS:NZ	2.93	0.42
34:BA:426:G:C2	34:BA:427:U:C2	3.08	0.42
34:BA:474:G:H2'	34:BA:475:G:C8	2.55	0.42
34:BA:485:G:O2'	34:BA:486:U:OP2	2.35	0.42
34:BA:540:G:H21	37:BD:42:GLN:NE2	2.17	0.42
36:BC:39:ILE:HD12	36:BC:57:ILE:HD13	2.02	0.42
38:BE:100:VAL:O	38:BE:107:ARG:NH2	2.41	0.42
38:BE:122:GLU:OE1	38:BE:131:ILE:HG13	2.20	0.42
44:BK:19:ALA:N	44:BK:81:ASP:O	2.51	0.42
46:BM:81:LEU:O	46:BM:89:GLY:HA3	2.19	0.42
47:BN:4:LYS:O	47:BN:7:ILE:HG12	2.20	0.42
48:BO:24:SER:O	48:BO:28:GLN:HG3	2.20	0.42
57:BZ:271:LEU:HA	57:BZ:274:ASP:HB2	2.01	0.42
1:CA:143:G:C6	1:CA:143(A):C:N4	2.87	0.42
1:CA:583:G:OP2	18:CU:10:ARG:HD2	2.20	0.42
1:CA:742:G:H4'	1:CA:1676:A:H5'	2.02	0.42
1:CA:838:C:H2'	1:CA:839:U:C6	2.55	0.42
1:CA:1217:C:OP1	18:CU:15:LYS:HE3	2.20	0.42
1:CA:1912:A:C8	1:CA:1918:A:C2	3.08	0.42
1:CA:2123:G:N2	1:CA:2176:A:H1'	2.34	0.42
1:CA:2448:A:N6	63:CA:3911:HOH:O	2.50	0.42
1:CA:2723:C:H5''	15:CR:1:MET:HE2	2.01	0.42
2:CB:91:C:O2'	2:CB:92:C:H5'	2.19	0.42
3:CC:48:LEU:CD2	3:CC:59:VAL:HG21	2.50	0.42
3:CC:174:ALA:HA	3:CC:175:PRO:HD3	1.82	0.42
8:CH:149:ARG:HH12	8:CH:154:PRO:HG2	1.84	0.42
13:CP:58:THR:HG21	32:C8:54:GLU:HB3	2.02	0.42
19:CV:30:GLY:H	19:CV:61:VAL:HG13	1.84	0.42
34:DA:232:G:C6	34:DA:233:C:C4	3.08	0.42
34:DA:418:C:H1'	34:DA:540:G:O2'	2.18	0.42
34:DA:630:G:O2'	34:DA:631:G:H5'	2.19	0.42
34:DA:1060:C:OP1	47:DN:45:ARG:NH2	2.48	0.42
34:DA:1179:A:H4'	42:DI:103:THR:HA	2.01	0.42
34:DA:1319:A:H61	34:DA:1361:G:H21	1.66	0.42
38:DE:80:ILE:HD12	38:DE:80:ILE:HA	1.89	0.42
45:DL:96:VAL:H	45:DL:96:VAL:HG23	1.56	0.42
48:DO:24:SER:OG	48:DO:25:THR:N	2.49	0.42
48:DO:54:ARG:O	48:DO:58:MET:HG3	2.20	0.42
52:DS:40:ILE:HB	52:DS:67:VAL:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DX:37:A:H5'	57:DZ:500:GLN:O	2.19	0.42
57:DZ:242:LEU:HD23	57:DZ:242:LEU:HA	1.72	0.42
1:AA:27:G:N2	1:AA:537:G:H1'	2.34	0.42
1:AA:296:U:H2'	1:AA:297:C:H6	1.85	0.42
1:AA:660:C:O5'	1:AA:660:C:H6	2.02	0.42
1:AA:1004:A:H61	14:AQ:83:MET:HE3	1.84	0.42
1:AA:1005:A:C8	1:AA:1007:G:C8	3.08	0.42
1:AA:1338:U:H2'	1:AA:1339:C:H6	1.79	0.42
1:AA:1522:G:H2'	1:AA:1523:C:C6	2.54	0.42
1:AA:1572:G:C2'	1:AA:1573:G:H5'	2.50	0.42
1:AA:2561:G:N7	63:AA:4005:HOH:O	2.37	0.42
1:AA:2824:C:O2'	29:A5:29:THR:HG21	2.20	0.42
3:AC:54:ARG:HE	3:AC:57:GLN:HG2	1.83	0.42
3:AC:225:ILE:O	3:AC:227:PRO:HD3	2.19	0.42
5:AE:60:ASN:CG	5:AE:62:PRO:HD2	2.40	0.42
6:AF:65:TRP:CH2	6:AF:72:ARG:CZ	3.02	0.42
11:AN:14:VAL:HA	11:AN:136:GLU:O	2.20	0.42
11:AN:78:TYR:O	11:AN:79:PRO:C	2.55	0.42
11:AN:91:LEU:O	11:AN:95:PRO:HG3	2.20	0.42
15:AR:70:LEU:HD12	15:AR:76:VAL:HG22	2.02	0.42
34:BA:254:G:OP1	50:BQ:67:LYS:O	2.37	0.42
34:BA:279:A:N6	50:BQ:98:LEU:O	2.52	0.42
34:BA:494:U:O5'	34:BA:494:U:H6	2.03	0.42
34:BA:515:G:N2	34:BA:537:G:C4	2.88	0.42
34:BA:609:A:H2'	34:BA:610:G:H5'	2.02	0.42
34:BA:625:G:H4'	49:BP:16:HIS:CG	2.55	0.42
34:BA:1005:A:H5''	34:BA:1006:C:OP2	2.19	0.42
34:BA:1316:G:N2	34:BA:1319:A:OP2	2.48	0.42
40:BG:14:PRO:HB3	40:BG:19:GLY:C	2.39	0.42
44:BK:103:LEU:HD23	44:BK:103:LEU:HA	1.79	0.42
45:BL:26:ALA:HB3	45:BL:98:TYR:OH	2.20	0.42
49:BP:4:ILE:HG12	49:BP:64:ALA:HB1	2.02	0.42
55:BV:12:A:H4'	55:BV:12:A:OP2	2.19	0.42
1:CA:18:C:H2'	1:CA:19:C:C6	2.55	0.42
1:CA:585:G:H2'	1:CA:1251:C:N4	2.35	0.42
1:CA:784:A:C8	1:CA:792:G:C5	3.08	0.42
1:CA:1221(A):C:C2	1:CA:1229:G:N2	2.87	0.42
1:CA:1359:A:C2	1:CA:1360:A:C8	3.08	0.42
1:CA:1509(A):A:C6	1:CA:1509(B):A:C5	3.08	0.42
1:CA:1816:G:H3'	4:CD:62:TYR:CE1	2.55	0.42
1:CA:1878:G:C6	1:CA:1879:C:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1945:G:C6	1:CA:1946:U:C4	3.07	0.42
3:CC:41:THR:O	3:CC:42:VAL:CB	2.64	0.42
6:CF:129:PHE:HB3	6:CF:132:VAL:HG11	2.02	0.42
9:CK:4:LYS:HA	9:CK:5:ARG:HA	1.59	0.42
23:CZ:166:SER:O	23:CZ:169:GLU:HB3	2.20	0.42
34:DA:343:U:O3'	34:DA:344:A:H8	2.03	0.42
34:DA:523:A:H61	45:DL:53:ARG:NH1	2.17	0.42
34:DA:579:G:H2'	34:DA:580:U:C6	2.54	0.42
34:DA:1418:A:H5''	34:DA:1419:G:OP2	2.20	0.42
38:DE:33:VAL:HG13	38:DE:112:LEU:CD1	2.50	0.42
42:DI:49:PRO:HG2	42:DI:81:ILE:HG23	2.02	0.42
42:DI:106:ALA:O	42:DI:108:VAL:HG23	2.20	0.42
48:DO:3:ILE:H	48:DO:3:ILE:HG12	1.76	0.42
57:DZ:91:THR:O	57:DZ:92:ILE:HG22	2.19	0.42
57:DZ:208:GLN:HA	57:DZ:211:GLU:HB3	2.01	0.42
1:AA:194:G:O2'	1:AA:195:U:P	2.78	0.42
1:AA:231:G:C8	32:A8:5:LYS:HG3	2.55	0.42
1:AA:485:U:H5''	31:A7:40:TRP:CD2	2.55	0.42
1:AA:830:A:C5	1:AA:832:G:H1'	2.55	0.42
1:AA:1049:G:O2'	1:AA:1056:A:N1	2.38	0.42
1:AA:1525:G:O2'	1:AA:1605:A:C2	2.72	0.42
1:AA:1530:G:N2	1:AA:1552:C:C2	2.88	0.42
1:AA:2074:G:C8	5:AE:141:ILE:HD11	2.55	0.42
1:AA:2154:U:H5	3:AC:6:LYS:HE3	1.85	0.42
1:AA:2835:C:H2'	1:AA:2836:A:O4'	2.20	0.42
8:AH:3:ARG:CZ	8:AH:5:GLY:H	2.33	0.42
10:AL:41:PHE:C	10:AL:43:ALA:H	2.22	0.42
14:AQ:10:ARG:CZ	14:AQ:10:ARG:HB2	2.47	0.42
14:AQ:51:ARG:HG3	14:AQ:66:ILE:HD11	2.01	0.42
16:AS:95:HIS:CG	16:AS:96:GLY:N	2.86	0.42
17:AT:16:ARG:HD2	17:AT:18:ASP:OD2	2.20	0.42
17:AT:128:GLU:HG2	17:AT:129:ARG:N	2.35	0.42
23:AZ:111:VAL:O	23:AZ:113:ALA:N	2.53	0.42
23:AZ:150:LEU:HB3	23:AZ:171:ILE:HD11	2.01	0.42
25:A1:7:ILE:HD13	25:A1:7:ILE:HA	1.89	0.42
27:A3:4:LEU:HD23	27:A3:4:LEU:HA	1.71	0.42
34:BA:423:G:H3'	34:BA:423:G:N3	2.35	0.42
34:BA:866:C:C4	34:BA:867:G:H1'	2.55	0.42
38:BE:46:GLY:O	38:BE:54:ALA:HB1	2.20	0.42
52:BS:45:VAL:HG11	52:BS:64:GLU:HG2	2.01	0.42
1:CA:29:U:H2'	1:CA:30:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:450:G:OP1	63:CA:3760:HOH:O	2.22	0.42
1:CA:920:G:O2'	1:CA:921:G:H5'	2.20	0.42
1:CA:1141:U:P	11:CN:25:ARG:HH11	2.42	0.42
1:CA:1359:A:C2	1:CA:1372:U:O4	2.73	0.42
1:CA:1580:A:H5'	1:CA:1581:G:OP2	2.20	0.42
1:CA:2143:C:O2	1:CA:2149:G:N2	2.53	0.42
1:CA:2529:G:O6	33:C9:31:LYS:NZ	2.53	0.42
2:CB:80:U:H2'	2:CB:81:G:H8	1.84	0.42
3:CC:42:VAL:O	3:CC:216:THR:C	2.59	0.42
7:CG:41:GLN:HG2	7:CG:155:MET:HB3	2.02	0.42
12:CO:43:VAL:HG21	12:CO:56:ASP:HB2	2.01	0.42
20:CW:84:ARG:HG3	20:CW:98:LYS:HD2	2.00	0.42
34:DA:298:A:C6	34:DA:299:G:C2	3.08	0.42
34:DA:377:G:OP1	49:DP:3:LYS:HD2	2.19	0.42
34:DA:584:G:O6	63:DA:1811:HOH:O	2.21	0.42
34:DA:659:U:H2'	34:DA:660:G:O4'	2.20	0.42
35:DB:19:HIS:CD2	35:DB:204:ASN:HD21	2.37	0.42
36:DC:43:LEU:O	36:DC:47:LEU:HB2	2.20	0.42
37:DD:129:ASN:HD21	37:DD:145:GLU:H	1.67	0.42
38:DE:151:LEU:H	38:DE:151:LEU:HG	1.68	0.42
39:DF:97:PHE:O	51:DR:31:LEU:HB2	2.19	0.42
42:DI:128:ARG:NH1	56:DX:35:A:OP1	2.53	0.42
47:DN:58:LYS:HB3	47:DN:58:LYS:HE2	1.88	0.42
50:DQ:65:ILE:HD11	50:DQ:72:ARG:HD2	2.02	0.42
56:DX:67:C:H2'	56:DX:68:C:H5'	2.02	0.42
57:DZ:69:VAL:HG12	57:DZ:327:PHE:CD1	2.55	0.42
57:DZ:129:LYS:O	57:DZ:131:PRO:HD3	2.20	0.42
57:DZ:317:MET:O	57:DZ:319:ASP:N	2.53	0.42
1:AA:309:C:H2'	1:AA:310:C:H6	1.85	0.41
1:AA:624:C:O2'	1:AA:628:C:H5''	2.20	0.41
1:AA:864:C:H4'	1:AA:977:G:C6	2.55	0.41
1:AA:1520:G:C5	1:AA:1521:C:C5	3.08	0.41
1:AA:1671:C:H2'	1:AA:1672:G:O4'	2.20	0.41
1:AA:1751:G:O2'	1:AA:1752:G:H5'	2.20	0.41
1:AA:2470:G:H1'	1:AA:2471:A:N7	2.34	0.41
1:AA:2724:U:OP1	1:AA:2727:G:H4'	2.20	0.41
4:AD:248:SER:HB3	4:AD:252:TRP:CZ3	2.55	0.41
5:AE:80:GLU:C	5:AE:81:ILE:HD12	2.41	0.41
6:AF:141:ALA:O	6:AF:142:TRP:C	2.58	0.41
8:AH:121:ILE:HD13	8:AH:121:ILE:HA	1.88	0.41
8:AH:125:VAL:HG12	8:AH:127:GLU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AK:126:ALA:O	9:AK:130:THR:N	2.53	0.41
11:AN:4:TYR:CE2	18:AU:100:VAL:HG11	2.54	0.41
34:BA:7:G:H21	38:BE:121:LYS:HG2	1.85	0.41
34:BA:397:A:N6	34:BA:548:G:C8	2.88	0.41
34:BA:409:G:C4	34:BA:410:G:C8	3.08	0.41
34:BA:636:U:H2'	34:BA:637:G:H8	1.85	0.41
34:BA:834:C:C2	34:BA:853:G:C2	3.08	0.41
34:BA:1123:A:H5'	34:BA:1124:G:P	2.60	0.41
34:BA:1312:G:N7	52:BS:2:PRO:HG2	2.34	0.41
35:BB:64:ARG:HE	35:BB:64:ARG:HB2	1.60	0.41
39:BF:10:LEU:HB2	39:BF:59:TYR:HB3	2.02	0.41
42:BI:7:THR:O	42:BI:83:ARG:HD2	2.20	0.41
49:BP:22:THR:OG1	49:BP:23:ASP:N	2.53	0.41
51:BR:58:LEU:HA	51:BR:62:GLU:OE1	2.20	0.41
57:BZ:12:LEU:HD23	57:BZ:283:PRO:HG2	2.02	0.41
57:BZ:201:ILE:HB	57:BZ:206:LEU:HD13	2.01	0.41
1:CA:675:A:H2'	1:CA:676:A:O4'	2.20	0.41
1:CA:881:G:H2'	1:CA:882:G:C8	2.55	0.41
1:CA:1288:U:O4	15:CR:106:GLY:HA3	2.19	0.41
1:CA:1675:C:O5'	1:CA:1675:C:H6	2.03	0.41
1:CA:2176:A:H2'	1:CA:2177:C:C6	2.55	0.41
1:CA:2191:G:C6	1:CA:2192:G:C5	3.08	0.41
1:CA:2537:U:C4	1:CA:2538:C:N4	2.88	0.41
1:CA:2813:A:C2	1:CA:2814:C:C2	3.08	0.41
6:CF:150:GLY:HA2	6:CF:172:TRP:CD2	2.55	0.41
8:CH:9:ILE:HG12	8:CH:69:ARG:HD2	2.01	0.41
24:C0:10:THR:HG22	24:C0:12:ASN:N	2.28	0.41
24:C0:72:ARG:HB3	24:C0:75:LEU:HB2	2.01	0.41
27:C3:20:LYS:HE3	27:C3:20:LYS:HB2	1.63	0.41
34:DA:454:C:H3'	34:DA:455:C:C5	2.55	0.41
34:DA:982:U:H4'	34:DA:983:A:O5'	2.20	0.41
35:DB:71:VAL:HG21	35:DB:164:VAL:HG22	2.02	0.41
37:DD:155:LEU:O	37:DD:159:ARG:HG3	2.19	0.41
44:DK:97:ALA:O	44:DK:101:SER:HB3	2.20	0.41
45:DL:93:LEU:HA	45:DL:94:PRO:HD3	1.88	0.41
48:DO:61:GLY:O	48:DO:64:ARG:HB3	2.20	0.41
57:DZ:309:LEU:HB3	57:DZ:391:GLY:H	1.84	0.41
1:AA:485:U:H4'	31:A7:40:TRP:CZ3	2.55	0.41
1:AA:895:G:N9	1:AA:978:A:H8	2.17	0.41
1:AA:1413:A:C5	1:AA:1414:G:H1'	2.55	0.41
1:AA:1537:G:C5	1:AA:1546:G:N2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2375:C:H2'	1:AA:2376:C:C6	2.55	0.41
1:AA:2529:C:C6	1:AA:2554:A:N7	2.88	0.41
1:AA:2699:U:H2'	1:AA:2700:U:O4'	2.20	0.41
3:AC:42:VAL:O	3:AC:216:THR:C	2.59	0.41
3:AC:48:LEU:CD2	3:AC:59:VAL:HG21	2.50	0.41
3:AC:60:ARG:NH2	3:AC:165:ARG:HH21	2.18	0.41
3:AC:167:ASP:OD1	3:AC:169:THR:OG1	2.38	0.41
4:AD:20:ASP:O	4:AD:22:SER:N	2.53	0.41
4:AD:142:VAL:HG13	4:AD:191:ALA:HB1	2.02	0.41
5:AE:7:VAL:HG12	5:AE:51:PHE:HE2	1.85	0.41
6:AF:95:ARG:HH11	6:AF:95:ARG:HD2	1.64	0.41
10:AL:119:ASP:OD1	10:AL:121:GLU:N	2.52	0.41
19:AV:60:GLU:HB2	19:AV:97:LYS:HE2	2.02	0.41
19:AV:66:ARG:HH11	19:AV:66:ARG:HD3	1.72	0.41
21:AX:64:LYS:HA	21:AX:64:LYS:HD2	1.67	0.41
24:A0:36:ILE:N	24:A0:36:ILE:HD13	2.34	0.41
28:A4:57:GLU:HA	28:A4:58:ARG:HA	1.63	0.41
34:BA:133:U:H1'	34:BA:230:G:N2	2.35	0.41
34:BA:134:A:H1'	34:BA:325:A:C5	2.54	0.41
34:BA:351:G:H4'	34:BA:352:C:OP1	2.20	0.41
34:BA:402:G:O2'	34:BA:620:C:N3	2.52	0.41
34:BA:662:G:O2'	34:BA:836:G:H5'	2.19	0.41
34:BA:853:G:C6	34:BA:854:G:N7	2.88	0.41
34:BA:853:G:C5	34:BA:854:G:C8	3.08	0.41
34:BA:1188:A:H8	34:BA:1188:A:O5'	2.02	0.41
34:BA:1273:G:H3'	34:BA:1274:G:H8	1.85	0.41
34:BA:1311:G:H1	34:BA:1326:C:H42	1.68	0.41
34:BA:1356:G:H2'	34:BA:1357:A:C8	2.55	0.41
35:BB:96:ARG:HB2	35:BB:148:TYR:HE1	1.84	0.41
35:BB:156:LYS:HE2	35:BB:156:LYS:HB3	1.85	0.41
37:BD:78:LEU:HD23	37:BD:78:LEU:HA	1.80	0.41
53:BT:71:THR:HG22	53:BT:72:LEU:N	2.35	0.41
57:BZ:-18:ALA:O	57:BZ:-14:ALA:HB3	2.20	0.41
57:BZ:94:VAL:HG11	57:BZ:121:VAL:CG2	2.49	0.41
57:BZ:297:GLU:O	57:BZ:297:GLU:HG3	2.19	0.41
1:CA:245:G:O5'	13:CP:73:GLY:HA2	2.20	0.41
1:CA:518:G:H4'	20:CW:18:ARG:NH1	2.35	0.41
1:CA:2360:A:H2'	1:CA:2361:A:O4'	2.19	0.41
1:CA:2488:A:H8	1:CA:2488:A:O5'	2.03	0.41
1:CA:2658:C:O3'	8:CH:158:HIS:CE1	2.69	0.41
1:CA:2833:G:H4'	1:CA:2834:G:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:96:PHE:O	5:CE:175:VAL:HG11	2.20	0.41
13:CP:39:LYS:HG2	13:CP:39:LYS:O	2.19	0.41
23:CZ:153:SER:HA	23:CZ:167:PRO:HB3	2.01	0.41
27:C3:8:LEU:HD23	27:C3:8:LEU:HA	1.67	0.41
34:DA:127:G:N1	34:DA:128:G:C5	2.88	0.41
34:DA:144:G:H2'	34:DA:145:G:C8	2.54	0.41
34:DA:853:G:C4	34:DA:854:G:C8	3.08	0.41
34:DA:1173:G:H2'	34:DA:1174:G:H8	1.83	0.41
35:DB:155:LEU:HD22	35:DB:157:ARG:O	2.21	0.41
40:DG:26:PHE:CE1	40:DG:30:ILE:HD11	2.55	0.41
42:DI:46:ALA:HA	42:DI:78:LYS:HB2	2.02	0.41
49:DP:4:ILE:HB	49:DP:66:PRO:HA	2.01	0.41
49:DP:49:LEU:HD12	49:DP:50:LYS:N	2.35	0.41
53:DT:53:LEU:HA	53:DT:53:LEU:HD23	1.90	0.41
57:DZ:74:TRP:CH2	57:DZ:270:GLN:HG2	2.55	0.41
57:DZ:170:ARG:HH11	57:DZ:170:ARG:CG	2.34	0.41
57:DZ:251:ILE:HG21	57:DZ:285:ASP:HB3	2.02	0.41
57:DZ:290:LYS:HB2	57:DZ:291:GLY:H	1.53	0.41
1:AA:185:A:O5'	13:AP:46:LYS:NZ	2.45	0.41
1:AA:402:C:H2'	1:AA:403:C:C6	2.55	0.41
1:AA:668:A:O2'	1:AA:669:A:H5'	2.20	0.41
1:AA:902:G:H2'	1:AA:903:C:O4'	2.19	0.41
1:AA:1135:G:OP2	1:AA:1135:G:H2'	2.20	0.41
1:AA:1304:C:H2'	1:AA:1305:G:O4'	2.20	0.41
1:AA:1310:G:H8	1:AA:1310:G:O5'	2.03	0.41
1:AA:1541:A:H2'	1:AA:1542:A:C8	2.54	0.41
1:AA:1553:A:O2'	1:AA:1554:A:C8	2.73	0.41
1:AA:1932:G:O2'	1:AA:1933:U:H5'	2.20	0.41
1:AA:2099:A:H2'	1:AA:2100:C:C6	2.55	0.41
1:AA:2754:A:H2'	1:AA:2755:C:O4'	2.20	0.41
1:AA:2820:A:O3'	5:AE:61:ARG:HB2	2.20	0.41
1:AA:2855:G:O2'	1:AA:2856:G:H5'	2.21	0.41
1:AA:2897:U:H2'	1:AA:2898:C:H6	1.83	0.41
63:AA:3919:HOH:O	6:AF:104:LYS:HB2	2.20	0.41
7:AG:75:LYS:HE3	7:AG:77:ILE:HD11	2.02	0.41
8:AH:158:HIS:O	8:AH:160:LYS:N	2.54	0.41
10:AL:51:ALA:HB2	10:AL:76:TYR:CE2	2.55	0.41
14:AQ:38:GLU:HB2	14:AQ:39:PRO:HD2	2.02	0.41
14:AQ:134:ARG:CZ	14:AQ:134:ARG:HB3	2.50	0.41
16:AS:30:ARG:HB2	16:AS:35:ILE:HG13	2.01	0.41
30:A6:11:LEU:HD23	30:A6:11:LEU:HA	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:427:U:H5'	37:BD:41:GLY:HA2	2.00	0.41
34:BA:461:A:C4	34:BA:471:G:C5	3.08	0.41
34:BA:872:A:C2	34:BA:874:G:C6	3.08	0.41
34:BA:1001:A:H2'	34:BA:1001(A):G:C8	2.55	0.41
34:BA:1084:G:C5	34:BA:1085:U:C4	3.08	0.41
34:BA:1279:A:N1	36:BC:26:LYS:NZ	2.63	0.41
34:BA:1370:G:C2	34:BA:1371:G:C8	3.09	0.41
34:BA:1412:C:H2'	34:BA:1413:A:H8	1.83	0.41
36:BC:6:HIS:HD2	36:BC:8:ILE:H	1.69	0.41
39:BF:97:PHE:HB2	51:BR:32:ARG:NH1	2.32	0.41
41:BH:96:GLY:O	41:BH:100:ILE:HG13	2.20	0.41
43:BJ:55:LYS:O	43:BJ:57:LYS:N	2.53	0.41
46:BM:11:ARG:NH1	46:BM:11:ARG:HB3	2.35	0.41
51:BR:32:ARG:HA	51:BR:69:THR:HG21	2.02	0.41
54:BU:5:ASP:O	54:BU:11:GLY:HA3	2.19	0.41
56:BX:75:C:H5''	56:BX:76:A:OP2	2.21	0.41
57:BZ:-55:LEU:HD22	57:BZ:-48:VAL:HG21	2.02	0.41
1:CA:270:A:H1'	1:CA:370:G:C2	2.55	0.41
1:CA:282:A:C8	1:CA:359:A:C6	3.08	0.41
1:CA:693:C:H1'	1:CA:1354:A:H1'	2.02	0.41
1:CA:848:G:C4	1:CA:933:A:C8	3.08	0.41
1:CA:1604:C:OP1	63:CA:3761:HOH:O	2.22	0.41
1:CA:1902:C:H2'	1:CA:1903:G:O4'	2.20	0.41
1:CA:2074:U:H2'	1:CA:2075:U:C6	2.55	0.41
1:CA:2299:G:N1	1:CA:2318:G:N7	2.68	0.41
2:CB:8:U:OP1	16:CS:15:ARG:NH2	2.42	0.41
4:CD:3:VAL:HG13	4:CD:17:THR:HB	2.01	0.41
4:CD:26:LYS:HE2	4:CD:28:GLU:O	2.20	0.41
7:CG:41:GLN:NE2	7:CG:153:ARG:HB3	2.34	0.41
8:CH:10:PRO:HA	8:CH:49:VAL:HG23	2.02	0.41
9:CK:49:ALA:N	9:CK:90:ALA:HB1	2.35	0.41
18:CU:14:HIS:CD2	18:CU:32:PHE:CE1	3.09	0.41
23:CZ:55:HIS:CE1	23:CZ:135:GLU:HB3	2.55	0.41
25:C1:83:GLU:HA	25:C1:84:GLY:HA2	1.64	0.41
33:C9:25:VAL:HB	33:C9:34:GLN:HB2	2.02	0.41
34:DA:954:G:H2'	34:DA:955:U:C6	2.54	0.41
34:DA:1133:G:N2	34:DA:1141:C:O2	2.54	0.41
34:DA:1320:C:H1'	52:DS:73:GLU:HG2	2.02	0.41
36:DC:114:PRO:HA	36:DC:117:ALA:HB3	2.02	0.41
36:DC:137:ALA:HA	36:DC:140:ARG:HH11	1.85	0.41
42:DI:36:TYR:HD2	42:DI:37:PHE:CE2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DJ:47:PHE:CE2	47:DN:37:PHE:HZ	2.38	0.41
44:DK:48:ILE:HD13	44:DK:48:ILE:N	2.36	0.41
44:DK:112:THR:HA	44:DK:113:PRO:HD2	1.92	0.41
46:DM:60:VAL:HG23	46:DM:64:TRP:CZ3	2.55	0.41
48:DO:85:LEU:HB3	48:DO:87:ILE:HG13	2.02	0.41
51:DR:38:GLU:HA	51:DR:41:LYS:NZ	2.35	0.41
53:DT:26:ASN:HB3	53:DT:71:THR:HG23	2.02	0.41
1:AA:323:A:N1	1:AA:346:A:O2'	2.45	0.41
1:AA:360:C:OP1	22:AY:84:ARG:HG2	2.20	0.41
1:AA:789:G:H4'	1:AA:1723:A:H5'	2.03	0.41
1:AA:873:U:H4'	13:AP:55:ARG:HB2	2.02	0.41
1:AA:932:C:N3	1:AA:937:A:N6	2.68	0.41
1:AA:1199:C:H2'	1:AA:1200:G:O4'	2.20	0.41
1:AA:2046:G:H1'	63:AA:4558:HOH:O	2.20	0.41
1:AA:2148:A:N7	1:AA:2185:C:H1'	2.36	0.41
5:AE:93:VAL:HB	5:AE:175:VAL:HG21	2.01	0.41
5:AE:104:VAL:O	5:AE:166:THR:HA	2.20	0.41
8:AH:29:PRO:HD2	8:AH:79:VAL:O	2.20	0.41
10:AL:80:LYS:HB3	10:AL:80:LYS:HE2	1.71	0.41
11:AN:99:LEU:HD23	11:AN:99:LEU:HA	1.81	0.41
14:AQ:18:LYS:HB2	14:AQ:18:LYS:HE3	1.37	0.41
14:AQ:63:LYS:HE2	23:AZ:175:VAL:HG21	2.01	0.41
15:AR:38:VAL:N	15:AR:39:PRO:CD	2.83	0.41
15:AR:96:ARG:CG	15:AR:115:GLU:HG2	2.51	0.41
17:AT:39:ARG:HH12	17:AT:41:ARG:HD3	1.86	0.41
23:AZ:73:GLN:HE21	23:AZ:73:GLN:HB3	1.60	0.41
34:BA:397:A:C6	34:BA:548:G:C8	3.09	0.41
34:BA:564:C:HO2'	41:BH:91:ARG:HH22	1.57	0.41
34:BA:1244:C:C2	34:BA:1294:G:N2	2.88	0.41
34:BA:1318:A:H2'	34:BA:1319:A:H5''	2.03	0.41
34:BA:1429:C:H2'	34:BA:1430:C:H6	1.85	0.41
34:BA:1452:C:O2'	34:BA:1457:G:N7	2.51	0.41
35:BB:122:PHE:CZ	35:BB:139:LYS:HB2	2.55	0.41
37:BD:190:ASP:H	37:BD:193:ASP:HB2	1.85	0.41
38:BE:87:SER:HB3	38:BE:131:ILE:HD13	2.02	0.41
43:BJ:5:ARG:HD3	43:BJ:71:LEU:HD11	2.02	0.41
50:BQ:84:LEU:HA	50:BQ:87:LYS:HB2	2.01	0.41
53:BT:18:GLN:O	53:BT:22:ARG:HG3	2.21	0.41
56:BX:8:4SU:H6	56:BX:8:4SU:O5'	2.20	0.41
56:BX:28:C:C2	56:BX:43:A:C2	3.09	0.41
56:BX:32:5MC:H2'	56:BX:33:U:H6	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:181:LEU:HD22	57:BZ:182:ARG:NH1	2.35	0.41
1:CA:262:A:C2	1:CA:430:G:N3	2.88	0.41
1:CA:1055:G:H5'	1:CA:1056:G:OP2	2.21	0.41
1:CA:1290:C:H2'	1:CA:1291:C:C6	2.56	0.41
1:CA:1316:U:H2'	1:CA:1317:A:C8	2.55	0.41
1:CA:1405:U:H2'	1:CA:1406:U:C6	2.55	0.41
1:CA:1485:G:H2'	1:CA:1486:A:O4'	2.20	0.41
1:CA:2650:U:H2'	1:CA:2651:C:C6	2.56	0.41
1:CA:2858:C:H6	1:CA:2858:C:O5'	2.03	0.41
4:CD:37:LEU:HD12	4:CD:62:TYR:HB2	2.01	0.41
7:CG:39:ILE:HG13	7:CG:157:ILE:HG23	2.02	0.41
14:CQ:52:VAL:HG22	23:CZ:183:LEU:HD11	2.02	0.41
15:CR:16:HIS:O	15:CR:17:ARG:C	2.57	0.41
16:CS:90:GLY:C	16:CS:92:TYR:H	2.23	0.41
23:CZ:158:PRO:O	23:CZ:161:VAL:HG12	2.20	0.41
34:DA:302:G:N3	34:DA:556:C:H4'	2.34	0.41
34:DA:435:C:H2'	34:DA:436:C:H6	1.82	0.41
34:DA:552:U:H5'	45:DL:86:ARG:HE	1.85	0.41
34:DA:728:A:H2'	34:DA:729:A:H8	1.79	0.41
35:DB:100:GLY:O	35:DB:104:ASN:N	2.42	0.41
35:DB:155:LEU:CD1	35:DB:159:PRO:HD3	2.49	0.41
37:DD:19:LEU:O	37:DD:21:LEU:N	2.51	0.41
1:AA:1717:C:H6	1:AA:1717:C:O5'	2.04	0.41
1:AA:1756:U:H1'	1:AA:2870:A:N3	2.35	0.41
1:AA:2227:G:HO2'	1:AA:2228:G:P	2.44	0.41
1:AA:2383:G:H1'	30:A6:39:TYR:CE1	2.56	0.41
1:AA:2574:U:H1'	12:AO:23:ARG:NH1	2.36	0.41
1:AA:2807:C:H42	1:AA:2813:G:H1	1.69	0.41
3:AC:11:LEU:HD22	3:AC:11:LEU:H	1.86	0.41
9:AK:88:ALA:C	9:AK:90:ALA:H	2.23	0.41
23:AZ:139:VAL:HG22	23:AZ:155:LEU:HD12	2.02	0.41
34:BA:298:A:H2'	34:BA:299:G:O4'	2.21	0.41
34:BA:939:G:C6	34:BA:940:C:C4	3.09	0.41
34:BA:1129:C:O2'	34:BA:1139:G:N7	2.37	0.41
34:BA:1412:C:C2	34:BA:1489:G:N2	2.88	0.41
34:BA:1460:A:H5''	34:BA:1461:G:OP2	2.20	0.41
40:BG:69:VAL:HG12	40:BG:69:VAL:O	2.20	0.41
48:BO:84:LYS:HD3	48:BO:84:LYS:O	2.20	0.41
57:BZ:125:ALA:HB1	57:BZ:132:ARG:HH21	1.85	0.41
57:BZ:129:LYS:HD2	57:BZ:253:LEU:HD22	2.03	0.41
57:BZ:349:LYS:HG2	57:BZ:350:GLU:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:118:A:C8	1:CA:119:A:C8	3.09	0.41
1:CA:414:C:H4'	1:CA:1879:C:O2	2.19	0.41
1:CA:673:C:H5''	6:CF:81:PRO:HD2	2.03	0.41
1:CA:838:C:H2'	1:CA:839:U:H6	1.85	0.41
1:CA:2064:C:O2	1:CA:2450:A:C6	2.73	0.41
1:CA:2507:C:H1'	1:CA:2583:G:N2	2.35	0.41
1:CA:2838:G:C6	1:CA:2839:G:C5	3.09	0.41
4:CD:227:ASN:O	4:CD:228:PRO:C	2.58	0.41
6:CF:108:LYS:HE3	6:CF:108:LYS:HB2	1.93	0.41
7:CG:39:ILE:HG23	7:CG:157:ILE:HG12	2.03	0.41
7:CG:136:ARG:NH1	7:CG:137:GLU:H	2.11	0.41
12:CO:48:PRO:HB3	34:DA:1422:G:H5'	2.02	0.41
15:CR:38:VAL:HG23	15:CR:110:PRO:O	2.20	0.41
15:CR:67:LEU:CD1	15:CR:76:VAL:HG21	2.50	0.41
23:CZ:46:LYS:HE3	23:CZ:46:LYS:HB2	1.95	0.41
23:CZ:61:LEU:HB2	23:CZ:65:GLN:HB3	2.03	0.41
23:CZ:85:HIS:HE1	23:CZ:87:ASP:OD2	2.03	0.41
24:C0:82:ARG:HA	24:C0:83:PRO:HD3	1.86	0.41
28:C4:8:LYS:O	28:C4:27:THR:HA	2.21	0.41
34:DA:130:A:C8	50:DQ:63:ARG:HG3	2.54	0.41
34:DA:451:A:H61	34:DA:480:U:H2'	1.85	0.41
34:DA:832:C:N4	34:DA:833:U:C4	2.88	0.41
34:DA:1531:A:N7	34:DA:1532:U:C4	2.89	0.41
35:DB:204:ASN:OD1	35:DB:205:ASP:N	2.54	0.41
38:DE:41:VAL:HG22	38:DE:113:ALA:HB2	2.01	0.41
40:DG:126:ASP:HB3	40:DG:131:LYS:HB3	2.01	0.41
41:DH:85:ARG:NH2	41:DH:134:ILE:HG23	2.32	0.41
43:DJ:52:GLY:HA2	43:DJ:53:PRO:HD3	1.88	0.41
47:DN:22:THR:HB	47:DN:33:VAL:HB	2.01	0.41
55:DV:17:U:O2	57:DZ:502:GLY:O	2.37	0.41
57:DZ:170:ARG:HA	57:DZ:170:ARG:HD3	1.49	0.41
1:AA:160:G:O2'	1:AA:161:C:H5'	2.19	0.41
1:AA:332:G:C8	1:AA:526:A:O4'	2.73	0.41
1:AA:753:A:H2'	1:AA:754:G:O4'	2.20	0.41
1:AA:1038:C:OP1	19:AV:74:LYS:NZ	2.43	0.41
1:AA:1109:G:H2'	1:AA:1110:C:O4'	2.21	0.41
1:AA:1386:U:OP1	21:AX:16:LYS:NZ	2.52	0.41
1:AA:1857:G:H2'	1:AA:1858:C:O4'	2.21	0.41
1:AA:2562:G:C2	1:AA:2571:C:O2	2.73	0.41
6:AF:64:ILE:HG13	6:AF:65:TRP:N	2.35	0.41
8:AH:35:VAL:O	8:AH:37:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AP:135:LEU:HD23	13:AP:135:LEU:HA	1.88	0.41
14:AQ:139:GLU:H	14:AQ:139:GLU:HG3	1.26	0.41
34:BA:120:A:C6	34:BA:122:G:C2	3.09	0.41
34:BA:224:C:OP1	53:BT:74:LYS:HE2	2.21	0.41
34:BA:341:C:O2'	34:BA:342:C:H5'	2.21	0.41
34:BA:407:G:O2'	37:BD:116:GLN:HA	2.20	0.41
34:BA:427:U:OP1	37:BD:13:ARG:NH2	2.54	0.41
34:BA:435:C:O5'	34:BA:435:C:H6	2.03	0.41
34:BA:581:G:N2	34:BA:582:U:C4	2.89	0.41
34:BA:667:G:O2'	48:BO:49:ASP:OD1	2.29	0.41
35:BB:15:VAL:HB	35:BB:209:ARG:HD3	2.02	0.41
35:BB:28:PHE:CD1	35:BB:190:THR:HA	2.56	0.41
35:BB:149:LEU:HD23	35:BB:149:LEU:HA	1.76	0.41
38:BE:98:THR:HB	38:BE:99:GLY:H	1.58	0.41
41:BH:134:ILE:HG12	41:BH:134:ILE:H	1.67	0.41
48:BO:55:GLY:HA2	48:BO:58:MET:HE2	2.01	0.41
53:BT:63:ILE:HG22	53:BT:77:ALA:HB1	2.03	0.41
53:BT:100:ILE:HD13	53:BT:100:ILE:H	1.85	0.41
57:BZ:137:ASN:OD1	57:BZ:138:LYS:N	2.51	0.41
57:BZ:160:ARG:HE	57:BZ:255:ILE:N	2.18	0.41
57:BZ:165:GLN:HA	57:BZ:178:ILE:O	2.21	0.41
57:BZ:181:LEU:HD23	57:BZ:182:ARG:CG	2.50	0.41
1:CA:719:C:H2'	1:CA:720:C:C6	2.56	0.41
1:CA:1163:G:C2'	1:CA:1164:G:H5'	2.50	0.41
1:CA:1355:G:H8	1:CA:1355:G:O5'	2.04	0.41
1:CA:1570:A:H2'	1:CA:1571:A:C8	2.55	0.41
1:CA:1638:C:H2'	1:CA:1639:U:O4'	2.21	0.41
1:CA:2123:G:H21	3:CC:45:HIS:CE1	2.29	0.41
1:CA:2594:C:N3	1:CA:2600:A:C2	2.89	0.41
4:CD:36:PRO:HA	4:CD:61:LEU:HD12	2.02	0.41
6:CF:148:LEU:HD22	6:CF:191:ARG:HD2	2.03	0.41
11:CN:20:GLY:HA2	11:CN:61:ARG:CZ	2.51	0.41
12:CO:71:ARG:NH2	12:CO:104:ARG:HB3	2.36	0.41
15:CR:8:ARG:O	15:CR:17:ARG:HD3	2.20	0.41
34:DA:902:G:C2	34:DA:903:G:C8	3.09	0.41
34:DA:1357:A:HO2'	47:DN:34:TYR:HE2	1.66	0.41
35:DB:115:LEU:O	35:DB:119:GLU:N	2.51	0.41
35:DB:216:SER:C	35:DB:218:ALA:H	2.23	0.41
39:DF:72:VAL:O	39:DF:75:LEU:HB3	2.21	0.41
48:DO:54:ARG:CG	48:DO:58:MET:HE2	2.50	0.41
57:DZ:127:LYS:HG2	57:DZ:128:TYR:CE2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DZ:145:ASP:OD2	57:DZ:145:ASP:C	2.59	0.41
57:DZ:203:GLU:O	57:DZ:206:LEU:HB3	2.19	0.41
57:DZ:216:LEU:O	57:DZ:219:VAL:HG12	2.20	0.41
1:AA:504:A:C6	1:AA:506:A:C6	3.09	0.41
1:AA:1275:G:H2'	1:AA:1276:C:C6	2.56	0.41
1:AA:1438:A:C6	1:AA:1439:A:C6	3.09	0.41
1:AA:1711:A:H2	12:AO:1:MET:HE1	1.85	0.41
1:AA:2422:G:H2'	1:AA:2423:A:O4'	2.20	0.41
1:AA:2433:G:H5''	1:AA:2434:A:OP2	2.20	0.41
1:AA:2521:G:C2'	1:AA:2522:C:H5'	2.51	0.41
1:AA:2599:A:N6	1:AA:2620:G:O2'	2.53	0.41
3:AC:194:ILE:CD1	3:AC:227:PRO:CB	2.99	0.41
8:AH:143:GLN:HG3	8:AH:147:ASN:HD21	1.85	0.41
15:AR:53:HIS:O	15:AR:56:LYS:HB2	2.21	0.41
23:AZ:157:LEU:HD23	23:AZ:157:LEU:HA	1.90	0.41
28:A4:3:GLU:O	28:A4:5:ILE:N	2.54	0.41
34:BA:374:A:C4	34:BA:375:U:C5	3.08	0.41
34:BA:614:A:C2	34:BA:627:G:C2	3.09	0.41
34:BA:731:G:OP1	34:BA:766:A:H1'	2.20	0.41
34:BA:872:A:C4	34:BA:874:G:C8	3.09	0.41
34:BA:1183:A:HO2'	34:BA:1184:G:P	2.43	0.41
34:BA:1248:A:C2	42:BI:70:LYS:HE2	2.55	0.41
34:BA:1433:A:C4	34:BA:1468:A:C2	3.09	0.41
36:BC:155:GLY:O	36:BC:157:ILE:HD12	2.20	0.41
47:BN:25:VAL:HG22	47:BN:38:GLY:O	2.19	0.41
52:BS:40:ILE:HG12	52:BS:71:LEU:HD12	2.03	0.41
56:BX:64:G:H2'	56:BX:65:C:C6	2.55	0.41
57:BZ:71:THR:HG22	57:BZ:80:ASN:OD1	2.20	0.41
57:BZ:127:LYS:HD3	57:BZ:128:TYR:CE2	2.55	0.41
1:CA:77:C:O2'	26:C2:14:ARG:NH2	2.50	0.41
1:CA:458:G:H8	31:C7:37:LYS:O	2.04	0.41
1:CA:534:U:H2'	1:CA:535:C:C6	2.56	0.41
1:CA:858:U:O2	1:CA:2268:A:H2'	2.21	0.41
1:CA:863:A:C2	1:CA:864:G:C4	3.09	0.41
1:CA:921:G:C6	1:CA:922:U:N3	2.89	0.41
1:CA:1055:G:H3'	1:CA:1056:G:C8	2.55	0.41
1:CA:1226:A:P	19:CV:84:LYS:HE2	2.60	0.41
1:CA:1355:G:P	4:CD:38:LYS:HE2	2.61	0.41
1:CA:1484:G:C6	1:CA:1485:G:C5	3.08	0.41
1:CA:2371:G:C2	1:CA:2372:G:C8	3.08	0.41
1:CA:2491:U:H1'	1:CA:2569:G:O3'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2627:G:N2	1:CA:2777:G:OP2	2.53	0.41
1:CA:2723:C:P	5:CE:109:LYS:NZ	2.93	0.41
4:CD:106:ILE:HD12	4:CD:106:ILE:HG21	1.87	0.41
6:CF:148:LEU:HD13	6:CF:154:VAL:HG21	2.02	0.41
8:CH:71:LEU:HD12	8:CH:71:LEU:HA	1.83	0.41
18:CU:83:LEU:HG	18:CU:88:ILE:HB	2.02	0.41
22:CY:73:ARG:HH21	22:CY:83:THR:C	2.24	0.41
23:CZ:108:PRO:HA	23:CZ:142:SER:HA	2.03	0.41
27:C3:4:LEU:HD23	27:C3:4:LEU:HA	1.76	0.41
34:DA:350:G:C6	34:DA:351:G:O6	2.73	0.41
34:DA:391:G:C5	34:DA:392:G:C8	3.09	0.41
34:DA:392:G:C2	34:DA:393:A:C4	3.08	0.41
34:DA:579:G:C5	34:DA:580:U:C5	3.09	0.41
34:DA:855:G:C6	34:DA:856:C:C4	3.09	0.41
34:DA:957:U:O2	34:DA:959:A:C8	2.74	0.41
34:DA:1053:G:H4'	34:DA:1054:C:H5'	2.01	0.41
36:DC:182:ILE:HA	36:DC:202:ILE:O	2.21	0.41
43:DJ:48:THR:OG1	43:DJ:62:HIS:CE1	2.74	0.41
51:DR:58:LEU:HD13	51:DR:58:LEU:HA	1.85	0.41
57:DZ:82:ILE:O	57:DZ:84:THR:HG23	2.21	0.41
57:DZ:185:ALA:HB3	57:DZ:200:PRO:O	2.20	0.41
1:AA:320:C:H2'	1:AA:321:C:H6	1.86	0.41
1:AA:771:U:H2'	1:AA:772:G:O4'	2.21	0.41
1:AA:779:C:H2'	1:AA:780:G:O4'	2.20	0.41
1:AA:791:G:OP1	63:AA:3944:HOH:O	2.22	0.41
1:AA:861:C:H4'	1:AA:1270:C:O2	2.20	0.41
1:AA:874:U:O2	1:AA:2258:G:H4'	2.21	0.41
1:AA:1856:A:OP1	4:AD:249:PRO:HD3	2.21	0.41
1:AA:2372:A:H2'	1:AA:2373:A:O4'	2.21	0.41
1:AA:2859:U:N3	1:AA:2877:G:O4'	2.53	0.41
2:AB:32:C:C2	2:AB:51:G:N2	2.88	0.41
4:AD:35:LYS:HB2	4:AD:36:PRO:HD2	2.01	0.41
4:AD:131:LEU:HB2	4:AD:136:ILE:HD11	2.03	0.41
5:AE:97:LYS:HE2	5:AE:97:LYS:HB3	1.92	0.41
7:AG:34:LEU:HD23	7:AG:161:THR:OG1	2.21	0.41
7:AG:61:ALA:O	28:A4:7:PRO:HG2	2.20	0.41
7:AG:121:ASN:HA	7:AG:122:PRO:HD3	1.85	0.41
8:AH:92:ILE:HD13	8:AH:92:ILE:HA	1.92	0.41
15:AR:16:HIS:O	15:AR:16:HIS:CD2	2.73	0.41
17:AT:27:THR:HB	17:AT:89:VAL:CG2	2.51	0.41
19:AV:91:TYR:CD1	19:AV:91:TYR:C	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:A4:61:ARG:HH21	52:BS:42:PRO:CD	2.34	0.41
34:BA:15:G:C4	34:BA:16:A:C8	3.09	0.41
34:BA:118:U:O4	34:BA:289:G:H4'	2.21	0.41
34:BA:244:U:O4	34:BA:906:G:H1'	2.21	0.41
34:BA:435:C:H2'	34:BA:436:C:C6	2.55	0.41
34:BA:1013:G:N2	34:BA:1016:A:OP2	2.51	0.41
34:BA:1418:A:O5'	34:BA:1418:A:H8	2.04	0.41
34:BA:1470:G:H2'	34:BA:1471:G:O4'	2.21	0.41
34:BA:1480:G:C6	34:BA:1481:U:C4	3.09	0.41
34:BA:1524:C:H2'	34:BA:1525:G:O4'	2.21	0.41
35:BB:186:ALA:N	35:BB:199:TYR:O	2.49	0.41
37:BD:125:HIS:O	37:BD:148:VAL:HG13	2.21	0.41
40:BG:113:GLU:HG3	40:BG:119:ARG:HA	2.02	0.41
53:BT:48:LYS:HA	53:BT:48:LYS:HD3	1.83	0.41
57:BZ:-20:LEU:HD22	57:BZ:-20:LEU:HA	1.85	0.41
57:BZ:6:GLU:C	57:BZ:8:ASP:H	2.24	0.41
57:BZ:180:VAL:O	57:BZ:213:HIS:CD2	2.74	0.41
57:BZ:230:LYS:HD2	57:BZ:235:GLU:CB	2.51	0.41
1:CA:185:U:C2	1:CA:212:G:N2	2.89	0.41
1:CA:309:G:O2'	1:CA:329:G:C8	2.71	0.41
1:CA:321:G:OP2	6:CF:135:LYS:HG3	2.21	0.41
1:CA:918:A:C5	1:CA:919:G:H1'	2.56	0.41
1:CA:950:G:H2'	1:CA:951:C:C6	2.55	0.41
1:CA:960:A:H2'	1:CA:962:G:H5'	2.02	0.41
1:CA:2016:U:C4	1:CA:2017:U:C4	3.09	0.41
1:CA:2206:G:H3'	1:CA:2207:G:N7	2.30	0.41
1:CA:2699:C:H2'	1:CA:2700:C:O4'	2.20	0.41
2:CB:14:U:H5'	2:CB:70:C:O2	2.21	0.41
7:CG:170:ARG:HD3	7:CG:170:ARG:HA	1.78	0.41
8:CH:143:GLN:O	8:CH:146:ALA:HB3	2.21	0.41
13:CP:139:LYS:C	13:CP:141:ALA:H	2.24	0.41
15:CR:28:LEU:HA	15:CR:28:LEU:HD23	1.84	0.41
16:CS:3:ARG:HE	16:CS:4:LEU:N	2.19	0.41
19:CV:72:VAL:O	19:CV:72:VAL:HG22	2.21	0.41
23:CZ:94:GLU:HA	23:CZ:95:PRO:HD2	1.90	0.41
26:C2:19:VAL:HA	26:C2:22:GLU:HG2	2.02	0.41
33:C9:29:ASN:HA	33:C9:30:PRO:HD3	1.88	0.41
34:DA:274:A:N3	34:DA:275:G:H1'	2.36	0.41
34:DA:729:A:H2'	34:DA:730:G:H8	1.85	0.41
34:DA:807:A:H2'	34:DA:808:C:H6	1.83	0.41
34:DA:1008:C:H2'	34:DA:1009:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:1060:C:N3	34:DA:1198:G:N1	2.68	0.41
34:DA:1190:G:OP1	36:DC:5:ILE:N	2.50	0.41
34:DA:1509:C:H2'	34:DA:1510:U:O4'	2.20	0.41
37:DD:15:GLU:HB3	37:DD:63:LYS:HG3	2.03	0.41
41:DH:12:ARG:HH11	41:DH:12:ARG:HD2	1.73	0.41
47:DN:24:CYS:O	47:DN:28:GLY:HA2	2.21	0.41
51:DR:51:LEU:HA	51:DR:51:LEU:HD23	1.82	0.41
57:DZ:140:ASP:HA	57:DZ:171:GLU:O	2.21	0.41
57:DZ:290:LYS:H	57:DZ:290:LYS:HG2	1.61	0.41
1:AA:217:A:OP1	13:AP:76:LYS:NZ	2.50	0.41
1:AA:701:A:H2	1:AA:702:A:C2	2.39	0.41
1:AA:874:U:H5'	1:AA:875:U:H5'	2.03	0.41
1:AA:1088:G:C6	1:AA:1089:C:C4	3.09	0.41
1:AA:1249:A:N1	1:AA:1287:A:N7	2.68	0.41
1:AA:1303:C:OP1	6:AF:75:HIS:NE2	2.42	0.41
1:AA:1553:A:O2'	1:AA:1554:A:O4'	2.39	0.41
1:AA:1558:G:H2'	1:AA:1559:C:O4'	2.21	0.41
1:AA:1785:C:H2'	1:AA:1786:A:O4'	2.21	0.41
1:AA:2105:G:O5'	1:AA:2105:G:H8	2.04	0.41
1:AA:2240:G:C6	1:AA:2241:C:C4	3.09	0.41
1:AA:2724:U:H5	1:AA:2728:C:OP1	2.04	0.41
2:AB:69:G:H2'	2:AB:70:C:C6	2.56	0.41
3:AC:44:VAL:HG23	3:AC:176:VAL:CG2	2.51	0.41
4:AD:24:ILE:HG23	4:AD:83:GLU:HA	2.03	0.41
6:AF:150:GLY:HA2	6:AF:172:TRP:CD2	2.56	0.41
7:AG:6:ALA:HB3	7:AG:104:GLU:OE2	2.21	0.41
8:AH:23:ARG:CZ	8:AH:23:ARG:HB2	2.49	0.41
10:AL:40:ALA:HB3	10:AL:67:PHE:HZ	1.86	0.41
14:AQ:27:VAL:HG11	14:AQ:134:ARG:HG3	2.02	0.41
14:AQ:118:LEU:HB3	14:AQ:131:ILE:HG12	2.03	0.41
23:AZ:30:ASN:O	23:AZ:32:HIS:N	2.54	0.41
23:AZ:94:GLU:H	23:AZ:94:GLU:HG3	1.62	0.41
25:A1:73:LEU:HD12	25:A1:94:LEU:HB3	2.03	0.41
31:A7:33:ARG:HH11	31:A7:33:ARG:HD2	1.63	0.41
32:A8:31:HIS:CD2	32:A8:32:LEU:HD22	2.56	0.41
34:BA:28:G:O2'	34:BA:296:U:OP1	2.26	0.41
34:BA:437:U:O2'	37:BD:125:HIS:CE1	2.74	0.41
34:BA:828:A:OP2	41:BH:21:LYS:NZ	2.53	0.41
34:BA:949:A:H2'	34:BA:950:U:O4'	2.21	0.41
34:BA:1234:C:H2'	34:BA:1235:U:H6	1.82	0.41
34:BA:1396:A:H4'	34:BA:1397:C:O5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BA:1438:G:H2'	34:BA:1439:C:H6	1.85	0.41
35:BB:80:ILE:HD11	35:BB:212:GLN:HA	2.03	0.41
35:BB:139:LYS:O	35:BB:143:GLU:HB2	2.21	0.41
37:BD:10:ARG:HA	37:BD:13:ARG:HG3	2.03	0.41
38:BE:123:LEU:HA	38:BE:123:LEU:HD23	1.70	0.41
39:BF:25:ILE:HD13	39:BF:25:ILE:HA	1.75	0.41
39:BF:38:GLU:HB2	39:BF:64:GLN:HG2	2.01	0.41
41:BH:103:VAL:HG21	41:BH:109:ILE:C	2.41	0.41
43:BJ:70:ARG:HA	43:BJ:70:ARG:HD3	1.87	0.41
45:BL:80:HIS:ND1	57:BZ:425:SER:HA	2.36	0.41
46:BM:11:ARG:HA	46:BM:45:VAL:HB	2.03	0.41
46:BM:15:VAL:HA	46:BM:18:ALA:HB3	2.02	0.41
46:BM:34:LEU:HD13	46:BM:41:PRO:HA	2.03	0.41
48:BO:43:LEU:HD13	48:BO:53:HIS:HD2	1.86	0.41
50:BQ:27:PHE:CE2	50:BQ:36:ILE:HD11	2.56	0.41
51:BR:47:THR:HG23	51:BR:49:LYS:HG3	2.02	0.41
52:BS:27:GLU:HB3	52:BS:28:LYS:HD2	2.02	0.41
53:BT:10:LEU:O	53:BT:13:LEU:HD11	2.21	0.41
57:BZ:-59:PRO:HD3	57:BZ:-52:VAL:HB	2.03	0.41
57:BZ:153:MET:C	57:BZ:155:GLU:N	2.74	0.41
57:BZ:164:MET:SD	57:BZ:257:PRO:HB3	2.61	0.41
57:BZ:213:HIS:ND1	57:BZ:213:HIS:C	2.74	0.41
57:BZ:238:THR:OG1	57:BZ:241:GLU:HG2	2.21	0.41
57:BZ:305:PRO:HA	57:BZ:333:GLY:O	2.21	0.41
1:CA:176:G:O2'	1:CA:177:G:H5'	2.21	0.41
1:CA:251:A:C5	1:CA:252:G:H1'	2.56	0.41
1:CA:466:A:N1	1:CA:795:C:O2'	2.49	0.41
1:CA:620:G:H8	1:CA:622:G:O6	2.04	0.41
1:CA:729:G:C6	4:CD:208:LYS:HB2	2.55	0.41
1:CA:823:G:C6	1:CA:824:A:C6	3.08	0.41
1:CA:953:A:OP2	14:CQ:16:ARG:NE	2.54	0.41
1:CA:1067:A:O2'	57:DZ:633:GLY:HA2	2.21	0.41
1:CA:1102:C:H2'	1:CA:1103:A:H8	1.82	0.41
1:CA:1286:A:C6	1:CA:1289:C:C2	3.09	0.41
1:CA:1289:C:H2'	1:CA:1290:C:C6	2.56	0.41
1:CA:1305:C:C2	1:CA:1624:G:C2	3.09	0.41
1:CA:1309:G:P	31:C7:9:ARG:HD3	2.61	0.41
1:CA:1394:U:H2'	1:CA:1395:A:O4'	2.21	0.41
1:CA:1541:G:H3'	1:CA:1542:A:H2'	2.03	0.41
1:CA:1782:C:H1'	1:CA:2609:U:O4'	2.21	0.41
1:CA:1922:G:H2'	1:CA:1923:U:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:2113:U:H2'	1:CA:2114:A:C8	2.51	0.41
1:CA:2390:U:P	32:C8:35:GLN:HE22	2.44	0.41
2:CB:38:C:H2'	2:CB:39:A:H8	1.85	0.41
3:CC:60:ARG:NH2	3:CC:165:ARG:HH21	2.18	0.41
5:CE:9:VAL:HG13	5:CE:25:VAL:HB	2.03	0.41
6:CF:101:LEU:O	6:CF:106:ARG:HD3	2.21	0.41
7:CG:86:MET:HA	7:CG:87:PRO:HD2	1.79	0.41
8:CH:38:SER:HA	8:CH:39:PRO:HD3	1.85	0.41
8:CH:101:ARG:NH2	8:CH:122:THR:HG23	2.36	0.41
10:CL:16:LYS:HB2	10:CL:16:LYS:HE3	1.78	0.41
10:CL:88:ALA:HB3	10:CL:134:MET:O	2.21	0.41
10:CL:100:THR:HB	10:CL:101:TRP:H	1.72	0.41
11:CN:20:GLY:HA2	11:CN:61:ARG:NE	2.36	0.41
11:CN:23:LEU:HA	11:CN:60:ILE:HD11	2.01	0.41
11:CN:39:ARG:HA	11:CN:40:PRO:HD2	1.94	0.41
14:CQ:1:MET:HB3	14:CQ:48:GLU:HG3	2.03	0.41
14:CQ:41:TRP:HB3	14:CQ:94:VAL:HB	2.02	0.41
19:CV:62:LEU:HB2	19:CV:93:GLU:O	2.21	0.41
23:CZ:180:VAL:O	23:CZ:183:LEU:HB3	2.21	0.41
25:C1:51:VAL:HG13	25:C1:53:VAL:HG23	2.03	0.41
26:C2:51:ARG:O	26:C2:55:ARG:HG3	2.20	0.41
34:DA:34:C:H2'	34:DA:35:G:C8	2.56	0.41
34:DA:41:G:H2'	34:DA:42:G:C8	2.56	0.41
34:DA:149:A:H2'	34:DA:150:C:C6	2.55	0.41
34:DA:356:A:N3	34:DA:368:U:O2'	2.48	0.41
34:DA:491:G:H2'	34:DA:492:G:H8	1.86	0.41
34:DA:502:G:N1	34:DA:503:C:C2	2.89	0.41
34:DA:522:C:H41	45:DL:53:ARG:HH22	1.69	0.41
34:DA:831:U:H2'	34:DA:832:C:H6	1.86	0.41
34:DA:921:U:H2'	34:DA:922:G:O4'	2.20	0.41
34:DA:944:G:N1	34:DA:1338:G:OP2	2.47	0.41
34:DA:977:A:H2'	34:DA:978:A:H5''	2.02	0.41
34:DA:1051:C:H2'	34:DA:1052:U:C6	2.55	0.41
34:DA:1096:C:H2'	34:DA:1097:C:H6	1.85	0.41
34:DA:1121:U:C2'	34:DA:1122:U:H5'	2.51	0.41
34:DA:1344:C:H4'	42:DI:120:ARG:HB3	2.03	0.41
34:DA:1392:G:N2	34:DA:1502:A:H8	2.19	0.41
35:DB:56:ARG:HD2	35:DB:56:ARG:HA	1.73	0.41
35:DB:84:GLU:HA	35:DB:87:ARG:HD3	2.01	0.41
35:DB:178:ARG:NH1	35:DB:196:LEU:O	2.54	0.41
36:DC:19:GLU:HB3	36:DC:40:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:125:GLU:HG2	36:DC:190:ARG:O	2.20	0.41
40:DG:50:ILE:HG22	40:DG:125:MET:HG3	2.03	0.41
40:DG:105:VAL:O	40:DG:108:ALA:HB3	2.20	0.41
46:DM:78:ILE:HG23	46:DM:92:HIS:CD2	2.55	0.41
48:DO:81:LEU:HA	48:DO:81:LEU:HD12	1.85	0.41
55:DV:16:A:C2	55:DV:17:U:C2	3.09	0.41
57:DZ:191:ASP:OD1	57:DZ:267:LYS:NZ	2.52	0.41
57:DZ:215:LYS:HA	57:DZ:218:GLU:HB2	2.02	0.41
1:AA:116:A:H3'	1:AA:117:A:C5'	2.51	0.41
1:AA:407:U:H4'	25:A1:16:ASN:O	2.21	0.41
1:AA:770:G:H2'	1:AA:771:U:O4'	2.21	0.41
1:AA:920:G:N2	1:AA:951:U:C2	2.89	0.41
1:AA:1133:G:C2	1:AA:1149:A:C2	3.09	0.41
1:AA:1188:A:C4	1:AA:1190:G:C8	3.09	0.41
1:AA:1404:G:O2'	1:AA:1405:A:H5''	2.20	0.41
1:AA:1405:A:H61	1:AA:1418:U:H3	1.69	0.41
1:AA:1740:U:O4	1:AA:1998:U:O2'	2.35	0.41
1:AA:1773:C:H2'	1:AA:1774:C:C6	2.56	0.41
1:AA:2154:U:N1	3:AC:6:LYS:HB3	2.36	0.41
1:AA:2347:A:OP1	16:AS:13:ARG:HB2	2.21	0.41
1:AA:2653:G:H5''	1:AA:2653:G:C8	2.55	0.41
1:AA:2804:C:C5	1:AA:2902:G:C5	3.09	0.41
1:AA:2880:C:H5''	15:AR:65:LEU:HD21	2.03	0.41
7:AG:66:GLN:NE2	7:AG:93:THR:O	2.51	0.41
11:AN:87:LEU:O	11:AN:88:GLU:C	2.58	0.41
12:AO:1:MET:HE3	12:AO:32:TYR:CE2	2.57	0.41
12:AO:8:LEU:N	12:AO:8:LEU:HD23	2.36	0.41
14:AQ:32:TYR:CE1	14:AQ:133:ARG:HB2	2.56	0.41
15:AR:100:LEU:HD12	15:AR:100:LEU:HA	1.83	0.41
18:AU:13:LYS:HB3	18:AU:13:LYS:HE3	1.49	0.41
32:A8:50:LEU:HD23	32:A8:50:LEU:HA	1.92	0.41
34:BA:124:G:C5	34:BA:125:U:C4	3.09	0.41
34:BA:368:U:N3	57:BZ:354:ARG:NH1	2.69	0.41
34:BA:403:C:H2'	34:BA:404:U:H6	1.86	0.41
34:BA:657:G:C2	34:BA:750:G:C5	3.08	0.41
34:BA:756:C:H2'	34:BA:757:U:O4'	2.21	0.41
34:BA:785:G:C2'	34:BA:786:G:H5'	2.51	0.41
34:BA:962:C:H42	34:BA:973:G:H1	1.68	0.41
34:BA:1333:A:C8	34:BA:1334:G:C8	3.09	0.41
35:BB:104:ASN:OD1	35:BB:107:THR:OG1	2.39	0.41
35:BB:120:ALA:O	35:BB:121:LEU:HD22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BB:137:ARG:HB3	35:BB:137:ARG:HH11	1.86	0.41
37:BD:176:LEU:HG	37:BD:178:VAL:HG22	2.03	0.41
38:BE:94:ALA:HB2	38:BE:119:LEU:HG	2.01	0.41
41:BH:39:LEU:HD12	41:BH:44:PHE:CB	2.51	0.41
43:BJ:90:LEU:HA	43:BJ:91:PRO:HD3	1.77	0.41
45:BL:44:THR:HA	45:BL:45:PRO:HD3	1.90	0.41
56:BX:23:C:H2'	56:BX:24:U:H6	1.84	0.41
57:BZ:78:ARG:NH1	57:BZ:357:ARG:NH2	2.69	0.41
1:CA:277:C:O2	1:CA:277:C:H2'	2.21	0.41
1:CA:678:C:H2'	1:CA:679:C:C6	2.55	0.41
1:CA:1164:G:H2'	1:CA:1165:U:C6	2.56	0.41
1:CA:1178:C:H2'	1:CA:1179:C:H6	1.86	0.41
1:CA:1958:C:C2'	1:CA:1959:G:H5'	2.50	0.41
1:CA:2031:A:C6	1:CA:2498:C:H1'	2.56	0.41
1:CA:2046:G:H2'	1:CA:2047:U:C6	2.56	0.41
1:CA:2363:C:O2	24:C0:39:ARG:NH2	2.53	0.41
1:CA:2450:A:C2	1:CA:2451:A:C4	3.09	0.41
1:CA:2570:G:C6	1:CA:2571:C:C4	3.09	0.41
1:CA:2685:G:H5'	12:CO:68:GLU:OE1	2.20	0.41
4:CD:68:LYS:C	4:CD:70:TRP:H	2.23	0.41
5:CE:170:LEU:HB3	5:CE:184:VAL:CG2	2.51	0.41
6:CF:140:LEU:O	6:CF:143:ALA:HB3	2.20	0.41
6:CF:200:GLU:O	6:CF:203:GLN:HB2	2.21	0.41
7:CG:98:ARG:H	7:CG:98:ARG:HG3	1.56	0.41
20:CW:86:LEU:HD23	20:CW:88:ARG:HD3	2.03	0.41
23:CZ:153:SER:HB3	23:CZ:167:PRO:O	2.20	0.41
25:C1:80:LEU:HB3	25:C1:82:LEU:HD21	2.03	0.41
34:DA:37:U:O2'	34:DA:38:G:H5'	2.21	0.41
34:DA:173:U:H5''	34:DA:197:A:O4'	2.21	0.41
34:DA:407:G:H1'	37:DD:119:GLN:OE1	2.21	0.41
34:DA:563:A:H2'	34:DA:567:G:C8	2.56	0.41
34:DA:657:G:H4'	48:DO:28:GLN:HG2	2.03	0.41
34:DA:841:U:H6	34:DA:841:U:OP2	2.04	0.41
34:DA:920:U:H2'	34:DA:921:U:H6	1.84	0.41
34:DA:973:G:O2'	47:DN:29:ARG:NH2	2.54	0.41
34:DA:1060:C:C5'	43:DJ:51:ARG:HB3	2.51	0.41
34:DA:1412:C:H2'	34:DA:1413:A:C8	2.56	0.41
36:DC:54:ARG:O	36:DC:69:HIS:ND1	2.50	0.41
46:DM:123:ALA:HB1	57:DZ:507:TYR:CB	2.51	0.41
57:DZ:346:LYS:HZ3	57:DZ:384:ILE:HG12	1.83	0.41
1:AA:484:G:C8	31:A7:37:LYS:HG2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:486:A:H2'	1:AA:487:C:O4'	2.21	0.40
1:AA:856:G:O4'	1:AA:1300:A:H1'	2.21	0.40
1:AA:870:G:C2	1:AA:882:A:C2	3.08	0.40
1:AA:952:G:H2'	1:AA:953:U:O4'	2.22	0.40
1:AA:1091:A:C8	1:AA:1093:G:C2	3.10	0.40
1:AA:1440:U:H4'	1:AA:1649:A:H4'	2.02	0.40
1:AA:1569:U:H6	1:AA:1569:U:O5'	2.04	0.40
1:AA:1685:C:H4'	1:AA:2722:C:O2	2.20	0.40
1:AA:1879:A:H2'	1:AA:1880:G:C8	2.56	0.40
1:AA:2556:G:O2'	1:AA:2557:G:H5'	2.21	0.40
1:AA:2623:U:H2'	29:A5:2:ALA:O	2.22	0.40
4:AD:53:PHE:HB3	4:AD:218:ARG:O	2.21	0.40
4:AD:162:SER:HB3	4:AD:195:ALA:CB	2.51	0.40
6:AF:112:MET:O	6:AF:115:ALA:HB3	2.21	0.40
12:AO:70:LYS:HE2	12:AO:70:LYS:HB3	1.61	0.40
12:AO:71:ARG:NH2	12:AO:77:ILE:HG21	2.36	0.40
16:AS:19:LYS:HG2	16:AS:19:LYS:H	1.74	0.40
16:AS:84:GLN:HG2	16:AS:111:GLU:OE2	2.20	0.40
19:AV:19:LYS:HA	19:AV:94:LEU:O	2.21	0.40
32:A8:44:LYS:O	32:A8:46:ARG:N	2.54	0.40
33:A9:17:ILE:HA	33:A9:17:ILE:HD12	1.78	0.40
34:BA:112:G:O2'	34:BA:354:G:O2'	2.22	0.40
34:BA:200:G:N2	34:BA:218:C:C2	2.89	0.40
34:BA:695:A:H2	34:BA:787:A:H1'	1.86	0.40
34:BA:695:A:H2'	34:BA:696:A:O4'	2.20	0.40
34:BA:987:G:H8	34:BA:987:G:O5'	2.04	0.40
34:BA:1157:A:C6	34:BA:1180:A:C6	3.08	0.40
34:BA:1346:A:N1	34:BA:1374:A:H5''	2.37	0.40
39:BF:8:ILE:HA	39:BF:87:ARG:O	2.21	0.40
46:BM:20:THR:C	46:BM:22:ILE:H	2.24	0.40
46:BM:118:ALA:HB1	56:BX:28:C:H4'	2.03	0.40
49:BP:18:ARG:O	49:BP:20:VAL:HB	2.20	0.40
50:BQ:40:LYS:HD2	50:BQ:42:TYR:CZ	2.55	0.40
56:BX:32:5MC:H2'	56:BX:33:U:C6	2.56	0.40
57:BZ:13:ARG:HH12	57:BZ:247:ARG:NH1	2.14	0.40
57:BZ:122:TRP:CH2	57:BZ:132:ARG:HD3	2.56	0.40
57:BZ:168:ILE:HD13	57:BZ:168:ILE:HG21	1.87	0.40
57:BZ:325:LEU:HD23	57:BZ:325:LEU:HA	1.79	0.40
1:CA:41:C:H2'	1:CA:42:G:O4'	2.21	0.40
1:CA:280:C:H2'	1:CA:281:G:O4'	2.21	0.40
1:CA:510:C:C4	1:CA:511:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:624:C:O2'	1:CA:657:U:OP1	2.32	0.40
1:CA:647:G:H8	1:CA:647:G:O5'	2.04	0.40
1:CA:753:C:H2'	1:CA:754:C:H6	1.87	0.40
1:CA:857:C:H1'	24:C0:26:TYR:CE1	2.56	0.40
1:CA:869:G:H5'	14:CQ:6:ARG:HH21	1.86	0.40
1:CA:1647:G:H3'	1:CA:1647:G:OP2	2.20	0.40
1:CA:1647:G:H3'	1:CA:1647:G:P	2.61	0.40
1:CA:1781:C:H5	31:C7:1:MET:HE1	1.87	0.40
1:CA:2660:A:H5''	1:CA:2661:G:OP2	2.21	0.40
4:CD:103:ARG:HB2	4:CD:104:TYR:H	1.71	0.40
4:CD:108:PRO:HG3	4:CD:143:HIS:CE1	2.56	0.40
5:CE:77:ILE:HA	5:CE:77:ILE:HD12	1.79	0.40
6:CF:64:ILE:HG21	6:CF:78:ILE:CG2	2.51	0.40
9:CK:29:TYR:H	9:CK:83:TYR:CB	2.33	0.40
13:CP:114:ILE:HG13	13:CP:125:VAL:HG21	2.02	0.40
16:CS:36:TYR:HE2	16:CS:54:LEU:HD22	1.85	0.40
20:CW:58:ALA:HB1	20:CW:69:LEU:HD21	2.03	0.40
21:CX:12:VAL:HG21	21:CX:27:THR:HG22	2.02	0.40
23:CZ:67:LEU:HD23	23:CZ:67:LEU:HA	1.96	0.40
24:C0:14:ARG:HH11	24:C0:14:ARG:HD2	1.69	0.40
25:C1:72:GLU:O	25:C1:76:ARG:HG3	2.21	0.40
34:DA:437:U:O2'	37:DD:123:HIS:HD2	2.04	0.40
34:DA:709:G:C4	34:DA:710:G:C8	3.09	0.40
34:DA:815:A:N3	34:DA:1527:C:O2'	2.50	0.40
34:DA:979:C:OP1	34:DA:1223:C:N4	2.54	0.40
34:DA:1061:G:C5	34:DA:1062:U:C5	3.09	0.40
34:DA:1527:C:H2'	34:DA:1528:U:C6	2.56	0.40
38:DE:74:GLY:O	38:DE:115:VAL:HG13	2.20	0.40
39:DF:99:ALA:O	51:DR:28:GLU:HA	2.21	0.40
40:DG:57:GLU:O	40:DG:61:VAL:HG23	2.20	0.40
40:DG:78:ARG:HG2	40:DG:79:ARG:H	1.85	0.40
40:DG:79:ARG:HB2	40:DG:80:VAL:H	1.44	0.40
51:DR:74:ARG:HA	51:DR:79:LEU:O	2.21	0.40
53:DT:12:ALA:HA	53:DT:15:ARG:HB2	2.03	0.40
57:DZ:-41:ALA:O	57:DZ:-36:LEU:HB2	2.21	0.40
1:AA:231:G:N2	1:AA:243:G:H2'	2.37	0.40
1:AA:733:G:H1	31:A7:16:HIS:CD2	2.40	0.40
1:AA:747:G:C6	1:AA:780:G:N2	2.89	0.40
1:AA:861:C:O2'	1:AA:1270:C:N3	2.54	0.40
1:AA:1097:G:C5	1:AA:1098:C:C4	3.10	0.40
1:AA:1240:G:O2'	1:AA:1272:A:N1	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1973:U:H2'	1:AA:1975:A:OP2	2.22	0.40
1:AA:2024:G:OP1	15:AR:9:LYS:HE3	2.20	0.40
1:AA:2225:U:H4'	4:AD:151:LYS:HD3	2.03	0.40
1:AA:2375:C:H2'	1:AA:2376:C:H6	1.86	0.40
1:AA:2486:C:H5''	1:AA:2487:C:OP2	2.21	0.40
1:AA:2653:G:P	11:AN:74:ARG:HE	2.43	0.40
4:AD:242:ARG:HG2	4:AD:246:PRO:HG3	2.03	0.40
6:AF:17:ARG:HG2	6:AF:18:ARG:N	2.36	0.40
6:AF:52:LYS:HA	6:AF:56:GLU:OE2	2.20	0.40
7:AG:111:LEU:HA	7:AG:114:ILE:HG13	2.03	0.40
14:AQ:27:VAL:CG1	14:AQ:134:ARG:HG3	2.51	0.40
18:AU:112:ARG:H	18:AU:112:ARG:HG2	1.47	0.40
19:AV:10:LYS:NZ	19:AV:23:GLU:OE2	2.53	0.40
19:AV:43:GLU:OE1	19:AV:43:GLU:N	2.54	0.40
21:AX:39:ILE:O	21:AX:43:VAL:HG23	2.21	0.40
28:A4:15:ILE:HB	28:A4:32:TYR:CD2	2.57	0.40
34:BA:169:C:O2'	34:BA:170:U:H5'	2.20	0.40
34:BA:502:G:C2	34:BA:503:C:O2	2.74	0.40
34:BA:543:C:C2	34:BA:544:G:C8	3.09	0.40
34:BA:656:C:C2'	48:BO:28:GLN:HE22	2.32	0.40
34:BA:791:G:H2'	34:BA:792:A:H5'	2.02	0.40
34:BA:1168:A:H2'	34:BA:1169:A:O4'	2.20	0.40
34:BA:1252:A:H2'	34:BA:1253:G:O4'	2.21	0.40
34:BA:1255:G:C2	34:BA:1283:G:C2	3.09	0.40
34:BA:1513:A:H2'	34:BA:1514:C:C6	2.57	0.40
35:BB:16:HIS:HB2	35:BB:204:ASN:CB	2.47	0.40
35:BB:172:ILE:HB	35:BB:173:ALA:H	1.61	0.40
35:BB:201:ILE:O	35:BB:203:GLY:N	2.55	0.40
38:BE:91:LEU:HB3	38:BE:118:ILE:HD11	2.02	0.40
42:BI:9:ARG:HD3	42:BI:14:VAL:HG22	2.02	0.40
49:BP:65:GLN:HA	49:BP:66:PRO:HD3	1.85	0.40
50:BQ:29:HIS:HA	50:BQ:30:PRO:HD2	1.82	0.40
53:BT:53:LEU:O	53:BT:57:ARG:N	2.51	0.40
57:BZ:99:ARG:C	57:BZ:101:LEU:H	2.25	0.40
57:BZ:301:ILE:HG22	57:BZ:332:SER:HB3	2.03	0.40
1:CA:262:A:H2'	1:CA:263:C:O4'	2.22	0.40
1:CA:312:G:H4'	1:CA:331:A:N3	2.37	0.40
1:CA:346:A:C5	1:CA:347:A:C8	3.09	0.40
1:CA:637:A:H8	13:CP:117:GLU:HG3	1.86	0.40
1:CA:766:C:C4	1:CA:767:U:C4	3.09	0.40
1:CA:1216:G:C4	1:CA:1217:C:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1255:U:C5	6:CF:73:ALA:HA	2.56	0.40
1:CA:1419:A:N6	1:CA:1494:A:N1	2.62	0.40
1:CA:1465:G:C4	1:CA:1466:G:C8	3.09	0.40
1:CA:1794:U:H2'	1:CA:1795:C:C6	2.56	0.40
1:CA:1859:A:H3'	3:CC:206:LYS:HD2	1.40	0.40
1:CA:2485:G:OP1	14:CQ:46:GLN:NE2	2.38	0.40
1:CA:2544:G:H1'	1:CA:2646:C:H4'	2.04	0.40
1:CA:2854:G:C6	1:CA:2855:C:C4	3.08	0.40
6:CF:94:PRO:O	6:CF:95:ARG:HB3	2.21	0.40
11:CN:13:TRP:CZ2	11:CN:51:PHE:CD2	3.09	0.40
15:CR:51:LEU:CD2	15:CR:66:VAL:HG22	2.52	0.40
18:CU:16:LYS:HB3	18:CU:16:LYS:HE2	1.72	0.40
20:CW:36:LEU:HD23	20:CW:36:LEU:HA	1.87	0.40
20:CW:96:ILE:HD13	20:CW:96:ILE:HG21	1.85	0.40
24:C0:19:LYS:HA	24:C0:19:LYS:HD3	1.80	0.40
34:DA:130:A:O2'	34:DA:131:C:O5'	2.33	0.40
34:DA:407:G:O2'	37:DD:116:GLN:HG3	2.20	0.40
34:DA:483:C:H3'	34:DA:484:G:H2'	2.02	0.40
34:DA:599:C:H2'	34:DA:600:C:C6	2.57	0.40
34:DA:791:G:H2'	34:DA:792:A:H5'	2.03	0.40
34:DA:1166:G:N2	34:DA:1170:A:OP2	2.49	0.40
40:DG:50:ILE:HD11	40:DG:58:PRO:HB3	2.03	0.40
42:DI:9:ARG:H	42:DI:79:LEU:HD23	1.86	0.40
53:DT:53:LEU:HA	53:DT:56:MET:HG2	2.02	0.40
57:DZ:129:LYS:HA	57:DZ:129:LYS:HD3	1.96	0.40
57:DZ:140:ASP:CG	62:DZ:704:GDP:HN21	2.25	0.40
57:DZ:238:THR:HG23	57:DZ:241:GLU:H	1.85	0.40
57:DZ:435:ASP:C	57:DZ:437:THR:H	2.25	0.40
1:AA:8:A:C5	1:AA:9:U:C5	3.10	0.40
1:AA:160:G:N2	1:AA:161:C:C2	2.90	0.40
1:AA:475:A:H2'	1:AA:476:G:C5'	2.52	0.40
1:AA:889:G:H2'	1:AA:890:G:O4'	2.22	0.40
1:AA:1209:G:O2'	1:AA:1210:G:H5'	2.20	0.40
1:AA:1793:A:N1	63:AA:4002:HOH:O	2.37	0.40
1:AA:1870:G:C8	1:AA:1949:A:H1'	2.56	0.40
1:AA:2122:G:C2	1:AA:2212:G:C2	3.09	0.40
5:AE:116:VAL:HG13	5:AE:122:PHE:CG	2.57	0.40
10:AL:90:LYS:HE3	10:AL:90:LYS:HB3	1.89	0.40
17:AT:5:ALA:O	17:AT:6:LEU:C	2.60	0.40
19:AV:4:ILE:HD13	19:AV:4:ILE:HG21	1.79	0.40
23:AZ:144:LEU:HD11	23:AZ:150:LEU:HD22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AZ:171:ILE:HD12	23:AZ:172:ALA:H	1.86	0.40
25:A1:35:THR:HG22	25:A1:35:THR:H	1.68	0.40
30:A6:9:LEU:HD21	30:A6:25:LYS:HB3	2.03	0.40
30:A6:40:CYS:HA	30:A6:41:PRO:HD3	1.82	0.40
31:A7:34:ARG:NH2	63:A7:201:HOH:O	2.46	0.40
34:BA:1379:G:O6	40:BG:2:ALA:HB3	2.21	0.40
35:BB:196:LEU:HD12	35:BB:196:LEU:HA	1.97	0.40
36:BC:121:ALA:HB1	36:BC:189:ALA:HB2	2.03	0.40
37:BD:93:PHE:O	37:BD:97:LEU:N	2.51	0.40
39:BF:62:TRP:CD1	51:BR:35:ARG:CZ	3.04	0.40
40:BG:21:VAL:HG23	40:BG:22:LEU:H	1.85	0.40
40:BG:146:GLU:O	40:BG:149:ARG:HB2	2.21	0.40
41:BH:21:LYS:O	41:BH:63:LEU:HD23	2.21	0.40
50:BQ:32:TYR:O	50:BQ:34:LYS:N	2.52	0.40
52:BS:18:LYS:CE	52:BS:31:ILE:HG23	2.52	0.40
57:BZ:-27:THR:O	57:BZ:-26:GLU:C	2.60	0.40
57:BZ:94:VAL:O	57:BZ:98:MET:HG2	2.21	0.40
57:BZ:110:SER:OG	57:BZ:136:ALA:HB1	2.22	0.40
1:CA:763:G:C4	1:CA:765:G:C8	3.09	0.40
1:CA:866:A:O5'	1:CA:866:A:C8	2.75	0.40
1:CA:1116:C:H2'	1:CA:1117:G:C8	2.50	0.40
1:CA:1505:C:H2'	1:CA:1506:C:C6	2.56	0.40
1:CA:1597:A:H5''	1:CA:1598:C:OP1	2.21	0.40
1:CA:1614:A:H62	20:CW:91:GLY:HA2	1.86	0.40
1:CA:1860:G:C6	1:CA:1883:G:N2	2.90	0.40
1:CA:2113:U:O4	1:CA:2170:A:N6	2.54	0.40
1:CA:2542:A:H4'	1:CA:2543:G:C8	2.54	0.40
1:CA:2854:G:H2'	1:CA:2855:C:C6	2.56	0.40
2:CB:16:G:H1	2:CB:68:C:H42	1.68	0.40
2:CB:16:G:C6	2:CB:69:G:C2	3.10	0.40
3:CC:194:ILE:CD1	3:CC:227:PRO:CB	2.99	0.40
5:CE:141:ILE:HG13	5:CE:150:VAL:CG2	2.52	0.40
6:CF:184:TYR:O	6:CF:188:ARG:HB2	2.21	0.40
8:CH:157:TYR:CE1	8:CH:172:LYS:HG2	2.56	0.40
11:CN:119:ARG:HH11	11:CN:119:ARG:HD3	1.77	0.40
11:CN:120:LEU:HD22	11:CN:122:VAL:HG23	2.03	0.40
14:CQ:16:ARG:NH2	14:CQ:18:LYS:HD3	2.35	0.40
14:CQ:63:LYS:HG2	23:CZ:178:GLU:HG2	2.03	0.40
15:CR:50:HIS:O	15:CR:54:LEU:HD13	2.21	0.40
15:CR:57:ARG:NE	15:CR:59:ASP:OD1	2.30	0.40
18:CU:86:ALA:O	19:CV:49:THR:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CX:92:LEU:C	21:CX:94:GLY:N	2.72	0.40
22:CY:90:LEU:HB2	22:CY:92:ASN:HB3	2.02	0.40
34:DA:1040:U:C2	34:DA:1041:A:C8	3.09	0.40
34:DA:1147:C:HO2'	42:DI:5:TYR:HH	1.69	0.40
34:DA:1168:A:C2	34:DA:1169:A:C4	3.10	0.40
34:DA:1254:C:OP1	43:DJ:45:ARG:HA	2.21	0.40
48:DO:70:LEU:HD23	48:DO:78:TYR:HA	2.02	0.40
57:DZ:280:LEU:HD23	57:DZ:281:PRO:HD2	2.04	0.40
1:AA:83:A:H5''	22:AY:8:LYS:HD2	2.01	0.40
1:AA:774:A:OP1	1:AA:1477:U:O2'	2.38	0.40
1:AA:815:G:H2'	1:AA:816:G:O4'	2.22	0.40
1:AA:866:A:N3	1:AA:1234:A:C2	2.89	0.40
1:AA:950:C:H2'	1:AA:951:U:C6	2.56	0.40
1:AA:1067:A:H61	1:AA:1188:A:H61	1.69	0.40
1:AA:1097:G:C6	1:AA:1098:C:N3	2.90	0.40
1:AA:1331:G:C5	1:AA:1375:U:C4	3.10	0.40
1:AA:1374:G:O2'	1:AA:1375:U:H2'	2.22	0.40
1:AA:1462:G:O2'	1:AA:1463:C:H5	2.04	0.40
1:AA:1790:A:H1'	1:AA:2723:A:C2	2.56	0.40
1:AA:1845:G:OP1	4:AD:40:THR:OG1	2.23	0.40
1:AA:2021:C:H2'	1:AA:2022:G:C8	2.56	0.40
1:AA:2108:U:H2'	1:AA:2109:G:H8	1.86	0.40
1:AA:2119:C:H2'	1:AA:2120:U:C6	2.57	0.40
1:AA:2149:G:N2	1:AA:2195:A:H1'	2.36	0.40
1:AA:2453:C:OP2	1:AA:2598:C:O2'	2.38	0.40
1:AA:2556:G:H2'	1:AA:2557:G:O4'	2.22	0.40
1:AA:2897:U:O5'	1:AA:2897:U:H6	2.05	0.40
11:AN:99:LEU:O	11:AN:103:VAL:HG23	2.21	0.40
13:AP:126:VAL:HG12	13:AP:148:LEU:HD13	2.02	0.40
15:AR:96:ARG:O	15:AR:96:ARG:HG3	2.20	0.40
23:AZ:92:SER:OG	23:AZ:94:GLU:HG3	2.22	0.40
25:A1:80:LEU:HB3	25:A1:82:LEU:HG	2.02	0.40
28:A4:47:GLN:HG2	28:A4:49:PHE:H	1.87	0.40
34:BA:583:A:H2'	34:BA:584:G:O4'	2.22	0.40
34:BA:715:A:H5''	34:BA:805:C:C1'	2.51	0.40
34:BA:1321:C:H6	34:BA:1322:C:H2'	1.86	0.40
34:BA:1438:G:H2'	34:BA:1439:C:C6	2.56	0.40
35:BB:172:ILE:H	35:BB:172:ILE:HG13	1.47	0.40
44:BK:40:ILE:HG23	44:BK:75:TYR:CD2	2.55	0.40
44:BK:79:SER:OG	44:BK:106:LYS:HD2	2.21	0.40
50:BQ:3:LYS:HD2	50:BQ:60:ILE:HD11	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:BZ:236:GLU:HG3	57:BZ:236:GLU:O	2.21	0.40
1:CA:118:A:H3'	1:CA:119:A:C5'	2.51	0.40
1:CA:359:A:H2'	1:CA:360:G:O4'	2.21	0.40
1:CA:428:A:H3'	1:CA:429:A:H8	1.86	0.40
1:CA:433:C:C4	1:CA:434:U:O4	2.75	0.40
1:CA:621:A:H3'	1:CA:622:G:H8	1.86	0.40
1:CA:1142:U:O5'	1:CA:1142:U:H6	2.04	0.40
1:CA:1152:C:H2'	1:CA:1153:C:C6	2.55	0.40
1:CA:1309:G:OP1	31:C7:9:ARG:HD3	2.22	0.40
1:CA:1426:G:H5''	1:CA:1427:A:OP2	2.20	0.40
1:CA:1815:A:OP1	1:CA:1815:A:H8	2.04	0.40
1:CA:2309:A:N6	1:CA:2310:A:C6	2.89	0.40
1:CA:2687:U:H2'	1:CA:2688:U:O4'	2.22	0.40
2:CB:38:C:H2'	2:CB:39:A:C8	2.56	0.40
3:CC:54:ARG:CZ	3:CC:55:SER:O	2.69	0.40
4:CD:159:ALA:HB1	4:CD:198:ASN:O	2.21	0.40
4:CD:222:ARG:O	4:CD:226:MET:HG3	2.20	0.40
5:CE:201:THR:HG23	5:CE:203:LYS:H	1.86	0.40
8:CH:35:VAL:HA	8:CH:36:PRO:HD2	1.81	0.40
15:CR:67:LEU:HD12	15:CR:67:LEU:HA	1.95	0.40
16:CS:10:ARG:O	16:CS:14:VAL:HG22	2.22	0.40
17:CT:64:ARG:NH1	17:CT:103:ARG:HA	2.37	0.40
26:C2:26:ARG:CZ	26:C2:26:ARG:HB2	2.50	0.40
27:C3:34:GLU:O	27:C3:35:ARG:HG3	2.22	0.40
28:C4:16:CYS:SG	28:C4:17:GLY:N	2.95	0.40
34:DA:304:U:H2'	34:DA:305:G:C8	2.56	0.40
34:DA:625:G:OP1	49:DP:9:PHE:HB3	2.21	0.40
34:DA:866:C:C5	34:DA:867:G:H1'	2.56	0.40
34:DA:1135:U:H4'	34:DA:1136:U:H5	1.86	0.40
34:DA:1281:U:H5''	34:DA:1282:C:C5	2.55	0.40
36:DC:11:ARG:HG2	36:DC:178:LEU:HD12	2.03	0.40
45:DL:124:LYS:HA	45:DL:125:PRO:HD3	1.90	0.40
47:DN:15:LYS:HE2	47:DN:15:LYS:HB3	1.88	0.40
1:AA:252:C:H1'	1:AA:457:G:N3	2.36	0.40
1:AA:354:A:C2	1:AA:1255:A:O2'	2.64	0.40
1:AA:776:G:N7	4:AD:209:ALA:HB3	2.37	0.40
1:AA:793:A:H2'	1:AA:2624:C:H5''	2.04	0.40
1:AA:1588:G:H3'	1:AA:1589:A:H2'	2.02	0.40
1:AA:1753:U:OP1	63:AA:3947:HOH:O	2.22	0.40
1:AA:1911:A:H2'	1:AA:1912:A:C8	2.57	0.40
1:AA:2039:U:H5''	1:AA:2040:G:P	2.62	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:2367:C:O3'	24:A0:24:LYS:HE3	2.22	0.40
1:AA:2672:A:C2'	1:AA:2673:G:H5'	2.52	0.40
2:AB:1:U:O2	2:AB:1:U:H2'	2.21	0.40
4:AD:67:PHE:HD1	4:AD:153:ALA:HB3	1.85	0.40
4:AD:223:GLY:HA3	4:AD:231:HIS:NE2	2.36	0.40
5:AE:47:VAL:HB	5:AE:49:LEU:HD13	2.03	0.40
13:AP:49:ARG:HD2	32:A8:60:LEU:HB2	2.04	0.40
14:AQ:135:ASP:N	14:AQ:138:ASP:OD2	2.48	0.40
18:AU:33:ARG:O	18:AU:36:ARG:HB3	2.22	0.40
19:AV:85:LYS:HZ3	19:AV:85:LYS:HG3	1.72	0.40
33:A9:10:ILE:HG22	33:A9:32:HIS:CE1	2.57	0.40
33:A9:18:ARG:NH2	33:A9:21:GLY:HA2	2.37	0.40
34:BA:124:G:H4'	34:BA:291:C:O2'	2.21	0.40
34:BA:153:C:H42	34:BA:168:G:H22	1.69	0.40
34:BA:434:U:H2'	34:BA:435:C:O4'	2.22	0.40
34:BA:641:U:O2'	34:BA:642:A:OP2	2.35	0.40
34:BA:1290:G:C4	34:BA:1291:G:C8	3.10	0.40
37:BD:194:LEU:HD12	37:BD:195:ALA:N	2.32	0.40
38:BE:76:ILE:H	38:BE:76:ILE:HG13	1.74	0.40
48:BO:32:LEU:HD23	48:BO:32:LEU:HA	1.69	0.40
57:BZ:183:MET:CG	57:BZ:213:HIS:HD2	2.35	0.40
57:BZ:289:ILE:HD11	57:BZ:331:TYR:CD2	2.57	0.40
57:BZ:637:ARG:O	57:BZ:639:ASN:N	2.54	0.40
1:CA:309:G:C5	1:CA:330:A:N6	2.90	0.40
1:CA:479:A:C2	1:CA:480:A:C5	3.10	0.40
1:CA:562:U:C4	1:CA:2036:C:O4'	2.74	0.40
1:CA:652(C):G:H5''	1:CA:652(D):C:OP2	2.21	0.40
1:CA:862:G:H2'	1:CA:863:A:O4'	2.21	0.40
1:CA:904:C:H2'	1:CA:905:U:C6	2.57	0.40
1:CA:990:A:H5''	1:CA:991:C:OP1	2.22	0.40
1:CA:1488:G:C6	1:CA:1489:U:C2	3.10	0.40
1:CA:1688:U:H1'	1:CA:1701:A:C6	2.56	0.40
1:CA:2012:G:H8	1:CA:2012:G:O5'	2.04	0.40
1:CA:2403:C:OP2	63:CA:3762:HOH:O	2.22	0.40
6:CF:157:VAL:HG11	6:CF:181:LEU:CD1	2.51	0.40
9:CK:24:PHE:HA	9:CK:87:VAL:H	1.87	0.40
15:CR:59:ASP:OD2	15:CR:61:HIS:HB3	2.20	0.40
23:CZ:100:VAL:HA	23:CZ:101:PRO:HD3	1.87	0.40
26:C2:32:LEU:HD22	26:C2:32:LEU:O	2.22	0.40
26:C2:52:ASP:O	26:C2:56:GLN:HG3	2.22	0.40
34:DA:45:U:H2'	34:DA:46:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DA:255:G:O3'	50:DQ:17:LYS:HD2	2.22	0.40
34:DA:391:G:O6	34:DA:392:G:C6	2.75	0.40
34:DA:559:A:H5'	34:DA:559:A:N3	2.36	0.40
34:DA:814:A:H2'	34:DA:816:A:H5'	2.02	0.40
34:DA:1143:G:C2	34:DA:1144:G:C5	3.10	0.40
34:DA:1504:G:H4'	34:DA:1505:G:C4	2.57	0.40
41:DH:103:VAL:HG21	41:DH:110:ALA:HB2	2.03	0.40
48:DO:28:GLN:NE2	48:DO:66:LEU:HD21	2.36	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 X-ray entries followed by that with respect to entries of similar resolution.

