Full wwPDB X-ray Structure Validation Report ⓘ

Jan 2, 2024 – 08:59 pm GMT

PDB ID	:	4WRO
Title	:	Complex of 70S ribosome with tRNA-Phe and mRNA with C-A mismatch in the second position in the A-site
Authors	:	Rozov, A.; Demeshkina, N.; Yusupov, M.; Yusupova, G.
Deposited on	:	2014-10-24
Resolution	:	3.05 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:

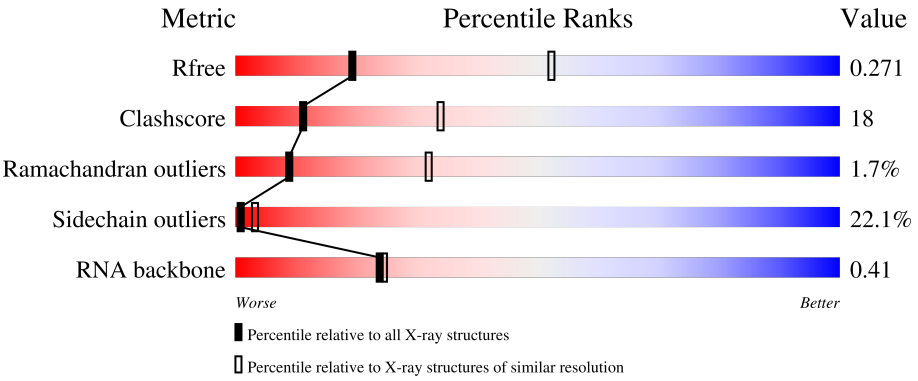
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.05 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}	130704	1754 (3.10-3.02)
Clashscore	141614	1864 (3.10-3.02)
Ramachandran outliers	138981	1794 (3.10-3.02)
Sidechain outliers	138945	1793 (3.10-3.02)
RNA backbone	3102	1036 (3.32-2.80)

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 <=5%

Mol	Chain	Length	Quality of chain
1	13	1522	27% 44% 23%
1	1G	1522	29% 46% 20%
2	1L	76	28% 39% 29%
2	3K	76	17% 43% 37%
2	3L	76	21% 37% 36% 7%
3	2K	77	35% 43% 17% 5%

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Mol	Chain	Length	Quality of chain
3	2L	77	31% 45% 18% 5%
4	4K	30	20% 17% 7% 57%
4	4L	30	7% 7% 7% 10% 70%
5	14	2917	27% 44% 23% 6%
5	1H	2917	21% 42% 29% 7%
6	12	256	36% 43% 13% 7%
6	1E	256	38% 41% 13% 7%
7	22	239	37% 42% 7% 14%
7	2E	239	55% 26% 5% 14%
8	32	209	51% 39% 8%
8	3E	209	49% 42% 8%
9	4E	162	43% 38% 12% 7%
10	5E	101	58% 36% 6%
11	6E	156	54% 38% 7%
12	7E	138	43% 48% 9%
13	8E	128	42% 45% 12%
14	1I	105	38% 46% 10% 6%
15	2I	129	46% 40% 7% 8%
16	3I	132	47% 36% 11% 5%
17	4I	126	43% 41% 8% 6%
18	5I	61	44% 44% 10%
19	6I	89	55% 38% 6%
20	7I	88	35% 43% 17% 5%
21	8I	105	38% 50% 8% 5%
22	9I	88	50% 30% 18%

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Mol	Chain	Length	Quality of chain
23	AI	93	35% 39% 10% 13%
24	BI	106	49% 33% 11% 7%
25	1F	27	33% 59% 7%
26	1K	76	29% 46% 18%
27	16	122	28% 40% 26% 6%
27	1J	122	30% 45% 21%
28	11	276	49% 40% 8%
29	21	206	48% 34% 16%
30	31	210	46% 38% 12%
31	41	182	42% 47% 11%
32	51	180	43% 42% 10%
33	61	148	40% 41% 16%
34	58	140	44% 41% 12%
35	68	122	56% 35% 9%
36	78	150	40% 40% 18%
37	88	141	50% 31% 14%
38	98	118	37% 48% 14%
39	A8	112	43% 41% 12%
40	B8	146	42% 39% 12% 6%
41	C8	118	44% 47% 6%
42	D8	101	52% 35% 13%
43	E8	113	58% 33% 10%
44	F8	96	42% 45% 8%
45	G8	110	35% 39% 16% 5% 5%
46	H8	206	33% 36% 14% 15%

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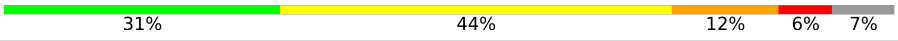
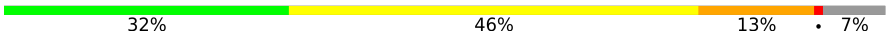
Mol	Chain	Length	Quality of chain
47	I8	85	
48	J8	98	
49	K8	72	
50	L8	60	
51	M8	71	
52	N8	60	
53	O8	54	
54	P8	49	
55	Q8	65	

2 Entry composition (i)

There are 58 unique types of molecules in this entry. The entry contains 260090 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 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	13	1497	Total	C	N	O	P	0	0	0
			32185	14324	5968	10396	1497			
1	1G	1497	Total	C	N	O	P	0	0	0
			32182	14324	5968	10394	1496			

- Molecule 2 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
2	1L	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			
2	3L	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			
2	3K	76	Total	C	N	O	P	S	0	0	0
			1627	730	290	530	75	2			

- Molecule 3 is a RNA chain called tRNA-fMet.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
3	2L	77	Total	C	N	O	P	S	0	0	0
			1645	734	298	535	77	1			
3	2K	77	Total	C	N	O	P	S	0	0	0
			1645	734	298	535	77	1			

- Molecule 4 is a RNA chain called RNA (30-MER).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	4L	9	Total	C	N	O	P	0	0	0
			191	86	35	61	9			
4	4K	13	Total	C	N	O	P	0	0	0
			279	126	55	85	13			

- Molecule 5 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	14	2909	Total	C	N	O	P	0	0	0
			62647	27884	11716	20139	2908			
5	1H	2912	Total	C	N	O	P	0	0	0
			62707	27911	11722	20163	2911			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
14	161	U	-	insertion	GB 48268
14	493	G	-	insertion	GB 48268
14	1228	G	-	insertion	GB 48268
1H	161	U	-	insertion	GB 48268
1H	493	G	-	insertion	GB 48268
1H	1228	G	-	insertion	GB 48268

- Molecule 6 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	1E	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			
6	12	237	Total	C	N	O	S	0	0	0
			1924	1228	344	347	5			

- Molecule 7 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	2E	205	Total	C	N	O	S	0	0	0
			1605	1011	313	280	1			
7	22	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

- Molecule 8 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	3E	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			
8	32	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

- Molecule 9 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	4E	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 10 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	5E	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 11 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	6E	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

- Molecule 12 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	7E	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

- Molecule 13 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
13	8E	127	Total	C	N	O	0	0	0
			1009	639	197	173			

- Molecule 14 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	1I	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

- Molecule 15 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	2I	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

- Molecule 16 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	3I	125	Total	C	N	O	S	0	0	0
			975	614	196	164	1			

- Molecule 17 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	4I	118	Total	C	N	O	S	0	0	0
			938	580	193	163	2			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
4I	119	ALA	GLY	conflict	UNP P80377

- Molecule 18 is a protein called 30S ribosomal protein S14 type Z.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	5I	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

- Molecule 19 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	6I	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 20 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	7I	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 21 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	8I	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 22 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
22	9I	72	Total	C	N	O	0	0	0
			590	376	117	97			

- Molecule 23 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AI	81	Total	C	N	O	S	0	0	0
			647	413	119	113	2			

- Molecule 24 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BI	99	Total	C	N	O	S	0	0	0
			762	470	162	128	2			

- Molecule 25 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
25	1F	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 26 is a RNA chain called tRNA-Phe.

Mol	Chain	Residues	Atoms						ZeroOcc	AltConf	Trace
26	1K	74	Total	C	N	O	P	S	0	0	0
			1587	712	286	514	73	2			

- Molecule 27 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	1J	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			
27	16	122	Total	C	N	O	P	0	0	0
			2617	1166	486	844	121			

- Molecule 28 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	11	272	Total	C	N	O	S	0	0	0
			2115	1335	420	357	3			

- Molecule 29 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	21	205	Total	C	N	O	S	0	0	0
			1568	991	300	271	6			

- Molecule 30 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	31	202	Total	C	N	O	S	0	0	0
			1585	1011	297	275	2			

- Molecule 31 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	41	181	Total	C	N	O	S	0	0	0
			1473	942	268	259	4			

- Molecule 32 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	51	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

- Molecule 33 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	61	146	Total	C	N	O	S	0	0	0
			1136	726	201	208	1			

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	58	138	Total	C	N	O	S	0	0	0
			1104	712	206	182	4			

- Molecule 35 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	68	122	Total	C	N	O	S	0	0	0
			932	588	171	169	4			

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	78	150	Total	C	N	O	S	0	0	0
			1144	712	232	197	3			

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	88	138	Total	C	N	O	S	0	0	0
			1086	693	208	179	6			

- Molecule 38 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	98	118	Total	C	N	O	S	0	0	0
			967	604	203	159	1			

- Molecule 39 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
39	A8	111	Total	C	N	O	0	0	0
			881	556	176	149			

- Molecule 40 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	B8	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 41 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	C8	117	Total	C	N	O	S	0	0	0
			963	610	202	150	1			

- Molecule 42 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	D8	101	Total	C	N	O	S	0	0	0
			778	501	142	134	1			

- Molecule 43 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	E8	113	Total	C	N	O	S	0	0	0
			899	566	177	154	2			

- Molecule 44 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	F8	94	Total	C	N	O	S	0	0	0
			742	482	134	125	1			

- Molecule 45 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	G8	104	Total	C	N	O	S	0	0	0
			791	510	149	127	5			

- Molecule 46 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	H8	175	Total	C	N	O	S	0	0	0
			1397	892	251	251	3			

- Molecule 47 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	I8	80	Total	C	N	O	S	0	0	0
			626	388	132	105	1			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I8	6	ALA	GLY	conflict	UNP P60493
I8	8	ALA	GLY	conflict	UNP P60493

- Molecule 48 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	J8	97	Total	C	N	O	S	0	0	0
			762	481	150	130	1			

- Molecule 49 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	K8	67	Total	C	N	O	S	0	0	0
			563	349	114	99	1			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
50	L8	57	Total	C	N	O	0	0	0
			452	288	88	76			

- Molecule 51 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	M8	66	Total	C	N	O	S	0	0	0
			533	335	96	97	5			

- Molecule 52 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	N8	58	Total	C	N	O	S	0	0	0
			453	285	89	74	5			

- Molecule 53 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	O8	45	Total	C	N	O	S	0	0	0
			389	241	79	65	4			

- Molecule 54 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	P8	45	Total	C	N	O	S	0	0	0
			391	240	97	52	2			

- Molecule 55 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	Q8	60	Total	C	N	O	S	0	0	0
			480	306	98	74	2			

- Molecule 56 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	13	149	Total Mg 149 149	0	0
56	1L	1	Total Mg 1 1	0	0
56	2L	4	Total Mg 4 4	0	0
56	3L	3	Total Mg 3 3	0	0
56	14	421	Total Mg 421 421	0	0
56	3E	2	Total Mg 2 2	0	0
56	5E	1	Total Mg 1 1	0	0
56	3I	1	Total Mg 1 1	0	0
56	5I	1	Total Mg 1 1	0	0
56	1K	2	Total Mg 2 2	0	0
56	2K	8	Total Mg 8 8	0	0
56	1H	537	Total Mg 537 537	0	0
56	1J	7	Total Mg 7 7	0	0
56	16	13	Total Mg 13 13	0	0
56	11	2	Total Mg 2 2	0	0
56	21	2	Total Mg 2 2	0	0
56	41	2	Total Mg 2 2	0	0
56	78	1	Total Mg 1 1	0	0
56	88	2	Total Mg 2 2	0	0
56	I8	1	Total Mg 1 1	0	0
56	J8	1	Total Mg 1 1	0	0
56	L8	1	Total Mg 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
56	P8	1	Total Mg 1 1	0	0
56	1G	96	Total Mg 96 96	0	0

- Molecule 57 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	14	1	Total Zn 1 1	0	0
57	3E	1	Total Zn 1 1	0	0
57	5I	1	Total Zn 1 1	0	0
57	G8	1	Total Zn 1 1	0	0
57	1G	1	Total Zn 1 1	0	0
57	32	1	Total Zn 1 1	0	0

- Molecule 58 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	13	230	Total O 230 230	0	0
58	2L	1	Total O 1 1	0	0
58	4L	2	Total O 2 2	0	0
58	14	863	Total O 863 863	0	0
58	3E	1	Total O 1 1	0	0
58	4E	3	Total O 3 3	0	0
58	8E	2	Total O 2 2	0	0
58	1I	1	Total O 1 1	0	0
58	3I	1	Total O 1 1	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	5I	1	Total O 1 1	0	0
58	6I	1	Total O 1 1	0	0
58	7I	1	Total O 1 1	0	0
58	BI	1	Total O 1 1	0	0
58	1K	6	Total O 6 6	0	0
58	2K	8	Total O 8 8	0	0
58	3K	1	Total O 1 1	0	0
58	4K	4	Total O 4 4	0	0
58	1H	1212	Total O 1212 1212	0	0
58	1J	12	Total O 12 12	0	0
58	16	21	Total O 21 21	0	0
58	11	9	Total O 9 9	0	0
58	21	3	Total O 3 3	0	0
58	31	8	Total O 8 8	0	0
58	58	3	Total O 3 3	0	0
58	78	6	Total O 6 6	0	0
58	98	1	Total O 1 1	0	0
58	B8	1	Total O 1 1	0	0
58	C8	3	Total O 3 3	0	0
58	D8	1	Total O 1 1	0	0
58	E8	2	Total O 2 2	0	0

Continued on next page...

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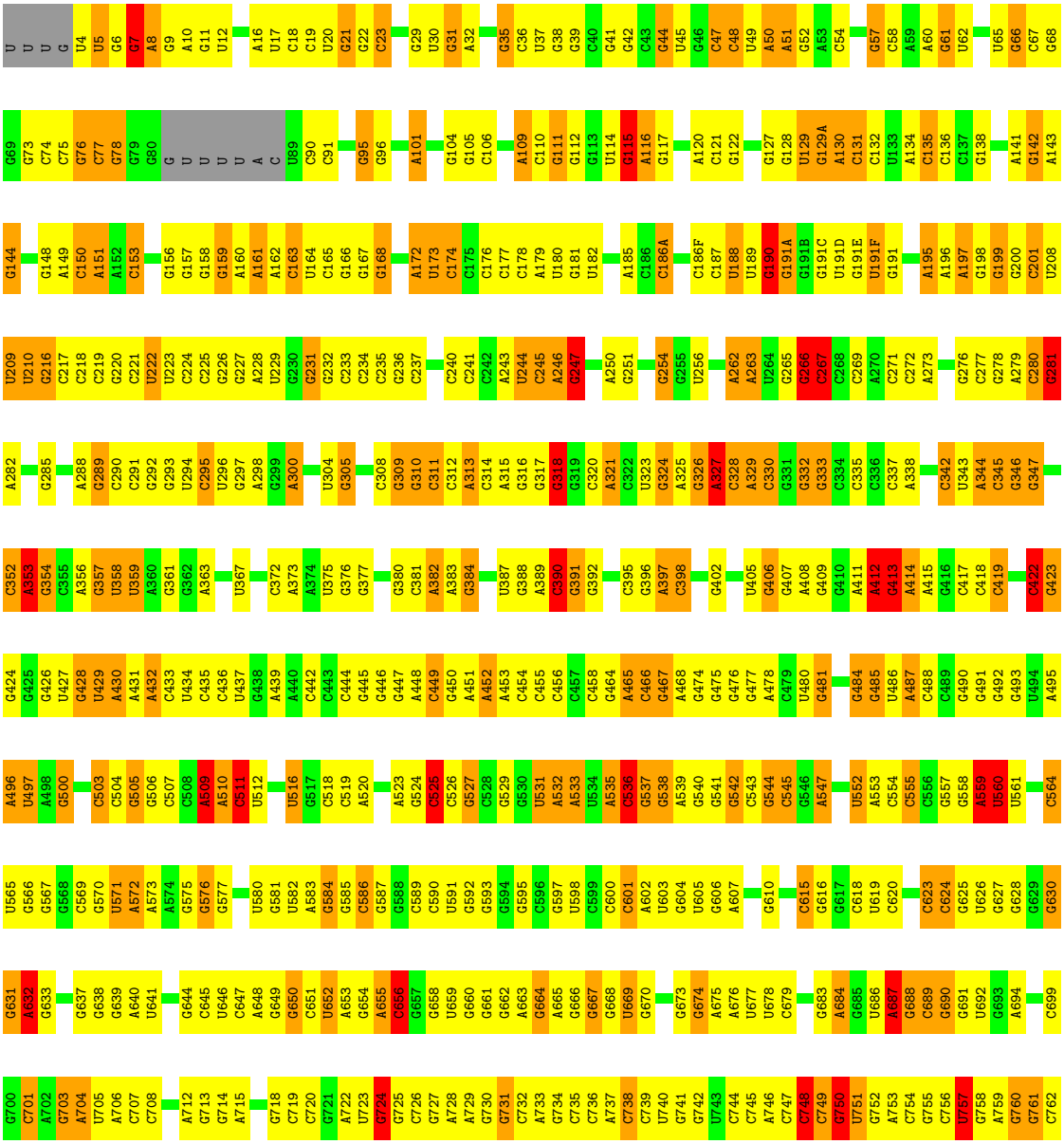
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	F8	2	Total O 2 2	0	0
58	G8	3	Total O 3 3	0	0
58	I8	5	Total O 5 5	0	0
58	J8	1	Total O 1 1	0	0
58	L8	1	Total O 1 1	0	0
58	P8	4	Total O 4 4	0	0
58	Q8	1	Total O 1 1	0	0
58	1G	106	Total O 106 106	0	0

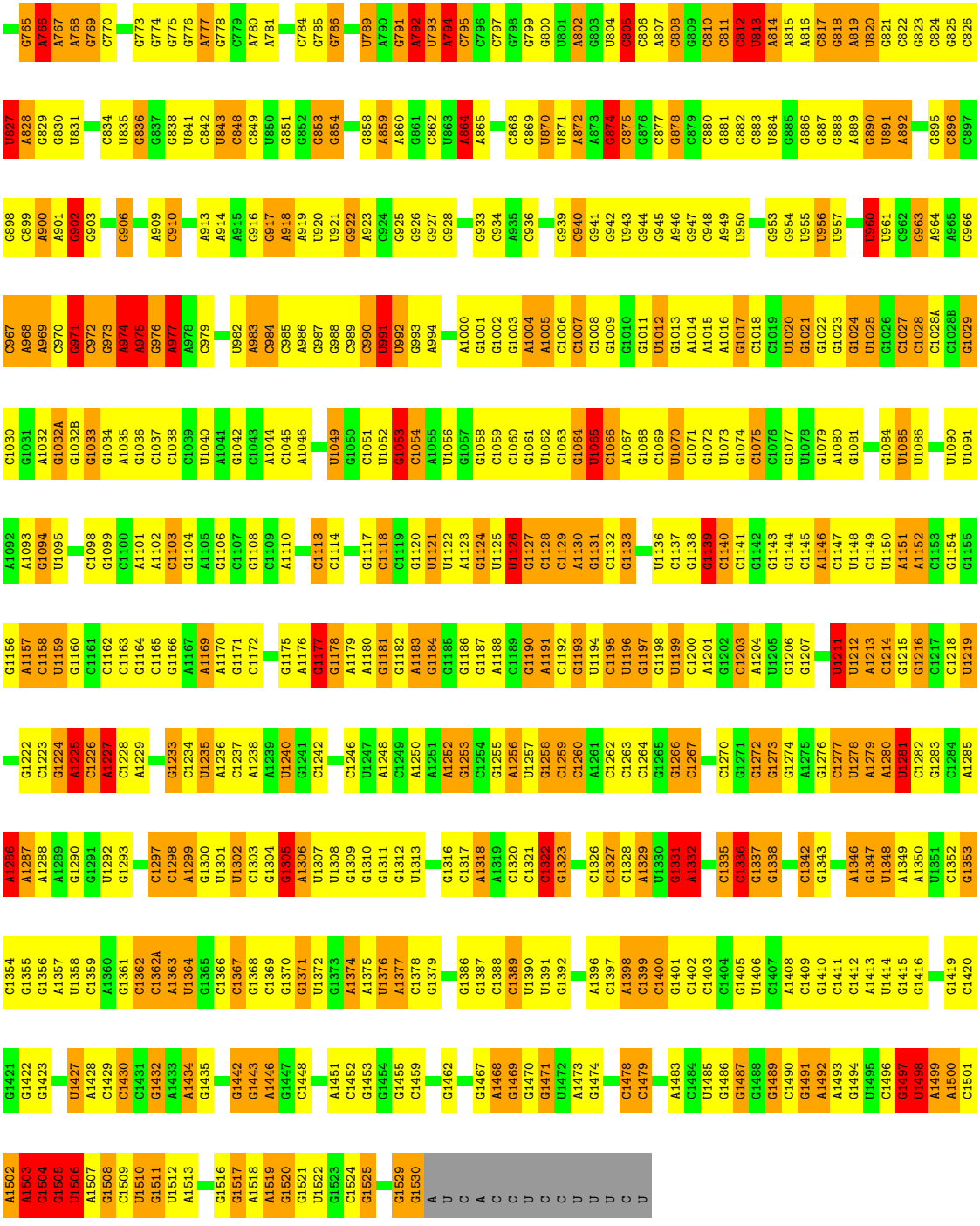
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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: 16S ribosomal RNA

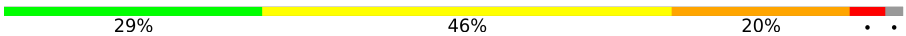
Chain 13:

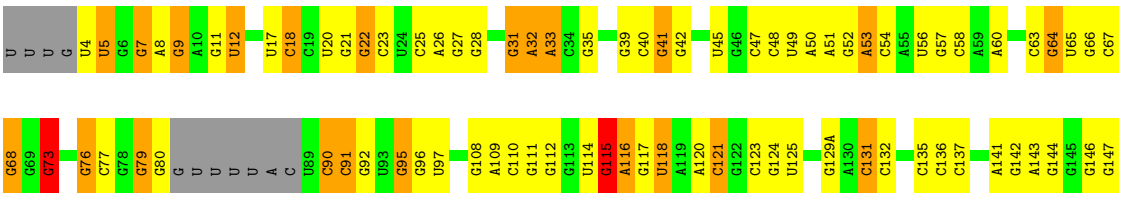


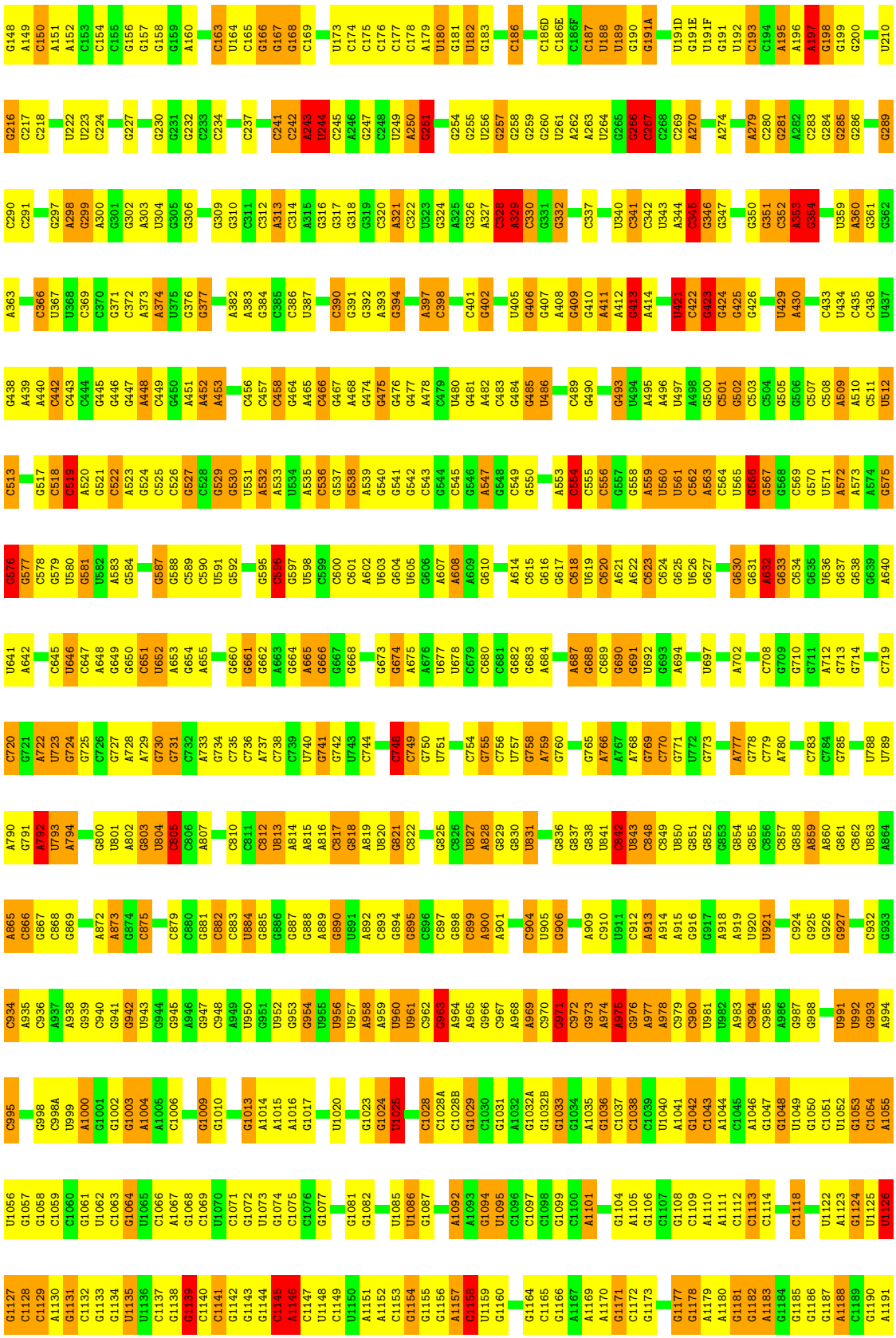


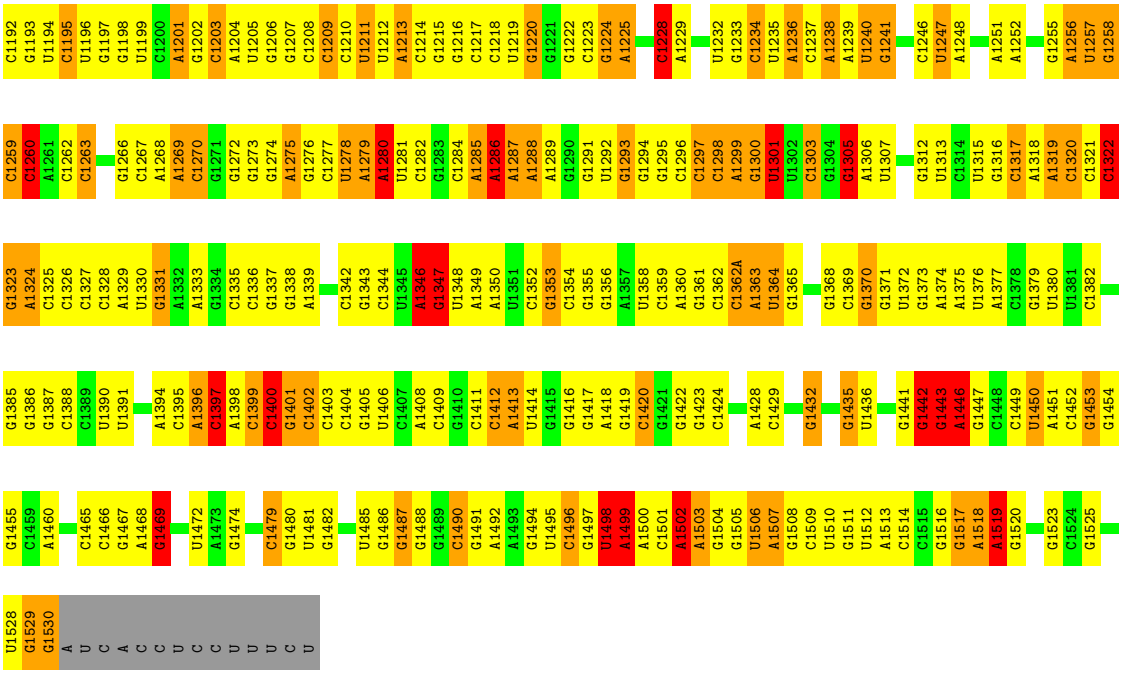
• Molecule 1: 16S ribosomal RNA

Chain 1G:



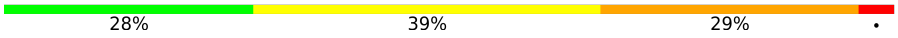






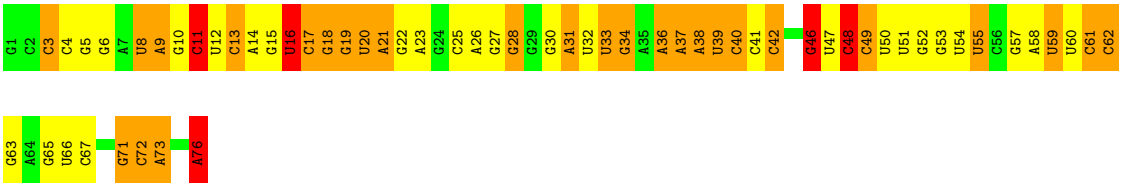
• Molecule 2: tRNA-Phe

Chain 1L:



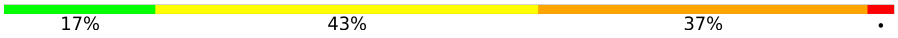
• Molecule 2: tRNA-Phe

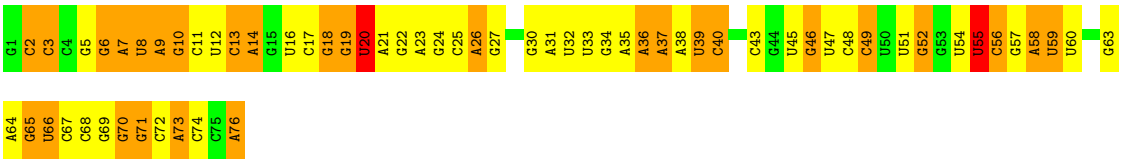
Chain 3L:



• Molecule 2: tRNA-Phe

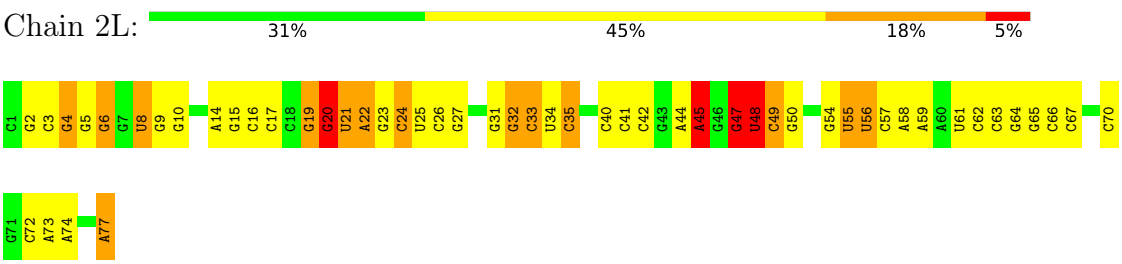
Chain 3K:





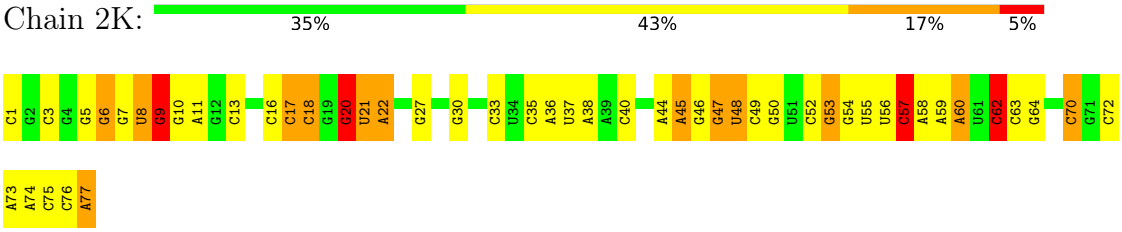
• Molecule 3: tRNA-fMet

Chain 2L:



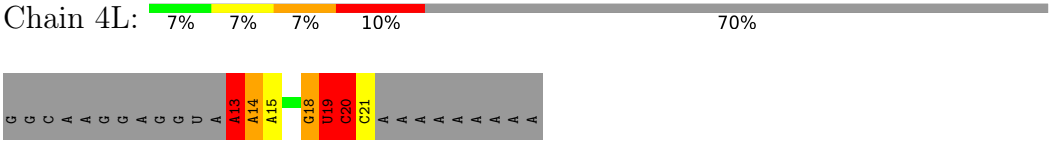
• Molecule 3: tRNA-fMet

Chain 2K:



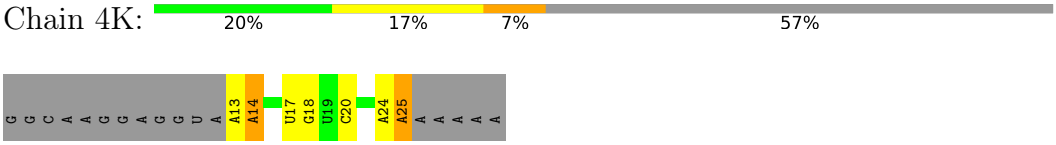
• Molecule 4: RNA (30-MER)

Chain 4L:



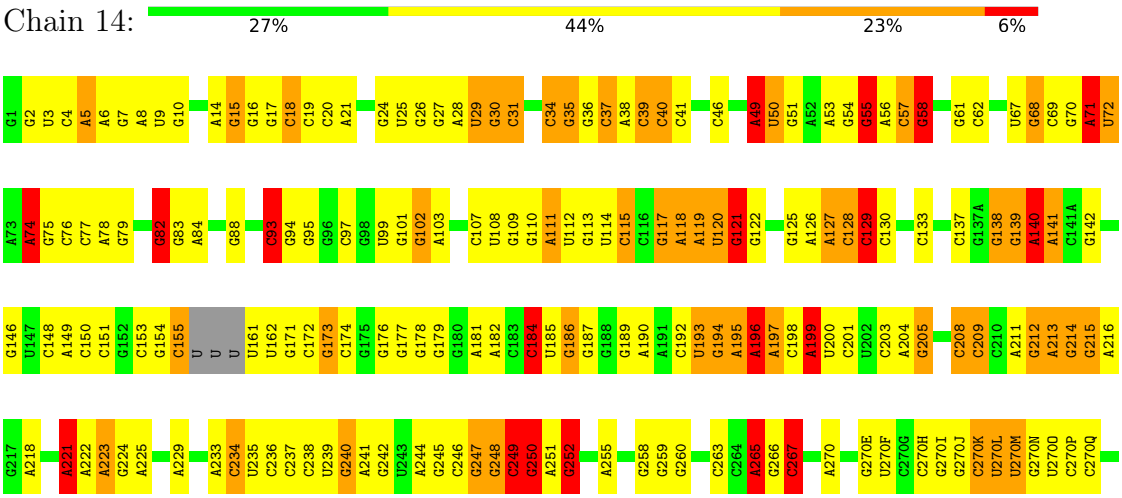
• Molecule 4: RNA (30-MER)

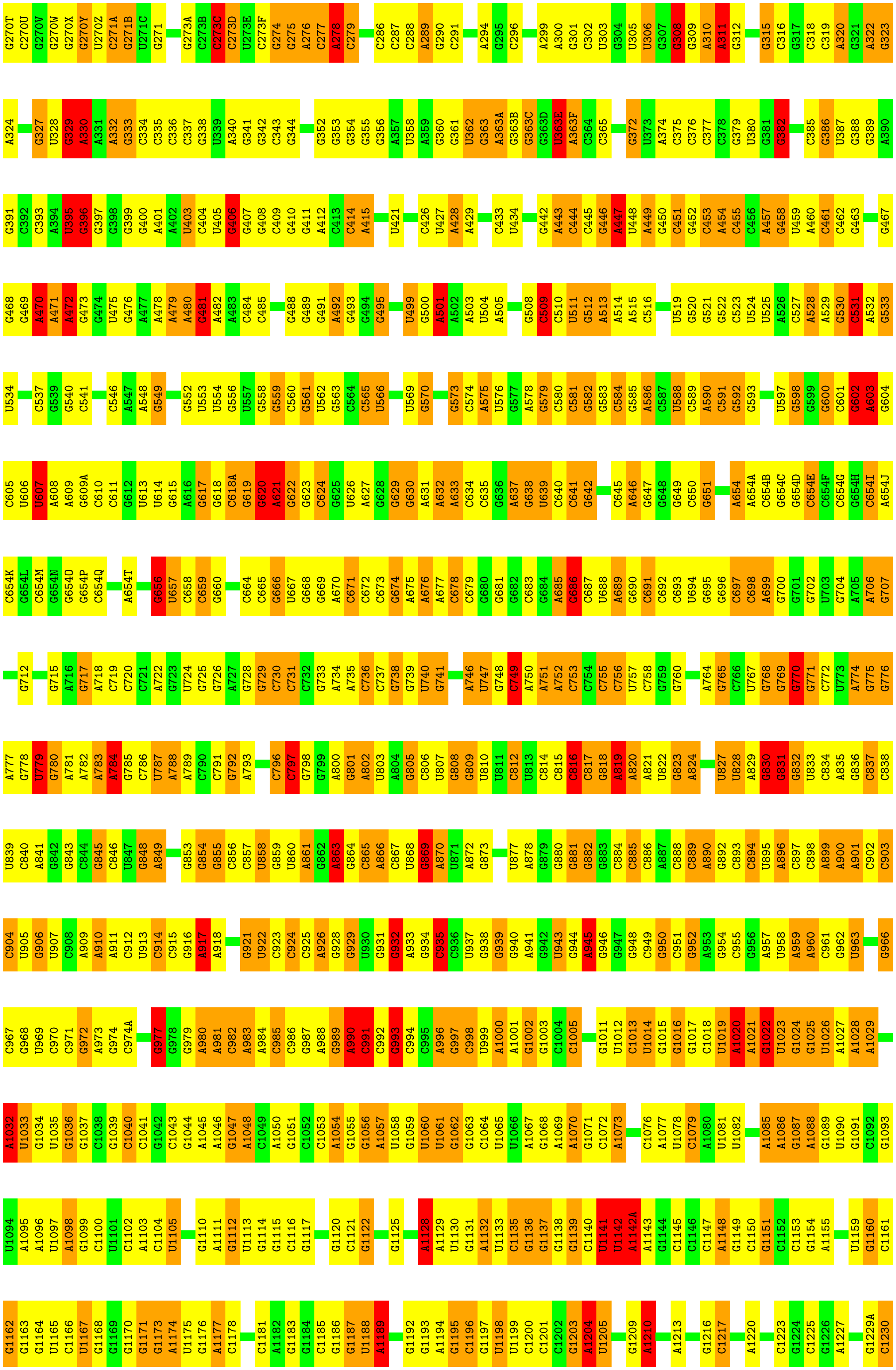
Chain 4K:



• Molecule 5: 23S ribosomal RNA

Chain 14:

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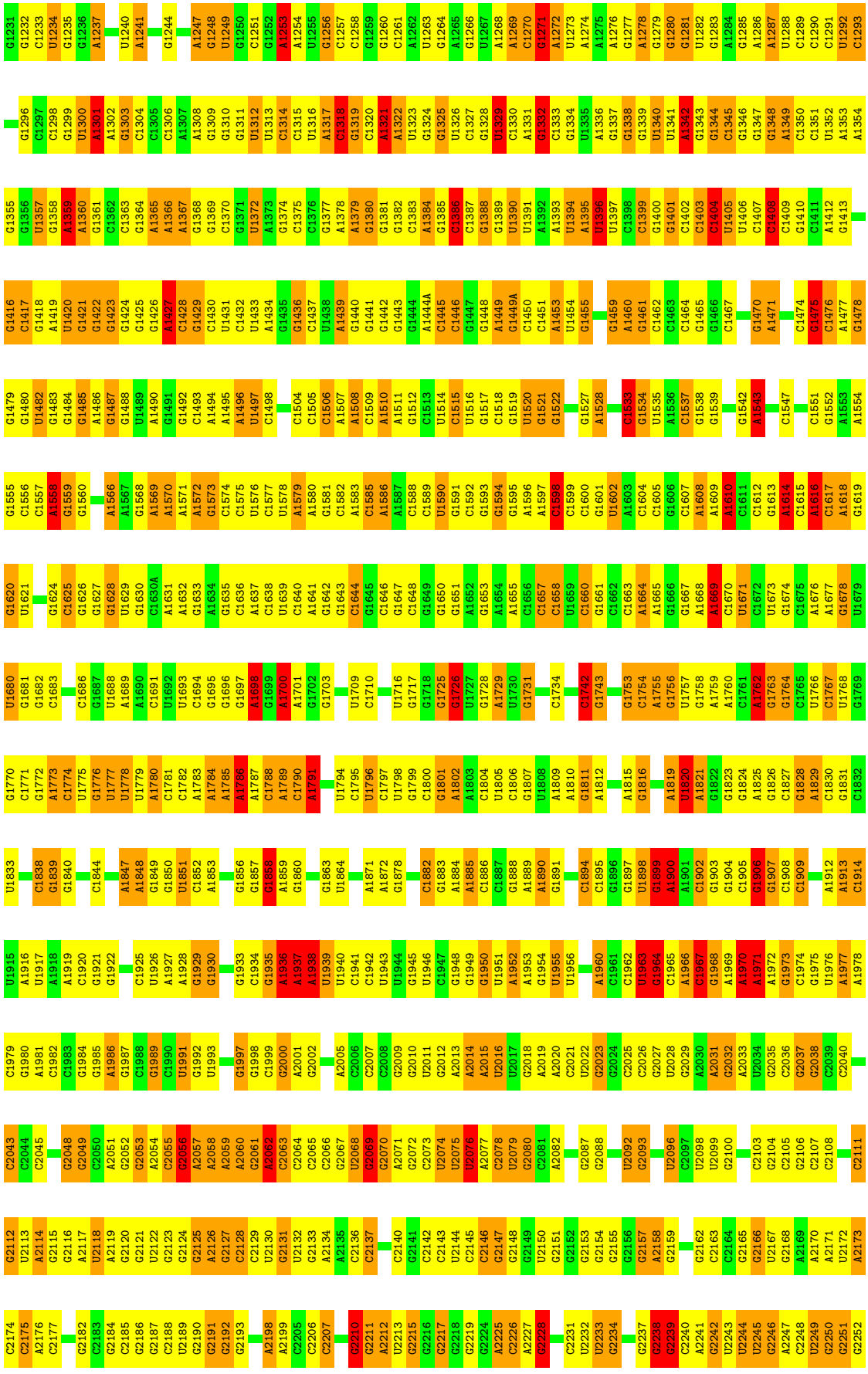
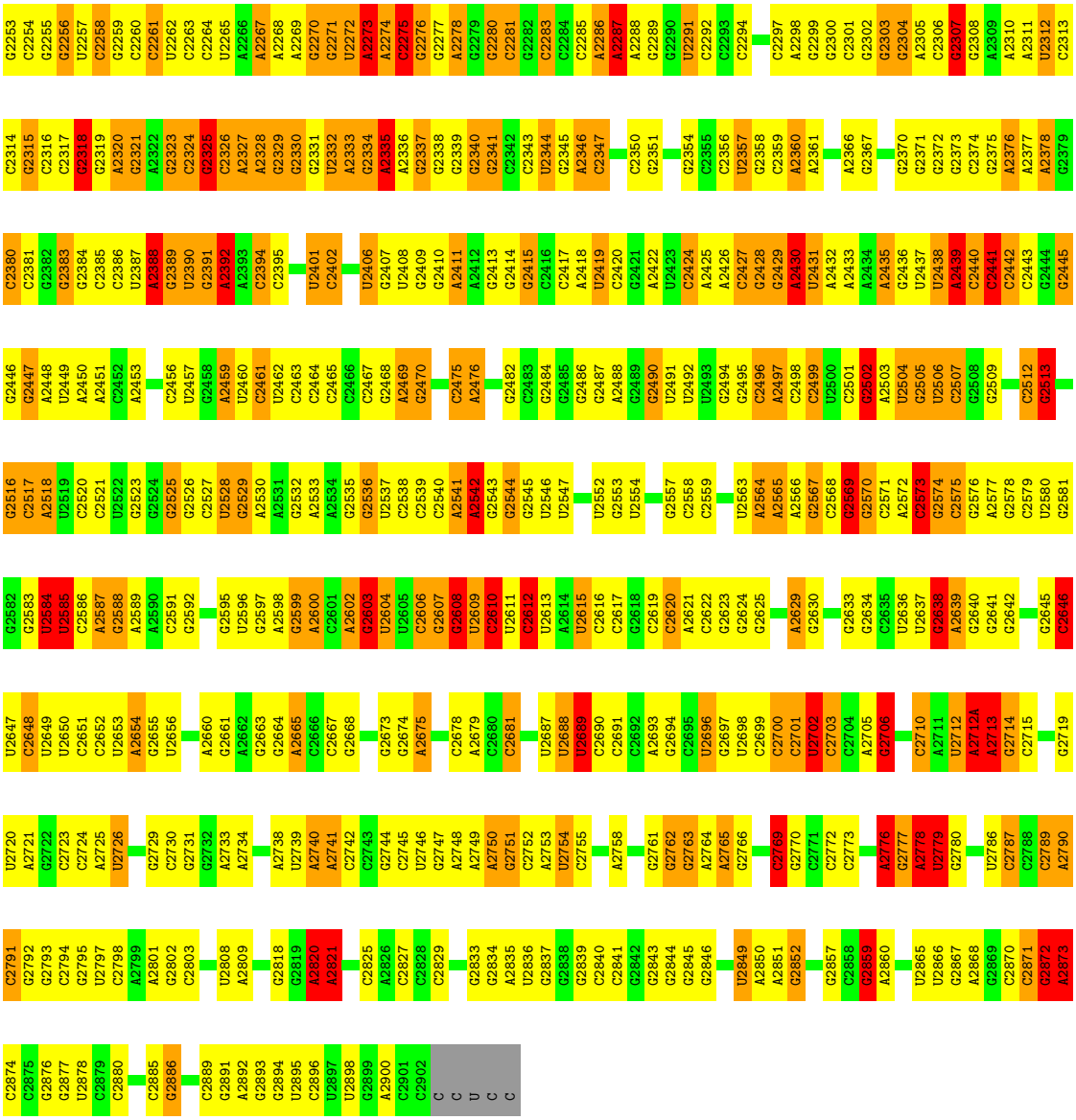
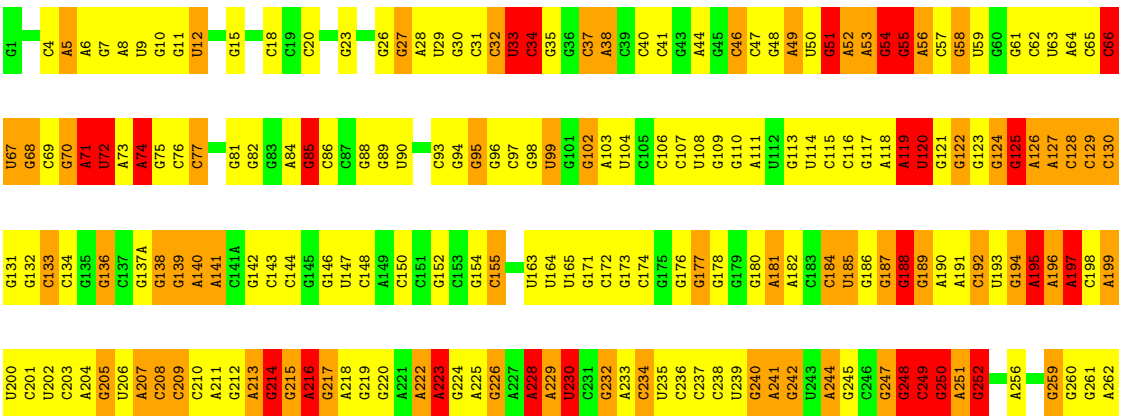
A324 G327 U328 G329 A330 A331 A332 G333 C334 C335 C336 C337 G338 U339 A340 G341 G342 C343 G344 G352 G353 C354 G355 G356 A357 U358 A359 G360 G361 U362 G363 A363A C363B G363C G363D U363E A363F C364 C365 G372 U373 A374 C375 C376 C377 C378 G379 U380 G381 G382 C385 G386 U387 G388 G389 A390
G391 C392 C393 A394 U395 G396 G397 G398 G399 G400 A401 A402 U403 C404 U405 G406 G407 G408 C409 G410 G411 A412 C413 C414 A415 U421 C426 U427 A428 A429 C433 U434 G442 A443 C444 C445 G446 A447 U448 A449 G450 C451 G452 C453 A454 C455 C456 A457 G458 U459 A460 C461 C462 G463 G467
G468 G469 A470 A471 A472 G473 G474 U475 G476 A477 A478 A479 A480 G481 A482 A483 C484 C485 G488 G489 G491 A492 G493 G494 G495 U499 G500 A501 A502 A503 U504 A505 G508 C509 C510 U511 G512 A513 A514 A515 C516 U519 G520 G521 G522 C523 U524 U525 A526 C527 A528 A529 G530 C531 A532 G533
U534 C537 G539 G540 C541 C546 A547 A548 G549 G552 U553 U554 G556 U557 G558 G559 C560 G561 U562 G563 C564 C565 U566 U569 G570 G573 C574 A575 U576 G577 A578 G579 C580 C581 G582 G583 C584 G585 A586 C587 U588 C589 A590 C591 G592 G593 U597 G598 G599 G600 C601 G602 A603 G604
C605 U606 U607 A608 A609 G609A C610 C611 G612 U613 U614 G615 A616 G617 G618 C618A G619 G620 A621 G622 G623 C624 G625 U626 A627 G628 G629 C630 A631 A632 A633 C634 C635 G636 A637 G638 U639 C640 C641 G642 C645 A646 G647 G648 G649 C650 G651 A654 A654A C654B C654C G654D C654E C654F C654G G654H C654I A654J
C654K G654L C654M G654N G654O G654P C654Q A654T G656 U657 C658 C659 G660 C664 C665 G666 U667 G668 G669 A670 C671 C672 C673 G674 A675 A676 A677 C678 C679 G680 G681 G682 C683 G684 A685 C686 C687 U688 A689 G690 C691 C692 C693 U694 G695 G696 C697 C698 A699 G700 G701 G702 U703 G704 A705 A706 G707
G712 G715 A716 G717 A718 C719 C720 C721 A722 G723 U724 G725 G726 A727 G728 G729 C730 C731 C732 G733 A734 A735 C736 C737 G738 G739 U740 G741 A746 U747 G748 C749 A750 A751 A752 C753 C754 C755 C756 U757 C758 G759 G760 A764 G765 C766 U767 G768 G769 G770 G771 C772 U773 A774 G775 G776
A777 G778 U779 G780 A781 A782 A783 A784 G785 C786 U787 A788 A789 C790 C791 G792 A793 C796 C797 G798 G799 A800 G801 A802 U803 A804 G805 C806 U807 G808 G809 U810 U811 C812 U813 C814 C815 C816 C817 G818 A819 A820 A821 U822 G823 A824 U827 U828 A829 G830 G831 G832 U833 C834 A835 G836 C837 C838
U839 C840 A841 G842 G843 C844 G845 C846 U847 G848 A849 G853 G854 G855 C856 C857 U858 G859 U860 A861 G862 A863 G864 C865 A866 C867 U868 G869 A870 U871 A872 G873 U877 A878 G879 G880 G881 G882 G883 C884 C885 C886 A887 C888 C889 A890 G892 C893 C894 U895 A896 C897 C898 A899 A900 A901 C902 C903
C904 U905 G906 U907 C908 A909 A910 A911 C912 U913 C914 C915 G916 A917 A918 G921 U922 C923 C924 C925 A926 G928 G929 U930 G931 G932 A933 G934 C935 C936 U937 G938 G939 G940 A941 G942 U943 G944 A945 G946 G947 G948 C949 G950 C951 G952 A953 G954 C955 G956 A957 U958 A959 A960 C961 G962 U963 G966
C967 G968 U969 C970 C971 G972 A973 G974 C974A G977 G978 G979 A980 A981 C982 A983 A984 C985 C986 G987 A988 G989 A990 C991 C992 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 G1003 C1004 C1005 G1011 U1012 C1013 U1014 G1015 G1016 G1017 C1018 U1019 A1020 A1021 G1022 U1023 G1024 G1025 U1026 A1027 A1028 A1029
A1032 U1033 G1034 U1035 G1036 G1037 C1038 G1039 C1040 C1041 G1042 C1043 G1044 A1045 A1046 G1047 A1048 C1049 A1050 G1051 C1052 C1053 A1054 G1055 G1056 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 U1065 U1066 A1067 G1068 A1069 A1070 G1071 C1072 A1073 C1076 A1077 U1078 C1079 A1080 U1081 U1082 A1085 A1086 G1087 A1088 G1089 U1090 G1091 C1092 G1093
U1094 A1095 A1096 U1097 A1098 G1099 C1100 U1101 C1102 A1103 C1104 U1105 G1110 A1111 G1112 U1113 G1114 G1115 C1116 G1117 G1120 C1121 G1122 G1125 A1128 A1129 U1130 G1131 A1132 U1133 C1135 G1136 G1137 G1138 G1139 C1140 U1141 U1142 A1142A A1143 G1144 C1145 C1146 C1147 A1148 G1149 C1150 G1151 C1152 C1153 G1154 A1155 U1159 G1160 C1161
G1162 G1163 G1164 U1165 C1166 U1167 G1168 G1169 G1170 G1171 G1173 A1174 U1175 G1176 A1177 C1178 C1181 A1182 G1183 G1184 C1185 G1186 G1187 U1188 A1189 G1192 G1193 A1194 G1195 C1196 G1197 U1198 U1199 C1200 G1201 C1202 G1203 A1204 U1205 G1209 A1210 A1213 G1216 C1217 A1220 C1223 G1224 C1225 G1226 A1227 G1229A C1230

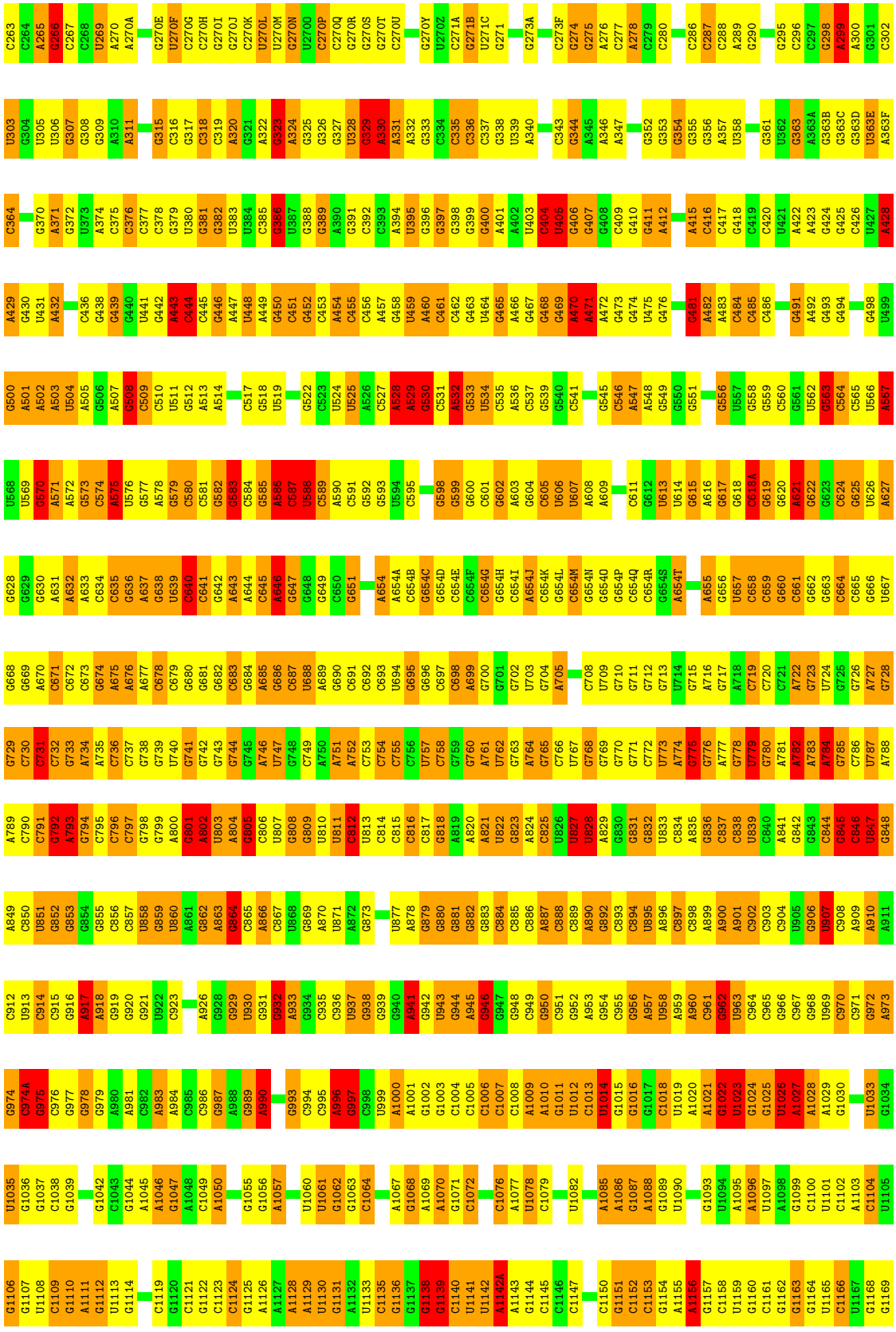


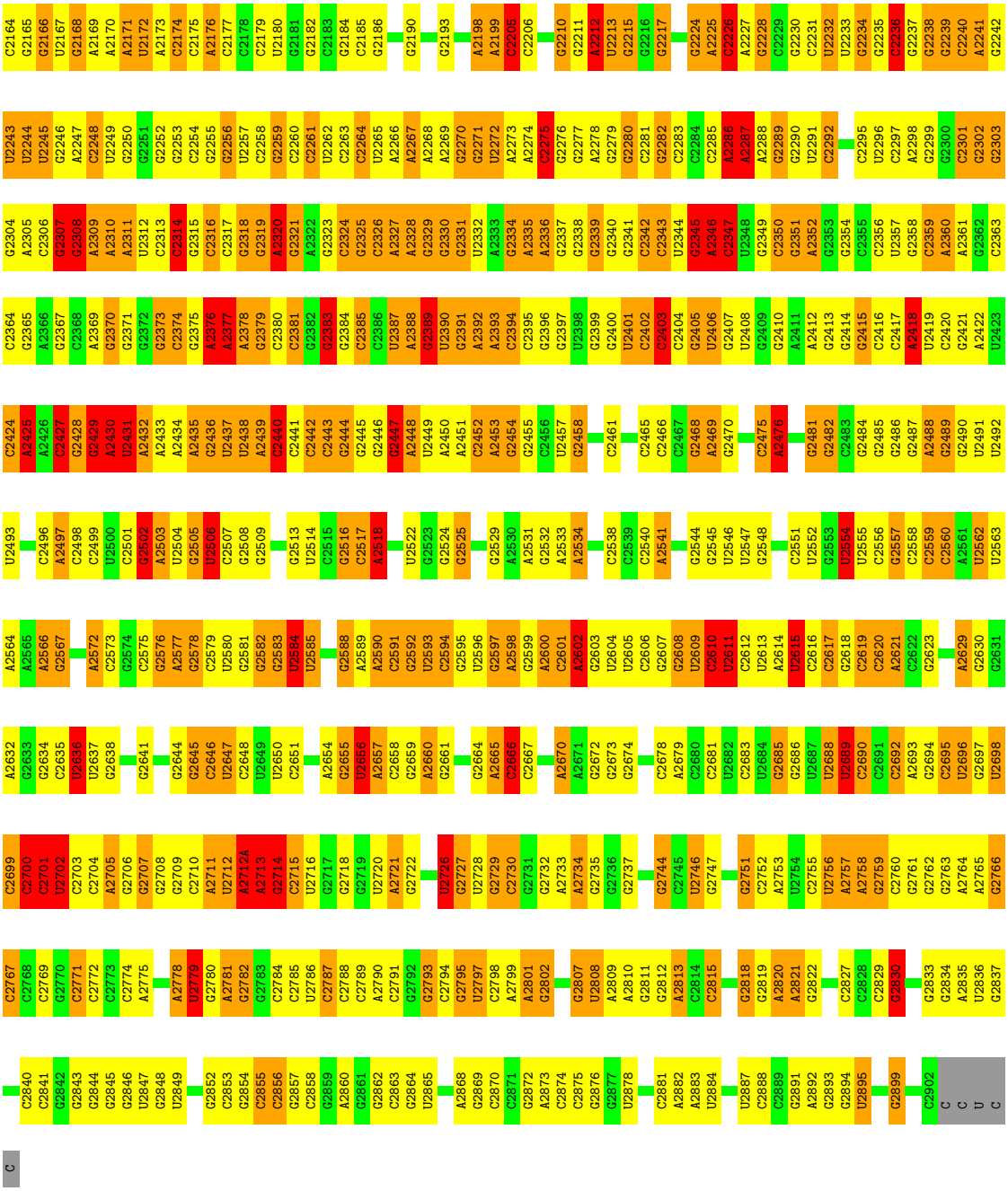


• Molecule 5: 23S ribosomal RNA

Chain 1H:

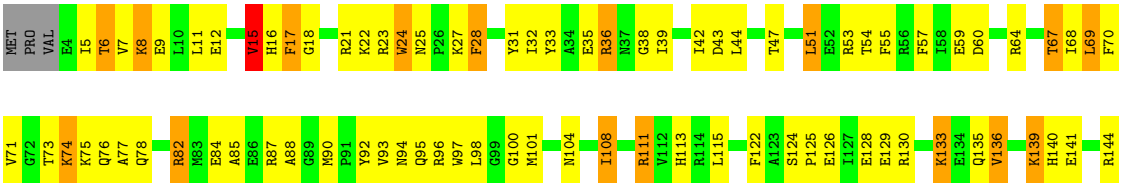


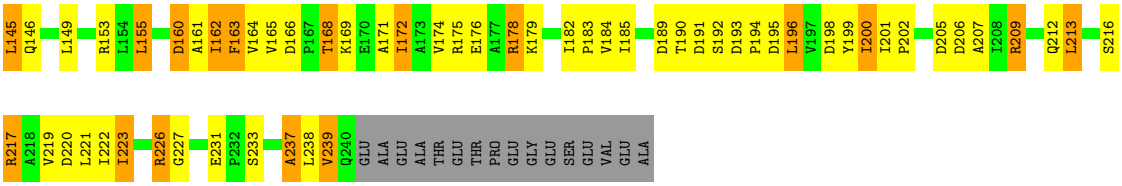




• Molecule 6: 30S ribosomal protein S2

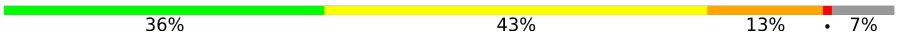
Chain 1E:

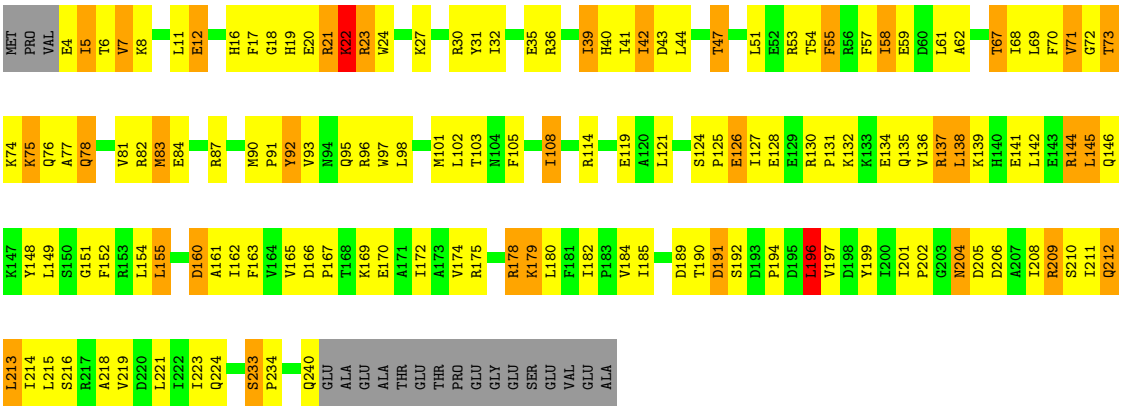




• Molecule 6: 30S ribosomal protein S2

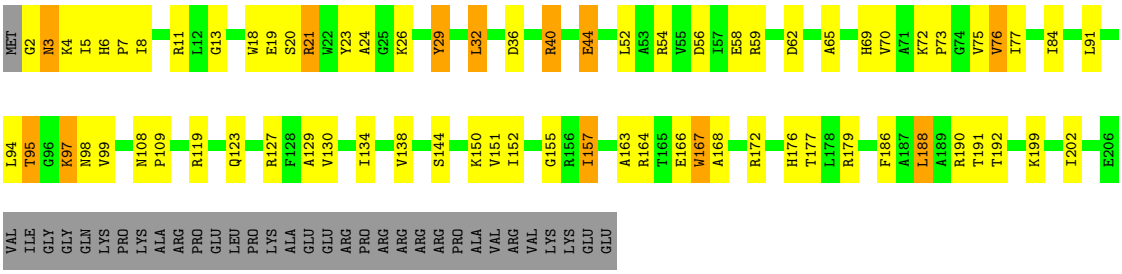
Chain 12:





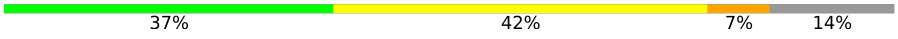
• Molecule 7: 30S ribosomal protein S3

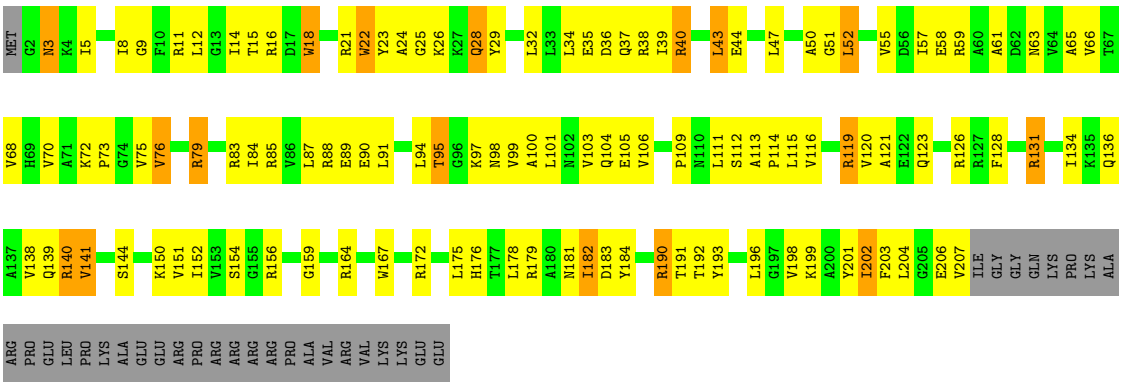
Chain 2E:



• Molecule 7: 30S ribosomal protein S3

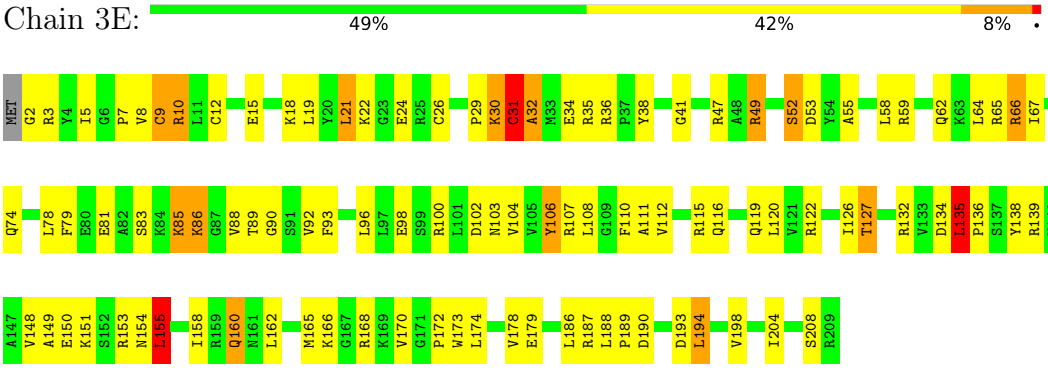
Chain 22:





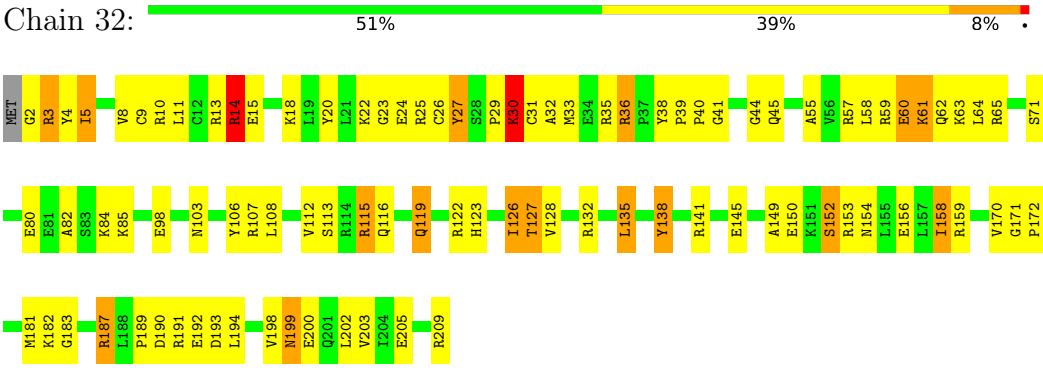
• Molecule 8: 30S ribosomal protein S4

Chain 3E:



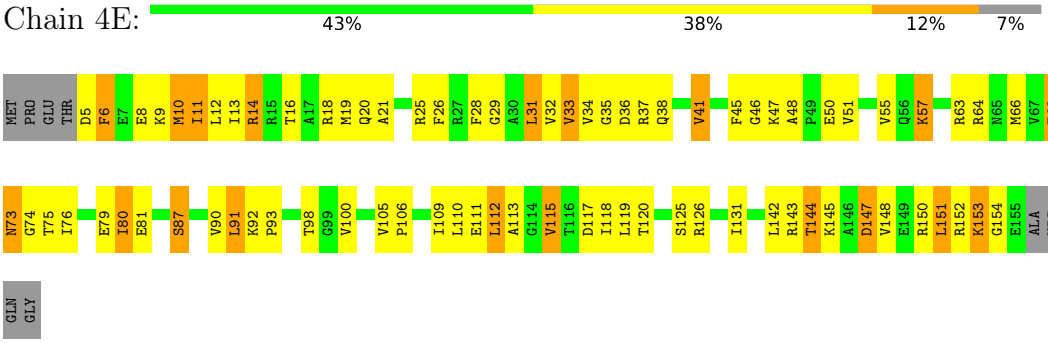
• Molecule 8: 30S ribosomal protein S4

Chain 32:



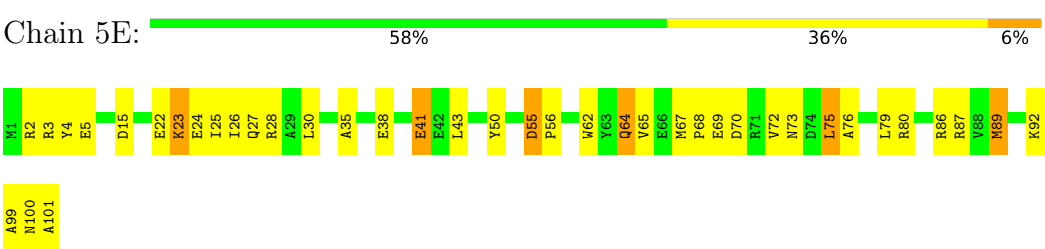
• Molecule 9: 30S ribosomal protein S5

Chain 4E:



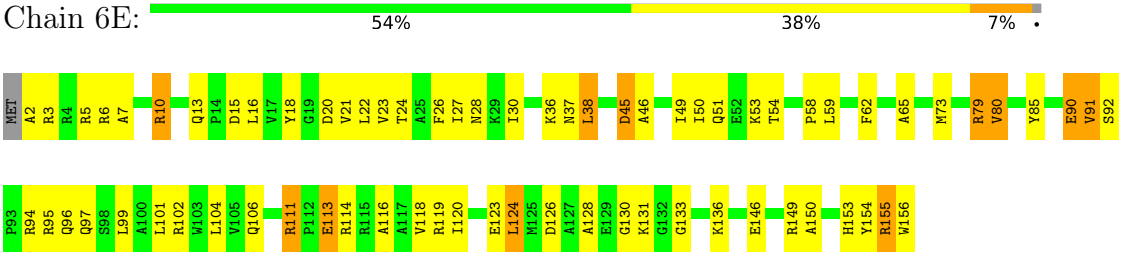
• Molecule 10: 30S ribosomal protein S6

Chain 5E:



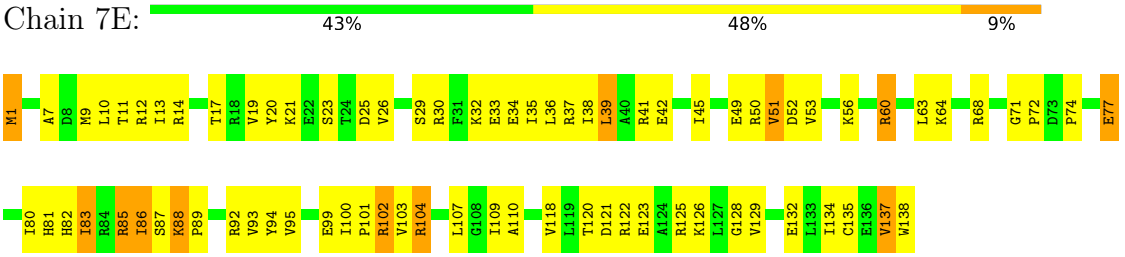
• Molecule 11: 30S ribosomal protein S7

Chain 6E:



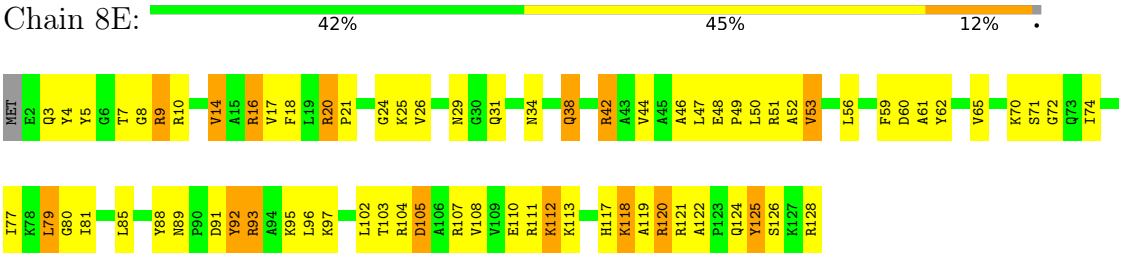
• Molecule 12: 30S ribosomal protein S8

Chain 7E:



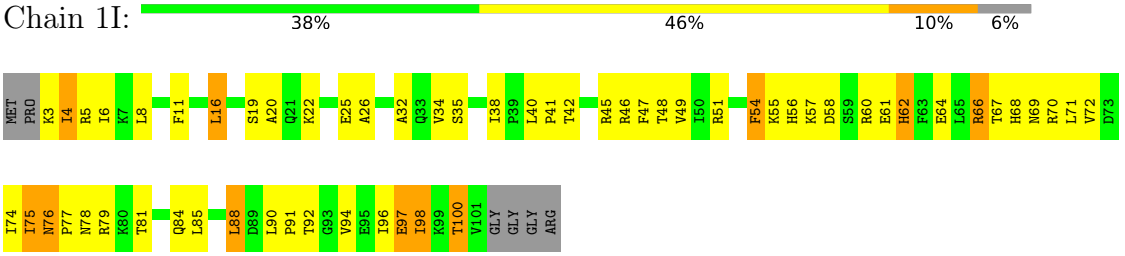
• Molecule 13: 30S ribosomal protein S9

Chain 8E:



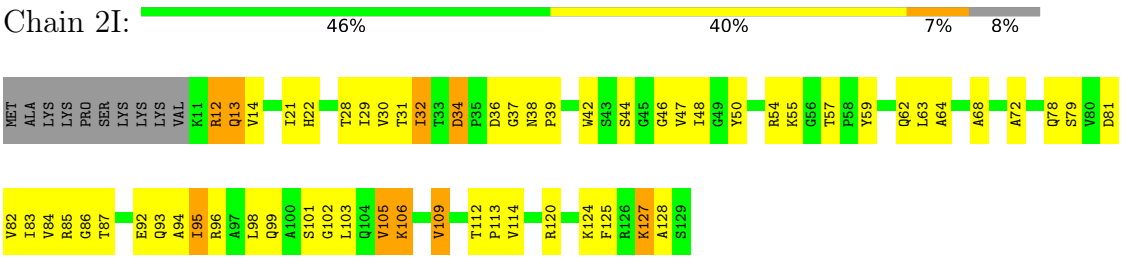
• Molecule 14: 30S ribosomal protein S10

Chain 1I:



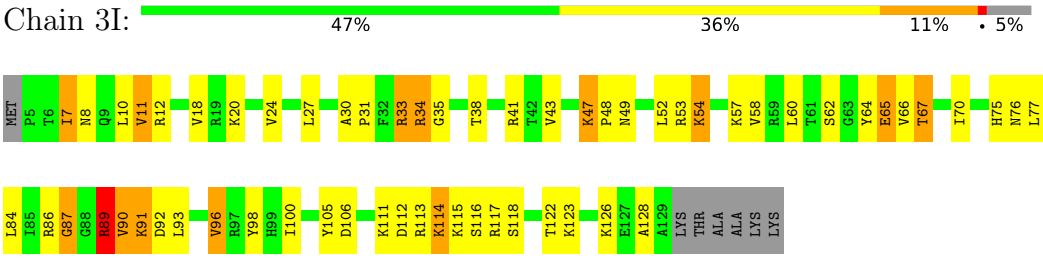
• Molecule 15: 30S ribosomal protein S11

Chain 2I:



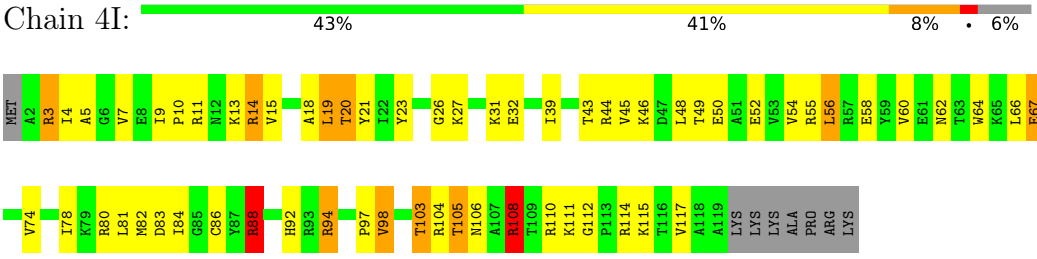
• Molecule 16: 30S ribosomal protein S12

Chain 3I:



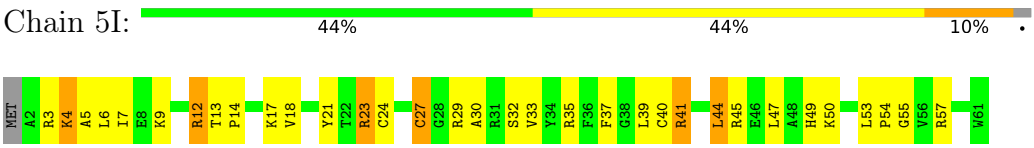
• Molecule 17: 30S ribosomal protein S13

Chain 4I:



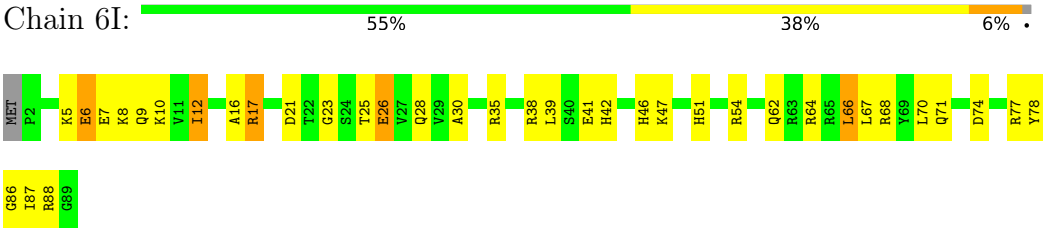
• Molecule 18: 30S ribosomal protein S14 type Z

Chain 5I:



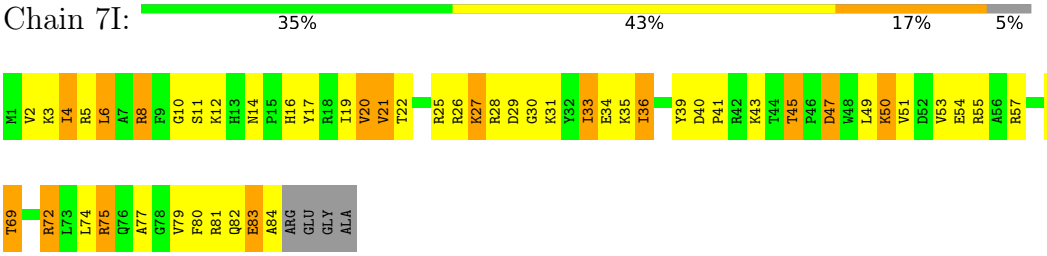
• Molecule 19: 30S ribosomal protein S15

Chain 6I:



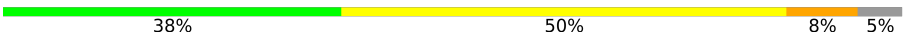
• Molecule 20: 30S ribosomal protein S16

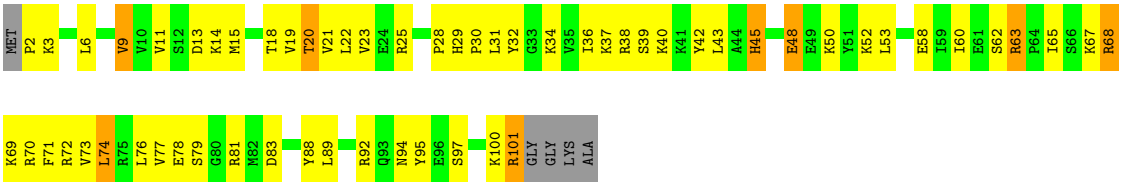
Chain 7I:



• Molecule 21: 30S ribosomal protein S17

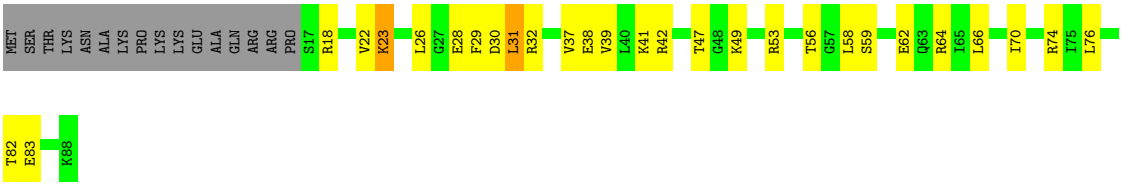
Chain 8I:





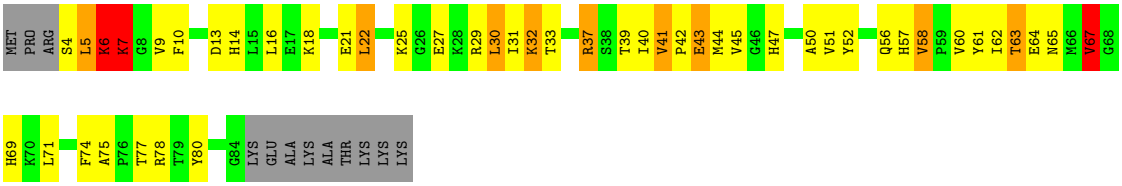
• Molecule 22: 30S ribosomal protein S18

Chain 9I:



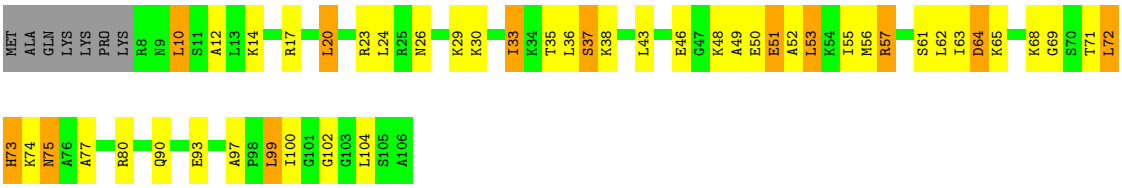
• Molecule 23: 30S ribosomal protein S19

Chain AI:



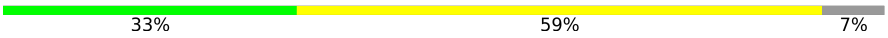
• Molecule 24: 30S ribosomal protein S20

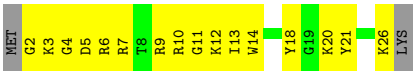
Chain BI:



• Molecule 25: 30S ribosomal protein Thx

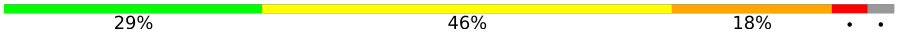
Chain 1F:

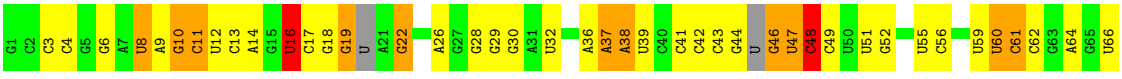


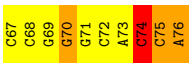


• Molecule 26: tRNA-Phe

Chain 1K:

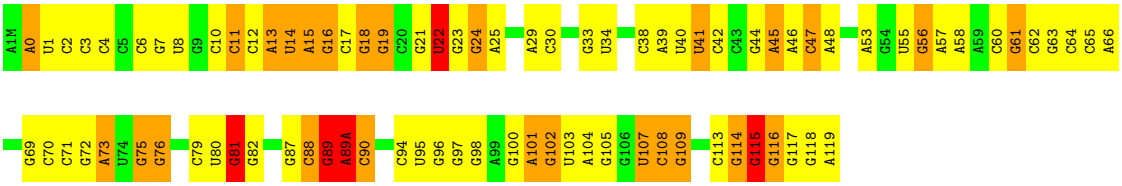






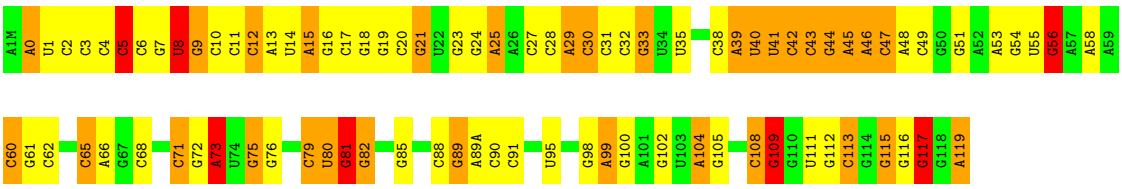
• Molecule 27: 5S ribosomal RNA

Chain 1J:



• Molecule 27: 5S ribosomal RNA

Chain 16:

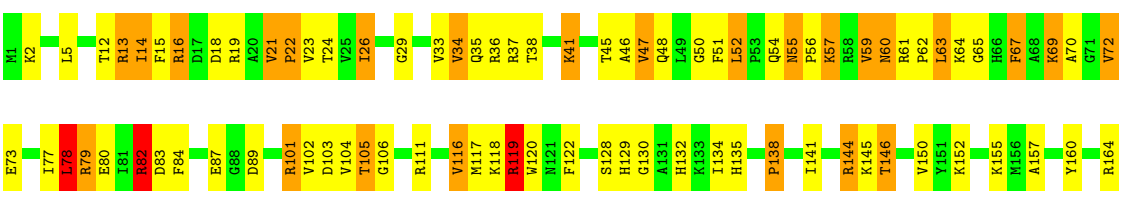


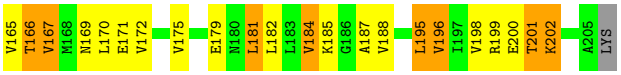
• Molecule 28: 50S ribosomal protein L2

Chain 11:

• Molecule 29: 50S ribosomal protein L3

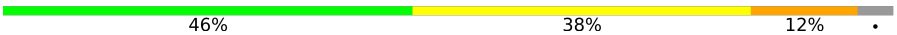
Chain 21:

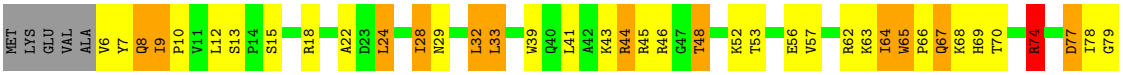


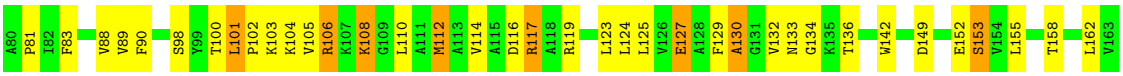


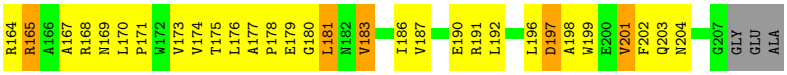
• Molecule 30: 50S ribosomal protein L4

Chain 31:



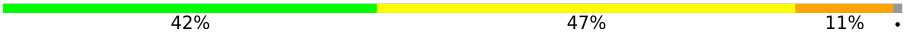


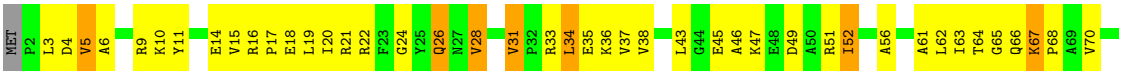


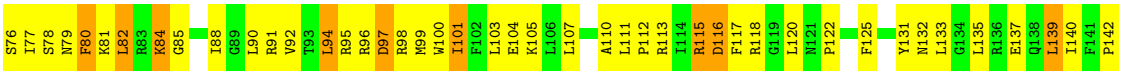


• Molecule 31: 50S ribosomal protein L5

Chain 41:

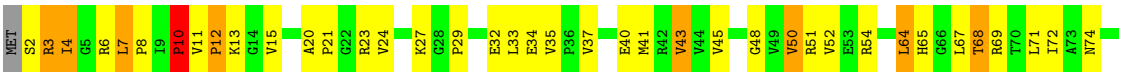






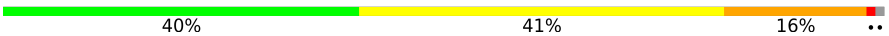
• Molecule 32: 50S ribosomal protein L6

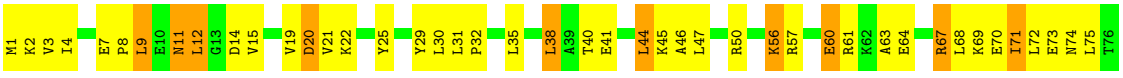
Chain 51:

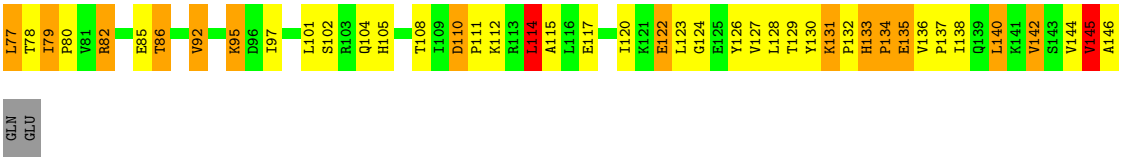


• Molecule 33: 50S ribosomal protein L9

Chain 61:

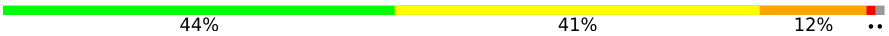


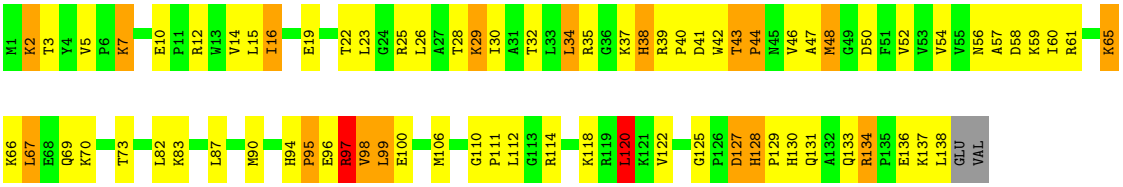




• Molecule 34: 50S ribosomal protein L13

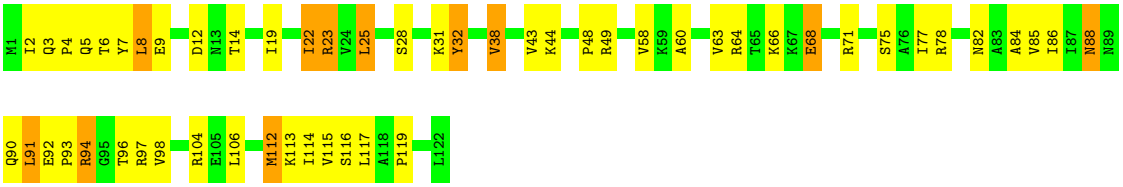
Chain 58:





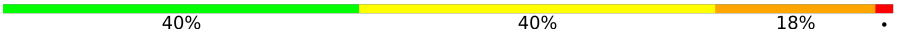
• Molecule 35: 50S ribosomal protein L14

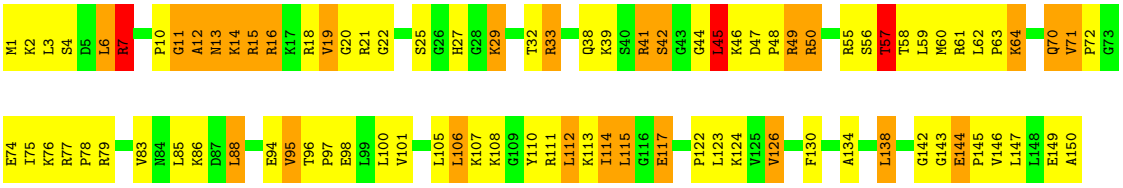
Chain 68:



• Molecule 36: 50S ribosomal protein L15

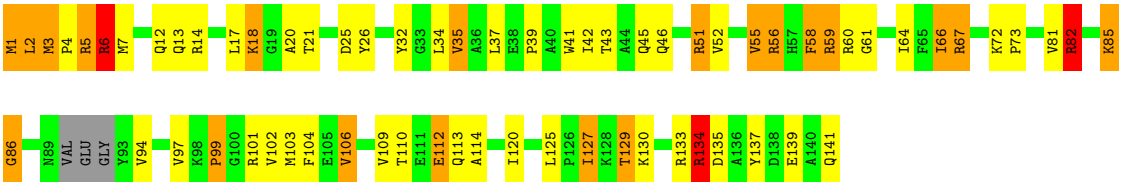
Chain 78:





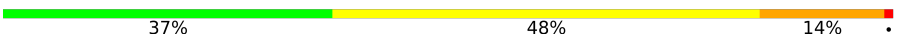
• Molecule 37: 50S ribosomal protein L16

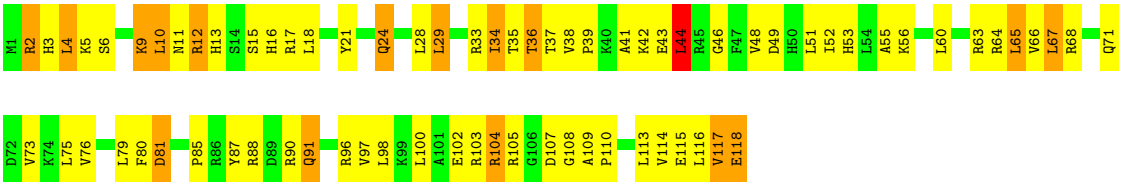
Chain 88:



• Molecule 38: 50S ribosomal protein L17

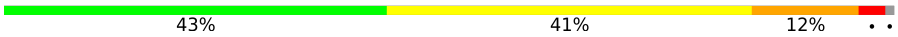
Chain 98:

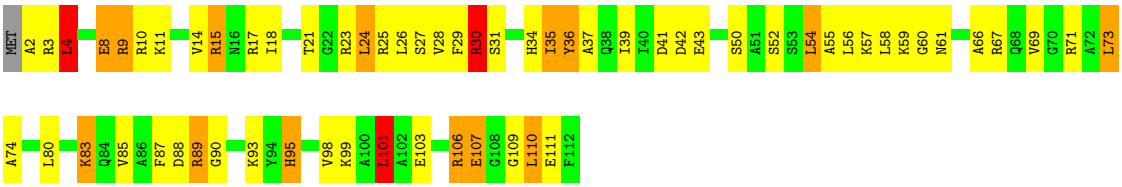




• Molecule 39: 50S ribosomal protein L18

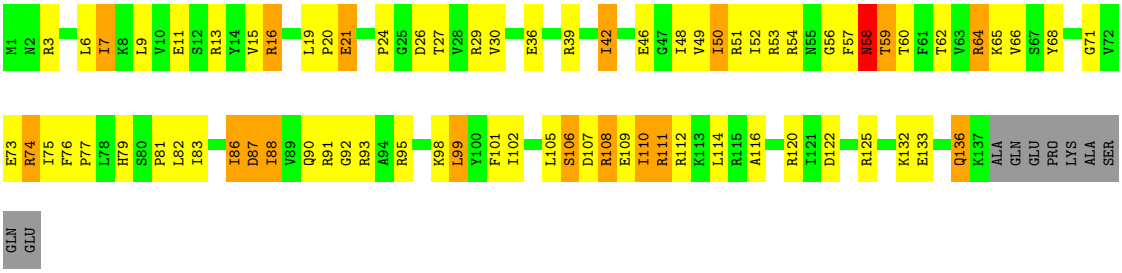
Chain A8:





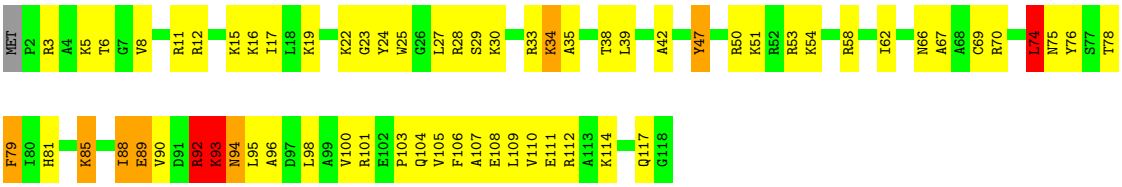
• Molecule 40: 50S ribosomal protein L19

Chain B8:



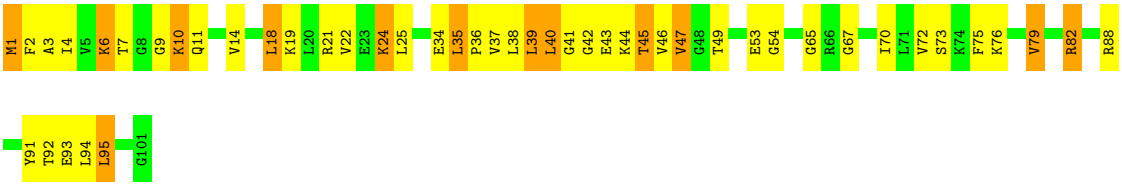
• Molecule 41: 50S ribosomal protein L20

Chain C8:



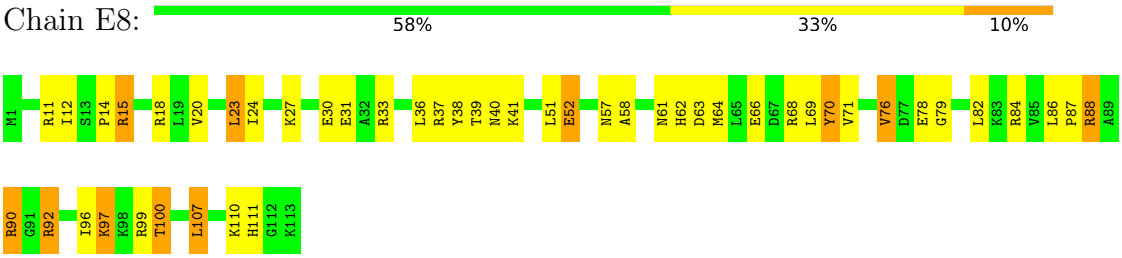
• Molecule 42: 50S ribosomal protein L21

Chain D8:



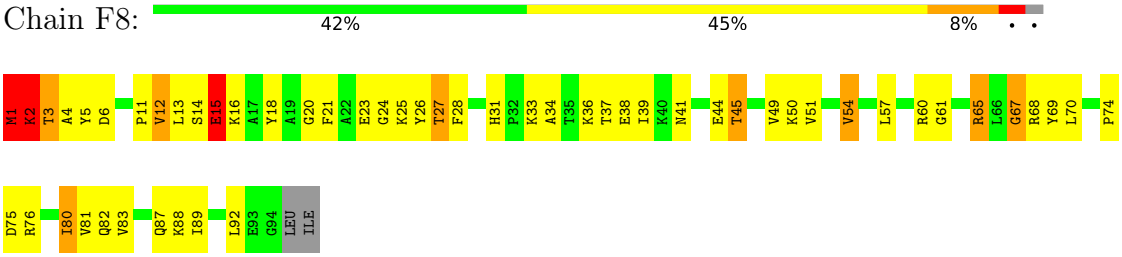
• Molecule 43: 50S ribosomal protein L22

Chain E8:



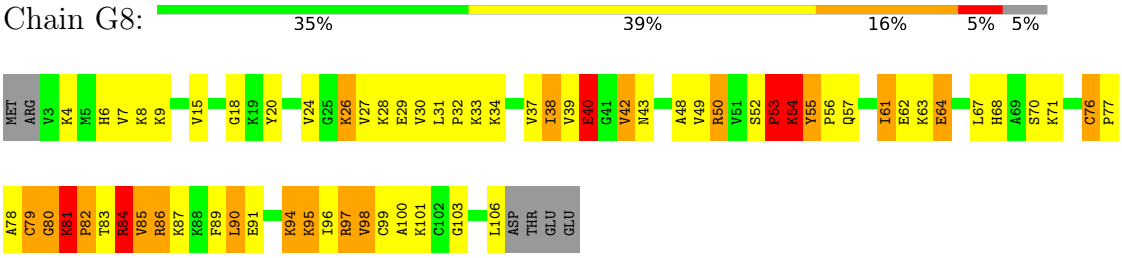
• Molecule 44: 50S ribosomal protein L23

Chain F8:



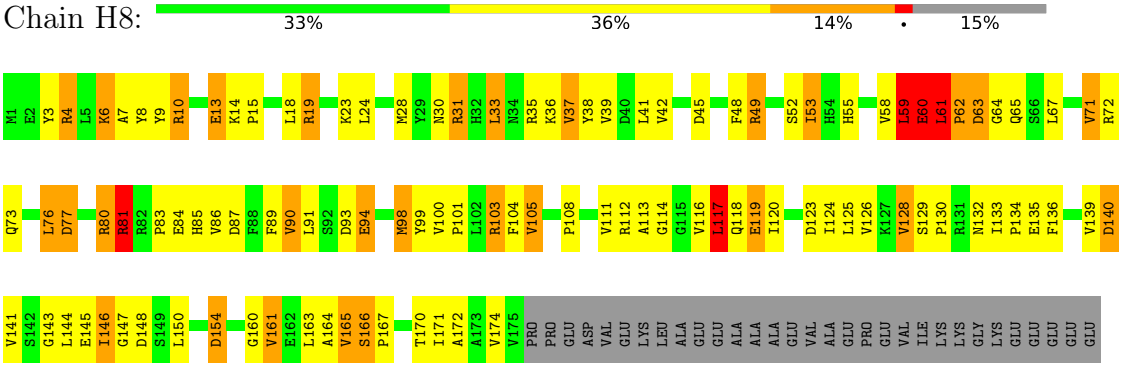
• Molecule 45: 50S ribosomal protein L24

Chain G8:



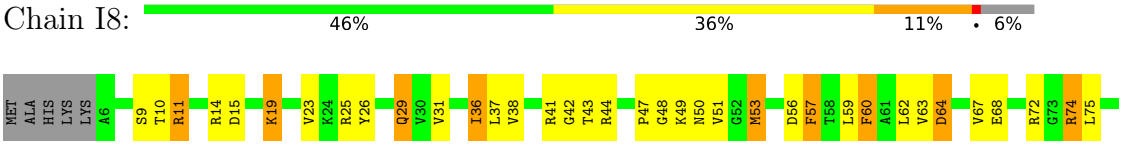
• Molecule 46: 50S ribosomal protein L25

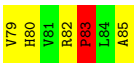
Chain H8:



• Molecule 47: 50S ribosomal protein L27

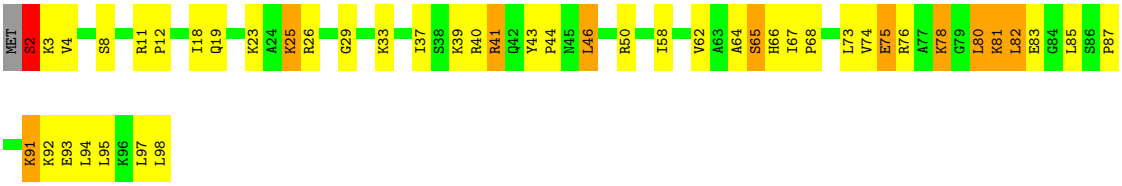
Chain I8:





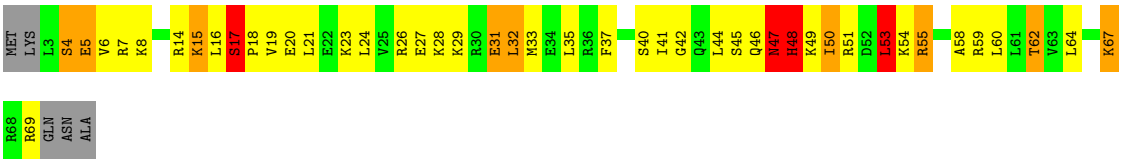
• Molecule 48: 50S ribosomal protein L28

Chain J8:



• Molecule 49: 50S ribosomal protein L29

Chain K8:

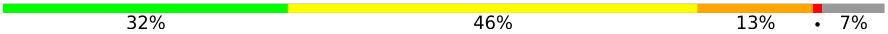


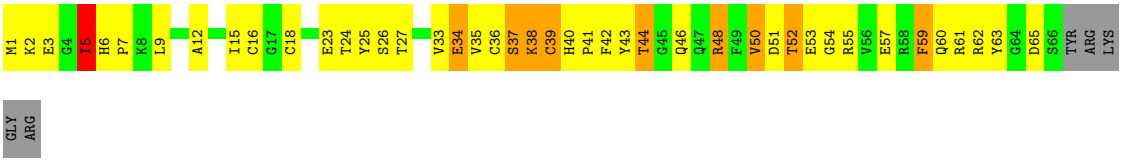
• Molecule 50: 50S ribosomal protein L30

Chain L8:

• Molecule 51: 50S ribosomal protein L31

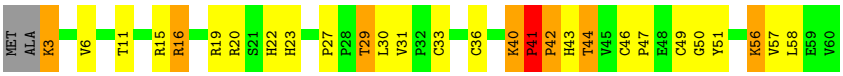
Chain M8:





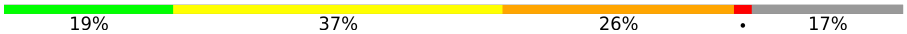
• Molecule 52: 50S ribosomal protein L32

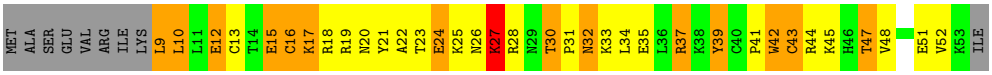
Chain N8:



• Molecule 53: 50S ribosomal protein L33

Chain O8:



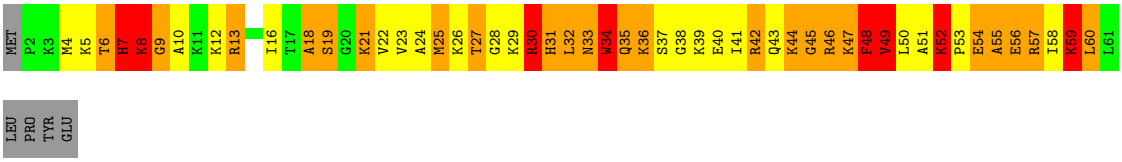


• Molecule 54: 50S ribosomal protein L34

Chain P8:

• Molecule 55: 50S ribosomal protein L35

Chain Q8:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	209.40Å 447.70Å 619.40Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	151.96 – 3.05 254.70 – 3.05	Depositor EDS
% Data completeness (in resolution range)	99.9 (151.96-3.05) 92.8 (254.70-3.05)	Depositor EDS
R_{merge}	0.33	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	0.76 (at 3.07Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.193 , 0.231 0.248 , 0.271	Depositor DCC
R_{free} test set	2000 reflections (0.18%)	wwPDB-VP
Wilson B-factor (Å^2)	89.4	Xtriage
Anisotropy	0.247	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.28 , 77.2	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.92	EDS
Total number of atoms	260090	wwPDB-VP
Average B, all atoms (Å^2)	113.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.46% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ 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: H2U, OMC, 7MG, ZN, MG, PSU, MIA, 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	13	0.87	14/36028 (0.0%)	1.59	679/56231 (1.2%)
1	1G	0.75	2/36025 (0.0%)	1.44	481/56227 (0.9%)
2	1L	0.51	1/1625 (0.1%)	1.02	1/2531 (0.0%)
2	3K	0.57	0/1625	1.17	11/2531 (0.4%)
2	3L	0.63	0/1625	1.20	16/2531 (0.6%)
3	2K	1.02	2/1721 (0.1%)	1.69	42/2682 (1.6%)
3	2L	0.78	1/1721 (0.1%)	1.49	23/2682 (0.9%)
4	4K	1.03	0/313	1.37	4/485 (0.8%)
4	4L	1.26	0/213	1.79	4/329 (1.2%)
5	14	0.99	84/70167 (0.1%)	1.74	2119/109541 (1.9%)
5	1H	1.24	280/70233 (0.4%)	2.01	3566/109643 (3.3%)
6	12	0.40	0/1959	0.68	2/2642 (0.1%)
6	1E	0.48	0/1959	0.74	0/2642
7	22	0.45	0/1636	0.67	1/2205 (0.0%)
7	2E	0.58	0/1629	0.74	0/2195
8	32	0.53	0/1732	0.76	1/2318 (0.0%)
8	3E	0.65	2/1732 (0.1%)	0.80	3/2318 (0.1%)
9	4E	0.62	0/1171	0.81	0/1576
10	5E	0.61	0/855	0.78	0/1154
11	6E	0.56	0/1275	0.70	0/1709
12	7E	0.59	0/1135	0.79	0/1527
13	8E	0.52	0/1028	0.75	1/1379 (0.1%)
14	1I	0.54	0/814	0.75	0/1095
15	2I	0.64	0/899	0.85	1/1213 (0.1%)
16	3I	0.79	0/991	1.03	4/1327 (0.3%)
17	4I	0.59	0/948	0.84	2/1272 (0.2%)
18	5I	0.83	1/500 (0.2%)	0.85	1/664 (0.2%)
19	6I	0.62	0/744	0.84	0/992
20	7I	0.56	0/721	0.77	0/970
21	8I	0.60	0/847	0.77	0/1131
22	9I	0.58	0/595	0.79	0/790
23	AI	0.60	0/661	0.84	0/890

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
24	BI	0.47	0/764	0.73	1/1007 (0.1%)
25	1F	0.52	0/221	0.81	0/288
26	1K	0.56	0/1602	1.16	9/2493 (0.4%)
27	16	0.97	2/2928 (0.1%)	1.87	95/4568 (2.1%)
27	1J	0.80	1/2928 (0.0%)	1.48	31/4568 (0.7%)
28	11	0.96	3/2165 (0.1%)	1.09	6/2919 (0.2%)
29	21	0.78	0/1601	0.99	3/2160 (0.1%)
30	31	0.88	1/1620 (0.1%)	1.02	6/2194 (0.3%)
31	41	0.65	0/1498	0.86	1/2016 (0.0%)
32	51	0.68	0/1362	0.92	3/1841 (0.2%)
33	61	0.59	0/1151	0.83	0/1558
34	58	0.69	0/1131	0.88	1/1525 (0.1%)
35	68	0.75	0/942	0.85	1/1269 (0.1%)
36	78	0.82	0/1161	1.14	3/1544 (0.2%)
37	88	0.94	0/1106	1.13	4/1478 (0.3%)
38	98	0.66	0/981	1.00	1/1312 (0.1%)
39	A8	0.74	0/891	1.05	6/1187 (0.5%)
40	B8	0.77	0/1155	0.92	0/1542
41	C8	0.82	0/981	0.93	1/1306 (0.1%)
42	D8	0.69	0/789	0.93	2/1057 (0.2%)
43	E8	0.77	0/910	0.98	2/1220 (0.2%)
44	F8	1.00	2/756 (0.3%)	1.04	4/1014 (0.4%)
45	G8	0.83	0/804	1.11	6/1073 (0.6%)
46	H8	0.54	0/1427	0.84	1/1935 (0.1%)
47	I8	0.86	0/634	1.01	0/847
48	J8	0.84	0/769	1.03	4/1022 (0.4%)
49	K8	0.99	2/565 (0.4%)	1.16	4/748 (0.5%)
50	L8	0.70	0/457	0.99	1/613 (0.2%)
51	M8	0.58	0/545	0.84	0/733
52	N8	0.69	0/467	0.98	1/632 (0.2%)
53	O8	0.81	1/396 (0.3%)	0.97	0/529
54	P8	0.98	0/399	1.12	1/526 (0.2%)
55	Q8	1.30	3/486 (0.6%)	1.71	9/638 (1.4%)
All	All	0.96	402/280719 (0.1%)	1.64	7169/426784 (1.7%)

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
6	12	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
6	1E	0	3
8	32	0	2
8	3E	0	1
13	8E	0	1
16	3I	0	1
17	4I	0	1
20	7I	0	1
23	AI	0	2
28	11	0	1
29	21	0	3
30	31	0	2
31	41	0	2
33	61	0	4
36	78	0	3
37	88	0	1
38	98	0	1
39	A8	0	1
40	B8	0	1
41	C8	0	1
45	G8	0	4
46	H8	0	2
47	I8	0	2
48	J8	0	1
49	K8	0	2
51	M8	0	1
52	N8	0	2
53	O8	0	3
55	Q8	0	8
All	All	0	58

All (402) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	2430	A	N9-C4	-15.74	1.28	1.37
5	1H	774	A	N9-C4	-13.11	1.29	1.37
5	1H	1786	A	N9-C4	-13.10	1.29	1.37
18	5I	27	CYS	CB-SG	-12.07	1.61	1.82
5	14	783	A	N9-C4	-11.82	1.30	1.37
5	1H	1332	G	N9-C4	-11.46	1.28	1.38
5	1H	71	A	N9-C4	-11.39	1.31	1.37
5	1H	676	A	N9-C4	-10.95	1.31	1.37
5	1H	783	A	N9-C4	-10.86	1.31	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	74	A	N9-C4	-10.40	1.31	1.37
5	1H	2346	A	N3-C4	-10.13	1.28	1.34
5	1H	1899	G	N9-C8	9.93	1.44	1.37
5	14	1786	A	N9-C4	-9.79	1.31	1.37
5	1H	1786	A	N3-C4	-9.77	1.28	1.34
5	1H	1614	A	N9-C4	-9.77	1.31	1.37
5	14	1332	G	N9-C4	-9.55	1.30	1.38
5	1H	676	A	C5-C4	9.40	1.45	1.38
5	1H	1899	G	N9-C4	-9.26	1.30	1.38
5	1H	774	A	C5-C6	-8.92	1.33	1.41
5	14	1786	A	C5-C6	-8.91	1.33	1.41
1	13	792	A	N9-C4	-8.83	1.32	1.37
49	K8	5	GLU	CG-CD	8.78	1.65	1.51
5	1H	1786	A	C5-C6	-8.53	1.33	1.41
5	14	2506	U	C2-N3	8.46	1.43	1.37
5	1H	676	A	N9-C8	8.46	1.44	1.37
5	1H	1698	A	N9-C4	-8.45	1.32	1.37
5	1H	2432	A	N9-C4	-8.28	1.32	1.37
1	13	792	A	C5-C6	-8.24	1.33	1.41
5	1H	330	A	N9-C4	-8.24	1.32	1.37
5	1H	2062	A	N7-C5	8.22	1.44	1.39
5	1H	1899	G	N3-C4	-8.22	1.29	1.35
27	16	81	G	C2-N3	8.20	1.39	1.32
5	1H	1950	G	N9-C8	8.18	1.43	1.37
5	1H	777	A	N3-C4	-8.14	1.29	1.34
5	1H	777	A	N9-C4	-8.07	1.33	1.37
5	1H	1678	G	N9-C8	8.07	1.43	1.37
1	13	1502	A	C5-C6	-7.98	1.33	1.41
5	1H	2430	A	C5-C6	-7.96	1.33	1.41
28	11	28	GLU	CG-CD	7.95	1.63	1.51
5	1H	1678	G	N9-C4	-7.90	1.31	1.38
5	1H	2346	A	N9-C4	-7.85	1.33	1.37
5	1H	774	A	N7-C5	-7.83	1.34	1.39
30	31	65	TRP	CB-CG	-7.83	1.36	1.50
5	1H	2506	U	N1-C2	7.81	1.45	1.38
5	1H	1678	G	N3-C4	-7.80	1.29	1.35
5	1H	2392	A	N9-C4	-7.79	1.33	1.37
49	K8	5	GLU	CB-CG	7.78	1.67	1.52
5	1H	828	U	C2-O2	7.78	1.29	1.22
5	1H	2246	G	N9-C8	-7.68	1.32	1.37
5	1H	860	U	N1-C2	7.68	1.45	1.38
5	1H	2713	A	N9-C4	-7.68	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	11	122	ASP	CB-CG	7.65	1.67	1.51
5	1H	1021	A	N9-C4	-7.63	1.33	1.37
5	1H	945	A	N7-C5	-7.54	1.34	1.39
5	1H	138	G	N9-C8	7.53	1.43	1.37
5	1H	945	A	N3-C4	-7.48	1.30	1.34
8	3E	9	CYS	CB-SG	7.48	1.95	1.82
5	1H	689	A	N3-C4	-7.46	1.30	1.34
5	1H	698	C	N1-C6	-7.46	1.32	1.37
5	1H	2442	C	N1-C6	-7.45	1.32	1.37
5	1H	821	A	N7-C5	-7.45	1.34	1.39
5	1H	1241	A	N9-C4	-7.44	1.33	1.37
5	1H	786	C	N3-C4	-7.35	1.28	1.33
5	1H	621	A	N9-C4	-7.32	1.33	1.37
5	14	774	A	N9-C4	-7.32	1.33	1.37
5	1H	71	A	C5-C6	-7.28	1.34	1.41
5	14	2015	A	N3-C4	-7.26	1.30	1.34
5	1H	2248	C	N3-C4	-7.23	1.28	1.33
5	14	1616	A	N9-C4	-7.20	1.33	1.37
5	14	1789	A	N3-C4	-7.19	1.30	1.34
5	14	1332	G	N3-C4	-7.17	1.30	1.35
5	14	2506	U	N1-C2	7.16	1.45	1.38
5	1H	2287	A	N9-C4	-7.10	1.33	1.37
5	1H	1379	A	N9-C4	-7.09	1.33	1.37
5	1H	1332	G	N9-C8	7.08	1.42	1.37
5	1H	71	A	N9-C8	7.08	1.43	1.37
5	1H	1142(A)	A	N9-C4	-7.07	1.33	1.37
5	14	783	A	N3-C4	-7.06	1.30	1.34
5	1H	787	U	C2-N3	-7.05	1.32	1.37
5	1H	2490	G	C5-C6	-7.03	1.35	1.42
5	1H	1899	G	C2-N3	-7.02	1.27	1.32
5	1H	467	G	C5-C4	-6.99	1.33	1.38
5	1H	2377	A	N9-C4	-6.99	1.33	1.37
3	2K	38	A	N3-C4	-6.92	1.30	1.34
5	1H	722	A	N9-C4	-6.92	1.33	1.37
5	14	204	A	N7-C5	-6.91	1.35	1.39
5	1H	204	A	N3-C4	-6.84	1.30	1.34
5	1H	2430	A	N3-C4	-6.83	1.30	1.34
55	Q8	54	GLU	CG-CD	6.82	1.62	1.51
5	1H	1616	A	N7-C5	-6.80	1.35	1.39
5	1H	2392	A	N9-C8	6.80	1.43	1.37
5	1H	2608	G	C2-N3	-6.79	1.27	1.32
5	1H	1937	A	N9-C8	-6.78	1.32	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	1776	G	C8-N7	-6.76	1.26	1.30
5	14	2062	A	N3-C4	6.74	1.38	1.34
5	14	676	A	N9-C8	6.74	1.43	1.37
5	14	1353	A	N3-C4	-6.74	1.30	1.34
5	14	945	A	N9-C4	-6.71	1.33	1.37
5	1H	197	A	N3-C4	-6.70	1.30	1.34
5	1H	1698	A	N3-C4	-6.70	1.30	1.34
5	14	71	A	N9-C4	-6.69	1.33	1.37
5	1H	676	A	N3-C4	-6.68	1.30	1.34
5	1H	1375	C	N1-C6	-6.67	1.33	1.37
5	1H	783	A	N7-C5	-6.67	1.35	1.39
5	1H	682	G	C8-N7	-6.65	1.26	1.30
5	14	774	A	C5-C6	-6.65	1.35	1.41
1	13	1519	A	N7-C5	-6.64	1.35	1.39
5	14	1786	A	N7-C5	-6.58	1.35	1.39
5	1H	2032	G	N7-C5	-6.57	1.35	1.39
5	14	1773	A	N9-C4	-6.56	1.33	1.37
5	1H	1786	A	N7-C5	-6.54	1.35	1.39
5	14	1890	A	N9-C4	-6.53	1.33	1.37
5	1H	2490	G	N9-C8	6.50	1.42	1.37
1	13	1502	A	N7-C5	-6.49	1.35	1.39
5	1H	2311	A	N9-C4	-6.48	1.33	1.37
5	1H	777	A	C6-N1	-6.46	1.31	1.35
5	1H	785	G	N7-C5	-6.45	1.35	1.39
5	1H	2503	A	C5-C6	-6.45	1.35	1.41
5	1H	783	A	C5-C6	-6.45	1.35	1.41
5	14	1142(A)	A	N9-C4	-6.45	1.33	1.37
5	14	2058	A	C6-N1	-6.43	1.31	1.35
5	1H	945	A	N1-C2	6.43	1.40	1.34
5	1H	693	C	N3-C4	-6.37	1.29	1.33
5	1H	530	G	N9-C8	6.36	1.42	1.37
5	1H	1364	G	N7-C5	-6.36	1.35	1.39
5	1H	1666	G	N7-C5	-6.36	1.35	1.39
5	1H	912	C	N1-C6	-6.35	1.33	1.37
5	14	1258	C	N3-C4	-6.34	1.29	1.33
44	F8	15	GLU	CB-CG	6.34	1.64	1.52
5	1H	2062	A	C5-C6	6.33	1.46	1.41
5	1H	690	G	N9-C8	-6.32	1.33	1.37
5	14	1676	A	N3-C4	-6.32	1.31	1.34
5	1H	1967	C	N1-C6	-6.31	1.33	1.37
5	14	2287	A	N9-C4	-6.29	1.34	1.37
5	14	330	A	N9-C4	-6.27	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	14	1676	A	N9-C4	-6.26	1.34	1.37
5	1H	116	C	N3-C4	-6.25	1.29	1.33
5	1H	783	A	N3-C4	-6.25	1.31	1.34
5	1H	1616	A	N9-C4	-6.24	1.34	1.37
5	1H	949	C	N1-C6	-6.24	1.33	1.37
5	1H	2557	G	N1-C2	-6.24	1.32	1.37
5	14	1950	G	C2-N3	6.23	1.37	1.32
5	1H	2058	A	N9-C4	-6.23	1.34	1.37
5	14	1285	G	C5-C4	-6.22	1.33	1.38
5	1H	2000	G	C5-C4	-6.22	1.33	1.38
5	1H	828	U	N1-C2	6.21	1.44	1.38
5	1H	698	C	C4-C5	-6.21	1.38	1.43
5	1H	1698	A	C5-C6	-6.21	1.35	1.41
5	14	2238	G	C8-N7	-6.20	1.27	1.30
5	1H	265	A	N3-C4	-6.20	1.31	1.34
5	1H	472	A	N3-C4	-6.20	1.31	1.34
5	1H	1621	U	N1-C6	-6.20	1.32	1.38
5	14	2518	A	N9-C4	-6.18	1.34	1.37
5	1H	2058	A	N3-C4	-6.17	1.31	1.34
5	1H	772	C	N1-C6	-6.15	1.33	1.37
5	1H	793	A	N7-C5	-6.15	1.35	1.39
5	1H	945	A	C5-C4	6.14	1.43	1.38
5	1H	789	A	N9-C4	-6.13	1.34	1.37
5	1H	1204	A	N9-C4	-6.13	1.34	1.37
5	1H	732	C	N1-C6	-6.13	1.33	1.37
5	1H	787	U	C2-O2	-6.13	1.16	1.22
5	1H	2256	G	N1-C2	-6.11	1.32	1.37
5	1H	1367	A	C6-N1	-6.11	1.31	1.35
5	1H	2053	G	C5-C4	-6.10	1.34	1.38
5	1H	786	C	C4-N4	-6.09	1.28	1.33
5	1H	71	A	C6-N6	-6.08	1.29	1.33
5	1H	1332	G	N3-C4	-6.07	1.31	1.35
5	1H	1349	A	C5-C4	6.06	1.43	1.38
5	14	2062	A	C6-N1	6.06	1.39	1.35
3	2K	38	A	N9-C4	-6.05	1.34	1.37
5	14	204	A	N3-C4	-6.04	1.31	1.34
5	14	2713	A	N9-C4	-6.04	1.34	1.37
5	14	1142(A)	A	N3-C4	-6.04	1.31	1.34
5	14	1608	A	C6-N1	-6.03	1.31	1.35
5	1H	2331	G	N9-C4	-6.03	1.33	1.38
5	1H	37	C	N1-C6	-6.02	1.33	1.37
5	1H	766	C	N1-C6	-6.01	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	2448	A	C5-C6	-6.00	1.35	1.41
5	1H	239	U	C2-N3	-5.99	1.33	1.37
5	1H	1825	A	C6-N1	-5.98	1.31	1.35
5	14	1786	A	C5-C4	5.97	1.43	1.38
5	1H	1364	G	C5-C4	-5.97	1.34	1.38
5	14	676	A	C5-C6	-5.96	1.35	1.41
5	1H	984	A	C5-C6	-5.96	1.35	1.41
5	1H	1806	C	N1-C6	-5.96	1.33	1.37
5	1H	735	A	N3-C4	-5.96	1.31	1.34
5	1H	1379	A	C6-N1	5.95	1.39	1.35
5	1H	1792	G	C6-N1	-5.93	1.35	1.39
5	14	1806	C	N1-C6	-5.92	1.33	1.37
5	14	778	G	C6-N1	-5.92	1.35	1.39
5	1H	2712(A)	A	N3-C4	5.91	1.38	1.34
5	1H	739	G	C5-C4	-5.91	1.34	1.38
5	1H	945	A	N9-C4	-5.91	1.34	1.37
3	2L	77	A	N9-C4	-5.90	1.34	1.37
5	14	677	A	N3-C4	-5.89	1.31	1.34
5	14	1678	G	N9-C4	-5.89	1.33	1.38
5	1H	1255	U	C2-N3	5.87	1.41	1.37
5	1H	823	G	C8-N7	-5.87	1.27	1.30
1	13	808	C	N1-C6	-5.86	1.33	1.37
5	14	955	C	N3-C4	-5.85	1.29	1.33
5	1H	1210	A	C5-C6	-5.85	1.35	1.41
5	1H	1210	A	N9-C4	-5.84	1.34	1.37
5	1H	2287	A	N3-C4	-5.84	1.31	1.34
5	14	1772	G	N9-C8	-5.81	1.33	1.37
5	14	1612	C	N1-C6	-5.80	1.33	1.37
5	14	783	A	N7-C5	-5.78	1.35	1.39
5	14	1296	G	C5-C4	-5.76	1.34	1.38
28	11	237	GLU	CG-CD	5.76	1.60	1.51
5	14	1997	G	C2-N3	5.76	1.37	1.32
5	1H	2584	U	N3-C4	-5.76	1.33	1.38
5	1H	56	A	N7-C5	-5.75	1.35	1.39
5	1H	265	A	N9-C4	-5.75	1.34	1.37
5	1H	1931	U	C2-N3	-5.74	1.33	1.37
5	1H	2603	G	C2-N3	-5.74	1.28	1.32
5	14	693	C	N3-C4	-5.74	1.29	1.33
1	13	795	C	N1-C6	-5.74	1.33	1.37
5	14	1802	A	N3-C4	-5.73	1.31	1.34
44	F8	15	GLU	CG-CD	5.73	1.60	1.51
5	14	774	A	N9-C8	5.72	1.42	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	785	G	N9-C8	-5.72	1.33	1.37
5	1H	1902	C	C4-C5	-5.71	1.38	1.43
5	1H	2490	G	N9-C4	-5.70	1.33	1.38
5	1H	1392	A	N9-C4	5.70	1.41	1.37
5	1H	2688	U	N3-C4	-5.70	1.33	1.38
55	Q8	48	PHE	CB-CG	-5.70	1.41	1.51
5	1H	2392	A	C5-C4	5.69	1.42	1.38
5	1H	2436	G	N9-C4	-5.68	1.33	1.38
5	1H	751	A	N9-C4	-5.68	1.34	1.37
5	1H	788	A	N3-C4	5.68	1.38	1.34
5	1H	2256	G	C6-N1	-5.67	1.35	1.39
53	O8	42	TRP	CB-CG	5.66	1.60	1.50
5	1H	729	G	C2-N3	-5.65	1.28	1.32
1	13	810	C	N1-C6	-5.63	1.33	1.37
5	1H	2336	A	N9-C4	5.62	1.41	1.37
5	1H	71	A	C5-C4	5.62	1.42	1.38
5	1H	751	A	N3-C4	-5.62	1.31	1.34
5	14	447	A	N3-C4	-5.61	1.31	1.34
5	1H	739	G	C5-C6	-5.61	1.36	1.42
5	1H	2585	U	N1-C2	5.61	1.43	1.38
5	1H	2452	C	N1-C6	-5.60	1.33	1.37
5	1H	1981	A	N9-C4	-5.60	1.34	1.37
5	1H	733	G	N9-C8	-5.59	1.33	1.37
5	1H	2254	C	N1-C2	-5.59	1.34	1.40
5	1H	1899	G	C8-N7	5.58	1.34	1.30
5	1H	1367	A	C5-C6	-5.58	1.36	1.41
5	1H	2239	G	C6-N1	-5.57	1.35	1.39
5	14	1698	A	N9-C4	-5.56	1.34	1.37
5	1H	124	G	C5-C6	-5.56	1.36	1.42
5	1H	1626	G	N9-C4	-5.56	1.33	1.38
5	14	2332	U	C4-C5	5.56	1.48	1.43
5	1H	2713	A	C5-C4	5.56	1.42	1.38
5	1H	473	G	N1-C2	-5.55	1.33	1.37
8	3E	12	CYS	CB-SG	5.55	1.91	1.82
5	14	1346	G	C5-C4	-5.54	1.34	1.38
5	1H	1363	C	N3-C4	-5.53	1.30	1.33
5	1H	1366	A	C5-C6	-5.52	1.36	1.41
5	1H	127	A	C5-C6	-5.52	1.36	1.41
5	1H	832	G	C2-N3	-5.52	1.28	1.32
5	1H	1773	A	N3-C4	-5.52	1.31	1.34
5	1H	1984	G	C6-N1	-5.52	1.35	1.39
5	1H	1605	C	N1-C6	-5.51	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	14	2873	A	N7-C5	-5.51	1.35	1.39
5	1H	1634	A	N3-C4	5.50	1.38	1.34
5	14	530	G	C5-C6	-5.50	1.36	1.42
5	1H	682	G	C5-C4	-5.50	1.34	1.38
5	1H	1161	C	N1-C6	5.50	1.40	1.37
5	1H	1616	A	C5-C6	-5.49	1.36	1.41
1	13	1483	A	N9-C4	-5.49	1.34	1.37
5	1H	1950	G	N9-C4	-5.46	1.33	1.38
5	14	1829	A	N7-C5	-5.44	1.35	1.39
5	1H	945	A	C5-C6	-5.44	1.36	1.41
5	1H	2501	C	N1-C6	-5.44	1.33	1.37
5	1H	774	A	N9-C8	5.43	1.42	1.37
5	1H	2453	A	N7-C5	-5.43	1.35	1.39
5	1H	443	A	N3-C4	5.43	1.38	1.34
5	1H	1258	C	N3-C4	-5.42	1.30	1.33
5	1H	1378	A	N9-C4	-5.42	1.34	1.37
5	1H	2252	G	C5-C4	-5.42	1.34	1.38
5	1H	140	A	N9-C8	5.42	1.42	1.37
5	1H	1678	G	C2-N3	-5.42	1.28	1.32
5	1H	778	G	N7-C5	-5.42	1.36	1.39
5	1H	678	C	C4'-C3'	-5.41	1.47	1.52
5	1H	1324	G	N9-C4	-5.41	1.33	1.38
5	1H	663	G	C6-N1	-5.41	1.35	1.39
5	1H	2259	G	C2-N3	-5.41	1.28	1.32
27	16	46	A	N9-C4	-5.41	1.34	1.37
5	1H	1825	A	C6-N6	-5.40	1.29	1.33
5	14	1772	G	N7-C5	-5.40	1.36	1.39
5	1H	2611	U	C4-O4	-5.39	1.19	1.23
5	14	204	A	N9-C4	-5.39	1.34	1.37
5	1H	184	C	N1-C6	-5.39	1.33	1.37
5	1H	1827	C	N3-C4	-5.39	1.30	1.33
5	1H	2059	A	N9-C4	-5.39	1.34	1.37
27	1J	89(A)	A	N9-C4	5.39	1.41	1.37
5	1H	761	A	N3-C4	-5.38	1.31	1.34
5	1H	793	A	C5-C6	-5.38	1.36	1.41
1	13	539	A	N3-C4	-5.37	1.31	1.34
5	1H	955	C	N3-C4	-5.37	1.30	1.33
5	1H	1786	A	C5-C4	5.37	1.42	1.38
5	1H	2048	G	N9-C8	-5.36	1.34	1.37
1	13	1498	U	N1-C2	5.36	1.43	1.38
5	1H	808	G	N9-C8	-5.36	1.34	1.37
5	1H	801	G	N9-C8	-5.35	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	1G	687	A	N9-C4	5.35	1.41	1.37
5	14	74	A	N9-C4	-5.35	1.34	1.37
5	1H	141	A	N9-C4	-5.35	1.34	1.37
5	14	2025	C	N1-C6	-5.34	1.33	1.37
5	1H	695	G	C6-N1	-5.33	1.35	1.39
5	14	2821	A	N9-C4	-5.33	1.34	1.37
5	1H	1818	U	C2-O2	-5.33	1.17	1.22
1	13	690	G	C5-C4	5.33	1.42	1.38
5	14	1785	A	N7-C5	-5.33	1.36	1.39
5	1H	973	A	N9-C4	-5.32	1.34	1.37
1	1G	690	G	N9-C8	5.32	1.41	1.37
5	1H	1957	C	C4-N4	-5.32	1.29	1.33
5	1H	1618	A	C5-C6	-5.32	1.36	1.41
5	1H	1950	G	N3-C4	-5.32	1.31	1.35
5	1H	508	G	N9-C8	5.31	1.41	1.37
5	1H	952	G	C5-C4	-5.30	1.34	1.38
5	1H	845	G	N9-C8	5.29	1.41	1.37
5	1H	2610	C	N3-C4	-5.29	1.30	1.33
5	14	774	A	N1-C2	5.28	1.39	1.34
5	1H	2064	C	N1-C6	-5.28	1.33	1.37
5	1H	2287	A	C5-C6	-5.28	1.36	1.41
5	14	1204	A	N9-C4	-5.28	1.34	1.37
5	1H	1365	A	N3-C4	-5.27	1.31	1.34
5	1H	2602	A	N7-C5	5.27	1.42	1.39
5	1H	2057	A	N9-C8	-5.26	1.33	1.37
5	1H	2602	A	N3-C4	5.25	1.38	1.34
5	1H	1698	A	C6-N1	-5.25	1.31	1.35
5	1H	1957	C	N3-C4	-5.25	1.30	1.33
5	1H	448	U	N1-C6	-5.25	1.33	1.38
5	1H	821	A	C5-C6	-5.25	1.36	1.41
5	1H	2416	C	N1-C6	5.24	1.40	1.37
5	14	1639	U	C2-N3	-5.23	1.34	1.37
5	1H	2559	C	N1-C6	-5.23	1.34	1.37
5	1H	70	G	C6-N1	-5.23	1.35	1.39
5	1H	260	G	N3-C4	-5.22	1.31	1.35
5	1H	527	C	N1-C6	-5.22	1.34	1.37
1	13	1227	A	N9-C4	-5.22	1.34	1.37
5	1H	2277	G	N9-C8	-5.22	1.34	1.37
5	1H	2599	G	N9-C8	-5.22	1.34	1.37
5	14	1815	A	C6-N1	-5.21	1.31	1.35
5	14	2506	U	C2-O2	5.21	1.27	1.22
5	1H	621	A	C5-C4	5.20	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	1971	A	C5-C4	-5.20	1.35	1.38
5	1H	957	A	C6-N6	5.20	1.38	1.33
5	1H	2602	A	N9-C4	5.20	1.41	1.37
5	14	1597	A	N9-C4	-5.19	1.34	1.37
5	1H	799	G	N9-C4	-5.19	1.33	1.38
5	1H	842	G	N9-C4	-5.18	1.33	1.38
5	1H	1257	C	N3-C4	-5.17	1.30	1.33
5	14	1271	G	N9-C8	-5.17	1.34	1.37
5	14	1286	A	N7-C5	-5.16	1.36	1.39
5	1H	197	A	C6-N1	-5.16	1.31	1.35
5	14	140	A	C5-C6	-5.15	1.36	1.41
5	1H	2378	A	C6-N1	5.14	1.39	1.35
5	1H	2418	A	C5-C4	-5.13	1.35	1.38
5	1H	197	A	N9-C4	-5.13	1.34	1.37
5	1H	2009	G	C5-C4	-5.13	1.34	1.38
5	1H	735	A	N9-C4	-5.13	1.34	1.37
5	1H	775	G	N1-C2	-5.13	1.33	1.37
5	14	1900	A	N3-C4	-5.13	1.31	1.34
5	1H	1428	C	C4-C5	5.12	1.47	1.43
5	1H	839	U	C4-O4	5.12	1.27	1.23
5	14	2599	G	C5-C4	-5.11	1.34	1.38
5	1H	2557	G	C2-N3	-5.11	1.28	1.32
5	14	2585	U	N1-C2	5.11	1.43	1.38
5	14	2332	U	C4-O4	5.11	1.27	1.23
5	1H	1385	G	N9-C4	-5.09	1.33	1.38
5	1H	2442	C	C5-C6	-5.09	1.30	1.34
5	1H	962	G	N9-C8	-5.09	1.34	1.37
5	14	1429	G	N7-C5	-5.09	1.36	1.39
5	1H	2062	A	N3-C4	5.09	1.38	1.34
5	1H	2072	G	C8-N7	-5.08	1.27	1.30
5	1H	2453	A	N9-C8	-5.08	1.33	1.37
55	Q8	34	TRP	CB-CG	5.08	1.59	1.50
5	1H	2581	G	N1-C2	-5.08	1.33	1.37
5	1H	2422	A	N3-C4	-5.08	1.31	1.34
5	14	252	G	C5-C4	-5.07	1.34	1.38
5	1H	2059	A	C5-C4	-5.06	1.35	1.38
5	1H	768	G	C6-N1	-5.06	1.36	1.39
5	1H	2591	C	N1-C2	-5.06	1.35	1.40
5	1H	945	A	C2-N3	5.05	1.38	1.33
2	1L	36	A	N9-C4	5.05	1.40	1.37
5	1H	1937	A	C5-C4	-5.05	1.35	1.38
1	13	789	U	N3-C4	-5.04	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	1H	1381	G	N3-C4	-5.04	1.31	1.35
5	1H	2451	A	C6-N1	-5.04	1.32	1.35
5	1H	749	C	N1-C6	-5.04	1.34	1.37
5	1H	56	A	C5-C6	-5.03	1.36	1.41
5	1H	2250	G	C2-N3	-5.03	1.28	1.32
5	14	1363	C	N3-C4	-5.03	1.30	1.33
5	1H	1253	A	N9-C8	-5.02	1.33	1.37
5	1H	805	G	N9-C8	-5.02	1.34	1.37
5	1H	1332	G	N1-C2	5.02	1.41	1.37
5	1H	2068	U	N3-C4	-5.02	1.33	1.38
5	14	1315	C	N3-C4	-5.01	1.30	1.33
5	1H	74	A	N3-C4	-5.01	1.31	1.34
5	1H	2448	A	N7-C5	-5.01	1.36	1.39
5	1H	1349	A	N9-C8	5.01	1.41	1.37
5	14	1798	U	N1-C6	-5.00	1.33	1.38

