



Full wwPDB X-ray Structure Validation Report ⓘ

May 21, 2020 – 10:03 am BST

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

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
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) : 2.11

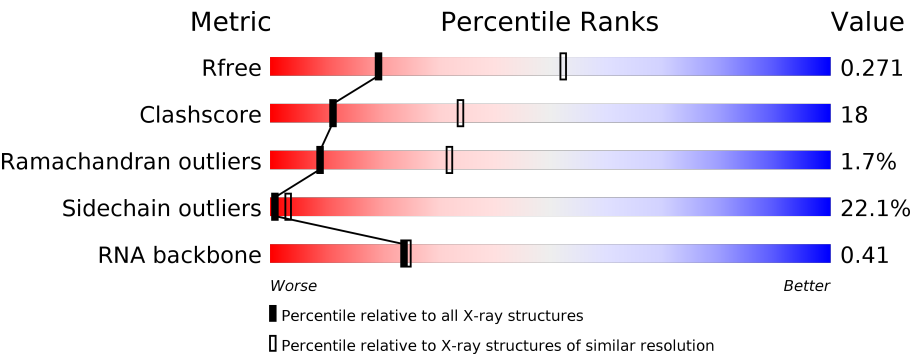
1 Overall quality at a glance i

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.



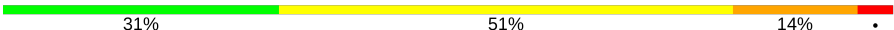


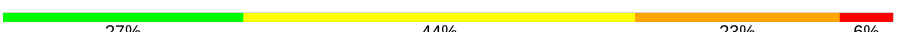
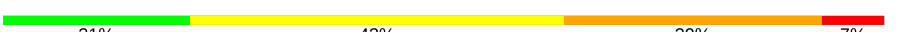
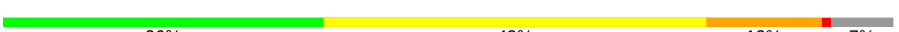
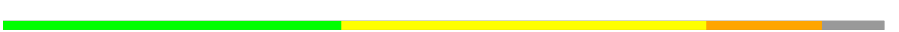







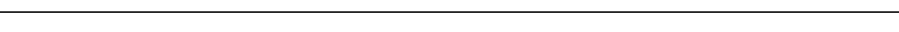

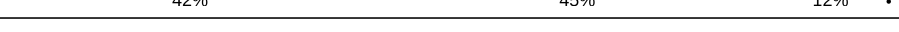

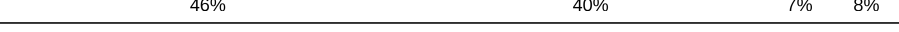





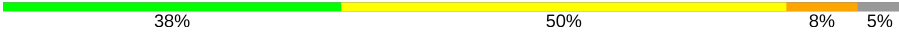
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1754 (3.10-3.02)
Clashscore	141614	1864 (3.10-3.02)
Ramachandran outliers	138981	1794 (3.10-3.02)
Sidechain outliers	138945	1793 (3.10-3.02)
RNA backbone	3102	1036 (3.32-2.80)

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 on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	13	1522	<div><div>27%</div><div>44%</div><div>23%</div><div>• •</div></div>
1	1G	1522	<div><div>29%</div><div>46%</div><div>20%</div><div>• •</div></div>
2	1L	76	<div><div>29%</div><div>43%</div><div>28%</div><div></div></div>
2	3K	76	<div><div>20%</div><div>46%</div><div>34%</div><div></div></div>
2	3L	76	<div><div>22%</div><div>42%</div><div>32%</div><div>•</div></div>
3	2K	77	<div><div>38%</div><div>44%</div><div>13%</div><div>5%</div></div>



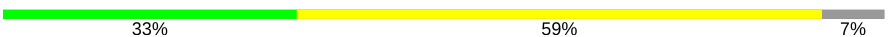

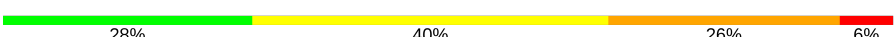
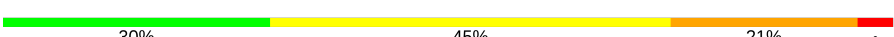


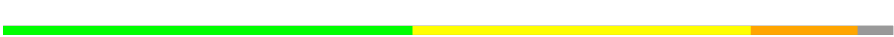

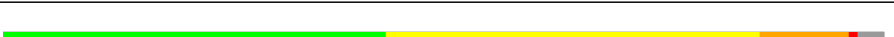


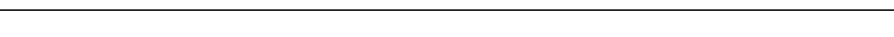











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Mol	Chain	Length	Quality of chain
3	2L	77	
4	4K	30	
4	4L	30	
5	14	2917	
5	1H	2917	
6	12	256	
6	1E	256	
7	22	239	
7	2E	239	
8	32	209	
8	3E	209	
9	4E	162	
10	5E	101	
11	6E	156	
12	7E	138	
13	8E	128	
14	1I	105	
15	2I	129	
16	3I	132	
17	4I	126	
18	5I	61	
19	6I	89	
20	7I	88	
21	8I	105	
22	9I	88	



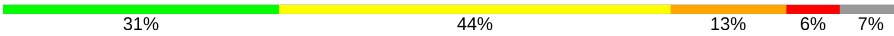
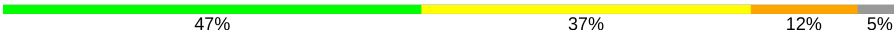
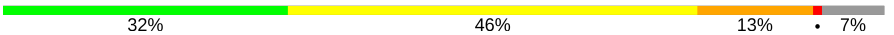

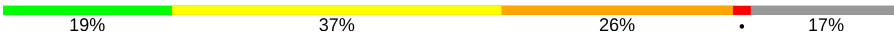


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Mol	Chain	Length	Quality of chain
23	AI	93	
24	BI	106	
25	1F	27	
26	1K	76	
27	16	122	
27	1J	122	
28	11	276	
29	21	206	
30	31	210	
31	41	182	
32	51	180	
33	61	148	
34	58	140	
35	68	122	
36	78	150	
37	88	141	
38	98	118	
39	A8	112	
40	B8	146	
41	C8	118	
42	D8	101	
43	E8	113	
44	F8	96	
45	G8	110	
46	H8	206	

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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

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	S	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	P8	1	Total Mg 1 1	0	0
56	13	149	Total Mg 149 149	0	0
56	1J	7	Total Mg 7 7	0	0
56	5I	1	Total Mg 1 1	0	0
56	16	13	Total Mg 13 13	0	0
56	21	2	Total Mg 2 2	0	0
56	2K	8	Total Mg 8 8	0	0
56	L8	1	Total Mg 1 1	0	0
56	3I	1	Total Mg 1 1	0	0
56	I8	1	Total Mg 1 1	0	0
56	5E	1	Total Mg 1 1	0	0
56	78	1	Total Mg 1 1	0	0
56	J8	1	Total Mg 1 1	0	0
56	1L	1	Total Mg 1 1	0	0
56	1G	96	Total Mg 96 96	0	0
56	11	2	Total Mg 2 2	0	0
56	1H	537	Total Mg 537 537	0	0
56	88	2	Total Mg 2 2	0	0
56	14	421	Total Mg 421 421	0	0
56	3E	2	Total Mg 2 2	0	0
56	3L	3	Total Mg 3 3	0	0
56	1K	2	Total Mg 2 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	41	2	Total 2	Mg 2	0	0
56	2L	4	Total 4	Mg 4	0	0

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

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

- Molecule 58 is water.

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

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

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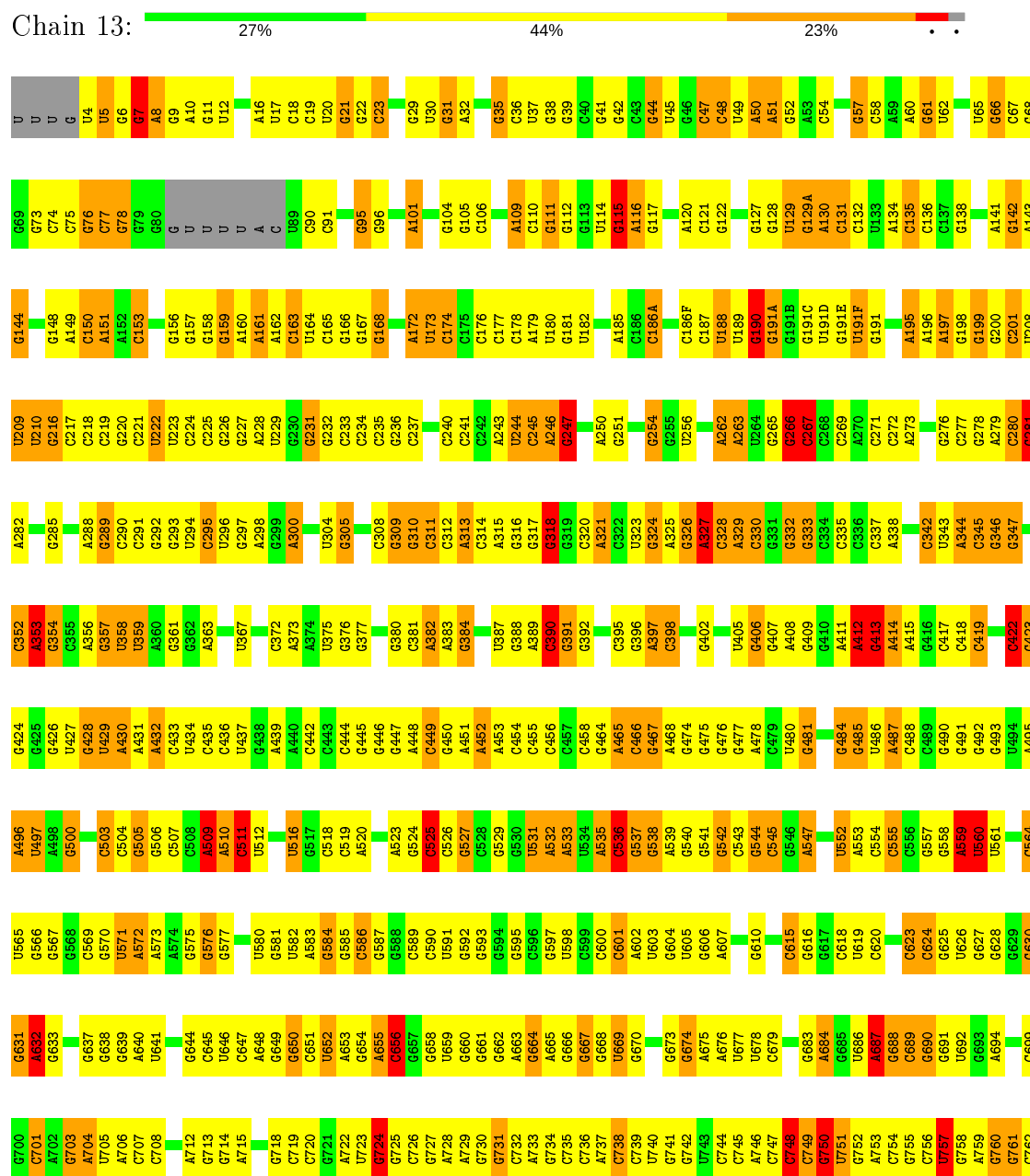
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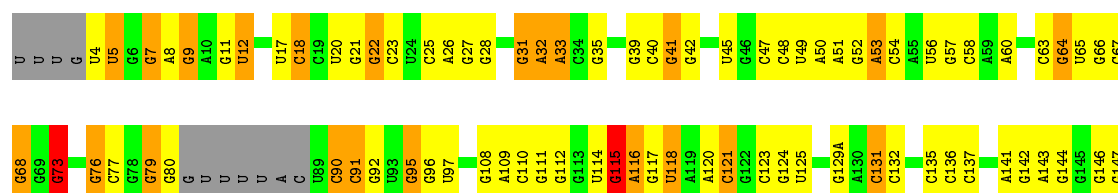
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	F8	2	Total	O	0	0
			2	2		
58	G8	3	Total	O	0	0
			3	3		
58	I8	5	Total	O	0	0
			5	5		
58	J8	1	Total	O	0	0
			1	1		
58	L8	1	Total	O	0	0
			1	1		
58	P8	4	Total	O	0	0
			4	4		
58	Q8	1	Total	O	0	0
			1	1		
58	1G	106	Total	O	0	0
			106	106		

3 Residue-property plots

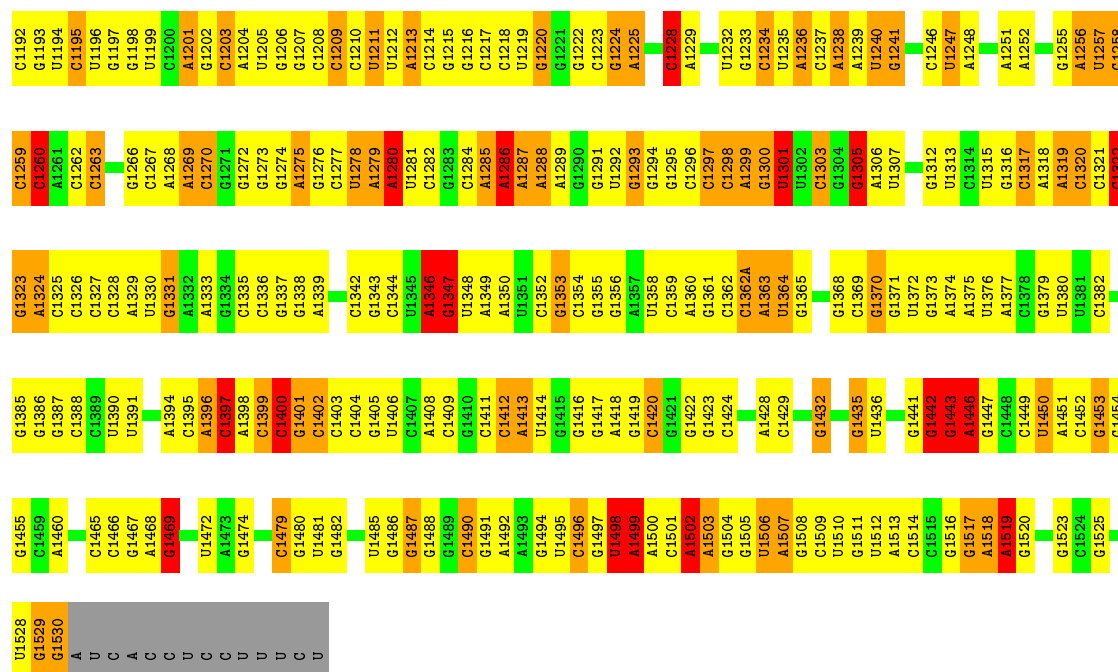
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according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



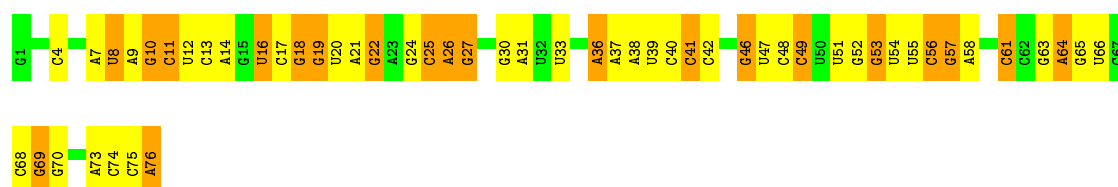


G1127	C995	A865	A790	C720	U641	G576	C513	G438	A363	C290	G216	G148
C1128	G998	C866	G791	G721	A642	G577	G517	A439	C366	C291	C217	A149
G1059	G998A	G867	A792	A722	G645	C578	C518	C442	U367	G297	C218	A150
A1130	A937	C868	U793	U723	C646	G579	C519	C443	U368	A298		A151
G1132	U999	G869	A794	G725	C647	U580	C520	C444	C369	G299	U222	C153
C1133	A1000	A872	G800	G726	A648	G581	G521	C445	C370	A300	U223	C154
G1133	G1001	A873	U801	G727	G649	U582	G522	G446	G371	G301	C224	C155
G1134	G1002	A874	A802	A728	G650	A583	G523	G447	C372	A303		C156
U1135	G1003	C875	G803	A729	G651	G584	G524	A448	A373	G304	G230	G157
U1136	A1004	C876	G804	U730	U652		C525	C449	A374	U304		G158
U1065	A1005	G879	C805	G731	A653	G588	C526	G450	U375	G305	G231	G159
A1067	A1006	C880	C806	G732	G654	C589	G527	G451	G376	G306	G232	A160
G1068	A846	G881	A807	A733	A655	C590	C528	A452	G377		G233	
C1069	G947	C882		A734	G660	U591	G529	A453		G309	C234	C163
U1070	C948	C883	C810	G735	G661	G592	G530		A382	G310		U164
G1071	A949	C884	C811	C736	G662		U531	C456	A383	C312	C237	G165
G1072	U950	U884	C812	A737	G663	G595	U532	C457	G384	C313		G166
U1073	G951	G885	U813	C738	A664	C596	A533	C458	C385	A314	C241	G167
A1015	U952	C886	U814	C739	G665	U598	U534	G464	C386	G314	C242	G168
A1016	G953	G887	A814	U740	A666	U599	A535	C466	U387	A315	A243	
G1075	G954	A888	A816	G741	G667	C599	C536	G467		G316	U244	
G1077	U955	U889	C817	G742	G668	G600	G537	G474	C390	G317	C245	U173
	U956	U890	G818	U743	G669	C601	G538	A468	G391	G318	A246	C174
	U957	U891	A819	C744		G602	A539	G475	G392	G319	G247	C175
G1081	A958	A892	U820		G673	U603	G540	G476	A393	C320	G248	C176
G1082	A959	C893	U821	C745	G674	G604	G541	G477	G394	A321	U249	C177
U1085	U960	G894	C822	C746	A675	U605	G542	G478		A322	U250	C178
U1086	U961	U895	G823	C747	A676	G606	G543	A479	C397	U323	G251	
G1087	C962	C896	G825	U751	U677	A607	G544	C479	C398	G324	G254	U180
	G963	C897	C826		U678	A608	C545	U480		A325	G255	G181
A1092	A964	G898	U827	C754	C879	A609	G546	G481	C401	G326	G256	U182
A1093	A965	C899	A828	G755	C880	G610	U547	A482	G402	A327		G183
G1094	G966	G900	G829	C756	C881		G548	G483	U405	C328	G257	
U1095	C967	A901	G830	U757	G682	A614	C549	G484	G406	G330	G258	U189
A1096	A968	G902	G831	C758	G683	G615	G550	G485	G407	G331	G259	G190
C1097	A969	C903	U831	U759	A684	G616		U486	A403	G332	U261	
G1098	C970	U904		A759		G617	A553		G409		G260	C186D
G1099	G971	G906	G836	G760	A687	C618	C584	C489	G410	C337	A262	C186E
C1100	C972	A909	G837	G765	G688	U619	C555	G490	A411		A263	C186F
A1101	G973	C910	U841	A766	C889	C820	C556		A412	U340	U264	U188
	A974	U911	C842	A767	G690	A621	G557	G493	G413	C341	G265	G190
G1104	C1037	C912	U843	A768	G691	A622	G558	U494	A414	C342	C267	G191A
A1105	G1038	G913	C848	G769	U692	C623	A559	A495		U343	C268	
G1106	C1039	A914	C849	C770	G693	C624	U560	A496	U421	C344	C269	U191D
C1107	U1040	A915	U850	G771	A694	G625	U561	U497	C422	C345	A270	G191E
G1108	G1042	G916	G851	U772		U626	A563	A498	G423	G346		U191F
C1109	A1043	G917	G852	G773	U697	G627	A564	G501	G424	G347	A274	G191
A1110	C1043	C918	G853				U565	G502	G425			U192
A1111	A1044	A918	G854	A777	A702	G630	G566	C503	G426	G350	A279	C193
C1112	C1045	A919	G855	G778		G631	G567	C504		G351	C280	G194
G1113	A1046	U820	G856	G779	C708	A632	G568	C505	U429	C352	G281	A195
C1114	G1047	U821	C956	A780	G709	G633	G569	G506	A430	A353	A282	A196
	U822	C924	C957	G780	G710	C634	C569	G507		G354	C283	A197
C1118	G1048	G925	A859	C783	G711	G635	G570	C508	C433	U359	G284	G198
G1185	U1049	G926	A860	C784	A712	U636	U571	A509	U434	A360	G285	G200
G1186	G1050	G927	G861	G785	G713	G637	A572	A510	C435	C361	G286	
G1187	C1051	G927	C862		G714	G638	A573	A511	C436			
A1188	U1052	U891	U863	U788		G639	A574		U437	G362	G289	
A1123	U1053	U992	U864	U789	C719	A640	G575	U512				
G1124	G1054	G993										
C1125	A1055	A994										
U1126												



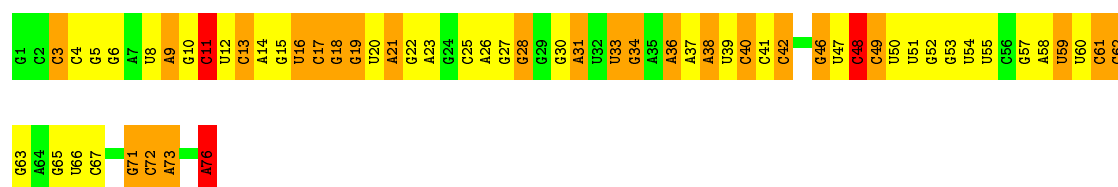
• Molecule 2: tRNA-Phe

Chain 1L: 29% 43% 28%



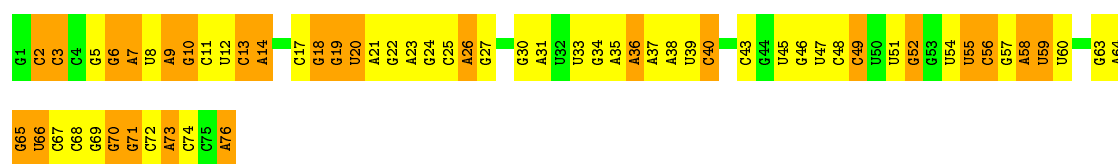
• Molecule 2: tRNA-Phe

Chain 3L: 22% 42% 32%

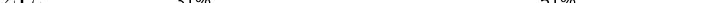


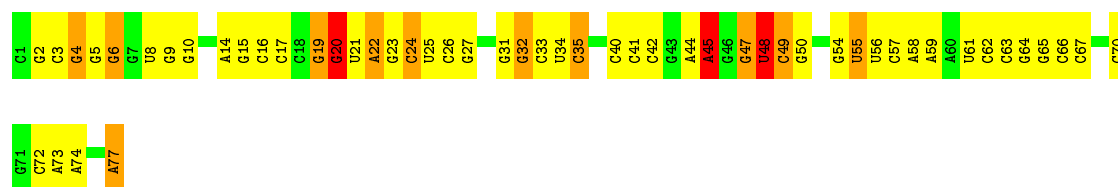
• Molecule 2: tRNA-Phe

Chain 3K: 20% 46% 34%



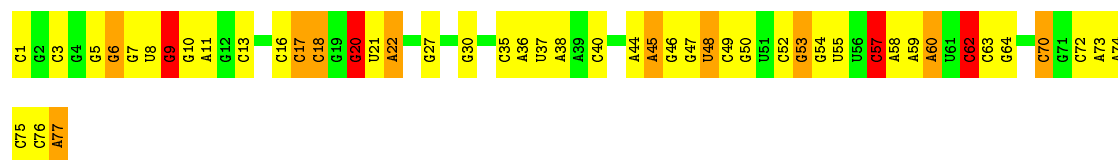
• Molecule 3: tRNA-fMet

Chain 2L:  31% 51% 14% 4%



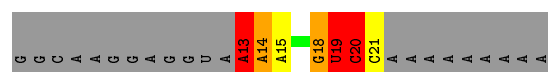
- Molecule 3: tRNA-fMet

Chain 2K:

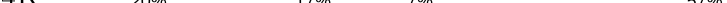


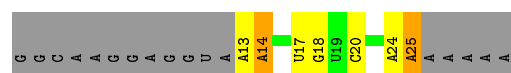
- Molecule 4: RNA (30-MER)

Chain 4L:  7% 7% 7% 10% 70%

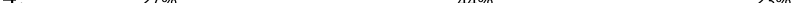


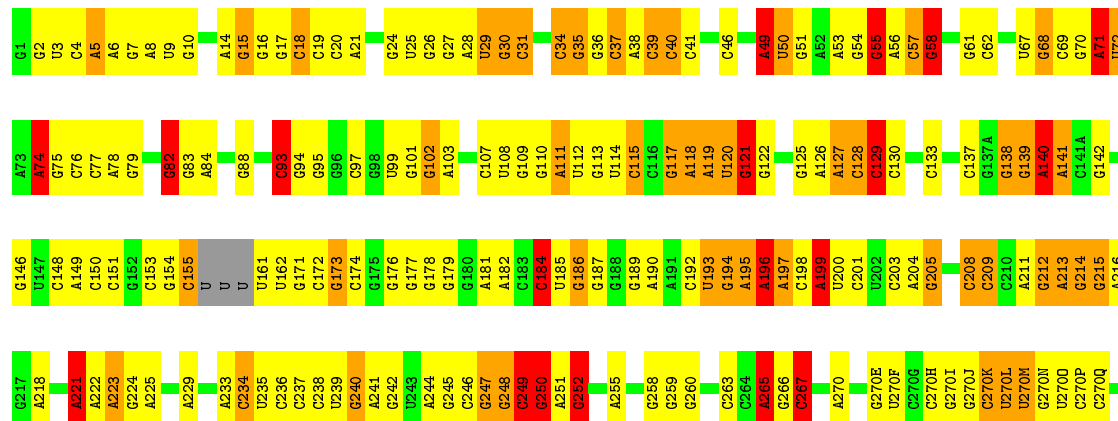
- Molecule 4: RNA (30-MER)

Chain 4K:  20% 17% 7% 57%



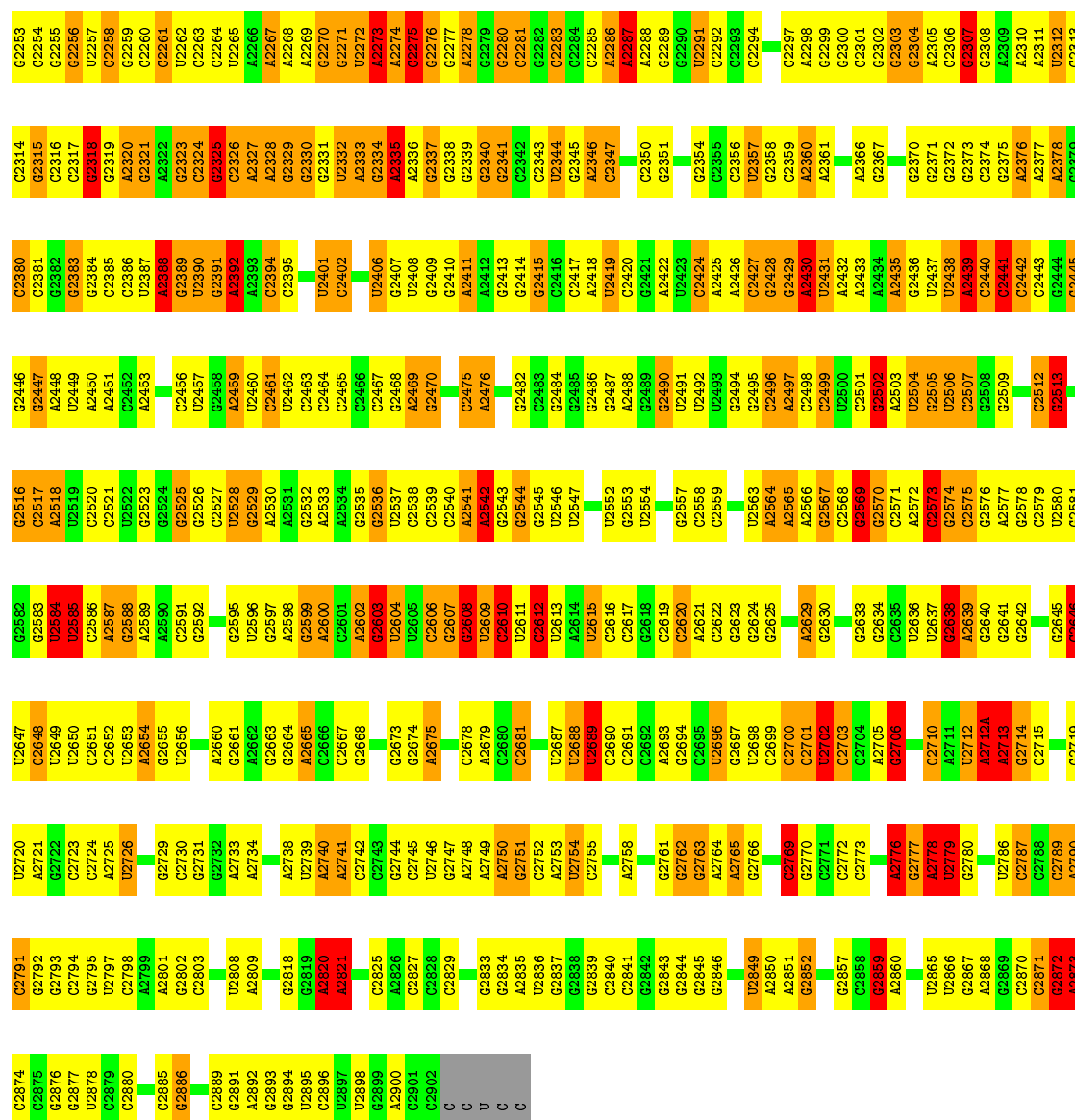
- Molecule 5: 23S ribosomal RNA

Chain 14: 



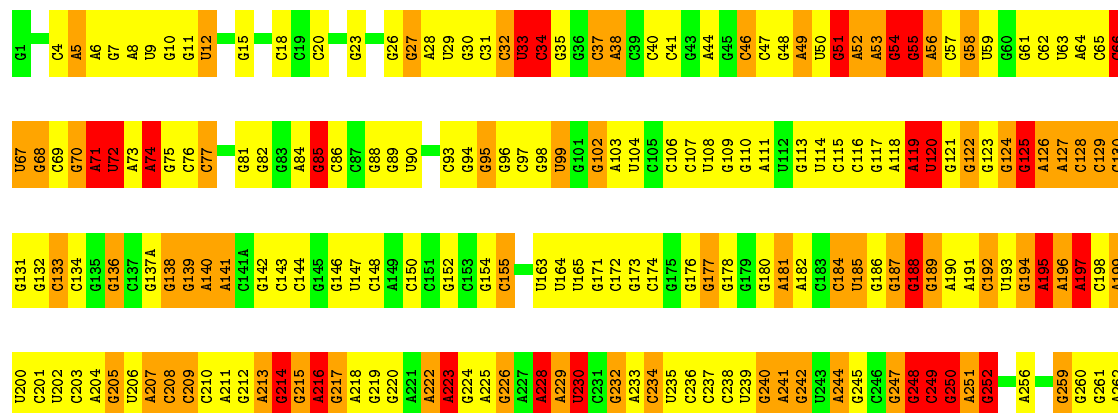


C2174	G1355	G1416	G1479	G1555	G1620	U1680	G1770	U1833	U1935	G1979	C2043	G2112	C2174
C2175	G1356	G1417	G1480	C1556	U1621	G1681	G1771	C1838	A1916	G1980	C2044	U2113	C2175
C2177	U1357	G1418	G1483	U1357	G1624	G1682	U1772	G1839	A1917	A1981	C2045	A2114	A2176
G2182	G1358	G1419	G1484	U1358	G1625	C1683	A1773	G1840	A1918	G1982	G2046	G2115	C2177
G2183	G1359	U1420	G1485	U1359	G1626	G1686	U1774	G1841	A1919	G1983	G2047	G2116	G2182
G2184	U1360	G1421	G1486	G1360	G1627	U1687	U1775	C1844	G1920	G1984	G2048	U2117	G2183
G2185	A1301	G1422	U1487	G1361	G1628	U1688	U1776	G1921	G1921	A1986	G2049	U2118	G2184
U1240	A1302	G1423	G1488	C1362	U1629	U1689	U1777	G1922	G1925	G1987	A2051	A2119	G2185
A1241	G1303	G1424	U1489	G1363	G1630	A1690	U1778	G1923	U1925	G1988	G2052	G2120	G2186
G1244	C1304	G1425	A1490	G1364	C1630A	G1691	U1779	G1924	C1926	G1989	G2053	G2121	G2187
G1247	C1305	G1426	G1491	A1366	G1631	U1692	G1781	G1927	A1927	G1990	G2054	U2122	G2188
A1247	G1306	A1427	G1492	A1367	G1632	U1693	C1782	G1928	A1928	U1991	G2055	G2123	G2189
G1248	A1307	G1428	G1493	A1367	G1633	C1694	A1783	G1929	G1929	G1992	G2056	G2124	U2190
U1249	A1308	G1429	C1493	G1368	G1634	G1695	U1784	U1930	U1930	U1993	A2057	G2125	G2190
U1249	G1309	G1430	A1494	G1369	G1635	G1696	A1785	G1931	G1933	G1997	G2058	G2126	G2191
G1250	G1310	U1431	A1495	G1370	G1636	G1697	A1786	G1932	G1934	G1998	A2059	G2127	G2192
G1251	G1311	U1432	A1496	G1371	C1637	U1698	A1787	G1933	G1935	G1999	G2060	G2128	G2193
G1252	U1312	U1433	A1497	U1372	G1638	G1699	C1788	G1934	G1936	G2000	A2061	C2129	A2198
G1252	U1313	A1434	C1498	U1373	U1639	U1701	U1789	G1935	A1936	A2001	C2062	U2130	A2199
A1253	G1314	G1435	C1504	G1374	U1640	G1702	A1790	G1936	A1937	G2002	C2063	G2131	A2199
U1255	G1315	G1436	C1505	G1375	G1641	G1703	C1790	G1937	U1938	G2003	C2064	G2132	C2206
G1256	U1316	U1437	C1506	G1376	G1642	U1704	A1791	G1938	U1939	G2004	C2065	A2134	C2207
G1257	A1317	U1438	A1507	G1377	G1643	G1705	A1792	G1939	U1940	A2005	G2067	A2135	G2210
C1257	G1318	A1439	A1508	U1378	G1644	U1706	C1795	U1864	C1941	C2006	U2068	C2136	G2211
C1258	G1319	A1440	A1509	A1379	G1645	C1710	U1796	A1871	C1942	C2007	C2069	C2137	A2212
G1259	C1320	G1441	C1509	G1380	G1646	U1716	U1797	A1872	G1943	G2008	A2070	G2140	A2213
G1260	A1321	G1442	A1510	G1381	G1647	U1717	U1798	A1873	U1944	G2009	A2071	G2141	G2214
C1261	A1322	G1443	G1512	G1382	G1648	G1717	G1799	G1878	U1945	G2010	G2072	G2142	G2215
A1262	U1323	G1444	G1513	C1383	G1649	G1718	C1800	C1882	U1946	G2011	C2073	G2143	G2216
G1263	G1324	U1444A	U1514	A1384	U1650	G1725	G1801	G1883	G1947	G2012	U2074	G2144	G2217
G1264	G1325	G1445	U1515	G1385	G1651	G1726	A1802	A1884	C1948	A2013	U2075	U2145	G2218
A1265	U1326	C1446	C1515	C1386	G1652	U1727	A1803	A1885	G1949	A2014	U2076	C2146	G2219
G1266	C1327	G1447	U1516	G1387	U1652	U1728	C1804	A1886	G1950	A2015	A2077	G2147	A2225
U1267	G1328	G1448	G1517	G1388	G1653	A1729	U1805	C1887	U1951	U2016	G2078	G2148	C2226
A1268	U1329	U1449	G1518	G1389	G1654	U1730	G1806	G1888	A1952	G2017	U2079	G2149	C2227
C1269	C1330	G1449A	G1519	U1390	A1655	G1731	G1807	A1889	A1953	G2018	G2080	U2150	G2228
A1331	A1331	C1450	U1520	U1391	C1656	U1732	U1808	A1890	G1954	A2019	C2081	C2151	C2231
G1271	G1332	C1451	G1521	A1392	C1657	C1734	A1809	G1891	U1956	A2020	A2082	G2152	U2232
C1333	C1333	U1463	G1522	U1393	G1658	U1742	A1810	C1894	A1960	U2022	G2087	G2153	U2233
U1273	G1334	A1464	U1527	U1394	U1659	G1743	A1811	C1895	A1961	G2023	G2088	G2154	G2234
A1274	U1335	G1465	A1528	A1395	G1661	U1743	A1812	G1896	C1962	G2024	U2092	G2155	G2234
G1276	A1336	U1397	G1459	U1396	C1662	G1753	A1815	G1897	C1963	C2025	G2093	G2156	G2237
G1277	G1337	G1398	A1460	G1398	C1663	C1754	G1816	U1898	U1963	C2026	G2094	G2157	G2238
A1278	G1338	U1399	G1461	C1399	C1664	A1755	G1817	U1899	G1964	G2027	U2095	A2158	G2239
G1279	G1339	G1400	G1462	G1400	C1665	G1756	G1819	A1900	C1965	U2028	U2096	G2159	G2240
G1280	U1341	G1401	C1463	G1401	G1666	U1757	U1820	A1901	A1966	G2029	C2097	G2160	A2241
G1281	A1342	C1402	G1464	C1402	G1667	G1758	A1821	C1902	G1967	A2030	U2098	G2161	G2242
U1282	G1343	G1403	G1465	G1403	A1668	A1759	G1822	G1903	G1968	G2031	U2099	C2163	G2243
G1283	G1344	C1404	G1466	C1404	A1669	U1760	G1823	G1904	A1969	G2032	G2100	C2164	U2244
A1284	C1345	U1405	C1467	U1405	A1670	C1761	G1824	C1905	A1970	A2033	G2103	G2165	U2245
G1285	G1346	U1406	G1470	U1406	U1671	A1762	A1825	G1906	A1971	U2034	G2104	C2166	G2246
A1286	G1347	A1407	A1471	A1407	U1672	G1763	G1826	G1907	A1972	G2035	C2105	U2167	A2247
A1287	G1348	C1408	G1471	C1408	U1673	G1764	G1827	C1908	G1973	G2036	G2106	G2168	G2248
U1288	A1349	G1409	G1474	G1409	C1674	C1765	G1828	C1909	C1974	G2037	C2107	A2169	U2249
C1289	C1350	G1410	U1474	G1410	G1675	U1766	A1829	A1912	G1975	G2038	C2108	A2170	G2250
C1290	C1351	C1411	G1475	C1411	A1676	U1767	G1830	A1913	U1976	C2039	C2109	U2172	G2251
U1292	A1352	A1412	C1476	A1352	A1677	U1768	G1831	C1914	U1977	C2040	C2111	A2173	G2252
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● Molecule 5: 23S ribosomal RNA

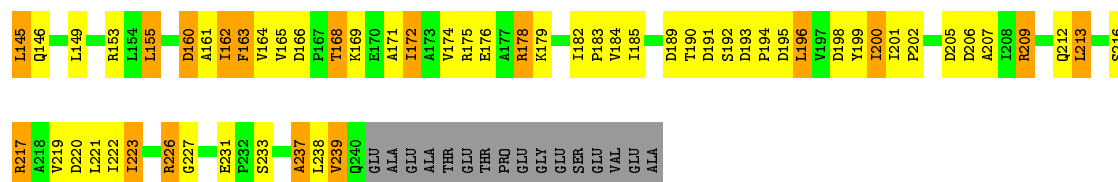
Chain 1H: 21% 42% 29% 7%



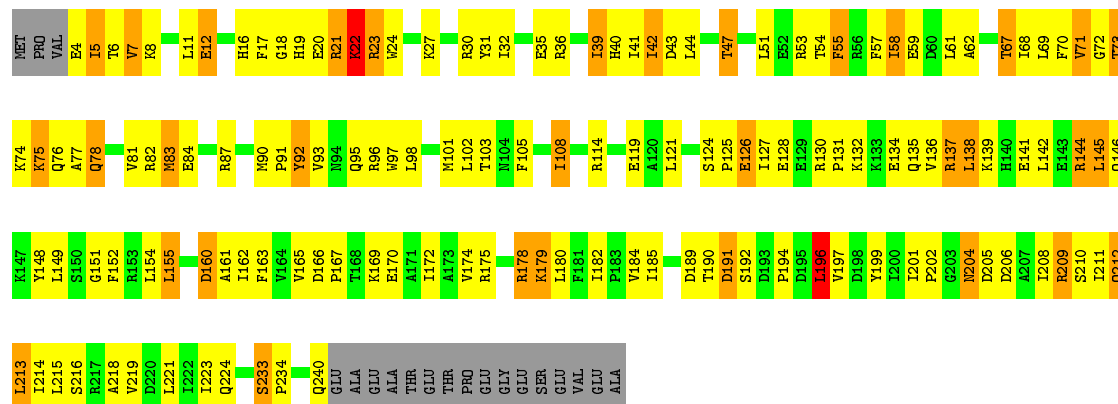
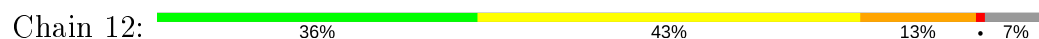


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A2030	C1967	G1904	G1828	U1766	G1678	C1615	G1551	U1489	G1425	A1301	G1239	G1171
A2031	G1968	C1905	A1829	U1767	U1679	A1616	G1555	G1490	G1426	A1302	U1240	A1174
G2032	A1969	G1906	C1830	U1768	U1680	C1617	G1556	G1491	A1427	G1303	U1241	G1175
A2033	G1970	G1907	G1831	U1769	G1681	A1618	C1557	C1493	G1428	C1304	A1242	U1176
G2034	A1971	C1908	C1832	G1770	G1682	G1619	C1558	A1494	G1429	C1305	G1243	G1177
G2035	A1972	G1909	U1833	C1771	G1683	U1621	A1558	A1495	C1430	C1306	G1244	A1177
G2036	G1973	G1910	U1834	U1772	C1684	G1622	G1559	A1496	U1431	A1307	G1245	C1178
C2037	C1974	A1914	G1835	G1773	C1685	G1623	G1560	U1497	C1432	A1308	A1246	C1179
C2039	G1975	U1915	C1836	U1774	G1686	G1624	G1561	C1498	A1373	G1309	A1247	C1180
C2040	U1916	A1916	C1837	U1775	G1687	C1625	A1562	C1499	A1374	G1310	G1248	C1181
U2041	A1917	U1917	G1838	U1776	A1689	G1626	G1563	G1500	A1434	G1311	U1249	A1182
U2042	A1978	A1918	G1839	U1777	A1690	G1627	G1564	G1501	C1437	G1312	G1250	
C2043	C1979	A1919	G1840	U1778	C1691	G1628	G1565	C1502	U1438	U1313	G1251	G1187
C2044	U1980	C1920	U1841	U1779	U1692	U1629	A1566	G1503	A1439	C1314	G1252	U1188
G2048	A1981	G1921	C1842	A1780	U1693	G1630	A1567	A1507	G1440	C1315	A1253	A1189
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A2059	G1996	G1933	G1855	A1791	G1704	G1641	U1578	C1518	A1453	U1326	G1264	C1200
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C2063	G2000	A1937	G1860	U1796	C1712	C1646	C1582	U1523	A1457	A1331	A1268	U1204
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C2065	G2002	U1939	G1862	U1798	G1727	G1648	A1587	G1525	U1397	C1333	C1270	G1206
G2066	G2003	U1940	G1863	G1799	U1728	G1649	C1588	G1526	A1460	C1334	G1271	C1207
U2068	A2005	C1941	C1870	C1800	G1729	G1650	C1589	G1527	G1461	A1336	U1272	G1208
C2067	G2004	G1942	A1871	G1801	U1730	G1651	U1590	A1528	C1462	G1337	A1274	A1210
G2068	C2006	U1943	A1872	A1802	U1731	A1652	G1591	A1529	C1463	U1338		
G2069	C2007	U1944	G1878	A1803	G1732	G1653	C1592	G1530	G1464	G1339	A1278	A1213
A2071	G2008	G1945	C1879	C1804	A1732	A1654	G1593	C1531	G1465	U1340	A1279	A1214
C2072	G2009	U1946	G1883	C1806	G1746	C1657	G1595	G1534	C1467	A1342	G1280	G1216
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U2074	U2011	G1948	A1885	U1808	G1748	U1659	A1597	U1536	A1469	C1344		G1218
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U2076	A2013	G1950	C1887	G1816	G1750	G1661	G1599	U1537	A1471	G1346	A1285	G1220
G2077	A2014	U1951	G1888	G1817	G1751	A1664	C1600	G1538	A1472	G1347	A1286	C1221
U2079	A2015	A1952	G1889	G1818	C1752	A1665	G1601	G1539	C1473	G1348	A1287	C1222
G2080	U2016	G1953	A1890	G1819	G1753	A1666	U1602	C1540	C1474	A1349	U1288	C1223
C2081	U2017	G1954	G1891	A1815	C1754	G1667	A1603	U1541	G1475	C1350	G1289	G1224
A2082	G2018	U1955	C1892	G1816	A1755	G1668	C1604	G1542	C1476	C1351	C1290	C1225
G2083	A2019	U1956	G1893	G1817	G1756	A1669	G1605	A1543	A1477	U1352	G1291	G1226
C2084	A2020	C1957	U1894	U1818	U1757	A1670	C1606	U1545	G1478	A1353	U1292	A1227
C2085	C2021	C1958	C1895	G1819	G1758	A1671	C1607	A1546	G1479	A1354	C1293	G1228
U2086	U2022	G1959	C1896	A1819	A1759	U1672	A1608	G1547	U1482	G1355	U1294	G1229
G2087	G2023	U1960	U1897	U1820	A1760	C1672	A1609	C1546	G1483	G1356	G1295	G1209A
U2088	G2024	C1961	U1898	A1821	C1761	U1673	G1610	G1547	G1486	U1357	G1296	C1230
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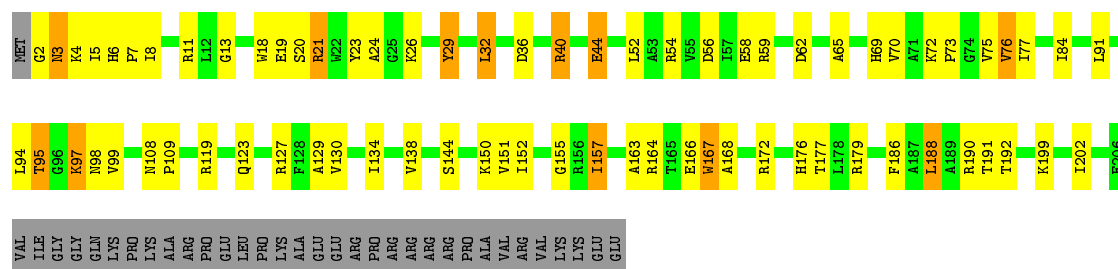