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	
3	AC	133/228 (58%)	90 (68%)	25 (19%)	18 (14%)	0	0
3	CC	133/228 (58%)	90 (68%)	25 (19%)	18 (14%)	0	0
4	AD	273/276 (99%)	239 (88%)	28 (10%)	6 (2%)	5	20
4	CD	273/276 (99%)	234 (86%)	35 (13%)	4 (2%)	8	29
5	AE	202/206 (98%)	181 (90%)	19 (9%)	2 (1%)	13	39
5	CE	202/206 (98%)	178 (88%)	20 (10%)	4 (2%)	6	21
6	AF	201/210 (96%)	182 (90%)	15 (8%)	4 (2%)	6	21
6	CF	201/210 (96%)	181 (90%)	14 (7%)	6 (3%)	3	13
7	AG	179/182 (98%)	152 (85%)	19 (11%)	8 (4%)	2	7
7	CG	179/182 (98%)	148 (83%)	21 (12%)	10 (6%)	1	4
8	AH	172/180 (96%)	152 (88%)	17 (10%)	3 (2%)	7	26
8	CH	172/180 (96%)	149 (87%)	20 (12%)	3 (2%)	7	26
9	AK	128/173 (74%)	66 (52%)	31 (24%)	31 (24%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	CK	128/173 (74%)	77 (60%)	29 (23%)	22 (17%)	0	0
10	AL	137/147 (93%)	105 (77%)	24 (18%)	8 (6%)	1	4
10	CL	137/147 (93%)	97 (71%)	35 (26%)	5 (4%)	3	10
11	AN	138/140 (99%)	127 (92%)	10 (7%)	1 (1%)	19	48
11	CN	138/140 (99%)	127 (92%)	9 (6%)	2 (1%)	9	30
12	AO	120/122 (98%)	106 (88%)	13 (11%)	1 (1%)	16	44
12	CO	120/122 (98%)	108 (90%)	9 (8%)	3 (2%)	4	17
13	AP	147/150 (98%)	133 (90%)	10 (7%)	4 (3%)	4	15
13	CP	147/150 (98%)	124 (84%)	18 (12%)	5 (3%)	3	11
14	AQ	139/141 (99%)	126 (91%)	11 (8%)	2 (1%)	9	30
14	CQ	139/141 (99%)	124 (89%)	12 (9%)	3 (2%)	5	20
15	AR	116/118 (98%)	105 (90%)	9 (8%)	2 (2%)	7	26
15	CR	116/118 (98%)	100 (86%)	14 (12%)	2 (2%)	7	26
16	AS	108/112 (96%)	92 (85%)	12 (11%)	4 (4%)	2	9
16	CS	108/112 (96%)	91 (84%)	13 (12%)	4 (4%)	2	9
17	AT	129/146 (88%)	115 (89%)	13 (10%)	1 (1%)	16	44
17	CT	129/146 (88%)	118 (92%)	9 (7%)	2 (2%)	8	27
18	AU	114/118 (97%)	106 (93%)	6 (5%)	2 (2%)	7	24
18	CU	114/118 (97%)	102 (90%)	11 (10%)	1 (1%)	14	42
19	AV	99/101 (98%)	90 (91%)	6 (6%)	3 (3%)	3	13
19	CV	99/101 (98%)	85 (86%)	9 (9%)	5 (5%)	1	5
20	AW	110/113 (97%)	99 (90%)	9 (8%)	2 (2%)	7	24
20	CW	110/113 (97%)	97 (88%)	11 (10%)	2 (2%)	7	24
21	AX	93/96 (97%)	83 (89%)	9 (10%)	1 (1%)	12	37
21	CX	93/96 (97%)	75 (81%)	14 (15%)	4 (4%)	2	7
22	AY	105/110 (96%)	90 (86%)	11 (10%)	4 (4%)	2	9
22	CY	105/110 (96%)	82 (78%)	21 (20%)	2 (2%)	6	23
23	AZ	183/206 (89%)	147 (80%)	23 (13%)	13 (7%)	1	2
23	CZ	183/206 (89%)	147 (80%)	24 (13%)	12 (7%)	1	3
24	A0	81/85 (95%)	72 (89%)	7 (9%)	2 (2%)	4	17
24	C0	81/85 (95%)	73 (90%)	7 (9%)	1 (1%)	11	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	A1	95/98 (97%)	90 (95%)	3 (3%)	2 (2%)	5	20
25	C1	95/98 (97%)	88 (93%)	4 (4%)	3 (3%)	3	12
26	A2	68/72 (94%)	59 (87%)	9 (13%)	0	100	100
26	C2	68/72 (94%)	60 (88%)	7 (10%)	1 (2%)	8	29
27	A3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
27	C3	57/60 (95%)	54 (95%)	3 (5%)	0	100	100
28	A4	67/71 (94%)	45 (67%)	15 (22%)	7 (10%)	0	1
28	C4	67/71 (94%)	52 (78%)	10 (15%)	5 (8%)	1	2
29	A5	57/60 (95%)	53 (93%)	4 (7%)	0	100	100
29	C5	57/60 (95%)	51 (90%)	6 (10%)	0	100	100
30	A6	51/54 (94%)	47 (92%)	4 (8%)	0	100	100
30	C6	51/54 (94%)	44 (86%)	6 (12%)	1 (2%)	6	21
31	A7	46/49 (94%)	41 (89%)	5 (11%)	0	100	100
31	C7	46/49 (94%)	39 (85%)	6 (13%)	1 (2%)	5	20
32	A8	62/65 (95%)	54 (87%)	5 (8%)	3 (5%)	2	6
32	C8	62/65 (95%)	58 (94%)	4 (6%)	0	100	100
33	A9	35/37 (95%)	34 (97%)	0	1 (3%)	3	13
33	C9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
35	BB	229/256 (90%)	174 (76%)	42 (18%)	13 (6%)	1	4
35	DB	229/256 (90%)	176 (77%)	40 (18%)	13 (6%)	1	4
36	BC	204/239 (85%)	165 (81%)	32 (16%)	7 (3%)	3	11
36	DC	204/239 (85%)	172 (84%)	30 (15%)	2 (1%)	13	39
37	BD	206/209 (99%)	150 (73%)	42 (20%)	14 (7%)	1	2
37	DD	206/209 (99%)	165 (80%)	30 (15%)	11 (5%)	1	5
38	BE	146/162 (90%)	123 (84%)	17 (12%)	6 (4%)	2	8
38	DE	146/162 (90%)	122 (84%)	19 (13%)	5 (3%)	3	11
39	BF	98/101 (97%)	84 (86%)	10 (10%)	4 (4%)	2	8
39	DF	98/101 (97%)	86 (88%)	12 (12%)	0	100	100
40	BG	153/156 (98%)	127 (83%)	20 (13%)	6 (4%)	2	9
40	DG	153/156 (98%)	127 (83%)	19 (12%)	7 (5%)	2	6
41	BH	135/138 (98%)	111 (82%)	17 (13%)	7 (5%)	1	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
41	DH	135/138 (98%)	120 (89%)	13 (10%)	2 (2%)	8	29
42	BI	125/128 (98%)	105 (84%)	14 (11%)	6 (5%)	2	6
42	DI	125/128 (98%)	109 (87%)	15 (12%)	1 (1%)	16	44
43	BJ	95/105 (90%)	80 (84%)	12 (13%)	3 (3%)	3	12
43	DJ	94/105 (90%)	76 (81%)	9 (10%)	9 (10%)	0	1
44	BK	112/129 (87%)	94 (84%)	16 (14%)	2 (2%)	7	24
44	DK	112/129 (87%)	93 (83%)	15 (13%)	4 (4%)	3	10
45	BL	120/132 (91%)	108 (90%)	12 (10%)	0	100	100
45	DL	120/132 (91%)	109 (91%)	9 (8%)	2 (2%)	7	26
46	BM	115/126 (91%)	97 (84%)	15 (13%)	3 (3%)	4	16
46	DM	120/126 (95%)	96 (80%)	18 (15%)	6 (5%)	1	5
47	BN	58/61 (95%)	46 (79%)	10 (17%)	2 (3%)	3	11
47	DN	58/61 (95%)	56 (97%)	2 (3%)	0	100	100
48	BO	86/89 (97%)	71 (83%)	15 (17%)	0	100	100
48	DO	86/89 (97%)	72 (84%)	10 (12%)	4 (5%)	2	6
49	BP	80/88 (91%)	55 (69%)	19 (24%)	6 (8%)	1	2
49	DP	80/88 (91%)	67 (84%)	10 (12%)	3 (4%)	2	9
50	BQ	97/105 (92%)	87 (90%)	8 (8%)	2 (2%)	5	20
50	DQ	97/105 (92%)	88 (91%)	9 (9%)	0	100	100
51	BR	66/88 (75%)	57 (86%)	9 (14%)	0	100	100
51	DR	66/88 (75%)	56 (85%)	9 (14%)	1 (2%)	8	29
52	BS	82/93 (88%)	71 (87%)	10 (12%)	1 (1%)	11	34
52	DS	81/93 (87%)	69 (85%)	8 (10%)	4 (5%)	2	6
53	BT	94/106 (89%)	81 (86%)	5 (5%)	8 (8%)	0	1
53	DT	94/106 (89%)	80 (85%)	10 (11%)	4 (4%)	2	7
54	BU	21/27 (78%)	20 (95%)	1 (5%)	0	100	100
54	DU	21/27 (78%)	18 (86%)	2 (10%)	1 (5%)	2	6
57	BZ	726/758 (96%)	561 (77%)	115 (16%)	50 (7%)	1	2
57	DZ	726/758 (96%)	558 (77%)	113 (16%)	55 (8%)	1	2
All	All	13389/14444 (93%)	11204 (84%)	1645 (12%)	540 (4%)	2	8

All (540) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AC	42	VAL
3	AC	47	LYS
3	AC	68	GLY
3	AC	180	SER
3	AC	181	PHE
4	AD	99	ASP
6	AF	130	ALA
7	AG	47	LYS
9	AK	29	TYR
9	AK	30	GLN
9	AK	33	PRO
9	AK	40	LEU
9	AK	47	ASN
9	AK	71	LEU
9	AK	74	LEU
9	AK	77	PRO
9	AK	80	VAL
9	AK	104	ILE
9	AK	105	PRO
9	AK	107	VAL
9	AK	128	LEU
10	AL	16	LYS
15	AR	2	ARG
16	AS	59	LYS
19	AV	31	ALA
23	AZ	136	PHE
23	AZ	154	ASP
28	A4	34	GLU
28	A4	59	PHE
32	A8	45	GLY
35	BB	10	LEU
35	BB	17	PHE
35	BB	125	PRO
36	BC	26	LYS
36	BC	65	ALA
37	BD	5	ILE
37	BD	42	GLN
37	BD	105	VAL
39	BF	70	ASP
40	BG	79	ARG
40	BG	80	VAL
42	BI	41	VAL
44	BK	49	GLY

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Mol	Chain	Res	Type
47	BN	52	GLN
49	BP	24	ALA
49	BP	56	ALA
53	BT	10	LEU
57	BZ	-33	GLY
57	BZ	88	VAL
57	BZ	100	VAL
57	BZ	171	GLU
57	BZ	182	ARG
57	BZ	183	MET
57	BZ	253	LEU
57	BZ	274	ASP
57	BZ	400	GLU
57	BZ	402	ILE
57	BZ	404	VAL
57	BZ	446	THR
57	BZ	469	GLU
57	BZ	504	ARG
3	CC	42	VAL
3	CC	47	LYS
3	CC	68	GLY
3	CC	180	SER
3	CC	181	PHE
4	CD	239	ARG
6	CF	21	ALA
6	CF	130	ALA
6	CF	132	VAL
7	CG	47	LYS
7	CG	181	ARG
8	CH	126	PRO
9	CK	33	PRO
9	CK	68	LEU
9	CK	69	PRO
9	CK	74	LEU
9	CK	77	PRO
9	CK	80	VAL
9	CK	100	ASN
9	CK	107	VAL
9	CK	128	LEU
10	CL	89	HIS
10	CL	115	LEU
12	CO	117	LEU

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Mol	Chain	Res	Type
14	CQ	28	ALA
19	CV	79	VAL
23	CZ	154	ASP
23	CZ	182	LYS
23	CZ	184	ALA
25	C1	85	LEU
31	C7	46	VAL
35	DB	10	LEU
35	DB	17	PHE
35	DB	21	ARG
35	DB	74	LYS
40	DG	80	VAL
42	DI	54	ASP
43	DJ	29	ARG
43	DJ	56	HIS
48	DO	19	PRO
51	DR	52	PRO
52	DS	30	LEU
53	DT	100	ILE
57	DZ	-65	LYS
57	DZ	-57	GLU
57	DZ	-25	SER
57	DZ	-23	LEU
57	DZ	89	ASP
57	DZ	92	ILE
57	DZ	93	GLU
57	DZ	160	ARG
57	DZ	183	MET
57	DZ	290	LYS
57	DZ	303	PRO
57	DZ	402	ILE
57	DZ	416	LYS
57	DZ	472	VAL
57	DZ	528	ALA
3	AC	53	ARG
3	AC	161	ARG
3	AC	179	ALA
4	AD	111	LEU
4	AD	209	ALA
4	AD	274	ARG
5	AE	135	HIS
7	AG	24	GLY

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Mol	Chain	Res	Type
7	AG	74	LYS
8	AH	126	PRO
9	AK	84	GLU
9	AK	91	LYS
9	AK	119	ALA
9	AK	120	LYS
9	AK	132	ASP
10	AL	13	PRO
13	AP	4	SER
13	AP	36	LYS
16	AS	70	GLY
16	AS	82	ILE
16	AS	96	GLY
17	AT	118	ARG
18	AU	51	LYS
20	AW	58	ALA
20	AW	111	HIS
21	AX	94	GLY
22	AY	54	LYS
23	AZ	137	ILE
23	AZ	184	ALA
24	A0	74	ARG
25	A1	10	LYS
28	A4	4	GLY
28	A4	45	GLY
32	A8	53	PRO
35	BB	21	ARG
36	BC	66	VAL
36	BC	107	GLN
37	BD	48	ALA
37	BD	101	LEU
37	BD	109	GLY
37	BD	178	VAL
37	BD	179	GLU
38	BE	98	THR
38	BE	140	ARG
39	BF	43	LEU
39	BF	71	ARG
41	BH	51	VAL
41	BH	83	ILE
41	BH	133	LEU
42	BI	43	ALA

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Mol	Chain	Res	Type
42	BI	44	VAL
42	BI	54	ASP
43	BJ	31	GLY
43	BJ	56	HIS
46	BM	67	GLU
47	BN	4	LYS
49	BP	78	GLY
50	BQ	49	GLU
53	BT	47	GLY
53	BT	100	ILE
57	BZ	-57	GLU
57	BZ	-25	SER
57	BZ	-23	LEU
57	BZ	-8	ALA
57	BZ	-4	ALA
57	BZ	39	ILE
57	BZ	170	ARG
57	BZ	235	GLU
57	BZ	277	VAL
57	BZ	416	LYS
57	BZ	418	LYS
57	BZ	468	ARG
57	BZ	472	VAL
57	BZ	656	ALA
57	BZ	671	MET
3	CC	53	ARG
3	CC	161	ARG
3	CC	179	ALA
4	CD	3	VAL
6	CF	133	ASN
7	CG	14	GLU
7	CG	32	PRO
7	CG	51	ARG
7	CG	84	LYS
7	CG	164	GLU
9	CK	20	ALA
9	CK	30	GLN
9	CK	75	GLN
9	CK	90	ALA
9	CK	93	LEU
9	CK	119	ALA
10	CL	13	PRO

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Mol	Chain	Res	Type
13	CP	122	PRO
14	CQ	88	GLY
15	CR	58	GLY
16	CS	35	ILE
17	CT	20	PRO
17	CT	100	TYR
19	CV	29	PRO
19	CV	43	GLU
21	CX	94	GLY
23	CZ	119	GLU
23	CZ	161	VAL
23	CZ	183	LEU
25	C1	10	LYS
28	C4	46	GLN
37	DD	5	ILE
37	DD	10	ARG
37	DD	129	ASN
37	DD	171	GLY
37	DD	182	LYS
40	DG	55	GLY
40	DG	114	ARG
43	DJ	36	GLY
43	DJ	55	LYS
43	DJ	75	ILE
43	DJ	77	PRO
43	DJ	79	ARG
44	DK	49	GLY
44	DK	106	LYS
46	DM	67	GLU
46	DM	108	ARG
49	DP	78	GLY
52	DS	12	ASP
57	DZ	-32	LEU
57	DZ	-24	ASN
57	DZ	-13	GLN
57	DZ	-12	ALA
57	DZ	39	ILE
57	DZ	85	PRO
57	DZ	88	VAL
57	DZ	154	GLN
57	DZ	318	ALA
57	DZ	324	ARG

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Mol	Chain	Res	Type
57	DZ	446	THR
57	DZ	456	GLU
57	DZ	468	ARG
57	DZ	533	VAL
3	AC	30	VAL
3	AC	43	GLU
3	AC	52	PRO
3	AC	69	LEU
3	AC	184	GLU
3	AC	202	PRO
3	AC	209	PHE
7	AG	43	LEU
7	AG	123	ASN
9	AK	22	GLY
9	AK	49	ALA
9	AK	73	GLY
9	AK	75	GLN
9	AK	93	LEU
9	AK	123	GLU
13	AP	29	LYS
18	AU	50	ARG
22	AY	11	ASP
22	AY	94	LYS
23	AZ	155	LEU
23	AZ	178	GLU
23	AZ	183	LEU
25	A1	96	LYS
28	A4	49	PHE
28	A4	62	ARG
36	BC	3	ASN
36	BC	81	GLY
37	BD	31	CYS
40	BG	144	MET
41	BH	132	GLU
43	BJ	75	ILE
49	BP	66	PRO
53	BT	23	ARG
57	BZ	85	PRO
57	BZ	486	THR
57	BZ	521	SER
57	BZ	638	GLY
3	CC	30	VAL

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Mol	Chain	Res	Type
3	CC	43	GLU
3	CC	52	PRO
3	CC	69	LEU
3	CC	184	GLU
3	CC	202	PRO
3	CC	209	PHE
5	CE	74	PRO
6	CF	200	GLU
7	CG	81	LYS
8	CH	152	ARG
9	CK	101	PRO
9	CK	129	PRO
10	CL	50	ASP
10	CL	72	PRO
13	CP	45	LEU
14	CQ	59	ARG
15	CR	73	VAL
16	CS	89	ARG
21	CX	44	GLU
23	CZ	155	LEU
23	CZ	157	LEU
23	CZ	178	GLU
26	C2	54	LYS
28	C4	45	GLY
30	C6	27	LYS
35	DB	20	GLU
35	DB	125	PRO
35	DB	232	PRO
37	DD	47	ARG
38	DE	73	ASN
40	DG	79	ARG
40	DG	118	VAL
40	DG	140	ASP
46	DM	106	ASN
48	DO	24	SER
48	DO	88	ARG
57	DZ	9	LEU
57	DZ	115	GLU
57	DZ	144	ALA
57	DZ	158	GLY
57	DZ	170	ARG
57	DZ	247	ARG

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Mol	Chain	Res	Type
57	DZ	403	GLU
57	DZ	404	VAL
57	DZ	444	PRO
57	DZ	457	LEU
57	DZ	636	PRO
57	DZ	671	MET
3	AC	16	ASP
5	AE	52	LEU
6	AF	141	ALA
6	AF	142	TRP
7	AG	126	ASP
8	AH	159	GLU
9	AK	5	ARG
9	AK	125	LEU
10	AL	21	PRO
10	AL	89	HIS
10	AL	139	VAL
14	AQ	40	ALA
14	AQ	60	ARG
19	AV	67	GLY
22	AY	57	GLN
23	AZ	161	VAL
24	A0	6	GLY
28	A4	63	TYR
33	A9	33	LYS
35	BB	13	ALA
35	BB	16	HIS
35	BB	28	PHE
35	BB	106	LYS
35	BB	204	ASN
35	BB	212	GLN
35	BB	231	GLU
36	BC	160	ALA
37	BD	177	ASP
38	BE	69	VAL
40	BG	4	ARG
41	BH	46	LYS
42	BI	29	ASN
52	BS	81	ARG
53	BT	102	GLY
57	BZ	37	GLY
57	BZ	112	GLN

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Mol	Chain	Res	Type
57	BZ	114	VAL
57	BZ	199	ILE
57	BZ	206	LEU
57	BZ	269	VAL
57	BZ	332	SER
57	BZ	473	ASP
57	BZ	500	GLN
57	BZ	640	ALA
3	CC	16	ASP
5	CE	52	LEU
5	CE	69	LYS
6	CF	66	PRO
7	CG	30	GLU
7	CG	126	ASP
8	CH	169	VAL
9	CK	23	SER
9	CK	53	VAL
9	CK	104	ILE
11	CN	2	LYS
12	CO	116	SER
13	CP	140	ALA
16	CS	90	GLY
19	CV	53	GLU
20	CW	57	ASN
21	CX	91	ALA
22	CY	57	GLN
22	CY	78	ALA
28	C4	68	ARG
35	DB	134	GLU
35	DB	189	ASP
37	DD	136	PRO
37	DD	168	ARG
38	DE	146	ALA
41	DH	51	VAL
43	DJ	37	PRO
43	DJ	78	ASN
45	DL	125	PRO
46	DM	6	GLY
48	DO	23	GLY
53	DT	61	SER
53	DT	95	ALA
53	DT	102	GLY

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Mol	Chain	Res	Type
54	DU	7	ARG
57	DZ	237	PRO
57	DZ	380	LEU
57	DZ	640	ALA
57	DZ	656	ALA
3	AC	21	TYR
4	AD	79	VAL
4	AD	275	LYS
7	AG	32	PRO
7	AG	87	PRO
12	AO	5	GLN
19	AV	79	VAL
23	AZ	157	LEU
35	BB	37	ASN
37	BD	3	ARG
37	BD	104	VAL
37	BD	189	PRO
38	BE	68	GLU
38	BE	129	ILE
40	BG	93	PRO
44	BK	106	LYS
46	BM	93	ARG
46	BM	113	PRO
49	BP	39	TYR
50	BQ	30	PRO
53	BT	71	THR
57	BZ	75	LYS
57	BZ	239	GLU
57	BZ	395	PRO
57	BZ	444	PRO
3	CC	21	TYR
4	CD	21	PHE
9	CK	85	ASP
9	CK	114	GLY
12	CO	26	LYS
13	CP	29	LYS
16	CS	84	GLN
19	CV	61	VAL
21	CX	45	THR
25	C1	3	LYS
28	C4	11	PRO
35	DB	124	SER

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Mol	Chain	Res	Type
35	DB	131	PRO
35	DB	227	GLY
36	DC	156	ARG
37	DD	56	VAL
37	DD	100	ARG
38	DE	27	ARG
46	DM	5	ALA
46	DM	21	TYR
52	DS	29	ARG
57	DZ	-1	GLU
57	DZ	153	MET
57	DZ	257	PRO
57	DZ	532	GLY
3	AC	221	PRO
6	AF	168	ARG
8	AH	55	PRO
9	AK	78	SER
9	AK	86	PRO
10	AL	51	ALA
15	AR	71	GLN
23	AZ	177	PRO
35	BB	159	PRO
37	BD	142	PRO
39	BF	89	MET
41	BH	9	MET
42	BI	97	LYS
53	BT	9	ASN
53	BT	96	GLY
57	BZ	115	GLU
3	CC	221	PRO
4	CD	191	ALA
5	CE	144	ARG
18	CU	6	THR
20	CW	22	ASP
23	CZ	101	PRO
23	CZ	136	PHE
24	C0	73	GLY
28	C4	54	GLY
35	DB	217	ARG
37	DD	167	GLY
49	DP	46	PRO
49	DP	53	VAL

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Mol	Chain	Res	Type
57	DZ	575	VAL
57	DZ	637	ARG
9	AK	101	PRO
10	AL	24	GLY
13	AP	122	PRO
23	AZ	120	ILE
32	A8	52	LYS
41	BH	13	ILE
57	BZ	94	VAL
23	CZ	115	GLY
44	DK	105	VAL
45	DL	83	VAL
52	DS	42	PRO
57	DZ	502	GLY
23	AZ	68	PRO
23	AZ	159	PRO
38	BE	109	ILE
49	BP	19	ILE
36	DC	99	VAL
44	DK	39	PRO
40	BG	130	GLY
11	CN	64	GLY
13	CP	142	GLY
40	DG	19	GLY
41	DH	73	ASP
9	AK	53	VAL
9	AK	68	LEU
11	AN	129	PRO
57	BZ	347	GLY
38	DE	11	ILE
38	DE	22	GLY
57	DZ	-52	VAL
57	DZ	32	ILE
57	DZ	638	GLY
10	AL	113	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	
3	AC	111/180 (62%)	103 (93%)	8 (7%)	12	34
3	CC	111/180 (62%)	103 (93%)	8 (7%)	12	34
4	AD	215/218 (99%)	178 (83%)	37 (17%)	1	5
4	CD	216/218 (99%)	183 (85%)	33 (15%)	2	7
5	AE	164/166 (99%)	134 (82%)	30 (18%)	1	4
5	CE	164/166 (99%)	134 (82%)	30 (18%)	1	4
6	AF	160/166 (96%)	123 (77%)	37 (23%)	0	2
6	CF	159/166 (96%)	127 (80%)	32 (20%)	1	3
7	AG	143/156 (92%)	114 (80%)	29 (20%)	1	3
7	CG	142/156 (91%)	110 (78%)	32 (22%)	1	2
8	AH	144/148 (97%)	126 (88%)	18 (12%)	3	12
8	CH	144/148 (97%)	123 (85%)	21 (15%)	2	8
10	AL	104/111 (94%)	88 (85%)	16 (15%)	2	7
10	CL	104/111 (94%)	82 (79%)	22 (21%)	1	3
11	AN	118/119 (99%)	96 (81%)	22 (19%)	1	4
11	CN	118/119 (99%)	99 (84%)	19 (16%)	2	6
12	AO	100/100 (100%)	87 (87%)	13 (13%)	3	11
12	CO	100/100 (100%)	85 (85%)	15 (15%)	2	8
13	AP	116/116 (100%)	95 (82%)	21 (18%)	1	4
13	CP	115/116 (99%)	98 (85%)	17 (15%)	2	8
14	AQ	111/111 (100%)	92 (83%)	19 (17%)	1	5
14	CQ	111/111 (100%)	98 (88%)	13 (12%)	4	14
15	AR	101/101 (100%)	82 (81%)	19 (19%)	1	4
15	CR	101/101 (100%)	82 (81%)	19 (19%)	1	4
16	AS	87/88 (99%)	76 (87%)	11 (13%)	3	12
16	CS	85/88 (97%)	68 (80%)	17 (20%)	1	3
17	AT	115/127 (91%)	98 (85%)	17 (15%)	2	8
17	CT	113/127 (89%)	90 (80%)	23 (20%)	1	3
18	AU	93/94 (99%)	83 (89%)	10 (11%)	5	17
18	CU	93/94 (99%)	78 (84%)	15 (16%)	2	6
19	AV	80/82 (98%)	62 (78%)	18 (22%)	1	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	CV	80/82 (98%)	68 (85%)	12 (15%)	2	8
20	AW	90/92 (98%)	76 (84%)	14 (16%)	2	7
20	CW	90/92 (98%)	76 (84%)	14 (16%)	2	7
21	AX	77/78 (99%)	70 (91%)	7 (9%)	7	24
21	CX	77/78 (99%)	67 (87%)	10 (13%)	3	11
22	AY	85/91 (93%)	70 (82%)	15 (18%)	1	5
22	CY	85/91 (93%)	68 (80%)	17 (20%)	1	3
23	AZ	156/179 (87%)	126 (81%)	30 (19%)	1	4
23	CZ	156/179 (87%)	135 (86%)	21 (14%)	3	10
24	A0	65/67 (97%)	60 (92%)	5 (8%)	10	31
24	C0	65/67 (97%)	58 (89%)	7 (11%)	5	17
25	A1	80/83 (96%)	69 (86%)	11 (14%)	3	10
25	C1	80/83 (96%)	69 (86%)	11 (14%)	3	10
26	A2	65/67 (97%)	54 (83%)	11 (17%)	1	5
26	C2	65/67 (97%)	59 (91%)	6 (9%)	7	24
27	A3	51/52 (98%)	39 (76%)	12 (24%)	0	2
27	C3	50/52 (96%)	42 (84%)	8 (16%)	2	6
28	A4	60/63 (95%)	49 (82%)	11 (18%)	1	4
28	C4	53/63 (84%)	40 (76%)	13 (24%)	0	2
29	A5	50/52 (96%)	42 (84%)	8 (16%)	2	6
29	C5	50/52 (96%)	38 (76%)	12 (24%)	0	2
30	A6	51/52 (98%)	40 (78%)	11 (22%)	1	2
30	C6	50/52 (96%)	40 (80%)	10 (20%)	1	3
31	A7	41/42 (98%)	37 (90%)	4 (10%)	6	21
31	C7	41/42 (98%)	31 (76%)	10 (24%)	0	2
32	A8	54/55 (98%)	45 (83%)	9 (17%)	2	6
32	C8	54/55 (98%)	47 (87%)	7 (13%)	3	11
33	A9	34/34 (100%)	31 (91%)	3 (9%)	8	26
33	C9	34/34 (100%)	30 (88%)	4 (12%)	4	14
35	BB	192/220 (87%)	153 (80%)	39 (20%)	1	3
35	DB	187/220 (85%)	152 (81%)	35 (19%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	BC	143/188 (76%)	131 (92%)	12 (8%)	9	28
36	DC	141/188 (75%)	117 (83%)	24 (17%)	1	5
37	BD	170/181 (94%)	139 (82%)	31 (18%)	1	4
37	DD	174/181 (96%)	139 (80%)	35 (20%)	1	3
38	BE	113/123 (92%)	99 (88%)	14 (12%)	4	13
38	DE	114/123 (93%)	96 (84%)	18 (16%)	2	7
39	BF	84/90 (93%)	70 (83%)	14 (17%)	2	6
39	DF	86/90 (96%)	78 (91%)	8 (9%)	7	23
40	BG	119/127 (94%)	102 (86%)	17 (14%)	2	9
40	DG	120/127 (94%)	101 (84%)	19 (16%)	2	7
41	BH	114/119 (96%)	91 (80%)	23 (20%)	1	3
41	DH	114/119 (96%)	94 (82%)	20 (18%)	1	5
42	BI	91/99 (92%)	78 (86%)	13 (14%)	2	9
42	DI	89/99 (90%)	74 (83%)	15 (17%)	1	5
43	BJ	66/92 (72%)	60 (91%)	6 (9%)	7	24
43	DJ	69/92 (75%)	64 (93%)	5 (7%)	12	34
44	BK	83/99 (84%)	72 (87%)	11 (13%)	3	10
44	DK	83/99 (84%)	74 (89%)	9 (11%)	5	17
45	BL	97/109 (89%)	85 (88%)	12 (12%)	4	13
45	DL	97/109 (89%)	83 (86%)	14 (14%)	2	8
46	BM	91/101 (90%)	79 (87%)	12 (13%)	3	11
46	DM	92/101 (91%)	78 (85%)	14 (15%)	2	7
47	BN	49/50 (98%)	38 (78%)	11 (22%)	1	2
47	DN	49/50 (98%)	41 (84%)	8 (16%)	2	6
48	BO	78/80 (98%)	66 (85%)	12 (15%)	2	7
48	DO	78/80 (98%)	66 (85%)	12 (15%)	2	7
49	BP	69/74 (93%)	57 (83%)	12 (17%)	1	5
49	DP	68/74 (92%)	58 (85%)	10 (15%)	2	8
50	BQ	94/97 (97%)	80 (85%)	14 (15%)	2	8
50	DQ	94/97 (97%)	87 (93%)	7 (7%)	11	33
51	BR	59/77 (77%)	51 (86%)	8 (14%)	3	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
51	DR	59/77 (77%)	49 (83%)	10 (17%)	1	5
52	BS	70/80 (88%)	61 (87%)	9 (13%)	3	11
52	DS	67/80 (84%)	59 (88%)	8 (12%)	4	14
53	BT	70/82 (85%)	54 (77%)	16 (23%)	0	2
53	DT	71/82 (87%)	65 (92%)	6 (8%)	8	27
54	BU	18/22 (82%)	16 (89%)	2 (11%)	5	16
54	DU	18/22 (82%)	17 (94%)	1 (6%)	17	47
57	BZ	369/636 (58%)	280 (76%)	89 (24%)	0	2
57	DZ	370/636 (58%)	280 (76%)	90 (24%)	0	2
All	All	10306/11672 (88%)	8607 (84%)	1699 (16%)	2	6

All (1699) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AC	28	ARG
3	AC	32	GLU
3	AC	48	LEU
3	AC	50	ILE
3	AC	53	ARG
3	AC	54	ARG
3	AC	203	GLU
3	AC	208	THR
4	AD	3	VAL
4	AD	12	SER
4	AD	13	ARG
4	AD	14	ARG
4	AD	16	MET
4	AD	18	VAL
4	AD	38	LYS
4	AD	61	LEU
4	AD	75	ILE
4	AD	94	LEU
4	AD	99	ASP
4	AD	103	ARG
4	AD	106	ILE
4	AD	111	LEU
4	AD	113	VAL
4	AD	116	GLN
4	AD	126	GLN

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Mol	Chain	Res	Type
4	AD	136	ILE
4	AD	140	THR
4	AD	147	LEU
4	AD	155	LEU
4	AD	173	VAL
4	AD	175	LEU
4	AD	183	ARG
4	AD	190	TYR
4	AD	200	ASP
4	AD	211	ARG
4	AD	217	ARG
4	AD	221	VAL
4	AD	229	VAL
4	AD	242	ARG
4	AD	253	GLN
4	AD	257	LEU
4	AD	259	THR
4	AD	265	PRO
4	AD	273	ARG
4	AD	274	ARG
5	AE	1	MET
5	AE	2	LYS
5	AE	7	VAL
5	AE	9	VAL
5	AE	21	VAL
5	AE	38	THR
5	AE	39	PRO
5	AE	47	VAL
5	AE	49	LEU
5	AE	72	VAL
5	AE	77	ILE
5	AE	82	ARG
5	AE	89	ASP
5	AE	93	VAL
5	AE	97	LYS
5	AE	111	ARG
5	AE	113	PHE
5	AE	116	VAL
5	AE	119	ARG
5	AE	128	SER
5	AE	144	ARG
5	AE	163	GLU

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Mol	Chain	Res	Type
5	AE	167	VAL
5	AE	170	LEU
5	AE	175	VAL
5	AE	178	GLU
5	AE	179	GLU
5	AE	181	LEU
5	AE	184	VAL
5	AE	185	LYS
6	AF	12	LEU
6	AF	15	SER
6	AF	19	GLU
6	AF	20	LEU
6	AF	24	LEU
6	AF	27	GLU
6	AF	33	LEU
6	AF	38	ARG
6	AF	44	ARG
6	AF	53	THR
6	AF	57	VAL
6	AF	74	ARG
6	AF	77	ASP
6	AF	88	VAL
6	AF	93	LYS
6	AF	95	ARG
6	AF	106	ARG
6	AF	110	LEU
6	AF	119	ARG
6	AF	125	LEU
6	AF	127	GLU
6	AF	132	VAL
6	AF	133	ASN
6	AF	137	LYS
6	AF	140	LEU
6	AF	151	SER
6	AF	157	VAL
6	AF	162	LEU
6	AF	165	ARG
6	AF	168	ARG
6	AF	170	LEU
6	AF	183	VAL
6	AF	191	ARG
6	AF	192	LEU

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Mol	Chain	Res	Type
6	AF	195	ASP
6	AF	200	GLU
6	AF	201	VAL
7	AG	7	LEU
7	AG	28	VAL
7	AG	31	VAL
7	AG	41	GLN
7	AG	43	LEU
7	AG	45	GLU
7	AG	58	GLN
7	AG	60	LEU
7	AG	77	ILE
7	AG	79	ASN
7	AG	81	LYS
7	AG	82	LEU
7	AG	86	MET
7	AG	91	ARG
7	AG	103	LEU
7	AG	116	ASP
7	AG	123	ASN
7	AG	126	ASP
7	AG	128	ARG
7	AG	137	GLU
7	AG	138	GLN
7	AG	140	ILE
7	AG	150	ASP
7	AG	153	ARG
7	AG	157	ILE
7	AG	159	VAL
7	AG	161	THR
7	AG	170	ARG
7	AG	175	LEU
8	AH	6	ARG
8	AH	13	LYS
8	AH	24	VAL
8	AH	34	GLU
8	AH	36	PRO
8	AH	50	VAL
8	AH	60	ARG
8	AH	69	ARG
8	AH	84	SER
8	AH	88	LEU