All (7169) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1899	G	N3-C4-N9	-27.85	109.29	126.00
5	1H	1786	A	C2-N3-C4	-22.12	99.54	110.60
5	1H	917	A	N1-C2-N3	21.20	139.90	129.30
5	1H	1332	G	N3-C4-N9	-21.08	113.35	126.00
5	1H	1899	G	N3-C4-C5	21.00	139.10	128.60
5	1H	917	A	C2-N3-C4	-20.38	100.41	110.60
5	1H	1332	G	N3-C4-C5	20.37	138.78	128.60
5	1H	783	A	C2-N3-C4	-20.12	100.54	110.60
5	1H	676	A	C2-N3-C4	-19.63	100.78	110.60
5	14	1786	A	C5-N7-C8	-19.18	94.31	103.90
5	1H	2430	A	C2-N3-C4	-18.65	101.27	110.60
5	1H	945	A	C6-C5-N7	-18.55	119.32	132.30
5	1H	1899	G	C2-N3-C4	-18.51	102.65	111.90
5	1H	1678	G	N3-C4-N9	-18.42	114.95	126.00
5	1H	1639	U	O5'-P-OP2	-17.96	89.15	110.70
5	1H	2430	A	N1-C6-N6	17.92	129.35	118.60
5	1H	1332	G	C2-N3-C4	-17.92	102.94	111.90
5	1H	71	A	C2-N3-C4	-17.50	101.85	110.60
5	1H	676	A	C5-N7-C8	-17.44	95.18	103.90
5	14	1786	A	C2-N3-C4	-17.34	101.93	110.60
5	1H	49	A	O5'-P-OP2	-17.24	90.01	110.70
5	1H	74	A	C2-N3-C4	-17.20	102.00	110.60
5	1H	1786	A	C5-N7-C8	-17.05	95.38	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2490	G	C4-C5-N7	16.94	117.58	110.80
5	1H	1829	A	O5'-P-OP1	-16.70	90.66	110.70
5	1H	945	A	N1-C6-N6	16.68	128.61	118.60
5	14	774	A	C2-N3-C4	-16.61	102.30	110.60
5	1H	783	A	C5-N7-C8	-16.53	95.64	103.90
5	1H	676	A	N7-C8-N9	16.52	122.06	113.80
5	14	783	A	C2-N3-C4	-16.51	102.34	110.60
5	1H	2430	A	C5-N7-C8	-16.47	95.67	103.90
5	1H	1698	A	C2-N3-C4	-16.45	102.38	110.60
5	14	1816	G	O5'-P-OP1	-16.34	91.00	105.70
5	1H	1678	G	N3-C4-C5	16.33	136.76	128.60
5	1H	2490	G	C5-N7-C8	-16.27	96.16	104.30
27	16	115	G	C5-C6-O6	-16.05	118.97	128.60
5	1H	783	A	N7-C8-N9	16.01	121.81	113.80
5	14	1786	A	N7-C8-N9	15.84	121.72	113.80
5	1H	1678	G	C2-N3-C4	-15.66	104.07	111.90
27	16	81	G	C4-C5-N7	15.52	117.01	110.80
5	1H	1899	G	N9-C4-C5	15.51	111.60	105.40
5	1H	945	A	C4-C5-C6	15.40	124.70	117.00
5	14	1332	G	N3-C4-C5	15.29	136.25	128.60
5	1H	783	A	C8-N9-C4	-15.27	99.69	105.80
27	16	81	G	C6-C5-N7	-15.26	121.24	130.40
5	14	1332	G	C2-N3-C4	-15.20	104.30	111.90
5	14	856	C	O5'-P-OP1	-15.16	92.06	105.70
5	1H	774	A	N3-C4-C5	15.12	137.39	126.80
5	1H	1899	G	N3-C2-N2	-15.08	109.35	119.90
5	14	1786	A	C4-C5-N7	15.05	118.22	110.70
5	1H	1931	U	N3-C2-O2	-15.02	111.69	122.20
5	1H	138	G	C5-N7-C8	-15.01	96.80	104.30
5	1H	1786	A	N7-C8-N9	14.86	121.23	113.80
5	1H	676	A	C8-N9-C4	-14.76	99.90	105.80
5	1H	2287	A	C2-N3-C4	-14.76	103.22	110.60
5	1H	2430	A	N3-C4-C5	14.76	137.13	126.80
5	1H	1825	A	N1-C6-N6	-14.75	109.75	118.60
5	1H	774	A	N1-C6-N6	14.74	127.45	118.60
5	14	1332	G	N3-C4-N9	-14.72	117.17	126.00
5	1H	945	A	N1-C2-N3	14.72	136.66	129.30
5	14	74	A	C2-N3-C4	-14.65	103.28	110.60
5	1H	138	G	C4-C5-N7	14.59	116.64	110.80
5	1H	593	G	O5'-P-OP2	-14.56	92.59	105.70
5	1H	1950	G	C5-N7-C8	-14.54	97.03	104.30
5	1H	1332	G	C5-N7-C8	-14.48	97.06	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	783	A	C5-N7-C8	-14.37	96.72	103.90
5	14	2873	A	N7-C8-N9	14.29	120.95	113.80
5	1H	945	A	C5-N7-C8	-14.20	96.80	103.90
5	1H	2346	A	C2-N3-C4	-14.14	103.53	110.60
5	1H	774	A	C2-N3-C4	-14.09	103.56	110.60
5	1H	1786	A	N1-C6-N6	14.06	127.04	118.60
5	1H	1616	A	C5-N7-C8	-14.01	96.90	103.90
5	1H	140	A	C5-N7-C8	-13.99	96.91	103.90
5	1H	2430	A	C4-C5-N7	13.87	117.63	110.70
5	1H	1786	A	N1-C2-N3	13.86	136.23	129.30
5	1H	1678	G	N3-C2-N2	-13.82	110.22	119.90
5	1H	2392	A	C5-N7-C8	-13.76	97.02	103.90
5	1H	945	A	N7-C8-N9	13.76	120.68	113.80
5	1H	1786	A	C6-C5-N7	-13.65	122.75	132.30
5	1H	945	A	C2-N3-C4	-13.62	103.79	110.60
1	13	966	G	C5-C6-O6	-13.50	120.50	128.60
5	14	530	G	N9-C4-C5	-13.47	100.01	105.40
5	1H	621	A	C2-N3-C4	-13.45	103.87	110.60
5	14	530	G	C5-C6-O6	-13.45	120.53	128.60
5	1H	793	A	N1-C6-N6	13.44	126.66	118.60
5	1H	1806	C	O5'-P-OP2	-13.43	93.61	105.70
5	1H	860	U	C4-C5-C6	13.43	127.76	119.70
5	1H	1021	A	C2-N3-C4	-13.33	103.94	110.60
5	1H	1614	A	C2-N3-C4	-13.31	103.94	110.60
5	1H	2598	A	O5'-P-OP1	-13.30	93.73	105.70
5	1H	1298	C	O5'-P-OP2	-13.23	93.79	105.70
1	13	329	A	O5'-P-OP2	-13.16	93.86	105.70
5	1H	330	A	C2-N3-C4	-13.09	104.05	110.60
5	14	676	A	C5-N7-C8	-13.09	97.36	103.90
5	1H	839	U	O5'-P-OP2	-13.08	93.93	105.70
5	1H	140	A	N7-C8-N9	13.06	120.33	113.80
5	1H	930	U	C5-C4-O4	13.04	133.73	125.90
5	14	1786	A	C6-C5-N7	-13.02	123.18	132.30
5	1H	1678	G	C5-N7-C8	-12.93	97.83	104.30
5	1H	774	A	C4-C5-N7	12.93	117.16	110.70
5	14	1619	G	O5'-P-OP2	-12.93	94.07	105.70
5	14	2873	A	C5-N7-C8	-12.93	97.44	103.90
5	14	1786	A	N1-C6-N6	12.88	126.33	118.60
5	14	2430	A	N1-C6-N6	12.87	126.32	118.60
5	1H	34	C	O5'-P-OP1	-12.86	94.13	105.70
5	1H	71	A	C5-N7-C8	-12.85	97.48	103.90
5	1H	860	U	C5-C6-N1	-12.84	116.28	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	774	A	C5-N7-C8	-12.84	97.48	103.90
1	13	1502	A	C5-N7-C8	-12.80	97.50	103.90
5	1H	1950	G	N7-C8-N9	12.78	119.49	113.10
5	1H	1496	A	N7-C8-N9	12.77	120.19	113.80
5	14	2873	A	C6-C5-N7	-12.76	123.37	132.30
5	1H	2330	G	C5-C6-O6	-12.76	120.94	128.60
5	1H	613	U	N3-C2-O2	-12.73	113.29	122.20
5	1H	1950	G	C8-N9-C4	-12.70	101.32	106.40
5	14	330	A	C2-N3-C4	-12.66	104.27	110.60
5	1H	793	A	C5-C6-N6	-12.65	113.58	123.70
5	1H	2598	A	O5'-P-OP2	12.64	125.87	110.70
5	1H	676	A	N3-C4-N9	-12.60	117.32	127.40
1	13	792	A	N1-C6-N6	12.58	126.14	118.60
5	1H	860	U	N3-C2-O2	-12.56	113.41	122.20
1	13	1502	A	C4-C5-N7	12.54	116.97	110.70
5	1H	510	C	O5'-P-OP2	-12.50	94.45	105.70
1	13	802	A	N1-C6-N6	12.46	126.08	118.60
5	1H	2468	G	O4'-C1'-N9	12.45	118.16	108.20
1	13	792	A	C5-N7-C8	-12.45	97.68	103.90
1	13	792	A	C4-C5-N7	12.41	116.91	110.70
5	1H	1600	C	O5'-P-OP2	-12.39	94.55	105.70
5	1H	2713	A	C2-N3-C4	-12.31	104.44	110.60
5	1H	138	G	N7-C8-N9	12.28	119.24	113.10
5	1H	1496	A	C5-N7-C8	-12.28	97.76	103.90
5	1H	828	U	C5-C4-O4	12.26	133.25	125.90
5	14	1984	G	O5'-P-OP2	-12.24	94.68	105.70
5	14	1602	U	O5'-P-OP2	12.22	125.36	110.70
1	13	792	A	C2-N3-C4	-12.19	104.50	110.60
1	13	1502	A	C6-C5-N7	-12.17	123.78	132.30
5	1H	2346	A	N1-C2-N3	12.16	135.38	129.30
5	1H	917	A	N1-C6-N6	12.13	125.88	118.60
1	13	1502	A	N1-C6-N6	12.12	125.87	118.60
5	1H	2330	G	N1-C6-O6	12.12	127.17	119.90
5	1H	735	A	C8-N9-C4	12.08	110.63	105.80
5	1H	688	U	O5'-P-OP2	-12.07	94.83	105.70
5	14	774	A	N1-C6-N6	12.06	125.83	118.60
5	1H	2390	U	O5'-P-OP1	-12.02	94.89	105.70
5	1H	1616	A	C4-C5-N7	11.99	116.70	110.70
5	1H	2609	U	O5'-P-OP2	-11.99	94.91	105.70
5	1H	37	C	N3-C4-C5	-11.96	117.12	121.90
5	1H	1982	C	O5'-P-OP2	-11.94	94.96	105.70
5	1H	2507	C	N3-C2-O2	-11.91	113.56	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1678	G	C2-N3-C4	-11.91	105.95	111.90
5	14	140	A	N7-C8-N9	11.88	119.74	113.80
5	14	793	A	O5'-P-OP2	-11.86	95.03	105.70
5	14	676	A	C2-N3-C4	-11.85	104.67	110.60
5	14	140	A	C5-N7-C8	-11.85	97.97	103.90
27	16	81	G	C5-N7-C8	-11.82	98.39	104.30
5	1H	1210	A	C5-N7-C8	-11.82	97.99	103.90
1	13	1517	G	O5'-P-OP2	-11.81	95.07	105.70
5	1H	1376	C	N3-C4-C5	-11.81	117.18	121.90
5	14	530	G	C4-C5-N7	11.76	115.50	110.80
5	14	130	C	N3-C4-C5	11.75	126.60	121.90
5	1H	2062	A	C8-N9-C4	11.72	110.49	105.80
5	1H	1899	G	C8-N9-C4	-11.71	101.72	106.40
5	1H	1616	A	N7-C8-N9	11.70	119.65	113.80
5	1H	1255	U	N3-C4-O4	11.69	127.59	119.40
5	14	2226	C	N1-C2-O2	11.69	125.91	118.90
5	14	783	A	N7-C8-N9	11.68	119.64	113.80
5	1H	2584	U	N3-C2-O2	-11.66	114.04	122.20
5	1H	1299	G	O5'-P-OP1	-11.65	95.22	105.70
1	1G	1203	C	C6-N1-C2	11.63	124.95	120.30
5	1H	1950	G	N3-C4-N9	-11.59	119.04	126.00
5	14	2518	A	N1-C6-N6	11.56	125.53	118.60
5	1H	1678	G	C8-N9-C4	-11.55	101.78	106.40
5	1H	1321	A	C8-N9-C4	11.53	110.41	105.80
5	1H	140	A	C8-N9-C4	-11.51	101.20	105.80
5	14	2070	G	O5'-P-OP2	-11.50	95.35	105.70
5	1H	2689	U	C5-C4-O4	11.50	132.80	125.90
5	1H	200	U	O5'-P-OP1	-11.47	95.37	105.70
5	1H	1122	G	C8-N9-C4	11.47	110.99	106.40
5	1H	141	A	C5-N7-C8	-11.45	98.17	103.90
5	1H	774	A	N3-C4-N9	-11.45	118.24	127.40
5	14	676	A	C4-C5-N7	11.40	116.40	110.70
5	14	1496	A	N7-C8-N9	11.40	119.50	113.80
5	14	2612	C	O5'-P-OP2	-11.39	95.45	105.70
5	1H	828	U	N1-C2-O2	11.37	130.76	122.80
1	13	971	G	O5'-P-OP2	-11.36	95.48	105.70
5	1H	783	A	N3-C4-N9	-11.34	118.33	127.40
5	1H	813	U	O5'-P-OP2	-11.33	95.50	105.70
1	13	1508	G	O5'-P-OP1	-11.33	95.51	105.70
5	1H	2699	C	C6-N1-C2	11.32	124.83	120.30
5	1H	963	U	O5'-P-OP2	11.29	124.25	110.70
5	1H	676	A	N3-C4-C5	11.28	134.70	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2688	U	C5-C4-O4	11.27	132.66	125.90
5	14	2873	A	N1-C6-N6	11.24	125.34	118.60
5	1H	459	U	O5'-P-OP2	-11.23	95.60	105.70
5	1H	141	A	N7-C8-N9	11.22	119.41	113.80
5	14	2464	C	C6-N1-C2	11.20	124.78	120.30
5	1H	964	C	O5'-P-OP1	-11.18	95.63	105.70
5	14	783	A	N3-C4-C5	11.18	134.63	126.80
1	13	1502	A	O5'-P-OP2	-11.16	95.65	105.70
5	14	530	G	C8-N9-C4	11.16	110.86	106.40
5	1H	1204	A	C2-N3-C4	-11.15	105.03	110.60
5	1H	1786	A	C4-C5-N7	11.14	116.27	110.70
5	1H	954	G	N3-C2-N2	-11.13	112.11	119.90
5	1H	138	G	C5-C6-O6	-11.12	121.93	128.60
5	1H	1528	A	C8-N9-C4	-11.12	101.35	105.80
5	14	530	G	N1-C6-O6	11.10	126.56	119.90
5	14	1698	A	N1-C6-N6	11.10	125.26	118.60
1	13	789	U	C5-C4-O4	11.09	132.56	125.90
5	1H	144	C	C5-C6-N1	-11.09	115.45	121.00
5	1H	2506	U	N1-C2-O2	11.08	130.56	122.80
5	14	774	A	C4-C5-N7	11.06	116.23	110.70
5	14	1661	G	C5-C6-O6	-11.06	121.96	128.60
5	1H	409	C	C6-N1-C2	11.06	124.72	120.30
5	1H	1899	G	C8-N9-C1'	11.06	141.38	127.00
5	1H	1204	A	O4'-C1'-N9	11.05	117.04	108.20
5	1H	1379	A	N1-C6-N6	11.05	125.23	118.60
5	14	2873	A	C2-N3-C4	-11.04	105.08	110.60
5	14	531	C	O5'-P-OP1	-11.03	95.77	105.70
5	14	945	A	C5-N7-C8	-11.03	98.38	103.90
5	14	1332	G	N3-C2-N2	-11.02	112.19	119.90
5	1H	265	A	C2-N3-C4	-11.02	105.09	110.60
5	14	2005	A	O5'-P-OP2	-10.96	95.83	105.70
5	1H	1614	A	C5-N7-C8	-10.94	98.43	103.90
5	1H	2346	A	O4'-C1'-N9	10.93	116.94	108.20
27	16	81	G	C5-C6-O6	-10.93	122.04	128.60
5	1H	2331	G	N1-C6-O6	10.89	126.43	119.90
5	1H	783	A	C5-C6-N1	-10.85	112.28	117.70
5	1H	2490	G	N7-C8-N9	10.85	118.52	113.10
5	1H	2375	G	C5-C6-O6	-10.80	122.12	128.60
5	14	1948	G	O5'-P-OP1	-10.79	95.99	105.70
5	1H	1931	U	C5-C4-O4	10.79	132.38	125.90
5	1H	778	G	N1-C6-O6	-10.76	113.44	119.90
5	1H	687	C	O5'-P-OP1	-10.74	96.03	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2584	U	C5-C4-O4	10.74	132.34	125.90
5	1H	2688	U	N3-C2-O2	-10.72	114.69	122.20
5	14	2542	A	O5'-P-OP2	-10.72	96.06	105.70
5	14	1678	G	N3-C4-C5	10.70	133.95	128.60
5	1H	1950	G	C4-C5-N7	10.70	115.08	110.80
5	1H	2490	G	N3-C4-C5	10.69	133.94	128.60
5	1H	2377	A	C8-N9-C4	10.66	110.07	105.80
5	14	2079	U	O5'-P-OP1	-10.66	96.10	105.70
5	14	774	A	N3-C4-C5	10.64	134.25	126.80
5	14	835	A	O5'-P-OP2	-10.63	96.13	105.70
5	1H	2311	A	C2-N3-C4	-10.62	105.29	110.60
5	14	2273	A	O5'-P-OP2	-10.61	96.15	105.70
5	14	2873	A	N1-C2-N3	10.60	134.60	129.30
5	1H	1660	C	N3-C2-O2	-10.60	114.48	121.90
5	14	2873	A	C8-N9-C4	-10.60	101.56	105.80
5	14	774	A	C5-N7-C8	-10.60	98.60	103.90
5	14	1812	A	O5'-P-OP2	-10.59	96.17	105.70
5	1H	133	C	C6-N1-C2	10.58	124.53	120.30
5	14	2326	C	C6-N1-C2	-10.58	116.07	120.30
5	1H	974(A)	C	N1-C2-O2	10.58	125.25	118.90
5	1H	97	C	O5'-P-OP1	-10.58	96.18	105.70
5	1H	945	A	C4-C5-N7	10.56	115.98	110.70
5	1H	2507	C	C6-N1-C2	-10.55	116.08	120.30
5	1H	786	C	N3-C4-N4	-10.55	110.61	118.00
5	1H	1950	G	N3-C4-C5	10.54	133.87	128.60
1	13	902	G	O5'-P-OP2	-10.52	96.23	105.70
5	1H	74	A	C5-N7-C8	-10.52	98.64	103.90
5	1H	120	U	C4-C5-C6	10.52	126.01	119.70
5	1H	2406	U	O5'-P-OP1	-10.51	96.24	105.70
1	13	792	A	O4'-C1'-N9	10.51	116.60	108.20
5	1H	641	C	O5'-P-OP1	-10.51	96.25	105.70
1	13	738	C	C6-N1-C2	-10.50	116.10	120.30
5	1H	2499	C	N1-C2-O2	-10.50	112.60	118.90
5	1H	729	G	C8-N9-C4	-10.48	102.21	106.40
5	14	1304	C	N1-C2-O2	10.48	125.19	118.90
5	1H	1528	A	N7-C8-N9	10.48	119.04	113.80
5	14	462	C	O5'-P-OP2	-10.47	96.27	105.70
5	1H	1376	C	C6-N1-C2	-10.47	116.11	120.30
5	1H	659	C	C6-N1-C2	10.46	124.48	120.30
5	1H	2700	C	C6-N1-C2	10.45	124.48	120.30
5	1H	1786	A	C5-C6-N1	-10.45	112.47	117.70
5	1H	2085	C	O5'-P-OP2	-10.45	96.30	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	982	C	C6-N1-C2	-10.43	116.13	120.30
5	1H	52	A	O5'-P-OP2	-10.43	96.32	105.70
5	1H	2392	A	N7-C8-N9	10.42	119.01	113.80
5	14	2067	G	O5'-P-OP1	-10.41	96.33	105.70
5	1H	1678	G	N7-C8-N9	10.41	118.30	113.10
5	1H	2199	A	O5'-P-OP1	-10.40	96.34	105.70
5	1H	1332	G	N7-C8-N9	10.38	118.29	113.10
5	1H	2392	A	C4-C5-N7	10.38	115.89	110.70
5	14	783	A	N3-C4-N9	-10.36	119.11	127.40
5	1H	1241	A	C5-N7-C8	-10.35	98.72	103.90
5	1H	698	C	C6-N1-C2	10.35	124.44	120.30
5	1H	2712(A)	A	N9-C4-C5	-10.35	101.66	105.80
5	1H	194	G	C8-N9-C4	10.35	110.54	106.40
5	1H	140	A	C4-C5-N7	10.35	115.87	110.70
5	14	1332	G	C5-N7-C8	-10.34	99.13	104.30
5	1H	783	A	N3-C4-C5	10.33	134.03	126.80
5	14	2011	U	O5'-P-OP1	-10.32	96.41	105.70
5	14	2688	U	N3-C2-O2	-10.30	114.99	122.20
5	1H	621	A	C5-N7-C8	-10.30	98.75	103.90
5	1H	2086	U	O5'-P-OP2	-10.30	96.43	105.70
5	14	1899	G	C2-N3-C4	-10.29	106.76	111.90
5	1H	1300	U	N1-C2-N3	10.28	121.06	114.90
5	1H	239	U	N3-C4-O4	-10.26	112.22	119.40
5	14	2501	C	C6-N1-C2	10.24	124.40	120.30
5	1H	74	A	C5-C6-N1	-10.24	112.58	117.70
5	1H	683	C	C5-C4-N4	-10.24	113.03	120.20
5	14	774	A	O5'-P-OP2	-10.23	96.49	105.70
5	1H	1623	G	N1-C6-O6	-10.21	113.78	119.90
5	14	1616	A	C5-N7-C8	-10.20	98.80	103.90
5	14	2446	G	O5'-P-OP2	-10.19	96.53	105.70
5	1H	1614	A	N1-C6-N6	10.18	124.71	118.60
5	1H	1021	A	C5-N7-C8	-10.16	98.82	103.90
1	13	827	U	N3-C2-O2	-10.16	115.09	122.20
5	14	778	G	N1-C6-O6	-10.16	113.81	119.90
27	16	115	G	N1-C6-O6	10.15	125.99	119.90
5	1H	528	A	C6-N1-C2	10.13	124.68	118.60
5	1H	1496	A	C8-N9-C4	-10.13	101.75	105.80
5	14	380	U	O5'-P-OP2	-10.13	96.58	105.70
27	16	81	G	N7-C8-N9	10.12	118.16	113.10
5	1H	2053	G	O5'-P-OP2	-10.12	96.59	105.70
5	1H	676	A	C5-C6-N1	-10.11	112.64	117.70
1	13	1260	C	C6-N1-C2	-10.11	116.26	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2776	A	C8-N9-C4	-10.10	101.76	105.80
5	14	1899	G	N1-C2-N2	-10.10	107.11	116.20
5	1H	1755	A	O5'-P-OP1	-10.10	96.61	105.70
1	13	1505	G	O5'-P-OP2	10.08	122.80	110.70
5	14	676	A	N1-C6-N6	10.07	124.64	118.60
5	14	528	A	C2-N3-C4	-10.07	105.56	110.60
5	1H	1930	G	O5'-P-OP1	-10.06	96.64	105.70
5	14	140	A	N1-C6-N6	10.06	124.64	118.60
5	1H	210	C	C6-N1-C2	10.05	124.32	120.30
1	1G	1395	C	O5'-P-OP1	-10.05	96.66	105.70
1	13	690	G	C6-C5-N7	-10.03	124.38	130.40
5	1H	945	A	O4'-C1'-N9	10.03	116.22	108.20
5	14	510	C	O5'-P-OP2	-10.03	96.67	105.70
5	1H	945	A	C4-N9-C1'	10.03	144.35	126.30
5	1H	456	C	C6-N1-C2	10.02	124.31	120.30
5	1H	330	A	C5-N7-C8	-10.02	98.89	103.90
5	14	2713	A	C5-N7-C8	-10.01	98.90	103.90
5	14	528	A	N1-C2-N3	10.00	134.30	129.30
5	1H	1496	A	C4-C5-N7	9.99	115.70	110.70
5	1H	917	A	C6-C5-N7	-9.99	125.31	132.30
5	14	1655	A	C8-N9-C4	9.97	109.79	105.80
5	14	140	A	C4-C5-N7	9.96	115.68	110.70
5	14	453	C	C6-N1-C2	9.96	124.28	120.30
5	1H	2689	U	N3-C4-O4	-9.96	112.43	119.40
5	14	561	G	N3-C4-N9	-9.96	120.03	126.00
5	1H	124	G	C8-N9-C4	9.94	110.38	106.40
5	14	2713	A	C2-N3-C4	-9.93	105.63	110.60
5	1H	1888	G	N3-C4-N9	9.92	131.95	126.00
5	1H	2573	C	C6-N1-C2	-9.91	116.34	120.30
5	14	780	G	N3-C2-N2	-9.90	112.97	119.90
5	14	2439	A	P-O3'-C3'	9.90	131.58	119.70
5	14	1698	A	C5-N7-C8	-9.89	98.95	103.90
5	1H	120	U	C5-C6-N1	-9.89	117.75	122.70
5	14	1348	G	O5'-P-OP2	9.89	122.56	110.70
5	1H	2591	C	N1-C2-O2	-9.89	112.97	118.90
5	1H	860	U	C2-N1-C1'	9.88	129.55	117.70
5	1H	148	C	N3-C4-C5	9.87	125.85	121.90
5	14	1678	G	C5-N7-C8	-9.86	99.37	104.30
5	1H	1437	C	C6-N1-C2	-9.86	116.36	120.30
5	1H	2427	C	O5'-P-OP2	9.86	122.53	110.70
1	13	690	G	O4'-C1'-N9	9.85	116.08	108.20
5	1H	860	U	O5'-P-OP1	9.85	122.52	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	252	G	O5'-P-OP2	-9.85	96.84	105.70
5	1H	2713	A	C5-N7-C8	-9.82	98.99	103.90
5	1H	815	C	N3-C4-C5	9.81	125.82	121.90
5	1H	1932	A	N1-C6-N6	9.81	124.48	118.60
5	1H	2430	A	N3-C4-N9	-9.80	119.56	127.40
5	14	2326	C	N3-C4-C5	-9.80	117.98	121.90
1	13	1331	G	O5'-P-OP2	-9.80	96.88	105.70
5	14	71	A	C5-N7-C8	-9.79	99.00	103.90
5	14	1633	G	C8-N9-C4	-9.79	102.48	106.40
5	14	1616	A	N7-C8-N9	9.79	118.69	113.80
5	1H	1210	A	N1-C6-N6	9.78	124.47	118.60
5	1H	2508	G	C4-C5-N7	-9.78	106.89	110.80
5	14	249	C	O5'-P-OP2	-9.78	96.90	105.70
5	14	672	C	O5'-P-OP1	9.78	122.43	110.70
5	14	1989	G	N3-C2-N2	-9.77	113.06	119.90
5	1H	777	A	N1-C6-N6	-9.77	112.74	118.60
5	1H	2490	G	C6-C5-N7	-9.76	124.55	130.40
1	13	966	G	N1-C6-O6	9.74	125.75	119.90
5	1H	1382	G	N1-C6-O6	9.74	125.75	119.90
5	1H	2503	A	N1-C6-N6	9.73	124.44	118.60
5	14	2518	A	C2-N3-C4	-9.73	105.74	110.60
5	1H	679	C	C5-C6-N1	-9.72	116.14	121.00
5	14	2062	A	N1-C6-N6	9.71	124.43	118.60
1	13	1502	A	N7-C8-N9	9.70	118.65	113.80
5	1H	593	G	N1-C2-N2	-9.70	107.47	116.20
5	1H	2490	G	C2-N3-C4	-9.70	107.05	111.90
5	14	2591	C	N1-C2-O2	-9.70	113.08	118.90
5	1H	1379	A	C5-N7-C8	-9.69	99.05	103.90
5	1H	2584	U	N3-C4-O4	-9.69	112.61	119.40
3	2L	77	A	C8-N9-C4	9.68	109.67	105.80
5	14	751	A	O5'-P-OP1	-9.68	96.99	105.70
5	1H	1314	C	C2-N1-C1'	9.68	129.45	118.80
5	1H	1626	G	O5'-P-OP2	9.67	122.31	110.70
5	14	1703	G	C4-C5-N7	9.65	114.66	110.80
5	14	2328	A	N1-C2-N3	9.64	134.12	129.30
5	14	856	C	C6-N1-C2	-9.63	116.45	120.30
5	14	2078	C	O5'-P-OP2	9.62	122.25	110.70
5	1H	47	C	N3-C4-C5	9.62	125.75	121.90
5	1H	2387	U	O5'-P-OP2	9.62	122.24	110.70
5	1H	127	A	N1-C6-N6	9.61	124.37	118.60
5	1H	1796	U	C5-C6-N1	-9.61	117.90	122.70
1	13	990	C	C6-N1-C2	-9.60	116.46	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	16	81	G	C4-N9-C1'	9.60	138.98	126.50
5	14	1698	A	C2-N3-C4	-9.60	105.80	110.60
2	3L	76	A	N7-C8-N9	9.58	118.59	113.80
27	16	81	G	N9-C4-C5	-9.58	101.57	105.40
5	14	1655	A	N7-C8-N9	-9.57	109.01	113.80
5	1H	2775	A	O5'-P-OP2	-9.57	97.09	105.70
5	1H	1210	A	C4-C5-N7	9.56	115.48	110.70
1	13	353	A	C8-N9-C4	-9.56	101.98	105.80
1	13	792	A	C6-C5-N7	-9.55	125.61	132.30
5	1H	239	U	C5-C4-O4	9.55	131.63	125.90
27	16	47	C	O5'-P-OP2	-9.55	97.10	105.70
5	1H	74	A	N3-C4-C5	9.55	133.48	126.80
5	14	786	C	C5-C6-N1	-9.54	116.23	121.00
5	14	746	A	O5'-P-OP2	9.54	122.15	110.70
55	Q8	25	MET	N-CA-C	9.54	136.75	111.00
5	14	676	A	N7-C8-N9	9.54	118.57	113.80
5	14	992	C	C6-N1-C2	-9.53	116.49	120.30
5	14	1304	C	N3-C2-O2	-9.53	115.23	121.90
5	1H	71	A	C4-C5-N7	9.53	115.46	110.70
5	14	140	A	C8-N9-C4	-9.53	101.99	105.80
5	1H	37	C	C4-C5-C6	9.52	122.16	117.40
5	14	2712	U	C5-C4-O4	9.52	131.61	125.90
27	16	81	G	N3-C4-N9	9.51	131.71	126.00
1	1G	360	A	C8-N9-C4	9.51	109.60	105.80
5	1H	2060	A	N1-C6-N6	-9.50	112.90	118.60
5	1H	2392	A	C2-N3-C4	-9.50	105.85	110.60
5	1H	2430	A	C5-C6-N1	-9.50	112.95	117.70
5	1H	774	A	C6-N1-C2	9.49	124.29	118.60
5	14	252	G	O5'-P-OP2	-9.48	97.17	105.70
5	1H	194	G	N7-C8-N9	-9.48	108.36	113.10
5	1H	930	U	N3-C4-O4	-9.48	112.76	119.40
5	14	530	G	C6-C5-N7	-9.48	124.71	130.40
5	1H	1332	G	N3-C2-N2	-9.48	113.27	119.90
5	1H	1899	G	N1-C2-N3	9.48	129.59	123.90
5	1H	180	G	C8-N9-C4	9.47	110.19	106.40
5	1H	755	C	N3-C4-C5	-9.46	118.12	121.90
5	1H	2270	G	N1-C6-O6	9.46	125.57	119.90
5	1H	1673	U	C5-C6-N1	-9.45	117.97	122.70
5	14	2702	U	O5'-P-OP2	-9.45	97.20	105.70
5	1H	852	G	O5'-P-OP2	-9.45	97.20	105.70
27	16	47	C	C6-N1-C2	9.44	124.08	120.30
5	1H	2377	A	N9-C4-C5	-9.44	102.03	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	141	A	C8-N9-C4	-9.43	102.03	105.80
5	1H	1404	C	O5'-P-OP2	-9.43	97.22	105.70
5	1H	2541	A	O5'-P-OP1	-9.43	97.22	105.70
5	1H	2857	G	O5'-P-OP1	-9.43	97.22	105.70
5	1H	632	A	O5'-P-OP2	9.42	122.01	110.70
5	1H	1769	G	O5'-P-OP2	-9.42	97.22	105.70
1	13	1281	U	N3-C2-O2	-9.41	115.61	122.20
5	1H	863	A	O5'-P-OP2	-9.41	97.23	105.70
5	14	783	A	C8-N9-C4	-9.40	102.04	105.80
5	14	945	A	C4-C5-N7	9.40	115.40	110.70
5	14	1698	A	C4-C5-N7	9.39	115.40	110.70
5	1H	512	G	O4'-C1'-N9	9.39	115.72	108.20
5	14	2447	G	P-O3'-C3'	9.39	130.97	119.70
5	1H	2578	G	C8-N9-C4	9.39	110.16	106.40
5	1H	2518	A	C5-N7-C8	-9.39	99.21	103.90
5	14	672	C	O5'-P-OP2	-9.38	97.26	105.70
5	1H	842	G	C5-C6-O6	-9.37	122.98	128.60
5	1H	1022	G	N9-C4-C5	9.37	109.15	105.40
5	1H	744	G	O5'-P-OP2	-9.37	97.27	105.70
5	1H	1021	A	N7-C8-N9	9.37	118.48	113.80
5	14	2513	G	C5-C6-O6	-9.36	122.98	128.60
1	13	1505	G	OP1-P-OP2	-9.35	105.57	119.60
1	13	1502	A	C2-N3-C4	-9.35	105.93	110.60
1	13	564	C	N3-C4-C5	-9.35	118.16	121.90
5	1H	703	U	C5-C4-O4	9.35	131.51	125.90
5	1H	2446	G	C4-C5-N7	9.35	114.54	110.80
1	13	802	A	C5-C6-N6	-9.34	116.23	123.70
5	14	2356	C	C6-N1-C2	9.34	124.04	120.30
5	1H	664	C	O5'-P-OP2	-9.34	97.29	105.70
5	14	1616	A	C2-N3-C4	-9.34	105.93	110.60
5	1H	2503	A	C5-C6-N6	-9.34	116.23	123.70
5	14	2307	G	O4'-C1'-N9	9.33	115.66	108.20
5	14	751	A	O5'-P-OP2	9.33	121.89	110.70
5	1H	966	G	N3-C2-N2	9.32	126.43	119.90
5	14	694	U	O5'-P-OP2	-9.32	97.31	105.70
5	1H	1996	C	C6-N1-C2	9.32	124.03	120.30
5	1H	1318	C	O5'-P-OP1	-9.31	97.32	105.70
5	14	2070	G	N1-C2-N2	-9.31	107.82	116.20
5	14	2712	U	C5-C6-N1	-9.31	118.05	122.70
5	1H	1332	G	C8-N9-C4	-9.31	102.68	106.40
5	14	687	C	O5'-P-OP1	-9.30	97.33	105.70
5	1H	1241	A	C2-N3-C4	-9.30	105.95	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1611	C	C2-N3-C4	-9.30	115.25	119.90
5	1H	2507	C	N1-C2-O2	9.28	124.47	118.90
1	13	802	A	C4-C5-N7	9.28	115.34	110.70
5	14	2429	G	O5'-P-OP1	9.28	121.83	110.70
5	1H	2497	A	C6-N1-C2	-9.27	113.04	118.60
5	1H	2688	U	N3-C4-O4	-9.26	112.92	119.40
5	1H	216	A	O5'-P-OP1	-9.26	97.37	105.70
5	1H	609	A	C8-N9-C4	9.26	109.50	105.80
5	1H	1559	G	N1-C6-O6	9.26	125.45	119.90
5	14	1616	A	C8-N9-C4	-9.26	102.10	105.80
5	14	783	A	C4-C5-N7	9.25	115.33	110.70
5	14	1602	U	O5'-P-OP1	-9.25	97.38	105.70
1	1G	402	G	C8-N9-C4	9.25	110.10	106.40
5	14	786	C	N3-C4-C5	9.24	125.60	121.90
5	1H	59	U	N3-C4-C5	-9.24	109.05	114.60
5	14	982	C	C5-C6-N1	9.24	125.62	121.00
5	1H	1792	G	N1-C6-O6	-9.24	114.36	119.90
5	1H	252	G	O5'-P-OP1	9.23	121.78	110.70
5	1H	2712	U	C2-N3-C4	-9.23	121.46	127.00
5	1H	613	U	N1-C2-N3	9.22	120.43	114.90
1	13	1195	C	C6-N1-C2	-9.22	116.61	120.30
5	1H	846	C	O5'-P-OP1	-9.22	97.40	105.70
27	16	115	G	C4-C5-N7	9.21	114.49	110.80
5	14	2512	C	N3-C4-C5	9.20	125.58	121.90
5	1H	2010	G	O5'-P-OP1	-9.20	97.42	105.70
5	14	2461	C	O5'-P-OP1	-9.20	97.42	105.70
5	1H	786	C	C5-C6-N1	-9.20	116.40	121.00
1	13	23	C	C6-N1-C2	-9.20	116.62	120.30
5	1H	1200	C	N1-C2-O2	-9.19	113.38	118.90
5	1H	1255	U	N3-C4-C5	-9.18	109.09	114.60
1	1G	915	A	O5'-P-OP2	-9.18	97.44	105.70
1	13	690	G	N7-C8-N9	9.18	117.69	113.10
5	14	1694	C	C6-N1-C2	9.18	123.97	120.30
5	1H	966	G	N1-C6-O6	-9.18	114.39	119.90
5	1H	1399	C	C6-N1-C2	-9.18	116.63	120.30
5	14	2062	A	N9-C4-C5	-9.18	102.13	105.80
5	1H	1035	U	C5-C4-O4	9.16	131.40	125.90
5	1H	1614	A	C4-C5-N7	9.16	115.28	110.70
5	1H	1914	C	C6-N1-C2	-9.16	116.63	120.30
5	14	2426	A	N7-C8-N9	9.15	118.38	113.80
5	1H	2576	G	C8-N9-C4	9.15	110.06	106.40
5	14	2073	C	N1-C2-O2	-9.15	113.41	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1379	A	C4-C5-N7	9.15	115.27	110.70
5	1H	2518	A	N7-C8-N9	9.15	118.37	113.80
5	1H	1558	A	P-O3'-C3'	9.14	130.67	119.70
5	14	40	C	C6-N1-C2	-9.14	116.64	120.30
5	1H	1616	A	O4'-C1'-N9	9.14	115.51	108.20
5	1H	1310	G	O5'-P-OP2	9.14	121.66	110.70
5	1H	1908	C	C6-N1-C2	-9.14	116.64	120.30
5	1H	2387	U	OP2-P-O3'	9.13	125.29	105.20
5	14	2490	G	C8-N9-C4	-9.12	102.75	106.40
1	13	1369	C	O5'-P-OP2	-9.12	97.49	105.70
5	1H	1618	A	N1-C6-N6	9.11	124.06	118.60
5	1H	2434	A	N1-C6-N6	-9.11	113.14	118.60
5	14	1496	A	C5-N7-C8	-9.09	99.36	103.90
5	1H	2392	A	N3-C4-C5	9.09	133.16	126.80
5	1H	809	G	C5-C6-N1	9.06	116.03	111.50
5	1H	864	G	C2-N3-C4	9.06	116.43	111.90
5	1H	945	A	C8-N9-C4	-9.06	102.17	105.80
5	1H	1431	U	C5-C6-N1	9.06	127.23	122.70
5	1H	783	A	C4-C5-N7	9.06	115.23	110.70
5	1H	1142(A)	A	C2-N3-C4	-9.05	106.07	110.60
5	14	2873	A	C4-C5-N7	9.05	115.23	110.70
5	1H	216	A	O5'-P-OP2	9.05	121.56	110.70
5	1H	801	G	O5'-P-OP2	-9.05	97.56	105.70
5	1H	2430	A	C6-C5-N7	-9.04	125.97	132.30
5	14	1313	U	C2-N1-C1'	9.03	128.54	117.70
5	14	2328	A	C6-N1-C2	-9.03	113.18	118.60
5	1H	2275	C	OP1-P-O3'	9.03	125.07	105.20
5	1H	966	G	N1-C2-N2	-9.03	108.08	116.20
5	14	468	G	OP1-P-OP2	-9.02	106.06	119.60
5	1H	845	G	N3-C4-C5	9.02	133.11	128.60
5	1H	71	A	N1-C2-N3	9.01	133.81	129.30
5	1H	1428	C	O5'-P-OP1	-9.01	97.59	105.70
1	13	802	A	N9-C4-C5	-9.00	102.20	105.80
5	1H	71	A	N3-C4-C5	8.99	133.10	126.80
5	1H	226	G	O4'-C1'-N9	8.99	115.39	108.20
5	1H	2518	A	C8-N9-C4	-8.99	102.20	105.80
5	1H	1284	A	O5'-P-OP2	-8.99	97.61	105.70
5	1H	1367	A	C2-N3-C4	-8.98	106.11	110.60
5	1H	2287	A	C5-C6-N1	-8.98	113.21	117.70
5	1H	1202	C	N1-C2-O2	-8.98	113.51	118.90
37	88	82	ARG	N-CA-C	8.97	135.21	111.00
5	1H	265	A	C5-N7-C8	-8.96	99.42	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	752	A	N1-C2-N3	8.96	133.78	129.30
5	1H	467	G	N7-C8-N9	-8.96	108.62	113.10
5	1H	491	G	O5'-P-OP1	-8.96	97.64	105.70
5	14	1786	A	C8-N9-C4	-8.96	102.22	105.80
5	1H	1899	G	C5-C6-O6	8.95	133.97	128.60
5	1H	1773	A	N1-C2-N3	8.95	133.77	129.30
1	1G	690	G	C5-N7-C8	-8.95	99.83	104.30
5	14	1396	U	N3-C2-O2	-8.94	115.94	122.20
5	1H	774	A	C5-C6-N1	-8.94	113.23	117.70
5	1H	1825	A	C5-C6-N6	8.93	130.84	123.70
5	1H	1314	C	C6-N1-C1'	-8.93	110.09	120.80
1	13	537	G	O5'-P-OP1	-8.92	97.67	105.70
5	1H	575	A	O5'-P-OP1	-8.92	97.67	105.70
2	3L	71	G	C4-C5-N7	-8.90	107.24	110.80
5	14	1938	A	N1-C6-N6	8.90	123.94	118.60
5	1H	1229(A)	G	O5'-P-OP2	-8.90	97.69	105.70
5	14	1342	A	N1-C2-N3	8.89	133.74	129.30
5	14	2056	G	N3-C2-N2	-8.89	113.68	119.90
5	1H	2608	G	N3-C2-N2	-8.89	113.68	119.90
5	14	835	A	O5'-P-OP1	8.89	121.36	110.70
1	13	664	G	O5'-P-OP2	-8.88	97.70	105.70
5	14	2591	C	O5'-P-OP2	-8.88	97.70	105.70
5	14	1678	G	C4-C5-N7	8.88	114.35	110.80
5	14	252	G	O5'-P-OP1	8.88	121.36	110.70
5	1H	329	G	O5'-P-OP2	-8.88	97.71	105.70
5	1H	1332	G	C8-N9-C1'	8.88	138.55	127.00
5	14	1598	C	O5'-P-OP2	-8.88	97.71	105.70
5	14	2542	A	C8-N9-C4	8.88	109.35	105.80
5	14	2490	G	N3-C4-N9	-8.87	120.68	126.00
5	1H	676	A	N1-C2-N3	8.87	133.73	129.30
5	14	310	A	O5'-P-OP1	-8.87	97.72	105.70
5	1H	788	A	C6-N1-C2	8.86	123.92	118.60
5	1H	85	G	O5'-P-OP2	-8.86	97.73	105.70
5	1H	739	G	O5'-P-OP2	-8.86	97.73	105.70
5	1H	2048	G	C4-C5-N7	-8.86	107.26	110.80
1	13	891	U	N3-C2-O2	-8.85	116.00	122.20
1	13	1317	C	N3-C4-C5	-8.85	118.36	121.90
5	1H	2447	G	N1-C6-O6	8.85	125.21	119.90
1	1G	690	G	N7-C8-N9	8.85	117.53	113.10
27	16	99	A	OP1-P-OP2	8.84	132.86	119.60
5	1H	1616	A	N1-C6-N6	8.84	123.90	118.60
5	1H	1271	G	O5'-P-OP2	-8.83	97.75	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1428	C	C5-C6-N1	-8.83	116.58	121.00
5	14	1671	U	O5'-P-OP1	-8.82	97.76	105.70
5	1H	124	G	C5-C6-O6	-8.82	123.31	128.60
5	1H	913	U	O5'-P-OP2	-8.82	97.76	105.70
5	14	2324	C	C6-N1-C2	8.82	123.83	120.30
5	1H	2346	A	C5-N7-C8	-8.82	99.49	103.90
5	14	2873	A	C4-C5-C6	8.81	121.41	117.00
5	1H	809	G	C5-C6-O6	-8.81	123.31	128.60
5	1H	71	A	N7-C8-N9	8.81	118.20	113.80
5	1H	207	A	C2-N3-C4	-8.81	106.19	110.60
5	1H	2713	A	N7-C8-N9	8.80	118.20	113.80
5	1H	462	C	O5'-P-OP2	-8.80	97.78	105.70
5	1H	2583	G	C8-N9-C4	-8.80	102.88	106.40
5	14	1283	G	N3-C4-C5	-8.80	124.20	128.60
5	1H	2712(A)	A	N1-C6-N6	8.79	123.88	118.60
5	14	2246	G	O5'-P-OP1	-8.79	97.79	105.70
5	1H	860	U	C6-N1-C1'	-8.79	108.89	121.20
1	13	567	G	O5'-P-OP1	-8.79	97.79	105.70
1	13	1227	A	C5-N7-C8	-8.79	99.51	103.90
1	1G	332	G	C8-N9-C4	8.78	109.91	106.40
1	13	892	A	C2-N3-C4	-8.77	106.21	110.60
5	14	841	A	N1-C6-N6	8.77	123.86	118.60
5	1H	1210	A	N7-C8-N9	8.77	118.18	113.80
5	14	37	C	C6-N1-C2	-8.76	116.80	120.30
5	1H	138	G	C8-N9-C4	-8.75	102.90	106.40
5	1H	2598	A	C8-N9-C4	8.75	109.30	105.80
5	1H	2503	A	N1-C2-N3	-8.75	124.93	129.30
5	1H	1407	C	C6-N1-C2	-8.74	116.80	120.30
1	13	542	G	O5'-P-OP1	-8.73	97.84	105.70
5	1H	2433	A	N1-C2-N3	8.73	133.67	129.30
5	1H	2689	U	P-O3'-C3'	8.73	130.18	119.70
5	14	593	G	O5'-P-OP1	8.73	121.18	110.70
5	1H	2336	A	C2-N3-C4	8.73	114.97	110.60
5	14	1394	U	O5'-P-OP1	-8.73	97.84	105.70
5	1H	856	C	O5'-P-OP1	-8.73	97.85	105.70
5	1H	1163	G	O5'-P-OP1	-8.73	97.84	105.70
1	13	1266	G	N3-C4-N9	-8.72	120.77	126.00
27	16	60	C	C5-C6-N1	8.72	125.36	121.00
5	1H	1989	G	N1-C6-O6	8.72	125.13	119.90
5	1H	938	G	O5'-P-OP2	-8.72	97.85	105.70
5	14	737	C	N1-C2-O2	-8.72	113.67	118.90
5	14	1329	U	O5'-P-OP1	-8.71	97.86	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1790	C	C6-N1-C2	8.71	123.78	120.30
5	1H	1639	U	O5'-P-OP1	8.70	121.14	110.70
5	14	205	G	C8-N9-C4	8.70	109.88	106.40
5	14	668	G	N3-C4-C5	8.70	132.95	128.60
5	1H	827	U	O5'-P-OP1	8.69	121.13	110.70
5	1H	1348	G	C5-C6-O6	-8.69	123.38	128.60
1	13	1322	C	O5'-P-OP2	-8.68	97.89	105.70
5	14	1967	C	O5'-P-OP2	-8.68	97.89	105.70
5	1H	974(A)	C	P-O3'-C3'	8.68	130.12	119.70
5	14	1343	G	O5'-P-OP1	-8.68	97.89	105.70
5	1H	126	A	OP1-P-OP2	8.68	132.62	119.60
5	1H	793	A	C6-C5-N7	-8.67	126.23	132.30
5	1H	2638	G	N3-C4-N9	8.67	131.20	126.00
5	14	468	G	O5'-P-OP2	8.67	121.10	110.70
5	1H	98	G	O5'-P-OP2	-8.67	97.90	105.70
5	1H	676	A	O4'-C1'-N9	8.67	115.13	108.20
5	14	130	C	C6-N1-C2	8.66	123.77	120.30
1	1G	812	C	C2-N1-C1'	8.66	128.33	118.80
5	1H	500	G	O5'-P-OP1	-8.66	97.90	105.70
5	14	945	A	C2-N3-C4	-8.66	106.27	110.60
5	1H	378	C	C6-N1-C2	8.66	123.76	120.30
5	1H	917	A	C5-C6-N1	-8.66	113.37	117.70
5	1H	2688	U	N1-C2-N3	8.66	120.09	114.90
5	1H	198	C	N3-C4-C5	8.65	125.36	121.90
5	14	2335	A	N1-C6-N6	-8.65	113.41	118.60
5	1H	271(B)	G	N3-C4-C5	-8.65	124.28	128.60
5	1H	1259	G	OP2-P-O3'	8.64	124.22	105.20
1	13	975	A	N1-C6-N6	8.64	123.78	118.60
5	14	2275	C	C6-N1-C2	-8.64	116.84	120.30
5	1H	77	C	N3-C4-N4	8.64	124.05	118.00
5	1H	1634	A	N1-C6-N6	8.63	123.78	118.60
5	1H	96	G	N1-C6-O6	8.62	125.08	119.90
5	1H	832	G	N3-C2-N2	-8.63	113.86	119.90
5	1H	678	C	C2-N3-C4	-8.62	115.59	119.90
5	1H	2331	G	C4-C5-N7	8.62	114.25	110.80
5	14	1024	G	N1-C6-O6	8.62	125.07	119.90
5	14	1342	A	C2-N3-C4	-8.62	106.29	110.60
5	1H	787	U	N3-C4-O4	-8.62	113.37	119.40
5	14	2324	C	N3-C4-C5	8.62	125.35	121.90
5	1H	974	G	C5-C6-O6	-8.62	123.43	128.60
5	1H	1528	A	O4'-C1'-N9	8.61	115.09	108.20
5	1H	1931	U	N1-C2-O2	8.60	128.82	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	3L	76	A	C5-N7-C8	-8.60	99.60	103.90
1	13	422	C	C6-N1-C2	-8.60	116.86	120.30
5	14	1788	C	N1-C2-O2	8.60	124.06	118.90
1	13	789	U	N3-C2-O2	-8.60	116.18	122.20
5	1H	917	A	C4-C5-C6	8.60	121.30	117.00
5	1H	984	A	N1-C6-N6	8.60	123.76	118.60
5	1H	1398	C	O5'-P-OP2	8.59	121.01	110.70
5	1H	967	C	O5'-P-OP2	-8.59	97.97	105.70
5	1H	2318	G	N3-C4-N9	-8.59	120.85	126.00
5	14	1698	A	C6-C5-N7	-8.59	126.29	132.30
5	14	196	A	O4'-C1'-N9	8.58	115.07	108.20
5	14	1821	A	C6-N1-C2	-8.58	113.45	118.60
5	1H	814	C	C5-C6-N1	-8.58	116.71	121.00
5	1H	961	C	O5'-P-OP1	-8.57	97.98	105.70
1	1G	866	C	C6-N1-C2	-8.57	116.87	120.30
5	1H	199	A	N1-C2-N3	-8.57	125.01	129.30
5	1H	1517	G	OP1-P-O3'	8.57	124.05	105.20
5	1H	1932	A	C5-C6-N6	-8.56	116.85	123.70
5	1H	1616	A	C6-C5-N7	-8.56	126.31	132.30
5	14	212	G	O5'-P-OP2	-8.55	98.00	105.70
5	14	2497	A	O5'-P-OP1	-8.55	98.01	105.70
5	1H	1022	G	C8-N9-C4	-8.54	102.98	106.40
1	13	656	C	C5-C6-N1	8.54	125.27	121.00
5	14	1363	C	N3-C4-N4	-8.54	112.02	118.00
5	14	1496	A	C8-N9-C4	-8.54	102.38	105.80
1	13	812	C	N3-C2-O2	-8.54	115.92	121.90
5	1H	124	G	N7-C8-N9	-8.53	108.83	113.10
5	1H	1566	A	O5'-P-OP2	-8.53	98.02	105.70
5	1H	1789	A	C5-C6-N1	8.53	121.97	117.70
5	14	2430	A	C2-N3-C4	-8.51	106.34	110.60
5	1H	679	C	C6-N1-C2	8.51	123.70	120.30
5	1H	691	C	C6-N1-C2	8.50	123.70	120.30
5	1H	1932	A	O5'-P-OP1	-8.50	98.05	105.70
1	13	1479	C	C5-C4-N4	-8.49	114.25	120.20
5	14	209	C	C2-N3-C4	-8.49	115.66	119.90
5	1H	1971	A	C2-N3-C4	8.48	114.84	110.60
5	1H	1416	G	O4'-C1'-N9	8.47	114.98	108.20
1	1G	11	G	O5'-P-OP1	-8.47	98.07	105.70
5	1H	1984	G	N7-C8-N9	-8.47	108.86	113.10
1	13	529	G	N1-C6-O6	8.47	124.98	119.90
5	14	1614	A	N1-C6-N6	8.47	123.68	118.60
5	1H	1984	G	C8-N9-C4	8.47	109.79	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2217	G	N1-C6-O6	8.47	124.98	119.90
5	1H	966	G	C5-C6-O6	8.46	133.68	128.60
5	1H	1691	C	O5'-P-OP1	-8.46	98.08	105.70
5	14	1614	A	C2-N3-C4	-8.46	106.37	110.60
5	1H	48	G	OP2-P-O3'	8.46	123.81	105.20
5	1H	68	G	O5'-P-OP1	-8.46	98.09	105.70
5	1H	1950	G	O4'-C1'-N9	8.46	114.96	108.20
5	1H	122	G	C2-N3-C4	-8.45	107.67	111.90
5	14	1528	A	N7-C8-N9	8.44	118.02	113.80
5	1H	2375	G	N1-C6-O6	8.44	124.97	119.90
5	1H	2385	C	O5'-P-OP2	-8.44	98.10	105.70
5	14	945	A	N1-C6-N6	8.44	123.66	118.60
5	1H	444	C	O5'-P-OP1	8.44	120.82	110.70
5	1H	1604	C	O5'-P-OP1	-8.43	98.11	105.70
1	13	1322	C	C2-N1-C1'	8.43	128.07	118.80
5	1H	739	G	C8-N9-C4	8.43	109.77	106.40
26	1K	74	C	C2-N1-C1'	8.43	128.07	118.80
5	1H	2532	G	N1-C6-O6	8.42	124.95	119.90
5	14	2258	C	O5'-P-OP1	-8.41	98.13	105.70
5	14	140	A	C6-C5-N7	-8.41	126.42	132.30
5	14	783	A	C5-C6-N1	-8.41	113.50	117.70
5	1H	860	U	N1-C2-O2	8.40	128.68	122.80
5	1H	2330	G	C6-C5-N7	-8.40	125.36	130.40
5	1H	2425	A	N1-C2-N3	8.40	133.50	129.30
5	1H	2577	A	N1-C6-N6	-8.40	113.56	118.60
1	13	775	G	N1-C6-O6	8.39	124.94	119.90
5	14	668	G	C2-N3-C4	-8.39	107.70	111.90
1	1G	27	G	N1-C6-O6	8.39	124.94	119.90
5	1H	140	A	O4'-C1'-N9	8.39	114.91	108.20
5	1H	2270	G	C5-C6-O6	-8.39	123.57	128.60
6	12	196	LEU	CA-CB-CG	8.39	134.60	115.30
5	1H	74	A	N7-C8-N9	8.39	117.99	113.80
5	1H	695	G	N1-C6-O6	-8.39	114.87	119.90
5	1H	2062	A	N7-C8-N9	-8.39	109.61	113.80
5	1H	1616	A	C8-N9-C4	-8.39	102.44	105.80
5	14	704	G	N3-C2-N2	-8.38	114.03	119.90
27	16	81	G	C8-N9-C1'	-8.38	116.10	127.00
5	1H	673	C	C5-C4-N4	-8.38	114.33	120.20
5	1H	2272	U	O5'-P-OP1	8.38	120.76	110.70
5	1H	335	C	C6-N1-C2	-8.37	116.95	120.30
5	1H	377	C	C5-C4-N4	-8.37	114.34	120.20
5	1H	676	A	C4-C5-N7	8.37	114.89	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	690	G	C8-N9-C4	-8.37	103.05	106.40
5	14	1253	A	C2-N3-C4	8.37	114.78	110.60
5	14	828	U	C5-C4-O4	8.36	130.92	125.90
5	14	1394	U	O5'-P-OP2	8.36	120.73	110.70
5	1H	247	G	C8-N9-C4	8.36	109.74	106.40
5	1H	667	U	N3-C4-O4	8.36	125.25	119.40
5	14	2430	A	C6-C5-N7	-8.35	126.45	132.30
5	14	2443	C	O5'-P-OP2	8.35	120.72	110.70
5	1H	2330	G	OP1-P-OP2	8.35	132.13	119.60
5	14	740	U	C2-N3-C4	8.35	132.01	127.00
5	14	126	A	O5'-P-OP2	-8.35	98.19	105.70
5	1H	537	C	O5'-P-OP1	8.35	120.72	110.70
3	2L	40	C	C6-N1-C2	-8.35	116.96	120.30
5	14	776	G	N3-C2-N2	-8.35	114.06	119.90
2	3K	71	G	O4'-C1'-N9	8.35	114.88	108.20
5	1H	1241	A	C5-C6-N1	-8.35	113.53	117.70
5	1H	812	C	N1-C2-O2	-8.34	113.89	118.90
5	1H	821	A	OP1-P-OP2	8.34	132.11	119.60
5	14	783	A	N1-C6-N6	8.34	123.60	118.60
5	14	1960	A	N1-C2-N3	8.34	133.47	129.30
5	1H	1950	G	C2-N3-C4	-8.34	107.73	111.90
5	1H	1698	A	N1-C2-N3	8.34	133.47	129.30
5	1H	2498	C	N1-C2-O2	-8.33	113.90	118.90
5	1H	2697	G	OP1-P-OP2	8.33	132.09	119.60
5	1H	2611	U	O5'-P-OP2	-8.32	98.21	105.70
1	1G	898	G	O5'-P-OP2	-8.32	98.21	105.70
1	13	1113	C	C6-N1-C2	-8.32	116.97	120.30
5	14	1528	A	C5-N7-C8	-8.32	99.74	103.90
5	1H	110	G	C8-N9-C4	8.32	109.73	106.40
5	14	737	C	N3-C2-O2	8.31	127.72	121.90
5	14	1904	G	O5'-P-OP2	-8.31	98.22	105.70
5	1H	121	G	C5-C6-O6	-8.31	123.61	128.60
5	1H	1786	A	OP1-P-O3'	8.31	123.49	105.20
5	1H	197	A	C2-N3-C4	-8.31	106.44	110.60
5	1H	1786	A	N3-C4-C5	8.31	132.62	126.80
5	14	574	C	O5'-P-OP2	-8.31	98.22	105.70
5	1H	1321	A	N7-C8-N9	-8.31	109.65	113.80
5	1H	2236	C	O5'-P-OP1	-8.31	98.22	105.70
5	1H	2422	A	O4'-C1'-N9	8.31	114.85	108.20
5	1H	1806	C	OP1-P-OP2	8.30	132.06	119.60
5	14	1786	A	N3-C4-C5	8.30	132.61	126.80
5	1H	783	A	N1-C2-N3	8.30	133.45	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1791	A	OP1-P-OP2	-8.30	107.15	119.60
5	1H	815	C	C6-N1-C2	8.30	123.62	120.30
5	1H	452	G	C2-N3-C4	8.29	116.05	111.90
1	13	690	G	C4-N9-C1'	8.29	137.28	126.50
5	14	1121	C	C6-N1-C2	8.29	123.61	120.30
5	14	1939	U	O5'-P-OP1	-8.29	98.24	105.70
5	14	209	C	N3-C4-C5	8.29	125.21	121.90
5	1H	74	A	N1-C6-N6	8.28	123.57	118.60
5	1H	1602	U	O5'-P-OP2	8.29	120.64	110.70
5	1H	1759	A	O5'-P-OP1	-8.28	98.25	105.70
5	1H	823	G	C8-N9-C4	8.28	109.71	106.40
5	1H	2331	G	C5-N7-C8	-8.28	100.16	104.30
1	13	1519	A	C4-C5-C6	8.28	121.14	117.00
5	1H	2702	U	C5-C6-N1	8.28	126.84	122.70
5	1H	688	U	N1-C2-N3	8.27	119.86	114.90
3	2K	27	G	C5-C6-O6	-8.27	123.64	128.60
5	14	1598	C	O5'-P-OP1	8.26	120.62	110.70
5	1H	2379	G	C5-C6-O6	-8.26	123.64	128.60
5	1H	735	A	N7-C8-N9	-8.25	109.67	113.80
5	1H	2330	G	C8-N9-C4	8.25	109.70	106.40
5	14	2226	C	N3-C2-O2	-8.25	116.12	121.90
5	14	755	C	N1-C2-O2	-8.25	113.95	118.90
5	1H	2424	C	N1-C2-O2	8.25	123.85	118.90
5	1H	746	A	N1-C6-N6	8.24	123.55	118.60
5	1H	1332	G	C4-C5-N7	8.24	114.10	110.80
5	1H	77	C	C5-C4-N4	-8.24	114.43	120.20
1	13	1313	U	C5-C6-N1	8.24	126.82	122.70
5	1H	2377	A	N1-C6-N6	8.24	123.54	118.60
5	14	1296	G	N7-C8-N9	-8.24	108.98	113.10
5	1H	2778	A	O5'-P-OP2	-8.24	98.29	105.70
1	1G	1397	C	C6-N1-C2	-8.24	117.00	120.30
5	1H	2598	A	OP2-P-O3'	8.23	123.31	105.20
5	14	74	A	C5-C6-N1	-8.23	113.59	117.70
5	14	694	U	O5'-P-OP1	8.23	120.57	110.70
5	1H	1544	C	N1-C2-O2	8.23	123.84	118.90
5	14	472	A	N1-C6-N6	-8.22	113.67	118.60
27	16	81	G	N1-C6-O6	8.22	124.83	119.90
5	14	2053	G	C8-N9-C4	8.22	109.69	106.40
5	14	2513	G	N1-C6-O6	8.21	124.83	119.90
1	1G	812	C	C5-C6-N1	8.21	125.11	121.00
5	14	1556	C	O5'-P-OP1	-8.21	98.31	105.70
5	1H	1984	G	C5-N7-C8	8.20	108.40	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	689	A	O5'-P-OP2	-8.20	98.33	105.70
1	13	970	C	O5'-P-OP1	-8.19	98.33	105.70
5	14	1313	U	C6-N1-C2	-8.19	116.08	121.00
5	1H	788	A	C5-C6-N1	-8.19	113.61	117.70
5	1H	828	U	N3-C2-O2	-8.19	116.47	122.20
27	16	44	G	C4-N9-C1'	-8.19	115.86	126.50
5	14	613	U	N3-C2-O2	-8.19	116.47	122.20
1	1G	481	G	N3-C4-C5	-8.19	124.51	128.60
1	13	1227	A	N7-C8-N9	8.18	117.89	113.80
5	14	2542	A	N7-C8-N9	-8.18	109.71	113.80
1	1G	777	A	O5'-P-OP2	-8.18	98.34	105.70
1	13	1500	A	N1-C6-N6	-8.18	113.69	118.60
5	1H	265	A	N7-C8-N9	8.18	117.89	113.80
5	14	1332	G	N1-C6-O6	8.17	124.80	119.90
5	1H	842	G	N1-C6-O6	8.17	124.80	119.90
5	1H	970	C	C4-C5-C6	8.17	121.49	117.40
1	13	690	G	C5-N7-C8	-8.17	100.22	104.30
5	1H	2507	C	N3-C4-C5	-8.17	118.63	121.90
5	1H	788	A	N9-C4-C5	-8.16	102.54	105.80
5	14	249	C	O5'-P-OP1	8.16	120.49	110.70
5	1H	210	C	N3-C4-C5	8.16	125.16	121.90
5	14	1142	U	C2-N1-C1'	8.16	127.49	117.70
5	14	1141	U	P-O3'-C3'	8.15	129.49	119.70
5	1H	1629	U	O5'-P-OP2	8.15	120.49	110.70
5	1H	2598	A	N9-C4-C5	-8.15	102.54	105.80
1	1G	254	G	O5'-P-OP1	-8.15	98.36	105.70
1	1G	915	A	N1-C6-N6	-8.15	113.71	118.60
5	14	1204	A	C2-N3-C4	-8.15	106.52	110.60
5	1H	472	A	O5'-P-OP2	-8.15	98.37	105.70
5	14	620	G	C8-N9-C4	-8.14	103.14	106.40
5	1H	1836	C	C6-N1-C2	-8.14	117.04	120.30
1	1G	1286	A	C8-N9-C4	-8.14	102.54	105.80
5	1H	847	U	C5-C6-N1	-8.13	118.64	122.70
5	14	141	A	C5-N7-C8	-8.13	99.84	103.90
5	1H	2241	A	N1-C2-N3	8.13	133.36	129.30
5	14	71	A	C2-N3-C4	-8.13	106.54	110.60
5	1H	1376	C	O5'-P-OP1	-8.13	98.39	105.70
5	1H	729	G	N7-C8-N9	8.12	117.16	113.10
5	1H	795	C	N1-C2-O2	-8.12	114.03	118.90
1	13	1322	C	C5-C6-N1	8.11	125.06	121.00
5	1H	1313	U	C5-C6-N1	8.11	126.75	122.70
5	1H	1566	A	C5-C6-N6	-8.11	117.22	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	16	6	C	C6-N1-C2	8.11	123.54	120.30
5	1H	2698	U	O5'-P-OP2	-8.10	98.41	105.70
3	2L	35	C	C2-N1-C1'	8.10	127.71	118.80
5	1H	117	G	C5-C6-N1	8.10	115.55	111.50
5	1H	966	G	O5'-P-OP2	-8.10	98.41	105.70
5	1H	1899	G	C6-C5-N7	8.10	135.26	130.40
5	1H	2331	G	C6-C5-N7	-8.10	125.54	130.40
5	14	1660	C	N3-C4-C5	8.09	125.14	121.90
5	1H	1244	G	C5-C6-O6	-8.09	123.74	128.60
26	1K	74	C	C6-N1-C1'	-8.09	111.09	120.80
5	1H	1854	A	N1-C6-N6	-8.09	113.75	118.60
5	1H	777	A	N1-C2-N3	8.09	133.34	129.30
5	14	2506	U	C2-N1-C1'	8.08	127.40	117.70
5	1H	528	A	N3-C4-C5	8.08	132.46	126.80
5	1H	528	A	O4'-C1'-N9	-8.08	101.73	108.20
5	1H	2374	C	C5-C6-N1	-8.08	116.96	121.00
1	13	966	G	C8-N9-C4	8.08	109.63	106.40
5	14	575	A	O5'-P-OP1	-8.08	98.43	105.70
5	14	2873	A	C5-C6-N1	-8.08	113.66	117.70
5	1H	2698	U	C5-C6-N1	-8.08	118.66	122.70
5	1H	1446	C	C6-N1-C2	-8.07	117.07	120.30
5	1H	1496	A	N1-C6-N6	8.07	123.44	118.60
5	1H	2346	A	C5-C6-N1	-8.07	113.66	117.70
5	14	141	A	N1-C6-N6	8.07	123.44	118.60
5	14	1816	G	O5'-P-OP2	8.07	120.38	110.70
5	1H	2346	A	N7-C8-N9	8.07	117.83	113.80
5	1H	2508	G	N9-C4-C5	8.07	108.63	105.40
5	1H	336	C	C6-N1-C2	-8.06	117.07	120.30
5	14	967	C	O5'-P-OP2	-8.06	98.44	105.70
5	1H	609	A	N1-C6-N6	8.06	123.44	118.60
5	1H	2304	G	O5'-P-OP1	-8.06	98.45	105.70
5	1H	1660	C	N1-C2-O2	8.05	123.73	118.90
5	14	922	U	O5'-P-OP1	-8.05	98.46	105.70
5	14	1359	A	C8-N9-C4	8.05	109.02	105.80
26	1K	74	C	N1-C2-O2	8.05	123.73	118.90
5	1H	1634	A	OP1-P-OP2	8.05	131.67	119.60
5	1H	271(B)	G	P-O3'-C3'	8.05	129.36	119.70
5	1H	2617	C	C6-N1-C2	8.05	123.52	120.30
5	1H	631	A	N7-C8-N9	-8.05	109.78	113.80
5	1H	938	G	O5'-P-OP1	8.04	120.35	110.70
5	1H	1405	U	O5'-P-OP2	-8.05	98.46	105.70
5	14	816	C	C6-N1-C2	8.04	123.52	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2392	A	C8-N9-C4	-8.04	102.58	105.80
5	14	2436	G	N3-C2-N2	-8.04	114.27	119.90
5	1H	609	A	N7-C8-N9	-8.04	109.78	113.80
5	1H	139	G	C2-N3-C4	8.03	115.92	111.90
5	1H	2584	U	N1-C2-N3	8.03	119.72	114.90
5	1H	2700	C	C2-N3-C4	-8.04	115.88	119.90
5	1H	621	A	N7-C8-N9	8.03	117.82	113.80
5	14	2702	U	N3-C2-O2	-8.03	116.58	122.20
5	1H	752	A	P-O3'-C3'	8.03	129.34	119.70
5	1H	1193	G	C8-N9-C4	8.03	109.61	106.40
5	1H	2544	G	C5-C6-O6	-8.03	123.78	128.60
5	14	746	A	O5'-P-OP1	-8.03	98.47	105.70
5	1H	702	G	O5'-P-OP2	-8.03	98.47	105.70
5	1H	858	U	O5'-P-OP2	-8.03	98.47	105.70
5	1H	845	G	C4-C5-N7	8.02	114.01	110.80
5	14	2075	U	C5-C6-N1	-8.02	118.69	122.70
5	1H	1971	A	C5-C6-N1	8.02	121.71	117.70
5	1H	2503	A	N9-C4-C5	-8.02	102.59	105.80
5	1H	1309	G	N3-C2-N2	8.02	125.51	119.90
5	14	1391	U	O5'-P-OP1	-8.01	98.49	105.70
5	1H	2238	G	O5'-P-OP2	-8.01	98.49	105.70
5	1H	624	C	O5'-P-OP2	8.01	120.31	110.70
5	14	148	C	N3-C4-C5	8.01	125.10	121.90
1	1G	1146	A	O5'-P-OP1	-8.01	98.49	105.70
5	14	2334	G	C8-N9-C4	8.00	109.60	106.40
5	1H	691	C	C5-C6-N1	-8.00	117.00	121.00
5	1H	2420	C	O5'-P-OP1	-8.00	98.50	105.70
1	13	812	C	C6-N1-C2	-8.00	117.10	120.30
5	1H	1574	C	C6-N1-C2	8.00	123.50	120.30
1	1G	900	A	O5'-P-OP1	-8.00	98.50	105.70
5	1H	1142(A)	A	C5-N7-C8	-8.00	99.90	103.90
5	1H	2700	C	C5-C6-N1	-8.00	117.00	121.00
5	14	74	A	N3-C4-C5	7.99	132.40	126.80
1	1G	576	G	C4-N9-C1'	7.99	136.89	126.50
5	1H	2869	G	C8-N9-C4	-7.99	103.20	106.40
5	1H	1632	A	N1-C6-N6	7.99	123.39	118.60
5	1H	2056	G	OP1-P-O3'	7.99	122.78	105.20
1	1G	508	C	C6-N1-C2	7.99	123.49	120.30
5	1H	2448	A	N1-C6-N6	7.98	123.39	118.60
5	14	1404	C	O5'-P-OP2	-7.98	98.52	105.70
5	1H	141	A	O5'-P-OP2	-7.97	98.52	105.70
5	1H	452	G	N3-C4-C5	-7.97	124.61	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2094	G	O5'-P-OP2	-7.97	98.52	105.70
5	1H	124	G	N1-C6-O6	7.97	124.68	119.90
5	1H	2352	A	O5'-P-OP1	-7.97	98.52	105.70
5	14	778	G	C5-C6-O6	7.97	133.38	128.60
5	1H	590	A	N1-C2-N3	7.97	133.28	129.30
5	1H	1626	G	C5-N7-C8	-7.97	100.32	104.30
5	1H	945	A	C8-N9-C1'	-7.96	113.36	127.70
5	1H	1312	U	O5'-P-OP1	-7.96	98.53	105.70
5	14	2512	C	C6-N1-C2	7.96	123.48	120.30
5	1H	330	A	N3-C4-C5	7.96	132.37	126.80
5	1H	736	C	O5'-P-OP2	7.96	120.25	110.70
5	1H	1425	G	C4-C5-N7	7.96	113.98	110.80
5	1H	746	A	O5'-P-OP2	7.96	120.25	110.70
5	1H	2442	C	C5-C6-N1	-7.96	117.02	121.00
5	1H	2600	A	N1-C6-N6	-7.96	113.83	118.60
5	14	2463	C	C6-N1-C2	7.95	123.48	120.30
5	1H	690	G	N1-C6-O6	7.95	124.67	119.90
5	1H	798	G	C8-N9-C4	7.95	109.58	106.40
5	1H	2361	A	OP1-P-OP2	7.95	131.53	119.60
5	14	1786	A	N9-C1'-C2'	7.95	124.33	114.00
5	1H	1299	G	O5'-P-OP2	7.95	120.24	110.70
5	1H	789	A	O5'-P-OP1	-7.95	98.55	105.70
5	14	199	A	C2-N3-C4	7.94	114.57	110.60
5	1H	1257	C	C6-N1-C2	-7.94	117.12	120.30
5	1H	2442	C	C4-C5-C6	7.94	121.37	117.40
5	1H	698	C	C5-C6-N1	-7.94	117.03	121.00
5	1H	773	U	O5'-P-OP2	-7.93	98.56	105.70
5	1H	1786	A	C4-C5-C6	7.93	120.96	117.00
5	14	1786	A	C5-C6-N1	-7.92	113.74	117.70
5	1H	1122	G	N9-C4-C5	-7.92	102.23	105.40
1	13	792	A	N3-C4-C5	7.92	132.34	126.80
1	13	1524	C	C2-N3-C4	-7.92	115.94	119.90
5	14	676	A	N3-C4-C5	7.92	132.34	126.80
5	14	735	A	C8-N9-C4	7.92	108.97	105.80
1	13	35	G	C5-C6-N1	-7.92	107.54	111.50
5	1H	71	A	N3-C4-N9	-7.91	121.07	127.40
5	1H	2446	G	C5-C6-O6	-7.91	123.85	128.60
5	1H	783	A	C6-C5-N7	-7.91	126.76	132.30
5	1H	698	C	OP1-P-OP2	7.91	131.46	119.60
5	1H	130	C	C5-C4-N4	-7.91	114.67	120.20
5	1H	245	G	N3-C4-N9	7.91	130.74	126.00
5	1H	2330	G	N9-C4-C5	-7.91	102.24	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	452	G	N1-C6-O6	-7.90	115.16	119.90
5	1H	528	A	C5-C6-N1	-7.90	113.75	117.70
5	14	1899	G	N1-C2-N3	7.90	128.64	123.90
5	1H	260	G	N9-C4-C5	7.90	108.56	105.40
5	1H	2585	U	N3-C4-C5	7.90	119.34	114.60
5	1H	2752	C	C6-N1-C2	-7.90	117.14	120.30
4	4K	20	C	C6-N1-C2	-7.90	117.14	120.30
5	1H	1626	G	N1-C6-O6	7.89	124.64	119.90
5	1H	2330	G	C4-C5-N7	7.89	113.96	110.80
5	1H	1010	A	C8-N9-C4	7.89	108.96	105.80
5	14	1678	G	N3-C4-N9	-7.89	121.27	126.00
5	1H	1373	A	C8-N9-C4	7.89	108.95	105.80
5	1H	1677	A	N1-C6-N6	-7.89	113.87	118.60
5	1H	2311	A	N1-C2-N3	7.89	133.24	129.30
5	1H	1210	A	C2-N3-C4	-7.88	106.66	110.60
5	14	2688	U	C5-C6-N1	-7.88	118.76	122.70
5	1H	920	G	C8-N9-C4	7.88	109.55	106.40
5	14	1036	G	C5-C6-O6	-7.87	123.88	128.60
5	1H	696	G	N1-C6-O6	-7.87	115.18	119.90
5	1H	436	C	C6-N1-C2	7.87	123.45	120.30
5	1H	1499	C	O5'-P-OP1	-7.87	98.62	105.70
5	1H	139	G	N3-C4-C5	-7.87	124.67	128.60
5	14	1600	C	O5'-P-OP2	-7.86	98.62	105.70
5	1H	835	A	C2-N3-C4	7.86	114.53	110.60
1	13	1502	A	C5-C6-N6	-7.86	117.41	123.70
5	1H	2498	C	C5-C4-N4	-7.86	114.70	120.20
1	13	699	C	C6-N1-C2	-7.86	117.16	120.30
5	1H	1752	C	C6-N1-C2	7.86	123.44	120.30
5	14	201	C	C6-N1-C2	7.86	123.44	120.30
5	14	399	G	O5'-P-OP2	-7.86	98.63	105.70
1	13	623	C	C6-N1-C2	-7.86	117.16	120.30
5	14	330	A	N1-C6-N6	7.86	123.31	118.60
5	1H	1255	U	N3-C2-O2	7.86	127.70	122.20
5	1H	108	U	O5'-P-OP1	-7.85	98.63	105.70
5	1H	945	A	C5-C6-N6	-7.85	117.42	123.70
5	1H	2448	A	C5-C6-N6	-7.85	117.42	123.70
5	1H	2031	A	C2-N3-C4	7.85	114.52	110.60
1	13	422	C	C2-N1-C1'	7.84	127.43	118.80
5	1H	1796	U	C2-N3-C4	-7.84	122.29	127.00
5	14	1341	U	O5'-P-OP1	-7.84	98.64	105.70
5	1H	98	G	OP1-P-OP2	7.84	131.36	119.60
5	1H	593	G	N3-C2-N2	7.84	125.39	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1363	C	C2-N3-C4	-7.84	115.98	119.90
1	13	1524	C	N3-C4-C5	7.84	125.03	121.90
5	1H	917	A	O5'-P-OP1	-7.84	98.65	105.70
5	1H	1428	C	C2-N3-C4	-7.83	115.98	119.90
5	1H	2330	G	C2-N3-C4	-7.83	107.98	111.90
5	1H	781	A	OP1-P-OP2	7.83	131.34	119.60
5	14	1989	G	C5-C6-O6	-7.83	123.90	128.60
5	1H	197	A	N1-C2-N3	7.83	133.21	129.30
5	1H	684	G	C8-N9-C4	-7.83	103.27	106.40
5	14	2702	U	O4'-C1'-N1	7.82	114.46	108.20
5	14	2518	A	C5-N7-C8	-7.82	99.99	103.90
5	14	2763	G	N3-C4-C5	-7.82	124.69	128.60
5	1H	1337	G	OP1-P-O3'	7.82	122.40	105.20
5	1H	638	G	O5'-P-OP1	-7.82	98.66	105.70
5	1H	144	C	C2-N3-C4	-7.82	115.99	119.90
5	1H	2403	C	C6-N1-C2	-7.82	117.17	120.30
5	14	1780	A	N1-C2-N3	7.81	133.20	129.30
5	1H	1675	C	C6-N1-C2	-7.81	117.18	120.30
5	1H	1981	A	O5'-P-OP2	-7.81	98.67	105.70
5	1H	744	G	C2-N3-C4	-7.81	108.00	111.90
5	14	1683	C	O5'-P-OP1	-7.80	98.68	105.70
5	14	2401	U	C5-C6-N1	7.80	126.60	122.70
5	1H	741	G	C5-C6-O6	-7.80	123.92	128.60
5	14	475	U	C6-N1-C2	-7.80	116.32	121.00
1	13	525	C	C6-N1-C2	-7.79	117.18	120.30
5	14	1789	A	C6-N1-C2	-7.79	113.92	118.60
5	1H	1611	C	N3-C4-C5	7.79	125.02	121.90
5	14	1348	G	C5-C6-O6	-7.79	123.93	128.60
5	14	1572	A	C5-C6-N6	-7.79	117.47	123.70
5	1H	815	C	C5-C4-N4	-7.79	114.75	120.20
5	1H	2509	G	C8-N9-C4	7.79	109.52	106.40
5	1H	2830	G	C8-N9-C4	-7.79	103.28	106.40
1	13	281	G	O5'-P-OP1	-7.79	98.69	105.70
1	13	313	A	O5'-P-OP2	-7.79	98.69	105.70
1	13	1281	U	N1-C2-O2	7.79	128.25	122.80
5	1H	621	A	N1-C2-N3	7.79	133.19	129.30
5	1H	1607	C	N3-C2-O2	-7.79	116.45	121.90
5	1H	1698	A	N3-C4-C5	7.78	132.25	126.80
5	1H	189	G	N1-C6-O6	7.78	124.57	119.90
5	1H	2713	A	N1-C2-N3	7.78	133.19	129.30
5	14	113	G	C5-C6-O6	-7.78	123.93	128.60
5	14	1455	G	O5'-P-OP2	-7.78	98.70	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	699	A	C2-N3-C4	7.78	114.49	110.60
5	1H	912	C	C4-C5-C6	7.78	121.29	117.40
1	1G	812	C	C6-N1-C2	-7.78	117.19	120.30
5	14	2435	A	C8-N9-C4	-7.77	102.69	105.80
5	1H	1996	C	C5-C6-N1	-7.77	117.12	121.00
5	1H	2497	A	N1-C2-N3	7.77	133.18	129.30
5	14	2839	G	O5'-P-OP2	-7.76	98.71	105.70
1	13	767	A	N1-C2-N3	7.76	133.18	129.30
49	K8	5	GLU	N-CA-C	-7.76	90.05	111.00
5	14	800	A	O5'-P-OP1	-7.75	98.72	105.70
5	1H	837	C	O5'-P-OP1	-7.75	98.72	105.70
5	1H	1942	C	C4-C5-C6	-7.75	113.52	117.40
5	14	2501	C	C2-N1-C1'	-7.75	110.27	118.80
5	1H	1842	G	N7-C8-N9	-7.75	109.23	113.10
1	13	353	A	N7-C8-N9	7.74	117.67	113.80
5	14	2609	U	O5'-P-OP2	-7.74	98.73	105.70
5	1H	683	C	N3-C4-C5	7.74	125.00	121.90
5	14	855	G	C8-N9-C4	-7.74	103.30	106.40
5	1H	2509	G	N1-C6-O6	-7.74	115.26	119.90
5	14	137	C	C6-N1-C2	-7.74	117.20	120.30
5	1H	591	C	C4-C5-C6	7.74	121.27	117.40
5	1H	271(B)	G	C4-N9-C1'	7.74	136.56	126.50
5	1H	689	A	N1-C2-N3	7.73	133.17	129.30
5	1H	749	C	N3-C4-C5	-7.73	118.81	121.90
5	14	1661	G	N1-C6-O6	7.73	124.54	119.90
5	1H	683	C	C2-N3-C4	-7.73	116.04	119.90
5	1H	1574	C	OP2-P-O3'	7.73	122.20	105.20
5	14	856	C	C5-C6-N1	7.72	124.86	121.00
5	14	1296	G	C8-N9-C4	7.72	109.49	106.40
5	1H	74	A	N3-C4-N9	-7.72	121.22	127.40
5	1H	1382	G	C5-C6-O6	-7.72	123.97	128.60
5	1H	1568	G	OP1-P-OP2	-7.72	108.02	119.60
1	13	1502	A	N9-C4-C5	-7.72	102.71	105.80
5	14	2873	A	C4-N9-C1'	7.72	140.19	126.30
5	1H	209	C	C5-C6-N1	-7.72	117.14	121.00
5	1H	99	U	N1-C2-O2	7.71	128.20	122.80
5	1H	659	C	C5-C6-N1	-7.71	117.14	121.00
5	1H	754	C	C2-N3-C4	-7.71	116.05	119.90
5	1H	772	C	C4-C5-C6	7.71	121.26	117.40
5	14	130	C	C2-N3-C4	-7.71	116.05	119.90
5	1H	613	U	C5-C6-N1	-7.71	118.85	122.70
1	1G	1442	G	N3-C4-C5	7.71	132.45	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1800	C	C4-C5-C6	7.71	121.25	117.40
5	1H	230	U	O5'-P-OP2	-7.70	98.77	105.70
5	1H	2265	U	O5'-P-OP1	-7.70	98.77	105.70
5	14	562	U	N1-C2-N3	7.69	119.52	114.90
5	1H	249	C	O5'-P-OP1	-7.69	98.78	105.70
5	14	127	A	O5'-P-OP2	-7.69	98.78	105.70
5	14	2607	G	C6-C5-N7	-7.69	125.79	130.40
5	1H	1812	A	O5'-P-OP2	-7.69	98.78	105.70
5	14	195	A	P-O3'-C3'	7.69	128.93	119.70
5	14	697	C	N1-C2-O2	-7.69	114.29	118.90
5	14	1939	U	C2-N1-C1'	-7.68	108.48	117.70
5	14	2713	A	N1-C6-N6	7.68	123.21	118.60
5	14	2080	G	O5'-P-OP2	-7.68	98.79	105.70
5	1H	1367	A	N1-C2-N3	7.68	133.14	129.30
5	1H	1614	A	N3-C4-C5	7.68	132.18	126.80
1	1G	691	G	N1-C6-O6	7.68	124.51	119.90
36	78	20	GLY	N-CA-C	7.68	132.29	113.10
5	14	472	A	N9-C4-C5	7.67	108.87	105.80
5	14	1397	U	C5-C4-O4	7.67	130.50	125.90
5	1H	1309	G	N1-C2-N2	-7.67	109.29	116.20
5	14	1939	U	C5-C4-O4	7.67	130.50	125.90
5	1H	2032	G	C2-N3-C4	-7.67	108.06	111.90
5	1H	2430	A	N7-C8-N9	7.67	117.63	113.80
5	14	1802	A	C6-N1-C2	-7.67	114.00	118.60
1	13	254	G	O5'-P-OP1	-7.67	98.80	105.70
27	16	81	G	N3-C2-N2	7.67	125.27	119.90
5	1H	1773	A	C2-N3-C4	-7.66	106.77	110.60
15	2I	102	GLY	N-CA-C	-7.66	93.94	113.10
1	13	903	G	O5'-P-OP2	-7.66	98.81	105.70
5	14	141	A	C4-C5-N7	7.66	114.53	110.70
5	1H	729	G	N3-C2-N2	-7.66	114.54	119.90
5	1H	1166	C	C6-N1-C2	-7.66	117.24	120.30
5	1H	1698	A	C5-N7-C8	-7.66	100.07	103.90
5	14	667	U	O5'-P-OP2	7.65	119.88	110.70
5	1H	678	C	N3-C4-C5	7.65	124.96	121.90
5	1H	1931	U	N1-C2-N3	7.65	119.49	114.90
5	1H	559	G	N1-C6-O6	7.65	124.49	119.90
5	14	263	C	N1-C2-O2	7.64	123.49	118.90
5	14	2045	C	C5-C6-N1	-7.64	117.18	121.00
5	1H	678	C	C5-C6-N1	-7.64	117.18	121.00
5	1H	1604	C	O5'-P-OP2	7.64	119.87	110.70
5	1H	1819	A	C5-C6-N6	-7.64	117.58	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	985	C	O5'-P-OP1	-7.64	98.82	105.70
5	1H	793	A	C6-N1-C2	-7.64	114.02	118.60
1	13	545	C	N3-C4-C5	7.63	124.95	121.90
5	1H	530	G	N1-C6-O6	-7.63	115.32	119.90
5	1H	755	C	C4-C5-C6	7.63	121.22	117.40
5	1H	2439	A	O5'-P-OP2	-7.63	98.83	105.70
1	1G	507	C	O5'-P-OP1	-7.63	98.83	105.70
5	1H	1829	A	N1-C6-N6	-7.63	114.02	118.60
5	1H	778	G	C5-C6-O6	7.63	133.18	128.60
5	1H	2010	G	O5'-P-OP2	7.63	119.86	110.70
1	1G	1286	A	N7-C8-N9	7.63	117.61	113.80
5	14	333	G	N7-C8-N9	7.63	116.91	113.10
5	1H	429	A	O5'-P-OP1	-7.63	98.84	105.70
5	14	2706	G	O5'-P-OP1	-7.62	98.84	105.70
1	13	966	G	N9-C4-C5	-7.62	102.35	105.40
3	2K	77	A	N1-C6-N6	7.62	123.17	118.60
5	1H	2057	A	O5'-P-OP1	-7.62	98.84	105.70
5	14	453	C	N3-C4-C5	7.62	124.95	121.90
1	13	900	A	OP1-P-OP2	-7.62	108.18	119.60
5	1H	1634	A	O5'-P-OP2	-7.61	98.85	105.70
5	1H	2508	G	N3-C2-N2	-7.61	114.57	119.90
5	14	1520	U	C5-C4-O4	7.61	130.47	125.90
1	13	760	G	N1-C6-O6	7.61	124.46	119.90
5	1H	847	U	N1-C2-N3	7.61	119.47	114.90
5	14	246	C	C6-N1-C2	7.60	123.34	120.30
5	14	2275	C	C5-C6-N1	7.60	124.80	121.00
5	14	2622	C	N1-C2-O2	-7.60	114.34	118.90
5	1H	71	A	O4'-C1'-N9	-7.60	102.12	108.20
5	1H	863	A	O5'-P-OP1	7.60	119.82	110.70
5	14	1633	G	N7-C8-N9	7.60	116.90	113.10
5	14	2713	A	C4-C5-N7	7.60	114.50	110.70
5	1H	827	U	C5-C6-N1	-7.60	118.90	122.70
5	1H	1241	A	N7-C8-N9	7.60	117.60	113.80
5	14	2518	A	C6-C5-N7	-7.59	126.98	132.30
5	14	70	G	N1-C6-O6	-7.59	115.34	119.90
5	1H	207	A	N1-C6-N6	7.59	123.16	118.60
5	14	2287	A	C2-N3-C4	-7.59	106.81	110.60
5	1H	993	G	O5'-P-OP1	-7.59	98.87	105.70
5	1H	1489	U	C5-C4-O4	7.59	130.45	125.90
1	1G	1528	U	C5-C6-N1	-7.59	118.91	122.70
5	1H	705	A	C2-N3-C4	-7.59	106.81	110.60
1	13	1335	C	C6-N1-C2	7.58	123.33	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	990	A	O5'-P-OP1	-7.58	98.87	105.70
5	1H	99	U	N3-C2-O2	-7.58	116.89	122.20
5	1H	1777	U	C4-C5-C6	7.58	124.25	119.70
5	14	1422	G	N1-C6-O6	7.58	124.44	119.90
5	1H	844	C	N1-C2-O2	-7.58	114.36	118.90
5	1H	2331	G	C5-C6-O6	-7.58	124.05	128.60
1	1G	1496	C	O5'-P-OP2	-7.58	98.88	105.70
5	1H	374	A	N1-C6-N6	7.57	123.14	118.60
5	1H	2232	U	N3-C4-C5	-7.57	110.06	114.60
5	1H	1598	C	OP1-P-O3'	7.57	121.85	105.20
5	14	516	C	O5'-P-OP1	-7.57	98.89	105.70
5	1H	2346	A	C8-N9-C4	-7.57	102.77	105.80
5	1H	2435	A	N1-C6-N6	-7.57	114.06	118.60
1	13	449	C	C6-N1-C2	-7.57	117.27	120.30
5	14	786	C	C2-N3-C4	-7.57	116.12	119.90
5	1H	1373	A	N7-C8-N9	-7.56	110.02	113.80
5	1H	2597	G	C5-N7-C8	-7.56	100.52	104.30
5	14	148	C	C6-N1-C2	7.56	123.33	120.30
5	1H	2572	A	C5-N7-C8	7.56	107.68	103.90
5	14	2056	G	N1-C6-O6	7.56	124.44	119.90
1	13	1226	C	N1-C2-O2	-7.56	114.36	118.90
5	1H	829	A	OP1-P-OP2	7.56	130.94	119.60
5	14	71	A	C4-C5-N7	7.56	114.48	110.70
5	1H	955	C	O5'-P-OP2	-7.56	98.90	105.70
5	1H	1332	G	N1-C6-O6	7.55	124.43	119.90
5	1H	2446	G	C5-N7-C8	-7.55	100.52	104.30
5	14	676	A	O4'-C1'-N9	7.55	114.24	108.20
5	14	1405	U	O5'-P-OP2	-7.55	98.91	105.70
5	1H	1781	C	N3-C4-N4	-7.55	112.72	118.00
5	1H	816	C	C2-N3-C4	7.54	123.67	119.90
1	13	802	A	C5-N7-C8	-7.54	100.13	103.90
5	1H	964	C	N1-C2-O2	-7.54	114.38	118.90
3	2K	7	G	O5'-P-OP2	-7.54	98.92	105.70
5	1H	2490	G	O4'-C1'-N9	7.54	114.23	108.20
5	14	1882	C	N1-C2-O2	7.54	123.42	118.90
5	1H	831	G	C5-C6-O6	7.54	133.12	128.60
5	1H	952	G	O5'-P-OP2	7.54	119.74	110.70
5	1H	2617	C	N3-C2-O2	7.54	127.17	121.90
28	11	111	LEU	CA-CB-CG	7.54	132.63	115.30
5	1H	679	C	C2-N3-C4	-7.53	116.13	119.90
5	1H	2253	G	N3-C4-N9	-7.53	121.48	126.00
5	1H	146	G	C5-C6-O6	-7.53	124.08	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	627	A	C8-N9-C4	7.53	108.81	105.80
1	1G	576	G	N3-C4-C5	-7.53	124.84	128.60
16	3I	89	ARG	NE-CZ-NH1	7.53	124.06	120.30
5	1H	2572	A	N7-C8-N9	-7.53	110.04	113.80
5	1H	203	C	O5'-P-OP2	7.53	119.73	110.70
1	1G	817	C	C6-N1-C2	7.52	123.31	120.30
5	14	1597	A	O5'-P-OP2	-7.52	98.93	105.70
5	14	1518	C	O5'-P-OP2	7.52	119.73	110.70
5	14	2499	C	C2-N1-C1'	7.52	127.07	118.80
1	13	858	G	C5-C6-O6	7.52	133.11	128.60
5	14	1314	C	C2-N3-C4	7.52	123.66	119.90
5	14	2062	A	C8-N9-C4	7.52	108.81	105.80
5	1H	2430	A	C5-C6-N6	-7.52	117.69	123.70
1	13	1522	U	C4-C5-C6	7.52	124.21	119.70
5	14	1253	A	N1-C2-N3	-7.51	125.54	129.30
5	14	1278	A	C8-N9-C4	7.51	108.81	105.80
1	13	122	G	N1-C6-O6	7.51	124.41	119.90
5	14	939	G	N1-C6-O6	7.51	124.41	119.90
5	1H	834	C	OP2-P-O3'	7.51	121.71	105.20
5	1H	1394	U	O5'-P-OP1	-7.51	98.94	105.70
5	1H	1888	G	C8-N9-C1'	-7.51	117.24	127.00
5	1H	2424	C	C5-C6-N1	7.51	124.75	121.00
5	1H	182	A	C8-N9-C4	7.50	108.80	105.80
5	14	155	C	N1-C2-O2	7.50	123.40	118.90
5	1H	1241	A	C4-C5-N7	7.50	114.45	110.70
5	1H	481	G	O5'-P-OP2	-7.50	98.95	105.70
5	1H	2589	A	C8-N9-C4	7.50	108.80	105.80
5	1H	2269	A	C2-N3-C4	-7.50	106.85	110.60
1	1G	18	C	C5-C6-N1	7.49	124.75	121.00
5	1H	672	C	O5'-P-OP1	7.49	119.69	110.70
5	14	2702	U	C2-N1-C1'	7.49	126.69	117.70
5	1H	1899	G	C4-N9-C1'	-7.49	116.77	126.50
5	1H	1189	A	C5-C6-N6	-7.49	117.71	123.70
5	1H	797	C	C4-C5-C6	7.49	121.14	117.40
5	1H	2054	A	OP2-P-O3'	7.49	121.67	105.20
5	1H	236	C	N3-C4-C5	-7.48	118.91	121.90
1	13	748	C	C5-C6-N1	7.48	124.74	121.00
1	13	789	U	N1-C2-N3	7.48	119.39	114.90
5	14	1377	G	C8-N9-C4	-7.48	103.41	106.40
5	1H	996	A	C8-N9-C4	7.48	108.79	105.80
5	1H	2401	U	C5-C6-N1	7.48	126.44	122.70
3	2K	1	C	C6-N1-C2	-7.47	117.31	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1931	U	C4-C5-C6	7.47	124.18	119.70
1	13	690	G	C2-N3-C4	-7.47	108.17	111.90
5	14	929	G	N1-C6-O6	7.47	124.38	119.90
5	14	2688	U	C5-C4-O4	7.47	130.38	125.90
5	14	2612	C	O5'-P-OP1	7.47	119.66	110.70
5	1H	945	A	C5-C6-N1	-7.46	113.97	117.70
5	1H	2591	C	N3-C2-O2	7.46	127.12	121.90
5	1H	1162	G	C8-N9-C4	-7.46	103.42	106.40
5	14	1496	A	C6-C5-N7	-7.46	127.08	132.30
5	1H	198	C	C2-N3-C4	-7.46	116.17	119.90
5	1H	1678	G	C4-C5-N7	7.46	113.78	110.80
5	1H	2331	G	C2-N3-C4	-7.46	108.17	111.90
1	13	1279	A	N7-C8-N9	7.45	117.53	113.80
5	14	2730	C	C6-N1-C2	-7.45	117.32	120.30
2	3L	71	G	C5-C6-O6	7.45	133.07	128.60
5	1H	815	C	C2-N3-C4	-7.45	116.17	119.90
5	1H	1313	U	C2-N1-C1'	7.45	126.64	117.70
1	13	1332	A	C8-N9-C4	-7.45	102.82	105.80
5	14	1142(A)	A	C2-N3-C4	-7.45	106.88	110.60
5	1H	1767	C	O5'-P-OP1	-7.45	99.00	105.70
5	1H	2712	U	N3-C4-C5	7.45	119.07	114.60
5	14	2490	G	N9-C4-C5	7.44	108.38	105.40
5	14	2734	A	N1-C6-N6	-7.44	114.13	118.60
5	1H	1589	C	O5'-P-OP2	7.44	119.63	110.70
1	1G	758	G	N1-C6-O6	7.44	124.36	119.90
5	1H	508	G	C8-N9-C4	-7.44	103.42	106.40
5	1H	2000	G	N7-C8-N9	-7.44	109.38	113.10
5	1H	1334	G	O5'-P-OP2	7.44	119.62	110.70
1	13	576	G	N1-C6-O6	7.43	124.36	119.90
27	16	115	G	O5'-P-OP2	7.43	119.62	110.70
5	1H	1838	C	C6-N1-C2	7.43	123.27	120.30
1	13	802	A	C6-C5-N7	-7.43	127.10	132.30
5	1H	449	A	C8-N9-C4	7.43	108.77	105.80
5	1H	1653	G	O5'-P-OP2	-7.43	99.01	105.70
1	13	652	U	C5-C6-N1	7.43	126.41	122.70
5	1H	513	A	C8-N9-C4	-7.43	102.83	105.80
5	1H	1241	A	C6-N1-C2	7.43	123.06	118.60
5	14	71	A	N1-C6-N6	7.42	123.05	118.60
5	14	187	G	C6-N1-C2	-7.42	120.65	125.10
5	14	673	C	O5'-P-OP1	7.42	119.61	110.70
5	1H	609	A	N9-C4-C5	-7.42	102.83	105.80
5	1H	1200	C	C4-C5-C6	7.42	121.11	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2426	A	C5-N7-C8	-7.42	100.19	103.90
5	1H	692	C	C2-N3-C4	-7.42	116.19	119.90
27	16	8	U	O5'-P-OP1	7.42	119.60	110.70
5	14	2313	C	C6-N1-C2	-7.42	117.33	120.30
5	1H	1021	A	C5-C6-N1	-7.41	113.99	117.70
5	1H	1379	A	C5-C6-N6	-7.41	117.77	123.70
5	1H	238	C	C5-C6-N1	-7.41	117.30	121.00
5	1H	1962	C	O5'-P-OP1	-7.41	99.03	105.70
5	1H	239	U	C5-C6-N1	-7.41	119.00	122.70
5	1H	1888	G	N3-C2-N2	7.41	125.09	119.90
5	14	2595	G	O5'-P-OP1	-7.41	99.03	105.70
5	1H	2581	G	N3-C2-N2	7.41	125.08	119.90
5	1H	271(B)	G	N3-C4-N9	7.40	130.44	126.00
5	14	2712	U	N3-C4-O4	-7.40	114.22	119.40
5	1H	2380	C	C5-C6-N1	-7.40	117.30	121.00
5	1H	2466	C	N3-C4-C5	7.40	124.86	121.90
5	14	566	U	C5-C6-N1	-7.40	119.00	122.70
5	14	1344	G	N1-C6-O6	7.40	124.34	119.90
5	14	2392	A	N7-C8-N9	7.40	117.50	113.80
5	14	1939	U	N3-C4-O4	-7.40	114.22	119.40
5	1H	1839	G	N1-C2-N2	-7.40	109.54	116.20
5	1H	2247	A	O5'-P-OP1	-7.40	99.04	105.70
5	1H	262	A	N1-C6-N6	7.40	123.04	118.60
1	13	775	G	O5'-P-OP1	-7.39	99.05	105.70
5	14	1187	G	C8-N9-C4	-7.39	103.44	106.40
5	14	2029	G	C8-N9-C4	-7.39	103.44	106.40
5	1H	2594	C	C2-N3-C4	-7.39	116.20	119.90
1	13	1524	C	C5-C6-N1	-7.39	117.31	121.00
1	13	810	C	N3-C4-N4	7.39	123.17	118.00
1	13	819	A	O5'-P-OP1	-7.39	99.05	105.70
5	14	2078	C	N3-C4-C5	-7.39	118.95	121.90
5	14	133	C	N3-C4-C5	7.38	124.85	121.90
5	1H	575	A	O5'-P-OP2	7.38	119.56	110.70
5	1H	201	C	N3-C4-C5	7.38	124.85	121.90
5	1H	1610	A	N9-C4-C5	-7.38	102.85	105.80
1	1G	818	G	C4-C5-N7	-7.38	107.85	110.80
5	1H	127	A	C5-C6-N6	-7.37	117.80	123.70
5	1H	1423	G	O5'-P-OP2	-7.37	99.06	105.70
5	1H	1681	G	C5-C6-O6	-7.37	124.18	128.60
5	14	2433	A	N7-C8-N9	7.37	117.48	113.80
5	1H	1300	U	C6-N1-C2	-7.37	116.58	121.00
5	1H	2328	A	N1-C2-N3	7.37	132.99	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1261	C	N3-C4-C5	7.37	124.85	121.90
5	14	989	G	O5'-P-OP1	-7.37	99.07	105.70
5	1H	944	G	O5'-P-OP2	-7.37	99.07	105.70
5	14	2433	A	O5'-P-OP2	7.37	119.54	110.70
5	1H	1678	G	N1-C2-N3	7.37	128.32	123.90
1	13	720	C	C6-N1-C2	-7.36	117.36	120.30
5	14	1323	U	OP1-P-OP2	-7.36	108.55	119.60
5	1H	805	G	OP1-P-O3'	7.36	121.40	105.20
1	1G	337	C	C6-N1-C2	-7.36	117.35	120.30
5	1H	201	C	C2-N3-C4	-7.36	116.22	119.90
5	1H	813	U	N3-C4-O4	7.36	124.55	119.40
5	1H	2506	U	N3-C2-O2	-7.36	117.05	122.20
5	1H	619	G	C8-N9-C4	7.36	109.34	106.40
1	13	690	G	C4-C5-N7	7.36	113.74	110.80
5	14	330	A	C4-C5-N7	7.36	114.38	110.70
5	1H	1496	A	C6-C5-N7	-7.36	127.15	132.30
1	1G	1519	A	C5-C6-N6	7.36	129.59	123.70
5	1H	1566	A	C5-C6-N1	7.36	121.38	117.70
5	14	2681	C	N3-C2-O2	-7.35	116.75	121.90
5	1H	1247	A	C6-N1-C2	-7.35	114.19	118.60
5	1H	571	A	C8-N9-C4	7.35	108.74	105.80
1	13	812	C	P-O3'-C3'	7.35	128.52	119.70
5	1H	459	U	C5-C4-O4	7.35	130.31	125.90
5	1H	1559	G	C4-C5-N7	7.35	113.74	110.80
5	14	786	C	N3-C4-N4	-7.34	112.86	118.00
5	1H	2380	C	C2-N3-C4	-7.34	116.23	119.90
5	1H	2440	C	C2-N3-C4	7.34	123.57	119.90
5	14	1950	G	N7-C8-N9	7.34	116.77	113.10
5	14	632	A	O5'-P-OP2	7.34	119.51	110.70
5	14	2438	U	O5'-P-OP2	-7.34	99.10	105.70
1	13	1158	C	N1-C2-O2	7.34	123.30	118.90
5	14	2206	C	O5'-P-OP2	-7.33	99.10	105.70
1	1G	890	G	O4'-C1'-N9	7.33	114.06	108.20
5	14	1616	A	O4'-C1'-N9	7.33	114.06	108.20
1	13	892	A	N1-C2-N3	7.33	132.96	129.30
5	1H	621	A	C4-C5-N7	7.33	114.36	110.70
5	1H	931	G	N3-C4-C5	-7.33	124.94	128.60
5	14	2070	G	C2-N3-C4	-7.33	108.24	111.90
5	1H	2623	G	N1-C6-O6	-7.33	115.50	119.90
5	1H	1940	U	N1-C2-O2	-7.32	117.67	122.80
5	1H	1006	C	O5'-P-OP1	-7.32	99.11	105.70
5	1H	1676	A	O5'-P-OP2	-7.32	99.11	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	645	C	C6-N1-C2	-7.32	117.37	120.30
5	1H	114	U	OP1-P-O3'	7.32	121.29	105.20
5	1H	140	A	C2-N3-C4	-7.32	106.94	110.60
5	1H	631	A	C8-N9-C4	7.32	108.73	105.80
1	1G	1465	C	C6-N1-C2	-7.32	117.37	120.30
5	1H	2708	G	C8-N9-C4	7.31	109.33	106.40
5	14	1657	C	N3-C4-C5	7.31	124.82	121.90
5	14	841	A	C5-C6-N6	-7.31	117.85	123.70
5	14	1281	G	C4-C5-N7	7.31	113.72	110.80
5	1H	1366	A	N1-C6-N6	7.31	122.98	118.60
5	1H	1559	G	C5-C6-O6	-7.31	124.21	128.60
5	14	1953	A	O5'-P-OP2	7.31	119.47	110.70
5	14	2430	A	C5-C6-N1	-7.31	114.05	117.70
5	1H	838	C	N1-C2-O2	-7.31	114.52	118.90
5	1H	1939	U	C4-C5-C6	-7.31	115.32	119.70
27	16	12	C	C4-C5-C6	7.31	121.05	117.40
5	1H	2000	G	C5-N7-C8	7.31	107.95	104.30
1	13	564	C	C6-N1-C2	-7.30	117.38	120.30
5	14	1831	G	N1-C2-N3	7.30	128.28	123.90
5	1H	767	U	O5'-P-OP2	-7.30	99.13	105.70
1	13	1203	C	N3-C2-O2	-7.30	116.79	121.90
5	14	242	G	C8-N9-C4	7.30	109.32	106.40
5	14	1925	C	N1-C2-O2	-7.30	114.52	118.90
5	14	1966	A	N1-C6-N6	-7.30	114.22	118.60
5	1H	2609	U	C5-C6-N1	-7.30	119.05	122.70
5	1H	2713	A	C8-N9-C4	-7.30	102.88	105.80
5	1H	2070	G	N1-C2-N2	-7.30	109.63	116.20
5	14	945	A	N7-C8-N9	7.30	117.45	113.80
5	1H	847	U	C2-N3-C4	-7.30	122.62	127.00
1	13	35	G	N1-C6-O6	7.29	124.28	119.90
5	1H	138	G	C6-C5-N7	-7.29	126.02	130.40
5	1H	590	A	C6-N1-C2	-7.29	114.22	118.60
5	1H	950	G	C8-N9-C4	7.29	109.32	106.40
5	1H	2282	G	O5'-P-OP1	-7.29	99.14	105.70
5	14	821	A	N1-C6-N6	7.29	122.97	118.60
5	14	2239	G	N3-C2-N2	7.29	125.00	119.90
5	1H	613	U	C5-C4-O4	7.29	130.28	125.90
5	1H	1969	A	O5'-P-OP1	-7.29	99.14	105.70
5	1H	762	U	N1-C2-O2	7.29	127.90	122.80
5	1H	633	A	O5'-P-OP2	7.29	119.44	110.70
5	1H	2359	C	C2-N3-C4	-7.29	116.26	119.90
1	13	1519	A	C8-N9-C4	-7.28	102.89	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2056	G	C5-C6-O6	-7.28	124.23	128.60
5	1H	62	C	C6-N1-C2	7.28	123.21	120.30
1	1G	812	C	P-O3'-C3'	7.28	128.44	119.70
5	14	1036	G	N1-C6-O6	7.28	124.27	119.90
5	1H	1415	U	C5-C4-O4	7.28	130.27	125.90
5	14	1960	A	C2-N3-C4	-7.28	106.96	110.60
5	1H	622	G	O5'-P-OP2	-7.28	99.15	105.70
5	1H	624	C	N3-C2-O2	7.28	126.99	121.90
1	13	656	C	C6-N1-C2	-7.27	117.39	120.30
5	1H	1695	G	O5'-P-OP1	-7.27	99.15	105.70
5	14	2776	A	N7-C8-N9	7.27	117.44	113.80
1	13	767	A	C2-N3-C4	-7.27	106.97	110.60
5	1H	187	G	N1-C6-O6	-7.27	115.54	119.90
5	1H	2023	G	O5'-P-OP1	-7.27	99.16	105.70
5	1H	400	G	C5-C6-O6	-7.26	124.24	128.60
1	1G	1519	A	N1-C6-N6	-7.26	114.24	118.60
5	14	2387	U	C2-N3-C4	-7.26	122.64	127.00
5	14	2401	U	C2-N1-C1'	7.26	126.42	117.70
5	1H	1942	C	N3-C4-C5	7.26	124.80	121.90
5	14	1608	A	N1-C6-N6	-7.26	114.24	118.60
5	1H	337	C	O5'-P-OP2	-7.26	99.17	105.70
5	1H	757	U	C5-C4-O4	7.26	130.25	125.90
5	14	1789	A	N1-C2-N3	7.25	132.93	129.30
5	1H	1888	G	C4-N9-C1'	7.25	135.93	126.50
5	14	409	C	C6-N1-C2	7.25	123.20	120.30
5	14	2072	G	C8-N9-C4	7.25	109.30	106.40
5	14	2440	C	C6-N1-C2	7.25	123.20	120.30
1	13	422	C	C5-C6-N1	7.25	124.62	121.00
5	1H	611	C	C5-C6-N1	-7.25	117.38	121.00
5	1H	1264	G	N1-C6-O6	-7.24	115.55	119.90
27	16	5	C	N3-C4-C5	7.24	124.80	121.90
1	13	733	A	C8-N9-C4	7.24	108.70	105.80
5	14	1572	A	N1-C6-N6	7.24	122.94	118.60
1	13	115	G	P-O3'-C3'	7.24	128.39	119.70
5	14	1300	U	O5'-P-OP1	7.24	119.38	110.70
5	1H	441	U	O5'-P-OP1	-7.24	99.19	105.70
5	1H	1594	G	OP1-P-O3'	7.24	121.12	105.20
5	1H	1673	U	C2-N1-C1'	-7.24	109.02	117.70
5	1H	2490	G	N1-C6-O6	7.23	124.24	119.90
5	1H	584	C	O5'-P-OP1	-7.23	99.19	105.70
5	1H	2287	A	N1-C2-N3	7.23	132.92	129.30
1	13	789	U	C4-C5-C6	7.23	124.04	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	138	G	O4'-C1'-N9	7.23	113.98	108.20
5	14	730	C	N1-C2-O2	7.23	123.24	118.90
5	1H	397	G	N3-C2-N2	-7.23	114.84	119.90
5	14	775	G	N3-C4-N9	7.23	130.34	126.00
5	14	2259	G	O5'-P-OP1	-7.23	99.20	105.70
5	14	2518	A	C4-C5-N7	7.23	114.31	110.70
5	1H	330	A	C4-C5-N7	7.23	114.31	110.70
5	1H	682	G	N9-C4-C5	-7.22	102.51	105.40
5	1H	2698	U	OP1-P-OP2	7.22	130.44	119.60
5	1H	1427	A	N1-C6-N6	-7.22	114.27	118.60
2	3K	71	G	C4-C5-N7	-7.22	107.91	110.80
5	1H	97	C	OP1-P-OP2	7.22	130.43	119.60
1	1G	519	C	C6-N1-C2	7.22	123.19	120.30
5	14	943	U	O5'-P-OP1	-7.22	99.20	105.70
5	1H	2256	G	N3-C2-N2	7.22	124.95	119.90
5	1H	377	C	C6-N1-C2	7.22	123.19	120.30
5	1H	770	G	C4-C5-N7	7.22	113.69	110.80
5	1H	639	U	O5'-P-OP2	-7.21	99.21	105.70
5	1H	974(A)	C	N3-C2-O2	-7.21	116.85	121.90
1	13	687	A	P-O3'-C3'	7.21	128.35	119.70
5	1H	456	C	O5'-P-OP2	-7.21	99.21	105.70
1	1G	1297	C	P-O3'-C3'	7.21	128.35	119.70
5	1H	1626	G	C2-N3-C4	-7.21	108.30	111.90
1	13	23	C	C5-C6-N1	7.21	124.61	121.00
5	14	2587	A	N1-C6-N6	7.21	122.92	118.60
27	16	85	G	C5-C6-O6	-7.21	124.28	128.60
5	14	2681	C	C5-C4-N4	7.21	125.24	120.20
5	1H	127	A	N9-C4-C5	-7.21	102.92	105.80
5	1H	692	C	C5-C4-N4	-7.21	115.16	120.20
5	1H	1678	G	N9-C4-C5	7.20	108.28	105.40
5	1H	2247	A	C2-N3-C4	-7.20	107.00	110.60
5	1H	1324	G	N1-C6-O6	7.20	124.22	119.90
5	1H	1900	A	C2-N3-C4	7.20	114.20	110.60
1	13	963	G	N1-C2-N2	-7.20	109.72	116.20
1	13	1342	C	N1-C2-O2	-7.20	114.58	118.90
5	1H	867	C	O5'-P-OP1	-7.20	99.22	105.70
5	1H	1787	A	O5'-P-OP1	-7.20	99.22	105.70
5	14	1681	G	N1-C6-O6	7.20	124.22	119.90
5	1H	398	G	O5'-P-OP2	-7.20	99.22	105.70
5	1H	1535	U	N3-C2-O2	-7.19	117.16	122.20
1	1G	1529	G	N3-C4-C5	-7.19	125.00	128.60
5	14	197	A	OP2-P-O3'	7.19	121.02	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1162	G	O5'-P-OP1	-7.19	99.23	105.70
5	1H	2427	C	O5'-P-OP1	-7.19	99.23	105.70
5	14	189	G	C8-N9-C4	7.19	109.28	106.40
5	14	2392	A	O5'-P-OP1	-7.19	99.23	105.70
5	1H	2069	G	OP2-P-O3'	7.18	121.00	105.20
5	14	1496	A	N1-C6-N6	7.18	122.91	118.60
5	14	2386	C	C5-C6-N1	-7.18	117.41	121.00
5	1H	138	G	N1-C6-O6	7.18	124.21	119.90
5	1H	2418	A	O5'-P-OP1	7.18	119.32	110.70
1	1G	576	G	N3-C4-N9	7.18	130.31	126.00
5	14	2506	U	N3-C4-O4	7.18	124.42	119.40
5	14	2546	U	O5'-P-OP2	-7.18	99.24	105.70
1	13	878	G	N3-C4-N9	7.18	130.31	126.00
5	14	1703	G	C5-C6-O6	-7.18	124.29	128.60
5	14	1821	A	N1-C2-N3	7.18	132.89	129.30
5	14	2066	C	OP1-P-O3'	7.17	120.98	105.20
5	1H	1528	A	C5-N7-C8	-7.17	100.31	103.90
5	1H	2048	G	N9-C4-C5	7.17	108.27	105.40
1	13	775	G	C5-C6-O6	-7.17	124.30	128.60
5	14	1614	A	C6-C5-N7	-7.17	127.28	132.30
5	1H	1671	U	N3-C4-O4	7.17	124.42	119.40
5	1H	196	A	O4'-C1'-N9	7.17	113.94	108.20
5	14	308	G	O5'-P-OP2	-7.17	99.25	105.70
5	14	641	C	C6-N1-C2	7.17	123.17	120.30
5	14	1314	C	C5-C6-N1	7.17	124.58	121.00
5	1H	818	G	O5'-P-OP1	-7.17	99.25	105.70
5	1H	1394	U	O5'-P-OP2	7.17	119.30	110.70
1	1G	1519	A	C8-N9-C4	-7.17	102.93	105.80
5	14	1786	A	OP1-P-O3'	7.16	120.96	105.20
5	1H	635	C	O5'-P-OP2	-7.16	99.25	105.70
5	1H	1836	C	N3-C4-C5	-7.16	119.03	121.90
5	1H	1623	G	C5-C6-N1	7.16	115.08	111.50
5	1H	1773	A	C5-C6-N1	-7.16	114.12	117.70
5	1H	2439	A	O4'-C1'-N9	-7.16	102.47	108.20
5	14	598	G	O5'-P-OP2	-7.16	99.26	105.70
5	14	2045	C	C6-N1-C2	7.16	123.16	120.30
5	1H	74	A	N1-C2-N3	7.16	132.88	129.30
5	1H	123	G	C6-N1-C2	-7.16	120.81	125.10
5	1H	1668	A	C8-N9-C4	7.16	108.66	105.80
5	14	467	G	O5'-P-OP2	-7.16	99.26	105.70
5	14	830	G	N9-C4-C5	-7.16	102.54	105.40
5	1H	1300	U	OP1-P-O3'	7.16	120.94	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2490	G	C5-C6-O6	-7.16	124.31	128.60
5	1H	213	A	N1-C6-N6	7.15	122.89	118.60
5	14	750	A	N7-C8-N9	7.15	117.38	113.80
5	1H	123	G	C5-C6-N1	7.15	115.08	111.50
5	1H	2567	G	O5'-P-OP1	-7.15	99.27	105.70
5	1H	946	G	O5'-P-OP1	-7.15	99.27	105.70
5	1H	1201	C	C5-C4-N4	-7.15	115.20	120.20
1	1G	1530	G	C5-C6-O6	-7.14	124.31	128.60
5	1H	2447	G	C5-C6-O6	-7.14	124.32	128.60
1	13	452	A	O5'-P-OP1	-7.14	99.28	105.70
1	1G	972	C	O5'-P-OP2	-7.14	99.28	105.70
5	14	1815	A	OP1-P-O3'	7.14	120.90	105.20
5	14	2681	C	C5-C6-N1	-7.14	117.43	121.00
5	1H	796	C	C6-N1-C2	7.14	123.15	120.30
27	16	115	G	N9-C4-C5	-7.14	102.55	105.40
5	14	1312	U	O5'-P-OP2	7.13	119.26	110.70
5	1H	631	A	C5-N7-C8	7.13	107.47	103.90
5	1H	241	A	N1-C2-N3	7.13	132.87	129.30
1	1G	121	C	C6-N1-C1'	-7.13	112.24	120.80
5	14	1989	G	N1-C6-O6	7.13	124.18	119.90
5	1H	1366	A	C2-N3-C4	-7.13	107.03	110.60
5	14	2688	U	N1-C2-N3	7.13	119.18	114.90
5	1H	860	U	C2-N3-C4	-7.13	122.72	127.00
5	1H	2199	A	N1-C6-N6	-7.13	114.32	118.60
54	P8	9	ARG	NE-CZ-NH1	7.13	123.86	120.30
5	1H	232	G	C8-N9-C1'	-7.13	117.73	127.00
5	1H	146	G	C4-C5-N7	7.12	113.65	110.80
5	14	561	G	N3-C2-N2	-7.12	114.91	119.90
5	1H	625	G	C5-C6-O6	-7.12	124.33	128.60
5	1H	786	C	C5-C4-N4	7.12	125.19	120.20
5	1H	808	G	N1-C6-O6	-7.12	115.63	119.90
5	1H	2439	A	C5-N7-C8	-7.12	100.34	103.90
1	13	808	C	C4-C5-C6	7.12	120.96	117.40
5	14	2490	G	N7-C8-N9	7.12	116.66	113.10
5	1H	2276	G	N3-C2-N2	-7.12	114.92	119.90
5	1H	180	G	N9-C4-C5	-7.12	102.55	105.40
5	1H	262	A	C5-C6-N6	-7.12	118.01	123.70
1	1G	884	U	N3-C2-O2	-7.12	117.22	122.20
5	14	733	G	O5'-P-OP2	-7.12	99.30	105.70
5	14	2574	G	C5-C6-O6	-7.12	124.33	128.60
5	1H	2072	G	C8-N9-C4	7.12	109.25	106.40
5	14	1423	G	C8-N9-C4	7.11	109.25	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	2K	40	C	C6-N1-C2	-7.11	117.45	120.30
5	1H	196	A	C6-N1-C2	7.11	122.87	118.60
5	14	1332	G	N1-C2-N3	7.11	128.17	123.90
5	14	2513	G	N9-C4-C5	-7.11	102.56	105.40
5	14	1703	G	N9-C4-C5	-7.11	102.56	105.40
5	1H	847	U	N3-C2-O2	-7.11	117.22	122.20
5	14	775	G	N1-C2-N2	-7.11	109.80	116.20
5	1H	2006	C	C6-N1-C2	7.11	123.14	120.30
1	13	623	C	C5-C6-N1	7.11	124.55	121.00
5	14	1281	G	C5-N7-C8	-7.11	100.75	104.30
5	1H	828	U	C2-N1-C1'	7.11	126.23	117.70
5	1H	1021	A	N3-C4-C5	7.11	131.77	126.80
5	1H	1835	G	C4-N9-C1'	7.11	135.74	126.50
1	1G	598	U	N1-C2-O2	-7.11	117.83	122.80
5	14	330	A	C5-N7-C8	-7.10	100.35	103.90
5	14	2374	C	N3-C4-C5	7.10	124.74	121.90
1	1G	1346	A	P-O3'-C3'	7.10	128.22	119.70
5	1H	1364	G	C5-C6-O6	-7.10	124.34	128.60
5	14	2607	G	N1-C6-O6	7.10	124.16	119.90
5	1H	835	A	O5'-P-OP1	7.10	119.22	110.70
1	1G	1502	A	N1-C6-N6	7.10	122.86	118.60
3	2L	35	C	N1-C2-O2	7.10	123.16	118.90
5	14	1963	U	N3-C2-O2	-7.10	117.23	122.20
5	14	590	A	O5'-P-OP1	-7.09	99.31	105.70
5	14	1002	G	O5'-P-OP2	-7.09	99.32	105.70
5	14	674	G	N1-C6-O6	-7.09	115.64	119.90
5	14	1655	A	C5-N7-C8	7.09	107.45	103.90
5	1H	842	G	N3-C4-C5	7.09	132.15	128.60
5	1H	1198	U	C5-C6-N1	-7.09	119.15	122.70
5	14	559	G	C5-C6-N1	-7.09	107.96	111.50
5	1H	510	C	OP1-P-OP2	7.09	130.23	119.60
5	1H	1204	A	C5-C6-N1	-7.09	114.16	117.70
5	1H	2712	U	O4'-C1'-N1	7.09	113.87	108.20
5	14	2378	A	N1-C6-N6	7.09	122.85	118.60
5	1H	251	A	O5'-P-OP1	-7.09	99.32	105.70
5	14	2763	G	N3-C4-N9	7.09	130.25	126.00
5	1H	1936	A	C5-C6-N6	-7.09	118.03	123.70
27	16	115	G	C6-C5-N7	-7.09	126.15	130.40
27	16	115	G	C5-C6-N1	7.08	115.04	111.50
1	1G	243	A	P-O3'-C3'	7.08	128.20	119.70
1	13	1371	G	O5'-P-OP2	7.08	119.20	110.70
5	1H	2346	A	C6-C5-N7	-7.08	127.34	132.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	945	A	C6-C5-N7	-7.08	127.34	132.30
5	14	2574	G	C5-C6-N1	7.08	115.04	111.50
5	1H	217	G	C5-C6-O6	7.08	132.85	128.60
42	D8	82	ARG	NE-CZ-NH1	-7.08	116.76	120.30
1	1G	121	C	C2-N1-C1'	7.08	126.59	118.80
5	14	621	A	N7-C8-N9	7.08	117.34	113.80
36	78	45	LEU	CB-CG-CD2	-7.08	98.97	111.00
5	1H	2314	C	O5'-P-OP2	-7.07	99.33	105.70
5	14	1322	A	OP2-P-O3'	7.07	120.76	105.20
5	1H	1297	C	C6-N1-C2	-7.07	117.47	120.30
1	13	1128	C	C5-C6-N1	7.07	124.53	121.00
5	14	774	A	C6-C5-N7	-7.07	127.35	132.30
5	1H	694	U	O5'-P-OP1	7.07	119.18	110.70
5	1H	1430	C	OP1-P-O3'	7.07	120.75	105.20
5	1H	2328	A	C2-N3-C4	-7.07	107.07	110.60
5	14	1952	A	C5-C6-N1	7.07	121.23	117.70
5	1H	987	G	N3-C4-N9	-7.07	121.76	126.00
5	1H	2585	U	C2-N3-C4	-7.07	122.76	127.00
5	14	472	A	O5'-P-OP2	-7.06	99.34	105.70
5	1H	1311	G	O5'-P-OP2	-7.06	99.34	105.70
1	1G	230	G	N3-C4-N9	-7.06	121.76	126.00
5	1H	318	C	O5'-P-OP1	-7.06	99.34	105.70
5	1H	1839	G	N3-C2-N2	7.06	124.84	119.90
5	1H	599	G	N3-C2-N2	7.06	124.84	119.90
5	1H	774	A	C8-N9-C1'	7.06	140.40	127.70
1	1G	817	C	C5-C6-N1	-7.06	117.47	121.00
27	16	21	G	N9-C4-C5	7.05	108.22	105.40
5	14	1347	G	OP1-P-O3'	7.05	120.71	105.20
5	1H	769	G	N1-C2-N2	-7.05	109.85	116.20
1	13	1305	G	N1-C2-N2	-7.05	109.86	116.20
5	14	429	A	C8-N9-C4	-7.05	102.98	105.80
5	1H	2508	G	C5-C6-O6	7.05	132.83	128.60
3	2K	9	G	N1-C6-O6	7.05	124.13	119.90
5	14	141	A	C6-C5-N7	-7.05	127.37	132.30
2	3K	71	G	C4-N9-C1'	-7.05	117.34	126.50
1	13	684	A	C8-N9-C4	-7.04	102.98	105.80
5	14	1979	C	C6-N1-C2	-7.04	117.48	120.30
5	14	1382	G	C5-C6-O6	-7.04	124.38	128.60
5	14	2592	G	O5'-P-OP1	7.04	119.15	110.70
5	1H	1936	A	O4'-C1'-N9	7.04	113.83	108.20
5	1H	2385	C	O5'-P-OP1	7.04	119.15	110.70
5	1H	2503	A	C8-N9-C4	7.04	108.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1501	C	C6-N1-C2	7.04	123.11	120.30
5	14	1204	A	O4'-C1'-N9	7.04	113.83	108.20
5	1H	1280	G	OP1-P-OP2	-7.04	109.05	119.60
5	1H	1574	C	N3-C4-C5	7.04	124.71	121.90
5	1H	734	A	C6-N1-C2	7.03	122.82	118.60
5	1H	1273	U	P-O3'-C3'	7.03	128.14	119.70
5	1H	1314	C	N1-C2-O2	7.03	123.12	118.90
27	16	44	G	C8-N9-C1'	7.03	136.14	127.00
5	14	2691	C	O5'-P-OP1	-7.03	99.37	105.70
1	13	1126	U	N1-C2-O2	-7.03	117.88	122.80
32	51	171	LEU	CA-CB-CG	7.03	131.46	115.30
39	A8	24	LEU	CA-CB-CG	7.03	131.46	115.30
5	14	1804	C	O5'-P-OP2	7.03	119.13	110.70
5	1H	1626	G	N7-C8-N9	7.02	116.61	113.10
5	1H	1776	G	N9-C4-C5	-7.02	102.59	105.40
5	1H	2685	G	O5'-P-OP2	-7.02	99.38	105.70
5	1H	2782	G	N1-C6-O6	7.02	124.11	119.90
5	1H	125	G	N3-C2-N2	7.02	124.81	119.90
5	1H	945	A	C6-N1-C2	-7.02	114.39	118.60
39	A8	30	ARG	NE-CZ-NH1	7.02	123.81	120.30
5	14	775	G	N3-C4-C5	-7.02	125.09	128.60
5	14	2068	U	OP1-P-O3'	7.02	120.64	105.20
5	14	2552	U	C2-N3-C4	-7.02	122.79	127.00
3	2K	62	C	N1-C2-O2	7.02	123.11	118.90
1	1G	1502	A	C6-C5-N7	-7.02	127.39	132.30
5	1H	2392	A	N3-C4-N9	-7.02	121.79	127.40
1	13	1277	C	C6-N1-C2	-7.01	117.49	120.30
5	1H	2636	U	O5'-P-OP1	-7.01	99.39	105.70
5	1H	1203	G	O5'-P-OP2	-7.01	99.39	105.70
5	1H	1401	G	C8-N9-C4	-7.01	103.59	106.40
5	14	2401	U	N3-C4-O4	7.01	124.31	119.40
5	14	201	C	C5-C6-N1	-7.01	117.50	121.00
5	1H	465	G	O5'-P-OP2	7.01	119.11	110.70
5	1H	1888	G	N9-C4-C5	-7.01	102.60	105.40
5	1H	455	C	N3-C2-O2	7.01	126.81	121.90
5	1H	1307	A	C8-N9-C4	7.01	108.60	105.80
5	1H	585	G	O5'-P-OP2	-7.01	99.39	105.70
5	1H	1341	U	OP1-P-O3'	7.01	120.62	105.20
5	14	2415	G	N3-C2-N2	-7.00	115.00	119.90
5	1H	51	G	OP2-P-O3'	7.00	120.61	105.20
5	1H	828	U	C4-C5-C6	7.00	123.90	119.70
5	1H	1535	U	C2-N1-C1'	7.00	126.10	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2291	U	C5-C4-O4	7.00	130.10	125.90
5	1H	613	U	N3-C4-O4	-7.00	114.50	119.40
5	1H	770	G	C5-C6-O6	-7.00	124.40	128.60
5	1H	2287	A	N1-C6-N6	7.00	122.80	118.60
5	14	561	G	N3-C4-C5	7.00	132.10	128.60
5	14	1391	U	O5'-P-OP2	7.00	119.09	110.70
5	14	1556	C	C6-N1-C2	7.00	123.10	120.30
5	1H	71	A	C8-N9-C4	-7.00	103.00	105.80
5	1H	658	C	O5'-P-OP2	-7.00	99.41	105.70
5	1H	971	C	C6-N1-C2	-6.99	117.50	120.30
5	1H	1142(A)	A	N3-C4-C5	6.99	131.70	126.80
5	1H	1775	U	N1-C2-O2	-6.99	117.91	122.80
1	1G	558	G	C5-C6-O6	6.99	132.80	128.60
5	14	786	C	C6-N1-C2	6.99	123.10	120.30
48	J8	80	LEU	CA-CB-CG	6.99	131.38	115.30
1	1G	306	G	N3-C4-N9	-6.99	121.81	126.00
5	14	1380	G	O5'-P-OP2	-6.99	99.41	105.70
5	1H	1252	G	N7-C8-N9	-6.99	109.61	113.10
1	1G	1519	A	N9-C4-C5	6.99	108.59	105.80
1	13	740	U	O5'-P-OP2	-6.99	99.41	105.70
5	14	2249	U	C6-N1-C2	-6.99	116.81	121.00
5	1H	621	A	N1-C6-N6	6.99	122.79	118.60
5	1H	1191	G	C8-N9-C4	6.99	109.19	106.40
5	1H	2583	G	N9-C4-C5	6.99	108.19	105.40
1	1G	576	G	C8-N9-C1'	-6.99	117.92	127.00
1	13	1260	C	C5-C6-N1	6.98	124.49	121.00
5	14	1350	C	O5'-P-OP1	-6.98	99.42	105.70
5	14	2585	U	C2-N1-C1'	6.98	126.08	117.70
5	1H	383	U	O4'-C1'-N1	6.98	113.79	108.20
5	1H	609	A	O5'-P-OP2	6.98	119.08	110.70
5	1H	671	C	N3-C4-C5	6.98	124.69	121.90
5	1H	871	U	N3-C4-O4	6.98	124.29	119.40
5	1H	2544	G	C8-N9-C4	6.98	109.19	106.40
1	1G	320	C	C6-N1-C2	6.98	123.09	120.30
5	1H	2256	G	O5'-P-OP2	-6.98	99.42	105.70
5	1H	628	G	OP1-P-OP2	6.98	130.06	119.60
5	1H	1612	C	N3-C4-C5	-6.98	119.11	121.90
5	1H	2437	U	N3-C4-C5	-6.98	110.41	114.60
5	1H	974	G	N1-C6-O6	6.98	124.08	119.90
5	14	1367	A	N1-C6-N6	6.97	122.78	118.60
5	14	1903	G	O5'-P-OP1	-6.97	99.42	105.70
5	1H	845	G	C4-N9-C1'	-6.97	117.43	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	688	U	O5'-P-OP2	-6.97	99.42	105.70
1	1G	690	G	C2-N3-C4	-6.97	108.41	111.90
1	13	575	G	O4'-C1'-N9	-6.97	102.62	108.20
5	14	2074	U	O5'-P-OP1	-6.97	99.43	105.70
5	1H	133	C	N3-C4-C5	6.97	124.69	121.90
5	1H	769	G	N3-C4-C5	-6.97	125.11	128.60
5	1H	788	A	C8-N9-C4	6.97	108.59	105.80
5	1H	1616	A	C5-C6-N6	-6.97	118.13	123.70
5	14	201	C	O5'-P-OP2	-6.97	99.43	105.70
5	14	737	C	C5-C4-N4	-6.97	115.32	120.20
5	1H	2695	C	N1-C2-O2	-6.97	114.72	118.90
5	1H	2513	G	O5'-P-OP2	-6.96	99.43	105.70
5	1H	815	C	O5'-P-OP1	6.96	119.06	110.70
5	1H	1618	A	C5-C6-N6	-6.96	118.13	123.70
5	1H	443	A	N9-C4-C5	-6.96	103.02	105.80
5	1H	467	G	C5-N7-C8	6.96	107.78	104.30
1	1G	481	G	C4-C5-C6	6.96	122.98	118.80
5	14	1142	U	N1-C2-O2	6.96	127.67	122.80
5	14	1569	A	C8-N9-C4	-6.96	103.02	105.80
5	14	1804	C	OP1-P-OP2	-6.96	109.16	119.60
5	1H	1241	A	N3-C4-C5	6.96	131.67	126.80
5	14	2592	G	N3-C4-C5	-6.96	125.12	128.60
5	1H	853	G	O5'-P-OP2	-6.96	99.44	105.70
5	1H	2508	G	C6-C5-N7	6.96	134.57	130.40
1	13	689	C	C6-N1-C2	-6.95	117.52	120.30
5	14	49	A	P-O3'-C3'	6.95	128.04	119.70
5	14	747	U	N3-C2-O2	6.95	127.07	122.20
5	1H	265	A	C8-N9-C4	-6.95	103.02	105.80
5	1H	1607	C	N1-C2-O2	6.95	123.07	118.90
5	1H	1698	A	O4'-C1'-N9	6.95	113.76	108.20
1	1G	136	C	O5'-P-OP2	-6.95	99.44	105.70
5	1H	1702	G	C8-N9-C4	6.95	109.18	106.40
5	1H	2392	A	C8-N9-C4	-6.95	103.02	105.80
5	1H	655	A	N7-C8-N9	6.95	117.27	113.80
5	14	1820	U	O5'-P-OP1	-6.95	99.45	105.70
5	14	1022	G	N1-C6-O6	-6.94	115.74	119.90
5	1H	739	G	N7-C8-N9	-6.94	109.63	113.10
5	1H	2270	G	N9-C4-C5	-6.94	102.62	105.40
3	2K	62	C	N3-C2-O2	-6.94	117.04	121.90
5	14	829	A	OP1-P-OP2	6.94	130.00	119.60
5	14	2036	C	O5'-P-OP2	-6.94	99.46	105.70
27	16	41	U	C5-C6-N1	-6.94	119.23	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2558	C	C6-N1-C2	6.93	123.07	120.30
1	1G	413	G	C6-C5-N7	6.93	134.56	130.40
5	1H	211	A	C2-N3-C4	-6.93	107.13	110.60
5	1H	681	G	C2-N3-C4	-6.93	108.43	111.90
5	1H	2490	G	C8-N9-C4	-6.93	103.63	106.40
5	1H	2573	C	N3-C4-C5	-6.93	119.13	121.90
55	Q8	28	GLY	N-CA-C	6.93	130.43	113.10
1	1G	1346	A	OP2-P-O3'	6.93	120.45	105.20
5	1H	2246	G	OP1-P-O3'	6.93	120.44	105.20
1	13	601	C	N1-C2-O2	6.93	123.06	118.90
5	1H	144	C	C6-N1-C2	6.93	123.07	120.30
5	1H	2016	U	C5-C6-N1	-6.93	119.24	122.70
5	1H	2450	A	O5'-P-OP2	-6.93	99.47	105.70
5	14	740	U	C5-C4-O4	6.93	130.06	125.90
5	1H	667	U	C5-C4-O4	-6.93	121.74	125.90
5	1H	2212	A	O4'-C1'-N9	6.93	113.74	108.20
1	13	318	G	N1-C6-O6	6.92	124.06	119.90
5	14	830	G	C8-N9-C4	6.92	109.17	106.40
5	1H	1162	G	O5'-P-OP1	-6.92	99.47	105.70
1	13	880	C	C6-N1-C2	6.92	123.07	120.30
5	14	203	C	N1-C2-O2	-6.92	114.75	118.90
5	1H	1346	G	N1-C6-O6	-6.92	115.75	119.90
5	1H	1698	A	C5-C6-N1	-6.92	114.24	117.70
5	1H	1899	G	C4-C5-C6	-6.92	114.65	118.80
5	1H	632	A	OP1-P-OP2	-6.92	109.22	119.60
5	1H	1122	G	N7-C8-N9	-6.92	109.64	113.10
5	1H	1942	C	C5-C6-N1	6.92	124.46	121.00
1	13	109	A	O5'-P-OP2	-6.92	99.48	105.70
5	14	184	C	C6-N1-C2	6.92	123.07	120.30
5	14	2702	U	C6-N1-C2	-6.92	116.85	121.00
5	1H	529	A	N7-C8-N9	6.92	117.26	113.80
5	1H	752	A	C2-N3-C4	-6.92	107.14	110.60
5	14	1963	U	N1-C2-O2	6.92	127.64	122.80
5	1H	1899	G	OP2-P-O3'	6.91	120.41	105.20
5	1H	1925	C	C4-C5-C6	6.91	120.86	117.40
5	14	476	G	O5'-P-OP2	-6.91	99.48	105.70
5	1H	222	A	P-O3'-C3'	6.91	127.99	119.70
5	1H	913	U	OP1-P-OP2	6.91	129.97	119.60
5	1H	1373	A	O5'-P-OP1	6.91	118.99	110.70
5	1H	2016	U	O5'-P-OP2	-6.91	99.48	105.70
5	1H	2389	G	O5'-P-OP1	-6.91	99.48	105.70
5	1H	1915	U	N3-C2-O2	-6.91	117.36	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1674	G	O4'-C1'-N9	-6.91	102.67	108.20
1	13	1359	C	O5'-P-OP1	-6.91	99.48	105.70
5	14	737	C	N3-C4-N4	6.91	122.83	118.00
5	1H	664	C	C5-C6-N1	-6.91	117.55	121.00
5	1H	2237	G	N1-C6-O6	6.91	124.04	119.90
5	1H	2709	G	O5'-P-OP1	6.91	118.99	110.70
27	16	95	U	C5-C4-O4	6.91	130.04	125.90
1	13	776	G	O5'-P-OP1	-6.90	99.49	105.70
5	1H	1309	G	N1-C6-O6	-6.90	115.76	119.90
5	1H	1761	C	N1-C2-O2	-6.90	114.76	118.90
5	1H	2008	C	OP2-P-O3'	6.90	120.39	105.20
5	1H	2319	G	N3-C4-C5	-6.90	125.15	128.60
5	1H	2324	C	C5-C4-N4	-6.90	115.37	120.20
5	1H	1979	C	C6-N1-C2	-6.90	117.54	120.30
5	1H	1535	U	N1-C2-O2	6.90	127.63	122.80
5	1H	2690	C	C4-C5-C6	6.90	120.85	117.40
5	14	1614	A	C5-N7-C8	-6.90	100.45	103.90
5	1H	141	A	C4-C5-N7	6.90	114.15	110.70
5	1H	1597	A	O4'-C1'-N9	6.90	113.72	108.20
1	1G	186	C	C6-N1-C2	-6.90	117.54	120.30
5	1H	194	G	C5-C6-O6	-6.89	124.46	128.60
5	1H	323	G	N1-C6-O6	-6.89	115.76	119.90
5	1H	1569	A	OP1-P-OP2	6.89	129.94	119.60
1	13	757	U	O5'-P-OP2	-6.89	99.50	105.70
5	14	1022	G	N9-C4-C5	6.89	108.16	105.40
1	1G	1499	A	C8-N9-C4	6.89	108.56	105.80
5	14	2512	C	C2-N3-C4	-6.89	116.45	119.90
5	14	2702	U	C5-C6-N1	6.89	126.14	122.70
5	1H	865	C	C6-N1-C2	6.89	123.06	120.30
5	1H	2597	G	C4-C5-N7	6.89	113.56	110.80
5	1H	1328	G	N3-C4-N9	6.89	130.13	126.00
5	1H	2332	U	OP1-P-OP2	-6.89	109.27	119.60
5	14	1899	G	C5-C6-N1	-6.89	108.06	111.50
5	14	2387	U	C5-C6-N1	-6.88	119.26	122.70
5	1H	37	C	N3-C2-O2	-6.88	117.08	121.90
5	1H	2320	A	O4'-C1'-N9	6.88	113.71	108.20
1	13	5	U	P-O3'-C3'	6.88	127.96	119.70
1	13	777	A	O5'-P-OP2	-6.88	99.51	105.70
5	14	686	G	C4-C5-N7	6.88	113.55	110.80
5	1H	1670	C	C6-N1-C2	6.88	123.05	120.30
5	1H	1312	U	C5-C4-O4	6.88	130.03	125.90
5	1H	2232	U	C5-C4-O4	6.88	130.03	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2403	C	N1-C2-O2	-6.88	114.78	118.90
5	1H	2499	C	N3-C2-O2	6.88	126.71	121.90
5	1H	129	C	C6-N1-C2	6.87	123.05	120.30
5	1H	970	C	N1-C2-O2	-6.87	114.78	118.90
5	1H	1352	U	N1-C2-O2	-6.87	117.99	122.80
5	1H	2388	A	O5'-P-OP1	6.87	118.94	110.70
5	1H	931	G	N3-C4-N9	6.87	130.12	126.00
1	1G	691	G	C5-C6-O6	-6.87	124.48	128.60
5	1H	2688	U	C4-C5-C6	6.87	123.82	119.70
5	14	1801	G	C5-C6-O6	-6.87	124.48	128.60
5	1H	705	A	N1-C6-N6	6.87	122.72	118.60
1	13	231	G	N1-C6-O6	6.87	124.02	119.90
1	13	1281	U	C2-N1-C1'	6.87	125.94	117.70
5	1H	422	A	N1-C6-N6	6.87	122.72	118.60
5	1H	541	C	N3-C2-O2	-6.87	117.09	121.90
5	1H	1210	A	N3-C4-C5	6.87	131.61	126.80
49	K8	4	SER	CA-C-N	-6.87	102.09	117.20
5	14	664	C	C5-C6-N1	-6.86	117.57	121.00
5	1H	1130	U	N3-C2-O2	-6.86	117.40	122.20
5	1H	1757	U	OP1-P-O3'	6.86	120.30	105.20
27	16	14	U	OP1-P-OP2	6.86	129.90	119.60
3	2L	45	A	O5'-P-OP2	6.86	118.93	110.70
5	1H	1385	G	N3-C4-C5	6.86	132.03	128.60
5	1H	1614	A	C6-C5-N7	-6.86	127.50	132.30
5	1H	470	A	C5-N7-C8	-6.86	100.47	103.90
5	1H	688	U	OP1-P-OP2	6.86	129.88	119.60
5	1H	1191	G	OP1-P-OP2	6.86	129.88	119.60
5	1H	1670	C	C5-C6-N1	-6.86	117.57	121.00
5	14	122	G	C5-C6-O6	-6.85	124.49	128.60
5	1H	528	A	N3-C4-N9	-6.85	121.92	127.40
5	1H	1252	G	C8-N9-C4	6.85	109.14	106.40
5	1H	2700	C	N3-C4-C5	6.85	124.64	121.90
5	1H	2737	G	C4-C5-N7	6.85	113.54	110.80
1	13	770	C	O5'-P-OP2	6.85	118.92	110.70
5	14	1806	C	O5'-P-OP2	-6.85	99.53	105.70
1	1G	402	G	N9-C4-C5	-6.85	102.66	105.40
1	13	967	C	N3-C4-N4	-6.85	113.21	118.00
5	14	1827	C	N3-C2-O2	-6.85	117.11	121.90
5	14	1937	A	O4'-C1'-N9	6.85	113.68	108.20
5	1H	1555	G	O5'-P-OP1	-6.85	99.53	105.70
1	1G	1528	U	O5'-P-OP2	-6.85	99.53	105.70
1	13	1530	G	C5-N7-C8	-6.85	100.88	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	870	A	C5-C6-N1	6.85	121.12	117.70
5	1H	1967	C	C4-C5-C6	6.85	120.82	117.40
5	14	569	U	C2-N3-C4	-6.85	122.89	127.00
5	1H	1357	U	O5'-P-OP2	-6.85	99.54	105.70
5	14	704	G	N1-C2-N2	6.84	122.36	116.20
5	1H	1445	C	C5-C6-N1	6.84	124.42	121.00
5	1H	1558	A	C2-N3-C4	-6.84	107.18	110.60
5	1H	2287	A	N3-C4-C5	6.84	131.59	126.80
5	14	2356	C	N3-C2-O2	6.84	126.69	121.90
5	14	582	G	C5-C6-O6	-6.84	124.50	128.60
5	14	1337	G	OP1-P-O3'	6.84	120.25	105.20
5	14	2429	G	O5'-P-OP2	-6.84	99.55	105.70
5	14	2622	C	C6-N1-C2	6.84	123.04	120.30
5	1H	990	A	C2-N3-C4	-6.84	107.18	110.60
5	1H	1228	G	C2-N3-C4	-6.84	108.48	111.90
5	14	1681	G	C5-N7-C8	-6.84	100.88	104.30
5	14	2596	U	OP1-P-OP2	6.84	129.85	119.60
5	1H	1848	A	C8-N9-C4	6.84	108.53	105.80
5	1H	1899	G	C5-N7-C8	-6.84	100.88	104.30
5	1H	804	A	O4'-C1'-N9	6.83	113.67	108.20
5	1H	2525	G	C5-C6-O6	-6.83	124.50	128.60
1	13	584	G	N3-C4-C5	-6.83	125.18	128.60
5	14	141	A	N7-C8-N9	6.83	117.22	113.80
5	14	330	A	N3-C4-C5	6.83	131.58	126.80
5	1H	337	C	C4-C5-C6	6.83	120.82	117.40
5	1H	588	U	N1-C2-O2	6.83	127.58	122.80
5	14	998	C	N1-C2-O2	6.83	123.00	118.90
5	1H	598	G	O5'-P-OP2	-6.83	99.55	105.70
5	1H	777	A	C5-C6-N6	6.83	129.16	123.70
1	1G	453	A	O5'-P-OP1	-6.83	99.55	105.70
1	13	295	C	O5'-P-OP2	-6.83	99.55	105.70
5	14	1315	C	N3-C4-N4	-6.83	113.22	118.00
1	1G	554	C	C6-N1-C2	-6.83	117.57	120.30
1	13	1504	G	OP1-P-O3'	6.83	120.22	105.20
5	1H	486	C	O5'-P-OP2	6.83	118.89	110.70
5	14	2624	G	N1-C6-O6	6.83	124.00	119.90
5	1H	866	A	C4-N9-C1'	6.83	138.59	126.30
5	1H	1699	G	O5'-P-OP1	-6.83	99.56	105.70
5	14	1554	A	O4'-C1'-N9	6.82	113.66	108.20
5	1H	212	G	OP2-P-O3'	6.82	120.21	105.20
5	1H	618(A)	C	C4-C5-C6	-6.82	113.99	117.40
5	1H	2057	A	C8-N9-C4	6.82	108.53	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	135	C	N1-C2-O2	-6.82	114.81	118.90
5	1H	1425	G	C5-C6-O6	-6.82	124.51	128.60
5	14	2406	U	O4'-C1'-N1	-6.82	102.74	108.20
5	1H	672	C	OP2-P-O3'	6.82	120.21	105.20
5	1H	2247	A	C5-C6-N1	-6.82	114.29	117.70
5	1H	2729	G	C5-C6-O6	-6.82	124.51	128.60
5	14	1277	G	C8-N9-C4	6.82	109.13	106.40
5	1H	148	C	C2-N3-C4	-6.82	116.49	119.90
5	1H	621	A	N3-C4-C5	6.82	131.57	126.80
5	1H	1264	G	C5-C6-O6	6.82	132.69	128.60
5	1H	1428	C	O5'-P-OP2	6.82	118.88	110.70
5	1H	2083	G	C8-N9-C4	6.82	109.13	106.40
5	14	1681	G	N3-C4-C5	6.82	132.01	128.60
5	14	1827	C	C2-N3-C4	-6.82	116.49	119.90
5	1H	859	G	N3-C4-C5	6.82	132.01	128.60
5	14	2502	G	O5'-P-OP1	-6.81	99.57	105.70
5	14	2429	G	OP2-P-O3'	6.81	120.19	105.20
17	4I	108	ARG	NE-CZ-NH1	6.81	123.71	120.30
5	1H	232	G	N3-C4-N9	6.81	130.09	126.00
5	1H	2375	G	C8-N9-C4	6.81	109.12	106.40
5	14	949	C	N1-C2-O2	-6.81	114.81	118.90
5	1H	1332	G	C5-C6-N1	-6.81	108.10	111.50
5	1H	2058	A	N9-C4-C5	6.81	108.52	105.80
5	1H	448	U	C4-C5-C6	6.81	123.78	119.70
1	1G	227	G	C8-N9-C4	6.81	109.12	106.40
5	14	983	A	OP2-P-O3'	6.81	120.17	105.20
1	13	812	C	C2-N1-C1'	6.80	126.28	118.80
3	2K	17	C	C2-N1-C1'	6.80	126.28	118.80
5	1H	1993	U	N1-C2-O2	-6.80	118.04	122.80
5	1H	740	U	O5'-P-OP1	6.80	118.86	110.70
5	1H	974	G	N3-C2-N2	-6.80	115.14	119.90
5	1H	2822	G	N1-C6-O6	6.80	123.98	119.90
5	14	607	U	O5'-P-OP2	-6.80	99.58	105.70
5	14	2356	C	C2-N1-C1'	-6.80	111.32	118.80
5	14	2624	G	C5-C6-O6	-6.80	124.52	128.60
5	1H	2514	U	C5-C6-N1	-6.80	119.30	122.70
5	1H	941	A	C4-C5-N7	6.80	114.10	110.70
1	13	748	C	C6-N1-C2	-6.80	117.58	120.30
1	13	1266	G	N3-C4-C5	6.80	132.00	128.60
5	14	954	G	C8-N9-C4	-6.80	103.68	106.40
5	14	2237	G	O5'-P-OP2	-6.80	99.58	105.70
5	1H	411	G	N3-C4-C5	-6.80	125.20	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	836	G	C2-N3-C4	6.80	115.30	111.90
5	14	1780	A	C5-C6-N6	6.79	129.14	123.70
5	1H	733	G	C6-N1-C2	-6.79	121.02	125.10
5	1H	1602	U	O5'-P-OP1	-6.79	99.58	105.70
5	14	780	G	N1-C6-O6	6.79	123.98	119.90
5	14	2287	A	N1-C6-N6	6.79	122.68	118.60
5	1H	265	A	C5-C6-N1	-6.79	114.30	117.70
5	1H	1613	G	N3-C2-N2	6.79	124.66	119.90
5	14	2281	C	C6-N1-C2	-6.79	117.58	120.30
5	14	566	U	C6-N1-C2	6.79	125.07	121.00
5	14	856	C	C2-N1-C1'	6.79	126.27	118.80
5	14	992	C	C5-C6-N1	6.79	124.39	121.00
3	2K	9	G	C5-C6-O6	-6.79	124.53	128.60
5	1H	126	A	O5'-P-OP2	-6.79	99.59	105.70
5	1H	214	G	N3-C4-C5	-6.79	125.21	128.60
5	1H	1933	G	N3-C2-N2	-6.79	115.15	119.90
1	1G	522	C	O5'-P-OP2	-6.79	99.59	105.70
5	14	179	G	C8-N9-C4	6.79	109.11	106.40
27	1J	102	G	C5-C6-O6	6.79	132.67	128.60
1	13	1408	A	N1-C6-N6	6.79	122.67	118.60
5	14	2057	A	O5'-P-OP2	-6.79	99.59	105.70
5	14	499	U	N3-C2-O2	-6.78	117.45	122.20
5	1H	203	C	C5-C4-N4	-6.78	115.45	120.20
5	1H	2490	G	N3-C4-N9	-6.78	121.93	126.00
5	1H	2443	C	N3-C4-N4	6.78	122.75	118.00
5	14	2762	G	C4-C5-N7	6.78	113.51	110.80
1	13	1158	C	C2-N1-C1'	6.78	126.25	118.80
5	1H	651	G	OP1-P-OP2	-6.78	109.43	119.60
5	1H	1161	C	C5-C6-N1	6.78	124.39	121.00
5	1H	2608	G	N1-C6-O6	6.78	123.97	119.90
5	14	2688	U	N3-C4-O4	-6.78	114.66	119.40
5	1H	746	A	O4'-C1'-N9	6.78	113.62	108.20
5	1H	2307	G	N1-C6-O6	6.78	123.97	119.90
1	13	878	G	N3-C2-N2	6.77	124.64	119.90
5	14	138	G	N7-C8-N9	6.77	116.49	113.10
5	14	1827	C	C5-C6-N1	-6.77	117.61	121.00
5	14	2741	A	C8-N9-C4	6.77	108.51	105.80
5	1H	1310	G	C4-C5-N7	6.77	113.51	110.80
5	14	1381	G	C8-N9-C4	6.77	109.11	106.40
5	14	1969	A	O5'-P-OP2	6.77	118.82	110.70
5	14	2346	A	C2-N3-C4	-6.77	107.22	110.60
1	1G	249	U	O5'-P-OP2	-6.77	99.61	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1614	A	C4-C5-N7	6.77	114.08	110.70
5	14	2430	A	O5'-P-OP2	6.77	118.82	110.70
5	14	1121	C	C5-C6-N1	-6.76	117.62	121.00
5	14	1279	G	O5'-P-OP2	-6.76	99.61	105.70
5	1H	808	G	N1-C2-N2	-6.76	110.11	116.20
5	1H	869	G	N1-C6-O6	-6.76	115.84	119.90
5	14	1021	A	C2-N3-C4	-6.76	107.22	110.60
5	14	816	C	N3-C4-C5	6.76	124.60	121.90
5	14	1342	A	N1-C6-N6	6.76	122.66	118.60
5	1H	1128	A	O5'-P-OP1	-6.76	99.61	105.70
5	1H	2264	C	OP1-P-O3'	6.76	120.07	105.20
5	14	736	C	O5'-P-OP1	-6.76	99.62	105.70
5	1H	2345	G	C4-C5-N7	6.76	113.50	110.80
1	1G	481	G	C4-N9-C1'	6.76	135.28	126.50
5	1H	1630	G	C5-C6-N1	6.75	114.88	111.50
5	1H	2392	A	C6-N1-C2	6.75	122.65	118.60
5	1H	195	A	P-O3'-C3'	6.75	127.81	119.70
5	1H	2378	A	N1-C6-N6	6.75	122.65	118.60
5	14	1253	A	N1-C6-N6	6.75	122.65	118.60
1	13	1299	A	N7-C8-N9	6.75	117.17	113.80
16	3I	33	ARG	NE-CZ-NH1	-6.75	116.92	120.30
1	1G	1455	G	N1-C6-O6	6.75	123.95	119.90
1	13	1025	U	C5-C4-O4	-6.75	121.85	125.90
5	1H	2363	C	C6-N1-C2	6.75	123.00	120.30
1	13	792	A	N9-C1'-C2'	6.75	122.77	114.00
5	14	511	U	C6-N1-C2	-6.75	116.95	121.00
5	1H	185	U	C5-C6-N1	-6.75	119.33	122.70
1	1G	1188	A	C8-N9-C4	6.75	108.50	105.80
5	14	1772	G	N1-C6-O6	6.75	123.95	119.90
5	1H	44	A	O5'-P-OP1	-6.75	99.63	105.70
5	1H	624	C	O5'-P-OP1	-6.74	99.63	105.70
5	1H	1967	C	N3-C4-C5	-6.74	119.20	121.90
5	1H	2373	G	C4-C5-C6	6.74	122.85	118.80
27	1J	81	G	C4-C5-N7	6.74	113.50	110.80
1	1G	299	G	O5'-P-OP2	6.74	118.79	110.70
5	1H	2319	G	C8-N9-C4	-6.74	103.70	106.40
5	1H	797	C	C5-C6-N1	-6.74	117.63	121.00
5	1H	2440	C	C5-C4-N4	6.74	124.92	120.20
1	13	1403	C	N3-C4-N4	-6.74	113.28	118.00
5	14	797	C	N3-C4-N4	6.74	122.72	118.00
5	14	1763	G	O5'-P-OP2	-6.74	99.64	105.70
2	3K	71	G	N7-C8-N9	-6.74	109.73	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	464	U	N3-C2-O2	-6.74	117.48	122.20
1	13	1519	A	C5-C6-N6	6.74	129.09	123.70
5	1H	2699	C	C5-C4-N4	-6.74	115.48	120.20
5	1H	1138	G	O5'-P-OP1	-6.74	99.64	105.70
5	1H	1837	C	C5-C6-N1	6.74	124.37	121.00
5	1H	831	G	C8-N9-C4	6.73	109.09	106.40
1	13	57	G	N3-C4-C5	-6.73	125.23	128.60
27	16	41	U	O5'-P-OP1	-6.73	99.64	105.70
5	14	2323	G	N1-C6-O6	6.73	123.94	119.90
3	2K	62	C	O5'-P-OP2	-6.73	99.64	105.70
5	1H	584	C	C5-C4-N4	-6.73	115.49	120.20
5	1H	2331	G	N3-C4-C5	6.73	131.97	128.60
5	14	1786	A	N1-C2-N3	6.73	132.66	129.30
5	1H	576	U	N1-C2-O2	-6.73	118.09	122.80
5	1H	445	C	N3-C2-O2	-6.73	117.19	121.90
5	1H	663	G	N3-C4-C5	-6.73	125.24	128.60
5	1H	1200	C	C5-C6-N1	-6.73	117.64	121.00
5	1H	1225	C	OP1-P-OP2	6.73	129.69	119.60
5	1H	2253	G	C8-N9-C1'	6.73	135.75	127.00
1	13	1203	C	C6-N1-C2	-6.72	117.61	120.30
5	14	1366	A	N1-C6-N6	6.72	122.64	118.60
5	1H	914	C	N3-C4-C5	-6.72	119.21	121.90
5	1H	1161	C	C6-N1-C2	-6.72	117.61	120.30
5	1H	1764	G	C5-C6-O6	6.72	132.63	128.60
5	14	1935	G	OP1-P-OP2	-6.72	109.52	119.60
27	1J	60	C	C6-N1-C2	-6.72	117.61	120.30
5	14	2464	C	N3-C4-C5	6.72	124.59	121.90
5	1H	245	G	N3-C4-C5	-6.72	125.24	128.60
5	1H	955	C	C5-C6-N1	-6.72	117.64	121.00
5	1H	1821	A	N1-C6-N6	-6.72	114.57	118.60
1	1G	413	G	N3-C4-N9	-6.72	121.97	126.00
5	14	822	U	N3-C4-O4	-6.72	114.70	119.40
5	14	1248	G	C8-N9-C4	6.72	109.09	106.40
5	14	2512	C	O5'-P-OP1	-6.72	99.65	105.70
5	1H	2708	G	N1-C6-O6	6.72	123.93	119.90
5	14	410	G	O5'-P-OP2	6.72	118.76	110.70
5	14	1372	U	N1-C2-O2	-6.72	118.10	122.80
5	14	1517	G	OP1-P-O3'	6.72	119.97	105.20
5	1H	115	C	N1-C2-O2	-6.72	114.87	118.90
1	13	792	A	C3'-C2'-C1'	-6.71	96.13	101.50
5	1H	965	C	OP1-P-OP2	6.71	129.67	119.60
5	1H	2205	C	O5'-P-OP2	-6.71	99.66	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1670	C	C4-C5-C6	6.71	120.76	117.40
5	1H	432	A	C5-N7-C8	-6.71	100.54	103.90
5	1H	528	A	C5-N7-C8	-6.71	100.54	103.90
5	1H	802	A	C8-N9-C4	-6.71	103.12	105.80
5	1H	1368	G	C5-C6-N1	6.71	114.86	111.50
27	16	115	G	C6-N1-C2	-6.71	121.07	125.10
1	1G	576	G	C4-C5-C6	6.71	122.83	118.80
5	1H	140	A	C6-C5-N7	-6.71	127.60	132.30
5	14	1251	C	OP1-P-OP2	6.71	129.66	119.60
5	14	1989	G	N1-C2-N2	6.71	122.24	116.20
1	13	300	A	O5'-P-OP1	-6.71	99.67	105.70
5	14	472	A	C5-C6-N6	6.71	129.07	123.70
5	14	2700	C	C6-N1-C2	6.71	122.98	120.30
5	1H	735	A	N1-C6-N6	6.71	122.62	118.60
5	1H	1463	C	C6-N1-C2	-6.71	117.62	120.30
1	13	422	C	P-O3'-C3'	6.71	127.75	119.70
5	1H	1255	U	C4-C5-C6	6.70	123.72	119.70
48	J8	2	SER	N-CA-C	6.70	129.09	111.00
5	1H	1307	A	N1-C6-N6	6.70	122.62	118.60
5	1H	1900	A	C5'-C4'-O4'	-6.70	101.06	109.10
5	1H	839	U	N3-C4-C5	-6.70	110.58	114.60
5	1H	2572	A	C8-N9-C4	6.70	108.48	105.80
5	1H	1786	A	C4-N9-C1'	6.70	138.35	126.30
5	1H	1830	C	N1-C2-O2	-6.70	114.88	118.90
1	13	827	U	N1-C2-N3	6.70	118.92	114.90
5	1H	1799	G	P-O3'-C3'	6.70	127.73	119.70
5	1H	751	A	O5'-P-OP2	6.69	118.73	110.70
1	1G	768	A	N1-C2-N3	6.69	132.65	129.30
1	13	135	C	N1-C2-O2	-6.69	114.89	118.90
5	14	704	G	N1-C6-O6	6.69	123.91	119.90
5	14	2713	A	N7-C8-N9	6.69	117.14	113.80
5	1H	470	A	O5'-P-OP1	-6.69	99.68	105.70
5	1H	2559	C	C4-C5-C6	6.69	120.75	117.40
5	1H	1352	U	O5'-P-OP2	-6.69	99.68	105.70
5	14	365	C	N1-C2-O2	-6.69	114.89	118.90
5	1H	481	G	N1-C6-O6	6.69	123.91	119.90
5	1H	1948	G	N1-C6-O6	-6.69	115.89	119.90
5	1H	2712(A)	A	C8-N9-C4	6.69	108.47	105.80
1	13	963	G	N3-C4-N9	6.68	130.01	126.00
1	13	1521	G	O5'-P-OP1	-6.68	99.68	105.70
5	14	1321	A	C8-N9-C4	6.68	108.47	105.80
5	1H	528	A	C2-N3-C4	-6.68	107.26	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2590	A	C2-N3-C4	-6.68	107.26	110.60
1	13	50	A	C8-N9-C4	-6.68	103.13	105.80
5	1H	144	C	C4-C5-C6	6.68	120.74	117.40
5	1H	2241	A	C2-N3-C4	-6.68	107.26	110.60
1	13	888	G	C2-N3-C4	-6.68	108.56	111.90
5	1H	1328	G	N3-C2-N2	6.68	124.58	119.90
5	1H	1520	U	N3-C2-O2	-6.68	117.53	122.20
5	1H	2308	G	C6-N1-C2	6.68	129.11	125.10
27	16	49	C	N3-C4-N4	6.68	122.67	118.00
5	1H	693	C	C5-C4-N4	6.68	124.87	120.20
5	1H	1382	G	C2-N3-C4	-6.68	108.56	111.90
5	1H	2589	A	O5'-P-OP2	-6.68	99.69	105.70
5	1H	2638	G	N3-C4-C5	-6.68	125.26	128.60
1	1G	513	C	C5-C6-N1	6.68	124.34	121.00
5	1H	1786	A	C8-N9-C4	-6.67	103.13	105.80
1	1G	921	U	O5'-P-OP1	6.67	118.71	110.70
1	13	968	A	N1-C6-N6	6.67	122.60	118.60
5	1H	2406	U	O4'-C1'-N1	-6.67	102.86	108.20
5	1H	984	A	C4-C5-N7	6.67	114.03	110.70
5	1H	2011	U	N3-C2-O2	6.67	126.87	122.20
1	13	812	C	N1-C2-O2	6.67	122.90	118.90
1	13	449	C	N3-C2-O2	-6.67	117.23	121.90
5	14	2386	C	C4-C5-C6	6.67	120.73	117.40
5	14	2437	U	C5-C4-O4	6.67	129.90	125.90
5	1H	194	G	C5-C6-N1	6.67	114.83	111.50
5	1H	1300	U	N1-C2-O2	-6.67	118.13	122.80
5	1H	1513	C	C5-C6-N1	6.67	124.33	121.00
5	1H	197	A	OP2-P-O3'	6.67	119.86	105.20
1	13	973	G	O5'-P-OP1	-6.66	99.70	105.70
5	1H	618(A)	C	C5-C6-N1	6.66	124.33	121.00
5	1H	755	C	OP2-P-O3'	6.66	119.86	105.20
5	14	621	A	C5-N7-C8	-6.66	100.57	103.90
5	1H	1821	A	N1-C2-N3	6.66	132.63	129.30
5	14	756	C	N3-C4-C5	-6.66	119.24	121.90
5	14	780	G	C5-C6-O6	-6.66	124.60	128.60
5	14	2272	U	N3-C2-O2	-6.66	117.54	122.20
5	1H	56	A	N9-C4-C5	-6.66	103.14	105.80
5	1H	832	G	C8-N9-C4	-6.66	103.74	106.40
5	1H	1636	C	N1-C2-O2	-6.66	114.90	118.90
27	1J	29	A	N1-C6-N6	6.66	122.60	118.60
1	13	748	C	C2-N1-C1'	6.66	126.12	118.80
5	14	2339	G	O5'-P-OP2	-6.66	99.71	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1471	A	C5-N7-C8	-6.66	100.57	103.90
5	1H	1608	A	O5'-P-OP1	-6.66	99.71	105.70
5	1H	2596	U	C5-C4-O4	-6.66	121.91	125.90
5	14	831	G	C5-C6-O6	-6.66	124.61	128.60
5	1H	617	G	C8-N9-C4	6.66	109.06	106.40
5	1H	1945	G	O5'-P-OP1	-6.66	99.71	105.70
5	1H	2074	U	O5'-P-OP1	-6.66	99.71	105.70
1	13	1406	U	C5-C6-N1	-6.65	119.37	122.70
5	1H	444	C	OP1-P-OP2	-6.65	109.62	119.60
5	1H	690	G	C8-N9-C4	6.65	109.06	106.40
5	1H	2508	G	N1-C6-O6	-6.65	115.91	119.90
1	1G	481	G	C8-N9-C4	-6.65	103.74	106.40
5	1H	128	C	C6-N1-C2	6.65	122.96	120.30
5	1H	450	G	C5-C6-N1	-6.65	108.17	111.50
5	1H	1611	C	C5-C4-N4	-6.65	115.55	120.20
5	14	750	A	C8-N9-C4	-6.65	103.14	105.80
5	1H	382	G	N1-C6-O6	6.65	123.89	119.90
5	1H	1210	A	C6-C5-N7	-6.65	127.65	132.30
27	16	29	A	C8-N9-C4	-6.65	103.14	105.80
1	1G	413	G	C4-N9-C1'	-6.65	117.86	126.50
5	1H	1471	A	N7-C8-N9	6.65	117.12	113.80
5	14	1950	G	C4-N9-C1'	6.64	135.14	126.50
5	1H	732	C	C4-C5-C6	6.64	120.72	117.40
5	1H	2068	U	N1-C2-O2	6.64	127.45	122.80
5	1H	2080	G	O5'-P-OP1	-6.64	99.72	105.70
1	1G	1442	G	N3-C4-N9	-6.64	122.02	126.00
5	14	2070	G	N3-C2-N2	6.64	124.55	119.90
5	1H	2509	G	N7-C8-N9	-6.64	109.78	113.10
27	16	81	G	N1-C2-N2	-6.64	110.22	116.20
1	13	1529	G	C8-N9-C4	-6.64	103.74	106.40
5	14	205	G	N9-C4-C5	-6.64	102.74	105.40
5	1H	2577	A	N9-C4-C5	6.64	108.46	105.80
5	1H	114	U	OP1-P-OP2	-6.64	109.64	119.60
5	1H	1669	A	N1-C2-N3	6.64	132.62	129.30
5	14	1639	U	N3-C2-O2	-6.64	117.56	122.20
5	14	2872	G	C8-N9-C4	-6.64	103.75	106.40
3	2K	77	A	C4-C5-N7	6.64	114.02	110.70
5	1H	735	A	N9-C4-C5	-6.64	103.15	105.80
5	1H	809	G	N3-C4-N9	6.64	129.98	126.00
5	14	1678	G	N7-C8-N9	6.63	116.42	113.10
2	3K	71	G	C5-N7-C8	6.63	107.62	104.30
1	13	576	G	C5-C6-N1	-6.63	108.18	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	110	G	N7-C8-N9	-6.63	109.78	113.10
1	13	1530	G	C4-C5-N7	6.63	113.45	110.80
5	14	481	G	O5'-P-OP2	-6.63	99.73	105.70
5	1H	1350	C	C6-N1-C2	6.63	122.95	120.30
5	1H	797	C	O5'-P-OP1	6.63	118.65	110.70
5	14	1650	G	O5'-P-OP2	-6.63	99.74	105.70
5	1H	1937	A	C5-N7-C8	6.63	107.21	103.90
5	14	974(A)	C	C6-N1-C2	-6.62	117.65	120.30
5	14	2867	G	O4'-C1'-N9	6.62	113.50	108.20
5	1H	845	G	P-O3'-C3'	6.62	127.65	119.70
5	1H	2394	C	O5'-P-OP2	-6.62	99.74	105.70
1	1G	317	G	N1-C6-O6	6.62	123.88	119.90
5	14	1989	G	C8-N9-C4	-6.62	103.75	106.40
5	1H	954	G	OP2-P-O3'	6.62	119.77	105.20
5	1H	1255	U	N1-C2-O2	-6.62	118.16	122.80
5	1H	1786	A	N9-C1'-C2'	6.62	122.61	114.00
5	1H	2303	G	OP1-P-O3'	6.62	119.77	105.20
1	13	1474	G	N1-C6-O6	-6.62	115.93	119.90
5	1H	1368	G	C6-N1-C2	-6.62	121.13	125.10
5	1H	2594	C	N1-C2-N3	6.62	123.83	119.20
43	E8	90	ARG	NE-CZ-NH1	-6.62	116.99	120.30
1	1G	1502	A	C5-N7-C8	-6.62	100.59	103.90
5	14	917	A	O5'-P-OP1	-6.62	99.74	105.70
5	14	963	U	O5'-P-OP1	-6.62	99.74	105.70
5	14	1621	U	O5'-P-OP1	-6.62	99.74	105.70
5	1H	676	A	OP1-P-OP2	6.62	129.53	119.60
5	1H	1579	A	C4-C5-C6	6.62	120.31	117.00
5	1H	1779	U	OP1-P-OP2	6.62	129.53	119.60
5	1H	1957	C	N3-C4-N4	-6.62	113.37	118.00
5	1H	66	C	C6-N1-C2	-6.62	117.65	120.30
5	14	1978	A	OP2-P-O3'	6.62	119.75	105.20
5	14	2615	U	C5-C4-O4	-6.62	121.93	125.90
5	1H	1201	C	N3-C4-N4	6.62	122.63	118.00
5	1H	1426	G	C8-N9-C4	-6.62	103.75	106.40
5	14	2226	C	C2-N1-C1'	6.61	126.08	118.80
5	1H	2688	U	C5-C6-N1	-6.61	119.39	122.70
5	14	1382	G	C5-C6-N1	6.61	114.81	111.50
1	1G	366	C	C6-N1-C2	6.61	122.94	120.30
5	14	2779	U	C5-C4-O4	6.61	129.87	125.90
1	1G	1356	G	C8-N9-C4	-6.61	103.76	106.40
5	14	1617	C	C4-C5-C6	6.61	120.70	117.40
5	1H	165	U	C2-N1-C1'	6.61	125.63	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	16	115	G	N3-C4-N9	6.61	129.97	126.00
5	14	475	U	N3-C2-O2	-6.61	117.58	122.20
5	14	1399	C	OP2-P-O3'	6.61	119.73	105.20
5	14	2360	A	C8-N9-C4	6.61	108.44	105.80
5	1H	468	G	O5'-P-OP2	6.61	118.63	110.70
5	1H	775	G	N3-C2-N2	6.61	124.52	119.90
5	1H	799	G	OP1-P-O3'	-6.61	90.67	105.20
27	16	43	C	C4-C5-C6	6.60	120.70	117.40
5	14	801	G	N1-C6-O6	-6.60	115.94	119.90
5	1H	1367	A	N1-C6-N6	6.60	122.56	118.60
1	13	910	C	C6-N1-C2	6.60	122.94	120.30
5	1H	1612	C	N3-C4-N4	6.60	122.62	118.00
5	1H	1842	G	C8-N9-C4	6.60	109.04	106.40
1	13	1498	U	C2-N1-C1'	6.60	125.62	117.70
5	1H	1422	G	C8-N9-C4	-6.60	103.76	106.40
5	1H	2082	A	C6-N1-C2	-6.60	114.64	118.60
5	1H	2304	G	N3-C4-C5	6.60	131.90	128.60
1	1G	45	U	C5-C6-N1	-6.60	119.40	122.70
1	13	21	G	N3-C4-C5	-6.59	125.30	128.60
5	14	1626	G	N3-C2-N2	-6.59	115.28	119.90
5	14	1790	C	C5-C4-N4	-6.59	115.58	120.20
5	1H	2501	C	C2-N1-C1'	-6.59	111.55	118.80
5	14	982	C	N3-C4-C5	-6.59	119.26	121.90
5	1H	1603	A	C8-N9-C4	-6.59	103.16	105.80
5	14	792	G	C5-C6-O6	6.59	132.55	128.60
5	1H	124	G	N9-C4-C5	-6.59	102.76	105.40
5	1H	842	G	C4-C5-N7	6.59	113.44	110.80
5	14	2087	G	N9-C4-C5	-6.59	102.77	105.40
5	14	2575	C	C5-C4-N4	6.59	124.81	120.20
5	1H	1394	U	C5-C6-N1	6.59	125.99	122.70
1	1G	31	G	N1-C6-O6	6.59	123.85	119.90
5	1H	1637	A	N1-C6-N6	-6.58	114.65	118.60
5	1H	1773	A	C4-C5-C6	6.58	120.29	117.00
5	14	1141	U	OP2-P-O3'	6.58	119.69	105.20
5	14	1318	C	C6-N1-C2	-6.58	117.67	120.30
5	1H	606	U	O5'-P-OP2	-6.58	99.78	105.70
5	1H	1343	G	C8-N9-C4	-6.58	103.77	106.40
5	1H	1610	A	N1-C6-N6	6.58	122.55	118.60
5	14	1271	G	N3-C4-C5	-6.58	125.31	128.60
5	1H	2068	U	C2-N3-C4	6.58	130.95	127.00
1	1G	11	G	O5'-P-OP2	6.58	118.60	110.70
5	1H	120	U	N1-C2-N3	6.58	118.85	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	827	U	C5-C4-O4	6.58	129.85	125.90
5	14	2622	C	C5-C6-N1	-6.58	117.71	121.00
5	1H	508	G	N7-C8-N9	6.58	116.39	113.10
5	1H	673	C	O5'-P-OP1	6.58	118.59	110.70
5	1H	2254	C	N1-C2-O2	-6.58	114.95	118.90
5	1H	2602	A	N1-C6-N6	-6.58	114.65	118.60
1	13	792	A	N9-C4-C5	-6.58	103.17	105.80
5	1H	1302	A	OP1-P-OP2	6.58	129.47	119.60
1	13	402	G	O5'-P-OP2	-6.58	99.78	105.70
5	14	1427	A	P-O3'-C3'	6.58	127.59	119.70
5	14	2841	C	C6-N1-C2	6.58	122.93	120.30
5	1H	1307	A	N9-C4-C5	-6.58	103.17	105.80
5	1H	1836	C	N3-C2-O2	-6.58	117.30	121.90
1	13	1374	A	O4'-C1'-N9	6.57	113.46	108.20
5	14	1518	C	O5'-P-OP1	-6.57	99.78	105.70
5	14	1783	A	C8-N9-C4	-6.57	103.17	105.80
5	1H	728	G	C8-N9-C4	6.57	109.03	106.40
5	1H	2311	A	C5-N7-C8	-6.57	100.61	103.90
1	1G	904	C	O5'-P-OP1	-6.57	99.78	105.70
5	1H	1189	A	N1-C6-N6	6.57	122.54	118.60
5	1H	2585	U	N3-C4-O4	-6.57	114.80	119.40
5	14	2609	U	C5-C6-N1	-6.57	119.42	122.70
5	14	2681	C	C4-C5-C6	6.57	120.69	117.40
1	13	1332	A	N7-C8-N9	6.57	117.08	113.80
5	1H	407	G	N3-C2-N2	6.57	124.50	119.90
5	1H	1848	A	N9-C4-C5	-6.57	103.17	105.80
1	13	1195	C	C5-C6-N1	6.56	124.28	121.00
5	14	1364	G	C8-N9-C4	6.56	109.03	106.40
5	14	2388	A	O4'-C1'-N9	6.56	113.45	108.20
5	1H	59	U	C6-N1-C2	-6.56	117.06	121.00
5	1H	1381	G	N3-C4-N9	-6.56	122.06	126.00
1	1G	218	C	C6-N1-C2	-6.56	117.67	120.30
1	1G	939	G	O5'-P-OP2	-6.56	99.79	105.70
5	1H	391	G	C6-C5-N7	-6.56	126.46	130.40
5	1H	1279	G	O5'-P-OP1	6.56	118.57	110.70
5	1H	2244	U	C4-C5-C6	6.56	123.64	119.70
5	14	114	U	C2-N1-C1'	6.56	125.57	117.70
5	1H	140	A	OP2-P-O3'	6.56	119.62	105.20
5	1H	1281	G	O5'-P-OP2	6.56	118.57	110.70
5	1H	1700	A	O5'-P-OP2	-6.56	99.80	105.70
5	1H	2336	A	N1-C2-N3	-6.56	126.02	129.30
5	1H	2377	A	C4-C5-N7	6.56	113.98	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1754	C	OP1-P-O3'	6.55	119.62	105.20
5	1H	1674	G	N1-C6-O6	6.55	123.83	119.90
5	1H	605	C	C6-N1-C2	6.55	122.92	120.30
1	13	1227	A	C8-N9-C4	-6.55	103.18	105.80
5	1H	777	A	N9-C4-C5	6.55	108.42	105.80
5	1H	1027	A	N1-C2-N3	6.55	132.58	129.30
5	1H	2069	G	C8-N9-C4	6.55	109.02	106.40
1	1G	1417	G	N1-C6-O6	6.55	123.83	119.90
1	13	765	G	N9-C4-C5	-6.55	102.78	105.40
5	1H	2068	U	C5-C4-O4	6.55	129.83	125.90
5	1H	2544	G	N9-C4-C5	-6.55	102.78	105.40
5	1H	2712	U	C6-N1-C1'	-6.55	112.03	121.20
5	14	138	G	C8-N9-C4	-6.55	103.78	106.40
39	A8	9	ARG	NE-CZ-NH1	-6.55	117.03	120.30
5	14	687	C	OP2-P-O3'	6.54	119.60	105.20
5	1H	1825	A	N9-C4-C5	6.54	108.42	105.80
1	13	814	A	C8-N9-C4	6.54	108.42	105.80
5	1H	398	G	C2-N3-C4	-6.54	108.63	111.90
5	1H	845	G	C5-N7-C8	-6.54	101.03	104.30
5	1H	2253	G	C4-N9-C1'	-6.54	117.99	126.50
5	1H	681	G	N1-C2-N2	-6.54	110.31	116.20
5	1H	681	G	N1-C2-N3	6.54	127.83	123.90
5	1H	961	C	N1-C2-O2	-6.54	114.97	118.90
5	1H	2375	G	N9-C4-C5	-6.54	102.78	105.40
1	13	263	A	O5'-P-OP2	6.54	118.55	110.70
5	1H	948	G	C5-N7-C8	-6.54	101.03	104.30
5	1H	582	G	C4-C5-N7	6.54	113.42	110.80
5	1H	1554	A	C4-C5-C6	6.54	120.27	117.00
5	1H	776	G	OP1-P-OP2	6.54	129.41	119.60
5	1H	2256	G	N1-C6-O6	-6.54	115.98	119.90
5	14	501	A	O5'-P-OP2	-6.54	99.82	105.70
5	14	252	G	C2-N3-C4	6.53	115.17	111.90
5	14	1900	A	C8-N9-C4	-6.53	103.19	105.80
5	14	2492	U	O5'-P-OP1	-6.53	99.82	105.70
5	1H	1026	U	O4'-C1'-N1	6.53	113.43	108.20
5	1H	1245	G	C4-C5-N7	-6.53	108.19	110.80
1	1G	800	G	N3-C2-N2	-6.53	115.33	119.90
5	14	2239	G	N1-C2-N2	-6.53	110.32	116.20
5	1H	811	U	OP1-P-OP2	6.53	129.40	119.60
5	14	2304	G	C8-N9-C4	-6.53	103.79	106.40
5	14	2638	G	P-O3'-C3'	6.53	127.54	119.70
5	14	686	G	C6-C5-N7	-6.53	126.48	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2573	C	C2-N1-C1'	6.53	125.98	118.80
5	1H	1698	A	C4-C5-N7	6.53	113.96	110.70
5	14	803	U	N3-C2-O2	-6.52	117.63	122.20
5	14	929	G	C5-C6-O6	-6.52	124.69	128.60
5	14	2681	C	N3-C4-N4	-6.52	113.44	118.00
5	1H	85	G	O5'-P-OP1	6.52	118.53	110.70
5	1H	530	G	C4-C5-C6	-6.52	114.89	118.80
5	1H	536	A	C6-N1-C2	-6.52	114.69	118.60
1	13	1322	C	C6-N1-C1'	-6.52	112.97	120.80
5	14	929	G	C6-C5-N7	-6.52	126.49	130.40
3	2K	35	C	C2-N1-C1'	6.52	125.97	118.80
5	1H	128	C	N3-C4-C5	6.52	124.51	121.90
5	1H	823	G	N9-C4-C5	-6.52	102.79	105.40
1	13	1065	U	P-O3'-C3'	6.52	127.52	119.70
5	14	2275	C	P-O3'-C3'	6.52	127.52	119.70
5	14	2503	A	C2-N3-C4	6.52	113.86	110.60
5	1H	53	A	OP1-P-O3'	6.52	119.54	105.20
5	14	74	A	C5-N7-C8	-6.52	100.64	103.90
26	1K	38	A	N1-C6-N6	6.52	122.51	118.60
1	1G	963	G	N1-C2-N2	-6.52	110.33	116.20
5	1H	247	G	N9-C4-C5	-6.51	102.80	105.40
5	1H	1673	U	C6-N1-C2	6.51	124.91	121.00
5	14	2073	C	N3-C4-N4	6.51	122.56	118.00
1	1G	232	G	C6-C5-N7	-6.51	126.49	130.40
1	1G	598	U	N3-C4-C5	-6.51	110.69	114.60
2	3L	76	A	O4'-C1'-N9	6.51	113.41	108.20
5	14	570	G	O5'-P-OP1	6.51	118.51	110.70
5	1H	760	G	N1-C6-O6	6.51	123.81	119.90
5	1H	1606	G	C5-C6-O6	-6.51	124.69	128.60
5	14	1703	G	C5-N7-C8	-6.51	101.05	104.30
5	1H	238	C	N1-C2-O2	-6.51	115.00	118.90
1	13	23	C	N3-C4-C5	-6.51	119.30	121.90
1	13	509	A	C2'-C3'-O3'	6.51	124.11	113.70
5	14	621	A	C5-C6-N1	-6.51	114.45	117.70
5	1H	728	G	N9-C4-C5	-6.51	102.80	105.40
5	1H	1187	G	OP2-P-O3'	6.51	119.51	105.20
5	1H	1600	C	OP1-P-O3'	6.51	119.52	105.20
1	1G	1228	C	O5'-P-OP2	-6.51	99.84	105.70
5	14	2606	C	O5'-P-OP1	-6.50	99.85	105.70
5	1H	2373	G	N1-C2-N3	6.50	127.80	123.90
1	13	190	G	N3-C4-C5	-6.50	125.35	128.60
5	14	569	U	C5-C6-N1	-6.50	119.45	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	191(F)	U	C6-N1-C2	-6.50	117.10	121.00
1	13	356	A	O4'-C1'-N9	6.50	113.40	108.20
5	14	111	A	C2-N3-C4	-6.50	107.35	110.60
5	1H	726	G	N1-C6-O6	6.50	123.80	119.90
5	14	1475	G	C8-N9-C4	-6.50	103.80	106.40
5	14	1318	C	OP1-P-OP2	-6.49	109.86	119.60
1	1G	690	G	N3-C4-N9	-6.49	122.10	126.00
1	13	584	G	N1-C6-O6	-6.49	116.00	119.90
5	1H	828	U	C2-N3-C4	6.49	130.90	127.00
5	1H	2008	C	C5-C6-N1	-6.49	117.75	121.00
5	1H	2050	C	C6-N1-C2	-6.49	117.70	120.30
5	14	558	G	C8-N9-C4	6.49	109.00	106.40
5	1H	265	A	C6-C5-N7	-6.49	127.76	132.30
5	1H	668	G	C4-C5-N7	6.49	113.40	110.80
1	13	1198	G	O5'-P-OP1	-6.49	99.86	105.70
1	13	1502	A	C4-N9-C1'	6.49	137.98	126.30
5	1H	621	A	O4'-C1'-N9	6.49	113.39	108.20
5	1H	1275	A	O5'-P-OP1	-6.49	99.86	105.70
5	1H	2060	A	N9-C4-C5	6.49	108.40	105.80
5	1H	2424	C	OP1-P-OP2	6.49	129.33	119.60
1	1G	398	C	N3-C4-C5	6.49	124.50	121.90
1	1G	512	U	N3-C2-O2	-6.49	117.66	122.20
1	13	311	C	C5-C6-N1	6.49	124.24	121.00
1	13	1329	A	N1-C6-N6	6.49	122.49	118.60
3	2L	77	A	N3-C4-C5	6.49	131.34	126.80
5	14	492	A	O5'-P-OP2	-6.49	99.86	105.70
5	1H	206	U	C5-C6-N1	-6.49	119.46	122.70
5	1H	2771	C	C6-N1-C2	-6.49	117.71	120.30
1	1G	942	G	OP1-P-O3'	6.49	119.47	105.20
5	14	802	A	C6-N1-C2	-6.48	114.71	118.60
5	14	2238	G	O4'-C1'-N9	-6.48	103.01	108.20
5	14	2427	C	C5-C4-N4	-6.48	115.66	120.20
5	14	197	A	P-O3'-C3'	6.48	127.48	119.70
1	1G	1418	A	N1-C6-N6	6.48	122.49	118.60
5	1H	439	G	OP1-P-O3'	6.48	119.46	105.20
5	1H	1407	C	C5-C6-N1	6.48	124.24	121.00
5	14	783	A	N1-C2-N3	6.48	132.54	129.30
5	1H	690	G	N3-C4-N9	6.48	129.89	126.00
5	1H	1559	G	C6-C5-N7	-6.48	126.51	130.40
5	1H	1678	G	O5'-P-OP2	-6.48	99.87	105.70
5	14	2435	A	N7-C8-N9	6.48	117.04	113.80
5	1H	2385	C	N3-C2-O2	-6.48	117.37	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	975	G	N1-C2-N2	6.47	122.03	116.20
5	1H	1216	G	C8-N9-C4	-6.47	103.81	106.40
5	1H	1318	C	O5'-P-OP2	6.47	118.47	110.70
45	G8	81	LYS	N-CA-C	-6.47	93.52	111.00
5	14	330	A	N9-C4-C5	-6.47	103.21	105.80
5	14	1572	A	C6-N1-C2	-6.47	114.72	118.60
5	14	1827	C	O5'-P-OP1	6.47	118.47	110.70
5	1H	2412	A	C6-N1-C2	-6.47	114.72	118.60
5	1H	485	C	N1-C2-O2	-6.47	115.02	118.90
5	1H	1197	G	N7-C8-N9	-6.47	109.86	113.10
5	1H	2660	A	O5'-P-OP2	-6.47	99.88	105.70
5	14	2069	G	N9-C4-C5	-6.47	102.81	105.40
5	14	2506	U	C6-N1-C1'	-6.47	112.14	121.20
5	1H	793	A	C4-C5-N7	6.47	113.94	110.70
5	1H	2726	U	C5-C6-N1	-6.47	119.47	122.70
1	1G	257	G	C5-C6-O6	-6.47	124.72	128.60
3	2L	72	C	N3-C4-C5	6.47	124.49	121.90
5	14	1939	U	OP2-P-O3'	6.47	119.43	105.20
5	1H	602	G	C6-C5-N7	-6.47	126.52	130.40
5	1H	774	A	C4-N9-C1'	-6.47	114.66	126.30
5	1H	2017	U	N3-C4-O4	6.47	123.93	119.40
5	1H	2065	C	OP2-P-O3'	6.47	119.43	105.20
5	14	141	A	C2-N3-C4	-6.46	107.37	110.60
5	14	834	C	OP2-P-O3'	6.46	119.42	105.20
5	1H	213	A	C5-C6-N6	-6.46	118.53	123.70
5	1H	1835	G	N3-C2-N2	6.46	124.43	119.90
1	13	1128	C	C6-N1-C2	-6.46	117.72	120.30
5	1H	845	G	C8-N9-C1'	6.46	135.40	127.00
5	1H	852	G	C8-N9-C4	6.46	108.98	106.40
5	14	2199	A	O5'-P-OP1	-6.46	99.89	105.70
5	1H	1428	C	C2-N1-C1'	-6.46	111.69	118.80
1	1G	18	C	C6-N1-C2	-6.46	117.72	120.30
5	1H	1938	A	O5'-P-OP1	-6.46	99.89	105.70
5	14	828	U	C4-C5-C6	6.46	123.58	119.70
5	1H	613	U	C2-N3-C4	-6.46	123.12	127.00
5	1H	1196	C	O5'-P-OP2	6.46	118.45	110.70
5	14	192	C	N1-C2-O2	-6.46	115.03	118.90
5	1H	99	U	C5-C6-N1	6.46	125.93	122.70
5	1H	662	G	OP1-P-OP2	6.46	129.28	119.60
5	1H	698	C	C4-C5-C6	6.46	120.63	117.40
5	1H	2701	C	C2-N3-C4	-6.46	116.67	119.90
5	14	1314	C	N1-C2-O2	6.46	122.77	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2326	C	O5'-P-OP1	-6.46	99.89	105.70
5	14	530	G	N3-C4-N9	6.45	129.87	126.00
5	14	688	U	OP2-P-O3'	6.45	119.40	105.20
5	14	2714	G	C8-N9-C4	6.45	108.98	106.40
3	2K	45	A	N1-C6-N6	6.45	122.47	118.60
5	1H	592	G	N1-C6-O6	6.45	123.77	119.90
5	1H	70	G	C5-C6-O6	6.45	132.47	128.60
5	1H	116	C	C4-C5-C6	6.45	120.63	117.40
5	14	591	C	N3-C4-N4	6.45	122.52	118.00
5	1H	467	G	C8-N9-C4	6.45	108.98	106.40
5	1H	1776	G	N3-C4-N9	6.45	129.87	126.00
1	1G	495	A	N1-C6-N6	-6.45	114.73	118.60
5	1H	1198	U	N3-C2-O2	-6.45	117.69	122.20
5	1H	737	C	C5-C6-N1	-6.45	117.78	121.00
5	1H	820	A	N1-C2-N3	6.45	132.52	129.30
5	1H	2270	G	C8-N9-C4	6.45	108.98	106.40
5	14	2490	G	C5-C6-O6	6.44	132.47	128.60
5	1H	2424	C	C2-N3-C4	6.44	123.12	119.90
5	1H	2434	A	C5-C6-N6	6.44	128.85	123.70
5	1H	1345	C	N1-C2-O2	-6.44	115.04	118.90
5	1H	1939	U	N3-C4-C5	6.44	118.47	114.60
5	1H	2073	C	OP1-P-OP2	-6.44	109.94	119.60
5	1H	2367	G	C2-N3-C4	-6.44	108.68	111.90
1	13	1498	U	P-O3'-C3'	6.44	127.42	119.70
5	14	698	C	OP1-P-OP2	6.44	129.26	119.60
5	14	833	U	C4-C5-C6	6.44	123.56	119.70
5	1H	213	A	N9-C4-C5	-6.44	103.22	105.80
5	1H	403	U	O5'-P-OP1	-6.44	99.91	105.70
5	1H	2271	G	N3-C4-N9	6.44	129.86	126.00
1	13	1506	U	C5-C4-O4	-6.44	122.04	125.90
5	14	1303	G	N1-C6-O6	-6.44	116.04	119.90
5	14	2406	U	N3-C2-O2	-6.44	117.69	122.20
3	2K	20	G	N1-C6-O6	-6.44	116.04	119.90
5	14	1776	G	O5'-P-OP1	6.43	118.42	110.70
5	1H	765	G	N9-C4-C5	6.43	107.97	105.40
5	1H	1610	A	C4-C5-N7	6.43	113.92	110.70
5	1H	1767	C	N3-C4-C5	6.43	124.47	121.90
5	1H	2379	G	N3-C4-N9	6.43	129.86	126.00
1	13	610	G	O5'-P-OP2	-6.43	99.91	105.70
1	13	792	A	N7-C8-N9	6.43	117.02	113.80
5	1H	677	A	N1-C6-N6	-6.43	114.74	118.60
5	1H	782	A	C5-C6-N1	6.43	120.92	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	2K	77	A	C5-N7-C8	-6.43	100.68	103.90
5	14	765	G	C8-N9-C4	-6.43	103.83	106.40
5	14	819	A	C8-N9-C4	-6.43	103.23	105.80
5	14	2258	C	N3-C4-N4	6.43	122.50	118.00
5	1H	690	G	C4-C5-C6	6.43	122.66	118.80
5	1H	791	C	OP2-P-O3'	6.43	119.35	105.20
13	8E	56	LEU	CA-CB-CG	6.43	130.08	115.30
5	1H	943	U	C5-C4-O4	6.43	129.76	125.90
5	14	39	C	C6-N1-C2	-6.43	117.73	120.30
5	14	2544	G	N1-C6-O6	6.43	123.76	119.90
5	1H	534	U	OP2-P-O3'	6.43	119.34	105.20
5	1H	1340	U	C5-C4-O4	-6.43	122.04	125.90
5	1H	2387	U	C5-C4-O4	-6.43	122.04	125.90
5	1H	271(B)	G	C6-C5-N7	-6.42	126.55	130.40
5	1H	1755	A	C8-N9-C4	-6.42	103.23	105.80
5	1H	2316	C	O5'-P-OP1	-6.42	99.92	105.70
27	1J	89(A)	A	C8-N9-C4	-6.42	103.23	105.80
5	1H	127	A	C4-C5-N7	6.42	113.91	110.70
5	1H	831	G	N7-C8-N9	-6.42	109.89	113.10
5	1H	1340	U	C6-N1-C2	6.42	124.85	121.00
5	1H	404	C	C6-N1-C2	6.42	122.87	120.30
5	1H	2442	C	OP1-P-OP2	-6.42	109.97	119.60
5	1H	2784	C	C5-C6-N1	-6.42	117.79	121.00
1	13	1374	A	C2-N3-C4	-6.42	107.39	110.60
5	14	1189	A	OP1-P-OP2	-6.42	109.97	119.60
5	14	1950	G	C8-N9-C4	-6.42	103.83	106.40
5	14	2078	C	O5'-P-OP1	-6.42	99.92	105.70
5	1H	446	G	C2-N3-C4	-6.42	108.69	111.90
5	1H	1543	A	C2-N3-C4	-6.42	107.39	110.60
5	1H	1800	C	C6-N1-C2	-6.42	117.73	120.30
5	1H	2316	C	O5'-P-OP2	6.42	118.40	110.70
5	1H	2584	U	OP1-P-OP2	-6.42	109.98	119.60
1	1G	890	G	O5'-P-OP1	6.42	118.40	110.70
5	14	697	C	N3-C4-C5	-6.42	119.33	121.90
5	14	939	G	C5-C6-O6	-6.41	124.75	128.60
5	14	1802	A	C4-C5-C6	6.41	120.21	117.00
5	1H	445	C	C6-N1-C2	-6.41	117.73	120.30
1	1G	748	C	P-O3'-C3'	6.41	127.39	119.70
5	14	1210	A	C5-N7-C8	-6.41	100.69	103.90
5	1H	2039	C	C6-N1-C2	-6.41	117.73	120.30
27	16	30	C	C6-N1-C2	-6.41	117.73	120.30
5	1H	120	U	C5-C4-O4	6.41	129.75	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1336	A	C5-C6-N6	-6.41	118.57	123.70
5	1H	1762	A	N7-C8-N9	-6.41	110.59	113.80
5	1H	1787	A	O4'-C1'-N9	-6.41	103.07	108.20
5	14	138	G	C5-C6-O6	-6.41	124.75	128.60
5	14	2338	G	N1-C6-O6	6.41	123.74	119.90
5	1H	1271	G	C6-C5-N7	-6.41	126.56	130.40
5	14	783	A	C6-C5-N7	-6.41	127.82	132.30
5	14	796	C	N3-C4-C5	6.41	124.46	121.90
5	14	1253	A	C5-C6-N6	-6.41	118.58	123.70
5	14	1479	G	N1-C6-O6	6.41	123.74	119.90
5	1H	813	U	OP1-P-OP2	6.41	129.21	119.60
5	1H	2712(A)	A	C5-C6-N6	-6.41	118.58	123.70
27	16	71	C	C6-N1-C2	-6.41	117.74	120.30
5	1H	728	G	O5'-P-OP2	-6.40	99.94	105.70
1	1G	632	A	P-O3'-C3'	6.40	127.39	119.70
5	14	1703	G	N1-C6-O6	6.40	123.74	119.90
5	1H	645	C	N1-C2-O2	6.40	122.74	118.90
5	1H	1626	G	N3-C4-C5	6.40	131.80	128.60
5	1H	1678	G	C8-N9-C1'	6.40	135.32	127.00
5	1H	212	G	OP1-P-O3'	-6.40	91.12	105.20
5	1H	2487	G	N9-C4-C5	-6.40	102.84	105.40
37	88	86	GLY	N-CA-C	-6.40	97.10	113.10
5	14	74	A	N1-C2-N3	6.40	132.50	129.30
5	14	2518	A	O4'-C1'-N9	-6.40	103.08	108.20
1	13	1530	G	N1-C6-O6	6.40	123.74	119.90
5	14	2506	U	O4'-C1'-N1	-6.40	103.08	108.20
5	1H	146	G	N9-C4-C5	-6.40	102.84	105.40
5	1H	1300	U	O5'-P-OP2	-6.40	99.94	105.70
5	1H	194	G	C5-N7-C8	6.39	107.50	104.30
3	2L	77	A	C4-C5-C6	-6.39	113.80	117.00
5	14	656	G	N1-C6-O6	6.39	123.74	119.90
5	1H	1827	C	C4-C5-C6	6.39	120.60	117.40
44	F8	67	GLY	N-CA-C	-6.39	97.12	113.10
1	13	1266	G	C4-N9-C1'	-6.39	118.19	126.50
5	1H	2547	U	N3-C2-O2	6.39	126.67	122.20
5	14	726	G	O4'-C1'-N9	6.39	113.31	108.20
5	14	2329	G	N1-C6-O6	-6.39	116.07	119.90
5	14	2595	G	OP1-P-OP2	6.39	129.19	119.60
1	1G	723	U	C2-N1-C1'	6.39	125.37	117.70
5	14	935	C	C5-C6-N1	-6.39	117.81	121.00
5	1H	1888	G	C6-C5-N7	-6.39	126.57	130.40
5	1H	2461	C	N3-C4-N4	-6.39	113.53	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	238	C	C4-C5-C6	6.39	120.59	117.40
5	1H	1831	G	N3-C2-N2	-6.39	115.43	119.90
1	13	250	A	N9-C4-C5	-6.38	103.25	105.80
5	14	1528	A	C8-N9-C4	-6.38	103.25	105.80
5	14	1936	A	O5'-P-OP1	6.38	118.36	110.70
5	1H	1762	A	C8-N9-C4	6.38	108.35	105.80
5	14	270(Y)	G	C4-C5-N7	-6.38	108.25	110.80
5	1H	383	U	C2-N1-C1'	-6.38	110.04	117.70
5	1H	2248	C	N3-C4-N4	-6.38	113.53	118.00
3	2K	3	C	N1-C2-O2	6.38	122.73	118.90
5	1H	977	G	N1-C6-O6	-6.38	116.07	119.90
5	1H	1607	C	C6-N1-C2	-6.38	117.75	120.30
1	13	690	G	C8-N9-C1'	-6.38	118.71	127.00
5	1H	813	U	N1-C2-O2	-6.38	118.34	122.80
5	1H	1587	A	C8-N9-C4	-6.38	103.25	105.80
2	3L	71	G	O4'-C1'-N9	6.37	113.30	108.20
5	14	1253	A	N9-C4-C5	-6.37	103.25	105.80
5	14	2491	U	OP1-P-O3'	6.37	119.22	105.20
5	1H	2442	C	C6-N1-C2	6.37	122.85	120.30
55	Q8	52	LYS	C-N-CD	-6.37	106.58	120.60
1	13	1501	C	OP2-P-O3'	6.37	119.22	105.20
5	14	675	A	N9-C4-C5	-6.37	103.25	105.80
1	1G	690	G	O4'-C1'-N9	6.37	113.30	108.20
5	14	2087	G	O5'-P-OP2	-6.37	99.97	105.70
5	1H	213	A	C4-C5-N7	6.37	113.89	110.70
5	14	671	C	C2-N3-C4	-6.37	116.72	119.90
5	14	954	G	O5'-P-OP2	6.37	118.34	110.70
5	14	1678	G	N1-C6-O6	6.37	123.72	119.90
3	2L	20	G	O5'-P-OP1	-6.37	99.97	105.70
2	3K	74	C	N1-C2-O2	6.37	122.72	118.90
5	1H	2737	G	N1-C6-O6	6.37	123.72	119.90
5	14	1258	C	N3-C4-N4	-6.37	113.55	118.00
5	1H	1379	A	N9-C4-C5	-6.37	103.25	105.80
5	14	1289	C	O5'-P-OP1	-6.36	99.97	105.70
5	14	1989	G	N3-C4-N9	-6.36	122.18	126.00
5	1H	73	A	C6-N1-C2	-6.36	114.78	118.60
30	31	44	ARG	NE-CZ-NH1	-6.36	117.12	120.30
5	1H	62	C	C5-C6-N1	-6.36	117.82	121.00
5	1H	307	G	N3-C2-N2	6.36	124.35	119.90
1	13	1518	A	C5-N7-C8	6.36	107.08	103.90
5	14	774	A	N9-C4-C5	-6.36	103.26	105.80
5	1H	181	A	C5-C6-N6	6.36	128.79	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	866	A	C8-N9-C1'	-6.36	116.26	127.70
1	13	690	G	C8-N9-C4	-6.36	103.86	106.40
5	14	1998	G	C2-N3-C4	-6.36	108.72	111.90
5	1H	398	G	N1-C2-N3	6.36	127.71	123.90
27	1J	75	G	N3-C4-N9	6.36	129.81	126.00
5	14	475	U	N1-C2-N3	6.35	118.71	114.90
5	1H	1613	G	N9-C4-C5	-6.35	102.86	105.40
5	14	1700	A	O5'-P-OP2	6.35	118.32	110.70
5	1H	1268	A	C2-N3-C4	-6.35	107.43	110.60
5	1H	1936	A	N9-C4-C5	-6.35	103.26	105.80
1	13	975	A	O4'-C1'-N9	-6.35	103.12	108.20
5	1H	2245	U	OP1-P-O3'	6.35	119.17	105.20
1	13	795	C	C4-C5-C6	6.35	120.57	117.40
31	41	34	LEU	CA-CB-CG	6.35	129.90	115.30
5	14	113	G	N1-C6-O6	6.34	123.71	119.90
5	1H	965	C	O5'-P-OP2	-6.34	99.99	105.70
5	1H	1197	G	C8-N9-C4	6.34	108.94	106.40
5	1H	1427	A	P-O3'-C3'	6.34	127.31	119.70
5	1H	1984	G	N9-C4-C5	-6.34	102.86	105.40
5	1H	2030	A	C5-C6-N6	-6.34	118.62	123.70
1	13	529	G	C5-C6-O6	-6.34	124.79	128.60
5	1H	835	A	O5'-P-OP2	-6.34	99.99	105.70
5	1H	1785	A	OP2-P-O3'	6.34	119.15	105.20
5	1H	2289	G	N1-C2-N2	6.34	121.91	116.20
5	14	211	A	N1-C6-N6	6.34	122.40	118.60
5	14	570	G	C4-C5-C6	6.34	122.60	118.80
5	1H	165	U	N3-C2-O2	-6.34	117.76	122.20
5	1H	853	G	C8-N9-C4	6.34	108.94	106.40
5	14	2248	C	N3-C4-C5	-6.34	119.36	121.90
5	14	2254	C	C2-N1-C1'	-6.34	111.83	118.80
5	14	2726	U	N3-C2-O2	-6.34	117.76	122.20
5	1H	74	A	C4-C5-N7	6.34	113.87	110.70
5	14	1282	U	C5-C6-N1	-6.34	119.53	122.70
5	14	1698	A	N9-C4-C5	-6.34	103.27	105.80
5	14	2387	U	N3-C4-C5	6.34	118.40	114.60
5	1H	592	G	N3-C2-N2	-6.34	115.46	119.90
5	1H	1379	A	N9-C1'-C2'	6.34	122.24	114.00
5	1H	1518	C	C6-N1-C2	-6.34	117.77	120.30
5	1H	647	G	N3-C4-C5	-6.33	125.43	128.60
5	1H	727	A	O5'-P-OP2	6.33	118.30	110.70
5	1H	590	A	C8-N9-C4	-6.33	103.27	105.80
5	1H	1797	C	C4-C5-C6	6.33	120.56	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1139	G	N3-C4-C5	6.33	131.76	128.60
5	14	1612	C	C6-N1-C2	6.33	122.83	120.30
5	1H	1342	A	N1-C6-N6	6.33	122.40	118.60
5	1H	1821	A	C6-N1-C2	-6.33	114.80	118.60
5	14	1630	G	N1-C6-O6	6.33	123.70	119.90
5	14	1902	C	N3-C4-C5	6.33	124.43	121.90
5	14	2198	A	N9-C4-C5	6.33	108.33	105.80
5	1H	133	C	C5-C4-N4	-6.33	115.77	120.20
5	1H	595	C	O5'-P-OP2	-6.33	100.01	105.70
1	1G	925	G	C8-N9-C4	6.33	108.93	106.40
1	1G	1402	C	N1-C2-O2	-6.33	115.11	118.90
5	1H	655	A	C2-N3-C4	-6.32	107.44	110.60
5	1H	1421	G	C6-C5-N7	-6.32	126.61	130.40
5	1H	1636	C	N3-C4-C5	-6.32	119.37	121.90
5	1H	2254	C	O5'-P-OP2	6.32	118.29	110.70
27	16	51	G	OP2-P-O3'	6.32	119.11	105.20
5	14	2821	A	C2-N3-C4	-6.32	107.44	110.60
5	1H	143	C	C6-N1-C2	6.32	122.83	120.30
5	1H	584	C	C6-N1-C2	6.32	122.83	120.30
5	1H	963	U	O5'-P-OP1	-6.32	100.01	105.70
5	1H	1207	C	O5'-P-OP1	-6.32	100.01	105.70
5	1H	1502	C	C6-N1-C2	-6.32	117.77	120.30
5	1H	981	A	N1-C2-N3	-6.32	126.14	129.30
5	14	676	A	C8-N9-C4	-6.32	103.27	105.80
5	1H	1253	A	N1-C2-N3	-6.32	126.14	129.30
5	1H	1690	A	O5'-P-OP1	-6.32	100.01	105.70
5	1H	2381	C	C6-N1-C2	6.32	122.83	120.30
5	14	778	G	N1-C2-N2	-6.32	110.52	116.20
5	14	2072	G	N9-C4-C5	-6.32	102.87	105.40
5	14	2401	U	C6-N1-C2	-6.32	117.21	121.00
5	14	2574	G	N3-C4-N9	6.32	129.79	126.00
5	1H	2689	U	OP2-P-O3'	6.31	119.09	105.20
5	1H	2712	U	C2-N1-C1'	6.31	125.28	117.70
1	13	1519	A	C5-C6-N1	-6.31	114.54	117.70
1	13	1519	A	O5'-P-OP2	-6.31	100.02	105.70
5	14	332	A	O5'-P-OP2	-6.31	100.02	105.70
5	14	2259	G	N3-C2-N2	-6.31	115.48	119.90
5	14	2501	C	N3-C2-O2	6.31	126.32	121.90
5	1H	1888	G	N3-C4-C5	-6.31	125.44	128.60
5	1H	2577	A	C5-C6-N6	6.31	128.75	123.70
5	14	1938	A	C6-C5-N7	-6.31	127.88	132.30
5	14	117	G	C4-C5-N7	6.31	113.32	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1642	G	O5'-P-OP1	-6.31	100.02	105.70
1	1G	197	A	P-O3'-C3'	6.31	127.27	119.70
1	1G	576	G	C6-C5-N7	-6.31	126.61	130.40
5	14	129	C	N3-C4-N4	6.31	122.42	118.00
5	1H	912	C	C5-C6-N1	-6.31	117.85	121.00
1	1G	321	A	C5-C6-N6	-6.31	118.65	123.70
1	1G	899	C	C2-N1-C1'	6.31	125.74	118.80
5	1H	449	A	N1-C2-N3	-6.31	126.15	129.30
5	1H	1382	G	C4-C5-N7	6.31	113.32	110.80
5	14	2544	G	C5-C6-O6	-6.30	124.82	128.60
5	1H	859	G	N3-C4-N9	-6.30	122.22	126.00
5	1H	2017	U	C5-C6-N1	6.30	125.85	122.70
1	13	1478	C	N3-C4-C5	6.30	124.42	121.90
5	14	1475	G	N7-C8-N9	6.30	116.25	113.10
5	1H	1021	A	N1-C6-N6	6.30	122.38	118.60
5	1H	1204	A	C5-N7-C8	-6.30	100.75	103.90
52	N8	41	PRO	C-N-CD	-6.30	106.74	120.60
5	14	333	G	C4-N9-C1'	6.30	134.69	126.50
5	1H	2392	A	C5-C6-N1	-6.30	114.55	117.70
5	14	1120	G	N3-C4-C5	6.30	131.75	128.60
5	14	1396	U	C2-N1-C1'	6.30	125.26	117.70
5	1H	2318	G	O4'-C1'-N9	6.30	113.24	108.20
1	1G	1502	A	C4-C5-N7	6.29	113.85	110.70
1	13	956	U	C6-N1-C2	-6.29	117.22	121.00
5	14	1598	C	C6-N1-C2	-6.29	117.78	120.30
5	1H	428	A	OP1-P-O3'	6.29	119.05	105.20
5	1H	960	A	O5'-P-OP1	-6.29	100.03	105.70
5	1H	2040	C	N3-C2-O2	6.29	126.31	121.90
5	1H	2713	A	C5-C6-N1	-6.29	114.55	117.70
5	14	2713	A	N3-C4-C5	6.29	131.20	126.80
5	1H	97	C	N3-C4-C5	6.29	124.42	121.90
5	14	1142	U	C6-N1-C1'	-6.29	112.39	121.20
5	14	2689	U	P-O3'-C3'	6.29	127.25	119.70
5	1H	1636	C	C4-C5-C6	6.29	120.55	117.40
5	1H	1899	G	C5-C6-N1	-6.29	108.36	111.50
5	1H	2454	G	N9-C4-C5	6.29	107.92	105.40
1	13	1266	G	C8-N9-C1'	6.29	135.17	127.00
5	14	82	G	N1-C6-O6	6.29	123.67	119.90
5	1H	1028	A	N1-C6-N6	-6.29	114.83	118.60
5	1H	2779	U	N3-C4-O4	-6.29	115.00	119.40
5	14	1306	C	O5'-P-OP1	-6.29	100.04	105.70
5	1H	471	A	C2-N3-C4	-6.29	107.46	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	598	G	OP1-P-OP2	6.29	129.03	119.60
5	1H	1608	A	N1-C6-N6	-6.29	114.83	118.60
5	14	1853	A	O5'-P-OP1	-6.28	100.04	105.70
5	1H	1497	U	C5-C4-O4	-6.28	122.13	125.90
5	1H	2692	C	N1-C2-O2	6.28	122.67	118.90
5	14	1514	U	C6-N1-C2	-6.28	117.23	121.00
5	14	1673	U	C5-C6-N1	-6.28	119.56	122.70
5	14	2265	U	N3-C4-C5	-6.28	110.83	114.60
5	1H	122	G	N1-C2-N3	6.28	127.67	123.90
5	1H	655	A	C5-N7-C8	-6.28	100.76	103.90
1	1G	328	C	P-O3'-C3'	6.28	127.24	119.70
5	14	938	G	C8-N9-C4	6.28	108.91	106.40
5	1H	726	G	O4'-C1'-N9	6.28	113.22	108.20
5	1H	1401	G	N7-C8-N9	6.28	116.24	113.10
5	14	1399	C	OP1-P-O3'	-6.28	91.39	105.20
5	1H	728	G	N3-C4-N9	6.28	129.76	126.00
5	1H	788	A	N1-C6-N6	6.28	122.36	118.60
5	1H	1681	G	C4-C5-N7	6.28	113.31	110.80
5	1H	2429	G	OP2-P-O3'	6.28	119.01	105.20
5	1H	2600	A	N9-C4-C5	6.28	108.31	105.80
5	1H	1621	U	O5'-P-OP1	-6.27	100.05	105.70
30	31	176	LEU	CA-CB-CG	6.27	129.73	115.30
5	14	1339	G	O5'-P-OP2	6.27	118.23	110.70
5	1H	619	G	N3-C4-C5	6.27	131.74	128.60
5	1H	1142(A)	A	N3-C4-N9	-6.27	122.38	127.40
5	1H	1229(A)	G	C2-N3-C4	-6.27	108.76	111.90
5	14	788	A	N1-C6-N6	6.27	122.36	118.60
5	1H	1394	U	C2-N3-C4	6.27	130.76	127.00
5	1H	2617	C	N1-C2-N3	-6.27	114.81	119.20
1	13	812	C	N3-C4-C5	-6.27	119.39	121.90
5	1H	119	A	N9-C4-C5	6.27	108.31	105.80
5	1H	1697	G	N1-C6-O6	6.27	123.66	119.90
5	14	683	C	C6-N1-C2	-6.27	117.79	120.30
5	1H	404	C	P-O3'-C3'	6.27	127.22	119.70
5	1H	979	G	N3-C2-N2	-6.27	115.51	119.90
5	1H	1166	C	C5-C6-N1	6.27	124.13	121.00
1	1G	449	C	C5-C4-N4	6.27	124.59	120.20
5	14	771	G	N3-C2-N2	-6.27	115.51	119.90
5	1H	1021	A	C4-C5-N7	6.27	113.83	110.70
5	14	1281	G	C5-C6-O6	-6.26	124.84	128.60
5	14	2270	G	O5'-P-OP1	-6.26	100.06	105.70
5	14	2769	C	C6-N1-C2	-6.26	117.79	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	961	C	O4'-C1'-N1	6.26	113.21	108.20
5	1H	1831	G	N1-C6-O6	6.26	123.66	119.90
5	1H	695	G	C5-C6-O6	6.26	132.36	128.60
3	2L	35	C	C6-N1-C1'	-6.26	113.28	120.80
5	1H	74	A	C6-C5-N7	-6.26	127.92	132.30
5	1H	1835	G	C6-C5-N7	-6.26	126.64	130.40
5	14	211	A	C5-C6-N6	-6.26	118.69	123.70
5	14	2011	U	O5'-P-OP2	6.26	118.21	110.70
5	1H	1632	A	C5-C6-N6	-6.26	118.69	123.70
5	1H	2541	A	O5'-P-OP2	6.26	118.21	110.70
5	14	939	G	C6-C5-N7	-6.26	126.64	130.40
5	1H	1967	C	OP1-P-OP2	6.26	128.99	119.60
5	1H	2415	G	N1-C2-N3	6.26	127.66	123.90
1	13	814	A	O5'-P-OP2	6.26	118.21	110.70
5	14	1363	C	N3-C4-C5	6.26	124.40	121.90
5	14	1496	A	O4'-C1'-N9	6.26	113.20	108.20
5	14	2640	G	N3-C2-N2	-6.26	115.52	119.90
5	1H	470	A	C4-C5-N7	6.26	113.83	110.70
5	1H	907	U	C5-C6-N1	-6.25	119.57	122.70
5	1H	2318	G	N3-C4-C5	6.25	131.73	128.60
1	1G	1399	C	C6-N1-C2	6.25	122.80	120.30
5	14	1607	C	C5-C4-N4	-6.25	115.82	120.20
5	14	2779	U	N3-C4-O4	-6.25	115.02	119.40
5	1H	640	C	OP1-P-O3'	6.25	118.96	105.20
5	1H	914	C	C6-N1-C1'	6.25	128.31	120.80
5	1H	2318	G	C8-N9-C4	-6.25	103.90	106.40
1	1G	425	G	O5'-P-OP1	-6.25	100.07	105.70
1	13	738	C	N3-C4-C5	-6.25	119.40	121.90
1	13	1434	A	C8-N9-C4	6.25	108.30	105.80
5	14	630	G	C8-N9-C4	6.25	108.90	106.40
5	14	1978	A	C2-N3-C4	-6.25	107.47	110.60
5	1H	119	A	N1-C6-N6	-6.25	114.85	118.60
1	1G	121	C	N1-C2-O2	6.25	122.65	118.90
5	1H	1888	G	O5'-P-OP1	-6.25	100.08	105.70
5	14	194	G	N3-C2-N2	-6.25	115.53	119.90
5	14	530	G	C2-N3-C4	-6.25	108.78	111.90
5	1H	1023	U	O5'-P-OP1	-6.25	100.08	105.70
5	1H	1246	A	C6-N1-C2	-6.25	114.85	118.60
5	14	752	A	P-O3'-C3'	6.25	127.20	119.70
5	1H	663	G	C5-C6-O6	6.25	132.35	128.60
5	14	1594	G	N7-C8-N9	6.25	116.22	113.10
5	1H	1618	A	OP1-P-OP2	-6.25	110.23	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	4L	13	A	P-O3'-C3'	6.24	127.19	119.70
5	1H	664	C	OP1-P-OP2	6.24	128.97	119.60
5	1H	1324	G	O4'-C1'-N9	6.24	113.19	108.20
5	14	621	A	C8-N9-C4	-6.24	103.30	105.80
5	14	1966	A	C5-C6-N1	6.24	120.82	117.70
5	1H	865	C	O5'-P-OP2	6.24	118.19	110.70
5	14	2392	A	C2-N3-C4	-6.24	107.48	110.60
5	14	1643	G	OP2-P-O3'	6.24	118.92	105.20
5	1H	2068	U	N1-C2-N3	-6.24	111.16	114.90
1	1G	264	U	C5-C4-O4	-6.24	122.16	125.90
1	13	813	U	O5'-P-OP2	-6.24	100.09	105.70
5	14	954	G	N7-C8-N9	6.24	116.22	113.10
5	14	1397	U	N3-C2-O2	-6.24	117.83	122.20
2	3L	76	A	C8-N9-C4	-6.24	103.31	105.80
5	14	1661	G	C4-C5-N7	6.24	113.29	110.80
5	1H	2430	A	N9-C4-C5	-6.24	103.31	105.80
5	14	1271	G	N3-C4-N9	6.23	129.74	126.00
5	1H	605	C	O5'-P-OP1	-6.23	100.09	105.70
5	1H	693	C	N1-C2-N3	6.23	123.56	119.20
5	1H	1260	G	OP1-P-OP2	-6.23	110.25	119.60
1	13	1186	G	N1-C6-O6	-6.23	116.16	119.90
5	14	1632	A	N1-C6-N6	6.23	122.34	118.60
5	1H	451	C	N1-C2-O2	-6.23	115.16	118.90
5	1H	1444	G	N1-C6-O6	-6.23	116.16	119.90
5	14	1585	C	N1-C2-O2	6.23	122.64	118.90
5	14	133	C	C6-N1-C2	6.23	122.79	120.30
5	14	1372	U	N1-C2-N3	6.23	118.64	114.90
5	14	1907	G	O5'-P-OP1	-6.23	100.10	105.70
5	14	2254	C	C5-C6-N1	-6.23	117.89	121.00
5	1H	1940	U	C2-N3-C4	-6.23	123.26	127.00
5	1H	1992	G	C5-C6-N1	6.23	114.61	111.50
5	1H	2375	G	C4-C5-N7	6.23	113.29	110.80
5	14	2076	U	O5'-P-OP2	-6.23	100.10	105.70
5	1H	780	G	OP1-P-OP2	-6.23	110.26	119.60
5	14	2503	A	O5'-P-OP1	-6.22	100.10	105.70
5	14	2518	A	C5-C6-N6	-6.22	118.72	123.70
5	14	2598	A	OP2-P-O3'	6.22	118.89	105.20
5	1H	528	A	C8-N9-C1'	6.22	138.91	127.70
5	1H	681	G	C6-C5-N7	-6.22	126.67	130.40
5	1H	789	A	C2-N3-C4	-6.22	107.49	110.60
5	1H	793	A	C5-N7-C8	-6.22	100.79	103.90
5	1H	1901	A	O5'-P-OP1	-6.22	100.10	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2062	A	C5-N7-C8	6.22	107.01	103.90
5	1H	2829	C	C6-N1-C2	6.22	122.79	120.30
5	14	68	G	N1-C6-O6	6.22	123.63	119.90
5	14	2763	G	C4-N9-C1'	6.22	134.59	126.50
5	1H	2737	G	C5-C6-O6	-6.22	124.87	128.60
5	1H	1445	C	C6-N1-C2	-6.22	117.81	120.30
1	1G	668	G	N3-C2-N2	-6.22	115.55	119.90
5	1H	2058	A	N3-C4-N9	-6.22	122.42	127.40
5	1H	2715	C	N3-C4-C5	6.22	124.39	121.90
5	1H	2830	G	N7-C8-N9	6.22	116.21	113.10
27	1J	6	C	C6-N1-C2	6.22	122.79	120.30
5	14	1436	G	N1-C6-O6	-6.22	116.17	119.90
5	1H	1278	A	C6-N1-C2	-6.22	114.87	118.60
5	1H	2614	A	C2-N3-C4	6.22	113.71	110.60
5	1H	1379	A	C6-C5-N7	-6.22	127.95	132.30
1	1G	1259	C	C6-N1-C2	-6.22	117.81	120.30
5	14	140	A	C5-C6-N6	-6.21	118.73	123.70
1	1G	449	C	N3-C2-O2	-6.21	117.55	121.90
5	1H	617	G	N7-C8-N9	-6.21	109.99	113.10
5	1H	2083	G	N9-C4-C5	-6.21	102.92	105.40
5	1H	636	G	O5'-P-OP1	-6.21	100.11	105.70
1	13	1276	G	C8-N9-C4	-6.21	103.92	106.40
1	13	1322	C	C2-N3-C4	6.21	123.00	119.90
5	14	204	A	N1-C6-N6	6.21	122.33	118.60
5	14	1899	G	N3-C2-N2	6.21	124.25	119.90
5	1H	273(A)	G	C8-N9-C4	6.21	108.88	106.40
5	1H	456	C	C5-C6-N1	-6.21	117.90	121.00
1	13	1511	G	C6-C5-N7	-6.21	126.68	130.40
5	14	500	G	O5'-P-OP2	-6.21	100.11	105.70
5	14	1203	G	O5'-P-OP1	6.21	118.15	110.70
5	14	1258	C	OP2-P-O3'	6.21	118.85	105.20
5	14	1348	G	N1-C6-O6	6.21	123.62	119.90
5	14	1427	A	N1-C6-N6	-6.21	114.88	118.60
5	1H	2286	A	C8-N9-C4	-6.21	103.32	105.80
1	1G	345	C	P-O3'-C3'	6.21	127.15	119.70
5	14	1270	C	C6-N1-C2	-6.21	117.82	120.30
5	14	1301	A	O4'-C1'-N9	6.21	113.16	108.20
5	14	2057	A	OP1-P-O3'	6.20	118.85	105.20
5	14	2070	G	N1-C2-N3	6.20	127.62	123.90
5	14	2433	A	C5-N7-C8	-6.20	100.80	103.90
5	1H	81	G	C5-C6-O6	6.20	132.32	128.60
5	1H	1377	G	C4-C5-C6	6.20	122.52	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1385	G	N3-C4-N9	-6.20	122.28	126.00
5	14	2386	C	C6-N1-C2	6.20	122.78	120.30
5	14	2513	G	C4-C5-N7	6.20	113.28	110.80
5	1H	1368	G	OP1-P-OP2	6.20	128.90	119.60
5	14	676	A	C6-C5-N7	-6.20	127.96	132.30
5	1H	1626	G	N3-C4-N9	-6.20	122.28	126.00
1	1G	150	C	C6-N1-C2	-6.20	117.82	120.30
5	14	2499	C	C5-C4-N4	-6.20	115.86	120.20
5	14	2873	A	O4'-C1'-N9	6.20	113.16	108.20
5	1H	378	C	N3-C4-C5	6.20	124.38	121.90
1	13	586	C	C6-N1-C2	6.20	122.78	120.30
5	1H	2009	G	C8-N9-C4	6.20	108.88	106.40
27	16	21	G	C8-N9-C4	-6.20	103.92	106.40
5	14	2356	C	N1-C2-O2	-6.19	115.18	118.90
5	14	561	G	N9-C4-C5	6.19	107.88	105.40
5	14	2012	G	N9-C4-C5	-6.19	102.92	105.40
5	14	2730	C	N3-C4-C5	-6.19	119.42	121.90
5	1H	2544	G	N1-C6-O6	6.19	123.62	119.90
1	13	757	U	N1-C2-O2	6.19	127.13	122.80
5	14	613	U	C5-C4-O4	6.19	129.62	125.90
5	14	1386	C	O5'-P-OP2	-6.19	100.13	105.70
5	14	2233	U	N1-C2-O2	-6.19	118.47	122.80
1	1G	890	G	N1-C6-O6	-6.19	116.19	119.90
5	1H	211	A	C8-N9-C4	6.19	108.28	105.80
5	1H	482	A	C8-N9-C4	-6.19	103.32	105.80
5	1H	574	C	C6-N1-C2	6.19	122.78	120.30
5	1H	1936	A	C4-C5-N7	6.19	113.79	110.70
5	1H	2028	U	O5'-P-OP1	-6.19	100.13	105.70
1	13	1279	A	C5-N7-C8	-6.19	100.81	103.90
5	14	458	G	N1-C6-O6	-6.19	116.19	119.90
5	1H	1671	U	C5-C4-O4	-6.19	122.19	125.90
1	13	111	G	O5'-P-OP2	-6.18	100.13	105.70
5	14	1698	A	N7-C8-N9	6.18	116.89	113.80
5	14	2275	C	C5'-C4'-O4'	-6.18	101.68	109.10
5	14	2432	A	OP1-P-OP2	6.18	128.88	119.60
5	1H	2599	G	C5-N7-C8	6.18	107.39	104.30
5	14	1986	A	O5'-P-OP2	-6.18	100.14	105.70
5	1H	371	A	N1-C6-N6	6.18	122.31	118.60
5	1H	1228	G	N1-C2-N3	6.18	127.61	123.90
5	1H	1904	G	OP2-P-O3'	6.18	118.80	105.20
1	1G	1145	C	OP1-P-O3'	6.18	118.80	105.20
1	13	1072	G	C5-C6-O6	6.18	132.31	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	731	C	C6-N1-C2	6.18	122.77	120.30
5	1H	1271	G	N1-C6-O6	6.18	123.61	119.90
5	1H	1950	G	O5'-P-OP1	-6.18	100.14	105.70
5	1H	2065	C	C4-C5-C6	-6.18	114.31	117.40
1	1G	882	C	O5'-P-OP1	-6.18	100.14	105.70
5	1H	119	A	C4-C5-N7	-6.18	107.61	110.70
5	1H	641	C	C5-C6-N1	6.18	124.09	121.00
5	1H	1333	C	N3-C4-C5	6.18	124.37	121.90
5	1H	2442	C	C2-N3-C4	-6.18	116.81	119.90
5	14	492	A	N1-C6-N6	6.17	122.31	118.60
5	1H	1780	A	O5'-P-OP2	6.17	118.11	110.70
5	1H	232	G	C4-N9-C1'	6.17	134.52	126.50
5	1H	690	G	C8-N9-C1'	-6.17	118.98	127.00
5	1H	1685	C	N3-C4-C5	6.17	124.37	121.90
1	1G	421	U	P-O3'-C3'	6.17	127.10	119.70
5	14	1784	A	C5-N7-C8	-6.17	100.82	103.90
5	1H	673	C	OP1-P-OP2	-6.17	110.35	119.60
5	1H	2394	C	OP1-P-OP2	6.17	128.85	119.60
5	1H	2438	U	C4-C5-C6	6.17	123.40	119.70
5	1H	2613	U	O5'-P-OP1	-6.17	100.15	105.70
27	1J	114	G	C8-N9-C4	6.17	108.87	106.40
1	13	1331	G	C8-N9-C4	-6.17	103.93	106.40
5	1H	1944	U	C5-C6-N1	-6.17	119.62	122.70
5	14	1914	C	N1-C2-O2	6.16	122.60	118.90
5	14	1969	A	N1-C6-N6	6.16	122.30	118.60
5	14	2499	C	C6-N1-C2	-6.16	117.83	120.30
5	1H	1914	C	N3-C2-O2	-6.16	117.59	121.90
32	51	87	LEU	CA-CB-CG	6.16	129.47	115.30
5	14	1938	A	C5-C6-N6	-6.16	118.77	123.70
5	1H	232	G	C6-C5-N7	-6.16	126.70	130.40
5	1H	446	G	N9-C4-C5	-6.16	102.94	105.40
5	1H	776	G	C8-N9-C4	-6.16	103.94	106.40
5	1H	989	G	C5-C6-O6	-6.16	124.90	128.60
5	1H	1376	C	C4-C5-C6	6.16	120.48	117.40
1	13	575	G	C5-C6-O6	6.16	132.29	128.60
5	14	1594	G	C8-N9-C4	-6.16	103.94	106.40
5	1H	452	G	C4-C5-N7	-6.16	108.34	110.80
5	1H	1332	G	N9-C4-C5	6.16	107.86	105.40
5	1H	1618	A	C5-N7-C8	-6.16	100.82	103.90
5	14	1783	A	N7-C8-N9	6.16	116.88	113.80
5	14	2603	G	O5'-P-OP1	-6.16	100.16	105.70
5	1H	617	G	N1-C6-O6	-6.16	116.21	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2082	A	N1-C2-N3	6.16	132.38	129.30
5	14	2441	C	N3-C4-N4	-6.15	113.69	118.00
5	1H	1421	G	N1-C6-O6	6.15	123.59	119.90
5	1H	2439	A	N7-C8-N9	6.15	116.88	113.80
5	1H	2578	G	N7-C8-N9	-6.15	110.02	113.10
1	13	632	A	N1-C6-N6	-6.15	114.91	118.60
5	14	823	G	N1-C2-N2	-6.15	110.66	116.20
5	14	1142(A)	A	N1-C2-N3	6.15	132.38	129.30
5	1H	514	A	OP1-P-O3'	6.15	118.74	105.20
5	1H	1273	U	OP2-P-O3'	6.15	118.73	105.20
5	1H	1932	A	C4-C5-N7	6.15	113.78	110.70
5	1H	675	A	N9-C4-C5	-6.15	103.34	105.80
5	14	2053	G	C5-C6-O6	-6.15	124.91	128.60
5	1H	330	A	N7-C8-N9	6.15	116.87	113.80
5	1H	697	C	C5-C4-N4	-6.15	115.90	120.20
5	1H	1337	G	OP2-P-O3'	-6.15	91.68	105.20
1	1G	615	C	C6-N1-C2	-6.15	117.84	120.30
1	13	584	G	N1-C2-N2	-6.15	110.67	116.20
5	1H	330	A	N3-C4-N9	-6.15	122.48	127.40
5	1H	609	A	C5-C6-N6	-6.14	118.78	123.70
1	13	1518	A	C8-N9-C4	6.14	108.26	105.80
5	14	1954	G	C2-N3-C4	6.14	114.97	111.90
5	1H	265	A	N1-C2-N3	6.14	132.37	129.30
5	1H	417	C	O5'-P-OP2	6.14	118.07	110.70
5	1H	508	G	C5-N7-C8	-6.14	101.23	104.30
5	14	747	U	OP1-P-OP2	6.14	128.81	119.60
5	1H	1658	C	O5'-P-OP1	-6.14	100.17	105.70
1	1G	1145	C	C2-N1-C1'	6.14	125.55	118.80
5	14	111	A	N1-C2-N3	6.14	132.37	129.30
5	14	528	A	C8-N9-C4	-6.14	103.34	105.80
5	1H	234	C	O5'-P-OP2	-6.14	100.18	105.70
5	1H	1192	G	O5'-P-OP2	-6.14	100.18	105.70
1	13	1200	C	C5-C6-N1	6.14	124.07	121.00
1	13	1266	G	C5-C6-O6	6.14	132.28	128.60
5	14	2048	G	C4-C5-N7	-6.14	108.34	110.80
5	14	2513	G	C6-C5-N7	-6.14	126.72	130.40
5	1H	333	G	N1-C6-O6	6.14	123.58	119.90
5	1H	698	C	O5'-P-OP2	-6.14	100.18	105.70
5	1H	1153	C	N1-C2-O2	-6.14	115.22	118.90
5	1H	2070	G	N3-C2-N2	6.14	124.20	119.90
1	1G	1260	C	C6-N1-C2	-6.14	117.85	120.30
5	14	774	A	N3-C4-N9	-6.13	122.49	127.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	273(A)	G	N1-C6-O6	6.13	123.58	119.90
5	1H	587	C	N3-C4-C5	6.13	124.35	121.90
5	1H	1417	C	N3-C4-C5	-6.13	119.45	121.90
5	14	1590	U	O5'-P-OP1	-6.13	100.18	105.70
5	1H	2447	G	N3-C4-N9	6.13	129.68	126.00
5	1H	1932	A	C5-N7-C8	-6.13	100.83	103.90
5	1H	2856	C	C6-N1-C2	-6.13	117.85	120.30
5	1H	584	C	N3-C2-O2	6.13	126.19	121.90
5	1H	696	G	O5'-P-OP2	6.13	118.06	110.70
5	1H	960	A	C8-N9-C4	6.13	108.25	105.80
1	13	310	G	OP2-P-O3'	6.13	118.68	105.20
1	13	363	A	OP1-P-OP2	6.13	128.79	119.60
1	13	1195	C	N1-C2-O2	-6.13	115.22	118.90
5	14	1348	G	C4-C5-N7	6.13	113.25	110.80
5	1H	271(B)	G	C6-N1-C2	-6.13	121.42	125.10
5	1H	767	U	OP1-P-OP2	6.13	128.79	119.60
1	1G	1523	G	O5'-P-OP2	-6.13	100.19	105.70
5	14	470	A	C5-C6-N6	-6.13	118.80	123.70
5	14	588	U	C5-C6-N1	-6.13	119.64	122.70
5	14	1681	G	C2-N3-C4	-6.13	108.84	111.90
5	14	2437	U	N3-C4-O4	-6.13	115.11	119.40
5	1H	809	G	N7-C8-N9	-6.13	110.04	113.10
5	1H	1203	G	C5-C6-O6	6.13	132.28	128.60
5	1H	2566	A	C8-N9-C4	-6.13	103.35	105.80
5	14	1991	U	N3-C2-O2	-6.12	117.91	122.20
5	1H	799	G	OP1-P-OP2	-6.12	110.41	119.60
5	1H	2713	A	N1-C6-N6	6.12	122.28	118.60
1	13	1259	C	C5-C6-N1	6.12	124.06	121.00
5	14	2029	G	N9-C4-C5	6.12	107.85	105.40
5	14	2198	A	C8-N9-C4	-6.12	103.35	105.80
5	1H	441	U	OP2-P-O3'	6.12	118.66	105.20
5	1H	1416	G	C8-N9-C4	6.12	108.85	106.40
27	1J	116	G	N1-C6-O6	6.12	123.57	119.90
1	13	555	C	C6-N1-C2	-6.12	117.85	120.30
1	13	761	G	N3-C4-C5	-6.12	125.54	128.60
5	1H	139	G	N3-C4-N9	6.12	129.67	126.00
5	1H	576	U	C5-C4-O4	-6.12	122.23	125.90
5	1H	802	A	N7-C8-N9	6.12	116.86	113.80
1	13	31	G	C5-C6-O6	-6.12	124.93	128.60
1	13	290	C	C6-N1-C2	6.12	122.75	120.30
5	1H	1796	U	C6-N1-C2	6.12	124.67	121.00
5	1H	2004	G	OP1-P-OP2	6.12	128.77	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2534	A	C8-N9-C4	6.12	108.25	105.80
1	13	858	G	C8-N9-C4	-6.11	103.95	106.40
5	14	1899	G	C6-C5-N7	-6.11	126.73	130.40
5	14	2225	A	P-O3'-C3'	6.11	127.03	119.70
5	1H	765	G	C5-C6-N1	-6.11	108.44	111.50
27	16	60	C	C2-N3-C4	6.11	122.96	119.90
1	1G	529	G	C5-C6-O6	-6.11	124.93	128.60
1	1G	1511	G	C6-C5-N7	-6.11	126.73	130.40
5	14	1964	G	O5'-P-OP1	-6.11	100.20	105.70
5	1H	2289	G	C5-C6-O6	-6.11	124.93	128.60
5	1H	2707	G	N3-C2-N2	-6.11	115.62	119.90
5	14	2237	G	N1-C2-N2	-6.11	110.70	116.20
45	G8	79	CYS	N-CA-C	6.11	127.50	111.00
5	14	2013	A	C2-N3-C4	-6.11	107.55	110.60
5	1H	2246	G	N3-C4-N9	6.11	129.67	126.00
5	14	1388	G	O5'-P-OP2	-6.11	100.20	105.70
5	1H	1601	G	N1-C2-N2	-6.11	110.70	116.20
5	1H	2266	A	N1-C2-N3	6.11	132.35	129.30
1	1G	1126	U	P-O3'-C3'	6.11	127.03	119.70
1	13	545	C	N3-C4-N4	-6.11	113.73	118.00
5	14	470	A	N1-C6-N6	6.11	122.26	118.60
5	14	2712	U	C4-C5-C6	6.11	123.36	119.70
5	14	40	C	C5-C6-N1	6.10	124.05	121.00
5	14	922	U	C5-C6-N1	6.10	125.75	122.70
5	14	2429	G	C5-C6-O6	-6.10	124.94	128.60
5	1H	1763	G	O5'-P-OP2	-6.10	100.21	105.70
1	1G	1469	G	O5'-P-OP1	-6.10	100.21	105.70
1	13	1072	G	N1-C6-O6	-6.10	116.24	119.90
5	14	1742	C	C6-N1-C2	-6.10	117.86	120.30
5	14	2237	G	N3-C2-N2	6.10	124.17	119.90
5	1H	1970	A	N1-C6-N6	-6.10	114.94	118.60
5	1H	2440	C	N3-C4-C5	-6.10	119.46	121.90
5	14	127	A	C5-C6-N6	-6.10	118.82	123.70
5	14	2014	A	C8-N9-C4	6.10	108.24	105.80
5	1H	299	A	OP2-P-O3'	6.10	118.62	105.20
5	1H	737	C	C4-C5-C6	6.10	120.45	117.40
5	1H	906	G	C8-N9-C1'	6.10	134.93	127.00
1	1G	244	U	C2-N1-C1'	6.10	125.02	117.70
5	14	70	G	N3-C4-C5	-6.10	125.55	128.60
5	14	475	U	C2-N1-C1'	6.10	125.02	117.70
5	1H	245	G	C4-N9-C1'	6.10	134.43	126.50
5	1H	655	A	C8-N9-C4	-6.10	103.36	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2009	G	N1-C6-O6	6.10	123.56	119.90
5	1H	2377	A	C5-C6-N6	-6.10	118.82	123.70
1	1G	224	C	C6-N1-C2	6.10	122.74	120.30
1	13	1286	A	N7-C8-N9	6.09	116.85	113.80
5	14	2443	C	C6-N1-C2	-6.09	117.86	120.30
5	1H	1998	G	C2-N3-C4	-6.09	108.85	111.90
27	16	23	G	N3-C2-N2	-6.09	115.63	119.90
1	13	1219	U	C5-C6-N1	6.09	125.75	122.70
5	14	97	C	O5'-P-OP2	-6.09	100.22	105.70
5	14	113	G	N3-C4-C5	6.09	131.65	128.60
5	14	1296	G	C5-N7-C8	6.09	107.35	104.30
5	1H	225	A	C8-N9-C4	6.09	108.24	105.80
5	1H	835	A	C6-N1-C2	-6.09	114.94	118.60
5	1H	1636	C	N3-C2-O2	6.09	126.17	121.90
5	1H	2256	G	N1-C2-N2	-6.09	110.72	116.20
1	13	191(F)	U	C5-C6-N1	6.09	125.75	122.70
1	13	718	G	O5'-P-OP2	6.09	118.01	110.70
5	1H	432	A	C4-C5-N7	6.09	113.75	110.70
1	13	963	G	N3-C4-C5	-6.09	125.56	128.60
5	1H	205	G	C2-N3-C4	6.09	114.94	111.90
5	1H	619	G	C4-N9-C1'	-6.09	118.58	126.50
5	1H	775	G	O4'-C1'-N9	6.09	113.07	108.20
5	1H	1834	U	C5-C4-O4	6.09	129.55	125.90
1	13	315	A	O5'-P-OP1	-6.09	100.22	105.70
5	1H	1201	C	OP2-P-O3'	6.09	118.59	105.20
5	1H	2275	C	O5'-P-OP2	-6.09	100.22	105.70
1	1G	481	G	C6-C5-N7	-6.09	126.75	130.40
1	13	117	G	C4-C5-N7	6.09	113.23	110.80
1	13	1489	G	C8-N9-C4	6.09	108.83	106.40
5	1H	851	U	N1-C2-O2	-6.09	118.54	122.80
5	1H	2269	A	C8-N9-C4	6.09	108.23	105.80
5	14	792	G	OP2-P-O3'	6.08	118.58	105.20
5	1H	335	C	N3-C4-C5	-6.08	119.47	121.90
5	1H	1774	C	O5'-P-OP1	-6.08	100.22	105.70
5	1H	2281	C	OP1-P-O3'	6.08	118.59	105.20
5	14	729	G	N1-C6-O6	6.08	123.55	119.90
5	14	2447	G	N1-C6-O6	6.08	123.55	119.90
5	1H	1255	U	O5'-P-OP1	-6.08	100.23	105.70
5	1H	1573	G	OP2-P-O3'	6.08	118.58	105.20
1	13	1025	U	C2-N1-C1'	6.08	125.00	117.70
5	1H	51	G	N1-C6-O6	-6.08	116.25	119.90
5	1H	432	A	N1-C6-N6	6.08	122.25	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	606	U	C5-C6-N1	-6.08	119.66	122.70
5	1H	729	G	N1-C2-N2	6.08	121.67	116.20
1	13	1237	C	N1-C2-O2	-6.08	115.25	118.90
5	14	1278	A	C2-N3-C4	-6.08	107.56	110.60
5	14	2014	A	N7-C8-N9	-6.08	110.76	113.80
5	1H	67	U	N3-C2-O2	-6.08	117.94	122.20
5	1H	248	G	C6-N1-C2	-6.08	121.45	125.10
5	1H	917	A	O5'-P-OP2	6.08	118.00	110.70
5	1H	1800	C	N1-C2-N3	6.08	123.45	119.20
1	13	726	C	OP1-P-O3'	6.08	118.57	105.20
5	14	786	C	C2-N1-C1'	-6.08	112.11	118.80
5	1H	2347	C	OP2-P-O3'	6.08	118.57	105.20
5	14	2439	A	N1-C6-N6	6.08	122.25	118.60
5	1H	209	C	O5'-P-OP2	-6.08	100.23	105.70
1	13	1103	C	O5'-P-OP2	-6.07	100.23	105.70
1	13	1530	G	C5-C6-O6	-6.07	124.96	128.60
5	14	2072	G	OP1-P-OP2	-6.07	110.49	119.60
5	1H	583	G	C8-N9-C4	-6.07	103.97	106.40
5	1H	2063	C	N3-C4-C5	-6.07	119.47	121.90
5	14	1604	C	N1-C2-O2	-6.07	115.26	118.90
5	1H	71	A	N1-C6-N6	6.07	122.24	118.60
5	1H	1618	A	C4-C5-N7	6.07	113.74	110.70
5	1H	1626	G	O5'-P-OP1	-6.07	100.24	105.70
1	13	1211	U	P-O3'-C3'	6.07	126.98	119.70
5	14	2765	A	C8-N9-C4	-6.07	103.37	105.80
5	1H	560	C	C6-N1-C2	6.07	122.73	120.30
5	1H	619	G	C2-N3-C4	-6.07	108.86	111.90
5	1H	1941	C	C6-N1-C2	-6.07	117.87	120.30
5	1H	904	C	C6-N1-C2	-6.07	117.87	120.30
5	1H	1602	U	C4-C5-C6	6.07	123.34	119.70
1	1G	889	A	O5'-P-OP1	-6.07	100.24	105.70
5	1H	665	C	C5-C6-N1	-6.07	117.97	121.00
5	14	810	U	N3-C2-O2	-6.07	117.95	122.20
1	1G	1405	G	O5'-P-OP2	-6.07	100.24	105.70
4	4K	18	G	N9-C4-C5	6.06	107.83	105.40
2	3L	71	G	C6-C5-N7	6.06	134.04	130.40
5	14	642	G	N7-C8-N9	6.06	116.13	113.10
5	14	666	G	C2-N3-C4	-6.06	108.87	111.90
5	14	1987	G	C5-C6-O6	-6.06	124.96	128.60
5	14	2357	U	O5'-P-OP2	-6.06	100.24	105.70
5	1H	797	C	O5'-P-OP2	-6.06	100.24	105.70
5	1H	2620	C	C5-C4-N4	-6.06	115.96	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2763	G	N9-C4-C5	-6.06	102.97	105.40
1	1G	768	A	C2-N3-C4	-6.06	107.57	110.60
5	1H	1255	U	O5'-P-OP2	6.06	117.97	110.70
5	1H	787	U	C4-C5-C6	-6.06	116.06	119.70
5	1H	1777	U	OP2-P-O3'	6.06	118.53	105.20
5	1H	2620	C	C6-N1-C1'	-6.06	113.53	120.80
5	1H	661	C	C5-C4-N4	-6.06	115.96	120.20
27	16	21	G	C5-C6-O6	6.06	132.24	128.60
1	1G	1498	U	P-O3'-C3'	6.06	126.97	119.70
3	2L	17	C	N1-C2-O2	6.06	122.53	118.90
5	14	265	A	N7-C8-N9	6.06	116.83	113.80
5	14	656	G	C6-C5-N7	-6.06	126.77	130.40
5	14	1235	G	N1-C6-O6	-6.06	116.27	119.90
5	1H	645	C	C5-C6-N1	6.06	124.03	121.00
5	1H	869	G	N1-C2-N2	-6.06	110.75	116.20
5	1H	1410	G	C4-N9-C1'	-6.06	118.63	126.50
5	1H	2422	A	C2-N3-C4	-6.06	107.57	110.60
1	13	1299	A	C5-N7-C8	-6.05	100.87	103.90
5	14	451	C	N3-C4-C5	6.05	124.32	121.90
5	14	591	C	N1-C2-O2	-6.05	115.27	118.90
5	14	1613	G	N3-C2-N2	6.05	124.14	119.90
5	1H	1129	A	OP1-P-OP2	6.05	128.68	119.60
5	1H	2075	U	N3-C2-O2	-6.05	117.96	122.20
5	14	1616	A	N1-C2-N3	6.05	132.33	129.30
5	1H	141	A	O4'-C1'-N9	6.05	113.04	108.20
5	1H	948	G	N7-C8-N9	6.05	116.13	113.10
5	1H	974(A)	C	OP1-P-OP2	-6.05	110.52	119.60
1	13	1250	A	N1-C6-N6	-6.05	114.97	118.60
5	14	221	A	O5'-P-OP1	-6.05	100.25	105.70
5	14	1332	G	N7-C8-N9	6.05	116.12	113.10
5	14	1956	U	N3-C2-O2	-6.05	117.96	122.20
5	1H	853	G	N9-C4-C5	-6.05	102.98	105.40
5	1H	1153	C	O5'-P-OP2	-6.05	100.25	105.70
1	13	944	G	C5-C6-O6	6.05	132.23	128.60
1	13	1331	G	P-O3'-C3'	6.05	126.96	119.70
5	1H	2392	A	O4'-C1'-N9	6.05	113.04	108.20
5	1H	82	G	C4-C5-N7	-6.05	108.38	110.80
5	1H	271(B)	G	C8-N9-C1'	-6.05	119.14	127.00
5	1H	1566	A	O5'-P-OP1	6.05	117.96	110.70
5	1H	1808	U	N3-C4-O4	6.05	123.63	119.40
5	14	1308	A	C5-C6-N1	-6.05	114.68	117.70
5	1H	502	A	C4-C5-C6	6.05	120.02	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	945	G	C8-N9-C4	-6.05	103.98	106.40
1	13	597	G	N1-C6-O6	-6.04	116.27	119.90
5	14	93	C	C5-C6-N1	6.04	124.02	121.00
5	14	1905	C	P-O3'-C3'	6.04	126.95	119.70
5	1H	839	U	OP1-P-OP2	6.04	128.66	119.60
5	1H	974	G	O4'-C1'-N9	-6.04	103.37	108.20
5	1H	134	C	C2-N3-C4	-6.04	116.88	119.90
5	1H	120	U	N3-C2-O2	-6.04	117.97	122.20
5	1H	1618	A	C6-C5-N7	-6.04	128.07	132.30
5	14	1241	A	C5-C6-N1	-6.04	114.68	117.70
5	14	1826	G	N7-C8-N9	-6.04	110.08	113.10
5	14	2087	G	C8-N9-C4	6.04	108.82	106.40
5	14	2341	G	C5-C6-N1	-6.04	108.48	111.50
5	1H	2339	G	N3-C4-N9	6.04	129.62	126.00
5	14	1579	A	N1-C6-N6	6.04	122.22	118.60
5	14	2271	G	OP2-P-O3'	6.03	118.48	105.20
5	1H	239	U	N3-C2-O2	-6.03	117.98	122.20
5	1H	729	G	N9-C4-C5	6.03	107.81	105.40
5	1H	1373	A	OP1-P-OP2	-6.03	110.55	119.60
5	14	1790	C	OP1-P-O3'	6.03	118.47	105.20
5	14	2068	U	O5'-P-OP1	-6.03	100.27	105.70
5	1H	631	A	O5'-P-OP2	6.03	117.94	110.70
5	1H	1428	C	N3-C4-N4	-6.03	113.78	118.00
1	13	883	C	N3-C4-C5	-6.03	119.49	121.90
5	14	752	A	C8-N9-C4	-6.03	103.39	105.80
5	1H	236	C	C4-C5-C6	6.03	120.42	117.40
5	1H	2597	G	C5-C6-O6	-6.03	124.98	128.60
1	13	419	C	C2-N1-C1'	6.03	125.43	118.80
5	14	1597	A	OP1-P-O3'	6.03	118.46	105.20
5	1H	1335	U	O5'-P-OP1	-6.03	100.28	105.70
5	1H	1612	C	C4-C5-C6	6.03	120.41	117.40
5	1H	2281	C	N3-C4-C5	6.03	124.31	121.90
27	16	60	C	N3-C4-N4	6.03	122.22	118.00
5	14	1351	C	C5-C6-N1	-6.03	117.99	121.00
5	14	1630	G	C5-C6-O6	-6.03	124.98	128.60
5	1H	1192	G	C8-N9-C4	6.03	108.81	106.40
5	1H	1229(A)	G	N7-C8-N9	6.03	116.11	113.10
5	1H	1364	G	N3-C4-N9	6.03	129.62	126.00
27	16	79	C	C6-N1-C2	-6.03	117.89	120.30
5	14	195	A	N1-C6-N6	6.02	122.21	118.60
5	14	621	A	C2-N3-C4	-6.02	107.59	110.60
1	1G	121	C	N3-C4-N4	6.02	122.22	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	193	U	C5-C6-N1	-6.02	119.69	122.70
5	1H	777	A	C2-N3-C4	-6.02	107.59	110.60
28	11	52	ARG	NE-CZ-NH1	-6.02	117.29	120.30
5	14	333	G	C5-N7-C8	-6.02	101.29	104.30
5	14	2706	G	C5-C6-N1	6.02	114.51	111.50
5	1H	1413	G	C8-N9-C4	-6.02	103.99	106.40
5	1H	1635	G	C5-C6-N1	-6.02	108.49	111.50
5	14	1608	A	C5-C6-N6	6.02	128.51	123.70
5	1H	1413	G	N7-C8-N9	6.02	116.11	113.10
5	1H	1837	C	O5'-P-OP1	-6.02	100.28	105.70
1	1G	800	G	N1-C6-O6	6.02	123.51	119.90
5	14	752	A	N1-C2-N3	6.02	132.31	129.30
5	14	1188	U	OP1-P-OP2	-6.02	110.57	119.60
5	1H	2646	C	OP2-P-O3'	6.02	118.44	105.20
5	14	74	A	N1-C6-N6	6.02	122.21	118.60
5	1H	509	C	N3-C4-C5	-6.02	119.49	121.90
1	13	500	G	C8-N9-C4	6.01	108.81	106.40
1	13	967	C	C4-C5-C6	-6.01	114.39	117.40
5	14	2492	U	O5'-P-OP2	6.01	117.92	110.70
5	1H	59	U	OP2-P-O3'	6.01	118.43	105.20
5	1H	2577	A	C8-N9-C4	-6.01	103.39	105.80
5	14	1785	A	C8-N9-C4	-6.01	103.39	105.80
1	1G	1355	G	N1-C6-O6	6.01	123.51	119.90
5	14	1650	G	C8-N9-C4	-6.01	104.00	106.40
5	14	2419	U	OP1-P-O3'	6.01	118.43	105.20
5	1H	1805	U	OP2-P-O3'	6.01	118.43	105.20
1	1G	1077	G	N9-C4-C5	-6.01	103.00	105.40
1	13	797	C	N1-C2-O2	-6.01	115.29	118.90
17	4I	88	ARG	NE-CZ-NH1	6.01	123.31	120.30
5	1H	1649	G	N1-C6-O6	-6.01	116.29	119.90
5	1H	1698	A	C6-C5-N7	-6.01	128.09	132.30
5	1H	671	C	N3-C4-N4	-6.01	113.79	118.00
5	1H	1632	A	C4-C5-N7	6.01	113.70	110.70
5	1H	2753	A	OP1-P-O3'	6.01	118.42	105.20
5	14	97	C	OP1-P-OP2	6.01	128.61	119.60
5	14	2254	C	C6-N1-C2	6.01	122.70	120.30
5	1H	593	G	C2-N3-C4	-6.01	108.90	111.90
5	1H	659	C	OP2-P-O3'	6.01	118.41	105.20
5	1H	811	U	N1-C2-N3	6.01	118.50	114.90
5	1H	2666	C	C6-N1-C2	-6.01	117.90	120.30
5	1H	2271	G	C8-N9-C1'	-6.00	119.19	127.00
1	13	820	U	O5'-P-OP1	-6.00	100.30	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1644	C	N3-C2-O2	-6.00	117.70	121.90
5	14	1770	G	O5'-P-OP2	6.00	117.91	110.70
5	1H	199	A	C4-C5-C6	-6.00	114.00	117.00
5	1H	1780	A	C8-N9-C4	-6.00	103.40	105.80
27	16	79	C	OP2-P-O3'	6.00	118.41	105.20
1	1G	723	U	C5-C6-N1	6.00	125.70	122.70
1	1G	1474	G	N3-C4-C5	6.00	131.60	128.60
5	14	765	G	N7-C8-N9	6.00	116.10	113.10
5	14	776	G	N9-C4-C5	6.00	107.80	105.40
5	14	1313	U	C5-C6-N1	6.00	125.70	122.70
5	1H	1638	C	OP1-P-O3'	6.00	118.40	105.20
5	1H	2610	C	N1-C2-O2	6.00	122.50	118.90
1	13	917	G	O5'-P-OP1	-6.00	100.30	105.70
1	1G	634	C	C6-N1-C2	-6.00	117.90	120.30
1	1G	895	G	C5-C6-O6	-6.00	125.00	128.60
5	14	74	A	N3-C4-N9	-6.00	122.60	127.40
5	14	129	C	C5-C4-N4	-6.00	116.00	120.20
5	14	2332	U	C5-C4-O4	6.00	129.50	125.90
5	1H	1194	A	N1-C2-N3	-6.00	126.30	129.30
5	1H	1305	C	N1-C2-O2	6.00	122.50	118.90
5	1H	1542	G	C5-C6-O6	6.00	132.20	128.60
5	1H	1848	A	N1-C6-N6	6.00	122.20	118.60
1	1G	1301	U	N3-C2-O2	-6.00	118.00	122.20
5	14	2829	C	N1-C2-O2	-6.00	115.30	118.90
5	1H	265	A	O4'-C1'-N9	6.00	113.00	108.20
5	1H	199	A	N1-C6-N6	-6.00	115.00	118.60
5	1H	247	G	C5-C6-O6	-5.99	125.00	128.60
5	1H	1253	A	C2-N3-C4	5.99	113.60	110.60
5	1H	1254	A	O5'-P-OP1	-5.99	100.31	105.70
5	1H	2271	G	C4-N9-C1'	5.99	134.29	126.50
5	14	1914	C	N3-C2-O2	-5.99	117.71	121.90
1	13	1491	G	OP2-P-O3'	5.99	118.38	105.20
5	14	738	G	N1-C2-N2	-5.99	110.81	116.20
5	14	2517	C	C2-N3-C4	-5.99	116.91	119.90
5	1H	103	A	C8-N9-C4	5.99	108.20	105.80
5	1H	1366	A	C4-C5-C6	5.99	119.99	117.00
6	12	23	ARG	N-CA-C	-5.99	94.83	111.00
5	1H	676	A	C6-C5-N7	-5.99	128.11	132.30
5	1H	2415	G	N3-C2-N2	-5.99	115.71	119.90
5	14	247	G	O5'-P-OP1	-5.99	100.31	105.70
5	1H	1605	C	C2-N3-C4	-5.99	116.91	119.90
5	14	950	G	N1-C6-O6	-5.98	116.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	187	G	C8-N9-C1'	-5.98	119.22	127.00
5	1H	455	C	N1-C2-O2	-5.98	115.31	118.90
5	1H	734	A	C5-N7-C8	-5.98	100.91	103.90
5	1H	1761	C	N3-C2-O2	5.98	126.09	121.90
5	1H	2275	C	C5'-C4'-O4'	-5.98	101.92	109.10
5	14	2067	G	OP1-P-O3'	5.98	118.36	105.20
5	14	2688	U	C2-N3-C4	-5.98	123.41	127.00
5	1H	432	A	C5-C6-N6	-5.98	118.91	123.70
5	1H	484	C	C2-N1-C1'	5.98	125.38	118.80
5	1H	2253	G	N1-C2-N2	5.98	121.58	116.20
5	14	675	A	N1-C6-N6	5.98	122.19	118.60
5	14	1145	C	C6-N1-C2	-5.98	117.91	120.30
5	1H	762	U	C2-N1-C1'	5.98	124.87	117.70
5	1H	1635	G	OP1-P-O3'	5.98	118.35	105.20
2	3L	48	C	N3-C4-N4	5.98	122.18	118.00
5	14	1695	G	C6-C5-N7	-5.98	126.81	130.40
1	13	878	G	N3-C4-C5	-5.98	125.61	128.60
1	13	1279	A	C8-N9-C4	-5.98	103.41	105.80
5	14	1625	C	N3-C2-O2	-5.98	117.72	121.90
5	14	1936	A	O4'-C1'-N9	5.98	112.98	108.20
5	1H	1906	G	C8-N9-C4	-5.98	104.01	106.40
5	14	808	G	C5-N7-C8	5.97	107.29	104.30
5	1H	1147	C	C6-N1-C2	5.97	122.69	120.30
5	1H	1673	U	C2-N3-C4	-5.97	123.42	127.00
5	1H	2370	G	O5'-P-OP1	-5.97	100.32	105.70
5	1H	2710	C	C6-N1-C2	5.97	122.69	120.30
5	14	685	A	C5-C6-N1	5.97	120.69	117.70
5	14	841	A	C6-C5-N7	-5.97	128.12	132.30
5	14	2762	G	N1-C6-O6	5.97	123.48	119.90
5	1H	194	G	N9-C4-C5	-5.97	103.01	105.40
5	1H	1261	C	C6-N1-C2	5.97	122.69	120.30
5	1H	2730	C	O5'-P-OP1	-5.97	100.32	105.70
1	1G	587	G	C6-C5-N7	-5.97	126.82	130.40
1	1G	674	G	N1-C6-O6	5.97	123.48	119.90