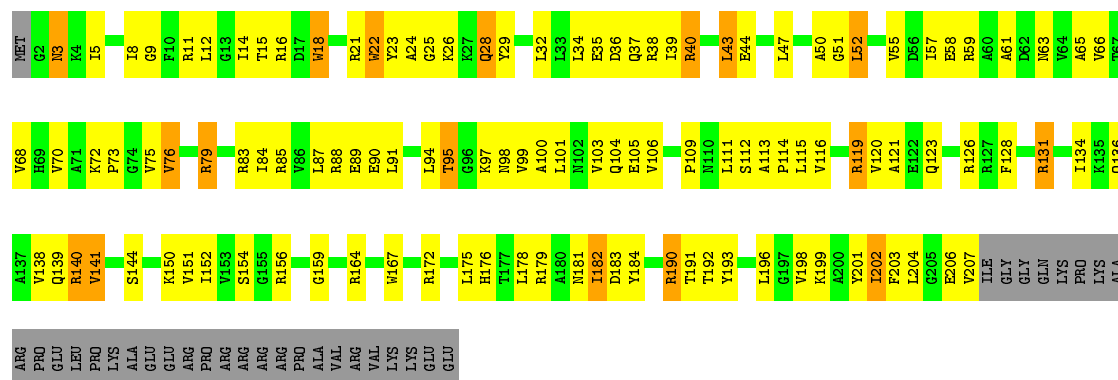
- Molecule 6: 30S ribosomal protein S2



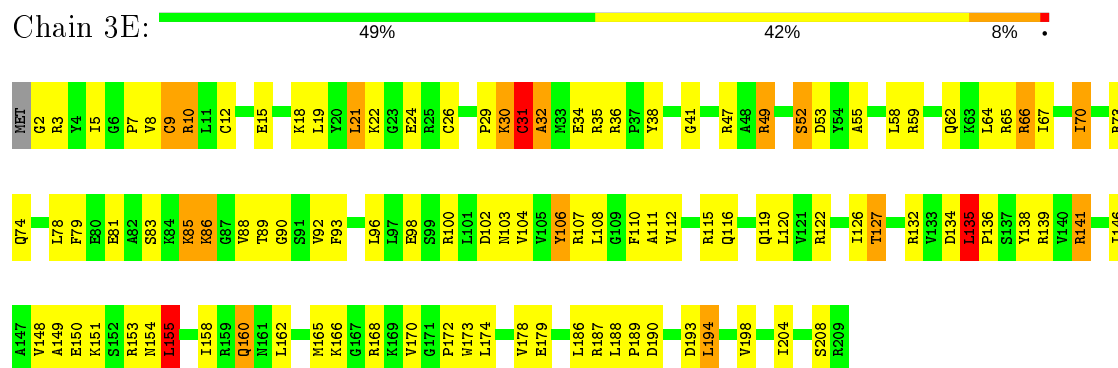
- Molecule 7: 30S ribosomal protein S3



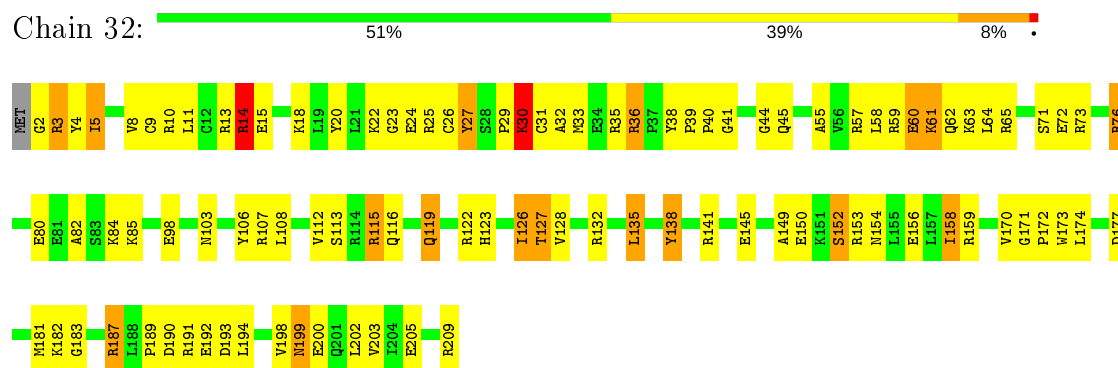
- Molecule 7: 30S ribosomal protein S3



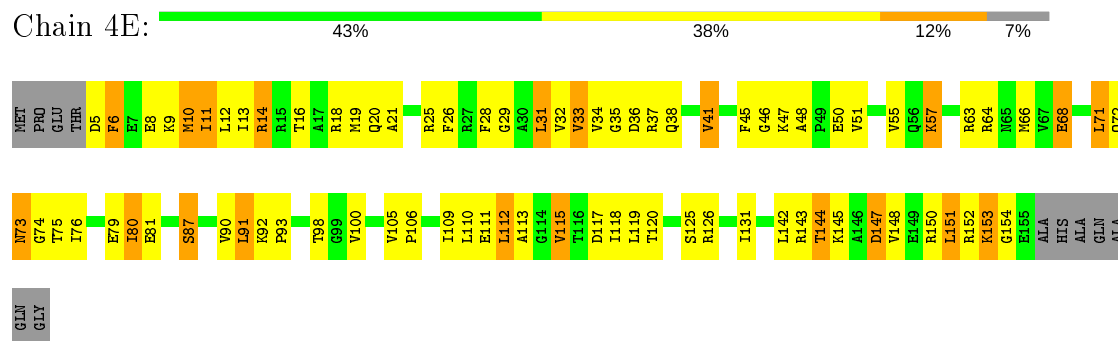
- Molecule 8: 30S ribosomal protein S4



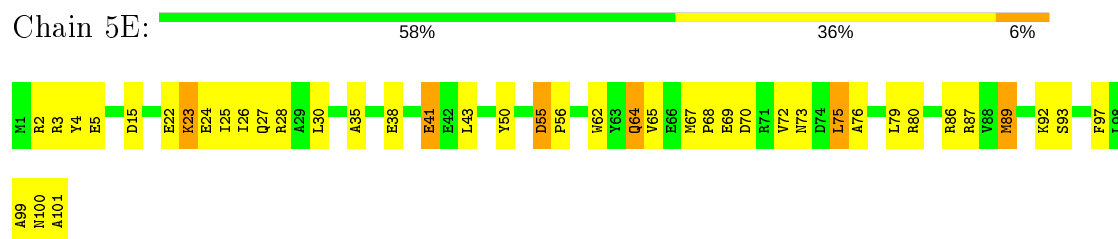
- Molecule 8: 30S ribosomal protein S4



- Molecule 9: 30S ribosomal protein S5

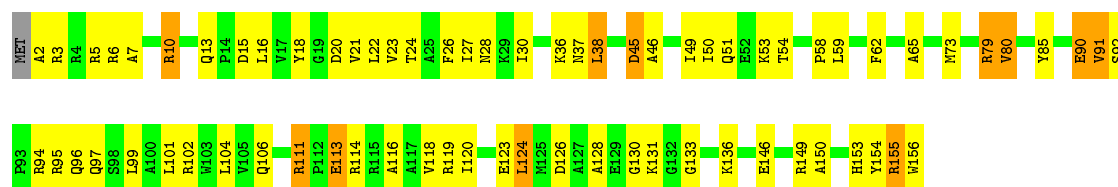


- Molecule 10: 30S ribosomal protein S6



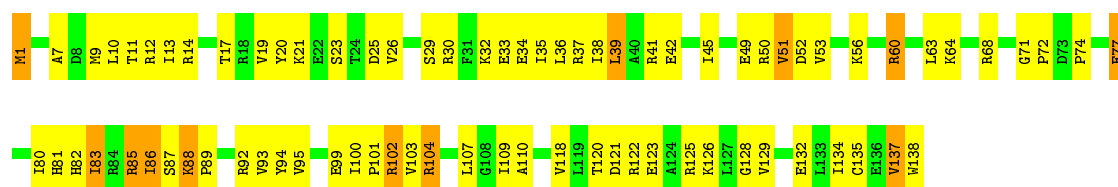
- Molecule 11: 30S ribosomal protein S7

Chain 6E: 



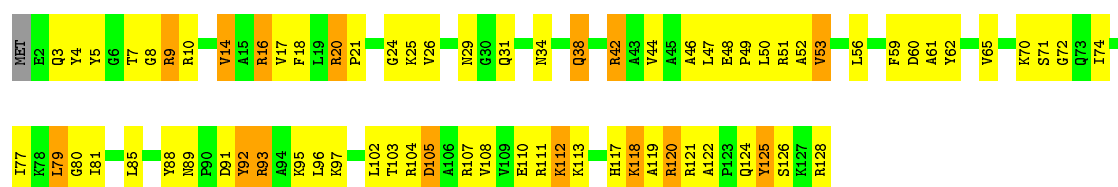
- Molecule 12: 30S ribosomal protein S8

Chain 7E: 



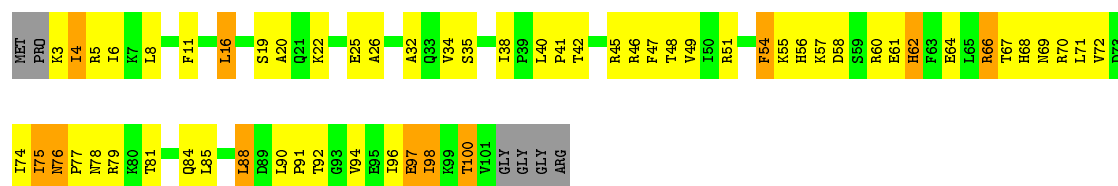
- Molecule 13: 30S ribosomal protein S9

Chain 8E: 



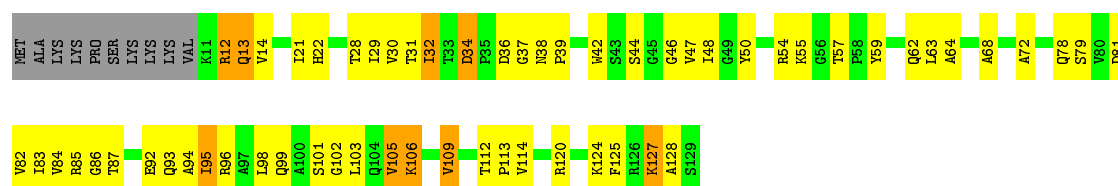
- Molecule 14: 30S ribosomal protein S10

Chain 1I: 



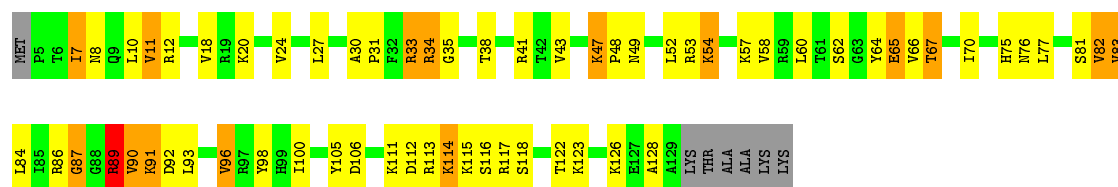
- Molecule 15: 30S ribosomal protein S11

Chain 2I: 



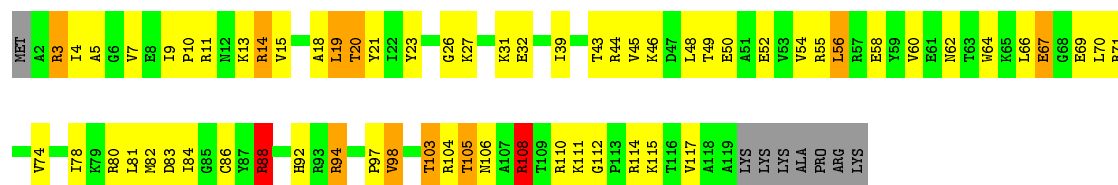
- Molecule 16: 30S ribosomal protein S12

Chain 3I: 



- Molecule 17: 30S ribosomal protein S13

Chain 4I: 



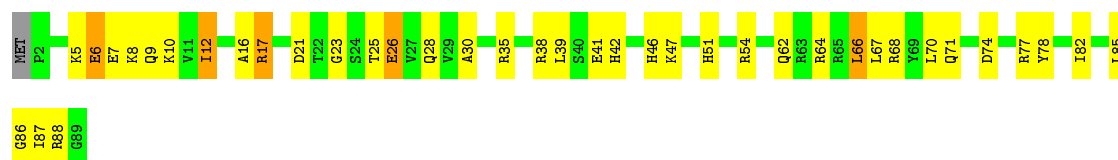
- Molecule 18: 30S ribosomal protein S14 type Z

Chain 5I: 



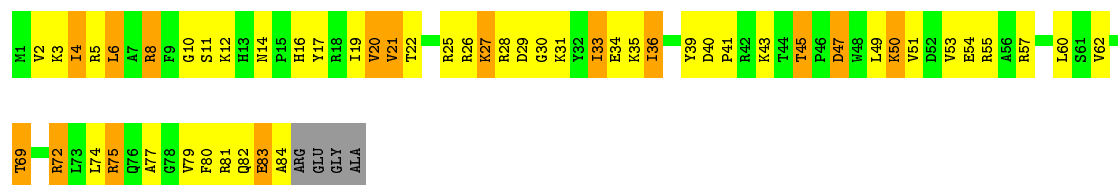
- Molecule 19: 30S ribosomal protein S15

Chain 6I: 



- Molecule 20: 30S ribosomal protein S16

Chain 7I: 



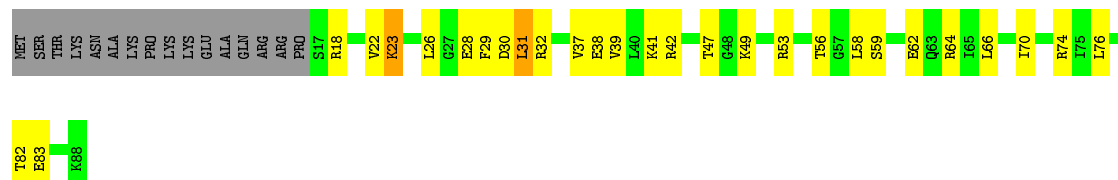
- Molecule 21: 30S ribosomal protein S17

Chain 8I: 



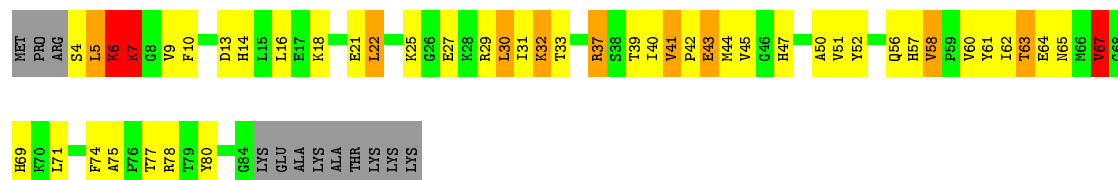
- Molecule 22: 30S ribosomal protein S18

Chain 9I: 50% 30% 18%



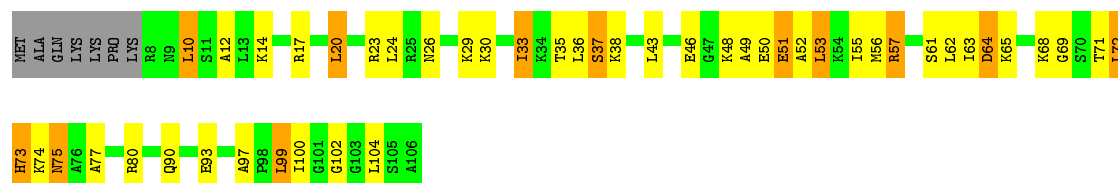
- Molecule 23: 30S ribosomal protein S19

Chain AI: 35% 39% 10% 13%



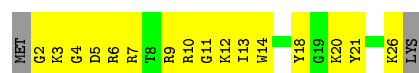
- Molecule 24: 30S ribosomal protein S20

Chain BI: 49% 33% 11% 7%



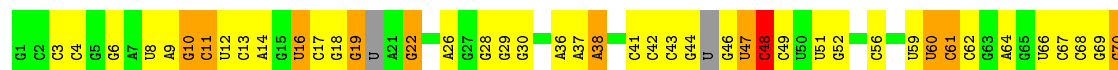
- Molecule 25: 30S ribosomal protein Thx

Chain 1F: 33% 59% 7%



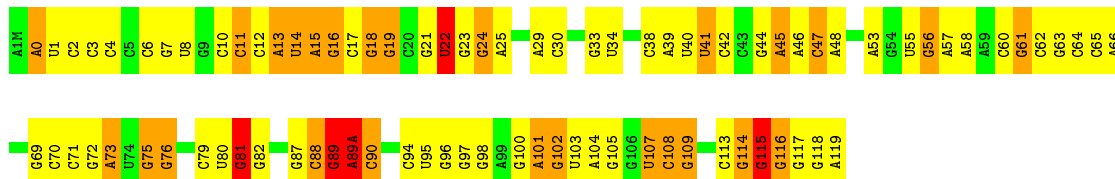
- Molecule 26: tRNA-Phe

Chain 1K: 33% 46% 16% 5%

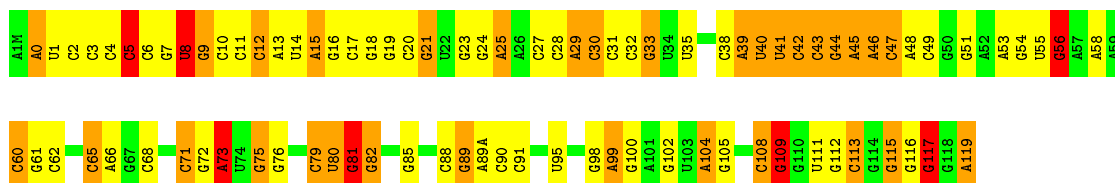




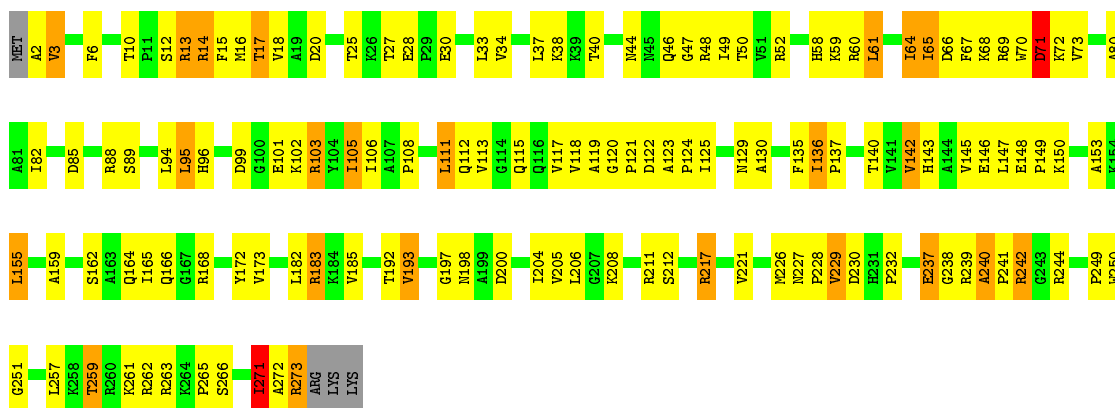
• Molecule 27: 5S ribosomal RNA



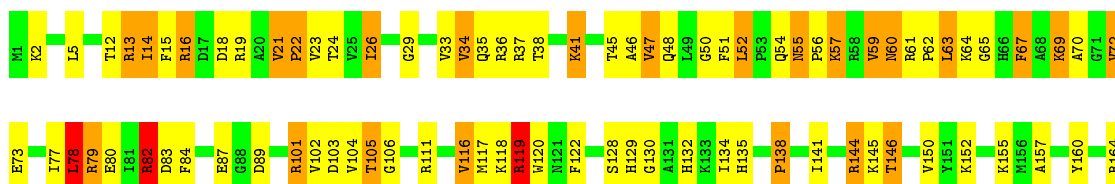
• Molecule 27: 5S ribosomal RNA

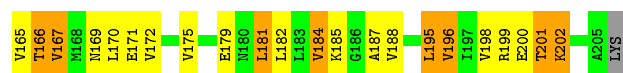


• Molecule 28: 50S ribosomal protein L2



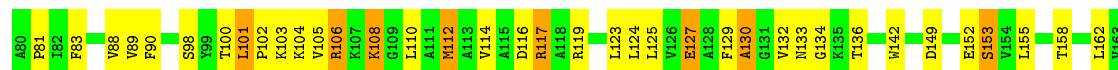
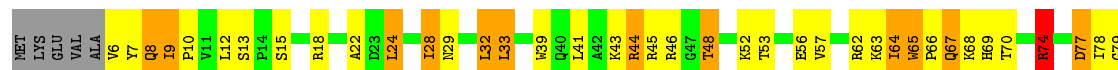
• Molecule 29: 50S ribosomal protein L3





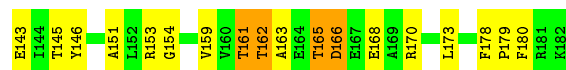
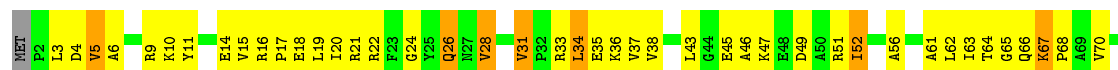
- Molecule 30: 50S ribosomal protein L4

Chain 31: 46% 38% 12%



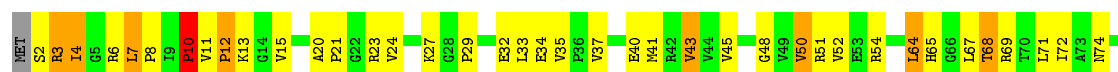
- Molecule 31: 50S ribosomal protein L5

Chain 41: 42% 47% 11%



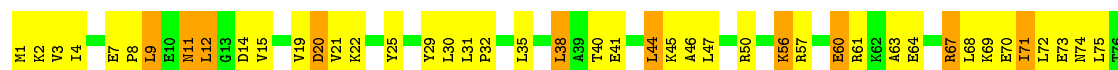
- Molecule 32: 50S ribosomal protein L6

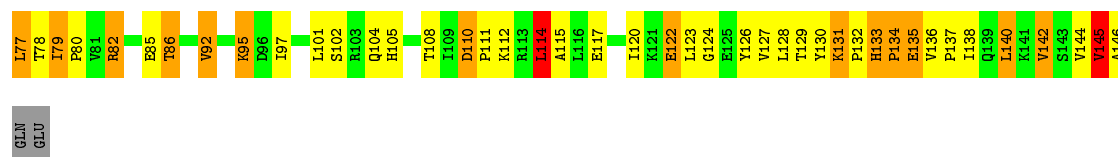
Chain 51: 43% 42% 10%



- Molecule 33: 50S ribosomal protein L9

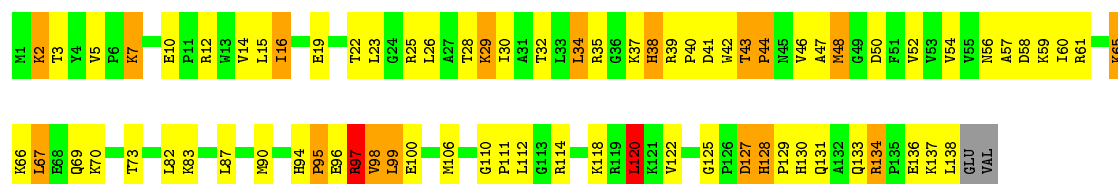
Chain 61: 40% 41% 16%





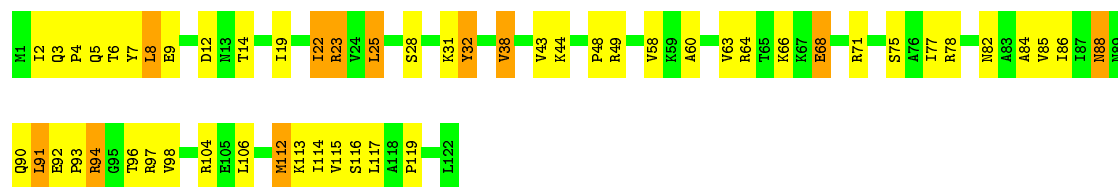
- Molecule 34: 50S ribosomal protein L13

Chain 58: 44% 41% 12% ..



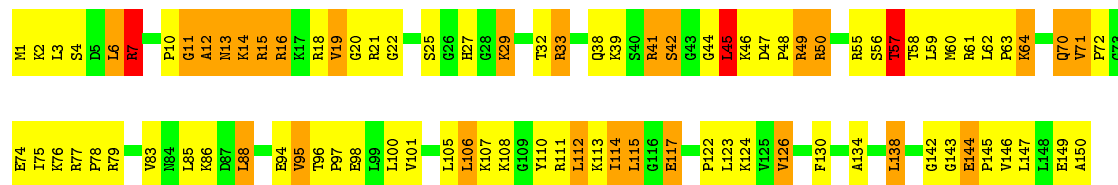
- Molecule 35: 50S ribosomal protein L14

Chain 68: 56% 35% 9%



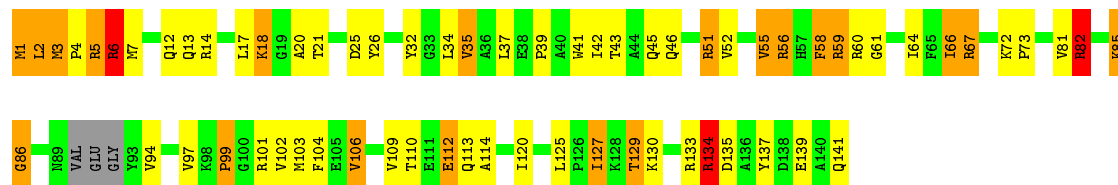
- Molecule 36: 50S ribosomal protein L15

Chain 78: 40% 40% 18% .



- Molecule 37: 50S ribosomal protein L16

Chain 88: 50% 31% 14% ..



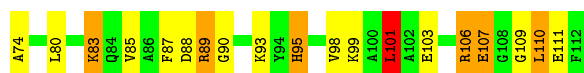
- Molecule 38: 50S ribosomal protein L17

Chain 98: 37% 48% 14% .



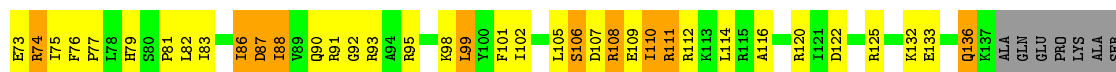
- Molecule 39: 50S ribosomal protein L18

Chain A8: 43% 41% 13% ..



- Molecule 40: 50S ribosomal protein L19

Chain B8: 42% 39% 12% 6% ..



GLN
GLU

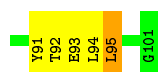
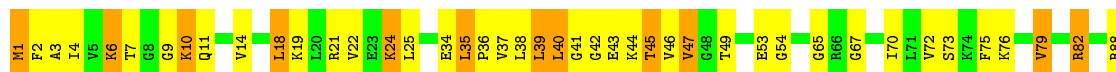
- Molecule 41: 50S ribosomal protein L20

Chain C8: 44% 47% 6% ..



- Molecule 42: 50S ribosomal protein L21

Chain D8: 52% 35% 13%



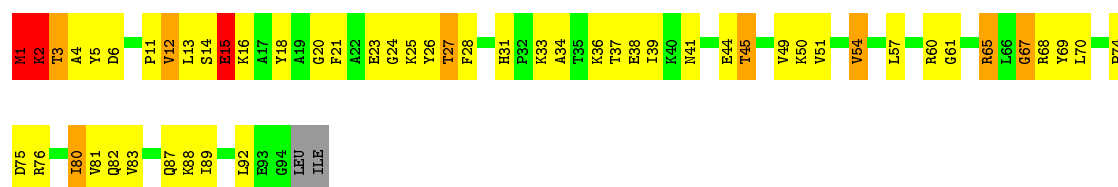
- Molecule 43: 50S ribosomal protein L22

Chain E8: 



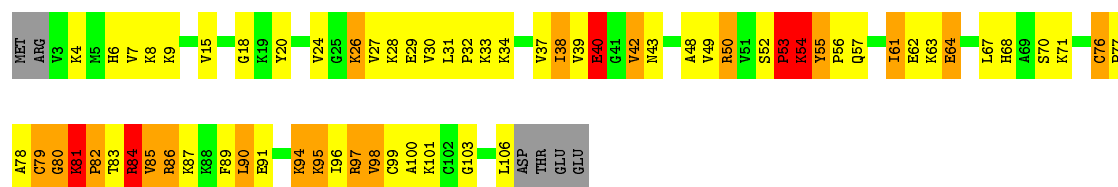
- Molecule 44: 50S ribosomal protein L23

Chain F8: 



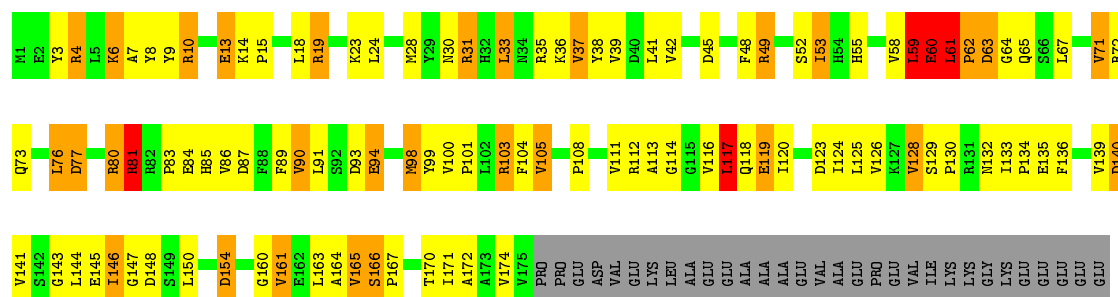
- Molecule 45: 50S ribosomal protein L24

Chain G8: 



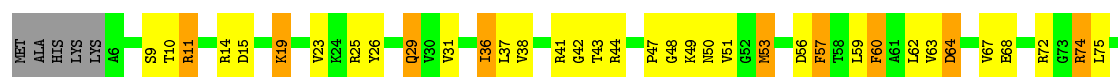
- Molecule 46: 50S ribosomal protein L25

Chain H8: 



- Molecule 47: 50S ribosomal protein L27

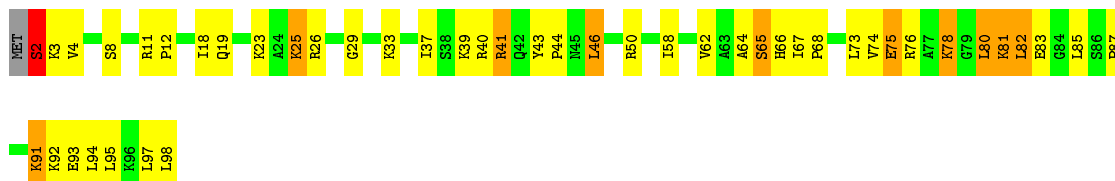
Chain I8: 





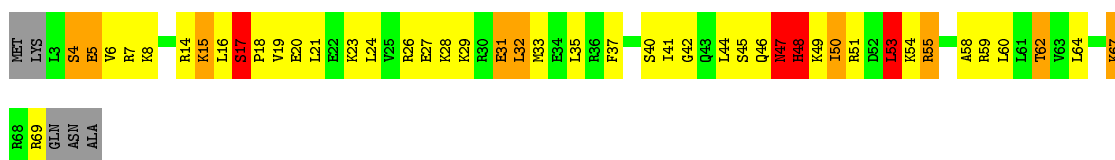
- Molecule 48: 50S ribosomal protein L28

Chain J8:



- Molecule 49: 50S ribosomal protein L29

Chain K8:



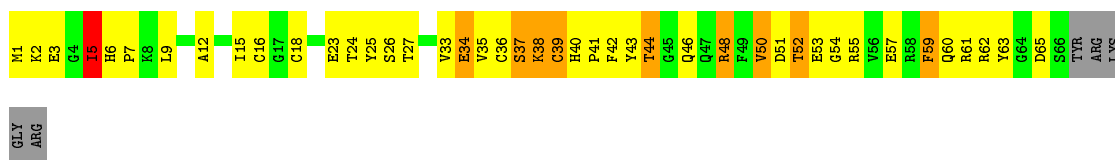
- Molecule 50: 50S ribosomal protein L30

Chain L8:



- Molecule 51: 50S ribosomal protein L31

Chain M8:



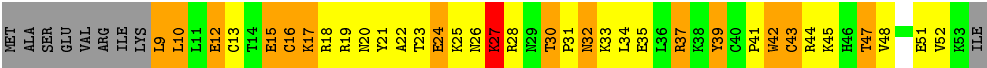
- Molecule 52: 50S ribosomal protein L32

Chain N8:



- Molecule 53: 50S ribosomal protein L33

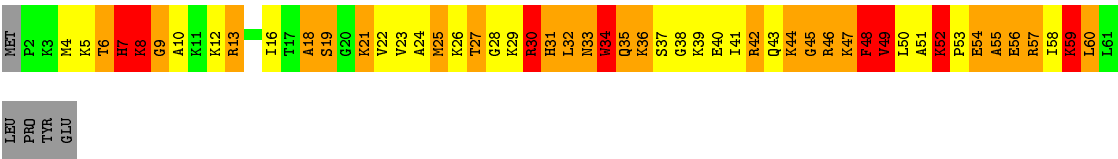
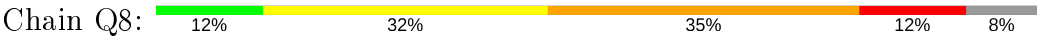
Chain O8:



- Molecule 54: 50S ribosomal protein L34



- Molecule 55: 50S ribosomal protein L35



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	209.40 Å 447.70 Å 619.40 Å 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
$\langle I/\sigma(I) \rangle$ ¹	0.76 (at 3.07 Å)	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	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.27$	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.*

¹Intensities estimated from amplitudes.

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

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: OMC, ZN, MIA, MG, H2U, 4SU, 7MG, PSU

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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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	1H	1332	G	C8-N9-C1'	8.88	138.55	127.00
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	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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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	O4'-C1'-N9	-8.08	101.73	108.20
5	1H	528	A	N3-C4-C5	8.08	132.46	126.80
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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-N3	6.54	127.83	123.90
5	1H	681	G	N1-C2-N2	-6.54	110.31	116.20
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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	C8-N9-C4	-5.90	104.04	106.40
5	14	570	G	C4-N9-C1'	5.90	134.17	126.50
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
5	1H	1133	U	N3-C4-C5	5.14	117.69	114.60
5	1H	1133	U	C2-N3-C4	-5.14	123.91	127.00
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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(°)	Ideal(°)
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

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:2714:G:OP2	58:1H:3679:HOH:O	1.74	1.03
5:1H:987:G:OP2	58:1H:4091: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
5:14:1689: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
5:14:495:G:O6	58:14:3951:HOH:O	1.87	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:HD22	46:H8:76:LEU:H	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
5:1H:1670:C:OP1	58:1H:3678:HOH:O	1.88	0.90
23:AI:5:LEU:HB3	23:AI:10:PHE:HE1	1.37	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
5:1H:801:G:OP2	58:1H:4320:HOH:O	1.92	0.87
12:7E:41:ARG:NH2	12:7E:123:GLU:OE1	2.07	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:2781:A:H5''	5:1H:2782:G:H5'	1.56	0.87
5:1H:429:A:OP2	58:1H:3798:HOH:O	1.90	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: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
5:1H:2292:C:OP1	39:A8:17:ARG:NH2	2.08	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
6:12:12:GLU:HB3	6:12:213:LEU:HD22	1.57	0.85
39:A8:93:LYS:HG2	39:A8:95:HIS:HB2	1.59	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
6:12:131:PRO:HG2	6:12:134:GLU:HB2	1.57	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
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
5:14:1658:C:OP1	58:14:3646:HOH:O	1.94	0.84
5:14:654(I):C:N3	5:14:654(M):C:N4	2.24	0.84
6:12:91:PRO:HG3	6:12:154:LEU:HB2	1.56	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
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:HG3	7:2E:40:ARG:HH11	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
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
2:1L:19:G:N2	2:1L:56:C:N3	2.27	0.83
1:13:737:A:H2'	1:13:738:C:H6	1.42	0.82
5:1H:1676:A:OP2	58:1H:3720:HOH:O	1.95	0.82
5:1H:602:G:HO2'	5:1H:604:G:HO2'	1.24	0.82
5:14:1485:G:H1	5:14:1504:C:H42	1.27	0.82
5:14:531:C:OP1	5:14:561:G:N2	2.12	0.82
1:1G:976:G:N2	1:1G:1362(A):C:OP2	2.12	0.82
5:1H:761:A:OP1	58:1H:3701:HOH:O	1.97	0.82
4:4L:13:A:O2'	4:4L:14:A:OP1	1.97	0.82
5:1H:566:U:OP1	36:78:29:LYS:NZ	2.12	0.82
5:14:458:G:O6	58:14:3932:HOH:O	1.97	0.82
5:1H:2126:A:N6	5:1H:2163:C:O2	2.12	0.82
5:1H:780:G:H21	5:1H:783:A:H62	1.27	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
7:22:141:VAL:HA	7:22:144:SER:HB3	1.60	0.82
9:4E:11:ILE:HG13	9:4E:31:LEU:HD13	1.62	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
5:1H:2243:U:OP1	58:1H:3726:HOH:O	1.97	0.82
24:BI:46:GLU:HB2	24:BI:48:LYS:HG2	1.62	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
5:14:2134:A:O2'	5:14:2159:G:N2	2.13	0.81
5:14:578:A:OP2	58:14:3741:HOH:O	1.96	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
5:1H:1386:C:H2'	5:1H:1387:C:H6	1.45	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
1:13:446:G:H1	1:13:488:C:H42	1.26	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
1:1G:587:G:N2	1:1G:754:C:OP2	2.13	0.81
5:1H:2270:G:OP2	58:1H:4408:HOH:O	1.96	0.81
27:16:100:G:OP1	58:16:320:HOH:O	1.97	0.81
6:12:70:PHE:HB2	6:12:92:TYR:HB2	1.63	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
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
5:1H:1778:U:H2'	5:1H:1784:A:N6	1.96	0.81
5:1H:860:U:H5	5:1H:917:A:C2	1.98	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:C5	5:1H:917:A:H2	1.99	0.81
40:B8:111:ARG:H	40:B8:111:ARG:HD3	1.46	0.81
1:13:601:C:H2'	1:13:602:A:H8	1.45	0.81
1:1G:1256:A:N6	1:1G:1278:U:OP2	2.13	0.81
5:1H:846:C:O3'	58:1H:3781:HOH:O	1.99	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
10:5E:101:ALA:HB2	22:9I:28:GLU:HG2	1.61	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
31:41:82:LEU:HD21	31:41:88:ILE:HD11	1.63	0.80
5:1H:2562:U:H1'	35:68:23:ARG:HH11	1.46	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:2597:G:O3'	58:1H:4808:HOH:O	1.99	0.80
5:1H:946:G:OP2	58:1H:4235: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
1:1G:1126:U:H4'	1:1G:1127:G:C8	2.17	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
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
1:1G:1181:G:N7	1:1G:1182:G:N2	2.30	0.80
5:1H:563:G:OP2	58:1H:3641:HOH:O	1.97	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
6:12:185:ILE:HG22	6:12:199:TYR:HB2	1.65	0.79
1:13:1422:G:H5''	35:68:48:PRO:HB3	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:HH11	9:4E:126:ARG:HG3	1.47	0.79
1:13:353:A:H5'	1:13:353:A:H8	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
5:1H:500:G:N7	58:1H:4519:HOH:O	2.15	0.79
14:1I:48:THR:HA	14:1I:62:HIS:HB3	1.62	0.79
3:2L:8:4SU:O2	3:2L:14:A:N6	2.16	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
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
52:N8:41:PRO:HD2	52:N8:44:THR:HG21	1.65	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
5:1H:428:A:OP1	58:1H:3818:HOH:O	2.01	0.78
27:1J:40:U:O2	27:1J:45:A:N6	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:8E:50:LEU:HD23	13:8E:85:LEU:HD11	1.65	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
38:98:55:ALA:HA	38:98:80:PHE:CE2	2.19	0.78
31:41:179:PRO:HG3	51:M8:38:LYS:HE3	1.65	0.78
1:13:673:G:H2'	1:13:674:G:C8	2.18	0.78
27:16:21:G:H1	27:16:62:C:H42	1.31	0.78
27:1J:46:A:H2'	27:1J:47:C:H6	1.46	0.78
11:6E:155:ARG:O	11:6E:155:ARG:NH2	2.16	0.78
40:B8:54:ARG:HA	40:B8:59:THR:HB	1.65	0.78
5:1H:1314:C:OP1	58:1H:4040:HOH:O	2.01	0.78
5:1H:71:A:C2	44:F8:31:HIS:HE1	1.96	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
7:22:138:VAL:HG23	7:22:151:VAL:HG23	1.66	0.78
31:41:67:LYS:HE2	51:M8:6:HIS:CE1	2.19	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
1:1G:1435:G:H2'	1:1G:1436:U:C6	2.19	0.78
5:1H:1249:U:OP1	58:1H:3969:HOH:O	1.99	0.78
1:13:36:C:OP1	16:3I:123:LYS:NZ	2.16	0.78
5:1H:731:C:OP2	58:1H:3701:HOH:O	2.01	0.78
8:3E:30:LYS:HB2	8:3E:35:ARG:HE	1.48	0.78
5:14:382:G:O6	58:14:4201:HOH:O	2.01	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
5:1H:1156:A:C8	41:C8:51:LYS:HD3	2.19	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: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:138:G:N2	44:F8:44:GLU:OE2	2.16	0.77
5:1H:1900:A:H5'	5:1H:1900:A:H8	1.49	0.77
5:1H:816:C:OP2	58:1H:3952:HOH:O	2.01	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
1:1G:1348:U:H3	1:1G:1374:A:H2	1.31	0.77
5:1H:2318:G:H22	39:A8:2:ALA:N	1.83	0.77
24:BI:69:GLY:O	24:BI:73:HIS:NE2	2.17	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
5:1H:654(E):C:N3	5:1H:654(P):G:N2	2.31	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
5:1H:2502:G:OP2	58:1H:3636:HOH:O	2.03	0.76
26:1K:6:G:H1	26:1K:67:C:H42	1.33	0.76
1:13:1506:U:O2'	58:13:1803:HOH:O	2.01	0.76
1:13:352:C:OP2	58:13:1896:HOH:O	2.03	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
5:1H:2058:A:OP1	58:1H:4395:HOH:O	2.04	0.76
3:2K:16:C:OP2	3:2K:17:C:N4	2.17	0.76
1:1G:407:G:OP1	8:32:115:ARG:NH2	2.18	0.76
1:1G:456:C:H42	1:1G:476:G:H1	1.33	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
1:13:505:G:N7	58:13:1883:HOH:O	2.17	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
2:3L:71:G:HO2'	5:14:1851:U:HO2'	1.32	0.76
1:1G:588:G:H1	1:1G:651:C:H42	1.31	0.76
5:1H:2593:U:O4	58:1H:3691:HOH:O	2.03	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
45:G8:76:CYS:O	45:G8:78:ALA:N	2.19	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
1:1G:803:G:OP1	58:1G:1722:HOH:O	2.04	0.75
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
1:13:1286:A:C8	1:13:1287:A:H4'	2.21	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
3:2L:24:C:H2'	3:2L:25:U:H6	1.50	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
5:14:1327:C:OP2	58:14:3722:HOH:O	2.02	0.75
5:14:193:U:OP2	58:14:3789:HOH:O	2.04	0.75
5:1H:2032:G:H21	29:21:146:THR:HG23	1.50	0.75
2:3L:9:A:H8	2:3L:11:C:H41	1.34	0.75
5:1H:598:G:H5'	36:78:11:GLY:HA3	1.69	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:HG3	17:4I:88:ARG:HH11	1.52	0.75
1:13:201:C:N4	1:13:209:U:O2	2.19	0.75
1:1G:371:G:H1	1:1G:390:C:H42	1.35	0.75
5:1H:999:U:OP2	58:1H:4096:HOH:O	2.03	0.75
7:22:35:GLU:OE2	7:22:59:ARG:NH2	2.20	0.75
1:1G:438:G:H4'	8:32:123:HIS:HD2	1.50	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
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
5:1H:2469:A:H61	5:1H:2481:G:H1'	1.50	0.75
5:1H:2271:G:N7	58:1H:4406:HOH:O	2.19	0.75
5:1H:416:C:N4	5:1H:2407:G:O6	2.19	0.75
2:3L:5:G:H2'	2:3L:6:G:H8	1.50	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
8:32:119:GLN:O	8:32:123:HIS:ND1	2.19	0.74
35:68:2:ILE:HD12	35:68:6:THR:HG21	1.67	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
5:1H:1165:U:H2'	5:1H:1166:C:C6	2.22	0.74
24:BI:71:THR:HG22	24:BI:72:LEU:H	1.50	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
5:14:2373:G:N2	5:14:2380:C:O2	2.17	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
5:1H:2199:A:H5'	5:1H:2205:C:OP2	1.86	0.74
5:1H:654(D):G:N2	5:1H:654(R):C:N3	2.35	0.74
15:2I:21:ILE:HG12	15:2I:30:VAL:HG12	1.69	0.74
30:31:8:GLN:CD	30:31:8:GLN:H	1.90	0.74
2:3L:5:G:H2'	2:3L:6:G:C8	2.23	0.74
24:BI:53:LEU:HD23	24:BI:100:ILE:HG22	1.70	0.74
1:13:737:A:H2'	1:13:738:C:C6	2.22	0.74
5:14:2689:U:OP2	5:14:2719:G:N2	2.20	0.74
1:1G:1157:A:H61	1:1G:1178:G:H21	1.31	0.74
1:1G:458:C:N3	1:1G:474:G:N2	2.36	0.74
5:1H:1900:A:H5'	5:1H:1900:A:C8	2.22	0.74
2:3L:20:H2U:O2'	2:3L:21:A:O5'	2.04	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
5:14:450:G:O6	58:14:3808:HOH:O	2.04	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:606:U:OP2	30:31:104:LYS:NZ	2.20	0.74
2:3K:10:G:H22	2:3K:25:C:H42	1.33	0.74
2:3L:6:G:H22	2:3L:67:C:H2'	1.52	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
5:14:2134:A:H62	5:14:2157:G:H1'	1.52	0.74
1:1G:1004:A:OP1	1:1G:1024:G:N1	2.20	0.74
2:3L:72:C:H3'	2:3L:73:A:H5''	1.68	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
6:12:18:GLY:O	6:12:204:ASN:ND2	2.21	0.74
5:14:1729:A:H2'	5:14:1731:G:H22	1.52	0.74
1:1G:1014:A:H2'	1:1G:1015:A:C8	2.23	0.74
1:1G:975:A:H4'	1:1G:976:G:H5''	1.69	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
9:4E:91:LEU:HD12	9:4E:120:THR:HG22	1.70	0.74
4:4L:18:G:O2'	1:1G:1401:G:OP1	2.05	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
1:1G:578:C:OP1	58:1G:1725:HOH:O	2.05	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
14:1I:6:ILE:HG22	14:1I:98:ILE:HG13	1.69	0.73
1:1G:1028:C:H42	1:1G:1033:G:H1	1.36	0.73
1:1G:156:G:N2	1:1G:165:C:O2	2.20	0.73
2:1L:51:U:H3	2:1L:63:G:H1	1.33	0.73
8:32:173:TRP:CZ3	8:32:193:ASP:HB3	2.23	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
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
16:3I:47:LYS:HA	16:3I:49:ASN:H	1.52	0.73
46:H8:129:SER:H	46:H8:161:VAL:HG11	1.53	0.73
5:1H:2249:U:O4	58:1H:3743:HOH:O	2.04	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