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Mol	Chain	Res	Type
8	AH	98	LEU
8	AH	107	VAL
8	AH	119	GLU
8	AH	122	THR
8	AH	127	GLU
8	AH	136	ILE
8	AH	139	GLN
8	AH	175	LYS
10	AL	2	LYS
10	AL	3	LYS
10	AL	4	VAL
10	AL	34	ILE
10	AL	35	MET
10	AL	45	THR
10	AL	50	ASP
10	AL	52	ILE
10	AL	58	THR
10	AL	59	ILE
10	AL	65	PHE
10	AL	70	LYS
10	AL	86	LYS
10	AL	93	ARG
10	AL	95	LYS
10	AL	104	VAL
11	AN	28	THR
11	AN	33	LEU
11	AN	34	LEU
11	AN	39	ARG
11	AN	48	MET
11	AN	58	ASP
11	AN	60	ILE
11	AN	61	ARG
11	AN	62	VAL
11	AN	73	THR
11	AN	79	PRO
11	AN	84	LYS
11	AN	87	LEU
11	AN	89	LYS
11	AN	90	MET
11	AN	97	ARG
11	AN	99	LEU
11	AN	119	ARG

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Mol	Chain	Res	Type
11	AN	120	LEU
11	AN	133	GLN
11	AN	137	LYS
11	AN	140	VAL
12	AO	1	MET
12	AO	3	GLN
12	AO	8	LEU
12	AO	10	VAL
12	AO	17	ARG
12	AO	22	ILE
12	AO	24	VAL
12	AO	28	SER
12	AO	59	LYS
12	AO	69	ILE
12	AO	94	ARG
12	AO	98	VAL
12	AO	107	ARG
13	AP	2	LYS
13	AP	16	ARG
13	AP	42	SER
13	AP	55	ARG
13	AP	59	LEU
13	AP	68	GLN
13	AP	70	GLN
13	AP	72	PRO
13	AP	76	LYS
13	AP	77	ARG
13	AP	83	VAL
13	AP	91	PHE
13	AP	99	LEU
13	AP	101	VAL
13	AP	106	LEU
13	AP	112	LEU
13	AP	117	GLU
13	AP	119	GLU
13	AP	133	SER
13	AP	148	LEU
13	AP	149	GLU
14	AQ	1	MET
14	AQ	2	LEU
14	AQ	3	MET
14	AQ	7	MET

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Mol	Chain	Res	Type
14	AQ	8	LYS
14	AQ	10	ARG
14	AQ	14	ARG
14	AQ	16	ARG
14	AQ	18	LYS
14	AQ	21	THR
14	AQ	35	VAL
14	AQ	45	GLN
14	AQ	55	VAL
14	AQ	56	ARG
14	AQ	75	THR
14	AQ	109	VAL
14	AQ	110	THR
14	AQ	133	ARG
14	AQ	139	GLU
15	AR	6	SER
15	AR	18	LEU
15	AR	28	LEU
15	AR	29	LEU
15	AR	33	ARG
15	AR	36	THR
15	AR	44	LEU
15	AR	54	LEU
15	AR	60	LEU
15	AR	65	LEU
15	AR	67	LEU
15	AR	75	LEU
15	AR	79	LEU
15	AR	100	LEU
15	AR	102	GLU
15	AR	111	LEU
15	AR	113	LEU
15	AR	114	VAL
15	AR	117	VAL
16	AS	3	ARG
16	AS	11	LYS
16	AS	19	LYS
16	AS	20	ARG
16	AS	27	SER
16	AS	32	LEU
16	AS	38	GLN
16	AS	50	SER

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Mol	Chain	Res	Type
16	AS	69	VAL
16	AS	78	LEU
16	AS	110	LEU
17	AT	6	LEU
17	AT	8	LYS
17	AT	13	ARG
17	AT	16	ARG
17	AT	17	THR
17	AT	23	ARG
17	AT	28	VAL
17	AT	39	ARG
17	AT	49	VAL
17	AT	59	THR
17	AT	78	LEU
17	AT	84	GLN
17	AT	85	LYS
17	AT	104	ASN
17	AT	115	ARG
17	AT	118	ARG
17	AT	128	GLU
18	AU	13	LYS
18	AU	36	ARG
18	AU	59	ARG
18	AU	74	LEU
18	AU	77	SER
18	AU	84	LYS
18	AU	95	LEU
18	AU	104	GLN
18	AU	108	GLU
18	AU	112	ARG
19	AV	1	MET
19	AV	15	GLU
19	AV	21	ARG
19	AV	28	GLU
19	AV	32	THR
19	AV	35	LEU
19	AV	43	GLU
19	AV	46	VAL
19	AV	51	VAL
19	AV	52	VAL
19	AV	61	VAL
19	AV	62	LEU

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Mol	Chain	Res	Type
19	AV	69	LYS
19	AV	72	VAL
19	AV	73	SER
19	AV	79	VAL
19	AV	95	LEU
19	AV	100	ARG
20	AW	4	LYS
20	AW	11	ARG
20	AW	13	SER
20	AW	15	ARG
20	AW	17	VAL
20	AW	19	LEU
20	AW	23	LEU
20	AW	31	GLU
20	AW	42	ARG
20	AW	49	LYS
20	AW	51	LEU
20	AW	67	ASP
20	AW	99	ARG
20	AW	100	THR
21	AX	33	LYS
21	AX	35	THR
21	AX	45	THR
21	AX	57	LEU
21	AX	66	LEU
21	AX	70	LEU
21	AX	72	LYS
22	AY	2	ARG
22	AY	7	VAL
22	AY	9	LYS
22	AY	11	ASP
22	AY	21	LYS
22	AY	23	ARG
22	AY	31	LEU
22	AY	47	LYS
22	AY	50	ARG
22	AY	55	TYR
22	AY	73	ARG
22	AY	88	LYS
22	AY	90	LEU
22	AY	91	GLU
22	AY	107	ASP

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Mol	Chain	Res	Type
23	AZ	5	LEU
23	AZ	8	TYR
23	AZ	18	LEU
23	AZ	19	ARG
23	AZ	24	LEU
23	AZ	31	ARG
23	AZ	33	LEU
23	AZ	49	ARG
23	AZ	52	SER
23	AZ	65	GLN
23	AZ	66	SER
23	AZ	72	ARG
23	AZ	73	GLN
23	AZ	77	ASP
23	AZ	78	LYS
23	AZ	82	ARG
23	AZ	86	VAL
23	AZ	91	LEU
23	AZ	92	SER
23	AZ	124	ILE
23	AZ	126	VAL
23	AZ	129	SER
23	AZ	136	PHE
23	AZ	137	ILE
23	AZ	156	LYS
23	AZ	162	GLU
23	AZ	170	THR
23	AZ	180	VAL
23	AZ	182	LYS
23	AZ	183	LEU
24	A0	7	LEU
24	A0	20	ARG
24	A0	43	THR
24	A0	55	ARG
24	A0	67	VAL
25	A1	21	ARG
25	A1	26	ARG
25	A1	30	VAL
25	A1	32	LYS
25	A1	40	ARG
25	A1	46	LEU
25	A1	73	LEU

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Mol	Chain	Res	Type
25	A1	75	GLU
25	A1	89	GLU
25	A1	95	LEU
25	A1	98	LEU
26	A2	8	LYS
26	A2	28	LYS
26	A2	30	ARG
26	A2	32	LEU
26	A2	52	ASP
26	A2	53	LEU
26	A2	62	THR
26	A2	64	LEU
26	A2	66	GLU
26	A2	67	LYS
26	A2	70	GLN
27	A3	3	ARG
27	A3	6	VAL
27	A3	8	LEU
27	A3	10	LYS
27	A3	17	LYS
27	A3	23	LEU
27	A3	29	ARG
27	A3	35	ARG
27	A3	37	LEU
27	A3	54	VAL
27	A3	58	VAL
27	A3	60	GLU
28	A4	1	MET
28	A4	33	VAL
28	A4	34	GLU
28	A4	35	VAL
28	A4	36	CYS
28	A4	39	CYS
28	A4	46	GLN
28	A4	48	ARG
28	A4	49	PHE
28	A4	58	ARG
28	A4	67	TYR
29	A5	6	VAL
29	A5	9	LYS
29	A5	15	ARG
29	A5	29	THR

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Mol	Chain	Res	Type
29	A5	40	LYS
29	A5	55	ARG
29	A5	56	LYS
29	A5	60	VAL
30	A6	4	GLU
30	A6	6	ARG
30	A6	7	ILE
30	A6	9	LEU
30	A6	14	THR
30	A6	33	LYS
30	A6	35	GLU
30	A6	44	ARG
30	A6	48	VAL
30	A6	50	ARG
30	A6	52	VAL
31	A7	1	MET
31	A7	9	ARG
31	A7	43	THR
31	A7	46	VAL
32	A8	13	ARG
32	A8	23	VAL
32	A8	26	LYS
32	A8	30	ARG
32	A8	31	HIS
32	A8	32	LEU
32	A8	34	TRP
32	A8	46	ARG
32	A8	52	LYS
33	A9	4	ARG
33	A9	17	ILE
33	A9	18	ARG
35	BB	8	LYS
35	BB	11	LEU
35	BB	15	VAL
35	BB	16	HIS
35	BB	17	PHE
35	BB	20	GLU
35	BB	21	ARG
35	BB	24	TRP
35	BB	37	ASN
35	BB	47	THR
35	BB	49	GLU

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Mol	Chain	Res	Type
35	BB	76	GLN
35	BB	78	GLN
35	BB	80	ILE
35	BB	83	MET
35	BB	96	ARG
35	BB	107	THR
35	BB	111	ARG
35	BB	112	VAL
35	BB	113	HIS
35	BB	119	GLU
35	BB	127	ILE
35	BB	142	LEU
35	BB	144	ARG
35	BB	145	LEU
35	BB	150	SER
35	BB	160	ASP
35	BB	168	THR
35	BB	169	LYS
35	BB	172	ILE
35	BB	178	ARG
35	BB	187	LEU
35	BB	200	ILE
35	BB	215	LEU
35	BB	217	ARG
35	BB	221	LEU
35	BB	223	ILE
35	BB	224	GLN
35	BB	235	SER
36	BC	28	GLN
36	BC	29	TYR
36	BC	45	LYS
36	BC	52	LEU
36	BC	123	GLN
36	BC	178	LEU
36	BC	181	ASN
36	BC	188	LEU
36	BC	192	THR
36	BC	196	LEU
36	BC	206	GLU
36	BC	207	VAL
37	BD	5	ILE
37	BD	13	ARG

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Mol	Chain	Res	Type
37	BD	15	GLU
37	BD	25	ARG
37	BD	31	CYS
37	BD	47	ARG
37	BD	49	ARG
37	BD	52	SER
37	BD	58	LEU
37	BD	61	LYS
37	BD	76	ARG
37	BD	78	LEU
37	BD	83	SER
37	BD	97	LEU
37	BD	100	ARG
37	BD	101	LEU
37	BD	107	ARG
37	BD	119	GLN
37	BD	121	VAL
37	BD	127	THR
37	BD	134	ASP
37	BD	135	LEU
37	BD	155	LEU
37	BD	158	ILE
37	BD	168	ARG
37	BD	173	TRP
37	BD	186	LEU
37	BD	188	LEU
37	BD	193	ASP
37	BD	196	LEU
37	BD	200	GLU
38	BE	10	MET
38	BE	11	ILE
38	BE	38	GLN
38	BE	40	ARG
38	BE	41	VAL
38	BE	47	LYS
38	BE	56	GLN
38	BE	75	THR
38	BE	78	HIS
38	BE	79	GLU
38	BE	91	LEU
38	BE	121	LYS
38	BE	140	ARG

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Mol	Chain	Res	Type
38	BE	147	ASP
39	BF	1	MET
39	BF	25	ILE
39	BF	30	LEU
39	BF	40	VAL
39	BF	43	LEU
39	BF	54	LYS
39	BF	64	GLN
39	BF	66	GLU
39	BF	69	GLU
39	BF	71	ARG
39	BF	72	VAL
39	BF	73	ASN
39	BF	82	ARG
39	BF	92	LYS
40	BG	8	GLU
40	BG	12	LEU
40	BG	15	ASP
40	BG	16	LEU
40	BG	21	VAL
40	BG	29	LYS
40	BG	41	ARG
40	BG	51	GLN
40	BG	61	VAL
40	BG	75	VAL
40	BG	78	ARG
40	BG	104	LEU
40	BG	113	GLU
40	BG	114	ARG
40	BG	115	ARG
40	BG	131	LYS
40	BG	138	LYS
41	BH	2	LEU
41	BH	10	LEU
41	BH	18	ARG
41	BH	19	VAL
41	BH	24	THR
41	BH	25	ASP
41	BH	26	VAL
41	BH	50	ARG
41	BH	51	VAL
41	BH	52	ASP

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Mol	Chain	Res	Type
41	BH	53	VAL
41	BH	54	ASP
41	BH	60	ARG
41	BH	63	LEU
41	BH	75	ARG
41	BH	78	GLN
41	BH	91	ARG
41	BH	109	ILE
41	BH	111	ILE
41	BH	112	LEU
41	BH	123	GLU
41	BH	133	LEU
41	BH	134	ILE
42	BI	23	ASN
42	BI	27	THR
42	BI	31	GLN
42	BI	53	VAL
42	BI	64	THR
42	BI	81	ILE
42	BI	93	ARG
42	BI	102	LEU
42	BI	104	ARG
42	BI	107	ARG
42	BI	113	LYS
42	BI	127	LYS
42	BI	128	ARG
43	BJ	5	ARG
43	BJ	16	LEU
43	BJ	21	GLN
43	BJ	49	VAL
43	BJ	65	LEU
43	BJ	92	THR
44	BK	14	VAL
44	BK	16	SER
44	BK	25	TYR
44	BK	33	THR
44	BK	40	ILE
44	BK	48	ILE
44	BK	51	LYS
44	BK	96	ARG
44	BK	104	GLN
44	BK	109	VAL

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Mol	Chain	Res	Type
44	BK	114	VAL
45	BL	18	VAL
45	BL	23	LYS
45	BL	27	LEU
45	BL	36	VAL
45	BL	46	LYS
45	BL	53	ARG
45	BL	57	LYS
45	BL	60	LEU
45	BL	67	THR
45	BL	97	ARG
45	BL	110	VAL
45	BL	116	SER
46	BM	3	ARG
46	BM	4	ILE
46	BM	15	VAL
46	BM	17	VAL
46	BM	32	GLU
46	BM	64	TRP
46	BM	70	LEU
46	BM	84	ILE
46	BM	102	ARG
46	BM	110	ARG
46	BM	114	ARG
46	BM	116	THR
47	BN	3	ARG
47	BN	4	LYS
47	BN	7	ILE
47	BN	8	GLU
47	BN	18	VAL
47	BN	23	ARG
47	BN	26	ARG
47	BN	33	VAL
47	BN	41	ARG
47	BN	44	LEU
47	BN	49	HIS
48	BO	3	ILE
48	BO	5	LYS
48	BO	6	GLU
48	BO	26	GLU
48	BO	39	LEU
48	BO	41	GLU

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Mol	Chain	Res	Type
48	BO	66	LEU
48	BO	71	GLN
48	BO	72	ARG
48	BO	76	GLU
48	BO	87	ILE
48	BO	88	ARG
49	BP	2	VAL
49	BP	4	ILE
49	BP	18	ARG
49	BP	19	ILE
49	BP	21	VAL
49	BP	49	LEU
49	BP	50	LYS
49	BP	54	GLU
49	BP	69	THR
49	BP	71	ARG
49	BP	72	ARG
49	BP	76	GLN
50	BQ	36	ILE
50	BQ	49	GLU
50	BQ	52	LYS
50	BQ	60	ILE
50	BQ	62	SER
50	BQ	68	ARG
50	BQ	70	ARG
50	BQ	72	ARG
50	BQ	77	VAL
50	BQ	78	GLU
50	BQ	86	GLU
50	BQ	91	ARG
50	BQ	92	ARG
50	BQ	94	ASN
51	BR	26	LEU
51	BR	29	PHE
51	BR	35	ARG
51	BR	37	VAL
51	BR	41	LYS
51	BR	52	PRO
51	BR	68	LYS
51	BR	76	LEU
52	BS	9	VAL
52	BS	28	LYS

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Mol	Chain	Res	Type
52	BS	38	SER
52	BS	65	ASN
52	BS	66	MET
52	BS	78	ARG
52	BS	81	ARG
52	BS	83	HIS
52	BS	85	LYS
53	BT	8	ARG
53	BT	13	LEU
53	BT	20	LEU
53	BT	24	LEU
53	BT	31	SER
53	BT	37	SER
53	BT	38	LYS
53	BT	45	GLN
53	BT	56	MET
53	BT	60	GLU
53	BT	62	LEU
53	BT	70	SER
53	BT	75	ASN
53	BT	84	LEU
53	BT	93	GLU
53	BT	100	ILE
54	BU	10	ARG
54	BU	15	ARG
57	BZ	-66	MET
57	BZ	-64	VAL
57	BZ	-58	LEU
57	BZ	-56	ASN
57	BZ	-49	VAL
57	BZ	-47	ASP
57	BZ	-36	LEU
57	BZ	-30	VAL
57	BZ	-24	ASN
57	BZ	-22	LYS
57	BZ	-20	LEU
57	BZ	-10	ARG
57	BZ	-6	ARG
57	BZ	-3	GLU
57	BZ	0	ARG
57	BZ	1	LEU
57	BZ	2	LYS

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Mol	Chain	Res	Type
57	BZ	8	ASP
57	BZ	13	ARG
57	BZ	21	ILE
57	BZ	30	GLU
57	BZ	40	HIS
57	BZ	79	ILE
57	BZ	83	ASP
57	BZ	84	THR
57	BZ	88	VAL
57	BZ	92	ILE
57	BZ	97	SER
57	BZ	102	ASP
57	BZ	117	GLN
57	BZ	121	VAL
57	BZ	130	VAL
57	BZ	132	ARG
57	BZ	139	MET
57	BZ	146	LEU
57	BZ	152	THR
57	BZ	156	ARG
57	BZ	157	LEU
57	BZ	160	ARG
57	BZ	163	VAL
57	BZ	166	LEU
57	BZ	172	ASP
57	BZ	173	THR
57	BZ	181	LEU
57	BZ	187	THR
57	BZ	196	ILE
57	BZ	198	GLU
57	BZ	207	ASP
57	BZ	210	ARG
57	BZ	215	LYS
57	BZ	216	LEU
57	BZ	225	GLU
57	BZ	236	GLU
57	BZ	238	THR
57	BZ	240	GLU
57	BZ	252	ASP
57	BZ	254	LYS
57	BZ	255	ILE
57	BZ	260	LEU

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Mol	Chain	Res	Type
57	BZ	269	VAL
57	BZ	271	LEU
57	BZ	279	TYR
57	BZ	284	LEU
57	BZ	286	ILE
57	BZ	289	ILE
57	BZ	292	THR
57	BZ	297	GLU
57	BZ	301	ILE
57	BZ	309	LEU
57	BZ	312	LEU
57	BZ	315	LYS
57	BZ	316	ILE
57	BZ	325	LEU
57	BZ	328	ILE
57	BZ	329	ARG
57	BZ	335	LEU
57	BZ	350	GLU
57	BZ	352	VAL
57	BZ	354	ARG
57	BZ	356	LEU
57	BZ	361	ASN
57	BZ	363	ARG
57	BZ	384	ILE
57	BZ	385	THR
57	BZ	392	GLU
57	BZ	393	ASP
57	BZ	396	ARG
57	BZ	399	LEU
57	BZ	651	GLU
3	CC	28	ARG
3	CC	32	GLU
3	CC	48	LEU
3	CC	50	ILE
3	CC	53	ARG
3	CC	54	ARG
3	CC	203	GLU
3	CC	208	THR
4	CD	3	VAL
4	CD	12	SER
4	CD	37	LEU
4	CD	54	ARG

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Mol	Chain	Res	Type
4	CD	61	LEU
4	CD	71	ASP
4	CD	94	LEU
4	CD	98	VAL
4	CD	99	ASP
4	CD	101	GLU
4	CD	103	ARG
4	CD	105	ILE
4	CD	106	ILE
4	CD	111	LEU
4	CD	126	GLN
4	CD	134	ARG
4	CD	142	VAL
4	CD	147	LEU
4	CD	155	LEU
4	CD	211	ARG
4	CD	217	ARG
4	CD	221	VAL
4	CD	229	VAL
4	CD	242	ARG
4	CD	253	GLN
4	CD	254	THR
4	CD	257	LEU
4	CD	259	THR
4	CD	260	ARG
4	CD	262	ARG
4	CD	270	ILE
4	CD	274	ARG
4	CD	276	LYS
5	CE	9	VAL
5	CE	12	THR
5	CE	14	ILE
5	CE	24	THR
5	CE	33	VAL
5	CE	40	GLU
5	CE	52	LEU
5	CE	58	ARG
5	CE	73	GLU
5	CE	75	VAL
5	CE	76	ARG
5	CE	82	ARG
5	CE	85	ASN

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Mol	Chain	Res	Type
5	CE	94	GLU
5	CE	105	THR
5	CE	111	ARG
5	CE	113	PHE
5	CE	116	VAL
5	CE	119	ARG
5	CE	141	ILE
5	CE	144	ARG
5	CE	154	LYS
5	CE	163	GLU
5	CE	175	VAL
5	CE	181	LEU
5	CE	182	LEU
5	CE	185	LYS
5	CE	188	VAL
5	CE	195	LEU
5	CE	202	LYS
6	CF	19	GLU
6	CF	20	LEU
6	CF	24	LEU
6	CF	27	GLU
6	CF	28	ILE
6	CF	43	LYS
6	CF	50	SER
6	CF	53	THR
6	CF	57	VAL
6	CF	62	ARG
6	CF	70	THR
6	CF	72	ARG
6	CF	74	ARG
6	CF	106	ARG
6	CF	119	ARG
6	CF	120	GLU
6	CF	126	VAL
6	CF	135	LYS
6	CF	137	LYS
6	CF	140	LEU
6	CF	157	VAL
6	CF	158	THR
6	CF	162	LEU
6	CF	169	ASN
6	CF	170	LEU

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Mol	Chain	Res	Type
6	CF	175	THR
6	CF	183	VAL
6	CF	192	LEU
6	CF	195	ASP
6	CF	200	GLU
6	CF	201	VAL
6	CF	205	ARG
7	CG	3	LEU
7	CG	4	ASP
7	CG	5	VAL
7	CG	7	LEU
7	CG	9	ARG
7	CG	16	ARG
7	CG	18	GLU
7	CG	20	ILE
7	CG	21	ARG
7	CG	33	ARG
7	CG	43	LEU
7	CG	47	LYS
7	CG	60	LEU
7	CG	70	VAL
7	CG	71	THR
7	CG	75	LYS
7	CG	91	ARG
7	CG	98	ARG
7	CG	115	ARG
7	CG	126	ASP
7	CG	133	LEU
7	CG	136	ARG
7	CG	140	ILE
7	CG	143	GLU
7	CG	145	THR
7	CG	148	MET
7	CG	150	ASP
7	CG	153	ARG
7	CG	159	VAL
7	CG	165	THR
7	CG	170	ARG
7	CG	175	LEU
8	CH	3	ARG
8	CH	6	ARG
8	CH	7	LEU

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Mol	Chain	Res	Type
8	CH	33	LEU
8	CH	37	VAL
8	CH	41	MET
8	CH	49	VAL
8	CH	59	ARG
8	CH	69	ARG
8	CH	71	LEU
8	CH	79	VAL
8	CH	92	ILE
8	CH	104	GLU
8	CH	106	THR
8	CH	110	SER
8	CH	115	VAL
8	CH	122	THR
8	CH	130	ARG
8	CH	136	ILE
8	CH	139	GLN
8	CH	171	LEU
10	CL	2	LYS
10	CL	4	VAL
10	CL	29	GLN
10	CL	30	HIS
10	CL	38	VAL
10	CL	47	ASN
10	CL	57	ILE
10	CL	59	ILE
10	CL	65	PHE
10	CL	77	LEU
10	CL	86	LYS
10	CL	93	ARG
10	CL	95	LYS
10	CL	96	VAL
10	CL	102	GLU
10	CL	105	LEU
10	CL	111	LYS
10	CL	117	THR
10	CL	118	THR
10	CL	127	ILE
10	CL	133	SER
10	CL	134	MET
11	CN	5	VAL
11	CN	10	GLU

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Mol	Chain	Res	Type
11	CN	33	LEU
11	CN	34	LEU
11	CN	46	VAL
11	CN	48	MET
11	CN	58	ASP
11	CN	59	LYS
11	CN	63	THR
11	CN	73	THR
11	CN	87	LEU
11	CN	97	ARG
11	CN	99	LEU
11	CN	109	LYS
11	CN	120	LEU
11	CN	121	LYS
11	CN	127	ASP
11	CN	133	GLN
11	CN	138	LEU
12	CO	3	GLN
12	CO	8	LEU
12	CO	10	VAL
12	CO	18	LYS
12	CO	23	ARG
12	CO	24	VAL
12	CO	28	SER
12	CO	65	THR
12	CO	69	ILE
12	CO	75	SER
12	CO	78	ARG
12	CO	94	ARG
12	CO	98	VAL
12	CO	113	LYS
12	CO	116	SER
13	CP	3	LEU
13	CP	16	ARG
13	CP	21	ARG
13	CP	40	SER
13	CP	45	LEU
13	CP	55	ARG
13	CP	57	THR
13	CP	64	LYS
13	CP	65	ARG
13	CP	70	GLN

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Mol	Chain	Res	Type
13	CP	83	VAL
13	CP	106	LEU
13	CP	112	LEU
13	CP	121	LYS
13	CP	125	VAL
13	CP	147	LEU
13	CP	148	LEU
14	CQ	1	MET
14	CQ	16	ARG
14	CQ	21	THR
14	CQ	45	GLN
14	CQ	46	GLN
14	CQ	63	LYS
14	CQ	75	THR
14	CQ	109	VAL
14	CQ	110	THR
14	CQ	111	GLU
14	CQ	128	LYS
14	CQ	131	ILE
14	CQ	133	ARG
15	CR	1	MET
15	CR	6	SER
15	CR	9	LYS
15	CR	18	LEU
15	CR	24	GLN
15	CR	28	LEU
15	CR	29	LEU
15	CR	33	ARG
15	CR	44	LEU
15	CR	63	ARG
15	CR	65	LEU
15	CR	67	LEU
15	CR	75	LEU
15	CR	79	LEU
15	CR	96	ARG
15	CR	100	LEU
15	CR	104	ARG
15	CR	111	LEU
15	CR	114	VAL
16	CS	3	ARG
16	CS	13	ARG
16	CS	19	LYS

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Mol	Chain	Res	Type
16	CS	20	ARG
16	CS	35	ILE
16	CS	38	GLN
16	CS	49	VAL
16	CS	50	SER
16	CS	52	SER
16	CS	53	SER
16	CS	54	LEU
16	CS	57	LYS
16	CS	62	LYS
16	CS	63	THR
16	CS	67	ARG
16	CS	85	VAL
16	CS	110	LEU
17	CT	6	LEU
17	CT	8	LYS
17	CT	13	ARG
17	CT	17	THR
17	CT	18	ASP
17	CT	19	LEU
17	CT	39	ARG
17	CT	40	THR
17	CT	42	ILE
17	CT	49	VAL
17	CT	53	ARG
17	CT	54	ARG
17	CT	59	THR
17	CT	65	LYS
17	CT	74	ARG
17	CT	78	LEU
17	CT	85	LYS
17	CT	89	VAL
17	CT	95	ARG
17	CT	96	ARG
17	CT	98	LYS
17	CT	115	ARG
17	CT	118	ARG
18	CU	6	THR
18	CU	8	VAL
18	CU	15	LYS
18	CU	31	SER
18	CU	52	ARG

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Mol	Chain	Res	Type
18	CU	60	LEU
18	CU	65	ILE
18	CU	69	CYS
18	CU	74	LEU
18	CU	83	LEU
18	CU	92	ARG
18	CU	95	LEU
18	CU	100	VAL
18	CU	104	GLN
18	CU	108	GLU
19	CV	6	LYS
19	CV	15	GLU
19	CV	18	LEU
19	CV	21	ARG
19	CV	32	THR
19	CV	35	LEU
19	CV	52	VAL
19	CV	62	LEU
19	CV	69	LYS
19	CV	72	VAL
19	CV	79	VAL
19	CV	95	LEU
20	CW	4	LYS
20	CW	6	ILE
20	CW	11	ARG
20	CW	15	ARG
20	CW	17	VAL
20	CW	19	LEU
20	CW	23	LEU
20	CW	24	ILE
20	CW	37	ARG
20	CW	50	VAL
20	CW	51	LEU
20	CW	60	ASN
20	CW	100	THR
20	CW	107	LEU
21	CX	9	LEU
21	CX	14	SER
21	CX	23	GLU
21	CX	37	THR
21	CX	57	LEU
21	CX	65	ARG

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Mol	Chain	Res	Type
21	CX	70	LEU
21	CX	72	LYS
21	CX	81	VAL
21	CX	82	GLN
22	CY	6	HIS
22	CY	9	LYS
22	CY	14	LEU
22	CY	37	VAL
22	CY	38	ILE
22	CY	43	ASN
22	CY	47	LYS
22	CY	49	VAL
22	CY	52	SER
22	CY	67	LEU
22	CY	72	VAL
22	CY	85	VAL
22	CY	88	LYS
22	CY	91	GLU
22	CY	95	LYS
22	CY	96	ILE
22	CY	107	ASP
23	CZ	16	SER
23	CZ	33	LEU
23	CZ	37	VAL
23	CZ	41	LEU
23	CZ	61	LEU
23	CZ	76	LEU
23	CZ	78	LYS
23	CZ	81	ARG
23	CZ	86	VAL
23	CZ	91	LEU
23	CZ	107	THR
23	CZ	111	VAL
23	CZ	126	VAL
23	CZ	136	PHE
23	CZ	142	SER
23	CZ	149	SER
23	CZ	150	LEU
23	CZ	154	ASP
23	CZ	156	LYS
23	CZ	161	VAL
23	CZ	170	THR

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Mol	Chain	Res	Type
24	C0	3	HIS
24	C0	9	SER
24	C0	11	ARG
24	C0	14	ARG
24	C0	20	ARG
24	C0	55	ARG
24	C0	74	ARG
25	C1	3	LYS
25	C1	4	VAL
25	C1	30	VAL
25	C1	37	ILE
25	C1	39	LYS
25	C1	40	ARG
25	C1	51	VAL
25	C1	52	ARG
25	C1	59	THR
25	C1	94	LEU
25	C1	95	LEU
26	C2	32	LEU
26	C2	41	ILE
26	C2	45	SER
26	C2	53	LEU
26	C2	60	LEU
26	C2	70	GLN
27	C3	6	VAL
27	C3	8	LEU
27	C3	18	ASP
27	C3	23	LEU
27	C3	31	LEU
27	C3	32	GLN
27	C3	36	VAL
27	C3	56	VAL
28	C4	5	ILE
28	C4	10	VAL
28	C4	34	GLU
28	C4	36	CYS
28	C4	50	VAL
28	C4	56	VAL
28	C4	58	ARG
28	C4	59	PHE
28	C4	61	ARG
28	C4	63	TYR

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Mol	Chain	Res	Type
28	C4	67	TYR
28	C4	68	ARG
28	C4	69	LYS
29	C5	6	VAL
29	C5	12	SER
29	C5	16	ARG
29	C5	21	SER
29	C5	26	THR
29	C5	27	PRO
29	C5	29	THR
29	C5	31	VAL
29	C5	33	CYS
29	C5	36	CYS
29	C5	40	LYS
29	C5	59	GLU
30	C6	6	ARG
30	C6	14	THR
30	C6	20	ASN
30	C6	23	THR
30	C6	27	LYS
30	C6	34	LEU
30	C6	38	LYS
30	C6	44	ARG
30	C6	48	VAL
30	C6	53	LYS
31	C7	4	THR
31	C7	9	ARG
31	C7	10	ARG
31	C7	14	LYS
31	C7	23	ARG
31	C7	32	LYS
31	C7	35	ARG
31	C7	41	ARG
31	C7	43	THR
31	C7	47	ARG
32	C8	3	LYS
32	C8	14	VAL
32	C8	23	VAL
32	C8	27	THR
32	C8	30	ARG
32	C8	31	HIS
32	C8	34	TRP

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Mol	Chain	Res	Type
33	C9	4	ARG
33	C9	26	ILE
33	C9	27	CYS
33	C9	35	ARG
35	DB	7	VAL
35	DB	12	GLU
35	DB	23	ARG
35	DB	24	TRP
35	DB	44	LEU
35	DB	47	THR
35	DB	51	LEU
35	DB	53	ARG
35	DB	56	ARG
35	DB	80	ILE
35	DB	93	VAL
35	DB	94	ASN
35	DB	96	ARG
35	DB	102	LEU
35	DB	107	THR
35	DB	110	GLN
35	DB	113	HIS
35	DB	115	LEU
35	DB	117	GLU
35	DB	119	GLU
35	DB	154	LEU
35	DB	157	ARG
35	DB	160	ASP
35	DB	169	LYS
35	DB	170	GLU
35	DB	179	LYS
35	DB	180	LEU
35	DB	185	ILE
35	DB	187	LEU
35	DB	189	ASP
35	DB	213	LEU
35	DB	217	ARG
35	DB	224	GLN
35	DB	229	VAL
35	DB	230	VAL
36	DC	3	ASN
36	DC	4	LYS
36	DC	5	ILE

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Mol	Chain	Res	Type
36	DC	16	ARG
36	DC	26	LYS
36	DC	30	ARG
36	DC	40	ARG
36	DC	43	LEU
36	DC	45	LYS
36	DC	47	LEU
36	DC	52	LEU
36	DC	102	ASN
36	DC	104	GLN
36	DC	105	GLU
36	DC	108	ASN
36	DC	120	VAL
36	DC	131	ARG
36	DC	152	ILE
36	DC	178	LEU
36	DC	188	LEU
36	DC	190	ARG
36	DC	191	THR
36	DC	195	VAL
36	DC	202	ILE
37	DD	5	ILE
37	DD	8	VAL
37	DD	13	ARG
37	DD	19	LEU
37	DD	28	SER
37	DD	31	CYS
37	DD	34	GLU
37	DD	47	ARG
37	DD	58	LEU
37	DD	61	LYS
37	DD	66	ARG
37	DD	76	ARG
37	DD	85	LYS
37	DD	86	LYS
37	DD	96	LEU
37	DD	97	LEU
37	DD	103	ASN
37	DD	115	ARG
37	DD	119	GLN
37	DD	120	LEU
37	DD	126	ILE

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Mol	Chain	Res	Type
37	DD	127	THR
37	DD	129	ASN
37	DD	132	ARG
37	DD	135	LEU
37	DD	150	GLU
37	DD	153	ARG
37	DD	160	GLN
37	DD	163	GLU
37	DD	170	VAL
37	DD	187	ARG
37	DD	188	LEU
37	DD	194	LEU
37	DD	202	LEU
37	DD	208	SER
38	DE	11	ILE
38	DE	25	ARG
38	DE	31	LEU
38	DE	41	VAL
38	DE	47	LYS
38	DE	60	TYR
38	DE	66	MET
38	DE	68	GLU
38	DE	71	LEU
38	DE	78	HIS
38	DE	90	VAL
38	DE	91	LEU
38	DE	107	ARG
38	DE	116	THR
38	DE	135	THR
38	DE	147	ASP
38	DE	150	ARG
38	DE	151	LEU
39	DF	27	GLN
39	DF	28	ARG
39	DF	69	GLU
39	DF	72	VAL
39	DF	74	ASP
39	DF	86	ARG
39	DF	87	ARG
39	DF	92	LYS
40	DG	4	ARG
40	DG	8	GLU

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Mol	Chain	Res	Type
40	DG	24	THR
40	DG	45	ASP
40	DG	57	GLU
40	DG	73	MET
40	DG	75	VAL
40	DG	76	ARG
40	DG	85	TYR
40	DG	87	VAL
40	DG	104	LEU
40	DG	114	ARG
40	DG	115	ARG
40	DG	137	LYS
40	DG	140	ASP
40	DG	151	TYR
40	DG	153	HIS
40	DG	154	TYR
40	DG	155	ARG
41	DH	2	LEU
41	DH	3	THR
41	DH	21	LYS
41	DH	25	ASP
41	DH	37	ARG
41	DH	51	VAL
41	DH	52	ASP
41	DH	54	ASP
41	DH	63	LEU
41	DH	78	GLN
41	DH	84	ARG
41	DH	85	ARG
41	DH	91	ARG
41	DH	98	LYS
41	DH	99	GLU
41	DH	104	ARG
41	DH	111	ILE
41	DH	112	LEU
41	DH	120	THR
41	DH	133	LEU
42	DI	7	THR
42	DI	17	VAL
42	DI	23	ASN
42	DI	27	THR
42	DI	41	VAL

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Mol	Chain	Res	Type
42	DI	53	VAL
42	DI	64	THR
42	DI	65	VAL
42	DI	83	ARG
42	DI	92	TYR
42	DI	102	LEU
42	DI	104	ARG
42	DI	108	VAL
42	DI	109	VAL
42	DI	124	GLN
43	DJ	17	ASP
43	DJ	38	ILE
43	DJ	58	ASP
43	DJ	59	SER
43	DJ	67	THR
44	DK	18	ARG
44	DK	30	VAL
44	DK	33	THR
44	DK	38	ASN
44	DK	96	ARG
44	DK	109	VAL
44	DK	114	VAL
44	DK	120	ARG
44	DK	126	ARG
45	DL	6	THR
45	DL	8	ASN
45	DL	24	VAL
45	DL	27	LEU
45	DL	33	ARG
45	DL	39	VAL
45	DL	52	LEU
45	DL	53	ARG
45	DL	55	VAL
45	DL	83	VAL
45	DL	84	LEU
45	DL	104	VAL
45	DL	113	ARG
45	DL	114	LYS
46	DM	3	ARG
46	DM	8	GLU
46	DM	12	ASN
46	DM	15	VAL

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Mol	Chain	Res	Type
46	DM	29	ARG
46	DM	56	LEU
46	DM	66	LEU
46	DM	70	LEU
46	DM	73	GLU
46	DM	91	ARG
46	DM	106	ASN
46	DM	108	ARG
46	DM	110	ARG
46	DM	114	ARG
47	DN	12	ARG
47	DN	15	LYS
47	DN	22	THR
47	DN	33	VAL
47	DN	42	ILE
47	DN	43	CYS
47	DN	44	LEU
47	DN	46	GLU
48	DO	3	ILE
48	DO	4	THR
48	DO	5	LYS
48	DO	7	GLU
48	DO	22	THR
48	DO	26	GLU
48	DO	38	ARG
48	DO	39	LEU
48	DO	41	GLU
48	DO	48	LYS
48	DO	66	LEU
48	DO	68	ARG
49	DP	2	VAL
49	DP	4	ILE
49	DP	5	ARG
49	DP	8	ARG
49	DP	21	VAL
49	DP	27	LYS
49	DP	35	LYS
49	DP	38	TYR
49	DP	60	LEU
49	DP	62	VAL
50	DQ	37	LYS
50	DQ	50	LYS

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Mol	Chain	Res	Type
50	DQ	65	ILE
50	DQ	70	ARG
50	DQ	72	ARG
50	DQ	74	LEU
50	DQ	76	LEU
51	DR	25	THR
51	DR	31	LEU
51	DR	32	ARG
51	DR	37	VAL
51	DR	41	LYS
51	DR	53	ARG
51	DR	55	ARG
51	DR	69	THR
51	DR	84	LYS
51	DR	86	VAL
52	DS	3	ARG
52	DS	12	ASP
52	DS	15	LEU
52	DS	16	LEU
52	DS	33	THR
52	DS	38	SER
52	DS	42	PRO
52	DS	78	ARG
53	DT	23	ARG
53	DT	62	LEU
53	DT	72	LEU
53	DT	80	ARG
53	DT	84	LEU
53	DT	89	ARG
54	DU	10	ARG
57	DZ	-65	LYS
57	DZ	-62	LEU
57	DZ	-58	LEU
57	DZ	-50	GLN
57	DZ	-29	LEU
57	DZ	-27	THR
57	DZ	-23	LEU
57	DZ	-22	LYS
57	DZ	-20	LEU
57	DZ	-19	GLU
57	DZ	-6	ARG
57	DZ	-3	GLU

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Mol	Chain	Res	Type
57	DZ	1	LEU
57	DZ	6	GLU
57	DZ	9	LEU
57	DZ	10	LYS
57	DZ	12	LEU
57	DZ	15	ILE
57	DZ	22	ASP
57	DZ	25	LYS
57	DZ	26	THR
57	DZ	28	THR
57	DZ	38	ARG
57	DZ	39	ILE
57	DZ	79	ILE
57	DZ	81	ILE
57	DZ	87	HIS
57	DZ	92	ILE
57	DZ	100	VAL
57	DZ	105	ILE
57	DZ	112	GLN
57	DZ	115	GLU
57	DZ	118	SER
57	DZ	130	VAL
57	DZ	132	ARG
57	DZ	141	LYS
57	DZ	146	LEU
57	DZ	151	ARG
57	DZ	155	GLU
57	DZ	156	ARG
57	DZ	157	LEU
57	DZ	162	VAL
57	DZ	163	VAL
57	DZ	170	ARG
57	DZ	182	ARG
57	DZ	187	THR
57	DZ	192	LEU
57	DZ	201	ILE
57	DZ	203	GLU
57	DZ	207	ASP
57	DZ	212	TYR
57	DZ	214	GLU
57	DZ	215	LYS
57	DZ	217	VAL

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Mol	Chain	Res	Type
57	DZ	219	VAL
57	DZ	222	ASP
57	DZ	227	ILE
57	DZ	228	MET
57	DZ	236	GLU
57	DZ	240	GLU
57	DZ	242	LEU
57	DZ	255	ILE
57	DZ	270	GLN
57	DZ	277	VAL
57	DZ	284	LEU
57	DZ	285	ASP
57	DZ	292	THR
57	DZ	297	GLU
57	DZ	298	VAL
57	DZ	299	VAL
57	DZ	302	HIS
57	DZ	312	LEU
57	DZ	315	LYS
57	DZ	322	VAL
57	DZ	328	ILE
57	DZ	352	VAL
57	DZ	355	LEU
57	DZ	356	LEU
57	DZ	361	ASN
57	DZ	363	ARG
57	DZ	364	GLU
57	DZ	368	GLU
57	DZ	369	LEU
57	DZ	377	VAL
57	DZ	381	LYS
57	DZ	385	THR
57	DZ	392	GLU
57	DZ	396	ARG
57	DZ	402	ILE
57	DZ	661	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (164) such sidechains are listed below:

Mol	Chain	Res	Type
3	AC	67	HIS
3	AC	173	HIS

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Mol	Chain	Res	Type
3	AC	189	ASN
3	AC	200	HIS
4	AD	87	ASN
4	AD	253	GLN
5	AE	85	ASN
6	AF	69	HIS
6	AF	169	ASN
6	AF	203	GLN
7	AG	26	GLN
7	AG	41	GLN
8	AH	147	ASN
10	AL	29	GLN
10	AL	30	HIS
11	AN	133	GLN
13	AP	38	GLN
15	AR	11	ASN
15	AR	13	HIS
15	AR	71	GLN
17	AT	43	GLN
17	AT	123	GLN
19	AV	80	GLN
21	AX	31	HIS
21	AX	82	GLN
22	AY	6	HIS
22	AY	92	ASN
23	AZ	50	GLN
23	AZ	55	HIS
23	AZ	73	GLN
23	AZ	121	HIS
26	A2	46	GLN
28	A4	46	GLN
32	A8	35	GLN
33	A9	36	GLN
35	BB	40	HIS
35	BB	45	GLN
35	BB	76	GLN
35	BB	212	GLN
36	BC	6	HIS
36	BC	28	GLN
36	BC	136	GLN
36	BC	181	ASN
37	BD	42	GLN

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Mol	Chain	Res	Type
37	BD	77	ASN
37	BD	119	GLN
37	BD	123	HIS
37	BD	125	HIS
37	BD	161	ASN
38	BE	38	GLN
38	BE	56	GLN
38	BE	141	GLN
39	BF	73	ASN
40	BG	13	GLN
40	BG	28	ASN
40	BG	110	GLN
41	BH	78	GLN
42	BI	23	ASN
42	BI	31	GLN
42	BI	34	ASN
42	BI	124	GLN
43	BJ	21	GLN
43	BJ	62	HIS
44	BK	93	GLN
46	BM	40	ASN
46	BM	92	HIS
47	BN	49	HIS
48	BO	9	GLN
48	BO	13	GLN
48	BO	28	GLN
48	BO	46	HIS
48	BO	62	GLN
50	BQ	16	GLN
50	BQ	26	GLN
50	BQ	94	ASN
52	BS	65	ASN
52	BS	69	HIS
52	BS	83	HIS
53	BT	42	GLN
53	BT	45	GLN
57	BZ	-50	GLN
57	BZ	7	ASN
57	BZ	77	HIS
57	BZ	80	ASN
57	BZ	165	GLN
57	BZ	213	HIS

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Mol	Chain	Res	Type
3	CC	67	HIS
3	CC	189	ASN
3	CC	200	HIS
4	CD	87	ASN
4	CD	96	HIS
4	CD	116	GLN
4	CD	164	GLN
4	CD	253	GLN
5	CE	85	ASN
6	CF	29	ASN
6	CF	69	HIS
6	CF	75	HIS
6	CF	169	ASN
6	CF	203	GLN
7	CG	108	ASN
8	CH	158	HIS
10	CL	29	GLN
10	CL	30	HIS
11	CN	128	HIS
11	CN	133	GLN
12	CO	90	GLN
13	CP	38	GLN
14	CQ	57	HIS
14	CQ	123	HIS
16	CS	68	GLN
17	CT	58	ASN
17	CT	79	HIS
17	CT	123	GLN
18	CU	72	HIS
18	CU	94	ASN
18	CU	104	GLN
20	CW	60	ASN
21	CX	31	HIS
22	CY	43	ASN
23	CZ	50	GLN
23	CZ	65	GLN
26	C2	38	GLN
26	C2	70	GLN
27	C3	33	GLN
30	C6	32	ASN
33	C9	36	GLN
35	DB	16	HIS

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Mol	Chain	Res	Type
35	DB	45	GLN
35	DB	76	GLN
35	DB	94	ASN
35	DB	146	GLN
35	DB	224	GLN
36	DC	28	GLN
36	DC	104	GLN
36	DC	110	ASN
36	DC	123	GLN
36	DC	170	GLN
37	DD	77	ASN
37	DD	123	HIS
37	DD	129	ASN
37	DD	160	GLN
38	DE	73	ASN
38	DE	130	ASN
39	DF	7	ASN
40	DG	28	ASN
40	DG	51	GLN
42	DI	31	GLN
43	DJ	68	HIS
44	DK	93	GLN
45	DL	49	ASN
45	DL	75	HIS
45	DL	78	GLN
46	DM	77	ASN
48	DO	13	GLN
48	DO	28	GLN
49	DP	13	HIS
50	DQ	16	GLN
52	DS	83	HIS
57	DZ	-50	GLN
57	DZ	77	HIS
57	DZ	117	GLN
57	DZ	154	GLN
57	DZ	213	HIS

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	2845/2915 (97%)	563 (19%)	43 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	CA	2839/2915 (97%)	578 (20%)	33 (1%)
2	AB	119/121 (98%)	25 (21%)	1 (0%)
2	CB	119/121 (98%)	23 (19%)	0
34	BA	1491/1521 (98%)	299 (20%)	18 (1%)
34	DA	1498/1521 (98%)	296 (19%)	20 (1%)
55	BV	12/24 (50%)	7 (58%)	0
55	DV	5/24 (20%)	1 (20%)	0
56	BX	75/77 (97%)	15 (20%)	1 (1%)
56	DX	75/77 (97%)	11 (14%)	0
All	All	9078/9316 (97%)	1818 (20%)	116 (1%)

All (1818) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	12	U
1	AA	13	A
1	AA	17	G
1	AA	34	C
1	AA	36	G
1	AA	45	C
1	AA	57	G
1	AA	63	A
1	AA	70	A
1	AA	73	A
1	AA	74	G
1	AA	83	A
1	AA	87	G
1	AA	89	U
1	AA	94	G
1	AA	95	G
1	AA	116	A
1	AA	117	A
1	AA	118	U
1	AA	119	G
1	AA	120	G
1	AA	121	G
1	AA	123	G
1	AA	131	C
1	AA	149	A
1	AA	162	G
1	AA	170	A
1	AA	171	A

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Mol	Chain	Res	Type
1	AA	185	A
1	AA	188	A
1	AA	189	U
1	AA	190	C
1	AA	194	G
1	AA	203	G
1	AA	204	G
1	AA	205	A
1	AA	210	A
1	AA	211	A
1	AA	213	G
1	AA	214	A
1	AA	217	A
1	AA	218	A
1	AA	222	A
1	AA	237	G
1	AA	239	G
1	AA	250	G
1	AA	253	C
1	AA	255	G
1	AA	269	G
1	AA	271	U
1	AA	272	U
1	AA	273	G
1	AA	274	U
1	AA	279	G
1	AA	282	G
1	AA	289	G
1	AA	299	G
1	AA	303	C
1	AA	307	A
1	AA	311	C
1	AA	335	A
1	AA	336	G
1	AA	341	G
1	AA	349	G
1	AA	353	G
1	AA	354	A
1	AA	358	C
1	AA	366	G
1	AA	370	A
1	AA	376	G

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Mol	Chain	Res	Type
1	AA	387	G
1	AA	391	G
1	AA	397	G
1	AA	413	G
1	AA	416	G
1	AA	434	G
1	AA	438	G
1	AA	449	A
1	AA	455	A
1	AA	469	A
1	AA	470	C
1	AA	474	U
1	AA	477	C
1	AA	483	A
1	AA	489	G
1	AA	496	A
1	AA	497	A
1	AA	499	G
1	AA	501	U
1	AA	507	G
1	AA	519	G
1	AA	528	A
1	AA	529	U
1	AA	530	A
1	AA	533	G
1	AA	534	C
1	AA	537	G
1	AA	553	A
1	AA	554	A
1	AA	555	G
1	AA	556	C
1	AA	557	A
1	AA	558	G
1	AA	573	G
1	AA	574	G
1	AA	586	G
1	AA	596	G
1	AA	598	A
1	AA	607	C
1	AA	609	A
1	AA	625	G
1	AA	626	A

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Mol	Chain	Res	Type
1	AA	627	G
1	AA	630	U
1	AA	631	A
1	AA	638	U
1	AA	639	G
1	AA	640	A
1	AA	641	G
1	AA	643	C
1	AA	659	C
1	AA	662	A
1	AA	670	C
1	AA	671	A
1	AA	697	C
1	AA	716	G
1	AA	733	G
1	AA	746	A
1	AA	764	G
1	AA	777	C
1	AA	787	U
1	AA	804	U
1	AA	809	U
1	AA	811	A
1	AA	812	G
1	AA	821	A
1	AA	822	G
1	AA	823	G
1	AA	829	A
1	AA	830	A
1	AA	831	A
1	AA	832	G
1	AA	836	A
1	AA	837	C
1	AA	839	G
1	AA	845	G
1	AA	852	G
1	AA	859	C
1	AA	874	U
1	AA	875	U
1	AA	880	U
1	AA	897	C
1	AA	906	G
1	AA	913	A

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Mol	Chain	Res	Type
1	AA	914	C
1	AA	924	U
1	AA	927	G
1	AA	929	G
1	AA	932	C
1	AA	933	C
1	AA	934	A
1	AA	935	C
1	AA	936	C
1	AA	937	A
1	AA	938	G
1	AA	939	C
1	AA	940	C
1	AA	942	A
1	AA	943	C
1	AA	945	A
1	AA	953	U
1	AA	956	A
1	AA	957	A
1	AA	960	C
1	AA	968	U
1	AA	977	G
1	AA	986	A
1	AA	990	A
1	AA	991	G
1	AA	992	G
1	AA	1004	A
1	AA	1006	C
1	AA	1019	G
1	AA	1020	C
1	AA	1029	A
1	AA	1031	C
1	AA	1037	C
1	AA	1042	A
1	AA	1051	C
1	AA	1052	C
1	AA	1054	C
1	AA	1058	U
1	AA	1059	C
1	AA	1068	G
1	AA	1069	U
1	AA	1072	U

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Mol	Chain	Res	Type
1	AA	1079	U
1	AA	1080	G
1	AA	1082	G
1	AA	1084	C
1	AA	1087	C
1	AA	1093	G
1	AA	1097	G
1	AA	1099	C
1	AA	1100	A
1	AA	1105	G
1	AA	1107	U
1	AA	1108	G
1	AA	1112	U
1	AA	1114	G
1	AA	1116	A
1	AA	1119	A
1	AA	1120	G
1	AA	1121	C
1	AA	1122	C
1	AA	1128	U
1	AA	1129	U
1	AA	1134	A
1	AA	1135	G
1	AA	1141	A
1	AA	1142	A
1	AA	1144	A
1	AA	1147	U
1	AA	1155	C
1	AA	1156	G
1	AA	1158	G
1	AA	1164	C
1	AA	1210	G
1	AA	1217	G
1	AA	1218	G
1	AA	1219	A
1	AA	1220	U
1	AA	1221	G
1	AA	1222	A
1	AA	1223	C
1	AA	1255	A
1	AA	1256	U
1	AA	1290	G

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Mol	Chain	Res	Type
1	AA	1299	A
1	AA	1302	G
1	AA	1317	G
1	AA	1318	A
1	AA	1319	U
1	AA	1329	G
1	AA	1338	U
1	AA	1339	C
1	AA	1340	U
1	AA	1343	C
1	AA	1346	U
1	AA	1347	A
1	AA	1352	C
1	AA	1364	C
1	AA	1367	A
1	AA	1372	U
1	AA	1380	G
1	AA	1393	G
1	AA	1395	A
1	AA	1398	U
1	AA	1405	A
1	AA	1406	A
1	AA	1411	A
1	AA	1416	C
1	AA	1423	G
1	AA	1424	A
1	AA	1425	A
1	AA	1430	A
1	AA	1431	G
1	AA	1432	C
1	AA	1436	U
1	AA	1437	U
1	AA	1441	A
1	AA	1453	C
1	AA	1460	G
1	AA	1462	G
1	AA	1463	C
1	AA	1466	U
1	AA	1467	G
1	AA	1468	G
1	AA	1469	G
1	AA	1474	C

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Mol	Chain	Res	Type
1	AA	1476	C
1	AA	1479	U
1	AA	1485	A
1	AA	1491	A
1	AA	1493	C
1	AA	1496	A
1	AA	1497	G
1	AA	1506	G
1	AA	1508	G
1	AA	1514	C
1	AA	1518	A
1	AA	1525	G
1	AA	1529	G
1	AA	1539	C
1	AA	1540	A
1	AA	1554	A
1	AA	1555	C
1	AA	1556	A
1	AA	1571	G
1	AA	1576	G
1	AA	1579	C
1	AA	1589	A
1	AA	1590	C
1	AA	1605	A
1	AA	1607	G
1	AA	1608	G
1	AA	1613	A
1	AA	1616	A
1	AA	1625	U
1	AA	1628	G
1	AA	1630	A
1	AA	1631	C
1	AA	1632	A
1	AA	1651	C
1	AA	1654	A
1	AA	1655	A
1	AA	1656	A
1	AA	1663	C
1	AA	1670	G
1	AA	1680	G
1	AA	1686	U
1	AA	1694	G

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Mol	Chain	Res	Type
1	AA	1695	C
1	AA	1700	G
1	AA	1701	A
1	AA	1706	U
1	AA	1721	G
1	AA	1729	G
1	AA	1743	G
1	AA	1745	A
1	AA	1747	A
1	AA	1748	A
1	AA	1752	G
1	AA	1766	G
1	AA	1767	A
1	AA	1768	U
1	AA	1769	G
1	AA	1775	C
1	AA	1776	G
1	AA	1779	G
1	AA	1787	G
1	AA	1793	A
1	AA	1794	G
1	AA	1795	G
1	AA	1804	A
1	AA	1811	A
1	AA	1813	C
1	AA	1822	A
1	AA	1831	C
1	AA	1832	G
1	AA	1833	A
1	AA	1847	G
1	AA	1859	G
1	AA	1860	A
1	AA	1870	G
1	AA	1878	A
1	AA	1889	G
1	AA	1892	G
1	AA	1893	G
1	AA	1900	G
1	AA	1911	A
1	AA	1922	A
1	AA	1928	G
1	AA	1937	U

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Mol	Chain	Res	Type
1	AA	1945	U
1	AA	1951	G
1	AA	1952	G
1	AA	1954	A
1	AA	1959	A
1	AA	1960	A
1	AA	1977	U
1	AA	1984	C
1	AA	1985	U
1	AA	1989	C
1	AA	1992	A
1	AA	1993	A
1	AA	1994	A
1	AA	1995	G
1	AA	2003	A
1	AA	2008	A
1	AA	2014	G
1	AA	2015	U
1	AA	2019	G
1	AA	2039	U
1	AA	2042	A
1	AA	2045	G
1	AA	2052	A
1	AA	2053	A
1	AA	2055	A
1	AA	2065	C
1	AA	2069	U
1	AA	2071	G
1	AA	2073	A
1	AA	2077	C
1	AA	2078	G
1	AA	2082	A
1	AA	2083	G
1	AA	2084	A
1	AA	2091	G
1	AA	2102	G
1	AA	2115	G
1	AA	2120	U
1	AA	2133	C
1	AA	2134	G
1	AA	2137	G
1	AA	2139	A

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Mol	Chain	Res	Type
1	AA	2141	A
1	AA	2149	G
1	AA	2151	C
1	AA	2154	U
1	AA	2156	A
1	AA	2157	A
1	AA	2158	C
1	AA	2160	C
1	AA	2163	G
1	AA	2164	C
1	AA	2167	C
1	AA	2168	C
1	AA	2169	G
1	AA	2172	U
1	AA	2173	G
1	AA	2175	G
1	AA	2178	G
1	AA	2179	G
1	AA	2180	A
1	AA	2181	G
1	AA	2188	G
1	AA	2189	U
1	AA	2190	G
1	AA	2191	A
1	AA	2192	A
1	AA	2194	U
1	AA	2195	A
1	AA	2197	C
1	AA	2204	G
1	AA	2206	G
1	AA	2210	C
1	AA	2211	U
1	AA	2213	G
1	AA	2214	G
1	AA	2217	C
1	AA	2220	A
1	AA	2221	A
1	AA	2227	G
1	AA	2228	G
1	AA	2229	A
1	AA	2230	U
1	AA	2237	A

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Mol	Chain	Res	Type
1	AA	2250	G
1	AA	2251	G
1	AA	2254	G
1	AA	2261	U
1	AA	2271	G
1	AA	2280	A
1	AA	2281	A
1	AA	2287	C
1	AA	2295	C
1	AA	2299	A
1	AA	2317	A
1	AA	2319	G
1	AA	2320	G
1	AA	2332	A
1	AA	2337	G
1	AA	2338	C
1	AA	2339	A
1	AA	2347	A
1	AA	2348	A
1	AA	2355	C
1	AA	2358	A
1	AA	2359	C
1	AA	2362	C
1	AA	2378	A
1	AA	2384	G
1	AA	2385	G
1	AA	2395	G
1	AA	2397	C
1	AA	2418	U
1	AA	2419	G
1	AA	2434	A
1	AA	2435	U
1	AA	2436	C
1	AA	2437	A
1	AA	2441	G
1	AA	2442	A
1	AA	2443	U
1	AA	2447	A
1	AA	2451	A
1	AA	2452	C
1	AA	2453	C
1	AA	2457	G

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Mol	Chain	Res	Type
1	AA	2459	G
1	AA	2460	A
1	AA	2461	U
1	AA	2480	G
1	AA	2488	A
1	AA	2490	A
1	AA	2491	G
1	AA	2509	A
1	AA	2514	G
1	AA	2517	G
1	AA	2518	U
1	AA	2519	C
1	AA	2522	C
1	AA	2530	A
1	AA	2532	C
1	AA	2537	G
1	AA	2541	G
1	AA	2566	U
1	AA	2578	A
1	AA	2579	G
1	AA	2584	A
1	AA	2585	C
1	AA	2590	G
1	AA	2594	G
1	AA	2597	U
1	AA	2598	C
1	AA	2600	G
1	AA	2613	C
1	AA	2614	A
1	AA	2621	U
1	AA	2622	C
1	AA	2623	U
1	AA	2624	C
1	AA	2642	G
1	AA	2673	G
1	AA	2674	A
1	AA	2685	G
1	AA	2701	U
1	AA	2702	C
1	AA	2714	U
1	AA	2715	C
1	AA	2719	G

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Mol	Chain	Res	Type
1	AA	2725	A
1	AA	2726	A
1	AA	2727	G
1	AA	2739	U
1	AA	2740	G
1	AA	2746	A
1	AA	2757	G
1	AA	2768	C
1	AA	2770	A
1	AA	2771	A
1	AA	2773	C
1	AA	2778	A
1	AA	2779	G
1	AA	2791	A
1	AA	2794	A
1	AA	2803	A
1	AA	2804	C
1	AA	2807	C
1	AA	2813	G
1	AA	2830	A
1	AA	2831	A
1	AA	2839	C
1	AA	2843	G
1	AA	2845	A
1	AA	2846	U
1	AA	2849	G
1	AA	2871	G
1	AA	2881	C
1	AA	2882	G
1	AA	2902	G
1	AA	2903	G
2	AB	2	C
2	AB	12	C
2	AB	13	A
2	AB	23	G
2	AB	26	A
2	AB	31	C
2	AB	32	C
2	AB	44	G
2	AB	45	A
2	AB	47	C
2	AB	50	G

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Mol	Chain	Res	Type
2	AB	52	A
2	AB	56	G
2	AB	58	A
2	AB	63	G
2	AB	73	A
2	AB	85	G
2	AB	90	A
2	AB	93	G
2	AB	94	C
2	AB	95	C
2	AB	108	U
2	AB	110	G
2	AB	113	G
2	AB	118	G
34	BA	5	U
34	BA	7	G
34	BA	8	A
34	BA	9	G
34	BA	11	G
34	BA	32	A
34	BA	39	G
34	BA	43	C
34	BA	44	G
34	BA	47	C
34	BA	48	C
34	BA	50	A
34	BA	51	A
34	BA	61	G
34	BA	66	G
34	BA	77	G
34	BA	78	G
34	BA	79	G
34	BA	97	G
34	BA	101	A
34	BA	116	A
34	BA	121	C
34	BA	127	G
34	BA	131	C
34	BA	137	C
34	BA	160	A
34	BA	163	C
34	BA	164	U

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Mol	Chain	Res	Type
34	BA	174	C
34	BA	182	U
34	BA	189(F)	U
34	BA	189(J)	G
34	BA	195	A
34	BA	197	A
34	BA	199	G
34	BA	202	U
34	BA	204	U
34	BA	216	G
34	BA	231	G
34	BA	243	A
34	BA	247	G
34	BA	251	G
34	BA	266	G
34	BA	267	C
34	BA	270	A
34	BA	281	G
34	BA	286	G
34	BA	289	G
34	BA	305	G
34	BA	306	G
34	BA	318	G
34	BA	320	C
34	BA	328	C
34	BA	329	A
34	BA	330	C
34	BA	331	G
34	BA	332	G
34	BA	343	U
34	BA	346	G
34	BA	347	G
34	BA	348	G
34	BA	351	G
34	BA	352	C
34	BA	353	A
34	BA	354	G
34	BA	355	C
34	BA	356	A
34	BA	367	U
34	BA	370	C
34	BA	372	C

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Mol	Chain	Res	Type
34	BA	373	A
34	BA	384	G
34	BA	397	A
34	BA	398	C
34	BA	406	G
34	BA	412	A
34	BA	413	G
34	BA	422	C
34	BA	424	G
34	BA	429	U
34	BA	439	A
34	BA	442	C
34	BA	446	G
34	BA	452	A
34	BA	470	C
34	BA	485	G
34	BA	496	A
34	BA	498	U
34	BA	505	G
34	BA	509	A
34	BA	510	A
34	BA	511	C
34	BA	518	C
34	BA	521	G
34	BA	526	C
34	BA	527	G
34	BA	531	U
34	BA	532	A
34	BA	533	A
34	BA	547	A
34	BA	549	C
34	BA	559	A
34	BA	561	U
34	BA	572	A
34	BA	573	A
34	BA	574	A
34	BA	576	G
34	BA	577	G
34	BA	581	G
34	BA	618	C
34	BA	630	G
34	BA	631	G

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Mol	Chain	Res	Type
34	BA	633	G
34	BA	634	C
34	BA	649	G
34	BA	653	A
34	BA	665	A
34	BA	671	G
34	BA	687	A
34	BA	688	G
34	BA	693	G
34	BA	694	A
34	BA	695	A
34	BA	702	A
34	BA	717	C
34	BA	723	U
34	BA	724	G
34	BA	731	G
34	BA	734	G
34	BA	749	C
34	BA	755	G
34	BA	759	A
34	BA	766	A
34	BA	774	G
34	BA	777	A
34	BA	787	A
34	BA	792	A
34	BA	793	U
34	BA	794	A
34	BA	796	C
34	BA	799	G
34	BA	806	C
34	BA	815	A
34	BA	817	C
34	BA	828	A
34	BA	829	G
34	BA	836	G
34	BA	840	C
34	BA	841	U
34	BA	848	C
34	BA	850	U
34	BA	851	G
34	BA	853	G
34	BA	859	A

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Mol	Chain	Res	Type
34	BA	870	U
34	BA	872	A
34	BA	874	G
34	BA	875	C
34	BA	892	A
34	BA	896	C
34	BA	902	G
34	BA	913	A
34	BA	914	A
34	BA	922	G
34	BA	926	G
34	BA	927	G
34	BA	932	C
34	BA	934	C
34	BA	935	A
34	BA	942	G
34	BA	960	U
34	BA	961	U
34	BA	964	A
34	BA	966	G
34	BA	968	A
34	BA	969	A
34	BA	971	G
34	BA	972	C
34	BA	974	A
34	BA	975	A
34	BA	976	G
34	BA	977	A
34	BA	992	U
34	BA	993	G
34	BA	1003	G
34	BA	1004	A
34	BA	1005	A
34	BA	1009	G
34	BA	1011	G
34	BA	1016	A
34	BA	1019	C
34	BA	1021	G
34	BA	1022	G
34	BA	1023	G
34	BA	1025	U
34	BA	1026	G

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Mol	Chain	Res	Type
34	BA	1028	C
34	BA	1029	C
34	BA	1030	C
34	BA	1030(A)	G
34	BA	1030(C)	G
34	BA	1031	G
34	BA	1045	C
34	BA	1053	G
34	BA	1054	C
34	BA	1065	U
34	BA	1066	C
34	BA	1068	G
34	BA	1075	C
34	BA	1076	C
34	BA	1081	G
34	BA	1094	G
34	BA	1095	U
34	BA	1101	A
34	BA	1118	C
34	BA	1123	A
34	BA	1124	G
34	BA	1125	U
34	BA	1126	U
34	BA	1130	A
34	BA	1136	U
34	BA	1137	C
34	BA	1139	G
34	BA	1140	C
34	BA	1141	C
34	BA	1146	A
34	BA	1152	A
34	BA	1157	A
34	BA	1159	U
34	BA	1165	C
34	BA	1166	G
34	BA	1169	A
34	BA	1183	A
34	BA	1184	G
34	BA	1190	G
34	BA	1196	U
34	BA	1197	G
34	BA	1200	C