1	1G	1260	C	C5-C6-N1	5.97	123.99	121.00
5	14	720	C	C6-N1-C2	5.97	122.69	120.30
5	1H	1520	U	C6-N1-C2	-5.97	117.42	121.00
1	1G	890	G	C4-C5-N7	-5.97	108.41	110.80
5	14	2787	C	C6-N1-C2	-5.97	117.91	120.30
5	1H	423	A	N1-C6-N6	-5.97	115.02	118.60
5	1H	1520	U	C5-C4-O4	5.97	129.48	125.90
5	1H	2454	G	C8-N9-C4	-5.97	104.01	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	659	C	OP2-P-O3'	5.97	118.33	105.20
5	1H	203	C	N1-C2-O2	-5.97	115.32	118.90
5	1H	783	A	O4'-C1'-N9	5.97	112.97	108.20
5	1H	1962	C	C4-C5-C6	-5.97	114.42	117.40
5	1H	2274	A	OP2-P-O3'	5.97	118.33	105.20
1	1G	244	U	C5-C4-O4	-5.97	122.32	125.90
5	14	1610	A	OP1-P-O3'	5.96	118.32	105.20
5	14	1664	A	O4'-C1'-N9	-5.96	103.43	108.20
5	1H	500	G	OP1-P-OP2	5.96	128.55	119.60
5	1H	2707	G	C6-N1-C2	-5.96	121.52	125.10
1	1G	1432	G	C5-C6-N1	-5.96	108.52	111.50
5	14	2376	A	C2-N3-C4	-5.96	107.62	110.60
5	1H	1837	C	C2-N3-C4	5.96	122.88	119.90
1	1G	332	G	N9-C4-C5	-5.96	103.02	105.40
5	14	1625	C	C6-N1-C2	-5.96	117.92	120.30
3	2K	57	C	OP1-P-OP2	5.96	128.54	119.60
5	1H	660	G	C5-N7-C8	-5.96	101.32	104.30
5	1H	967	C	N3-C4-C5	5.96	124.28	121.90
5	1H	2502	G	N3-C4-C5	-5.96	125.62	128.60
5	1H	2656	U	C2-N1-C1'	5.96	124.85	117.70
1	1G	266	G	C8-N9-C4	-5.96	104.02	106.40
1	1G	1390	U	C5-C4-O4	5.96	129.47	125.90
5	1H	1024	G	O5'-P-OP1	-5.96	100.34	105.70
39	A8	101	LEU	CA-CB-CG	5.96	129.00	115.30
5	14	2092	U	C5-C4-O4	5.96	129.47	125.90
5	1H	410	G	O5'-P-OP1	-5.96	100.34	105.70
5	1H	821	A	N1-C6-N6	5.96	122.17	118.60
5	1H	2449	U	OP2-P-O3'	5.96	118.30	105.20
5	14	1345	C	C6-N1-C2	-5.95	117.92	120.30
5	14	1558	A	N1-C2-N3	5.95	132.28	129.30
5	14	2873	A	N9-C1'-C2'	5.95	121.74	114.00
5	1H	1564	C	N3-C4-C5	5.95	124.28	121.90
5	1H	1817	G	N1-C6-O6	-5.95	116.33	119.90
27	16	99	A	C8-N9-C4	-5.95	103.42	105.80
1	13	942	G	OP1-P-O3'	5.95	118.30	105.20
5	14	780	G	N1-C2-N2	5.95	121.56	116.20
5	1H	1605	C	C5-C4-N4	-5.95	116.03	120.20
1	13	267	C	OP2-P-O3'	5.95	118.29	105.20
5	14	1653	G	OP1-P-OP2	5.95	128.53	119.60
5	1H	503	A	N1-C6-N6	-5.95	115.03	118.60
5	1H	1304	C	N3-C4-C5	5.95	124.28	121.90
5	1H	1379	A	C3'-C2'-C1'	-5.95	96.74	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1647	G	C4-C5-N7	-5.95	108.42	110.80
5	1H	2084	C	C4-C5-C6	5.95	120.38	117.40
1	13	1518	A	C5-C6-N1	-5.95	114.73	117.70
5	14	940	G	O5'-P-OP1	5.95	117.84	110.70
5	14	2432	A	O5'-P-OP2	-5.95	100.35	105.70
5	1H	181	A	O5'-P-OP2	5.95	117.84	110.70
5	1H	388	G	C5-C6-O6	-5.95	125.03	128.60
5	1H	1879	C	C6-N1-C2	-5.95	117.92	120.30
5	1H	966	G	C2-N3-C4	-5.95	108.93	111.90
5	1H	1262	A	C5-C6-N6	-5.95	118.94	123.70
5	1H	1587	A	N9-C4-C5	5.95	108.18	105.80
5	1H	2712	U	N3-C2-O2	-5.95	118.04	122.20
35	68	22	ILE	CG1-CB-CG2	-5.95	98.32	111.40
1	13	129	U	O4'-C1'-N1	5.95	112.96	108.20
5	14	1136	G	C5-C6-O6	-5.95	125.03	128.60
5	1H	461	C	N1-C2-O2	-5.95	115.33	118.90
5	1H	1889	A	C2-N3-C4	-5.95	107.63	110.60
5	14	1528	A	C4-C5-N7	5.94	113.67	110.70
5	14	2056	G	N1-C2-N2	5.94	121.55	116.20
5	1H	193	U	N1-C2-O2	-5.94	118.64	122.80
5	1H	498	G	O5'-P-OP2	5.94	117.83	110.70
5	1H	640	C	C6-N1-C2	-5.94	117.92	120.30
5	1H	816	C	N3-C4-N4	5.94	122.16	118.00
5	1H	1905	C	N3-C4-C5	-5.94	119.52	121.90
5	1H	2575	C	C5-C6-N1	-5.94	118.03	121.00
27	16	29	A	OP1-P-OP2	-5.94	110.68	119.60
1	1G	508	C	N3-C4-C5	5.94	124.28	121.90
5	14	2573	C	C6-N1-C2	-5.94	117.92	120.30
5	1H	1332	G	C4-N9-C1'	-5.94	118.78	126.50
5	1H	1842	G	C5-N7-C8	5.94	107.27	104.30
1	1G	448	A	N1-C6-N6	5.94	122.17	118.60
5	1H	165	U	N1-C2-O2	5.94	126.96	122.80
5	1H	739	G	O5'-P-OP1	5.94	117.83	110.70
5	1H	960	A	N9-C4-C5	-5.94	103.42	105.80
5	1H	1366	A	C6-C5-N7	-5.94	128.14	132.30
5	1H	217	G	N1-C6-O6	-5.94	116.34	119.90
5	1H	765	G	N3-C4-N9	-5.94	122.44	126.00
5	1H	1852	C	N1-C2-O2	-5.94	115.34	118.90
5	14	667	U	O5'-P-OP1	-5.94	100.36	105.70
5	14	982	C	C2-N3-C4	5.94	122.87	119.90
5	1H	1513	C	OP1-P-O3'	5.94	118.26	105.20
1	1G	1354	C	C5-C6-N1	5.94	123.97	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	690	G	N1-C6-O6	5.94	123.46	119.90
1	1G	690	G	C4-C5-N7	5.94	113.17	110.80
5	1H	71	A	C6-C5-N7	-5.93	128.15	132.30
5	1H	391	G	N1-C6-O6	5.93	123.46	119.90
5	1H	1842	G	C4-C5-N7	-5.93	108.43	110.80
5	1H	2388	A	O4'-C1'-N9	5.93	112.95	108.20
5	14	138	G	C5-N7-C8	-5.93	101.33	104.30
5	14	613	U	N1-C2-O2	5.93	126.95	122.80
5	14	1882	C	C2-N1-C1'	5.93	125.32	118.80
5	1H	1319	G	C5-C6-N1	5.93	114.47	111.50
5	1H	1366	A	C8-N9-C4	5.93	108.17	105.80
1	13	1518	A	N7-C8-N9	-5.93	110.83	113.80
5	14	2249	U	C5-C6-N1	5.93	125.66	122.70
5	1H	774	A	C4-C5-C6	-5.93	114.04	117.00
5	1H	1667	G	O5'-P-OP1	-5.93	100.36	105.70
5	14	194	G	N1-C6-O6	5.93	123.46	119.90
5	1H	1328	G	N1-C2-N2	-5.93	110.86	116.20
1	13	956	U	N3-C4-C5	-5.93	111.04	114.60
5	14	1809	A	O5'-P-OP2	5.93	117.81	110.70
5	1H	1162	G	N9-C4-C5	5.93	107.77	105.40
5	1H	1636	C	N3-C4-N4	5.93	122.15	118.00
5	1H	2048	G	C5-C6-N1	-5.93	108.54	111.50
42	D8	18	LEU	CA-CB-CG	5.93	128.93	115.30
7	22	196	LEU	CA-CB-CG	5.93	128.93	115.30
1	13	60	A	C8-N9-C4	5.92	108.17	105.80
5	14	480	A	N1-C6-N6	-5.92	115.05	118.60
5	14	1203	G	N3-C4-C5	-5.92	125.64	128.60
5	1H	2321	G	O5'-P-OP1	5.92	117.81	110.70
5	14	330	A	C6-C5-N7	-5.92	128.15	132.30
5	14	706	A	C8-N9-C4	-5.92	103.43	105.80
5	14	1934	C	N1-C2-O2	5.92	122.45	118.90
5	14	270(X)	G	N1-C6-O6	5.92	123.45	119.90
5	1H	2278	A	C8-N9-C4	-5.92	103.43	105.80
1	1G	413	G	C8-N9-C1'	5.92	134.70	127.00
1	13	1512	U	N3-C2-O2	-5.92	118.06	122.20
5	1H	841	A	N1-C6-N6	5.92	122.15	118.60
5	1H	2594	C	C6-N1-C2	-5.92	117.93	120.30
1	1G	244	U	C6-N1-C1'	-5.92	112.91	121.20
5	1H	133	C	C2-N3-C4	-5.92	116.94	119.90
5	1H	627	A	N7-C8-N9	-5.92	110.84	113.80
5	1H	954	G	N1-C2-N2	5.92	121.53	116.20
5	1H	1204	A	N3-C4-C5	5.92	130.94	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2346	A	N1-C6-N6	5.92	122.15	118.60
5	14	2239	G	N3-C4-N9	5.92	129.55	126.00
5	1H	121	G	C4-C5-N7	5.92	113.17	110.80
5	1H	1617	C	O5'-P-OP2	5.92	117.80	110.70
5	1H	1669	A	C6-N1-C2	-5.92	115.05	118.60
1	1G	950	U	O5'-P-OP2	5.92	117.80	110.70
5	14	2073	C	OP1-P-OP2	-5.92	110.73	119.60
5	14	1342	A	C6-C5-N7	-5.91	128.16	132.30
5	14	1796	U	C5-C6-N1	5.91	125.66	122.70
5	1H	2522	U	C5-C6-N1	-5.91	119.74	122.70
5	14	31	C	O5'-P-OP1	-5.91	100.38	105.70
5	1H	825	C	N1-C2-O2	-5.91	115.35	118.90
5	14	1382	G	C8-N9-C4	5.91	108.76	106.40
5	14	1726	G	C8-N9-C4	-5.91	104.04	106.40
5	1H	55	G	OP1-P-O3'	5.91	118.20	105.20
5	1H	684	G	N9-C4-C5	5.91	107.76	105.40
5	14	1496	A	C4-C5-N7	5.91	113.66	110.70
5	1H	611	C	C6-N1-C2	5.91	122.66	120.30
5	1H	1817	G	N1-C2-N2	-5.91	110.88	116.20
5	1H	2476	A	C8-N9-C4	-5.91	103.44	105.80
5	1H	2619	C	C4-C5-C6	5.91	120.35	117.40
1	1G	354	G	C8-N9-C4	-5.91	104.04	106.40
5	1H	668	G	OP1-P-OP2	5.91	128.46	119.60
27	16	33	G	N1-C6-O6	-5.91	116.36	119.90
5	14	1313	U	N3-C4-O4	5.91	123.53	119.40
26	1K	47	U	C2-N1-C1'	5.91	124.79	117.70
5	1H	377	C	N3-C4-C5	5.91	124.26	121.90
5	1H	1496	A	C5-C6-N6	-5.91	118.98	123.70
5	1H	1784	A	O5'-P-OP1	5.91	117.78	110.70
5	1H	2465	C	C5-C6-N1	-5.91	118.05	121.00
1	1G	1446	A	O5'-P-OP1	5.91	117.79	110.70
5	14	570	G	C4-N9-C1'	5.90	134.17	126.50
5	14	570	G	C8-N9-C4	-5.90	104.04	106.40
5	14	863	A	O5'-P-OP2	-5.90	100.39	105.70
5	1H	1812	A	OP1-P-OP2	5.90	128.45	119.60
5	1H	1829	A	OP1-P-OP2	5.90	128.45	119.60
5	1H	2059	A	C8-N9-C4	5.90	108.16	105.80
1	13	359	U	C5-C4-O4	5.90	129.44	125.90
1	13	496	A	C8-N9-C4	-5.90	103.44	105.80
1	13	644	G	O5'-P-OP2	-5.90	100.39	105.70
5	14	2011	U	N3-C2-O2	5.90	126.33	122.20
5	14	2347	C	N3-C2-O2	-5.90	117.77	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1158	C	C5-C6-N1	-5.90	118.05	121.00
5	1H	1681	G	N1-C6-O6	5.90	123.44	119.90
5	14	395	U	O4'-C1'-N1	5.90	112.92	108.20
5	14	2392	A	C5-C6-N1	-5.90	114.75	117.70
3	2K	17	C	C6-N1-C1'	-5.90	113.72	120.80
5	1H	808	G	C8-N9-C4	5.90	108.76	106.40
5	1H	827	U	O5'-P-OP2	-5.90	100.39	105.70
5	1H	1614	A	N9-C4-C5	-5.90	103.44	105.80
1	1G	556	C	O5'-P-OP1	-5.90	100.39	105.70
5	14	1301	A	N9-C4-C5	-5.90	103.44	105.80
5	1H	914	C	C6-N1-C2	-5.90	117.94	120.30
5	1H	1416	G	C4-N9-C1'	-5.90	118.83	126.50
5	1H	1772	G	N9-C1'-C2'	-5.90	105.51	112.00
5	1H	191	A	C6-N1-C2	5.89	122.14	118.60
5	1H	252	G	C5-C6-O6	-5.89	125.06	128.60
5	1H	1381	G	O5'-P-OP2	5.89	117.77	110.70
5	1H	2588	G	C4-C5-N7	5.89	113.16	110.80
5	14	130	C	C5-C6-N1	-5.89	118.05	121.00
5	14	278	A	OP1-P-O3'	5.89	118.17	105.20
5	14	926	A	N1-C6-N6	5.89	122.14	118.60
5	14	1366	A	C5-C6-N6	-5.89	118.99	123.70
5	14	1528	A	N1-C6-N6	5.89	122.14	118.60
5	14	1826	G	C5-N7-C8	5.89	107.25	104.30
5	1H	137(A)	G	C5-C6-O6	-5.89	125.06	128.60
5	1H	232	G	N9-C4-C5	-5.89	103.04	105.40
5	1H	1365	A	C5-C6-N1	-5.89	114.75	117.70
5	1H	2827	C	N3-C2-O2	5.89	126.02	121.90
1	13	1200	C	N1-C2-O2	5.89	122.44	118.90
1	13	899	C	C4-C5-C6	5.89	120.34	117.40
5	14	187	G	C5-C6-N1	5.89	114.44	111.50
5	1H	576	U	OP2-P-O3'	5.89	118.16	105.20
5	1H	741	G	O5'-P-OP1	-5.89	100.40	105.70
5	1H	814	C	C2-N3-C4	-5.89	116.95	119.90
5	1H	1534	G	C2-N3-C4	5.89	114.84	111.90
5	1H	1804	C	OP1-P-OP2	-5.89	110.77	119.60
5	1H	197	A	C5-C6-N6	5.89	128.41	123.70
5	1H	579	G	C2-N3-C4	5.89	114.84	111.90
5	1H	2387	U	C2-N3-C4	-5.89	123.47	127.00
5	1H	2713	A	C6-C5-N7	-5.89	128.18	132.30
1	1G	244	U	O5'-P-OP2	5.89	117.77	110.70
1	1G	493	G	N7-C8-N9	5.89	116.04	113.10
5	14	970	C	N1-C2-O2	-5.89	115.37	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1396	U	O5'-P-OP1	-5.89	100.40	105.70
8	3E	12	CYS	CA-CB-SG	5.89	124.60	114.00
5	1H	40	C	C5-C6-N1	-5.89	118.06	121.00
1	13	263	A	O5'-P-OP1	-5.88	100.40	105.70
5	14	1302	A	OP1-P-OP2	5.88	128.43	119.60
5	14	1341	U	OP1-P-O3'	5.88	118.15	105.20
5	14	2701	C	P-O3'-C3'	5.88	126.76	119.70
1	1G	481	G	N3-C4-N9	5.88	129.53	126.00
5	1H	1827	C	C5-C6-N1	-5.88	118.06	121.00
5	14	2499	C	N3-C2-O2	-5.88	117.78	121.90
5	1H	1752	C	N3-C2-O2	5.88	126.02	121.90
5	1H	1960	A	C2-N3-C4	-5.88	107.66	110.60
5	14	1618	A	N1-C6-N6	-5.88	115.07	118.60
5	14	1776	G	C6-C5-N7	-5.88	126.87	130.40
5	1H	2040	C	N1-C2-O2	-5.88	115.37	118.90
1	13	789	U	C6-N1-C2	-5.88	117.47	121.00
5	14	620	G	N9-C4-C5	5.88	107.75	105.40
5	1H	2819	G	N3-C2-N2	-5.88	115.79	119.90
1	13	890	G	O4'-C1'-N9	5.88	112.90	108.20
1	13	1200	C	C2-N3-C4	5.88	122.84	119.90
5	14	2674	G	O5'-P-OP2	-5.88	100.41	105.70
5	14	2723	C	C6-N1-C2	-5.88	117.95	120.30
5	1H	195	A	N1-C6-N6	5.88	122.13	118.60
5	1H	1004	C	C6-N1-C2	-5.88	117.95	120.30
5	1H	2513	G	C8-N9-C4	-5.88	104.05	106.40
1	1G	963	G	N3-C2-N2	5.88	124.01	119.90
5	14	2318	G	N7-C8-N9	5.88	116.04	113.10
5	1H	125	G	N1-C2-N2	-5.88	110.91	116.20
1	13	333	G	C4-N9-C1'	5.87	134.14	126.50
5	14	819	A	OP2-P-O3'	5.87	118.12	105.20
5	14	1475	G	N3-C2-N2	-5.87	115.79	119.90
5	1H	2081	C	N1-C2-O2	5.87	122.42	118.90
5	1H	2713	A	N3-C4-N9	-5.87	122.70	127.40
5	14	1136	G	N1-C6-O6	5.87	123.42	119.90
5	1H	33	U	OP1-P-O3'	5.87	118.11	105.20
1	1G	738	C	N1-C2-O2	-5.87	115.38	118.90
5	14	1950	G	O4'-C1'-N9	5.87	112.89	108.20
5	1H	148	C	C6-N1-C2	5.87	122.65	120.30
5	1H	1626	G	N3-C2-N2	-5.87	115.79	119.90
5	1H	1950	G	C6-C5-N7	-5.87	126.88	130.40
5	1H	2501	C	C6-N1-C1'	5.87	127.84	120.80
5	1H	2516	G	O5'-P-OP2	-5.87	100.42	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	470	A	C4-C5-N7	5.87	113.63	110.70
5	14	915	C	N1-C2-O2	5.87	122.42	118.90
5	14	330	A	C5-C6-N1	-5.87	114.77	117.70
5	14	2430	A	C4-C5-N7	5.87	113.63	110.70
5	1H	724	U	C5-C4-O4	5.87	129.42	125.90
5	14	189	G	O5'-P-OP1	-5.86	100.42	105.70
5	14	736	C	O5'-P-OP2	5.86	117.74	110.70
5	14	1573	G	N1-C6-O6	5.86	123.42	119.90
3	2K	37	U	C5-C6-N1	-5.86	119.77	122.70
5	1H	205	G	N3-C4-N9	5.86	129.52	126.00
5	1H	866	A	O4'-C1'-N9	-5.86	103.51	108.20
5	1H	1677	A	C5-C6-N6	5.86	128.39	123.70
5	1H	2329	G	N1-C6-O6	-5.86	116.38	119.90
5	1H	2465	C	C6-N1-C2	5.86	122.64	120.30
27	1J	107	U	C2-N1-C1'	-5.86	110.66	117.70
1	13	532	A	C2-N3-C4	-5.86	107.67	110.60
1	13	690	G	N1-C2-N3	5.86	127.42	123.90
1	13	768	A	OP1-P-OP2	5.86	128.39	119.60
1	13	1374	A	N1-C2-N3	5.86	132.23	129.30
5	14	1336	A	O5'-P-OP2	-5.86	100.42	105.70
5	1H	33	U	N3-C2-O2	-5.86	118.10	122.20
5	1H	2607	G	C2-N3-C4	-5.86	108.97	111.90
5	1H	2602	A	C2-N3-C4	5.86	113.53	110.60
1	13	531	U	C5-C6-N1	-5.86	119.77	122.70
1	13	817	C	C5-C4-N4	-5.86	116.10	120.20
5	1H	1526	G	N7-C8-N9	5.86	116.03	113.10
5	1H	2296	U	N3-C4-O4	5.86	123.50	119.40
5	1H	2503	A	C2-N3-C4	5.86	113.53	110.60
1	13	413	G	O4'-C1'-N9	5.86	112.88	108.20
5	1H	262	A	C5-N7-C8	-5.86	100.97	103.90
5	1H	2292	C	C6-N1-C2	-5.86	117.96	120.30
1	1G	501	C	C6-N1-C2	-5.86	117.96	120.30
5	1H	1252	G	O4'-C1'-N9	-5.85	103.52	108.20
5	1H	1496	A	O4'-C1'-N9	5.85	112.88	108.20
5	14	584	C	C5-C4-N4	-5.85	116.10	120.20
5	1H	273(A)	G	N9-C4-C5	-5.85	103.06	105.40
5	1H	802	A	C5-N7-C8	-5.85	100.97	103.90
5	1H	848	G	C8-N9-C1'	-5.85	119.39	127.00
5	1H	1400	G	C8-N9-C4	-5.85	104.06	106.40
1	1G	741	G	N1-C6-O6	5.85	123.41	119.90
1	1G	971	G	O4'-C1'-N9	5.85	112.88	108.20
1	1G	1469	G	C5-C6-O6	-5.85	125.09	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	270(X)	G	C6-C5-N7	-5.85	126.89	130.40
5	1H	942	G	N3-C2-N2	-5.85	115.80	119.90
1	1G	1234	C	N1-C2-O2	5.85	122.41	118.90
5	1H	680	G	N7-C8-N9	-5.85	110.17	113.10
5	1H	864	G	N3-C4-C5	-5.85	125.67	128.60
5	1H	984	A	N9-C4-C5	-5.85	103.46	105.80
5	1H	2060	A	C5-C6-N6	5.85	128.38	123.70
5	14	2072	G	OP1-P-O3'	5.85	118.06	105.20
3	2K	22	A	O5'-P-OP1	-5.85	100.44	105.70
5	1H	400	G	C4-C5-N7	5.85	113.14	110.80
5	1H	509	C	C6-N1-C2	-5.85	117.96	120.30
5	1H	635	C	O5'-P-OP1	5.85	117.72	110.70
3	2L	31	G	OP1-P-O3'	5.85	118.06	105.20
5	1H	2275	C	N3-C4-C5	-5.85	119.56	121.90
1	1G	687	A	P-O3'-C3'	5.85	126.72	119.70
1	1G	865	A	C8-N9-C4	-5.85	103.46	105.80
5	14	698	C	O5'-P-OP2	-5.84	100.44	105.70
5	14	753	C	C5-C6-N1	-5.84	118.08	121.00
5	14	1852	C	C6-N1-C2	-5.84	117.96	120.30
5	14	2517	C	O4'-C1'-N1	5.84	112.88	108.20
5	1H	386	G	C5-C6-N1	5.84	114.42	111.50
5	1H	2573	C	O5'-P-OP2	-5.84	100.44	105.70
5	1H	2645	G	C5-N7-C8	-5.84	101.38	104.30
1	1G	913	A	O5'-P-OP2	-5.84	100.44	105.70
1	13	827	U	C4-C5-C6	5.84	123.21	119.70
5	14	617	G	C8-N9-C4	5.84	108.74	106.40
5	14	1598	C	C2-N1-C1'	5.84	125.23	118.80
5	1H	1309	G	C8-N9-C4	5.84	108.74	106.40
27	16	44	G	C6-C5-N7	5.84	133.91	130.40
5	14	513	A	O5'-P-OP2	-5.84	100.44	105.70
5	14	632	A	OP1-P-OP2	-5.84	110.84	119.60
5	14	774	A	C5-C6-N1	-5.84	114.78	117.70
5	14	1597	A	N7-C8-N9	-5.84	110.88	113.80
5	14	2346	A	O4'-C1'-N9	5.84	112.87	108.20
5	1H	199	A	C6-N1-C2	5.84	122.10	118.60
5	1H	970	C	O5'-P-OP2	5.84	117.71	110.70
1	13	250	A	C8-N9-C4	5.84	108.14	105.80
5	14	570	G	C5-C6-N1	-5.84	108.58	111.50
5	14	672	C	C5-C6-N1	-5.84	118.08	121.00
5	1H	659	C	C2-N1-C1'	-5.84	112.38	118.80
5	1H	738	G	N9-C4-C5	-5.84	103.06	105.40
5	1H	2076	U	N1-C2-N3	5.84	118.40	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	664	C	C2-N3-C4	-5.84	116.98	119.90
5	1H	847	U	C4-C5-C6	5.84	123.20	119.70
1	1G	112	G	O5'-P-OP2	5.84	117.70	110.70
5	1H	663	G	C4-N9-C1'	5.83	134.09	126.50
1	1G	610	G	O5'-P-OP2	-5.83	100.45	105.70
1	13	729	A	N1-C6-N6	5.83	122.10	118.60
5	14	311	A	N1-C6-N6	5.83	122.10	118.60
5	14	1241	A	O4'-C1'-N9	5.83	112.87	108.20
5	14	1641	A	N1-C2-N3	5.83	132.22	129.30
5	14	2702	U	N1-C1'-C2'	5.83	121.58	114.00
49	K8	4	SER	C-N-CA	5.83	136.29	121.70
1	1G	321	A	N1-C6-N6	5.83	122.10	118.60
5	14	791	C	N3-C2-O2	5.83	125.98	121.90
5	14	2029	G	O5'-P-OP1	-5.83	100.45	105.70
5	14	2250	G	OP1-P-O3'	5.83	118.03	105.20
5	1H	716	A	N7-C8-N9	5.83	116.72	113.80
5	1H	787	U	N3-C4-C5	5.83	118.10	114.60
5	1H	1151	G	N1-C6-O6	5.83	123.40	119.90
5	1H	2689	U	C5-C6-N1	-5.83	119.78	122.70
1	1G	1209	C	C5-C6-N1	5.83	123.92	121.00
5	14	828	U	N3-C2-O2	-5.83	118.12	122.20
5	14	1897	G	C5-C6-O6	-5.83	125.10	128.60
5	14	1313	U	O4'-C1'-N1	5.83	112.86	108.20
3	2K	11	A	N1-C6-N6	-5.83	115.10	118.60
5	1H	49	A	C5-N7-C8	5.83	106.81	103.90
5	1H	972	G	C8-N9-C4	5.83	108.73	106.40
39	A8	110	LEU	N-CA-C	5.83	126.73	111.00
5	1H	1807	G	C5-C6-N1	5.83	114.41	111.50
5	1H	2446	G	N9-C4-C5	-5.83	103.07	105.40
1	1G	956	U	C6-N1-C2	-5.83	117.50	121.00
5	14	1681	G	C4-C5-N7	5.83	113.13	110.80
5	14	2596	U	O5'-P-OP2	-5.83	100.46	105.70
5	1H	1824	G	N1-C6-O6	5.83	123.39	119.90
5	14	760	G	OP1-P-O3'	5.82	118.01	105.20
5	14	2430	A	C4-C5-C6	5.82	119.91	117.00
5	1H	2228	G	N3-C4-C5	-5.82	125.69	128.60
5	1H	2438	U	C5-C6-N1	-5.82	119.79	122.70
5	1H	685	A	C6-N1-C2	5.82	122.09	118.60
1	13	792	A	C5-C6-N6	-5.82	119.04	123.70
1	13	1216	G	O5'-P-OP2	-5.82	100.46	105.70
5	1H	109	G	N1-C2-N3	5.82	127.39	123.90
5	1H	867	C	O5'-P-OP2	5.82	117.69	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1248	G	C8-N9-C4	5.82	108.73	106.40
27	16	81	G	O4'-C1'-N9	5.82	112.86	108.20
5	14	1796	U	O5'-P-OP2	5.82	117.68	110.70
5	14	2376	A	C8-N9-C4	5.82	108.13	105.80
5	1H	1010	A	N9-C4-C5	-5.82	103.47	105.80
5	14	1122	G	C5-C6-O6	-5.82	125.11	128.60
5	14	1607	C	N3-C4-N4	5.82	122.07	118.00
5	1H	137(A)	G	N1-C6-O6	5.82	123.39	119.90
5	1H	1931	U	N3-C4-C5	-5.82	111.11	114.60
5	1H	2451	A	N1-C6-N6	-5.82	115.11	118.60
55	Q8	30	ARG	NE-CZ-NH1	-5.82	117.39	120.30
5	14	1342	A	N9-C1'-C2'	5.81	121.56	114.00
5	1H	867	C	N1-C2-O2	-5.81	115.41	118.90
5	14	2065	C	O5'-P-OP2	-5.81	100.47	105.70
5	14	2608	G	OP1-P-OP2	-5.81	110.88	119.60
5	1H	776	G	N3-C2-N2	-5.81	115.83	119.90
5	1H	1519	G	O5'-P-OP1	-5.81	100.47	105.70
5	1H	2282	G	O5'-P-OP2	5.81	117.67	110.70
5	1H	2855	C	C6-N1-C2	-5.81	117.97	120.30
1	1G	251	G	O4'-C1'-N9	-5.81	103.55	108.20
5	14	1899	G	C5-C6-O6	5.81	132.09	128.60
5	14	777	A	C6-N1-C2	-5.81	115.11	118.60
5	1H	385	C	OP2-P-O3'	5.81	117.98	105.20
5	1H	1022	G	P-O3'-C3'	5.81	126.67	119.70
5	1H	1792	G	C6-C5-N7	5.81	133.88	130.40
5	1H	1940	U	N3-C4-O4	5.81	123.47	119.40
5	1H	2534	A	N7-C8-N9	-5.81	110.90	113.80
1	13	511	C	C5-C6-N1	-5.81	118.10	121.00
5	14	914	C	OP1-P-O3'	5.81	117.97	105.20
5	14	1963	U	C6-N1-C2	-5.81	117.52	121.00
5	1H	374	A	C5-C6-N6	-5.81	119.05	123.70
5	1H	761	A	C8-N9-C4	5.81	108.12	105.80
5	1H	1678	G	N1-C2-N2	5.81	121.43	116.20
5	1H	2585	U	C5-C6-N1	-5.81	119.80	122.70
1	1G	789	U	C6-N1-C2	-5.81	117.52	121.00
1	1G	1145	C	N1-C2-O2	5.81	122.38	118.90
5	14	488	G	O5'-P-OP2	-5.81	100.47	105.70
5	14	509	C	N3-C2-O2	-5.81	117.84	121.90
5	14	2242	G	O5'-P-OP2	5.81	117.67	110.70
5	14	2276	G	C5-C6-N1	-5.81	108.60	111.50
1	1G	525	C	C5-C6-N1	5.81	123.90	121.00
5	14	1338	G	N3-C2-N2	5.80	123.96	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2271	G	C2-N3-C4	5.80	114.80	111.90
27	16	85	G	N1-C6-O6	5.80	123.38	119.90
1	13	1459	C	N1-C2-O2	5.80	122.38	118.90
5	1H	793	A	N3-C4-N9	5.80	132.04	127.40
5	1H	1355	G	N1-C6-O6	-5.80	116.42	119.90
5	1H	1883	G	N9-C4-C5	-5.80	103.08	105.40
1	13	395	C	C2-N1-C1'	-5.80	112.42	118.80
1	13	1502	A	N1-C2-N3	5.80	132.20	129.30
5	14	791	C	N1-C2-O2	-5.80	115.42	118.90
5	1H	1894	C	O5'-P-OP2	-5.80	100.48	105.70
1	13	738	C	C5-C6-N1	5.80	123.90	121.00
5	14	1340	U	C6-N1-C2	5.80	124.48	121.00
5	14	1613	G	N3-C4-N9	5.80	129.48	126.00
5	14	1979	C	C5-C6-N1	5.80	123.90	121.00
5	1H	1128	A	C5-C6-N1	5.80	120.60	117.70
46	H8	117	LEU	CA-CB-CG	5.80	128.64	115.30
5	14	2000	G	C8-N9-C4	5.80	108.72	106.40
5	1H	2311	A	N3-C4-C5	5.80	130.86	126.80
1	13	1427	U	OP2-P-O3'	5.80	117.95	105.20
5	14	462	C	OP1-P-OP2	5.80	128.29	119.60
5	14	735	A	N7-C8-N9	-5.80	110.90	113.80
5	14	1290	C	OP1-P-OP2	5.80	128.29	119.60
5	1H	1006	C	N1-C2-O2	-5.80	115.42	118.90
5	14	1574	C	OP2-P-O3'	5.79	117.94	105.20
5	14	1760	A	C6-N1-C2	-5.79	115.12	118.60
5	1H	2329	G	N3-C4-N9	-5.79	122.52	126.00
1	1G	1420	C	C6-N1-C2	-5.79	117.98	120.30
1	13	644	G	C8-N9-C4	5.79	108.72	106.40
1	13	1250	A	C5-C6-N6	5.79	128.33	123.70
5	1H	1431	U	C2-N3-C4	5.79	130.47	127.00
5	1H	1601	G	N3-C2-N2	5.79	123.95	119.90
5	1H	1673	U	N1-C2-O2	-5.79	118.75	122.80
5	1H	2522	U	C4-C5-C6	5.79	123.17	119.70
1	13	557	G	N3-C4-N9	5.79	129.47	126.00
5	1H	746	A	C5-C6-N6	-5.79	119.07	123.70
5	1H	1379	A	O4'-C1'-N9	5.79	112.83	108.20
3	2L	17	C	C2-N1-C1'	5.79	125.17	118.80
1	13	1498	U	N3-C2-O2	-5.79	118.15	122.20
5	14	728	G	C5-N7-C8	5.79	107.19	104.30
5	14	1619	G	C5-C6-O6	-5.79	125.13	128.60
5	14	1653	G	O5'-P-OP2	-5.79	100.49	105.70
5	14	2420	C	O5'-P-OP1	-5.79	100.49	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1824	G	OP1-P-OP2	-5.79	110.92	119.60
1	13	402	G	O5'-P-OP1	5.79	117.64	110.70
5	14	209	C	C5-C4-N4	-5.79	116.15	120.20
5	14	2598	A	P-O3'-C3'	5.79	126.64	119.70
3	2K	6	G	C5-C6-O6	-5.79	125.13	128.60
5	1H	1348	G	N1-C6-O6	5.79	123.37	119.90
5	1H	2301	C	C6-N1-C2	-5.79	117.99	120.30
1	13	786	G	C5-N7-C8	5.78	107.19	104.30
5	14	1598	C	OP1-P-OP2	-5.78	110.92	119.60
5	14	1802	A	N1-C2-N3	5.78	132.19	129.30
5	1H	133	C	C5-C6-N1	-5.78	118.11	121.00
5	1H	832	G	N9-C4-C5	5.78	107.71	105.40
5	1H	2507	C	C5-C4-N4	5.78	124.25	120.20
27	16	89	G	O5'-P-OP1	-5.78	100.50	105.70
5	14	1470	G	N1-C6-O6	5.78	123.37	119.90
5	1H	1345	C	C2-N1-C1'	-5.78	112.44	118.80
1	1G	691	G	C6-C5-N7	-5.78	126.93	130.40
5	14	1154	G	C4-C5-N7	5.78	113.11	110.80
5	14	1815	A	N1-C6-N6	-5.78	115.13	118.60
5	14	2019	A	C8-N9-C4	5.78	108.11	105.80
5	1H	1978	A	C8-N9-C4	-5.78	103.49	105.80
5	1H	2062	A	N9-C4-C5	-5.78	103.49	105.80
1	13	792	A	C5-C6-N1	-5.78	114.81	117.70
5	14	115	C	C5-C6-N1	-5.78	118.11	121.00
5	14	642	G	C8-N9-C4	-5.78	104.09	106.40
5	14	1999	C	N3-C4-C5	5.78	124.21	121.90
5	1H	465	G	O5'-P-OP1	-5.78	100.50	105.70
5	14	306	U	N3-C2-O2	5.78	126.24	122.20
5	14	1778	U	OP2-P-O3'	5.78	117.91	105.20
5	14	2217	G	C5-C6-O6	-5.78	125.13	128.60
5	1H	1280	G	N9-C1'-C2'	-5.78	105.64	112.00
5	1H	1624	G	C5-C6-N1	5.78	114.39	111.50
5	1H	2048	G	C5-N7-C8	5.78	107.19	104.30
5	1H	2417	C	OP2-P-O3'	5.78	117.91	105.20
27	16	80	U	N3-C2-O2	-5.78	118.16	122.20
1	13	892	A	N1-C6-N6	5.78	122.07	118.60
5	14	265	A	C5-N7-C8	-5.78	101.01	103.90
5	14	1142	U	N3-C2-O2	-5.78	118.16	122.20
5	1H	113	G	O5'-P-OP2	5.78	117.63	110.70
1	13	1399	C	OP2-P-O3'	5.77	117.90	105.20
5	1H	40	C	C4-C5-C6	5.77	120.29	117.40
5	1H	736	C	N3-C4-C5	5.77	124.21	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	825	C	C5-C4-N4	-5.77	116.16	120.20
5	1H	1368	G	O5'-P-OP2	-5.77	100.50	105.70
5	1H	2430	A	O5'-P-OP2	-5.77	100.50	105.70
28	11	52	ARG	NE-CZ-NH2	5.77	123.19	120.30
1	1G	812	C	N3-C4-N4	5.77	122.04	118.00
28	11	71	ASP	CB-CG-OD1	-5.77	113.11	118.30
5	14	55	G	C8-N9-C4	-5.77	104.09	106.40
5	14	691	C	C4-C5-C6	5.77	120.28	117.40
5	14	1939	U	C6-N1-C1'	5.77	129.28	121.20
5	14	2787	C	N1-C2-O2	5.77	122.36	118.90
5	1H	608	A	C6-N1-C2	-5.77	115.14	118.60
5	1H	1565	C	N3-C4-C5	5.77	124.21	121.90
5	1H	2030	A	N1-C6-N6	5.77	122.06	118.60
5	1H	2071	A	C8-N9-C4	-5.77	103.49	105.80
5	1H	2379	G	N9-C4-C5	-5.77	103.09	105.40
5	14	2065	C	O5'-P-OP1	5.77	117.62	110.70
5	1H	784	A	P-O3'-C3'	5.77	126.62	119.70
5	1H	832	G	C5-C6-N1	-5.77	108.62	111.50
5	1H	1489	U	N1-C2-N3	5.77	118.36	114.90
27	16	21	G	C4-C5-N7	-5.77	108.49	110.80
5	14	2374	C	C6-N1-C2	5.77	122.61	120.30
5	1H	452	G	N9-C4-C5	5.77	107.71	105.40
5	1H	708	C	OP2-P-O3'	5.77	117.89	105.20
1	1G	244	U	O5'-P-OP1	-5.77	100.51	105.70
1	13	817	C	C6-N1-C2	5.76	122.61	120.30
5	14	223	A	C8-N9-C4	-5.76	103.50	105.80
5	1H	2377	A	N3-C4-C5	5.76	130.84	126.80
1	1G	1474	G	N1-C6-O6	5.76	123.36	119.90
1	1G	1498	U	O4'-C1'-N1	-5.76	103.59	108.20
1	1G	690	G	N3-C4-C5	5.76	131.48	128.60
1	13	765	G	C8-N9-C4	5.76	108.70	106.40
1	13	1348	U	C5-C4-O4	5.76	129.36	125.90
5	14	1234	U	C5-C4-O4	5.76	129.36	125.90
5	14	1925	C	C2-N1-C1'	-5.76	112.46	118.80
5	14	2075	U	OP2-P-O3'	5.76	117.87	105.20
5	1H	1035	U	N3-C4-O4	-5.76	115.37	119.40
5	1H	1526	G	C8-N9-C4	-5.76	104.10	106.40
5	1H	2383	G	OP1-P-O3'	5.76	117.88	105.20
5	1H	2446	G	N7-C8-N9	5.76	115.98	113.10
1	1G	503	C	C6-N1-C2	-5.76	118.00	120.30
1	1G	1432	G	N1-C2-N3	5.76	127.36	123.90
1	13	1214	C	N1-C2-O2	-5.76	115.44	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1277	G	N3-C4-C5	5.76	131.48	128.60
5	14	1786	A	N9-C4-C5	-5.76	103.50	105.80
5	1H	541	C	C6-N1-C2	-5.76	118.00	120.30
5	1H	606	U	C5-C4-O4	5.76	129.35	125.90
5	1H	2455	G	C5-C6-O6	-5.76	125.14	128.60
1	1G	632	A	OP2-P-O3'	5.76	117.87	105.20
5	14	2456	C	N3-C4-C5	-5.76	119.60	121.90
5	14	2779	U	C5-C6-N1	-5.76	119.82	122.70
5	1H	196	A	OP2-P-O3'	5.76	117.87	105.20
5	1H	449	A	N9-C4-C5	-5.76	103.50	105.80
5	1H	1393	A	O4'-C1'-N9	5.76	112.81	108.20
5	1H	2350	C	N1-C2-O2	5.76	122.36	118.90
5	1H	2762	G	C6-C5-N7	-5.76	126.94	130.40
1	13	1496	C	C2-N1-C1'	-5.76	112.47	118.80
5	14	1439	A	C8-N9-C4	5.76	108.10	105.80
2	3K	71	G	C8-N9-C4	5.76	108.70	106.40
5	1H	66	C	OP1-P-OP2	-5.76	110.96	119.60
5	1H	919	G	N1-C2-N3	5.76	127.35	123.90
5	1H	1502	C	O5'-P-OP1	-5.76	100.52	105.70
5	1H	2307	G	C4-C5-N7	5.76	113.10	110.80
27	16	60	C	C6-N1-C2	-5.76	118.00	120.30
1	1G	1529	G	C4-N9-C1'	5.75	133.98	126.50
1	13	1335	C	C2-N1-C1'	-5.75	112.47	118.80
5	14	704	G	N3-C4-C5	5.75	131.48	128.60
5	14	1762	A	O5'-P-OP2	-5.75	100.52	105.70
5	1H	1021	A	N1-C2-N3	5.75	132.18	129.30
5	1H	2744	G	OP2-P-O3'	5.75	117.86	105.20
1	13	854	G	N1-C6-O6	5.75	123.35	119.90
1	13	1199	U	C6-N1-C2	-5.75	117.55	121.00
1	13	1525	G	C4-N9-C1'	-5.75	119.02	126.50
5	14	322	A	N1-C6-N6	-5.75	115.15	118.60
5	14	1186	G	O5'-P-OP1	-5.75	100.53	105.70
5	14	1613	G	N9-C4-C5	-5.75	103.10	105.40
5	14	2040	C	O5'-P-OP1	-5.75	100.52	105.70
5	1H	56	A	O5'-P-OP1	-5.75	100.52	105.70
5	1H	270(A)	A	N1-C6-N6	5.75	122.05	118.60
5	1H	1194	A	O5'-P-OP2	-5.75	100.52	105.70
5	1H	1229(A)	G	C5-N7-C8	-5.75	101.42	104.30
5	1H	1614	A	C5-C6-N1	-5.75	114.82	117.70
5	14	1827	C	C4-C5-C6	5.75	120.28	117.40
5	1H	738	G	N1-C2-N2	-5.75	111.03	116.20
5	1H	839	U	C4-C5-C6	5.75	123.15	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1792	G	OP1-P-O3'	5.75	117.85	105.20
45	G8	106	LEU	CA-CB-CG	5.75	128.53	115.30
1	1G	279	A	O5'-P-OP2	-5.75	100.53	105.70
5	14	974(A)	C	N3-C2-O2	-5.75	117.88	121.90
5	1H	205	G	N3-C4-C5	-5.75	125.72	128.60
1	13	1151	A	O5'-P-OP2	-5.75	100.53	105.70
5	14	674	G	C5-C6-N1	5.75	114.37	111.50
5	14	779	U	N3-C4-C5	5.75	118.05	114.60
5	14	1570	A	C6-C5-N7	-5.75	128.28	132.30
5	1H	2072	G	N9-C4-C5	-5.75	103.10	105.40
1	13	623	C	N3-C4-N4	5.75	122.02	118.00
5	14	205	G	O5'-P-OP2	-5.75	100.53	105.70
5	1H	641	C	C6-N1-C2	-5.75	118.00	120.30
5	1H	1378	A	C2-N3-C4	-5.75	107.73	110.60
5	14	2007	C	C5-C6-N1	-5.74	118.13	121.00
5	14	2610	C	N3-C4-C5	5.74	124.20	121.90
5	1H	2487	G	C6-C5-N7	-5.74	126.95	130.40
5	1H	2576	G	N9-C4-C5	-5.74	103.10	105.40
1	13	557	G	N3-C2-N2	5.74	123.92	119.90
5	1H	28	A	OP1-P-OP2	-5.74	110.99	119.60
5	1H	181	A	N1-C6-N6	-5.74	115.16	118.60
5	1H	727	A	C5-C6-N1	-5.74	114.83	117.70
5	1H	859	G	C4-N9-C1'	-5.74	119.03	126.50
5	1H	2050	C	N3-C4-C5	-5.74	119.60	121.90
5	14	831	G	N1-C6-O6	5.74	123.34	119.90
5	14	1991	U	C5-C4-O4	5.74	129.34	125.90
5	14	2502	G	C8-N9-C4	-5.74	104.10	106.40
5	1H	786	C	N3-C4-C5	5.74	124.20	121.90
5	1H	1669	A	C6-C5-N7	-5.74	128.28	132.30
5	1H	2708	G	C5-C6-O6	-5.74	125.16	128.60
1	13	991	U	C5-C6-N1	5.74	125.57	122.70
5	14	71	A	N3-C4-C5	5.74	130.82	126.80
5	14	129	C	C6-N1-C1'	-5.74	113.92	120.80
5	14	1277	G	C2-N3-C4	-5.74	109.03	111.90
2	3K	71	G	C6-C5-N7	5.74	133.84	130.40
5	1H	619	G	N7-C8-N9	-5.74	110.23	113.10
5	1H	2311	A	N3-C4-N9	-5.74	122.81	127.40
1	13	1473	A	N1-C6-N6	5.74	122.04	118.60
5	1H	2245	U	C5-C4-O4	-5.74	122.46	125.90
5	1H	2488	A	N1-C6-N6	5.74	122.04	118.60
5	14	189	G	N7-C8-N9	-5.74	110.23	113.10
5	14	624	C	N3-C2-O2	5.74	125.91	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	287	C	C5-C4-N4	-5.74	116.19	120.20
5	1H	1382	G	C6-C5-N7	-5.74	126.96	130.40
5	1H	1946	U	N1-C2-O2	5.74	126.81	122.80
1	1G	1501	C	N3-C4-C5	5.74	124.19	121.90
5	14	921	G	C5-C6-N1	-5.73	108.63	111.50
5	1H	2259	G	OP1-P-OP2	-5.73	111.00	119.60
1	1G	900	A	O5'-P-OP2	5.73	117.58	110.70
1	13	1493	A	O5'-P-OP1	-5.73	100.54	105.70
5	14	704	G	N3-C4-N9	-5.73	122.56	126.00
5	1H	333	G	C4-C5-N7	5.73	113.09	110.80
5	1H	671	C	C2-N3-C4	-5.73	117.03	119.90
5	1H	2271	G	N3-C4-C5	-5.73	125.73	128.60
1	13	585	G	C8-N9-C4	5.73	108.69	106.40
2	1L	33	U	O5'-P-OP1	-5.73	100.54	105.70
8	3E	32	ALA	N-CA-C	-5.73	95.53	111.00
5	1H	290	G	N3-C4-N9	5.73	129.44	126.00
5	1H	1971	A	N1-C6-N6	-5.73	115.16	118.60
5	1H	2230	G	N1-C2-N2	5.73	121.36	116.20
5	1H	2367	G	C5-C6-N1	-5.73	108.63	111.50
5	1H	2554	U	C5-C6-N1	5.73	125.56	122.70
44	F8	70	LEU	CA-CB-CG	5.73	128.48	115.30
5	14	792	G	N1-C6-O6	-5.73	116.46	119.90
5	1H	265	A	C4-C5-N7	5.73	113.56	110.70
5	1H	2573	C	N3-C2-O2	-5.73	117.89	121.90
39	A8	110	LEU	CA-CB-CG	5.73	128.47	115.30
1	1G	1209	C	C6-N1-C2	-5.73	118.01	120.30
1	13	1233	G	N1-C6-O6	-5.73	116.47	119.90
5	14	320	A	O5'-P-OP2	-5.73	100.55	105.70
5	1H	94	G	N1-C6-O6	5.73	123.33	119.90
27	1J	103	U	C5-C6-N1	-5.73	119.84	122.70
1	1G	360	A	N9-C4-C5	-5.73	103.51	105.80
1	13	23	C	C2-N3-C4	5.72	122.76	119.90
1	13	575	G	N1-C6-O6	-5.72	116.47	119.90
1	13	805	C	OP1-P-OP2	-5.72	111.01	119.60
5	14	729	G	N3-C2-N2	-5.72	115.89	119.90
5	14	1784	A	C4-C5-N7	5.72	113.56	110.70
5	1H	525	U	C5-C4-O4	5.72	129.34	125.90
5	1H	1983	C	N3-C2-O2	5.72	125.91	121.90
5	1H	2450	A	N1-C2-N3	5.72	132.16	129.30
5	1H	2591	C	C5-C4-N4	-5.72	116.19	120.20
1	1G	1479	C	N3-C2-O2	-5.72	117.89	121.90
1	13	481	G	C8-N9-C1'	-5.72	119.56	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1420	C	N3-C4-C5	5.72	124.19	121.90
1	13	1511	G	C8-N9-C1'	-5.72	119.56	127.00
5	14	816	C	C5-C4-N4	-5.72	116.19	120.20
5	14	2087	G	N3-C2-N2	5.72	123.91	119.90
5	1H	930	U	N1-C2-N3	5.72	118.33	114.90
5	1H	978	G	C2-N3-C4	-5.72	109.04	111.90
5	1H	1625	C	N1-C2-O2	5.72	122.33	118.90
5	1H	2608	G	N1-C2-N2	5.72	121.35	116.20
5	14	141	A	O4'-C1'-N9	5.72	112.78	108.20
5	14	193	U	C5-C6-N1	-5.72	119.84	122.70
5	14	271(A)	C	C6-N1-C2	-5.72	118.01	120.30
5	14	2443	C	O5'-P-OP1	-5.72	100.55	105.70
5	1H	975	G	N3-C2-N2	-5.72	115.89	119.90
5	1H	1855	G	N3-C4-N9	5.72	129.43	126.00
1	1G	449	C	C6-N1-C2	-5.72	118.01	120.30
5	14	2356	C	N3-C4-C5	5.72	124.19	121.90
5	1H	955	C	C4-C5-C6	5.72	120.26	117.40
5	1H	1337	G	C5-C6-O6	5.72	132.03	128.60
5	1H	1825	A	C6-C5-N7	5.72	136.30	132.30
5	1H	2226	C	C2-N3-C4	-5.72	117.04	119.90
45	G8	81	LYS	C-N-CD	-5.72	108.02	120.60
1	1G	291	C	N1-C2-O2	-5.72	115.47	118.90
1	1G	924	C	OP1-P-OP2	5.72	128.18	119.60
5	1H	2618	G	C8-N9-C4	-5.72	104.11	106.40
1	1G	366	C	C5-C6-N1	-5.72	118.14	121.00
5	1H	592	G	O5'-P-OP1	-5.72	100.55	105.70
5	1H	1295	C	N1-C2-O2	-5.72	115.47	118.90
5	1H	2217	G	N3-C4-C5	-5.72	125.74	128.60
5	1H	2307	G	C2-N3-C4	-5.72	109.04	111.90
5	1H	2547	U	N1-C2-O2	-5.72	118.80	122.80
5	1H	2584	U	C5-C6-N1	-5.72	119.84	122.70
5	1H	2655	G	O4'-C1'-N9	5.72	112.77	108.20
27	16	12	C	C5-C6-N1	-5.72	118.14	121.00
1	1G	230	G	C5-C6-N1	-5.72	108.64	111.50
5	14	155	C	N3-C2-O2	-5.71	117.90	121.90
5	14	1304	C	N3-C4-C5	5.71	124.19	121.90
5	14	1313	U	OP1-P-O3'	5.71	117.77	105.20
5	14	1570	A	N1-C6-N6	5.71	122.03	118.60
5	14	2592	G	N3-C4-N9	5.71	129.43	126.00
5	1H	779	U	OP1-P-OP2	-5.71	111.03	119.60
5	1H	1694	C	P-O3'-C3'	5.71	126.56	119.70
27	16	102	G	N3-C4-N9	-5.71	122.57	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1283	G	N3-C4-N9	5.71	129.43	126.00
5	1H	1382	G	N3-C4-C5	5.71	131.46	128.60
5	14	1929	G	OP1-P-OP2	5.71	128.17	119.60
5	1H	1872	A	C8-N9-C4	5.71	108.08	105.80
5	1H	2084	C	C5-C6-N1	-5.71	118.14	121.00
5	1H	2712	U	C5-C6-N1	-5.71	119.84	122.70
1	1G	723	U	P-O3'-C3'	5.71	126.55	119.70
5	14	2247	A	C8-N9-C4	-5.71	103.52	105.80
4	4K	20	C	N3-C4-C5	-5.71	119.62	121.90
5	1H	418	G	C8-N9-C4	5.71	108.68	106.40
27	1J	47	C	OP1-P-O3'	5.71	117.76	105.20
5	14	1225	C	O5'-P-OP2	-5.71	100.56	105.70
5	14	1773	A	O5'-P-OP1	5.71	117.55	110.70
5	1H	1614	A	N1-C2-N3	5.71	132.16	129.30
5	1H	1937	A	C8-N9-C4	5.71	108.08	105.80
5	1H	2458	G	C4-N9-C1'	5.71	133.92	126.50
5	1H	2548	G	N1-C6-O6	-5.71	116.47	119.90
1	1G	112	G	O5'-P-OP1	-5.71	100.56	105.70
1	13	185	A	C8-N9-C4	-5.71	103.52	105.80
5	1H	602	G	N1-C2-N2	-5.71	111.06	116.20
5	1H	845	G	C2-N3-C4	-5.71	109.05	111.90
5	1H	1445	C	C2-N3-C4	5.71	122.75	119.90
1	13	906	G	N3-C2-N2	-5.71	115.91	119.90
5	14	2778	A	O5'-P-OP2	-5.70	100.57	105.70
5	1H	674	G	O5'-P-OP2	5.70	117.54	110.70
5	1H	1819	A	N1-C6-N6	5.70	122.02	118.60
5	1H	2860	A	N1-C6-N6	5.70	122.02	118.60
1	13	1093	A	C8-N9-C4	-5.70	103.52	105.80
5	14	115	C	C6-N1-C2	5.70	122.58	120.30
5	1H	1685	C	C2-N3-C4	-5.70	117.05	119.90
5	1H	2708	G	N9-C4-C5	-5.70	103.12	105.40
5	1H	909	A	C6-N1-C2	-5.70	115.18	118.60
5	1H	1766	U	N3-C4-O4	5.70	123.39	119.40
1	13	1471	G	O5'-P-OP2	-5.70	100.57	105.70
5	14	1247	A	OP2-P-O3'	5.70	117.74	105.20
5	1H	636	G	O5'-P-OP2	5.70	117.54	110.70
5	1H	1018	C	N3-C4-N4	5.70	121.99	118.00
5	1H	1649	G	N3-C4-C5	-5.70	125.75	128.60
5	1H	1817	G	N3-C2-N2	5.70	123.89	119.90
5	1H	2638	G	C5-C6-O6	-5.70	125.18	128.60
1	13	972	C	N3-C4-N4	-5.70	114.01	118.00
5	14	666	G	C4-C5-N7	5.70	113.08	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1274	A	O5'-P-OP2	-5.70	100.57	105.70
5	1H	217	G	N7-C8-N9	5.70	115.95	113.10
5	14	2688	U	C4-C5-C6	5.70	123.12	119.70
5	1H	2302	G	N1-C6-O6	-5.70	116.48	119.90
5	1H	2392	A	N1-C6-N6	5.70	122.02	118.60
5	1H	2487	G	N1-C6-O6	5.70	123.32	119.90
5	1H	2599	G	N7-C8-N9	-5.70	110.25	113.10
5	1H	2690	C	N3-C2-O2	-5.70	117.91	121.90
5	1H	2729	G	C4-C5-N7	5.70	113.08	110.80
5	1H	2844	G	OP2-P-O3'	5.70	117.73	105.20
1	13	1408	A	C5-N7-C8	-5.69	101.05	103.90
5	14	1569	A	C5-N7-C8	-5.69	101.05	103.90
5	1H	667	U	N1-C2-O2	-5.69	118.81	122.80
5	1H	2266	A	C2-N3-C4	-5.69	107.75	110.60
27	16	9	G	OP2-P-O3'	5.69	117.72	105.20
43	E8	23	LEU	CA-CB-CG	5.69	128.39	115.30
1	13	812	C	O5'-P-OP2	5.69	117.53	110.70
1	13	1502	A	N9-C1'-C2'	5.69	121.40	114.00
5	14	1953	A	C5-C6-N6	-5.69	119.15	123.70
5	1H	657	U	OP2-P-O3'	5.69	117.72	105.20
5	1H	828	U	C6-N1-C1'	-5.69	113.23	121.20
5	1H	1919	A	O4'-C1'-N9	-5.69	103.65	108.20
5	1H	2509	G	C5-C6-N1	5.69	114.34	111.50
5	1H	640	C	N3-C4-C5	-5.69	119.62	121.90
5	1H	1600	C	C5-C6-N1	5.69	123.84	121.00
1	1G	674	G	N9-C4-C5	-5.69	103.12	105.40
5	1H	82	G	N3-C4-C5	-5.69	125.76	128.60
5	1H	1805	U	O5'-P-OP1	-5.69	100.58	105.70
5	1H	2860	A	C5-C6-N6	-5.69	119.15	123.70
5	14	1271	G	C4-C5-C6	5.69	122.21	118.80
1	13	1025	U	N3-C4-O4	5.68	123.38	119.40
5	1H	502	A	N1-C2-N3	5.68	132.14	129.30
5	1H	1948	G	O5'-P-OP1	-5.68	100.58	105.70
1	13	186(A)	C	C6-N1-C2	-5.68	118.03	120.30
1	13	872	A	O4'-C1'-N9	5.68	112.75	108.20
5	14	821	A	O5'-P-OP1	-5.68	100.59	105.70
5	14	955	C	C6-N1-C2	-5.68	118.03	120.30
5	14	1671	U	C5-C4-O4	-5.68	122.49	125.90
5	1H	628	G	N1-C6-O6	-5.68	116.49	119.90
5	1H	2581	G	C5-C6-O6	5.68	132.01	128.60
5	1H	2610	C	P-O3'-C3'	5.68	126.52	119.70
1	1G	788	U	OP1-P-OP2	-5.68	111.08	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	2L	6	G	C8-N9-C4	5.68	108.67	106.40
4	4L	19	U	O5'-P-OP1	-5.68	100.59	105.70
5	14	406	G	C4-N9-C1'	5.68	133.89	126.50
5	14	730	C	N3-C2-O2	-5.68	117.92	121.90
5	14	1558	A	P-O3'-C3'	5.68	126.52	119.70
5	14	1022	G	C5-C6-O6	5.68	132.01	128.60
5	14	1801	G	C6-C5-N7	-5.68	126.99	130.40
5	1H	2827	C	N1-C2-O2	-5.68	115.49	118.90
5	14	2275	C	OP1-P-O3'	5.68	117.69	105.20
5	1H	740	U	OP1-P-O3'	-5.68	92.71	105.20
5	14	1695	G	N9-C4-C5	-5.68	103.13	105.40
5	14	1906	G	C5-N7-C8	-5.67	101.46	104.30
5	14	2318	G	C8-N9-C4	-5.67	104.13	106.40
5	1H	219	G	OP1-P-O3'	5.67	117.68	105.20
5	1H	799	G	O5'-P-OP2	5.67	117.51	110.70
1	1G	264	U	N1-C2-N3	-5.67	111.50	114.90
5	14	1000	A	C8-N9-C4	-5.67	103.53	105.80
5	14	1379	A	C5-N7-C8	-5.67	101.06	103.90
5	1H	1258	C	OP2-P-O3'	5.67	117.68	105.20
5	1H	2270	G	C6-C5-N7	-5.67	127.00	130.40
1	13	1498	U	C5-C4-O4	-5.67	122.50	125.90
5	14	2420	C	O5'-P-OP2	5.67	117.50	110.70
5	1H	2360	A	C2-N3-C4	-5.67	107.76	110.60
1	1G	137	C	C6-N1-C2	5.67	122.57	120.30
5	1H	1348	G	N1-C2-N2	5.67	121.30	116.20
4	4L	13	A	OP1-P-O3'	5.67	117.67	105.20
5	14	267	C	C5-C6-N1	5.67	123.83	121.00
5	14	2304	G	N7-C8-N9	5.67	115.93	113.10
5	14	2589	A	C8-N9-C4	5.67	108.07	105.80
5	14	2591	C	N3-C2-O2	5.67	125.87	121.90
3	2K	30	G	O5'-P-OP2	-5.67	100.60	105.70
5	1H	936	C	C6-N1-C2	5.67	122.57	120.30
5	1H	1367	A	C4-C5-N7	5.67	113.53	110.70
27	16	6	C	C5-C6-N1	-5.67	118.17	121.00
1	13	7	G	C8-N9-C4	5.67	108.67	106.40
5	14	815	C	O5'-P-OP1	5.67	117.50	110.70
5	1H	683	C	N3-C4-N4	5.67	121.97	118.00
5	1H	1633	G	N3-C4-C5	-5.67	125.77	128.60
5	1H	1760	A	O5'-P-OP2	-5.67	100.60	105.70
5	1H	2485	G	C2-N3-C4	-5.67	109.07	111.90
4	4K	17	U	C5-C6-N1	-5.67	119.87	122.70
5	1H	1639	U	N3-C2-O2	-5.67	118.23	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1998	G	C8-N9-C4	5.67	108.67	106.40
5	14	1278	A	N7-C8-N9	-5.66	110.97	113.80
5	14	2740	A	O5'-P-OP2	-5.66	100.60	105.70
5	1H	240	G	N3-C2-N2	-5.66	115.94	119.90
5	1H	1771	C	C2-N3-C4	-5.66	117.07	119.90
5	1H	1817	G	C5-C6-O6	5.66	132.00	128.60
45	G8	80	GLY	N-CA-C	5.66	127.26	113.10
3	2L	4	G	OP1-P-OP2	5.66	128.09	119.60
5	14	1343	G	N3-C4-C5	-5.66	125.77	128.60
5	1H	663	G	C4-C5-C6	5.66	122.20	118.80
1	1G	1511	G	N1-C6-O6	5.66	123.30	119.90
5	14	581	C	C5-C4-N4	5.66	124.16	120.20
5	14	1831	G	C6-C5-N7	-5.66	127.00	130.40
5	1H	2270	G	C8-N9-C1'	-5.66	119.64	127.00
5	1H	2647	U	C5-C4-O4	5.66	129.30	125.90
1	13	291	C	N1-C2-O2	-5.66	115.50	118.90
5	14	812	C	N1-C2-O2	-5.66	115.50	118.90
5	14	2391	G	O5'-P-OP2	-5.66	100.61	105.70
5	14	2876	G	N9-C4-C5	-5.66	103.14	105.40
5	1H	732	C	C5-C6-N1	-5.66	118.17	121.00
5	1H	1200	C	OP1-P-OP2	-5.66	111.11	119.60
5	1H	1608	A	C5-N7-C8	5.66	106.73	103.90
5	14	278	A	P-O3'-C3'	5.66	126.49	119.70
5	1H	424	G	N1-C6-O6	-5.66	116.51	119.90
1	13	773	G	O5'-P-OP2	-5.66	100.61	105.70
1	13	1402	C	N3-C4-C5	-5.66	119.64	121.90
5	1H	716	A	C8-N9-C4	-5.66	103.54	105.80
5	1H	1624	G	C8-N9-C4	5.66	108.66	106.40
5	1H	2260	C	N3-C4-C5	5.66	124.16	121.90
1	13	1199	U	N3-C2-O2	-5.65	118.24	122.20
5	1H	1241	A	N3-C4-N9	-5.65	122.88	127.40
5	1H	259	G	N1-C6-O6	5.65	123.29	119.90
5	1H	689	A	C4-C5-C6	5.65	119.83	117.00
5	1H	783	A	N9-C1'-C2'	-5.65	105.78	112.00
5	1H	1141	U	O4'-C1'-N1	5.65	112.72	108.20
48	J8	2	SER	CB-CA-C	-5.65	99.36	110.10
1	1G	924	C	C5-C4-N4	5.65	124.16	120.20
1	13	50	A	N3-C4-C5	-5.65	122.84	126.80
5	14	808	G	N1-C2-N3	5.65	127.29	123.90
5	14	1135	C	N1-C2-O2	5.65	122.29	118.90
5	14	2787	C	N3-C2-O2	-5.65	117.94	121.90
5	1H	217	G	C8-N9-C4	-5.65	104.14	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	624	C	N1-C2-O2	-5.65	115.51	118.90
5	1H	793	A	C4-C5-C6	5.65	119.83	117.00
1	1G	337	C	C5-C6-N1	5.65	123.83	121.00
5	14	528	A	N7-C8-N9	5.65	116.62	113.80
5	14	854	G	OP1-P-O3'	5.65	117.63	105.20
5	14	1898	U	C5-C4-O4	5.65	129.29	125.90
5	14	2459	A	C8-N9-C4	-5.65	103.54	105.80
5	1H	1274	A	C8-N9-C4	-5.65	103.54	105.80
5	1H	1445	C	O5'-P-OP2	5.65	117.48	110.70
1	1G	267	C	O5'-P-OP1	-5.65	100.62	105.70
1	13	47	C	N1-C2-O2	-5.65	115.51	118.90
5	14	250	G	O5'-P-OP1	-5.65	100.62	105.70
5	14	668	G	C8-N9-C4	5.65	108.66	106.40
5	14	1254	A	C5-C6-N6	-5.65	119.18	123.70
5	14	1336	A	C6-N1-C2	-5.65	115.21	118.60
5	14	1506	C	C5-C6-N1	5.65	123.82	121.00
5	14	1602	U	N3-C4-C5	-5.65	111.21	114.60
5	14	1695	G	C4-C5-N7	5.65	113.06	110.80
5	14	1801	G	N9-C4-C5	-5.65	103.14	105.40
5	14	2877	G	O5'-P-OP1	5.65	117.48	110.70
5	1H	2433	A	C2-N3-C4	-5.65	107.78	110.60
1	1G	1435	G	O5'-P-OP2	-5.65	100.62	105.70
5	1H	1849	G	C5-C6-O6	5.65	131.99	128.60
3	2K	5	G	C8-N9-C4	5.64	108.66	106.40
5	1H	1565	C	C6-N1-C2	5.64	122.56	120.30
5	1H	2692	C	N3-C2-O2	-5.64	117.95	121.90
1	1G	328	C	C6-N1-C2	-5.64	118.04	120.30
1	1G	1285	A	P-O3'-C3'	5.64	126.47	119.70
1	13	328	C	O5'-P-OP1	-5.64	100.62	105.70
1	13	526	C	C6-N1-C2	5.64	122.56	120.30
1	13	786	G	N7-C8-N9	-5.64	110.28	113.10
5	1H	2027	G	C4-C5-N7	-5.64	108.54	110.80
5	1H	2498	C	N3-C2-O2	5.64	125.85	121.90
48	J8	82	LEU	CA-CB-CG	5.64	128.28	115.30
1	13	884	U	O5'-P-OP2	-5.64	100.62	105.70
5	14	2245	U	OP1-P-OP2	-5.64	111.14	119.60
5	1H	771	G	O5'-P-OP2	5.64	117.47	110.70
27	1J	14	U	OP1-P-OP2	5.64	128.06	119.60
5	14	446	G	C6-C5-N7	-5.64	127.02	130.40
5	14	1210	A	C2-N3-C4	-5.64	107.78	110.60
5	14	1663	C	C2-N3-C4	-5.64	117.08	119.90
5	1H	589	C	C6-N1-C2	-5.64	118.04	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	816	C	N3-C4-C5	-5.64	119.64	121.90
5	1H	851	U	N1-C2-N3	5.64	118.28	114.90
5	1H	1996	C	N3-C4-C5	5.64	124.16	121.90
5	1H	2329	G	N1-C2-N3	5.64	127.28	123.90
5	1H	2844	G	C8-N9-C4	-5.64	104.14	106.40
1	1G	636	U	O5'-P-OP1	-5.64	100.62	105.70
5	14	2731	G	N7-C8-N9	5.64	115.92	113.10
5	1H	2027	G	C5-C6-O6	5.64	131.98	128.60
5	1H	2763	G	C4-C5-N7	5.64	113.06	110.80
1	1G	1301	U	N1-C2-O2	5.64	126.75	122.80
5	14	1605	C	N1-C2-O2	-5.63	115.52	118.90
5	14	1903	G	OP2-P-O3'	5.63	117.59	105.20
5	1H	767	U	C5-C4-O4	5.63	129.28	125.90
5	1H	397	G	C2-N3-C4	-5.63	109.08	111.90
5	1H	1763	G	OP2-P-O3'	5.63	117.59	105.20
5	14	429	A	N7-C8-N9	5.63	116.62	113.80
5	14	866	A	OP1-P-O3'	5.63	117.59	105.20
5	14	1340	U	C5-C6-N1	-5.63	119.88	122.70
5	14	2243	U	OP2-P-O3'	5.63	117.59	105.20
5	1H	46	C	OP2-P-O3'	5.63	117.59	105.20
5	1H	70	G	OP1-P-O3'	5.63	117.59	105.20
5	1H	1278	A	N1-C2-N3	5.63	132.12	129.30
5	1H	1307	A	C2-N3-C4	-5.63	107.78	110.60
5	1H	2443	C	N3-C4-C5	-5.63	119.65	121.90
5	1H	2338	G	O5'-P-OP1	-5.63	100.63	105.70
5	14	681	G	N9-C4-C5	-5.63	103.15	105.40
5	14	2762	G	C5-C6-O6	-5.63	125.22	128.60
5	1H	70	G	N1-C6-O6	-5.63	116.52	119.90
5	1H	2827	C	C5-C4-N4	-5.63	116.26	120.20
1	13	943	U	O5'-P-OP1	-5.63	100.64	105.70
3	2K	35	C	C6-N1-C1'	-5.63	114.05	120.80
5	1H	867	C	C6-N1-C2	5.63	122.55	120.30
5	1H	956	G	N1-C6-O6	5.63	123.28	119.90
5	1H	2342	C	C5-C6-N1	5.63	123.81	121.00
5	1H	2466	C	C6-N1-C2	5.63	122.55	120.30
1	1G	193	C	C6-N1-C2	-5.63	118.05	120.30
1	1G	1124	G	C8-N9-C1'	5.63	134.31	127.00
1	13	898	G	O5'-P-OP1	-5.62	100.64	105.70
2	3L	71	G	N1-C6-O6	-5.62	116.53	119.90
5	1H	335	C	C5-C6-N1	5.62	123.81	121.00
5	1H	945	A	OP2-P-O3'	5.62	117.58	105.20
1	13	669	U	C6-N1-C2	-5.62	117.63	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1222	G	N1-C6-O6	5.62	123.27	119.90
1	13	1313	U	C6-N1-C2	-5.62	117.63	121.00
5	14	2841	C	C5-C6-N1	-5.62	118.19	121.00
5	1H	937	U	C6-N1-C2	5.62	124.38	121.00
5	1H	1939	U	O5'-P-OP1	-5.62	100.64	105.70
5	1H	2418	A	C2-N3-C4	5.62	113.41	110.60
1	1G	512	U	C6-N1-C2	-5.62	117.62	121.00
1	13	35	G	N3-C2-N2	-5.62	115.97	119.90
5	14	1801	G	N1-C6-O6	5.62	123.27	119.90
5	14	1920	C	N3-C4-C5	-5.62	119.65	121.90
5	14	2387	U	C6-N1-C2	5.62	124.37	121.00
3	2K	27	G	N1-C6-O6	5.62	123.27	119.90
5	1H	140	A	N1-C6-N6	5.62	121.97	118.60
5	1H	259	G	C4-C5-N7	5.62	113.05	110.80
5	14	1357	U	C4-C5-C6	5.62	123.07	119.70
5	1H	1633	G	OP2-P-O3'	5.62	117.56	105.20
36	78	33	ARG	NE-CZ-NH1	-5.62	117.49	120.30
1	1G	115	G	P-O3'-C3'	5.62	126.44	119.70
5	14	2053	G	N9-C4-C5	-5.62	103.15	105.40
5	14	2597	G	C6-C5-N7	-5.62	127.03	130.40
5	1H	1018	C	C5-C4-N4	-5.62	116.27	120.20
5	1H	1771	C	N1-C2-O2	-5.62	115.53	118.90
5	1H	1781	C	C5-C4-N4	5.62	124.13	120.20
5	1H	1948	G	C6-C5-N7	5.62	133.77	130.40
1	1G	1416	G	O5'-P-OP2	-5.62	100.64	105.70
5	14	1898	U	N1-C2-N3	5.62	118.27	114.90
5	1H	768	G	N1-C6-O6	-5.62	116.53	119.90
1	1G	121	C	C5-C4-N4	-5.62	116.27	120.20
5	1H	2237	G	C6-C5-N7	-5.62	127.03	130.40
5	1H	2563	U	OP1-P-OP2	5.62	128.02	119.60
1	1G	330	C	N1-C2-O2	5.62	122.27	118.90
1	13	667	G	N3-C4-N9	-5.61	122.63	126.00
1	13	811	C	C2-N3-C4	-5.61	117.09	119.90
5	14	1409	C	O5'-P-OP2	-5.61	100.65	105.70
5	1H	504	U	C2-N1-C1'	5.61	124.44	117.70
5	1H	822	U	N3-C2-O2	-5.61	118.27	122.20
5	1H	1406	U	OP1-P-O3'	5.61	117.55	105.20
1	1G	329	A	N1-C2-N3	5.61	132.11	129.30
5	1H	123	G	N3-C2-N2	-5.61	115.97	119.90
5	14	1598	C	C5-C6-N1	5.61	123.81	121.00
5	1H	481	G	C5-C6-O6	-5.61	125.23	128.60
5	1H	960	A	OP1-P-OP2	5.61	128.02	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2424	C	C4-C5-C6	-5.61	114.59	117.40
1	13	545	C	N3-C2-O2	-5.61	117.97	121.90
1	13	1355	G	C8-N9-C4	-5.61	104.16	106.40
5	1H	1835	G	C8-N9-C1'	-5.61	119.71	127.00
1	13	766	A	O5'-P-OP1	-5.61	100.65	105.70
1	13	1310	G	C8-N9-C4	5.61	108.64	106.40
5	14	333	G	C4-C5-N7	5.61	113.04	110.80
5	14	656	G	C5-C6-O6	-5.61	125.24	128.60
5	14	1772	G	C8-N9-C4	5.61	108.64	106.40
5	1H	678	C	N1-C2-O2	-5.61	115.53	118.90
1	1G	1354	C	C6-N1-C2	-5.61	118.06	120.30
1	13	810	C	C2-N1-C1'	5.61	124.97	118.80
5	14	776	G	C8-N9-C4	-5.61	104.16	106.40
5	14	1669	A	O5'-P-OP1	-5.61	100.66	105.70
5	14	2253	G	C5-C6-O6	-5.61	125.24	128.60
5	1H	371	A	C6-C5-N7	-5.61	128.38	132.30
5	1H	747	U	O5'-P-OP1	-5.61	100.66	105.70
5	1H	1324	G	N3-C2-N2	-5.61	115.98	119.90
44	F8	1	MET	CA-CB-CG	5.61	122.83	113.30
5	14	2731	G	C8-N9-C4	-5.60	104.16	106.40
5	1H	690	G	C5-N7-C8	5.60	107.10	104.30
5	1H	2737	G	N9-C4-C5	-5.60	103.16	105.40
5	14	315	G	O5'-P-OP2	-5.60	100.66	105.70
5	14	489	G	N7-C8-N9	5.60	115.90	113.10
5	1H	984	A	C6-C5-N7	-5.60	128.38	132.30
5	1H	1573	G	C8-N9-C4	5.60	108.64	106.40
5	1H	1603	A	O5'-P-OP1	5.60	117.42	110.70
27	16	82	G	O5'-P-OP2	-5.60	100.66	105.70
1	13	1354	C	C6-N1-C2	-5.60	118.06	120.30
1	13	1522	U	C5-C6-N1	-5.60	119.90	122.70
5	14	1390	U	OP1-P-O3'	5.60	117.52	105.20
5	1H	1800	C	OP1-P-O3'	5.60	117.52	105.20
5	1H	2581	G	N3-C4-N9	5.60	129.36	126.00
5	14	146	G	C6-C5-N7	-5.60	127.04	130.40
5	14	263	C	N3-C2-O2	-5.60	117.98	121.90
5	14	1617	C	N1-C2-N3	5.60	123.12	119.20
5	1H	921	G	C2-N3-C4	5.60	114.70	111.90
5	1H	1940	U	C5-C4-O4	-5.60	122.54	125.90
1	1G	354	G	O5'-P-OP2	-5.60	100.66	105.70
1	1G	360	A	N7-C8-N9	-5.60	111.00	113.80
1	1G	901	A	C8-N9-C4	5.60	108.04	105.80
1	13	111	G	C8-N9-C4	5.60	108.64	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	761	G	C5-C6-O6	5.60	131.96	128.60
5	14	932	G	N3-C4-C5	5.60	131.40	128.60
5	1H	189	G	C5-C6-O6	-5.60	125.24	128.60
5	1H	673	C	N3-C4-N4	5.60	121.92	118.00
5	1H	741	G	O5'-P-OP2	5.60	117.42	110.70
5	1H	2486	G	OP1-P-O3'	5.60	117.51	105.20
32	51	87	LEU	CB-CG-CD1	-5.60	101.49	111.00
1	1G	913	A	C5-C6-N6	-5.60	119.22	123.70
1	1G	1380	U	C2-N1-C1'	-5.60	110.98	117.70
5	14	664	C	C4-C5-C6	5.60	120.20	117.40
5	14	1597	A	C8-N9-C4	5.60	108.04	105.80
5	14	1617	C	N3-C2-O2	-5.60	117.98	121.90
5	1H	1024	G	N3-C4-N9	5.60	129.36	126.00
5	1H	1216	G	N3-C4-C5	-5.60	125.80	128.60
50	L8	53	LEU	N-CA-C	-5.60	95.89	111.00
1	1G	23	C	C6-N1-C2	-5.60	118.06	120.30
5	14	186	G	N3-C2-N2	-5.59	115.98	119.90
5	14	2392	A	C5-N7-C8	-5.59	101.10	103.90
5	1H	37	C	C6-N1-C2	-5.59	118.06	120.30
5	1H	132	G	N1-C6-O6	-5.59	116.54	119.90
5	1H	192	C	OP2-P-O3'	5.59	117.50	105.20
5	1H	401	A	C2-N3-C4	-5.59	107.80	110.60
5	1H	908	C	OP2-P-O3'	5.59	117.50	105.20
1	13	896	C	C5-C6-N1	-5.59	118.20	121.00
5	14	997	G	N1-C6-O6	-5.59	116.55	119.90
5	14	2609	U	C2-N3-C4	-5.59	123.64	127.00
5	1H	260	G	C2-N3-C4	5.59	114.70	111.90
5	1H	693	C	N3-C4-N4	-5.59	114.09	118.00
5	1H	1327	C	N1-C2-O2	-5.59	115.55	118.90
5	1H	2784	C	C6-N1-C2	5.59	122.54	120.30
1	1G	26	A	O5'-P-OP2	-5.59	100.67	105.70
1	1G	169	C	N1-C2-O2	5.59	122.25	118.90
1	1G	1355	G	C5-C6-O6	-5.59	125.25	128.60
1	13	674	G	N1-C6-O6	5.59	123.25	119.90
5	14	385	C	OP1-P-OP2	5.59	127.98	119.60
5	14	945	A	N3-C4-C5	5.59	130.71	126.80
3	2K	20	G	C4-C5-N7	-5.59	108.56	110.80
5	1H	1210	A	C5-C6-N1	-5.59	114.91	117.70
5	1H	1660	C	C2-N3-C4	-5.59	117.11	119.90
5	1H	1787	A	OP1-P-O3'	5.59	117.50	105.20
5	1H	2025	C	C6-N1-C2	-5.59	118.06	120.30
5	1H	2253	G	O5'-P-OP2	-5.59	100.67	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	815	A	OP2-P-O3'	5.59	117.50	105.20
3	2L	24	C	O5'-P-OP2	-5.59	100.67	105.70
5	14	1277	G	OP1-P-OP2	5.59	127.98	119.60
5	1H	1428	C	C6-N1-C2	5.59	122.53	120.30
5	1H	1973	G	C8-N9-C4	-5.59	104.17	106.40
5	1H	2551	C	N1-C2-O2	-5.59	115.55	118.90
1	13	1049	U	C2-N1-C1'	-5.59	111.00	117.70
5	14	415	A	O5'-P-OP2	-5.59	100.67	105.70
5	1H	416	C	N3-C4-N4	-5.59	114.09	118.00
5	1H	2408	U	O5'-P-OP2	-5.59	100.67	105.70
5	1H	2440	C	C5-C6-N1	5.59	123.79	121.00
27	16	47	C	N3-C4-C5	5.59	124.14	121.90
1	1G	1455	G	C5-C6-O6	-5.59	125.25	128.60
5	14	1569	A	N7-C8-N9	5.58	116.59	113.80
5	14	1882	C	N3-C2-O2	-5.58	117.99	121.90
5	1H	303	U	C6-N1-C2	-5.58	117.65	121.00
5	1H	1766	U	O5'-P-OP1	-5.58	100.67	105.70
5	1H	1774	C	OP1-P-O3'	5.58	117.49	105.20
1	13	974	A	C4-C5-N7	5.58	113.49	110.70
5	14	77	C	O5'-P-OP1	-5.58	100.67	105.70
5	14	2007	C	N1-C2-O2	-5.58	115.55	118.90
5	14	2427	C	N3-C4-N4	5.58	121.91	118.00
5	1H	473	G	N1-C2-N2	-5.58	111.17	116.20
5	1H	828	U	N3-C4-O4	-5.58	115.49	119.40
1	1G	1259	C	C5-C6-N1	5.58	123.79	121.00
5	14	447	A	N1-C2-N3	5.58	132.09	129.30
5	14	2603	G	OP1-P-O3'	5.58	117.48	105.20
5	1H	240	G	O5'-P-OP1	5.58	117.40	110.70
5	1H	989	G	N1-C6-O6	5.58	123.25	119.90
5	1H	1800	C	N3-C4-C5	-5.58	119.67	121.90
1	1G	493	G	C8-N9-C4	-5.58	104.17	106.40
5	14	1632	A	C5-C6-N6	-5.58	119.24	123.70
5	1H	182	A	N9-C4-C5	-5.58	103.57	105.80
5	1H	636	G	N3-C2-N2	-5.58	115.99	119.90
1	13	762	C	C6-N1-C2	5.58	122.53	120.30
5	14	672	C	C2-N3-C4	-5.58	117.11	119.90
5	14	1858	G	P-O3'-C3'	5.58	126.39	119.70
5	14	2390	U	N1-C2-N3	5.58	118.25	114.90
5	14	2569	G	C4-C5-N7	-5.58	108.57	110.80
26	1K	47	U	O4'-C1'-N1	5.58	112.66	108.20
5	1H	443	A	N1-C6-N6	5.58	121.95	118.60
5	1H	1599	C	O5'-P-OP2	-5.58	100.68	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1936	A	N1-C6-N6	5.58	121.95	118.60
5	1H	2708	G	C6-C5-N7	-5.58	127.05	130.40
5	14	972	G	C5-C6-O6	5.58	131.95	128.60
5	1H	697	C	N3-C4-C5	5.58	124.13	121.90
5	1H	2593	U	OP2-P-O3'	5.58	117.47	105.20
27	16	98	G	N3-C2-N2	5.58	123.80	119.90
5	14	1020	A	N1-C6-N6	5.58	121.94	118.60
5	1H	371	A	O5'-P-OP2	-5.58	100.68	105.70
5	1H	754	C	N3-C4-C5	5.58	124.13	121.90
5	1H	782	A	C5-C6-N6	-5.58	119.24	123.70
5	1H	828	U	N3-C4-C5	-5.58	111.25	114.60
5	1H	1565	C	O4'-C1'-N1	5.58	112.66	108.20
5	1H	1639	U	C5-C6-N1	-5.58	119.91	122.70
5	1H	2442	C	N3-C4-N4	5.58	121.90	118.00
30	31	176	LEU	CB-CG-CD2	-5.58	101.52	111.00
1	1G	452	A	O4'-C1'-N9	5.58	112.66	108.20
1	1G	1498	U	C2-N1-C1'	5.58	124.39	117.70
5	14	1423	G	N7-C8-N9	-5.57	110.31	113.10
5	14	2461	C	OP1-P-OP2	5.57	127.96	119.60
5	1H	37	C	C5-C4-N4	5.57	124.10	120.20
5	1H	2289	G	N1-C6-O6	5.57	123.24	119.90
5	1H	2318	G	N7-C8-N9	5.57	115.89	113.10
1	1G	1305	G	O5'-P-OP1	-5.57	100.68	105.70
1	13	552	U	N3-C2-O2	-5.57	118.30	122.20
5	14	977	G	O5'-P-OP1	-5.57	100.69	105.70
5	14	1678	G	C6-C5-N7	-5.57	127.06	130.40
5	1H	1559	G	C5-N7-C8	-5.57	101.51	104.30
1	1G	1404	C	OP2-P-O3'	5.57	117.46	105.20
5	14	155	C	C2-N1-C1'	5.57	124.93	118.80
5	14	855	G	N7-C8-N9	5.57	115.89	113.10
5	14	1605	C	O5'-P-OP1	-5.57	100.69	105.70
5	1H	238	C	C2-N3-C4	-5.57	117.11	119.90
5	1H	412	A	C8-N9-C4	5.57	108.03	105.80
5	1H	929	G	O5'-P-OP1	-5.57	100.69	105.70
5	1H	1775	U	N3-C2-O2	5.57	126.10	122.20
1	13	1139	G	C8-N9-C4	5.57	108.63	106.40
5	14	792	G	C8-N9-C4	-5.57	104.17	106.40
5	14	1616	A	C4-C5-N7	5.57	113.48	110.70
5	14	1624	G	C4-N9-C1'	-5.57	119.26	126.50
5	14	1805	U	OP2-P-O3'	5.57	117.45	105.20
5	1H	1229	G	N1-C2-N3	5.57	127.24	123.90
1	13	956	U	C5-C6-N1	5.57	125.48	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	707	G	C4-N9-C1'	5.57	133.74	126.50
5	14	2648	C	N3-C4-C5	5.57	124.13	121.90
5	1H	705	A	N1-C2-N3	5.57	132.08	129.30
5	14	330	A	N1-C2-N3	5.57	132.08	129.30
5	14	1811	G	C8-N9-C4	5.57	108.63	106.40
5	14	2523	G	N1-C6-O6	5.57	123.24	119.90
5	1H	663	G	O5'-P-OP2	-5.57	100.69	105.70
5	1H	1157	G	OP1-P-OP2	5.57	127.95	119.60
5	1H	1301	A	C6-C5-N7	-5.57	128.40	132.30
5	1H	1780	A	O5'-P-OP1	-5.57	100.69	105.70
5	1H	2007	C	C5-C6-N1	-5.57	118.22	121.00
1	13	1469	G	C8-N9-C4	-5.56	104.17	106.40
5	14	856	C	C2-N3-C4	5.56	122.68	119.90
5	14	1776	G	N3-C4-N9	5.56	129.34	126.00
5	14	803	U	N1-C2-O2	5.56	126.69	122.80
5	1H	1486	A	N1-C6-N6	5.56	121.94	118.60
5	1H	1792	G	C5-C6-O6	5.56	131.94	128.60
5	1H	1940	U	C5-C6-N1	-5.56	119.92	122.70
5	1H	1977	A	C2-N3-C4	-5.56	107.82	110.60
1	13	442	C	C6-N1-C2	-5.56	118.08	120.30
1	13	891	U	N1-C2-O2	5.56	126.69	122.80
26	1K	38	A	N9-C4-C5	-5.56	103.58	105.80
5	1H	2329	G	OP1-P-OP2	5.56	127.94	119.60
5	14	673	C	C6-N1-C2	5.56	122.52	120.30
5	14	756	C	O5'-P-OP1	-5.56	100.70	105.70
5	14	2429	G	OP1-P-OP2	-5.56	111.26	119.60
5	1H	89	G	C8-N9-C4	-5.56	104.18	106.40
5	14	796	C	C2-N3-C4	-5.56	117.12	119.90
5	14	1904	G	N1-C6-O6	-5.56	116.56	119.90
5	1H	1599	C	N3-C4-C5	5.56	124.12	121.90
5	1H	2246	G	C5-N7-C8	5.56	107.08	104.30
5	1H	2644	G	OP2-P-O3'	5.56	117.42	105.20
5	1H	812	C	N3-C4-C5	-5.56	119.68	121.90
5	1H	2271	G	C6-C5-N7	-5.56	127.07	130.40
1	13	176	C	C6-N1-C2	-5.55	118.08	120.30
5	14	453	C	O5'-P-OP1	-5.55	100.70	105.70
5	14	2712(A)	A	N1-C2-N3	-5.55	126.52	129.30
5	1H	811	U	O5'-P-OP1	-5.55	100.70	105.70
5	1H	973	A	C2-N3-C4	-5.55	107.82	110.60
5	1H	1344	G	N1-C6-O6	5.55	123.23	119.90
1	13	1504	G	P-O3'-C3'	5.55	126.36	119.70
5	14	1292	U	N3-C2-O2	5.55	126.09	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1762	A	O4'-C1'-N9	5.55	112.64	108.20
5	1H	1773	A	N1-C6-N6	5.55	121.93	118.60
5	1H	1976	U	N3-C2-O2	-5.55	118.31	122.20
5	14	767	U	O5'-P-OP2	-5.55	100.70	105.70
5	14	1229(A)	G	C8-N9-C4	5.55	108.62	106.40
5	1H	391	G	C2-N3-C4	-5.55	109.12	111.90
5	1H	1252	G	OP2-P-O3'	5.55	117.41	105.20
5	1H	1574	C	OP1-P-O3'	-5.55	92.98	105.20
5	1H	2713	A	N3-C4-C5	5.55	130.69	126.80
5	14	740	U	N1-C2-O2	5.55	126.69	122.80
5	14	1394	U	C2-N3-C4	5.55	130.33	127.00
5	1H	202	U	N3-C4-C5	5.55	117.93	114.60
5	1H	501	A	N1-C2-N3	5.55	132.07	129.30
5	1H	642	G	N3-C4-N9	-5.55	122.67	126.00
5	1H	2425	A	C6-N1-C2	-5.55	115.27	118.60
1	1G	895	G	N1-C6-O6	5.55	123.23	119.90
5	14	834	C	O5'-P-OP2	-5.55	100.71	105.70
5	14	2258	C	C5-C4-N4	-5.55	116.32	120.20
5	1H	2487	G	C8-N9-C4	5.55	108.62	106.40
1	13	1492	A	O5'-P-OP1	5.55	117.36	110.70
5	14	247	G	N1-C6-O6	5.55	123.23	119.90
5	14	2523	G	C5-C6-O6	-5.55	125.27	128.60
5	1H	970	C	N1-C2-N3	5.55	123.08	119.20
5	1H	2437	U	C5-C4-O4	5.55	129.23	125.90
1	13	1355	G	N3-C4-C5	-5.54	125.83	128.60
5	14	461	C	N3-C4-N4	5.54	121.88	118.00
5	14	566	U	C5-C4-O4	-5.54	122.57	125.90
5	14	1900	A	N7-C8-N9	5.54	116.57	113.80
5	1H	38	A	C5-C6-N1	5.54	120.47	117.70
5	1H	1026	U	C2-N1-C1'	-5.54	111.05	117.70
5	1H	2377	A	C2-N3-C4	-5.54	107.83	110.60
1	1G	1417	G	C5-C6-N1	-5.54	108.73	111.50
5	14	2585	U	N1-C2-O2	5.54	126.68	122.80
5	14	2763	G	C8-N9-C1'	-5.54	119.79	127.00
5	1H	445	C	C2-N1-C1'	5.54	124.90	118.80
5	1H	814	C	O5'-P-OP2	-5.54	100.71	105.70
5	1H	1328	G	C6-C5-N7	-5.54	127.07	130.40
5	1H	1978	A	N9-C4-C5	5.54	108.02	105.80
1	13	250	A	N1-C6-N6	5.54	121.92	118.60
1	13	750	G	C8-N9-C4	-5.54	104.18	106.40
5	1H	529	A	C8-N9-C4	-5.54	103.58	105.80
5	1H	972	G	N9-C4-C5	-5.54	103.18	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1139	G	N3-C4-N9	-5.54	122.68	126.00
1	13	751	U	O5'-P-OP1	-5.54	100.71	105.70
5	14	1805	U	O5'-P-OP1	-5.54	100.71	105.70
1	1G	805	C	C5-C6-N1	5.54	123.77	121.00
1	13	1278	U	O5'-P-OP2	-5.54	100.72	105.70
5	14	1725	G	C4-N9-C1'	5.54	133.70	126.50
5	1H	196	A	C5-C6-N1	-5.54	114.93	117.70
5	1H	932	G	N3-C2-N2	5.54	123.78	119.90
5	1H	1268	A	N1-C6-N6	-5.54	115.28	118.60
5	1H	2335	A	O4'-C1'-N9	5.54	112.63	108.20
1	1G	598	U	C4-C5-C6	5.54	123.02	119.70
5	14	808	G	N3-C4-C5	-5.54	125.83	128.60
5	14	2226	C	C5-C6-N1	5.54	123.77	121.00
5	1H	1632	A	C5-N7-C8	-5.54	101.13	103.90
5	1H	2575	C	C4-C5-C6	5.54	120.17	117.40
27	1J	60	C	C5-C6-N1	5.54	123.77	121.00
29	21	119	ARG	N-CA-C	-5.54	96.05	111.00
5	14	117	G	C5-C6-N1	5.54	114.27	111.50
5	14	1728	G	N3-C4-N9	5.54	129.32	126.00
5	14	2198	A	O4'-C1'-N9	5.54	112.63	108.20
5	14	2449	U	C4-C5-C6	5.54	123.02	119.70
3	2K	11	A	O5'-P-OP2	-5.54	100.72	105.70
5	1H	110	G	OP1-P-OP2	5.54	127.90	119.60
5	1H	330	A	N1-C2-N3	5.54	132.07	129.30
5	14	1828	G	C8-N9-C4	-5.53	104.19	106.40
5	1H	578	A	OP2-P-O3'	5.53	117.37	105.20
5	1H	1534	G	N3-C4-C5	-5.53	125.83	128.60
5	1H	1804	C	O5'-P-OP1	5.53	117.34	110.70
5	1H	2020	A	N1-C6-N6	5.53	121.92	118.60
5	1H	2052	G	OP2-P-O3'	5.53	117.37	105.20
5	1H	2363	C	OP2-P-O3'	5.53	117.37	105.20
5	1H	2375	G	N9-C1'-C2'	-5.53	105.91	112.00
37	88	2	LEU	N-CA-C	-5.53	96.06	111.00
5	14	1254	A	N1-C6-N6	5.53	121.92	118.60
5	14	2320	A	P-O3'-C3'	5.53	126.34	119.70
5	1H	380	U	OP1-P-OP2	5.53	127.90	119.60
5	1H	1549	C	N3-C4-N4	-5.53	114.13	118.00
5	1H	1573	G	C5-C6-O6	-5.53	125.28	128.60
5	1H	2267	A	OP1-P-O3'	5.53	117.37	105.20
1	1G	1205	U	C6-N1-C2	-5.53	117.68	121.00
5	1H	794	G	O5'-P-OP1	-5.53	100.72	105.70
5	1H	2324	C	C6-N1-C1'	-5.53	114.16	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	4L	20	C	C6-N1-C2	-5.53	118.09	120.30
5	14	1396	U	C4-C5-C6	5.53	123.02	119.70
5	1H	938	G	N1-C2-N2	-5.53	111.22	116.20
5	14	479	A	N1-C6-N6	-5.53	115.28	118.60
5	14	1342	A	C4-C5-N7	5.53	113.46	110.70
5	14	1969	A	O5'-P-OP1	-5.53	100.72	105.70
5	1H	446	G	C8-N9-C4	5.53	108.61	106.40
5	1H	455	C	C4-C5-C6	-5.53	114.64	117.40
5	1H	816	C	O5'-P-OP1	5.53	117.33	110.70
5	1H	1621	U	N3-C4-O4	5.53	123.27	119.40
5	1H	2287	A	O5'-P-OP2	-5.53	100.72	105.70
5	1H	2455	G	N3-C4-N9	5.53	129.32	126.00
1	1G	722	A	N1-C6-N6	5.53	121.92	118.60
5	14	1185	C	OP2-P-O3'	5.53	117.36	105.20
5	14	1293	C	C5-C4-N4	-5.53	116.33	120.20
5	14	1802	A	N3-C4-C5	-5.53	122.93	126.80
5	1H	210	C	C5-C4-N4	-5.53	116.33	120.20
5	1H	666	G	C2-N3-C4	-5.53	109.14	111.90
5	1H	1343	G	N3-C4-C5	-5.53	125.84	128.60
5	1H	2370	G	N1-C6-O6	-5.53	116.58	119.90
5	1H	2513	G	N3-C4-C5	-5.53	125.84	128.60
5	1H	2714	G	O5'-P-OP2	-5.53	100.73	105.70
1	1G	1511	G	C4-C5-C6	5.53	122.11	118.80
1	13	1502	A	C8-N9-C1'	-5.52	117.76	127.70
5	14	508	G	O5'-P-OP1	-5.52	100.73	105.70
5	14	1309	G	C8-N9-C1'	-5.52	119.82	127.00
5	1H	974(A)	C	C5-C4-N4	5.52	124.07	120.20
3	2K	17	C	N1-C2-O2	5.52	122.21	118.90
5	1H	1225	C	C6-N1-C2	5.52	122.51	120.30
5	14	461	C	N3-C2-O2	5.52	125.77	121.90
5	1H	116	C	OP1-P-OP2	-5.52	111.32	119.60
55	Q8	60	LEU	CA-CB-CG	5.52	128.00	115.30
5	14	1569	A	O4'-C1'-N9	5.52	112.62	108.20
5	14	1780	A	N1-C6-N6	-5.52	115.29	118.60
5	1H	456	C	OP1-P-OP2	5.52	127.88	119.60
5	1H	633	A	C5-N7-C8	-5.52	101.14	103.90
5	1H	1939	U	C5-C4-O4	-5.52	122.59	125.90
1	1G	901	A	OP2-P-O3'	5.52	117.34	105.20
1	13	899	C	C5-C6-N1	-5.52	118.24	121.00
5	14	1790	C	N3-C2-O2	5.52	125.76	121.90
5	1H	933	A	O5'-P-OP2	-5.52	100.73	105.70
5	1H	2331	G	OP2-P-O3'	5.52	117.34	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	765	G	N3-C2-N2	-5.52	116.04	119.90
5	14	58	G	C8-N9-C4	-5.51	104.19	106.40
5	14	1033	U	C5-C6-N1	5.51	125.46	122.70
5	14	2314	C	N3-C2-O2	-5.51	118.04	121.90
5	1H	473	G	N3-C4-N9	5.51	129.31	126.00
5	1H	2065	C	C5-C6-N1	5.51	123.76	121.00
5	1H	2727	G	C8-N9-C4	-5.51	104.19	106.40
1	1G	1529	G	C8-N9-C4	-5.51	104.19	106.40
5	14	993	G	OP1-P-OP2	-5.51	111.33	119.60
5	14	1283	G	OP1-P-OP2	5.51	127.87	119.60
5	14	1661	G	C8-N9-C4	5.51	108.61	106.40
5	14	1992	G	C5-C6-N1	5.51	114.26	111.50
5	1H	1807	G	C5-C6-O6	-5.51	125.29	128.60
1	1G	166	G	C5-C6-O6	-5.51	125.29	128.60
1	1G	1158	C	C6-N1-C2	-5.51	118.09	120.30
1	13	291	C	C6-N1-C2	-5.51	118.10	120.30
5	14	1232	G	N3-C4-N9	-5.51	122.69	126.00
5	14	1936	A	O5'-P-OP2	-5.51	100.74	105.70
5	14	2390	U	C6-N1-C2	-5.51	117.69	121.00
5	1H	116	C	C5-C6-N1	-5.51	118.24	121.00
5	1H	639	U	OP1-P-OP2	5.51	127.87	119.60
5	1H	797	C	N1-C2-O2	-5.51	115.59	118.90
5	1H	2769	C	C6-N1-C2	-5.51	118.10	120.30
1	13	536	C	O5'-P-OP2	-5.51	100.74	105.70
5	14	954	G	N3-C4-C5	-5.51	125.84	128.60
2	3K	74	C	N3-C2-O2	-5.51	118.04	121.90
5	1H	139	G	C5-C6-O6	-5.51	125.30	128.60
27	1J	89	G	C8-N9-C4	-5.51	104.20	106.40
1	1G	232	G	C8-N9-C1'	-5.51	119.84	127.00
1	1G	513	C	OP1-P-O3'	5.51	117.32	105.20
5	14	2512	C	C5-C6-N1	-5.51	118.25	121.00
5	1H	724	U	C5-C6-N1	-5.51	119.95	122.70
5	1H	841	A	C4-C5-N7	5.51	113.45	110.70
1	1G	402	G	N3-C2-N2	5.51	123.75	119.90
5	14	1967	C	OP2-P-O3'	5.51	117.31	105.20
5	14	2009	G	O5'-P-OP2	-5.51	100.74	105.70
5	14	2426	A	C4-C5-N7	5.51	113.45	110.70
5	1H	1514	U	O5'-P-OP1	-5.51	100.75	105.70
5	1H	1697	G	C6-C5-N7	-5.51	127.10	130.40
5	1H	2338	G	C5-C6-O6	-5.51	125.30	128.60
5	1H	2457	U	N3-C2-O2	5.51	126.06	122.20
5	1H	2585	U	N3-C2-O2	-5.51	118.34	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1904	G	N3-C4-C5	-5.50	125.85	128.60
5	1H	1779	U	O5'-P-OP2	-5.50	100.75	105.70
5	14	58	G	N7-C8-N9	5.50	115.85	113.10
5	14	333	G	C8-N9-C4	-5.50	104.20	106.40
5	14	824	A	O5'-P-OP2	5.50	117.31	110.70
5	14	2334	G	N9-C4-C5	-5.50	103.20	105.40
5	14	2729	G	C5-C6-O6	-5.50	125.30	128.60
5	1H	786	C	C2-N3-C4	-5.50	117.15	119.90
5	1H	1136	G	N3-C2-N2	-5.50	116.05	119.90
5	1H	1962	C	C5-C6-N1	5.50	123.75	121.00
1	13	1336	C	P-O3'-C3'	5.50	126.30	119.70
5	1H	187	G	N3-C2-N2	5.50	123.75	119.90
5	1H	680	G	C8-N9-C4	5.50	108.60	106.40
5	1H	1198	U	C2-N3-C4	-5.50	123.70	127.00
5	14	561	G	C8-N9-C1'	5.50	134.15	127.00
5	1H	1634	A	C5-C6-N6	-5.50	119.30	123.70
5	1H	2525	G	N1-C6-O6	5.50	123.20	119.90
27	16	5	C	C2-N3-C4	-5.50	117.15	119.90
1	1G	783	C	OP1-P-O3'	5.50	117.30	105.20
1	13	511	C	C2-N1-C1'	-5.50	112.75	118.80
5	14	1217	C	N3-C4-C5	-5.50	119.70	121.90
5	1H	210	C	OP2-P-O3'	5.50	117.30	105.20
5	1H	676	A	N1-C6-N6	5.50	121.90	118.60
5	1H	2699	C	N3-C4-C5	5.50	124.10	121.90
1	1G	1405	G	N3-C4-N9	5.50	129.30	126.00
5	14	706	A	N7-C8-N9	5.50	116.55	113.80
5	14	749	C	N1-C2-O2	5.50	122.20	118.90
5	14	1470	G	OP2-P-O3'	5.50	117.29	105.20
5	14	1908	C	C6-N1-C2	-5.50	118.10	120.30
1	13	481	G	C4-N9-C1'	5.50	133.64	126.50
1	13	973	G	N1-C6-O6	-5.50	116.60	119.90
1	13	432	A	O5'-P-OP1	-5.49	100.75	105.70
1	13	1299	A	C8-N9-C4	-5.49	103.60	105.80
5	14	600	G	N3-C4-C5	5.49	131.35	128.60
5	14	1019	U	C2-N1-C1'	5.49	124.29	117.70
5	14	1917	U	C5-C6-N1	5.49	125.45	122.70
5	14	2714	G	N7-C8-N9	-5.49	110.35	113.10
5	1H	782	A	C6-N1-C2	-5.49	115.30	118.60
5	1H	1257	C	N1-C2-N3	5.49	123.05	119.20
5	1H	1377	G	C8-N9-C4	-5.49	104.20	106.40
5	1H	2329	G	N7-C8-N9	-5.49	110.35	113.10
27	1J	22	U	C5-C6-N1	5.49	125.45	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	842	C	O4'-C1'-N1	5.49	112.59	108.20
1	1G	1495	U	C4-C5-C6	5.49	123.00	119.70
1	13	1061	G	C8-N9-C4	-5.49	104.20	106.40
5	14	2048	G	N3-C4-C5	-5.49	125.85	128.60
1	13	1103	C	C6-N1-C2	-5.49	118.10	120.30
5	14	584	C	N1-C2-O2	-5.49	115.61	118.90
5	14	2691	C	N3-C4-C5	-5.49	119.70	121.90
5	14	2700	C	C5-C4-N4	-5.49	116.36	120.20
5	1H	296	C	C5-C6-N1	-5.49	118.25	121.00
5	1H	608	A	N9-C4-C5	5.49	108.00	105.80
5	1H	1784	A	O4'-C1'-N9	-5.49	103.81	108.20
1	13	972	C	C5-C4-N4	5.49	124.04	120.20
5	14	71	A	N7-C8-N9	5.49	116.55	113.80
5	14	179	G	N7-C8-N9	-5.49	110.36	113.10
5	1H	2012	G	C6-C5-N7	-5.49	127.11	130.40
5	1H	2385	C	C2-N3-C4	-5.49	117.16	119.90
5	14	1286	A	C4-C5-C6	5.49	119.74	117.00
5	1H	646	A	OP1-P-O3'	5.49	117.27	105.20
5	1H	2272	U	OP1-P-OP2	-5.49	111.37	119.60
1	1G	242	C	N1-C2-O2	-5.49	115.61	118.90
1	1G	970	C	O5'-P-OP1	-5.49	100.76	105.70
1	13	1276	G	N7-C8-N9	5.49	115.84	113.10
5	14	1682	G	O5'-P-OP2	-5.49	100.76	105.70
5	1H	1250	G	N1-C6-O6	-5.49	116.61	119.90
5	1H	2518	A	C4-C5-N7	5.49	113.44	110.70
1	13	190	G	C4-N9-C1'	5.48	133.63	126.50
1	13	871	U	N1-C2-N3	5.48	118.19	114.90
5	14	1966	A	C6-N1-C2	-5.48	115.31	118.60
5	1H	407	G	N3-C4-N9	5.48	129.29	126.00
27	16	98	G	N1-C2-N2	-5.48	111.27	116.20
1	13	878	G	N1-C2-N2	-5.48	111.27	116.20
5	14	2449	U	N3-C4-O4	5.48	123.24	119.40
1	1G	1499	A	N7-C8-N9	-5.48	111.06	113.80
5	14	1698	A	C5-C6-N6	-5.48	119.32	123.70
5	14	1963	U	C5-C6-N1	5.48	125.44	122.70
5	1H	298	G	OP2-P-O3'	5.48	117.26	105.20
5	1H	1798	U	O5'-P-OP2	-5.48	100.77	105.70
5	1H	1832	C	C6-N1-C2	5.48	122.49	120.30
5	14	1790	C	C2-N3-C4	-5.48	117.16	119.90
5	1H	766	C	C5-C4-N4	-5.48	116.36	120.20
5	14	1807	G	N1-C6-O6	5.48	123.19	119.90
5	14	1831	G	C4-N9-C1'	5.48	133.62	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1980	G	C5-C6-O6	-5.48	125.31	128.60
5	1H	1489	U	C6-N1-C1'	5.48	128.87	121.20
5	1H	1781	C	N1-C2-O2	5.48	122.19	118.90
5	1H	1938	A	C4-C5-C6	5.48	119.74	117.00
1	1G	266	G	C4-N9-C1'	5.48	133.62	126.50
5	14	1787	A	O4'-C1'-N9	-5.48	103.82	108.20
5	1H	2702	U	C5'-C4'-O4'	5.48	115.67	109.10
1	1G	766	A	O5'-P-OP2	-5.48	100.77	105.70
1	1G	842	C	C6-N1-C2	-5.48	118.11	120.30
1	13	712	A	N1-C6-N6	-5.47	115.31	118.60
1	13	1367	C	OP1-P-OP2	5.47	127.81	119.60
5	14	1780	A	N9-C4-C5	5.47	107.99	105.80
5	14	2702	U	N1-C2-O2	5.47	126.63	122.80
5	1H	1901	A	OP1-P-O3'	5.47	117.25	105.20
1	1G	818	G	C5-C6-O6	5.47	131.88	128.60
1	1G	875	C	N3-C2-O2	-5.47	118.07	121.90
5	14	1820	U	O5'-P-OP2	5.47	117.27	110.70
5	14	2607	G	N9-C4-C5	-5.47	103.21	105.40
5	1H	202	U	C6-N1-C2	5.47	124.28	121.00
5	1H	208	C	OP2-P-O3'	5.47	117.24	105.20
5	1H	631	A	C2-N3-C4	5.47	113.34	110.60
5	1H	1142(A)	A	N1-C6-N6	5.47	121.88	118.60
5	1H	1940	U	N1-C2-N3	5.47	118.18	114.90
5	1H	2324	C	N3-C4-C5	5.47	124.09	121.90
5	1H	2712(A)	A	C4-C5-N7	5.47	113.44	110.70
27	16	104	A	N1-C6-N6	5.47	121.88	118.60
5	14	2509	G	O5'-P-OP1	-5.47	100.78	105.70
5	1H	774	A	C5-C6-N6	-5.47	119.32	123.70
5	1H	912	C	C2-N3-C4	-5.47	117.16	119.90
5	1H	1313	U	C6-N1-C2	-5.47	117.72	121.00
5	1H	1901	A	C6-N1-C2	-5.47	115.32	118.60
5	14	1348	G	O5'-P-OP1	-5.47	100.78	105.70
5	14	1476	C	N1-C2-O2	-5.47	115.62	118.90
5	14	1571	A	C6-N1-C2	-5.47	115.32	118.60
5	14	1801	G	C4-C5-N7	5.47	112.99	110.80
5	1H	2044	C	C4-C5-C6	5.47	120.14	117.40
5	14	814	C	C2-N1-C1'	-5.47	112.79	118.80
5	1H	1021	A	N3-C4-N9	-5.47	123.03	127.40
5	1H	1602	U	N1-C2-N3	5.47	118.18	114.90
5	1H	1664	A	N7-C8-N9	5.47	116.53	113.80
5	1H	2751	G	N7-C8-N9	5.47	115.83	113.10
5	14	1797	C	C5-C6-N1	-5.47	118.27	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1909	C	N1-C2-O2	5.47	122.18	118.90
5	1H	1610	A	C5-N7-C8	-5.47	101.17	103.90
5	1H	2595	G	O5'-P-OP2	-5.47	100.78	105.70
1	1G	890	G	C5-C6-O6	5.47	131.88	128.60
3	2L	77	A	N9-C4-C5	-5.46	103.61	105.80
5	14	1644	C	N1-C2-O2	5.46	122.18	118.90
5	14	2062	A	C6-N1-C2	5.46	121.88	118.60
5	1H	59	U	N3-C4-O4	5.46	123.22	119.40
5	1H	599	G	N3-C4-N9	5.46	129.28	126.00
5	1H	1599	C	C2-N3-C4	-5.46	117.17	119.90
5	1H	2538	C	C6-N1-C2	5.46	122.49	120.30
1	1G	1380	U	C5-C6-N1	-5.46	119.97	122.70
5	14	1559	G	N1-C6-O6	5.46	123.18	119.90
5	14	1762	A	C5-C6-N1	-5.46	114.97	117.70
5	14	1966	A	N9-C4-C5	5.46	107.98	105.80
5	1H	2374	C	C6-N1-C2	5.46	122.48	120.30
1	13	354	G	O5'-P-OP2	-5.46	100.78	105.70
1	13	570	G	N1-C6-O6	5.46	123.18	119.90
1	13	1250	A	N9-C4-C5	5.46	107.98	105.80
5	14	2547	U	OP2-P-O3'	5.46	117.22	105.20
3	2K	73	A	C8-N9-C4	5.46	107.98	105.80
5	1H	560	C	O5'-P-OP2	5.46	117.25	110.70
5	1H	690	G	N9-C4-C5	-5.46	103.22	105.40
5	1H	1301	A	O5'-P-OP1	-5.46	100.78	105.70
1	1G	33	A	OP1-P-O3'	5.46	117.22	105.20
1	1G	581	G	C8-N9-C4	5.46	108.58	106.40
1	13	122	G	N3-C2-N2	-5.46	116.08	119.90
5	14	270(Y)	G	C5-C6-O6	5.46	131.88	128.60
5	14	1914	C	C2-N1-C1'	5.46	124.81	118.80
1	13	535	A	C8-N9-C4	-5.46	103.62	105.80
1	13	874	G	C2-N3-C4	5.46	114.63	111.90
5	14	791	C	P-O3'-C3'	5.46	126.25	119.70
5	1H	2198	A	N1-C2-N3	5.46	132.03	129.30
29	21	65	GLY	N-CA-C	-5.46	99.45	113.10
5	14	1022	G	C8-N9-C4	-5.46	104.22	106.40
5	14	2573	C	C5-C6-N1	5.46	123.73	121.00
5	14	2585	U	C6-N1-C1'	-5.46	113.56	121.20
5	1H	923	C	C4-C5-C6	5.46	120.13	117.40
5	1H	2389	G	C5-C6-N1	-5.46	108.77	111.50
1	1G	690	G	N3-C2-N2	-5.46	116.08	119.90
5	14	1193	G	C8-N9-C4	5.46	108.58	106.40
5	14	1533	C	C2-N1-C1'	5.46	124.80	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2093	G	O5'-P-OP2	-5.46	100.79	105.70
1	13	326	G	C4-C5-N7	-5.45	108.62	110.80
5	14	1237	A	N1-C6-N6	-5.45	115.33	118.60
5	14	1904	G	C4-C5-N7	-5.45	108.62	110.80
5	1H	245	G	N1-C2-N2	-5.45	111.29	116.20
5	1H	481	G	C8-N9-C1'	-5.45	119.91	127.00
5	1H	1253	A	C8-N9-C4	5.45	107.98	105.80
5	1H	1785	A	C4-C5-C6	5.45	119.73	117.00
5	1H	2280	G	C2-N3-C4	5.45	114.63	111.90
1	1G	285	G	N1-C6-O6	5.45	123.17	119.90
5	1H	617	G	C5-C6-N1	5.45	114.23	111.50
1	1G	264	U	C6-N1-C1'	-5.45	113.57	121.20
1	13	1489	G	N7-C8-N9	-5.45	110.38	113.10
5	14	861	A	O5'-P-OP1	-5.45	100.79	105.70
5	1H	41	C	C6-N1-C2	-5.45	118.12	120.30
5	1H	1123	C	C4-C5-C6	5.45	120.13	117.40
5	1H	1274	A	N7-C8-N9	5.45	116.53	113.80
5	1H	1902	C	N3-C4-C5	-5.45	119.72	121.90
5	1H	2020	A	C5-C6-N6	-5.45	119.34	123.70
1	1G	166	G	N1-C6-O6	5.45	123.17	119.90
1	13	333	G	C8-N9-C1'	-5.45	119.92	127.00
2	3L	71	G	C5-N7-C8	5.45	107.02	104.30
5	14	756	C	C6-N1-C2	-5.45	118.12	120.30
5	1H	409	C	C5-C6-N1	-5.45	118.28	121.00
5	1H	852	G	O5'-P-OP1	5.45	117.24	110.70
5	1H	1213	A	O5'-P-OP2	5.45	117.24	110.70
5	1H	2008	C	C4-C5-C6	5.45	120.12	117.40
5	1H	2440	C	C6-N1-C1'	5.45	127.34	120.80
5	1H	2711	A	OP1-P-O3'	5.45	117.19	105.20
1	1G	921	U	N3-C2-O2	-5.45	118.39	122.20
3	2L	45	A	O5'-P-OP1	-5.45	100.80	105.70
5	14	1005	C	N3-C2-O2	-5.45	118.09	121.90
5	14	2763	G	N3-C2-N2	5.45	123.71	119.90
5	1H	127	A	C8-N9-C4	5.45	107.98	105.80
1	1G	810	C	N3-C4-C5	5.45	124.08	121.90
5	14	630	G	N7-C8-N9	-5.45	110.38	113.10
5	1H	405	U	N1-C2-O2	5.45	126.61	122.80
5	1H	729	G	C5-N7-C8	-5.45	101.58	104.30
5	1H	762	U	C6-N1-C1'	-5.45	113.58	121.20
5	1H	1278	A	O5'-P-OP2	-5.45	100.80	105.70
5	1H	2199	A	OP2-P-O3'	5.45	117.18	105.20
27	16	75	G	N1-C6-O6	5.45	123.17	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2584	U	C2-N1-C1'	5.44	124.23	117.70
5	1H	1989	G	C5-C6-O6	-5.44	125.33	128.60
5	1H	2010	G	N3-C2-N2	-5.44	116.09	119.90
5	1H	2338	G	N3-C2-N2	-5.44	116.09	119.90
1	13	1504	G	O5'-P-OP1	-5.44	100.80	105.70
5	14	2734	A	C5-C6-N6	5.44	128.05	123.70
5	1H	659	C	OP1-P-O3'	-5.44	93.23	105.20
5	1H	1210	A	C6-N1-C2	5.44	121.86	118.60
5	1H	2346	A	C1'-O4'-C4'	-5.44	105.55	109.90
5	1H	2779	U	C5-C4-O4	5.44	129.16	125.90
27	1J	18	G	N3-C4-N9	-5.44	122.73	126.00
1	13	220	G	C4-N9-C1'	5.44	133.57	126.50
1	13	516	U	OP2-P-O3'	5.44	117.17	105.20
1	13	667	G	N3-C2-N2	-5.44	116.09	119.90
1	13	757	U	N3-C2-O2	-5.44	118.39	122.20
5	14	488	G	N3-C4-N9	5.44	129.26	126.00
5	14	2625	G	N1-C6-O6	5.44	123.17	119.90
5	1H	463	G	OP1-P-O3'	5.44	117.17	105.20
5	1H	1308	A	N1-C2-N3	5.44	132.02	129.30
5	1H	1332	G	N1-C2-N3	5.44	127.16	123.90
5	1H	1337	G	N1-C6-O6	-5.44	116.64	119.90
5	1H	1364	G	C2-N3-C4	5.44	114.62	111.90
1	1G	1236	A	O5'-P-OP1	-5.44	100.80	105.70
1	13	584	G	C6-N1-C2	-5.44	121.84	125.10
5	14	1821	A	C8-N9-C4	-5.44	103.62	105.80
1	13	50	A	C6-N1-C2	-5.44	115.34	118.60
5	14	267	C	C6-N1-C2	-5.44	118.12	120.30
5	14	835	A	C2-N3-C4	5.44	113.32	110.60
5	14	1703	G	N3-C4-C5	5.44	131.32	128.60
5	1H	305	U	C6-N1-C2	-5.44	117.74	121.00
5	1H	528	A	N1-C2-N3	-5.44	126.58	129.30
5	1H	1352	U	N1-C2-N3	5.44	118.16	114.90
5	1H	2060	A	C8-N9-C1'	5.44	137.49	127.70
5	1H	2421	G	C8-N9-C4	5.44	108.58	106.40
27	1J	22	U	C6-N1-C2	-5.44	117.74	121.00
1	1G	232	G	N3-C4-N9	5.44	129.26	126.00
5	14	2010	G	O5'-P-OP1	-5.44	100.81	105.70
5	14	2062	A	C4-C5-N7	5.44	113.42	110.70
5	14	2068	U	OP2-P-O3'	-5.44	93.24	105.20
5	14	2390	U	OP1-P-O3'	5.44	117.16	105.20
5	1H	673	C	N3-C2-O2	5.44	125.70	121.90
5	1H	1406	U	C6-N1-C2	-5.44	117.74	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2342	C	C6-N1-C2	-5.44	118.12	120.30
1	1G	913	A	OP2-P-O3'	5.44	117.16	105.20
1	13	112	G	OP1-P-OP2	-5.43	111.45	119.60
1	13	972	C	OP2-P-O3'	5.43	117.16	105.20
5	14	76	C	OP2-P-O3'	5.43	117.16	105.20
5	14	449	A	OP1-P-O3'	5.43	117.16	105.20
5	14	788	A	C6-C5-N7	-5.43	128.50	132.30
5	14	1460	A	P-O3'-C3'	5.43	126.22	119.70
5	14	2430	A	N9-C4-C5	-5.43	103.63	105.80
5	14	2741	A	N1-C2-N3	-5.43	126.58	129.30
5	1H	140	A	N3-C4-C5	5.43	130.60	126.80
5	1H	676	A	N9-C4-C5	5.43	107.97	105.80
5	1H	1050	A	O4'-C1'-N9	5.43	112.55	108.20
55	Q8	49	VAL	N-CA-C	5.43	125.67	111.00
1	1G	899	C	N1-C2-O2	5.43	122.16	118.90
5	14	974(A)	C	C5-C4-N4	5.43	124.00	120.20
5	14	1779	U	O5'-P-OP2	-5.43	100.81	105.70
5	14	1806	C	C6-N1-C2	5.43	122.47	120.30
5	14	2700	C	C6-N1-C1'	-5.43	114.28	120.80
5	1H	242	G	O5'-P-OP2	-5.43	100.81	105.70
5	1H	381	G	OP1-P-OP2	5.43	127.75	119.60
5	1H	794	G	C4-C5-N7	-5.43	108.63	110.80
5	1H	1030	G	N1-C2-N2	-5.43	111.31	116.20
1	1G	569	C	C6-N1-C2	-5.43	118.13	120.30
1	13	1501	C	C6-N1-C2	-5.43	118.13	120.30
5	14	671	C	C5-C6-N1	-5.43	118.28	121.00
5	14	1646	C	C6-N1-C2	5.43	122.47	120.30
5	14	2504	U	N3-C2-O2	-5.43	118.40	122.20
5	1H	938	G	N3-C2-N2	5.43	123.70	119.90
1	13	777	A	O5'-P-OP1	5.43	117.22	110.70
1	13	1235	U	O5'-P-OP2	5.43	117.22	110.70
5	14	948	G	O5'-P-OP2	5.43	117.21	110.70
5	1H	247	G	C5-C6-N1	5.43	114.22	111.50
5	1H	1791	A	C2-N3-C4	5.43	113.31	110.60
5	1H	2373	G	C8-N9-C1'	-5.43	119.94	127.00
1	1G	266	G	P-O3'-C3'	5.43	126.22	119.70
1	1G	1418	A	C5-C6-N6	-5.43	119.36	123.70
5	14	603	A	N7-C8-N9	5.43	116.51	113.80
5	14	2724	C	OP2-P-O3'	5.43	117.14	105.20
5	1H	199	A	C8-N9-C1'	5.43	137.47	127.70
5	1H	2060	A	C6-C5-N7	5.43	136.10	132.30
1	13	767	A	O5'-P-OP1	-5.43	100.82	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	802	A	C5-C6-N1	5.43	120.41	117.70
5	14	1359	A	N7-C8-N9	-5.43	111.09	113.80
5	14	2542	A	O5'-P-OP1	5.43	117.21	110.70
5	1H	1157	G	N3-C2-N2	-5.43	116.10	119.90
5	1H	1303	G	O5'-P-OP2	-5.43	100.82	105.70
5	1H	2615	U	O5'-P-OP2	-5.43	100.82	105.70
1	13	1329	A	N9-C4-C5	-5.42	103.63	105.80
5	14	2570	G	N1-C6-O6	5.42	123.16	119.90
5	1H	129	C	OP2-P-O3'	5.42	117.14	105.20
5	1H	2690	C	N3-C4-C5	-5.42	119.73	121.90
5	14	1772	G	N9-C4-C5	-5.42	103.23	105.40
5	1H	622	G	C5-N7-C8	5.42	107.01	104.30
5	1H	2503	A	N3-C4-N9	5.42	131.74	127.40
1	13	1336	C	C5-C6-N1	5.42	123.71	121.00
5	1H	917	A	C6-N1-C2	-5.42	115.35	118.60
5	1H	2435	A	C5-C6-N6	5.42	128.04	123.70
1	1G	353	A	OP2-P-O3'	5.42	117.13	105.20
1	1G	812	C	C6-N1-C1'	-5.42	114.30	120.80
5	14	2053	G	N7-C8-N9	-5.42	110.39	113.10
1	1G	193	C	C5-C6-N1	5.42	123.71	121.00
1	13	586	C	C5-C6-N1	-5.42	118.29	121.00
1	13	1128	C	C2-N1-C1'	5.42	124.76	118.80
5	14	382	G	O5'-P-OP1	-5.42	100.82	105.70
5	1H	621	A	C6-C5-N7	-5.42	128.51	132.30
5	1H	987	G	N9-C4-C5	5.42	107.57	105.40
5	1H	1288	U	N3-C4-O4	5.42	123.19	119.40
5	1H	1328	G	N9-C4-C5	-5.42	103.23	105.40
5	1H	1330	C	C5-C6-N1	5.42	123.71	121.00
5	1H	1363	C	C5-C6-N1	-5.42	118.29	121.00
5	1H	1489	U	N3-C4-C5	-5.42	111.35	114.60
5	1H	2457	U	N1-C2-O2	-5.42	119.01	122.80
1	1G	12	U	C6-N1-C2	-5.42	117.75	121.00
1	1G	884	U	C6-N1-C2	-5.42	117.75	121.00
1	13	1508	G	O5'-P-OP2	5.42	117.20	110.70
5	14	365	C	C6-N1-C2	-5.42	118.13	120.30
5	14	833	U	N3-C4-O4	5.42	123.19	119.40
5	1H	528	A	C4-N9-C1'	-5.42	116.55	126.30
5	1H	983	A	C8-N9-C4	5.42	107.97	105.80
5	1H	1022	G	C4-C5-N7	-5.42	108.63	110.80
5	1H	2275	C	O4'-C1'-N1	-5.42	103.87	108.20
5	14	1379	A	C2-N3-C4	-5.42	107.89	110.60
1	1G	1356	G	N7-C8-N9	5.42	115.81	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	528	A	C5-N7-C8	-5.41	101.19	103.90
5	1H	20	C	C2-N3-C4	-5.41	117.19	119.90
5	1H	239	U	C2-N1-C1'	-5.41	111.20	117.70
5	1H	772	C	C5-C6-N1	-5.41	118.29	121.00
5	1H	793	A	N3-C4-C5	-5.41	123.01	126.80
5	1H	1339	G	C5-C6-O6	-5.41	125.35	128.60
5	1H	2594	C	N3-C2-O2	-5.41	118.11	121.90
1	1G	1188	A	N7-C8-N9	-5.41	111.09	113.80
1	1G	33	A	C8-N9-C4	-5.41	103.64	105.80
1	13	718	G	OP1-P-OP2	-5.41	111.48	119.60
5	14	1777	U	N1-C2-N3	5.41	118.15	114.90
5	14	2870	C	C6-N1-C2	-5.41	118.14	120.30
5	1H	792	G	C8-N9-C1'	-5.41	119.97	127.00
5	1H	1664	A	C5-N7-C8	-5.41	101.19	103.90
5	1H	2573	C	N1-C2-N3	5.41	122.99	119.20
5	1H	113	G	OP1-P-O3'	5.41	117.10	105.20
5	1H	791	C	P-O3'-C3'	5.41	126.19	119.70
5	1H	1471	A	C8-N9-C4	-5.41	103.64	105.80
5	1H	2354	G	N1-C6-O6	5.41	123.14	119.90
5	1H	2681	C	C2-N1-C1'	5.41	124.75	118.80
1	1G	720	C	C5-C4-N4	-5.41	116.41	120.20
5	14	1198	U	N3-C2-O2	-5.41	118.42	122.20
5	14	1930	G	C4-C5-N7	-5.41	108.64	110.80
5	14	2518	A	N1-C2-N3	5.41	132.00	129.30
5	1H	1809	A	C5-C6-N1	5.41	120.40	117.70
5	1H	2746	U	N3-C2-O2	-5.41	118.42	122.20
1	13	1408	A	N7-C8-N9	5.41	116.50	113.80
5	14	208	C	OP2-P-O3'	5.41	117.09	105.20
5	14	1742	C	C5-C6-N1	5.41	123.70	121.00
5	14	1829	A	O5'-P-OP1	-5.41	100.84	105.70
5	14	2852	G	C6-C5-N7	-5.41	127.16	130.40
5	1H	115	C	OP1-P-O3'	5.41	117.09	105.20
5	1H	481	G	C4-N9-C1'	5.41	133.53	126.50
5	1H	682	G	C8-N9-C4	5.41	108.56	106.40
5	1H	852	G	OP2-P-O3'	5.41	117.09	105.20
1	1G	1394	A	N1-C2-N3	-5.41	126.60	129.30
1	13	525	C	C5-C6-N1	5.40	123.70	121.00
5	14	127	A	C5-C6-N1	5.40	120.40	117.70
5	1H	1425	G	C5-N7-C8	-5.40	101.60	104.30
5	1H	2645	G	C4-C5-N7	5.40	112.96	110.80
5	14	1528	A	C6-C5-N7	-5.40	128.52	132.30
5	14	2330	G	O5'-P-OP1	5.40	117.18	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	454	A	O5'-P-OP2	-5.40	100.84	105.70
5	1H	1899	G	N1-C2-N2	5.40	121.06	116.20
5	1H	2271	G	C5-C6-O6	-5.40	125.36	128.60
5	1H	2422	A	N1-C2-N3	5.40	132.00	129.30
27	16	17	C	N3-C2-O2	-5.40	118.12	121.90
1	1G	812	C	N1-C2-O2	5.40	122.14	118.90
1	13	1511	G	C4-N9-C1'	5.40	133.52	126.50
5	14	1557	C	N3-C4-C5	5.40	124.06	121.90
5	1H	336	C	C2-N1-C1'	5.40	124.74	118.80
5	1H	593	G	N1-C2-N3	5.40	127.14	123.90
5	1H	1836	C	C5-C4-N4	5.40	123.98	120.20
5	1H	1958	C	N3-C4-N4	5.40	121.78	118.00
1	13	509	A	P-O3'-C3'	5.40	126.18	119.70
1	13	1362	C	C6-N1-C2	-5.40	118.14	120.30
5	14	834	C	C4-C5-C6	5.40	120.10	117.40
5	14	2324	C	C2-N3-C4	-5.40	117.20	119.90
5	1H	379	G	C6-C5-N7	5.40	133.64	130.40
5	1H	690	G	N1-C2-N3	5.40	127.14	123.90
5	1H	971	C	C4-C5-C6	5.40	120.10	117.40
5	14	273(C)	C	C5-C4-N4	-5.40	116.42	120.20
5	14	689	A	N7-C8-N9	-5.40	111.10	113.80
5	14	1521	G	N3-C2-N2	5.40	123.68	119.90
5	1H	113	G	C2-N3-C4	-5.40	109.20	111.90
5	1H	193	U	C2-N3-C4	-5.40	123.76	127.00
5	1H	451	C	N3-C4-N4	5.40	121.78	118.00
5	1H	1601	G	OP1-P-O3'	5.40	117.07	105.20
5	1H	2446	G	C6-C5-N7	-5.40	127.16	130.40
1	1G	12	U	N1-C2-N3	5.40	118.14	114.90
1	13	560	U	C5-C6-N1	5.40	125.40	122.70
5	14	812	C	N3-C4-N4	5.40	121.78	118.00
5	14	2351	G	N3-C4-C5	-5.40	125.90	128.60
5	1H	1245	G	O5'-P-OP1	-5.40	100.84	105.70
1	1G	727	G	N3-C4-N9	5.40	129.24	126.00
5	14	121	G	C6-N1-C2	-5.39	121.86	125.10
5	14	241	A	O5'-P-OP2	-5.39	100.84	105.70
5	14	774	A	C5-C6-N6	-5.39	119.38	123.70
5	14	1785	A	N9-C4-C5	5.39	107.96	105.80
5	14	2426	A	OP1-P-O3'	5.39	117.07	105.20
5	1H	658	C	OP2-P-O3'	5.39	117.07	105.20
5	1H	2061	G	OP1-P-OP2	5.39	127.69	119.60
1	1G	312	C	C6-N1-C2	-5.39	118.14	120.30
5	14	2061	G	O5'-P-OP2	-5.39	100.85	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2267	A	OP1-P-OP2	5.39	127.69	119.60
5	1H	530	G	N3-C4-N9	-5.39	122.77	126.00
5	1H	1123	C	C5-C6-N1	-5.39	118.30	121.00
5	1H	2516	G	O5'-P-OP1	5.39	117.17	110.70
45	G8	81	LYS	C-N-CA	5.39	144.65	122.00
5	14	205	G	N7-C8-N9	-5.39	110.40	113.10
5	1H	1858	G	N7-C8-N9	5.39	115.80	113.10
1	1G	503	C	C5-C6-N1	5.39	123.69	121.00
1	13	674	G	C6-C5-N7	-5.39	127.17	130.40
1	13	1376	U	N3-C4-O4	-5.39	115.63	119.40
5	14	657	U	C5-C4-O4	5.39	129.13	125.90
5	1H	237	C	C6-N1-C2	5.39	122.46	120.30
5	1H	802	A	OP1-P-O3'	-5.39	93.34	105.20
5	1H	857	C	OP1-P-OP2	5.39	127.69	119.60
5	1H	939	G	C2-N3-C4	-5.39	109.21	111.90
5	1H	1029	A	N1-C6-N6	5.39	121.83	118.60
5	1H	1764	G	C8-N9-C4	-5.39	104.25	106.40
5	14	396	G	OP1-P-O3'	5.39	117.05	105.20
5	1H	773	U	C5-C4-O4	5.39	129.13	125.90
5	1H	1819	A	C5-C6-N1	5.39	120.39	117.70
27	1J	75	G	N3-C4-C5	-5.39	125.91	128.60
27	16	49	C	C5-C4-N4	-5.39	116.43	120.20
1	1G	1158	C	N3-C2-O2	-5.39	118.13	121.90
3	2L	48	U	P-O3'-C3'	5.39	126.16	119.70
5	14	1271	G	C5-N7-C8	5.39	106.99	104.30
5	14	2335	A	P-O3'-C3'	5.39	126.17	119.70
3	2K	75	C	OP1-P-O3'	5.39	117.05	105.20
5	1H	694	U	C5-C4-O4	5.39	129.13	125.90
5	1H	917	A	C4-C5-N7	5.39	113.39	110.70
1	13	813	U	OP1-P-OP2	5.38	127.68	119.60
1	13	1511	G	C2-N3-C4	-5.38	109.21	111.90
5	14	205	G	OP1-P-OP2	5.38	127.68	119.60
5	14	1624	G	C8-N9-C1'	5.38	134.00	127.00
5	14	2219	G	C8-N9-C4	5.38	108.55	106.40
5	14	2259	G	N1-C2-N2	5.38	121.05	116.20
5	1H	2446	G	N1-C6-O6	5.38	123.13	119.90
5	1H	2509	G	N3-C2-N2	5.38	123.67	119.90
5	1H	586	A	N1-C6-N6	-5.38	115.37	118.60
1	1G	317	G	C6-C5-N7	-5.38	127.17	130.40
1	13	357	G	C8-N9-C4	5.38	108.55	106.40
1	13	794	A	OP2-P-O3'	5.38	117.04	105.20
5	14	482	A	C5-C6-N1	5.38	120.39	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1568	G	C4-N9-C1'	-5.38	119.50	126.50
5	1H	245	G	C6-C5-N7	-5.38	127.17	130.40
5	1H	263	C	C5-C6-N1	-5.38	118.31	121.00
5	1H	513	A	N7-C8-N9	5.38	116.49	113.80
27	16	109	G	C8-N9-C4	-5.38	104.25	106.40
1	1G	493	G	N3-C4-C5	-5.38	125.91	128.60
1	13	1479	C	N3-C4-N4	5.38	121.77	118.00
5	14	478	A	O5'-P-OP1	-5.38	100.86	105.70
5	14	772	C	O5'-P-OP1	-5.38	100.86	105.70
5	14	1968	G	OP1-P-O3'	5.38	117.03	105.20
5	1H	1626	G	C8-N9-C4	-5.38	104.25	106.40
5	1H	1698	A	N3-C4-N9	-5.38	123.10	127.40
5	14	117	G	C5-C6-O6	-5.38	125.37	128.60
5	14	190	A	N1-C2-N3	-5.38	126.61	129.30
5	14	1902	C	C4-C5-C6	-5.38	114.71	117.40
5	1H	188	G	C5'-C4'-O4'	5.38	115.55	109.10
5	1H	530	G	N3-C4-C5	5.38	131.29	128.60
5	1H	935	C	C6-N1-C2	5.38	122.45	120.30
5	1H	1399	C	N1-C2-O2	-5.38	115.67	118.90
5	1H	1774	C	OP1-P-OP2	5.38	127.67	119.60
5	1H	1819	A	N9-C4-C5	-5.38	103.65	105.80
5	1H	1937	A	N7-C8-N9	-5.38	111.11	113.80
5	1H	2869	G	N7-C8-N9	5.38	115.79	113.10
1	13	19	C	C6-N1-C2	-5.38	118.15	120.30
1	13	974	A	C5-N7-C8	-5.38	101.21	103.90
5	14	1521	G	C8-N9-C4	-5.38	104.25	106.40
5	14	1977	A	OP2-P-O3'	5.38	117.03	105.20
5	1H	823	G	N1-C2-N3	5.38	127.13	123.90
5	1H	906	G	C4-N9-C1'	-5.38	119.51	126.50
5	1H	1205	U	O5'-P-OP1	5.38	117.15	110.70
5	1H	1477	A	OP2-P-O3'	5.38	117.03	105.20
5	14	1301	A	C8-N9-C4	5.38	107.95	105.80
5	1H	364	C	C6-N1-C2	-5.38	118.15	120.30
5	1H	1399	C	C5-C6-N1	5.38	123.69	121.00
5	1H	2383	G	C8-N9-C4	-5.38	104.25	106.40
5	1H	2578	G	N1-C2-N2	-5.38	111.36	116.20
5	1H	270(A)	A	C5-C6-N6	-5.37	119.40	123.70
5	1H	410	G	C5-N7-C8	-5.37	101.61	104.30
5	1H	563	G	C5-C6-O6	5.37	131.82	128.60
5	1H	914	C	N1-C2-O2	-5.37	115.68	118.90
5	1H	1805	U	N3-C4-O4	5.37	123.16	119.40
5	1H	2752	C	C5-C6-N1	5.37	123.69	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	230	G	N9-C4-C5	5.37	107.55	105.40
1	1G	652	U	N3-C2-O2	-5.37	118.44	122.20
1	13	1305	G	N7-C8-N9	5.37	115.79	113.10
5	14	138	G	C4-C5-N7	5.37	112.95	110.80
5	14	1282	U	C2-N3-C4	-5.37	123.78	127.00
2	3K	76	A	O5'-P-OP1	-5.37	100.87	105.70
5	1H	598	G	C5-C6-O6	-5.37	125.38	128.60
5	1H	766	C	N3-C2-O2	5.37	125.66	121.90
5	1H	798	G	N3-C4-C5	5.37	131.28	128.60
5	1H	1607	C	C2-N1-C1'	5.37	124.71	118.80
5	1H	2346	A	N9-C1'-C2'	5.37	120.98	114.00
5	14	1325	G	N3-C4-N9	5.37	129.22	126.00
5	1H	1342	A	N9-C4-C5	-5.37	103.65	105.80
1	1G	266	G	N3-C4-C5	-5.37	125.92	128.60
5	1H	871	U	N1-C2-O2	-5.37	119.04	122.80
5	1H	2310	A	C5-C6-N1	5.37	120.38	117.70
1	13	814	A	N9-C4-C5	-5.37	103.65	105.80
5	14	1230	C	N3-C2-O2	-5.37	118.14	121.90
5	1H	148	C	C5-C6-N1	-5.37	118.32	121.00
5	1H	1229(A)	G	C4-C5-N7	5.37	112.95	110.80
5	1H	1269	A	C5-N7-C8	-5.37	101.22	103.90
5	1H	1475	G	N3-C4-N9	-5.37	122.78	126.00
5	1H	1936	A	C5-N7-C8	-5.37	101.22	103.90
5	1H	2395	C	C5-C4-N4	-5.37	116.44	120.20
5	1H	2453	A	C5-N7-C8	5.37	106.58	103.90
1	13	975	A	C6-C5-N7	-5.36	128.54	132.30
5	14	915	C	N3-C2-O2	-5.36	118.15	121.90
5	14	2428	G	P-O3'-C3'	5.36	126.14	119.70
5	14	2564	A	N1-C6-N6	5.36	121.82	118.60
5	1H	915	C	OP1-P-OP2	-5.36	111.55	119.60
5	1H	974(A)	C	C2-N3-C4	5.36	122.58	119.90
5	1H	1754	C	OP1-P-O3'	5.36	117.00	105.20
1	1G	1347	G	N3-C4-N9	-5.36	122.78	126.00
5	1H	845	G	OP1-P-O3'	5.36	117.00	105.20
5	1H	462	C	OP1-P-OP2	5.36	127.64	119.60
5	1H	670	A	OP1-P-O3'	-5.36	93.41	105.20
5	1H	758	C	N3-C4-C5	5.36	124.04	121.90
5	1H	844	C	N3-C2-O2	5.36	125.65	121.90
5	1H	921	G	C8-N9-C4	-5.36	104.25	106.40
5	1H	961	C	OP1-P-OP2	5.36	127.64	119.60
5	1H	1789	A	C2-N3-C4	5.36	113.28	110.60
5	1H	2072	G	N7-C8-N9	-5.36	110.42	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1132	A	OP2-P-O3'	5.36	116.99	105.20
5	1H	473	G	N9-C4-C5	-5.36	103.26	105.40
1	13	1498	U	O4'-C1'-N1	-5.36	103.91	108.20
5	14	988	A	N1-C6-N6	5.36	121.81	118.60
5	14	1266	G	C8-N9-C4	5.36	108.54	106.40
5	14	1557	C	C6-N1-C2	5.36	122.44	120.30
5	1H	147	U	C6-N1-C2	5.36	124.21	121.00
5	1H	232	G	N1-C6-O6	5.36	123.11	119.90
5	1H	769	G	N3-C2-N2	5.36	123.65	119.90
5	1H	1825	A	OP1-P-OP2	-5.36	111.56	119.60
1	13	50	A	P-O3'-C3'	5.36	126.13	119.70
1	13	1516	G	OP2-P-O3'	5.36	116.98	105.20
5	1H	210	C	C2-N3-C4	-5.36	117.22	119.90
5	1H	772	C	OP2-P-O3'	5.36	116.98	105.20
5	1H	1489	U	O5'-P-OP1	-5.36	100.88	105.70
5	1H	2596	U	N3-C2-O2	5.36	125.95	122.20
1	13	327	A	O4'-C1'-N9	5.35	112.48	108.20
5	14	830	G	C5-C6-O6	-5.35	125.39	128.60
5	14	1313	U	N1-C2-N3	5.35	118.11	114.90
5	1H	2583	G	N7-C8-N9	5.35	115.78	113.10
5	14	1982	C	C2-N1-C1'	5.35	124.69	118.80
5	1H	54	G	C6-C5-N7	-5.35	127.19	130.40
5	1H	664	C	C4-C5-C6	5.35	120.08	117.40
5	1H	848	G	O5'-P-OP1	5.35	117.12	110.70
5	1H	1239	G	C8-N9-C4	5.35	108.54	106.40
5	1H	1475	G	N1-C2-N2	5.35	121.02	116.20
5	1H	1834	U	N3-C2-O2	-5.35	118.45	122.20
27	16	95	U	C2-N1-C1'	-5.35	111.28	117.70
1	13	1318	A	O5'-P-OP2	5.35	117.12	110.70
5	14	573	G	C2-N3-C4	5.35	114.58	111.90
5	1H	871	U	N3-C2-O2	5.35	125.94	122.20
5	1H	1577	C	C4-C5-C6	5.35	120.08	117.40
5	1H	2010	G	OP1-P-O3'	5.35	116.97	105.20
1	13	918	A	N1-C6-N6	5.35	121.81	118.60
1	13	1198	G	C8-N9-C4	5.35	108.54	106.40
3	2L	5	G	C8-N9-C4	5.35	108.54	106.40
5	14	2274	A	N7-C8-N9	5.35	116.47	113.80
5	14	2585	U	O4'-C1'-N1	5.35	112.48	108.20
5	1H	839	U	C5-C4-O4	5.35	129.11	125.90
5	1H	1021	A	C8-N9-C4	-5.35	103.66	105.80
27	1J	102	G	N1-C6-O6	-5.35	116.69	119.90
1	13	1266	G	C6-C5-N7	5.35	133.61	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	668	G	N3-C4-N9	-5.35	122.79	126.00
1	1G	390	C	C6-N1-C2	-5.35	118.16	120.30
5	14	2074	U	C6-N1-C2	-5.35	117.79	121.00
5	1H	2581	G	N1-C2-N2	-5.35	111.39	116.20
55	Q8	59	LYS	CD-CE-NZ	5.35	124.00	111.70
1	1G	1203	C	C5-C6-N1	-5.35	118.33	121.00
5	14	562	U	N1-C2-O2	-5.34	119.06	122.80
3	2K	77	A	C6-C5-N7	-5.34	128.56	132.30
5	1H	415	A	C5-C6-N6	-5.34	119.42	123.70
5	1H	1336	A	N1-C6-N6	5.34	121.81	118.60
5	1H	2439	A	OP1-P-O3'	5.34	116.96	105.20
5	1H	567	A	OP1-P-OP2	5.34	127.61	119.60
1	1G	1469	G	N1-C6-O6	5.34	123.11	119.90
5	14	393	C	N3-C4-N4	-5.34	114.26	118.00
5	14	1365	A	C5-N7-C8	-5.34	101.23	103.90
5	14	1667	G	O5'-P-OP1	-5.34	100.89	105.70
5	1H	1142(A)	A	N7-C8-N9	5.34	116.47	113.80
5	1H	2041	U	O5'-P-OP1	-5.34	100.89	105.70
1	1G	1280	A	C8-N9-C4	5.34	107.94	105.80
5	14	2576	G	C2-N3-C4	5.34	114.57	111.90
5	1H	464	U	C4-C5-C6	5.34	122.90	119.70
5	1H	726	G	C2-N3-C4	-5.34	109.23	111.90
5	1H	1691	C	OP1-P-O3'	5.34	116.95	105.20
5	1H	1840	G	N3-C2-N2	-5.34	116.16	119.90
5	1H	1917	U	N1-C2-O2	5.34	126.54	122.80
5	1H	1938	A	N1-C2-N3	5.34	131.97	129.30
1	1G	630	G	N9-C4-C5	-5.34	103.26	105.40
1	13	16	A	OP1-P-O3'	5.34	116.94	105.20
5	1H	199	A	N9-C4-C5	5.34	107.94	105.80
1	1G	1195	C	C6-N1-C2	-5.34	118.17	120.30
5	14	780	G	C8-N9-C4	-5.34	104.27	106.40
5	14	1342	A	C5-N7-C8	-5.34	101.23	103.90
5	1H	1955	U	O5'-P-OP2	-5.34	100.90	105.70
5	1H	2253	G	N9-C4-C5	5.34	107.53	105.40
1	1G	1469	G	N7-C8-N9	5.34	115.77	113.10
1	13	789	U	N3-C4-O4	-5.33	115.67	119.40
1	13	858	G	N1-C6-O6	-5.33	116.70	119.90
5	14	250	G	C8-N9-C4	-5.33	104.27	106.40
5	1H	787	U	OP1-P-O3'	5.33	116.93	105.20
5	1H	1393	A	O5'-P-OP2	-5.33	100.90	105.70
5	1H	1500	G	C4-C5-N7	5.33	112.93	110.80
5	1H	1575	C	O5'-P-OP1	5.33	117.10	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1602	U	N3-C2-O2	-5.33	118.47	122.20
5	1H	1837	C	C4-C5-C6	-5.33	114.73	117.40
5	1H	2706	G	N3-C2-N2	-5.33	116.17	119.90
27	16	113	C	C6-N1-C2	5.33	122.43	120.30
1	1G	1124	G	O4'-C1'-N9	5.33	112.47	108.20
1	1G	1247	U	C6-N1-C2	-5.33	117.80	121.00
1	13	247	G	C8-N9-C4	-5.33	104.27	106.40
5	1H	1000	A	O5'-P-OP1	-5.33	100.90	105.70
5	1H	1027	A	C4-C5-C6	5.33	119.67	117.00
5	1H	1601	G	N9-C4-C5	-5.33	103.27	105.40
5	1H	1669	A	N7-C8-N9	5.33	116.47	113.80
5	1H	1816	G	OP2-P-O3'	5.33	116.93	105.20
5	14	1776	G	OP1-P-OP2	-5.33	111.61	119.60
2	3K	71	G	C8-N9-C1'	5.33	133.93	127.00
5	1H	189	G	C8-N9-C4	5.33	108.53	106.40
5	1H	1843	C	C2-N3-C4	-5.33	117.23	119.90
1	13	246	A	N1-C6-N6	5.33	121.80	118.60
5	14	1812	A	OP1-P-OP2	5.33	127.59	119.60
5	14	2544	G	O5'-P-OP1	-5.33	100.90	105.70
5	1H	210	C	N3-C2-O2	5.33	125.63	121.90
5	1H	238	C	OP1-P-OP2	5.33	127.59	119.60
5	1H	395	U	O4'-C1'-N1	5.33	112.46	108.20
5	1H	595	C	OP2-P-O3'	5.33	116.92	105.20
5	1H	663	G	N1-C6-O6	-5.33	116.70	119.90
5	1H	1851	U	C2-N1-C1'	-5.33	111.31	117.70
5	1H	2243	U	N3-C2-O2	-5.33	118.47	122.20
5	1H	422	A	N9-C4-C5	-5.33	103.67	105.80
5	1H	682	G	C8-N9-C1'	-5.33	120.08	127.00
5	1H	1521	G	OP1-P-OP2	-5.33	111.61	119.60
5	1H	2701	C	O3'-P-O5'	5.33	114.12	104.00
1	1G	1530	G	N1-C6-O6	5.33	123.10	119.90
5	14	639	U	C5-C4-O4	5.33	129.09	125.90
5	14	2032	G	C5-C6-O6	-5.33	125.41	128.60
5	14	2315	G	N3-C4-N9	5.33	129.19	126.00
5	14	2710	C	C6-N1-C2	5.33	122.43	120.30
5	1H	131	G	C5-C6-O6	-5.33	125.40	128.60
5	1H	674	G	C8-N9-C4	5.33	108.53	106.40
5	1H	777	A	C6-N1-C2	-5.33	115.40	118.60
5	1H	939	G	C5-C6-O6	5.33	131.80	128.60
5	1H	972	G	O5'-P-OP1	5.33	117.09	110.70
5	1H	1317	A	OP1-P-O3'	5.33	116.91	105.20
5	1H	1989	G	C6-C5-N7	-5.33	127.20	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2499	C	C2-N3-C4	-5.33	117.24	119.90
5	1H	2597	G	C5-C6-N1	5.33	114.16	111.50
5	14	62	C	OP2-P-O3'	5.32	116.91	105.20
5	14	1568	G	C8-N9-C1'	5.32	133.92	127.00
5	14	2000	G	C6-N1-C2	-5.32	121.91	125.10
5	1H	339	U	OP1-P-OP2	-5.32	111.61	119.60
5	1H	699	A	C5-C6-N6	-5.32	119.44	123.70
55	Q8	45	GLY	N-CA-C	5.32	126.41	113.10
1	1G	814	A	N1-C6-N6	5.32	121.79	118.60
5	14	618(A)	C	C6-N1-C2	5.32	122.43	120.30
5	14	1197	G	C5-C6-O6	5.32	131.79	128.60
5	1H	837	C	C6-N1-C2	-5.32	118.17	120.30
27	1J	55	U	N3-C4-C5	-5.32	111.41	114.60
1	13	309	G	N1-C6-O6	5.32	123.09	119.90
5	1H	582	G	C5-N7-C8	-5.32	101.64	104.30
5	1H	682	G	C6-C5-N7	-5.32	127.21	130.40
5	1H	1024	G	N3-C4-C5	-5.32	125.94	128.60
5	1H	1960	A	N1-C2-N3	5.32	131.96	129.30
5	1H	1996	C	C2-N3-C4	-5.32	117.24	119.90
5	1H	2438	U	C2-N3-C4	-5.32	123.81	127.00
5	1H	2498	C	N3-C4-N4	5.32	121.72	118.00
5	14	2281	C	C2-N1-C1'	5.32	124.65	118.80
3	2K	70	C	O5'-P-OP1	5.32	117.08	110.70
5	1H	99	U	C2-N1-C1'	5.32	124.08	117.70
5	1H	133	C	O5'-P-OP1	5.32	117.08	110.70
5	1H	643	A	N1-C2-N3	5.32	131.96	129.30
5	1H	684	G	N3-C2-N2	-5.32	116.18	119.90
5	1H	769	G	N3-C4-N9	5.32	129.19	126.00
5	1H	823	G	C8-N9-C1'	-5.32	120.09	127.00
5	1H	1625	C	O5'-P-OP1	5.32	117.08	110.70
1	1G	118	U	N1-C2-O2	-5.32	119.08	122.80
1	13	584	G	C4-N9-C1'	5.32	133.41	126.50
1	13	963	G	N1-C2-N3	5.32	127.09	123.90
5	14	823	G	N3-C2-N2	5.32	123.62	119.90
5	14	1863	G	O5'-P-OP2	-5.32	100.92	105.70
5	14	2581	G	O5'-P-OP2	-5.32	100.92	105.70
5	1H	400	G	C5-C6-N1	5.32	114.16	111.50
5	1H	410	G	N3-C2-N2	-5.32	116.18	119.90
5	1H	776	G	N9-C4-C5	5.32	107.53	105.40
5	1H	1178	C	C6-N1-C2	5.32	122.43	120.30
5	1H	1905	C	N3-C4-N4	5.32	121.72	118.00
5	1H	2566	A	P-O3'-C3'	5.32	126.08	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2599	G	C4-C5-N7	-5.32	108.67	110.80
27	16	56	G	C8-N9-C4	-5.32	104.27	106.40
1	1G	31	G	N3-C4-C5	5.32	131.26	128.60
5	14	1128	A	C5-C6-N1	5.31	120.36	117.70
5	14	1271	G	O5'-P-OP2	-5.31	100.92	105.70
1	13	481	G	N3-C4-N9	5.31	129.19	126.00
1	13	944	G	N1-C6-O6	-5.31	116.71	119.90
5	14	1485	G	C8-N9-C4	5.31	108.53	106.40
5	1H	72	U	O5'-P-OP2	-5.31	100.92	105.70
5	1H	328	U	N3-C4-C5	-5.31	111.41	114.60
5	1H	2351	G	N3-C4-C5	-5.31	125.94	128.60
27	16	68	C	C6-N1-C2	5.31	122.42	120.30
1	13	57	G	N1-C6-O6	-5.31	116.71	119.90
5	14	240	G	N3-C4-C5	5.31	131.26	128.60
5	14	2338	G	N9-C4-C5	-5.31	103.28	105.40
5	14	2516	G	OP2-P-O3'	5.31	116.88	105.20
5	1H	1758	G	N3-C2-N2	-5.31	116.18	119.90
5	1H	2060	A	C8-N9-C4	-5.31	103.68	105.80
1	1G	197	A	C8-N9-C4	-5.31	103.68	105.80
1	13	760	G	C5-C6-O6	-5.31	125.41	128.60
5	14	463	G	OP1-P-O3'	5.31	116.88	105.20
5	14	1209	G	O5'-P-OP2	-5.31	100.92	105.70
5	14	1820	U	C2-N1-C1'	-5.31	111.33	117.70
5	14	1999	C	C6-N1-C2	5.31	122.42	120.30
5	14	2256	G	O5'-P-OP1	5.31	117.07	110.70
5	1H	271(B)	G	C8-N9-C4	-5.31	104.28	106.40
5	1H	1780	A	N7-C8-N9	5.31	116.45	113.80
5	1H	2238	G	C2-N3-C4	5.31	114.56	111.90
5	1H	1534	G	C8-N9-C4	-5.31	104.28	106.40
5	1H	2070	G	N3-C4-N9	5.31	129.19	126.00
5	14	615	G	C4-C5-N7	-5.31	108.68	110.80
5	14	1767	C	N3-C2-O2	-5.31	118.19	121.90
5	1H	422	A	C4-C5-C6	5.31	119.65	117.00
5	1H	1647	G	C5-C6-O6	5.31	131.78	128.60
41	C8	74	LEU	CA-CB-CG	5.31	127.50	115.30
5	14	194	G	C5-C6-O6	-5.30	125.42	128.60
5	14	1332	G	OP1-P-O3'	5.30	116.87	105.20
5	14	2545	G	C8-N9-C1'	-5.30	120.10	127.00
5	14	2553	G	O5'-P-OP1	-5.30	100.93	105.70
5	1H	709	U	OP2-P-O3'	5.30	116.87	105.20
5	1H	1272	A	C4-C5-C6	-5.30	114.35	117.00
5	1H	2072	G	OP1-P-O3'	5.30	116.87	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2297	C	O5'-P-OP1	-5.30	100.93	105.70
1	1G	1442	G	C4-N9-C1'	-5.30	119.61	126.50
1	1G	1443	G	N3-C4-N9	-5.30	122.82	126.00
1	13	1075	C	O5'-P-OP1	-5.30	100.93	105.70
5	14	2820	A	P-O3'-C3'	5.30	126.06	119.70
5	1H	407	G	N1-C2-N2	-5.30	111.43	116.20
5	1H	445	C	N1-C2-O2	5.30	122.08	118.90
1	1G	313	A	O5'-P-OP2	-5.30	100.93	105.70
5	14	1394	U	C5-C6-N1	5.30	125.35	122.70
5	14	1929	G	C5-C6-O6	5.30	131.78	128.60
5	14	2051	A	N1-C2-N3	5.30	131.95	129.30
5	14	2597	G	C5-C6-N1	-5.30	108.85	111.50
5	1H	917	A	OP1-P-O3'	5.30	116.86	105.20
5	1H	1033	U	C2-N1-C1'	-5.30	111.34	117.70
37	88	106	VAL	CB-CA-C	-5.30	101.33	111.40
1	13	1520	G	C4-C5-N7	5.30	112.92	110.80
5	14	588	U	C5-C4-O4	5.30	129.08	125.90
5	14	2442	C	OP1-P-OP2	-5.30	111.65	119.60
5	14	2453	A	C8-N9-C4	5.30	107.92	105.80
5	14	2588	G	C5-C6-O6	5.30	131.78	128.60
5	1H	59	U	C4-C5-C6	5.30	122.88	119.70
5	1H	177	G	C2-N3-C4	5.30	114.55	111.90
5	1H	1427	A	OP1-P-O3'	5.30	116.86	105.20
1	1G	1270	C	C6-N1-C2	-5.30	118.18	120.30
1	1G	1124	G	C4-N9-C1'	-5.30	119.61	126.50
1	13	1177	G	O5'-P-OP1	5.30	117.06	110.70
5	14	492	A	C5-C6-N6	-5.30	119.46	123.70
5	1H	2012	G	N9-C4-C5	-5.30	103.28	105.40
5	1H	2489	G	N1-C2-N2	-5.30	111.43	116.20
27	16	117	G	N3-C4-C5	5.30	131.25	128.60
1	1G	1400	C	C4-C5-C6	-5.30	114.75	117.40
5	14	2074	U	N1-C2-N3	5.29	118.08	114.90
5	1H	1309	G	N3-C4-N9	5.29	129.18	126.00
5	1H	1818	U	N1-C2-N3	5.29	118.08	114.90
5	1H	1898	U	O5'-P-OP2	-5.29	100.93	105.70
1	13	950	U	C6-N1-C2	5.29	124.18	121.00
1	13	1503	A	N1-C6-N6	-5.29	115.42	118.60
5	14	122	G	N1-C6-O6	5.29	123.08	119.90
5	14	747	U	N1-C2-N3	-5.29	111.72	114.90
5	14	801	G	C5-C6-N1	5.29	114.15	111.50
5	14	1989	G	C5-N7-C8	-5.29	101.65	104.30
5	1H	1194	A	C5-C6-N6	-5.29	119.46	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1295	C	C2-N3-C4	-5.29	117.25	119.90
1	1G	232	G	N1-C6-O6	5.29	123.08	119.90
1	1G	1145	C	C6-N1-C1'	-5.29	114.45	120.80
5	14	1479	G	C5-C6-N1	-5.29	108.86	111.50
5	14	1953	A	N9-C4-C5	-5.29	103.68	105.80
5	14	2700	C	O5'-P-OP1	5.29	117.05	110.70
5	1H	835	A	C5-C6-N1	5.29	120.34	117.70
5	1H	2449	U	N3-C2-O2	-5.29	118.50	122.20
1	1G	666	G	C4-N9-C1'	5.29	133.38	126.50
5	14	1046	A	O4'-C1'-N9	5.29	112.43	108.20
5	14	1838	C	O5'-P-OP1	-5.29	100.94	105.70
1	13	539	A	N1-C6-N6	-5.29	115.43	118.60
1	13	765	G	C8-N9-C1'	-5.29	120.13	127.00
1	13	773	G	C5-C6-O6	5.29	131.77	128.60
1	13	1053	G	P-O3'-C3'	5.29	126.05	119.70
5	14	121	G	N1-C2-N3	5.29	127.07	123.90
5	14	242	G	C4-N9-C1'	-5.29	119.62	126.50
5	14	1898	U	C6-N1-C2	-5.29	117.83	121.00
5	1H	213	A	C5-N7-C8	-5.29	101.26	103.90
5	1H	1397	U	N3-C2-O2	-5.29	118.50	122.20
5	1H	1975	G	O5'-P-OP2	-5.29	100.94	105.70
27	16	42	C	C5-C6-N1	-5.29	118.36	121.00
29	21	195	LEU	CA-CB-CG	5.29	127.47	115.30
1	1G	538	G	O5'-P-OP1	-5.29	100.94	105.70
1	13	241	C	OP1-P-O3'	5.29	116.83	105.20
1	13	644	G	O5'-P-OP1	5.29	117.05	110.70
5	14	1999	C	C5-C4-N4	-5.29	116.50	120.20
5	1H	832	G	O5'-P-OP1	5.29	117.04	110.70
5	1H	2060	A	O4'-C1'-N9	5.29	112.43	108.20
1	13	535	A	N1-C6-N6	-5.29	115.43	118.60
1	13	1151	A	O4'-C1'-N9	5.29	112.43	108.20
5	14	747	U	C6-N1-C2	5.29	124.17	121.00
5	14	1237	A	N9-C4-C5	5.29	107.91	105.80
5	14	2251	G	N1-C6-O6	-5.29	116.73	119.90
5	14	2357	U	N1-C2-O2	5.29	126.50	122.80
5	1H	324	A	O5'-P-OP1	-5.29	100.94	105.70
5	1H	432	A	N7-C8-N9	5.29	116.44	113.80
5	1H	1157	G	N1-C2-N3	5.29	127.07	123.90
5	1H	1210	A	C8-N9-C4	-5.29	103.69	105.80
5	1H	1475	G	N3-C2-N2	-5.29	116.20	119.90
5	1H	2385	C	C6-N1-C2	-5.29	118.19	120.30
1	1G	258	G	C8-N9-C4	-5.29	104.29	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1197	G	OP1-P-O3'	5.28	116.82	105.20
1	13	1259	C	C6-N1-C2	-5.28	118.19	120.30
5	14	570	G	N3-C4-C5	-5.28	125.96	128.60
5	1H	32	C	C6-N1-C1'	5.28	127.14	120.80
5	1H	867	C	N3-C2-O2	5.28	125.60	121.90
5	1H	1469	A	OP1-P-O3'	5.28	116.82	105.20
5	1H	1537	C	C6-N1-C2	-5.28	118.19	120.30
5	14	1616	A	N3-C4-N9	-5.28	123.17	127.40
5	1H	1007	C	C4-C5-C6	5.28	120.04	117.40
27	1J	89	G	N7-C8-N9	5.28	115.74	113.10
5	14	30	G	C6-C5-N7	-5.28	127.23	130.40
5	14	499	U	C2-N1-C1'	5.28	124.04	117.70
5	14	602	G	N9-C4-C5	-5.28	103.29	105.40
5	14	757	U	N1-C2-N3	5.28	118.07	114.90
5	14	2859	G	N3-C4-C5	-5.28	125.96	128.60
5	1H	1627	G	C4-C5-N7	-5.28	108.69	110.80
5	1H	2060	A	P-O3'-C3'	5.28	126.04	119.70
1	1G	1220	G	N1-C6-O6	5.28	123.07	119.90
1	1G	1528	U	C6-N1-C2	5.28	124.17	121.00
5	14	2263	C	OP1-P-OP2	-5.28	111.68	119.60
5	14	2723	C	N3-C2-O2	-5.28	118.20	121.90
5	1H	847	U	OP1-P-OP2	5.28	127.52	119.60
1	1G	1394	A	N9-C4-C5	-5.28	103.69	105.80
5	14	728	G	C8-N9-C4	5.28	108.51	106.40
5	14	1772	G	C6-C5-N7	-5.28	127.23	130.40
5	14	2078	C	N1-C2-O2	-5.28	115.73	118.90
5	14	2335	A	C4-C5-N7	-5.28	108.06	110.70
5	14	2621	A	N1-C6-N6	-5.28	115.43	118.60
5	1H	215	G	N9-C4-C5	-5.28	103.29	105.40
5	1H	873	G	C8-N9-C4	-5.28	104.29	106.40
5	1H	1133	U	C6-N1-C2	5.28	124.17	121.00
5	1H	2232	U	N1-C2-N3	5.28	118.07	114.90
1	13	545	C	N1-C2-O2	5.28	122.07	118.90
5	14	2331	G	C5-C6-O6	-5.28	125.44	128.60
5	1H	509	C	C4-C5-C6	5.28	120.04	117.40
1	13	1279	A	C6-C5-N7	-5.27	128.61	132.30
5	14	2600	A	OP2-P-O3'	5.27	116.80	105.20
5	14	2689	U	N1-C2-N3	5.27	118.06	114.90
5	1H	51	G	O4'-C1'-N9	-5.27	103.98	108.20
5	1H	188	G	C6-N1-C2	-5.27	121.94	125.10
5	1H	2593	U	C5-C6-N1	5.27	125.34	122.70
5	1H	2686	G	N3-C4-C5	-5.27	125.96	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	353	A	OP2-P-O3'	5.27	116.80	105.20
1	13	1442	G	C6-C5-N7	-5.27	127.24	130.40
5	14	1471	A	C8-N9-C4	-5.27	103.69	105.80
5	14	1613	G	C4-C5-N7	5.27	112.91	110.80
5	14	2776	A	N9-C4-C5	5.27	107.91	105.80
5	1H	381	G	C8-N9-C4	5.27	108.51	106.40
5	1H	1280	G	C4-N9-C1'	-5.27	119.65	126.50
5	1H	2405	G	N1-C6-O6	-5.27	116.74	119.90
1	1G	712	A	N1-C6-N6	5.27	121.76	118.60
5	14	1506	C	C6-N1-C2	-5.27	118.19	120.30
5	14	2675	A	C2-N3-C4	-5.27	107.96	110.60
5	1H	508	G	N9-C1'-C2'	5.27	120.85	114.00
5	1H	853	G	O5'-P-OP1	5.27	117.03	110.70
5	1H	1972	A	OP2-P-O3'	5.27	116.80	105.20
1	1G	309	G	C8-N9-C4	5.27	108.51	106.40
1	13	751	U	N3-C4-O4	5.27	123.09	119.40
1	13	1362(A)	C	C5-C6-N1	-5.27	118.36	121.00
5	14	707	G	C5-C6-N1	-5.27	108.86	111.50
27	16	41	U	C5-C4-O4	5.27	129.06	125.90
1	1G	893	C	C6-N1-C2	5.27	122.41	120.30
1	1G	1205	U	C5-C6-N1	5.27	125.33	122.70
5	14	306	U	O5'-P-OP1	-5.27	100.96	105.70
5	14	472	A	C4-C5-N7	-5.27	108.07	110.70
5	14	593	G	OP2-P-O3'	5.27	116.79	105.20
5	14	1359	A	N9-C4-C5	-5.27	103.69	105.80
5	14	1912	A	O5'-P-OP2	5.27	117.02	110.70
5	14	2873	A	C8-N9-C1'	-5.27	118.22	127.70
5	1H	2069	G	N9-C4-C5	-5.27	103.29	105.40
5	1H	2376	A	C8-N9-C4	5.27	107.91	105.80
5	1H	375	C	O5'-P-OP1	5.27	117.02	110.70
5	1H	1947	C	C5-C4-N4	-5.27	116.51	120.20
1	13	190	G	N3-C4-N9	5.26	129.16	126.00
1	13	1468	A	C5-C6-N1	5.26	120.33	117.70
5	14	1543	A	N1-C2-N3	5.26	131.93	129.30
5	1H	188	G	C5-C6-O6	-5.26	125.44	128.60
5	1H	1421	G	OP2-P-O3'	5.26	116.78	105.20
5	1H	2068	U	N3-C4-O4	-5.26	115.71	119.40
5	1H	2330	G	N1-C2-N3	5.26	127.06	123.90
5	1H	2444	G	N3-C2-N2	-5.26	116.21	119.90
38	98	17	ARG	NE-CZ-NH1	5.26	122.93	120.30
1	1G	63	C	C6-N1-C2	-5.26	118.19	120.30
1	1G	899	C	C6-N1-C1'	-5.26	114.48	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1K	48	C	N1-C2-O2	5.26	122.06	118.90
5	1H	582	G	C6-C5-N7	-5.26	127.24	130.40
5	1H	1366	A	N9-C4-C5	-5.26	103.69	105.80
5	1H	1808	U	C5-C4-O4	-5.26	122.74	125.90
5	1H	2458	G	C6-C5-N7	-5.26	127.24	130.40
1	13	391	G	N1-C6-O6	-5.26	116.74	119.90
5	14	1780	A	C2-N3-C4	-5.26	107.97	110.60
5	14	1989	G	C8-N9-C1'	5.26	133.84	127.00
5	14	2569	G	N1-C6-O6	-5.26	116.74	119.90
5	14	2689	U	OP2-P-O3'	5.26	116.77	105.20
5	1H	99	U	C6-N1-C2	-5.26	117.84	121.00
5	1H	225	A	C2-N3-C4	-5.26	107.97	110.60
5	1H	482	A	N7-C8-N9	5.26	116.43	113.80
5	1H	2621	A	OP2-P-O3'	5.26	116.78	105.20
27	16	109	G	N3-C2-N2	-5.26	116.22	119.90
5	14	681	G	C8-N9-C4	5.26	108.50	106.40
5	14	1669	A	OP1-P-OP2	5.26	127.49	119.60
5	14	2244	U	N1-C2-O2	-5.26	119.12	122.80
5	14	2467	C	C6-N1-C2	-5.26	118.20	120.30
5	1H	804	A	N9-C4-C5	5.26	107.90	105.80
5	1H	2674	G	C6-N1-C2	-5.26	121.94	125.10
5	1H	2774	C	C6-N1-C2	5.26	122.40	120.30
1	1G	1500	A	N1-C6-N6	5.26	121.75	118.60
1	13	862	C	C2-N1-C1'	-5.26	113.02	118.80
5	14	61	G	N3-C4-N9	5.26	129.16	126.00
5	14	1309	G	O5'-P-OP1	5.26	117.01	110.70
5	1H	186	G	C8-N9-C4	5.26	108.50	106.40
5	1H	1157	G	O5'-P-OP2	-5.26	100.97	105.70
5	14	391	G	C8-N9-C1'	-5.26	120.17	127.00
5	14	566	U	C2-N3-C4	-5.26	123.85	127.00
5	14	629	G	O5'-P-OP2	-5.26	100.97	105.70
5	14	1187	G	N7-C8-N9	5.26	115.73	113.10
5	14	1728	G	N3-C4-C5	-5.26	125.97	128.60
5	14	2338	G	C5-C6-O6	-5.26	125.45	128.60
5	1H	132	G	C5-C6-O6	5.26	131.75	128.60
5	1H	463	G	N3-C2-N2	5.26	123.58	119.90
5	1H	902	C	C6-N1-C2	5.26	122.40	120.30
5	1H	1229(A)	G	OP1-P-OP2	5.26	127.48	119.60
5	1H	1348	G	N3-C2-N2	-5.26	116.22	119.90
5	1H	1664	A	C8-N9-C4	-5.26	103.70	105.80
5	1H	2350	C	N3-C2-O2	-5.26	118.22	121.90
5	1H	2501	C	N3-C4-N4	-5.26	114.32	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2611	U	N3-C2-O2	-5.26	118.52	122.20
5	1H	2666	C	C5-C6-N1	5.26	123.63	121.00
5	1H	2759	G	O4'-C1'-N9	-5.26	104.00	108.20
27	16	108	C	C6-N1-C2	5.26	122.40	120.30
1	13	413	G	C4-C5-N7	-5.25	108.70	110.80
1	13	538	G	N3-C4-N9	5.25	129.15	126.00
5	14	869	G	N3-C4-N9	5.25	129.15	126.00
5	14	1409	C	OP1-P-OP2	5.25	127.48	119.60
5	1H	56	A	N1-C6-N6	5.25	121.75	118.60
1	13	731	G	OP1-P-O3'	5.25	116.76	105.20
1	13	1432	G	C4-C5-C6	5.25	121.95	118.80
5	14	393	C	C5-C4-N4	5.25	123.88	120.20
5	14	817	C	C6-N1-C2	-5.25	118.20	120.30
5	14	1377	G	N3-C2-N2	-5.25	116.22	119.90
5	1H	23	G	N3-C2-N2	-5.25	116.22	119.90
5	1H	136	G	N7-C8-N9	-5.25	110.47	113.10
5	1H	811	U	C6-N1-C1'	5.25	128.55	121.20
5	1H	1346	G	OP1-P-O3'	5.25	116.76	105.20
5	1H	2767	C	C2-N1-C1'	5.25	124.58	118.80
1	1G	581	G	O5'-P-OP2	-5.25	100.97	105.70
1	1G	1223	C	N1-C2-O2	5.25	122.05	118.90
5	14	2518	A	O5'-P-OP1	-5.25	100.97	105.70
5	1H	209	C	C2-N3-C4	-5.25	117.27	119.90
5	1H	906	G	C6-C5-N7	5.25	133.55	130.40
5	1H	1681	G	N3-C4-C5	5.25	131.23	128.60
5	1H	2206	C	C6-N1-C2	5.25	122.40	120.30
1	13	535	A	C5-C6-N6	5.25	127.90	123.70
1	13	875	C	C6-N1-C2	-5.25	118.20	120.30
5	1H	296	C	C4-C5-C6	5.25	120.03	117.40
5	1H	1229(A)	G	C6-C5-N7	-5.25	127.25	130.40
1	1G	603	U	N3-C4-C5	-5.25	111.45	114.60
1	1G	674	G	C4-C5-N7	5.25	112.90	110.80
1	1G	906	G	N1-C6-O6	5.25	123.05	119.90
1	13	587	G	O5'-P-OP1	5.25	117.00	110.70
1	13	966	G	N3-C4-N9	5.25	129.15	126.00
1	13	971	G	O5'-P-OP1	5.25	117.00	110.70
1	13	1474	G	C5-C6-N1	5.25	114.12	111.50
5	14	403	U	C5-C6-N1	-5.25	120.08	122.70
5	14	2199	A	OP2-P-O3'	5.25	116.75	105.20
5	14	2874	C	O5'-P-OP1	-5.25	100.98	105.70
16	3I	89	ARG	NE-CZ-NH2	-5.25	117.67	120.30
5	1H	1893	C	O5'-P-OP2	-5.25	100.98	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	892	A	N1-C6-N6	5.25	121.75	118.60
1	1G	1443	G	N3-C4-C5	5.25	131.22	128.60
1	13	129	U	C6-N1-C1'	5.25	128.54	121.20
5	14	685	A	C5-C6-N6	-5.25	119.50	123.70
5	14	1366	A	C4-C5-N7	5.25	113.32	110.70
5	1H	1024	G	C4-N9-C1'	5.25	133.32	126.50
5	1H	1382	G	OP2-P-O3'	5.25	116.74	105.20
5	1H	1626	G	C4-C5-N7	5.25	112.90	110.80
5	1H	1925	C	N3-C4-C5	-5.25	119.80	121.90
5	14	265	A	C6-C5-N7	-5.25	128.63	132.30
5	1H	795	C	C5-C6-N1	-5.25	118.38	121.00
5	1H	1301	A	N1-C6-N6	5.25	121.75	118.60
1	1G	943	U	O5'-P-OP1	-5.25	100.98	105.70
1	13	533	A	O4'-C1'-N9	5.24	112.39	108.20
1	13	601	C	N3-C2-O2	-5.24	118.23	121.90
5	14	70	G	C2-N3-C4	5.24	114.52	111.90
5	14	215	G	OP1-P-O3'	5.24	116.74	105.20
5	14	1558	A	C2-N3-C4	-5.24	107.98	110.60
5	14	1766	U	C5-C6-N1	-5.24	120.08	122.70
5	1H	416	C	N3-C4-C5	5.24	124.00	121.90
5	1H	716	A	O5'-P-OP2	5.24	116.99	110.70
5	1H	1214	A	OP2-P-O3'	5.24	116.74	105.20
5	1H	2617	C	C5-C4-N4	-5.24	116.53	120.20
5	1H	2844	G	N7-C8-N9	5.24	115.72	113.10
5	14	1024	G	C6-C5-N7	-5.24	127.25	130.40
5	14	2038	G	N9-C4-C5	-5.24	103.30	105.40
5	1H	187	G	N1-C2-N2	-5.24	111.48	116.20
5	1H	958	U	C6-N1-C2	-5.24	117.86	121.00
5	1H	1830	C	OP1-P-OP2	-5.24	111.74	119.60
1	13	300	A	N7-C8-N9	5.24	116.42	113.80
5	14	818	G	C8-N9-C4	-5.24	104.30	106.40
5	1H	728	G	N1-C2-N2	-5.24	111.48	116.20
5	1H	1632	A	C6-C5-N7	-5.24	128.63	132.30
5	1H	2346	A	N3-C4-N9	-5.24	123.21	127.40
5	1H	2429	G	C5-C6-O6	5.24	131.75	128.60
1	13	884	U	N1-C2-N3	-5.24	111.76	114.90
5	14	870	A	OP1-P-O3'	5.24	116.72	105.20
5	14	2569	G	N3-C4-C5	-5.24	125.98	128.60
5	1H	129	C	N3-C4-N4	5.24	121.67	118.00
5	1H	632	A	C2-N3-C4	-5.24	107.98	110.60
5	1H	1607	C	OP1-P-O3'	5.24	116.73	105.20
5	1H	2286	A	N7-C8-N9	5.24	116.42	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2589	A	N7-C8-N9	-5.24	111.18	113.80
1	13	1227	A	C4-C5-N7	5.24	113.32	110.70
5	14	2401	U	C5-C4-O4	-5.24	122.76	125.90
5	14	2696	U	O5'-P-OP1	-5.24	100.99	105.70
5	1H	318	C	OP1-P-O3'	5.24	116.72	105.20
5	1H	1187	G	O5'-P-OP1	-5.24	100.99	105.70
5	1H	2822	G	N9-C4-C5	-5.24	103.31	105.40
49	K8	53	LEU	CB-CG-CD2	5.24	119.90	111.00
1	13	353	A	C5-N7-C8	-5.24	101.28	103.90
5	14	56	A	N1-C6-N6	-5.24	115.46	118.60
5	14	823	G	O5'-P-OP1	5.24	116.98	110.70
5	14	1349	A	C5-N7-C8	-5.24	101.28	103.90
5	14	1601	G	C4-C5-N7	5.24	112.89	110.80
5	14	2037	G	N3-C4-C5	-5.24	125.98	128.60
5	14	2713	A	C6-C5-N7	-5.24	128.63	132.30
1	1G	1025	U	C2-N1-C1'	5.24	123.98	117.70
5	1H	241	A	OP2-P-O3'	5.23	116.72	105.20
5	1H	739	G	N3-C4-C5	5.23	131.22	128.60
1	13	559	A	O4'-C1'-N9	5.23	112.39	108.20
5	14	201	C	C2-N3-C4	-5.23	117.28	119.90
5	14	414	C	N3-C4-C5	5.23	123.99	121.90
5	14	781	A	O5'-P-OP1	-5.23	100.99	105.70
5	14	2053	G	C2-N3-C4	5.23	114.52	111.90
5	1H	481	G	P-O3'-C3'	5.23	125.98	119.70
5	1H	1566	A	O4'-C1'-N9	-5.23	104.01	108.20
5	1H	2380	C	C4-C5-C6	5.23	120.02	117.40
5	1H	2858	C	OP1-P-OP2	5.23	127.45	119.60
1	1G	770	C	N3-C2-O2	5.23	125.56	121.90
1	13	1196	U	C2-N1-C1'	5.23	123.98	117.70
5	14	140	A	C2-N3-C4	-5.23	107.98	110.60
5	14	779	U	N3-C4-O4	-5.23	115.74	119.40
5	14	1315	C	N3-C4-C5	5.23	123.99	121.90
5	14	1446	C	C6-N1-C2	-5.23	118.21	120.30
5	14	2646	C	N3-C4-C5	5.23	123.99	121.90
5	1H	238	C	N1-C2-N3	5.23	122.86	119.20
5	1H	699	A	N1-C6-N6	5.23	121.74	118.60
5	1H	2310	A	C8-N9-C4	-5.23	103.71	105.80
1	1G	1417	G	C6-C5-N7	-5.23	127.26	130.40
5	14	787	U	OP1-P-OP2	-5.23	111.76	119.60
5	14	818	G	N7-C8-N9	5.23	115.71	113.10
5	14	1235	G	C5-C6-O6	5.23	131.74	128.60
5	14	1790	C	N1-C2-O2	-5.23	115.76	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2713	A	C4-C5-N7	5.23	113.31	110.70
1	1G	596	C	C6-N1-C2	5.23	122.39	120.30
1	1G	1409	C	N3-C4-C5	-5.23	119.81	121.90
5	14	1187	G	C5-C6-N1	-5.23	108.89	111.50
5	14	1825	A	O5'-P-OP2	-5.23	101.00	105.70
5	14	2005	A	N7-C8-N9	-5.23	111.19	113.80
5	1H	944	G	C5-C6-N1	-5.23	108.89	111.50
5	1H	1783	A	N1-C6-N6	5.23	121.74	118.60
1	13	963	G	C8-N9-C1'	-5.23	120.21	127.00
1	13	1342	C	N3-C2-O2	5.23	125.56	121.90
1	1G	1270	C	C5-C6-N1	5.23	123.61	121.00
5	14	702	G	C5-C6-O6	5.22	131.74	128.60
5	14	712	G	N1-C6-O6	5.22	123.03	119.90
5	14	751	A	N1-C2-N3	5.22	131.91	129.30
5	14	1313	U	N3-C4-C5	-5.22	111.47	114.60
5	1H	1021	A	C6-C5-N7	-5.22	128.64	132.30
5	1H	1614	A	N7-C8-N9	5.22	116.41	113.80
5	1H	2447	G	O4'-C1'-N9	5.22	112.38	108.20
27	16	91	C	OP1-P-OP2	-5.22	111.76	119.60
5	14	824	A	OP1-P-O3'	5.22	116.69	105.20
5	14	2872	G	N3-C4-C5	-5.22	125.99	128.60
5	1H	2457	U	C5-C6-N1	5.22	125.31	122.70
5	1H	2729	G	N1-C6-O6	5.22	123.03	119.90
5	14	787	U	O5'-P-OP1	5.22	116.97	110.70
5	14	1573	G	C5-C6-N1	-5.22	108.89	111.50
5	1H	2253	G	C6-C5-N7	5.22	133.53	130.40
1	13	977	A	C8-N9-C4	-5.22	103.71	105.80
5	14	1624	G	O5'-P-OP2	-5.22	101.00	105.70
5	1H	223	A	C8-N9-C4	-5.22	103.71	105.80
5	1H	1280	G	N3-C4-C5	5.22	131.21	128.60
5	1H	1340	U	N3-C2-O2	5.22	125.85	122.20
5	1H	1375	C	C5-C4-N4	-5.22	116.55	120.20
5	1H	1664	A	OP2-P-O3'	5.22	116.68	105.20
5	1H	2007	C	N3-C2-O2	-5.22	118.25	121.90
5	14	2523	G	C6-C5-N7	-5.22	127.27	130.40
5	1H	1997	G	C8-N9-C4	-5.22	104.31	106.40
5	1H	2367	G	N3-C4-C5	5.22	131.21	128.60
5	14	784	A	C8-N9-C4	5.22	107.89	105.80
5	14	971	C	N1-C2-O2	-5.22	115.77	118.90
5	14	1241	A	O5'-P-OP1	-5.22	101.00	105.70
5	14	1325	G	O5'-P-OP2	5.22	116.96	110.70
5	14	2378	A	C8-N9-C4	5.22	107.89	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	615	G	O4'-C1'-N9	5.22	112.37	108.20
5	1H	809	G	C8-N9-C4	5.22	108.49	106.40
5	1H	1326	U	OP2-P-O3'	5.22	116.67	105.20
5	1H	1790	C	C6-N1-C2	5.22	122.39	120.30
5	14	363(E)	U	C2-N1-C1'	5.21	123.96	117.70
5	14	1597	A	N1-C6-N6	-5.21	115.47	118.60
5	14	1784	A	OP1-P-O3'	5.21	116.67	105.20
5	14	2007	C	C4-C5-C6	5.21	120.01	117.40
5	1H	130	C	N3-C4-N4	5.21	121.65	118.00
5	1H	132	G	N1-C2-N2	-5.21	111.51	116.20
5	1H	1139	G	N1-C6-O6	-5.21	116.77	119.90
5	1H	1572	A	OP2-P-O3'	5.21	116.67	105.20
5	1H	2491	U	C4-C5-C6	-5.21	116.57	119.70
5	1H	2576	G	N7-C8-N9	-5.21	110.49	113.10
5	14	41	C	C6-N1-C2	5.21	122.39	120.30
5	14	375	C	O5'-P-OP1	5.21	116.95	110.70
5	14	495	G	C8-N9-C4	5.21	108.48	106.40
5	14	1230	C	O5'-P-OP1	5.21	116.96	110.70
5	1H	2232	U	C4-C5-C6	5.21	122.83	119.70
5	1H	2438	U	N3-C2-O2	-5.21	118.55	122.20
1	13	791	G	N3-C4-C5	-5.21	125.99	128.60
5	14	428	A	C8-N9-C4	-5.21	103.72	105.80
5	14	565	C	OP1-P-OP2	5.21	127.42	119.60
5	14	1691	C	N1-C2-O2	5.21	122.03	118.90
5	14	1770	G	C5-C6-N1	-5.21	108.89	111.50
5	1H	207	A	C4-C5-N7	5.21	113.31	110.70
5	1H	1907	G	N3-C4-C5	5.21	131.21	128.60
5	1H	2590	A	C6-N1-C2	5.21	121.73	118.60
1	1G	1518	A	O5'-P-OP1	-5.21	101.01	105.70
1	13	285	G	OP1-P-O3'	5.21	116.66	105.20
5	14	830	G	N1-C6-O6	5.21	123.03	119.90
5	1H	827	U	C6-N1-C2	5.21	124.13	121.00
5	1H	1386	C	C6-N1-C2	-5.21	118.22	120.30
1	13	535	A	N9-C4-C5	5.21	107.88	105.80
1	13	899	C	C6-N1-C2	5.21	122.38	120.30
5	14	211	A	C8-N9-C4	5.21	107.88	105.80
5	14	512	G	O4'-C1'-N9	5.21	112.37	108.20
5	14	676	A	N3-C4-N9	-5.21	123.23	127.40
5	14	1372	U	C4-C5-C6	5.21	122.83	119.70
5	14	2445	G	N3-C2-N2	5.21	123.55	119.90
5	1H	244	A	N1-C6-N6	5.21	121.72	118.60
5	1H	2058	A	N1-C6-N6	-5.21	115.47	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2726	U	N3-C4-O4	-5.21	115.75	119.40
1	1G	257	G	N1-C6-O6	5.21	123.03	119.90
1	13	1252	A	OP1-P-OP2	5.21	127.41	119.60
2	3L	71	G	N9-C4-C5	5.21	107.48	105.40
5	14	238	C	N1-C2-O2	-5.21	115.78	118.90
5	14	2596	U	C5-C4-O4	5.21	129.02	125.90
5	1H	2425	A	O5'-P-OP2	-5.21	101.01	105.70
5	1H	2611	U	N3-C4-O4	-5.21	115.75	119.40
28	11	271	ILE	N-CA-C	5.21	125.06	111.00
1	1G	310	G	N9-C4-C5	5.21	107.48	105.40
5	14	1671	U	N3-C4-O4	5.21	123.04	119.40
5	1H	182	A	N1-C6-N6	5.21	121.72	118.60
5	1H	570	G	C6-N1-C2	5.21	128.22	125.10
5	1H	1296	G	C5-N7-C8	5.21	106.90	104.30
5	1H	2380	C	N1-C2-N3	5.21	122.84	119.20
1	1G	1158	C	N1-C2-O2	5.21	122.02	118.90
5	14	234	C	N1-C2-O2	5.20	122.02	118.90
5	14	769	G	C8-N9-C4	5.20	108.48	106.40
5	14	1937	A	C8-N9-C4	5.20	107.88	105.80
5	1H	320	A	N1-C6-N6	5.20	121.72	118.60
5	1H	942	G	N3-C4-N9	-5.20	122.88	126.00
5	1H	1390	U	OP1-P-O3'	5.20	116.65	105.20
5	1H	1683	C	N1-C2-O2	-5.20	115.78	118.90
5	1H	1799	G	O5'-P-OP1	-5.20	101.02	105.70
5	1H	2048	G	C4-C5-C6	5.20	121.92	118.80
5	1H	719	C	C6-N1-C2	-5.20	118.22	120.30
5	1H	1140	C	C2-N1-C1'	5.20	124.52	118.80
5	14	1271	G	C8-N9-C1'	-5.20	120.24	127.00
5	14	1777	U	O5'-P-OP2	5.20	116.94	110.70
5	1H	181	A	C4-C5-N7	-5.20	108.10	110.70
5	1H	210	C	C5-C6-N1	-5.20	118.40	121.00
5	1H	582	G	N3-C2-N2	5.20	123.54	119.90
5	1H	734	A	C4-C5-N7	5.20	113.30	110.70
5	1H	1761	C	C5-C4-N4	-5.20	116.56	120.20
1	13	775	G	N3-C2-N2	-5.20	116.26	119.90
1	13	1224	G	O5'-P-OP1	5.20	116.94	110.70
5	14	265	A	C8-N9-C4	-5.20	103.72	105.80
5	14	1408	C	N1-C2-O2	-5.20	115.78	118.90
5	14	1966	A	C2-N3-C4	5.20	113.20	110.60
5	14	2225	A	N9-C1'-C2'	-5.20	106.28	112.00
5	1H	737	C	OP1-P-O3'	-5.20	93.76	105.20
5	1H	825	C	C5-C6-N1	-5.20	118.40	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	831	G	C5-N7-C8	5.20	106.90	104.30
5	1H	961	C	O5'-P-OP2	5.20	116.94	110.70
5	1H	1373	A	N9-C1'-C2'	-5.20	106.28	112.00
1	13	1225	A	N9-C4-C5	-5.20	103.72	105.80
5	14	511	U	N3-C4-C5	-5.20	111.48	114.60
5	14	966	G	O5'-P-OP2	-5.20	101.02	105.70
5	14	2069	G	C5-C6-O6	-5.20	125.48	128.60
5	1H	213	A	C8-N9-C4	5.20	107.88	105.80
5	1H	963	U	OP1-P-OP2	-5.20	111.81	119.60
5	1H	1239	G	OP2-P-O3'	5.20	116.63	105.20
5	1H	2408	U	OP2-P-O3'	5.20	116.63	105.20
1	13	1359	C	N1-C2-O2	-5.20	115.78	118.90
5	14	858	U	O5'-P-OP2	-5.20	101.02	105.70
5	14	2426	A	C8-N9-C4	-5.20	103.72	105.80
5	14	2620	C	N1-C2-O2	-5.20	115.78	118.90
5	1H	877	U	C5-C6-N1	5.20	125.30	122.70
5	1H	1959	G	C8-N9-C4	-5.20	104.32	106.40
1	13	1305	G	C5-C6-O6	5.19	131.72	128.60
2	3L	11	C	C6-N1-C2	-5.19	118.22	120.30
5	14	241	A	OP1-P-OP2	5.19	127.39	119.60
5	14	1292	U	N1-C2-O2	-5.19	119.16	122.80
5	1H	1246	A	N1-C2-N3	5.19	131.90	129.30
5	1H	2601	C	N3-C2-O2	-5.19	118.26	121.90
1	1G	244	U	N1-C2-N3	-5.19	111.78	114.90
1	1G	332	G	C5-C6-O6	-5.19	125.48	128.60
1	1G	1077	G	C4-C5-N7	5.19	112.88	110.80
2	3L	48	C	C5-C4-N4	-5.19	116.56	120.20
5	14	379	G	N3-C4-N9	5.19	129.12	126.00
5	1H	508	G	P-O3'-C3'	5.19	125.93	119.70
5	1H	656	G	C6-N1-C2	-5.19	121.98	125.10
5	1H	1398	C	C6-N1-C2	5.19	122.38	120.30
1	13	1329	A	O5'-P-OP1	-5.19	101.03	105.70
1	13	1479	C	N3-C4-C5	5.19	123.98	121.90
5	14	574	C	C6-N1-C2	5.19	122.38	120.30
5	14	1019	U	N1-C2-O2	5.19	126.43	122.80
5	14	2623	G	O5'-P-OP1	5.19	116.93	110.70
5	1H	1027	A	C2-N3-C4	-5.19	108.00	110.60
5	1H	1579	A	N1-C6-N6	5.19	121.72	118.60
1	1G	1405	G	N3-C4-C5	-5.19	126.00	128.60
5	1H	778	G	N3-C2-N2	5.19	123.53	119.90
5	1H	2517	C	O4'-C1'-N1	5.19	112.35	108.20
5	14	204	A	C6-N1-C2	-5.19	115.49	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	592	G	OP2-P-O3'	5.19	116.61	105.20
5	14	786	C	O5'-P-OP2	-5.19	101.03	105.70
5	14	1828	G	C4-C5-C6	5.19	121.91	118.80
5	14	1955	U	N1-C2-N3	5.19	118.01	114.90
5	14	2075	U	C2-N3-C4	-5.19	123.89	127.00
5	14	2430	A	C5-N7-C8	-5.19	101.31	103.90
5	1H	266	G	O5'-P-OP2	-5.19	101.03	105.70
5	1H	1626	G	C5-C6-N1	-5.19	108.91	111.50
5	1H	2248	C	N3-C4-C5	5.19	123.97	121.90
5	1H	2638	G	C8-N9-C1'	-5.19	120.26	127.00
1	13	172	A	C8-N9-C4	-5.19	103.73	105.80
5	1H	1914	C	C5-C4-N4	5.19	123.83	120.20
1	13	960	U	C2-N1-C1'	5.18	123.92	117.70
1	13	974	A	O4'-C1'-N9	5.18	112.35	108.20
5	14	426	C	C6-N1-C2	-5.18	118.23	120.30
5	14	963	U	O5'-P-OP2	5.18	116.92	110.70
5	1H	485	C	N3-C2-O2	5.18	125.53	121.90
5	1H	1432	C	C6-N1-C2	5.18	122.37	120.30
5	1H	1993	U	C5-C4-O4	-5.18	122.79	125.90
5	1H	2081	C	OP2-P-O3'	5.18	116.61	105.20
27	16	75	G	C5-C6-O6	-5.18	125.49	128.60
1	13	1305	G	C4-N9-C1'	5.18	133.24	126.50
5	14	1036	G	C4-C5-N7	5.18	112.87	110.80
5	14	1136	G	N9-C4-C5	-5.18	103.33	105.40
5	14	1599	C	C6-N1-C2	-5.18	118.23	120.30
5	14	2276	G	N3-C2-N2	-5.18	116.27	119.90
5	14	2383	G	N3-C4-C5	-5.18	126.01	128.60
5	1H	202	U	C5-C4-O4	-5.18	122.79	125.90
5	1H	265	A	N3-C4-C5	5.18	130.43	126.80
5	1H	811	U	C6-N1-C2	-5.18	117.89	121.00
5	1H	1218	C	O5'-P-OP1	-5.18	101.03	105.70
5	1H	2358	G	C6-N1-C2	-5.18	121.99	125.10
5	1H	2560	C	C4-C5-C6	-5.18	114.81	117.40
5	1H	1704	G	O5'-P-OP1	5.18	116.92	110.70
5	1H	2260	C	C6-N1-C2	5.18	122.37	120.30
5	1H	2591	C	N3-C4-C5	5.18	123.97	121.90
5	1H	2592	G	C4-C5-C6	5.18	121.91	118.80
5	14	751	A	C6-N1-C2	-5.18	115.49	118.60
5	14	2517	C	C5-C4-N4	-5.18	116.57	120.20
5	1H	622	G	N7-C8-N9	-5.18	110.51	113.10
5	1H	767	U	N3-C4-C5	-5.18	111.49	114.60
5	1H	2848	G	O4'-C1'-N9	5.18	112.34	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1753	G	C4-C5-N7	5.18	112.87	110.80
5	14	2437	U	C5-C6-N1	-5.18	120.11	122.70
5	1H	647	G	C4-N9-C1'	5.18	133.23	126.50
5	1H	1397	U	C4-C5-C6	5.18	122.81	119.70
5	1H	1575	C	O5'-P-OP2	-5.18	101.04	105.70
5	1H	1728	G	OP2-P-O3'	5.18	116.59	105.20
1	13	1305	G	C6-C5-N7	-5.18	127.30	130.40
1	13	1498	U	C2'-C3'-O3'	5.18	121.98	113.70
5	14	581	C	N3-C4-N4	-5.18	114.38	118.00
5	14	1941	C	C6-N1-C2	-5.18	118.23	120.30
5	14	1998	G	C8-N9-C4	5.18	108.47	106.40
5	14	2584	U	N1-C2-O2	5.18	126.42	122.80
5	14	2607	G	C4-C5-N7	5.18	112.87	110.80
5	1H	131	G	O5'-P-OP2	5.18	116.91	110.70
5	1H	1669	A	C4-C5-C6	5.18	119.59	117.00
1	1G	264	U	N3-C4-O4	5.18	123.02	119.40
1	1G	758	G	C5-N7-C8	-5.18	101.71	104.30
5	14	29	U	N3-C2-O2	-5.17	118.58	122.20
5	14	617	G	N7-C8-N9	-5.17	110.51	113.10
5	14	1338	G	OP1-P-O3'	5.17	116.58	105.20
5	14	1613	G	P-O3'-C3'	5.17	125.91	119.70
5	14	2210	G	C4-N9-C1'	5.17	133.23	126.50
5	14	2765	A	C4-C5-C6	5.17	119.59	117.00
3	2K	11	A	N9-C4-C5	5.17	107.87	105.80
3	2K	60	A	OP1-P-OP2	5.17	127.36	119.60
5	1H	576	U	C2-N3-C4	-5.17	123.89	127.00
5	1H	1702	G	N9-C4-C5	-5.17	103.33	105.40
55	Q8	13	ARG	NE-CZ-NH2	5.17	122.89	120.30
1	1G	402	G	N7-C8-N9	-5.17	110.51	113.10
1	13	1242	C	N3-C4-N4	5.17	121.62	118.00
1	13	1252	A	O5'-P-OP2	-5.17	101.04	105.70
5	1H	509	C	O5'-P-OP2	-5.17	101.04	105.70
5	1H	1579	A	C6-C5-N7	-5.17	128.68	132.30
1	1G	363	A	OP1-P-O3'	5.17	116.58	105.20
1	13	878	G	C8-N9-C1'	-5.17	120.28	127.00
5	14	675	A	C4-C5-N7	5.17	113.29	110.70
5	14	752	A	N7-C8-N9	5.17	116.39	113.80
5	14	1395	A	O4'-C1'-N9	5.17	112.34	108.20
5	14	2000	G	N7-C8-N9	-5.17	110.51	113.10
5	1H	20	C	O5'-P-OP2	-5.17	101.05	105.70
5	1H	1131	G	O4'-C1'-N9	5.17	112.34	108.20
5	1H	1629	U	OP1-P-OP2	-5.17	111.84	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1931	U	C6-N1-C2	-5.17	117.90	121.00
5	1H	2525	G	N9-C4-C5	-5.17	103.33	105.40
5	1H	2600	A	O5'-P-OP1	-5.17	101.05	105.70
1	13	481	G	C6-C5-N7	-5.17	127.30	130.40
2	3L	76	A	C4-C5-N7	5.17	113.28	110.70
5	14	2499	C	N3-C4-N4	5.17	121.62	118.00
5	1H	1661	G	C8-N9-C4	5.17	108.47	106.40
5	1H	1982	C	OP1-P-OP2	5.17	127.36	119.60
5	1H	621	A	C5-C6-N1	-5.17	115.11	117.70
5	1H	1380	G	C8-N9-C1'	-5.17	120.28	127.00
1	13	925	G	N9-C4-C5	-5.17	103.33	105.40
5	14	787	U	N3-C4-O4	-5.17	115.78	119.40
5	14	1694	C	N1-C2-N3	-5.17	115.58	119.20
5	14	2428	G	C8-N9-C4	-5.17	104.33	106.40
5	14	2608	G	C2-N3-C4	5.17	114.48	111.90
5	1H	692	C	N3-C4-N4	5.17	121.62	118.00
5	1H	1247	A	C5-C6-N1	5.17	120.28	117.70
5	1H	1444(A)	A	O5'-P-OP1	-5.17	101.05	105.70
5	1H	2256	G	C5-C6-O6	5.17	131.70	128.60
5	1H	2367	G	N7-C8-N9	5.17	115.68	113.10
5	1H	2432	A	C8-N9-C4	5.17	107.87	105.80
5	1H	2444	G	N1-C6-O6	5.17	123.00	119.90
5	14	1661	G	N9-C4-C5	-5.17	103.33	105.40
5	14	2518	A	N3-C4-C5	5.17	130.42	126.80
5	1H	1009	A	N1-C6-N6	5.17	121.70	118.60
5	1H	1622	G	C6-N1-C2	-5.17	122.00	125.10
1	1G	234	C	N3-C2-O2	5.17	125.52	121.90
1	1G	1511	G	C5-C6-N1	-5.17	108.92	111.50
1	13	872	A	C6-N1-C2	5.16	121.70	118.60
5	14	1620	G	OP1-P-O3'	5.16	116.56	105.20
5	1H	263	C	O5'-P-OP2	-5.16	101.05	105.70
5	14	731	C	C5-C6-N1	-5.16	118.42	121.00
5	14	776	G	N1-C2-N2	5.16	120.85	116.20
5	1H	124	G	C2-N3-C4	-5.16	109.32	111.90
5	1H	1971	A	N1-C2-N3	-5.16	126.72	129.30
5	1H	2031	A	N1-C2-N3	-5.16	126.72	129.30
1	13	1126	U	N3-C2-O2	5.16	125.81	122.20
5	14	681	G	N1-C2-N2	-5.16	111.56	116.20
5	14	2228	G	C4-C5-N7	5.16	112.86	110.80
5	14	2378	A	N9-C4-C5	-5.16	103.74	105.80
5	1H	626	U	N1-C2-N3	5.16	118.00	114.90
5	1H	741	G	N1-C6-O6	5.16	123.00	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	773	U	C5-C6-N1	-5.16	120.12	122.70
5	1H	1363	C	N3-C4-C5	5.16	123.97	121.90
1	1G	64	G	P-O3'-C3'	5.16	125.89	119.70
1	13	817	C	C6-N1-C1'	-5.16	114.61	120.80
1	13	1500	A	N9-C4-C5	5.16	107.86	105.80
5	14	672	C	N3-C4-N4	-5.16	114.39	118.00
5	1H	503	A	O4'-C1'-N9	5.16	112.33	108.20
5	1H	2592	G	C6-C5-N7	-5.16	127.30	130.40
1	13	1246	C	C6-N1-C2	-5.16	118.24	120.30
5	1H	559	G	C5-C6-O6	-5.16	125.51	128.60
5	1H	1193	G	C5-C6-O6	-5.16	125.51	128.60
5	1H	2712	U	P-O3'-C3'	5.16	125.89	119.70
5	14	1695	G	N3-C4-N9	5.16	129.09	126.00
5	14	1973	G	N1-C2-N2	-5.16	111.56	116.20
5	14	2073	C	C5-C4-N4	-5.16	116.59	120.20
5	1H	228	A	N1-C6-N6	5.16	121.69	118.60
5	1H	1310	G	C5-C6-O6	-5.16	125.51	128.60
5	1H	2028	U	N1-C2-N3	5.16	117.99	114.90
5	1H	2373	G	N1-C6-O6	5.16	122.99	119.90
1	1G	831	U	C5-C6-N1	5.16	125.28	122.70
1	1G	1472	U	C5-C4-O4	-5.16	122.81	125.90
1	13	1298	C	C6-N1-C2	5.15	122.36	120.30
5	14	1336	A	C5-C6-N1	5.15	120.28	117.70
5	14	1686	C	C6-N1-C2	5.15	122.36	120.30
5	1H	2261	C	O5'-P-OP2	-5.15	101.06	105.70
1	13	231	G	C5-C6-N1	-5.15	108.92	111.50
1	13	1190	G	N1-C6-O6	5.15	122.99	119.90
5	14	406	G	C6-C5-N7	-5.15	127.31	130.40
5	14	2049	G	C5-C6-O6	-5.15	125.51	128.60
5	14	2380	C	OP2-P-O3'	5.15	116.53	105.20
5	1H	121	G	C8-N9-C1'	-5.15	120.30	127.00
5	1H	150	C	C5-C4-N4	5.15	123.81	120.20
5	1H	267	C	N3-C4-C5	5.15	123.96	121.90
5	1H	639	U	C5-C4-O4	5.15	128.99	125.90
5	1H	1203	G	N1-C6-O6	-5.15	116.81	119.90
5	1H	1786	A	C8-N9-C1'	-5.15	118.42	127.70
5	1H	1885	A	C8-N9-C4	5.15	107.86	105.80
5	1H	2641	G	N9-C4-C5	-5.15	103.34	105.40
27	1J	29	A	C5-N7-C8	-5.15	101.32	103.90
1	1G	353	A	C4-C5-N7	5.15	113.28	110.70
5	14	363(E)	U	C5-C6-N1	5.15	125.28	122.70
5	14	2337	G	O5'-P-OP2	5.15	116.88	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	751	A	O5'-P-OP1	-5.15	101.06	105.70
5	1H	1218	C	OP1-P-OP2	5.15	127.33	119.60
5	1H	1238	G	N9-C1'-C2'	-5.15	106.33	112.00
5	1H	1789	A	C6-N1-C2	-5.15	115.51	118.60
1	1G	932	C	C2-N1-C1'	5.15	124.47	118.80
5	14	697	C	C6-N1-C2	-5.15	118.24	120.30
5	1H	429	A	N1-C2-N3	5.15	131.88	129.30
1	1G	1380	U	C6-N1-C2	5.15	124.09	121.00
5	14	113	G	C8-N9-C4	5.15	108.46	106.40
5	1H	1888	G	N1-C2-N2	-5.15	111.57	116.20
5	1H	2281	C	O5'-P-OP2	-5.15	101.07	105.70
5	1H	2502	G	C4-C5-N7	-5.15	108.74	110.80
1	1G	493	G	C4-N9-C1'	5.15	133.19	126.50
1	1G	758	G	C4-C5-N7	5.15	112.86	110.80
1	1G	924	C	C4-C5-C6	5.15	119.97	117.40
5	14	121	G	C6-C5-N7	-5.15	127.31	130.40
5	14	870	A	C8-N9-C4	5.15	107.86	105.80
5	14	985	C	N3-C2-O2	-5.15	118.30	121.90
5	1H	391	G	C5-C6-N1	-5.15	108.93	111.50
5	1H	630	G	C8-N9-C4	5.15	108.46	106.40
1	13	576	G	C8-N9-C1'	-5.14	120.31	127.00
5	14	329	G	C5-C6-O6	-5.14	125.51	128.60
5	14	1332	G	C4-C5-N7	5.14	112.86	110.80
5	14	2256	G	O5'-P-OP2	-5.14	101.07	105.70
5	14	2326	C	N3-C2-O2	-5.14	118.30	121.90
5	14	2384	G	C8-N9-C1'	-5.14	120.31	127.00
5	14	2451	A	C6-N1-C2	-5.14	115.51	118.60
5	14	2542	A	C5-N7-C8	5.14	106.47	103.90
5	1H	539	G	C6-C5-N7	-5.14	127.31	130.40
5	1H	845	G	C4-C5-C6	-5.14	115.71	118.80
5	1H	862	G	N3-C4-C5	-5.14	126.03	128.60
5	1H	1391	U	C2-N1-C1'	5.14	123.87	117.70
5	1H	1572	A	N1-C6-N6	5.14	121.69	118.60
5	1H	2018	G	N1-C6-O6	5.14	122.99	119.90
44	F8	3	THR	C-N-CA	5.14	134.56	121.70
1	1G	563	A	C8-N9-C4	-5.14	103.74	105.80
5	14	1241	A	C2-N3-C4	-5.14	108.03	110.60
5	14	1334	G	O5'-P-OP2	5.14	116.87	110.70
5	14	2518	A	O5'-P-OP2	5.14	116.87	110.70
24	BI	104	LEU	CA-CB-CG	5.14	127.13	115.30
5	1H	586	A	C6-C5-N7	5.14	135.90	132.30
5	1H	956	G	C5-C6-N1	-5.14	108.93	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1133	U	C2-N3-C4	-5.14	123.91	127.00
5	1H	1133	U	N3-C4-C5	5.14	117.69	114.60
5	1H	1983	C	C2-N1-C1'	-5.14	113.14	118.80
1	13	358	U	N1-C2-O2	5.14	126.40	122.80
5	1H	772	C	N3-C4-C5	-5.14	119.84	121.90
1	1G	353	A	N1-C6-N6	5.14	121.68	118.60
5	14	845	G	C8-N9-C1'	-5.14	120.32	127.00
5	14	1401	G	C8-N9-C4	-5.14	104.34	106.40
5	14	1455	G	OP1-P-OP2	5.14	127.31	119.60
5	14	1908	C	N3-C4-C5	-5.14	119.84	121.90
5	14	2340	G	C8-N9-C4	5.14	108.46	106.40
5	14	2576	G	N1-C2-N2	5.14	120.83	116.20
5	1H	580	C	C6-N1-C2	-5.14	118.24	120.30
5	1H	1229	G	C6-N1-C2	-5.14	122.02	125.10
5	1H	1252	G	N1-C6-O6	-5.14	116.82	119.90
5	14	809	G	C5-N7-C8	5.14	106.87	104.30
5	1H	529	A	C5-N7-C8	-5.14	101.33	103.90
5	14	1786	A	C4-N9-C1'	5.14	135.54	126.30
5	14	2504	U	N1-C2-O2	5.14	126.39	122.80
5	14	2546	U	OP1-P-OP2	5.14	127.31	119.60
5	14	2734	A	N9-C4-C5	5.14	107.85	105.80
5	1H	689	A	C6-N1-C2	-5.14	115.52	118.60
5	1H	783	A	C6-N1-C2	5.14	121.68	118.60
5	1H	1902	C	C4-C5-C6	5.14	119.97	117.40
5	1H	1940	U	C4-C5-C6	5.14	122.78	119.70
5	1H	2026	C	C4-C5-C6	5.14	119.97	117.40
5	1H	2310	A	N7-C8-N9	5.14	116.37	113.80
5	1H	2323	G	C5-C6-O6	5.14	131.68	128.60
5	1H	2821	A	C6-N1-C2	-5.14	115.52	118.60
1	1G	884	U	N3-C4-C5	-5.14	111.52	114.60
1	1G	971	G	O5'-P-OP1	5.14	116.86	110.70
1	13	219	C	C6-N1-C2	-5.13	118.25	120.30
1	13	240	C	OP1-P-O3'	5.13	116.50	105.20
1	13	532	A	N1-C6-N6	5.13	121.68	118.60
5	14	837	C	O5'-P-OP1	-5.13	101.08	105.70
5	14	2463	C	N1-C2-O2	-5.13	115.82	118.90
3	2K	72	C	OP2-P-O3'	5.13	116.50	105.20
5	1H	931	G	C5-C6-N1	5.13	114.07	111.50
5	1H	1899	G	N7-C8-N9	5.13	115.67	113.10
5	1H	1984	G	N3-C4-N9	5.13	129.08	126.00
5	1H	2036	C	C6-N1-C2	-5.13	118.25	120.30
5	1H	2385	C	N1-C2-N3	5.13	122.79	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	818	G	C5-C6-N1	-5.13	108.93	111.50
5	14	1762	A	C2-N3-C4	-5.13	108.03	110.60
5	1H	226	G	N1-C6-O6	5.13	122.98	119.90
5	1H	731	C	N3-C4-C5	-5.13	119.85	121.90
1	1G	1442	G	C2-N3-C4	-5.13	109.33	111.90
5	14	258	G	O5'-P-OP1	5.13	116.86	110.70
5	14	540	G	N3-C4-N9	-5.13	122.92	126.00
5	14	808	G	C8-N9-C1'	-5.13	120.33	127.00
5	14	1280	G	N9-C1'-C2'	-5.13	106.36	112.00
5	1H	81	G	C4-C5-N7	-5.13	108.75	110.80
5	1H	1389	G	OP1-P-O3'	5.13	116.49	105.20
5	1H	1674	G	C5-C6-O6	-5.13	125.52	128.60
5	1H	1939	U	N3-C2-O2	5.13	125.79	122.20
5	1H	2217	G	N3-C4-N9	5.13	129.08	126.00
5	1H	2311	A	N7-C8-N9	5.13	116.37	113.80
5	1H	2562	U	C5-C6-N1	-5.13	120.13	122.70
27	16	104	A	OP2-P-O3'	5.13	116.49	105.20
1	1G	973	G	N9-C4-C5	-5.13	103.35	105.40
5	14	372	G	O4'-C1'-N9	5.13	112.30	108.20
5	14	579	G	N1-C2-N2	5.13	120.82	116.20
5	14	1196	C	C4-C5-C6	-5.13	114.83	117.40
1	13	312	C	OP2-P-O3'	5.13	116.48	105.20
1	13	690	G	C4-C5-C6	5.13	121.88	118.80
5	1H	941	A	C5-C6-N6	-5.13	119.60	123.70
5	1H	1193	G	N7-C8-N9	-5.13	110.54	113.10
5	1H	2059	A	N7-C8-N9	-5.13	111.24	113.80
5	1H	2310	A	C2-N3-C4	5.13	113.16	110.60
1	13	818	G	C4-C5-N7	-5.13	108.75	110.80
5	14	784	A	C2-N3-C4	-5.13	108.04	110.60
5	14	950	G	C5-C6-O6	5.13	131.68	128.60
5	14	2259	G	O5'-P-OP2	5.13	116.85	110.70
5	1H	88	G	OP1-P-O3'	5.13	116.48	105.20
5	1H	789	A	N3-C4-C5	5.13	130.39	126.80
5	1H	1381	G	O5'-P-OP1	-5.13	101.09	105.70
5	1H	1622	G	N1-C2-N3	5.13	126.98	123.90
5	1H	1624	G	N1-C2-N2	-5.13	111.59	116.20
5	1H	2379	G	N1-C6-O6	5.13	122.97	119.90
27	16	41	U	N3-C4-O4	-5.13	115.81	119.40
27	16	99	A	N1-C6-N6	-5.13	115.52	118.60
1	13	689	C	OP1-P-O3'	5.12	116.47	105.20
1	13	1389	C	O5'-P-OP2	5.12	116.85	110.70
1	13	1497	G	O5'-P-OP2	-5.12	101.09	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1529	G	N3-C4-C5	-5.12	126.04	128.60
5	14	748	G	N1-C6-O6	-5.12	116.83	119.90
5	14	1521	G	N7-C8-N9	5.12	115.66	113.10
5	14	1651	G	OP1-P-O3'	5.12	116.48	105.20
5	1H	2050	C	N3-C4-N4	5.12	121.59	118.00
27	1J	11	C	N3-C2-O2	-5.12	118.31	121.90
1	13	452	A	C8-N9-C4	5.12	107.85	105.80
1	13	1462	G	N1-C6-O6	-5.12	116.83	119.90
5	14	1321	A	N1-C6-N6	5.12	121.67	118.60
5	14	2217	G	C6-C5-N7	-5.12	127.33	130.40
5	14	2763	G	N1-C2-N2	-5.12	111.59	116.20
5	1H	66	C	N3-C4-C5	-5.12	119.85	121.90
5	1H	263	C	O5'-P-OP1	5.12	116.85	110.70
5	1H	795	C	C4-C5-C6	5.12	119.96	117.40
5	1H	990	A	N1-C6-N6	5.12	121.67	118.60
5	1H	1346	G	C5-C6-O6	5.12	131.67	128.60
5	14	57	C	OP2-P-O3'	5.12	116.47	105.20
5	1H	784	A	O4'-C1'-N9	5.12	112.30	108.20
5	1H	923	C	N1-C2-O2	-5.12	115.83	118.90
1	1G	509	A	P-O3'-C3'	5.12	125.85	119.70
1	1G	566	G	O4'-C1'-N9	-5.12	104.10	108.20
5	14	1286	A	N9-C4-C5	5.12	107.85	105.80
5	1H	2318	G	C5-N7-C8	-5.12	101.74	104.30
1	13	1509	C	O5'-P-OP1	-5.12	101.09	105.70
5	14	1833	U	N3-C2-O2	-5.12	118.62	122.20
5	1H	461	C	C4-C5-C6	5.12	119.96	117.40
5	1H	765	G	O5'-P-OP1	-5.12	101.09	105.70
5	1H	775	G	N1-C2-N2	-5.12	111.59	116.20
1	1G	394	G	C8-N9-C4	-5.12	104.35	106.40
1	13	582	U	N3-C2-O2	-5.12	118.62	122.20
5	14	2346	A	C5-N7-C8	-5.12	101.34	103.90
5	1H	813	U	N3-C2-O2	5.12	125.78	122.20
1	13	129	U	C5-C4-O4	5.12	128.97	125.90
1	13	991	U	C2-N1-C1'	5.12	123.84	117.70
5	14	311	A	N9-C4-C5	-5.12	103.75	105.80
5	14	768	G	O5'-P-OP2	-5.12	101.10	105.70
5	14	1726	G	N3-C4-C5	-5.12	126.04	128.60
5	14	2012	G	C8-N9-C4	5.12	108.45	106.40
5	14	2457	U	N3-C2-O2	-5.12	118.62	122.20
5	1H	271(B)	G	N1-C2-N2	-5.12	111.60	116.20
5	1H	1300	U	C2-N3-C4	-5.12	123.93	127.00
1	1G	377	G	C6-C5-N7	-5.12	127.33	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	808	C	C5-C6-N1	-5.11	118.44	121.00
1	13	956	U	C2-N3-C4	5.11	130.07	127.00
5	14	500	G	OP1-P-OP2	5.11	127.27	119.60
5	14	2871	C	O5'-P-OP2	-5.11	101.10	105.70
5	1H	203	C	C2-N3-C4	-5.11	117.34	119.90
5	1H	926	A	OP1-P-O3'	5.11	116.45	105.20
1	1G	912	C	C5-C6-N1	-5.11	118.44	121.00
1	13	412	A	P-O3'-C3'	5.11	125.83	119.70
1	13	781	A	C5-C6-N6	-5.11	119.61	123.70
5	14	2608	G	N3-C4-C5	-5.11	126.04	128.60
5	1H	391	G	N7-C8-N9	5.11	115.66	113.10
5	1H	1825	A	N3-C4-N9	-5.11	123.31	127.40
5	1H	124	G	C6-C5-N7	-5.11	127.33	130.40
5	1H	250	G	N7-C8-N9	5.11	115.66	113.10
5	1H	2351	G	N3-C4-N9	5.11	129.07	126.00
5	1H	2707	G	C5-C6-N1	5.11	114.06	111.50
1	1G	1530	G	N3-C4-N9	5.11	129.07	126.00
5	14	830	G	OP1-P-O3'	5.11	116.44	105.20
5	14	2032	G	N1-C6-O6	5.11	122.97	119.90
5	14	2307	G	OP2-P-O3'	5.11	116.44	105.20
5	14	2840	C	C4-C5-C6	5.11	119.95	117.40
5	1H	622	G	N1-C6-O6	-5.11	116.83	119.90
27	16	115	G	C5-N7-C8	-5.11	101.75	104.30
30	31	46	ARG	NE-CZ-NH1	-5.11	117.75	120.30
1	13	191(E)	G	N3-C4-N9	5.11	129.06	126.00
5	14	1643	G	O5'-P-OP1	-5.11	101.10	105.70
5	14	1805	U	C4-C5-C6	5.11	122.76	119.70
5	14	2431	U	C6-N1-C2	5.11	124.06	121.00
5	1H	845	G	C5'-C4'-O4'	-5.11	102.97	109.10
1	1G	697	U	C6-N1-C2	5.11	124.06	121.00
1	1G	897	C	C2-N1-C1'	-5.11	113.18	118.80
5	14	808	G	N3-C4-N9	5.11	129.06	126.00
5	14	1970	A	O5'-P-OP2	-5.11	101.10	105.70
5	14	2070	G	OP1-P-OP2	5.11	127.26	119.60
5	1H	305	U	O5'-P-OP1	-5.11	101.11	105.70
5	1H	703	U	N3-C4-O4	-5.11	115.83	119.40
5	1H	972	G	C4-C5-N7	5.11	112.84	110.80
1	1G	449	C	N3-C4-N4	-5.11	114.43	118.00
1	13	1177	G	C8-N9-C4	5.10	108.44	106.40
5	14	1256	G	N1-C6-O6	5.10	122.96	119.90
5	1H	803	U	O5'-P-OP1	5.10	116.83	110.70
5	1H	1272	A	C5-N7-C8	-5.10	101.35	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	975	A	O4'-C1'-N9	-5.10	104.12	108.20
1	13	748	C	P-O3'-C3'	5.10	125.82	119.70
5	14	615	G	C6-C5-N7	5.10	133.46	130.40
5	14	681	G	N3-C4-N9	5.10	129.06	126.00
5	14	1641	A	N1-C6-N6	-5.10	115.54	118.60
5	14	2062	A	C5-C6-N6	-5.10	119.62	123.70
3	2K	10	G	O5'-P-OP1	-5.10	101.11	105.70
3	2K	74	A	N1-C6-N6	-5.10	115.54	118.60
5	1H	795	C	OP1-P-OP2	5.10	127.25	119.60
5	1H	961	C	C6-N1-C2	-5.10	118.26	120.30
1	1G	135	C	N3-C2-O2	5.10	125.47	121.90
1	1G	329	A	C4-C5-C6	5.10	119.55	117.00
1	13	281	G	N3-C4-C5	-5.10	126.05	128.60
5	14	1776	G	N1-C2-N2	-5.10	111.61	116.20
26	1K	38	A	C5-C6-N6	-5.10	119.62	123.70
5	1H	178	G	C5-C6-N1	5.10	114.05	111.50
5	1H	848	G	C4-N9-C1'	5.10	133.13	126.50
5	1H	1778	U	N1-C2-O2	5.10	126.37	122.80
5	1H	2281	C	C5-C4-N4	-5.10	116.63	120.20
5	1H	2575	C	C5-C4-N4	5.10	123.77	120.20
5	14	582	G	N1-C6-O6	5.10	122.96	119.90
5	14	1566	A	C4-C5-C6	-5.10	114.45	117.00
5	14	1802	A	C4-N9-C1'	5.10	135.48	126.30
5	14	2604	U	C5-C6-N1	-5.10	120.15	122.70
3	2K	77	A	C5-C6-N6	-5.10	119.62	123.70
5	1H	818	G	N9-C4-C5	5.10	107.44	105.40
5	1H	1888	G	C4-C5-N7	5.10	112.84	110.80
5	1H	2517	C	O5'-P-OP1	-5.10	101.11	105.70
27	16	108	C	O4'-C1'-N1	5.10	112.28	108.20
1	13	765	G	N3-C4-N9	5.10	129.06	126.00
1	13	1306	A	O5'-P-OP2	-5.10	101.11	105.70
5	14	273(A)	G	C5-C6-O6	-5.10	125.54	128.60
5	14	633	A	N1-C6-N6	5.10	121.66	118.60
5	14	1785	A	C4-C5-C6	5.10	119.55	117.00
5	14	1840	G	N1-C6-O6	5.10	122.96	119.90
5	1H	856	C	N1-C2-O2	-5.10	115.84	118.90
5	1H	1156	A	O5'-P-OP2	-5.10	101.11	105.70
5	1H	2597	G	OP2-P-O3'	5.10	116.41	105.20
1	13	1525	G	OP2-P-O3'	5.10	116.41	105.20
5	14	333	G	C6-C5-N7	-5.10	127.34	130.40
5	14	458	G	C5-C6-N1	5.10	114.05	111.50
5	1H	1284	A	C5-N7-C8	-5.10	101.35	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1330	C	C6-N1-C2	-5.10	118.26	120.30
5	14	1257	C	OP2-P-O3'	5.09	116.41	105.20
5	1H	693	C	C4-C5-C6	5.09	119.95	117.40
5	1H	1022	G	N3-C2-N2	-5.09	116.33	119.90
5	1H	1382	G	OP1-P-O3'	-5.09	93.99	105.20
5	1H	2287	A	C6-C5-N7	-5.09	128.73	132.30
1	1G	1498	U	C6-N1-C2	-5.09	117.94	121.00
5	14	1781	C	N3-C4-C5	5.09	123.94	121.90
5	1H	1969	A	C5-N7-C8	5.09	106.45	103.90
1	13	887	G	N3-C4-N9	5.09	129.06	126.00
5	14	1844	C	OP1-P-OP2	-5.09	111.96	119.60
5	1H	469	G	C5-C6-N1	5.09	114.05	111.50
5	1H	668	G	OP1-P-O3'	5.09	116.40	105.20
5	1H	723	G	C8-N9-C4	5.09	108.44	106.40
5	1H	865	C	N1-C2-N3	-5.09	115.64	119.20
5	1H	1339	G	O5'-P-OP2	5.09	116.81	110.70
5	1H	1542	G	N1-C6-O6	-5.09	116.84	119.90
5	1H	2389	G	P-O3'-C3'	5.09	125.81	119.70
5	1H	2532	G	C5-C6-N1	-5.09	108.95	111.50
5	1H	2778	A	O5'-P-OP1	5.09	116.81	110.70
1	1G	354	G	N7-C8-N9	5.09	115.65	113.10
1	13	294	U	OP2-P-O3'	5.09	116.39	105.20
5	14	40	C	N3-C4-C5	-5.09	119.86	121.90
5	14	576	U	OP2-P-O3'	5.09	116.40	105.20
5	14	691	C	N3-C4-C5	-5.09	119.86	121.90
5	14	1286	A	C8-N9-C4	-5.09	103.76	105.80
5	14	2256	G	N3-C4-N9	5.09	129.05	126.00
5	14	2430	A	C5-C6-N6	-5.09	119.63	123.70
5	1H	259	G	C5-N7-C8	-5.09	101.76	104.30
5	1H	522	G	C4-C5-N7	5.09	112.83	110.80
5	1H	1241	A	C8-N9-C4	-5.09	103.76	105.80
5	1H	1800	C	C5-C4-N4	5.09	123.76	120.20
5	1H	2367	G	C5-N7-C8	-5.09	101.76	104.30
5	14	62	C	O5'-P-OP2	-5.09	101.12	105.70
5	14	204	A	C6-C5-N7	-5.09	128.74	132.30
5	14	2552	U	C5-C4-O4	-5.09	122.85	125.90
5	1H	209	C	C6-N1-C2	5.09	122.33	120.30
5	1H	290	G	N3-C4-C5	-5.09	126.06	128.60
5	1H	657	U	OP1-P-OP2	5.09	127.23	119.60
5	1H	1545(A)	A	C4-C5-C6	-5.09	114.46	117.00
5	1H	1997	G	N1-C2-N3	5.09	126.95	123.90
1	1G	687	A	C8-N9-C4	-5.09	103.77	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	1487	G	N1-C6-O6	5.09	122.95	119.90
1	13	21	G	N3-C4-N9	5.09	129.05	126.00
1	13	1504	G	C5'-C4'-O4'	-5.09	103.00	109.10
5	14	2374	C	C2-N3-C4	-5.09	117.36	119.90
5	1H	468	G	N1-C6-O6	5.09	122.95	119.90
5	1H	532	A	O4'-C1'-N9	5.09	112.27	108.20
5	1H	792	G	N3-C4-N9	5.09	129.05	126.00
5	1H	2449	U	OP1-P-OP2	5.09	127.23	119.60
1	1G	7	G	C8-N9-C4	5.09	108.44	106.40
1	1G	306	G	N3-C4-C5	5.09	131.14	128.60
1	1G	493	G	C6-C5-N7	-5.09	127.35	130.40
1	13	1510	U	N3-C2-O2	5.08	125.76	122.20
5	14	1281	G	N3-C4-C5	5.08	131.14	128.60
5	1H	831	G	C4-C5-N7	-5.08	108.77	110.80
5	1H	1804	C	C6-N1-C2	5.08	122.33	120.30
5	1H	2017	U	C6-N1-C2	-5.08	117.95	121.00
1	1G	645	C	C6-N1-C2	-5.08	118.27	120.30
1	1G	730	G	O5'-P-OP1	-5.08	101.12	105.70
1	13	724	G	OP1-P-O3'	5.08	116.38	105.20
1	13	891	U	OP2-P-O3'	5.08	116.39	105.20
1	13	1416	G	N1-C6-O6	-5.08	116.85	119.90
5	14	457	A	O5'-P-OP2	-5.08	101.12	105.70
5	14	1617	C	N3-C4-C5	-5.08	119.87	121.90
5	14	2265	U	C4-C5-C6	5.08	122.75	119.70
5	14	2762	G	C6-C5-N7	-5.08	127.35	130.40
5	1H	54	G	OP1-P-O3'	5.08	116.38	105.20
5	1H	837	C	C5-C4-N4	-5.08	116.64	120.20
5	1H	1627	G	C5-C6-O6	5.08	131.65	128.60
1	1G	309	G	N1-C6-O6	5.08	122.95	119.90
1	1G	1139	G	C4-N9-C1'	-5.08	119.89	126.50
1	13	1262	C	O5'-P-OP2	-5.08	101.13	105.70
5	14	638	G	C8-N9-C4	-5.08	104.37	106.40
5	14	741	G	N3-C2-N2	-5.08	116.34	119.90
5	14	849	A	OP1-P-O3'	5.08	116.38	105.20
5	14	2048	G	C5-N7-C8	5.08	106.84	104.30
16	3I	86	ARG	NE-CZ-NH1	-5.08	117.76	120.30
5	1H	870	A	C8-N9-C4	5.08	107.83	105.80
28	11	122	ASP	CB-CG-OD2	5.08	122.87	118.30
5	14	676	A	C5-C6-N6	-5.08	119.64	123.70
5	14	1633	G	N9-C4-C5	5.08	107.43	105.40
5	14	2075	U	N3-C4-O4	-5.08	115.84	119.40
5	1H	2689	U	C2-N1-C1'	-5.08	111.60	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1277	G	C4-N9-C1'	-5.08	119.90	126.50
5	14	2092	U	N1-C2-N3	5.08	117.95	114.90
5	1H	708	C	C5-C6-N1	-5.08	118.46	121.00
5	1H	728	G	C8-N9-C1'	-5.08	120.40	127.00
5	1H	1427	A	N9-C4-C5	5.08	107.83	105.80
5	1H	1443	G	N1-C2-N3	5.08	126.95	123.90
5	1H	1700	A	OP1-P-OP2	5.08	127.22	119.60
1	1G	448	A	N9-C4-C5	-5.08	103.77	105.80
5	14	322	A	N9-C4-C5	5.08	107.83	105.80
5	14	2325	G	OP1-P-OP2	5.08	127.22	119.60
5	1H	62	C	OP2-P-O3'	5.08	116.37	105.20
1	13	1061	G	N3-C2-N2	-5.08	116.35	119.90
1	13	1191	A	N9-C4-C5	-5.08	103.77	105.80
5	14	1355	G	N1-C6-O6	-5.08	116.86	119.90
5	14	1844	C	O5'-P-OP2	5.08	116.79	110.70
5	1H	121	G	C5-C6-N1	5.08	114.04	111.50
5	1H	464	U	C5-C6-N1	-5.08	120.16	122.70
5	1H	1241	A	C6-C5-N7	-5.08	128.75	132.30
5	1H	1288	U	N1-C2-O2	-5.08	119.25	122.80
5	1H	1933	G	OP1-P-O3'	5.08	116.36	105.20
5	1H	2689	U	N1-C2-N3	5.08	117.94	114.90
5	1H	2815	C	OP1-P-OP2	5.08	127.21	119.60
1	1G	28	G	C8-N9-C4	-5.08	104.37	106.40
1	13	529	G	C4-C5-N7	5.07	112.83	110.80
5	14	363(C)	G	N3-C4-C5	5.07	131.14	128.60
5	14	678	C	OP1-P-O3'	5.07	116.36	105.20
5	14	1395	A	O5'-P-OP2	5.07	116.79	110.70
5	14	2072	G	N1-C6-O6	5.07	122.94	119.90
5	1H	110	G	C5-N7-C8	5.07	106.84	104.30
5	1H	588	U	N3-C4-C5	5.07	117.64	114.60
5	1H	1214	A	N7-C8-N9	-5.07	111.26	113.80
5	1H	1849	G	O5'-P-OP2	5.07	116.79	110.70
5	1H	2611	U	OP2-P-O3'	5.07	116.36	105.20
1	1G	180	U	C5-C6-N1	5.07	125.24	122.70
1	1G	227	G	N7-C8-N9	-5.07	110.56	113.10
1	1G	973	G	N1-C6-O6	5.07	122.94	119.90
1	13	500	G	N9-C4-C5	-5.07	103.37	105.40
5	14	2541	A	OP2-P-O3'	5.07	116.36	105.20
1	13	326	G	C5-C6-O6	5.07	131.64	128.60
3	2L	40	C	N3-C4-C5	-5.07	119.87	121.90
5	14	31	C	C6-N1-C2	-5.07	118.27	120.30
5	14	613	U	N3-C4-O4	-5.07	115.85	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1906	G	C4-C5-N7	5.07	112.83	110.80
5	1H	127	A	C2-N3-C4	-5.07	108.06	110.60
5	1H	931	G	C6-N1-C2	-5.07	122.06	125.10
5	1H	962	G	C8-N9-C4	5.07	108.43	106.40
5	1H	2240	C	OP1-P-O3'	5.07	116.36	105.20
1	1G	509	A	C2'-C3'-O3'	5.07	121.81	113.70
1	1G	924	C	N1-C2-N3	5.07	122.75	119.20
5	14	775	G	C6-C5-N7	-5.07	127.36	130.40
5	1H	344	G	N3-C4-C5	-5.07	126.06	128.60
5	1H	1156	A	C5-C6-N1	5.07	120.23	117.70
27	16	73	A	N1-C6-N6	-5.07	115.56	118.60
1	1G	1364	U	C2-N1-C1'	-5.07	111.62	117.70
1	13	527	G	N7-C8-N9	5.07	115.63	113.10
5	14	1296	G	N1-C6-O6	-5.07	116.86	119.90
5	14	1372	U	C6-N1-C2	-5.07	117.96	121.00
5	14	1572	A	C6-C5-N7	-5.07	128.75	132.30
5	14	1643	G	OP1-P-O3'	-5.07	94.05	105.20
5	14	2581	G	OP1-P-OP2	5.07	127.20	119.60
5	1H	1264	G	C8-N9-C4	-5.07	104.37	106.40
5	1H	1377	G	C4-C5-N7	-5.07	108.77	110.80
1	1G	73	G	C5-C6-N1	-5.07	108.97	111.50
1	1G	237	C	N3-C2-O2	-5.07	118.35	121.90
1	1G	374	A	N9-C4-C5	-5.07	103.77	105.80
1	1G	1224	G	O5'-P-OP1	5.07	116.78	110.70
1	13	529	G	N9-C4-C5	-5.07	103.37	105.40
1	13	864	A	C8-N9-C4	-5.07	103.77	105.80
1	13	1069	C	O5'-P-OP1	-5.07	101.14	105.70
5	14	952	G	OP1-P-O3'	5.07	116.34	105.20
5	14	1894	C	O5'-P-OP2	-5.07	101.14	105.70
5	1H	657	U	OP1-P-O3'	-5.07	94.05	105.20
5	1H	1124	C	N1-C2-O2	-5.07	115.86	118.90
5	1H	2060	A	C4-C5-C6	-5.07	114.47	117.00
5	1H	2551	C	C5-C6-N1	-5.07	118.47	121.00
1	13	701	C	C6-N1-C2	-5.06	118.28	120.30
5	14	1678	G	C5-C6-N1	-5.06	108.97	111.50
5	1H	511	U	C5-C6-N1	5.06	125.23	122.70
5	1H	657	U	C5-C6-N1	-5.06	120.17	122.70
5	1H	1152	C	N1-C2-O2	-5.06	115.86	118.90
5	1H	1347	G	OP1-P-O3'	5.06	116.34	105.20
5	1H	1593	G	OP1-P-O3'	5.06	116.34	105.20
5	1H	1993	U	N3-C2-O2	5.06	125.75	122.20
5	1H	2672	G	N1-C2-N3	5.06	126.94	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	13	1299	A	C6-C5-N7	-5.06	128.76	132.30
1	13	1327	C	C6-N1-C2	5.06	122.33	120.30
5	14	574	C	OP1-P-OP2	5.06	127.19	119.60
5	14	770	G	OP1-P-OP2	-5.06	112.01	119.60
5	14	830	G	C4-C5-N7	5.06	112.83	110.80
5	14	1369	G	OP1-P-OP2	5.06	127.19	119.60
5	1H	818	G	N3-C4-N9	-5.06	122.96	126.00
5	1H	909	A	C2-N3-C4	5.06	113.13	110.60
27	1J	22	U	C2-N1-C1'	5.06	123.77	117.70
1	1G	603	U	C6-N1-C2	-5.06	117.96	121.00
1	13	305	G	C8-N9-C4	5.06	108.42	106.40
5	14	1377	G	N3-C4-C5	-5.06	126.07	128.60
5	14	1382	G	OP2-P-O3'	5.06	116.33	105.20
5	1H	582	G	N1-C2-N2	-5.06	111.64	116.20
5	1H	645	C	N3-C2-O2	-5.06	118.36	121.90
5	1H	751	A	C5-N7-C8	-5.06	101.37	103.90
5	1H	2346	A	P-O3'-C3'	5.06	125.77	119.70
5	14	866	A	N9-C4-C5	-5.06	103.78	105.80
5	14	1223	C	N1-C2-O2	-5.06	115.86	118.90
5	1H	58	G	N3-C2-N2	-5.06	116.36	119.90
5	1H	1227	A	N1-C2-N3	-5.06	126.77	129.30
5	1H	2271	G	OP2-P-O3'	5.06	116.33	105.20
5	1H	2318	G	N9-C4-C5	5.06	107.42	105.40
1	13	57	G	N3-C4-N9	5.06	129.03	126.00
1	13	112	G	C8-N9-C4	-5.06	104.38	106.40
5	14	1787	A	C2-N3-C4	-5.06	108.07	110.60
5	1H	624	C	C5-C4-N4	-5.06	116.66	120.20
5	1H	1142(A)	A	C5-C6-N1	-5.06	115.17	117.70
5	1H	1309	G	N7-C8-N9	-5.06	110.57	113.10
5	1H	1775	U	O5'-P-OP2	-5.06	101.15	105.70
5	1H	2560	C	C5-C6-N1	5.06	123.53	121.00
1	1G	68	G	C5-C6-O6	-5.06	125.56	128.60
1	13	503	C	C2-N1-C1'	5.06	124.36	118.80
5	14	2014	A	OP1-P-OP2	5.06	127.18	119.60
5	1H	217	G	N9-C4-C5	5.06	107.42	105.40
5	1H	700	G	N9-C1'-C2'	-5.06	106.44	112.00
5	1H	2599	G	OP2-P-O3'	5.06	116.32	105.20
1	13	390	C	N1-C2-O2	-5.05	115.87	118.90
5	14	671	C	N1-C2-N3	5.05	122.74	119.20
5	14	866	A	C8-N9-C1'	-5.05	118.60	127.70
5	14	1326	U	C5-C4-O4	5.05	128.93	125.90
5	14	1658	C	N3-C4-C5	-5.05	119.88	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1823	G	N3-C4-C5	5.05	131.13	128.60
5	14	2544	G	C4-C5-N7	5.05	112.82	110.80
5	1H	673	C	N1-C2-O2	-5.05	115.87	118.90
5	1H	1189	A	C4-C5-N7	5.05	113.23	110.70
5	1H	1367	A	C6-C5-N7	-5.05	128.76	132.30
5	1H	1618	A	O5'-P-OP1	-5.05	101.15	105.70
5	1H	1920	C	N1-C2-O2	5.05	121.93	118.90
1	1G	45	U	C6-N1-C2	5.05	124.03	121.00
1	1G	332	G	O5'-P-OP1	-5.05	101.15	105.70
1	1G	1453	G	O5'-P-OP1	-5.05	101.15	105.70
5	14	2490	G	C5-N7-C8	-5.05	101.77	104.30
5	14	2501	C	P-O3'-C3'	5.05	125.76	119.70
5	1H	1570	A	C2-N3-C4	-5.05	108.07	110.60
27	16	8	U	O5'-P-OP2	-5.05	101.15	105.70
1	13	814	A	N7-C8-N9	-5.05	111.27	113.80
5	14	363(F)	A	C8-N9-C4	5.05	107.82	105.80
5	14	749	C	N3-C2-O2	-5.05	118.36	121.90
5	14	1789	A	OP1-P-O3'	5.05	116.31	105.20
5	14	1948	G	O5'-P-OP2	5.05	116.76	110.70
5	14	1971	A	OP1-P-O3'	5.05	116.31	105.20
5	1H	262	A	C4-C5-N7	5.05	113.23	110.70
5	1H	530	G	C5-C6-O6	5.05	131.63	128.60
5	1H	602	G	N3-C4-N9	5.05	129.03	126.00
5	1H	768	G	C5-C6-N1	5.05	114.03	111.50
5	1H	970	C	C5-C6-N1	-5.05	118.47	121.00
5	1H	1857	G	N1-C6-O6	5.05	122.93	119.90
5	14	586	A	OP1-P-O3'	5.05	116.31	105.20
5	14	1024	G	C5-C6-N1	-5.05	108.97	111.50
5	14	1573	G	O5'-P-OP1	5.05	116.76	110.70
5	14	1831	G	C8-N9-C1'	-5.05	120.44	127.00
5	1H	1231	G	C5-C6-O6	-5.05	125.57	128.60
5	1H	1755	A	O5'-P-OP2	5.05	116.76	110.70
5	1H	2390	U	C2-N1-C1'	5.05	123.76	117.70
27	1J	102	G	C4-C5-N7	-5.05	108.78	110.80
1	1G	780	A	OP1-P-O3'	5.05	116.31	105.20
5	14	2592	G	C4-N9-C1'	5.05	133.06	126.50
5	1H	67	U	OP1-P-O3'	5.05	116.31	105.20
5	1H	376	C	N3-C2-O2	-5.05	118.37	121.90
1	1G	423	G	C5-C6-O6	-5.05	125.57	128.60
2	3L	76	A	C6-C5-N7	-5.05	128.77	132.30
5	14	1032	A	N1-C2-N3	-5.05	126.78	129.30
5	14	1248	G	N9-C4-C5	-5.05	103.38	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	2351	G	N3-C4-N9	5.05	129.03	126.00
5	14	2499	C	C6-N1-C1'	-5.05	114.75	120.80
18	5I	44	LEU	CA-CB-CG	5.05	126.91	115.30
5	1H	589	C	N1-C2-N3	5.05	122.73	119.20
5	1H	664	C	N1-C2-N3	5.05	122.73	119.20
5	1H	1317	A	N7-C8-N9	5.05	116.32	113.80
5	1H	2009	G	C5-C6-O6	-5.05	125.57	128.60
5	1H	2329	G	C2-N3-C4	-5.05	109.38	111.90
1	1G	1502	A	N7-C8-N9	5.05	116.32	113.80
1	13	714	G	OP2-P-O3'	5.04	116.30	105.20
5	14	593	G	N7-C8-N9	-5.04	110.58	113.10
5	1H	245	G	N7-C8-N9	5.04	115.62	113.10
5	1H	997	G	C8-N9-C4	5.04	108.42	106.40
5	1H	2602	A	OP1-P-O3'	5.04	116.30	105.20
5	14	593	G	C8-N9-C4	5.04	108.42	106.40
5	14	788	A	N9-C4-C5	-5.04	103.78	105.80
5	14	991	C	C6-N1-C2	-5.04	118.28	120.30
5	14	1302	A	OP2-P-O3'	5.04	116.30	105.20
5	1H	250	G	C8-N9-C4	-5.04	104.38	106.40
5	1H	508	G	C4'-C3'-C2'	-5.04	97.56	102.60
5	1H	532	A	C5-C6-N6	-5.04	119.67	123.70
5	1H	1364	G	N3-C4-C5	-5.04	126.08	128.60
5	1H	1596	A	OP2-P-O3'	5.04	116.29	105.20
1	13	1305	G	C5-C6-N1	-5.04	108.98	111.50
3	2L	4	G	C8-N9-C4	5.04	108.42	106.40
5	14	693	C	N3-C4-N4	-5.04	114.47	118.00
5	14	985	C	N1-C2-O2	5.04	121.92	118.90
5	14	986	C	OP2-P-O3'	-5.04	94.11	105.20
5	14	1828	G	C5-C6-N1	-5.04	108.98	111.50
5	14	2334	G	N7-C8-N9	-5.04	110.58	113.10
5	14	2463	C	C2-N1-C1'	-5.04	113.25	118.80
5	1H	381	G	N7-C8-N9	-5.04	110.58	113.10
5	1H	920	G	N9-C4-C5	-5.04	103.38	105.40
5	1H	2027	G	C5-N7-C8	5.04	106.82	104.30
5	1H	2071	A	OP1-P-OP2	-5.04	112.04	119.60
30	31	197	ASP	N-CA-C	-5.04	97.39	111.00
1	1G	674	G	C5-C6-O6	-5.04	125.58	128.60
1	1G	1297	C	OP2-P-O3'	5.04	116.29	105.20
1	13	1297	C	N1-C2-O2	5.04	121.92	118.90
5	14	1766	U	C4-C5-C6	5.04	122.72	119.70
5	14	2623	G	C8-N9-C4	-5.04	104.38	106.40
5	1H	677	A	O5'-P-OP1	-5.04	101.16	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	816	C	C5-C6-N1	5.04	123.52	121.00
5	1H	1008	C	N3-C4-C5	5.04	123.92	121.90
5	1H	1805	U	C4-C5-C6	5.04	122.72	119.70
5	1H	1854	A	N9-C4-C5	5.04	107.82	105.80
1	13	231	G	N3-C2-N2	-5.04	116.37	119.90
1	13	961	U	N3-C4-C5	5.04	117.62	114.60
5	14	939	G	C4-C5-C6	5.04	121.82	118.80
5	14	2424	C	OP1-P-OP2	5.04	127.16	119.60
5	14	2675	A	N3-C4-C5	5.04	130.33	126.80
5	1H	211	A	N9-C4-C5	-5.04	103.78	105.80
5	1H	271(A)	C	N1-C2-O2	5.04	121.92	118.90
5	1H	380	U	C6-N1-C2	-5.04	117.98	121.00
5	1H	778	G	O5'-P-OP2	-5.04	101.16	105.70
5	1H	1906	G	O4'-C1'-N9	5.04	112.23	108.20
5	1H	2012	G	N3-C4-N9	5.04	129.02	126.00
5	1H	2448	A	C4-C5-N7	5.04	113.22	110.70
27	1J	61	G	N1-C6-O6	5.04	122.92	119.90
1	1G	1234	C	N3-C2-O2	-5.04	118.37	121.90
1	13	120	A	O4'-C1'-N9	-5.04	104.17	108.20
5	14	1801	G	N3-C4-N9	5.04	129.02	126.00
5	14	2002	G	N1-C6-O6	-5.04	116.88	119.90
5	14	2565	A	C8-N9-C4	5.04	107.81	105.80
5	1H	1704	G	N1-C6-O6	5.04	122.92	119.90
5	1H	1835	G	N3-C4-N9	5.04	129.02	126.00
5	1H	1938	A	OP1-P-OP2	5.04	127.16	119.60
5	1H	2239	G	N3-C2-N2	5.04	123.43	119.90
1	1G	341	C	C6-N1-C2	5.04	122.31	120.30
1	13	674	G	OP1-P-O3'	5.04	116.28	105.20
5	1H	226	G	C6-C5-N7	-5.04	127.38	130.40
5	1H	530	G	C5-N7-C8	-5.04	101.78	104.30
5	1H	536	A	O5'-P-OP1	5.04	116.74	110.70
5	1H	1275	A	N1-C6-N6	5.04	121.62	118.60
5	1H	2367	G	N3-C4-N9	-5.04	122.98	126.00
1	1G	623	C	C6-N1-C2	-5.04	118.29	120.30
1	1G	905	U	C4-C5-C6	5.04	122.72	119.70
5	14	18	C	N3-C4-N4	-5.03	114.48	118.00
5	14	783	A	O5'-P-OP2	-5.03	101.17	105.70
5	14	914	C	N1-C2-O2	5.03	121.92	118.90
5	14	1642	G	O5'-P-OP1	-5.03	101.17	105.70
5	14	1906	G	N1-C6-O6	5.03	122.92	119.90
5	1H	307	G	N3-C4-C5	-5.03	126.08	128.60
5	1H	395	U	C2-N1-C1'	5.03	123.74	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	1284	A	OP1-P-OP2	5.03	127.15	119.60
27	1J	107	U	O4'-C1'-N1	5.03	112.23	108.20
1	13	583	A	C2-N3-C4	-5.03	108.08	110.60
5	14	1555	G	N3-C2-N2	-5.03	116.38	119.90
5	1H	379	G	N1-C6-O6	-5.03	116.88	119.90
5	1H	941	A	N1-C2-N3	-5.03	126.78	129.30
5	1H	2381	C	N3-C4-C5	5.03	123.91	121.90
5	1H	2696	U	O5'-P-OP1	-5.03	101.17	105.70
27	1J	81	G	C6-C5-N7	-5.03	127.38	130.40
1	13	1307	U	OP1-P-O3'	5.03	116.27	105.20
1	13	1512	U	C5-C4-O4	5.03	128.92	125.90
1	13	1521	G	N3-C2-N2	5.03	123.42	119.90
5	14	1755	A	OP1-P-O3'	5.03	116.27	105.20
5	1H	1317	A	C8-N9-C4	-5.03	103.79	105.80
5	1H	2265	U	N3-C4-C5	-5.03	111.58	114.60
1	1G	118	U	N3-C4-C5	-5.03	111.58	114.60
5	14	77	C	O5'-P-OP2	5.03	116.73	110.70
5	14	724	U	C4-C5-C6	5.03	122.72	119.70
1	13	780	A	OP1-P-OP2	-5.03	112.06	119.60
1	13	1338	G	N9-C4-C5	5.03	107.41	105.40
3	2K	45	A	N9-C4-C5	-5.03	103.79	105.80
5	1H	599	G	N1-C2-N2	-5.03	111.67	116.20
5	1H	792	G	C8-N9-C4	5.03	108.41	106.40
5	1H	1497	U	N3-C4-O4	5.03	122.92	119.40
5	1H	2354	G	C8-N9-C1'	-5.03	120.46	127.00
27	16	111	U	C4-C5-C6	5.03	122.72	119.70
1	1G	353	A	N9-C4-C5	-5.03	103.79	105.80
1	1G	458	C	C6-N1-C2	-5.03	118.29	120.30
1	1G	831	U	C6-N1-C2	-5.03	117.98	121.00
5	14	306	U	N1-C2-O2	-5.03	119.28	122.80
5	14	323	G	OP1-P-O3'	5.03	116.25	105.20
5	14	1085	A	P-O3'-C3'	5.03	125.73	119.70
5	14	1276	A	C4-C5-N7	5.03	113.21	110.70
5	14	1804	C	OP1-P-O3'	5.03	116.26	105.20
5	1H	651	G	C8-N9-C4	-5.03	104.39	106.40
5	1H	803	U	C5-C6-N1	-5.03	120.19	122.70
5	1H	1014	U	C2-N1-C1'	-5.03	111.67	117.70
5	1H	1307	A	OP1-P-OP2	5.03	127.14	119.60
5	1H	1410	G	C8-N9-C1'	5.03	133.53	127.00
5	1H	1535	U	C6-N1-C2	-5.03	117.98	121.00
27	16	58	A	OP2-P-O3'	5.03	116.25	105.20
30	31	74	ARG	NE-CZ-NH2	5.03	122.81	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1G	691	G	C4-C5-N7	5.03	112.81	110.80
5	14	2210	G	C8-N9-C1'	-5.02	120.47	127.00
5	14	2247	A	N7-C8-N9	5.02	116.31	113.80
5	14	2616	C	O5'-P-OP1	-5.02	101.18	105.70
5	1H	665	C	C6-N1-C2	5.02	122.31	120.30
5	1H	1394	U	N3-C4-C5	-5.02	111.59	114.60
5	1H	1698	A	N1-C6-N6	5.02	121.61	118.60
5	1H	2319	G	O4'-C1'-N9	5.02	112.22	108.20
1	1G	866	C	N3-C2-O2	-5.02	118.38	121.90
1	13	266	G	C2-N3-C4	-5.02	109.39	111.90
1	13	810	C	C5-C4-N4	-5.02	116.68	120.20
1	13	903	G	OP2-P-O3'	5.02	116.25	105.20
1	13	1400	C	C6-N1-C2	5.02	122.31	120.30
5	14	1379	A	N9-C1'-C2'	5.02	120.53	114.00
5	14	1826	G	C8-N9-C4	5.02	108.41	106.40
5	14	1973	G	N3-C2-N2	5.02	123.42	119.90
5	14	2072	G	C5-C6-O6	-5.02	125.59	128.60
5	1H	942	G	N1-C2-N2	5.02	120.72	116.20
5	1H	1257	C	C4-C5-C6	5.02	119.91	117.40
5	1H	1387	C	C6-N1-C2	-5.02	118.29	120.30
5	1H	1611	C	C5-C6-N1	-5.02	118.49	121.00
5	1H	1660	C	N3-C4-C5	5.02	123.91	121.90
5	1H	2228	G	N3-C2-N2	5.02	123.42	119.90
5	1H	2779	U	C5-C6-N1	-5.02	120.19	122.70
1	1G	1322	C	N1-C2-O2	5.02	121.91	118.90
1	13	533	A	N1-C6-N6	5.02	121.61	118.60
5	1H	1853	A	N1-C6-N6	5.02	121.61	118.60
5	1H	2670	A	C8-N9-C4	-5.02	103.79	105.80
1	1G	269	C	N1-C2-O2	-5.02	115.89	118.90
1	13	333	G	C6-C5-N7	-5.02	127.39	130.40
5	14	114	U	N3-C4-O4	5.02	122.91	119.40
5	14	1085	A	OP1-P-O3'	5.02	116.24	105.20
5	14	1903	G	OP1-P-OP2	5.02	127.13	119.60
5	14	2607	G	N3-C4-N9	5.02	129.01	126.00
5	1H	842	G	C5-N7-C8	-5.02	101.79	104.30
5	1H	976	C	N3-C4-C5	-5.02	119.89	121.90
5	1H	1262	A	C5-C6-N1	5.02	120.21	117.70
5	1H	1673	U	N3-C2-O2	5.02	125.71	122.20
5	1H	1937	A	P-O3'-C3'	5.02	125.72	119.70
5	1H	2234	G	O5'-P-OP1	5.02	116.72	110.70
5	1H	2588	G	N3-C2-N2	5.02	123.41	119.90
1	1G	232	G	C4-N9-C1'	5.02	133.03	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	14	1410	G	O5'-P-OP2	-5.02	101.19	105.70
5	14	2283	C	N3-C4-N4	5.02	121.51	118.00
5	14	2287	A	C5-N7-C8	-5.02	101.39	103.90
5	1H	834	C	C4-C5-C6	5.02	119.91	117.40
5	1H	837	C	C5-C6-N1	5.02	123.51	121.00
5	1H	972	G	C5-C6-N1	5.02	114.01	111.50
5	1H	1608	A	C4-C5-N7	-5.02	108.19	110.70
5	1H	1980	G	P-O3'-C3'	5.02	125.72	119.70
5	1H	2416	C	N3-C4-N4	-5.02	114.49	118.00
1	1G	792	A	C8-N9-C4	5.02	107.81	105.80
5	1H	677	A	C4-C5-N7	-5.02	108.19	110.70
5	1H	1153	C	OP2-P-O3'	5.02	116.23	105.20
1	1G	317	G	C5-C6-O6	-5.02	125.59	128.60
1	13	571	U	OP1-P-OP2	-5.01	112.08	119.60
5	14	624	C	N1-C2-O2	-5.01	115.89	118.90
3	2K	74	A	N9-C4-C5	5.01	107.81	105.80
5	1H	192	C	N3-C4-C5	5.01	123.91	121.90
5	1H	290	G	N3-C2-N2	5.01	123.41	119.90
5	1H	860	U	N1-C2-N3	5.01	117.91	114.90
5	1H	1590	U	O5'-P-OP1	-5.01	101.19	105.70
5	1H	1895	C	N1-C2-O2	-5.01	115.89	118.90
5	1H	1941	C	N3-C4-C5	-5.01	119.89	121.90
5	1H	2346	A	C4-C5-N7	5.01	113.21	110.70
5	1H	2383	G	N7-C8-N9	5.01	115.61	113.10
5	1H	2394	C	C5-C6-N1	5.01	123.51	121.00
27	1J	115	G	O5'-P-OP1	5.01	116.72	110.70
8	3E	135	LEU	CA-CB-CG	5.01	126.83	115.30
5	1H	786	C	N3-C2-O2	-5.01	118.39	121.90
5	1H	2434	A	N3-C4-N9	-5.01	123.39	127.40
5	1H	2819	G	N1-C6-O6	5.01	122.91	119.90
1	13	300	A	C8-N9-C4	-5.01	103.80	105.80
1	13	1027	C	P-O3'-C3'	5.01	125.71	119.70
1	13	1374	A	C6-C5-N7	-5.01	128.79	132.30
1	13	1430	C	C5-C6-N1	-5.01	118.49	121.00
5	14	388	G	C5-C6-N1	-5.01	108.99	111.50
5	14	755	C	N3-C4-N4	5.01	121.51	118.00
5	14	841	A	N3-C4-N9	5.01	131.41	127.40
5	14	2001	A	C6-N1-C2	-5.01	115.59	118.60
5	14	2038	G	C8-N9-C4	5.01	108.40	106.40
5	1H	1298	C	O5'-P-OP1	5.01	116.71	110.70
5	1H	1345	C	N3-C4-C5	5.01	123.91	121.90
5	1H	2237	G	C5-C6-N1	-5.01	108.99	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	2379	G	C6-C5-N7	-5.01	127.39	130.40
27	1J	103	U	C2-N1-C1'	-5.01	111.69	117.70
1	1G	1413	A	C8-N9-C4	-5.01	103.80	105.80
1	13	413	G	N9-C4-C5	5.01	107.40	105.40
1	13	812	C	OP2-P-O3'	5.01	116.22	105.20
1	13	913	A	OP1-P-O3'	5.01	116.22	105.20
3	2L	77	A	C4-N9-C1'	-5.01	117.28	126.30
5	14	481	G	O5'-P-OP1	5.01	116.71	110.70
5	14	1613	G	C5-C6-N1	5.01	114.00	111.50
5	14	2612	C	N1-C2-O2	5.01	121.91	118.90
5	1H	35	G	OP1-P-OP2	5.01	127.11	119.60
5	1H	323	G	C5-C6-O6	5.01	131.60	128.60
5	1H	476	G	O5'-P-OP2	-5.01	101.19	105.70
5	1H	1914	C	N1-C2-N3	5.01	122.71	119.20
5	1H	1937	A	OP2-P-O3'	5.01	116.22	105.20
5	1H	2596	U	N1-C2-O2	-5.01	119.29	122.80
5	14	2313	C	N3-C2-O2	-5.01	118.39	121.90
5	1H	609	A	OP1-P-O3'	-5.01	94.18	105.20
5	1H	1788	C	O5'-P-OP2	-5.01	101.19	105.70
5	1H	2779	U	N3-C2-O2	-5.01	118.69	122.20
27	16	10	C	OP1-P-OP2	-5.01	112.09	119.60
1	13	944	G	C4-C5-N7	-5.01	108.80	110.80
5	14	187	G	C8-N9-C1'	-5.01	120.49	127.00
5	14	2321	G	C4-N9-C1'	5.01	133.01	126.50
5	14	2388	A	C2-N3-C4	-5.01	108.10	110.60
5	1H	1203	G	O5'-P-OP1	5.01	116.71	110.70
5	1H	1300	U	P-O3'-C3'	5.01	125.71	119.70
5	1H	1773	A	C6-C5-N7	-5.01	128.80	132.30
5	1H	1961	C	N1-C2-O2	-5.01	115.90	118.90
8	32	135	LEU	CA-CB-CG	5.01	126.82	115.30
5	14	750	A	C5-N7-C8	-5.00	101.40	103.90
5	14	2088	G	O5'-P-OP2	5.00	116.71	110.70
5	14	2463	C	N3-C2-O2	5.00	125.40	121.90
5	14	53	A	OP1-P-O3'	5.00	116.21	105.20
5	14	808	G	C4-C5-N7	-5.00	108.80	110.80
5	14	2380	C	C2-N1-C1'	5.00	124.30	118.80
5	1H	2424	C	OP2-P-O3'	5.00	116.21	105.20
1	13	57	G	N1-C2-N2	-5.00	111.70	116.20
1	13	1305	G	C4-C5-C6	5.00	121.80	118.80
5	14	204	A	C4-C5-C6	5.00	119.50	117.00
5	14	686	G	N3-C4-N9	5.00	129.00	126.00
5	14	1367	A	C4-C5-N7	5.00	113.20	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	1H	191	A	O5'-P-OP1	5.00	116.70	110.70
5	1H	260	G	N3-C2-N2	-5.00	116.40	119.90
5	1H	774	A	C6-C5-N7	-5.00	128.80	132.30
5	1H	1377	G	N9-C4-C5	5.00	107.40	105.40
5	1H	2431	U	OP1-P-O3'	5.00	116.20	105.20
34	58	120	LEU	CA-CB-CG	5.00	126.81	115.30