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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
1:1G:1411:C:H2'	1:1G:1412:C:H6	1.54	0.73
5:1H:1496:A:H8	5:1H:1577:C:HO2'	1.36	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: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
5:14:2228:G:O6	58:14:4163:HOH:O	2.03	0.73
5:14:5:A:H2'	5:14:6:A:H8	1.54	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
5:1H:1315:C:OP2	58:1H:4040:HOH:O	2.06	0.73
5:1H:732:C:OP2	58:1H:4186:HOH:O	2.07	0.73
29:21:38:THR:HG23	29:21:41:LYS:H	1.54	0.73
8:32:173:TRP:CD1	8:32:174:LEU:HG	2.24	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
1:13:1129:C:N4	1:13:1139:G:H1	1.87	0.73
5:14:2720:U:H3	5:14:2873:A:H2	1.36	0.73
5:14:453:C:OP1	58:14:3810:HOH:O	2.06	0.73
1:1G:590:C:O2	1:1G:649:G:N2	2.20	0.73
5:1H:1021:A:H8	5:1H:1022:G:H5''	1.54	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
29:21:82:ARG:O	29:21:84:PHE:N	2.21	0.73
1:13:1297:C:OP1	17:4I:13:LYS:NZ	2.22	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
1:1G:1106:G:H5''	7:22:172:ARG:HG2	1.71	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
5:1H:878:A:N6	5:1H:899:A:O2'	2.22	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
1:13:1218:C:H2'	1:13:1219:U:C6	2.23	0.72
1:13:983:A:OP1	18:5I:3:ARG:NH2	2.22	0.72
5:1H:1388:G:H2'	5:1H:1389:G:H8	1.54	0.72
12:7E:42:GLU:HG3	12:7E:109:ILE:HD12	1.71	0.72
6:12:19:HIS:HE1	6:12:206:ASP:HB2	1.54	0.72
5:14:2642:G:N2	5:14:2772:C:O2	2.19	0.72
1:1G:56:U:H2'	1:1G:57:G:C8	2.25	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
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
7:22:76:VAL:HG21	7:22:103:VAL:HG11	1.71	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
1:13:1177:G:OP1	1:13:1177:G:H4'	1.89	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
14:1I:40:LEU:HB2	14:1I:69:ASN:HB2	1.69	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
5:1H:1327:C:OP2	58:1H:3650:HOH:O	2.06	0.72
15:2I:99:GLN:HA	15:2I:105:VAL:HG11	1.69	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
5:1H:1803:A:O2'	28:11:259:THR:HG21	1.90	0.72
5:14:39:C:H2'	5:14:40:C:C6	2.25	0.72
1:1G:979:C:H3'	1:1G:980:C:H5''	1.72	0.72
5:1H:1601:G:N7	58:1H:4122:HOH:O	2.22	0.72
12:7E:87:SER:HB2	12:7E:93:VAL:HB	1.72	0.72
28:11:10:THR:OG1	28:11:13:ARG:HB2	1.90	0.72
1:13:1226:C:O2'	17:4I:111:LYS:NZ	2.23	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
1:1G:631:G:H3'	1:1G:632:A:H8	1.55	0.71
5:1H:1516:U:H2'	5:1H:1517:G:H8	1.55	0.71
13:8E:26:VAL:HG13	13:8E:61:ALA:HB3	1.70	0.71
31:41:65:GLY:HA2	51:M8:7:PRO:HG2	1.72	0.71
6:12:75:LYS:HA	6:12:78:GLN:HB2	1.72	0.71
1:1G:1513:A:H2'	1:1G:1514:C:C6	2.25	0.71
1:1G:895:G:H1	1:1G:904:C:H42	1.38	0.71
5:1H:1056:G:H21	5:1H:1103:A:H62	1.38	0.71
23:AI:5:LEU:HD13	23:AI:10:PHE:HD1	1.55	0.71
1:1G:1157:A:N6	1:1G:1178:G:H21	1.88	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
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
28:11:182:LEU:H	28:11:272:ALA:HB3	1.55	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
5:1H:1253:A:C8	58:1H:3734:HOH:O	2.43	0.71
1:13:963:G:N3	14:1I:55:LYS:NZ	2.38	0.71
30:31:179:GLU:OE1	30:31:179:GLU:N	2.23	0.71
2:3K:5:G:N2	2:3K:68:C:N3	2.38	0.71
19:6I:17:ARG:HD3	19:6I:26:GLU:HG3	1.71	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
5:14:2645:G:H3'	5:14:2646:C:H5'	1.72	0.71
1:1G:560:U:O2'	1:1G:561:U:OP2	2.07	0.71
2:3L:34:G:N7	1:1G:1382:C:O2'	2.21	0.71
2:3L:6:G:N2	2:3L:67:C:H2'	2.06	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
1:13:1256: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
1:1G:243:A:H4'	1:1G:244:U:O5'	1.90	0.71
5:1H:2636:U:OP1	29:21:79:ARG:HA	1.89	0.71
8:32:26:CYS:HA	8:32:31:CYS:CB	2.21	0.71
8:3E:90:GLY:HA3	8:3E:204:ILE:HD11	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:67:THR:HG21	6:12:155:LEU:HG	1.73	0.71
1:13:1497:G:H2'	1:13:1498:U:H5'	1.72	0.71
1:13:877:C:OP1	12:7E:88:LYS:NZ	2.23	0.71
5:14:1022:G:O2'	5:14:1023:U:OP2	2.08	0.71
5:14:248:G:OP1	58:14:4218:HOH:O	2.08	0.71
1:1G:666:G:OP2	1:1G:725:G:N2	2.23	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:O	55:Q8:7:HIS:ND1	2.22	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
1:1G:1423:G:H2'	1:1G:1424:C:H6	1.56	0.70
5:1H:2657:A:O3'	32:51:160:LYS:NZ	2.24	0.70
1:13:504:C:OP1	58:13:1881:HOH:O	2.07	0.70
5:1H:392:C:OP2	58:1H:3773:HOH:O	2.08	0.70
11:6E:94:ARG:O	11:6E:97:GLN:HB3	1.91	0.70
5:1H:2308:G:N1	5:1H:2311:A:H2	1.84	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
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
1:1G:1411:C:H2'	1:1G:1412:C:C6	2.27	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
1:13:1321: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
5:14:1717: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
5:14:387:U:OP1	58:14:4217:HOH:O	2.08	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
5:1H:862:G:OP2	58:1H:4089:HOH:O	2.08	0.70
2:3K:20:H2U:H5''	2:3K:20:H2U:H61	1.72	0.70
9:4E:100:VAL:HG22	9:4E:118:ILE:HG22	1.73	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
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
23:AI:41:VAL:HG21	23:AI:67:VAL:HG12	1.74	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
1:1G:938:A:N3	1:1G:1376:U:O2'	2.23	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
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
5:14:1970: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:HD2	55:Q8:59:LYS:H	1.57	0.69
6:12:137:ARG:NH2	6:12:141:GLU:OE1	2.25	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
1:1G:1300:G:O2'	1:1G:1301:U:O5'	2.10	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
1:13:1423:G:OP1	35:68:49:ARG:NH2	2.26	0.69
38:98:12:ARG:HD3	38:98:16:HIS:CG	2.26	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
1:1G:1069:C:O2'	1:1G:1192:C:O2	2.09	0.69
1:1G:785:G:N7	58:1G:1802:HOH:O	2.25	0.69
5:1H:338:G:OP2	58:1H:4286:HOH:O	2.09	0.69
8:32:14:ARG:HG3	8:32:14:ARG:HH11	1.57	0.69
8:3E:160:GLN:O	8:3E:160:GLN:NE2	2.25	0.69
46:H8:31:ARG:NH1	46:H8:94:GLU:OE2	2.25	0.69
1:13:209:U:H5'	1:13:210:U:OP2	1.92	0.69
1:1G:1294:G:H2'	1:1G:1295:G:H8	1.57	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
17:4I:23:TYR:HD2	17:4I:67:GLU:HA	1.58	0.69
5:14:848:G:H2'	5:14:849:A:C8	2.26	0.69
1:1G:192:U:H2'	1:1G:193:C:H6	1.57	0.69
5:1H:1349:A:OP1	58:1H:4251:HOH:O	2.10	0.69
5:1H:256:A:OP2	58:1H:4653:HOH:O	2.11	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
1:13:1122: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
5:1H:270(E):G:H1	5:1H:270(U):C:H42	1.39	0.69
43:E8:70:TYR:H	43:E8:70:TYR:HD1	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
9:4E:142:LEU:O	9:4E:143:ARG:NH1	2.25	0.69
1:13:1062:U:H2'	1:13:1063:C:C6	2.28	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
5:14:395:U:H2'	5:14:396:G:N7	2.08	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: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:639:U:O2'	5:1H:640:C:H5'	1.92	0.69
7:22:70:VAL:HG12	7:22:72:LYS:H	1.58	0.69
55:Q8:54:GLU:O	55:Q8:56:GLU:N	2.25	0.69
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
5:1H:646:A:H2'	5:1H:647:G:O4'	1.94	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
6:12:5:ILE:HA	6:12:221:LEU:HD21	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
5:14:2343:C:O2'	5:14:2373:G:O2'	2.05	0.68
5:14:34:C:O2'	5:14:35:G:OP1	2.11	0.68
1:1G:411:A:H62	1:1G:413:G:H21	1.41	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
17:4I:23:TYR:HB3	17:4I:67:GLU:HB2	1.74	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
5:14:323:G:O2'	5:14:1205:U:N3	2.25	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
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
13:8E:46:ALA:HB2	13:8E:74:ILE:HG23	1.76	0.68
1:13:1305:G:N2	1:13:1331:G:H2'	2.09	0.68
1:13:660:G:H2'	1:13:661:G:H8	1.58	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
1:13:738:C:OP1	10:5E:2:ARG:NH1	2.26	0.68
46:H8:63:ASP:HB2	46:H8:65:GLN:HG3	1.74	0.68
53:O8:32:ASN:N	53:O8:32:ASN:OD1	2.26	0.68
5:1H:1354:A:H4'	28:11:38:LYS:HE3	1.74	0.68
6:1E:11:LEU:HD13	6:1E:217:ARG:HH12	1.59	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
5:1H:1331:A:O3'	58:1H:4043:HOH:O	2.10	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
7:22:182:ILE:HG22	7:22:203:PHE:HA	1.73	0.68
35:68:88:ASN:ND2	35:68:92:GLU:H	1.92	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
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
1:1G:352:C:O5'	58:1G:1741:HOH:O	2.11	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
6:1E:185:ILE:HG22	6:1E:199:TYR:HB2	1.76	0.68
1:1G:1279:A:O2'	1:1G:1282:C:N4	2.27	0.68
1:1G:452:A:O2'	1:1G:453:A:O4'	2.08	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
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
27:1J:11:C:OP2	27:1J:12:C:N4	2.20	0.68
7:22:25:GLY:H	7:22:28:GLN:HE22	1.42	0.68
37:88:5:ARG:HD3	37:88:5:ARG:N	2.09	0.68
13:8E:121:ARG:NH1	13:8E:122:ALA:O	2.26	0.68
52:N8:42:PRO:HB2	52:N8:43:HIS:ND1	2.08	0.68
5:14:1048:A:N6	5:14:1112:G:O2'	2.21	0.68
5:1H:2127:G:H22	5:1H:2162:G:H1'	1.58	0.68
5:1H:459:U:H5''	54:P8:40:TRP:CD2	2.28	0.68
1:13:376:G:O3'	20:7I:5:ARG:NH1	2.25	0.68
1:13:1023:G:H3'	1:13:1024:G:H5''	1.76	0.68
5:14:2392:A:H2	5:14:2424:C:H42	1.41	0.68
5:14:273(C):C:H42	5:14:363(C):G:H1	1.39	0.68
1:1G:512:U:H2'	1:1G:513:C:H6	1.58	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
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
5:14:881:G:O6	5:14:882:G:N2	2.27	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
2:3K:5:G:H22	2:3K:68:C:H42	1.42	0.67
13:8E:125:TYR:HD1	13:8E:126:SER:H	1.43	0.67
1:1G:1154:G:H2'	1:1G:1155:G:C8	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:957:U:H1'	1:1G:960:U:C5	2.29	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
5:1H:839:U:OP2	58:1H:3956:HOH:O	2.11	0.67
22:9I:26:LEU:HD22	22:9I:42:ARG:HH22	1.59	0.67
1:13:1124:G:O2'	1:13:1145:C:N4	2.27	0.67
1:13:1118:C:H1'	1:13:1179:A:C4	2.29	0.67
1:13:786:G:N7	58:13:2022:HOH:O	2.28	0.67
1:1G:1095:U:P	1:1G:1108:G:H1	2.17	0.67
5:1H:1359:A:H2'	5:1H:1360:A:H5'	1.76	0.67
31:4I:37:VAL:HG21	31:4I:103:LEU:HD21	1.76	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
5:1H:586:A:OP2	58:1H:3968:HOH:O	2.12	0.67
5:1H:624:C:OP1	58:1H:4469:HOH:O	2.13	0.67
5:1H:599:G:N2	5:1H:658:C:O2	2.19	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
8:3E:106:TYR:HE2	8:3E:107:ARG:HH11	1.41	0.67
5:14:1962:C:O2'	5:14:1964:G:OP2	2.13	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:N3	5:1H:2062:A:H2'	2.10	0.67
16:3I:66:VAL:HG22	16:3I:67:THR:H	1.59	0.67
9:4E:10:MET:HB2	9:4E:32:VAL:HG22	1.77	0.67
1:1G:512:U:H2'	1:1G:513:C:C6	2.29	0.67
5:1H:1406:U:H2'	5:1H:1407:C:C6	2.29	0.67
5:1H:176:G:O2'	5:1H:177:G:H5'	1.95	0.67
8:32:55:ALA:O	8:32:59:ARG:HG2	1.94	0.67
31:4I:35:GLU:HG3	31:4I:36:LYS:HB2	1.77	0.67
45:G8:97:ARG:NH1	45:G8:103:GLY:O	2.28	0.67
5:1H:1798:U:C5'	28:11:259:THR:HG22	2.25	0.67
5:14:270(W):G:N7	58:14:4350:HOH:O	2.28	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
5:1H:229:A:H4'	5:1H:230:U:H5'	1.76	0.67
5:1H:2445:G:OP1	30:31:74:ARG:NH2	2.28	0.67
9:4E:8:GLU:OE1	9:4E:63:ARG:NH2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:6I:6:GLU:HA	19:6I:9:GLN:HB2	1.76	0.67
36:78:114:ILE:HD11	36:78:130:PHE:HD2	1.60	0.67
39:A8:89:ARG:HG2	39:A8:89:ARG:O	1.93	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:H	29:21:135:HIS:CD2	2.11	0.67
31:41:77:ILE:HG22	31:41:82:LEU:HD12	1.76	0.67
1:13:1503:A:N3	4:4K:13:A:N6	2.43	0.67
1:13:674:G:H2'	1:13:675:A:H8	1.58	0.67
5:14:2037:G:H2'	5:14:2038:G:C8	2.30	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
5:1H:879:G:O6	5:1H:898:C:N4	2.19	0.67
1:13:1192:C:OP2	7:2E:4:LYS:NZ	2.28	0.67
34:58:96:GLU:O	34:58:98:VAL:HG12	1.95	0.67
33:61:12:LEU:HG	33:61:19:VAL:HG21	1.77	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
6:12:178:ARG:NH1	6:12:196:LEU:O	2.27	0.67
1:13:413:G:H22	1:13:428:G:H1'	1.60	0.67
5:14:1997:G:OP2	58:14:3650:HOH:O	2.11	0.67
5:14:450:G:O6	58:14:3813:HOH:O	2.12	0.67
1:1G:978:A:O2'	1:1G:1322:C:N3	2.28	0.67
1:1G:316:G:OP2	1:1G:351:G:O2'	2.11	0.67
15:2I:12:ARG:HG2	15:2I:14:VAL:HG13	1.76	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
1:1G:1213:A:N6	1:1G:1215:G:N3	2.43	0.66
5:1H:1525:G:H2'	5:1H:1526:G:C8	2.25	0.66
5:1H:330:A:O2'	5:1H:331:A:H8	1.77	0.66
5:1H:33:U:H4'	5:1H:34:C:OP1	1.93	0.66
11:6E:5:ARG:CZ	11:6E:7:ALA:HA	2.24	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
1:13:448: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
5:1H:2212:A:H1'	5:1H:2215:G:C5	2.30	0.66
5:1H:248:G:H5'	5:1H:250:G:N7	2.09	0.66
5:1H:2632:A:HO2'	5:1H:2811:G:HO2'	1.38	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
8:32:199:ASN:HB3	8:32:202:LEU:HG	1.76	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
5:14:987:G:O2'	5:14:1000:A:N3	2.23	0.66
1:1G:1469:G:O6	58:1G:1800:HOH:O	2.12	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
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:1072:G:H2'	1:1G:1073:U:H6	1.59	0.66
1:1G:572:A:OP1	58:1G:1743:HOH:O	2.14	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
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
5:14:731:C:OP1	58:14:3830:HOH:O	2.14	0.66
5:1H:2287:A:H62	5:1H:2344:U:H3	1.40	0.66
11:6E:111:ARG:NH1	11:6E:113:GLU:OE2	2.29	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
6:12:92:TYR:CD1	6:12:151:GLY:HA3	2.31	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
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
16:3I:49:ASN:ND2	16:3I:92:ASP:OD2	2.26	0.66
1:13:1346:A:H5''	13:8E:120:ARG:NH1	2.10	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
5:14:1537:C:H2'	5:14:1538:G:C8	2.31	0.66
5:14:279:C:H42	5:14:361:G:H1	1.41	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
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
33:6I:110:ASP:HB2	33:6I:112:LYS:H	1.61	0.66
1:13:411:A:C4	1:13:413:G:H1'	2.30	0.66
6:1E:126:GLU:HA	6:1E:129:GLU:HG2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1E:21:ARG:HB2	6:1E:39:ILE:HG12	1.78	0.66
1:1G:179:A:H2'	1:1G:180:U:C6	2.30	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
8:32:31:CYS:C	8:32:33:MET:H	1.99	0.66
53:O8:10:LEU:HD23	55:Q8:32:LEU:HD22	1.76	0.66
1:13:591:U:H2'	1:13:592:G:H8	1.61	0.66
1:13:74:C:H42	1:13:96:G:H1	1.42	0.66
5:14:2291:U:H5''	5:14:2380:C:O2'	1.96	0.66
5:14:491:G:H2'	5:14:492:A:C8	2.31	0.66
5:1H:957:A:N1	5:1H:2458:G:H4'	2.11	0.66
31:41:64:THR:HG22	31:41:66:GLN:N	2.10	0.66
5:1H:2359:C:H4'	55:Q8:49:VAL:HG11	1.76	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
5:14:2239:G:OP2	58:14:3510:HOH:O	2.14	0.66
5:14:738:G:O3'	58:14:3825:HOH:O	2.13	0.66
1:1G:1278:U:H5'	1:1G:1279:A:H5'	1.77	0.66
5:1H:1278:A:N7	58:1H:4756:HOH:O	2.27	0.66
5:1H:587:C:OP2	36:78:21:ARG:NH2	2.28	0.66
40:B8:16:ARG:HE	40:B8:19:LEU:HD11	1.61	0.66
1:13:1194:U:H2'	1:13:1195:C:C6	2.30	0.65
1:13:504:C:OP1	58:13:1885:HOH:O	2.14	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
34:58:56:ASN:N	34:58:125:GLY:O	2.15	0.65
34:58:15:LEU:HD12	34:58:136:GLU:HG2	1.77	0.65
5:1H:958:U:OP2	37:88:14:ARG:NH1	2.29	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
1:1G:793:U:OP1	58:1G:1801:HOH:O	2.13	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
8:3E:30:LYS:CB	8:3E:35:ARG:HE	2.09	0.65
37:88:51:ARG:NH1	37:88:52:VAL:HG23	2.11	0.65
5:14:1058:U:H2'	5:14:1059:G:C8	2.32	0.65
5:14:2273:A:H2'	5:14:2274:A:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:958:A:N3	1:1G:985:C:O2'	2.29	0.65
5:1H:2127:G:H1	5:1H:2162:G:H1'	1.61	0.65
5:1H:298:G:N7	58:1H:4289:HOH:O	2.29	0.65
2:3L:37:MIA:S10	2:3L:38:A:H1'	2.37	0.65
52:N8:42:PRO:O	52:N8:44:THR:HB	1.97	0.65
1:13:1301:U:O2'	1:13:1302:U:H5'	1.96	0.65
1:13:17:U:H2'	1:13:18:C:C6	2.32	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
1:1G:971:G:N2	1:1G:1363:A:OP2	2.27	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
5:1H:265:A:C8	5:1H:266:G:H1'	2.32	0.65
1:13:963:G:H21	14:1I:55:LYS:HE2	1.62	0.65
8:3E:31:CYS:SG	8:3E:32:ALA:N	2.68	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
1:1G:1131:G:H2'	1:1G:1132:C:H6	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
1:13:390:C:O3'	20:7I:28:ARG:NH2	2.29	0.65
5:14:403:U:H4'	5:14:404:C:H5'	1.79	0.65
1:13:624:C:O3'	20:7I:10:GLY:HA2	1.97	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
1:1G:1274:G:H2'	1:1G:1275:A:H8	1.61	0.65
1:13:1446:A:O2'	40:B8:125:ARG:NH2	2.30	0.65
55:Q8:46:ARG:CZ	55:Q8:46:ARG:HA	2.27	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
5:1H:761:A:OP1	58:1H:3698:HOH:O	2.13	0.65
6:12:145:LEU:O	6:12:149:LEU:HB2	1.97	0.65
1:13:1139:G:H4'	1:13:1140:C:H5'	1.77	0.65
1:13:637:G:H2'	1:13:638:G:H8	1.62	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2318:G:H5'	5:14:2319:G:OP2	1.97	0.65
5:14:824:A:H1'	5:14:2358:G:N7	2.12	0.65
6:1E:88:ALA:HB2	6:1E:219:VAL:HG13	1.77	0.65
1:1G:1324:A:H4'	1:1G:1362:C:H4'	1.77	0.65
5:1H:2855:C:H2'	5:1H:2856:C:H6	1.62	0.65
5:1H:2635:C:H5''	29:21:78:LEU:HA	1.79	0.65
8:32:106:TYR:HE1	8:32:112:VAL:O	1.80	0.65
1:13:1368:G:OP2	13:8E:112:LYS:HD2	1.97	0.65
28:11:3:VAL:HG13	28:11:17:THR:HG23	1.80	0.64
1:13:1149:C:H2'	1:13:1150:U:H6	1.63	0.64
1:1G:1347:G:O2'	1:1G:1373:G:O6	2.13	0.64
1:1G:359:U:H2'	1:1G:360:A:C8	2.33	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
16:3I:24:VAL:HB	16:3I:27:LEU:HD12	1.78	0.64
37:88:51:ARG:HH11	37:88:51:ARG:HB3	1.60	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
1:1G:532:A:H2	7:22:156:ARG:HH22	1.43	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
5:1H:1228:G:OP2	41:C8:16:LYS:NZ	2.30	0.64
55:Q8:34:TRP:C	55:Q8:34:TRP:CD1	2.71	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: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
5:1H:761:A:OP2	58:1H:3882:HOH:O	2.15	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
5:1H:1324:G:N7	58:1H:3647:HOH:O	2.29	0.64
27:1J:80:U:H2'	27:1J:81:G:N2	2.09	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
19:6I:7:GLU:OE1	19:6I:38:ARG:NH2	2.30	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
1:1G:680:C:H42	1:1G:710:G:H1	1.44	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
5:1H:287:C:H2'	5:1H:288:C:H6	1.62	0.64
31:4I:4:ASP:OD1	31:4I:9:ARG:NH1	2.30	0.64
13:8E:9:ARG:HD2	13:8E:14:VAL:HG13	1.79	0.64
49:K8:14:ARG:HB3	49:K8:15:LYS:HE3	1.79	0.64
1:13:584:G:N7	58:13:1920:HOH:O	2.30	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
1:1G:1151:A:O2'	1:1G:1152:A:O5'	2.16	0.64
1:1G:433:C:H2'	1:1G:434:U:H6	1.62	0.64
5:1H:1388:G:H2'	5:1H:1389:G:C8	2.32	0.64
5:1H:226:G:H21	5:1H:228:A:H2	1.46	0.64
2:3L:52:G:N2	2:3L:63:G:N7	2.46	0.64
11:6E:18:TYR:HB3	11:6E:59:LEU:HD12	1.79	0.64
55:Q8:45:GLY:N	55:Q8:46:ARG:O	2.31	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
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
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
5:14:1043:C:H42	5:14:1112:G:H1	1.45	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
1:1G:1258:G:H2'	1:1G:1259:C:H6	1.63	0.64
1:1G:411:A:C5	1:1G:413:G:H1'	2.33	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
31:4I:97:ASP:O	31:4I: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
1:13:1133: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)
5:14:1060: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
5:14:749:C:OP2	58:14:3863:HOH:O	2.15	0.64
39:A8:28:VAL:HG11	39:A8:98:VAL:HG13	1.80	0.64
23:AI:41:VAL:HG11	23:AI:67:VAL:HA	1.78	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
1:1G:1286:A:C8	1:1G:1287:A:H4'	2.32	0.63
5:1H:1496:A:H8	5:1H:1577:C:O2'	1.81	0.63
5:1H:400:G:O6	58:1H:4154:HOH:O	2.10	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
1:13:728: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
1:1G:1002:G:H2'	1:1G:1003:G:H8	1.63	0.63
1:1G:539:A:H2'	1:1G:540:G:C8	2.34	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
3:2K:62:C:H2'	3:2K:63:C:H6	1.63	0.63
30:31:9:ILE:HD12	30:31:125:LEU:HG	1.80	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
31:41:112:PRO:HB3	51:M8:37:SER:H	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
1:1G:985:C:N3	1:1G:1220:G:N2	2.44	0.63
5:1H:900:A:H3'	5:1H:901:A:H8	1.63	0.63
3:2K:8:4SU:H6	3:2K:8:4SU:O5'	1.99	0.63
16:3I:83:VAL:HG21	16:3I:100:ILE:HD13	1.79	0.63
6:12:162:ILE:O	6:12:185:ILE:HG12	1.99	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
1:13:1000:A:H2'	1:13:1001:G:C8	2.33	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