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Mol	Chain	Res	Type
34	BA	1201	A
34	BA	1202	G
34	BA	1213	A
34	BA	1214	C
34	BA	1227	A
34	BA	1236	A
34	BA	1238	A
34	BA	1239	A
34	BA	1240	U
34	BA	1241	G
34	BA	1253	G
34	BA	1256	A
34	BA	1257	U
34	BA	1258	G
34	BA	1260	C
34	BA	1261	A
34	BA	1270	C
34	BA	1278	U
34	BA	1279	A
34	BA	1280	A
34	BA	1286	A
34	BA	1287	A
34	BA	1299	A
34	BA	1300	G
34	BA	1305	G
34	BA	1317	C
34	BA	1322	C
34	BA	1338	G
34	BA	1340	A
34	BA	1344	C
34	BA	1346	A
34	BA	1347	G
34	BA	1353	G
34	BA	1360	A
34	BA	1363	C
34	BA	1370	G
34	BA	1397	C
34	BA	1400	C
34	BA	1402	C
34	BA	1403	C
34	BA	1419	G
34	BA	1442	G

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Mol	Chain	Res	Type
34	BA	1442(A)	G
34	BA	1446	U
34	BA	1447	A
34	BA	1452	C
34	BA	1460	A
34	BA	1475	G
34	BA	1478	C
34	BA	1487	G
34	BA	1488	G
34	BA	1497	G
34	BA	1499	A
34	BA	1502	A
34	BA	1504	G
34	BA	1506	U
34	BA	1508	G
34	BA	1517	G
34	BA	1529	G
34	BA	1530	G
34	BA	1531	A
55	BV	13	A
55	BV	14	A
55	BV	17	U
55	BV	18	G
55	BV	19	U
55	BV	23	A
55	BV	24	A
56	BX	6	G
56	BX	9	G
56	BX	13	C
56	BX	19	G
56	BX	20	U
56	BX	21	A
56	BX	25	C
56	BX	31	G
56	BX	34	C
56	BX	42	G
56	BX	47	U
56	BX	56	C
56	BX	58	A
56	BX	68	C
56	BX	76	A
1	CA	12	U

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Mol	Chain	Res	Type
1	CA	13	A
1	CA	15	G
1	CA	34	C
1	CA	35	G
1	CA	36	G
1	CA	45	C
1	CA	71	A
1	CA	74	A
1	CA	75	G
1	CA	78	A
1	CA	84	A
1	CA	90	U
1	CA	100	G
1	CA	102	G
1	CA	107	C
1	CA	118	A
1	CA	119	A
1	CA	120	U
1	CA	131	G
1	CA	139(A)	G
1	CA	141	A
1	CA	154(A)	C
1	CA	157	U
1	CA	181	A
1	CA	196	A
1	CA	199	A
1	CA	200	U
1	CA	205	G
1	CA	214	G
1	CA	215	G
1	CA	216	A
1	CA	221	A
1	CA	222	A
1	CA	228	A
1	CA	229	A
1	CA	231	C
1	CA	232	G
1	CA	233	A
1	CA	235	U
1	CA	237	C
1	CA	245	G
1	CA	248	G

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Mol	Chain	Res	Type
1	CA	250	G
1	CA	271(I)	G
1	CA	271(K)	U
1	CA	271(L)	U
1	CA	271(M)	G
1	CA	271(O)	C
1	CA	272	G
1	CA	272(A)	U
1	CA	272(B)	G
1	CA	272(J)	C
1	CA	277	C
1	CA	278	A
1	CA	286	C
1	CA	289	A
1	CA	294	A
1	CA	298	G
1	CA	299	A
1	CA	302	C
1	CA	308	G
1	CA	310	A
1	CA	311	A
1	CA	317	G
1	CA	327	G
1	CA	329	G
1	CA	330	A
1	CA	331	A
1	CA	333	G
1	CA	338	G
1	CA	352	G
1	CA	362	U
1	CA	363	G
1	CA	363(B)	G
1	CA	363(C)	G
1	CA	386	G
1	CA	396	G
1	CA	405	U
1	CA	406	G
1	CA	407	G
1	CA	411	G
1	CA	412	A
1	CA	416	C
1	CA	419	C

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Mol	Chain	Res	Type
1	CA	422	A
1	CA	428	A
1	CA	438	G
1	CA	443	A
1	CA	444	C
1	CA	449	A
1	CA	455	C
1	CA	456	C
1	CA	457	A
1	CA	467	G
1	CA	470	A
1	CA	479	A
1	CA	481	G
1	CA	504	U
1	CA	505	A
1	CA	509	C
1	CA	528	A
1	CA	529	A
1	CA	530	G
1	CA	531	C
1	CA	532	A
1	CA	533	G
1	CA	545	G
1	CA	563	G
1	CA	573	G
1	CA	575	A
1	CA	586	A
1	CA	588	U
1	CA	603	A
1	CA	604	G
1	CA	605	C
1	CA	606	U
1	CA	607	U
1	CA	614(A)	U
1	CA	615	G
1	CA	616	G
1	CA	627	A
1	CA	631	A
1	CA	637	A
1	CA	641	C
1	CA	645	C
1	CA	646	A

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Mol	Chain	Res	Type
1	CA	652(B)	A
1	CA	652(C)	G
1	CA	652(U)	G
1	CA	668	G
1	CA	669	G
1	CA	685	A
1	CA	686	G
1	CA	696	G
1	CA	730	C
1	CA	751	A
1	CA	755	C
1	CA	762	U
1	CA	764	A
1	CA	765	G
1	CA	775	G
1	CA	776	G
1	CA	777	A
1	CA	782	A
1	CA	784	A
1	CA	785	G
1	CA	790	C
1	CA	792	G
1	CA	794	G
1	CA	802	A
1	CA	805	G
1	CA	812	C
1	CA	819	A
1	CA	827	U
1	CA	828	U
1	CA	830	G
1	CA	847	U
1	CA	857	C
1	CA	859	G
1	CA	866	A
1	CA	867	C
1	CA	879	G
1	CA	880	G
1	CA	884	C
1	CA	886	C
1	CA	887	A
1	CA	888	C
1	CA	889	C

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Mol	Chain	Res	Type
1	CA	890	A
1	CA	893	C
1	CA	896	A
1	CA	897	C
1	CA	898	C
1	CA	900	A
1	CA	901	A
1	CA	902	C
1	CA	907	U
1	CA	910	A
1	CA	915	C
1	CA	917	A
1	CA	932	G
1	CA	933	A
1	CA	938	G
1	CA	941	A
1	CA	945	A
1	CA	946	G
1	CA	958	U
1	CA	959	A
1	CA	961	C
1	CA	971	C
1	CA	974	G
1	CA	975	C
1	CA	980	A
1	CA	983	A
1	CA	996	A
1	CA	1002	G
1	CA	1012	U
1	CA	1013	C
1	CA	1022	G
1	CA	1025	G
1	CA	1027	A
1	CA	1033	U
1	CA	1038	C
1	CA	1039	G
1	CA	1041	C
1	CA	1042	G
1	CA	1046	A
1	CA	1047	G
1	CA	1048	A
1	CA	1050	A

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Mol	Chain	Res	Type
1	CA	1055	G
1	CA	1057	A
1	CA	1058	G
1	CA	1060	U
1	CA	1061	U
1	CA	1062	G
1	CA	1070	A
1	CA	1071	G
1	CA	1073	A
1	CA	1075	C
1	CA	1076	C
1	CA	1079	C
1	CA	1083	U
1	CA	1088	A
1	CA	1090	U
1	CA	1101	U
1	CA	1103	A
1	CA	1106	G
1	CA	1109	C
1	CA	1110	G
1	CA	1111	A
1	CA	1112	G
1	CA	1113	U
1	CA	1142	U
1	CA	1164	G
1	CA	1171	G
1	CA	1191	G
1	CA	1205	U
1	CA	1211	U
1	CA	1220	A
1	CA	1230	C
1	CA	1236	G
1	CA	1244	G
1	CA	1246	A
1	CA	1248	G
1	CA	1250	G
1	CA	1253	A
1	CA	1256	G
1	CA	1271	G
1	CA	1272	A
1	CA	1273	U
1	CA	1283	G

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Mol	Chain	Res	Type
1	CA	1300	U
1	CA	1301	A
1	CA	1314	C
1	CA	1319	G
1	CA	1321	A
1	CA	1335	U
1	CA	1338	G
1	CA	1345	C
1	CA	1349	A
1	CA	1359	A
1	CA	1360	A
1	CA	1365	A
1	CA	1368	G
1	CA	1370	C
1	CA	1380	G
1	CA	1384	A
1	CA	1385	G
1	CA	1388	G
1	CA	1390	U
1	CA	1395	A
1	CA	1416	G
1	CA	1417	C
1	CA	1419	A
1	CA	1420	U
1	CA	1421	G
1	CA	1427	A
1	CA	1428	C
1	CA	1445	A
1	CA	1449	A
1	CA	1450	G
1	CA	1455	G
1	CA	1459	G
1	CA	1460	A
1	CA	1467	C
1	CA	1471	A
1	CA	1472	A
1	CA	1482	G
1	CA	1489	U
1	CA	1490	A
1	CA	1493	C
1	CA	1495	A
1	CA	1496	A

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Mol	Chain	Res	Type
1	CA	1497	U
1	CA	1502	C
1	CA	1509	C
1	CA	1509(A)	A
1	CA	1529	G
1	CA	1533	G
1	CA	1543	C
1	CA	1547	C
1	CA	1558	A
1	CA	1559	G
1	CA	1560	G
1	CA	1569	A
1	CA	1575	C
1	CA	1578	U
1	CA	1580	A
1	CA	1583	A
1	CA	1584	C
1	CA	1586	A
1	CA	1608	A
1	CA	1609	A
1	CA	1610	A
1	CA	1612	C
1	CA	1616	A
1	CA	1618	A
1	CA	1633	G
1	CA	1640	C
1	CA	1646	C
1	CA	1647	G
1	CA	1648	C
1	CA	1651	G
1	CA	1654	A
1	CA	1655	A
1	CA	1672	C
1	CA	1673	U
1	CA	1674	G
1	CA	1696	G
1	CA	1700	A
1	CA	1701	A
1	CA	1703	G
1	CA	1721	G
1	CA	1722	A
1	CA	1742	G

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Mol	Chain	Res	Type
1	CA	1746	G
1	CA	1756	G
1	CA	1758	G
1	CA	1762	A
1	CA	1763	G
1	CA	1764	G
1	CA	1769	G
1	CA	1773	A
1	CA	1774	C
1	CA	1780	A
1	CA	1782	C
1	CA	1786	A
1	CA	1791	A
1	CA	1800	C
1	CA	1801	G
1	CA	1808	U
1	CA	1811	G
1	CA	1812	A
1	CA	1816	G
1	CA	1823	G
1	CA	1829	A
1	CA	1835	G
1	CA	1839	G
1	CA	1847	A
1	CA	1848	A
1	CA	1877	A
1	CA	1878	G
1	CA	1884	A
1	CA	1889	A
1	CA	1896	G
1	CA	1900	A
1	CA	1906	G
1	CA	1913	A
1	CA	1914	C
1	CA	1926	U
1	CA	1929	G
1	CA	1930	G
1	CA	1937	A
1	CA	1938	A
1	CA	1952	A
1	CA	1955	U
1	CA	1959	G

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Mol	Chain	Res	Type
1	CA	1960	A
1	CA	1962	C
1	CA	1963	U
1	CA	1964	G
1	CA	1966	A
1	CA	1967	C
1	CA	1970	A
1	CA	1971	A
1	CA	1972	A
1	CA	1983	C
1	CA	1992	G
1	CA	1993	U
1	CA	1996	C
1	CA	1997	G
1	CA	2005	A
1	CA	2009	G
1	CA	2020	A
1	CA	2023	G
1	CA	2027	G
1	CA	2031	A
1	CA	2032	G
1	CA	2033	A
1	CA	2038	G
1	CA	2043	C
1	CA	2046	G
1	CA	2047	U
1	CA	2055	C
1	CA	2056	G
1	CA	2060	A
1	CA	2061	G
1	CA	2062	A
1	CA	2067	G
1	CA	2069	G
1	CA	2082	A
1	CA	2099	U
1	CA	2102	U
1	CA	2105	C
1	CA	2106	G
1	CA	2110	G
1	CA	2111	C
1	CA	2113	U
1	CA	2115	G

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Mol	Chain	Res	Type
1	CA	2116	G
1	CA	2117	A
1	CA	2119	A
1	CA	2122	U
1	CA	2126	A
1	CA	2127	G
1	CA	2129	C
1	CA	2130	U
1	CA	2131	G
1	CA	2132	U
1	CA	2133	G
1	CA	2134	A
1	CA	2135	A
1	CA	2136	C
1	CA	2137	C
1	CA	2141	G
1	CA	2142	C
1	CA	2144	U
1	CA	2146	C
1	CA	2150	U
1	CA	2153	G
1	CA	2154	G
1	CA	2157	G
1	CA	2162	G
1	CA	2164	C
1	CA	2165	G
1	CA	2167	U
1	CA	2168	G
1	CA	2169	A
1	CA	2172	U
1	CA	2178	C
1	CA	2181	G
1	CA	2186	G
1	CA	2188	C
1	CA	2189	U
1	CA	2190	G
1	CA	2192	G
1	CA	2198	A
1	CA	2206	G
1	CA	2207	G
1	CA	2208	A
1	CA	2225	A

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Mol	Chain	Res	Type
1	CA	2238	G
1	CA	2258	C
1	CA	2259	G
1	CA	2268	A
1	CA	2275	C
1	CA	2283	C
1	CA	2287	A
1	CA	2288	A
1	CA	2305	A
1	CA	2308	G
1	CA	2311	A
1	CA	2312	U
1	CA	2318	G
1	CA	2319	G
1	CA	2320	A
1	CA	2325	G
1	CA	2327	A
1	CA	2336	A
1	CA	2343	C
1	CA	2347	C
1	CA	2350	C
1	CA	2354	G
1	CA	2355	C
1	CA	2379	G
1	CA	2383	G
1	CA	2385	C
1	CA	2400	G
1	CA	2406	U
1	CA	2410	G
1	CA	2418	A
1	CA	2422	A
1	CA	2425	A
1	CA	2428	G
1	CA	2429	G
1	CA	2430	A
1	CA	2434	A
1	CA	2435	A
1	CA	2439	A
1	CA	2441	C
1	CA	2448	A
1	CA	2460	U
1	CA	2468	G

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Mol	Chain	Res	Type
1	CA	2474	C
1	CA	2476	A
1	CA	2487	G
1	CA	2490	G
1	CA	2494	G
1	CA	2502	G
1	CA	2505	G
1	CA	2506	U
1	CA	2518	A
1	CA	2525	G
1	CA	2529	G
1	CA	2543	G
1	CA	2549	G
1	CA	2554	U
1	CA	2555	U
1	CA	2566	A
1	CA	2567	G
1	CA	2573	C
1	CA	2574	G
1	CA	2602	A
1	CA	2608	G
1	CA	2609	U
1	CA	2611	U
1	CA	2612	C
1	CA	2630	G
1	CA	2632	A
1	CA	2654	A
1	CA	2660	A
1	CA	2663	G
1	CA	2681	C
1	CA	2683	C
1	CA	2684	U
1	CA	2689	U
1	CA	2690	C
1	CA	2691	C
1	CA	2702	U
1	CA	2703	C
1	CA	2712(A)	A
1	CA	2713	A
1	CA	2714	G
1	CA	2721	A
1	CA	2726	U

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Mol	Chain	Res	Type
1	CA	2733	A
1	CA	2748	A
1	CA	2757	A
1	CA	2758	A
1	CA	2760	C
1	CA	2765	A
1	CA	2766	G
1	CA	2767	C
1	CA	2778	A
1	CA	2780	G
1	CA	2785	C
1	CA	2794	C
1	CA	2802	G
1	CA	2803	C
1	CA	2818	G
1	CA	2820	A
1	CA	2821	A
1	CA	2833	G
1	CA	2835	A
1	CA	2836	U
1	CA	2839	G
1	CA	2872	G
1	CA	2874	C
1	CA	2875	C
1	CA	2877	G
1	CA	2879	C
1	CA	2892	A
1	CA	2893	G
1	CA	2894	G
1	CA	2896	C
1	CA	2897	U
2	CB	2	C
2	CB	7	G
2	CB	9	G
2	CB	13	A
2	CB	15	A
2	CB	20	C
2	CB	21	G
2	CB	24	G
2	CB	25	A
2	CB	32	C
2	CB	34	U

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Mol	Chain	Res	Type
2	CB	42	C
2	CB	45	A
2	CB	52	A
2	CB	56	G
2	CB	58	A
2	CB	67	G
2	CB	73	A
2	CB	85	G
2	CB	106	G
2	CB	110	G
2	CB	116	G
2	CB	118	G
34	DA	5	U
34	DA	6	G
34	DA	9	G
34	DA	29	G
34	DA	30	U
34	DA	32	A
34	DA	39	G
34	DA	47	C
34	DA	48	C
34	DA	51	A
34	DA	54	C
34	DA	69	G
34	DA	73	G
34	DA	80	G
34	DA	97	G
34	DA	101	A
34	DA	111	G
34	DA	116	A
34	DA	121	C
34	DA	131	C
34	DA	143	A
34	DA	163	C
34	DA	174	C
34	DA	182	U
34	DA	189(E)	U
34	DA	189(G)	G
34	DA	189(H)	G
34	DA	189(K)	U
34	DA	195	A
34	DA	197	A

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Mol	Chain	Res	Type
34	DA	201	C
34	DA	203	U
34	DA	204	U
34	DA	216	G
34	DA	220	G
34	DA	240	C
34	DA	243	A
34	DA	247	G
34	DA	251	G
34	DA	258	G
34	DA	261	U
34	DA	266	G
34	DA	267	C
34	DA	269	C
34	DA	281	G
34	DA	289	G
34	DA	290	C
34	DA	298	A
34	DA	299	G
34	DA	301	G
34	DA	308	C
34	DA	309	G
34	DA	318	G
34	DA	321	A
34	DA	328	C
34	DA	332	G
34	DA	339	C
34	DA	342	C
34	DA	343	U
34	DA	344	A
34	DA	346	G
34	DA	347	G
34	DA	352	C
34	DA	353	A
34	DA	354	G
34	DA	367	U
34	DA	372	C
34	DA	373	A
34	DA	382	A
34	DA	384	G
34	DA	388	G
34	DA	398	C

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Mol	Chain	Res	Type
34	DA	406	G
34	DA	412	A
34	DA	413	G
34	DA	424	G
34	DA	429	U
34	DA	430	A
34	DA	439	A
34	DA	442	C
34	DA	443	C
34	DA	452	A
34	DA	485	G
34	DA	496	A
34	DA	498	U
34	DA	505	G
34	DA	509	A
34	DA	510	A
34	DA	511	C
34	DA	518	C
34	DA	521	G
34	DA	527	G
34	DA	531	U
34	DA	532	A
34	DA	533	A
34	DA	545	C
34	DA	547	A
34	DA	559	A
34	DA	560	U
34	DA	561	U
34	DA	562	C
34	DA	563	A
34	DA	564	C
34	DA	571	U
34	DA	572	A
34	DA	573	A
34	DA	576	G
34	DA	592	G
34	DA	596	C
34	DA	601	C
34	DA	610	G
34	DA	620	C
34	DA	628	G
34	DA	630	G

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Mol	Chain	Res	Type
34	DA	632	A
34	DA	653	A
34	DA	665	A
34	DA	687	A
34	DA	688	G
34	DA	693	G
34	DA	695	A
34	DA	702	A
34	DA	717	C
34	DA	721	G
34	DA	723	U
34	DA	728	A
34	DA	731	G
34	DA	734	G
34	DA	749	C
34	DA	753	A
34	DA	755	G
34	DA	756	C
34	DA	759	A
34	DA	774	G
34	DA	777	A
34	DA	788	U
34	DA	792	A
34	DA	793	U
34	DA	794	A
34	DA	817	C
34	DA	821	G
34	DA	825	G
34	DA	827	U
34	DA	828	A
34	DA	829	G
34	DA	840	C
34	DA	841	U
34	DA	848	C
34	DA	851	G
34	DA	859	A
34	DA	874	G
34	DA	880	C
34	DA	884	U
34	DA	902	G
34	DA	908	A
34	DA	914	A

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Mol	Chain	Res	Type
34	DA	916	G
34	DA	922	G
34	DA	926	G
34	DA	927	G
34	DA	934	C
34	DA	936	C
34	DA	960	U
34	DA	961	U
34	DA	966	G
34	DA	968	A
34	DA	969	A
34	DA	971	G
34	DA	974	A
34	DA	975	A
34	DA	976	G
34	DA	977	A
34	DA	978	A
34	DA	989	C
34	DA	992	U
34	DA	993	G
34	DA	1003	G
34	DA	1005	A
34	DA	1006	C
34	DA	1007	C
34	DA	1016	A
34	DA	1022	G
34	DA	1025	U
34	DA	1026	G
34	DA	1027	C
34	DA	1028	C
34	DA	1030	C
34	DA	1030(A)	G
34	DA	1030(B)	C
34	DA	1031	G
34	DA	1033	G
34	DA	1046	A
34	DA	1065	U
34	DA	1066	C
34	DA	1067	A
34	DA	1081	G
34	DA	1094	G
34	DA	1095	U

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Mol	Chain	Res	Type
34	DA	1100	C
34	DA	1101	A
34	DA	1105	A
34	DA	1117	G
34	DA	1121	U
34	DA	1122	U
34	DA	1124	G
34	DA	1125	U
34	DA	1127	G
34	DA	1130	A
34	DA	1136	U
34	DA	1137	C
34	DA	1138	G
34	DA	1139	G
34	DA	1146	A
34	DA	1152	A
34	DA	1154	G
34	DA	1159	U
34	DA	1161	C
34	DA	1164	G
34	DA	1166	G
34	DA	1170	A
34	DA	1181	G
34	DA	1183	A
34	DA	1184	G
34	DA	1190	G
34	DA	1196	U
34	DA	1197	G
34	DA	1202	G
34	DA	1211	U
34	DA	1212	U
34	DA	1220	G
34	DA	1225	A
34	DA	1227	A
34	DA	1228	C
34	DA	1236	A
34	DA	1238	A
34	DA	1240	U
34	DA	1241	G
34	DA	1249	C
34	DA	1253	G
34	DA	1254	C

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Mol	Chain	Res	Type
34	DA	1256	A
34	DA	1257	U
34	DA	1258	G
34	DA	1260	C
34	DA	1261	A
34	DA	1279	A
34	DA	1280	A
34	DA	1281	U
34	DA	1282	C
34	DA	1285	A
34	DA	1286	A
34	DA	1287	A
34	DA	1301	U
34	DA	1305	G
34	DA	1322	C
34	DA	1326	C
34	DA	1332	A
34	DA	1347	G
34	DA	1358	U
34	DA	1360	A
34	DA	1363	C
34	DA	1363(A)	A
34	DA	1364	U
34	DA	1368	G
34	DA	1397	C
34	DA	1398	A
34	DA	1401	G
34	DA	1419	G
34	DA	1437	C
34	DA	1442	G
34	DA	1442(A)	G
34	DA	1442(B)	A
34	DA	1445	C
34	DA	1446	U
34	DA	1447	A
34	DA	1452	C
34	DA	1456	G
34	DA	1467	G
34	DA	1469	G
34	DA	1473	A
34	DA	1487	G
34	DA	1495	U

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Mol	Chain	Res	Type
34	DA	1496	C
34	DA	1497	G
34	DA	1502	A
34	DA	1503	A
34	DA	1504	G
34	DA	1506	U
34	DA	1507	A
34	DA	1517	G
34	DA	1519	A
34	DA	1520	G
34	DA	1529	G
34	DA	1530	G
34	DA	1531	A
34	DA	1532	U
55	DV	14	A
56	DX	6	G
56	DX	13	C
56	DX	18	G
56	DX	19	G
56	DX	20	U
56	DX	21	A
56	DX	22	G
56	DX	47	U
56	DX	48	C
56	DX	68	C
56	DX	76	A

All (116) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	184	A
1	AA	188	A
1	AA	271	U
1	AA	302	A
1	AA	334	A
1	AA	555	G
1	AA	572	A
1	AA	716	G
1	AA	793	A
1	AA	811	A
1	AA	821	A
1	AA	906	G

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Mol	Chain	Res	Type
1	AA	1098	C
1	AA	1154	U
1	AA	1188	A
1	AA	1219	A
1	AA	1220	U
1	AA	1221	G
1	AA	1255	A
1	AA	1431	G
1	AA	1466	U
1	AA	1654	A
1	AA	1655	A
1	AA	1700	G
1	AA	1721	G
1	AA	1793	A
1	AA	1859	G
1	AA	1935	A
1	AA	2014	G
1	AA	2019	G
1	AA	2084	A
1	AA	2203	G
1	AA	2209	G
1	AA	2287	C
1	AA	2403	G
1	AA	2418	U
1	AA	2434	A
1	AA	2442	A
1	AA	2451	A
1	AA	2623	U
1	AA	2701	U
1	AA	2769	U
1	AA	2902	G
2	AB	109	C
34	BA	115	G
34	BA	266	G
34	BA	347	G
34	BA	509	A
34	BA	532	A
34	BA	560	U
34	BA	687	A
34	BA	748	C
34	BA	793	U
34	BA	839	U

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Mol	Chain	Res	Type
34	BA	913	A
34	BA	991	U
34	BA	1065	U
34	BA	1067	A
34	BA	1165	C
34	BA	1201	A
34	BA	1285	A
34	BA	1442	G
56	BX	19	G
1	CA	195	A
1	CA	199	A
1	CA	249	C
1	CA	277	C
1	CA	310	A
1	CA	685	A
1	CA	746	A
1	CA	764	A
1	CA	774	A
1	CA	856	C
1	CA	900	A
1	CA	1026	U
1	CA	1057	A
1	CA	1300	U
1	CA	1379	A
1	CA	1420	U
1	CA	1427	A
1	CA	1497	U
1	CA	1608	A
1	CA	1653	G
1	CA	1913	A
1	CA	1939	U
1	CA	1992	G
1	CA	1996	C
1	CA	2081	C
1	CA	2110	G
1	CA	2250	G
1	CA	2318	G
1	CA	2406	U
1	CA	2439	A
1	CA	2689	U
1	CA	2726	U
1	CA	2756	U

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Mol	Chain	Res	Type
34	DA	115	G
34	DA	173	U
34	DA	266	G
34	DA	428	G
34	DA	429	U
34	DA	509	A
34	DA	510	A
34	DA	560	U
34	DA	687	A
34	DA	748	C
34	DA	840	C
34	DA	913	A
34	DA	991	U
34	DA	1064	G
34	DA	1065	U
34	DA	1183	A
34	DA	1201	A
34	DA	1279	A
34	DA	1442	G
34	DA	1530	G

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

8 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	$\# Z > 2$
56	4SU	DX	8	56	18,21,22	1.72	4 (22%)	25,30,33	2.08	7 (28%)
56	5MC	BX	32	56	19,22,23	1.41	3 (15%)	26,32,35	1.13	2 (7%)
56	4SU	BX	8	56	18,21,22	1.82	5 (27%)	25,30,33	2.55	7 (28%)
56	PSU	BX	55	56	18,21,22	1.35	1 (5%)	21,30,33	2.22	4 (19%)
56	5MU	BX	54	58,56	19,22,23	1.59	6 (31%)	27,32,35	1.96	7 (25%)
56	PSU	DX	55	56	18,21,22	1.41	2 (11%)	21,30,33	1.93	4 (19%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
56	5MU	DX	54	56	19,22,23	1.38	5 (26%)	27,32,35	2.19	8 (29%)
56	5MC	DX	32	56	19,22,23	2.18	2 (10%)	26,32,35	1.27	4 (15%)

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
56	4SU	DX	8	56	-	0/7/25/26	0/2/2/2
56	5MC	BX	32	56	-	0/7/25/26	0/2/2/2
56	4SU	BX	8	56	-	0/7/25/26	0/2/2/2
56	PSU	BX	55	56	-	0/7/25/26	0/2/2/2
56	5MU	BX	54	58,56	-	0/7/25/26	0/2/2/2
56	PSU	DX	55	56	-	0/7/25/26	0/2/2/2
56	5MU	DX	54	56	-	0/7/25/26	0/2/2/2
56	5MC	DX	32	56	-	0/7/25/26	0/2/2/2

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DX	32	5MC	C5-C4	8.29	1.50	1.44
56	BX	8	4SU	C4-S4	-5.02	1.59	1.68
56	BX	55	PSU	C6-C5	4.52	1.40	1.35
56	DX	8	4SU	C4-S4	-4.50	1.60	1.68
56	BX	32	5MC	C5-C4	4.28	1.47	1.44
56	DX	55	PSU	C6-C5	3.97	1.39	1.35
56	DX	32	5MC	C6-C5	3.48	1.40	1.34
56	BX	54	5MU	C4-C5	3.48	1.50	1.44
56	DX	8	4SU	C2-N1	3.19	1.43	1.38
56	BX	32	5MC	C6-C5	3.18	1.39	1.34
56	BX	8	4SU	C2-N3	-3.01	1.32	1.38
56	BX	54	5MU	C6-C5	2.85	1.39	1.34
56	DX	54	5MU	C2-N1	2.77	1.42	1.38
56	DX	8	4SU	C4-N3	-2.76	1.34	1.37
56	BX	8	4SU	C4-N3	-2.75	1.34	1.37
56	BX	54	5MU	C2-N1	2.63	1.42	1.38
56	BX	54	5MU	C4-N3	-2.45	1.34	1.38
56	BX	32	5MC	C6-N1	-2.44	1.33	1.38
56	BX	8	4SU	C5-C4	-2.43	1.39	1.42
56	BX	8	4SU	C2-N1	2.39	1.42	1.38
56	DX	54	5MU	C4-N3	-2.35	1.34	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DX	54	5MU	C6-C5	2.28	1.38	1.34
56	DX	8	4SU	C6-C5	2.23	1.40	1.35
56	DX	54	5MU	C4-C5	2.22	1.48	1.44
56	DX	54	5MU	C6-N1	-2.20	1.34	1.38
56	BX	54	5MU	C6-N1	-2.15	1.34	1.38
56	DX	55	PSU	C4-N3	-2.14	1.34	1.38
56	BX	54	5MU	C2-N3	-2.01	1.34	1.38

All (43) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BX	8	4SU	C4-N3-C2	-7.02	120.58	127.31
56	BX	8	4SU	C5-C4-N3	6.72	121.00	114.75
56	BX	55	PSU	N1-C2-N3	6.20	121.71	115.17
56	DX	8	4SU	C4-N3-C2	-6.07	121.50	127.31
56	DX	55	PSU	N1-C2-N3	5.87	121.36	115.17
56	BX	55	PSU	O2-C2-N1	-5.03	117.60	122.79
56	DX	54	5MU	C4-N3-C2	-5.02	120.76	127.34
56	DX	8	4SU	N3-C2-N1	4.79	121.13	114.89
56	DX	54	5MU	O4-C4-C5	-4.73	119.50	124.92
56	BX	54	5MU	C4-N3-C2	-4.71	121.17	127.34
56	DX	54	5MU	C5-C4-N3	4.70	119.41	115.32
56	DX	8	4SU	C5-C4-N3	4.62	119.05	114.75
56	BX	54	5MU	N3-C2-N1	4.44	120.67	114.89
56	BX	54	5MU	C5-C4-N3	4.31	119.07	115.32
56	BX	55	PSU	C4-N3-C2	-4.19	120.61	126.37
56	BX	8	4SU	N3-C2-N1	4.17	120.32	114.89
56	BX	8	4SU	C5-C4-S4	-4.12	119.60	124.31
56	DX	54	5MU	N3-C2-N1	4.10	120.23	114.89
56	DX	54	5MU	C5-C6-N1	-3.77	119.22	123.31
56	DX	32	5MC	C5-C6-N1	-3.70	119.29	123.31
56	DX	55	PSU	C4-N3-C2	-3.69	121.29	126.37
56	BX	8	4SU	C1'-N1-C2	3.60	124.06	117.59
56	BX	54	5MU	C5-C6-N1	-3.49	119.52	123.31
56	BX	32	5MC	C5-C4-N3	-3.25	118.43	121.75
56	DX	32	5MC	C5-C4-N3	-3.18	118.49	121.75
56	BX	54	5MU	C5M-C5-C4	3.04	122.03	118.78
56	DX	55	PSU	O2-C2-N1	-3.01	119.68	122.79
56	DX	8	4SU	C6-N1-C2	-2.67	117.75	121.00
56	DX	54	5MU	C1'-N1-C6	-2.63	116.82	121.15
56	BX	8	4SU	O2-C2-N3	-2.55	116.78	121.49
56	BX	32	5MC	C5-C6-N1	-2.48	120.62	123.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BX	54	5MU	O4-C4-C5	-2.43	122.13	124.92
56	DX	8	4SU	O2-C2-N3	-2.38	117.10	121.49
56	BX	55	PSU	O4-C4-C5	-2.37	118.11	124.01
56	DX	55	PSU	C5-C6-N1	-2.35	118.87	122.14
56	DX	32	5MC	O2-C2-N3	-2.25	118.78	122.33
56	DX	54	5MU	C1'-N1-C2	2.20	121.55	117.59
56	BX	54	5MU	C5M-C5-C6	-2.19	119.89	122.85
56	DX	54	5MU	C5M-C5-C4	2.14	121.07	118.78
56	DX	8	4SU	C1'-N1-C2	2.04	121.27	117.59
56	DX	32	5MC	CM5-C5-C6	-2.03	120.10	122.85
56	DX	8	4SU	C5-C4-S4	-2.02	122.00	124.31
56	BX	8	4SU	C1'-N1-C6	-2.02	116.47	120.78

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

4 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	DX	8	4SU	1	0
56	BX	32	5MC	4	0
56	BX	8	4SU	1	0
56	DX	55	PSU	1	0

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 2062 ligands modelled in this entry, 2058 are monoatomic - leaving 4 for Mogul analysis.

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
61	SF4	DD	501	37	0,12,12	-	-	-		
62	GDP	BZ	801	58	25,30,30	0.91	0	30,47,47	1.22	2 (6%)
62	GDP	DZ	704	58	25,30,30	1.13	2 (8%)	30,47,47	1.20	2 (6%)
61	SF4	BD	501	37	0,12,12	-	-	-		

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
62	GDP	DZ	704	58	-	4/12/32/32	0/3/3/3
62	GDP	BZ	801	58	-	5/12/32/32	0/3/3/3
61	SF4	DD	501	37	-	-	0/6/5/5
61	SF4	BD	501	37	-	-	0/6/5/5

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	DZ	704	GDP	PA-O3A	2.91	1.62	1.59
62	DZ	704	GDP	C6-N1	-2.36	1.34	1.37

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	BZ	801	GDP	C8-N7-C5	2.80	107.31	102.55
62	DZ	704	GDP	O2B-PB-O3A	2.48	112.94	104.64
62	DZ	704	GDP	C8-N7-C5	2.47	106.76	102.55
62	BZ	801	GDP	O2B-PB-O3A	2.47	112.91	104.64

There are no chirality outliers.

All (9) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
62	DZ	704	GDP	C5'-O5'-PA-O3A
62	DZ	704	GDP	C5'-O5'-PA-O2A
62	DZ	704	GDP	O4'-C4'-C5'-O5'
62	DZ	704	GDP	C3'-C4'-C5'-O5'
62	BZ	801	GDP	O4'-C4'-C5'-O5'
62	BZ	801	GDP	C3'-C4'-C5'-O5'

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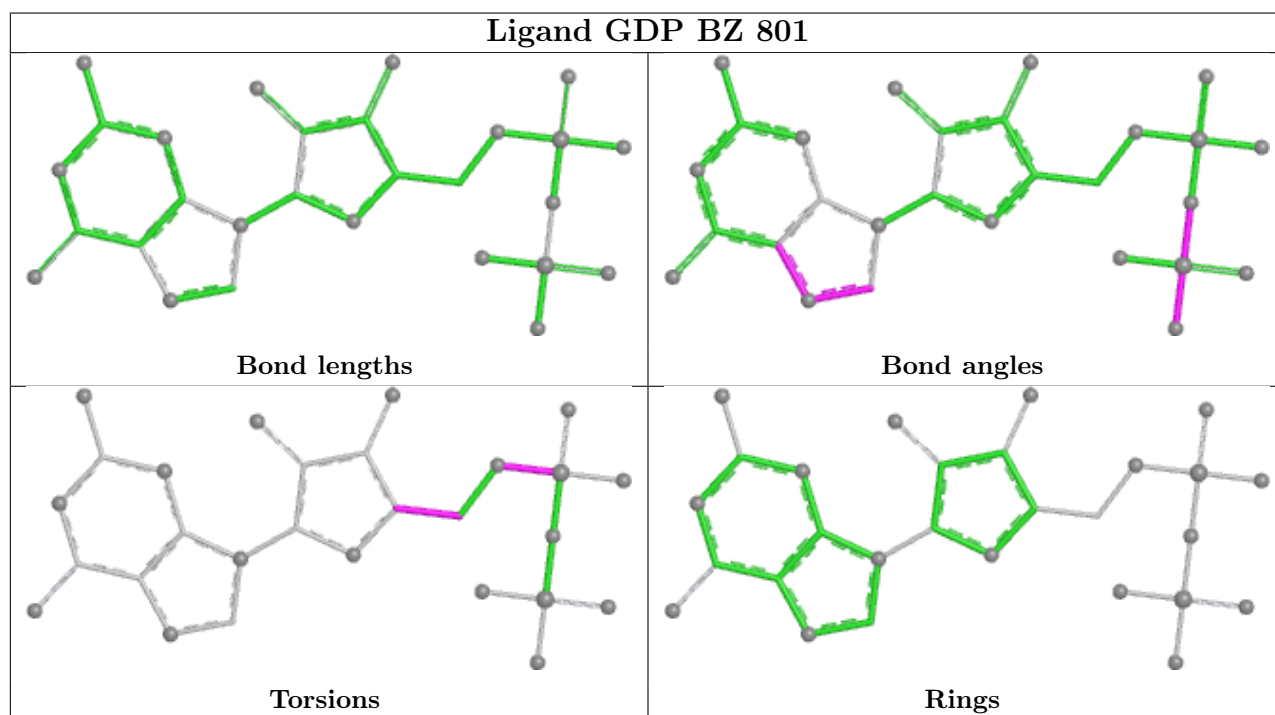
Mol	Chain	Res	Type	Atoms
62	BZ	801	GDP	C5'-O5'-PA-O3A
62	BZ	801	GDP	C5'-O5'-PA-O1A
62	BZ	801	GDP	C5'-O5'-PA-O2A

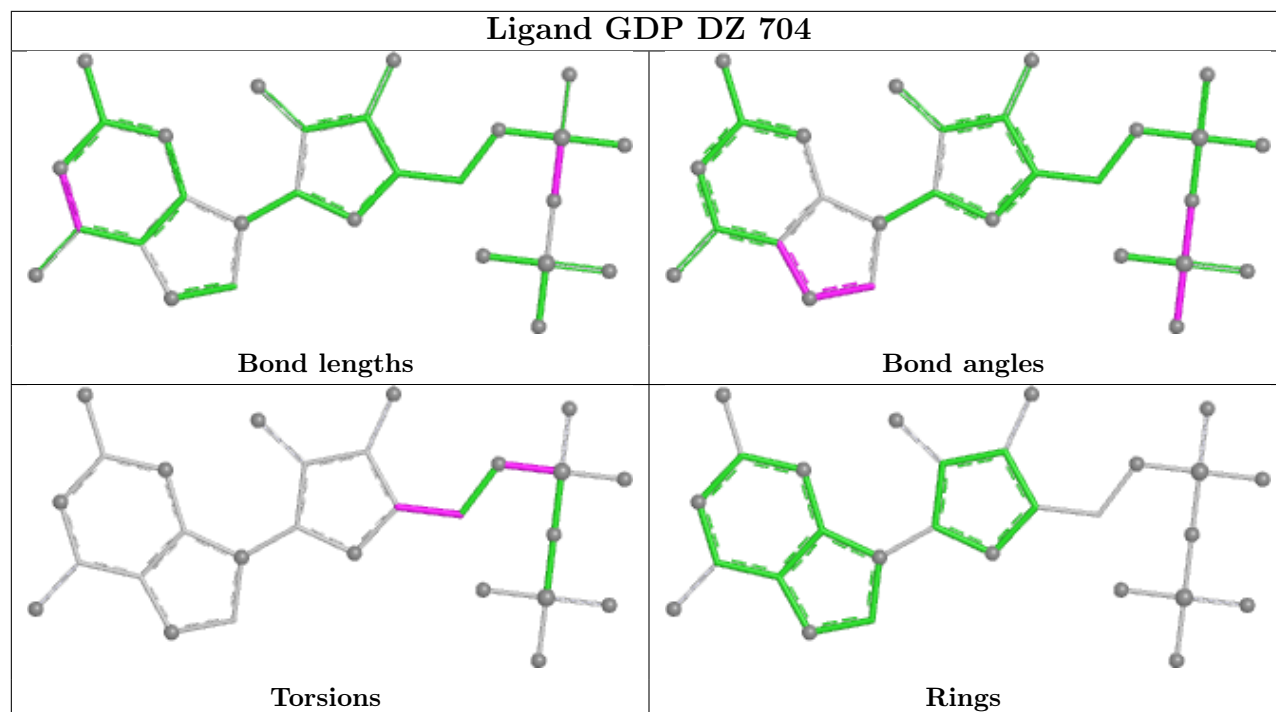
There are no ring outliers.

2 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
62	BZ	801	GDP	4	0
62	DZ	704	GDP	7	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	2852/2915 (97%)	-0.41	124 (4%) 40 32	14, 34, 140, 350	0
1	CA	2848/2915 (97%)	0.21	204 (7%) 23 17	27, 57, 179, 341	0
2	AB	120/121 (99%)	-0.13	1 (0%) 82 77	23, 50, 72, 108	0
2	CB	120/121 (99%)	1.00	7 (5%) 30 23	64, 91, 118, 166	0
3	AC	137/228 (60%)	3.40	122 (89%) 0 0	132, 205, 251, 280	0
3	CC	137/228 (60%)	3.07	113 (82%) 0 0	144, 214, 251, 276	0
4	AD	275/276 (99%)	-0.50	3 (1%) 77 71	12, 34, 59, 136	0
4	CD	275/276 (99%)	-0.15	4 (1%) 71 64	23, 47, 73, 128	0
5	AE	204/206 (99%)	-0.58	1 (0%) 87 83	5, 33, 57, 80	0
5	CE	204/206 (99%)	0.29	9 (4%) 39 32	20, 62, 106, 135	0
6	AF	203/210 (96%)	-0.43	0 100 100	11, 35, 77, 171	0
6	CF	203/210 (96%)	0.21	5 (2%) 58 49	21, 62, 105, 154	0
7	AG	181/182 (99%)	0.90	31 (17%) 5 4	36, 76, 134, 205	0
7	CG	181/182 (99%)	1.66	60 (33%) 1 1	72, 111, 173, 199	0
8	AH	174/180 (96%)	-0.14	4 (2%) 61 52	25, 45, 68, 110	0
8	CH	174/180 (96%)	1.51	40 (22%) 2 3	63, 112, 161, 197	0
9	AK	130/173 (75%)	1.86	52 (40%) 1 1	46, 103, 172, 216	0
9	CK	130/173 (75%)	2.81	95 (73%) 0 0	74, 159, 199, 218	0
10	AL	139/147 (94%)	2.47	91 (65%) 0 0	96, 170, 224, 247	0
10	CL	139/147 (94%)	3.29	112 (80%) 0 0	126, 194, 241, 274	0
11	AN	140/140 (100%)	-0.55	0 100 100	14, 27, 59, 93	0
11	CN	140/140 (100%)	0.61	7 (5%) 35 28	32, 70, 108, 151	0
12	AO	122/122 (100%)	-0.54	0 100 100	18, 36, 61, 77	0
12	CO	122/122 (100%)	0.13	1 (0%) 82 77	36, 57, 84, 107	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AP	149/150 (99%)	-0.16	2 (1%) 74 67	11, 42, 80, 108	0
13	CP	149/150 (99%)	0.48	4 (2%) 56 47	30, 67, 115, 135	0
14	AQ	141/141 (100%)	-0.44	2 (1%) 73 66	12, 33, 54, 82	0
14	CQ	141/141 (100%)	0.60	7 (4%) 35 28	37, 69, 99, 119	0
15	AR	118/118 (100%)	-0.66	0 100 100	16, 29, 45, 54	0
15	CR	118/118 (100%)	0.19	1 (0%) 82 77	33, 55, 89, 103	0
16	AS	110/112 (98%)	-0.10	0 100 100	30, 50, 80, 92	0
16	CS	110/112 (98%)	1.09	14 (12%) 9 8	46, 85, 120, 150	0
17	AT	131/146 (89%)	-0.20	4 (3%) 51 43	23, 40, 90, 169	0
17	CT	131/146 (89%)	0.46	6 (4%) 38 30	42, 65, 106, 141	0
18	AU	116/118 (98%)	-0.73	0 100 100	9, 22, 39, 87	0
18	CU	116/118 (98%)	0.48	0 100 100	27, 65, 92, 105	0
19	AV	101/101 (100%)	-0.83	0 100 100	9, 28, 49, 73	0
19	CV	101/101 (100%)	0.45	4 (3%) 43 35	35, 78, 111, 165	0
20	AW	112/113 (99%)	-0.64	0 100 100	13, 25, 43, 110	0
20	CW	112/113 (99%)	0.01	1 (0%) 81 75	28, 49, 80, 117	0
21	AX	95/96 (98%)	-0.36	1 (1%) 77 71	15, 34, 68, 98	0
21	CX	95/96 (98%)	0.30	2 (2%) 63 55	38, 60, 85, 105	0
22	AY	107/110 (97%)	-0.09	2 (1%) 66 58	23, 44, 84, 162	0
22	CY	107/110 (97%)	0.80	9 (8%) 18 14	45, 74, 115, 169	0
23	AZ	185/206 (89%)	0.22	6 (3%) 50 42	28, 56, 91, 145	0
23	CZ	185/206 (89%)	1.47	46 (24%) 2 2	61, 104, 149, 210	0
24	A0	83/85 (97%)	-0.03	7 (8%) 18 14	12, 35, 83, 218	0
24	C0	83/85 (97%)	0.98	14 (16%) 5 5	42, 66, 119, 223	0
25	A1	97/98 (98%)	-0.14	2 (2%) 63 55	20, 43, 78, 101	0
25	C1	97/98 (98%)	0.12	4 (4%) 42 34	30, 51, 89, 127	0
26	A2	70/72 (97%)	-0.15	2 (2%) 54 45	24, 43, 70, 121	0
26	C2	70/72 (97%)	0.69	9 (12%) 9 7	47, 71, 100, 116	0
27	A3	59/60 (98%)	-0.54	0 100 100	15, 29, 54, 99	0
27	C3	59/60 (98%)	0.81	2 (3%) 48 40	45, 72, 111, 147	0
28	A4	69/71 (97%)	1.46	21 (30%) 1 1	60, 117, 203, 232	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	C4	69/71 (97%)	1.77	23 (33%) 1 1	80, 157, 202, 217	0
29	A5	59/60 (98%)	-0.79	0 100 100	9, 25, 40, 52	0
29	C5	59/60 (98%)	-0.11	0 100 100	26, 51, 89, 104	0
30	A6	53/54 (98%)	-0.56	0 100 100	22, 40, 54, 74	0
30	C6	53/54 (98%)	0.17	0 100 100	40, 59, 79, 105	0
31	A7	48/49 (97%)	-0.41	2 (4%) 41 33	13, 24, 68, 133	0
31	C7	48/49 (97%)	-0.17	4 (8%) 19 14	26, 39, 95, 118	0
32	A8	64/65 (98%)	-0.55	0 100 100	15, 28, 45, 65	0
32	C8	64/65 (98%)	-0.01	0 100 100	37, 51, 71, 85	0
33	A9	37/37 (100%)	-0.42	0 100 100	23, 35, 56, 66	0
33	C9	37/37 (100%)	1.03	8 (21%) 3 3	45, 77, 95, 127	0
34	BA	1495/1521 (98%)	0.87	181 (12%) 10 8	31, 83, 186, 328	0
34	DA	1501/1521 (98%)	0.91	211 (14%) 7 6	38, 89, 195, 331	0
35	BB	231/256 (90%)	1.31	46 (19%) 3 3	42, 104, 170, 215	0
35	DB	231/256 (90%)	1.56	60 (25%) 2 2	70, 123, 177, 208	0
36	BC	206/239 (86%)	1.53	45 (21%) 3 3	56, 117, 174, 195	0
36	DC	206/239 (86%)	1.75	75 (36%) 1 1	68, 136, 180, 209	0
37	BD	208/209 (99%)	1.16	37 (17%) 4 4	44, 86, 137, 185	0
37	DD	208/209 (99%)	1.03	31 (14%) 7 6	58, 85, 135, 197	0
38	BE	148/162 (91%)	0.49	6 (4%) 42 34	34, 72, 104, 126	0
38	DE	148/162 (91%)	0.75	10 (6%) 25 19	49, 79, 116, 178	0
39	BF	100/101 (99%)	0.76	4 (4%) 43 35	55, 85, 116, 135	0
39	DF	100/101 (99%)	0.63	0 100 100	47, 86, 117, 133	0
40	BG	155/156 (99%)	1.43	42 (27%) 2 2	67, 112, 179, 223	0
40	DG	155/156 (99%)	1.64	52 (33%) 1 1	69, 131, 189, 215	0
41	BH	137/138 (99%)	0.47	2 (1%) 71 64	47, 72, 99, 118	0
41	DH	137/138 (99%)	0.80	10 (7%) 22 17	56, 80, 109, 141	0
42	BI	127/128 (99%)	2.19	66 (51%) 0 0	64, 124, 167, 195	0
42	DI	127/128 (99%)	2.48	74 (58%) 0 0	88, 143, 190, 213	0
43	BJ	97/105 (92%)	2.10	47 (48%) 0 1	80, 129, 183, 210	0
43	DJ	96/105 (91%)	2.33	55 (57%) 0 0	90, 150, 196, 218	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	BK	114/129 (88%)	0.70	12 (10%) 13 10	35, 78, 125, 148	0
44	DK	114/129 (88%)	0.79	12 (10%) 13 10	50, 89, 115, 170	0
45	BL	122/132 (92%)	0.22	3 (2%) 58 49	36, 58, 77, 111	0
45	DL	122/132 (92%)	0.61	8 (6%) 26 19	46, 70, 94, 115	0
46	BM	117/126 (92%)	2.21	55 (47%) 0 1	76, 135, 181, 201	0
46	DM	122/126 (96%)	2.37	61 (50%) 0 1	93, 150, 196, 255	0
47	BN	60/61 (98%)	2.20	34 (56%) 0 0	65, 111, 146, 169	0
47	DN	60/61 (98%)	2.84	46 (76%) 0 0	97, 138, 173, 193	0
48	BO	88/89 (98%)	0.61	3 (3%) 48 40	36, 70, 106, 119	0
48	DO	88/89 (98%)	0.65	6 (6%) 25 19	46, 70, 105, 153	0
49	BP	82/88 (93%)	1.26	11 (13%) 8 7	49, 79, 118, 168	0
49	DP	82/88 (93%)	1.00	8 (9%) 14 11	53, 77, 112, 154	0
50	BQ	99/105 (94%)	0.67	6 (6%) 28 21	44, 71, 98, 124	0
50	DQ	99/105 (94%)	0.85	11 (11%) 12 9	43, 77, 104, 115	0
51	BR	68/88 (77%)	0.71	5 (7%) 22 17	41, 79, 122, 133	0
51	DR	68/88 (77%)	0.62	3 (4%) 39 32	52, 82, 127, 143	0
52	BS	84/93 (90%)	2.45	49 (58%) 0 0	95, 144, 193, 207	0
52	DS	83/93 (89%)	2.77	57 (68%) 0 0	90, 164, 211, 224	0
53	BT	96/106 (90%)	1.38	26 (27%) 2 2	60, 83, 123, 164	0
53	DT	96/106 (90%)	1.15	19 (19%) 3 3	56, 85, 134, 156	0
54	BU	23/27 (85%)	2.80	17 (73%) 0 0	62, 116, 154, 180	0
54	DU	23/27 (85%)	2.65	14 (60%) 0 0	90, 134, 171, 184	0
55	BV	13/24 (54%)	2.71	10 (76%) 0 0	48, 85, 170, 176	0
55	DV	6/24 (25%)	2.80	4 (66%) 0 0	62, 78, 169, 197	0
56	BX	72/77 (93%)	0.67	4 (5%) 31 24	33, 76, 123, 186	0
56	DX	72/77 (93%)	0.88	7 (9%) 15 11	40, 99, 147, 161	0
57	BZ	730/758 (96%)	1.45	218 (29%) 1 1	34, 77, 135, 187	0
57	DZ	730/758 (96%)	1.89	314 (43%) 1 1	36, 100, 165, 220	0
All	All	22704/23760 (95%)	0.63	3372 (14%) 7 6	5, 70, 179, 350	0

All (3372) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
10	CL	127	ILE	12.3
46	DM	123	ALA	8.9
9	CK	57	THR	8.8
10	AL	10	LEU	8.5
57	BZ	572	TYR	8.5
10	CL	9	LYS	8.3
57	BZ	538	TYR	7.9
3	AC	30	VAL	7.8
3	AC	26	ALA	7.7
57	DZ	576	ASP	7.7
46	DM	98	VAL	7.6
42	DI	64	THR	7.5
52	BS	2	PRO	7.3
10	CL	107	ILE	7.2
3	AC	210	LEU	7.2
3	CC	215	VAL	7.1
10	CL	12	LEU	7.1
46	DM	124	PRO	7.0
57	DZ	501	THR	7.0
57	BZ	504	ARG	6.9
57	BZ	434	GLU	6.8
9	CK	85	ASP	6.8
3	AC	190	ILE	6.7
38	DE	22	GLY	6.7
57	BZ	401	SER	6.6
57	BZ	527	ASN	6.6
57	DZ	507	TYR	6.6
52	DS	2	PRO	6.6
8	AH	2	SER	6.6
57	DZ	86	GLY	6.5
10	CL	11	GLN	6.5
10	CL	10	LEU	6.5
3	CC	164	PHE	6.5
42	DI	66	ARG	6.5
10	CL	130	SER	6.3
57	DZ	656	ALA	6.3
57	DZ	89	ASP	6.3
57	BZ	454	MET	6.3
53	BT	9	ASN	6.2
24	C0	2	ALA	6.2
10	CL	57	ILE	6.2
10	CL	78	ILE	6.2
42	DI	106	ALA	6.2

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Mol	Chain	Res	Type	RSRZ
52	DS	4	SER	6.2
57	DZ	419	ALA	6.1
46	DM	122	LYS	6.1
57	DZ	426	GLN	6.1
57	BZ	91	THR	6.1
24	C0	3	HIS	6.1
57	DZ	578	SER	6.0
53	DT	9	ASN	6.0
3	CC	190	ILE	6.0
57	DZ	574	GLU	6.0
46	BM	100	GLY	6.0
57	DZ	572	TYR	6.0
52	BS	71	LEU	6.0
34	DA	1202	G	6.0
3	CC	194	ILE	6.0
24	C0	7	LEU	6.0
46	BM	98	VAL	5.9
57	DZ	255	ILE	5.9
3	CC	59	VAL	5.9
10	CL	113	PRO	5.9
57	DZ	502	GLY	5.9
3	AC	33	LEU	5.9
9	CK	58	LEU	5.9
57	DZ	613	PRO	5.9
52	BS	68	GLY	5.9
3	CC	15	VAL	5.9
46	BM	63	THR	5.8
10	CL	19	PRO	5.8
10	CL	96	VAL	5.8
3	CC	210	LEU	5.8
3	CC	221	PRO	5.8
42	DI	105	ASP	5.8
1	CA	652(B)	A	5.8
1	CA	2124	G	5.8
52	DS	71	LEU	5.8
24	A0	7	LEU	5.7
57	BZ	420	ASP	5.7
34	BA	1447	A	5.7
52	BS	11	VAL	5.7
57	DZ	411	VAL	5.7
8	CH	63	SER	5.7
10	CL	8	VAL	5.7

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Mol	Chain	Res	Type	RSRZ
10	CL	136	VAL	5.7
10	CL	13	PRO	5.7
54	BU	18	TYR	5.7
3	AC	215	VAL	5.7
24	A0	8	GLY	5.6
46	DM	87	TYR	5.6
10	CL	55	VAL	5.6
3	CC	223	VAL	5.6
10	CL	123	ALA	5.6
57	BZ	530	VAL	5.6
24	A0	3	HIS	5.6
43	DJ	59	SER	5.6
3	CC	213	VAL	5.5
47	DN	2	ALA	5.5
1	AA	2139	A	5.5
57	DZ	570	GLY	5.5
9	CK	89	ALA	5.5
35	BB	136	VAL	5.5
57	DZ	504	ARG	5.5
1	AA	2137	G	5.5
46	BM	23	TYR	5.5
57	DZ	531	GLY	5.5
7	CG	77	ILE	5.5
54	DU	4	GLY	5.4
3	AC	164	PHE	5.4
47	DN	7	ILE	5.4
57	DZ	506	GLN	5.4
57	DZ	457	LEU	5.4
3	AC	44	VAL	5.4
9	CK	53	VAL	5.4
57	DZ	463	VAL	5.4
10	CL	114	ASP	5.4
3	AC	166	ASN	5.4
3	CC	222	SER	5.4
10	CL	74	ALA	5.4
36	BC	171	GLY	5.4
46	BM	24	GLY	5.4
10	CL	21	PRO	5.3
42	BI	106	ALA	5.3
57	DZ	237	PRO	5.3
37	DD	23	GLY	5.3
1	CA	2123	G	5.3

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Mol	Chain	Res	Type	RSRZ
57	DZ	643	ILE	5.3
47	DN	22	THR	5.3
9	CK	39	ALA	5.3
3	AC	12	LEU	5.3
57	DZ	461	ILE	5.3
42	BI	37	PHE	5.3
40	BG	80	VAL	5.3
3	AC	194	ILE	5.3
52	DS	79	THR	5.3
47	BN	20	ALA	5.3
1	CA	1533	G	5.3
40	BG	34	GLY	5.3
37	BD	3	ARG	5.2
24	A0	6	GLY	5.2
57	BZ	457	LEU	5.2
9	CK	83	TYR	5.2
10	AL	22	PRO	5.2
55	BV	24	A	5.2
35	DB	222	ILE	5.2
43	DJ	6	ILE	5.2
3	CC	20	VAL	5.1
46	BM	94	ARG	5.1
57	DZ	473	ASP	5.1
10	CL	20	ALA	5.1
57	DZ	429	ALA	5.1
46	DM	78	ILE	5.1
1	CA	2117	A	5.1
57	DZ	577	SER	5.1
35	BB	12	GLU	5.1
57	DZ	582	PHE	5.1
47	DN	6	LEU	5.1
57	DZ	432	ALA	5.1
3	AC	167	ASP	5.1
3	AC	61	GLY	5.1
57	DZ	532	GLY	5.1
1	AA	2138	G	5.1
1	CA	1087	G	5.1
3	AC	69	LEU	5.1
57	DZ	462	ILE	5.0
57	DZ	420	ASP	5.0
3	AC	227	PRO	5.0
40	DG	83	ALA	5.0

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Mol	Chain	Res	Type	RSRZ
24	C0	8	GLY	5.0
40	DG	37	ASN	5.0
9	CK	49	ALA	5.0
57	DZ	454	MET	5.0
3	AC	37	LYS	5.0
3	CC	179	ALA	5.0
10	CL	34	ILE	5.0
46	BM	6	GLY	5.0
13	CP	76	LYS	5.0
57	DZ	537	GLU	5.0
47	DN	39	LEU	5.0
3	AC	55	SER	5.0
52	DS	31	ILE	4.9
22	AY	1	MET	4.9
57	DZ	497	PHE	4.9
1	CA	1536	C	4.9
57	BZ	411	VAL	4.9
57	DZ	437	THR	4.9
10	AL	11	GLN	4.9
3	AC	162	ILE	4.9
3	AC	197	LEU	4.9
52	DS	45	VAL	4.9
46	DM	118	ALA	4.9
43	DJ	47	PHE	4.9
3	AC	65	LEU	4.9
10	CL	115	LEU	4.9
54	DU	14	TRP	4.9
3	CC	44	VAL	4.9
3	AC	175	PRO	4.9
22	CY	1	MET	4.9
36	DC	168	ALA	4.9
1	CA	2116	G	4.9
3	AC	54	ARG	4.8
3	AC	186	LEU	4.8
52	DS	9	VAL	4.8
3	CC	8	TYR	4.8
52	DS	76	PRO	4.8
52	BS	78	ARG	4.8
10	CL	23	VAL	4.8
57	BZ	529	ILE	4.8
47	BN	12	ARG	4.8
25	C1	2	SER	4.8

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Mol	Chain	Res	Type	RSRZ
36	DC	154	SER	4.8
17	AT	131	ALA	4.8
57	BZ	83	ASP	4.8
43	BJ	72	VAL	4.8
57	BZ	570	GLY	4.8
7	CG	75	LYS	4.8
3	AC	208	THR	4.8
36	BC	37	GLN	4.8
52	BS	10	PHE	4.8
52	BS	12	ASP	4.7
57	BZ	94	VAL	4.7
57	BZ	464	ASP	4.7
57	DZ	401	SER	4.7
57	BZ	515	GLU	4.7
47	DN	34	TYR	4.7
36	DC	189	ALA	4.7
47	BN	3	ARG	4.7
10	CL	68	VAL	4.7
36	DC	159	GLY	4.7
57	DZ	425	SER	4.7
54	BU	17	THR	4.7
3	AC	57	GLN	4.7
10	CL	126	MET	4.7
3	AC	59	VAL	4.7
47	DN	38	GLY	4.7
43	BJ	77	PRO	4.7
34	DA	1092	A	4.7
43	BJ	40	LEU	4.7
3	AC	27	ALA	4.7
46	DM	120	LYS	4.7
47	BN	4	LYS	4.7
52	BS	9	VAL	4.7
57	DZ	530	VAL	4.7
43	DJ	37	PRO	4.7
52	BS	4	SER	4.7
54	DU	17	THR	4.7
57	BZ	86	GLY	4.6
43	BJ	46	ARG	4.6
57	BZ	422	GLU	4.6
52	DS	75	ALA	4.6
52	DS	80	TYR	4.6
57	BZ	39	ILE	4.6

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Mol	Chain	Res	Type	RSRZ
9	CK	6	ASN	4.6
57	DZ	614	GLU	4.6
3	CC	10	ALA	4.6
42	DI	125	TYR	4.6
3	AC	213	VAL	4.6
1	CA	1048	A	4.6
55	DV	14	A	4.6
1	CA	1072	C	4.6
47	BN	6	LEU	4.6
52	BS	5	LEU	4.6
57	BZ	576	ASP	4.6
57	DZ	102	ASP	4.6
9	CK	55	LYS	4.6
3	CC	30	VAL	4.6
54	DU	18	TYR	4.6
57	DZ	493	VAL	4.6
43	DJ	40	LEU	4.6
1	AA	2182	G	4.6
10	CL	26	ALA	4.6
42	DI	14	VAL	4.6
42	DI	7	THR	4.6
36	BC	2	GLY	4.6
9	CK	63	LEU	4.5
57	DZ	216	LEU	4.5
42	BI	11	LYS	4.5
57	DZ	422	GLU	4.5
1	CA	2148	G	4.5
10	CL	69	THR	4.5
44	DK	75	TYR	4.5
3	CC	4	HIS	4.5
1	CA	1067	A	4.5
24	A0	2	ALA	4.5
34	DA	977	A	4.5
9	CK	54	ALA	4.5
10	AL	124	ALA	4.5
45	DL	18	VAL	4.5
57	DZ	476	VAL	4.5
57	BZ	475	ASN	4.5
57	BZ	495	GLY	4.5
1	CA	2160	G	4.5
3	CC	63	VAL	4.5
43	DJ	38	ILE	4.5

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Mol	Chain	Res	Type	RSRZ
3	CC	12	LEU	4.5
9	AK	6	ASN	4.5
46	DM	113	PRO	4.5
57	BZ	562	ASP	4.5
9	CK	38	HIS	4.4
57	DZ	88	VAL	4.4
4	CD	276	LYS	4.4
7	CG	65	GLY	4.4
16	CS	61	ASN	4.4
43	DJ	39	PRO	4.4
57	DZ	85	PRO	4.4
26	A2	70	GLN	4.4
55	BV	23	A	4.4
9	CK	62	ALA	4.4
57	BZ	541	ALA	4.4
9	CK	7	VAL	4.4
10	AL	136	VAL	4.4
10	CL	52	ILE	4.4
3	CC	48	LEU	4.4
3	CC	186	LEU	4.4
35	DB	111	ARG	4.4
24	C0	4	LYS	4.4
46	BM	95	GLY	4.4
1	CA	1058	G	4.4
57	DZ	464	ASP	4.4
34	BA	532	A	4.4
55	BV	14	A	4.4
55	DV	13	A	4.4
57	BZ	533	VAL	4.4
31	A7	47	ARG	4.4
42	DI	11	LYS	4.4
42	DI	113	LYS	4.4
42	BI	6	GLY	4.4
46	DM	97	PRO	4.4
3	AC	171	ALA	4.4
46	BM	28	ALA	4.4
34	DA	1363(A)	A	4.4
42	DI	102	LEU	4.4
4	AD	275	LYS	4.4
46	DM	102	ARG	4.4
54	BU	15	ARG	4.4
57	BZ	268	GLY	4.4

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Mol	Chain	Res	Type	RSRZ
1	CA	1026	U	4.4
56	BX	47	U	4.4
43	BJ	47	PHE	4.4
3	AC	11	LEU	4.3
37	BD	153	ARG	4.3
10	CL	72	PRO	4.3
10	CL	73	PRO	4.3
57	DZ	448	GLN	4.3
57	BZ	497	PHE	4.3
37	DD	154	ASN	4.3
10	CL	7	VAL	4.3
7	CG	76	SER	4.3
1	CA	2147	G	4.3
49	BP	82	GLN	4.3
57	DZ	500	GLN	4.3
1	CA	34	C	4.3
9	AK	53	VAL	4.3
7	AG	48	GLU	4.3
52	DS	42	PRO	4.3
57	DZ	573	HIS	4.3
10	CL	120	LEU	4.3
47	DN	13	THR	4.3
57	DZ	427	ALA	4.3
1	CA	1047	G	4.3
57	BZ	575	VAL	4.3
7	CG	127	GLY	4.3
3	CC	33	LEU	4.3
9	CK	51	LEU	4.3
42	BI	19	LEU	4.3
57	BZ	458	HIS	4.3
3	AC	20	VAL	4.2
42	DI	65	VAL	4.2
46	BM	87	TYR	4.2
57	DZ	538	TYR	4.2
10	AL	15	GLY	4.2
34	BA	1362	C	4.2
42	BI	126	SER	4.2
43	DJ	74	ILE	4.2
57	DZ	472	VAL	4.2
42	DI	27	THR	4.2
3	AC	214	TYR	4.2
35	BB	133	LYS	4.2