There are no chirality outliers.

All (58) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
28	11	197	GLY	Peptide
6	12	22	LYS	Peptide
6	1E	15	VAL	Peptide
6	1E	169	LYS	Peptide
6	1E	237	ALA	Peptide
29	21	57	LYS	Peptide
29	21	78	LEU	Peptide
29	21	82	ARG	Peptide
30	31	130	ALA	Peptide
30	31	133	ASN	Peptide
8	32	152	SER	Peptide
8	32	30	LYS	Peptide
8	3E	31	CYS	Peptide
16	3I	87	GLY	Peptide
31	41	85	GLY	Peptide
31	41	95	ARG	Peptide
17	4I	105	THR	Peptide
33	61	11	ASN	Peptide
33	61	114	LEU	Peptide
33	61	134	PRO	Peptide
33	61	82	ARG	Peptide
36	78	11	GLY	Peptide
36	78	14	LYS	Peptide
36	78	70	GLN	Peptide
20	7I	75	ARG	Peptide
37	88	1	MET	Peptide
13	8E	110	GLU	Peptide
38	98	44	LEU	Peptide
39	A8	110	LEU	Peptide
23	AI	6	LYS	Peptide
23	AI	7	LYS	Peptide

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Mol	Chain	Res	Type	Group
40	B8	58	ASN	Peptide
41	C8	92	ARG	Peptide
45	G8	53	PRO	Peptide
45	G8	54	LYS	Peptide
45	G8	80	GLY	Peptide
45	G8	94	LYS	Peptide
46	H8	59	LEU	Peptide
46	H8	63	ASP	Peptide
47	I8	83	PRO	Peptide
47	I8	9	SER	Peptide
48	J8	75	GLU	Peptide
49	K8	17	SER	Peptide
49	K8	46	GLN	Peptide
51	M8	40	HIS	Peptide
52	N8	41	PRO	Peptide
52	N8	58	LEU	Peptide
53	O8	15	GLU	Peptide
53	O8	16	CYS	Peptide
53	O8	27	LYS	Peptide
55	Q8	18	ALA	Peptide
55	Q8	19	SER	Peptide
55	Q8	27	THR	Peptide
55	Q8	48	PHE	Peptide
55	Q8	56	GLU	Peptide
55	Q8	6	THR	Peptide
55	Q8	7	HIS	Peptide
55	Q8	9	GLY	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	13	32185	0	16244	835	0
1	1G	32182	0	16243	773	1
2	1L	1627	0	842	40	0
2	3K	1627	0	842	51	0
2	3L	1627	0	842	53	0
3	2K	1645	0	845	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	2L	1645	0	845	38	0
4	4K	279	0	142	6	0
4	4L	191	0	98	8	0
5	14	62647	0	31582	1217	0
5	1H	62707	0	31606	1584	1
6	12	1924	0	1975	116	0
6	1E	1924	0	1975	112	0
7	22	1612	0	1677	87	0
7	2E	1605	0	1668	48	0
8	32	1702	0	1763	87	0
8	3E	1702	0	1763	82	0
9	4E	1155	0	1213	67	0
10	5E	842	0	857	29	0
11	6E	1256	0	1296	51	0
12	7E	1115	0	1177	61	0
13	8E	1009	0	1037	60	0
14	1I	801	0	849	56	0
15	2I	884	0	904	39	0
16	3I	975	0	1062	47	0
17	4I	938	0	997	54	0
18	5I	491	0	529	28	0
19	6I	733	0	771	32	0
20	7I	705	0	725	50	0
21	8I	834	0	904	58	0
22	9I	590	0	662	25	0
23	AI	647	0	665	50	0
24	BI	762	0	861	35	0
25	1F	217	0	234	19	0
26	1K	1587	0	822	25	0
27	16	2617	0	1328	74	0
27	1J	2617	0	1328	81	0
28	11	2115	0	2195	102	0
29	21	1568	0	1634	92	0
30	31	1585	0	1632	93	0
31	41	1473	0	1535	99	0
32	51	1336	0	1418	73	0
33	61	1136	0	1223	66	0
34	58	1104	0	1180	60	0
35	68	932	0	996	42	0
36	78	1144	0	1228	96	0
37	88	1086	0	1129	57	0
38	98	967	0	1033	61	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	A8	881	0	943	61	0
40	B8	1141	0	1202	70	0
41	C8	963	0	1022	68	0
42	D8	778	0	852	39	0
43	E8	899	0	964	30	0
44	F8	742	0	803	46	0
45	G8	791	0	881	61	0
46	H8	1397	0	1430	78	0
47	I8	626	0	642	38	0
48	J8	762	0	848	37	0
49	K8	563	0	612	30	0
50	L8	452	0	503	23	0
51	M8	533	0	526	38	0
52	N8	453	0	475	29	0
53	O8	389	0	404	35	0
54	P8	391	0	432	17	0
55	Q8	480	0	549	106	0
56	11	2	0	0	0	0
56	13	149	0	0	0	0
56	14	421	0	0	0	0
56	16	13	0	0	0	0
56	1G	96	0	0	0	0
56	1H	537	0	0	0	0
56	1J	7	0	0	0	0
56	1K	2	0	0	0	0
56	1L	1	0	0	0	0
56	21	2	0	0	0	0
56	2K	8	0	0	0	0
56	2L	4	0	0	0	0
56	3E	2	0	0	0	0
56	3I	1	0	0	0	0
56	3L	3	0	0	0	0
56	41	2	0	0	0	0
56	5E	1	0	0	0	0
56	5I	1	0	0	0	0
56	78	1	0	0	0	0
56	88	2	0	0	0	0
56	I8	1	0	0	0	0
56	J8	1	0	0	0	0
56	L8	1	0	0	0	0
56	P8	1	0	0	0	0
57	14	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	1G	1	0	0	0	0
57	32	1	0	0	0	0
57	3E	1	0	0	0	0
57	5I	1	0	0	0	0
57	G8	1	0	0	0	0
58	11	9	0	0	3	0
58	13	230	0	0	36	0
58	14	863	0	0	119	0
58	16	21	0	0	3	0
58	1G	106	0	0	22	0
58	1H	1212	0	0	257	0
58	1I	1	0	0	1	0
58	1J	12	0	0	4	0
58	1K	6	0	0	0	0
58	21	3	0	0	2	0
58	2K	8	0	0	1	0
58	2L	1	0	0	0	0
58	31	8	0	0	0	0
58	3E	1	0	0	0	0
58	3I	1	0	0	0	0
58	3K	1	0	0	0	0
58	4E	3	0	0	0	0
58	4K	4	0	0	0	0
58	4L	2	0	0	0	0
58	58	3	0	0	0	0
58	5I	1	0	0	0	0
58	6I	1	0	0	0	0
58	78	6	0	0	0	0
58	7I	1	0	0	0	0
58	8E	2	0	0	0	0
58	98	1	0	0	1	0
58	B8	1	0	0	0	0
58	BI	1	0	0	0	0
58	C8	3	0	0	2	0
58	D8	1	0	0	0	0
58	E8	2	0	0	0	0
58	F8	2	0	0	0	0
58	G8	3	0	0	0	0
58	I8	5	0	0	1	0
58	J8	1	0	0	0	0
58	L8	1	0	0	1	0
58	P8	4	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	Q8	1	0	0	0	0
All	All	260090	0	157464	7103	1

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 18.