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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
27:16:40:U:H1'	27:16:45:A:N6	2.13	0.63
5:1H:1022:G:N2	5:1H:1142(A):A:N1	2.46	0.63
5:1H:746:A:C6	5:1H:2611:U:H5''	2.33	0.63
5:1H:634:C:H2'	5:1H:635:C:C6	2.33	0.63
20:7I:26:ARG:HH21	20:7I:31:LYS:HD3	1.62	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
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
5:1H:2053:G:OP2	58:1H:3853:HOH:O	2.15	0.63
5:1H:639:U:H2'	5:1H:640:C:C6	2.33	0.63
5:1H:85:G:OP2	45:G8:9:LYS:HB2	1.98	0.63
7:22:22:TRP:HB3	7:22:59:ARG:HB2	1.79	0.63
46:H8:9:TYR:CE1	46:H8:35:ARG:HD3	2.33	0.63
28:11:68:LYS:HB3	28:11:70:TRP:CH2	2.34	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
5:14:479:A:N3	5:14:481:G:H5''	2.13	0.63
1:1G:1268:A:H2'	1:1G:1269:A:C8	2.34	0.63
1:1G:54:C:N4	1:1G:353:A:OP2	2.30	0.63
5:1H:1794:U:H2'	5:1H:1795:C:H6	1.61	0.63
2:1L:10:G:H2'	2:1L:11:C:C6	2.34	0.63
1:1G:542:G:OP1	8:32:10:ARG:NH2	2.32	0.63
23:AI:40:ILE:HD11	23:AI:62:ILE:HD13	1.80	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
1:13:1306: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
30:31:6:VAL:HG21	30:31:119:ARG:HB2	1.79	0.63
8:3E:162:LEU:O	8:3E:165:MET:HB3	1.99	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
22:9I:56:THR:HB	22:9I:58:LEU:HD13	1.81	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
1:13:1224:G:C6	1:13:1322:C:H1'	2.34	0.63
1:13:412:A:H4'	1:13:413:G:O5'	1.98	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)
5:1H:1189:A:OP2	58:1H:3945:HOH:O	2.15	0.63
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
44:F8:3:THR:HA	44:F8:6:ASP:OD2	1.99	0.63
27:16:44:G:H1'	27:16:47:C:H42	1.63	0.62
25:1F:9:ARG:O	25:1F:13:ILE:HG13	1.99	0.62
1:1G:976:G:H5'	1:1G:1358:U:O2'	1.99	0.62
1:1G:664:G:H22	1:1G:741:G:H1	1.47	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
7:2E:40:ARG:HG3	7:2E:40:ARG:NH1	2.11	0.62
33:61:92:VAL:HG13	33:61:120:ILE:HG23	1.81	0.62
37:88:112:GLU:CD	37:88:112:GLU:H	2.01	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
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
7:2E:32:LEU:HD13	7:2E:59:ARG:HH11	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
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
45:G8:49:VAL:HG21	45:G8:55:TYR:CE2	2.34	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
1:1G:464:G:O6	1:1G:466:C:H5'	1.99	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
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
37:88:135:ASP:HB3	37:88:137:TYR:H	1.62	0.62
1:13:1288:A:N1	1:13:1371:G:H1'	2.15	0.62
1:13:474:G:H2'	1:13:475:G:C8	2.35	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:190:THR:O	6:12:191:ASP:HB3	1.98	0.62
1:13:1312:G:O3'	23:AI:6:LYS:NZ	2.26	0.62
1:13:156:G:H1'	1:13:166:G:H22	1.63	0.62
5:14:1935:G:H1'	5:14:1964:G:N2	2.14	0.62
5:14:259:G:N2	5:14:621:A:H8	1.96	0.62
6:1E:73:THR:O	6:1E:78:GLN:NE2	2.31	0.62
5:1H:302:C:H2'	5:1H:303:U:C6	2.33	0.62
35:68:2:ILE:HG13	35:68:8:LEU:HD11	1.80	0.62
9:4E:143:ARG:NE	12:7E:77:GLU:OE1	2.32	0.62
1:13:453:A:O3'	20:7I:75:ARG:NH1	2.33	0.62
5:1H:2882:A:OP1	38:98:96:ARG:NH1	2.30	0.62
23:AI:63:THR:OG1	23:AI:64:GLU:N	2.31	0.62
48:J8:18:ILE:HG12	48:J8:37:ILE:HG12	1.82	0.62
5:14:2272:U:O4	58:14:4061:HOH:O	2.16	0.62
5:14:2262:U:H4'	5:14:2328:A:C2	2.35	0.62
5:14:2335:A:C8	5:14:2337:G:C5	2.87	0.62
1:1G:1057:G:H1	1:1G:1203:C:H42	1.47	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
7:22:91:LEU:HD11	7:22:101:LEU:HD12	1.80	0.62
5:1H:956:G:OP2	37:88:14:ARG:NH2	2.33	0.62
24:BI:26:ASN:HB2	24:BI:71:THR:HG23	1.81	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
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
5:14:863:A:H2'	5:14:864:G:C8	2.33	0.62
1:1G:1423:G:H2'	1:1G:1424:C:C6	2.35	0.62
1:1G:1446:A:H4'	1:1G:1446:A:OP1	2.00	0.62
5:1H:1899:G:N2	5:1H:1902:C:C5	2.66	0.62
5:1H:573:G:O2'	5:1H:574:C:H3'	1.99	0.62
21:8I:100:LYS:HB3	21:8I:101:ARG:NH1	2.14	0.62
41:C8:90:VAL:HG22	42:D8:39:LEU:HG	1.82	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
5:14:2123:G:H2'	5:14:2124:G:H8	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1556:C:H2'	5:1H:1557:C:H6	1.64	0.62
5:1H:270(P):C:H2'	5:1H:270(Q):C:C6	2.35	0.62
2:3L:9:A:H4'	2:3L:46:7MG:H5'	1.81	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
5:14:1678:G:H22	5:14:1989:G:H22	1.48	0.62
1:1G:1235:U:O2'	1:1G:1305:G:O5'	2.17	0.62
5:1H:1062:G:H2'	5:1H:1063:G:C8	2.35	0.62
2:3L:19:G:OP2	2:3L:57:G:N2	2.32	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
11:6E:16:LEU:HD13	13:8E:44:VAL:HG22	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
1:13:516: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: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
5:1H:376:C:P	58:1H:3775:HOH:O	2.58	0.61
6:12:84:GLU:HB3	6:12:219:VAL:HG11	1.82	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:2079:U:O4	58:1H:4489:HOH:O	2.13	0.61
5:1H:458:G:O2'	5:1H:469:G:O6	2.10	0.61
5:14:82:G:N2	5:14:103:A:OP2	2.29	0.61
5:14:1342:A:H2	5:14:1602:U:N3	1.97	0.61
5:14:751:A:P	58:14:3517:HOH:O	2.58	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
5:1H:2593:U:H2'	5:1H:2594:C:H6	1.65	0.61
14:1I:8:LEU:HD12	14:1I:20:ALA:HB2	1.82	0.61
4:4L:15:A:O5'	4:4L:15:A:H8	1.83	0.61
32:51:98:LEU:HD22	32:51:125:VAL:HG23	1.81	0.61
5:1H:270(L):U:O2	33:61:50:ARG:HG2	2.00	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
1:13:917:G:H2'	1:13:918:A:C8	2.34	0.61
5:14:1047:G:H2'	5:14:1110:G:H1	1.66	0.61
5:14:270(K):C:O2	5:14:270(N):G:N2	2.27	0.61
5:1H:1138:G:H21	34:58:106:MET:HE3	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:2E:73:PRO:O	7:2E:76:VAL:HG13	1.99	0.61
32:51:12:PRO:HG2	32:51:13:LYS:HE2	1.82	0.61
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
1:13:1278:U:H5'	1:13:1279:A:O4'	2.01	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
6:1E:185:ILE:CG2	6:1E:199:TYR:HB2	2.30	0.61
6:1E:51:LEU:HG	6:1E:201:ILE:HD12	1.82	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
28:11:17:THR:HG22	28:11:204:ILE:HA	1.81	0.61
5:14:1141:U:O2'	5:14:1142:U:OP2	2.18	0.61
5:14:630:G:N2	5:14:633:A:OP2	2.29	0.61
27:16:0:A:N6	27:16:119:A:N1	2.48	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
1:13:523:A:H61	16:3I:92:ASP:HB2	1.65	0.61
5:1H:1997:G:OP2	58:1H:4104:HOH:O	2.15	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
8:32:177:ASP:OD2	8:32:182:LYS:NZ	2.33	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
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
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
1:1G:1385:G:H2'	1:1G:1386:G:H8	1.65	0.61
1:1G:1490:C:H2'	1:1G:1491:G:O4'	2.00	0.61
5:1H:2801:A:H5'	5:1H:2895:U:H1'	1.80	0.61
8:32:24:GLU:OE2	8:32:24:GLU:N	2.33	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
19:6I:17:ARG:NH1	19:6I:17:ARG:HG3	2.15	0.61
46:H8:53:ILE:HA	46:H8:71:VAL:HG13	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:14:1664:A:OP2	58:14:3658:HOH:O	2.16	0.61
5:14:235:U:H2'	5:14:236:C:C6	2.36	0.61
6:1E:141:GLU:O	6:1E:145:LEU:HB2	2.01	0.61
1:1G:21:G:OP1	58:1G:1764:HOH:O	2.16	0.61
5:1H:2179:C:H2'	5:1H:2180:U:C6	2.36	0.61
15:2I:32:ILE:HD12	15:2I:72:ALA:HB2	1.83	0.61
8:3E:186:LEU:HB2	8:3E:187:ARG:HG2	1.83	0.61
2:3K:18:G:N2	2:3K:55:PSU:HN3	1.99	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
39:A8:106:ARG:HH22	39:A8:107:GLU:HB2	1.64	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
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:517:C:OP1	52:N8:16:ARG:NH2	2.29	0.61
29:21:128:SER:OG	29:21:129:HIS:N	2.32	0.61
29:21:70:ALA:O	29:21:73:GLU:N	2.34	0.61
16:3I:90:VAL:O	16:3I:91:LYS:HB3	2.01	0.61
5:1H:2378:A:H2'	39:A8:21:THR:HG21	1.82	0.61
6:12:163:PHE:CD2	6:12:185:ILE:HG13	2.36	0.60
1:13:1226:C:H2'	17:4I:103:THR:HB	1.81	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
5:14:406:G:N2	5:14:421:U:O2	2.23	0.60
1:1G:1257:U:H5'	1:1G:1258:G:C8	2.36	0.60
1:1G:662:G:O2'	1:1G:836:G:OP1	2.19	0.60
5:1H:2135:A:N6	5:1H:2156:G:O2'	2.34	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
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
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
5:14:586:A:N1	5:14:809:G:O2'	2.27	0.60
1:1G:144:G:H1	1:1G:178:C:H42	1.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2062:A:N6	5:1H:2503:A:H62	2.00	0.60
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
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
1:1G:999:U:H2'	1:1G:1000:A:C8	2.37	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
8:3E:98:GLU:O	8:3E:103:ASN:ND2	2.33	0.60
33:61:21:VAL:HG21	33:61:25:TYR:HD2	1.66	0.60
13:8E:21:PRO:HA	13:8E:59:PHE:HA	1.84	0.60
39:A8:66:ALA:HA	39:A8:69:VAL:HG12	1.82	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
8:32:108:LEU:HD21	8:32:183:GLY:HA3	1.83	0.60
8:32:9:CYS:SG	8:32:22:LYS:HD2	2.41	0.60
30:31:33:LEU:HD23	36:78:1:MET:HG3	1.82	0.60
28:11:238:GLY:O	58:11:402:HOH:O	2.16	0.60
5:1H:2591:C:P	28:11:239:ARG:HG3	2.41	0.60
6:12:144:ARG:HH21	6:12:148:TYR:HD2	1.48	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
1:1G:1224:G:N1	1:1G:1322:C:H1'	2.17	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:529:A:H8	5:1H:530:G:C6	2.19	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
13:8E:18:PHE:HD2	13:8E:62:TYR:HD2	1.48	0.60
1:13:127:G:O2'	21:8I:2:PRO:O	2.19	0.60
1:13:660:G:H2'	1:13:661:G:C8	2.36	0.60
1:1G:1057:G:H5''	7:22:154:SER:O	2.01	0.60
5:1H:1641:A:H5''	5:1H:1642:G:OP2	2.02	0.60
5:1H:2610:C:H4'	5:1H:2611:U:OP2	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1L:8:4SU:H5	2:1L:13:C:N3	2.16	0.60
51:M8:18:CYS:HB3	51:M8:39:CYS:SG	2.41	0.60
5:1H:686:G:OP1	54:P8:11:LYS:NZ	2.34	0.60
1:13:1060:C:C4	7:2E:2:GLY:HA3	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
5:14:214:G:OP1	5:14:214:G:H4'	2.01	0.60
5:14:588:U:H2'	5:14:589:C:C6	2.37	0.60
1:1G:457:C:H2'	1:1G:458:C:C6	2.37	0.60
5:1H:1790:C:H5''	5:1H:1791:A:OP1	2.01	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
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
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
5:14:1316: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
5:14:619:G:H5''	5:14:620:G:N2	2.16	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
5:1H:974(A):C:OP1	58:1H:4332:HOH:O	2.17	0.60
14:1I:38:ILE:HG23	14:1I:71:LEU:HB3	1.83	0.60
34:58:15:LEU:HB2	34:58:134:ARG:HB3	1.84	0.60
23:AI:41:VAL:HB	23:AI:42:PRO:HA	1.84	0.60
5:14:1464:C:HO2'	5:14:1528:A:H8	1.48	0.60
1:1G:1002:G:H2'	1:1G:1003:G:C8	2.37	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
5:1H:782:A:C2	28:11:226:MET:HG2	2.37	0.60
6:12:179:LYS:HD3	6:12:180:LEU:HG	1.84	0.60
6:12:19:HIS:CG	6:12:20:GLU:H	2.20	0.60
1:13:939:G:H5''	11:6E:102:ARG:NH2	2.17	0.60
5:14:1443:G:O6	58:14:4003:HOH:O	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:837:G:H1	1:1G:849:C:H42	1.49	0.60
5:1H:1024:G:H3'	5:1H:1025:G:H5''	1.83	0.60
5:1H:136:G:N7	58:1H:4283:HOH:O	2.31	0.60
3:2L:22:A:N6	3:2L:47:7MG:H2'	2.17	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
46:H8:7:ALA:HB2	46:H8:59:LEU:HD22	1.84	0.60
6:12:174:VAL:HG11	6:12:196:LEU:HD13	1.84	0.59
1:13:1064:G:OP1	1:13:1386:G:H4'	2.01	0.59
1:13:38:G:C2	1:13:397:A:C2	2.90	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
1:1G:451:A:N6	1:1G:480:U:H2'	2.16	0.59
5:1H:128:C:H2'	5:1H:129:C:H6	1.67	0.59
5:1H:1359:A:C2	5:1H:1372:U:O4	2.55	0.59
5:1H:250:G:H2'	5:1H:251:A:C8	2.36	0.59
40:B8:21:GLU:OE1	40:B8:91:ARG:NH2	2.36	0.59
5:1H:2611:U:H2'	52:N8:3:LYS:HD3	1.83	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
5:14:2190: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
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
5:14:1027:A:H5'	27:1J:88:C:H41	1.65	0.59
8:32:31:CYS:C	8:32:33:MET:N	2.54	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
1:13:21: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
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
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
5:1H:654(G):C:O2	5:1H:654(N):G:N2	2.34	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
21:8I:6:LEU:HD22	21:8I:23:VAL:HG11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:J8:73:LEU:HD11	48:J8:95:LEU:HD21	1.83	0.59
36:78:60:MET:HA	55:Q8:13:ARG:NH1	2.18	0.59
1:13:1510:U:H2'	1:13:1511:G:C8	2.38	0.59
1:13:631:G:H2'	1:13:632:A:N3	2.18	0.59
5:14:1041:C:H42	5:14:1114:G:H22	1.50	0.59
5:1H:1588:C:H2'	5:1H:1589:C:H6	1.68	0.59
5:1H:34:C:H6	5:1H:34:C:OP2	1.86	0.59
5:1H:363(B):G:H2'	5:1H:363(C):G:H8	1.66	0.59
4:4K:13:A:O2'	4:4K:14:A:OP1	2.20	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
5:1H:1798:U:H5''	28:11:259:THR:HG22	1.84	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
5:14:2564:A:OP1	5:14:2648:C:H4'	2.03	0.59
5:14:469:G:OP2	58:14:3933:HOH:O	2.15	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
1:1G: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
5:1H:1049:C:H2'	5:1H:1050:A:H5'	1.84	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
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
1:13:327:A:HO2'	1:13:329:A:H8	1.51	0.59
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
1:1G:624:C:H2'	1:1G:625:G:H8	1.67	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
5:1H:620:G:H4'	5:1H:621:A:C5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:13:181: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
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
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
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
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
6:12:21:ARG:HA	6:12:39:ILE:HA	1.85	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
1:1G:1194:U:H2'	1:1G:1195:C:H6	1.66	0.59
1:1G:297:G:N2	1:1G:300:A:OP2	2.32	0.59
5:1H:2836:U:H2'	5:1H:2837:G:C8	2.38	0.59
5:1H:286:C:H2'	5:1H:287:C:C6	2.38	0.59
29:21:101:ARG:CZ	29:21:171:GLU:HB2	2.33	0.59
18:5I:37:PHE:CE2	18:5I:53:LEU:HD13	2.37	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
46:H8:67:LEU:HD22	46:H8:90:VAL:HG11	1.84	0.59
28:11:147:LEU:HD13	28:11:155:LEU:HD21	1.83	0.59
28:11:228:PRO:O	58:11:404:HOH:O	2.17	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
1:1G:987:G:H22	1:1G:1218:C:H42	1.51	0.59
5:1H:484:C:H2'	5:1H:485:C:C6	2.38	0.59
27:16:42:C:H4'	31:41:67:LYS:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:974:A:OP2	18:5I:29:ARG:NH2	2.36	0.59
37:88:133:ARG:O	37:88:134:ARG:HB2	2.03	0.59
5:1H:1613:G:O2'	54:P8:3:ARG:NE	2.35	0.59
6:12:132:LYS:HA	6:12:135:GLN:HB2	1.84	0.59
6:12:102:LEU:HD21	6:12:162:ILE:HG21	1.83	0.59
1:13:890:G:O2'	1:13:906:G:O6	2.14	0.59
5:14:1949:G:O6	58:14:4055:HOH:O	2.14	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
5:1H:1429:G:H2'	5:1H:1430:C:C6	2.38	0.59
5:1H:637:A:H2'	36:78:117:GLU:OE1	2.03	0.59
18:5I:4:LYS:O	18:5I:7:ILE:HG13	2.03	0.59
35:68:98:VAL:HG13	35:68:117:LEU:HB2	1.84	0.59
1:13:933:G:OP2	11:6E:3:ARG:HB2	2.02	0.59
49:K8:35:LEU:HD12	49:K8:53:LEU:HD12	1.84	0.59
5:14:1033:U:H6	5:14:1033:U:H3'	1.68	0.58
5:14:1942:C:OP2	5:14:1943:U:O2'	2.14	0.58
1:13:1286:A:H5''	25:1F:26:LYS:HG2	1.85	0.58
1:1G:1194:U:H2'	1:1G:1195:C:C6	2.38	0.58
1:1G:632:A:H1'	1:1G:633:G:OP2	2.02	0.58
5:1H:1678:G:N2	5:1H:1989:G:N2	2.50	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
29:21:116:VAL:O	29:21:117:MET:HB3	2.01	0.58
5:1H:2562:U:H1'	35:68:23:ARG:NH1	2.16	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
6:12:19:HIS:CE1	6:12:206:ASP:HB2	2.35	0.58
1:13:659:U:H2'	1:13:660:G:C8	2.38	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
2:1L:19:G:O2'	2:1L:57:G:N2	2.36	0.58
1:1G:1190:G:H5'	7:22:176:HIS:HE2	1.67	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
5:1H:1798:U:H5'	28:11:259:THR:HG22	1.85	0.58
1:13:1148:U:H2'	1:13:1149:C:O4'	2.04	0.58
1:13:1372:U:OP1	13:8E:72:GLY:N	2.36	0.58
1:13:692:U:O2'	1:13:694:A:N7	2.29	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
1:13:1327:C:OP2	25:1F:12:LYS:NZ	2.37	0.58
1:1G:1298:C:H4'	1:1G:1299:A:C8	2.39	0.58
1:1G:421:U:O2'	1:1G:423:G:N7	2.37	0.58
5:1H:997:G:OP1	41:C8:93:LYS:HD2	2.04	0.58
29:21:103:ASP:OD1	29:21:201:THR:HG23	2.03	0.58
7:22:75:VAL:O	7:22:83:ARG:NH2	2.36	0.58
1:1G:490:G:OP2	8:32:132:ARG:NH2	2.36	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
1:13:1002:G:H2'	1:13:1003:G:H8	1.68	0.58
1:13:254:G:O3'	21:8I:69:LYS:NZ	2.29	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
1:13:581:G:N2	1:13:760:G:N7	2.51	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
5:1H:2431:U:H3'	58:1H:3988:HOH:O	2.03	0.58
5:1H:252:G:OP2	36:78:50:ARG:NH1	2.37	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
7:2E:77:ILE:HA	7:2E:84:ILE:HD12	1.84	0.58
15:2I:22:HIS:HB3	15:2I:29:ILE:HG23	1.85	0.58
2:3K:72:C:H2'	2:3K:73:A:O4'	2.04	0.58
32:51:125:VAL:HG12	32:51:127:GLU:O	2.04	0.58
13:8E:112:LYS:HD3	13:8E:113:LYS:N	2.19	0.58
21:8I:20:THR:HG23	21:8I:43:LEU:HD23	1.85	0.58
5:1H:535:C:O3'	41:C8:53:ARG:NH1	2.36	0.58
28:11:206:LEU:HD22	28:11:211:ARG:HG2	1.85	0.58
5:14:1013:C:H42	5:14:1149:G:H1	1.51	0.58
1:1G:353:A:H8	1:1G:353:A:H5'	1.67	0.58
5:1H:2179:C:H2'	5:1H:2180:U:H6	1.67	0.58
5:1H:269:U:OP1	58:1H:4353:HOH:O	2.17	0.58
1:13:963:G:N2	14:1I:55:LYS:HZ1	2.01	0.58
15:2I:124:LYS:HB3	15:2I:125:PHE:CD2	2.39	0.58
33:61:56:LYS:O	33:61:60:GLU:HB3	2.04	0.58
5:1H:125:G:C6	54:P8:10:ARG:HG3	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:7:VAL:HG22	6:12:8:LYS:H	1.68	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
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
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
1:13:1318:A:H5''	23:AI:10:PHE:CD2	2.38	0.58
23:AI:40:ILE:HD11	23:AI:62:ILE:HG23	1.85	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
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
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
1:13:1260:C:H6	1:13:1260:C:H3'	1.69	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
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
5:14:270(H):C:H2'	5:14:270(I):G:H8	1.69	0.58
1:1G:179:A:H2'	1:1G:180:U:H6	1.68	0.58
27:1J:38:C:H42	27:1J:44:G:H1	1.50	0.58
17:4I:4:ILE:HG22	17:4I:5:ALA:H	1.69	0.58
32:51:4:ILE:HD11	32:51:7:LEU:HD11	1.86	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
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
5:1H:1249:U:OP1	58:1H:3970:HOH:O	2.17	0.58
5:1H:960:A:H61	37:88:82:ARG:NH2	2.02	0.58
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2L:4:G:H1	3:2L:70:C:H42	1.52	0.58
8:32:24:GLU:HG2	8:32:25:ARG:H	1.68	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
7:2E:6:HIS:CD2	18:5I:49:HIS:HB3	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
5:1H:1805:U:O2	28:11:50:THR:HB	2.04	0.57
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
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
5:1H:1453:A:O2'	5:1H:1454:U:H2'	2.04	0.57
5:1H:155:C:N4	5:1H:171:G:H1	2.02	0.57
5:1H:1799:G:H5'	5:1H:1819:A:H61	1.68	0.57
27:16:42:C:O3'	31:41:67:LYS:NZ	2.37	0.57
5:1H:1022:G:O6	34:58:66: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
28:11:17:THR:HG22	28:11:205:VAL:H	1.69	0.57
1:13:736:C:H2'	1:13:737:A:C8	2.39	0.57
5:14:1485:G:H1	5:14:1504:C:N4	1.98	0.57
5:14:332:A:O2'	5:14:334:C:OP2	2.22	0.57
6:1E:74:LYS:O	6:1E:78:GLN:NE2	2.37	0.57
1:1G:984:C:H2'	1:1G:985:C:C6	2.40	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
5:1H:533:G:H5'	41:C8:24:TYR:CD1	2.39	0.57
1:13:963:G:H21	14:1I:55:LYS:CE	2.16	0.57
6:12:119:GLU:HG3	6:12:142:LEU:HD11	1.85	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
1:1G:111:G:O5'	1:1G:111:G:H8	1.86	0.57
1:1G:1481:U:H2'	1:1G:1482:G:C8	2.39	0.57
5:1H:2807:G:H3'	5:1H:2808:U:H5''	1.86	0.57
14:1I:78:ASN:HB2	14:1I:81:THR:HG23	1.85	0.57
29:21:29:GLY:H	29:21:51:PHE:HE1	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2K:16:C:O2'	3:2K:62:C:OP1	2.20	0.57
8:32:173:TRP:HZ3	8:32:193:ASP:HB3	1.67	0.57
9:4E:33:VAL:HG11	9:4E:109:ILE:HA	1.86	0.57
39:A8:42:ASP:O	39:A8:43:GLU:HB2	2.03	0.57
6:12:221:LEU:HA	6:12:224:GLN:HB2	1.86	0.57
6:1E:12:GLU:HA	6:1E:16:HIS:ND1	2.19	0.57
1:1G:992:U:H3	1:1G:1044:A:H62	1.53	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
3:2L:48:U:O2'	3:2L:49:C:OP2	2.20	0.57
32:51:4:ILE:HB	32:51:6:ARG:HG3	1.87	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
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
5:1H:1264:G:H3'	5:1H:1265:A:H5''	1.87	0.57
5:1H:142:G:H1'	44:F8:37:THR:HG21	1.87	0.57
5:1H:2262:U:O2'	5:1H:2263:C:H5'	2.05	0.57
5:1H:322:A:P	30:31:168:ARG:HH21	2.28	0.57
14:1I:26:ALA:HB1	14:1I:84:GLN:HG2	1.87	0.57
3:2L:62:C:H2'	3:2L:63:C:H6	1.68	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
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
6:12:77:ALA:O	6:12:81:VAL:HG23	2.04	0.57
1:13:793:U:H5'	1:13:794:A:H5''	1.87	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
5:14:739:G:P	58:14:3825:HOH:O	2.62	0.57
25:1F:3:LYS:HB3	25:1F:14:TRP:CD1	2.39	0.57
1:1G:1016:A:O2'	1:1G:1217:C:O2'	2.21	0.57
5:1H:1298:C:OP2	58:1H:3654:HOH:O	2.17	0.57
7:2E:95:THR:HB	7:2E:97:LYS:H	1.69	0.57
15:2I:86:GLY:N	15:2I:112:THR:OG1	2.26	0.57
15:2I:21:ILE:HB	15:2I:84:VAL:HG12	1.85	0.57
30:31:103:LYS:HA	30:31:106:ARG:HG3	1.86	0.57
2:3K:64:A:C2	2:3K:65:G:H1'	2.40	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
1:13:1120: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
1:1G:114:U:H2'	1:1G:115:G:C8	2.40	0.57
1:1G:1412:C:H2'	1:1G:1413:A:C8	2.39	0.57
1:1G:940:C:H2'	1:1G:941:G:H8	1.69	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
16:3I:117:ARG:HB3	16:3I:122:THR:HB	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
1:13:1130:A:N6	1:13:1144:G:H21	2.03	0.57
1:13:1497:G:C2'	1:13:1498:U:H5'	2.34	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:O5'	1:13:748:C:H6	1.88	0.57
5:14:363(E):U:H5'	5:14:363(F):A:OP2	2.05	0.57
1:1G:1142:G:H3'	1:1G:1143:G:C8	2.40	0.57
1:1G:176:C:H2'	1:1G:177:C:H6	1.69	0.57
5:1H:2830:G:H8	5:1H:2830:G:H5''	1.70	0.57
1:1G:1055:A:N3	7:22:156:ARG:NH1	2.53	0.57
30:31:167:ALA:HB1	30:31:173:VAL:HG11	1.87	0.57
16:3I:53:ARG:HG3	16:3I:93:LEU:HD21	1.87	0.57
31:41:131:TYR:O	31:41:159:VAL:HG22	2.04	0.57
1:13:1368:G:H5''	13:8E:112:LYS:HB3	1.87	0.57
13:8E:49:PRO:O	13:8E:53:VAL:HB	2.05	0.57
39:A8:99:LYS:O	39:A8:103:GLU:HG2	2.05	0.57
24:BI:57:ARG:NH1	24:BI:102:GLY:HA2	2.19	0.57
46:H8:58:VAL:O	46:H8:60:GLU:N	2.37	0.57
28:11:71:ASP:N	28:11:71:ASP:OD1	2.34	0.57
6:12:22:LYS:NZ	6:12:35:GLU:OE1	2.36	0.57
1:13:1120:G:H2'	1:13:1121:U:C6	2.40	0.57
1:13:953:G:H2'	1:13:954:G:O4'	2.04	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
1:1G:994:A:C5	1:1G:1216:G:H4'	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
14:1I:84:GLN:HG3	14:1I:88:LEU:HD23	1.87	0.57
7:22:11:ARG:HB2	7:22:11:ARG:HH11	1.70	0.57
3:2K:62:C:H2'	3:2K:63:C:C6	2.39	0.57
3:2L:41:C:H2'	3:2L:42:C:H6	1.69	0.57
30:31:129:PHE:HA	30:31:142:TRP:NE1	2.19	0.57
17:4I:20:THR:HG23	17:4I:26:GLY:HA3	1.87	0.57
55:Q8:30:ARG:CZ	55:Q8:30:ARG:HB2	2.34	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
1:13:701:C:O2	1:13:703:G:N1	2.38	0.57
1:1G:1216:G:H2'	1:1G:1217:C:C6	2.40	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
5:1H:674:G:H1'	30:31:74:ARG:HD3	1.85	0.57
8:32:76:ARG:HH21	8:32:80:GLU:HG2	1.70	0.57
21:8I:76:LEU:HD12	21:8I:77:VAL:N	2.19	0.57
55:Q8:25:MET:HG2	55:Q8:46:ARG:HG2	1.87	0.57
1:13:1190:G:OP1	7:2E:4:LYS:HA	2.05	0.56
1:13:153:C:N4	1:13:168:G:H1	2.00	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
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
5:1H: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
27:1J:70:C:H2'	27:1J:71:C:H6	1.70	0.56
5:1H:2580:U:H4'	29:21:130:GLY:HA3	1.87	0.56
15:2I:98:LEU:O	15:2I:101:SER:OG	2.14	0.56
8:3E:92:VAL:HG12	8:3E:96:LEU:HD21	1.87	0.56
31:41:151:ALA:O	31:41:153:ARG:NH1	2.38	0.56
10:5E:3:ARG:HB3	10:5E:93:SER:HB2	1.87	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
5:1H:1310:G:OP2	54:P8:9:ARG:NH1	2.37	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	14:11:55:LYS:NZ	2.02	0.56
5:14:2120:G:H2'	5:14:2121:G:C8	2.40	0.56
5:14:654(J):A:N7	5:14:654(K):C:N4	2.53	0.56
27:16:5:C:O2'	27:16:27:C:O2	2.21	0.56
6:1E:16:HIS:CE1	6:1E:213:LEU:HD13	2.41	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
1:1G:280:C:H3'	1:1G:281:G:H5'	1.87	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
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
29:21:50:GLY:HA2	29:21:77:ILE:HA	1.87	0.56
7:2E:52:LEU:HA	7:2E:70:VAL:HG12	1.86	0.56
2:3L:33:U:N3	2:3L:36:A:OP2	2.38	0.56
11:6E:120:ILE:O	11:6E:124:LEU:HB2	2.05	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
1:13:971:G:N2	1:13:1363:A:OP2	2.33	0.56
1:13:271:C:H2'	1:13:272:C:H6	1.70	0.56
1:13:31:G:O2'	1:13:48:C:N4	2.38	0.56
1:13:864:A:H2'	1:13:865:A:C8	2.40	0.56
5:14:30:G:H2'	5:14:31:C:H6	1.68	0.56
1:1G:1058:G:H1	1:1G:1199:U:H3	1.53	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
5:1H:2636:U:H2'	5:1H:2637:U:C6	2.40	0.56
5:1H:2830:G:C8	5:1H:2830:G:H5''	2.40	0.56
32:51:83:TYR:HB3	32:51:135:GLY:H	1.70	0.56
1:13:1187:G:O5'	13:8E:113:LYS:NZ	2.38	0.56
49:K8:59:ARG:O	49:K8:62:THR:HG23	2.06	0.56
1:13:1525:G:OP1	15:2I:120:ARG:NH2	2.39	0.56
5:14:1981:A:OP1	58:14:3544:HOH:O	2.17	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
5:1H:1036:G:H1	5:1H:1119:C:N4	1.96	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:192:C:P	58:1H:3729:HOH:O	2.64	0.56
5:1H:2299:G:O6	58:1H:4565:HOH:O	2.18	0.56
29:21:167:VAL:HG21	29:21:187:ALA:CB	2.35	0.56
7:22:32:LEU:O	7:22:36:ASP:HB2	2.05	0.56
8:3E:108:LEU:HD23	8:3E:110:PHE:CE1	2.41	0.56
27:16:42:C:O2'	31:41:67:LYS:HE3	2.06	0.56
34:58:7:LYS:NZ	34:58:7:LYS:H	2.03	0.56
23:AI:51:VAL:HG12	23:AI:52:TYR:H	1.70	0.56
1:13:1015:A:H2'	1:13:1016:A:C8	2.40	0.56
1:13:156:G:H1	1:13:165:C:H42	1.52	0.56
6:1E:115:LEU:HD13	6:1E:145:LEU:HB3	1.88	0.56
1:1G:1241:G:H1	1:1G:1296:C:H42	1.51	0.56
1:1G:1360:A:OP1	1:1G:1360:A:H8	1.89	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
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
16:3I:70:ILE:HD13	16:3I:77:LEU:HD12	1.86	0.56
34:58:19:GLU:HG3	34:58:59:LYS:HB3	1.88	0.56
10:5E:86:ARG:O	10:5E:87:ARG:HG2	2.05	0.56
18:5I:9:LYS:HA	18:5I:12:ARG:HG2	1.87	0.56
35:68:63:VAL:HG12	35:68:106:LEU:HD11	1.87	0.56
1:13:580:U:OP1	19:6I:54:ARG:NH2	2.37	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
1:13:1508: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:NH1	6:1E:111:ARG:HG2	2.18	0.56
1:1G:1004:A:H2	1:1G:1024:G:C8	2.23	0.56
1:1G:401:C:H2'	1:1G:402:G:C8	2.41	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
5:1H:600:G:N2	5:1H:605:C:O3'	2.38	0.56
1:13:553:A:H5''	16:3I:24:VAL:HG21	1.86	0.56
33:61:131:LYS:HB3	33:61:132:PRO:HA	1.88	0.56
1:13:376:G:H5''	20:7I:5:ARG:HD2	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:I8:14:ARG:NH1	58:I8:202:HOH:O	2.38	0.56
27:16:11:C:OP2	47:I8:72:ARG:NH2	2.39	0.56
1:13:1086:U:O4	1:13:1099:G:N2	2.30	0.56
1:13:1336:C:H5''	1:13:1336:C:C6	2.41	0.56
1:13:637:G:H2'	1:13:638:G:C8	2.41	0.56
5:14:1025:G:O2'	5:14:1026:U:OP1	2.24	0.56
5:14:1011:G:C2	5:14:1151:G:C2	2.94	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
5:14:309:G:N3	5:14:329:G:O2'	2.38	0.56
5:1H:1427:A:H4'	5:1H:1428:C:O5'	2.04	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
29:21:101:ARG:HG2	29:21:169:ASN:OD1	2.05	0.56
3:2K:52:C:H2'	3:2K:53:G:O4'	2.06	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
6:12:53:ARG:HH12	6:12:199:TYR:HA	1.69	0.56
1:13:1149:C:H2'	1:13:1150:U:C6	2.41	0.56
1:13:405:U:O4	8:3E:2:GLY:N	2.39	0.56
5:14:2749:A:N1	5:14:2750:A:N6	2.53	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
5:1H: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
2:1L:18:G:O2'	2:1L:19:G:OP1	2.19	0.56
8:32:82:ALA:HA	8:32:85:LYS:HB2	1.88	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
2:3L:48:C:H41	2:3L:59:U:H1'	1.69	0.56
17:4I:52:GLU:O	17:4I:56:LEU:HB2	2.06	0.56
55:Q8:48:PHE:CE2	55:Q8:52:LYS:HG3	2.41	0.56
1:13:57:G:H2'	1:13:58:C:C6	2.41	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:H5''	5:14:2542:A:N3	2.21	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
1:1G:1278:U:H5'	1:1G:1279:A:C5'	2.36	0.56
1:1G:302:G:O2'	1:1G:556:C:H5''	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:12:212:GLN:O	6:12:216:SER:N	2.28	0.56
1:13:142:G:H2'	1:13:143:A:H8	1.69	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
5:14:363: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
1:1G:1498:U:O2'	1:1G:1499:A:OP2	2.18	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
8:32:112:VAL:HG12	8:32:116:GLN:OE1	2.05	0.56
8:32:59:ARG:HA	8:32:62:GLN:HB2	1.87	0.56
32:51:86:GLU:HG3	32:51:165:ALA:H	1.69	0.56
32:51:20:ALA:HB1	32:51:21:PRO:HD2	1.88	0.56
1:13:750:G:N3	19:6I:23:GLY:HA3	2.21	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
28:11:71:ASP:OD2	28:11:103:ARG:NH2	2.39	0.56
1:13:1226:C:H4'	23:AI:80:TYR:OH	2.06	0.56
1:13:429:U:OP2	8:3E:36:ARG:NH2	2.35	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
1:1G:188:U:O2'	1:1G:189:U:H5'	2.06	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
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
14:1I:57:LYS:HD2	14:1I:60:ARG:HH12	1.71	0.56
29:21:48:GLN:OE1	29:21:77:ILE:HG21	2.06	0.56
2:3L:37:MIA:H2'	2:3L:38:A:H8	1.71	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
1:13:37: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)
5:14:2808:U:H2'	5:14:2809:A:H8	1.72	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
5:1H:1570:A:H2'	5:1H:1571:A:C8	2.40	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
27:1J:44:G:H5''	27:1J:45:A:OP1	2.06	0.55
29:21:105:THR:OG1	29:21:199:ARG:NH2	2.38	0.55
29:21:78:LEU:O	29:21:79:ARG:HB2	2.05	0.55
3:2L:10:G:N2	3:2L:27:G:H1'	2.21	0.55
32:51:86:GLU:HG3	32:51:165:ALA:HB3	1.88	0.55
13:8E:8:GLY:HA3	13:8E:79:LEU:HB3	1.87	0.55
1:13:1346:A:N1	1:13:1374:A:H5''	2.21	0.55
1:13:221:C:H2'	1:13:222:U:H6	1.71	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
1:1G:983:A:N1	1:1G:1222:G:N2	2.55	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: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
8:3E:107:ARG:HH21	8:3E:194:LEU:HD22	1.71	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
1:13:160:A:H1'	1:13:344:A:C8	2.41	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
5:14:279:C:N4	5:14:361:G:H1	2.05	0.55
27:16:44:G:H1'	27:16:47:C:N4	2.20	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
1:1G: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
5:1H:2766:G:H2'	5:1H:2766:G:N3	2.22	0.55
5:1H:654:A:H3'	5:1H:654:A:N3	2.21	0.55
33:61:9:LEU:HD21	33:61:35:LEU:HD13	1.89	0.55
5:1H:1250:G:OP2	36:78:18:ARG:NH1	2.39	0.55
23:AI:51:VAL:O	23:AI:57:HIS:HA	2.07	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
1:13:1366:C:H2'	1:13:1367:C:H6	1.71	0.55
5:14:1058:U:H2'	5:14:1059:G:H8	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
1:1G:994:A:N7	1:1G:1216:G:H4'	2.21	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
5:1H:729:G:OP2	28:11:13:ARG:NH1	2.36	0.55
7:22:50:ALA:HB1	7:22:70:VAL:HG11	1.88	0.55
31:41:84:LYS:O	31:41:84:LYS:HG3	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
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
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
5:14:343:C:H2'	5:14:344:G:C8	2.41	0.55
5:14:71:A:C8	5:14:71:A:H5'	2.41	0.55
5:14:918:A:O2'	27:1J:96:G:N2	2.39	0.55
1:1G:1043:C:H2'	1:1G:1044:A:H8	1.72	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
15:2I:127:LYS:HD3	15:2I:128:ALA:H	1.70	0.55
8:32:150:GLU:C	8:32:152:SER:H	2.10	0.55
16:3I:126:LYS:HG3	16:3I:128:ALA:H	1.71	0.55
28:11:164:GLN:OE1	28:11:166:GLN:NE2	2.39	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)
1:13:77:C:H2'	1:13:78:G:H5''	1.88	0.55
5:14:2461:C:H2'	5:14:2462:U:H6	1.72	0.55
27:16:15:A:H5'	27:16:16:G:H8	1.71	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
5:1H:280:C:N3	5:1H:361:G:C2	2.75	0.55
7:2E:3:ASN:OD1	7:2E:3:ASN:N	2.40	0.55
15:2I:103:LEU:O	15:2I:105:VAL:HG12	2.07	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
40:B8:93:ARG:HH11	40:B8:93:ARG:HG3	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
28:11:12:SER:HB2	28:11:208:LYS:HB3	1.87	0.55
1:13:1486:G:H2'	1:13:1487:G:O4'	2.07	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
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
2:1L:19:G:HO2'	2:1L:57:G:N2	2.04	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
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
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
6:1E:212:GLN:OE1	6:1E:216:SER:OG	2.25	0.55
25:1F:9:ARG:HG3	25:1F:13:ILE:HD11	1.89	0.55
1:1G:1062:U:H2'	1:1G:1063:C:C6	2.42	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:4:U:H3'	1:1G:5:U:H5'	1.89	0.55
5:1H:2210:G:H3'	5:1H:2211:G:C8	2.42	0.55
5:1H:698:C:O2'	5:1H:734:A:N6	2.40	0.55
2:1L:46:7MG:H82	2:1L:46:7MG:H5''	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4E:87:SER:HB3	9:4E:125:SER:O	2.07	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:OG1	42:D8:45:THR:O	2.17	0.55
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
1:13:1020:U:H2'	1:13:1021:G:C8	2.42	0.55
5:14:509:C:OP1	58:14:4154:HOH:O	2.18	0.55
5:1H:1013:C:O2'	5:1H:1014:U:H5'	2.06	0.55
5:1H:2711:A:OP2	58:1H:3683: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
32:51:43:VAL:HB	32:51:52:VAL:HG22	1.89	0.55
32:51:10:PRO:HB2	32:51:50:VAL:HG13	1.89	0.55
37:88:32:TYR:CE2	37:88:133:ARG:HG3	2.42	0.55
1:13:1292:U:H5'	13:8E:38:GLN:OE1	2.06	0.55
46:H8:24:LEU:HB3	46:H8:39:VAL:HG23	1.89	0.55
55:Q8:38:GLY:HA2	55:Q8:39:LYS:C	2.28	0.55
5:1H:2418:A:OP1	55:Q8:39:LYS:HD3	2.07	0.55
55:Q8:6:THR:N	55:Q8:59:LYS:HZ2	2.01	0.55
1:13:353:A:C8	1:13:353:A:H5'	2.37	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
5:14:251:A:C5	5:14:252:G:H1'	2.42	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
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
1:1G: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
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
15:2I:50:TYR:CD1	15:2I:54:ARG:HB3	2.42	0.55
8:3E:64:LEU:HD22	8:3E:198:VAL:HG11	1.89	0.55
17:4I:23:TYR:CE2	17:4I:71:ARG:HG3	2.42	0.55
17:4I:88:ARG:CG	17:4I:88:ARG:HH11	2.19	0.55
23:AI:67:VAL:HG21	51:M8:59:PHE:HB3	1.88	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
1:13:128:G:H5'	21:8I:2:PRO:O	2.06	0.54
5:14:1754:C:H2'	5:14:1755:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1927:A:H2'	5:14:1928:A:C8	2.42	0.54
5:14:273(F):C:H3'	5:14:274:G:H5''	1.89	0.54
1:13:1327:C:P	25:1F:12:LYS:HZ1	2.29	0.54
1:1G:1401:G:C2	1:1G:1402:C:H1'	2.42	0.54
1:1G:565:U:OP2	1:1G:566:G:O2'	2.18	0.54
5:1H:1174:A:C4	5:1H:1178:C:N4	2.75	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
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
1:13:1056:U:H5'	7:2E:163:ALA:HB2	1.89	0.54
7:2E:21:ARG:NH2	7:2E:56:ASP:OD1	2.40	0.54
3:2L:24:C:C2	3:2L:25:U:C5	2.95	0.54
5:1H:1257:C:H4'	30:31:83:PHE:CD1	2.42	0.54
8:3E:111:ALA:HB2	8:3E:120:LEU:HD11	1.89	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
1:13:67: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
1:1G:1095:U:OP1	1:1G:1108:G:N1	2.39	0.54
1:1G:872:A:O2'	1:1G:873:A:H5''	2.07	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
5:1H:581:C:H2'	5:1H:582:G:H8	1.72	0.54
29:21:37:ARG:O	29:21:45:THR:HA	2.08	0.54
8:3E:85:LYS:HG3	8:3E:86:LYS:N	2.22	0.54
5:1H:270(L):U:H3	33:61:50:ARG:NE	2.05	0.54
13:8E:17:VAL:HG11	13:8E:81:ILE:HD13	1.89	0.54
40:B8:16:ARG:NH2	40:B8:83:ILE:O	2.39	0.54
6:12:105:PHE:HA	6:12:108:ILE:HB	1.88	0.54
1:13:1366:C:H2'	1:13:1367:C:C6	2.43	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
27:16:8:U:O2	27:16:112:G:N1	2.20	0.54
1:1G:1037:C:H2'	1:1G:1038:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:559:A:H4'	1:1G:560:U:C5'	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
5:1H:1786:A:C2	5:1H:2606:C:H1'	2.38	0.54
5:1H:192:C:O2'	5:1H:802:A:N3	2.39	0.54
5:1H:664:C:H4'	5:1H:941:A:OP1	2.08	0.54
27:1J:44:G:H1'	27:1J:47:C:H42	1.72	0.54
5:1H:443:A:N7	30:31:45:ARG:HG2	2.22	0.54
5:1H:1006:C:O2	34:58:106:MET:HG2	2.08	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
5:1H:996:A:H4'	41:C8:92:ARG:HE	1.72	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
1:13:1034: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
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
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
1:1G:519:C:H2'	1:1G:520:A:O4'	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
29:21:104:VAL:HG22	29:21:198:VAL:HG22	1.89	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
37:88:35:VAL:HA	37:88:101:ARG:O	2.06	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:O	23:AI:78:ARG:HD2	2.07	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
5:1H:2364:C:H4'	47:I8:56:ASP:OD1	2.08	0.54
52:N8:50:GLY:N	52:N8:56:LYS:HG3	2.18	0.54
28:11:65:ILE:HD11	28:11:67:PHE:CE1	2.43	0.54
6:12:67:THR:H	6:12:160:ASP:HB2	1.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:1G:1287:A:H2'	1:1G:1288:A:C8	2.43	0.54
1:1G:980:C:H3'	1:1G:981:U:C6	2.42	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
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
7:22:84:ILE:HG23	7:22:85:ARG:HD2	1.89	0.54
16:3I:111:LYS:O	16:3I:112:ASP:HB2	2.06	0.54
1:13:35:G:O2'	16:3I:118:SER:O	2.19	0.54
17:4I:7:VAL:HB	31:4I:115:ARG:NH2	2.22	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
12:7E:36:LEU:HA	12:7E:39:LEU:HB2	1.90	0.54
1:13:1443:G:O2'	40:B8:122:ASP:OD2	2.21	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
1:13:1175:G:H2'	1:13:1176:A:C8	2.42	0.54
1:13:661:G:H1	1:13:744:C:H42	1.56	0.54
1:13:963:G:H21	14:1I:55:LYS:HZ1	1.53	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
1:1G:1387:G:H2'	1:1G:1388:C:C6	2.42	0.54
1:1G:977:A:O2'	1:1G:981:U:N3	2.40	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
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
2:3K:18:G:H1'	2:3K:58:A:C2	2.43	0.54
1:13:667:G:H4'	19:6I:51:HIS:CE1	2.42	0.54
22:9I:58:LEU:HB3	22:9I:62:GLU:HB3	1.89	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
6:12:12:GLU:HB2	6:12:16:HIS:CG	2.43	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
5:14:337:C:H2'	5:14:338:G:O4'	2.05	0.54
6:1E:223:ILE:HA	6:1E:226:ARG:HG2	1.89	0.54
1:1G:1466:C:H2'	1:1G:1467:G:O4'	2.08	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
5:1H:5:A:H2'	5:1H:6:A:H8	1.72	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
32:5I:6:ARG:HB3	32:5I:65:HIS:CG	2.42	0.54
5:1H:784:A:C5	28:11:229:VAL:HG21	2.43	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
5:14:355:G:H2'	5:14:356:G:C8	2.41	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
1:1G:56:U:H2'	1:1G:57:G:H8	1.68	0.54
5:1H:1534:G:H3'	5:1H:1534:G:N3	2.23	0.54
5:1H:671:C:OP1	36:78:42:SER:O	2.26	0.54
17:4I:52:GLU:HA	17:4I:55:ARG:HB2	1.89	0.54
36:78:38:GLN:O	36:78:41:ARG:HB2	2.08	0.54
12:7E:17:THR:O	12:7E:20:TYR:N	2.33	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
5:1H:1159:U:P	50:L8:30:ARG:HH12	2.31	0.54
1:13:1455:G:OP1	24:BI:35:THR:OG1	2.13	0.54
1:13:198:G:H2'	1:13:199:G:H8	1.73	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
5:14:491: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:1657:C:H2'	5:1H:1658:C:C6	2.43	0.54
5:1H:2244:U:O2'	5:1H:2245:U:H5'	2.07	0.54
5:1H:779:U:H5''	28:11:49:ILE:HD12	1.90	0.54
27:1J:88:C:H3'	27:1J:89:G:N7	2.22	0.54
2:3L:20:H2U:H52	2:3L:59:U:C2	2.43	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
28:11:182:LEU:O	28:11:271:ILE:HG13	2.07	0.54
1:13:1157:A:N6	1:13:1178:G:H21	2.06	0.54
1:13:651:C:H2'	1:13:652:U:C6	2.42	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
5:14:981:A:N1	5:14:2027:G:O2'	2.27	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
5:1H:1914:C:H2'	5:1H:1915:U:O4'	2.08	0.54
5:1H:325:G:H2'	5:1H:326:G:H8	1.72	0.54
5:1H:90:U:H6	5:1H:90:U:OP1	1.91	0.54
27:1J:62:C:H2'	27:1J:63:G:C8	2.43	0.54
30:31:134:GLY:HA3	30:31:162:LEU:O	2.08	0.54
8:32:126:ILE:HG22	8:32:127:THR:H	1.71	0.54
6:12:130:ARG:H	6:12:130:ARG:HE	1.56	0.53
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
1:13:503: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
5:1H:1298:C:P	58:1H:3656:HOH:O	2.65	0.53
3:2K:54:G:H2'	3:2K:55:U:H6	1.72	0.53
3:2L:20:G:OP1	3:2L:61:U:N3	2.41	0.53
2:3K:36:A:C2	2:3K:37:MIA:H1'	2.42	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
1:13:377:G:OP1	20:7I:3:LYS:HD2	2.07	0.53
37:88:51:ARG:HD2	37:88:66:ILE:HD11	1.90	0.53
1:13:973:G:OP1	14:1I:57:LYS:NZ	2.29	0.53
5:14:2802:G:H2'	5:14:2803:C:O4'	2.08	0.53
5:14:527:C:OP2	5:14:2779:U:H5	1.91	0.53
27:16:12:C:O2	47:18:74:ARG:NH1	2.38	0.53
27:16:15:A:H1'	27:16:109:G:C4	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:1E:212:GLN:O	6:1E:216:SER:OG	2.15	0.53
1:1G:1074:G:O2'	1:1G:1101:A:N1	2.34	0.53
1:1G:959:A:HO2'	1:1G:984:C:HO2'	1.56	0.53
5:1H:111:A:H4'	49:K8:69:ARG:NH2	2.23	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
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
26:1K:74:C:N4	5:1H:2555:U:H1'	2.24	0.53
8:32:57:ARG:NH2	8:32:205:GLU:OE2	2.39	0.53
8:3E:30:LYS:H	8:3E:34:GLU:HB2	1.73	0.53
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
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
6:12:141:GLU:O	6:12:145:LEU:HB2	2.07	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
1:1G:1126:U:H4'	1:1G:1127:G:H8	1.71	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
5:1H:1103:A:H3'	5:1H:1104:C:H6	1.73	0.53
5:1H:1010:A:HO2'	5:1H:1152:C:HO2'	1.53	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
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
14:1I:54:PHE:CZ	14:1I:55:LYS:NZ	2.71	0.53
2:1L:11:C:H2'	2:1L:12:U:H6	1.74	0.53
3:2K:76:C:H4'	58:2K:208:HOH:O	2.07	0.53
8:32:13:ARG:C	8:32:15:GLU:H	2.12	0.53
9:4E:48:ALA:HB2	9:4E:57:LYS:HD3	1.90	0.53
9:4E:73:ASN:ND2	9:4E:73:ASN:O	2.29	0.53
36:78:149:GLU:HG2	36:78:150:ALA:H	1.73	0.53
12:7E:10:LEU:HB3	12:7E:83:ILE:HD11	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:16:90:C:H5'	37:88:18:LYS:HA	1.91	0.53
45:G8:20:TYR:CE1	45:G8:43:ASN:HA	2.42	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
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
1:1G:895:G:H1	1:1G:904:C:N4	2.07	0.53
5:1H:10:G:O2'	5:1H:2801:A:N3	2.40	0.53
5:1H:1268:A:H2'	5:1H:1269:A:O4'	2.08	0.53
5:1H:139:G:N3	5:1H:141:A:N1	2.56	0.53
5:1H:1796:U:H2'	5:1H:1797:C:C6	2.43	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
26:1K:70:G:C2	26:1K:71:G:H1'	2.43	0.53
7:22:152:ILE:HB	7:22:199:LYS:HB2	1.90	0.53
8:3E:62:GLN:O	8:3E:66:ARG:HB2	2.09	0.53
2:3K:34:G:H2'	2:3K:35:A:C8	2.44	0.53
17:4I:58:GLU:O	17:4I:62:ASN:ND2	2.37	0.53
32:51:157:TYR:CE1	32:51:172:LYS:HB2	2.44	0.53
28:11:17:THR:CG2	28:11:204:ILE:HA	2.38	0.53
1:13:1525:G:P	15:2I:120:ARG:HH22	2.32	0.53
1:13:392:G:H5''	20:7I:12:LYS:HD2	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
1:1G:1326:C:H2'	1:1G:1327:C:H6	1.74	0.53
1:1G:340:U:H2'	1:1G:341:C:C6	2.43	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
14:1I:4:ILE:HG13	14:1I:100:THR:HA	1.90	0.53
5:1H:2572:A:N7	29:21:144:ARG:HD2	2.24	0.53
16:3I:93:LEU:O	16:3I:96:VAL:HG13	2.09	0.53
2:3L:71:G:H2'	2:3L:72:C:H5''	1.90	0.53
10:5E:50:TYR:OH	22:9I:74:ARG:O	2.16	0.53
44:F8:1:MET:O	44:F8:3:THR:N	2.41	0.53
6:12:87:ARG:HH21	6:12:233:SER:H	1.57	0.53
1:13:1060:C:H5''	14:1I:51:ARG:HG2	1.91	0.53
1:13:1348:U:H4'	13:8E:120:ARG:HD2	1.91	0.53
1:13:1429:C:H2'	1:13:1430:C:H6	1.73	0.53
1:13:1399:C:C2	1:13:1502:A:N6	2.77	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:C8	5:14:2439:A:H5'	2.43	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
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
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
31:41:16:ARG:O	31:41:20:ILE:HG13	2.08	0.53
32:51:129:THR:OG1	32:51:129:THR:O	2.27	0.53
1:13:1117:G:H5''	13:8E:104:ARG:NH1	2.24	0.53
13:8E:17:VAL:HG21	13:8E:80:GLY:HA3	1.88	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
5:1H:1903:G:OP1	28:11:241:PRO:HB2	2.09	0.53
1:13:280:C:H3'	1:13:281:G:H5'	1.91	0.53