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Mol	Chain	Res	Type	RSRZ
42	DI	18	PHE	4.2
3	CC	162	ILE	4.2
52	DS	40	ILE	4.2
42	DI	117	HIS	4.2
45	BL	89	ARG	4.2
57	BZ	419	ALA	4.2
57	DZ	491	VAL	4.2
57	DZ	575	VAL	4.2
3	AC	204	GLY	4.2
52	BS	13	ASP	4.2
28	C4	49	PHE	4.2
9	CK	40	LEU	4.2
36	DC	34	LEU	4.2
57	DZ	157	LEU	4.2
46	DM	99	ARG	4.2
57	BZ	160	ARG	4.2
9	AK	49	ALA	4.2
42	BI	14	VAL	4.2
1	CA	2115	G	4.2
34	BA	630	G	4.2
3	CC	41	THR	4.2
46	BM	103	THR	4.2
57	DZ	442	THR	4.2
57	DZ	639	ASN	4.2
4	AD	276	LYS	4.2
22	CY	107	ASP	4.2
34	BA	1286	A	4.2
57	BZ	473	ASP	4.2
33	C9	17	ILE	4.2
47	DN	27	CYS	4.2
52	BS	14	HIS	4.2
36	DC	162	GLN	4.2
57	BZ	432	ALA	4.2
57	DZ	84	THR	4.1
3	AC	221	PRO	4.1
8	CH	175	LYS	4.1
9	AK	35	LYS	4.1
9	AK	74	LEU	4.1
52	BS	37	ARG	4.1
1	CA	2169	A	4.1
57	DZ	443	HIS	4.1
3	AC	182	PRO	4.1

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Mol	Chain	Res	Type	RSRZ
9	CK	77	PRO	4.1
9	CK	86	PRO	4.1
54	BU	4	GLY	4.1
42	DI	62	TYR	4.1
4	CD	262	ARG	4.1
9	CK	79	ALA	4.1
43	DJ	49	VAL	4.1
57	DZ	641	GLN	4.1
1	CA	1057	A	4.1
3	AC	35	THR	4.1
37	BD	2	GLY	4.1
3	AC	198	GLU	4.1
42	BI	2	GLU	4.1
57	DZ	660	ARG	4.1
10	AL	96	VAL	4.1
40	BG	83	ALA	4.1
49	BP	68	ASP	4.1
1	AA	2163	G	4.1
1	AA	2188	G	4.1
1	CA	2120	G	4.1
1	CA	2133	G	4.1
1	CA	1847	A	4.1
34	DA	1183	A	4.1
52	DS	77	THR	4.1
7	CG	42	GLY	4.1
43	BJ	54	PHE	4.1
52	DS	10	PHE	4.1
28	A4	62	ARG	4.1
1	CA	1060	U	4.1
57	BZ	407	PRO	4.1
1	CA	1171	G	4.0
28	C4	63	TYR	4.0
57	BZ	683	VAL	4.0
46	BM	33	ALA	4.0
52	BS	75	ALA	4.0
10	AL	132	ARG	4.0
10	CL	67	PHE	4.0
57	DZ	455	GLY	4.0
57	DZ	503	GLY	4.0
42	DI	10	ARG	4.0
57	BZ	468	ARG	4.0
8	CH	43	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
42	BI	78	LYS	4.0
3	AC	200	HIS	4.0
57	DZ	87	HIS	4.0
3	AC	29	LEU	4.0
43	DJ	65	LEU	4.0
52	BS	76	PRO	4.0
6	CF	207	GLY	4.0
40	BG	4	ARG	4.0
1	AA	2197	C	4.0
3	AC	169	THR	4.0
57	BZ	417	THR	4.0
43	BJ	35	SER	4.0
57	DZ	408	VAL	4.0
44	BK	89	ALA	4.0
57	BZ	421	GLN	4.0
1	CA	2833	G	4.0
3	CC	227	PRO	4.0
34	DA	1002	G	4.0
39	BF	83	ASP	4.0
9	CK	67	GLY	4.0
47	DN	51	GLY	4.0
36	BC	192	THR	4.0
57	DZ	403	GLU	4.0
1	AA	2196	C	4.0
35	BB	7	VAL	4.0
9	CK	34	ALA	4.0
43	BJ	85	LEU	4.0
10	CL	22	PRO	4.0
42	DI	49	PRO	4.0
10	AL	78	ILE	4.0
47	DN	31	ARG	4.0
48	BO	89	GLY	4.0
57	DZ	562	ASP	4.0
1	AA	2143	G	3.9
1	CA	1093	G	3.9
34	DA	1032	G	3.9
3	CC	208	THR	3.9
52	DS	33	THR	3.9
52	DS	66	MET	3.9
46	BM	7	VAL	3.9
47	DN	21	TYR	3.9
1	CA	2174	C	3.9

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Mol	Chain	Res	Type	RSRZ
34	BA	1363	C	3.9
42	DI	9	ARG	3.9
57	DZ	498	ILE	3.9
57	BZ	89	ASP	3.9
35	DB	48	MET	3.9
35	BB	97	TRP	3.9
36	BC	207	VAL	3.9
43	DJ	72	VAL	3.9
57	BZ	537	GLU	3.9
17	CT	130	ALA	3.9
42	DI	45	ALA	3.9
9	AK	51	LEU	3.9
10	AL	60	TYR	3.9
1	AA	2200	C	3.9
8	CH	174	GLY	3.9
1	CA	1103	A	3.9
3	AC	62	THR	3.9
23	CZ	162	GLU	3.9
36	BC	206	GLU	3.9
40	BG	156	TRP	3.9
42	BI	64	THR	3.9
57	DZ	440	VAL	3.9
57	DZ	566	THR	3.9
3	CC	11	LEU	3.9
3	CC	17	PRO	3.9
43	DJ	41	PRO	3.9
43	DJ	43	ARG	3.9
1	CA	2162	G	3.9
34	DA	1365	G	3.9
3	CC	70	GLY	3.9
35	DB	99	GLY	3.9
42	BI	72	GLY	3.9
10	AL	55	VAL	3.9
47	DN	25	VAL	3.9
34	BA	723	U	3.9
5	CE	195	LEU	3.9
10	CL	124	ALA	3.9
10	CL	128	ALA	3.9
42	BI	102	LEU	3.9
46	DM	107	ALA	3.9
42	BI	117	HIS	3.9
53	BT	73	HIS	3.9

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Mol	Chain	Res	Type	RSRZ
47	DN	19	ARG	3.9
42	DI	73	GLN	3.9
57	BZ	90	PHE	3.9
38	BE	85	GLY	3.9
52	DS	82	GLY	3.9
42	BI	41	VAL	3.8
10	AL	12	LEU	3.8
34	BA	1320	C	3.8
34	DA	1363	C	3.8
37	BD	24	GLU	3.8
57	DZ	434	GLU	3.8
57	DZ	623	ASP	3.8
46	BM	96	LEU	3.8
3	CC	26	ALA	3.8
46	DM	88	ARG	3.8
36	BC	14	ILE	3.8
46	BM	4	ILE	3.8
42	DI	33	PHE	3.8
57	DZ	634	MET	3.8
9	CK	78	SER	3.8
57	BZ	597	GLY	3.8
9	CK	56	ASN	3.8
42	DI	108	VAL	3.8
43	BJ	69	ASN	3.8
3	CC	197	LEU	3.8
40	BG	90	GLU	3.8
10	CL	71	THR	3.8
10	CL	108	ALA	3.8
1	CA	2110	G	3.8
34	DA	1224	G	3.8
1	AA	2201	C	3.8
1	CA	2150	U	3.8
3	AC	23	ILE	3.8
10	AL	13	PRO	3.8
10	AL	16	LYS	3.8
57	DZ	39	ILE	3.8
37	DD	2	GLY	3.8
42	BI	30	GLY	3.8
3	AC	179	ALA	3.8
3	CC	203	GLU	3.8
57	BZ	574	GLU	3.8
47	BN	15	LYS	3.8

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Mol	Chain	Res	Type	RSRZ
3	AC	52	PRO	3.8
57	BZ	636	PRO	3.8
1	CA	1059	G	3.8
22	CY	55	TYR	3.8
40	DG	82	GLY	3.8
42	BI	5	TYR	3.8
46	BM	21	TYR	3.8
57	BZ	507	TYR	3.8
46	DM	60	VAL	3.8
57	BZ	452	SER	3.8
3	CC	35	THR	3.8
36	DC	192	THR	3.8
46	DM	92	HIS	3.8
57	DZ	238	THR	3.8
57	DZ	246	ILE	3.8
3	AC	66	PRO	3.8
42	BI	98	PRO	3.8
57	DZ	492	ASP	3.8
3	CC	209	PHE	3.8
36	BC	162	GLN	3.8
57	DZ	664	GLN	3.8
1	CA	2111	C	3.8
1	CA	2146	C	3.8
1	CA	2161	C	3.8
10	CL	27	LEU	3.8
36	BC	94	LEU	3.8
36	DC	87	LEU	3.8
43	BJ	34	VAL	3.8
43	BJ	65	LEU	3.8
3	AC	199	ALA	3.7
9	AK	88	ALA	3.7
36	DC	3	ASN	3.7
46	DM	28	ALA	3.7
46	DM	106	ASN	3.7
3	CC	225	ILE	3.7
57	BZ	436	PRO	3.7
57	BZ	449	THR	3.7
57	DZ	435	ASP	3.7
46	DM	119	GLY	3.7
42	DI	5	TYR	3.7
1	CA	1118	C	3.7
8	CH	97	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
47	BN	19	ARG	3.7
3	AC	205	ALA	3.7
9	CK	43	ALA	3.7
3	AC	25	GLU	3.7
41	DH	99	GLU	3.7
42	BI	12	GLU	3.7
1	CA	2112	G	3.7
3	AC	41	THR	3.7
34	BA	1331	G	3.7
57	BZ	501	THR	3.7
10	AL	92	GLY	3.7
9	CK	125	LEU	3.7
50	BQ	98	LEU	3.7
52	DS	56	GLN	3.7
37	BD	159	ARG	3.7
9	CK	97	ALA	3.7
57	DZ	441	SER	3.7
1	CA	1069	A	3.7
1	AA	2123	G	3.7
1	AA	2181	G	3.7
1	CA	2121	G	3.7
42	DI	30	GLY	3.7
46	DM	6	GLY	3.7
57	DZ	94	VAL	3.7
57	DZ	543	GLN	3.7
34	BA	202	U	3.7
40	DG	4	ARG	3.7
46	DM	104	ARG	3.7
55	BV	22	U	3.7
46	DM	5	ALA	3.7
52	DS	49	ILE	3.7
3	AC	4	HIS	3.7
28	C4	66	SER	3.7
46	BM	97	PRO	3.7
57	DZ	438	PHE	3.7
57	DZ	661	SER	3.7
36	DC	191	THR	3.7
37	BD	154	ASN	3.7
1	AA	2183	C	3.7
1	CA	1104	C	3.7
3	CC	42	VAL	3.7
36	DC	207	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
42	DI	109	VAL	3.7
43	BJ	24	VAL	3.7
3	AC	8	TYR	3.7
34	DA	1190	G	3.7
17	AT	130	ALA	3.7
23	CZ	21	ALA	3.7
57	BZ	524	GLU	3.6
7	CG	135	LEU	3.6
3	AC	70	GLY	3.6
3	AC	71	LYS	3.6
9	CK	98	LYS	3.6
36	DC	155	GLY	3.6
36	DC	158	GLY	3.6
57	DZ	496	LYS	3.6
45	BL	18	VAL	3.6
1	CA	1049	C	3.6
57	DZ	179	ASP	3.6
43	DJ	46	ARG	3.6
57	DZ	626	ALA	3.6
23	CZ	68	PRO	3.6
57	BZ	535	PRO	3.6
57	DZ	405	PRO	3.6
10	CL	37	PHE	3.6
37	BD	179	GLU	3.6
57	BZ	579	GLU	3.6
34	BA	1190	G	3.6
57	BZ	442	THR	3.6
57	DZ	533	VAL	3.6
40	DG	115	ARG	3.6
49	BP	81	ARG	3.6
34	DA	1447	A	3.6
57	BZ	82	ILE	3.6
1	CA	2175	C	3.6
34	BA	342	C	3.6
55	BV	21	C	3.6
3	AC	17	PRO	3.6
9	CK	105	PRO	3.6
23	CZ	95	PRO	3.6
54	DU	23	PRO	3.6
1	AA	271	U	3.6
40	DG	38	LEU	3.6
46	BM	13	LYS	3.6

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Mol	Chain	Res	Type	RSRZ
46	BM	90	LEU	3.6
47	DN	15	LYS	3.6
8	CH	2	SER	3.6
10	AL	7	VAL	3.6
10	CL	104	VAL	3.6
3	AC	224	ARG	3.6
42	BI	20	ARG	3.6
7	CG	39	ILE	3.6
9	CK	104	ILE	3.6
57	DZ	619	ASP	3.6
57	DZ	674	ASP	3.6
28	C4	67	TYR	3.6
57	DZ	650	ALA	3.6
3	CC	182	PRO	3.6
35	BB	131	PRO	3.6
48	BO	2	PRO	3.6
3	AC	67	HIS	3.6
1	CA	2179	C	3.6
34	DA	980	C	3.6
34	DA	1320	C	3.6
57	BZ	433	GLU	3.6
3	CC	65	LEU	3.6
23	CZ	156	LYS	3.6
47	BN	17	LYS	3.6
57	DZ	665	GLY	3.6
13	CP	15	ARG	3.6
40	BG	77	SER	3.6
3	CC	166	ASN	3.6
3	CC	50	ILE	3.6
8	CH	4	ILE	3.6
1	AA	2173	G	3.6
46	BM	30	ALA	3.6
47	BN	2	ALA	3.6
43	DJ	54	PHE	3.6
57	DZ	648	PRO	3.6
35	DB	140	HIS	3.6
10	CL	111	LYS	3.6
34	DA	975	A	3.5
42	DI	118	LYS	3.6
1	AA	2151	C	3.5
57	BZ	588	MET	3.5
10	AL	66	THR	3.5

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Mol	Chain	Res	Type	RSRZ
35	DB	165	VAL	3.5
52	DS	78	ARG	3.5
57	DZ	99	ARG	3.5
7	AG	76	SER	3.5
33	C9	6	SER	3.5
9	CK	30	GLN	3.5
42	BI	15	ALA	3.5
3	AC	181	PHE	3.5
35	DB	232	PRO	3.5
57	BZ	540	PRO	3.5
57	DZ	90	PHE	3.5
3	CC	37	LYS	3.5
3	CC	214	TYR	3.5
5	CE	78	LEU	3.5
7	CG	152	LEU	3.5
9	CK	44	LEU	3.5
10	CL	76	TYR	3.5
10	CL	105	LEU	3.5
52	DS	20	LEU	3.5
57	DZ	460	GLU	3.5
34	DA	994	A	3.5
40	DG	80	VAL	3.5
52	DS	37	ARG	3.5
1	CA	271(K)	U	3.5
3	AC	216	THR	3.5
3	AC	225	ILE	3.5
57	DZ	227	ILE	3.5
34	BA	979	C	3.5
28	A4	60	GLN	3.5
52	BS	56	GLN	3.5
57	DZ	407	PRO	3.5
43	BJ	71	LEU	3.5
52	BS	22	LEU	3.5
9	CK	121	ASP	3.5
42	DI	75	ASP	3.5
52	DS	69	HIS	3.5
57	BZ	609	GLU	3.5
57	DZ	433	GLU	3.5
40	DG	32	ARG	3.5
53	DT	25	ARG	3.5
3	AC	42	VAL	3.5
8	CH	37	VAL	3.5

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Mol	Chain	Res	Type	RSRZ
10	CL	15	GLY	3.5
1	AA	2136	A	3.5
1	AA	2145	G	3.5
1	CA	1044	G	3.5
1	CA	1170	G	3.5
1	CA	2118	U	3.5
1	CA	2128	C	3.5
3	AC	193	PHE	3.5
47	DN	20	ALA	3.5
3	CC	66	PRO	3.5
10	CL	25	PRO	3.5
57	DZ	470	PHE	3.5
3	CC	69	LEU	3.5
57	DZ	659	LEU	3.5
57	DZ	635	GLU	3.5
42	BI	66	ARG	3.5
10	AL	68	VAL	3.5
28	A4	54	GLY	3.5
35	DB	136	VAL	3.5
36	BC	158	GLY	3.5
42	BI	53	VAL	3.5
46	DM	112	GLY	3.5
10	AL	107	ILE	3.5
9	CK	37	THR	3.5
42	DI	103	THR	3.5
1	AA	2135	U	3.5
1	CA	2113	U	3.5
57	DZ	423	LYS	3.5
9	CK	106	GLN	3.5
1	CA	2100	G	3.5
1	CA	2182	G	3.5
7	CG	80	PHE	3.5
35	DB	163	PHE	3.5
40	DG	117	ALA	3.5
42	BI	82	ALA	3.5
42	BI	79	LEU	3.5
10	CL	134	MET	3.5
34	DA	1234	C	3.5
7	AG	35	GLU	3.5
43	BJ	5	ARG	3.5
3	CC	5	GLY	3.4
42	DI	86	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
57	BZ	561	VAL	3.4
57	DZ	217	VAL	3.4
3	AC	50	ILE	3.4
47	DN	4	LYS	3.4
57	DZ	417	THR	3.4
3	AC	159	ALA	3.4
9	CK	129	PRO	3.4
34	DA	1364	U	3.4
42	DI	123	PRO	3.4
43	DJ	18	ALA	3.4
47	BN	14	PRO	3.4
57	BZ	412	ALA	3.4
57	DZ	275	ALA	3.4
34	DA	1531	A	3.4
10	CL	116	ASN	3.4
57	DZ	527	ASN	3.4
1	CA	2127	G	3.4
1	CA	2166	G	3.4
34	BA	976	G	3.4
34	DA	1001(A)	G	3.4
35	DB	7	VAL	3.4
57	BZ	408	VAL	3.4
1	CA	2183	C	3.4
3	AC	172	ILE	3.4
46	DM	4	ILE	3.4
57	BZ	536	LYS	3.4
28	A4	52	THR	3.4
3	AC	209	PHE	3.4
36	DC	129	ALA	3.4
10	CL	112	MET	3.4
1	CA	1090	U	3.4
57	DZ	458	HIS	3.4
9	CK	109	SER	3.4
35	DB	144	ARG	3.4
46	DM	62	ASN	3.4
52	DS	3	ARG	3.4
57	BZ	499	ARG	3.4
57	BZ	571	SER	3.4
57	BZ	639	ASN	3.4
1	AA	1219	A	3.4
9	AK	7	VAL	3.4
23	CZ	169	GLU	3.4

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Mol	Chain	Res	Type	RSRZ
10	AL	52	ILE	3.4
28	A4	43	TYR	3.4
46	DM	117	VAL	3.4
52	DS	51	VAL	3.4
57	BZ	472	VAL	3.4
17	AT	107	ASP	3.4
31	A7	48	LYS	3.4
45	DL	47	LYS	3.4
34	BA	1368	G	3.4
1	CA	2105	C	3.4
1	CA	2129	C	3.4
3	CC	193	PHE	3.4
43	DJ	42	THR	3.4
8	CH	96	ALA	3.4
57	DZ	580	MET	3.4
57	DZ	640	ALA	3.4
26	C2	7	ARG	3.4
42	DI	42	ARG	3.4
43	DJ	70	ARG	3.4
3	CC	212	SER	3.4
40	BG	37	ASN	3.4
46	BM	25	ILE	3.4
49	BP	62	VAL	3.4
23	AZ	168	GLU	3.4
57	BZ	462	ILE	3.4
57	BZ	494	GLU	3.4
1	AA	2141	A	3.4
1	CA	1913	A	3.4
4	CD	275	LYS	3.4
34	DA	1110	A	3.4
42	BI	114	TYR	3.4
43	BJ	36	GLY	3.4
55	BV	13	A	3.4
57	BZ	438	PHE	3.4
9	AK	86	PRO	3.4
43	DJ	87	THR	3.4
47	DN	10	ALA	3.4
57	DZ	202	PRO	3.4
1	AA	2130	C	3.4
9	CK	50	ARG	3.4
47	DN	41	ARG	3.4
57	DZ	430	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
57	DZ	243	VAL	3.4
10	AL	64	SER	3.4
10	AL	70	LYS	3.4
10	CL	75	SER	3.4
43	BJ	76	ASN	3.4
35	DB	134	GLU	3.4
57	BZ	577	SER	3.4
10	CL	87	GLY	3.4
57	DZ	379	GLY	3.4
57	DZ	406	GLU	3.4
55	DV	15	A	3.3
3	AC	196	ALA	3.3
36	DC	149	ALA	3.3
57	DZ	444	PRO	3.3
3	AC	217	THR	3.3
52	DS	63	THR	3.3
1	AA	2199	C	3.3
28	C4	56	VAL	3.3
43	DJ	50	ILE	3.3
46	DM	121	LYS	3.3
34	BA	1323	G	3.3
10	CL	135	GLY	3.3
34	BA	1364	U	3.3
23	CZ	97	GLU	3.3
37	BD	113	SER	3.3
40	DG	22	LEU	3.3
40	DG	101	LEU	3.3
10	AL	37	PHE	3.3
40	BG	26	PHE	3.3
3	AC	51	ASP	3.3
40	DG	112	PRO	3.3
47	DN	59	ALA	3.3
52	DS	13	ASP	3.3
57	DZ	83	ASP	3.3
57	DZ	257	PRO	3.3
34	DA	532	A	3.3
57	DZ	541	ALA	3.3
28	A4	55	ARG	3.3
43	BJ	81	THR	3.3
53	BT	23	ARG	3.3
40	DG	36	LYS	3.3
54	BU	14	TRP	3.3

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Mol	Chain	Res	Type	RSRZ
36	DC	182	ILE	3.3
42	DI	17	VAL	3.3
43	BJ	74	ILE	3.3
1	CA	2108	C	3.3
16	CS	60	GLY	3.3
34	DA	1116	C	3.3
34	DA	1270	C	3.3
9	CK	17	LEU	3.3
9	CK	74	LEU	3.3
24	C0	84	LEU	3.3
28	A4	63	TYR	3.3
36	BC	193	TYR	3.3
37	DD	20	TYR	3.3
1	AA	2203	G	3.3
1	CA	2106	G	3.3
1	CA	2318	G	3.3
9	CK	25	PHE	3.3
52	BS	74	PHE	3.3
10	AL	25	PRO	3.3
57	BZ	648	PRO	3.3
3	CC	39	ASP	3.3
3	CC	167	ASP	3.3
33	C9	12	ASP	3.3
43	DJ	73	ASP	3.3
1	CA	2173	A	3.3
9	CK	102	LYS	3.3
10	AL	9	LYS	3.3
24	A0	5	LYS	3.3
42	BI	97	LYS	3.3
57	DZ	509	HIS	3.3
48	DO	3	ILE	3.3
49	DP	19	ILE	3.3
10	AL	8	VAL	3.3
37	BD	124	GLY	3.3
57	BZ	386	GLY	3.3
7	CG	62	LEU	3.3
13	AP	98	GLU	3.3
52	DS	5	LEU	3.3
52	DS	44	MET	3.3
1	CA	1066	U	3.3
34	BA	1352	C	3.3
36	BC	184	TYR	3.3

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Mol	Chain	Res	Type	RSRZ
52	DS	35	SER	3.3
9	AK	105	PRO	3.3
5	CE	58	ARG	3.3
9	AK	50	ARG	3.3
37	DD	118	ARG	3.3
1	AA	2190	G	3.3
1	CA	2149	G	3.3
10	CL	62	ASP	3.3
34	DA	1185	G	3.3
46	BM	16	ASP	3.3
43	DJ	100	THR	3.3
35	BB	140	HIS	3.3
3	AC	176	VAL	3.3
46	BM	45	VAL	3.3
34	BA	977	A	3.3
7	CG	44	GLY	3.3
46	DM	100	GLY	3.3
57	BZ	466	LEU	3.3
23	CZ	11	GLU	3.3
42	DI	110	GLU	3.3
57	BZ	469	GLU	3.3
57	DZ	615	GLU	3.3
3	AC	180	SER	3.2
7	AG	146	TYR	3.2
54	BU	23	PRO	3.2
55	BV	20	U	3.2
8	CH	3	ARG	3.2
28	A4	61	ARG	3.2
36	DC	163	ALA	3.2
37	BD	100	ARG	3.2
42	BI	120	ARG	3.2
42	DI	120	ARG	3.2
46	BM	102	ARG	3.2
57	DZ	136	ALA	3.2
1	AA	1122	C	3.2
10	AL	114	ASP	3.2
28	C4	44	THR	3.2
49	DP	82	GLN	3.2
57	DZ	569	ASP	3.2
36	DC	55	VAL	3.2
57	BZ	88	VAL	3.2
34	DA	963	G	3.2

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Mol	Chain	Res	Type	RSRZ
34	DA	1371	G	3.2
40	DG	16	LEU	3.2
37	BD	23	GLY	3.2
34	BA	1360	A	3.2
47	BN	16	PHE	3.2
3	CC	175	PRO	3.2
46	BM	10	PRO	3.2
3	AC	58	ASN	3.2
1	CA	2122	U	3.2
9	CK	35	LYS	3.2
10	AL	116	ASN	3.2
35	DB	133	LYS	3.2
43	DJ	69	ASN	3.2
47	DN	5	ALA	3.2
52	BS	53	ASN	3.2
57	DZ	593	ALA	3.2
34	BA	1049	U	3.2
1	AA	2129	C	3.2
1	CA	2137	C	3.2
34	BA	163	C	3.2
34	DA	1038	C	3.2
38	DE	10	MET	3.2
35	DB	11	LEU	3.2
40	BG	12	LEU	3.2
10	CL	101	TRP	3.2
54	DU	11	GLY	3.2
57	BZ	532	GLY	3.2
47	DN	36	PHE	3.2
1	AA	218	A	3.2
1	AA	2187	G	3.2
1	CA	1050	A	3.2
1	CA	1062	G	3.2
8	CH	95	ARG	3.2
34	BA	1001(A)	G	3.2
39	BF	54	LYS	3.2
47	BN	29	ARG	3.2
50	DQ	100	LYS	3.2
55	BV	12	A	3.2
9	CK	28	ASN	3.2
57	DZ	226	ASN	3.2
1	AA	2152	U	3.2
1	CA	1081	U	3.2

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Mol	Chain	Res	Type	RSRZ
3	AC	222	SER	3.2
37	DD	152	SER	3.2
53	BT	11	SER	3.2
10	AL	112	MET	3.2
52	DS	41	VAL	3.2
57	BZ	684	GLN	3.2
57	DZ	180	VAL	3.2
10	CL	58	THR	3.2
10	CL	118	THR	3.2
35	DB	196	LEU	3.2
46	DM	19	LEU	3.2
57	DZ	624	LEU	3.2
1	CA	2164	C	3.2
1	CA	2188	C	3.2
34	DA	1029	C	3.2
9	AK	123	GLU	3.2
27	C3	2	PRO	3.2
28	A4	58	ARG	3.2
46	DM	80	ARG	3.2
54	DU	15	ARG	3.2
57	DZ	439	ARG	3.2
9	CK	11	ALA	3.2
10	CL	44	ALA	3.2
10	CL	81	ALA	3.2
1	AA	572	A	3.2
1	CA	1085	A	3.2
1	CA	1095	A	3.2
1	CA	2135	A	3.2
3	CC	226	ASN	3.2
9	AK	104	ILE	3.2
53	BT	75	ASN	3.2
1	CA	1083	U	3.2
9	AK	99	SER	3.2
35	BB	61	LEU	3.2
40	DG	99	LEU	3.2
42	DI	96	LEU	3.2
3	CC	56	ASP	3.2
8	AH	174	GLY	3.2
10	CL	92	GLY	3.2
36	BC	41	GLY	3.2
42	DI	67	GLY	3.2
9	AK	102	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
9	CK	65	GLU	3.2
35	DB	21	ARG	3.2
47	DN	29	ARG	3.2
47	DN	46	GLU	3.2
1	CA	1080	C	3.2
7	CG	2	PRO	3.2
34	BA	1328	C	3.2
34	DA	1149	C	3.2
42	DI	82	ALA	3.1
57	BZ	429	ALA	3.1
57	BZ	589	ALA	3.1
3	AC	226	ASN	3.1
57	DZ	514	VAL	3.1
34	BA	160	A	3.1
9	AK	109	SER	3.1
52	BS	33	THR	3.1
8	CH	66	GLY	3.1
10	AL	87	GLY	3.1
23	AZ	114	GLY	3.1
35	DB	227	GLY	3.1
1	AA	2171	G	3.1
1	CA	652(C)	G	3.1
1	CA	2101	G	3.1
34	DA	1182	G	3.1
43	DJ	55	LYS	3.1
3	CC	9	ARG	3.1
14	CQ	60	ARG	3.1
10	AL	73	PRO	3.1
40	DG	2	ALA	3.1
53	BT	95	ALA	3.1
57	BZ	585	ALA	3.1
43	BJ	98	ILE	3.1
1	CA	2136	C	3.1
1	CA	2138	C	3.1
31	C7	46	VAL	3.1
46	DM	66	LEU	3.1
57	BZ	463	VAL	3.1
57	DZ	404	VAL	3.1
57	DZ	459	LEU	3.1
1	AA	1123	A	3.1
1	CA	2310	A	3.1
10	CL	18	THR	3.1

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Mol	Chain	Res	Type	RSRZ
52	BS	8	GLY	3.1
52	DS	68	GLY	3.1
14	CQ	10	ARG	3.1
42	DI	104	ARG	3.1
57	BZ	666	ARG	3.1
54	DU	5	ASP	3.1
5	CE	73	GLU	3.1
9	CK	84	GLU	3.1
23	CZ	60	GLU	3.1
35	DB	97	TRP	3.1
52	DS	34	TRP	3.1
34	BA	1002	G	3.1
34	BA	1276	G	3.1
34	BA	1312	G	3.1
34	BA	1353	G	3.1
34	DA	1347	G	3.1
36	BC	129	ALA	3.1
3	CC	172	ILE	3.1
36	DC	152	ILE	3.1
3	AC	15	VAL	3.1
9	AK	87	VAL	3.1
10	CL	5	VAL	3.1
40	DG	17	VAL	3.1
47	BN	18	VAL	3.1
57	DZ	679	VAL	3.1
57	DZ	186	TYR	3.1
1	CA	1043	C	3.1
1	CA	1076	C	3.1
35	DB	132	LYS	3.1
37	DD	6	GLY	3.1
46	DM	63	THR	3.1
1	CA	1061	U	3.1
9	CK	24	PHE	3.1
10	AL	79	ARG	3.1
35	BB	144	ARG	3.1
35	DB	70	PHE	3.1
36	DC	172	ARG	3.1
47	DN	57	ARG	3.1
54	BU	10	ARG	3.1
54	DU	6	ARG	3.1
34	BA	1183	A	3.1
23	CZ	2	GLU	3.1

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Mol	Chain	Res	Type	RSRZ
42	DI	12	GLU	3.1
57	DZ	456	GLU	3.1
57	DZ	494	GLU	3.1
46	BM	117	VAL	3.1
1	AA	2134	G	3.1
1	CA	2159	G	3.1
1	CA	2319	G	3.1
34	DA	1368	G	3.1
52	BS	69	HIS	3.1
52	DS	14	HIS	3.1
49	BP	38	TYR	3.1
36	DC	148	GLY	3.1
40	DG	84	ASN	3.1
10	AL	93	ARG	3.1
43	DJ	45	ARG	3.1
57	DZ	633	GLY	3.1
1	CA	1109	C	3.1
1	CA	2145	C	3.1
9	AK	92	THR	3.1
9	CK	12	THR	3.1
57	DZ	612	THR	3.1
10	CL	54	PRO	3.1
10	AL	56	GLU	3.1
42	DI	2	GLU	3.1
1	CA	6	A	3.1
1	CA	2134	A	3.1
10	AL	61	ALA	3.1
10	CL	99	ILE	3.1
57	BZ	92	ILE	3.1
57	BZ	546	ILE	3.1
57	BZ	590	ILE	3.1
57	DZ	82	ILE	3.1
36	DC	47	LEU	3.0
10	AL	23	VAL	3.0
36	DC	130	VAL	3.0
47	BN	33	VAL	3.0
57	BZ	514	VAL	3.0
9	AK	83	TYR	3.0
23	CZ	99	TYR	3.0
36	BC	201	TYR	3.0
35	DB	228	GLY	3.0
42	BI	67	GLY	3.0

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Mol	Chain	Res	Type	RSRZ
57	BZ	465	ARG	3.0
57	BZ	502	GLY	3.0
57	DZ	453	GLY	3.0
1	CA	2104	G	3.0
1	CA	2190	G	3.0
34	DA	1033	G	3.0
3	AC	202	PRO	3.0
1	AA	2172	U	3.0
1	CA	2178	C	3.0
35	DB	225	ALA	3.0
43	BJ	83	GLU	3.0
57	BZ	547	GLU	3.0
57	BZ	592	GLU	3.0
57	DZ	199	ILE	3.0
3	AC	56	ASP	3.0
3	AC	188	ASP	3.0
46	DM	86	CYS	3.0
3	CC	176	VAL	3.0
34	DA	1236	A	3.0
10	CL	70	LYS	3.0
57	BZ	573	HIS	3.0
9	CK	41	ARG	3.0
37	BD	118	ARG	3.0
37	DD	3	ARG	3.0
53	BT	8	ARG	3.0
54	BU	9	ARG	3.0
3	CC	204	GLY	3.0
40	BG	82	GLY	3.0
10	AL	69	THR	3.0
52	BS	65	ASN	3.0
3	AC	203	GLU	3.0
3	CC	29	LEU	3.0
37	BD	149	ALA	3.0
57	DZ	245	ALA	3.0
1	CA	1117	G	3.0
1	CA	2125	G	3.0
1	CA	2152	G	3.0
34	BA	1224	G	3.0
34	DA	1036	G	3.0
34	DA	1316	G	3.0
1	AA	2167	C	3.0
3	AC	201	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
9	CK	27	VAL	3.0
10	AL	138	VAL	3.0
10	CL	119	ASP	3.0
10	CL	138	VAL	3.0
34	BA	1045	C	3.0
52	BS	60	VAL	3.0
57	BZ	569	ASP	3.0
10	AL	30	HIS	3.0
1	AA	2198	A	3.0
35	DB	36	ARG	3.0
36	BC	79	ARG	3.0
40	DG	5	ARG	3.0
42	BI	42	ARG	3.0
57	BZ	170	ARG	3.0
3	CC	220	GLY	3.0
9	CK	76	GLY	3.0
22	CY	57	GLN	3.0
42	DI	115	GLY	3.0
47	BN	21	TYR	3.0
10	CL	91	PRO	3.0
36	DC	165	THR	3.0
52	BS	48	THR	3.0
57	DZ	516	PRO	3.0
10	AL	57	ILE	3.0
53	BT	100	ILE	3.0
57	DZ	229	LEU	3.0
3	CC	159	ALA	3.0
23	AZ	135	GLU	3.0
46	BM	32	GLU	3.0
57	DZ	445	GLU	3.0
57	DZ	579	GLU	3.0
7	CG	81	LYS	3.0
43	BJ	99	LYS	3.0
7	CG	159	VAL	3.0
42	BI	86	VAL	3.0
10	AL	62	ASP	3.0
1	AA	1221	G	3.0
1	AA	1555	C	3.0
1	CA	277	C	3.0
1	CA	1071	G	3.0
34	DA	971	G	3.0
34	DA	1314	C	3.0

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Mol	Chain	Res	Type	RSRZ
54	BU	6	ARG	3.0
3	AC	38	PHE	3.0
3	CC	49	GLY	3.0
40	BG	89	MET	3.0
1	CA	2309	A	3.0
42	BI	87	GLN	3.0
7	CG	146	TYR	3.0
9	CK	33	PRO	3.0
10	AL	34	ILE	3.0
10	AL	127	ILE	3.0
43	DJ	96	ILE	3.0
3	AC	218	THR	3.0
43	DJ	71	LEU	3.0
46	BM	34	LEU	3.0
37	BD	77	ASN	3.0
9	CK	14	LYS	3.0
10	CL	17	ALA	3.0
10	CL	40	ALA	3.0
10	CL	122	ALA	3.0
36	DC	160	ALA	3.0
42	BI	61	ALA	3.0
37	BD	163	GLU	3.0
47	DN	11	LYS	3.0
57	BZ	456	GLU	3.0
11	CN	140	VAL	3.0
44	BK	16	SER	3.0
57	BZ	217	VAL	3.0
2	CB	1	U	2.9
34	DA	1351	U	2.9
10	AL	67	PHE	2.9
35	DB	152	PHE	2.9
42	DI	68	GLY	2.9
52	BS	84	GLY	2.9
57	DZ	234	GLY	2.9
1	AA	1121	C	2.9
1	AA	2168	C	2.9
34	DA	1223	C	2.9
1	AA	2204	G	2.9
1	CA	100	G	2.9
8	CH	21	PRO	2.9
34	DA	1106	G	2.9
34	DA	1117	G	2.9

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Mol	Chain	Res	Type	RSRZ
34	DA	1233	G	2.9
46	BM	113	PRO	2.9
57	BZ	405	PRO	2.9
1	CA	1073	A	2.9
9	CK	32	LEU	2.9
10	AL	120	LEU	2.9
34	DA	974	A	2.9
3	AC	14	LYS	2.9
3	AC	168	LYS	2.9
36	BC	191	THR	2.9
53	BT	58	LYS	2.9
57	BZ	416	LYS	2.9
10	AL	26	ALA	2.9
22	CY	105	ALA	2.9
9	CK	100	ASN	2.9
40	DG	109	ASN	2.9
8	CH	52	VAL	2.9
28	C4	10	VAL	2.9
3	CC	200	HIS	2.9
57	BZ	619	ASP	2.9
43	DJ	10	GLY	2.9
3	CC	57	GLN	2.9
35	DB	234	PRO	2.9
53	BT	55	ILE	2.9
57	BZ	202	PRO	2.9
57	DZ	551	GLN	2.9
36	DC	8	ILE	2.9
57	BZ	450	ILE	2.9
42	DI	112	LYS	2.9
47	DN	17	LYS	2.9
50	BQ	87	LYS	2.9
1	AA	2133	C	2.9
1	CA	2103	C	2.9
1	CA	2143	C	2.9
27	C3	51	ALA	2.9
34	BA	1223	C	2.9
36	DC	24	ALA	2.9
54	DU	8	THR	2.9
57	DZ	220	ALA	2.9
1	CA	1045	A	2.9
1	CA	1074	G	2.9
1	CA	1086	A	2.9

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Mol	Chain	Res	Type	RSRZ
1	CA	1091	G	2.9
1	CA	1098	A	2.9
1	CA	1110	G	2.9
3	AC	223	VAL	2.9
7	CG	160	VAL	2.9
34	BA	1252	A	2.9
34	DA	1030(A)	G	2.9
34	DA	1350	A	2.9
36	BC	181	ASN	2.9
52	DS	65	ASN	2.9
57	BZ	617	MET	2.9
45	DL	116	SER	2.9
28	A4	59	PHE	2.9
1	AA	2154	U	2.9
23	CZ	114	GLY	2.9
54	BU	5	ASP	2.9
10	AL	21	PRO	2.9
10	CL	77	LEU	2.9
42	BI	3	GLN	2.9
42	DI	50	LEU	2.9
43	DJ	8	LEU	2.9
53	BT	62	LEU	2.9
3	AC	21	TYR	2.9
16	CS	36	TYR	2.9
3	AC	174	ALA	2.9
40	BG	2	ALA	2.9
57	DZ	528	ALA	2.9
57	BZ	566	THR	2.9
10	CL	4	VAL	2.9
11	CN	68	GLU	2.9
37	BD	150	GLU	2.9
42	BI	108	VAL	2.9
47	DN	18	VAL	2.9
57	DZ	469	GLU	2.9
1	AA	34	C	2.9
1	AA	2162	C	2.9
16	CS	3	ARG	2.9
34	DA	995	C	2.9
34	DA	1030	C	2.9
1	AA	2191	A	2.9
46	DM	64	TRP	2.9
1	AA	2128	G	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	2170	G	2.9
3	AC	64	SER	2.9
3	CC	55	SER	2.9
34	BA	1309	G	2.9
13	CP	109	GLY	2.9
57	BZ	557	GLY	2.9
1	AA	1107	U	2.9
23	CZ	159	PRO	2.9
34	BA	170	U	2.9
34	DA	1212	U	2.9
52	BS	15	LEU	2.9
57	BZ	467	LYS	2.9
57	DZ	424	LEU	2.9
9	AK	106	GLN	2.9
57	DZ	630	GLN	2.9
36	DC	60	ALA	2.9
10	CL	117	THR	2.9
43	BJ	42	THR	2.9
52	BS	41	VAL	2.9
3	AC	165	ARG	2.9
3	CC	43	GLU	2.9
9	CK	15	GLU	2.9
26	C2	12	GLU	2.9
46	BM	91	ARG	2.9
50	BQ	96	GLU	2.9
57	BZ	460	GLU	2.9
57	BZ	678	GLU	2.9
17	AT	38	ASN	2.9
23	CZ	30	ASN	2.9
1	AA	696	C	2.8
1	AA	2165	C	2.8
2	CB	20	C	2.8
2	CB	31	C	2.8
34	BA	1275	A	2.8
34	BA	1397	C	2.8
34	DA	1039	C	2.8
47	DN	61	TRP	2.8
34	DA	1357	A	2.8
9	CK	117	LEU	2.8
35	BB	154	LEU	2.8
47	BN	55	GLY	2.8
53	DT	99	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
57	BZ	229	LEU	2.8
57	DZ	184	LYS	2.8
8	CH	36	PRO	2.8
57	DZ	636	PRO	2.8
1	AA	2142	G	2.8
1	CA	1056	G	2.8
38	DE	20	GLN	2.8
57	BZ	435	ASP	2.8
57	BZ	641	GLN	2.8
3	AC	10	ALA	2.8
7	CG	6	ALA	2.8
35	BB	34	ALA	2.8
35	DB	177	ALA	2.8
40	DG	25	ALA	2.8
36	BC	138	VAL	2.8
37	DD	148	VAL	2.8
40	DG	91	VAL	2.8
57	DZ	610	VAL	2.8
37	DD	132	ARG	2.8
57	BZ	84	THR	2.8
35	DB	231	GLU	2.8
44	BK	92	GLU	2.8
52	DS	53	ASN	2.8
57	DZ	675	HIS	2.8
10	CL	86	LYS	2.8
57	DZ	564	LYS	2.8
43	BJ	50	ILE	2.8
43	DJ	88	LEU	2.8
57	BZ	409	ILE	2.8
52	BS	59	PRO	2.8
1	CA	1079	C	2.8
34	BA	994	A	2.8
34	BA	996	A	2.8
34	BA	1201	A	2.8
37	BD	208	SER	2.8
9	AK	113	GLN	2.8
3	CC	16	ASP	2.8
7	AG	49	ASP	2.8
10	CL	50	ASP	2.8
26	C2	52	ASP	2.8
1	AA	2144	U	2.8
1	CA	2130	U	2.8

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Mol	Chain	Res	Type	RSRZ
34	DA	1313	U	2.8
44	BK	65	ALA	2.8
57	BZ	474	ALA	2.8
57	BZ	626	ALA	2.8
8	CH	113	VAL	2.8
9	CK	94	VAL	2.8
10	AL	4	VAL	2.8
40	BG	85	TYR	2.8
43	DJ	86	MET	2.8
46	DM	91	ARG	2.8
47	BN	35	ARG	2.8
53	BT	22	ARG	2.8
1	CA	2165	G	2.8
10	AL	71	THR	2.8
25	C1	75	GLU	2.8
34	BA	1011	G	2.8
34	BA	1047	G	2.8
34	BA	1253	G	2.8
36	BC	166	GLU	2.8
57	BZ	382	GLU	2.8
57	BZ	486	THR	2.8
57	DZ	611	THR	2.8
3	CC	14	LYS	2.8
9	CK	64	LYS	2.8
10	CL	30	HIS	2.8
36	BC	26	LYS	2.8
43	DJ	99	LYS	2.8
7	CG	144	ILE	2.8
9	AK	40	LEU	2.8
35	DB	61	LEU	2.8
36	DC	77	ILE	2.8
57	BZ	216	LEU	2.8
57	BZ	227	ILE	2.8
57	BZ	424	LEU	2.8
57	DZ	601	ILE	2.8
37	DD	37	PRO	2.8
9	CK	99	SER	2.8
35	BB	95	GLN	2.8
43	BJ	33	GLN	2.8
1	CA	1088	A	2.8
1	CA	2170	A	2.8
5	CE	19	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
8	CH	141	VAL	2.8
28	A4	51	ASP	2.8
28	C4	65	ASP	2.8
34	BA	1270	C	2.8
34	BA	1452	C	2.8
34	DA	1214	C	2.8
35	BB	93	VAL	2.8
43	BJ	73	ASP	2.8
53	BT	97	ALA	2.8
57	DZ	588	MET	2.8
52	BS	29	ARG	2.8
52	BS	80	TYR	2.8
52	DS	52	TYR	2.8
9	AK	118	THR	2.8
57	DZ	446	THR	2.8
14	CQ	128	LYS	2.8
24	A0	4	LYS	2.8
40	DG	62	PHE	2.8
43	DJ	63	PHE	2.8
46	DM	27	LYS	2.8
7	CG	133	LEU	2.8
10	AL	115	LEU	2.8
35	DB	155	LEU	2.8
43	BJ	8	LEU	2.8
53	BT	20	LEU	2.8
1	CA	1107	G	2.8
34	DA	630	G	2.8
28	C4	45	GLY	2.8
52	BS	42	PRO	2.8
57	BZ	490	PRO	2.8
57	DZ	415	PRO	2.8
3	CC	219	MET	2.8
3	AC	34	ALA	2.8
17	CT	131	ALA	2.8
47	BN	32	SER	2.8
57	BZ	578	SER	2.8
31	C7	23	ARG	2.8
35	BB	229	VAL	2.8
35	DB	197	VAL	2.8
46	BM	80	ARG	2.8
1	AA	1935	A	2.8
1	CA	2107	C	2.8

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Mol	Chain	Res	Type	RSRZ
3	CC	163	GLU	2.8
8	CH	129	THR	2.8
9	AK	127	GLU	2.8
34	BA	1008	C	2.8
52	DS	7	LYS	2.8
57	BZ	437	THR	2.8
57	DZ	418	LYS	2.8
57	DZ	536	LYS	2.8
57	BZ	223	PHE	2.8
57	BZ	-29	LEU	2.8
3	CC	23	ILE	2.8
7	CG	157	ILE	2.8
36	DC	124	ILE	2.8
42	BI	81	ILE	2.8
36	DC	41	GLY	2.8
57	DZ	505	GLY	2.8
57	DZ	508	GLY	2.8
35	BB	125	PRO	2.7
1	AA	299	G	2.7
1	AA	2132	G	2.7
1	CA	1106	G	2.7
34	BA	631	G	2.7
34	BA	1365	G	2.7
34	DA	976	G	2.7
3	CC	46	ALA	2.7
3	CC	192	ALA	2.7
9	AK	90	ALA	2.7
57	BZ	404	VAL	2.7
57	BZ	439	ARG	2.7
57	BZ	682	GLN	2.7
57	DZ	682	GLN	2.7
42	BI	17	VAL	2.7
9	AK	23	SER	2.7
6	CF	23	ASP	2.7
10	CL	90	LYS	2.7
42	BI	127	LYS	2.7
57	BZ	596	LYS	2.7
7	AG	53	LEU	2.7
23	CZ	178	GLU	2.7
35	BB	31	TYR	2.7
35	DB	170	GLU	2.7
34	DA	1188	A	2.7

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Mol	Chain	Res	Type	RSRZ
34	DA	1261	A	2.7
47	BN	13	THR	2.7
49	BP	60	LEU	2.7
52	DS	30	LEU	2.7
57	DZ	431	LEU	2.7
3	AC	45	HIS	2.7
34	BA	1262	C	2.7
34	DA	1114	C	2.7
4	CD	194	GLY	2.7
28	C4	54	GLY	2.7
54	BU	11	GLY	2.7
35	DB	101	MET	2.7
54	DU	10	ARG	2.7
9	AK	81	VAL	2.7
10	AL	17	ALA	2.7
36	DC	137	ALA	2.7
42	BI	13	ALA	2.7
42	DI	43	ALA	2.7
57	BZ	476	VAL	2.7
57	DZ	647	VAL	2.7
35	BB	22	LYS	2.7
10	AL	75	SER	2.7
1	AA	1108	G	2.7
34	DA	1491	G	2.7
40	BG	43	PHE	2.7
49	DP	9	PHE	2.7
57	DZ	271	LEU	2.7
28	A4	57	GLU	2.7
36	BC	152	ILE	2.7
36	DC	23	TYR	2.7
42	DI	4	TYR	2.7
53	BT	51	GLU	2.7
3	CC	217	THR	2.7
7	AG	77	ILE	2.7
9	AK	130	THR	2.7
43	DJ	75	ILE	2.7
46	DM	43	THR	2.7
52	BS	62	ILE	2.7
57	DZ	91	THR	2.7
1	AA	1124	U	2.7
1	CA	1420	U	2.7
34	BA	65	U	2.7

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Mol	Chain	Res	Type	RSRZ
1	CA	896	A	2.7
3	CC	177	GLY	2.7
7	AG	142	PRO	2.7
10	CL	24	GLY	2.7
34	BA	1363(A)	A	2.7
34	DA	1046	A	2.7
38	BE	52	PRO	2.7
57	BZ	586	GLY	2.7
57	DZ	131	PRO	2.7
1	AA	1579	C	2.7
1	CA	652(D)	C	2.7
34	DA	1030(B)	C	2.7
34	DA	1260	C	2.7
34	DA	1267	C	2.7
3	CC	7	ARG	2.7
7	AG	51	ARG	2.7
9	AK	5	ARG	2.7
42	DI	107	ARG	2.7
57	DZ	465	ARG	2.7
57	DZ	208	GLN	2.7
57	DZ	221	ALA	2.7
10	AL	90	LYS	2.7
24	C0	5	LYS	2.7
7	CG	43	LEU	2.7
9	AK	93	LEU	2.7
36	DC	94	LEU	2.7
36	DC	188	LEU	2.7
40	BG	38	LEU	2.7
57	DZ	552	SER	2.7
7	CG	4	ASP	2.7
9	CK	18	GLU	2.7
57	DZ	222	ASP	2.7
36	DC	6	HIS	2.7
43	BJ	100	THR	2.7
1	AA	2228	G	2.7
3	AC	207	GLY	2.7
3	CC	202	PRO	2.7
33	C9	37	GLY	2.7
34	DA	1310	G	2.7
34	DA	1456	G	2.7
37	DD	87	GLY	2.7
54	BU	16	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
56	DX	46	G	2.7
57	DZ	294	PRO	2.7
1	CA	229	A	2.7
4	AD	262	ARG	2.7
25	C1	26	ARG	2.7
26	C2	69	ARG	2.7
34	DA	1286	A	2.7
37	DD	49	ARG	2.7
46	BM	110	ARG	2.7
57	BZ	484	ARG	2.7
57	DZ	644	ARG	2.7
57	DZ	666	ARG	2.7
10	AL	86	LYS	2.7
35	BB	237	ALA	2.7
35	DB	230	VAL	2.7
36	BC	151	VAL	2.7
43	BJ	7	LYS	2.7
53	BT	94	ALA	2.7
53	DT	34	LYS	2.7
57	DZ	645	ALA	2.7
9	CK	42	GLN	2.7
34	DA	970	C	2.7
34	DA	1115	C	2.7
34	DA	1195	C	2.7
36	DC	37	GLN	2.7
36	BC	188	LEU	2.7
7	AG	144	ILE	2.7
42	DI	63	ILE	2.7
57	DZ	546	ILE	2.7
9	AK	78	SER	2.7
26	C2	66	GLU	2.7
57	DZ	515	GLU	2.7
3	CC	21	TYR	2.7
28	A4	67	TYR	2.7
40	DG	44	TYR	2.7
57	DZ	250	THR	2.7
10	AL	113	PRO	2.7
28	C4	17	GLY	2.7
36	DC	74	GLY	2.7
42	DI	21	PRO	2.7
57	BZ	415	PRO	2.7
57	BZ	453	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
57	BZ	613	PRO	2.7
35	DB	226	ARG	2.6
3	AC	6	LYS	2.6
42	BI	95	LYS	2.6
43	BJ	14	LYS	2.6
57	BZ	418	LYS	2.6
57	BZ	681	LYS	2.6
43	DJ	34	VAL	2.6
52	DS	19	VAL	2.6
57	BZ	491	VAL	2.6
1	AA	2147	G	2.6
1	CA	549	G	2.6
1	CA	2157	G	2.6
3	CC	34	ALA	2.6
17	CT	126	ALA	2.6
40	BG	134	ALA	2.6
43	BJ	20	ALA	2.6
1	CA	2119	A	2.6
1	CA	2602	A	2.6
34	BA	1324	A	2.6
34	DA	949	A	2.6
57	DZ	124	GLN	2.6
23	CZ	33	LEU	2.6
39	BF	10	LEU	2.6
40	BG	101	LEU	2.6
52	DS	16	LEU	2.6
57	DZ	466	LEU	2.6
9	CK	52	PHE	2.6
35	DB	122	PHE	2.6
1	AA	2164	C	2.6
1	CA	645	C	2.6
34	DA	940	C	2.6
34	DA	1097	C	2.6
34	DA	1210	C	2.6
34	DA	1367	C	2.6
42	BI	74	ILE	2.6
42	DI	77	ILE	2.6
42	DI	81	ILE	2.6
7	CG	155	MET	2.6
10	CL	89	HIS	2.6
3	CC	52	PRO	2.6
7	CG	129	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
8	CH	5	GLY	2.6
28	C4	29	PRO	2.6
46	BM	89	GLY	2.6
48	DO	22	THR	2.6
57	DZ	483	TYR	2.6
57	BZ	410	ASP	2.6
57	BZ	623	ASP	2.6
21	CX	60	ARG	2.6
37	DD	73	ARG	2.6
46	DM	3	ARG	2.6
47	DN	35	ARG	2.6
52	BS	3	ARG	2.6
1	AA	2166	U	2.6
1	CA	2132	U	2.6
9	AK	27	VAL	2.6
11	CN	9	VAL	2.6
57	BZ	670	VAL	2.6
57	DZ	162	VAL	2.6
10	AL	74	ALA	2.6
57	DZ	19	ALA	2.6
35	BB	11	LEU	2.6
44	DK	13	GLN	2.6
57	DZ	632	LEU	2.6
1	CA	1054	A	2.6
1	CA	1077	A	2.6
10	CL	65	PHE	2.6
34	BA	983	A	2.6
34	DA	1180	A	2.6
34	DA	1319	A	2.6
35	DB	105	PHE	2.6
48	BO	87	ILE	2.6
1	AA	2126	G	2.6
1	CA	1055	G	2.6
1	CA	2186	G	2.6
34	BA	951	G	2.6
34	DA	1031	G	2.6
34	DA	1042	G	2.6
47	DN	8	GLU	2.6
40	BG	130	GLY	2.6
57	BZ	85	PRO	2.6
9	CK	29	TYR	2.6
47	BN	34	TYR	2.6

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Mol	Chain	Res	Type	RSRZ
3	CC	178	LYS	2.6
10	AL	50	ASP	2.6
10	AL	80	LYS	2.6
28	C4	69	LYS	2.6
36	DC	135	LYS	2.6
37	BD	65	ARG	2.6
40	BG	70	LYS	2.6
47	BN	23	ARG	2.6
53	DT	86	ARG	2.6
57	BZ	492	ASP	2.6
47	BN	25	VAL	2.6
57	DZ	269	VAL	2.6
1	AA	1466	U	2.6
53	DT	40	ALA	2.6
53	DT	72	LEU	2.6
9	AK	25	PHE	2.6
46	BM	9	ILE	2.6
50	DQ	36	ILE	2.6
57	DZ	92	ILE	2.6
57	DZ	413	ILE	2.6
57	DZ	563	ILE	2.6
10	AL	35	MET	2.6
42	BI	29	ASN	2.6
1	AA	2322	A	2.6
34	BA	149	A	2.6
34	BA	1531	A	2.6
34	DA	978	A	2.6
34	DA	1201	A	2.6
38	BE	50	GLU	2.6
57	DZ	603	GLU	2.6
43	BJ	37	PRO	2.6
3	AC	68	GLY	2.6
3	CC	207	GLY	2.6
9	AK	103	GLY	2.6
10	CL	31	GLY	2.6
28	A4	64	GLY	2.6
50	DQ	37	LYS	2.6
54	DU	16	GLY	2.6
57	DZ	622	GLY	2.6
1	CA	171	G	2.6
1	CA	2751	G	2.6
7	CG	131	TYR	2.6

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Mol	Chain	Res	Type	RSRZ
7	CG	161	THR	2.6
34	BA	79	G	2.6
34	DA	1124	G	2.6
34	DA	1139	G	2.6
34	DA	1312	G	2.6
40	BG	44	TYR	2.6
42	BI	92	TYR	2.6
42	DI	114	TYR	2.6
51	BR	47	THR	2.6
54	BU	21	TYR	2.6
1	AA	2150	C	2.6
1	AA	2210	C	2.6
1	CA	1102	C	2.6
7	CG	116	ASP	2.6
34	DA	1066	C	2.6
34	DA	1113	C	2.6
36	DC	173	VAL	2.6
42	DI	26	VAL	2.6
43	BJ	44	VAL	2.6
46	BM	60	VAL	2.6
57	DZ	670	VAL	2.6
7	AG	82	LEU	2.6
7	CG	73	ALA	2.6
8	CH	33	LEU	2.6
10	CL	82	ALA	2.6
25	A1	98	LEU	2.6
35	BB	138	LEU	2.6
36	BC	91	LEU	2.6
10	CL	29	GLN	2.6
23	CZ	53	ILE	2.6
34	DA	992	U	2.6
28	A4	49	PHE	2.6
35	BB	17	PHE	2.6
43	BJ	6	ILE	2.6
57	DZ	402	ILE	2.6
57	DZ	556	ILE	2.6
57	DZ	550	MET	2.6
40	BG	84	ASN	2.6
46	BM	62	ASN	2.6
3	AC	163	GLU	2.6
13	CP	92	GLU	2.6
3	AC	160	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
9	CK	60	ARG	2.6
33	C9	20	HIS	2.6
46	BM	69	GLU	2.6
52	DS	64	GLU	2.6
53	DT	8	ARG	2.6
54	BU	7	ARG	2.6
57	DZ	200	PRO	2.6
35	DB	65	GLY	2.6
46	BM	26	GLY	2.6
34	DA	1225	A	2.6
42	BI	125	TYR	2.6
52	DS	39	THR	2.6
7	CG	78	SER	2.6
10	AL	5	VAL	2.6
23	CZ	16	SER	2.6
47	DN	56	VAL	2.6
52	BS	35	SER	2.6
57	BZ	521	SER	2.6
3	AC	48	LEU	2.6
7	CG	147	ASP	2.6
35	DB	221	LEU	2.6
40	DG	59	LEU	2.6
42	BI	84	ALA	2.5
43	BJ	88	LEU	2.6
57	BZ	459	LEU	2.6
57	DZ	224	ASP	2.6
10	AL	14	ALA	2.5
57	DZ	581	ALA	2.5
1	CA	274	G	2.5
1	CA	1051	G	2.5
1	CA	1099	G	2.5
1	CA	1509	C	2.5
1	CA	2168	G	2.5
1	CA	2187	G	2.5
34	BA	64	G	2.5
34	DA	1096	C	2.5
35	DB	41	ILE	2.5
46	DM	82	MET	2.5
47	DN	37	PHE	2.5
9	CK	21	GLN	2.5
9	CK	75	GLN	2.5
10	AL	110	GLN	2.5

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Mol	Chain	Res	Type	RSRZ
40	BG	13	GLN	2.5
1	AA	12	U	2.5
3	CC	6	LYS	2.5
3	CC	58	ASN	2.5
5	CE	121	ASN	2.5
28	C4	38	LYS	2.5
52	DS	70	LYS	2.5
3	AC	13	GLU	2.5
37	BD	132	ARG	2.5
43	DJ	64	GLU	2.5
50	DQ	2	PRO	2.5
57	BZ	509	HIS	2.5
57	DZ	30	GLU	2.5
40	DG	21	VAL	2.5
36	DC	196	LEU	2.5
37	DD	188	LEU	2.5
40	DG	154	TYR	2.5
46	BM	109	THR	2.5
57	BZ	-48	VAL	2.5
42	DI	56	LEU	2.5
57	DZ	568	TYR	2.5
1	CA	2114	A	2.5
9	AK	126	ALA	2.5
10	AL	133	SER	2.5
24	C0	9	SER	2.5
44	BK	53	SER	2.5
50	BQ	99	SER	2.5
3	AC	39	ASP	2.5
8	CH	137	ASP	2.5
35	BB	222	ILE	2.5
42	DI	101	PHE	2.5
47	BN	7	ILE	2.5
57	BZ	580	MET	2.5
47	BN	36	PHE	2.5
9	CK	115	GLN	2.5
10	AL	101	TRP	2.5
1	AA	670	C	2.5
1	CA	1053	C	2.5
1	CA	2789	C	2.5
34	BA	218	C	2.5
34	BA	1244	C	2.5
34	DA	1359	C	2.5

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Mol	Chain	Res	Type	RSRZ
1	CA	2180	U	2.5
10	CL	2	LYS	2.5
34	BA	306	G	2.5
34	BA	343	U	2.5
34	BA	1003	G	2.5
34	BA	1021	G	2.5
34	BA	1126	U	2.5
34	DA	1281	U	2.5
45	DL	126	LYS	2.5
3	AC	53	ARG	2.5
3	AC	183	PRO	2.5
8	CH	112	PRO	2.5
9	CK	69	PRO	2.5
23	CZ	62	PRO	2.5
40	BG	78	ARG	2.5
41	BH	5	PRO	2.5
46	DM	94	ARG	2.5
10	AL	47	ASN	2.5
23	AZ	2	GLU	2.5
38	DE	99	GLY	2.5
40	DG	81	GLY	2.5
42	BI	80	GLY	2.5
43	DJ	76	ASN	2.5
54	BU	2	GLY	2.5
57	BZ	615	GLU	2.5
8	CH	7	LEU	2.5
8	CH	26	VAL	2.5
24	C0	43	THR	2.5
28	A4	56	VAL	2.5
35	BB	165	VAL	2.5
40	BG	91	VAL	2.5
40	DG	66	VAL	2.5
57	DZ	232	LEU	2.5
3	AC	187	ALA	2.5
51	BR	20	ALA	2.5
57	DZ	159	ALA	2.5
3	AC	212	SER	2.5
42	DI	126	SER	2.5
50	DQ	97	SER	2.5
57	DZ	201	ILE	2.5
1	AA	1507	A	2.5
1	CA	1084	A	2.5

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Mol	Chain	Res	Type	RSRZ
34	BA	1227	A	2.5
34	BA	1332	A	2.5
36	BC	62	ASP	2.5
41	DH	54	ASP	2.5
57	BZ	673	PHE	2.5
57	DZ	558	PHE	2.5
57	DZ	672	PHE	2.5
9	AK	75	GLN	2.5
10	AL	29	GLN	2.5
43	BJ	55	LYS	2.5
44	BK	51	LYS	2.5
53	BT	14	LYS	2.5
9	CK	5	ARG	2.5
17	CT	125	ARG	2.5
10	AL	91	PRO	2.5
34	DA	1150	U	2.5
34	DA	1315	U	2.5
46	BM	41	PRO	2.5
14	CQ	100	GLY	2.5
34	BA	980	C	2.5
34	BA	1243	C	2.5
34	BA	1282	C	2.5
34	DA	979	C	2.5
57	BZ	455	GLY	2.5
57	BZ	654	GLY	2.5
1	AA	691	G	2.5
1	AA	2155	G	2.5
1	CA	2181	G	2.5
8	CH	19	VAL	2.5
23	CZ	161	VAL	2.5
34	DA	1160	G	2.5
34	DA	1353	G	2.5
42	BI	28	VAL	2.5
42	BI	47	LEU	2.5
47	BN	56	VAL	2.5
52	BS	51	VAL	2.5
52	DS	22	LEU	2.5
57	DZ	-48	VAL	2.5
57	DZ	428	LEU	2.5
3	CC	62	THR	2.5
3	CC	196	ALA	2.5
7	AG	50	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
9	AK	89	ALA	2.5
42	DI	15	ALA	2.5
57	BZ	676	TYR	2.5
57	DZ	482	ALA	2.5
8	CH	72	ILE	2.5
52	BS	40	ILE	2.5
9	CK	45	LYS	2.5
23	CZ	166	SER	2.5
36	BC	154	SER	2.5
42	DI	95	LYS	2.5
57	DZ	668	SER	2.5
1	CA	2126	A	2.5
34	BA	1001	A	2.5
34	DA	1044	A	2.5
34	DA	1360	A	2.5
7	CG	21	ARG	2.5
35	BB	137	ARG	2.5
36	BC	172	ARG	2.5
36	DC	190	ARG	2.5
47	DN	26	ARG	2.5
52	BS	36	ARG	2.5
53	DT	23	ARG	2.5
33	C9	30	PRO	2.5
3	CC	160	GLY	2.5
52	DS	83	HIS	2.5
10	CL	36	GLU	2.5
23	CZ	94	GLU	2.5
50	DQ	49	GLU	2.5
56	DX	47	U	2.5
57	BZ	685	GLU	2.5
37	BD	21	LEU	2.5
9	AK	28	ASN	2.5
35	DB	229	VAL	2.5
36	BC	195	VAL	2.5
40	BG	28	ASN	2.5
42	DI	29	ASN	2.5
46	DM	7	VAL	2.5
57	BZ	594	VAL	2.5
57	DZ	475	ASN	2.5
1	AA	2159	C	2.5
1	AA	2205	C	2.5
34	BA	479	C	2.5

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Mol	Chain	Res	Type	RSRZ
34	BA	1030(B)	C	2.5
34	DA	972	C	2.5
34	DA	1112	C	2.5
34	DA	1366	C	2.5
3	AC	22	THR	2.5
3	CC	187	ALA	2.5
10	AL	44	ALA	2.5
10	CL	51	ALA	2.5
36	BC	200	ALA	2.5
40	DG	27	ILE	2.5
46	BM	107	ALA	2.5
57	BZ	-2	ALA	2.5
57	BZ	451	ILE	2.5
57	DZ	529	ILE	2.5
3	CC	38	PHE	2.5
3	CC	181	PHE	2.5
9	CK	96	PHE	2.5
1	CA	614(B)	G	2.4
1	CA	2184	G	2.4
3	CC	71	LYS	2.4
34	BA	102	G	2.4
34	BA	346	G	2.4
34	BA	384	G	2.4
34	BA	933	G	2.4
34	BA	993	G	2.4
34	DA	1094	G	2.4
3	CC	64	SER	2.4
42	BI	105	ASP	2.4
42	DI	71	SER	2.4
8	CH	101	ARG	2.4
35	BB	23	ARG	2.4
36	BC	30	ARG	2.4
42	BI	128	ARG	2.4
47	BN	52	GLN	2.4
35	BB	202	PRO	2.4
57	BZ	559	PRO	2.4
1	CA	2062	A	2.4
34	BA	958	A	2.4
34	BA	1289	A	2.4
7	AG	45	GLU	2.4
9	CK	8	GLU	2.4
23	CZ	144	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
36	DC	166	GLU	2.4
57	DZ	181	LEU	2.4
7	CG	15	VAL	2.4
23	CZ	98	MET	2.4
34	BA	1000	U	2.4
34	DA	1090	U	2.4
34	DA	1194	U	2.4
35	DB	112	VAL	2.4
35	DB	164	VAL	2.4
44	DK	117	ASN	2.4
7	CG	57	ALA	2.4
43	BJ	32	ALA	2.4
57	BZ	244	ALA	2.4
57	DZ	605	ILE	2.4
36	DC	95	THR	2.4
42	BI	33	PHE	2.4
52	DS	48	THR	2.4
1	AA	270	C	2.4
1	AA	1118	C	2.4
1	AA	2125	C	2.4
1	AA	2158	C	2.4
1	AA	2186	C	2.4
7	CG	25	TYR	2.4
34	BA	990	C	2.4
34	BA	1030	C	2.4
34	DA	1043	C	2.4
38	BE	24	ARG	2.4
40	BG	79	ARG	2.4
1	AA	2146	G	2.4
1	CA	652(U)	G	2.4
3	CC	183	PRO	2.4
7	AG	116	ASP	2.4
28	C4	37	SER	2.4
40	DG	92	SER	2.4
40	DG	110	GLN	2.4
57	BZ	393	ASP	2.4
57	DZ	118	SER	2.4
57	DZ	587	SER	2.4
8	CH	168	PRO	2.4
9	AK	77	PRO	2.4
34	BA	1310	G	2.4
34	DA	945	G	2.4