All (7103) 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)
5:1H:567:A:OP1	58:1H:3610:HOH:O	1.72	1.07
5:1H:987:G:OP2	58:1H:4091:HOH:O	1.74	1.03
5:1H:2714:G:OP2	58:1H:3679:HOH:O	1.74	1.03
36:78:19:VAL:HG12	36:78:21:ARG:H	1.24	1.02
5:1H:945:A:OP1	58:1H:4240:HOH:O	1.80	1.00
5:1H:810:U:OP1	58:1H:3734:HOH:O	1.79	1.00
5:1H:2248:C:OP2	58:1H:3743:HOH:O	1.78	0.99
27:1J:15:A:H5'	27:1J:16:G:H8	1.28	0.99
5:1H:1359:A:N1	5:1H:1372:U:N3	2.11	0.98
5:1H:730:C:OP2	58:1H:3701:HOH:O	1.80	0.98
5:1H:778:G:O6	58:1H:4193:HOH:O	1.81	0.98
5:14:2701:C:H3'	5:14:2702:U:H5"	1.46	0.98
30:31:29:ASN:H	30:31:112:MET:HE1	1.22	0.98
5:1H:943:U:OP2	58:1H:4764:HOH:O	1.81	0.98
6:12:42:ILE:HD11	6:12:202:PRO:HB2	1.45	0.97
8:3E:26:CYS:HA	8:3E:31:CYS:HB2	1.46	0.97
5:14:249:C:OP1	58:14:3521:HOH:O	1.82	0.97
5:1H:763:G:OP1	58:1H:3703:HOH:O	1.81	0.97
5:1H:585:G:OP2	58:1H:3903:HOH:O	1.81	0.97
5:14:1496:A:H8	5:14:1577:C:HO2'	1.02	0.96
5:1H:1190:G:N7	58:1H:3945:HOH:O	1.97	0.96
5:1H:1614:A:OP1	58:1H:4006:HOH:O	1.82	0.96
5:14:676:A:H8	5:14:2069:G:H21	1.12	0.96
5:1H:220:G:O6	58:1H:3821:HOH:O	1.83	0.96
1:1G:1305:G:H22	1:1G:1331:G:H2'	1.26	0.96
5:1H:71:A:H2	44:F8:31:HIS:HE1	1.06	0.96
5:14:2588:G:OP1	58:14:3611:HOH:O	1.83	0.96
5:1H:1265:A:OP2	58:1H:3620:HOH:O	1.82	0.96
5:14:2502:G:OP2	58:14:3867:HOH:O	1.83	0.95
5:1H:2701:C:H3'	5:1H:2702:U:H5"	1.48	0.95
5:14:1614:A:OP1	58:14:3516:HOH:O	1.83	0.94
5:1H:2588:G:OP1	58:1H:3999:HOH:O	1.85	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:187:G:OP2	58:1H:4595:HOH:O	1.84	0.94
5:1H:399:G:OP2	58:1H:4157:HOH:O	1.83	0.94
5:14:1839:G:OP2	58:14:4298:HOH:O	1.85	0.94
36:78:47:ASP:OD2	36:78:50:ARG:NH2	2.01	0.94
40:B8:50:ILE:HD11	40:B8:102:ILE:HD11	1.49	0.94
5:1H:2057:A:OP2	58:1H:3625:HOH:O	1.85	0.94
5:1H:2308:G:H1	5:1H:2311:A:H2	1.02	0.93
5:1H:1636:C:OP2	58:1H:3613:HOH:O	1.86	0.93
8:32:26:CYS:HA	8:32:31:CYS:HB3	1.51	0.93
5:1H:809:G:OP1	58:1H:3791:HOH:O	1.86	0.92
5:1H:2432:A:OP2	58:1H:3988:HOH:O	1.87	0.92
5:14:495:G:O6	58:14:3951:HOH:O	1.87	0.92
5:14:1689:A:H62	5:14:1698:A:H2	1.12	0.92
5:14:1757:U:H3	5:14:1762:A:H2	1.15	0.92
5:1H:330:A:H2	5:1H:1210:A:HO2'	1.05	0.92
36:78:58:THR:HG21	55:Q8:52:LYS:HE2	1.51	0.92
5:1H:1013:C:OP2	58:1H:3808:HOH:O	1.86	0.92
5:1H:31:C:OP1	58:1H:3827:HOH:O	1.87	0.92
14:1I:61:GLU:OE2	18:5I:45:ARG:NH1	2.01	0.91
5:14:1332:G:N2	5:14:1609:A:O2'	2.03	0.91
5:14:1771:C:HO2'	5:14:1786:A:H8	0.98	0.91
2:3L:71:G:O2'	5:14:1851:U:O2'	1.86	0.91
5:14:2035:G:OP1	58:14:3778:HOH:O	1.89	0.91
5:1H:1639:U:OP1	58:1H:3684:HOH:O	1.88	0.91
27:1J:18:G:N2	27:1J:65:C:N3	2.19	0.91
5:1H:2033:A:OP1	58:1H:4172:HOH:O	1.88	0.91
5:14:1616:A:O2'	58:14:3708:HOH:O	1.88	0.90
5:1H:607:U:H3	5:1H:621:A:H2	1.17	0.90
46:H8:76:LEU:H	46:H8:76:LEU:HD22	1.36	0.90
1:13:1348:U:H3	1:13:1374:A:H2	1.19	0.90
5:14:397:G:N7	58:14:4232:HOH:O	2.04	0.90
5:14:2505:G:O6	58:14:3941:HOH:O	1.88	0.90
5:1H:2712(A):A:OP2	58:1H:3679:HOH:O	1.88	0.90
36:78:138:LEU:HD12	36:78:144:GLU:HG3	1.51	0.90
23:AI:5:LEU:HB3	23:AI:10:PHE:HE1	1.37	0.90
5:1H:1670:C:OP1	58:1H:3678:HOH:O	1.88	0.90
5:1H:1771:C:HO2'	5:1H:1786:A:H8	0.91	0.90
1:13:972:C:OP1	58:13:1831:HOH:O	1.90	0.89
5:14:802:A:OP1	58:14:4189:HOH:O	1.90	0.89
36:78:15:ARG:HB2	36:78:16:ARG:HB2	1.55	0.89
5:14:1533:C:H42	5:14:1538:G:H1	1.19	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1678:G:H22	5:1H:1989:G:H22	1.15	0.89
5:1H:882:G:H22	5:1H:894:C:H42	1.16	0.89
5:1H:450:G:OP2	58:1H:3976:HOH:O	1.90	0.89
5:1H:1009:A:OP2	58:1H:4296:HOH:O	1.90	0.89
5:1H:2452:C:OP1	58:1H:4626:HOH:O	1.89	0.89
5:14:1899:G:H21	5:14:1902:C:N4	1.71	0.89
5:1H:1525:G:H2'	5:1H:1526:G:H8	1.37	0.89
5:14:1359:A:H62	5:14:1372:U:H3	1.16	0.88
5:1H:1036:G:H1	5:1H:1119:C:H42	1.21	0.88
20:7I:74:LEU:HA	20:7I:77:ALA:HB2	1.54	0.88
1:13:262:A:H2'	1:13:263:A:C8	2.09	0.88
41:C8:6:THR:OG1	58:C8:203:HOH:O	1.91	0.88
5:14:2016:U:OP1	58:14:4025:HOH:O	1.92	0.88
5:1H:2074:U:OP1	58:1H:3696:HOH:O	1.91	0.88
5:1H:2431:U:OP2	58:1H:3991:HOH:O	1.91	0.88
1:13:1110:A:OP2	58:13:1971:HOH:O	1.90	0.88
5:1H:1253:A:N7	58:1H:3734:HOH:O	2.07	0.88
31:41:64:THR:HG22	31:41:66:GLN:H	1.39	0.88
5:1H:192:C:OP1	58:1H:3726:HOH:O	1.92	0.88
1:13:538:G:H5"	16:3I:114:LYS:HB2	1.57	0.87
30:31:66:PRO:O	30:31:67:GLN:HB3	1.72	0.87
5:1H:124:G:N7	58:1H:4722:HOH:O	2.07	0.87
12:7E:41:ARG:NH2	12:7E:123:GLU:OE1	2.07	0.87
5:1H:801:G:OP2	58:1H:4320:HOH:O	1.92	0.87
45:G8:30:VAL:HG22	45:G8:37:VAL:HG12	1.55	0.87
1:13:1505:G:OP1	58:13:1804:HOH:O	1.93	0.87
5:1H:429:A:OP2	58:1H:3798:HOH:O	1.90	0.87
5:1H:2781:A:H5"	5:1H:2782:G:H5'	1.56	0.87
1:13:21:G:OP1	58:13:1837:HOH:O	1.93	0.87
5:14:1899:G:H21	5:14:1902:C:H41	1.17	0.87
5:1H:1623:G:O6	58:1H:4023:HOH:O	1.92	0.86
5:1H:571:A:OP2	58:1H:3939:HOH:O	1.93	0.86
5:1H:846:C:O2'	58:1H:3778:HOH:O	1.92	0.86
27:1J:80:U:H2'	27:1J:81:G:H21	1.38	0.86
55:Q8:27:THR:HG22	55:Q8:29:LYS:HB3	1.57	0.86
1:13:1500:A:OP1	58:13:1804:HOH:O	1.93	0.86
5:14:67:U:H3	5:14:74:A:H2	1.18	0.86
5:1H:1975:G:OP2	58:1H:4080:HOH:O	1.92	0.86
40:B8:57:PHE:O	40:B8:58:ASN:ND2	2.09	0.86
6:1E:178:ARG:HG3	12:7E:72:PRO:HA	1.56	0.86
5:1H:1622:G:OP2	58:1H:4473:HOH:O	1.94	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2292:C:OP1	39:A8:17:ARG:NH2	2.08	0.86
5:1H:2392:A:OP2	55:Q8:30:ARG:NH2	2.08	0.86
32:51:77:LYS:HE2	32:51:138:LYS:HD2	1.57	0.86
1:13:1305:G:H21	1:13:1331:G:H2'	1.39	0.86
37:88:51:ARG:HH12	37:88:52:VAL:HG23	1.40	0.86
55:Q8:46:ARG:HH21	55:Q8:48:PHE:HA	1.40	0.86
5:1H:49:A:N7	5:1H:120:U:H5	1.74	0.85
5:1H:141:A:H8	5:1H:1595:G:H21	1.24	0.85
8:3E:22:LYS:HB2	8:3E:26:CYS:SG	2.15	0.85
29:21:135:HIS:NE2	58:21:401:HOH:O	2.08	0.85
39:A8:93:LYS:HG2	39:A8:95:HIS:HB2	1.59	0.85
6:12:12:GLU:HB3	6:12:213:LEU:HD22	1.57	0.85
5:1H:1332:G:N2	5:1H:1609:A:HO2'	1.74	0.85
5:14:635:C:O2'	5:14:639:U:OP1	1.94	0.85
5:1H:574:C:OP1	58:1H:3844:HOH:O	1.95	0.85
5:14:2304:G:N2	5:14:2312:U:O4	2.09	0.85
5:1H:2419:U:O4	55:Q8:29:LYS:NZ	2.10	0.85
6:12:131:PRO:HG2	6:12:134:GLU:HB2	1.57	0.85
5:14:900:A:H3'	5:14:901:A:H8	1.41	0.84
50:L8:13:ILE:O	58:L8:201:HOH:O	1.94	0.84
5:1H:1113:U:H5'	32:51:2:SER:HB2	1.57	0.84
5:1H:2615:U:OP1	58:1H:3620:HOH:O	1.95	0.84
30:31:6:VAL:N	30:31:24:LEU:O	2.10	0.84
1:13:785:G:N7	58:13:2017:HOH:O	2.08	0.84
5:1H:1689:A:H62	5:1H:1698:A:H2	1.24	0.84
5:1H:2577:A:OP1	58:1H:3852:HOH:O	1.94	0.84
5:14:259:G:H21	5:14:621:A:H8	1.23	0.84
5:1H:1007:C:OP2	58:1H:4295:HOH:O	1.94	0.84
1:1G:324:G:N7	58:1G:1785:HOH:O	2.11	0.84
5:14:654(I):C:N3	5:14:654(M):C:N4	2.24	0.84
5:14:1658:C:OP1	58:14:3646:HOH:O	1.94	0.84
1:13:1505:G:H5'	58:13:1801:HOH:O	1.77	0.84
5:1H:1780:A:OP1	58:1H:3631:HOH:O	1.95	0.84
5:1H:1997:G:OP2	58:1H:4102:HOH:O	1.93	0.84
30:31:29:ASN:N	30:31:112:MET:HE1	1.91	0.84
6:12:91:PRO:HG3	6:12:154:LEU:HB2	1.56	0.84
1:1G:286:G:N7	58:1G:1779:HOH:O	2.10	0.84
1:1G:961:U:O2	1:1G:1201:A:N6	2.11	0.84
1:13:1311:G:N2	1:13:1326:C:O2	2.10	0.84
16:3I:76:ASN:ND2	16:3I:106:ASP:O	2.10	0.84
19:6I:17:ARG:HH11	19:6I:17:ARG:HG3	1.41	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1006:C:OP2	58:1H:4297:HOH:O	1.93	0.84
5:1H:1332:G:N2	5:1H:1609:A:O2'	2.10	0.83
5:1H:1639:U:OP2	58:1H:3655:HOH:O	1.97	0.83
5:14:780:G:H21	5:14:783:A:H62	1.22	0.83
7:2E:40:ARG:HH11	7:2E:40:ARG:HG3	1.42	0.83
5:14:2499:C:OP1	58:14:3767:HOH:O	1.95	0.83
5:1H:71:A:H2	44:F8:31:HIS:CE1	1.96	0.83
30:31:130:ALA:H	30:31:132:VAL:HG13	1.41	0.83
1:13:1372:U:H5"	13:8E:71:SER:HB2	1.61	0.83
5:1H:741:G:OP1	58:1H:4066:HOH:O	1.96	0.83
1:13:1213:A:O2'	1:13:1215:G:N7	2.12	0.83
1:1G:1141:C:H2'	1:1G:1142:G:H8	1.43	0.83
5:14:120:U:OP1	58:14:4319:HOH:O	1.96	0.83
5:14:2361:A:N7	58:14:4293:HOH:O	2.11	0.83
17:4I:108:ARG:HG3	17:4I:108:ARG:HH11	1.44	0.83
34:58:34:LEU:HD21	34:58:120:LEU:HB2	1.61	0.83
1:13:455:C:H42	1:13:477:G:H1	1.26	0.83
2:1L:19:G:N2	2:1L:56:C:N3	2.27	0.83
5:14:1043:C:N3	5:14:1112:G:N2	2.26	0.83
5:1H:620:G:H4'	5:1H:621:A:H5"	1.61	0.83
1:13:737:A:H2'	1:13:738:C:H6	1.42	0.82
5:1H:602:G:HO2'	5:1H:604:G:HO2'	1.24	0.82
5:1H:1676:A:OP2	58:1H:3720:HOH:O	1.95	0.82
5:14:1485:G:H1	5:14:1504:C:H42	1.27	0.82
4:4L:13:A:O2'	4:4L:14:A:OP1	1.97	0.82
5:14:531:C:OP1	5:14:561:G:N2	2.12	0.82
5:1H:566:U:OP1	36:78:29:LYS:NZ	2.12	0.82
5:1H:761:A:OP1	58:1H:3701:HOH:O	1.97	0.82
1:1G:976:G:N2	1:1G:1362(A):C:OP2	2.12	0.82
5:14:458:G:O6	58:14:3932:HOH:O	1.97	0.82
5:1H:780:G:H21	5:1H:783:A:H62	1.27	0.82
5:1H:2126:A:N6	5:1H:2163:C:O2	2.12	0.82
48:J8:83:GLU:HG2	48:J8:85:LEU:H	1.42	0.82
1:13:1130:A:O2'	13:8E:3:GLN:NE2	2.12	0.82
9:4E:11:ILE:HG13	9:4E:31:LEU:HD13	1.62	0.82
7:22:141:VAL:HA	7:22:144:SER:HB3	1.60	0.82
5:14:2256:G:O6	58:14:3878:HOH:O	1.96	0.82
1:13:1029:G:H1'	1:13:1032(A):G:H22	1.42	0.82
5:14:1324:G:N7	58:14:3721:HOH:O	2.11	0.82
24:BI:46:GLU:HB2	24:BI:48:LYS:HG2	1.62	0.82
5:1H:2243:U:OP1	58:1H:3726:HOH:O	1.97	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1664:A:OP2	58:14:3653:HOH:O	1.97	0.82
5:14:2074:U:OP1	58:14:3509:HOH:O	1.98	0.82
5:14:578:A:OP2	58:14:3741:HOH:O	1.96	0.81
5:14:2134:A:O2'	5:14:2159:G:N2	2.13	0.81
1:1G:21:G:OP1	58:1G:1766:HOH:O	1.97	0.81
5:1H:392:C:OP1	58:1H:3770:HOH:O	1.98	0.81
27:1J:3:C:N3	27:1J:117:G:N2	2.28	0.81
1:13:446:G:H1	1:13:488:C:H42	1.26	0.81
1:13:1432:G:N2	58:13:1980:HOH:O	2.14	0.81
1:13:1502:A:H2	1:13:1505:G:H1	1.25	0.81
5:1H:1386:C:H2'	5:1H:1387:C:H6	1.45	0.81
1:1G:998:G:N2	1:1G:1043:C:N3	2.29	0.81
1:13:967:C:HO2'	13:8E:125:TYR:HH	1.21	0.81
5:1H:2270:G:OP2	58:1H:4408:HOH:O	1.96	0.81
1:1G:587:G:N2	1:1G:754:C:OP2	2.13	0.81
27:16:100:G:OP1	58:16:320:HOH:O	1.97	0.81
5:14:2681:C:H5	5:14:2725:A:H62	1.29	0.81
5:14:2763:G:OP2	58:14:4072:HOH:O	1.99	0.81
5:1H:2656:U:H3	5:1H:2665:A:H2	1.25	0.81
6:12:70:PHE:HB2	6:12:92:TYR:HB2	1.63	0.81
1:13:1508:G:OP1	58:13:1802:HOH:O	1.99	0.81
5:14:1168:G:O6	5:14:1181:C:N4	2.14	0.81
5:14:1342:A:H2	5:14:1602:U:H3	1.24	0.81
5:14:2738:A:OP2	58:14:4073:HOH:O	1.99	0.81
16:3I:89:ARG:HG3	16:3I:89:ARG:HH11	1.44	0.81
23:AI:40:ILE:HG23	23:AI:41:VAL:HG13	1.62	0.81
5:1H:860:U:H5	5:1H:917:A:C2	1.98	0.81
5:1H:1778:U:H2'	5:1H:1784:A:N6	1.96	0.81
5:1H:860:U:C5	5:1H:917:A:H2	1.99	0.81
40:B8:111:ARG:HD3	40:B8:111:ARG:H	1.46	0.81
1:13:601:C:H2'	1:13:602:A:H8	1.45	0.81
5:1H:846:C:O3'	58:1H:3781:HOH:O	1.99	0.81
1:1G:1256:A:N6	1:1G:1278:U:OP2	2.13	0.81
10:5E:101:ALA:HB2	22:9I:28:GLU:HG2	1.61	0.81
5:1H:751:A:OP1	58:1H:4007:HOH:O	1.99	0.81
5:1H:751:A:OP1	58:1H:4008:HOH:O	1.99	0.81
41:C8:8:VAL:HG23	41:C8:11:ARG:HH21	1.44	0.81
5:14:1665:A:OP2	58:14:3662:HOH:O	1.98	0.80
5:1H:2562:U:H1'	35:68:23:ARG:HH11	1.46	0.80
31:41:82:LEU:HD21	31:41:88:ILE:HD11	1.63	0.80
5:14:1434:A:H61	5:14:1558:A:N6	1.78	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:946:G:OP2	58:1H:4235:HOH:O	1.99	0.80
5:1H:2597:G:O3'	58:1H:4808:HOH:O	1.99	0.80
33:61:7:GLU:HA	33:61:15:VAL:HG22	1.63	0.80
1:13:1129:C:H4'	1:13:1130:A:H5'	1.61	0.80
8:3E:9:CYS:HB3	8:3E:32:ALA:HB2	1.63	0.80
5:1H:76:C:O2'	49:K8:62:THR:HG21	1.82	0.80
36:78:115:LEU:HA	36:78:134:ALA:HB2	1.63	0.80
1:1G:1126:U:H4'	1:1G:1127:G:C8	2.17	0.80
11:6E:15:ASP:HB3	11:6E:20:ASP:H	1.47	0.80
5:14:854:G:H2'	5:14:855:G:H8	1.47	0.80
5:1H:563:G:OP2	58:1H:3641:HOH:O	1.97	0.80
1:1G:1181:G:N7	1:1G:1182:G:N2	2.30	0.80
5:1H:2608:G:N7	58:1H:3866:HOH:O	2.13	0.80
44:F8:1:MET:HG2	44:F8:2:LYS:H	1.47	0.80
6:1E:33:TYR:HB2	6:1E:43:ASP:HB2	1.64	0.80
5:1H:1287:A:N7	38:98:107:ASP:HB2	1.95	0.80
40:B8:108:ARG:HA	40:B8:111:ARG:HE	1.46	0.80
52:N8:50:GLY:H	52:N8:56:LYS:HG3	1.46	0.80
33:61:132:PRO:O	33:61:133:HIS:ND1	2.15	0.79
55:Q8:6:THR:H	55:Q8:59:LYS:HZ2	1.29	0.79
1:13:1422:G:H5"	35:68:48:PRO:HB3	1.65	0.79
6:12:185:ILE:HG22	6:12:199:TYR:HB2	1.65	0.79
5:14:1771:C:OP1	58:14:3626:HOH:O	2.00	0.79
5:14:1864:U:OP1	5:14:2410:G:O2'	1.99	0.79
9:4E:126:ARG:HG3	9:4E:126:ARG:HH11	1.47	0.79
1:13:353:A:H8	1:13:353:A:H5'	1.47	0.79
13:8E:3:GLN:OE1	13:8E:20:ARG:NH1	2.12	0.79
38:98:55:ALA:HA	38:98:80:PHE:HE2	1.46	0.79
1:1G:1316:G:H22	1:1G:1319:A:H5"	1.48	0.79
3:2L:8:4SU:O2	3:2L:14:A:N6	2.16	0.79
14:1I:48:THR:HA	14:1I:62:HIS:HB3	1.62	0.79
5:1H:500:G:N7	58:1H:4519:HOH:O	2.15	0.79
1:1G:576:G:N2	1:1G:759:A:OP1	2.16	0.79
5:14:1263:U:OP2	58:14:4209:HOH:O	2.01	0.79
52:N8:41:PRO:HD2	52:N8:44:THR:HG21	1.65	0.79
1:1G:988:G:N2	1:1G:1217:C:O2	2.15	0.79
1:1G:1502:A:H2	1:1G:1505:G:H1	1.30	0.79
5:14:751:A:OP1	58:14:3517:HOH:O	2.01	0.79
5:1H:2685:G:N7	58:1H:4210:HOH:O	2.14	0.79
13:8E:50:LEU:HD23	13:8E:85:LEU:HD11	1.65	0.78
5:1H:428:A:OP1	58:1H:3818:HOH:O	2.01	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:40:U:O2	27:1J:45:A:N6	2.16	0.78
5:14:330:A:H2	5:14:1210:A:HO2'	1.32	0.78
29:21:57:LYS:HG3	29:21:59:VAL:HG12	1.63	0.78
31:41:179:PRO:HG3	51:M8:38:LYS:HE3	1.65	0.78
38:98:55:ALA:HA	38:98:80:PHE:CE2	2.19	0.78
1:13:673:G:H2'	1:13:674:G:C8	2.18	0.78
11:6E:155:ARG:O	11:6E:155:ARG:NH2	2.16	0.78
27:1J:46:A:H2'	27:1J:47:C:H6	1.46	0.78
27:16:21:G:H1	27:16:62:C:H42	1.31	0.78
40:B8:54:ARG:HA	40:B8:59:THR:HB	1.65	0.78
5:1H:71:A:C2	44:F8:31:HIS:HE1	1.96	0.78
5:1H:1314:C:OP1	58:1H:4040:HOH:O	2.01	0.78
1:13:975:A:H4'	1:13:976:G:H5"	1.63	0.78
5:1H:2299:G:N7	58:1H:4566:HOH:O	2.16	0.78
31:41:67:LYS:HE2	51:M8:6:HIS:CE1	2.19	0.78
7:22:138:VAL:HG23	7:22:151:VAL:HG23	1.66	0.78
1:13:36:C:OP1	16:3I:123:LYS:NZ	2.16	0.78
1:13:247:G:OP2	21:8I:100:LYS:N	2.16	0.78
1:13:559:A:OP1	9:4E:126:ARG:NH2	2.16	0.78
5:14:1061:U:H4'	5:14:1070:A:H1'	1.66	0.78
5:1H:1249:U:OP1	58:1H:3969:HOH:O	1.99	0.78
1:1G:1435:G:H2'	1:1G:1436:U:C6	2.19	0.78
8:3E:30:LYS:HB2	8:3E:35:ARG:HE	1.48	0.78
5:1H:731:C:OP2	58:1H:3701:HOH:O	2.01	0.78
5:14:382:G:O6	58:14:4201:HOH:O	2.01	0.78
5:1H:1156:A:C8	41:C8:51:LYS:HD3	2.19	0.78
32:51:169:VAL:O	32:51:170:ARG:NE	2.16	0.78
40:B8:6:LEU:HA	40:B8:9:LEU:HB2	1.65	0.78
1:13:1160:G:H1	1:13:1177:G:H22	1.30	0.78
5:1H:1364:G:N7	48:J8:2:SER:HB3	1.98	0.78
1:13:664:G:H22	1:13:741:G:H1	1.32	0.77
5:14:945:A:OP1	58:14:3882:HOH:O	2.02	0.77
5:1H:138:G:N2	44:F8:44:GLU:OE2	2.16	0.77
5:1H:1678:G:H22	5:1H:1989:G:N2	1.80	0.77
27:1J:15:A:H5'	27:1J:16:G:C8	2.16	0.77
27:1J:18:G:H1	27:1J:65:C:H42	1.31	0.77
5:1H:816:C:OP2	58:1H:3952:HOH:O	2.01	0.77
5:1H:1900:A:H5'	5:1H:1900:A:H8	1.49	0.77
46:H8:126:VAL:HG12	46:H8:163:LEU:HA	1.65	0.77
5:1H:2334:G:O6	47:I8:74:ARG:NH2	2.17	0.77
5:14:1729:A:H2'	5:14:1731:G:N2	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:456:C:N3	1:1G:476:G:N2	2.30	0.77
5:1H:676:A:H8	5:1H:2069:G:H21	1.31	0.77
8:32:23:GLY:H	8:32:26:CYS:HB2	1.49	0.77
5:1H:1891:G:N7	58:1H:4492:HOH:O	2.16	0.77
24:BI:69:GLY:O	24:BI:73:HIS:NE2	2.17	0.77
5:1H:2318:G:H22	39:A8:2:ALA:N	1.83	0.77
1:1G:1348:U:H3	1:1G:1374:A:H2	1.31	0.77
5:1H:654(E):C:N3	5:1H:654(P):G:N2	2.31	0.77
5:1H:2035:G:OP1	58:1H:3838:HOH:O	2.03	0.77
5:1H:2594:C:N4	58:1H:3691:HOH:O	2.17	0.77
53:O8:26:ASN:ND2	53:O8:35:GLU:OE2	2.16	0.77
1:1G:1132:C:H2'	1:1G:1133:G:H8	1.49	0.77
1:1G:1154:G:H2'	1:1G:1155:G:H8	1.49	0.77
5:14:1627:G:OP2	58:14:4087:HOH:O	2.01	0.76
5:14:1891:G:O6	58:14:4194:HOH:O	2.02	0.76
26:1K:6:G:H1	26:1K:67:C:H42	1.33	0.76
5:1H:2502:G:OP2	58:1H:3636:HOH:O	2.03	0.76
1:13:352:C:OP2	58:13:1896:HOH:O	2.03	0.76
1:13:1506:U:O2'	58:13:1803:HOH:O	2.01	0.76
5:14:2048:G:N7	58:14:3728:HOH:O	2.18	0.76
1:13:838:G:H1	1:13:848:C:N4	1.83	0.76
5:14:570:G:O6	58:14:3765:HOH:O	2.02	0.76
5:1H:879:G:N1	5:1H:898:C:N3	2.33	0.76
27:1J:101:A:OP2	58:1J:311:HOH:O	2.03	0.76
8:32:98:GLU:OE2	8:32:103:ASN:ND2	2.18	0.76
9:4E:45:PHE:CE2	9:4E:47:LYS:HD2	2.21	0.76
3:2K:16:C:OP2	3:2K:17:C:N4	2.17	0.76
5:1H:2058:A:OP1	58:1H:4395:HOH:O	2.04	0.76
1:1G:407:G:OP1	8:32:115:ARG:NH2	2.18	0.76
33:61:3:VAL:HG12	33:61:38:LEU:HA	1.68	0.76
46:H8:62:PRO:C	46:H8:64:GLY:HA2	2.06	0.76
1:1G:456:C:H42	1:1G:476:G:H1	1.33	0.76
1:13:505:G:N7	58:13:1883:HOH:O	2.17	0.76
2:3L:71:G:HO2'	5:14:1851:U:HO2'	1.32	0.76
5:14:1794:U:H2'	5:14:1795:C:H6	1.49	0.76
29:21:116:VAL:HG11	29:21:138:PRO:HB3	1.67	0.76
2:1L:53:G:N2	2:1L:61:C:N3	2.33	0.76
2:3K:6:G:N2	2:3K:67:C:O2	2.15	0.76
5:1H:2593:U:O4	58:1H:3691:HOH:O	2.03	0.76
45:G8:76:CYS:O	45:G8:78:ALA:N	2.19	0.76
1:1G:588:G:H1	1:1G:651:C:H42	1.31	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2419:U:H5'	53:O8:23:THR:HG21	1.67	0.76
1:13:974:A:OP2	18:5I:41:ARG:NH1	2.19	0.76
3:2K:47:7MG:H81	3:2K:48:U:H5	1.51	0.76
32:51:4:ILE:HG21	32:51:6:ARG:NH1	2.01	0.76
14:1I:58:ASP:OD1	58:1I:201:HOH:O	2.04	0.75
30:31:7:TYR:O	30:31:22:ALA:N	2.17	0.75
45:G8:76:CYS:SG	45:G8:97:ARG:HG2	2.26	0.75
1:1G:803:G:OP1	58:1G:1722:HOH:O	2.04	0.75
1:13:1286:A:C8	1:13:1287:A:H4'	2.21	0.75
3:2L:24:C:H2'	3:2L:25:U:H6	1.50	0.75
5:14:1970:A:OP2	58:14:3592:HOH:O	2.03	0.75
5:1H:808:G:O3'	58:1H:3793:HOH:O	2.03	0.75
45:G8:100:ALA:HB1	45:G8:101:LYS:HB2	1.67	0.75
5:14:2878:U:O4	58:14:4107:HOH:O	2.05	0.75
40:B8:26:ASP:HB3	40:B8:92:GLY:H	1.51	0.75
45:G8:87:LYS:H	45:G8:94:LYS:HG2	1.50	0.75
46:H8:4:ARG:HB3	46:H8:58:VAL:HG23	1.66	0.75
2:3L:9:A:H8	2:3L:11:C:H41	1.34	0.75
5:14:193:U:OP2	58:14:3789:HOH:O	2.04	0.75
5:14:1327:C:OP2	58:14:3722:HOH:O	2.02	0.75
5:1H:598:G:H5'	36:78:11:GLY:HA3	1.69	0.75
5:1H:2032:G:H21	29:21:146:THR:HG23	1.50	0.75
1:13:144:G:N2	1:13:178:C:O2	2.17	0.75
27:16:40:U:H1'	27:16:45:A:H61	1.52	0.75
1:13:153:C:H42	1:13:168:G:H1	1.33	0.75
5:14:323:G:HO2'	5:14:1205:U:H3	1.33	0.75
5:14:2298:A:H61	5:14:2318:G:H2'	1.51	0.75
17:4I:88:ARG:HH11	17:4I:88:ARG:HG3	1.52	0.75
1:13:201:C:N4	1:13:209:U:O2	2.19	0.75
8:3E:83:SER:HA	8:3E:89:THR:HG23	1.67	0.75
2:3K:3:C:N4	2:3K:70:G:O6	2.20	0.75
5:1H:999:U:OP2	58:1H:4096:HOH:O	2.03	0.75
36:78:50:ARG:HH21	36:78:50:ARG:HG3	1.52	0.75
55:Q8:48:PHE:HE1	55:Q8:53:PRO:HD3	1.50	0.75
1:1G:371:G:H1	1:1G:390:C:H42	1.35	0.75
1:1G:438:G:H4'	8:32:123:HIS:HD2	1.50	0.75
7:22:35:GLU:OE2	7:22:59:ARG:NH2	2.20	0.75
5:1H:2469:A:H61	5:1H:2481:G:H1'	1.50	0.75
2:3L:5:G:H2'	2:3L:6:G:H8	1.50	0.75
5:1H:416:C:N4	5:1H:2407:G:O6	2.19	0.75
5:1H:2271:G:N7	58:1H:4406:HOH:O	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:963:G:H1	1:13:972:C:H42	1.33	0.74
6:1E:111:ARG:HG2	6:1E:111:ARG:HH11	1.50	0.74
5:1H:993:G:OP1	41:C8:50:ARG:NH2	2.20	0.74
5:14:863:A:H2'	5:14:864:G:H8	1.50	0.74
5:1H:2878:U:O4	58:1H:4411:HOH:O	2.05	0.74
35:68:2:ILE:HD12	35:68:6:THR:HG21	1.67	0.74
8:32:119:GLN:O	8:32:123:HIS:ND1	2.19	0.74
1:13:406:G:N7	1:13:495:A:O2'	2.19	0.74
5:14:1778:U:H2'	5:14:1784:A:N6	2.02	0.74
6:1E:67:THR:HG21	6:1E:155:LEU:HG	1.69	0.74
24:BI:71:THR:HG22	24:BI:72:LEU:H	1.50	0.74
5:1H:1165:U:H2'	5:1H:1166:C:C6	2.22	0.74
5:1H:1064:C:N4	5:1H:1070:A:OP1	2.21	0.74
49:K8:47:ASN:O	49:K8:49:LYS:N	2.18	0.74
1:13:601:C:H2'	1:13:602:A:C8	2.21	0.74
2:3L:5:G:H2'	2:3L:6:G:C8	2.23	0.74
5:14:2373:G:N2	5:14:2380:C:O2	2.17	0.74
15:2I:21:ILE:HG12	15:2I:30:VAL:HG12	1.69	0.74
24:BI:53:LEU:HD23	24:BI:100:ILE:HG22	1.70	0.74
5:1H:654(D):G:N2	5:1H:654(R):C:N3	2.35	0.74
5:1H:2199:A:H5'	5:1H:2205:C:OP2	1.86	0.74
30:31:8:GLN:H	30:31:8:GLN:CD	1.90	0.74
1:1G:545:C:OP1	8:32:61:LYS:NZ	2.20	0.74
1:1G:673:G:H2'	1:1G:674:G:C8	2.22	0.74
1:1G:827:U:H3	1:1G:872:A:H62	1.36	0.74
1:13:737:A:H2'	1:13:738:C:C6	2.22	0.74
2:3L:20:H2U:O2'	2:3L:21:A:O5'	2.04	0.74
5:14:2689:U:OP2	5:14:2719:G:N2	2.20	0.74
5:1H:1900:A:H5'	5:1H:1900:A:C8	2.22	0.74
31:41:135:LEU:HD23	31:41:140:ILE:HD11	1.69	0.74
55:Q8:39:LYS:O	55:Q8:40:GLU:HB3	1.87	0.74
1:1G:458:C:N3	1:1G:474:G:N2	2.36	0.74
1:1G:1157:A:H61	1:1G:1178:G:H21	1.31	0.74
2:3L:6:G:H22	2:3L:67:C:H2'	1.52	0.74
5:14:450:G:O6	58:14:3808:HOH:O	2.04	0.74
2:3K:10:G:H22	2:3K:25:C:H42	1.33	0.74
5:1H:259:G:H21	5:1H:621:A:H8	1.33	0.74
5:1H:450:G:O6	58:1H:3979:HOH:O	2.06	0.74
5:1H:606:U:OP2	30:31:104:LYS:NZ	2.20	0.74
5:1H:1316:U:H2'	5:1H:1317:A:H8	1.52	0.74
5:1H:1386:C:H2'	5:1H:1387:C:C6	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1857:G:N7	58:1H:4644:HOH:O	2.20	0.74
5:1H:1899:G:H22	5:1H:1902:C:H41	1.36	0.74
5:1H:2255:G:OP2	58:1H:4248:HOH:O	2.05	0.74
48:J8:91:LYS:O	48:J8:94:LEU:N	2.18	0.74
55:Q8:23:VAL:HG13	55:Q8:46:ARG:HG3	1.70	0.74
2:3L:72:C:H3'	2:3L:73:A:H5"	1.68	0.74
5:14:2134:A:H62	5:14:2157:G:H1'	1.52	0.74
47:I8:53:MET:HG3	47:I8:59:LEU:HD23	1.68	0.74
49:K8:4:SER:HA	49:K8:6:VAL:HG22	1.70	0.74
55:Q8:50:LEU:C	55:Q8:52:LYS:H	1.90	0.74
1:1G:1004:A:OP1	1:1G:1024:G:N1	2.20	0.74
4:4L:18:G:O2'	1:1G:1401:G:OP1	2.05	0.74
5:14:1729:A:H2'	5:14:1731:G:H22	1.52	0.74
9:4E:91:LEU:HD12	9:4E:120:THR:HG22	1.70	0.74
5:1H:1153:C:OP2	58:1H:4100:HOH:O	2.05	0.74
31:41:37:VAL:HG22	31:41:159:VAL:HG12	1.69	0.74
1:1G:975:A:H4'	1:1G:976:G:H5"	1.69	0.74
1:1G:1014:A:H2'	1:1G:1015:A:C8	2.23	0.74
6:12:18:GLY:O	6:12:204:ASN:ND2	2.21	0.74
5:14:2528:U:O2'	5:14:2530:A:OP1	2.05	0.74
1:1G:60:A:N6	1:1G:110:C:N3	2.35	0.74
1:1G:957:U:H1'	1:1G:960:U:H5	1.53	0.74
1:13:1348:U:H2'	1:13:1349:A:H8	1.53	0.73
5:14:1647:G:OP2	58:14:3710:HOH:O	2.06	0.73
17:4I:10:PRO:HB2	17:4I:18:ALA:HB1	1.68	0.73
55:Q8:53:PRO:HA	55:Q8:55:ALA:N	2.03	0.73
1:1G:578:C:OP1	58:1G:1725:HOH:O	2.05	0.73
14:1I:6:ILE:HG22	14:1I:98:ILE:HG13	1.69	0.73
2:1L:51:U:H3	2:1L:63:G:H1	1.33	0.73
21:8I:76:LEU:HD11	21:8I:79:SER:HB3	1.68	0.73
55:Q8:57:ARG:HD3	55:Q8:57:ARG:N	2.04	0.73
1:1G:156:G:N2	1:1G:165:C:O2	2.20	0.73
1:1G:1028:C:H42	1:1G:1033:G:H1	1.36	0.73
8:32:173:TRP:CZ3	8:32:193:ASP:HB3	2.23	0.73
16:3I:47:LYS:HA	16:3I:49:ASN:H	1.52	0.73
5:1H:376:C:OP2	58:1H:3775:HOH:O	2.07	0.73
30:31:29:ASN:H	30:31:112:MET:CE	1.99	0.73
46:H8:129:SER:H	46:H8:161:VAL:HG11	1.53	0.73
5:1H:10:G:N2	5:1H:2801:A:O2'	2.21	0.73
5:1H:452:G:OP2	58:1H:3974:HOH:O	2.06	0.73
5:1H:2249:U:O4	58:1H:3743:HOH:O	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C8:92:ARG:O	41:C8:94:ASN:N	2.21	0.73
5:14:2705:A:OP2	58:14:3684:HOH:O	2.06	0.73
15:2I:79:SER:OG	15:2I:106:LYS:NZ	2.20	0.73
21:8I:22:LEU:HD11	21:8I:39:SER:HB3	1.69	0.73
5:1H:1496:A:H8	5:1H:1577:C:HO2'	1.36	0.73
1:1G:1411:C:H2'	1:1G:1412:C:H6	1.54	0.73
5:1H:1479:G:N7	5:1H:1510:A:N6	2.37	0.73
5:1H:2056:G:OP2	58:1H:3628:HOH:O	2.05	0.73
36:78:39:LYS:HG3	36:78:45:LEU:HD22	1.70	0.73
5:1H:2134:A:OP2	5:1H:2157:G:N2	2.22	0.73
55:Q8:48:PHE:CE1	55:Q8:53:PRO:HD3	2.24	0.73
1:13:886:G:N7	58:13:1937:HOH:O	2.22	0.73
5:14:5:A:H2'	5:14:6:A:H8	1.54	0.73
5:14:2228:G:O6	58:14:4163:HOH:O	2.03	0.73
5:1H:732:C:OP2	58:1H:4186:HOH:O	2.07	0.73
5:1H:1315:C:OP2	58:1H:4040:HOH:O	2.06	0.73
29:21:38:THR:HG23	29:21:41:LYS:H	1.54	0.73
31:41:47:LYS:HD3	31:41:81:LYS:HB2	1.71	0.73
51:M8:38:LYS:NZ	51:M8:44:THR:OG1	2.21	0.73
1:1G:377:G:H1	1:1G:386:C:H42	1.37	0.73
1:1G:474:G:H2'	1:1G:475:G:C8	2.24	0.73
8:32:173:TRP:CD1	8:32:174:LEU:HG	2.24	0.73
1:13:1129:C:N4	1:13:1139:G:H1	1.87	0.73
1:13:1297:C:OP1	17:4I:13:LYS:NZ	2.22	0.73
5:14:453:C:OP1	58:14:3810:HOH:O	2.06	0.73
5:14:2720:U:H3	5:14:2873:A:H2	1.36	0.73
5:1H:330:A:HO2'	5:1H:331:A:H8	1.37	0.73
5:1H:881:G:O6	5:1H:895:U:N3	2.20	0.73
5:1H:1021:A:H8	5:1H:1022:G:H5"	1.54	0.73
29:21:82:ARG:O	29:21:84:PHE:N	2.21	0.73
1:1G:590:C:O2	1:1G:649:G:N2	2.20	0.73
5:14:1824:G:N7	58:14:3985:HOH:O	2.21	0.72
5:14:2115:G:O2'	5:14:2171:A:N6	2.21	0.72
5:1H:878:A:N6	5:1H:899:A:O2'	2.22	0.72
5:1H:1171:G:N2	5:1H:1178:C:N3	2.32	0.72
5:1H:1569:A:H5'	28:11:61:LEU:HD21	1.70	0.72
1:1G:1106:G:H5"	7:22:172:ARG:HG2	1.71	0.72
5:14:1936:A:OP1	58:14:3629:HOH:O	2.07	0.72
5:1H:860:U:H5	5:1H:917:A:H2	1.33	0.72
34:58:96:GLU:O	34:58:98:VAL:N	2.18	0.72
44:F8:36:LYS:HG2	44:F8:54:VAL:HB	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:H8:10:ARG:HG3	46:H8:36:LYS:HB3	1.72	0.72
1:13:983:A:OP1	18:5I:3:ARG:NH2	2.22	0.72
1:13:1218:C:H2'	1:13:1219:U:C6	2.23	0.72
12:7E:42:GLU:HG3	12:7E:109:ILE:HD12	1.71	0.72
5:1H:1388:G:H2'	5:1H:1389:G:H8	1.54	0.72
5:14:2642:G:N2	5:14:2772:C:O2	2.19	0.72
5:1H:450:G:O6	58:1H:3982:HOH:O	2.06	0.72
35:68:112:MET:HA	35:68:115:VAL:HG22	1.69	0.72
46:H8:19:ARG:NH1	46:H8:84:GLU:O	2.22	0.72
1:1G:56:U:H2'	1:1G:57:G:C8	2.25	0.72
6:12:19:HIS:HE1	6:12:206:ASP:HB2	1.54	0.72
5:14:2000:G:OP2	58:14:4252:HOH:O	2.07	0.72
6:1E:69:LEU:HB3	6:1E:162:ILE:HG22	1.72	0.72
5:1H:1786:A:H2	5:1H:2606:C:H1'	1.53	0.72
39:A8:27:SER:HA	39:A8:88:ASP:HB3	1.71	0.72
46:H8:13:GLU:HB3	46:H8:18:LEU:HD11	1.71	0.72
7:22:76:VAL:HG21	7:22:103:VAL:HG11	1.71	0.72
1:13:1177:G:OP1	1:13:1177:G:H4'	1.89	0.72
14:1I:40:LEU:HB2	14:1I:69:ASN:HB2	1.69	0.72
5:1H:1364:G:OP2	48:J8:2:SER:OG	2.08	0.72
5:1H:1607:C:O2	58:1H:4534:HOH:O	2.07	0.72
5:1H:2758:A:OP2	58:1H:4680:HOH:O	2.06	0.72
1:13:1060:C:C5	7:2E:2:GLY:HA3	2.25	0.72
1:13:1305:G:O2'	1:13:1331:G:N2	2.22	0.72
5:14:2210:G:H3'	5:14:2211:G:C2	2.24	0.72
15:2I:99:GLN:HA	15:2I:105:VAL:HG11	1.69	0.72
5:1H:1327:C:OP2	58:1H:3650:HOH:O	2.06	0.72
34:58:73:THR:HB	34:58:82:LEU:HD11	1.72	0.72
5:14:1828:G:OP1	58:14:3581:HOH:O	2.07	0.72
5:1H:1153:C:OP2	58:1H:4099:HOH:O	2.07	0.72
5:1H:1856:G:OP2	58:1H:4646:HOH:O	2.07	0.72
5:14:39:C:H2'	5:14:40:C:C6	2.25	0.72
12:7E:87:SER:HB2	12:7E:93:VAL:HB	1.72	0.72
5:1H:1601:G:N7	58:1H:4122:HOH:O	2.22	0.72
5:1H:1803:A:O2'	28:11:259:THR:HG21	1.90	0.72
1:1G:979:C:H3'	1:1G:980:C:H5"	1.72	0.72
1:13:1226:C:O2'	17:4I:111:LYS:NZ	2.23	0.72
28:11:10:THR:OG1	28:11:13:ARG:HB2	1.90	0.72
3:2L:24:C:H2'	3:2L:25:U:C6	2.25	0.71
33:61:29:TYR:HD2	33:61:30:LEU:HD23	1.52	0.71
36:78:19:VAL:HB	36:78:27:HIS:HB2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:779:U:O4	58:14:4266:HOH:O	2.03	0.71
13:8E:26:VAL:HG13	13:8E:61:ALA:HB3	1.70	0.71
5:1H:1516:U:H2'	5:1H:1517:G:H8	1.55	0.71
31:41:65:GLY:HA2	51:M8:7:PRO:HG2	1.72	0.71
1:1G:631:G:H3'	1:1G:632:A:H8	1.55	0.71
23:AI:5:LEU:HD13	23:AI:10:PHE:HD1	1.55	0.71
5:1H:1056:G:H21	5:1H:1103:A:H62	1.38	0.71
1:1G:895:G:H1	1:1G:904:C:H42	1.38	0.71
1:1G:1513:A:H2'	1:1G:1514:C:C6	2.25	0.71
6:12:75:LYS:HA	6:12:78:GLN:HB2	1.72	0.71
32:51:83:TYR:HB2	32:51:134:SER:HA	1.70	0.71
45:G8:38:ILE:HD11	45:G8:64:GLU:HG3	1.72	0.71
1:1G:41:G:H2'	1:1G:42:G:C8	2.25	0.71
1:1G:957:U:O2'	1:1G:959:A:N7	2.21	0.71
1:1G:1157:A:N6	1:1G:1178:G:H21	1.88	0.71
1:13:963:G:N3	14:1I:55:LYS:NZ	2.38	0.71
5:14:801:G:OP2	58:14:3967:HOH:O	2.08	0.71
6:1E:5:ILE:HG13	6:1E:6:THR:HG22	1.73	0.71
19:6I:17:ARG:HD3	19:6I:26:GLU:HG3	1.71	0.71
2:3K:5:G:N2	2:3K:68:C:N3	2.38	0.71
5:1H:1253:A:C8	58:1H:3734:HOH:O	2.43	0.71
28:11:182:LEU:H	28:11:272:ALA:HB3	1.55	0.71
30:31:179:GLU:OE1	30:31:179:GLU:N	2.23	0.71
52:N8:30:LEU:HD23	52:N8:41:PRO:HA	1.72	0.71
1:13:1240:U:OP2	11:6E:116:ALA:N	2.23	0.71
2:3L:6:G:N2	2:3L:67:C:H2'	2.06	0.71
2:3L:34:G:N7	1:1G:1382:C:O2'	2.21	0.71
5:14:2645:G:H3'	5:14:2646:C:H5'	1.72	0.71
9:4E:11:ILE:HD13	9:4E:33:VAL:HG22	1.73	0.71
4:4K:24:A:H2'	4:4K:25:A:C8	2.26	0.71
1:1G:560:U:O2'	1:1G:561:U:OP2	2.07	0.71
1:13:1256:A:OP2	7:2E:26:LYS:NZ	2.22	0.71
32:51:4:ILE:HD13	32:51:4:ILE:H	1.54	0.71
32:51:4:ILE:HG13	32:51:6:ARG:NE	2.06	0.71
38:98:91:GLN:O	38:98:91:GLN:NE2	2.22	0.71
5:14:1174:A:N6	5:14:1176:G:O2'	2.23	0.71
5:14:1977:A:OP2	58:14:4315:HOH:O	2.08	0.71
8:3E:90:GLY:HA3	8:3E:204:ILE:HD11	1.73	0.71
5:1H:2636:U:OP1	29:21:79:ARG:HA	1.89	0.71
1:1G:243:A:H4'	1:1G:244:U:O5'	1.90	0.71
8:32:26:CYS:HA	8:32:31:CYS:CB	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:877:C:OP1	12:7E:88:LYS:NZ	2.23	0.71
1:13:1497:G:H2'	1:13:1498:U:H5'	1.72	0.71
5:14:248:G:OP1	58:14:4218:HOH:O	2.08	0.71
5:14:1022:G:O2'	5:14:1023:U:OP2	2.08	0.71
5:1H:760:G:OP1	58:1H:3881:HOH:O	2.08	0.71
34:58:67:LEU:HA	34:58:87:LEU:HD12	1.72	0.71
37:88:82:ARG:HD2	37:88:82:ARG:N	2.05	0.71
55:Q8:7:HIS:ND1	55:Q8:7:HIS:O	2.22	0.71
1:1G:666:G:OP2	1:1G:725:G:N2	2.23	0.71
6:12:67:THR:HG21	6:12:155:LEU:HG	1.73	0.71
1:13:827:U:H5	1:13:872:A:N1	1.88	0.71
5:1H:155:C:H42	5:1H:171:G:H1	1.36	0.71
5:1H:2576:G:OP1	58:1H:3850:HOH:O	2.09	0.71
31:41:66:GLN:OE1	31:41:98:ARG:NH1	2.23	0.71
34:58:12:ARG:HH21	34:58:14:VAL:HG22	1.56	0.71
41:C8:69:CYS:SG	41:C8:79:PHE:HD2	2.14	0.71
1:13:1263:C:H2'	1:13:1264:C:H6	1.56	0.70
5:1H:2657:A:O3'	32:51:160:LYS:NZ	2.24	0.70
1:1G:1423:G:H2'	1:1G:1424:C:H6	1.56	0.70
1:13:504:C:OP1	58:13:1881:HOH:O	2.07	0.70
11:6E:94:ARG:O	11:6E:97:GLN:HB3	1.91	0.70
5:1H:392:C:OP2	58:1H:3773:HOH:O	2.08	0.70
2:1L:58:A:O2'	2:1L:61:C:N4	2.24	0.70
5:1H:442:G:H1'	30:31:48:THR:HG21	1.73	0.70
5:1H:2308:G:N1	5:1H:2311:A:H2	1.84	0.70
38:98:12:ARG:HG2	38:98:12:ARG:HH11	1.55	0.70
1:13:1145:C:H4'	1:13:1146:A:H5'	1.73	0.70
5:14:2689:U:P	5:14:2719:G:H22	2.14	0.70
5:1H:2000:G:N7	58:1H:4664:HOH:O	2.25	0.70
38:98:97:VAL:HG22	38:98:114:VAL:HG22	1.71	0.70
1:1G:1411:C:H2'	1:1G:1412:C:C6	2.27	0.70
1:13:1321:C:H3'	1:13:1322:C:H5"	1.73	0.70
5:14:882:G:H22	5:14:894:C:H42	1.37	0.70
5:1H:1061:U:H4'	5:1H:1070:A:H1'	1.72	0.70
5:1H:2849:U:OP2	40:B8:95:ARG:NH1	2.24	0.70
49:K8:17:SER:HB3	49:K8:67:LYS:HE3	1.73	0.70
1:13:619:U:H3	8:3E:134:ASP:HB2	1.57	0.70
5:14:387:U:OP1	58:14:4217:HOH:O	2.08	0.70
5:14:1717:G:H1	5:14:1742:C:H42	1.39	0.70
5:14:2528:U:O3'	5:14:2529:G:N2	2.20	0.70
5:1H:1465:G:H2'	5:1H:1466:G:H8	1.54	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:46:A:H2'	27:1J:47:C:C6	2.26	0.70
39:A8:106:ARG:NH2	39:A8:107:GLU:HB2	2.05	0.70
1:13:345:C:O2'	1:13:346:G:N2	2.25	0.70
5:14:2131:G:H5"	5:14:2158:A:H61	1.56	0.70
6:1E:8:LYS:HG2	6:1E:9:GLU:H	1.56	0.70
9:4E:100:VAL:HG22	9:4E:118:ILE:HG22	1.73	0.70
2:3K:20:H2U:H61	2:3K:20:H2U:H5"	1.72	0.70
5:1H:862:G:OP2	58:1H:4089:HOH:O	2.08	0.70
5:14:1022:G:H22	5:14:1142(A):A:H2	1.40	0.70
5:14:2210:G:O5'	5:14:2211:G:N2	2.21	0.70
6:1E:53:ARG:NH2	6:1E:198:ASP:O	2.21	0.70
29:21:77:ILE:O	29:21:79:ARG:N	2.24	0.70
37:88:66:ILE:O	37:88:104:PHE:N	2.23	0.70
39:A8:26:LEU:HD12	39:A8:39:ILE:HD11	1.72	0.70
5:14:2327:A:H2'	5:14:2328:A:C8	2.27	0.70
23:AI:41:VAL:HG21	23:AI:67:VAL:HG12	1.74	0.70
5:1H:2074:U:P	58:1H:3696:HOH:O	2.48	0.70
39:A8:52:SER:HB2	39:A8:55:ALA:H	1.56	0.70
46:H8:126:VAL:HA	46:H8:164:ALA:H	1.57	0.70
5:14:1971:A:OP1	58:14:3589:HOH:O	2.10	0.70
5:14:2191:G:O2'	5:14:2192:G:OP1	2.10	0.70
5:1H:187:G:N7	58:1H:4591:HOH:O	2.25	0.70
1:13:973:G:H3'	1:13:974:A:H5"	1.74	0.69
5:1H:217:G:OP2	58:1H:3796:HOH:O	2.09	0.69
5:1H:625:G:O6	36:78:107:LYS:NZ	2.21	0.69
5:1H:1253:A:N7	58:1H:3731:HOH:O	2.25	0.69
5:1H:1332:G:N2	5:1H:1610:A:C8	2.60	0.69
1:1G:938:A:N3	1:1G:1376:U:O2'	2.23	0.69
5:14:1970:A:OP1	58:14:3589:HOH:O	2.09	0.69
45:G8:29:GLU:HB3	45:G8:38:ILE:HG23	1.74	0.69
46:H8:108:PRO:HB2	46:H8:112:ARG:HA	1.74	0.69
55:Q8:59:LYS:H	55:Q8:59:LYS:HD2	1.57	0.69
1:13:1423:G:OP1	35:68:49:ARG:NH2	2.26	0.69
5:14:31:C:OP1	58:14:3962:HOH:O	2.10	0.69
5:14:67:U:H2'	5:14:68:G:H8	1.57	0.69
5:1H:1164:G:H2'	5:1H:1165:U:C6	2.26	0.69
5:1H:2489:G:OP2	58:1H:4345:HOH:O	2.10	0.69
38:98:12:ARG:HD3	38:98:16:HIS:CG	2.26	0.69
1:1G:1300:G:O2'	1:1G:1301:U:O5'	2.10	0.69
6:12:137:ARG:NH2	6:12:141:GLU:OE1	2.25	0.69
5:1H:1434:A:H61	5:1H:1558:A:N6	1.90	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:698:C:O2'	5:14:734:A:N6	2.26	0.69
8:3E:160:GLN:NE2	8:3E:160:GLN:O	2.25	0.69
5:1H:338:G:OP2	58:1H:4286:HOH:O	2.09	0.69
46:H8:31:ARG:NH1	46:H8:94:GLU:OE2	2.25	0.69
1:1G:785:G:N7	58:1G:1802:HOH:O	2.25	0.69
1:1G:1069:C:O2'	1:1G:1192:C:O2	2.09	0.69
8:32:14:ARG:HH11	8:32:14:ARG:HG3	1.57	0.69
1:13:209:U:H5'	1:13:210:U:OP2	1.92	0.69
17:4I:23:TYR:HD2	17:4I:67:GLU:HA	1.58	0.69
5:1H:2111:C:O2'	5:1H:2119:A:OP1	2.09	0.69
5:1H:2447:G:OP2	58:1H:3918:HOH:O	2.10	0.69
5:1H:2685:G:O6	58:1H:4207:HOH:O	2.10	0.69
1:1G:1294:G:H2'	1:1G:1295:G:H8	1.57	0.69
5:14:848:G:H2'	5:14:849:A:C8	2.26	0.69
5:1H:256:A:OP2	58:1H:4653:HOH:O	2.11	0.69
5:1H:1349:A:OP1	58:1H:4251:HOH:O	2.10	0.69
37:88:12:GLN:HG2	37:88:73:PRO:HD2	1.74	0.69
39:A8:37:ALA:HB2	39:A8:101:LEU:HD21	1.73	0.69
1:1G:192:U:H2'	1:1G:193:C:H6	1.57	0.69
1:13:1122:U:O4	1:13:1123:A:N6	2.26	0.69
5:14:355:G:H2'	5:14:356:G:H8	1.57	0.69
9:4E:142:LEU:O	9:4E:143:ARG:NH1	2.25	0.69
5:1H:270(E):G:H1	5:1H:270(U):C:H42	1.39	0.69
43:E8:70:TYR:HD1	43:E8:70:TYR:H	1.40	0.69
55:Q8:32:LEU:HG	55:Q8:33:ASN:N	2.08	0.69
55:Q8:34:TRP:CZ3	55:Q8:39:LYS:HB2	2.27	0.69
7:22:3:ASN:HD22	7:22:3:ASN:H	1.41	0.69
1:13:1062:U:H2'	1:13:1063:C:C6	2.28	0.69
5:14:395:U:H2'	5:14:396:G:N7	2.08	0.69
5:14:1327:C:OP2	58:14:3717:HOH:O	2.11	0.69
5:14:2324:C:H5"	5:14:2325:G:H5'	1.75	0.69
5:1H:731:C:H5"	58:1H:3879:HOH:O	1.92	0.69
5:1H:945:A:OP1	58:1H:4242:HOH:O	2.11	0.69
5:1H:1006:C:OP1	58:1H:4298:HOH:O	2.10	0.69
5:1H:1871:A:H2'	5:1H:1872:A:C8	2.28	0.69
5:1H:639:U:O2'	5:1H:640:C:H5'	1.92	0.69
55:Q8:54:GLU:O	55:Q8:56:GLU:N	2.25	0.69
7:22:70:VAL:HG12	7:22:72:LYS:H	1.58	0.69
5:1H:646:A:H2'	5:1H:647:G:O4'	1.94	0.68
5:1H:1377:G:OP2	58:1H:4252:HOH:O	2.10	0.68
5:1H:2058:A:N6	58:1H:3623:HOH:O	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:101:ARG:O	29:21:201:THR:OG1	2.11	0.68
45:G8:90:LEU:HD23	45:G8:91:GLU:HA	1.74	0.68
1:13:262:A:H2'	1:13:263:A:H8	1.58	0.68
1:13:342:C:H2'	1:13:343:U:O4'	1.93	0.68
5:14:34:C:O2'	5:14:35:G:OP1	2.11	0.68
5:14:2343:C:O2'	5:14:2373:G:O2'	2.05	0.68
17:4I:23:TYR:HB3	17:4I:67:GLU:HB2	1.74	0.68
5:1H:1855:G:N7	58:1H:4448:HOH:O	2.24	0.68
5:1H:1899:G:H22	5:1H:1902:C:N4	1.91	0.68
1:1G:411:A:H62	1:1G:413:G:H21	1.41	0.68
6:12:5:ILE:HA	6:12:221:LEU:HD21	1.74	0.68
5:14:323:G:O2'	5:14:1205:U:N3	2.25	0.68
5:14:1386:C:OP2	5:14:1396:U:H5	1.76	0.68
5:14:2074:U:OP1	58:14:3511:HOH:O	2.11	0.68
5:14:2287:A:H62	5:14:2344:U:H3	1.41	0.68
5:1H:1021:A:H62	5:1H:1141:U:H3	1.38	0.68
27:1J:100:G:O5'	58:1J:309:HOH:O	2.10	0.68
40:B8:26:ASP:HB2	40:B8:91:ARG:HA	1.74	0.68
45:G8:30:VAL:HG12	45:G8:32:PRO:HD3	1.76	0.68
5:14:774:A:H2	5:14:787:U:HO2'	1.41	0.68
13:8E:46:ALA:HB2	13:8E:74:ILE:HG23	1.76	0.68
5:1H:122:G:N7	58:1H:4261:HOH:O	2.25	0.68
5:1H:1516:U:H2'	5:1H:1517:G:C8	2.29	0.68
5:1H:1534:G:H2'	5:1H:1535:U:H4'	1.75	0.68
5:1H:1849:G:OP2	58:1H:4443:HOH:O	2.10	0.68
5:1H:2502:G:N7	58:1H:3920:HOH:O	2.26	0.68
32:51:149:ARG:NH1	32:51:167:GLU:OE2	2.26	0.68
1:13:660:G:H2'	1:13:661:G:H8	1.58	0.68
1:13:738:C:OP1	10:5E:2:ARG:NH1	2.26	0.68
1:13:1305:G:N2	1:13:1331:G:H2'	2.09	0.68
5:14:1329:U:H5"	5:14:1330:C:H5	1.58	0.68
5:14:1857:G:O2'	5:14:1885:A:N6	2.26	0.68
5:1H:120:U:OP2	58:1H:4263:HOH:O	2.11	0.68
31:41:161:THR:HG23	31:41:163:ALA:H	1.59	0.68
46:H8:63:ASP:HB2	46:H8:65:GLN:HG3	1.74	0.68
53:O8:32:ASN:OD1	53:O8:32:ASN:N	2.26	0.68
6:1E:11:LEU:HD13	6:1E:217:ARG:HH12	1.59	0.68
11:6E:95:ARG:HH21	11:6E:99:LEU:HD11	1.58	0.68
5:1H:581:C:OP1	41:C8:33:ARG:HG3	1.94	0.68
5:1H:1331:A:O3'	58:1H:4043:HOH:O	2.10	0.68
5:1H:1354:A:H4'	28:11:38:LYS:HE3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2061:G:H5'	58:1H:3638:HOH:O	1.94	0.68
35:68:88:ASN:ND2	35:68:92:GLU:H	1.92	0.68
1:1G:620:C:OP1	58:1G:1770:HOH:O	2.11	0.68
1:1G:888:G:HO2'	1:1G:1488:G:HO2'	1.38	0.68
7:22:182:ILE:HG22	7:22:203:PHE:HA	1.73	0.68
1:13:129(A):G:H4'	1:13:130:A:H5"	1.76	0.68
5:14:1434:A:H61	5:14:1558:A:H62	1.39	0.68
43:E8:97:LYS:HE2	43:E8:99:ARG:NH2	2.08	0.68
48:J8:92:LYS:HA	48:J8:95:LEU:HB2	1.75	0.68
1:1G:352:C:O5'	58:1G:1741:HOH:O	2.11	0.68
6:1E:185:ILE:HG22	6:1E:199:TYR:HB2	1.76	0.68
13:8E:121:ARG:NH1	13:8E:122:ALA:O	2.26	0.68
5:1H:761:A:H5"	58:1H:3698:HOH:O	1.94	0.68
5:1H:929:G:O6	58:1H:3779:HOH:O	2.11	0.68
5:1H:2392:A:H2	5:1H:2424:C:H42	1.42	0.68
5:1H:2759:G:OP2	58:1H:4675:HOH:O	2.11	0.68
27:1J:11:C:OP2	27:1J:12:C:N4	2.20	0.68
37:88:5:ARG:HD3	37:88:5:ARG:N	2.09	0.68
52:N8:42:PRO:HB2	52:N8:43:HIS:ND1	2.08	0.68
1:1G:452:A:O2'	1:1G:453:A:O4'	2.08	0.68
1:1G:1279:A:O2'	1:1G:1282:C:N4	2.27	0.68
7:22:25:GLY:H	7:22:28:GLN:HE22	1.42	0.68
1:13:376:G:O3'	20:7I:5:ARG:NH1	2.25	0.68
5:14:1048:A:N6	5:14:1112:G:O2'	2.21	0.68
5:1H:459:U:H5"	54:P8:40:TRP:CD2	2.28	0.68
5:1H:2127:G:H22	5:1H:2162:G:H1'	1.58	0.68
1:13:1023:G:H3'	1:13:1024:G:H5"	1.76	0.68
5:14:273(C):C:H42	5:14:363(C):G:H1	1.39	0.68
5:14:2392:A:H2	5:14:2424:C:H42	1.41	0.68
5:1H:216:A:H3'	58:1H:3796:HOH:O	1.94	0.68
5:1H:2533:A:OP2	58:1H:4613:HOH:O	2.12	0.68
51:M8:12:ALA:HB3	51:M8:24:THR:HB	1.75	0.68
1:1G:512:U:H2'	1:1G:513:C:H6	1.58	0.68
5:14:881:G:O6	5:14:882:G:N2	2.27	0.67
5:14:1187:G:OP2	58:14:3752:HOH:O	2.12	0.67
5:14:1794:U:H2'	5:14:1795:C:C6	2.28	0.67
13:8E:125:TYR:HD1	13:8E:126:SER:H	1.43	0.67
2:3K:5:G:H22	2:3K:68:C:H42	1.42	0.67
5:1H:1634:A:OP2	58:1H:4403:HOH:O	2.11	0.67
5:1H:2199:A:H5"	5:1H:2205:C:H5	1.59	0.67
22:9I:26:LEU:HD22	22:9I:42:ARG:HH22	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:839:U:OP2	58:1H:3956:HOH:O	2.11	0.67
5:1H:2033:A:H8	58:1H:4172:HOH:O	1.76	0.67
5:1H:2057:A:P	58:1H:3625:HOH:O	2.52	0.67
5:1H:2346:A:O2'	53:O8:24:GLU:OE2	2.12	0.67
5:1H:2593:U:H2'	5:1H:2594:C:C6	2.29	0.67
5:1H:2688:U:H5	5:1H:2720:U:OP2	1.76	0.67
1:1G:957:U:H1'	1:1G:960:U:C5	2.29	0.67
1:1G:1154:G:H2'	1:1G:1155:G:C8	2.28	0.67
1:13:786:G:N7	58:13:2022:HOH:O	2.28	0.67
1:13:1118:C:H1'	1:13:1179:A:C4	2.29	0.67
1:13:1124:G:O2'	1:13:1145:C:N4	2.27	0.67
5:1H:1359:A:H2'	5:1H:1360:A:H5'	1.76	0.67
31:41:37:VAL:HG21	31:41:103:LEU:HD21	1.76	0.67
1:1G:1095:U:P	1:1G:1108:G:H1	2.17	0.67
5:14:1040:C:O2	5:14:1115:G:N2	2.20	0.67
5:14:1828:G:OP1	58:14:3583:HOH:O	2.12	0.67
8:3E:106:TYR:HE2	8:3E:107:ARG:HH11	1.41	0.67
5:1H:586:A:OP2	58:1H:3968:HOH:O	2.12	0.67
5:1H:599:G:N2	5:1H:658:C:O2	2.19	0.67
5:1H:624:C:OP1	58:1H:4469:HOH:O	2.13	0.67
5:1H:817:C:OP2	58:1H:3948:HOH:O	2.11	0.67
1:1G:426:G:OP1	8:32:36:ARG:NH2	2.26	0.67
5:14:1962:C:O2'	5:14:1964:G:OP2	2.13	0.67
9:4E:10:MET:HB2	9:4E:32:VAL:HG22	1.77	0.67
16:3I:66:VAL:HG22	16:3I:67:THR:H	1.59	0.67
5:1H:1520:U:H2'	5:1H:1521:G:O4'	1.95	0.67
5:1H:1605:C:O3'	58:1H:3890:HOH:O	2.12	0.67
5:1H:2062:A:H2'	5:1H:2062:A:N3	2.10	0.67
5:1H:176:G:O2'	5:1H:177:G:H5'	1.95	0.67
5:1H:1406:U:H2'	5:1H:1407:C:C6	2.29	0.67
31:41:35:GLU:HG3	31:41:36:LYS:HB2	1.77	0.67
45:G8:97:ARG:NH1	45:G8:103:GLY:O	2.28	0.67
1:1G:512:U:H2'	1:1G:513:C:C6	2.29	0.67
8:32:55:ALA:O	8:32:59:ARG:HG2	1.94	0.67
5:14:270(W):G:N7	58:14:4350:HOH:O	2.28	0.67
9:4E:8:GLU:OE1	9:4E:63:ARG:NH2	2.27	0.67
19:6I:6:GLU:HA	19:6I:9:GLN:HB2	1.76	0.67
5:1H:229:A:H4'	5:1H:230:U:H5'	1.76	0.67
5:1H:1798:U:C5'	28:11:259:THR:HG22	2.25	0.67
5:1H:2445:G:OP1	30:31:74:ARG:NH2	2.28	0.67
36:78:114:ILE:HD11	36:78:130:PHE:HD2	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A8:89:ARG:HG2	39:A8:89:ARG:O	1.93	0.67
1:1G:561:U:O2'	1:1G:562:C:OP2	2.12	0.67
1:1G:735:C:H2'	1:1G:736:C:H6	1.60	0.67
1:13:598:U:H4'	12:7E:94:TYR:CD2	2.30	0.67
5:1H:2583:G:OP1	58:1H:4711:HOH:O	2.11	0.67
29:21:135:HIS:CD2	29:21:135:HIS:H	2.11	0.67
31:41:77:ILE:HG22	31:41:82:LEU:HD12	1.76	0.67
1:13:674:G:H2'	1:13:675:A:H8	1.58	0.67
1:13:1192:C:OP2	7:2E:4:LYS:NZ	2.28	0.67
1:13:1503:A:N3	4:4K:13:A:N6	2.43	0.67
5:14:30:G:O6	58:14:4168:HOH:O	2.10	0.67
5:14:446:G:OP2	58:14:3913:HOH:O	2.12	0.67
5:14:854:G:H2'	5:14:855:G:C8	2.28	0.67
5:14:2037:G:H2'	5:14:2038:G:C8	2.30	0.67
5:1H:879:G:O6	5:1H:898:C:N4	2.19	0.67
33:61:12:LEU:HG	33:61:19:VAL:HG21	1.77	0.67
34:58:96:GLU:O	34:58:98:VAL:HG12	1.95	0.67
46:H8:163:LEU:HB3	46:H8:165:VAL:H	1.59	0.67
50:L8:7:LYS:HB2	50:L8:34:GLU:HG2	1.75	0.67
1:13:413:G:H22	1:13:428:G:H1'	1.60	0.67
5:14:450:G:O6	58:14:3813:HOH:O	2.12	0.67
5:14:1997:G:OP2	58:14:3650:HOH:O	2.11	0.67
15:2I:12:ARG:HG2	15:2I:14:VAL:HG13	1.76	0.67
1:1G:316:G:OP2	1:1G:351:G:O2'	2.11	0.67
1:1G:978:A:O2'	1:1G:1322:C:N3	2.28	0.67
6:12:178:ARG:NH1	6:12:196:LEU:O	2.27	0.67
1:13:1352:C:OP1	25:1F:3:LYS:NZ	2.19	0.66
5:14:2610:C:O2'	58:14:3940:HOH:O	2.03	0.66
11:6E:5:ARG:CZ	11:6E:7:ALA:HA	2.24	0.66
5:1H:33:U:H4'	5:1H:34:C:OP1	1.93	0.66
5:1H:330:A:O2'	5:1H:331:A:H8	1.77	0.66
5:1H:1525:G:H2'	5:1H:1526:G:C8	2.25	0.66
38:98:41:ALA:O	38:98:44:LEU:N	2.23	0.66
41:C8:92:ARG:HD2	42:D8:11:GLN:HB2	1.76	0.66
1:1G:1213:A:N6	1:1G:1215:G:N3	2.43	0.66
1:13:448:A:OP2	1:13:485:G:N2	2.21	0.66
1:13:649:G:H2'	1:13:650:G:H8	1.59	0.66
16:3I:52:LEU:O	16:3I:54:LYS:NZ	2.27	0.66
21:8I:18:THR:OG1	21:8I:69:LYS:NZ	2.25	0.66
5:1H:248:G:H5'	5:1H:250:G:N7	2.09	0.66
5:1H:547:A:H2'	5:1H:548:A:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:730:C:H3'	58:1H:3699:HOH:O	1.94	0.66
5:1H:2212:A:H1'	5:1H:2215:G:C5	2.30	0.66
5:1H:2632:A:HO2'	5:1H:2811:G:HO2'	1.38	0.66
8:32:199:ASN:HB3	8:32:202:LEU:HG	1.76	0.66
5:14:987:G:O2'	5:14:1000:A:N3	2.23	0.66
44:F8:25:LYS:HG3	44:F8:82:GLN:OE1	1.95	0.66
47:I8:11:ARG:O	47:I8:14:ARG:NH2	2.28	0.66
1:1G:728:A:H2'	1:1G:729:A:C8	2.30	0.66
1:1G:804:U:H5"	1:1G:805:C:OP2	1.94	0.66
1:1G:1469:G:O6	58:1G:1800:HOH:O	2.12	0.66
5:1H:784:A:OP1	58:1H:4003:HOH:O	2.13	0.66
5:1H:973:A:OP2	58:1H:3944:HOH:O	2.11	0.66
5:1H:1405:U:H2'	5:1H:1406:U:C6	2.30	0.66
5:1H:1899:G:N2	5:1H:1902:C:H5	1.93	0.66
5:1H:2074:U:H2'	5:1H:2075:U:C6	2.30	0.66
1:1G:572:A:OP1	58:1G:1743:HOH:O	2.14	0.66
1:1G:1072:G:H2'	1:1G:1073:U:H6	1.59	0.66
5:14:731:C:OP1	58:14:3830:HOH:O	2.14	0.66
11:6E:111:ARG:NH1	11:6E:113:GLU:OE2	2.29	0.66
5:1H:2287:A:H62	5:1H:2344:U:H3	1.40	0.66
47:I8:37:LEU:HD22	47:I8:67:VAL:HG11	1.77	0.66
49:K8:50:ILE:HD12	49:K8:51:ARG:H	1.60	0.66
53:O8:9:LEU:N	53:O8:27:LYS:HA	2.10	0.66
1:13:1346:A:H5"	13:8E:120:ARG:NH1	2.10	0.66
5:14:141:A:H8	5:14:1595:G:H21	1.42	0.66
5:14:1900:A:OP2	58:14:3595:HOH:O	2.13	0.66
16:3I:49:ASN:ND2	16:3I:92:ASP:OD2	2.26	0.66
5:1H:577:G:H1'	58:1H:3788:HOH:O	1.94	0.66
5:1H:607:U:N3	5:1H:621:A:H2	1.90	0.66
39:A8:34:HIS:HB2	39:A8:36:TYR:HE1	1.60	0.66
41:C8:69:CYS:HG	41:C8:79:PHE:HD2	1.41	0.66
6:12:92:TYR:CD1	6:12:151:GLY:HA3	2.31	0.66
5:14:279:C:H42	5:14:361:G:H1	1.41	0.66
5:14:1537:C:H2'	5:14:1538:G:C8	2.31	0.66
14:1I:22:LYS:NZ	14:1I:88:LEU:O	2.27	0.66
16:3I:58:VAL:O	16:3I:65:GLU:HA	1.95	0.66
5:1H:1994:C:OP1	58:1H:4103:HOH:O	2.12	0.66
5:1H:2582:G:OP2	58:1H:3864:HOH:O	2.13	0.66
33:61:110:ASP:HB2	33:61:112:LYS:H	1.61	0.66
1:13:411:A:C4	1:13:413:G:H1'	2.30	0.66
6:1E:21:ARG:HB2	6:1E:39:ILE:HG12	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1E:126:GLU:HA	6:1E:129:GLU:HG2	1.77	0.66
5:1H:761:A:N7	58:1H:4185:HOH:O	2.27	0.66
5:1H:882:G:N2	5:1H:894:C:H42	1.93	0.66
53:O8:10:LEU:HD23	55:Q8:32:LEU:HD22	1.76	0.66
1:1G:179:A:H2'	1:1G:180:U:C6	2.30	0.66
8:32:31:CYS:C	8:32:33:MET:H	1.99	0.66
1:13:74:C:H42	1:13:96:G:H1	1.42	0.66
1:13:591:U:H2'	1:13:592:G:H8	1.61	0.66
5:14:491:G:H2'	5:14:492:A:C8	2.31	0.66
5:14:2291:U:H5"	5:14:2380:C:O2'	1.96	0.66
5:1H:957:A:N1	5:1H:2458:G:H4'	2.11	0.66
5:1H:2359:C:H4'	55:Q8:49:VAL:HG11	1.76	0.66
31:41:64:THR:HG22	31:41:66:GLN:N	2.10	0.66
1:13:1160:G:H22	1:13:1177:G:N2	1.94	0.66
1:13:1304:G:N1	1:13:1332:A:OP2	2.26	0.66
5:14:738:G:O3'	58:14:3825:HOH:O	2.13	0.66
5:14:2239:G:OP2	58:14:3510:HOH:O	2.14	0.66
5:1H:587:C:OP2	36:78:21:ARG:NH2	2.28	0.66
5:1H:1278:A:N7	58:1H:4756:HOH:O	2.27	0.66
40:B8:16:ARG:HE	40:B8:19:LEU:HD11	1.61	0.66
1:1G:1278:U:H5'	1:1G:1279:A:H5'	1.77	0.66
1:13:504:C:OP1	58:13:1885:HOH:O	2.14	0.65
1:13:1194:U:H2'	1:13:1195:C:C6	2.30	0.65
5:14:38:A:H2'	5:14:39:C:C6	2.30	0.65
5:1H:588:U:H2'	5:1H:589:C:C6	2.31	0.65
5:1H:722:A:H2'	5:1H:723:G:C8	2.31	0.65
5:1H:958:U:OP2	37:88:14:ARG:NH1	2.29	0.65
34:58:15:LEU:HD12	34:58:136:GLU:HG2	1.77	0.65
34:58:56:ASN:N	34:58:125:GLY:O	2.15	0.65
55:Q8:18:ALA:O	55:Q8:19:SER:OG	2.12	0.65
5:14:1579:A:H2'	5:14:1580:A:C8	2.32	0.65
5:14:1975:G:OP2	58:14:3625:HOH:O	2.14	0.65
8:3E:30:LYS:CB	8:3E:35:ARG:HE	2.09	0.65
5:1H:1021:A:C8	5:1H:1022:G:H5"	2.30	0.65
5:1H:1658:C:OP1	58:21:401:HOH:O	2.13	0.65
5:1H:2032:G:H21	29:21:146:THR:CG2	2.09	0.65
5:1H:2168:G:OP1	5:1H:2168:G:H4'	1.95	0.65
37:88:51:ARG:NH1	37:88:52:VAL:HG23	2.11	0.65
1:1G:793:U:OP1	58:1G:1801:HOH:O	2.13	0.65
2:3L:37:MIA:S10	2:3L:38:A:H1'	2.37	0.65
5:14:1058:U:H2'	5:14:1059:G:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2273:A:H2'	5:14:2274:A:C8	2.32	0.65
5:1H:298:G:N7	58:1H:4289:HOH:O	2.29	0.65
5:1H:2127:G:H1	5:1H:2162:G:H1'	1.61	0.65
52:N8:42:PRO:O	52:N8:44:THR:HB	1.97	0.65
1:1G:958:A:N3	1:1G:985:C:O2'	2.29	0.65
1:13:17:U:H2'	1:13:18:C:C6	2.32	0.65
1:13:963:G:H21	14:1I:55:LYS:HE2	1.62	0.65
1:13:1301:U:O2'	1:13:1302:U:H5'	1.96	0.65
5:14:30:G:H2'	5:14:31:C:C6	2.32	0.65
5:14:597:U:H2'	5:14:598:G:C8	2.32	0.65
5:14:889:C:H2'	5:14:890:A:H4'	1.79	0.65
5:14:972:G:OP2	5:14:973:A:O2'	2.15	0.65
8:3E:31:CYS:SG	8:3E:32:ALA:N	2.68	0.65
5:1H:265:A:C8	5:1H:266:G:H1'	2.32	0.65
5:1H:1265:A:H3'	52:N8:19:ARG:NH1	2.11	0.65
5:1H:1968:G:OP2	58:1H:4324:HOH:O	2.14	0.65
5:1H:2217:G:O6	58:1H:4337:HOH:O	2.13	0.65
1:1G:971:G:N2	1:1G:1363:A:OP2	2.27	0.65
1:13:223:U:H2'	1:13:224:C:H6	1.61	0.65
5:14:93:C:H5'	5:14:94:G:OP2	1.95	0.65
6:1E:16:HIS:HE1	6:1E:213:LEU:HD13	1.61	0.65
5:1H:67:U:H3	5:1H:74:A:H2	1.44	0.65
55:Q8:5:LYS:H	55:Q8:59:LYS:NZ	1.95	0.65
1:1G:1131:G:H2'	1:1G:1132:C:H6	1.61	0.65
1:13:390:C:O3'	20:7I:28:ARG:NH2	2.29	0.65
1:13:624:C:O3'	20:7I:10:GLY:HA2	1.97	0.65
5:14:403:U:H4'	5:14:404:C:H5'	1.79	0.65
1:13:1446:A:O2'	40:B8:125:ARG:NH2	2.30	0.65
5:14:176:G:O6	58:14:4178:HOH:O	2.09	0.65
27:16:15:A:H5'	27:16:16:G:C8	2.32	0.65
55:Q8:46:ARG:CZ	55:Q8:46:ARG:HA	2.27	0.65
1:1G:1274:G:H2'	1:1G:1275:A:H8	1.61	0.65
5:1H:761:A:OP1	58:1H:3698:HOH:O	2.13	0.65
1:1G:1305:G:N2	1:1G:1331:G:H2'	2.08	0.65
1:1G:1376:U:H2'	1:1G:1377:A:C8	2.32	0.65
1:13:637:G:H2'	1:13:638:G:H8	1.62	0.65
1:13:1139:G:H4'	1:13:1140:C:H5'	1.77	0.65
5:14:2275:C:H6	5:14:2275:C:H5'	1.62	0.65
5:1H:1332:G:OP1	58:1H:4040:HOH:O	2.14	0.65
55:Q8:6:THR:H	55:Q8:59:LYS:NZ	1.95	0.65
6:12:145:LEU:O	6:12:149:LEU:HB2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1368:G:OP2	13:8E:112:LYS:HD2	1.97	0.65
5:14:824:A:H1'	5:14:2358:G:N7	2.12	0.65
5:14:2318:G:H5'	5:14:2319:G:OP2	1.97	0.65
6:1E:88:ALA:HB2	6:1E:219:VAL:HG13	1.77	0.65
5:1H:2635:C:H5"	29:21:78:LEU:HA	1.79	0.65
5:1H:2855:C:H2'	5:1H:2856:C:H6	1.62	0.65
1:1G:1324:A:H4'	1:1G:1362:C:H4'	1.77	0.65
8:32:106:TYR:HE1	8:32:112:VAL:O	1.80	0.65
1:13:1149:C:H2'	1:13:1150:U:H6	1.63	0.64
16:3I:24:VAL:HB	16:3I:27:LEU:HD12	1.78	0.64
5:1H:1021:A:H8	5:1H:1021:A:H3'	1.62	0.64
5:1H:1320:C:H4'	5:1H:1321:A:OP1	1.96	0.64
5:1H:2702:U:H6	5:1H:2702:U:OP1	1.80	0.64
28:11:3:VAL:HG13	28:11:17:THR:HG23	1.80	0.64
37:88:51:ARG:HB3	37:88:51:ARG:HH11	1.60	0.64
1:1G:359:U:H2'	1:1G:360:A:C8	2.33	0.64
1:1G:1347:G:O2'	1:1G:1373:G:O6	2.13	0.64
1:13:1028:C:H42	1:13:1033:G:H1	1.44	0.64
1:13:1318:A:H1'	23:AI:37:ARG:HH21	1.62	0.64
5:14:5:A:H2'	5:14:6:A:C8	2.32	0.64
5:1H:443:A:H1'	5:1H:1201:C:O4'	1.96	0.64
5:1H:907:U:O2'	37:88:101:ARG:NH2	2.30	0.64
5:14:39:C:H2'	5:14:40:C:H6	1.60	0.64
5:14:67:U:H2'	5:14:68:G:C8	2.32	0.64
5:14:796:C:H2'	5:14:797:C:C6	2.32	0.64
6:1E:21:ARG:HB2	6:1E:39:ILE:HA	1.77	0.64
5:1H:1228:G:OP2	41:C8:16:LYS:NZ	2.30	0.64
5:1H:1533:C:H3'	5:1H:1534:G:H5"	1.78	0.64
5:1H:2287:A:N6	5:1H:2344:U:H3	1.95	0.64
55:Q8:34:TRP:C	55:Q8:34:TRP:CD1	2.71	0.64
1:1G:532:A:H2	7:22:156:ARG:HH22	1.43	0.64
5:14:1678:G:N2	5:14:1989:G:H22	1.95	0.64
5:14:2712(A):A:H5"	5:14:2713:A:OP2	1.97	0.64
5:1H:761:A:OP2	58:1H:3882:HOH:O	2.15	0.64
5:1H:1509:C:H3'	5:1H:1510:A:H5"	1.77	0.64
5:1H:2317:C:H2'	5:1H:2318:G:H5'	1.80	0.64
27:1J:13:A:N1	27:1J:69:G:O2'	2.27	0.64
1:13:812:C:N3	58:13:1809:HOH:O	2.30	0.64
5:14:1997:G:OP2	58:14:3648:HOH:O	2.15	0.64
19:6I:7:GLU:OE1	19:6I:38:ARG:NH2	2.30	0.64
5:1H:1324:G:N7	58:1H:3647:HOH:O	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2572:A:N7	29:21:145:LYS:HB2	2.13	0.64
27:1J:80:U:H2'	27:1J:81:G:N2	2.09	0.64
39:A8:24:LEU:HB2	39:A8:85:VAL:HG12	1.79	0.64
51:M8:24:THR:OG1	51:M8:25:TYR:N	2.27	0.64
13:8E:9:ARG:HD2	13:8E:14:VAL:HG13	1.79	0.64
5:1H:287:C:H2'	5:1H:288:C:H6	1.62	0.64
5:1H:1021:A:C8	5:1H:1021:A:H3'	2.33	0.64
5:1H:2027:G:N7	58:1H:4175:HOH:O	2.30	0.64
31:41:4:ASP:OD1	31:41:9:ARG:NH1	2.30	0.64
49:K8:14:ARG:HB3	49:K8:15:LYS:HE3	1.79	0.64
1:1G:680:C:H42	1:1G:710:G:H1	1.44	0.64
1:13:584:G:N7	58:13:1920:HOH:O	2.30	0.64
2:3L:52:G:N2	2:3L:63:G:N7	2.46	0.64
5:14:140:A:H8	5:14:1408:C:HO2'	1.42	0.64
5:14:273(C):C:N4	5:14:363(C):G:H1	1.96	0.64
11:6E:18:TYR:HB3	11:6E:59:LEU:HD12	1.79	0.64
5:1H:226:G:H21	5:1H:228:A:H2	1.46	0.64
5:1H:1388:G:H2'	5:1H:1389:G:C8	2.32	0.64
55:Q8:45:GLY:N	55:Q8:46:ARG:O	2.31	0.64
1:1G:433:C:H2'	1:1G:434:U:H6	1.62	0.64
1:1G:1151:A:O2'	1:1G:1152:A:O5'	2.16	0.64
1:13:674:G:H2'	1:13:675:A:C8	2.33	0.64
1:13:859:A:H2'	1:13:860:A:H8	1.63	0.64
5:1H:768:G:O2'	5:1H:1379:A:N6	2.30	0.64
33:61:38:LEU:H	33:61:38:LEU:HD12	1.62	0.64
55:Q8:37:SER:HA	55:Q8:39:LYS:O	1.98	0.64
8:32:4:TYR:CE2	8:32:11:LEU:HD11	2.33	0.64
8:32:127:THR:HG21	8:32:149:ALA:HB2	1.79	0.64
5:14:602:G:O2'	5:14:604:G:O2'	2.16	0.64
5:14:996:A:H2'	5:14:997:G:H8	1.63	0.64
5:14:1043:C:H42	5:14:1112:G:H1	1.45	0.64
5:1H:1062:G:N2	5:1H:1076:C:N3	2.38	0.64
5:1H:1287:A:C8	38:98:107:ASP:HB2	2.33	0.64
27:1J:15:A:H3'	27:1J:16:G:H5'	1.80	0.64
31:41:97:ASP:O	31:41:100:TRP:N	2.31	0.64
38:98:100:LEU:HD11	38:98:113:LEU:HD13	1.80	0.64
43:E8:37:ARG:HD3	43:E8:38:TYR:CE2	2.32	0.64
48:J8:23:LYS:HB3	48:J8:29:GLY:HA3	1.80	0.64
1:1G:411:A:C5	1:1G:413:G:H1'	2.33	0.64
1:1G:1258:G:H2'	1:1G:1259:C:H6	1.63	0.64
1:13:1133:G:N2	1:13:1141:C:N3	2.42	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:749:C:OP2	58:14:3863:HOH:O	2.15	0.64
5:14:1060:U:H4'	5:14:1061:U:H5"	1.80	0.64
5:14:2020:A:O2'	5:14:2021:C:H5'	1.97	0.64
23:AI:41:VAL:HG11	23:AI:67:VAL:HA	1.78	0.64
39:A8:28:VAL:HG11	39:A8:98:VAL:HG13	1.80	0.64
44:F8:1:MET:C	44:F8:3:THR:H	2.00	0.64
1:13:237:C:H5"	21:8I:25:ARG:CZ	2.28	0.63
1:13:330:C:O2	58:13:1901:HOH:O	2.14	0.63
5:14:607:U:H3	5:14:621:A:H2	1.44	0.63
5:1H:400:G:O6	58:1H:4154:HOH:O	2.10	0.63
5:1H:1496:A:H8	5:1H:1577:C:O2'	1.81	0.63
27:1J:104:A:H2'	27:1J:105:G:O4'	1.98	0.63
37:88:81:VAL:O	37:88:82:ARG:HB2	1.98	0.63
1:1G:1286:A:C8	1:1G:1287:A:H4'	2.32	0.63
1:13:728:A:C5	19:6I:54:ARG:HD2	2.33	0.63
1:13:735:C:H2'	1:13:736:C:H6	1.63	0.63
1:13:854:G:N7	58:13:1927:HOH:O	2.30	0.63
3:2K:62:C:H2'	3:2K:63:C:H6	1.63	0.63
5:1H:1858:G:H2'	5:1H:1883:G:N2	2.14	0.63
5:1H:2002:G:N7	58:1H:4385:HOH:O	2.30	0.63
30:31:9:ILE:HD12	30:31:125:LEU:HG	1.80	0.63
31:41:112:PRO:HB3	51:M8:37:SER:H	1.63	0.63
37:88:104:PHE:HE2	37:88:125:LEU:HD11	1.63	0.63
44:F8:3:THR:OG1	44:F8:4:ALA:HA	1.98	0.63
1:1G:539:A:H2'	1:1G:540:G:C8	2.34	0.63
1:1G:1002:G:H2'	1:1G:1003:G:H8	1.63	0.63
1:13:150:C:H2'	1:13:151:A:O4'	1.98	0.63
5:14:55:G:O6	5:14:115:C:N4	2.17	0.63
5:14:882:G:H22	5:14:894:C:N4	1.97	0.63
16:3I:83:VAL:HG21	16:3I:100:ILE:HD13	1.79	0.63
3:2K:8:4SU:O5'	3:2K:8:4SU:H6	1.99	0.63
5:1H:900:A:H3'	5:1H:901:A:H8	1.63	0.63
1:1G:985:C:N3	1:1G:1220:G:N2	2.44	0.63
1:13:505:G:OP1	58:13:1881:HOH:O	2.15	0.63
1:13:536:C:H2'	1:13:537:G:C8	2.33	0.63
42:D8:41:GLY:O	42:D8:45:THR:HA	1.98	0.63
51:M8:39:CYS:SG	51:M8:41:PRO:HD3	2.39	0.63
6:12:162:ILE:O	6:12:185:ILE:HG12	1.99	0.63
1:13:156:G:H1'	1:13:166:G:N2	2.13	0.63
1:13:272:C:H2'	1:13:273:A:C8	2.34	0.63
1:13:1000:A:H2'	1:13:1001:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2125:G:N2	5:14:2172:U:OP1	2.32	0.63
20:7I:26:ARG:HH21	20:7I:31:LYS:HD3	1.62	0.63
5:1H:634:C:H2'	5:1H:635:C:C6	2.33	0.63
5:1H:746:A:C6	5:1H:2611:U:H5"	2.33	0.63
5:1H:1022:G:N2	5:1H:1142(A):A:N1	2.46	0.63
27:16:40:U:H1'	27:16:45:A:N6	2.13	0.63
6:1E:100:GLY:O	6:1E:104:ASN:N	2.29	0.63
6:1E:219:VAL:HA	6:1E:222:ILE:HD12	1.81	0.63
5:1H:85:G:OP2	45:G8:9:LYS:HB2	1.98	0.63
5:1H:639:U:H2'	5:1H:640:C:C6	2.33	0.63
5:1H:2053:G:OP2	58:1H:3853:HOH:O	2.15	0.63
46:H8:9:TYR:CE1	46:H8:35:ARG:HD3	2.33	0.63
1:1G:1239:A:H4'	1:1G:1240:U:H5'	1.81	0.63
1:1G:1255:G:O2'	1:1G:1258:G:O2'	2.10	0.63
7:22:22:TRP:HB3	7:22:59:ARG:HB2	1.79	0.63
1:13:130:A:OP2	21:8I:63:ARG:NH2	2.32	0.63
1:13:187:C:O2	1:13:191(A):G:N1	2.32	0.63
1:13:272:C:H2'	1:13:273:A:H8	1.62	0.63
1:13:524:G:H2'	1:13:525:C:C6	2.34	0.63
2:1L:10:G:H2'	2:1L:11:C:C6	2.34	0.63
5:14:479:A:N3	5:14:481:G:H5"	2.13	0.63
23:AI:40:ILE:HD11	23:AI:62:ILE:HD13	1.80	0.63
5:1H:1794:U:H2'	5:1H:1795:C:H6	1.61	0.63
28:11:68:LYS:HB3	28:11:70:TRP:CH2	2.34	0.63
34:58:38:HIS:O	41:C8:67:ALA:HB1	1.98	0.63
47:I8:53:MET:HG3	47:I8:59:LEU:CD2	2.28	0.63
1:1G:54:C:N4	1:1G:353:A:OP2	2.30	0.63
1:1G:542:G:OP1	8:32:10:ARG:NH2	2.32	0.63
1:1G:1268:A:H2'	1:1G:1269:A:C8	2.34	0.63
1:13:1306:A:H61	1:13:1331:G:H1'	1.64	0.63
5:14:19:C:H2'	5:14:20:C:C6	2.34	0.63
8:3E:162:LEU:O	8:3E:165:MET:HB3	1.99	0.63
22:9I:56:THR:HB	22:9I:58:LEU:HD13	1.81	0.63
30:31:6:VAL:HG21	30:31:119:ARG:HB2	1.79	0.63
31:41:56:ALA:HB2	31:41:153:ARG:HE	1.64	0.63
37:88:66:ILE:HG22	37:88:67:ARG:N	2.12	0.63
46:H8:28:MET:HB2	46:H8:37:VAL:HG11	1.81	0.63
55:Q8:5:LYS:H	55:Q8:59:LYS:HZ2	1.47	0.63
1:13:412:A:H4'	1:13:413:G:O5'	1.98	0.63
1:13:1224:G:C6	1:13:1322:C:H1'	2.34	0.63
6:1E:15:VAL:HG21	6:1E:209:ARG:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:2I:78:GLN:O	15:2I:103:LEU:HA	1.98	0.63
23:AI:6:LYS:O	23:AI:7:LYS:HB3	1.97	0.63
5:1H:1189:A:OP2	58:1H:3945:HOH:O	2.15	0.63
44:F8:3:THR:HA	44:F8:6:ASP:OD2	1.99	0.63
7:2E:40:ARG:HG3	7:2E:40:ARG:NH1	2.11	0.62
25:1F:9:ARG:O	25:1F:13:ILE:HG13	1.99	0.62
5:1H:1093:G:O2'	5:1H:1099:G:N2	2.32	0.62
5:1H:2788:C:O2'	5:1H:2809:A:N3	2.32	0.62
27:16:44:G:H1'	27:16:47:C:H42	1.63	0.62
33:61:92:VAL:HG13	33:61:120:ILE:HG23	1.81	0.62
37:88:112:GLU:H	37:88:112:GLU:CD	2.01	0.62
1:1G:664:G:H22	1:1G:741:G:H1	1.47	0.62
1:1G:976:G:H5'	1:1G:1358:U:O2'	1.99	0.62
1:13:1060:C:O2'	14:1I:56:HIS:ND1	2.31	0.62
5:14:1019:U:H2'	5:14:1020:A:C8	2.35	0.62
7:2E:32:LEU:HD13	7:2E:59:ARG:HH11	1.64	0.62
20:7I:77:ALA:HB3	20:7I:79:VAL:H	1.62	0.62
21:8I:67:LYS:HA	21:8I:70:ARG:HH12	1.64	0.62
32:51:27:LYS:HA	32:51:32:GLU:HA	1.80	0.62
33:61:144:VAL:HG22	33:61:145:VAL:HG22	1.81	0.62
45:G8:49:VAL:HG21	45:G8:55:TYR:CE2	2.34	0.62
1:1G:1072:G:H2'	1:1G:1073:U:C6	2.34	0.62
1:1G:1288:A:N3	1:1G:1352:C:O2'	2.31	0.62
1:13:536:C:H2'	1:13:537:G:H8	1.64	0.62
5:14:1188:U:O2'	5:14:1189:A:H5'	1.99	0.62
5:14:1340:U:H4'	5:14:1394:U:O2'	2.00	0.62
5:1H:1165:U:H2'	5:1H:1166:C:H6	1.64	0.62
5:1H:1221:C:H2'	5:1H:1222:C:H6	1.64	0.62
37:88:135:ASP:HB3	37:88:137:TYR:H	1.62	0.62
1:1G:464:G:O6	1:1G:466:C:H5'	1.99	0.62
7:22:113:ALA:HA	7:22:202:ILE:HD11	1.82	0.62
8:32:4:TYR:HE2	8:32:11:LEU:HD11	1.64	0.62
1:13:474:G:H2'	1:13:475:G:C8	2.35	0.62
1:13:1288:A:N1	1:13:1371:G:H1'	2.15	0.62
5:14:2096:U:H3	5:14:2193:G:H1	1.46	0.62
6:1E:174:VAL:HG13	6:1E:184:VAL:HG11	1.82	0.62
31:41:143:GLU:OE1	51:M8:26:SER:OG	2.17	0.62
33:61:4:ILE:HG21	33:61:47:LEU:HD22	1.81	0.62
1:1G:682:G:H1	1:1G:708:C:H42	1.45	0.62
7:22:91:LEU:HB2	7:22:99:VAL:HG11	1.80	0.62
8:32:20:TYR:HA	8:32:26:CYS:HB3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:156:G:H1'	1:13:166:G:H22	1.63	0.62
1:13:453:A:O3'	20:7I:75:ARG:NH1	2.33	0.62
1:13:1312:G:O3'	23:AI:6:LYS:NZ	2.26	0.62
5:14:259:G:N2	5:14:621:A:H8	1.96	0.62
5:14:1935:G:H1'	5:14:1964:G:N2	2.14	0.62
6:1E:73:THR:O	6:1E:78:GLN:NE2	2.31	0.62
9:4E:143:ARG:NE	12:7E:77:GLU:OE1	2.32	0.62
23:AI:63:THR:OG1	23:AI:64:GLU:N	2.31	0.62
5:1H:302:C:H2'	5:1H:303:U:C6	2.33	0.62
5:1H:2882:A:OP1	38:98:96:ARG:NH1	2.30	0.62
35:68:2:ILE:HG13	35:68:8:LEU:HD11	1.80	0.62
48:J8:18:ILE:HG12	48:J8:37:ILE:HG12	1.82	0.62
6:12:190:THR:O	6:12:191:ASP:HB3	1.98	0.62
5:14:2262:U:H4'	5:14:2328:A:C2	2.35	0.62
5:14:2272:U:O4	58:14:4061:HOH:O	2.16	0.62
5:14:2335:A:C8	5:14:2337:G:C5	2.87	0.62
24:BI:26:ASN:HB2	24:BI:71:THR:HG23	1.81	0.62
5:1H:956:G:OP2	37:88:14:ARG:NH2	2.33	0.62
5:1H:2334:G:H5'	39:A8:9:ARG:HG2	1.81	0.62
29:21:167:VAL:HG21	29:21:187:ALA:HB3	1.82	0.62
46:H8:30:ASN:HA	46:H8:89:PHE:HE1	1.64	0.62
55:Q8:27:THR:O	55:Q8:29:LYS:HA	2.00	0.62
55:Q8:50:LEU:O	55:Q8:52:LYS:N	2.30	0.62
1:1G:1057:G:H1	1:1G:1203:C:H42	1.47	0.62
7:22:91:LEU:HD11	7:22:101:LEU:HD12	1.80	0.62
5:14:863:A:H2'	5:14:864:G:C8	2.33	0.62
5:14:1024:G:H8	5:14:1024:G:O5'	1.83	0.62
5:14:2297:C:O2	5:14:2321:G:N2	2.25	0.62
21:8I:100:LYS:HB3	21:8I:101:ARG:NH1	2.14	0.62
5:1H:573:G:O2'	5:1H:574:C:H3'	1.99	0.62
5:1H:1899:G:N2	5:1H:1902:C:C5	2.66	0.62
41:C8:90:VAL:HG22	42:D8:39:LEU:HG	1.82	0.62
1:1G:1423:G:H2'	1:1G:1424:C:C6	2.35	0.62
1:1G:1446:A:OP1	1:1G:1446:A:H4'	2.00	0.62
1:13:1177:G:O2'	1:13:1178:G:O4'	2.18	0.62
1:13:1504:G:OP1	1:13:1507:A:H4'	2.00	0.62
5:14:2638:G:O2'	5:14:2639:A:O5'	2.16	0.62
5:14:2701:C:H3'	5:14:2702:U:C5'	2.26	0.62
5:1H:1486:A:H2'	5:1H:1487:G:H8	1.65	0.62
5:1H:1771:C:O2'	5:1H:1786:A:H8	1.72	0.62
2:3L:9:A:H4'	2:3L:46:7MG:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2123:G:H2'	5:14:2124:G:H8	1.65	0.62
5:1H:270(P):C:H2'	5:1H:270(Q):C:C6	2.35	0.62
5:1H:1556:C:H2'	5:1H:1557:C:H6	1.64	0.62
33:61:31:LEU:HD21	33:61:38:LEU:HG	1.81	0.62
1:13:396:G:O2'	1:13:398:C:OP1	2.15	0.62
2:3L:19:G:OP2	2:3L:57:G:N2	2.32	0.62
5:14:1678:G:H22	5:14:1989:G:H22	1.48	0.62
11:6E:16:LEU:HD13	13:8E:44:VAL:HG22	1.82	0.62
5:1H:1062:G:H2'	5:1H:1063:G:C8	2.35	0.62
31:41:11:TYR:OH	31:41:16:ARG:NH1	2.32	0.62
33:61:71:ILE:HG12	33:61:72:LEU:HD12	1.82	0.62
44:F8:41:ASN:O	44:F8:45:THR:HG23	2.00	0.62
51:M8:52:THR:OG1	51:M8:53:GLU:N	2.30	0.62
1:1G:1235:U:O2'	1:1G:1305:G:O5'	2.17	0.62
1:13:516:U:O4	58:13:1873:HOH:O	2.16	0.61
5:14:802:A:H4'	58:14:3801:HOH:O	2.00	0.61
5:1H:376:C:P	58:1H:3775:HOH:O	2.58	0.61
5:1H:1557:C:OP2	5:1H:1558:A:O2'	2.12	0.61
5:1H:1711:C:H2'	5:1H:1712:C:H6	1.65	0.61
1:13:719:C:H1'	22:9I:49:LYS:HB3	1.81	0.61
5:14:1963:U:H5"	5:14:1963:U:O2	1.98	0.61
5:1H:458:G:O2'	5:1H:469:G:O6	2.10	0.61
5:1H:2079:U:O4	58:1H:4489:HOH:O	2.13	0.61
6:12:84:GLU:HB3	6:12:219:VAL:HG11	1.82	0.61
4:4L:15:A:H8	4:4L:15:A:O5'	1.83	0.61
5:14:82:G:N2	5:14:103:A:OP2	2.29	0.61
5:14:751:A:P	58:14:3517:HOH:O	2.58	0.61
5:14:1342:A:H2	5:14:1602:U:N3	1.97	0.61
14:1I:8:LEU:HD12	14:1I:20:ALA:HB2	1.82	0.61
5:1H:270(L):U:O2	33:61:50:ARG:HG2	2.00	0.61
5:1H:2593:U:H2'	5:1H:2594:C:H6	1.65	0.61
32:51:98:LEU:HD22	32:51:125:VAL:HG23	1.81	0.61
46:H8:103:ARG:HG3	46:H8:136:PHE:CD2	2.34	0.61
48:J8:58:ILE:HG23	48:J8:87:PRO:HG3	1.83	0.61
1:1G:1126:U:H5"	1:1G:1280:A:N7	2.16	0.61
1:1G:1294:G:H2'	1:1G:1295:G:C8	2.35	0.61
1:1G:1316:G:N2	1:1G:1319:A:H5"	2.15	0.61
1:13:917:G:H2'	1:13:918:A:C8	2.34	0.61
5:14:270(K):C:O2	5:14:270(N):G:N2	2.27	0.61
5:14:1047:G:H2'	5:14:1110:G:H1	1.66	0.61
7:2E:73:PRO:O	7:2E:76:VAL:HG13	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:6E:111:ARG:HD2	11:6E:123:GLU:HB2	1.82	0.61
21:8I:68:ARG:H	21:8I:70:ARG:HH11	1.45	0.61
5:1H:1138:G:H21	34:58:106:MET:HE3	1.64	0.61
5:1H:2327:A:H2'	5:1H:2328:A:C8	2.36	0.61
5:1H:2492:U:H2'	5:1H:2493:U:C6	2.36	0.61
32:51:12:PRO:HG2	32:51:13:LYS:HE2	1.82	0.61
1:13:177:C:OP1	24:BI:65:LYS:NZ	2.26	0.61
1:13:820:U:H4'	1:13:821:G:OP2	2.00	0.61
1:13:1278:U:H5"	1:13:1279:A:O4'	2.01	0.61
6:1E:51:LEU:HG	6:1E:201:ILE:HD12	1.82	0.61
6:1E:185:ILE:CG2	6:1E:199:TYR:HB2	2.30	0.61
5:1H:1381:G:N7	58:1H:4123:HOH:O	2.31	0.61
5:1H:2576:G:OP1	58:1H:3852:HOH:O	2.16	0.61
46:H8:4:ARG:NH1	46:H8:60:GLU:OE2	2.33	0.61
54:P8:11:LYS:HE3	54:P8:15:THR:OG1	2.00	0.61
1:13:523:A:H61	16:3I:92:ASP:HB2	1.65	0.61
5:14:630:G:N2	5:14:633:A:OP2	2.29	0.61
5:14:1141:U:O2'	5:14:1142:U:OP2	2.18	0.61
27:16:0:A:N6	27:16:119:A:N1	2.48	0.61
28:11:17:THR:HG22	28:11:204:ILE:HA	1.81	0.61
29:21:51:PHE:CE2	29:21:52:LEU:HG	2.35	0.61
30:31:22:ALA:HB1	30:31:24:LEU:HD13	1.82	0.61
8:3E:108:LEU:HD23	8:3E:110:PHE:HE1	1.65	0.61
16:3I:89:ARG:HG3	16:3I:89:ARG:NH1	2.16	0.61
5:1H:353:G:H2'	5:1H:354:G:H8	1.64	0.61
5:1H:533:G:H5'	41:C8:24:TYR:CE1	2.35	0.61
5:1H:1997:G:OP2	58:1H:4104:HOH:O	2.15	0.61
46:H8:45:ASP:OD2	46:H8:49:ARG:NH1	2.34	0.61
49:K8:32:LEU:HD11	49:K8:54:LYS:HG3	1.82	0.61
55:Q8:50:LEU:C	55:Q8:52:LYS:N	2.54	0.61
8:32:177:ASP:OD2	8:32:182:LYS:NZ	2.33	0.61
1:13:1124:G:H5'	14:1I:35:SER:HB2	1.83	0.61
5:14:140:A:C8	5:14:1408:C:O2'	2.54	0.61
19:6I:17:ARG:HG3	19:6I:17:ARG:NH1	2.15	0.61
5:1H:2801:A:H5'	5:1H:2895:U:H1'	1.80	0.61
31:41:35:GLU:OE1	31:41:36:LYS:N	2.33	0.61
35:68:71:ARG:HH21	35:68:77:ILE:HG21	1.65	0.61
46:H8:53:ILE:HA	46:H8:71:VAL:HG13	1.83	0.61
52:N8:40:LYS:HG3	52:N8:47:PRO:HD2	1.81	0.61
55:Q8:7:HIS:HD1	55:Q8:10:ALA:H	1.48	0.61
1:1G:1385:G:H2'	1:1G:1386:G:H8	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1490:C:H2'	1:1G:1491:G:O4'	2.00	0.61
8:32:24:GLU:N	8:32:24:GLU:OE2	2.33	0.61
5:14:235:U:H2'	5:14:236:C:C6	2.36	0.61
5:14:1664:A:OP2	58:14:3658:HOH:O	2.16	0.61
6:1E:141:GLU:O	6:1E:145:LEU:HB2	2.01	0.61
8:3E:186:LEU:HB2	8:3E:187:ARG:HG2	1.83	0.61
9:4E:8:GLU:HG2	9:4E:34:VAL:HG22	1.81	0.61
11:6E:27:ILE:HA	11:6E:30:ILE:HD12	1.81	0.61
15:2I:32:ILE:HD12	15:2I:72:ALA:HB2	1.83	0.61
2:3K:18:G:N2	2:3K:55:PSU:HN3	1.99	0.61
5:1H:2179:C:H2'	5:1H:2180:U:C6	2.36	0.61
39:A8:106:ARG:HH22	39:A8:107:GLU:HB2	1.64	0.61
1:1G:21:G:OP1	58:1G:1764:HOH:O	2.16	0.61
1:13:1151:A:O2'	1:13:1152:A:O5'	2.12	0.61
5:14:996:A:N6	5:14:1160:G:C6	2.69	0.61
5:14:1592:C:H2'	5:14:1593:G:H8	1.64	0.61
16:3I:90:VAL:O	16:3I:91:LYS:HB3	2.01	0.61
5:1H:517:C:OP1	52:N8:16:ARG:NH2	2.29	0.61
5:1H:1113:U:OP1	32:51:2:SER:N	2.34	0.61
5:1H:2140:C:O2	5:1H:2151:G:N2	2.32	0.61
5:1H:2378:A:H2'	39:A8:21:THR:HG21	1.82	0.61
29:21:70:ALA:O	29:21:73:GLU:N	2.34	0.61
29:21:128:SER:OG	29:21:129:HIS:N	2.32	0.61
1:13:1226:C:H2'	17:4I:103:THR:HB	1.81	0.60
5:14:406:G:N2	5:14:421:U:O2	2.23	0.60
5:14:2287:A:N6	5:14:2344:U:H3	1.97	0.60
5:14:2850:A:C2	5:14:2851:A:C4	2.89	0.60
5:1H:302:C:H2'	5:1H:303:U:H6	1.66	0.60
5:1H:582:G:H2'	5:1H:583:G:C8	2.36	0.60
5:1H:2135:A:N6	5:1H:2156:G:O2'	2.34	0.60
35:68:88:ASN:HD21	35:68:92:GLU:H	1.49	0.60
47:I8:23:VAL:HG13	47:I8:38:VAL:HG23	1.83	0.60
1:1G:662:G:O2'	1:1G:836:G:OP1	2.19	0.60
1:1G:1257:U:H5'	1:1G:1258:G:C8	2.36	0.60
6:12:163:PHE:CD2	6:12:185:ILE:HG13	2.36	0.60
5:14:586:A:N1	5:14:809:G:O2'	2.27	0.60
5:14:2557:G:H2'	5:14:2558:C:H6	1.66	0.60
5:14:2777:G:H5"	5:14:2778:A:H5'	1.83	0.60
5:1H:1088:A:H5'	5:1H:1089:G:H5'	1.82	0.60
5:1H:1859:A:N6	5:1H:1883:G:O2'	2.34	0.60
5:1H:2062:A:N6	5:1H:2503:A:H62	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:31:134:GLY:H	30:31:162:LEU:HB3	1.65	0.60
37:88:43:THR:HG22	37:88:94:VAL:HG12	1.83	0.60
43:E8:79:GLY:HA3	43:E8:100:THR:HG22	1.83	0.60
46:H8:104:PHE:CE2	46:H8:119:GLU:HB3	2.35	0.60
1:1G:144:G:H1	1:1G:178:C:H42	1.49	0.60
5:14:1056:G:H4'	5:14:1086:A:H1'	1.83	0.60
5:14:2126:A:N1	5:14:2163:C:H1'	2.16	0.60
5:14:2375:G:N7	58:14:3923:HOH:O	2.31	0.60
5:14:2693:A:H2'	5:14:2694:G:H8	1.66	0.60
8:3E:98:GLU:O	8:3E:103:ASN:ND2	2.33	0.60
13:8E:21:PRO:HA	13:8E:59:PHE:HA	1.84	0.60
5:1H:1102:C:H2'	5:1H:1103:A:H8	1.65	0.60
5:1H:1509:C:H2'	5:1H:1511:A:C8	2.36	0.60
5:1H:2698:U:H2'	5:1H:2699:C:C6	2.36	0.60
33:61:21:VAL:HG21	33:61:25:TYR:HD2	1.66	0.60
39:A8:66:ALA:HA	39:A8:69:VAL:HG12	1.82	0.60
1:1G:999:U:H2'	1:1G:1000:A:C8	2.37	0.60
1:13:1160:G:H1	1:13:1177:G:N2	1.98	0.60
5:14:898:C:H3'	5:14:899:A:H5"	1.82	0.60
5:1H:796:C:H2'	5:1H:797:C:C6	2.36	0.60
30:31:33:LEU:HD23	36:78:1:MET:HG3	1.82	0.60
8:32:9:CYS:SG	8:32:22:LYS:HD2	2.41	0.60
8:32:108:LEU:HD21	8:32:183:GLY:HA3	1.83	0.60
1:13:127:G:O2'	21:8I:2:PRO:O	2.19	0.60
5:14:1041:C:H42	5:14:1114:G:H1	1.49	0.60
5:14:1593:G:H2'	5:14:1594:G:C8	2.37	0.60
5:14:2402:C:H5	5:14:2415:G:H22	1.48	0.60
13:8E:18:PHE:HD2	13:8E:62:TYR:HD2	1.48	0.60
5:1H:529:A:H8	5:1H:530:G:C6	2.19	0.60
5:1H:1102:C:H2'	5:1H:1103:A:C8	2.35	0.60
5:1H:1510:A:OP1	5:1H:1511:A:H5'	2.01	0.60
5:1H:2591:C:P	28:11:239:ARG:HG3	2.41	0.60
28:11:238:GLY:O	58:11:402:HOH:O	2.16	0.60
29:21:64:LYS:O	29:21:70:ALA:HB2	2.01	0.60
30:31:32:LEU:HD21	30:31:105:VAL:HG13	1.83	0.60
1:1G:1224:G:N1	1:1G:1322:C:H1'	2.17	0.60
6:12:144:ARG:HH21	6:12:148:TYR:HD2	1.48	0.60
1:13:660:G:H2'	1:13:661:G:C8	2.36	0.60
2:1L:8:4SU:H5	2:1L:13:C:N3	2.16	0.60
5:1H:686:G:OP1	54:P8:11:LYS:NZ	2.34	0.60
5:1H:1641:A:H5"	5:1H:1642:G:OP2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2610:C:H4'	5:1H:2611:U:OP2	2.00	0.60
51:M8:18:CYS:HB3	51:M8:39:CYS:SG	2.41	0.60
1:1G:1057:G:H5"	7:22:154:SER:O	2.01	0.60
1:13:1060:C:C4	7:2E:2:GLY:HA3	2.37	0.60
5:14:214:G:H4'	5:14:214:G:OP1	2.01	0.60
5:14:588:U:H2'	5:14:589:C:C6	2.37	0.60
5:14:1093:G:O2'	5:14:1099:G:N2	2.35	0.60
5:14:1416:G:O2'	5:14:1417:C:O5'	2.18	0.60
5:14:1420:U:O2'	5:14:1421:G:OP1	2.16	0.60
17:4I:39:ILE:HD12	17:4I:56:LEU:HD23	1.84	0.60
20:7I:19:ILE:HB	20:7I:36:ILE:O	2.01	0.60
21:8I:68:ARG:H	21:8I:70:ARG:NH1	1.99	0.60
5:1H:286:C:H2'	5:1H:287:C:H6	1.67	0.60
5:1H:654(A):A:H2	5:1H:654(T):A:N1	1.99	0.60
5:1H:1790:C:H5"	5:1H:1791:A:OP1	2.01	0.60
1:1G:457:C:H2'	1:1G:458:C:C6	2.37	0.60
1:13:179:A:H2'	1:13:180:U:C6	2.36	0.60
1:13:838:G:H1	1:13:848:C:H42	1.50	0.60
5:14:619:G:H5"	5:14:620:G:N2	2.16	0.60
5:14:1316:U:O2'	5:14:1317:A:H5'	2.02	0.60
5:14:1428:C:N4	5:14:1570:A:OP2	2.23	0.60
5:14:2299:G:N1	5:14:2318:G:H8	1.99	0.60
14:1I:38:ILE:HG23	14:1I:71:LEU:HB3	1.83	0.60
23:AI:41:VAL:HB	23:AI:42:PRO:HA	1.84	0.60
5:1H:974(A):C:OP1	58:1H:4332:HOH:O	2.17	0.60
5:1H:1168:G:C2	5:1H:1182:A:C2	2.89	0.60
5:1H:2124:G:N2	5:1H:2174:C:O2	2.35	0.60
34:58:15:LEU:HB2	34:58:134:ARG:HB3	1.84	0.60
5:14:1464:C:HO2'	5:14:1528:A:H8	1.48	0.60
5:1H:446:G:OP2	58:1H:3712:HOH:O	2.16	0.60
30:31:9:ILE:HG12	30:31:10:PRO:HD2	1.84	0.60
34:58:26:LEU:O	34:58:30:ILE:HG13	2.00	0.60
44:F8:24:GLY:O	44:F8:83:VAL:HG22	2.02	0.60
1:1G:1002:G:H2'	1:1G:1003:G:C8	2.37	0.60
1:13:939:G:H5"	11:6E:102:ARG:NH2	2.17	0.60
3:2L:22:A:N6	3:2L:47:7MG:H2'	2.17	0.60
5:14:1443:G:O6	58:14:4003:HOH:O	2.11	0.60
12:7E:7:ALA:HB2	12:7E:85:ARG:HH11	1.67	0.60
22:9I:31:LEU:H	22:9I:31:LEU:HD23	1.67	0.60
5:1H:136:G:N7	58:1H:4283:HOH:O	2.31	0.60
5:1H:782:A:C2	28:11:226:MET:HG2	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1024:G:H3'	5:1H:1025:G:H5"	1.83	0.60
46:H8:7:ALA:HB2	46:H8:59:LEU:HD22	1.84	0.60
1:1G:837:G:H1	1:1G:849:C:H42	1.49	0.60
1:1G:1141:C:H2'	1:1G:1142:G:C8	2.31	0.60
1:1G:1263:C:N3	1:1G:1273:G:N2	2.50	0.60
6:12:19:HIS:CG	6:12:20:GLU:H	2.20	0.60
6:12:179:LYS:HD3	6:12:180:LEU:HG	1.84	0.60
1:13:38:G:C2	1:13:397:A:C2	2.90	0.59
1:13:1064:G:OP1	1:13:1386:G:H4'	2.01	0.59
5:14:176:G:O2'	5:14:177:G:H5'	2.02	0.59
6:1E:84:GLU:HB3	6:1E:219:VAL:HG21	1.84	0.59
5:1H:128:C:H2'	5:1H:129:C:H6	1.67	0.59
5:1H:250:G:H2'	5:1H:251:A:C8	2.36	0.59
5:1H:1359:A:C2	5:1H:1372:U:O4	2.55	0.59
5:1H:2611:U:H2'	52:N8:3:LYS:HD3	1.83	0.59
40:B8:21:GLU:OE1	40:B8:91:ARG:NH2	2.36	0.59
1:1G:451:A:N6	1:1G:480:U:H2'	2.16	0.59
6:12:174:VAL:HG11	6:12:196:LEU:HD13	1.84	0.59
1:13:429:U:H1'	1:13:430:A:H5"	1.83	0.59
1:13:804:U:H5"	1:13:805:C:OP2	2.03	0.59
5:14:1027:A:H5'	27:1J:88:C:H41	1.65	0.59
5:14:2190:G:H2'	5:14:2191:G:O4'	2.03	0.59
6:1E:76:GLN:NE2	6:1E:207:ALA:H	2.00	0.59
35:68:93:PRO:HG3	35:68:114:ILE:HG12	1.84	0.59
38:98:81:ASP:OD1	38:98:81:ASP:N	2.34	0.59
1:1G:17:U:H2'	1:1G:18:C:C6	2.37	0.59
1:1G:192:U:H2'	1:1G:193:C:C6	2.36	0.59
1:1G:749:C:H2'	1:1G:750:G:H8	1.67	0.59
1:1G:960:U:H3	1:1G:1225:A:H1'	1.66	0.59
8:32:31:CYS:C	8:32:33:MET:N	2.54	0.59
1:13:21:G:OP1	58:13:1839:HOH:O	2.17	0.59
5:14:823:G:H2'	5:14:824:A:C8	2.37	0.59
21:8I:6:LEU:HD22	21:8I:23:VAL:HG11	1.84	0.59
5:1H:654(G):C:O2	5:1H:654(N):G:N2	2.34	0.59
5:1H:1010:A:OP2	58:1H:4294:HOH:O	2.17	0.59
5:1H:2150:U:H2'	5:1H:2151:G:C8	2.38	0.59
5:1H:2584:U:H2'	5:1H:2585:U:H2'	1.83	0.59
30:31:101:LEU:O	30:31:106:ARG:NH1	2.35	0.59
31:41:107:LEU:HD21	31:41:178:PHE:CD1	2.37	0.59
36:78:60:MET:HA	55:Q8:13:ARG:NH1	2.18	0.59
48:J8:73:LEU:HD11	48:J8:95:LEU:HD21	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:661:G:H1	1:1G:744:C:H42	1.48	0.59
1:1G:765:G:N2	1:1G:813:U:OP2	2.26	0.59
1:13:631:G:H2'	1:13:632:A:N3	2.18	0.59
1:13:1510:U:H2'	1:13:1511:G:C8	2.38	0.59
5:14:1041:C:H42	5:14:1114:G:H22	1.50	0.59
4:4K:13:A:O2'	4:4K:14:A:OP1	2.20	0.59
5:1H:34:C:OP2	5:1H:34:C:H6	1.86	0.59
5:1H:363(B):G:H2'	5:1H:363(C):G:H8	1.66	0.59
5:1H:1588:C:H2'	5:1H:1589:C:H6	1.68	0.59
34:58:127:ASP:OD1	34:58:127:ASP:N	2.36	0.59
45:G8:9:LYS:HA	45:G8:27:VAL:HG22	1.83	0.59
1:13:142:G:H2'	1:13:143:A:C8	2.38	0.59
1:13:630:G:H2'	1:13:631:G:O4'	2.02	0.59
1:13:677:U:H3	1:13:713:G:H22	1.49	0.59
5:14:239:U:H2'	5:14:240:G:O4'	2.02	0.59
5:14:469:G:OP2	58:14:3933:HOH:O	2.15	0.59
5:14:2564:A:OP1	5:14:2648:C:H4'	2.03	0.59
8:3E:65:ARG:HG3	8:3E:70:ILE:HG22	1.85	0.59
11:6E:73:MET:HG2	11:6E:90:GLU:HA	1.84	0.59
13:8E:112:LYS:HD3	13:8E:113:LYS:H	1.67	0.59
23:AI:44:MET:O	23:AI:47:HIS:HB2	2.03	0.59
5:1H:270:A:OP1	58:1H:4271:HOH:O	2.16	0.59
5:1H:618:G:H2'	5:1H:618(A):C:H6	1.67	0.59
5:1H:1049:C:H2'	5:1H:1050:A:H5'	1.84	0.59
5:1H:1798:U:H5"	28:11:259:THR:HG22	1.84	0.59
1:1G:825:G:H1	1:1G:875:C:H42	1.48	0.59
1:1G:890:G:O2'	1:1G:906:G:O6	2.16	0.59
1:1G:1028(A):C:H5	1:1G:1029:G:C5	2.21	0.59
1:1G:1051:C:O2	1:1G:1207:G:N2	2.27	0.59
1:1G:1512:U:H2'	1:1G:1513:A:C8	2.38	0.59
1:13:327:A:HO2'	1:13:329:A:H8	1.51	0.59
5:1H:620:G:H4'	5:1H:621:A:C5'	2.32	0.59
5:1H:1265:A:H8	5:1H:1265:A:OP1	1.85	0.59
5:1H:1899:G:N2	5:1H:1902:C:H41	2.00	0.59
5:1H:2317:C:C2'	5:1H:2318:G:H5'	2.32	0.59
29:21:119:ARG:HD2	29:21:120:TRP:CE2	2.37	0.59
34:58:133:GLN:HG2	34:58:134:ARG:H	1.68	0.59
41:C8:92:ARG:CZ	42:D8:11:GLN:H	2.16	0.59
45:G8:49:VAL:HG21	45:G8:55:TYR:HE2	1.67	0.59
46:H8:9:TYR:HE1	46:H8:35:ARG:HD3	1.68	0.59
1:1G:624:C:H2'	1:1G:625:G:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1002:G:H22	1:1G:1038:C:H42	1.50	0.59
1:1G:1262:C:O2	1:1G:1273:G:N2	2.24	0.59
1:13:181:G:HO2'	1:13:182:U:H6	1.49	0.59
5:14:107:C:H2'	5:14:108:U:H6	1.67	0.59
5:14:2128:C:H1'	5:14:2173:A:H2	1.68	0.59
6:1E:178:ARG:NH1	6:1E:196:LEU:O	2.33	0.59
14:1I:6:ILE:HG12	14:1I:72:VAL:O	2.02	0.59
15:2I:57:THR:HG22	15:2I:59:TYR:H	1.67	0.59
5:1H:1331:A:O2'	5:1H:1332:G:H8	1.85	0.59
5:1H:1512:G:H2'	5:1H:1513:C:C6	2.38	0.59
5:1H:1711:C:H2'	5:1H:1712:C:C6	2.38	0.59
5:1H:2028:U:O4	58:1H:4175:HOH:O	2.17	0.59
38:98:56:LYS:NZ	38:98:90:ARG:O	2.34	0.59
40:B8:108:ARG:HA	40:B8:111:ARG:NE	2.15	0.59
1:1G:108:G:H5'	1:1G:109:A:H5"	1.84	0.59
1:1G:181:G:O2'	1:1G:183:G:O6	2.18	0.59
1:1G:405:U:O4	8:32:2:GLY:N	2.36	0.59
1:1G:448:A:P	1:1G:485:G:H22	2.25	0.59
1:1G:600:C:H2'	1:1G:601:C:C6	2.37	0.59
1:13:1003:G:N2	1:13:1037:C:O2	2.28	0.59
1:13:1128:C:O2'	1:13:1139:G:O6	2.20	0.59
5:14:19:C:H2'	5:14:20:C:H6	1.66	0.59
5:14:2270:G:OP2	58:14:4062:HOH:O	2.17	0.59
5:14:2340:G:H2'	5:14:2341:G:C8	2.38	0.59
11:6E:92:SER:O	11:6E:96:GLN:HG3	2.02	0.59
13:8E:89:ASN:O	13:8E:89:ASN:ND2	2.36	0.59
18:5I:37:PHE:CE2	18:5I:53:LEU:HD13	2.37	0.59
5:1H:286:C:H2'	5:1H:287:C:C6	2.38	0.59
5:1H:2836:U:H2'	5:1H:2837:G:C8	2.38	0.59
29:21:101:ARG:CZ	29:21:171:GLU:HB2	2.33	0.59
46:H8:67:LEU:HD22	46:H8:90:VAL:HG11	1.84	0.59
1:1G:297:G:N2	1:1G:300:A:OP2	2.32	0.59
1:1G:1194:U:H2'	1:1G:1195:C:H6	1.66	0.59
6:12:21:ARG:HA	6:12:39:ILE:HA	1.85	0.59
1:13:974:A:OP2	18:5I:29:ARG:NH2	2.36	0.59
1:13:1302:U:OP2	17:4I:21:TYR:OH	2.18	0.59
5:14:2801:A:H5"	5:14:2895:U:H4'	1.84	0.59
5:1H:484:C:H2'	5:1H:485:C:C6	2.38	0.59
5:1H:1613:G:O2'	54:P8:3:ARG:NE	2.35	0.59
27:16:42:C:H4'	31:41:67:LYS:HD2	1.84	0.59
28:11:147:LEU:HD13	28:11:155:LEU:HD21	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:228:PRO:O	58:11:404:HOH:O	2.17	0.59
37:88:133:ARG:O	37:88:134:ARG:HB2	2.03	0.59
1:1G:987:G:H22	1:1G:1218:C:H42	1.51	0.59
1:13:890:G:O2'	1:13:906:G:O6	2.14	0.59
1:13:933:G:OP2	11:6E:3:ARG:HB2	2.02	0.59
5:14:597:U:H2'	5:14:598:G:H8	1.67	0.59
5:14:654(B):C:H2'	5:14:654(C):G:C8	2.38	0.59
5:14:1949:G:O6	58:14:4055:HOH:O	2.14	0.59
18:5I:4:LYS:O	18:5I:7:ILE:HG13	2.03	0.59
5:1H:637:A:H2'	36:78:117:GLU:OE1	2.03	0.59
5:1H:1429:G:H2'	5:1H:1430:C:C6	2.38	0.59
35:68:98:VAL:HG13	35:68:117:LEU:HB2	1.84	0.59
49:K8:35:LEU:HD12	49:K8:53:LEU:HD12	1.84	0.59
6:12:102:LEU:HD21	6:12:162:ILE:HG21	1.83	0.59
6:12:132:LYS:HA	6:12:135:GLN:HB2	1.84	0.59
1:13:1286:A:H5"	25:1F:26:LYS:HG2	1.85	0.58
5:14:1033:U:H3'	5:14:1033:U:H6	1.68	0.58
5:14:1942:C:OP2	5:14:1943:U:O2'	2.14	0.58
5:1H:860:U:C5	5:1H:917:A:C2	2.79	0.58
5:1H:996:A:OP2	41:C8:92:ARG:NH2	2.35	0.58
5:1H:1678:G:N2	5:1H:1989:G:N2	2.50	0.58
5:1H:2562:U:H1'	35:68:23:ARG:NH1	2.16	0.58
29:21:116:VAL:O	29:21:117:MET:HB3	2.01	0.58
42:D8:19:LYS:HG3	42:D8:95:LEU:HD23	1.85	0.58
49:K8:58:ALA:O	49:K8:62:THR:HG22	2.03	0.58
1:1G:632:A:H1'	1:1G:633:G:OP2	2.02	0.58
1:1G:1194:U:H2'	1:1G:1195:C:C6	2.38	0.58
1:13:659:U:H2'	1:13:660:G:C8	2.38	0.58
2:1L:19:G:O2'	2:1L:57:G:N2	2.36	0.58
5:14:519:U:H2'	5:14:520:G:C8	2.39	0.58
5:1H:270(N):G:OP2	33:61:57:ARG:NH2	2.37	0.58
1:1G:1190:G:H5'	7:22:176:HIS:HE2	1.67	0.58
6:12:19:HIS:CE1	6:12:206:ASP:HB2	2.35	0.58
5:1H:1290:C:H2'	5:1H:1291:C:C6	2.39	0.58
5:1H:2402:C:H5	5:1H:2415:G:H22	1.50	0.58
45:G8:83:THR:HG22	45:G8:84:ARG:HG3	1.85	0.58
48:J8:64:ALA:HA	48:J8:67:ILE:HG13	1.85	0.58
1:13:692:U:O2'	1:13:694:A:N7	2.29	0.58
1:13:1148:U:H2'	1:13:1149:C:O4'	2.04	0.58
1:13:1327:C:OP2	25:1F:12:LYS:NZ	2.37	0.58
1:13:1372:U:OP1	13:8E:72:GLY:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1171:G:O2'	5:14:1173:G:N3	2.35	0.58
5:1H:997:G:OP1	41:C8:93:LYS:HD2	2.04	0.58
5:1H:1798:U:H5'	28:11:259:THR:HG22	1.85	0.58
29:21:103:ASP:OD1	29:21:201:THR:HG23	2.03	0.58
38:98:67:LEU:HD22	38:98:76:VAL:HG21	1.85	0.58
41:C8:85:LYS:HA	41:C8:85:LYS:NZ	2.17	0.58
45:G8:40:GLU:HB2	45:G8:64:GLU:OE1	2.02	0.58
1:1G:421:U:O2'	1:1G:423:G:N7	2.37	0.58
1:1G:490:G:OP2	8:32:132:ARG:NH2	2.36	0.58
1:1G:1298:C:H4'	1:1G:1299:A:C8	2.39	0.58
7:22:75:VAL:O	7:22:83:ARG:NH2	2.36	0.58
1:13:254:G:O3'	21:8I:69:LYS:NZ	2.29	0.58
1:13:581:G:N2	1:13:760:G:N7	2.51	0.58
1:13:600:C:H2'	1:13:601:C:C6	2.38	0.58
1:13:686:U:O4	1:13:703:G:H1'	2.03	0.58
1:13:741:G:H2'	1:13:742:G:O4'	2.04	0.58
1:13:1002:G:H2'	1:13:1003:G:H8	1.68	0.58
5:14:330:A:H2	5:14:1210:A:O2'	1.86	0.58
5:14:2572:A:OP1	5:14:2574:G:O2'	2.20	0.58
5:14:2836:U:H2'	5:14:2837:G:C8	2.39	0.58
7:2E:77:ILE:HA	7:2E:84:ILE:HD12	1.84	0.58
13:8E:112:LYS:HD3	13:8E:113:LYS:N	2.19	0.58
15:2I:22:HIS:HB3	15:2I:29:ILE:HG23	1.85	0.58
21:8I:20:THR:HG23	21:8I:43:LEU:HD23	1.85	0.58
2:3K:72:C:H2'	2:3K:73:A:O4'	2.04	0.58
5:1H:252:G:OP2	36:78:50:ARG:NH1	2.37	0.58
5:1H:535:C:O3'	41:C8:53:ARG:NH1	2.36	0.58
5:1H:2431:U:H3'	58:1H:3988:HOH:O	2.03	0.58
5:1H:2534:A:N6	58:1H:4612:HOH:O	2.36	0.58
5:1H:2577:A:H5"	5:1H:2578:G:H5'	1.85	0.58
27:1J:56:G:H4'	27:1J:57:A:C8	2.38	0.58
32:51:125:VAL:HG12	32:51:127:GLU:O	2.04	0.58
1:13:963:G:N2	14:1I:55:LYS:HZ1	2.01	0.58
5:14:1013:C:H42	5:14:1149:G:H1	1.51	0.58
15:2I:124:LYS:HB3	15:2I:125:PHE:CD2	2.39	0.58
5:1H:125:G:C6	54:P8:10:ARG:HG3	2.39	0.58
5:1H:269:U:OP1	58:1H:4353:HOH:O	2.17	0.58
5:1H:2179:C:H2'	5:1H:2180:U:H6	1.67	0.58
28:11:206:LEU:HD22	28:11:211:ARG:HG2	1.85	0.58
33:61:56:LYS:O	33:61:60:GLU:HB3	2.04	0.58
1:1G:353:A:H5'	1:1G:353:A:H8	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1318:A:H5"	23:AI:10:PHE:CD2	2.38	0.58
1:13:1346:A:H5"	13:8E:120:ARG:HH12	1.69	0.58
5:14:1354:A:OP2	58:14:3562:HOH:O	2.17	0.58
5:14:1520:U:H2'	5:14:1521:G:O4'	2.04	0.58
5:14:2098:U:N3	5:14:2191:G:O6	2.16	0.58
5:14:2638:G:O2'	5:14:2639:A:H8	1.85	0.58
6:1E:179:LYS:HA	12:7E:72:PRO:HG3	1.84	0.58
8:3E:30:LYS:HA	8:3E:35:ARG:HG3	1.84	0.58
12:7E:122:ARG:O	12:7E:126:LYS:HG3	2.03	0.58
23:AI:40:ILE:HD11	23:AI:62:ILE:HG23	1.85	0.58
5:1H:2146:C:H4'	5:1H:2147:G:N7	2.19	0.58
27:1J:94:C:H2'	27:1J:95:U:C6	2.39	0.58
6:12:7:VAL:HG22	6:12:8:LYS:H	1.68	0.58
1:13:1468:A:OP2	58:13:1980:HOH:O	2.16	0.58
5:14:1260:G:H2'	5:14:1261:C:C6	2.39	0.58
5:14:2655:G:N2	5:14:2665:A:OP2	2.21	0.58
9:4E:153:LYS:HD3	9:4E:154:GLY:H	1.68	0.58
10:5E:30:LEU:HB3	10:5E:35:ALA:HB3	1.84	0.58
33:61:8:PRO:HA	33:61:14:ASP:HA	1.84	0.58
41:C8:19:LYS:O	41:C8:22:LYS:HG3	2.03	0.58
1:1G:1059:C:H42	1:1G:1198:G:H1	1.51	0.58
1:1G:1329:A:H2'	1:1G:1330:U:O4'	2.04	0.58
8:32:59:ARG:O	8:32:63:LYS:N	2.21	0.58
1:13:323:U:H2'	1:13:324:G:O4'	2.03	0.58
1:13:376:G:H1	1:13:387:U:H3	1.52	0.58
1:13:1260:C:H3'	1:13:1260:C:H6	1.69	0.58
5:14:270(H):C:H2'	5:14:270(I):G:H8	1.69	0.58
5:14:1325:G:OP1	5:14:1647:G:O2'	2.17	0.58
5:14:1859:A:N6	5:14:1883:G:O2'	2.37	0.58
17:4I:4:ILE:HG22	17:4I:5:ALA:H	1.69	0.58
27:1J:38:C:H42	27:1J:44:G:H1	1.50	0.58
32:51:4:ILE:HD11	32:51:7:LEU:HD11	1.86	0.58
1:1G:179:A:H2'	1:1G:180:U:H6	1.68	0.58
3:2L:4:G:H1	3:2L:70:C:H42	1.52	0.58
5:14:582:G:H2'	5:14:583:G:C8	2.39	0.58
5:14:923:C:H2'	5:14:924:C:C6	2.39	0.58
7:2E:6:HIS:CD2	18:5I:49:HIS:HB3	2.39	0.58
9:4E:12:LEU:HD21	9:4E:14:ARG:HB2	1.86	0.58
17:4I:97:PRO:HA	17:4I:110:ARG:HD3	1.85	0.58
5:1H:960:A:H61	37:88:82:ARG:NH2	2.02	0.58
5:1H:1249:U:OP1	58:1H:3970:HOH:O	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2032:G:N2	29:21:146:THR:HG23	2.18	0.58
29:21:111:ARG:HD2	29:21:160:TYR:CD2	2.39	0.58
40:B8:64:ARG:HB2	40:B8:73:GLU:HG2	1.85	0.58
47:I8:25:ARG:HD3	47:I8:29:GLN:NE2	2.18	0.58
1:1G:313:A:H2'	1:1G:314:C:C6	2.38	0.58
1:1G:591:U:H2'	1:1G:592:G:C8	2.38	0.58
8:32:24:GLU:HG2	8:32:25:ARG:H	1.68	0.58
5:14:1188:U:C2'	5:14:1189:A:H5'	2.33	0.57
5:14:2262:U:H4'	5:14:2328:A:H2	1.68	0.57
5:1H:155:C:N4	5:1H:171:G:H1	2.02	0.57
5:1H:1022:G:O6	34:58:66:LYS:NZ	2.37	0.57
5:1H:1453:A:O2'	5:1H:1454:U:H2'	2.04	0.57
5:1H:1799:G:H5'	5:1H:1819:A:H61	1.68	0.57
5:1H:1805:U:O2	28:11:50:THR:HB	2.04	0.57
27:16:42:C:O3'	31:41:67:LYS:NZ	2.37	0.57
38:98:3:HIS:O	38:98:5:LYS:N	2.37	0.57
50:L8:31:LEU:O	50:L8:32:GLN:HB2	2.04	0.57
52:N8:40:LYS:HZ3	52:N8:46:CYS:HB3	1.69	0.57
1:1G:125:U:O4	58:1G:1711:HOH:O	2.15	0.57
1:1G:186(D):C:H2'	1:1G:186(E):C:C6	2.39	0.57
1:1G:408:A:H2'	1:1G:409:G:O4'	2.04	0.57
1:13:736:C:H2'	1:13:737:A:C8	2.39	0.57
1:13:963:G:H21	14:1I:55:LYS:CE	2.16	0.57
5:14:332:A:O2'	5:14:334:C:OP2	2.22	0.57
5:14:1485:G:H1	5:14:1504:C:N4	1.98	0.57
6:1E:74:LYS:O	6:1E:78:GLN:NE2	2.37	0.57
5:1H:533:G:H5'	41:C8:24:TYR:CD1	2.39	0.57
5:1H:1055:G:H1'	5:1H:1085:A:C2	2.39	0.57
5:1H:1430:C:H2'	5:1H:1431:U:C6	2.38	0.57
5:1H:2593:U:O4	58:1H:3690:HOH:O	2.16	0.57
28:11:17:THR:HG22	28:11:205:VAL:H	1.69	0.57
1:1G:984:C:H2'	1:1G:985:C:C6	2.40	0.57
1:13:554:C:H2'	1:13:555:C:H6	1.70	0.57
1:13:963:G:H5'	58:13:1953:HOH:O	2.03	0.57
5:14:235:U:H2'	5:14:236:C:H6	1.68	0.57
9:4E:33:VAL:HG11	9:4E:109:ILE:HA	1.86	0.57
14:1I:78:ASN:HB2	14:1I:81:THR:HG23	1.85	0.57
3:2K:16:C:O2'	3:2K:62:C:OP1	2.20	0.57
5:1H:2807:G:H3'	5:1H:2808:U:H5"	1.86	0.57
29:21:29:GLY:H	29:21:51:PHE:HE1	1.51	0.57
39:A8:42:ASP:O	39:A8:43:GLU:HB2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:111:G:H8	1:1G:111:G:O5'	1.86	0.57
1:1G:1481:U:H2'	1:1G:1482:G:C8	2.39	0.57
6:12:119:GLU:HG3	6:12:142:LEU:HD11	1.85	0.57
8:32:173:TRP:HZ3	8:32:193:ASP:HB3	1.67	0.57
3:2L:48:U:O2'	3:2L:49:C:OP2	2.20	0.57
6:1E:12:GLU:HA	6:1E:16:HIS:ND1	2.19	0.57
5:1H:1111:A:N3	5:1H:1112:G:H1'	2.19	0.57
5:1H:1187:G:OP2	58:1H:3949:HOH:O	2.17	0.57
32:51:4:ILE:HB	32:51:6:ARG:HG3	1.87	0.57
1:1G:992:U:H3	1:1G:1044:A:H62	1.53	0.57
6:12:221:LEU:HA	6:12:224:GLN:HB2	1.86	0.57
3:2L:62:C:H2'	3:2L:63:C:H6	1.68	0.57
5:14:1688:U:O2	5:14:1700:A:H5'	2.05	0.57
5:14:2074:U:H2'	5:14:2075:U:C6	2.40	0.57
14:1I:26:ALA:HB1	14:1I:84:GLN:HG2	1.87	0.57
17:4I:3:ARG:HE	17:4I:9:ILE:HD11	1.68	0.57
17:4I:82:MET:O	17:4I:84:ILE:N	2.35	0.57
5:1H:142:G:H1'	44:F8:37:THR:HG21	1.87	0.57
5:1H:322:A:P	30:31:168:ARG:HH21	2.28	0.57
5:1H:1264:G:H3'	5:1H:1265:A:H5"	1.87	0.57
5:1H:2262:U:O2'	5:1H:2263:C:H5'	2.05	0.57
37:88:39:PRO:HA	37:88:97:VAL:O	2.04	0.57
44:F8:51:VAL:HG13	44:F8:81:VAL:HG23	1.87	0.57
1:1G:1274:G:H2'	1:1G:1275:A:C8	2.39	0.57
1:1G:1386:G:C2	1:1G:1387:G:N7	2.71	0.57
1:13:793:U:H5'	1:13:794:A:H5"	1.87	0.57
5:14:739:G:P	58:14:3825:HOH:O	2.62	0.57
5:14:1537:C:O2'	5:14:1538:G:O4'	2.18	0.57
5:14:2542:A:H4'	5:14:2542:A:OP1	2.05	0.57
7:2E:95:THR:HB	7:2E:97:LYS:H	1.69	0.57
15:2I:21:ILE:HB	15:2I:84:VAL:HG12	1.85	0.57
15:2I:86:GLY:N	15:2I:112:THR:OG1	2.26	0.57
25:1F:3:LYS:HB3	25:1F:14:TRP:CD1	2.39	0.57
2:3K:64:A:C2	2:3K:65:G:H1'	2.40	0.57
5:1H:1298:C:OP2	58:1H:3654:HOH:O	2.17	0.57
30:31:103:LYS:HA	30:31:106:ARG:HG3	1.86	0.57
38:98:52:ILE:O	38:98:55:ALA:N	2.34	0.57
40:B8:26:ASP:OD2	40:B8:120:ARG:NH1	2.36	0.57
1:1G:1016:A:O2'	1:1G:1217:C:O2'	2.21	0.57
6:12:77:ALA:O	6:12:81:VAL:HG23	2.04	0.57
1:13:1120:G:H2'	1:13:1121:U:H6	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1124:G:HO2'	1:13:1145:C:N4	2.01	0.57
1:13:1259:C:N4	1:13:1260:C:O2	2.38	0.57
5:14:1359:A:N6	5:14:1372:U:H3	1.96	0.57
5:14:2130:U:H2'	5:14:2158:A:N1	2.20	0.57
6:1E:27:LYS:NZ	6:1E:193:ASP:OD2	2.24	0.57
6:1E:94:ASN:OD1	6:1E:95:GLN:N	2.33	0.57
16:3I:117:ARG:HB3	16:3I:122:THR:HB	1.86	0.57
5:1H:1433:U:O2	5:1H:1561:G:C2	2.57	0.57
5:1H:1533:C:H3'	5:1H:1534:G:C5'	2.35	0.57
30:31:162:LEU:HA	30:31:165:ARG:HG3	1.86	0.57
39:A8:26:LEU:HD22	39:A8:87:PHE:HD1	1.70	0.57
41:C8:112:ARG:NH2	42:D8:47:VAL:HG13	2.19	0.57
1:1G:114:U:H2'	1:1G:115:G:C8	2.40	0.57
1:1G:940:C:H2'	1:1G:941:G:H8	1.69	0.57
1:1G:1412:C:H2'	1:1G:1413:A:C8	2.39	0.57
1:13:179:A:H2'	1:13:180:U:H6	1.69	0.57
1:13:413:G:N2	1:13:428:G:H1'	2.18	0.57
1:13:748:C:H6	1:13:748:C:O5'	1.88	0.57
1:13:1130:A:N6	1:13:1144:G:H21	2.03	0.57
1:13:1368:G:H5"	13:8E:112:LYS:HB3	1.87	0.57
1:13:1497:G:C2'	1:13:1498:U:H5'	2.34	0.57
5:14:363(E):U:H5'	5:14:363(F):A:OP2	2.05	0.57
13:8E:49:PRO:O	13:8E:53:VAL:HB	2.05	0.57
16:3I:53:ARG:HG3	16:3I:93:LEU:HD21	1.87	0.57
24:BI:57:ARG:NH1	24:BI:102:GLY:HA2	2.19	0.57
5:1H:2830:G:H5"	5:1H:2830:G:H8	1.70	0.57
30:31:167:ALA:HB1	30:31:173:VAL:HG11	1.87	0.57
31:41:131:TYR:O	31:41:159:VAL:HG22	2.04	0.57
39:A8:99:LYS:O	39:A8:103:GLU:HG2	2.05	0.57
46:H8:58:VAL:O	46:H8:60:GLU:N	2.37	0.57
1:1G:176:C:H2'	1:1G:177:C:H6	1.69	0.57
1:1G:1055:A:N3	7:22:156:ARG:NH1	2.53	0.57
1:1G:1142:G:H3'	1:1G:1143:G:C8	2.40	0.57
1:13:953:G:H2'	1:13:954:G:O4'	2.04	0.57
1:13:1120:G:H2'	1:13:1121:U:C6	2.40	0.57
3:2L:41:C:H2'	3:2L:42:C:H6	1.69	0.57
5:14:1332:G:H22	5:14:1609:A:HO2'	1.52	0.57
5:14:1441:G:H2'	5:14:1442:G:H8	1.70	0.57
5:14:2776:A:OP1	5:14:2776:A:H3'	2.05	0.57
14:1I:84:GLN:HG3	14:1I:88:LEU:HD23	1.87	0.57
17:4I:20:THR:HG23	17:4I:26:GLY:HA3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2K:62:C:H2'	3:2K:63:C:C6	2.39	0.57
5:1H:1316:U:H2'	5:1H:1317:A:C8	2.36	0.57
5:1H:1403:C:H5"	5:1H:1471:A:H1'	1.86	0.57
5:1H:2683:C:OP1	40:B8:53:ARG:NH2	2.37	0.57
28:11:71:ASP:N	28:11:71:ASP:OD1	2.34	0.57
30:31:129:PHE:HA	30:31:142:TRP:NE1	2.19	0.57
55:Q8:30:ARG:HB2	55:Q8:30:ARG:CZ	2.34	0.57
1:1G:222:U:H2'	1:1G:223:U:H6	1.69	0.57
1:1G:433:C:H2'	1:1G:434:U:C6	2.38	0.57
1:1G:994:A:C5	1:1G:1216:G:H4'	2.40	0.57
6:12:22:LYS:NZ	6:12:35:GLU:OE1	2.36	0.57
7:22:11:ARG:HB2	7:22:11:ARG:HH11	1.70	0.57
1:13:701:C:O2	1:13:703:G:N1	2.38	0.57
1:13:1170:A:C8	1:13:1171:G:C8	2.93	0.57
1:13:1183:A:O2'	1:13:1184:G:OP1	2.19	0.57
21:8I:76:LEU:HD12	21:8I:77:VAL:N	2.19	0.57
5:1H:674:G:H1'	30:31:74:ARG:HD3	1.85	0.57
5:1H:1338:G:H2'	5:1H:1339:G:H8	1.70	0.57
5:1H:2636:U:P	29:21:79:ARG:HA	2.45	0.57
55:Q8:25:MET:HG2	55:Q8:46:ARG:HG2	1.87	0.57
1:1G:1216:G:H2'	1:1G:1217:C:C6	2.40	0.57
8:32:76:ARG:HH21	8:32:80:GLU:HG2	1.70	0.57
1:13:153:C:N4	1:13:168:G:H1	2.00	0.56
1:13:1190:G:OP1	7:2E:4:LYS:HA	2.05	0.56
5:14:654(E):C:H42	5:14:654(P):G:H22	1.53	0.56
5:14:706:A:H2'	5:14:707:G:O4'	2.05	0.56
5:14:1913:A:H4'	5:14:1914:C:H5"	1.86	0.56
5:14:2150:U:H2'	5:14:2151:G:H8	1.69	0.56
8:3E:92:VAL:HG12	8:3E:96:LEU:HD21	1.87	0.56
10:5E:3:ARG:HB3	10:5E:93:SER:HB2	1.87	0.56
15:2I:98:LEU:O	15:2I:101:SER:OG	2.14	0.56
5:1H:1310:G:OP2	54:P8:9:ARG:NH1	2.37	0.56
5:1H:1676:A:N7	58:1H:3722:HOH:O	2.33	0.56
5:1H:1794:U:H2'	5:1H:1795:C:C6	2.39	0.56
5:1H:2275:C:H5'	5:1H:2275:C:H6	1.69	0.56
5:1H:2341:G:H2'	5:1H:2342:C:C6	2.39	0.56
5:1H:2580:U:H4'	29:21:130:GLY:HA3	1.87	0.56
27:1J:70:C:H2'	27:1J:71:C:H6	1.70	0.56
31:41:151:ALA:O	31:41:153:ARG:NH1	2.38	0.56
33:61:29:TYR:O	33:61:32:PRO:HD2	2.05	0.56
45:G8:87:LYS:HD2	45:G8:96:ILE:HD11	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:558:G:H5”	1:13:559:A:OP2	2.05	0.56
1:13:963:G:H21	14:1I:55:LYS:NZ	2.02	0.56
2:3L:33:U:N3	2:3L:36:A:OP2	2.38	0.56
5:14:654(J):A:N7	5:14:654(K):C:N4	2.53	0.56
5:14:2120:G:H2’	5:14:2121:G:C8	2.40	0.56
6:1E:16:HIS:CE1	6:1E:213:LEU:HD13	2.41	0.56
7:2E:52:LEU:HA	7:2E:70:VAL:HG12	1.86	0.56
11:6E:120:ILE:O	11:6E:124:LEU:HB2	2.05	0.56
5:1H:336:C:OP1	45:G8:83:THR:HG23	2.05	0.56
5:1H:760:G:H5”	58:1H:3878:HOH:O	2.05	0.56
5:1H:792:G:H5”	5:1H:793:A:H5’	1.87	0.56
5:1H:848:G:H2’	5:1H:849:A:C8	2.40	0.56
5:1H:1069:A:H4’	5:1H:1070:A:H5”	1.87	0.56
5:1H:2128:C:N4	5:1H:2160:G:H1	2.03	0.56
27:16:5:C:O2’	27:16:27:C:O2	2.21	0.56
29:21:50:GLY:HA2	29:21:77:ILE:HA	1.87	0.56
38:98:63:ARG:HG2	38:98:67:LEU:HD23	1.87	0.56
44:F8:80:ILE:HG13	44:F8:80:ILE:O	2.05	0.56
47:I8:63:VAL:HG23	47:I8:64:ASP:O	2.04	0.56
55:Q8:48:PHE:CZ	55:Q8:52:LYS:HB2	2.39	0.56
1:1G:280:C:H3’	1:1G:281:G:H5’	1.87	0.56
1:1G:1177:G:O2’	1:1G:1178:G:O4’	2.23	0.56
1:1G:1210:C:H3’	1:1G:1211:U:H5”	1.86	0.56
1:13:31:G:O2’	1:13:48:C:N4	2.38	0.56
1:13:271:C:H2’	1:13:272:C:H6	1.70	0.56
1:13:864:A:H2’	1:13:865:A:C8	2.40	0.56
1:13:971:G:N2	1:13:1363:A:OP2	2.33	0.56
1:13:1187:G:O5’	13:8E:113:LYS:NZ	2.38	0.56
1:13:1525:G:OP1	15:2I:120:ARG:NH2	2.39	0.56
5:14:30:G:H2’	5:14:31:C:H6	1.68	0.56
5:14:1981:A:OP1	58:14:3544:HOH:O	2.17	0.56
8:3E:108:LEU:HD23	8:3E:110:PHE:CE1	2.41	0.56
23:AI:51:VAL:HG12	23:AI:52:TYR:H	1.70	0.56
5:1H:192:C:P	58:1H:3729:HOH:O	2.64	0.56
5:1H:1036:G:H1	5:1H:1119:C:N4	1.96	0.56
5:1H:1312:U:H4’	5:1H:1313:U:O5’	2.04	0.56
5:1H:1639:U:O2’	5:1H:1640:C:H5’	2.05	0.56
5:1H:2299:G:O6	58:1H:4565:HOH:O	2.18	0.56
5:1H:2636:U:H2’	5:1H:2637:U:C6	2.40	0.56
5:1H:2830:G:H5”	5:1H:2830:G:C8	2.40	0.56
27:16:42:C:O2’	31:41:67:LYS:HE3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:167:VAL:HG21	29:21:187:ALA:CB	2.35	0.56
32:51:83:TYR:HB3	32:51:135:GLY:H	1.70	0.56
34:58:7:LYS:H	34:58:7:LYS:NZ	2.03	0.56
49:K8:59:ARG:O	49:K8:62:THR:HG23	2.06	0.56
1:1G:108:G:H5'	1:1G:109:A:C5'	2.36	0.56
1:1G:438:G:H4'	8:32:123:HIS:CD2	2.38	0.56
1:1G:868:C:H2'	1:1G:869:G:O4'	2.04	0.56
1:1G:977:A:HO2'	1:1G:981:U:H3	1.52	0.56
1:1G:1058:G:H1	1:1G:1199:U:H3	1.53	0.56
7:22:32:LEU:O	7:22:36:ASP:HB2	2.05	0.56
1:13:156:G:H1	1:13:165:C:H42	1.52	0.56
1:13:580:U:OP1	19:6I:54:ARG:NH2	2.37	0.56
1:13:1015:A:H2'	1:13:1016:A:C8	2.40	0.56
6:1E:115:LEU:HD13	6:1E:145:LEU:HB3	1.88	0.56
10:5E:86:ARG:O	10:5E:87:ARG:HG2	2.05	0.56
16:3I:70:ILE:HD13	16:3I:77:LEU:HD12	1.86	0.56
18:5I:9:LYS:HA	18:5I:12:ARG:HG2	1.87	0.56
5:1H:827:U:H5'	5:1H:828:U:O5'	2.04	0.56
5:1H:888:C:H2'	5:1H:889:C:C2	2.41	0.56
5:1H:1026:U:H1'	5:1H:1027:A:O5'	2.05	0.56
5:1H:1178:C:H4'	5:1H:1179:C:OP1	2.05	0.56
5:1H:2068:U:N3	5:1H:2430:A:C2	2.73	0.56
34:58:19:GLU:HG3	34:58:59:LYS:HB3	1.88	0.56
35:68:63:VAL:HG12	35:68:106:LEU:HD11	1.87	0.56
38:98:38:VAL:HB	38:98:39:PRO:HD3	1.86	0.56
44:F8:3:THR:HB	44:F8:6:ASP:HB2	1.87	0.56
1:1G:1241:G:H1	1:1G:1296:C:H42	1.51	0.56
1:1G:1360:A:H8	1:1G:1360:A:OP1	1.89	0.56
1:13:376:G:H5"	20:7I:5:ARG:HD2	1.87	0.56
1:13:553:A:H5"	16:3I:24:VAL:HG21	1.86	0.56
1:13:1508:G:P	58:13:1803:HOH:O	2.64	0.56
5:14:2646:C:H2'	5:14:2647:U:O4'	2.05	0.56
6:1E:111:ARG:HG2	6:1E:111:ARG:NH1	2.18	0.56
5:1H:600:G:N2	5:1H:605:C:O3'	2.38	0.56
5:1H:1835:G:H5'	5:1H:1836:C:OP2	2.06	0.56
5:1H:2481:G:HO2'	5:1H:2482:G:P	2.28	0.56
27:16:11:C:OP2	47:I8:72:ARG:NH2	2.39	0.56
33:61:131:LYS:HB3	33:61:132:PRO:HA	1.88	0.56
38:98:12:ARG:HG2	38:98:12:ARG:NH1	2.21	0.56
39:A8:24:LEU:HD12	39:A8:41:ASP:HB2	1.88	0.56
47:I8:14:ARG:NH1	58:I8:202:HOH:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:401:C:H2'	1:1G:402:G:C8	2.41	0.56
1:1G:1004:A:H2	1:1G:1024:G:C8	2.23	0.56
1:13:637:G:H2'	1:13:638:G:C8	2.41	0.56
1:13:1086:U:O4	1:13:1099:G:N2	2.30	0.56
1:13:1336:C:C6	1:13:1336:C:H5"	2.41	0.56
5:14:309:G:N3	5:14:329:G:O2'	2.38	0.56
5:14:1011:G:C2	5:14:1151:G:C2	2.94	0.56
5:14:1025:G:O2'	5:14:1026:U:OP1	2.24	0.56
5:14:1819:A:H4'	5:14:1820:U:O5'	2.04	0.56
5:14:2317:C:H2'	5:14:2318:G:O4'	2.04	0.56
5:14:2507:C:H5"	5:14:2573:C:N4	2.20	0.56
3:2K:52:C:H2'	3:2K:53:G:O4'	2.06	0.56
5:1H:234:C:H2'	5:1H:235:U:H6	1.70	0.56
5:1H:607:U:N3	5:1H:621:A:C2	2.70	0.56
5:1H:1427:A:H4'	5:1H:1428:C:O5'	2.04	0.56
29:21:101:ARG:HG2	29:21:169:ASN:OD1	2.05	0.56
48:J8:8:SER:HB3	48:J8:66:HIS:CD2	2.41	0.56
50:L8:9:VAL:HG22	50:L8:54:VAL:HA	1.88	0.56
1:13:405:U:O4	8:3E:2:GLY:N	2.39	0.56
1:13:1149:C:H2'	1:13:1150:U:C6	2.41	0.56
2:1L:18:G:O2'	2:1L:19:G:OP1	2.19	0.56
2:3L:48:C:H41	2:3L:59:U:H1'	1.69	0.56
5:14:400:G:N7	58:14:3921:HOH:O	2.33	0.56
5:14:519:U:H2'	5:14:520:G:H8	1.69	0.56
5:14:2749:A:N1	5:14:2750:A:N6	2.53	0.56
8:3E:173:TRP:CD1	8:3E:174:LEU:HG	2.40	0.56
16:3I:47:LYS:HB2	16:3I:48:PRO:HA	1.88	0.56
17:4I:52:GLU:O	17:4I:56:LEU:HB2	2.06	0.56
5:1H:1049:C:C2'	5:1H:1050:A:H5'	2.35	0.56
5:1H:1514:U:H2'	5:1H:1515:C:C6	2.40	0.56
55:Q8:48:PHE:CE2	55:Q8:52:LYS:HG3	2.41	0.56
6:12:53:ARG:HH12	6:12:199:TYR:HA	1.69	0.56
8:32:82:ALA:HA	8:32:85:LYS:HB2	1.88	0.56
1:13:57:G:H2'	1:13:58:C:C6	2.41	0.56
5:14:639:U:H2'	5:14:640:C:C6	2.41	0.56
5:14:696:G:H2'	5:14:697:C:H6	1.71	0.56
5:14:1939:U:OP1	5:14:2604:U:O2'	2.22	0.56
5:14:2127:G:O2'	5:14:2173:A:N1	2.33	0.56
5:14:2542:A:N3	5:14:2542:A:H5"	2.21	0.56
32:51:20:ALA:HB3	32:51:23:ARG:HG3	1.88	0.56
41:C8:8:VAL:O	41:C8:12:ARG:HG3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:K8:55:ARG:O	49:K8:58:ALA:HB3	2.05	0.56
55:Q8:8:LYS:H	55:Q8:8:LYS:HD2	1.70	0.56
1:1G:302:G:O2'	1:1G:556:C:H5"	2.06	0.56
1:1G:1278:U:H5'	1:1G:1279:A:C5'	2.36	0.56
1:13:142:G:H2'	1:13:143:A:H8	1.69	0.56
1:13:750:G:N3	19:6I:23:GLY:HA3	2.21	0.56
5:14:363:G:H2'	5:14:363(A):A:H8	1.69	0.56
5:14:621:A:H3'	5:14:622:G:H8	1.71	0.56
5:14:656:G:H2'	5:14:657:U:O4'	2.06	0.56
5:14:1470:G:N2	5:14:1522:G:OP2	2.39	0.56
5:14:1849:G:H2'	5:14:1850:G:H8	1.69	0.56
5:14:2054:A:H5"	5:14:2055:C:O5'	2.05	0.56
5:1H:2392:A:H2	5:1H:2424:C:N4	2.03	0.56
5:1H:2862:G:H2'	5:1H:2863:C:H6	1.70	0.56
32:51:20:ALA:HB1	32:51:21:PRO:HD2	1.88	0.56
32:51:86:GLU:HG3	32:51:165:ALA:H	1.69	0.56
36:78:38:GLN:O	36:78:44:GLY:HA2	2.06	0.56
54:P8:15:THR:HG22	54:P8:16:HIS:CE1	2.40	0.56
1:1G:1498:U:O2'	1:1G:1499:A:OP2	2.18	0.56
6:12:212:GLN:O	6:12:216:SER:N	2.28	0.56
8:32:59:ARG:HA	8:32:62:GLN:HB2	1.87	0.56
8:32:112:VAL:HG12	8:32:116:GLN:OE1	2.05	0.56
1:13:429:U:OP2	8:3E:36:ARG:NH2	2.35	0.56
1:13:1226:C:H4'	23:AI:80:TYR:OH	2.06	0.56
2:3L:37:MIA:H2'	2:3L:38:A:H8	1.71	0.56
5:14:1450:C:H2'	5:14:1451:C:C6	2.41	0.56
5:14:2275:C:H5'	5:14:2275:C:C6	2.39	0.56
14:1I:57:LYS:HD2	14:1I:60:ARG:HH12	1.71	0.56
5:1H:459:U:H2'	5:1H:460:A:H8	1.71	0.56
5:1H:563:G:OP2	58:1H:3640:HOH:O	2.18	0.56
5:1H:1140:C:OP1	34:58:23:LEU:HB3	2.06	0.56
5:1H:1359:A:H2	5:1H:1372:U:O4	1.89	0.56
5:1H:2164:C:OP2	5:1H:2166:G:N2	2.39	0.56
28:11:71:ASP:OD2	28:11:103:ARG:NH2	2.39	0.56
29:21:48:GLN:OE1	29:21:77:ILE:HG21	2.06	0.56
32:51:136:ILE:H	32:51:136:ILE:HD12	1.70	0.56
32:51:154:PRO:HB3	32:51:163:TYR:CE2	2.41	0.56
49:K8:47:ASN:C	49:K8:49:LYS:H	2.07	0.56
1:1G:188:U:O2'	1:1G:189:U:H5'	2.06	0.56
1:13:37:U:O2'	1:13:500:G:H4'	2.05	0.55
1:13:859:A:H2'	1:13:860:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2L:10:G:N2	3:2L:27:G:H1'	2.21	0.55
5:14:2808:U:H2'	5:14:2809:A:H8	1.72	0.55
13:8E:8:GLY:HA3	13:8E:79:LEU:HB3	1.87	0.55
5:1H:213:A:H5"	5:1H:214:G:OP2	2.06	0.55
5:1H:534:U:H5'	41:C8:42:ALA:HB1	1.88	0.55
5:1H:1570:A:H2'	5:1H:1571:A:C8	2.40	0.55
27:1J:44:G:H5"	27:1J:45:A:OP1	2.06	0.55
29:21:78:LEU:O	29:21:79:ARG:HB2	2.05	0.55
29:21:105:THR:OG1	29:21:199:ARG:NH2	2.38	0.55
32:51:86:GLU:HG3	32:51:165:ALA:HB3	1.88	0.55
1:1G:1134:G:H1	1:1G:1140:C:H42	1.54	0.55
1:1G:1422:G:H2'	1:1G:1423:G:H8	1.71	0.55
1:13:221:C:H2'	1:13:222:U:H6	1.71	0.55
1:13:1346:A:N1	1:13:1374:A:H5"	2.21	0.55
5:14:1021:A:H2'	5:14:1023:U:H5'	1.87	0.55
5:14:1053:C:H2'	5:14:1054:A:O4'	2.06	0.55
5:14:1270:C:H5"	5:14:1271:G:O5'	2.06	0.55
5:14:1359:A:N7	5:14:1372:U:O4	2.40	0.55
5:14:2652:C:H42	5:14:2668:G:H1	1.52	0.55
6:1E:124:SER:HB2	6:1E:125:PRO:HD2	1.89	0.55
8:3E:107:ARG:HH21	8:3E:194:LEU:HD22	1.71	0.55
5:1H:483:A:OP1	45:G8:50:ARG:NH2	2.39	0.55
5:1H:565:C:H4'	58:1H:3733:HOH:O	2.06	0.55
5:1H:607:U:OP1	30:31:102:PRO:HA	2.06	0.55
5:1H:1013:C:C2'	5:1H:1014:U:H5'	2.36	0.55
5:1H:1534:G:H22	5:1H:1538:G:N2	2.03	0.55
5:1H:1769:G:O2'	5:1H:1958:C:OP1	2.17	0.55
5:1H:2131:G:H5"	5:1H:2133:G:H4'	1.88	0.55
5:1H:2313:C:H4'	31:41:91:ARG:HG3	1.87	0.55
42:D8:65:GLY:HA3	42:D8:91:TYR:CE1	2.40	0.55
55:Q8:6:THR:HA	55:Q8:58:ILE:H	1.71	0.55
1:1G:983:A:N1	1:1G:1222:G:N2	2.55	0.55
1:13:160:A:H1'	1:13:344:A:C8	2.41	0.55
5:14:279:C:N4	5:14:361:G:H1	2.05	0.55
5:14:1921:G:H2'	5:14:1922:G:H8	1.71	0.55
5:14:2134:A:OP2	5:14:2157:G:N2	2.30	0.55
23:AI:51:VAL:O	23:AI:57:HIS:HA	2.07	0.55
5:1H:654:A:H3'	5:1H:654:A:N3	2.21	0.55
5:1H:1250:G:OP2	36:78:18:ARG:NH1	2.39	0.55
5:1H:1400:G:H2'	5:1H:1401:G:C8	2.42	0.55
5:1H:2324:C:H5"	5:1H:2325:G:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2766:G:H2'	5:1H:2766:G:N3	2.22	0.55
27:16:44:G:H1'	27:16:47:C:N4	2.20	0.55
33:61:9:LEU:HD21	33:61:35:LEU:HD13	1.89	0.55
41:C8:92:ARG:NH1	42:D8:11:GLN:O	2.39	0.55
52:N8:40:LYS:NZ	52:N8:46:CYS:HB3	2.22	0.55
1:1G:57:G:H2'	1:1G:58:C:C6	2.41	0.55
1:1G:741:G:H2'	1:1G:742:G:O4'	2.06	0.55
1:1G:865:A:N3	1:1G:918:A:O2'	2.30	0.55
1:1G:940:C:H2'	1:1G:941:G:C8	2.41	0.55
1:1G:1251:A:H2'	1:1G:1252:A:C8	2.42	0.55
1:1G:1326:C:H2'	1:1G:1327:C:C6	2.42	0.55
1:13:1366:C:H2'	1:13:1367:C:H6	1.71	0.55
5:14:581:C:H2'	5:14:582:G:H8	1.70	0.55
5:14:848:G:H2'	5:14:849:A:H8	1.70	0.55
5:14:1058:U:H2'	5:14:1059:G:H8	1.71	0.55
12:7E:25:ASP:OD1	12:7E:60:ARG:HG3	2.07	0.55
12:7E:87:SER:HB2	12:7E:93:VAL:CB	2.36	0.55
22:9I:59:SER:OG	22:9I:62:GLU:HB2	2.06	0.55
5:1H:729:G:OP2	28:11:13:ARG:NH1	2.36	0.55
5:1H:1216:G:OP2	41:C8:12:ARG:NH2	2.35	0.55
5:1H:1408:C:C2	5:1H:1595:G:N2	2.74	0.55
31:41:84:LYS:HG3	31:41:84:LYS:O	2.05	0.55
32:51:101:ARG:NH2	32:51:121:ILE:O	2.40	0.55
33:61:29:TYR:CD2	33:61:30:LEU:HD23	2.38	0.55
36:78:50:ARG:HD3	55:Q8:7:HIS:NE2	2.21	0.55
1:1G:994:A:N7	1:1G:1216:G:H4'	2.21	0.55
7:22:50:ALA:HB1	7:22:70:VAL:HG11	1.88	0.55
1:13:105:G:H2'	1:13:106:C:C6	2.41	0.55
1:13:730:G:C5	1:13:731:G:H1'	2.42	0.55
5:14:71:A:H5'	5:14:71:A:C8	2.41	0.55
5:14:343:C:H2'	5:14:344:G:C8	2.41	0.55
5:14:918:A:O2'	27:1J:96:G:N2	2.39	0.55
15:2I:127:LYS:HD3	15:2I:128:ALA:H	1.70	0.55
16:3I:126:LYS:HG3	16:3I:128:ALA:H	1.71	0.55
5:1H:1113:U:H2'	5:1H:1114:G:C8	2.41	0.55
5:1H:2843:G:H1	5:1H:2874:C:H42	1.53	0.55
27:1J:88:C:H3'	27:1J:89:G:C8	2.41	0.55
1:1G:1043:C:H2'	1:1G:1044:A:H8	1.72	0.55
8:32:150:GLU:C	8:32:152:SER:H	2.10	0.55
1:13:77:C:H2'	1:13:78:G:H5"	1.88	0.55
1:13:683:G:C6	1:13:684:A:C6	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2461:C:H2'	5:14:2462:U:H6	1.72	0.55
7:2E:3:ASN:N	7:2E:3:ASN:OD1	2.40	0.55
8:3E:141:ARG:HB2	8:3E:141:ARG:NH1	2.22	0.55
9:4E:11:ILE:HG13	9:4E:31:LEU:HB3	1.88	0.55
13:8E:112:LYS:HA	13:8E:119:ALA:HB2	1.89	0.55
15:2I:103:LEU:O	15:2I:105:VAL:HG12	2.07	0.55
5:1H:280:C:N3	5:1H:361:G:C2	2.75	0.55
5:1H:1392:A:C6	5:1H:1393:A:N1	2.75	0.55
5:1H:1443:G:C2	5:1H:1549:C:N3	2.75	0.55
5:1H:1598:C:H2'	5:1H:1599:C:H6	1.71	0.55
5:1H:2028:U:H2'	5:1H:2029:G:O4'	2.07	0.55
5:1H:2345:G:N3	5:1H:2381:C:H2'	2.21	0.55
27:16:15:A:H5'	27:16:16:G:H8	1.71	0.55
28:11:164:GLN:OE1	28:11:166:GLN:NE2	2.39	0.55
40:B8:93:ARG:HG3	40:B8:93:ARG:HH11	1.72	0.55
42:D8:25:LEU:H	42:D8:92:THR:CG2	2.20	0.55
49:K8:28:LYS:HA	49:K8:31:GLU:HB2	1.89	0.55
1:13:390:C:H2'	1:13:391:G:C8	2.42	0.55
1:13:452:A:OP1	20:7I:43:LYS:NZ	2.39	0.55
1:13:979:C:N4	58:13:1828:HOH:O	2.39	0.55
1:13:1486:G:H2'	1:13:1487:G:O4'	2.07	0.55
2:1L:19:G:HO2'	2:1L:57:G:N2	2.04	0.55
5:14:2114:A:N6	5:14:2119:A:N7	2.55	0.55
5:1H:1637:A:H4'	5:1H:2711:A:O2'	2.07	0.55
27:1J:13:A:H5"	27:1J:15:A:C6	2.42	0.55
28:11:12:SER:HB2	28:11:208:LYS:HB3	1.87	0.55
29:21:105:THR:HG22	29:21:106:GLY:H	1.71	0.55
1:13:1015:A:H2'	1:13:1016:A:H8	1.70	0.55
2:1L:46:7MG:H5"	2:1L:46:7MG:H82	1.89	0.55
5:14:288:C:H2'	5:14:289:A:C8	2.41	0.55
5:14:890:A:H2'	5:14:892:G:C8	2.42	0.55
5:14:1069:A:H4'	5:14:1070:A:H5"	1.88	0.55
5:14:2745:C:H2'	5:14:2746:U:O4'	2.07	0.55
6:1E:212:GLN:OE1	6:1E:216:SER:OG	2.25	0.55
9:4E:87:SER:HB3	9:4E:125:SER:O	2.07	0.55
25:1F:9:ARG:HG3	25:1F:13:ILE:HD11	1.89	0.55
5:1H:698:C:O2'	5:1H:734:A:N6	2.40	0.55
5:1H:2210:G:H3'	5:1H:2211:G:C8	2.42	0.55
35:68:58:VAL:HG21	35:68:86:ILE:HG12	1.88	0.55
39:A8:14:VAL:O	39:A8:18:ILE:HD13	2.06	0.55
42:D8:45:THR:O	42:D8:45:THR:OG1	2.17	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:H8:126:VAL:HA	46:H8:164:ALA:N	2.20	0.55
52:N8:41:PRO:CD	52:N8:44:THR:HG21	2.36	0.55
1:1G:4:U:H3'	1:1G:5:U:H5'	1.89	0.55
1:1G:191(F):U:H2'	1:1G:191:G:C8	2.42	0.55
1:1G:410:G:N1	1:1G:429:U:O2	2.39	0.55
1:1G:1062:U:H2'	1:1G:1063:C:C6	2.42	0.55
1:13:1020:U:H2'	1:13:1021:G:C8	2.42	0.55
1:13:1292:U:H5'	13:8E:38:GLN:OE1	2.06	0.55
5:14:509:C:OP1	58:14:4154:HOH:O	2.18	0.55
26:1K:76:A:HO2'	5:1H:2506:U:H1'	1.71	0.55
2:3K:5:G:H22	2:3K:68:C:N4	2.05	0.55
5:1H:1013:C:O2'	5:1H:1014:U:H5'	2.06	0.55
5:1H:2418:A:OP1	55:Q8:39:LYS:HD3	2.07	0.55
5:1H:2711:A:OP2	58:1H:3683:HOH:O	2.18	0.55
32:51:10:PRO:HB2	32:51:50:VAL:HG13	1.89	0.55
32:51:43:VAL:HB	32:51:52:VAL:HG22	1.89	0.55
37:88:32:TYR:CE2	37:88:133:ARG:HG3	2.42	0.55
46:H8:24:LEU:HB3	46:H8:39:VAL:HG23	1.89	0.55
55:Q8:6:THR:N	55:Q8:59:LYS:HZ2	2.01	0.55
55:Q8:38:GLY:HA2	55:Q8:39:LYS:C	2.28	0.55
1:13:353:A:H5'	1:13:353:A:C8	2.37	0.55
5:14:251:A:C5	5:14:252:G:H1'	2.42	0.55
5:14:1054:A:H62	5:14:1104:C:H42	1.53	0.55
5:14:1496:A:H8	5:14:1577:C:O2'	1.79	0.55
5:14:2602:A:H4'	5:14:2603:G:O5'	2.06	0.55
5:14:2849:U:H4'	5:14:2868:A:C2	2.42	0.55
8:3E:64:LEU:HD22	8:3E:198:VAL:HG11	1.89	0.55
15:2I:50:TYR:CD1	15:2I:54:ARG:HB3	2.42	0.55
17:4I:23:TYR:CE2	17:4I:71:ARG:HG3	2.42	0.55
17:4I:88:ARG:HH11	17:4I:88:ARG:CG	2.19	0.55
23:AI:67:VAL:HG21	51:M8:59:PHE:HB3	1.88	0.55
5:1H:599:G:N1	5:1H:658:C:N3	2.44	0.55
27:1J:16:G:H2'	27:1J:17:C:C6	2.42	0.55
40:B8:3:ARG:HD2	40:B8:6:LEU:HB3	1.89	0.55
46:H8:165:VAL:HB	46:H8:166:SER:HA	1.87	0.55
1:1G:32:A:H2'	1:1G:33:A:C8	2.42	0.55
1:1G:688:G:H2'	1:1G:689:C:H6	1.71	0.55
1:1G:1320:C:H2'	1:1G:1321:C:C6	2.42	0.55
1:1G:1372:U:H2'	1:1G:1373:G:O4'	2.07	0.55
1:13:128:G:H5'	21:8I:2:PRO:O	2.06	0.54
1:13:1056:U:H5'	7:2E:163:ALA:HB2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1327:C:P	25:1F:12:LYS:HZ1	2.29	0.54
3:2L:24:C:C2	3:2L:25:U:C5	2.95	0.54
5:14:273(F):C:H3'	5:14:274:G:H5"	1.89	0.54
5:14:1754:C:H2'	5:14:1755:A:C8	2.42	0.54
5:14:1927:A:H2'	5:14:1928:A:C8	2.42	0.54
7:2E:21:ARG:NH2	7:2E:56:ASP:OD1	2.40	0.54
8:3E:111:ALA:HB2	8:3E:120:LEU:HD11	1.89	0.54
5:1H:732:C:H3'	58:1H:4182:HOH:O	2.07	0.54
5:1H:945:A:P	58:1H:4233:HOH:O	2.65	0.54
5:1H:1174:A:C4	5:1H:1178:C:N4	2.75	0.54
5:1H:1257:C:H4'	30:31:83:PHE:CD1	2.42	0.54
5:1H:1264:G:OP1	52:N8:19:ARG:NH2	2.37	0.54
5:1H:1680:U:H2'	5:1H:1681:G:O4'	2.07	0.54
5:1H:1728:G:H3'	5:1H:1729:A:H5"	1.89	0.54
5:1H:1803:A:H4'	28:11:259:THR:HG23	1.89	0.54
5:1H:2061:G:OP2	5:1H:2502:G:H5'	2.06	0.54
5:1H:2564:A:C2	5:1H:2647:U:H4'	2.41	0.54
31:41:47:LYS:NZ	31:41:80:PHE:HD2	2.05	0.54
32:51:152:ARG:HG3	32:51:161:GLY:HA2	1.88	0.54
46:H8:130:PRO:O	46:H8:133:ILE:HG13	2.08	0.54
1:1G:565:U:OP2	1:1G:566:G:O2'	2.18	0.54
1:1G:1401:G:C2	1:1G:1402:C:H1'	2.42	0.54
1:13:67:C:H2'	1:13:68:G:C8	2.41	0.54
5:14:2037:G:H2'	5:14:2038:G:H8	1.71	0.54
8:3E:85:LYS:HG3	8:3E:86:LYS:N	2.22	0.54
13:8E:17:VAL:HG11	13:8E:81:ILE:HD13	1.89	0.54
5:1H:270(L):U:H3	33:61:50:ARG:NE	2.05	0.54
5:1H:581:C:H2'	5:1H:582:G:H8	1.72	0.54
5:1H:2310:A:N6	31:41:79:ASN:HB2	2.22	0.54
5:1H:2780:G:OP1	34:58:118:LYS:NZ	2.36	0.54
29:21:37:ARG:O	29:21:45:THR:HA	2.08	0.54
40:B8:16:ARG:NH2	40:B8:83:ILE:O	2.39	0.54
1:1G:872:A:O2'	1:1G:873:A:H5"	2.07	0.54
1:1G:1095:U:OP1	1:1G:1108:G:N1	2.39	0.54
1:13:586:C:O2'	1:13:878:G:H4'	2.08	0.54
1:13:872:A:C5	1:13:874:G:C8	2.96	0.54
1:13:928:G:H1	1:13:1389:C:H42	1.55	0.54
1:13:1366:C:H2'	1:13:1367:C:C6	2.43	0.54
5:1H:192:C:O2'	5:1H:802:A:N3	2.39	0.54
5:1H:443:A:N7	30:31:45:ARG:HG2	2.22	0.54
5:1H:664:C:H4'	5:1H:941:A:OP1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:996:A:H4'	41:C8:92:ARG:HE	1.72	0.54
5:1H:1006:C:O2	34:58:106:MET:HG2	2.08	0.54
5:1H:1786:A:C2	5:1H:2606:C:H1'	2.38	0.54
5:1H:1827:C:C2'	5:1H:1828:G:H5'	2.38	0.54
5:1H:2103:C:O2	5:1H:2186:G:N2	2.34	0.54
27:1J:44:G:H1'	27:1J:47:C:H42	1.72	0.54
27:16:8:U:O2	27:16:112:G:N1	2.20	0.54
36:78:94:GLU:OE2	36:78:124:LYS:HD3	2.07	0.54
40:B8:99:LEU:HB3	40:B8:101:PHE:CE2	2.42	0.54
43:E8:33:ARG:NE	43:E8:52:GLU:OE1	2.39	0.54
49:K8:48:HIS:N	49:K8:50:ILE:HD11	2.22	0.54
1:1G:559:A:H4'	1:1G:560:U:C5'	2.38	0.54
1:1G:1037:C:H2'	1:1G:1038:C:C6	2.42	0.54
6:12:105:PHE:HA	6:12:108:ILE:HB	1.88	0.54
1:13:444:C:H2'	1:13:445:G:H8	1.71	0.54
1:13:464:G:C6	1:13:466:C:H5'	2.43	0.54
1:13:1034:G:N2	1:13:1035:A:N7	2.56	0.54
1:13:1147:C:O2	13:8E:16:ARG:NH1	2.37	0.54
1:13:1478:C:H2'	1:13:1479:C:C6	2.43	0.54
5:14:195:A:H61	5:14:198:C:H3'	1.73	0.54
5:14:445:C:O2'	5:14:446:G:H5'	2.08	0.54
8:3E:106:TYR:HE2	8:3E:107:ARG:NH1	2.04	0.54
19:6I:70:LEU:HD11	19:6I:77:ARG:HG3	1.89	0.54
21:8I:13:ASP:HA	21:8I:19:VAL:HG12	1.90	0.54
21:8I:70:ARG:C	21:8I:71:PHE:HD1	2.11	0.54
23:AI:78:ARG:HD2	23:AI:78:ARG:C	2.28	0.54
23:AI:78:ARG:HD2	23:AI:78:ARG:O	2.07	0.54
5:1H:1204:A:C2	5:1H:1241:A:N1	2.76	0.54
5:1H:1550:C:H2'	5:1H:1551:C:H6	1.73	0.54
5:1H:2364:C:H4'	47:I8:56:ASP:OD1	2.08	0.54
29:21:104:VAL:HG22	29:21:198:VAL:HG22	1.89	0.54
37:88:35:VAL:HA	37:88:101:ARG:O	2.06	0.54
43:E8:18:ARG:HD3	43:E8:76:VAL:HG13	1.90	0.54
44:F8:1:MET:HG2	44:F8:2:LYS:N	2.19	0.54
47:I8:26:TYR:O	47:I8:29:GLN:HB2	2.08	0.54
52:N8:50:GLY:N	52:N8:56:LYS:HG3	2.18	0.54
1:1G:519:C:H2'	1:1G:520:A:O4'	2.07	0.54
1:13:35:G:O2'	16:3I:118:SER:O	2.19	0.54
1:13:1004:A:H8	1:13:1036:G:N2	2.05	0.54
1:13:1316:G:N2	1:13:1318:A:H3'	2.22	0.54
1:13:1443:G:O2'	40:B8:122:ASP:OD2	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:362:U:H3'	5:14:363:G:H5"	1.90	0.54
5:14:585:G:OP2	58:14:4270:HOH:O	2.18	0.54
5:14:1445:C:H2'	5:14:1446:C:H6	1.72	0.54
5:14:1542:G:O6	5:14:1543:A:N6	2.41	0.54
12:7E:36:LEU:HA	12:7E:39:LEU:HB2	1.90	0.54
16:3I:111:LYS:O	16:3I:112:ASP:HB2	2.06	0.54
17:4I:7:VAL:HB	31:41:115:ARG:NH2	2.22	0.54
5:1H:719:C:H2'	5:1H:720:C:H6	1.73	0.54
5:1H:997:G:OP1	41:C8:93:LYS:N	2.38	0.54
5:1H:1358:G:N2	5:1H:1372:U:C5	2.76	0.54
5:1H:2343:C:HO2'	5:1H:2373:G:HO2'	1.54	0.54
28:11:65:ILE:HD11	28:11:67:PHE:CE1	2.43	0.54
34:58:65:LYS:HB3	34:58:69:GLN:HG3	1.88	0.54
35:68:19:ILE:HG22	35:68:43:VAL:HA	1.89	0.54
51:M8:54:GLY:HA2	51:M8:57:GLU:HB3	1.88	0.54
55:Q8:53:PRO:HB3	55:Q8:56:GLU:N	2.23	0.54
1:1G:980:C:H3'	1:1G:981:U:C6	2.42	0.54
1:1G:1287:A:H2'	1:1G:1288:A:C8	2.43	0.54
6:12:67:THR:H	6:12:160:ASP:HB2	1.72	0.54
7:22:84:ILE:HG23	7:22:85:ARG:HD2	1.89	0.54
1:13:661:G:H1	1:13:744:C:H42	1.56	0.54
1:13:667:G:H4'	19:6I:51:HIS:CE1	2.42	0.54
1:13:963:G:H21	14:1I:55:LYS:HZ1	1.53	0.54
1:13:1175:G:H2'	1:13:1176:A:C8	2.42	0.54
5:14:433:C:C4	5:14:434:U:O4	2.61	0.54
5:14:649:G:H2'	5:14:650:C:C6	2.42	0.54
22:9I:58:LEU:HB3	22:9I:62:GLU:HB3	1.89	0.54
2:3K:18:G:H1'	2:3K:58:A:C2	2.43	0.54
5:1H:1101:U:H2'	5:1H:1102:C:C6	2.43	0.54
5:1H:1107:G:H2'	5:1H:1108:U:C6	2.43	0.54
5:1H:1339:G:H21	5:1H:1603:A:H1'	1.72	0.54
5:1H:1565:C:O2'	5:1H:1567:A:N7	2.35	0.54
5:1H:2001:A:OP1	38:98:9:LYS:NZ	2.41	0.54
27:1J:15:A:H1'	27:1J:109:G:C5	2.43	0.54
35:68:104:ARG:HD3	40:B8:36:GLU:HG2	1.89	0.54
46:H8:60:GLU:O	46:H8:61:LEU:HB3	2.07	0.54
1:1G:977:A:O2'	1:1G:981:U:N3	2.40	0.54
1:1G:1387:G:H2'	1:1G:1388:C:C6	2.42	0.54
7:22:44:GLU:HA	7:22:52:LEU:HD11	1.90	0.54
7:22:61:ALA:C	7:22:63:ASN:H	2.11	0.54
5:14:337:C:H2'	5:14:338:G:O4'	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1657:C:H2'	5:14:1658:C:C6	2.43	0.54
5:14:1786:A:C2	5:14:2606:C:H1'	2.43	0.54
5:14:2557:G:H2'	5:14:2558:C:C6	2.42	0.54
6:1E:223:ILE:HA	6:1E:226:ARG:HG2	1.89	0.54
15:2I:92:GLU:HA	15:2I:95:ILE:HG13	1.90	0.54
16:3I:89:ARG:HG2	16:3I:90:VAL:N	2.22	0.54
17:4I:27:LYS:HA	17:4I:31:LYS:NZ	2.21	0.54
5:1H:5:A:H2'	5:1H:6:A:H8	1.72	0.54
32:51:6:ARG:HB3	32:51:65:HIS:CG	2.42	0.54
1:1G:300:A:H1'	1:1G:565:U:O2	2.07	0.54
1:1G:674:G:H2'	1:1G:675:A:C8	2.42	0.54
1:1G:677:U:H3	1:1G:713:G:H22	1.54	0.54
1:1G:984:C:H2'	1:1G:985:C:H6	1.73	0.54
1:1G:1466:C:H2'	1:1G:1467:G:O4'	2.08	0.54
6:12:12:GLU:HB2	6:12:16:HIS:CG	2.43	0.54
5:14:355:G:H2'	5:14:356:G:C8	2.41	0.54
5:14:1461:G:H2'	5:14:1462:C:C6	2.42	0.54
5:14:2299:G:N1	5:14:2318:G:C8	2.76	0.54
5:14:2753:A:H2'	5:14:2754:U:O4'	2.07	0.54
12:7E:17:THR:O	12:7E:20:TYR:N	2.33	0.54
17:4I:52:GLU:HA	17:4I:55:ARG:HB2	1.89	0.54
5:1H:671:C:OP1	36:78:42:SER:O	2.26	0.54
5:1H:784:A:C5	28:11:229:VAL:HG21	2.43	0.54
5:1H:1159:U:P	50:L8:30:ARG:HH12	2.31	0.54
5:1H:1534:G:H3'	5:1H:1534:G:N3	2.23	0.54
36:78:38:GLN:O	36:78:41:ARG:HB2	2.08	0.54
45:G8:82:PRO:HG3	45:G8:97:ARG:HG3	1.90	0.54
49:K8:23:LYS:O	49:K8:27:GLU:HG3	2.08	0.54
1:1G:56:U:H2'	1:1G:57:G:H8	1.68	0.54
1:1G:1075:C:H5'	6:12:103:THR:HG21	1.88	0.54
1:1G:1131:G:C8	1:1G:1132:C:H5	2.25	0.54
1:13:198:G:H2'	1:13:199:G:H8	1.73	0.54
1:13:1455:G:OP1	24:BI:35:THR:OG1	2.13	0.54
2:3L:20:H2U:H52	2:3L:59:U:C2	2.43	0.54
5:14:491:G:H2'	5:14:492:A:H8	1.72	0.54
5:14:774:A:H2	5:14:787:U:O2'	1.91	0.54
5:14:1011:G:N3	5:14:1151:G:N2	2.56	0.54
5:14:1292:U:H2'	5:14:1293:C:C6	2.42	0.54
5:14:2392:A:H2	5:14:2424:C:N4	2.06	0.54
5:1H:779:U:H5"	28:11:49:ILE:HD12	1.90	0.54
5:1H:1657:C:H2'	5:1H:1658:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2244:U:O2'	5:1H:2245:U:H5'	2.07	0.54
27:1J:88:C:H3'	27:1J:89:G:N7	2.22	0.54
31:41:110:ALA:HA	31:41:140:ILE:O	2.07	0.54
31:41:135:LEU:O	31:41:154:GLY:HA3	2.07	0.54
40:B8:26:ASP:O	40:B8:49:VAL:HG13	2.08	0.54
1:1G:538:G:O6	58:1G:1755:HOH:O	2.14	0.54
1:1G:624:C:H2'	1:1G:625:G:C8	2.43	0.54
1:1G:866:C:O2'	1:1G:919:A:OP1	2.26	0.54
1:13:651:C:H2'	1:13:652:U:C6	2.42	0.54
1:13:1157:A:N6	1:13:1178:G:H21	2.06	0.54
5:14:981:A:N1	5:14:2027:G:O2'	2.27	0.54
5:14:1331:A:O2'	5:14:1332:G:H8	1.91	0.54
5:14:2340:G:H2'	5:14:2341:G:H8	1.72	0.54
5:1H:90:U:H6	5:1H:90:U:OP1	1.91	0.54
5:1H:325:G:H2'	5:1H:326:G:H8	1.72	0.54
5:1H:1914:C:H2'	5:1H:1915:U:O4'	2.08	0.54
27:1J:62:C:H2'	27:1J:63:G:C8	2.43	0.54
28:11:182:LEU:O	28:11:271:ILE:HG13	2.07	0.54
30:31:134:GLY:HA3	30:31:162:LEU:O	2.08	0.54
1:1G:1009:G:C2	1:1G:1010:G:C8	2.97	0.54
1:1G:1126:U:N3	1:1G:1281:U:O4'	2.40	0.54
8:32:126:ILE:HG22	8:32:127:THR:H	1.71	0.54
1:13:233:C:H2'	1:13:234:C:H6	1.74	0.53
1:13:278:G:N2	21:8I:95:TYR:HB3	2.23	0.53
1:13:377:G:OP1	20:7I:3:LYS:HD2	2.07	0.53
1:13:503:C:OP2	16:3I:116:SER:OG	2.25	0.53
1:13:625:G:H2'	1:13:626:U:H6	1.72	0.53
1:13:991:U:O2'	1:13:992:U:O5'	2.24	0.53
3:2L:20:G:OP1	3:2L:61:U:N3	2.41	0.53
9:4E:37:ARG:HH12	9:4E:111:GLU:HG2	1.73	0.53
12:7E:103:VAL:HG21	12:7E:110:ALA:HB2	1.89	0.53
3:2K:54:G:H2'	3:2K:55:U:H6	1.72	0.53
2:3K:36:A:C2	2:3K:37:MIA:H1'	2.42	0.53
5:1H:1298:C:P	58:1H:3656:HOH:O	2.65	0.53
37:88:51:ARG:HD2	37:88:66:ILE:HD11	1.90	0.53
6:12:130:ARG:H	6:12:130:ARG:HE	1.56	0.53
1:13:973:G:OP1	14:1I:57:LYS:NZ	2.29	0.53
5:14:527:C:OP2	5:14:2779:U:H5	1.91	0.53
5:14:2802:G:H2'	5:14:2803:C:O4'	2.08	0.53
6:1E:212:GLN:O	6:1E:216:SER:OG	2.15	0.53
8:3E:30:LYS:H	8:3E:34:GLU:HB2	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:8E:29:ASN:OD1	13:8E:65:VAL:N	2.39	0.53
24:BI:90:GLN:HA	24:BI:93:GLU:HB2	1.89	0.53
26:1K:74:C:N4	5:1H:2555:U:H1'	2.24	0.53
5:1H:111:A:H4'	49:K8:69:ARG:NH2	2.23	0.53
5:1H:322:A:OP1	30:31:168:ARG:NH2	2.40	0.53
5:1H:833:U:O2	36:78:55:ARG:NH2	2.39	0.53
5:1H:1142:U:H5'	5:1H:1142(A):A:H8	1.72	0.53
5:1H:1300:U:H3'	58:1H:3612:HOH:O	2.09	0.53
27:16:12:C:O2	47:I8:74:ARG:NH1	2.38	0.53
27:16:15:A:H1'	27:16:109:G:C4	2.44	0.53
41:C8:110:VAL:O	41:C8:114:LYS:N	2.38	0.53
47:I8:49:LYS:HB2	47:I8:80:HIS:HB3	1.89	0.53
48:J8:3:LYS:HG2	48:J8:46:LEU:HD22	1.90	0.53
1:1G:959:A:HO2'	1:1G:984:C:HO2'	1.56	0.53
1:1G:1074:G:O2'	1:1G:1101:A:N1	2.34	0.53
8:32:57:ARG:NH2	8:32:205:GLU:OE2	2.39	0.53
2:1L:11:C:H2'	2:1L:12:U:H6	1.74	0.53
5:14:1430:C:H2'	5:14:1431:U:C6	2.44	0.53
5:14:1945:G:H2'	5:14:1946:U:C6	2.43	0.53
5:14:2461:C:H2'	5:14:2462:U:C6	2.42	0.53
5:14:2791:C:H2'	5:14:2792:G:H8	1.74	0.53
9:4E:48:ALA:HB2	9:4E:57:LYS:HD3	1.90	0.53
9:4E:73:ASN:O	9:4E:73:ASN:ND2	2.29	0.53
12:7E:10:LEU:HB3	12:7E:83:ILE:HD11	1.90	0.53
14:1I:54:PHE:CZ	14:1I:55:LYS:NZ	2.71	0.53
3:2K:76:C:H4'	58:2K:208:HOH:O	2.07	0.53
5:1H:67:U:H2'	5:1H:68:G:H8	1.73	0.53
5:1H:746:A:C5	5:1H:2611:U:H5"	2.43	0.53
5:1H:1010:A:HO2'	5:1H:1152:C:HO2'	1.53	0.53
5:1H:1103:A:H3'	5:1H:1104:C:H6	1.73	0.53
5:1H:1221:C:H2'	5:1H:1222:C:C6	2.42	0.53
5:1H:1535:U:N3	5:1H:1537:C:H1'	2.23	0.53
27:16:90:C:H5'	37:88:18:LYS:HA	1.91	0.53
36:78:149:GLU:HG2	36:78:150:ALA:H	1.73	0.53
45:G8:20:TYR:CE1	45:G8:43:ASN:HA	2.42	0.53
1:1G:434:U:H2'	1:1G:435:C:C6	2.43	0.53
1:1G:476:G:H2'	1:1G:477:G:H8	1.74	0.53
1:1G:493:G:H8	1:1G:493:G:O5'	1.91	0.53
1:1G:500:G:H2'	1:1G:501:C:C6	2.44	0.53
1:1G:517:G:N2	1:1G:530:G:OP1	2.33	0.53
1:1G:1126:U:H4'	1:1G:1127:G:H8	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:141:GLU:O	6:12:145:LEU:HB2	2.07	0.53
8:32:13:ARG:C	8:32:15:GLU:H	2.12	0.53
5:14:805:G:OP2	5:14:806:C:N4	2.41	0.53
5:14:853:G:H2'	5:14:854:G:C8	2.43	0.53
8:3E:62:GLN:O	8:3E:66:ARG:HB2	2.09	0.53
17:4I:58:GLU:O	17:4I:62:ASN:ND2	2.37	0.53
26:1K:70:G:C2	26:1K:71:G:H1'	2.43	0.53
2:3K:34:G:H2'	2:3K:35:A:C8	2.44	0.53
5:1H:10:G:O2'	5:1H:2801:A:N3	2.40	0.53
5:1H:139:G:N3	5:1H:141:A:N1	2.56	0.53
5:1H:880:G:O2'	5:1H:881:G:O5'	2.17	0.53
5:1H:950:G:H2'	5:1H:951:C:C6	2.42	0.53
5:1H:1268:A:H2'	5:1H:1269:A:O4'	2.08	0.53
5:1H:1796:U:H2'	5:1H:1797:C:C6	2.43	0.53
32:51:157:TYR:CE1	32:51:172:LYS:HB2	2.44	0.53
1:1G:895:G:H1	1:1G:904:C:N4	2.07	0.53
1:1G:1134:G:H2'	1:1G:1135:U:O4'	2.09	0.53
1:1G:1238:A:N3	1:1G:1241:G:O2'	2.32	0.53
7:22:152:ILE:HB	7:22:199:LYS:HB2	1.90	0.53
1:13:392:G:H5"	20:7I:12:LYS:HD2	1.90	0.53
1:13:1525:G:P	15:2I:120:ARG:HH22	2.32	0.53
2:3L:71:G:H2'	2:3L:72:C:H5"	1.90	0.53
5:14:194:G:H2'	5:14:195:A:O4'	2.08	0.53
5:14:247:G:H4'	5:14:386:G:C5	2.44	0.53
5:14:360:G:H2'	5:14:361:G:H8	1.73	0.53
10:5E:50:TYR:OH	22:9I:74:ARG:O	2.16	0.53
14:1I:4:ILE:HG13	14:1I:100:THR:HA	1.90	0.53
16:3I:93:LEU:O	16:3I:96:VAL:HG13	2.09	0.53
5:1H:503:A:H4'	5:1H:504:U:H5"	1.91	0.53
5:1H:995:C:O2	34:58:3:THR:OG1	2.21	0.53
5:1H:2572:A:N7	29:21:144:ARG:HD2	2.24	0.53
28:11:17:THR:CG2	28:11:204:ILE:HA	2.38	0.53
44:F8:1:MET:O	44:F8:3:THR:N	2.41	0.53
1:1G:340:U:H2'	1:1G:341:C:C6	2.43	0.53
1:1G:1326:C:H2'	1:1G:1327:C:H6	1.74	0.53
1:13:1060:C:H5"	14:1I:51:ARG:HG2	1.91	0.53
1:13:1117:G:H5"	13:8E:104:ARG:NH1	2.24	0.53
1:13:1348:U:H4'	13:8E:120:ARG:HD2	1.91	0.53
1:13:1399:C:C2	1:13:1502:A:N6	2.77	0.53
1:13:1429:C:H2'	1:13:1430:C:H6	1.73	0.53
5:14:1011:G:H2'	5:14:1013:C:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1204:A:H2	5:14:1241:A:N1	2.06	0.53
5:14:1288:U:C2	5:14:1327:C:O2	2.62	0.53
5:14:2439:A:H5'	5:14:2439:A:C8	2.43	0.53
13:8E:17:VAL:HG21	13:8E:80:GLY:HA3	1.88	0.53
5:1H:37:C:H2'	5:1H:38:A:C8	2.43	0.53
5:1H:999:U:P	58:1H:4096:HOH:O	2.67	0.53
5:1H:2309:A:C5	5:1H:2310:A:C8	2.97	0.53
5:1H:2331:G:O3'	47:I8:43:THR:HG22	2.08	0.53
31:41:16:ARG:O	31:41:20:ILE:HG13	2.08	0.53
32:51:129:THR:O	32:51:129:THR:OG1	2.27	0.53
46:H8:154:ASP:OD1	46:H8:154:ASP:N	2.26	0.53
49:K8:47:ASN:HB2	49:K8:50:ILE:HD11	1.91	0.53
1:1G:322:C:H41	1:1G:328:C:H6	1.56	0.53
1:1G:843:U:H3'	1:1G:848:C:O4'	2.09	0.53
1:1G:979:C:H5	1:1G:980:C:C6	2.27	0.53
6:12:87:ARG:HH21	6:12:233:SER:H	1.57	0.53
1:13:280:C:H3'	1:13:281:G:H5'	1.91	0.53
1:13:323:U:H5'	24:BI:23:ARG:HB2	1.90	0.53
5:14:49:A:H5"	5:14:51:G:O4'	2.08	0.53
5:14:1027:A:C2	5:14:2488:A:H5'	2.43	0.53
5:14:2520:C:H41	5:14:2542:A:H62	1.57	0.53
5:14:2537:U:H2'	5:14:2538:C:C6	2.43	0.53
5:14:2772:C:H2'	5:14:2773:C:C6	2.44	0.53
5:14:2865:U:C4	5:14:2866:U:C4	2.97	0.53
6:1E:97:TRP:CZ3	6:1E:172:ILE:HB	2.44	0.53
5:1H:353:G:H2'	5:1H:354:G:C8	2.44	0.53
5:1H:459:U:H2'	5:1H:460:A:C8	2.43	0.53
5:1H:460:A:H5"	5:1H:461:C:OP2	2.08	0.53
5:1H:1432:C:H2'	5:1H:1433:U:O4'	2.08	0.53
5:1H:1494:A:O2'	5:1H:1495:A:H5'	2.08	0.53
5:1H:1903:G:OP1	28:11:241:PRO:HB2	2.09	0.53
5:1H:2864:G:H2'	5:1H:2865:U:C6	2.44	0.53
27:1J:4:C:H42	27:1J:116:G:H1	1.54	0.53
46:H8:52:SER:O	46:H8:52:SER:OG	2.27	0.53
1:1G:979:C:H3'	1:1G:980:C:C5'	2.37	0.53
1:1G:1321:C:N4	1:1G:1322:C:N4	2.57	0.53
1:13:474:G:H2'	1:13:475:G:H8	1.73	0.53
1:13:659:U:H2'	1:13:660:G:H8	1.72	0.53
5:14:1614:A:H5"	5:14:1615:C:OP2	2.09	0.53
5:14:2059:A:H5"	5:14:2060:A:OP2	2.07	0.53
2:3K:7:A:C6	2:3K:49:C:C2	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:507:A:H5"	5:1H:508:G:H3'	1.90	0.53
5:1H:581:C:H2'	5:1H:582:G:C8	2.44	0.53
5:1H:2659:G:H4'	32:51:175:LYS:HD2	1.90	0.53
27:1J:38:C:N3	27:1J:44:G:N2	2.44	0.53
28:11:12:SER:O	28:11:16:MET:HB2	2.08	0.53
28:11:69:ARG:HD3	28:11:105:ILE:HD11	1.89	0.53
29:21:166:THR:HG21	29:21:199:ARG:HH22	1.73	0.53
40:B8:58:ASN:C	40:B8:58:ASN:HD22	2.12	0.53
1:1G:222:U:H2'	1:1G:223:U:C6	2.44	0.53
1:1G:1118:C:H1'	1:1G:1179:A:C4	2.44	0.53
7:22:159:GLY:HA2	7:22:193:TYR:CD1	2.43	0.53
1:13:627:G:H2'	1:13:628:G:H8	1.74	0.53
1:13:919:A:O2'	1:13:920:U:H5'	2.08	0.53
5:14:221:A:C4	5:14:266:G:N7	2.77	0.53
5:14:877:U:O4	5:14:899:A:N6	2.42	0.53
5:14:1260:G:H2'	5:14:1261:C:H6	1.74	0.53
5:14:2104:G:H2'	5:14:2105:C:C6	2.43	0.53
7:2E:7:PRO:O	7:2E:11:ARG:HG2	2.09	0.53
18:5I:3:ARG:HH21	18:5I:6:LEU:HD11	1.74	0.53
20:7I:74:LEU:CA	20:7I:77:ALA:HB2	2.34	0.53
5:1H:569:U:C4	5:1H:570:G:C6	2.97	0.53
33:61:69:LYS:HG3	33:61:136:VAL:HB	1.91	0.53
34:58:30:ILE:HG23	34:58:52:VAL:HG11	1.91	0.53
39:A8:88:ASP:O	39:A8:90:GLY:N	2.41	0.53
42:D8:9:GLY:O	42:D8:10:LYS:HG3	2.08	0.53
50:L8:38:GLU:OE2	50:L8:38:GLU:N	2.24	0.53
1:1G:1346:A:H3'	1:1G:1346:A:OP2	2.08	0.53
5:14:34:C:HO2'	5:14:35:G:P	2.32	0.53
5:14:1425:G:N2	5:14:1573:G:N7	2.56	0.53
5:14:2062:A:O2'	5:14:2063:C:OP1	2.26	0.53
5:14:2648:C:H2'	5:14:2649:U:C6	2.44	0.53
11:6E:79:ARG:NH1	11:6E:80:VAL:O	2.42	0.53
23:AI:41:VAL:O	51:M8:63:TYR:OH	2.19	0.53
5:1H:120:U:OP2	58:1H:4262:HOH:O	2.18	0.53
5:1H:863:A:H2'	5:1H:864:G:H8	1.74	0.53
5:1H:1230:C:H2'	5:1H:1231:G:C8	2.44	0.53
5:1H:1359:A:N1	5:1H:1372:U:C4	2.76	0.53
5:1H:1441:G:H2'	5:1H:1442:G:H8	1.74	0.53
5:1H:1466:G:N2	5:1H:1547:C:N3	2.57	0.53
5:1H:2127:G:H2'	5:1H:2128:C:O4'	2.08	0.53
5:1H:2347:C:OP1	53:O8:39:TYR:OH	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2658:C:P	32:51:160:LYS:HZ1	2.32	0.53
5:1H:2689:U:H5"	5:1H:2713:A:C2	2.44	0.53
41:C8:47:TYR:C	41:C8:47:TYR:CD2	2.83	0.53
53:O8:16:CYS:O	53:O8:17:LYS:HB2	2.09	0.53
1:1G:837:G:H1	1:1G:849:C:N4	2.07	0.53
7:22:8:ILE:HD11	7:22:184:TYR:HB3	1.90	0.53
1:13:110:C:H2'	1:13:111:G:O4'	2.09	0.52
1:13:227:G:N2	20:7I:62:VAL:O	2.40	0.52
2:1L:8:4SU:H5	2:1L:13:C:C4	2.43	0.52
5:14:990:A:H5'	5:14:990:A:H8	1.73	0.52
5:14:1204:A:O2'	5:14:1205:U:OP2	2.26	0.52
5:14:1533:C:C4	5:14:1534:G:H1'	2.44	0.52
5:14:2031:A:C6	5:14:2498:C:H1'	2.44	0.52
6:1E:28:PHE:O	6:1E:32:ILE:HG22	2.09	0.52
17:4I:7:VAL:HB	31:41:115:ARG:CZ	2.39	0.52
2:3K:30:G:N2	2:3K:40:C:O2	2.42	0.52
5:1H:1329:U:H5"	5:1H:1330:C:H5	1.72	0.52
5:1H:1639:U:P	58:1H:3655:HOH:O	2.65	0.52
5:1H:1649:G:O2'	38:98:107:ASP:OD1	2.16	0.52
5:1H:2056:G:C2	5:1H:2057:A:C8	2.97	0.52
5:1H:2171:A:O2'	5:1H:2172:U:O5'	2.26	0.52
5:1H:2308:G:N1	5:1H:2311:A:C2	2.64	0.52
5:1H:2579:C:H2'	5:1H:2580:U:O4'	2.10	0.52
32:51:12:PRO:HG2	32:51:13:LYS:HG2	1.90	0.52
32:51:12:PRO:HB3	32:51:48:GLY:HA2	1.91	0.52
36:78:13:ASN:ND2	36:78:15:ARG:HD3	2.23	0.52
42:D8:65:GLY:HA3	42:D8:91:TYR:CZ	2.44	0.52
46:H8:124:ILE:HD12	46:H8:125:LEU:H	1.73	0.52
49:K8:33:MET:HG2	49:K8:37:PHE:CE1	2.44	0.52
55:Q8:9:GLY:H	55:Q8:12:LYS:H	1.57	0.52
1:1G:518:C:H5"	1:1G:519:C:C6	2.44	0.52
7:22:65:ALA:HA	7:22:100:ALA:HB3	1.90	0.52
1:13:1002:G:H1	1:13:1038:C:H42	1.57	0.52
1:13:1178:G:P	13:8E:93:ARG:HH21	2.32	0.52
1:13:1502:A:H2	1:13:1505:G:N1	2.03	0.52
5:14:212:G:H2'	5:14:213:A:O4'	2.09	0.52
5:14:270(H):C:H2'	5:14:270(I):G:C8	2.44	0.52
5:14:654(A):A:H2'	5:14:654(B):C:C6	2.45	0.52
5:14:1636:C:H2'	5:14:1637:A:C8	2.45	0.52
5:14:2656:U:H3	5:14:2665:A:H2	1.57	0.52
7:2E:19:GLU:HG3	7:2E:54:ARG:NH1	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:3E:104:VAL:O	8:3E:107:ARG:N	2.42	0.52
8:3E:112:VAL:HG12	8:3E:116:GLN:OE1	2.09	0.52
10:5E:23:LYS:HG2	10:5E:27:GLN:NE2	2.23	0.52
12:7E:9:MET:SD	12:7E:32:LYS:HG2	2.49	0.52
12:7E:95:VAL:HB	12:7E:99:GLU:HB2	1.91	0.52
13:8E:4:TYR:CE1	13:8E:88:TYR:HB2	2.44	0.52
23:AI:39:THR:HG22	23:AI:40:ILE:H	1.75	0.52
5:1H:247:G:H4'	5:1H:386:G:C5	2.44	0.52
5:1H:2126:A:H62	5:1H:2163:C:H1'	1.73	0.52
27:16:15:A:H4'	27:16:15:A:OP1	2.10	0.52
28:11:108:PRO:HG3	28:11:143:HIS:CE1	2.43	0.52
55:Q8:53:PRO:CB	55:Q8:56:GLU:HG3	2.39	0.52
1:1G:164:U:H2'	1:1G:165:C:C6	2.44	0.52
1:1G:604:G:H2'	1:1G:605:U:O4'	2.09	0.52
1:1G:607:A:H2'	1:1G:608:A:O4'	2.08	0.52
8:32:14:ARG:HG3	8:32:14:ARG:NH1	2.19	0.52
8:32:153:ARG:NH1	8:32:181:MET:SD	2.82	0.52
1:13:878:G:H5'	12:7E:89:PRO:HG2	1.90	0.52
1:13:1263:C:H2'	1:13:1264:C:C6	2.39	0.52
1:13:1303:C:N4	1:13:1304:G:C6	2.77	0.52
5:14:208:C:H2'	5:14:209:C:H6	1.75	0.52
5:14:459:U:H2'	5:14:460:A:H8	1.73	0.52
5:14:1027:A:H5'	27:1J:88:C:N4	2.24	0.52
6:1E:82:ARG:NE	6:1E:92:TYR:OH	2.42	0.52
9:4E:98:THR:HB	9:4E:117:ASP:HB3	1.91	0.52
9:4E:148:VAL:HG21	12:7E:107:LEU:HD22	1.91	0.52
11:6E:5:ARG:HG2	11:6E:7:ALA:H	1.74	0.52
21:8I:28:PRO:HA	21:8I:34:LYS:O	2.09	0.52
5:1H:355:G:H2'	5:1H:356:G:C8	2.44	0.52
5:1H:1931:U:H5	5:1H:1969:A:N7	2.08	0.52
5:1H:2080:G:H5"	5:1H:2080:G:H8	1.72	0.52
5:1H:2115:G:N2	5:1H:2172:U:O2	2.42	0.52
5:1H:2402:C:H2'	5:1H:2403:C:H5'	1.90	0.52
46:H8:53:ILE:HG22	46:H8:71:VAL:HG22	1.90	0.52
1:1G:1053:G:O6	1:1G:1199:U:H2'	2.09	0.52
1:1G:1057:G:H1	1:1G:1203:C:N4	2.06	0.52
1:13:509:A:H5"	8:3E:55:ALA:HB2	1.91	0.52
1:13:1124:G:C2	1:13:1127:G:N2	2.77	0.52
1:13:1412:C:H2'	1:13:1413:A:C8	2.45	0.52
5:14:249:C:H5"	58:14:3521:HOH:O	2.07	0.52
5:14:900:A:H3'	5:14:901:A:C8	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:903:C:H2'	5:14:904:C:C6	2.44	0.52
5:14:1087:G:H2'	5:14:1089:G:H1'	1.92	0.52
5:14:1087:G:H1	5:14:1102:C:H42	1.56	0.52
5:14:1786:A:H2	5:14:2606:C:H1'	1.74	0.52
5:14:2533:A:O4'	5:14:2664:G:H4'	2.10	0.52
8:3E:74:GLN:O	8:3E:78:LEU:HD13	2.10	0.52
17:4I:108:ARG:NH1	17:4I:112:GLY:O	2.43	0.52
24:BI:75:ASN:OD1	24:BI:75:ASN:N	2.40	0.52
26:1K:19:G:H5'	26:1K:60:U:O4	2.10	0.52
5:1H:70:G:H21	5:1H:71:A:N6	2.08	0.52
5:1H:574:C:H4'	5:1H:575:A:O5'	2.10	0.52
5:1H:973:A:OP2	58:1H:3942:HOH:O	2.19	0.52
5:1H:2123:G:H1	5:1H:2175:C:H42	1.57	0.52
27:1J:62:C:H2'	27:1J:63:G:H8	1.74	0.52
28:11:94:LEU:HD23	28:11:95:LEU:N	2.24	0.52
31:41:5:VAL:H	51:M8:25:TYR:HE2	1.57	0.52
39:A8:30:ARG:HG3	39:A8:30:ARG:O	2.10	0.52
1:1G:345:C:O2'	1:1G:346:G:O5'	2.25	0.52
1:1G:646:U:H2'	1:1G:647:C:C6	2.45	0.52
1:1G:722:A:C8	1:1G:724:G:H1'	2.44	0.52
1:1G:1327:C:H2'	1:1G:1328:C:C6	2.44	0.52
6:12:47:THR:HG23	6:12:202:PRO:HG2	1.90	0.52
1:13:337:C:H2'	1:13:338:A:C8	2.44	0.52
1:13:375:U:O3'	20:7I:6:LEU:HB2	2.09	0.52
1:13:626:U:C2	1:13:627:G:C8	2.98	0.52
5:14:259:G:O2'	5:14:621:A:O2'	2.24	0.52
5:14:530:G:HO2'	5:14:531:C:P	2.32	0.52
5:14:1149:G:H2'	5:14:1150:C:C6	2.44	0.52
5:14:1657:C:H2'	5:14:1658:C:H6	1.74	0.52
6:1E:6:THR:OG1	6:1E:7:VAL:N	2.41	0.52
6:1E:87:ARG:NH1	6:1E:220:ASP:OD1	2.35	0.52
21:8I:48:GLU:O	21:8I:50:LYS:HG2	2.09	0.52
3:2K:17:C:H2'	3:2K:18:C:H2'	1.92	0.52
5:1H:847:U:C5	5:1H:933:A:N1	2.78	0.52
5:1H:863:A:H2'	5:1H:864:G:C8	2.44	0.52
5:1H:1523:U:C2	5:1H:1524:G:C8	2.97	0.52
5:1H:2128:C:H2'	5:1H:2129:C:H6	1.74	0.52
31:41:122:PRO:HB3	31:41:180:PHE:HD1	1.75	0.52
38:98:10:LEU:O	38:98:12:ARG:HG2	2.10	0.52
1:1G:769:G:H4'	1:1G:1513:A:H4'	1.91	0.52
1:1G:1028:C:H2'	1:1G:1028(A):C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:98:LEU:O	6:12:101:MET:HG2	2.09	0.52
1:13:591:U:H2'	1:13:592:G:C8	2.44	0.52
5:14:581:C:H2'	5:14:582:G:C8	2.45	0.52
5:14:1187:G:H8	5:14:1187:G:O5'	1.93	0.52
5:14:1485:G:H2'	5:14:1486:A:C8	2.45	0.52
6:1E:54:THR:O	6:1E:57:PHE:N	2.41	0.52
8:3E:108:LEU:HD12	8:3E:174:LEU:HD13	1.90	0.52
23:AI:5:LEU:HD13	23:AI:10:PHE:CD1	2.40	0.52
24:BI:43:LEU:HD13	24:BI:51:GLU:HB3	1.91	0.52
5:1H:71:A:C2	44:F8:31:HIS:CE1	2.82	0.52
5:1H:431:U:O2'	5:1H:432:A:H5'	2.10	0.52
5:1H:1588:C:H2'	5:1H:1589:C:C6	2.45	0.52
5:1H:1688:U:O2	5:1H:1700:A:H5"	2.09	0.52
5:1H:2388:A:C2'	5:1H:2389:G:H5'	2.40	0.52
27:1J:76:G:N7	58:1J:302:HOH:O	2.34	0.52
27:16:44:G:C2	27:16:48:A:C2	2.97	0.52
33:61:57:ARG:O	33:61:61:ARG:HG2	2.09	0.52
36:78:78:PRO:HB3	36:78:111:ARG:HH21	1.75	0.52
36:78:79:ARG:HB2	36:78:110:TYR:HD1	1.75	0.52
1:1G:591:U:H2'	1:1G:592:G:H8	1.74	0.52
1:1G:1053:G:O2'	1:1G:1054:C:P	2.68	0.52
1:1G:1127:G:H22	1:1G:1144:G:N2	2.07	0.52
1:1G:1171:G:H2'	1:1G:1172:C:C6	2.44	0.52
1:13:475:G:H2'	1:13:476:G:O4'	2.09	0.52
3:2L:8:4SU:O5'	3:2L:8:4SU:H6	2.10	0.52
2:3L:11:C:H2'	2:3L:12:U:C6	2.43	0.52
5:14:290:G:H2'	5:14:291:C:O4'	2.10	0.52
5:14:2153:G:N2	5:14:2154:G:O6	2.42	0.52
5:14:2720:U:N3	5:14:2873:A:H2	2.04	0.52
5:14:2791:C:H2'	5:14:2792:G:C8	2.45	0.52
14:1I:6:ILE:HD11	14:1I:72:VAL:HB	1.90	0.52
22:9I:26:LEU:HD22	22:9I:42:ARG:NH2	2.25	0.52
2:3K:18:G:H22	2:3K:55:PSU:HN3	1.58	0.52
27:1J:7:G:H1	27:1J:113:C:H42	1.56	0.52
30:31:8:GLN:CD	30:31:8:GLN:N	2.62	0.52
36:78:50:ARG:HH21	36:78:50:ARG:CG	2.22	0.52
37:88:14:ARG:HG2	37:88:41:TRP:HH2	1.75	0.52
1:13:1162:C:H2'	1:13:1163:C:C6	2.44	0.52
2:1L:55:PSU:H5"	2:1L:56:C:OP2	2.09	0.52
5:14:515:A:N1	5:14:1260:G:O2'	2.37	0.52
5:14:2184:G:H2'	5:14:2185:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2388:A:C2'	5:14:2389:G:H5'	2.40	0.52
5:14:2889:C:H3'	5:14:2891:G:C8	2.45	0.52
6:1E:17:PHE:HB3	6:1E:44:LEU:HD11	1.92	0.52
7:2E:40:ARG:O	7:2E:44:GLU:HG2	2.09	0.52
8:3E:19:LEU:HB3	8:3E:21:LEU:HD21	1.92	0.52
19:6I:16:ALA:HB1	19:6I:21:ASP:HB3	1.92	0.52
5:1H:242:G:H5'	55:Q8:60:LEU:CD1	2.39	0.52
28:11:108:PRO:HD2	28:11:111:LEU:HG	1.92	0.52
1:1G:625:G:H2'	1:1G:626:U:H6	1.74	0.52
6:12:67:THR:HG23	6:12:90:MET:HE2	1.91	0.52
6:12:84:GLU:O	6:12:219:VAL:HG21	2.10	0.52
1:13:407:G:OP1	8:3E:115:ARG:NH1	2.43	0.52
1:13:1044:A:C5	1:13:1045:C:H1'	2.45	0.52
5:14:249:C:H4'	5:14:250:G:O5'	2.10	0.52
5:14:997:G:H2'	5:14:998:C:C6	2.45	0.52
5:14:1035:U:H2'	5:14:1036:G:C8	2.45	0.52
5:14:2092:U:H4'	5:14:2093:G:O5'	2.10	0.52
20:7I:8:ARG:HB3	20:7I:28:ARG:NH1	2.24	0.52
20:7I:26:ARG:HE	20:7I:31:LYS:HB3	1.75	0.52
5:1H:1198:U:H2'	5:1H:1199:U:C6	2.45	0.52
5:1H:1203:G:H3'	5:1H:1204:A:H5"	1.92	0.52
5:1H:1728:G:H3'	5:1H:1729:A:C5'	2.40	0.52
5:1H:2111:C:H2'	5:1H:2118:U:H4'	1.92	0.52
5:1H:2650:U:H2'	5:1H:2651:C:C6	2.44	0.52
28:11:125:ILE:HG13	28:11:137:PRO:HD3	1.91	0.52
48:J8:87:PRO:O	48:J8:91:LYS:HB2	2.09	0.52
49:K8:42:GLY:O	49:K8:44:LEU:N	2.43	0.52
1:1G:429:U:H1'	1:1G:430:A:H5"	1.92	0.52
1:1G:559:A:H4'	1:1G:560:U:H5"	1.90	0.52
1:13:605:U:C2	1:13:606:G:H8	2.28	0.52
1:13:688:G:H2'	1:13:689:C:H6	1.75	0.52
1:13:738:C:H2'	1:13:739:C:C6	2.44	0.52
1:13:1228:C:H2'	1:13:1229:A:H8	1.74	0.52
2:3L:26:A:H2'	2:3L:27:G:H5'	1.91	0.52
5:14:342:G:H2'	5:14:343:C:H6	1.74	0.52
5:14:1926:U:H2'	5:14:1928:A:OP2	2.10	0.52
5:14:2158:A:H1'	5:14:2159:G:C8	2.44	0.52
5:14:2849:U:H1'	5:14:2866:U:O2	2.10	0.52
10:5E:22:GLU:O	10:5E:26:ILE:HG13	2.09	0.52
11:6E:15:ASP:OD1	11:6E:16:LEU:N	2.43	0.52
3:2K:47:7MG:O2'	3:2K:48:U:O5'	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:86:C:H4'	5:1H:104:U:H1'	1.91	0.52
5:1H:1728:G:O6	5:1H:1730:U:H5"	2.10	0.52
5:1H:2329:G:H2'	5:1H:2330:G:C8	2.45	0.52
40:B8:26:ASP:HB3	40:B8:120:ARG:HH22	1.75	0.52
40:B8:42:ILE:HD12	40:B8:42:ILE:H	1.75	0.52
44:F8:3:THR:CB	44:F8:4:ALA:HA	2.40	0.52
55:Q8:35:GLN:C	55:Q8:37:SER:H	2.14	0.52
1:1G:1132:C:H2'	1:1G:1133:G:C8	2.39	0.52
6:12:30:ARG:HH21	6:12:194:PRO:HG2	1.75	0.52
3:2L:44:A:H2'	3:2L:45:A:C8	2.45	0.51
5:14:107:C:H2'	5:14:108:U:C6	2.44	0.51
5:14:796:C:H2'	5:14:797:C:H6	1.72	0.51
7:2E:58:GLU:H	7:2E:65:ALA:HB3	1.74	0.51
8:3E:148:VAL:HG12	8:3E:149:ALA:O	2.10	0.51
26:1K:10:G:O2'	26:1K:11:C:OP1	2.26	0.51
5:1H:1109:C:O2'	5:1H:1110:G:O4'	2.27	0.51
5:1H:1338:G:H2'	5:1H:1339:G:C8	2.44	0.51
5:1H:2492:U:H2'	5:1H:2493:U:H6	1.73	0.51
27:16:15:A:H1'	27:16:109:G:N9	2.25	0.51
33:61:104:GLN:HG2	33:61:105:HIS:ND1	2.26	0.51
38:98:33:ARG:HG3	38:98:115:GLU:HB3	1.90	0.51
39:A8:15:ARG:HD2	39:A8:88:ASP:OD2	2.10	0.51
41:C8:28:ARG:NH1	41:C8:38:THR:OG1	2.35	0.51
46:H8:120:ILE:HG13	46:H8:170:THR:HG22	1.91	0.51
48:J8:93:GLU:O	48:J8:97:LEU:HB2	2.10	0.51
55:Q8:49:VAL:HG13	55:Q8:49:VAL:O	2.08	0.51
55:Q8:53:PRO:HA	55:Q8:54:GLU:C	2.29	0.51
1:1G:1347:G:N2	1:1G:1373:G:H2'	2.25	0.51
1:1G:1397:C:OP2	1:1G:1397:C:H4'	2.10	0.51
1:13:195:A:C2	1:13:196:A:H2	2.27	0.51
2:1L:49:C:H42	2:1L:65:G:H1	1.58	0.51
3:2L:35:C:H1'	1:1G:1400:C:N4	2.25	0.51
5:14:2207:C:H42	5:14:2217:G:H1	1.59	0.51
20:7I:49:LEU:HD12	20:7I:50:LYS:H	1.75	0.51
5:1H:277:C:H3'	5:1H:278:A:O4'	2.11	0.51
5:1H:1729:A:C6	5:1H:1731:G:C2	2.98	0.51
5:1H:2137:C:N3	5:1H:2138:C:N4	2.57	0.51
46:H8:124:ILE:HG13	46:H8:126:VAL:HG13	1.91	0.51
1:1G:589:C:H42	1:1G:650:G:H1	1.58	0.51
1:13:67:C:H2'	1:13:68:G:H8	1.74	0.51
1:13:114:U:H2'	1:13:115:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1375:A:OP1	11:6E:28:ASN:ND2	2.38	0.51
5:14:1581:G:H2'	5:14:1582:C:O4'	2.11	0.51
5:14:1890:A:OP2	58:14:4195:HOH:O	2.19	0.51
8:3E:150:GLU:HA	8:3E:153:ARG:HG3	1.93	0.51
12:7E:29:SER:OG	12:7E:32:LYS:N	2.39	0.51
16:3I:38:THR:HB	16:3I:57:LYS:HB3	1.92	0.51
21:8I:31:LEU:HD23	21:8I:32:TYR:CZ	2.46	0.51
5:1H:370:G:H4'	5:1H:371:A:OP2	2.10	0.51
5:1H:529:A:H4'	5:1H:530:G:H5'	1.91	0.51
5:1H:710:G:H2'	5:1H:711:G:C8	2.45	0.51
5:1H:2115:G:H1'	5:1H:2171:A:N1	2.26	0.51
5:1H:2235:G:H2'	5:1H:2236:C:C6	2.45	0.51
5:1H:2341:G:H2'	5:1H:2342:C:H6	1.75	0.51
5:1H:2598:A:OP1	58:1H:4808:HOH:O	2.18	0.51
5:1H:2678:C:H2'	5:1H:2679:A:O4'	2.10	0.51
38:98:48:VAL:HA	38:98:51:LEU:HB2	1.92	0.51
40:B8:56:GLY:O	40:B8:59:THR:HG22	2.10	0.51
1:1G:186(D):C:H2'	1:1G:186(E):C:H6	1.73	0.51
1:1G:250:A:H1'	1:1G:251:G:OP2	2.10	0.51
1:1G:328:C:H4'	1:1G:329:A:C5'	2.40	0.51
1:1G:646:U:H2'	1:1G:647:C:H6	1.75	0.51
1:1G:1172:C:H2'	1:1G:1173:G:H8	1.74	0.51
6:12:11:LEU:HD23	6:12:213:LEU:HD11	1.91	0.51
1:13:828:A:H2'	1:13:829:G:O4'	2.09	0.51
1:13:1286:A:H8	1:13:1287:A:H4'	1.71	0.51
2:3L:52:G:H1	2:3L:62:C:N4	2.09	0.51
5:14:31:C:N4	58:14:4168:HOH:O	2.43	0.51
5:14:1268:A:H2'	5:14:1269:A:O4'	2.10	0.51
5:14:2323:G:H1	5:14:2332:U:H3	1.58	0.51
6:1E:17:PHE:HD1	6:1E:17:PHE:H	1.58	0.51
5:1H:1614:A:H61	43:E8:88:ARG:H	1.58	0.51
5:1H:2105:C:H2'	5:1H:2106:G:H8	1.76	0.51
27:16:7:G:H4'	39:A8:29:PHE:CD2	2.45	0.51
27:16:104:A:OP1	46:H8:72:ARG:NE	2.43	0.51
36:78:15:ARG:CB	36:78:16:ARG:HB2	2.34	0.51
45:G8:29:GLU:HB3	45:G8:38:ILE:CG2	2.41	0.51
1:1G:736:C:H2'	1:1G:737:A:C8	2.45	0.51
1:1G:952:U:H4'	1:1G:964:A:N1	2.26	0.51
1:1G:1109:C:H2'	1:1G:1110:A:O4'	2.10	0.51
1:1G:1277:C:HO2'	1:1G:1279:A:H8	1.57	0.51
1:1G:1343:G:H2'	1:1G:1344:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:8:LYS:HE2	6:12:213:LEU:HD21	1.92	0.51
6:12:22:LYS:HB3	6:12:40:HIS:CD2	2.45	0.51
6:12:95:GLN:HB2	6:12:148:TYR:HA	1.93	0.51
6:12:125:PRO:HA	6:12:127:ILE:HG12	1.93	0.51
1:13:1396:A:H4'	1:13:1397:C:H5"	1.92	0.51
5:14:548:A:C5	5:14:549:G:H1'	2.45	0.51
5:14:606:U:H4'	5:14:658:C:H4'	1.91	0.51
5:14:839:U:H2'	5:14:840:C:H6	1.76	0.51
5:14:1057:A:H2'	5:14:1058:U:O4'	2.11	0.51
5:14:1199:U:O3'	58:14:3914:HOH:O	2.19	0.51
5:14:1485:G:H2'	5:14:1486:A:H8	1.75	0.51
5:14:2394:C:H1'	58:14:3523:HOH:O	2.11	0.51
21:8I:70:ARG:O	21:8I:71:PHE:HD1	1.94	0.51
5:1H:5:A:H2'	5:1H:6:A:C8	2.46	0.51
5:1H:357:A:H2'	5:1H:358:U:C6	2.46	0.51
5:1H:860:U:C4	5:1H:917:A:H2	2.28	0.51
28:11:33:LEU:O	28:11:64:ILE:HG23	2.10	0.51
28:11:136:ILE:HG22	28:11:137:PRO:HD2	1.92	0.51
29:21:15:PHE:HB3	40:B8:81:PRO:HG3	1.93	0.51
31:41:107:LEU:O	51:M8:38:LYS:HD3	2.10	0.51
39:A8:34:HIS:HB2	39:A8:36:TYR:CE1	2.42	0.51
43:E8:110:LYS:HG3	43:E8:111:HIS:H	1.75	0.51
44:F8:1:MET:C	44:F8:3:THR:N	2.64	0.51
46:H8:30:ASN:OD1	46:H8:33:LEU:N	2.41	0.51
52:N8:33:CYS:SG	52:N8:40:LYS:HD3	2.50	0.51
55:Q8:24:ALA:O	55:Q8:46:ARG:HG2	2.10	0.51
1:1G:342:C:H2'	1:1G:343:U:O4'	2.11	0.51
1:1G:589:C:N3	1:1G:650:G:N2	2.47	0.51
1:1G:748:C:H6	1:1G:748:C:O5'	1.91	0.51
1:1G:975:A:H4'	1:1G:976:G:C5'	2.40	0.51
1:1G:1013:G:N2	1:1G:1017:G:O6	2.44	0.51
1:1G:1516:G:N2	1:1G:1519:A:OP2	2.43	0.51
1:13:1160:G:H22	1:13:1177:G:H22	1.58	0.51
2:3L:15:G:H2'	2:3L:16:H2U:H51	1.92	0.51
5:14:861:A:C2	5:14:917:A:C4	2.99	0.51
5:14:1366:A:H2'	5:14:1367:A:O4'	2.10	0.51
5:14:1374:G:H2'	5:14:1375:C:C6	2.45	0.51
5:14:1432:C:H2'	5:14:1433:U:O4'	2.09	0.51
5:14:1527:G:H5"	5:14:1528:A:OP1	2.11	0.51
5:14:1757:U:N3	5:14:1762:A:H2	1.97	0.51
5:14:2142:C:H2'	5:14:2143:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:3E:107:ARG:NH2	8:3E:194:LEU:HD22	2.26	0.51
15:2I:59:TYR:CZ	15:2I:63:LEU:HD11	2.45	0.51
2:3K:71:G:HO2'	5:1H:1851:U:HO2'	1.56	0.51
5:1H:265:A:H1'	5:1H:266:G:O4'	2.10	0.51
5:1H:1188:U:H4'	42:D8:79:VAL:HG22	1.91	0.51
5:1H:2849:U:H4'	5:1H:2868:A:C2	2.45	0.51
28:11:145:VAL:HG12	28:11:146:GLU:O	2.10	0.51
37:88:59:ARG:C	37:88:61:GLY:H	2.14	0.51
43:E8:82:LEU:HD13	43:E8:84:ARG:NH2	2.25	0.51
45:G8:15:VAL:HG21	45:G8:42:VAL:HG21	1.93	0.51
1:1G:468:A:C5	1:1G:474:G:H1'	2.45	0.51
1:1G:1004:A:H8	1:1G:1036:G:N2	2.09	0.51
1:1G:1298:C:H1'	1:1G:1299:A:C6	2.46	0.51
1:1G:1306:A:N6	1:1G:1331:G:O2'	2.44	0.51
6:12:68:ILE:HG12	6:12:161:ALA:HB3	1.92	0.51
2:3L:53:G:N2	2:3L:61:C:N3	2.56	0.51
5:14:819:A:OP2	5:14:1187:G:N2	2.42	0.51
5:14:1445:C:H2'	5:14:1446:C:C6	2.45	0.51
5:14:1810:A:H2'	5:14:1811:G:O4'	2.11	0.51
5:14:2027:G:H2'	5:14:2028:U:O4'	2.10	0.51
5:14:2239:G:P	58:14:3510:HOH:O	2.68	0.51
6:1E:25:ASN:ND2	6:1E:193:ASP:HB3	2.26	0.51
6:1E:53:ARG:NH1	6:1E:200:ILE:HD12	2.25	0.51
7:2E:130:VAL:O	7:2E:134:ILE:HG12	2.10	0.51
7:2E:134:ILE:HG22	7:2E:168:ALA:HB3	1.92	0.51
9:4E:11:ILE:HB	9:4E:105:VAL:HG22	1.93	0.51
2:3K:18:G:O2'	2:3K:19:G:OP1	2.26	0.51
5:1H:1438:U:H2'	5:1H:1439:A:H8	1.76	0.51
5:1H:2155:G:H2'	5:1H:2156:G:H5'	1.91	0.51
5:1H:2378:A:H4'	39:A8:23:ARG:NH1	2.25	0.51
5:1H:2781:A:C5'	5:1H:2782:G:H5'	2.36	0.51
32:51:86:GLU:HG3	32:51:165:ALA:N	2.26	0.51
34:58:28:THR:HA	34:58:106:MET:HE2	1.92	0.51
35:68:25:LEU:HD12	35:68:38:VAL:HG22	1.93	0.51
36:78:95:VAL:HG21	36:78:123:LEU:HD13	1.92	0.51
36:78:114:ILE:HD11	36:78:130:PHE:CD2	2.43	0.51
37:88:3:MET:HG2	37:88:4:PRO:O	2.10	0.51
49:K8:42:GLY:C	49:K8:44:LEU:H	2.12	0.51
50:L8:37:LEU:HD12	50:L8:43:ILE:HD13	1.91	0.51
55:Q8:29:LYS:O	55:Q8:30:ARG:HG3	2.10	0.51
1:1G:458:C:H2'	1:1G:464:G:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1502:A:H4'	1:1G:1503:A:OP2	2.11	0.51
7:22:11:ARG:NH2	7:22:182:ILE:HD11	2.25	0.51
1:13:452:A:O2'	20:7I:72:ARG:HG3	2.11	0.51
1:13:1159:U:O4'	1:13:1182:G:N2	2.44	0.51
5:14:21:A:H61	5:14:519:U:H3	1.59	0.51
5:14:274:G:H2'	5:14:275:G:H4'	1.92	0.51
5:14:654(E):C:N4	5:14:654(P):G:H22	2.07	0.51
5:14:674:G:OP2	58:14:4186:HOH:O	2.19	0.51
5:14:2638:G:HO2'	5:14:2639:A:P	2.34	0.51
9:4E:126:ARG:HG3	9:4E:126:ARG:NH1	2.23	0.51
5:1H:1803:A:H4'	28:11:259:THR:CG2	2.41	0.51
5:1H:2108:C:H2'	5:1H:2109:U:O4'	2.11	0.51
5:1H:2810:A:H2'	5:1H:2811:G:O4'	2.11	0.51
28:11:102:LYS:C	28:11:103:ARG:HG2	2.31	0.51
32:51:144:VAL:O	32:51:148:ILE:HG12	2.10	0.51
32:51:154:PRO:HD3	32:51:162:ILE:O	2.11	0.51
33:61:110:ASP:H	33:61:130:TYR:HH	1.59	0.51
1:1G:631:G:C3'	1:1G:632:A:H8	2.21	0.51
1:1G:1266:G:N2	1:1G:1270:C:N3	2.58	0.51
6:12:57:PHE:HD2	6:12:58:ILE:HD13	1.75	0.51
6:12:72:GLY:O	6:12:74:LYS:N	2.44	0.51
1:13:452:A:H2'	1:13:453:A:C8	2.46	0.51
1:13:991:U:C4	1:13:1212:U:H1'	2.46	0.51
2:1L:26:A:H3'	2:1L:27:G:H8	1.74	0.51
5:14:196:A:N3	5:14:196:A:H2'	2.26	0.51
5:14:259:G:HO2'	5:14:621:A:HO2'	1.58	0.51
5:14:270:A:OP2	5:14:270(Y):G:N2	2.40	0.51
5:14:619:G:H5"	5:14:620:G:H21	1.75	0.51
5:14:807:U:H2'	5:14:808:G:H8	1.76	0.51
5:14:839:U:H3	5:14:939:G:H1	1.58	0.51
5:14:1592:C:H2'	5:14:1593:G:C8	2.44	0.51
5:14:1776:G:OP2	58:14:3543:HOH:O	2.20	0.51
18:5I:21:TYR:HE2	18:5I:23:ARG:NE	2.07	0.51
22:9I:26:LEU:HD11	22:9I:29:PHE:CG	2.45	0.51
5:1H:2392:A:H8	36:78:61:ARG:HG2	1.75	0.51
5:1H:2602:A:OP1	58:1H:4741:HOH:O	2.18	0.51
28:11:69:ARG:HH11	28:11:69:ARG:HG3	1.76	0.51
34:58:96:GLU:C	34:58:98:VAL:H	2.11	0.51
36:78:15:ARG:HH21	36:78:15:ARG:HG3	1.76	0.51
36:78:49:ARG:NE	55:Q8:57:ARG:HG2	2.26	0.51
45:G8:97:ARG:H	45:G8:97:ARG:HD2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:40:C:H42	1:1G:402:G:H1	1.59	0.51
1:1G:665:A:H1'	1:1G:733:A:O4'	2.11	0.51
1:1G:1129:C:C4	1:1G:1139:G:N1	2.78	0.51
6:12:209:ARG:HD3	6:12:240:GLN:OE1	2.10	0.51
7:22:9:GLY:HA2	7:22:12:LEU:HG	1.92	0.51
1:13:49:U:C2	1:13:361:G:N2	2.79	0.51
5:14:861:A:N3	27:1J:79:C:O2'	2.44	0.51
5:14:1328:G:H2'	5:14:1330:C:C5	2.46	0.51
5:1H:232:G:N2	5:1H:420:C:OP1	2.32	0.51
5:1H:754:C:H2'	5:1H:755:C:H6	1.76	0.51
5:1H:1125:G:OP2	5:1H:1126:A:O2'	2.29	0.51
5:1H:1556:C:H2'	5:1H:1557:C:C6	2.46	0.51
5:1H:1693:U:H1'	28:11:14:ARG:NH2	2.26	0.51
5:1H:1925:C:C2'	5:1H:1926:U:H5'	2.41	0.51
5:1H:2127:G:N2	5:1H:2162:G:H1'	2.24	0.51
5:1H:2147:G:H2'	5:1H:2148:G:H4'	1.93	0.51
5:1H:2383:G:O2'	5:1H:2384:G:H5'	2.11	0.51
5:1H:2540:C:H2'	5:1H:2541:A:O4'	2.10	0.51
5:1H:2746:U:O4	5:1H:2755:C:H4'	2.11	0.51
5:1H:2795:G:H3'	5:1H:2797:U:C5'	2.41	0.51
30:31:114:VAL:HG21	30:31:202:PHE:CZ	2.46	0.51
1:1G:532:A:H61	7:22:193:TYR:HA	1.75	0.51
1:1G:1002:G:H22	1:1G:1038:C:N4	2.09	0.51
1:1G:1298:C:O2'	1:1G:1299:A:OP2	2.29	0.51
1:13:1145:C:H4'	1:13:1146:A:H8	1.76	0.50
1:13:1423:G:P	35:68:49:ARG:HH22	2.33	0.50
2:3L:76:A:O2'	5:14:2394:C:N3	2.40	0.50
5:14:35:G:H2'	5:14:36:G:O4'	2.11	0.50
5:14:110:G:C2	5:14:111:A:C8	2.99	0.50
5:14:601:C:O2	5:14:605:C:H4'	2.11	0.50
5:14:1358:G:N2	5:14:1372:U:C5	2.79	0.50
5:14:2390:U:O2'	5:14:2391:G:H5'	2.11	0.50
5:14:2394:C:H2'	5:14:2395:C:H6	1.76	0.50
26:1K:8:4SU:H1'	26:1K:48:C:O2'	2.10	0.50
3:2K:44:A:C2	3:2K:45:A:C4	2.99	0.50
5:1H:102:G:OP1	49:K8:7:ARG:NH2	2.44	0.50
5:1H:275:G:N7	5:1H:363:G:C4	2.79	0.50
5:1H:1486:A:H2'	5:1H:1487:G:C8	2.46	0.50
5:1H:1997:G:H5"	58:1H:4102:HOH:O	2.09	0.50
5:1H:2096:U:H3	5:1H:2193:G:H1	1.59	0.50
5:1H:2619:C:H5"	29:21:152:LYS:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:23:VAL:HA	29:21:185:LYS:HA	1.93	0.50
34:58:39:ARG:NH2	34:58:41:ASP:OD2	2.43	0.50
40:B8:62:THR:HG22	40:B8:75:ILE:HG12	1.92	0.50
44:F8:11:PRO:HG2	44:F8:13:LEU:HD21	1.92	0.50
44:F8:31:HIS:CD2	44:F8:33:LYS:HB2	2.46	0.50
53:O8:26:ASN:OD1	53:O8:28:ARG:HB2	2.11	0.50
1:1G:1059:C:OP2	7:22:199:LYS:NZ	2.41	0.50
1:1G:1145:C:H4'	1:1G:1146:A:OP1	2.10	0.50
8:32:13:ARG:O	8:32:15:GLU:N	2.41	0.50
1:13:868:C:H2'	1:13:869:G:O4'	2.11	0.50
1:13:954:G:H2'	1:13:955:U:C6	2.45	0.50
1:13:1398:A:N1	9:4E:19:MET:HE2	2.26	0.50
2:3L:8:4SU:O5'	2:3L:8:4SU:H6	2.11	0.50
5:14:353:G:H2'	5:14:354:G:H8	1.75	0.50
5:14:1482:U:H3	5:14:1512:G:H1	1.59	0.50
5:14:2648:C:H2'	5:14:2649:U:H6	1.76	0.50
5:14:2749:A:H62	5:14:2753:A:H61	1.59	0.50
6:1E:226:ARG:HG3	6:1E:227:GLY:H	1.76	0.50
8:3E:102:ASP:HB3	8:3E:136:PRO:HB3	1.92	0.50
8:3E:150:GLU:HG3	8:3E:153:ARG:HE	1.76	0.50
10:5E:69:GLU:O	10:5E:72:VAL:HG12	2.11	0.50
11:6E:50:ILE:HB	11:6E:58:PRO:HB3	1.93	0.50
16:3I:7:ILE:CD1	21:8I:32:TYR:HB3	2.42	0.50
5:1H:475:U:C4	5:1H:481:G:O6	2.65	0.50
5:1H:1508:A:O2'	5:1H:1509:C:O4'	2.17	0.50
5:1H:2729:G:H2'	5:1H:2730:C:C6	2.46	0.50
5:1H:2815:C:H5'	52:N8:29:THR:HG21	1.93	0.50
27:1J:24:G:H4'	27:1J:25:A:H5'	1.92	0.50
28:11:2:ALA:HA	28:11:20:ASP:HB2	1.93	0.50
28:11:25:THR:HB	28:11:82:ILE:H	1.75	0.50
28:11:249:PRO:HD2	28:11:250:TRP:CZ3	2.46	0.50
40:B8:26:ASP:CB	40:B8:92:GLY:H	2.24	0.50
46:H8:81:ARG:HG3	46:H8:81:ARG:O	2.10	0.50
53:O8:51:GLU:HG2	53:O8:52:VAL:N	2.26	0.50
55:Q8:57:ARG:HA	55:Q8:58:ILE:C	2.31	0.50
1:1G:408:A:OP2	58:1G:1751:HOH:O	2.18	0.50
1:1G:526:C:C4	1:1G:527:G:H1'	2.46	0.50
1:1G:1512:U:H2'	1:1G:1513:A:H8	1.75	0.50
8:32:33:MET:O	8:32:35:ARG:HG3	2.12	0.50
1:13:678:U:H2'	1:13:679:C:C6	2.47	0.50
2:3L:3:C:H2'	2:3L:4:C:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:172:C:H2'	5:14:173:G:H8	1.76	0.50
5:14:320:A:H4'	5:14:322:A:C8	2.47	0.50
5:14:654(D):G:H22	5:14:654(Q):C:H42	1.59	0.50
5:14:1849:G:H2'	5:14:1850:G:C8	2.46	0.50
10:5E:41:GLU:HB2	10:5E:62:TRP:CE3	2.46	0.50
12:7E:13:ILE:O	12:7E:17:THR:HG23	2.11	0.50
19:6I:74:ASP:HB3	19:6I:77:ARG:HG2	1.92	0.50
5:1H:270(J):G:H1	5:1H:270(P):C:H42	1.60	0.50
5:1H:415:A:H2'	5:1H:416:C:O4'	2.12	0.50
5:1H:606:U:H4'	5:1H:658:C:H4'	1.94	0.50
5:1H:654(H):G:H2'	5:1H:654(H):G:N3	2.26	0.50
5:1H:1086:A:H1'	5:1H:1103:A:H61	1.76	0.50
5:1H:1303:G:OP2	58:1H:4736:HOH:O	2.19	0.50
5:1H:2887:U:H2'	5:1H:2888:C:C6	2.46	0.50
27:1J:66:A:N6	27:1J:107:U:H2'	2.26	0.50
27:16:89:G:H2'	27:16:89(A):A:C8	2.47	0.50
31:41:46:ALA:HB1	31:41:49:ASP:O	2.11	0.50
36:78:78:PRO:HB3	36:78:111:ARG:NH2	2.25	0.50
41:C8:69:CYS:HB2	41:C8:74:LEU:HD13	1.92	0.50
42:D8:24:LYS:HA	42:D8:92:THR:HG23	1.92	0.50
44:F8:15:GLU:HG3	44:F8:16:LYS:N	2.26	0.50
53:O8:9:LEU:HB3	53:O8:26:ASN:O	2.11	0.50
6:12:32:ILE:HD12	6:12:41:ILE:O	2.11	0.50
1:13:10:A:OP2	9:4E:126:ARG:HD3	2.12	0.50
1:13:300:A:H1'	1:13:565:U:O2	2.12	0.50
1:13:1117:G:O3'	13:8E:104:ARG:HD3	2.12	0.50
5:14:442:G:C6	5:14:444:C:N4	2.79	0.50
5:14:1271:G:O3'	5:14:1272:A:H4'	2.11	0.50
5:14:1417:C:H42	5:14:1581:G:H1	1.59	0.50
5:14:1598:C:OP2	5:14:1598:C:H6	1.94	0.50
7:2E:32:LEU:HD13	7:2E:59:ARG:NH1	2.27	0.50
8:3E:98:GLU:HG2	8:3E:189:PRO:HG2	1.93	0.50
24:BI:49:ALA:O	24:BI:52:ALA:N	2.44	0.50
2:3K:69:G:H2'	2:3K:70:G:C8	2.47	0.50
5:1H:242:G:OP1	58:1H:4468:HOH:O	2.20	0.50
5:1H:654(D):G:H22	5:1H:654(Q):C:N4	2.09	0.50
5:1H:1016:G:N7	58:1H:4462:HOH:O	2.34	0.50
5:1H:1278:A:OP1	38:98:36:THR:HG22	2.11	0.50
5:1H:1748:G:H2'	5:1H:1749:A:C8	2.45	0.50
5:1H:2061:G:H5"	5:1H:2503:A:C2	2.47	0.50
27:1J:15:A:H1'	27:1J:109:G:C4	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C8:95:LEU:HG	42:D8:4:ILE:HD13	1.93	0.50
41:C8:107:ALA:O	41:C8:111:GLU:HG2	2.10	0.50
45:G8:77:PRO:HD2	45:G8:97:ARG:HD3	1.94	0.50
55:Q8:23:VAL:HG22	55:Q8:24:ALA:N	2.26	0.50
1:1G:424:G:H2'	1:1G:425:G:H8	1.76	0.50
1:1G:991:U:O2	1:1G:993:G:H8	1.94	0.50
1:1G:1055:A:N6	1:1G:1206:G:N7	2.60	0.50
1:13:552:U:O2'	1:13:553:A:H5'	2.12	0.50
5:14:603:A:H8	5:14:604:G:H1'	1.76	0.50
5:14:902:C:H2'	5:14:903:C:C6	2.47	0.50
5:14:1040:C:H2'	5:14:1041:C:C6	2.47	0.50
5:14:2320:A:N6	5:14:2333:A:H2'	2.27	0.50
5:14:2394:C:H2'	5:14:2395:C:C6	2.46	0.50
5:14:2845:G:OP2	58:14:3679:HOH:O	2.19	0.50
14:1I:90:LEU:N	14:1I:91:PRO:HD3	2.26	0.50
20:7I:4:ILE:HA	20:7I:20:VAL:O	2.11	0.50
23:AI:50:ALA:HA	23:AI:58:VAL:O	2.12	0.50
23:AI:58:VAL:HG11	23:AI:75:ALA:HB1	1.93	0.50
5:1H:130:C:O3'	5:1H:1349:A:H1'	2.12	0.50
5:1H:474:G:O6	58:1H:4558:HOH:O	2.19	0.50
5:1H:2453:A:H2'	5:1H:2454:G:O4'	2.12	0.50
5:1H:2620:C:H2'	5:1H:2621:A:O4'	2.12	0.50
27:16:15:A:O2'	27:16:109:G:C8	2.54	0.50
31:41:112:PRO:HG3	51:M8:38:LYS:HD2	1.93	0.50
47:I8:36:ILE:O	47:I8:36:ILE:HD13	2.11	0.50
1:1G:167:G:H2'	1:1G:168:G:H8	1.76	0.50
1:1G:960:U:H4'	1:1G:961:U:H5"	1.94	0.50
1:1G:1432:G:N2	58:1G:1800:HOH:O	2.43	0.50
1:1G:1449:C:H3'	1:1G:1450:U:H4'	1.93	0.50
8:32:126:ILE:HG22	8:32:127:THR:N	2.26	0.50
1:13:138:G:H1	1:13:225:C:H42	1.60	0.50
1:13:446:G:H1	1:13:488:C:N4	2.02	0.50
1:13:1014:A:H4'	23:AI:14:HIS:CD2	2.47	0.50
1:13:1386:G:O2'	1:13:1387:G:H5'	2.11	0.50
5:14:276:A:H2'	5:14:277:C:C5	2.46	0.50
5:14:1021:A:H8	5:14:1021:A:H3'	1.77	0.50
5:14:2475:C:H5'	5:14:2476:A:O5'	2.12	0.50
6:1E:18:GLY:N	6:1E:42:ILE:HG22	2.27	0.50
18:5I:6:LEU:HB3	18:5I:23:ARG:HH22	1.76	0.50
20:7I:45:THR:HB	20:7I:47:ASP:H	1.76	0.50
24:BI:30:LYS:NZ	24:BI:80:ARG:HH12	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2094:G:O2'	5:1H:2095:C:H5'	2.11	0.50
5:1H:2298:A:H62	5:1H:2318:G:H8	1.60	0.50
5:1H:2388:A:H2'	5:1H:2389:G:H5'	1.94	0.50
5:1H:2679:A:H4'	29:21:165:VAL:HG11	1.92	0.50
5:1H:2712:U:OP1	5:1H:2714:G:H4'	2.11	0.50
5:1H:2756:U:H4'	5:1H:2757:A:OP1	2.11	0.50
27:1J:100:G:P	58:1J:309:HOH:O	2.68	0.50
31:41:28:VAL:O	31:41:31:VAL:HG13	2.12	0.50
33:61:8:PRO:HG3	33:61:14:ASP:HB2	1.93	0.50
36:78:39:LYS:HG3	36:78:45:LEU:CD2	2.41	0.50
40:B8:111:ARG:H	40:B8:111:ARG:CD	2.17	0.50
51:M8:34:GLU:HG2	51:M8:35:VAL:N	2.25	0.50
55:Q8:56:GLU:O	55:Q8:57:ARG:HG3	2.11	0.50
1:1G:382:A:H2'	1:1G:383:A:H8	1.77	0.50
1:1G:520:A:N1	1:1G:536:C:H1'	2.27	0.50
1:1G:561:U:HO2'	1:1G:562:C:P	2.35	0.50
1:1G:690:G:H2'	1:1G:691:G:O4'	2.11	0.50
1:1G:841:U:H4'	1:1G:842:C:C6	2.46	0.50
1:13:159:G:O2'	1:13:161:A:N7	2.39	0.50
1:13:738:C:H2'	1:13:739:C:H6	1.75	0.50
2:1L:39:PSU:H2'	2:1L:40:C:C6	2.47	0.50
5:14:654(C):G:H2'	5:14:654(D):G:O4'	2.11	0.50
5:14:1167:U:C2	5:14:1183:G:N2	2.80	0.50
5:14:1784:A:H4'	5:14:1785:A:O5'	2.12	0.50
10:5E:38:GLU:HB2	10:5E:64:GLN:HB3	1.94	0.50
11:6E:95:ARG:NH2	11:6E:99:LEU:HD21	2.27	0.50
23:AI:42:PRO:O	23:AI:45:VAL:HG22	2.12	0.50
5:1H:84:A:OP2	45:G8:8:LYS:NZ	2.27	0.50
5:1H:190:A:OP2	48:J8:39:LYS:HE3	2.11	0.50
5:1H:270(G):C:H2'	5:1H:270(H):C:H6	1.76	0.50
5:1H:2116:G:O6	5:1H:2172:U:N3	2.45	0.50
5:1H:2232:U:P	48:J8:40:ARG:HH12	2.34	0.50
27:1J:18:G:H1	27:1J:65:C:N4	2.05	0.50
28:11:112:GLN:O	28:11:115:GLN:HG2	2.12	0.50
30:31:62:ARG:HB3	30:31:62:ARG:NH1	2.27	0.50
45:G8:38:ILE:CD1	45:G8:64:GLU:HG3	2.40	0.50
1:1G:216:G:O2'	1:1G:217:C:O4'	2.30	0.50
1:1G:942:G:C2	1:1G:1342:C:C2	2.99	0.50
1:13:165:C:H2'	1:13:166:G:C8	2.46	0.50
5:14:17:G:H2'	5:14:18:C:C6	2.47	0.50
5:14:311:A:C6	5:14:328:U:C4	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:406:G:H1	5:14:421:U:H3	1.57	0.50
5:14:1590:U:H2'	5:14:1591:G:C8	2.47	0.50
5:14:1788:C:C2	5:14:1789:A:C8	3.00	0.50
5:14:1828:G:P	58:14:3533:HOH:O	2.70	0.50
23:AI:40:ILE:O	23:AI:41:VAL:HG22	2.11	0.50
24:BI:49:ALA:CB	24:BI:99:LEU:HB2	2.42	0.50
26:1K:19:G:H22	26:1K:56:C:H42	1.60	0.50
5:1H:582:G:H2'	5:1H:583:G:H8	1.76	0.50
5:1H:2344:U:O2'	53:O8:37:ARG:HG2	2.12	0.50
34:58:35:ARG:O	34:58:42:TRP:HZ3	1.94	0.50
37:88:52:VAL:O	37:88:56:ARG:HB2	2.12	0.50
38:98:46:GLY:HA2	38:98:49:ASP:HB2	1.92	0.50
41:C8:50:ARG:NH2	42:D8:72:VAL:HG12	2.27	0.50
55:Q8:53:PRO:HB3	55:Q8:56:GLU:HG3	1.93	0.50
1:1G:828:A:H2'	1:1G:829:G:O4'	2.11	0.50
6:12:71:VAL:HG23	6:12:163:PHE:O	2.11	0.50
6:12:91:PRO:HG2	6:12:155:LEU:HB2	1.94	0.50
8:32:199:ASN:HD22	8:32:199:ASN:C	2.14	0.50
1:13:1007:C:H42	1:13:1022:G:H1	1.59	0.50
5:14:1062:G:H2'	5:14:1063:G:H8	1.76	0.50
5:14:2340:G:O2'	5:14:2341:G:H5'	2.12	0.50
5:14:2408:U:H2'	5:14:2409:G:C8	2.47	0.50
8:3E:64:LEU:O	8:3E:67:ILE:HB	2.12	0.50
11:6E:45:ASP:O	11:6E:49:ILE:HG12	2.11	0.50
13:8E:125:TYR:CD1	13:8E:126:SER:N	2.79	0.50
17:4I:11:ARG:HB2	17:4I:11:ARG:HH11	1.75	0.50
22:9I:38:GLU:HA	22:9I:41:LYS:NZ	2.27	0.50
5:1H:184:C:H2'	5:1H:185:U:C6	2.47	0.50
5:1H:782:A:H5'	5:1H:783:A:C2	2.47	0.50
5:1H:963:U:OP1	58:1H:3922:HOH:O	2.18	0.50
5:1H:1026:U:H1'	5:1H:1027:A:P	2.52	0.50
5:1H:1093:G:HO2'	5:1H:1099:G:N2	2.09	0.50
5:1H:1181:C:O2'	5:1H:1182:A:H5'	2.12	0.50
5:1H:1213:A:H1'	5:1H:1238:G:N3	2.27	0.50
5:1H:1766:U:O2'	5:1H:1767:C:H5'	2.12	0.50
5:1H:1814:G:P	28:11:40:THR:HG21	2.51	0.50
5:1H:2224:G:H4'	5:1H:2226:C:C2	2.47	0.50
5:1H:2429:G:O6	36:78:61:ARG:NH1	2.45	0.50
5:1H:2771:C:H2'	5:1H:2772:C:H6	1.77	0.50
29:21:16:ARG:HG3	29:21:16:ARG:O	2.12	0.50
34:58:137:LYS:HE3	34:58:138:LEU:C	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:18:ARG:O	36:78:19:VAL:HG22	2.11	0.50
36:78:124:LYS:HA	36:78:143:GLY:O	2.11	0.50
36:78:126:VAL:HG13	36:78:145:PRO:HB2	1.94	0.50
49:K8:18:PRO:O	49:K8:21:LEU:HB2	2.11	0.50
1:1G:374:A:N3	1:1G:374:A:H2'	2.26	0.50
1:1G:1048:G:O4'	1:1G:1215:G:H4'	2.12	0.50
7:22:112:SER:O	7:22:116:VAL:HG23	2.12	0.50
1:13:413:G:N7	8:3E:35:ARG:NH1	2.60	0.49
1:13:625:G:H4'	20:7I:16:HIS:ND1	2.26	0.49
5:14:451:C:OP2	58:14:3807:HOH:O	2.18	0.49
5:14:736:C:OP1	58:14:4131:HOH:O	2.19	0.49
5:14:951:C:O2'	5:14:952:G:H5'	2.12	0.49
5:14:1176:G:H5'	5:14:1177:A:OP1	2.12	0.49
5:14:2459:A:C5	5:14:2460:U:C5	3.00	0.49
6:1E:238:LEU:H	6:1E:238:LEU:HD12	1.76	0.49
17:4I:3:ARG:HH22	31:41:139:LEU:HD13	1.76	0.49
5:1H:530:G:N3	5:1H:530:G:O4'	2.45	0.49
5:1H:1465:G:H2'	5:1H:1466:G:C8	2.41	0.49
5:1H:1542:G:OP2	5:1H:1543:A:O2'	2.30	0.49
5:1H:2151:G:H2'	5:1H:2152:G:H8	1.77	0.49
5:1H:2257:U:O2'	5:1H:2258:C:H5'	2.12	0.49
5:1H:2505:G:O6	5:1H:2576:G:H2'	2.12	0.49
29:21:60:ASN:OD1	29:21:62:PRO:HD2	2.12	0.49
33:61:1:MET:O	33:61:20:ASP:HA	2.12	0.49
38:98:24:GLN:HE22	38:98:36:THR:HG21	1.76	0.49
38:98:60:LEU:O	38:98:64:ARG:HG3	2.12	0.49
40:B8:26:ASP:CB	40:B8:91:ARG:HA	2.41	0.49
45:G8:97:ARG:HD2	45:G8:97:ARG:N	2.26	0.49
47:I8:25:ARG:HD3	47:I8:29:GLN:HE22	1.77	0.49
55:Q8:4:MET:HB3	55:Q8:59:LYS:HZ3	1.77	0.49
1:13:44:G:C2	1:13:45:U:H1'	2.47	0.49
1:13:320:C:H42	1:13:333:G:H1	1.60	0.49
1:13:1118:C:OP1	13:8E:104:ARG:NH1	2.37	0.49
1:13:1500:A:P	58:13:1804:HOH:O	2.63	0.49
5:14:1538:G:H2'	5:14:1539:G:H8	1.78	0.49
5:14:2162:G:H4'	5:14:2173:A:OP2	2.12	0.49
16:3I:82:VAL:HG13	16:3I:105:TYR:HB3	1.94	0.49
18:5I:24:CYS:HB2	18:5I:40:CYS:HB3	1.94	0.49
26:1K:52:G:N2	26:1K:62:C:O2	2.35	0.49
5:1H:234:C:O2'	5:1H:235:U:H5'	2.12	0.49
5:1H:270(J):G:H2'	5:1H:270(K):C:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1429:G:O2'	5:1H:1430:C:H5'	2.11	0.49
5:1H:2272:U:H5"	5:1H:2273:A:OP1	2.12	0.49
5:1H:2399:G:O3'	53:O8:19:ARG:NH1	2.44	0.49
5:1H:2432:A:C4	48:J8:33:LYS:HG2	2.46	0.49
5:1H:2771:C:H2'	5:1H:2772:C:C6	2.48	0.49
27:1J:44:G:H1'	27:1J:47:C:N4	2.26	0.49
29:21:33:VAL:O	29:21:69:LYS:HD2	2.12	0.49
30:31:149:ASP:OD1	30:31:149:ASP:N	2.31	0.49
34:58:66:LYS:O	34:58:70:LYS:HB3	2.12	0.49
37:88:58:PHE:O	37:88:61:GLY:N	2.45	0.49
41:C8:88:ILE:C	41:C8:90:VAL:H	2.16	0.49
55:Q8:42:ARG:HG2	55:Q8:42:ARG:O	2.11	0.49
1:1G:575:G:OP1	1:1G:575:G:H4'	2.13	0.49
1:1G:838:G:N2	1:1G:849:C:N3	2.61	0.49
1:1G:957:U:H2'	1:1G:959:A:OP2	2.11	0.49
1:1G:1262:C:H2'	1:1G:1263:C:C6	2.46	0.49
1:13:765:G:H5"	1:13:766:A:OP1	2.12	0.49
1:13:1367:C:H5'	14:1I:60:ARG:HE	1.77	0.49
1:13:1429:C:H2'	1:13:1430:C:C6	2.47	0.49
3:2L:32:G:C5	3:2L:33:OMC:C5	3.00	0.49
3:2L:54:G:H2'	3:2L:55:U:C6	2.47	0.49
5:14:71:A:H4'	5:14:72:U:H5"	1.95	0.49
5:14:831:G:H5"	5:14:832:G:OP2	2.11	0.49
5:14:957:A:N6	5:14:2459:A:C8	2.80	0.49
5:14:997:G:H2'	5:14:998:C:H6	1.77	0.49
5:14:2056:G:C2	5:14:2057:A:C8	3.00	0.49
9:4E:71:LEU:HD22	9:4E:115:VAL:H	1.77	0.49
11:6E:150:ALA:HB2	15:2I:50:TYR:OH	2.12	0.49
12:7E:21:LYS:O	12:7E:63:LEU:HD23	2.11	0.49
14:1I:32:ALA:HB3	14:1I:76:ASN:O	2.12	0.49
15:2I:44:SER:OG	15:2I:47:VAL:HG23	2.12	0.49
21:8I:11:VAL:HG23	21:8I:20:THR:HB	1.94	0.49
5:1H:286:C:O2'	5:1H:287:C:H5'	2.12	0.49
5:1H:945:A:OP2	5:1H:945:A:H4'	2.12	0.49
5:1H:1038:C:H2'	5:1H:1039:G:O4'	2.11	0.49
5:1H:1187:G:P	58:1H:3949:HOH:O	2.69	0.49
5:1H:2655:G:O2'	5:1H:2664:G:O6	2.26	0.49
27:16:28:C:OP1	39:A8:31:SER:OG	2.24	0.49
27:16:54:G:H2'	27:16:55:U:H6	1.78	0.49
32:51:124:GLU:HG2	32:51:126:PRO:HG3	1.94	0.49
33:61:95:LYS:HA	33:61:111:PRO:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:19:VAL:CB	36:78:27:HIS:HB2	2.39	0.49
39:A8:39:ILE:HD12	39:A8:73:LEU:HD22	1.94	0.49
1:1G:222:U:C2	1:1G:223:U:C5	3.00	0.49
1:1G:458:C:H2'	1:1G:464:G:C8	2.48	0.49
1:1G:601:C:H2'	1:1G:602:A:C8	2.47	0.49
7:22:190:ARG:H	7:22:190:ARG:HD2	1.77	0.49
1:13:1410:G:O6	58:13:2024:HOH:O	2.19	0.49
4:4L:13:A:HO2'	4:4L:14:A:P	2.29	0.49
5:14:234:C:H2'	5:14:235:U:C6	2.47	0.49
5:14:305:U:H2'	5:14:306:U:C6	2.48	0.49
5:14:343:C:H2'	5:14:344:G:H8	1.77	0.49
5:14:446:G:H8	58:14:3913:HOH:O	1.94	0.49
5:14:1758:G:C2	5:14:2696:U:H5'	2.47	0.49
5:14:1937:A:H5'	58:14:3633:HOH:O	2.12	0.49
9:4E:113:ALA:O	9:4E:115:VAL:HG23	2.12	0.49
12:7E:134:ILE:HG22	12:7E:135:CYS:SG	2.53	0.49
26:1K:51:U:H2'	26:1K:52:G:C8	2.47	0.49
5:1H:586:A:P	58:1H:3968:HOH:O	2.70	0.49
5:1H:754:C:H2'	5:1H:755:C:C6	2.48	0.49
5:1H:882:G:H22	5:1H:894:C:N4	1.97	0.49
5:1H:972:G:H8	5:1H:972:G:O5'	1.95	0.49
5:1H:1441:G:H2'	5:1H:1442:G:C8	2.47	0.49
5:1H:1776:G:OP2	58:1H:3665:HOH:O	2.20	0.49
5:1H:2314:C:H5"	31:41:38:VAL:HG21	1.94	0.49
40:B8:105:LEU:O	40:B8:107:ASP:N	2.45	0.49
55:Q8:6:THR:HG22	55:Q8:59:LYS:HD2	1.93	0.49
1:1G:143:A:O3'	1:1G:144:G:H8	1.95	0.49
1:1G:158:G:H1	1:1G:163:C:H42	1.60	0.49
1:1G:648:A:H2'	1:1G:649:G:H8	1.75	0.49
1:1G:857:C:H2'	1:1G:858:G:O4'	2.11	0.49
1:1G:1028:C:N4	1:1G:1033:G:H1	2.08	0.49
6:12:55:PHE:HZ	6:12:218:ALA:HA	1.77	0.49
1:13:428:G:C8	1:13:430:A:C4	3.00	0.49
5:14:108:U:H2'	5:14:109:G:H8	1.77	0.49
5:14:1165:U:H2'	5:14:1166:C:C6	2.47	0.49
5:14:1858:G:H1'	5:14:1884:A:N6	2.27	0.49
5:14:2536:G:C6	5:14:2537:U:C4	3.01	0.49
11:6E:26:PHE:CE2	11:6E:30:ILE:HD11	2.47	0.49
15:2I:85:ARG:HD3	15:2I:113:PRO:HD3	1.94	0.49
17:4I:80:ARG:NH1	23:AI:65:ASN:O	2.46	0.49
5:1H:618:G:H2'	5:1H:618(A):C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1621:U:H5”	5:1H:1622:G:OP1	2.12	0.49
5:1H:1889:A:N1	5:1H:2234:G:H1’	2.27	0.49
5:1H:2069:G:H4’	58:1H:4258:HOH:O	2.11	0.49
5:1H:2559:C:O2’	5:1H:2560:C:H5’	2.12	0.49
27:1J:115:G:H8	27:1J:115:G:OP2	1.96	0.49
40:B8:24:PRO:HA	40:B8:49:VAL:HG22	1.95	0.49
50:L8:8:LEU:HD22	50:L8:31:LEU:HD22	1.95	0.49
1:13:690:G:H2’	1:13:691:G:O4’	2.13	0.49
1:13:791:G:C6	1:13:792:A:C2	3.00	0.49
1:13:1007:C:N4	1:13:1022:G:H1	2.10	0.49
1:13:1098:C:C2	1:13:1099:G:C8	3.00	0.49
2:1L:10:G:O2’	2:1L:11:C:OP1	2.29	0.49
5:14:287:C:H2’	5:14:288:C:C6	2.48	0.49
5:14:459:U:H2’	5:14:460:A:C8	2.48	0.49
5:14:1278:A:N7	58:14:4068:HOH:O	2.34	0.49
5:14:1894:C:O2’	5:14:1895:C:H5’	2.12	0.49
5:14:2134:A:C2	5:14:2159:G:H1’	2.46	0.49
7:2E:129:ALA:HB2	8:3E:47:ARG:HH22	1.78	0.49
10:5E:27:GLN:HA	10:5E:30:LEU:HD12	1.95	0.49
20:7I:17:TYR:HE2	20:7I:41:PRO:HG3	1.77	0.49
23:AI:30:LEU:HD22	23:AI:30:LEU:H	1.78	0.49
24:BI:26:ASN:O	24:BI:30:LYS:HB2	2.13	0.49
2:3K:19:G:N1	5:1H:2112:G:H1’	2.28	0.49
5:1H:1204:A:H2	5:1H:1241:A:N1	2.10	0.49
5:1H:1389:G:C2	5:1H:1399:C:O2	2.65	0.49
5:1H:1412:A:H2’	5:1H:1413:G:C8	2.48	0.49
5:1H:2032:G:C4	29:21:145:LYS:HD3	2.48	0.49
5:1H:2318:G:H1	39:A8:2:ALA:HA	1.77	0.49
27:1J:3:C:H2’	27:1J:4:C:C6	2.48	0.49
27:1J:4:C:H42	27:1J:116:G:H22	1.59	0.49
27:16:73:A:C4	27:16:104:A:C2	3.00	0.49
28:11:121:PRO:HB3	28:11:135:PHE:CE2	2.47	0.49
29:21:63:LEU:HD23	29:21:63:LEU:O	2.11	0.49
31:41:37:VAL:HG23	31:41:99:MET:CE	2.43	0.49
31:41:49:ASP:OD2	31:41:51:ARG:NH2	2.46	0.49
35:68:63:VAL:HG11	35:68:85:VAL:HG23	1.94	0.49
36:78:122:PRO:HA	36:78:142:GLY:HA3	1.94	0.49
41:C8:29:SER:OG	41:C8:30:LYS:HE2	2.13	0.49
44:F8:61:GLY:N	44:F8:75:ASP:OD1	2.31	0.49
49:K8:42:GLY:O	49:K8:44:LEU:HD23	2.11	0.49
1:1G:79:G:H2’	1:1G:79:G:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:440:A:H8	1:1G:440:A:OP2	1.95	0.49
1:1G:674:G:H2'	1:1G:675:A:H8	1.76	0.49
1:1G:1071:C:H2'	1:1G:1072:G:H8	1.78	0.49
1:1G:1374:A:H2'	1:1G:1375:A:H5'	1.94	0.49
6:12:196:LEU:HD12	6:12:197:VAL:HG23	1.94	0.49
7:22:11:ARG:HB2	7:22:11:ARG:NH1	2.27	0.49
1:13:186(F):C:H2'	1:13:187:C:O4'	2.12	0.49
1:13:201:C:N4	1:13:209:U:H1'	2.27	0.49
1:13:428:G:C8	1:13:430:A:C5	3.01	0.49
1:13:486:U:H2'	1:13:487:A:H8	1.77	0.49
1:13:1113:C:H2'	1:13:1114:C:H6	1.77	0.49
2:1L:11:C:H2'	2:1L:12:U:C6	2.48	0.49
3:2L:54:G:H2'	3:2L:55:U:H6	1.78	0.49
5:14:2261:C:O2'	5:14:2262:U:H5'	2.13	0.49
5:14:2540:C:O2'	5:14:2740:A:N3	2.41	0.49
26:1K:16:H2U:O2	26:1K:16:H2U:H2'	2.12	0.49
5:1H:142:G:H1'	44:F8:37:THR:CG2	2.43	0.49
5:1H:325:G:H2'	5:1H:326:G:C8	2.47	0.49
5:1H:821:A:H2'	5:1H:946:G:H5"	1.93	0.49
5:1H:847:U:P	58:1H:3781:HOH:O	2.70	0.49
5:1H:1022:G:N2	5:1H:1023:U:O4	2.40	0.49
5:1H:1683:C:H2'	5:1H:1684:C:C6	2.48	0.49
5:1H:2314:C:H2'	5:1H:2315:G:H8	1.76	0.49
5:1H:2862:G:H2'	5:1H:2863:C:C6	2.48	0.49
29:21:24:THR:HG21	29:21:188:VAL:HG21	1.95	0.49
31:41:63:ILE:HG22	31:41:143:GLU:HB2	1.94	0.49
33:61:11:ASN:O	33:61:12:LEU:HB2	2.13	0.49
33:61:38:LEU:HD12	33:61:38:LEU:N	2.28	0.49
33:61:69:LYS:O	33:61:73:GLU:HB2	2.13	0.49
34:58:12:ARG:HH21	34:58:14:VAL:CG2	2.24	0.49
36:78:2:LYS:HG2	36:78:4:SER:H	1.78	0.49
46:H8:143:GLY:O	46:H8:145:GLU:HG2	2.13	0.49
55:Q8:59:LYS:H	55:Q8:59:LYS:CD	2.22	0.49
1:1G:851:G:H2'	1:1G:852:G:H8	1.77	0.49
1:1G:983:A:O2'	1:1G:1050:G:OP2	2.21	0.49
1:1G:1255:G:O3'	1:1G:1258:G:H1'	2.12	0.49
6:12:214:ILE:O	6:12:218:ALA:HB2	2.12	0.49
5:14:141:A:C8	5:14:1408:C:H1'	2.48	0.49
5:14:1000:A:C6	5:14:1001:A:N1	2.81	0.49
5:14:2187:G:C6	5:14:2188:C:N3	2.80	0.49
5:14:2306:C:H3'	5:14:2307:G:H5"	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4E:153:LYS:HD3	9:4E:154:GLY:N	2.28	0.49
12:7E:83:ILE:HB	12:7E:137:VAL:HG13	1.95	0.49
20:7I:53:VAL:HG22	20:7I:79:VAL:HG23	1.94	0.49
24:BI:14:LYS:HG3	24:BI:17:ARG:HH21	1.77	0.49
5:1H:357:A:H2'	5:1H:358:U:H6	1.77	0.49
5:1H:1021:A:C8	5:1H:1021:A:C3'	2.95	0.49
5:1H:1443:G:N2	5:1H:1549:C:C2	2.81	0.49
5:1H:1532:C:H2'	5:1H:1533:C:O4'	2.13	0.49
5:1H:1980:G:H4'	58:1H:3664:HOH:O	2.13	0.49
5:1H:2154:G:H2'	5:1H:2155:G:C8	2.48	0.49
27:1J:89(A):A:C8	27:1J:90:C:H1'	2.48	0.49
28:11:149:PRO:O	28:11:150:LYS:HB2	2.12	0.49
31:41:112:PRO:HB3	51:M8:36:CYS:HA	1.95	0.49
32:51:92:ILE:CD1	32:51:93:GLY:H	2.25	0.49
35:68:98:VAL:HG11	35:68:114:ILE:HG23	1.94	0.49
38:98:65:LEU:O	38:98:68:ARG:HB2	2.13	0.49
46:H8:111:VAL:HG11	46:H8:146:ILE:HD11	1.94	0.49
1:1G:909:A:H2'	1:1G:910:C:O4'	2.12	0.49
1:13:765:G:N2	1:13:813:U:OP2	2.45	0.49
1:13:827:U:H5"	1:13:828:A:OP2	2.13	0.49
1:13:1160:G:H1	1:13:1177:G:H1	1.59	0.49
5:14:108:U:H2'	5:14:109:G:C8	2.48	0.49
5:14:959:A:N6	5:14:960:A:N1	2.61	0.49
5:14:1486:A:O2'	5:14:1487:G:H5'	2.12	0.49
5:14:2146:C:H4'	5:14:2147:G:C8	2.48	0.49
10:5E:99:ALA:HB3	22:9I:29:PHE:CE1	2.48	0.49
14:1I:46:ARG:NH2	14:1I:64:GLU:OE1	2.46	0.49
18:5I:39:LEU:HD11	18:5I:47:LEU:HD12	1.93	0.49
3:2K:20:G:C2	3:2K:58:A:N3	2.80	0.49
5:1H:844:C:H3'	5:1H:845:G:C8	2.48	0.49
5:1H:2154:G:H2'	5:1H:2155:G:H8	1.77	0.49
5:1H:2615:U:H2'	5:1H:2616:C:H6	1.77	0.49
37:88:55:VAL:HG12	37:88:64:ILE:HD12	1.95	0.49
43:E8:37:ARG:HD3	43:E8:38:TYR:HE2	1.77	0.49
51:M8:38:LYS:HD2	51:M8:38:LYS:H	1.77	0.49
52:N8:40:LYS:HE2	52:N8:47:PRO:HD2	1.95	0.49
1:1G:626:U:C2	1:1G:627:G:C8	3.01	0.49
1:1G:1291:G:H2'	1:1G:1292:U:C6	2.47	0.49
7:22:87:LEU:HA	7:22:90:GLU:HG2	1.95	0.49
1:13:595:G:H1	1:13:641:U:HO2'	1.61	0.49
1:13:727:G:N2	1:13:730:G:OP2	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:957:U:N3	1:13:960:U:OP2	2.41	0.49
2:3L:25:C:H2'	2:3L:26:A:O4'	2.13	0.49
5:14:315:G:H2'	5:14:316:C:C6	2.48	0.49
5:14:2122:U:H2'	5:14:2123:G:O4'	2.13	0.49
5:14:2697:G:H2'	5:14:2698:U:O4'	2.12	0.49
11:6E:26:PHE:CD2	11:6E:30:ILE:HD11	2.47	0.49
23:AI:42:PRO:HD3	51:M8:63:TYR:HE2	1.78	0.49
24:BI:50:GLU:HG3	24:BI:100:ILE:HD13	1.94	0.49
5:1H:76:C:HO2'	49:K8:62:THR:HG21	1.78	0.49
5:1H:392:C:P	58:1H:3773:HOH:O	2.71	0.49
5:1H:661:C:HO2'	36:78:14:LYS:H	1.57	0.49
5:1H:1047:G:O2'	5:1H:1111:A:N6	2.46	0.49
5:1H:1152:C:H3'	58:1H:4100:HOH:O	2.12	0.49
5:1H:1210:A:H5'	5:1H:1210:A:H8	1.76	0.49
5:1H:2646:C:OP2	5:1H:2732:G:O2'	2.22	0.49
5:1H:2695:C:H2'	5:1H:2696:U:H6	1.77	0.49
28:11:182:LEU:N	28:11:272:ALA:HB3	2.24	0.49
32:51:54:ARG:HD3	32:51:65:HIS:ND1	2.28	0.49
33:61:110:ASP:OD1	33:61:130:TYR:OH	2.21	0.49
40:B8:26:ASP:OD2	40:B8:120:ARG:NH2	2.45	0.49
41:C8:101:ARG:C	41:C8:103:PRO:HD3	2.33	0.49
43:E8:14:PRO:O	43:E8:18:ARG:HB2	2.12	0.49
44:F8:2:LYS:HG2	49:K8:26:ARG:HE	1.77	0.49
55:Q8:39:LYS:HG3	55:Q8:40:GLU:H	1.78	0.49
1:1G:167:G:O2'	1:1G:168:G:H5'	2.13	0.49
1:1G:187:C:H2'	1:1G:188:U:O4'	2.13	0.49
1:1G:411:A:H62	1:1G:413:G:N2	2.07	0.49
1:1G:641:U:O3'	1:1G:642:A:H8	1.96	0.49
1:1G:1062:U:H2'	1:1G:1063:C:C5	2.48	0.49
1:1G:1376:U:H2'	1:1G:1377:A:H8	1.78	0.49
1:13:57:G:H2'	1:13:58:C:H6	1.77	0.48
1:13:292:G:N7	1:13:293:G:H1'	2.28	0.48
1:13:547:A:OP1	8:3E:73:ARG:NH2	2.46	0.48
1:13:834:C:C2	1:13:853:G:C2	3.01	0.48
1:13:1286:A:H5"	25:1F:26:LYS:CG	2.43	0.48
5:14:37:C:H2'	5:14:38:A:C8	2.47	0.48
5:14:120:U:C2	5:14:149:A:C6	3.00	0.48
5:14:580:C:H2'	5:14:581:C:H6	1.78	0.48
5:14:912:C:C6	5:14:913:U:H5	2.30	0.48
5:14:1021:A:H3'	5:14:1021:A:C8	2.48	0.48
5:14:1026:U:H2'	27:1J:88:C:H42	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1510:A:H2'	5:14:1511:A:O4'	2.13	0.48
5:14:2638:G:O2'	5:14:2639:A:C8	2.66	0.48
12:7E:35:ILE:HD12	12:7E:118:VAL:HG11	1.94	0.48
12:7E:121:ASP:HB2	12:7E:125:ARG:NH2	2.28	0.48
13:8E:128:ARG:NH2	3:2K:36:A:OP2	2.38	0.48
20:7I:39:TYR:HB2	20:7I:49:LEU:HD13	1.94	0.48
26:1K:76:A:O2'	5:1H:2506:U:H1'	2.12	0.48
2:3K:24:G:C6	2:3K:25:C:N4	2.81	0.48
2:3K:52:G:N2	2:3K:63:G:N7	2.60	0.48
5:1H:975:G:H1'	5:1H:990:A:C2	2.48	0.48
5:1H:1142:U:H5'	5:1H:1142(A):A:C8	2.48	0.48
5:1H:1858:G:H8	5:1H:1858:G:OP2	1.96	0.48
27:1J:18:G:H2'	27:1J:19:G:C8	2.48	0.48
35:68:7:TYR:CZ	35:68:44:LYS:HG3	2.48	0.48
36:78:96:THR:C	36:78:98:GLU:H	2.15	0.48
38:98:87:TYR:HE1	38:98:117:VAL:HG12	1.77	0.48
39:A8:34:HIS:CE1	39:A8:54:LEU:HD23	2.48	0.48
39:A8:59:LYS:HG2	39:A8:60:GLY:H	1.77	0.48
40:B8:110:ILE:HG23	40:B8:111:ARG:HD3	1.94	0.48
48:J8:41:ARG:HG3	48:J8:43:TYR:CZ	2.48	0.48