5:14:1027:A:C2	5:14:2488:A:H5'	2.43	0.53
5:14:2537:U:H2'	5:14:2538:C:C6	2.43	0.53
5:14:2520:C:H41	5:14:2542:A:H62	1.57	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
5:14:49:A:H5''	5:14:51:G:O4'	2.08	0.53
6:1E:97:TRP:CZ3	6:1E:172:ILE:HB	2.44	0.53
1:1G:1321:C:N4	1:1G:1322:C:N4	2.57	0.53
1:1G:979:C:H3'	1:1G:980:C:C5'	2.37	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:2864:G:H2'	5:1H:2865:U:C6	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
27:1J:4:C:H42	27:1J:116:G:H1	1.54	0.53
1:13:323:U:H5'	24:BI:23:ARG:HB2	1.90	0.53
46:H8:52:SER:O	46:H8:52:SER:OG	2.27	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2059:A:H5''	5:14:2060:A:OP2	2.07	0.53
1:1G:1118:C:H1'	1:1G:1179:A:C4	2.44	0.53
1:1G:222:U:H2'	1:1G:223:U:C6	2.44	0.53
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
27:1J:38:C:N3	27:1J:44:G:N2	2.44	0.53
29:21:166:THR:HG21	29:21:199:ARG:HH22	1.73	0.53
7:22:159:GLY:HA2	7:22:193:TYR:CD1	2.43	0.53
2:3K:7:A:C6	2:3K:49:C:C2	2.96	0.53
5:1H:2659:G:H4'	32:51:175:LYS:HD2	1.90	0.53
40:B8:58:ASN:HD22	40:B8:58:ASN:C	2.12	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
5:14:1260: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
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
1:1G:1346:A:OP2	1:1G:1346:A:H3'	2.08	0.53
5:1H:569:U:C4	5:1H:570:G:C6	2.97	0.53
7:2E:7:PRO:O	7:2E:11:ARG:HG2	2.09	0.53
34:58:30:ILE:HG23	34:58:52:VAL:HG11	1.91	0.53
18:5I:3:ARG:HH21	18:5I:6:LEU:HD11	1.74	0.53
33:61:69:LYS:HG3	33:61:136:VAL:HB	1.91	0.53
20:7I:74:LEU:CA	20:7I:77:ALA:HB2	2.34	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:N	50:L8:38:GLU:OE2	2.24	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
5:14:34:C:HO2'	5:14:35:G:P	2.32	0.53
1:1G:837:G:H1	1:1G:849:C:N4	2.07	0.53
5:1H:120:U:OP2	58:1H:4262:HOH:O	2.18	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:863:A:H2'	5:1H:864:G:H8	1.74	0.53
7:22:8:ILE:HD11	7:22:184:TYR:HB3	1.90	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
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
1:13:110:C:H2'	1:13:111:G:O4'	2.09	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
5:14:990:A:H5'	5:14:990:A:H8	1.73	0.52
6:1E:28:PHE:O	6:1E:32:ILE:HG22	2.09	0.52
1:1G:518:C:H5''	1:1G:519:C:C6	2.44	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: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
2:1L:8:4SU:H5	2:1L:13:C:C4	2.43	0.52
7:22:65:ALA:HA	7:22:100:ALA:HB3	1.90	0.52
2:3K:30:G:N2	2:3K:40:C:O2	2.42	0.52
17:4I:7:VAL:HB	31:41:115:ARG:CZ	2.39	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
1:13:227:G:N2	20:7I:62:VAL:O	2.40	0.52
5:1H:1649:G:O2'	38:98:107:ASP:OD1	2.16	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
28:11:108:PRO:HG3	28:11:143:HIS:CE1	2.43	0.52
1:13:1002:G:H1	1:13:1038:C:H42	1.57	0.52
1:13:1502:A:H2	1:13:1505:G:N1	2.03	0.52
5:14:1636:C:H2'	5:14:1637:A:C8	2.45	0.52
5:14:212:G:H2'	5:14:213:A:O4'	2.09	0.52
5:14:2656:U:H3	5:14:2665:A:H2	1.57	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
27:16:15:A:OP1	27:16:15:A:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:2126:A:H62	5:1H:2163:C:H1'	1.73	0.52
5:1H:247:G:H4'	5:1H:386:G:C5	2.44	0.52
7:2E:19:GLU:HG3	7:2E:54:ARG:NH1	2.24	0.52
8:32:14:ARG:NH1	8:32:14:ARG:HG3	2.19	0.52
8:32:153:ARG:NH1	8:32:181:MET:SD	2.82	0.52
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:95:VAL:HB	12:7E:99:GLU:HB2	1.91	0.52
12:7E:9:MET:SD	12:7E:32:LYS:HG2	2.49	0.52
13:8E:4:TYR:CE1	13:8E:88:TYR:HB2	2.44	0.52
1:13:1178:G:P	13:8E:93:ARG:HH21	2.32	0.52
23:AI:39:THR:HG22	23:AI:40:ILE:H	1.75	0.52
55:Q8:53:PRO:CB	55:Q8:56:GLU:HG3	2.39	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
5:14:1027:A:H5'	27:1J:88:C:N4	2.24	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
6:1E:82:ARG:NE	6:1E:92:TYR:OH	2.42	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
5:1H:1931:U:H5	5:1H:1969:A:N7	2.08	0.52
5:1H:2080:G:H8	5:1H:2080:G:H5''	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
5:1H:355:G:H2'	5:1H:356:G:C8	2.44	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
1:13:878:G:H5'	12:7E:89:PRO:HG2	1.90	0.52
21:8I:28:PRO:HA	21:8I:34:LYS:O	2.09	0.52
46:H8:53:ILE:HG22	46:H8:71:VAL:HG22	1.90	0.52
28:11:94:LEU:HD23	28:11:95:LEU:N	2.24	0.52
6:12:47:THR:HG23	6:12:202:PRO:HG2	1.90	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
1:13:509:A:H5''	8:3E:55:ALA:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:14:249:C:H5''	58:14:3521:HOH:O	2.07	0.52
5:14:2533:A:O4'	5:14:2664:G:H4'	2.10	0.52
5:14:900:A:H3'	5:14:901:A:C8	2.33	0.52
5:14:903:C:H2'	5:14:904:C:C6	2.44	0.52
1:1G:1327:C:H2'	1:1G:1328:C:C6	2.44	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
5:1H:2123:G:H1	5:1H:2175:C:H42	1.57	0.52
5:1H:574:C:H4'	5:1H:575:A:O5'	2.10	0.52
5:1H:70:G:H21	5:1H:71:A:N6	2.08	0.52
5:1H:973:A:OP2	58:1H:3942:HOH:O	2.19	0.52
27:1J:62:C:H2'	27:1J:63:G:H8	1.74	0.52
26:1K:19:G:H5'	26:1K:60:U:O4	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
39:A8:30:ARG:HG3	39:A8:30:ARG:O	2.10	0.52
24:BI:75:ASN:N	24:BI:75:ASN:OD1	2.40	0.52
31:4I:5:VAL:H	51:M8:25:TYR:HE2	1.57	0.52
6:12:98:LEU:O	6:12:101:MET:HG2	2.09	0.52
1:13:337:C:H2'	1:13:338:A:C8	2.44	0.52
1:13:626:U:C2	1:13:627:G:C8	2.98	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
5:14:530:G:HO2'	5:14:531:C:P	2.32	0.52
5:14:259:G:O2'	5:14:621:A:O2'	2.24	0.52
6:1E:87:ARG:NH1	6:1E:220:ASP:OD1	2.35	0.52
6:1E:6:THR:OG1	6:1E:7:VAL:N	2.41	0.52
1:1G:1028:C:H2'	1:1G:1028(A):C:O4'	2.10	0.52
1:1G:769:G:H4'	1:1G:1513:A:H4'	1.91	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
5:1H:863:A:H2'	5:1H:864:G:C8	2.44	0.52
5:1H:847:U:C5	5:1H:933:A:N1	2.78	0.52
3:2K:17:C:H2'	3:2K:18:C:H2'	1.92	0.52
31:4I:122:PRO:HB3	31:4I:180:PHE:HD1	1.75	0.52
1:13:375:U:O3'	20:7I:6:LEU:HB2	2.09	0.52
21:8I:48:GLU:O	21:8I:50:LYS:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:98:10:LEU:O	38:98:12:ARG:HG2	2.10	0.52
1:13:591:U:H2'	1:13:592:G:C8	2.44	0.52
5:14:1187:G:O5'	5:14:1187:G:H8	1.93	0.52
5:14:1485:G:H2'	5:14:1486:A:C8	2.45	0.52
5:14:581:C:H2'	5:14:582:G:C8	2.45	0.52
27:16:44:G:C2	27:16:48:A:C2	2.97	0.52
6:1E:54:THR:O	6:1E:57:PHE:N	2.41	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
1:1G:591:U:H2'	1:1G:592:G:H8	1.74	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
5:1H:431:U:O2'	5:1H:432:A:H5'	2.10	0.52
5:1H:71:A:C2	44:F8:31:HIS:CE1	2.82	0.52
27:1J:76:G:N7	58:1J:302:HOH:O	2.34	0.52
8:3E:108:LEU:HD12	8:3E:174:LEU:HD13	1.90	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
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
1:13:475:G:H2'	1:13:476:G:O4'	2.09	0.52
5:14:2153:G:N2	5:14:2154:G:O6	2.42	0.52
5:14:2791:C:H2'	5:14:2792:G:C8	2.45	0.52
5:14:2720:U:N3	5:14:2873:A:H2	2.04	0.52
5:14:290:G:H2'	5:14:291:C:O4'	2.10	0.52
14:1I:6:ILE:HD11	14:1I:72:VAL:HB	1.90	0.52
27:1J:7:G:H1	27:1J:113:C:H42	1.56	0.52
3:2L:8:4SU:H6	3:2L:8:4SU:O5'	2.10	0.52
30:31:8:GLN:N	30:31:8:GLN:CD	2.62	0.52
2:3K:18:G:H22	2:3K:55:PSU:HN3	1.58	0.52
2:3L:11:C:H2'	2:3L:12:U:C6	2.43	0.52
36:78:50:ARG:CG	36:78:50:ARG:HH21	2.22	0.52
37:88:14:ARG:HG2	37:88:41:TRP:HH2	1.75	0.52
22:9I:26:LEU:HD22	22:9I:42:ARG:NH2	2.25	0.52
28:11:108:PRO:HD2	28:11:111:LEU:HG	1.92	0.52
6:12:84:GLU:O	6:12:219:VAL:HG21	2.10	0.52
6:12:67:THR:HG23	6:12:90:MET:HE2	1.91	0.52
1:13:1162:C:H2'	1:13:1163:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2184:G:H2'	5:14:2185:C:C6	2.45	0.52
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
5:14:515:A:N1	5:14:1260:G:O2'	2.37	0.52
6:1E:17:PHE:HB3	6:1E:44:LEU:HD11	1.92	0.52
1:1G:625:G:H2'	1:1G:626:U:H6	1.74	0.52
2:1L:55:PSU:H5''	2:1L:56:C:OP2	2.09	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
28:11:125:ILE:HG13	28:11:137:PRO:HD3	1.91	0.52
1:13:1044:A:C5	1:13:1045:C:H1'	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
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
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
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
1:13:407:G:OP1	8:3E:115:ARG:NH1	2.43	0.52
20:7I:26:ARG:HE	20:7I:31:LYS:HB3	1.75	0.52
20:7I:8:ARG:HB3	20:7I:28:ARG:NH1	2.24	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
6:12:30:ARG:HH21	6:12:194:PRO:HG2	1.75	0.52
1:13:1228:C:H2'	1:13:1229:A:H8	1.74	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
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
5:14:342:G:H2'	5:14:343:C:H6	1.74	0.52
1:1G:1132:C:H2'	1:1G:1133:G:C8	2.39	0.52
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2329:G:H2'	5:1H:2330:G:C8	2.45	0.52
3:2K:47:7MG:O2'	3:2K:48:U:O5'	2.27	0.52
2:3L:26:A:H2'	2:3L:27:G:H5'	1.91	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
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
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
27:16:15:A:H1'	27:16:109:G:N9	2.25	0.51
1:1G:1347:G:N2	1:1G:1373:G:H2'	2.25	0.51
1:1G:1397:C:H4'	1:1G:1397:C:OP2	2.10	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
26:1K:10:G:O2'	26:1K:11:C:OP1	2.26	0.51
7:2E:58:GLU:H	7:2E:65:ALA:HB3	1.74	0.51
3:2L:44:A:H2'	3:2L:45:A:C8	2.45	0.51
8:3E:148:VAL:HG12	8:3E:149:ALA:O	2.10	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
1:13:195:A:C2	1:13:196:A:H2	2.27	0.51
5:14:2207:C:H42	5:14:2217:G:H1	1.59	0.51
1:1G:589:C:H42	1:1G:650:G:H1	1.58	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
5:1H:277:C:H3'	5:1H:278:A:O4'	2.11	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
20:7I:49:LEU:HD12	20:7I:50:LYS:H	1.75	0.51
46:H8:124:ILE:HG13	46:H8:126:VAL:HG13	1.91	0.51
6:12:11:LEU:HD23	6:12:213:LEU:HD11	1.91	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
1:13:67:C:H2'	1:13:68:G:H8	1.74	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
1:1G:1172:C:H2'	1:1G:1173:G:H8	1.74	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
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
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
8:3E:150:GLU:HA	8:3E:153:ARG:HG3	1.93	0.51
16:3I:38:THR:HB	16:3I:57:LYS:HB3	1.92	0.51
12:7E:29:SER:OG	12:7E:32:LYS:N	2.39	0.51
21:8I:31:LEU:HD23	21:8I:32:TYR:CZ	2.46	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
6:12:125:PRO:HA	6:12:127:ILE:HG12	1.93	0.51
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
1:13:1286:A:H8	1:13:1287:A:H4'	1.71	0.51
1:13:828:A:H2'	1:13:829:G:O4'	2.09	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
5:14:31:C:N4	58:14:4168:HOH:O	2.43	0.51
27:16:7:G:H4'	39:A8:29:PHE:CD2	2.45	0.51
6:1E:17:PHE:H	6:1E:17:PHE:HD1	1.58	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3L:52:G:H1	2:3L:62:C:N4	2.09	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
27:16:104:A:OP1	46:H8:72:ARG:NE	2.43	0.51
28:11:136:ILE:HG22	28:11:137:PRO:HD2	1.92	0.51
28:11:33:LEU:O	28:11:64:ILE:HG23	2.10	0.51
1:13:1396:A:H4'	1:13:1397:C:H5''	1.92	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
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
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
1:1G: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:O5'	1:1G:748:C:H6	1.91	0.51
1:1G:975:A:H4'	1:1G:976:G:C5'	2.40	0.51
5:1H:357:A:H2'	5:1H:358:U:C6	2.46	0.51
5:1H:5:A:H2'	5:1H:6:A:C8	2.46	0.51
5:1H:860:U:C4	5:1H:917:A:H2	2.28	0.51
29:21:15:PHE:HB3	40:B8:81:PRO:HG3	1.93	0.51
21:8I:70:ARG:O	21:8I:71:PHE:HD1	1.94	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
31:41:107:LEU:O	51:M8:38:LYS:HD3	2.10	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
28:11:145:VAL:HG12	28:11:146:GLU:O	2.10	0.51
6:12:68:ILE:HG12	6:12:161:ALA:HB3	1.92	0.51
1:13:1160:G:H22	1:13:1177:G:H22	1.58	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)
5:14:861:A:C2	5:14:917:A:C4	2.99	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
1:1G:468:A:C5	1:1G:474:G:H1'	2.45	0.51
5:1H:265:A:H1'	5:1H:266:G:O4'	2.10	0.51
5:1H:2849:U:H4'	5:1H:2868:A:C2	2.45	0.51
15:2I:59:TYR:CZ	15:2I:63:LEU:HD11	2.45	0.51
8:3E:107:ARG:NH2	8:3E:194:LEU:HD22	2.26	0.51
2:3K:71:G:HO2'	5:1H:1851:U:HO2'	1.56	0.51
2:3L:15:G:H2'	2:3L:16:H2U:H51	1.92	0.51
37:88:59:ARG:C	37:88:61:GLY:H	2.14	0.51
5:1H:1188:U:H4'	42:D8:79:VAL:HG22	1.91	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
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
1:1G:1502:A:H4'	1:1G:1503:A:OP2	2.11	0.51
1:1G:458:C:H2'	1:1G:464:G:H8	1.75	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
7:22:11:ARG:NH2	7:22:182:ILE:HD11	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
2:3K:18:G:O2'	2:3K:19:G:OP1	2.26	0.51
2:3L:53:G:N2	2:3L:61:C:N3	2.56	0.51
9:4E:11:ILE:HB	9:4E:105:VAL:HG22	1.93	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
36:78:114:ILE:HD11	36:78:130:PHE:CD2	2.43	0.51
36:78:95:VAL:HG21	36:78:123:LEU:HD13	1.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:11:102:LYS:C	28:11:103:ARG:HG2	2.31	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
1:13:1159:U:O4'	1:13:1182:G:N2	2.44	0.51
1:13:452:A:O2'	20:7I:72:ARG:HG3	2.11	0.51
5:14:2638:G:HO2'	5:14:2639:A:P	2.34	0.51
5:14:274:G:H2'	5:14:275:G:H4'	1.92	0.51
5:14:21:A:H61	5:14:519:U:H3	1.59	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
1:1G:1266:G:N2	1:1G:1270:C:N3	2.58	0.51
1:1G:631:G:C3'	1:1G:632:A:H8	2.21	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
9:4E:126:ARG:NH1	9:4E:126:ARG:HG3	2.23	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
28:11:69:ARG:HG3	28:11:69:ARG:HH11	1.76	0.51
6:12:209:ARG:HD3	6:12:240:GLN:OE1	2.10	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
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
5:14:196:A:H2'	5:14:196:A:N3	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
1:1G:1129:C:C4	1:1G:1139:G:N1	2.78	0.51
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
5:1H:2602:A:OP1	58:1H:4741:HOH:O	2.18	0.51
2:1L:26:A:H3'	2:1L:27:G:H8	1.74	0.51
7:22:9:GLY:HA2	7:22:12:LEU:HG	1.92	0.51
34:58:96:GLU:C	34:58:98:VAL:H	2.11	0.51
18:5I:21:TYR:HE2	18:5I:23:ARG:NE	2.07	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:15:ARG:HH21	36:78:15:ARG:HG3	1.76	0.51
5:1H:2392:A:H8	36:78:61:ARG:HG2	1.75	0.51
22:9I:26:LEU:HD11	22:9I:29:PHE:CG	2.45	0.51
45:G8:97:ARG:H	45:G8:97:ARG:HD2	1.75	0.51
36:78:49:ARG:NE	55:Q8:57:ARG:HG2	2.26	0.51
1:13:49:U:C2	1:13:361:G:N2	2.79	0.51
5:14:1328:G:H2'	5:14:1330:C:C5	2.46	0.51
5:14:861:A:N3	27:1J:79:C:O2'	2.44	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
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
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
1:1G:532:A:H61	7:22:193:TYR:HA	1.75	0.51
30:31:114:VAL:HG21	30:31:202:PHE:CZ	2.46	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
5:14:110:G:C2	5:14:111:A:C8	2.99	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
2:3L:76:A:O2'	5:14:2394:C:N3	2.40	0.50
5:14:2394:C:H2'	5:14:2395:C:H6	1.76	0.50
5:14:35:G:H2'	5:14:36:G:O4'	2.11	0.50
5:14:601:C:O2	5:14:605:C:H4'	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
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
5:1H:275:G:N7	5:1H:363:G:C4	2.79	0.50
26:1K:8:4SU:H1'	26:1K:48:C:O2'	2.10	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
3:2K:44:A:C2	3:2K:45:A:C4	2.99	0.50
8:32:13:ARG:O	8:32:15:GLU:N	2.41	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
5:1H:102:G:OP1	49:K8:7:ARG:NH2	2.44	0.50
53:O8:26:ASN:OD1	53:O8:28:ARG:HB2	2.11	0.50
28:11:249:PRO:HD2	28:11:250:TRP:CZ3	2.46	0.50
28:11:25:THR:HB	28:11:82:ILE:H	1.75	0.50
28:11:2:ALA:HA	28:11:20:ASP:HB2	1.93	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
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
5:14:353:G:H2'	5:14:354:G:H8	1.75	0.50
6:1E:226:ARG:HG3	6:1E:227:GLY:H	1.76	0.50
1:1G:1512:U:H2'	1:1G:1513:A:H8	1.75	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
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:475:U:C4	5:1H:481:G:O6	2.65	0.50
27:1J:24:G:H4'	27:1J:25:A:H5'	1.92	0.50
8:32:33:MET:O	8:32:35:ARG:HG3	2.12	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
16:3I:7:ILE:CD1	21:8I:32:TYR:HB3	2.42	0.50
2:3L:8:4SU:O5'	2:3L:8:4SU:H6	2.11	0.50
1:13:1398:A:N1	9:4E:19:MET:HE2	2.26	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
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
5:1H:2815:C:H5'	52:N8:29:THR:HG21	1.93	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
6:12:32:ILE:HD12	6:12:41:ILE:O	2.11	0.50
1:13:678:U:H2'	1:13:679:C:C6	2.47	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
5:14:1849:G:H2'	5:14:1850:G:C8	2.46	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
27:16:89:G:H2'	27:16:89(A):A:C8	2.47	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:270(J):G:H1	5:1H:270(P):C:H42	1.60	0.50
5:1H:2887:U:H2'	5:1H:2888:C:C6	2.46	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
27:1J:66:A:N6	27:1J:107:U:H2'	2.26	0.50
2:3L:3:C:H2'	2:3L:4:C:O4'	2.12	0.50
31:41:46:ALA:HB1	31:41:49:ASP:O	2.11	0.50
10:5E:41:GLU:HB2	10:5E:62:TRP:CE3	2.46	0.50
19:6I:74:ASP:HB3	19:6I:77:ARG:HG2	1.92	0.50
36:78:78:PRO:HB3	36:78:111:ARG:NH2	2.25	0.50
12:7E:13:ILE:O	12:7E:17:THR:HG23	2.11	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
1:13:300:A:H1'	1:13:565:U:O2	2.12	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:H6	5:14:1598:C:OP2	1.94	0.50
5:14:442:G:C6	5:14:444:C:N4	2.79	0.50
1:1G:1055:A:N6	1:1G:1206:G:N7	2.60	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
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
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
27:1J:15:A:H1'	27:1J:109:G:C4	2.46	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
2:3K:69:G:H2'	2:3K:70:G:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:10:A:OP2	9:4E:126:ARG:HD3	2.12	0.50
1:13:1117:G:O3'	13:8E:104:ARG:HD3	2.12	0.50
24:BI:49:ALA:O	24:BI:52:ALA:N	2.44	0.50
41:C8:107:ALA:O	41:C8:111:GLU:HG2	2.10	0.50
41:C8:95:LEU:HG	42:D8:4:ILE:HD13	1.93	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
1:13:552:U:O2'	1:13:553:A:H5'	2.12	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
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
27:16:15:A:O2'	27:16:109:G:C8	2.54	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
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
5:1H:130:C:O3'	5:1H:1349:A:H1'	2.12	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
5:1H:474:G:O6	58:1H:4558:HOH:O	2.19	0.50
14:1I:90:LEU:N	14:1I:91:PRO:HD3	2.26	0.50
8:32:126:ILE:HG22	8:32:127:THR:N	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
47:I8:36:ILE:HD13	47:I8:36:ILE:O	2.11	0.50
31:4I:112:PRO:HG3	51:M8:38:LYS:HD2	1.93	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
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
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
5:14:276:A:H2'	5:14:277:C:C5	2.46	0.50
6:1E:18:GLY:N	6:1E:42:ILE:HG22	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
18:5I:6:LEU:HB3	18:5I:23:ARG:HH22	1.76	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
20:7I:45:THR:HB	20:7I:47:ASP:H	1.76	0.50
40:B8:111:ARG:H	40:B8:111:ARG:CD	2.17	0.50
24:BI:30:LYS:NZ	24:BI:80:ARG:HH12	2.10	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
28:11:112:GLN:O	28:11:115:GLN:HG2	2.12	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
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
5:14:654(C):G:H2'	5:14:654(D):G:O4'	2.11	0.50
1:1G:942:G:C2	1:1G:1342:C:C2	2.99	0.50
1:1G:216:G:O2'	1:1G:217:C:O4'	2.30	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
5:1H:270(G):C:H2'	5:1H:270(H):C:H6	1.76	0.50
5:1H:84:A:OP2	45:G8:8:LYS:NZ	2.27	0.50
27:1J:18:G:H1	27:1J:65:C:N4	2.05	0.50
2:1L:39:PSU:H2'	2:1L:40:C:C6	2.47	0.50
30:31:62:ARG:HB3	30:31:62:ARG:NH1	2.27	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
45:G8:38:ILE:CD1	45:G8:64:GLU:HG3	2.40	0.50
5:1H:190:A:OP2	48:J8:39:LYS:HE3	2.11	0.50
6:12:91:PRO:HG2	6:12:155:LEU:HB2	1.94	0.50
6:12:71:VAL:HG23	6:12:163:PHE:O	2.11	0.50
1:13:165:C:H2'	1:13:166:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
5:14:406:G:H1	5:14:421:U:H3	1.57	0.50
1:1G:828:A:H2'	1:1G:829:G:O4'	2.11	0.50
5:1H:582:G:H2'	5:1H:583:G:H8	1.76	0.50
26:1K:19:G:H22	26:1K:56:C:H42	1.60	0.50
8:32:199:ASN:C	8:32:199:ASN:HD22	2.14	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
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
41:C8:50:ARG:NH2	42:D8:72:VAL:HG12	2.27	0.50
5:1H:2344:U:O2'	53:O8:37:ARG:HG2	2.12	0.50
55:Q8:53:PRO:HB3	55:Q8:56:GLU:HG3	1.93	0.50
5:1H:1814:G:P	28:11:40:THR:HG21	2.51	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
1:1G:1048:G:O4'	1:1G:1215:G:H4'	2.12	0.50
1:1G:374:A:H2'	1:1G:374:A:N3	2.26	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:184:C:H2'	5:1H:185:U:C6	2.47	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
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
29:21:16:ARG:O	29:21:16:ARG:HG3	2.12	0.50
7:22:112:SER:O	7:22:116:VAL:HG23	2.12	0.50
8:3E:64:LEU:O	8:3E:67:ILE:HB	2.12	0.50
17:4I:11:ARG:HB2	17:4I:11:ARG:HH11	1.75	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)
11:6E:45:ASP:O	11:6E:49:ILE:HG12	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
36:78:18:ARG:O	36:78:19:VAL:HG22	2.11	0.50
13:8E:125:TYR:CD1	13:8E:126:SER:N	2.79	0.50
22:9I:38:GLU:HA	22:9I:41:LYS:NZ	2.27	0.50
49:K8:18:PRO:O	49:K8:21:LEU:HB2	2.11	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
5:14:1176: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
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
6:1E:238:LEU:HD12	6:1E:238:LEU:H	1.76	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
5:1H:530:G:O4'	5:1H:530:G:N3	2.45	0.49
29:21:60:ASN:OD1	29:21:62:PRO:HD2	2.12	0.49
17:4I:3:ARG:HH22	31:41:139:LEU:HD13	1.76	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:N	45:G8:97:ARG:HD2	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
1:13:1118: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
1:13:320:C:H42	1:13:333:G:H1	1.60	0.49
1:13:44:G:C2	1:13:45:U:H1'	2.47	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
1:1G:1262:C:H2'	1:1G:1263:C:C6	2.46	0.49
1:1G:575:G:H4'	1:1G:575:G:OP1	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
5:1H:1429:G:O2'	5:1H:1430:C:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2272:U:H5''	5:1H:2273:A:OP1	2.12	0.49
5:1H:234:C:O2'	5:1H:235:U:H5'	2.12	0.49
5:1H:2432:A:C4	48:J8:33:LYS:HG2	2.46	0.49
5:1H:270(J):G:H2'	5:1H:270(K):C:O4'	2.13	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
26:1K:52:G:N2	26:1K:62:C:O2	2.35	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
16:3I:82:VAL:HG13	16:3I:105:TYR:HB3	1.94	0.49
34:58:66:LYS:O	34:58:70:LYS:HB3	2.12	0.49
18:5I:24:CYS:HB2	18:5I:40:CYS:HB3	1.94	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
5:1H:2399:G:O3'	53:O8:19:ARG:NH1	2.44	0.49
55:Q8:42:ARG:HG2	55:Q8:42:ARG:O	2.11	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
1:13:765:G:H5''	1:13:766:A:OP1	2.12	0.49
5:14:2056:G:C2	5:14:2057:A:C8	3.00	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
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
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
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
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
14:1I:32:ALA:HB3	14:1I:76:ASN:O	2.12	0.49
7:22:190:ARG:H	7:22:190:ARG:HD2	1.77	0.49
15:2I:44:SER:OG	15:2I:47:VAL:HG23	2.12	0.49
11:6E:150:ALA:HB2	15:2I:50:TYR:OH	2.12	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
9:4E:71:LEU:HD22	9:4E:115:VAL:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:78:19:VAL:CB	36:78:27:HIS:HB2	2.39	0.49
12:7E:21:LYS:O	12:7E:63:LEU:HD23	2.11	0.49
21:8I:11:VAL:HG23	21:8I:20:THR:HB	1.94	0.49
39:A8:39:ILE:HD12	39:A8:73:LEU:HD22	1.94	0.49
6:12:55:PHE:HZ	6:12:218:ALA:HA	1.77	0.49
1:13:1410:G:O6	58:13:2024:HOH:O	2.19	0.49
5:14:1937:A:H5'	58:14:3633:HOH:O	2.12	0.49
5:14:234:C:H2'	5:14:235:U:C6	2.47	0.49
5:14:1758:G:C2	5:14:2696:U:H5'	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
1:1G:1028:C:N4	1:1G:1033:G:H1	2.08	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
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: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:O5'	5:1H:972:G:H8	1.95	0.49
26:1K:51:U:H2'	26:1K:52:G:C8	2.47	0.49
5:1H:2314:C:H5''	31:41:38:VAL:HG21	1.94	0.49
9:4E:113:ALA:O	9:4E:115:VAL:HG23	2.12	0.49
4:4L:13:A:HO2'	4:4L:14:A:P	2.29	0.49
12:7E:134:ILE:HG22	12:7E:135:CYS:SG	2.53	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
1:13:428: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
5:1H:1621:U:H5''	5:1H:1622:G:OP1	2.12	0.49
5:1H:2069:G:H4'	58:1H:4258:HOH:O	2.11	0.49
5:1H:1889:A:N1	5:1H:2234:G:H1'	2.27	0.49
5:1H:2559:C:O2'	5:1H:2560:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:618:G:H2'	5:1H:618(A):C:C6	2.48	0.49
27:1J:115:G:H8	27:1J:115:G:OP2	1.96	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
11:6E:26:PHE:CE2	11:6E:30:ILE:HD11	2.47	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
28:11:121:PRO:HB3	28:11:135:PHE:CE2	2.47	0.49
6:12:196:LEU:HD12	6:12:197:VAL:HG23	1.94	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
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
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
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
27:16:73:A:C4	27:16:104:A:C2	3.00	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
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:79:G:H2'	1:1G:79:G:N3	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: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
2:1L:10:G:O2'	2:1L:11:C:OP1	2.29	0.49
5:1H:2032:G:C4	29:21:145:LYS:HD3	2.48	0.49
29:21:63:LEU:O	29:21:63:LEU:HD23	2.11	0.49
7:22:11:ARG:NH1	7:22:11:ARG:HB2	2.27	0.49
7:2E:129:ALA:HB2	8:3E:47:ARG:HH22	1.78	0.49
2:3K:19:G:N1	5:1H:2112:G:H1'	2.28	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
10:5E:27:GLN:HA	10:5E:30:LEU:HD12	1.95	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:12:214:ILE:O	6:12:218:ALA:HB2	2.12	0.49
1:13:1113:C:H2'	1:13:1114:C:H6	1.77	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
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
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
1:1G:851:G:H2'	1:1G:852:G:H8	1.77	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
5:1H:325:G:H2'	5:1H:326:G:C8	2.47	0.49
5:1H:847:U:P	58:1H:3781:HOH:O	2.70	0.49
5:1H:821:A:H2'	5:1H:946:G:H5"	1.93	0.49
26:1K:16:H2U:O2	26:1K:16:H2U:H2'	2.12	0.49
2:1L:11:C:H2'	2:1L:12:U:C6	2.48	0.49
29:21:24:THR:HG21	29:21:188:VAL:HG21	1.95	0.49
3:2L:54:G:H2'	3:2L:55:U:H6	1.78	0.49
31:41:63:ILE:HG22	31:41:143:GLU:HB2	1.94	0.49
34:58:12:ARG:HH21	34:58:14:VAL:CG2	2.24	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
36:78:2:LYS:HG2	36:78:4:SER:H	1.78	0.49
5:1H:142:G:H1'	44:F8:37:THR:CG2	2.43	0.49
46:H8:143:GLY:O	46:H8:145:GLU:HG2	2.13	0.49
55:Q8:59:LYS:CD	55:Q8:59:LYS:H	2.22	0.49
28:11:149:PRO:O	28:11:150:LYS:HB2	2.12	0.49
5:14:1000:A:C6	5:14:1001:A:N1	2.81	0.49
5:14:141:A:C8	5:14:1408:C:H1'	2.48	0.49
5:14:2187:G:C6	5:14:2188:C:N3	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2306:C:H3'	5:14:2307:G:H5''	1.95	0.49
1:1G:909:A:H2'	1:1G:910:C:O4'	2.12	0.49
5:1H:1021:A:C3'	5:1H:1021:A:C8	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
5:1H:357:A:H2'	5:1H:358:U:H6	1.77	0.49
27:1J:89(A):A:C8	27:1J:90:C:H1'	2.48	0.49
9:4E:153:LYS:HD3	9:4E:154:GLY:N	2.28	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
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
38:98:65:LEU:O	38:98:68:ARG:HB2	2.13	0.49
24:BI:14:LYS:HG3	24:BI:17:ARG:HH21	1.77	0.49
46:H8:111:VAL:HG11	46:H8:146:ILE:HD11	1.94	0.49
31:41:112:PRO:HB3	51:M8:36:CYS:HA	1.95	0.49
1:13:1160:G:H1	1:13:1177:G:H1	1.59	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
5:14:108:U:H2'	5:14:109:G:C8	2.48	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
5:14:959:A:N6	5:14:960:A:N1	2.61	0.49
1:1G:1291:G:H2'	1:1G:1292:U:C6	2.47	0.49
1:1G:626:U:C2	1:1G:627:G:C8	3.01	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
5:1H:844:C:H3'	5:1H:845:G:C8	2.48	0.49
14:1I:46:ARG:NH2	14:1I:64:GLU:OE1	2.46	0.49
7:22:87:LEU:HA	7:22:90:GLU:HG2	1.95	0.49
3:2K:20:G:C2	3:2K:58:A:N3	2.80	0.49
10:5E:99:ALA:HB3	22:9I:29:PHE:CE1	2.48	0.49
18:5I:39:LEU:HD11	18:5I:47:LEU:HD12	1.93	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:H	51:M8:38:LYS:HD2	1.77	0.49
52:N8:40:LYS:HE2	52:N8:47:PRO:HD2	1.95	0.49
28:11:182:LEU:N	28:11:272:ALA:HB3	2.24	0.49
1:13:595:G:H1	1:13:641:U:HO2'	1.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:727:G:N2	1:13:730:G:OP2	2.36	0.49
1:13:957:U:N3	1:13:960:U:OP2	2.41	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
5:14:315:G:H2'	5:14:316:C:C6	2.48	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
1:1G: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
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:H8	5:1H:1210:A:H5'	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
5:1H:392:C:P	58:1H:3773:HOH:O	2.71	0.49
2:3L:25:C:H2'	2:3L:26:A:O4'	2.13	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
11:6E:26:PHE:CD2	11:6E:30:ILE:HD11	2.47	0.49
5:1H:661:C:HO2'	36:78:14:LYS:H	1.57	0.49
40:B8:26:ASP:OD2	40:B8:120:ARG:NH2	2.45	0.49
24:BI:50:GLU:HG3	24:BI:100:ILE:HD13	1.94	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
5:1H:76:C:HO2'	49:K8:62:THR:HG21	1.78	0.49
23:AI:42:PRO:HD3	51:M8:63:TYR:HE2	1.78	0.49
55:Q8:39:LYS:HG3	55:Q8:40:GLU:H	1.78	0.49
1:13:1286:A:H5''	25:1F:26:LYS:CG	2.43	0.48
1:13:292:G:N7	1:13:293:G:H1'	2.28	0.48
1:13:57:G:H2'	1:13:58:C:H6	1.77	0.48
1:13:834:C:C2	1:13:853:G:C2	3.01	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
5:14:120:U:C2	5:14:149:A:C6	3.00	0.48
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
5:14:37:C:H2'	5:14:38:A:C8	2.47	0.48
5:14:580:C:H2'	5:14:581:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:912:C:C6	5:14:913:U:H5	2.30	0.48
1:1G:474:G:H2'	1:1G:475:G:H8	1.73	0.48
5:1H:1142:U:H5'	5:1H:1142(A):A:C8	2.48	0.48
5:1H:1858:G:OP2	5:1H:1858:G:H8	1.96	0.48
5:1H:975:G:H1'	5:1H:990:A:C2	2.48	0.48
27:1J:18:G:H2'	27:1J:19:G:C8	2.48	0.48
26:1K:76:A:O2'	5:1H:2506:U:H1'	2.12	0.48
13:8E:128:ARG:NH2	3:2K:36:A:OP2	2.38	0.48
1:13:547:A:OP1	8:3E:73:ARG:NH2	2.46	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
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
12:7E:121:ASP:HB2	12:7E:125:ARG:NH2	2.28	0.48
12:7E:35:ILE:HD12	12:7E:118:VAL:HG11	1.94	0.48
20:7I:39:TYR:HB2	20:7I:49:LEU:HD13	1.94	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
28:11:239:ARG:O	28:11:240:ALA:CB	2.61	0.48
1:13:1002:G:C4	1:13:1003:G:C8	3.01	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
5:14:1496:A:O3'	5:14:1497:U:H6	1.96	0.48
5:14:2529:G:P	5:14:2529:G:H21	2.37	0.48
5:14:2633:G:H2'	5:14:2634:G:O4'	2.13	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
1:1G:1396:A:H4'	1:1G:1397:C:OP2	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:H2'	1:1G:616:G:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:730:G:C5	1:1G:731:G:H1'	2.48	0.48
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
5:1H:778:G:N7	58:1H:4188:HOH:O	2.35	0.48
30:31:68:LYS:O	30:31:69:HIS:HB2	2.12	0.48
2:3K:13:C:H2'	2:3K:14:A:H8	1.78	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
39:A8:35:ILE:HD11	39:A8:101:LEU:HD23	1.95	0.48
23:AI:5:LEU:HB3	23:AI:10:PHE:CE1	2.29	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
1:13:1280:A:H3'	1:13:1281:U:H5'	1.94	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
1:13:872: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
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
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
5:14:6:A:H2'	5:14:7:G:H5'	1.95	0.48
27:16:15:A:H3'	27:16:16:G:H5'	1.95	0.48
6:1E:237:ALA:O	6:1E:239:VAL:N	2.47	0.48
1:1G:157:G:H1	1:1G:164:U:H3	1.61	0.48
5:1H:2692:C:O2'	5:1H:2693:A:H5'	2.13	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
14:1I:34:VAL:HG12	14:1I:74:ILE:HG23	1.94	0.48
8:32:13:ARG:HD2	8:32:38:TYR:O	2.13	0.48
8:3E:7:PRO:HB2	8:3E:10:ARG:HG2	1.96	0.48
16:3I:75:HIS:ND1	16:3I:75:HIS:O	2.46	0.48
2:3L:18:G:O2'	2:3L:60:U:O4	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:5I:6:LEU:HB3	18:5I:23:ARG:NH2	2.29	0.48
1:13:1218:C:OP2	18:5I:9:LYS:NZ	2.45	0.48
1:13:375:U:OP1	20:7I:69:THR:HG21	2.13	0.48
37:88:135:ASP:HB3	37:88:137:TYR:N	2.28	0.48
37:88:85:LYS:HG3	37:88:86:GLY: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
1:13:1347:G:O2'	1:13:1348:U:OP2	2.31	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
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
5:14:890:A:H2'	5:14:892:G:H8	1.76	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
1:1G:1152:A:H2'	1:1G:1153:C:H6	1.78	0.48
1:1G:241:C:C2	1:1G:286:G:C2	3.01	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
2:1L:8:4SU:H6	2:1L:13:C:H42	1.77	0.48
29:21:172:VAL:HG13	29:21:182:LEU:HD11	1.94	0.48
30:31:124:LEU:HD12	30:31:125:LEU:O	2.12	0.48
30:31:78:ILE:HA	30:31:83:PHE:CD2	2.48	0.48
8:3E:102:ASP:OD1	8:3E:103:ASN:N	2.46	0.48
8:3E:8:VAL:HG13	8:3E:21:LEU:HB2	1.95	0.48
2:3L:30:G:N2	2:3L:40:C:O2	2.47	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
36:78:97:PRO:HB3	36:78:112:LEU:HD12	1.96	0.48
21:8I:62:SER:HB3	21:8I:72:ARG:HE	1.78	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
24:BI:61:SER:O	24:BI:65:LYS:HB2	2.14	0.48
41:C8:88:ILE:O	41:C8:90:VAL:N	2.46	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:E8:38:TYR:OH	52:N8:47:PRO:HG3	2.12	0.48
28:11:68:LYS:HB3	28:11:70:TRP:CZ3	2.49	0.48
1:13:1053:G:H4'	1:13:1054:C:O5'	2.13	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
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
5:14:128:C:H2'	5:14:129:C:H6	1.79	0.48
5:14:1899:G:N2	5:14:1902:C:N4	2.51	0.48
5:14:528:A:C2	5:14:2043:C:H4'	2.49	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
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: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
7:22:111:LEU:HD11	7:22:144:SER:O	2.13	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
15:2I:21:ILE:HD13	15:2I:94:ALA:HB1	1.95	0.48
2:3K:19:G:O2'	2:3K:57:G:N3	2.46	0.48
2:3K:18:G:HO2'	2:3K:19:G:P	2.37	0.48
5:1H:2562:U:C1'	35:68:23:ARG:HH11	2.22	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
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
1:13:244:U:H4'	1:13:245:C:O5'	2.12	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
1:13:7:G:H5'	1:13:298:A:O4'	2.13	0.48
5:14:1233:C:H2'	5:14:1234:U:H6	1.78	0.48
5:14:142:G:H5''	5:14:1598:C:O2'	2.12	0.48
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:29:U:O4	58:14:4172:HOH:O	2.20	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
1:1G:12:U:O2'	1:1G:526:C:H4'	2.13	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
5:1H:483:A:O4'	45:G8:48:ALA:HB1	2.14	0.48
27:1J:44:G:O2'	27:1J:48:A:N6	2.47	0.48
8:32:30:LYS:HD3	8:32:30:LYS:N	2.29	0.48
1:13:510:A:OP2	8:3E:49:ARG:NH2	2.47	0.48
2:3K:9:A:H5'	2:3K:10:G:OP2	2.14	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
28:11:242:ARG:O	58:11:409:HOH:O	2.20	0.48
1:13:1128:C:H6	1:13:1139:G:C6	2.30	0.48
1:13:631:G:C8	1:13:632:A:C2	3.02	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
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
6:1E:101:MET:HG2	6:1E:108:ILE:HG13	1.95	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
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:2793:G:OP2	5:1H:2793:G:H8	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1L:63:G:H2'	2:1L:64:A:C8	2.49	0.48
7:22:18:TRP:HE3	7:22:18:TRP:H	1.61	0.48
8:3E:62:GLN:HB3	8:3E:66:ARG:NH1	2.28	0.48
2:3L:40:C:H2'	2:3L:41:C:H6	1.78	0.48
12:7E:38:ILE:HD11	12:7E:118:VAL:O	2.13	0.48
37:88:66:ILE:HG22	37:88:67:ARG:H	1.76	0.48
5:1H:2295:C:OP1	39:A8:10:ARG:NH1	2.47	0.48
42:D8:93:GLU:O	42:D8:94:LEU:HD23	2.13	0.48
44:F8:36:LYS:HA	44:F8:39:ILE:HD12	1.96	0.48
44:F8:3:THR:CB	44:F8:6:ASP:HB2	2.43	0.48
51:M8:9:LEU:HD12	51:M8:27:THR:N	2.27	0.48
28:11:155:LEU:HD13	28:11:155:LEU:N	2.29	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
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
5:14:1338:G:N3	5:14:1393:A:H2	2.12	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
6:1E:16:HIS:N	6:1E:16:HIS:CD2	2.82	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
1:1G:281:G:H8	1:1G:281:G:OP2	1.96	0.48
5:1H:1124:C:H2'	5:1H:1125:G:O4'	2.14	0.48
5:1H:1332:G:C8	5:1H:1332:G:H5'	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
5:1H:660:G:H21	36:78:12:ALA:HA	1.79	0.48
27:1J:66:A:C2	27:1J:108:C:C4	3.01	0.48
7:22:179:ARG:O	7:22:206:GLU:HA	2.14	0.48
2:3K:63:G:N2	2:3K:64:A:H1'	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
24:BI:63:ILE:HG22	24:BI:77:ALA:HB1	1.95	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
5:14:899:A:H2'	5:14:900:A:H8	1.79	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
1:1G:588:G:H1	1:1G:651:C:N4	2.07	0.48
1:1G:90:C:H2'	1:1G:91:C:C6	2.48	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
5:1H:733:G:C8	58:1H:4185:HOH:O	2.64	0.48
3:2L:41:C:H2'	3:2L:42:C:C6	2.48	0.48
30:31:178:PRO:HB3	30:31:198:ALA:HA	1.94	0.48
9:4E:28:PHE:O	9:4E:47:LYS:HA	2.13	0.48
32:51:4:ILE:CD1	32:51:4:ILE:H	2.26	0.48
35:68:12:ASP:HB3	35:68:85:VAL:HG13	1.95	0.48
5:1H:910:A:H62	37:88:12:GLN:HA	1.79	0.48
38:98:104:ARG:HD2	38:98:107:ASP:OD2	2.14	0.48
41:C8:34:LYS:H	41:C8:34:LYS:HG2	1.39	0.48
41:C8:6:THR:N	58:C8:203:HOH:O	2.40	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
1:13:1255:G:C2	1:13:1283:G:C2	3.02	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
1:13:66:G:O4'	1:13:173:U:C4	2.67	0.48
1:13:807:A:H2'	1:13:808:C:C6	2.48	0.48
5:14:1742:C:H5'	5:14:1743:G:OP2	2.14	0.48
5:14:1786:A:H1'	5:14:1938:A:N6	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H3'	1:1G:1286:A:C8	2.49	0.48
1:1G:755:G:H2'	1:1G:756:C:H6	1.79	0.48
1:1G:858:G:H8	1:1G:858:G:OP2	1.96	0.48
5:1H:128:C:H2'	5:1H:129:C:C6	2.47	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:270(E):G:C6	5:1H:270(F):U:C4	3.02	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
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
14:1I:48:THR:OG1	14:1I:62:HIS:ND1	2.40	0.48
1:13:973:G:OP1	14:1I:57:LYS:HD3	2.14	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
13:8E:97:LYS:HB2	13:8E:102:LEU:HD12	1.95	0.48
1:13:1233:G:H2'	1:13:1234:C:C6	2.48	0.47
1:13:295:C:H2'	1:13:296:U:O4'	2.14	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
1:13:1074:G:H4'	6:1E:104:ASN:HB2	1.94	0.47
6:1E:237:ALA:O	6:1E:239:VAL:HG23	2.14	0.47
1:1G:1203:C:H2'	1:1G:1204:A:H8	1.79	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
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
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:525:U:H5''	5:1H:556:G:H5''	1.96	0.47
5:1H:710:G:H2'	5:1H:711:G:H8	1.79	0.47
7:22:70:VAL:HG12	7:22:72:LYS:N	2.28	0.47
5:1H:588:U:C2	30:31:90:PHE:CE1	3.01	0.47
8:3E:92:VAL:O	8:3E:96:LEU:HD22	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:4L:20:C:H2'	4:4L:21:C:C6	2.48	0.47
7:2E:29:TYR:OH	18:5I:54:PRO:HD2	2.14	0.47
1:13:1117:G:H5''	13:8E:104:ARG:CZ	2.44	0.47
50:L8:54:VAL:HG13	50:L8:54:VAL:O	2.14	0.47
5:1H:459:U:H5''	54:P8:40:TRP:CG	2.49	0.47
6:12:178:ARG:HH11	6:12:178:ARG:HB2	1.79	0.47
1:13:1234:C:H2'	1:13:1235:U:C6	2.49	0.47
1:13:458:C:H2'	1:13:464:G:O4'	2.14	0.47
27:16:11:C:H5''	27:16:12:C:OP2	2.13	0.47
6:1E:47:THR:O	6:1E:51:LEU:HB2	2.14	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
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
5:1H:1110:G:O2'	5:1H:1111:A:O5'	2.31	0.47
5:1H:758:C:O2	5:1H:1981:A:H2	1.96	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
5:1H:996:A:O2'	41:C8:92:ARG:HG3	2.14	0.47
29:21:78:LEU:HD23	29:21:78:LEU:O	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
16:3I:8:ASN:O	16:3I:11:VAL:HG23	2.14	0.47
2:3L:8:4SU:H5''	2:3L:49:C:OP2	2.14	0.47
34:58:42:TRP:HA	34:58:48:MET:CE	2.44	0.47
11:6E:101:LEU:HA	11:6E:101:LEU:HD23	1.70	0.47
40:B8:136:GLN:HG2	40:B8:136:GLN:H	1.48	0.47
42:D8:2:PHE:CE1	42:D8:42:GLY:HA3	2.49	0.47
6:12:75:LYS:HA	6:12:78:GLN:CB	2.43	0.47
1:13:101:A:OP2	1:13:101:A:H8	1.96	0.47
1:13:977:A:C8	1:13:1223:C:N3	2.82	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
5:14:1420:U:HO2'	5:14:1421:G:P	2.37	0.47
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
5:14:580:C:H2'	5:14:581:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:16:119:A:H2'	27:16:119:A:N3	2.29	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
1:1G:79:G:H1	1:1G:90:C:N4	2.12	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
5:1H:399:G:OP2	58:1H:4155:HOH:O	2.20	0.47
5:1H:57:C:H2'	5:1H:58:G:O4'	2.14	0.47
5:1H:880:G:H22	5:1H:897:C:N4	2.13	0.47
7:22:21:ARG:O	7:22:58:GLU:HA	2.15	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
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
9:4E:106:PRO:O	9:4E:110:LEU:HG	2.14	0.47
5:1H:1111:A:H5'	32:51:3:ARG:HD3	1.95	0.47
11:6E:113:GLU:CG	11:6E:119:ARG:HG2	2.44	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
6:12:149:LEU:HD23	6:12:152:PHE:HB3	1.96	0.47
1:13:1225:A:N3	1:13:1225:A:H2'	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
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
5:14:1919:A:O3'	1:1G:1517:G:H1'	2.14	0.47
5:14:2291:U:H2'	5:14:2292:C:C6	2.50	0.47
5:14:2250:G:O2'	5:14:2496:C:OP1	2.19	0.47
5:14:820:A:N3	5:14:943:U:H4'	2.29	0.47
6:1E:166:ASP:C	6:1E:168:THR:H	2.16	0.47
1:1G:1218:C:H2'	1:1G:1219:U:C6	2.49	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
5:1H:1055:G:O6	5:1H:1056:G:N1	2.47	0.47
5:1H:197:A:N6	5:1H:2430:A:H2'	2.29	0.47
5:1H:2163:C:H2'	5:1H:2164:C:O4'	2.13	0.47
5:1H:858:U:O2	5:1H:2268:A:H2'	2.13	0.47
5:1H:731:C:P	58:1H:3701:HOH:O	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:742:G:H2'	5:1H:743:G:C8	2.50	0.47
15:2I:62:GLN:HB2	15:2I:93:GLN:HE21	1.80	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
5:1H:6:A:O2'	34:58:129:PRO:HB3	2.14	0.47
35:68:63:VAL:HG23	35:68:64:ARG:HG3	1.96	0.47
5:1H:2428:G:N3	36:78:61:ARG:NH1	2.62	0.47
24:BI:26:ASN:HB2	24:BI:71:THR:CG2	2.44	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
1:13:1379: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
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
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
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
5:1H:1639:U:H4'	5:1H:2699:C:H4'	1.96	0.47
5:1H:363(B):G:H2'	5:1H:363(C):G:C8	2.47	0.47
2:1L:8:4SU:H6	2:1L:13:C:N4	2.30	0.47
7:2E:3:ASN:O	7:2E:4:LYS:HG2	2.14	0.47
16:3I:66:VAL:HG22	16:3I:67:THR:N	2.29	0.47
34:58:73:THR:HA	34:58:83:LYS:O	2.14	0.47
11:6E:113:GLU:HB2	11:6E:118:VAL:HG13	1.96	0.47
19:6I:25:THR:HG21	19:6I:70:LEU:HB2	1.95	0.47
35:68:119:PRO:HB2	40:B8:68:TYR:CE2	2.49	0.47
24:BI:53:LEU:HA	24:BI:56:MET:HB3	1.97	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
6:12:101:MET:O	6:12:105:PHE:HB2	2.15	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
1:13:963:G:N2	1:13:972:C:N3	2.43	0.47
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2747:G:O6	5:14:2755:C:H5''	2.15	0.47
5:14:818:G:H4'	5:14:838:C:O3'	2.14	0.47
6:1E:171:ALA:O	6:1E:175:ARG:HB2	2.14	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
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
5:1H:533:G:OP1	41:C8:25:TRP:N	2.38	0.47
14:1I:16:LEU:HD23	14:1I:94:VAL:HG13	1.96	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
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
1:13:1375:A:P	11:6E:28:ASN:HD22	2.36	0.47
1:13:656:C:O3'	19:6I:62:GLN:NE2	2.48	0.47
24:BI:73:HIS:HB3	24:BI:74:LYS:HG3	1.96	0.47
55:Q8:8:LYS:HD2	55:Q8:8:LYS:N	2.30	0.47
6:12:182:ILE:H	6:12:182:ILE:HD12	1.80	0.47
6:12:75:LYS:HD2	6:12:75:LYS:O	2.14	0.47
1:13:1489:G:H2'	1:13:1490:C:O4'	2.14	0.47
5:14:1159:U:O2'	5:14:1160:G:H5'	2.15	0.47
5:14:973:A:O4'	5:14:1188:U:C6	2.68	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
5:14:873:G:N2	5:14:905:U:C2	2.83	0.47
27:16:80:U:O2'	27:16:81:G:H5'	2.15	0.47