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Mol	Chain	Res	Type	RSRZ
57	DZ	540	PRO	2.4
7	CG	3	LEU	2.4
7	CG	19	LEU	2.4
35	DB	44	LEU	2.4
41	DH	71	GLY	2.4
42	DI	19	LEU	2.4
42	DI	69	GLY	2.4
7	AG	167	GLU	2.4
9	CK	122	VAL	2.4
36	DC	103	VAL	2.4
46	DM	17	VAL	2.4
57	BZ	406	GLU	2.4
57	DZ	481	VAL	2.4
57	DZ	510	VAL	2.4
57	DZ	671	MET	2.4
34	DA	1030(D)	A	2.4
55	BV	15	A	2.4
1	CA	958	U	2.4
1	CA	1078	U	2.4
34	BA	1446	U	2.4
34	DA	1065	U	2.4
34	DA	1211	U	2.4
54	BU	13	ILE	2.4
3	AC	36	ALA	2.4
3	CC	18	ASN	2.4
3	CC	27	ALA	2.4
9	AK	124	ALA	2.4
35	BB	171	ALA	2.4
36	BC	168	ALA	2.4
41	DH	16	ALA	2.4
42	BI	119	ALA	2.4
54	DU	3	LYS	2.4
57	BZ	310	ALA	2.4
57	BZ	482	ALA	2.4
35	BB	28	PHE	2.4
3	CC	218	THR	2.4
9	AK	12	THR	2.4
9	CK	130	THR	2.4
10	AL	76	TYR	2.4
35	BB	33	TYR	2.4
57	DZ	212	TYR	2.4
37	BD	47	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
42	BI	9	ARG	2.4
43	BJ	45	ARG	2.4
48	DO	68	ARG	2.4
57	DZ	468	ARG	2.4
1	AA	1138	C	2.4
1	CA	888	C	2.4
34	BA	165	C	2.4
34	BA	999	C	2.4
34	BA	1039	C	2.4
34	BA	1137	C	2.4
34	BA	1336	C	2.4
34	DA	154	C	2.4
34	DA	1118	C	2.4
37	BD	37	PRO	2.4
37	DD	39	PRO	2.4
57	DZ	535	PRO	2.4
16	CS	31	SER	2.4
35	DB	121	LEU	2.4
42	BI	75	ASP	2.4
46	DM	16	ASP	2.4
57	BZ	441	SER	2.4
57	DZ	175	SER	2.4
9	CK	66	LEU	2.4
10	AL	27	LEU	2.4
16	CS	58	LEU	2.4
3	AC	173	HIS	2.4
3	CC	61	GLY	2.4
9	AK	131	MET	2.4
10	CL	48	MET	2.4
28	A4	45	GLY	2.4
57	DZ	158	GLY	2.4
36	BC	90	GLU	2.4
44	DK	14	VAL	2.4
46	BM	15	VAL	2.4
57	BZ	493	VAL	2.4
1	AA	2149	G	2.4
1	CA	1524	G	2.4
34	BA	971	G	2.4
34	BA	1124	G	2.4
34	BA	1182	G	2.4
34	BA	1361	G	2.4
44	BK	95	ILE	2.4

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Mol	Chain	Res	Type	RSRZ
47	BN	11	LYS	2.4
52	BS	70	LYS	2.4
57	DZ	539	ILE	2.4
3	CC	174	ALA	2.4
7	CG	158	ALA	2.4
43	DJ	27	ALA	2.4
43	DJ	32	ALA	2.4
57	DZ	67	ALA	2.4
1	CA	272(A)	U	2.4
1	CA	2109	U	2.4
34	DA	996	A	2.4
34	DA	1256	A	2.4
46	DM	49	THR	2.4
57	DZ	486	THR	2.4
26	C2	51	ARG	2.4
36	BC	29	TYR	2.4
36	DC	193	TYR	2.4
37	BD	49	ARG	2.4
42	DI	16	ARG	2.4
43	BJ	43	ARG	2.4
6	CF	14	PRO	2.4
28	C4	11	PRO	2.4
36	DC	174	PRO	2.4
57	DZ	308	PRO	2.4
7	CG	139	LEU	2.4
10	AL	84	LEU	2.4
41	BH	133	LEU	2.4
42	DI	85	LEU	2.4
44	DK	77	MET	2.4
1	CA	652(V)	C	2.4
10	AL	83	GLY	2.4
16	CS	96	GLY	2.4
23	CZ	32	HIS	2.4
34	BA	1043	C	2.4
34	BA	1317	C	2.4
34	DA	1203	C	2.4
36	DC	13	GLY	2.4
40	DG	77	SER	2.4
43	DJ	89	ASP	2.4
52	DS	72	GLY	2.4
57	DZ	40	HIS	2.4
8	CH	44	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
35	DB	184	VAL	2.4
44	DK	82	VAL	2.4
52	DS	67	VAL	2.4
57	DZ	163	VAL	2.4
26	C2	11	GLU	2.4
37	DD	163	GLU	2.4
42	BI	118	LYS	2.4
43	DJ	57	LYS	2.4
46	DM	111	LYS	2.4
57	DZ	414	GLU	2.4
10	AL	51	ALA	2.4
10	AL	65	PHE	2.4
12	CO	103	ALA	2.4
42	BI	46	ALA	2.4
57	BZ	523	PHE	2.4
57	BZ	582	PHE	2.4
1	AA	927	G	2.4
1	AA	1217	G	2.4
1	CA	2102	U	2.4
1	AA	2156	A	2.4
1	AA	2843	G	2.4
1	CA	1068	G	2.4
1	CA	2151	G	2.4
1	CA	2206	G	2.4
1	CA	2308	G	2.4
23	CZ	131	ARG	2.4
24	C0	82	ARG	2.4
34	BA	1117	G	2.4
34	DA	1196	U	2.4
34	BA	1188	A	2.4
34	BA	1357	A	2.4
34	DA	983	A	2.4
34	DA	1026	G	2.4
34	DA	1047	G	2.4
34	DA	1053	G	2.4
47	BN	41	ARG	2.4
56	DX	2	G	2.4
56	DX	19	G	2.4
36	DC	184	TYR	2.3
57	DZ	616	TYR	2.3
10	AL	54	PRO	2.3
37	DD	176	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
46	BM	19	LEU	2.3
52	BS	30	LEU	2.3
57	DZ	288	PRO	2.3
57	DZ	153	MET	2.3
57	DZ	165	GLN	2.3
57	DZ	595	GLN	2.3
14	CQ	23	GLY	2.3
40	BG	81	GLY	2.3
46	DM	95	GLY	2.3
49	DP	13	HIS	2.3
53	BT	101	GLY	2.3
3	CC	180	SER	2.3
9	CK	23	SER	2.3
15	CR	73	VAL	2.3
40	DG	156	TRP	2.3
46	BM	83	ASP	2.3
46	DM	54	VAL	2.3
47	DN	60	SER	2.3
49	DP	48	TRP	2.3
57	DZ	452	SER	2.3
7	AG	30	GLU	2.3
9	CK	123	GLU	2.3
37	DD	156	GLU	2.3
52	DS	43	GLU	2.3
57	BZ	255	ILE	2.3
57	BZ	487	ILE	2.3
1	AA	155	C	2.3
1	CA	1075	C	2.3
34	BA	217	C	2.3
34	DA	219	C	2.3
34	DA	1027	C	2.3
34	DA	1037	C	2.3
9	AK	79	ALA	2.3
10	AL	123	ALA	2.3
10	CL	6	ALA	2.3
40	DG	65	ALA	2.3
47	DN	16	PHE	2.3
57	DZ	589	ALA	2.3
3	CC	211	ARG	2.3
36	DC	54	ARG	2.3
37	DD	35	ARG	2.3
57	BZ	324	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
3	AC	189	ASN	2.3
1	AA	2124	U	2.3
1	AA	2131	U	2.3
1	CA	1097	U	2.3
28	C4	18	CYS	2.3
34	BA	1307	U	2.3
10	AL	19	PRO	2.3
14	CQ	7	MET	2.3
19	CV	71	LEU	2.3
23	CZ	9	TYR	2.3
35	BB	10	LEU	2.3
36	DC	175	LEU	2.3
57	DZ	279	TYR	2.3
1	AA	2157	A	2.3
1	AA	2614	A	2.3
34	BA	1306	A	2.3
1	AA	2174	G	2.3
1	AA	2206	G	2.3
1	AA	2212	G	2.3
10	CL	110	GLN	2.3
34	BA	139	G	2.3
34	BA	973	G	2.3
34	BA	1185	G	2.3
34	BA	1370	G	2.3
34	DA	1003	G	2.3
34	DA	1138	G	2.3
34	DA	1370	G	2.3
40	BG	56	GLN	2.3
56	BX	46	G	2.3
7	AG	55	LYS	2.3
9	AK	98	LYS	2.3
9	CK	103	GLY	2.3
10	CL	3	LYS	2.3
16	CS	11	LYS	2.3
35	BB	66	GLY	2.3
35	BB	147	LYS	2.3
43	DJ	13	HIS	2.3
43	DJ	14	LYS	2.3
43	DJ	36	GLY	2.3
46	DM	13	LYS	2.3
50	DQ	14	LYS	2.3
52	DS	6	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
57	BZ	40	HIS	2.3
57	BZ	633	GLY	2.3
57	BZ	638	GLY	2.3
57	DZ	189	GLY	2.3
5	CE	33	VAL	2.3
23	CZ	37	VAL	2.3
57	BZ	610	VAL	2.3
57	DZ	534	ILE	2.3
7	CG	167	GLU	2.3
10	CL	133	SER	2.3
35	BB	195	ASP	2.3
35	DB	233	SER	2.3
3	CC	205	ALA	2.3
23	CZ	184	ALA	2.3
31	C7	45	ALA	2.3
46	DM	76	ALA	2.3
57	DZ	669	PHE	2.3
1	CA	2163	C	2.3
34	BA	995	C	2.3
34	BA	1354	C	2.3
34	DA	89	C	2.3
34	DA	848	C	2.3
34	DA	999	C	2.3
34	DA	1137	C	2.3
34	DA	1147	C	2.3
38	DE	144	THR	2.3
7	CG	34	LEU	2.3
9	AK	112	LEU	2.3
36	BC	87	LEU	2.3
36	DC	91	LEU	2.3
43	BJ	86	MET	2.3
57	BZ	431	LEU	2.3
57	DZ	228	MET	2.3
1	AA	2202	U	2.3
1	CA	1105	U	2.3
7	AG	112	PRO	2.3
8	CH	94	TYR	2.3
34	BA	991	U	2.3
34	BA	1302	U	2.3
34	DA	1232	U	2.3
42	BI	21	PRO	2.3
36	DC	29	TYR	2.3

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Mol	Chain	Res	Type	RSRZ
40	BG	154	TYR	2.3
46	BM	59	TYR	2.3
57	DZ	655	TYR	2.3
3	CC	168	LYS	2.3
8	CH	15	VAL	2.3
10	AL	31	GLY	2.3
34	BA	1248	A	2.3
52	BS	67	VAL	2.3
5	AE	77	ILE	2.3
36	DC	167	TRP	2.3
1	CA	1089	G	2.3
1	CA	2141	G	2.3
3	AC	24	ASP	2.3
8	CH	123	PHE	2.3
10	CL	85	GLU	2.3
34	BA	1030(A)	G	2.3
34	BA	1220	G	2.3
34	BA	1290	G	2.3
34	DA	306	G	2.3
34	DA	1087	G	2.3
34	DA	1186	G	2.3
34	DA	1221	G	2.3
42	BI	35	GLU	2.3
9	CK	119	ALA	2.3
40	BG	7	ALA	2.3
47	DN	48	ALA	2.3
49	DP	68	ASP	2.3
8	CH	51	ARG	2.3
28	A4	68	ARG	2.3
38	DE	27	ARG	2.3
57	DZ	160	ARG	2.3
7	AG	62	LEU	2.3
7	CG	90	LEU	2.3
40	BG	59	LEU	2.3
42	DI	47	LEU	2.3
10	AL	58	THR	2.3
46	DM	20	THR	2.3
52	BS	39	THR	2.3
1	CA	271(J)	C	2.3
1	CA	2139	C	2.3
34	BA	1149	C	2.3
34	BA	1297	C	2.3

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Mol	Chain	Res	Type	RSRZ
34	DA	1045	C	2.3
34	DA	1321	C	2.3
43	DJ	53	PRO	2.3
14	CQ	22	LYS	2.3
24	C0	46	LYS	2.3
36	BC	135	LYS	2.3
45	BL	20	LYS	2.3
52	BS	6	LYS	2.3
1	AA	1220	U	2.3
11	CN	8	GLN	2.3
34	DA	202	U	2.3
34	DA	1532	U	2.3
42	BI	4	TYR	2.3
35	BB	110	GLN	2.3
57	BZ	448	GLN	2.3
57	BZ	595	GLN	2.3
3	AC	170	GLY	2.3
9	CK	22	GLY	2.3
9	CK	110	GLY	2.3
19	CV	42	GLY	2.3
28	A4	17	GLY	2.3
22	CY	44	ILE	2.3
33	C9	16	VAL	2.3
40	BG	42	ILE	2.3
40	BG	153	HIS	2.3
46	BM	74	VAL	2.3
46	DM	9	ILE	2.3
52	BS	45	VAL	2.3
1	CA	653	A	2.3
3	AC	7	ARG	2.3
3	CC	171	ALA	2.3
7	AG	54	GLU	2.3
28	C4	23	GLU	2.3
34	BA	161	A	2.3
34	BA	975	A	2.3
34	BA	1280	A	2.3
34	BA	1287	A	2.3
34	DA	965	A	2.3
34	DA	1151	A	2.3
34	DA	1213	A	2.3
50	BQ	86	GLU	2.3
52	BS	73	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
57	BZ	214	GLU	2.3
57	DZ	223	PHE	2.3
7	CG	118	ARG	2.3
33	C9	22	ARG	2.3
40	BG	41	ARG	2.3
53	DT	57	ARG	2.3
57	BZ	528	ALA	2.3
28	A4	66	SER	2.3
1	AA	2176	G	2.3
1	CA	2155	G	2.3
16	CS	56	LEU	2.3
34	BA	1031	G	2.3
34	BA	1042	G	2.3
34	BA	1291	G	2.3
34	DA	942	G	2.3
35	BB	180	LEU	2.3
46	DM	90	LEU	2.3
7	CG	112	PRO	2.3
16	CS	62	LYS	2.3
22	CY	63	LYS	2.3
53	DT	98	PRO	2.3
57	DZ	657	THR	2.3
46	BM	106	ASN	2.2
1	AA	1087	C	2.2
1	CA	2177	C	2.2
7	CG	38	VAL	2.2
7	CG	70	VAL	2.2
7	CG	140	ILE	2.2
10	AL	53	VAL	2.2
23	CZ	74	VAL	2.2
23	CZ	143	GLY	2.2
23	CZ	160	GLY	2.2
28	C4	4	GLY	2.2
37	BD	170	VAL	2.2
44	DK	25	TYR	2.2
34	BA	1113	C	2.2
34	BA	1369	C	2.2
34	DA	1018	C	2.2
34	DA	1192	C	2.2
40	DG	153	HIS	2.2
42	BI	63	ILE	2.2
42	DI	6	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
53	BT	102	GLY	2.2
57	DZ	542	VAL	2.2
57	DZ	600	VAL	2.2
57	DZ	677	GLN	2.2
34	DA	1302	U	2.2
35	DB	57	PHE	2.2
40	DG	43	PHE	2.2
57	BZ	470	PHE	2.2
3	CC	165	ARG	2.2
3	CC	198	GLU	2.2
7	AG	153	ARG	2.2
10	CL	102	GLU	2.2
10	CL	132	ARG	2.2
23	CZ	80	ARG	2.2
35	DB	62	ALA	2.2
35	DB	157	ARG	2.2
36	DC	11	ARG	2.2
37	DD	179	GLU	2.2
40	BG	102	ARG	2.2
40	BG	129	GLU	2.2
40	DG	76	ARG	2.2
43	DJ	20	ALA	2.2
47	BN	31	ARG	2.2
47	BN	59	ALA	2.2
49	BP	25	ARG	2.2
52	DS	81	ARG	2.2
57	BZ	403	GLU	2.2
57	DZ	204	GLU	2.2
57	DZ	209	ALA	2.2
57	DZ	310	ALA	2.2
1	AA	90	A	2.2
1	AA	1222	A	2.2
1	CA	1460	A	2.2
2	CB	120	A	2.2
3	CC	51	ASP	2.2
7	AG	150	ASP	2.2
37	BD	194	LEU	2.2
44	DK	36	ASP	2.2
51	BR	85	LEU	2.2
40	DG	29	LYS	2.2
40	DG	35	LYS	2.2
45	DL	115	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
57	DZ	478	LYS	2.2
41	DH	72	PRO	2.2
43	BJ	41	PRO	2.2
57	DZ	436	PRO	2.2
3	CC	216	THR	2.2
1	AA	2184	G	2.2
1	CA	2631	G	2.2
3	AC	49	GLY	2.2
3	CC	189	ASN	2.2
6	CF	8	GLN	2.2
6	CF	150	GLY	2.2
7	AG	119	GLY	2.2
7	AG	140	ILE	2.2
7	CG	26	GLN	2.2
16	CS	35	ILE	2.2
34	BA	1010	G	2.2
34	BA	1138	G	2.2
34	BA	1491	G	2.2
34	DA	941	G	2.2
34	DA	1266	G	2.2
36	DC	134	ILE	2.2
36	DC	170	GLN	2.2
37	BD	103	ASN	2.2
37	DD	5	ILE	2.2
42	BI	65	VAL	2.2
43	BJ	96	ILE	2.2
37	DD	27	TYR	2.2
43	BJ	62	HIS	2.2
46	BM	92	HIS	2.2
46	DM	68	GLY	2.2
57	BZ	565	VAL	2.2
57	BZ	600	VAL	2.2
47	DN	49	HIS	2.2
57	DZ	557	GLY	2.2
2	AB	1	U	2.2
1	AA	1155	C	2.2
14	AQ	60	ARG	2.2
34	BA	100	C	2.2
34	BA	436	C	2.2
34	BA	1254	C	2.2
34	DA	422	C	2.2
34	DA	1054	C	2.2

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Mol	Chain	Res	Type	RSRZ
34	DA	1242	C	2.2
34	DA	1262	C	2.2
34	DA	1322	C	2.2
35	DB	114	ARG	2.2
36	BC	131	ARG	2.2
38	DE	24	ARG	2.2
42	BI	104	ARG	2.2
42	BI	121	ARG	2.2
49	DP	81	ARG	2.2
53	BT	25	ARG	2.2
3	AC	32	GLU	2.2
9	AK	62	ALA	2.2
9	CK	90	ALA	2.2
10	AL	88	ALA	2.2
10	AL	122	ALA	2.2
23	CZ	145	GLU	2.2
40	DG	152	ALA	2.2
42	DI	61	ALA	2.2
43	BJ	27	ALA	2.2
46	DM	35	GLU	2.2
47	DN	30	ALA	2.2
57	BZ	220	ALA	2.2
57	BZ	651	GLU	2.2
57	DZ	651	GLU	2.2
3	AC	219	MET	2.2
57	DZ	122	TRP	2.2
9	CK	10	LEU	2.2
9	CK	61	LEU	2.2
57	BZ	602	LEU	2.2
57	DZ	166	LEU	2.2
10	CL	16	LYS	2.2
57	DZ	248	LYS	2.2
57	DZ	252	ASP	2.2
57	DZ	410	ASP	2.2
1	AA	1134	A	2.2
1	AA	1878	A	2.2
1	CA	655	A	2.2
34	BA	1030(D)	A	2.2
34	DA	1324	A	2.2
36	BC	174	PRO	2.2
43	DJ	15	THR	2.2
47	BN	22	THR	2.2

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Mol	Chain	Res	Type	RSRZ
57	BZ	385	THR	2.2
57	BZ	611	THR	2.2
19	CV	54	GLY	2.2
23	CZ	56	VAL	2.2
36	DC	157	ILE	2.2
42	BI	77	ILE	2.2
43	DJ	23	ILE	2.2
43	DJ	98	ILE	2.2
36	DC	69	HIS	2.2
37	DD	167	GLY	2.2
40	BG	55	GLY	2.2
44	DK	17	GLY	2.2
53	DT	90	GLN	2.2
57	BZ	616	TYR	2.2
57	DZ	205	TYR	2.2
3	AC	191	ARG	2.2
8	CH	42	ARG	2.2
9	AK	24	PHE	2.2
23	CZ	136	PHE	2.2
43	DJ	66	ARG	2.2
1	AA	1003	U	2.2
1	CA	2191	G	2.2
1	CA	2300	G	2.2
7	CG	61	ALA	2.2
7	CG	164	GLU	2.2
10	CL	121	GLU	2.2
34	BA	77	G	2.2
34	BA	1030(C)	G	2.2
34	BA	1033	G	2.2
34	BA	1215	G	2.2
34	BA	1221	G	2.2
34	DA	1013	G	2.2
34	DA	1030(C)	G	2.2
34	DA	1184	G	2.2
34	DA	1193	G	2.2
46	DM	51	ALA	2.2
51	DR	24	ALA	2.2
57	DZ	412	ALA	2.2
36	DC	90	GLU	2.2
38	DE	81	GLU	2.2
41	DH	22	GLU	2.2
57	DZ	12	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
57	DZ	567	LEU	2.2
1	AA	1631	C	2.2
2	CB	88	C	2.2
34	BA	176	C	2.2
34	BA	1217	C	2.2
34	DA	1119	C	2.2
34	DA	1317	C	2.2
47	DN	58	LYS	2.2
49	BP	27	LYS	2.2
57	BZ	591	LYS	2.2
53	DT	70	SER	2.2
1	AA	2195	A	2.2
8	CH	35	VAL	2.2
8	CH	107	VAL	2.2
10	AL	104	VAL	2.2
34	BA	152	A	2.2
34	DA	1001	A	2.2
34	DA	1179	A	2.2
35	BB	67	THR	2.2
35	BB	127	ILE	2.2
35	BB	200	ILE	2.2
54	BU	8	THR	2.2
23	CZ	115	GLY	2.2
37	BD	130	GLY	2.2
37	BD	180	GLY	2.2
48	DO	89	GLY	2.2
53	BT	69	GLY	2.2
35	DB	16	HIS	2.2
49	BP	76	GLN	2.2
31	C7	47	ARG	2.2
36	DC	203	PHE	2.2
40	DG	18	TYR	2.2
57	BZ	231	TYR	2.2
57	BZ	672	PHE	2.2
57	BZ	98	MET	2.2
10	CL	43	ALA	2.2
36	BC	61	ALA	2.2
47	BN	10	ALA	2.2
53	DT	52	ALA	2.2
7	AG	182	LYS	2.2
7	CG	84	LYS	2.2
8	CH	27	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
37	DD	150	GLU	2.2
40	BG	16	LEU	2.2
46	BM	27	LYS	2.2
53	BT	13	LEU	2.2
34	BA	204	U	2.2
34	BA	1125	U	2.2
34	BA	1247	U	2.2
1	CA	1037	G	2.2
1	CA	1414	G	2.2
23	CZ	177	PRO	2.2
34	BA	216	G	2.2
34	BA	1106	G	2.2
34	DA	951	G	2.2
34	DA	1154	G	2.2
34	DA	1253	G	2.2
7	CG	126	ASP	2.2
34	BA	1335	C	2.2
57	DZ	658	ASP	2.2
57	DZ	97	SER	2.2
7	AG	160	VAL	2.2
36	BC	76	VAL	2.2
40	DG	105	VAL	2.2
57	DZ	642	VAL	2.2
10	CL	28	GLY	2.1
10	CL	97	GLY	2.1
36	DC	171	GLY	2.1
42	DI	39	GLY	2.1
44	BK	49	GLY	2.1
1	AA	1119	A	2.1
1	CA	1070	A	2.1
3	AC	161	ARG	2.1
3	AC	195	ARG	2.1
24	C0	44	ARG	2.1
34	BA	1041	A	2.1
34	BA	1044	A	2.1
34	BA	1251	A	2.1
34	BA	1288	A	2.1
34	DA	1289	A	2.1
35	BB	178	ARG	2.1
35	DB	135	GLN	2.1
35	DB	137	ARG	2.1
42	BI	18	PHE	2.1

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Mol	Chain	Res	Type	RSRZ
56	DX	76	A	2.1
57	BZ	506	GLN	2.1
57	DZ	182	ARG	2.1
57	DZ	628	ARG	2.1
57	DZ	684	GLN	2.1
9	CK	131	MET	2.1
57	DZ	676	TYR	2.1
3	CC	47	LYS	2.1
3	CC	206	LYS	2.1
8	CH	88	LEU	2.1
9	CK	68	LEU	2.1
10	AL	46	ALA	2.1
35	BB	37	ASN	2.1
11	CN	138	LEU	2.1
23	CZ	41	LEU	2.1
36	BC	101	LEU	2.1
52	DS	25	LYS	2.1
53	BT	74	LYS	2.1
53	DT	49	ALA	2.1
57	BZ	215	LYS	2.1
57	DZ	335	LEU	2.1
49	DP	54	GLU	2.1
1	CA	614(A)	U	2.1
1	CA	1082	U	2.1
55	BV	19	U	2.1
10	AL	72	PRO	2.1
35	DB	127	ILE	2.1
46	DM	84	ILE	2.1
19	CV	72	VAL	2.1
36	DC	153	VAL	2.1
44	BK	14	VAL	2.1
57	DZ	195	ASP	2.1
7	AG	42	GLY	2.1
25	C1	84	GLY	2.1
44	DK	107	SER	2.1
50	DQ	54	GLY	2.1
57	BZ	97	SER	2.1
1	AA	932	C	2.1
1	AA	2161	C	2.1
1	AA	2175	G	2.1
1	AA	2227	G	2.1
1	CA	1092	C	2.1

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Mol	Chain	Res	Type	RSRZ
7	AG	136	ARG	2.1
8	CH	6	ARG	2.1
11	CN	115	ARG	2.1
17	CT	17	THR	2.1
28	C4	27	THR	2.1
36	BC	177	THR	2.1
40	BG	24	THR	2.1
41	DH	3	THR	2.1
57	BZ	447	GLY	2.1
34	BA	435	C	2.1
34	BA	1023	G	2.1
34	BA	1026	G	2.1
34	BA	1193	G	2.1
34	BA	1216	G	2.1
34	DA	962	C	2.1
34	DA	993	G	2.1
34	DA	1145	C	2.1
34	DA	1206	G	2.1
34	DA	1255	G	2.1
34	DA	1276	G	2.1
56	BX	69	C	2.1
56	DX	70	G	2.1
57	DZ	13	ARG	2.1
10	CL	35	MET	2.1
16	CS	29	PHE	2.1
37	BD	160	GLN	2.1
37	BD	165	MET	2.1
40	DG	97	GLN	2.1
42	DI	37	PHE	2.1
49	BP	80	PHE	2.1
3	AC	178	LYS	2.1
7	CG	8	LYS	2.1
7	CG	69	ALA	2.1
9	AK	10	LEU	2.1
10	CL	60	TYR	2.1
11	CN	118	LYS	2.1
36	DC	32	LEU	2.1
36	DC	199	LYS	2.1
47	DN	47	LEU	2.1
50	DQ	87	LYS	2.1
42	DI	119	ALA	2.1
57	BZ	1	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
57	BZ	212	TYR	2.1
57	DZ	18	ALA	2.1
57	DZ	148	LEU	2.1
34	DA	968	A	2.1
34	DA	1152	A	2.1
57	DZ	231	TYR	2.1
7	CG	79	ASN	2.1
22	AY	92	ASN	2.1
9	CK	36	GLU	2.1
46	DM	61	GLU	2.1
53	BT	60	GLU	2.1
57	BZ	548	GLU	2.1
1	CA	999	U	2.1
1	CA	1101	U	2.1
5	CE	56	PRO	2.1
34	BA	90	U	2.1
34	DA	1049	U	2.1
36	DC	7	PRO	2.1
47	DN	14	PRO	2.1
40	DG	42	ILE	2.1
9	CK	81	VAL	2.1
41	DH	79	VAL	2.1
57	DZ	565	VAL	2.1
3	AC	16	ASP	2.1
3	CC	53	ARG	2.1
10	AL	134	MET	2.1
10	CL	83	GLY	2.1
16	CS	13	ARG	2.1
24	C0	6	GLY	2.1
38	BE	22	GLY	2.1
42	DI	72	GLY	2.1
44	DK	126	ARG	2.1
45	DL	103	GLY	2.1
47	DN	55	GLY	2.1
48	DO	88	ARG	2.1
50	DQ	92	ARG	2.1
57	BZ	430	ARG	2.1
9	CK	82	PHE	2.1
10	CL	41	PHE	2.1
36	BC	6	HIS	2.1
43	DJ	48	THR	2.1
57	BZ	488	THR	2.1

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Mol	Chain	Res	Type	RSRZ
7	CG	138	GLN	2.1
26	C2	43	GLN	2.1
57	DZ	513	LYS	2.1
57	DZ	583	LYS	2.1
10	CL	84	LEU	2.1
17	CT	114	LEU	2.1
37	DD	157	LEU	2.1
57	BZ	206	LEU	2.1
57	BZ	428	LEU	2.1
1	AA	935	C	2.1
1	CA	1038	C	2.1
1	CA	2142	C	2.1
1	CA	2313	C	2.1
34	BA	1325	C	2.1
34	DA	1019	C	2.1
34	DA	1153	C	2.1
34	DA	1243	C	2.1
36	BC	149	ALA	2.1
42	DI	122	ALA	2.1
51	BR	60	ALA	2.1
44	BK	25	TYR	2.1
45	DL	69	TYR	2.1
1	AA	1218	G	2.1
1	CA	11	G	2.1
34	DA	1088	G	2.1
34	DA	1216	G	2.1
34	DA	1271	G	2.1
34	DA	1355	G	2.1
56	DX	63	G	2.1
3	CC	32	GLU	2.1
8	AH	32	GLU	2.1
9	CK	16	ASN	2.1
10	AL	33	ASN	2.1
10	CL	42	ASN	2.1
57	DZ	171	GLU	2.1
1	CA	1111	A	2.1
1	CA	1445	A	2.1
1	CA	2311	A	2.1
34	DA	1332	A	2.1
23	AZ	159	PRO	2.1
8	CH	92	ILE	2.1
43	BJ	38	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
34	BA	1211	U	2.1
34	DA	84	U	2.1
36	DC	68	VAL	2.1
57	BZ	510	VAL	2.1
57	BZ	608	VAL	2.1
57	DZ	526	VAL	2.1
28	C4	61	ARG	2.1
35	BB	100	GLY	2.1
35	DB	38	GLY	2.1
36	DC	80	GLY	2.1
37	DD	139	ARG	2.1
37	DD	180	GLY	2.1
40	BG	5	ARG	2.1
43	BJ	66	ARG	2.1
46	BM	99	ARG	2.1
48	DO	77	ARG	2.1
52	DS	29	ARG	2.1
53	BT	83	ARG	2.1
57	BZ	11	ARG	2.1
57	DZ	477	GLY	2.1
57	DZ	553	GLY	2.1
57	DZ	652	MET	2.1
8	AH	175	LYS	2.1
22	CY	4	LYS	2.1
23	CZ	44	PHE	2.1
36	DC	10	PHE	2.1
10	CL	100	THR	2.1
23	CZ	140	ASP	2.1
36	DC	62	ASP	2.1
43	DJ	56	HIS	2.1
53	DT	54	LYS	2.1
57	BZ	544	LYS	2.1
10	CL	103	GLN	2.1
13	AP	99	LEU	2.1
36	DC	204	LEU	2.1
40	DG	11	GLN	2.1
42	DI	79	LEU	2.1
57	DZ	421	GLN	2.1
7	AG	46	ALA	2.1
10	CL	32	ALA	2.1
10	CL	131	ALA	2.1
35	DB	186	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
38	BE	95	ALA	2.1
47	BN	5	ALA	2.1
51	DR	20	ALA	2.1
7	CG	12	TYR	2.1
40	DG	85	TYR	2.1
42	DI	92	TYR	2.1
46	DM	59	TYR	2.1
2	CB	4	C	2.1
23	CZ	34	ASN	2.1
26	C2	65	ASN	2.1
34	BA	92	C	2.1
34	BA	1195	C	2.1
34	BA	1277	C	2.1
34	BA	1359	C	2.1
34	DA	1452	C	2.1
35	DB	143	GLU	2.1
37	BD	156	GLU	2.1
39	BF	69	GLU	2.1
43	BJ	64	GLU	2.1
52	BS	43	GLU	2.1
41	DH	15	ASN	2.1
44	BK	117	ASN	2.1
7	CG	142	PRO	2.1
40	DG	93	PRO	2.1
46	DM	41	PRO	2.1
45	DL	70	ILE	2.1
57	DZ	21	ILE	2.1
1	AA	928	G	2.1
1	AA	1120	G	2.1
1	AA	2169	G	2.1
1	AA	2208	G	2.1
1	CA	1039	G	2.1
1	CA	1112	G	2.1
1	CA	2154	G	2.1
2	CB	18	G	2.1
34	BA	383	A	2.1
34	BA	530	G	2.1
34	BA	1168	A	2.1
34	BA	1283	G	2.1
34	DA	181	G	2.1
34	DA	544	G	2.1
34	DA	973	G	2.1

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Mol	Chain	Res	Type	RSRZ
34	DA	1024	G	2.1
34	DA	1048	G	2.1
34	DA	1057	G	2.1
34	DA	1093	A	2.1
34	DA	1215	G	2.1
34	DA	1323	G	2.1
34	DA	1356	G	2.1
35	BB	24	TRP	2.1
23	CZ	86	VAL	2.1
37	DD	140	VAL	2.1
40	DG	9	VAL	2.1
42	BI	109	VAL	2.1
1	AA	2189	U	2.1
3	AC	28	ARG	2.1
3	CC	54	ARG	2.1
21	AX	68	ARG	2.1
21	CX	1	MET	2.1
36	BC	54	ARG	2.1
40	DG	73	MET	2.1
34	BA	1235	U	2.1
34	DA	982	U	2.1
34	DA	1000	U	2.1
34	DA	1091	U	2.1
34	DA	1235	U	2.1
46	BM	108	ARG	2.1
53	BT	17	ARG	2.1
36	DC	4	LYS	2.1
37	BD	87	GLY	2.1
37	DD	124	GLY	2.1
50	BQ	100	LYS	2.1
52	DS	26	GLY	2.1
57	DZ	495	GLY	2.1
57	DZ	662	LYS	2.1
36	DC	31	HIS	2.1
40	BG	62	PHE	2.1
40	DG	26	PHE	2.1
57	BZ	525	PHE	2.1
7	AG	26	GLN	2.0
7	CG	97	ASP	2.0
7	CG	162	THR	2.0
10	AL	18	THR	2.0
28	C4	52	THR	2.0

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Mol	Chain	Res	Type	RSRZ
35	DB	79	ASP	2.0
35	DB	168	THR	2.0
9	AK	54	ALA	2.0
10	AL	130	SER	2.0
10	CL	61	ALA	2.0
35	BB	62	ALA	2.0
38	DE	94	ALA	2.0
41	DH	113	SER	2.0
46	BM	2	ALA	2.0
46	BM	5	ALA	2.0
52	BS	38	SER	2.0
20	CW	30	GLU	2.0
26	A2	11	GLU	2.0
57	DZ	235	GLU	2.0
57	DZ	241	GLU	2.0
23	AZ	177	PRO	2.0
47	DN	42	ILE	2.0
49	BP	19	ILE	2.0
57	BZ	518	PRO	2.0
57	DZ	-59	PRO	2.0
57	DZ	116	PRO	2.0
57	DZ	450	ILE	2.0
57	DZ	625	ASN	2.0
1	CA	1178	C	2.0
3	AC	63	VAL	2.0
34	BA	91	C	2.0
34	BA	150	C	2.0
34	BA	457	C	2.0
34	BA	970	C	2.0
34	BA	1314	C	2.0
34	DA	175	C	2.0
34	DA	984	C	2.0
34	DA	1063	C	2.0
34	DA	1208	C	2.0
34	DA	1244	C	2.0
34	DA	1325	C	2.0
14	AQ	10	ARG	2.0
28	A4	35	VAL	2.0
37	DD	209	ARG	2.0
42	BI	83	ARG	2.0
54	DU	7	ARG	2.0
57	BZ	647	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
57	DZ	156	ARG	2.0
57	DZ	276	VAL	2.0
3	AC	31	LYS	2.0
10	CL	80	LYS	2.0
16	CS	93	LYS	2.0
23	CZ	127	LYS	2.0
46	DM	65	LYS	2.0
53	DT	14	LYS	2.0
53	DT	74	LYS	2.0
57	BZ	423	LYS	2.0
57	DZ	10	LYS	2.0
57	DZ	75	LYS	2.0
5	CE	71	GLY	2.0
34	BA	179	A	2.0
34	DA	1035	A	2.0
34	DA	1503	A	2.0
35	BB	72	GLY	2.0
36	DC	185	GLY	2.0
37	BD	167	GLY	2.0
47	DN	43	CYS	2.0
9	AK	26	LEU	2.0
34	DA	1062	U	2.0
34	DA	1148	U	2.0
43	DJ	85	LEU	2.0
47	BN	39	LEU	2.0
57	BZ	567	LEU	2.0
1	AA	2153	G	2.0
1	AA	2177	G	2.0
1	CA	271(M)	G	2.0
1	CA	883	G	2.0
34	BA	104	G	2.0
34	BA	168	G	2.0
34	BA	181	G	2.0
34	BA	348	G	2.0
34	BA	1036	G	2.0
34	BA	1131	G	2.0
34	BA	1356	G	2.0
34	DA	377	G	2.0
55	DV	18	G	2.0
56	BX	9	G	2.0
51	BR	63	GLN	2.0
57	BZ	664	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
57	DZ	449	THR	2.0
57	DZ	488	THR	2.0
9	CK	126	ALA	2.0
9	CK	132	ASP	2.0
10	AL	43	ALA	2.0
23	CZ	93	ASP	2.0
37	BD	144	ASP	2.0
44	DK	67	ASP	2.0
25	A1	2	SER	2.0
37	BD	152	SER	2.0
9	AK	8	GLU	2.0
9	CK	70	GLU	2.0
10	AL	106	GLU	2.0
23	CZ	84	GLU	2.0
28	C4	34	GLU	2.0
35	BB	185	ILE	2.0
35	BB	214	ILE	2.0
36	DC	5	ILE	2.0
38	DE	68	GLU	2.0
43	DJ	61	GLU	2.0
46	BM	8	GLU	2.0
46	DM	23	TYR	2.0
52	BS	52	TYR	2.0
57	BZ	604	PRO	2.0
57	BZ	614	GLU	2.0
57	DZ	451	ILE	2.0
35	DB	83	MET	2.0
3	AC	211	ARG	2.0
3	CC	224	ARG	2.0
37	BD	115	ARG	2.0
37	BD	122	ARG	2.0
40	DG	48	LYS	2.0
44	BK	126	ARG	2.0
46	BM	111	LYS	2.0
47	DN	33	VAL	2.0
50	DQ	52	LYS	2.0
52	BS	85	LYS	2.0
52	DS	18	LYS	2.0
57	BZ	513	LYS	2.0
57	DZ	219	VAL	2.0
57	DZ	608	VAL	2.0
7	AG	139	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
9	AK	48	GLY	2.0
22	CY	90	LEU	2.0
24	C0	59	LEU	2.0
43	DJ	11	PHE	2.0
51	DR	57	GLY	2.0
52	DS	74	PHE	2.0
53	DT	13	LEU	2.0
1	CA	897	C	2.0
34	DA	470	C	2.0
43	BJ	68	HIS	2.0
57	BZ	87	HIS	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
56	5MC	DX	32	21/22	0.83	0.14	86,86,86,86	0
56	PSU	DX	55	20/21	0.84	0.13	95,95,95,95	0
56	5MU	DX	54	21/22	0.88	0.13	108,108,108,108	0
56	4SU	DX	8	20/21	0.89	0.12	96,96,96,96	0
56	5MU	BX	54	21/22	0.90	0.13	85,85,85,85	0
56	PSU	BX	55	20/21	0.90	0.10	74,74,74,74	0
56	5MC	BX	32	21/22	0.93	0.13	65,65,65,65	0
56	4SU	BX	8	20/21	0.94	0.10	70,70,70,70	1