55:Q8:13:ARG:O	55:Q8:23:VAL:HG23	2.13	0.48
1:1G:474:G:H2'	1:1G:475:G:H8	1.73	0.48
1:13:114:U:O2'	1:13:115:G:H5'	2.13	0.48
1:13:191(C):G:H2'	1:13:191(D):U:O4'	2.13	0.48
1:13:329:A:C5	1:13:332:G:C6	3.01	0.48
1:13:541:G:N7	58:13:1999:HOH:O	2.35	0.48
1:13:571:U:O2	1:13:918:A:H5'	2.13	0.48
1:13:600:C:H4'	12:7E:128:GLY:O	2.12	0.48
1:13:724:G:C2	1:13:725:G:C8	3.01	0.48
1:13:1002:G:C4	1:13:1003:G:C8	3.01	0.48
5:14:270(T):G:C6	5:14:270(U):C:C4	3.00	0.48
5:14:659:C:H2'	5:14:660:G:H8	1.78	0.48
5:14:867:C:C5	5:14:868:U:C5	3.01	0.48
5:14:1496:A:O3'	5:14:1497:U:H6	1.96	0.48
5:14:2529:G:H21	5:14:2529:G:P	2.37	0.48
5:14:2633:G:H2'	5:14:2634:G:O4'	2.13	0.48
9:4E:29:GLY:HA2	9:4E:46:GLY:O	2.12	0.48
17:4I:60:VAL:HG12	17:4I:66:LEU:HD11	1.95	0.48
23:AI:5:LEU:HB3	23:AI:10:PHE:CE1	2.29	0.48
2:3K:13:C:H2'	2:3K:14:A:H8	1.78	0.48
5:1H:778:G:N7	58:1H:4188:HOH:O	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1416:G:H2'	5:1H:1417:C:C5	2.47	0.48
5:1H:2105:C:H2'	5:1H:2106:G:C8	2.48	0.48
5:1H:2157:G:O2'	5:1H:2158:A:O5'	2.29	0.48
5:1H:2176:A:H2'	5:1H:2177:C:H6	1.78	0.48
5:1H:2351:G:HO2'	5:1H:2352:A:H8	1.60	0.48
28:11:239:ARG:O	28:11:240:ALA:CB	2.61	0.48
30:31:68:LYS:O	30:31:69:HIS:HB2	2.12	0.48
39:A8:35:ILE:HD11	39:A8:101:LEU:HD23	1.95	0.48
40:B8:16:ARG:HD3	40:B8:79:HIS:HA	1.95	0.48
43:E8:24:ILE:HG12	43:E8:36:LEU:HD21	1.94	0.48
45:G8:83:THR:HG22	45:G8:84:ARG:HE	1.78	0.48
51:M8:43:TYR:O	51:M8:46:GLN:HA	2.13	0.48
1:1G:328:C:O2	1:1G:328:C:H2'	2.13	0.48
1:1G:390:C:H2'	1:1G:391:G:C8	2.48	0.48
1:1G:616:G:N3	1:1G:616:G:H2'	2.28	0.48
1:1G:730:G:C5	1:1G:731:G:H1'	2.48	0.48
1:1G:1396:A:H4'	1:1G:1397:C:OP2	2.13	0.48
1:13:173:U:C6	1:13:197:A:C2	3.01	0.48
1:13:223:U:H2'	1:13:224:C:C6	2.47	0.48
1:13:375:U:OP1	20:7I:69:THR:HG21	2.13	0.48
1:13:872:A:C4	1:13:874:G:N7	2.80	0.48
1:13:918:A:H2'	1:13:919:A:C8	2.48	0.48
1:13:939:G:H2'	1:13:940:C:C6	2.48	0.48
1:13:1218:C:OP2	18:5I:9:LYS:NZ	2.45	0.48
1:13:1280:A:H3'	1:13:1281:U:H5'	1.94	0.48
2:3L:18:G:O2'	2:3L:60:U:O4	2.29	0.48
5:14:6:A:H2'	5:14:7:G:H5'	1.95	0.48
5:14:533:G:H2'	5:14:534:U:O4'	2.13	0.48
5:14:634:C:H2'	5:14:635:C:C6	2.48	0.48
5:14:1093:G:H22	5:14:1097:U:H5"	1.78	0.48
5:14:2233:U:H2'	5:14:2234:G:C8	2.49	0.48
5:14:2315:G:H2'	5:14:2316:C:C6	2.48	0.48
6:1E:237:ALA:O	6:1E:239:VAL:N	2.47	0.48
8:3E:7:PRO:HB2	8:3E:10:ARG:HG2	1.96	0.48
14:1I:34:VAL:HG12	14:1I:74:ILE:HG23	1.94	0.48
16:3I:75:HIS:ND1	16:3I:75:HIS:O	2.46	0.48
18:5I:6:LEU:HB3	18:5I:23:ARG:NH2	2.29	0.48
5:1H:397:G:H1'	5:1H:2231:C:O2'	2.13	0.48
5:1H:453:C:OP1	58:1H:3979:HOH:O	2.20	0.48
5:1H:994:C:OP1	41:C8:53:ARG:NH2	2.46	0.48
5:1H:2692:C:O2'	5:1H:2693:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:16:15:A:H3'	27:16:16:G:H5'	1.95	0.48
37:88:85:LYS:HG3	37:88:86:GLY:N	2.28	0.48
37:88:135:ASP:HB3	37:88:137:TYR:N	2.28	0.48
44:F8:67:GLY:C	44:F8:69:TYR:H	2.16	0.48
48:J8:78:LYS:HD3	48:J8:78:LYS:N	2.28	0.48
1:1G:157:G:H1	1:1G:164:U:H3	1.61	0.48
8:32:13:ARG:HD2	8:32:38:TYR:O	2.13	0.48
1:13:222:U:H2'	1:13:223:U:C6	2.48	0.48
1:13:343:U:O2'	1:13:346:G:O6	2.28	0.48
1:13:444:C:H2'	1:13:445:G:C8	2.48	0.48
1:13:1347:G:O2'	1:13:1348:U:OP2	2.31	0.48
2:1L:8:4SU:H6	2:1L:13:C:H42	1.77	0.48
2:3L:30:G:N2	2:3L:40:C:O2	2.47	0.48
5:14:890:A:H2'	5:14:892:G:H8	1.76	0.48
5:14:1003:G:N2	5:14:1153:C:C2	2.81	0.48
5:14:2650:U:H2'	5:14:2651:C:H6	1.79	0.48
8:3E:8:VAL:HG13	8:3E:21:LEU:HB2	1.95	0.48
8:3E:102:ASP:OD1	8:3E:103:ASN:N	2.46	0.48
17:4I:88:ARG:HG3	17:4I:88:ARG:NH1	2.26	0.48
19:6I:26:GLU:OE2	19:6I:77:ARG:NH1	2.46	0.48
21:8I:62:SER:HB3	21:8I:72:ARG:HE	1.78	0.48
24:BI:61:SER:O	24:BI:65:LYS:HB2	2.14	0.48
5:1H:1068:G:H1'	5:1H:1096:A:N3	2.28	0.48
5:1H:1942:C:OP2	5:1H:1943:U:O2'	2.24	0.48
5:1H:2010:G:N7	58:1H:4632:HOH:O	2.35	0.48
5:1H:2168:G:O2'	5:1H:2169:A:H5'	2.14	0.48
5:1H:2256:G:N7	58:1H:4246:HOH:O	2.35	0.48
5:1H:2855:C:H2'	5:1H:2856:C:C6	2.47	0.48
29:21:172:VAL:HG13	29:21:182:LEU:HD11	1.94	0.48
30:31:78:ILE:HA	30:31:83:PHE:CD2	2.48	0.48
30:31:124:LEU:HD12	30:31:125:LEU:O	2.12	0.48
36:78:97:PRO:HB3	36:78:112:LEU:HD12	1.96	0.48
38:98:15:SER:HB2	58:98:201:HOH:O	2.12	0.48
39:A8:87:PHE:CE2	39:A8:89:ARG:HB2	2.48	0.48
41:C8:88:ILE:O	41:C8:90:VAL:N	2.46	0.48
43:E8:38:TYR:OH	52:N8:47:PRO:HG3	2.12	0.48
44:F8:18:TYR:O	44:F8:20:GLY:N	2.47	0.48
48:J8:83:GLU:C	48:J8:85:LEU:H	2.17	0.48
1:1G:241:C:C2	1:1G:286:G:C2	3.01	0.48
1:1G:1086:U:H2'	1:1G:1087:G:H8	1.78	0.48
1:1G:1142:G:H3'	1:1G:1143:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1152:A:H2'	1:1G:1153:C:H6	1.78	0.48
1:13:116:A:H61	1:13:313:A:H1'	1.78	0.48
1:13:282:A:N3	1:13:282:A:H2'	2.27	0.48
1:13:560:U:H5'	1:13:566:G:N2	2.28	0.48
1:13:1053:G:H4'	1:13:1054:C:O5'	2.13	0.48
5:14:128:C:H2'	5:14:129:C:H6	1.79	0.48
5:14:528:A:C2	5:14:2043:C:H4'	2.49	0.48
5:14:1019:U:H3	5:14:1142(A):A:H62	1.61	0.48
5:14:1069:A:H2'	5:14:1073:A:N7	2.28	0.48
5:14:1899:G:N2	5:14:1902:C:N4	2.51	0.48
15:2I:21:ILE:HD13	15:2I:94:ALA:HB1	1.95	0.48
2:3K:18:G:HO2'	2:3K:19:G:P	2.37	0.48
2:3K:19:G:O2'	2:3K:57:G:N3	2.46	0.48
5:1H:470:A:O3'	58:1H:3823:HOH:O	2.20	0.48
5:1H:883:G:H2'	5:1H:884:C:H4'	1.96	0.48
5:1H:1252:G:H5"	58:1H:3785:HOH:O	2.12	0.48
5:1H:1533:C:H2'	5:1H:1534:G:C5	2.48	0.48
5:1H:2199:A:H3'	5:1H:2205:C:H6	1.77	0.48
5:1H:2562:U:C1'	35:68:23:ARG:HH11	2.22	0.48
27:16:1:U:H2'	27:16:2:C:C6	2.49	0.48
27:16:76:G:N7	58:16:315:HOH:O	2.35	0.48
28:11:68:LYS:HB3	28:11:70:TRP:CZ3	2.49	0.48
35:68:88:ASN:OD1	35:68:90:GLN:HB2	2.13	0.48
36:78:71:VAL:HG12	36:78:72:PRO:HD3	1.96	0.48
48:J8:3:LYS:O	48:J8:12:PRO:HD3	2.13	0.48
53:O8:25:LYS:HB2	55:Q8:32:LEU:HD12	1.95	0.48
53:O8:47:THR:HG22	53:O8:48:VAL:HG23	1.96	0.48
7:22:47:LEU:O	7:22:51:GLY:N	2.42	0.48
7:22:57:ILE:HG12	7:22:66:VAL:HG13	1.94	0.48
7:22:111:LEU:HD11	7:22:144:SER:O	2.13	0.48
1:13:7:G:H5'	1:13:298:A:O4'	2.13	0.48
1:13:244:U:H4'	1:13:245:C:O5'	2.12	0.48
1:13:510:A:OP2	8:3E:49:ARG:NH2	2.47	0.48
1:13:540:G:H2'	1:13:541:G:O4'	2.13	0.48
1:13:658:G:H2'	1:13:659:U:C6	2.49	0.48
1:13:1013:G:N2	1:13:1016:A:OP2	2.47	0.48
1:13:1028:C:N4	1:13:1033:G:H1	2.11	0.48
1:13:1063:C:H3'	1:13:1064:G:H2'	1.95	0.48
5:14:29:U:O4	58:14:4172:HOH:O	2.20	0.48
5:14:142:G:H5"	5:14:1598:C:O2'	2.12	0.48
5:14:1233:C:H2'	5:14:1234:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1669:A:H5"	5:14:1670:C:OP2	2.13	0.48
5:14:1777:U:O2'	5:14:1778:U:H5'	2.13	0.48
2:3K:9:A:H5'	2:3K:10:G:OP2	2.14	0.48
5:1H:483:A:O4'	45:G8:48:ALA:HB1	2.14	0.48
5:1H:1454:U:H5'	38:98:63:ARG:CZ	2.43	0.48
5:1H:1602:U:O4	58:1H:4120:HOH:O	2.18	0.48
5:1H:1607:C:H4'	5:1H:1608:A:O5'	2.13	0.48
5:1H:1839:G:OP2	58:1H:4547:HOH:O	2.20	0.48
5:1H:2331:G:H4'	47:I8:42:GLY:HA3	1.96	0.48
5:1H:2347:C:P	53:O8:39:TYR:OH	2.71	0.48
5:1H:2729:G:H2'	5:1H:2730:C:H6	1.78	0.48
27:1J:44:G:O2'	27:1J:48:A:N6	2.47	0.48
33:61:8:PRO:CA	33:61:14:ASP:HA	2.44	0.48
36:78:1:MET:HE2	36:78:6:LEU:HD13	1.96	0.48
46:H8:30:ASN:HA	46:H8:89:PHE:CE1	2.48	0.48
46:H8:73:GLN:HB2	46:H8:87:ASP:HB2	1.94	0.48
50:L8:35:ARG:HB3	50:L8:37:LEU:HD22	1.96	0.48
1:1G:12:U:O2'	1:1G:526:C:H4'	2.13	0.48
1:1G:1068:G:N7	1:1G:1094:G:C8	2.81	0.48
1:1G:1258:G:H2'	1:1G:1259:C:C6	2.47	0.48
1:1G:1349:A:H2'	1:1G:1350:A:C8	2.49	0.48
8:32:30:LYS:HD3	8:32:30:LYS:N	2.29	0.48
1:13:631:G:C8	1:13:632:A:C2	3.02	0.48
1:13:1128:C:H6	1:13:1139:G:C6	2.30	0.48
2:1L:63:G:H2'	2:1L:64:A:C8	2.49	0.48
2:3L:40:C:H2'	2:3L:41:C:H6	1.78	0.48
5:14:322:A:H5'	5:14:340:A:H1'	1.94	0.48
5:14:530:G:C6	5:14:2022:U:H5"	2.48	0.48
5:14:1386:C:H2'	5:14:1387:C:C6	2.49	0.48
5:14:2103:C:O2	5:14:2186:G:N2	2.30	0.48
6:1E:101:MET:HG2	6:1E:108:ILE:HG13	1.95	0.48
8:3E:62:GLN:HB3	8:3E:66:ARG:NH1	2.28	0.48
12:7E:38:ILE:HD11	12:7E:118:VAL:O	2.13	0.48
5:1H:311:A:C6	5:1H:328:U:C4	3.02	0.48
5:1H:547:A:C6	5:1H:548:A:C6	3.01	0.48
5:1H:654(L):G:H3'	5:1H:654(M):C:H5"	1.95	0.48
5:1H:654(M):C:H3'	5:1H:654(N):G:C8	2.49	0.48
5:1H:1103:A:H3'	5:1H:1104:C:C6	2.49	0.48
5:1H:1541:U:H2'	5:1H:1542:G:O4'	2.14	0.48
5:1H:1889:A:H2'	5:1H:1890:A:C8	2.48	0.48
5:1H:2295:C:OP1	39:A8:10:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2793:G:H8	5:1H:2793:G:OP2	1.96	0.48
28:11:242:ARG:O	58:11:409:HOH:O	2.20	0.48
37:88:66:ILE:HG22	37:88:67:ARG:H	1.76	0.48
42:D8:93:GLU:O	42:D8:94:LEU:HD23	2.13	0.48
44:F8:3:THR:CB	44:F8:6:ASP:HB2	2.43	0.48
44:F8:36:LYS:HA	44:F8:39:ILE:HD12	1.96	0.48
51:M8:9:LEU:HD12	51:M8:27:THR:N	2.27	0.48
1:1G:456:C:N4	1:1G:476:G:H1	2.04	0.48
1:1G:501:C:H2'	1:1G:502:G:H8	1.78	0.48
1:1G:980:C:H5'	1:1G:981:U:C5	2.49	0.48
7:22:18:TRP:H	7:22:18:TRP:HE3	1.61	0.48
1:13:344:A:O2'	1:13:346:G:N7	2.46	0.48
1:13:491:G:H2'	1:13:492:G:O4'	2.13	0.48
1:13:947:G:H2'	1:13:948:C:C6	2.48	0.48
1:13:1226:C:OP2	17:4I:103:THR:OG1	2.21	0.48
1:13:1260:C:H3'	1:13:1260:C:C6	2.47	0.48
1:13:1280:A:C3'	1:13:1281:U:H5'	2.43	0.48
5:14:270(I):G:H2'	5:14:270(J):G:H8	1.79	0.48
5:14:817:C:H2'	5:14:818:G:O4'	2.13	0.48
5:14:1338:G:N3	5:14:1393:A:H2	2.12	0.48
6:1E:16:HIS:N	6:1E:16:HIS:CD2	2.82	0.48
24:BI:63:ILE:HG22	24:BI:77:ALA:HB1	1.95	0.48
2:3K:63:G:N2	2:3K:64:A:H1'	2.29	0.48
5:1H:660:G:H21	36:78:12:ALA:HA	1.79	0.48
5:1H:1124:C:H2'	5:1H:1125:G:O4'	2.14	0.48
5:1H:1332:G:H5'	5:1H:1332:G:C8	2.49	0.48
5:1H:2061:G:P	58:1H:3638:HOH:O	2.71	0.48
5:1H:2818:G:OP2	38:98:42:LYS:NZ	2.44	0.48
27:1J:66:A:C2	27:1J:108:C:C4	3.01	0.48
28:11:155:LEU:HD13	28:11:155:LEU:N	2.29	0.48
31:41:64:THR:HG23	31:41:94:LEU:HD22	1.95	0.48
32:51:83:TYR:CB	32:51:134:SER:HA	2.42	0.48
33:61:7:GLU:O	33:61:9:LEU:HD13	2.13	0.48
41:C8:69:CYS:HB2	41:C8:74:LEU:CD1	2.43	0.48
46:H8:77:ASP:OD2	46:H8:80:ARG:NH1	2.46	0.48
47:I8:60:PHE:CD1	47:I8:60:PHE:N	2.80	0.48
53:O8:51:GLU:HG2	53:O8:52:VAL:H	1.77	0.48
1:1G:281:G:H8	1:1G:281:G:OP2	1.96	0.48
1:1G:1049:U:H4'	1:1G:1050:G:H5"	1.95	0.48
1:1G:1158:C:H2'	1:1G:1158:C:O2	2.14	0.48
7:22:179:ARG:O	7:22:206:GLU:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:452:A:O2'	1:13:453:A:O4'	2.29	0.48
1:13:901:A:C5	1:13:902:G:H1'	2.49	0.48
1:13:1206:G:C6	1:13:1207:G:C5	3.02	0.48
1:13:1273:G:H3'	1:13:1274:G:H8	1.78	0.48
3:2L:41:C:H2'	3:2L:42:C:C6	2.48	0.48
5:14:899:A:H2'	5:14:900:A:H8	1.79	0.48
5:14:1759:A:H4'	5:14:2715:C:O4'	2.14	0.48
5:14:1950:G:C2	5:14:1951:U:C5	3.02	0.48
5:14:2131:G:C5'	5:14:2158:A:H61	2.23	0.48
5:14:2520:C:H41	5:14:2542:A:N6	2.12	0.48
9:4E:28:PHE:O	9:4E:47:LYS:HA	2.13	0.48
5:1H:733:G:C8	58:1H:4185:HOH:O	2.64	0.48
5:1H:910:A:H62	37:88:12:GLN:HA	1.79	0.48
5:1H:1087:G:H2'	5:1H:1089:G:H4'	1.95	0.48
5:1H:1292:U:H2'	5:1H:1293:C:C6	2.49	0.48
5:1H:1859:A:N6	5:1H:1883:G:HO2'	2.12	0.48
5:1H:2604:U:C2'	5:1H:2605:U:H5'	2.44	0.48
30:31:178:PRO:HB3	30:31:198:ALA:HA	1.94	0.48
32:51:4:ILE:H	32:51:4:ILE:CD1	2.26	0.48
35:68:12:ASP:HB3	35:68:85:VAL:HG13	1.95	0.48
38:98:104:ARG:HD2	38:98:107:ASP:OD2	2.14	0.48
41:C8:6:THR:N	58:C8:203:HOH:O	2.40	0.48
41:C8:34:LYS:H	41:C8:34:LYS:HG2	1.39	0.48
42:D8:75:PHE:HD1	42:D8:82:ARG:HG3	1.78	0.48
46:H8:128:VAL:HG23	46:H8:161:VAL:HG21	1.96	0.48
1:1G:90:C:H2'	1:1G:91:C:C6	2.48	0.48
1:1G:588:G:H1	1:1G:651:C:N4	2.07	0.48
1:1G:1095:U:OP1	1:1G:1108:G:N2	2.47	0.48
1:1G:1203:C:H2'	1:1G:1204:A:C8	2.48	0.48
1:1G:1259:C:N4	1:1G:1260:C:O2	2.47	0.48
1:1G:1300:G:HO2'	1:1G:1301:U:P	2.37	0.48
1:13:66:G:O4'	1:13:173:U:C4	2.67	0.48
1:13:296:U:H2'	1:13:297:G:C8	2.49	0.48
1:13:618:C:H5"	1:13:619:U:H5"	1.96	0.48
1:13:807:A:H2'	1:13:808:C:C6	2.48	0.48
1:13:973:G:OP1	14:1I:57:LYS:HD3	2.14	0.48
1:13:1255:G:C2	1:13:1283:G:C2	3.02	0.48
5:14:270(Z):U:O3'	5:14:271(A):C:H6	1.97	0.48
5:14:342:G:H2'	5:14:343:C:C6	2.49	0.48
5:14:696:G:O2'	5:14:697:C:H5'	2.13	0.48
5:14:1742:C:H5'	5:14:1743:G:OP2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1786:A:H1'	5:14:1938:A:N6	2.29	0.48
13:8E:97:LYS:HB2	13:8E:102:LEU:HD12	1.95	0.48
14:1I:48:THR:OG1	14:1I:62:HIS:ND1	2.40	0.48
5:1H:128:C:H2'	5:1H:129:C:C6	2.47	0.48
5:1H:270(E):G:C6	5:1H:270(F):U:C4	3.02	0.48
5:1H:306:U:H2'	5:1H:307:G:O4'	2.14	0.48
5:1H:579:G:H2'	5:1H:580:C:C6	2.49	0.48
5:1H:1296:G:O2'	5:1H:1297:C:H5'	2.13	0.48
5:1H:1332:G:P	58:1H:4043:HOH:O	2.70	0.48
5:1H:1439:A:H2'	5:1H:1440:G:O4'	2.14	0.48
5:1H:2243:U:H2'	5:1H:2244:U:C6	2.48	0.48
5:1H:2556:C:H2'	5:1H:2557:G:O4'	2.13	0.48
5:1H:2845:G:O2'	5:1H:2846:G:H5'	2.14	0.48
5:1H:2883:A:H5'	5:1H:2884:U:H5'	1.96	0.48
31:41:49:ASP:OD1	31:41:51:ARG:HB3	2.13	0.48
35:68:4:PRO:O	35:68:5:GLN:HB2	2.13	0.48
1:1G:755:G:H2'	1:1G:756:C:H6	1.79	0.48
1:1G:858:G:OP2	1:1G:858:G:H8	1.96	0.48
1:1G:1004:A:C6	1:1G:1025:U:H1'	2.49	0.48
1:1G:1071:C:H2'	1:1G:1072:G:C8	2.49	0.48
1:1G:1105:A:H2'	1:1G:1106:G:H8	1.78	0.48
1:1G:1217:C:H2'	1:1G:1218:C:C6	2.49	0.48
1:1G:1286:A:C8	1:1G:1286:A:H3'	2.49	0.48
1:13:295:C:H2'	1:13:296:U:O4'	2.14	0.47
1:13:1074:G:H4'	6:1E:104:ASN:HB2	1.94	0.47
1:13:1117:G:H5"	13:8E:104:ARG:CZ	2.44	0.47
1:13:1233:G:H2'	1:13:1234:C:C6	2.48	0.47
4:4L:20:C:H2'	4:4L:21:C:C6	2.48	0.47
5:14:2078:C:C4	5:14:2079:U:C4	3.02	0.47
5:14:2285:C:C2'	5:14:2286:A:H5"	2.44	0.47
6:1E:237:ALA:O	6:1E:239:VAL:HG23	2.14	0.47
7:2E:29:TYR:OH	18:5I:54:PRO:HD2	2.14	0.47
8:3E:92:VAL:O	8:3E:96:LEU:HD22	2.14	0.47
17:4I:50:GLU:O	17:4I:54:VAL:HG23	2.14	0.47
17:4I:88:ARG:HD2	17:4I:98:VAL:HG22	1.96	0.47
5:1H:287:C:H2'	5:1H:288:C:C6	2.45	0.47
5:1H:300:A:N3	5:1H:319:C:H1'	2.29	0.47
5:1H:459:U:H5"	54:P8:40:TRP:CG	2.49	0.47
5:1H:525:U:H5"	5:1H:556:G:H5"	1.96	0.47
5:1H:588:U:C2	30:31:90:PHE:CE1	3.01	0.47
5:1H:710:G:H2'	5:1H:711:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1139:G:O2'	5:1H:1143:A:N1	2.42	0.47
5:1H:2689:U:H5"	5:1H:2713:A:H2	1.78	0.47
50:L8:54:VAL:O	50:L8:54:VAL:HG13	2.14	0.47
1:1G:256:U:H2'	1:1G:257:G:C8	2.49	0.47
1:1G:373:A:N3	1:1G:374:A:C8	2.82	0.47
1:1G:1203:C:H2'	1:1G:1204:A:H8	1.79	0.47
7:22:70:VAL:HG12	7:22:72:LYS:N	2.28	0.47
1:13:458:C:H2'	1:13:464:G:O4'	2.14	0.47
1:13:1234:C:H2'	1:13:1235:U:C6	2.49	0.47
2:3L:8:4SU:H5"	2:3L:49:C:OP2	2.14	0.47
6:1E:47:THR:O	6:1E:51:LEU:HB2	2.14	0.47
7:2E:19:GLU:HG3	7:2E:54:ARG:CZ	2.44	0.47
7:2E:72:LYS:HB3	7:2E:75:VAL:HG23	1.96	0.47
11:6E:101:LEU:HD23	11:6E:101:LEU:HA	1.70	0.47
16:3I:8:ASN:O	16:3I:11:VAL:HG23	2.14	0.47
5:1H:758:C:O2	5:1H:1981:A:H2	1.96	0.47
5:1H:996:A:O2'	41:C8:92:ARG:HG3	2.14	0.47
5:1H:1110:G:O2'	5:1H:1111:A:O5'	2.31	0.47
5:1H:2065:C:H2'	5:1H:2066:C:C6	2.49	0.47
5:1H:2685:G:OP2	40:B8:51:ARG:NH2	2.46	0.47
27:16:11:C:H5"	27:16:12:C:OP2	2.13	0.47
29:21:78:LEU:O	29:21:78:LEU:HD23	2.14	0.47
34:58:42:TRP:HA	34:58:48:MET:CE	2.44	0.47
40:B8:136:GLN:H	40:B8:136:GLN:HG2	1.48	0.47
42:D8:2:PHE:CE1	42:D8:42:GLY:HA3	2.49	0.47
1:1G:147:G:H1	1:1G:175:C:H42	1.61	0.47
1:1G:540:G:H2'	1:1G:541:G:C8	2.49	0.47
1:1G:616:G:C2	1:1G:617:G:C8	3.02	0.47
1:1G:1385:G:C4	1:1G:1386:G:C8	3.02	0.47
1:1G:1387:G:H2'	1:1G:1388:C:H6	1.79	0.47
6:12:178:ARG:HH11	6:12:178:ARG:HB2	1.79	0.47
1:13:101:A:H8	1:13:101:A:OP2	1.96	0.47
1:13:407:G:H2'	1:13:408:A:C8	2.49	0.47
1:13:431:A:H2'	1:13:432:A:O4'	2.14	0.47
1:13:814:A:N7	1:13:816:A:C4	2.82	0.47
1:13:977:A:C8	1:13:1223:C:N3	2.82	0.47
2:3L:19:G:C6	5:14:2112:G:H4'	2.49	0.47
2:3L:28:G:O6	2:3L:42:C:N4	2.46	0.47
2:3L:54:U:H6	2:3L:54:U:O5'	1.97	0.47
5:14:580:C:H2'	5:14:581:C:C6	2.50	0.47
5:14:1420:U:HO2'	5:14:1421:G:P	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1441:G:H2'	5:14:1442:G:C8	2.47	0.47
5:14:2130:U:O2'	5:14:2134:A:O4'	2.29	0.47
9:4E:106:PRO:O	9:4E:110:LEU:HG	2.14	0.47
11:6E:113:GLU:CG	11:6E:119:ARG:HG2	2.44	0.47
3:2K:47:7MG:H81	3:2K:48:U:C5	2.41	0.47
2:3K:58:A:O2'	2:3K:59:U:OP1	2.29	0.47
5:1H:57:C:H2'	5:1H:58:G:O4'	2.14	0.47
5:1H:399:G:OP2	58:1H:4155:HOH:O	2.20	0.47
5:1H:880:G:H22	5:1H:897:C:N4	2.13	0.47
5:1H:1111:A:H5'	32:51:3:ARG:HD3	1.95	0.47
5:1H:1164:G:H2'	5:1H:1165:U:H6	1.76	0.47
5:1H:1206:G:C6	5:1H:1207:C:C4	3.02	0.47
5:1H:1808:U:H2'	5:1H:1809:A:O4'	2.14	0.47
5:1H:2127:G:N1	5:1H:2162:G:H1'	2.28	0.47
27:16:119:A:H2'	27:16:119:A:N3	2.29	0.47
42:D8:21:ARG:HG2	42:D8:91:TYR:CD2	2.49	0.47
44:F8:12:VAL:HG13	44:F8:27:THR:O	2.15	0.47
1:1G:79:G:H1	1:1G:90:C:N4	2.12	0.47
1:1G:151:A:H2'	1:1G:152:A:O4'	2.15	0.47
1:1G:547:A:H5'	58:1G:1704:HOH:O	2.14	0.47
6:12:75:LYS:HA	6:12:78:GLN:CB	2.43	0.47
7:22:21:ARG:O	7:22:58:GLU:HA	2.15	0.47
1:13:928:G:C2	1:13:1390:U:O2	2.67	0.47
1:13:990:C:H2'	1:13:991:U:C6	2.50	0.47
1:13:1225:A:H2'	1:13:1225:A:N3	2.28	0.47
1:13:1256:A:H4'	1:13:1258:G:C4	2.48	0.47
1:13:1277:C:H1'	1:13:1282:C:O2	2.14	0.47
5:14:820:A:N3	5:14:943:U:H4'	2.29	0.47
5:14:1919:A:O3'	1:1G:1517:G:H1'	2.14	0.47
5:14:2250:G:O2'	5:14:2496:C:OP1	2.19	0.47
5:14:2291:U:H2'	5:14:2292:C:C6	2.50	0.47
6:1E:166:ASP:C	6:1E:168:THR:H	2.16	0.47
15:2I:62:GLN:HB2	15:2I:93:GLN:HE21	1.80	0.47
24:BI:26:ASN:HB2	24:BI:71:THR:CG2	2.44	0.47
5:1H:6:A:O2'	34:58:129:PRO:HB3	2.14	0.47
5:1H:197:A:N6	5:1H:2430:A:H2'	2.29	0.47
5:1H:731:C:P	58:1H:3701:HOH:O	2.67	0.47
5:1H:742:G:H2'	5:1H:743:G:C8	2.50	0.47
5:1H:858:U:O2	5:1H:2268:A:H2'	2.13	0.47
5:1H:1055:G:O6	5:1H:1056:G:N1	2.47	0.47
5:1H:2163:C:H2'	5:1H:2164:C:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2428:G:N3	36:78:61:ARG:NH1	2.62	0.47
31:41:36:LYS:HG2	31:41:38:VAL:HG23	1.96	0.47
31:41:67:LYS:HG2	51:M8:5:ILE:HG22	1.96	0.47
35:68:63:VAL:HG23	35:68:64:ARG:HG3	1.96	0.47
47:I8:50:ASN:ND2	47:I8:83:PRO:HD3	2.29	0.47
51:M8:12:ALA:O	51:M8:24:THR:HG21	2.14	0.47
1:1G:303:A:H2'	1:1G:304:U:O4'	2.14	0.47
1:1G:778:G:H2'	1:1G:779:C:O4'	2.14	0.47
1:1G:1218:C:H2'	1:1G:1219:U:C6	2.49	0.47
6:12:149:LEU:HD23	6:12:152:PHE:HB3	1.96	0.47
1:13:279:A:H4'	1:13:280:C:H5"	1.95	0.47
1:13:703:G:H4'	1:13:704:A:O5'	2.15	0.47
1:13:1379:G:N7	11:6E:2:ALA:HB3	2.29	0.47
1:13:1409:C:H2'	1:13:1410:G:H8	1.79	0.47
2:1L:8:4SU:H6	2:1L:13:C:N4	2.30	0.47
5:14:1024:G:H3'	5:14:1025:G:H5"	1.96	0.47
5:14:1033:U:H3'	5:14:1033:U:C6	2.49	0.47
5:14:1860:G:H1	5:14:1882:C:H42	1.62	0.47
5:14:2377:A:H2'	5:14:2378:A:C8	2.49	0.47
5:14:2527:C:N4	5:14:2528:U:C4	2.82	0.47
5:14:2544:G:H1'	5:14:2646:C:H4'	1.97	0.47
7:2E:3:ASN:O	7:2E:4:LYS:HG2	2.14	0.47
11:6E:113:GLU:HB2	11:6E:118:VAL:HG13	1.96	0.47
16:3I:66:VAL:HG22	16:3I:67:THR:N	2.29	0.47
19:6I:25:THR:HG21	19:6I:70:LEU:HB2	1.95	0.47
24:BI:53:LEU:HA	24:BI:56:MET:HB3	1.97	0.47
5:1H:363(B):G:H2'	5:1H:363(C):G:C8	2.47	0.47
5:1H:1639:U:H4'	5:1H:2699:C:H4'	1.96	0.47
34:58:73:THR:HA	34:58:83:LYS:O	2.14	0.47
35:68:119:PRO:HB2	40:B8:68:TYR:CE2	2.49	0.47
41:C8:78:THR:O	41:C8:81:HIS:N	2.46	0.47
42:D8:1:MET:HA	42:D8:43:GLU:HB3	1.95	0.47
55:Q8:57:ARG:HD3	55:Q8:57:ARG:H	1.76	0.47
1:1G:129(A):G:C2	1:1G:191(A):G:C8	3.02	0.47
1:1G:1305:G:H22	1:1G:1331:G:C2'	2.13	0.47
1:13:236:G:H5"	21:8I:42:TYR:OH	2.14	0.47
1:13:592:G:C2	1:13:593:G:C8	3.02	0.47
1:13:656:C:O3'	19:6I:62:GLN:NE2	2.48	0.47
1:13:963:G:N2	1:13:972:C:N3	2.43	0.47
1:13:1375:A:P	11:6E:28:ASN:HD22	2.36	0.47
5:14:818:G:H4'	5:14:838:C:O3'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1885:A:H3'	5:14:1886:C:H6	1.79	0.47
5:14:2441:C:O2'	5:14:2442:C:H5'	2.15	0.47
5:14:2747:G:O6	5:14:2755:C:H5"	2.15	0.47
6:1E:171:ALA:O	6:1E:175:ARG:HB2	2.14	0.47
14:1I:16:LEU:HD23	14:1I:94:VAL:HG13	1.96	0.47
24:BI:73:HIS:HB3	24:BI:74:LYS:HG3	1.96	0.47
5:1H:533:G:OP1	41:C8:25:TRP:N	2.38	0.47
5:1H:2391:G:O6	5:1H:2425:A:H8	1.98	0.47
5:1H:2881:C:C2	5:1H:2882:A:C8	3.02	0.47
31:41:112:PRO:HB3	51:M8:37:SER:N	2.28	0.47
33:61:46:ALA:O	33:61:50:ARG:HD3	2.15	0.47
55:Q8:8:LYS:HD2	55:Q8:8:LYS:N	2.30	0.47
1:1G:1010:G:C2	1:1G:1020:U:H1'	2.49	0.47
1:1G:1051:C:H2'	1:1G:1052:U:C6	2.49	0.47
1:1G:1097:C:H1'	1:1G:1169:A:C2	2.49	0.47
1:1G:1317:C:H5"	1:1G:1318:A:OP2	2.15	0.47
6:12:101:MET:O	6:12:105:PHE:HB2	2.15	0.47
7:22:32:LEU:HD22	7:22:59:ARG:CZ	2.44	0.47
7:22:91:LEU:O	7:22:95:THR:OG1	2.24	0.47
1:13:167:G:H2'	1:13:168:G:C8	2.50	0.47
1:13:652:U:C4	1:13:752:G:N3	2.82	0.47
1:13:826:C:H4'	12:7E:12:ARG:HG2	1.97	0.47
1:13:1151:A:O2'	1:13:1152:A:O4'	2.33	0.47
1:13:1489:G:H2'	1:13:1490:C:O4'	2.14	0.47
5:14:271(B):G:N7	5:14:421:U:H2'	2.30	0.47
5:14:873:G:N2	5:14:905:U:C2	2.83	0.47
5:14:973:A:O4'	5:14:1188:U:C6	2.68	0.47
5:14:1159:U:O2'	5:14:1160:G:H5'	2.15	0.47
5:14:1321:A:H2'	5:14:1322:A:O4'	2.15	0.47
5:14:1423:G:H2'	5:14:1424:G:H8	1.80	0.47
5:14:1830:C:O5'	5:14:1830:C:H6	1.98	0.47
5:14:2062:A:HO2'	5:14:2063:C:P	2.38	0.47
5:14:2241:A:H2'	5:14:2242:G:C8	2.50	0.47
7:2E:155:GLY:O	7:2E:157:ILE:HG12	2.14	0.47
8:3E:96:LEU:HD12	8:3E:139:ARG:HH11	1.80	0.47
9:4E:151:LEU:HD11	12:7E:77:GLU:OE2	2.15	0.47
10:5E:76:ALA:O	10:5E:80:ARG:HG3	2.15	0.47
11:6E:20:ASP:HB3	11:6E:23:VAL:HG23	1.96	0.47
17:4I:27:LYS:HA	17:4I:31:LYS:HZ2	1.77	0.47
17:4I:27:LYS:HD3	17:4I:31:LYS:NZ	2.29	0.47
19:6I:82:ILE:O	19:6I:86:GLY:N	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:8I:29:HIS:N	21:8I:34:LYS:O	2.46	0.47
23:AI:41:VAL:H	23:AI:44:MET:HG3	1.79	0.47
25:1F:10:ARG:HA	25:1F:13:ILE:HD12	1.96	0.47
26:1K:42:C:H2'	26:1K:43:C:C6	2.49	0.47
3:2K:45:A:H2'	3:2K:46:G:O4'	2.13	0.47
5:1H:29:U:H2'	5:1H:30:G:C8	2.49	0.47
5:1H:442:G:C4	5:1H:444:C:C5	3.02	0.47
5:1H:780:G:N2	5:1H:783:A:H62	2.03	0.47
5:1H:850:C:H5"	50:L8:18:ASP:HB2	1.97	0.47
5:1H:944:G:H5"	5:1H:945:A:H5'	1.96	0.47
5:1H:1107:G:H2'	5:1H:1108:U:H6	1.80	0.47
5:1H:1298:C:C5'	5:1H:1299:G:OP2	2.63	0.47
5:1H:1317:A:H2'	5:1H:1318:C:H6	1.79	0.47
5:1H:1547:C:H2'	5:1H:1548:C:C6	2.50	0.47
5:1H:1677:A:H2'	5:1H:1678:G:C8	2.50	0.47
5:1H:2123:G:H22	5:1H:2175:C:N4	2.13	0.47
5:1H:2335:A:C8	5:1H:2337:G:C5	3.03	0.47
27:1J:0:A:H2'	27:1J:1:U:C6	2.49	0.47
27:1J:40:U:H1'	27:1J:46:A:N1	2.30	0.47
27:16:80:U:O2'	27:16:81:G:H5'	2.15	0.47
29:21:117:MET:O	29:21:117:MET:HG2	2.14	0.47
29:21:144:ARG:HB3	29:21:145:LYS:H	1.57	0.47
30:31:12:LEU:O	30:31:127:GLU:N	2.48	0.47
30:31:198:ALA:O	30:31:201:VAL:N	2.46	0.47
31:41:17:PRO:HA	31:41:20:ILE:HD12	1.97	0.47
33:61:110:ASP:HB2	33:61:112:LYS:HG2	1.96	0.47
34:58:57:ALA:C	34:58:59:LYS:H	2.17	0.47
35:68:86:ILE:HG22	35:68:94:ARG:HB2	1.97	0.47
36:78:18:ARG:C	36:78:19:VAL:HG22	2.34	0.47
40:B8:20:PRO:HG2	40:B8:86:ILE:O	2.15	0.47
45:G8:34:LYS:O	45:G8:34:LYS:HG2	2.15	0.47
48:J8:58:ILE:CG2	48:J8:87:PRO:HG3	2.44	0.47
55:Q8:44:LYS:HG3	55:Q8:45:GLY:N	2.29	0.47
1:1G:322:C:H5	1:1G:328:C:H5	1.61	0.47
1:1G:359:U:H2'	1:1G:360:A:H8	1.76	0.47
1:1G:1359:C:O2'	1:1G:1361:G:N7	2.48	0.47
6:12:75:LYS:HD2	6:12:75:LYS:O	2.14	0.47
6:12:182:ILE:H	6:12:182:ILE:HD12	1.80	0.47
8:32:30:LYS:CB	8:32:35:ARG:HD2	2.44	0.47
1:13:266:G:H5"	1:13:267:C:C5	2.50	0.47
1:13:535:A:H5"	58:13:1877:HOH:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:872:A:C8	1:13:874:G:C8	3.03	0.47
1:13:1079:G:C6	1:13:1080:A:N6	2.83	0.47
3:2L:26:C:H2'	3:2L:27:G:O4'	2.14	0.47
5:14:68:G:H2'	5:14:69:C:C6	2.50	0.47
5:14:68:G:H2'	5:14:69:C:H6	1.80	0.47
5:14:139:G:N2	5:14:141:A:N1	2.62	0.47
5:14:273(F):C:H3'	5:14:274:G:C5'	2.45	0.47
5:14:1056:G:H1'	5:14:1103:A:H61	1.79	0.47
5:14:1344:G:H4'	5:14:1384:A:C5	2.50	0.47
5:14:2260:C:C2'	5:14:2261:C:H5'	2.45	0.47
5:14:2575:C:H2'	5:14:2578:G:O6	2.14	0.47
6:1E:17:PHE:HB3	6:1E:44:LEU:HD21	1.96	0.47
6:1E:98:LEU:HD12	6:1E:108:ILE:HD11	1.96	0.47
9:4E:81:GLU:HB3	9:4E:90:VAL:HG23	1.97	0.47
20:7I:53:VAL:HG13	20:7I:79:VAL:HG22	1.97	0.47
5:1H:95:G:O2'	49:K8:48:HIS:HB3	2.14	0.47
5:1H:106:C:H2'	5:1H:107:C:H6	1.80	0.47
5:1H:194:G:H2'	5:1H:195:A:O4'	2.14	0.47
5:1H:558:G:P	34:58:111:PRO:HD2	2.55	0.47
5:1H:598:G:H2'	5:1H:599:G:O4'	2.15	0.47
5:1H:972:G:OP2	5:1H:973:A:O2'	2.25	0.47
5:1H:1063:G:N2	5:1H:1076:C:O2	2.48	0.47
5:1H:2111:C:H5	5:1H:2147:G:C6	2.33	0.47
27:1J:2:C:H2'	27:1J:3:C:C6	2.49	0.47
27:1J:13:A:H5"	27:1J:15:A:N6	2.29	0.47
27:16:42:C:O2'	31:41:67:LYS:O	2.23	0.47
36:78:57:THR:HB	36:78:59:LEU:H	1.79	0.47
42:D8:53:GLU:HG2	42:D8:54:GLY:N	2.30	0.47
48:J8:25:LYS:HE2	48:J8:25:LYS:HB3	1.73	0.47
49:K8:31:GLU:HB3	49:K8:53:LEU:HD11	1.97	0.47
1:1G:393:A:O2'	1:1G:394:G:H5'	2.15	0.47
1:1G:947:G:H2'	1:1G:948:C:O4'	2.14	0.47
1:1G:998:G:H2'	1:1G:998(A):C:C6	2.50	0.47
1:1G:1428:A:H2'	1:1G:1429:C:C6	2.49	0.47
7:22:138:VAL:HG23	7:22:151:VAL:CG2	2.41	0.47
1:13:920:U:H2'	1:13:921:U:C6	2.50	0.47
2:1L:30:G:H2'	2:1L:31:A:H8	1.80	0.47
2:3L:13:C:H2'	2:3L:14:A:H8	1.80	0.47
4:4L:18:G:O3'	4:4L:19:U:H6	1.98	0.47
5:14:236:C:H2'	5:14:237:C:H6	1.80	0.47
5:14:353:G:H2'	5:14:354:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:868:U:H2'	5:14:869:G:C8	2.50	0.47
5:14:869:G:C2	5:14:870:A:C8	3.03	0.47
5:14:921:G:C6	5:14:922:U:C4	3.02	0.47
5:14:1071:G:H1'	5:14:1089:G:H2'	1.97	0.47
5:14:1198:U:H2'	5:14:1199:U:C6	2.49	0.47
6:1E:35:GLU:OE1	6:1E:38:GLY:HA2	2.15	0.47
6:1E:162:ILE:O	6:1E:185:ILE:HG13	2.15	0.47
10:5E:97:PHE:N	22:9I:30:ASP:OD1	2.46	0.47
15:2I:46:GLY:HA2	15:2I:50:TYR:O	2.15	0.47
17:4I:94:ARG:NH1	5:1H:888:C:OP1	2.47	0.47
20:7I:28:ARG:HG3	20:7I:29:ASP:OD1	2.15	0.47
5:1H:524:U:H2'	5:1H:525:U:C6	2.50	0.47
5:1H:910:A:C5	37:88:13:GLN:HG3	2.50	0.47
5:1H:1299:G:H3'	5:1H:1639:U:O4	2.15	0.47
5:1H:1337:G:H2'	5:1H:1338:G:H8	1.80	0.47
5:1H:1417:C:P	58:1H:4133:HOH:O	2.72	0.47
5:1H:1575:C:H2'	5:1H:1576:U:C6	2.49	0.47
5:1H:2349:G:OP1	53:O8:42:TRP:CH2	2.68	0.47
5:1H:2863:C:O2'	5:1H:2864:G:H5'	2.15	0.47
27:1J:118:G:O6	27:1J:119:A:N6	2.48	0.47
36:78:115:LEU:HA	36:78:134:ALA:CB	2.38	0.47
40:B8:87:ASP:OD1	40:B8:87:ASP:N	2.47	0.47
40:B8:91:ARG:O	40:B8:116:ALA:HA	2.15	0.47
40:B8:105:LEU:C	40:B8:107:ASP:H	2.18	0.47
41:C8:62:ILE:HG23	41:C8:76:TYR:CE1	2.50	0.47
45:G8:89:PHE:O	45:G8:90:LEU:HG	2.15	0.47
50:L8:31:LEU:HB3	50:L8:32:GLN:OE1	2.15	0.47
53:O8:17:LYS:O	53:O8:19:ARG:N	2.47	0.47
1:1G:731:G:H5'	1:1G:766:A:H4'	1.96	0.47
1:13:232:G:H2'	1:13:233:C:H6	1.79	0.47
1:13:1002:G:H2'	1:13:1003:G:C8	2.50	0.47
1:13:1499:A:C8	1:13:1499:A:OP2	2.68	0.47
2:1L:39:PSU:H2'	2:1L:40:C:H6	1.79	0.47
5:14:244:A:C2	5:14:255:A:C4	3.03	0.47
5:14:739:G:OP1	58:14:3825:HOH:O	2.20	0.47
5:14:816:C:N4	5:14:1192:G:C6	2.83	0.47
5:14:1071:G:O2'	5:14:1089:G:H3'	2.15	0.47
5:14:2468:G:H3'	5:14:2476:A:N1	2.30	0.47
14:1I:57:LYS:CD	14:1I:60:ARG:HH12	2.27	0.47
23:AI:32:LYS:HE3	23:AI:57:HIS:CD2	2.50	0.47
2:3K:19:G:C6	5:1H:2112:G:H1'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:438:G:H2'	5:1H:439:G:H8	1.80	0.47
5:1H:465:G:O5'	5:1H:465:G:H8	1.98	0.47
5:1H:962:G:H2'	5:1H:963:U:C6	2.50	0.47
5:1H:1077:A:H3'	5:1H:1078:U:C5'	2.45	0.47
28:11:70:TRP:CH2	28:11:150:LYS:HA	2.50	0.47
29:21:13:ARG:HG2	29:21:13:ARG:HH11	1.79	0.47
33:61:2:LYS:HA	33:61:20:ASP:HB2	1.96	0.47
33:61:134:PRO:HA	33:61:135:GLU:HG3	1.96	0.47
34:58:12:ARG:HB2	34:58:50:ASP:OD1	2.14	0.47
37:88:35:VAL:HG13	37:88:130:LYS:HB3	1.96	0.47
38:98:103:ARG:NH1	38:98:110:PRO:HD3	2.30	0.47
43:E8:40:ASN:O	43:E8:41:LYS:HG2	2.14	0.47
46:H8:14:LYS:HA	46:H8:15:PRO:HD2	1.73	0.47
46:H8:165:VAL:HB	46:H8:166:SER:CA	2.44	0.47
1:1G:328:C:H4'	1:1G:329:A:H5"	1.97	0.47
1:1G:828:A:H5"	1:1G:859:A:N1	2.30	0.47
1:1G:1171:G:H2'	1:1G:1172:C:H6	1.78	0.47
6:12:54:THR:HG23	6:12:199:TYR:HB3	1.96	0.47
7:22:150:LYS:HB3	7:22:201:TYR:HB2	1.96	0.47
8:32:8:VAL:HA	8:32:11:LEU:HD12	1.97	0.47
1:13:232:G:H2'	1:13:233:C:C6	2.50	0.46
1:13:603:U:H2'	1:13:604:G:C8	2.49	0.46
1:13:669:U:C2	1:13:670:G:C8	3.02	0.46
1:13:1024:G:H4'	1:13:1024:G:OP1	2.14	0.46
2:1L:38:A:H2'	2:1L:39:PSU:C6	2.50	0.46
2:3L:52:G:H1	2:3L:62:C:H42	1.62	0.46
2:3L:53:G:N2	2:3L:61:C:O2	2.48	0.46
5:14:176:G:C2'	5:14:177:G:H5'	2.45	0.46
5:14:642:G:H3'	5:14:642:G:C8	2.50	0.46
5:14:1403:C:OP1	5:14:1522:G:N2	2.34	0.46
5:14:1848:A:C4	5:14:1849:G:C8	3.03	0.46
5:14:1970:A:P	58:14:3592:HOH:O	2.73	0.46
5:14:2130:U:H2'	5:14:2158:A:C6	2.50	0.46
6:1E:36:ARG:HA	6:1E:36:ARG:HD2	1.75	0.46
9:4E:41:VAL:HG13	9:4E:113:ALA:HB2	1.97	0.46
12:7E:23:SER:OG	12:7E:60:ARG:HG2	2.15	0.46
17:4I:15:VAL:HG23	17:4I:43:THR:O	2.15	0.46
5:1H:99:U:C6	5:1H:102:G:C2	3.02	0.46
5:1H:616:A:C4	30:31:180:GLY:HA2	2.50	0.46
5:1H:634:C:H2'	5:1H:635:C:H6	1.77	0.46
5:1H:831:G:H8	5:1H:831:G:O5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1045:A:H1'	5:1H:1047:G:N3	2.30	0.46
5:1H:1204:A:H61	5:1H:1240:U:H2'	1.79	0.46
5:1H:1222:C:H2'	5:1H:1223:C:H6	1.80	0.46
5:1H:1525:G:C4	5:1H:1526:G:C8	3.03	0.46
5:1H:1784:A:H5"	58:1H:4063:HOH:O	2.15	0.46
5:1H:2128:C:H2'	5:1H:2129:C:C6	2.49	0.46
5:1H:2787:C:H1'	29:21:62:PRO:HG3	1.96	0.46
30:31:81:PRO:HB3	30:31:89:VAL:HG23	1.97	0.46
36:78:98:GLU:O	36:78:101:VAL:HG13	2.14	0.46
38:98:13:HIS:ND1	38:98:15:SER:HB3	2.30	0.46
45:G8:85:VAL:HG23	45:G8:96:ILE:O	2.15	0.46
46:H8:116:VAL:H	46:H8:174:VAL:HG13	1.80	0.46
47:I8:51:VAL:N	47:I8:62:LEU:HD12	2.30	0.46
55:Q8:27:THR:HG21	55:Q8:39:LYS:NZ	2.31	0.46
1:1G:757:U:O2'	1:1G:879:C:H1'	2.15	0.46
1:1G:962:C:H42	1:1G:973:G:H1	1.63	0.46
1:1G:1129:C:H5	1:1G:1141:C:H42	1.63	0.46
7:22:40:ARG:HA	7:22:43:LEU:HB2	1.96	0.46
7:22:61:ALA:O	7:22:63:ASN:N	2.47	0.46
1:13:757:U:H2'	1:13:758:G:O4'	2.16	0.46
1:13:1016:A:H2'	1:13:1017:G:O4'	2.15	0.46
1:13:1122:U:C4	1:13:1123:A:N7	2.83	0.46
1:13:1376:U:H2'	1:13:1377:A:C8	2.49	0.46
5:14:78:A:H2'	5:14:79:G:C8	2.50	0.46
5:14:588:U:O4	5:14:670:A:H1'	2.15	0.46
5:14:590:A:H2'	5:14:591:C:C6	2.49	0.46
5:14:2740:A:H2'	5:14:2741:A:C8	2.51	0.46
5:14:2748:A:H2'	5:14:2749:A:C8	2.50	0.46
6:1E:28:PHE:CD1	6:1E:194:PRO:HD3	2.49	0.46
6:1E:77:ALA:HB1	6:1E:165:VAL:HG11	1.98	0.46
7:2E:152:ILE:HB	7:2E:199:LYS:HB2	1.97	0.46
14:1I:49:VAL:CG2	18:5I:41:ARG:HB2	2.46	0.46
2:3K:18:G:H21	2:3K:58:A:N6	2.14	0.46
5:1H:320:A:H2'	30:31:136:THR:HG21	1.96	0.46
5:1H:1413:G:N2	5:1H:1589:C:O2	2.44	0.46
5:1H:1464:C:HO2'	5:1H:1528:A:H8	1.62	0.46
5:1H:1575:C:H2'	5:1H:1576:U:H6	1.80	0.46
5:1H:1614:A:N6	43:E8:88:ARG:H	2.12	0.46
5:1H:1644:C:H2'	5:1H:1645:G:H5'	1.98	0.46
5:1H:2126:A:H2'	5:1H:2126:A:N3	2.31	0.46
5:1H:2239:G:H5'	28:11:251:GLY:HA3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2427:C:H5”	5:1H:2428:G:OP1	2.14	0.46
30:31:155:LEU:HD13	30:31:174:VAL:HG23	1.98	0.46
39:A8:83:LYS:O	39:A8:109:GLY:HA2	2.14	0.46
50:L8:43:ILE:O	50:L8:47:VAL:HG23	2.15	0.46
1:1G:108:G:OP1	1:1G:326:G:N2	2.41	0.46
1:1G:424:G:H2’	1:1G:425:G:C8	2.50	0.46
1:1G:637:G:H2’	1:1G:638:G:H8	1.80	0.46
1:1G:1082:G:H8	1:1G:1082:G:OP2	1.97	0.46
6:12:128:GLU:O	6:12:130:ARG:HG2	2.16	0.46
6:12:136:VAL:O	6:12:139:LYS:HB3	2.16	0.46
7:22:84:ILE:HG12	7:22:88:ARG:NH2	2.31	0.46
8:32:30:LYS:HB2	8:32:35:ARG:HD2	1.96	0.46
1:13:109:A:C6	1:13:326:G:C6	3.03	0.46
1:13:174:C:H5’	1:13:174:C:H6	1.80	0.46
1:13:358:U:H2’	1:13:359:U:O4’	2.16	0.46
1:13:1178:G:N2	1:13:1181:G:H8	2.13	0.46
1:13:1240:U:O2’	11:6E:38:LEU:HG	2.15	0.46
1:13:1448:C:H42	1:13:1455:G:H1	1.63	0.46
3:2L:63:C:H2’	3:2L:64:G:C8	2.50	0.46
3:2L:73:A:C6	3:2L:74:A:C6	3.02	0.46
5:14:2231:C:H2’	5:14:2232:U:O4’	2.15	0.46
5:14:2647:U:H2’	5:14:2648:C:C6	2.50	0.46
12:7E:51:VAL:HG23	12:7E:52:ASP:N	2.31	0.46
13:8E:105:ASP:OD1	13:8E:107:ARG:HD3	2.15	0.46
16:3I:91:LYS:HG3	16:3I:91:LYS:O	2.14	0.46
22:9I:37:VAL:O	22:9I:41:LYS:HB3	2.15	0.46
26:1K:37:MIA:H8	26:1K:37:MIA:O5’	2.15	0.46
2:3K:25:C:N4	2:3K:26:A:C8	2.83	0.46
5:1H:821:A:H5”	5:1H:822:U:H6	1.80	0.46
5:1H:890:A:H3’	5:1H:892:G:H8	1.79	0.46
5:1H:1280:G:N2	5:1H:1291:C:C2	2.83	0.46
5:1H:1405:U:H2’	5:1H:1406:U:H6	1.74	0.46
5:1H:2051:A:H4’	29:21:141:ILE:HG12	1.97	0.46
5:1H:2291:U:H2’	5:1H:2292:C:C6	2.50	0.46
27:1J:21:G:H2’	27:1J:22:U:O4’	2.14	0.46
29:21:117:MET:HA	29:21:122:PHE:N	2.29	0.46
30:31:168:ARG:HG2	30:31:175:THR:HG21	1.98	0.46
45:G8:28:LYS:CE	45:G8:40:GLU:HG2	2.44	0.46
55:Q8:38:GLY:HA2	55:Q8:39:LYS:O	2.16	0.46
1:1G:1055:A:N6	1:1G:1206:G:C5	2.83	0.46
1:13:447:G:H8	1:13:447:G:O5’	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:917:G:H2'	1:13:918:A:H8	1.77	0.46
1:13:960:U:C2	1:13:1225:A:N7	2.84	0.46
2:3L:9:A:O2'	2:3L:10:G:N7	2.33	0.46
5:14:57:C:H2'	5:14:58:G:O4'	2.15	0.46
5:14:530:G:O6	5:14:2023:G:OP1	2.34	0.46
5:14:592:G:H1	5:14:665:C:H42	1.64	0.46
5:14:1001:A:H2'	5:14:1002:G:O4'	2.15	0.46
5:14:1059:G:C8	5:14:1060:U:H2'	2.51	0.46
5:14:1936:A:C8	5:14:1940:U:O2	2.68	0.46
5:14:1945:G:H2'	5:14:1946:U:H6	1.81	0.46
5:14:2191:G:HO2'	5:14:2192:G:P	2.36	0.46
5:14:2540:C:H2'	5:14:2541:A:O4'	2.16	0.46
9:4E:68:GLU:O	9:4E:68:GLU:HG3	2.15	0.46
12:7E:53:VAL:O	12:7E:56:LYS:HG3	2.16	0.46
14:1I:81:THR:O	14:1I:85:LEU:HG	2.16	0.46
16:3I:47:LYS:HA	16:3I:49:ASN:N	2.26	0.46
26:1K:29:G:H2'	26:1K:30:G:H8	1.81	0.46
5:1H:240:G:H8	5:1H:240:G:O5'	1.99	0.46
5:1H:580:C:H2'	5:1H:581:C:C6	2.50	0.46
5:1H:880:G:H1	5:1H:897:C:H42	1.64	0.46
5:1H:899:A:H8	5:1H:899:A:O5'	1.98	0.46
5:1H:1387:C:O2	5:1H:1388:G:C8	2.69	0.46
5:1H:1746:G:H2'	5:1H:1747:G:H8	1.80	0.46
5:1H:1813:G:H1'	28:11:50:THR:OG1	2.16	0.46
5:1H:2262:U:H4'	5:1H:2328:A:C2	2.50	0.46
5:1H:2404:C:O3'	36:78:77:ARG:NH2	2.47	0.46
5:1H:2475:C:H4'	5:1H:2476:A:OP1	2.16	0.46
5:1H:2698:U:H2'	5:1H:2699:C:H6	1.79	0.46
5:1H:2721:A:H2'	5:1H:2722:G:O4'	2.16	0.46
5:1H:2795:G:H3'	5:1H:2797:U:H5"	1.98	0.46
27:16:7:G:O5'	39:A8:29:PHE:CE2	2.68	0.46
27:16:31:C:H2'	27:16:32:C:C6	2.50	0.46
30:31:41:LEU:HA	30:31:44:ARG:HD3	1.97	0.46
35:68:64:ARG:O	35:68:82:ASN:HA	2.16	0.46
36:78:59:LEU:O	55:Q8:13:ARG:HD2	2.16	0.46
36:78:88:LEU:HD12	36:78:95:VAL:HG11	1.98	0.46
38:98:12:ARG:HH11	38:98:12:ARG:CG	2.27	0.46
43:E8:79:GLY:N	43:E8:100:THR:O	2.37	0.46
45:G8:76:CYS:C	45:G8:78:ALA:H	2.17	0.46
1:1G:577:G:H2'	1:1G:578:C:H6	1.81	0.46
1:1G:655:A:H61	1:1G:751:U:H3	1.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:770:C:O2'	1:1G:771:G:H5'	2.16	0.46
1:1G:861:G:H2'	1:1G:862:C:H6	1.80	0.46
1:1G:1190:G:H3'	7:22:3:ASN:OD1	2.16	0.46
1:1G:1236:A:H2'	1:1G:1237:C:C6	2.51	0.46
6:12:70:PHE:O	6:12:93:VAL:N	2.39	0.46
6:12:73:THR:HG21	6:12:97:TRP:N	2.30	0.46
1:13:276:G:O3'	21:8I:68:ARG:NH1	2.48	0.46
1:13:411:A:C5	1:13:413:G:H1'	2.51	0.46
1:13:538:G:OP2	16:3I:115:LYS:HG3	2.16	0.46
1:13:592:G:N3	1:13:593:G:C8	2.84	0.46
1:13:746:A:H2'	1:13:747:C:H6	1.80	0.46
1:13:1169:A:N6	1:13:1170:A:N1	2.63	0.46
1:13:1336:C:H1'	1:13:1337:G:C6	2.51	0.46
5:14:171:G:H2'	5:14:172:C:C6	2.51	0.46
5:14:690:G:H2'	5:14:691:C:C6	2.51	0.46
5:14:830:G:H4'	5:14:831:G:OP2	2.15	0.46
5:14:1260:G:C6	5:14:1261:C:C4	3.03	0.46
5:14:1716:U:H2'	5:14:1717:G:H8	1.80	0.46
15:2I:112:THR:HA	15:2I:113:PRO:HD3	1.73	0.46
5:1H:381:G:C4	5:1H:394:A:C2	3.04	0.46
5:1H:757:U:H2'	5:1H:758:C:O4'	2.15	0.46
5:1H:937:U:H2'	5:1H:938:G:O4'	2.15	0.46
5:1H:1756:G:H4'	5:1H:1758:G:O4'	2.16	0.46
5:1H:1965:C:H3'	5:1H:1966:A:H2'	1.97	0.46
5:1H:2249:U:O4	58:1H:3745:HOH:O	2.16	0.46
33:61:110:ASP:OD1	33:61:110:ASP:N	2.39	0.46
38:98:34:ILE:HG22	38:98:114:VAL:HB	1.98	0.46
38:98:109:ALA:HA	38:98:110:PRO:HD2	1.74	0.46
41:C8:79:PHE:HE2	41:C8:106:PHE:CZ	2.33	0.46
42:D8:46:VAL:C	42:D8:47:VAL:HG12	2.36	0.46
43:E8:57:ASN:HA	43:E8:61:ASN:HD22	1.81	0.46
46:H8:76:LEU:H	46:H8:76:LEU:CD2	2.14	0.46
1:1G:617:G:H1	1:1G:623:C:H42	1.62	0.46
1:1G:637:G:H2'	1:1G:638:G:C8	2.51	0.46
6:12:16:HIS:HA	6:12:209:ARG:HG2	1.98	0.46
7:22:70:VAL:O	7:22:106:VAL:HG23	2.14	0.46
7:22:113:ALA:HB3	7:22:114:PRO:HD3	1.98	0.46
8:32:15:GLU:OE1	8:32:59:ARG:NH2	2.46	0.46
8:32:158:ILE:H	8:32:158:ILE:HG12	1.48	0.46
1:13:554:C:H2'	1:13:555:C:C6	2.51	0.46
1:13:739:C:O2	19:6I:42:HIS:HE1	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1179:A:O3'	13:8E:103:THR:HG23	2.16	0.46
1:13:1286:A:OP1	25:1F:26:LYS:HG2	2.15	0.46
5:14:1287:A:C5	5:14:1288:U:C4	3.04	0.46
5:14:1439:A:H2'	5:14:1440:G:O4'	2.16	0.46
5:14:2488:A:H8	5:14:2488:A:O5'	1.99	0.46
5:14:2845:G:N2	5:14:2871:C:O2	2.38	0.46
9:4E:131:ILE:HD13	9:4E:131:ILE:HA	1.82	0.46
11:6E:65:ALA:HB2	11:6E:128:ALA:HB2	1.96	0.46
11:6E:133:GLY:HA2	11:6E:136:LYS:HG3	1.98	0.46
19:6I:30:ALA:HB2	19:6I:85:LEU:HD11	1.97	0.46
5:1H:249:C:O2'	36:78:64:LYS:HE3	2.16	0.46
5:1H:249:C:O2	55:Q8:12:LYS:NZ	2.45	0.46
5:1H:430:G:H5"	5:1H:431:U:OP2	2.15	0.46
5:1H:743:G:O3'	58:1H:3715:HOH:O	2.21	0.46
5:1H:960:A:H2'	5:1H:962:G:H5'	1.97	0.46
5:1H:1543:A:H3'	5:1H:1543:A:OP2	2.15	0.46
5:1H:2053:G:P	58:1H:3853:HOH:O	2.73	0.46
5:1H:2275:C:H5'	5:1H:2275:C:C6	2.49	0.46
5:1H:2747:G:O6	5:1H:2755:C:H5"	2.15	0.46
27:1J:10:C:C4	27:1J:11:C:C5	3.04	0.46
27:16:48:A:H4'	39:A8:95:HIS:HD2	1.81	0.46
28:11:72:LYS:HA	28:11:72:LYS:HD2	1.85	0.46
29:21:116:VAL:H	29:21:157:ALA:HB2	1.81	0.46
30:31:39:TRP:O	30:31:43:LYS:HG2	2.15	0.46
30:31:52:LYS:HA	30:31:56:GLU:OE1	2.15	0.46
33:61:79:ILE:HA	33:61:80:PRO:HD2	1.81	0.46
37:88:17:LEU:HD13	37:88:39:PRO:HB2	1.97	0.46
1:1G:166:G:H2'	1:1G:167:G:C8	2.51	0.46
1:1G:532:A:N6	1:1G:1206:G:O2'	2.49	0.46
1:1G:728:A:C2	1:1G:729:A:C5	3.04	0.46
1:1G:735:C:H2'	1:1G:736:C:C6	2.46	0.46
1:1G:920:U:H2'	1:1G:921:U:C6	2.51	0.46
1:1G:983:A:H2	1:1G:984:C:C6	2.34	0.46
1:1G:1131:G:N7	1:1G:1132:C:H5	2.13	0.46
8:32:3:ARG:HH22	8:32:5:ILE:HG23	1.80	0.46
1:13:474:G:H5"	20:7I:81:ARG:CZ	2.46	0.46
1:13:590:C:H2'	1:13:591:U:H6	1.81	0.46
1:13:825:G:C6	1:13:826:C:C4	3.03	0.46
1:13:1004:A:H2'	1:13:1005:A:O4'	2.16	0.46
1:13:1132:C:H2'	1:13:1133:G:C8	2.50	0.46
1:13:1346:A:C4	11:6E:10:ARG:NH1	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1478:C:H2'	1:13:1479:C:H6	1.81	0.46
2:1L:7:A:H61	2:1L:66:U:H3	1.63	0.46
5:14:248:G:H5'	5:14:250:G:N7	2.30	0.46
5:14:300:A:H1'	5:14:319:C:H1'	1.96	0.46
5:14:962:G:C2	5:14:963:U:C2	3.03	0.46
5:14:998:C:H2'	5:14:999:U:O4'	2.15	0.46
5:14:2079:U:O4	58:14:4179:HOH:O	2.20	0.46
5:14:2150:U:H2'	5:14:2151:G:C8	2.50	0.46
5:14:2285:C:H2'	5:14:2286:A:H5"	1.96	0.46
5:14:2526:G:H5'	5:14:2742:C:O2'	2.16	0.46
10:5E:89:MET:HG3	22:9I:76:LEU:HD21	1.98	0.46
18:5I:21:TYR:OH	18:5I:23:ARG:NH2	2.49	0.46
21:8I:29:HIS:CD2	21:8I:30:PRO:HD2	2.51	0.46
24:BI:33:ILE:O	24:BI:37:SER:OG	2.33	0.46
25:1F:2:GLY:O	25:1F:4:GLY:N	2.49	0.46
5:1H:1142(A):A:C2	5:1H:1144:G:C8	3.04	0.46
5:1H:1469:A:N1	5:1H:1524:G:C6	2.83	0.46
5:1H:2443:C:H2'	5:1H:2444:G:H8	1.81	0.46
5:1H:2496:C:OP1	37:88:82:ARG:HD3	2.16	0.46
27:16:60:C:C2	27:16:61:G:C8	3.04	0.46
30:31:101:LEU:HD22	30:31:102:PRO:CD	2.45	0.46
38:98:81:ASP:O	38:98:85:PRO:HG2	2.16	0.46
45:G8:94:LYS:HG3	45:G8:95:LYS:H	1.81	0.46
47:I8:23:VAL:HG13	47:I8:38:VAL:CG2	2.46	0.46
54:P8:37:LYS:HG3	54:P8:37:LYS:O	2.16	0.46
1:1G:243:A:C2	1:1G:245:C:C2	3.04	0.46
1:1G:501:C:H2'	1:1G:502:G:C8	2.51	0.46
1:1G:1190:G:H5'	7:22:176:HIS:NE2	2.31	0.46
1:1G:1191:A:OP1	7:22:3:ASN:ND2	2.33	0.46
1:1G:1239:A:O2'	1:1G:1298:C:N4	2.48	0.46
1:1G:1268:A:H2'	1:1G:1269:A:H8	1.78	0.46
1:1G:1286:A:H3'	1:1G:1286:A:H8	1.81	0.46
6:12:215:LEU:HA	6:12:218:ALA:HB3	1.97	0.46
7:22:55:VAL:HG22	7:22:68:VAL:HG13	1.98	0.46
7:22:79:ARG:HB3	7:22:79:ARG:NH1	2.31	0.46
8:32:23:GLY:O	8:32:27:TYR:HD1	1.98	0.46
1:13:134:A:H61	20:7I:25:ARG:NH1	2.14	0.46
5:14:277:C:OP2	5:14:278:A:N6	2.49	0.46
5:14:528:A:H2	5:14:2043:C:H5'	1.79	0.46
5:14:817:C:H5	58:14:3751:HOH:O	1.98	0.46
5:14:1050:A:N3	5:14:2751:G:H2'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1E:70:PHE:O	6:1E:93:VAL:N	2.36	0.46
8:3E:166:LYS:HG2	8:3E:178:VAL:HG11	1.98	0.46
20:7I:83:GLU:HB3	20:7I:84:ALA:H	1.66	0.46
24:BI:53:LEU:O	24:BI:57:ARG:NH1	2.49	0.46
2:3K:26:A:H2'	2:3K:27:G:H5'	1.96	0.46
2:3K:66:U:H2'	2:3K:67:C:O4'	2.16	0.46
5:1H:363(E):U:H5'	5:1H:363(F):A:OP2	2.15	0.46
5:1H:1290:C:H2'	5:1H:1291:C:H6	1.77	0.46
5:1H:1434:A:H61	5:1H:1558:A:H61	1.63	0.46
5:1H:2365:G:H4'	47:I8:60:PHE:CZ	2.51	0.46
27:16:21:G:H1	27:16:62:C:N4	2.07	0.46
27:16:29:A:H2'	27:16:30:C:C6	2.51	0.46
27:16:38:C:C1'	39:A8:95:HIS:HE2	2.29	0.46
28:11:66:ASP:HB3	28:11:105:ILE:CD1	2.46	0.46
29:21:119:ARG:HG2	29:21:160:TYR:HB2	1.96	0.46
36:78:39:LYS:CG	36:78:45:LEU:HD22	2.43	0.46
38:98:12:ARG:HD3	38:98:16:HIS:CD2	2.50	0.46
41:C8:92:ARG:HB3	42:D8:11:GLN:OE1	2.15	0.46
1:1G:426:G:OP1	8:32:38:TYR:OH	2.29	0.46
1:1G:801:U:H2'	1:1G:802:A:C8	2.50	0.46
1:1G:867:G:O2'	1:1G:868:C:H5'	2.16	0.46
1:1G:1170:A:H8	1:1G:1170:A:O5'	1.99	0.46
7:22:140:ARG:NE	7:22:140:ARG:HA	2.30	0.46
1:13:972:C:OP1	58:13:1830:HOH:O	2.20	0.46
1:13:1346:A:C5	11:6E:10:ARG:NH1	2.84	0.46
2:3L:17:C:N4	5:14:2112:G:OP1	2.48	0.46
5:14:755:C:H2'	5:14:756:C:C6	2.51	0.46
5:14:921:G:H2'	5:14:922:U:C6	2.50	0.46
5:14:1427:A:H4'	5:14:1428:C:O5'	2.16	0.46
5:14:1436:G:O2'	5:14:1477:A:H4'	2.16	0.46
5:14:1973:G:H2'	5:14:1974:C:C6	2.50	0.46
5:14:2567:G:H2'	5:14:2568:C:C6	2.51	0.46
5:14:2772:C:H2'	5:14:2773:C:H6	1.81	0.46
5:14:2779:U:O2	5:14:2779:U:O4'	2.34	0.46
9:4E:51:VAL:O	9:4E:55:VAL:HG23	2.16	0.46
9:4E:63:ARG:HA	9:4E:66:MET:HE2	1.97	0.46
10:5E:24:GLU:CG	10:5E:28:ARG:HH22	2.29	0.46
19:6I:17:ARG:HA	19:6I:17:ARG:HD2	1.78	0.46
21:8I:45:HIS:O	21:8I:73:VAL:HG23	2.16	0.46
5:1H:636:G:N7	36:78:113:LYS:HE2	2.30	0.46
5:1H:803:U:C4	5:1H:804:A:N7	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:806:C:C2	5:1H:807:U:C5	3.04	0.46
5:1H:1006:C:H5'	34:58:28:THR:HG23	1.98	0.46
5:1H:1046:A:O2'	5:1H:1047:G:OP1	2.33	0.46
5:1H:1591:G:H2'	5:1H:1592:C:C6	2.51	0.46
5:1H:1657:C:H2'	5:1H:1658:C:H6	1.81	0.46
5:1H:2040:C:H2'	5:1H:2041:U:O4'	2.15	0.46
5:1H:2092:U:H4'	5:1H:2093:G:O5'	2.16	0.46
5:1H:2401:U:H2'	5:1H:2402:C:H5"	1.98	0.46
27:16:29:A:H2'	27:16:30:C:O4'	2.15	0.46
27:16:48:A:H4'	39:A8:95:HIS:CD2	2.51	0.46
28:11:124:PRO:HG2	28:11:129:ASN:HD21	1.81	0.46
38:98:51:LEU:HD22	38:98:66:VAL:HG13	1.97	0.46
39:A8:67:ARG:NH1	39:A8:67:ARG:HB2	2.31	0.46
39:A8:103:GLU:O	39:A8:106:ARG:HD3	2.16	0.46
41:C8:92:ARG:HD3	41:C8:94:ASN:HB3	1.97	0.46
42:D8:67:GLY:O	42:D8:88:ARG:HG2	2.16	0.46
42:D8:76:LYS:O	42:D8:79:VAL:HG12	2.16	0.46
55:Q8:33:ASN:O	55:Q8:34:TRP:CG	2.69	0.46
1:1G:35:G:C2	1:1G:550:G:N3	2.84	0.46
1:1G:391:G:C6	1:1G:392:G:C5	3.04	0.46
1:1G:1013:G:O2'	1:1G:1014:A:N7	2.39	0.46
1:1G:1280:A:H5'	1:1G:1281:U:OP2	2.16	0.46
1:1G:1292:U:H2'	1:1G:1293:G:C8	2.51	0.46
6:12:19:HIS:CG	6:12:20:GLU:N	2.83	0.46
1:13:484:G:O2'	1:13:485:G:OP2	2.27	0.46
1:13:493:G:O5'	1:13:493:G:H8	1.98	0.46
1:13:654:G:C2'	1:13:655:A:H5'	2.46	0.46
1:13:658:G:H2'	1:13:659:U:H6	1.81	0.46
1:13:909:A:H2'	1:13:910:C:O4'	2.16	0.46
1:13:1145:C:H5"	1:13:1146:A:OP1	2.16	0.46
1:13:1165:C:H2'	1:13:1166:G:O4'	2.15	0.46
1:13:1485:U:O2'	1:13:1486:G:H5'	2.16	0.46
2:1L:68:C:H2'	2:1L:69:G:C8	2.51	0.46
5:14:120:U:H4'	5:14:121:G:H5"	1.97	0.46
5:14:208:C:H2'	5:14:209:C:C6	2.50	0.46
5:14:444:C:O2'	5:14:445:C:H5'	2.16	0.46
5:14:797:C:H2'	5:14:798:G:O4'	2.16	0.46
5:14:982:C:OP1	58:14:4327:HOH:O	2.21	0.46
5:14:1678:G:N2	5:14:1989:G:N2	2.62	0.46
5:14:2261:C:H1'	5:14:2388:A:N3	2.31	0.46
5:14:2469:A:C2	5:14:2470:G:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2647:U:H2'	5:14:2648:C:H6	1.81	0.46
9:4E:36:ASP:OD2	9:4E:38:GLN:HB2	2.16	0.46
14:1I:11:PHE:HB3	18:5I:55:GLY:HA3	1.97	0.46
19:6I:71:GLN:O	19:6I:71:GLN:HG2	2.16	0.46
5:1H:172:C:H2'	5:1H:173:G:C8	2.51	0.46
5:1H:207:A:H2'	5:1H:208:C:O4'	2.15	0.46
5:1H:315:G:C6	5:1H:316:C:C4	3.04	0.46
5:1H:343:C:O2'	5:1H:344:G:H5'	2.16	0.46
5:1H:528:A:C2	5:1H:2043:C:H4'	2.51	0.46
5:1H:832:G:H5'	36:78:45:LEU:HD11	1.98	0.46
5:1H:2287:A:C2	5:1H:2289:G:C8	3.04	0.46
5:1H:2345:G:H4'	5:1H:2346:A:O5'	2.16	0.46
5:1H:2688:U:C5	5:1H:2720:U:OP2	2.64	0.46
30:31:28:ILE:HA	30:31:112:MET:HE1	1.97	0.46
30:31:183:VAL:O	30:31:187:VAL:HG23	2.16	0.46
37:88:37:LEU:HD23	37:88:37:LEU:HA	1.77	0.46
40:B8:48:ILE:HD13	40:B8:114:LEU:HD12	1.97	0.46
41:C8:50:ARG:HH22	42:D8:72:VAL:HG12	1.81	0.46
43:E8:24:ILE:HD12	43:E8:24:ILE:O	2.15	0.46
1:1G:20:U:H2'	1:1G:21:G:O4'	2.15	0.46
1:1G:382:A:H2'	1:1G:383:A:C8	2.51	0.46
1:1G:397:A:H3'	1:1G:397:A:N3	2.30	0.46
1:1G:616:G:C2	1:1G:617:G:N7	2.84	0.46
1:1G:731:G:OP1	1:1G:766:A:H1'	2.16	0.46
1:1G:818:G:O2'	1:1G:819:A:H5'	2.16	0.46
1:1G:899:C:H5"	1:1G:900:A:OP2	2.15	0.46
1:1G:1306:A:C6	1:1G:1307:U:C2	3.04	0.46
1:1G:1315:U:H2'	1:1G:1316:G:O4'	2.15	0.46
1:1G:1352:C:H42	1:1G:1370:G:H1	1.64	0.46
6:12:16:HIS:O	6:12:210:SER:HB2	2.15	0.46
1:13:414:A:H2'	1:13:415:A:O4'	2.16	0.45
1:13:454:C:H41	1:13:478:A:H2	1.63	0.45
1:13:632:A:H8	1:13:633:G:C8	2.34	0.45
1:13:1256:A:N3	1:13:1277:C:N4	2.63	0.45
2:3L:46:7MG:O2'	2:3L:48:C:H1'	2.15	0.45
5:14:71:A:H5'	5:14:71:A:H8	1.81	0.45
5:14:646:A:H2'	5:14:647:G:O4'	2.16	0.45
5:14:1404:C:O2'	5:14:1405:U:H5'	2.16	0.45
5:14:1449:A:H5'	5:14:1449(A):G:OP2	2.16	0.45
5:14:2857:G:N2	5:14:2859:G:H3'	2.31	0.45
7:2E:119:ARG:O	7:2E:123:GLN:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:7E:107:LEU:HD23	12:7E:107:LEU:HA	1.69	0.45
20:7I:49:LEU:HD12	20:7I:50:LYS:N	2.31	0.45
21:8I:43:LEU:O	21:8I:69:LYS:HG3	2.16	0.45
21:8I:58:GLU:O	21:8I:74:LEU:N	2.41	0.45
21:8I:100:LYS:HB3	21:8I:101:ARG:CZ	2.46	0.45
22:9I:66:LEU:O	22:9I:70:ILE:HG13	2.15	0.45
2:3K:33:U:H1'	2:3K:37:MIA:H121	1.98	0.45
5:1H:289:A:C4	5:1H:353:G:N2	2.84	0.45
5:1H:425:G:H2'	5:1H:426:C:H6	1.81	0.45
5:1H:860:U:H5	5:1H:917:A:N1	2.13	0.45
5:1H:910:A:N7	37:88:13:GLN:HG3	2.31	0.45
5:1H:1044:G:HO2'	5:1H:1111:A:H61	1.64	0.45
5:1H:1047:G:H2'	5:1H:1110:G:C2	2.49	0.45
5:1H:1380:G:N2	5:1H:1570:A:C2	2.84	0.45
5:1H:1478:G:H2'	5:1H:1479:G:H8	1.80	0.45
5:1H:2019:A:H4'	41:C8:34:LYS:HD3	1.97	0.45
5:1H:2248:C:H2'	5:1H:2249:U:O4'	2.16	0.45
5:1H:2488:A:H2'	5:1H:2489:G:O4'	2.16	0.45
5:1H:2583:G:OP2	58:1H:3864:HOH:O	2.21	0.45
5:1H:2726:U:O2'	5:1H:2727:G:H8	1.98	0.45
27:16:11:C:O5'	27:16:12:C:H5	2.00	0.45
30:31:32:LEU:CD2	30:31:105:VAL:HG13	2.46	0.45
32:51:64:LEU:O	32:51:68:THR:OG1	2.34	0.45
34:58:16:ILE:HB	34:58:54:VAL:HG22	1.97	0.45
35:68:68:GLU:OE2	35:68:78:ARG:NH1	2.49	0.45
40:B8:60:THR:HG22	40:B8:77:PRO:HA	1.97	0.45
42:D8:25:LEU:H	42:D8:92:THR:HG21	1.81	0.45
42:D8:82:ARG:N	42:D8:82:ARG:HD2	2.31	0.45
45:G8:87:LYS:HB3	45:G8:94:LYS:HG2	1.98	0.45
52:N8:46:CYS:HA	52:N8:47:PRO:HD2	1.79	0.45
1:1G:142:G:H2'	1:1G:143:A:H8	1.80	0.45
1:1G:345:C:H1'	1:1G:346:G:C2	2.50	0.45
1:1G:542:G:H5'	8:32:41:GLY:HA3	1.98	0.45
6:12:73:THR:HB	6:12:96:ARG:H	1.79	0.45
1:13:948:C:O2'	1:13:949:A:H5'	2.17	0.45
1:13:1322:C:O2'	1:13:1323:G:O5'	2.32	0.45
1:13:1409:C:H2'	1:13:1410:G:C8	2.51	0.45
2:3L:10:G:H2'	2:3L:11:C:O4'	2.17	0.45
2:3L:20:H2U:H62	2:3L:21:A:C1'	2.47	0.45
5:14:360:G:H2'	5:14:361:G:C8	2.49	0.45
5:14:511:U:C5	5:14:512:G:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:632:A:H2'	5:14:633:A:C8	2.51	0.45
5:14:1572:A:H8	5:14:1572:A:O5'	1.98	0.45
5:14:2689:U:H6	5:14:2689:U:H5'	1.81	0.45
10:5E:5:GLU:HB3	10:5E:62:TRP:NE1	2.31	0.45
11:6E:16:LEU:HD12	13:8E:42:ARG:HA	1.99	0.45
26:1K:74:C:H1'	26:1K:75:C:H5'	1.99	0.45
5:1H:6:A:C2	34:58:131:GLN:HG3	2.51	0.45
5:1H:822:U:O2'	5:1H:823:G:H5'	2.16	0.45
5:1H:1385:G:O2'	5:1H:1396:U:C6	2.63	0.45
5:1H:1537:C:H2'	5:1H:1538:G:O4'	2.16	0.45
5:1H:2379:G:O2'	39:A8:17:ARG:NH1	2.42	0.45
5:1H:2780:G:OP2	34:58:118:LYS:HD3	2.15	0.45
27:1J:72:G:O2'	27:1J:104:A:N6	2.45	0.45
27:1J:117:G:O5'	27:1J:117:G:H8	1.99	0.45
27:16:31:C:H2'	27:16:32:C:H6	1.81	0.45
30:31:108:LYS:HE2	30:31:108:LYS:HB3	1.75	0.45
31:41:137:GLU:HG3	31:41:140:ILE:HG23	1.98	0.45
39:A8:67:ARG:O	39:A8:71:ARG:HG3	2.17	0.45
1:1G:198:G:H2'	1:1G:199:G:H8	1.81	0.45
1:1G:284:G:H2'	1:1G:285:G:H8	1.81	0.45
1:1G:590:C:H2'	1:1G:591:U:C6	2.50	0.45
1:1G:728:A:H2'	1:1G:729:A:H8	1.76	0.45
1:1G:1067:A:H1'	1:1G:1068:G:C8	2.51	0.45
1:1G:1215:G:C5	1:1G:1216:G:N7	2.85	0.45
7:22:23:TYR:CD1	7:22:24:ALA:N	2.84	0.45
1:13:129(A):G:N2	1:13:188:U:O2'	2.49	0.45
1:13:280:C:O2	21:8I:38:ARG:HG3	2.16	0.45
1:13:381:C:H2'	1:13:382:A:O4'	2.17	0.45
1:13:872:A:N7	1:13:874:G:C8	2.84	0.45
1:13:1298:C:C5	11:6E:114:ARG:HD3	2.51	0.45
3:2L:33:OMC:HM22	3:2L:34:U:H5'	1.99	0.45
5:14:944:G:H5"	5:14:945:A:O5'	2.17	0.45
5:14:1486:A:H2'	5:14:1487:G:C8	2.52	0.45
5:14:2123:G:H1	5:14:2175:C:H42	1.65	0.45
5:14:2655:G:H1'	5:14:2656:U:H5	1.81	0.45
8:3E:7:PRO:CB	8:3E:10:ARG:HG2	2.46	0.45
13:8E:92:TYR:O	13:8E:96:LEU:HB2	2.16	0.45
2:3K:56:C:N3	5:1H:2112:G:N2	2.64	0.45
5:1H:26:G:C6	5:1H:27:G:N1	2.84	0.45
5:1H:50:U:H3'	5:1H:51:G:H5'	1.98	0.45
5:1H:141:A:C8	5:1H:1408:C:H1'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:189:G:H2'	5:1H:205:G:N2	2.31	0.45
5:1H:323:G:C8	30:31:171:PRO:HG3	2.51	0.45
5:1H:389:G:H22	36:78:72:PRO:HD3	1.81	0.45
5:1H:1163:G:C2	5:1H:1164:G:C8	3.04	0.45
5:1H:1170:G:N2	5:1H:1180:C:C2	2.85	0.45
5:1H:1188:U:C4'	42:D8:79:VAL:HG22	2.46	0.45
5:1H:1205:U:H4'	5:1H:1206:G:OP2	2.15	0.45
5:1H:1354:A:H8	5:1H:1354:A:O5'	2.00	0.45
5:1H:1996:C:OP1	35:68:31:LYS:HE3	2.16	0.45
5:1H:2303:G:O2'	31:41:132:ASN:HB2	2.17	0.45
30:31:129:PHE:O	30:31:130:ALA:HB3	2.16	0.45
31:41:11:TYR:O	31:41:16:ARG:HG3	2.16	0.45
34:58:46:VAL:CG1	34:58:48:MET:HG3	2.47	0.45
36:78:49:ARG:HE	55:Q8:57:ARG:HG2	1.79	0.45
37:88:127:ILE:H	37:88:127:ILE:HG13	1.67	0.45
38:98:21:TYR:OH	38:98:43:GLU:HG2	2.16	0.45
40:B8:24:PRO:HD3	40:B8:52:ILE:HD12	1.97	0.45
1:1G:41:G:H2'	1:1G:42:G:H8	1.76	0.45
1:1G:590:C:H2'	1:1G:591:U:H6	1.80	0.45
1:1G:680:C:N4	1:1G:710:G:H1	2.12	0.45
1:1G:1256:A:N6	1:1G:1277:C:H3'	2.30	0.45
6:12:102:LEU:H	6:12:102:LEU:HD12	1.82	0.45
6:12:124:SER:OG	6:12:126:GLU:HB2	2.16	0.45
8:32:22:LYS:HD2	8:32:26:CYS:SG	2.56	0.45
1:13:271:C:H2'	1:13:272:C:C6	2.51	0.45
1:13:447:G:C6	1:13:485:G:H1'	2.51	0.45
1:13:881:G:OP2	16:3I:12:ARG:NH2	2.50	0.45
5:14:117:G:C6	5:14:119:A:C6	3.04	0.45
5:14:691:C:H2'	5:14:692:C:H6	1.81	0.45
5:14:977:G:C6	5:14:987:G:C6	3.05	0.45
5:14:1386:C:OP2	5:14:1396:U:C5	2.64	0.45
5:14:1430:C:H2'	5:14:1431:U:H6	1.79	0.45
5:14:1788:C:H2'	5:14:1789:A:H8	1.81	0.45
5:14:1856:G:H1	5:14:1886:C:H42	1.63	0.45
5:14:2115:G:H2'	5:14:2116:G:N7	2.32	0.45
5:14:2693:A:H2'	5:14:2694:G:C8	2.49	0.45
8:3E:100:ARG:O	8:3E:103:ASN:N	2.49	0.45
12:7E:7:ALA:HB2	12:7E:85:ARG:HD2	1.98	0.45
14:1I:3:LYS:N	14:1I:75:ILE:HA	2.31	0.45
14:1I:57:LYS:HD2	14:1I:60:ARG:NH1	2.30	0.45
18:5I:23:ARG:HH11	18:5I:30:ALA:HB2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:8I:9:VAL:O	21:8I:21:VAL:HA	2.17	0.45
26:1K:51:U:H2'	26:1K:52:G:H8	1.81	0.45
5:1H:7:G:H2'	5:1H:8:A:O4'	2.16	0.45
5:1H:773:U:C4'	28:11:47:GLY:HA3	2.47	0.45
5:1H:1640:C:H2'	5:1H:1641:A:C8	2.51	0.45
5:1H:1644:C:C2'	5:1H:1645:G:H5'	2.47	0.45
5:1H:1899:G:H1	5:1H:1902:C:H41	1.63	0.45
5:1H:2469:A:H2	5:1H:2481:G:H21	1.62	0.45
5:1H:2887:U:H2'	5:1H:2888:C:H6	1.81	0.45
32:51:51:ARG:HG2	32:51:52:VAL:H	1.82	0.45
34:58:23:LEU:HD12	34:58:23:LEU:HA	1.72	0.45
36:78:50:ARG:HD3	55:Q8:7:HIS:CD2	2.52	0.45
40:B8:3:ARG:O	40:B8:7:ILE:N	2.49	0.45
46:H8:99:TYR:HD1	46:H8:123:ASP:HB3	1.81	0.45
47:I8:42:GLY:C	47:I8:57:PHE:HD2	2.19	0.45
50:L8:40:THR:O	50:L8:44:ARG:HB2	2.17	0.45
1:1G:999:U:H2'	1:1G:1000:A:H8	1.80	0.45
1:1G:1014:A:P	1:1G:1014:A:H8	2.39	0.45
1:1G:1092:A:C2	1:1G:1183:A:H2	2.34	0.45
1:1G:1260:C:H3'	1:1G:1260:C:H6	1.81	0.45
6:12:201:ILE:HA	6:12:202:PRO:HD2	1.88	0.45
7:22:119:ARG:HH22	7:22:140:ARG:HG2	1.81	0.45
8:32:31:CYS:SG	8:32:31:CYS:O	2.74	0.45
1:13:11:G:C5	1:13:12:U:C5	3.05	0.45
1:13:195:A:H4'	24:BI:68:LYS:HD3	1.99	0.45
1:13:201:C:H42	1:13:216:G:H1	1.64	0.45
1:13:397:A:H5'	1:13:398:C:OP1	2.16	0.45
1:13:417:C:H2'	1:13:418:C:H6	1.82	0.45
1:13:490:G:OP2	8:3E:132:ARG:NH2	2.49	0.45
1:13:663:A:H2'	1:13:664:G:O4'	2.16	0.45
1:13:745:C:OP1	1:13:851:G:O2'	2.34	0.45
1:13:1139:G:H4'	1:13:1140:C:C5'	2.45	0.45
1:13:1308:U:OP1	17:4I:98:VAL:N	2.40	0.45
1:13:1414:U:H2'	1:13:1415:G:H8	1.80	0.45
2:1L:51:U:O5'	2:1L:51:U:H6	2.00	0.45
5:14:308:G:C8	5:14:501:A:H1'	2.52	0.45
5:14:470:A:H2'	5:14:471:A:O4'	2.17	0.45
5:14:493:G:H8	5:14:493:G:O5'	2.00	0.45
5:14:654(D):G:H22	5:14:654(Q):C:N4	2.15	0.45
5:14:993:G:C5	5:14:994:C:C5	3.05	0.45
5:14:1041:C:N4	5:14:1114:G:H1	2.12	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1423:G:C4	5:14:1424:G:C8	3.04	0.45
5:14:2111:C:N1	5:14:2118:U:H4'	2.32	0.45
8:3E:52:SER:O	8:3E:55:ALA:HB3	2.16	0.45
8:3E:154:ASN:CG	8:3E:155:LEU:H	2.20	0.45
9:4E:63:ARG:HA	9:4E:66:MET:CE	2.46	0.45
14:1I:66:ARG:HB2	14:1I:68:HIS:CE1	2.52	0.45
18:5I:50:LYS:HE2	18:5I:50:LYS:HB3	1.69	0.45
20:7I:27:LYS:H	20:7I:27:LYS:HG2	1.44	0.45
2:3K:2:C:H2'	2:3K:3:C:C6	2.51	0.45
5:1H:298:G:N7	58:1H:4288:HOH:O	2.47	0.45
5:1H:493:G:H2'	5:1H:494:G:O4'	2.16	0.45
5:1H:657:U:H2'	5:1H:658:C:C6	2.51	0.45
5:1H:784:A:O4'	28:11:227:ASN:ND2	2.49	0.45
5:1H:1175:U:O3'	5:1H:1176:G:H4'	2.16	0.45
5:1H:1345:C:H2'	5:1H:1346:G:H8	1.82	0.45
5:1H:2315:G:H2'	5:1H:2316:C:C6	2.51	0.45
5:1H:2854:G:C2	5:1H:2855:C:C2	3.05	0.45
30:31:28:ILE:HA	30:31:112:MET:CE	2.47	0.45
30:31:114:VAL:HG11	30:31:202:PHE:HE2	1.81	0.45
30:31:177:ALA:HB1	30:31:178:PRO:HD2	1.98	0.45
35:68:113:LYS:HE2	35:68:117:LEU:HD21	1.98	0.45
38:98:98:LEU:HD23	38:98:98:LEU:HA	1.84	0.45
38:98:118:GLU:OE1	38:98:118:GLU:HA	2.16	0.45
41:C8:34:LYS:HA	41:C8:34:LYS:HE3	1.99	0.45
43:E8:88:ARG:HB3	43:E8:92:ARG:CB	2.47	0.45
47:I8:19:LYS:HD3	47:I8:19:LYS:HA	1.49	0.45
55:Q8:47:LYS:HA	55:Q8:47:LYS:HD3	1.47	0.45
1:1G:655:A:N6	1:1G:751:U:H3	2.15	0.45
1:1G:953:G:H5'	1:1G:965:A:H61	1.82	0.45
1:1G:1014:A:C6	1:1G:1015:A:N6	2.85	0.45
6:12:142:LEU:O	6:12:142:LEU:HD23	2.16	0.45
1:13:110:C:O2'	20:7I:25:ARG:O	2.31	0.45
1:13:422:C:H1'	1:13:423:G:C2	2.51	0.45
1:13:592:G:H2'	1:13:593:G:H8	1.82	0.45
1:13:707:C:O2'	1:13:708:C:H5'	2.17	0.45
1:13:976:G:H5'	1:13:1358:U:O2'	2.17	0.45
1:13:1103:C:H5"	6:1E:98:LEU:HD13	1.97	0.45
1:13:1290:G:O3'	11:6E:37:ASN:ND2	2.50	0.45
1:13:1316:G:H2'	1:13:1318:A:OP2	2.15	0.45
1:13:1508:G:O5'	1:13:1508:G:H8	1.99	0.45
5:14:17:G:H2'	5:14:18:C:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:637:A:H4'	5:14:638:G:O5'	2.17	0.45
5:14:839:U:H2'	5:14:840:C:C6	2.50	0.45
5:14:1322:A:N1	5:14:1333:C:O2'	2.41	0.45
5:14:1331:A:O2'	5:14:1332:G:C8	2.69	0.45
5:14:1464:C:O2'	5:14:1528:A:C8	2.68	0.45
5:14:2257:U:O2'	5:14:2258:C:H5'	2.17	0.45
5:14:2563:U:O2	5:14:2565:A:C8	2.70	0.45
6:1E:195:ASP:O	12:7E:74:PRO:HG3	2.17	0.45
10:5E:76:ALA:HA	10:5E:79:LEU:HD12	1.99	0.45
14:1I:42:THR:HG23	14:1I:67:THR:O	2.17	0.45
14:1I:77:PRO:HB2	14:1I:79:ARG:NH1	2.31	0.45
17:4I:3:ARG:CZ	17:4I:7:VAL:HG13	2.46	0.45
19:6I:66:LEU:HD12	19:6I:66:LEU:HA	1.74	0.45
5:1H:729:G:C6	28:11:208:LYS:HB2	2.52	0.45
5:1H:1108:U:O4	5:1H:1109:C:N4	2.49	0.45
5:1H:1239:G:H5"	58:1H:3830:HOH:O	2.17	0.45
5:1H:1257:C:H4'	30:31:83:PHE:CE1	2.51	0.45
5:1H:1494:A:C2'	5:1H:1495:A:H5'	2.46	0.45
5:1H:1607:C:H1'	58:1H:4534:HOH:O	2.16	0.45
5:1H:1858:G:H2'	5:1H:1883:G:H22	1.78	0.45
5:1H:2396:G:O2'	5:1H:2397:G:H5'	2.16	0.45
27:16:71:C:C2	27:16:72:G:C8	3.05	0.45
29:21:38:THR:CG2	29:21:41:LYS:HB2	2.47	0.45
33:61:126:TYR:HB2	33:61:140:LEU:HD11	1.98	0.45
40:B8:74:ARG:HD3	40:B8:76:PHE:CZ	2.52	0.45
40:B8:107:ASP:N	40:B8:107:ASP:OD1	2.42	0.45
55:Q8:45:GLY:N	55:Q8:46:ARG:HB3	2.31	0.45
1:1G:109:A:H2'	1:1G:326:G:N2	2.32	0.45
1:1G:547:A:OP1	58:1G:1704:HOH:O	2.21	0.45
6:12:19:HIS:CE1	6:12:206:ASP:H	2.34	0.45
6:12:92:TYR:CE1	6:12:151:GLY:HA3	2.51	0.45
7:22:104:GLN:OE1	7:22:105:GLU:N	2.27	0.45
1:13:1391:U:H2'	1:13:1392:G:C8	2.51	0.45
1:13:1428:A:H2'	1:13:1429:C:C6	2.51	0.45
2:1L:76:A:C8	5:14:2583:G:N2	2.85	0.45
5:14:16:G:H2'	5:14:17:G:H8	1.82	0.45
5:14:565:C:H4'	5:14:1253:A:C6	2.52	0.45
5:14:807:U:C2	5:14:808:G:C8	3.04	0.45
5:14:1628:G:H2'	5:14:1629:U:C6	2.52	0.45
5:14:2688:U:C5	5:14:2720:U:OP2	2.70	0.45
5:14:2885:C:N3	5:14:2886:G:H1'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:1I:3:LYS:N	14:1I:74:ILE:O	2.50	0.45
3:2K:20:G:C4	3:2K:58:A:C2	3.05	0.45
5:1H:172:C:H2'	5:1H:173:G:H8	1.80	0.45
5:1H:632:A:H8	5:1H:632:A:O5'	1.99	0.45
5:1H:654(A):A:H2	5:1H:654(T):A:H61	1.65	0.45
5:1H:1243:G:H4'	36:78:7:ARG:NH2	2.31	0.45
5:1H:1474:C:H2'	5:1H:1475:G:C8	2.51	0.45
5:1H:1843:C:O5'	5:1H:1843:C:H6	1.98	0.45
5:1H:2035:G:P	58:1H:3838:HOH:O	2.71	0.45
5:1H:2383:G:C2'	5:1H:2384:G:H5'	2.47	0.45
30:31:64:ILE:HG23	30:31:65:TRP:CD1	2.52	0.45
30:31:68:LYS:HB3	30:31:68:LYS:HE3	1.85	0.45
33:61:129:THR:HG22	33:61:137:PRO:HB3	1.99	0.45
48:J8:50:ARG:HE	48:J8:50:ARG:HB2	1.61	0.45
1:1G:560:U:HO2'	1:1G:561:U:P	2.39	0.45
1:1G:625:G:C4	1:1G:626:U:C5	3.05	0.45
1:1G:882:C:O2'	1:1G:883:C:H5'	2.17	0.45
6:12:83:MET:SD	6:12:234:PRO:HB2	2.57	0.45
6:12:167:PRO:HD2	6:12:192:SER:OG	2.17	0.45
7:22:73:PRO:O	7:22:76:VAL:HG22	2.16	0.45
1:13:11:G:C6	1:13:12:U:C4	3.05	0.45
1:13:44:G:C6	1:13:45:U:C2	3.05	0.45
4:4L:13:A:N7	1:1G:1503:A:C2	2.85	0.45
5:14:270(L):U:O2'	5:14:270(M):U:OP1	2.33	0.45
5:14:699:A:H2'	5:14:700:G:O4'	2.16	0.45
5:14:783:A:H8	5:14:784:A:H4'	1.82	0.45
5:14:916:G:C2'	5:14:917:A:H5"	2.46	0.45
5:14:1062:G:H2'	5:14:1063:G:C8	2.52	0.45
5:14:1128:A:O4'	5:14:2516:G:O2'	2.34	0.45
5:14:1147:C:H2'	5:14:1148:A:C8	2.52	0.45
5:14:1426:G:C2'	5:14:1572:A:H61	2.29	0.45
5:14:1680:U:N3	5:14:1764:G:OP2	2.35	0.45
5:14:2068:U:H3	5:14:2430:A:H2	1.56	0.45
9:4E:11:ILE:HD11	9:4E:31:LEU:HD22	1.98	0.45
12:7E:86:ILE:O	12:7E:88:LYS:HG2	2.17	0.45
12:7E:104:ARG:O	12:7E:107:LEU:HB2	2.17	0.45
13:8E:5:TYR:HE1	13:8E:16:ARG:HG2	1.81	0.45
13:8E:34:ASN:O	13:8E:38:GLN:HB2	2.16	0.45
13:8E:118:LYS:O	13:8E:119:ALA:HB3	2.16	0.45
23:AI:43:GLU:H	23:AI:43:GLU:HG2	1.45	0.45
24:BI:10:LEU:HG	24:BI:12:ALA:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:719:C:H2'	5:1H:720:C:C6	2.51	0.45
5:1H:836:G:C5	5:1H:837:C:C4	3.05	0.45
5:1H:996:A:C5	5:1H:1160:G:N2	2.85	0.45
5:1H:1042:G:H1	5:1H:1113:U:H3	1.63	0.45
5:1H:2138:C:N4	5:1H:2153:G:H1	2.14	0.45
5:1H:2228:G:OP2	28:11:263:ARG:NH2	2.50	0.45
5:1H:2376:A:H2'	5:1H:2377:A:O4'	2.16	0.45
5:1H:2705:A:O2'	5:1H:2852:G:OP1	2.26	0.45
27:16:42:C:C5	27:16:43:C:C5	3.05	0.45
28:11:206:LEU:HA	28:11:206:LEU:HD23	1.76	0.45
30:31:153:SER:OG	30:31:190:GLU:HG3	2.16	0.45
31:41:145:THR:O	31:41:146:TYR:HB3	2.17	0.45
33:61:75:LEU:HB3	33:61:105:HIS:HD2	1.82	0.45
37:88:137:TYR:CE1	46:H8:83:PRO:HG3	2.52	0.45
44:F8:65:ARG:HB3	44:F8:65:ARG:HH11	1.81	0.45
46:H8:7:ALA:HB3	46:H8:61:LEU:CB	2.46	0.45
46:H8:59:LEU:HA	46:H8:59:LEU:HD23	1.70	0.45
50:L8:5:LYS:HD2	50:L8:34:GLU:OE1	2.16	0.45
51:M8:42:PHE:O	51:M8:43:TYR:HB3	2.17	0.45
1:1G:21:G:H2'	1:1G:22:G:C8	2.52	0.45
1:1G:195:A:N7	1:1G:196:A:C6	2.84	0.45
1:1G:1275:A:H2'	1:1G:1276:G:O4'	2.17	0.45
6:12:166:ASP:HB3	6:12:169:LYS:HB3	1.99	0.45
1:13:408:A:H2'	1:13:409:G:C8	2.52	0.45
1:13:874:G:C4	1:13:875:C:C5	3.05	0.45
1:13:1058:G:H2'	1:13:1059:C:O4'	2.16	0.45
2:1L:53:G:H2'	2:1L:54:U:C6	2.51	0.45
5:14:286:C:H2'	5:14:287:C:H6	1.81	0.45
5:14:623:G:H2'	5:14:624:C:C6	2.52	0.45
5:14:1028:A:N6	5:14:1125:G:H2'	2.31	0.45
5:14:1032:A:N1	5:14:1122:G:O6	2.50	0.45
5:14:2055:C:H4'	5:14:2056:G:H5"	1.99	0.45
6:1E:189:ASP:HB3	6:1E:191:ASP:HB2	1.99	0.45
24:BI:64:ASP:OD1	24:BI:64:ASP:N	2.50	0.45
5:1H:978:G:C2	5:1H:986:C:C2	3.05	0.45
5:1H:1591:G:H2'	5:1H:1592:C:H6	1.81	0.45
5:1H:1800:C:OP2	28:11:183:ARG:NH2	2.35	0.45
5:1H:2126:A:C8	5:1H:2127:G:N2	2.85	0.45
5:1H:2311:A:H8	31:41:88:ILE:HD12	1.82	0.45
5:1H:2393:A:H5'	36:78:63:PRO:HB3	1.98	0.45
28:11:71:ASP:HB2	28:11:103:ARG:HH22	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:113:LYS:HG2	36:78:115:LEU:HD23	1.98	0.45
43:E8:88:ARG:HB3	43:E8:92:ARG:HB2	1.99	0.45
45:G8:28:LYS:HD2	45:G8:40:GLU:HG2	1.99	0.45
45:G8:68:HIS:HB3	45:G8:71:LYS:HG2	1.98	0.45
47:I8:23:VAL:HA	47:I8:38:VAL:HG22	1.99	0.45
48:J8:83:GLU:C	48:J8:85:LEU:N	2.70	0.45
1:1G:32:A:C2	1:1G:33:A:C4	3.04	0.45
1:1G:618:C:H5'	1:1G:619:U:H5"	1.99	0.45
1:1G:920:U:H2'	1:1G:921:U:H6	1.81	0.45
1:1G:976:G:OP2	1:1G:1358:U:O2'	2.35	0.45
1:1G:1130:A:N6	1:1G:1131:G:O6	2.50	0.45
1:13:667:G:OP1	1:13:732:C:O2'	2.26	0.45
1:13:730:G:C6	1:13:731:G:H1'	2.51	0.45
1:13:1106:G:H5"	7:2E:172:ARG:HG2	1.99	0.45
1:13:1399:C:H4'	1:13:1400:C:H5"	1.98	0.45
5:14:38:A:H2'	5:14:39:C:H6	1.76	0.45
5:14:140:A:H8	5:14:1408:C:O2'	1.93	0.45
5:14:363:G:H2'	5:14:363(A):A:C8	2.50	0.45
5:14:1097:U:H2'	5:14:1098:A:O4'	2.16	0.45
5:14:1790:C:H2'	5:14:1791:A:C5	2.52	0.45
5:14:2212:A:H1'	5:14:2215:G:C5	2.52	0.45
5:14:2329:G:H2'	5:14:2330:G:C8	2.51	0.45
7:2E:18:TRP:HB3	7:2E:20:SER:O	2.16	0.45
9:4E:12:LEU:HD21	9:4E:14:ARG:HD3	1.99	0.45
15:2I:93:GLN:OE1	15:2I:96:ARG:HD3	2.16	0.45
18:5I:35:ARG:HG2	18:5I:35:ARG:HH11	1.79	0.45
5:1H:416:C:N3	5:1H:2407:G:N1	2.53	0.45
5:1H:466:A:N3	5:1H:683:C:H1'	2.32	0.45
5:1H:518:G:H2'	5:1H:519:U:C6	2.52	0.45
5:1H:1442:G:C2	5:1H:1550:C:O2	2.70	0.45
5:1H:2068:U:N3	5:1H:2430:A:H2	2.15	0.45
5:1H:2070:G:C2	5:1H:2442:C:C2	3.05	0.45
5:1H:2694:G:C6	5:1H:2695:C:C4	3.05	0.45
30:31:53:THR:O	30:31:56:GLU:N	2.42	0.45
31:41:64:THR:CG2	31:41:66:GLN:HB2	2.47	0.45
31:41:98:ARG:HA	31:41:101:ILE:HG23	1.98	0.45
31:41:125:PHE:CZ	31:41:170:ARG:HA	2.51	0.45
35:68:60:ALA:HB1	35:68:84:ALA:HB1	1.99	0.45
38:98:4:LEU:HA	38:98:4:LEU:HD13	1.34	0.45
38:98:60:LEU:HD12	38:98:60:LEU:HA	1.70	0.45
39:A8:74:ALA:HB1	39:A8:107:GLU:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:G8:85:VAL:O	45:G8:86:ARG:HD3	2.17	0.45
46:H8:113:ALA:N	46:H8:114:GLY:HA2	2.32	0.45
47:I8:64:ASP:HB2	47:I8:85:ALA:HB1	1.97	0.45
55:Q8:16:ILE:HD13	55:Q8:56:GLU:OE2	2.17	0.45
55:Q8:39:LYS:CG	55:Q8:40:GLU:H	2.30	0.45
1:1G:147:G:O2'	1:1G:148:G:H5'	2.17	0.45
1:1G:373:A:C2	1:1G:374:A:C8	3.04	0.45
1:1G:583:A:H2'	1:1G:584:G:O4'	2.16	0.45
1:1G:995:C:H6	1:1G:995:C:O5'	2.00	0.45
7:22:3:ASN:H	7:22:3:ASN:ND2	2.10	0.45
7:22:40:ARG:H	7:22:40:ARG:HG3	1.47	0.45
1:13:131:C:O2	1:13:131:C:H2'	2.17	0.44
1:13:135:C:H2'	1:13:136:C:H5'	1.99	0.44
1:13:686:U:O2'	1:13:687:A:OP2	2.33	0.44
1:13:1073:U:H2'	1:13:1074:G:H8	1.81	0.44
1:13:1292:U:H2'	1:13:1293:G:C8	2.51	0.44
2:1L:18:G:HO2'	2:1L:19:G:P	2.38	0.44
2:1L:41:C:H2'	2:1L:42:C:C6	2.52	0.44
2:1L:46:7MG:H5"	2:1L:46:7MG:C8	2.52	0.44
5:14:460:A:H5"	5:14:461:C:OP2	2.17	0.44
5:14:691:C:H2'	5:14:692:C:C6	2.53	0.44
5:14:984:A:H5"	5:14:985:C:H5	1.82	0.44
5:14:1001:A:C8	5:14:1002:G:C8	3.05	0.44
5:14:1034:G:H2'	5:14:1035:U:O4'	2.17	0.44
5:14:1465:G:H5'	5:14:1528:A:O2'	2.16	0.44
5:14:2321:G:N3	5:14:2321:G:H2'	2.31	0.44
6:1E:87:ARG:HH11	6:1E:219:VAL:HB	1.81	0.44
8:3E:85:LYS:HE2	8:3E:85:LYS:HB2	1.65	0.44
15:2I:83:ILE:HG12	15:2I:109:VAL:HG23	1.98	0.44
5:1H:18:C:O3'	41:C8:23:GLY:HA2	2.17	0.44
5:1H:658:C:H2'	5:1H:659:C:C6	2.52	0.44
5:1H:851:U:OP1	50:L8:49:LYS:NZ	2.45	0.44
5:1H:1001:A:H2'	5:1H:1002:G:O4'	2.16	0.44
5:1H:1012:U:O4	34:58:25:ARG:HA	2.17	0.44
5:1H:2001:A:H2'	5:1H:2002:G:C8	2.53	0.44
5:1H:2259:G:C2	5:1H:2282:G:C6	3.04	0.44
29:21:135:HIS:CD2	29:21:135:HIS:N	2.82	0.44
30:31:117:ARG:HD2	30:31:117:ARG:HA	1.61	0.44
40:B8:26:ASP:HB2	40:B8:90:GLN:O	2.16	0.44
40:B8:58:ASN:ND2	40:B8:58:ASN:O	2.50	0.44
40:B8:88:ILE:HD12	40:B8:90:GLN:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:C8:58:ARG:O	41:C8:62:ILE:HG13	2.17	0.44
41:C8:88:ILE:C	41:C8:90:VAL:N	2.70	0.44
42:D8:82:ARG:HH11	42:D8:82:ARG:HD3	1.56	0.44
46:H8:63:ASP:CB	46:H8:65:GLN:HG3	2.43	0.44
1:1G:67:C:H2'	1:1G:68:G:C8	2.52	0.44
1:1G:244:U:H6	1:1G:244:U:H5'	1.82	0.44
1:1G:543:C:OP1	8:32:14:ARG:HD2	2.16	0.44
1:1G:1054:C:O2'	1:1G:1055:A:O5'	2.28	0.44
1:1G:1208:C:H2'	1:1G:1209:C:C6	2.52	0.44
1:1G:1320:C:C4	1:1G:1321:C:N4	2.85	0.44
1:1G:1321:C:H3'	1:1G:1322:C:H5"	1.98	0.44
1:1G:1505:G:H4'	1:1G:1506:U:H5"	1.99	0.44
6:12:138:LEU:H	6:12:138:LEU:HG	1.59	0.44
6:12:138:LEU:O	6:12:141:GLU:HB3	2.16	0.44
6:12:146:GLN:O	6:12:149:LEU:N	2.49	0.44
6:12:208:ILE:HA	6:12:211:ILE:HD12	1.99	0.44
8:32:22:LYS:O	8:32:113:SER:HB3	2.17	0.44
1:13:830:G:H2'	1:13:831:U:O4'	2.17	0.44
5:14:223:A:N1	5:14:407:G:O2'	2.42	0.44
5:14:484:C:H2'	5:14:485:C:C6	2.52	0.44
5:14:819:A:H2'	5:14:820:A:H5'	1.99	0.44
5:14:1016:G:H2'	5:14:1017:G:O4'	2.17	0.44
5:14:2637:U:H2'	5:14:2638:G:O4'	2.17	0.44
6:1E:178:ARG:HB2	6:1E:178:ARG:HH11	1.83	0.44
11:6E:5:ARG:NE	11:6E:7:ALA:HA	2.32	0.44
16:3I:43:VAL:HG23	16:3I:93:LEU:HD22	1.99	0.44
17:4I:49:THR:HB	17:4I:52:GLU:HG2	1.99	0.44
20:7I:34:GLU:HG2	20:7I:35:LYS:N	2.32	0.44
21:8I:11:VAL:HG22	21:8I:20:THR:O	2.17	0.44
24:BI:29:LYS:HE3	24:BI:29:LYS:HB2	1.63	0.44
2:3K:35:A:H2'	2:3K:36:A:H8	1.82	0.44
5:1H:234:C:H2'	5:1H:235:U:C6	2.50	0.44
5:1H:736:C:O5'	5:1H:736:C:H6	2.00	0.44
5:1H:916:G:C2'	5:1H:917:A:H5"	2.48	0.44
5:1H:1061:U:O2'	5:1H:1070:A:O4'	2.31	0.44
5:1H:1530:G:O6	5:1H:1542:G:N2	2.50	0.44
5:1H:1750:G:C2	5:1H:1751:C:C5	3.05	0.44
5:1H:2360:A:OP1	55:Q8:49:VAL:HB	2.17	0.44
5:1H:2364:C:H2'	5:1H:2365:G:O4'	2.17	0.44
5:1H:2592:G:C5	5:1H:2593:U:C4	3.05	0.44
27:1J:45:A:N3	27:1J:45:A:H2'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:119:ALA:CB	28:11:130:ALA:HB3	2.46	0.44
28:11:217:ARG:H	28:11:217:ARG:HG2	1.51	0.44
29:21:15:PHE:HA	29:21:19:ARG:O	2.17	0.44
31:41:68:PRO:HB3	31:41:92:VAL:HB	1.99	0.44
32:51:32:GLU:O	32:51:33:LEU:HD23	2.17	0.44
38:98:103:ARG:HD2	38:98:108:GLY:O	2.17	0.44
44:F8:3:THR:HA	44:F8:6:ASP:HB2	1.99	0.44
46:H8:3:TYR:O	46:H8:58:VAL:HG22	2.18	0.44
50:L8:12:PRO:O	50:L8:20:LYS:NZ	2.51	0.44
1:1G:76:G:C6	1:1G:77:C:C4	3.05	0.44
1:1G:849:C:H2'	1:1G:850:U:O4'	2.17	0.44
6:12:27:LYS:HB2	6:12:194:PRO:HD2	1.99	0.44
6:12:82:ARG:NH1	6:12:92:TYR:OH	2.50	0.44
1:13:130:A:O2'	1:13:131:C:O5'	2.31	0.44
1:13:592:G:C6	1:13:648:A:C6	3.05	0.44
1:13:662:G:O2'	1:13:836:G:OP1	2.33	0.44
1:13:760:G:H2'	1:13:761:G:H5'	1.99	0.44
1:13:1074:G:N3	1:13:1102:A:C2	2.86	0.44
2:3L:50:U:H2'	2:3L:51:U:C6	2.52	0.44
5:14:7:G:H2'	5:14:8:A:C8	2.52	0.44
5:14:234:C:H2'	5:14:235:U:H6	1.82	0.44
5:14:266:G:H2'	5:14:267:C:O5'	2.17	0.44
5:14:270(Y):G:C2	5:14:270(Z):U:O4	2.70	0.44
5:14:524:U:H2'	5:14:525:U:H6	1.82	0.44
5:14:1921:G:H2'	5:14:1922:G:C8	2.52	0.44
5:14:2329:G:H2'	5:14:2330:G:O4'	2.18	0.44
5:14:2712:U:O2'	5:14:2712(A):A:P	2.75	0.44
22:9I:53:ARG:NE	22:9I:58:LEU:O	2.50	0.44
5:1H:71:A:OP1	5:1H:72:U:H2'	2.18	0.44
5:1H:242:G:H5'	55:Q8:60:LEU:HD13	2.00	0.44
5:1H:309:G:N3	5:1H:329:G:O2'	2.50	0.44
5:1H:1202:C:N4	5:1H:1203:G:C6	2.85	0.44
5:1H:1387:C:C2	5:1H:1388:G:C8	3.06	0.44
5:1H:1514:U:H2'	5:1H:1515:C:H6	1.80	0.44
5:1H:1665:A:N7	58:1H:4205:HOH:O	2.36	0.44
5:1H:2318:G:H22	39:A8:2:ALA:CA	2.29	0.44
29:21:21:VAL:HA	29:21:22:PRO:HD3	1.58	0.44
32:51:15:VAL:HG12	32:51:29:PRO:HD2	1.99	0.44
37:88:5:ARG:HD3	37:88:5:ARG:H	1.79	0.44
46:H8:124:ILE:HD12	46:H8:125:LEU:N	2.32	0.44
53:O8:17:LYS:C	53:O8:19:ARG:H	2.20	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:570:G:H2'	1:1G:571:U:C6	2.52	0.44
1:1G:648:A:H2'	1:1G:649:G:C8	2.52	0.44
1:1G:1112:C:C4	7:22:178:LEU:HD23	2.53	0.44
1:1G:1369:C:H2'	1:1G:1370:G:O4'	2.17	0.44
7:22:21:ARG:HB3	7:22:21:ARG:NH1	2.32	0.44
7:22:136:GLN:O	7:22:139:GLN:N	2.51	0.44
1:13:824:C:O2'	12:7E:1:MET:HB3	2.18	0.44
5:14:37:C:H2'	5:14:38:A:H8	1.81	0.44
5:14:270(E):G:H2'	5:14:270(F):U:C6	2.52	0.44
5:14:327:G:N2	5:14:336:C:C2	2.85	0.44
5:14:600:G:N2	5:14:605:C:O3'	2.50	0.44
5:14:654:A:H8	5:14:654:A:OP1	2.00	0.44
5:14:1039:G:H1'	5:14:1117:G:N2	2.32	0.44
5:14:2569:G:C2	5:14:2570:G:C8	3.05	0.44
6:1E:22:LYS:C	6:1E:24:TRP:H	2.19	0.44
6:1E:68:ILE:HG12	6:1E:161:ALA:HB3	1.99	0.44
22:9I:47:THR:O	22:9I:83:GLU:N	2.30	0.44
5:1H:7:G:N2	5:1H:8:A:N3	2.66	0.44
5:1H:11:G:H2'	5:1H:12:U:H5'	1.99	0.44
5:1H:68:G:H2'	5:1H:69:C:O4'	2.17	0.44
5:1H:154:G:H2'	5:1H:155:C:O4'	2.17	0.44
5:1H:188:G:H1	5:1H:208:C:H42	1.64	0.44
5:1H:1296:G:C2'	5:1H:1297:C:H5'	2.47	0.44
5:1H:1337:G:H2'	5:1H:1338:G:C8	2.52	0.44
5:1H:1478:G:O2'	5:1H:1479:G:H5'	2.17	0.44
5:1H:1889:A:H2'	5:1H:1890:A:O4'	2.17	0.44
5:1H:2053:G:OP1	29:21:144:ARG:HD3	2.16	0.44
5:1H:2080:G:H5"	5:1H:2080:G:C8	2.52	0.44
5:1H:2109:U:N3	5:1H:2110:G:O6	2.50	0.44
5:1H:2286:A:OP1	53:O8:28:ARG:NH2	2.45	0.44
5:1H:2592:G:C6	5:1H:2593:U:C4	3.06	0.44
29:21:46:ALA:HB1	29:21:80:GLU:HB3	1.99	0.44
33:61:9:LEU:HD12	33:61:9:LEU:HA	1.75	0.44
33:61:86:THR:O	33:61:122:GLU:HG3	2.17	0.44
34:58:37:LYS:HE2	34:58:37:LYS:HB3	1.80	0.44
34:58:47:ALA:HB2	34:58:112:LEU:HD11	2.00	0.44
35:68:91:LEU:HD12	35:68:91:LEU:HA	1.72	0.44
36:78:106:LEU:O	36:78:107:LYS:C	2.55	0.44
37:88:17:LEU:HD23	37:88:17:LEU:HA	1.58	0.44
37:88:20:ALA:HB2	37:88:99:PRO:HD2	1.99	0.44
39:A8:36:TYR:N	39:A8:36:TYR:CD1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:E8:86:LEU:HD12	43:E8:87:PRO:HD2	1.98	0.44
51:M8:38:LYS:O	51:M8:39:CYS:HB3	2.18	0.44
53:O8:20:ASN:C	53:O8:21:TYR:CG	2.91	0.44
1:1G:191(F):U:H2'	1:1G:191:G:H8	1.81	0.44
1:13:757:U:H5"	1:13:822:C:O2	2.17	0.44
1:13:983:A:H2	1:13:984:C:C6	2.36	0.44
1:13:1068:G:N7	1:13:1094:G:H2'	2.32	0.44
1:13:1434:A:H2'	1:13:1435:G:O4'	2.18	0.44
3:2L:14:A:C2	3:2L:23:G:C4	3.06	0.44
5:14:49:A:H4'	5:14:50:U:H5"	1.98	0.44
5:14:1183:G:OP2	5:14:1183:G:H8	2.01	0.44
5:14:1966:A:H4'	5:14:1967:C:OP1	2.17	0.44
5:14:2372:G:H2'	5:14:2373:G:C8	2.52	0.44
5:14:2851:A:C5	5:14:2852:G:C5	3.06	0.44
8:3E:29:PRO:HA	8:3E:34:GLU:HG3	1.99	0.44
3:2K:59:A:H4'	3:2K:60:A:OP1	2.18	0.44
2:3K:70:G:C5	2:3K:71:G:N7	2.86	0.44
5:1H:270(J):G:H1	5:1H:270(P):C:N4	2.14	0.44
5:1H:761:A:C8	58:1H:4181:HOH:O	2.56	0.44
5:1H:906:G:OP1	37:88:141:GLN:HG2	2.18	0.44
5:1H:1389:G:C2	5:1H:1390:U:C2	3.06	0.44
5:1H:1533:C:H2'	5:1H:1534:G:C6	2.52	0.44
5:1H:2714:G:P	58:1H:3681:HOH:O	2.76	0.44
28:11:226:MET:HB3	28:11:230:ASP:HB2	1.99	0.44
29:21:61:ARG:O	29:21:63:LEU:HD22	2.17	0.44
32:51:166:GLY:O	32:51:167:GLU:HG2	2.18	0.44
34:58:97:ARG:H	34:58:100:GLU:HG3	1.81	0.44
36:78:138:LEU:HD12	36:78:144:GLU:CG	2.37	0.44
39:A8:8:GLU:HA	39:A8:11:LYS:HB3	2.00	0.44
45:G8:89:PHE:CD2	45:G8:90:LEU:N	2.86	0.44
46:H8:8:TYR:HB2	46:H8:38:TYR:CE1	2.53	0.44
46:H8:165:VAL:HB	46:H8:167:PRO:HD3	1.98	0.44
47:I8:47:PRO:CB	47:I8:51:VAL:HG12	2.48	0.44
52:N8:20:ARG:HG2	52:N8:23:HIS:CE1	2.53	0.44
1:1G:5:U:O2'	8:32:84:LYS:HG3	2.18	0.44
1:1G:195:A:C6	1:1G:196:A:N1	2.86	0.44
1:1G:589:C:C2	1:1G:650:G:N2	2.82	0.44
1:1G:1399:C:C2	1:1G:1502:A:N6	2.86	0.44
1:13:590:C:H2'	1:13:591:U:C6	2.52	0.44
1:13:1305:G:N2	1:13:1331:G:C4	2.86	0.44
5:14:960:A:C8	5:14:962:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1451:C:H3'	5:14:1453:A:H5'	1.99	0.44
5:14:1453:A:O2'	5:14:1454:U:H2'	2.17	0.44
5:14:1795:C:H2'	5:14:1796:U:H6	1.83	0.44
5:14:2026:C:N4	5:14:2027:G:C5	2.86	0.44
5:14:2105:C:H2'	5:14:2106:G:O4'	2.18	0.44
6:1E:168:THR:OG1	6:1E:192:SER:HB2	2.18	0.44
25:1F:5:ASP:O	25:1F:11:GLY:HA3	2.17	0.44
26:1K:38:A:H5'	5:1H:1913:A:C6	2.52	0.44
2:3K:54:U:H2'	2:3K:55:PSU:O4'	2.18	0.44
5:1H:34:C:OP2	5:1H:34:C:C6	2.68	0.44
5:1H:74:A:H8	5:1H:74:A:O5'	2.00	0.44
5:1H:500:G:N2	5:1H:502:A:H3'	2.32	0.44
5:1H:1287:A:C5	5:1H:1288:U:C4	3.05	0.44
5:1H:1479:G:C4	5:1H:1480:G:C8	3.05	0.44
5:1H:1509:C:N4	5:1H:1511:A:H62	2.15	0.44
5:1H:1952:A:C6	35:68:22:ILE:HD12	2.53	0.44
5:1H:2320:A:H8	5:1H:2321:G:O6	2.01	0.44
27:1J:97:G:H2'	27:1J:98:G:O4'	2.17	0.44
28:11:69:ARG:HG3	28:11:69:ARG:NH1	2.32	0.44
28:11:118:VAL:HG22	28:11:119:ALA:N	2.33	0.44
28:11:159:ALA:HB1	28:11:198:ASN:O	2.17	0.44
30:31:77:ASP:OD1	30:31:77:ASP:N	2.25	0.44
31:41:61:ALA:HA	31:41:66:GLN:O	2.18	0.44
33:61:86:THR:HA	33:61:123:LEU:HD13	2.00	0.44
33:61:114:LEU:HB3	33:61:115:ALA:H	1.61	0.44
34:58:2:LYS:N	34:58:2:LYS:HD2	2.33	0.44
42:D8:3:ALA:HB3	42:D8:14:VAL:HG23	1.98	0.44
55:Q8:34:TRP:CH2	55:Q8:39:LYS:HB2	2.52	0.44
1:1G:91:C:H2'	1:1G:92:G:C8	2.53	0.44
1:1G:485:G:HO2'	1:1G:486:U:H6	1.63	0.44
1:1G:540:G:H2'	1:1G:541:G:O4'	2.18	0.44
1:1G:959:A:O2'	1:1G:984:C:O2'	2.29	0.44
1:1G:1028(A):C:O2	1:1G:1033:G:N2	2.50	0.44
1:1G:1043:C:H2'	1:1G:1044:A:C8	2.52	0.44
1:1G:1073:U:H2'	1:1G:1074:G:C8	2.52	0.44
1:1G:1179:A:H2'	1:1G:1180:A:O4'	2.18	0.44
1:1G:1260:C:OP1	1:1G:1284:C:H4'	2.17	0.44
1:13:41:G:H2'	1:13:42:G:C8	2.53	0.44
1:13:511:C:C2	1:13:512:U:C6	3.06	0.44
1:13:1011:G:H2'	1:13:1012:U:O4'	2.17	0.44
1:13:1028(A):C:H42	1:13:1032(A):G:H1	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1347:G:OP2	13:8E:107:ARG:HG2	2.18	0.44
5:14:68:G:H2'	5:14:69:C:O4'	2.17	0.44
5:14:318:C:H2'	5:14:319:C:H6	1.83	0.44
5:14:522:G:H2'	5:14:523:C:C6	2.52	0.44
5:14:523:C:H4'	5:14:541:C:O2	2.18	0.44
5:14:719:C:H6	5:14:719:C:O5'	2.00	0.44
5:14:746:A:H2'	5:14:2612:C:H5"	1.99	0.44
5:14:959:A:C6	5:14:960:A:N1	2.85	0.44
5:14:1316:U:C2'	5:14:1317:A:H5'	2.47	0.44
5:14:1451:C:H42	5:14:1459:G:H1	1.65	0.44
5:14:2079:U:H2'	5:14:2080:G:O4'	2.18	0.44
5:14:2272:U:H5"	5:14:2273:A:OP1	2.18	0.44
8:3E:141:ARG:HB2	8:3E:141:ARG:CZ	2.47	0.44
3:2K:9:G:H1'	3:2K:47:7MG:H5'	1.99	0.44
5:1H:500:G:N1	5:1H:503:A:OP2	2.49	0.44
5:1H:845:G:H8	5:1H:845:G:OP2	2.00	0.44
5:1H:1288:U:C2	5:1H:1327:C:O2	2.71	0.44
5:1H:1423:G:C4	5:1H:1424:G:C8	3.06	0.44
5:1H:1590:U:H2'	5:1H:1591:G:C8	2.52	0.44
5:1H:1598:C:H2'	5:1H:1599:C:C6	2.52	0.44
5:1H:1932:A:H2'	5:1H:1933:G:O4'	2.18	0.44
5:1H:2014:A:H2'	5:1H:2015:A:C8	2.53	0.44
5:1H:2212:A:HO2'	5:1H:2213:U:P	2.40	0.44
5:1H:2489:G:O2'	5:1H:2518:A:N6	2.51	0.44
5:1H:2766:G:H5"	5:1H:2767:C:OP2	2.17	0.44
5:1H:2870:C:H5"	38:98:65:LEU:HD21	2.00	0.44
29:21:24:THR:HG21	29:21:188:VAL:CG2	2.48	0.44
31:41:165:THR:HG23	31:41:168:GLU:OE1	2.17	0.44
32:51:94:TYR:HA	32:51:106:THR:O	2.18	0.44
33:61:120:ILE:HG12	33:61:126:TYR:CE2	2.53	0.44
33:61:123:LEU:HD23	33:61:142:VAL:O	2.16	0.44
36:78:1:MET:HE1	36:78:6:LEU:HA	1.99	0.44
36:78:57:THR:HB	36:78:60:MET:H	1.82	0.44
37:88:5:ARG:O	37:88:6:ARG:C	2.55	0.44
42:D8:46:VAL:HG12	42:D8:47:VAL:H	1.82	0.44
43:E8:27:LYS:HB3	43:E8:31:GLU:HG3	1.98	0.44
45:G8:81:LYS:HB3	45:G8:82:PRO:HA	1.99	0.44
1:1G:35:G:C2	1:1G:550:G:C2	3.05	0.44
1:1G:620:C:H3'	1:1G:621:A:H8	1.83	0.44
1:13:318:G:H1	1:13:335:C:H42	1.65	0.44
1:13:342:C:N4	1:13:347:G:H1	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:436:C:H2'	1:13:437:U:O4'	2.18	0.44
1:13:456:C:H42	1:13:476:G:H1	1.65	0.44
1:13:1272:G:C6	1:13:1273:G:C4	3.06	0.44
1:13:1507:A:C2	1:13:1508:G:C4	3.06	0.44
2:1L:14:A:C2	2:1L:22:G:H1'	2.53	0.44
4:4L:20:C:H2'	4:4L:21:C:H6	1.83	0.44
5:14:198:C:H5'	5:14:2244:U:OP1	2.17	0.44
5:14:198:C:O2'	5:14:199:A:H5'	2.17	0.44
5:14:455:C:N3	5:14:473:G:H5'	2.32	0.44
5:14:579:G:H2'	5:14:580:C:C6	2.53	0.44
5:14:769:G:H2'	5:14:770:G:H8	1.82	0.44
5:14:968:G:H2'	5:14:969:U:O4'	2.18	0.44
5:14:1399:C:H2'	5:14:1400:G:H8	1.83	0.44
5:14:1575:C:H2'	5:14:1576:U:H6	1.83	0.44
5:14:2270:G:H2'	5:14:2271:G:H5'	2.00	0.44
5:14:2438:U:H5"	5:14:2600:A:OP1	2.18	0.44
5:14:2696:U:H2'	5:14:2697:G:C8	2.53	0.44
6:1E:136:VAL:HA	6:1E:139:LYS:HB2	2.00	0.44
6:1E:239:VAL:O	6:1E:239:VAL:HG12	2.18	0.44
9:4E:76:ILE:HG13	9:4E:93:PRO:HB3	2.00	0.44
9:4E:147:ASP:HA	9:4E:150:ARG:NH1	2.33	0.44
11:6E:126:ASP:O	11:6E:130:GLY:N	2.51	0.44
12:7E:34:GLU:HB3	12:7E:118:VAL:HG21	1.98	0.44
16:3I:24:VAL:CB	16:3I:27:LEU:HD12	2.47	0.44
19:6I:10:LYS:HA	19:6I:10:LYS:HD2	1.82	0.44
19:6I:64:ARG:O	19:6I:68:ARG:HB2	2.18	0.44
23:AI:40:ILE:HD11	23:AI:62:ILE:CG2	2.48	0.44
5:1H:844:C:H3'	5:1H:845:G:H8	1.81	0.44
5:1H:1019:U:O2'	5:1H:1021:A:C2	2.70	0.44
5:1H:1389:G:O2'	5:1H:1390:U:H5'	2.18	0.44
5:1H:1971:A:C4	28:11:241:PRO:HD3	2.53	0.44
5:1H:2199:A:H5"	5:1H:2205:C:C5	2.47	0.44
27:16:25:A:OP1	58:16:301:HOH:O	2.20	0.44
30:31:33:LEU:HB3	36:78:6:LEU:HD11	1.98	0.44
36:78:1:MET:CE	36:78:6:LEU:HD13	2.47	0.44
39:A8:66:ALA:HA	39:A8:69:VAL:CG1	2.46	0.44
41:C8:17:ILE:HG23	41:C8:39:LEU:HD12	2.00	0.44
41:C8:28:ARG:O	41:C8:35:ALA:HA	2.18	0.44
43:E8:23:LEU:HD11	52:N8:27:PRO:HA	2.00	0.44
46:H8:105:VAL:HG22	46:H8:140:ASP:HB3	1.99	0.44
1:1G:166:G:H2'	1:1G:167:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:601:C:H2'	1:1G:602:A:H8	1.83	0.44
1:1G:757:U:H2'	1:1G:758:G:O4'	2.17	0.44
7:22:131:ARG:HG3	7:22:131:ARG:HH11	1.83	0.44
7:22:181:ASN:OD1	7:22:204:LEU:HB2	2.18	0.44
1:13:148:G:H2'	1:13:149:A:H8	1.83	0.44
1:13:406:G:H21	8:3E:119:GLN:HE22	1.66	0.44
1:13:668:G:O2'	19:6I:46:HIS:HB3	2.17	0.44
1:13:736:C:H2'	1:13:737:A:H8	1.83	0.44
1:13:891:U:H2'	1:13:892:A:H8	1.82	0.44
1:13:922:G:C6	1:13:923:A:C6	3.06	0.44
1:13:1182:G:H4'	1:13:1183:A:H5"	1.99	0.44
1:13:1203:C:H2'	1:13:1204:A:O4'	2.17	0.44
1:13:1342:C:H2'	1:13:1343:G:C8	2.53	0.44
5:14:414:C:O2'	5:14:415:A:H5'	2.18	0.44
5:14:686:G:H2'	5:14:788:A:N1	2.33	0.44
5:14:1249:U:O2	5:14:1249:U:H2'	2.18	0.44
5:14:1492:G:OP1	5:14:2210:G:N1	2.50	0.44
5:14:1507:A:C4	5:14:1508:A:H1'	2.53	0.44
5:14:2343:C:O3'	5:14:2373:G:H4'	2.18	0.44
5:14:2653:U:H3'	5:14:2654:A:C8	2.52	0.44
6:1E:15:VAL:H	6:1E:16:HIS:CD2	2.35	0.44
6:1E:226:ARG:HG3	6:1E:227:GLY:N	2.32	0.44
7:2E:91:LEU:HB2	7:2E:99:VAL:HG21	1.99	0.44
9:4E:147:ASP:O	9:4E:151:LEU:HB2	2.18	0.44
11:6E:22:LEU:HG	11:6E:62:PHE:HE2	1.83	0.44
13:8E:18:PHE:CD2	13:8E:62:TYR:HD2	2.33	0.44
21:8I:22:LEU:HD22	21:8I:88:TYR:CD1	2.53	0.44
5:1H:127:A:H5"	5:1H:128:C:C6	2.52	0.44
5:1H:1332:G:N2	5:1H:1610:A:H8	2.10	0.44
5:1H:1519:G:O2'	5:1H:1520:U:H5'	2.18	0.44
5:1H:1728:G:H8	5:1H:1732:A:H62	1.66	0.44
5:1H:1885:A:H2'	5:1H:1886:C:O4'	2.18	0.44
5:1H:2053:G:H5'	29:21:144:ARG:O	2.18	0.44
5:1H:2144:U:N3	5:1H:2146:C:O2	2.51	0.44
5:1H:2327:A:H2'	5:1H:2328:A:H8	1.82	0.44
5:1H:2330:G:H2'	5:1H:2331:G:O4'	2.18	0.44
5:1H:2371:G:C4'	53:O8:45:LYS:HG3	2.48	0.44
5:1H:2545:G:H2'	5:1H:2546:U:O4'	2.17	0.44
27:16:24:G:N7	27:16:56:G:H2'	2.33	0.44
30:31:164:ARG:HG3	30:31:175:THR:OG1	2.17	0.44
36:78:19:VAL:HG11	36:78:25:SER:OG	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:88:43:THR:O	37:88:46:GLN:N	2.48	0.44
42:D8:39:LEU:O	42:D8:40:LEU:HD23	2.18	0.44
44:F8:1:MET:O	44:F8:3:THR:HG23	2.18	0.44
44:F8:49:VAL:HG22	44:F8:50:LYS:N	2.32	0.44
45:G8:87:LYS:N	45:G8:94:LYS:HG2	2.24	0.44
45:G8:94:LYS:HD2	45:G8:94:LYS:HA	1.72	0.44
48:J8:85:LEU:HA	48:J8:85:LEU:HD13	1.65	0.44
53:O8:21:TYR:HB2	53:O8:22:ALA:H	1.56	0.44
53:O8:41:PRO:HB2	53:O8:43:CYS:H	1.83	0.44
1:1G:571:U:O2	1:1G:918:A:H5'	2.18	0.44
6:12:77:ALA:HB2	6:12:211:ILE:HD13	2.00	0.44
8:32:60:GLU:OE2	8:32:198:VAL:HA	2.18	0.44
1:13:187:C:O2	1:13:191(A):G:C2	2.71	0.43
1:13:352:C:P	58:13:1900:HOH:O	2.76	0.43
1:13:465:A:N7	1:13:467:G:C6	2.86	0.43
1:13:756:C:H2'	1:13:757:U:O4'	2.18	0.43
1:13:793:U:OP1	58:13:2018:HOH:O	2.21	0.43
1:13:1103:C:H2'	1:13:1104:G:O4'	2.18	0.43
1:13:1470:G:H2'	1:13:1471:G:O4'	2.18	0.43
1:13:1505:G:P	58:13:1804:HOH:O	2.70	0.43
3:2L:44:A:C2	3:2L:45:A:C5	3.06	0.43
3:2L:56:PSU:N3	3:2L:59:A:OP2	2.42	0.43
5:14:407:G:H2'	5:14:408:G:H8	1.83	0.43
5:14:740:U:H2'	5:14:741:G:C8	2.53	0.43
5:14:1196:C:O4'	5:14:1227:A:C2	2.71	0.43
5:14:1270:C:H5"	5:14:1271:G:C5'	2.48	0.43
5:14:1668:A:N3	5:14:1670:C:C4	2.86	0.43
5:14:2287:A:C2	5:14:2289:G:C8	3.06	0.43
5:14:2302:G:H2'	5:14:2303:G:O4'	2.18	0.43
5:14:2850:A:H5'	5:14:2868:A:C2	2.53	0.43
6:1E:8:LYS:H	6:1E:8:LYS:HE2	1.82	0.43
11:6E:46:ALA:O	11:6E:49:ILE:N	2.49	0.43
12:7E:81:HIS:HB2	12:7E:138:TRP:CE3	2.53	0.43
17:4I:19:LEU:HD21	17:4I:56:LEU:HD11	2.00	0.43
5:1H:31:C:O2'	5:1H:32:C:H5'	2.18	0.43
5:1H:216:A:H5'	58:1H:3796:HOH:O	2.16	0.43
5:1H:250:G:P	36:78:60:MET:HE1	2.57	0.43
5:1H:675:A:C8	5:1H:804:A:C6	3.06	0.43
5:1H:1523:U:H2'	5:1H:1524:G:O4'	2.18	0.43
5:1H:1728:G:H5'	5:1H:1729:A:OP2	2.17	0.43
5:1H:2782:G:C8	5:1H:2782:G:O5'	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:105:ILE:HD12	28:11:105:ILE:HA	1.83	0.43
29:21:24:THR:N	29:21:184:VAL:O	2.48	0.43
31:41:16:ARG:O	31:41:19:LEU:HB2	2.18	0.43
31:41:18:GLU:O	31:41:22:ARG:HG3	2.18	0.43
32:51:12:PRO:CG	32:51:13:LYS:HE2	2.47	0.43
32:51:83:TYR:CB	32:51:135:GLY:H	2.31	0.43
35:68:4:PRO:O	35:68:5:GLN:CB	2.66	0.43
42:D8:6:LYS:O	42:D8:6:LYS:HG3	2.17	0.43
1:1G:547:A:OP1	58:1G:1701:HOH:O	2.21	0.43
1:1G:854:G:C2	1:1G:855:G:C8	3.06	0.43
1:1G:953:G:C6	1:1G:954:G:C4	3.06	0.43
1:1G:1122:U:N3	1:1G:1123:A:N7	2.66	0.43
1:1G:1368:G:O2'	1:1G:1369:C:H5'	2.18	0.43
8:32:8:VAL:O	8:32:11:LEU:N	2.44	0.43
1:13:750:G:C4	1:13:751:U:C5	3.06	0.43
1:13:986:A:H2'	1:13:987:G:C8	2.53	0.43
1:13:988:G:H2'	1:13:989:C:O4'	2.18	0.43
1:13:1304:G:OP1	25:1F:2:GLY:N	2.51	0.43
3:2L:73:A:N6	3:2L:74:A:C6	2.86	0.43
5:14:341:G:C6	5:14:342:G:C5	3.06	0.43
5:14:678:C:H2'	5:14:679:C:C6	2.52	0.43
5:14:864:G:C6	5:14:865:C:N4	2.86	0.43
5:14:895:U:H4'	5:14:896:A:C4	2.53	0.43
5:14:1112:G:H2'	5:14:1113:U:C6	2.53	0.43
5:14:1448:G:H1'	5:14:1528:A:H62	1.83	0.43
5:14:1496:A:H2'	5:14:1498:C:C5	2.53	0.43
5:14:1688:U:H2'	5:14:1698:A:N6	2.33	0.43
5:14:1820:U:H4'	5:14:1821:A:OP2	2.18	0.43
5:14:2291:U:H3	5:14:2341:G:H1	1.64	0.43
8:3E:126:ILE:HG22	8:3E:127:THR:N	2.33	0.43
8:3E:148:VAL:HG21	8:3E:158:ILE:HG21	2.01	0.43
9:4E:35:GLY:H	9:4E:112:LEU:HD13	1.83	0.43
12:7E:86:ILE:HG22	12:7E:87:SER:H	1.82	0.43
21:8I:13:ASP:OD1	21:8I:14:LYS:NZ	2.51	0.43
22:9I:66:LEU:HD11	22:9I:70:ILE:HD11	1.99	0.43
26:1K:66:U:H2'	26:1K:67:C:C6	2.53	0.43
2:3K:24:G:H2'	2:3K:25:C:C6	2.53	0.43
5:1H:125:G:H5'	5:1H:125:G:C8	2.53	0.43
5:1H:295:G:C5	5:1H:344:G:C2	3.06	0.43
5:1H:405:U:H4'	5:1H:406:G:OP2	2.18	0.43
5:1H:722:A:H2'	5:1H:723:G:H8	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1138:G:H21	34:58:106:MET:CE	2.29	0.43
5:1H:1665:A:N6	58:1H:4205:HOH:O	2.50	0.43
5:1H:2027:G:C2'	5:1H:2028:U:H5'	2.49	0.43
5:1H:2695:C:H2'	5:1H:2696:U:C6	2.53	0.43
5:1H:2699:C:H2'	5:1H:2700:C:O4'	2.18	0.43
30:31:28:ILE:HG21	30:31:116:ASP:HB2	1.99	0.43
30:31:130:ALA:N	30:31:132:VAL:HG13	2.22	0.43
34:58:42:TRP:HA	34:58:48:MET:HE1	1.99	0.43
38:98:2:ARG:HB3	38:98:3:HIS:H	1.53	0.43
41:C8:105:VAL:HG22	42:D8:45:THR:HG21	2.01	0.43
44:F8:34:ALA:HA	44:F8:38:GLU:OE1	2.18	0.43
50:L8:35:ARG:HB3	50:L8:37:LEU:CD2	2.49	0.43
51:M8:1:MET:SD	51:M8:6:HIS:CE1	3.11	0.43
1:1G:862:C:O2'	1:1G:863:U:H5'	2.18	0.43
1:1G:1053:G:O2'	1:1G:1054:C:O5'	2.33	0.43
1:1G:1157:A:O2'	1:1G:1158:C:P	2.77	0.43
6:12:130:ARG:HE	6:12:130:ARG:N	2.17	0.43
1:13:266:G:O3'	21:8I:67:LYS:HB2	2.18	0.43
1:13:484:G:H5'	1:13:486:U:O4'	2.18	0.43
1:13:589:C:H42	1:13:650:G:H1	1.66	0.43
1:13:963:G:H1	1:13:972:C:N4	2.08	0.43
1:13:1348:U:H2'	1:13:1349:A:C8	2.44	0.43
2:3L:15:G:N1	2:3L:48:C:N4	2.67	0.43
5:14:931:G:H3'	5:14:931:G:C8	2.53	0.43
5:14:1060:U:H5'	5:14:1061:U:C5	2.53	0.43
5:14:1133:U:O2	5:14:1137:G:H5'	2.18	0.43
5:14:1716:U:H2'	5:14:1717:G:C8	2.52	0.43
5:14:2366:A:H2'	5:14:2367:G:O4'	2.18	0.43
6:1E:60:ASP:HB3	6:1E:64:ARG:NH1	2.33	0.43
8:3E:8:VAL:CG1	8:3E:21:LEU:HB2	2.48	0.43
8:3E:62:GLN:O	8:3E:66:ARG:HD3	2.19	0.43
5:1H:322:A:H5'	5:1H:340:A:H1'	1.99	0.43
5:1H:774:A:H2	5:1H:787:U:HO2'	1.59	0.43
5:1H:775:G:C4	5:1H:794:G:C8	3.06	0.43
5:1H:969:U:H2'	5:1H:970:C:C6	2.54	0.43
5:1H:1438:U:H2'	5:1H:1439:A:C8	2.53	0.43
5:1H:1790:C:H2'	5:1H:1791:A:C5	2.54	0.43
5:1H:1878:G:H2'	5:1H:1879:C:C6	2.53	0.43
5:1H:2127:G:H1	5:1H:2162:G:C1'	2.29	0.43
5:1H:2248:C:C5	5:1H:2249:U:C4	3.07	0.43
5:1H:2356:C:H2'	5:1H:2357:U:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2481:G:HO2'	5:1H:2482:G:C5'	2.31	0.43
5:1H:2552:U:H2'	5:1H:2554:U:OP2	2.18	0.43
27:1J:56:G:H4'	27:1J:57:A:H8	1.84	0.43
27:1J:81:G:H2'	27:1J:82:G:O4'	2.18	0.43
28:11:136:ILE:O	28:11:168:ARG:NH2	2.51	0.43
29:21:35:GLN:HG3	29:21:36:ARG:H	1.83	0.43
31:41:20:ILE:HG13	31:41:20:ILE:H	1.47	0.43
32:51:107:VAL:HB	32:51:152:ARG:HG2	2.00	0.43
33:61:127:VAL:HA	33:61:138:ILE:O	2.18	0.43
36:78:96:THR:HG22	36:78:126:VAL:HB	2.01	0.43
40:B8:114:LEU:HD23	40:B8:114:LEU:HA	1.79	0.43
43:E8:70:TYR:N	43:E8:70:TYR:CD1	2.84	0.43
54:P8:30:VAL:O	54:P8:34:ARG:HG3	2.18	0.43
55:Q8:53:PRO:HB3	55:Q8:56:GLU:H	1.83	0.43
1:1G:197:A:H3'	1:1G:197:A:OP2	2.17	0.43
1:1G:407:G:O2'	8:32:116:GLN:HG3	2.18	0.43
1:1G:617:G:C2	1:1G:618:C:C5	3.06	0.43
1:1G:631:G:H3'	1:1G:632:A:C8	2.45	0.43
1:1G:1057:G:H2'	1:1G:1058:G:C8	2.52	0.43
1:1G:1420:C:O5'	1:1G:1420:C:H6	2.02	0.43
1:1G:1443:G:H3'	1:1G:1446:A:C5'	2.49	0.43
1:1G:1507:A:H2'	1:1G:1508:G:C8	2.53	0.43
8:32:108:LEU:HD13	8:32:174:LEU:HD22	2.00	0.43
1:13:22:G:C6	1:13:23:C:C4	3.06	0.43
1:13:165:C:H2'	1:13:166:G:H8	1.82	0.43
1:13:198:G:H2'	1:13:199:G:C8	2.53	0.43
1:13:342:C:H42	1:13:347:G:H1	1.66	0.43
1:13:922:G:H1'	9:4E:19:MET:HB2	2.00	0.43
1:13:983:A:H1'	1:13:1049:U:O2	2.18	0.43
1:13:1252:A:H2'	1:13:1253:G:O4'	2.18	0.43
5:14:296:C:H42	5:14:342:G:H1	1.66	0.43
5:14:1163:G:H2'	5:14:1164:G:H8	1.83	0.43
5:14:1260:G:C5	5:14:1261:C:C5	3.06	0.43
5:14:2157:G:O2'	5:14:2158:A:C8	2.71	0.43
5:14:2280:G:O2'	5:14:2388:A:N1	2.38	0.43
5:14:2317:C:N3	5:14:2318:G:C8	2.86	0.43
17:4I:84:ILE:HG13	23:AI:74:PHE:HE1	1.84	0.43
19:6I:9:GLN:HA	19:6I:12:ILE:HG13	2.01	0.43
2:3K:36:A:C6	2:3K:37:MIA:C4	3.01	0.43
5:1H:492:A:H2'	5:1H:493:G:O4'	2.18	0.43
5:1H:587:C:N3	36:78:33:ARG:NH1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:638:G:C5	5:1H:651:G:C2	3.07	0.43
5:1H:880:G:H2'	5:1H:881:G:H8	1.82	0.43
5:1H:1340:U:H4'	5:1H:1341:U:OP2	2.19	0.43
5:1H:1528:A:O2'	5:1H:1529:A:H5'	2.17	0.43
5:1H:1727:U:H2'	5:1H:1728:G:O4'	2.18	0.43
5:1H:2022:U:O2'	5:1H:2617:C:H5'	2.19	0.43
5:1H:2035:G:H4'	5:1H:2036:C:OP2	2.19	0.43
5:1H:2137:C:H42	5:1H:2154:G:H22	1.66	0.43
5:1H:2369:A:H2'	5:1H:2370:G:H8	1.82	0.43
5:1H:2436:G:C6	5:1H:2437:U:C4	3.06	0.43
5:1H:2516:G:O2'	5:1H:2517:C:H5'	2.18	0.43
5:1H:2629:A:O2'	5:1H:2630:G:H5"	2.17	0.43
5:1H:2852:G:C6	5:1H:2853:C:N3	2.86	0.43
30:31:63:LYS:HG2	30:31:65:TRP:O	2.18	0.43
30:31:196:LEU:C	30:31:197:ASP:O	2.55	0.43
31:41:16:ARG:N	31:41:17:PRO:HD2	2.33	0.43
31:41:37:VAL:O	31:41:94:LEU:HG	2.18	0.43
31:41:52:ILE:HD13	31:41:52:ILE:HA	1.84	0.43
32:51:8:PRO:HG2	32:51:69:ARG:NH2	2.33	0.43
44:F8:65:ARG:HB3	44:F8:65:ARG:NH1	2.34	0.43
46:H8:125:LEU:HG	46:H8:164:ALA:HB3	2.00	0.43
53:O8:23:THR:OG1	55:Q8:36:LYS:NZ	2.51	0.43
53:O8:44:ARG:O	53:O8:45:LYS:HG2	2.19	0.43
1:1G:406:G:H1	1:1G:436:C:H42	1.67	0.43
1:1G:793:U:O2	1:1G:1516:G:H4'	2.19	0.43
1:1G:821:G:H2'	1:1G:822:C:H6	1.82	0.43
1:13:881:G:P	16:3I:12:ARG:HH22	2.40	0.43
1:13:994:A:N7	1:13:1216:G:H4'	2.33	0.43
1:13:1157:A:C6	1:13:1180:A:C5	3.07	0.43
1:13:1162:C:O5'	1:13:1162:C:H6	2.00	0.43
1:13:1273:G:H5'	1:13:1274:G:OP2	2.18	0.43
1:13:1328:C:OP1	25:1F:21:TYR:OH	2.34	0.43
1:13:1362:C:O2	1:13:1362(A):C:H5	2.02	0.43
3:2L:56:PSU:O4	3:2L:58:A:C8	2.71	0.43
3:2L:65:G:C6	3:2L:66:C:C4	3.06	0.43
2:3L:20:H2U:H51	2:3L:21:A:C8	2.54	0.43
5:14:1056:G:H5'	5:14:1086:A:N3	2.34	0.43
5:14:1187:G:P	58:14:3754:HOH:O	2.76	0.43
5:14:2128:C:H1'	5:14:2173:A:C2	2.49	0.43
6:1E:155:LEU:HD22	6:1E:155:LEU:HA	1.75	0.43
11:6E:51:GLN:OE1	11:6E:51:GLN:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:6E:113:GLU:HG2	11:6E:119:ARG:HG2	2.00	0.43
22:9I:53:ARG:HH21	22:9I:59:SER:HA	1.83	0.43
26:1K:10:G:H2'	26:1K:11:C:C6	2.53	0.43
5:1H:1062:G:H1'	5:1H:1088:A:C5	2.53	0.43
5:1H:1339:G:N2	5:1H:1603:A:H1'	2.33	0.43
5:1H:1675:C:H2'	5:1H:1676:A:O4'	2.19	0.43
5:1H:1834:U:H4'	5:1H:1969:A:C6	2.53	0.43
5:1H:2002:G:C5	58:1H:4385:HOH:O	2.71	0.43
5:1H:2712:U:O2'	5:1H:2713:A:H5'	2.18	0.43
5:1H:2801:A:H2'	5:1H:2802:G:H4'	2.00	0.43
27:16:112:G:H2'	27:16:113:C:H6	1.83	0.43
29:21:101:ARG:NH1	29:21:171:GLU:HB2	2.32	0.43
29:21:134:ILE:C	29:21:134:ILE:HD12	2.39	0.43
35:68:31:LYS:HB3	35:68:32:TYR:CE2	2.53	0.43
36:78:114:ILE:HD12	36:78:134:ALA:HB1	1.99	0.43
41:C8:101:ARG:O	41:C8:103:PRO:HD3	2.18	0.43
43:E8:79:GLY:CA	43:E8:100:THR:HG22	2.48	0.43
1:1G:536:C:H2'	1:1G:537:G:C8	2.54	0.43
1:1G:827:U:H5"	1:1G:828:A:OP2	2.19	0.43
1:1G:848:C:H2'	1:1G:849:C:C6	2.54	0.43
1:1G:1028(A):C:H42	1:1G:1032(B):G:H22	1.65	0.43
1:1G:1331:G:OP1	1:1G:1331:G:H4'	2.18	0.43
7:22:121:ALA:HB2	7:22:198:VAL:HG21	2.01	0.43
1:13:141:A:H2'	1:13:142:G:H8	1.84	0.43
1:13:590:C:H42	1:13:649:G:H1	1.67	0.43
1:13:649:G:H2'	1:13:650:G:C8	2.47	0.43
5:14:608:A:H2'	5:14:609:A:O4'	2.19	0.43
5:14:1078:U:H1'	5:14:1088:A:C2	2.53	0.43
5:14:1389:G:H2'	5:14:1390:U:O4'	2.18	0.43
5:14:2068:U:N3	5:14:2430:A:H2	2.16	0.43
5:14:2285:C:C3'	5:14:2286:A:H5"	2.49	0.43
5:14:2286:A:H4'	5:14:2287:A:O4'	2.18	0.43
6:1E:23:ARG:HB3	6:1E:23:ARG:NH1	2.34	0.43
19:6I:71:GLN:HG3	19:6I:78:TYR:CE2	2.54	0.43
21:8I:22:LEU:HD12	21:8I:40:LYS:O	2.19	0.43
5:1H:53:A:C8	5:1H:54:G:C8	3.07	0.43
5:1H:546:C:N4	5:1H:547:A:N1	2.67	0.43
5:1H:852:G:O2'	5:1H:853:G:H5'	2.18	0.43
5:1H:1301:A:H2	5:1H:1626:G:N3	2.17	0.43
5:1H:2468:G:H5"	37:88:120:ILE:HD12	1.99	0.43
5:1H:2564:A:OP1	5:1H:2648:C:H4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:16:40:U:O2'	27:16:43:C:H5	2.02	0.43
31:41:61:ALA:O	31:41:65:GLY:N	2.36	0.43
41:C8:30:LYS:HA	41:C8:30:LYS:HD3	1.76	0.43
45:G8:89:PHE:HD2	45:G8:90:LEU:N	2.16	0.43
47:I8:11:ARG:H	47:I8:11:ARG:HG3	1.59	0.43
48:J8:44:PRO:HB2	48:J8:46:LEU:HD13	2.00	0.43
1:1G:620:C:H5'	58:1G:1770:HOH:O	2.18	0.43
1:1G:683:G:H2'	1:1G:684:A:C8	2.54	0.43
1:1G:692:U:O2'	1:1G:694:A:N7	2.46	0.43
1:1G:1256:A:OP2	7:22:26:LYS:NZ	2.39	0.43
1:1G:1468:A:H5"	1:1G:1469:G:OP2	2.17	0.43
1:1G:1509:C:H2'	1:1G:1510:U:O4'	2.18	0.43
1:13:190:G:HO2'	1:13:191(A):G:P	2.42	0.43
1:13:277:C:H2'	1:13:278:G:H8	1.84	0.43
1:13:664:G:N2	1:13:741:G:H1	2.07	0.43
1:13:1179:A:H2'	1:13:1180:A:O4'	2.19	0.43
1:13:1199:U:H4'	14:1I:54:PHE:CE2	2.53	0.43
5:14:51:G:N3	5:14:119:A:C2	2.87	0.43
5:14:638:G:C5	5:14:651:G:C2	3.07	0.43
5:14:717:G:H2'	5:14:718:A:O4'	2.19	0.43
5:14:909:A:C6	5:14:912:C:C2	3.07	0.43
5:14:962:G:H2'	5:14:963:U:C6	2.54	0.43
5:14:1412:A:H2'	5:14:1413:G:C8	2.53	0.43
5:14:2111:C:C6	5:14:2118:U:H4'	2.54	0.43
5:14:2238:G:H2'	5:14:2238:G:N3	2.34	0.43
7:2E:167:TRP:CD1	7:2E:168:ALA:N	2.86	0.43
12:7E:120:THR:OG1	12:7E:123:GLU:HG3	2.18	0.43
14:1I:34:VAL:HG12	14:1I:74:ILE:HG12	2.00	0.43
23:AI:13:ASP:HA	23:AI:16:LEU:HB3	2.01	0.43
24:BI:97:ALA:O	24:BI:99:LEU:N	2.52	0.43
5:1H:208:C:H2'	5:1H:209:C:C6	2.54	0.43
5:1H:241:A:H5"	58:1H:4470:HOH:O	2.19	0.43
5:1H:438:G:H2'	5:1H:439:G:C8	2.54	0.43
5:1H:654(C):G:H2'	5:1H:654(D):G:O4'	2.18	0.43
5:1H:805:G:H4'	5:1H:806:C:OP2	2.19	0.43
5:1H:1019:U:HO2'	5:1H:1021:A:H2	1.65	0.43
5:1H:1404:C:O2'	5:1H:1405:U:H5'	2.19	0.43
5:1H:1666:G:OP1	35:68:66:LYS:HE2	2.19	0.43
5:1H:2286:A:H4'	5:1H:2287:A:O4'	2.19	0.43
5:1H:2577:A:H1'	52:N8:3:LYS:HA	2.00	0.43
5:1H:2693:A:H2'	5:1H:2694:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:119:ARG:HH11	29:21:119:ARG:HG3	1.83	0.43
33:61:124:GLY:H	33:61:142:VAL:HG23	1.84	0.43
40:B8:81:PRO:HG2	40:B8:82:LEU:HD12	2.01	0.43
40:B8:132:LYS:HE2	40:B8:133:GLU:HG3	2.00	0.43
43:E8:58:ALA:O	43:E8:64:MET:HB2	2.18	0.43
44:F8:11:PRO:HB3	44:F8:92:LEU:HD21	2.00	0.43
53:O8:12:GLU:H	53:O8:12:GLU:HG2	1.64	0.43
1:1G:373:A:H2'	1:1G:374:A:H8	1.83	0.43
1:1G:542:G:P	8:32:10:ARG:HH22	2.41	0.43
1:1G:793:U:H5'	1:1G:794:A:O5'	2.19	0.43
1:1G:881:G:C6	1:1G:882:C:C4	3.07	0.43
1:1G:956:U:C2	1:1G:1225:A:C2	3.07	0.43
1:1G:1312:G:H2'	1:1G:1313:U:O4'	2.19	0.43
7:22:37:GLN:O	7:22:40:ARG:HG3	2.17	0.43
7:22:40:ARG:O	7:22:44:GLU:N	2.51	0.43
8:32:138:TYR:C	8:32:138:TYR:CD2	2.92	0.43
1:13:647:C:C4	1:13:648:A:N7	2.87	0.43
1:13:688:G:H2'	1:13:689:C:C6	2.54	0.43
5:14:224:G:H2'	5:14:225:A:O4'	2.18	0.43
5:14:1399:C:O2'	5:14:1400:G:H5'	2.19	0.43
5:14:1795:C:H2'	5:14:1796:U:C6	2.54	0.43
5:14:1860:G:H8	5:14:1860:G:O5'	2.01	0.43
5:14:2320:A:H1'	5:14:2321:G:C6	2.53	0.43
5:14:2438:U:O3'	5:14:2439:A:H3'	2.18	0.43
5:14:2441:C:OP2	5:14:2586:C:O2'	2.31	0.43
6:1E:136:VAL:O	6:1E:140:HIS:N	2.50	0.43
9:4E:36:ASP:CG	9:4E:38:GLN:HB2	2.38	0.43
9:4E:152:ARG:HA	12:7E:64:LYS:HE2	1.99	0.43
10:5E:4:TYR:CD1	10:5E:92:LYS:HA	2.54	0.43
19:6I:6:GLU:H	19:6I:6:GLU:CD	2.22	0.43
21:8I:78:GLU:HG2	21:8I:81:ARG:HD2	2.00	0.43
24:BI:35:THR:HA	24:BI:38:LYS:HD3	2.00	0.43
2:3K:39:PSU:C2'	2:3K:40:C:H5'	2.48	0.43
5:1H:234:C:C2	5:1H:235:U:C5	3.07	0.43
5:1H:572:A:H5"	5:1H:573:G:OP2	2.17	0.43
5:1H:660:G:N2	36:78:12:ALA:HA	2.34	0.43
5:1H:742:G:H2'	5:1H:743:G:H8	1.83	0.43
5:1H:784:A:C8	5:1H:792:G:C5	3.07	0.43
5:1H:818:G:H4'	5:1H:838:C:O3'	2.19	0.43
5:1H:880:G:H22	5:1H:897:C:H42	1.67	0.43
5:1H:1179:C:H2'	5:1H:1180:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1426:G:OP2	5:1H:1427:A:O2'	2.27	0.43
5:1H:1922:G:H2'	5:1H:1923:U:C6	2.53	0.43
5:1H:2012:G:H8	5:1H:2012:G:O5'	2.02	0.43
5:1H:2093:G:C6	5:1H:2225:A:C8	3.07	0.43
5:1H:2309:A:C6	5:1H:2310:A:C8	3.07	0.43
5:1H:2414:G:N3	5:1H:2414:G:H2'	2.33	0.43
5:1H:2715:C:C2'	5:1H:2716:U:H5'	2.49	0.43
27:16:19:G:H2'	27:16:20:C:O4'	2.18	0.43
27:16:43:C:OP1	31:41:67:LYS:NZ	2.51	0.43
27:16:112:G:H2'	27:16:113:C:C6	2.54	0.43
31:41:142:PRO:HG2	31:41:143:GLU:OE2	2.19	0.43
33:61:77:LEU:H	33:61:77:LEU:HD12	1.84	0.43
34:58:29:LYS:H	34:58:29:LYS:HG2	1.54	0.43
34:58:96:GLU:HB2	34:58:122:VAL:HG12	2.01	0.43
36:78:144:GLU:HA	36:78:145:PRO:HD3	1.89	0.43
39:A8:3:ARG:HG2	39:A8:4:LEU:N	2.33	0.43
40:B8:19:LEU:HA	40:B8:20:PRO:HD3	1.79	0.43
44:F8:14:SER:O	44:F8:15:GLU:C	2.57	0.43
48:J8:91:LYS:O	48:J8:93:GLU:N	2.52	0.43
51:M8:2:LYS:HD3	51:M8:2:LYS:HA	1.74	0.43
1:1G:539:A:H2'	1:1G:540:G:H8	1.80	0.43
1:1G:918:A:H2'	1:1G:919:A:O4'	2.18	0.43
6:12:19:HIS:CD2	6:12:20:GLU:H	2.37	0.43
6:12:166:ASP:OD2	6:12:169:LYS:HB2	2.19	0.43
8:32:39:PRO:O	8:32:44:GLY:HA3	2.19	0.43
8:32:64:LEU:HB2	8:32:198:VAL:HG11	1.99	0.43
8:32:154:ASN:O	8:32:159:ARG:HD2	2.19	0.43
1:13:265:G:H5"	21:8I:65:ILE:O	2.18	0.43
1:13:519:C:H2'	1:13:520:A:O4'	2.19	0.43
1:13:1065:U:H4'	1:13:1066:C:O5'	2.19	0.43
1:13:1159:U:C2	1:13:1182:G:C2	3.06	0.43
1:13:1331:G:OP2	17:4I:23:TYR:HD1	2.02	0.43
1:13:1342:C:O2'	13:8E:124:GLN:HG2	2.18	0.43
3:2L:44:A:H2'	3:2L:45:A:H8	1.83	0.43
5:14:236:C:H2'	5:14:237:C:C6	2.53	0.43
5:14:480:A:H2	5:14:499:U:O2	2.02	0.43
5:14:670:A:H4'	5:14:671:C:O5'	2.19	0.43
5:14:1216:G:C4	5:14:1217:C:C5	3.07	0.43
5:14:1310:G:H2'	5:14:1311:G:H5'	2.01	0.43
5:14:1442:G:H2'	5:14:1443:G:C8	2.54	0.43
5:14:1461:G:H2'	5:14:1462:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1484:G:C6	5:14:1485:G:C5	3.07	0.43
5:14:1485:G:N2	5:14:1504:C:N3	2.54	0.43
5:14:1511:A:H3'	5:14:1512:G:H8	1.83	0.43
5:14:1582:C:HO2'	5:14:1586:A:H8	1.66	0.43
5:14:1677:A:H2'	5:14:1678:G:C8	2.54	0.43
5:14:2064:C:H1'	5:14:2450:A:C2	2.54	0.43
5:14:2119:A:N6	5:14:2170:A:N7	2.66	0.43
6:1E:85:ALA:O	6:1E:90:MET:N	2.51	0.43
7:2E:150:LYS:HE3	7:2E:150:LYS:HB2	1.69	0.43
8:3E:90:GLY:O	8:3E:93:PHE:HB3	2.19	0.43
9:4E:152:ARG:HB2	12:7E:64:LYS:HZ3	1.84	0.43
10:5E:75:LEU:HD22	10:5E:79:LEU:HD11	2.01	0.43
13:8E:48:GLU:N	13:8E:49:PRO:HD2	2.33	0.43
2:3K:33:U:H2'	2:3K:35:A:OP2	2.18	0.43
5:1H:66:C:C4	5:1H:67:U:C4	3.07	0.43
5:1H:74:A:O5'	5:1H:74:A:C8	2.72	0.43
5:1H:298:G:H5"	5:1H:299:A:OP1	2.19	0.43
5:1H:470:A:H2'	5:1H:471:A:C8	2.53	0.43
5:1H:973:A:P	58:1H:3944:HOH:O	2.76	0.43
5:1H:1047:G:H2'	5:1H:1110:G:N1	2.34	0.43
5:1H:1142(A):A:C4	5:1H:1144:G:N7	2.86	0.43
5:1H:1890:A:H2	5:1H:2235:G:O4'	2.02	0.43
5:1H:2184:G:C6	5:1H:2185:C:C4	3.06	0.43
5:1H:2636:U:H2'	5:1H:2637:U:H6	1.82	0.43
5:1H:2700:C:C2'	5:1H:2701:C:H5'	2.47	0.43
28:11:59:LYS:HD2	28:11:60:ARG:H	1.83	0.43
28:11:101:GLU:OE1	28:11:103:ARG:HD3	2.19	0.43
29:21:34:VAL:HG22	29:21:48:GLN:HB3	2.00	0.43
31:41:111:LEU:HD21	31:41:120:LEU:HD21	2.01	0.43
32:51:86:GLU:HG2	32:51:87:LEU:H	1.82	0.43
33:61:60:GLU:O	33:61:63:ALA:HB3	2.18	0.43
34:58:43:THR:HA	34:58:44:PRO:HD2	1.68	0.43
37:88:110:THR:HG23	37:88:113:GLN:OE1	2.18	0.43
38:98:34:ILE:O	38:98:114:VAL:N	2.41	0.43
40:B8:101:PHE:O	40:B8:105:LEU:HD13	2.19	0.43
50:L8:2:PRO:HB2	50:L8:3:ARG:H	1.55	0.43
51:M8:23:GLU:OE1	51:M8:24:THR:N	2.52	0.43
1:1G:129(A):G:HO2'	1:1G:189:U:H6	1.67	0.43
1:1G:279:A:C8	1:1G:281:G:C2	3.07	0.43
1:1G:284:G:H2'	1:1G:285:G:C8	2.54	0.43
1:1G:567:G:N2	58:1G:1763:HOH:O	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:1061:G:C5	1:1G:1062:U:C5	3.07	0.43
1:1G:1134:G:C6	1:1G:1135:U:C2	3.07	0.43
1:13:191(F):U:H2'	1:13:191:G:C8	2.54	0.43
1:13:1331:G:O2'	1:13:1332:A:O5'	2.35	0.43
5:14:286:C:H2'	5:14:287:C:C6	2.53	0.43
5:14:358:U:H6	5:14:358:U:O5'	2.02	0.43
5:14:363(A):A:H2'	5:14:363(A):A:N3	2.33	0.43
5:14:610:C:H2'	5:14:611:C:C6	2.54	0.43
5:14:1024:G:C8	5:14:1025:G:H2'	2.54	0.43
5:14:2107:C:N3	5:14:2182:G:N2	2.66	0.43
5:14:2370:G:H2'	5:14:2371:G:O4'	2.18	0.43
5:14:2660:A:H2'	5:14:2661:G:O4'	2.19	0.43
6:1E:60:ASP:O	6:1E:64:ARG:HG2	2.18	0.43
6:1E:160:ASP:O	6:1E:183:PRO:HD2	2.19	0.43
6:1E:182:ILE:HA	6:1E:183:PRO:HD3	1.93	0.43
8:3E:135:LEU:HA	8:3E:136:PRO:HD2	1.83	0.43
10:5E:97:PHE:O	22:9I:31:LEU:HD23	2.19	0.43
17:4I:92:HIS:HA	17:4I:110:ARG:NH2	2.34	0.43
5:1H:1510:A:H2'	5:1H:1510:A:N3	2.32	0.43
5:1H:1936:A:C8	5:1H:1940:U:O2	2.72	0.43
5:1H:2227:A:H4'	28:11:265:PRO:HD3	2.00	0.43
5:1H:2418:A:H5"	5:1H:2419:U:OP2	2.19	0.43
29:21:102:VAL:O	29:21:170:LEU:N	2.46	0.43
30:31:62:ARG:HH21	30:31:64:ILE:HD13	1.84	0.43
30:31:178:PRO:HB2	30:31:201:VAL:HG21	2.01	0.43
31:41:111:LEU:HD22	31:41:117:PHE:CZ	2.54	0.43
32:51:152:ARG:HD3	32:51:152:ARG:HA	1.83	0.43
39:A8:14:VAL:HG11	39:A8:90:GLY:O	2.18	0.43
39:A8:88:ASP:C	39:A8:90:GLY:H	2.22	0.43
43:E8:71:VAL:HA	43:E8:107:LEU:HD12	2.00	0.43
44:F8:49:VAL:HG23	44:F8:87:GLN:HG2	2.01	0.43
45:G8:61:ILE:HG23	45:G8:62:GLU:N	2.33	0.43
46:H8:100:VAL:HG12	46:H8:101:PRO:O	2.19	0.43
46:H8:117:LEU:HD22	46:H8:118:GLN:N	2.34	0.43
55:Q8:27:THR:HG23	55:Q8:31:HIS:NE2	2.34	0.43
1:1G:445:G:H1	1:1G:489:C:H42	1.67	0.43
1:1G:446:G:H2'	1:1G:447:G:O4'	2.19	0.43
1:1G:579:G:C4	1:1G:580:U:C5	3.07	0.43
1:1G:592:G:N2	1:1G:647:C:N3	2.62	0.43
1:1G:1287:A:H2	1:1G:1353:G:N3	2.17	0.43
1:1G:1322:C:O2'	1:1G:1323:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:254:G:OP1	21:8I:67:LYS:O	2.36	0.42
1:13:426:G:H2'	1:13:427:U:C6	2.54	0.42
1:13:542:G:H5'	8:3E:41:GLY:HA3	2.00	0.42
1:13:625:G:H4'	20:7I:16:HIS:CG	2.54	0.42
1:13:704:A:H5"	1:13:705:U:OP2	2.18	0.42
1:13:724:G:H2'	1:13:725:G:H8	1.84	0.42
1:13:799:G:C6	1:13:800:G:C4	3.07	0.42
1:13:1075:C:OP1	6:1E:179:LYS:HE2	2.19	0.42
1:13:1367:C:H5'	14:1I:60:ARG:NE	2.34	0.42
1:13:1386:G:C2	1:13:1387:G:C8	3.07	0.42
5:14:514:A:C2	5:14:515:A:C4	3.07	0.42
5:14:629:G:H5"	5:14:650:C:O2'	2.19	0.42
5:14:1014:U:N3	5:14:1015:G:N7	2.66	0.42
5:14:1018:C:H2'	5:14:1019:U:H6	1.84	0.42
5:14:1380:G:C8	5:14:1380:G:O5'	2.72	0.42
5:14:1709:U:H2'	5:14:1710:C:C6	2.54	0.42
5:14:2333:A:H5"	5:14:2335:A:H5"	2.00	0.42
5:14:2345:G:N3	5:14:2381:C:H2'	2.34	0.42
5:14:2516:G:C6	5:14:2517:C:N4	2.87	0.42
6:1E:70:PHE:HB2	6:1E:92:TYR:HB2	2.01	0.42
6:1E:162:ILE:HD11	6:1E:184:VAL:HG22	2.01	0.42
9:4E:145:LYS:HA	12:7E:107:LEU:HD21	2.01	0.42
10:5E:4:TYR:HD1	10:5E:92:LYS:HA	1.83	0.42
13:8E:49:PRO:HA	13:8E:52:ALA:HB3	2.00	0.42
15:2I:48:ILE:HD11	15:2I:64:ALA:HA	2.01	0.42
18:5I:27:CYS:HB2	18:5I:29:ARG:H	1.84	0.42
2:3K:59:U:H3'	2:3K:60:U:C6	2.53	0.42
5:1H:481:G:H1'	5:1H:507:A:N1	2.34	0.42
5:1H:659:C:H4'	30:31:100:THR:O	2.19	0.42
5:1H:729:G:O5'	28:11:208:LYS:NZ	2.51	0.42
5:1H:747:U:O2	5:1H:2014:A:H1'	2.18	0.42
5:1H:1106:G:H2'	5:1H:1107:G:O4'	2.19	0.42
5:1H:2054:A:H5"	5:1H:2055:C:O5'	2.19	0.42
5:1H:2164:C:H5	5:1H:2165:G:C6	2.36	0.42
5:1H:2179:C:O5'	5:1H:2179:C:H6	2.01	0.42
27:1J:44:G:C2	27:1J:48:A:C2	3.07	0.42
29:21:120:TRP:CD1	29:21:155:LYS:HB3	2.54	0.42
30:31:9:ILE:HG13	30:31:123:LEU:HG	2.01	0.42
32:51:126:PRO:HG2	32:51:130:ARG:HH12	1.83	0.42
38:98:48:VAL:O	38:98:51:LEU:N	2.51	0.42
38:98:117:VAL:O	38:98:118:GLU:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A8:36:TYR:N	39:A8:36:TYR:HD1	2.17	0.42
53:O8:34:LEU:H	53:O8:34:LEU:HD22	1.84	0.42
1:1G:160:A:H1'	1:1G:344:A:C5	2.54	0.42
1:1G:409:G:O6	1:1G:433:C:N4	2.50	0.42
1:1G:859:A:H2'	1:1G:860:A:O4'	2.19	0.42
1:1G:1289:A:N6	1:1G:1371:G:HO2'	2.17	0.42
8:32:76:ARG:HH21	8:32:80:GLU:CG	2.32	0.42
1:13:115:G:C2	1:13:289:G:N7	2.87	0.42
1:13:235:C:H5'	21:8I:70:ARG:HG2	2.00	0.42
1:13:734:G:C2	1:13:735:C:C2	3.08	0.42
1:13:895:G:H2'	1:13:896:C:C6	2.54	0.42
1:13:1084:G:C5	1:13:1085:U:C4	3.07	0.42
1:13:1156:G:H2'	1:13:1157:A:H5"	2.01	0.42
5:14:200:U:O2	5:14:386:G:N2	2.52	0.42
5:14:1059:G:H1	5:14:1079:C:H42	1.66	0.42
5:14:1138:G:C2	5:14:1139:G:H1'	2.54	0.42
5:14:1280:G:C6	5:14:1281:G:C5	3.07	0.42
5:14:2427:C:H5"	5:14:2428:G:OP1	2.19	0.42
5:14:2535:G:H2'	5:14:2536:G:H8	1.84	0.42
5:14:2872:G:C4	5:14:2873:A:C2	3.07	0.42
6:1E:145:LEU:HD12	6:1E:149:LEU:HD12	2.01	0.42
9:4E:9:LYS:HB2	9:4E:9:LYS:HE3	1.87	0.42
9:4E:144:THR:OG1	9:4E:147:ASP:OD1	2.33	0.42
19:6I:26:GLU:H	19:6I:26:GLU:HG2	1.51	0.42
22:9I:26:LEU:HD13	22:9I:42:ARG:NH2	2.35	0.42
2:3K:37:MIA:H2'	2:3K:38:A:C8	2.55	0.42
4:4K:13:A:HO2'	4:4K:14:A:P	2.40	0.42
5:1H:49:A:N7	5:1H:120:U:C5	2.67	0.42
5:1H:244:A:H4'	36:78:74:GLU:HB3	2.01	0.42
5:1H:621:A:OP2	36:78:108:LYS:NZ	2.51	0.42
5:1H:687:C:H2'	5:1H:688:U:O4'	2.18	0.42
5:1H:1025:G:C4	5:1H:1135:C:H1'	2.53	0.42
5:1H:1478:G:C2	5:1H:1479:G:C8	3.07	0.42
5:1H:1497:U:H3'	5:1H:1498:C:H6	1.84	0.42
5:1H:1667:G:O2'	5:1H:1991:U:O4	2.22	0.42
5:1H:1726:G:H2'	5:1H:1727:U:O4'	2.18	0.42
5:1H:2728:U:H2'	5:1H:2729:G:H8	1.84	0.42
5:1H:2840:C:H2'	5:1H:2841:C:C6	2.55	0.42
29:21:14:ILE:HD13	29:21:14:ILE:HA	1.71	0.42
31:41:22:ARG:HE	31:41:22:ARG:HB3	1.45	0.42
32:51:164:TYR:N	32:51:167:GLU:OE1	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:E8:90:ARG:HH11	43:E8:90:ARG:HD2	1.65	0.42
45:G8:94:LYS:HG3	45:G8:95:LYS:N	2.34	0.42
47:I8:47:PRO:HB3	47:I8:51:VAL:HG12	2.02	0.42
48:J8:65:SER:HB2	48:J8:66:HIS:ND1	2.34	0.42
55:Q8:34:TRP:HE1	55:Q8:36:LYS:HE3	1.83	0.42
1:1G:255:G:O6	1:1G:270:A:N6	2.52	0.42
1:1G:322:C:H5	1:1G:328:C:C5	2.37	0.42
1:1G:803:G:C6	1:1G:804:U:C4	3.07	0.42
1:1G:888:G:O2'	1:1G:1488:G:O2'	2.13	0.42
1:1G:1127:G:N2	1:1G:1144:G:N2	2.67	0.42
1:1G:1247:U:H2'	1:1G:1248:A:O4'	2.20	0.42
1:13:639:G:C2	1:13:640:A:C5	3.07	0.42
1:13:673:G:H5"	10:5E:87:ARG:NH1	2.34	0.42
1:13:881:G:H2'	1:13:882:C:O4'	2.20	0.42
1:13:1363:A:H4'	1:13:1364:U:O5'	2.19	0.42
1:13:1427:U:H2'	1:13:1428:A:C8	2.54	0.42
2:1L:65:G:N2	2:1L:66:U:H1'	2.34	0.42
5:14:396:G:H8	5:14:396:G:O5'	2.03	0.42
5:14:991:C:O2	5:14:1164:G:C2	2.72	0.42
5:14:1293:C:H6	5:14:1293:C:O5'	2.03	0.42
5:14:1519:G:C6	5:14:1520:U:C4	3.07	0.42
5:14:1647:G:P	58:14:3707:HOH:O	2.77	0.42
5:14:2490:G:H2'	5:14:2490:G:N3	2.34	0.42
8:3E:155:LEU:HD23	8:3E:155:LEU:HA	1.72	0.42
9:4E:71:LEU:HA	9:4E:75:THR:O	2.18	0.42
12:7E:33:GLU:OE2	12:7E:50:ARG:NH1	2.52	0.42
14:1I:57:LYS:HE3	14:1I:60:ARG:HH12	1.83	0.42
5:1H:299:A:H5'	5:1H:300:A:OP2	2.20	0.42
5:1H:566:U:H1'	58:1H:3789:HOH:O	2.19	0.42
5:1H:902:C:H2'	5:1H:903:C:H6	1.84	0.42
5:1H:1057:A:N7	5:1H:1086:A:H3'	2.34	0.42
5:1H:1338:G:O2'	5:1H:1393:A:N1	2.52	0.42
5:1H:2301:C:H2'	5:1H:2302:G:H8	1.84	0.42
27:16:42:C:O2	31:41:92:VAL:HA	2.18	0.42
29:21:13:ARG:HH11	29:21:13:ARG:CG	2.32	0.42
29:21:18:ASP:HB3	40:B8:82:LEU:HD11	1.99	0.42
29:21:26:ILE:O	29:21:26:ILE:HG12	2.17	0.42
33:61:104:GLN:O	33:61:105:HIS:HB2	2.20	0.42
34:58:110:GLY:O	34:58:114:ARG:HG3	2.19	0.42
41:C8:11:ARG:O	41:C8:15:LYS:HG3	2.20	0.42
55:Q8:7:HIS:CD2	55:Q8:57:ARG:HH22	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:129(A):G:C6	1:1G:188:U:H4'	2.54	0.42
1:1G:262:A:C6	1:1G:263:A:N6	2.87	0.42
1:1G:371:G:H1	1:1G:390:C:N4	2.09	0.42
1:1G:623:C:N4	1:1G:624:C:C4	2.87	0.42
1:1G:1152:A:H2'	1:1G:1153:C:C6	2.54	0.42
1:1G:1307:U:O5'	1:1G:1307:U:H6	2.02	0.42
6:12:54:THR:O	6:12:57:PHE:HB3	2.19	0.42
6:12:134:GLU:O	6:12:138:LEU:HG	2.20	0.42
6:12:174:VAL:HG13	6:12:184:VAL:HG11	2.01	0.42
1:13:433:C:H2'	1:13:434:U:C6	2.54	0.42
1:13:468:A:H5"	20:7I:80:PHE:HB3	2.01	0.42
1:13:956:U:H2'	1:13:957:U:O4'	2.19	0.42
1:13:977:A:C8	1:13:1223:C:C4	3.08	0.42
5:14:274:G:H2'	5:14:275:G:C4'	2.48	0.42
5:14:725:G:H8	5:14:725:G:O5'	2.02	0.42
5:14:1628:G:H2'	5:14:1629:U:H6	1.84	0.42
5:14:2120:G:N2	5:14:2121:G:C6	2.87	0.42
5:14:2129:C:H2'	5:14:2130:U:O4'	2.20	0.42
5:14:2300:G:C2	5:14:2301:C:C2	3.07	0.42
5:14:2769:C:H2'	5:14:2770:G:O4'	2.20	0.42
6:1E:21:ARG:C	6:1E:23:ARG:H	2.22	0.42
9:4E:35:GLY:HA3	9:4E:112:LEU:O	2.19	0.42
17:4I:54:VAL:HG12	17:4I:58:GLU:HG3	2.00	0.42
26:1K:22:G:N7	26:1K:46:7MG:HM71	2.34	0.42
3:2K:47:7MG:HO2'	3:2K:48:U:H6	1.64	0.42
5:1H:51:G:N3	5:1H:119:A:C2	2.87	0.42
5:1H:67:U:H2'	5:1H:68:G:C8	2.54	0.42
5:1H:586:A:OP2	58:1H:3971:HOH:O	2.22	0.42
5:1H:818:G:N7	5:1H:1187:G:C6	2.88	0.42
5:1H:930:U:O2	5:1H:930:U:O4'	2.35	0.42
5:1H:1045:A:H4'	5:1H:1045:A:OP1	2.20	0.42
5:1H:1069:A:O2'	5:1H:1072:C:OP2	2.37	0.42
5:1H:1317:A:H2'	5:1H:1318:C:C6	2.54	0.42
5:1H:2199:A:H3'	5:1H:2205:C:C6	2.55	0.42
5:1H:2347:C:H4'	53:O8:39:TYR:CE2	2.54	0.42
5:1H:2666:C:H5"	5:1H:2667:C:OP2	2.19	0.42
27:1J:2:C:H2'	27:1J:3:C:C5	2.54	0.42
27:1J:23:G:C2	27:1J:24:G:O6	2.73	0.42
29:21:111:ARG:HD2	29:21:160:TYR:CE2	2.53	0.42
32:51:3:ARG:CZ	32:51:3:ARG:HA	2.50	0.42
33:61:21:VAL:HG22	33:61:22:LYS:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:88:20:ALA:CB	37:88:99:PRO:HD2	2.49	0.42
45:G8:96:ILE:HG22	45:G8:97:ARG:O	2.19	0.42
47:I8:23:VAL:HB	47:I8:26:TYR:HE1	1.83	0.42
49:K8:47:ASN:O	49:K8:49:LYS:HG3	2.19	0.42
54:P8:26:GLY:O	54:P8:30:VAL:HG23	2.20	0.42
55:Q8:23:VAL:O	55:Q8:44:LYS:HB2	2.19	0.42
1:1G:35:G:N1	1:1G:550:G:C2	2.86	0.42
1:1G:622:A:C8	1:1G:623:C:C6	3.06	0.42
1:1G:830:G:H2'	1:1G:831:U:O4'	2.19	0.42
1:1G:836:G:C6	1:1G:851:G:C6	3.08	0.42
1:1G:1047:G:H8	1:1G:1047:G:O5'	2.02	0.42
6:12:43:ASP:O	6:12:47:THR:OG1	2.38	0.42
6:12:54:THR:CG2	6:12:199:TYR:HB3	2.49	0.42
1:13:246:A:C2	1:13:282:A:C5	3.07	0.42
1:13:380:G:C2	1:13:384:G:C6	3.08	0.42
1:13:452:A:H62	1:13:480:U:H3	1.66	0.42
1:13:819:A:H4'	1:13:820:U:OP2	2.19	0.42
1:13:1171:G:O2'	1:13:1172:C:H5'	2.19	0.42
5:14:407:G:H2'	5:14:408:G:C8	2.55	0.42
5:14:881:G:H5'	5:14:882:G:OP2	2.20	0.42
5:14:929:G:H8	5:14:929:G:O5'	2.02	0.42
5:14:2062:A:H2'	5:14:2063:C:O5'	2.19	0.42
5:14:2619:C:H2'	5:14:2620:C:C6	2.54	0.42
6:1E:70:PHE:HB2	6:1E:92:TYR:CB	2.50	0.42
8:3E:108:LEU:HD11	8:3E:174:LEU:HD22	2.01	0.42
11:6E:153:HIS:CE1	15:2I:57:THR:HG23	2.55	0.42
16:3I:34:ARG:HG3	16:3I:35:GLY:N	2.33	0.42
5:1H:6:A:N3	34:58:131:GLN:HG3	2.35	0.42
5:1H:52:A:O2'	5:1H:53:A:H5'	2.20	0.42
5:1H:229:A:OP2	36:78:150:ALA:HB1	2.19	0.42
5:1H:1021:A:H3'	5:1H:1022:G:H5"	2.01	0.42
5:1H:1330:C:O2'	5:1H:1331:A:H5'	2.19	0.42
5:1H:1705:G:C6	5:1H:1706:U:N3	2.88	0.42
5:1H:1820:U:H4'	5:1H:1821:A:OP2	2.20	0.42
27:16:8:U:H5"	39:A8:15:ARG:HH12	1.84	0.42
28:11:272:ALA:HB1	28:11:273:ARG:H	1.69	0.42
33:61:4:ILE:HD11	33:61:44:LEU:HD13	2.01	0.42
34:58:130:HIS:HA	34:58:134:ARG:HH22	1.85	0.42
37:88:42:ILE:HD12	37:88:97:VAL:HG21	2.02	0.42
47:I8:75:LEU:HA	47:I8:75:LEU:HD23	1.58	0.42
55:Q8:41:ILE:HG22	55:Q8:41:ILE:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:25:C:H5'	1:1G:524:G:H1'	2.01	0.42
1:1G:117:G:H2'	1:1G:118:U:O4'	2.20	0.42
1:1G:149:A:O2'	1:1G:150:C:H5'	2.20	0.42
1:1G:298:A:H5"	1:1G:299:G:OP2	2.19	0.42
1:1G:791:G:C6	1:1G:792:A:N7	2.88	0.42
1:1G:981:U:O5'	1:1G:981:U:H6	2.02	0.42
1:1G:1058:G:H2'	1:1G:1059:C:C6	2.55	0.42
1:1G:1064:G:C8	1:1G:1066:C:C2	3.07	0.42
1:1G:1155:G:H2'	1:1G:1156:G:O4'	2.20	0.42
1:1G:1325:C:H2'	1:1G:1326:C:C6	2.55	0.42
1:1G:1496:C:H2'	1:1G:1497:G:C8	2.54	0.42
1:1G:1517:G:C6	1:1G:1518:A:C5	3.08	0.42
6:12:185:ILE:CG2	6:12:199:TYR:HB2	2.43	0.42
6:12:212:GLN:O	6:12:215:LEU:N	2.53	0.42
8:32:108:LEU:HD12	8:32:108:LEU:HA	1.85	0.42
1:13:11:G:H2'	1:13:12:U:H6	1.84	0.42
1:13:20:U:C4	1:13:21:G:C5	3.08	0.42
1:13:329:A:C4	1:13:332:G:C5	3.07	0.42
1:13:606:G:N3	1:13:606:G:H2'	2.35	0.42
1:13:843:U:H5'	1:13:848:C:C5	2.55	0.42
1:13:1037:C:H2'	1:13:1038:C:H6	1.83	0.42
1:13:1164:G:C6	1:13:1165:C:C4	3.08	0.42
2:1L:76:A:H8	5:14:2583:G:H21	1.64	0.42
3:2L:32:G:C4	3:2L:33:OMC:C5	3.07	0.42
5:14:451:C:H41	5:14:454:A:H5'	1.85	0.42
5:14:931:G:H3'	5:14:931:G:H8	1.85	0.42
5:14:1028:A:H2'	5:14:1029:A:C8	2.55	0.42
5:14:1171:G:N2	5:14:1174:A:N1	2.68	0.42
5:14:1421:G:C2	5:14:1422:G:C8	3.08	0.42
5:14:1726:G:H1	5:14:1734:C:H42	1.66	0.42
5:14:2057:A:O2'	5:14:2058:A:H5'	2.19	0.42
5:14:2465:C:O2	5:14:2486:G:C2	2.72	0.42
5:14:2712:U:H2'	5:14:2714:G:H5"	2.01	0.42
11:6E:102:ARG:O	11:6E:106:GLN:HG3	2.20	0.42
14:1I:47:PHE:CE2	18:5I:37:PHE:HE1	2.37	0.42
15:2I:50:TYR:O	15:2I:55:LYS:HD3	2.20	0.42
23:AI:18:LYS:O	23:AI:22:LEU:HD22	2.20	0.42
2:3K:2:C:H4'	2:3K:3:C:OP1	2.19	0.42
5:1H:65:C:H2'	5:1H:66:C:C6	2.55	0.42
5:1H:71:A:H4'	5:1H:72:U:H5"	2.02	0.42
5:1H:317:G:N2	5:1H:318:C:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:389:G:O5'	5:1H:389:G:H8	2.02	0.42
5:1H:404:C:H1'	5:1H:405:U:OP2	2.19	0.42
5:1H:625:G:N7	36:78:107:LYS:NZ	2.67	0.42
5:1H:817:C:H2'	5:1H:818:G:O4'	2.20	0.42
5:1H:1024:G:C3'	5:1H:1025:G:H5"	2.48	0.42
5:1H:1298:C:H5"	5:1H:1299:G:OP2	2.19	0.42
5:1H:1378:A:O2'	5:1H:1380:G:N7	2.46	0.42
5:1H:1771:C:H1'	5:1H:1786:A:C8	2.55	0.42
5:1H:2619:C:H5'	29:21:150:VAL:O	2.20	0.42
5:1H:2757:A:N1	32:51:67:LEU:HD22	2.35	0.42
5:1H:2785:C:H2'	5:1H:2786:U:O4'	2.19	0.42
27:1J:14:U:O2'	27:1J:107:U:O2'	2.02	0.42
31:41:105:LYS:HD3	51:M8:26:SER:HB2	2.01	0.42
31:41:107:LEU:HD11	31:41:178:PHE:CD1	2.54	0.42
31:41:113:ARG:HD2	51:M8:33:VAL:HG13	2.01	0.42
33:61:128:LEU:O	33:61:138:ILE:N	2.49	0.42
36:78:85:LEU:HA	36:78:88:LEU:HD22	2.00	0.42
46:H8:141:VAL:HG21	46:H8:150:LEU:CD1	2.50	0.42
47:I8:49:LYS:NZ	47:I8:68:GLU:OE2	2.42	0.42
51:M8:12:ALA:C	51:M8:24:THR:HG21	2.40	0.42
55:Q8:21:LYS:HA	55:Q8:21:LYS:HD2	1.65	0.42
1:1G:409:G:H2'	1:1G:410:G:O4'	2.20	0.42
1:1G:553:A:H2'	1:1G:554:C:H6	1.85	0.42
1:1G:1073:U:H2'	1:1G:1074:G:H8	1.84	0.42
1:13:76:G:H1'	1:13:95:G:N2	2.35	0.42
1:13:537:G:H5"	16:3I:113:ARG:NH1	2.34	0.42
1:13:823:G:C2	1:13:878:G:C2	3.07	0.42
1:13:1226:C:H4'	1:13:1227:A:OP1	2.20	0.42
1:13:1366:C:O3'	14:1I:60:ARG:NH2	2.53	0.42
2:1L:37:MIA:H122	2:1L:37:MIA:H162	1.72	0.42
2:3L:30:G:C2	2:3L:31:A:C5	3.08	0.42
5:14:118:A:N3	5:14:178:G:H1'	2.35	0.42
5:14:300:A:H2'	5:14:334:C:H1'	2.01	0.42
5:14:301:G:C4	5:14:302:C:C5	3.07	0.42
5:14:631:A:H2'	5:14:632:A:O4'	2.19	0.42
5:14:950:G:C5	5:14:951:C:C4	3.08	0.42
5:14:999:U:O2'	5:14:1000:A:H5'	2.20	0.42
5:14:1203:G:H3'	5:14:1204:A:H5"	2.01	0.42
5:14:1328:G:H2'	5:14:1330:C:C4	2.55	0.42
5:14:2075:U:H2'	5:14:2238:G:N2	2.34	0.42
5:14:2277:G:C6	5:14:2278:A:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2607:G:H2'	5:14:2608:G:O4'	2.19	0.42
12:7E:10:LEU:HD22	12:7E:83:ILE:HD11	2.02	0.42
12:7E:11:THR:HA	12:7E:14:ARG:NH1	2.34	0.42
14:1I:6:ILE:HG22	14:1I:98:ILE:CG1	2.43	0.42
15:2I:32:ILE:HD11	15:2I:68:ALA:C	2.39	0.42
20:7I:21:VAL:O	20:7I:33:ILE:N	2.46	0.42
20:7I:55:ARG:HD2	20:7I:55:ARG:HA	1.71	0.42
23:AI:41:VAL:N	23:AI:44:MET:HG3	2.34	0.42
5:1H:185:U:H4'	5:1H:218:A:H4'	2.01	0.42
5:1H:973:A:O4'	5:1H:1188:U:C6	2.72	0.42
5:1H:1050:A:C8	5:1H:2751:G:C5	3.08	0.42
5:1H:1207:C:H2'	5:1H:1208:C:H6	1.84	0.42
5:1H:1313:U:H2'	5:1H:1610:A:C2	2.54	0.42
5:1H:1856:G:H2'	5:1H:1857:G:H5'	2.02	0.42
5:1H:2144:U:HO2'	5:1H:2145:C:H5	1.66	0.42
5:1H:2241:A:O2'	5:1H:2242:G:H5'	2.20	0.42
5:1H:2259:G:N1	5:1H:2282:G:O6	2.53	0.42
5:1H:2359:C:C4'	55:Q8:49:VAL:HG11	2.46	0.42
5:1H:2830:G:N3	5:1H:2883:A:H2	2.17	0.42
30:31:101:LEU:HD13	30:31:102:PRO:HD2	2.02	0.42
33:61:110:ASP:CB	33:61:112:LYS:H	2.32	0.42
37:88:34:LEU:HD23	37:88:104:PHE:HD2	1.85	0.42
40:B8:76:PHE:HA	40:B8:77:PRO:HD2	1.82	0.42
41:C8:105:VAL:O	41:C8:109:LEU:HD12	2.19	0.42
45:G8:54:LYS:O	45:G8:55:TYR:CG	2.73	0.42
45:G8:84:ARG:HD2	45:G8:84:ARG:C	2.39	0.42
46:H8:28:MET:HB2	46:H8:37:VAL:CG1	2.48	0.42
1:1G:141:A:H1'	1:1G:182:U:O2	2.19	0.42
1:1G:987:G:H22	1:1G:1218:C:N4	2.14	0.42
1:1G:1004:A:H8	1:1G:1036:G:H22	1.65	0.42
1:1G:1333:A:O5'	1:1G:1333:A:H8	2.02	0.42
1:1G:1411:C:C2	1:1G:1412:C:C5	3.07	0.42
7:22:39:ILE:O	7:22:43:LEU:HB2	2.20	0.42
5:14:108:U:C2	5:14:109:G:C8	3.08	0.42
5:14:621:A:H3'	5:14:622:G:C8	2.53	0.42
5:14:872:A:C6	5:14:906:G:C2	3.08	0.42
5:14:1299:G:H5'	5:14:1301:A:O4'	2.19	0.42
5:14:1388:G:H2'	5:14:1389:G:H8	1.85	0.42
5:14:1429:G:H2'	5:14:1430:C:C6	2.54	0.42
5:14:1753:G:N1	5:14:1756:G:C2	2.87	0.42
5:14:2168:G:H2'	5:14:2168:G:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2525:G:N2	5:14:2539:C:C2	2.88	0.42
6:1E:11:LEU:O	6:1E:16:HIS:CE1	2.73	0.42
15:2I:31:THR:HA	15:2I:42:TRP:HA	2.01	0.42
16:3I:41:ARG:HE	16:3I:41:ARG:HB2	1.65	0.42
17:4I:13:LYS:HB3	17:4I:14:ARG:H	1.55	0.42
5:1H:270(G):C:H2'	5:1H:270(H):C:C6	2.55	0.42
5:1H:468:G:N7	54:P8:39:ARG:NH2	2.67	0.42
5:1H:562:U:O4	5:1H:2036:C:H1'	2.19	0.42
5:1H:601:C:O2	5:1H:605:C:H4'	2.19	0.42
5:1H:822:U:C2'	5:1H:823:G:H5'	2.50	0.42
5:1H:996:A:C6	5:1H:1160:G:C2	3.08	0.42
5:1H:1558:A:H3'	5:1H:1558:A:OP2	2.20	0.42
5:1H:2611:U:OP2	5:1H:2611:U:H6	2.03	0.42
5:1H:2615:U:H2'	5:1H:2616:C:C6	2.54	0.42
5:1H:2751:G:C2	32:51:3:ARG:HB3	2.55	0.42
27:16:3:C:H2'	27:16:4:C:H6	1.85	0.42
28:11:70:TRP:CD1	28:11:70:TRP:C	2.93	0.42
28:11:142:VAL:HG23	28:11:193:VAL:HA	2.01	0.42
29:21:47:VAL:O	29:21:80:GLU:HA	2.19	0.42
29:21:105:THR:O	29:21:196:VAL:HB	2.19	0.42
31:41:166:ASP:N	31:41:166:ASP:OD1	2.53	0.42
33:61:95:LYS:HE2	33:61:95:LYS:HB3	1.83	0.42
44:F8:18:TYR:O	44:F8:21:PHE:N	2.29	0.42
45:G8:39:VAL:O	45:G8:39:VAL:HG12	2.20	0.42
48:J8:78:LYS:O	48:J8:78:LYS:HG2	2.19	0.42
50:L8:8:LEU:HD13	50:L8:31:LEU:HA	2.01	0.42
55:Q8:34:TRP:CG	55:Q8:35:GLN:N	2.83	0.42
55:Q8:45:GLY:CA	55:Q8:46:ARG:C	2.88	0.42
1:1G:476:G:H2'	1:1G:477:G:C8	2.54	0.42
1:1G:631:G:H8	1:1G:631:G:O5'	2.03	0.42
1:1G:934:C:O2'	1:1G:1344:C:OP2	2.26	0.42
1:1G:1104:G:C4	1:1G:1105:A:C8	3.08	0.42
1:1G:1441:G:H5"	1:1G:1442:G:H5'	2.01	0.42
6:12:16:HIS:CD2	6:12:209:ARG:HG3	2.55	0.42
7:22:79:ARG:H	7:22:79:ARG:HG2	1.64	0.42
8:32:14:ARG:HA	8:32:39:PRO:HB3	2.00	0.42
1:13:247:G:OP2	21:8I:100:LYS:HB2	2.20	0.42
1:13:321:A:C2	1:13:333:G:C2	3.08	0.42
1:13:791:G:C6	1:13:792:A:N1	2.88	0.42
1:13:1410:G:H2'	1:13:1411:C:C6	2.55	0.42
5:14:443:A:H1'	5:14:1201:C:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:618:G:H2'	5:14:618(A):C:O4'	2.20	0.42
5:14:729:G:H2'	5:14:1775:U:H1'	2.01	0.42
5:14:1139:G:H8	5:14:1139:G:O5'	2.03	0.42
5:14:1425:G:H2'	5:14:1426:G:O4'	2.20	0.42
5:14:1464:C:O2'	5:14:1528:A:H8	1.99	0.42
5:14:1495:A:H2'	5:14:1496:A:N3	2.35	0.42
5:14:1689:A:N6	5:14:1698:A:H2	1.96	0.42
5:14:2176:A:H2'	5:14:2177:C:C6	2.55	0.42
5:14:2227:A:OP2	58:14:4162:HOH:O	2.21	0.42
6:1E:97:TRP:CH2	6:1E:176:GLU:OE2	2.73	0.42
7:2E:3:ASN:C	7:2E:4:LYS:HG2	2.40	0.42
11:6E:150:ALA:O	15:2I:57:THR:HG21	2.20	0.42
13:8E:89:ASN:O	13:8E:91:ASP:N	2.52	0.42
17:4I:94:ARG:HH22	5:1H:887:A:H5"	1.84	0.42
21:8I:36:ILE:HG13	21:8I:36:ILE:O	2.20	0.42
23:AI:64:GLU:HB2	51:M8:60:GLN:NE2	2.35	0.42
26:1K:43:C:O5'	26:1K:43:C:H6	2.01	0.42
3:2K:63:C:O2	3:2K:64:G:C8	2.72	0.42
5:1H:329:G:H4'	5:1H:330:A:OP2	2.19	0.42
5:1H:346:A:H2'	5:1H:346:A:N3	2.34	0.42
5:1H:816:C:H4'	58:1H:3962:HOH:O	2.20	0.42
5:1H:917:A:N6	27:16:80:U:H4'	2.35	0.42
5:1H:1469:A:C2	5:1H:1524:G:C2	3.08	0.42
5:1H:1926:U:O2'	5:1H:1928:A:N7	2.49	0.42
5:1H:2138:C:H42	5:1H:2153:G:H1	1.68	0.42
5:1H:2159:G:H2'	5:1H:2160:G:O4'	2.20	0.42
5:1H:2760:C:O2'	5:1H:2761:G:H5'	2.20	0.42
5:1H:2864:G:H2'	5:1H:2865:U:H6	1.83	0.42
27:16:75:G:H21	46:H8:85:HIS:CE1	2.37	0.42
27:16:88:C:H2'	27:16:89:G:O4'	2.19	0.42
27:16:99:A:C4	27:16:100:G:C8	3.08	0.42
29:21:181:LEU:HA	29:21:181:LEU:HD12	1.79	0.42
31:41:37:VAL:N	31:41:99:MET:HE3	2.35	0.42
32:51:4:ILE:HG13	32:51:6:ARG:HB2	2.01	0.42
32:51:40:GLU:H	32:51:40:GLU:HG3	1.69	0.42
35:68:113:LYS:O	35:68:116:SER:HB3	2.20	0.42
36:78:3:LEU:HD23	36:78:3:LEU:HA	1.83	0.42
36:78:76:LYS:HD3	36:78:76:LYS:HA	1.71	0.42
45:G8:76:CYS:HB2	45:G8:82:PRO:HD3	2.01	0.42
1:1G:216:G:O2'	1:1G:217:C:O5'	2.36	0.42
1:1G:279:A:H5"	1:1G:281:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:666:G:N2	1:1G:740:U:O2	2.51	0.42
1:1G:894:G:C6	1:1G:895:G:C5	3.08	0.42
1:1G:1050:G:C6	1:1G:1051:C:C4	3.07	0.42
1:1G:1067:A:H4'	1:1G:1068:G:O5'	2.18	0.42
1:1G:1277:C:HO2'	1:1G:1279:A:H1'	1.85	0.42
8:32:156:GLU:H	8:32:156:GLU:HG3	1.56	0.42
8:32:189:PRO:HB2	8:32:194:LEU:HD21	2.02	0.42
1:13:160:A:H2'	1:13:161:A:O4'	2.19	0.42
1:13:405:U:O2'	1:13:497:U:H5'	2.20	0.42
1:13:656:C:H2'	19:6I:28:GLN:NE2	2.35	0.42
1:13:953:G:N7	17:4I:104:ARG:NH2	2.67	0.42
1:13:1353:G:OP1	25:1F:10:ARG:NH2	2.52	0.42
2:3L:18:G:N2	2:3L:55:PSU:C4	2.88	0.42
6:1E:5:ILE:HG13	6:1E:6:THR:H	1.84	0.42
6:1E:59:GLU:HB2	6:1E:221:LEU:HD11	2.02	0.42
6:1E:178:ARG:HD2	12:7E:71:GLY:O	2.20	0.42
6:1E:189:ASP:HB2	6:1E:205:ASP:HB3	2.01	0.42
9:4E:74:GLY:O	9:4E:115:VAL:HA	2.20	0.42
21:8I:67:LYS:O	21:8I:68:ARG:HB3	2.19	0.42
21:8I:83:ASP:OD1	21:8I:83:ASP:N	2.43	0.42
5:1H:270(T):G:C5	5:1H:270(U):C:C5	3.08	0.42
5:1H:309:G:H4'	45:G8:18:GLY:HA2	2.02	0.42
5:1H:332:A:C2	5:1H:335:C:C5	3.08	0.42
5:1H:458:G:O2'	54:P8:39:ARG:HD3	2.19	0.42
5:1H:812:C:H5"	5:1H:1250:G:O2'	2.20	0.42
5:1H:1243:G:H4'	36:78:7:ARG:HH21	1.85	0.42
5:1H:1668:A:H4'	5:1H:1669:A:O5'	2.19	0.42
5:1H:2056:G:N3	5:1H:2056:G:H2'	2.35	0.42
5:1H:2290:G:C6	5:1H:2291:U:N3	2.88	0.42
5:1H:2875:C:H2'	5:1H:2876:G:O4'	2.20	0.42
27:1J:4:C:N4	27:1J:116:G:H22	2.17	0.42
27:16:24:G:C2	27:16:56:G:C2	3.08	0.42
30:31:6:VAL:HG11	30:31:119:ARG:CA	2.50	0.42
31:41:6:ALA:HB3	51:M8:23:GLU:HG3	2.01	0.42
32:51:4:ILE:HG21	32:51:6:ARG:CZ	2.49	0.42
32:51:74:ASN:ND2	32:51:138:LYS:HD3	2.35	0.42
32:51:154:PRO:HB3	32:51:163:TYR:CZ	2.55	0.42
33:61:63:ALA:O	33:61:67:ARG:HB2	2.19	0.42
36:78:47:ASP:HA	36:78:48:PRO:HD3	1.74	0.42
37:88:34:LEU:HD23	37:88:104:PHE:CD2	2.54	0.42
42:D8:35:LEU:HA	42:D8:36:PRO:HD3	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:G8:40:GLU:HA	45:G8:42:VAL:H	1.85	0.42
1:1G:352:C:P	58:1G:1741:HOH:O	2.77	0.42
1:1G:352:C:O2'	1:1G:354:G:OP1	2.27	0.42
1:1G:442:C:H2'	1:1G:443:C:C6	2.55	0.42
1:1G:595:G:O5'	1:1G:595:G:H8	2.02	0.42
1:1G:596:C:H2'	1:1G:597:G:H8	1.84	0.42
1:1G:790:A:H8	1:1G:790:A:O5'	2.03	0.42
1:1G:793:U:O4	1:1G:1517:G:H5"	2.20	0.42
1:1G:1053:G:HO2'	1:1G:1054:C:P	2.42	0.42
1:1G:1113:C:H2'	1:1G:1114:C:C6	2.55	0.42
1:1G:1306:A:C2	1:1G:1307:U:H1'	2.55	0.42
7:22:73:PRO:HA	7:22:76:VAL:HG13	2.01	0.42
1:13:129:U:N3	1:13:131:C:N4	2.68	0.41
1:13:163:C:O2'	1:13:164:U:O4'	2.24	0.41
1:13:177:C:H2'	1:13:178:C:H6	1.84	0.41
1:13:304:U:H2'	1:13:305:G:C8	2.55	0.41
1:13:945:G:C2	1:13:946:A:C8	3.08	0.41
1:13:1032(A):G:H2'	1:13:1032(B):G:N7	2.35	0.41
1:13:1108:G:H5'	7:2E:176:HIS:CE1	2.55	0.41
1:13:1191:A:OP2	7:2E:3:ASN:ND2	2.53	0.41
1:13:1506:U:H2'	58:13:1805:HOH:O	2.20	0.41
3:2L:62:C:H2'	3:2L:63:C:C6	2.53	0.41
5:14:139:G:N2	5:14:1596:A:H4'	2.35	0.41
5:14:751:A:H2'	5:14:789:A:C2	2.55	0.41
5:14:910:A:N3	5:14:2264:C:O2'	2.46	0.41
5:14:1200:C:P	58:14:3958:HOH:O	2.78	0.41
5:14:1291:C:H2'	5:14:1292:U:C6	2.54	0.41
5:14:1360:A:H2'	5:14:1361:G:O4'	2.20	0.41
5:14:1422:G:C1'	5:14:1495:A:H61	2.33	0.41
5:14:1593:G:C2	5:14:1594:G:C4	3.08	0.41
5:14:1767:C:H2'	5:14:1768:U:O4'	2.20	0.41
5:14:2512:C:H5"	5:14:2513:G:OP2	2.20	0.41
5:14:2650:U:H2'	5:14:2651:C:C6	2.55	0.41
5:14:2789:C:H2'	5:14:2790:A:O4'	2.20	0.41
9:4E:11:ILE:O	9:4E:12:LEU:HB2	2.20	0.41
9:4E:20:GLN:HG2	9:4E:21:ALA:H	1.85	0.41
10:5E:55:ASP:HA	10:5E:56:PRO:HD2	1.77	0.41
10:5E:72:VAL:HG13	10:5E:73:ASN:N	2.35	0.41
15:2I:12:ARG:HG3	15:2I:13:GLN:N	2.35	0.41
2:3K:6:G:C6	2:3K:7:A:C6	3.08	0.41
5:1H:4:C:H42	5:1H:2899:G:H1	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:265:A:H8	5:1H:266:G:H1'	1.82	0.41
5:1H:602:G:N2	5:1H:655:A:C8	2.75	0.41
5:1H:916:G:H2'	5:1H:917:A:H5"	2.02	0.41
5:1H:1019:U:O2'	5:1H:1021:A:H2	2.03	0.41
5:1H:1253:A:N6	58:1H:3731:HOH:O	2.41	0.41
5:1H:1264:G:OP1	52:N8:19:ARG:NH1	2.53	0.41
5:1H:1328:G:H2'	5:1H:1330:C:C4	2.54	0.41
5:1H:1799:G:H5'	5:1H:1819:A:N6	2.34	0.41
5:1H:2111:C:HO2'	5:1H:2119:A:P	2.41	0.41
5:1H:2298:A:H2'	5:1H:2299:G:O4'	2.20	0.41
5:1H:2306:C:H3'	5:1H:2307:G:H5'	2.02	0.41
5:1H:2443:C:O2'	5:1H:2444:G:H5'	2.19	0.41
5:1H:2524:G:C2	5:1H:2525:G:H1'	2.55	0.41
30:31:101:LEU:HD22	30:31:101:LEU:HA	1.76	0.41
32:51:35:VAL:HG12	32:51:37:VAL:HG23	2.02	0.41
36:78:62:LEU:O	55:Q8:13:ARG:HD3	2.20	0.41
38:98:10:LEU:O	38:98:12:ARG:N	2.53	0.41
38:98:116:LEU:HD23	38:98:116:LEU:HA	1.91	0.41
41:C8:66:ASN:ND2	41:C8:76:TYR:HB3	2.34	0.41
45:G8:85:VAL:HG22	45:G8:98:VAL:HB	2.02	0.41
46:H8:120:ILE:HG12	46:H8:172:ALA:HA	2.01	0.41
46:H8:128:VAL:CB	46:H8:161:VAL:HG21	2.50	0.41
47:I8:72:ARG:O	47:I8:75:LEU:HB2	2.20	0.41
55:Q8:52:LYS:HB3	55:Q8:52:LYS:HE3	1.65	0.41
1:1G:109:A:H2'	1:1G:326:G:H21	1.83	0.41
1:1G:255:G:H2'	1:1G:256:U:C6	2.55	0.41
1:1G:456:C:H2'	1:1G:457:C:H6	1.85	0.41
1:1G:683:G:C6	1:1G:684:A:C6	3.08	0.41
1:1G:1148:U:H2'	1:1G:1149:C:O4'	2.20	0.41
1:1G:1286:A:C8	1:1G:1286:A:C3'	3.03	0.41
1:1G:1481:U:H2'	1:1G:1482:G:H8	1.83	0.41
7:22:106:VAL:HB	7:22:109:PRO:HB3	2.02	0.41
1:13:683:G:C6	1:13:684:A:C5	3.08	0.41
1:13:955:U:H1'	1:13:1227:A:N6	2.35	0.41
1:13:1073:U:H2'	1:13:1074:G:C8	2.55	0.41
1:13:1128:C:C6	1:13:1139:G:C6	3.08	0.41
1:13:1143:G:N2	1:13:1144:G:C2	2.88	0.41
1:13:1356:G:H2'	1:13:1357:A:C8	2.56	0.41
5:14:332:A:C2	5:14:335:C:C5	3.08	0.41
5:14:521:G:H2'	5:14:522:G:H8	1.86	0.41
5:14:819:A:C4	5:14:1189:A:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:979:G:H3'	5:14:980:A:C5'	2.49	0.41
5:14:1338:G:O2'	5:14:1393:A:N1	2.48	0.41
5:14:2014:A:H2'	5:14:2015:A:C8	2.55	0.41
5:14:2301:C:H2'	5:14:2302:G:H8	1.86	0.41
5:14:2820:A:O2'	5:14:2821:A:OP1	2.37	0.41
9:4E:91:LEU:CD1	9:4E:120:THR:HG22	2.45	0.41
14:1I:76:ASN:HA	14:1I:77:PRO:HD2	1.80	0.41
16:3I:82:VAL:CG1	16:3I:105:TYR:HB3	2.50	0.41
23:AI:21:GLU:HG2	23:AI:22:LEU:HD13	2.02	0.41
23:AI:32:LYS:HA	23:AI:50:ALA:HB3	2.02	0.41
5:1H:355:G:H2'	5:1H:356:G:H8	1.83	0.41
5:1H:466:A:H4'	54:P8:30:VAL:HG13	2.00	0.41
5:1H:712:G:C6	5:1H:713:G:C5	3.07	0.41
5:1H:932:G:N7	58:1H:3965:HOH:O	2.37	0.41
5:1H:2262:U:C2'	5:1H:2263:C:H5'	2.50	0.41
27:16:39:A:H2'	27:16:40:U:C6	2.54	0.41
28:11:64:ILE:HD13	28:11:64:ILE:HG21	1.84	0.41
30:31:116:ASP:OD2	36:78:1:MET:HB2	2.20	0.41
31:41:33:ARG:O	31:41:162:THR:HG23	2.21	0.41
31:41:37:VAL:H	31:41:99:MET:HE3	1.85	0.41
31:41:67:LYS:HE2	31:41:67:LYS:H	1.84	0.41
32:51:4:ILE:C	32:51:6:ARG:H	2.23	0.41
40:B8:88:ILE:O	40:B8:88:ILE:HG13	2.20	0.41
45:G8:9:LYS:HA	45:G8:27:VAL:CG2	2.50	0.41
47:I8:48:GLY:N	47:I8:79:VAL:O	2.52	0.41
1:1G:259:G:H1	1:1G:267:C:H42	1.67	0.41
1:1G:1054:C:H5"	1:1G:1197:G:OP1	2.21	0.41
1:1G:1099:G:OP1	6:12:148:TYR:OH	2.38	0.41
1:1G:1224:G:N2	1:1G:1322:C:O2'	2.52	0.41
1:1G:1413:A:C2	1:1G:1414:U:H1'	2.55	0.41
6:12:72:GLY:C	6:12:74:LYS:H	2.23	0.41
7:22:126:ARG:HD2	7:22:128:PHE:HE2	1.85	0.41
1:13:131:C:H2'	1:13:132:C:C6	2.55	0.41
1:13:228:A:H2'	1:13:229:U:O4'	2.20	0.41
1:13:308:C:H2'	1:13:309:G:C8	2.54	0.41
1:13:749:C:H2'	1:13:750:G:H8	1.86	0.41
1:13:964:A:N3	1:13:969:A:O2'	2.46	0.41
1:13:1131:G:H2'	1:13:1132:C:C6	2.54	0.41
1:13:1211:U:H4'	1:13:1212:U:O5'	2.20	0.41
2:1L:76:A:H8	5:14:2583:G:N2	2.18	0.41
5:14:29:U:H2'	5:14:30:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:185:U:H2'	5:14:186:G:O4'	2.20	0.41
5:14:734:A:O2'	5:14:1635:G:H5'	2.20	0.41
5:14:917:A:N1	5:14:918:A:N3	2.68	0.41
5:14:1131:G:C2	5:14:1132:A:C4	3.08	0.41
5:14:1194:A:H2'	5:14:1195:G:O4'	2.20	0.41
5:14:1418:G:H8	5:14:1418:G:O5'	2.04	0.41
5:14:1542:G:H3'	5:14:1543:A:H5"	2.03	0.41
5:14:2516:G:C5	5:14:2517:C:C4	3.08	0.41
7:2E:13:GLY:HA3	18:5I:57:ARG:HH11	1.85	0.41
17:4I:69:GLU:HG3	31:41:118:ARG:NH2	2.35	0.41
20:7I:50:LYS:HA	20:7I:50:LYS:HD3	1.86	0.41
23:AI:37:ARG:H	23:AI:37:ARG:HG3	1.36	0.41
26:1K:60:U:H5'	26:1K:61:C:OP2	2.19	0.41
5:1H:880:G:HO2'	5:1H:881:G:C5'	2.27	0.41
5:1H:1018:C:O2'	5:1H:1019:U:H5'	2.21	0.41
5:1H:1188:U:O2'	5:1H:1189:A:H5'	2.20	0.41
5:1H:1279:G:N2	5:1H:1292:U:C2	2.88	0.41
5:1H:1454:U:O2'	5:1H:1455:G:N7	2.45	0.41
5:1H:2302:G:C6	5:1H:2315:G:C6	3.09	0.41
5:1H:2503:A:H3'	5:1H:2503:A:OP2	2.21	0.41
5:1H:2598:A:P	58:1H:4808:HOH:O	2.69	0.41
5:1H:2660:A:H2'	5:1H:2661:G:O4'	2.20	0.41
27:16:79:C:O5'	27:16:79:C:H6	2.03	0.41
28:11:3:VAL:HA	28:11:18:VAL:O	2.20	0.41
29:21:67:PHE:O	29:21:69:LYS:HE2	2.20	0.41
29:21:116:VAL:HG13	29:21:122:PHE:CD2	2.54	0.41
33:61:145:VAL:HB	33:61:146:ALA:H	1.56	0.41
36:78:100:LEU:HD12	36:78:100:LEU:HA	1.84	0.41
37:88:34:LEU:HD11	37:88:129:THR:HB	2.01	0.41
39:A8:29:PHE:CD1	39:A8:30:ARG:N	2.89	0.41
40:B8:102:ILE:HA	40:B8:105:LEU:HD22	2.02	0.41
46:H8:6:LYS:HE3	46:H8:8:TYR:OH	2.20	0.41
46:H8:98:MET:O	46:H8:125:LEU:HA	2.20	0.41
49:K8:33:MET:O	49:K8:37:PHE:HD1	2.02	0.41
1:1G:123:C:H2'	1:1G:124:G:C8	2.55	0.41
1:1G:422:C:H6	1:1G:422:C:H2'	1.68	0.41
1:1G:773:G:C2	1:1G:807:A:C2	3.08	0.41
7:22:183:ASP:HB3	7:22:202:ILE:HG13	2.02	0.41
8:32:127:THR:OG1	8:32:128:VAL:N	2.53	0.41
8:32:170:VAL:HG12	8:32:171:GLY:H	1.85	0.41
1:13:158:G:H21	1:13:162:A:H62	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:645:C:C4	1:13:646:U:C4	3.09	0.41
1:13:778:G:H8	1:13:778:G:O5'	2.04	0.41
1:13:835:U:OP1	22:9I:64:ARG:NH2	2.41	0.41
1:13:874:G:C6	1:13:875:C:C4	3.08	0.41
5:14:14:A:H5"	5:14:15:G:OP2	2.20	0.41
5:14:341:G:H2'	5:14:342:G:O4'	2.19	0.41
5:14:530:G:O2'	5:14:531:C:P	2.78	0.41
5:14:695:G:C2	5:14:768:G:C5	3.08	0.41
5:14:882:G:N2	5:14:894:C:H42	2.12	0.41
5:14:952:G:C6	5:14:966:G:C6	3.08	0.41
5:14:1505:C:H2'	5:14:1506:C:C6	2.55	0.41
5:14:1858:G:H2'	5:14:1883:G:H22	1.85	0.41
5:14:2111:C:C2	5:14:2118:U:H4'	2.56	0.41
5:14:2211:G:O2'	5:14:2212:A:P	2.79	0.41
5:14:2303:G:C2'	5:14:2304:G:H5'	2.50	0.41
5:14:2629:A:N3	5:14:2629:A:H2'	2.35	0.41
5:14:2845:G:H2'	5:14:2846:G:C8	2.56	0.41
6:1E:5:ILE:HG13	6:1E:6:THR:N	2.35	0.41
6:1E:97:TRP:HH2	6:1E:176:GLU:OE2	2.03	0.41
7:2E:4:LYS:HE3	7:2E:4:LYS:HB3	1.78	0.41
8:3E:79:PHE:O	8:3E:83:SER:HB2	2.20	0.41
9:4E:26:PHE:HE1	4:4K:25:A:C2	2.38	0.41
9:4E:80:ILE:HG12	9:4E:81:GLU:N	2.35	0.41
12:7E:51:VAL:HG11	12:7E:60:ARG:HB2	2.03	0.41
13:8E:25:LYS:O	13:8E:61:ALA:N	2.52	0.41
23:AI:7:LYS:HB3	23:AI:7:LYS:NZ	2.35	0.41
5:1H:639:U:H2'	5:1H:640:C:H6	1.82	0.41
5:1H:1359:A:N3	5:1H:1359:A:O4'	2.53	0.41
5:1H:2239:G:P	58:1H:3697:HOH:O	2.78	0.41
5:1H:2261:C:O2'	5:1H:2262:U:H5'	2.19	0.41
5:1H:2438:U:O2'	5:1H:2440:C:OP1	2.28	0.41
5:1H:2576:G:P	58:1H:3850:HOH:O	2.76	0.41
27:1J:70:C:H2'	27:1J:71:C:O4'	2.19	0.41
27:1J:79:C:H2'	27:1J:80:U:O4'	2.21	0.41
27:16:29:A:OP2	39:A8:31:SER:HB2	2.20	0.41
28:11:232:PRO:HB3	28:11:244:ARG:NH1	2.36	0.41
31:41:122:PRO:HB3	31:41:180:PHE:CD1	2.55	0.41
32:51:92:ILE:H	32:51:92:ILE:HG13	1.54	0.41
45:G8:55:TYR:N	45:G8:56:PRO:HD3	2.35	0.41
51:M8:48:ARG:O	51:M8:51:ASP:HB3	2.20	0.41
52:N8:22:HIS:CD2	52:N8:22:HIS:N	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q8:33:ASN:O	55:Q8:34:TRP:CD1	2.73	0.41
1:1G:52:G:C4	1:1G:53:A:C8	3.08	0.41
1:1G:1015:A:H8	1:1G:1015:A:O5'	2.04	0.41
1:1G:1132:C:O2'	1:1G:1133:G:H5'	2.20	0.41
1:1G:1246:C:H2'	1:1G:1247:U:O4'	2.19	0.41
1:1G:1516:G:H2'	1:1G:1518:A:OP2	2.20	0.41
6:12:166:ASP:CG	6:12:169:LYS:HB2	2.40	0.41
8:32:172:PRO:HB2	8:32:187:ARG:HH12	1.85	0.41
1:13:4:U:H3	12:7E:102:ARG:HG3	1.85	0.41
1:13:51:A:OP2	1:13:52:G:H8	2.01	0.41
1:13:324:G:N2	1:13:326:G:H3'	2.35	0.41
1:13:376:G:H5"	20:7I:5:ARG:HB2	2.01	0.41
1:13:448:A:H2'	1:13:449:C:O2	2.20	0.41
1:13:960:U:C2	1:13:1225:A:C5	3.08	0.41
1:13:1017:G:H2'	1:13:1018:C:C6	2.56	0.41
1:13:1160:G:N2	1:13:1177:G:H22	2.18	0.41
1:13:1248:A:H2	13:8E:70:LYS:HD2	1.86	0.41
1:13:1273:G:H3'	1:13:1274:G:C8	2.55	0.41
1:13:1312:G:H5'	23:AI:6:LYS:CD	2.51	0.41
1:13:1405:G:O4'	1:13:1519:A:H4'	2.20	0.41
5:14:1480:G:C6	5:14:1482:U:C4	3.07	0.41
5:14:1871:A:H2'	5:14:1872:A:C8	2.54	0.41
5:14:2077:A:O2'	5:14:2078:C:H5'	2.20	0.41
5:14:2358:G:C5	5:14:2359:C:C5	3.08	0.41
5:14:2370:G:C6	5:14:2371:G:C6	3.09	0.41
5:14:2541:A:H5"	5:14:2542:A:OP2	2.20	0.41
5:14:2570:G:H2'	5:14:2571:C:O4'	2.20	0.41
5:14:2687:U:C4	5:14:2688:U:C5	3.08	0.41
7:2E:11:ARG:NH2	7:2E:177:THR:O	2.51	0.41
12:7E:85:ARG:NH2	12:7E:87:SER:O	2.49	0.41
13:8E:102:LEU:HD23	13:8E:102:LEU:HA	1.89	0.41
16:3I:10:LEU:HD13	21:8I:32:TYR:CE1	2.55	0.41
20:7I:50:LYS:HD3	20:7I:51:VAL:H	1.86	0.41
3:2K:57:C:H5"	3:2K:58:A:OP2	2.21	0.41
5:1H:124:G:N2	5:1H:126:A:O2'	2.53	0.41
5:1H:657:U:H2'	5:1H:658:C:H6	1.85	0.41
5:1H:994:C:H5"	5:1H:995:C:OP1	2.20	0.41
5:1H:1195:G:N3	5:1H:1227:A:H2	2.17	0.41
5:1H:1266:G:O4'	43:E8:15:ARG:NH2	2.53	0.41
5:1H:1431:U:C2	5:1H:1563:G:N2	2.89	0.41
5:1H:1954:G:H1'	5:1H:1956:U:O4	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:73:A:C4	27:1J:104:A:C2	3.09	0.41
27:1J:118:G:C5	27:1J:119:A:N7	2.88	0.41
30:31:67:GLN:O	30:31:67:GLN:HG3	2.16	0.41
37:88:72:LYS:HA	37:88:73:PRO:HD3	1.96	0.41
41:C8:54:LYS:H	41:C8:54:LYS:HG3	1.52	0.41
53:O8:45:LYS:HA	53:O8:45:LYS:HD3	1.78	0.41
1:1G:266:G:H2'	1:1G:266:G:N3	2.35	0.41
1:1G:540:G:H2'	1:1G:541:G:H8	1.84	0.41
1:1G:755:G:H2'	1:1G:756:C:C6	2.55	0.41
1:1G:857:C:C4	1:1G:858:G:C5	3.08	0.41
1:1G:1164:G:C2	1:1G:1173:G:C6	3.09	0.41
1:1G:1228:C:H2'	1:1G:1229:A:H8	1.83	0.41
1:1G:1260:C:H3'	1:1G:1260:C:C6	2.55	0.41
1:13:598:U:H4'	12:7E:94:TYR:CG	2.54	0.41
1:13:706:A:N7	1:13:707:C:H5	2.18	0.41
1:13:728:A:N7	19:6I:54:ARG:HD2	2.35	0.41
1:13:753:A:H4'	1:13:754:C:C5'	2.50	0.41
2:1L:16:H2U:H3'	2:1L:16:H2U:O2	2.21	0.41
3:2L:63:C:H2'	3:2L:64:G:H8	1.85	0.41
2:3L:53:G:N2	2:3L:61:C:C2	2.88	0.41
5:14:248:G:OP1	5:14:248:G:H4'	2.21	0.41
5:14:260:G:O4'	5:14:621:A:H1'	2.19	0.41
5:14:376:C:H2'	5:14:377:C:C6	2.56	0.41
5:14:447:A:C8	5:14:473:G:C6	3.09	0.41
5:14:1054:A:H2'	5:14:1055:G:C8	2.56	0.41
5:14:1318:C:H5"	5:14:1319:G:OP2	2.21	0.41
5:14:1374:G:H2'	5:14:1375:C:H6	1.84	0.41
5:14:2244:U:O5'	5:14:2244:U:H6	2.03	0.41
5:14:2584:U:H5"	5:14:2585:U:OP2	2.21	0.41
7:2E:186:PHE:CE2	7:2E:188:LEU:HD23	2.54	0.41
15:2I:32:ILE:HD11	15:2I:68:ALA:HB1	2.02	0.41
17:4I:11:ARG:HB2	17:4I:11:ARG:NH1	2.36	0.41
23:AI:25:LYS:HD3	23:AI:27:GLU:HB2	2.02	0.41
24:BI:14:LYS:HE2	24:BI:14:LYS:HB3	1.86	0.41
5:1H:529:A:C8	5:1H:530:G:C6	3.06	0.41
5:1H:821:A:C2'	5:1H:946:G:H5"	2.50	0.41
5:1H:844:C:H2'	5:1H:845:G:O4'	2.20	0.41
5:1H:1387:C:O2	5:1H:1387:C:H2'	2.21	0.41
5:1H:1544:C:O2	5:1H:1544:C:H2'	2.20	0.41
5:1H:1861:G:C2	5:1H:1862:G:C8	3.08	0.41
5:1H:2159:G:H2'	5:1H:2160:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2377:A:H2'	5:1H:2378:A:C8	2.55	0.41
5:1H:2396:G:OP1	48:J8:25:LYS:HD2	2.19	0.41
5:1H:2443:C:OP1	30:31:68:LYS:HD3	2.20	0.41
5:1H:2503:A:H4'	5:1H:2504:U:OP1	2.20	0.41
5:1H:2812:G:C2	5:1H:2813:A:C4	3.09	0.41
34:58:34:LEU:HD12	34:58:34:LEU:HA	1.87	0.41
37:88:106:VAL:HG21	37:88:114:ALA:HB1	2.01	0.41
40:B8:29:ARG:NH1	40:B8:46:GLU:OE2	2.54	0.41
40:B8:62:THR:CG2	40:B8:75:ILE:HG12	2.50	0.41
44:F8:67:GLY:O	44:F8:69:TYR:N	2.49	0.41
46:H8:48:PHE:HE1	46:H8:71:VAL:HG11	1.86	0.41
48:J8:83:GLU:HG2	48:J8:85:LEU:N	2.21	0.41
55:Q8:46:ARG:NH2	55:Q8:48:PHE:HA	2.21	0.41
1:1G:9:G:H1	1:1G:25:C:H42	1.69	0.41
1:1G:376:G:H1	1:1G:387:U:H3	1.67	0.41
6:12:8:LYS:HE3	6:12:11:LEU:HD23	2.03	0.41
6:12:54:THR:HG22	6:12:58:ILE:HD11	2.02	0.41
6:12:108:ILE:HD13	6:12:108:ILE:HA	1.85	0.41
7:22:37:GLN:O	7:22:40:ARG:N	2.54	0.41
8:32:14:ARG:HB2	8:32:40:PRO:CD	2.51	0.41
1:13:266:G:H8	1:13:266:G:H2'	1.72	0.41
1:13:572:A:C2	1:13:864:A:C6	3.09	0.41
1:13:789:U:H5	1:13:792:A:OP2	2.04	0.41
1:13:1216:G:H5"	18:5I:5:ALA:HB2	2.03	0.41
1:13:1309:G:C6	1:13:1329:A:C2	3.08	0.41
1:13:1374:A:O2'	11:6E:28:ASN:HB3	2.21	0.41
3:2L:66:C:O2'	3:2L:67:C:H5'	2.21	0.41
5:14:27:G:O2'	5:14:28:A:OP2	2.26	0.41
5:14:111:A:C2	5:14:112:U:C2	3.09	0.41
5:14:843:G:H1	5:14:935:C:H42	1.68	0.41
5:14:1263:U:H2'	5:14:1264:G:C8	2.55	0.41
5:14:1507:A:C5	5:14:1508:A:H1'	2.56	0.41
5:14:1774:C:O5'	5:14:1774:C:H6	2.04	0.41
5:14:1838:C:N4	5:14:1898:U:H2'	2.36	0.41
5:14:1858:G:H1'	5:14:1884:A:H62	1.84	0.41
5:14:2533:A:O5'	5:14:2533:A:H8	2.02	0.41
6:1E:178:ARG:HA	6:1E:178:ARG:HD3	1.78	0.41
9:4E:118:ILE:HG12	9:4E:119:LEU:N	2.35	0.41
10:5E:100:ASN:H	22:9I:23:LYS:HZ2	1.69	0.41
16:3I:84:LEU:HB2	16:3I:105:TYR:CE2	2.56	0.41
20:7I:40:ASP:HA	20:7I:41:PRO:HD2	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:8I:68:ARG:HG3	21:8I:68:ARG:O	2.20	0.41
24:BI:33:ILE:H	24:BI:33:ILE:HG12	1.60	0.41
5:1H:273(F):C:H3'	5:1H:274:G:H5"	2.02	0.41
5:1H:654(J):A:N1	5:1H:654(M):C:N4	2.69	0.41
5:1H:761:A:N7	58:1H:4181:HOH:O	2.53	0.41
5:1H:1400:G:C6	5:1H:1401:G:C6	3.09	0.41
5:1H:1540:G:H2'	5:1H:1541:U:O4'	2.20	0.41
5:1H:1567:A:H5'	28:11:58:HIS:ND1	2.35	0.41
5:1H:1689:A:H2'	5:1H:1690:A:C8	2.55	0.41
5:1H:2060:A:OP1	30:31:69:HIS:N	2.37	0.41
5:1H:2148:G:H2'	5:1H:2149:G:O4'	2.21	0.41
5:1H:2160:G:C2	5:1H:2161:C:H1'	2.55	0.41
5:1H:2315:G:OP1	31:41:36:LYS:NZ	2.38	0.41
5:1H:2400:G:H2'	5:1H:2401:U:C6	2.56	0.41
27:1J:22:U:H3	27:1J:61:G:H1	1.69	0.41
27:16:18:G:H1	27:16:65:C:H42	1.68	0.41
27:16:116:G:H2'	27:16:117:G:O4'	2.20	0.41
29:21:170:LEU:HD21	29:21:187:ALA:HB3	2.03	0.41
39:A8:9:ARG:HH11	39:A8:9:ARG:HD2	1.67	0.41
40:B8:16:ARG:NE	40:B8:19:LEU:HD11	2.33	0.41
40:B8:90:GLN:HG3	40:B8:91:ARG:N	2.34	0.41
48:J8:81:LYS:N	48:J8:81:LYS:HD2	2.35	0.41
50:L8:30:ARG:H	50:L8:30:ARG:HG3	1.68	0.41
52:N8:41:PRO:HB2	52:N8:42:PRO:CD	2.50	0.41
53:O8:30:THR:HA	53:O8:31:PRO:C	2.39	0.41
54:P8:1:MET:O	54:P8:3:ARG:HG2	2.21	0.41
55:Q8:53:PRO:HA	55:Q8:55:ALA:H	1.81	0.41
55:Q8:59:LYS:HB2	55:Q8:60:LEU:HG	2.03	0.41
1:1G:115:G:C2	1:1G:289:G:N7	2.88	0.41
1:1G:131:C:H2'	1:1G:132:C:C6	2.56	0.41
1:1G:1041:A:N6	1:1G:1042:G:C2	2.89	0.41
1:1G:1058:G:H8	1:1G:1058:G:O5'	2.04	0.41
1:1G:1375:A:H2'	1:1G:1376:U:O4'	2.20	0.41
1:1G:1479:C:O2'	1:1G:1480:G:H5'	2.21	0.41
6:12:7:VAL:HG13	6:12:8:LYS:HG3	2.03	0.41
7:22:14:ILE:HG23	7:22:15:THR:OG1	2.19	0.41
8:32:61:LYS:N	8:32:203:VAL:HG22	2.35	0.41
1:13:22:G:H2'	1:13:23:C:C6	2.56	0.41
1:13:266:G:N2	1:13:269:C:H5	2.18	0.41
1:13:667:G:H4'	19:6I:51:HIS:ND1	2.36	0.41
1:13:784:C:H2'	1:13:785:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:963:G:C2	14:1I:55:LYS:NZ	2.85	0.41
1:13:1277:C:O2'	1:13:1279:A:H1'	2.21	0.41
1:13:1499:A:O2'	1:13:1520:G:H5'	2.20	0.41
2:1L:30:G:H2'	2:1L:31:A:C8	2.55	0.41
3:2L:22:A:H61	3:2L:47:7MG:H2'	1.85	0.41
2:3L:40:C:H2'	2:3L:41:C:C6	2.55	0.41
5:14:524:U:H2'	5:14:525:U:C6	2.55	0.41
5:14:581:C:C2	5:14:582:G:C8	3.09	0.41
5:14:817:C:H4'	5:14:932:G:C5	2.55	0.41
5:14:836:G:H2'	5:14:837:C:C6	2.56	0.41
5:14:857:C:H2'	5:14:858:U:C6	2.56	0.41
5:14:1115:G:H2'	5:14:1116:C:C6	2.56	0.41
5:14:1475:G:H5'	5:14:1476:C:OP2	2.20	0.41
5:14:2052:G:H2'	5:14:2053:G:H8	1.85	0.41
5:14:2273:A:H2'	5:14:2274:A:H8	1.81	0.41
5:14:2468:G:O2'	5:14:2469:A:O4'	2.38	0.41
5:14:2748:A:H2'	5:14:2749:A:H8	1.85	0.41
5:14:2850:A:H5'	5:14:2868:A:H2	1.85	0.41
6:1E:31:TYR:O	6:1E:42:ILE:HG13	2.21	0.41
8:3E:154:ASN:OD1	8:3E:154:ASN:N	2.50	0.41
13:8E:24:GLY:HA2	13:8E:59:PHE:O	2.21	0.41
15:2I:34:ASP:OD1	15:2I:36:ASP:HB2	2.21	0.41
5:1H:7:G:C2	5:1H:8:A:C4	3.08	0.41
5:1H:728:G:H4'	28:11:13:ARG:HD3	2.03	0.41
5:1H:731:C:H5	58:1H:3699:HOH:O	2.04	0.41
5:1H:744:G:OP1	29:21:132:HIS:ND1	2.50	0.41
5:1H:825:C:H5"	58:1H:3874:HOH:O	2.20	0.41
5:1H:1519:G:C2'	5:1H:1520:U:H5'	2.51	0.41
5:1H:2051:A:OP2	58:1H:4167:HOH:O	2.21	0.41
5:1H:2262:U:OP1	5:1H:2387:U:O2'	2.23	0.41
5:1H:2728:U:H2'	5:1H:2729:G:C8	2.56	0.41
27:1J:40:U:H3'	27:1J:41:U:H5'	2.03	0.41
27:16:43:C:H5"	51:M8:1:MET:HG2	2.02	0.41
28:11:172:TYR:HD2	28:11:185:VAL:C	2.23	0.41
29:21:144:ARG:HH11	29:21:144:ARG:HG3	1.86	0.41
32:51:7:LEU:N	32:51:8:PRO:HD3	2.35	0.41
32:51:153:LYS:H	32:51:153:LYS:CD	2.32	0.41
34:58:94:HIS:C	34:58:95:PRO:O	2.59	0.41
39:A8:3:ARG:HG2	39:A8:4:LEU:H	1.85	0.41
40:B8:107:ASP:CG	40:B8:109:GLU:HG3	2.41	0.41
46:H8:7:ALA:HB3	46:H8:61:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:H8:105:VAL:HG13	46:H8:139:VAL:C	2.40	0.41
46:H8:165:VAL:HB	46:H8:167:PRO:CD	2.51	0.41
47:I8:36:ILE:HA	47:I8:60:PHE:HA	2.01	0.41
48:J8:37:ILE:HG21	48:J8:37:ILE:HD13	1.68	0.41
55:Q8:42:ARG:N	55:Q8:42:ARG:HD2	2.35	0.41
55:Q8:48:PHE:CE2	55:Q8:52:LYS:HB2	2.56	0.41
1:1G:66:G:C2	1:1G:67:C:C6	3.09	0.41
1:1G:260:G:H2'	1:1G:261:U:C6	2.56	0.41
1:1G:562:C:H4'	1:1G:563:A:O5'	2.20	0.41
1:1G:677:U:O2'	1:1G:678:U:H5'	2.21	0.41
1:1G:793:U:O4	1:1G:1517:G:H8	2.04	0.41
1:1G:964:A:N3	1:1G:969:A:O2'	2.49	0.41
1:1G:1165:C:H2'	1:1G:1166:G:O4'	2.19	0.41
1:1G:1338:G:C6	1:1G:1339:A:N1	2.89	0.41
1:13:29:G:O2'	1:13:30:U:H5'	2.21	0.41
1:13:61:G:H2'	1:13:62:U:O4'	2.20	0.41
1:13:104:G:C2	1:13:105:G:C8	3.08	0.41
1:13:128:G:H4'	21:8I:3:LYS:HG2	2.01	0.41
1:13:200:G:N2	1:13:218:C:C2	2.88	0.41
1:13:222:U:H2'	1:13:223:U:H6	1.84	0.41
1:13:266:G:H5"	1:13:267:C:H5	1.84	0.41
1:13:325:A:H2'	1:13:326:G:O4'	2.21	0.41
1:13:543:C:C2'	1:13:544:G:H5'	2.50	0.41
1:13:639:G:N2	1:13:640:A:C4	2.89	0.41
1:13:811:C:H4'	1:13:900:A:N6	2.36	0.41
1:13:940:C:H2'	1:13:941:G:C8	2.56	0.41
1:13:1077:G:N2	1:13:1080:A:OP2	2.48	0.41
1:13:1130:A:C6	1:13:1146:A:C6	3.09	0.41
1:13:1212:U:H4'	1:13:1213:A:C8	2.56	0.41
1:13:1320:C:H2'	1:13:1321:C:O4'	2.21	0.41
1:13:1329:A:N7	25:1F:7:ARG:NH2	2.69	0.41
1:13:1362(A):C:H5'	1:13:1363:A:O5'	2.21	0.41
3:2L:20:G:C2	3:2L:58:A:C2	3.09	0.41
3:2L:66:C:H2'	3:2L:67:C:H6	1.86	0.41
5:14:55:G:O2'	5:14:127:A:N1	2.37	0.41
5:14:74:A:C8	5:14:74:A:O5'	2.74	0.41
5:14:83:G:N2	5:14:102:G:H2'	2.35	0.41
5:14:265:A:N6	5:14:427:U:O2'	2.50	0.41
5:14:273(C):C:H5'	5:14:273(D):C:OP2	2.19	0.41
5:14:374:A:C2	5:14:401:A:C4	3.08	0.41
5:14:805:G:H4'	5:14:806:C:OP2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1142:U:O2	5:14:1142:U:H2'	2.20	0.41
5:14:1332:G:N2	5:14:1610:A:C8	2.89	0.41
5:14:1425:G:H2'	5:14:1426:G:C8	2.56	0.41
5:14:1542:G:O5'	5:14:1543:A:H5"	2.21	0.41
5:14:1551:C:C4	5:14:1552:G:C5	3.09	0.41
5:14:1906:G:C2	5:14:1907:G:C8	3.09	0.41
5:14:2579:C:H2'	5:14:2580:U:O4'	2.21	0.41
5:14:2588:G:OP2	58:14:3613:HOH:O	2.21	0.41
5:14:2699:C:H2'	5:14:2700:C:O4'	2.21	0.41
5:14:2749:A:H62	5:14:2753:A:N6	2.19	0.41
5:14:2843:G:N7	58:14:3675:HOH:O	2.36	0.41
6:1E:108:ILE:HA	6:1E:108:ILE:HD13	1.77	0.41
7:2E:157:ILE:HG13	7:2E:164:ARG:HG2	2.03	0.41
8:3E:9:CYS:SG	8:3E:31:CYS:O	2.79	0.41
9:4E:11:ILE:H	9:4E:11:ILE:HG12	1.46	0.41
12:7E:88:LYS:O	12:7E:92:ARG:HD3	2.21	0.41
12:7E:100:ILE:HA	12:7E:101:PRO:HD3	1.79	0.41
15:2I:37:GLY:O	15:2I:39:PRO:HD3	2.20	0.41
17:4I:74:VAL:O	17:4I:78:ILE:HG13	2.21	0.41
17:4I:108:ARG:HG3	17:4I:108:ARG:NH1	2.21	0.41
23:AI:40:ILE:HG12	23:AI:41:VAL:N	2.36	0.41
2:3K:5:G:H2'	2:3K:6:G:C8	2.56	0.41
2:3K:11:C:H2'	2:3K:12:U:C6	2.56	0.41
2:3K:58:A:HO2'	2:3K:59:U:P	2.41	0.41
5:1H:152:G:H1	5:1H:174:C:H42	1.68	0.41
5:1H:208:C:H2'	5:1H:209:C:H6	1.85	0.41
5:1H:214:G:N2	5:1H:216:A:N3	2.66	0.41
5:1H:223:A:N1	5:1H:407:G:O2'	2.46	0.41
5:1H:469:G:C6	54:P8:39:ARG:NH1	2.89	0.41
5:1H:567:A:OP1	58:1H:3606:HOH:O	2.21	0.41
5:1H:817:C:H4'	5:1H:932:G:C5	2.56	0.41
5:1H:918:A:N3	27:16:80:U:O2'	2.46	0.41
5:1H:993:G:C4	5:1H:994:C:C5	3.09	0.41
5:1H:1000:A:C8	5:1H:1154:G:N2	2.89	0.41
5:1H:1035:U:H2'	5:1H:1036:G:C8	2.56	0.41
5:1H:1055:G:O2'	5:1H:1086:A:N6	2.54	0.41
5:1H:1100:C:H2'	5:1H:1101:U:C6	2.55	0.41
5:1H:1301:A:OP1	58:1H:3612:HOH:O	2.21	0.41
5:1H:1582:C:O2'	5:1H:1586:A:C8	2.72	0.41
5:1H:1956:U:C2'	5:1H:1957:C:H5'	2.51	0.41
5:1H:1976:U:H6	5:1H:1976:U:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2123:G:H2'	5:1H:2124:G:H8	1.85	0.41
5:1H:2582:G:H2'	5:1H:2582:G:N3	2.34	0.41
5:1H:2779:U:O2	5:1H:2779:U:O4'	2.38	0.41
5:1H:2802:G:OP2	5:1H:2802:G:H8	2.04	0.41
5:1H:2841:C:O5'	5:1H:2841:C:H6	2.04	0.41
5:1H:2881:C:O2'	38:98:96:ARG:HA	2.21	0.41
27:1J:34:U:O4	27:1J:44:G:H2'	2.21	0.41
27:1J:87:G:H3'	27:1J:88:C:C5'	2.48	0.41
28:11:44:ASN:O	28:11:46:GLN:O	2.38	0.41
28:11:67:PHE:HB3	28:11:153:ALA:H	1.86	0.41
28:11:85:ASP:OD2	28:11:88:ARG:NH1	2.45	0.41
31:41:11:TYR:HA	31:41:15:VAL:HB	2.03	0.41
31:41:20:ILE:O	31:41:24:GLY:HA2	2.19	0.41
31:41:173:LEU:HD22	31:41:178:PHE:CE2	2.55	0.41
31:41:173:LEU:O	31:41:178:PHE:HB2	2.20	0.41
33:61:68:LEU:HA	33:61:68:LEU:HD12	1.75	0.41
34:58:95:PRO:O	34:58:96:GLU:CD	2.59	0.41
37:88:51:ARG:O	37:88:55:VAL:HG13	2.20	0.41
39:A8:25:ARG:O	39:A8:39:ILE:HA	2.21	0.41
40:B8:108:ARG:O	40:B8:111:ARG:HG2	2.20	0.41
42:D8:40:LEU:HD22	42:D8:47:VAL:HA	2.03	0.41
45:G8:52:SER:HB3	45:G8:53:PRO:HD2	2.02	0.41
48:J8:92:LYS:HA	48:J8:95:LEU:CB	2.48	0.41
52:N8:40:LYS:CE	52:N8:46:CYS:HB3	2.50	0.41
53:O8:28:ARG:CZ	53:O8:30:THR:HG23	2.50	0.41
55:Q8:7:HIS:O	55:Q8:10:ALA:N	2.42	0.41
55:Q8:21:LYS:HB3	55:Q8:48:PHE:HD1	1.85	0.41
1:1G:8:A:C5	8:32:209:ARG:HA	2.56	0.41
1:1G:830:G:N1	1:1G:831:U:O2	2.54	0.41
1:1G:1015:A:C6	1:1G:1016:A:C5	3.09	0.41
1:1G:1028(A):C:N4	1:1G:1032(B):G:H22	2.18	0.41
1:1G:1126:U:H1'	1:1G:1127:G:OP2	2.21	0.41
1:1G:1198:G:H2'	1:1G:1199:U:C6	2.56	0.41
1:1G:1206:G:H4'	7:22:192:THR:O	2.21	0.41
1:1G:1263:C:H42	1:1G:1272:G:H1	1.68	0.41
7:22:134:ILE:HD12	7:22:151:VAL:HG11	2.02	0.41
1:13:109:A:N7	1:13:326:G:H2'	2.35	0.41
1:13:128:G:O2'	21:8I:3:LYS:HE2	2.20	0.41
1:13:222:U:C2	1:13:223:U:C5	3.09	0.41
1:13:313:A:O2'	1:13:314:C:H5'	2.20	0.41
1:13:317:G:C6	1:13:318:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:434:U:H2'	1:13:435:C:C6	2.56	0.41
1:13:805:C:H2'	1:13:806:C:H6	1.86	0.41
1:13:875:C:O2'	12:7E:14:ARG:NH1	2.54	0.41
1:13:1279:A:O2'	1:13:1281:U:OP2	2.31	0.41
1:13:1413:A:H2'	1:13:1414:U:O4'	2.21	0.41
3:2L:3:C:H5'	5:14:2255:G:O2'	2.21	0.41
5:14:10:G:C6	5:14:2629:A:N7	2.88	0.41
5:14:1138:G:H2'	5:14:1139:G:O4'	2.20	0.41
5:14:1161:C:H2'	5:14:1162:G:C8	2.56	0.41
5:14:1387:C:C2	5:14:1388:G:C8	3.09	0.41
5:14:1572:A:H2'	5:14:1573:G:O4'	2.21	0.41
5:14:1581:G:H8	5:14:1581:G:O5'	2.04	0.41
5:14:1847:A:C3'	5:14:1848:A:H5'	2.51	0.41
5:14:2166:G:N2	5:14:2171:A:N7	2.69	0.41
5:14:2297:C:H2'	5:14:2298:A:H8	1.85	0.41
5:14:2494:G:O2'	5:14:2495:G:H5'	2.21	0.41
5:14:2558:C:H2'	5:14:2559:C:O4'	2.21	0.41
5:14:2702:U:HO2'	5:14:2703:C:H6	1.56	0.41
6:1E:98:LEU:H	6:1E:101:MET:HE3	1.86	0.41
8:3E:21:LEU:H	8:3E:21:LEU:HG	1.70	0.41
8:3E:108:LEU:HB3	8:3E:110:PHE:CE1	2.56	0.41
14:1I:6:ILE:HA	14:1I:97:GLU:O	2.20	0.41
16:3I:30:ALA:HB1	16:3I:31:PRO:HD2	2.02	0.41
16:3I:82:VAL:HG22	16:3I:83:VAL:H	1.86	0.41
22:9I:26:LEU:HD11	22:9I:29:PHE:CD2	2.56	0.41
5:1H:394:A:O2'	5:1H:395:U:H5'	2.20	0.41
5:1H:405:U:O2	5:1H:405:U:H2'	2.21	0.41
5:1H:528:A:N1	5:1H:2042:A:H2'	2.36	0.41
5:1H:532:A:N7	5:1H:2021:C:O2'	2.38	0.41
5:1H:551:G:H8	5:1H:551:G:O5'	2.04	0.41
5:1H:705:A:C8	5:1H:727:A:C2	3.09	0.41
5:1H:878:A:C2	5:1H:879:G:C5	3.09	0.41
5:1H:1153:C:P	58:1H:4097:HOH:O	2.79	0.41
5:1H:1535:U:H5'	5:1H:1537:C:C4	2.56	0.41
5:1H:1671:U:O2'	5:1H:1673:U:H5	2.04	0.41
5:1H:1682:G:C6	5:1H:1683:C:C4	3.09	0.41
5:1H:2264:C:N4	47:I8:15:ASP:OD2	2.48	0.41
5:1H:2279:G:O6	47:I8:14:ARG:HD2	2.21	0.41
5:1H:2591:C:H2'	5:1H:2592:G:C8	2.55	0.41
5:1H:2734:A:H3'	5:1H:2735:G:H8	1.86	0.41
5:1H:2863:C:C2	5:1H:2864:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:70:C:H2'	27:1J:71:C:C6	2.52	0.41
30:31:197:ASP:O	30:31:199:TRP:N	2.53	0.41
32:51:37:VAL:HG13	32:51:68:THR:HG21	2.03	0.41
32:51:151:ILE:H	32:51:151:ILE:HG13	1.50	0.41
35:68:75:SER:CB	40:B8:74:ARG:HH12	2.34	0.41
39:A8:56:LEU:CB	39:A8:58:LEU:HD22	2.51	0.41
45:G8:20:TYR:CG	45:G8:42:VAL:HG23	2.55	0.41
48:J8:98:LEU:HD23	48:J8:98:LEU:HA	1.95	0.41
1:1G:49:U:C2	1:1G:361:G:N2	2.89	0.41
1:1G:158:G:H1	1:1G:163:C:N4	2.19	0.41
1:1G:887:G:H1	1:1G:910:C:H42	1.68	0.41
1:1G:974:A:H5'	1:1G:975:A:OP1	2.21	0.41
1:1G:1164:G:H1	1:1G:1172:C:H42	1.68	0.41
1:1G:1342:C:H2'	1:1G:1343:G:H8	1.86	0.41
7:22:175:LEU:HD12	7:22:175:LEU:H	1.86	0.41
8:32:29:PRO:HD2	8:32:30:LYS:HE2	2.03	0.41
1:13:73:G:H2'	1:13:74:C:C6	2.55	0.40
1:13:178:C:C2	1:13:179:A:C8	3.09	0.40
1:13:564:C:C6	21:8I:31:LEU:HD11	2.56	0.40
1:13:827:U:C5	1:13:870:U:C4	3.09	0.40
1:13:1090:U:H2'	1:13:1091:U:H6	1.86	0.40
1:13:1129:C:OP1	1:13:1130:A:H8	2.04	0.40
1:13:1145:C:C4'	1:13:1146:A:H5'	2.46	0.40
1:13:1286:A:C2	25:1F:18:TYR:OH	2.71	0.40
2:1L:24:G:C6	2:1L:25:C:C4	3.08	0.40
5:14:50:U:H4'	5:14:51:G:OP2	2.21	0.40
5:14:335:C:H2'	5:14:336:C:C6	2.56	0.40
5:14:530:G:O2'	5:14:531:C:O5'	2.39	0.40
5:14:553:U:C4	5:14:554:U:C4	3.09	0.40
5:14:816:C:P	58:14:3753:HOH:O	2.79	0.40
5:14:1404:C:C2'	5:14:1405:U:H5'	2.50	0.40
5:14:1477:A:H2'	5:14:1478:G:O4'	2.20	0.40
5:14:1638:C:H5"	5:14:2710:C:O2'	2.21	0.40
5:14:2074:U:P	58:14:3509:HOH:O	2.74	0.40
5:14:2299:G:C6	5:14:2318:G:C8	3.08	0.40
5:14:2808:U:H5"	5:14:2891:G:O6	2.21	0.40
6:1E:17:PHE:N	6:1E:17:PHE:CD1	2.89	0.40
12:7E:87:SER:OG	12:7E:92:ARG:HA	2.20	0.40
13:8E:25:LYS:N	13:8E:60:ASP:OD1	2.48	0.40
14:1I:47:PHE:CZ	18:5I:37:PHE:HE1	2.38	0.40
15:2I:59:TYR:CE2	15:2I:63:LEU:HD11	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:4I:3:ARG:HB3	17:4I:9:ILE:HG12	2.02	0.40
17:4I:92:HIS:HA	17:4I:110:ARG:HH21	1.86	0.40
20:7I:26:ARG:NH2	20:7I:31:LYS:HD3	2.34	0.40
2:3K:6:G:O6	2:3K:7:A:N6	2.53	0.40
5:1H:270(I):G:H8	5:1H:270(I):G:O5'	2.04	0.40
5:1H:619:G:H3'	5:1H:620:G:N2	2.36	0.40
5:1H:643:A:O2'	5:1H:644:A:H5'	2.21	0.40
5:1H:989:G:N7	50:L8:13:ILE:HD11	2.36	0.40
5:1H:1011:G:OP1	41:C8:75:ASN:HB3	2.21	0.40
5:1H:1204:A:N1	5:1H:1241:A:C2	2.89	0.40
5:1H:1324:G:O2'	5:1H:1326:U:OP2	2.30	0.40
5:1H:1514:U:C4	5:1H:1515:C:N4	2.89	0.40
5:1H:1664:A:H5"	5:1H:1665:A:OP2	2.22	0.40
5:1H:1857:G:H8	5:1H:1857:G:O5'	2.04	0.40
5:1H:2339:G:H2'	5:1H:2340:G:C8	2.56	0.40
5:1H:2342:C:O2'	5:1H:2374:C:H5"	2.21	0.40
5:1H:2820:A:OP2	38:98:2:ARG:NH2	2.53	0.40
27:16:54:G:H2'	27:16:55:U:C6	2.56	0.40
29:21:105:THR:HG21	29:21:164:ARG:CZ	2.51	0.40
29:21:201:THR:HG22	29:21:202:LYS:N	2.36	0.40
38:98:2:ARG:HH11	38:98:2:ARG:HG2	1.86	0.40
38:98:12:ARG:HD3	38:98:16:HIS:ND1	2.36	0.40
44:F8:5:TYR:HB3	49:K8:33:MET:HB2	2.03	0.40
46:H8:160:GLY:O	46:H8:161:VAL:HG13	2.21	0.40
53:O8:15:GLU:CG	53:O8:16:CYS:H	2.34	0.40
1:1G:115:G:H4'	1:1G:116:A:O5'	2.21	0.40
1:1G:522:C:H2'	1:1G:523:A:O4'	2.21	0.40
1:1G:561:U:O2'	1:1G:562:C:P	2.79	0.40
1:1G:881:G:C5	1:1G:882:C:C5	3.09	0.40
1:1G:962:C:C2	1:1G:963:G:C8	3.09	0.40
1:1G:1166:G:N2	1:1G:1171:G:C6	2.89	0.40
1:1G:1238:A:N7	1:1G:1303:C:H1'	2.36	0.40
1:1G:1376:U:C2	1:1G:1377:A:N7	2.89	0.40
1:1G:1402:C:H2'	1:1G:1403:C:O4'	2.21	0.40
6:12:144:ARG:HG3	6:12:145:LEU:N	2.35	0.40
1:13:8:A:N7	8:3E:208:SER:HB3	2.36	0.40
1:13:74:C:H2'	1:13:75:C:O4'	2.21	0.40
1:13:389:A:H2'	1:13:390:C:C5'	2.50	0.40
1:13:452:A:P	20:7I:43:LYS:HZ1	2.44	0.40
1:13:615:C:C2	1:13:616:G:C8	3.09	0.40
1:13:687:A:C2	1:13:704:A:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:769:G:H4'	1:13:1513:A:H4'	2.03	0.40
1:13:848:C:H2'	1:13:849:C:O4'	2.20	0.40
1:13:1000:A:H4'	5:14:2137:C:OP1	2.22	0.40
1:13:1034:G:N2	1:13:1035:A:C5	2.90	0.40
1:13:1177:G:O6	1:13:1181:G:N7	2.54	0.40
1:13:1192:C:C5	1:13:1193:G:C8	3.09	0.40
1:13:1267:C:O2	25:1F:20:LYS:HD2	2.20	0.40
1:13:1286:A:H2	25:1F:18:TYR:HH	1.64	0.40
2:3L:66:U:H2'	2:3L:67:C:O4'	2.21	0.40
5:14:24:G:H2'	5:14:25:U:O4'	2.21	0.40
5:14:150:C:H2'	5:14:151:C:C6	2.56	0.40
5:14:273(D):C:H42	5:14:363(B):G:H1	1.69	0.40
5:14:455:C:N3	5:14:472:A:H2'	2.35	0.40
5:14:559:G:H2'	5:14:560:C:O4'	2.21	0.40
5:14:565:C:H2'	5:14:566:U:O4'	2.22	0.40
5:14:1104:C:H2'	5:14:1105:U:C6	2.56	0.40
5:14:1771:C:H1'	5:14:1786:A:C8	2.57	0.40
5:14:2070:G:C2	5:14:2442:C:C2	3.10	0.40
5:14:2417:C:H2'	5:14:2418:A:H8	1.86	0.40
6:1E:42:ILE:HD11	6:1E:202:PRO:HB2	2.03	0.40
9:4E:6:PHE:HD1	9:4E:6:PHE:HA	1.77	0.40
10:5E:2:ARG:HD2	10:5E:69:GLU:HB3	2.03	0.40
10:5E:67:MET:HB2	10:5E:68:PRO:HD2	2.04	0.40
13:8E:77:ILE:O	13:8E:81:ILE:HG12	2.22	0.40
20:7I:57:ARG:O	20:7I:60:LEU:N	2.53	0.40
20:7I:77:ALA:CB	20:7I:79:VAL:H	2.33	0.40
24:BI:68:LYS:HB2	24:BI:68:LYS:HE3	1.86	0.40
26:1K:10:G:HO2'	26:1K:11:C:P	2.43	0.40
3:2K:57:C:O2'	31:41:78:SER:HB2	2.21	0.40
5:1H:270:A:H1'	5:1H:370:G:C2	2.56	0.40
5:1H:270(F):U:H2'	5:1H:270(G):C:C6	2.56	0.40
5:1H:821:A:H5"	5:1H:822:U:C6	2.56	0.40
5:1H:1419:A:C8	5:1H:1421:G:C6	3.08	0.40
5:1H:1666:G:H1'	35:68:3:GLN:HE21	1.86	0.40
5:1H:1786:A:H1'	5:1H:1938:A:N6	2.37	0.40
5:1H:2371:G:H4'	53:O8:45:LYS:HG3	2.04	0.40
5:1H:2413:G:O6	58:1H:3756:HOH:O	2.22	0.40
5:1H:2592:G:C6	5:1H:2593:U:N3	2.89	0.40
27:1J:65:C:C4	27:1J:108:C:C5	3.09	0.40
27:16:2:C:H2'	27:16:3:C:C6	2.57	0.40
27:16:38:C:H2'	27:16:39:A:H5"	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:11:119:ALA:HB1	28:11:130:ALA:HB3	2.01	0.40
28:11:120:GLY:N	28:11:130:ALA:O	2.54	0.40
28:11:164:GLN:HB3	28:11:166:GLN:NE2	2.37	0.40
30:31:6:VAL:HG11	30:31:119:ARG:HA	2.03	0.40
30:31:24:LEU:HD21	30:31:114:VAL:HG12	2.02	0.40
30:31:77:ASP:HB2	30:31:79:GLY:H	1.87	0.40
34:58:40:PRO:HB3	41:C8:67:ALA:HB3	2.03	0.40
43:E8:14:PRO:HG2	43:E8:78:GLU:HB2	2.02	0.40
48:J8:94:LEU:HD23	48:J8:94:LEU:HA	1.78	0.40
50:L8:4:LEU:HD21	50:L8:39:ASP:OD2	2.22	0.40
1:1G:12:U:H4'	1:1G:526:C:O2'	2.21	0.40
1:1G:95:G:C6	1:1G:96:G:C5	3.09	0.40
1:1G:200:G:H1	1:1G:217:C:H42	1.69	0.40
1:1G:448:A:OP2	1:1G:485:G:N2	2.45	0.40
1:1G:560:U:H5'	1:1G:566:G:N2	2.36	0.40
1:1G:1277:C:O2'	1:1G:1279:A:H1'	2.21	0.40
6:12:61:LEU:HD12	6:12:61:LEU:HA	1.90	0.40
1:13:506:G:H2'	1:13:507:C:O4'	2.21	0.40
1:13:1014:A:H2'	1:13:1015:A:C8	2.56	0.40
1:13:1051:C:H2'	1:13:1052:U:C6	2.57	0.40
1:13:1151:A:H5'	14:1I:41:PRO:HA	2.04	0.40
1:13:1321:C:C3'	1:13:1322:C:H5"	2.47	0.40
1:13:1410:G:C4	1:13:1491:G:N2	2.89	0.40
1:13:1503:A:C2	4:4K:13:A:N7	2.90	0.40
3:2L:19:G:C2	3:2L:59:A:C4	3.09	0.40
2:3L:48:C:H5	2:3L:59:U:O4'	2.04	0.40
5:14:26:G:C6	5:14:27:G:N1	2.89	0.40
5:14:235:U:C2	5:14:236:C:C5	3.10	0.40
5:14:479:A:H4'	5:14:480:A:OP1	2.21	0.40
5:14:608:A:H2'	5:14:609:A:C8	2.56	0.40
5:14:827:U:H2'	5:14:2430:A:H2	1.85	0.40
5:14:1060:U:H5'	5:14:1061:U:C6	2.56	0.40
5:14:1063:G:C4	5:14:1076:C:N4	2.90	0.40
5:14:1148:A:O2'	5:14:1149:G:H5'	2.21	0.40
5:14:1401:G:H2'	5:14:1402:C:O4'	2.21	0.40
5:14:1448:G:O2'	5:14:1528:A:N6	2.55	0.40
5:14:1515:C:H2'	5:14:1516:U:H6	1.86	0.40
5:14:2185:C:H2'	5:14:2186:G:O4'	2.21	0.40
5:14:2245:U:H5"	5:14:2246:G:H5'	2.04	0.40
5:14:2273:A:O2'	5:14:2274:A:H5'	2.21	0.40
5:14:2320:A:C6	5:14:2333:A:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2418:A:H2'	5:14:2419:U:C6	2.57	0.40
5:14:2535:G:N3	5:14:2536:G:C8	2.90	0.40
5:14:2688:U:H1'	5:14:2721:A:N6	2.37	0.40
6:1E:36:ARG:C	6:1E:38:GLY:H	2.24	0.40
6:1E:126:GLU:HA	6:1E:129:GLU:CG	2.49	0.40
7:2E:91:LEU:O	7:2E:94:LEU:HG	2.22	0.40
12:7E:94:TYR:HE1	12:7E:132:GLU:HB2	1.85	0.40
17:4I:81:LEU:O	17:4I:84:ILE:HG22	2.21	0.40
20:7I:11:SER:HB2	20:7I:14:ASN:HB3	2.03	0.40
20:7I:27:LYS:HG3	20:7I:30:GLY:HA3	2.03	0.40
21:8I:29:HIS:HA	21:8I:30:PRO:HD2	1.87	0.40
24:BI:20:LEU:O	24:BI:23:ARG:HB3	2.22	0.40
26:1K:3:C:O5'	26:1K:3:C:H6	2.05	0.40
5:1H:58:G:H5'	44:F8:74:PRO:HB3	2.03	0.40
5:1H:275:G:N2	5:1H:276:A:C6	2.89	0.40
5:1H:564:C:H2'	5:1H:565:C:O4'	2.21	0.40
5:1H:1197:G:H5'	5:1H:1228:G:O2'	2.21	0.40
5:1H:2106:G:C6	5:1H:2107:C:C4	3.09	0.40
5:1H:2107:C:O2	5:1H:2182:G:N2	2.23	0.40
5:1H:2124:G:H2'	5:1H:2125:G:H5'	2.03	0.40
5:1H:2758:A:C4	32:51:67:LEU:HD21	2.57	0.40
5:1H:2843:G:H1	5:1H:2874:C:N4	2.19	0.40
27:16:89:G:C6	27:16:89(A):A:C6	3.10	0.40
28:11:46:GLN:HB2	28:11:48:ARG:HG2	2.04	0.40
28:11:89:SER:HG	28:11:159:ALA:H	1.69	0.40
30:31:110:LEU:HD12	30:31:110:LEU:HA	1.78	0.40
31:41:107:LEU:HA	31:41:107:LEU:HD23	1.83	0.40
33:61:79:ILE:HA	33:61:79:ILE:HD13	1.69	0.40
34:58:99:LEU:HD23	34:58:99:LEU:HA	1.80	0.40
35:68:113:LYS:O	35:68:113:LYS:HD3	2.21	0.40
38:98:29:LEU:HD12	38:98:29:LEU:HA	1.76	0.40
39:A8:83:LYS:HE3	39:A8:109:GLY:O	2.21	0.40
41:C8:96:ALA:O	41:C8:100:VAL:HG23	2.21	0.40
42:D8:38:LEU:HD21	42:D8:40:LEU:O	2.21	0.40
44:F8:26:TYR:CD2	44:F8:89:ILE:HG13	2.56	0.40
45:G8:40:GLU:HA	45:G8:42:VAL:N	2.36	0.40
46:H8:147:GLY:N	46:H8:174:VAL:O	2.50	0.40
52:N8:3:LYS:HB3	52:N8:3:LYS:HE3	1.29	0.40
52:N8:56:LYS:N	52:N8:56:LYS:HD2	2.36	0.40
55:Q8:35:GLN:C	55:Q8:37:SER:N	2.75	0.40
55:Q8:57:ARG:N	55:Q8:57:ARG:CD	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Q8:58:ILE:O	55:Q8:58:ILE:HG22	2.21	0.40
1:1G:18:C:O5'	1:1G:18:C:H6	2.05	0.40
1:1G:96:G:C2	1:1G:97:U:C2	3.10	0.40
1:1G:376:G:O2'	1:1G:377:G:H5'	2.20	0.40
1:1G:500:G:O2'	1:1G:501:C:H5'	2.21	0.40
1:1G:719:C:C5	1:1G:720:C:C4	3.09	0.40
1:1G:1233:G:H2'	1:1G:1234:C:C6	2.56	0.40
8:32:150:GLU:C	8:32:152:SER:N	2.73	0.40
1:13:254:G:H1'	21:8I:15:MET:HG2	2.04	0.40
1:13:377:G:H5'	20:7I:5:ARG:NH1	2.36	0.40
1:13:1003:G:N2	1:13:1004:A:O2'	2.55	0.40
1:13:1126:U:O2'	1:13:1127:G:OP1	2.35	0.40
1:13:1129:C:O2	1:13:1130:A:N7	2.54	0.40
5:14:16:G:O2'	5:14:17:G:H5'	2.20	0.40
5:14:21:A:C2	5:14:520:G:C2	3.09	0.40
5:14:142:G:OP1	5:14:1598:C:H1'	2.21	0.40
5:14:218:A:C2	5:14:235:U:H4'	2.56	0.40
5:14:270(P):C:H2'	5:14:270(Q):C:C6	2.57	0.40
5:14:447:A:C5	5:14:473:G:C4	3.09	0.40
5:14:747:U:O2	5:14:2014:A:H1'	2.22	0.40
5:14:884:C:H5	5:14:885:C:C4	2.40	0.40
5:14:1204:A:C2	5:14:1241:A:N1	2.87	0.40
5:14:1357:U:H2'	5:14:1358:G:O4'	2.21	0.40
5:14:1405:U:H2'	5:14:1406:U:C6	2.56	0.40
5:14:1486:A:H2'	5:14:1487:G:H8	1.85	0.40
5:14:1828:G:OP2	58:14:3533:HOH:O	2.22	0.40
5:14:2076:U:H6	5:14:2076:U:O5'	2.05	0.40
5:14:2115:G:N2	5:14:2172:U:H3	2.19	0.40
5:14:2154:G:H2'	5:14:2155:G:O4'	2.21	0.40
5:14:2280:G:N3	5:14:2280:G:H2'	2.35	0.40
5:14:2300:G:H2'	5:14:2301:C:O4'	2.22	0.40
5:14:2411:A:H8	5:14:2411:A:OP2	2.05	0.40
5:14:2459:A:H5"	5:14:2460:U:OP2	2.21	0.40
5:14:2537:U:H2'	5:14:2538:C:H6	1.86	0.40
6:1E:53:ARG:HH12	6:1E:199:TYR:HA	1.87	0.40
6:1E:163:PHE:HA	6:1E:185:ILE:O	2.21	0.40
7:2E:108:ASN:HA	7:2E:109:PRO:HD2	1.96	0.40
8:3E:108:LEU:CD1	8:3E:174:LEU:HD13	2.51	0.40
8:3E:172:PRO:O	8:3E:186:LEU:HD12	2.20	0.40
11:6E:91:VAL:HG12	11:6E:95:ARG:HB3	2.04	0.40
12:7E:39:LEU:HD12	12:7E:39:LEU:HA	1.77	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:3I:87:GLY:HA2	16:3I:98:TYR:HA	2.03	0.40
19:6I:5:LYS:O	19:6I:8:LYS:HB3	2.21	0.40
21:8I:101:ARG:HH21	21:8I:101:ARG:HB2	1.87	0.40
23:AI:40:ILE:HG22	23:AI:69:HIS:O	2.21	0.40
23:AI:51:VAL:HG12	23:AI:52:TYR:N	2.33	0.40
5:1H:76:C:O2'	5:1H:77:C:H5'	2.22	0.40
5:1H:250:G:H5'	36:78:60:MET:SD	2.62	0.40
5:1H:270(R):G:H2'	5:1H:270(S):G:C8	2.56	0.40
5:1H:322:A:OP2	30:31:169:ASN:HB2	2.21	0.40
5:1H:811:U:H3'	36:78:22:GLY:CA	2.52	0.40
5:1H:1062:G:O2'	5:1H:1077:A:N6	2.55	0.40
5:1H:1291:C:O2'	5:1H:1292:U:H5'	2.22	0.40
5:1H:1444:G:C2	5:1H:1548:C:N3	2.89	0.40
5:1H:2600:A:N7	28:11:237:GLU:HG3	2.37	0.40
5:1H:2864:G:C6	5:1H:2865:U:C4	3.10	0.40
27:1J:13:A:H2'	27:1J:70:C:O2'	2.22	0.40
27:1J:38:C:O2	27:1J:48:A:H1'	2.21	0.40
28:11:80:ALA:HB2	28:11:96:HIS:CD2	2.57	0.40
30:31:7:TYR:HA	30:31:22:ALA:O	2.21	0.40
30:31:181:LEU:HD22	30:31:186:ILE:HD11	2.04	0.40
31:41:26:GLN:HE21	31:41:26:GLN:HB2	1.74	0.40
33:61:56:LYS:HG3	33:61:57:ARG:N	2.35	0.40
41:C8:75:ASN:HB2	41:C8:78:THR:H	1.86	0.40
45:G8:26:LYS:HE2	45:G8:26:LYS:HA	2.02	0.40
46:H8:98:MET:HG3	46:H8:99:TYR:N	2.37	0.40
46:H8:133:ILE:HA	46:H8:134:PRO:HD2	1.91	0.40
54:P8:10:ARG:O	54:P8:14:LYS:HB2	2.21	0.40
1:1G:165:C:H2'	1:1G:166:G:C8	2.56	0.40
1:1G:407:G:P	8:32:115:ARG:HH21	2.41	0.40
1:1G:927:G:C2	1:1G:1391:U:H1'	2.56	0.40
1:1G:1129:C:O5'	1:1G:1130:A:H5'	2.21	0.40
8:32:119:GLN:HG2	8:32:123:HIS:HE1	1.87	0.40
1:13:450:G:N7	1:13:481:G:C6	2.90	0.40
1:13:625:G:O2'	1:13:626:U:H5'	2.21	0.40
1:13:975:A:HO2'	18:5I:32:SER:CB	2.34	0.40
1:13:1070:U:H2'	1:13:1071:C:H6	1.86	0.40
1:13:1260:C:C6	1:13:1260:C:C3'	3.05	0.40
2:3L:48:C:H5	2:3L:59:U:C1'	2.35	0.40
5:14:25:U:C4	5:14:26:G:C6	3.09	0.40
5:14:184:C:H2'	5:14:185:U:C6	2.57	0.40
5:14:270(J):G:N2	5:14:270(K):C:O2	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:389:G:H8	5:14:389:G:O5'	2.05	0.40
5:14:513:A:C2	5:14:514:A:C4	3.10	0.40
5:14:552:G:C5	5:14:553:U:C5	3.10	0.40
5:14:1017:G:C2	5:14:1018:C:C2	3.09	0.40
5:14:1022:G:C6	5:14:1140:C:C4	3.10	0.40
5:14:1142:U:H5"	5:14:1142(A):A:H5'	2.03	0.40
5:14:1427:A:H4'	5:14:1428:C:O4'	2.22	0.40
5:14:2461:C:C2	5:14:2462:U:C5	3.09	0.40
5:14:2525:G:N2	5:14:2538:C:O2	2.49	0.40
5:14:2577:A:H5"	5:14:2578:G:H5'	2.04	0.40
5:14:2706:G:N7	58:14:3685:HOH:O	2.36	0.40
5:14:2844:G:H3'	5:14:2845:G:H8	1.87	0.40
7:2E:23:TYR:CD2	7:2E:24:ALA:N	2.89	0.40
7:2E:58:GLU:N	7:2E:65:ALA:HB3	2.36	0.40
8:3E:86:LYS:HE2	8:3E:86:LYS:HB3	1.78	0.40
9:4E:14:ARG:HH11	9:4E:14:ARG:HD2	1.71	0.40
9:4E:63:ARG:H	9:4E:63:ARG:HG2	1.55	0.40
13:8E:118:LYS:HB3	13:8E:118:LYS:HE2	1.37	0.40
21:8I:76:LEU:HD12	21:8I:77:VAL:H	1.85	0.40
5:1H:55:G:N3	5:1H:56:A:C8	2.90	0.40
5:1H:270(L):U:O5'	5:1H:270(L):U:H6	2.05	0.40
5:1H:308:G:C6	5:1H:309:G:C6	3.09	0.40
5:1H:763:G:O2'	5:1H:764:A:H3'	2.22	0.40
5:1H:863:A:H2	5:1H:914:C:H41	1.70	0.40
5:1H:1164:G:C6	5:1H:1165:U:C4	3.10	0.40
5:1H:1239:G:H2'	5:1H:1240:U:O4'	2.21	0.40
5:1H:1401:G:H2'	5:1H:1402:C:C6	2.56	0.40
5:1H:1515:C:H2'	5:1H:1516:U:C6	2.57	0.40
5:1H:1919:A:H5"	5:1H:1920:C:OP2	2.21	0.40
5:1H:2114:A:N3	5:1H:2114:A:H2'	2.36	0.40
5:1H:2212:A:O2'	5:1H:2213:U:O5'	2.39	0.40
5:1H:2233:U:H2'	5:1H:2234:G:C8	2.55	0.40
5:1H:2392:A:N1	5:1H:2424:C:N3	2.70	0.40
5:1H:2393:A:H2'	5:1H:2394:C:H6	1.86	0.40
5:1H:2444:G:OP2	30:31:68:LYS:HD2	2.21	0.40
5:1H:2572:A:C4	29:21:144:ARG:NH1	2.90	0.40
5:1H:2645:G:C3'	5:1H:2646:C:H5'	2.51	0.40
5:1H:2840:C:O3'	38:98:53:HIS:NE2	2.53	0.40
5:1H:2853:C:H2'	5:1H:2854:G:C8	2.57	0.40
28:11:101:GLU:HG3	28:11:102:LYS:N	2.37	0.40
31:41:116:ASP:HB3	31:41:117:PHE:H	1.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:61:114:LEU:HD13	33:61:130:TYR:CD1	2.56	0.40
40:B8:66:VAL:HA	40:B8:71:GLY:HA2	2.03	0.40
52:N8:30:LEU:HA	52:N8:41:PRO:O	2.21	0.40
55:Q8:27:THR:HG21	55:Q8:39:LYS:HZ2	1.86	0.40
1:1G:73:G:H1	1:1G:97:U:H3	1.70	0.40
1:1G:713:G:H2'	1:1G:714:G:C8	2.57	0.40
1:1G:1128:C:C2	1:1G:1139:G:C6	3.09	0.40
1:1G:1141:C:H6	1:1G:1141:C:O5'	2.04	0.40
1:1G:1157:A:H8	1:1G:1158:C:N4	2.19	0.40
1:1G:1273:G:H3'	1:1G:1274:G:H8	1.86	0.40
1:1G:1349:A:H2'	1:1G:1350:A:H8	1.84	0.40
1:1G:1486:G:H2'	1:1G:1487:G:C1'	2.52	0.40
6:12:58:ILE:O	6:12:62:ALA:N	2.42	0.40
6:12:98:LEU:HD23	6:12:98:LEU:HA	1.91	0.40
6:12:189:ASP:H	6:12:192:SER:HB2	1.86	0.40
7:22:47:LEU:HB2	7:22:52:LEU:HD13	2.04	0.40
7:22:112:SER:HB3	7:22:115:LEU:HD12	2.03	0.40
7:22:120:VAL:O	7:22:123:GLN:HB3	2.22	0.40
8:32:65:ARG:HD2	8:32:72:GLU:HA	2.03	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2137:C:OP1	1:1G:999:U:O2'[4_555]	2.11	0.09