25:1F:10:ARG:HA	25:1F:13:ILE:HD12	1.96	0.47
1:1G:1359:C:O2'	1:1G:1361:G:N7	2.48	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
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:780:G:N2	5:1H:783:A:H62	2.03	0.47
5:1H:944:G:H5''	5:1H:945:A:H5'	1.96	0.47
29:21:117:MET:O	29:21:117:MET:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:2E:155:GLY:O	7:2E:157:ILE:HG12	2.14	0.47
3:2K:45:A:H2'	3:2K:46:G:O4'	2.13	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
9:4E:151:LEU:HD11	12:7E:77:GLU:OE2	2.15	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
10:5E:76:ALA:O	10:5E:80:ARG:HG3	2.15	0.47
33:61:110:ASP:HB2	33:61:112:LYS:HG2	1.96	0.47
11:6E:20:ASP:HB3	11:6E:23:VAL:HG23	1.96	0.47
23:AI:41:VAL:H	23:AI:44:MET:HG3	1.79	0.47
40:B8:20:PRO:HG2	40:B8:86:ILE:O	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
1:13:1151:A:O2'	1:13:1152:A:O4'	2.33	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
5:14:2241:A:H2'	5:14:2242:G:C8	2.50	0.47
5:14:271(B):G:N7	5:14:421:U:H2'	2.30	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
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
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
26:1K:42:C:H2'	26:1K:43:C:C6	2.49	0.47
29:21:144:ARG:HB3	29:21:145:LYS:H	1.57	0.47
8:32:30:LYS:CB	8:32:35:ARG:HD2	2.44	0.47
8:3E:96:LEU:HD12	8:3E:139:ARG:HH11	1.80	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
19:6I:82:ILE:O	19:6I:86:GLY:N	2.45	0.47
36:78:18:ARG:C	36:78:19:VAL:HG22	2.34	0.47
1:13:826:C:H4'	12:7E:12:ARG:HG2	1.97	0.47
21:8I:29:HIS:N	21:8I:34:LYS:O	2.46	0.47
45:G8:34:LYS:HG2	45:G8:34:LYS:O	2.15	0.47
5:1H:850:C:H5"	50:L8:18:ASP:HB2	1.97	0.47
1:13:1079:G:C6	1:13:1080:A:N6	2.83	0.47
1:13:266:G:H5"	1:13:267:C:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:535:A:H5''	58:13:1877:HOH:O	2.14	0.47
1:13:872:A:C8	1:13:874:G:C8	3.03	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
5:14:139:G:N2	5:14:141:A:N1	2.62	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
5:14:273(F):C:H3'	5:14:274:G:C5'	2.45	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
6:1E:98:LEU:HD12	6:1E:108:ILE:HD11	1.96	0.47
6:1E:17:PHE:HB3	6:1E:44:LEU:HD21	1.96	0.47
1:1G:1428:A:H2'	1:1G:1429:C:C6	2.49	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
5:1H:1063:G:N2	5:1H:1076:C:O2	2.48	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:2111:C:H5	5:1H:2147:G:C6	2.33	0.47
5:1H:598:G:H2'	5:1H:599:G:O4'	2.15	0.47
5:1H:95:G:O2'	49:K8:48:HIS:HB3	2.14	0.47
5:1H:972:G:OP2	5:1H:973:A:O2'	2.25	0.47
27:1J:13:A:H5''	27:1J:15:A:N6	2.29	0.47
27:1J:2:C:H2'	27:1J:3:C:C6	2.49	0.47
7:22:138:VAL:HG23	7:22:151:VAL:CG2	2.41	0.47
3:2L:26:C:H2'	3:2L:27:G:O4'	2.14	0.47
27:16:42:C:O2'	31:41:67:LYS:O	2.23	0.47
9:4E:81:GLU:HB3	9:4E:90:VAL:HG23	1.97	0.47
5:1H:558:G:P	34:58:111:PRO:HD2	2.55	0.47
36:78:57:THR:HB	36:78:59:LEU:H	1.79	0.47
20:7I:53:VAL:HG13	20:7I:79:VAL:HG22	1.97	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
1:13:920:U:H2'	1:13:921:U:C6	2.50	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
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
5:14:868:U:H2'	5:14:869:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:1E:162:ILE:O	6:1E:185:ILE:HG13	2.15	0.47
6:1E:35:GLU:OE1	6:1E:38:GLY:HA2	2.15	0.47
1:1G:731:G:H5'	1:1G:766:A:H4'	1.96	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:2863:C:O2'	5:1H:2864:G:H5'	2.15	0.47
5:1H:524:U:H2'	5:1H:525:U:C6	2.50	0.47
17:4I:94:ARG:NH1	5:1H:888:C:OP1	2.47	0.47
27:1J:118:G:O6	27:1J:119:A:N6	2.48	0.47
2:1L:30:G:H2'	2:1L:31:A:H8	1.80	0.47
15:2I:46:GLY:HA2	15:2I:50:TYR:O	2.15	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
36:78:115:LEU:HA	36:78:134:ALA:CB	2.38	0.47
20:7I:28:ARG:HG3	20:7I:29:ASP:OD1	2.15	0.47
5:1H:910:A:C5	37:88:13:GLN:HG3	2.50	0.47
10:5E:97:PHE:N	22:9I:30:ASP:OD1	2.46	0.47
40:B8:105:LEU:C	40:B8:107:ASP:H	2.18	0.47
40:B8:91:ARG:O	40:B8:116:ALA:HA	2.15	0.47
40:B8:87:ASP:OD1	40:B8:87:ASP:N	2.47	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
5:1H:2349:G:OP1	53:O8:42:TRP:CH2	2.68	0.47
28:11:70:TRP:CH2	28:11:150:LYS:HA	2.50	0.47
6:12:54:THR:HG23	6:12:199:TYR:HB3	1.96	0.47
1:13:1002:G:H2'	1:13:1003:G:C8	2.50	0.47
1:13:1499:A:OP2	1:13:1499:A:C8	2.68	0.47
1:13:232:G:H2'	1:13:233:C:H6	1.79	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
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
1:1G:1171:G:H2'	1:1G:1172:C:H6	1.78	0.47
1:1G:328:C:H4'	1:1G:329:A:H5''	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:828:A:H5''	1:1G:859:A:N1	2.30	0.47
5:1H:1077:A:H3'	5:1H:1078:U:C5'	2.45	0.47
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
14:1I:57:LYS:CD	14:1I:60:ARG:HH12	2.27	0.47
2:1L:39:PSU:H2'	2:1L:40:C:H6	1.79	0.47
29:21:13:ARG:HG2	29:21:13:ARG:HH11	1.79	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
2:3K:19:G:C6	5:1H:2112:G:H1'	2.50	0.47
34:58:12:ARG:HB2	34:58:50:ASP:OD1	2.14	0.47
33:61:134:PRO:HA	33:61:135:GLU:HG3	1.96	0.47
33:61:2:LYS:HA	33:61:20:ASP:HB2	1.96	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
23:AI:32:LYS:HE3	23:AI:57:HIS:CD2	2.50	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
1:13:1024:G:H4'	1:13:1024:G:OP1	2.14	0.46
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
5:14:1403:C:OP1	5:14:1522:G:N2	2.34	0.46
5:14:176:G:C2'	5:14:177:G:H5'	2.45	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
5:14:642:G:H3'	5:14:642:G:C8	2.50	0.46
6:1E:36:ARG:HA	6:1E:36:ARG:HD2	1.75	0.46
1:1G:1129:C:H5	1:1G:1141:C:H42	1.63	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
5:1H:1045:A:H1'	5:1H:1047:G:N3	2.30	0.46
5:1H:1222:C:H2'	5:1H:1223:C:H6	1.80	0.46
5:1H:1204:A:H61	5:1H:1240:U:H2'	1.79	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:634:C:H2'	5:1H:635:C:H6	1.77	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:831:G:H8	5:1H:831:G:O5'	1.98	0.46
5:1H:99:U:C6	5:1H:102:G:C2	3.02	0.46
2:1L:38:A:H2'	2:1L:39:PSU:C6	2.50	0.46
5:1H:2787:C:H1'	29:21:62:PRO:HG3	1.96	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
5:1H:616:A:C4	30:31:180:GLY:HA2	2.50	0.46
30:31:81:PRO:HB3	30:31:89:VAL:HG23	1.97	0.46
2:3L:53:G:N2	2:3L:61:C:O2	2.48	0.46
2:3L:52:G:H1	2:3L:62:C:H42	1.62	0.46
9:4E:41:VAL:HG13	9:4E:113:ALA:HB2	1.97	0.46
17:4I:15:VAL:HG23	17:4I:43:THR:O	2.15	0.46
36:78:98:GLU:O	36:78:101:VAL:HG13	2.14	0.46
12:7E:23:SER:OG	12:7E:60:ARG:HG2	2.15	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
5:1H:2239:G:H5'	28:11:251:GLY:HA3	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
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
1:13:757:U:H2'	1:13:758:G:O4'	2.16	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
5:14:590:A:H2'	5:14:591:C:C6	2.49	0.46
5:14:588:U:O4	5:14:670:A:H1'	2.15	0.46
5:14:78:A:H2'	5:14:79:G:C8	2.50	0.46
6:1E:77:ALA:HB1	6:1E:165:VAL:HG11	1.98	0.46
6:1E:28:PHE:CD1	6:1E:194:PRO:HD3	2.49	0.46
1:1G:1082:G:H8	1:1G:1082:G:OP2	1.97	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
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:1413:G:N2	5:1H:1589:C:O2	2.44	0.46
5:1H:1644:C:H2'	5:1H:1645:G:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2126:A:H2'	5:1H:2126:A:N3	2.31	0.46
5:1H:2427:C:H5''	5:1H:2428:G:OP1	2.14	0.46
5:1H:320:A:H2'	30:31:136:THR:HG21	1.96	0.46
7:22:84:ILE:HG12	7:22:88:ARG:NH2	2.31	0.46
7:2E:152:ILE:HB	7:2E:199:LYS:HB2	1.97	0.46
30:31:155:LEU:HD13	30:31:174:VAL:HG23	1.98	0.46
8:32:30:LYS:HB2	8:32:35:ARG:HD2	1.96	0.46
2:3K:18:G:H21	2:3K:58:A:N6	2.14	0.46
14:1I:49:VAL:CG2	18:5I:41:ARG:HB2	2.46	0.46
39:A8:83:LYS:O	39:A8:109:GLY:HA2	2.14	0.46
5:1H:1614:A:N6	43:E8:88:ARG:H	2.12	0.46
50:L8:43:ILE:O	50:L8:47:VAL:HG23	2.15	0.46
1:13:109:A:C6	1:13:326:G:C6	3.03	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
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
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
1:1G:1055:A:N6	1:1G:1206:G:C5	2.83	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:2291:U:H2'	5:1H:2292:C:C6	2.50	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
27:1J:21:G:H2'	27:1J:22:U:O4'	2.14	0.46
26:1K:37:MIA:O5'	26:1K:37:MIA:H8	2.15	0.46
29:21:117:MET:HA	29:21:122:PHE:N	2.29	0.46
5:1H:2051:A:H4'	29:21:141:ILE:HG12	1.97	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
30:31:168:ARG:HG2	30:31:175:THR:HG21	1.98	0.46
16:3I:91:LYS:O	16:3I:91:LYS:HG3	2.14	0.46
2:3K:25:C:N4	2:3K:26:A:C8	2.83	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
22:9I:37:VAL:O	22:9I:41:LYS:HB3	2.15	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
6:12:70:PHE:O	6:12:93:VAL:N	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:73:THR:HG21	6:12:97:TRP:N	2.30	0.46
1:13:960:U:C2	1:13:1225:A:N7	2.84	0.46
1:13:447:G:O5'	1:13:447:G:H8	1.99	0.46
1:13:917:G:H2'	1:13:918:A:H8	1.77	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
5:14:530:G:O6	5:14:2023:G:OP1	2.34	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
5:14:57:C:H2'	5:14:58:G:O4'	2.15	0.46
5:14:592:G:H1	5:14:665:C:H42	1.64	0.46
27:16:31:C:H2'	27:16:32:C:C6	2.50	0.46
1:1G:1236:A:H2'	1:1G:1237:C:C6	2.51	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
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
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:240:G:H8	5:1H:240:G:O5'	1.99	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
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:O5'	5:1H:899:A:H8	1.98	0.46
14:1I:81:THR:O	14:1I:85:LEU:HG	2.16	0.46
26:1K:29:G:H2'	26:1K:30:G:H8	1.81	0.46
1:1G:1190:G:H3'	7:22:3:ASN:OD1	2.16	0.46
30:31:41:LEU:HA	30:31:44:ARG:HD3	1.97	0.46
16:3I:47:LYS:HA	16:3I:49:ASN:N	2.26	0.46
2:3L:9:A:O2'	2:3L:10:G:N7	2.33	0.46
9:4E:68:GLU:HG3	9:4E:68:GLU:O	2.15	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
5:1H:2404:C:O3'	36:78:77:ARG:NH2	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:88:LEU:HD12	36:78:95:VAL:HG11	1.98	0.46
12:7E:53:VAL:O	12:7E:56:LYS:HG3	2.16	0.46
38:98:12:ARG:CG	38:98:12:ARG:HH11	2.27	0.46
27:16:7:G:O5'	39:A8:29:PHE:CE2	2.68	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
6:12:16:HIS:HA	6:12:209:ARG:HG2	1.98	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
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
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
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
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
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
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
7:22:113:ALA:HB3	7:22:114:PRO:HD3	1.98	0.46
7:22:70:VAL:O	7:22:106:VAL:HG23	2.14	0.46
15:2I:112:THR:HA	15:2I:113:PRO:HD3	1.73	0.46
8:32:158:ILE:HG12	8:32:158:ILE:H	1.48	0.46
8:32:15:GLU:OE1	8:32:59:ARG:NH2	2.46	0.46
33:61:110:ASP:OD1	33:61:110:ASP:N	2.39	0.46
38:98:109:ALA:HA	38:98:110:PRO:HD2	1.74	0.46
38:98:34:ILE:HG22	38:98:114:VAL:HB	1.98	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:CD2	46:H8:76:LEU:H	2.14	0.46
28:11:72:LYS:HD2	28:11:72:LYS:HA	1.85	0.46
1:13:554:C:H2'	1:13:555:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:739:C:O2	19:6I:42:HIS:HE1	1.96	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
27:16:48:A:H4'	39:A8:95:HIS:HD2	1.81	0.46
1:13:1286:A:OP1	25:1F:26:LYS:HG2	2.15	0.46
1:1G:1131:G:N7	1:1G:1132:C:H5	2.13	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
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: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:2747:G:O6	5:1H:2755:C:H5''	2.15	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
27:1J:10:C:C4	27:1J:11:C:C5	3.04	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
8:32:3:ARG:HH22	8:32:5:ILE:HG23	1.80	0.46
9:4E:131:ILE:HA	9:4E:131:ILE:HD13	1.82	0.46
33:61:79:ILE:HA	33:61:80:PRO:HD2	1.81	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
37:88:17:LEU:HD13	37:88:39:PRO:HB2	1.97	0.46
1:13:1179:A:O3'	13:8E:103:THR:HG23	2.16	0.46
6:12:215:LEU:HA	6:12:218:ALA:HB3	1.97	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
1:13:1478:C:H2'	1:13:1479:C:H6	1.81	0.46
1:13:474:G:H5''	20:7I:81:ARG:CZ	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
5:14:248:G:H5'	5:14:250:G:N7	2.30	0.46
5:14:2526:G:H5'	5:14:2742:C:O2'	2.16	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
27:16:60:C:C2	27:16:61:G:C8	3.04	0.46
25:1F:2:GLY:O	25:1F:4:GLY:N	2.49	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: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
1:1G:1239:A:O2'	1:1G:1298:C:N4	2.48	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
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
2:1L:7:A:H61	2:1L:66:U:H3	1.63	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
30:31:101:LEU:HD22	30:31:102:PRO:CD	2.45	0.46
8:32:23:GLY:O	8:32:27:TYR:HD1	1.98	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
38:98:81:ASP:O	38:98:85:PRO:HG2	2.16	0.46
24:BI:33:ILE:O	24:BI:37:SER:OG	2.33	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:O	54:P8:37:LYS:HG3	2.16	0.46
28:11:66:ASP:HB3	28:11:105:ILE:CD1	2.46	0.46
1:13:134:A:H61	20:7I:25:ARG:NH1	2.14	0.46
5:14:528:A:H2	5:14:2043:C:H5'	1.79	0.46
5:14:1050:A:N3	5:14:2751:G:H2'	2.30	0.46
5:14:277:C:OP2	5:14:278:A:N6	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:817:C:H5	58:14:3751:HOH:O	1.98	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
6:1E:70:PHE:O	6:1E:93:VAL:N	2.36	0.46
1:1G:1170:A:H8	1:1G:1170:A:O5'	1.99	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
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
5:1H:363(E):U:H5'	5:1H:363(F):A:OP2	2.15	0.46
29:21:119:ARG:HG2	29:21:160:TYR:HB2	1.96	0.46
7:22:140:ARG:NE	7:22:140:ARG:HA	2.30	0.46
8:3E:166:LYS:HG2	8:3E:178:VAL:HG11	1.98	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
36:78:39:LYS:CG	36:78:45:LEU:HD22	2.43	0.46
20:7I:83:GLU:HB3	20:7I:84:ALA:H	1.66	0.46
38:98:12:ARG:HD3	38:98:16:HIS:CD2	2.50	0.46
24:BI:53:LEU:O	24:BI:57:ARG:NH1	2.49	0.46
41:C8:92:ARG:HB3	42:D8:11:GLN:OE1	2.15	0.46
28:11:124:PRO:HG2	28:11:129:ASN:HD21	1.81	0.46
6:12:19:HIS:CG	6:12:20:GLU:N	2.83	0.46
1:13:972:C:OP1	58:13:1830:HOH:O	2.20	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
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
27:16:29:A:H2'	27:16:30:C:O4'	2.15	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
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
5:1H:1046:A:O2'	5:1H:1047:G:OP1	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:803:U:C4	5:1H:804:A:N7	2.84	0.46
5:1H:806:C:C2	5:1H:807:U:C5	3.04	0.46
2:3L:17:C:N4	5:14:2112:G:OP1	2.48	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
5:1H:1006:C:H5'	34:58:28:THR:HG23	1.98	0.46
10:5E:24:GLU:CG	10:5E:28:ARG:HH22	2.29	0.46
1:13:1346:A:C5	11:6E:10:ARG:NH1	2.84	0.46
19:6I:17:ARG:HA	19:6I:17:ARG:HD2	1.78	0.46
5:1H:636:G:N7	36:78:113:LYS:HE2	2.30	0.46
21:8I:45:HIS:O	21:8I:73:VAL:HG23	2.16	0.46
38:98:51:LEU:HD22	38:98:66:VAL:HG13	1.97	0.46
39:A8:103:GLU:O	39:A8:106:ARG:HD3	2.16	0.46
39:A8:67:ARG:HB2	39:A8:67:ARG:NH1	2.31	0.46
27:16:48:A:H4'	39:A8:95:HIS:CD2	2.51	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
6:12:16:HIS:O	6:12:210:SER:HB2	2.15	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
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
5:14:120:U:H4'	5:14:121:G:H5''	1.97	0.46
5:14:1678:G:N2	5:14:1989:G:N2	2.62	0.46
5:14:208:C:H2'	5:14:209:C:C6	2.50	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
5:14:2647:U:H2'	5:14:2648:C:H6	1.81	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:982:C:OP1	58:14:4327:HOH:O	2.21	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
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:N3	1:1G:397:A:H3'	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
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: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
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
14:1I:11:PHE:HB3	18:5I:55:GLY:HA3	1.97	0.46
2:1L:68:C:H2'	2:1L:69:G:C8	2.51	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
9:4E:36:ASP:OD2	9:4E:38:GLN:HB2	2.16	0.46
19:6I:71:GLN:HG2	19:6I:71:GLN:O	2.16	0.46
37:88:37:LEU:HA	37:88:37:LEU:HD23	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
6:12:73:THR:HB	6:12:96:ARG:H	1.79	0.45
1:13:1256:A:N3	1:13:1277:C:N4	2.63	0.45
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
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
5:14:646:A:H2'	5:14:647:G:O4'	2.16	0.45
5:14:71:A:H5'	5:14:71:A:H8	1.81	0.45
27:16:11:C:O5'	27:16:12:C:H5	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:1047:G:H2'	5:1H:1110:G:C2	2.49	0.45
5:1H:1044:G:HO2'	5:1H:1111:A:H61	1.64	0.45
5:1H:1478:G:H2'	5:1H:1479:G:H8	1.80	0.45
5:1H:1380:G:N2	5:1H:1570:A:C2	2.84	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
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
7:2E:119:ARG:O	7:2E:123:GLN:HG3	2.16	0.45
30:31:32:LEU:CD2	30:31:105:VAL:HG13	2.46	0.45
1:1G:542:G:H5'	8:32:41:GLY:HA3	1.98	0.45
2:3K:33:U:H1'	2:3K:37:MIA:H121	1.98	0.45
2:3L:46:7MG:O2'	2:3L:48:C:H1'	2.15	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
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:100:LYS:HB3	21:8I:101:ARG:CZ	2.46	0.45
21:8I:58:GLU:O	21:8I:74:LEU:N	2.41	0.45
21:8I:43:LEU:O	21:8I:69:LYS:HG3	2.16	0.45
22:9I:66:LEU:O	22:9I:70:ILE:HG13	2.15	0.45
40:B8:60:THR:HG22	40:B8:77:PRO:HA	1.97	0.45
5:1H:2019:A:H4'	41:C8:34:LYS:HD3	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
1:13:1322: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
1:13:948:C:O2'	1:13:949:A:H5'	2.17	0.45
5:14:1572:A:H8	5:14:1572:A:O5'	1.98	0.45
5:14:2689:U:H5'	5:14:2689:U:H6	1.81	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
27:16:31:C:H2'	27:16:32:C:H6	1.81	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
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
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:822:U:O2'	5:1H:823:G:H5'	2.16	0.45
27:1J:117:G:H8	27:1J:117:G:O5'	1.99	0.45
27:1J:72:G:O2'	27:1J:104:A:N6	2.45	0.45
26:1K:74:C:H1'	26:1K:75:C:H5'	1.99	0.45
7:22:23:TYR:CD1	7:22:24:ALA:N	2.84	0.45
30:31:108:LYS:HE2	30:31:108:LYS:HB3	1.75	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
31:41:137:GLU:HG3	31:41:140:ILE:HG23	1.98	0.45
5:1H:2780:G:OP2	34:58:118:LYS:HD3	2.15	0.45
5:1H:6:A:C2	34:58:131:GLN:HG3	2.51	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
39:A8:67:ARG:O	39:A8:71:ARG:HG3	2.17	0.45
6:12:102:LEU:HD12	6:12:102:LEU:H	1.82	0.45
6:12:124:SER:OG	6:12:126:GLU:HB2	2.16	0.45
1:13:1298:C:C5	11:6E:114:ARG:HD3	2.51	0.45
1:13:129(A):G:N2	1:13:188:U:O2'	2.49	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
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
5:14:944:G:H5''	5:14:945:A:O5'	2.17	0.45
1:1G:1256:A:N6	1:1G:1277:C:H3'	2.30	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:141:A:C8	5:1H:1408:C:H1'	2.52	0.45
5:1H:1996:C:OP1	35:68:31:LYS:HE3	2.16	0.45
5:1H:189:G:H2'	5:1H:205:G:N2	2.31	0.45
2:3K:56:C:N3	5:1H:2112:G:N2	2.64	0.45
5:1H:2303:G:O2'	31:41:132:ASN:HB2	2.17	0.45
5:1H:26:G:C6	5:1H:27:G:N1	2.84	0.45
5:1H:389:G:H22	36:78:72:PRO:HD3	1.81	0.45
5:1H:50:U:H3'	5:1H:51:G:H5'	1.98	0.45
3:2L:33:OMC:HM22	3:2L:34:U:H5'	1.99	0.45
30:31:129:PHE:O	30:31:130:ALA:HB3	2.16	0.45
5:1H:323:G:C8	30:31:171:PRO:HG3	2.51	0.45
8:32:22:LYS:HD2	8:32:26:CYS:SG	2.56	0.45
8:3E:7:PRO:CB	8:3E:10:ARG:HG2	2.46	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
13:8E:92:TYR:O	13:8E:96:LEU:HB2	2.16	0.45
1:13:280:C:O2	21:8I:38:ARG:HG3	2.16	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
5:1H:1188:U:C4'	42:D8:79:VAL:HG22	2.46	0.45
5:1H:773:U:C4'	28:11:47:GLY:HA3	2.47	0.45
6:12:201:ILE:HA	6:12:202:PRO:HD2	1.88	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
5:14:117:G:C6	5:14:119:A:C6	3.04	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
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
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:H6	1:1G:1260:C:H3'	1.81	0.45
1:1G:999:U:H2'	1:1G:1000:A:H8	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:7:G:H2'	5:1H:8:A:O4'	2.16	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
26:1K:51:U:H2'	26:1K:52:G:H8	1.81	0.45
7:22:119:ARG:HH22	7:22:140:ARG:HG2	1.81	0.45
8:32:31:CYS:O	8:32:31:CYS:SG	2.74	0.45
8:3E:100:ARG:O	8:3E:103:ASN:N	2.49	0.45
1:13:881:G:OP2	16:3I:12:ARG:NH2	2.50	0.45
32:51:51:ARG:HG2	32:51:52:VAL:H	1.82	0.45
34:58:23:LEU:HA	34:58:23:LEU:HD12	1.72	0.45
18:5I:23:ARG:HH11	18:5I:30:ALA:HB2	1.81	0.45
12:7E:7:ALA:HB2	12:7E:85:ARG:HD2	1.98	0.45
21:8I:9:VAL:O	21:8I:21:VAL:HA	2.17	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
36:78:50:ARG:HD3	55:Q8:7:HIS:CD2	2.52	0.45
6:12:142:LEU:O	6:12:142:LEU:HD23	2.16	0.45
1:13:1139:G:H4'	1:13:1140:C:C5'	2.45	0.45
1:13:11:G:C5	1:13:12:U:C5	3.05	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
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
5:14:1041:C:N4	5:14:1114:G:H1	2.12	0.45
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
5:14:470:A:H2'	5:14:471:A:O4'	2.17	0.45
5:14:493:G:O5'	5:14:493:G:H8	2.00	0.45
5:14:308:G:C8	5:14:501:A:H1'	2.52	0.45
5:14:654(D):G:H22	5:14:654(Q):C:N4	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:993:G:C5	5:14:994:C:C5	3.05	0.45
1:1G:1014:A:C6	1:1G:1015:A:N6	2.85	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
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
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
14:1I:66:ARG:HB2	14:1I:68:HIS:CE1	2.52	0.45
2:1L:51:U:H6	2:1L:51:U:O5'	2.00	0.45
30:31:177:ALA:HB1	30:31:178:PRO:HD2	1.98	0.45
30:31:114:VAL:HG11	30:31:202:PHE:HE2	1.81	0.45
30:31:28:ILE:HA	30:31:112:MET:CE	2.47	0.45
8:3E:154:ASN:CG	8:3E:155:LEU:H	2.20	0.45
8:3E:52:SER:O	8:3E:55:ALA:HB3	2.16	0.45
2:3K:2:C:H2'	2:3K:3:C:C6	2.51	0.45
9:4E:63:ARG:HA	9:4E:66:MET:CE	2.46	0.45
18:5I:50:LYS:HB3	18:5I:50:LYS:HE2	1.69	0.45
35:68:113:LYS:HE2	35:68:117:LEU:HD21	1.98	0.45
20:7I:27:LYS:H	20:7I:27:LYS:HG2	1.44	0.45
38:98:118:GLU:OE1	38:98:118:GLU:HA	2.16	0.45
38:98:98:LEU:HA	38:98:98:LEU:HD23	1.84	0.45
1:13:195:A:H4'	24:BI:68:LYS:HD3	1.99	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:HD3	55:Q8:47:LYS:HA	1.47	0.45
5:1H:729:G:C6	28:11:208:LYS:HB2	2.52	0.45
6:12:92:TYR:CE1	6:12:151:GLY:HA3	2.51	0.45
6:12:19:HIS:CE1	6:12:206:ASP:H	2.34	0.45
1:13:1316:G:H2'	1:13:1318:A:OP2	2.15	0.45
1:13:976:G:H5'	1:13:1358:U:O2'	2.17	0.45
1:13:1508:G:O5'	1:13:1508:G:H8	1.99	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
5:14:1322:A:N1	5:14:1333:C:O2'	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:14:17:G:H2'	5:14:18:C:H6	1.80	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
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
27:16:71:C:C2	27:16:72:G:C8	3.05	0.45
6:1E:195:ASP:O	12:7E:74:PRO:HG3	2.17	0.45
1:13:1103:C:H5''	6:1E:98:LEU:HD13	1.97	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
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
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
29:21:38:THR:CG2	29:21:41:LYS:HB2	2.47	0.45
7:22:104:GLN:OE1	7:22:105:GLU:N	2.27	0.45
17:4I:3:ARG:CZ	17:4I:7:VAL:HG13	2.46	0.45
10:5E:76:ALA:HA	10:5E:79:LEU:HD12	1.99	0.45
33:61:126:TYR:HB2	33:61:140:LEU:HD11	1.98	0.45
1:13:1290:G:O3'	11:6E:37:ASN:ND2	2.50	0.45
19:6I:66:LEU:HD12	19:6I:66:LEU:HA	1.74	0.45
1:13:110:C:O2'	20:7I:25:ARG:O	2.31	0.45
40:B8:107:ASP:OD1	40:B8:107:ASP:N	2.42	0.45
40:B8:74:ARG:HD3	40:B8:76:PHE:CZ	2.52	0.45
55:Q8:45:GLY:N	55:Q8:46:ARG:HB3	2.31	0.45
6:12:167:PRO:HD2	6:12:192:SER:OG	2.17	0.45
6:12:83:MET:SD	6:12:234:PRO:HB2	2.57	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
5:14:565:C:H4'	5:14:1253:A:C6	2.52	0.45
5:14:1628:G:H2'	5:14:1629:U:C6	2.52	0.45
5:14:16:G:H2'	5:14:17:G:H8	1.82	0.45
2:1L:76:A:C8	5:14:2583:G:N2	2.85	0.45
5:14:2688:U:C5	5:14:2720:U:OP2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2885:C:N3	5:14:2886:G:H1'	2.31	0.45
5:14:807:U:C2	5:14:808:G:C8	3.04	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
5:1H:1474:C:H2'	5:1H:1475:G:C8	2.51	0.45
5:1H:172:C:H2'	5:1H:173:G:H8	1.80	0.45
5:1H:1843:C:H6	5:1H:1843:C:O5'	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
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
14:1I:3:LYS:N	14:1I:74:ILE:O	2.50	0.45
7:22:73:PRO:O	7:22:76:VAL:HG22	2.16	0.45
3:2K:20:G:C4	3:2K:58:A:C2	3.05	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
5:1H:1243:G:H4'	36:78:7:ARG:NH2	2.31	0.45
48:J8:50:ARG:HB2	48:J8:50:ARG:HE	1.61	0.45
28:11:206:LEU:HD23	28:11:206:LEU:HA	1.76	0.45
6:12:166:ASP:HB3	6:12:169:LYS:HB3	1.99	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
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
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
27:16:42:C:C5	27:16:43:C:C5	3.05	0.45
1:1G:1275:A:H2'	1:1G:1276:G:O4'	2.17	0.45
1:1G:195:A:N7	1:1G:196:A:C6	2.84	0.45
1:1G:21:G:H2'	1:1G:22:G:C8	2.52	0.45
5:1H:1042:G:H1	5:1H:1113:U:H3	1.63	0.45
5:1H:996:A:C5	5:1H:1160:G:N2	2.85	0.45
5:1H:2138:C:N4	5:1H:2153:G:H1	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
9:4E:11:ILE:HD11	9:4E:31:LEU:HD22	1.98	0.45
4:4L:13:A:N7	1:1G:1503:A:C2	2.85	0.45
33:61:75:LEU:HB3	33:61:105:HIS:HD2	1.82	0.45
12:7E:104:ARG:O	12:7E:107:LEU:HB2	2.17	0.45
12:7E:86:ILE:O	12:7E:88:LYS:HG2	2.17	0.45
13:8E:118:LYS:O	13:8E:119:ALA:HB3	2.16	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
23:AI:43:GLU:HG2	23:AI:43:GLU:H	1.45	0.45
24:BI:10:LEU:HG	24:BI:12:ALA:H	1.81	0.45
44:F8:65:ARG:HH11	44:F8:65:ARG:HB3	1.81	0.45
46:H8:59:LEU:HD23	46:H8:59:LEU:HA	1.70	0.45
46:H8:7:ALA:HB3	46:H8:61:LEU:CB	2.46	0.45
37:88:137:TYR:CE1	46:H8:83:PRO:HG3	2.52	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
28:11:71:ASP:HB2	28:11:103:ARG:HH22	1.82	0.45
1:13:1058:G:H2'	1:13:1059:C:O4'	2.16	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
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
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
6:1E:189:ASP:HB3	6:1E:191:ASP:HB2	1.99	0.45
1:1G:1130:A:N6	1:1G:1131:G:O6	2.50	0.45
1:1G:976:G:OP2	1:1G:1358:U:O2'	2.35	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2311:A:H8	31:41:88:ILE:HD12	1.82	0.45
5:1H:978:G:C2	5:1H:986:C:C2	3.05	0.45
2:1L:53:G:H2'	2:1L:54:U:C6	2.51	0.45
36:78:113:LYS:HG2	36:78:115:LEU:HD23	1.98	0.45
5:1H:2393:A:H5'	36:78:63:PRO:HB3	1.98	0.45
24:BI:64:ASP:N	24:BI:64:ASP:OD1	2.50	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
1:13:1106: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
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
5:14:1097:U:H2'	5:14:1098:A:O4'	2.16	0.45
5:14:140:A:H8	5:14:1408:C:O2'	1.93	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
5:14:363:G:H2'	5:14:363(A):A:C8	2.50	0.45
5:14:38:A:H2'	5:14:39:C:H6	1.76	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
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
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
7:22:3:ASN:H	7:22:3:ASN:ND2	2.10	0.45
7:22:40:ARG:HG3	7:22:40:ARG:H	1.47	0.45
7:2E:18:TRP:HB3	7:2E:20:SER:O	2.16	0.45
15:2I:93:GLN:OE1	15:2I:96:ARG:HD3	2.16	0.45
30:31:53:THR:O	30:31:56:GLU:N	2.42	0.45
31:41:125:PHE:CZ	31:41:170:ARG:HA	2.51	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:4E:12:LEU:HD21	9:4E:14:ARG:HD3	1.99	0.45
18:5I:35:ARG:HH11	18:5I:35:ARG:HG2	1.79	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:HA	38:98:60:LEU:HD12	1.70	0.45
39:A8:74:ALA:HB1	39:A8:107:GLU:O	2.16	0.45
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
6:12:138:LEU:HG	6:12:138:LEU:H	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
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
1:13:131:C:H2'	1:13:131:C:O2	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
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:H2'	5:14:2321:G:N3	2.31	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
6:1E:87:ARG:HH11	6:1E:219:VAL:HB	1.81	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
1:1G:244:U:H5'	1:1G:244:U:H6	1.82	0.44
1:1G:67:C:H2'	1:1G:68:G:C8	2.52	0.44
5:1H:1001:A:H2'	5:1H:1002:G:O4'	2.16	0.44
5:1H:18:C:O3'	41:C8:23:GLY:HA2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:21:135:HIS:CD2	29:21:135:HIS:N	2.82	0.44
15:2I:83:ILE:HG12	15:2I:109:VAL:HG23	1.98	0.44
30:31:117:ARG:HD2	30:31:117:ARG:HA	1.61	0.44
8:32:22:LYS:O	8:32:113:SER:HB3	2.17	0.44
1:1G:543:C:OP1	8:32:14:ARG:HD2	2.16	0.44
8:3E:85:LYS:HB2	8:3E:85:LYS:HE2	1.65	0.44
5:1H:1012:U:O4	34:58:25:ARG:HA	2.17	0.44
40:B8:58:ASN:O	40:B8:58:ASN:ND2	2.50	0.44
40:B8:88:ILE:HD12	40:B8:90:GLN:H	1.81	0.44
40:B8:26:ASP:HB2	40:B8:90:GLN:O	2.16	0.44
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
28:11:119:ALA:CB	28:11:130:ALA:HB3	2.46	0.44
28:11:217:ARG:HG2	28:11:217:ARG:H	1.51	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
1:13:830:G:H2'	1:13:831:U:O4'	2.17	0.44
5:14:1016:G:H2'	5:14:1017:G:O4'	2.17	0.44
5:14:223:A:N1	5:14:407:G:O2'	2.42	0.44
5:14:2637:U:H2'	5:14:2638:G:O4'	2.17	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
6:1E:178:ARG:HB2	6:1E:178:ARG:HH11	1.83	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
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:234:C:H2'	5:1H:235:U:C6	2.50	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
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
27:1J:45:A:H2'	27:1J:45:A:N3	2.32	0.44
29:21:15:PHE:HA	29:21:19:ARG:O	2.17	0.44
16:3I:43:VAL:HG23	16:3I:93:LEU:HD22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3K:35:A:H2'	2:3K:36:A:H8	1.82	0.44
31:41:68:PRO:HB3	31:41:92:VAL:HB	1.99	0.44
17:4I:49:THR:HB	17:4I:52:GLU:HG2	1.99	0.44
32:51:32:GLU:O	32:51:33:LEU:HD23	2.17	0.44
11:6E:5:ARG:NE	11:6E:7:ALA:HA	2.32	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
38:98:103:ARG:HD2	38:98:108:GLY:O	2.17	0.44
24:BI:29:LYS:HB2	24:BI:29:LYS:HE3	1.63	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
5:1H:2360:A:OP1	55:Q8:49:VAL:HB	2.17	0.44
1:13:1074:G:N3	1:13:1102:A:C2	2.86	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
1:13:760:G:H2'	1:13:761:G:H5'	1.99	0.44
1:13:662:G:O2'	1:13:836:G:OP1	2.33	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
5:14:234: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
5:14:2712:U:O2'	5:14:2712(A):A:P	2.75	0.44
5:14:524:U:H2'	5:14:525:U:H6	1.82	0.44
5:14:7:G:H2'	5:14:8:A:C8	2.52	0.44
1:1G:1369:C:H2'	1:1G:1370:G:O4'	2.17	0.44
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
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
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:71:A:OP1	5:1H:72:U:H2'	2.18	0.44
29:21:21:VAL:HA	29:21:22:PRO:HD3	1.58	0.44
7:22:136:GLN:O	7:22:139:GLN:N	2.51	0.44
1:1G:1112:C:C4	7:22:178:LEU:HD23	2.53	0.44
7:22:21:ARG:NH1	7:22:21:ARG:HB3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:3L:50:U:H2'	2:3L:51:U:C6	2.52	0.44
32:51:15:VAL:HG12	32:51:29:PRO:HD2	1.99	0.44
37:88:5:ARG:H	37:88:5:ARG:HD3	1.79	0.44
22:9I:53:ARG:NE	22:9I:58:LEU:O	2.50	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
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
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
5:14:37:C:H2'	5:14:38:A:H8	1.81	0.44
5:14:600:G:N2	5:14:605:C:O3'	2.50	0.44
5:14:654:A:OP1	5:14:654:A:H8	2.00	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
1:1G:191(F):U:H2'	1:1G:191:G:H8	1.81	0.44
5:1H:11:G:H2'	5:1H:12:U:H5'	1.99	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: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:1889:A:H2'	5:1H:1890:A:O4'	2.17	0.44
5:1H:2080:G:C8	5:1H:2080:G:H5''	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
5:1H:68:G:H2'	5:1H:69:C:O4'	2.17	0.44
5:1H:7:G:N2	5:1H:8:A:N3	2.66	0.44
5:1H:2053:G:OP1	29:21:144:ARG:HD3	2.16	0.44
29:21:46:ALA:HB1	29:21:80:GLU:HB3	1.99	0.44
34:58:37:LYS:HB3	34:58:37:LYS:HE2	1.80	0.44
34:58:47:ALA:HB2	34:58:112:LEU:HD11	2.00	0.44
33:61:86:THR:O	33:61:122:GLU:HG3	2.17	0.44
33:61:9:LEU:HD12	33:61:9:LEU:HA	1.75	0.44
35:68:91:LEU:HA	35:68:91:LEU:HD12	1.72	0.44
36:78:106:LEU:O	36:78:107:LYS:C	2.55	0.44
1:13:824:C:O2'	12:7E:1:MET:HB3	2.18	0.44
37:88:17:LEU:HA	37:88:17:LEU:HD23	1.58	0.44
37:88:20:ALA:HB2	37:88:99:PRO:HD2	1.99	0.44
22:9I:47:THR:O	22:9I:83:GLU:N	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:A8:36:TYR:N	39:A8:36:TYR:CD1	2.86	0.44
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
28:11:226:MET:HB3	28:11:230:ASP:HB2	1.99	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
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
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
5:14:49:A:H4'	5:14:50:U:H5''	1.98	0.44
1:1G:1399:C:C2	1:1G:1502:A:N6	2.86	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:5:U:O2'	8:32:84:LYS:HG3	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:270(J):G:H1	5:1H:270(P):C:N4	2.14	0.44
5:1H:2714:G:P	58:1H:3681:HOH:O	2.76	0.44
5:1H:761:A:C8	58:1H:4181:HOH:O	2.56	0.44
29:21:61:ARG:O	29:21:63:LEU:HD22	2.17	0.44
3:2K:59:A:H4'	3:2K:60:A:OP1	2.18	0.44
3:2L:14:A:C2	3:2L:23:G:C4	3.06	0.44
8:3E:29:PRO:HA	8:3E:34:GLU:HG3	1.99	0.44
2:3K:70:G:C5	2:3K:71:G:N7	2.86	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
5:1H:906:G:OP1	37:88:141:GLN:HG2	2.18	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:H8:165:VAL:HB	46:H8:167:PRO:HD3	1.98	0.44
46:H8:8:TYR:HB2	46:H8:38:TYR:CE1	2.53	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
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
28:11:69:ARG:HG3	28:11:69:ARG:NH1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1305:G:N2	1:13:1331:G:C4	2.86	0.44
1:13:590:C:H2'	1:13:591:U:C6	2.52	0.44
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
5:14:960:A:C8	5:14:962:G:C8	3.06	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
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
1:1G: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:91:C:H2'	1:1G:92:G:C8	2.53	0.44
1:1G:959:A:O2'	1:1G:984:C:O2'	2.29	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
5:1H:34:C:OP2	5:1H:34:C:C6	2.68	0.44
5:1H:500:G:N2	5:1H:502:A:H3'	2.32	0.44
5:1H:74:A:H8	5:1H:74:A:O5'	2.00	0.44
27:1J:97:G:H2'	27:1J:98:G:O4'	2.17	0.44
26:1K:38:A:H5'	5:1H:1913:A:C6	2.52	0.44
30:31:77:ASP:OD1	30:31:77:ASP:N	2.25	0.44
2:3K:54:U:H2'	2:3K:55:PSU:O4'	2.18	0.44
31:41:61:ALA:HA	31:41:66:GLN:O	2.18	0.44
34:58:2:LYS:N	34:58:2:LYS:HD2	2.33	0.44
33:61:114:LEU:HB3	33:61:115:ALA:H	1.61	0.44
33:61:86:THR:HA	33:61:123:LEU:HD13	2.00	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
1:13:1011: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
1:13:1347:G:OP2	13:8E:107:ARG:HG2	2.18	0.44
1:13:41:G:H2'	1:13:42:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:511:C:C2	1:13:512:U:C6	3.06	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
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
5:14:68:G:H2'	5:14:69:C:O4'	2.17	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
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
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: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
29:21:24:THR:HG21	29:21:188:VAL:CG2	2.48	0.44
3:2K:9:G:H1'	3:2K:47:7MG:H5'	1.99	0.44
8:3E:141:ARG:HB2	8:3E:141:ARG:CZ	2.47	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
33:61:123:LEU:HD23	33:61:142:VAL:O	2.16	0.44
33:61:120:ILE:HG12	33:61:126:TYR:CE2	2.53	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
5:1H:2870:C:H5''	38:98:65:LEU:HD21	2.00	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
1:13:1272: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
5:14:198: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
5:14:2270: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
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
27:16:25:A:OP1	58:16:301:HOH:O	2.20	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
1:1G:166:G:H2'	1:1G:167:G:H8	1.83	0.44
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
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
5:1H:844:C:H3'	5:1H:845:G:H8	1.81	0.44
2:1L:14:A:C2	2:1L:22:G:H1'	2.53	0.44
7:22:131:ARG:HH11	7:22:131:ARG:HG3	1.83	0.44
7:22:181:ASN:OD1	7:22:204:LEU:HB2	2.18	0.44
16:3I:24:VAL:CB	16:3I:27:LEU:HD12	2.47	0.44
9:4E:147:ASP:HA	9:4E:150:ARG:NH1	2.33	0.44
9:4E:76:ILE:HG13	9:4E:93:PRO:HB3	2.00	0.44
4:4L:20:C:H2'	4:4L:21:C:H6	1.83	0.44
11:6E:126:ASP:O	11:6E:130:GLY:N	2.51	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
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
12:7E:34:GLU:HB3	12:7E:118:VAL:HG21	1.98	0.44
39:A8:66:ALA:HA	39:A8:69:VAL:CG1	2.46	0.44
23:AI:40:ILE:HD11	23:AI:62:ILE:CG2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:12:77:ALA:HB2	6:12:211:ILE:HD13	2.00	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
1:13:148:G:H2'	1:13:149:A:H8	1.83	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
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
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
27:16:24:G:N7	27:16:56:G:H2'	2.33	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
1:1G:571:U:O2	1:1G:918:A:H5'	2.18	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: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
5:1H:2053:G:H5'	29:21:144:ARG:O	2.18	0.44
7:2E:91:LEU:HB2	7:2E:99:VAL:HG21	1.99	0.44
30:31:164:ARG:HG3	30:31:175:THR:OG1	2.17	0.44
8:32:60:GLU:OE2	8:32:198:VAL:HA	2.18	0.44
1:13:406:G:H21	8:3E:119:GLN:HE22	1.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:78:19:VAL:HG11	36:78:25:SER:OG	2.18	0.44
37:88:43:THR:O	37:88:46:GLN:N	2.48	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
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:G8:94:LYS:HA	45:G8:94:LYS:HD2	1.72	0.44
45:G8:87:LYS:N	45:G8:94:LYS:HG2	2.24	0.44
48:J8:85:LEU:HD13	48:J8:85:LEU:HA	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
28:11:105:ILE:HA	28:11:105:ILE:HD12	1.83	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
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
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
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
6:1E:8:LYS:HE2	6:1E:8:LYS:H	1.82	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
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
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:216:A:H5'	58:1H:3796:HOH:O	2.16	0.43
5:1H:2782:G:C8	5:1H:2782:G:O5'	2.71	0.43
5:1H:31:C:O2'	5:1H:32:C:H5'	2.18	0.43
5:1H:675:A:C8	5:1H:804:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:24:THR:N	29:21:184:VAL:O	2.48	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
8:32:8:VAL:O	8:32:11:LEU:N	2.44	0.43
31:41:18:GLU:O	31:41:22:ARG:HG3	2.18	0.43
31:41:16:ARG:O	31:41:19:LEU:HB2	2.18	0.43
17:4I:19:LEU:HD21	17:4I:56:LEU:HD11	2.00	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
11:6E:46:ALA:O	11:6E:49:ILE:N	2.49	0.43
5:1H:250:G:P	36:78:60:MET:HE1	2.57	0.43
12:7E:81:HIS:HB2	12:7E:138:TRP:CE3	2.53	0.43
42:D8:6:LYS:O	42:D8:6:LYS:HG3	2.17	0.43
6:12:130:ARG:N	6:12:130:ARG:HE	2.17	0.43
1:13:1304:G:OP1	25:1F:2:GLY:N	2.51	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
5:14:1112:G:H2'	5:14:1113:U:C6	2.53	0.43
5:14:1496:A:H2'	5:14:1498:C:C5	2.53	0.43
5:14:1448:G:H1'	5:14:1528:A:H62	1.83	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
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
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
1:1G:862:C:O2'	1:1G:863:U:H5'	2.18	0.43
5:1H:1138:G:H21	34:58:106:MET:CE	2.29	0.43
5:1H:125:G:C8	5:1H:125:G:H5'	2.53	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
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)
26:1K:66:U:H2'	26:1K:67:C:C6	2.53	0.43
3:2L:73:A:N6	3:2L:74:A:C6	2.86	0.43
30:31:130:ALA:N	30:31:132:VAL:HG13	2.22	0.43
30:31:28:ILE:HG21	30:31:116:ASP:HB2	1.99	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
2:3K:24:G:H2'	2:3K:25:C:C6	2.53	0.43
9:4E:35:GLY:H	9:4E:112:LEU:HD13	1.83	0.43
34:58:42:TRP:HA	34:58:48:MET:HE1	1.99	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
38:98:2:ARG:HB3	38:98:3:HIS:H	1.53	0.43
22:9I:66:LEU:HD11	22:9I:70:ILE:HD11	1.99	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
28:11:136:ILE:O	28:11:168:ARG:NH2	2.51	0.43
1:13:1348:U:H2'	1:13:1349:A:C8	2.44	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
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
5:14:931:G:H3'	5:14:931:G:C8	2.53	0.43
6:1E:60:ASP:HB3	6:1E:64:ARG:NH1	2.33	0.43
1:1G:1057:G:H2'	1:1G:1058:G:C8	2.52	0.43
1:1G:1420:C:H6	1:1G:1420:C:O5'	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
1:1G:197:A:OP2	1:1G:197:A:H3'	2.17	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2356:C:H2'	5:1H:2357:U:O4'	2.17	0.43
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
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
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
29:21:35:GLN:HG3	29:21:36:ARG:H	1.83	0.43
8:32:108:LEU:HD13	8:32:174:LEU:HD22	2.00	0.43
1:1G:407:G:O2'	8:32:116:GLN:HG3	2.18	0.43
8:3E:62:GLN:O	8:3E:66:ARG:HD3	2.19	0.43
8:3E:8:VAL:CG1	8:3E:21:LEU:HB2	2.48	0.43
2:3L:15:G:N1	2:3L:48:C:N4	2.67	0.43
31:41:20:ILE:H	31:41:20:ILE:HG13	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
1:13:983: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
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
1:13:22:G:C6	1:13:23:C:C4	3.06	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
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
5:14:2317:C:N3	5:14:2318:G:C8	2.86	0.43
5:14:2280:G:O2'	5:14:2388:A:N1	2.38	0.43
5:14:296:C:H42	5:14:342:G:H1	1.66	0.43
1:1G:793:U:O2	1:1G:1516:G:H4'	2.19	0.43
1:1G:406:G:H1	1:1G:436:C:H42	1.67	0.43
1:1G:821:G:H2'	1:1G:822:C:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:492:A:H2'	5:1H:493:G:O4'	2.18	0.43
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
30:31:196:LEU:C	30:31:197:ASP:O	2.55	0.43
30:31:63:LYS:HG2	30:31:65:TRP:O	2.18	0.43
2:3K:36:A:C6	2:3K:37:MIA:C4	3.01	0.43
31:41:16:ARG:N	31:41:17:PRO:HD2	2.33	0.43
31:41:52:ILE:HA	31:41:52:ILE:HD13	1.84	0.43
31:41:37:VAL:O	31:41:94:LEU:HG	2.18	0.43
32:51:8:PRO:HG2	32:51:69:ARG:NH2	2.33	0.43
19:6I:9:GLN:HA	19:6I:12:ILE:HG13	2.01	0.43
5:1H:587:C:N3	36:78:33:ARG:NH1	2.67	0.43
17:4I:84:ILE:HG13	23:AI:74:PHE:HE1	1.84	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
1:13:1157: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
1:13:994:A:N7	1:13:1216:G:H4'	2.33	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
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
27:16:112:G:H2'	27:16:113:C:H6	1.83	0.43
6:1E:155:LEU:HA	6:1E:155:LEU:HD22	1.75	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:848:C:H2'	1:1G:849:C:C6	2.54	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
26:1K:10:G:H2'	26:1K:11:C:C6	2.53	0.43
29:21:101:ARG:NH1	29:21:171:GLU:HB2	2.32	0.43
29:21:134:ILE:HD12	29:21:134:ILE:C	2.39	0.43
7:22:121:ALA:HB2	7:22:198:VAL:HG21	2.01	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
1:13:881:G:P	16:3I:12:ARG:HH22	2.40	0.43
2:3L:20:H2U:H51	2:3L:21:A:C8	2.54	0.43
35:68:31:LYS:HB3	35:68:32:TYR:CE2	2.53	0.43
11:6E:113:GLU:HG2	11:6E:119:ARG:HG2	2.00	0.43
11:6E:51:GLN:OE1	11:6E:51:GLN:HA	2.19	0.43
36:78:114:ILE:HD12	36:78:134:ALA:HB1	1.99	0.43
22:9I:53:ARG:HH21	22:9I:59:SER:HA	1.83	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
1:13:141: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
5:14:1078: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
5:14:2285: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
5:14:2068:U:N3	5:14:2430:A:H2	2.16	0.43
5:14:608:A:H2'	5:14:609:A:O4'	2.19	0.43
27:16:40:U:O2'	27:16:43:C:H5	2.02	0.43
6:1E:23:ARG:NH1	6:1E:23:ARG:HB3	2.34	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
1:1G: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
5:1H:1301:A:H2	5:1H:1626:G:N3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