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	DA	1624	1/1	0.28	0.21	115,115,115,115	0
58	MG	DA	1753	1/1	0.33	0.24	83,83,83,83	0
58	MG	CA	3140	1/1	0.35	0.35	122,122,122,122	0
58	MG	DZ	701	1/1	0.35	0.19	112,112,112,112	0
58	MG	CA	3296	1/1	0.53	0.20	80,80,80,80	0
58	MG	CA	3002	1/1	0.54	0.37	112,112,112,112	0
58	MG	BA	3025	1/1	0.54	0.21	88,88,88,88	0
58	MG	CA	3494	1/1	0.55	0.27	88,88,88,88	0
58	MG	AA	3611	1/1	0.55	0.14	55,55,55,55	0
58	MG	CA	3553	1/1	0.56	0.17	88,88,88,88	0
58	MG	BA	3169	1/1	0.57	0.27	130,130,130,130	0
58	MG	BA	3106	1/1	0.57	0.20	93,93,93,93	0
58	MG	CB	3013	1/1	0.57	0.22	96,96,96,96	0
58	MG	DA	1752	1/1	0.58	0.19	79,79,79,79	0
58	MG	BA	3052	1/1	0.59	0.29	102,102,102,102	0
58	MG	CA	3238	1/1	0.59	0.19	85,85,85,85	0
58	MG	AA	3026	1/1	0.60	0.16	83,83,83,83	0
58	MG	BA	3035	1/1	0.60	0.39	99,99,99,99	0
58	MG	CA	3509	1/1	0.60	0.14	96,96,96,96	0
58	MG	CA	3209	1/1	0.61	0.20	82,82,82,82	0
58	MG	BA	3203	1/1	0.62	0.20	83,83,83,83	0
58	MG	AA	3614	1/1	0.63	0.17	103,103,103,103	0
58	MG	AA	3784	1/1	0.64	0.32	73,73,73,73	0
58	MG	DA	1734	1/1	0.65	0.13	78,78,78,78	0
58	MG	CA	3072	1/1	0.65	0.38	93,93,93,93	0
58	MG	CA	3149	1/1	0.65	0.23	63,63,63,63	0
58	MG	DA	1729	1/1	0.65	0.36	79,79,79,79	0
58	MG	DA	1690	1/1	0.66	0.15	85,85,85,85	0
58	MG	DK	5001	1/1	0.66	0.15	101,101,101,101	0
58	MG	BA	3173	1/1	0.66	0.34	113,113,113,113	0
58	MG	BA	3155	1/1	0.67	0.10	96,96,96,96	0
58	MG	DE	202	1/1	0.67	0.17	93,93,93,93	0
58	MG	BA	3017	1/1	0.67	0.16	133,133,133,133	0
58	MG	CA	3576	1/1	0.67	0.12	71,71,71,71	0
58	MG	BA	3033	1/1	0.68	0.22	52,52,52,52	0
58	MG	CA	3592	1/1	0.68	0.14	93,93,93,93	0
58	MG	CA	3046	1/1	0.69	0.32	113,113,113,113	0
58	MG	DA	1714	1/1	0.69	0.12	78,78,78,78	0
58	MG	CA	3008	1/1	0.69	0.41	98,98,98,98	0
58	MG	AA	3274	1/1	0.70	0.23	88,88,88,88	0
58	MG	BL	3001	1/1	0.70	0.33	80,80,80,80	0
58	MG	CA	3081	1/1	0.70	0.33	85,85,85,85	0
58	MG	BA	3140	1/1	0.71	0.15	91,91,91,91	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3103	1/1	0.71	0.26	85,85,85,85	0
58	MG	CA	3114	1/1	0.71	0.27	94,94,94,94	0
58	MG	BA	3081	1/1	0.71	0.37	82,82,82,82	0
58	MG	CA	3305	1/1	0.72	0.14	90,90,90,90	0
58	MG	CA	3482	1/1	0.72	0.11	89,89,89,89	0
58	MG	BA	3160	1/1	0.72	0.15	61,61,61,61	0
58	MG	BX	107	1/1	0.72	0.11	67,67,67,67	0
58	MG	BA	3110	1/1	0.72	0.28	103,103,103,103	0
58	MG	CA	3141	1/1	0.72	0.25	97,97,97,97	0
58	MG	CA	3619	1/1	0.73	0.17	79,79,79,79	0
58	MG	BA	3048	1/1	0.73	0.11	75,75,75,75	0
58	MG	CA	3057	1/1	0.73	0.15	84,84,84,84	0
58	MG	DZ	702	1/1	0.73	0.17	61,61,61,61	0
58	MG	CA	3541	1/1	0.74	0.25	71,71,71,71	0
58	MG	DA	1659	1/1	0.74	0.16	87,87,87,87	0
58	MG	AA	3017	1/1	0.74	0.23	78,78,78,78	0
58	MG	AA	3745	1/1	0.74	0.18	84,84,84,84	0
58	MG	CA	3297	1/1	0.75	0.20	83,83,83,83	0
58	MG	DA	1602	1/1	0.75	0.30	95,95,95,95	0
58	MG	AZ	301	1/1	0.75	0.20	98,98,98,98	0
58	MG	DA	1635	1/1	0.75	0.15	89,89,89,89	0
58	MG	DA	1764	1/1	0.75	0.20	72,72,72,72	0
58	MG	CA	3510	1/1	0.75	0.15	93,93,93,93	0
58	MG	DA	1675	1/1	0.75	0.10	77,77,77,77	0
58	MG	AA	3778	1/1	0.75	0.14	55,55,55,55	0
58	MG	CA	3628	1/1	0.75	0.22	76,76,76,76	0
58	MG	DA	1615	1/1	0.76	0.29	85,85,85,85	0
58	MG	CA	3555	1/1	0.76	0.14	80,80,80,80	0
58	MG	CA	3067	1/1	0.76	0.31	83,83,83,83	0
58	MG	BA	3179	1/1	0.76	0.18	78,78,78,78	0
58	MG	AA	3690	1/1	0.76	0.16	69,69,69,69	0
58	MG	CA	3031	1/1	0.76	0.17	74,74,74,74	0
58	MG	AA	3711	1/1	0.76	0.23	74,74,74,74	0
58	MG	BA	3069	1/1	0.76	0.21	82,82,82,82	0
58	MG	AA	3752	1/1	0.77	0.16	64,64,64,64	1
58	MG	DA	1704	1/1	0.77	0.28	128,128,128,128	0
58	MG	CA	3074	1/1	0.77	0.23	91,91,91,91	0
58	MG	CB	3001	1/1	0.77	0.20	96,96,96,96	0
58	MG	CB	3006	1/1	0.77	0.13	82,82,82,82	0
58	MG	AA	3729	1/1	0.77	0.16	58,58,58,58	0
58	MG	CA	3292	1/1	0.77	0.29	75,75,75,75	0
58	MG	CA	3106	1/1	0.77	0.11	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3088	1/1	0.77	0.23	68,68,68,68	0
58	MG	DJ	5001	1/1	0.77	0.15	105,105,105,105	0
58	MG	BA	3112	1/1	0.77	0.29	70,70,70,70	0
58	MG	CA	3587	1/1	0.77	0.19	81,81,81,81	0
58	MG	BA	3119	1/1	0.77	0.16	79,79,79,79	0
58	MG	CA	3648	1/1	0.78	0.15	77,77,77,77	0
58	MG	BX	108	1/1	0.78	0.14	78,78,78,78	0
58	MG	CA	3275	1/1	0.78	0.17	67,67,67,67	0
58	MG	CA	3545	1/1	0.78	0.24	61,61,61,61	0
58	MG	AA	3633	1/1	0.78	0.23	75,75,75,75	0
58	MG	CA	3124	1/1	0.78	0.28	87,87,87,87	0
58	MG	CA	3071	1/1	0.78	0.41	84,84,84,84	0
58	MG	BA	3117	1/1	0.78	0.12	65,65,65,65	0
58	MG	BA	3071	1/1	0.78	0.31	93,93,93,93	0
58	MG	CA	3153	1/1	0.78	0.19	55,55,55,55	0
58	MG	BA	3095	1/1	0.78	0.15	99,99,99,99	0
58	MG	DA	1699	1/1	0.78	0.22	123,123,123,123	0
58	MG	CA	3596	1/1	0.79	0.17	77,77,77,77	0
58	MG	BA	3007	1/1	0.79	0.22	75,75,75,75	0
58	MG	CA	3623	1/1	0.79	0.17	69,69,69,69	0
58	MG	AA	3122	1/1	0.79	0.28	67,67,67,67	0
58	MG	CA	3645	1/1	0.79	0.39	79,79,79,79	0
58	MG	CA	3647	1/1	0.79	0.28	82,82,82,82	0
58	MG	CA	3527	1/1	0.79	0.16	81,81,81,81	0
58	MG	CA	3535	1/1	0.79	0.17	79,79,79,79	0
58	MG	BA	3092	1/1	0.79	0.24	86,86,86,86	0
58	MG	AA	3270	1/1	0.79	0.21	80,80,80,80	0
58	MG	BA	3196	1/1	0.79	0.18	84,84,84,84	0
58	MG	BA	3158	1/1	0.79	0.20	63,63,63,63	0
58	MG	CA	3351	1/1	0.79	0.12	83,83,83,83	0
58	MG	CA	3034	1/1	0.79	0.23	100,100,100,100	0
58	MG	CA	3094	1/1	0.79	0.46	83,83,83,83	0
58	MG	DA	1685	1/1	0.80	0.13	52,52,52,52	0
58	MG	DA	1686	1/1	0.80	0.16	101,101,101,101	0
58	MG	CA	3049	1/1	0.80	0.12	78,78,78,78	0
58	MG	AA	3109	1/1	0.80	0.52	124,124,124,124	0
58	MG	BA	3055	1/1	0.80	0.13	54,54,54,54	0
58	MG	CA	3650	1/1	0.80	0.12	67,67,67,67	0
58	MG	BA	3030	1/1	0.80	0.18	62,62,62,62	0
58	MG	A4	502	1/1	0.80	0.14	120,120,120,120	0
58	MG	DA	1742	1/1	0.80	0.14	77,77,77,77	0
58	MG	DA	1749	1/1	0.80	0.20	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3201	1/1	0.80	0.20	91,91,91,91	0
58	MG	CA	3174	1/1	0.80	0.23	65,65,65,65	0
58	MG	AB	3017	1/1	0.80	0.16	76,76,76,76	0
58	MG	CA	3616	1/1	0.80	0.22	71,71,71,71	0
58	MG	CA	3043	1/1	0.80	0.34	101,101,101,101	0
58	MG	CA	3241	1/1	0.80	0.23	74,74,74,74	0
58	MG	DA	1670	1/1	0.80	0.19	81,81,81,81	0
58	MG	BL	3003	1/1	0.80	0.13	79,79,79,79	0
58	MG	DA	1707	1/1	0.81	0.20	69,69,69,69	0
58	MG	AA	3354	1/1	0.81	0.18	58,58,58,58	0
58	MG	BA	3182	1/1	0.81	0.13	80,80,80,80	0
58	MG	BA	3059	1/1	0.81	0.29	76,76,76,76	0
58	MG	DA	1641	1/1	0.81	0.11	79,79,79,79	0
58	MG	AA	3641	1/1	0.81	0.40	76,76,76,76	0
58	MG	CA	3225	1/1	0.81	0.29	79,79,79,79	0
58	MG	CA	3455	1/1	0.81	0.13	78,78,78,78	0
58	MG	CA	3461	1/1	0.81	0.25	107,107,107,107	0
58	MG	AA	3246	1/1	0.81	0.33	98,98,98,98	0
58	MG	CA	3239	1/1	0.81	0.20	74,74,74,74	0
58	MG	DA	1695	1/1	0.81	0.17	88,88,88,88	0
58	MG	AA	3248	1/1	0.81	0.33	72,72,72,72	0
58	MG	BN	503	1/1	0.81	0.24	66,66,66,66	0
58	MG	A8	5001	1/1	0.82	0.20	57,57,57,57	0
58	MG	CA	3059	1/1	0.82	0.26	76,76,76,76	0
58	MG	BA	3177	1/1	0.82	0.14	73,73,73,73	0
58	MG	CA	3663	1/1	0.82	0.17	73,73,73,73	0
58	MG	AA	3095	1/1	0.82	0.50	110,110,110,110	0
58	MG	AA	3679	1/1	0.82	0.13	64,64,64,64	0
58	MG	DA	1709	1/1	0.82	0.10	44,44,44,44	0
58	MG	CA	3154	1/1	0.82	0.18	77,77,77,77	0
58	MG	CA	3583	1/1	0.82	0.15	78,78,78,78	0
58	MG	CA	3173	1/1	0.82	0.27	81,81,81,81	0
58	MG	BA	3054	1/1	0.82	0.16	77,77,77,77	0
58	MG	DA	1744	1/1	0.82	0.27	90,90,90,90	0
58	MG	AN	3001	1/1	0.82	0.28	83,83,83,83	0
58	MG	CA	3490	1/1	0.82	0.31	78,78,78,78	0
58	MG	DA	1656	1/1	0.82	0.20	91,91,91,91	0
58	MG	AA	3364	1/1	0.82	0.24	79,79,79,79	0
58	MG	CA	3100	1/1	0.82	0.12	90,90,90,90	0
58	MG	DA	1672	1/1	0.82	0.25	100,100,100,100	0
58	MG	DA	1673	1/1	0.82	0.15	61,61,61,61	0
58	MG	BA	3060	1/1	0.82	0.24	82,82,82,82	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3442	1/1	0.82	0.21	64,64,64,64	0
58	MG	CA	3379	1/1	0.83	0.18	86,86,86,86	0
58	MG	CA	3610	1/1	0.83	0.24	98,98,98,98	0
58	MG	CA	3437	1/1	0.83	0.15	74,74,74,74	0
58	MG	AA	3649	1/1	0.83	0.17	90,90,90,90	0
58	MG	BA	3107	1/1	0.83	0.14	59,59,59,59	0
58	MG	CA	3624	1/1	0.83	0.17	72,72,72,72	0
58	MG	CA	3627	1/1	0.83	0.24	101,101,101,101	0
58	MG	CA	3181	1/1	0.83	0.32	108,108,108,108	0
58	MG	CA	3638	1/1	0.83	0.18	78,78,78,78	0
58	MG	CA	3200	1/1	0.83	0.22	72,72,72,72	0
58	MG	CA	3086	1/1	0.83	0.16	63,63,63,63	0
58	MG	AA	3658	1/1	0.83	0.15	60,60,60,60	0
58	MG	AA	3616	1/1	0.83	0.13	37,37,37,37	1
58	MG	BA	3188	1/1	0.83	0.12	86,86,86,86	0
58	MG	AA	3689	1/1	0.83	0.13	55,55,55,55	0
58	MG	BA	3002	1/1	0.83	0.12	91,91,91,91	0
58	MG	CB	3012	1/1	0.83	0.26	74,74,74,74	0
58	MG	BA	3090	1/1	0.83	0.18	90,90,90,90	0
58	MG	AA	3196	1/1	0.83	0.16	50,50,50,50	0
58	MG	DA	1603	1/1	0.83	0.12	81,81,81,81	0
58	MG	BA	3093	1/1	0.83	0.17	65,65,65,65	0
58	MG	DA	1761	1/1	0.83	0.13	75,75,75,75	0
58	MG	DA	1620	1/1	0.83	0.12	69,69,69,69	0
58	MG	AA	3806	1/1	0.83	0.14	60,60,60,60	0
58	MG	DA	1634	1/1	0.83	0.19	71,71,71,71	0
58	MG	CA	3315	1/1	0.83	0.27	76,76,76,76	0
58	MG	AA	3461	1/1	0.83	0.14	64,64,64,64	0
58	MG	CA	3377	1/1	0.83	0.11	64,64,64,64	0
58	MG	CA	3242	1/1	0.84	0.12	63,63,63,63	0
58	MG	CA	3255	1/1	0.84	0.18	95,95,95,95	0
58	MG	CA	3098	1/1	0.84	0.14	79,79,79,79	0
58	MG	AB	3014	1/1	0.84	0.14	67,67,67,67	0
58	MG	BA	3104	1/1	0.84	0.17	76,76,76,76	0
58	MG	BA	3010	1/1	0.84	0.15	68,68,68,68	0
58	MG	AA	3192	1/1	0.84	0.15	41,41,41,41	0
58	MG	CA	3611	1/1	0.84	0.17	58,58,58,58	0
58	MG	CA	3129	1/1	0.84	0.16	69,69,69,69	0
58	MG	CA	3341	1/1	0.84	0.11	48,48,48,48	0
58	MG	BA	3109	1/1	0.84	0.14	79,79,79,79	0
58	MG	AD	308	1/1	0.84	0.14	70,70,70,70	0
58	MG	CA	3143	1/1	0.84	0.15	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3429	1/1	0.84	0.21	62,62,62,62	1
58	MG	BA	3195	1/1	0.84	0.17	73,73,73,73	0
58	MG	AA	3766	1/1	0.84	0.11	70,70,70,70	0
58	MG	CA	3063	1/1	0.84	0.23	66,66,66,66	0
58	MG	AA	3775	1/1	0.84	0.14	45,45,45,45	0
58	MG	CA	3068	1/1	0.84	0.21	72,72,72,72	0
58	MG	DA	1732	1/1	0.84	0.11	80,80,80,80	0
58	MG	AA	3727	1/1	0.84	0.15	66,66,66,66	0
58	MG	CA	3195	1/1	0.84	0.21	69,69,69,69	0
58	MG	BA	3045	1/1	0.84	0.22	75,75,75,75	0
58	MG	CB	3008	1/1	0.84	0.10	58,58,58,58	0
58	MG	AA	3476	1/1	0.84	0.17	68,68,68,68	0
58	MG	AA	3106	1/1	0.84	0.14	80,80,80,80	0
58	MG	CF	301	1/1	0.84	0.18	62,62,62,62	0
58	MG	CA	3539	1/1	0.84	0.22	77,77,77,77	0
58	MG	BA	3006	1/1	0.84	0.14	71,71,71,71	0
58	MG	CA	3090	1/1	0.84	0.18	79,79,79,79	0
58	MG	CA	3548	1/1	0.84	0.12	116,116,116,116	0
58	MG	BA	3163	1/1	0.84	0.12	52,52,52,52	0
58	MG	DA	1629	1/1	0.84	0.16	73,73,73,73	0
58	MG	AA	3491	1/1	0.85	0.13	33,33,33,33	0
58	MG	CA	3166	1/1	0.85	0.21	61,61,61,61	0
58	MG	BA	3082	1/1	0.85	0.17	69,69,69,69	0
58	MG	AB	3001	1/1	0.85	0.32	85,85,85,85	0
58	MG	BA	3089	1/1	0.85	0.27	89,89,89,89	0
58	MG	CA	3190	1/1	0.85	0.20	68,68,68,68	0
58	MG	AB	3004	1/1	0.85	0.26	87,87,87,87	0
58	MG	DA	1628	1/1	0.85	0.07	69,69,69,69	0
58	MG	AA	3310	1/1	0.85	0.11	57,57,57,57	0
58	MG	AA	3344	1/1	0.85	0.17	85,85,85,85	0
58	MG	CA	3543	1/1	0.85	0.11	70,70,70,70	0
58	MG	CA	3210	1/1	0.85	0.31	93,93,93,93	0
58	MG	DA	1648	1/1	0.85	0.23	90,90,90,90	0
58	MG	CA	3546	1/1	0.85	0.08	79,79,79,79	0
58	MG	DA	1657	1/1	0.85	0.17	72,72,72,72	0
58	MG	CA	3216	1/1	0.85	0.17	74,74,74,74	0
58	MG	DA	1668	1/1	0.85	0.16	82,82,82,82	0
58	MG	BA	3187	1/1	0.85	0.11	59,59,59,59	0
58	MG	CA	3229	1/1	0.85	0.26	61,61,61,61	0
58	MG	AB	3023	1/1	0.85	0.29	74,74,74,74	0
58	MG	CA	3577	1/1	0.85	0.14	43,43,43,43	1
58	MG	DA	1676	1/1	0.85	0.12	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3027	1/1	0.85	0.31	77,77,77,77	0
58	MG	AA	3099	1/1	0.85	0.10	57,57,57,57	0
58	MG	BA	3199	1/1	0.85	0.12	68,68,68,68	0
58	MG	CA	3245	1/1	0.85	0.23	77,77,77,77	0
58	MG	CA	3082	1/1	0.85	0.17	66,66,66,66	0
58	MG	CA	3274	1/1	0.85	0.21	73,73,73,73	0
58	MG	DA	1705	1/1	0.85	0.22	86,86,86,86	0
58	MG	AA	3441	1/1	0.85	0.16	46,46,46,46	0
58	MG	CA	3617	1/1	0.85	0.20	52,52,52,52	0
58	MG	AA	3264	1/1	0.85	0.19	77,77,77,77	0
58	MG	A7	103	1/1	0.85	0.26	48,48,48,48	0
58	MG	BA	3056	1/1	0.85	0.23	67,67,67,67	0
58	MG	DA	1733	1/1	0.85	0.26	81,81,81,81	0
58	MG	BV	101	1/1	0.85	0.22	110,110,110,110	0
58	MG	BX	101	1/1	0.85	0.09	78,78,78,78	0
58	MG	BA	3057	1/1	0.85	0.17	89,89,89,89	0
58	MG	CA	3644	1/1	0.85	0.14	66,66,66,66	0
58	MG	AA	3237	1/1	0.85	0.19	63,63,63,63	0
58	MG	AA	3664	1/1	0.85	0.13	55,55,55,55	0
58	MG	CA	3004	1/1	0.85	0.29	64,64,64,64	0
58	MG	CA	3413	1/1	0.85	0.20	79,79,79,79	0
58	MG	BA	3062	1/1	0.85	0.51	81,81,81,81	0
58	MG	AA	3239	1/1	0.85	0.15	69,69,69,69	0
58	MG	AA	3680	1/1	0.85	0.16	58,58,58,58	0
58	MG	DL	3001	1/1	0.85	0.12	57,57,57,57	0
58	MG	CA	3042	1/1	0.85	0.42	96,96,96,96	0
58	MG	CA	3475	1/1	0.85	0.26	75,75,75,75	0
58	MG	CA	3189	1/1	0.86	0.23	58,58,58,58	0
58	MG	AA	3001	1/1	0.86	0.10	36,36,36,36	0
58	MG	CA	3579	1/1	0.86	0.12	83,83,83,83	0
58	MG	DA	1642	1/1	0.86	0.15	76,76,76,76	0
58	MG	AA	3674	1/1	0.86	0.18	74,74,74,74	0
58	MG	AA	3756	1/1	0.86	0.14	61,61,61,61	0
58	MG	CA	3588	1/1	0.86	0.13	68,68,68,68	0
58	MG	CA	3389	1/1	0.86	0.19	81,81,81,81	0
58	MG	CA	3390	1/1	0.86	0.16	74,74,74,74	0
58	MG	CA	3412	1/1	0.86	0.12	58,58,58,58	0
58	MG	CA	3099	1/1	0.86	0.27	82,82,82,82	0
58	MG	AA	3762	1/1	0.86	0.11	58,58,58,58	0
58	MG	AA	3423	1/1	0.86	0.14	65,65,65,65	0
58	MG	BA	3039	1/1	0.86	0.30	78,78,78,78	0
58	MG	CA	3116	1/1	0.86	0.18	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3468	1/1	0.86	0.29	80,80,80,80	0
58	MG	CA	3119	1/1	0.86	0.08	55,55,55,55	0
58	MG	CA	3481	1/1	0.86	0.17	55,55,55,55	0
58	MG	AA	3345	1/1	0.86	0.10	67,67,67,67	0
58	MG	AA	3538	1/1	0.86	0.13	91,91,91,91	0
58	MG	BA	3154	1/1	0.86	0.12	94,94,94,94	0
58	MG	CA	3498	1/1	0.86	0.19	71,71,71,71	0
58	MG	CA	3500	1/1	0.86	0.12	82,82,82,82	0
58	MG	AA	3539	1/1	0.86	0.23	63,63,63,63	0
58	MG	DA	1718	1/1	0.86	0.19	72,72,72,72	0
58	MG	DA	1720	1/1	0.86	0.14	64,64,64,64	0
58	MG	DA	1723	1/1	0.86	0.08	68,68,68,68	0
58	MG	DA	1728	1/1	0.86	0.17	85,85,85,85	0
58	MG	AA	3794	1/1	0.86	0.27	68,68,68,68	0
58	MG	AA	3651	1/1	0.86	0.13	49,49,49,49	0
58	MG	AA	3652	1/1	0.86	0.13	74,74,74,74	0
58	MG	CA	3537	1/1	0.86	0.22	67,67,67,67	0
58	MG	DA	1740	1/1	0.86	0.13	79,79,79,79	0
58	MG	CA	3285	1/1	0.86	0.22	59,59,59,59	0
58	MG	BA	3096	1/1	0.86	0.12	64,64,64,64	0
58	MG	CE	307	1/1	0.86	0.10	65,65,65,65	0
58	MG	DA	1751	1/1	0.86	0.15	69,69,69,69	0
58	MG	CA	3078	1/1	0.86	0.14	66,66,66,66	0
58	MG	CQ	204	1/1	0.86	0.17	79,79,79,79	0
58	MG	DA	1754	1/1	0.86	0.10	66,66,66,66	0
58	MG	BA	3101	1/1	0.86	0.22	60,60,60,60	0
58	MG	AB	3002	1/1	0.86	0.16	58,58,58,58	0
58	MG	DA	1607	1/1	0.86	0.35	82,82,82,82	0
58	MG	CA	3308	1/1	0.86	0.13	50,50,50,50	0
58	MG	AA	3100	1/1	0.86	0.13	60,60,60,60	0
58	MG	CA	3337	1/1	0.86	0.19	68,68,68,68	0
58	MG	CA	3557	1/1	0.86	0.24	82,82,82,82	0
58	MG	CA	3563	1/1	0.86	0.17	92,92,92,92	0
58	MG	AA	3437	1/1	0.87	0.10	55,55,55,55	0
58	MG	CA	3156	1/1	0.87	0.10	84,84,84,84	0
58	MG	AA	3579	1/1	0.87	0.16	53,53,53,53	0
58	MG	CA	3397	1/1	0.87	0.10	59,59,59,59	0
58	MG	CA	3407	1/1	0.87	0.10	70,70,70,70	0
58	MG	CA	3169	1/1	0.87	0.21	55,55,55,55	0
58	MG	BA	3176	1/1	0.87	0.11	61,61,61,61	0
58	MG	AA	3592	1/1	0.87	0.11	63,63,63,63	0
58	MG	DA	1683	1/1	0.87	0.28	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3774	1/1	0.87	0.22	78,78,78,78	0
58	MG	AA	3601	1/1	0.87	0.10	59,59,59,59	0
58	MG	DA	1688	1/1	0.87	0.12	57,57,57,57	0
58	MG	AA	3608	1/1	0.87	0.08	29,29,29,29	0
58	MG	CA	3466	1/1	0.87	0.15	65,65,65,65	0
58	MG	BA	3013	1/1	0.87	0.14	75,75,75,75	0
58	MG	BA	3191	1/1	0.87	0.12	74,74,74,74	0
58	MG	CA	3077	1/1	0.87	0.12	81,81,81,81	0
58	MG	BA	3014	1/1	0.87	0.12	97,97,97,97	0
58	MG	AA	3193	1/1	0.87	0.28	72,72,72,72	0
58	MG	AA	3349	1/1	0.87	0.23	39,39,39,39	0
58	MG	AA	3803	1/1	0.87	0.12	62,62,62,62	0
58	MG	DA	1719	1/1	0.87	0.16	66,66,66,66	0
58	MG	AA	3683	1/1	0.87	0.23	65,65,65,65	0
58	MG	AA	3807	1/1	0.87	0.14	65,65,65,65	0
58	MG	AA	3113	1/1	0.87	0.30	97,97,97,97	0
58	MG	CA	3515	1/1	0.87	0.16	73,73,73,73	0
58	MG	AA	3621	1/1	0.87	0.18	39,39,39,39	0
58	MG	BA	3047	1/1	0.87	0.26	71,71,71,71	0
58	MG	AA	3695	1/1	0.87	0.11	44,44,44,44	0
58	MG	AA	3709	1/1	0.87	0.15	53,53,53,53	0
58	MG	AA	3360	1/1	0.87	0.20	111,111,111,111	0
58	MG	CA	3279	1/1	0.87	0.12	89,89,89,89	0
58	MG	CA	3118	1/1	0.87	0.20	67,67,67,67	0
58	MG	AA	3635	1/1	0.87	0.16	60,60,60,60	0
58	MG	AA	3640	1/1	0.87	0.12	74,74,74,74	0
58	MG	AF	304	1/1	0.87	0.09	41,41,41,41	0
58	MG	AA	3740	1/1	0.87	0.22	92,92,92,92	0
58	MG	DA	1760	1/1	0.87	0.08	71,71,71,71	0
58	MG	AA	3148	1/1	0.87	0.16	68,68,68,68	0
58	MG	AZ	302	1/1	0.87	0.19	66,66,66,66	0
58	MG	CA	3324	1/1	0.87	0.12	66,66,66,66	0
58	MG	DA	1640	1/1	0.87	0.22	74,74,74,74	0
58	MG	CA	3146	1/1	0.87	0.22	80,80,80,80	0
58	MG	CA	3045	1/1	0.87	0.27	65,65,65,65	0
58	MG	CA	3151	1/1	0.87	0.14	54,54,54,54	0
58	MG	AA	3119	1/1	0.87	0.16	62,62,62,62	0
58	MG	CA	3066	1/1	0.88	0.11	50,50,50,50	0
58	MG	CA	3387	1/1	0.88	0.17	62,62,62,62	0
58	MG	AA	3057	1/1	0.88	0.11	56,56,56,56	0
58	MG	AA	3758	1/1	0.88	0.26	81,81,81,81	0
58	MG	AA	3672	1/1	0.88	0.23	32,32,32,32	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	DA	1665	1/1	0.88	0.11	64,64,64,64	0
58	MG	CA	3400	1/1	0.88	0.12	73,73,73,73	0
58	MG	AA	3200	1/1	0.88	0.11	52,52,52,52	0
58	MG	DA	1671	1/1	0.88	0.30	72,72,72,72	0
58	MG	CA	3608	1/1	0.88	0.17	70,70,70,70	0
58	MG	BA	3051	1/1	0.88	0.20	71,71,71,71	0
58	MG	AA	3675	1/1	0.88	0.12	40,40,40,40	0
58	MG	AA	3336	1/1	0.88	0.11	53,53,53,53	0
58	MG	DA	1677	1/1	0.88	0.22	80,80,80,80	0
58	MG	BA	3200	1/1	0.88	0.11	63,63,63,63	0
58	MG	DA	1684	1/1	0.88	0.20	63,63,63,63	0
58	MG	CA	3448	1/1	0.88	0.16	78,78,78,78	0
58	MG	AA	3562	1/1	0.88	0.12	57,57,57,57	0
58	MG	AA	3622	1/1	0.88	0.19	46,46,46,46	0
58	MG	CA	3088	1/1	0.88	0.15	65,65,65,65	0
58	MG	DA	1691	1/1	0.88	0.17	74,74,74,74	0
58	MG	AA	3627	1/1	0.88	0.23	72,72,72,72	0
58	MG	AA	3266	1/1	0.88	0.22	74,74,74,74	0
58	MG	BA	3115	1/1	0.88	0.22	86,86,86,86	0
58	MG	AA	3634	1/1	0.88	0.11	57,57,57,57	1
58	MG	DA	1706	1/1	0.88	0.13	85,85,85,85	0
58	MG	CA	3486	1/1	0.88	0.26	81,81,81,81	0
58	MG	CA	3487	1/1	0.88	0.19	68,68,68,68	0
58	MG	BX	103	1/1	0.88	0.26	87,87,87,87	0
58	MG	AA	3580	1/1	0.88	0.14	39,39,39,39	0
58	MG	CA	3495	1/1	0.88	0.22	62,62,62,62	0
58	MG	CA	3108	1/1	0.88	0.27	106,106,106,106	0
58	MG	CB	3007	1/1	0.88	0.27	64,64,64,64	0
58	MG	DA	1724	1/1	0.88	0.10	77,77,77,77	0
58	MG	AA	3813	1/1	0.88	0.12	57,57,57,57	0
58	MG	BA	3070	1/1	0.88	0.13	72,72,72,72	0
58	MG	AA	3590	1/1	0.88	0.22	23,23,23,23	1
58	MG	BA	3073	1/1	0.88	0.27	74,74,74,74	0
58	MG	BA	3074	1/1	0.88	0.10	66,66,66,66	0
58	MG	DA	1737	1/1	0.88	0.26	78,78,78,78	0
58	MG	DA	1739	1/1	0.88	0.15	76,76,76,76	0
58	MG	CG	3001	1/1	0.88	0.22	81,81,81,81	0
58	MG	CN	5001	1/1	0.88	0.12	76,76,76,76	0
58	MG	CO	201	1/1	0.88	0.11	61,61,61,61	0
58	MG	BA	3161	1/1	0.88	0.17	87,87,87,87	0
58	MG	CA	3138	1/1	0.88	0.28	70,70,70,70	0
58	MG	BA	3016	1/1	0.88	0.10	73,73,73,73	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3166	1/1	0.88	0.07	58,58,58,58	0
58	MG	AA	3172	1/1	0.88	0.41	32,32,32,32	0
58	MG	BA	3170	1/1	0.88	0.09	71,71,71,71	0
58	MG	DA	1621	1/1	0.88	0.07	58,58,58,58	0
58	MG	AA	3593	1/1	0.88	0.14	51,51,51,51	0
58	MG	DA	1765	1/1	0.88	0.10	64,64,64,64	0
58	MG	AA	3598	1/1	0.88	0.10	61,61,61,61	0
58	MG	AA	3478	1/1	0.88	0.11	40,40,40,40	0
58	MG	CA	3060	1/1	0.88	0.17	60,60,60,60	0
58	MG	CA	3374	1/1	0.88	0.17	56,56,56,56	0
58	MG	CA	3375	1/1	0.88	0.12	74,74,74,74	0
58	MG	AA	3480	1/1	0.88	0.12	54,54,54,54	0
58	MG	AB	3018	1/1	0.89	0.15	81,81,81,81	0
58	MG	CA	3288	1/1	0.89	0.13	63,63,63,63	0
58	MG	AA	3234	1/1	0.89	0.21	77,77,77,77	0
58	MG	CA	3013	1/1	0.89	0.20	61,61,61,61	0
58	MG	CA	3128	1/1	0.89	0.23	60,60,60,60	0
58	MG	CA	3024	1/1	0.89	0.26	87,87,87,87	0
58	MG	CA	3130	1/1	0.89	0.15	68,68,68,68	0
58	MG	DA	1650	1/1	0.89	0.17	57,57,57,57	0
58	MG	CA	3135	1/1	0.89	0.27	84,84,84,84	0
58	MG	CA	3025	1/1	0.89	0.23	75,75,75,75	0
58	MG	CA	3570	1/1	0.89	0.09	41,41,41,41	0
58	MG	DA	1661	1/1	0.89	0.08	62,62,62,62	0
58	MG	DA	1663	1/1	0.89	0.16	63,63,63,63	0
58	MG	AA	3185	1/1	0.89	0.19	65,65,65,65	0
58	MG	BA	3164	1/1	0.89	0.09	60,60,60,60	0
58	MG	AA	3773	1/1	0.89	0.32	36,36,36,36	0
58	MG	CA	3580	1/1	0.89	0.15	79,79,79,79	0
58	MG	AA	3443	1/1	0.89	0.09	61,61,61,61	0
58	MG	AA	3444	1/1	0.89	0.16	73,73,73,73	0
58	MG	DA	1674	1/1	0.89	0.12	72,72,72,72	0
58	MG	AA	3455	1/1	0.89	0.12	56,56,56,56	0
58	MG	BA	3094	1/1	0.89	0.09	78,78,78,78	0
58	MG	CA	3593	1/1	0.89	0.12	82,82,82,82	0
58	MG	AA	3060	1/1	0.89	0.20	64,64,64,64	0
58	MG	CA	3607	1/1	0.89	0.08	67,67,67,67	0
58	MG	A7	101	1/1	0.89	0.27	64,64,64,64	0
58	MG	CA	3159	1/1	0.89	0.17	68,68,68,68	0
58	MG	DA	1687	1/1	0.89	0.11	66,66,66,66	0
58	MG	BA	3053	1/1	0.89	0.15	69,69,69,69	0
58	MG	DA	1689	1/1	0.89	0.12	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3107	1/1	0.89	0.21	48,48,48,48	0
58	MG	AA	3202	1/1	0.89	0.10	63,63,63,63	0
58	MG	AA	3804	1/1	0.89	0.14	65,65,65,65	0
58	MG	CA	3175	1/1	0.89	0.24	60,60,60,60	0
58	MG	CA	3422	1/1	0.89	0.19	74,74,74,74	0
58	MG	BA	3192	1/1	0.89	0.11	65,65,65,65	0
58	MG	CA	3432	1/1	0.89	0.19	96,96,96,96	0
58	MG	CA	3629	1/1	0.89	0.21	73,73,73,73	0
58	MG	CA	3631	1/1	0.89	0.21	66,66,66,66	0
58	MG	BA	3004	1/1	0.89	0.17	64,64,64,64	0
58	MG	CA	3445	1/1	0.89	0.21	91,91,91,91	0
58	MG	BA	3058	1/1	0.89	0.23	69,69,69,69	0
58	MG	BA	3197	1/1	0.89	0.09	75,75,75,75	0
58	MG	CA	3198	1/1	0.89	0.20	62,62,62,62	0
58	MG	AA	3362	1/1	0.89	0.14	67,67,67,67	0
58	MG	CA	3652	1/1	0.89	0.17	84,84,84,84	0
58	MG	CA	3205	1/1	0.89	0.11	71,71,71,71	0
58	MG	CA	3206	1/1	0.89	0.17	104,104,104,104	0
58	MG	CB	3003	1/1	0.89	0.13	76,76,76,76	0
58	MG	AA	3481	1/1	0.89	0.08	50,50,50,50	0
58	MG	DA	1736	1/1	0.89	0.14	78,78,78,78	0
58	MG	AA	3488	1/1	0.89	0.10	23,23,23,23	0
58	MG	DA	1738	1/1	0.89	0.13	78,78,78,78	0
58	MG	BA	3205	1/1	0.89	0.08	68,68,68,68	0
58	MG	CB	3009	1/1	0.89	0.12	64,64,64,64	0
58	MG	CA	3223	1/1	0.89	0.27	75,75,75,75	0
58	MG	CA	3488	1/1	0.89	0.11	69,69,69,69	0
58	MG	CE	304	1/1	0.89	0.14	65,65,65,65	0
58	MG	AA	3668	1/1	0.89	0.09	38,38,38,38	0
58	MG	AA	3321	1/1	0.89	0.12	69,69,69,69	0
58	MG	BN	502	1/1	0.89	0.08	64,64,64,64	0
58	MG	BA	3136	1/1	0.89	0.14	70,70,70,70	0
58	MG	BA	3137	1/1	0.89	0.09	73,73,73,73	0
58	MG	CA	3506	1/1	0.89	0.08	61,61,61,61	0
58	MG	AA	3753	1/1	0.89	0.16	72,72,72,72	0
58	MG	AA	3335	1/1	0.89	0.10	40,40,40,40	0
58	MG	CA	3246	1/1	0.89	0.34	77,77,77,77	0
58	MG	AA	3249	1/1	0.89	0.13	62,62,62,62	0
58	MG	BA	3157	1/1	0.89	0.15	67,67,67,67	0
58	MG	BX	109	1/1	0.89	0.13	78,78,78,78	0
58	MG	BA	3077	1/1	0.89	0.28	86,86,86,86	0
58	MG	CA	3540	1/1	0.89	0.12	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3070	1/1	0.90	0.26	82,82,82,82	0
58	MG	AA	3223	1/1	0.90	0.20	54,54,54,54	0
58	MG	CA	3483	1/1	0.90	0.18	68,68,68,68	0
58	MG	CD	301	1/1	0.90	0.23	79,79,79,79	0
58	MG	CA	3484	1/1	0.90	0.17	67,67,67,67	0
58	MG	BA	3046	1/1	0.90	0.16	60,60,60,60	0
58	MG	AD	302	1/1	0.90	0.18	46,46,46,46	0
58	MG	AD	307	1/1	0.90	0.10	56,56,56,56	0
58	MG	AA	3660	1/1	0.90	0.16	68,68,68,68	0
58	MG	CA	3493	1/1	0.90	0.32	105,105,105,105	0
58	MG	AD	312	1/1	0.90	0.36	58,58,58,58	0
58	MG	BA	3108	1/1	0.90	0.12	49,49,49,49	0
58	MG	CA	3227	1/1	0.90	0.30	68,68,68,68	0
58	MG	DA	1604	1/1	0.90	0.08	72,72,72,72	0
58	MG	DA	1606	1/1	0.90	0.11	72,72,72,72	0
58	MG	CA	3499	1/1	0.90	0.12	65,65,65,65	0
58	MG	AA	3757	1/1	0.90	0.13	43,43,43,43	0
58	MG	CA	3504	1/1	0.90	0.16	69,69,69,69	0
58	MG	CA	3237	1/1	0.90	0.28	75,75,75,75	0
58	MG	AA	3518	1/1	0.90	0.08	19,19,19,19	0
58	MG	DA	1626	1/1	0.90	0.28	72,72,72,72	0
58	MG	CA	3089	1/1	0.90	0.23	73,73,73,73	0
58	MG	CA	3511	1/1	0.90	0.12	74,74,74,74	0
58	MG	DA	1632	1/1	0.90	0.18	69,69,69,69	0
58	MG	AA	3612	1/1	0.90	0.20	49,49,49,49	0
58	MG	CA	3516	1/1	0.90	0.20	105,105,105,105	0
58	MG	DA	1637	1/1	0.90	0.20	67,67,67,67	0
58	MG	CA	3520	1/1	0.90	0.24	83,83,83,83	0
58	MG	CA	3523	1/1	0.90	0.18	62,62,62,62	0
58	MG	CA	3526	1/1	0.90	0.09	75,75,75,75	0
58	MG	BA	3209	1/1	0.90	0.12	79,79,79,79	0
58	MG	CA	3530	1/1	0.90	0.17	78,78,78,78	0
58	MG	DA	1655	1/1	0.90	0.27	73,73,73,73	0
58	MG	CA	3532	1/1	0.90	0.12	58,58,58,58	0
58	MG	BD	502	1/1	0.90	0.22	80,80,80,80	0
58	MG	AA	3330	1/1	0.90	0.12	66,66,66,66	0
58	MG	CA	3248	1/1	0.90	0.11	58,58,58,58	0
58	MG	CA	3249	1/1	0.90	0.21	64,64,64,64	0
58	MG	DA	1664	1/1	0.90	0.20	59,59,59,59	0
58	MG	BA	3116	1/1	0.90	0.15	82,82,82,82	0
58	MG	CA	3257	1/1	0.90	0.16	65,65,65,65	0
58	MG	CA	3260	1/1	0.90	0.13	69,69,69,69	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3271	1/1	0.90	0.19	84,84,84,84	0
58	MG	BL	3004	1/1	0.90	0.17	67,67,67,67	0
58	MG	CA	3549	1/1	0.90	0.13	61,61,61,61	0
58	MG	AA	3041	1/1	0.90	0.34	75,75,75,75	0
58	MG	AA	3002	1/1	0.90	0.14	54,54,54,54	0
58	MG	BA	3131	1/1	0.90	0.10	76,76,76,76	0
58	MG	BA	3135	1/1	0.90	0.28	80,80,80,80	0
58	MG	CA	3564	1/1	0.90	0.11	75,75,75,75	0
58	MG	CA	3565	1/1	0.90	0.09	90,90,90,90	0
58	MG	AA	3564	1/1	0.90	0.13	48,48,48,48	0
58	MG	CA	3122	1/1	0.90	0.12	43,43,43,43	0
58	MG	BX	104	1/1	0.90	0.08	69,69,69,69	0
58	MG	CA	3127	1/1	0.90	0.20	94,94,94,94	0
58	MG	AA	3577	1/1	0.90	0.13	36,36,36,36	0
58	MG	CA	3582	1/1	0.90	0.10	96,96,96,96	0
58	MG	AA	3681	1/1	0.90	0.11	63,63,63,63	0
58	MG	BA	3144	1/1	0.90	0.10	53,53,53,53	0
58	MG	BA	3149	1/1	0.90	0.20	82,82,82,82	0
58	MG	DA	1700	1/1	0.90	0.13	62,62,62,62	0
58	MG	CA	3136	1/1	0.90	0.24	64,64,64,64	0
58	MG	BA	3065	1/1	0.90	0.15	57,57,57,57	0
58	MG	CA	3358	1/1	0.90	0.14	78,78,78,78	0
58	MG	CA	3598	1/1	0.90	0.12	66,66,66,66	0
58	MG	CA	3606	1/1	0.90	0.11	51,51,51,51	0
58	MG	AA	3629	1/1	0.90	0.20	74,74,74,74	0
58	MG	AA	3375	1/1	0.90	0.17	57,57,57,57	0
58	MG	AA	3024	1/1	0.90	0.18	55,55,55,55	0
58	MG	AA	3477	1/1	0.90	0.11	57,57,57,57	0
58	MG	CA	3613	1/1	0.90	0.24	96,96,96,96	0
58	MG	CA	3148	1/1	0.90	0.23	77,77,77,77	0
58	MG	AA	3431	1/1	0.90	0.14	56,56,56,56	0
58	MG	BA	3075	1/1	0.90	0.20	56,56,56,56	0
58	MG	DA	1730	1/1	0.90	0.11	75,75,75,75	0
58	MG	AA	3206	1/1	0.90	0.21	62,62,62,62	0
58	MG	AA	3821	1/1	0.90	0.13	58,58,58,58	0
58	MG	CA	3625	1/1	0.90	0.15	53,53,53,53	0
58	MG	CA	3406	1/1	0.90	0.20	89,89,89,89	0
58	MG	BA	3167	1/1	0.90	0.12	85,85,85,85	0
58	MG	AA	3647	1/1	0.90	0.15	71,71,71,71	0
58	MG	CA	3048	1/1	0.90	0.23	85,85,85,85	0
58	MG	CA	3634	1/1	0.90	0.11	75,75,75,75	0
58	MG	CA	3635	1/1	0.90	0.12	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3020	1/1	0.90	0.08	51,51,51,51	0
58	MG	CA	3639	1/1	0.90	0.28	79,79,79,79	0
58	MG	CA	3051	1/1	0.90	0.40	64,64,64,64	0
58	MG	AA	3440	1/1	0.90	0.16	51,51,51,51	0
58	MG	CA	3646	1/1	0.90	0.10	75,75,75,75	0
58	MG	CA	3433	1/1	0.90	0.21	61,61,61,61	0
58	MG	AA	3737	1/1	0.90	0.12	75,75,75,75	0
58	MG	CA	3179	1/1	0.90	0.13	55,55,55,55	0
58	MG	DA	1763	1/1	0.90	0.17	94,94,94,94	0
58	MG	AA	3222	1/1	0.90	0.23	61,61,61,61	0
58	MG	CA	3656	1/1	0.90	0.24	96,96,96,96	0
58	MG	CA	3185	1/1	0.90	0.15	66,66,66,66	0
58	MG	AA	3607	1/1	0.90	0.22	59,59,59,59	0
58	MG	BA	3037	1/1	0.90	0.12	64,64,64,64	0
58	MG	BA	3186	1/1	0.90	0.17	67,67,67,67	0
58	MG	AA	3653	1/1	0.90	0.10	67,67,67,67	0
58	MG	CA	3479	1/1	0.90	0.11	56,56,56,56	0
58	MG	AA	3547	1/1	0.91	0.09	30,30,30,30	0
58	MG	AA	3553	1/1	0.91	0.17	60,60,60,60	0
58	MG	AA	3181	1/1	0.91	0.24	94,94,94,94	0
58	MG	BA	3068	1/1	0.91	0.12	87,87,87,87	0
58	MG	BA	3194	1/1	0.91	0.09	60,60,60,60	0
58	MG	AA	3068	1/1	0.91	0.15	53,53,53,53	0
58	MG	AA	3574	1/1	0.91	0.09	47,47,47,47	0
58	MG	CA	3139	1/1	0.91	0.10	63,63,63,63	0
58	MG	AA	3576	1/1	0.91	0.12	69,69,69,69	0
58	MG	BA	3072	1/1	0.91	0.28	75,75,75,75	0
58	MG	AA	3673	1/1	0.91	0.16	66,66,66,66	0
58	MG	CE	306	1/1	0.91	0.27	99,99,99,99	0
58	MG	AB	3019	1/1	0.91	0.12	64,64,64,64	0
58	MG	AB	3021	1/1	0.91	0.18	60,60,60,60	0
58	MG	CA	3473	1/1	0.91	0.23	70,70,70,70	0
58	MG	BA	3206	1/1	0.91	0.13	62,62,62,62	0
58	MG	CA	3478	1/1	0.91	0.16	73,73,73,73	0
58	MG	AA	3186	1/1	0.91	0.18	41,41,41,41	0
58	MG	BA	3210	1/1	0.91	0.12	68,68,68,68	0
58	MG	BA	3212	1/1	0.91	0.17	73,73,73,73	0
58	MG	BA	3080	1/1	0.91	0.08	52,52,52,52	0
58	MG	DA	1605	1/1	0.91	0.23	75,75,75,75	0
58	MG	CA	3157	1/1	0.91	0.21	68,68,68,68	0
58	MG	CA	3485	1/1	0.91	0.12	74,74,74,74	0
58	MG	AA	3381	1/1	0.91	0.09	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3071	1/1	0.91	0.15	59,59,59,59	0
58	MG	BA	3083	1/1	0.91	0.22	68,68,68,68	0
58	MG	AA	3111	1/1	0.91	0.20	79,79,79,79	0
58	MG	AD	311	1/1	0.91	0.12	55,55,55,55	0
58	MG	AA	3265	1/1	0.91	0.17	60,60,60,60	0
58	MG	AA	3112	1/1	0.91	0.10	46,46,46,46	0
58	MG	AF	307	1/1	0.91	0.15	61,61,61,61	0
58	MG	AH	3002	1/1	0.91	0.18	77,77,77,77	0
58	MG	AA	3596	1/1	0.91	0.08	54,54,54,54	0
58	MG	AA	3597	1/1	0.91	0.15	40,40,40,40	0
58	MG	BA	3098	1/1	0.91	0.14	78,78,78,78	0
58	MG	CA	3196	1/1	0.91	0.14	58,58,58,58	0
58	MG	BA	3099	1/1	0.91	0.27	70,70,70,70	0
58	MG	AA	3269	1/1	0.91	0.26	84,84,84,84	0
58	MG	CA	3201	1/1	0.91	0.19	52,52,52,52	0
58	MG	DA	1651	1/1	0.91	0.11	70,70,70,70	0
58	MG	CA	3204	1/1	0.91	0.08	58,58,58,58	0
58	MG	AA	3703	1/1	0.91	0.14	41,41,41,41	1
58	MG	CA	3521	1/1	0.91	0.18	77,77,77,77	0
58	MG	A5	104	1/1	0.91	0.11	60,60,60,60	0
58	MG	BA	3105	1/1	0.91	0.13	60,60,60,60	0
58	MG	DA	1662	1/1	0.91	0.15	70,70,70,70	0
58	MG	AA	3705	1/1	0.91	0.12	57,57,57,57	0
58	MG	CA	3211	1/1	0.91	0.19	72,72,72,72	0
58	MG	CA	3026	1/1	0.91	0.16	79,79,79,79	0
58	MG	AA	3600	1/1	0.91	0.15	57,57,57,57	0
58	MG	AA	3199	1/1	0.91	0.13	55,55,55,55	0
58	MG	AA	3713	1/1	0.91	0.12	47,47,47,47	0
58	MG	CA	3228	1/1	0.91	0.22	51,51,51,51	0
58	MG	AA	3717	1/1	0.91	0.08	56,56,56,56	0
58	MG	CA	3232	1/1	0.91	0.25	65,65,65,65	0
58	MG	CA	3235	1/1	0.91	0.30	70,70,70,70	0
58	MG	BA	3005	1/1	0.91	0.27	64,64,64,64	0
58	MG	CA	3547	1/1	0.91	0.10	66,66,66,66	0
58	MG	AA	3089	1/1	0.91	0.09	33,33,33,33	0
58	MG	AA	3292	1/1	0.91	0.20	71,71,71,71	0
58	MG	AA	3449	1/1	0.91	0.15	53,53,53,53	0
58	MG	AA	3452	1/1	0.91	0.14	67,67,67,67	0
58	MG	CA	3243	1/1	0.91	0.28	110,110,110,110	0
58	MG	BA	3120	1/1	0.91	0.18	78,78,78,78	0
58	MG	BA	3124	1/1	0.91	0.09	71,71,71,71	0
58	MG	CA	3247	1/1	0.91	0.16	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3036	1/1	0.91	0.10	49,49,49,49	0
58	MG	BA	3015	1/1	0.91	0.23	87,87,87,87	0
58	MG	DA	1696	1/1	0.91	0.20	64,64,64,64	0
58	MG	DA	1697	1/1	0.91	0.20	65,65,65,65	0
58	MG	AA	3319	1/1	0.91	0.13	66,66,66,66	0
58	MG	AA	3015	1/1	0.91	0.20	62,62,62,62	0
58	MG	AA	3129	1/1	0.91	0.20	57,57,57,57	0
58	MG	AA	3624	1/1	0.91	0.15	70,70,70,70	0
58	MG	BA	3028	1/1	0.91	0.20	90,90,90,90	0
58	MG	CA	3585	1/1	0.91	0.10	80,80,80,80	0
58	MG	AA	3626	1/1	0.91	0.11	58,58,58,58	0
58	MG	DA	1710	1/1	0.91	0.10	79,79,79,79	0
58	MG	DA	1711	1/1	0.91	0.13	70,70,70,70	0
58	MG	AA	3759	1/1	0.91	0.14	63,63,63,63	0
58	MG	CA	3591	1/1	0.91	0.15	77,77,77,77	0
58	MG	AA	3211	1/1	0.91	0.28	86,86,86,86	0
58	MG	CA	3286	1/1	0.91	0.19	90,90,90,90	0
58	MG	AA	3016	1/1	0.91	0.20	57,57,57,57	0
58	MG	CA	3080	1/1	0.91	0.17	56,56,56,56	0
58	MG	AA	3767	1/1	0.91	0.15	66,66,66,66	0
58	MG	AA	3159	1/1	0.91	0.25	97,97,97,97	0
58	MG	CA	3083	1/1	0.91	0.10	70,70,70,70	0
58	MG	AA	3229	1/1	0.91	0.12	54,54,54,54	0
58	MG	AA	3347	1/1	0.91	0.12	40,40,40,40	0
58	MG	AA	3638	1/1	0.91	0.10	45,45,45,45	0
58	MG	AA	3492	1/1	0.91	0.09	61,61,61,61	0
58	MG	CA	3339	1/1	0.91	0.16	62,62,62,62	0
58	MG	AA	3513	1/1	0.91	0.10	58,58,58,58	0
58	MG	CA	3344	1/1	0.91	0.09	36,36,36,36	0
58	MG	CA	3349	1/1	0.91	0.14	54,54,54,54	0
58	MG	AA	3801	1/1	0.91	0.09	89,89,89,89	0
58	MG	AA	3645	1/1	0.91	0.23	78,78,78,78	0
58	MG	DA	1746	1/1	0.91	0.12	77,77,77,77	0
58	MG	BA	3174	1/1	0.91	0.08	69,69,69,69	0
58	MG	CA	3101	1/1	0.91	0.34	77,77,77,77	0
58	MG	CA	3376	1/1	0.91	0.16	70,70,70,70	0
58	MG	AA	3232	1/1	0.91	0.20	79,79,79,79	0
58	MG	AA	3527	1/1	0.91	0.08	21,21,21,21	0
58	MG	AA	3029	1/1	0.91	0.16	50,50,50,50	0
58	MG	BA	3181	1/1	0.91	0.08	47,47,47,47	0
58	MG	AA	3174	1/1	0.91	0.32	62,62,62,62	0
58	MG	CA	3396	1/1	0.91	0.24	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3184	1/1	0.91	0.07	49,49,49,49	0
58	MG	DA	1766	1/1	0.91	0.13	53,53,53,53	0
58	MG	BA	3185	1/1	0.91	0.22	111,111,111,111	0
58	MG	CA	3403	1/1	0.91	0.14	70,70,70,70	0
58	MG	AA	3816	1/1	0.91	0.14	91,91,91,91	0
58	MG	CA	3125	1/1	0.91	0.13	47,47,47,47	0
58	MG	CA	3408	1/1	0.91	0.10	54,54,54,54	0
58	MG	CA	3657	1/1	0.91	0.13	62,62,62,62	0
62	GDP	DZ	704	28/28	0.91	0.10	80,80,80,80	0
58	MG	AA	3226	1/1	0.92	0.21	73,73,73,73	0
58	MG	AA	3341	1/1	0.92	0.08	15,15,15,15	0
58	MG	AA	3630	1/1	0.92	0.11	58,58,58,58	0
58	MG	CA	3489	1/1	0.92	0.09	53,53,53,53	0
58	MG	AA	3631	1/1	0.92	0.23	68,68,68,68	0
58	MG	BA	3021	1/1	0.92	0.08	37,37,37,37	0
58	MG	CQ	202	1/1	0.92	0.10	66,66,66,66	0
58	MG	BA	3022	1/1	0.92	0.08	46,46,46,46	0
58	MG	CA	3240	1/1	0.92	0.11	58,58,58,58	0
58	MG	BA	3023	1/1	0.92	0.29	75,75,75,75	0
58	MG	AA	3079	1/1	0.92	0.30	63,63,63,63	0
58	MG	BA	3198	1/1	0.92	0.19	68,68,68,68	0
58	MG	CA	3096	1/1	0.92	0.21	63,63,63,63	0
58	MG	AA	3028	1/1	0.92	0.17	55,55,55,55	0
58	MG	DA	1611	1/1	0.92	0.12	74,74,74,74	0
58	MG	DA	1613	1/1	0.92	0.28	70,70,70,70	0
58	MG	AA	3093	1/1	0.92	0.31	52,52,52,52	0
58	MG	DA	1617	1/1	0.92	0.11	63,63,63,63	0
58	MG	BA	3031	1/1	0.92	0.10	61,61,61,61	0
58	MG	AA	3271	1/1	0.92	0.12	55,55,55,55	0
58	MG	CA	3514	1/1	0.92	0.12	63,63,63,63	0
58	MG	CA	3250	1/1	0.92	0.14	76,76,76,76	0
58	MG	CA	3253	1/1	0.92	0.10	56,56,56,56	0
58	MG	CA	3103	1/1	0.92	0.16	55,55,55,55	0
58	MG	DA	1630	1/1	0.92	0.12	56,56,56,56	0
58	MG	BA	3034	1/1	0.92	0.14	61,61,61,61	0
58	MG	BA	3208	1/1	0.92	0.11	81,81,81,81	0
58	MG	AA	3718	1/1	0.92	0.13	47,47,47,47	0
58	MG	AB	3006	1/1	0.92	0.19	70,70,70,70	0
58	MG	DA	1639	1/1	0.92	0.30	83,83,83,83	0
58	MG	BA	3038	1/1	0.92	0.09	65,65,65,65	0
58	MG	AA	3719	1/1	0.92	0.12	41,41,41,41	0
58	MG	CA	3534	1/1	0.92	0.12	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3272	1/1	0.92	0.22	69,69,69,69	0
58	MG	AA	3359	1/1	0.92	0.09	49,49,49,49	0
58	MG	AA	3736	1/1	0.92	0.10	35,35,35,35	0
58	MG	DA	1654	1/1	0.92	0.19	57,57,57,57	0
58	MG	CA	3126	1/1	0.92	0.25	71,71,71,71	0
58	MG	CA	3294	1/1	0.92	0.15	71,71,71,71	0
58	MG	AA	3273	1/1	0.92	0.16	52,52,52,52	0
58	MG	AA	3069	1/1	0.92	0.11	63,63,63,63	0
58	MG	BT	3001	1/1	0.92	0.24	60,60,60,60	0
58	MG	AA	3277	1/1	0.92	0.33	78,78,78,78	0
58	MG	CA	3311	1/1	0.92	0.09	48,48,48,48	0
58	MG	CA	3134	1/1	0.92	0.20	69,69,69,69	0
58	MG	AA	3748	1/1	0.92	0.11	56,56,56,56	0
58	MG	DA	1667	1/1	0.92	0.25	61,61,61,61	0
58	MG	CA	3334	1/1	0.92	0.19	72,72,72,72	0
58	MG	BA	3125	1/1	0.92	0.14	63,63,63,63	0
58	MG	BA	3126	1/1	0.92	0.12	59,59,59,59	0
58	MG	AA	3373	1/1	0.92	0.17	57,57,57,57	0
58	MG	AA	3284	1/1	0.92	0.19	43,43,43,43	0
58	MG	AA	3489	1/1	0.92	0.09	63,63,63,63	0
58	MG	CA	3573	1/1	0.92	0.18	64,64,64,64	0
58	MG	AA	3137	1/1	0.92	0.06	49,49,49,49	0
58	MG	CA	3355	1/1	0.92	0.12	59,59,59,59	0
58	MG	AA	3606	1/1	0.92	0.14	64,64,64,64	0
58	MG	CA	3361	1/1	0.92	0.11	48,48,48,48	0
58	MG	CA	3367	1/1	0.92	0.21	59,59,59,59	0
58	MG	CA	3369	1/1	0.92	0.10	58,58,58,58	0
58	MG	AA	3404	1/1	0.92	0.13	43,43,43,43	0
58	MG	BA	3147	1/1	0.92	0.09	84,84,84,84	0
58	MG	CA	3017	1/1	0.92	0.10	45,45,45,45	0
58	MG	CA	3590	1/1	0.92	0.13	62,62,62,62	0
58	MG	CA	3020	1/1	0.92	0.11	61,61,61,61	0
58	MG	CA	3378	1/1	0.92	0.08	78,78,78,78	0
58	MG	BA	3148	1/1	0.92	0.10	67,67,67,67	0
58	MG	CA	3380	1/1	0.92	0.14	63,63,63,63	0
58	MG	CA	3385	1/1	0.92	0.14	70,70,70,70	0
58	MG	CA	3600	1/1	0.92	0.07	39,39,39,39	0
58	MG	CA	3602	1/1	0.92	0.10	78,78,78,78	0
58	MG	CA	3155	1/1	0.92	0.25	69,69,69,69	0
58	MG	CA	3388	1/1	0.92	0.13	68,68,68,68	0
58	MG	AA	3493	1/1	0.92	0.17	44,44,44,44	0
58	MG	DA	1708	1/1	0.92	0.21	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3150	1/1	0.92	0.13	47,47,47,47	0
58	MG	CA	3392	1/1	0.92	0.08	63,63,63,63	0
58	MG	CA	3395	1/1	0.92	0.07	53,53,53,53	0
58	MG	BA	3061	1/1	0.92	0.24	67,67,67,67	0
58	MG	CA	3160	1/1	0.92	0.30	74,74,74,74	0
58	MG	AU	203	1/1	0.92	0.17	56,56,56,56	0
58	MG	CA	3622	1/1	0.92	0.21	51,51,51,51	0
58	MG	CA	3038	1/1	0.92	0.07	46,46,46,46	0
58	MG	CA	3172	1/1	0.92	0.09	53,53,53,53	0
58	MG	DA	1725	1/1	0.92	0.13	64,64,64,64	0
58	MG	CA	3039	1/1	0.92	0.22	69,69,69,69	0
58	MG	BA	3064	1/1	0.92	0.10	78,78,78,78	0
58	MG	CA	3410	1/1	0.92	0.11	40,40,40,40	0
58	MG	AA	3414	1/1	0.92	0.08	55,55,55,55	0
58	MG	CA	3044	1/1	0.92	0.11	52,52,52,52	0
58	MG	CA	3417	1/1	0.92	0.09	48,48,48,48	0
58	MG	BA	3067	1/1	0.92	0.19	73,73,73,73	0
58	MG	CA	3424	1/1	0.92	0.14	51,51,51,51	0
58	MG	AA	3243	1/1	0.92	0.11	66,66,66,66	0
58	MG	CA	3430	1/1	0.92	0.15	71,71,71,71	0
58	MG	AA	3519	1/1	0.92	0.09	32,32,32,32	0
58	MG	AA	3096	1/1	0.92	0.22	81,81,81,81	0
58	MG	CA	3050	1/1	0.92	0.07	43,43,43,43	0
58	MG	AA	3618	1/1	0.92	0.10	49,49,49,49	0
58	MG	CA	3649	1/1	0.92	0.12	94,94,94,94	0
58	MG	CA	3053	1/1	0.92	0.17	57,57,57,57	0
58	MG	AA	3435	1/1	0.92	0.09	37,37,37,37	0
58	MG	AA	3216	1/1	0.92	0.08	36,36,36,36	0
58	MG	AA	3785	1/1	0.92	0.13	70,70,70,70	0
58	MG	AA	3789	1/1	0.92	0.17	52,52,52,52	0
58	MG	CA	3472	1/1	0.92	0.12	45,45,45,45	0
58	MG	CB	3002	1/1	0.92	0.08	64,64,64,64	0
58	MG	BA	3076	1/1	0.92	0.10	42,42,42,42	0
58	MG	CB	3004	1/1	0.92	0.15	67,67,67,67	0
58	MG	AA	3156	1/1	0.92	0.18	63,63,63,63	0
58	MG	BA	3078	1/1	0.92	0.19	66,66,66,66	0
58	MG	AA	3796	1/1	0.92	0.14	19,19,19,19	1
58	MG	AA	3799	1/1	0.92	0.14	48,48,48,48	0
58	MG	AA	3688	1/1	0.92	0.09	29,29,29,29	0
58	MG	DT	3001	1/1	0.92	0.21	66,66,66,66	0
58	MG	BA	3011	1/1	0.92	0.07	76,76,76,76	0
58	MG	AA	3802	1/1	0.92	0.11	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
59	K	AA	3818	1/1	0.92	0.14	87,87,87,87	0
58	MG	AA	3019	1/1	0.92	0.11	57,57,57,57	0
58	MG	CA	3654	1/1	0.93	0.08	29,29,29,29	0
58	MG	CA	3420	1/1	0.93	0.10	58,58,58,58	0
58	MG	AA	3154	1/1	0.93	0.17	56,56,56,56	0
58	MG	CA	3018	1/1	0.93	0.14	62,62,62,62	0
58	MG	CA	3428	1/1	0.93	0.08	55,55,55,55	0
58	MG	BA	3018	1/1	0.93	0.08	72,72,72,72	0
58	MG	AA	3788	1/1	0.93	0.17	60,60,60,60	0
58	MG	CA	3180	1/1	0.93	0.30	74,74,74,74	0
58	MG	AA	3458	1/1	0.93	0.09	70,70,70,70	0
58	MG	AA	3793	1/1	0.93	0.10	60,60,60,60	0
58	MG	CA	3187	1/1	0.93	0.14	67,67,67,67	0
58	MG	AA	3460	1/1	0.93	0.11	71,71,71,71	0
58	MG	AA	3088	1/1	0.93	0.20	73,73,73,73	0
58	MG	CA	3194	1/1	0.93	0.12	61,61,61,61	0
58	MG	BA	3027	1/1	0.93	0.12	75,75,75,75	0
58	MG	CD	302	1/1	0.93	0.07	76,76,76,76	0
58	MG	BA	3128	1/1	0.93	0.11	47,47,47,47	0
58	MG	AA	3605	1/1	0.93	0.10	40,40,40,40	1
58	MG	CA	3199	1/1	0.93	0.08	36,36,36,36	0
58	MG	AA	3209	1/1	0.93	0.16	59,59,59,59	0
58	MG	CA	3476	1/1	0.93	0.13	54,54,54,54	0
58	MG	CA	3477	1/1	0.93	0.12	54,54,54,54	0
58	MG	AA	3064	1/1	0.93	0.07	35,35,35,35	0
58	MG	CO	202	1/1	0.93	0.12	52,52,52,52	0
58	MG	CQ	201	1/1	0.93	0.17	63,63,63,63	0
58	MG	CA	3203	1/1	0.93	0.29	76,76,76,76	0
58	MG	AA	3165	1/1	0.93	0.10	56,56,56,56	0
58	MG	CV	202	1/1	0.93	0.20	85,85,85,85	0
58	MG	AA	3610	1/1	0.93	0.11	51,51,51,51	0
58	MG	BA	3143	1/1	0.93	0.15	79,79,79,79	0
58	MG	AA	3110	1/1	0.93	0.07	50,50,50,50	0
58	MG	AA	3051	1/1	0.93	0.19	34,34,34,34	0
58	MG	AA	3808	1/1	0.93	0.15	33,33,33,33	1
58	MG	CA	3215	1/1	0.93	0.17	39,39,39,39	0
58	MG	DA	1609	1/1	0.93	0.09	45,45,45,45	0
58	MG	AA	3811	1/1	0.93	0.11	53,53,53,53	0
58	MG	CA	3054	1/1	0.93	0.20	68,68,68,68	0
58	MG	CA	3055	1/1	0.93	0.22	37,37,37,37	0
58	MG	DA	1616	1/1	0.93	0.08	51,51,51,51	0
58	MG	BA	3043	1/1	0.93	0.18	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3058	1/1	0.93	0.08	48,48,48,48	0
58	MG	AA	3363	1/1	0.93	0.07	28,28,28,28	0
58	MG	CA	3496	1/1	0.93	0.17	64,64,64,64	0
58	MG	AA	3699	1/1	0.93	0.18	38,38,38,38	1
58	MG	AA	3819	1/1	0.93	0.09	44,44,44,44	0
58	MG	CA	3064	1/1	0.93	0.12	51,51,51,51	0
58	MG	CA	3501	1/1	0.93	0.10	63,63,63,63	0
58	MG	DA	1631	1/1	0.93	0.15	59,59,59,59	0
58	MG	AA	3700	1/1	0.93	0.15	48,48,48,48	0
58	MG	AA	3177	1/1	0.93	0.13	51,51,51,51	0
58	MG	CA	3508	1/1	0.93	0.10	57,57,57,57	0
58	MG	AA	3704	1/1	0.93	0.09	76,76,76,76	0
58	MG	DA	1638	1/1	0.93	0.10	74,74,74,74	0
58	MG	BA	3162	1/1	0.93	0.10	54,54,54,54	0
58	MG	AA	3018	1/1	0.93	0.32	75,75,75,75	0
58	MG	AA	3278	1/1	0.93	0.08	35,35,35,35	0
58	MG	AB	3008	1/1	0.93	0.17	51,51,51,51	0
58	MG	AA	3030	1/1	0.93	0.14	31,31,31,31	1
58	MG	CA	3517	1/1	0.93	0.10	77,77,77,77	0
58	MG	AA	3496	1/1	0.93	0.07	58,58,58,58	0
58	MG	DA	1652	1/1	0.93	0.11	58,58,58,58	0
58	MG	AA	3625	1/1	0.93	0.10	63,63,63,63	0
58	MG	CA	3522	1/1	0.93	0.10	59,59,59,59	0
58	MG	BA	3172	1/1	0.93	0.10	55,55,55,55	0
58	MG	AA	3511	1/1	0.93	0.21	56,56,56,56	0
58	MG	DA	1658	1/1	0.93	0.06	63,63,63,63	0
58	MG	AB	3020	1/1	0.93	0.11	53,53,53,53	0
58	MG	AA	3285	1/1	0.93	0.09	44,44,44,44	0
58	MG	CA	3531	1/1	0.93	0.10	58,58,58,58	0
58	MG	AB	3022	1/1	0.93	0.07	56,56,56,56	0
58	MG	BA	3063	1/1	0.93	0.19	51,51,51,51	0
58	MG	AA	3721	1/1	0.93	0.13	76,76,76,76	0
58	MG	CA	3273	1/1	0.93	0.13	54,54,54,54	0
58	MG	CA	3538	1/1	0.93	0.13	69,69,69,69	0
58	MG	CA	3091	1/1	0.93	0.20	63,63,63,63	0
58	MG	AA	3116	1/1	0.93	0.19	75,75,75,75	0
58	MG	AA	3416	1/1	0.93	0.09	25,25,25,25	0
58	MG	CA	3284	1/1	0.93	0.07	48,48,48,48	0
58	MG	CA	3097	1/1	0.93	0.19	65,65,65,65	0
58	MG	AA	3732	1/1	0.93	0.13	41,41,41,41	0
58	MG	CA	3287	1/1	0.93	0.10	55,55,55,55	0
58	MG	AD	309	1/1	0.93	0.12	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	DA	1680	1/1	0.93	0.15	56,56,56,56	0
58	MG	AA	3421	1/1	0.93	0.12	70,70,70,70	0
58	MG	CA	3551	1/1	0.93	0.07	57,57,57,57	0
58	MG	AA	3422	1/1	0.93	0.07	23,23,23,23	0
58	MG	CA	3102	1/1	0.93	0.17	76,76,76,76	0
58	MG	AA	3738	1/1	0.93	0.11	28,28,28,28	0
58	MG	CA	3302	1/1	0.93	0.10	84,84,84,84	0
58	MG	CA	3105	1/1	0.93	0.13	45,45,45,45	0
58	MG	AA	3062	1/1	0.93	0.30	66,66,66,66	0
58	MG	CA	3567	1/1	0.93	0.17	49,49,49,49	0
58	MG	CA	3569	1/1	0.93	0.11	54,54,54,54	0
58	MG	AA	3430	1/1	0.93	0.08	25,25,25,25	0
58	MG	AA	3552	1/1	0.93	0.13	51,51,51,51	0
58	MG	AP	203	1/1	0.93	0.10	41,41,41,41	0
58	MG	CA	3332	1/1	0.93	0.10	50,50,50,50	0
58	MG	CA	3117	1/1	0.93	0.32	73,73,73,73	0
58	MG	AA	3639	1/1	0.93	0.17	71,71,71,71	0
58	MG	AV	205	1/1	0.93	0.07	37,37,37,37	0
58	MG	CA	3121	1/1	0.93	0.24	60,60,60,60	0
58	MG	AA	3317	1/1	0.93	0.14	57,57,57,57	0
58	MG	AA	3082	1/1	0.93	0.10	38,38,38,38	0
58	MG	BA	3202	1/1	0.93	0.10	62,62,62,62	0
58	MG	CA	3352	1/1	0.93	0.08	46,46,46,46	0
58	MG	A1	101	1/1	0.93	0.10	54,54,54,54	0
58	MG	DA	1717	1/1	0.93	0.13	74,74,74,74	0
58	MG	CA	3357	1/1	0.93	0.16	57,57,57,57	0
58	MG	A2	3001	1/1	0.93	0.08	50,50,50,50	0
58	MG	CA	3595	1/1	0.93	0.08	69,69,69,69	0
58	MG	DA	1721	1/1	0.93	0.12	65,65,65,65	0
58	MG	CA	3359	1/1	0.93	0.11	44,44,44,44	0
58	MG	BA	3085	1/1	0.93	0.18	49,49,49,49	0
58	MG	CA	3362	1/1	0.93	0.16	57,57,57,57	0
58	MG	DA	1726	1/1	0.93	0.08	61,61,61,61	0
58	MG	CA	3601	1/1	0.93	0.07	73,73,73,73	0
58	MG	CA	3364	1/1	0.93	0.10	65,65,65,65	0
58	MG	CA	3605	1/1	0.93	0.12	63,63,63,63	0
58	MG	DA	1731	1/1	0.93	0.14	82,82,82,82	0
58	MG	CA	3366	1/1	0.93	0.10	47,47,47,47	0
58	MG	AA	3194	1/1	0.93	0.18	60,60,60,60	0
58	MG	AA	3325	1/1	0.93	0.08	65,65,65,65	0
58	MG	CA	3132	1/1	0.93	0.15	61,61,61,61	0
58	MG	AA	3101	1/1	0.93	0.16	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3211	1/1	0.93	0.10	59,59,59,59	0
58	MG	AA	3760	1/1	0.93	0.08	27,27,27,27	0
58	MG	A7	104	1/1	0.93	0.16	44,44,44,44	1
58	MG	AA	3761	1/1	0.93	0.10	48,48,48,48	0
58	MG	A9	502	1/1	0.93	0.22	58,58,58,58	0
58	MG	BA	3001	1/1	0.93	0.09	55,55,55,55	0
58	MG	DA	1747	1/1	0.93	0.20	78,78,78,78	0
58	MG	BA	3097	1/1	0.93	0.18	66,66,66,66	0
58	MG	AA	3332	1/1	0.93	0.10	44,44,44,44	0
58	MG	AA	3765	1/1	0.93	0.15	61,61,61,61	0
58	MG	BA	3100	1/1	0.93	0.21	74,74,74,74	0
58	MG	AA	3134	1/1	0.93	0.17	67,67,67,67	0
58	MG	DA	1755	1/1	0.93	0.20	71,71,71,71	0
58	MG	DA	1757	1/1	0.93	0.12	73,73,73,73	0
58	MG	DA	1759	1/1	0.93	0.08	64,64,64,64	0
58	MG	CA	3394	1/1	0.93	0.06	84,84,84,84	0
58	MG	BX	102	1/1	0.93	0.16	67,67,67,67	0
58	MG	AA	3103	1/1	0.93	0.21	48,48,48,48	0
58	MG	CA	3636	1/1	0.93	0.16	65,65,65,65	0
58	MG	CA	3637	1/1	0.93	0.09	79,79,79,79	0
58	MG	AA	3769	1/1	0.93	0.17	56,56,56,56	0
58	MG	DE	201	1/1	0.93	0.12	82,82,82,82	0
58	MG	BA	3008	1/1	0.93	0.13	61,61,61,61	0
58	MG	AA	3771	1/1	0.93	0.18	38,38,38,38	1
58	MG	AA	3655	1/1	0.93	0.11	59,59,59,59	0
58	MG	AA	3447	1/1	0.93	0.23	75,75,75,75	0
58	MG	AA	3253	1/1	0.93	0.12	65,65,65,65	0
58	MG	CA	3167	1/1	0.93	0.18	43,43,43,43	0
58	MG	CA	3168	1/1	0.93	0.14	58,58,58,58	0
58	MG	DZ	703	1/1	0.93	0.08	56,56,56,56	0
58	MG	AA	3083	1/1	0.93	0.10	27,27,27,27	1
60	ZN	C4	501	1/1	0.93	0.06	192,192,192,192	0
58	MG	AA	3453	1/1	0.93	0.14	54,54,54,54	0
58	MG	AA	3543	1/1	0.94	0.12	62,62,62,62	0
58	MG	CA	3414	1/1	0.94	0.08	39,39,39,39	0
58	MG	CA	3415	1/1	0.94	0.10	52,52,52,52	0
58	MG	AA	3544	1/1	0.94	0.12	52,52,52,52	0
58	MG	CA	3014	1/1	0.94	0.16	62,62,62,62	0
58	MG	CA	3661	1/1	0.94	0.15	60,60,60,60	0
58	MG	AA	3546	1/1	0.94	0.08	53,53,53,53	1
58	MG	CA	3665	1/1	0.94	0.15	55,55,55,55	0
58	MG	CA	3666	1/1	0.94	0.23	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3049	1/1	0.94	0.10	51,51,51,51	0
58	MG	AA	3191	1/1	0.94	0.14	44,44,44,44	0
58	MG	AA	3436	1/1	0.94	0.08	52,52,52,52	0
58	MG	AA	3144	1/1	0.94	0.16	47,47,47,47	0
58	MG	CA	3431	1/1	0.94	0.20	51,51,51,51	0
58	MG	CA	3184	1/1	0.94	0.27	85,85,85,85	0
58	MG	AA	3438	1/1	0.94	0.05	19,19,19,19	0
58	MG	CA	3435	1/1	0.94	0.08	28,28,28,28	0
58	MG	CB	3010	1/1	0.94	0.09	53,53,53,53	0
58	MG	CA	3436	1/1	0.94	0.07	53,53,53,53	0
58	MG	BA	3113	1/1	0.94	0.14	60,60,60,60	0
58	MG	CA	3032	1/1	0.94	0.25	67,67,67,67	0
58	MG	CA	3033	1/1	0.94	0.21	88,88,88,88	0
58	MG	CE	303	1/1	0.94	0.18	53,53,53,53	0
58	MG	AA	3572	1/1	0.94	0.10	49,49,49,49	0
58	MG	CA	3457	1/1	0.94	0.15	58,58,58,58	0
58	MG	CA	3035	1/1	0.94	0.17	58,58,58,58	0
58	MG	CA	3036	1/1	0.94	0.09	42,42,42,42	0
58	MG	CF	303	1/1	0.94	0.10	50,50,50,50	0
58	MG	CA	3197	1/1	0.94	0.23	63,63,63,63	0
58	MG	CA	3470	1/1	0.94	0.13	69,69,69,69	0