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
6	12	235/256 (92%)	196 (83%)	35 (15%)	4 (2%)	9 32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
6	1E	235/256 (92%)	199 (85%)	33 (14%)	3 (1%)	12 38
7	22	204/239 (85%)	185 (91%)	19 (9%)	0	100 100
7	2E	203/239 (85%)	182 (90%)	21 (10%)	0	100 100
8	32	206/209 (99%)	181 (88%)	23 (11%)	2 (1%)	15 45
8	3E	206/209 (99%)	186 (90%)	18 (9%)	2 (1%)	15 45
9	4E	149/162 (92%)	138 (93%)	10 (7%)	1 (1%)	22 52
10	5E	99/101 (98%)	93 (94%)	6 (6%)	0	100 100
11	6E	153/156 (98%)	145 (95%)	8 (5%)	0	100 100
12	7E	136/138 (99%)	125 (92%)	10 (7%)	1 (1%)	22 52
13	8E	125/128 (98%)	105 (84%)	20 (16%)	0	100 100
14	1I	97/105 (92%)	89 (92%)	8 (8%)	0	100 100
15	2I	117/129 (91%)	102 (87%)	14 (12%)	1 (1%)	17 47
16	3I	123/132 (93%)	103 (84%)	20 (16%)	0	100 100
17	4I	116/126 (92%)	97 (84%)	18 (16%)	1 (1%)	17 47
18	5I	58/61 (95%)	47 (81%)	9 (16%)	2 (3%)	3 17
19	6I	86/89 (97%)	79 (92%)	7 (8%)	0	100 100
20	7I	82/88 (93%)	76 (93%)	6 (7%)	0	100 100
21	8I	98/105 (93%)	94 (96%)	4 (4%)	0	100 100
22	9I	70/88 (80%)	60 (86%)	8 (11%)	2 (3%)	4 20
23	AI	79/93 (85%)	66 (84%)	9 (11%)	4 (5%)	2 10
24	BI	97/106 (92%)	80 (82%)	17 (18%)	0	100 100
25	1F	23/27 (85%)	21 (91%)	2 (9%)	0	100 100
28	11	270/276 (98%)	252 (93%)	15 (6%)	3 (1%)	14 42
29	21	203/206 (98%)	164 (81%)	29 (14%)	10 (5%)	2 11
30	31	200/210 (95%)	182 (91%)	16 (8%)	2 (1%)	15 45
31	41	179/182 (98%)	156 (87%)	20 (11%)	3 (2%)	9 32
32	51	172/180 (96%)	143 (83%)	22 (13%)	7 (4%)	3 14
33	61	144/148 (97%)	117 (81%)	24 (17%)	3 (2%)	7 26
34	58	136/140 (97%)	117 (86%)	15 (11%)	4 (3%)	4 20
35	68	120/122 (98%)	112 (93%)	8 (7%)	0	100 100
36	78	148/150 (99%)	116 (78%)	27 (18%)	5 (3%)	3 17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
37	88	134/141 (95%)	110 (82%)	20 (15%)	4 (3%)	4 19
38	98	116/118 (98%)	100 (86%)	15 (13%)	1 (1%)	17 47
39	A8	109/112 (97%)	89 (82%)	19 (17%)	1 (1%)	17 47
40	B8	135/146 (92%)	120 (89%)	14 (10%)	1 (1%)	22 52
41	C8	115/118 (98%)	107 (93%)	5 (4%)	3 (3%)	5 22
42	D8	99/101 (98%)	92 (93%)	6 (6%)	1 (1%)	15 45
43	E8	111/113 (98%)	101 (91%)	10 (9%)	0	100 100
44	F8	92/96 (96%)	83 (90%)	7 (8%)	2 (2%)	6 25
45	G8	102/110 (93%)	80 (78%)	16 (16%)	6 (6%)	1 8
46	H8	173/206 (84%)	141 (82%)	24 (14%)	8 (5%)	2 12
47	I8	78/85 (92%)	66 (85%)	11 (14%)	1 (1%)	12 38
48	J8	95/98 (97%)	85 (90%)	8 (8%)	2 (2%)	7 26
49	K8	65/72 (90%)	57 (88%)	6 (9%)	2 (3%)	4 19
50	L8	55/60 (92%)	50 (91%)	4 (7%)	1 (2%)	8 30
51	M8	64/71 (90%)	40 (62%)	22 (34%)	2 (3%)	4 19
52	N8	56/60 (93%)	46 (82%)	8 (14%)	2 (4%)	3 16
53	O8	43/54 (80%)	28 (65%)	13 (30%)	2 (5%)	2 12
54	P8	43/49 (88%)	41 (95%)	2 (5%)	0	100 100
55	Q8	58/65 (89%)	33 (57%)	19 (33%)	6 (10%)	0 2
All	All	6312/6731 (94%)	5477 (87%)	730 (12%)	105 (2%)	9 32