31:41:61:ALA:O	31:41:65:GLY:N	2.36	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
41:C8:30:LYS:HD3	41:C8:30:LYS:HA	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
1:13:1179: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
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
5:14:51:G:N3	5:14:119:A:C2	2.87	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:N3	5:14:2238:G:H2'	2.34	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
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
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
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:208:C:H2'	5:1H:209:C:C6	2.54	0.43
5:1H:2286:A:H4'	5:1H:2287:A:O4'	2.19	0.43
5:1H:241:A:H5''	58:1H:4470:HOH:O	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:805:G:H4'	5:1H:806:C:OP2	2.19	0.43
14:1I:34:VAL:HG12	14:1I:74:ILE:HG12	2.00	0.43
29:21:119:ARG:HG3	29:21:119:ARG:HH11	1.83	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
7:2E:167:TRP:CD1	7:2E:168:ALA:N	2.86	0.43
8:32:138:TYR:CD2	8:32:138:TYR:C	2.92	0.43
33:61:124:GLY:H	33:61:142:VAL:HG23	1.84	0.43
12:7E:120:THR:OG1	12:7E:123:GLU:HG3	2.18	0.43
23:AI:13:ASP:HA	23:AI:16:LEU:HB3	2.01	0.43
40:B8:132:LYS:HE2	40:B8:133:GLU:HG3	2.00	0.43
40:B8:81:PRO:HG2	40:B8:82:LEU:HD12	2.01	0.43
24:BI:97:ALA:O	24:BI:99:LEU:N	2.52	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
6:12:166:ASP:OD2	6:12:169:LYS:HB2	2.19	0.43
6:12:19:HIS:CD2	6:12:20:GLU:H	2.37	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
5:14:1399: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
5:14:224:G:H2'	5:14:225:A:O4'	2.18	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
27:16:112:G:H2'	27:16:113:C:C6	2.54	0.43
27:16:19:G:H2'	27:16:20:C:O4'	2.18	0.43
6:1E:136:VAL:O	6:1E:140:HIS:N	2.50	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
5:1H:1179:C:H2'	5:1H:1180:C:C6	2.53	0.43
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:O5'	5:1H:2012:G:H8	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:234:C:C2	5:1H:235:U:C5	3.07	0.43
5:1H:2414:G:H2'	5:1H:2414:G:N3	2.33	0.43
5:1H:2715:C:C2'	5:1H:2716:U:H5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:32:154:ASN:O	8:32:159:ARG:HD2	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
2:3K:39:PSU:C2'	2:3K:40:C:H5'	2.48	0.43
31:41:142:PRO:HG2	31:41:143:GLU:OE2	2.19	0.43
27:16:43:C:OP1	31:41:67:LYS:NZ	2.51	0.43
9:4E:36:ASP:CG	9:4E:38:GLN:HB2	2.38	0.43
34:58:96:GLU:HB2	34:58:122:VAL:HG12	2.01	0.43
34:58:29:LYS:HG2	34:58:29:LYS:H	1.54	0.43
10:5E:4:TYR:CD1	10:5E:92:LYS:HA	2.54	0.43
33:61:77:LEU:H	33:61:77:LEU:HD12	1.84	0.43
19:6I:6:GLU:H	19:6I:6:GLU:CD	2.22	0.43
36:78:144:GLU:HA	36:78:145:PRO:HD3	1.89	0.43
9:4E:152:ARG:HA	12:7E:64:LYS:HE2	1.99	0.43
21:8I:78:GLU:HG2	21:8I:81:ARG:HD2	2.00	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
24:BI:35:THR:HA	24:BI:38:LYS:HD3	2.00	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:HA	51:M8:2:LYS:HD3	1.74	0.43
28:11:101:GLU:OE1	28:11:103:ARG:HD3	2.19	0.43
28:11:59:LYS:HD2	28:11:60:ARG:H	1.83	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
1:13:265: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:14:2119:A:N6	5:14:2170:A:N7	2.66	0.43
5:14:236:C:H2'	5:14:237:C:C6	2.53	0.43
5:14:2064:C:H1'	5:14:2450:A:C2	2.54	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
6:1E:85:ALA:O	6:1E:90:MET:N	2.51	0.43
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
1:1G: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
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:2184:G:C6	5:1H:2185:C:C4	3.06	0.43
5:1H:1890:A:H2	5:1H:2235:G:O4'	2.02	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
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:66:C:C4	5:1H:67:U:C4	3.07	0.43
5:1H:74:A:C8	5:1H:74:A:O5'	2.72	0.43
5:1H:973:A:P	58:1H:3944:HOH:O	2.76	0.43
29:21:34:VAL:HG22	29:21:48:GLN:HB3	2.00	0.43
7:2E:150:LYS:HB2	7:2E:150:LYS:HE3	1.69	0.43
3:2L:44:A:H2'	3:2L:45:A:H8	1.83	0.43
8:3E:90:GLY:O	8:3E:93:PHE:HB3	2.19	0.43
2:3K:33:U:H2'	2:3K:35:A:OP2	2.18	0.43
31:41:111:LEU:HD21	31:41:120:LEU:HD21	2.01	0.43
9:4E:152:ARG:HB2	12:7E:64:LYS:HZ3	1.84	0.43
32:51:86:GLU:HG2	32:51:87:LEU:H	1.82	0.43
34:58:43:THR:HA	34:58:44:PRO:HD2	1.68	0.43
10:5E:75:LEU:HD22	10:5E:79:LEU:HD11	2.01	0.43
33:61:60:GLU:O	33:61:63:ALA:HB3	2.18	0.43
37:88:110:THR:HG23	37:88:113:GLN:OE1	2.18	0.43
1:13:1342:C:O2'	13:8E:124:GLN:HG2	2.18	0.43
13:8E:48:GLU:N	13:8E:49:PRO:HD2	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:13:1331:G:O2'	1:13:1332:A:O5'	2.35	0.43
1:13:191(F):U:H2'	1:13:191:G:C8	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
5:14:286:C:H2'	5:14:287:C:C6	2.53	0.43
5:14:358:U:O5'	5:14:358:U:H6	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
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
6:1E:60:ASP:O	6:1E:64:ARG:HG2	2.18	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
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
5:1H:1510:A:N3	5:1H:1510:A:H2'	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
30:31:178:PRO:HB2	30:31:201:VAL:HG21	2.01	0.43
30:31:62:ARG:HH21	30:31:64:ILE:HD13	1.84	0.43
8:3E:135:LEU:HA	8:3E:136:PRO:HD2	1.83	0.43
31:41:111:LEU:HD22	31:41:117:PHE:CZ	2.54	0.43
17:4I:92:HIS:HA	17:4I:110:ARG:NH2	2.34	0.43
32:51:152:ARG:HA	32:51:152:ARG:HD3	1.83	0.43
10:5E:97:PHE:O	22:9I:31:LEU:HD23	2.19	0.43
39:A8:88:ASP:C	39:A8:90:GLY:H	2.22	0.43
39:A8:14:VAL:HG11	39:A8:90:GLY:O	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:13:1386:G:C2	1:13:1387:G:C8	3.07	0.42
1:13:426:G:H2'	1:13:427:U:C6	2.54	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
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
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
6:1E:162:ILE:HD11	6:1E:184:VAL:HG22	2.01	0.42
1:13:1075:C:OP1	6:1E:179:LYS:HE2	2.19	0.42
6:1E:70:PHE:HB2	6:1E:92:TYR:HB2	2.01	0.42
1:1G:1289:A:N6	1:1G:1371:G:HO2'	2.17	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
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:H6	5:1H:2179:C:O5'	2.01	0.42
5:1H:481:G:H1'	5:1H:507:A:N1	2.34	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
1:13:1367:C:H5'	14:1I:60:ARG:NE	2.34	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
15:2I:48:ILE:HD11	15:2I:64:ALA:HA	2.01	0.42
5:1H:659:C:H4'	30:31:100:THR:O	2.19	0.42
30:31:9:ILE:HG13	30:31:123:LEU:HG	2.01	0.42
8:32:76:ARG:HH21	8:32:80:GLU:CG	2.32	0.42
1:13:542:G:H5'	8:3E:41:GLY:HA3	2.00	0.42
2:3K:59:U:H3'	2:3K:60:U:C6	2.53	0.42
9:4E:145:LYS:HA	12:7E:107:LEU:HD21	2.01	0.42
32:51:126:PRO:HG2	32:51:130:ARG:HH12	1.83	0.42
10:5E:4:TYR:HD1	10:5E:92:LYS:HA	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:5I:27:CYS:HB2	18:5I:29:ARG:H	1.84	0.42
13:8E:49:PRO:HA	13:8E:52:ALA:HB3	2.00	0.42
1:13:254:G:OP1	21:8I:67:LYS:O	2.36	0.42
38:98:117:VAL:O	38:98:118:GLU:HB2	2.18	0.42
38:98:48:VAL:O	38:98:51:LEU:N	2.51	0.42
39:A8:36:TYR:N	39:A8:36:TYR:HD1	2.17	0.42
53:O8:34:LEU:HD22	53:O8:34:LEU:H	1.84	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
1:13:115:G:C2	1:13:289:G:N7	2.87	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
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
5:14:200:U:O2	5:14:386:G:N2	2.52	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
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
1:1G:888:G:O2'	1:1G:1488:G:O2'	2.13	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
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:1726:G:H2'	5:1H:1727:U:O4'	2.18	0.42
5:1H:1667:G:O2'	5:1H:1991:U:O4	2.22	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
5:1H:49:A:N7	5:1H:120:U:C5	2.67	0.42
5:1H:687:C:H2'	5:1H:688:U:O4'	2.18	0.42
29:21:14:ILE:HA	29:21:14:ILE:HD13	1.71	0.42
2:3K:37:MIA:H2'	2:3K:38:A:C8	2.55	0.42
31:41:22:ARG:HB3	31:41:22:ARG:HE	1.45	0.42
9:4E:144:THR:OG1	9:4E:147:ASP:OD1	2.33	0.42
9:4E:9:LYS:HE3	9:4E:9:LYS:HB2	1.87	0.42
4:4K:13:A:HO2'	4:4K:14:A:P	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:164:TYR:N	32:51:167:GLU:OE1	2.53	0.42
19:6I:26:GLU:H	19:6I:26:GLU:HG2	1.51	0.42
5:1H:621:A:OP2	36:78:108:LYS:NZ	2.51	0.42
5:1H:244:A:H4'	36:78:74:GLU:HB3	2.01	0.42
1:13:235:C:H5'	21:8I:70:ARG:HG2	2.00	0.42
22:9I:26:LEU:HD13	22:9I:42:ARG:NH2	2.35	0.42
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
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
6:12:54:THR:O	6:12:57:PHE:HB3	2.19	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
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
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:N3	5:14:2490:G:H2'	2.34	0.42
5:14:396:G:H8	5:14:396:G:O5'	2.03	0.42
1:1G:1152:A:H2'	1:1G:1153:C:C6	2.54	0.42
1:1G:129(A):G:C6	1:1G:188:U:H4'	2.54	0.42
1:1G:1307:U:O5'	1:1G:1307:U:H6	2.02	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
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
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
14:1I:57:LYS:HE3	14:1I:60:ARG:HH12	1.83	0.42
2:1L:65:G:N2	2:1L:66:U:H1'	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:26:ILE:O	29:21:26:ILE:HG12	2.17	0.42
8:3E:155:LEU:HD23	8:3E:155:LEU:HA	1.72	0.42
27:16:42:C:O2	31:41:92:VAL:HA	2.18	0.42
9:4E:71:LEU:HA	9:4E:75:THR:O	2.18	0.42
34:58:110:GLY:O	34:58:114:ARG:HG3	2.19	0.42
33:61:104:GLN:O	33:61:105:HIS:HB2	2.20	0.42
12:7E:33:GLU:OE2	12:7E:50:ARG:NH1	2.52	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
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
1:13:433:C:H2'	1:13:434:U:C6	2.54	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
5:14:1628: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
5:14:274:G:H2'	5:14:275:G:C4'	2.48	0.42
5:14:2769:C:H2'	5:14:2770:G:O4'	2.20	0.42
5:14:725:G:H8	5:14:725:G:O5'	2.02	0.42
6:1E:21:ARG:C	6:1E:23:ARG:H	2.22	0.42
1:1G:1047:G:H8	1:1G:1047:G:O5'	2.02	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
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:818:G:N7	5:1H:1187:G:C6	2.88	0.42
5:1H:51:G:N3	5:1H:119:A:C2	2.87	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
5:1H:586:A:OP2	58:1H:3971:HOH:O	2.22	0.42
5:1H:67:U:H2'	5:1H:68:G:C8	2.54	0.42
5:1H:930:U:O2	5:1H:930:U:O4'	2.35	0.42
27:1J:23:G:C2	27:1J:24:G:O6	2.73	0.42
27:1J:2:C:H2'	27:1J:3:C:C5	2.54	0.42
26:1K:22:G:N7	26:1K:46:7MG:HM71	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:21:111:ARG:HD2	29:21:160:TYR:CE2	2.53	0.42
3:2K:47:7MG:HO2'	3:2K:48:U:H6	1.64	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
32:51:3:ARG:HA	32:51:3:ARG:CZ	2.50	0.42
33:61:21:VAL:HG22	33:61:22:LYS:N	2.35	0.42
1:13:468:A:H5''	20:7I:80:PHE:HB3	2.01	0.42
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
28:11:272:ALA:HB1	28:11:273:ARG:H	1.69	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
1:13:1171:G:O2'	1:13:1172:C:H5'	2.19	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
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
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:O5'	5:14:929:G:H8	2.02	0.42
27:16:8:U:H5''	39:A8:15:ARG:HH12	1.84	0.42
6:1E:70:PHE:HB2	6:1E:92:TYR:CB	2.50	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:117:G:H2'	1:1G:118:U: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:149:A:O2'	1:1G:150:C:H5'	2.20	0.42
1:1G:1517:G:C6	1:1G:1518:A:C5	3.08	0.42
1:1G:298:A:H5''	1:1G:299:G:OP2	2.19	0.42
1:1G:25:C:H5'	1:1G:524:G:H1'	2.01	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
5:1H:1021:A:H3'	5:1H:1022:G:H5''	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:229:A:OP2	36:78:150:ALA:HB1	2.19	0.42
5:1H:52:A:O2'	5:1H:53:A:H5'	2.20	0.42
11:6E:153:HIS:CE1	15:2I:57:THR:HG23	2.55	0.42
8:32:108:LEU:HD12	8:32:108:LEU:HA	1.85	0.42
8:3E:108:LEU:HD11	8:3E:174:LEU:HD22	2.01	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
34:58:130:HIS:HA	34:58:134:ARG:HH22	1.85	0.42
33:61:4:ILE:HD11	33:61:44:LEU:HD13	2.01	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:O	55:Q8:41:ILE:HG22	2.20	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
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
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
2:1L:76:A:H8	5:14:2583:G:H21	1.64	0.42
5:14:2712:U:H2'	5:14:2714:G:H5''	2.01	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
1:1G:1073:U:H2'	1:1G:1074:G:H8	1.84	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:317:G:N2	5:1H:318:C:C2	2.87	0.42
5:1H:389:G:H8	5:1H:389:G:O5'	2.02	0.42
5:1H:404:C:H1'	5:1H:405:U:OP2	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:817:C:H2'	5:1H:818:G:O4'	2.20	0.42
27:1J:14:U:O2'	27:1J:107:U:O2'	2.02	0.42
5:1H:2619:C:H5'	29:21:150:VAL:O	2.20	0.42
15:2I:50:TYR:O	15:2I:55:LYS:HD3	2.20	0.42
3:2L:32:G:C4	3:2L:33:OMC:C5	3.07	0.42
2:3K:2:C:H4'	2:3K:3:C:OP1	2.19	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
14:1I:47:PHE:CE2	18:5I:37:PHE:HE1	2.37	0.42
33:61:128:LEU:O	33:61:138:ILE:N	2.49	0.42
11:6E:102:ARG:O	11:6E:106:GLN:HG3	2.20	0.42
5:1H:625:G:N7	36:78:107:LYS:NZ	2.67	0.42
36:78:85:LEU:HA	36:78:88:LEU:HD22	2.00	0.42
23:AI:18:LYS:O	23:AI:22:LEU:HD22	2.20	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
1:13:1226:C:H4'	1:13:1227:A:OP1	2.20	0.42
1:13:76:G:H1'	1:13:95:G:N2	2.35	0.42
1:13:823:G:C2	1:13:878:G:C2	3.07	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
5:14:118:A:N3	5:14:178:G:H1'	2.35	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
5:14:2607:G:H2'	5:14:2608:G:O4'	2.19	0.42
5:14:301:G:C4	5:14:302:C:C5	3.07	0.42
5:14:300:A:H2'	5:14:334:C:H1'	2.01	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:185:U:H4'	5:1H:218:A:H4'	2.01	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:2830:G:N3	5:1H:2883:A:H2	2.17	0.42
5:1H:973:A:O4'	5:1H:1188:U:C6	2.72	0.42
1:13:1366:C:O3'	14:1I:60:ARG:NH2	2.53	0.42
14:1I:6:ILE:HG22	14:1I:98:ILE:CG1	2.43	0.42
2:1L:37:MIA:H162	2:1L:37:MIA:H122	1.72	0.42
7:22:39:ILE:O	7:22:43:LEU:HB2	2.20	0.42
15:2I:32:ILE:HD11	15:2I:68:ALA:C	2.39	0.42
30:31:101:LEU:HD13	30:31:102:PRO:HD2	2.02	0.42
1:13:537:G:H5''	16:3I:113:ARG:NH1	2.34	0.42
2:3L:30:G:C2	2:3L:31:A:C5	3.08	0.42
33:61:110:ASP:CB	33:61:112:LYS:H	2.32	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
20:7I:21:VAL:O	20:7I:33:ILE:N	2.46	0.42
20:7I:55:ARG:HA	20:7I:55:ARG:HD2	1.71	0.42
37:88:34:LEU:HD23	37:88:104:PHE:HD2	1.85	0.42
23:AI:41:VAL:N	23:AI:44:MET:HG3	2.34	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
5:1H:2359:C:C4'	55:Q8:49:VAL:HG11	2.46	0.42
28:11:142:VAL:HG23	28:11:193:VAL:HA	2.01	0.42
28:11:70:TRP:CD1	28:11:70:TRP:C	2.93	0.42
6:12:16:HIS:CD2	6:12:209:ARG:HG3	2.55	0.42
5:14:108:U:C2	5:14:109:G:C8	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:2168:G:H2'	5:14:2168:G:N3	2.34	0.42
5:14:2525:G:N2	5:14:2539:C:C2	2.88	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
27:16:3:C:H2'	27:16:4:C:H6	1.85	0.42
6:1E:11:LEU:O	6:1E:16:HIS:CE1	2.73	0.42
1:1G:1104:G:C4	1:1G:1105:A:C8	3.08	0.42
1:1G:934:C:O2'	1:1G:1344:C:OP2	2.26	0.42
1:1G:1441:G:H5''	1:1G:1442:G:H5'	2.01	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
5:1H:996:A:C6	5:1H:1160:G:C2	3.08	0.42
5:1H:1558:A:OP2	5:1H:1558:A:H3'	2.20	0.42
5:1H:2611:U:H6	5:1H:2611:U:OP2	2.03	0.42
5:1H:2615:U:H2'	5:1H:2616:C:C6	2.54	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
29:21:105:THR:O	29:21:196:VAL:HB	2.19	0.42
29:21:47:VAL:O	29:21:80:GLU:HA	2.19	0.42
7:22:79:ARG:HG2	7:22:79:ARG:H	1.64	0.42
15:2I:31:THR:HA	15:2I:42:TRP:HA	2.01	0.42
8:32:14:ARG:HA	8:32:39:PRO:HB3	2.00	0.42
16:3I:41:ARG:HE	16:3I:41:ARG:HB2	1.65	0.42
31:41:166:ASP:N	31:41:166:ASP:OD1	2.53	0.42
17:4I:13:LYS:HB3	17:4I:14:ARG:H	1.55	0.42
5:1H:2751:G:C2	32:51:3:ARG:HB3	2.55	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:HG12	45:G8:39:VAL:O	2.20	0.42
48:J8:78:LYS:HG2	48:J8:78:LYS:O	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
1:13:1410:G:H2'	1:13:1411:C:C6	2.55	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
5:14:1139:G:H8	5:14:1139:G:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1425:G:H2'	5:14:1426:G:O4'	2.20	0.42
5:14:1495:A:H2'	5:14:1496:A:N3	2.35	0.42
5:14:1464:C:O2'	5:14:1528:A:H8	1.99	0.42
5:14:1689:A:N6	5:14:1698:A:H2	1.96	0.42
5:14:729:G:H2'	5:14:1775:U:H1'	2.01	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
5:14:443:A:H1'	5:14:1201:C:O4'	2.20	0.42
5:14:618:G:H2'	5:14:618(A):C:O4'	2.20	0.42
27:16:99:A:C4	27:16:100:G:C8	3.08	0.42
27:16:75:G:H21	46:H8:85:HIS:CE1	2.37	0.42
5:1H:917:A:N6	27:16:80:U:H4'	2.35	0.42
27:16:88:C:H2'	27:16:89:G:O4'	2.19	0.42
6:1E:97:TRP:CH2	6:1E:176:GLU:OE2	2.73	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
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
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
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
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
26:1K:43:C:O5'	26:1K:43:C:H6	2.01	0.42
29:21:181:LEU:HD12	29:21:181:LEU:HA	1.79	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
3:2K:63:C:O2	3:2K:64:G:C8	2.72	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
31:41:37:VAL:N	31:41:99:MET:HE3	2.35	0.42
17:4I:94:ARG:HH22	5:1H:887:A:H5''	1.84	0.42
32:51:40:GLU:H	32:51:40:GLU:HG3	1.69	0.42
32:51:4:ILE:HG13	32:51:6:ARG:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:68:113:LYS:O	35:68:116:SER:HB3	2.20	0.42
36:78:3:LEU:HA	36:78:3:LEU:HD23	1.83	0.42
36:78:76:LYS:HA	36:78:76:LYS:HD3	1.71	0.42
13:8E:89:ASN:O	13:8E:91:ASP:N	2.52	0.42
21:8I:36:ILE:HG13	21:8I:36:ILE:O	2.20	0.42
45:G8:76:CYS:HB2	45:G8:82:PRO:HD3	2.01	0.42
23:AI:64:GLU:HB2	51:M8:60:GLN:NE2	2.35	0.42
1:13:1353:G:OP1	25:1F:10:ARG:NH2	2.52	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
27:16:24:G:C2	27:16:56:G:C2	3.08	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
6:1E:59:GLU:HB2	6:1E:221:LEU:HD11	2.02	0.42
6:1E:5:ILE:HG13	6:1E:6:THR:H	1.84	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
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:H8	1:1G:595:G:O5'	2.02	0.42
1:1G:596:C:H2'	1:1G:597:G:H8	1.84	0.42
1:1G:790:A:O5'	1:1G:790:A:H8	2.03	0.42
1:1G:793:U:O4	1:1G:1517:G:H5''	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:H2'	5:1H:2056:G:N3	2.35	0.42
5:1H:2290:G:C6	5:1H:2291:U:N3	2.88	0.42
5:1H:270(T):G:C5	5:1H:270(U):C:C5	3.08	0.42
5:1H:2875:C:H2'	5:1H:2876:G:O4'	2.20	0.42
5:1H:332:A:C2	5:1H:335:C:C5	3.08	0.42
5:1H:812:C:H5''	5:1H:1250:G:O2'	2.20	0.42
27:1J:4:C:N4	27:1J:116:G:H22	2.17	0.42
7:22:73:PRO:HA	7:22:76:VAL:HG13	2.01	0.42
30:31:6:VAL:HG11	30:31:119:ARG:CA	2.50	0.42
2:3L:18:G:N2	2:3L:55:PSU:C4	2.88	0.42
31:41:6:ALA:HB3	51:M8:23:GLU:HG3	2.01	0.42
9:4E:74:GLY:O	9:4E:115:VAL:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:154:PRO:HB3	32:51:163:TYR:CZ	2.55	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
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
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
42:D8:35:LEU:HA	42:D8:36:PRO:HD3	1.82	0.42
5:1H:309:G:H4'	45:G8:18:GLY:HA2	2.02	0.42
45:G8:40:GLU:HA	45:G8:42:VAL:H	1.85	0.42
5:1H:458:G:O2'	54:P8:39:ARG:HD3	2.19	0.42
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
1:13:129:U:N3	1:13:131:C:N4	2.68	0.41
1:13:1506:U:H2'	58:13:1805:HOH:O	2.20	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
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
5:14:139:G:N2	5:14:1596:A:H4'	2.35	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
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
1:1G:109:A:H2'	1:1G:326:G:H21	1.83	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:1H:265:A:H8	5:1H:266:G:H1'	1.82	0.41
5:1H:4:C:H42	5:1H:2899:G:H1	1.68	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
7:22:106:VAL:HB	7:22:109:PRO:HB3	2.02	0.41
1:13:1191:A:OP2	7:2E:3:ASN:ND2	2.53	0.41
15:2I:12:ARG:HG3	15:2I:13:GLN:N	2.35	0.41
3:2L:62:C:H2'	3:2L:63:C:C6	2.53	0.41
30:31:101:LEU:HA	30:31:101:LEU:HD22	1.76	0.41
2:3K:6:G:C6	2:3K:7:A:C6	3.08	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
32:51:35:VAL:HG12	32:51:37:VAL:HG23	2.02	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
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
36:78:62:LEU:O	55:Q8:13:ARG:HD3	2.20	0.41
55:Q8:52:LYS:HE3	55:Q8:52:LYS:HB3	1.65	0.41
28:11:64:ILE:HD13	28:11:64:ILE:HG21	1.84	0.41
6:12:72:GLY:C	6:12:74:LYS:H	2.23	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
1:13:955:U:H1'	1:13:1227:A:N6	2.35	0.41
1:13:1356:G:H2'	1:13:1357:A:C8	2.56	0.41
1:13:683:G:C6	1:13:684:A:C5	3.08	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)
5:14:1338: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
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
5:14:979:G:H3'	5:14:980:A:C5'	2.49	0.41
27:16:39:A:H2'	27:16:40:U:C6	2.54	0.41
1:1G:1099:G:OP1	6:12:148:TYR:OH	2.38	0.41
1:1G:1054:C:H5''	1:1G:1197:G:OP1	2.21	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
1:1G:259:G:H1	1:1G:267:C:H42	1.67	0.41
5:1H:2262:U:C2'	5:1H:2263:C:H5'	2.50	0.41
5:1H:355:G:H2'	5:1H:356:G:H8	1.83	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
14:1I:76:ASN:HA	14:1I:77:PRO:HD2	1.80	0.41
7:22:126:ARG:HD2	7:22:128:PHE:HE2	1.85	0.41
30:3I:116:ASP:OD2	36:78:1:MET:HB2	2.20	0.41
16:3I:82:VAL:CG1	16:3I:105:TYR:HB3	2.50	0.41
31:4I:33:ARG:O	31:4I:162:THR:HG23	2.21	0.41
31:4I:37:VAL:H	31:4I:99:MET:HE3	1.85	0.41
31:4I:67:LYS:HE2	31:4I:67:LYS:H	1.84	0.41
9:4E:91:LEU:CD1	9:4E:120:THR:HG22	2.45	0.41
32:5I:4:ILE:C	32:5I:6:ARG:H	2.23	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
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
5:1H:466:A:H4'	54:P8:30:VAL:HG13	2.00	0.41
28:1I:3:VAL:HA	28:1I:18:VAL:O	2.20	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
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
5:14:1131:G:C2	5:14:1132:A:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:1194:A:H2'	5:14:1195:G:O4'	2.20	0.41
5:14:1418:G:O5'	5:14:1418:G:H8	2.04	0.41
5:14:1542:G:H3'	5:14:1543:A:H5''	2.03	0.41
5:14:185:U:H2'	5:14:186:G:O4'	2.20	0.41
5:14:2516:G:C5	5:14:2517:C:C4	3.08	0.41
5:14:29:U:H2'	5:14:30:G:C8	2.56	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
27:16:79:C:H6	27:16:79:C:O5'	2.03	0.41
1:1G:123:C:H2'	1:1G:124:G:C8	2.55	0.41
1:1G:422:C:H2'	1:1G:422:C:H6	1.68	0.41
1:1G:773:G:C2	1:1G:807:A:C2	3.08	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:OP2	5:1H:2503:A:H3'	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
5:1H:880:G:HO2'	5:1H:881:G:C5'	2.27	0.41
26:1K:60:U:H5'	26:1K:61:C:OP2	2.19	0.41
2:1L:76:A:H8	5:14:2583:G:N2	2.18	0.41
29:21:116:VAL:HG13	29:21:122:PHE:CD2	2.54	0.41
29:21:67:PHE:O	29:21:69:LYS:HE2	2.20	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
17:4I:69:GLU:HG3	31:41:118:ARG:NH2	2.35	0.41
7:2E:13:GLY:HA3	18:5I:57:ARG:HH11	1.85	0.41
33:61:145:VAL:HB	33:61:146:ALA:H	1.56	0.41
36:78:100:LEU:HA	36:78:100:LEU:HD12	1.84	0.41
20:7I:50:LYS:HD3	20:7I:50:LYS:HA	1.86	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
23:AI:37:ARG:H	23:AI:37:ARG:HG3	1.36	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
28:11:232:PRO:HB3	28:11:244:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:12:166:ASP:CG	6:12:169:LYS:HB2	2.40	0.41
1:13:158:G:H21	1:13:162:A:H62	1.69	0.41
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
5:14:1505: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
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
27:16:29:A:OP2	39:A8:31:SER:HB2	2.20	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
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
1:1G:52:G:C4	1:1G:53:A:C8	3.08	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
5:1H:639:U:H2'	5:1H:640:C:H6	1.82	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
7:2E:4:LYS:HE3	7:2E:4:LYS:HB3	1.78	0.41
8:32:172:PRO:HB2	8:32:187:ARG:HH12	1.85	0.41
8:3E:79:PHE:O	8:3E:83:SER:HB2	2.20	0.41
31:41:122:PRO:HB3	31:41:180:PHE:CD1	2.55	0.41
9:4E:80:ILE:HG12	9:4E:81:GLU:N	2.35	0.41
9:4E:26:PHE:HE1	4:4K:25:A:C2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:92:ILE:H	32:51:92:ILE:HG13	1.54	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:NZ	23:AI:7:LYS:HB3	2.35	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
55:Q8:33:ASN:O	55:Q8:34:TRP:CD1	2.73	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
1:13:960:U:C2	1:13:1225:A:C5	3.08	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
1:13:1405:G:O4'	1:13:1519:A:H4'	2.20	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
1:13:4: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
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
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:C6	1:1G:1260:C:H3'	2.55	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
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:124:G:N2	5:1H:126:A:O2'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1J:118:G:C5	27:1J:119:A:N7	2.88	0.41
27:1J:73:A:C4	27:1J:104:A:C2	3.09	0.41
7:2E:11:ARG:NH2	7:2E:177:THR:O	2.51	0.41
3:2K:57:C:H5''	3:2K:58:A:OP2	2.21	0.41
30:31:67:GLN:HG3	30:31:67:GLN:O	2.16	0.41
16:3I:10:LEU:HD13	21:8I:32:TYR:CE1	2.55	0.41
12:7E:85:ARG:NH2	12:7E:87:SER:O	2.49	0.41
20:7I:50:LYS:HD3	20:7I:51:VAL:H	1.86	0.41
37:88:72:LYS:HA	37:88:73:PRO:HD3	1.96	0.41
13:8E:102:LEU:HD23	13:8E:102:LEU:HA	1.89	0.41
1:13:1312:G:H5'	23:AI:6:LYS:CD	2.51	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
6:12:108:ILE:HA	6:12:108:ILE:HD13	1.85	0.41
6:12:54:THR:HG22	6:12:58:ILE:HD11	2.02	0.41
6:12:8:LYS:HE3	6:12:11:LEU:HD23	2.03	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
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
5:14:248:G:H4'	5:14:248:G:OP1	2.21	0.41
5:14:2584:U:H5''	5:14:2585:U:OP2	2.21	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
5:14:260:G:O4'	5:14:621:A:H1'	2.19	0.41
1:1G:376:G:H1	1:1G:387:U:H3	1.67	0.41
1:1G:9:G:H1	1:1G:25:C:H42	1.69	0.41
5:1H:1387:C:H2'	5:1H:1387:C:O2	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
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
5:1H:529:A:C8	5:1H:530:G:C6	3.06	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:1L:16:H2U:H3'	2:1L:16:H2U:O2	2.21	0.41
7:22:37:GLN:O	7:22:40:ARG:N	2.54	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
3:2L:63:C:H2'	3:2L:64:G:H8	1.85	0.41
8:32:14:ARG:HB2	8:32:40:PRO:CD	2.51	0.41
2:3L:53:G:N2	2:3L:61:C:C2	2.88	0.41
17:4I:11:ARG:HB2	17:4I:11:ARG:NH1	2.36	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
23:AI:25:LYS:HD3	23:AI:27:GLU:HB2	2.02	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
24:BI:14:LYS:HB3	24:BI:14:LYS:HE2	1.86	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
5:1H:1567:A:H5'	28:11:58:HIS:ND1	2.35	0.41
6:12:7:VAL:HG13	6:12:8:LYS:HG3	2.03	0.41
1:13:1309:G:C6	1:13:1329:A:C2	3.08	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
5:14:111:A:C2	5:14:112:U:C2	3.09	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:H8	5:14:2533:A:O5'	2.02	0.41
5:14:27:G:O2'	5:14:28:A:OP2	2.26	0.41
5:14:843:G:H1	5:14:935:C:H42	1.68	0.41
27:16:116:G:H2'	27:16:117:G:O4'	2.20	0.41
27:16:18:G:H1	27:16:65:C:H42	1.68	0.41
6:1E:178:ARG:HD3	6:1E:178:ARG:HA	1.78	0.41
1:1G:1041:A:N6	1:1G:1042:G:C2	2.89	0.41
1:1G:1058:G:O5'	1:1G:1058:G:H8	2.04	0.41
1:1G:115:G:C2	1:1G:289:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:131:C:H2'	1:1G:132:C:C6	2.56	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
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: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
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
27:1J:22:U:H3	27:1J:61:G:H1	1.69	0.41
29:21:170:LEU:HD21	29:21:187:ALA:HB3	2.03	0.41
7:22:14:ILE:HG23	7:22:15:THR:OG1	2.19	0.41
3:2L:66:C:O2'	3:2L:67:C:H5'	2.21	0.41
8:32:61:LYS:N	8:32:203:VAL:HG22	2.35	0.41
16:3I:84:LEU:HB2	16:3I:105:TYR:CE2	2.56	0.41
9:4E:118:ILE:HG12	9:4E:119:LEU:N	2.35	0.41
1:13:1216:G:H5''	18:5I:5:ALA:HB2	2.03	0.41
1:13:1374:A:O2'	11:6E:28:ASN:HB3	2.21	0.41
20:7I:40:ASP:HA	20:7I:41:PRO:HD2	1.80	0.41
21:8I:68:ARG:O	21:8I:68:ARG:HG3	2.20	0.41
10:5E:100:ASN:H	22:9I:23:LYS:HZ2	1.69	0.41
39:A8:9:ARG:HD2	39:A8:9:ARG:HH11	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
24:BI:33:ILE:HG12	24:BI:33:ILE:H	1.60	0.41
48:J8:81:LYS:HD2	48:J8:81:LYS:N	2.35	0.41
50:L8:30:ARG:HG3	50:L8:30:ARG:H	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
5:1H:728:G:H4'	28:11:13:ARG:HD3	2.03	0.41
28:11:172:TYR:HD2	28:11:185:VAL:C	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:13:963:G:C2	14:1I:55:LYS:NZ	2.85	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
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
6:1E:31:TYR:O	6:1E:42:ILE:HG13	2.21	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
1:1G:793:U:O4	1:1G:1517:G:H8	2.04	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:66:G:C2	1:1G:67:C:C6	3.09	0.41
1:1G:677:U:O2'	1:1G:678:U:H5'	2.21	0.41
1:1G:964:A:N3	1:1G:969:A:O2'	2.49	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
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:7:G:C2	5:1H:8:A:C4	3.08	0.41
5:1H:825:C:H5'	58:1H:3874:HOH:O	2.20	0.41
27:1J:40:U:H3'	27:1J:41:U:H5'	2.03	0.41
2:1L:30:G:H2'	2:1L:31:A:C8	2.55	0.41
29:21:144:ARG:HG3	29:21:144:ARG:HH11	1.86	0.41
15:2I:34:ASP:OD1	15:2I:36:ASP:HB2	2.21	0.41
3:2L:22:A:H61	3:2L:47:7MG:H2'	1.85	0.41
8:3E:154:ASN:OD1	8:3E:154:ASN:N	2.50	0.41
2:3L:40:C:H2'	2:3L:41:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:51:153:LYS:H	32:51:153:LYS:CD	2.32	0.41
32:51:7:LEU:N	32:51:8:PRO:HD3	2.35	0.41
34:58:94:HIS:C	34:58:95:PRO:O	2.59	0.41
13:8E:24:GLY:HA2	13:8E:59:PHE:O	2.21	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:H8:105: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
46:H8:7:ALA:HB3	46:H8:61:LEU:HB2	2.02	0.41
47:I8:36:ILE:HA	47:I8:60:PHE:HA	2.01	0.41
48:J8:37:ILE:HD13	48:J8:37:ILE:HG21	1.68	0.41
27:16:43:C:H5'	51:M8:1:MET:HG2	2.02	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
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
1:13:104:G:C2	1:13:105:G:C8	3.08	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
1:13:1362(A):C:H5'	1:13:1363:A:O5'	2.21	0.41
1:13:200:G:N2	1:13:218:C:C2	2.88	0.41
1:13:29:G:O2'	1:13:30:U:H5'	2.21	0.41
1:13:543:C:C2'	1:13:544:G:H5'	2.50	0.41
1:13:940:C:H2'	1:13:941:G:C8	2.56	0.41
5:14:83:G:N2	5:14:102:G:H2'	2.35	0.41
5:14:273(C):C:H5'	5:14:273(D):C:OP2	2.19	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
5:14:374:A:C2	5:14:401:A:C4	3.08	0.41
5:14:265:A:N6	5:14:427:U:O2'	2.50	0.41
5:14:805:G:H4'	5:14:806:C:OP2	2.21	0.41
6:1E:108:ILE:HA	6:1E:108:ILE:HD13	1.77	0.41
1:13:1329:A:N7	25:1F:7:ARG:NH2	2.69	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:830:G:N1	1:1G:831:U:O2	2.54	0.41
5:1H:152:G:H1	5:1H:174:C:H42	1.68	0.41
5:1H:1582:C:O2'	5:1H:1586:A:C8	2.72	0.41
5:1H:2123:G:H2'	5:1H:2124:G:H8	1.85	0.41
5:1H:2582:G:N3	5:1H:2582:G:H2'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2802:G:OP2	5:1H:2802:G:H8	2.04	0.41
5:1H:2841:C:H6	5:1H:2841:C:O5'	2.04	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:993:G:C4	5:1H:994:C:C5	3.09	0.41
1:1G:1206:G:H4'	7:22:192:THR:O	2.21	0.41
8:3E:9:CYS:SG	8:3E:31:CYS:O	2.79	0.41
2:3K:58:A:HO2'	2:3K:59:U:P	2.41	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
34:58:95:PRO:O	34:58:96:GLU:CD	2.59	0.41
33:61:68:LEU:HD12	33:61:68:LEU:HA	1.75	0.41
37:88:51:ARG:O	37:88:55:VAL:HG13	2.20	0.41
1:13:128:G:H4'	21:8I:3:LYS:HG2	2.01	0.41
23:AI:40:ILE:HG12	23:AI:41:VAL:N	2.36	0.41
48:J8:92:LYS:HA	48:J8:95:LEU:CB	2.48	0.41
53:O8:28:ARG:CZ	53:O8:30:THR:HG23	2.50	0.41
55:Q8:21:LYS:HB3	55:Q8:48:PHE:HD1	1.85	0.41
28:11:44:ASN:O	28:11:46:GLN:O	2.38	0.41
1:13:1077:G:N2	1:13:1080:A:OP2	2.48	0.41
1:13:1320:C:H2'	1:13:1321:C:O4'	2.21	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
1:13:61:G:H2'	1:13:62:U:O4'	2.20	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
5:14:1142:U:H2'	5:14:1142:U:O2	2.20	0.41
5:14:55:G:O2'	5:14:127:A:N1	2.37	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
5:14:74:A:O5'	5:14:74:A:C8	2.74	0.41
1:1G:1198:G:H2'	1:1G:1199:U:C6	2.56	0.41
1:1G:1263:C:H42	1:1G:1272:G:H1	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1G:8:A:C5	8:32:209:ARG:HA	2.56	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:1000:A:C8	5:1H:1154:G:N2	2.89	0.41
5:1H:1301:A:OP1	58:1H:3612:HOH:O	2.21	0.41
5:1H:1956:U:C2'	5:1H:1957:C:H5'	2.51	0.41
5:1H:1976:U:O5'	5:1H:1976:U:H6	2.03	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:2779:U:O4'	5:1H:2779:U:O2	2.38	0.41
5:1H:918:A:N3	27:16:80:U:O2'	2.46	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
7:22:134:ILE:HD12	7:22:151:VAL:HG11	2.02	0.41
7:2E:157:ILE:HG13	7:2E:164:ARG:HG2	2.03	0.41
15:2I:37:GLY:O	15:2I:39:PRO:HD3	2.20	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
2:3K:11:C:H2'	2:3K:12:U:C6	2.56	0.41
2:3K:5:G:H2'	2:3K:6:G:C8	2.56	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
9:4E:11:ILE:HG12	9:4E:11:ILE:H	1.46	0.41
17:4I:108:ARG:HG3	17:4I:108:ARG:NH1	2.21	0.41
17:4I:74:VAL:O	17:4I:78:ILE:HG13	2.21	0.41
12:7E:100:ILE:HA	12:7E:101:PRO:HD3	1.79	0.41
12:7E:88:LYS:O	12:7E:92:ARG:HD3	2.21	0.41
5:1H:2881:C:O2'	38:98:96:ARG:HA	2.21	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
52:N8:40:LYS:CE	52:N8:46:CYS:HB3	2.50	0.41
55:Q8:7:HIS:O	55:Q8:10:ALA:N	2.42	0.41
1:13:109:A:N7	1:13:326:G:H2'	2.35	0.41
1:13:1279:A:O2'	1:13:1281:U:OP2	2.31	0.41
1:13:128:G:O2'	21:8I:3:LYS:HE2	2.20	0.41
1:13:1413:A:H2'	1:13:1414:U:O4'	2.21	0.41
1:13:222:U:C2	1:13:223:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
5:14:10:G:C6	5:14:2629:A:N7	2.88	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
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
1:1G:158:G:H1	1:1G:163:C:N4	2.19	0.41
1:1G:49:U:C2	1:1G:361:G:N2	2.89	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
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:2279:G:O6	47:18:14: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
5:1H:394:A:O2'	5:1H:395:U:H5'	2.20	0.41
5:1H:405:U:H2'	5:1H:405:U:O2	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:O5'	5:1H:551:G:H8	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
14:1I:6:ILE:HA	14:1I:97:GLU:O	2.20	0.41
27:1J:70:C:H2'	27:1J:71:C:C6	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:22:175:LEU:H	7:22:175:LEU:HD12	1.86	0.41
3:2L:3:C:H5'	5:14:2255:G:O2'	2.21	0.41
30:31:197:ASP:O	30:31:199:TRP:N	2.53	0.41
8:32:29:PRO:HD2	8:32:30:LYS:HE2	2.03	0.41
8:3E:108:LEU:HB3	8:3E:110:PHE:CE1	2.56	0.41
8:3E:21:LEU:HG	8:3E:21:LEU:H	1.70	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
32:51:151:ILE:HG13	32:51:151:ILE:H	1.50	0.41
32:51:37:VAL:HG13	32:51:68:THR:HG21	2.03	0.41
35:68:75:SER:CB	40:B8:74:ARG:HH12	2.34	0.41
22:9I:26:LEU:HD11	22:9I:29:PHE:CD2	2.56	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
5:1H:2264:C:N4	47:I8:15:ASP:OD2	2.48	0.41
48:J8:98:LEU:HA	48:J8:98:LEU:HD23	1.95	0.41
6:12:144:ARG:HG3	6:12:145:LEU:N	2.35	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
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
1:13:73:G:H2'	1:13:74:C:C6	2.55	0.40
1:13:827:U:C5	1:13:870:U:C4	3.09	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
5:14:335:C:H2'	5:14:336:C:C6	2.56	0.40
5:14:50:U:H4'	5:14:51:G:OP2	2.21	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
27:16:54:G:H2'	27:16:55:U:C6	2.56	0.40
6:1E:17:PHE:N	6:1E:17:PHE:CD1	2.89	0.40
1:1G:115:G:H4'	1:1G:116:A:O5'	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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: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
14:1I:47:PHE:CZ	18:5I:37:PHE:HE1	2.38	0.40
2:1L:24:G:C6	2:1L:25:C:C4	3.08	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
15:2I:59:TYR:CE2	15:2I:63:LEU:HD11	2.56	0.40
2:3K:6:G:O6	2:3K:7:A:N6	2.53	0.40
17:4I:92:HIS:HA	17:4I:110:ARG:HH21	1.86	0.40
17:4I:3:ARG:HB3	17:4I:9:ILE:HG12	2.02	0.40
12:7E:87:SER:OG	12:7E:92:ARG:HA	2.20	0.40
20:7I:26:ARG:NH2	20:7I:31:LYS:HD3	2.34	0.40
13:8E:25:LYS:N	13:8E:60:ASP:OD1	2.48	0.40
38:98:12:ARG:HD3	38:98:16:HIS:ND1	2.36	0.40
38:98:2:ARG:HH11	38:98:2:ARG:HG2	1.86	0.40
5:1H:2820:A:OP2	38:98:2:ARG:NH2	2.53	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
5:1H:989:G:N7	50:L8:13:ILE:HD11	2.36	0.40
53:O8:15:GLU:CG	53:O8:16:CYS:H	2.34	0.40
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
6:12:61:LEU:HA	6:12:61:LEU:HD12	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:13:769:G:H4'	1:13:1513:A:H4'	2.03	0.40
1:13:389:A:H2'	1:13:390:C:C5'	2.50	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
1:13:74:C:H2'	1:13:75:C:O4'	2.21	0.40
1:13:848:C:H2'	1:13:849:C:O4'	2.20	0.40
1:13:8:A:N7	8:3E:208:SER:HB3	2.36	0.40
5:14:1104:C:H2'	5:14:1105:U:C6	2.56	0.40
5:14:150:C:H2'	5:14:151:C: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
5:14:24:G:H2'	5:14:25:U:O4'	2.21	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
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
6:1E:42:ILE:HD11	6:1E:202:PRO:HB2	2.03	0.40
1:13:1286:A:H2	25:1F:18:TYR:HH	1.64	0.40
1:1G:1277:C:O2'	1:1G:1279:A:H1'	2.21	0.40
1:1G:12:U:H4'	1:1G:526:C:O2'	2.21	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:95:G:C6	1:1G:96:G:C5	3.09	0.40
5:1H:1419:A:C8	5:1H:1421:G:C6	3.08	0.40
5:1H:1786:A:H1'	5:1H:1938:A:N6	2.37	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
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
27:1J:65:C:C4	27:1J:108:C:C5	3.09	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
30:31:6:VAL:HG11	30:31:119:ARG:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:3L:66:U:H2'	2:3L:67:C:O4'	2.21	0.40
9:4E:6:PHE:HD1	9:4E:6:PHE:HA	1.77	0.40
34:58:40:PRO:HB3	41:C8:67:ALA:HB3	2.03	0.40
10:5E:67:MET:HB2	10:5E:68:PRO:HD2	2.04	0.40
10:5E:2:ARG:HD2	10:5E:69:GLU:HB3	2.03	0.40
5:1H:1666:G:H1'	35:68:3:GLN:HE21	1.86	0.40
1:13:452:A:P	20:7I:43:LYS:HZ1	2.44	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
13:8E:77:ILE:O	13:8E:81:ILE:HG12	2.22	0.40
24:BI:68:LYS:HB2	24:BI:68:LYS:HE3	1.86	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
5:1H:2371:G:H4'	53:O8:45:LYS:HG3	2.04	0.40
28:11:89:SER:HG	28:11:159:ALA:H	1.69	0.40
28:11:46:GLN:HB2	28:11:48:ARG:HG2	2.04	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
1:13:506:G:H2'	1:13:507:C:O4'	2.21	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
5:14:235:U:C2	5:14:236:C:C5	3.10	0.40
5:14:2418:A:H2'	5:14:2419:U:C6	2.57	0.40
5:14:827:U:H2'	5:14:2430:A:H2	1.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:14:26:G:C6	5:14:27:G:N1	2.89	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
27:16:89:G:C6	27:16:89(A):A:C6	3.10	0.40
6:1E:126:GLU:HA	6:1E:129:GLU:CG	2.49	0.40
6:1E:36:ARG:C	6:1E:38:GLY:H	2.24	0.40
1:1G:1233:G:H2'	1:1G:1234:C:C6	2.56	0.40
1:1G:18:C:H6	1:1G:18:C:O5'	2.05	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:96:G:C2	1:1G:97:U:C2	3.10	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:275:G:N2	5:1H:276:A:C6	2.89	0.40
5:1H:2843:G:H1	5:1H:2874:C:N4	2.19	0.40
5:1H:564:C:H2'	5:1H:565:C:O4'	2.21	0.40
5:1H:58:G:H5'	44:F8:74:PRO:HB3	2.03	0.40
26:1K:3:C:O5'	26:1K:3:C:H6	2.05	0.40
7:2E:91:LEU:O	7:2E:94:LEU:HG	2.22	0.40
3:2L:19:G:C2	3:2L:59:A:C4	3.09	0.40
30:31:110:LEU:HA	30:31:110:LEU:HD12	1.78	0.40
8:32:150:GLU:C	8:32:152:SER:N	2.73	0.40
2:3L:48:C:H5	2:3L:59:U:O4'	2.04	0.40
31:41:107:LEU:HA	31:41:107:LEU:HD23	1.83	0.40
17:4I:81:LEU:O	17:4I:84:ILE:HG22	2.21	0.40
5:1H:2758:A:C4	32:51:67:LEU:HD21	2.57	0.40
34:58:99:LEU:HD23	34:58:99:LEU:HA	1.80	0.40
33:61:79:ILE:HD13	33:61:79:ILE:HA	1.69	0.40
35:68:113:LYS:O	35:68:113:LYS:HD3	2.21	0.40
12:7E:94:TYR:HE1	12:7E:132:GLU:HB2	1.85	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
38:98:29:LEU:HA	38:98:29:LEU:HD12	1.76	0.40
39:A8:83:LYS:HE3	39:A8:109:GLY:O	2.21	0.40
24:BI:20:LEU:O	24:BI:23:ARG:HB3	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HE3	52:N8:3:LYS:HB3	1.29	0.40
52:N8:56:LYS:HD2	52:N8:56:LYS:N	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
55:Q8:58:ILE:O	55:Q8:58:ILE:HG22	2.21	0.40
5:1H:2600:A:N7	28:11:237:GLU:HG3	2.37	0.40
28:11:80:ALA:HB2	28:11:96:HIS:CD2	2.57	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
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
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
5:14:142:G:OP1	5:14:1598:C:H1'	2.21	0.40
5:14:1486:A:H2'	5:14:1487:G:H8	1.85	0.40
5:14:16:G:O2'	5:14:17:G:H5'	2.20	0.40
5:14:1828:G:OP2	58:14:3533:HOH:O	2.22	0.40
5:14:747:U:O2	5:14:2014:A:H1'	2.22	0.40
5:14:2076:U:H6	5:14:2076:U:O5'	2.05	0.40
5:14:2154:G:H2'	5:14:2155:G:O4'	2.21	0.40
5:14:2115:G:N2	5:14:2172:U:H3	2.19	0.40
5:14:218:A:C2	5:14:235:U:H4'	2.56	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
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
5:14:21:A:C2	5:14:520:G:C2	3.09	0.40
5:14:884:C:H5	5:14:885:C:C4	2.40	0.40
6:1E:163:PHE:HA	6:1E:185:ILE:O	2.21	0.40
6:1E:53:ARG:HH12	6:1E:199:TYR:HA	1.87	0.40
1:1G:1129:C:O5'	1:1G:1130:A:H5'	2.21	0.40
1:1G:927:G:C2	1:1G:1391:U:H1'	2.56	0.40
1:1G:165:C:H2'	1:1G:166:G:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:270(R):G:H2'	5:1H:270(S):G:C8	2.56	0.40
5:1H:2864:G:C6	5:1H:2865:U:C4	3.10	0.40
5:1H:76:C:O2'	5:1H:77:C:H5'	2.22	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
7:2E:108:ASN:HA	7:2E:109:PRO:HD2	1.96	0.40
5:1H:322:A:OP2	30:31:169:ASN:HB2	2.21	0.40
30:31:181:LEU:HD22	30:31:186:ILE:HD11	2.04	0.40
30:31:7:TYR:HA	30:31:22:ALA:O	2.21	0.40
1:1G:407:G:P	8:32:115:ARG:HH21	2.41	0.40
8:32:119:GLN:HG2	8:32:123:HIS:HE1	1.87	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
16:3I:87:GLY:HA2	16:3I:98:TYR:HA	2.03	0.40
31:41:26:GLN:HB2	31:41:26:GLN:HE21	1.74	0.40
33:61:56:LYS:HG3	33:61:57:ARG:N	2.35	0.40
11:6E:91:VAL:HG12	11:6E:95:ARG:HB3	2.04	0.40
19:6I:5:LYS:O	19:6I:8:LYS:HB3	2.21	0.40
5:1H:811:U:H3'	36:78:22:GLY:CA	2.52	0.40
5:1H:250:G:H5'	36:78:60:MET:SD	2.62	0.40
12:7E:39:LEU:HD12	12:7E:39:LEU:HA	1.77	0.40
21:8I:101:ARG:HB2	21:8I:101:ARG:HH21	1.87	0.40
23:AI:51:VAL:HG12	23:AI:52:TYR:N	2.33	0.40
23:AI:40:ILE:HG22	23:AI:69:HIS:O	2.21	0.40
41:C8:75:ASN:HB2	41:C8:78:THR:H	1.86	0.40
45:G8:26:LYS:HA	45:G8:26:LYS:HE2	2.02	0.40
46:H8:133:ILE:HA	46:H8:134:PRO:HD2	1.91	0.40
46:H8:98:MET:HG3	46:H8:99:TYR:N	2.37	0.40
54:P8:10:ARG:O	54:P8:14:LYS:HB2	2.21	0.40
28:11:101:GLU:HG3	28:11:102:LYS:N	2.37	0.40
6:12:189:ASP:H	6:12:192:SER:HB2	1.86	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:14:184:C:H2'	5:14:185:U:C6	2.57	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
5:14:25:U:C4	5:14:26:G:C6	3.09	0.40
5:14:2706:G:N7	58:14:3685:HOH:O	2.36	0.40
5:14:270(J):G:N2	5:14:270(K):C:O2	2.54	0.40
5:14:2844:G:H3'	5:14:2845:G:H8	1.87	0.40
5:14:389:G:O5'	5:14:389:G:H8	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
1:1G:1128:C:C2	1:1G:1139:G:C6	3.09	0.40
1:1G:1141:C:O5'	1:1G:1141:C:H6	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
1:1G:713:G:H2'	1:1G:714:G:C8	2.57	0.40
1:1G:73:G:H1	1:1G:97:U:H3	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:2645:G:C3'	5:1H:2646:C:H5'	2.51	0.40
5:1H:270(L):U:O5'	5:1H:270(L):U:H6	2.05	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
5:1H:308:G:C6	5:1H:309:G:C6	3.09	0.40
5:1H:55:G:N3	5:1H:56:A:C8	2.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1H:2572:A:C4	29:21:144:ARG:NH1	2.90	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
7:22:47:LEU:HB2	7:22:52:LEU:HD13	2.04	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
5:1H:2444:G:OP2	30:31:68:LYS:HD2	2.21	0.40
8:32:65:ARG:HD2	8:32:72:GLU:HA	2.03	0.40
8:3E:86:LYS:HB3	8:3E:86:LYS:HE2	1.78	0.40
2:3L:48:C:H5	2:3L:59:U:C1'	2.35	0.40
31:41:116:ASP:HB3	31:41:117:PHE:H	1.46	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
33:61:114:LEU:HD13	33:61:130:TYR:CD1	2.56	0.40
13:8E:118:LYS:HE2	13:8E:118:LYS:HB3	1.37	0.40
21:8I:76:LEU:HD12	21:8I:77:VAL:H	1.85	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