58	MG	AA	3244	1/1	0.94	0.23	69,69,69,69	0
58	MG	AA	3783	1/1	0.94	0.10	52,52,52,52	0
58	MG	AA	3661	1/1	0.94	0.21	43,43,43,43	0
58	MG	AA	3145	1/1	0.94	0.05	38,38,38,38	0
58	MG	BA	3121	1/1	0.94	0.08	59,59,59,59	0
58	MG	CU	3001	1/1	0.94	0.23	91,91,91,91	0
58	MG	AA	3665	1/1	0.94	0.14	83,83,83,83	0
58	MG	C1	101	1/1	0.94	0.10	67,67,67,67	0
58	MG	C8	5001	1/1	0.94	0.17	48,48,48,48	0
58	MG	AA	3063	1/1	0.94	0.28	66,66,66,66	0
58	MG	AA	3790	1/1	0.94	0.09	48,48,48,48	0
58	MG	CA	3208	1/1	0.94	0.18	69,69,69,69	0
58	MG	BA	3019	1/1	0.94	0.14	55,55,55,55	0
58	MG	BA	3130	1/1	0.94	0.08	49,49,49,49	0
58	MG	AA	3669	1/1	0.94	0.07	34,34,34,34	0
58	MG	DA	1608	1/1	0.94	0.12	58,58,58,58	0
58	MG	CA	3213	1/1	0.94	0.12	68,68,68,68	0
58	MG	CA	3214	1/1	0.94	0.16	43,43,43,43	0
58	MG	AA	3195	1/1	0.94	0.12	43,43,43,43	0
58	MG	AA	3342	1/1	0.94	0.07	4,4,4,4	0
58	MG	CA	3218	1/1	0.94	0.10	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3491	1/1	0.94	0.13	65,65,65,65	0
58	MG	CA	3222	1/1	0.94	0.13	53,53,53,53	0
58	MG	AA	3583	1/1	0.94	0.18	64,64,64,64	0
58	MG	DA	1623	1/1	0.94	0.26	77,77,77,77	0
58	MG	CA	3224	1/1	0.94	0.14	64,64,64,64	0
58	MG	BA	3024	1/1	0.94	0.24	63,63,63,63	0
58	MG	AA	3587	1/1	0.94	0.09	59,59,59,59	0
58	MG	BA	3026	1/1	0.94	0.21	57,57,57,57	0
58	MG	AA	3676	1/1	0.94	0.15	64,64,64,64	0
58	MG	AA	3588	1/1	0.94	0.20	54,54,54,54	0
58	MG	AA	3149	1/1	0.94	0.16	67,67,67,67	0
58	MG	AA	3197	1/1	0.94	0.17	49,49,49,49	0
58	MG	BA	3032	1/1	0.94	0.09	47,47,47,47	0
58	MG	AA	3014	1/1	0.94	0.12	44,44,44,44	0
58	MG	CA	3069	1/1	0.94	0.13	56,56,56,56	0
58	MG	AA	3685	1/1	0.94	0.10	47,47,47,47	0
58	MG	AA	3809	1/1	0.94	0.16	60,60,60,60	0
58	MG	BA	3036	1/1	0.94	0.24	72,72,72,72	0
58	MG	AA	3085	1/1	0.94	0.10	30,30,30,30	0
58	MG	DA	1643	1/1	0.94	0.11	55,55,55,55	0
58	MG	DA	1646	1/1	0.94	0.16	57,57,57,57	0
58	MG	CA	3076	1/1	0.94	0.25	69,69,69,69	0
58	MG	CA	3518	1/1	0.94	0.07	61,61,61,61	0
58	MG	CA	3519	1/1	0.94	0.16	62,62,62,62	0
58	MG	AA	3268	1/1	0.94	0.29	61,61,61,61	0
58	MG	AA	3355	1/1	0.94	0.06	57,57,57,57	0
58	MG	BA	3042	1/1	0.94	0.10	69,69,69,69	0
58	MG	AA	3817	1/1	0.94	0.21	57,57,57,57	0
58	MG	CA	3524	1/1	0.94	0.11	54,54,54,54	0
58	MG	AA	3115	1/1	0.94	0.09	15,15,15,15	0
58	MG	AA	3698	1/1	0.94	0.09	62,62,62,62	0
58	MG	DA	1660	1/1	0.94	0.10	70,70,70,70	0
58	MG	AA	3160	1/1	0.94	0.20	50,50,50,50	0
58	MG	CA	3259	1/1	0.94	0.23	56,56,56,56	0
58	MG	AA	3603	1/1	0.94	0.08	35,35,35,35	0
58	MG	BA	3050	1/1	0.94	0.23	67,67,67,67	0
58	MG	AA	3464	1/1	0.94	0.15	59,59,59,59	0
58	MG	CA	3536	1/1	0.94	0.10	75,75,75,75	0
58	MG	BA	3175	1/1	0.94	0.15	78,78,78,78	0
58	MG	DA	1669	1/1	0.94	0.07	73,73,73,73	0
58	MG	CA	3092	1/1	0.94	0.26	107,107,107,107	0
58	MG	CA	3093	1/1	0.94	0.12	68,68,68,68	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AB	3005	1/1	0.94	0.17	67,67,67,67	0
58	MG	AA	3468	1/1	0.94	0.11	51,51,51,51	0
58	MG	CA	3542	1/1	0.94	0.10	82,82,82,82	0
58	MG	AA	3204	1/1	0.94	0.12	55,55,55,55	0
58	MG	CA	3544	1/1	0.94	0.10	66,66,66,66	0
58	MG	AA	3055	1/1	0.94	0.15	34,34,34,34	0
58	MG	AB	3016	1/1	0.94	0.09	33,33,33,33	0
58	MG	CA	3290	1/1	0.94	0.11	53,53,53,53	0
58	MG	AA	3609	1/1	0.94	0.09	71,71,71,71	0
58	MG	CA	3293	1/1	0.94	0.07	26,26,26,26	0
58	MG	AA	3021	1/1	0.94	0.11	39,39,39,39	0
58	MG	CA	3552	1/1	0.94	0.07	34,34,34,34	0
58	MG	CA	3295	1/1	0.94	0.08	69,69,69,69	0
58	MG	AA	3714	1/1	0.94	0.15	55,55,55,55	1
58	MG	CA	3556	1/1	0.94	0.20	66,66,66,66	0
58	MG	AA	3715	1/1	0.94	0.17	54,54,54,54	0
58	MG	DA	1694	1/1	0.94	0.20	65,65,65,65	0
58	MG	CA	3559	1/1	0.94	0.08	75,75,75,75	0
58	MG	CA	3300	1/1	0.94	0.15	66,66,66,66	0
58	MG	AA	3372	1/1	0.94	0.20	61,61,61,61	0
58	MG	BA	3189	1/1	0.94	0.09	66,66,66,66	0
58	MG	CA	3566	1/1	0.94	0.13	41,41,41,41	1
58	MG	DA	1701	1/1	0.94	0.17	64,64,64,64	0
58	MG	AA	3045	1/1	0.94	0.45	43,43,43,43	0
58	MG	CA	3112	1/1	0.94	0.09	70,70,70,70	0
58	MG	CA	3113	1/1	0.94	0.13	60,60,60,60	0
58	MG	AA	3482	1/1	0.94	0.11	64,64,64,64	0
58	MG	CA	3575	1/1	0.94	0.07	78,78,78,78	0
58	MG	CA	3331	1/1	0.94	0.13	43,43,43,43	0
58	MG	BA	3193	1/1	0.94	0.10	70,70,70,70	0
58	MG	AA	3213	1/1	0.94	0.14	50,50,50,50	1
58	MG	DA	1712	1/1	0.94	0.08	51,51,51,51	0
58	MG	DA	1713	1/1	0.94	0.15	74,74,74,74	0
58	MG	AD	303	1/1	0.94	0.13	70,70,70,70	0
58	MG	DA	1716	1/1	0.94	0.10	75,75,75,75	0
58	MG	AA	3175	1/1	0.94	0.22	60,60,60,60	0
58	MG	CA	3120	1/1	0.94	0.17	127,127,127,127	0
58	MG	CA	3342	1/1	0.94	0.12	69,69,69,69	0
58	MG	AA	3490	1/1	0.94	0.06	50,50,50,50	0
58	MG	CA	3345	1/1	0.94	0.14	87,87,87,87	0
58	MG	DA	1722	1/1	0.94	0.08	58,58,58,58	0
58	MG	AA	3399	1/1	0.94	0.13	39,39,39,39	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3176	1/1	0.94	0.10	49,49,49,49	0
58	MG	AA	3411	1/1	0.94	0.08	41,41,41,41	0
58	MG	AE	302	1/1	0.94	0.15	68,68,68,68	0
58	MG	AF	302	1/1	0.94	0.21	31,31,31,31	1
58	MG	AA	3128	1/1	0.94	0.16	71,71,71,71	0
58	MG	CA	3597	1/1	0.94	0.12	51,51,51,51	0
58	MG	AA	3739	1/1	0.94	0.17	74,74,74,74	0
58	MG	AG	202	1/1	0.94	0.07	73,73,73,73	0
58	MG	CA	3131	1/1	0.94	0.25	70,70,70,70	0
58	MG	AH	3001	1/1	0.94	0.18	50,50,50,50	0
58	MG	CA	3604	1/1	0.94	0.07	74,74,74,74	0
58	MG	AA	3500	1/1	0.94	0.09	55,55,55,55	0
58	MG	AA	3741	1/1	0.94	0.11	45,45,45,45	0
58	MG	CA	3368	1/1	0.94	0.19	64,64,64,64	0
58	MG	AA	3743	1/1	0.94	0.13	80,80,80,80	0
58	MG	CA	3609	1/1	0.94	0.12	64,64,64,64	0
58	MG	AQ	202	1/1	0.94	0.06	29,29,29,29	0
58	MG	AA	3509	1/1	0.94	0.14	48,48,48,48	0
58	MG	CA	3612	1/1	0.94	0.19	74,74,74,74	0
58	MG	AA	3747	1/1	0.94	0.14	62,62,62,62	0
58	MG	AW	3001	1/1	0.94	0.20	50,50,50,50	0
58	MG	AW	3004	1/1	0.94	0.21	64,64,64,64	0
58	MG	CA	3144	1/1	0.94	0.28	56,56,56,56	0
58	MG	CA	3621	1/1	0.94	0.20	65,65,65,65	0
58	MG	CA	3145	1/1	0.94	0.20	66,66,66,66	0
58	MG	CA	3381	1/1	0.94	0.12	68,68,68,68	0
58	MG	AA	3286	1/1	0.94	0.07	53,53,53,53	0
58	MG	AA	3419	1/1	0.94	0.12	26,26,26,26	0
58	MG	CA	3626	1/1	0.94	0.08	62,62,62,62	0
58	MG	AA	3632	1/1	0.94	0.09	45,45,45,45	0
58	MG	CA	3150	1/1	0.94	0.13	63,63,63,63	0
58	MG	AA	3754	1/1	0.94	0.07	40,40,40,40	0
58	MG	AA	3179	1/1	0.94	0.17	78,78,78,78	0
58	MG	A5	101	1/1	0.94	0.10	43,43,43,43	1
58	MG	AA	3108	1/1	0.94	0.13	74,74,74,74	0
58	MG	BX	105	1/1	0.94	0.12	78,78,78,78	0
58	MG	A6	101	1/1	0.94	0.11	64,64,64,64	0
58	MG	AA	3184	1/1	0.94	0.07	36,36,36,36	0
58	MG	DL	3002	1/1	0.94	0.08	74,74,74,74	0
58	MG	CA	3402	1/1	0.94	0.14	67,67,67,67	0
58	MG	AA	3529	1/1	0.94	0.09	28,28,28,28	0
58	MG	CA	3162	1/1	0.94	0.18	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3165	1/1	0.94	0.13	41,41,41,41	0
58	MG	CA	3001	1/1	0.94	0.21	71,71,71,71	0
58	MG	AA	3429	1/1	0.94	0.17	42,42,42,42	0
58	MG	AA	3078	1/1	0.94	0.14	49,49,49,49	0
58	MG	BB	3001	1/1	0.95	0.24	76,76,76,76	0
58	MG	AA	3734	1/1	0.95	0.16	65,65,65,65	0
58	MG	BF	3001	1/1	0.95	0.23	71,71,71,71	0
58	MG	AA	3735	1/1	0.95	0.10	21,21,21,21	0
58	MG	CA	3399	1/1	0.95	0.09	63,63,63,63	0
58	MG	CA	3651	1/1	0.95	0.16	51,51,51,51	0
58	MG	AF	308	1/1	0.95	0.07	55,55,55,55	0
58	MG	AG	201	1/1	0.95	0.09	49,49,49,49	0
58	MG	AA	3158	1/1	0.95	0.09	35,35,35,35	0
58	MG	AA	3358	1/1	0.95	0.10	61,61,61,61	0
58	MG	CA	3658	1/1	0.95	0.18	50,50,50,50	0
58	MG	CA	3659	1/1	0.95	0.22	104,104,104,104	0
58	MG	AA	3262	1/1	0.95	0.15	49,49,49,49	0
58	MG	CA	3158	1/1	0.95	0.10	54,54,54,54	0
58	MG	AA	3484	1/1	0.95	0.12	35,35,35,35	0
58	MG	AP	201	1/1	0.95	0.17	66,66,66,66	0
58	MG	AA	3623	1/1	0.95	0.06	43,43,43,43	0
58	MG	CA	3163	1/1	0.95	0.13	45,45,45,45	0
58	MG	BA	3087	1/1	0.95	0.12	70,70,70,70	0
58	MG	AQ	201	1/1	0.95	0.27	51,51,51,51	0
58	MG	CA	3418	1/1	0.95	0.10	39,39,39,39	0
58	MG	AA	3263	1/1	0.95	0.33	71,71,71,71	0
58	MG	BX	106	1/1	0.95	0.07	55,55,55,55	0
58	MG	CA	3423	1/1	0.95	0.12	54,54,54,54	0
58	MG	AU	201	1/1	0.95	0.11	44,44,44,44	0
58	MG	CB	3011	1/1	0.95	0.21	51,51,51,51	0
58	MG	BA	3091	1/1	0.95	0.25	72,72,72,72	0
58	MG	AA	3048	1/1	0.95	0.11	33,33,33,33	0
58	MG	BX	110	1/1	0.95	0.08	57,57,57,57	0
58	MG	AV	204	1/1	0.95	0.18	37,37,37,37	0
58	MG	CE	301	1/1	0.95	0.15	64,64,64,64	0
58	MG	CA	3178	1/1	0.95	0.10	34,34,34,34	0
58	MG	AA	3125	1/1	0.95	0.16	63,63,63,63	0
58	MG	CE	305	1/1	0.95	0.10	41,41,41,41	0
58	MG	CA	3434	1/1	0.95	0.10	68,68,68,68	0
58	MG	CA	3003	1/1	0.95	0.20	44,44,44,44	0
58	MG	AA	3164	1/1	0.95	0.16	37,37,37,37	0
58	MG	CF	302	1/1	0.95	0.22	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3182	1/1	0.95	0.11	47,47,47,47	0
58	MG	CA	3441	1/1	0.95	0.19	56,56,56,56	0
58	MG	CA	3183	1/1	0.95	0.11	25,25,25,25	0
58	MG	CA	3005	1/1	0.95	0.23	56,56,56,56	0
58	MG	CA	3449	1/1	0.95	0.08	42,42,42,42	0
58	MG	CA	3006	1/1	0.95	0.09	65,65,65,65	0
58	MG	AA	3365	1/1	0.95	0.11	54,54,54,54	0
58	MG	CQ	203	1/1	0.95	0.09	59,59,59,59	0
58	MG	CA	3459	1/1	0.95	0.06	48,48,48,48	0
58	MG	CR	201	1/1	0.95	0.07	51,51,51,51	0
58	MG	CA	3010	1/1	0.95	0.09	40,40,40,40	0
58	MG	CA	3463	1/1	0.95	0.08	50,50,50,50	0
58	MG	CA	3464	1/1	0.95	0.15	47,47,47,47	0
58	MG	AX	101	1/1	0.95	0.23	72,72,72,72	0
58	MG	CA	3467	1/1	0.95	0.09	54,54,54,54	0
58	MG	CA	3191	1/1	0.95	0.14	84,84,84,84	0
58	MG	AA	3750	1/1	0.95	0.06	14,14,14,14	0
58	MG	CA	3471	1/1	0.95	0.10	69,69,69,69	0
58	MG	CA	3016	1/1	0.95	0.18	79,79,79,79	0
58	MG	AA	3366	1/1	0.95	0.06	52,52,52,52	0
58	MG	A0	105	1/1	0.95	0.08	36,36,36,36	0
58	MG	AA	3367	1/1	0.95	0.08	50,50,50,50	0
58	MG	CA	3021	1/1	0.95	0.09	27,27,27,27	0
58	MG	DA	1612	1/1	0.95	0.07	38,38,38,38	0
58	MG	AA	3127	1/1	0.95	0.16	52,52,52,52	0
58	MG	DA	1614	1/1	0.95	0.19	70,70,70,70	0
58	MG	AA	3167	1/1	0.95	0.18	29,29,29,29	0
58	MG	AA	3168	1/1	0.95	0.10	64,64,64,64	0
58	MG	AA	3169	1/1	0.95	0.22	61,61,61,61	0
58	MG	AA	3637	1/1	0.95	0.17	64,64,64,64	0
58	MG	AA	3385	1/1	0.95	0.08	28,28,28,28	0
58	MG	DA	1622	1/1	0.95	0.06	42,42,42,42	0
58	MG	CA	3207	1/1	0.95	0.21	55,55,55,55	0
58	MG	AA	3033	1/1	0.95	0.28	34,34,34,34	0
58	MG	AA	3523	1/1	0.95	0.12	27,27,27,27	0
58	MG	DA	1627	1/1	0.95	0.21	48,48,48,48	0
58	MG	BA	3111	1/1	0.95	0.33	72,72,72,72	0
58	MG	CA	3037	1/1	0.95	0.11	57,57,57,57	0
58	MG	AA	3764	1/1	0.95	0.12	54,54,54,54	0
58	MG	AA	3210	1/1	0.95	0.18	63,63,63,63	0
58	MG	BA	3114	1/1	0.95	0.22	55,55,55,55	0
58	MG	AA	3643	1/1	0.95	0.10	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3217	1/1	0.95	0.11	66,66,66,66	0
58	MG	AA	3173	1/1	0.95	0.23	71,71,71,71	0
58	MG	CA	3219	1/1	0.95	0.25	52,52,52,52	0
58	MG	CA	3221	1/1	0.95	0.10	76,76,76,76	0
58	MG	BA	3003	1/1	0.95	0.07	51,51,51,51	0
58	MG	AA	3646	1/1	0.95	0.11	57,57,57,57	0
58	MG	AA	3770	1/1	0.95	0.32	39,39,39,39	0
58	MG	CA	3505	1/1	0.95	0.07	60,60,60,60	0
58	MG	DA	1644	1/1	0.95	0.18	64,64,64,64	0
58	MG	DA	1645	1/1	0.95	0.19	61,61,61,61	0
58	MG	AA	3531	1/1	0.95	0.06	52,52,52,52	0
58	MG	DA	1647	1/1	0.95	0.07	49,49,49,49	0
58	MG	CA	3226	1/1	0.95	0.21	64,64,64,64	0
58	MG	DA	1649	1/1	0.95	0.11	60,60,60,60	0
58	MG	AA	3532	1/1	0.95	0.14	60,60,60,60	0
58	MG	AA	3034	1/1	0.95	0.15	56,56,56,56	0
58	MG	CA	3052	1/1	0.95	0.24	69,69,69,69	0
58	MG	CA	3512	1/1	0.95	0.07	64,64,64,64	0
58	MG	BA	3009	1/1	0.95	0.19	58,58,58,58	0
58	MG	CA	3234	1/1	0.95	0.14	58,58,58,58	0
58	MG	BA	3127	1/1	0.95	0.11	50,50,50,50	0
58	MG	CA	3236	1/1	0.95	0.11	52,52,52,52	0
58	MG	AA	3215	1/1	0.95	0.09	56,56,56,56	0
58	MG	CA	3056	1/1	0.95	0.15	61,61,61,61	0
58	MG	AA	3280	1/1	0.95	0.10	46,46,46,46	0
58	MG	AA	3281	1/1	0.95	0.23	60,60,60,60	0
58	MG	BA	3132	1/1	0.95	0.14	61,61,61,61	0
58	MG	BA	3133	1/1	0.95	0.09	68,68,68,68	0
58	MG	CA	3061	1/1	0.95	0.26	74,74,74,74	0
58	MG	CA	3062	1/1	0.95	0.28	65,65,65,65	0
58	MG	AA	3131	1/1	0.95	0.11	36,36,36,36	0
58	MG	AA	3052	1/1	0.95	0.30	63,63,63,63	0
58	MG	AA	3550	1/1	0.95	0.07	52,52,52,52	0
58	MG	BA	3138	1/1	0.95	0.14	62,62,62,62	0
58	MG	AA	3012	1/1	0.95	0.17	34,34,34,34	0
58	MG	BA	3141	1/1	0.95	0.09	49,49,49,49	0
58	MG	AA	3224	1/1	0.95	0.11	26,26,26,26	0
58	MG	AA	3792	1/1	0.95	0.10	27,27,27,27	0
58	MG	CA	3258	1/1	0.95	0.12	40,40,40,40	0
58	MG	AA	3295	1/1	0.95	0.13	46,46,46,46	0
58	MG	CA	3073	1/1	0.95	0.12	53,53,53,53	0
58	MG	DA	1681	1/1	0.95	0.15	46,46,46,46	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3261	1/1	0.95	0.11	47,47,47,47	0
58	MG	CA	3264	1/1	0.95	0.06	60,60,60,60	0
58	MG	CA	3269	1/1	0.95	0.12	54,54,54,54	0
58	MG	AA	3563	1/1	0.95	0.11	49,49,49,49	1
58	MG	AA	3297	1/1	0.95	0.05	20,20,20,20	0
58	MG	AA	3797	1/1	0.95	0.08	39,39,39,39	0
58	MG	BA	3151	1/1	0.95	0.12	63,63,63,63	0
58	MG	CA	3277	1/1	0.95	0.07	42,42,42,42	0
58	MG	CA	3278	1/1	0.95	0.07	48,48,48,48	0
58	MG	AA	3569	1/1	0.95	0.06	15,15,15,15	0
58	MG	CA	3282	1/1	0.95	0.07	31,31,31,31	0
58	MG	AA	3298	1/1	0.95	0.10	57,57,57,57	0
58	MG	BA	3156	1/1	0.95	0.09	36,36,36,36	0
58	MG	AA	3303	1/1	0.95	0.09	53,53,53,53	0
58	MG	AA	3309	1/1	0.95	0.12	44,44,44,44	0
58	MG	CA	3087	1/1	0.95	0.16	35,35,35,35	0
58	MG	DA	1702	1/1	0.95	0.15	73,73,73,73	0
58	MG	CA	3289	1/1	0.95	0.14	51,51,51,51	0
58	MG	AA	3225	1/1	0.95	0.10	34,34,34,34	0
58	MG	AA	3805	1/1	0.95	0.18	40,40,40,40	1
58	MG	AA	3316	1/1	0.95	0.16	59,59,59,59	0
58	MG	AA	3138	1/1	0.95	0.10	54,54,54,54	0
58	MG	AA	3581	1/1	0.95	0.07	27,27,27,27	0
58	MG	BA	3165	1/1	0.95	0.08	61,61,61,61	0
58	MG	CA	3571	1/1	0.95	0.09	77,77,77,77	0
58	MG	AA	3140	1/1	0.95	0.05	56,56,56,56	0
58	MG	CA	3299	1/1	0.95	0.22	54,54,54,54	0
58	MG	AA	3231	1/1	0.95	0.16	41,41,41,41	0
58	MG	AA	3445	1/1	0.95	0.10	59,59,59,59	0
58	MG	CA	3303	1/1	0.95	0.07	45,45,45,45	0
58	MG	AA	3142	1/1	0.95	0.08	41,41,41,41	0
58	MG	AA	3693	1/1	0.95	0.17	60,60,60,60	0
58	MG	AA	3591	1/1	0.95	0.10	66,66,66,66	0
58	MG	AA	3696	1/1	0.95	0.21	76,76,76,76	0
58	MG	AA	3448	1/1	0.95	0.06	17,17,17,17	0
58	MG	CA	3326	1/1	0.95	0.07	39,39,39,39	0
58	MG	CA	3329	1/1	0.95	0.07	57,57,57,57	0
58	MG	BA	3044	1/1	0.95	0.09	56,56,56,56	0
58	MG	AA	3328	1/1	0.95	0.05	17,17,17,17	0
58	MG	BA	3178	1/1	0.95	0.10	63,63,63,63	0
58	MG	CA	3594	1/1	0.95	0.17	74,74,74,74	0
58	MG	AA	3451	1/1	0.95	0.12	53,53,53,53	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	BA	3180	1/1	0.95	0.07	41,41,41,41	0
58	MG	AA	3074	1/1	0.95	0.16	59,59,59,59	0
58	MG	AA	3235	1/1	0.95	0.10	54,54,54,54	0
58	MG	CA	3599	1/1	0.95	0.10	69,69,69,69	0
58	MG	DA	1735	1/1	0.95	0.10	70,70,70,70	0
58	MG	BA	3049	1/1	0.95	0.07	36,36,36,36	0
58	MG	AA	3097	1/1	0.95	0.13	61,61,61,61	0
58	MG	CA	3347	1/1	0.95	0.07	33,33,33,33	0
58	MG	CA	3603	1/1	0.95	0.06	48,48,48,48	0
58	MG	AB	3010	1/1	0.95	0.10	51,51,51,51	1
58	MG	DA	1741	1/1	0.95	0.19	68,68,68,68	0
58	MG	AA	3707	1/1	0.95	0.16	31,31,31,31	1
58	MG	AA	3187	1/1	0.95	0.06	36,36,36,36	0
58	MG	DA	1745	1/1	0.95	0.10	69,69,69,69	0
58	MG	CA	3354	1/1	0.95	0.08	46,46,46,46	0
58	MG	AA	3056	1/1	0.95	0.12	61,61,61,61	0
58	MG	DA	1748	1/1	0.95	0.18	66,66,66,66	0
58	MG	BA	3190	1/1	0.95	0.18	89,89,89,89	0
58	MG	DA	1750	1/1	0.95	0.10	71,71,71,71	0
58	MG	AA	3004	1/1	0.95	0.11	24,24,24,24	0
58	MG	AA	3462	1/1	0.95	0.13	70,70,70,70	0
58	MG	AA	3042	1/1	0.95	0.07	36,36,36,36	0
58	MG	AA	3716	1/1	0.95	0.06	63,63,63,63	0
58	MG	CA	3615	1/1	0.95	0.19	65,65,65,65	0
58	MG	AA	3466	1/1	0.95	0.09	59,59,59,59	0
58	MG	DA	1758	1/1	0.95	0.14	64,64,64,64	0
58	MG	AA	3155	1/1	0.95	0.19	48,48,48,48	0
58	MG	AA	3474	1/1	0.95	0.08	50,50,50,50	0
58	MG	AA	3023	1/1	0.95	0.10	37,37,37,37	0
58	MG	AA	3726	1/1	0.95	0.08	37,37,37,37	0
58	MG	AA	3250	1/1	0.95	0.12	62,62,62,62	0
58	MG	AA	3728	1/1	0.95	0.09	48,48,48,48	0
58	MG	BA	3066	1/1	0.95	0.17	53,53,53,53	0
58	MG	DD	502	1/1	0.95	0.17	61,61,61,61	0
58	MG	CA	3137	1/1	0.95	0.10	51,51,51,51	0
58	MG	AD	310	1/1	0.95	0.13	44,44,44,44	0
58	MG	AA	3252	1/1	0.95	0.10	46,46,46,46	0
58	MG	BA	3207	1/1	0.95	0.10	66,66,66,66	0
58	MG	AA	3730	1/1	0.95	0.07	38,38,38,38	0
58	MG	CA	3142	1/1	0.95	0.18	54,54,54,54	0
58	MG	AE	301	1/1	0.95	0.06	19,19,19,19	0
58	MG	AA	3615	1/1	0.95	0.06	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AE	305	1/1	0.95	0.08	29,29,29,29	0
58	MG	AA	3733	1/1	0.95	0.08	66,66,66,66	0
58	MG	CA	3391	1/1	0.95	0.04	61,61,61,61	0
58	MG	CA	3147	1/1	0.95	0.16	58,58,58,58	0
60	ZN	DN	501	1/1	0.95	0.07	127,127,127,127	0
58	MG	CA	3393	1/1	0.95	0.08	35,35,35,35	0
58	MG	CA	3469	1/1	0.96	0.08	61,61,61,61	0
58	MG	AA	3585	1/1	0.96	0.09	63,63,63,63	0
58	MG	CD	303	1/1	0.96	0.07	35,35,35,35	0
58	MG	AA	3586	1/1	0.96	0.10	65,65,65,65	0
58	MG	AB	3015	1/1	0.96	0.06	38,38,38,38	0
58	MG	AA	3178	1/1	0.96	0.20	61,61,61,61	0
58	MG	CA	3474	1/1	0.96	0.06	52,52,52,52	0
58	MG	AA	3701	1/1	0.96	0.10	33,33,33,33	0
58	MG	AA	3702	1/1	0.96	0.18	46,46,46,46	1
58	MG	AA	3153	1/1	0.96	0.12	67,67,67,67	0
58	MG	AA	3080	1/1	0.96	0.14	33,33,33,33	0
58	MG	AA	3267	1/1	0.96	0.11	49,49,49,49	0
58	MG	AA	3706	1/1	0.96	0.19	29,29,29,29	1
58	MG	AA	3456	1/1	0.96	0.06	32,32,32,32	0
58	MG	CA	3251	1/1	0.96	0.07	47,47,47,47	0
58	MG	AA	3457	1/1	0.96	0.13	65,65,65,65	0
58	MG	CA	3254	1/1	0.96	0.18	63,63,63,63	0
58	MG	AA	3081	1/1	0.96	0.09	56,56,56,56	0
58	MG	CA	3256	1/1	0.96	0.13	40,40,40,40	0
58	MG	AD	306	1/1	0.96	0.09	41,41,41,41	0
58	MG	AA	3059	1/1	0.96	0.13	49,49,49,49	0
58	MG	CA	3104	1/1	0.96	0.13	60,60,60,60	0
58	MG	CU	3002	1/1	0.96	0.15	63,63,63,63	0
58	MG	AA	3350	1/1	0.96	0.08	32,32,32,32	0
58	MG	C0	101	1/1	0.96	0.10	64,64,64,64	0
58	MG	CA	3492	1/1	0.96	0.10	52,52,52,52	0
58	MG	C7	101	1/1	0.96	0.07	47,47,47,47	0
58	MG	AA	3599	1/1	0.96	0.10	52,52,52,52	0
58	MG	DA	1601	1/1	0.96	0.14	59,59,59,59	0
58	MG	CA	3107	1/1	0.96	0.08	54,54,54,54	0
58	MG	CA	3265	1/1	0.96	0.13	55,55,55,55	0
58	MG	CA	3266	1/1	0.96	0.10	58,58,58,58	0
58	MG	AA	3132	1/1	0.96	0.15	53,53,53,53	0
58	MG	CA	3109	1/1	0.96	0.15	59,59,59,59	0
58	MG	CA	3111	1/1	0.96	0.12	62,62,62,62	0
58	MG	AA	3035	1/1	0.96	0.13	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3503	1/1	0.96	0.11	49,49,49,49	1
58	MG	BA	3201	1/1	0.96	0.11	68,68,68,68	0
58	MG	CA	3276	1/1	0.96	0.07	51,51,51,51	0
58	MG	AA	3602	1/1	0.96	0.22	47,47,47,47	0
58	MG	CA	3507	1/1	0.96	0.10	71,71,71,71	0
58	MG	CA	3115	1/1	0.96	0.19	37,37,37,37	0
58	MG	AA	3189	1/1	0.96	0.07	11,11,11,11	0
58	MG	CA	3280	1/1	0.96	0.10	38,38,38,38	0
58	MG	DA	1618	1/1	0.96	0.10	47,47,47,47	0
58	MG	DA	1619	1/1	0.96	0.18	62,62,62,62	0
58	MG	BA	3204	1/1	0.96	0.11	68,68,68,68	0
58	MG	AA	3467	1/1	0.96	0.07	44,44,44,44	0
58	MG	CA	3513	1/1	0.96	0.13	66,66,66,66	0
58	MG	AA	3136	1/1	0.96	0.22	66,66,66,66	0
58	MG	AA	3470	1/1	0.96	0.06	28,28,28,28	0
58	MG	AF	303	1/1	0.96	0.10	43,43,43,43	0
58	MG	AA	3061	1/1	0.96	0.06	26,26,26,26	0
58	MG	AF	306	1/1	0.96	0.18	48,48,48,48	0
58	MG	BA	3079	1/1	0.96	0.05	35,35,35,35	0
58	MG	AA	3086	1/1	0.96	0.11	53,53,53,53	0
58	MG	AA	3166	1/1	0.96	0.15	57,57,57,57	0
58	MG	AA	3731	1/1	0.96	0.13	31,31,31,31	0
58	MG	DA	1633	1/1	0.96	0.19	60,60,60,60	0
58	MG	AA	3279	1/1	0.96	0.10	51,51,51,51	0
58	MG	AA	3139	1/1	0.96	0.12	49,49,49,49	0
58	MG	DA	1636	1/1	0.96	0.17	64,64,64,64	0
58	MG	CA	3525	1/1	0.96	0.12	40,40,40,40	0
58	MG	BL	3002	1/1	0.96	0.07	49,49,49,49	0
58	MG	BA	3086	1/1	0.96	0.23	51,51,51,51	0
58	MG	CA	3529	1/1	0.96	0.09	79,79,79,79	0
58	MG	CA	3133	1/1	0.96	0.05	29,29,29,29	0
58	MG	AA	3020	1/1	0.96	0.08	23,23,23,23	0
58	MG	AA	3282	1/1	0.96	0.15	39,39,39,39	0
58	MG	AN	3003	1/1	0.96	0.07	45,45,45,45	0
58	MG	AA	3370	1/1	0.96	0.13	57,57,57,57	0
58	MG	AA	3371	1/1	0.96	0.12	59,59,59,59	0
58	MG	CA	3314	1/1	0.96	0.11	50,50,50,50	0
58	MG	AA	3619	1/1	0.96	0.09	37,37,37,37	0
58	MG	CA	3316	1/1	0.96	0.06	60,60,60,60	0
58	MG	CA	3317	1/1	0.96	0.06	51,51,51,51	0
58	MG	CA	3320	1/1	0.96	0.09	66,66,66,66	0
58	MG	CA	3323	1/1	0.96	0.08	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	DA	1653	1/1	0.96	0.05	29,29,29,29	0
58	MG	AA	3283	1/1	0.96	0.18	59,59,59,59	0
58	MG	AQ	203	1/1	0.96	0.13	40,40,40,40	0
58	MG	CA	3328	1/1	0.96	0.13	52,52,52,52	0
58	MG	AR	5001	1/1	0.96	0.06	32,32,32,32	0
58	MG	AA	3105	1/1	0.96	0.18	31,31,31,31	0
58	MG	AA	3198	1/1	0.96	0.08	36,36,36,36	0
58	MG	AA	3376	1/1	0.96	0.07	18,18,18,18	0
58	MG	CA	3336	1/1	0.96	0.09	60,60,60,60	0
58	MG	AA	3379	1/1	0.96	0.07	30,30,30,30	0
58	MG	AA	3494	1/1	0.96	0.08	33,33,33,33	1
58	MG	AA	3238	1/1	0.96	0.16	55,55,55,55	0
58	MG	BA	3102	1/1	0.96	0.26	56,56,56,56	0
58	MG	DA	1666	1/1	0.96	0.15	47,47,47,47	0
58	MG	AA	3498	1/1	0.96	0.05	45,45,45,45	0
58	MG	AA	3751	1/1	0.96	0.05	26,26,26,26	0
58	MG	CA	3560	1/1	0.96	0.18	56,56,56,56	0
58	MG	CA	3346	1/1	0.96	0.06	40,40,40,40	0
58	MG	AA	3382	1/1	0.96	0.08	38,38,38,38	1
58	MG	AA	3505	1/1	0.96	0.08	55,55,55,55	0
58	MG	AA	3289	1/1	0.96	0.07	26,26,26,26	0
58	MG	AA	3390	1/1	0.96	0.07	47,47,47,47	0
58	MG	AA	3171	1/1	0.96	0.11	53,53,53,53	0
58	MG	CA	3012	1/1	0.96	0.09	58,58,58,58	0
58	MG	AA	3515	1/1	0.96	0.05	18,18,18,18	0
58	MG	DA	1679	1/1	0.96	0.11	60,60,60,60	0
58	MG	CA	3572	1/1	0.96	0.18	76,76,76,76	0
58	MG	AA	3517	1/1	0.96	0.09	18,18,18,18	0
58	MG	DA	1682	1/1	0.96	0.11	52,52,52,52	0
58	MG	CA	3015	1/1	0.96	0.17	82,82,82,82	0
58	MG	AA	3401	1/1	0.96	0.12	33,33,33,33	0
58	MG	AA	3241	1/1	0.96	0.14	64,64,64,64	0
58	MG	CA	3578	1/1	0.96	0.12	38,38,38,38	0
58	MG	AA	3405	1/1	0.96	0.06	54,54,54,54	0
58	MG	AA	3526	1/1	0.96	0.16	38,38,38,38	0
58	MG	CA	3581	1/1	0.96	0.08	51,51,51,51	0
58	MG	AA	3642	1/1	0.96	0.09	41,41,41,41	0
58	MG	CA	3022	1/1	0.96	0.06	35,35,35,35	0
58	MG	DA	1692	1/1	0.96	0.09	53,53,53,53	0
58	MG	DA	1693	1/1	0.96	0.08	60,60,60,60	0
58	MG	CA	3584	1/1	0.96	0.09	43,43,43,43	0
58	MG	CA	3171	1/1	0.96	0.10	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3586	1/1	0.96	0.06	46,46,46,46	0
58	MG	AA	3296	1/1	0.96	0.06	18,18,18,18	0
58	MG	AA	3143	1/1	0.96	0.12	28,28,28,28	0
58	MG	AA	3121	1/1	0.96	0.12	46,46,46,46	0
58	MG	AA	3299	1/1	0.96	0.10	21,21,21,21	0
58	MG	BA	3123	1/1	0.96	0.07	54,54,54,54	0
58	MG	AA	3032	1/1	0.96	0.13	37,37,37,37	0
58	MG	AA	3305	1/1	0.96	0.12	53,53,53,53	0
58	MG	AA	3542	1/1	0.96	0.06	45,45,45,45	0
58	MG	AA	3247	1/1	0.96	0.35	68,68,68,68	0
58	MG	CA	3386	1/1	0.96	0.18	63,63,63,63	0
58	MG	AA	3654	1/1	0.96	0.12	65,65,65,65	0
58	MG	AA	3780	1/1	0.96	0.08	41,41,41,41	0
58	MG	AA	3428	1/1	0.96	0.12	41,41,41,41	0
58	MG	CA	3186	1/1	0.96	0.26	58,58,58,58	0
58	MG	CA	3040	1/1	0.96	0.14	64,64,64,64	0
58	MG	AA	3203	1/1	0.96	0.15	46,46,46,46	0
58	MG	DA	1715	1/1	0.96	0.09	49,49,49,49	0
58	MG	BA	3012	1/1	0.96	0.06	29,29,29,29	0
58	MG	AA	3311	1/1	0.96	0.09	34,34,34,34	0
58	MG	CA	3192	1/1	0.96	0.23	65,65,65,65	0
58	MG	CA	3193	1/1	0.96	0.10	57,57,57,57	0
58	MG	AA	3787	1/1	0.96	0.15	50,50,50,50	0
58	MG	CA	3398	1/1	0.96	0.06	58,58,58,58	0
58	MG	AA	3548	1/1	0.96	0.05	29,29,29,29	0
58	MG	CA	3047	1/1	0.96	0.10	60,60,60,60	0
58	MG	CA	3401	1/1	0.96	0.17	60,60,60,60	0
58	MG	AA	3662	1/1	0.96	0.16	58,58,58,58	0
58	MG	AA	3058	1/1	0.96	0.14	35,35,35,35	0
58	MG	DA	1727	1/1	0.96	0.06	57,57,57,57	0
58	MG	CA	3404	1/1	0.96	0.06	86,86,86,86	0
58	MG	AA	3205	1/1	0.96	0.14	56,56,56,56	0
58	MG	AA	3666	1/1	0.96	0.14	62,62,62,62	0
58	MG	AA	3667	1/1	0.96	0.11	29,29,29,29	0
58	MG	CA	3202	1/1	0.96	0.21	58,58,58,58	0
58	MG	BA	3146	1/1	0.96	0.13	65,65,65,65	0
58	MG	AA	3795	1/1	0.96	0.07	49,49,49,49	0
58	MG	AA	3094	1/1	0.96	0.10	29,29,29,29	0
58	MG	AA	3554	1/1	0.96	0.07	40,40,40,40	0
58	MG	CA	3416	1/1	0.96	0.07	34,34,34,34	0
58	MG	AA	3670	1/1	0.96	0.08	31,31,31,31	0
58	MG	AA	3671	1/1	0.96	0.10	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3419	1/1	0.96	0.13	40,40,40,40	0
58	MG	CA	3633	1/1	0.96	0.08	61,61,61,61	0
58	MG	AA	3555	1/1	0.96	0.06	49,49,49,49	0
58	MG	CA	3421	1/1	0.96	0.14	69,69,69,69	0
58	MG	AA	3560	1/1	0.96	0.08	39,39,39,39	0
58	MG	AA	3207	1/1	0.96	0.19	37,37,37,37	0
58	MG	BA	3029	1/1	0.96	0.09	54,54,54,54	0
58	MG	CA	3425	1/1	0.96	0.11	54,54,54,54	0
58	MG	AA	3324	1/1	0.96	0.06	32,32,32,32	0
58	MG	AA	3254	1/1	0.96	0.11	35,35,35,35	0
58	MG	AA	3677	1/1	0.96	0.04	40,40,40,40	0
58	MG	AA	3565	1/1	0.96	0.08	17,17,17,17	0
58	MG	AA	3258	1/1	0.96	0.04	13,13,13,13	0
58	MG	AA	3810	1/1	0.96	0.15	62,62,62,62	0
58	MG	AA	3259	1/1	0.96	0.08	20,20,20,20	0
58	MG	AA	3682	1/1	0.96	0.05	51,51,51,51	0
58	MG	AA	3814	1/1	0.96	0.12	43,43,43,43	0
58	MG	AA	3261	1/1	0.96	0.27	69,69,69,69	0
58	MG	AA	3333	1/1	0.96	0.11	66,66,66,66	0
58	MG	CA	3443	1/1	0.96	0.18	66,66,66,66	0
58	MG	DA	1762	1/1	0.96	0.05	53,53,53,53	0
58	MG	CA	3075	1/1	0.96	0.10	52,52,52,52	0
58	MG	AA	3334	1/1	0.96	0.07	58,58,58,58	0
58	MG	AA	3446	1/1	0.96	0.07	59,59,59,59	0
58	MG	CA	3452	1/1	0.96	0.08	62,62,62,62	0
58	MG	CA	3664	1/1	0.96	0.13	55,55,55,55	0
58	MG	CA	3453	1/1	0.96	0.15	59,59,59,59	0
58	MG	CA	3454	1/1	0.96	0.07	38,38,38,38	0
58	MG	AA	3208	1/1	0.96	0.15	26,26,26,26	1
58	MG	CA	3456	1/1	0.96	0.08	46,46,46,46	0
58	MG	CA	3231	1/1	0.96	0.23	50,50,50,50	0
58	MG	CA	3458	1/1	0.96	0.12	46,46,46,46	0
58	MG	AA	3692	1/1	0.96	0.10	51,51,51,51	0
58	MG	CA	3233	1/1	0.96	0.15	56,56,56,56	0
58	MG	AA	3152	1/1	0.96	0.08	49,49,49,49	0
58	MG	AA	3582	1/1	0.96	0.07	37,37,37,37	0
58	MG	CA	3465	1/1	0.96	0.07	46,46,46,46	0
60	ZN	A4	501	1/1	0.96	0.06	133,133,133,133	0
58	MG	AA	3338	1/1	0.96	0.05	29,29,29,29	0
58	MG	AA	3697	1/1	0.96	0.13	69,69,69,69	0
62	GDP	BZ	801	28/28	0.96	0.07	52,52,52,52	0
58	MG	AB	3009	1/1	0.96	0.08	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3313	1/1	0.97	0.09	33,33,33,33	0
58	MG	AA	3723	1/1	0.97	0.06	19,19,19,19	0
58	MG	AD	304	1/1	0.97	0.08	18,18,18,18	0
58	MG	AD	305	1/1	0.97	0.22	64,64,64,64	0
58	MG	AA	3617	1/1	0.97	0.12	30,30,30,30	0
58	MG	AA	3315	1/1	0.97	0.09	34,34,34,34	0
58	MG	AA	3047	1/1	0.97	0.06	31,31,31,31	0
58	MG	CA	3281	1/1	0.97	0.05	34,34,34,34	0
58	MG	AA	3507	1/1	0.97	0.09	31,31,31,31	0
58	MG	CA	3283	1/1	0.97	0.08	49,49,49,49	0
58	MG	AA	3410	1/1	0.97	0.10	46,46,46,46	0
58	MG	AA	3510	1/1	0.97	0.08	47,47,47,47	0
58	MG	AA	3218	1/1	0.97	0.17	49,49,49,49	0
58	MG	CA	3123	1/1	0.97	0.15	66,66,66,66	0
58	MG	CA	3497	1/1	0.97	0.08	63,63,63,63	0
58	MG	CY	502	1/1	0.97	0.11	54,54,54,54	0
58	MG	AA	3413	1/1	0.97	0.09	36,36,36,36	0
58	MG	AA	3318	1/1	0.97	0.19	53,53,53,53	0
58	MG	C3	101	1/1	0.97	0.07	69,69,69,69	0
58	MG	AE	304	1/1	0.97	0.07	40,40,40,40	0
58	MG	AA	3221	1/1	0.97	0.12	55,55,55,55	0
58	MG	CA	3502	1/1	0.97	0.07	69,69,69,69	0
58	MG	BE	3001	1/1	0.97	0.04	59,59,59,59	0
58	MG	AA	3628	1/1	0.97	0.11	53,53,53,53	0
58	MG	BK	201	1/1	0.97	0.12	56,56,56,56	0
58	MG	AA	3010	1/1	0.97	0.22	66,66,66,66	0
58	MG	AA	3123	1/1	0.97	0.07	53,53,53,53	0
58	MG	AA	3520	1/1	0.97	0.09	23,23,23,23	0
58	MG	AA	3522	1/1	0.97	0.05	30,30,30,30	0
58	MG	CA	3301	1/1	0.97	0.07	58,58,58,58	0
58	MG	DA	1610	1/1	0.97	0.11	45,45,45,45	0
58	MG	AA	3188	1/1	0.97	0.05	31,31,31,31	0
58	MG	AA	3742	1/1	0.97	0.10	39,39,39,39	1
58	MG	CA	3304	1/1	0.97	0.06	53,53,53,53	0
58	MG	AA	3124	1/1	0.97	0.20	43,43,43,43	0
58	MG	AA	3744	1/1	0.97	0.11	77,77,77,77	0
58	MG	AA	3425	1/1	0.97	0.06	49,49,49,49	0
58	MG	CA	3312	1/1	0.97	0.07	49,49,49,49	0
58	MG	CA	3313	1/1	0.97	0.07	51,51,51,51	0
58	MG	AA	3636	1/1	0.97	0.07	24,24,24,24	0
58	MG	AA	3329	1/1	0.97	0.06	17,17,17,17	0
58	MG	AA	3749	1/1	0.97	0.15	55,55,55,55	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3190	1/1	0.97	0.15	40,40,40,40	0
58	MG	AA	3228	1/1	0.97	0.08	55,55,55,55	0
58	MG	CA	3322	1/1	0.97	0.05	32,32,32,32	0
58	MG	AA	3534	1/1	0.97	0.05	22,22,22,22	0
58	MG	AA	3536	1/1	0.97	0.07	15,15,15,15	0
58	MG	CA	3325	1/1	0.97	0.14	39,39,39,39	0
58	MG	AA	3031	1/1	0.97	0.11	22,22,22,22	1
58	MG	CA	3327	1/1	0.97	0.06	33,33,33,33	0
58	MG	AA	3230	1/1	0.97	0.15	49,49,49,49	0
58	MG	AU	202	1/1	0.97	0.24	44,44,44,44	0
58	MG	AA	3540	1/1	0.97	0.04	29,29,29,29	0
58	MG	AV	201	1/1	0.97	0.15	19,19,19,19	0
58	MG	CA	3333	1/1	0.97	0.07	41,41,41,41	0
58	MG	AA	3102	1/1	0.97	0.15	50,50,50,50	0
58	MG	CA	3335	1/1	0.97	0.10	43,43,43,43	0
58	MG	AA	3275	1/1	0.97	0.11	56,56,56,56	0
58	MG	AA	3648	1/1	0.97	0.10	38,38,38,38	0
58	MG	AW	3002	1/1	0.97	0.08	52,52,52,52	0
58	MG	CA	3009	1/1	0.97	0.16	67,67,67,67	0
58	MG	AW	3003	1/1	0.97	0.10	55,55,55,55	0
58	MG	CA	3011	1/1	0.97	0.07	46,46,46,46	0
58	MG	AA	3276	1/1	0.97	0.26	50,50,50,50	0
58	MG	AA	3439	1/1	0.97	0.10	33,33,33,33	0
58	MG	AA	3763	1/1	0.97	0.15	62,62,62,62	0
58	MG	CA	3164	1/1	0.97	0.13	38,38,38,38	0
58	MG	AA	3339	1/1	0.97	0.09	41,41,41,41	0
58	MG	A0	101	1/1	0.97	0.12	51,51,51,51	0
58	MG	A0	102	1/1	0.97	0.09	43,43,43,43	0
58	MG	A0	103	1/1	0.97	0.10	54,54,54,54	0
58	MG	CA	3356	1/1	0.97	0.05	41,41,41,41	0
58	MG	A0	104	1/1	0.97	0.08	41,41,41,41	0
58	MG	AA	3037	1/1	0.97	0.09	44,44,44,44	0
58	MG	CA	3558	1/1	0.97	0.04	47,47,47,47	0
58	MG	AA	3104	1/1	0.97	0.05	13,13,13,13	0
58	MG	CA	3360	1/1	0.97	0.10	43,43,43,43	0
58	MG	CA	3561	1/1	0.97	0.07	55,55,55,55	1
58	MG	CA	3023	1/1	0.97	0.08	45,45,45,45	0
58	MG	AA	3551	1/1	0.97	0.05	46,46,46,46	0
58	MG	AA	3768	1/1	0.97	0.13	96,96,96,96	0
58	MG	CA	3365	1/1	0.97	0.13	29,29,29,29	0
58	MG	CA	3177	1/1	0.97	0.12	50,50,50,50	0
58	MG	AA	3130	1/1	0.97	0.16	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3027	1/1	0.97	0.09	47,47,47,47	0
58	MG	CA	3028	1/1	0.97	0.08	42,42,42,42	0
58	MG	CA	3370	1/1	0.97	0.07	56,56,56,56	0
58	MG	CA	3030	1/1	0.97	0.07	57,57,57,57	0
58	MG	A5	102	1/1	0.97	0.10	47,47,47,47	0
58	MG	AA	3236	1/1	0.97	0.21	37,37,37,37	1
58	MG	AA	3346	1/1	0.97	0.07	45,45,45,45	0
58	MG	BA	3122	1/1	0.97	0.07	58,58,58,58	0
58	MG	AA	3040	1/1	0.97	0.17	45,45,45,45	0
58	MG	AA	3663	1/1	0.97	0.16	60,60,60,60	0
58	MG	AA	3557	1/1	0.97	0.07	39,39,39,39	0
58	MG	AA	3777	1/1	0.97	0.05	20,20,20,20	0
58	MG	AA	3065	1/1	0.97	0.07	28,28,28,28	0
58	MG	DA	1678	1/1	0.97	0.10	57,57,57,57	0
58	MG	AA	3779	1/1	0.97	0.13	61,61,61,61	0
58	MG	CA	3041	1/1	0.97	0.19	31,31,31,31	0
58	MG	AA	3066	1/1	0.97	0.09	48,48,48,48	0
58	MG	AA	3781	1/1	0.97	0.18	52,52,52,52	1
58	MG	AA	3782	1/1	0.97	0.12	72,72,72,72	0
58	MG	AA	3351	1/1	0.97	0.08	29,29,29,29	0
58	MG	BA	3134	1/1	0.97	0.14	62,62,62,62	0
58	MG	AA	3450	1/1	0.97	0.08	48,48,48,48	0
58	MG	AA	3352	1/1	0.97	0.08	51,51,51,51	0
58	MG	AA	3786	1/1	0.97	0.11	57,57,57,57	0
58	MG	AA	3353	1/1	0.97	0.13	75,75,75,75	0
58	MG	BA	3139	1/1	0.97	0.08	54,54,54,54	0
58	MG	AA	3570	1/1	0.97	0.06	18,18,18,18	0
58	MG	AA	3005	1/1	0.97	0.09	61,61,61,61	0
58	MG	AA	3006	1/1	0.97	0.14	52,52,52,52	0
58	MG	AA	3575	1/1	0.97	0.11	30,30,30,30	0
58	MG	AA	3356	1/1	0.97	0.07	33,33,33,33	0
58	MG	AA	3170	1/1	0.97	0.10	39,39,39,39	0
58	MG	CA	3405	1/1	0.97	0.06	53,53,53,53	0
58	MG	AA	3090	1/1	0.97	0.10	50,50,50,50	0
58	MG	AA	3678	1/1	0.97	0.13	32,32,32,32	0
58	MG	CA	3212	1/1	0.97	0.07	37,37,37,37	0
58	MG	CA	3409	1/1	0.97	0.17	61,61,61,61	0
58	MG	AA	3290	1/1	0.97	0.20	63,63,63,63	0
58	MG	AA	3798	1/1	0.97	0.08	32,32,32,32	0
58	MG	BA	3152	1/1	0.97	0.09	58,58,58,58	0
58	MG	AA	3291	1/1	0.97	0.08	44,44,44,44	0
58	MG	AA	3043	1/1	0.97	0.13	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3065	1/1	0.97	0.04	41,41,41,41	0
58	MG	CA	3614	1/1	0.97	0.19	89,89,89,89	0
58	MG	AA	3463	1/1	0.97	0.10	46,46,46,46	0
58	MG	CA	3220	1/1	0.97	0.09	30,30,30,30	0
58	MG	AA	3584	1/1	0.97	0.05	14,14,14,14	0
58	MG	CA	3618	1/1	0.97	0.10	37,37,37,37	0
58	MG	AA	3684	1/1	0.97	0.05	28,28,28,28	0
58	MG	CA	3620	1/1	0.97	0.07	34,34,34,34	0
58	MG	BA	3159	1/1	0.97	0.04	55,55,55,55	0
58	MG	AA	3293	1/1	0.97	0.13	32,32,32,32	0
58	MG	AA	3686	1/1	0.97	0.12	70,70,70,70	0
58	MG	AA	3687	1/1	0.97	0.05	46,46,46,46	0
58	MG	AA	3465	1/1	0.97	0.05	40,40,40,40	0
58	MG	CA	3427	1/1	0.97	0.15	53,53,53,53	0
58	MG	AA	3294	1/1	0.97	0.06	65,65,65,65	0
58	MG	AA	3072	1/1	0.97	0.21	40,40,40,40	0
58	MG	AA	3691	1/1	0.97	0.18	87,87,87,87	0
58	MG	AA	3812	1/1	0.97	0.08	57,57,57,57	0
58	MG	CA	3632	1/1	0.97	0.12	54,54,54,54	0
58	MG	AA	3073	1/1	0.97	0.08	25,25,25,25	0
58	MG	CA	3079	1/1	0.97	0.05	46,46,46,46	0
58	MG	AA	3044	1/1	0.97	0.14	34,34,34,34	0
58	MG	AA	3815	1/1	0.97	0.19	53,53,53,53	0
58	MG	AA	3007	1/1	0.97	0.08	20,20,20,20	0
58	MG	AA	3117	1/1	0.97	0.11	50,50,50,50	0
58	MG	CA	3438	1/1	0.97	0.06	49,49,49,49	0
58	MG	CA	3640	1/1	0.97	0.13	57,57,57,57	0
58	MG	CA	3641	1/1	0.97	0.10	54,54,54,54	0
58	MG	CA	3643	1/1	0.97	0.06	57,57,57,57	0
58	MG	CA	3084	1/1	0.97	0.23	86,86,86,86	0
58	MG	CA	3442	1/1	0.97	0.20	75,75,75,75	0
58	MG	AA	3301	1/1	0.97	0.05	22,22,22,22	0
58	MG	AA	3302	1/1	0.97	0.17	56,56,56,56	0
58	MG	CA	3446	1/1	0.97	0.10	39,39,39,39	0
58	MG	DA	1743	1/1	0.97	0.10	60,60,60,60	0
58	MG	BA	3040	1/1	0.97	0.11	48,48,48,48	0
58	MG	BA	3041	1/1	0.97	0.07	53,53,53,53	0
58	MG	CA	3450	1/1	0.97	0.07	66,66,66,66	0
58	MG	CA	3451	1/1	0.97	0.06	47,47,47,47	0
58	MG	CA	3653	1/1	0.97	0.12	25,25,25,25	0
58	MG	CA	3244	1/1	0.97	0.07	40,40,40,40	0
58	MG	AA	3479	1/1	0.97	0.08	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3146	1/1	0.97	0.07	34,34,34,34	0
58	MG	AA	3377	1/1	0.97	0.04	20,20,20,20	0
58	MG	AA	3378	1/1	0.97	0.07	18,18,18,18	0
58	MG	CA	3660	1/1	0.97	0.09	38,38,38,38	0
58	MG	AA	3483	1/1	0.97	0.05	44,44,44,44	0
58	MG	DA	1756	1/1	0.97	0.15	68,68,68,68	0
58	MG	CA	3095	1/1	0.97	0.16	86,86,86,86	0
58	MG	AA	3147	1/1	0.97	0.33	37,37,37,37	0
58	MG	CA	3460	1/1	0.97	0.09	49,49,49,49	0
58	MG	AA	3604	1/1	0.97	0.07	65,65,65,65	0
58	MG	CA	3462	1/1	0.97	0.12	43,43,43,43	0
58	MG	AA	3487	1/1	0.97	0.07	39,39,39,39	0
58	MG	AB	3012	1/1	0.97	0.06	30,30,30,30	1
58	MG	AA	3306	1/1	0.97	0.06	47,47,47,47	0
58	MG	CB	3005	1/1	0.97	0.24	61,61,61,61	0
58	MG	AA	3307	1/1	0.97	0.10	6,6,6,6	0
58	MG	AA	3098	1/1	0.97	0.07	24,24,24,24	0
58	MG	AA	3182	1/1	0.97	0.06	23,23,23,23	1
58	MG	AA	3391	1/1	0.97	0.05	42,42,42,42	0
58	MG	DF	3001	1/1	0.97	0.07	49,49,49,49	0
58	MG	AA	3394	1/1	0.97	0.05	18,18,18,18	0
58	MG	CA	3262	1/1	0.97	0.14	64,64,64,64	0
58	MG	CA	3263	1/1	0.97	0.10	29,29,29,29	0
58	MG	AA	3395	1/1	0.97	0.06	22,22,22,22	0
58	MG	AA	3613	1/1	0.97	0.06	54,54,54,54	0
58	MG	AA	3120	1/1	0.97	0.09	43,43,43,43	0
58	MG	CA	3268	1/1	0.97	0.12	69,69,69,69	0
58	MG	AA	3497	1/1	0.97	0.10	51,51,51,51	0
58	MG	CE	302	1/1	0.97	0.08	46,46,46,46	0
58	MG	CA	3270	1/1	0.97	0.18	66,66,66,66	0
58	MG	CA	3110	1/1	0.97	0.10	51,51,51,51	0
58	MG	CA	3480	1/1	0.97	0.10	44,44,44,44	0
61	SF4	DD	501	8/8	0.97	0.06	90,90,90,90	0
58	MG	CA	3272	1/1	0.97	0.06	34,34,34,34	0
58	MG	AD	301	1/1	0.97	0.24	44,44,44,44	0
58	MG	AA	3525	1/1	0.98	0.07	26,26,26,26	0
58	MG	AA	3426	1/1	0.98	0.07	33,33,33,33	0
58	MG	AA	3427	1/1	0.98	0.07	34,34,34,34	0
58	MG	A7	102	1/1	0.98	0.08	39,39,39,39	0
58	MG	AA	3528	1/1	0.98	0.06	25,25,25,25	0
58	MG	CA	3363	1/1	0.98	0.07	42,42,42,42	0
58	MG	AA	3644	1/1	0.98	0.07	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3343	1/1	0.98	0.13	65,65,65,65	0
58	MG	A8	5002	1/1	0.98	0.05	30,30,30,30	0
58	MG	AA	3530	1/1	0.98	0.06	15,15,15,15	0
58	MG	AA	3135	1/1	0.98	0.19	62,62,62,62	0
58	MG	AA	3214	1/1	0.98	0.21	39,39,39,39	1
58	MG	AA	3046	1/1	0.98	0.10	35,35,35,35	0
58	MG	CA	3372	1/1	0.98	0.08	53,53,53,53	0
58	MG	BA	3142	1/1	0.98	0.05	47,47,47,47	0
58	MG	CA	3550	1/1	0.98	0.03	54,54,54,54	1
58	MG	AA	3650	1/1	0.98	0.06	59,59,59,59	0
58	MG	AA	3535	1/1	0.98	0.06	27,27,27,27	0
58	MG	AA	3432	1/1	0.98	0.07	28,28,28,28	0
58	MG	DA	1625	1/1	0.98	0.04	42,42,42,42	0
58	MG	CA	3554	1/1	0.98	0.04	67,67,67,67	0
58	MG	AA	3537	1/1	0.98	0.05	35,35,35,35	0
58	MG	AA	3433	1/1	0.98	0.07	18,18,18,18	0
58	MG	AA	3434	1/1	0.98	0.07	22,22,22,22	0
58	MG	AA	3656	1/1	0.98	0.09	55,55,55,55	0
58	MG	AA	3657	1/1	0.98	0.09	51,51,51,51	1
58	MG	AA	3251	1/1	0.98	0.08	33,33,33,33	1
58	MG	BA	3153	1/1	0.98	0.06	48,48,48,48	0
58	MG	AA	3541	1/1	0.98	0.04	29,29,29,29	0
58	MG	AA	3161	1/1	0.98	0.06	54,54,54,54	0
58	MG	AA	3217	1/1	0.98	0.09	46,46,46,46	0
58	MG	AA	3162	1/1	0.98	0.09	58,58,58,58	0
58	MG	AA	3545	1/1	0.98	0.06	15,15,15,15	0
58	MG	AA	3255	1/1	0.98	0.16	40,40,40,40	0
58	MG	AA	3256	1/1	0.98	0.07	54,54,54,54	0
58	MG	AA	3257	1/1	0.98	0.06	26,26,26,26	0
58	MG	AA	3549	1/1	0.98	0.11	58,58,58,58	0
58	MG	AA	3220	1/1	0.98	0.04	34,34,34,34	0
58	MG	CA	3574	1/1	0.98	0.05	53,53,53,53	0
58	MG	AA	3300	1/1	0.98	0.08	51,51,51,51	0
58	MG	AA	3070	1/1	0.98	0.16	33,33,33,33	0
58	MG	AA	3260	1/1	0.98	0.12	23,23,23,23	0
58	MG	AA	3084	1/1	0.98	0.15	41,41,41,41	0
58	MG	AA	3361	1/1	0.98	0.12	28,28,28,28	0
58	MG	AA	3556	1/1	0.98	0.07	37,37,37,37	0
58	MG	CA	3230	1/1	0.98	0.08	50,50,50,50	0
58	MG	AA	3118	1/1	0.98	0.16	36,36,36,36	1
58	MG	AA	3559	1/1	0.98	0.10	50,50,50,50	0
58	MG	AA	3053	1/1	0.98	0.05	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3561	1/1	0.98	0.06	56,56,56,56	0
58	MG	AA	3054	1/1	0.98	0.09	38,38,38,38	0
58	MG	CA	3085	1/1	0.98	0.14	62,62,62,62	0
58	MG	AA	3087	1/1	0.98	0.14	49,49,49,49	0
58	MG	AA	3227	1/1	0.98	0.17	31,31,31,31	0
58	MG	AA	3011	1/1	0.98	0.14	39,39,39,39	0
58	MG	AA	3566	1/1	0.98	0.06	28,28,28,28	0
58	MG	AA	3567	1/1	0.98	0.08	26,26,26,26	0
58	MG	AA	3568	1/1	0.98	0.07	51,51,51,51	0
58	MG	BA	3183	1/1	0.98	0.05	60,60,60,60	0
58	MG	AA	3368	1/1	0.98	0.05	39,39,39,39	0
58	MG	AA	3820	1/1	0.98	0.13	30,30,30,30	1
58	MG	AA	3369	1/1	0.98	0.07	27,27,27,27	0
58	MG	AA	3571	1/1	0.98	0.05	14,14,14,14	0
58	MG	AA	3312	1/1	0.98	0.09	52,52,52,52	0
58	MG	AB	3003	1/1	0.98	0.13	50,50,50,50	0
58	MG	AA	3573	1/1	0.98	0.05	31,31,31,31	0
58	MG	CA	3426	1/1	0.98	0.07	51,51,51,51	0
58	MG	AA	3025	1/1	0.98	0.17	41,41,41,41	0
58	MG	CA	3252	1/1	0.98	0.06	51,51,51,51	0
58	MG	AA	3314	1/1	0.98	0.08	28,28,28,28	0
58	MG	AB	3007	1/1	0.98	0.09	45,45,45,45	0
58	MG	AA	3694	1/1	0.98	0.06	47,47,47,47	0
58	MG	AA	3075	1/1	0.98	0.04	13,13,13,13	0
58	MG	AA	3091	1/1	0.98	0.10	34,34,34,34	0
58	MG	AB	3011	1/1	0.98	0.05	31,31,31,31	0
58	MG	AA	3578	1/1	0.98	0.04	34,34,34,34	0
58	MG	AB	3013	1/1	0.98	0.08	53,53,53,53	0
58	MG	AA	3126	1/1	0.98	0.24	26,26,26,26	0
58	MG	AA	3233	1/1	0.98	0.09	51,51,51,51	0
58	MG	CA	3439	1/1	0.98	0.04	46,46,46,46	0
58	MG	CA	3440	1/1	0.98	0.06	39,39,39,39	0
58	MG	AA	3092	1/1	0.98	0.06	43,43,43,43	0
58	MG	AA	3320	1/1	0.98	0.09	23,23,23,23	0
58	MG	AA	3150	1/1	0.98	0.09	62,62,62,62	0
58	MG	CA	3444	1/1	0.98	0.04	37,37,37,37	0
58	MG	AA	3322	1/1	0.98	0.05	33,33,33,33	0
58	MG	AA	3469	1/1	0.98	0.06	42,42,42,42	0
58	MG	CA	3447	1/1	0.98	0.10	62,62,62,62	0
58	MG	AA	3383	1/1	0.98	0.09	34,34,34,34	0
58	MG	AA	3473	1/1	0.98	0.04	17,17,17,17	0
58	MG	AA	3151	1/1	0.98	0.06	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3708	1/1	0.98	0.11	32,32,32,32	1
58	MG	AA	3589	1/1	0.98	0.08	38,38,38,38	0
58	MG	CA	3630	1/1	0.98	0.10	61,61,61,61	0
58	MG	AA	3710	1/1	0.98	0.17	32,32,32,32	1
58	MG	AA	3475	1/1	0.98	0.05	60,60,60,60	0
58	MG	DA	1703	1/1	0.98	0.05	68,68,68,68	0
58	MG	AA	3712	1/1	0.98	0.13	36,36,36,36	1
58	MG	AA	3386	1/1	0.98	0.04	18,18,18,18	0
58	MG	AA	3387	1/1	0.98	0.04	24,24,24,24	0
58	MG	AA	3388	1/1	0.98	0.06	17,17,17,17	0
58	MG	AA	3594	1/1	0.98	0.11	27,27,27,27	0
58	MG	AA	3595	1/1	0.98	0.08	42,42,42,42	0
58	MG	AA	3077	1/1	0.98	0.09	92,92,92,92	0
58	MG	AA	3326	1/1	0.98	0.05	59,59,59,59	0
58	MG	AA	3327	1/1	0.98	0.05	13,13,13,13	0
58	MG	CA	3642	1/1	0.98	0.09	53,53,53,53	0
58	MG	AA	3722	1/1	0.98	0.05	11,11,11,11	0
58	MG	AA	3008	1/1	0.98	0.05	18,18,18,18	0
58	MG	AA	3725	1/1	0.98	0.11	39,39,39,39	0
58	MG	AF	301	1/1	0.98	0.11	43,43,43,43	0
58	MG	AA	3396	1/1	0.98	0.07	16,16,16,16	0
58	MG	BA	3084	1/1	0.98	0.07	80,80,80,80	0
58	MG	AA	3397	1/1	0.98	0.03	15,15,15,15	0
58	MG	AA	3485	1/1	0.98	0.04	15,15,15,15	0
58	MG	AF	305	1/1	0.98	0.09	40,40,40,40	0
58	MG	AA	3486	1/1	0.98	0.09	28,28,28,28	0
58	MG	AA	3398	1/1	0.98	0.05	17,17,17,17	0
58	MG	AA	3180	1/1	0.98	0.11	72,72,72,72	0
58	MG	AA	3400	1/1	0.98	0.10	33,33,33,33	0
58	MG	BZ	800	1/1	0.98	0.09	44,44,44,44	0
58	MG	AA	3240	1/1	0.98	0.19	60,60,60,60	0
58	MG	AA	3402	1/1	0.98	0.05	27,27,27,27	0
58	MG	AA	3403	1/1	0.98	0.04	18,18,18,18	0
58	MG	AA	3331	1/1	0.98	0.15	34,34,34,34	0
58	MG	AA	3050	1/1	0.98	0.15	53,53,53,53	0
58	MG	CA	3306	1/1	0.98	0.05	61,61,61,61	0
58	MG	AO	5001	1/1	0.98	0.06	53,53,53,53	0
58	MG	CA	3309	1/1	0.98	0.04	40,40,40,40	0
58	MG	CA	3152	1/1	0.98	0.06	49,49,49,49	0
58	MG	CA	3007	1/1	0.98	0.07	27,27,27,27	0
58	MG	AA	3495	1/1	0.98	0.13	50,50,50,50	0
58	MG	AP	202	1/1	0.98	0.17	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3406	1/1	0.98	0.08	50,50,50,50	0
58	MG	AA	3407	1/1	0.98	0.04	19,19,19,19	0
58	MG	AA	3408	1/1	0.98	0.06	44,44,44,44	0
58	MG	CA	3318	1/1	0.98	0.04	45,45,45,45	0
58	MG	CA	3319	1/1	0.98	0.05	33,33,33,33	0
58	MG	AA	3499	1/1	0.98	0.04	35,35,35,35	0
58	MG	CA	3321	1/1	0.98	0.05	30,30,30,30	0
58	MG	AA	3409	1/1	0.98	0.07	30,30,30,30	0
58	MG	AA	3501	1/1	0.98	0.06	48,48,48,48	0
58	MG	AA	3502	1/1	0.98	0.05	24,24,24,24	0
58	MG	AA	3746	1/1	0.98	0.05	28,28,28,28	0
58	MG	AA	3620	1/1	0.98	0.05	42,42,42,42	0
58	MG	CA	3019	1/1	0.98	0.05	27,27,27,27	0
58	MG	AA	3503	1/1	0.98	0.05	52,52,52,52	0
58	MG	AA	3504	1/1	0.98	0.08	62,62,62,62	0
58	MG	CA	3330	1/1	0.98	0.06	29,29,29,29	0
58	MG	AA	3242	1/1	0.98	0.07	28,28,28,28	0
58	MG	CA	3170	1/1	0.98	0.09	32,32,32,32	0
58	MG	AA	3506	1/1	0.98	0.05	32,32,32,32	0
58	MG	AA	3067	1/1	0.98	0.05	50,50,50,50	0
58	MG	AA	3508	1/1	0.98	0.07	13,13,13,13	0
58	MG	AA	3183	1/1	0.98	0.08	75,75,75,75	0
58	MG	CF	304	1/1	0.98	0.06	54,54,54,54	0
58	MG	AA	3245	1/1	0.98	0.06	28,28,28,28	1
58	MG	CA	3338	1/1	0.98	0.05	41,41,41,41	0
58	MG	CA	3176	1/1	0.98	0.06	41,41,41,41	0
58	MG	CA	3340	1/1	0.98	0.03	35,35,35,35	0
58	MG	AA	3415	1/1	0.98	0.07	30,30,30,30	0
58	MG	CA	3029	1/1	0.98	0.05	32,32,32,32	0
58	MG	CA	3343	1/1	0.98	0.07	46,46,46,46	0
58	MG	AA	3512	1/1	0.98	0.07	11,11,11,11	0
58	MG	AA	3337	1/1	0.98	0.06	10,10,10,10	0
58	MG	AA	3013	1/1	0.98	0.13	34,34,34,34	0
58	MG	AA	3420	1/1	0.98	0.08	12,12,12,12	0
58	MG	CA	3348	1/1	0.98	0.09	58,58,58,58	0
58	MG	AA	3114	1/1	0.98	0.11	62,62,62,62	0
58	MG	CA	3350	1/1	0.98	0.13	39,39,39,39	0
58	MG	AA	3340	1/1	0.98	0.13	58,58,58,58	0
58	MG	AA	3287	1/1	0.98	0.12	46,46,46,46	0
58	MG	CA	3528	1/1	0.98	0.03	38,38,38,38	0
58	MG	CA	3353	1/1	0.98	0.06	66,66,66,66	0
60	ZN	BN	501	1/1	0.98	0.04	121,121,121,121	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3521	1/1	0.98	0.05	37,37,37,37	0
58	MG	AA	3424	1/1	0.98	0.05	17,17,17,17	0
61	SF4	BD	501	8/8	0.98	0.04	79,79,79,79	0
58	MG	AA	3288	1/1	0.98	0.06	25,25,25,25	0
58	MG	CA	3533	1/1	0.98	0.08	52,52,52,52	0
58	MG	BA	3129	1/1	0.98	0.10	52,52,52,52	0
58	MG	AA	3472	1/1	0.99	0.03	25,25,25,25	0
58	MG	AA	3374	1/1	0.99	0.09	17,17,17,17	0
58	MG	CV	201	1/1	0.99	0.05	69,69,69,69	0
58	MG	AR	5002	1/1	0.99	0.20	40,40,40,40	0
58	MG	AA	3533	1/1	0.99	0.08	24,24,24,24	0
58	MG	AA	3022	1/1	0.99	0.08	9,9,9,9	0
58	MG	CA	3188	1/1	0.99	0.03	36,36,36,36	0
58	MG	AA	3133	1/1	0.99	0.07	30,30,30,30	0
58	MG	AA	3772	1/1	0.99	0.07	22,22,22,22	1
58	MG	AV	202	1/1	0.99	0.03	40,40,40,40	0
58	MG	CA	3291	1/1	0.99	0.10	40,40,40,40	0
58	MG	AV	203	1/1	0.99	0.07	34,34,34,34	1
58	MG	BA	3145	1/1	0.99	0.03	37,37,37,37	0
58	MG	CA	3589	1/1	0.99	0.04	35,35,35,35	0
58	MG	AA	3157	1/1	0.99	0.11	40,40,40,40	1
58	MG	AA	3219	1/1	0.99	0.04	4,4,4,4	0
58	MG	AA	3304	1/1	0.99	0.05	30,30,30,30	0
58	MG	CA	3655	1/1	0.99	0.10	52,52,52,52	0
58	MG	AA	3380	1/1	0.99	0.04	15,15,15,15	0
58	MG	CA	3411	1/1	0.99	0.07	31,31,31,31	0
58	MG	CA	3298	1/1	0.99	0.09	42,42,42,42	0
58	MG	AA	3141	1/1	0.99	0.06	51,51,51,51	0
58	MG	AA	3348	1/1	0.99	0.08	31,31,31,31	0
58	MG	AA	3454	1/1	0.99	0.06	49,49,49,49	0
58	MG	CA	3662	1/1	0.99	0.15	48,48,48,48	0
58	MG	AA	3038	1/1	0.99	0.09	10,10,10,10	0
58	MG	AA	3384	1/1	0.99	0.04	28,28,28,28	0
58	MG	AE	303	1/1	0.99	0.02	17,17,17,17	0
58	MG	AA	3039	1/1	0.99	0.07	44,44,44,44	0
58	MG	AA	3514	1/1	0.99	0.10	35,35,35,35	0
58	MG	CA	3307	1/1	0.99	0.04	39,39,39,39	0
58	MG	AA	3003	1/1	0.99	0.03	19,19,19,19	0
58	MG	AA	3516	1/1	0.99	0.05	20,20,20,20	0
58	MG	CA	3310	1/1	0.99	0.06	29,29,29,29	0
58	MG	AA	3459	1/1	0.99	0.06	18,18,18,18	0
58	MG	AA	3323	1/1	0.99	0.04	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	CA	3161	1/1	0.99	0.06	40,40,40,40	0
58	MG	AA	3212	1/1	0.99	0.07	31,31,31,31	1
58	MG	BA	3118	1/1	0.99	0.05	43,43,43,43	0
58	MG	AA	3389	1/1	0.99	0.09	34,34,34,34	0
58	MG	CA	3371	1/1	0.99	0.11	46,46,46,46	0
58	MG	AA	3791	1/1	0.99	0.08	15,15,15,15	0
58	MG	DA	1698	1/1	0.99	0.08	76,76,76,76	0
58	MG	CA	3373	1/1	0.99	0.07	42,42,42,42	0
58	MG	AA	3076	1/1	0.99	0.03	8,8,8,8	0
58	MG	AA	3755	1/1	0.99	0.10	29,29,29,29	0
58	MG	BA	3168	1/1	0.99	0.03	57,57,57,57	0
58	MG	CA	3267	1/1	0.99	0.07	39,39,39,39	0
58	MG	AA	3720	1/1	0.99	0.04	59,59,59,59	0
58	MG	AA	3163	1/1	0.99	0.15	45,45,45,45	0
58	MG	BA	3171	1/1	0.99	0.08	61,61,61,61	0
58	MG	AA	3392	1/1	0.99	0.06	21,21,21,21	0
58	MG	CA	3382	1/1	0.99	0.03	37,37,37,37	0
58	MG	CA	3383	1/1	0.99	0.04	40,40,40,40	0
58	MG	CA	3384	1/1	0.99	0.10	44,44,44,44	0
58	MG	AA	3524	1/1	0.99	0.12	29,29,29,29	0
58	MG	A7	105	1/1	0.99	0.07	44,44,44,44	0
58	MG	CA	3568	1/1	0.99	0.03	40,40,40,40	0
58	MG	AN	3002	1/1	0.99	0.03	26,26,26,26	0
60	ZN	A9	501	1/1	0.99	0.03	41,41,41,41	0
58	MG	AA	3393	1/1	0.99	0.06	26,26,26,26	0
58	MG	AA	3558	1/1	0.99	0.07	18,18,18,18	0
60	ZN	C6	501	1/1	0.99	0.02	60,60,60,60	0
60	ZN	C9	501	1/1	0.99	0.07	93,93,93,93	0
58	MG	AA	3417	1/1	0.99	0.10	42,42,42,42	0
58	MG	AA	3418	1/1	0.99	0.09	30,30,30,30	0
58	MG	AA	3009	1/1	0.99	0.04	23,23,23,23	0
58	MG	AA	3357	1/1	0.99	0.06	27,27,27,27	0
58	MG	AA	3471	1/1	0.99	0.03	34,34,34,34	0
58	MG	AA	3800	1/1	1.00	0.04	30,30,30,30	0
58	MG	AA	3308	1/1	1.00	0.04	28,28,28,28	0
60	ZN	CY	501	1/1	1.00	0.02	92,92,92,92	0
58	MG	AA	3776	1/1	1.00	0.03	40,40,40,40	0
60	ZN	C5	101	1/1	1.00	0.04	66,66,66,66	0
58	MG	AA	3724	1/1	1.00	0.04	22,22,22,22	0
58	MG	AA	3412	1/1	1.00	0.07	20,20,20,20	0
58	MG	CA	3562	1/1	1.00	0.04	36,36,36,36	0
60	ZN	AY	501	1/1	1.00	0.02	63,63,63,63	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
58	MG	AA	3659	1/1	1.00	0.04	14,14,14,14	0
60	ZN	A5	103	1/1	1.00	0.01	36,36,36,36	0
60	ZN	A6	102	1/1	1.00	0.02	46,46,46,46	0

6.5 Other polymers [i](#)

There are no such residues in this entry.