All (105) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
29	21	83	ASP
32	51	169	VAL
36	78	57	THR
45	G8	54	LYS
49	K8	48	HIS
52	N8	41	PRO
52	N8	42	PRO
55	Q8	51	ALA
12	7E	86	ILE
18	5I	13	THR
18	5I	14	PRO

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Mol	Chain	Res	Type
22	9I	22	VAL
28	11	240	ALA
29	21	60	ASN
29	21	78	LEU
32	51	168	PRO
33	61	145	VAL
37	88	66	ILE
41	C8	89	GLU
41	C8	93	LYS
46	H8	6	LYS
46	H8	60	GLU
46	H8	165	VAL
50	L8	54	VAL
51	M8	50	VAL
53	O8	17	LYS
55	Q8	55	ALA
6	12	7	VAL
17	4I	83	ASP
29	21	21	VAL
32	51	10	PRO
34	58	97	ARG
34	58	128	HIS
38	98	11	ASN
44	F8	2	LYS
45	G8	53	PRO
48	J8	75	GLU
49	K8	47	ASN
55	Q8	8	LYS
55	Q8	44	LYS
6	12	73	THR
8	32	32	ALA
8	3E	30	LYS
8	3E	155	LEU
23	AI	7	LYS
29	21	82	ARG
31	41	97	ASP
34	58	22	THR
36	78	42	SER
37	88	6	ARG
39	A8	4	LEU
40	B8	106	SER
45	G8	40	GLU

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Mol	Chain	Res	Type
45	G8	81	LYS
46	H8	59	LEU
47	I8	83	PRO
55	Q8	7	HIS
55	Q8	33	ASN
6	1E	133	LYS
6	1E	135	GLN
15	2I	82	VAL
23	AI	67	VAL
29	21	56	PRO
29	21	118	LYS
30	31	67	GLN
31	41	5	VAL
32	51	12	PRO
33	61	12	LEU
33	61	133	HIS
36	78	95	VAL
37	88	3	MET
37	88	134	ARG
44	F8	68	ARG
45	G8	84	ARG
46	H8	62	PRO
46	H8	81	ARG
48	J8	76	ARG
6	12	6	THR
8	32	14	ARG
29	21	22	PRO
29	21	55	ASN
31	41	96	ARG
32	51	167	GLU
36	78	7	ARG
36	78	12	ALA
53	O8	18	ARG
9	4E	115	VAL
28	11	3	VAL
28	11	123	ALA
30	31	24	LEU
41	C8	88	ILE
6	1E	239	VAL
23	AI	41	VAL
22	9I	39	VAL
23	AI	9	VAL

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Mol	Chain	Res	Type
42	D8	49	THR
45	G8	76	CYS
6	12	39	ILE
29	21	72	VAL
46	H8	53	ILE
46	H8	61	LEU
32	51	127	GLU
34	58	95	PRO
51	M8	5	ILE
32	51	173	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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
6	12	205/220 (93%)	155 (76%)	50 (24%)	0 2
6	1E	205/220 (93%)	157 (77%)	48 (23%)	1 2
7	22	160/188 (85%)	130 (81%)	30 (19%)	1 5
7	2E	159/188 (85%)	131 (82%)	28 (18%)	2 7
8	32	180/181 (99%)	149 (83%)	31 (17%)	2 7
8	3E	180/181 (99%)	143 (79%)	37 (21%)	1 4
9	4E	116/123 (94%)	87 (75%)	29 (25%)	0 1
10	5E	90/90 (100%)	79 (88%)	11 (12%)	5 17
11	6E	126/127 (99%)	101 (80%)	25 (20%)	1 5
12	7E	119/119 (100%)	98 (82%)	21 (18%)	2 7
13	8E	98/99 (99%)	74 (76%)	24 (24%)	0 2
14	1I	89/92 (97%)	71 (80%)	18 (20%)	1 4
15	2I	90/99 (91%)	76 (84%)	14 (16%)	2 10
16	3I	104/109 (95%)	83 (80%)	21 (20%)	1 4
17	4I	94/101 (93%)	70 (74%)	24 (26%)	0 1
18	5I	49/50 (98%)	41 (84%)	8 (16%)	2 9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
19	6I	79/80 (99%)	67 (85%)	12 (15%)	3 10
20	7I	72/74 (97%)	54 (75%)	18 (25%)	0 1
21	8I	95/97 (98%)	79 (83%)	16 (17%)	2 8
22	9I	63/77 (82%)	58 (92%)	5 (8%)	12 36
23	AI	70/80 (88%)	50 (71%)	20 (29%)	0 1
24	BI	76/82 (93%)	60 (79%)	16 (21%)	1 4
25	1F	20/22 (91%)	19 (95%)	1 (5%)	24 54
28	11	214/218 (98%)	169 (79%)	45 (21%)	1 4
29	21	165/166 (99%)	125 (76%)	40 (24%)	0 2
30	31	161/166 (97%)	127 (79%)	34 (21%)	1 4
31	41	155/156 (99%)	125 (81%)	30 (19%)	1 5
32	51	145/148 (98%)	110 (76%)	35 (24%)	0 2
33	61	122/124 (98%)	87 (71%)	35 (29%)	0 1
34	58	117/119 (98%)	92 (79%)	25 (21%)	1 3
35	68	100/100 (100%)	85 (85%)	15 (15%)	3 11
36	78	116/116 (100%)	82 (71%)	34 (29%)	0 0
37	88	104/111 (94%)	75 (72%)	29 (28%)	0 1
38	98	101/101 (100%)	72 (71%)	29 (29%)	0 1
39	A8	87/88 (99%)	68 (78%)	19 (22%)	1 3
40	B8	120/127 (94%)	93 (78%)	27 (22%)	1 3
41	C8	93/94 (99%)	76 (82%)	17 (18%)	1 6
42	D8	82/82 (100%)	63 (77%)	19 (23%)	1 2
43	E8	92/92 (100%)	71 (77%)	21 (23%)	1 3
44	F8	76/78 (97%)	61 (80%)	15 (20%)	1 5
45	G8	85/91 (93%)	56 (66%)	29 (34%)	0 0
46	H8	154/179 (86%)	114 (74%)	40 (26%)	0 1
47	I8	61/67 (91%)	47 (77%)	14 (23%)	1 2
48	J8	82/83 (99%)	65 (79%)	17 (21%)	1 4
49	K8	62/67 (92%)	39 (63%)	23 (37%)	0 0
50	L8	49/52 (94%)	40 (82%)	9 (18%)	1 6
51	M8	59/63 (94%)	42 (71%)	17 (29%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
52	N8	51/52 (98%)	37 (72%)	14 (28%)	0 1
53	O8	44/52 (85%)	31 (70%)	13 (30%)	0 0
54	P8	38/42 (90%)	32 (84%)	6 (16%)	2 9
55	Q8	50/55 (91%)	31 (62%)	19 (38%)	0 0
All	All	5324/5588 (95%)	4147 (78%)	1177 (22%)	1 3

All (1177) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	1E	6	THR
6	1E	8	LYS
6	1E	15	VAL
6	1E	17	PHE
6	1E	24	TRP
6	1E	28	PHE
6	1E	36	ARG
6	1E	51	LEU
6	1E	55	PHE
6	1E	67	THR
6	1E	69	LEU
6	1E	71	VAL
6	1E	74	LYS
6	1E	75	LYS
6	1E	82	ARG
6	1E	96	ARG
6	1E	108	ILE
6	1E	111	ARG
6	1E	113	HIS
6	1E	122	PHE
6	1E	128	GLU
6	1E	130	ARG
6	1E	133	LYS
6	1E	136	VAL
6	1E	139	LYS
6	1E	144	ARG
6	1E	145	LEU
6	1E	146	GLN
6	1E	153	ARG
6	1E	155	LEU
6	1E	160	ASP
6	1E	162	ILE

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Mol	Chain	Res	Type
6	1E	163	PHE
6	1E	164	VAL
6	1E	168	THR
6	1E	172	ILE
6	1E	178	ARG
6	1E	190	THR
6	1E	196	LEU
6	1E	200	ILE
6	1E	206	ASP
6	1E	209	ARG
6	1E	213	LEU
6	1E	217	ARG
6	1E	223	ILE
6	1E	226	ARG
6	1E	231	GLU
6	1E	233	SER
7	2E	3	ASN
7	2E	5	ILE
7	2E	8	ILE
7	2E	21	ARG
7	2E	29	TYR
7	2E	32	LEU
7	2E	36	ASP
7	2E	40	ARG
7	2E	44	GLU
7	2E	62	ASP
7	2E	69	HIS
7	2E	76	VAL
7	2E	95	THR
7	2E	97	LYS
7	2E	98	ASN
7	2E	127	ARG
7	2E	138	VAL
7	2E	144	SER
7	2E	151	VAL
7	2E	157	ILE
7	2E	166	GLU
7	2E	167	TRP
7	2E	179	ARG
7	2E	188	LEU
7	2E	190	ARG
7	2E	191	THR

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Mol	Chain	Res	Type
7	2E	192	THR
7	2E	202	ILE
8	3E	3	ARG
8	3E	5	ILE
8	3E	10	ARG
8	3E	15	GLU
8	3E	18	LYS
8	3E	21	LEU
8	3E	24	GLU
8	3E	31	CYS
8	3E	38	TYR
8	3E	49	ARG
8	3E	52	SER
8	3E	53	ASP
8	3E	58	LEU
8	3E	59	ARG
8	3E	66	ARG
8	3E	70	ILE
8	3E	81	GLU
8	3E	85	LYS
8	3E	86	LYS
8	3E	88	VAL
8	3E	106	TYR
8	3E	122	ARG
8	3E	127	THR
8	3E	135	LEU
8	3E	138	TYR
8	3E	141	ARG
8	3E	146	ILE
8	3E	151	LYS
8	3E	155	LEU
8	3E	160	GLN
8	3E	168	ARG
8	3E	170	VAL
8	3E	179	GLU
8	3E	188	LEU
8	3E	190	ASP
8	3E	193	ASP
8	3E	194	LEU
9	4E	5	ASP
9	4E	6	PHE
9	4E	10	MET

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Mol	Chain	Res	Type
9	4E	11	ILE
9	4E	13	ILE
9	4E	14	ARG
9	4E	16	THR
9	4E	18	ARG
9	4E	25	ARG
9	4E	31	LEU
9	4E	33	VAL
9	4E	41	VAL
9	4E	50	GLU
9	4E	57	LYS
9	4E	64	ARG
9	4E	68	GLU
9	4E	71	LEU
9	4E	72	GLN
9	4E	73	ASN
9	4E	79	GLU
9	4E	80	ILE
9	4E	87	SER
9	4E	91	LEU
9	4E	92	LYS
9	4E	112	LEU
9	4E	144	THR
9	4E	147	ASP
9	4E	151	LEU
9	4E	153	LYS
10	5E	15	ASP
10	5E	23	LYS
10	5E	25	ILE
10	5E	41	GLU
10	5E	43	LEU
10	5E	55	ASP
10	5E	64	GLN
10	5E	65	VAL
10	5E	70	ASP
10	5E	75	LEU
10	5E	89	MET
11	6E	6	ARG
11	6E	10	ARG
11	6E	13	GLN
11	6E	21	VAL
11	6E	24	THR

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Mol	Chain	Res	Type
11	6E	36	LYS
11	6E	38	LEU
11	6E	45	ASP
11	6E	53	LYS
11	6E	54	THR
11	6E	79	ARG
11	6E	80	VAL
11	6E	85	TYR
11	6E	90	GLU
11	6E	91	VAL
11	6E	104	LEU
11	6E	111	ARG
11	6E	113	GLU
11	6E	124	LEU
11	6E	131	LYS
11	6E	146	GLU
11	6E	149	ARG
11	6E	154	TYR
11	6E	155	ARG
11	6E	156	TRP
12	7E	1	MET
12	7E	19	VAL
12	7E	26	VAL
12	7E	30	ARG
12	7E	37	ARG
12	7E	39	LEU
12	7E	45	ILE
12	7E	49	GLU
12	7E	51	VAL
12	7E	60	ARG
12	7E	68	ARG
12	7E	77	GLU
12	7E	80	ILE
12	7E	82	HIS
12	7E	83	ILE
12	7E	85	ARG
12	7E	88	LYS
12	7E	102	ARG
12	7E	104	ARG
12	7E	129	VAL
12	7E	137	VAL
13	8E	7	THR

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Mol	Chain	Res	Type
13	8E	9	ARG
13	8E	10	ARG
13	8E	14	VAL
13	8E	16	ARG
13	8E	20	ARG
13	8E	31	GLN
13	8E	38	GLN
13	8E	42	ARG
13	8E	47	LEU
13	8E	51	ARG
13	8E	53	VAL
13	8E	79	LEU
13	8E	92	TYR
13	8E	93	ARG
13	8E	95	LYS
13	8E	105	ASP
13	8E	108	VAL
13	8E	111	ARG
13	8E	112	LYS
13	8E	117	HIS
13	8E	118	LYS
13	8E	120	ARG
13	8E	125	TYR
14	1I	4	ILE
14	1I	5	ARG
14	1I	16	LEU
14	1I	19	SER
14	1I	25	GLU
14	1I	45	ARG
14	1I	54	PHE
14	1I	62	HIS
14	1I	66	ARG
14	1I	70	ARG
14	1I	75	ILE
14	1I	76	ASN
14	1I	88	LEU
14	1I	92	THR
14	1I	96	ILE
14	1I	97	GLU
14	1I	98	ILE
14	1I	100	THR
15	2I	12	ARG

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Mol	Chain	Res	Type
15	2I	13	GLN
15	2I	28	THR
15	2I	32	ILE
15	2I	34	ASP
15	2I	38	ASN
15	2I	81	ASP
15	2I	87	THR
15	2I	95	ILE
15	2I	105	VAL
15	2I	106	LYS
15	2I	109	VAL
15	2I	114	VAL
15	2I	127	LYS
16	3I	7	ILE
16	3I	11	VAL
16	3I	18	VAL
16	3I	20	LYS
16	3I	33	ARG
16	3I	34	ARG
16	3I	47	LYS
16	3I	54	LYS
16	3I	60	LEU
16	3I	62	SER
16	3I	64	TYR
16	3I	65	GLU
16	3I	67	THR
16	3I	81	SER
16	3I	82	VAL
16	3I	83	VAL
16	3I	89	ARG
16	3I	90	VAL
16	3I	91	LYS
16	3I	96	VAL
16	3I	114	LYS
17	4I	3	ARG
17	4I	14	ARG
17	4I	19	LEU
17	4I	20	THR
17	4I	32	GLU
17	4I	44	ARG
17	4I	45	VAL
17	4I	46	LYS

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Mol	Chain	Res	Type
17	4I	48	LEU
17	4I	56	LEU
17	4I	64	TRP
17	4I	67	GLU
17	4I	70	LEU
17	4I	86	CYS
17	4I	88	ARG
17	4I	94	ARG
17	4I	98	VAL
17	4I	103	THR
17	4I	105	THR
17	4I	106	ASN
17	4I	108	ARG
17	4I	114	ARG
17	4I	115	LYS
17	4I	117	VAL
18	5I	4	LYS
18	5I	12	ARG
18	5I	17	LYS
18	5I	18	VAL
18	5I	23	ARG
18	5I	33	VAL
18	5I	41	ARG
18	5I	44	LEU
19	6I	6	GLU
19	6I	12	ILE
19	6I	17	ARG
19	6I	26	GLU
19	6I	35	ARG
19	6I	39	LEU
19	6I	41	GLU
19	6I	47	LYS
19	6I	66	LEU
19	6I	67	LEU
19	6I	87	ILE
19	6I	88	ARG
20	7I	2	VAL
20	7I	4	ILE
20	7I	6	LEU
20	7I	8	ARG
20	7I	20	VAL
20	7I	21	VAL

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Mol	Chain	Res	Type
20	7I	22	THR
20	7I	27	LYS
20	7I	33	ILE
20	7I	36	ILE
20	7I	45	THR
20	7I	47	ASP
20	7I	50	LYS
20	7I	54	GLU
20	7I	69	THR
20	7I	72	ARG
20	7I	82	GLN
20	7I	83	GLU
21	8I	9	VAL
21	8I	20	THR
21	8I	37	LYS
21	8I	45	HIS
21	8I	48	GLU
21	8I	52	LYS
21	8I	53	LEU
21	8I	60	ILE
21	8I	63	ARG
21	8I	68	ARG
21	8I	74	LEU
21	8I	89	LEU
21	8I	92	ARG
21	8I	94	ASN
21	8I	97	SER
21	8I	101	ARG
22	9I	18	ARG
22	9I	23	LYS
22	9I	31	LEU
22	9I	32	ARG
22	9I	82	THR
23	AI	4	SER
23	AI	5	LEU
23	AI	6	LYS
23	AI	7	LYS
23	AI	22	LEU
23	AI	29	ARG
23	AI	30	LEU
23	AI	31	ILE
23	AI	32	LYS

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Mol	Chain	Res	Type
23	AI	33	THR
23	AI	37	ARG
23	AI	43	GLU
23	AI	56	GLN
23	AI	58	VAL
23	AI	60	VAL
23	AI	61	TYR
23	AI	63	THR
23	AI	67	VAL
23	AI	71	LEU
23	AI	77	THR
24	BI	10	LEU
24	BI	20	LEU
24	BI	24	LEU
24	BI	33	ILE
24	BI	36	LEU
24	BI	37	SER
24	BI	51	GLU
24	BI	53	LEU
24	BI	55	ILE
24	BI	57	ARG
24	BI	62	LEU
24	BI	64	ASP
24	BI	72	LEU
24	BI	73	HIS
24	BI	75	ASN
24	BI	99	LEU
25	1F	6	ARG
28	11	6	PHE
28	11	13	ARG
28	11	14	ARG
28	11	15	PHE
28	11	17	THR
28	11	27	THR
28	11	30	GLU
28	11	34	VAL
28	11	37	LEU
28	11	61	LEU
28	11	64	ILE
28	11	65	ILE
28	11	71	ASP
28	11	73	VAL

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Mol	Chain	Res	Type
28	11	95	LEU
28	11	99	ASP
28	11	103	ARG
28	11	105	ILE
28	11	106	ILE
28	11	113	VAL
28	11	117	VAL
28	11	136	ILE
28	11	140	THR
28	11	142	VAL
28	11	148	GLU
28	11	155	LEU
28	11	162	SER
28	11	165	ILE
28	11	173	VAL
28	11	183	ARG
28	11	192	THR
28	11	193	VAL
28	11	200	ASP
28	11	212	SER
28	11	217	ARG
28	11	221	VAL
28	11	229	VAL
28	11	242	ARG
28	11	257	LEU
28	11	259	THR
28	11	261	LYS
28	11	262	ARG
28	11	266	SER
28	11	271	ILE
28	11	273	ARG
29	21	2	LYS
29	21	5	LEU
29	21	12	THR
29	21	13	ARG
29	21	14	ILE
29	21	16	ARG
29	21	26	ILE
29	21	34	VAL
29	21	41	LYS
29	21	47	VAL
29	21	52	LEU

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Mol	Chain	Res	Type
29	21	54	GLN
29	21	55	ASN
29	21	59	VAL
29	21	63	LEU
29	21	67	PHE
29	21	69	LYS
29	21	72	VAL
29	21	78	LEU
29	21	79	ARG
29	21	87	GLU
29	21	89	ASP
29	21	101	ARG
29	21	105	THR
29	21	116	VAL
29	21	119	ARG
29	21	138	PRO
29	21	144	ARG
29	21	146	THR
29	21	166	THR
29	21	167	VAL
29	21	175	VAL
29	21	179	GLU
29	21	181	LEU
29	21	184	VAL
29	21	195	LEU
29	21	196	VAL
29	21	200	GLU
29	21	201	THR
29	21	202	LYS
30	31	8	GLN
30	31	9	ILE
30	31	13	SER
30	31	15	SER
30	31	18	ARG
30	31	28	ILE
30	31	32	LEU
30	31	33	LEU
30	31	48	THR
30	31	57	VAL
30	31	64	ILE
30	31	70	THR
30	31	74	ARG

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Mol	Chain	Res	Type
30	31	77	ASP
30	31	88	VAL
30	31	98	SER
30	31	101	LEU
30	31	106	ARG
30	31	108	LYS
30	31	112	MET
30	31	117	ARG
30	31	127	GLU
30	31	152	GLU
30	31	153	SER
30	31	158	THR
30	31	165	ARG
30	31	170	LEU
30	31	181	LEU
30	31	183	VAL
30	31	191	ARG
30	31	192	LEU
30	31	201	VAL
30	31	203	GLN
30	31	204	ASN
31	41	3	LEU
31	41	10	LYS
31	41	14	GLU
31	41	21	ARG
31	41	26	GLN
31	41	28	VAL
31	41	31	VAL
31	41	34	LEU
31	41	43	LEU
31	41	45	GLU
31	41	52	ILE
31	41	62	LEU
31	41	67	LYS
31	41	70	VAL
31	41	76	SER
31	41	80	PHE
31	41	82	LEU
31	41	84	LYS
31	41	90	LEU
31	41	94	LEU
31	41	101	ILE

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Mol	Chain	Res	Type
31	41	104	GLU
31	41	115	ARG
31	41	116	ASP
31	41	133	LEU
31	41	139	LEU
31	41	161	THR
31	41	162	THR
31	41	165	THR
31	41	166	ASP
32	51	3	ARG
32	51	4	ILE
32	51	7	LEU
32	51	10	PRO
32	51	11	VAL
32	51	24	VAL
32	51	34	GLU
32	51	41	MET
32	51	43	VAL
32	51	45	VAL
32	51	50	VAL
32	51	64	LEU
32	51	68	THR
32	51	71	LEU
32	51	72	ILE
32	51	77	LYS
32	51	80	SER
32	51	81	GLU
32	51	84	SER
32	51	88	LEU
32	51	89	ILE
32	51	92	ILE
32	51	99	VAL
32	51	105	LEU
32	51	114	VAL
32	51	122	THR
32	51	129	THR
32	51	132	ARG
32	51	136	ILE
32	51	139	GLN
32	51	141	VAL
32	51	153	LYS
32	51	169	VAL

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Mol	Chain	Res	Type
32	51	171	LEU
32	51	175	LYS
33	61	9	LEU
33	61	20	ASP
33	61	38	LEU
33	61	40	THR
33	61	41	GLU
33	61	44	LEU
33	61	45	LYS
33	61	56	LYS
33	61	60	GLU
33	61	64	GLU
33	61	67	ARG
33	61	70	GLU
33	61	71	ILE
33	61	74	ASN
33	61	77	LEU
33	61	78	THR
33	61	79	ILE
33	61	82	ARG
33	61	85	GLU
33	61	86	THR
33	61	92	VAL
33	61	95	LYS
33	61	97	ILE
33	61	101	LEU
33	61	102	SER
33	61	108	THR
33	61	110	ASP
33	61	114	LEU
33	61	117	GLU
33	61	122	GLU
33	61	131	LYS
33	61	135	GLU
33	61	140	LEU
33	61	142	VAL
33	61	145	VAL
34	58	2	LYS
34	58	5	VAL
34	58	7	LYS
34	58	10	GLU
34	58	16	ILE

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Mol	Chain	Res	Type
34	58	29	LYS
34	58	32	THR
34	58	34	LEU
34	58	38	HIS
34	58	43	THR
34	58	44	PRO
34	58	48	MET
34	58	58	ASP
34	58	60	ILE
34	58	61	ARG
34	58	65	LYS
34	58	67	LEU
34	58	90	MET
34	58	97	ARG
34	58	98	VAL
34	58	99	LEU
34	58	120	LEU
34	58	127	ASP
34	58	128	HIS
34	58	134	ARG
35	68	8	LEU
35	68	9	GLU
35	68	14	THR
35	68	23	ARG
35	68	25	LEU
35	68	28	SER
35	68	32	TYR
35	68	38	VAL
35	68	68	GLU
35	68	88	ASN
35	68	91	LEU
35	68	94	ARG
35	68	96	THR
35	68	97	ARG
35	68	112	MET
36	78	6	LEU
36	78	7	ARG
36	78	10	PRO
36	78	13	ASN
36	78	15	ARG
36	78	16	ARG
36	78	19	VAL

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Mol	Chain	Res	Type
36	78	29	LYS
36	78	32	THR
36	78	41	ARG
36	78	45	LEU
36	78	46	LYS
36	78	49	ARG
36	78	50	ARG
36	78	56	SER
36	78	57	THR
36	78	64	LYS
36	78	70	GLN
36	78	71	VAL
36	78	75	ILE
36	78	83	VAL
36	78	86	LYS
36	78	88	LEU
36	78	105	LEU
36	78	106	LEU
36	78	112	LEU
36	78	114	ILE
36	78	115	LEU
36	78	117	GLU
36	78	126	VAL
36	78	138	LEU
36	78	144	GLU
36	78	146	VAL
36	78	147	LEU
37	88	1	MET
37	88	2	LEU
37	88	5	ARG
37	88	6	ARG
37	88	7	MET
37	88	18	LYS
37	88	21	THR
37	88	25	ASP
37	88	26	TYR
37	88	35	VAL
37	88	45	GLN
37	88	51	ARG
37	88	55	VAL
37	88	56	ARG
37	88	58	PHE

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Mol	Chain	Res	Type
37	88	59	ARG
37	88	60	ARG
37	88	67	ARG
37	88	82	ARG
37	88	85	LYS
37	88	99	PRO
37	88	102	VAL
37	88	103	MET
37	88	109	VAL
37	88	112	GLU
37	88	127	ILE
37	88	129	THR
37	88	134	ARG
37	88	139	GLU
38	98	2	ARG
38	98	4	LEU
38	98	6	SER
38	98	9	LYS
38	98	10	LEU
38	98	12	ARG
38	98	18	LEU
38	98	24	GLN
38	98	28	LEU
38	98	29	LEU
38	98	34	ILE
38	98	35	THR
38	98	36	THR
38	98	37	THR
38	98	44	LEU
38	98	65	LEU
38	98	67	LEU
38	98	71	GLN
38	98	73	VAL
38	98	75	LEU
38	98	79	LEU
38	98	81	ASP
38	98	88	ARG
38	98	91	GLN
38	98	102	GLU
38	98	104	ARG
38	98	105	ARG
38	98	117	VAL

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Mol	Chain	Res	Type
38	98	118	GLU
39	A8	4	LEU
39	A8	8	GLU
39	A8	15	ARG
39	A8	30	ARG
39	A8	35	ILE
39	A8	36	TYR
39	A8	50	SER
39	A8	54	LEU
39	A8	57	LYS
39	A8	61	ASN
39	A8	73	LEU
39	A8	80	LEU
39	A8	83	LYS
39	A8	89	ARG
39	A8	95	HIS
39	A8	101	LEU
39	A8	106	ARG
39	A8	107	GLU
39	A8	111	GLU
40	B8	7	ILE
40	B8	11	GLU
40	B8	13	ARG
40	B8	15	VAL
40	B8	16	ARG
40	B8	21	GLU
40	B8	27	THR
40	B8	30	VAL
40	B8	39	ARG
40	B8	42	ILE
40	B8	50	ILE
40	B8	58	ASN
40	B8	59	THR
40	B8	64	ARG
40	B8	65	LYS
40	B8	74	ARG
40	B8	86	ILE
40	B8	87	ASP
40	B8	88	ILE
40	B8	98	LYS
40	B8	99	LEU
40	B8	106	SER

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Mol	Chain	Res	Type
40	B8	108	ARG
40	B8	110	ILE
40	B8	111	ARG
40	B8	112	ARG
40	B8	136	GLN
41	C8	3	ARG
41	C8	5	LYS
41	C8	27	LEU
41	C8	34	LYS
41	C8	47	TYR
41	C8	70	ARG
41	C8	74	LEU
41	C8	79	PHE
41	C8	85	LYS
41	C8	89	GLU
41	C8	92	ARG
41	C8	93	LYS
41	C8	94	ASN
41	C8	98	LEU
41	C8	104	GLN
41	C8	108	GLU
41	C8	117	GLN
42	D8	1	MET
42	D8	6	LYS
42	D8	7	THR
42	D8	10	LYS
42	D8	18	LEU
42	D8	22	VAL
42	D8	24	LYS
42	D8	34	GLU
42	D8	35	LEU
42	D8	37	VAL
42	D8	39	LEU
42	D8	40	LEU
42	D8	44	LYS
42	D8	45	THR
42	D8	47	VAL
42	D8	70	ILE
42	D8	73	SER
42	D8	79	VAL
42	D8	95	LEU
43	E8	11	ARG

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Mol	Chain	Res	Type
43	E8	12	ILE
43	E8	15	ARG
43	E8	20	VAL
43	E8	30	GLU
43	E8	39	THR
43	E8	51	LEU
43	E8	52	GLU
43	E8	62	HIS
43	E8	63	ASP
43	E8	66	GLU
43	E8	68	ARG
43	E8	69	LEU
43	E8	70	TYR
43	E8	76	VAL
43	E8	88	ARG
43	E8	92	ARG
43	E8	96	ILE
43	E8	97	LYS
43	E8	100	THR
43	E8	107	LEU
44	F8	1	MET
44	F8	2	LYS
44	F8	12	VAL
44	F8	15	GLU
44	F8	23	GLU
44	F8	27	THR
44	F8	28	PHE
44	F8	45	THR
44	F8	54	VAL
44	F8	57	LEU
44	F8	60	ARG
44	F8	65	ARG
44	F8	76	ARG
44	F8	80	ILE
44	F8	88	LYS
45	G8	4	LYS
45	G8	6	HIS
45	G8	7	VAL
45	G8	24	VAL
45	G8	26	LYS
45	G8	31	LEU
45	G8	33	LYS

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Mol	Chain	Res	Type
45	G8	38	ILE
45	G8	40	GLU
45	G8	42	VAL
45	G8	50	ARG
45	G8	54	LYS
45	G8	55	TYR
45	G8	57	GLN
45	G8	61	ILE
45	G8	63	LYS
45	G8	64	GLU
45	G8	67	LEU
45	G8	70	SER
45	G8	79	CYS
45	G8	82	PRO
45	G8	84	ARG
45	G8	85	VAL
45	G8	86	ARG
45	G8	90	LEU
45	G8	95	LYS
45	G8	97	ARG
45	G8	98	VAL
45	G8	99	CYS
46	H8	4	ARG
46	H8	10	ARG
46	H8	13	GLU
46	H8	19	ARG
46	H8	23	LYS
46	H8	31	ARG
46	H8	33	LEU
46	H8	37	VAL
46	H8	41	LEU
46	H8	42	VAL
46	H8	49	ARG
46	H8	55	HIS
46	H8	60	GLU
46	H8	61	LEU
46	H8	71	VAL
46	H8	76	LEU
46	H8	77	ASP
46	H8	80	ARG
46	H8	81	ARG
46	H8	86	VAL

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Mol	Chain	Res	Type
46	H8	90	VAL
46	H8	91	LEU
46	H8	93	ASP
46	H8	94	GLU
46	H8	98	MET
46	H8	103	ARG
46	H8	105	VAL
46	H8	117	LEU
46	H8	119	GLU
46	H8	128	VAL
46	H8	132	ASN
46	H8	135	GLU
46	H8	140	ASP
46	H8	144	LEU
46	H8	146	ILE
46	H8	148	ASP
46	H8	154	ASP
46	H8	161	VAL
46	H8	166	SER
46	H8	171	ILE
47	I8	10	THR
47	I8	11	ARG
47	I8	19	LYS
47	I8	29	GLN
47	I8	31	VAL
47	I8	36	ILE
47	I8	41	ARG
47	I8	44	ARG
47	I8	53	MET
47	I8	57	PHE
47	I8	60	PHE
47	I8	64	ASP
47	I8	74	ARG
47	I8	82	ARG
48	J8	2	SER
48	J8	4	VAL
48	J8	11	ARG
48	J8	19	GLN
48	J8	25	LYS
48	J8	26	ARG
48	J8	41	ARG
48	J8	46	LEU

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Mol	Chain	Res	Type
48	J8	62	VAL
48	J8	65	SER
48	J8	68	PRO
48	J8	74	VAL
48	J8	78	LYS
48	J8	80	LEU
48	J8	81	LYS
48	J8	82	LEU
48	J8	91	LYS
49	K8	5	GLU
49	K8	8	LYS
49	K8	15	LYS
49	K8	16	LEU
49	K8	17	SER
49	K8	19	VAL
49	K8	20	GLU
49	K8	24	LEU
49	K8	29	LYS
49	K8	31	GLU
49	K8	32	LEU
49	K8	40	SER
49	K8	41	ILE
49	K8	45	SER
49	K8	47	ASN
49	K8	48	HIS
49	K8	50	ILE
49	K8	53	LEU
49	K8	55	ARG
49	K8	60	LEU
49	K8	62	THR
49	K8	64	LEU
49	K8	67	LYS
50	L8	8	LEU
50	L8	11	SER
50	L8	13	ILE
50	L8	30	ARG
50	L8	31	LEU
50	L8	36	VAL
50	L8	37	LEU
50	L8	40	THR
50	L8	55	ARG
51	M8	3	GLU

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Mol	Chain	Res	Type
51	M8	5	ILE
51	M8	15	ILE
51	M8	16	CYS
51	M8	34	GLU
51	M8	37	SER
51	M8	38	LYS
51	M8	39	CYS
51	M8	44	THR
51	M8	48	ARG
51	M8	50	VAL
51	M8	52	THR
51	M8	55	ARG
51	M8	59	PHE
51	M8	61	ARG
51	M8	62	ARG
51	M8	65	ASP
52	N8	3	LYS
52	N8	6	VAL
52	N8	11	THR
52	N8	15	ARG
52	N8	16	ARG
52	N8	29	THR
52	N8	31	VAL
52	N8	36	CYS
52	N8	40	LYS
52	N8	44	THR
52	N8	49	CYS
52	N8	51	TYR
52	N8	56	LYS
52	N8	57	VAL
53	O8	9	LEU
53	O8	10	LEU
53	O8	12	GLU
53	O8	13	CYS
53	O8	24	GLU
53	O8	27	LYS
53	O8	30	THR
53	O8	32	ASN
53	O8	33	LYS
53	O8	37	ARG
53	O8	39	TYR
53	O8	43	CYS

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Mol	Chain	Res	Type
53	O8	47	THR
54	P8	4	THR
54	P8	8	ASN
54	P8	14	LYS
54	P8	23	ARG
54	P8	29	LYS
54	P8	43	THR
55	Q8	8	LYS
55	Q8	21	LYS
55	Q8	22	VAL
55	Q8	26	LYS
55	Q8	30	ARG
55	Q8	31	HIS
55	Q8	32	LEU
55	Q8	34	TRP
55	Q8	35	GLN
55	Q8	36	LYS
55	Q8	42	ARG
55	Q8	43	GLN
55	Q8	46	ARG
55	Q8	47	LYS
55	Q8	48	PHE
55	Q8	49	VAL
55	Q8	52	LYS
55	Q8	57	ARG
55	Q8	59	LYS
6	12	4	GLU
6	12	5	ILE
6	12	12	GLU
6	12	17	PHE
6	12	21	ARG
6	12	22	LYS
6	12	23	ARG
6	12	24	TRP
6	12	31	TYR
6	12	36	ARG
6	12	42	ILE
6	12	44	LEU
6	12	47	THR
6	12	51	LEU
6	12	55	PHE
6	12	58	ILE

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Mol	Chain	Res	Type
6	12	59	GLU
6	12	67	THR
6	12	69	LEU
6	12	71	VAL
6	12	75	LYS
6	12	76	GLN
6	12	78	GLN
6	12	83	MET
6	12	92	TYR
6	12	108	ILE
6	12	114	ARG
6	12	121	LEU
6	12	126	GLU
6	12	137	ARG
6	12	138	LEU
6	12	144	ARG
6	12	145	LEU
6	12	155	LEU
6	12	160	ASP
6	12	165	VAL
6	12	170	GLU
6	12	172	ILE
6	12	175	ARG
6	12	178	ARG
6	12	179	LYS
6	12	191	ASP
6	12	196	LEU
6	12	204	ASN
6	12	205	ASP
6	12	209	ARG
6	12	212	GLN
6	12	213	LEU
6	12	223	ILE
6	12	233	SER
7	22	3	ASN
7	22	5	ILE
7	22	16	ARG
7	22	18	TRP
7	22	22	TRP
7	22	28	GLN
7	22	29	TYR
7	22	34	LEU

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Mol	Chain	Res	Type
7	22	38	ARG
7	22	40	ARG
7	22	43	LEU
7	22	52	LEU
7	22	76	VAL
7	22	79	ARG
7	22	89	GLU
7	22	94	LEU
7	22	95	THR
7	22	97	LYS
7	22	98	ASN
7	22	119	ARG
7	22	131	ARG
7	22	140	ARG
7	22	141	VAL
7	22	164	ARG
7	22	167	TRP
7	22	182	ILE
7	22	190	ARG
7	22	191	THR
7	22	202	ILE
7	22	207	VAL
8	32	3	ARG
8	32	5	ILE
8	32	14	ARG
8	32	18	LYS
8	32	27	TYR
8	32	30	LYS
8	32	36	ARG
8	32	45	GLN
8	32	58	LEU
8	32	60	GLU
8	32	61	LYS
8	32	71	SER
8	32	73	ARG
8	32	76	ARG
8	32	107	ARG
8	32	115	ARG
8	32	119	GLN
8	32	122	ARG
8	32	126	ILE
8	32	127	THR

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Mol	Chain	Res	Type
8	32	135	LEU
8	32	138	TYR
8	32	141	ARG
8	32	145	GLU
8	32	158	ILE
8	32	187	ARG
8	32	190	ASP
8	32	191	ARG
8	32	192	GLU
8	32	199	ASN
8	32	200	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (15) such sidechains are listed below:

Mol	Chain	Res	Type
6	1E	16	HIS
8	3E	160	GLN
10	5E	18	GLN
13	8E	89	ASN
15	2I	62	GLN
15	2I	93	GLN
23	AI	56	GLN
29	21	135	HIS
32	51	158	HIS
36	78	13	ASN
38	98	71	GLN
44	F8	31	HIS
47	I8	29	GLN
49	K8	56	GLN
6	12	19	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	13	1495/1522 (98%)	353 (23%)	38 (2%)
1	1G	1495/1522 (98%)	374 (25%)	37 (2%)
2	1L	74/76 (97%)	32 (43%)	3 (4%)
2	3K	74/76 (97%)	36 (48%)	5 (6%)
2	3L	74/76 (97%)	32 (43%)	1 (1%)
26	1K	70/76 (92%)	32 (45%)	2 (2%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
27	16	121/122 (99%)	26 (21%)	3 (2%)
27	1J	121/122 (99%)	31 (25%)	3 (2%)
3	2K	76/77 (98%)	15 (19%)	2 (2%)
3	2L	76/77 (98%)	17 (22%)	3 (3%)
4	4K	12/30 (40%)	2 (16%)	0
4	4L	9/30 (30%)	4 (44%)	2 (22%)
5	14	2908/2917 (99%)	754 (25%)	46 (1%)
5	1H	2911/2917 (99%)	685 (23%)	62 (2%)
All	All	9516/9640 (98%)	2393 (25%)	207 (2%)

All (2393) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	6	G
1	13	7	G
1	13	8	A
1	13	9	G
1	13	32	A
1	13	39	G
1	13	44	G
1	13	47	C
1	13	48	C
1	13	50	A
1	13	51	A
1	13	54	C
1	13	61	G
1	13	65	U
1	13	66	G
1	13	76	G
1	13	77	C
1	13	78	G
1	13	90	C
1	13	91	C
1	13	95	G
1	13	101	A
1	13	116	A
1	13	121	C
1	13	129(A)	G
1	13	130	A
1	13	131	C
1	13	142	G

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Mol	Chain	Res	Type
1	13	144	G
1	13	150	C
1	13	151	A
1	13	153	C
1	13	157	G
1	13	159	G
1	13	161	A
1	13	163	C
1	13	168	G
1	13	172	A
1	13	173	U
1	13	174	C
1	13	186(A)	C
1	13	188	U
1	13	189	U
1	13	190	G
1	13	191(A)	G
1	13	195	A
1	13	197	A
1	13	199	G
1	13	201	C
1	13	208	U
1	13	209	U
1	13	210	U
1	13	216	G
1	13	217	C
1	13	222	U
1	13	226	G
1	13	231	G
1	13	243	A
1	13	244	U
1	13	245	C
1	13	247	G
1	13	251	G
1	13	256	U
1	13	262	A
1	13	266	G
1	13	267	C
1	13	280	C
1	13	281	G
1	13	288	A
1	13	289	G

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Mol	Chain	Res	Type
1	13	310	G
1	13	311	C
1	13	316	G
1	13	318	G
1	13	321	A
1	13	324	G
1	13	327	A
1	13	328	C
1	13	330	C
1	13	332	G
1	13	342	C
1	13	344	A
1	13	345	C
1	13	346	G
1	13	347	G
1	13	352	C
1	13	353	A
1	13	354	G
1	13	357	G
1	13	367	U
1	13	372	C
1	13	373	A
1	13	382	A
1	13	383	A
1	13	384	G
1	13	388	G
1	13	390	C
1	13	397	A
1	13	398	C
1	13	406	G
1	13	412	A
1	13	413	G
1	13	414	A
1	13	419	C
1	13	422	C
1	13	423	G
1	13	424	G
1	13	429	U
1	13	430	A
1	13	439	A
1	13	451	A
1	13	465	A

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Mol	Chain	Res	Type
1	13	466	C
1	13	467	G
1	13	485	G
1	13	487	A
1	13	496	A
1	13	497	U
1	13	505	G
1	13	509	A
1	13	510	A
1	13	511	C
1	13	518	C
1	13	525	C
1	13	527	G
1	13	531	U
1	13	532	A
1	13	533	A
1	13	536	C
1	13	544	G
1	13	545	C
1	13	547	A
1	13	559	A
1	13	561	U
1	13	569	C
1	13	572	A
1	13	573	A
1	13	576	G
1	13	577	G
1	13	607	A
1	13	615	C
1	13	620	C
1	13	623	C
1	13	624	C
1	13	630	G
1	13	631	G
1	13	632	A
1	13	650	G
1	13	653	A
1	13	655	A
1	13	656	C
1	13	665	A
1	13	666	G
1	13	676	A

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Mol	Chain	Res	Type
1	13	687	A
1	13	688	G
1	13	703	G
1	13	704	A
1	13	715	A
1	13	722	A
1	13	723	U
1	13	724	G
1	13	748	C
1	13	749	C
1	13	750	G
1	13	755	G
1	13	757	U
1	13	759	A
1	13	766	A
1	13	767	A
1	13	768	A
1	13	769	G
1	13	774	G
1	13	777	A
1	13	792	A
1	13	793	U
1	13	794	A
1	13	795	C
1	13	802	A
1	13	805	C
1	13	810	C
1	13	813	U
1	13	815	A
1	13	817	C
1	13	818	G
1	13	827	U
1	13	828	A
1	13	836	G
1	13	841	U
1	13	842	C
1	13	843	U
1	13	848	C
1	13	853	G
1	13	859	A
1	13	864	A
1	13	870	U

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Mol	Chain	Res	Type
1	13	874	G
1	13	889	A
1	13	902	G
1	13	914	A
1	13	916	G
1	13	922	G
1	13	926	G
1	13	927	G
1	13	934	C
1	13	936	C
1	13	940	C
1	13	960	U
1	13	968	A
1	13	969	A
1	13	971	G
1	13	974	A
1	13	975	A
1	13	976	G
1	13	977	A
1	13	982	U
1	13	983	A
1	13	984	C
1	13	991	U
1	13	992	U
1	13	993	G
1	13	1004	A
1	13	1005	A
1	13	1006	C
1	13	1007	C
1	13	1008	C
1	13	1009	G
1	13	1012	U
1	13	1017	G
1	13	1020	U
1	13	1021	G
1	13	1024	G
1	13	1025	U
1	13	1028	C
1	13	1029	G
1	13	1030	C
1	13	1032	A
1	13	1032(A)	G

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Mol	Chain	Res	Type
1	13	1033	G
1	13	1040	U
1	13	1042	G
1	13	1046	A
1	13	1053	G
1	13	1054	C
1	13	1064	G
1	13	1065	U
1	13	1066	C
1	13	1067	A
1	13	1070	U
1	13	1081	G
1	13	1085	U
1	13	1094	G
1	13	1095	U
1	13	1101	A
1	13	1118	C
1	13	1121	U
1	13	1124	G
1	13	1125	U
1	13	1126	U
1	13	1127	G
1	13	1129	C
1	13	1130	A
1	13	1131	G
1	13	1133	G
1	13	1136	U
1	13	1137	C
1	13	1138	G
1	13	1139	G
1	13	1140	C
1	13	1146	A
1	13	1152	A
1	13	1154	G
1	13	1157	A
1	13	1158	C
1	13	1159	U
1	13	1169	A
1	13	1177	G
1	13	1178	G
1	13	1181	G
1	13	1184	G

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Mol	Chain	Res	Type
1	13	1188	A
1	13	1193	G
1	13	1196	U
1	13	1197	G
1	13	1201	A
1	13	1212	U
1	13	1213	A
1	13	1214	C
1	13	1225	A
1	13	1227	A
1	13	1236	A
1	13	1238	A
1	13	1240	U
1	13	1253	G
1	13	1256	A
1	13	1257	U
1	13	1258	G
1	13	1266	G
1	13	1267	C
1	13	1270	C
1	13	1272	G
1	13	1273	G
1	13	1280	A
1	13	1281	U
1	13	1286	A
1	13	1287	A
1	13	1299	A
1	13	1300	G
1	13	1302	U
1	13	1305	G
1	13	1322	C
1	13	1323	G
1	13	1331	G
1	13	1332	A
1	13	1335	C
1	13	1336	C
1	13	1337	G
1	13	1338	G
1	13	1346	A
1	13	1347	G
1	13	1350	A
1	13	1353	G

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Mol	Chain	Res	Type
1	13	1361	G
1	13	1363	A
1	13	1364	U
1	13	1370	G
1	13	1377	A
1	13	1378	C
1	13	1388	C
1	13	1398	A
1	13	1401	G
1	13	1419	G
1	13	1442	G
1	13	1443	G
1	13	1446	A
1	13	1451	A
1	13	1452	C
1	13	1453	G
1	13	1467	G
1	13	1469	G
1	13	1487	G
1	13	1492	A
1	13	1494	G
1	13	1497	G
1	13	1499	A
1	13	1503	A
1	13	1504	G
1	13	1505	G
1	13	1506	U
1	13	1517	G
1	13	1529	G
1	13	1530	G
2	1L	4	C
2	1L	8	4SU
2	1L	9	A
2	1L	10	G
2	1L	11	C
2	1L	16	H2U
2	1L	17	C
2	1L	19	G
2	1L	20	H2U
2	1L	21	A
2	1L	22	G
2	1L	25	C

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Mol	Chain	Res	Type
2	1L	26	A
2	1L	27	G
2	1L	36	A
2	1L	41	C
2	1L	46	7MG
2	1L	47	U
2	1L	48	C
2	1L	49	C
2	1L	52	G
2	1L	53	G
2	1L	56	C
2	1L	57	G
2	1L	61	C
2	1L	64	A
2	1L	69	G
2	1L	70	G
2	1L	73	A
2	1L	74	C
2	1L	75	C
2	1L	76	A
3	2L	2	G
3	2L	6	G
3	2L	9	G
3	2L	15	G
3	2L	16	C
3	2L	20	G
3	2L	21	H2U
3	2L	22	A
3	2L	32	G
3	2L	45	A
3	2L	47	7MG
3	2L	48	U
3	2L	49	C
3	2L	50	G
3	2L	55	U
3	2L	57	C
3	2L	77	A
2	3L	3	C
2	3L	9	A
2	3L	11	C
2	3L	13	C
2	3L	16	H2U

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Mol	Chain	Res	Type
2	3L	17	C
2	3L	18	G
2	3L	19	G
2	3L	21	A
2	3L	22	G
2	3L	23	A
2	3L	28	G
2	3L	31	A
2	3L	33	U
2	3L	34	G
2	3L	36	A
2	3L	38	A
2	3L	39	PSU
2	3L	40	C
2	3L	42	C
2	3L	46	7MG
2	3L	47	U
2	3L	48	C
2	3L	49	C
2	3L	58	A
2	3L	59	U
2	3L	61	C
2	3L	62	C
2	3L	65	G
2	3L	72	C
2	3L	73	A
2	3L	76	A
4	4L	14	A
4	4L	18	G
4	4L	19	U
4	4L	20	C
5	14	2	G
5	14	3	U
5	14	4	C
5	14	5	A
5	14	9	U
5	14	15	G
5	14	34	C
5	14	35	G
5	14	46	C
5	14	49	A
5	14	50	U

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Mol	Chain	Res	Type
5	14	54	G
5	14	55	G
5	14	58	G
5	14	71	A
5	14	72	U
5	14	74	A
5	14	75	G
5	14	82	G
5	14	84	A
5	14	88	G
5	14	93	C
5	14	95	G
5	14	99	U
5	14	102	G
5	14	118	A
5	14	119	A
5	14	120	U
5	14	121	G
5	14	125	G
5	14	129	C
5	14	138	G
5	14	139	G
5	14	140	A
5	14	153	C
5	14	154	G
5	14	155	C
5	14	161	U
5	14	162	U
5	14	173	G
5	14	174	C
5	14	181	A
5	14	182	A
5	14	184	C
5	14	196	A
5	14	199	A
5	14	205	G
5	14	213	A
5	14	214	G
5	14	215	G
5	14	216	A
5	14	221	A
5	14	222	A

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Mol	Chain	Res	Type
5	14	229	A
5	14	233	A
5	14	245	G
5	14	248	G
5	14	249	C
5	14	250	G
5	14	252	G
5	14	265	A
5	14	267	C
5	14	270(K)	C
5	14	270(L)	U
5	14	270(M)	U
5	14	270(O)	U
5	14	271(B)	G
5	14	271	G
5	14	273(C)	C
5	14	273(D)	C
5	14	274	G
5	14	275	G
5	14	276	A
5	14	277	C
5	14	278	A
5	14	279	C
5	14	289	A
5	14	294	A
5	14	299	A
5	14	303	U
5	14	308	G
5	14	310	A
5	14	311	A
5	14	312	G
5	14	324	A
5	14	327	G
5	14	329	G
5	14	330	A
5	14	333	G
5	14	352	G
5	14	362	U
5	14	363	G
5	14	363(A)	A
5	14	363(E)	U
5	14	372	G

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Mol	Chain	Res	Type
5	14	382	G
5	14	386	G
5	14	395	U
5	14	396	G
5	14	405	U
5	14	406	G
5	14	411	G
5	14	412	A
5	14	428	A
5	14	443	A
5	14	444	C
5	14	447	A
5	14	448	U
5	14	449	A
5	14	452	G
5	14	454	A
5	14	455	C
5	14	457	A
5	14	470	A
5	14	471	A
5	14	472	A
5	14	481	G
5	14	501	A
5	14	504	U
5	14	505	A
5	14	509	C
5	14	529	A
5	14	531	C
5	14	532	A
5	14	533	G
5	14	537	C
5	14	546	C
5	14	549	G
5	14	556	G
5	14	563	G
5	14	573	G
5	14	575	A
5	14	584	C
5	14	602	G
5	14	603	A
5	14	607	U
5	14	609(A)	G

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Mol	Chain	Res	Type
5	14	614	U
5	14	617	G
5	14	619	G
5	14	620	G
5	14	621	A
5	14	622	G
5	14	626	U
5	14	627	A
5	14	637	A
5	14	641	C
5	14	645	C
5	14	646	A
5	14	651	G
5	14	654	A
5	14	654(E)	C
5	14	654(G)	C
5	14	654(I)	C
5	14	654(O)	G
5	14	654(T)	A
5	14	656	G
5	14	666	G
5	14	669	G
5	14	686	G
5	14	689	A
5	14	699	A
5	14	715	G
5	14	717	G
5	14	722	A
5	14	730	C
5	14	749	C
5	14	752	A
5	14	753	C
5	14	758	C
5	14	764	A
5	14	765	G
5	14	770	G
5	14	771	G
5	14	775	G
5	14	776	G
5	14	779	U
5	14	782	A
5	14	784	A

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Mol	Chain	Res	Type
5	14	785	G
5	14	792	G
5	14	797	C
5	14	805	G
5	14	812	C
5	14	816	C
5	14	819	A
5	14	820	A
5	14	827	U
5	14	828	U
5	14	830	G
5	14	831	G
5	14	832	G
5	14	845	G
5	14	846	C
5	14	848	G
5	14	859	G
5	14	860	U
5	14	863	A
5	14	865	C
5	14	866	A
5	14	869	G
5	14	878	A
5	14	880	G
5	14	881	G
5	14	882	G
5	14	885	C
5	14	886	C
5	14	888	C
5	14	889	C
5	14	890	A
5	14	894	C
5	14	896	A
5	14	897	C
5	14	899	A
5	14	900	A
5	14	901	A
5	14	903	C
5	14	904	C
5	14	906	G
5	14	907	U
5	14	910	A

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Mol	Chain	Res	Type
5	14	911	A
5	14	914	C
5	14	917	A
5	14	924	C
5	14	925	C
5	14	926	A
5	14	928	G
5	14	932	G
5	14	933	A
5	14	934	G
5	14	935	C
5	14	937	U
5	14	941	A
5	14	945	A
5	14	946	G
5	14	958	U
5	14	959	A
5	14	961	C
5	14	974	G
5	14	977	G
5	14	980	A
5	14	981	A
5	14	983	A
5	14	989	G
5	14	990	A
5	14	991	C
5	14	993	G
5	14	996	A
5	14	1005	C
5	14	1012	U
5	14	1013	C
5	14	1014	U
5	14	1016	G
5	14	1020	A
5	14	1022	G
5	14	1023	U
5	14	1025	G
5	14	1026	U
5	14	1028	A
5	14	1029	A
5	14	1032	A
5	14	1037	G

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Mol	Chain	Res	Type
5	14	1040	C
5	14	1044	G
5	14	1045	A
5	14	1047	G
5	14	1048	A
5	14	1051	G
5	14	1054	A
5	14	1056	G
5	14	1057	A
5	14	1060	U
5	14	1061	U
5	14	1062	G
5	14	1064	C
5	14	1065	U
5	14	1067	A
5	14	1068	G
5	14	1070	A
5	14	1072	C
5	14	1073	A
5	14	1077	A
5	14	1079	C
5	14	1081	U
5	14	1082	U
5	14	1085	A
5	14	1086	A
5	14	1087	G
5	14	1088	A
5	14	1090	U
5	14	1091	G
5	14	1095	A
5	14	1096	A
5	14	1098	A
5	14	1100	C
5	14	1105	U
5	14	1111	A
5	14	1112	G
5	14	1128	A
5	14	1129	A
5	14	1130	U
5	14	1135	C
5	14	1136	G
5	14	1137	G

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Mol	Chain	Res	Type
5	14	1139	G
5	14	1142	U
5	14	1142(A)	A
5	14	1143	A
5	14	1148	A
5	14	1151	G
5	14	1155	A
5	14	1160	G
5	14	1167	U
5	14	1170	G
5	14	1171	G
5	14	1173	G
5	14	1174	A
5	14	1175	U
5	14	1177	A
5	14	1178	C
5	14	1189	A
5	14	1195	G
5	14	1204	A
5	14	1205	U
5	14	1210	A
5	14	1213	A
5	14	1220	A
5	14	1230	C
5	14	1237	A
5	14	1240	U
5	14	1244	G
5	14	1247	A
5	14	1248	G
5	14	1249	U
5	14	1253	A
5	14	1256	G
5	14	1269	A
5	14	1271	G
5	14	1272	A
5	14	1273	U
5	14	1287	A
5	14	1298	C
5	14	1300	U
5	14	1301	A
5	14	1303	G
5	14	1312	U

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Mol	Chain	Res	Type
5	14	1314	C
5	14	1317	A
5	14	1318	C
5	14	1319	G
5	14	1320	C
5	14	1321	A
5	14	1329	U
5	14	1332	G
5	14	1342	A
5	14	1345	C
5	14	1348	G
5	14	1349	A
5	14	1352	U
5	14	1359	A
5	14	1360	A
5	14	1365	A
5	14	1368	G
5	14	1370	C
5	14	1378	A
5	14	1379	A
5	14	1383	C
5	14	1384	A
5	14	1385	G
5	14	1386	C
5	14	1395	A
5	14	1403	C
5	14	1404	C
5	14	1407	C
5	14	1408	C
5	14	1416	G
5	14	1417	C
5	14	1419	A
5	14	1420	U
5	14	1421	G
5	14	1427	A
5	14	1428	C
5	14	1437	C
5	14	1444(A)	A
5	14	1445	C
5	14	1449	A
5	14	1449(A)	G
5	14	1453	A

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Mol	Chain	Res	Type
5	14	1455	G
5	14	1459	G
5	14	1460	A
5	14	1461	G
5	14	1467	C
5	14	1471	A
5	14	1474	C
5	14	1475	G
5	14	1478	G
5	14	1482	U
5	14	1483	G
5	14	1487	G
5	14	1488	G
5	14	1490	A
5	14	1493	C
5	14	1494	A
5	14	1497	U
5	14	1508	A
5	14	1509	C
5	14	1510	A
5	14	1515	C
5	14	1522	G
5	14	1533	C
5	14	1534	G
5	14	1535	U
5	14	1537	C
5	14	1543	A
5	14	1547	C
5	14	1558	A
5	14	1559	G
5	14	1560	G
5	14	1566	A
5	14	1569	A
5	14	1578	U
5	14	1583	A
5	14	1585	C
5	14	1586	A
5	14	1588	C
5	14	1589	C
5	14	1598	C
5	14	1608	A
5	14	1610	A

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Mol	Chain	Res	Type
5	14	1614	A
5	14	1616	A
5	14	1617	C
5	14	1618	A
5	14	1620	G
5	14	1625	C
5	14	1628	G
5	14	1631	A
5	14	1640	C
5	14	1644	C
5	14	1648	C
5	14	1660	C
5	14	1669	A
5	14	1671	U
5	14	1674	G
5	14	1680	U
5	14	1693	U
5	14	1696	G
5	14	1697	G
5	14	1698	A
5	14	1700	A
5	14	1701	A
5	14	1725	G
5	14	1726	G
5	14	1729	A
5	14	1731	G
5	14	1742	C
5	14	1743	G
5	14	1756	G
5	14	1762	A
5	14	1763	G
5	14	1764	G
5	14	1773	A
5	14	1774	C
5	14	1780	A
5	14	1782	C
5	14	1786	A
5	14	1791	A
5	14	1800	C
5	14	1801	G
5	14	1802	A
5	14	1816	G

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Mol	Chain	Res	Type
5	14	1820	U
5	14	1829	A
5	14	1839	G
5	14	1847	A
5	14	1848	A
5	14	1851	U
5	14	1858	G
5	14	1878	G
5	14	1885	A
5	14	1888	G
5	14	1889	A
5	14	1900	A
5	14	1906	G
5	14	1909	C
5	14	1913	A
5	14	1916	A
5	14	1929	G
5	14	1930	G
5	14	1933	G
5	14	1936	A
5	14	1937	A
5	14	1938	A
5	14	1952	A
5	14	1955	U
5	14	1960	A
5	14	1963	U
5	14	1964	G
5	14	1965	C
5	14	1967	C
5	14	1968	G
5	14	1970	A
5	14	1971	A
5	14	1972	A
5	14	1976	U
5	14	1985	G
5	14	1986	A
5	14	1991	U
5	14	1993	U
5	14	2016	U
5	14	2018	G
5	14	2023	G
5	14	2031	A

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Mol	Chain	Res	Type
5	14	2032	G
5	14	2033	A
5	14	2043	C
5	14	2049	G
5	14	2055	C
5	14	2056	G
5	14	2059	A
5	14	2060	A
5	14	2061	G
5	14	2063	C
5	14	2069	G
5	14	2071	A
5	14	2076	U
5	14	2082	A
5	14	2096	U
5	14	2099	U
5	14	2100	G
5	14	2108	C
5	14	2111	C
5	14	2112	G
5	14	2113	U
5	14	2114	A
5	14	2117	A
5	14	2118	U
5	14	2125	G
5	14	2126	A
5	14	2127	G
5	14	2128	C
5	14	2131	G
5	14	2132	U
5	14	2133	G
5	14	2136	C
5	14	2137	C
5	14	2140	C
5	14	2144	U
5	14	2145	C
5	14	2146	C
5	14	2147	G
5	14	2148	G
5	14	2158	A
5	14	2165	G
5	14	2166	G

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Mol	Chain	Res	Type
5	14	2167	U
5	14	2173	A
5	14	2174	C
5	14	2175	C
5	14	2189	U
5	14	2191	G
5	14	2192	G
5	14	2198	A
5	14	2207	C
5	14	2210	G
5	14	2211	G
5	14	2212	A
5	14	2213	U
5	14	2215	G
5	14	2225	A
5	14	2226	C
5	14	2228	G
5	14	2234	G
5	14	2238	G
5	14	2239	G
5	14	2240	C
5	14	2249	U
5	14	2251	G
5	14	2252	G
5	14	2261	C
5	14	2267	A
5	14	2268	A
5	14	2269	A
5	14	2273	A
5	14	2275	C
5	14	2276	G
5	14	2278	A
5	14	2280	G
5	14	2281	C
5	14	2283	C
5	14	2286	A
5	14	2287	A
5	14	2288	A
5	14	2294	C
5	14	2303	G
5	14	2305	A
5	14	2307	G

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Mol	Chain	Res	Type
5	14	2308	G
5	14	2310	A
5	14	2311	A
5	14	2312	U
5	14	2318	G
5	14	2325	G
5	14	2326	C
5	14	2327	A
5	14	2333	A
5	14	2334	G
5	14	2335	A
5	14	2336	A
5	14	2344	U
5	14	2346	A
5	14	2347	C
5	14	2350	C
5	14	2354	G
5	14	2357	U
5	14	2360	A
5	14	2376	A
5	14	2383	G
5	14	2385	C
5	14	2388	A
5	14	2389	G
5	14	2392	A
5	14	2394	C
5	14	2401	U
5	14	2402	C
5	14	2406	U
5	14	2407	G
5	14	2411	A
5	14	2413	G
5	14	2414	G
5	14	2422	A
5	14	2425	A
5	14	2429	G
5	14	2430	A
5	14	2431	U
5	14	2435	A
5	14	2439	A
5	14	2440	C
5	14	2441	C

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Mol	Chain	Res	Type
5	14	2445	G
5	14	2448	A
5	14	2469	A
5	14	2470	G
5	14	2475	C
5	14	2476	A
5	14	2482	G
5	14	2484	G
5	14	2487	G
5	14	2496	C
5	14	2497	A
5	14	2502	G
5	14	2504	U
5	14	2505	G
5	14	2506	U
5	14	2507	C
5	14	2513	G
5	14	2518	A
5	14	2521	C
5	14	2525	G
5	14	2528	U
5	14	2529	G
5	14	2532	G
5	14	2536	G
5	14	2542	A
5	14	2543	G
5	14	2554	U
5	14	2566	A
5	14	2567	G
5	14	2569	G
5	14	2573	C
5	14	2584	U
5	14	2585	U
5	14	2587	A
5	14	2599	G
5	14	2602	A
5	14	2603	G
5	14	2608	G
5	14	2609	U
5	14	2610	C
5	14	2611	U
5	14	2612	C

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Mol	Chain	Res	Type
5	14	2613	U
5	14	2615	U
5	14	2617	C
5	14	2630	G
5	14	2636	U
5	14	2639	A
5	14	2641	G
5	14	2646	C
5	14	2654	A
5	14	2663	G
5	14	2665	A
5	14	2667	C
5	14	2673	G
5	14	2675	A
5	14	2678	C
5	14	2679	A
5	14	2689	U
5	14	2690	C
5	14	2702	U
5	14	2703	C
5	14	2706	G
5	14	2712(A)	A
5	14	2713	A
5	14	2726	U
5	14	2733	A
5	14	2739	U
5	14	2744	G
5	14	2750	A
5	14	2751	G
5	14	2752	C
5	14	2754	U
5	14	2758	A
5	14	2761	G
5	14	2762	G
5	14	2764	A
5	14	2765	A
5	14	2766	G
5	14	2769	C
5	14	2777	G
5	14	2778	A
5	14	2779	U
5	14	2780	G

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Mol	Chain	Res	Type
5	14	2786	U
5	14	2787	C
5	14	2789	C
5	14	2790	A
5	14	2791	C
5	14	2793	G
5	14	2794	C
5	14	2795	G
5	14	2797	U
5	14	2798	C
5	14	2818	G
5	14	2820	A
5	14	2821	A
5	14	2825	C
5	14	2827	C
5	14	2833	G
5	14	2834	G
5	14	2835	A
5	14	2849	U
5	14	2860	A
5	14	2872	G
5	14	2873	A
5	14	2880	C
5	14	2886	G
5	14	2892	A
5	14	2894	G
5	14	2896	C
5	14	2898	U
5	14	2900	A
26	1K	4	C
26	1K	9	A
26	1K	10	G
26	1K	11	C
26	1K	12	U
26	1K	13	C
26	1K	14	A
26	1K	16	H2U
26	1K	17	C
26	1K	18	G
26	1K	19	G
26	1K	22	G
26	1K	26	A

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Mol	Chain	Res	Type
26	1K	28	G
26	1K	36	A
26	1K	41	C
26	1K	44	G
26	1K	47	U
26	1K	48	C
26	1K	49	C
26	1K	59	U
26	1K	60	U
26	1K	61	C
26	1K	64	A
26	1K	68	C
26	1K	69	G
26	1K	70	G
26	1K	72	C
26	1K	73	A
26	1K	74	C
26	1K	75	C
26	1K	76	A
3	2K	6	G
3	2K	9	G
3	2K	13	C
3	2K	18	C
3	2K	20	G
3	2K	21	H2U
3	2K	22	A
3	2K	48	U
3	2K	49	C
3	2K	50	G
3	2K	53	G
3	2K	57	C
3	2K	62	C
3	2K	70	C
3	2K	77	A
2	3K	2	C
2	3K	3	C
2	3K	6	G
2	3K	7	A
2	3K	8	4SU
2	3K	9	A
2	3K	10	G
2	3K	13	C

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Mol	Chain	Res	Type
2	3K	14	A
2	3K	17	C
2	3K	19	G
2	3K	20	H2U
2	3K	21	A
2	3K	22	G
2	3K	23	A
2	3K	26	A
2	3K	31	A
2	3K	36	A
2	3K	40	C
2	3K	43	C
2	3K	45	U
2	3K	46	7MG
2	3K	47	U
2	3K	48	C
2	3K	49	C
2	3K	51	U
2	3K	52	G
2	3K	55	PSU
2	3K	56	C
2	3K	58	A
2	3K	59	U
2	3K	65	G
2	3K	66	U
2	3K	70	G
2	3K	73	A
2	3K	76	A
4	4K	14	A
4	4K	25	A
5	1H	5	A
5	1H	9	U
5	1H	12	U
5	1H	15	G
5	1H	27	G
5	1H	34	C
5	1H	46	C
5	1H	51	G
5	1H	54	G
5	1H	55	G
5	1H	61	G
5	1H	63	U

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Mol	Chain	Res	Type
5	1H	64	A
5	1H	66	C
5	1H	71	A
5	1H	72	U
5	1H	74	A
5	1H	75	G
5	1H	85	G
5	1H	93	C
5	1H	95	G
5	1H	102	G
5	1H	118	A
5	1H	119	A
5	1H	120	U
5	1H	125	G
5	1H	133	C
5	1H	140	A
5	1H	155	C
5	1H	163	U
5	1H	164	U
5	1H	181	A
5	1H	188	G
5	1H	196	A
5	1H	197	A
5	1H	199	A
5	1H	214	G
5	1H	215	G
5	1H	216	A
5	1H	222	A
5	1H	223	A
5	1H	224	G
5	1H	228	A
5	1H	229	A
5	1H	230	U
5	1H	233	A
5	1H	248	G
5	1H	250	G
5	1H	252	G
5	1H	261	G
5	1H	266	G
5	1H	269	U
5	1H	270(F)	U
5	1H	270(L)	U

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Mol	Chain	Res	Type
5	1H	270(M)	U
5	1H	270(N)	G
5	1H	270(P)	C
5	1H	270(Y)	G
5	1H	271(B)	G
5	1H	271(C)	U
5	1H	271	G
5	1H	274	G
5	1H	275	G
5	1H	278	A
5	1H	299	A
5	1H	311	A
5	1H	315	G
5	1H	323	G
5	1H	324	A
5	1H	327	G
5	1H	329	G
5	1H	330	A
5	1H	331	A
5	1H	347	A
5	1H	352	G
5	1H	354	G
5	1H	363	G
5	1H	363(D)	G
5	1H	363(E)	U
5	1H	364	C
5	1H	372	G
5	1H	382	G
5	1H	386	G
5	1H	389	G
5	1H	396	G
5	1H	404	C
5	1H	405	U
5	1H	406	G
5	1H	411	G
5	1H	412	A
5	1H	428	A
5	1H	443	A
5	1H	444	C
5	1H	447	A
5	1H	448	U
5	1H	451	C

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Mol	Chain	Res	Type
5	1H	454	A
5	1H	455	C
5	1H	457	A
5	1H	460	A
5	1H	470	A
5	1H	471	A
5	1H	481	G
5	1H	482	A
5	1H	491	G
5	1H	501	A
5	1H	505	A
5	1H	508	G
5	1H	509	C
5	1H	529	A
5	1H	530	G
5	1H	531	C
5	1H	532	A
5	1H	533	G
5	1H	545	G
5	1H	546	C
5	1H	547	A
5	1H	549	G
5	1H	556	G
5	1H	563	G
5	1H	564	C
5	1H	567	A
5	1H	570	G
5	1H	573	G
5	1H	575	A
5	1H	583	G
5	1H	586	A
5	1H	587	C
5	1H	588	U
5	1H	603	A
5	1H	607	U
5	1H	613	U
5	1H	614	U
5	1H	615	G
5	1H	617	G
5	1H	618(A)	C
5	1H	621	A
5	1H	622	G

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Mol	Chain	Res	Type
5	1H	627	A
5	1H	637	A
5	1H	640	C
5	1H	641	C
5	1H	645	C
5	1H	646	A
5	1H	649	G
5	1H	654	A
5	1H	654(B)	C
5	1H	654(C)	G
5	1H	654(G)	C
5	1H	654(I)	C
5	1H	654(J)	A
5	1H	654(K)	C
5	1H	654(M)	C
5	1H	654(O)	G
5	1H	654(T)	A
5	1H	669	G
5	1H	678	C
5	1H	686	G
5	1H	695	G
5	1H	699	A
5	1H	704	G
5	1H	715	G
5	1H	717	G
5	1H	730	C
5	1H	731	C
5	1H	752	A
5	1H	753	C
5	1H	762	U
5	1H	764	A
5	1H	765	G
5	1H	775	G
5	1H	776	G
5	1H	779	U
5	1H	782	A
5	1H	784	A
5	1H	785	G
5	1H	790	C
5	1H	791	C
5	1H	792	G
5	1H	793	A

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Mol	Chain	Res	Type
5	1H	801	G
5	1H	802	A
5	1H	805	G
5	1H	812	C
5	1H	824	A
5	1H	827	U
5	1H	828	U
5	1H	845	G
5	1H	846	C
5	1H	847	U
5	1H	855	G
5	1H	859	G
5	1H	864	G
5	1H	866	A
5	1H	879	G
5	1H	880	G
5	1H	881	G
5	1H	882	G
5	1H	884	C
5	1H	885	C
5	1H	886	C
5	1H	887	A
5	1H	888	C
5	1H	890	A
5	1H	892	G
5	1H	893	C
5	1H	894	C
5	1H	895	U
5	1H	896	A
5	1H	897	C
5	1H	900	A
5	1H	901	A
5	1H	907	U
5	1H	910	A
5	1H	917	A
5	1H	918	A
5	1H	932	G
5	1H	941	A
5	1H	946	G
5	1H	953	A
5	1H	959	A
5	1H	961	C

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Mol	Chain	Res	Type
5	1H	962	G
5	1H	968	G
5	1H	974	G
5	1H	974(A)	C
5	1H	975	G
5	1H	983	A
5	1H	990	A
5	1H	996	A
5	1H	997	G
5	1H	1003	G
5	1H	1005	C
5	1H	1011	G
5	1H	1012	U
5	1H	1013	C
5	1H	1014	U
5	1H	1015	G
5	1H	1016	G
5	1H	1020	A
5	1H	1022	G
5	1H	1023	U
5	1H	1025	G
5	1H	1026	U
5	1H	1027	A
5	1H	1028	A
5	1H	1033	U
5	1H	1037	G
5	1H	1046	A
5	1H	1047	G
5	1H	1057	A
5	1H	1061	U
5	1H	1062	G
5	1H	1064	C
5	1H	1067	A
5	1H	1068	G
5	1H	1070	A
5	1H	1071	G
5	1H	1072	C
5	1H	1076	C
5	1H	1078	U
5	1H	1079	C
5	1H	1082	U
5	1H	1085	A

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Mol	Chain	Res	Type
5	1H	1086	A
5	1H	1087	G
5	1H	1088	A
5	1H	1090	U
5	1H	1095	A
5	1H	1096	A
5	1H	1097	U
5	1H	1104	C
5	1H	1106	G
5	1H	1109	C
5	1H	1111	A
5	1H	1112	G
5	1H	1121	C
5	1H	1128	A
5	1H	1129	A
5	1H	1130	U
5	1H	1131	G
5	1H	1135	C
5	1H	1136	G
5	1H	1138	G
5	1H	1139	G
5	1H	1142	U
5	1H	1142(A)	A
5	1H	1145	C
5	1H	1150	C
5	1H	1151	G
5	1H	1155	A
5	1H	1156	A
5	1H	1169	G
5	1H	1171	G
5	1H	1176	G
5	1H	1178	C
5	1H	1179	C
5	1H	1192	G
5	1H	1195	G
5	1H	1204	A
5	1H	1205	U
5	1H	1218	C
5	1H	1220	A
5	1H	1221	C
5	1H	1229(A)	G
5	1H	1237	A

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Mol	Chain	Res	Type
5	1H	1244	G
5	1H	1249	U
5	1H	1253	A
5	1H	1256	G
5	1H	1265	A
5	1H	1267	U
5	1H	1268	A
5	1H	1271	G
5	1H	1272	A
5	1H	1273	U
5	1H	1274	A
5	1H	1285	G
5	1H	1292	U
5	1H	1298	C
5	1H	1300	U
5	1H	1301	A
5	1H	1305	C
5	1H	1313	U
5	1H	1314	C
5	1H	1329	U
5	1H	1344	G
5	1H	1345	C
5	1H	1348	G
5	1H	1349	A
5	1H	1352	U
5	1H	1359	A
5	1H	1360	A
5	1H	1365	A
5	1H	1368	G
5	1H	1379	A
5	1H	1380	G
5	1H	1384	A
5	1H	1385	G
5	1H	1386	C
5	1H	1393	A
5	1H	1395	A
5	1H	1397	U
5	1H	1404	C
5	1H	1407	C
5	1H	1416	G
5	1H	1417	C
5	1H	1420	U

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Mol	Chain	Res	Type
5	1H	1421	G
5	1H	1428	C
5	1H	1431	U
5	1H	1444(A)	A
5	1H	1449	A
5	1H	1449(A)	G
5	1H	1453	A
5	1H	1455	G
5	1H	1456	G
5	1H	1458	C
5	1H	1459	G
5	1H	1460	A
5	1H	1461	G
5	1H	1467	C
5	1H	1471	A
5	1H	1473	G
5	1H	1478	G
5	1H	1483	G
5	1H	1490	A
5	1H	1493	C
5	1H	1495	A
5	1H	1496	A
5	1H	1497	U
5	1H	1507	A
5	1H	1508	A
5	1H	1509	C
5	1H	1510	A
5	1H	1511	A
5	1H	1517	G
5	1H	1520	U
5	1H	1522	G
5	1H	1526	G
5	1H	1534	G
5	1H	1535	U
5	1H	1536	A
5	1H	1537	C
5	1H	1538	G
5	1H	1540	G
5	1H	1543	A
5	1H	1544	C
5	1H	1545	A
5	1H	1547	C

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Mol	Chain	Res	Type
5	1H	1548	C
5	1H	1554	A
5	1H	1556	C
5	1H	1558	A
5	1H	1559	G
5	1H	1560	G
5	1H	1562	A
5	1H	1566	A
5	1H	1569	A
5	1H	1578	U
5	1H	1580	A
5	1H	1586	A
5	1H	1587	A
5	1H	1595	G
5	1H	1608	A
5	1H	1609	A
5	1H	1610	A
5	1H	1617	C
5	1H	1618	A
5	1H	1634	A
5	1H	1641	A
5	1H	1645	G
5	1H	1647	G
5	1H	1648	C
5	1H	1651	G
5	1H	1654	A
5	1H	1664	A
5	1H	1674	G
5	1H	1675	C
5	1H	1695	G
5	1H	1700	A
5	1H	1701	A
5	1H	1728	G
5	1H	1729	A
5	1H	1731	G
5	1H	1732	A
5	1H	1756	G
5	1H	1758	G
5	1H	1763	G
5	1H	1764	G
5	1H	1773	A
5	1H	1782	C

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Mol	Chain	Res	Type
5	1H	1791	A
5	1H	1799	G
5	1H	1800	C
5	1H	1801	G
5	1H	1802	A
5	1H	1816	G
5	1H	1819	A
5	1H	1826	G
5	1H	1829	A
5	1H	1835	G
5	1H	1839	G
5	1H	1847	A
5	1H	1853	A
5	1H	1858	G
5	1H	1870	C
5	1H	1878	G
5	1H	1889	A
5	1H	1900	A
5	1H	1901	A
5	1H	1905	C
5	1H	1906	G
5	1H	1914	C
5	1H	1919	A
5	1H	1926	U
5	1H	1929	G
5	1H	1930	G
5	1H	1931	U
5	1H	1935	G
5	1H	1938	A
5	1H	1941	C
5	1H	1955	U
5	1H	1961	C
5	1H	1963	U
5	1H	1967	C
5	1H	1969	A
5	1H	1970	A
5	1H	1971	A
5	1H	1972	A
5	1H	1974	C
5	1H	1982	C
5	1H	1983	C
5	1H	1993	U

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Mol	Chain	Res	Type
5	1H	1994	C
5	1H	2004	G
5	1H	2020	A
5	1H	2021	C
5	1H	2023	G
5	1H	2031	A
5	1H	2032	G
5	1H	2033	A
5	1H	2035	G
5	1H	2043	C
5	1H	2049	G
5	1H	2051	A
5	1H	2054	A
5	1H	2055	C
5	1H	2056	G
5	1H	2060	A
5	1H	2061	G
5	1H	2062	A
5	1H	2063	C
5	1H	2069	G
5	1H	2070	G
5	1H	2080	G
5	1H	2100	G
5	1H	2108	C
5	1H	2111	C
5	1H	2112	G
5	1H	2113	U
5	1H	2114	A
5	1H	2115	G
5	1H	2116	G
5	1H	2118	U
5	1H	2126	A
5	1H	2127	G
5	1H	2128	C
5	1H	2129	C
5	1H	2131	G
5	1H	2132	U
5	1H	2133	G
5	1H	2135	A
5	1H	2136	C
5	1H	2139	C
5	1H	2147	G

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Mol	Chain	Res	Type
5	1H	2148	G
5	1H	2157	G
5	1H	2158	A
5	1H	2161	C
5	1H	2166	G
5	1H	2167	U
5	1H	2168	G
5	1H	2170	A
5	1H	2171	A
5	1H	2172	U
5	1H	2173	A
5	1H	2174	C
5	1H	2176	A
5	1H	2190	G
5	1H	2198	A
5	1H	2205	C
5	1H	2210	G
5	1H	2212	A
5	1H	2213	U
5	1H	2215	G
5	1H	2224	G
5	1H	2225	A
5	1H	2226	C
5	1H	2236	C
5	1H	2238	G
5	1H	2240	C
5	1H	2267	A
5	1H	2275	C
5	1H	2280	G
5	1H	2283	C
5	1H	2285	C
5	1H	2286	A
5	1H	2287	A
5	1H	2288	A
5	1H	2305	A
5	1H	2307	G
5	1H	2308	G
5	1H	2309	A
5	1H	2312	U
5	1H	2314	C
5	1H	2319	G
5	1H	2320	A

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Mol	Chain	Res	Type
5	1H	2325	G
5	1H	2326	C
5	1H	2327	A
5	1H	2334	G
5	1H	2336	A
5	1H	2343	C
5	1H	2345	G
5	1H	2346	A
5	1H	2347	C
5	1H	2350	C
5	1H	2376	A
5	1H	2377	A
5	1H	2383	G
5	1H	2385	C
5	1H	2389	G
5	1H	2390	U
5	1H	2391	G
5	1H	2393	A
5	1H	2402	C
5	1H	2403	C
5	1H	2405	G
5	1H	2406	U
5	1H	2410	G
5	1H	2418	A
5	1H	2425	A
5	1H	2427	C
5	1H	2428	G
5	1H	2429	G
5	1H	2430	A
5	1H	2431	U
5	1H	2435	A
5	1H	2439	A
5	1H	2440	C
5	1H	2441	C
5	1H	2447	G
5	1H	2448	A
5	1H	2469	A
5	1H	2470	G
5	1H	2475	C
5	1H	2476	A
5	1H	2482	G
5	1H	2484	G

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Mol	Chain	Res	Type
5	1H	2497	A
5	1H	2502	G
5	1H	2505	G
5	1H	2506	U
5	1H	2518	A
5	1H	2529	G
5	1H	2531	A
5	1H	2554	U
5	1H	2566	A
5	1H	2567	G
5	1H	2582	G
5	1H	2584	U
5	1H	2590	A
5	1H	2601	C
5	1H	2602	A
5	1H	2609	U
5	1H	2611	U
5	1H	2612	C
5	1H	2615	U
5	1H	2629	A
5	1H	2634	G
5	1H	2636	U
5	1H	2654	A
5	1H	2656	U
5	1H	2657	A
5	1H	2665	A
5	1H	2666	C
5	1H	2670	A
5	1H	2673	G
5	1H	2689	U
5	1H	2690	C
5	1H	2700	C
5	1H	2701	C
5	1H	2702	U
5	1H	2703	C
5	1H	2704	C
5	1H	2705	A
5	1H	2707	G
5	1H	2712(A)	A
5	1H	2713	A
5	1H	2714	G
5	1H	2718	G

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Mol	Chain	Res	Type
5	1H	2721	A
5	1H	2726	U
5	1H	2733	A
5	1H	2734	A
5	1H	2744	G
5	1H	2757	A
5	1H	2758	A
5	1H	2764	A
5	1H	2765	A
5	1H	2766	G
5	1H	2778	A
5	1H	2779	U
5	1H	2781	A
5	1H	2787	C
5	1H	2789	C
5	1H	2790	A
5	1H	2791	C
5	1H	2793	G
5	1H	2794	C
5	1H	2795	G
5	1H	2797	U
5	1H	2798	C
5	1H	2799	A
5	1H	2801	A
5	1H	2802	G
5	1H	2807	G
5	1H	2808	U
5	1H	2813	A
5	1H	2818	G
5	1H	2820	A
5	1H	2821	A
5	1H	2830	G
5	1H	2833	G
5	1H	2834	G
5	1H	2835	A
5	1H	2847	U
5	1H	2872	G
5	1H	2891	G
5	1H	2892	A
5	1H	2893	G
5	1H	2894	G
5	1H	2895	U

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Mol	Chain	Res	Type
5	1H	2899	G
27	1J	0	A
27	1J	8	U
27	1J	13	A
27	1J	15	A
27	1J	16	G
27	1J	19	G
27	1J	22	U
27	1J	24	G
27	1J	30	C
27	1J	33	G
27	1J	39	A
27	1J	41	U
27	1J	42	C
27	1J	45	A
27	1J	53	A
27	1J	58	A
27	1J	64	C
27	1J	73	A
27	1J	75	G
27	1J	76	G
27	1J	81	G
27	1J	88	C
27	1J	89	G
27	1J	89(A)	A
27	1J	90	C
27	1J	101	A
27	1J	102	G
27	1J	108	C
27	1J	109	G
27	1J	114	G
27	1J	115	G
27	16	0	A
27	16	5	C
27	16	8	U
27	16	9	G
27	16	13	A
27	16	15	A
27	16	25	A
27	16	33	G
27	16	35	U
27	16	39	A

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Mol	Chain	Res	Type
27	16	40	U
27	16	41	U
27	16	45	A
27	16	46	A
27	16	53	A
27	16	56	G
27	16	65	C
27	16	66	A
27	16	73	A
27	16	81	G
27	16	82	G
27	16	105	G
27	16	109	G
27	16	115	G
27	16	117	G
27	16	119	A
1	1G	5	U
1	1G	7	G
1	1G	9	G
1	1G	22	G
1	1G	31	G
1	1G	32	A
1	1G	39	G
1	1G	41	G
1	1G	47	C
1	1G	48	C
1	1G	50	A
1	1G	51	A
1	1G	53	A
1	1G	65	U
1	1G	73	G
1	1G	76	G
1	1G	79	G
1	1G	80	G
1	1G	90	C
1	1G	91	C
1	1G	95	G
1	1G	116	A
1	1G	120	A
1	1G	121	C
1	1G	131	C
1	1G	146	G

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Mol	Chain	Res	Type
1	1G	154	C
1	1G	163	C
1	1G	167	G
1	1G	168	G
1	1G	173	U
1	1G	174	C
1	1G	182	U
1	1G	186	C
1	1G	187	C
1	1G	188	U
1	1G	189	U
1	1G	190	G
1	1G	191(A)	G
1	1G	191(D)	U
1	1G	191(E)	G
1	1G	195	A
1	1G	197	A
1	1G	198	G
1	1G	210	U
1	1G	216	G
1	1G	241	C
1	1G	242	C
1	1G	243	A
1	1G	244	U
1	1G	247	G
1	1G	250	A
1	1G	251	G
1	1G	266	G
1	1G	267	C
1	1G	270	A
1	1G	274	A
1	1G	281	G
1	1G	283	C
1	1G	289	G
1	1G	290	C
1	1G	298	A
1	1G	318	G
1	1G	321	A
1	1G	328	C
1	1G	329	A
1	1G	330	C
1	1G	332	G

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Mol	Chain	Res	Type
1	1G	345	C
1	1G	346	G
1	1G	347	G
1	1G	350	G
1	1G	351	G
1	1G	352	C
1	1G	353	A
1	1G	354	G
1	1G	366	C
1	1G	367	U
1	1G	369	C
1	1G	372	C
1	1G	384	G
1	1G	397	A
1	1G	398	C
1	1G	406	G
1	1G	409	G
1	1G	411	A
1	1G	412	A
1	1G	413	G
1	1G	414	A
1	1G	421	U
1	1G	422	C
1	1G	423	G
1	1G	424	G
1	1G	429	U
1	1G	430	A
1	1G	439	A
1	1G	442	C
1	1G	465	A
1	1G	466	C
1	1G	467	G
1	1G	475	G
1	1G	478	A
1	1G	482	A
1	1G	483	C
1	1G	484	G
1	1G	485	G
1	1G	486	U
1	1G	496	A
1	1G	497	U
1	1G	502	G

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Mol	Chain	Res	Type
1	1G	505	G
1	1G	510	A
1	1G	511	C
1	1G	518	C
1	1G	519	C
1	1G	521	G
1	1G	527	G
1	1G	529	G
1	1G	530	G
1	1G	531	U
1	1G	532	A
1	1G	533	A
1	1G	536	C
1	1G	547	A
1	1G	549	C
1	1G	554	C
1	1G	555	C
1	1G	559	A
1	1G	561	U
1	1G	562	C
1	1G	564	C
1	1G	566	G
1	1G	567	G
1	1G	572	A
1	1G	573	A
1	1G	575	G
1	1G	576	G
1	1G	577	G
1	1G	581	G
1	1G	596	C
1	1G	608	A
1	1G	614	A
1	1G	618	C
1	1G	620	C
1	1G	630	G
1	1G	632	A
1	1G	633	G
1	1G	640	A
1	1G	646	U
1	1G	651	C
1	1G	652	U
1	1G	653	A

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Mol	Chain	Res	Type
1	1G	654	G
1	1G	660	G
1	1G	661	G
1	1G	665	A
1	1G	687	A
1	1G	688	G
1	1G	702	A
1	1G	724	G
1	1G	731	G
1	1G	734	G
1	1G	749	C
1	1G	755	G
1	1G	759	A
1	1G	760	G
1	1G	769	G
1	1G	777	A
1	1G	792	A
1	1G	794	A
1	1G	803	G
1	1G	804	U
1	1G	805	C
1	1G	813	U
1	1G	816	A
1	1G	817	C
1	1G	820	U
1	1G	821	G
1	1G	827	U
1	1G	828	A
1	1G	842	C
1	1G	843	U
1	1G	848	C
1	1G	859	A
1	1G	873	A
1	1G	884	U
1	1G	885	G
1	1G	913	A
1	1G	914	A
1	1G	916	G
1	1G	926	G
1	1G	927	G
1	1G	934	C
1	1G	935	A

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Mol	Chain	Res	Type
1	1G	936	C
1	1G	954	G
1	1G	958	A
1	1G	960	U
1	1G	961	U
1	1G	963	G
1	1G	966	G
1	1G	967	C
1	1G	968	A
1	1G	969	A
1	1G	971	G
1	1G	972	C
1	1G	974	A
1	1G	975	A
1	1G	976	G
1	1G	977	A
1	1G	978	A
1	1G	980	C
1	1G	984	C
1	1G	991	U
1	1G	992	U
1	1G	993	G
1	1G	995	C
1	1G	1000	A
1	1G	1003	G
1	1G	1004	A
1	1G	1006	C
1	1G	1009	G
1	1G	1013	G
1	1G	1023	G
1	1G	1024	G
1	1G	1025	U
1	1G	1028	C
1	1G	1028(B)	C
1	1G	1029	G
1	1G	1031	G
1	1G	1032(A)	G
1	1G	1033	G
1	1G	1035	A
1	1G	1036	G
1	1G	1038	C
1	1G	1040	U

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Mol	Chain	Res	Type
1	1G	1042	G
1	1G	1043	C
1	1G	1046	A
1	1G	1048	G
1	1G	1053	G
1	1G	1054	C
1	1G	1055	A
1	1G	1056	U
1	1G	1064	G
1	1G	1081	G
1	1G	1085	U
1	1G	1086	U
1	1G	1092	A
1	1G	1094	G
1	1G	1095	U
1	1G	1101	A
1	1G	1111	A
1	1G	1113	C
1	1G	1118	C
1	1G	1124	G
1	1G	1125	U
1	1G	1127	G
1	1G	1128	C
1	1G	1129	C
1	1G	1131	G
1	1G	1135	U
1	1G	1137	C
1	1G	1138	G
1	1G	1139	G
1	1G	1141	C
1	1G	1146	A
1	1G	1147	C
1	1G	1154	G
1	1G	1157	A
1	1G	1158	C
1	1G	1159	U
1	1G	1160	G
1	1G	1171	G
1	1G	1177	G
1	1G	1178	G
1	1G	1181	G
1	1G	1182	G

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Mol	Chain	Res	Type
1	1G	1183	A
1	1G	1185	G
1	1G	1186	G
1	1G	1187	G
1	1G	1188	A
1	1G	1193	G
1	1G	1196	U
1	1G	1201	A
1	1G	1202	G
1	1G	1211	U
1	1G	1212	U
1	1G	1213	A
1	1G	1214	C
1	1G	1225	A
1	1G	1228	C
1	1G	1232	U
1	1G	1238	A
1	1G	1240	U
1	1G	1241	G
1	1G	1256	A
1	1G	1257	U
1	1G	1258	G
1	1G	1260	C
1	1G	1263	C
1	1G	1267	C
1	1G	1269	A
1	1G	1275	A
1	1G	1278	U
1	1G	1279	A
1	1G	1280	A
1	1G	1286	A
1	1G	1287	A
1	1G	1288	A
1	1G	1293	G
1	1G	1297	C
1	1G	1298	C
1	1G	1299	A
1	1G	1300	G
1	1G	1301	U
1	1G	1303	C
1	1G	1305	G
1	1G	1317	C

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Mol	Chain	Res	Type
1	1G	1319	A
1	1G	1320	C
1	1G	1322	C
1	1G	1323	G
1	1G	1324	A
1	1G	1331	G
1	1G	1335	C
1	1G	1336	C
1	1G	1337	G
1	1G	1346	A
1	1G	1347	G
1	1G	1353	G
1	1G	1362(A)	C
1	1G	1363	A
1	1G	1364	U
1	1G	1365	G
1	1G	1370	G
1	1G	1379	G
1	1G	1396	A
1	1G	1397	C
1	1G	1398	A
1	1G	1400	C
1	1G	1401	G
1	1G	1406	U
1	1G	1408	A
1	1G	1412	C
1	1G	1419	G
1	1G	1442	G
1	1G	1443	G
1	1G	1446	A
1	1G	1447	G
1	1G	1450	U
1	1G	1451	A
1	1G	1452	C
1	1G	1453	G
1	1G	1454	G
1	1G	1460	A
1	1G	1469	G
1	1G	1485	U
1	1G	1490	C
1	1G	1492	A
1	1G	1494	G

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Mol	Chain	Res	Type
1	1G	1499	A
1	1G	1502	A
1	1G	1503	A
1	1G	1504	G
1	1G	1506	U
1	1G	1507	A
1	1G	1517	G
1	1G	1519	A
1	1G	1520	G
1	1G	1525	G
1	1G	1529	G
1	1G	1530	G

All (207) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	13	5	U
1	13	50	A
1	13	115	G
1	13	190	G
1	13	244	U
1	13	266	G
1	13	327	A
1	13	412	A
1	13	422	C
1	13	428	G
1	13	429	U
1	13	484	G
1	13	509	A
1	13	560	U
1	13	631	G
1	13	687	A
1	13	703	G
1	13	748	C
1	13	793	U
1	13	812	C
1	13	991	U
1	13	992	U
1	13	1027	C
1	13	1053	G
1	13	1064	G
1	13	1065	U

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Mol	Chain	Res	Type
1	13	1126	U
1	13	1183	A
1	13	1211	U
1	13	1213	A
1	13	1225	A
1	13	1285	A
1	13	1302	U
1	13	1331	G
1	13	1336	C
1	13	1452	C
1	13	1498	U
1	13	1504	G
2	1L	10	G
2	1L	18	G
2	1L	46	7MG
3	2L	19	G
3	2L	47	7MG
3	2L	48	U
2	3L	16	H2U
4	4L	13	A
4	4L	19	U
5	14	34	C
5	14	49	A
5	14	101	G
5	14	128	C
5	14	196	A
5	14	197	A
5	14	278	A
5	14	310	A
5	14	503	A
5	14	685	A
5	14	752	A
5	14	764	A
5	14	893	C
5	14	960	A
5	14	1022	G
5	14	1085	A
5	14	1141	U
5	14	1378	A
5	14	1396	U
5	14	1416	G
5	14	1420	U

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Mol	Chain	Res	Type
5	14	1427	A
5	14	1460	A
5	14	1558	A
5	14	1608	A
5	14	1799	G
5	14	1819	A
5	14	1899	G
5	14	1963	U
5	14	2062	A
5	14	2157	G
5	14	2191	G
5	14	2211	G
5	14	2225	A
5	14	2275	C
5	14	2406	U
5	14	2439	A
5	14	2447	G
5	14	2602	A
5	14	2611	U
5	14	2629	A
5	14	2638	G
5	14	2689	U
5	14	2776	A
5	14	2859	G
5	14	2893	G
26	1K	10	G
26	1K	13	C
3	2K	21	H2U
3	2K	48	U
2	3K	2	C
2	3K	18	G
2	3K	20	H2U
2	3K	46	7MG
2	3K	58	A
5	1H	33	U
5	1H	125	G
5	1H	195	A
5	1H	196	A
5	1H	222	A
5	1H	229	A
5	1H	249	C
5	1H	271(B)	G

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Mol	Chain	Res	Type
5	1H	404	C
5	1H	481	G
5	1H	508	G
5	1H	528	A
5	1H	587	C
5	1H	685	A
5	1H	752	A
5	1H	764	A
5	1H	800	A
5	1H	880	G
5	1H	961	C
5	1H	974(A)	C
5	1H	1022	G
5	1H	1026	U
5	1H	1060	U
5	1H	1085	A
5	1H	1095	A
5	1H	1110	G
5	1H	1178	C
5	1H	1273	U
5	1H	1312	U
5	1H	1396	U
5	1H	1420	U
5	1H	1427	A
5	1H	1493	C
5	1H	1508	A
5	1H	1558	A
5	1H	1608	A
5	1H	1609	A
5	1H	1617	C
5	1H	1678	G
5	1H	1694	C
5	1H	1757	U
5	1H	1762	A
5	1H	1799	G
5	1H	1900	A
5	1H	2060	A
5	1H	2062	A
5	1H	2080	G
5	1H	2157	G
5	1H	2167	U
5	1H	2171	A

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Mol	Chain	Res	Type
5	1H	2212	A
5	1H	2225	A
5	1H	2389	G
5	1H	2428	G
5	1H	2447	G
5	1H	2475	C
5	1H	2481	G
5	1H	2566	A
5	1H	2610	C
5	1H	2689	U
5	1H	2756	U
5	1H	2873	A
27	1J	56	G
27	1J	88	C
27	1J	89	G
27	16	40	U
27	16	81	G
27	16	108	C
1	1G	64	G
1	1G	115	G
1	1G	197	A
1	1G	243	A
1	1G	244	U
1	1G	250	A
1	1G	266	G
1	1G	327	A
1	1G	328	C
1	1G	345	C
1	1G	412	A
1	1G	421	U
1	1G	429	U
1	1G	509	A
1	1G	535	A
1	1G	560	U
1	1G	632	A
1	1G	687	A
1	1G	723	U
1	1G	748	C
1	1G	793	U
1	1G	812	C
1	1G	884	U
1	1G	913	A

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Mol	Chain	Res	Type
1	1G	992	U
1	1G	1053	G
1	1G	1054	C
1	1G	1126	U
1	1G	1128	C
1	1G	1145	C
1	1G	1157	A
1	1G	1285	A
1	1G	1297	C
1	1G	1300	G
1	1G	1346	A
1	1G	1453	G
1	1G	1498	U

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

41 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	$\#\|Z\| > 2$
26	MIA	1K	37	26	24,31,32	2.47	3 (12%)	26,44,47	2.67	6 (23%)
2	7MG	1L	46	2	22,26,27	3.20	8 (36%)	29,39,42	2.72	10 (34%)
3	PSU	2K	56	3	18,21,22	1.18	2 (11%)	22,30,33	1.94	5 (22%)
2	PSU	1L	32	2	18,21,22	1.27	1 (5%)	22,30,33	1.48	3 (13%)
2	MIA	3L	37	2	24,31,32	2.84	4 (16%)	26,44,47	3.85	10 (38%)
3	H2U	2L	21	3	18,21,22	2.12	3 (16%)	21,30,33	1.63	4 (19%)
26	PSU	1K	32	56,26	18,21,22	1.42	3 (16%)	22,30,33	1.56	3 (13%)
3	PSU	2L	56	3	18,21,22	1.50	2 (11%)	22,30,33	1.68	3 (13%)
26	PSU	1K	39	26	18,21,22	1.09	1 (5%)	22,30,33	1.64	3 (13%)
3	4SU	2L	8	3	18,21,22	2.00	4 (22%)	26,30,33	2.51	5 (19%)
2	H2U	1L	16	2	18,21,22	2.27	4 (22%)	21,30,33	2.06	5 (23%)
2	PSU	3L	39	2	18,21,22	1.13	1 (5%)	22,30,33	1.64	4 (18%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
26	PSU	1K	55	26	18,21,22	1.31	1 (5%)	22,30,33	1.51	4 (18%)
3	7MG	2K	47	3	22,26,27	2.96	7 (31%)	29,39,42	2.74	10 (34%)
2	PSU	1L	55	2	18,21,22	1.38	1 (5%)	22,30,33	1.46	4 (18%)
2	H2U	3L	16	2	18,21,22	2.16	4 (22%)	21,30,33	1.97	4 (19%)
2	PSU	3L	32	2	18,21,22	1.27	2 (11%)	22,30,33	1.56	3 (13%)
2	PSU	3K	39	2	18,21,22	1.32	1 (5%)	22,30,33	1.49	3 (13%)
3	OMC	2L	33	3	19,22,23	1.75	3 (15%)	26,31,34	1.07	2 (7%)
2	PSU	3K	32	2	18,21,22	1.22	1 (5%)	22,30,33	1.70	4 (18%)
2	PSU	3K	55	2	18,21,22	1.16	1 (5%)	22,30,33	1.90	6 (27%)
2	H2U	3L	20	2	18,21,22	2.23	4 (22%)	21,30,33	1.79	5 (23%)
2	4SU	3K	8	2	18,21,22	1.91	3 (16%)	26,30,33	2.46	5 (19%)
3	OMC	2K	33	3	19,22,23	1.88	3 (15%)	26,31,34	0.90	2 (7%)
2	PSU	1L	39	2	18,21,22	1.13	1 (5%)	22,30,33	1.52	4 (18%)
26	7MG	1K	46	26	22,26,27	2.99	7 (31%)	29,39,42	2.85	11 (37%)
2	H2U	3K	20	2	18,21,22	2.19	4 (22%)	21,30,33	2.07	5 (23%)
2	7MG	3L	46	2	22,26,27	3.27	6 (27%)	29,39,42	2.80	10 (34%)
2	PSU	3L	55	2	18,21,22	1.14	1 (5%)	22,30,33	1.57	3 (13%)
3	7MG	2L	47	3	22,26,27	3.16	7 (31%)	29,39,42	2.84	11 (37%)
2	4SU	3L	8	2	18,21,22	1.92	5 (27%)	26,30,33	1.97	5 (19%)
3	4SU	2K	8	3	18,21,22	1.91	3 (16%)	26,30,33	2.65	5 (19%)
2	MIA	3K	37	2	24,31,32	2.56	4 (16%)	26,44,47	4.00	10 (38%)
26	4SU	1K	8	26	18,21,22	1.76	4 (22%)	26,30,33	2.30	4 (15%)
2	4SU	1L	8	2	18,21,22	1.82	4 (22%)	26,30,33	2.08	5 (19%)
2	7MG	3K	46	2	22,26,27	3.06	6 (27%)	29,39,42	2.86	11 (37%)
2	MIA	1L	37	2	24,31,32	2.43	4 (16%)	26,44,47	2.55	9 (34%)
26	H2U	1K	16	26	18,21,22	2.52	3 (16%)	21,30,33	1.81	5 (23%)
3	H2U	2K	21	3	18,21,22	2.80	3 (16%)	21,30,33	1.82	4 (19%)
2	H2U	1L	20	2	18,21,22	2.16	3 (16%)	21,30,33	2.20	5 (23%)
2	H2U	3K	16	2	18,21,22	2.21	4 (22%)	21,30,33	1.99	5 (23%)

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
26	MIA	1K	37	26	-	7/11/33/34	0/3/3/3
2	7MG	1L	46	2	-	4/7/37/38	0/3/3/3
3	PSU	2K	56	3	-	0/7/25/26	0/2/2/2
2	PSU	1L	32	2	-	3/7/25/26	0/2/2/2
2	MIA	3L	37	2	-	8/11/33/34	0/3/3/3
3	H2U	2L	21	3	-	4/7/38/39	0/2/2/2
26	PSU	1K	32	56,26	-	0/7/25/26	0/2/2/2
3	PSU	2L	56	3	-	0/7/25/26	0/2/2/2
26	PSU	1K	39	26	-	0/7/25/26	0/2/2/2
3	4SU	2L	8	3	-	0/7/25/26	0/2/2/2
2	H2U	1L	16	2	-	5/7/38/39	0/2/2/2
2	PSU	3L	39	2	-	2/7/25/26	0/2/2/2
26	PSU	1K	55	26	-	2/7/25/26	0/2/2/2
3	7MG	2K	47	3	-	5/7/37/38	0/3/3/3
2	PSU	1L	55	2	-	0/7/25/26	0/2/2/2
2	H2U	3L	16	2	-	3/7/38/39	0/2/2/2
2	PSU	3L	32	2	-	1/7/25/26	0/2/2/2
2	PSU	3K	39	2	-	0/7/25/26	0/2/2/2
3	OMC	2L	33	3	-	1/9/27/28	0/2/2/2
2	PSU	3K	32	2	-	0/7/25/26	0/2/2/2
2	PSU	3K	55	2	-	5/7/25/26	0/2/2/2
2	H2U	3L	20	2	-	6/7/38/39	0/2/2/2
2	4SU	3K	8	2	-	5/7/25/26	0/2/2/2
3	OMC	2K	33	3	-	0/9/27/28	0/2/2/2
2	PSU	1L	39	2	-	0/7/25/26	0/2/2/2
26	7MG	1K	46	26	-	2/7/37/38	0/3/3/3
2	H2U	3K	20	2	-	0/7/38/39	0/2/2/2
2	7MG	3L	46	2	-	2/7/37/38	0/3/3/3
2	PSU	3L	55	2	-	2/7/25/26	0/2/2/2
3	7MG	2L	47	3	-	4/7/37/38	0/3/3/3
2	4SU	3L	8	2	-	3/7/25/26	0/2/2/2
3	4SU	2K	8	3	-	0/7/25/26	0/2/2/2
2	MIA	3K	37	2	-	6/11/33/34	0/3/3/3
26	4SU	1K	8	26	-	0/7/25/26	0/2/2/2
2	4SU	1L	8	2	-	7/7/25/26	0/2/2/2
2	7MG	3K	46	2	-	2/7/37/38	0/3/3/3
2	MIA	1L	37	2	-	6/11/33/34	0/3/3/3
26	H2U	1K	16	26	-	3/7/38/39	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	H2U	2K	21	3	-	3/7/38/39	0/2/2/2
2	H2U	1L	20	2	-	4/7/38/39	0/2/2/2
2	H2U	3K	16	2	-	0/7/38/39	0/2/2/2

All (136) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	3L	46	7MG	C5-N7	10.15	1.47	1.35
2	3K	46	7MG	C5-N7	9.71	1.46	1.35
2	1L	46	7MG	C5-N7	9.40	1.46	1.35
3	2L	47	7MG	C5-N7	9.15	1.46	1.35
26	1K	37	MIA	C13-C14	9.00	1.58	1.32
26	1K	46	7MG	C5-N7	8.75	1.45	1.35
3	2K	21	H2U	C2-N1	8.71	1.48	1.35
2	3L	37	MIA	C13-C14	8.70	1.57	1.32
2	1L	37	MIA	C13-C14	8.59	1.57	1.32
3	2K	47	7MG	C5-N7	8.52	1.45	1.35
2	3K	37	MIA	C13-C14	8.33	1.56	1.32
26	1K	16	H2U	C2-N1	8.19	1.47	1.35
3	2L	47	7MG	C4-N9	-7.61	1.28	1.37
2	3L	37	MIA	C2-S10	7.48	1.82	1.75
2	1L	46	7MG	C4-N9	-7.43	1.29	1.37
2	3L	46	7MG	C4-N9	-7.37	1.29	1.37
2	1L	16	H2U	C2-N1	7.21	1.45	1.35
2	3L	20	H2U	C2-N1	7.00	1.45	1.35
2	3K	16	H2U	C2-N1	6.76	1.45	1.35
26	1K	46	7MG	C4-N9	-6.71	1.29	1.37
3	2K	47	7MG	C4-N9	-6.66	1.30	1.37
2	3L	16	H2U	C2-N1	6.64	1.45	1.35
2	1L	20	H2U	C2-N1	6.41	1.44	1.35
2	3L	37	MIA	C6-N6	6.32	1.46	1.34
2	3K	20	H2U	C2-N1	6.32	1.44	1.35
2	3K	46	7MG	C4-N9	-6.28	1.30	1.37
3	2L	8	4SU	C5-C4	6.26	1.50	1.42
3	2K	8	4SU	C5-C4	6.26	1.50	1.42
26	1K	37	MIA	C6-N6	6.15	1.45	1.34
2	3K	37	MIA	C2-S10	6.09	1.80	1.75
2	3L	46	7MG	C4-N3	6.01	1.48	1.34
2	1L	46	7MG	C4-N3	5.96	1.48	1.34
26	1K	46	7MG	C4-N3	5.91	1.48	1.34
2	3K	46	7MG	C4-N3	5.90	1.48	1.34
3	2K	47	7MG	C4-N3	5.74	1.47	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	2K	21	H2U	C2-N3	5.71	1.48	1.38
2	3K	37	MIA	C6-N6	5.64	1.44	1.34
3	2L	21	H2U	C2-N1	5.63	1.43	1.35
2	3L	8	4SU	C5-C4	5.62	1.49	1.42
3	2L	47	7MG	C4-N3	5.59	1.47	1.34
2	3K	8	4SU	C5-C4	5.58	1.49	1.42
26	1K	8	4SU	C5-C4	5.39	1.49	1.42
2	1L	8	4SU	C5-C4	5.27	1.49	1.42
2	1L	37	MIA	C2-S10	5.08	1.80	1.75
2	1L	37	MIA	C6-N6	4.99	1.43	1.34
3	2K	33	OMC	C2-N3	4.97	1.46	1.36
3	2L	56	PSU	C6-C5	4.94	1.41	1.35
3	2K	21	H2U	C4-N3	4.85	1.45	1.37
3	2L	33	OMC	C2-N3	4.71	1.45	1.36
3	2L	21	H2U	C2-N3	4.65	1.46	1.38
26	1K	16	H2U	C2-N3	4.62	1.46	1.38
2	3K	39	PSU	C6-C5	4.56	1.40	1.35
3	2K	33	OMC	C4-N4	4.51	1.44	1.33
2	1L	55	PSU	C6-C5	4.51	1.40	1.35
26	1K	32	PSU	C6-C5	4.49	1.40	1.35
2	1L	20	H2U	C2-N3	4.46	1.45	1.38
2	1L	32	PSU	C6-C5	4.37	1.40	1.35
26	1K	55	PSU	C6-C5	4.35	1.40	1.35
2	3K	16	H2U	C2-N3	4.33	1.45	1.38
2	3K	20	H2U	C2-N3	4.31	1.45	1.38
2	3L	32	PSU	C6-C5	4.31	1.40	1.35
2	3L	20	H2U	C2-N3	4.27	1.45	1.38
26	1K	46	7MG	C5-C4	-4.24	1.24	1.38
2	3L	46	7MG	C5-C4	-4.20	1.24	1.38
2	3L	16	H2U	C2-N3	4.20	1.45	1.38
3	2L	21	H2U	C4-N3	4.20	1.44	1.37
2	1L	46	7MG	C5-C4	-4.19	1.24	1.38
2	3K	20	H2U	C4-N3	4.18	1.44	1.37
2	3K	32	PSU	C6-C5	4.17	1.40	1.35
26	1K	16	H2U	C4-N3	4.17	1.44	1.37
2	3K	8	4SU	C2-N1	4.15	1.45	1.38
3	2L	33	OMC	C4-N4	4.14	1.43	1.33
2	1L	16	H2U	C2-N3	4.10	1.45	1.38
3	2K	47	7MG	C5-C4	-4.09	1.24	1.38
2	3K	46	7MG	C5-C4	-4.03	1.24	1.38
3	2L	47	7MG	C5-C4	-4.00	1.24	1.38
2	3L	8	4SU	C2-N1	3.92	1.44	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	1L	8	4SU	C2-N1	3.90	1.44	1.38
2	3L	55	PSU	C6-C5	3.87	1.39	1.35
3	2K	33	OMC	C5-C4	3.84	1.51	1.42
2	1L	39	PSU	C6-C5	3.81	1.39	1.35
2	1L	20	H2U	C4-N3	3.74	1.44	1.37
2	3L	39	PSU	C6-C5	3.70	1.39	1.35
2	3K	55	PSU	C6-C5	3.69	1.39	1.35
3	2K	56	PSU	C6-C5	3.69	1.39	1.35
2	3L	16	H2U	C4-N3	3.65	1.43	1.37
2	3K	16	H2U	C4-N3	3.46	1.43	1.37
26	1K	39	PSU	C6-C5	3.46	1.39	1.35
2	1L	16	H2U	C4-N3	3.34	1.43	1.37
26	1K	8	4SU	C2-N1	3.33	1.43	1.38
2	3L	20	H2U	C4-N3	3.28	1.43	1.37
3	2K	8	4SU	C2-N1	3.27	1.43	1.38
3	2L	8	4SU	C6-N1	3.27	1.45	1.38
3	2L	33	OMC	C5-C4	3.22	1.50	1.42
26	1K	46	7MG	C2-N2	3.18	1.41	1.34
3	2L	47	7MG	C8-N9	3.18	1.47	1.46
3	2L	47	7MG	C2-N2	3.06	1.41	1.34
3	2L	8	4SU	C2-N1	3.00	1.43	1.38
2	3K	8	4SU	C6-N1	3.00	1.45	1.38
2	3L	46	7MG	C2-N2	2.98	1.41	1.34
2	3K	37	MIA	C6-N1	2.97	1.36	1.32
2	3K	46	7MG	C2-N2	2.94	1.41	1.34
2	3L	37	MIA	C6-N1	2.93	1.36	1.32
2	3L	8	4SU	C6-N1	2.91	1.45	1.38
2	1L	46	7MG	C8-N9	2.88	1.47	1.46
3	2K	47	7MG	C2-N2	2.83	1.40	1.34
3	2K	47	7MG	C8-N9	2.79	1.47	1.46
2	1L	46	7MG	C2-N2	2.75	1.40	1.34
3	2L	56	PSU	C2-N1	2.72	1.40	1.36
3	2L	8	4SU	C4-N3	2.68	1.40	1.37
2	1L	8	4SU	C6-N1	2.66	1.44	1.38
3	2K	8	4SU	C6-N1	2.65	1.44	1.38
26	1K	37	MIA	C4-N3	-2.64	1.31	1.35
2	1L	37	MIA	C6-N1	2.51	1.36	1.32
26	1K	8	4SU	C6-N1	2.50	1.44	1.38
26	1K	32	PSU	C2-N1	2.43	1.40	1.36
2	3L	46	7MG	C5-C6	2.41	1.49	1.43
2	3L	20	H2U	C6-N1	-2.40	1.42	1.47
2	1L	16	H2U	C6-N1	-2.35	1.42	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	3L	8	4SU	C2-N3	2.28	1.42	1.38
2	3K	46	7MG	C5-C6	2.22	1.49	1.43
2	3K	20	H2U	C6-N1	-2.20	1.43	1.47
2	1L	8	4SU	C2-N3	2.18	1.41	1.38
2	3L	16	H2U	C6-N1	-2.13	1.43	1.47
2	3K	16	H2U	C6-N1	-2.13	1.43	1.47
3	2K	56	PSU	C4-C5	-2.12	1.38	1.44
3	2L	47	7MG	C6-N1	-2.11	1.34	1.38
26	1K	46	7MG	C5-C6	2.10	1.48	1.43
2	1L	46	7MG	C5-C6	2.08	1.48	1.43
2	1L	46	7MG	C6-N1	-2.08	1.35	1.38
2	3L	8	4SU	C4-N3	2.07	1.39	1.37
2	3L	32	PSU	C2-N1	2.04	1.39	1.36
26	1K	8	4SU	C4-N3	2.04	1.39	1.37
3	2K	47	7MG	C5-C6	2.02	1.48	1.43
26	1K	32	PSU	O4'-C1'	-2.01	1.41	1.43
26	1K	46	7MG	C6-N1	-2.00	1.35	1.38

All (225) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	3K	37	MIA	C11-S10-C2	14.91	113.40	102.27
2	3L	37	MIA	C11-S10-C2	14.37	113.00	102.27
26	1K	37	MIA	C12-C13-C14	-9.63	108.41	127.14
3	2K	8	4SU	C4-N3-C2	-9.24	118.36	127.34
2	3K	37	MIA	C12-C13-C14	-8.87	109.87	127.14
2	3L	37	MIA	C12-C13-C14	-8.57	110.47	127.14
3	2L	8	4SU	C4-N3-C2	-8.21	119.36	127.34
2	3K	8	4SU	C4-N3-C2	-8.18	119.40	127.34
2	1L	37	MIA	C12-C13-C14	-7.88	111.80	127.14
26	1K	8	4SU	C4-N3-C2	-7.73	119.83	127.34
3	2L	47	7MG	C4-C5-N7	7.43	115.84	105.53
2	1L	20	H2U	C4-N3-C2	-7.05	119.95	125.79
2	1L	8	4SU	C4-N3-C2	-7.00	120.54	127.34
3	2K	47	7MG	C4-C5-N7	6.91	115.12	105.53
2	1L	46	7MG	C4-C5-N7	6.71	114.85	105.53
2	3K	46	7MG	CM7-N7-C5	6.67	143.62	126.40
3	2L	8	4SU	C5-C4-N3	6.65	120.86	114.69
26	1K	46	7MG	C4-C5-N7	6.57	114.66	105.53
2	3L	8	4SU	C4-N3-C2	-6.41	121.12	127.34
2	3K	8	4SU	C5-C4-N3	6.32	120.55	114.69
2	3L	46	7MG	CM7-N7-C5	6.31	142.68	126.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	3K	46	7MG	C4-C5-N7	6.29	114.27	105.53
3	2L	47	7MG	CM7-N7-C5	6.27	142.58	126.40
2	1L	46	7MG	CM7-N7-C5	6.10	142.16	126.40
2	3L	46	7MG	C4-C5-N7	6.10	114.00	105.53
2	1L	16	H2U	C4-N3-C2	-6.10	120.73	125.79
26	1K	46	7MG	CM7-N7-C5	6.00	141.89	126.40
2	3L	16	H2U	C4-N3-C2	-5.98	120.83	125.79
2	3K	20	H2U	C4-N3-C2	-5.98	120.83	125.79
2	3K	16	H2U	C4-N3-C2	-5.78	121.00	125.79
26	1K	46	7MG	C5-C4-N9	5.78	113.85	106.35
2	3L	46	7MG	C5-C4-N9	5.74	113.80	106.35
3	2K	8	4SU	C5-C4-N3	5.60	119.88	114.69
3	2K	47	7MG	C6-C5-N7	-5.57	123.15	131.91
2	3K	46	7MG	C5-C4-N9	5.54	113.54	106.35
2	1L	46	7MG	C5-C4-N9	5.53	113.53	106.35
26	1K	8	4SU	C5-C4-N3	5.53	119.82	114.69
3	2K	47	7MG	CM7-N7-C5	5.48	140.53	126.40
3	2K	8	4SU	N3-C2-N1	5.46	122.14	114.89
3	2L	47	7MG	C5-C4-N9	5.42	113.39	106.35
3	2K	47	7MG	C5-C4-N9	5.36	113.31	106.35
2	3L	46	7MG	C5-C6-N1	5.28	120.30	110.99
2	3K	37	MIA	C15-C14-C13	-5.08	107.97	122.65
26	1K	16	H2U	C4-N3-C2	-5.05	121.60	125.79
3	2L	47	7MG	C6-C5-N7	-5.04	123.98	131.91
3	2K	21	H2U	C4-N3-C2	-4.96	121.67	125.79
2	3K	46	7MG	C5-C6-N1	4.86	119.56	110.99
26	1K	46	7MG	C5-C6-N1	4.86	119.55	110.99
26	1K	46	7MG	C2-N3-C4	4.77	120.80	112.30
26	1K	37	MIA	C5-C6-N1	-4.74	116.88	120.81
2	3K	37	MIA	C2-N3-C4	4.73	121.85	115.32
2	1L	46	7MG	C5-C6-N1	4.72	119.31	110.99
2	3K	8	4SU	N3-C2-N1	4.68	121.10	114.89
3	2K	56	PSU	N1-C2-N3	4.66	120.41	115.13
2	3K	46	7MG	C2-N3-C4	4.62	120.54	112.30
2	3K	55	PSU	C4-N3-C2	-4.61	119.69	126.34
2	3K	37	MIA	C16-C14-C13	-4.59	109.39	122.65
2	3K	55	PSU	N1-C2-N3	4.58	120.32	115.13
2	1L	20	H2U	C5-C4-N3	4.56	121.77	116.65
2	3L	46	7MG	C2-N3-C4	4.56	120.42	112.30
2	3L	8	4SU	C5-C4-N3	4.52	118.88	114.69
2	3K	32	PSU	C4-N3-C2	-4.48	119.89	126.34
26	1K	46	7MG	C5-C4-N3	-4.44	119.67	128.13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	2L	47	7MG	C5-C6-N1	4.43	118.80	110.99
2	3L	32	PSU	C4-N3-C2	-4.42	119.97	126.34
3	2L	56	PSU	C4-N3-C2	-4.42	119.97	126.34
26	1K	46	7MG	C6-C5-N7	-4.42	124.97	131.91
2	3K	46	7MG	C5-C4-N3	-4.41	119.72	128.13
2	1L	37	MIA	C15-C14-C13	-4.38	110.00	122.65
2	3L	37	MIA	C2-N3-C4	4.38	121.36	115.32
2	3L	55	PSU	C4-N3-C2	-4.36	120.06	126.34
2	3K	16	H2U	N3-C2-N1	4.35	121.25	116.65
2	3L	37	MIA	C16-C14-C13	-4.32	110.15	122.65
26	1K	8	4SU	C5-C4-S4	-4.32	118.90	124.47
2	3L	20	H2U	C4-N3-C2	-4.32	122.21	125.79
2	1L	8	4SU	N3-C2-N1	4.29	120.59	114.89
3	2L	8	4SU	C5-C4-S4	-4.27	118.97	124.47
3	2K	21	H2U	N3-C2-N1	4.22	121.12	116.65
3	2L	21	H2U	C4-N3-C2	-4.17	122.33	125.79
26	1K	39	PSU	C4-N3-C2	-4.11	120.41	126.34
2	3L	46	7MG	C5-C4-N3	-4.09	120.34	128.13
2	1L	46	7MG	C6-C5-N7	-4.08	125.50	131.91
2	3K	46	7MG	C6-C5-N7	-4.05	125.54	131.91
3	2K	47	7MG	C5-C4-N3	-4.05	120.41	128.13
2	1L	8	4SU	C5-C4-N3	4.04	118.44	114.69
26	1K	37	MIA	C16-C14-C13	-4.04	110.98	122.65
26	1K	37	MIA	C12-N6-C6	4.03	128.51	122.55
3	2K	47	7MG	C5-C6-N1	4.02	118.07	110.99
26	1K	39	PSU	N1-C2-N3	4.01	119.67	115.13
2	1L	37	MIA	C16-C14-C13	-4.01	111.07	122.65
3	2K	56	PSU	C4-N3-C2	-4.00	120.57	126.34
2	1L	37	MIA	C11-S10-C2	-4.00	99.28	102.27
3	2L	8	4SU	N3-C2-N1	3.99	120.19	114.89
2	1L	16	H2U	N3-C2-N1	3.98	120.86	116.65
2	1L	37	MIA	C2-N3-C4	3.97	120.80	115.32
26	1K	32	PSU	N1-C2-N3	3.96	119.61	115.13
2	3L	16	H2U	C5-C4-N3	3.94	121.08	116.65
3	2L	56	PSU	N1-C2-N3	3.89	119.53	115.13
2	1L	39	PSU	C4-N3-C2	-3.85	120.78	126.34
2	3L	39	PSU	N1-C2-N3	3.85	119.49	115.13
2	3K	20	H2U	C5-C4-N3	3.84	120.96	116.65
2	1L	46	7MG	C2-N3-C4	3.82	119.11	112.30
26	1K	16	H2U	C5-C4-N3	3.81	120.92	116.65
2	3L	8	4SU	N3-C2-N1	3.78	119.91	114.89
2	3L	39	PSU	C4-N3-C2	-3.78	120.89	126.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	1K	32	PSU	C4-N3-C2	-3.78	120.89	126.34
3	2K	56	PSU	O2-C2-N1	-3.71	118.71	122.79
2	3K	32	PSU	N1-C2-N3	3.71	119.33	115.13
2	1L	46	7MG	C5-C4-N3	-3.70	121.08	128.13
2	3L	55	PSU	N1-C2-N3	3.70	119.32	115.13
3	2K	56	PSU	C6-N1-C2	-3.69	118.91	122.68
26	1K	8	4SU	N3-C2-N1	3.69	119.79	114.89
3	2K	8	4SU	C5-C4-S4	-3.68	119.73	124.47
3	2L	47	7MG	C2-N3-C4	3.66	118.82	112.30
3	2L	47	7MG	C5-C4-N3	-3.66	121.16	128.13
2	3L	37	MIA	C15-C14-C13	-3.65	112.10	122.65
2	3K	39	PSU	C4-N3-C2	-3.65	121.08	126.34
2	3L	20	H2U	C5-C6-N1	3.62	123.55	111.61
2	1L	16	H2U	C5-C4-N3	3.54	120.63	116.65
26	1K	55	PSU	C4-N3-C2	-3.54	121.23	126.34
2	1L	32	PSU	C4-N3-C2	-3.53	121.25	126.34
3	2L	8	4SU	O2-C2-N1	-3.51	118.12	122.79
2	3L	37	MIA	C5-C6-N1	-3.47	117.92	120.81
26	1K	55	PSU	N1-C2-N3	3.46	119.06	115.13
3	2K	8	4SU	O2-C2-N1	-3.42	118.24	122.79
26	1K	37	MIA	C15-C14-C13	-3.38	112.88	122.65
26	1K	16	H2U	C5-C6-N1	3.37	122.73	111.61
2	3K	37	MIA	N3-C2-N1	-3.36	120.80	126.98
2	3L	46	7MG	C6-C5-N7	-3.33	126.67	131.91
2	3L	37	MIA	N3-C2-N1	-3.31	120.89	126.98
2	3K	39	PSU	N1-C2-N3	3.30	118.87	115.13
3	2L	21	H2U	N3-C2-N1	3.30	120.14	116.65
2	1L	39	PSU	N1-C2-N3	3.29	118.86	115.13
2	3K	20	H2U	C5-C6-N1	3.28	122.43	111.61
3	2K	47	7MG	C2-N3-C4	3.28	118.14	112.30
2	3L	46	7MG	N9-C8-N7	-3.26	98.71	103.38
2	3L	32	PSU	N1-C2-N3	3.26	118.83	115.13
3	2K	21	H2U	C5-C6-N1	3.24	122.28	111.61
2	1L	16	H2U	C5-C6-N1	3.23	122.24	111.61
2	1L	8	4SU	C5-C4-S4	-3.22	120.32	124.47
2	3K	16	H2U	C5-C6-N1	3.22	122.21	111.61
2	1L	55	PSU	C4-N3-C2	-3.18	121.75	126.34
2	1L	55	PSU	N1-C2-N3	3.17	118.73	115.13
3	2L	21	H2U	C5-C6-N1	3.15	121.99	111.61
2	3K	55	PSU	C6-C5-C4	3.15	120.40	118.20
3	2L	21	H2U	O2-C2-N1	-3.14	119.17	123.11
2	3K	8	4SU	C5-C4-S4	-3.13	120.43	124.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	3L	39	PSU	O2-C2-N1	-3.12	119.35	122.79
3	2K	47	7MG	N9-C8-N7	-3.06	99.00	103.38
2	3L	20	H2U	N3-C2-N1	3.05	119.88	116.65
2	3K	20	H2U	N3-C2-N1	3.05	119.88	116.65
3	2K	47	7MG	O6-C6-C5	-3.04	120.09	127.54
2	1L	37	MIA	C12-N6-C6	-3.04	118.05	122.55
2	1L	46	7MG	N9-C8-N7	-3.04	99.03	103.38
2	3L	16	H2U	N3-C2-N1	3.03	119.86	116.65
2	3L	16	H2U	C5-C6-N1	3.03	121.61	111.61
2	3K	46	7MG	O6-C6-C5	-3.02	120.13	127.54
3	2K	47	7MG	C2-N1-C6	-3.02	119.59	125.10
2	3L	8	4SU	C5-C4-S4	-2.98	120.63	124.47
2	3K	16	H2U	C5-C4-N3	2.96	119.97	116.65
2	3L	46	7MG	C2-N1-C6	-2.92	119.77	125.10
2	3L	20	H2U	C5-C4-N3	2.92	119.93	116.65
2	1L	20	H2U	N3-C2-N1	2.92	119.74	116.65
26	1K	32	PSU	C6-N1-C2	-2.91	119.71	122.68
2	3K	46	7MG	C2-N1-C6	-2.90	119.82	125.10
2	1L	32	PSU	N1-C2-N3	2.89	118.41	115.13
2	1L	55	PSU	O2-C2-N1	-2.89	119.61	122.79
3	2L	47	7MG	O6-C6-C5	-2.88	120.48	127.54
2	3K	37	MIA	C4-C5-N7	-2.87	106.41	109.40
26	1K	46	7MG	N9-C8-N7	-2.86	99.29	103.38
2	1L	20	H2U	O2-C2-N1	-2.84	119.54	123.11
2	3L	37	MIA	C2-N1-C6	2.82	122.24	117.19
2	3L	39	PSU	C6-N1-C2	-2.81	119.81	122.68
2	3K	46	7MG	N9-C8-N7	-2.79	99.39	103.38
2	1L	37	MIA	N3-C2-N1	-2.78	121.86	126.98
26	1K	46	7MG	C2-N1-C6	-2.77	120.05	125.10
2	3L	46	7MG	O6-C6-C5	-2.77	120.75	127.54
2	1L	46	7MG	O6-C6-C5	-2.77	120.76	127.54
26	1K	46	7MG	O6-C6-C5	-2.76	120.77	127.54
2	1L	32	PSU	O2-C2-N1	-2.75	119.76	122.79
2	3K	32	PSU	O2-C2-N1	-2.68	119.84	122.79
2	1L	39	PSU	O2-C2-N1	-2.66	119.86	122.79
2	1L	20	H2U	C5-C6-N1	2.65	120.36	111.61
2	1L	55	PSU	C6-N1-C2	-2.62	120.00	122.68
2	1L	46	7MG	C2-N1-C6	-2.60	120.36	125.10
26	1K	39	PSU	C6-N1-C2	-2.57	120.06	122.68
26	1K	37	MIA	C4-C5-N7	-2.56	106.73	109.40
26	1K	55	PSU	C6-N1-C2	-2.54	120.09	122.68
3	2L	47	7MG	C2-N1-C6	-2.53	120.49	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	1L	16	H2U	O2-C2-N3	-2.50	116.84	121.50
2	3K	20	H2U	O2-C2-N1	-2.50	119.97	123.11
2	3L	37	MIA	C4-C5-N7	-2.48	106.81	109.40
26	1K	16	H2U	N3-C2-N1	2.47	119.27	116.65
2	3K	55	PSU	O2-C2-N1	-2.45	120.10	122.79
2	1L	8	4SU	O2-C2-N1	-2.41	119.58	122.79
2	3L	55	PSU	O2-C2-N1	-2.38	120.17	122.79
26	1K	55	PSU	O2-C2-N1	-2.38	120.17	122.79
3	2L	33	OMC	N4-C4-N3	2.37	122.12	117.97
2	3K	37	MIA	C2-N1-C6	2.36	121.41	117.19
2	3K	37	MIA	C12-N6-C6	-2.31	119.12	122.55
3	2L	47	7MG	O4'-C1'-N9	2.30	112.44	109.30
2	3K	37	MIA	C16-C14-C15	-2.30	109.53	114.60
26	1K	16	H2U	O2-C2-N3	-2.26	117.29	121.50
2	1L	39	PSU	C6-N1-C2	-2.26	120.37	122.68
3	2K	21	H2U	O2-C2-N3	-2.25	117.31	121.50
2	3L	37	MIA	C16-C14-C15	-2.25	109.64	114.60
3	2L	33	OMC	C1'-N1-C2	2.24	123.42	118.42
2	3K	8	4SU	O2-C2-N1	-2.22	119.84	122.79
2	3K	55	PSU	O4'-C1'-C2'	2.21	108.26	105.14
2	1L	37	MIA	C4-C5-N7	-2.21	107.10	109.40
2	3K	32	PSU	O4-C4-C5	-2.20	118.31	124.05
2	3K	39	PSU	C6-N1-C2	-2.15	120.49	122.68
3	2L	56	PSU	C6-C5-C4	2.13	119.69	118.20
3	2K	33	OMC	N4-C4-N3	2.11	121.67	117.97
3	2L	47	7MG	N9-C8-N7	-2.09	100.38	103.38
2	3L	20	H2U	O2-C2-N3	-2.07	117.64	121.50
2	3K	55	PSU	C6-N1-C2	-2.06	120.57	122.68
3	2K	33	OMC	C6-C5-C4	2.06	120.83	117.50
2	3K	46	7MG	N2-C2-N1	2.05	121.08	116.71
2	1L	37	MIA	C2-N1-C6	2.05	120.86	117.19
3	2K	56	PSU	C6-C5-C4	2.05	119.63	118.20
2	3K	16	H2U	O2-C2-N1	-2.05	120.54	123.11
26	1K	46	7MG	N1-C2-N3	-2.02	119.55	123.32
2	3L	8	4SU	O2-C2-N1	-2.01	120.11	122.79
2	3L	32	PSU	C5-C4-N3	2.00	121.11	116.58

There are no chirality outliers.

All (105) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	1L	8	4SU	C2'-C1'-N1-C2

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Mol	Chain	Res	Type	Atoms
2	1L	8	4SU	C2'-C1'-N1-C6
2	3K	8	4SU	C2'-C1'-N1-C2
2	3K	8	4SU	C2'-C1'-N1-C6
2	1L	16	H2U	O4'-C1'-N1-C6
2	3L	16	H2U	O4'-C4'-C5'-O5'
2	3L	16	H2U	C3'-C4'-C5'-O5'
2	1L	20	H2U	O4'-C1'-N1-C6
2	3L	20	H2U	O4'-C4'-C5'-O5'
2	3L	20	H2U	O4'-C1'-N1-C6
2	1L	32	PSU	O4'-C1'-C5-C4
2	1L	32	PSU	C2'-C1'-C5-C6
2	1L	32	PSU	O4'-C1'-C5-C6
2	1L	37	MIA	O4'-C4'-C5'-O5'
2	1L	37	MIA	C3'-C4'-C5'-O5'
2	1L	37	MIA	N1-C2-S10-C11
2	1L	37	MIA	N3-C2-S10-C11
2	1L	37	MIA	C12-C13-C14-C15
2	3L	37	MIA	O4'-C4'-C5'-O5'
2	3L	37	MIA	C3'-C4'-C5'-O5'
2	3L	37	MIA	N1-C2-S10-C11
2	3L	37	MIA	N3-C2-S10-C11
2	3L	37	MIA	C12-C13-C14-C15
2	3L	37	MIA	C12-C13-C14-C16
2	3K	37	MIA	C5-C6-N6-C12
2	3K	37	MIA	N1-C2-S10-C11
2	3K	37	MIA	N3-C2-S10-C11
2	3K	37	MIA	C12-C13-C14-C15
2	3K	37	MIA	C12-C13-C14-C16
2	3L	39	PSU	C3'-C4'-C5'-O5'
2	1L	46	7MG	C4'-C5'-O5'-P
2	3K	46	7MG	C3'-C4'-C5'-O5'
2	3K	55	PSU	C2'-C1'-C5-C4
2	3K	55	PSU	C2'-C1'-C5-C6
2	3K	55	PSU	O4'-C1'-C5-C6
2	3K	55	PSU	C3'-C4'-C5'-O5'
3	2L	47	7MG	O4'-C4'-C5'-O5'
26	1K	16	H2U	C4'-C5'-O5'-P
26	1K	37	MIA	C5-C6-N6-C12
26	1K	37	MIA	N1-C6-N6-C12
26	1K	37	MIA	N1-C2-S10-C11
26	1K	37	MIA	N3-C2-S10-C11
26	1K	37	MIA	N6-C12-C13-C14

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Mol	Chain	Res	Type	Atoms
26	1K	37	MIA	C12-C13-C14-C15
26	1K	37	MIA	C12-C13-C14-C16
2	1L	16	H2U	C3'-C4'-C5'-O5'
2	3L	39	PSU	O4'-C4'-C5'-O5'
2	3L	46	7MG	O4'-C4'-C5'-O5'
3	2L	47	7MG	C3'-C4'-C5'-O5'
2	3L	20	H2U	C2'-C1'-N1-C2
2	1L	8	4SU	C3'-C4'-C5'-O5'
2	3K	8	4SU	O4'-C4'-C5'-O5'
2	1L	16	H2U	O4'-C4'-C5'-O5'
2	3L	20	H2U	C3'-C4'-C5'-O5'
2	3L	46	7MG	C3'-C4'-C5'-O5'
2	3K	55	PSU	O4'-C4'-C5'-O5'
3	2L	21	H2U	O4'-C4'-C5'-O5'
3	2L	21	H2U	C3'-C4'-C5'-O5'
3	2K	21	H2U	O4'-C4'-C5'-O5'
3	2K	21	H2U	C3'-C4'-C5'-O5'
2	1L	16	H2U	O4'-C1'-N1-C2
26	1K	46	7MG	O4'-C1'-N9-C8
2	3K	37	MIA	N1-C6-N6-C12
2	1L	20	H2U	C2'-C1'-N1-C6
26	1K	16	H2U	C2'-C1'-N1-C2
26	1K	46	7MG	O4'-C1'-N9-C4
3	2K	47	7MG	C2'-C1'-N9-C8
2	1L	8	4SU	O4'-C4'-C5'-O5'
2	3K	46	7MG	O4'-C4'-C5'-O5'
2	3L	20	H2U	C2'-C1'-N1-C6
26	1K	16	H2U	C2'-C1'-N1-C6
2	3L	37	MIA	C5-C6-N6-C12
2	1L	46	7MG	C2'-C1'-N9-C8
2	1L	16	H2U	C4'-C5'-O5'-P
2	1L	20	H2U	C2'-C1'-N1-C2
2	3L	37	MIA	N1-C6-N6-C12
3	2L	47	7MG	O4'-C1'-N9-C4
2	1L	37	MIA	C12-C13-C14-C16
2	3K	8	4SU	O4'-C1'-N1-C6
2	1L	20	H2U	O4'-C1'-N1-C2
2	1L	8	4SU	O4'-C1'-N1-C6
2	3L	20	H2U	O4'-C1'-N1-C2
2	3K	8	4SU	O4'-C1'-N1-C2
3	2K	47	7MG	C4'-C5'-O5'-P
3	2K	47	7MG	O4'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
2	3L	16	H2U	C4'-C5'-O5'-P
3	2K	47	7MG	C3'-C4'-C5'-O5'
3	2L	47	7MG	O4'-C1'-N9-C8
2	1L	8	4SU	O4'-C1'-N1-C2
2	3L	32	PSU	O4'-C1'-C5-C4
2	3L	55	PSU	O4'-C1'-C5-C4
26	1K	55	PSU	O4'-C1'-C5-C4
2	1L	46	7MG	O4'-C1'-N9-C8
3	2K	47	7MG	O4'-C1'-N9-C8
2	1L	8	4SU	C4'-C5'-O5'-P
2	3L	55	PSU	O4'-C1'-C5-C6
3	2L	21	H2U	O4'-C1'-N1-C6
3	2L	21	H2U	C2'-C1'-N1-C2
26	1K	55	PSU	O4'-C1'-C5-C6
2	3L	8	4SU	O4'-C1'-N1-C6
3	2K	21	H2U	C2'-C1'-N1-C2
3	2L	33	OMC	C2'-C1'-N1-C2
2	3L	8	4SU	C4'-C5'-O5'-P
2	1L	46	7MG	C3'-C4'-C5'-O5'
2	3L	8	4SU	C2'-C1'-N1-C6

There are no ring outliers.

26 monomers are involved in 52 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
26	1K	37	MIA	1	0
2	1L	46	7MG	2	0
2	3L	37	MIA	2	0
3	2L	56	PSU	2	0
3	2L	8	4SU	2	0
2	1L	16	H2U	1	0
3	2K	47	7MG	5	0
2	1L	55	PSU	1	0
2	3L	16	H2U	1	0
2	3K	39	PSU	1	0
3	2L	33	OMC	3	0
2	3K	55	PSU	3	0
2	3L	20	H2U	4	0
2	1L	39	PSU	3	0
26	1K	46	7MG	1	0
2	3K	20	H2U	1	0
2	3L	46	7MG	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	3L	55	PSU	1	0
3	2L	47	7MG	2	0
2	3L	8	4SU	2	0
3	2K	8	4SU	1	0
2	3K	37	MIA	4	0
26	1K	8	4SU	1	0
2	1L	8	4SU	4	0
2	1L	37	MIA	1	0
26	1K	16	H2U	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 1265 ligands modelled in this entry, 1265 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

Unable to reproduce the depositors R factor - this section is therefore empty.

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

Unable to reproduce the depositors R factor - this section is therefore empty.

6.3 Carbohydrates

Unable to reproduce the depositors R factor - this section is therefore empty.

6.4 Ligands

Unable to reproduce the depositors R factor - this section is therefore empty.

6.5 Other polymers

Unable to reproduce the depositors R factor - this section is therefore empty.