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

Some 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	2I	135	HIS
32	5I	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 ⓘ

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
2	PSU	3L	55	2	17,21,22	0.97	1 (5%)	20,30,33	3.23	5 (25%)
26	PSU	1K	32	26,56	17,21,22	1.12	2 (11%)	20,30,33	3.25	5 (25%)
2	7MG	3K	46	2	22,26,27	3.45	6 (27%)	28,39,42	2.48	11 (39%)
3	H2U	2K	21	3	18,21,22	2.80	3 (16%)	21,30,33	1.82	4 (19%)
2	H2U	3L	16	2	18,21,22	2.16	4 (22%)	21,30,33	1.97	4 (19%)
26	H2U	1K	16	26	18,21,22	2.52	3 (16%)	21,30,33	1.81	5 (23%)
2	7MG	3L	46	2	22,26,27	3.59	6 (27%)	28,39,42	2.42	10 (35%)
2	H2U	3K	16	2	18,21,22	2.21	4 (22%)	21,30,33	1.99	5 (23%)
2	H2U	3L	20	2	18,21,22	2.23	4 (22%)	21,30,33	1.79	5 (23%)
2	7MG	1L	46	2	22,26,27	3.49	6 (27%)	28,39,42	2.45	11 (39%)
26	MIA	1K	37	26	24,31,32	2.47	3 (12%)	26,44,47	2.67	6 (23%)
2	MIA	3L	37	2	24,31,32	2.84	4 (16%)	26,44,47	3.85	10 (38%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	4SU	2L	8	3	14,21,22	3.66	2 (14%)	15,30,33	1.05	2 (13%)
2	MIA	1L	37	2	24,31,32	2.43	4 (16%)	26,44,47	2.55	9 (34%)
3	PSU	2L	56	3	17,21,22	1.29	1 (5%)	20,30,33	3.28	5 (25%)
3	7MG	2K	47	3	22,26,27	3.36	7 (31%)	28,39,42	2.47	10 (35%)
2	4SU	1L	8	2	14,21,22	3.24	2 (14%)	15,30,33	1.55	2 (13%)
3	OMC	2K	33	3	15,22,23	2.33	4 (26%)	17,31,34	1.54	3 (17%)
2	MIA	3K	37	2	24,31,32	2.56	4 (16%)	26,44,47	4.00	10 (38%)
2	H2U	1L	16	2	18,21,22	2.27	4 (22%)	21,30,33	2.06	5 (23%)
2	PSU	3K	55	2	17,21,22	1.14	3 (17%)	20,30,33	3.16	7 (35%)
3	4SU	2K	8	3	14,21,22	3.47	2 (14%)	15,30,33	1.10	2 (13%)
3	H2U	2L	21	3	18,21,22	2.12	3 (16%)	21,30,33	1.63	4 (19%)
2	4SU	3K	8	2	14,21,22	3.43	2 (14%)	15,30,33	1.23	2 (13%)
2	PSU	3K	39	2	17,21,22	1.15	1 (5%)	20,30,33	3.51	7 (35%)
2	PSU	3L	39	2	17,21,22	1.18	1 (5%)	20,30,33	3.35	4 (20%)
26	4SU	1K	8	26	14,21,22	3.23	2 (14%)	15,30,33	1.27	2 (13%)
3	7MG	2L	47	3	22,26,27	3.35	7 (31%)	28,39,42	2.54	11 (39%)
2	H2U	1L	20	2	18,21,22	2.16	3 (16%)	21,30,33	2.20	5 (23%)
3	OMC	2L	33	3	15,22,23	2.19	4 (26%)	17,31,34	1.49	2 (11%)
2	4SU	3L	8	2	14,21,22	3.41	2 (14%)	15,30,33	1.60	2 (13%)
3	PSU	2K	56	3	17,21,22	1.30	2 (11%)	20,30,33	3.18	6 (30%)
2	PSU	1L	39	2	17,21,22	1.12	1 (5%)	20,30,33	3.43	5 (25%)
26	7MG	1K	46	26	22,26,27	3.46	7 (31%)	28,39,42	2.53	11 (39%)
2	PSU	1L	55	2	17,21,22	1.30	2 (11%)	20,30,33	3.71	5 (25%)
2	PSU	3L	32	2	17,21,22	1.20	1 (5%)	20,30,33	3.55	6 (30%)
2	PSU	3K	32	2	17,21,22	1.14	1 (5%)	20,30,33	3.28	6 (30%)
26	PSU	1K	55	26	17,21,22	1.10	1 (5%)	20,30,33	3.51	6 (30%)
2	PSU	1L	32	2	17,21,22	1.23	2 (11%)	20,30,33	3.93	7 (35%)
26	PSU	1K	39	26	17,21,22	0.97	1 (5%)	20,30,33	3.26	6 (30%)
2	H2U	3K	20	2	18,21,22	2.19	4 (22%)	21,30,33	2.07	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
2	PSU	3L	55	2	-	0/7/25/26	0/2/2/2
26	PSU	1K	32	26,56	-	0/7/25/26	0/2/2/2
2	7MG	3K	46	2	-	2/7/37/38	0/3/3/3
3	H2U	2K	21	3	-	3/7/38/39	0/2/2/2
2	H2U	3L	16	2	-	3/7/38/39	0/2/2/2
26	H2U	1K	16	26	-	3/7/38/39	0/2/2/2
2	7MG	3L	46	2	-	2/7/37/38	0/3/3/3
2	H2U	3K	16	2	-	0/7/38/39	0/2/2/2
2	H2U	3L	20	2	-	6/7/38/39	0/2/2/2
2	7MG	1L	46	2	-	5/7/37/38	0/3/3/3
26	MIA	1K	37	26	-	7/11/33/34	0/3/3/3
2	MIA	3L	37	2	-	8/11/33/34	0/3/3/3
3	4SU	2L	8	3	-	0/5/25/26	0/2/2/2
2	MIA	1L	37	2	-	6/11/33/34	0/3/3/3
3	PSU	2L	56	3	-	0/7/25/26	0/2/2/2
3	7MG	2K	47	3	-	6/7/37/38	0/3/3/3
2	4SU	1L	8	2	-	4/5/25/26	0/2/2/2
3	OMC	2K	33	3	-	0/7/27/28	0/2/2/2
2	MIA	3K	37	2	-	6/11/33/34	0/3/3/3
2	H2U	1L	16	2	-	5/7/38/39	0/2/2/2
2	PSU	3K	55	2	-	2/7/25/26	0/2/2/2
3	4SU	2K	8	3	-	0/5/25/26	0/2/2/2
3	H2U	2L	21	3	-	4/7/38/39	0/2/2/2
2	4SU	3K	8	2	-	1/5/25/26	0/2/2/2
2	PSU	3K	39	2	-	0/7/25/26	0/2/2/2
2	PSU	3L	39	2	-	2/7/25/26	0/2/2/2
26	4SU	1K	8	26	-	0/5/25/26	0/2/2/2
3	7MG	2L	47	3	-	4/7/37/38	0/3/3/3
2	H2U	1L	20	2	-	4/7/38/39	0/2/2/2
3	OMC	2L	33	3	-	1/7/27/28	0/2/2/2
2	4SU	3L	8	2	-	3/5/25/26	0/2/2/2
3	PSU	2K	56	3	-	0/7/25/26	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	PSU	1L	55	2	-	0/7/25/26	0/2/2/2
2	PSU	3L	32	2	-	0/7/25/26	0/2/2/2
2	PSU	3K	32	2	-	0/7/25/26	0/2/2/2
26	PSU	1K	55	26	-	0/7/25/26	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	PSU	1L	32	2	-	2/7/25/26	0/2/2/2
26	PSU	1K	39	26	-	0/7/25/26	0/2/2/2
2	H2U	3K	20	2	-	0/7/38/39	0/2/2/2

All (126) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	3L	46	7MG	C4-N3	11.24	1.48	1.34
2	1L	46	7MG	C4-N3	11.14	1.48	1.34
26	1K	46	7MG	C4-N3	11.05	1.48	1.34
2	3K	46	7MG	C4-N3	11.02	1.48	1.34
3	2L	8	4SU	C5-C4	10.78	1.50	1.38
3	2K	8	4SU	C5-C4	10.78	1.50	1.38
3	2K	47	7MG	C4-N3	10.74	1.47	1.34
3	2L	47	7MG	C4-N3	10.45	1.47	1.34
2	3L	8	4SU	C5-C4	10.05	1.49	1.38
2	3K	8	4SU	C5-C4	10.01	1.49	1.38
26	1K	8	4SU	C5-C4	9.79	1.49	1.38
2	1L	8	4SU	C5-C4	9.65	1.49	1.38
26	1K	37	MIA	C13-C14	9.00	1.58	1.32
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
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	8	4SU	C6-N1	8.14	1.45	1.35
2	3K	8	4SU	C6-N1	7.61	1.45	1.35
2	3L	37	MIA	C2-S10	7.48	1.82	1.75
2	3L	8	4SU	C6-N1	7.45	1.45	1.35
26	1K	46	7MG	C5-C4	-7.42	1.24	1.39
2	3L	46	7MG	C5-C4	-7.35	1.24	1.39
2	1L	46	7MG	C5-C4	-7.32	1.24	1.39
2	1L	16	H2U	C2-N1	7.21	1.45	1.35
3	2K	47	7MG	C5-C4	-7.17	1.24	1.39
2	3K	46	7MG	C5-C4	-7.07	1.24	1.39
3	2L	47	7MG	C5-C4	-7.01	1.24	1.39
2	3L	20	H2U	C2-N1	7.00	1.45	1.35
2	1L	8	4SU	C6-N1	6.95	1.44	1.35
3	2K	8	4SU	C6-N1	6.93	1.44	1.35
2	3K	16	H2U	C2-N1	6.76	1.45	1.35
2	3L	16	H2U	C2-N1	6.64	1.45	1.35
26	1K	8	4SU	C6-N1	6.63	1.44	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
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
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	C6-C5	6.08	1.49	1.41
2	3K	46	7MG	C6-C5	5.71	1.49	1.41
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
26	1K	46	7MG	C6-C5	5.48	1.48	1.41
3	2K	33	OMC	C6-N1	5.45	1.42	1.35
2	1L	46	7MG	C6-C5	5.45	1.48	1.41
3	2K	47	7MG	C6-C5	5.33	1.48	1.41
3	2L	33	OMC	C6-N1	5.25	1.42	1.35
3	2L	47	7MG	C4-N9	-5.09	1.28	1.38
2	1L	37	MIA	C2-S10	5.08	1.80	1.75
2	1L	37	MIA	C6-N6	4.99	1.43	1.34
2	1L	46	7MG	C4-N9	-4.98	1.29	1.38
2	3L	46	7MG	C4-N9	-4.94	1.29	1.38
3	2L	47	7MG	C6-C5	4.86	1.48	1.41
3	2K	21	H2U	C4-N3	4.85	1.45	1.37
3	2L	21	H2U	C2-N3	4.65	1.46	1.38
26	1K	16	H2U	C2-N3	4.62	1.46	1.38
26	1K	46	7MG	C4-N9	-4.53	1.29	1.38
3	2K	47	7MG	C4-N9	-4.49	1.30	1.38
2	1L	20	H2U	C2-N3	4.46	1.45	1.38
3	2K	33	OMC	C5-C4	4.36	1.51	1.41
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	46	7MG	C5-N7	4.31	1.47	1.39
2	3L	20	H2U	C2-N3	4.27	1.45	1.38
2	3K	46	7MG	C4-N9	-4.26	1.30	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	3K	20	H2U	C4-N3	4.18	1.44	1.37
3	2K	33	OMC	C2-N3	4.17	1.46	1.38
26	1K	16	H2U	C4-N3	4.17	1.44	1.37
2	1L	16	H2U	C2-N3	4.10	1.45	1.38
2	1L	55	PSU	C4-N3	4.03	1.40	1.33
2	3K	46	7MG	C5-N7	4.01	1.46	1.39
2	1L	32	PSU	C4-N3	3.94	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	1K	46	7MG	C2-N2	3.94	1.41	1.33
3	2L	33	OMC	C2-N3	3.90	1.45	1.38
2	3L	32	PSU	C4-N3	3.89	1.39	1.33
3	2L	56	PSU	C4-N3	3.86	1.39	1.33
2	1L	46	7MG	C5-N7	3.81	1.46	1.39
3	2L	47	7MG	C2-N2	3.78	1.41	1.33
2	1L	39	PSU	C4-N3	3.78	1.39	1.33
3	2L	33	OMC	C5-C4	3.78	1.50	1.41
2	3K	32	PSU	C4-N3	3.77	1.39	1.33
2	3L	39	PSU	C4-N3	3.77	1.39	1.33
2	1L	20	H2U	C4-N3	3.74	1.44	1.37
2	3L	46	7MG	C2-N2	3.69	1.41	1.33
2	3L	16	H2U	C4-N3	3.65	1.43	1.37
2	3K	46	7MG	C2-N2	3.65	1.41	1.33
3	2L	47	7MG	C5-N7	3.64	1.46	1.39
2	3K	39	PSU	C4-N3	3.54	1.39	1.33
3	2K	47	7MG	C2-N2	3.52	1.40	1.33
2	3K	16	H2U	C4-N3	3.46	1.43	1.37
26	1K	55	PSU	C4-N3	3.45	1.39	1.33
2	1L	46	7MG	C2-N2	3.42	1.40	1.33
26	1K	46	7MG	C5-N7	3.38	1.45	1.39
2	1L	16	H2U	C4-N3	3.34	1.43	1.37
2	3L	20	H2U	C4-N3	3.28	1.43	1.37
3	2K	56	PSU	C4-N3	3.25	1.38	1.33
3	2K	47	7MG	C5-N7	3.23	1.45	1.39
2	3L	55	PSU	C4-N3	3.19	1.38	1.33
3	2K	33	OMC	C4-N4	3.17	1.44	1.35
2	3K	37	MIA	C6-N1	2.97	1.36	1.32
2	3L	37	MIA	C6-N1	2.93	1.36	1.32
2	3K	55	PSU	C4-N3	2.93	1.38	1.33
3	2L	33	OMC	C4-N4	2.88	1.43	1.35
3	2K	56	PSU	C5-C1'	-2.79	1.49	1.52
26	1K	32	PSU	C4-N3	2.68	1.37	1.33
26	1K	37	MIA	C4-N3	-2.64	1.31	1.35
26	1K	39	PSU	C4-N3	2.62	1.37	1.33
2	1L	37	MIA	C6-N1	2.51	1.36	1.32
2	3L	20	H2U	C6-N1	-2.40	1.42	1.47
26	1K	32	PSU	O4'-C1'	-2.38	1.41	1.44
2	1L	16	H2U	C6-N1	-2.35	1.42	1.47
2	3K	55	PSU	C5-C1'	-2.33	1.50	1.52
3	2K	47	7MG	C2-N1	2.24	1.39	1.35
2	3K	55	PSU	O4'-C1'	-2.21	1.41	1.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	3K	20	H2U	C6-N1	-2.20	1.43	1.47
2	3L	16	H2U	C6-N1	-2.13	1.43	1.47
2	3K	16	H2U	C6-N1	-2.13	1.43	1.47
2	1L	55	PSU	O4'-C1'	-2.13	1.41	1.44
26	1K	46	7MG	C2-N1	2.12	1.39	1.35
3	2L	47	7MG	C2-N1	2.10	1.39	1.35
2	1L	32	PSU	C5-C1'	2.09	1.54	1.52

All (238) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
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
2	1L	32	PSU	N1-C2-N3	-12.60	118.41	128.43
2	1L	55	PSU	N1-C2-N3	-12.21	118.73	128.43
2	3L	32	PSU	N1-C2-N3	-12.08	118.83	128.43
2	1L	39	PSU	N1-C2-N3	-12.04	118.86	128.43
2	3K	39	PSU	N1-C2-N3	-12.03	118.87	128.43
26	1K	55	PSU	N1-C2-N3	-11.79	119.06	128.43
2	3L	55	PSU	N1-C2-N3	-11.46	119.32	128.43
2	3K	32	PSU	N1-C2-N3	-11.45	119.33	128.43
2	3L	39	PSU	N1-C2-N3	-11.25	119.49	128.43
3	2L	56	PSU	N1-C2-N3	-11.19	119.53	128.43
26	1K	32	PSU	N1-C2-N3	-11.09	119.61	128.43
26	1K	39	PSU	N1-C2-N3	-11.01	119.67	128.43
2	3K	55	PSU	N1-C2-N3	-10.20	120.32	128.43
3	2K	56	PSU	N1-C2-N3	-10.09	120.41	128.43
26	1K	37	MIA	C12-C13-C14	-9.63	108.41	127.14
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
2	1L	37	MIA	C12-C13-C14	-7.88	111.80	127.14
2	1L	55	PSU	C4-N3-C2	7.83	121.75	115.14
2	1L	32	PSU	C4-N3-C2	7.23	121.25	115.14
26	1K	55	PSU	C4-N3-C2	7.21	121.23	115.14
2	1L	20	H2U	C4-N3-C2	-7.05	119.95	125.79
2	3K	39	PSU	C4-N3-C2	7.04	121.08	115.14
26	1K	32	PSU	C4-N3-C2	6.81	120.89	115.14
2	3L	39	PSU	C4-N3-C2	6.80	120.89	115.14
2	1L	39	PSU	C4-N3-C2	6.68	120.78	115.14
3	2K	56	PSU	C4-N3-C2	6.43	120.57	115.14
26	1K	39	PSU	C4-N3-C2	6.24	120.41	115.14
2	1L	32	PSU	O4'-C1'-C5	6.15	119.46	109.93

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1L	16	H2U	C4-N3-C2	-6.10	120.73	125.79
3	2K	47	7MG	C6-C5-C4	6.08	121.73	115.20
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	3L	55	PSU	C4-N3-C2	5.83	120.06	115.14
3	2L	47	7MG	C4-C5-N7	5.79	115.84	106.98
2	3K	16	H2U	C4-N3-C2	-5.78	121.00	125.79
3	2L	56	PSU	C4-N3-C2	5.72	119.97	115.14
2	3L	32	PSU	C4-N3-C2	5.72	119.97	115.14
2	3K	32	PSU	C4-N3-C2	5.62	119.89	115.14
2	3K	55	PSU	C4-N3-C2	5.39	119.69	115.14
2	1L	55	PSU	C5-C4-N3	-5.37	118.44	125.36
3	2K	47	7MG	C4-C5-N7	5.32	115.12	106.98
26	1K	46	7MG	C5-C4-N9	5.28	113.85	106.44
2	3L	46	7MG	C5-C4-N9	5.25	113.80	106.44
3	2K	56	PSU	C5-C4-N3	-5.22	118.64	125.36
2	1L	46	7MG	C4-C5-N7	5.14	114.85	106.98
2	3K	46	7MG	CM7-N7-C5	5.10	143.62	124.01
2	3L	39	PSU	C5-C4-N3	-5.08	118.81	125.36
2	3K	37	MIA	C15-C14-C13	-5.08	107.97	122.65
2	3K	46	7MG	C5-C4-N9	5.07	113.54	106.44
26	1K	16	H2U	C4-N3-C2	-5.05	121.60	125.79
2	1L	46	7MG	C5-C4-N9	5.05	113.53	106.44
26	1K	46	7MG	C4-C5-N7	5.02	114.66	106.98
3	2K	21	H2U	C4-N3-C2	-4.96	121.67	125.79
3	2L	47	7MG	C5-C4-N9	4.95	113.39	106.44
3	2K	47	7MG	C5-C4-N9	4.90	113.31	106.44
2	3L	46	7MG	CM7-N7-C5	4.86	142.68	124.01
3	2L	47	7MG	CM7-N7-C5	4.83	142.58	124.01
26	1K	46	7MG	C6-C5-C4	4.82	120.37	115.20
2	3L	32	PSU	O4'-C1'-C5	4.80	117.37	109.93
26	1K	55	PSU	C5-C4-N3	-4.80	119.18	125.36
2	3K	46	7MG	C4-C5-N7	4.76	114.27	106.98
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	CM7-N7-C5	4.72	142.16	124.01
26	1K	46	7MG	CM7-N7-C5	4.65	141.89	124.01
2	3K	46	7MG	C6-C5-C4	4.65	120.19	115.20
3	2L	47	7MG	C6-C5-C4	4.64	120.18	115.20
2	3L	46	7MG	C4-C5-N7	4.59	114.00	106.98
2	3K	37	MIA	C16-C14-C13	-4.59	109.39	122.65
2	3K	55	PSU	C5-C4-N3	-4.58	119.47	125.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	1L	20	H2U	C5-C4-N3	4.56	121.77	116.65
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	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
2	3L	20	H2U	C4-N3-C2	-4.32	122.21	125.79
3	2K	47	7MG	CM7-N7-C5	4.30	140.53	124.01
3	2L	56	PSU	C5-C4-N3	-4.28	119.85	125.36
3	2K	33	OMC	C2-N3-C4	4.27	120.67	116.34
2	1L	39	PSU	C5-C4-N3	-4.24	119.89	125.36
3	2K	21	H2U	N3-C2-N1	4.22	121.12	116.65
26	1K	32	PSU	C5-C4-N3	-4.20	119.94	125.36
26	1K	46	7MG	C5-C4-N3	-4.18	119.67	126.49
3	2L	21	H2U	C4-N3-C2	-4.17	122.33	125.79
2	1L	46	7MG	C6-C5-C4	4.15	119.65	115.20
2	3K	46	7MG	C5-C4-N3	-4.14	119.72	126.49
2	1L	32	PSU	C5-C4-N3	-4.14	120.02	125.36
2	3L	8	4SU	C2-N3-C4	4.12	121.12	115.15
3	2L	47	7MG	C8-N7-C5	-4.11	98.24	108.94
2	3K	39	PSU	C5-C4-N3	-4.05	120.14	125.36
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
2	1L	8	4SU	C5-C4-N3	-4.03	118.44	123.83
2	1L	37	MIA	C16-C14-C13	-4.01	111.07	122.65
2	1L	37	MIA	C11-S10-C2	-4.00	99.28	102.27
2	3K	55	PSU	C5-C6-N1	-3.98	119.54	124.44
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
2	3L	32	PSU	C6-N1-C2	3.97	121.90	115.36
2	3L	16	H2U	C5-C4-N3	3.94	121.08	116.65
2	3L	46	7MG	C6-C5-C4	3.84	119.33	115.20
2	3K	20	H2U	C5-C4-N3	3.84	120.96	116.65
26	1K	39	PSU	C5-C4-N3	-3.83	120.42	125.36
26	1K	16	H2U	C5-C4-N3	3.81	120.92	116.65
2	3L	46	7MG	C5-C4-N3	-3.76	120.34	126.49
26	1K	46	7MG	N1-C2-N3	-3.74	119.55	125.42
2	1L	55	PSU	O4'-C1'-C5	-3.74	104.14	109.93
3	2K	47	7MG	C5-C4-N3	-3.72	120.41	126.49
2	1L	8	4SU	C2-N3-C4	3.72	120.54	115.15
2	3K	32	PSU	C5-C4-N3	-3.71	120.58	125.36
2	3L	8	4SU	C5-C4-N3	-3.70	118.88	123.83
2	3L	55	PSU	C5-C4-N3	-3.70	120.60	125.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	2L	56	PSU	C5-C6-N1	-3.66	119.94	124.44
2	3L	37	MIA	C15-C14-C13	-3.65	112.10	122.65
2	1L	46	7MG	C8-N7-C5	-3.65	99.46	108.94
3	2L	33	OMC	C2-N3-C4	3.63	120.02	116.34
2	3L	20	H2U	C5-C6-N1	3.62	123.55	111.61
26	1K	46	7MG	C8-N7-C5	-3.59	99.60	108.94
2	1L	32	PSU	C5-C1'-C2'	-3.59	108.91	115.32
3	2K	47	7MG	C8-N7-C5	-3.57	99.66	108.94
3	2L	33	OMC	N4-C4-N3	3.56	122.12	116.49
2	3L	46	7MG	N1-C2-N3	-3.55	119.85	125.42
2	1L	16	H2U	C5-C4-N3	3.54	120.63	116.65
2	3L	46	7MG	C8-N7-C5	-3.54	99.74	108.94
2	3K	46	7MG	C8-N7-C5	-3.51	99.80	108.94
2	3L	37	MIA	C5-C6-N1	-3.47	117.92	120.81
3	2K	56	PSU	O4'-C1'-C5	-3.44	104.61	109.93
3	2L	56	PSU	C6-N1-C2	3.43	121.02	115.36
2	3L	55	PSU	C6-N1-C2	3.39	120.95	115.36
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	3K	46	7MG	N1-C2-N3	-3.35	120.17	125.42
2	3K	32	PSU	C6-N1-C2	3.34	120.87	115.36
26	1K	39	PSU	C5-C1'-C2'	-3.34	109.36	115.32
2	1L	46	7MG	C5-C4-N3	-3.32	121.08	126.49
2	3L	37	MIA	N3-C2-N1	-3.31	120.89	126.98
2	3L	32	PSU	C5-C4-N3	-3.30	121.11	125.36
3	2L	21	H2U	N3-C2-N1	3.30	120.14	116.65
2	3K	20	H2U	C5-C6-N1	3.28	122.43	111.61
3	2K	33	OMC	N4-C4-N3	3.27	121.67	116.49
3	2L	47	7MG	C5-C4-N3	-3.26	121.16	126.49
2	3L	46	7MG	N7-C8-N9	-3.26	98.71	103.38
3	2K	21	H2U	C5-C6-N1	3.24	122.28	111.61
26	1K	8	4SU	C2-N3-C4	3.23	119.83	115.15
2	1L	16	H2U	C5-C6-N1	3.23	122.24	111.61
2	1L	32	PSU	C6-N1-C2	3.22	120.67	115.36
2	3K	16	H2U	C5-C6-N1	3.22	122.21	111.61
2	3L	32	PSU	C5-C6-N1	-3.18	120.53	124.44
2	3K	55	PSU	C6-N1-C2	3.16	120.57	115.36
3	2L	21	H2U	C5-C6-N1	3.15	121.99	111.61
2	1L	46	7MG	N1-C2-N3	-3.14	120.49	125.42
3	2L	21	H2U	O2-C2-N1	-3.14	119.17	123.11
2	3K	39	PSU	C6-N1-C2	3.11	120.49	115.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	2L	47	7MG	N1-C2-N3	-3.11	120.55	125.42
3	2K	47	7MG	N7-C8-N9	-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
2	1L	39	PSU	C6-N1-C2	3.04	120.37	115.36
2	1L	37	MIA	C12-N6-C6	-3.04	118.05	122.55
2	1L	46	7MG	N7-C8-N9	-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
26	1K	8	4SU	C5-C4-N3	-3.00	119.82	123.83
26	1K	32	PSU	C5-C6-N1	-2.96	120.81	124.44
2	3K	16	H2U	C5-C4-N3	2.96	119.97	116.65
3	2K	8	4SU	C5-C4-N3	-2.95	119.88	123.83
2	3K	8	4SU	C2-N3-C4	2.93	119.40	115.15
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
3	2L	8	4SU	C2-N3-C4	2.91	119.36	115.15
2	1L	32	PSU	C4-C5-C1'	2.88	126.56	121.12
3	2L	47	7MG	C6-N1-C2	2.87	120.49	115.93
2	3K	37	MIA	C4-C5-N7	-2.87	106.41	109.40
26	1K	55	PSU	C6-N1-C2	2.87	120.09	115.36
26	1K	46	7MG	N7-C8-N9	-2.86	99.29	103.38
26	1K	39	PSU	C6-N1-C2	2.85	120.06	115.36
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	1L	55	PSU	C6-N1-C2	2.81	120.00	115.36
2	1L	46	7MG	C6-N1-C2	2.79	120.36	115.93
2	3K	46	7MG	N7-C8-N9	-2.79	99.39	103.38
2	1L	37	MIA	N3-C2-N1	-2.78	121.86	126.98
2	3L	55	PSU	C5-C6-N1	-2.77	121.04	124.44
2	3L	39	PSU	C6-N1-C2	2.70	119.81	115.36
2	1L	20	H2U	C5-C6-N1	2.65	120.36	111.61
2	3K	32	PSU	C5-C6-N1	-2.65	121.18	124.44
26	1K	32	PSU	C6-N1-C2	2.64	119.71	115.36
26	1K	46	7MG	C6-N1-C2	2.59	120.05	115.93
26	1K	37	MIA	C4-C5-N7	-2.56	106.73	109.40
26	1K	39	PSU	C5-C6-N1	-2.51	121.35	124.44
2	3K	32	PSU	C5-C1'-C2'	-2.50	110.85	115.32
2	1L	16	H2U	O2-C2-N3	-2.50	116.84	121.50
26	1K	46	7MG	C2-N3-C4	2.50	120.80	113.89
2	3K	20	H2U	O2-C2-N1	-2.50	119.97	123.11
3	2K	33	OMC	C5-C4-N3	-2.49	118.85	121.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
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
3	2K	47	7MG	C5-C6-N1	-2.47	118.07	123.14
2	3K	46	7MG	N2-C2-N1	2.46	121.08	117.25
2	3K	8	4SU	C5-C4-N3	-2.45	120.55	123.83
2	3K	46	7MG	C6-N1-C2	2.45	119.82	115.93
2	3L	46	7MG	C6-N1-C2	2.42	119.77	115.93
2	3K	46	7MG	C2-N3-C4	2.40	120.54	113.89
2	1L	39	PSU	C5-C1'-C2'	-2.39	111.05	115.32
2	3K	39	PSU	C5-C1'-C2'	-2.39	111.06	115.32
26	1K	55	PSU	C5-C1'-C2'	-2.37	111.08	115.32
2	3L	46	7MG	C2-N3-C4	2.36	120.42	113.89
2	3K	37	MIA	C2-N1-C6	2.36	121.41	117.19
2	1L	46	7MG	N2-C2-N3	2.34	120.89	117.25
2	3K	37	MIA	C12-N6-C6	-2.31	119.12	122.55
3	2K	47	7MG	C6-N1-C2	2.31	119.59	115.93
26	1K	46	7MG	N2-C2-N1	2.30	120.84	117.25
2	3K	37	MIA	C16-C14-C15	-2.30	109.53	114.60
3	2L	47	7MG	O4'-C1'-N9	2.29	112.44	109.35
2	3K	55	PSU	C5-C1'-C2'	-2.27	111.26	115.32
26	1K	16	H2U	O2-C2-N3	-2.26	117.29	121.50
2	1L	46	7MG	C4-N9-C1'	-2.26	121.24	126.60
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
2	3K	55	PSU	O4'-C1'-C2'	2.22	108.26	104.66
3	2L	8	4SU	C5-C4-N3	-2.22	120.86	123.83
3	2K	8	4SU	C2-N3-C4	2.21	118.36	115.15
2	1L	37	MIA	C4-C5-N7	-2.21	107.10	109.40
3	2K	56	PSU	C6-N1-C2	2.15	118.91	115.36
26	1K	55	PSU	C5-C6-N1	-2.14	121.80	124.44
3	2K	47	7MG	N1-C2-N3	-2.14	122.06	125.42
3	2K	56	PSU	C5-C6-N1	-2.13	121.82	124.44
3	2L	47	7MG	C5-C6-N1	-2.11	118.80	123.14
3	2L	47	7MG	N7-C8-N9	-2.09	100.38	103.38
2	3K	39	PSU	O2'-C2'-C1'	-2.09	106.97	111.94
2	3L	20	H2U	O2-C2-N3	-2.07	117.64	121.50
2	1L	37	MIA	C2-N1-C6	2.05	120.86	117.19
2	3K	16	H2U	O2-C2-N1	-2.05	120.54	123.11
2	3K	39	PSU	C5-C6-N1	-2.01	121.96	124.44

There are no chirality outliers.

All (91) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	3K	46	7MG	C3'-C4'-C5'-O5'
2	3L	16	H2U	O4'-C4'-C5'-O5'
2	3L	16	H2U	C3'-C4'-C5'-O5'
26	1K	16	H2U	C4'-C5'-O5'-P
2	3L	20	H2U	O4'-C4'-C5'-O5'
2	3L	20	H2U	O4'-C1'-N1-C6
2	1L	46	7MG	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
26	1K	37	MIA	C12-C13-C14-C15
26	1K	37	MIA	C12-C13-C14-C16
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	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	1L	8	4SU	O4'-C1'-N1-C6
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	1L	16	H2U	O4'-C1'-N1-C6
2	3K	55	PSU	C3'-C4'-C5'-O5'
2	3L	39	PSU	C3'-C4'-C5'-O5'
3	2L	47	7MG	O4'-C4'-C5'-O5'
2	1L	20	H2U	O4'-C1'-N1-C6
3	2L	33	OMC	C2'-C1'-N1-C6
2	3L	8	4SU	C2'-C1'-N1-C6
2	3L	8	4SU	O4'-C1'-N1-C6
2	1L	32	PSU	O4'-C1'-C5-C4
2	1L	32	PSU	O4'-C1'-C5-C6
2	3L	46	7MG	O4'-C4'-C5'-O5'
2	1L	16	H2U	C3'-C4'-C5'-O5'

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

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Mol	Chain	Res	Type	Atoms
2	1L	8	4SU	C4'-C5'-O5'-P
3	2L	21	H2U	O4'-C1'-N1-C6
3	2L	21	H2U	C2'-C1'-N1-C2
3	2K	21	H2U	C2'-C1'-N1-C2
2	3L	8	4SU	C4'-C5'-O5'-P
2	1L	46	7MG	C3'-C4'-C5'-O5'

There are no ring outliers.

26 monomers are involved in 52 short contacts:

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

5.5 Carbohydrates

There are no carbohydrates in this entry.

5.6 Ligand geometry

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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data [i](#)

6.1 Protein, DNA and RNA chains [i](#)

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

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

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

6.3 Carbohydrates [i](#)

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

6.4 Ligands [i](#)

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

6.5 Other polymers [i](#)

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